



**HUBBS
SEAWORLD
RESEARCH
INSTITUTE**

FINS & FLUKES

MARINE MAMMAL STRANDING PROGRAM

SPRING 2017

STRANDING SUMMARY

In 2016, the HSWRI Marine Mammal Stranding (MMS) Team responded to 69 stranded cetaceans (dolphins and whales) including 10 live animals and 59 dead animals. Fifty strandings occurred in Brevard County and 19 strandings occurred in Volusia County. Of these, 23 stranded beachside and 46 stranded in local waterways.

- 59 bottlenose dolphins (*Tursiops truncatus*), 42 of those from the Indian River Lagoon (IRL). Of the IRL dolphins, 7 cases involved human interaction.
- 2 Risso's dolphins (*Grampus griseus*)
- 3 pygmy sperm whales (*Kogia breviceps*), and 2 dwarf sperm whales (*Kogia sima*)
- 1 sperm whale (*Physeter macrocephalus*)
- 1 Atlantic spotted dolphin (*Stenella frontalis*)
- 1 unidentified cetacean



WHAT CAN YOU DO TO HELP A STRANDED WHALE OR DOLPHIN?

To report an injured or dead marine mammal, please call:

1 (888) 404-3922

1. Please do not push the animal back into the water. Stranded animals are typically very sick, injured, or orphaned and will beach themselves again.
2. Keep people and pets away from the animal. Limit the number of people to the minimum needed to hold the animal upright. Petting stranded marine mammals should be avoided because it may cause stress to the animal.
3. Keep the animal upright and relieve pressure from the flippers by digging pits under them in the sand.
4. Keep the animal cool and wet by pouring water on the skin or applying wet towels and shading the animal (avoid getting water in or blocking the blowhole).
5. Avoid the tail area and let go of the animal if it thrashes. Stranded whales and dolphins can be dangerous.

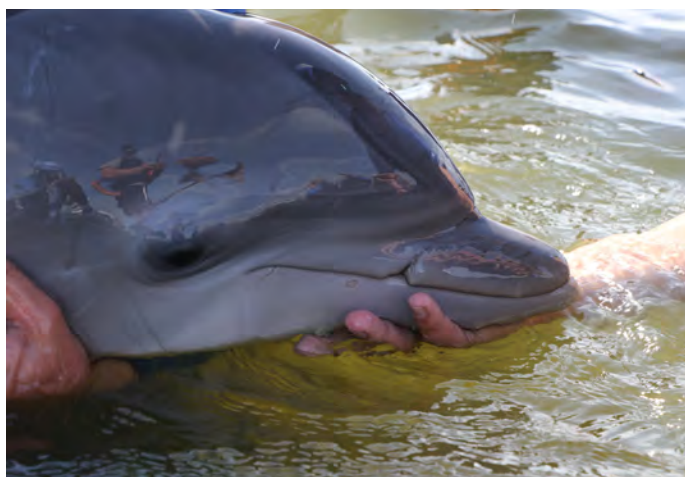
RESPONDED TO
1022
DOLPHIN AND WHALE
STRANDINGS*

*2001-2014

DOLPHIN CALF RESCUED FROM LIFE-THREATENING ENTANGLEMENT

On August 17th, during a mosquito lagoon survey, we sighted an entangled calf swimming with its mother. The mother had been documented previously by our photo-ID work and the calf was determined to be about 13 months old. Sadly, we noted that fishing line was wrapped around and embedded in the calf's dorsal fin tissue as well as the leading edge of its flukes. The calf was swimming alongside its mother and able to surface well enough, but had developed curvature in the spine along the peduncle (tail) - likely a result of the fishing gear and drag over time. The calf appeared to be suffering nutritionally.

HSWRI sighted the mother and calf in multiple subsequent surveys and collected photographs to document the calf's deteriorating condition. On August 19th, an intervention was approved by NOAA Fisheries to capture and disentangle the calf with support from HSWRI's local partners including: SeaWorld Orlando, University of Florida, Harbor Branch Oceanographic Institute, Georgia Aquarium's Dolphin Conservation Field Station, Florida Fish and Wildlife Conservation Commission, and Volusia



County Environmental Management. HSWRI and our collaborators carefully encircled the calf in a net and experienced handlers provided special care supporting him in the water while its mother anxiously remained close by just outside the net. Veterinarians removed large amounts of fishing line and debris, evaluated the calf's injuries and administered an antibiotic. Within a few minutes, the calf was released back to its mother and the pair swam away together.

Veterinarians were concerned about the significant abnormal curvature in the calf's peduncle. We are pleased to report that since the disentangling, the peduncle seems to have straightened out nicely. The calf has since been sighted doing remarkably well, foraging and skillfully catching fish on its own, socializing with its mother, and lifting its tail out of the water. We look forward to seeing the calf (now nick-named "Gryff") over the coming months in our surveys and hope he will continue to thrive.

