

2021 Atlantic Large Whale Entanglement Report

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2021 Atlantic Large Whale Entanglement Report

This report summarizes all large whale entanglement incidents along the Atlantic coast that were reported to NOAA Fisheries in 2021 in which line, gear or unknown materials were directly observed on the whale. Only incidents with new indications of entanglement first reported in 2021 are included. We do not include whales that were reported entangled in earlier years and continued to be entangled in 2021. These incidents represent a minimum number as not all interactions are reported and not all interactions that are reported have gear still present when documented and reported.

Table 1. 2021 Atlantic large whale entanglement reports with gear present*

| | Live | Dead | Total |
|----------------|------|------|-------|
| Right Whale | 3 | 0 | 3 |
| Humpback Whale | 21 | 0 | 21 |
| Finback Whale | 2 | 0 | 2 |
| Minke Whale | 2 | 2 | 4 |
| Sei Whale | 0 | 0 | 0 |
| TOTAL | 28 | 2 | 30 |

* Gear present entanglement cases are those for which one or more of the following applies:

- Gear was reported on a whale by a reliable observer.
- Gear was photo-documented on a whale.
- Gear was retrieved from a whale.
- Gear was reported on a whale by an inexperienced observer who was interviewed by NOAA Fisheries or Center for Coastal Studies (CCS) staff and the account was descriptive enough to eliminate doubt about whether or not the whale was entangled.

Descriptions of wounds and the condition of the animal in this report are based on the preliminary information at the time the incident was documented. NOAA Fisheries Northeast Fisheries Science Center (NEFSC) determines the final condition classification based on their data analysis through the mortality and serious injury determinations process (<https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act-policies-guidance-and-regulations#distinguishing-serious-from-non-serious-injury-of-marine-mammals>). Information obtained after the production time frame of this report may alter any determination, status, or sighting information provided here. As described above, this report only includes animals with documented or witnessed gear. Animals that have no gear documented or witnessed and a cause of death or injuries determined to be due to entanglement are described in the NEFSC Mortality and Serious Injury reports (<https://repository.library.noaa.gov/view/noaa/50947>). Stock assessment reports

(<https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments>) summarize the full status of a species.

Notes:

- Entanglement case information was compiled from numerous resources including U.S. and Canadian federal governments, U.S. state agencies, and U.S. and Canadian partners within the Atlantic Large Whale Disentanglement Network (ALWDN) as well as through interviews with fishermen when appropriate. The reports contain all known U.S. Atlantic large whale entanglement incidents with gear present reported in 2021, including incidents of entangled whales from stocks that fall under U.S. protection (e.g. North Atlantic right whales, Gulf of Maine humpback whales) that occurred outside U.S. borders.
- Not all entanglement incidents are observed and many entanglement scars and injuries are first seen without gear present, so this report is not a comprehensive list of all large whale 2021 entanglement incidents.
- The terms rope and line (as in buoy line) are used interchangeably however when the gear is monofilament line that is explicitly stated.
- The presence or absence of line can be difficult to determine when monitoring monofilament cases. Environmental conditions, lighting, and animal behavior, can make detectability of monofilament difficult. The first gear-free sighting for a monofilament incident is not a definitive assessment of lack of monofilament line.
- NOAA staff conducted documentation and analysis on recovered gear and/or through owner interviews when possible. All gear analysis is quantitative in nature and any qualitative information is outside the scope of this report. Target species was based on owner interviews or gear determination.
- Location first observed entangled is where the entangled whale was first sighted and reported. Unless an animal is anchored, the location first observed is rarely where the whale first became entangled.
- Some incident reports include photographs. Personal identification details of gear such as permit numbers or vessel names are manually redacted from the photographs.
- Definitions:
 - Entangled = animal was last seen with an entanglement that may or may not be life-threatening.
 - Gear shed = animal shed the entangling gear on its own without human intervention;
 - Disentangled – gear free = animal had all gear completely removed by disentanglement network responders.
 - Disentangled – gear shed = animal had all life-threatening gear removed by disentanglement network responders, but some non-life threatening gear remained and was later shed by the whale.
 - Disentangled – monitor = animal had all life-threatening gear removed with some non life-threatening gear remaining that is expected to be shed.

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- New England Aquarium and the Right Whale Consortium provide sighting and life history information for right whales.
- Center for Coastal Studies, with contributions from 7 Seas Whale Watch, Blue Ocean Society, Boston Harbor Cruises, Brier Island Whale and Seabird Cruises, Dolphin Fleet, FWC, GA DNR, Gotham Whale and Whale and Dolphin Conservation, provided demographic and sighting information for humpback whales. Please contact Jooke Robbins of CCS for more information.
- CCS compiled thousands of photographs from numerous whale watch companies and ALWDN partners for these determinations.
- NOAA Fisheries staff and the GARFO policy series editors that offered helpful comments.

Table 2. Acronyms

| | |
|--------------|--|
| ALWTRP | Atlantic Large Whale Take Reduction Plan |
| AMAPPS | Atlantic Marine Assessment Program for Protected Species |
| AMSeas | Atlantic Marine Conservation Society, NY |
| CMARI | Clearwater Marine Aquarium Research Institute |
| CCS | Center for Coastal Studies, MA |
| CWI | Canadian Whale Institute (Canada) |
| CWRT | Campobello Whale Rescue (Canada) |
| DFO | Department of Fisheries and Oceans (Canada) |
| DFO C&P / TC | DFO Conservation and Protection Program / Transport Canada |
| FWC | Florida Fish and Wildlife Conservation Commission |
| FWRI | Fish and Wildlife Research Institute, Florida |
| GA DNR | Georgia Department of Natural Resources |
| GAM | Gear Alert Marker |
| GARFO | Greater Atlantic Regional Fisheries Office - NOAA |
| MA EP | Massachusetts Environmental Police |
| MMoME | Marine Mammals of Maine |
| MMP | Maine Marine Patrol |
| NEAq | New England Aquarium |
| NEFSC | Protected Species Branch, Northeast Fisheries Science Center |
| NMFS | National Marine Fisheries Service/NOAA Fisheries |
| NOAA | National Oceanic and Atmospheric Administration |
| RI DEM | Rhode Island Department of Environmental Management |
| USCG | United States Coast Guard |
| VAq | Virginia Aquarium |
| VRMC | Virginia Marine Resources Commission |

Table 3. Atlantic entanglement summary for 2021 confirmed cases with gear present.

| Entanglement Report Number | Species | Date of First Observation | Dead/ Alive¹ | SI Determination² | Gear Collected | Type of Gear | Gear part ID³ |
|-----------------------------------|----------------|----------------------------------|--------------------------------|-------------------------------------|-----------------------|---------------------|---------------------------------|
| E01-21 | Humpback | 1/2/2021 | Alive | Non-SI | No | Unknown | B,V |
| E02-21 | Right | 1/11/2021 | Alive | SI | No | Unknown | T, U |
| E03-21 | Humpback | 3/3/2021 | Alive | SI | No | Unknown | U |
| E04-21 | Right | 3/10/2021 | Alive | SI | Yes | Unknown | U |
| E05-21 | Humpback | 5/7/2021 | Alive | Non-SI | No | Unknown | U |
| E06-21 | Minke | 6/6/2021 | Alive | SI (PR) | No | Unknown | U |
| E07-21 | Humpback | 6/8/2021 | Alive | Non-SI | Yes | U.S. Lobster | S, V |
| E08-21 | Humpback | 6/24/2021 | Alive | Non-SI | No | Unknown Mesh | N |
| E09-21 | Humpback | 6/28/2021 | Alive | Non-SI | No | U.S. monofilament | M |
| E10-21 | Humpback | 6/29/2021 | Alive | SI (PR) | No | Unknown Mesh | N |
| E11-21 | Minke | 7/4/2021 | Dead | SI | Yes | Unknown | U, N, debris |
| E12-21 | Humpback | 7/7/2021 | Alive | Non-SI | Yes | U.S. monofilament | M |
| E13-21 | Right | 7/13/2021 | Alive | SI | No | Unknown Canadian | U |
| E14-21 | Humpback | 7/13/2021 | Alive | Non-SI | No | U.S. monofilament | M |
| E15-21 | Humpback | 7/14/2021 | Alive | SI (PR) | No | U.S. Monofilament | M |
| E16-21 | Humpback | 7/19/2021 | Alive | Non-SI | No | U.S. monofilament | M |
| E17-21 | Humpback | 7/27/2021 | Alive | Non-SI | No | Monofilament | M |
| E18-21 | Humpback | 7/28/2021 | Alive | Non-SI | No | U.S. monofilament | M |
| E19-21 | Minke | 8/1/2021 | Dead | SI | No | U.S. Lobster | B, V |
| E20-21 | Humpback | 8/1/2021 | Alive | SI | No | Unknown | U |
| E21-21 | Humpback | 8/4/2021 | Alive | Non-SI | No | U.S. monofilament | M |

Table continues and notes on next page

Table 3 continued. Atlantic entanglement summary for 2021 confirmed cases with gear present.

| Entanglement Report Number | Species | Date of First Observation | Dead/Alive ¹ | SI Determination ² | Gear Collected | Type of Gear | Gear part ID ³ |
|----------------------------|----------|---------------------------|-------------------------|-------------------------------|----------------|-------------------|---------------------------|
| E22-21 | Humpback | 8/8/2021 | Alive | Non-SI | Yes | U.S. Lobster | S, V |
| E23-21 | Humpback | 8/8/2021 | Alive | Non-SI | No | U.S. monofilament | M |
| E24-21 | Humpback | 8/16/2021 | Alive | SI (PR) | No | Unknown | U |
| E25-21 | Finback | 8/29/2021 | Alive | SI (PR) | No | Unknown | S, V |
| E26-21 | Humpback | 8/30/2021 | Alive | SI | No | Unknown Gillnet | N |
| E27-21 | Finback | 9/1/2021 | Alive | SI | No | Navigational Buoy | N/A |
| E28-21 | Humpback | 9/25/2021 | Alive | Non-SI | No | Monofilament | M |
| E29-21 | Minke | 10/10/2021 | Alive | Non-SI | Yes | U.S. Lobster | B, B |
| E30-21 | Humpback | 12/29/2021 | Alive | SI | No | Unknown | U |

¹ Dead/Alive column represents the status as of the writing of this report.

