



New England
Aquarium

Protecting the blue planet

Right Whale

RESEARCH NEWS

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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 a particular aspect of our project at www.neaq.org. 

Editors Note

We are happy to announce that you may now access past issues of *Right Whale Research News* on our website http://www.neaq.org/conservation_and_research/blue_lifestyle/. 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!



Orion (Catalog #3240) rests her chin on the back of Catalog #3405 in the Bay of Fundy on August 7, 2014. Photo: Kelsey Howe/NEAQ.

Right Whales on the Move

Philip Hamilton

As we have reported in past newsletters, right whales have dramatically altered their distributions in recent years. Sightings in the Bay of Fundy, among other feeding habitats, have been inconsistent, but decreasing (see graph); so when our team packs up in July to head to Lubec, Maine, for our field work in the Bay and on Roseway Basin (RB), there is a lot of speculation about what we will find. This year, the beginning of the season in the Bay looked promising—lots of whales and many of them doing typical feeding dives. There was a collective sigh of relief and satisfaction as the team settled into what they know best—photographing and identifying a lot of whales in a short period. Unfortunately, by the third week in August few whales remained. Many of the same whales had moved to RB, where a second team of researchers from the Canadian Whale Institute (CWI) and the Aquarium were

surveying. As it turned out, the whales never really returned to the Bay in any numbers; 85 percent of all the sightings there occurred between August 7 and 12! A similar pattern occurred on RB: we found relatively robust numbers in the beginning, but they didn't stay for long—65 percent of all the sightings occurred on August 19 and 20.

It's always possible that we missed a concentration of whales on RB, but this year there were other efforts in the area to bolster these findings. A joint effort with Dalhousie University and Woods Hole Oceanographic Institution deployed two autonomous underwater gliders: one listening for whales and one looking for their food. Both gliders reported back to a land station via satellite every day. Very few right whale calls were heard on RB in September; in fact most of the calls were detected relatively

Continued on page 2

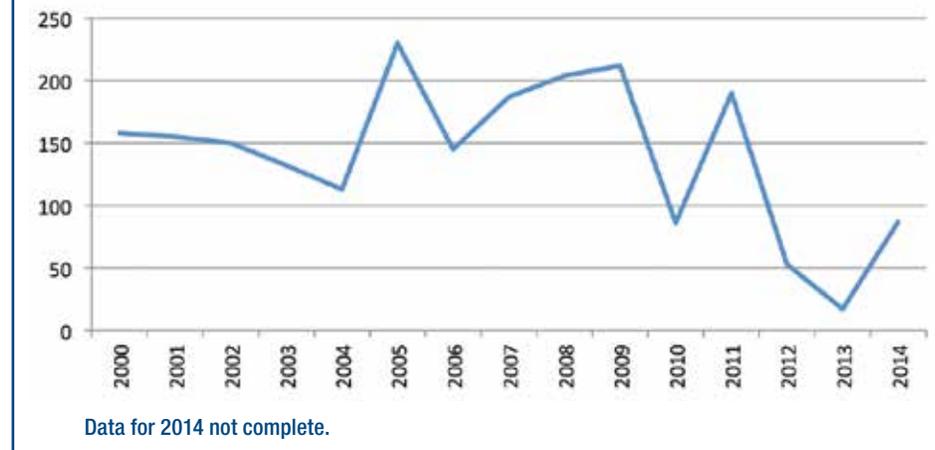
Calving Season

Continued from 1

near shore well to the north and east. CWI also deployed and recovered two listening buoys (AMARS—developed and provided by Jasco Applied Sciences, Halifax, N.S.) that were anchored near the bottom in the heart of the RB area. Preliminary results from Jasco indicate that right whale calls were recorded in August, so it will be interesting to see how the September results compare. The results from those collaborations, while still under analysis, suggest we didn't miss much during our RB boat surveys!

So, where were the whales? It's the same question we asked last year, and here are a few possibilities: Some could have been north of Georges Bank, where the Canadian Department of Fisheries and Ocean photographed a very large social group in July. However, the National Marine Fisheries Service surveyed that area in early September and found no right whales. Some clearly went further north, where three areas had right whales in greater numbers than usual. Right whales were seen in the Gulf of St Lawrence off the northwest corner of Nova Scotia and in the Bay de Chaleur near the Gaspé Peninsula from June into September. Also, there were two sightings of right whales off Newfoundland in September (sadly one of them was a dead, entangled whale). With these sightings in mind, we wonder whether the few right whale calls detected near the Nova Scotia coast by the glider were from whales from the Bay and RB heading north to one of these other areas. It is times like these when we realize what a big ocean it actually is!

