INCIDENTAL ENTANGLEMENTS OF CETACEANS AND LEATHERBACK SEA TURTLES IN FISHING GEAR REPORTED DURING 2010 - 2011 AND A SUMMARY OF THE WHALE RELEASE AND STRANDINGS GROUP ACTIVITIES.

A PRELIMINARY REPORT SUBMITTED TO THE DEPARTMENT OF FISHERIES AND OCEANS, CANADA

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The Navigator Magazine generously ran (and have done so for several years now) six months of free advertisements promoting the toll-free number to fishers with details of whom to call when you have or see a marine animal entrapped or stranded; thanks to Madonna Stewart and the staff. Thank you to the Community of Portugal Cove-St. Philip's for providing in-kind support of the program through a reduction in business taxes

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INTRODUCTION

Entanglements in fishing gear are a global threat to marine animals. Although the exact number of global entangled marine animals is unknown, such entanglements are likely widespread amongst the world's baleen whale species (Johnson et al., 2005). Records of entangled cetaceans, basking sharks and leatherback sea turtles have been kept for Newfoundland and Labrador since 1979, and have been published in various journals and unpublished reports (Lien, 1994; Volgeneau et al., and Benjamins et al., in press 2011; Lien et al., 1991, 1992, 1993, 1995, 1996, unsubmitted reports 1997, 1998, 1999; Ledwell et al., 2000, 2001; Ledwell and Huntington, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009). Fishermen in the Newfoundland and Labrador region have been offered assistance with the removal of large whales, basking sharks and leatherback sea turtles from their fishing gear since 1978. An organized program to disentangle large whales began with Dr. Jon Lien of the Memorial University of Newfoundland in 1979 and continued through to 1999. The Canadian Coast Guard ran the program from 1999 -2000, with the Whale Release and Strandings Group taking over the program from 2001 to present.

When a collision occurs between cetaceans and fishing gear, the animal can become entangled and held in place. An entangled animal, alive (depending on size and maneuverability) or dead (buoyancy), becomes an issue for the fishermen who must retrieve their gear so that fishing can be resumed. Special techniques and tools were developed to deal with both alive and dead whales to assist fishermen, thus reducing costs and fishing downtime (Lien 1980). For the most part the same methods are still used in this region today.

The fishery in Newfoundland and Labrador has shifted from being primarily an inshore, fixed-gear fishery, conducted from relatively small boats (<10 meters) and focused primarily on Atlantic cod, to a diversified fishery occurring both inshore and offshore, using both fixed and mobile gear types. Following the cod moratorium in 1992, through both conservation measures and an increase in the pot fisheries targeting snow crabs, toad crabs and whelk, there has been an increase in both the size of vessels and offshore distances to pursue those species. The snow crab (*Chionocetes opillio*) fishery, using stationary crab pots set in long strings of 20 to 100 pots, each pot separated by 6 meters, containing 16 mm. poly rope, large fishing balloons and staff buoys, has expanded rapidly into both inshore and offshore waters since 1994. In addition, a whelk (Buccinum undatum) fishery fishing the St. Pierre Bank using similar gear has expanded in similar fashion. This, together with offshore fisheries targeting Greenland turbot (Reinhardtius hippoglossoides), and a variety of other gillnet fisheries targeting monkfish (Lophius americanus), lumpfish (Cyclopterus lumpus), winter flounder (Pseudopleuronectes americanus) and Atlantic cod (Gadus morhua), has also effected where and when entanglements of large whales and sea turtles occur. Prior to 1992, the disentanglement assistance team dealt almost totally with the inshore (one could drive to an entanglement within a day) in comparison to today, where it has become both an inshore and offshore problem. Large whales entangled in the offshore often have to wait for days before a response can be generated due to the logistics of getting to the animal, weather and distance.

METHODS

Whale, leatherback sea turtle and basking shark entanglements in fishing gear, as well as strandings and sightings of marine animals, were reported to the Whale Release and Strandings Group in 2010 by calling an advertised toll free number (1-888-895-3003) which can be accessed 24 hours a day and seven days a week. A trained release team responds by providing suitable, safe advice, or by sending expert personnel to the site for needed assistance. The trained crew was equipped and ready to deploy immediately with an inflatable zodiac and necessary specialized tools and safety equipment for disentanglement of whales, leatherback sea turtles and basking sharks. The objective of each disentanglement is the safe, clean release of the whale or other marine animals from fishing gear with minimal or no damage inflicted to the fishing gear involved in the entrapment. The disentanglement crew also responded to whale and leatherback sea turtle strandings. Calls concerning entanglements, strandings and dead floating animals were also forwarded to the group by DFO Conservation Officers, Coast Guard Centres, fishers, Royal Canadian Mounted Police (RCMP), Crime Stoppers and the general public. The program was funded by the Fisheries and Oceans Canada in 2010.

