



WHALES, SHARKS AND TURTLES OF NEWFOUNDLAND AND LABRADOR GUIDEBOOK

Front Cover Photo: Thomas Kelley/Unsplash

Newfoundland and Labrador (NL) is home to beautiful giants of the sea: Whales, Sharks and Turtles.

Due to the many different species who visit our waters, it's often hard to differentiate between them all.

This guidebook was developed by the Canadian Parks and Wilderness Society – Newfoundland and Labrador Chapter

(CPAWS-NL) to assist with identification, understanding the risks these species are facing and how we can help.

CPAWS is a national non-profit conservation group that works to protect Canada's wild ecosystems in parks, wilderness and natural areas, preserving the full diversity of habitats and their species.

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Photo: tswinner/Getty Images

Identifications



Photo: atese/Getty Images

Marine animals such as whales, dolphins, sharks, and sea turtles are easily identified in the wild by their fins, flippers, tails and heads but generally share the same physical properties among each group.

Use the following diagrams as a quick reference guide to correctly identify body parts of these species. Please note that the Humpback Whale, White-beaked Dolphin and Basking Shark are used to represent whale, dolphin/porpoise and shark species, respectively.





eye

beak

eye

Photo: NOAA



pectoral fin (flipper)

Dolphins/Porpoises dorsal fin blow hole





Leatherback Sea Turtles

dorsal ridges

JAA Fisheri

tail

hind

flipper

carapace

"pink spot"

eye

fore flipper



Species at Risk

Species at risk of global extinction are listed under the International Union for Conservation of Nature's (IUCN) Red List of Threatened Species which divides them into nine categories:



Credit: IUCN

In Canada, species are also assessed and listed under the **Species at Risk Act (SARA)**. The goal of this act is to protect wildlife species at risk and their critical habitats within Canada. They can be classified into one of four categories:

Special Concern

A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats

Threatened

A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction

SARA Categories

Endangered

A wildlife species that is facing imminent extirpation or extinction

Extirpated

A wildlife species that no longer exists in the wild in Canada, but exists elsewhere



Common Species in NL





Atlantic White-sided Dolphin



Atlantic White-sided Dolphin

(Lagenorhynchus acutus)

Status (SARA): Not Listed Status (IUCN): Least Concern

Named for their unique coloration on their sides, they are "co-operative" feeders, and help each other when hunting for prey from herring to squid. Like other dolphins, they are very playful and like to surf the waves created by vessels and leap out of the water at high speeds. There are different populations of Atlantic White-sided Dolphins, which are easily distinguishable. Newfoundland and Labrador, is home to the Atlantic population.



Atlantic White-sided Dolphin



Atlantic White-sided Dolphin

(Lagenorhynchus acutus)

Migration Patterns:

They appear to move throughout a large home range, including Newfoundland and Labrador, following the seasonal movements of their fish prey, rather than undertaking specific seasonal migrations. Many are seen in the southern parts of the island.



Atlantic White-sided Dolphin



HEAD: Short beak, with white bottom "lip"





White to pale yellow patch found behind the dorsal fin



DORSAL FIN: More curved than White-beaked Dolphin

Photo icon: Ca2hill/Getty Images



Common Minke



Common Minke Whale

(Balaenoptera acutorostrata)

Status (SARA): Not Listed Status (IUCN): Least Concern

Minke Whales are the most abundant and one of the smallest baleen whales in the world, even with its great size of 30 feet and 20,000 pounds! They have a slender shape, with a pointed head. Unlike other baleen whales, Minkes are opportunistic feeders, and if krill or small fish are not available, they will eat larger fish like haddock or cod. This whale may be curious around boats but can be difficult to spot due to its solitary nature and inconspicuous behaviour.



Common Minke



Common Minke Whale

(Balaenoptera acutorostrata)

Migration Patterns:

Minke Whales are common in bays of Newfoundland and Labrador from April to October. In general, they perform regular migrations to feeding areas at high latitudes in spring and to breeding areas at low latitudes in fall, although some individuals may remain on the feeding grounds throughout the winter.



