

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

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Summary

Assistance was provided to fishers in Newfoundland and Labrador who had whales, leatherback turtles and basking sharks entrapped in their gear in 2002 by the Marine Animal Disentanglement Assistance Program (MADAP).

Eleven humpback whales were reported entrapped, more than any other large whale (Table 1). Those whales were entrapped in a variety of fishing gears. Mortality was low; one humpback was found dead in fishing gear.

Minke whales (7) were the next most common whale entrapped in fishing gear in 2002 (Table 2). No mortality occurred in minkes and all were released alive.

Two other large unidentified whales were reported entrapped (Table 3). One of those whales was seen entangled in a fleet of crab pots. It towed the pots away before the release team arrived. The other could not be relocated.

Two leatherback turtles were released from fishing gear (Table 4). Leatherback turtles are classified as 'endangered' under COSEWIC criteria. Six basking shark were reported dead in fishing gear (Table 5). Strandings and cetacean sightings are summarized in Tables 6, 7, 8. Strandings of seals are often reported to the program. This information is forwarded to Fisheries and Oceans Marine Mammals Group.

Solitary social belugas were observed in a number of communities interacting with humans and vessels. In 2002 reports of animals were received from six communities. These reports involved three identified individuals. Mortality and injury occurred because of these solitary animals attraction to boats.

Marine Stewardship and Species at Risk Education

A hands-on, conservation education program that focused on marine stewardship and the whales of Newfoundland was presented to schools on the Connaigre and Burin peninsulas and from Gander to St. John's on the East Coast of Newfoundland.

Methods

The Marine Animal Disentanglement Assistance Program maintains a 24-hour a day 7-day a week toll free phone line and response team for fishers and members of the public to report whales and other marine animals, including leatherback turtles, caught in fishing gear, stranded or behaving strangely in Newfoundland and Labrador. Toll-free number stickers and posters are distributed to all areas of the region, newspaper ads and articles are prepared, and periodic broadcasts are repeated by local radio stations. A trained release and strandings team with specialized gear responds to entrapped and stranded marine animals. Fishers and other community members provide assistance to the disentanglement team by helping untangle whales, standing by in boats for safety, moving gear out of the immediate area and all other necessary help.

Discussion

Humpback whales were entrapped in a variety of fishing gears in 2002. Large numbers of humpbacks were seen and reported by crab fishers in the Laurentian Channel. Three were reported entrapped in the Laurentian Channel and cut from crab gear by fishers. One of those towed 400 meters of 5/8" rope and a large orange float into Bonavista Bay over the span of a month where it was reported to MADAP and released. Another entrapped humpback almost capsized a longliner in the Laurentian Channel while entangled in crab gear and subsequently in the stabilizer fish of the boat.

Large whales entrapped in crab gear may not always be reported by fishers who absorb the financial loss and cut them loose with varying amounts of gear and pots on them. The crab fishery is a lucrative fishery and an entrapped marine animal can mean lost fishing time. Shelf life of crab is extremely important and thus fishers are hesitant to wait offshore for a release team. Dead whales in crab gear may also not be reported when caught but often will show up as a Coast Guard 'Notice to Mariners'. This may account for the dead whales during the dates of 11-15 July when five dead whales were reported.

It is necessary to invest greater effort in working with the crab fleet to determine the extent of the entrapment problems with gear used by that sector and the mortality this inflicts on different cetacean species.

Six minke whales were released alive from fishing gear in 2002. It is the first instance where the number of minke whales released during an entrapment season was greater than the number of humpback whales released. This may be partially due to the type of gear the minke whales were entrapped in. Flounder and lump nets have bigger mesh sizes and are set in shoal water. A minke entrapped in this gear can hold the gear up longer till rescued. The cod gillnets, which entrapped minke whales, were set in fleets of two. Survival time for a minke whale would be greater in this, a shorter fleet of gear where the whale would have to expend less energy raising the gear from the bottom. Many factors may apply here and the minke whale population may be increasing thus accounting for more entrapments

Six basking sharks were reported in 2002. The numbers reported entangled could have been substantially higher if there was a market for the fins and livers.

