

RIGHT WHALE NEWS

*An independent forum for right whale conservation and recovery,
publishing several times each year.*

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Vessel Strikes and a Dead Calf

At the age of 15, female Catalog #3560, had her first known calf in early December 2019. The exact date and location are unknown, but the event likely took place off Georgia in the first half of the month. There is a history. The pair was seen frequently during the 2019-20 season. In March, the pair travelled into the Gulf of Mexico, among the few right whales that have done so. They appeared to have a nearshore habitat preference, which brought them into view of many researchers, volunteers, and citizens. They were popular. Yet, there would be no happy ending.

Their last sighting in the southeastern U.S. was off Cape Lookout, North Carolina, on 6 April 2020. At that point, it appeared that they were enroute north to feeding areas off New England and eastern Canada. However, the trip was interrupted.

In the morning of 25 June 2020, a boater reported to NOAA Fisheries a floating whale carcass 4 miles off Elberon, New Jersey. A survey aircraft operating nearby was diverted. The aircraft was on site by 3 p.m. Researchers from the Marine Mammal Stranding Center deployed with the U.S. Coast Guard. The dead whale was identified as the male calf of #3560. A necropsy was conducted on 27 and 28 June.

The wounds along the head and body were consistent with two different vessel collisions. Preliminary observations suggest that the wounds on the anterior body were several weeks old. A second vessel collision resulted in a series of propeller wounds and a skeg or rudder wound across the tail stock. This second set of wounds was likely inflicted shortly before the animal died. The necropsy report and associated actions are underway.

Further information about the event can be found [here](#).

As for the 15 January event (a vessel strike on the calf of #2360, *Derecha*, see *Right Whale News* March 2020) it is reasonable to assume that this calf died after the last sighting. The result is that, of the ten calves born this season, the number still alive has been reduced to eight.



The Coast Guard and the Atlantic Marine Conservation Society recovering the carcass of the calf of #3560 off New Jersey on 27 June 2020, authorized by NOAA/NMFS permit #18786-04. Note the propeller marks.

Cape Cod Bay: Large Numbers Despite COVID-19 Shutdown

Contributed by Stormy Mayo, Center for Coastal Studies, Provincetown, Massachusetts

Because of the COVID-19 pandemic, the 2020 field season was unusual in many respects. Although our season was suspended for the three weeks of the winter and early spring that usually produce high numbers of right whales, we were still able to begin flying and cruising again in April with a number of restrictions. With the gap in field effort due to the pandemic, the number of individual right whales that we documented in 2020 was lower than in recent years. Nevertheless with the dedication of AvWatch flight services, their pilots, and our crew of Christy Hudak, Amy James, Bridget McKenna, and Alison Ogilvy, along with interns, we were able to identify 194 individual right whales—48% of the approximate population of approximately 400.

Supported by NOAA and the Massachusetts Division of Marine Fisheries, we began our surveillance effort in late 2019 with the first Cape Cod Bay (CCB) survey on 29 December and, until flights were grounded for three weeks in late March and April (the usual peak time for right whale residency), the season proceeded typically. Though we focused our vessel and aerial

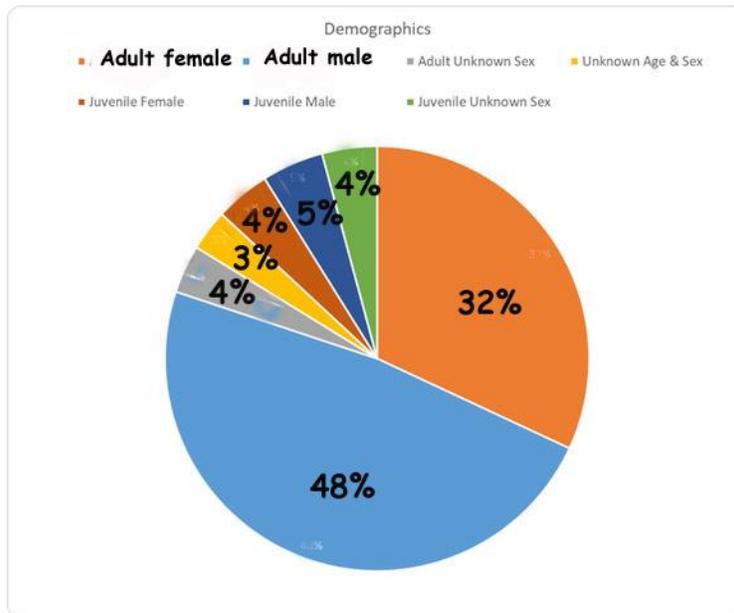
surveys on CCB, our 2020 field work included one flight south of Nantucket (during which 53 right whales were documented) in support of field efforts by the New England Aquarium and NOAA.