Figure 1. Map of Newfoundland and Labrador waters, showing spatial divisions of nearshore (numbered) and offshore waters used in this study. 1 = Labrador inshore; 2 = Newfoundland northeast coast, 3 = Newfoundland south coast; 4 = Newfoundland west coast; 5 = Quebec North Shore.

RESULTS

Humpbacks

Fifteen (15) humpback whales (Table 1) were reported entangled in fishing gear in Newfoundland and Labrador waters to the Whale Release and Strandings Group during 2010. Four (4) of those entanglements were confirmed to have involved snow crab gear and three (3) others towing gear had heavy rope and large balloons indicating crab gear entanglement. Seven (7) humpbacks were entangled in various gillnets and one in a combination of snow crab and herring nets. A humpback was cut from snow crab gear by a fisherman with pots and rope attached 10 nm from Portland Creek on the Great Northern Peninsula on the 18th of May. An entangled humpback was reported in herring nets 0.5 nm from the harbour of Portland Creek on the 19th of May. Despite two brief unsuccessful attempts to work on the animal due to declining daylight and heavy weather conditions in the area, when we finally did get to the animal 11 days later it had drowned. The whale had crab gear and pots entangled into the herring nets, and was bridled with multiple tail wraps. This whale is believed to be the same animal cut out of gear on the 18th of May.

A humpback reported on the 10th of July is believed to be the same animal seen entangled in the area during the last week of June. The Whale Release and Strandings Group removed a large portion of the gear on the 13th but the animal was very evasive. What remained was a slight haul rope cut in to the body anterior to the dorsal. The animal was moving fast and was observed feeding repeatedly on caplin. Repeated attempts in various areas proved unsuccessful as the animal was reported in the surrounding area until the 4th of August. The animal's body condition looked okay. From CFV (commercial fishing vessel) numbers on the removed gear we were able to determine that

the animal was caught three weeks prior in Jean de Baie, Placentia Bay, NL. In this case, the fisherman lost the entire net and anchor rope to the whale.

A humpback released gear free on the 25th of July off of Cow Head had been entangled for three weeks. A check from a fisherman from River of Ponds who had lost three cod gillnets and whose CFV number was on the gear proved that the net was lost three weeks prior to us removing and collecting the rest of the nets from the whale.

A humpback entangled in a herring net in Southern Harbour in Placentia Bay in March 18th of 2011 and released by the Whale Release and Strandings Group was the earliest known disentanglement since large whale disentanglement records have been kept from 1979 to present.

Minke whales

Only one minke whale (Table 2) was reported entrapped in fishing gear in 2010. This whale was removed alive from a mackerel seine in Lapoile Bay on the South Coast by fishermen during the last week of October.

Leatherback sea turtles

Five (5) (Table 3) leatherback sea turtles were reported entrapped in fishing gear in 2010. Out of these animals, three were released alive and gear free from cod gillnets, one was released alive and gear free from a mackerel trap and one died in a mackerel net. On the 10th of September I talked a fisherman through releasing a leatherback from cod nets. A necropsy was conducted by the Whale Release and Strandings Group on the leatherback that died in the mackerel net at Middle Arm, Green Bay. Since 2000, a total

of 37 leatherbacks have been reported entrapped in fishing gear in this region. From 1976 to present, a total of seventy-seven (77) leatherbacks have been reported gear entrapped in Newfoundland and Labrador waters (Fig. 2). Mortality during this period has been 27%.

