

Entanglements in Fishing and Marine Equipment and Strandings reported to the Whale Release and Strandings Group in Newfoundland and Labrador and a summary of the Whale Release and Strandings Program during 2021

A Report to Fisheries and Oceans, Canada –
Newfoundland and Labrador Region

Wayne Ledwell, Julie Huntington, Cateline Landry, Noah Ledwell and Jesse Hanlon
Whale Release and Strandings
Tangly Whales, Inc
244 Tolt Rd.
Portugal Cove-St. Philips, NL, A1M1R2

31st December 2021

Table of Contents

List of Tables	2
Acknowledgements	3
Introduction	4
Methods	6
Results and Discussion	7
Disentanglement Training/Educational Activities/Tool Workshop	10
Recommendations	10
Tables	13
References	20
Appendices	25

List of Tables

Table 1. Humpback whales reported entangled in fishing gear in Newfoundland and Labrador during 2021

Table 2. Other whales reported entangled in fishing gear in Newfoundland and Labrador during 2021

Table 3. Ice-entrapped, stranded and dead floating cetaceans reported in Newfoundland and Labrador during 2021

Table 4. Miscellaneous cetaceans reported in Newfoundland and Labrador during 2021

Table 5. Sightings/cruises/surveys in Newfoundland and Labrador during 2021

Acknowledgements

Thanks to DFO fisheries officers out of Twillingate, Bay Roberts, St. John's, Bonavista and Marystown for their support with entangled and stranded whales. Some of these projects were challenging and we couldn't have done them without the help of the fisheries officers.

Thanks to Blair Adams for his assistance with the Musgrave Harbour northern bottlenose necropsy, as well as Grant for carrying us and our equipment to the site on his skidoo.

Thank you to Kris and Shawna Prince who helped us search for an entangled humpback in Trinity Bay. They are always ready and willing to drop what they are doing and assist to help a whale.

Thank you to the Summer Career Placement Student Program (SCP) for their support over the years.

Thank you to Loyola and Joe O'Brien, Gerry Williams and Wayne Maloney for standing by us during a disentanglement in Bay Bulls.

Thanks to Dean Ingram of the Clarenville shipyard. He deserves special thanks for rescuing a severely entangled beluga.

Thanks to the Navigator magazine for running reduced fee ads for the toll-free number to fishers advertising details of whom to call when you have or see a marine animal entrapped or stranded in Newfoundland waters. (Appendix V)

Thanks to Laura Feyrer for her insight and support to digitally catalogue the 45 entrapment reports of the Whale Research Group and the Whale Release and Strandings Group reports.

And thank you to the fish harvesters of Newfoundland and Labrador for working with us by prompt reporting and helping us with the disentanglement and strandings of marine animals in the Newfoundland DFO Region.

Whale Release and Strandings Group

The Whale Release and Strandings Group (Tangly Whales, Inc.) is an incorporated (July 200) non-profit environmental organization that has been responsible for the disentanglement and response to strandings of marine animals in Newfoundland and Labrador since 2000. The organization has a board of directors.

The Mission statement for the Whale Release and Strandings Group is:

- To conserve biodiversity
- To release whales from fishing gear
- To attempt to save fishing gear to the extent possible during a disentanglement
- To coordinate strandings on marine animals
- To conduct research work on marine animals
- To conduct all other work on marine animals as seen fit.

From 1978 through 2021, assistance has been offered to fish harvesters in the DFO Newfoundland Region who incidentally have large whales, leatherback sea turtles and basking sharks entangled in their fishing gear and for assistance with live or dead stranded marine animals. This service has been provided with support from Fisheries and Oceans, Canada.

Summary reports

During this time-period (1978-2021) information from fish harvesters regarding whale interactions has been recorded and monitored. Included are the incidences of entrapments, strandings and sightings of twenty different species of cetaceans, leatherback sea turtles, and sharks that have been recorded in continuous reports and summaries from 1978 through 2021.

This report represents the forty fifth (45th) of such reports in a similar format produced by the Whale Research Group (MUN) and the Whale Release and Strandings Group. The purpose of these yearly reports is to summarize activities of important events, such as entrapments, entanglements and strandings of animals at risk and under study, and research and/or educational studies undertaken. These reports are catalogued at the Memorial University Library (Centre for Newfoundland Studies), at Fisheries and Oceans Canada and with the Whale Release and Strandings Group. One of the benefits of these reports is quick access to changes in entrapments and entanglements in the Newfoundland region related to changes in fishing gear and distributions of large marine animals, as well as the various strandings, ice-entrapments and sightings of rare animals and animals under study.

Introduction

The program, which has been run by the Whale Release and Strandings Group (WRS) from 2001-2021, plus providing, during 2000, a one-year mentorship with the Canadian Coast Guard, uses methods of which the most important is working with stakeholders (harvesters) for disentangling of large whales from fishing gear, which was pioneered by

Dr. Jon Lien (Lien 1980), and with a few modifications, these methods remain those of choice today.

The disentanglement program in use today was designed and developed for the highly rural nature of over 800 fishing communities spread over the 17,000 km coastline of Newfoundland and Labrador (NL). The disentanglement assistance program has benefited fish harvesters, whales, endangered leatherback sea turtles, basking sharks and the people of Canada. It has provided assistance to often financially strained fishers, saving them thousands of dollars in what would be lost fishing gear and downtime if they did not have skilled support in releasing a large whale entrapped in their gear. WRS releases large and often endangered whales, leatherback sea turtles and basking sharks from fishing gear and allows them to continue their life processes. We have the largest feeding population of humpbacks in the northwest Atlantic, with about 5,000 individuals visiting NL waters during spring, summer and fall. These whales play a critical role within fragile marine ecosystems globally, including here in the northwest Atlantic, and found the basis for a large tourism industry in the region.

The program also responds to all reported live and dead stranded cetaceans and sea turtles, as well as pack ice entrapments.

The purpose of the assistance is: (1) to assist fish harvesters in releasing whales from fishing gear, thus decreasing downtime and damage to fishing gear. The length of time a large marine animal is entrapped in fishing gear is directly correlated to greater gear damage and loss of income due to the gear not fishing properly or at all (Lien 1983), (2) to release entrapped marine animals as quickly and safely as possible to allow them to continue their life processes, such as feeding, migrating, mating, rearing their young, (3) to communicate with fish harvesters and communities about marine animals, including species at risk, and habitat protection, and (4) to add to the scientific knowledge of cetaceans, leatherback sea turtles and sharks that inhabit Newfoundland and Labrador waters.

Fish harvesters have come to realize that calling a government sponsored program offers them a safer, faster and more efficient alternative to dealing with a gear-entrapped animal than attempting a release on their own. Fish harvesters and untrained persons who take whales out of gear often leave large amounts of fishing gear on the animal perhaps because they do not or cannot look underwater to see all the gear that is on the entrapped animal. Whales caught in crab gear that are cut loose by fish harvesters and other untrained persons are often released with vast amounts of rope and pots still attached (Ledwell and Huntington 2001, 2002, 2006). This provides more opportunity for whale re-entrapment and more gear damage and allows the animal to move from the vicinity in which it was entrapped, making it more difficult to relocate, and/or challenging to catch to remove any remaining gear. A timely response by experienced personnel results in the removal of most, if not all gear from the animals, less gear damage and reduced fishing downtime, particularly important to the economically marginalized inshore fishers.