² SI determination: SI = Serious injury or mortality was determined to be the primary cause from entanglement; Non-SI = No serious injury or mortality caused by the entanglement; SI (PR) = Insufficient information available to make an informed determination, prorated value of 0.75. Refer to <https://media.fisheries.noaa.gov/dam-migration/02-238-01.pdf> for more information regarding determination definitions.

³ Gear part ID: V = Vertical/End Line; B= Single Buoy; S = Surface System (multiple buoys); G = Ground Line; N = Gillnet/Mesh; T = Trap/Pot; M = Monofilament Line; U = Unknown, gear type or gear part could not be determined; N/A = Not applicable, no gear was analyzed. Any combination of codes is possible although each code will only be listed once, regardless if different types/sets of gear were involved. This column may not represent all portions of the true initial entanglement as gear could have been shed before the first observation. Gear portions identified may not represent the section that initially caused the entanglement.

2021 Entanglements

| | |
|--|---|
| NMFS No: E01-21 | Date First Observed Entangled: 1/2/2021 |
| Location First Observed Entangled: 2.0 NM east of Virginia Beach, VA | Latitude/Longitude First Observed Entangled: 36° 54.7' N, 75° 56.8' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Gear Shed |
| Sighting prior to entanglement: February 2020 | Re-sightings Post-entanglement: 1/12/2021 |
| Whale Biology: Live humpback whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| Event Description: |
|--|
| <p>1/2/2021</p> <ul style="list-style-type: none"> Whale watch vessel reported and documented an entangled humpback. <p>1/5/2021</p> <ul style="list-style-type: none"> Another whale watch vessel reported this same individual, still entangled, and stood by while USCG, VAq, and VRMC responded. The teams continued documentation and applied a limpet tag to the whale to gather additional information. <p>1/12/2021</p> <ul style="list-style-type: none"> The same whale watch vessel documented this whale several times over the next few days, and no entangling gear was observed. |

| Description of Gear on Whale as Reported: | |
|---|--|
| During Initial Sighting: Red bullet buoy in tow about one body's length aft of the animal. Point of attachment is unclear, but likely involves the mouth and/or flipper. | Subsequent Descriptions: On 1/5/21, there was no obvious change in entanglement configuration. On 1/12/21, no entangling gear was observed. |

| Description of Wounds/Condition: | |
|---|---|
| During Initial Sighting: Whale was described as being smaller in size, and traveling slowly. | Subsequent Descriptions: Actively feeding. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|-------------------------------|---------------|
| NMFS No. | E01-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Buoy, endline |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Buoy and endline of unknown origin. | | |
| <u>Gear Description:</u> | Documentation showed a red bullet buoy was trailing behind the whale. | | |
| <u>Comments:</u> | None. | | |
| <u>Conclusions:</u> | Whale was entangled in buoy and endline of unknown origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E02-21 | Date First Observed Entangled: 1/11/2021 |
| Location First Observed Entangled: 9.1 NM east of Fernandina Beach, FL | Latitude/Longitude First Observed Entangled: 30° 42.1' N, 81° 15.0' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: 4/7/2019 | Re-sightings Post-entanglement: None |
| Whale Biology: Live right whale, #1803, adult male | |
| NMFS Serious Injury/Mortality Determination: Serious Injury | |

| Event Description: |
|--|
| <p>1/11/2021</p> <ul style="list-style-type: none"> The CMARI aerial survey team discovered an entangled right whale, triggering an on-water response by GA DNR. Teams were able to obtain additional documentation of the entanglement configuration, but due to rough sea conditions and the behavior of the whale, attempts to tag were unsuccessful. <p>1/12/2021</p> <ul style="list-style-type: none"> Aerial and vessel-based survey teams were able to relocate the whale. Due to rough sea state and the behavior of the whale, the team was unable attach a telemetry buoy. <p>1/13/2021</p> <ul style="list-style-type: none"> Multiple agencies conducted both aerial and vessel-based surveys to try and relocate this whale, but were unsuccessful. |

| Description of Gear on Whale as Reported: | |
|--|---------------------------------------|
| During Initial Sighting: Multiple wraps of blue line around the peduncle and both fluke blades. A trap/pot trailed just aft of the flukes and at least one length of the blue rope trailed 50-60ft aft of the flukes. | Subsequent Descriptions: None. |

| Description of Wounds/Condition: | |
|---|---------------------------------------|
| During Initial Sighting: Below-average condition, open wounds at the peduncle and a heavier load of cyamids at the mouth, head and peduncle. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|--|---|-------------------------------|------------|
| NMFS No. | E02-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Rope, trap |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Rope and trap of unknown origin. | | |
| <u>Gear Description:</u> | Documentation showed rope and a partial wire mesh trap of unknown origin. | | |
| <u>Comments:</u> | None. | | |
| <u>Conclusions:</u> | Whale was entangled in rope with a wire mesh trap of unknown origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E03-21 | Date First Observed Entangled: 3/3/2021 |
| Location First Observed Entangled: 18.9 NM southeast of Beaufort, NC | Latitude/Longitude First Observed Entangled: 34° 24.7' N, 76° 32.5' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Live humpback whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Serious Injury | |

| |
|---|
| Event Description: |
| A boater observed an entangled whale, but was delayed in reporting due to lack of cell service. Rough sea conditions prevented a response from being mounted. |

| |
|---|
| Description of Gear on Whale as Reported: |
| <div> During Initial Sighting: Tight wrap of heavy line around the body just forward of the pectoral flippers. </div> <div> Subsequent Descriptions: None. </div> |

| |
|--|
| Description of Wounds/Condition: |
| <div> During Initial Sighting: Small in size, observed breaching. </div> <div> Subsequent Descriptions: None. </div> |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|-------------------------------|---------|
| NMFS No. | E03-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Rope |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Unknown rope | | |
| Gear Description: | Documentation showed rope over the back. | | |
| Comments: | None. | | |
| Conclusions: | The whale was entangled in rope of unknown origin. | | |

2021 Entanglements

| | |
|---|---|
| NMFS No: E04-21 | Date First Observed Entangled: 3/10/2021 |
| Location First Observed Entangled: 8.3 NM north of Sandwich, MA | Latitude/Longitude First Observed Entangled: 41° 54.6' N, 70° 26.1' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Partial disentanglement – Monitor |
| Sighting prior to entanglement: 7/24/2020 | Re-sightings Post-entanglement: None |
| Whale Biology: Live right whale, #3560 Snow Cone, adult female | |
| NMFS Serious Injury/Mortality Determination: Serious Injury | |

| Event Description: |
|--|
| <p>3/10/2021</p> <ul style="list-style-type: none"> The CCS aerial survey team documented an entangled right whale, prompting a response by both MA Environmental Police and the CCS response team. Working from Ibis, the team attached a telemetry buoy, as well as an A4 buoy to add floatation and mark the whale during dives. The team then aimed to use a cutting grapple to remove some line, but severed it ahead of the telemetry attachment. Attempts to reattach the telemetry were unsuccessful and response efforts were called off due to worsening seas. MA EP retrieved the severed gear, and the whale still remains partially entangled. <p>3/12/2021</p> <ul style="list-style-type: none"> The CCS aerial survey team documented this whale in an aggregation of right whales. Based on imagery from the prior sighting, the entanglement configuration may have shifted. Using a grapple, the team affixed an A4 buoy, but Snow Cone's behavior was challenging to work with. With sea conditions declining, the team opted to cut the longer trailing line as far forward of the grapple as possible, shortening it. After this, the whale dove and was not relocated. <p>5/10/2021</p> <ul style="list-style-type: none"> A DFO aerial survey team sighted Snow Cone, still entangled. <p>5/11/2021</p> <ul style="list-style-type: none"> The DFO aerial team had another sighting of Snow Cone and helped guide efforts of the CWRT, who managed to make two cuts to the trailing lengths of line with a cutting grapple. Poor weather conditions forced the teams to head back to port. Snow Cone remains partially entangled. <p>6/8/2021</p> <ul style="list-style-type: none"> The DFO aerial survey team documented Snow Cone in group of other whales, still entangled. <p>6/12/2021</p> <ul style="list-style-type: none"> The DFO aerial survey team sighted Snow Cone again, and documented what appears to be a small shift in entanglement configuration. |

6/13-6/21/2021

- DFO aerial survey teams documented Snow Cone multiple times over the past couple weeks. The entanglement configuration, as well as the condition of the whale, remain unchanged.

7/8/2021

- DFO aerial survey teams sighted Snow Cone again, revealing a significant shift in entanglement configuration since the prior sighting. CWRT was responding to an entangled humpback, and switched gears to respond to Snow Cone. The team established a control line, added two buoys, and using the drag from their vessel, parted the entangling line at the grapple connection. This was repeated several times.

7/11/2021

- Snow Cone was sighted again by DFO aerial survey teams.

8/4/2021

- Scientists from the University of New Brunswick sighted and collected drone footage of Snow Cone's entanglement. CWI and NEAq field teams completed preliminary photo-ID from this recent field work.

10/24/2021

- NEFSC documented Snow Cone south of Nantucket during an aerial survey, with a possible shift in entanglement configuration.

11/6/2021

- The CCS aerial survey team documented Snow Cone, but due to time of day and distance, no response was mounted.

12/2/2021

- The FWRI aerial survey team found Snow Cone, still entangled, with a calf. FWRI and GA DNR responded to gain additional documentation of the pair. This is the first documented chronically entangled right whale carrying a calf to term. Throughout the following week, sightings of the pair continued from the Clearwater Marine Aquarium Institute's aerial team.

12/17/2021

- Recreational boaters off of Florida cut one of the lengths of line exiting the side of Snow Cone's mouth. She was sighted later in the day, as well as the following day by the FWC aerial team.

