

© S. Giroux, MMON



MARINE MAMMAL DATA COLLECTION PROTOCOL



FOR THE MARITIME INDUSTRY

© S. Pronovost, MMON





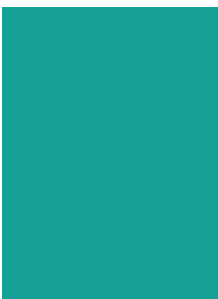
This project is produced by:



The maritime industry data collection program was developed in collaboration with



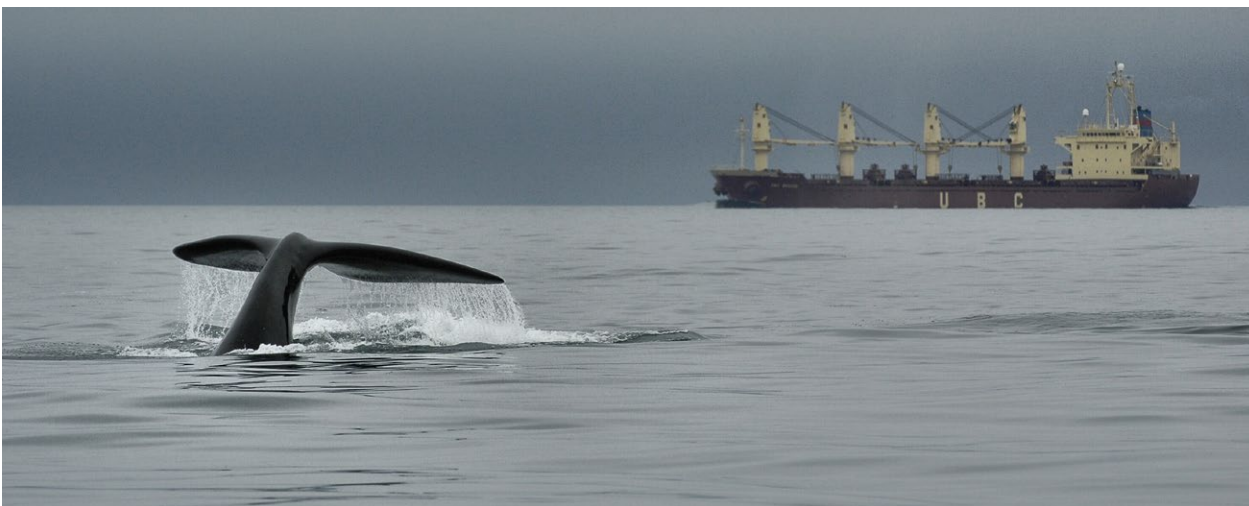
This initiative is made possible in part thanks to funding received under Fisheries and Oceans Canada's Habitat Stewardship Program (HSP) for Species at Risk.



1. INTRODUCTION

By becoming a collector and reporting sightings of marine mammals, your company contributes to the protection of ecosystems and the conservation of marine resources. To help the recovery of certain species of marine mammals and promote their conservation, it is necessary to know their distribution

and to take into consideration certain essential variables: the time of year, weather conditions and changes in the environment. As maritime carriers sail year-round, they can collect whale sightings on a regular basis be used by both the scientific community and resource managers.



© Yan Guilbault

2. OBJECTIVES

Maritime carriers navigate in all seasons and all places, which offers the possibility of gathering data in remote or poorly monitored regions such as the Arctic, Newfoundland and Labrador, the Cabot Strait and the northern Gulf of St. Lawrence. These data, particularly those collected outside the summer season, between October 1 and April 30, can provide a better understanding of the distribution and abundance of marine mammals.

The data collected helps to supplement existing databases used in informing efficient conservation measures. They are also used to develop certain educational materials or to support more research efforts when species are sighted several times in unusual locations.

3. METHODOLOGY

1

Complete a training in whale identification is essential before you start collecting data.

2

Collect data when the observation conditions are good and does not compromise the safety of navigation. Your reporting of marine mammals should be done systematically and rigorously each time a whale is sighted.

3

Complete the observation chart according to the protocol. We encourage you to use an electronic format directly on your computer or by using the online application available here observation.navigatingwhales.ca. If using paper, write neatly, legibly, and dark enough.

4

Send the data at least once a month by e-mail to the responsible person within your company or to info@romm.ca for international mariners.

