

RIGHT WHALE NEWS

*An independent forum for right whale conservation and recovery,
published quarterly each year.*

Volume 26 Number 2

July 2018

As of 23 July 2018, the number of calves born into the population this year stands at zero. On the other hand, there has been just a single known mortality. While there is expressed concern about a decreasing population and perhaps species extinction, a review of the efforts and results described in this issue may provide hope for an alternative view. This, and considering the history of this population with a rollercoaster of highs and lows, combined with unknowns and perhaps some resilience, gives cause to hope—hope for emerging good news and a rebound in the coming year. If and when a rebound does occur, it may not look familiar—the pendulum swings, change is with us. (Ed.)

Cape Cod Bay 2018: 250 Individuals

Contributed by Charles “Stormy” Mayo, Center for Coastal Studies

Just when we think we understand what right whales are up to, how they make a living, where they aggregate, and how many there are, they surprise us. These surprises have been obvious during the last decade, and were amplified during the 2018 winter season in Cape Cod Bay (CCB). In 2018, as in every year since 1984, our work at the Center for Coastal Studies (CCS) was concentrated in the heart of winter, the season when right whales feed deep in the Bay, in areas that vary at different time-scales. Supported by the Massachusetts Division of Marine Fisheries and the National Oceanic and Atmospheric Administration (NOAA), in January 2018, we began our aerial survey, although, as in the recent past, shore sightings suggested that right whales were in our waters in numbers as early as late November. The CCS aerial survey team headed by Amy James (flight coordinator), Brigid McKenna (individual ID manager), and Alison Ogilvie (aerial survey observer) documented 13 right whales in the Bay on the first 2018 flight, on 16 January, and thereafter reported right whales on all CCB flights until 14 May. The maximum number of whales observed in the Bay on one day in 2018 was recorded on 27 April, 137 individuals. While a high number of rare whales (137) in such a small embayment is only the fourth highest total we’ve recorded during the study, in 2016 we documented 198 individuals

on a one-day survey confined to the Bay. As of this publication, we have identified 249 individual right whales in the Bay or nearby in 2018, and suspect that a number yet to be matched to the catalog will bring the total to well over 250, more than half of the estimated population.

As in all of the 34 years of the study, according to Christy Hudak (vessel survey manager), the first whales seen in January and February were on long diving patterns, apparently feeding very close to the bottom on dense layers of the copepod *Pseudocalanus* sp. The early-season deep-diving behavior continued until early March when gradual changes in the distribution of zooplankton brought the feeding whales closer to the surface. From late March through mid-May, the observed behavior was dominated by surface or near-surface skimming, first on *Pseudocalanus* and then later on *Calanus* hyper-dense patches (sometimes exceeding densities of 10^6 organisms/m³).

During the first 25 years of our study, the patterns of whale activity in CCB seemed stable over a season spanning late January through late April, when yearly around 25% of the estimated population was foraging along the eastern shore of the bay. Then, in 2010, the numbers of individual whales documented yearly began to increase faster than the numbers estimated alive by the North Atlantic Right Whale Catalog team at New England Aquarium. That rising trend has continued. Since 2010 the increasing proportion of the North Atlantic population using CCB, the lengthening of the whales' residency season from three months to more than five, and changes in the areas of aggregation from the eastern side of the Bay to the western, suggest that the whales are responding to a changing environment. Although the activities of the whales, including the period of residency, and the increasing proportion of the population coming to the bay, are likely related to the long season of dense zooplankton patch formation. The underlying biological and physical processes that cause the enrichment of the Bay and the southern Gulf of Maine remain unclear.

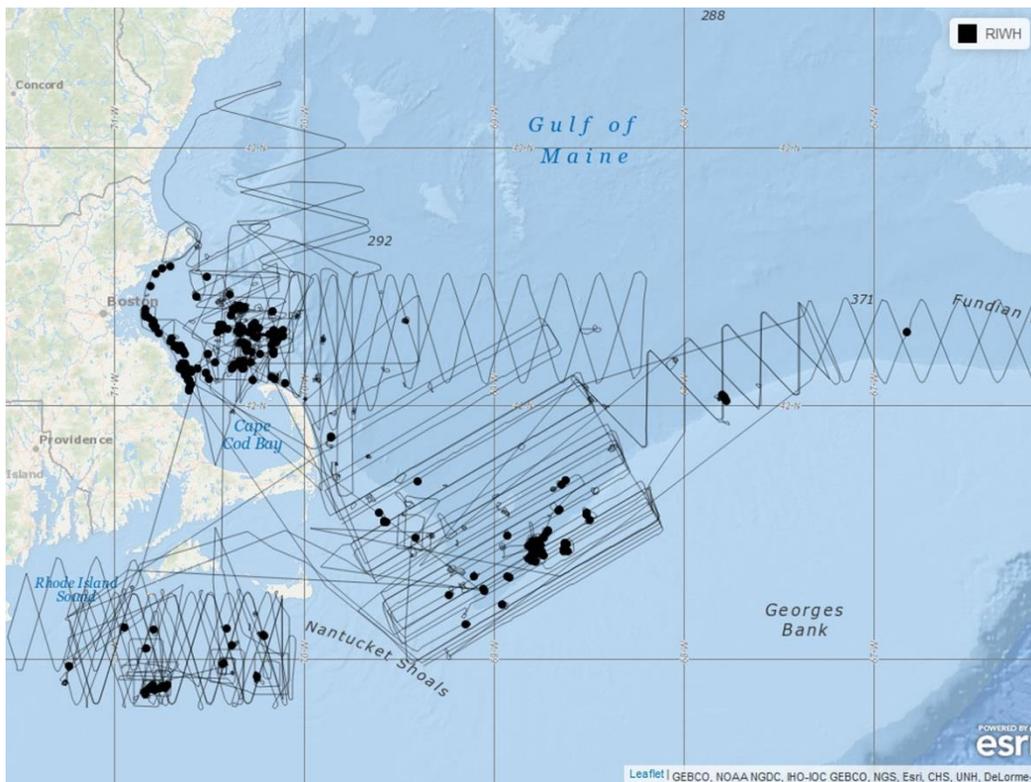
Our recent work has identified the individuals of the North Atlantic population that preferentially choose to come to CCB, so in 2018, it was not a surprise that several of the regular yearly visitors to the Bay were again back for a long residency. These included Catalog #3946 (adult female); seen repeatedly throughout the season; #3546/*Halo* (adult female); #3823 (adult female); #1817/*Silt* (adult female); #1708 (adult male); and #1711 (adult female).