12/27/2021 and 12/29/2021

- Snow and her calf have been sighted regularly off of Florida and Georgia, and her entanglement configuration appears to be changing.

1/19/2022

- Regular sightings continued of Snow Cone and her calf. During this sighting, FWRI was able to obtain important additional documentation of the wounds and entanglement.

2/17/2022

- The Marineland Right Whale Project obtained additional drone documentation of Snow Cone and her calf.

4/23/2022-4/27/2022

- Snow Cone and her calf were sighted the last couple days by the CCS aerial survey team, back up off the coast of Massachusetts. Unsuccessful relocation efforts and poor conditions prevented responses from being mounted. On 4/25/2022, the CCS response and aerial teams sighted the pair, and considered using a cutting arrow aimed at the line exiting her bonnet and entering the baleen, but no good opportunities arose. Efforts were called off due to worsening sea conditions, but with the right conditions and behavior of the whale, this could be a viable option for future responses. On 4/27/2022, Marine Mammal Observers had a sighting of Snow Cone off of Provincetown, but poor conditions prevented a response.

7/22/2022

- Snow Cone was sighted by a CWI/NEAq boat-based survey on the Shediac Valley, without her calf.

9/21/2022

- The NEAq aerial survey sighted Snow Cone south of Nantucket, with additional gear in tow. Due to the time of day and distance, the CCS team was unable to respond.

Description of Gear on Whale as Reported:

During Initial Sighting:

Two lengths of line exiting the left side of the mouth, trailing aft. One length of line terminated about 60 feet aft of the flukes, while the other trailed over 160 feet aft before sinking down into the water column. Both lengths of line appeared to be clean and knot-less and remained separate (not twisted).

Subsequent Descriptions: During the 3/12/2021 partial disentanglement, it was possible the rope was no longer present in the wrapping wounds along the bonnet. On 5/10/2021, the entanglement configuration remains unchanged. The following day, after disentanglement efforts by CWRT, She was left with line still exiting her mouth, one length trailing about 20feet aft of the flukes and the other trailing to her tailstock. On 6/12/2021, the entanglement appears to have moved slightly up her flank. On 7/8/2021, the longer trailing section gained length and the shorter section diminished. The bitter end of the shorter length of line had caught the longer length, forming a loose loop at the area of her left flipper. An additional 20ft of line was removed during this disentanglement effort. During the 8/4/2021 sighting, the loop around the pectoral fin appears to have resolved itself. The two bitter ends look to be of about equal length, and may be jumbled together creating a bridle, but that is unconfirmed. On 10/24/2021, the shorter portion of line now appears to have moved a little closer to the whale's mouth, as well as a wrap around the baleen plates on the right side of the mouth, confirming previous suspicions. On 12/17/2021, the recreational boaters cut short one length of line exiting the left side of the mouth, creating a clean bitter end. On 12/27/2021, the trailing lines that had been exiting her right mouth became difficult to see, with one bitter end floating toward the surface at her left flank (the overall configuration could not be discerned). On 12/29/2021, both trailing lengths could be seen, with one exiting the apex of the left mouthline (as it has been for the last few weeks) and one now exiting the right side of her mouth, just

| | |
|--|--|
| | <p>above her eye. During the 1/19/2022 sighting, teams were able to document a piece of line exiting the wound on her rostrum, providing supporting evidence that the rostrum wrap is deeply embedded. During the 4/24/2022 sighting, imagery collected shows the wrap of rope around her bonnet is not a simple wrap, but complicated by the baleen at the front of her mouth, as well as a weave of line through the baleen. On 9/21/2022, additional gear was observed in addition to the original entangling gear. The new gear includes one or more lengths of line caught in her mouth and trailing aft of her flukes. Just aft of the flukes there appears to be weighted gear. Some of this gear may interact with her left flipper.</p> |
|--|--|

| Description of Wounds/Condition: | |
|--|---|
| <p>During Initial Sighting: Fair condition, good skin color and reasonable body condition. Two wrapping wounds present along the rostrum, one healed while the other was active. The active wound at the bonnet likely has a deeply embedded line. Behavior was similar to other whales in the area, traveling and feeding.</p> | <p>Subsequent Descriptions: On 5/10/2021, her condition appeared to be declining, with graying skin and sloughing. On 7/8/2021, her overall condition appeared to be improving, with teams witnessing defecation. During the 8/4/2021 documentation, Snow Cone's overall condition appeared good. During the 11/6/2021 sighting, there appeared to be an increase in cyamid load on the callosity of the whale compared to previous sightings. On 12/2/2021, despite carrying a calf to term, there was no obvious decline in her health. On 2/17/2022, the skin around the mouth seemed somewhat grayer with more cyamids. During the 4/24/2022 sighting, Snow Cone appeared thinner and the wound on her rostrum was more apparent. On 4/25/2022 when the pair were documented again, Snow Cone's overall condition was poor, and she was noticeably thinner than other mom/calf pairs. On 7/22/2022, Snow Cone was sighted without her calf, and appeared thinner with further discoloration of the rostrum. During the 9/21/2022 sighting, it was apparent that Snow Cone's health and condition had declined significantly.</p> |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|--|--|-------------------------------|---------|
| NMFS No. | E04-21 | Gear Recovered (y/n) | Yes |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | 5/8" | Gear Part | Rope |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Unknown | | |
| <u>Gear Description:</u> | As of October 2023, NMFS has only analyzed gear retrieved from operations in U.S. waters and not from Canadian waters. U.S. collected gear includes approximately 31 fathoms of 5/8" sink line with beaded lead yarn and 18 fathoms of 5/8" float line. No gear marking was found on the recovered line. | | |
| <u>Comments:</u> | None. | | |
| <u>Conclusions:</u> | The whale was entangled in rope of unknown origin. | | |

Gear Images



E04-21 image – Sink line showing the beaded lead yarn.

2021 Entanglements

| | |
|--|---|
| NMFS No: E05-21 | Date First Observed Entangled: 5/7/2021 |
| Location First Observed Entangled: 15.4 NM southeast of Gloucester, MA | Latitude/Longitude First Observed Entangled: 42° 23.9' N, 70° 25.3' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Gear Shed |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: 7/11/2021 |
| Whale Biology: Live humpback whale, 2021 calf of Jabiru, unknown sex | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| Event Description: |
|--|
| <p>5/7/2021</p> <ul style="list-style-type: none"> Multiple whale watch naturalists sighted the calf of Jabiru with an entanglement-related injury, but it was unclear at that time if gear was involved. The CCS response team was unable to relocate the whale. <p>5/16/2021</p> <ul style="list-style-type: none"> WW vessel re-sighted and documented this whale, confirming that entangling gear was present. <p>5/17/2021</p> <ul style="list-style-type: none"> The CCS team re-located the mom and calf pair, and obtained additional documentation of the wounds and entangling gear. With no option to establish a control line, the team opted to use cutting arrows to try and sever the collar of rope, and allow the whale's immune system to reject the rope. Despite multiple efforts throughout the day, attempts at cutting the rope were unsuccessful. <p>7/4/2021</p> <ul style="list-style-type: none"> WW Naturalists sighted Jabiru and her calf, with no apparent changes in health or entanglement configuration. <p>7/10/2021</p> <ul style="list-style-type: none"> WW vessel sighted the pair in the afternoon and reported it to the CCS response team. The following morning, the same vessel sighted the pair again and the CCS team was also searching the area, and responded. Based on the documentation collected, the team feels reasonably confident the embedded gear is no longer present. |

| Description of Gear on Whale as Reported: | |
|--|---|
| During Initial Sighting: Originally reported as an entanglement-related injury, but could not confirm if any gear was present. On 5/16/2021 it was confirmed there was deeply embedded entangling gear forward on the body, encircling the whale. No rope was visible due to degree of embedding, except at the chest, where a small jumble of orange rope could be seen exiting a wound. | Subsequent Descriptions: On 7/4/2021, the entanglement still remained unclear, with no gear visible in the wounds, and no possible documentation of the chest area. During the 7/11/2021 sighting, gear was no longer visible in the chest wound, suggesting the calf was able to shed its entanglement. |

| Description of Wounds/Condition: | |
|--|---|
| During Initial Sighting: Behaving normally, fluking and breaching. Very good body condition. Wounds appear clean and indentation was easily visible where rope was pinching into the whale. | Subsequent Descriptions: On 7/4/2021, the health and behavior of the calf still appeared normal, despite the severity of the entanglement. On 7/11/2021, the calf still appeared to be in good condition and behaving normally, with no obvious wound discoloration. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|-------------------------------|---------|
| NMFS No. | E05-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Rope |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Rope | | |
| <u>Gear Description:</u> | Photographs showed a rope around the body with no distinguishing markings. | | |
| <u>Comments:</u> | None. | | |
| <u>Conclusions:</u> | The whale was entangled in rope of unknown origin. | | |

