TO REPORT A TRAPPED SEA TURTLE OR SIGHTING CALL: **1-888-895-3003**

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LEATHERBACK SEA TURTLES IN CANADA'S ATLANTIC

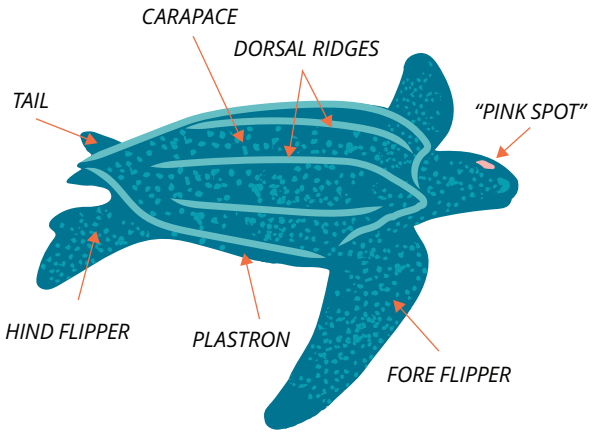
The endangered leatherback turtle can be found off the coast of Newfoundland during the summer months. It's important to report sightings of sea turtles that are entangled or in trouble.

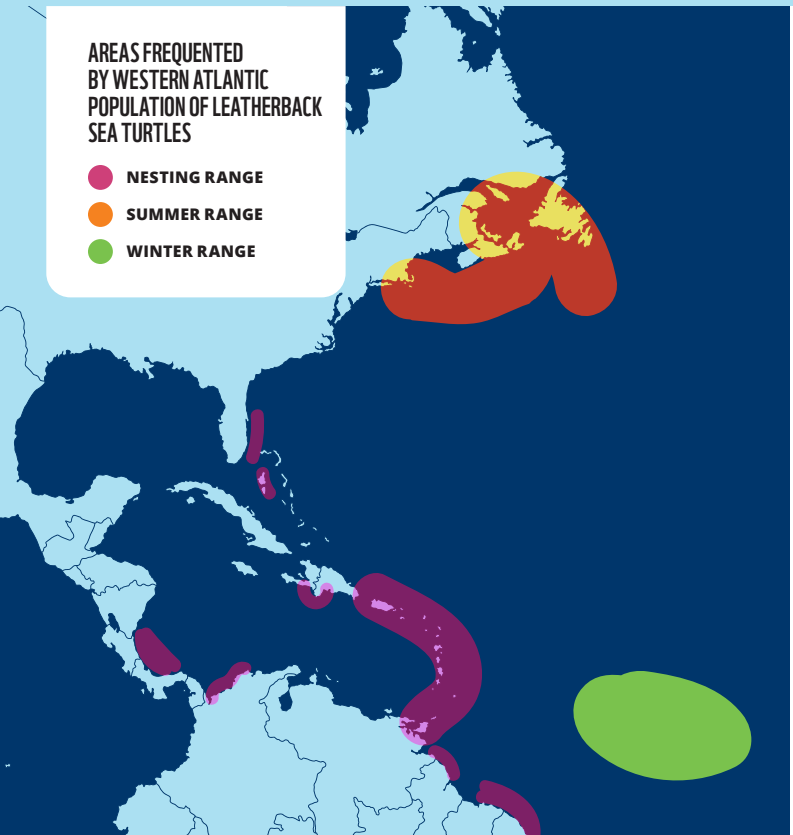
LEATHERBACK TURTLE

SIZE: The leatherback turtle is the largest sea turtle. Those that frequent Atlantic Canadian waters have an average shell length of 1.5 m and average weight of approximately 400 kg.

APPEARANCE: Unlike other sea turtles that have a hard carapace, leatherback sea turtles are named for the leather-like skin that covers their teardrop-shaped shell. Dark grey to black in colour with scattered white marks, adults also have a unique pink spot on the top of their head. Leatherbacks have large paddle-shaped flippers and seven distinct dorsal ridges.

STATUS: Endangered





WHERE ARE LEATHERBACK SEA TURTLES FOUND?