Fourteen years of right whale counts in the Bay of Fundy



Recent Funding for New Work

Philip Hamilton

This summer the Right Whale Research Program was awarded funds that will allow us to pursue some exciting projects. These funds from the National Marine Fisheries Service (NMFS) will be used to update our analysis of human-caused scarring on right whales. The previous work on this issue resulted in an important paper, “Monitoring North Atlantic right whale *Eubalaena glacialis* entanglement rates: a 30 yr retrospective” by Amy Knowlton and others, showing that on average 25 percent of photographed animals are entangled or scarred from ropes *annually* with 83 percent of the population showing evidence of such interactions. It is important to continue this work to determine if the recent distribution changes have resulted in changes in right whale encounters with fishing gear. This money will also allow us to provide near real-time identifications for entangled, dead and injured whales to assist field teams engaged in genetic sampling efforts and to inform government managers of recent impacts to right whales. And lastly, this funding will support the development of case studies to describe recent anthropogenic injuries.

We also received funding from the Institute of Museum and Library Services (IMLS) to work with Trent University in Peterborough, Ontario, to compare all photographic data housed at the Aquarium to the genetic database maintained there. Since the two use very different, independent techniques to individually identify whales, these comparisons allow us to detect errors in either database. Previous efforts along these lines resulted in some exciting discoveries, including the first reciprocal adoption of two calves by different mothers (see *Are you my mother?* in *RWRN Dec 2010*). This time, we are hoping to focus on identifying dead whales; there is often poor quality photographic and genetic information available from right whale carcasses due to rapid decomposition, but when the data are combined and additional information on individual sighting history is included, difficult identifications are possible.

We are grateful to the IMLS and NMFS for their support of this important work!

Have You Seen This Whale?

Moe Brown

Right whales in the western North Atlantic are shifting their habitat use patterns. Although spring sightings in Cape Cod Bay have been at the highest recorded over the last three years, summer and fall sightings in the traditional critical habitat areas in the Gulf of Maine and Eastern Canada have been sparse. There are several efforts underway to get help from eyes on the water along the eastern seaboard of the U.S. and Canada. Professional mariners, fish harvesters, whale watch operators, recreational boaters and the general public are all able to participate in the citizen scientist programs.

In 2013, biologists at Fisheries and Oceans Canada posted hundreds of right whale sighting placards in small ports and harbors, post offices, grocery stores and community centers, and in 2014 they distributed these placards to all fish harvesters in the Canadian Maritimes. The reporting hotline has resulted in reports of right whales around Cape Breton and the eastern shore of Nova Scotia. Any photographs are shared with Aquarium researchers to add these important sightings to our database. A similar program has been initiated in the U.S. in 2014 with large aluminum signs being placed in marinas along the Northeast coast.

In October 2014, Whale Alert 2.0 was launched. It is a free app available on iTunes and provides mariners with whale vessel-strike mitigation measures and a reporting interface for live whale sightings (as well as ones that are dead, injured, stranded or entangled). The app is geographically smart, so it will direct the user's sighting to the relevant government agency or distressed whale response group. A version of Whale Alert for Android phones will be available soon.

In addition we also spend time tracking social media and YouTube videos for postings of right whale photographs or video. The goal of this program is to piece together the sightings outside of the known habitat areas to help direct future surveys.

These recently created signs for Canada (top right) and the Northeast U.S. (bottom right) will give boat operators cues for identifying right whales at sea and contact information to report sightings.

 Fisheries and Oceans Canada / Pêches et Océans Canada			
WANTED		RECHERCHÉ	
Information requested on the whereabouts of NORTH ATLANTIC RIGHT WHALES in Canadian waters.		On cherche à connaître les allées et venues des BALEINES NOIRES DE L'ATLANTIQUE NORD dans les eaux canadiennes.	
			
