RIGHT WHALE NEWS

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

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18th Calf for 2021

Anything can happen, and sometimes does. An additional calf for the season has been reported. On 20 May 2021, a mother-calf right whale pair was sighted off Brier Island, Nova Scotia. Amy Tudor, a naturalist with Mariner Cruises Whale Watching, sighted the pair in the narrow Grand Passage between Brier and Long Islands. The mother was identified as Catalog #3232, *Lobster*. The calf is believed to be her second. This sighting brings the number of calves to 18 for the 2021 season.

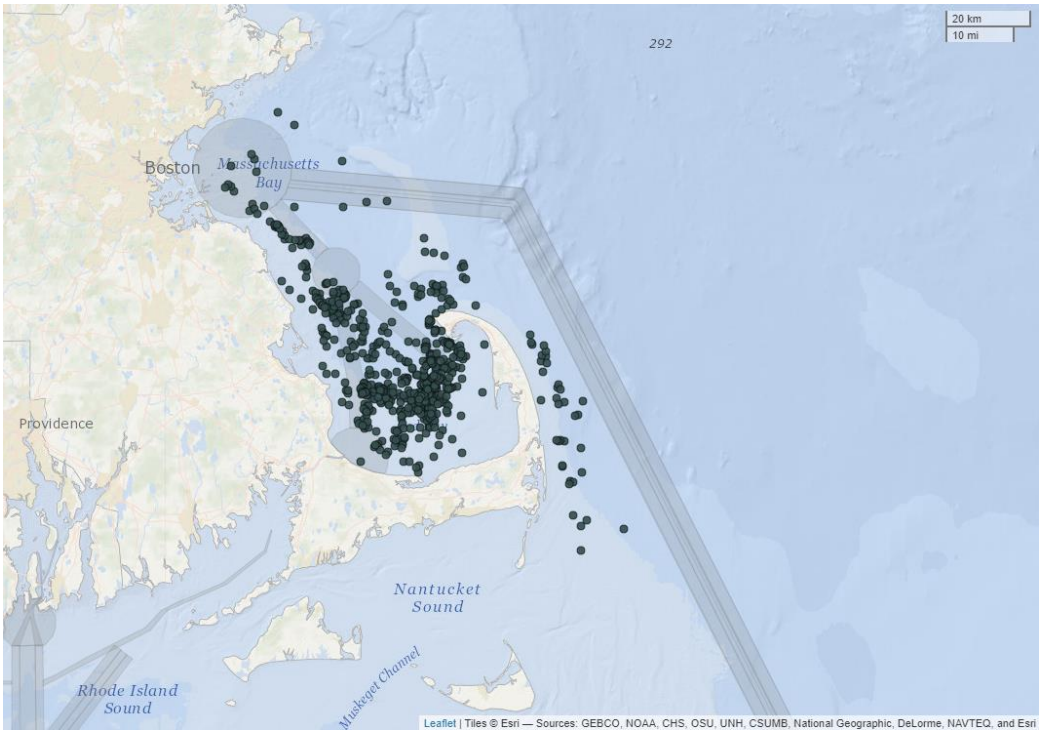
Female catalog #3232, Lobster*, in Grand Passage, Nova Scotia (her calf, #18 for the year, is not visible). Photo taken from Brier Island looking north toward Freeport, Long Island. Photo: Jess Tudor.*

Lobster is noteworthy as one of a dozen or so mothers who were first detected with a calf in the northeast and outside of the southeastern U.S. calving area. Whether *Lobster* and other females with similar habits gave birth off the southeastern U.S. and were undetected, or, had their calves in northern waters is unknown. However, Amy described the calf as small and young, and nicknamed it "Tinker," a term used for small or undersized lobsters. The size hints at a more northerly birth than Florida.

Since then, *Lobster* and her calf have been seen in the Gulf of St. Lawrence. On 17 July 2021, Moe Brown, as part of a joint research team (Canadian Whale Institute/University of New Brunswick/ Dalhousie/New England Aquarium), and working from a 65-foot chartered snow-crab vessel, was able to obtain a DNA sample from the calf.