Leatherback sea turtles have the widest range of any marine turtle and are the only species found commonly in the waters of Newfoundland and Labrador.

The Atlantic population travels up to 18,000 km from tropical and subtropical nesting beaches in the Caribbean to temperate feeding areas in the North Atlantic, where jellyfish are abundant. In Atlantic Canada, leatherback turtles have been spotted up and down the coast of Newfoundland and as far north as Nain, Labrador.

Leatherbacks are the deepest diving marine turtle. While in Atlantic Canada, they have been recorded in waters as shallow as 2 m and as deep as 5,000 m.

Leatherback turtles can forage as far as 50N due to a unique internal heating system that allows them to keep their core body temperature higher when venturing into colder water.

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ANCIENT AND ENDANGERED

Sea turtles are among the oldest species on the planet. For more than 150 million years, sea turtles have covered vast distances across the world's oceans, performing a vital and integral role in marine ecosystems.

Over the last 200 years, human activities have tipped the scales against the survival of these ancient mariners. Today, all seven species of sea turtles are classified as at risk, with the leatherback and loggerhead sea turtles listed as Endangered under Canada's Species at Risk Act.

Entangled in fishing gear

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KEY THREATS

INCIDENTAL CAPTURE

One of the biggest threats to leatherback sea turtles is hooking, net entrapment and entanglement in fishing gear. Once entangled, turtles may not be able to swim, surface to breathe or find food.

INGESTION OF MARINE DEBRIS

More than 50% of sea turtles have eaten plastic debris such as bags and balloons, mistaking it for their main prey, jellyfish.

HABITAT LOSS AND DEGRADATION

Tourism and residential development has led to the destruction of critically important nesting beaches in the Caribbean.

TRADE AND ILLEGAL HUNTING

Poaching and egg collection, along with the international trade in turtle products, are a major cause of serious declines.

WHAT TO DO IF YOU ENCOUNTER A LEATHERBACK TURTLE

If you see a leatherback sea turtle or release one from your fishing gear, please report it at 1-888-895-3003. Record the sighting in your log book as well.

The **Whale Release and Strandings Group** responds to live and stranded leatherback sea turtles to provide safe and proper re-entry and to collect valuable scientific information that can help us learn more about this endangered species and prevent further declines in their population.

IF YOU CATCH ONE

Leatherback sea turtles are frequently spotted in waters off Atlantic Canada and can become entangled in fishing gear. They are usually caught by ropes around their flippers or neck.

- If you catch a leatherback sea turtle in your fishing gear, it will not try to hurt you.
- By getting the turtle alongside your boat, you may be able to untwist the ropes and release it with very little damage to your gear.
- Do not try to tow a live turtle to the wharf or shore as that can cause injury.

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LEATHERBACK SEA TURTLES AND ENTANGLEMENT

A huge threat for leatherback sea turtles in the Atlantic includes entanglements in fishing gear, especially in fisheries located in the species' pelagic and coastal foraging zones as well as along its migratory route.

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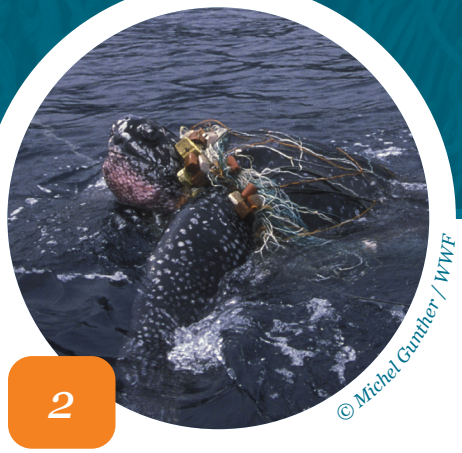

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FIXED GEAR BYCATCH

In Canada, studies suggest there is a high risk of entanglement and high mortality rates associated with leatherback sea turtle bycatch in fishing gear that is anchored to the ocean bottom (fixed gear).

COMMERCIAL LONGLINE BYCATCH

The majority of leatherback entanglements documented globally, and particularly in high-latitude waters like the temperate Northwest Atlantic, involve interactions with large pelagic/commercial longline fisheries. Commercial longlines pose a threat to leatherbacks during their trans-oceanic pelagic migrations and in offshore foraging areas.

