August 2021, Version 1.1

RIGHT WHALE MYTHS AND FACTS

By the Maine Coalition for North Atlantic Right Whales

Our Mission is:
"To Provide Accurate Information and Advocate for the Recovery of the North Atlantic right whale."

The Maine Coalition for North Atlantic Right Whales is made up of Maine scientists and educators. The Coalition provides the most accurate and up-to-date information available about North Atlantic right whales and the efforts to keep them from going extinct.

Today, there is a lot of misinformation or only partially accurate information being provided to the public about the right whale situation, especially as it pertains to activities in Maine waters.

The Coalition is attempting to set the record straight by publishing a Myth and Facts document. Each Myth is based on misinformation or incorrect information that has appeared about right whales. Below each Myth statement is a factual and accurate discussion about the problems with the myth. References are provided.

It is hoped that if all stakeholders involved in and affected by the efforts to save right whales from extinction have accurate information, then sound decisions can be supported that lead to the recovery of the North Atlantic right whale.

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Right Whale Myths

MYTH #1
There are No Right Whales in Waters Where Maine Lobstermen Fish

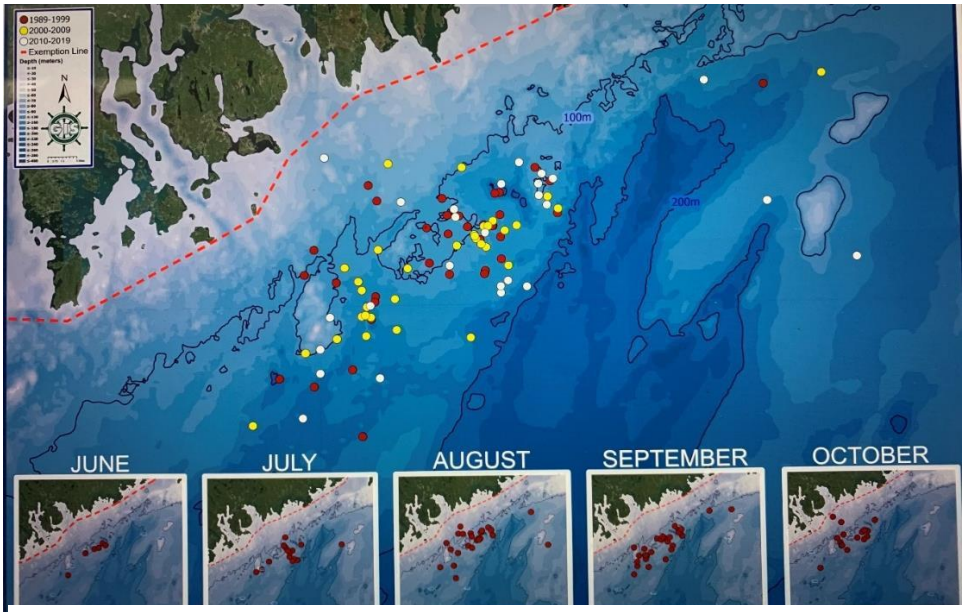
FACT:

Even though there are fewer than 400 North Atlantic right whales remaining, right whales have been observed every month of the year in waters in which Maine lobstermen fish.

MORE FACTS:

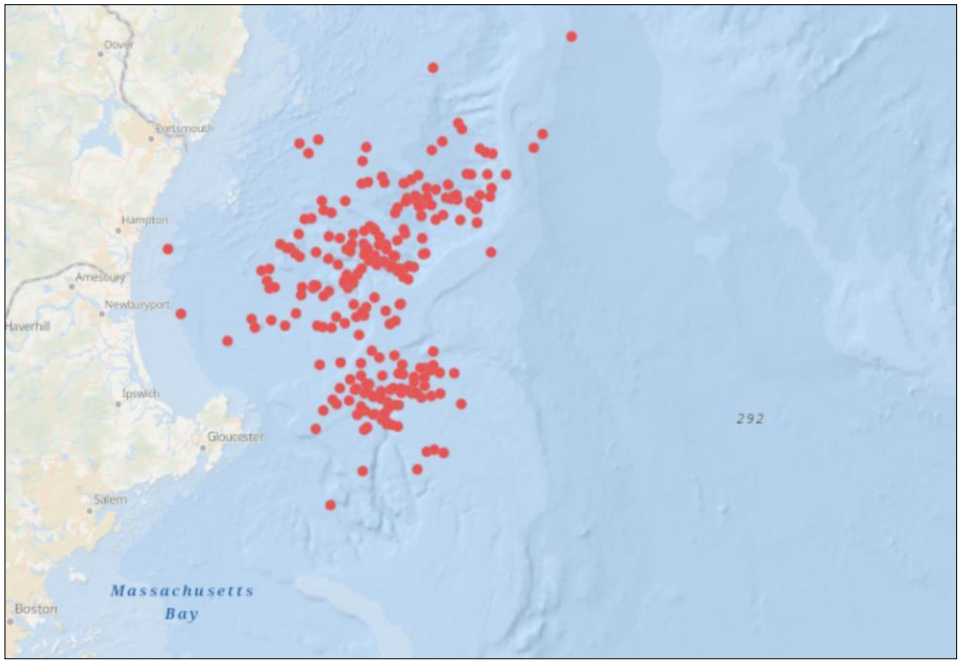
Data from Surveys
Determining the distribution of right whales for each month throughout a given year is not an easy undertaking. Aerial and vessel surveys and acoustic monitoring are the main tools available to keep track of right whales, along with opportunistic sightings from boaters and whale watch companies. Nonetheless, from these efforts, it has been documented that right whales have been observed every month of the year in waters where Maine lobstermen fish in the last decade.

Whale Watch Vessels
Over the past thirty years, right whales (between 1 and 7) have been sighted on over 100 whale watching tours leaving Bar Harbor. Also, Allied Whale scientists have observed right whales from the lighthouse on Mount Desert Rock since 1976, the latest as recently as 2017.



Right Whale Sighting Locations (1-7 animals) between 1989-2020 (no data for 1991), from Bar Harbor, Maine.

Right Whales have been sighted on many whale watching tours out to Jeffreys Ledge. Between 2003 and 2020, there were over 100 days when right whales were seen from whale watching tours, mostly during August and September.



Right Whale Sighting Locations from Whale Watching Tours between 2003 and 2020.

Other Opportunistic Sightings

Numerous other opportunistic sightings have been made all along the coast of Maine. Right whales have been observed close to Maine shores at least three times since 2018:

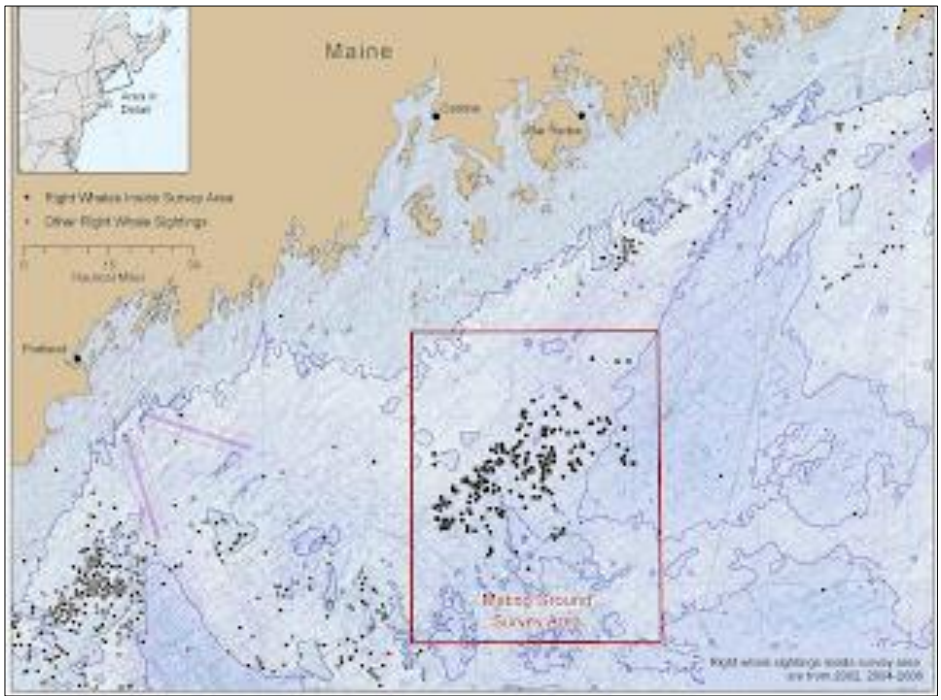
- In May 2018, two right whales were photographed less than a mile offshore, one off of York and the other off of Wells.[1]
- In 2020, a right whale was photographed off of Eastport, where an incoming ship had to alter course to go around it with pilot captain Bob Peacock at the helm.[2]
- In 2020, a video was taken of a right whale breaching in lower Blue Hill Bay, where thousands of lobster traps are fished.[3]