2021 Entanglements

| | |
|---|---|
| NMFS No: E06-21 | Date First Observed Entangled: 6/6/2021 |
| Location First Observed Entangled: 4.6 NM north of North Truro, MA | Latitude/Longitude First Observed Entangled: 42° 08' N, 70° 05' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Live minke whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Serious Injury (Prorated) | |

| Event Description: |
|--|
| <p>6/6/2021</p> <ul style="list-style-type: none"> A charter vessel discovered an entangled whale and reported the sighting to CCS, but it was lost before CCS arrived on scene. The response team searched the area, but were unable to relocate. <p>6/11/2021</p> <ul style="list-style-type: none"> WW naturalists had a brief sighting of this whale, still entangled. |

| Description of Gear on Whale as Reported: | |
|--|-------------------------------|
| During Initial Sighting: Large jumble of rope on the back, forward the dorsal fin. | Subsequent Descriptions: None |

| Description of Wounds/Condition: | |
|--------------------------------------|-------------------------------|
| During Initial Sighting: None noted. | Subsequent Descriptions: None |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|--|---|----------------------|---------|
| NMFS No. | E06-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Rope |
| Fishery Mark Recovered/Documented | No | ALWTRP Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Unknown rope | | |
| Gear Description: | Photograph showed a bundle of rope on the back. | | |
| Comments: | None. | | |
| Conclusions: | Whale was entangled in rope of unknown origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E07-21 | Date First Observed Entangled: 6/8/2021 |
| Location First Observed Entangled: 7.6 NM northeast of Race Point, Provincetown, MA | Latitude/Longitude First Observed Entangled: 42° 10.4' N, 70° 09.8' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Disentangled |
| Sighting prior to entanglement: 9/01/2020 | Re-sightings Post-entanglement: 6/09/2021 |
| Whale Biology: Live humpback whale, Valley, adult female | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| Event Description: |
|---|
| <p>6/8/2021</p> <ul style="list-style-type: none"> Whale watch vessel reported an entangled whale to CCS, and switched off standing by with another whale watch until CCS could arrive on scene. The team worked aboard R/V Ibis and established a control line, working their way up to make a secure A4 buoy attachment, and removed the rope and buoy aft this attachment. Due to worsening weather, the team deployed a telemetry buoy. Once a secure attachment was established, the team continued documentation to inform future response efforts before standing down. <p>6/9/2021</p> <ul style="list-style-type: none"> CCS tracked the whale overnight, and she was sighted again by a commercial fishermen, who reported that the entangling gear snagged on another fisherman's gear. CCS relocated the whale and opted to use the inflatable to cut the anchoring line exiting her mouth with a pole and fixed knife, as grappling into the anchoring gear would be quite difficult. Now that it was believed she only had a pass of rope through her mouth, with a clean bitter end on the left side, and the telemetry on the right, they then tried to add more drag to the telemetry side by attaching an A5 buoy closer to the flukes. With little results, the team switched gears and opted to try a sea anchor, which pulled the remaining rope from her mouth. The team in the inflatable collected the gear while the team onboard the R/V Ibis followed Valley to confirm she was gear free. |

| Description of Gear on Whale as Reported: | |
|---|---|
| During Initial Sighting: Buoy would surface when the whale did, trailing roughly 100 feet aft of her flukes. Hard-shell pill buoy was attached further down the entangling rope at depth. Rope was fouled. | Subsequent Descriptions: During the 6/9/2021 approaches from the inflatable, the team observed line exiting the right mouth of the whale headed over her back, passing under her body and headed to the telemetry buoy. Rope exiting deep in the gape of Valley's left mouth below the eye was also visible. This rope appeared to be weighted and headed straight down, under the whale's body. |

| Description of Wounds/Condition: | |
|--|---------------------------------------|
| During Initial Sighting: Skinny in appearance. Traveling slowly and relatively calm behavior. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|-------------------------------|-------------------------------|
| NMFS No. | E07-21 | Gear Recovered (y/n) | Yes |
| Date Set | Unknown but recent | Date Lost | Unknown |
| Line Diameter | 3/8" and 1/2" | Gear Part | Surface system and endline |
| Fishery Mark Recovered/Documented | Yes | Fishery Mark Origin and Color | Purple and Green – ME federal |
| Target Species | Lobster | Location of set | Northern Jeffries Ledge |
| Gear Type | U.S. Lobster – Maine Federal | | |
| <u>Gear Description:</u> | Recovered gear consisted of 27.5 fathoms of line; 7.5 fathoms of 3/8" sink off the pickup buoy and 20 fathoms of 1/2" sink off the GoDeep buoy. Two sets of purple (1 fathom each) and green (6 inches each) fishery ID marks. | | |
| <u>Comments:</u> | Fisherman typically uses 15-18 trap trawls. Buoy lines are typically half float and half sink. His best estimate for when the gear was set was after the entanglement sighting date, suggesting the gear was recently set. | | |
| <u>Conclusions:</u> | Whale was entangled in the endline of a Maine federal lobster trawl. | | |

Gear Images



E07-12 image – overall recovered gear



E07-12 image – close up of recovered woven purple twine in the endline



E07-12 image – woven purple and green twine in the endline

2021 Entanglements

| | |
|--|---|
| NMFS No: E08-21 | Date First Observed Entangled: 6/24/2021 |
| Location First Observed Entangled: 11.1 NM east of Eastham, MA | Latitude/Longitude First Observed Entangled: 41° 49.0' N, 69° 41.5' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Monitor, likely gear shed |
| Sighting prior to entanglement: 9/25/2020 | Re-sightings Post-entanglement: None |
| Whale Biology: Live humpback whale, Cat Eyes, adult male | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| |
|---|
| Event Description: |
| The CCS Humpback Whale Studies Program was on a research cruise and came across a whale with monofilament mesh on the pectoral flipper. |

| |
|--|
| Description of Gear on Whale as Reported: |
| <div> <div>During Initial Sighting: Small piece of monofilament netting hanging from a barnacle on the tip of the right pectoral flipper.</div> <div>Subsequent Descriptions: None.</div> </div> |

| |
|--|
| Description of Wounds/Condition: |
| <div> <div>During Initial Sighting: None noted.</div> <div>Subsequent Descriptions: None.</div> </div> |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|-------------------------------|-------------------|
| NMFS No. | E08-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | N/A | Gear Part | Monofilament mesh |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Mesh of unknown origin. | | |
| <u>Gear Description:</u> | Documentation showed a small section of monofilament mesh on the tip of one pectoral flipper. | | |
| <u>Comments:</u> | None. | | |
| <u>Conclusions:</u> | Whale was entangled in monofilament mesh of unknown origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E09-21 | Date First Observed Entangled: 6/28/2021 |
| Location First Observed Entangled: 13.8 NM northeast of Rockport, MA | Latitude/Longitude First Observed Entangled: 42° 46.8' N, 70° 19.6' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Gear shed |
| Sighting prior to entanglement: 6/20/2021 | Re-sightings Post-entanglement: 7/15/2021 |
| Whale Biology: Live humpback whale, Clamp, adult female | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| Event Description: |
|---|
| 6/28/2021 <ul style="list-style-type: none"> Whale watch naturalists sighted a whale with monofilament line trailing. 7/15/2021 <ul style="list-style-type: none"> Whale was sighted gear free. |

| Description of Gear on Whale as Reported: | |
|--|---------------------------------------|
| During Initial Sighting: Monofilament line running vertically over the left flank aft of the dorsal. Point of attachment unknown. | Subsequent Descriptions: None. |

| Description of Wounds/Condition: | |
|--------------------------------------|-------------------------------|
| During Initial Sighting: None noted. | Subsequent Descriptions: None |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|--|--|-------------------------------|-------------------|
| NMFS No. | E09-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Monofilament line |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | U.S. monofilament line | | |
| <u>Gear Description:</u> | Whale was documented with monofilament line trailing. | | |
| <u>Comments:</u> | The pre-entanglement sighting indicated the entanglement was of U.S. origin. | | |
| <u>Conclusions:</u> | Whale was entanglement in unknown monofilament of U.S. origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E10-21 | Date First Observed Entangled: 6/29/2021 |
| Location First Observed Entangled: 14.3 NM southeast of Block Island, RI | Latitude/Longitude First Observed Entangled: 41° 01.0' N, 71° 17.2' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Live humpback whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Serious Injury (Prorated) | |

| |
|--|
| Event Description: |
| Network members were alerted by a fishermen of an entangled humpback. No photos were taken, and due to the time of day, distance, and forecasted weather, no response was mounted. |

| Description of Gear on Whale as Reported: | |
|---|---------------------------------------|
| During Initial Sighting: Described by fisher as being wrapped in netting, with flukes possibly involved. | Subsequent Descriptions: None. |

| Description of Wounds/Condition: | |
|--------------------------------------|--------------------------------|
| During Initial Sighting: None noted. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|-------------------------------|--------------|
| NMFS No. | E10-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Mesh/netting |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Unknown mesh/netting | | |
| <u>Gear Description:</u> | Reporter described the whale being wrapped in mesh/netting. | | |
| <u>Comments:</u> | Experienced responders interviewed the reporter and felt confident on the species identification and gear description despite no documentation. | | |
| <u>Conclusions:</u> | Whale was entangled in mesh/netting of unknown origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E11-21 | Date First Observed Entangled: 7/4/2021 |
| Location First Observed Entangled: 1.1 NM west of Point Judith, RI | Latitude/Longitude First Observed Entangled: 41° 22.1' N, 71° 31.2' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Deceased |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Dead minke whale, unknown ID, juvenile male | |
| NMFS Serious Injury/Mortality Determination: Mortality | |

| |
|---|
| Event Description: |
| A boater reported to USCG a dead floating whale entangled in gear. The following morning, USCG relocated and towed to shore. RI DEM collected the gear, and a necropsy was conducted on the carcass the next day by Mystic Aquarium and AMSEAS. |

| Description of Gear on Whale as Reported: | |
|--|---------------------------------------|
| During Initial Sighting: Mouth entanglement, consisting of a mass of different colored ropes, mesh, and debris. | Subsequent Descriptions: None. |

| Description of Wounds/Condition: | |
|--|--|
| During Initial Sighting: Moderately decomposed. | Subsequent Descriptions: Necropsy revealed a fair body condition, with external linear impressions and internal hemorrhaging. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|-------------------------------|--------------------|
| NMFS No. | E11-21 | Gear Recovered (y/n) | Yes |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | 3/16" and 1/4" | Gear Part | Line, mesh, debris |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Unknown line, mesh and debris. | | |
| <u>Gear Description:</u> | The recovered gear was a bundle of 3/16" to 1/4" floating poly rope. Tangled mess of 5 1/2" green webbing. Broken mesh from mobile gear and a mesh produce bag. | | |
| <u>Comments:</u> | The recovered gear is a combination of a number of different gear sets and debris. | | |
| <u>Conclusions:</u> | Whale was entangled in gear and debris from multiple sources including fishing gear and marine debris, of unknown origin. | | |

