

North Atlantic Right Whale Causes of Death for Confirmed Carcasses

| Year | Month | NARW ID | Sex | Location First Observed Dead | Country First Observed Dead | Preliminary Cause of Death |
|------|-----------|-----------------|-----|-------------------------------|-----------------------------|---|
| 2017 | April | #4694 | F | Barnstable, MA | USA | Vessel strike (blunt force trauma) |
| 2017 | June | #3746 | M | Gulf of St Lawrence | Canada | Undetermined; could not be examined |
| 2017 | June | Glacier #1402 | M | Gulf of St Lawrence | Canada | Suspect vessel strike (blunt force trauma) |
| 2017 | June | Panama #3190 | M | Gulf of St Lawrence | Canada | Undetermined; advance decomposition |
| 2017 | June | Starboard #3603 | F | Gulf of St Lawrence | Canada | Acute entanglement (gear present; anchored) |
| 2017 | June | Contrail #3512 | F | Gulf of St Lawrence | Canada | Undetermined; could not be examined |
| 2017 | June | #1207 | M | Gulf of St Lawrence | Canada | Probable vessel strike (blunt force trauma) |
| 2017 | July | Unk | M | Gulf of St Lawrence | Canada | Probable vessel strike (blunt force trauma) |
| 2017 | July | Peanut #2140 | M | Gulf of St Lawrence | Canada | Suspect vessel strike (blunt force trauma) |
| 2017 | July | Alien #2630 | M | Newfoundland | Canada | Undetermined; could not be examined |
| 2017 | July | Unk | F | Newfoundland | Canada | Undetermined; could not be examined |
| 2017 | July | Mystique #1911 | F | Newfoundland | Canada | Undetermined; could not be examined |
| 2017 | August | Unk | M | Martha's Vineyard, MA | USA | Probable entanglement |
| 2017 | August | Couplet #2123 | F | Cape Cod, MA (offshore) | USA | Undetermined; could not be examined |
| 2017 | September | #4504 | F | Gulf of St Lawrence | Canada | Acute entanglement (gear present) |
| 2017 | October | Unk | F | Nashawena Island, MA | USA | Suspect entanglement |
| 2017 | November | Picasso #2611 | F | Martha's Vineyard, MA | USA | Undetermined; advance decomposition |
| 2018 | January | #3893 | F | Virginia Beach, VA (offshore) | USA | Chronic entanglement (gear present) |
| 2018 | August | #4505 | M | Monomoy, MA | USA | Probable entanglement |
| 2018 | October | #3515 | F | Nantucket, MA (offshore) | USA | Probable acute entanglement |
| 2019 | June | Wolverine #4023 | M | Gulf of St Lawrence | Canada | Suspect vessel strike (blunt force trauma) |