Since 2010, the distribution of right whales has shifted. The Bay of Fundy is not used as frequently by right whales as it once was, although they are still detected in this area. However, over nearly the same time period, the numbers of NARW identified in Cape Cod Bay, just about 70 nautical miles from Maine fishing grounds, has risen over 300% with nearly 200 individuals, more than 50% of the population, seen during late winter and spring in recent years.[4]

Historically, NOAA conducted numerous aerial surveys during the fall and winter months in Jordan Basin and around Cashes Ledge and Outer Fall. From this effort, 212 individual right

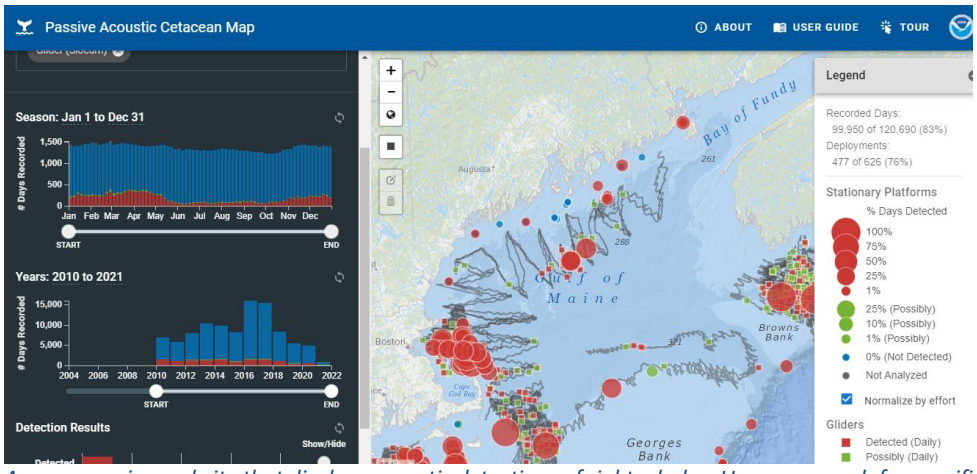
[1] https://www.pressherald.com/2018/05/15/photos-reveal-multiple-rare-right-whales-off-the-york-county-coast/
[2] Cross-Border Wanderings of a Young Whale - Center For Ocean Life (andersoncabotcenterforoceanlife.org)
[3] Video captures young whale breaching off Long Island - Mount Desert Islander (mdislander.com)
[4] https://coastalstudies.org/right-whale-research/field-notes

whales were identified in the central Gulf of Maine where Maine lobstermen fish between 2002-2008.



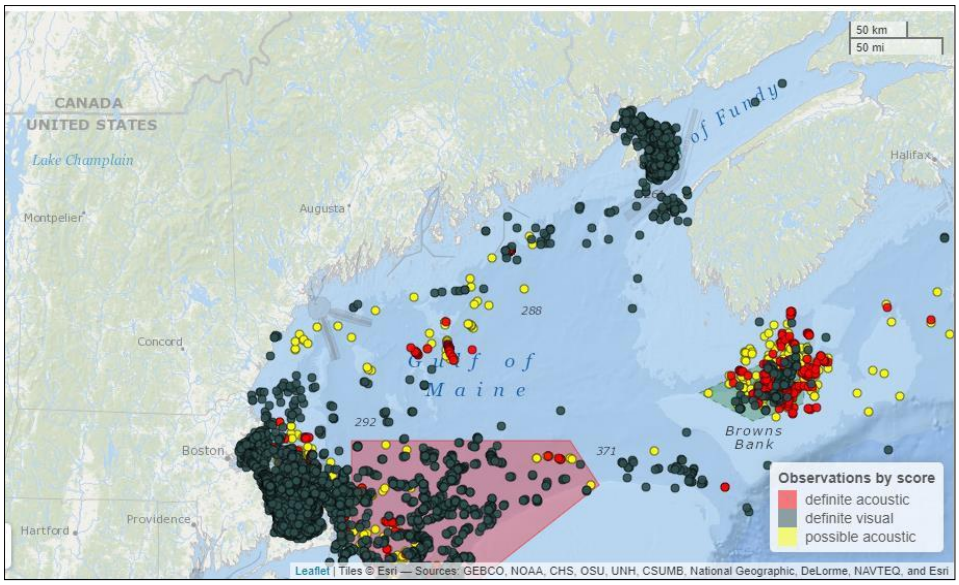
Aerial sightings of right whales in 2002-2008 in Jordan Basin, Gulf of Maine. © NOAA