Common Minke Whale



BLOW: Low, bushy and usually inconspicuous





band, which identifies individuals





Photo icon: Joanne-Weston/Getty Images

Fluke rarely seen above water





Fin Whale

(Balaenoptera physalus)

Status (SARA): Special Concern Status (IUCN): Vulnerable

Fin Whales are the second largest living animal on Earth. They are filter feeders and their only predator known is Killer Whales which prey upon the young. Their coloration is asymmetric, with the right lower jaw being mostly white and the left lower jaw being mostly dark. Though extremely large, they are one of the fastest whales, and are able to swim over 37km/h!





Fin Whale

(Balaenoptera physalus)

Migration Patterns:

These whales can be seen in NL, especially along the southeast coast of Newfoundland or the south coast of Labrador. The are seen all year-year round, although they are more commonly seen from early spring to late fall and are usually found in offshore waters, or deep nearshore waters when fish are present. In general, Fin Whales are found between high-latitude feeding grounds in summer and lower-latitude breeding grounds in winter (most populations).



Fin Whale



BLOW:

Narrow, cone shaped, up to 6 metres in height

FLUKES: Rarely shown, slightly concaved bottom edge with distinct notch in the middle





DORSAL FIN: Sickle-shaped and curving towards the back

Photo icon: JG1153/Getty Images





Harbour Porpoise

(Phocoena phocoena)

Status (SARA): Not Listed Status (IUCN): Least Concern

Though very similar to Dolphins, Porpoises are different in a few ways: they are more shy, less vocal, have spade-shaped teeth rather than cone-shaped, their body shape is more stout, and their dorsal fin lacks a hook. This porpoise is one of the smallest marine mammals which helps in identifying them from dolphins but can be hard to spot due to their inconspicuous behaviour and shyness around boats.





Harbour Porpoise

(Phocoena phocoena)

Migration Patterns:

While there are noticeable seasonal shifts in distribution in certain locations, Harbour Porpoises do not appear to undertake coordinated migrations. Newfoundland and Labrador is home to a Northwest Atlantic sub-population that are seen year-round, although they are more commonly seen during summer months in harbours or bays, as their name suggests.



<u>HEAD:</u> Circular head, no prominent "beak"

underneath. Body is less elongated and more stout than dolphin

DORSAL FIN: Triangle shape, no hook unlike Dolphins. Not active surface swimmers

Photo icon: Aquablog

Humpback Whale

(Megaptera novaeangliae)

Status (SARA): Not at Risk Status (IUCN): Least Concern

Humpback Whales, also known as angels of the sea due to their "wing-like" pectoral fins, are baleen whales. They are very active, often being seen breaching, fin and tail slapping, peduncle throws and spyhopping. They have very large pectoral fins, which are about 1/3 the body length – the largest of any whale. Humpback Whales are extremely vocal, with unique songs, grunts, and whispers. Their songs can carry over 30km away and sing for more than 20mins at a time.

Humpback Whale

(Megaptera novaeangliae)

Migration Patterns:

In the summer, they are common off the east and south coasts of Newfoundland, off southeastern Labrador, on the edges of the Grand Banks, and in the Gulf of St Lawrence. During the fall, they migrate southward to breed in tropical waters and return to northern feeding grounds for the summer.

Humpback Whale

<u>BLOW:</u> Tall, column-like

<u>FLUKES:</u> Large, lobed and white underneath, unique patterns which distinguish inidviduals

DORSAL FIN: Low and broadbased sitting on a hump

Photo icon: Yann-HUBERT/Getty Images

Killer Whale

(Orcinus orca)

Status (SARA): Not Listed Status (IUCN): Data Deficient

Killer Whales, or more commonly known as Orca Whales, are the largest species of dolphins. They are ferocious predators, exhibiting almost hateful behaviours when toying with their prey. Like other dolphins, they are extremely smart and even pass down communication and hunting skills down generations, making each pod unique in their behaviours. Male Killer Whales live up to 60 years, while the females are able to live much longer, up to 90.