Twenty-nine (29) leatherback sightings were reported to the Whale Release and Strandings Group during 2010. This is the highest number of leatherbacks reported to our group in a given year, which may be attributed to various reasons: 1. There are more leatherbacks in our waters; in 2008 there were 28 sightings of free swimming leatherbacks reported (Ledwell and Huntington, 2008). 2. There are more recreational boaters on the water in this region. 3. There is more awareness for reporting leatherback sightings from the general population. The Whale Release and Strandings Group has conducted extensive drives this past 10 years directed towards educating the general public about leatherback sea turtles. From 2000 to present, 107 leatherbacks have been reported sighted or stranded to the group. Records for leatherback sightings reported for this region total 171 with an additional nine (9) dead, stranded animals reported (Fig. 2).

A female leatherback was discovered dead at Griquet on the Great Northern Peninsula in October. This turtle was necropsied by W. Ledwell and Dr. Beth Pollock of the Newfoundland and Labrador Provincial Veterinary Services. The turtle was flipper tagged at the Pacure Nature Reserve in Costa Rica in 2009 and the tag was recovered (See Appendix i).

Figure 2. Reported Leatherback Turtle Entanglements and Sightings around Newfoundland and Labrador, 1976-2010.

Sightings and strandings

On the 9th of September, a northern right whale was photographed off of Bay Bulls. The whale was identified as being catalogued at the New England Aquarium. This whale, right whale #1425, is a reproductive female last seen in Massachusetts Bay in February 2008.

On the 13th of September, an adult female white-sided dolphin live-stranded at Noggin Cove in Notre Dame Bay. The animal was moved into deeper water by locals three times and it re-stranded each time. When I arrived, the animal was lying on its side close to a sewage outflow, and it was decided to euthanize the animal due to its inability to swim upright and its body condition. No other dolphins were observed in the bay during the stranding.

Ice entrapments

Two whales were ice entrapped by heavy slob ice on March 31st. One, a small minke was observed in the main Tickle at New World Island with no swimming space, being compacted by the ice. By noon the animal was nowhere to be seen with blood on the ice and is believed to have expired. The second, a white beaked dolphin was discovered alive and ice entrapped in Purcells Harbour on New World Island on the morning of March 31st. The animal was in heavy slob ice. In the early afternoon the slob abated and the animal disappeared. It is believed to be alive.

Killer whales

There were multiple sightings of killer whales, including two separate accounts of large groups of killer whales videotaped killing minke whales off the southern Avalon and the east coast (Table 6).

Belugas

Repeated sightings were reported in 2010 of both solitary, social and a group of four animals which was unusual. During the past decade solitary belugas have shown up in various areas around the island (Benjamins and Ledwell, 2008), many of which have been social. Four belugas were observed by W. Ledwell in Wild Cove, White Bay, NL, in July. The animals, a mixed group of what appeared to be two adults and two juveniles, were in the area for about a month.

Education Workshops

A workshop on welfare issues associated with the entanglement of large whales held in April in Maui, Hawaii, was attended by Wayne Ledwell. This workshop brought together a select group of large whale disentanglement specialists and large whale veterinarians from around the world. The important report was endorsed by the 88 countries of the International Whaling Commission held in June of 2010 in Morocco (See Appendix ii).

Laura Temple of the Whale Release and Strandings Group attended the NOAA National Marine Health and Stranding Conference held at the National Conservation Training Center (NCTC) of the U.S. Fish and Wildlife Service (April 6 - 10, 2010, at

Shepherdstown, West Virginia, USA). A poster was presented on ice entrapments in Newfoundland and Labrador (See Appendix iii).

A brochure was designed and distributed throughout the region as an initial attempt to organize a strandings network for this area (See Appendix iv). The poster covers the areas of concern for stranded, ice entrapped whales, dolphins and leatherback sea turtles as well as solitary social belugas. Presentations on the issues addressed in the brochure were given at the annual conference and workshop of the Volunteer firefighters of Newfoundland and Labraodor, the Coast Guard Auxiliary and Harbour Authorities. Those groups were given presentations on what to do in case of a strandings event as they are usually the first line contacted during strandings.

References

Johnson, A., G. Salvador, J. Kenney, J. Robbins, S. D. Kraus, S. Landry and P. J. Clapham. 2005. Fishing gear involved in entanglements of right and humpback whales. Marine Mammal Science 21: 635–645.

Ledwell, W. 2005. Whales and Dolphins of Newfoundland and Labrador. Boulder Publications Ltd.:112 pp.

Ledwell, W., Benjamins, S., Lawson, J., and Huntington, J. 2007. The most southerly record of a bowhead whale, *Balaena mysticetus*, from the western north Atlantic Ocean. Arctic 60(1): 17-22.