Cape Cod Bay Report

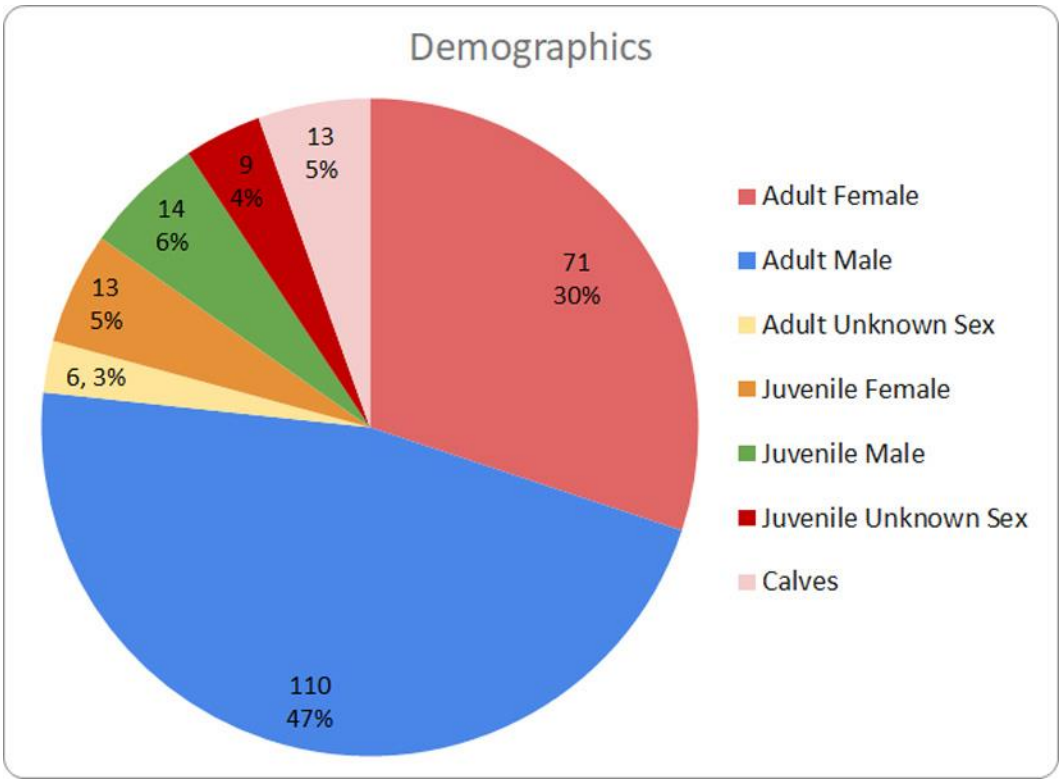
On Wednesday, 26 May 2021, staff from the Center for Coastal Studies hosted a Zoom meeting with a report on the 2021 Cape Cod Bay right whale season. As of that report, 234+ right whales, or about 65% of the population, had been individually identified.



Right whale sightings in the Cape Cod Bay area recorded by the Center for Coastal Studies during aerial surveys in 2021. Surveys were flown from 11 December 2020 through 14 May 2021.

Several mother-calf pairs were sighted, the first being catalog #3520, *Millipede*, sighted on 3 March (the earliest sighting of a mother-calf pair in the program's history). In total, 13 mother-calf pairs were sighted—all of which were observed this season in the Southeastern U.S.

Brigid McKenna and her fellow observers describe seeing a mix of behaviors: feeding, surface-active groups (SAGs), coordinated feeding, breaching, and travelling. In early February they primarily saw SAGs and in late February, they started seeing subsurface feeding and long dives (likely feeding at depth). Early to mid-March there were almost exclusively long dives (10-25 minutes) and beginning mid-March, subsurface feeding was again observed. Beginning in April, skim feeding was seen more frequently. Throughout March, SAGs were observed, and the last one was sighted in early April. All of the SAGs consisted of at least one male and a focal female, and a penis and insertion was seen at least three times.