Although Cape Cod Bay is a regular early-spring nursing area for mother/calf pairs, the troubling lack of calves in 2018 as reported by the Southeast U.S. surveys was, unfortunately, reflected in our observations of no new nursing calves in the Bay.

Northeast Fisheries Science Center Report: 181 Individuals

Contributed by Tim Cole and Leah Crowe, Northeast Fisheries Science Center

The Northeast Fisheries Science Center (NEFSC) aerial survey team, in the NOAA Twin Otter, flew 150 hours during 30 flights in U.S. waters from 20 March to 30 May. We had 269 right whale "sightings" and photographed 183 of those sightings. Allison Henry reported, "So far we have 181 unique individuals for our U.S. surveys. Additional individuals may emerge as photographs from a few remaining flights are examined."



Survey tracks and right whale sightings (black dots) for the NOAA/NEFSC Aerial Spring Survey 2018. Preliminary data indicate at least 181 individuals, but additional individuals may be identified as photo analysis proceeds. (Graphic: L. Crowe, NEFSC)

The NEFSC aerial survey team moved up to Moncton, New Brunswick, on 1 June, to assist with the Canadian surveys, and will be there through August as funding allows. So far we have flown 46 hours over eight surveys. Preliminary matching has identified more than 146 unique individuals photographed so far in the Gulf of St Lawrence. Alison Ogilvie, CCS observer, is flying with us, and has recognized many individuals she saw earlier this year in Cape Cod Bay.

Wind Area Surveys Underway

Including contributions by Catherine Williams, Massachusetts Clean Energy Center

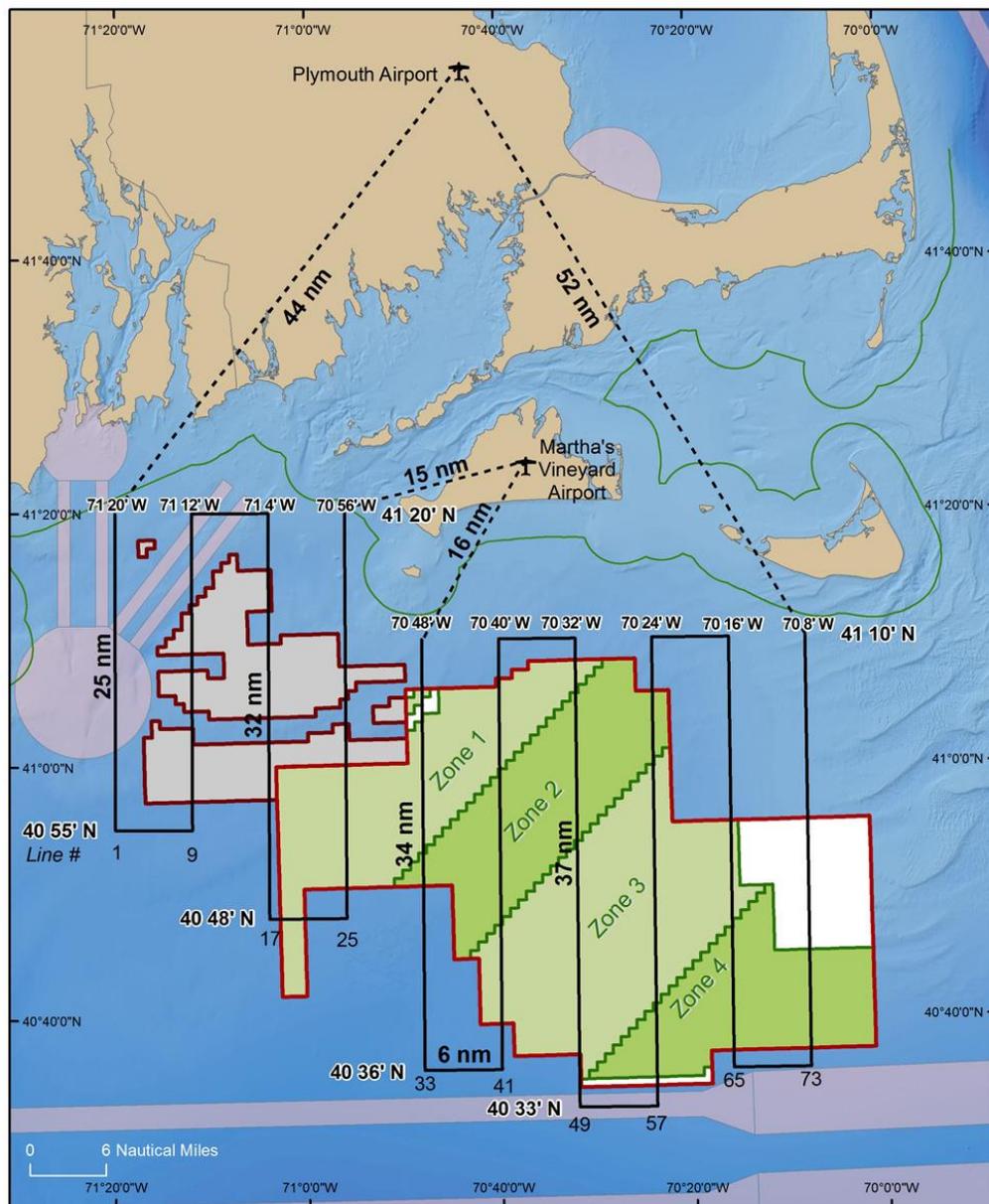
An additional source of current right whale and environmental data is underway south of Martha's Vineyard. The Massachusetts Clean Energy Center (MassCEC) in partnership with the Bureau of Ocean Energy Management (BOEM), is sponsoring a multi-year survey effort to assess the distributions and abundances of North Atlantic right whales and other large whales and sea turtles in the Massachusetts and Rhode Island/Massachusetts Wind Energy Areas (see graphic next page). The New England Aquarium (NEAQ) is conducting aerial line-transect surveys using a mix of observer sightings and automated aerial photography. The Woods Hole Oceanographic Institution (WHOI) is conducting simultaneous oceanographic surveys in the winter and spring to assess the physical and biological characteristics of the waters around the right whale distribution. A fourth year of surveys was conducted between February 2017 and July 2018, and the fifth survey campaign will begin in August 2018 and continue until July 2019. These survey activities provide critical data required by federal agencies to assess and permit future offshore wind energy development in the Wind Energy Areas, and will increase understanding of the seasonality, numbers, and distribution of right whales in addition to the underlying causes for that seasonal occurrence.