Gear Images





E11-21 – portion of recovered line and mesh



E11-21 – portion of recovered mesh bag

2021 Entanglements

| | |
|---|---|
| NMFS No: E12-21 | Date First Observed Entangled: 7/7/2021 |
| Location First Observed Entangled: 12.9 NM northeast of Race Point, Provincetown, MA | Latitude/Longitude First Observed Entangled: 42° 23.8' N, 70° 21.4' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Disentangled – gear shed |
| Sighting prior to entanglement: 7/01/2021 | Re-sightings Post-entanglement: 8/8/2021 |
| Whale Biology: Live humpback whale, 2021 calf of Dross, unknown sex | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| |
|--|
| Event Description: |
| <p>Whale watch boat sighted Dross and her calf, and noticed the calf was behaving abnormally. They confirmed it was entangled, reported the sighting to CCS, and stood by with other whale watch vessels until the response team could arrive. Using a pole with a fixed knife attached, the team made multiple attempts to sweep behind the animal to try and shorten any line. Although the team could not see or feel if a cut was made, some line on the animal was no longer visible, and they did observe a bitter end. They were able to make another cut to the other side, leaving the calf with line that presumably runs through the mouth, with two clean bitter ends. CCS recovered the cut line and it is expected that the calf will shed the remaining gear.</p> |

| Description of Gear on Whale as Reported: | |
|---|---------------------------------------|
| During Initial Sighting: Monofilament line passing down the left flank and going up and over the peduncle. Presumed to originate in the mouth. | Subsequent Descriptions: None. |

| Description of Wounds/Condition: | |
|---|---------------------------------------|
| During Initial Sighting: Agitated and swimming with mouth wide open. Increasing speed and reacting strongly to close approaches/being touched by the pole. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|-------------------------------|--------------|
| NMFS No. | E12-21 | Gear Recovered (y/n) | Yes |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | N/A | Gear Part | Monofilament |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | U.S. monofilament line | | |
| Gear Description: | Nine fathoms of monofilament line were recovered. | | |
| Comments: | Whales were sighted 6 days prior gear free. | | |
| Conclusions: | Whale was entangled in monofilament line of U.S. origin. | | |

Gear Images



2021 Entanglements

| | |
|--|---|
| NMFS No: E13-21 | Date First Observed Entangled: 7/13/2021 |
| Location First Observed Entangled: 32.6 NM northeast of Sainte Marie - Saint Raphael, CA | Latitude/Longitude First Observed Entangled: 47° 55.3' N, 63° 47.1' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: 7/13/2021 | Re-sightings Post-entanglement: None |
| Whale Biology: Live right whale, #4615 Hercules, juvenile male | |
| NMFS Serious Injury/Mortality Determination: Serious Injury | |

| Event Description: |
|---|
| <p>7/13/2021</p> <ul style="list-style-type: none"> The Gulf Rescue Team discovered an entangled right whale that NEAq identified as Hercules, who had been sighted by CWI gear-free just a few hours earlier. The whale's behavior also suggested this was a recent entanglement with heavy gear involved. CWI, CWRT and others were nearby and opted to attach telemetry given the time, whale behavior, and resources available. Using a grapple, the team attached the telemetry buoy to the trailing gear. The tag transmitted for several hours after, but stopped in the early hours of the following day. <p>7/14/2021</p> <ul style="list-style-type: none"> DFO C&P/ TC searched for and relocated the whale, but sea conditions were too rough for a response. The entanglement configuration appears to have changed. With no additional hits on the telemetry tag, the buoy was likely been pulled under. <p>9/13/2021</p> <ul style="list-style-type: none"> The telemetry buoy began transmitting again for two days, but it cannot be confirmed that it is still attached to the whale. DFO and CWRT were notified and planned to search the area. |

| Description of Gear on Whale as Reported: | |
|---|---|
| During Initial Sighting: The whale had bitten down on a single piece of rope. The rope exiting the left side of the mouth traveled over the head just in front of the blowholes and twisted with the rope exiting the right mouth, forming a bridle at the right mouth. This twisted rope traveled under the right flipper/body. At the flukes the ropes separated, with one length forming a loose loop, the other cinched tight over the tailstock. From there the ropes trailed aft with one potentially going to weight. | Subsequent Descriptions: On 7/14/2021, The peduncle wrap was no longer present. The bridle through the mouth was still there, heading down to weighted gear. |

| Description of Wounds/Condition: | |
|--|---------------------------------------|
| During Initial Sighting: Whale's behavior was violent, with frequent thrashing, head raises, and rolling. Wounds actively bleeding where rope was in contact with the skin. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|-------------------------------|---------|
| NMFS No. | E13-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Rope |
| ALWTRP Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Canadian unknown rope | | |
| <u>Gear Description:</u> | Rope was described as being large diameter. | | |
| <u>Comments:</u> | The animal was seen gear free hours earlier. | | |
| <u>Conclusions:</u> | Whale was entangled in rope of Canadian origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E14-21 | Date First Observed Entangled: 7/13/2021 |
| Location First Observed Entangled: 7.3 NM northwest of Race Point, Provincetown, MA | Latitude/Longitude First Observed Entangled: 42° 09.6' N, 70° 20.7' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Gear Shed |
| Sighting prior to entanglement: 7/11/2021 | Re-sightings Post-entanglement: 8/07/2021 |
| Whale Biology: Live humpback whale, Shuffleboard, adult female | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| |
|--|
| Event Description: |
| Whale watch naturalists observed a humpback whale with monofilament line trailing off the right fluke blade. |

| Description of Gear on Whale as Reported: | |
|--|--------------------------------------|
| During Initial Sighting: Monofilament line snagged on a barnacle on the right fluke tip and trailing aft. | Subsequent Descriptions: None |

| | |
|---|---------------------------------------|
| Description of Wounds/Condition: | |
| During Initial Sighting: None noted. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|-------------------------------|--------------|
| NMFS No. | E14-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Monofilament |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | U.S. monofilament line | | |
| <u>Gear Description:</u> | Whale was documented with monofilament line. | | |
| <u>Comments:</u> | Pre-entanglement sighting was two days prior. | | |
| <u>Conclusions:</u> | Whale was entangled in monofilament line of U.S origin. | | |

2021 Entanglements

| | |
|--|--|
| NMFS No: E15-21 | Date First Observed Entangled: 7/14/2021 |
| Location First Observed Entangled: 6.5 NM northwest of Race Point, Provincetown, MA | Latitude/Longitude First Observed Entangled: ~ 42° 9' N, 70° 20' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Monitor |
| Sighting prior to entanglement: 7/14/2021 | Re-sightings Post-entanglement: None |
| Whale Biology: Live humpback whale, unknown ID, adult, unknown sex | |
| NMFS Serious Injury/Mortality Determination: Serious Injury (Prorated) | |

| |
|---|
| Event Description: |
| Whale watch naturalists witnessed a whale interact with fishing gear being actively fished by a rod and reel fisher. The naturalists were unable to collect photos. |

| |
|--|
| Description of Gear on Whale as Reported: |
| <div> During Initial Sighting: Monofilament line involved, unknown point of attachment. </div> <div> Subsequent Descriptions: None. </div> |

| |
|---|
| Description of Wounds/Condition: |
| <div> During Initial Sighting: None noted. </div> <div> Subsequent Descriptions: None. </div> |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|-------------------------------|--------------|
| NMFS No. | E15-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Monofilament |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | U.S. monofilament line | | |
| Gear Description: | Monofilament line from rod and reel fisherman. | | |
| Comments: | Whale was witnessed interacting with line. | | |
| Conclusions: | Whale was entangled in rod and reel monofilament line of U.S. origin. | | |

2021 Entanglements

| | |
|---|--|
| NMFS No: E16-21 | Date First Observed Entangled: 7/19/2021 |
| Location First Observed Entangled: 4.3 NM east of Gloucester, MA | Latitude/Longitude First Observed Entangled: ~42° 37, 70° 30 |
| Initial Movement (Anchored/Free): Free-swimming | Status: Gear Shed |
| Sighting prior to entanglement: 7/16/2021 | Re-sightings Post-entanglement: 7/28/2021 |
| Whale Biology: Live humpback whale, Mogul, adult, contact CCS for sex ID | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| |
|---|
| Event Description: |
| Whale watch naturalists sighted Mogul with monofilament in tow. This whale was sighted several times by whale watch boats throughout the following weeks, and it appears Mogul was able to shed the entanglement. |

| Description of Gear on Whale as Reported: | |
|--|---|
| During Initial Sighting: Monofilament line streaming from the left fluke blade. | Subsequent Descriptions: No gear observed. |

| | |
|---|---------------------------------------|
| Description of Wounds/Condition: | |
| During Initial Sighting: None noted. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|-------------------------------|-------------------|
| NMFS No. | E16-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Monofilament line |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | U.S. monofilament line | | |
| Gear Description: | Whale was documented with monofilament line over the left fluke. | | |
| Comments: | Pre-entanglement sighting was three days prior. | | |
| Conclusions: | Whale was entangled in monofilament line of U.S. origin. | | |

2021 Entanglements

| | |
|---|---|
| NMFS No: E17-21 | Date First Observed Entangled: 7/27/2021 |
| Location First Observed Entangled: 3.0 NM northwest of Brier Island, NS | Latitude/Longitude First Observed Entangled: 44° 18.9' N, 66° 24.3' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Monitor |
| Sighting prior to entanglement: 7/24/2021 | Re-sightings Post-entanglement: Unknown |
| Whale Biology: Live humpback whale, Sedge, adult male | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| |
|--|
| Event Description: |
| Naturalist aboard a whale watch vessel reported and photographed the whale Sedge with monofilament attached. |

| Description of Gear on Whale as Reported: | |
|---|---------------------------------------|
| During Initial Sighting: Monofilament line trailing over the right fluke blade. Point of attachment unclear. | Subsequent Descriptions: None. |

| | |
|--|---------------------------------------|
| Description of Wounds/Condition: | |
| During Initial Sighting: Appeared agitated. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|-------------------------------|-------------------|
| NMFS No. | E17-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Monofilament line |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Monofilament line | | |
| <u>Gear Description:</u> | Whale was documented with monofilament line | | |
| <u>Comments:</u> | Pre-entanglement sighting was three days prior. | | |
| <u>Conclusions:</u> | Whale was entangled in monofilament line of unknown origin. | | |

