

# Right Whale Research News

Volume 27, Number 2 November 2018

## In this issue:

Expanded Bay of Fundy Surveys  
Result in Few Right Whale Sightings

A Path Forward for Reducing  
Right Whale Entanglements

2018 Gulf of St. Lawrence Summary

Mortality and Entanglement Update

A Rare Sighting

Discovering That Some of Our  
Friends Have Been Around a  
Long Time

Sponsored Whale Update

Calling All Teachers! We now offer  
a Classroom Sponsorship!

2018 Right Whale Festival

Gift Ideas

## Expanded Bay of Fundy Surveys Result in Few Right Whale Sightings

For 38 years, the New England Aquarium Right Whale Team has been surveying the Bay of Fundy for right whales. The months of August and September, which coincide with right whale presence, have always been the core of our survey efforts. However in recent years, their timing has been unpredictable and their overall use of the bay has declined. This year, we decided to spread our field season over a four-month period beginning in June to better understand right whale use of this once vibrant habitat. We did four two-week surveys over June, July, August, and September.

The season started with a number of setbacks. Our beloved research vessel, *Nereid*, which has been with us for all 38 years, had unexpected last-minute repairs, and our dock was still out of commission due to the damage it sustained over the winter. Thankfully, a local whale watch company, *Quoddy Link Marine*, out of St. Andrews, New Brunswick, agreed to take us out as a charter. June 16 was our first day on the water, and we discovered a right whale on our very first track line! Right whales have previously been seen in the bay in June, but mostly along the Nova Scotia shoreline. This whale was in the middle of the bay and was traveling. Even though we waited exactly where it dove with many experienced observers on watch, we were not able to relocate and photograph it.

During the following three months, we were able to survey the entire study area multiple times and found very few right whales (see map on page 2). However, we did find quite a few humpback, fin, and minke whales, and many ocean sunfish (a record 38 in one day!)

The five identified whales we saw in the bay did not appear to stay long. **Eros (Catalog #3701)**, an 11-year-old male, and **#3991**, a 9-year-old female, were seen only once each. The six-day residency of entangled male **#3843** (see *Mortality and Entanglement Update*) was the longest documented residency for the season. Finally, two males, 13-year-old **#3570** and 17-year-old **#3150**, were seen August 16 and 17, northwest of the usual aggregation area.

In addition to the right whales we found on our surveys, two others were seen in the bay by whale watch companies: **Neptune (#3301)**,



With a misty Campobello Island in the background, **#3150** lifts his flukes for a dive on August 17.

Photo: Marilyn Marx/ACCOL/NEAq.

Continued on page 2

## Bay of Fundy

Continued from page 1

a 15-year-old male, on September 1 and 5, and #4102, a 7-year-old of unknown sex seen on August 23 off Nova Scotia. Only seven different right whales were photographed in the bay this summer, our lowest count on record despite the thorough effort. The previous low was 15 animals identified in 2013.

Shifting food resources are changing this once thriving right whale feeding area to an erratically used habitat

that keeps us guessing and trying to adapt. But our long-term monitoring effort provides valuable insights into how the oceans are transforming. We know that about a third of the right whale population was in the Gulf of St. Lawrence—two of the whales seen in the Bay, #3843 and Neptune, had been seen in the gulf earlier in the summer—but we still don't know where the remaining two-thirds of the population is going during the summer months.

—Philip Hamilton

## A Path Forward for Reducing Right Whale Entanglements

On October 9-12, 2018, NOAA Fisheries convened a meeting of the Atlantic Large Whale Take Reduction Team (TRT). This team, comprised of fishermen, scientists, conservation groups, and state and federal regulators, is tasked with developing consensus-based measures to reduce large whale entanglements to a mandated level that allows a population to be sustained.

