



Contact: Shelley Dawicki  
508-495-2378  
shelley.dawicki@noaa.gov

June 1, 2016  
SS16.09

## **Cape Gray Seal Molting Season Ending, Seals Disperse for the Summer and Fall**

Researchers from several federal agencies and local non-profit organizations are monitoring the gray seal population on Cape Cod, where the seals are now finishing their spring molt period when they shed their hair. Many of the seals have been hauled out during this time on South Monomoy Island, part of the Monomoy National Wildlife Refuge in Chatham, Mass. managed by the U.S. Fish and Wildlife Service.

“Gray seals have been seen in dense concentrations on the island for the past six weeks or so, from late March into early May,” said Kimberly Murray, coordinator of the seal research program at NOAA’s Northeast Fisheries Science Center (NEFSC) laboratory in Woods Hole, Mass. “The area is fairly remote from human activity and appears to be their preferred haulout location for the annual molt this year.”

Gray seals give birth or pup in late December through early February on Muskeget Island off Nantucket, and in recent years on South Monomoy Island as well. The largest seal aggregations, however, are seen during the spring molt. The animals will disperse after the molt to many other locations in the Northwest Atlantic and will continue to haul out at these locations throughout the year.

Researchers from the NEFSC, the Fish and Wildlife Service (FWS), the Center for Coastal Studies (CCS), International Fund for Animal Welfare (IFAW), and other partner organizations routinely monitor the population of both gray and harbor seals in the area and conduct research on the animals in an effort to learn more about their behavior and role in the ecosystem. The FWS and the National Park Service assist research efforts through access to haul-out areas, equipment and logistical support, and exhibits on the ecology of local marine life.

Gray seals have a presence year-round in southeastern Massachusetts, while the smaller harbor seals are fairly rare on the Cape in late spring and summer. Harbor seals head north to Maine by late April to give birth there in May and early June. They molt in July and don’t return to Cape Cod and the Islands until the fall.

“Gray seals molt their skin and hair once a year,” said Lisa Sette, a member of the marine animal entanglement response team and project leader for the seal program at the Center for Coastal Studies in Provincetown. “The molt may take several weeks to complete,

during which time the seals spend less time in the water foraging and more time hauled out on land because the molting process is physiologically demanding.”

### **Aerial surveys, tagging provide data**

Based on aerial survey data from 2014 and 2015, fewer gray seals are hauled out on South Monomoy Island in summer and fall. The seals start to use other haul-out sites in the area, around Chatham Harbor and along the Cape Cod National Seashore - areas that are managed by the National Park Service - after the molt. Haul-out sites are locations where seals aggregate on land. Gray seals around Cape Cod are part of a much larger population in the Western North Atlantic, with hundreds of thousands inhabiting Canadian waters.

An aerial survey flight over South Monomoy Island on April 25 by the Center for Coastal Studies photographed many of the molting seals. The goal of the flight was to better understand the seasonal patterns of gray seals in the area.

On that day NEFSC researchers counted roughly 25,000 gray seals hauled out on that island, which is more than observed around the same time last year. However, the annual counts can vary widely based on the timing and frequency of surveys because the peak time when the most animals are hauled out is unknown.

A full survey of all seal haul-out sites in southeastern Massachusetts, from Nomans Land Island National Wildlife Refuge off the southwest tip of Martha's Vineyard to Plymouth, was conducted on May 11 by the Center for Coastal Studies. NEFSC researchers are analyzing trends in the seal population over time and hope to have the results later this year.

“Supplementing the surveys with more information to estimate total abundance would be helpful,” Murray said. “If we could tag some of the animals prior to the survey we could estimate how many seals were in the water at the time of the survey and therefore be able to estimate the size of the total population. We could also find out more about local movements between the sites we are monitoring.”

Many more tags would be required, placed on both male and female juveniles and adults, to adequately account for the percentage of seals in the water as opposed to those hauled out on land that can be seen and counted in aerial surveys. Stephanie Wood, a seal researcher at the NEFSC, is developing a seal pup production model using data from aerial surveys at Muskeget Island, Maine's Seal Island, and other locations. The model could provide an alternative approach to estimating the size of the breeding seal population.