2021 Entanglements

| | |
|---|---|
| NMFS No: E18-21 | Date First Observed Entangled: 7/28/2021 |
| Location First Observed Entangled: 15.3 NM east of Gloucester, MA | Latitude/Longitude First Observed Entangled: 42° 32.7' N, 70° 16.1' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Gear shed |
| Sighting prior to entanglement: 7/27/2021 | Re-sightings Post-entanglement: 10/07/2021 |
| Whale Biology: Live humpback whale, Crisp, adult female | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

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|--|
| Event Description: |
| Whale watch naturalists documented a humpback with monofilament line trailing. |

| | |
|--|---------------------------------------|
| Description of Gear on Whale as Reported: | |
| During Initial Sighting: Monofilament line trailing over the left fluke blade. Unknown point of attachment. | Subsequent Descriptions: None. |

| | |
|---|---------------------------------------|
| Description of Wounds/Condition: | |
| During Initial Sighting: None noted. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|-------------------------------|-------------------|
| NMFS No. | E18-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Monofilament line |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | U.S. monofilament line | | |
| <u>Gear Description:</u> | Whale was documented with monofilament line trailing off the left fluke. | | |
| <u>Comments:</u> | Pre-entanglement sighting was one day prior. | | |
| <u>Conclusions:</u> | Whale was entangled in monofilament line of U.S. origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E19-21 | Date First Observed Entangled: 8/1/2021 |
| Location First Observed Entangled: Off Phippsburg, ME | Latitude/Longitude First Observed Entangled: 43° 41.5' N, 69° 42.4' W |
| Initial Movement (Anchored/Free): Anchored | Status: Deceased |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Dead minke whale, unknown ID, adult female | |
| NMFS Serious Injury/Mortality Determination: Serious Injury | |

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| Event Description: |
| With the assistance of MMP, MMoME responded to a floating entangled minke carcass. Documentation and samples from the whale were collected. The carcass was towed and transported to a compost site several days later. |

| | |
|--|---------------------------------------|
| Description of Gear on Whale as Reported: | |
| During Initial Sighting: Lines wrapped around the left pectoral flipper/axillary region. Two buoys in association with these lines, along with a third buoy wrapped around the tailstock. | Subsequent Descriptions: None. |

| | |
|--|---------------------------------------|
| Description of Wounds/Condition: | |
| During Initial Sighting: Impression at base of tail from associated line. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|-------------------------------|-------------------------------------|
| NMFS No. | E19-21 | Gear Recovered (y/n) | No |
| Date Set | 7/28/2021 | Date Lost | Unknown |
| Line Diameter | 3/8" | Gear Part | Surface system and endline |
| Fishery Mark Recovered/Documented | Yes | Fishery Mark Origin and Color | Purple – Maine state |
| Target Species | Lobster | Location of set | ~2 miles south of Sequin Island, ME |
| Gear Type | U.S. lobster – Maine state | | |
| <u>Gear Description:</u> | Documentation showed the whale was entangled in the surface system and endline. Fisherman stated they fish 15 trap trawls with the 15 fathoms of 7/16" sink rope between pots and endline that are 3/8" with 3/4 sink and 1/4 float rope. | | |
| <u>Comments:</u> | Gear was returned to fisherman and interview was conducted. | | |
| <u>Conclusions:</u> | Whale was entangled in the endline of a 15 lobster trap trawl of U.S. origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E20-21 | Date First Observed Entangled: 8/1/2021 |
| Location First Observed Entangled: 41.2 NM southeast of Nantucket Island, MA | Latitude/Longitude First Observed Entangled: 40° 42.0' N, 69° 25.7' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Live humpback whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Serious Injury | |

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|--|
| Event Description: |
| The Northeast AMAPPS aerial survey team encountered an entangled whale and reported the sighting. Due to time of day and distance, no response was possible. |

| Description of Gear on Whale as Reported: | |
|---|---------------------------------------|
| During Initial Sighting: One bitter end of rope about ten feet aft of the whale’s right fluke blade which leads to multiple wraps of the peduncle at the fluke insertion, and at least one wrap of the flukes at the midline. The rope then continues aft of the whale to what is likely another bitter end about two whale lengths behind the flukes. | Subsequent Descriptions: None. |

| Description of Wounds/Condition: | |
|--|---------------------------------------|
| During Initial Sighting: Observed traveling, but not fluking. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|-------------------------------|---------|
| NMFS No. | E20-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Unknown |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Unknown line | | |
| <u>Gear Description:</u> | Whale was documented with line and other possible undefined gear parts. | | |
| <u>Comments:</u> | Documentation and orientation of the whale did not offer many insights into the gear type. | | |
| <u>Conclusions:</u> | Whale was entangled in rope and possible undefined gear parts of unknown origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E21-21 | Date First Observed Entangled: 8/4/2021 |
| Location First Observed Entangled: 14.1 NM north of Race Point, Provincetown, MA | Latitude/Longitude First Observed Entangled: 42° 17.4' N, 70° 19.1' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Gear Shed |
| Sighting prior to entanglement: 8/03/2021 | Re-sightings Post-entanglement: 8/7/2021 |
| Whale Biology: Live humpback whale, Dross, adult female | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| |
|--|
| Event Description: |
| Whale watch naturalists sighted Dross and her calf, with Dross having monofilament in tow. |

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|--|
| Description of Gear on Whale as Reported: |
| <div> During Initial Sighting: Monofilament line snagged on a barnacle and trailing off the left fluke blade. </div> <div> Subsequent Descriptions: None. </div> |

| |
|--|
| Description of Wounds/Condition: |
| <div> During Initial Sighting: Behaving normally. </div> <div> Subsequent Descriptions: None. </div> |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|-------------------------------|-------------------|
| NMFS No. | E21-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Monofilament line |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | U.S. monofilament line | | |
| <u>Gear Description:</u> | Whale was documented with monofilament line on the tip of the left fluke. | | |
| <u>Comments:</u> | Pre-entanglement sighting was one day prior. | | |
| <u>Conclusions:</u> | Whale was entangled in monofilament line of U.S. origin. | | |

2021 Entanglements

| | |
|---|---|
| NMFS No: E22-21 | Date First Observed Entangled: 8/8/2021 |
| Location First Observed Entangled: 4.0 NM east of Rockport, MA | Latitude/Longitude First Observed Entangled: 42° 40.5' N, 70° 30.4' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Gear shed |
| Sighting prior to entanglement: 8/06/2021 | Re-sightings Post-entanglement: 8/18/2021 |
| Whale Biology: Live humpback whale, 2021 calf of Jabiru, unknown sex | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

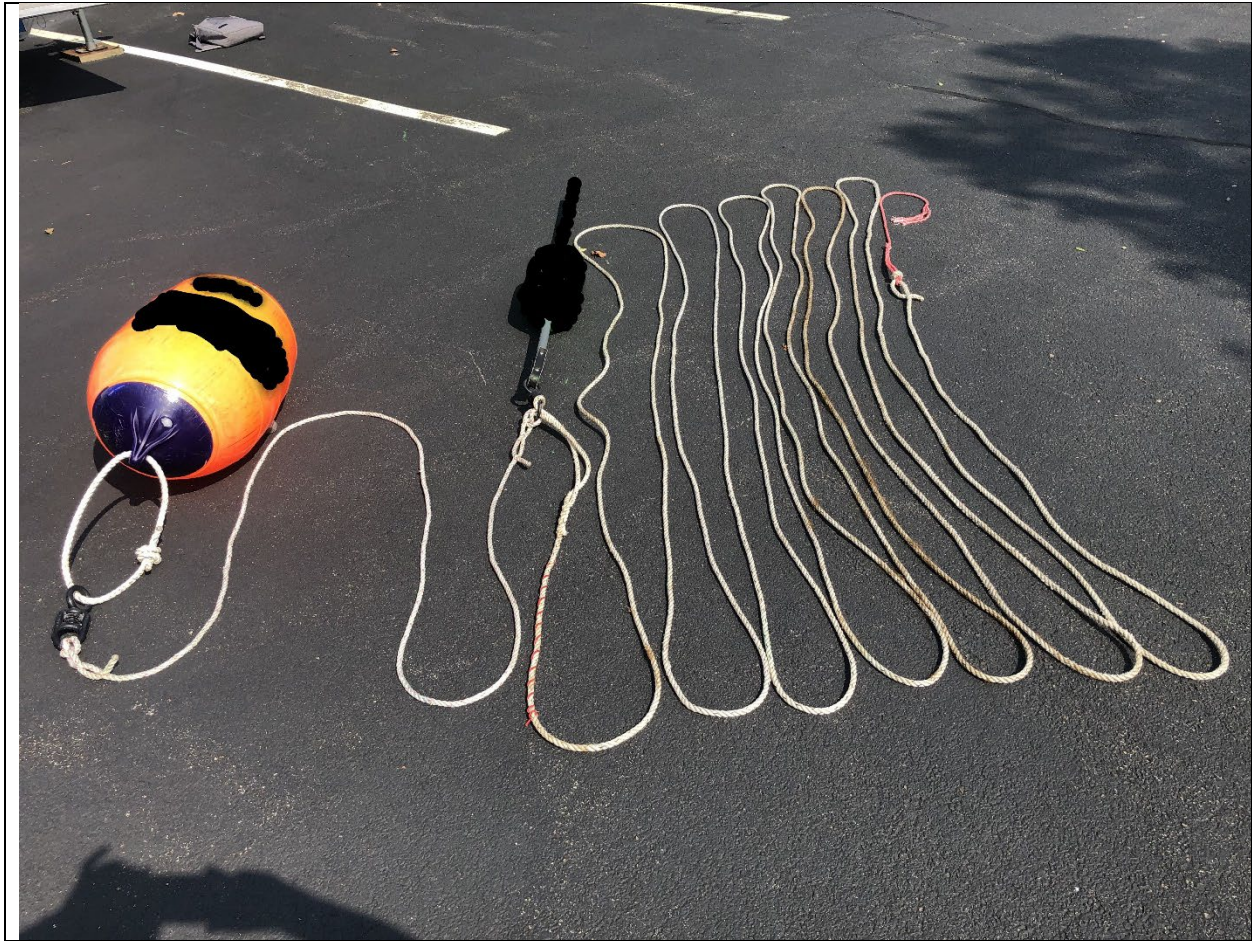
| Event Description: |
|---|
| <p>8/8/2021</p> <ul style="list-style-type: none"> Whale watch vessel overheard a fisher reporting an entangled calf to the USCG, and relayed that report to CCS, as did NMFS and USCG. The fisher was unable to standby, so several whale watch vessels took turns standing by while a response was mounted. The whale watch vessels began documenting the mom/calf pair and the calf's entanglement configuration. During standby, the calf dove under one of the whale watch boats while they were out of gear, and the entanglement may have snagged the bottom of the boat. When the calf surfaced, the gear was no longer visible. The whale watch crew collected the snagged gear off the boat. CCS arrived and searched the area in the hopes of confirming the pair to be gear free, but needed to redirect efforts to another entanglement report that came in. <p>8/18/2021</p> <ul style="list-style-type: none"> Jabiru and her calf have been sighted several times over the last week by both whale watch vessels and CCS, and were confirmed to be gear-free. |

