

RIGHT WHALE NEWS

*An independent forum for right whale conservation and recovery,
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Change

Change is one of few known certainties. It is the theme of this issue. Changes are occurring in right whale distribution, surveys, state of knowledge, management, politics, and available resources. We live in interesting times. For those who subscribe to successful co-existence of right whales and humans, best use of available resources, and wise decision-making, attention and participation are required.

Editor

2012 Right Whale Population Estimate: 510

On 6 November 2013, Philip Hamilton, New England Aquarium, provided the best estimate of catalogued right whales—510 individuals—to the annual meeting of the North Atlantic Right Whale Consortium. A caveat exists: the estimate excludes potential un-photographed whales, which is supported by genetics data suggesting the existence of additional individuals in the population. For this report, there was an additional caveat—changes in right whale distribution (see reports below) meant that a portion of the population was not available to be photographed in “traditional” survey areas. For this reason, the 510 estimate—essentially unchanged from the previous (2011) estimate of 509—includes more uncertainty and may be influenced by changes in distribution rather than changes in the population.

The full report is posted at www.narwc.org, under Resources and then Publications.

Ship-Strike Rule at the White House

Five years after a law was passed requiring vessels longer than 65 feet to slow down to 10 knots or less within 20 nautical miles of designated areas along the eastern coastline to mitigate vessel-whale collisions, the public comment period (*Right Whale News*, June 2013) on a proposed rule to continue the speed regulations has closed. The National Marine Fisheries Service has reviewed the comments received and crafted a final rule, which was submitted to the White House on Monday, 21 October 2013.

Within the Executive Office of the President of the United States sits the Office of Management and Budget (OMB), the largest office within the executive branch. It is reported that the review is occurring in this office. A timeline for the outcome is not known.

The rule of 10 October 2008 included a “sunset clause,” the purpose of which was to require an evaluation of the effectiveness of the rule before taking further action. Based on this clause, the present rule will expire on 9 December 2013.

Bay of Fundy Field Season 2013: The Mystery Continues

Contributed by Marianna Hagbloom, New England Aquarium

Recently the right whale research community has been witnessing changes in the way right whales are using their typical known habitats. The data from 2013, the New England Aquarium’s (NEAq) 34th field season, contributed information about this phenomenon. This year was remarkable because of the near absence of right whales in the Bay of Fundy (BOF); our team documented only *FIVE* individuals after a total of 12 survey days during August and September. Weather, as usual, was a major factor limiting the number of survey days—a combination of strong winds, rain, and fog kept us on shore more than in most years. Photographs submitted by local whale-watch groups added an additional six unique individuals for the summer, including mother #1946 and calf, which were seen in July. For comparison, in 2012 we photographed about 40 individuals (*Right Whale News*, October 2012); while in 2011, we photographed about 166 individuals. Due to the lack of whales in the BOF and the inability to work those we did find, the joint team from Syracuse University and the Northeast Fisheries Science Center studying mother/calf pairs and the NEAq blow-analysis team did not collect any of the data they were hoping for. However, their teams did assist with survey efforts, so there were days when the BOF was covered by three boats.

NEAq’s offshore surveys were a major component of this summer’s field work. Additionally, for the next three years we will be able to look beyond the BOF and explore Canadian waters such as Roseway Basin (RB) to identify right whale critical habitats using both boats and aircraft. During this 2013 field season, two cruises and two days of aerial surveys were completed (see below for more details). These treks were fruitful, as approximately 45 individuals were photographed over the course of the four trips.

After our first three surveys in the BOF, we had surveyed 325 nm of tracklines with no right whale sightings. Three more trips would elapse until mother #3513 and her calf became our first sighted whales on 20 August. We were expecting to see more than just one pair; of the 20 mothers reported this year, 12 of the 17 mothers who had previously given birth (in previous years) brought their calves to the BOF. This was not the case this year—another anomaly! We didn’t have to work too hard for the second sighting of #3513 and her calf—we were caught by surprise on 28 August when a whale watch reported them at a location close to our field station in Lubec, Maine. While it’s not unusual for minke whales to appear around the area, it’s very rare for large whales to do so. The pair were observed for several hours and eventually made

their way back into the Bay. However, our two sightings of this pair would turn out to be the only times we saw a mother/calf in the area.