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.

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. 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. 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 Department of Fisheries and Oceans, 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

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 the Department of Fisheries and Oceans, St. John's, Newfoundland, Canada

Ledwell, W, J. Huntington. 2006. Whale and leatherback sea turtles 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. 2007. Incidental entrapments in fishing 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, and J. Huntington. 2008. Incidental Entrapments 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 2008. A Report to the Department of Fisheries and Oceans Canada Newfoundland and Labrador Region. March 2008.
- Ledwell, W, and J. Huntington, 2009. Whale, leatherback sea turtles 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 the Department of Fisheries and Oceans Canada, March 31, 2010.
- Lien, J. 1980. Whale entrapment in inshore fishing gear in Newfoundland. Final Report. Memorial University of Newfoundland, 315 pp.
- Lien, J. 1994. Entrapments of large cetaceans in passive inshore fishing gear in Newfoundland and Labrador (1979-1990). Reports of the International Whaling Commission 15 (Special Issue): 149-157.
- Lien, J., W., Barney, A., Verhulst, and R Seton. 1991. Entrapments and strandings reported to the Entrapment Assistance Program during 1991; and a test of "whale alerts" for preventing whale collisions. Preliminary report to the Department of Fisheries and Oceans and the Newfoundland and Labrador Department of Fisheries, St. John's.
- Lien, J., W. Barney, W. Ledwell, S. Todd, P. Stevick, J. Huntington, R. Seton and K. Curren. 1993. Incidental entrapments 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 in fishing gear. A preliminary report to the Department of Fisheries and Oceans Canada Newfoundland Region, and the Newfoundland and Labrador Department of Fisheries.
- Lien, J., D. Pittman and 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., 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., Todd, S., and Guigne, J. 1990. Inferences about perception in large cetaceans, especially humpback whales, from incidental catches in fixed fishing gear, enhancement of nets by "alarm" devices and the acoustics of fishing gear. In: Sensory abilities of cetaceans. Edited by J. Thomas and R. Kastelein. Plenum Press, New York. pp. 347 – 362.

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

Volgenau, L., Kraus, S. and Lien, J. 1995. The impact of entanglements on two substocks of the western North Atlantic humpback whale, *Megaptera novaeangliae*. Can. J. Zool. 73(9): 1689–1698.

Table 1. Humpback whales reported entangled in fishing gear in Newfoundland and Labrador during 2010 - 2011

Date	Area	Gear type	Description
,	10nm off Portland Creek	Snow crab	Humpback cut loose with 60 fathoms of 5/8 rope and 2 crab pots
19 May	Portland Creek, Great Northern Peninsula	Herring nets	Dead. 10m. animal entangled in herring nets. Tried on eve/night of 19 th . Wind too strong, animal moving too much but anchored. Strong winds throughout. Tried again on the 25 th . Wind too strong.
30 May	Portland Creek area 5011N, 5739W	nets/snow	Crew found dead whale with 5/8 bridle and tail wraps with snow crab gear attached to their herring nets. Whale had moved 3 nm from original position of entanglement. Same whale as 18 and 19 May
	170nm from Fermuese	Snow crab	Dead in gear
28 June	Conche	Crab gear	Towing large red balloon and rope. Swam into harbour and out. Not re sighted
Last week June	7nm off Brigus South Head	Herring nets	Towing gear
1 July	Grand Banks, outside 200nm 4721N, 4811W	Snow crab	~15m humpback entangled pulled one fleet of gear in to the other. Fishermen cut gear off leaving 35 pots, haul up and balloons on the whale, about 1500m of rope. Wind strong and whale disappeared towing the gear
1 July	Cape St. Mary's 465ON, 5413W	_	Released alive from fleet of 5 nets. 2 bridle wraps of head and lead rope with another wrap of lead rope around body. Many wraps of head and lead rope around peduncle. Released gear free from gear
3 July	Downing Basin	Snow crab	Reported by fisherman Reg Ryan after hearing it on the vhf. Couldn't contact the fisherman who had the whale caught