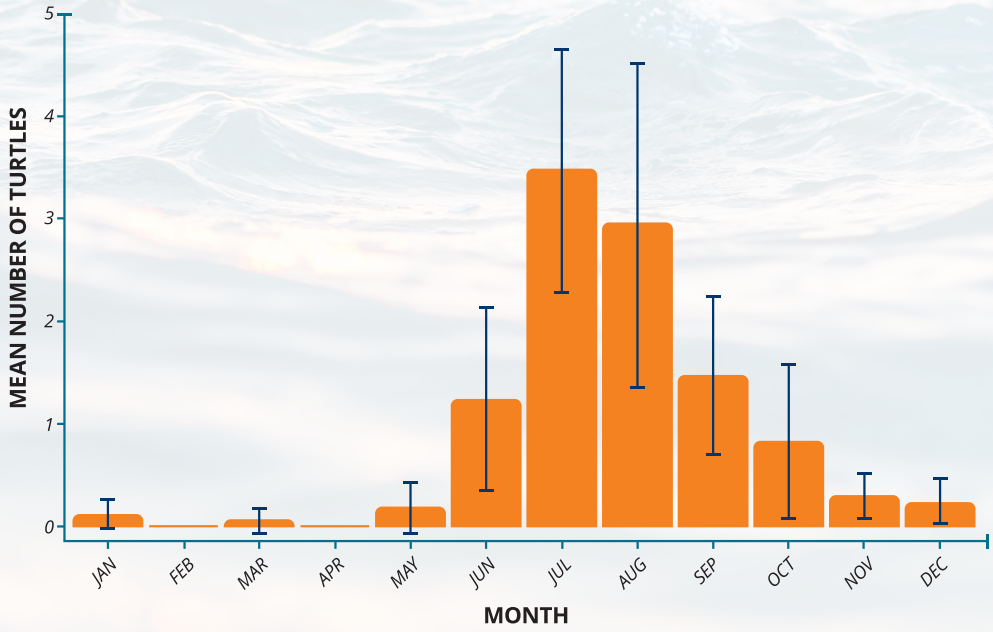
ABANDONED, LOST OR DISCARDED FISHING GEAR (ALDFG)

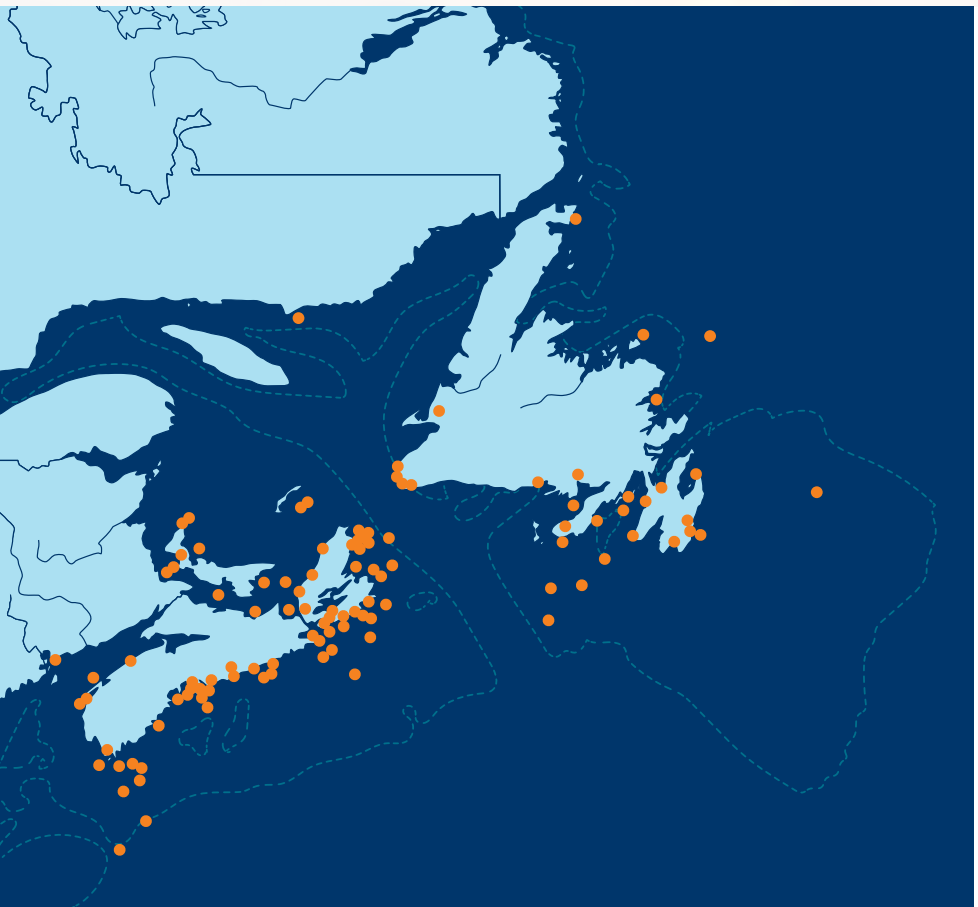
Leatherbacks are vulnerable not only to active fishing gear but also to abandoned, lost or discarded fishing gear (ALDFG).