From 1979 to 2021 one thousand one hundred and twenty-nine (1,129) humpback whales (*Megaptera novaeangliae*), one hundred and sixty-five (165) minke whales (*Balaenoptera acutorostrata*), sixteen (16) fin whales (*Balaenoptera physalus*), one (1) right whales (*Eubalaena glacialis*), two (2) killer whales (*Orcinus orca*), one (1) bowhead whale (*Balaena mysticetus*), one (1) beluga (*Delphinapterus leucas*) and ninety - one (91) unknown large whales were reported entrapped or entangled in fishing gear in Newfoundland and Labrador.

Eighty-two (82) leatherback turtles (*Dermochelys coriacea*) have been reported entangled in fishing gear in this region with a mortality of 25%. There have been fifteen (15) reported leatherback turtle strandings with 11 of those being dead animals reported in the Newfoundland region. Two (2) live leatherbacks that had stranded were rescued and returned to sea by members of the WRS group. A loggerhead turtle (*Caretta caretta*) was collected cold stunned in Hermitage Harbour and returned to ocean from the Harbour Breton harbour after it was rewarmed (Ledwell and Huntington 2007).

Entrapments, strandings and sightings of other cetaceans, either unusual to the area or under study or animals free swimming but in poor health and marine animals such as sea turtles, sharks, walrus, have also been documented (Lien 1994, Ledwell and Huntington 2000-2012, Ledwell, Huntington and Sacrey 2013-2015, Ledwell and Huntington 2016, Ledwell, Huntington and Enserink 2017, Ledwell, Huntington, and Ledwell 2018, Ledwell, Huntington, Sacrey and Landry 2019, Ledwell, Huntington, Ledwell, and Landry 2020).

From 1992 to 2000 funding for a marine animal release program was varied and at times non-existent.

The most common types of fishing gear associated with entanglements in this region currently include gillnets (cod, herring, mackerel, lumpfish, flounder, monk, skate and turbot), snow crab pots, whelk pots, toad crab pots, box traps (caplin, cod, herring, mackerel and squid), unspecified and illegal gillnets, ropes/buoys and moorings. In other words, most types of fishing gear have the potential to incidentally catch whales and they do. In recent years, fishing effort in Newfoundland and Labrador has shifted offshore. This shift in gear has led to an increase in the number of offshore entrapments reported and offshore entanglements have primarily involved snow crab and whelk pot gear.

Methods

Whale, leatherback sea turtle and basking shark entanglements in fishing gear and strandings and sightings of marine animals were reported to the Whale Release and Strandings Program in 2021 by calling a Canada-wide advertised toll-free number (1-888-895-3003) (Appendix V) which can be accessed 24 hours a day seven-days a week year-round. A trained release team responds by providing suitable, safe advice, or sending expert personnel to the site for needed assistance. The trained crew is equipped and ready to deploy immediately with an inflatable zodiac and necessary specialized tools (Appendix VI) for disentanglement of whales, leatherback sea turtles and basking sharks. The objective of each disentanglement is the safe, gear-free release of the whale or other

marine animals from the fishing gear with minimal or no damage to the fishing gear involved in the entanglement. The disentanglement crew also responds to whale and leatherback sea turtle strandings. Calls concerning entanglements, strandings and dead floating animals were also forwarded to the group by DFO Fisheries Officers, Coast Guard Centers, fishers, Royal Canadian Mounted Police (RCMP), whale watching businesses, Crime Stoppers and the general public. Fisheries and Oceans Canada funded the program in 2021. Additional funding was provided through Canada Summer Jobs-Service Canada and the Town of Portugal Cove-St. Philip's.

Results and Discussion

Results of the Entrapment Assistance Program from previous years have been summarized in annual reports to Fisheries and Oceans and/or the Newfoundland and Labrador Department of Fisheries (Lien 1979, Lien 1980, Lien and Aldrich 1982, Lien et al. 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, Lien 1990, 1991, 1992, 1993, 1994, 1995, (1996, 1997, 1998, 1999 personal papers Lien), Ledwell, Huntington and Lien 2000, Ledwell and Huntington 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, Ledwell, Huntington and Kelly 2010, Ledwell and Huntington 2011, 2012, Ledwell, Huntington and Sacrey 2013, 2014, 2015. Ledwell and Huntington 2016, Ledwell, Huntington and Enserink 2017, Ledwell, Huntington and Ledwell 2018, Ledwell, Huntington, Sacrey and Landry 2019, Ledwell, Huntington, Ledwell and Landry 2020).

Humpback whales reported entangled in fishing gear in Newfoundland and Labrador during 2021

Humpback Whales

There were (20) twenty reports of entangled humpbacks reported to the Whale Release and Strandings Group in 2021. Through analysis of what the gear configuration and the poly buoys looked like on the animal and the areas reported we believe that (6) six of these reports to be the same animal. See Table 1.

26th May

WRS members released a humpback from snow crab gear off Little Burnt Bay, Notre Dame Bay. The whale had towed the fleet of gear from off in the bay to shallower waters closer to the community. The animal had 2 bridle ropes through its mouth leading down into the gear. The animal had quite a bit of mobility and was staying down for lengthy periods and coming up in unpredictable areas. We managed to hook into the gear and to cut both the bridles and released the whale free of all gear.

6th June

A tourist reported a whale thrashing about with green fishing gear on it. Sometimes tourists mistake the fins under water for fishing gear as they look greenish from the surface. We were unable to relocate this animal.

20th-22nd June

A humpback was reported to WRS late on the evening of the 20th towing 2 poly buoys and heading south. WRS alerted DFO for a search pattern and on the 21st the whale was seen with the same gear configuration by fishermen 5nm off St. Brides still heading south. We teamed up with Fisheries Officers and a patrol boat out of Placentia and a DFO surveillance plane out of St. John's and spent 5 hours searching when we had to call it off due to heavy fog setting down. On the 22nd we got numerous calls, from whale watchers on the famous St. Vincent's beach, of a humpback towing the same gear configuration close to shore. With the same fisheries officers and patrol boat from Placentia we caught up to the animal off of St. Vincent's beach, St. Mary's Bay. We removed all the gear from the peduncle of the whale which was 91 meters of 9/16" polysteel rope and 2 poly buoys. The gear was completely removed and identified as snow crab gear.

25th June

Humpback reported by a sunrise watcher off Doran's Lane, Logy Bay. One of our team relieved him to try and keep the whale in sight while we drove to Torbay and with a DFO patrol boat out of St. John's and we spent 3 hours searching on the water before we resighted the whale in pretty much the same area it had been sighted from land earlier. The whale had a small red styrofoam float attached to its left fin and a mouth bridle that was also wrapped around the fin and into the rope leading into the gear it was dragging. There was also a body wrap forward of the fins. We cut the mouth bridle close to its head and the body wrap. The whale became agitated and began moving away from us, so we cut the gear leading under its fin releasing it from the gear that was on the bottom. We didn't get to remove the float that was around its left fin. We believe the gear to be lobster gear.