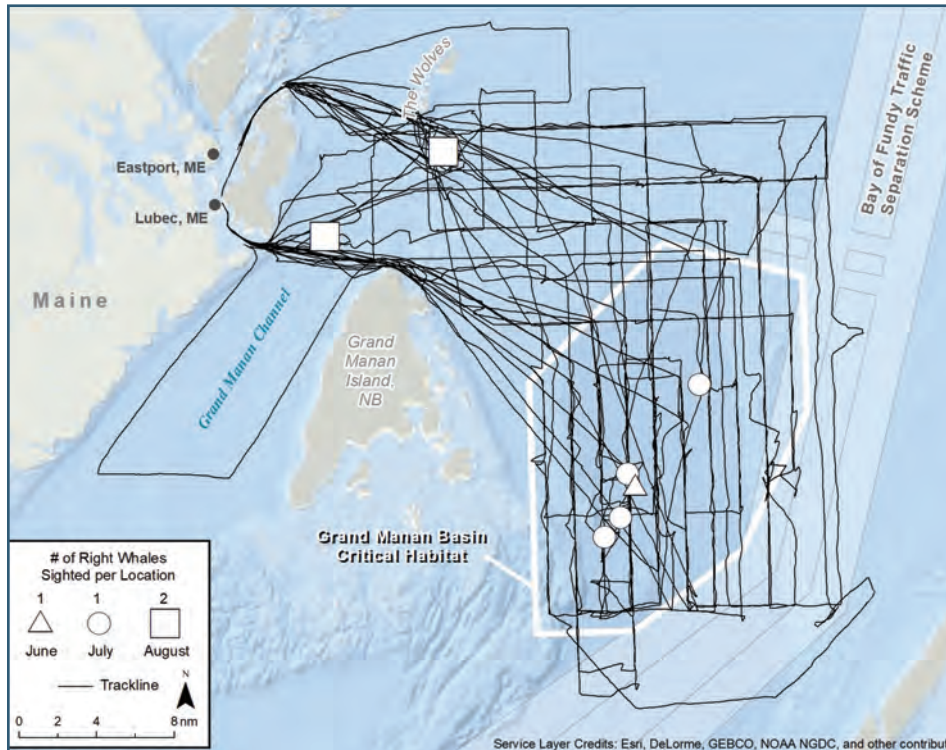
Past TRT meetings were often fraught with controversy about where entanglements occurred and how they were affecting right whales. But after 2017's devastating number of deaths and serious entanglement injuries coupled with an increasing level of entanglements over the past decade, there is no longer a question that the right whale population is declining fast, and entanglements are a main reason for the decline. This year's meeting focused on options for implementing solutions to this chronic problem.

The four main options discussed at length were ropeless fishing, the use of reduced breaking strength ropes of 1,700 pounds or less (see *Fishing Ropes and Whales ... in RWRN May 2016* and [ropeless.org](http://ropeless.org)), reduced fishing effort, and expanded closures. All of these options will be explored in greater depth in the months ahead and, in March 2019, the TRT will convene again and give NOAA Fisheries its recommendations for a path forward as regulations are developed.

Since NOAA Fisheries is mandated under the Marine Mammal Protection Act to enact measures to bring entanglement impacts to a sustainable level, it has made it clear that new regulations will be forthcoming and are asking the TRT for its guidance.

Sadly, yet another right whale carcass was documented two days after the end of this meeting with evidence of a severe entanglement interaction, highlighting the need for expanded regulations.

—Amy Knowlton



Right whales seen and track lines covered by the Anderson Cabot Center's right whale survey team in the Bay of Fundy from June 16 to September 21, 2018. Map: Brooke Hodge ACCOL/NEAq.

## Southern right whale researcher from Argentina visits Lubec

In July, we had the pleasure of hosting Florencia "Flo" Vilches, a researcher who studies southern right whales off Argentina ([accol.org/blog/lessons-identifying-southern-right-whales/](http://accol.org/blog/lessons-identifying-southern-right-whales/)) and a Marine Conservation Action Fund (MCAF) fellow. MCAF is a microgranting and fellowship program at the Aquarium's Anderson Cabot Center for Ocean Life that provides support to marine conservationists in developing countries to help them deal with critical issues facing imperiled species. As part of the fellowship, MCAF grantees spend time with Anderson Cabot Center scientists to share knowledge and network with their peers. During her two weeks with the team in Lubec, Flo was able to get out to sea on multiple days and saw two right whales. In the office, we introduced her to our custom-made photo-identification software *DIGITS*, as she explores options for managing their southern right whale database. We really enjoyed working with Flo and sharing our stories about right whales in different hemispheres!