THESE WHALES CAN BE RECOGNIZED BY THE FOLLOWING: <ul style="list-style-type: none"> • A broad back with no dorsal fin • White patterns on the head • Broad paddle-shaped flipper and a smooth Y-shaped fluke • V-shaped blow 		LA BALEINE NOIRE EST RECONNAISSABLE PAR LES CARACTÉRISTIQUES SUIVANTES: <ul style="list-style-type: none"> • Un large corps noir dépourvu de nageoire dorsale • Des tâches blanches sur la tête • Des larges nageoires pectorales en forme de rame • Une nageoire caudale lisse en forme de "Y" et un souffle en "V" 	
PLEASE DO NOT APPROACH BUT RECORD:		SVP N'APPROCHEZ PAS MAIS NOTEZ:	
<ul style="list-style-type: none"> • Date • Location (coordinates) • Number observed • Photographs (if possible) 		<ul style="list-style-type: none"> • La date • L'emplacement (coordonnées) • Le nombre observé • Les photos (si possible) 	
PLEASE SEND INFORMATION TO/VEUILLEZ SVP CONTACTER email/courriel: XMARwhalesightings@dfo-mpo.gc.ca Ph/Tél: (506)529-5838			
EMERGENCY CONTACT NUMBER FOR ENTANGLED, ENTRAPPED, STRANDED OR DEAD RIGHT WHALES / NUMÉRO D'URGENCE POUR LES BALEINES NOIRES ENCHÊVÊTRÉES, PIÉGÉES, ÉCHOUÉES, OU MORTES 1-866-567-6277 MARITIMES			

North Atlantic Right Whales Need Your Help!

This endangered species visits our region throughout the year. Please protect right whales by reporting sightings and keeping a safe distance.



You Can Help!
Report sightings of right whales or marine mammals and sea turtles in distress to the Greater Atlantic Region NOAA Fisheries Marine Animal Hotline
866-755-NOAA (6622)
or the US Coast Guard on VHF Channel 16

If You See A Right Whale:

- Report the sighting to NOAA Fisheries or US Coast Guard.
- Operate vessel at slowest safe speed.
- Remain alert for other whales in the area.
- Depart area slowly and safely if whale approaches.

Remember:

- It is illegal to approach North Atlantic right whales within 500 yards (1,500 feet).
- The law requires vessels 65 feet or greater to slow to 10 knots within seasonal management areas.*
- All vessels should consider slowing to 10 knots in seasonal management areas.
- If you see whales, basking sharks, or birds feeding on plankton patches, pay close attention; a right whale might also be feeding nearby.

Look Out For Right Whales!



Download a free right whale spotting and reporting app: www.whalealert.org
 See resources when sailing pleasure or other vessels: www.seaheal.org
 Search about seasonal management areas and speed restriction regulations: www.greateratlantic.noaa.gov/management



Update on Mortality, Injury and Entanglement

Monica Zani

In each newsletter we report on new injuries, entanglements, and mortalities that the population has suffered in the preceding six months and update the on-going cases. The following is a brief summary of all these known (documented) events.

Mortalities

Since our last newsletter a startling number of mortality events have been documented.

- **Catalog #3966** (5-year-old male) was sighted floating dead in mid-July off the coast of Massachusetts. Due to the poor condition of the carcass towing the whale ashore for a necropsy was not an option.
Cause of death: unknown
- **Unknown I.D.**
In late August parts of an extremely decomposed right whale washed ashore in Rhode Island. It is possible that the carcass is that of **Catalog #3966** but we will have to wait for genetic testing for confirmation.
Cause of death: unknown

- **Unknown I.D.**
In early September a right whale was found floating dead, entangled in a large amount of fishing gear. The carcass was located more than 100 miles from the Newfoundland shore, making retrieval unfeasible.
Cause of death: entanglement
- **Unknown I.D.**
Yet another dead right whale was discovered at the end of September, also entangled, off the Massachusetts coast, but was not recovered. No individual identification can be determined from the photographs.
Cause of death: entanglement

Injury

Each year many whales are documented with new severe scars and/or wounds that indicate a serious entanglement has occurred in the recent past. Typically we don't report on these individual cases in *RWRN* but hope to develop a method to display this information in future newsletters, as these severe injuries can lead to the whale's demise. However, on a positive note, we have an update on a young whale that suffered a severe injury a few years ago.