5

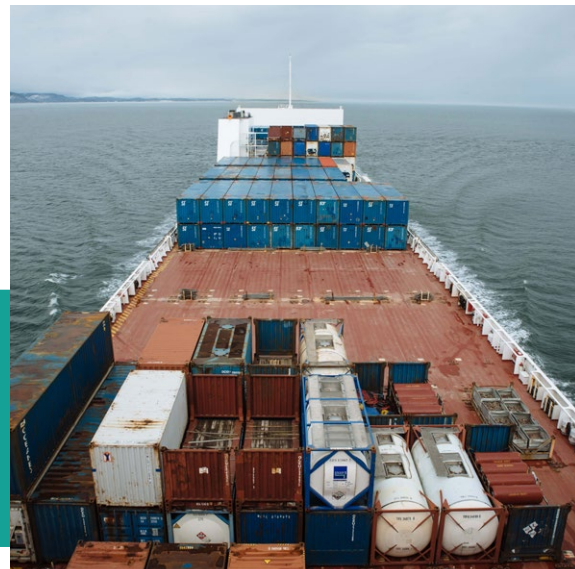
Keep the completed observation charts in a safe place, sheltered from the elements. Lost or damaged data is unrecoverable.

6

Send your questions or comments for improving the protocol or the program to MMON at info@romm.ca.

7

Promptly report any sightings of any dead, seriously injured or in distress marine mammals or any exceptional sightings such as the presence of North Atlantic right whales or leatherback sea turtles to the appropriate network for the region (see contact details in Annex 4).



4. HOW TO COMPLETE THE OBSERVATION CHART

For each species observed, the following data must be entered in the observation chart:

DAY

(DD/MM/YYYY)

TIME OF SIGHTING

(HH:MM)

WIND

The wind speed makes it possible to assess the height of the waves and improve the validity of the data collected. Use the Beaufort scale:

| Code | Descriptif | Speed in km/h | Speed in knots | Ocean observations |
|------|-----------------|---------------|----------------|--|
| 0 | Calm | Less than 1 | Less than 1 | Sea surface like a mirror, but not necessarily flat. |
| 1 | Light air | 1 - 5 | 1 - 3 | Ripples with the appearance of scales are formed, but without foam crests. |
| 2 | Light breeze | 6 - 11 | 4 - 6 | Small wavelets, still short but more pronounced. Crests do not break. When visibility good, horizon line always very clear. |
| 3 | Gentle breeze | 12 - 19 | 7 - 10 | Large wavelets. Crests begin to break. Foam of glassy appearance. Perhaps scattered whitecaps. |
| 4 | Moderate breeze | 20 - 28 | 11 - 16 | Small waves, becoming longer. Fairly frequent whitecaps. |
| 5 | Fresh breeze | 29 - 38 | 17 - 21 | Moderate waves, taking a more pronounced long form. Many whitecaps are formed. Chance of some spray. |
| 6 | Strong breeze | 39 - 49 | 22 - 27 | Large waves begin to form. White foam crests are more extensive everywhere. Probably some spray. |
| 7 | Near gale | 50 - 61 | 28 - 33 | Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind. |
| 8 | Gale | 62 - 74 | 34 - 40 | Moderately high waves of greater length. Edges of crests begin to break into the spindrift. The foam is blown in well-marked streaks along the direction of the wind. |
| 9 | Strong gale | 75 - 88 | 41 - 47 | High waves. Dense streaks of foam along the direction of the wind. Wave crests begin to topple, tumble and roll over. Spray may affect visibility. |
| 10 | Storm | 89 - 102 | 48 - 55 | Very high waves with long overhanging crests. Dense white streaks of foam. Sea surface takes on a white appearance. Tumbling of the sea becomes heavy and shock-like. Visibility affected. |
| 11 | Violent storm | 103 - 117 | 56 - 63 | Exceptionally high waves. Sea completely covered with long white patches of foam. Visibility affected. |
| 12 | Hurricane | 118 - 133 | 64 - 71 | Air filled with foam and spray. Sea entirely white with foam. Visibility seriously impaired. |

VISIBILITY

| | | |
|----------|----------|-------------------------------|
| 1 | Very low | < 100 meters |
| 2 | Limited | 100 metres – 2 nautical miles |
| 3 | Good | > 2 nautical miles |

SPECIES

Write the full name of the species observed or its **corresponding code** (see the abbreviation of scientific names provided in Appendix).

If you recognize that it is a rorqual or dolphin but cannot identify the specific species, write "**rorqual sp.**" or "**dolphin sp.**". Indicate "**cetacean sp.**" if you have observed a cetacean without being able to identify the genus or species and add a photo when sending the data chart. If you cannot take a photo, write down as many details as possible (color, breath, particular behavior, etc.) in the remarks section.

CERTAINTY

This information is essential to give a level of certainty to the data collected.

- 1** = Absolute certainty (must be 100% sure, without any possible doubt regarding the species).
- 2** = Uncertainty. If you have any doubt whatsoever regarding the identification of the observed species, you must enter "2".

NUMBER OF ANIMALS OBSERVED

Indicate the number of animals observed. Make a rough estimate if there are too many to count individually.



© F. Gandolphe, ROMM

GPS POSITIONING

Indicate the GPS coordinates of **your vessel**.