25th – 26th June

Humpback seen by hiker with small red float close to body reported at 7 pm. We believe the same whale from earlier in the day off Logy Bay. This whale was reported multiple times also on the 26th from St. John's area to Cape Spear. We searched for the animal but were unable to relocate. The whale was reported to be feeding.

25th June

Humpback reported off Burin towing green ropes and netting. We alerted the Marystown detachment of DFO, but the whale was not relocated.

3rd July

Humpback reported by whale watchers off St. Vincent's beach towing red rope. Moving freely and diving. Not seen again.

3rd July

Humpback reported towing white torpedo float on a long line with drone footage showing what looked like a lobster pot dragging from its mouth in the Logy Bay area by hikers heading towards Flatrock. We alerted the DFO and prepared for a response but were unable to relocate the whale.

5th July

Humpback reported by whale tour operators towing what appeared to be lobster gear with plastic window washer bottle attached as a float and streaming from the animal's mouth. The whale was bridled, and hog tied from the mouth to its peduncle. We cut multiple tail wraps in increasing wind from a highly mobile animal in increasing wind conditions. We then cut the mouth bridles releasing it completely of gear. Based on the rope configuration we removed from the whale and conversation with the tour operators we believe it was entangled in 2 different sets of lobster gear.

9th July

Fish harvester reported heavily entangled humpback off Portugal Cove South with rope wraps embedded in back forward of the pectorals and towing a white styrofoam float about 10 meters behind floats. He also thought it was towing a crab or lobster pot behind the pectorals. We searched the area with a DFO patrol boat and a DFO surveillance plane for 3 hours before the wind picked up to 20 knots from the SE and with fog rolling in, we had to abandon the search.

11th July

Heavily entangled humpback towed snow crab pots into another fish harvester's snow crab gear 11 nm off Petty Harbour on the Southern Shore. The fish harvester released the whale from both sets of gear. I talked to one of them and saw a video. They said they removed all the gear except some rope through its mouth.

19th July

Recreational fisher reported a cow/calf pair off Bay Roberts, Conception Bay. The calf "had a rope around its neck". The fisher reported the incident to the Bay Roberts detachment of DFO who relayed it to WRS. The whale was not relocated.

19th July

Same person from 9th July reported a humpback off Portugal Cove South towing small styrofoam float with ropes around its back but nothing on its tail. We alerted DFO to search for the animal but due to wind and fog a response was not mounted.

4th August

Humpback reported by whale tour group off English Harbour Trinity Bay with rope around its back. A second whale tour company reported what appears to be the same whale with what appeared to be crab rope hanging loose from its mouth. The animal wasn't seen again.

4th August

Sailing vessel north of Cape Freels near Lumsden reported a humpback towing an orange poly buoy. No response mounted due to weather. Whale was not sighted again.

6th September

Whale tour group Sea of Whales reported with images of a humpback late evening off Trinity heavily scarred and entangled with heavy rope embedded across its back and deep scarring from either same rope or other. Rope also wrapped around peduncle. WRS

contacted the Bonavista detachment of the DFO as the weather next day was calm for search of the area. DFO together with WRS and Sea of Whales and with boaters in the area searched the Bay from Catalina to Irelands Eye all day on the 10th in flat calm weather but did not relocate the animal.

Minke whales

One (1) minke whale was reported entangled in fishing gear in NL in 2021. See Table 2.

11th July

A minke was reported entangled in a fleet of two cod gillnets in the sentinel fishery off Mary's Harbour, Labrador. The fish harvester removed one net and the whale began to kick up, so they decided to try and pull the remaining net of using their speed boat. They cut it and let the whale go with one net attached and a poly float. WRS notified the DFO detachment, but the animal was not relocated.

- We have been trying to run a disentanglement workshop for minke disentanglement in Labrador for a few years now but as it stands Covid has prevented our team from carrying out this in-person training

Clareville beluga

A solitary social male beluga, nicknamed 'Bluey', travelled the communities of Smith Sound during the summer and fall of 2021 (Table 2). The animal was entrapped multiple times in various fishing gears, recreational cod jiggers, boat moorings, dock moorings and who knows what else. It towed away lobster pots and other floats and created havoc for the local shipyard divers, taking their wrenches, their dive floats, pulling on their fins, spare regulators and attempting to pull them around. WRS responded multiple time to the animal, once even babysitting it as the shipyard prepared the cradle for a vessel retrieval. The animal was covered by media multiple times. The entrapments were severe including one in ½ inch aircraft steel cable and heavy rope that held a boat mooring anchored to cast iron radiators and propane bottle. WRS had to involve divers from the shipyard to cut the cable after removing the rope. His luck finally ran out in a derelict boat mooring not far from his last known entrapment. Poor weather probably prevented the locals from spotting it. The WRS team performed a necropsy on November 21st, and collected tissue samples were deposited at the Marine Mammal section of DFO, St. John's.

Strandings

The Whale Release and Strandings Group conducted 3 necropsies during the winter spring and fall of 2021 (Table 3) of three (3) individual Northern Bottlenose whales. See Appendices I, II and III. Because 'Bluey', the beluga, had a bit of a beak however small and due to the trouble he caused and the fact that he had affected so many people in good and bad ways, both good and bad, we have included his necropsy results as an honorary beaked whale alongside the northern bottlenose study remains. See Appendix IV.

Disentanglement Training/Educational Activities

The First Large Whale Disentanglement Tool Workshop – On hold due to Covid 19

A disentanglement whale tool workshop scheduled for the fall 2021 was also put on hold due to Covid-19. The goal of this workshop was to bring together representatives of various groups who work on getting gear off of large whales here under the direction of master machinist Philippe Germain, who manufactures WRS tools together with Wayne Ledwell (See Appendix VI), at the Flume tank at the Marine Institute. The objective is to test the effectiveness of the various cutting tools currently used on different ropes and netting along with bringing together ideas for designing other knives.

Collaboration from a group of responders with diverse knowledge and varied experience within the field is an ideal and invaluable contribution to continue this innovative process, and a workshop to achieve this is set to be held at the Flume Tank at the Marine Institute of Memorial University of Newfoundland and Labrador.

The evolution of fisheries and accompanying gear has been reflected in the selection and development of appropriate tools for safe and effective disentanglement of marine wildlife. Novel modifications to tools may further enhance disentanglement capacity, allow for more efficient response, create safer environments for responders, and subject both responders and marine wildlife to reduced risk of injury.