- **Catalog #4160** (3-year-old male)
In July of 2011 **Catalog #4160** was a calf (of **Gannet, Catalog #2660**), and was sighted off Massachusetts alone and with deep entanglement wounds. Later that year, his mother, **Gannet**,



Catalog #4001 in the Bay of Fundy in September. Although the extent of the entanglement is unknown, tight head wraps like this one are often lethal.

Photo: Johanna Anderson/NEAQ

was seen twice, in the Gulf of St. Lawrence and the Bay of Fundy, also alone and bearing severe entanglement wounds. We speculate that the pair sustained their injuries at the same time and perhaps it was that event that caused their separation. Considering that **Catalog #4160** would still have been nursing at his approximately seven months of age, combined with the extent of his injuries, we feared he wouldn't survive.

However, in August of this year he was documented on Roseway Basin by our survey team and had recovered well! Unfortunately, his mother, **Gannet**, has not been resighted since 2011.

New Entanglements

Three new right whale entanglements have been documented in the last six months. This does not include the two entanglement mortalities noted above.

- **Unknown I.D.**

Documented in late June on Georges Bank by a NOAA survey plane and appeared to be in extremely poor condition. Due to the distance from shore no response could be launched.

- **Catalog #4001** (4-year-old male) First documented entangled in the Bay of Fundy in early September. Although there was a disentanglement team and three boats on the water trying to relocate the whale, he was lost due to fading light and worsening sea state. **Catalog #4001** was resighted in October on Jeffreys Ledge, but due to time constraints and distance from shore no disentanglement response was launched.

- **Catalog #3279** (12-year-old male) first documented entangled in the Bay of Fundy in mid September. Due to the evasive behavior of the whale, time of day and weather forecast, no disentanglement effort was possible.

Updates on Previously Entangled Whales (since last newsletter)

- **Kingfisher (Catalog #3346)**

(11-year old male)

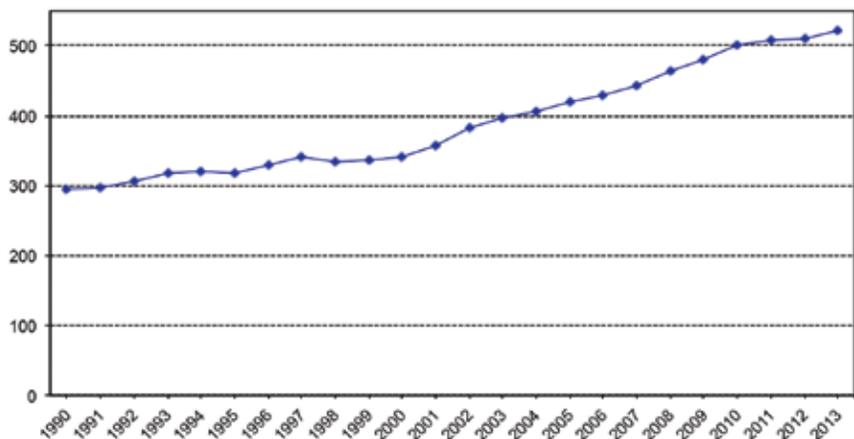
Currently holds the unfortunate title of being the longest, persistent entanglement case. First entangled at the age of 1 year, he has been carrying gear on his right flipper for the past 10 years. Kingfisher re-sights are common by both aerial and boat-based survey teams, and he was most recently sighted in August on Roseway Basin (off Nova Scotia). While his right flipper and entanglement was not seen, it is assumed that he still carries his gear.

Previously Entangled Whales with No Current Update

Entanglements are documented every year, and not all cases can be resolved through disentanglement. Often we don't have any updates on previous cases because the whale has not been re-sighted. To our knowledge these entanglements may still persist or, in some cases, the whale may have died offshore. Currently there are 11 such entanglement cases from the past five years. If these whales are not sighted for six years, we presume they are dead.

