

ASSATEAGUE ISLAND NATIONAL SEASHORE
MARINE ANIMAL STRANDINGS 2008 - 2009

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Abstract

A total of 33 marine animals stranded dead on Assateague Island National Seashore between the Ocean City inlet and the Maryland/Virginia state line during the years 2008 through 2009. Sixteen were sea turtles and 17 were marine mammals. The breakdown for total strandings each of those years was 14 and 19 respectively. The sea turtle/marine mammal breakdown for each year was 4/10 and 12/7 respectively. Of the turtles that stranded, most were loggerheads (*Caretta caretta*) with 4 and 11 recorded for each year. Two had flipper and/or PIT tags. One Leatherback turtle (*Dermochelys coriacea*) stranded in 2009. Marine mammal strandings (with respective number per year) included three Bottlenose Dolphins (*Tursiops truncatus*) (3, 0), three Harbor Porpoises (*Phocoena phocoena*) (2, 1), three Common Dolphins (*Delphinus delphis*) (1, 2), two Humpback Whales (*Megaptera novaeangliae*) (1, 1), two Harp Seals (*Phoca groenlandica*) (0, 2), one Atlantic White-sided Dolphin (*Lagenorhynchus acutus*) (1, 0), one Gray Seal (*Halichoerus grypus*) (1, 0) and one Gervais' Beaked Whale (*Mesoplodon europaeus*) (0, 1). Unidentified strandings included an odontocete in 2008. There was convincing evidence that the cause of death of a Harbor Porpoise and Humpback Whale, both in 2008, was the result of boat strikes. The Marine Mammal and Sea Turtle Stranding Program, through the Cooperative Oxford Laboratory in Maryland, prepared a written report for each stranding following examination of most of the carcasses. Strandings were documented in all months except December. From 1991 through 2009, the average number of animals stranding per year was 19 and the range was eight to 34 animals.

Introduction

The Maryland portion of Assateague Island is approximately 35 kilometers (km) in length and is bordered by the Atlantic Ocean and Sinepuxent and Chincoteague Bays. This portion of the island is managed by either the National Park Service (NPS) as Assateague Island National Seashore (ASIS) or the Maryland Department of Natural Resources (DNR) as Assateague State Park (ASP). Assateague Island National Seashore is open year-round and the combined beach use by park staff and visitors usually results in fairly quick reports of stranded marine animals. This report details sea turtle and marine mammal strandings that occurred within ASIS between 2008 and 2009, with a table documenting all strandings that have been recorded historically.

NPS Management Policies recognizes that naturally occurring wildlife injuries, disease, and death are important factors driving the process of natural selection, and ultimately contribute to the overall health and vigor of native wildlife populations. In recognition of the scientific information opportunities any live or dead marine animal offers, ASIS allows stranded animals to be examined and sampled by experienced cooperators, and occasionally removed from the park for further study or rehabilitative efforts. Ideally, any live animals removed or rescued from ASIS should be released from the island when possible. Similarly, only animals rescued from ASIS should be released from the island, unless extenuating circumstances warrant the release of animals taken from locations other than ASIS. Requests to release any animal from ASIS are reviewed by the Chief of Resources Management, and approved on a case-by-case basis. Recovery assistance is provided for federally threatened and endangered species, or non-listed species suffering from human induced injury or illness. All live and dead strandings are documented, regardless of condition or recovery efforts. Refer to the ASIS Sick, Injured and

Dead Wildlife Response Protocol for more detailed information about handling procedures and management guidelines.

The Cooperative Oxford Laboratory (COL) is operated under a partnership between DNR and the National Oceanic and Atmospheric Administration (NOAA). Through COL, the Marine Mammal and Sea Turtle Stranding Program (MMSTSP), established in 1990, coordinates responses and collects data on all dead strandings on the Delmarva Peninsula. Facilities at COL include a laboratory equipped to necropsy marine animals. Their efforts help develop information on stranding patterns, human interactions and the population health of marine animals. Dead or alive, stranded marine animals provide researchers, resource managers, and others with an invaluable source of information from species that may not otherwise be available for study. The staff at ASIS has worked cooperatively with MMSTSP since 1991, and will continue this team effort so data collection is consistent and readily available.