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|------|-----------|------------------------------|---|--------------------------------|--------|--|
| 2019 | June | Punctuation #1281 | F | Gulf of St Lawrence | Canada | Probable vessel strike (sharp force trauma) |
| 2019 | June | Comet #1514 | M | Gulf of St Lawrence | Canada | Probable vessel strike (blunt force trauma) |
| 2019 | June | #3815 | F | Gulf of St Lawrence | Canada | Undetermined; not examined |
| 2019 | June | #3329 | F | Gulf of St Lawrence | Canada | Undetermined; not examined |
| 2019 | June | Clipper #3450 | F | Gulf of St Lawrence | Canada | Probable vessel strike (blunt force trauma) |
| 2019 | June | Unk* | U | Cape Breton | Canada | Undetermined; not examined |
| 2019 | July | #3421 | M | Gulf of St Lawrence | Canada | Undetermined |
| 2019 | July | Unk | F | Cape Breton | Canada | Undetermined; not examined |
| 2019 | September | Snake Eyes #1226 | M | Long Island, NY(offshore) | USA | Probable acute entanglement |
| 2020 | June | #5060 (2020 Calf of #3560) | M | Elberon, New Jersey (offshore) | USA | Vessel strike (sharp and blunt force trauma) |
| 2020 | November | Unk | M | Core Banks, North Carolina | USA | Perinatal mortality |
| 2021 | February | #5130 (2021 Calf of #3230) | M | St. Augustine, Florida | USA | Vessel strike (sharp and blunt force trauma) |
| 2021 | February | Cottontail #3920** | M | Myrtle Beach, SC (offshore) | USA | Chronic entanglement (gear present) |
| 2023 | January | #5394 (2023 Calf of #3194) | M | Morehead City, NC (offshore) | USA | Perinatal mortality |
| 2023 | February | #3343 | M | Virginia Beach, VA | USA | Suspect vessel strike (blunt force trauma) |
| 2024 | January | #5120 (2021 Calf of #3720)** | F | Martha's Vineyard, MA | USA | Chronic entanglement (gear present) |
| 2024 | February | #5340 (2023 Calf of #4340) | F | Savannah, GA (offshore) | USA | Probable vessel strike (blunt force trauma) |
| 2024 | March | 2024 Calf of #1612** | F | Cumberland Island, GA | USA | Probable vessel strike (sharp force trauma) |
| 2024 | March | #1950 | F | Virginia Beach, VA (offshore) | USA | Probable vessel strike (blunt force trauma) |
| 2024 | May | Unk*** | U | Nova Scotia (offshore) | Canada | Undetermined; could not be examined |

*This whale is not confirmed since it could not be relocated and determination of it being a re-sighted carcass was inconclusive.

**These whales had confirmed injuries that became more severe and changed categories, or had more than one injury documented during the UME timeframe and are listed in the Multiple Qualifying Injury Categories Table at the end of this document

***This is a presumed/probable right whale based upon photos collected in May 2024. The carcass was not examined, and no samples were collected for genetic testing.

Note: Tables represent confirmed mortalities and injuries reported in each country and do not always reflect the location of the injury or death of the animal. Carcasses may drift across national boundaries; therefore, a carcass may be sighted or reported in one country even though the mortality occurred elsewhere. Species or stocks that migrate across national boundaries often carry their illnesses, injuries, or exposures to toxins with them. For mortality, serious injury, and morbidity determinations in these species, transboundary collaboration is critical in determining the causes of injury, illness, and mortality for each animal.

North Atlantic Right Whales Initially Determined to be Seriously Injured (Last Seen Alive)

| Year | Month | NARW ID | Sex | Location First Observed | Country First Observed | Initial Serious Injury Determination |
|------|----------|----------------------------|-----|----------------------------------|------------------------|--------------------------------------|
| 2017 | January | Ruffian #3530 | M | off Cumberland Island, GA | USA | Entanglement |
| 2017 | July | #4123 | M | off New Brunswick | Canada | Entanglement |
| 2017 | July | Mayport #4094 | F | off New Brunswick | Canada | Entanglement |
| 2017 | July | Diablo #3139 | F | off Nantucket, MA | USA | Entanglement |
| 2017 | August | Zion #3245 | M | off Gaspé, Quebec | Canada | Entanglement |
| 2018 | February | #3296 | M | off Jekyll Island, GA | USA | Entanglement |
| 2018 | July | #3312 | M | off New Brunswick | Canada | Entanglement |
| 2018 | July | #3843 | M | off New Brunswick | Canada | Entanglement |
| 2018 | August | #3960 | M | off New Brunswick | Canada | Entanglement |
| 2018 | December | #2310 | M | off Nantucket, MA | USA | Entanglement |
| 2018 | December | #3208 | M | off Nantucket, MA | USA | Entanglement |
| 2019 | April | Nebula #4423 | M | off Orleans, MA | USA | Entanglement |
| 2019 | June | Avalanche #4440 | M | off New Brunswick | Canada | Entanglement |
| 2019 | July | #3125 | M | off Percé, Quebec | Canada | Entanglement |
| 2020 | January | #5010 (2020 Calf of #2360) | U | Altamaha Sound, GA | USA | Vessel Strike |
| 2020 | January | Quill #4091* | F | South of Nantucket, MA | USA | Entanglement |
| 2020 | February | Dragon #3180 | F | off Nantucket, MA | USA | Entanglement |
| 2020 | March | Unk | U | off Georges Bank | USA | Entanglement |
| 2020 | October | #4680 | M | off Sea Bright, NJ | USA | Entanglement |
| 2020 | December | Unk | U | off Canary Islands | Spain | Dependent Calf |
| 2021 | January | #1803 | M | off Georgia/Florida state border | USA | Entanglement |
| 2021 | February | Infinity #3230 | F | off St. Augustine, FL | USA | Vessel Strike |