Killer Whale

(Orcinus orca)

Migration Patterns:

Killer Whale movements seem to be mainly associated with the movement of their prey. This means that although some long distance movements have been documented, Killer Whales do not have a migration route in the North Atlantic as such. They are most often recorded in the coastal waters off Newfoundland, particularly in the Strait of Belle Isle. Most sightings occur during the summer and fall months.

Killer

BLOW: Low and bushy

Black on top, white underneath. Small notch in middle

DORSAL FIN: Very tall, can be over 1.8m (Males' longer than females')

Photo icon: slowmotiongli/Getty Images

White-beaked Dolphin

White-beaked Dolphin

(Lagenorhynchus albirostris)

Status (SARA): Not Listed Status (IUCN): Least Concern

White-beaked Dolphins eat a diversity of prey from the ocean bottom and surface, and particularly enjoy squid. They are often found surfing waves created by vessels, making it even more important to be cautious of boating. Unlike many marine mammals, Whitebeaked Dolphins typically stay within the cold waters of the Atlantic Ocean.

White-beaked Dolphin

White-beaked Dolphin

(Lagenorhynchus albirostris)

Migration Patterns:

White-beaked Dolphins appear to have some seasonal movements, moving north in the summer months and south during the winter. In some cases, their movements seem to follow schooling capelin or other fish. In Newfoundland, they are most commonly seen in nearshore waters during the summer, with many seen in southern Labrador and northern Newfoundland.

White-beaked Dolphin

HEAD: Short beak, with white "lips"

Small relative to body, and very tapered at base

DORSAL FIN: Large, tall, and curved, located middle of back

Photo icon: WeDive.no

Less Common Species in NL

Photo: Eduardo Baena /Getty Images

Basking Shark

(Cetorhinus maximus)

Status (SARA): Not Listed Status (IUCN): Endangered

Basking Sharks are the second largest fish in the world, exceeded only by the Whale Shark. They are filter feeders, eating tiny planktonic prey, and are often seen on the surface, with their mouths wide open to feed. Each hour, they filter about 4,000,000 pounds of water! Basking Sharks never stay in one place for long, always migrating to new locations, making scientific study of them very difficult.

Basking Shark

(Cetorhinus maximus)

Migration Patterns:

Basking Sharks are a highly migratory species. Although its seasonal movements are not well known, these animals may migrate to southerly waters during the winter. They can be seen during summer and fall (May to September) near and around the coastline in Newfoundland.

HEAD:

Top jaw long "nose", when feeding mouth is expanded and nose often seen out of water

Body tapered at both ends, 5 large gill openings

DORSAL FIN: Traingular shape, 2nd dorsal fin lower on back larger than White Shark

Photo icon: Rebecca Belleni Photography/Getty Images




Beluga Whale (Delphinapterus leucas)

Status (SARA): Not Listed Status (IUCN): Least Concern

Beluga Whales are easily spotted due to their white colouration and uniquely shaped head. Belugas are playful and curious, often swimming near harbours and boats. It's crucial we keep a distance and do not touch or feed them. They are a toothed-whale, and are unique as they have a movable neck, allowing its head to move up and down, left to right. Belugas are born grey, turning white as an adult (3-8 years old).





Beluga Whale (Delphinapterus leucas)

Migration Patterns:

Throughout their range, Belugas typically inhabit cold Arctic waters along pack ice. They seasonally migrate along the coast of Labrador and are occasional summer visitors in Newfoundland waters. Although, not listed under SARA, other sub-populations in Canada are considered threatened or endangered under this act.





BLOW: Low, bushy and usually inconspicuous





White flukes, broad with deep median notch



DORSAL FIN: No dorsal fin, has a ridge on its back instead

Photo icon: DejaVu Designs/Getty Images





Blue Whale

(Balaenoptera musculus)

Status (SARA): Endangered Status (IUCN): Endangered

Think Dinosaurs were enormous? Blue Whales are even bigger! They are the largest animal ever to live on our Earth. Believe it or not, they are filter feeders and live solely on tiny krill, but need over 12,000 pounds of it, per day! Blue Whales are also the loudest animals on the planet, making sounds which can be heard by other blue whales over 1600km away.