LOCATION (optional data)

Whenever it is possible, include information about the location such as specific landmarks (e.g.: an island or buoy).

DISTANCE (optional data)

Estimate the distance between the animal and your vessel.

- 1 < 100 meters
- 2 100 - 200 meters
- 3 200 - 400 meters
- 4 400 -1 000 meters
- 5 > 1 000 meters (0.5 nautical mile)

COMMENTS (optional data)

In this section, record any information you deem relevant such as a description of the behaviour (e.g. breaching), the presence of juveniles or visible marks, the direction where the whale was travelling to, or the presence of feeding birds in the area where the whale was seen.

OBSERVER

Indicate the full name or initials of the person who made the observation.

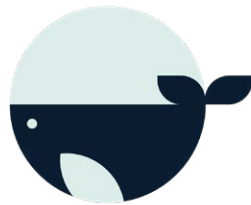


© V. Nolet

5. TOOLS AVAILABLE

The website “**Navigating Whale Habitat**” provides information and training to assist in marine mammals data collection those navigating the waters of the Canadian east coast, including the Estuary and Gulf of St. Lawrence.

Visit www.navigationbaleines.ca/en/home to have access to all the tools for the maritime industry by visiting the "shipowners" portal.

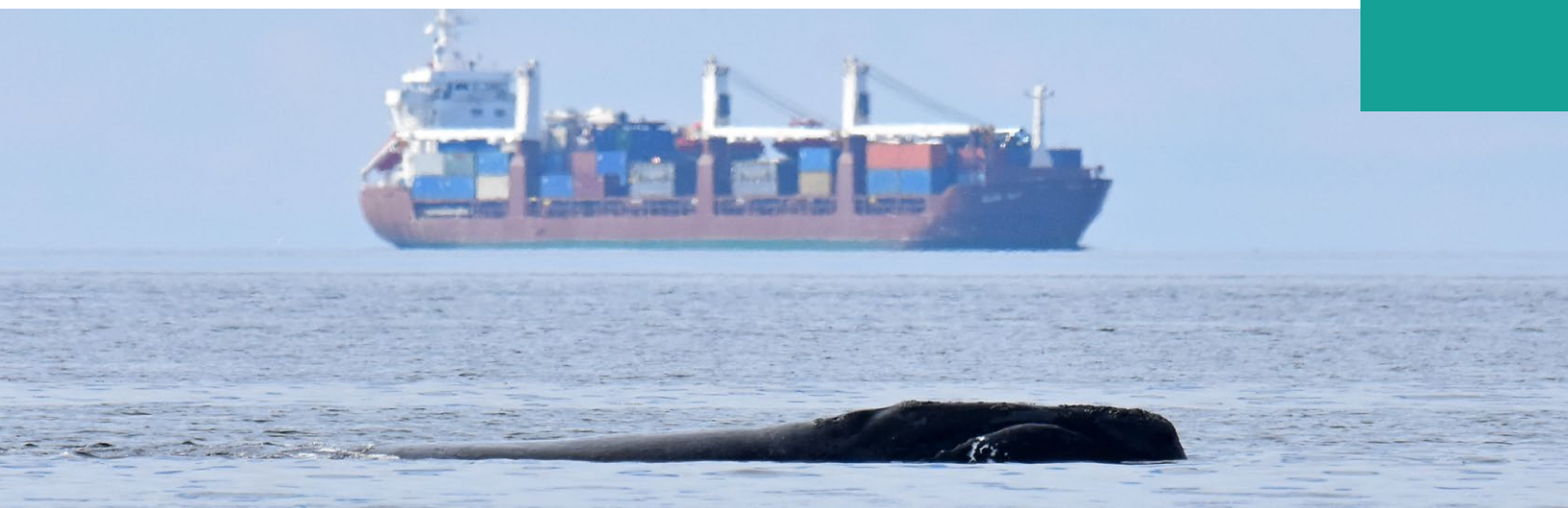


Navigating Whale Habitat

■ **Complete the training online** which will allow you to identify better the different species of whales and learn about the data collection protocol. Contact MMON at info@romm.ca to obtain the version compatible with your existing onboard training system. To access the training online, visit observers.navigatingwhales.ca.