Keeping Count

As curators of the right whale photo-id catalog, we keep a careful eye on how the population is doing each year by conducting an annual count. Since right whales are not sighted every year this would make an annual tally of individuals sighted biased towards low numbers. The approach we have taken to account for this is to presume an animal is alive if it has been sighted within the past 6 years. Very few animals in the population have sighting gaps longer than 6 years, so this approach is a good way for us to get a near real-time assessment of how this small population is faring. As you can see, the population has seen steady growth especially since 2000. Overall this is encouraging news yet the rate of population growth at 2.5 percent on average is much lower than expected for a species that should be in recovery mode. For example, southern right whale populations have been growing at 6 percent to 7 percent. The human impacts this small population endures have definitely curtailed growth and remain one of the main challenges these whales (and those who try to keep them out of harms way) continue to face.



The number of individuals presumed to be alive (seen within previous 5 years or the given year)

Sponsored Whale Update

Marianna Hagbloom

Since our Sponsored Whale Update in the Spring 2014 newsletter, there has only been one new sighting of a sponsored whale: **Calvin!**

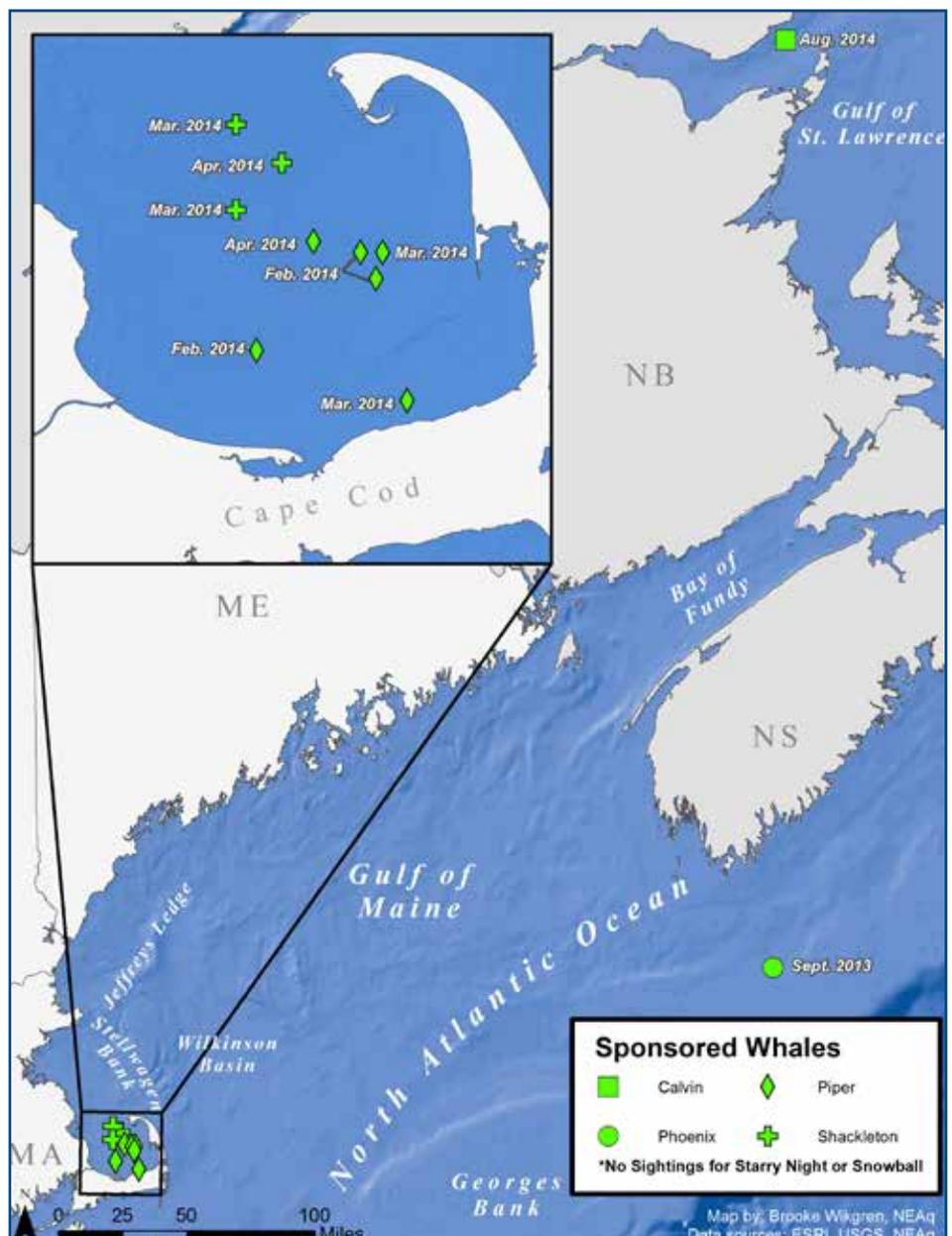
Calvin (Catalog #2223) was seen on August 16 in the Gulf of St. Lawrence during a Canadian Department of Fisheries and Oceans survey. **Calvin** was spotted with **Catalog #1233**—a female that was first seen in 1974! A few other right whales were seen in the area as well.