5 July	Cape St.	Poly buoys	Towing 4 large fishing balloons and staff buoy.
coury	Mary's	and staff	Reported by staff at Cape St. Mary's reserve. No
			further resightings of animal reported
10-20	Cape Broyle to	Herring nets	Towing herring nets. Same as last week June
July	Ferryland		
13 July	Cape Broyle	Herring nets	Partially released swimming whale. We took 2 collapsed poly floats, 2 floating poly floats and 2 cork floats together with 10m of cabled netting off the whale. Animal still had embed 5/8 rope anterior to dorsal which we were unable to remove due to evasivenees of the whale. Same whale as 10-20 July and last week June
15 July	Low Point- Bay De Verde	Red balloon and net	Towing gear. May have been lump net
21 July	Fortune Bay 4656N, 5606W	1 large 2 ft. Diameter poly buoy and 2 smaller poly buoys	Towing gear. Could not relocate
25 July	Parsons Pond. 8nm off Cow Head	•	Released all (multiple) wraps of head and lead rope from tail and peduncle. Whale had taken gear 3 weeks prior from River of Ponds area
2 August	Noddy Cove, Great Northern Peninsula. 5139N, 5535W	Pink and white buoy	Towing gear close to sacred Islands. Not reported resighted
4	Cape Race	Small red	Highly suspect same whale as 13 July due to
August	4637N, 6307W		balloon size still on animal
6 August	Marys Harbour, Labrador		Moving fast in to bay towards Marys harbour. No further resightings
4 October	Virgin Arm, New World Island.		Self released while WRS enroute
18 March	Southern Harbour, Placentia Bay	Herring net	Released alive by members of WRS

Table 2. Minke whales reported entangled in fishing gear in Newfoundland and Labrador during 2010 - 2011

Date	Area	Gear type	Description
Last week October	3		5m minke rolled alive out of mackerel seine in Lapoile Bay

Table 3. Leatherback sea turtles reported entrapped in fishing gear in Newfoundland and Labrador during 201 - 2011.

Date	Area	Description
12 August		Released alive from haul-up rope of cod gillnets
Mid August		Released alive and gear free from doorways of mackerel trap. Turtle had short tail
7 September	5358W	Released alive and gear free from haul up buoy of cod gillnets. Animal had 1/2 turn around front flipper
10 September	5542W	2 cod gillnets. Talked fisherman through releasing the turtle. Released alive and gear free from haul up buoy rope
16 September	,	Dead in mackerel net. Female 162 cm carapace necropsied by W. Ledwell

Table 4. Leatherback sea turtle sightings reported in Newfoundland and Labrador during 2010 - 2011

Date	Area	Description
27 May	Rencointre East, 47 38.4N, 55 17W	Free swimming. Placentia Bay Smart buoy water temp. 4.6 degrees C
14 July	North Head Bay Bulls, 4718N, 5247W	Free swimming
22 July	St. Brendans, 4851N, 5340W	Free swimming "size of pickup box"
10 August	10nm off Bauline South, 4707N, 5234W	Free swimming
12 August	Stone Island Bonavista Bay, 4842N, 5351W	Eating jellyfish
12 August	St. Brendans	Free swimming about 2 nm from 12 August entanglement

13 August	Lamaline Harbour, 4651N, 5548W	Free swimming reported by body surfer in the harbour
15 August	Cape Bonavista, 4842N, 5305W	Free Swimming
15 August	Small Pte. Ledge St. John's 4736.5N, 6238W	Free swimming ~ 4-5ft shell
16 August	Horse Chops Trinity Bay (Close to English Harbour East)	Free swimming
3 rd week Aug.	50nm Cape Race 4645N, 5200W	5 leatherbacks sighted on different occasions during snow crab survey
25 August	St. Anthony 5121N, 5534W	Free swimming 200m of light
4 September	Brimston Head Fogo 4951N 5358W	Free swimming
11 September	Back Cove Fogo 4943N, 5417W	Free swimming
13 September	Joe Batts Arm, 4945N, 5410W	Free swimming shell~4ft.
17 September	Change Islands, 4841N, 5424W	4 leatherbacks reported at similar time
17 September	Green Island Witless Bay, 4715N, 5247W	Free swimming
25 September	Holyrood, 4725N, 5310W	Free Swimming
24 October	Griquet, Great Northern Peninsula, 5132N, 5527W	297 kg. female dead stranded in harbour. Necropsied by W. Ledwell and Dr. Beth Pollock. Carapace length 147cm. The turtle was flipper tagged from Pacure Nature Reserve Caribbean Coast of Costa Rica (2009)
14 November	Hampden White Bay 4933N, 5651W	Free swimming
3 December	Grand Beach Fortune Bay 4705N, 5539W	Dead inside Barasway. Left to necropsy but animal drifted out to sea. Looked dead for couple of weeks from pictures.