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|------|-----------|-----------------------|---|------------------------------|--------|---------------|
| 2021 | July | Hercules #4615* | M | off New Brunswick | Canada | Entanglement |
| 2021 | December | 2022 Calf of #3560**1 | U | off Cumberland Island, GA | USA | Entanglement |
| 2022 | May | Sundog #3823* | F | off Gaspé, Quebec | Canada | Entanglement |
| 2022 | June | Meridian #1403 | M | off New Brunswick | Canada | Entanglement |
| 2022 | September | Snow Cone #3560* | F | off Nantucket, MA | USA | Entanglement |
| 2022 | August | #4501 | M | off New Brunswick | Canada | Entanglement |
| 2023 | January | #4904 | F | off Rodanthe, North Carolina | USA | Entanglement |
| 2023 | January | Argo #1218 | M | off Surf City, NC | USA | Entanglement |
| 2023 | February | Bishop #4545* | F | off Southern MA | USA | Entanglement |
| 2023 | June | Specs #2930 | M | Gulf of St Lawrence | Canada | Entanglement |
| 2024 | March | 2024 Calf of #1950**2 | U | off Virginia Beach, Virginia | USA | Vessel Strike |
| 2024 | May | Shelagh #4510* | F | Gulf of St Lawrence | Canada | Entanglement |
| 2024 | June | 2023 Calf of #1812 | F | Gulf of St Lawrence | Canada | Entanglement |
| 2024 | July | Dropcloth #1271* | M | Gulf of St Lawrence | Canada | Entanglement |
| 2024 | August | Neptune #3301* | M | Gulf of St Lawrence | Canada | Entanglement |
| 2024 | December | #5110 | M | South of Nantucket, MA | USA | Entanglement |
| 2024 | December | #5132 | M | off Outer Banks, NC | USA | Entanglement |

*These whales had confirmed injuries that became more severe and changed categories, or had more than one injury documented during the UME timeframe and are listed in the Multiple Qualifying Injury Categories Table at the end of this document

**1“Dependent Calf – Serious Injury to Mother”. Unless additional information proves a dependent calf survives the loss or serious injury of its mother, a confirmed case involving a dependent calf of a dead or seriously injured mother is counted as a serious injury to the calf based upon the injury to the mother (in this case entanglement).

**2“Dependent Calf – Serious Injury to Mother”. Unless additional information proves a dependent calf survives the loss or serious injury of its mother, a confirmed case involving a dependent calf of a dead or seriously injured mother is counted as a serious injury to the calf based upon the injury to the mother (in this case vessel strike).

Note: Tables represent confirmed mortalities and injuries reported in each country and do not always reflect the location of the injury or death of the animal. Carcasses may drift across national boundaries; therefore, a carcass may be sighted or reported in one country even though the mortality occurred elsewhere. Species or stocks that migrate across national boundaries often carry their illnesses, injuries, or exposures to toxins with them. For mortality, serious injury, and morbidity determinations in these species, transboundary collaboration is critical in determining the causes of injury, illness, and mortality for each animal.