A northern right whale, listed as 'endangered' by COSEWIC criteria, came ashore dead during July 2001 at St. Theresa's on the Port au Port Peninsula but was not investigated until July 2002. Tissue and bone samples were collected. Dr. Steve Carr of Memorial University completed a DNA analysis. Unusual coral like growths were noted on a rib bone. Additional work is being done in conjunction with MUN Medical School, the New England Aquarium and the Trent University Genetics Lab.

A pygmy sperm whale stranding at Little St. Lawrence was the first recorded case in Newfoundland. This animal entered the harbour two weeks prior to its final stranding and

was seen repeatedly swimming around the area. The whale was necropsied and the skeleton retained. Results of this study can be found in *Lien et al. (2003)*.

A 10 meter baleen whale live stranded at Musgravetown on 28 May. The whale stranded and was pushed off by locals. It again stranded and was towed to deep water and was not seen again. From a video clip it appeared the animal was a sei whale.

A 10 m male humpback whale stranded live in Salt Harbour on New World Island and remained alive for five days. The animal was towed by three boats to deeper water during the first day by placing a net bag around its head and pulling ropes attached to the net bag from both the head and tail area. When the animal was moved to deeper water it towed all three boats back further into the harbour and stranded in shoal water again. The whale remained there for five days, and died on the fifth during an attempt to move it out of the area. Blood samples were collected and sent to Dr. Richardson of the University of Toronto.

Strandings are reported for a variety of reasons. People are concerned for the safety of the animal during live strandings, general curiosity and the possible scientific value of specimens and the overwhelming desire to rid themselves of a large stinking carcass. Stranding reports are categorized as to the value of response in collecting scientific data. Often strandings occur after hours or on weekends and our toll-free line offers advice and response to frustrated callers.

The skeleton of a 10.8 m dead stranded sperm whale was obtained for the Emerald Zone Corporation, a group whose plan it is to mount skeletons of the various whales of Newfoundland and Labrador throughout the Green Bay area.

Bone, baleen and other samples are collected regularly in conjunction with the Department of Fisheries and Oceans of Memorial University, the Whale Research Group of Memorial University and other scientific institutions. In addition to these collections, specimens have been provided to the Newfoundland Museum, and tourism groups for display.

The educational outreach program visited 40 schools with presentations from K-12 on the Avalon, Burin, East, North-East and Connaigra Peninsulas. The program was interactive focussing and reinforcing what students already know about themselves and their environment and linking that to whales and the commonness of our shared environment. Materials used were blue whale baleen, fin baleen, humpback baleen, minke baleen, Sperm whale teeth, harbour porpoise teeth, pothead lower jaw, acorn and gooseneck barnacles from humpback whales, louse from humpback whale, rib and vertebrae from minke whale, vertebrae, disk, finger bone, ear bone and scapula from humpback, squid beaks from stomach of sperm whale, canvas shadow of 9.5 m humpback whale, measuring tape, handout materials as attached and posters from Whale Research Group at Memorial University.

Acknowledgements

The success of 2002 Marine Animal Disentanglement Assistance Program depended on many individuals and agencies. The Traffic Center of Canadian Coast Guard relayed messages from fishermen and others about entrapped and stranded marine animals. Rick Morry of the Coast Guard small engines donated an outboard engine for the season for our inflatable. Dr. Jon Lien of the Whale Research Group of Memorial University provided invaluable advice and expertise. Graduate students Claudio Cordelli, Patrick Abrigral and Stephen Benjamin assisted with entrapments. Dr. Catherine Hood provided immeasurable help in getting the program on the road and moral support to keep it going. Thanks to Drs. Jack Lawson, Hugh Whitney and Doug Tweedie. Special thanks to all the community members who offered their stewardship in caring for the dying stranded humpback in Salt Harbour. Without the assistance of fishers who give their time and expertise to untangling whales and other marine animals this program would not be possible.