| Description of Gear on Whale as Reported: | |
|---|--|
| During Initial Sighting: One buoy line from fixed gear looped over the leading edge of the calf's left pectoral, likely held in place by the drag of the gear. Two buoys trailing. | Subsequent Descriptions: The calf is gear free. |

| Description of Wounds/Condition: | |
|--------------------------------------|--------------------------------------|
| During Initial Sighting: None noted. | Subsequent Descriptions: None noted. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|--|---|-------------------------------|----------------------------|
| NMFS No. | E22-21 | Gear Recovered (y/n) | Yes |
| Date Set | 8/06/2021 | Date Lost | Unknown |
| Line Diameter | 3/8" | Gear Part | Surface system, endline |
| Fishery Mark Recovered/Documented | Yes | Fishery Mark Origin and Color | Red - MA |
| Target Species | Lobster | Location of set | 42° 40.5' N 70° 30.5' W |
| Gear Type | U.S lobster – Massachusetts state | | |
| <u>Gear Description:</u> | Recovered gear consisted LD3 polyball and bullet buoy attached to 600 lbs. weak links leading to 21 fathoms of 3/8" sink rope. Bitter end of recovered buoy line was 3/8" Rocky Mount 1,700 lbs weak rope. Appropriate ALWTRP color marks and weak insertions were present. | | |
| <u>Comments:</u> | Fisherman was identified and interviewed. The endline and surface system was part of a 20 trap trawl. | | |
| <u>Conclusions:</u> | Whale was entangled in the endline of a 20 trap lobster trawl of U.S. MA state origin. | | |

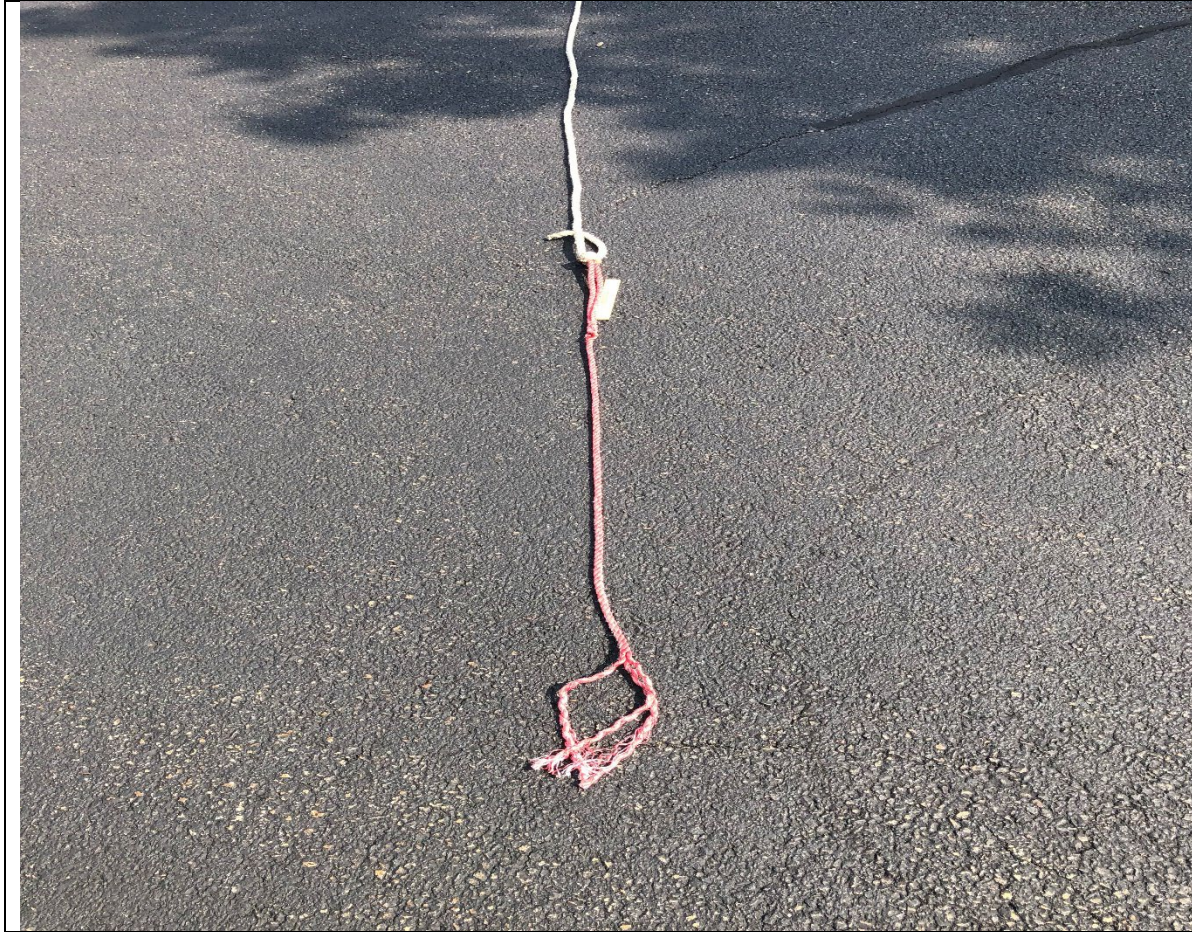
Gear Images



E22-21 – full set of recovered gear.



E22-21 – ALWTRP red Massachusetts mark



E22-21 – end of buoy sink line leading to Rocky Mount weak rope.



E22-21 – Close up of parted Rocky Mount weak rope.

2021 Entanglements

| | |
|--|---|
| NMFS No: E23-21 | Date First Observed Entangled: 8/8/2021 |
| Location First Observed Entangled: 19.0 NM southeast of Gloucester, MA | Latitude/Longitude First Observed Entangled: 42° 21.3' N, 70° 22.1' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Gear shed |
| Sighting prior to entanglement: 8/07/2021 | Re-sightings Post-entanglement: 8/9/2021 |
| Whale Biology: Live humpback whale, 2021 calf of Dross, unknown sex | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| Event Description: |
|---|
| <p>8/8/2021</p> <ul style="list-style-type: none"> A whale watch vessel was observing Dross and her calf, felt that the two were acting abnormally, and discovered the calf had monofilament line in tow. The sighting was reported to CCS, who was currently responding to a different entanglement report. The pair was observed by several whale watch vessels throughout the day. When CCS arrived on scene, they had not been sighted for some time, and despite searching, were not relocated. <p>8/9/2021</p> <ul style="list-style-type: none"> The pair were observed by whale watch vessels and CCS over numerous days and are confirmed to be gear-free. |

| Description of Gear on Whale as Reported: | |
|--|--|
| During Initial Sighting: Line passing over the left fluke blade, under the peduncle and then back over the right fluke blade, trailing aft. | Subsequent Descriptions: Calf is gear free. |

| Description of Wounds/Condition: | |
|--------------------------------------|--------------------------------|
| During Initial Sighting: None noted. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|-------------------------------|-------------------|
| NMFS No. | E23-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Monofilament line |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | U.S. monofilament line | | |
| <u>Gear Description:</u> | Whale was documented with monofilament line | | |
| <u>Comments:</u> | Pre-entanglement sighting was one day prior. | | |
| <u>Conclusions:</u> | Whale was entangled in monofilament line of U.S. origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E24-21 | Date First Observed Entangled: 8/16/2021 |
| Location First Observed Entangled: 33.3 NM southeast of Nantucket Island, MA | Latitude/Longitude First Observed Entangled: 40° 45.5' N, 69° 37.8' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Live humpback whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Serious Injury (Prorated) | |

| |
|--|
| Event Description: |
| The CCS aerial survey team was conducting a right whale survey, and upon reviewing images from the flight, discovered that they had also documented an entangled humpback. |

| |
|--|
| Description of Gear on Whale as Reported: |
| <div> <div> During Initial Sighting: Rope wrapped around the body, just forward of the flippers. Rope trails beneath the whale to at least the flukes. </div> <div> Subsequent Descriptions: None. </div> </div> |

| |
|--|
| Description of Wounds/Condition: |
| <div> <div> During Initial Sighting: None noted. </div> <div> Subsequent Descriptions: None. </div> </div> |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|-------------------------------|---------|
| NMFS No. | E24-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Unknown |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Unknown rope | | |
| <u>Gear Description:</u> | Whale was documented with rope over the body. | | |
| <u>Comments:</u> | None. | | |
| <u>Conclusions:</u> | Whale was entangled in rope of unknown origin. | | |