Demographics for the 234 right whale sightings in the Cape Cod Bay area, during 11 December 2020 through 14 May 2021.

This 2021 report, combined with previous reports (see below), suggests that right whale occurrence in the Cape Cod area remains strong, with survey data going back more than two decades.

For further information:

Right Whale News: August 2020, April 2019, July 2018, and June 2017

Ganley, L.C., S. Brault, and C.A. Mayo. 2019. What we see is not what there is: Estimating North Atlantic right whale *Eubalaena glacialis* local abundance. Endangered Species Research 38: 101–113.

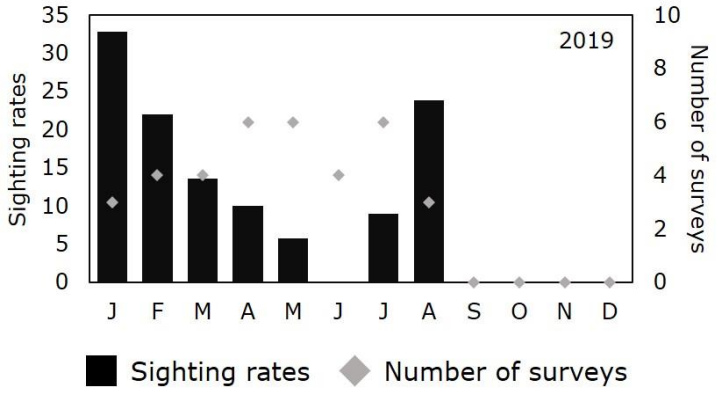
Mayo, C.B., L. Ganley, C.A. Hudak, S. Brault, M.K. Marx, E. Burke, and M.W. Brown. 2018. Distribution, demography, and behavior of North Atlantic right whales (*Eubalaena glacialis*) in Cape Cod Bay, Massachusetts, 1998–2013. Marine Mammal Science 34(4):979-996.

Nichols, O.C., R.D. Kenney, and M.W. Brown. 2008. Spatial and temporal distribution of North Atlantic right whales (*Eubalaena glacialis*) in Cape Cod Bay, and implications for management. Fishery Bulletin 108: 270–280.

Southern New England Wind Energy Area Update

Among the potential human impacts on right whales are the present and proposed offshore wind energy areas (WEAs). One of the largest will be developed in the waters south of Massachusetts and Rhode Island. A recent publication by Quintana-Rizzo *et al*. provides near-current information.