NEWBORN SPERM WHALE STRANDS ALIVE AT PONCE INLET



On August 27th, HSWRI's MMS Team received a report from Volusia County Beach Patrol about a small whale that had stranded along the shoreline. We arrived at the scene where it was being supported by beach patrol and staff from the Marine Science Center until help arrived. The animal was identified as a neonate sperm whale (*Physeter macrocephalus*), an endangered species. Unfortunately, the young 10-foot male was in very poor condition and expired on the beach within the hour. The animal was then transported to the Marine Discovery Center where a post-mortem exam, or necropsy, was conducted by our staff and Volusia County Environmental Management. Findings included neonatal characters indicating the animal was born quite recently and had sustained superficial shark bites. The whale's heart was grossly abnormal in shape and further analyses revealed the animal suffered from congenital heart disease. Likely the calf stranded after being separated from its mother. Sperm whale strandings are rare in our study area with only four strandings of this species in the past 20 years. These large toothed-whales can grow to over 50 feet in length and dive to feed on squid, sharks, skates and fish, sometimes staying under water for more than an hour reaching depths over 3,000 feet. Sperm whales inhabit deep waters in all oceans of the world. Sadly, their population has been negatively

impacted by years of commercial whaling. They continue to face threats from ship strikes, entanglements, human-related noise, and pollutants. For more information about sperm whales and other cetaceans, visit: <http://www.fisheries.noaa.gov/pr/species/mammals/>

WELL-KNOWN DOLPHIN FOUND DEAD IN THE MOSQUITO LAGOON



On October 26th, HSWRI recovered a dolphin that was found stranded along a seawall in New Smyrna Beach. Upon our arrival, we were sad to see that the animal was a dolphin well-known by our team nick-named "Raggedy Anne." We have been tracking this older female dolphin in our response area since 2008 when we initiated routine surveys and she was regularly sighted rearing her calves. She had survived numerous shark bites as well an outbreak of morbillivirus (a contagious virus that can spread among dolphins). We last observed her on October 18th and noticed that she was thin and in poor condition. Preliminary results indicate that Raggedy Anne suffered from lung disease; lab analyses may provide further insight into the cause of her death.



INDIAN RIVER LAGOON DIE-OFFS: CSI RESEARCH CONTINUES

HSWRI efforts to determine the underlying cause of the Indian River Lagoon (IRL) multi-species die-off that started in 2013 continue. All common pathological causes have been ruled out and a proposed ecological factor - short term changes in prey availability - also unlikely based on a study first reported by postdoc Dr. Sam Rossman. In 2016, Dr. Rossman shared his findings at a meeting of marine mammal biologists and received the John R. Twiss Jr. Award for innovative research in ecosystem conservation. Current research is employing a new laboratory technique to assess how a past legacy of pollution may be impacting the IRL and contributing to the die-offs. We are studying rare forms of nitrogen locked away within layers of bottlenose dolphin teeth.



**HELP US FIND CLUES TO
RESTORE IRL HEALTH**

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These analyses are only possible thanks to the rich collection of archived samples and accompanying data obtained by current HSWRI scientists Megan Stolen, Wendy Noke Durden and Teresa Jablonski, and former HSWRI scientists Nelio Barros, Dan Odell, and others, over the past 20 years. One working hypothesis is that factors such as nitrogen pollution contributed by wastewater and fertilizer may have caused gradual changes in the estuarine environment that reached a tipping point in 2013. As restoration efforts (e.g., muck removal) ramp up in the IRL, studies such as this are vitally important because they lend historical context as to how the ecosystem functioned prior to human disturbance and will provide a target to evaluate the efficacy of current and future proposed remediation projects.



FIRST COMPREHENSIVE BOTTLENOSE DOLPHIN SURVEY IN THE INDIAN RIVER LAGOON

In the summer of 2016, Hubbs-SeaWorld Research Institute and collaborators initiated the first comprehensive bottlenose dolphin surveys of the Indian River Lagoon (IRL). The study is a significant effort including collaborators from Harbor Branch Oceanographic Institute, SeaWorld Orlando, the Georgia Aquarium Dolphin Conservation Field Station, St. Johns River Water Management District, and Volusia County Environmental Management. Survey work has been needed to estimate the current abundance of dolphins in the IRL following multiple Unusual Mortality Events.

Since the project began, we've completed replicate surveys during the summer, fall, and winter seasons, covering the entire IRL nine times, during which our staff have sighted nearly 1,800 dolphins. The surveys were funded by NOAA SeaGrant and other public and private sources. We are incredibly honored to provide leadership for these vital surveys that will inform local resources management actions on dolphin welfare. We thank our partners and faithful stranding volunteers for their assistance in making this project a reality!



A HEALTHY HAPPY THRIVING DOLPHIN

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OUR PURPOSE

Why we exist

*To conserve and renew
marine life to ensure a
healthier planet.*

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OUR VISION

Our long-term impact

*Working together to
steward a healthier
planet where humans
and marine life thrive
together.*

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This list is comprised of donors who supported HSWRI's Florida Team from February 2015 to February 2017. Though we take every possible step to ensure its accuracy, with a list of this nature it is possible that an oversight has occurred. If your name has been omitted or there is an error in the listing, we apologize and ask that you contact us at 619-226-3871.



FINS & FLUKES

HURRICANE MATTHEW: \$28,000 RAISED

HSWRI's Florida lab was heavily damaged by Hurricane Matthew in October 2016. A huge water surge and 105 mph winds wreaked havoc on our site, located only 50 feet from the edge of the Indian River Lagoon. Complete restoration will cost more than \$250,000. Thanks to a generous challenge gift and additional community support, a total of \$28,000 has been raised for repairs to date. Thank you!



HSWRI Florida dock pre-Hurricane

Funding of \$222,000 is still needed to complete lab and seawall restoration.

Our stranding team has faithfully responded to dolphins in distress but our research capabilities are severely diminished as lab repairs remain unfunded. Work to benefit the IRL is at a standstill until more than 120 tissue samples, collected over the last three decades, are returned to our lab from offsite freezers.

Join our supporters today with your generous gift to benefit HSWRI, our staff, and the precious dolphins of your local lagoon!



HSWRI Florida dock post-Hurricane



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www.discoverfloridasoceans.org

*All members will receive the HSWRI Marine Mammal Stranding Program. "Fins and Flukes" newsletter and Society members are invited to special HSWRI events. Donations may also be made online at www.hswri.org/donate-now/ or by credit card at 619-226-3871.