Table 5. Stranded and dead floating cetaceans reported in Newfoundland and Labrador during 2010 - 2011

Date	Area	Species	Description
10 June	Conne River, South Coast		Dead, floating close to salmon cages. Towed in to bay
11 June	Bois Island Bay D'Espoir	Humpback 8m	Probably same as 10 June
8 July	J	Harbour porpoise	Dead on beach. Tail cut off
30 July	4601N, 5311W	Large unknown	Dead floating
23 August	North West Brook	White sided dolphin	Towed in to deeper water. Animal swam on
13 September	Noggin Cove	White sided dolphin	Euthanized by W. Ledwell, necropsied and skull taken
17 December	Pleasantville Notre Dame Bay	Minke	Freshly dead
18 January	Pines Cove Great Northern Peninsula	Humpback	Long dead ashore
24 February	Eastport	Pilot	5m long dead long fin pilot whale
23 March	Tickle Cove B.B.	White beaked dolphin	Dead (fresh) on beach

Table 6. Ice entrapped whales reported in Newfoundland and Labrador during 2010 - 2011.

Date	Area	Animal	Description
	Twillingate causeway		Live entrrapped entrapped in heavy slob close to shore. Believed to have died as a result
	Purcells Harbour. New World Island Island	1	Live entrapped in slob ice. Believed to have moved on as the ice slackened around noon

Table 7. Miscellaneous cetaceans reported in Newfoundland and Labrador during 2010 - 2011

Date	Area	Species	Description
30 April	Westport White Bay	Beluga	Solitary, juvenile beluga ~3m ice entrapped around wharf. Animal moved on when ice slacked in bay after 3 days
10 June	Conche	2 killer whales	Free swimming
29 June	Conche	Beluga	Solitary beluga in Conche harbour for 1 day
7 July	4822N, 5042W	4 killer whales	Free swimming
11 July	Cottlesville Notre Dame Bay	Beluga	Solitary animal swimming around stages. Stayed in area for 1 day
19 July	Wild Cove, White Bay	4 belugas	Free swimming
19 July	Tail of Grand Banks 4344N, 5227W	4 Blue whales	Free swimming
29 July	Green Island Witless Bay	8 killer whales	Heading south
2 August	Cape St. John 4955.7N, 5529W	5 killer whales	Free swimming
12 August	Tinkers Point Tors Cove	12-15 killer whales	Killed 6-7m minke. Tour boat observed all. Video taken
14 August	Great Island, Bauline South	12-15 killer whales	Free swimming
17 August	Roberts Arm, White Bay	Group	Formed up on small boat. People scared
17 August	Trinity	Group	Killed a minke. Tour boat present during take down. Video taken
9 September	Bay Bulls	Northern Right	Right whale # 1425 reproductive female free swimming. Last seen in Massachusetts bay February 2008

26 October	Kings Point Green Bay	Swimming in the harbour for 1 week
8 November	St. Brendans	Seen while turr hunting

Table 8. Other marine animals reported in Newfoundland and Labrador during 2010 - 2011

Date	Area	Animal	Description
25 August	Bay Roberts		~6 ft. and injured in tidal pool. Died and collected. Shark had injuries believed to be result of killer whales or other shark
26 August	Marystown	Seal	Dead on beach

Appendix i

Leatherback sea turtle (Dermochelys coriacea) dead stranded at Griquet, NL, 24 October 2010.

A 297 kg female leatherback sea turtle was discovered floating dead in Griquet Harbour on the Great Northern Peninsula of Newfoundland in position 513235 N, 55270 W on the 24th of October 2010. A post-mortem was conducted on the wharf at Noddy Bay on the Great Northern Peninsula on the 27th of October by Wayne Ledwell of the Whale Release and Strandings Group and Dr. Beth Pollock of the Newfoundland and Labrador Provincial Veterinary Services. Fishermen from the surrounding communities of St. Lunaire, Griquet and Noddy Bay provided assistance with moving the turtle, necropsy assistance and disposal of the remains. The animal was weighed on the scales at the fish plant in St. Lunaire.