Bill White, Senior Director for offshore wind at MassCEC, describes that the studies began in 2011, prior to any developer leasing. "We didn't want to wait until 2015 when leasing was scheduled to begin. A decision was made to move forward as a state, and begin gathering information that would likely expedite the federal permitting process." Likewise, added Tyler Studds, Senior Manager for offshore wind development, "The surveys are not specific to any one lease, but rather include all the wind energy planning areas; they are designed to encompass the area, rather than be designed for any one lease holder."

As part of the ongoing process, on 30 and 31 May, MassCEC, the Massachusetts Executive Office of Energy and Environmental Affairs, BOEM, and the NEAQ, convened a workshop that included marine scientists, environmental NGOs, regulators, public stakeholders and offshore wind leaseholders in order to develop a scientific research framework that will guide the long-term study of potential impacts to endangered whales and sea turtles associated with offshore wind facility construction and operation in the Northeast.

The research framework will address potential impacts to marine mammals and sea turtles associated with offshore wind facility construction and operation at a regional scale over multiple years. As described above, it is not intended to directly address construction and operation plans designed to mitigate potential impacts associated with short-term construction activities at the project-specific scale. Instead, the research framework will address the assessment of short-term,

long-term, and potential population-level impacts on distribution, abundance, behavior, or demography of endangered marine mammals and sea turtles. The Framework will be developed with a focus on assessing potential impacts to endangered whales and sea turtles associated with offshore wind facility construction and operation within the Massachusetts and Rhode/Island Massachusetts Wind Energy Areas. It is anticipated that application of the Framework will be subsequently extended to address offshore wind development along the Atlantic coast.



The aerial survey plan for the Rhode Island/Massachusetts wind-area studies. The flights are conducted by the New England Aquarium, Ester Quintana, Chief Scientist of Marine Mammal Surveys; survey platform is a Cessna Skymaster. Surveys are planned to be ongoing through July 2019.

The reports of past studies can be found at MassCeC.com, under Emerging Initiatives, then Offshore Wind Initiatives, and then Environmental Characterization. Proceedings of the May 2018 workshop, the Framework document, and current and future study results will also be posted at this location.

Canadian Summary: A Toolbox Approach

When a single right whale was reported on 16 June 2018 east of Grand Manan in the Bay of Fundy, the Canadian government moved quickly to issue a temporary fisheries closure. The closure affected lobster, crab, groundfish, herring, and mackerel licenses. Lawrence Cook, chairman of the Grand Manan Fisherman’s Association lobster advisory board, described that about 40 boats, roughly a third of the Grand Manan fleet, would be impacted. Also in June, Roseway Basin was closed for 15 days when a whale was sighted there.

Similar closures have taken place to the north, in the Gulf of St. Lawrence. In a proactive measure, the Canadian government declared an early end to the snow-crab fishery, requiring that traps be removed from the water by 30 June, two weeks earlier than usual. The hope was that gear would be out of the water before whales began appearing in the area. In addition, vessels greater than 20 meters in length are required to slow to a maximum of 10 knots when traveling in the Gulf.

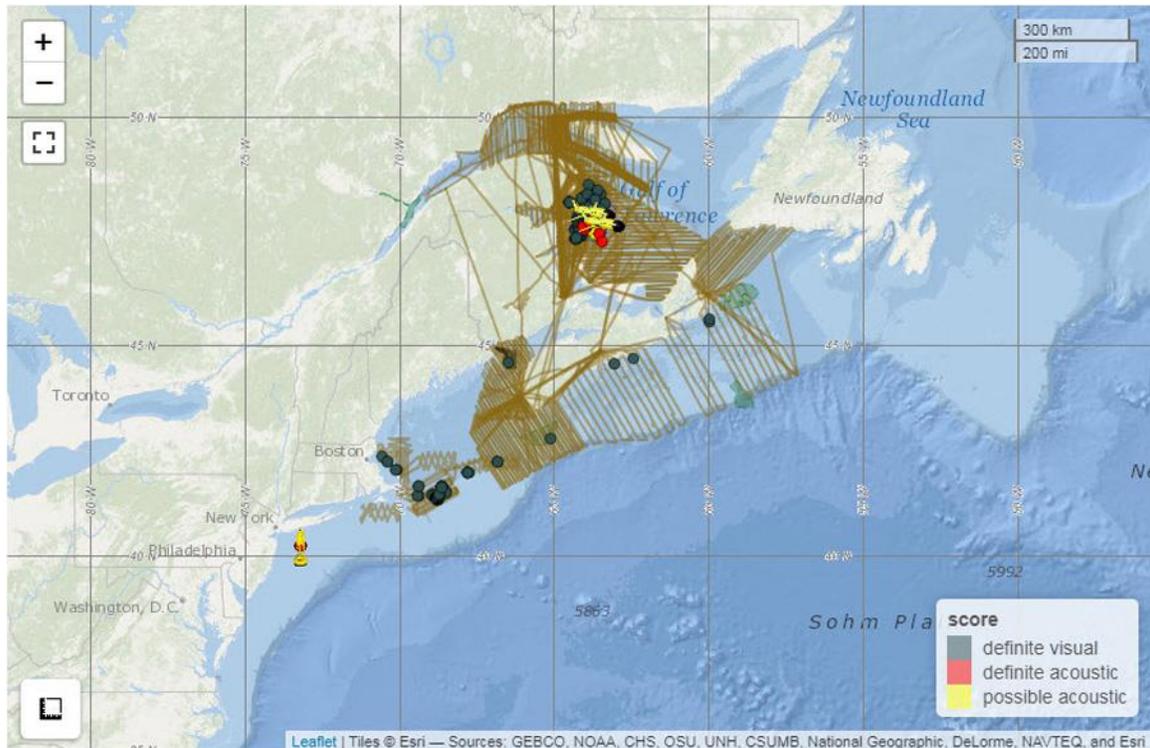
Also in the Gulf of St. Lawrence, on 20 May, two right whales were sighted. Subsequently the Department of Fisheries and Oceans closed lobster fishing areas in the Gulf as of 30 May. The “static closure” was implemented off the northern coast of New Brunswick—two days before the season began and for its duration, until 30 June. The closure area is where 90 per cent of the right whales were observed last summer. The “dynamic closures” (as described above) in other areas will be imposed wherever a right whale is spotted this season, and the area around will be closed for 15 days. Those closures would be lifted once two consecutive aerial surveys confirm that the whales have departed the area.