North Atlantic Right Whale Morbidity (Sublethally Injured or Ill) Cases

| Year | Month | NARW ID | Sex | Location First Observed | Country First Observed | Initial Morbidity (Sublethal Injury/Illness) Determination |
|------|-----------|-------------------------|-----|-------------------------|------------------------|--|
| 2017 | April | Iceland #1412 | F | Great South Channel | USA | Entanglement |
| 2017 | April | #4146 | F | off Truro, MA | USA | Entanglement |
| 2017 | April | Resolution #3532 | M | Great South Channel | USA | Entanglement |
| 2017 | April | #4425 | M | Cape Cod Bay, MA | USA | Entanglement |
| 2017 | June | Cello #1820 | M | off New Brunswick | Canada | Entanglement |
| 2017 | July | Ergo #1317 | M | off New Brunswick | Canada | Entanglement |
| 2017 | July | G048 | U | off New Brunswick | Canada | Entanglement |
| 2017 | July | Nantucket #1971 | M | off New Brunswick | Canada | Entanglement |
| 2017 | July | Arpeggio #2753 | F | Gulf of St. Lawrence | Canada | Entanglement |
| 2017 | August | Sirius #3660 | M | Gulf of St Lawrence | Canada | Unknown Injury |
| 2017 | August | #4617 | F | Cape Cod Bay, MA | USA | Entanglement |
| 2017 | October | #2145 | F | off Mt. Desert Rock, ME | USA | Poor Body Condition |
| 2018 | February | #1708 | M | Cape Cod Bay, MA | USA | Entanglement |
| 2018 | February | Silt #1817 | F | Cape Cod Bay, MA | USA | Entanglement |
| 2018 | February | Ravine #3142 | F | South of Nantucket, MA | USA | Poor Body Condition |
| 2018 | April | Bongo #3623 | M | Massachusetts Bay | USA | Entanglement |
| 2018 | May | Javelin #1112 | M | Great South Channel | USA | Entanglement |
| 2018 | June | #4720 | U | Gulf of St. Lawrence | Canada | Entanglement |
| 2018 | July | Gully #4601 | F | off New Brunswick | Canada | Entanglement |
| 2018 | July | Dyad #4180 | F | Gulf of St. Lawrence | Canada | Entanglement |
| 2018 | September | Seamount #4457 | M | Gulf of St Lawrence | Canada | Entanglement |
| 2018 | November | Unidentified whale-2018 | U | Stellwagen Bank, MA | USA | Poor Body Condition |
| 2018 | November | Champagne #3904 | F | South of Nantucket, MA | USA | Entanglement |
| 2018 | November | Katz #1804 | M | Southern New England | USA | Poor Body Condition |
| 2019 | June | Twister #3510 | M | off Perce, Quebec | Canada | Entanglement |