In addition to COL staff, other members of MMSTSP include the National Aquarium in Baltimore (NAIB) which directs the Marine Animal Rescue Program (MARP), and the Smithsonian Institution (SI). MARP focuses its efforts towards rescue and rehabilitation efforts, and SI assists with events involving unusual or rare species.

The Archie Carr Center for Sea Turtle Research (ACCSTR) at the University of Florida coordinates a program to distribute sea turtle tags and manage recapture data, along with maintenance of a tag number database. This database includes tag number series submitted by researchers worldwide in an effort to avoid duplications, and lists the organization to contact for each tag to obtain information on stranded or recaptured tagged turtles.

Methods

After a dead animal was observed by or reported to ASIS staff, a simple assessment of its overall condition, estimated size, tentative species identification, and the stranding location was made. This information was generally reported directly to COL by calling their stranding phone. If response from MMSTSP was delayed, RM staff tried to confirm the presence and location of the carcass, especially if the carcass was near the intertidal zone and subject to tidal action. If it was in danger of washing back out, efforts were made to tow larger carcasses out of the tidal zone, ideally to west of the OSV travel lanes. Smaller carcasses could be removed from the beach to a more accessible area such as the shell road or Seashore Headquarters.

MMSTSP staff usually conduct an examination for all responses, whether on site or in their lab. The examination report documents evidence of human-induced or other interactions, internal and external condition of animal, abnormalities, and evidence of disease or parasites. Measurements are taken from both whole and partial specimens, and where possible, samples are taken for genetics, histology and toxicology. Where species and condition of the carcass warranted, some whole organs are preserved for study. All reports include the location, species, sex, condition of the animal and general observations. Complete necropsies and histology can only be performed on freshly dead specimens. Following examination, the possible cause of death and final disposition of the animal is noted. Occasionally strandings are located near a sensitive plover nesting site or are carried back out by the tide before the team can arrive. In those cases where

examination cannot be performed, photos and measurements are taken by ASIS staff when possible to document the stranding.

MMSTSP maintains current collection permits required by the National Marine Fisheries Service (NMFS) through NOAA, as well as a list of approved research requests for specific species or tissue. Authorization letters are specific to the individual response person and affiliation, and include justification for possession of the requested samples. Carcass condition of the stranded animals was a critical factor determining the types of samples harvested. Samples collected from stranded animals from ASIS were listed on the completed stranding reports.

Reports were catalogued by MMSTSP including reports of special findings and photographs when applicable. A copy of the final stranding report for each animal was sent to ASIS for reference. Carcasses were either left to naturally decay at the original stranding location, placed on the beach away from public areas, preserved for educational or research purposes, or incinerated at the laboratory.

Data Storage

All marine animal strandings that occurred at ASIS are documented in NPS files. The ASIS database for Stranded Marine Animals is stored in the RM Electronic Library under G:\Electronic Library\03 T&E Animals\08 Marine Animal Strandings\Stranded Database\Strandings. All hard copy COL/MMSTSP stranding reports are located in the RM library.

The MMSTSP maintains records for dead strandings in Maryland, and has access to data from other states. Records for live, rescued animals are maintained by MARP, although formal documents are usually not prepared for external use. The Smithsonian has a restricted Internet accessible database, which has data and information on marine animals.

Results/Discussion

There were 33 strandings from 2008 through 2009 with totals of 14 and 19 for each of those years respectively. The number of sea turtles for each year was 4 and 12 for a total of 16, and the number of marine mammals for each year was 10 and 7 for a total of 17 (Table 1). From 1991 through 2009, the average number of animals stranding per year was 19 and the range was eight to 34 animals. Species breakdown for each year from 1991 through 2009 is shown in Table 3. Strandings occurred in every month except December for this report period.

	2008	2009	Total
Turtles	4	12	16
Mammals	10	7	17
Total	14	19	33

Table 1: Marine Animal Strandings 2008-2009

Cause of death was determined to be from boat strike injuries for one Harbor Porpoise and one Humpback Whale. Several turtles had cracks and/or crushing of their carapaces, but it could not be determined if they had occurred pre- or post-mortem.