Carl Allen, Maritime Fishermen’s Union, describes that 25 percent of the overall harvest normally comes out of the closed grids. “There is frustration and unease among the fishermen, as government decisions made in Ottawa have not been inclusive of the fishing community. We want to protect them as much as anybody, and after the events of last summer, the industry [can be part of identifying solutions].”

Kim Davies, a whale researcher at Dalhousie University, notes that right whales have returned to the same area where they have been sighted in previous years, giving a boost to conservation

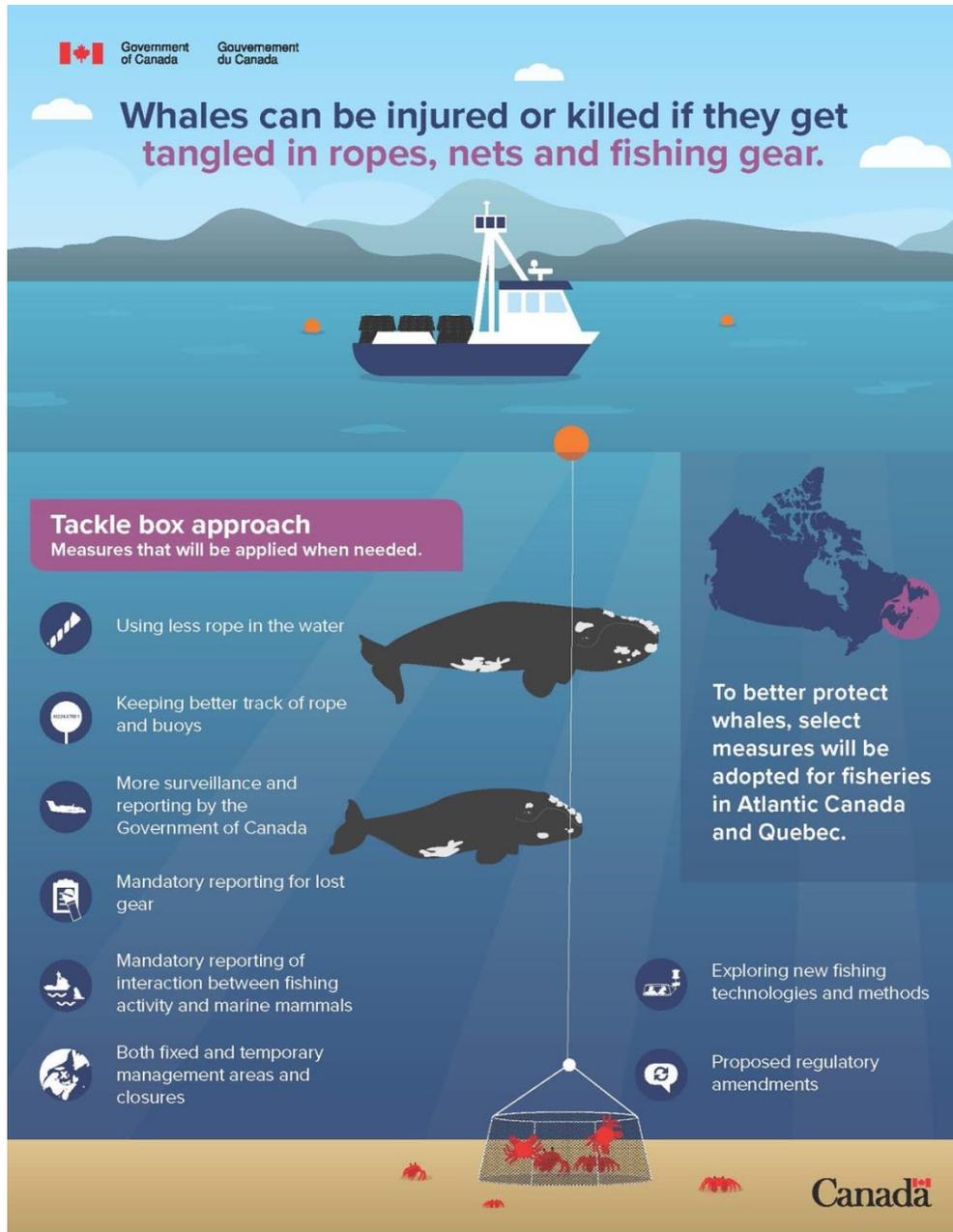
efforts. The closed areas were effective because the government managers were able to anticipate the habitat the whales would be occupying.