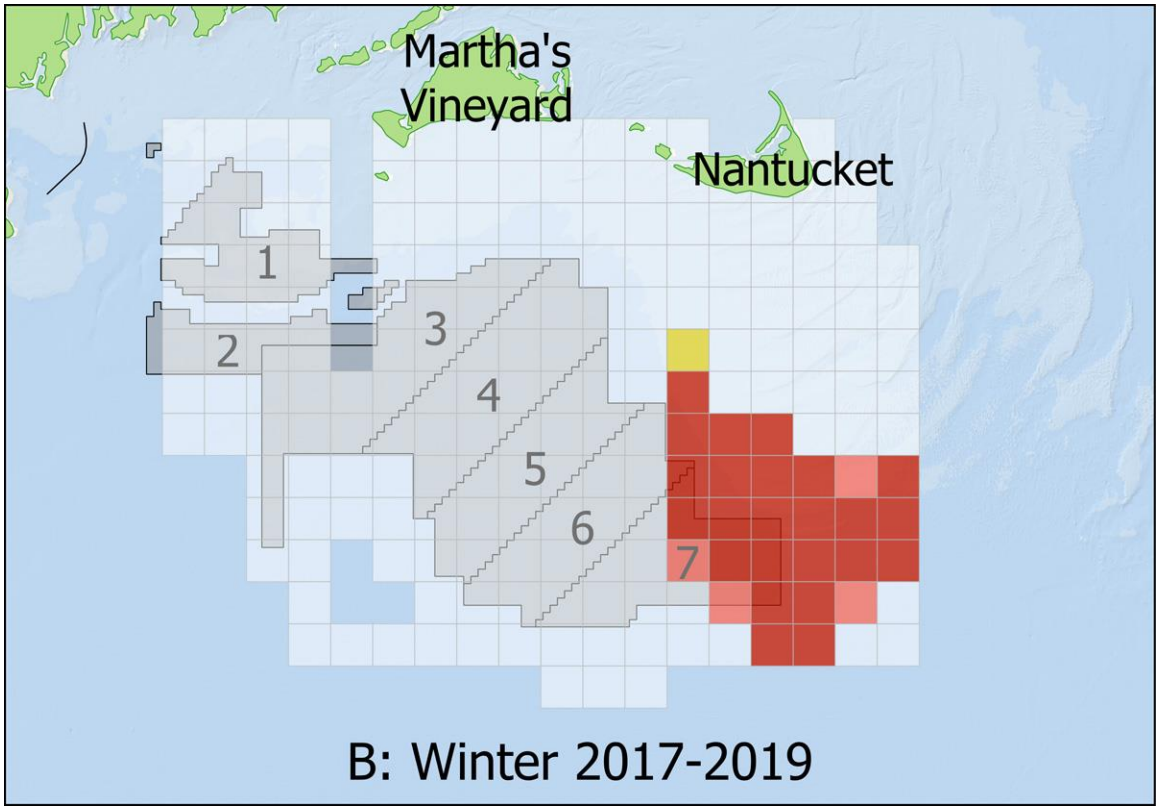
From March 2011 through December 2019, 327 unique right whales were identified. The annual tally of right whales reported (not unique whale identifications) varied between 28 and 418. By the end of 2019, 87% of the estimated current population had been sighted in the Southern New England (SNE) area.



An example of monthly sighting rates of right whales and monthly aerial survey effort. Sighting rate is defined as the number of right whales per 1000 km of survey. Sighting rates and sighting effort varied across years. This example is for 2019.

Sighting rates varied through time, suggesting that right whales have become more common in SNE area over recent years. Right whales were sighted during most months of the year, and, in a pattern that has changed from previous findings, their presence extended beyond the December–May period.

Sightings distribution was changeable; right whales concentrated in the northeastern part of the WEA at times and in the southeastern portion at other times. The authors caution that there was increased field effort in recent years.



Aggregations vary in space and time. Shown is an example of seasonal distribution analysis. This one is for winter 2017–2019 (the "recent years" time period). The areas of concentration (colored areas) varied over time period and season. WEA lease zones are identified by the numbers.

In view of these findings, mitigation measures by the lease-holding companies will be crucial. Current mitigation procedures are described here: Vineyard Wind NGO agreement 2019.

Looking forward, three groups, the New England Aquarium, Center for Coastal Studies (CCS), and the Northeast Fisheries Science Center (NEFSC) are collaborating on continuing surveys. Tim Cole, NEFSC, describes that it is a tag-team effort, mostly to overcome aircraft availability challenges. The NOAA Twin Otter is currently on another project but will likely return in early

October. In the interim, CCS has a NOAA grant to fly 2–3x per month, hopefully through December. They are primarily covering Cape Cod Bay, Massachusetts Bay, and Nantucket Shoals to help with seasonal right whale modeling, and to photocapture individuals to help get a handle on where some of the whales not in the Gulf of St. Lawrence might be. Jessica Redfern, New England Aquarium, reports that funding for surveys expires at the end of August, but proposals for continuation have been submitted.

For further information:

Right Whale News has reported on this emerging ocean presence (New York Bight, December 2018; Southern New England, July 2018).

Leiter, S.M., K.M. Stone, J.L. Thompson, C.M. Accardo, B.C. Wikgren, M.A. Zani, T.V.N. Cole, R.D. Kenney, C.A. Mayo, and S.D. Kraus. 2017. North Atlantic right whale *Eubalaena glacialis* occurrence in offshore wind energy areas near Massachusetts and Rhode Island, USA. Endangered Species Research 34: 45–59.