The whales came to us! At 10:45 A.M. on 28 August, whale watch Quoddy Link Marine reported a right whale mother (#3513) and calf on the western side of Campobello Island. Excited by the unusual location and the fact that we were starving for sightings, everyone in the house piled onboard the R/V Nereid. The team monitored the movements of the pair as they continued deeper into a channel known as Friar Roads, following them as far as Lubec, home of our field station. The whales repeatedly crossed between U.S and Canadian waters. Eventually the pair started swimming north towards the mouth of the channel, and were assumed to have made it back safely into the Bay of Fundy, as they were no longer in the area the next day. (Photo: M. Brown)

The only other mother/calf sighting occurred on 19 September on RB—a habitat where calves are not regularly seen. The mother was Catspaw (#1632), and her calf was sporting an enormous fat roll, which was great to see but that caused some confusion about the state of health at first (thin or fat?).

One BOF survey, on 6 September, initially seemed promising: three male right whales were seen, including a healthy looking Kingfisher (#3346), whose flipper has been entangled since 2004. Yet as we spent time observing Manta (#1507), we noticed that he was traveling not just south, but south *against* the tide—Manta was leaving the BOF full steam ahead, and we were no longer feeling as encouraged as we had been a few hours earlier. It had the smell of our 2012 field season—whales checking out the area but not staying. Sure enough, the remainder of our September BOF surveys left us empty-handed.

As the team remained stumped by the silence in the BOF, we received a few reports of right whales scattered around Nova Scotia—some far to the north off Cape Breton Island. We began to make appeals for any word of sightings, reaching out to fishermen, whale watches, and research vessels. Canadian DFO had done an outreach project to inform mariners as to what the species looks like and how to report a sighting. However, no hotspots containing these “missing” whales were unveiled. (*However, please see following article. Ed.*)

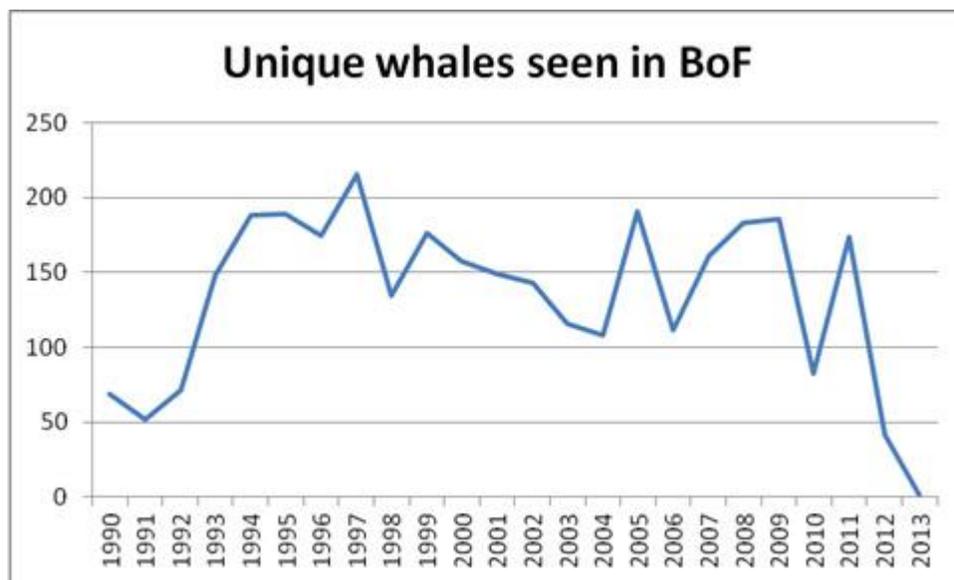
Our hopes at coming away from the season with at least some sightings were buoyed by plans to cruise through Roseway Basin (RB), last surveyed by NEAq in 2010 with 34 individuals photographed. Last year’s lack of whales in the BOF led to curiosity about what was going on in RB, so NEAq researchers were excited to peek into this area again. The first trip was 16-21 August, but the whales were not present in the large numbers that we hoped for. Three individuals were seen at the southwest corner of RB, and a fourth was seen two days later to the north of those sightings. Although disappointing, we felt this was a revealing trip—if the majority of the population were not found in the BOF or RB, where were they spending these months?