Table 1. Humpback whale entrapments in fishing gear in Newfoundland and Labrador during 2002

Date	Area	Gear type	Description
19 June	Laurentian channel	Crab pots	Fisher cut whale from gear with 17 pots, 880 meter rope, staff buoy still attached to whale
19 June	Laurentian channel	Crab pots	The same fisher cut whale from gear with 8 pots, 520 meters rope and staff buoy still attached to whale
22 June	45° 10 N 54° 11 W, 3PS	Monk fish nets	Released dead
4 July	Cape St. Mary's	Gillnets	Released alive
10 July	Petit Forte, P.B.	Cod trap moorings	Released alive
11 July	Chance Cove, Trinity Bay	Caplin trap moorings	Released alive
16 July	Upper Amherst Cove, Bonavista Bay	Towing crab gear from 19 June entanglement	Released alive
25 July	Laurentian channel	Crab pots	Entangled in stabilizer of longliner, self release

30 July	Witless Bay, S.S.	Rope/buoy	Towing gear, could not relocate
17 August	Tickle Cove, Bonavista Bay	Gillnets	Self release
4 September	Nain , Labrador	Rope, grapnel	Partial release, whale towed gear away

Table 2. Minke whale entrapments in fishing gear in Newfoundland and Labrador during 2002.

Date	Area	Gear type	Description
20 June	Shoe Cove, Bay Verte Peninsula, N.D.B	Flounder nets	Released alive
24 June	Foxtrap, C.B	Lump nets	Released alive
2 July	Salmon Cove, Conception Bay	Lump nets	Released alive
11 July	Red Harbour, Placentia Bay	Cod gillnets	Self release
13 July	Red Harbour, Placentia Bay	Cod gillnets	Released alive
28 July	Harbour Grace	Flounder nets	Released alive
10 August	Fortune	Mackerel trap	Released alive

Table 3. Other large whales entangled in fishing gear in Newfoundland and Labrador during 2002

Date	Area	Gear type	Description
7 May	Grand Bank, F.B.	Crab pots	Large whale towed a fleet of 20 crab pots with both ends and buoys attached away. The whale nor gear was ever relocated
12 June	Hatchet Cove, T.B	unknown	Could not relocate

Table 4. Leatherback turtle entrapments and sightings in Newfoundland and Labrador during 2002

Date	Area	Gear type	Description
June	Harbour Mille, F.B		Two turtles observed free swimming
27 July	46° 28 N 54° 49 W, Placentia Bay	Crab pots	Released alive
11 August	Little St. Lawrence, Placentia Bay		Free swimming
6 September	Shoal Bay, Fogo Island	Longline	Released alive
19 September	Conception Harbour, Conception Bay		Free swimming

Table 5. Basking sharks reported entrapped in fishing gear in Newfoundland and Labrador during 2002

Date	Area	Gear type	Description
9 July	Burin	Gillnets	Dead
15 August	Channel-Port aux Basques	Mackerel trap	Dead
28 August	Port aux Basques	Various gear	4 dead

Table 6. Stranded cetaceans reported in Newfoundland and Labrador during 2002

Date	Area	Species	Description
9 April	Codroy	Sperm whale (<i>Physeter catadon</i>)	Severely decomposed, skeleton retrieved. Examined by W. Ledwell
25 April	St. Theresa's, Port aux Port Peninsula	Northern Right whale (<i>Eubaleana glacialis</i>)	Severely decomposed. I.D by DNA analysis. Whale had been ashore since July 2001. Examined by W. Ledwell

20 May	Calvert, Southern Shore	Beluga (<i>Delphinapterus leucas</i>)	Killed by longliner propeller, necropsied at provincial veterinary building
28 May	Musgravetown	unknown	Live stranding, refloated by local citizens
20 June	Little Barasaway, Placentia Bay	Sperm (<i>Physeter catadon</i>)	Advanced decomposition. Examined by W. Ledwell
20 June	Laurentian channel	Sperm (<i>Physeter catadon</i>)	Dead, floating, pictures by DFO surveillance
11 July	Lawn Head	Large whale spp.	Dead floating
12 July	47° 22. 96 N 54° 41.83 W , 3PSc	Large whale spp.	Dead floating
13 July	Pass Island, Hermitage Bay	20-30 ft. whale	Dead floating
14 July	Merasheen Island	Large whale spp	Dead floating, possibly same whale as 12 July
15 July	Hermitage Bay	Large whale spp.	Dead floating, possibly same whale as 13 July
27 July	St. Vincent's	Humpback whale (<i>Megaptera novaengliae</i>)	Humpback calf swam into the gut and was scared to swim back through surf. Whale went out during the night
30 July	Squid Cove, Northern Peninsula	Long-Finned Pilot whale (<i>Globicephala melaena</i>)	Dead stranded. Moderate decomposition
4 August	Trout River, Northern Peninsula	Large whale spp.	Dead floating
7 August	Little St. Lawrence	Pygmy Sperm whale (<i>Kogia breviceps</i>)	Dead stranded. Animal was in area two weeks before last stranding. Examined at provincial veterinary building
13 August	Garnish	Large whale spp.	Dead stranded