A general summary of our observations in the Cape Cod area, the product of 32 aerial surveys and 13 cruises plus opportunistic shore sightings follows; below that is a figure showing the breakdown by age and gender categories:

- **194*** individual right whales identified;
- 20 all-points-bulletin (APB)** individuals (including 1 entangled), 14 more submitted for assessment;
- 67* sightings of APB individuals submitted;
- 24,286 photographs (aerial, vessel and opportunistic);
- 3 of 10 known mother/calf (M/C) pairs documented;
- 268 zooplankton samples processed, and
- 4,060 non-right whale marine mammal sightings logged (location and behavior).

**Numbers may increase after all data are processed*

*** APB is an alert to be on the lookout for entangled and injured whales*



A summary of Center for Coastal Studies observations in the Cape Cod area.

The mothers of the M/C pairs that we documented were: #3103 and #1970 from the aircraft and vessel and #2223 photographed from the beach by one of our dedicated shore observers, but not seen during surveys. Note: that both the very dense aggregations of whales and the M/C pairs have, during past years, peaked during the time we were grounded in 2020 by COVID-19, so

taking this into consideration this season may well have been similar to previous years. The last whales for the season were documented from the aircraft on 29 April 2020. Thus the 2020 season stretched from late December through to the very end of April, a few weeks shorter than in recent years.

New England Aquarium Surveys Affected by COVID-19

Contributed by Philip Hamilton, New England Aquarium

The New England Aquarium team cancelled plans for field work in Cape Cod Bay (CCB) in the spring and in the Gulf of St. Lawrence, the latter due to the Canadian border being closed. The CCB work is in collaboration with the Northeast Fisheries Science Center (NEFSC) and the Woods Hole Oceanographic Institution (WHOI) and the Gulf work is in collaboration with Dalhousie University, University of New Brunswick, and the Canadian Whale Institute. These field efforts are expected to resume in 2021. The NEAQ did send two poop collection kits to the Gulf—one for Nick Hawkins and one for Andrew Wright’s Department of Fisheries and Oceans (DFO) team aboard the *Coriolis*. These are two of the only vessel-based efforts in the Gulf this year. Nick Hawkins has already collected one sample.

In the Bay of Fundy, a NEAQ team is conducting their 40th consecutive field season using the R/V *Nereid*. A small team will be surveying from 1 August through 15 September and collecting photographs, biopsies, and poop samples. Finally, the NEAQ aerial survey team flying for the EcoMaps program at the Aquarium resumed surveys of the wind-farm area south of the Cape in the spring and sighted a right whale in July.

Monitoring and Mitigation in Canada Continues Strong

*Contributed by Alexis Van Bommel, Senior Analyst,
Fisheries and Oceans Canada, Ottawa, Ontario.*

Despite concerns about effects of the COVID-19 pandemic, the Government of Canada is using a variety of tools in 2020 to monitor and detect North Atlantic right whales (NARWs) in Canadian waters, including aircraft surveillance, on-the-water vessel surveillance, hydrophones (underwater microphones), and gliders. While there has been some impact on the timing of some assets due to COVID-19, the impact on Canadian NARW aerial surveillance and acoustic detection tools has been limited. For example, while the U.S. NOAA flights have been cancelled in Canada for 2020, Canada has increased its aerial assets for the summer (*e.g.*, an additional

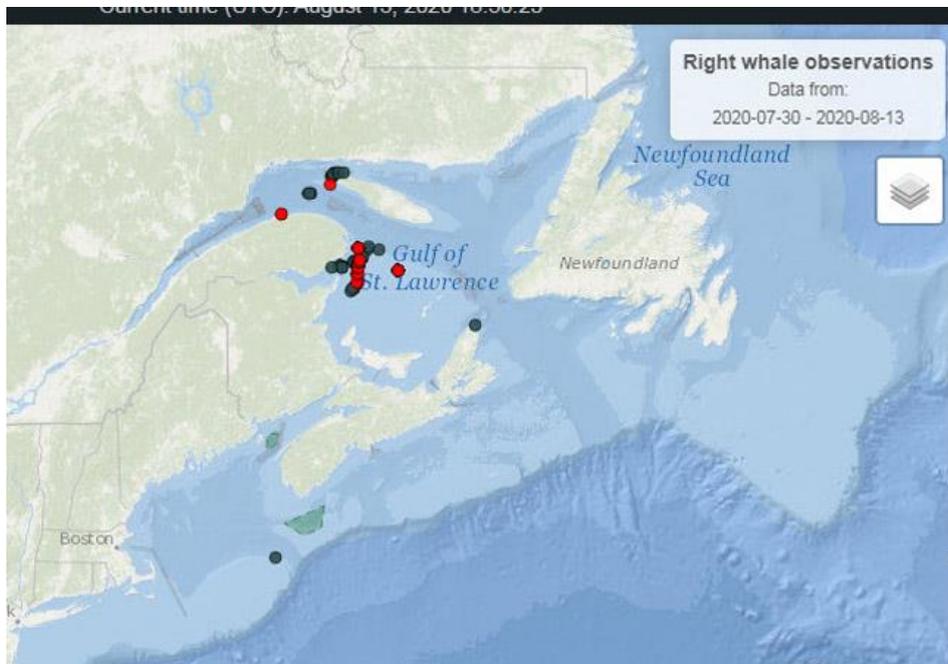
Cessna flying in the late summer and use of acoustic detection to support the triggering of management actions). The DFO has dedicated approximately 972 hours to aerial surveillance for NARW. Overall, Canada's 2020 NARW monitoring and detection coverage has increased this year due to additional aerial assets and consideration of acoustic detections to trigger management measures. For example, from April to August, upwards of four airplanes from DFO alone have been contributing NARW surveillance flights: 2 Cessnas, 1 Twin Otter, and 1 King Air. An additional plane is operated by Transport Canada.

