

ASSATEAGUE ISLAND NATIONAL SEASHORE
MARINE ANIMAL STRANDINGS 2004 - 2007

Allison Turner
Biological Technician
Division of Resource Management

Assateague Island National Seashore
7206 National Seashore Lane
Berlin, MD 21811
410-641-1443

November 28, 2007

Abstract

A total of 77 stranded marine animals (two living) came ashore on Assateague Island National Seashore between the Ocean City inlet and the Maryland/Virginia state line during the years 2004 through 2007. Thirty-seven were sea turtles and 40 were marine mammals. The breakdown for each of those four years was 34, 12, 16 and 15 respectively. The sea turtle/marine mammal breakdown for each year was 21/13, 1/11, 9/7 and 6/9 respectively. Of the turtles that stranded, most were loggerheads (*Caretta caretta*) with 12, 1, 6 and 6 recorded for each year. Three had flipper and PIT tags. Leatherback turtles (*Dermochelys coriacea*) also stranded, at a rate of 9, 0, 3 and 0 for each year. Marine mammal strandings (with number per year) included 17 Bottlenose Dolphins (*Tursiops truncatus*) (6, 1, 6, 4), two live Risso's Dolphins (*Grampus griseus*) (one was euthanized and one died on the beach; 1, 1, 0, 0), three Harbor Porpoises (*Phocoena phocoena*) (1, 2, 0, 0), two Atlantic White-sided Dolphins (*Lagenorhynchus acutus*) (0, 1, 1, 0), and three Harp Seals (*Phoca groenlandica*) (0, 1, 0, 2). Species documented in only one of the four years included three Common Dolphins (*Delphinus delphis*) in 2004, three Long-finned Pilot Whales (*Globicephala melas*) and one Harbor Seal (*Phoca vitulina*) in 2005, and one Hooded Seal (*Cystophora cristata*), one Gray Seal (*Halichoerus grypus*) and one Humpback Whale (*Megaptera novaeangliae*) in 2007. Unidentified mammals included a seal and a cetacean in 2004, and an odontocete in 2005. The Marine Mammal and Sea Turtle Stranding Network, through the Cooperative Oxford Laboratory in Maryland, examined all dead strandings except four and prepared written reports. Strandings were documented from mid-February through late December. From 1991 through 2007, the average number of animals stranding per year was 19 and the range was eight to 34 animals. Cause of death in two cases, and possibly three more, was determined to be the result of human activities. One case was a suspected human-caused laceration to a seal's head, and the other four cases, all turtles, were confirmed or suspected boat strikes.

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 2004 and 2007.

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 Network (MMSTSN), established in 1990, coordinates response 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 MMSTSN since 1991, and will continue this team effort so data collection is consistent and readily available.

In addition to COL staff, other members of MMSTSN 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 Lauren Shilling of COL. If response from MMSTSN 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. Occasionally, arrangements were made to transfer small carcasses from the beach to a more accessible area such as the shell road or Seashore Headquarters.

MMSTSN 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 were taken from both whole and partial specimens. All reports included the location, species, sex, condition of the animal and general observations. Complete necropsies and histology could

only be performed on freshly dead specimens. Following examination, the possible cause of death and final disposition of the animal was noted.

MMSTSN 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 MMSTSN 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 stranding reports are located in the RM library.

The MMSTSN 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 77 strandings from 2004 through 2007 with totals of 34, 12, 16 and 15 for each of those years respectively. The number of sea turtles for each year was 21, 1, 9 and 6 for a total of 37, and the number of marine mammals for each year was 13, 11, 7 and 9 for a total of 40 (Table 1). From 1991 through 2007, 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 2007 is shown in Table 2. Strandings occurred in every month except January and November for this report period, although most occurred May through October. In four cases, stranded animals washed back out before the stranding team could respond, so those incident/necropsy reports were based solely on what could be seen in the photographs provided by ASIS staff.

	2004	2005	2006	2007	Total
Turtles	21	1	9	6	37
Mammals	13	11	7	9	40
Total	34	12	16	15	77

Table 1: Marine Animal Strandings 2004-2007

Cause of death was determined to be from boat strike/propeller injuries in two turtle cases. Two more turtles had prop cracks in their carapaces from boat strikes, but it could not be determined if they had occurred pre- or post-mortem. A penetrating laceration on a seal's head was suspected to be human-caused.

Table 2 lists the three Loggerhead Turtles that stranded with flipper and PIT tags.

Date	Species	MDDNR ID	Flipper Tag	PIT Tag
9/28/04	<i>Caretta caretta</i>	04-CCA-54	RRC982	436A1C7803
8/31/06	<i>Caretta caretta</i>	06-CCA-28	SSX984	436A3E6350
9/19/07	<i>Caretta caretta</i>	07-CCA-30	RRJ705	44397B240F

Table 2: Sea Turtle Tag Data

The ACCSTR provided the following information on these turtles:

Strand date 9/28/04: Female tagged when she nested on Blackbeard Island, GA on 5/26/03

Strand date 8/31/06: Female tagged when she nested on Blackbeard Island, GA on 6/5/02. She nested again on Wassaw Island, GA on 7/12/05

Strand date 9/19/07: Female tagged when she false crawled on Pritchards Island, SC on 5/18/03. Measurements were taken at that time. She then nested three times that summer on Pritchards Island.

Common Name	Pre-1991	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total
Fin Whale	*																		
Humpback Whale	*		2								1							1	4
Northern Right Whale													1						1
Pygmy Sperm Whale	*													1					1
Dwarf Sperm Whale	*																		
Sperm Whale						1					1								2
True's Beaked Whale	*																		
Atlantic White-sided Dolphin	*			1				1								1	1		4
Bottlenose Dolphin	*	1	4	5	2	1	3	1		1	1	3	4	7	6	1	6	4	50
Common Dolphin	*						1				1	1			3				6
Harbor Porpoise	*	2		3	10	1	3	9	1	15	1	3		1	1	2			52
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
Harbor Seal			2	1		1	1		1	1						1			8
Harp Seal							1		1			2				1		2	7
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		22
Loggerhead Turtle	*	8	7	9	7	6	9	5	3	4	6	15	23	3	12	1	6	6	130
Unidentified	*		2						2						2	1			7
Total		12	23	20	20	13	18	17	8	22	14	30	31	18	34	12	16	15	323

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