Florencia Vilches

# 2018 Gulf of St. Lawrence Summary

In recent years, perhaps in response to a rapidly warming Gulf of Maine, right whale distribution has dramatically shifted, especially in the summer months (see *Expanded Bay of Fundy...*). After determining that the Gulf of St. Lawrence is now a right whale hot spot, we joined efforts with the Canadian Whale Institute and Dalhousie University to study this emerging habitat. This past summer marked our third year of this joint study.

We were also part of a very successful collaborative multi-agency effort to extensively survey the Gulf of St. Lawrence to better understand right whale habitat use. Canadian and American government entities conducted aerial surveys. Two Slocum gliders from Dalhousie and the Marine Environmental Observation Prediction and Response Network (MEOPAR) recorded whale vocalizations and ocean conditions. Thirty-two sonobuoys were deployed from a Canadian Royal Airforce aircraft to listen for whales. Our vessel-based team chartered the *Jean-Denis Martin*—a 62.5-foot snow crab fishing vessel based out of Shippagan, New Brunswick—to conduct two 14-day cruises in July and August with chief scientists Monica Zani and Amy Knowlton from the Anderson Cabot Center each leading a team of four to five scientists and two crew. Our goals while at sea were to collect right whale photographic and behavioral data, conduct plankton and CTD (Conductivity, Temperature, and Depth) tows, and

deploy additional sonobuoys to hear right whales. The researchers aboard the *Jean-Denis Martin* found that working with the fishermen crew was beneficial to both parties, allowing an exchange of information, viewpoints, and ideas.

The July cruise photographed 101 sightings over 12 survey days, and the August cruise photographed 313 sightings over 11 survey days, with one fecal sample collected on each cruise. We know these sightings include duplicates of the same individuals, but because photo-analysis is only just beginning, we can't yet provide a count of how many individual right whales we documented; however, we know it's at least 80! Two juveniles that hadn't been seen since their birth year in 2016 were photographed. Unfortunately, one of them—the **2016 calf of Catalog #3101**—had severe wounds from a recent entanglement, but she was curious about our vessel and stayed with us for about an hour.

Near the end of the second cruise, we came across entangled whale **#3960** and watched the amazing feat of it apparently shedding the entanglement (see *Mortality and...*). Throughout both surveys, many exciting surface active groups were observed and the hydrophones recorded some chatty whales! The Dalhousie students were particularly busy with not only survey duties and sonobuoy deployments, but three plankton tows each day! There is no doubt that the work we did on these

cruises is invaluable to understanding which whales are using the gulf and what their food resource looks like. Combined with the enormous effort from other organizations, the picture of right whales in the gulf will continue to develop.

—Marianna Hagbloom, Amy Knowlton, Monica Zani

## The Tools of the Trade

### SONOBUOYS

A sonobuoy is a buoy that houses a hydrophone and radio transmitter, and will transmit real-time whale calls back to a receiver (as long as the receiver is within range). Sonobuoys allow the source of the call to be localized.

### GLIDERS

Slocum gliders are autonomous underwater vehicles equipped with hydrophones and a series of instruments to measure ocean conditions. The glider can follow remotely delivered directions, and upon surfacing will send data back via satellite. The glider can distinguish between whale calls and indicate the species it has detected!

### CTD

#### (Conductivity, Temperature, and Depth)

A CTD is a device that is deployed to the seafloor and measures oceanographic parameters, including water temperature, salinity, and density throughout the water column in that particular location. The CTD also has an optical plankton counter attached, which allows for a depiction of the location of the plankton layers and the size of the plankton. This information is then linked to the plankton samples pulled up in the plankton net tows.



Catalog #3510, #3920, and #4040 participate in a nine-whale surface active group (SAG) in the Gulf of St. Lawrence. Photo: Marianna Hagbloom/NEAQ/CWI/DAL

# Mortality and Entanglement UPDATE

In each newsletter, we report on the most recent mortality and entanglement events (since the last newsletter or approximately six months). It is important to remember that this list includes the minimum number of dead and entangled whales. Distribution shifts, survey effort, funding, and weather are all factors that may affect detection of dead and entangled whales and may well lead to an under representation of mortality and entanglement events in this population.