In previous years, Transport Canada's primary tool for surveillance was the National Aerial Surveillance Program (NASP) planes. In 2020, Transport Canada will be deploying an acoustic underwater glider and a Remotely Piloted Aircraft System (RPAS or drone). Both of these detection technologies should be operational in the Gulf of St. Lawrence before the end of August. By using these in combination with our NASP surveillance flights, we have increased the operational options for surveying Transport Canada's dynamic shipping zones for NARW presence, while also reducing the burden on the NASP and the risk that weather will undermine surveillance efforts. This will make our surveillance of the Gulf of St. Lawrence more robust and varied than previous years.

In Canada, monitoring for right whales is split into two major periods, the fall-winter period and the peak whale period during the spring-fall. During the fall-winter periods, from November to April, monitoring focuses largely on fixed-gear fisheries around southern Nova Scotia as there is limited fishing activity in other areas, *e.g.* most fisheries in the Gulf of St. Lawrence are closed due to winter conditions. As the ice recedes in the spring and fisheries open, targeted NARW monitoring in higher risk areas begins. For 2020, increased NARW aerial surveillance began on 26 April and focused on the southern Gulf of St. Lawrence and, to a lesser extent, the northern Gulf of St. Lawrence, Bay of Fundy, Scotian Shelf, and Roseway Basin. Complementary tools like hydrophones mounted to Viking buoys and mobile underwater gliders are also currently being used for near real-time NARW detection and to trigger management measures such as vessel slowdown and fisheries management measures.

Six Viking buoys equipped with hydrophones were deployed throughout the Gulf of St. Lawrence in June 2020 and will remain in the water until the end of October 2020. These hydrophones transmit NARW calls in near real-time to a team of marine mammal acoustic experts for validation. Detections are displayed on WhaleMap, an interactive mapping tool that displays near real-time NARW visual sightings and acoustic detections as well as survey efforts in Canadian waters (see figure on next page).

In light of the Government of Canada's sustained and expanded investment and growing experience in monitoring NARWs, Canada is taking all necessary actions to protect the NARW. Our 2020 surveillance plan is adequate, and will help to mitigate impacts on right whales.



An example of the near real-time and interactive plot of right whales in Canadian waters for a recent two-week period. Key: green symbols=sighting, red symbols=acoustic detection. Prepared by Dalhousie University. Source: <https://whalemap.ocean.dal.ca/>

A Consideration of Yacht Traffic in the Southeastern U.S. Seasonal Management Area

*Contributed by Lisa Neyman, Fish and Wildlife Research Institute,
Florida Fish and Wildlife Conservation Commission, St. Petersburg, Florida*

Vessel strikes are a leading cause of mortality and injury for NARWs (Sharp *et al.*, 2019). In a report to the Southeastern U.S. Right Whale Implementation Team on 1 May 2020, we examined the pleasure-yacht traffic in the Southeastern U.S. Seasonal Management Area (SEUS SMA). Understanding vessel behavior in NARW habitat is essential to evaluating the effectiveness of conservation and management efforts, including the seasonal 10-knot speed limit regulation of the 2008 Right Whale Ship Strike Reduction Rule, applicable to vessels at least 65ft in length. Vessel traffic can be monitored and characterized using the Automatic Identification System (AIS), which is required onboard commercial vessels and is voluntarily carried by some privately-owned vessels. We used these AIS data to better understand how the pleasure-yacht component of the recreational boating community utilized the SEUS SMA during the 2016/17 through 2019/20 NARW calving seasons. Since yachts are not required to carry AIS, the data

presented here do not include all yacht traffic, but are still likely representative of general yacht traffic patterns in the region.

The number of yachts detected (*i.e.*, carrying AIS, regardless of length) in the SEUS SMA has been increasing over the past 4 years, although this may be due to more yachts carrying AIS. There was a periodicity to the observed yacht traffic, reported here relative to the right whale calving season. Regulated (under the Ship Strike Reduction Rule) yacht traffic was consistently high in November, relatively low during January and February, and increased again in late March and early April, with activity concentrated during the daylight hours. St. Augustine was the most commonly used port in the region (Figure 1 left). However, many detected yachts