Disentanglement training and school outreach in Coastal Labrador

(This is still on hold due to Covid – 19)

Although large whale entanglements in Labrador have historically been low compared to the island portion of the province, in recent years, reports of entanglements and requests for responses from our group have been increasing. As the only group within the province equipped to safely respond to whale entanglements, and in order to address these gaps, it was requested that our team provide training workshops to interested groups in several coastal communities to improve marine animal response capacity within Labrador. Over the fall of 2021 and 2021, three members of Whale Release and Strandings team, had planned to travel to the coastal communities of Nain, Natuashish, Postville, Makkovik and Rigolet, Labrador to deliver small cetacean disentanglement training workshops developed for fishers, fisheries officers and other interested community members.

Additionally, the WRS team had planned to engage with school groups through our marine wildlife outreach program, which aims to connect and engage kindergarten to grade 12 students with their natural environment, and to inspire curiosity and appreciation of local marine ecosystems. Several school principals and teachers were eager to participate in our grade-specific programming and outdoor learning opportunities. Although we had received encouraging support from the Newfoundland and Labrador English School District Labrador Region program specialist and schools' staff, unfortunately due to the pandemic, we were unable to visit schools at this time and have postponed visits until it is deemed safe to do so.

Reducing endangered sea turtle bycatch and entanglement through collaboration, education, and training in mitigation techniques

Tangly Whales has also been involved in a three-year project in collaboration with FFAW, CPAWS-NL and WWF-Canada, which will provide educational materials and disentanglement tools to fishers along the south shore of Newfoundland to help enable them to safely interact with endangered entangled leatherback sea turtles. The project engages fishers by asking for input and feedback on tool design, ideas for gear deployment adjustments to reduce risk of bycatch, and best practices to be shared throughout the industry.

During the first and second year of the project, preliminary planning and development of educational materials has taken place, as well as the manufacturing and distributing of line cutter tools. During the third year, the group will again meet with fishers, to provide educational material and line cutter tools, as well as soliciting feedback to be incorporated into the design and manufacturing of the next iteration of tools. Engaging in project objectives over three years will allow sufficient time to effectively integrate fisher feedback, refine tools, and develop best practices.

Recommendations

All vessels in the DFO Newfoundland Region should have the WRS toll-free number stickers onboard and in their logbooks alerting them who to call when they have an entrapped whale or see an entrapped or stranded whale or leatherback sea turtle. By having the toll-free number visible in the wheelhouse, fishers may call for expert advice when they have or as soon as they see a whale or leatherback entrapped and not attempt to cut animals free and leave them with large amounts of gear attached which may cause the animal to become re-entrapped or die. This situation can be at least partially avoided if boats have the entrapment assistance hotline number easily visible onboard and upon calling the WRS group they can be advised on the proper release procedures or be advised that a release team is available to attend to the entanglement. This may, in turn, lessen the number of whales and / or sea turtles each season free-swimming with gear attached. See Appendix I for toll-free sticker.

Because of the dangers inherent in fishing boats encountering entangled large whales in their fishing gear in the offshore, especially snow crab gear, fishing groups need to be advised by an experienced disentanglement group on procedures to protect lives and lessen gear damage.

Table 1. Humpback whales reported entangled in fishing gear in Newfoundland and Labrador during 2021

Date	Area	Gear type	Description
26 th May	Little Burnt Bay, NL 49.356483 N, 55.080143 W	Crab fleet	WRS responded to animal bridled through mouth and WRS members cut bridled lines from whale's mouth.
6 June	Cape Spear	unknown	Tourist reports whale trashing about with green fishing gear on it. Unable to relocate
10 th June	Cobbler's Path, Outer Cove, NL 47 66 55 N 52 66 86 W		Lobtailing humpback reported as entangled minke.
20 th June	Point Verde, Placentia Bay, NL 47 15 45 N, 54 02 23 W	Towing 2 poly buoys. 1 large, 1 small	WRS responded with DFO aerial patrol, patrol and surveillance plane could not locate whale after searching for ~5 hrs with fog conditions
22 th June	St. Vincent's, NL 47 15 45 N 54 02 23 W	Towing snow crab buoys and 50 fathoms of rope	WRS responded and met DFO officers in Gaskiers, then located the whale off St. Vincent's Beach and disentangled it, removing all gear.
25 th June	Cobbler's Path, Outer Cove, NL 47 66 55 N 52 66 86 W	Fleet of lobster gear with red float	WRS responded, first locating whale from shore, then launched in Torbay and steamed to area looking for whale for ~2 hours with DFO before finding it. WRS cut the line around its back and tail.
25 th June	Signal Hill	Towing small red float close to fin	Reported at 7 pm. Believed to be the same whale as earlier on the 25 th
25 th June	Burin 47 03 N 55 07 W	Green rope and netting	Notified Marystown DFO but unable to relocate the animal
26 th June	Cape Race, NL 46 39 378 N 53 04 215 W		Possibly same whale from June 25, sighted by two different groups.

3 rd July	St. Vincent's Beach, NL 46 47 17.9 N 53 38 32.6 W	Red rope	Animal towing red rope, moving freely and diving, but was not resighted again.
3 rd July	Logy Bay, NL 47 64 48.8 N 52 64 84.1 W	Towing white torpedo float and suspected lobster pot	Line wrapped through mouth, around body. Headed towards Flatrock, moving freely, diving, but not re-sighted.
5 th July	Bay Bulls, NL 47 18 30.6 N 52 46 57.2 W	Two possible types of lobster gear (with two different types of rope)	Bridled through mouth and wrapped several times around tail so tightly that tail was pulled over to one side and whale was unable to straighten tail. WRS cut mouth bridle and wraps around tail, left completely free of gear afterwards.
9 th July	Portugal Cove South, NL 46 40 N 53 17 W	Lobster/crab with white float	WRS carried out intensive search for heavily entangled whale from Portugal Cove South to Cape Pine with DFO officers in zodiac and help from a surveillance plane but were unsuccessful in finding whale.
11 th July	Catalina, NL 48 50 67.8 N 53 06 77.4 W		WRS found whale actively feeding in harbour, maneuvering quickly and seemingly healthy and evasive, with no visible gear on it.
19 th July	Blackhead Cove, NL 47 53 54.4 N 52 65 8057 W		Reported to DFO for not lifting its tail, though, DFO officers already on site reported that there was no gear on the whale, so WRS stood down.
19 th July	Bay Roberts, NL	unknown "rope around its neck"	Entangled calf reported to DFO, but neither DFO nor WRS could contact the fisher who reported the animal to get the position of the sighting.
19 th July	Portugal Cove South, NL 46 39 60.6 N 53 15 90.3 W	small white float and ropes	Observed free swimming, no visible gear on tail, but towing small white float and ropes around body.
4 th August	English Harbour, NL 48 37 30.2 N 53 27 56.5 W	Rope wrapped around body	Swimming, feeding whale looked to have rope from crab gear hanging loose from mouth. The man who reported the incident was not responsive to further calls or email.

4 th August	Belle Isle, NL 49 21 45 N 53 39 94 W	towing orange poly buoy	Coast Guard reported entangled animal north of Cape Freels.
6 th September	Between Horse Chops and English Harbour, NL 48.3418 N 53.1871 W	Heavy rope	Sea of Whales reported heavily scarred and entangled in rope across back and peduncle. WRS responded and actively searched area from land and on the water for whale with Sea of Whales and DFO Bonavista officers, though whale was not re-located.