Our 18-21 September RB vessel survey was a different story, and it was interesting to see how the area had changed from August. Once we hit the middle of RB, there were whales in all directions. We watched a 16-whale surface-active-group unfold with Phoenix (#1705) as the focal female. Once the group broke up, we focused our attention on the nearby individuals that had started subsurface feeding. Unfortunately, it was late in the day and we had to leave several distant whales un-photographed. That evening, a dip of the plankton net yielded a significant amount of copepods in the water column, and in the morning the whales were subsurface feeding again. As noon approached, the whales had dispersed, and it was during this time that female #3946 was found entangled with line running through her mouth, with new scarring and poor skin condition. The rest of the day was spent tracking her and making attempts at disentanglement, since we had several trained crew members and equipment on board. Yet, our platform was not suitable for the job and despite several attempts, no gear was removed from the whale nor was a telemetry buoy attached. This was the first observation of this entanglement, and there have been no reported sightings of this whale since. Based on scarring patterns, #3946 was entangled in 2012, and the last gear-free sighting was in Cape Cod Bay in April 2013. At that time, she was in poor condition and still recovering from her previous entanglement.

The aerial component of our work topped off the season. Mostly due to weather, there were no aerial surveys in early August and early September. We were able to conduct two aerial surveys (28&29 September), but next summer we plan to do more. The plane used, a Cessna Skymaster O2-A, held two pilots and two NEAq observers, and large portions of Grand Manan Banks, Lurcher Shoal, Browns Bank and RB were covered. Three right whales were seen on Grand Manan Banks on the first day, and seven to eight individuals were seen in the southern region of RB on the second day. It was quite a change from the two weeks prior. But having another survey of few sightings sandwiching the larger number allowed us to better estimate the peak of the RB season.

With our 2013 BOF and RB surveys combined, the number of individuals photographed is estimated at 57 (numbers are subject to change as photo-analyses are still underway). In

comparison, our two last years of surveys that covered both the BOF *and* RB were in 2009, which yielded 226 individuals, and in 2010 with 87 individuals. This year of low sightings has left a big question mark hanging in the air, but whale-watch reports ranging from Massachusetts to the Gulf of St. Lawrence indicate that other species of large whale seem to have spent the summer elsewhere. Theories about the factors underlying the observed changes continue to involve a mix of—but not limited to—warming waters, a drop in phytoplankton productivity, and a shift in the availability of food resources. Whatever the cause, we hope that our endangered right whales are meeting their caloric needs safely, wherever they are. For further details of our season, please check out our blog at rightwhales.neaq.org.



Based on the number of individuals photographically identified, right whales in the Bay of Fundy have decreased in recent years. Philip Hamilton, New England Aquarium, describes that a caveat to the graph is that the 2012 and 2013 analyses are not complete (e.g., the graph when updated will show ~ 57 rather than 0 in 2013), but the general pattern of the graph will not change.

Acknowledgments: Support by Irving Oil, the Island Foundation, the Canadian Whale Institute), and the Habitat Stewardship Program of Environment Canada.

Right Whales in the Gulf of St. Lawrence

While the Bay of Fundy and Roseway Basin are known summer/fall right whale habitats, it has been known for some time that there are others. The individuals that go elsewhere—with emphasis on mother-calf pairs—have been termed the “non-Fundy” individuals. At the North Atlantic Right Whale Consortium meeting on 7 November 2013, Moira Brown described that the Gulf of St. Lawrence area is currently the best candidate area for a second summer nursery. From 1981 to 2012 there were 206 photographed right whale sightings of which 150 (73%) were

matched to 42 individuals in the Right Whale Photo-Identification Catalog. These sightings likely under-represent the numbers in the area, as there has been virtually no dedicated survey effort.

Aerial Surveys in the SEUS: Redesign and Reduction

Aerial surveys in the southeastern U.S. have been the mainstay for monitoring and mitigation for more than two decades. Over time there has been refinement and evolution. In recent years there has been consistency with four aerial survey teams: South Carolina/Northern Georgia (SCGA), Northern Early Warning System (NEWS), Central Early Warning System (CEWS), and the Southern Early Warning System (SEWS). The SCGA, CEWS, and SEWS areas have been flown with Cessna 337s (Skymasters) and the NEWS has been flown with a NOAA Twin Otter.

In 2010, the National Marine Fisheries Service Southeast Regional Office (SERO) requested assistance from the North Atlantic Right Whale Recovery Plan Southeast U.S. Implementation Team (SEIT) in assessing the effectiveness of SE aerial surveys in achieving aerial survey objectives in the Southeast U.S. (see Terms of Reference posted on SEIT website at [sero.nmfs.noaa.gov/pr/southeastimplementation team](http://sero.nmfs.noaa.gov/pr/southeastimplementation%20team)). The basis for the reduction is twofold: 1) reducing exposure to risk of people and aircraft from the low-altitude and demanding flights, and 2) reducing cost in the face of present and future budget cuts.

