



**Natural Heritage  
& Endangered Species  
Program**

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*Massachusetts Division of Fisheries & Wildlife*

**Sperm Whale  
*Physeter macrocephalus***

State Status: **Endangered**  
Federal Status: **Endangered**

**DESCRIPTION:** The Sperm Whale is the largest of the toothed whales, with females weighing up to 15 tons and reaching lengths of 11 m, and males up to 45 tons at lengths of 16 m. The Sperm Whale's skin is coarse with irregular corrugations and mostly colored dark grey, though some individuals have white patches on the belly. Their head takes up approximately one-third of their total body length and has a unique single blowhole on the front left side of the head. The small dorsal fin is low enough to be unnoticeable as there is a series of lower bumps visible along the top of the tail posterior to the fin. The lower jaw is very narrow and contains 20 to 26 conical functioning teeth. Adults have a large, overhanging rostrum that contains the spermaceti organ. The species' teeth may not be necessary for feeding as they do not break through the gums until after puberty and healthy Sperm Whales have been captured that do not possess any teeth. The Sperm Whale's brain is the largest of any animal at 7.8 kg in mature males.

**RANGE AND HABITAT:** Sperm Whales can be found in all the oceans of the world, but primarily in the higher latitudes from 45° north and south. Sperm Whales generally inhabit deep water over 1,000 m in depth and are uncommon in shallow waters. Young whales live in tropical and subtropical waters, until they migrate towards the poles sometime between the ages of 4 and 21. Thereafter, they occasionally return to warm water for breeding. Though the Sperm Whale's range depends on multiple variables such as locations of food sources, breeding condition, age, and sex, there is a general seasonal north-south movement of the species. Sperm Whales inhabiting US waters have been divided into five populations: California-Oregon-Washington; North Pacific (Alaska); Hawaii; Northern Gulf of Mexico; and North Atlantic. Though the Sperm Whale's migration patterns are generally understood, they still remain complex and difficult to predict.



*Photo courtesy of NOAA*

**DISTRIBUTION IN NEW ENGLAND WATERS:**

Live adult Sperm Whale sightings are very rare in Massachusetts waters as well as in the Gulf of Maine. They usually remain in deeper water off the continental shelf. The few live Sperm Whales seen in New England have usually been very young calves, but two large adult males have washed up on Nantucket in recent years. The first was a 47-foot animal that stranded alive on Low Beach, Siasconset, on December 30, 1997. Its skeleton is now on display in the Nantucket Whaling Museum. The second was a 46-foot, 45-ton whale that washed up on June 7, 2002, at Great Point. The skeleton of this animal is now on display in the New Bedford Whaling Museum.

**LIFE HISTORY AND ECOLOGY:** Sperm Whales are a social species and often form units of adult females, their young, and juveniles of either gender. These stable, long-term matriarchal units often result in separation based on age and sex. Females reach sexual maturity at around 9 years of age and produce a calf at the rate of about one every five years. There is a 14- to 16-month gestation period and females give birth to a single calf

*A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan*

**Massachusetts Division of Fisheries & Wildlife**

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Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.

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that can be up to 4 m in length. Puberty in males is prolonged and may not be reached until the whale is 10 to 20 years old. A male may not actively participate in breeding until his late twenties. The lifespan of the Sperm Whale is not definitively known; however, females physically mature around 30 years of age while males mature at 50.

The Sperm Whale's diet consists mainly of large squids, sharks, skates, and other fishes. The average dive for a Sperm Whale when capturing food lasts around 35 minutes, but they may dive for up to an hour and reach depths over 1000 m.

**POPULATION STATUS:** Despite a significant population decline caused by commercial whaling in the nineteenth and twentieth century, the Sperm Whale remains the most abundant of the large whale species. Current estimates range from 200,000 to 1,500,000 individuals. As for other whales, Sperm Whales are threatened by ship strikes, entanglement in fishing gear, pollution, habitat degradation, predation of young by Killer Whales, and disturbance by anthropogenic noise.

**STRANDED WHALES:** For all live or dead marine mammal strandings, please call one of the following Hot Lines:

For Cape Cod: 508-743-9548  
IFAW Marine Mammal Rescue and Research

For areas near Boston: 617-973-5247  
New England Aquarium

For all other areas: 978-281-9300  
National Marine Fisheries Service, Gloucester

Be prepared to provide the following information:

- Name and contact number
- Location of animal with detailed description and nearby landmarks, if possible
- Number, size, and type of animal
- Any other helpful information such as behavior or tidal cycle

Keep a safe distance away from the animal. For mass strandings of two or more animals and large whales, the International Fund for Animal Welfare will establish an

incident command system where respondents will have logo gear and/or vests.

For all dead marine mammals, please describe:

- If the carcass is marked with grease pen or tagged, note the tag's color, number, and position on the animal

Though every carcass cannot be removed due to budget limitations, it is required by law that data and samples be collected from every dead marine mammal that comes to shore.

## REFERENCE

Sperm Whales (*Physeter macrocephalus*). Office of Protected Resources. NOAA Fisheries. URL: <http://www.fisheries.noaa.gov/pr/species/mammals/whales/sperm-whale.html>

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