Table 2. Other cetaceans reported entangled in fishing gear to the Whale Release and Strandings Group in 2021

Date	Area	Species	Description
6 th June	Cape Spear, NL 47 52 57 N, 52 62 18 W	unknown	Whale reported thrashing about with green fishing gear on it. Fisheries officers unable to locate whale.
25 th June	Burin, NL 47 02 877 N 55 06 913 W	unknown	Report of 3 whales together, one entangled, trailing green ropes and netting. Called DFO to aid in re-location, though whale was not re-sighted.
3 rd July	unknown	Beluga	Cod fishing jigger tracked through body of animal until line broke leaving jigger in its side and deep scarring.
11 th July	Mary's Harbour, NL 52 30 98.7 N 55 83 23.3 W	Minke	Entangled in fleet of 2 cod gillnets and fishermen removed one net, but whale began to dive so they attempted to pull the net off using their boat and cut the net, letting whale go with one net and a red poly buoy attached.
25 th August	Hibbs Hole, Port de Grave, NL 47.5992 N 53.1806 W	Unidentified large cetacean	Animal reported entangled at surface in gill nets, pulling floats up and down, so WRS prepared to respond and engaged DFO officials, though activity stopped, and buoys appeared to return to surface.

2 nd September	Clarenville, NL 48.1682 N 53.9646 W	Beluga (‘Bluey’)	Whale familiar to community (‘Bluey’) entangled in steel cable boat mooring anchored in place, so WRS launched and approached to biopsy, cut ropes, then attempted to cut steel cable wrapped around body, though could not cut through it or lift iron anchor. Diver Dean Ingram was able to assist and remove cable from bottom using dive equipment and bolt cutters. He then made a final cut to cable wrapped around whale's body to free it completely from gear.
17 th September	Portugal Cove Ferry Run, NL 47.6273 N 52.8595 W	Unidentified Baleen Whale	WRS crew searched from land, unable to find whale, but noticed sunfish in area.
14 th October	Clarenville, NL 48.1682 N 53.9646 W	Beluga (‘Bluey’)	‘Bluey’ reported entangled in diver situ marker around body, possibly for days. WRS responded to calls from DFO and Canada Border Services and WRS was minutes from launching when advised animal had freed itself. WRS confirmed this with DFO officers on site.
17 th October	Hickmans Harbour, Random Island, NL 48.1023 N 53.7308 W	Beluga (‘Bluey’)	Entangled by fish plant in squid boat mooring. WRS responded and removed all gear to completely free whale.
23 rd October	Lady Cove, Random Island, NL 48.0941 N 53.8427 W	Beluga (‘Bluey’)	Report from local resident that ‘Bluey’ had been released from floating dock mooring and that whale had major scarring on peduncle.
5 th November	Joe Batts Arm, Fogo 49.73 N 54.19W	Sperm	Large sperm whale dead stranded
21 st November	Hickmans Harbour, Random Island, NL 48.1023 N 53.7308	Beluga (‘Bluey’)	‘Bluey’ the beluga dead entrapped in derelict boat mooring. Necropsy and tissue sample collection carried out by members of WRS

21 st November	South Coast 46.55N 57.28W	Large whale species	Dead drifting reported by M.V. Patrona 1
---------------------------	---------------------------------	------------------------	---

Table 3. Ice entrapped, stranded and dead floating cetaceans reported in Newfoundland and Labrador during 2021

Date	Area	Species	Description
16 th February	Reach Run Causeway, Boyd's Cove, NL 49.4695 N, 54.7487 W	Northern bottlenose whale	Female live stranded and died. WRS responded and carried out morphometrics and tissue sampling.
9 th March	Banting Provincial Park, Musgrave Harbour, NL 49.25 09 N, 53.51 43.86 W	Northern bottlenose whale	Dead stranded male. WRS responded and carried out morphometrics and tissue sampling.
15 th May	Birchy Cove, NL 48.35416 N 53.10484 W	Sperm	Dead stranded. DFO responded to document.
4 th July	Milford Arm, NL 49 26 49 N 55 10 7 W	Atlantic White-sided dolphin	Public reported skeleton found on beach.
26 th July	Makkovik, NL 45 04 27 N 58 23 43 W	Unidentified	Dead ~40' whale drifting with tide.
14 th August	Chance Cove Beach, NL 47 67 38.8 N 53 81 50.6 W	Unidentified large cetacean	Appeared as though whale live stranded on beach. WRS responded, but no stranded whale in area.
25 th August	Burnt Islands, NL 47 59 54 N 58 88 40 W	Pilot whale	Dead beached floating whale.
26 th August	1 mile east of Triton Light, NL 49 31 3.59 N 55 37 7.19 W	Unidentified large cetacean	Dead, drifting. Reported to Coast Guard as Notice to Mariners.

22 nd August	Horsechops, NL 48 34 41.1 N 53 20 96.7 W	Minke	Dead minke reported by Eco tours Trinity. WRS passed on message to DFO Marine Mammals.
10 th September	Cottrells Cove, NL 49.4965 N 55.3154 W	Humpback	Dead humpback on beach by Pleasantville Farms aquaculture site.
15 th September	Embree by Lewisporte, NL 49.3170 N 55.0263 W	Pilot whale	Six live stranded in shallow water. WRS mobilized to respond, however local provincial wildlife officer and community able to push all into deeper water (except one juvenile that died).
17 th September	Biscay Bay Beach, NL 46.7430 N 53.2847 W	Atlantic white sided dolphin	Dead stranded.
23 rd September	Trepassey, NL 46.7275 N 53.3601 W	Atlantic white sided dolphin	Live stranded and died shortly afterwards.
21 st September	St. Mary's, NL 46.9166 N 53.5750 W	Pilot whale	Dead, stranded on beach.
21 st September	Newville, Notre Dame Bay, NL 49.5859 N 54.6902 W	Pilot whale	Dead, floating in middle of Newville Cove. Pushed back out by public.
24 th September	Little Burnt Bay, NL 49.3572 N 55.0786 W	Pilot whale	Dead, stranded on beach.
2 nd October	Marystown, NL 47.1651° N 55.1555° W	Northern bottlenose whale	Dead, stranded on beach. WRS responded and carried out morphometrics and tissue sampling.
4 th October	Boyd's Cove, NL 49.4441° N 54.6585° W	Fin whale	Dead, floating in good condition.
4 th October	Redlands Beach, Point Lance, NL 46°48'49.6"N 54°07'13.8"W	Atlantic white sided dolphin	Dead, stranded on beach. Appear to have been there for multiple days.
13 th October	Strait Belle Isle, NL 51.5000° N 56.4989° W	Large, unidentified whale	Dead, drifting.