Blue Whale

(Balaenoptera musculus)

Migration Patterns:

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 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.





BLOW: Tall, slender and vertical, upwards of 9 metres in height

FLUKES: Very broad with a straight or slightly concave bottom edge with a slight notch in the middle





DORSAL FIN: Very small compared to body size, almost at end of body

Photo icon: MR1805/Getty Images





Great White Shark

(Carcharodon carcharias)

Status (SARA): Endangered Status (IUCN): Vulnerable

The Great White Shark is the largest predatory fish in the world, known to prey upon whales. Unlike other cold-blooded fishes, Great White Sharks have a specialized blood vessel structure called a countercurrent exchanger, allowing them to quickly adapt to different water temperatures. Sharks have 5 rows of teeth, equalling about 3000 teeth. If a tooth is lost, a new one will grow into place. A shark uses about 20,000 teeth in its lifetime!





Great White Shark

(Carcharodon carcharias)

Migration Patterns:

The Great White Shark travel long distances, making long migrations every year. Individuals in Atlantic Canada are likely seasonal migrants belonging to a widespread Northwest Atlantic population and are rarely seen in Newfoundland and Labrador.



Great White Shark



HEAD: Sharply pointed conical snout

<u>BODY:</u> Blunt torpedo-like

body, with strong crescent shaped caudal fin (tail)



DORSAL FIN: Traingular shape, top caudal fin usually seen when dorsal fin is above water



Photo icon: RamonCerretero/Getty Images



Leatherback Sea Turtle



Leatherback Sea Turtle

(Dermochelys coriacea)

Status (SARA): Endangered Status (IUCN): Vulnerable

Leatherback Sea Turtles are 1 of 7 marine turtles, worldwide. They are very unique as they do not have a typical hard-shell, but a leathery carapace. They also have a notable pink spot on the dorsal surface of their head that is thought to aid in detecting seasonal changes. They are the largest turtle at over 1.8m in length, and have existed on Earth since Dinosaurs!



Leatherback Sea Turtle



Leatherback Sea Turtle

(Dermochelys coriacea)

Migration Patterns:

Leatherback Sea Turtles are highly migratory and travel from southern tropical nesting grounds to northern feeding grounds every year. Newfoundland waters are an important foraging area for these turtles and are sighted in spring and summer months feeding on jellyfish. Sightings are more common in southern Newfoundland.



Leatherback Sea Turtle



HEAD: Deeply notched upper jaw with 2 cusps



BODY: Up to 1.8m long, no shell but a leathery carapace that tapers at end

SURFACE: Turtles often only show their head and top part of shell. Surface swimmers



Photo Icon: Giovanny Gava/Getty Images



North Atlantic Right Whale



North Atlantic Right Whale

(Eubaleana glacialis)

Status (SARA): Endangered Status (IUCN): Critically Endangered

The North Atlantic Right Whale is the most endangered whale, with less than 400 individuals left, worldwide. Its name comes from being the "right" whale to hunt, causing a steep decline in population. Though whaling of this species has stopped, the population is still struggling. Each whale's callosity pattern is unique, giving identity to individual whales. It is extremely important to report if spotted in Newfoundland and Labrador.



North Atlantic Right Whale



North Atlantic Right Whale

(Eubaleana glacialis)

Migration Patterns:

Sightings of North Atlantic Right Whales are rare in NL but can be seen in late summer in the Lower Bay of Fundy and less often on the south coast of Newfoundland. Right Whales head south to their calving grounds in the winter to the shallow coastal waters off the southeastern United States.



North Atlantic Right Whale



<u>BLOW:</u> V-Shaped blow





Black tail, often seen when diving



FLIPPERS: No Dorsal Fin. Uniquely shaped and short flippers

Photos: Foto4440/Getty Images





Sei Whale

(Balaenoptera borealis)

Status (SARA): Endangered Status (IUCN): Endangered

Sei whales are believed to be the fastest of the baleen whales, reaching speeds of up to 50 km/h. They are often mistaken for a Fin Whale, but are smaller and have symmetrical coloration on their jaws. Similar to Right Whales, Sei Whales filter feed by skimming the water for food, rather than large gulps and lunges of most other baleens. Their population is also struggling to recover from whaling practices and other current threats.





