Government of Canada Gouvernement du Canada

Canada

Home > Species profiles > Species

Species Profile

Blue Whale Atlantic population

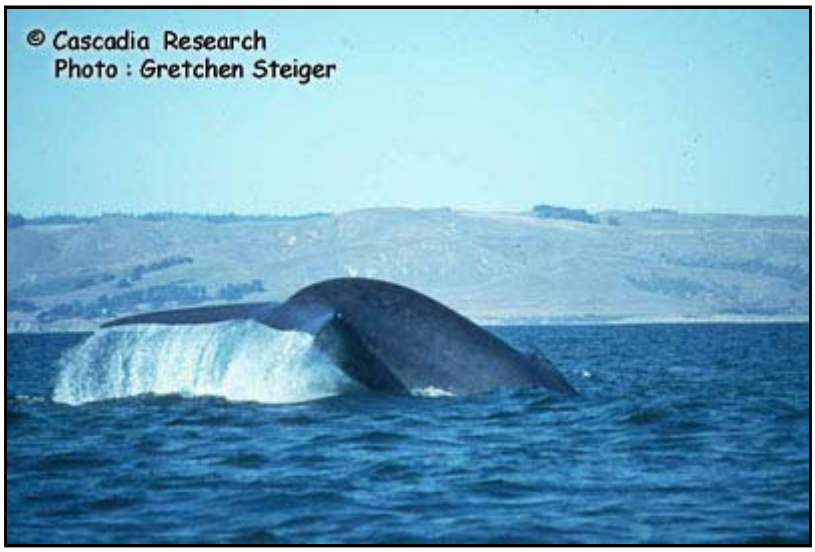
Scientific Name:	*Balaenoptera musculus*
Taxonomy Group:	Mammals
Range:	Atlantic Ocean
Last COSEWIC Assessment:	May 2002
Last COSEWIC Designation:	Endangered
SARA Status:	Schedule 1, Endangered

Go to advanced search

Related Species

Species	COSEWIC Status	SARA Status
Blue Whale	Non-active	Special Concern

Quick Links: | Photo | Description | Distribution and Population | Habitat | Biology | Threats | Protection | Other Protection or Status | Recovery Initiatives | National Recovery Program | Documents



Top

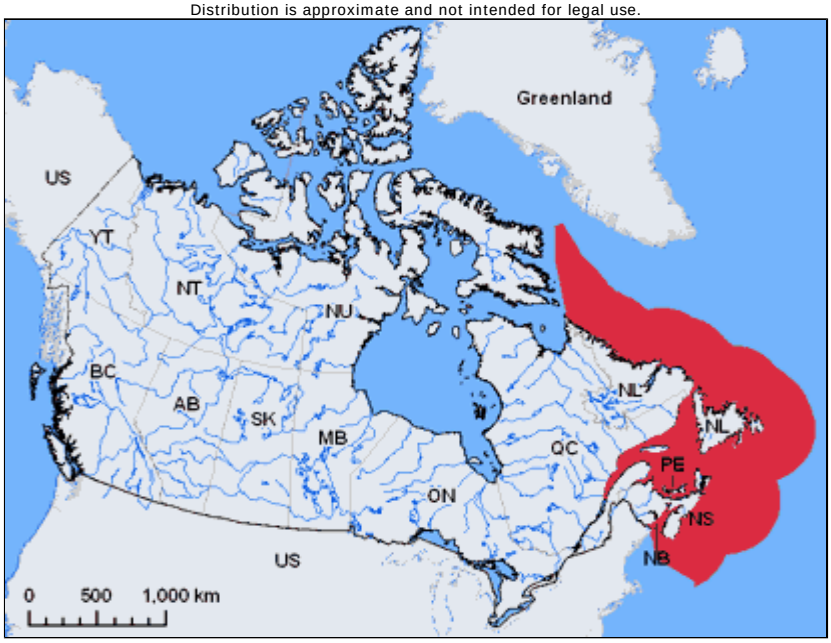
Description
The Blue Whale is the largest animal known to have ever existed on the planet. It is a rorqual whale, a group of whales characterized by pleated grooves in the skin of the neck that allow the

throat to expand during the intake of huge amounts of water during feeding. Blue Whales have between 60 and 88 of these throat grooves running from the throat to mid-body. Their tapered, elongated bodies are widest at the level of the eye, with the head accounting for about one-quarter of the total length. The dorsal fin is relatively small, and the pectoral flippers are pointed. Overall, Blue Whales are a mottled blend of dark and light shades of grey. The pattern of the mottling can vary considerably, but it is unique to each individual, and remains stable over time. It can therefore be used to identify individuals and track their movements and behaviour. The biggest Blue Whale ever recorded was 29.5 m long. Females are generally larger than males. Calves measure about 7 m at birth and weigh about 2 tons.

