SeaWorld And Hubbs-SeaWorld Scientists Uncover Fatal Attraction: Dolphins Choking On Fish, Fishing Line

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ORLANDO, Fla., June 24, 2013 /PRNewswire via COMTEX/ -- A team of scientists from SeaWorld and the Hubbs-SeaWorld Research Institute has uncovered an unusual cause of death among bottlenose dolphins in Florida's Indian River Lagoon: asphyxiation (choking) by ingestion of certain fish.

"This is the first study documenting a statistically significant number of dolphin deaths caused by choking," said Megan Stolen, M.S., Hubbs-SeaWorld Research Institute scientist and the study's principal author.

"This research lays a critical foundation for future study because of environmental changes and invasive species altering prey populations," said Stolen.

Published last week in open-access scientific journal PLOS One, the study found the choking deaths were caused by one of two things: the dolphins had ingested strong-spined fish whose fins had punctured and lodged in the esophagus obstructing the airway; or the animals had eaten fish attached to fishing line which wrapped around the larynx and interfered with breathing. (http://dx.plos.org/10.1371/journal.pone.0066828).

The study found a 4 percent dolphin mortality rate (14 of 350 deaths) over the past 15 years due to asphyxiation. When the Indian River Lagoon animals were compared to dolphins from Florida's oceanside beaches, the significance of these findings was stark. The oceanside animals had no cases of similar asphyxiation either from line or fish ingestion.

While the impact of prey availability is under further review, the connection between dolphin deaths and recreational fishing in the lagoon is of more immediate concern. In more than one-third of the cases identified, researchers found dolphins had choked on fish ensnared with hooks that embedded in the esophagus or with monofilament line that became entangled in the animals' larynx.

Fishing gear -- line, lures, hooks -- has long been recognized as a danger to marine animals, including manatees, sea turtles and dolphins. SeaWorld has rescued and rehabilitated thousands of animals that have become entangled and the company urges anglers to properly use and dispose of gear and avoid fishing in environmentally sensitive areas.

"Over the next year, our work will be focusing on defining all of the significant causes of mortality for dolphins in the lagoon," said SeaWorld's Judy St. Leger, DVM, DACVP, one of the study's coauthors. "We also suspect that this choking concern might be happening in other dolphin populations. We hope this report spurs other researchers to look for and report trends like this." Scientists at SeaWorld and the Hubbs-SeaWorld Research Institute have been monitoring the lagoon's 700+ dolphin population since 1987.

Study contributors include Erika Nilson of SeaWorld, and Wendy Durden, M.S. and Teresa Mazza of the Hubbs-SeaWorld Research Institute.

About Hubbs-SeaWorld Research Institute

Hubbs-SeaWorld Research Institute, founded in 1963 to conduct research in the tradition of worldrenowned scientists Dr. Carl L. and Laura C. Hubbs, is a public, non-profit charity dedicated to providing effective solutions to conflicts that arise between human activity and the natural world. Hubbs-SeaWorld scientists apply sophisticated technologies to seek the solutions that protect and conserve marine animals while benefiting humans and their reliance on marine resources. The Institute also recognizes the critical importance of scientific literacy as a foundation for competing in the highly technical and competitive global economy and strives to provide innovative education programs to promote scientific literacy among our children and young scientists. In 2013, HSWRI celebrates 50 years of its mission "to return to the sea some measure of the benefits derived from it."

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