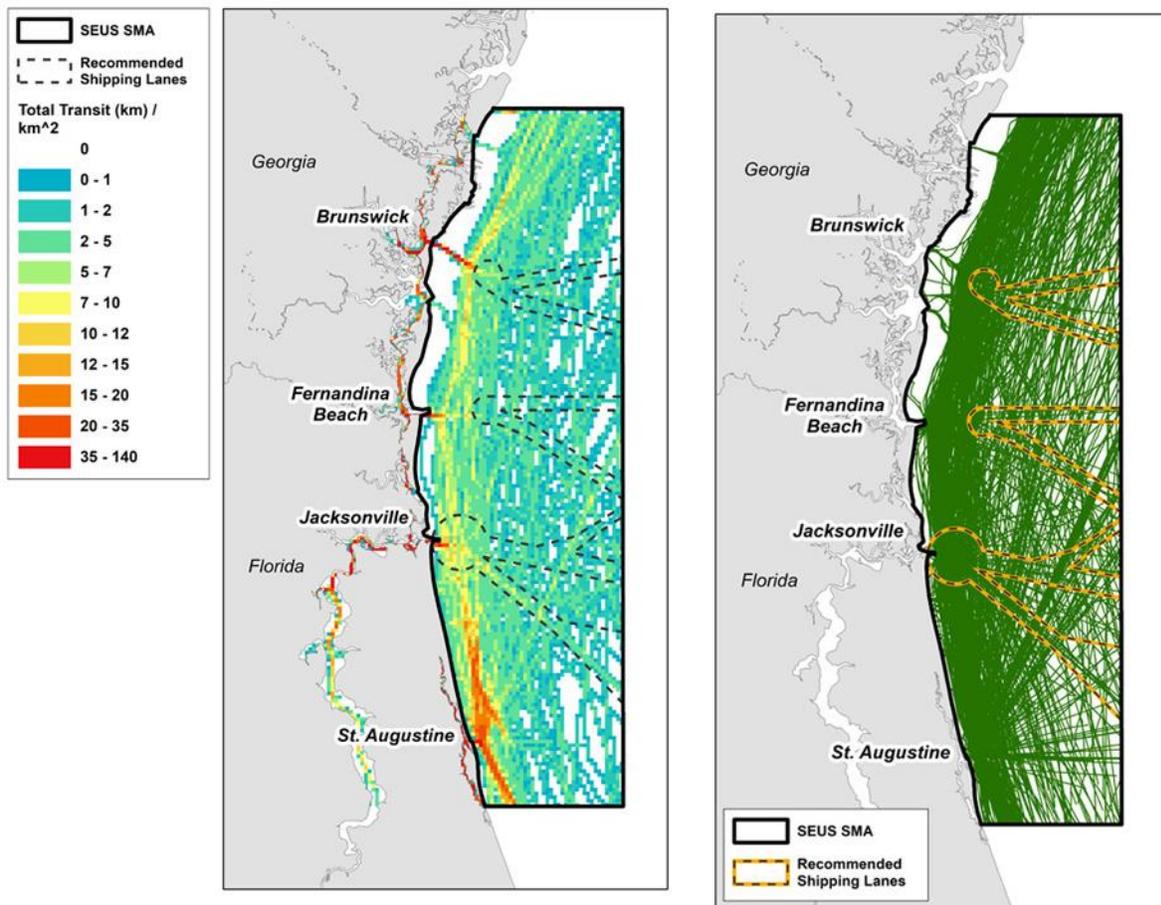


Figure 1: Left) Density of total detected **regulated** transit (km transit/km²) within the SEUS SMA during the 2019/20 NARW calving season. Right) Tracklines of **all** detected yachts for the 2019/20 NARW calving season showing the general north-south transit pattern of pleasure yachts. Similar patterns in transit distribution were observed in the three previous calving seasons (2016/17, 2017/18, 2018/19).

appeared to be transiting through the area, rather than partaking in local day trips, and did not enter a port. Yacht traffic clearly exhibits a strong north-south orientation, which is quite different than the commercial traffic in the region, which is generally oriented east-west in the recommended shipping lanes (Figure 1 right). Looking at the spatial distribution of regulated transits by speed, the highest density of yacht traffic traveling over 10 knots occurred in the port entry channels and near St. Augustine. Furthermore, across each of the four years, 60-70% of detected regulated yacht traffic was above 10 knots, which was consistently higher than other regulated vessel types (2-45%) during the same period.

Analyses like this, using vessel patterns detected with AIS, can help conservation interests develop and focus effective outreach approaches. For instance, the area used most by the yachting community in this region was St. Augustine, and may therefore be a key area for NARW conservation outreach efforts. However, as most yacht traffic was likely transiting through the region, additional work to identify the launch ports for those transitory vessels may also be important for outreach efforts. Furthermore, expanding the area of study outside of the SMA or when the SMA is inactive may elucidate the level of community awareness of NARW conservation efforts.

This work provides an integral first look at general pleasure yacht traffic patterns in the SEUS SMA during the NARW calving season, improving our understanding of how this region's seascape is used and of the potential cumulative impacts from human activities in the area.

References

Sharp, S.M., et al. (2019). Gross and histopathologic diagnoses from North Atlantic right whale *Eubalaena glacialis* mortalities between 2003 and 2018. *Diseases of Aquatic Organisms* 135:1-31. <https://doi.org/10.3354/dao03376>.