Now, acoustic gliders and buoys are being used more, and right whales continue to be detected in the Gulf of Maine. In fact, recent buoys and gliders have recorded calls from right whales off Casco Bay, Monhegan Island, Milbridge, Great Duck Island, Lubec, the Schoodic Ridges, all around Mount Desert Rock and many calls from Outer Falls. These acoustic data collection tools are ongoing and valuable for furthering our understanding of right whale activity in waters that Maine lobstermen regularly use.[5]



A new mapping website that displays acoustic detections of right whales. User can search for specific years or seasons. This map is showing detections for 2010-present (Aug 2021).

[5] Passive Acoustic Cetacean Map | NOAA NEFSC



Right whale sightings in the Gulf of Maine from 2013 through 2020. Whale Map is another mapping tool that integrates sightings and acoustic detections. [6]

[6] https://whalemap.ocean.dal.ca/WhaleMap/

MYTH #2

The Decline in Right Whales is Mostly Due to Mortality in Canada

FACT:

It is true that entanglement and vessel strike mortalities have been documented recently in Canada with greater frequency, especially in recent years as right whales shifted into the Gulf of St. Lawrence, where no protective measures were initially in place. But there have also been vessel strike and entanglement mortalities in U.S. waters from 2012 to the present. The increasing death rate detected in 2017 prompted NOAA Fisheries to declare an Unusual Mortality Event (UME) for right whales[7]. As the UME website notes, since 2017, "The current total confirmed mortalities for the UME are 34 dead stranded whales (21 in Canada; 13 in the United States), and the leading category for the cause of death for this UME is 'human interaction,' specifically from entanglements or vessel strikes." The website also tracks serious injuries. Since 2017, it has documented 13 entanglement and 2 vessel strike serious injuries that could lead to death. The country of origin cannot always be determined, but it is known that entanglements and vessel strikes are occurring in both countries and that more needs to be done to protect this species.

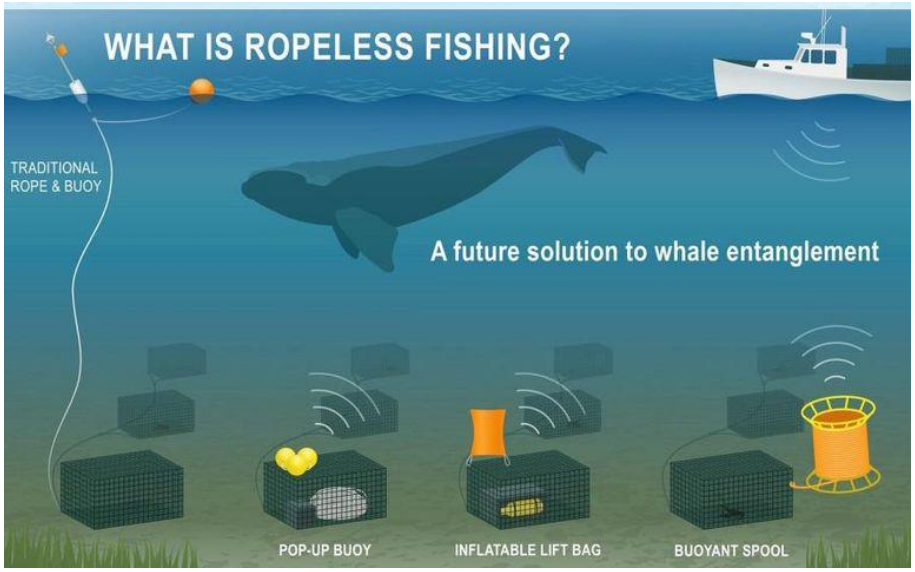
MORE FACTS:

Right whales are regularly entangled by U.S. fishing gear. NOAA Fisheries determined that right whale entanglement deaths have occurred equally in U.S. and Canadian waters (2018 Stock Assessment Report). Deaths in U.S. waters alone far exceed the Potential Biological Removal (PBR) of 0.8 individuals per year, and are reported at a documented average level of 2.2 individuals per year in U.S. waters[8]. A new study indicates that for every right whale death documented, there are 2.8 more deaths happening that are not observed. This equates to 6-7 right whales deaths per year in U.S. waters; the majority of these are from entanglement.[9]

[7] https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2021-north-atlantic-right-whale-unusual-mortality-event

[8] NOAA Proposed Rule 2020. Proposed Rule to Amend the Atlantic Large Whale Take Reduction Plan to Reduce Risk of Serious Injury and Mortality to North Atlantic Right Whales Caused by Entanglement in Northeast Crab and Lobster Trap/Pot Fisheries | NOAA Fisheries

[9] Pace et al 2021, https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/csp2.346



Ropeless fishing diagram, courtesy NEFSC.

U.S. Entanglements

NOAA Fisheries determined that of the right whale entanglements between 1997 and 2017 where the entangling gear was still attached to the whale and the location and type of gear could be established, the lobster fishery entangled 11 whales in waters off New England. Unfortunately, only a small percentage of entanglements can be traced back to their source. Most entanglement events result in scars only without any evidence of where the right whale interacted with the gear. From 1980 - 2018, a total of 1624 entanglement events have been documented, including 130 with attached gear remaining. Of those 130 cases with attached gear, only a small portion of those could be assigned to the country or region of occurrence.[10] Unless fishing gear includes geographic-specific markers that are detected, it remains difficult to assign entanglement cases to particular fisheries, but it is safe to assume that Canada is not to blame for *all* past or current entanglements and deaths. It is likely that entanglements are occurring in Maine waters as well as elsewhere along the U.S. coast.

Canadian Response to Entanglements

Since the catastrophic rise in right whale deaths in 2017, Canada has instituted strict protocols on ship speed and mandatory closures of fisheries when right whale presence is confirmed. Canada is actively researching weak rope and ropeless fishing with the help of Canadian fishermen. The Ministry of Fisheries said, "The North Atlantic right whale is endangered, but together we are working to change that. Since 2017, our government has introduced new measures to protect this species, and we are proud of the progress we have made in implementing them."[11] In addition to seasonal and temporary closures, snow crab fishermen are testing weak ropes and ropeless gear during the 2021 snow crab season.

[10] https://www.narwc.org/uploads/1/1/6/6/116623219/catalog_report-2020_-_final.pdf. See Task 2 and Task 3.

[11] https://www.newswire.ca/news-releases/government-of-canada-unveils-2020-north-atlantic-right-whale-protection-measures-833550886.html

U.S. Response to Entanglements

In the U.S., NOAA Fisheries is in the process of developing a new suite of regulations to protect right whales from entanglements. These measures will include additional closures, insertion of weak rope into a portion of the endlines, and reducing endline numbers by requiring fishermen to trawl up, i.e., add more pots to each trawl. There is also testing of ropeless gear occurring in the U.S. The Maine lobster fishing industry has expressed tremendous concern about these proposed regulations and believes it is government overreach, whereas conservation groups have indicated that the proposed rule is not strong enough. NOAA Fisheries will be publishing a Final Rule in the fall of 2021. As this Final Rule becomes reality, we encourage the Maine lobster fishing industry to expand testing of weak ropes and ropeless gear. This will ensure that this transition makes the fishery safer for all large whale species and gives them access to closed areas.