Table 4. Miscellaneous cetaceans and encounters reported in Newfoundland and Labrador during 2021

Date	Area	Species	Description
26 th June	Merashen Island, Placentia Bay, NL 47 32 26 N 54 11 57 W	Humpback	Struck by a Silver Dolphin boat. Tipped boat as boat was idling along. Skipper was unsure if prop hit whale, but he later saw the whale stick its head up.
11 th August	Clarenville, NL 48 16 98.7 N 53 95 99.4 W	Beluga (‘Bluey’)	‘Bluey’ was harassing divers delivering ships to the dock and dry dock has been shut down due to harassment of the divers. WRS responded to try to distract beluga while divers were in the water at the drydock, but the whale never appeared.
20 th September and 21 st September	Spanish Room, NL 47.1944 N 55.0835 W	Northern bottlenose whale	Reports of whale swimming close to beach. DFO officers in area tried to shepherd out of cove.
25 th October	Boyd’s Cove, NL 49.4441° N, 54.6585° W	Pilot whale	Reports of whale circling near shore. WRS contacted DFO officers on site who, via photo, confirmed species and behaviour.
3 rd November	Brigus South, NL 47.19N 52.79W	Probable right whale	Probable NARW reported to J. Lawson by turr hunters.
9 th November	Pacquet, White Bay, NL 50.11N 55.78W	2 Right whales	2 NARW whales reported to J. Lawson feeding 500m offshore by turr hunters.
11 th November	Herring Neck, Notre Dame Bay, NL 49.66N 54.63W	Right	One NARW feeding reported by DFO officer

References

Ledwell, W., Huntington, J., Ledwell, N., and Cateline Landry. Entanglements in Fishing Gear and Strandings reported to the Whale Release and Strandings Group in Newfoundland and Labrador and a summary of the Whale Release and Strandings Program during 2020. A report to the Department of Fisheries and Oceans, Newfoundland and Labrador Region

Ledwell, W., Huntington, J., Sacrey, E. and Cateline Landry. Entanglements in Fishing Gear and Strandings reported to the Whale Release and Strandings Group in Newfoundland and Labrador and a summary of the Whale Release and Strandings Program during 2019. A report to the Department of Fisheries and Oceans, Newfoundland and Labrador Region

Ledwell, W., Huntington, J., and Noah Ledwell. Entanglements in Fishing Gear and Strandings reported to the Whale Release and Strandings Group in Newfoundland and Labrador and a summary of the Whale Release and Strandings Program during 2018. A report to the Department of Fisheries and Oceans, Newfoundland and Labrador Region

Ledwell, W., Huntington, J., and Kim Enserink. Incidental entrapments and entanglements of cetaceans and leatherback sea turtles and strandings and harassments reported to the Whale Release and Strandings Group in Newfoundland and Labrador and a summary of the Whale Release and Strandings Program during 2017. A report to the Department of Fisheries and Oceans, Newfoundland and Labrador Region

Allison G Henry, Timothy VN Cole, Mendy Garron, Wayne Ledwell, David Morin, and Andrew Reid. 2017. Serious Injury and Mortality Determinations for Baleen Whale Stocks along the Gulf of Mexico, United States East Coast, and Atlantic Canadian Provinces, 2011-2015.

Ledwell, W. and J. Huntington. 2016. Incidental entrapments and entanglements of cetaceans and leatherback sea turtles and strandings and harassments reported to the Whale Release and Strandings Group in Newfoundland and Labrador and a summary of the Whale Release and Strandings Program during 2016

Ledwell, W., Huntington, J, Sacrey, E. 2015. Incidental entrapments and entanglements of cetaceans and leatherback sea turtles, strandings, ice entrapments reported to the Whale Release and Strandings Group in Newfoundland and Labrador and a summary of the Whale Release and Strandings Program during 2015

Henry AG, Cole TVN, Hall L, Ledwell W, Morin D, Reid A. 2015. Mortality and serious injury determinations for baleen whale stocks along the Gulf of Mexico, United States east coast and Atlantic Canadian provinces, 2009-2013. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 15-10; 45 p. doi: 10.7289/V5C53HTB InstanceEndEditable

Henry AG, Cole TVN, Hall L, Ledwell W, Morin D, Reid A. 2014. Mortality determinations for baleen whale stocks along the Gulf of Mexico, United States east coast, and Atlantic Canadian provinces, 2008 - 2012. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 14-10; 17 p. doi: <http://nefsc.noaa.gov/publications/InstanceEndEditable>

Ledwell, W., Huntington, J, Sacrey, E. 2014. Incidental entrapments in fishing gear and strandings reported and responded to by the Whale Release and Strandings Group in Newfoundland and Labrador and a summary of the Whale Release and Strandings Group during 2014. A report to the Department of Fisheries and Oceans, Newfoundland and Labrador Region

Ledwell, W., Huntington, J, Sacrey, E. 2013. Incidental entrapments in fishing gear and strandings reported and responded to by the Whale Release and Strandings Group in Newfoundland and Labrador and a summary of the Whale Release and Strandings Group during 2013. A report to the Department of Fisheries and Oceans, Newfoundland and Labrador Region

Benjamins, S., Ledwell, W., Huntington, J., Davidson, A. Assessing changes in numbers and distribution of large whale entanglements in Newfoundland and Labrador Canada (July 2012). *Marine Mammal Science* (28:3, 579-601)

Ledwell, W. and J. Huntington. 2012. Incidental entrapments in fishing gear and strandings reported and responded to by the Whale Release and Strandings Group in Newfoundland and Labrador and a summary of the Whale Release and Strandings Group during 2012. A report to the Department of Fisheries and Oceans, Newfoundland and Labrador Region

Henry AG, Cole TVN, Garron M, Hall L, Ledwell W, Reid A. 2012. Mortality and Serious Injury Determinations for Baleen Whale Stocks along the Gulf of Mexico, United States East Coast and Atlantic Canadian Provinces, 2006-2010. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 12-11; 24 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026

Ledwell, W. J. Huntington and Nick Kelly. 2011. Incidental entanglements of cetaceans and leatherback sea turtles during 2010-2011 in Newfoundland and Labrador and a summary of the Whale Release and Strandings Group activities. A preliminary report to the Department of Fisheries and Oceans, Canada. 31 March 2011

Ledwell, W, J. Huntington. 2010. Whale, leatherback sea turtle and basking sharks entrapped in fishing gear in Newfoundland and Labrador and a summary of the strandings, sightings and education work during 2009-2010. A preliminary report to Fisheries and Oceans Canada March 31, 2010

Benjamins, S., and Ledwell, W. Vagrant sociable monodontids in Newfoundland and Labrador, Canada. Oral presentation at the workshop 'Protection and management of

solitary sociable cetaceans' at the 22nd Annual Conference of the European Cetacean Society, Egmond aan Zee, the Netherlands, March 2008

Ledwell, W, J. Huntington. 2007. Incidental entrapments in fishing gear gear reported in 2007 in Newfoundland and Labrador and a summary of the whale Release and Strandings Program. A Report to the Department of Fisheries and Oceans Canada – Newfoundland and Labrador Region. January 2007