The SEIT and SERO collaborated to identify and redefine recovery-based goals of Southeast U.S. aerial surveys (conditioned upon the continuation of the ship speed rule) including: 1. Population monitoring, 2. Monitoring trends in human-related serious injuries and mortalities, 3. Vessel strike reduction, and 4. Characterizing habitat use. With these redefined goals, the Team needed to assess how best to accomplish these objectives.

How would a redesign and reductions affect monitoring and mitigation? Analyses were requested and presented to the SEIT in May 2013. Amy Knowlton, New England Aquarium, and Clay George, Georgia Department of Natural Resources, evaluated change options relative to detecting entangled whales and subsequent disentangling. Lance Garrison, Southeast Fisheries Science Center, evaluated redesign options relative to the stated goals of: 1) support demographic models by detecting and identifying individual right whales occurring in the SEUS each year, 2) detect mother-calf pairs early in the season, 3) detect entangled, injured, and ship-struck whales in the SEUS, and 4) improve efficiency in achieving these primary goals. Analyses are preliminary and ongoing. However, the preliminary results suggest that a temporal and spatial reduction in effort, along with incorporating an adaptive sampling approach, may generate an acceptable goal realization.

The first phase of implementing changes will take place in the 2013-14 SEUS season. The SCGA surveys will be discontinued. The number of teams will therefore be reduced from four to three. Some shortening of the survey lines in the east-west (offshore) direction will take place. An expansion of the area to potentially be surveyed will result from the addition of east-west

tracklines to the north and south of the existing Early Warning System area. Some lines parallel to the coast are also envisioned. Trials with adaptive sampling will occur. In the next phase (the 2014-15 season), based on trials and results in this upcoming season, a further reduction (perhaps to two survey teams) will be explored and evaluated. In these future years, with perhaps two survey aircraft available, a subset of the total lines will be surveyed—determined with reference to water temperature, likely whale distribution, and other variables. This is described as a still-evolving process.

Human Activities Impact Female Reproductive Success

Contributed by Amy Knowlton, New England Aquarium

Healthy reproductive females and successful calf production are essential to right whale population conservation and recovery. A recent study of photo-identified North Atlantic right whale females evaluated reproductive potential versus realized reproductive success, and investigated the impacts of entanglements and vessel strikes on reproduction.

Totals of 163 reproductive and 80 non-reproductive females were identified between 1935 and 2012. Of the 163 reproductive females, 103 were presumed alive in 2012 with two considered senescent. The resultant living reproductive female pool consists of 101 females, 21.7% of the total presumed living NARW population. Of the 80 identified non-reproductive females, 49 were presumed living in 2012 including 33 calves/juveniles, 13 nulliparous adults, and three of unknown age. Next, 102 female-focused family trees were developed to depict 494 calvings of 163 reproductive females, of which 26 are grandmothers and 11 are great grandmothers. The maximum number of calves born to a female was eight, and maximum reproductive span was 35 years. There was an average net gain of 2.3 reproductive females each year. The proportion of females considered available to calve each year that actually did calve averaged 0.49 from 1980 to 2012.

Human impacts were responsible for the loss of at least 11.9% of the total female population, and potentially as much as 37.4% during the study period. The majority of vessel strikes and serious entanglements were documented in the 1990s and 2000s with some indication that the number of females lost has gone down in the past six years. Reproductive females seen alive and carrying gear, or with severe wounds from entanglement, had a significantly lower chance of calving again. Females that experienced moderate or severe entanglement wounds between calvings had significantly longer calving intervals than females that experienced minor or no entanglement wounds. Human impacts are reducing the reproductive success of this population.

Acknowledgment: Article based on findings in a report submitted to the Cooperative Institute for the Northeast Region (CINAR)

Kelp Gulls and Southern Right Whale Calves: A Conflicting Relationship

Contributed by Carina Marón, University of Utah

Kelp Gulls (*Larus dominicanus*) feed on the skin and blubber of living southern right whales (*Eubalaena australis*) at Península Valdés (PV), Argentina, opening lesions on the whales' backs and affecting the whales' behavior (Rowntree *et al.* 1998). Gulls attack whales of all ages but mother-calf pairs are the preferred target (Sironi *et al.* 2009). Attacks have increased with time and are now considered a potential cause for high calf mortality events (600 calves died from 2005 through 2013 with, as yet, no clearly identified common cause). Gulls negatively impact mother-calf pairs causing them to spend energy and time fleeing gulls rather than nursing.