Figure 1. John Haviland, member of the South Shore Lobster Fishermen's Association, using 1700 pound weak sleeves for whale safer lobster. ©NEAQ

MYTH #3

Right Whales Do Not Get Entangled in Maine Fishing Gear

FACT:

Maine marine mammals, including right whales, get entangled in vertical lines rising to the surface from lobster and crab traps as well as gillnet gear. NOAA Fisheries has found that from 1997 to 2017, at least three right whales were entangled in Maine coastal lobster fisheries, and three more were caught in offshore lobster fisheries in the Gulf of Maine. Most entanglements cannot be traced to their place of origin yet in a letter from 18 concerned scientists to the Maine Delegation in 2019, they highlighted that "the number of North Atlantic right whales in Maine waters, the number of entanglements that are occurring in Maine waters, and the severity of all entanglements and their effects upon the right whale population are all significantly underestimated."[12]

MORE FACTS:

The number of vertical lines in Maine is very high. The scientists, in their letter, also state, "Combined, high lobster trap density and simultaneous whale occurrence will lead to entanglements in any part of the ocean. Right whales are demonstrably occurring in Maine lobster fishing zones, and 87 percent of the U.S. Atlantic lobster fishery falls within Maine waters—representing about 3 million licensed traps and approximately 400,000 vertical lines. Every single vertical line poses an entanglement risk." These standing lines create an underwater forest of hazards. There are over 1,000 Maine lobster fishermen that have federal fishing licenses and much of their fishing takes place in offshore waters where right whales live and feed.

In the 2019 letter referenced above, scientists said that "The high lobster trap counts, the historic lax gear-marking scheme and problems with both recovering and identifying fishing gear of any kind combine to significantly ***underestimate*** numbers of entanglement events in Maine waters." The bottom line is that despite the fact that most entanglements cannot be traced back to where they occurred, the evidence is clear that right whales are at risk of entanglement in Maine waters.

[12] Kraus, et. al. 2019. Letter to Maine Congressional Delegation and NOAA officials, September 17, 2019. A copy of this letter is linked here: https://www.nrdc.org/sites/default/files/media-uploads/scientist_letter_on_right_whales_and_lobster_gear_risk_in_maine.pdf

MYTH #4
Most Right Whale Deaths are Caused by Cruise Ships

FACT:

It is a fact that most right whale deaths are caused by entanglement in fishing gear.[13] [14] Right whales have also died from vessel strikes in both the U.S. and Canada but there has been no scientific proof that shows that cruise ships are killing right whales more than any other vessel type along the eastern seaboard.[15] All vessel types can kill right whales and other large whale species. Right whales swim slowly, about 3-4 knots, and sometimes feed at or near the surface. If vessels travel at 10 knots or less, there is a better chance a right whale can avoid serious injury or death, but at higher speeds, they are vulnerable.

MORE FACTS:

The most recent documented vessel strike death was in February 2021. A two-month-old male calf died from an accidental strike in the calving grounds off Florida. The calf was hit by a 54-foot sport fishing vessel that was going 17 knots. The calf's mother, a known female named Infinity, was also injured.

In 2008, NOAA Fisheries implemented a Right Whale Ship Strike Reduction Rule, ie the Speed Rule.[16] The rule required vessels over 65 feet in length to travel at a speed of 10 knots or less in designated areas and at designated times along the eastern seaboard. Implementation of that rule lowered the number of vessel strikes in the protected areas. Vessel strikes, however, continued to happen in other areas and sometimes involving vessels under 65 feet. Healthy right whales killed by a vessel strike tend to float because of their blubber mass, while entangled right whales can become malnourished and are likely to sink upon death. Because of this, it is estimated that only about 25% of the entanglement deaths are actually documented, while a higher percentage of deaths due to vessel strike are likely known.

The latest data indicate that right whales are being hit by vessels of all sizes and in places not protected under the 2008 Speed Rule. The Speed Rule needs to be amended to include vessels smaller than 65 feet and to expand the areas protected. All vessels should be required to go 10 knots or less in areas where right whales are present or suspected of being present.