Ledwell, W., Benjamins, S., Lawson, J., J. Huntington. (2007) The Most Southerly Record of a Stranded Bowhead Whale, *Balaena mysticetus*, from the Western North Atlantic Ocean. *Arctic*, 60:1

Ledwell, W, J. Huntington. 2006. Whale and leatherback sea turtle incidental entrapment in fishing gear in Newfoundland and Labrador and a summary of the Whale Release and Strandings Program during 2006. A Report to the Department of Fisheries and Oceans, St. John's, Newfoundland and Labrador, Canada

Ledwell, W, J. Huntington. 2005. Whale, leatherback sea turtle and basking shark entrapments in fishing gear in Newfoundland and Labrador and a summary of the Whale Release and Strandings Program during 2005. A report to Fisheries and Oceans, St. John's, Newfoundland, Canada

Ledwell, W, J. Huntington. 2004. Marine Animal entrapments in fishing gear in Newfoundland and Labrador and a summary of the Whale Release and Strandings program during 2004. A report to the Department of Fisheries and Oceans, St. John's, Newfoundland, Canada

Lien, J. 2004. Guidelines for Assistance Programmes fo Marine Animals in Distress: A National Approach. Report provided to the SARCEP Marine Animal Working Group of Regional SARA Coordinators

Ledwell, W, J. Huntington. 2003. Whale entrapments in fishing gear reported during 2003 and a summary of the whale release and strandings program in Newfoundland and Labrador. A preliminary report to the Fisheries and Oceans, Canada

Ledwell, W, Reid, B, Huntington, J. (2003) Leatherback Turtle (*Dermochelys coriacea*) Stranding and Release at Lobster Head Cove October 11-13, 2003. *The Osprey*, 34:4, St. John's, Newfoundland

Ledwell, W, J. Huntington. 2002. Whale entrapments in fishing gear and a summary of the marine animal disentanglement assistance program in Newfoundland and Labrador during 2002. A report to the Habitat Stewardship Program of Environment Canada

Ledwell, W, J. Huntington, J. Lien. 2001. Whale entrapments in fishing gear, strandings and sightings of marine animals and summary of the entrapment program during 2001-

Newfoundland region a report to the Habitat Stewardship Program of Environment Canada

Ledwell, W., J. Huntington, J. Lien. 2000. Whale entrapments in fishing gear and other marine animal Incidental entrapments during 2000. A report to the Department of Fisheries and Oceans- Newfoundland and Labrador Region

Lien, J., Todd, S., and Pittman, D. (1996) Entrapments in fishing gear and strandings in Newfoundland and Labrador reported to the entrapment assistance program during 1995. Report to the Department of Fisheries and Oceans and the Newfoundland and Labrador Department of Food, Fisheries and Aquaculture

Lien, J., Pittman, D., Hood, C., Richter, C., Borgaard, D., Marques, F., and Todd, S. (1995) Entrapments in fishing gear and strandings in Newfoundland and Labrador reported to the entrapment assistance program during 1994. Report to the Department of Fisheries and Oceans

Lien, J. 1994. Entrapments of large cetaceans in passive inshore fishing gear in Newfoundland and Labrador (1979-1990). Reports of the International Whaling Commission, Special Issue 15: 149-157

Lien, J., Pittman, D., Mitchell (1994) Entrapments in fishing gear and strandings in Newfoundland and Labrador reported to the Entrapment Assistance Program during 1993, and preliminary reports on "alarm" tests, development of alarm technology, humpback whale surveys and education programs. Report to the Atlantic Fisheries Adjustment Program, St. John's, Nfld., 14 March, 15 pp

Lien, J., Barney, W., Ledwell, W., Todd, S., Stevick, P., Huntington, J., Seton, R., and Curren, K. (1992) Incidental entrapment of marine mammals by inshore fishing gear reported in 1992, some results of by-catch monitoring, and tests of acoustic deterrents to prevent whale collisions with fishing gear. Preliminary report to Fisheries and Oceans

Lien, J., Barney, W., Verhulst, A., Seton, R. (1991) Entrapments and strandings reported to the Entrapment Assistance Program during 1991; and a test of "Whale Alerts" to prevent whale collisions with fishing gear. Preliminary Report to Fisheries and Oceans

Lien, J., Huntington, J., Ledwell, W. and Huntsman, T. (1990) Whale entrapments in inshore fishing gear and a summary of the Entrapment Assistance Program in Newfoundland and Labrador during 1990. Report to Fisheries and Oceans, 31 December, 19 pp

Lien, J., G.B. Stenson and P.W. Jones. 1989. Ice entrapments of blue whales, (*Balaenoptera musculus*), in Newfoundland, (1978-1987). Unpublished manuscript

Lien, J., Ledwell, W. and Huntington, J. (1989) Whale and shark entrapments in inshore fishing gear in Newfoundland and Labrador. Report to the Newfoundland and Labrador Department of Fisheries and the Department of Fisheries and Oceans - Newfoundland Region, 10 January, 14 pp

Lien, J., Ledwell, W. and Nauen, J. (1988) Incidental entrapments in inshore fishing gear during 1988: A preliminary report to the Newfoundland and Labrador Department of Fisheries and Oceans - Newfoundland Regions, 15 December, 30 pp

Lien, J. (1988) Problems of Newfoundland fishermen with large whales and sharks during 1987 and a review of incidental entrapment in inshore fishing gear during the past decade. *The Osprey*, 19 (1) 30-38: 19 (2) 65-71

Lien, J., Papineau, J., and Dugan, L. (1987) Incidental entrapments of cetaceans, sharks and marine turtles in inshore fishing gear reported during 1987 in Newfoundland and Labrador. Report to the Department of Fisheries and Oceans - Newfoundland Region and the Newfoundland and Labrador Department of Fisheries, 30 December, 42 pp

Lien, J., Breeck, D., Pinsent, D., and Walter, H. (1986) Whale and shark entrapments in inshore fishing gear during 1986: A preliminary report to Fisheries and Oceans, St. John's, Nfld., 33 pp

Lien, J., Walter, and Harvey-Clark, C. (1985) Whale and shark entrapments in inshore fishing gear reported during 1985. Report to Fisheries and Oceans - Newfoundland Region, 21 pp

Lien, J., Dix, L., Lee, E. and Walter, H. (1984) Whale and shark entrapments in inshore fishing gear during 1984. Report to Fisheries and Oceans, 21 pp.