Sei Whale

(Balaenoptera borealis)

Migration Patterns:

Sei Whales are mostly found in temperate waters and generally make seasonal migrations from low latitudes in the winter to higher latitudes in the summer. In Atlantic Canada, they have been observed off Newfoundland, on the Scotian Shelf and Slope, and in the Labrador Sea in the summer, with some Sei Whales found in these waters year-round.



Sei Whale



BLOW: Shorter (<3m) and less dense than Fin or Blue Whale blow





Rarely see tail or arching when diving. Very distinct head







Short-beaked



Short-beaked Common Dolphin (Delphinus delphis)

Status (SARA): Not Listed Status (IUCN): Least Concern

Short-beaked Common Dolphins have a distinctive colour pattern, with multiple colour bands along its sides and a black "mask" connecting the eye to the snout. These dolphins are known for forming large groups for hunting and socializing, and at times, hundreds of these groups come together to form "super pods", numbering in the thousands! They are fast swimmers and are often seen riding the waves formed at the boat's bow.

Short-beaked



Short-beaked Common Dolphin (Delphinus delphis)

Migration Patterns:

Short-beaked Common Dolphins are one of the most abundant and familiar dolphins in the world. They are widely distributed, preferring warm tropical to cool temperate waters that are primarily oceanic and offshore. In Newfoundland and Labrador, they can be found year-round although they may be more common during summer.

Short-beaked Common Dolphin



HEAD: Rounded forehead, moderately long snout

Colour bands on sides, "mask" connecting eye and snout







Photo icon: neil bowman/Getty Images



Sowerby's Beaked Whale



Sowerby's Beaked Whale

(Mesoplodon bidens)

Status (SARA): Special Concern Status (IUCN): Least Concern

Sowerby's Beaked Whale resembles a dolphin more so than a whale, but is indeed a member of the Beaked Whale family. They are deep divers, and rarely seen. Males are distinguished by their two visible teeth on either side of the jaw. They use suction to feed on small, deep-sea fish and cephalopods in deep waters.



Sowerby's Beaked Whale



Sowerby's Beaked Whale

(Mesoplodon bidens)

Migration Patterns:

Sowerby's Beaked Whales are found exclusively in the North Atlantic Ocean. In Canadian waters, Sowerby's Beaked Whales are thought to mostly inhabit deep waters (>500 metres) along the continental slope from Nova Scotia to the Davis Strait. Sightings are relatively rare, particularly off Newfoundland and Labrador.



Sowerby's Beaked Whale



BLOW: Very low, hardly ever seen or noticed





Dolphin-like, long snout, with bulge on head (where melon is located)



DORSAL FIN: Small, wide-based, slightly hooked, 2/3 down. Tail does not have median notch

Photo icon: Whale and Dolphin Conservation





Sperm Whale

(Physeter macrocephalus)

Status (SARA): Not Listed Status (IUCN): Vulnerable

Sperm Whales are the largest of the toothed whales, and are active predators hunting down squid (even giant squid!) in the deep sea, bony fishes and even sharks. They are named for the spermaceti substance which fills their head, it's unknown why they have it perhaps for buoyancy to allow their deep dives. They are incredible divers, able to descend over 3000ft and remain underwater for over 90 minutes!





Sperm Whale

(Physeter macrocephalus)

Migration Patterns:

The movement and migration of Sperm Whales is not well-understood in detail. However, there is an apparent seasonal migration polewards in the summer by males, while many females tend to stay at lower latitudes with no apparent movement pattern. Male Sperm Whales have been sighted off both coasts of Canada.