Top

Canadian Distribution of the Blue Whale, Atlantic population (shown in red) [1,2]

Distribution is approximate and not intended for legal use.



[1]Author: Canadian Wildlife Service, 2004

[2]Data Sources: The main source of information and data is the COSEWIC Status Report. In many cases additional data sources were used; a complete list will be available in the future.

Top

Distribution and Population

Blue Whales are found in all the oceans of the world. Three subspecies are recognized. The Blue Whale that occurs in Canada is commonly known as the Northern Hemisphere subspecies. Two geographically separated populations exist in Canadian waters: one in the North Atlantic and the other in the North Pacific. The Atlantic population of Blue Whales frequents waters off eastern Canada. During spring, summer, and fall, these whales occur along the north shore of the Gulf of St. Lawrence and off eastern Nova Scotia. In summer they also occur off the south coast of the island of Newfoundland and in the Davis Strait, between Baffin Island and Greenland. They usually migrate south for the winter, but in years of light ice cover, some whales may remain in the St. Lawrence for much of the winter. We do not know how many Blue Whales there are in the Atlantic population, but between 20 and 105 Blue Whales are seen annually in the Gulf of St. Lawrence in photo identification studies. A total of 382 individuals have been catalogued in the Gulf since 1979. About 40% of these return regularly, while the remainder appear to be occasional visitors that typically range outside the Gulf of St. Lawrence.

Top

Habitat
Blue Whales range widely, inhabiting both coastal waters and the open ocean. Individuals belonging to the Atlantic population are frequently observed in estuaries and shallow coastal zones where the mixing of waters ensures high productivity of krill (small shrimp-like crustaceans about 2 cm long), the whales' main food.

Top

Biology
Blue Whales migrate in small herds, spending the summer in food-rich areas close to the edge of the polar ice, and the winter in temperate waters. They feed almost exclusively on krill and one whale may eat as much as 4 tons per day. Blue Whales feed by gulping large quantities of krill, allowing both the water and crustaceans to enter the mouth. The water pressure causes the throat grooves to expand, allowing the whale to hold huge volumes of water in its mouth. The whale then uses its tongue and the muscles at the bottom of the mouth to push the water out through the baleen. Krill and other planktonic organisms become trapped in the fringes of the baleen plates, and the whale then swallows them. After breathing from 6 to 20 times at the water's surface over a 1- to 5-minute period, Blue Whales generally dive for 5 to 15 minutes. Dives of 20 minutes are not uncommon, and rare dives of up to 36 minutes have been recorded in the St. Lawrence. Male and female Blue Whales reach sexual maturity at between 5 and 15 years of age, females when they measure from 21 to 23 m long and males at a length of 20 to 21 m. Mating and the birth of young take place during the fall and winter in the warmer southern waters. Females give birth, usually to a single calf, every two or three years after a gestation period of 10 to 11 months. It has been estimated that Blue Whales live from 70 to 80 years. They can swim at speeds of up to 36 km/hr, but typically cruise at 2 to 8 km/hr when they are feeding or travelling. In addition to being the largest animals on earth, Blue Whales are also the loudest: at up to 186 decibels their calls are louder than a jet (which reaches only 140 decibels). The calls, which vary among populations, have been described in some detail, but their function remains unclear. Current indications are that only the males make these long, loud calls

Top

Threats
Past commercial whaling of Blue Whales is the main factor responsible for the decline in the animals' population. At least 11 000 Blue Whales were harvested in the North Atlantic before 1960. Approximately 1500 of these were harvested in eastern Canadian waters from 1898 to 1951. Since the end of commercial whaling, human threats have included collisions with ships, disturbance from increasing whale-watching activity, entanglement in fishing gear, and pollution (especially oil pollution).

Top

Protection

Federal Protection

The Blue Whale, Atlantic population, is protected under the federal *Species at Risk Act* (SARA). More information about SARA, including how it protects individual species, is available in the *Species at Risk Act*: A Guide.

It is also protected under the Marine Mammals Regulations, which fall under the *Fisheries Act*.

Provincial and Territorial Protection

To know if this species is protected by provincial or territorial laws, consult the provinces and

territories websites.

Top

Other Protection or Status
Internationally, Blue Whales are protected by the International Whaling Commission. The Blue Whale is listed by both the World Conservation Union (IUCN) and the Convention on the International Trade of Endangered Species (CITES).