In January 2018, as the right whale research community was still grappling with the devastating loss of 17 right whales during the previous year, the first dead whale of 2018 was found in the mid-Atlantic (see *Mortality and...in RWRN, May 2018*). Seven months passed before the second mortality of the year was reported.

## New Mortalities

**Unidentified** (juvenile male): In late August a dead, floating right whale was reported off Martha's Vineyard, Mass. A few days later the carcass washed up on a secluded beach on Monomoy National Wildlife Refuge, where a necropsy was performed. No gear was found on the carcass, but based on external evidence, the cause of death is suspected to be drowning due to entanglement. The young (based on size) whale was not identifiable using physical features due to the level of decomposition; we hope that the genetic samples that were collected will eventually lead to the identification of the individual.



**Unidentified:** On October 14, another right whale carcass was spotted about 100 nautical miles east of Nantucket by a NOAA oceanographic vessel. Although the whale was extremely decomposed, deep wounds consistent with entanglement were visible on the ventral side of its body. As with the August mortality, samples were collected for genetic analysis.

## Entanglement Update

**Kleenex** (Catalog #1142; adult female, unknown age): In our last newsletter, we reported on **Kleenex's** long entanglement and an April disentanglement attempt (see *Mortality and...in RWRN, May 2018*). She was seen several times in June and July in the Gulf of St. Lawrence by the Northeast Fisheries Science Center (NEFSC) aerial survey team. She was still entangled but no disentanglement response was launched. When **Kleenex** was last seen, in late July, her health appeared to have deteriorated considerably. Her fate is unknown.

## New Entanglement

**Catalog #4091** (8-year-old female): In May, during a routine NEFSC right whale aerial survey, #4091 was observed entangled in the Great South Channel (southeast of Cape Cod). Due to weather conditions, no disentanglement response could be mounted. **Catalog #4091** had previously been seen in Cape Cod Bay just six days prior not entangled. She has not been sighted again, and her fate is unknown.

**Catalog #3843** (10-year-old male): In late July, research groups (including the Anderson Cabot Center team) working in the Bay of Fundy found and documented an entangled right whale. Due to a number of circumstances, no disentanglement response occurred. The following day, a search involving multiple organizations/agencies commenced but was hindered by poor weather conditions and reduced visibility. Less than one week later, #3843 was again sighted and a disentanglement team responded. They were able to cut off some of the trailing gear before he quickly swam away. He has not been sighted again, so his current condition and amount of entanglement remaining, if any, is unknown, but we remain optimistic.

**Catalog #3960** (9-year-old male): On August 20 during an Anderson Cabot Center, Canadian Whale Institute, and Dalhousie University research cruise in the Gulf of St. Lawrence, #3960 was sighted and found to be severely entangled. The team felt that the entanglement was very recent as the whale was bleeding. Over the course of two hours, they witnessed him thrash violently each time he surfaced from 15-minute dives. Then the entanglement appeared to shift dramatically and the whale sped up and swam away. It's believed that #3960 may have freed himself from the gear, but he has not been seen since. We will have to wait for future sightings to confirm that he is truly gear-free.

—Monica Zani

**Catalog #3960** is entangled by multiple lines and buoys from fishing gear in the Gulf of St. Lawrence. At top, broken baleen is visible jutting out of the right side of his mouth.

Photos: NEAq/CWI/DAL





## A Rare Sighting

On July 23, the whale watchers from the Elding Adventure at Sea ([elding.is](http://elding.is)) saw a North Atlantic right whale northwest of Reykjavik, Iceland. Photographs taken by Captain Guðlaugur Ottesen Karlsson allowed members of our right whale research team to identify it as **Mogul (Catalog #3845)**, a 10-year-old male born to **Slalom (#1245)** in 2008.

There have only been three different whales identified off Iceland in the last 30 years. Two of them were reproductive females, **#1412** and **#1710**, and the third, **#2260**, is of unknown sex and age. All three have some long gaps in their sighting histories (up to 15 years), so it is not surprising that they are traveling to distant habitats. Photos of these whales, along with their sighting histories, can be seen on the Catalog website, [rwcatalog.neaq.org](http://rwcatalog.neaq.org).