The lack of sightings doesn't discourage us, since we know whale movements have been irregular. We hope it doesn't discourage our sponsors either—your whale may not show up on the map, but *you* are making a mark! This fiscal year, our program ran out of grant funding for a brief period of time; we would not have been able to continue our work without the support of our donors and sponsors. We'd like to express our sincere thanks to all of you, because your contribution does make a difference, as it helps us carry out our conservation research on this enigmatic species. Thank you!

We look forward to introducing some new whales to our sponsorship program next year, and we want to hear from you about whom you'd like to sponsor! Should it be a young or old whale? Should it be a whale with unique scars, or a silly name, or a weird callosity pattern? Email your suggestions to mhagbloom@neaq.org, and we'll reveal the newest faces in an upcoming newsletter!

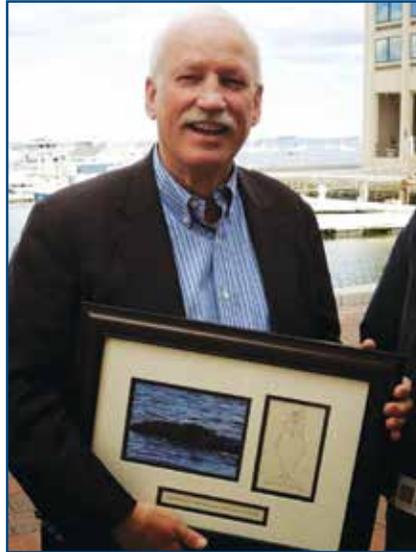
Top: Calvin in the Gulf of St. Lawrence, August 16, 2014. Photo: Yves Morin/ Dept. Fisheries and Oceans Canada.

Map: Sponsored whale sightings September 2013 through August 2014. Brooke Wikgren/NEAQ



A Special Honor

When Howard “Bud” Ris retired as head of the New England Aquarium earlier this year we decided that we would like to honor his nine-year tenure by naming a whale after him. Although a departure from normal naming protocols, we felt it was a fitting tribute to commemorate Bud’s vital contribution to the Aquarium and his deep commitment to right whale research. We chose **Catalog #1158** for the honor because the name is consistent with an unusual feature of the whale: she (yes, **1158** is a female) has a long history of being a good “buddy” or “bud” to another female right whale, “**Half Note**” (**Catalog #1301**). The two whales have been sighted together often and actually have the longest documented association of any two individual North Atlantic right whales (see *The Unusual Case...* in *RWRN* May 2014). By naming



Bud Ris holds the plaque displaying Catalog #1158 photo and new name—Bud—an honor that has only been bestowed on a few humans over the past 30 years.

Catalog #1158 “Bud,” we’re honoring someone who has shown dedication and support for the right whale cause.

Welcoming A New President

Succeeding Bud Ris as Aquarium president is Dr. Nigella Hillgarth, a distinguished zoologist and the longtime Executive Director of the Birch Aquarium (which is part of U.C. San Diego’s Scripps Institution of Oceanography). Dr. Hillgarth is a native of Ireland and earned her doctorate in animal behavior at England’s Oxford University. We’re thrilled to welcome her to Boston and New England Aquarium!



Holiday Gift Ideas

Are you looking for a special gift for someone this holiday season? Here are a few fun and interesting suggestions from our right whale collection. Plus, with every purchase you’ll be helping to support right whale research!

Plush right whale There are many stuffed animals on the market, but this is the only one that looks like a right whale! This little whale is cute, soft and accurate too, with wool callosities, corduroy baleen and paddle-shaped flippers. 15 inches long. \$20.