13 August	Cappahayden	Minke whale (<i>Balaenoptera acutorostrata</i>)	Dead stranded. Examined by W. Ledwell and Dr. J. Lien
13 August	Parsons Pond, Northern Peninsula	Whale spp.	Dead stranded
19 August	Burnt Point, Conception Bay	Large whale spp.	Dead stranded
19 August	Point Le Haye	Whale spp.	Dead, Severe decomposition. Examined by W. Ledwell
22 August	Grady island, Carthwright	7 m whale	Dead floating
28 August	Sandy Point, Port aux Basques	3 unknown dolphin spp.	Refloated by volunteer Search and Rescue group
3 September	Catalina	8 m whale	Dead floating
7 September	Summerford New World Island	White-sided dolphin (<i>Lagenorhynchus albirostris</i>)	Live stranded, brought out to deep water
8 September	Farmers Head, New World Island	White-sided dolphin	Dead stranded. Same as 7 September
11 September	Elliston, Bonavista Bay	Killer whale (<i>Orcinus orca</i>)	Dead stranded, advanced decomposition. Skeleton retained
18 September	Wareham, Bonavista Bay	White-sided dolphin	Dead stranded
23-27 September	Salt Harbour, New World Island	Humpback whale	Live stranded. Died after 5 days. Monitored and examined by W. Ledwell
17 October	Argentia	Sperm whale	Moderate decomposition. Examined by W. Ledwell
19 December	Salvage, Bonavista Bay	White-sided dolphin	Dead stranded

Table 7. Other cetaceans sighted in Newfoundland and Labrador during 2002

Date	Area	Species	Description
11 February	Davis Strait Areas 0AB, 2GH	Northern Bottlenose whales (<i>Hyperoodon ampulatus</i>)	Whales reported during summer 2001 stealing turbot from longline boats
3 April	Bay Bulls	Beluga (<i>Delphinapterus leucas</i>)*	Free swimming
19 April	Codroy	Beluga*	Free swimming, hanging around wharf, boats
2 May	Dover, Bonavista Bay	Beluga*	Free swimming
7 May	Calvert, Southern Shore	Beluga *	Free swimming
17 May	Valleyfield, Bonavista Bay	Beluga*	Free swimming
27 June	Virgin Arm, New World Island	Beluga*	Free swimming
27 July	Hermitage	Dolphin spp.	Acting curious
21 October	Davis Strait 0AB, 2GH	Northern bottlenose whales	Reported stealing fish from longline boats
7 November	Cape Anguille	Blue whales (<i>Balaenoptera musculus</i>)	Free swimming 7 mile off the Cape

* Solitary belugas were reported various times over the year. All were juvenile belugas that seemed to ‘adopt’ local wharves and harbours for a time and then move to another area. Three belugas in total were reported, one on the West Coast, one on the East Coast and one on the Southern Shore. All three were social, interacting with structures and people.

Table 8. Seals reported in Newfoundland and Labrador during 2002

Date	Area	Description
6 January	Bay Bulls	Hauled out on beach. Concerned citizen over safety of seal
20 January	Calvert	Various reports of seal in brackish pond. One seal dead on beach

9 April	Codroy	Approximately 40 dead seals*
20 April	Norris Point, Bonne Bay	Approximately 75 dead seals*
24 June	Petty Harbour	Hauled out. Concerned citizen over safety of seal
12 August	Bristol's Hope, Conception Bay	Hooded seal hauled out
1 Dec	Holyrood	Hauled out on parking lot. Concerned citizen called about seal safety

* Young whitecoats died when they were forced into the water during ice breakup and high winds during the winter in the Gulf. Dead seals were reported throughout the region.

References

Lien, J, Whitney, H., Ledwell, W., Daoust, P.Y., Sjaer, B. A new record of a pigmy sperm whale, *Kogia breviceps*, in Newfoundland. *The Osprey*, In press.