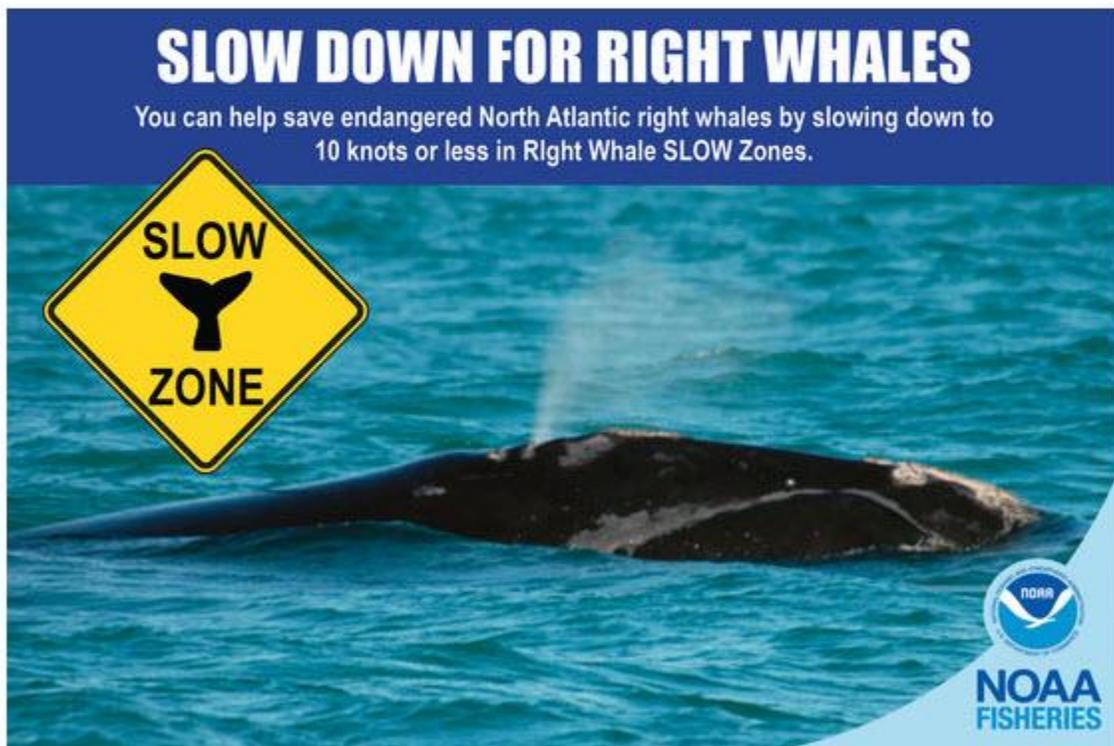
Editor's note:

There exist records that suggest that consideration of pleasure yacht traffic is warranted. On 10 March 2005, an 11-year-old female was struck by a ~ 45 ft recreational vessel off Cumberland Island, Georgia. (This strike predated the ship-strike rule, and the vessel was smaller than those currently regulated by the rule.) On 25 June 2020, a six-month-old calf was struck twice and killed off New Jersey. This incident is under investigation. The vessels currently are unknown, but the propeller marks may suggest a vessel in the size range of those addressed by this article.

NOAA Fisheries Announces *Right Whale Slow Zones* Campaign

The deaths of two calves by smaller vessels have brought attention to this size class of vessels. On 6 August 2020, NOAA Fisheries announced a new “Right Whale Slow Zones” campaign asking all vessel operators to slow down or avoid areas where right whales have been detected to reduce the risk of vessel strikes to critically endangered North Atlantic right whales. This effort is complementary to other NOAA vessel-strike reduction efforts. It brings together sighting and acoustic detection information to inform mariners of right whale presence and encourages vessels of all sizes to slow down in areas where right whales have been detected.

Help Endangered Whales: Slow Down in Slow Zones



The Slow Zones program uses sound collected from underwater acoustic listening devices to detect right whales. Visual sightings will also be used. Researchers, managers, and now boaters will be notified of the presence of right whales in the area from Maine through Virginia. It complements the voluntary Dynamic Management Area program for large ships. All boaters or

interested parties can sign up for email notifications and select “Right Whale Slow Zones” under the Regional New England/Mid-Atlantic subscription topics.

The Right Whale Slow Zones will last for 15 days after a detection occurs. The zones will be posted on the online right whale sightings map. The free Whale Alert app that will automatically notify a boater about to enter one of these areas can be downloaded.

Further information and links to the sightings map and the alert map can be found [here](#).

Partnering with Fishers: Ropeless Gear Trials in the Southeast U.S.