A large survey and monitoring effort is underway in Canadian waters. Both Canadian and U.S. platforms and researchers are involved. An impression of the survey effort and sightings to date in 2018 is provided by the plot below. The surveillance efforts will help inform decisions on measures specific to shipping and fishing industries to help protect North Atlantic right whales.



Summary of survey effort and right whale sightings, 2 May through 12 July 2018. Participants in the effort include: DFO Quebec, Gulf, Newfoundland, and Maritimes regions; Transport Canada; NMFS Protected Species Branch; Woods Hole Oceanographic Institution / robots4whales; New England Aquarium; Canadian Whale Institute; Mingan Island Cetacean Study; Ocean Tracking Network; and Dalhousie University / MEOPAR-WHaLE Project. (Graphic from whalemap.ocean.dal.ca/WhaleMap.)

Closures are one of several measures that the government can impose on the conditions of a license. There are many others (*e.g.*, quota limit, gear marking, line-length restrictions, and mandatory reporting of lost gear and whale sightings). In addition, Federal Fisheries Minister Dominic LeBlanc announced a mandatory speed restriction in shipping lanes from 28 April to 15 November 2018 to reduce ship strikes. Lastly, new regulations for whale watching went into effect on 11 July. The combination of measures is referred to as a “tackle box” approach by the Canadian government (see graphic next page).



A poster describing Canada's tackle box approach. A combination of measures is aimed at reducing human impacts on North Atlantic right whales while they are in Canadian waters.

The totality of the increased level of activity in Canada is a result of the 12 right whale mortalities in the Gulf of St Lawrence area from June through September 2017.

Sources: Canadian Broadcasting Company News; Kim Davies, Dalhousie University; Laurie Murison, Grand Manan Whale Museum; and www.dfo-mpo.gc.ca.

A Mortality off Virginia

On 22 January 2018, a right whale carcass was reported off the coast of Virginia. The whale was towed ashore and a necropsy performed. The whale was a juvenile female, Catalog #3893, and approximately 39 ft. (18.4 m) in length. A 10-year-old, she was last seen in the Gulf of St. Lawrence on 29 July 2017. Chronic entanglement was given as the preliminary cause of death. Previously, her mother, Catalog #3293, *Porcia*, had lost another calf due to entanglement. On 19 December 2012, *Porcia*'s 2011 calf, Catalog #4193, a 2-year-old male, came ashore just south of Marineland, Florida—entangled.

Right Whales, Right Gear: Avoiding Whale Entanglements While Keeping Fisheries Successful

Contributed by Emily Greenhalgh, New England Aquarium

Fishing is a vital part of the New England economy and is an important aspect of the region's cultural heritage. At the same time, North Atlantic right whales are an iconic and critical component of the region's coastal ecosystem. Where these two meet, entanglements occur. Whales become wrapped in buoy ropes used to locate and haul pots resting on the seafloor. These entanglements are costly and upsetting to fishermen, and can be deadly for the endangered whales.

How large is the entanglement issue? Today, there are fewer than 450 North Atlantic right whales. Eighty-two percent of those whales bear the scars indicative of entanglement in fishing gear. Entanglements now surpass ship strikes as the main threat to right whales, according to Dr. Tim Werner, Senior Scientist at the New England Aquarium's Anderson Cabot Center for Ocean Life and Director of the Consortium for Wildlife Bycatch Reduction.



On 19 June 2018, Werner moderated a panel that brought together fishermen and scientists to discuss methods to avoid the entanglement of endangered right whales. Panel members included: (L to R) Amy Knowlton, Senior Scientist at the Anderson Cabot Center for Ocean Life; Dr. Laurens Howle of Duke University; Tim Werner, convener; John Haviland, President of the South Shore Lobster Fishermen's Association; and Kristan Porter, President of the Maine Lobstermen's Association. This workshop is

another example of fishermen and research scientists working collaboratively to save whales and pot fisheries alike.

“What do you call a lobsterman who can't lobster? A problem solver,” said Haviland, who with other members of the industry has been collaborating with scientists at the Anderson Cabot Center for Ocean Life to find courses of action to minimize entanglements. Haviland and Porter highlighted New England fishermen’s whale-protection efforts, including seasonal closures and, in many areas, the use of sinking groundlines—ropes that connect strings of multiple traps together.

Despite these regulated changes, the problem persists. Right whale deaths now outnumber births, and the remaining population is moving dangerously close to extinction.

According to Knowlton, researchers are seeing a higher rate of moderate to severe entanglements since the mid-1990s. That timeline aligns with the fishing industry’s switch to stronger, polymer rope. What makes an entanglement “high-risk”? Multiple attachment points, long lengths of trailing rope, and other factors help scientists make that distinction.

In collaboration with engineers, fishermen, scientists, and fisheries managers in the U.S. and Canada, Anderson Cabot Center researchers are working on two promising options to minimize entanglements: reduced-breaking strength ropes that are strong enough for fishing but weak enough to allow whales to free themselves and ropeless traps that would eliminate entanglements altogether as they keep ropes out of the water column and out of harm’s way until hauled to the surface.

However promising, new technologies can face challenges in real-world implementation. Ropeless fishing is an “interesting technology, but all technologies don’t work in all fisheries,” said Porter. Porter, who traveled with Werner to Australia to observe a ropeless fishery in action, said he was skeptical the technology could work wide-scale in New England waters.

For Howle, Associate Professor of mechanical engineering and materials science at Duke University, insight is the key to prevention. He has worked with Anderson Cabot Center researchers to develop a computer model that shows how right whales end up entangled in fishing gear. Howle says that knowing how whales become entangled can help scientists determine how to modify gear to prevent harm to right whales and other marine animals.

The conclusion of the panel was clear: the only way to save right whales is to work together.

Legislation Filed: Will Grant Program Be Realized?

On 7 June 2018, Senator Cory Booker, D-NJ, and several other U.S. senators filed the SAVE Right Whales Act. The legislation would allocate \$5M annually in grants for conservation programs and the development of new technology or other methods to mitigate effects from fishing gear entanglements and ship collisions. The bill has been referred to the Senate Commerce committee.