Quintana-Rizzo, E., S. Leiter, T.V.N. Cole, M.N. Hagbloom, A.R. Knowlton, P. Nagelkirk, O. O'Brien, C.B. Kahn, A.G. Henry, P.A. Duley, L.M. Crowe, C.A. Mayo, and S.D. Kraus. 2021. Residency, demographics, and movement patterns of North Atlantic right whales *Eubalaena glacialis* in an offshore wind energy development in southern New England, USA. Endangered Species Research 45: 251–268.

Regulations on the Horizon

Injury and mortality of right whales in commercial fishing gear has been an ongoing issue. New regulations are on the horizon. These regulations are expected in late summer/early fall. The chain of events goes back several decades, and includes a number of laws. It's a long and sometimes bumpy road. A synopsis leading up to August 2021 follows.

The Marine Mammal Protection Act (MMPA) of 1972 is the first to come into play. It was enacted to set forth a national policy to prevent marine mammals and populations from being depleted as a result of human activities. The MMPA prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S.

By the mid-1990s, there were concerns that measures in the MMPA to minimize the effects of bycatch in commercial fisheries had not been effective. These concerns were addressed in the 1994 amendments to the MMPA. New provisions called for procedures to both assess and mitigate the effects of commercial fishing operations, including requiring marine mammal stock

assessments (with the corresponding Scientific Review Groups), and developing and implementing Take Reduction Plans (along with the corresponding Take Reduction Teams) for U.S. commercial fisheries.

At the April 2019 meeting of the Atlantic Large Whale Take Reduction Team in Providence, Rhode Island (*Right Whale News*, September 2019), proposals were put forward aimed at a 60-80% risk reduction in mortality and serious injury to right whales in the U.S. Northeast Region commercial lobster/Jonah crab trap/pot fishery, which accounts for 93 % of the vertical buoy lines in areas where right whales occur in the U.S.

The path forward from that point is prescribed in detail. While not explicitly a part of the take-reduction-plan process, an Endangered Species Act (ESA) consultation came into play. Under Section 7 of the 1973 ESA, the "action agency" (National Marine Fisheries Service, (NMFS)) engaged in intra-service consultation (as NMFS is both the action agency and the consulting agency). The consultation examines whether the federal action (authorizing the commercial fisheries) will jeopardize the continued existence of the species (right whales) or result in the destruction or adverse modification of its critical habitat. If the action is likely to adversely affect an endangered species, a formal consultation is initiated. The product of a formal consultation is a Biological Opinion document, which includes a jeopardy or no jeopardy opinion. A "jeopardy opinion" determines that the action as it currently exists will jeopardize the continued existence of an endangered or threatened species, and that reasonable and prudent alternatives (RPAs) must be taken to avoid jeopardy. On the other hand, a "no jeopardy" finding typically includes reasonable and prudent measures (RPMs) that reduce the likelihood that the action will jeopardize a listed species in the future.

The May 2021 Biological Opinion included a Conservation Framework that put forward generalized mitigation targets. Reductions in serious injuries and mortalities of right whales due to interactions with fisheries will be implemented in four phases over a 10-year period. The first phase is the implementation of amendments to the Atlantic Large Whale Take Reduction Plan in the ongoing rulemaking. Each phase will be followed by an evaluation.

The evaluation periods will consider whether modifications to the Framework are needed. During these periods, the agency will evaluate population metrics and threats, including but not limited to, calving and survival rates, changes in the fisheries, and existing mitigation measures.

At this point, a third law is brought into play—the 1969 National Environmental Policy Act (NEPA). NEPA requires that all branches of government give proper consideration to the environment prior to undertaking any major federal action that significantly affects the environment. If an assessment suggests possible impact(s), a draft Environmental Impact Statement (EIS) is prepared that analyzes the impacts of the proposed alternatives on the environment. After receiving public input on the draft EIS, which is typically released at the same time as a proposed rule for action, a Final EIS is prepared. In this case, a Final EIS has

been prepared and was released in July 2021 (Volume I, Volume II, Volume III). The rule associated with the Final EIS has completed its review. Of the proposed alternatives in the Final EIS, Alternative 2 was preferred for risk reduction. Specific measures are listed. These include: 1) reducing the number of lines in the water (*e.g.*, via increasing the number of traps per trawl and identifying areas restricted from trawl lines, and 2) reducing mortality and serious injury in the remaining lines by requiring a low (≤ 1,700 pounds) maximum breaking strength for the buoy line or inserts.