**Mogul**, however, does not fit the profile of the other Iceland whales. His mom, **Slalom**, is seen regularly in the main habitats along the Eastern Seaboard of the U.S. and Canada, and **Mogul** has been seen every year since his birth in 2008, and almost always near the coast. **Mogul** has at least two brothers and two sisters. His sister **Insignia (#2645)** is the only sibling to have offspring of her own. **Insignia** has had four calves so far, making **Mogul** an uncle many times over.

Prior to his Iceland sighting in July, **Mogul** had last been photographed off Marblehead, Mass., on May 2, 2018.

Local residents photographed two right whales from the beach and submitted their photos to the catalog. One of the whales was **Mogul**! Right whales have had to change where they go to feed in recent years in response to a rapidly warming Gulf of Maine. We wondered if other right whales would be seen in Iceland waters this summer, but as far as we know, **Mogul** was the only one.

—Philip Hamilton

This article first appeared as a blog post: [accol.org/blog/a-rare-right-whale-sighting-in-iceland/](http://accol.org/blog/a-rare-right-whale-sighting-in-iceland/)



Above, **Mogul** skimfeeds west of Reykjavik, Iceland, in July 2018. At top, **Mogul** dives with the coast of Iceland in the background.

Photos: Guðlaugur Ottesen Karlsson/Elding Adventure at Sea.

# Discovering That Some of Our Friends Have Been Around a Long Time

Two of the pioneers of whale research at Woods Hole Oceanographic Institution (WHOI), Drs. Bill Watkins and Bill Schevill, photographed right whales in the waters around Cape Cod from 1955 through the early 1980's. The New Bedford Whaling Museum in New Bedford, Mass., was recently given their old files and graciously allowed us to review the images. In the process, we discovered quite a treasure trove of new information!

While some of the sightings in the collection had already been submitted to the North Atlantic Right Whale Catalog, others had not. The photos from the Watkins and Schevill collection allowed us to add 20 right whale sightings from 1955 to 1973 to the database. Of those, we have matched two to the Catalog, both males: **Scoop (Catalog #1327)** seen on April 13, 1956, and **Radiator (#1019)**, photographed in Cape Cod Bay on May 10, 1958. Before we received these photos, our earliest sighting of **Scoop** was in 1982, so we added 26 years to his sighting history! That 60-year time span between his first sighting in 1956 and his most recent sighting in 2016 makes him the oldest whale alive (that we know of). The record holder before this was **#1045**, a calving female with a sighting history that also spanned 60 years. Sadly, she was last seen in 1995 with a deep, and undoubtedly fatal, propeller wound on her head. **Radiator's** first sighting had been in 1980, so the 1958 sighting added 22 years to his sighting history. He had a 51-year sighting span, but he was entangled when

last seen in 2009 and is now presumed dead. How much longer would all these whales live if we stopped injuring them?

We are still working on matching the remaining sightings, but we know that at least one of the whales had never been photographed before. That whale, now known as **#1010**, has been added to the Catalog.

The North Atlantic Right Whale Photo Identification Catalog is a collaborative effort among many scientists

that serves as the foundation for most research initiatives on right whales; it provides critical life history data that allows us to track reproduction, mortality, movements, and anthropogenic scarring. The Watkins and Schevill collection has been an invaluable resource and has enriched our understanding of the lifespan and habitat use of individuals in this fragile population.

—Philip Hamilton



Photo: Anisha Rajaselvam/CWI

The unique scar on **Scoop's** back allowed us to confirm the match, 60 years apart, at top, on September 16, 2016, in the Bay of Fundy and below, on April 13, 1956, in Cape Cod Bay.



Photo: Fred Beck/WHOI

# Sponsored Whale Update

*Be sure to check out the map to see where your whale has been over the past year.*

After the spring newsletter went to print, Cape Cod Bay had an influx of hungry whales, including four of our sponsorship whales! Here are the sighting updates from this spring and summer.

