

Hawaii Sees Increase in Stranded Turtles

The green sea turtle (honu) is found in the protected shallow, coastal waters of Hawaii. Since its listing as a threatened species in 1978 under the Endangered Species Act (ESA), the population has increased both in the nesting areas in the Northwestern Hawaiian Islands and the foraging areas around the main Hawaiian islands. There has also been an increase in the number of stranded turtles, i.e., individuals washed up on shore dead or alive but in need of medical attention. Several reasons for the strandings have been identified, including fibropapilloma (FP) and interactions with recreational fishing gear.

FP is an often fatal, tumor-forming disease that can lead to disruptions in breathing, feeding, seeing or swimming. Between 39 and 69 percent of the stranded turtles in Hawaii have been found to carry the disease. The only spot in Hawaii where no known cases of FP have occurred is the western coastline of the Big Island. Tumors are the most prevalent in turtles living off the coastline of Maui. However, most of the stranded turtles are reported on Oahu, where the majority of the human population resides.

"Tumors exacerbate the entanglement in netting or fishing line," says George Balazs, head of the Marine Turtle Research Program at the National Marine Fisheries Service (NMFS) Honolulu Laboratory. "Warty protruding growths offer more for line and net to snag and entangle on."



Live sea turtle severely injured by fishing line at Kapoho, Hawaii. This turtle was rescued and treated by NMFS biologists and University of Hawaii at Hilo student assistants. Simple precautions by shoreline fishermen can reduce entanglement and suffering. (G. Balazs photo)

"Entanglement and flipper death from monofilament fishing line, and even ingestion of line, all from active shoreline fishing are issues of increasing concern in the Hawaiian islands," Balazs notes. "Simply stated, there are more coastal recreational fishermen and more turtle interactions."

Last year, 51 turtles were found stranded with evidence of coastal gear, including lines, hooks and netting. That is nearly double the amount found stranded with evidence of coastal gear six years earlier, i.e., 27 turtles in 1994.

A serious aspect of green sea turtle interactions with

Coastal fishing gear interactions monitored by the Honolulu Laboratory Marine Turtle Research Program

Year	Total Number of Strandings	Number (Percent) of Turtles with Evidence of Fishing Gear*
1994	213	27 (13%)
1995	195	29 (15%)
1996	252	35 (14%)
1997	239	46 (19%)
1998	284	37 (13%)
1999	293	46 (16%)
2000	274	51 (18%)
Total	1,750	271 (15%)

*Evidence of line, hook or net interaction does not mean the gear killed the turtle.

coastal fishing gear is entanglement in monofilament line. Lines wrapped around a turtle's flipper restrict movement and often sever the limb or require amputation by veterinarians.

"Sea turtles with a single front flipper get along pretty well," Balazs says. "But certainly they get along better with two front flippers." Males with only a single front flipper are unable to mate, he notes.

Both the State of Hawaii and federal agencies are responsible for monitoring and taking action to protect these species within the nearshore areas. The NMFS Office of Law Enforcement notes that it is against the law for people to "take" green sea turtles. The term "take" is broadly interpreted in the ESA, meaning to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or to attempt to engage in any such conduct." Therefore, not only fishermen with nets and poles should take note but also divers and snorkelers.

Although green sea turtles are generally vegetarian and feed primarily on seaweed (limu), they can be attracted to materials used for bait, such as squid or shrimp. To reduce the impacts of coastal fisheries on turtles, scientists have recommended the following:

- ◆ Do not cast in an area where turtles can be seen repeatedly surfacing to breathe, as this signals they are feeding.
- ◆ If a turtle is caught, cut the fish line as close as possible to the hook (within an inch or two) and remove any other pieces of line that may entangle the turtle.
- ◆ Do not attempt to remove a hook from a turtle unless it is lightly embedded and can be taken out with no added injury.
- ◆ Turtles that are entangled with deeply cutting line or embedded with a hook piercing deep into their body need to be treated by a veterinarian. Keep the turtle in the shade and call the NMFS Marine Turtle Research Program at 983-5730 or, on weekends and holidays, call the State of Hawaii conservation hotline at 587-0077.

For suspected law enforcement violations, call NMFS Law Enforcement at (808) 541-2727 or (800) 853-1964.