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[13] Sharp, Sarah, et. al. 2019. Gross and histopathologic diagnoses from North Atlantic right whale Eubalaena glacialis mortalities between 2003 and 2018. Diseases of Aquatic Organisms. https://doi.org/10.3354/dao03376.
[14] Pace, Richard, et al. 2021. Cryptic mortality of Noth Atlantic Right Whales. Conservation Science and Practice 3:e346. https://doi.org/10.1111/csp2.346
[15] https://www.mdislander.com/opinions/letters-to-the-editor/to-the-editor-right-whale-population-is-not-fine
[16] Compliance Guide for Right Whale Ship Strike Reduction Rule (noaa.gov)

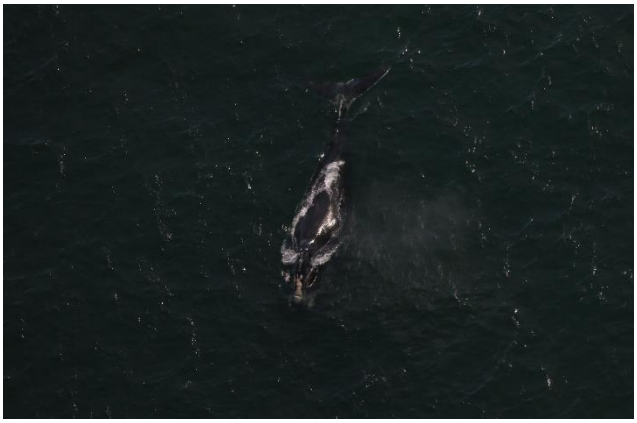
MYTH #5
Calling Right Whales "Critically Endangered" is Propaganda to Hurt the Lobster Industry

FACT:

The North Atlantic right whale was listed as Endangered in 1973 under the U.S. Endangered Species Act. They were recently reclassified as "Critically Endangered" [17] on the IUCN Red List. The International Union for Conservation of Nature (IUCN) stated that there might be only 250 or fewer mature animals in the right whale population. Especially concerning is the small number of mature females, probably only 80. The species is at very high risk of functional extinction within several decades if new protections are not implemented.

MORE FACTS:

The situation is dire for right whales, and the designation of "critically endangered" is not taken lightly or intended to cause malice. IUCN noted that of 30 confirmed human-caused deaths or serious injuries of North Atlantic right whales between 2012 and 2016, 26 were due to entanglement. Even for those whales that survive, the trauma and injuries from entanglement have long-lasting effects on health. One result is that females are taking longer to calve. Instead of a normal 3-year schedule, they are now only reproducing every 6-10 years, which also contributes to the species' decline. In addition, a new study indicates that entangled right whales and calves of entangled right whales are not growing as big as right whales born 40 years ago[18].



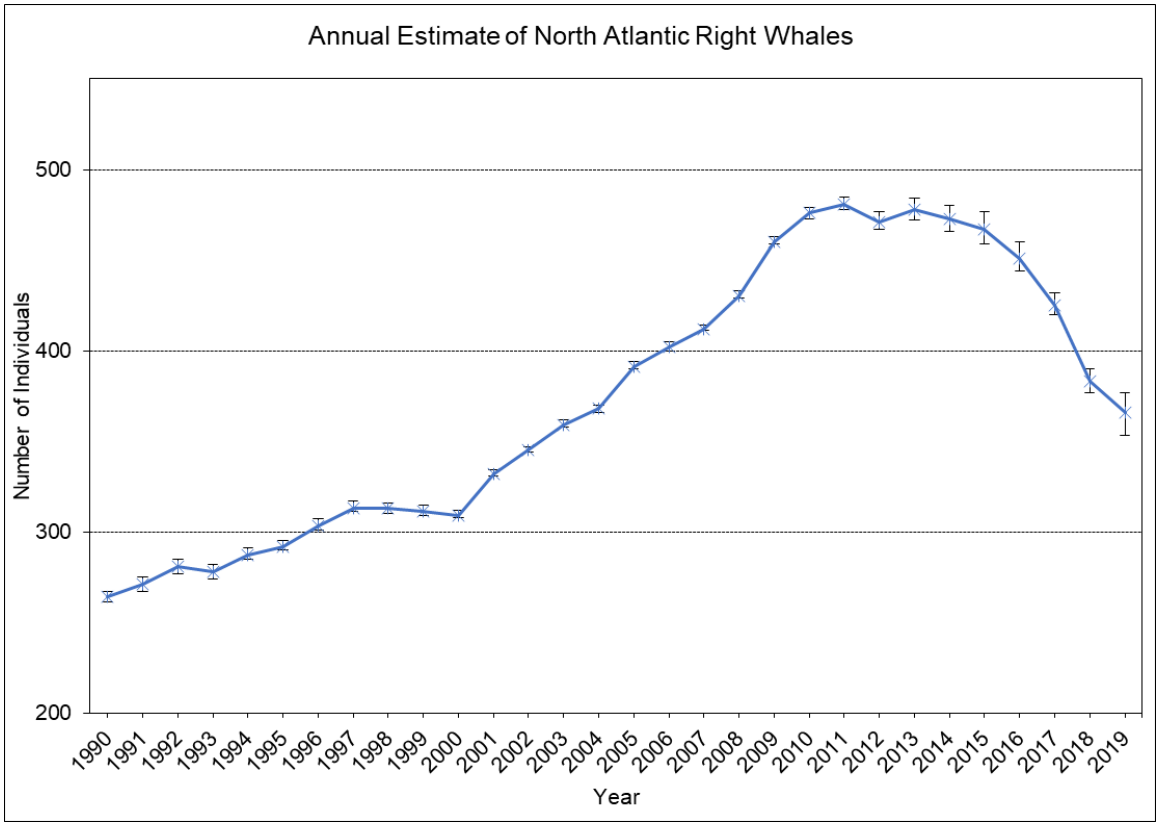
North Atlantic right whale Cottontail, seen from above with gear trailing from his mouth. © Center for Coastal Studies.