■ **Enter your sighting records online** using the data entry tool available at: observation.navigatingwhales.ca

■ **Consult the Mariner's Guide to Whales in the Northwest Atlantic** to learn best practices to reduce ship strikes and consult species maps showing areas where more vigilance is desirable. It can be downloaded at: <https://www.navigationbaleines.ca/en/mariners-guide/>



APPENDIX 1 • LIST OF WHALE SPECIES

| Name | Code | Protection status |
|--|------|-------------------|
| BALEEN WHALES | | |
| Blue whale <i>Balaenoptera musculus</i> | BM | Endangered |
| Fin whale <i>Balaenoptera physalus</i> | BP | Special concern |
| Humpback whale <i>Megaptera novaeangliae</i> | MN | Not at risk |
| Sei whale <i>Balaenoptera borealis</i> | BB | Endangered |
| Minke whale <i>Balaenoptera acutorostrata</i> | BA | Not at risk |
| North Atlantic right whale <i>Eubalaena glacialis</i> | EG | Endangered |
| Bowhead whale <i>Balaena mysticetus</i> | BMV | Special concern |
| TOOTH WHALES | | |
| Sperm whale <i>Physeter macrocephalus</i> | PM | Not at risk |
| Orca <i>Orcinus orca</i> | OO | Special concern |
| Beluga whale <i>Delphinapterus leucas</i> | DL | Endangered |
| Harbour porpoise <i>Phocoena phocoena</i> | PP | Special concern |
| Long-finned pilot whale <i>Globicephala melaena</i> | GM | Not at risk |
| Northern bottlenose whale <i>Hyperoodon ampullatus</i> | HA | Endangered |
| Narwhal <i>Monodon monoceros</i> | MM | Special concern |
| White-sided dolphin <i>Lagenorhynchus acutus</i> | LA | Not at risk |
| Dauphin à nez blanc <i>Lagenorhynchus albirostris</i> | LAL | Not at risk |
| Short-beaked common dolphin <i>Delphinus delphis</i> | DD | Not at risk |
| Dolphin sp. | DSP | - |
| Rorqual sp. | RSP | - |
| Cetacean sp. | CSP | - |

APPENDIX 2 • LIST OF SEAL SPECIES

| Name | Code | Protection status |
|---|------|-------------------|
| Grey seal <i>Halichoerus grypus</i> | HG | Not at risk |
| Harbour seal <i>Phoca vitulina</i> | PV | Not at risk |
| Harp seal <i>Pagophilus groenlandicus</i> | PG | Not at risk |
| Hooded seal <i>Cystophora cristata</i> | CC | Not at risk |
| Bearded seal <i>Erignathus barbatus</i> | EB | Not at risk |
| Ringed seal <i>Pusa hispida</i> | PH | Not at risk |
| Seal sp. | PSP | - |

APPENDIX 3 • LIST OF OTHER SPECIES OF INTEREST

| Name | Code | Protection status |
|--|------|-------------------|
| Polar bear <i>Ursinus maritimus</i> | UM | Special concern |
| Atlantic walrus <i>Odobenus rosmarus</i> | OR | Special concern |
| Leatherback turtle <i>Dermochelys coriacea</i> | DECO | Endangered |
| Basking shark <i>Cetorhinus maximus</i> | CM | Not at risk |
| Ocean sunfish <i>Mola mola</i> | MOLA | Not at risk |
| Atlantic bluefin tuna <i>Thunnus thynnus</i> | TT | Endangered |

APPENDIX 4 • EMERGENCY NETWORKS AND REPORTING NUMBERS

TO REPORT A DEAD, SERIOUSLY INJURED OR IN DISTRESS MARINE MAMMAL

QUEBEC: QUEBEC MARINE MAMMAL EMERGENCY RESPONSE NETWORK

1-877-722-5346

NEWFOUNDLAND AND LABRADOR: Whale Release and Strandings

1-888-895-3003

NOVA SCOTIA, NEW BRUNSWICK, PRINCE EDWARD ISLAND:

Marine Animal Response Society

1-866-567-6277 ou VHF 16

TO REPORT AN EXCEPTIONAL OBSERVATION

QUEBEC: Quebec marine mammal emergency response network

1-877-722-5346

NEWFOUNDLAND AND LABRADOR:

Marine mammals: whalesighting@dfo-mpo.gc.ca

NOVA SCOTIA, NEW BRUNSWICK, PRINCE EDWARD ISLAND:

Marine mammals: 1-844-800-8568

XMARWhaleSightings@dfo-mpo.gc.ca

CANADIAN SEA TURTLE NETWORK :

Leatherback turtles: 1-888-729-4667

info@seaturtle.ca



OBSERVATION CHART

Year: _____ Month: _____ Company: _____ Vessel: _____

| Date | Observation Time | Wind (Beaufort) 0 to 12 | Visibility* | | | Species | Certainty† | | Nb. Of ind. | GPS Coordinates | Location | Distance animal vs ship | Remarks | Initials |
|------|------------------|----------------------------|-------------|---|---|---------|------------|---|-------------|-----------------|----------|-------------------------|---------|----------|
| | | | 1 | 2 | 3 | | 1 | 2 | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

* **Visibility:** **1** = Very low (< 100 m); **2** = Limited (100 m to 2 nm); **3** = Good (> 2 nm)

† **Certainty:** **1** = Absolute certainty (no doubt on identification)
2 = Uncertainty (minimum doubt on identification)