

Marine Reptiles

Olive ridley sea turtle

Lepidochelys olivacea

SPECIES STATUS: Federally Listed as Threatened State Listed as Threatened IUCN Red list – Vulnerable

SPECIES INFORMATION: Adult male olive ridley sea turtles are distinguished by longer, thicker tails an elongated carapace, and one enlarged, hooked claw. Olive ridleys are the smallest and most abundant sea turtle, with adult carapace lengths of 60 to 70 centimeters (about 2 feet). Little information exists on the feeding behavior of post-hatchlings and juveniles in pelagic waters, but they are most likely exclusively carnivorous (e.g., eating invertebrates and fish eggs). Older juveniles and adults feed on a wide variety of benthic organisms. Growth rates are unknown and age at sexual maturity is 10 to 18 years. Females often return to the same site to lay additional clutches every month and do so *en masse*. Incubation lasts 46 to 65 days. Each clutch contains about 100 eggs, and sex determination is temperature-dependent. Genetic analysis of olive ridley turtles taken in the Hawai'i-based longline fishery shows that about two-thirds of the animals came from the eastern Pacific, and the remaining one-third originated in the western Pacific or Indian Ocean. Thus, Hawai'i represents a point of convergence for these source areas.

DISTRIBUTION: Worldwide, the species occurs in subtropical and tropical waters of the Pacific Ocean. Generally only seen in deep oceanic waters around Hawai'i. Nesting has been recorded only once in Hawai'i, on Maui in 1985.

ABUNDANCE: There is no clear trend in abundance.

LOCATION AND CONDITION OF KEY HABITAT: Most often found in shallow water around reefs, bays, and inlets. Most nesting occurs on continental beaches. Preferred nesting habitat is mid-level beaches free of debris.

THREATS:

- <u>Fisheries bycatch</u>. Mortality of adult and juvenile turtles results from fisheries bycatch. Due to federally mandated take reduction measures implemented by Hawaiian longline fisheries, sea turtle bycatch rates have been reduced by approximately 90 percent since 2004. Bycatch remains a threat in other regions.
- <u>Habitat loss and degradation</u>. Nesting beaches (all of which occur outside Hawai'i) are extremely critical to the species' survival and are subject to natural and human-caused threats such as tsunamis, oil spills, sea level rise from climate change, light pollution, vehicular traffic on beaches, and coastal development.
- <u>Harvest of eggs and adults</u>. Harvest occurs on beaches in many countries, although conservation efforts have reduced this threat.
- Marine debris. Entanglement by, or ingestion of, marine debris is a source of mortality.

CONSERVATION ACTIONS: Actions specific to olive ridley sea turtles should include the following:

- Cooperate with jurisdictions where nesting occurs to restore nesting habitat and reduce take of eggs and females.
- Reduce marine debris in in the marine environment and on beaches.
- Continue partnerships with local conservation groups that monitor and conserve turtles, respond to stranding, and conduct research and outreach programs.
- Conduct education and outreach efforts, particularly to address threats such as fishing interactions, marine recreation interactions, and marine debris.

MONITORING:

- Continue to monitor nesting sites.
- Continue to monitor turtles harmed or killed by marine debris and from fisheries bycatch.

RESEARCH PRIORITIES:

 Determine distribution, abundance, and status of post-hatchlings, juveniles, and adults in the marine environment.

References:

Gulko D, Eckert K. 2003. Sea Turtles: An Ecological Guide. Honolulu, HI: Mutual Publishing.

IUCN Red List of Threatened Species. 2015. Version 2014.3. www.iucnredlist.org. (Accessed May 2015).

Kaneko JJ, and Bartram PK. 2008. What if you don't speak "CPUE-ese"? Pelagic Fisheries Research Program Newsletter, University of Hawai'i. 13(2):1-3.

National Marine Fisheries Service and U.S. Fish and Wildlife Service. 1998. Recovery Plan for U.S. Pacific Populations of the Olive Ridley Turtle (*Lepidochelys olivacea*). Silver Springs, MD.

National Marine Fisheries Service. 2004. Fisheries off West Coast states and in the western Pacific; western Pacific pelagic fisheries; pelagic longline fishing restrictions, seasonal area closure, limit on swordfish fishing effort, gear restrictions, and other sea turtle take mitigation measures. FR 69:17329-17354.

National Marine Fisheries Service and U.S. Fish and Wildlife Service. 2007. Olive Ridley Turtle (*Lepidochelys olivacea*) 5-year Review: Summary and Evaluation. National Marine Fisheries Service, Silver Springs, Maryland, and U.S. Fish and Wildlife Service, Jacksonville, Florida.