The turtle had two metal tags, PN1458 and PN1459, in the left and right flippers respectively. Tag inscription was from the Department of Zoology, University of Florida Gainesville, FL, USA. The turtle had been tagged at the Pacuare Nature Reserve on the Caribbean coast of Costa Rica in 2009. Tag PN1459 was retrieved.

The post-mortem showed the animal to have been reproductive. Fat around the organs was jelly-like, indicating that it was using its fat reserves. Samples taken, preserved in 10% buffered formalin and ethanol and frozen include skin, muscle, liver, heart, kidney, lung, ovary, large and small intestine, adrenal glands and a lesion located anterior to the cloaca in the intestine. The eyes were collected and frozen. Jellyfish samples and amphipods were also collected from the gut and stored at the Whale Release and Strandings Group. All other samples are preserved at the Provincial Veterinary office in Corner Brook, Newfoundland.

Morphometrics (cm)

Carapace length (straight)	147
Carapace length (curved)	152
Carapace width	104
Plastron length	131
Plastron width	67
Head length	30
Head width	26
Head circumference	78
Right flipper length	97
Right flipper width	31
Tail length (outside)	31
Tail length (inside)	42

Appendix ii

Report of the Workshop on Welfare Issues Associated with the Entanglement of Large Whales (Submitted by Australia, Norway and USA)

Members: Mattila (Convener), Rowles (Convener), An, Barco, Bjørge (Chair), Coughran, Gallego, Harms, Knowlton, Landry, Ledwell, Lyman, Marcondes, Meÿer, Moore, Øen, Robbins, Smith, Taylor, Uhart, Urban, Wilkin.

http://www.iwcoffice.org/ documents/commission/IWC62docs/62-15.pdf

Appendix iii

Ice Entrapments of Cetaceans Around the Coast of Newfoundland, Canada: 1968-2009 poster presented at the NOAA National Marine Health and Stranding Conference by Laura Temple.

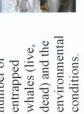
Appendix ivWhale and Dolphin Strandings brochure developed initially in an attempt to organize a marine strandings network in Newfoundland and Labrador.

Strandings: What You Should Do Support on the beach Check for injuries Reduce stress on whale by keeping dogs and crowds away and noise down. Place blankets or towels over the animals. DO NOT cover their blowholes	Phone Whale Release and Strandings' toll-free number: 1 (888) 895-3003 Take photographs (put an object in for scale in order to help determine the size of the animal). Remember these are wild animals: use caution around them. Their powerful tail fins can inflict serious injuries. Do not attempt to move large whales: this is very dangerous. Support by hand or stretcher. Small whales can be held with one hand positioned behind and under the flipper and the other behind the dorsal fin. Face multiple
Support on the beach	Support in the water
 Check for injuries Reduce stress on whale by keeping dogs and crowds away and noise down. Place blankets or towels over the animals. DO NOT cover their blowholes 	 Support by hand or stretcher. Small whales can be held with one hand positioned behind and under the flipper and the other behind the dorsal fin. Face multiple
 Pour water over animals to help them maintain their body temperature. DO NOT pour water in or near their blowholes. Minimize handling. 	animals toward each other so that they can see each other.
flukes as handles. Do not stand on flippers. Remove sharp objects from underneath the	unstable, rock it back and forth before release so it can
 animal. Move animals from heavy surf. Dig trenches for flippers and tail. Animals 	 regain its sense of balance. DO NOT submerge blowholes. This would be like submerging a person's nostrils!
• Use tarp or stretcher to move whales.	II.

Ice Entrapment

Basic Anatomy of Toothed Whale

whales (live, Record the number of entrapped





entrapments is dangerous and should be left to people who are experienced in others who wish to help to call the Rescuing and responding to ice dealing with such events. strandings hotline.



Multiple Strandings

of animals that are number and size ashore and free swimming. Record the





may have witnessed the stranding for background information.

Dead Stranded Whales

Call the Whale Release and Strandings hotline: 1 (888) 895-3003

dorsal fin

Release

ales

- If there are multiple whales, release together in a single horizontal line.
 - on the water Make noise offshore. to drive whales
 - boats on the Position
- edges of the group of moving whales
- Do not tow whales by the tail: it can break their backs. the beach.

away from