BLOW: Low and bushy, pointing forward, to the left





Distinct V-Notch in middle, each side is a right triangle

Dorsal Fin: Rounded smaller hump, 2/3 back from head

Skin is wrinkly



Photo icon: Dennis Scott/Getty Images



Illustrations by Tony Pyrzakowski ©

Threats & How to Help



Underwater Noise

Underwater noise also poses threats to marine animals, especially whales as they are highly vocal by nature and depend on sound to function normally.

Noise disturbances can cause behavioural changes and can result in displacement, avoidance, shifts in migration path, stress, hearing damage and strandings.

While boat engine noise is an ongoing concern, much more harmful noise is generated from seismic vessels

in search of oil and gas.



Entanglements

Entanglements from fishing nets, ropes attached to fishing gear and marine debris such as plastic affect over 200 species worldwide. Whales are especially affected by entanglements around their fins, tails and mouths. Being entangled causes injuries to the body, can prevent being able to eat, and the sheer weight of debris can ultimately cause drowning.

Entanglements is a very serious issue, one of which can easily be reduced by using the most wildlife friendly fishing gear available, careful use of fishing gear and retrieving lost or abandoned gear to avoid

ghost fishing.



Vessel Strikes

With the ever increasing traffic within our oceans and with larger and faster vessels, vessel strikes are increasingly becoming a serious threat to marine mammals, sharks and turtles. Many species you may encounter often show scarring from being struck while others simply do not recover.

Within Canada, marine mammals are protected against vessel strikes and human interactions under the *Marine Mammal Regulations* which includes minimal distance requirements. This has been crucial for the recovery strategies of the North Atlantic Right Whale.



Marine Debris Ingestion

Marine Debris includes all garbage which accidentally or purposely entered the ocean from land or sea and includes debris in all shapes and sizes including micro to macro plastics.

Microplastics are exceptionally dangerous when considering the effects of ingestion. Plastics do not digest and stay in the stomach, making the stomach feel "full". This is often why species are found with a stomach of plastics, as they are not able to pass nor ingest sources of nutrients. Many plastics also mimic food sources, such as plastic bags resembling jellyfish - the preferred diet for

Leatherback Sea Turtles.



Climate Change

Climate Change is having severe impacts to nearly every species, worldwide. With ocean temperatures rising, we are seeing a shift Northward of species to colder waters and habitats are being completely removed through the melting of sea ice. Ocean distribution of species is changing, this not only affects the habitats, migration patterns, but also impacts our fisheries, tourism, and culture.



How to Help

There are many ways to help our ocean and the species that call it home! Examples include increasing education of protection and threats that species face, being whale safe while boating, supporting and promoting marine protected areas in your local communities and beach cleanups to encourage reducing our waste.

Beach Cleanups are a great community event that not only helps coastline and marine habitats but also increases awareness. It is very important to be very careful when doing cleanups, ensuring you are making the habitat better and not impacting it more by removing debris which was actually transformed into a home for a species (e.g. some metal structures become a great home for seastars and mussels)!



How to Help: Whale Watching

Whale watching provides an incredible opportunity to witness the giants of the sea, to learn more about these phenomenal creatures, and create a stronger connection. Appreciating these species will only cause more desire to protect them. However, we must be careful.

It's crucial to follow the Marine Mammal Regulations such as remaining 100m away, not chasing the animal, not feeding or touching, reducing speeds, and not separating individuals from pods. You can learn more by visiting: www.dfo-mpo.gc.ca


Citizen Science

Citizen Science is a great way for individuals to make an impact and contribution to science! There are a variety of citizen science initiatives, just like ours! Check out our CPAWS-NL's Marine Species Survey App and keep track of all your marine mammal, shark and turtle sightings!

This information will provide a more clear picture of the population of these species surrounding Newfoundland and Labrador waters.

App Link: https://arcg.is/0iXWli

Or scan the QR code to open the survey on your device



Reporting

Similar to Citizen Science, reporting Species at Risk, entangled and stranded species are extremely important.

DFO Marine Mammal or Sea Turtle Sightings in NL: whalesighting@dfo-mpo.gc.ca

> Shark Sightings in NL: NLSharkSightings@dfo-mpo.gc.ca

Whale Release and Strandings NL: 1-888-895-3003





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