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|------|-----------|-----------------------------------|---|--------------------------|--------|---------------------|
| 2019 | July | Lemur #3380 | M | Gulf of St Lawrence | Canada | Entanglement |
| 2019 | August | Zero #3908 | F | Bay of Fundy | Canada | Entanglement |
| 2019 | September | Freckles #4308 | F | Southern New England | USA | Entanglement |
| 2019 | December | #3466 | M | South of Nantucket, MA | USA | Entanglement |
| 2020 | January | Wavy Gravy #1627 | M | Southern New England | USA | Entanglement |
| 2020 | February | Aphrodite #1701 | F | off Provincetown, MA | USA | Entanglement |
| 2020 | February | Batman #1017 | M | Cape Cod Bay, MA | USA | Vessel Strike |
| 2020 | June | Manta #1507 | M | Gulf of St. Lawrence | Canada | Entanglement |
| 2020 | July | Agave #5001 (2020 Calf of #3101) | M | off New Brunswick | Canada | Unknown Injury |
| 2021 | March | El #1209 | F | Massachusetts Bay | USA | Vessel Strike |
| 2021 | April | Calvin #2223 | F | Massachusetts Bay | USA | Entanglement |
| 2021 | June | #3550 | M | Gulf of St Lawrence | Canada | Entanglement |
| 2021 | July | Katahdin #4633 | F | Gulf of St Lawrence | Canada | Entanglement |
| 2021 | September | Scarf #1429 | M | Gulf of St Lawrence | Canada | Entanglement |
| 2022 | January | #5201 (2022 Calf of #1301) | M | off Brunswick, GA | USA | Poor Body Condition |
| 2022 | May | Tux #3401 | M | Gulf of Maine | USA | Entanglement |
| 2022 | May | #5012 (2020 Calf of #1612) | M | off Georges Bank | USA | Vessel Strike |
| 2022 | June | Hyphen #2681 | M | Gulf of Maine | USA | Entanglement |
| 2022 | July | Sebastian #4650 | M | Gulf of St. Lawrence | Canada | Entanglement |
| 2022 | July | Burl #3579 | M | Gulf of St. Lawrence | Canada | Entanglement |
| 2022 | August | Mogul #3845 | M | Gulf of St. Lawrence | Canada | Entanglement |
| 2022 | August | Wall-E #5104 (2021 Calf of #3904) | M | Gulf of St. Lawrence | Canada | Entanglement |
| 2022 | December | Prickly Pear #4310 | F | off St. Augustine, FL | USA | Entanglement |
| 2022 | December | #5192 (2021 Calf of #3520) | M | off Southern New England | USA | Entanglement |
| 2023 | January | Nimbus #3812* | M | off Jekyll Island, GA | USA | Entanglement |
| 2023 | January | Coral #4980 | F | off Amelia Island, FL | USA | Unknown Injury |

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|------|-----------|--------------------------------|---|--------------------------|--------|---------------------|
| 2023 | February | #5290 (2022 Calf of #3220) | F | off Tybee Island, GA | USA | Vessel Strike |
| 2023 | March | Nymph #4020 | F | Cape Cod Bay, MA | USA | Vessel Strike |
| 2023 | March | #4080 | F | off Southern New England | USA | Entanglement |
| 2023 | March | #4145 | M | off Southern New England | USA | Entanglement |
| 2023 | March | Rill #4446 | M | off Southern New England | USA | Unknown Injury |
| 2023 | June | Echo #2642* | F | Gulf of St. Lawrence | Canada | Entanglement |
| 2023 | June | #5257 (2022 Calf of #3157) | M | Gulf of St Lawrence | Canada | Entanglement |
| 2023 | June | #5280 (2022 Calf of #4180) | F | Gulf of St. Lawrence | Canada | Entanglement |
| 2023 | July | Martini #4042* | M | Gulf of St. Lawrence | Canada | Entanglement |
| 2023 | July | #5046 (2020 Calf of #3546) | M | Gulf of St Lawrence | Canada | Unknown Injury |
| 2023 | July | Boomerang #2503 | F | Gulf of St. Lawrence | Canada | Entanglement |
| 2023 | August | #4605 | M | South of Nantucket, MA | USA | Entanglement |
| 2023 | September | #5253* (2022 Calf of #2753) | M | Gulf of St. Lawrence | Canada | Entanglement |
| 2024 | January | 2024 Calf of #1301 | F | Florida | USA | Poor Body Condition |
| 2024 | January | 2024 Calf of #3260 | F | North Carolina | USA | Poor Body Condition |
| 2024 | February | Atoll #4714 | F | Cape Cod Bay, MA | USA | Entanglement |
| 2024 | April | Kilo #4143 | M | off Block Island, RI | USA | Entanglement |
| 2024 | May | #4991 | F | Gulf of St. Lawrence | Canada | Entanglement |
| 2024 | May | #4130 | M | off New York | USA | Vessel Strike |
| 2024 | June | Unk | U | Gulf of St. Lawrence | Canada | Entanglement |
| 2024 | July | #4050 | F | off New York | USA | Vessel Strike |
| 2024 | August | Salem #3617 | M | Gulf of St. Lawrence | Canada | Poor Body Condition |
| 2024 | September | Chimineia #4040* | F | Gulf of St Lawrence | Canada | Entanglement |
| 2024 | October | #5196 | M | Bay of Fundy | Canada | Vessel Strike |
| 2024 | December | #4120 | F | South of Nantucket, MA | USA | Entanglement |
| 2024 | December | #5015 | M | Great South Channel | USA | Entanglement |