Lien, J., Staniforth, S., Fawcett, L., Vaughan, R., and Dong, J.(1983) Whale and shark entrapments in inshore fishing gear during 1983. Report to Fisheries and Oceans, 26 pp

Lien, J., Dong, J., Baraff, L., Harvey, J., and Chu, K. (1982) whale entrapments in inshore fishing gear during 1982: A preliminary report to Fisheries and Oceans Canada, St. John's, Newfoundland, 20pp

Lien, J. and Aldrich, D. (1982) Damage to inshore fishing gear in Newfoundland by sharks and whales during 1981. CAFSAC WP/82/104, 46 pp. September, 36 pp

Lien, J. (1980) Whale collisions with fishing gear in Newfoundland. Report to Fisheries and Oceans Canada - Newfoundland Region, 31 December, 316 pp

Appendix I

Northern Bottlenose stranding Reach Run Causeway, New World Island 2021-04-08

A female northern bottlenose whale *Hyperoodon ampullatus*, live stranded and died on the 16th February in the Reach Run Causeway on New World Island on the east coast of Newfoundland. The whale then became frozen in the sea ice until the week of the 1st of April. The Whale Release and Strandings Group and DFO Fisheries Officers from the Twillingate detachment on the 8th April towed the animal from an inaccessible necropsy site to an adjacent cove and with a block and tackle tied to a tree used the engine power from the RHIB to haul it onto the beach. WRS members conducted a necropsy on the animal.

The whale was thin and laterally compressed. There was no evidence of blunt force trauma nor fishing gear entanglement. The reproductive tract and stomach were removed as well as the teeth and flipper bones. The stomach contained 5 liters of squid beaks and was full of water.

Skin, muscle, blubber and organ samples were retained for DFO

Morphometrics (cm)

LOA	730
Tip of snout to anterior dorsal	450
Tip snout to posterior dorsal	500
Tip snout to anterior pectoral	200
Tip snout to center genitals	520
Tip snout to center eye	105
Tip snout to center blowhole	130
Length pectoral	77
Width pectoral	26
Length throat grooves	52
Length beak	63
Fluke width	200
Fluke ½ chord	53
Dorsal fin height	44
Dorsal fin width	33

½ girths

@ Anterior dorsal	167
@genitals	134

Blubber thickness (mm)

Anterior lateral dorsal	7
Posterior lateral dorsal	7.4
Anterior pectoral	6
Mid body	

Appendix II

Northern Bottlenose whale, *Hyperoodon ampullatus*, stranding at Musgrave Harbour March 7, 2021.

A male northern bottlenose whale, *Hyperoodon ampullatus*, stranded dead at Banting Provincial Park, Musgrave Harbour on the 7th March 2021. Members of the Whale Release and Strandings Group conducted a necropsy on the 10th March 2021.

The whale had an old deep scar ½ way between the dorsal and peduncle on the back ridgeline and scarring on the peduncle at the joining to the flukes. We believe these scars to be fishing gear entanglement related.

Morphometrics, photos and tissue samples were taken. Teeth, skin, blubber, muscle, heart, lung, liver, and spleen were sampled for DFO.

The entire gut was collected and examined. Squid beaks and a ball of old rope interlaced with squid beaks were discovered.

Morphometrics (cm)

LOA	835
Tip of snout to Ant. Dorsal	540
Tip of snout to Pos. dorsal	610
Tip of snout to Ant. Pectoral	227
Tip of snout to Pos. pectoral	265
Tip of snout to center genitals	510
Tip of snout to center blowhole	140
Tip of snout to center eye	130
Length pectoral	90
Width pectoral	25
Fluke width	235
Fluke ½ chord	58
Dorsal height	50
Dorsal width	45
Beak length	70
Blubber thickness right lateral side	
Anterior pectoral	12.7
Posterior pectoral	7.6
Mid lateral side	6.4
Genital	7.6
½ girths	
Anterior pectoral	230
Anterior dorsal	260
Genital	190

Appendix III

Northern Bottlenose stranding Marystown, Burin peninsula 2021-10-2

A juvenile male northern bottlenose whale, *Hyperoodon ampullatus*, stranded on a beach in Mortier Bay, Marystown, by Greig Seafoods on the Burin Peninsula, southeast coast of Newfoundland.

The whale appeared to have been on the beach for multiple days. There was no evidence of blunt force trauma or fishing gear entanglement. A necropsy was conducted on the beach by Whale Release and Strandings group.

The stomach was empty except for 3 squid beaks. The lungs had disintegrated to mush.

A northern bottlenose whale was observed in the cove at Spanish Room, on the Burin Peninsula on the 20th and 21st September by locals and the Marystown DFO. Repeated attempts by the Marystown fisheries officers were unable to relocate the whale. The distance from Spanish Room to the stranding site is 2.5 nm

Skin, muscle, blubber and organ samples and teeth and flipper bones were retained and deposited at the DFO, Marine Mammals section, St. John's NL.

Morphometrics (cm)

Length overall	590
Tip of snout to mid genitals	360
Tip of snout to centre of umbilicus	270
Tip of snout to anterior dorsal	364
Tip of snout to posterior dorsal	420
Tip of snout to anterior pectoral	140
Tip of snout to posterior pectoral	174
Snout to centre of eye	84
Snout to centre of blowhole	95
Length of snout	30
Fluke width	160
Fluke half chord	43
Pectoral length	60
Pectoral half chord	20
Dorsal fin height	34
Dorsal fin width	22
1/2 girths	
Anterior pectoral	175
Mid body	180
Anterior dorsal	134

Genital slit	134
Blubber thickness on dorsal side	
Anterior pectoral	6
Posterior pectoral	6
Anterior dorsal	5.5
Posterior dorsal	5.5
Blubber thickness ventral	
Umbilicus	6.5
Genital slit	6.5
Midbody dorsal	5.0

Appendix IV

Beluga entanglement Hickman's Harbour, Random Island 21st November 2021

A male juvenile beluga, *Delphinapterus leucas*, Bluey, the resident Clarenville area beluga, was discovered dead in a derelict boat mooring in Hickman's Harbour, Random Island, on the 20 November 2021. The beluga had previously been entangled multiple times and freed by both members of the Whale Release and Strandings Group and locals. A necropsy was conducted by WRS on the morning of the 21st November 2021.

The whale appeared healthy with various healed scars and a blood shot eye. The gut was full of fish, crab, squid remains and was also full of nematodes. Skin, blubber, muscle, teeth, heart, lung and liver and stomach samples were collected and deposited at the Marine Mammal section of DFO, St. John's NL.

Morphometrics	cm
LOA	290
Tip snout to center genitals	190
Snout to umbilicus	149
Snout to anterior pectoral	67
Snout to Post. Pectoral	78
Snout to center eye	27
Snout to Center blowhole	35
Length snout	4
Fluke width	65
Fluke ½ chord	24
Pectoral length	35
Pectoral ½ chord	24
Blubber thickness right lateral	
Anterior Pectoral	5
Post pectoral	4
Anterior dorsal Ridge	6
Post dorsal ridge	5
½ girths	
Anterior pectoral	80
Mid body	100
Post dorsal ridge	100
Genital slit	72

WHALE AND TURTLE NOTICE

1-888-895-3003

If you have a WHALE or TURTLE or basking shark (live or dead) caught in your fishing gear, call this toll-free number and we will respond with a trained team. If you see any whales, turtles or dolphins (live or dead) on a beach, please call. Should you see any leatherback sea turtles please call.



Fisheries and Oceans
Canada

Pêches and Océans
Canada

Whale Release & Strandings
Newfoundland & Labrador

Canada

Appendix VI