On 31 August, with a completed review, the agency issued a Record of Decision (ROD). At this point, the process will yield a final "rule" or regulation. The final rule will be published in the Federal Register.

We, and the right whales, have been down this road before—a prescribed process that culminates in law or regulation. For example, the ship-speed rule of 2008 (*Right Whale News*, August 2008), the sinking ground line rule of 2008 (*Right Whale News*, August 2008), and the expanded critical habitat of 2016 (*Right Whale News*, March 2016) all followed this path.

In almost every case, the process has been contentious. In this instance, the provision for an evaluation and perhaps modification after each action step is an advance in the process.

The target before us is a 60–80% risk reduction (mortality and serious injury to right whales resulting from the U.S. commercial lobster/Jonah crab trap/pot fishery) and a 54–65% reduction in co-occurrence of right whales and buoy lines in the Northeast Region.

While Phase 1 is still in progress, NMFS has begun Phase 2 of the modifications to the Atlantic Large Whale Take Reduction Plan, with the publication of a Notice of Intent on 11 August 2021. The next phase will extend to additional species, gear types, and geographic areas. It will address reducing the risk of entanglement from gillnet and other trap/pot fisheries (*e.g.*, hagfish, black sea bass, blue crab), along the East Coast including Northeast, Mid-Atlantic, and Southeast regions.

Jennifer Goebel, NMFS Greater Atlantic Regional Fisheries Office, describes that because there are very few cases where we know the location of the entanglement and the fishery from which the gear came, we have to regulate all of the buoy lines. Any buoy line could be the one that a whale gets entangled in. The TRT and NMFS started with lobster/Jonah crab in the Northeast because they account for about 93% of the buoy lines that occur in the same areas right whales do.

The information and schedule for Phase 2 is here.

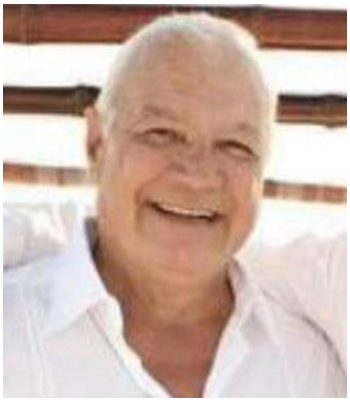
As described, the outcome for the Phase 1 proposed rulemaking is expected in late summer/early fall. The changes to restricted areas (including opening to ropeless gear) will go into effect 30

days after publication of the final rule in the Federal Register. The gear modifications will go into effect 1 May 2022.

The rule includes the following: 1. Three new seasonal closed areas, 2. A gear-marking system, and 3. Sections or devices in the buoy lines with a 1,700-pound breaking strength. Note that complete weak rope is not a requirement. Also note that there are "conservation equivalencies," where an alternative to plan items, but with more risk reduction, are acceptable. A summary of the changes is here.

Evolution is happening. Changes are on the horizon.

In Memorium



Robert Carroll Murphy, 81, of Fernandina Beach, Florida, passed away on 30 December 2020. Bob's character was . . . colorful. His bearing as a career army officer with a booming voice was mixed with a mostly helpful and friendly personality. Bob, through his company, Environmental Aviation, provided aircraft and aerial survey services for the right whale monitoring program in the Southeastern U.S. from 1998 to 2003. Typically, at season end, Bob hosted memorable hangar parties for the aerial observer teams and pilots. On a warm spring evening, in front of the open hangar, with a bonfire, and the setting sun off to the west, Bob would be at the grill slinging hot dogs and hamburgers while his wife Chong would be serving Korean "pot stickers." Bob Murphy R.I.P.