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North Atlantic Right Whales with Multiple Qualifying Injury Categories

Note: The animals listed below are already counted in the UME tally and included in the tables above based on the injury from the year in BOLD, which corresponds with the most severe category for their injury/illness (e.g., death, serious injury or morbidity).

The table highlights those whales that were confirmed to have experienced an injury that became more severe and changed categories, or had more than one injury since the UME began in 2017 that met the standards for inclusion in the UME as a morbidity, serious injury, or mortality.

| NARW ID | Sex | Year | Month | Dead/SI/Morbidity | COD/SI/Morbidity Category | Years/Months Between Most Recent Injuries |
|----------------------------|---------|-------------|------------------|-------------------|---------------------------|---|
| Quill #4091 | Female | 2018 | May | Morbidity | Entanglement | 1 year 6 months |
| | | 2020 | January | SI | Entanglement | |
| Cottontail #3920 | Male | 2020 | October | SI | Entanglement | 5 months |
| | | 2021 | February | Dead | Entanglement | |
| Hercules #4615 | Male | 2018 | July | Morbidity | Entanglement | 1 year |
| | | 2020 | July | Morbidity | Entanglement | |
| | | 2021 | July | SI | Entanglement | |
| Sundog #3823 | Female | 2018 | February | Morbidity | Entanglement | 2 years 3 months |
| | | 2022 | May | SI | Entanglement | |
| Snowcone #3560 | Female | 2021 | March | SI | Entanglement | 1 year 6 months |
| | | 2022 | September | SI | Entanglement | |
| Nimbus #3812 | Male | 2019 | July | Morbidity | Unknown Injury | 3 years 7 months |
| | | 2023 | January | Morbidity | Entanglement | |
| Bishop #4545 | Female | 2023 | February | SI | Entanglement | 4 months |
| | | 2023 | July | SI | Entanglement | |
| Echo #2642 | Female | 2017 | July | Morbidity | Entanglement | 5 years 11 months |
| | | 2023 | June | Morbidity | Entanglement | |
| Martini #4042 | Male | 2022 | May | Morbidity | Entanglement | 10 months |
| | | 2023 | July | Morbidity | Entanglement | |
| #5253 (2022 Calf of #2753) | Male | 2022 | August | Morbidity | Entanglement | 11 months |
| | | 2023 | September | Morbidity | Entanglement | |
| #5120 (2021 Calf of #3720) | Female | 2022 | August | SI | Entanglement | 1 year 5 months |
| | | 2024 | January | Dead | Entanglement | |
| 2024 Calf of #1612 | Unknown | 2024 | January | SI | Vessel Strike | 2 months |
| | | 2024 | March | Dead | Vessel Strike | |
| Shelagh #4510 | Female | 2017 | July | SI | Entanglement | 1 year 1 month |
| | | 2023 | April | Morbidity | Entanglement | |
| | | 2024 | May | SI | Entanglement | |

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|-----------------|--------|-------------|------------------|------------------|---------------------|-------------------|
| Dropcloth #1271 | Male | 2019 | July | Morbidity | Entanglement | 5 years |
| | | 2024 | July | SI | Entanglement | |
| Neptune #3301 | Male | 2019 | September | Morbidity | Entanglement | 4 years 11 months |
| | | 2024 | August | SI | Entanglement | |
| Chimineia #4040 | Female | 2023 | July | Morbidity | Unknown Injury | 10 months |
| | | 2024 | September | Morbidity | Entanglement | |