## Manta (Catalog #1507):

Seen in Cape Cod Bay on April 30 by the Center for Coastal Studies (CCS), and on May 1 by the Northeast Fisheries Science Center (NEFSC) vessel survey. Observers noted that he appeared thin and had poor skin condition. Two months later, the NEFSC aerial survey team sighted him in the Gulf of St. Lawrence on July 20 and 21, but his situation appeared the same.

## Aphrodite (Catalog #1701):

Photographed in Cape Cod Bay by CCS on April 22, 23, and 30, and on May 4. At each sighting, she was feeding.

## Calvin (Catalog #2223):

Observed skimfeeding in Cape Cod Bay on April 27 by CCS, then she spent much of the summer in the Gulf of St. Lawrence. NEFSC saw her there on June 11, 17, and 30, July 7, 11, 20, and 21, and August 3 and 6! On August 6, NEFSC documented her in two different surface active groups. She was also seen on July 20 and 21, and August 21 by the joint research team from the Anderson Cabot Center, Canadian Whale Institute, and Dalhousie University.

## Shackleton (Catalog #2440):

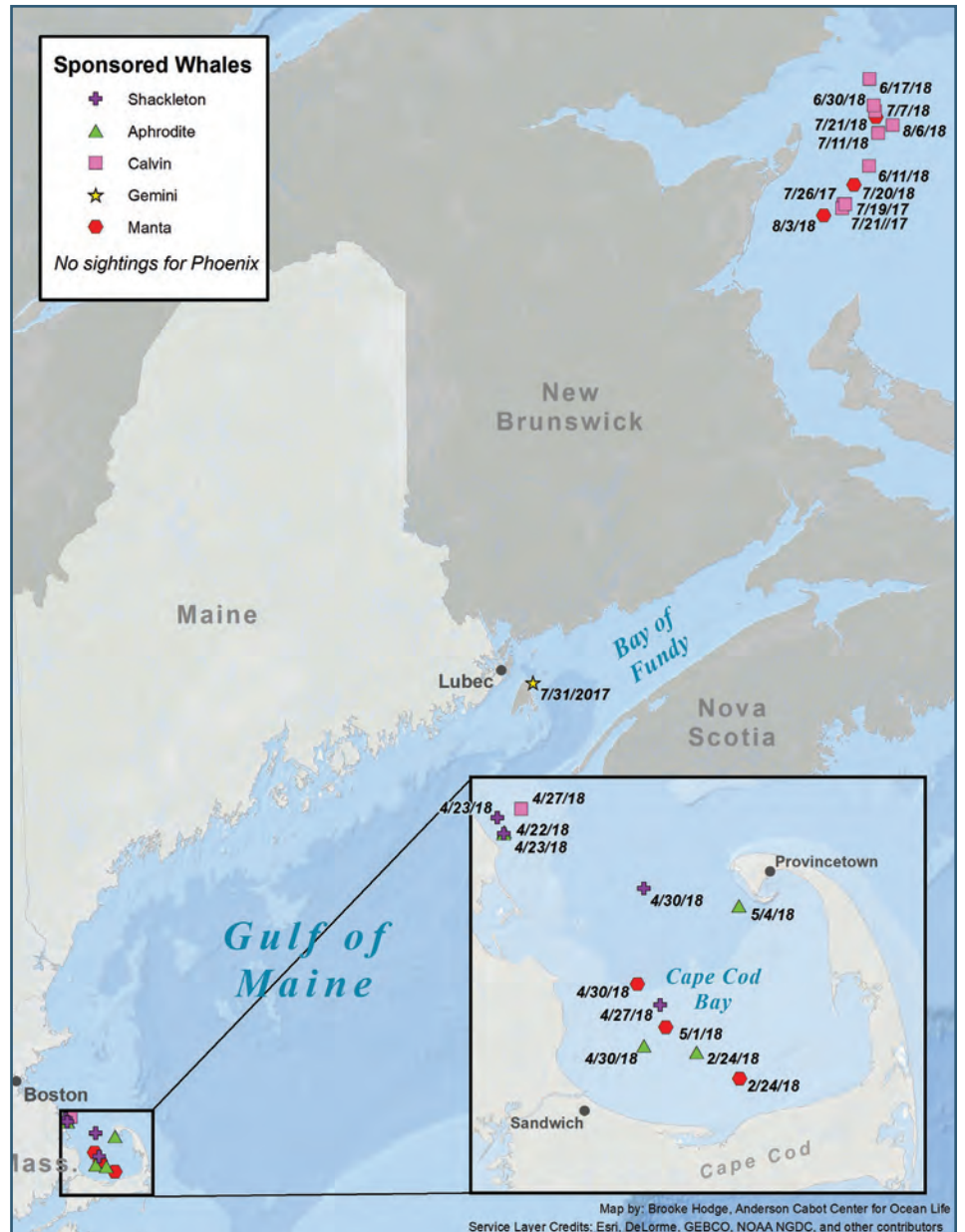
Seen in Cape Cod Bay by CCS on April 22, 23, 27, and 30. Like Aphrodite, he was observed feeding at each sighting.