Top

Recovery Initiatives

Status of Recovery Planning

Recovery Strategies :

Name National Recovery Strategy for the Blue Whale Atlantic population (Balaenoptera musculus)
Status Recovery team/planner in place
Number of Action Plans 0

Top

Recovery Team

Blue Whale (Atlantic population) Recovery Team

Hugues Bouchard - Chair - Fisheries and Oceans Canada
Phone: 418-775-0585 Fax: 418-775-0679 Send Email

Top

Recovery Progress and Activities

Summary of Progress to Date

The Saguenay-St. Lawrence Marine Park has introduced a number of regulations to better protect whales from whale-watching activities inside the park boundaries. Boaters (industrial, recreational and others) must comply with several regulatory measures such as limited observation periods, reduced speed, and maximum approach distances (400 m) when they are near endangered species, such as the Blue Whale. The number of vessels allowed within a certain distance from a cetacean is limited and there are strict policies in place concerning air traffic in the park. In addition, the marine park organizes a workshop-cruise every year for boaters and naturalists working on whale-watching vessels to familiarize themselves with proper techniques for approaching cetaceans.

Throughout the fall of 2004, the Department of Fisheries and Oceans Canada (DFO) held a public consultation about the creation of a Marine Protected Area in the St. Lawrence Estuary. The purpose of this project is to ensure the long-term conservation and protection of marine mammals that live seasonally or year-round in the St. Lawrence Estuary and of their habitat and food resources.

Summary of Research / Monitoring Activities

Fisheries and Oceans Canada (DFO) have been conducting studies on marine animal health since 1990. Causes of whale death are investigated to assess any potential threats to whale populations in their habitat. Recent research initiatives by this organization, in collaboration with the University of Dalhousie and the Mingan Island Cetacean Study (MICS) research organization also attempt to determine whether food availability would constitute a factor in what appears to be a reproduction failure of the Blue Whale. DFO and Parks Canada have been working with the Group for Research and Education on Marine Mammals (GREMM) to define the habitat needs of the Blue Whale and to assess the impact of boat traffic and whale-watching activities on the species within the St. Lawrence Estuary.

The MICS research organization continues to do research on the distribution, stock identification, and seasonal movements of the Blue Whale in the North Atlantic. Photo-identification is being used to estimate population size, distribution, dispersal, and migratory patterns. Skin biopsies taken in conjunction with photo-identification provide sex and genetic information for each individual, which helps researchers to better understand Blue Whale stock, social structure and reproduction. The biopsies also provide information on contaminant loads.

Vessel traffic patterns are being monitored along the west and east coasts of North America to minimize the risk of possible collisions between whales and vessels and the disturbance of critical whale habitats. Historical records are examined and ship-based and aerial surveys are conducted by DFO to identify areas of concentration of whales.

Summary of Recovery Activities

Outreach programs developed in the Newfoundland and Nova Scotia regions include toll-free hotlines, response to calls of dead and distressed marine animals, training for volunteers participating in rescue events, and education sessions targeted towards costal communities, industry, government and non-government organizations, and local schools. Marine conservation kits, including field testing of prototypes at local libraries, are being developed by Tangly Whales Inc. in Newfoundland as an interactive way to reach out to schools and other organizations, encouraging them to be more responsive in future stewardship activities. The Marine Animal Response Society (MARS) is working to develop and implement a cetacean sighting network in Nova Scotia and hopes to work with other groups in New Brunswick and Prince Edward Island to implement a Maritime-wide assistance network.

The Grand Manan Whale and Seabird Research Station (GMWSRS) is developing a voluntary Code of Conduct for fishermen using fixed fishing gear near large whales in the Bay of Fundy. This will foster stewardship, provide information to prevent entanglement of whales and loss of fishing gear, and will promote education on endangered whales in the coastal communities of New Brunswick and Nova Scotia.

The Quebec Marine Mammal Emergency Response Network organizes, coordinates, and implements measures to reduce the accidental death of marine mammals, help animals in trouble, and intervene in cases of beached or drifting carcases in waters bordering the province of Quebec. People who navigate or live along the St. Lawrence are invited to call the toll-free recovery line to alert the Network to any such incidence. The Group for Research and Education on Marine Mammals (GREMM) receives and directs incoming Network calls 24 hours a day, 7 days a week. GREMM also publishes a weekly pamphlet, Portraits of Whales, which is distributed to cruise operators and guides throughout the whale-watching season. Portraits of Whales describes current research projects, interesting sightings made during the past week, hot issues, the portrait of a particular whale, and actions being taken to protect species at risk such as the St. Lawrence Blue Whales.