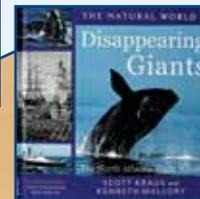
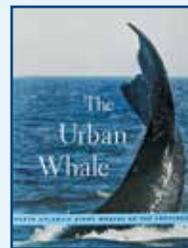
T-Shirt New colors and design! Kids sizes too! High quality, 100% cotton, with great right whale and New England Aquarium logos. In colonial red, royal blue and heather gray for adults and apple green and Caribbean blue for kids. Adult (men and women) and kid sizes: S, M, L, XL. \$15 - 20.

Books are also available check out the website for more information.

Right Whale Sponsorship

Share the compelling story of a right whale with a friend! By learning about the life of an individual right whale, a sponsor will

gain a more in-depth understanding of the struggles and successes these endangered whales experience. Sponsors will receive a Sponsorship Certificate with a picture of their chosen whale, the book *Disappearing Giants*, written by Scott Kraus and Ken Mallory of the New England Aquarium and a colorful and informative four-page pamphlet that includes the life story, composite drawing and map of sightings of the specific sponsored whale. It also includes a one-year subscription to our biannual newsletter and links to our website and blog that allow you to stay updated on right whale news.



Kids T

For more information visit the following link:



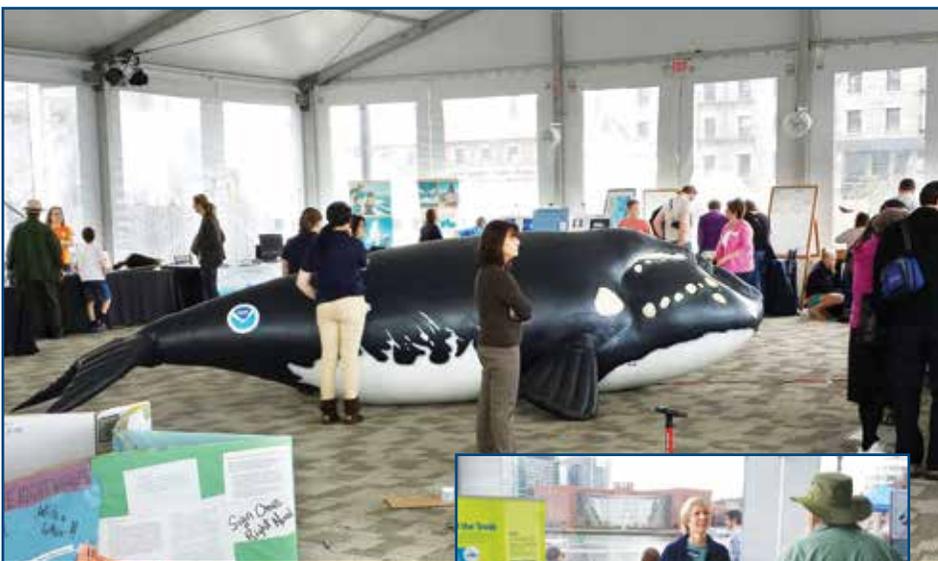
http://www.neaq.org/get_involved/animal_sponsorship/right_whale_sponsorship.php (or go to the www.neaq.org homepage and click on Get Involved and Sponsor an Animal to find the right whale sponsorship page).



New England Aquarium

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Right Whale Festival

In early May, the Aquarium hosted the first Southern New England Right Whale Festival. Eighteen organizations participated, sharing information about their research and advocacy on behalf of right whales. Approximately 1,200 attendees passed through the festival tent during the four-hour event. The festival was co-sponsored by the Adams School Calvineers from Castine, Maine (see *The Calvin Project...* in *RWRN May 2008 and 2009*). The second festival will be held at the Aquarium on Sunday, May 3, 2015, so mark your calendars!



IMATA Raffle

In late April, the Aquarium's Marine Mammal Department hosted The International Marine Animal Trainers' Association (IMATA) regional workshop and they chose to give the proceeds from their raffle—\$1,125—to the Right Whale Research Program! Thanks to the Marine Mammal Department for thinking of us; we are grateful for their support!

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 before, and we truly appreciate your generosity. Sponsorship funds are used by the New England Aquarium Right Whale Program to support activities that directly contribute to the conservation of North Atlantic right whales.