Unfortunately, we have no recent sightings of **Gemini (Catalog #1150)** or **Phoenix (Catalog #1705)** to report. Thank you for sponsoring a right whale and supporting our research!

—Marianna Hagbloom



Calvin in the Gulf of St. Lawrence in July. Photo: ACCOL/CWI/DAL



Sponsored whale sightings July 2017 through August 2018. Map: Brooke Hodge/ACCOL/NEAq



# New England Aquarium

Central Wharf  
Boston, MA 02110-3399

PRINTED ON  
RECYCLED PAPER  
275/11-18/Alpha

## Calling All Teachers! We now offer a Classroom Sponsorship!

Perfect for classrooms or service projects, this sponsorship includes a full-color booklet about your whale, a one-year subscription to *Right Whale Research News*, a small informational book about whales, a plush right whale for the classroom, certificates and stickers for up to 30 students, and access to the right whale-themed Smithsonian in Your Classroom lesson plans "*The Tale of a Whale*."

To learn more about our sponsorship program, visit us online. [neaq.org/rwsponsorship](http://neaq.org/rwsponsorship)



## Gift Ideas

Give an adorable right whale plushy, a colorful T-shirt, or other right whale gifts and support our efforts to save right whales.

Buy online. Shipping is free!  
[rightwhaleresearch.bigcartel.com](http://rightwhaleresearch.bigcartel.com)

### Editor

Marilyn Marx

### Contributors

Marianna Hagbloom  
Philip Hamilton  
Brooke Hodge

Amy Knowlton  
Monica Zani

In this newsletter, all photographs of right whales in U.S. waters were taken under NMFS/NOAA permit under the authority of the Marine Mammal Protection Act and the U.S. Endangered Species Act. *Right Whale Research News* is produced and published by the New England Aquarium. We welcome your comments and suggestions.

Read more about our project at [andersoncabotcenterforoceanlife.org](http://andersoncabotcenterforoceanlife.org).

You may access past issues of *Right Whale Research News* on our website at [neaq.org/rightwhale](http://neaq.org/rightwhale). The archive goes back to 2005, and all but the two most recent issues of *RWRN* are available. Now when one of the articles in the current issue refers to an earlier piece on the same subject, it's easy to check it out!

## Thank you!

We would like to thank all the individuals, organizations, and schools that continue to support our research with annual sponsorships and donations. In these difficult economic times, with federal research budgets shrinking, your support is more critical than ever, and we truly appreciate your generosity. Sponsorship funds are used by our Right Whale Program to support activities that directly contribute to the conservation of North Atlantic right whales.

## 2018 Right Whale Festival

The Aquarium hosted the fifth annual New England Right Whale Festival on May 6, and with more than 3,400 participants, we almost doubled our attendance from last year! Representatives from 13 organizations shared their knowledge about right whales and engaged visitors with fun, hands-on activities. As in past years, the festival was co-sponsored by the Calvineers, a group of seventh- and eighth-grade students from the Adams School in Castine, Maine, whose mission is to educate the public about right whales and promote conservation.



Calvineer Nora Spratt shows a festival attendee a whale rib bone. Photo: Jon Kinson

Save the date of May 5, 2019, for next year's festival. We hope to see you there!