2021 Entanglements

| | |
|---|---|
| NMFS No: E25-21 | Date First Observed Entangled: 8/29/2021 |
| Location First Observed Entangled: 25.8 NM south of Martha's Vineyard, MA | Latitude/Longitude First Observed Entangled: 40° 55.2' N, 70° 30.2' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Live finback whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Serious Injury (Prorated) | |

| |
|---|
| Event Description: |
| Marine Mammal Observers sighted an entangled whale and reported it to the NMFS hotline. Due to time of day and distance, no responsible was possible. |

| |
|--|
| Description of Gear on Whale as Reported: |
| <div> During Initial Sighting: High-flier trailing about a body-length behind the whale. Point of attachment unknown. </div> <div> Subsequent Descriptions: None. </div> |

| |
|---|
| Description of Wounds/Condition: |
| <div> During Initial Sighting: None noted. </div> <div> Subsequent Descriptions: None. </div> |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|-------------------------------|---------------|
| NMFS No. | E25-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Buoy, endline |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Unknown endline and buoy | | |
| <u>Gear Description:</u> | Whale was documented trailing a high flyer buoy. | | |
| <u>Comments:</u> | None. | | |
| <u>Conclusions:</u> | Whale was entangled in a buoy and endline of unknown origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E26-21 | Date First Observed Entangled: 8/30/2021 |
| Location First Observed Entangled: 35.9 NM east of Asbury Park, NJ | Latitude/Longitude First Observed Entangled: 40° 13.0' N, 73° 13.1' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Live humpback whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Serious Injury | |

| |
|---|
| Event Description: |
| A whale watch vessel encountered an entangled humpback and reported the sighting. Due to sea state, time of day, and distance from shore, no response was possible. |

| Description of Gear on Whale as Reported: | |
|---|--------------------------------|
| During Initial Sighting: Gillnet panel including rope, webbing and floats were wrapping the body. Unknown if flippers or other body parts involved, or if there is any trailing gear. | Subsequent Descriptions: None. |

| Description of Wounds/Condition: | |
|---|---------------------------------------|
| During Initial Sighting: Extremely poor condition with a heavy load of cyamids. Line embedded forward of the dorsal fin. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|----------------------|--------------------|
| NMFS No. | E26-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Gillnet mesh panel |
| ALWTRP Mark Recovered/Documented | No | ALWTRP Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Gillnet of unknown origin | | |
| <u>Gear Description:</u> | Whale was documented with a gillnet mesh panel, including floats and line over the body. | | |
| <u>Comments:</u> | None. | | |
| <u>Conclusions:</u> | Whale was entangled in a gillnet mesh panel of unknown origin. | | |

2021 Entanglements

| | |
|---|---|
| NMFS No: E27-21 | Date First Observed Entangled: 9/1/2021 |
| Location First Observed Entangled: 4.3 NM north of Grand Manan Island, NB | Latitude/Longitude First Observed Entangled: 44° 52.3' N, 66° 46.0' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Live finback whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Serious Injury | |

| |
|--|
| Event Description: |
| The Grand Manan ferry reported a entangled whale, prompting a response from CWRT, DFO Grand Manan, and DFO C&P. Despite hours of disentanglement efforts, the whale eventually dove and was not resighted. |

| Description of Gear on Whale as Reported: | |
|--|--------------------------------------|
| During Initial Sighting: Large red navigational or marker buoy tight to the whales head with a chain leading into the left mouth, no trailing line (or chain) was observed. | Subsequent Descriptions: None |

| Description of Wounds/Condition: | |
|--|---------------------------------------|
| During Initial Sighting: Fresh wounds on flippers, dorsal fin and tail. Blood observed coming out of the right side of the mouth. The whale was struggling to surface due to the heavily weighted gear. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|--|--|-------------------------------|-----------------------------|
| NMFS No. | E27-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Navigational buoy and chain |
| Fishery Mark Recovered/Documented | No | Fishery Mark Origin and Color | N/A |
| Target Species | N/A | Location of set | Unknown |
| Gear Type | N/A – navigational buoy. | | |
| <u>Gear Description:</u> | Whale was document with chain coming out of the mouth and leading to a very large navigational buoy. | | |
| <u>Comments:</u> | None. | | |
| <u>Conclusions:</u> | Whale was entangled in the chain of a very large navigational buoy of unknown origin. | | |

2021 Entanglements

| | |
|--|---|
| NMFS No: E28-21 | Date First Observed Entangled: 9/25/2021 |
| Location First Observed Entangled: 14.1 NM east of Hampton Beach, NH | Latitude/Longitude First Observed Entangled: 42° 51.4' N, 70° 29.8' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Gear shed |
| Sighting prior to entanglement: 9/13/2021 | Re-sightings Post-entanglement: 10/11/2021 |
| Whale Biology: Live humpback whale, Sword, adult, contact CCS for sex determination | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| |
|--|
| Event Description: |
| Naturalists aboard a whale watch vessel sighted Sword with monofilament line trailing. |

| | |
|---|---------------------------------------|
| Description of Gear on Whale as Reported: | |
| During Initial Sighting: Hook stuck in the trailing edge of the dorsal fin with monofilament line trailing aft the left fluke blade. | Subsequent Descriptions: None. |

| | |
|---|---------------------------------------|
| Description of Wounds/Condition: | |
| During Initial Sighting: None noted. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|--|----------------------|-------------------|
| NMFS No. | E28-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Monofilament line |
| ALWTRP Mark Recovered/Documented | No | ALWTRP Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Monofilament line | | |
| <u>Gear Description:</u> | Whale was documented with monofilament line coming from the dorsal fin area and trailing over the fluke. | | |
| <u>Comments:</u> | None. | | |
| <u>Conclusions:</u> | Whale was entangled in monofilament line of unknown origin. | | |

2021 Entanglements

| | |
|---|---|
| NMFS No: E29-21 | Date First Observed Entangled: 10/10/2021 |
| Location First Observed Entangled: 1.7 NM west of Monhegan Island, ME | Latitude/Longitude First Observed Entangled: 43° 46.2' N, 69° 21.6' W |
| Initial Movement (Anchored/Free): Anchored | Status: Disentangled |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Live minke whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Non-Serious Injury | |

| |
|--|
| Event Description: |
| A boater called in an entangled whale to USCG, who relayed the message to CCS. The NEFSC aerial team was in the area conducting a survey, and were able to assist in relocating the whale and confirming the entanglement. CCS also reached out to MMP for a potential response. Using their small rigid hull vessel, MMP began assessing the entanglement configuration. With dwindling daylight preventing a successful grapple into the descending line, they opted to cut the line going across the back with a flying knife, and then step back to observe any changes in whale behavior or entanglement configuration. With no changes observed, they grappled the gear closer to the surface system, which caused the whale to react and allowed the team to grapple into the descending line. A cut was made forward of the surface system and that gear was retrieved, followed by a cut to the anchoring line close to the whale. The whale swam off with a short piece of line running through the mouth that should be shed quickly. |

| Description of Gear on Whale as Reported: | |
|--|---------------------------------------|
| During Initial Sighting: Line and buoys entangling the mouth area. Exact configuration unclear. Tail and pectoral flippers gear free. | Subsequent Descriptions: None. |

| | |
|--------------------------------------|--------------------------------|
| Description of Wounds/Condition: | |
| During Initial Sighting: None noted. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|--|---|----------------------|--|
| NMFS No. | E29-21 | Gear Recovered (y/n) | Yes |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | 3/8" or 7/16" | Gear Part | Buoy and endline |
| ALWTRP Mark Recovered/Documented | Yes | ALWTRP Color | Purple and Green – Maine federal |
| Target Species | Lobster | Location of set | Unknown |
| Gear Type | U.S. lobster – Maine federal | | |
| <u>Gear Description:</u> | Gear was a complete set of triples and was retained by MMP. | | |
| <u>Comments:</u> | Fisherman was identified and interviewed. The three trap trawl consists of an endline of 1/3 float from the bottom and the rest sink of either 3/8" or 7/16". 15 fathoms of 7/16" sink line between traps. Buoys are either bullet buoys with 3' plastic spindle or GoDeep hard plastic buoys. Gear had appropriate ALWTRP color marks. | | |
| <u>Conclusions:</u> | Whale was entangled in the endline and buoy of a U.S. lobster 3 trap trawl from Maine federal waters. | | |

2021 Entanglements

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|--|--|
| NMFS No: E30-21 | Date First Observed Entangled: 12/29/2021 |
| Location First Observed Entangled: Off Little Island, VA | Latitude/Longitude First Observed Entangled: ~36° 42' N, 75° 53' W |
| Initial Movement (Anchored/Free): Free-swimming | Status: Entangled |
| Sighting prior to entanglement: Unknown | Re-sightings Post-entanglement: None |
| Whale Biology: Live humpback whale, unknown ID and life history | |
| NMFS Serious Injury/Mortality Determination: Serious injury | |

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| Event Description: |
| Virginia Aquarium received a report of an entangled whale. No response was mounted. |

| Description of Gear on Whale as Reported: | |
|--|---------------------------------------|
| During Initial Sighting: Blue rope at and around the dorsal fin. Exact configuration unclear. | Subsequent Descriptions: None. |

| Description of Wounds/Condition: | |
|--|---------------------------------------|
| During Initial Sighting: Wounds visible forward and behind the dorsal fin where the rope appears to be embedding into the skin. | Subsequent Descriptions: None. |

| FISHERY INTERACTION GEAR ANALYSIS | | | |
|-----------------------------------|---|----------------------|---------|
| NMFS No. | E30-21 | Gear Recovered (y/n) | No |
| Date Set | Unknown | Date Lost | Unknown |
| Line Diameter | Unknown | Gear Part | Unknown |
| ALWTRP Mark Recovered/Documented | No | ALWTRP Color | N/A |
| Target Species | Unknown | Location of set | Unknown |
| Gear Type | Unknown line | | |
| Gear Description: | Whale was documented with unknown line over the body. | | |
| Comments: | None. | | |
| Conclusions: | Whale was entangled in line of unknown origin. | | |