On the House side, U.S. representative William Keating, D-Mass, introduced a similar bill on 7 June. The language in the House and Senate bill is said to be identical.

The intent of the bills seems clear. The aim is to provide a constant funding stream for conservation of right whales—primarily for the non-Federal government sector of the right whale community. The eligible applicants for future submittal of proposals are relevant State and tribal agencies, research institutions, and nonprofit organizations with required expertise. The language suggests that while the proposed funding is for non-Federal investigators and groups, a Federal agency may be a partner or collaborator. The priority is to reduce the lethal and sub-lethal effects of human activities on North Atlantic right whales, with emphasis on cooperative projects that include fishing and shipping sector participants.

There is also language on Federal monetary accountability, where for fiscal year 2020 and each fiscal year thereafter, an interagency budget shall be provided that describes the appropriations and expenditures for the preceding fiscal year, and expenditure estimates for the current fiscal year. Lastly, the bill limits to 5 percent the administrative expenses of the federal agency.

There is perhaps a large caveat in the bill's language: the phrase "Subject to the availability of funds . . .". Other possible stumbling blocks include a government-centric decision-making process on proposals that includes the use of the term "appropriate" when determining those entities qualified to submit proposals.

There is uncertainty as to if, when, and how the proposed legislation will move forward and take its final form.

Strahan Motion for Emergency Injunction Denied

On Monday, 14 May 2018, a portion of the right whale community gathered in Courtroom 11 in the United States District Court in Boston. The judge was The Honorable Denise J. Casper. At 12:15, attorneys for NOAA/NMFS, the Commonwealth of Massachusetts, Massachusetts Lobstermen's Association, and the South Shore Lobster Fishermen's Association took their

seats. Also present were Dan McKiernan, Deputy Director of the Massachusetts Division of Marine Fisheries, and other organization members and executives.

The plaintiff in the case was Richard Maximus Strahan, identified as the Chief Science Officer of Whale Safe USA. Mr. Strahan was not present in the courtroom but instead was connected remotely to the proceedings. Strahan, on 6 May, had filed a Temporary Restraining Order against the Massachusetts Department of Marine Fisheries to immediately cease further licensing of lobster-pot fishing gear in all Massachusetts coastal waters. The motion described that this must be done to stop any more “Northern right whales” (sic) from being killed or injured by their entanglement in the vertical ropes used in this fishing gear.

In his sometimes colorful testimony, Mr. Strahan described the lack of calves in 2018, the requirements of the Endangered Species Act, and the Court’s 1996 ruling that the State’s licensing and regulatory scheme of lobster pot fishing categorically violates an ESA prohibition. Attorneys for the defendants argued that the agency was meeting its responsibilities as a permitting authority to minimize the likelihood of injury or death to right whales. They also argued that Strahan had failed to meet a 60-day notice requirement prior to filing his suit.

The Court findings filed on the following day, 15 May, denied Strahan’s motion. This was based on several factors. A key element in the decision was that Strahan failed to demonstrate his fulfillment of the ESA’s mandatory notice requirement. (The ESA imposes a mandatory 60-day pre-suit written notice requirement to all citizen suits, which puts the agencies on notice of a perceived violation and gives them an opportunity to review their actions and take corrective actions if warranted.)

The lobster fishery was already closed in Cape Cod Bay (a fixed-gear closure from February through April) in an effort to protect whales from entanglement during their annual occurrence in this habitat. An emergency extension of the closure beyond the 1 May season opening was imposed when more than 100 right whales were reported feeding in the Bay. As it happened, an aerial survey on 15 May reported no right whale sightings, indicating that they had departed the Bay. The Department of Marine Fisheries subsequently opened the bay to lobster fishing. This coincided, but was not tied to, the Court’s decision.

In a subsequent action, Strahan has sought a court order to stop the use of vertical buoy ropes in fishing gear by licensed fishermen and force the state to apply for an incidental take permit under the Endangered Species Act. Strahan has filed the required 60-day notice of intent to sue. Other suits have been threatened. Massachusetts, along with the Massachusetts Lobstermen’s Association, is currently being sued by Strahan over the licensing and the use of vertical buoy lines. A motion to dismiss is set for 7 September. An additional suit has been filed against the State of Maine, and suits against other states have been threatened.

The legal issues between Strahan and the Commonwealth of Massachusetts and its lobster fishery go back several decades. In April 1995 Strahan filed suit against Massachusetts and the issuance of its licenses and permits for several fisheries. In September 1996 the court denied Strahan's motions. However, the court ordered the defendants to convene an Endangered Whale Working Group aimed at modifications of fixed fishing gear and initiating other actions to minimize harm to the northern right whales. Fishing gear modifications have taken place (via the North Atlantic Large Whale Take Reduction Team) and annual monitoring was initiated (see also article on page 1).

Source materials are from the *Cape Cod Times* and provided by Dan McKiernan, Massachusetts Division of Marine Fisheries deputy director.

Scientific Research Permits: Refinements to the Process

*Contributed by Carrie Hubbard, Permits and Conservation Division,
NOAA/NMFS Office of Protected Resources.*

On a regular basis, the permit office interacts with scientists who apply for research permits and submit annual reports. A major advance in the process was the establishment of the on-line system in 2008. Over the years, a number of features, including on-line reporting and the streamlined ability to re-use text from previous applications, have been welcome. Additional refinements and improvements are ongoing. Here are a few:

Updated application instructions:

In 2017, we revised our research permit instructions using feedback from permit holders and focusing on information needed to ensure the issuance criteria are met. We hope to reduce the amount of back-and-forth required once an application is submitted. Be sure to use the new instructions if you're applying for a research permit: <https://www.fisheries.noaa.gov/node/22701>

ESA "harass" definition:

In 2016, NOAA Fisheries defined "harass" under the ESA as to "create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering".

(<https://www.fisheries.noaa.gov/webdam/download/64690357>).