URLs

DFO: Large Whale Recovery Strategy:
http://www.pac.dfo-mpo.gc.ca/sara /species/marinemammals/largewrecoverystr_e.htm

DFO: The Blue Whale A Fragile Giant:
http://ublib.buffalo.edu/libraries/e- resources/ebooks/records/eey3395.html

Mingan Island Cetacean Study:
http://ww w.rorqual.com/englisch/index.html

Nature Canada: Endangered Species:
http:// www.cnf.ca/species/critters/blue.html

Whale online
http://www. whales-online.net/indexe.html

Réseau d'observation des mammifères marins (in French only)
http://www.romm.ca/

St. Lawrence Estuary Marine Protected Area
http://www.qc.dfo-mpo.gc.ca/ZPMEstuaire/default_en.asp

Saguenay–St. Lawrence Marine Park
http://www.parcmarin.qc. ca/

Quebec Marine Mammal Emergency Response Network:
http://www.whales-online.net/eng/FSC.html?sc t=2&pag=2-4-11.html

Documents

COSEWIC Status Reports (1 record(s) found.)
COSEWIC Assessments (1 record(s) found.)
Response Statements (1 record(s) found.)
Recovery Strategies (1 record(s) found.)
Orders (2 record(s) found.)
Permits and Related Agreements (4 record(s) found.)
Consultation Documents (1 record(s) found.)
11 record(s) found.

COSEWIC Status Reports

COSEWIC Status Report - Blue Whale (2002)

The blue whale, Balaenoptera musculus (Linnaeus 1758) is the largest animal known to have lived on Earth with a maximum reported length of 33.6m (110ft) although the longest scientifically validated was 29.9m (98ft). Three subspecies have been desig...

COSEWIC Assessments

COSEWIC Assessment - Blue Whale (2002)

Entire Canadian range was designated as Special Concern in April 1983. Split into two populations in May 2002. The Atlantic population was up-listed to Endangered in May 2002. Last assessment based on an update status report....

Response Statements

Response Statements - Blue Whale (2004)

A response statement is a communications document that identifies how the Minister of the Environment intends to respond to the assessment of a wildlife species by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The document p...

Recovery Strategies

Recovery Strategy for the blue whale (Balaenoptera musculus), Northwest Atlantic population, in Canada (2010)

The blue whale population (*Balaenoptera musculus*) in the Northwest Atlantic [1] was designated as endangered by the Committee on the Status of Endangered Wildlife in Can...

Orders

Order Acknowledging Receipt of the Assessments Done Pursuant to Subsection 23(1) of the Species at Risk Act (2004)

This Order acknowledges receipt by the Governor in Council of the assessments of the status of wildlife species done pursuant to subsection 23(1) of the Species at Risk Act (SARA) by the Committee on the Status of Endangered Wildlife in Canada (COSEW...

Order Amending Schedules 1 to 3 to the Species at Risk Act (2005)

Schedule 1, the List of Wildlife Species at Risk of the *Species at Risk Act* (SARA), is amended by Order of the Governor in Council (GIC), on the recommendation of the Minister of the Environment, by the addition of 73 species. This Order is ...

Permits and Related Agreements

Explanation for issuing permit(#DFO-MAR-2009-005), persuant to the provisions of section 73 of SARA (2009)

During annual research voyages of the CCGS Hudson, proponents of this project will measure multifrequency acoustic backscatter within the Gully Marine Protected Area (MPA). This will contribute to a set of continuous (since 2006) distribution data fo...

Explanation for issuing permit(#SAR-2008P-006), persuant to the provisions of section 73 of SARA (2008)

As part of the Atlantic Zone Monitoring Project (AZMP), the researchers will: • Record hydrographic profiles • Collect seawater samples • Collect zooplankton samples The Gully is one of the sites where sampling has occurred since 1998, as pa...

Explanation for issuing permit(#SAR-2008P-024), persuant to the provisions of section 73 of SARA (2008)

The research team will conduct trawl surveys for plankton and for nekton - fish, squid and large crustaceans - in the Gully Marine Protected area for approximately ten days in August and September. Trawl gear is designed to sample target species at d...

Explanation for issuing permit(#SAR-2008P-027), persuant to the provisions of section 73 of SARA (2008)

The Marine Animal Rescue Society (MARS) strives to assist all live whales and dolphins in distress by deciding, based on careful assessment, the best course of action. Action may involve rescue and return to the water. If an animal is injured or is i...

Consultation Documents

Consultation Workbook Regarding the Addition of the Blue Whale (Atlantic population) to the List of Wildlife Species at Risk under the Species at Risk Act (2004)

Your opinion is being sought to assist the government of Canada in making an informed decision on whether to add the Blue Whale (Atlantic population) to the Schedule 1 (the List of Wildlife Species at Risk) of the Species at Risk Act (SARA). Your inp...

Date Modified: 01/11/2010