Table 2 lists the two Loggerhead Turtles that stranded with tags. Turtle 09-CCA-34 had a single metal tag on the right rear flipper, labeled “TTB220 Reward Premio Dept Zoology UF Gainesville FL USA”. The following information regarding this turtle was included in the MMSTSP stranding report:

“We received information that this tag was used by Woods Hole Oceanographic Institute for the fisheries observer program. Mike Tork (Woods Hole Oceanographic Institute) reported the following in an email to Peter Eliazar (Archie Carr Center for Sea Turtle Research at University of Florida): ‘The loggerhead turtle was caught during a trawl trip targeting summer flounder on 9-5-09. Location - 38 47.9 / 74 58.3. The observer attempted to resuscitate the turtle without success. The turtle was kept on board the vessel, per observer’s request, until it was tossed overboard by the crew early 9-7-09. The crew tossed the turtle just offshore of Cape May, NJ, while the observer slept. The intent of the observer was to bring it into port (Cape May) and his Area Coordinator, along with stranding personnel, were waiting at the dock for the turtle. This is an ongoing investigation by NMFS OLE.’”

Turtle 09-CCA-42 had tags on both front flippers, and a PIT tag. The middle characters of the right front tag were obscured by barnacles. The ACCSTR provided the following information:

“Turns out this turtle was a regular nester on Jekyll Island, GA. She was originally tagged when she nested on 6/6/93 with flipper tags QQY726/QQY727 and PIT tag 00004EFAEF. Her measurements were CCL=103 cm, CCW=101 cm. She nested again on 6/19/93, 7/3/93, 7/15/93, 6/15/96, 6/27/96, 7/11/96, 5/26/99, 6/9/99, 6/22/99, 7/4/99, 5/18/08, 6/3/08, 6/13/08, 6/26/08 and 7/8/08. On 7/8/08, her measurements were SCL(n-t)=99 cm, SCL(n-n)=95.5 cm, SCW=74.2 cm, CCL(n-t)=107 cm, CCL(nn)=104.5 cm, CCW=100 cm. Tag YYG077 was added on 5/18/08.”

Date	Species	MDDNR ID	Flipper Tag	PIT Tag
9/10/09	<i>Caretta caretta</i>	09-CCA-34	Right rear: TTB220	not scanned
10/16/09	<i>Caretta caretta</i>	09-CCA-42	Left front: YYG077 Right front: Y____6	00-004E-FAEF

Table 2: Sea Turtle Tag Data

Common Name	Pre-1991	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Fin Whale	*																				
Humpback Whale	*		2								1							1	1	1	6
Northern Right Whale													1								1
Pygmy Sperm Whale	*													1							1
Dwarf Sperm Whale	*																				
Sperm Whale						1					1										2
Gervais' Beaked Whale																			1	1	
True's Beaked Whale	*																				
Atlantic White-sided Dolphin	*			1				1								1	1		1		5
Bottlenose Dolphin	*	1	4	5	2	1	3	1		1	1	3	4	7	6	1	6	4	3		53
Common Dolphin	*						1				1	1			3				1	2	9
Harbor Porpoise	*	2		3	10	1	3	9	1	15	1	3		1	1	2			2	1	55
Long-finned Pilot Whale			2	1						1						3					7
Short-finned Pilot Whale			3																		3
Risso's Dolphin	*				1							1		2	1	1					6
Striped Dolphin	*	1	1			1						1		2							6
Gray Seal	*																	1	1		2
Harbor Seal			2	1		1	1		1	1						1					8
Harp Seal							1		1			2				1		2		2	9
Hooded Seal								1				1						1			3
Green Turtle											1	1									2
Kemp's Ridley Turtle													1								1
Leatherback Turtle						2					2	2	2	2	9		3			1	23
Loggerhead Turtle	*	8	7	9	7	6	9	5	3	4	6	15	23	3	12	1	6	6	4	11	145
Unidentified	*		2						2						2	1			1		8
Total		12	23	20	20	13	18	17	8	22	14	30	31	18	34	12	16	15	14	19	356

Table 3. Historic Marine Animal Strandings at Assateague Island National Seashore, MD