Previously, the only definition of "harassment" was from the Marine Mammal Protection Act (MMPA): any act of pursuit, torment or annoyance that has the potential to:

- injure a marine mammal or marine mammal stock in the wild (Level A harassment)
- disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding,

feeding, or sheltering but which does not have the potential to injure a marine mammal or marine mammal stock in the wild (Level B harassment).

For permitting, the new ESA definition means that some research methods (*e.g.*, photo-ID) may result in a ‘take’ by harassment under the MMPA, but do not rise to the level of take under the ESA. In these cases, we may issue permits under the MMPA only, with a simplified, informal ESA consultation resulting in quicker processing (90 vs. 135 days or more).

We’ve used this streamlining option for several permits now, including a few that have takes of North Atlantic right whales.

For permitting, this means that some research methods (*e.g.*, photo-ID) may result in ‘take’ by harassment under the MMPA, but not the ESA. In these cases, we may issue permits under the MMPA only, with a simplified ESA consultation resulting in quicker processing.

Changes to permit reports:

We reduced the number of questions in annual reports from ten to six and combined the final report with your last annual report. You’ll see these changes when you submit a report in APPS (<https://apps.nmfs.noaa.gov>). Our goal is to focus on the effects of research to inform ESA, MMPA, and NEPA analyses. Check out our new web page for information about reports: <https://www.fisheries.noaa.gov/national/reports-protected-species-permits>.

Programmatic Consultations for ESA species:

We recently completed two programmatic ESA consultations for sturgeon and sea turtle research. The next taxa we’re tackling are cetaceans, including North Atlantic right whales. We are currently compiling reporting data and drafting a Biological Assessment that covers 14 listed cetacean species/stocks. We expect the cetacean programmatic to be completed in early 2019. The benefit is that most research permits will fit under the scope of the programmatic and will not require individual consultations. We expect this to shorten processing from one year to six months. We plan to set up permitting cycles with deadlines for when to apply so there is predictability in the permit process. We’ll contact permit holders with information as we move forward.

One of the other outcomes of the programmatic consultations is that we are now issuing 10-year permits for ESA-only species, like sea turtles and sturgeon. At this time, however, we are unable to do the same for cetacean permits because our MMPA regulations specifically limit permits to five years. We plan to pursue regulatory changes in the future.

New researcher qualifications form:

When we review CVs, we’re looking for specific examples of a researcher’s field experience as well as their ability to publish and secure funding. Unfortunately, many CVs focus only on

publications and grant awards, and we have to ask for more information, which is frustrating and extends the processing time.

To help with this problem, we've developed a researcher qualifications form that can be filled out and submitted instead of a CV. Using the form is optional. It can be uploaded to APPS in place of a CV. <https://www.fisheries.noaa.gov/webdam/download/70888076>

Standard methods for marine mammals:

We are beginning to develop standard methods for routine pinniped and cetacean research. Our goal is for pre-approved standard methods to be part of permit applications, which will streamline reviews and shorten processing. You'll have an opportunity to provide feedback later this year or in 2019 when we share drafts with the research community.

New NOAA Fisheries website (www.fisheries.noaa.gov):

NOAA Fisheries' new website launched earlier this year. We've created new pages for each permit type and are working on additional pages to serve our permit holders.

Overview of the Permit Office:

The Permits and Conservation Division is part of the NOAA Fisheries' Office of Protected Resources. Jolie Harrison is the Division Chief. Our Deputy Division Chief, Amy Sloan, and eight staff manage 219 active permits (84 marine mammal scientific research, 63 ESA scientific research, 36 General Authorizations, 30 MMPA/ESA parts, 4 commercial photography, and 2 public display). In 2017, we processed 65 permits, 14 major amendments, and 188 minor actions. In addition to our daily work processing permits, we're committed to streamlining the process.

Questions?

If you have questions about these projects or your permit, please contact your permit analyst or call 301-427-8401.

Fifth Annual New England Right Whale Festival

On Sunday, 6 May, the Fifth Annual New England Right Whale Festival was held at the New England Aquarium's Harbor View Terrace Tent on Boston's waterfront from 11 am to 3 pm. It was a celebration of the current efforts to help protect North Atlantic right whales from extinction. The New England Aquarium teamed up with the Adams School Calvineers, of Castine, Maine (see also *Right Whale News*, November 2017, p. 5), to invite the public to learn



On Sunday, 6 May 2018, the Fifth Annual New England Whale Festival was held on Boston's waterfront. (Photos: J. Hain)

from scientists from the Anderson Cabot Center for Ocean Life at the New England Aquarium, other local researchers, and educators about the efforts taking place in our backyard to protect this highly endangered species. There were opportunities to learn about right whales, meet right whale scientists, and take part in family-friendly activities, such as readings by authors of books with environmental messages.

Calendar

6 November 2018. Ropeless Consortium Meeting. New Bedford Whaling Museum, New Bedford, Massachusetts.

7-8 November 2018. North Atlantic Right Whale Consortium Annual Meeting, New Bedford Whaling Museum, New Bedford, Massachusetts. Registration will open 1 July, abstract submission is now open and will close on 1 September.