Nine gray seals have been live-captured and tagged in the past few years, including the first gray seal tagging effort on the Cape in 2013. The 2013 tagging was the largest and only tagging effort of its kind to occur in the United States on gray seals. It is a difficult and expensive process; gray seals are large animals and can be aggressive, and capturing a seal from a group of animals can be dangerous. Satellite tags cost about \$5,000 each, and will only stay on until the next molt.

Information from the previously-tagged animals has revealed clues about their behaviors. One tagged animal traveled hundreds of miles around the Cape and Islands over many months before the tag fell off in the next molt.

These types of behavioral data can also provide clues about where gray seals go to forage at sea and the size of their home ranges. Although seals are seen congregated on a few haul-out sites, their primary habitat is actually in and under the water out of sight. An understanding of the role seals play in our marine ecosystems requires an understanding of where the seals go and what they do when they are not hauled out on shore.

“Until more tags can be placed on animals, aerial surveys will only lead to minimum estimates of population abundance,” Wood said. Historically, gray and harbor seals were present here and were a part of the ecosystem. As they return to the areas they once colonized, researchers share information and use the images from aerial surveys not only to learn about their abundance and distribution but also to determine the human impact on the animals, such as entanglements in fishing gear.

### **Collaboration Leads to a Disentanglement**

Images from the April 25 aerial survey showed several entangled animals on South Monomoy Island that warranted a closer look by a ground crew. Such entanglements are not uncommon, and IFAW frequently conducts vessel-based disentanglement surveys in Chatham Harbor. The majority of entanglements observed during surveys involve monofilament netting or line that encircle the neck of seals. These entanglements are life-threatening; if not removed, the entangling material slowly constricts over time as the seal grows and can lead to eventual death.

South Monomoy Island, one of three islands in the Monomoy National Wildlife Refuge, is a unique environment. Isolated and only accessible by small boat, the island’s federal wilderness area designation means a lack of roads and mechanized equipment. The wide beach and lack of crowds make it a suitable site for disentanglement operations.

For the recent event, collaboration between several of the organizations led to a quick response and a positive result. CCS researchers notified IFAW of entangled seals they found in their survey images, and provided IFAW with the GPS coordinates from the survey.

“The data helped us narrow down the area for a ground search and identify animals with gear on them,” said C.T. Harry, assistant stranding coordinator at IFAW. “Not all seals can be successfully disentangled; we look for circumstances that present a high degree of success, such as smaller animals, those isolated from the herd, or high on the beach away from the water. In this case we were able to disentangle one of the seals, attach a flipper tag, and release it back to the wild.”

Residents and visitors will see gray seals hauled out on sandy areas and in local waters throughout the summer and fall. Since they travel between locations, you may be seeing the same seals in different places. Keep a safe distance away as required by law. Animals in obvious distress or entangled should be reported to the stranding network (<http://www.fisheries.noaa.gov/pr/health/report.htm>). On Cape Cod, call IFAW at 508-743-8548.

###

Related links:

Gray Seals: <http://www.fisheries.noaa.gov/pr/species/mammals/seals/gray-seal.html>

Scientists to Try Cape Cod's First Tagging and Sampling Effort on Adult Gray Seals:

[http://www.nefsc.noaa.gov/press\\_release/2013/News/NR1305/](http://www.nefsc.noaa.gov/press_release/2013/News/NR1305/)

Surveys Show Increasing Populations of Gray and Harbor Seals in New England:

[http://www.nefsc.noaa.gov/press\\_release/2009/SciSpot/SS0901/](http://www.nefsc.noaa.gov/press_release/2009/SciSpot/SS0901/)

Seal Research at NEFSC: <http://www.nefsc.noaa.gov/psb/seals/>

Center for Coastal Studies: <http://coastalstudies.org/programs/seal-research>

International Fund for Animal Welfare (IFAW): [http://www.ifaw.org/united-states/our-](http://www.ifaw.org/united-states/our-work/seals/rescuing-seals-distress)

[work/seals/rescuing-seals-distress](http://www.ifaw.org/united-states/our-work/seals/rescuing-seals-distress)

Monomoy National Wildlife Refuge: <http://www.fws.gov/refuge/Monomoy/about.html>

The Northwest Atlantic Seal Research Consortium: <http://nasrc.who.edu/page.do?pid=116616>