People and Changes

Sharon Young, a long-time and stalwart voice for right whales and conservation, retired from her position as Marine Issues Field Director at the Humane Society of the United States (HSUS). She also stepped down from the Southeast U.S. right whale implementation team as well as the Atlantic Large Whale Take Reduction Team. Before joining HSUS in 1992, she was a teacher and a naturalist, and spent more than 10 years in field research on marine mammals, and co-authoring papers that focused on feeding and foraging ecology. She also served on the congressionally mandated Atlantic Scientific Review Group for more than a decade, reviewing the annual NMFS marine mammal stock assessments.

Janet Coit has been named the new NOAA Assistant Administrator for Fisheries (*i.e.*, the head of NMFS). She was formerly the head of Rhode Island's Department of Environmental

Management. Her selection was announced by U.S. Secretary of Commerce, Gina Raimondo, former governor of Rhode Island.

Calendar

19 October 2021. Ropeless Consortium Meeting, virtual. Registration information and other details available at www.ropeless.org.

26–27 October 2021. Annual meeting of the North Atlantic Right Whale Consortium. The meeting will be virtual. Meeting details are available at www.narwc.org.

Postponed until 1–3 August 2022, with workshops on 30 & 31 July. 24th Biennial Biology of Marine Mammals Conference, Palm Beach County Convention Center, Palm Beach, Florida. For further information, see marinemammalscience.org.

6–7 November 2021. Annual Right Whale Festival. Main Beach, 32 N. Fletcher Ave., Fernandina Beach, Florida. See: rightwhalefestival.com. The Right Whale Festival will feature live music, exhibits promoting marine conservation with onsite marine mammal scientists, kid's activities, art and unique gifts, a silent auction, a beach clean-up, food trucks, and much more. This free festival takes place rain or shine. Please check back, as COVID may require adjustments.

Scientific Literature and Reports

Argüelles, M. B., M. Coscarella, C. Fiorito, & M. Bertellotti. 2021. Southern right whales generally appear not to react to transiting research vessels. Marine Mammal Science (Early View) 1– 12. https://doi.org/10.1111/mms.12843

Azizeh, T.R., K.R. Sprogis, R. Soley, M.L.K. Nielsen, M.M. Uhart, M. Sironi, C.F. Marón, L. Bejder, P.T. Madsen, and F. Christiansen. 2021. Acute and chronic behavioral effects of kelp gull micropredation on southern right whale mother-calf pairs off Península Valdés, Argentina. Marine Ecology Progress Series 668:133-148.

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Cole, A.K., S.W. Brillant, and S.A. Boudreau. 2021. Effects of time-area closures on the distribution of snow crab fishing effort with respect to entanglement threat to North Atlantic right whales. ICES Journal of Marine Science. https://doi.org/10.1093/icesjms/fsab103

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How, J.R., W.K. de la Mare, D.K. Coughran, M.C. Double, and S. de Lestang. 2021. Gear modifications reduced humpback whale entanglements in a commercial rock lobster fishery. Marine Mammal Science 37: 782– 806. https://doi.org/10.1111/mms.12774

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Ramp, C., D. Gaspard, K. Gavrilchuk, M. Unger, A. Schleimer, J. Lelarue, S. Landry, and R. Sears. 2021. Up in the air: Drone images reveal underestimation of entanglement rates in large rorqual whales. Endangered Species Research 44:33-44. https://doi.org/10.3354/esr01084

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Wu, C.-Y., D.P. Nowacek, A.E. Nousek-McGregor, R. McGregor, and L.E. Howle. 2021. Computational fluid dynamics of flow regime and hydrodynamic forces generated by a gliding North Atlantic right whale (*Eubalaena glacialis*). Marine Mammal Science 37: 826–842. https://doi.org/10.1111/mms.12798

Right Whale News

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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 "Mail Chimp" system at: http://eepurl.com/JvmKf. The link is also available via the *Right Whale News* tab on www.narwc.org.

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