Scientific Literature and Reports

- Arias M., M.A. Coscarella, M. A. Romero, G.M. Svendsen, M. Ocampo Reinaldo, N. Curcio , E.A. Crespo, and R.A.C. González. 2018. Impact of whale-watching on southern right whale (*Eubalaena australis*) in Patagonia: Assessing the effects from its beginnings in the context of population growth. *Tourism Management Perspectives* 27:1-9. <https://doi.org/10.1016/j.tmp.2018.03.005>
- Christiansen, F., F. Vivier, C. Charlton, R. Ward, A. Amerson, S. Burnell, and L. Bejder. 2018. Maternal body size and condition determine calf growth rates in southern right whales. *Marine Ecology Progress Series* 592:267-282.
- Carroll, E.L., R. Alderman, J.L. Bannister, M. Bérubé, P.B. Best, L. Boren, C.S. Baker, R. Constantine, K. Findlay, R. Harcourt, L. Lemaire, P.J. Palsbøll, N.J. Patenaude, V.J. Rowntree, J. Seger, D. Steel, L.O. Valenzuela, M. Watson, and O.E. Gaggiotti. 2018. Incorporating non-equilibrium dynamics into demographic history inferences of a migratory marine species. *Heredity*. (early on-line) <https://www.nature.com/articles/s41437-018-0077-y>
- Cholewiak, D., C.W. Clark, D. Ponirakis, A. Frankel, L.T. Hatch, D. Risch, J.E. Stanistreet, M. Thompson, E. Vu, and S.M. Van Parijs. 2018. Communicating amidst the noise: Modeling the aggregate influence of ambient and vessel noise on baleen whale communication space in a national marine sanctuary. *Endangered Species Research* 36:59-75.
- Groch, K. 2018. Conservation advances for the southern right whales in Brazil. Pp. 441-475 in: M.R. Rossi-Santos and C.W. Finkl (eds) *Advances in Marine Vertebrate Research in Latin America*. Coastal Research Library, vol 22. Springer, Cham., Switzerland.
- Ellen, J., D. Maureen, M. Jessica, G.V. Barbara, C. Elsa, L. Rafaela, B. Susannah, and S. Laela. 2018. First acoustic recordings of critically endangered eastern South Pacific southern right whales (*Eubalaena australis*). *Marine Mammal Science*, doi.org/10.1111/mms.12519.
- Jones, R.T. 2018. A whale of a difference: Southern right whale culture and the Tasman world's living terrain of encounter. *Environment and History*. DOI: 10.3197/096734018X15217309861540.
- Lysiak, N.S.J., S.J. Trumble, A.R. Knowlton, and M.J. Moore. 2018. Characterizing the duration and severity of fishing gear entanglement on a North Atlantic right whale (*Eubalaena glacialis*) using stable isotopes, steroid and thyroid hormones in baleen. *Frontiers in Marine Science*. DOI: 10.3389/fmars.2018.00168.
- Marx, F.G., T. Park, E.M.G. Fitzgerald, and A.R. Evans. 2018. A Miocene pygmy right whale fossil from Australia. *PeerJ* 6:e5025. DOI 10.7717/peerj.5025.
- Mayo, C.A., L. Ganley, C.A. Hudak, S. Brault, M.K. Marx, E. Burke, and M.W. Brown. 2018. Distribution, demography, and behavior of North Atlantic right whales (*Eubalaena glacialis*) in Cape Cod Bay, Massachusetts, 1998–2013. *Marine Mammal Science*.

DOI: 10.1111/mms.12511.

- Meyer-Gutbrod, E.L., C.H. Greene, and K.T.A. Davies. 2018. Marine species range shifts necessitate advanced policy planning: The case of the North Atlantic right whale. *Oceanography* 31(2). <https://doi.org/10.5670/oceanog.2018.209>.
- NMFS (National Marine Fisheries Service). 2018. 2018 Revision to: Technical guidance for assessing the effects of anthropogenic sound on marine mammal hearing (Version 2.0). Underwater acoustic thresholds for onset of permanent and temporary threshold shifts. NOAA Technical Memorandum NMFS-OPR-59. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Silver Spring, Maryland.
- Southall, B.L., L. Hatch, A. Scholik-Schlomer, T. Bergmann, M. Jasny, K. Metcalf, L. Weilgart, A.J. Wright, and M.E. Perera. 2018. Reducing noise from large commercial ships: Progress and partnerships. *Proceedings of the Marine Safety and Security Council - Coast Guard Journal of Safety and Security at Sea* 1:58-65.
- Tetra Tech Inc. and Smultea Environmental Sciences LLC. 2018. January 2018 survey report for New York Bight whale monitoring aerial surveys. Prepared for New York State Department of Environmental Conservation, Division of Marine Resources, Albany, New York.
- Tetra Tech Inc. and Smultea Environmental Sciences LLC. 2018. February 2018 survey report for New York Bight whale monitoring aerial surveys. Prepared for New York State Department of Environmental Conservation, Division of Marine Resources, Albany, New York.
- Tetra Tech Inc. and Smultea Environmental Sciences LLC. 2018. March 2018 survey report for New York Bight whale monitoring aerial surveys. Prepared for New York State Department of Environmental Conservation, Division of Marine Resources, Albany, New York.
- Tetra Tech Inc. and Smultea Environmental Sciences LLC. 2018. Year 1 annual survey report for New York Bight whale monitoring aerial surveys March 2017 – February 2018. Prepared for New York State Department of Environmental Conservation, Division of Marine Resources, Albany, New York.
- Wright, D.L., C.L. Berchok, J.L. Crance, and P.J. Clapham. 2018. Acoustic detection of the critically endangered North Pacific right whale in the northern Bering Sea. *Marine Mammal Science*. <http://dx.doi.org/10.1111/mms.12521>

Right Whale News

Right Whale News is a publication of Associated Scientists at Woods Hole. It is disseminated online through the courtesy of the North Atlantic Right Whale Consortium. The Editor is Jim Hain. The editorial board consists of Julie Albert, Robert Kenney, Hans Neuhauser, and Amy Whitt. The current and back issues of *Right Whale News* published between 1994 and 2017 are available at the North Atlantic Right Whale Consortium website, www.narwc.org, under the *Right Whale News* tab.

To submit ideas, article topics, and comments, contact Editor Jim Hain at jhain@earthlink.net and place “RWN Editorial” in the subject line. To subscribe, please use the new “Mail Chimp” system at: <http://eepurl.com/JvmKf>. The link is also available via the *Right Whale News* tab on www.narwc.org.

Citing *Right Whale News*: The requested format for citations from *Right Whale News* is: Right Whale News Volume(number): page(s). Alternatively, a less formal citation may simply use month and year of issue.

An index to *Right Whale News*, subject and author, for the period 2014-2004 is posted at the North Atlantic Right Whale Consortium website, www.narwc.org—under the *Right Whale News* tab. Indexing for the period 2004-1994 is underway.

Support for *Right Whale News* is provided by the Island Foundation and the Massachusetts Environmental Trust.