Contributed by Kim Sawicki, Sustainable Seas Technology, Melbourne, Florida

On 28 May 2020 a ropeless fishing gear demonstration was held at the Fish Dock Restaurant, owned by fisherman Charlie Phillips, in Townsend, Georgia. The demo was hosted by Sustainable Seas Technology and was supported by staff and volunteers from Conserve.iO (a technology and data company in Delray Beach, Florida) and the Marine Resources Council. Invitees included fishermen, fisheries managers, researchers, and conservationists. The event was attended both in person and virtually as it was live-streamed and recorded for those not able to attend due to social distancing requirements.

Two years ago, Bryan Fluech, Associate Director of the University of Georgia’s Marine Extension and Georgia Sea Grant, first introduced Charlie Phillips, a fisherman on the Atlantic Large Whale Take Reduction Team, to researcher Kim Sawicki (Sustainable Seas Technology). Kim was seeking fishermen in the Southeast U.S. willing to trial innovative ropeless fishing gear. Ropeless gear could allow pot fishermen to more safely share the ocean with protected marine species like North Atlantic right whales. Pot and trap fisheries are considered some of the most sustainable sources of seafood on Earth but use gear that creates a substantial risk to whales.

This risk comes in the form of an ‘endline’ and buoy left in the water column 24 hours a day during the fishing season. They are used to mark and retrieve pots from the bottom of the ocean. There are more than one million vertical lines used by the lobster and crab fishing industry alone off the North American coast of the Atlantic Ocean. Sadly, entanglement in this gear is the leading cause of death for critically endangered NARWs. With a population of around 400 individuals, less than a quarter of which are breeding females, the risk posed by this gear has led fisheries management to order closures of specific fisheries when these whales might be present.

Currently these “time-area closures” create conditions that are less than favorable to black sea bass pot fishers in the Southeast U.S., who fish during the winter when these fish are most

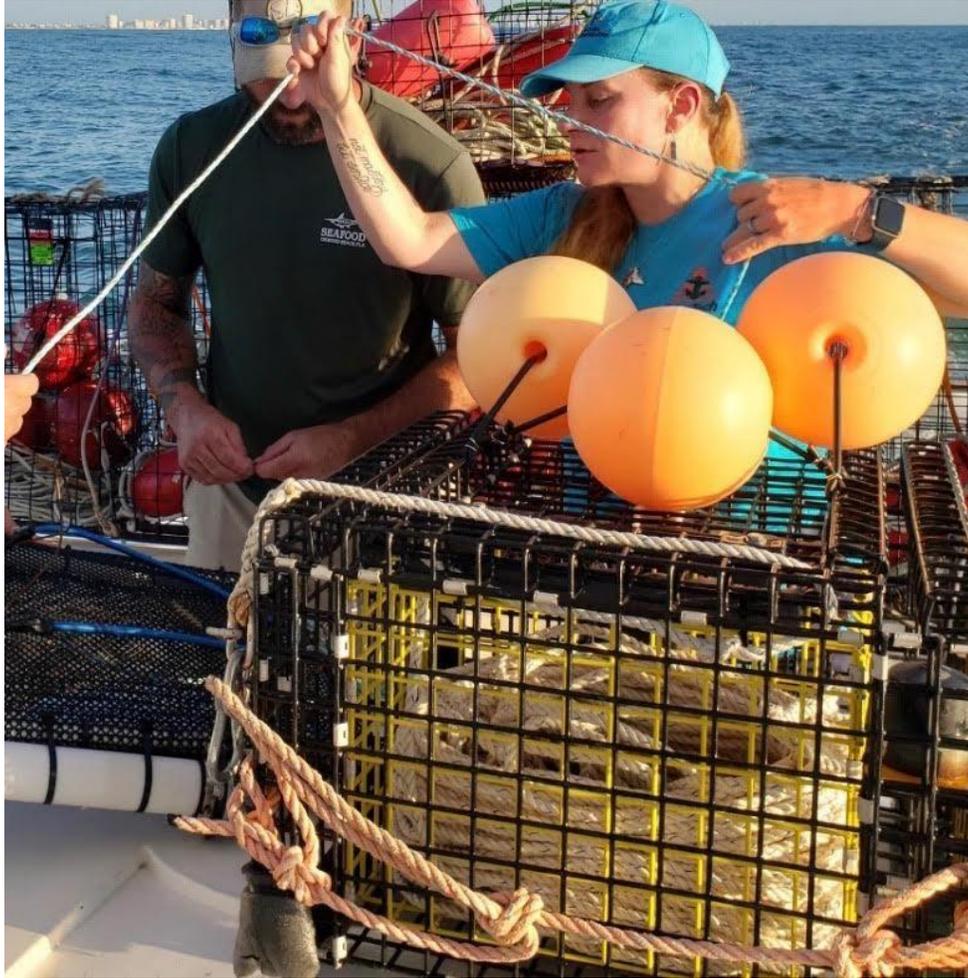
plentiful and easy to catch. Due to the presence of NARW in the Southeast U.S. during the winter, fishermen like Charlie are required to motor much farther offshore to reach the closest allowable pot fishing grounds. This is an expensive and sometimes unpleasant trip due to weather and safety concerns. These factors have led Charlie to decline to fish for black sea bass since obtaining his permits six years ago. This is also the case for many of the other black sea bass pot fishermen in the South Atlantic region.