In the 40 years that right whales have been studied, nearly 100,000 photographed sightings of them have been collected throughout their range. They are likely the best-studied whale species in the world. These photos are used to look for evidence of entanglement in fishing gear based on wrapping scars or attached rope. Scientists have documented 1,624 entanglement events from 1980-2018 involving 87% of the known population.[19] Of those whales, 60% have been entangled more than once, and about 8% are connected to dead whales or those that are dying from entanglement. Scientists recently looked at all the necropsies between 2003 and 2018 (45 conducted) and 58% of these were due to

[17] Cooke, J.G. 2020. Eubalaena glacialis (errata version published in 2020). The IUCN Red List of Threatened Species 2020: e.T41712A178589687. https://dx.doi.org/10.2305/IUCN.UK.2020-2.RLTS.T41712A178589687.en.
[18] Stewart, et. al. 2021. Decreasing body lengths in North Atlantic right whales. Current Biology 31:14, 3174-3179. https://doi.org/10.1016/j.cub.2021.04.067
[19] https://www.narwc.org/uploads/1/1/6/6/116623219/catalog_report-2020_-_final.pdf. See Task 2 and Task 3.

entanglement.[20] The fact is that right whales are at a high risk of being entangled off Maine because of the hundreds of thousands of vertical lines that are set in waters extending out 50 miles from shore. These are waters of co-occurrence where fishing gear is present and right whales search for food, feed and live.

On October 20, 2020 an aerial survey team flying south of Nantucket discovered "Cottontail", an 11-year-old male right whale with line over his head, exiting both sides of his mouth, and extending beyond his tail for about three to four body lengths. The Center for Coastal Studies removed some gear from the whale, but he then disappeared for many months. In mid-February 2021, Cottontail was seen swimming off the coast of Florida where researchers determined he was severely emaciated and clearly in distress. Unfortunately, he was not able to be disentangled and sadly, Cottontail was found dead on February 28, 15 miles off the coast of Myrtle Beach, South Carolina.[21] The pain and suffering that whales like Cottontail must experience is hard to imagine. No animal deserves to die a slow painful death and full of fear. Right whales are critically endangered due to human activities and we must remember that this is a profound humane and moral issue that can be prevented.



Right Whale Population Status, 1990-2019, using methods described in Pace et al. 2017.[22] (see North Atlantic Right Whale Consortium's 2020 report card for details).[23]

[20] Sharp, Sarah, et. al. 2019. Gross and histopathologic diagnoses from North Atlantic right whale Eubalaena glacialis mortalities between 2003 and 2018. Diseases of Aquatic Organisms. https://doi.org/10.3354/dao03376

[21] https://www.fisheries.noaa.gov/feature-story/adult-north-atlantic-right-whale-found-dead-south-carolina

[22] Pace et al. 2017. https://onlinelibrary.wiley.com/doi/full/10.1002/ece3.3406

[23] North Atlantic Right Whale Consortium, 2020 Annual Report Card. https://www.narwc.org/report-cards.html