ENTANGLEMENT PATTERNS

TEMPORAL PATTERNS

Leatherback entanglements in Atlantic Canada have been reported primarily between June and October, with most reported in July and August; this is when leatherbacks are seasonally resident and several fisheries are active in continental shelf waters (Hamelin et al., 2017).





GEOGRAPHIC PATTERNS

Most entanglement reports in Atlantic Canada came from coastal Nova Scotia, with a notable concentration of reports on the Atlantic coast, particularly in the vicinity of Halifax and around Cape Breton Island.

Newfoundland and Labrador also had many entanglement incidents, which were dispersed around the extensive coastline. The most northern record came from Labrador. There were also entanglement reports from the provinces of Prince Edward Island, Québec (including the Magdalen Islands), and New Brunswick (Hamelin et al., 2017).

FISHING GEAR PATTERNS

Interactions between leatherback sea turtles and fishing gear are expected to differ depending on gear type.

In Atlantic Canada, they are commonly reported in pot gear (e.g., snow crab, lobster, whelk) and trap nets (e.g., mackerel); this corresponds to extensive use of polypropylene lines distributed in the upper water column where leatherback foraging activity is concentrated (Hamelin et al., 2017).

Fisheries impacted in leatherback sea turtle entanglements

ATLANTIC CANADA FROM 1998 TO 2014

FISHERY	FREQUENCY	% OF ENTANGLE-MENTS
Pot*	91	44.4
Trap net	53	25.8
GIll net	24	11.7
Groundfish longline	7	3.4
Rod & reel (tuna/ swordfish)	4	2.0
Bait net	3	1.5
Aquaculture	3	1.5
Offshore lobster	2	0.98
Other/ unknown	18	8.8

**Pot fisheries include inshore lobster, snow crab, rock crab, whelk, and hagfish fisheries.*

Fishing gear components implicated in leatherback sea turtle entanglements

ATLANTIC CANADA FROM 1998 TO 2014

FISHERY	FREQUENCY	% OF ENTANGLE-MENTS
Main buoy line	94	45.8
Misc. rope	24	11.7
Haul-up buoy line	22	10.7
Mooring line	15	7.3
Net	15	7.3
Trap net *free swimming*	15	7.3
Head rope	5	2.4
Hook	4	2.0
Bottom longline	3	1.5
Hi-flier line	2	0.98
Other/ unknown	6	2.9

OCEAN HABITAT PATTERNS

Entanglement occurrences can vary depending on the physical areas within the ocean that leatherbacks inhabit. Leatherbacks normally inhabit areas where prey productivity is high, along oceanic frontal systems and along vertical gradients located at oceanic fronts.

Adult turtles move from offshore waters into coastal areas to exploit the seasonal production of jellyfish. Leatherbacks also aggregate in specific areas with unique ocean circulation characteristics: **shelf slope fronts**, **upwelling fronts**, and **western current boundary edges**; this is likely related to the concentration of jelly-plankton.

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