The use of ropeless fishing gear may finally give these fishermen the ability to share the ocean safely with whales. Ropeless gear, which is stored on the seafloor next to traps and pots, is activated only when the fisherman is present. Ropeless gear combines regular fishing gear with an acoustic buoy release and a mapping application. The goal of these devices is to vastly reduce or completely eliminate the risk of entanglement for whales in pot and trap lines.

The idea of using acoustic releases as part of a fishing system was first introduced in 1998 when the National Marine Fisheries Service issued its first contract to develop a ropeless system for pot fisheries. Since that first study more than twenty years ago, dozens of research projects have led to the development of six different devices, five of which are being used or tested in fisheries around the world. In April, I returned to the U.S. from a Fulbright Fellowship in Scotland and Ireland working with pot fishers who successfully trialed different ropeless devices to reduce entanglements and are dedicated to future trials.

Since May, Charlie and I have been self-funding a pilot project in Georgia to determine if ropeless fishing will work in the South Atlantic with black sea bass gear. While the effectiveness of ropeless gear in other fisheries is known, it is imperative that testing be done in the South Atlantic (during the absence of NARW) to determine the best approach for rigging these devices and to collect data that the Protected Resources Division of NOAA Fisheries will require when considering supporting the use of these gears during time-area closures. This research could pave the way for other fisheries to begin using ropeless gear in other areas.

On 11 June 2020 the South Atlantic Fishery Management Council voted to recommend to NOAA to approve the group's exempted fishing permit application to fish with six of these ropeless devices in Georgia during the month of September. This is a huge leap in the right direction for fishermen and NARWs to safely coexist.



Kim Sawicki teaching a black sea bass pot fisher how to use an EdgeTech 5112 ropeless fishing system off Ponce Inlet, Florida, June 2020.

Northeast U.S. Implementation Team Reformed

As announced at the Atlantic Large Whale Take Reduction Team meeting on 9-12 October 2018, the North Atlantic Right Whale Recovery Plan Northeast U.S. Implementation Team (NEIT) has been re-convened. Recall that the Endangered Species Act authorizes NOAA Fisheries to appoint recovery teams to assist with the development and implementation of recovery plans. Also recall that the original NEIT was disbanded in 2004.

The mission of the team is to:

** Coordinate and effect recovery plan implementation in the Northeast U.S. while making efficient use of available resources via recommendations to the NOAA Fisheries Greater Atlantic Regional Fisheries Office,*

- * *Involve stakeholders in implementation of the recovery plan,*
- * *Promote creative solutions,*
- * *Monitor effectiveness of recovery plan implementation and adapt accordingly, and*
- * *Identify and prioritize information needs that can be best addressed through enhanced partnerships.*

The current Team Lead is Katie Moore, U.S. Coast Guard. Diane Borgaard is the Greater Atlantic Region Right Whale Recovery Coordinator, and the liaison to the Team. There are 13 members on the team from diverse agencies and institutions. There have been five meetings to date, including a joint meeting with the Southeastern Team on 29-30 October 2019. A list of action items was produced by the October 2019 joint meeting. Similar to the Southeastern Team, the meetings are closed. However, the NEIT is currently discussing public involvement and transparency. Further information, including meeting summaries and action items, is available by searching on “Northeast U.S. implementation team.”

Entangled Documentary Premieres at the Woods Hole Film Festival

The Woods Hole Film Festival, 25 July through 3 August, was virtual this year. Participants could stream the films. As is often true, the festival included many ocean-, environmental-, and conservation-themed films. One noteworthy film was the documentary, *Entangled*. As is familiar to the right whale community, proposed federal regulations often cast the lobstermen against scientists and environmental advocates aiming to save right whales. Livelihoods and the future of the species are at stake. David Abel and Andy Laub have produced a documentary that matter-of-factly shows the issues and the players. Abel advises that at present the film will be played at film festivals, with distribution and availability to be developed in the future.

David Abel is an award-winning reporter who covers fisheries and environmental issues for *The Boston Globe*. Andy Laub is a documentary film maker. The pair previously produced *Lobster Wars: The Fight Over the World’s Richest Fishing Grounds*.

Calendar

Fall 2020, date(s) TBD. Meeting of the Southeast U.S. Implementation Team (SEIT). Due to the COVID-19 pandemic, there is uncertainty. It is unlikely that there will be an in-person meeting. A remote webinar is likely, whether for the entire group or for the team alone. In addition, the normal two-day meeting may be scaled back to a single day. Meeting facilitator Tom Pitchford (tom.pitchford@myfwc.com) will send out a notice as the time draws near.

27–28 October 2020. Annual meeting of the North Atlantic Right Whale Consortium. It will be virtual. May be linked to the Ropeless Consortium Workshop and Meeting on 26 October. Registration and abstract submission posted shortly at www.narwc.org and www.ropeless.org.

7–8 November 2020. Right Whale Festival. Fernandina Beach, Florida. CANCELLED.

13-17 December 2021. 24th Biennial Biology of Marine Mammals Conference, Palm Beach, Florida.

Scientific Literature and Reports

- Baumgartner, M.F., *et al.* 2020. Slocum gliders provide accurate near real-time estimates of baleen whale presence from human-reviewed passive acoustic detection information. *Frontiers in Marine Science* 7. DOI: 10.3389/fmars.2020.00100
- Carroll, E.L., *et al.* 2020. Genetic diversity and connectivity of southern right whales (*Eubalaena australis*) found in the Brazil and Chile–Peru wintering grounds and the South Georgia (Islas Georgias del Sur) feeding ground. *Journal of Heredity* 111(3):263–276. <https://doi.org/10.1093/jhered/esaa010>
- Chalcobsky, A. E.A. Crespo, and M.A. Coscarella. 2020. Short-term effects of whale watching boats on the movement patterns of southern right whales in Península Valdés, Patagonia, Argentina. *Marine Environmental Research* 157: 104927. <https://doi.org/10.1016/j.marenvres.2020.104927>.
- Christiansen, F., M.L.K. Nielsen, C. Charlton, L. Bejder, and P.T. Madsen. 2020. Southern right whales show no behavioral response to low noise levels from a nearby unmanned aerial vehicle. *Marine Mammal Science* 36:953-963. <https://doi.org/10.1111/mms.12699>
- de Lavigerie, G.D., M. Bosselaers, S. Goolaerts, T. Park, O. Lambert, and F.G. Marx. 2020. New Pliocene right whale from Belgium informs balaenid phylogeny and function. *Journal of Systematic Palaeontology* 18:1141-1166. DOI: 10.1080/14772019.2020.1746422
- Dombroski, J.R.G., S.E. Parks, P.A.C. Flores, L.M.M. López, K.A. Shorter, and K.R. Groch. 2020. Animal-borne tags provide insights into the acoustic communication of southern right whales (*Eubalaena australis*) on the calving grounds. *Journal of the Acoustical Society of America* 147(6): EL498-EL503.
- Gil, K.N., M.A. Lillie, A.W. Vogl, and R.E. Shadwick. 2020. Rorqual whale nasal plugs: Protecting the respiratory tract against water entry and barotrauma. *Journal of Experimental Biology* 223(4): jeb219691. DOI: 10.1242/jeb.219691
- Lindner, M.S., A.A. Carribero, and M.J. Klaich. 2020. Return rate of southern right whales (*Eubalaena australis*) to the whale watching area, Peninsula Valdes, Patagonia, Argentina. *Ocean & Coastal Management* 184: 104905. DOI: 10.1016/j.ocecoaman.2019.104905

- Mackay, A.I., *et al.* 2020. Satellite derived offshore migratory movements of southern right whales (*Eubalaena australis*) from Australian and New Zealand wintering grounds. PLOS ONE 15(5): e0231577. <https://doi.org/10.1371/journal.pone.0231577>
- Martins, M.C.I., C. Miller, P. Hamilton, J. Robbins, D.P. Zitterbart, and M. Moore. 2020. Respiration cycle duration and seawater flux through open blowholes of humpback (*Megaptera novaeangliae*) and North Atlantic right (*Eubalaena glacialis*) whales. Marine Mammal Science (early view). DOI: 10.1111/mms.12703
- Myers, H.J. and M.J. Moore. 2020. Reducing effort in the U.S. American lobster (*Homarus americanus*) fishery to prevent North Atlantic right whale (*Eubalaena glacialis*) entanglements may support higher profits and long-term sustainability. Marine Policy 118:104017. <https://doi.org/10.1016/j.marpol.2020.104017>
- Redfern, J.V., E.A. Becker, and T.J. Moore. 2020. Effects of variability in ship traffic and whale distributions on the risk of ships striking whales. Frontiers in Marine Science 6: article 793. DOI: 10.3389/fmars.2019.00793
- Schoeman, R.P., C. Patterson-Abrolat, and S. Plön. 2020. A global review of vessel collisions with marine animals. Frontiers in Marine Science 7: article 292. 10.3389/fmars.2020.00292
- Stamation, K., M. Watson, P. Moloney, C. Charlton, and J. Bannister. 2020. Population estimate and rate of increase of southern right whales *Eubalaena australis* in southeastern Australia. Endangered Species Research 41:373-383. DOI: 10.3354/esr01031
- Werth, A.J. and H. Ito. 2020. Whale jaw joint is a shock absorber. Journal of Experimental Biology 223: jeb211904. DOI:10.1242/jeb.211904
- Werth, A.J., T.L. Sformo, N.S. Lysiak, D. Rita, and J.C. George. 2020. Baleen turnover and gut transit in mysticete whales and its environmental implications. Polar Biology 43: 707–723. <https://doi.org/10.1007/s00300-020-02673-8>

Right Whale News

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Jim Hain, Editor of *Right Whale News*, is a member of the Society of Environmental Journalists.