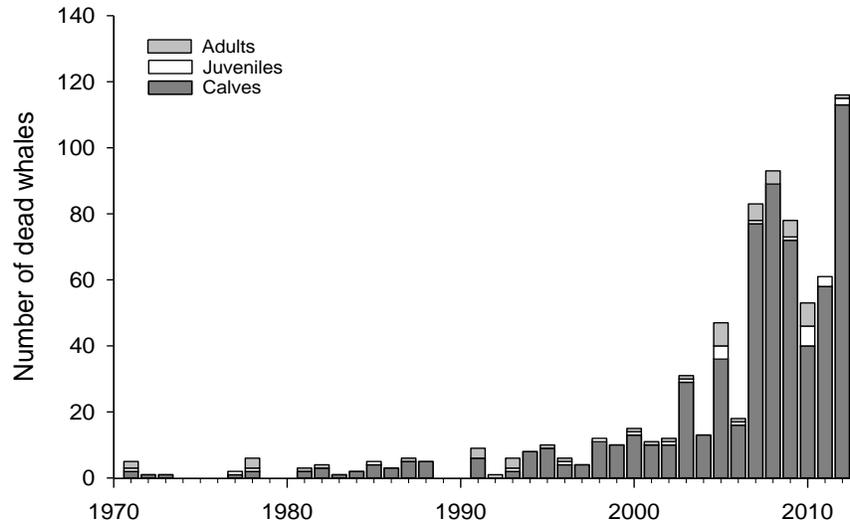


A mother-calf pair at Península Valdés. White ovals on the calf's back are lesions from gull attacks.

Gull harassment was first noticed in the 1970s when Kelp Gulls occasionally picked *peeling skin* from the whales' backs or the water (Cummings *et al.* 1972). By the early 1980s the problem was worse and gulls frequently gouged out flesh from the backs of mothers (Thomas 1988). A decade later, gulls added calves to their "menu." In 1995, mother-calf pairs were attacked in 12% of the total intervals they were observed. By 2011, the gull attack rate doubled to 25% and most attacks were aimed at calves. The number of wounds and open lesions on the whales' backs has increased with the increase in gull attacks. Since 1995, few mother-calf pairs have been lesion-free, and some have more than ten lesions.

Calf mortality rates have increased at PV during the last nine years (see figure below). An unprecedented number of calves died in 2005, and high mortalities have continued with an average of 74 calves dying each year from 2007 through 2012. Although malnutrition, biotoxins, infectious disease, and gull harassment have been proposed as explanations of the deaths, until now no consistent evidence has been found to support any of these hypotheses (Uhart *et al.* 2008, Rowntree *et al.* in review).

How might Kelp Gull harassment contribute to calf deaths? Escaping from gull attacks could reduce energy and time spent in resting and nursing, thus compromising calf survivorship. Rowntree *et al.* (1998) found that mother-calf pairs that were harassed by gulls tripled the amount of time spent in high-energy activities (*e.g.*, swimming faster) compared to undisturbed pairs. An important consideration is that the lactating mothers are *fasting* while at PV and cannot recover energy reserves since there is almost no food available. Thus, losing energy reserves to deal with gull attacks could be critical during a period when calves require maternal milk to survive.



Number of dead whales per year at Península Valdés.



A calf's fright response when it surfaces to breathe and is attacked by a gull.

The predatory relationship between gulls and whales is a problem far from resolution. The Kelp Gull population continues to grow, possibly because they feed on fish processing waste and urban landfills. Ongoing research may provide evidence that would link calf deaths to gull harassment. If found, such evidence might promote gull management strategies.

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Government Shutdown Affects Right Whale Community

From 1 through 16 October 2013, the United States federal government entered a shutdown after Congress failed to agree on funding legislation. Government operations resumed on 17 October after an interim appropriations bill (a continuing resolution) was signed into law. The 16-day-long government shutdown was the third longest in U.S. history, after the 18-day shutdown in 1978 and the 21-day shutdown in 1995-96.

A number of fallouts were felt in the right whale community:

- In response to a query from *Right Whale News* seeking the NMFS right whale spending report for FY13, as of the publication date, the customary report from the Office of Protected Resources, Silver Spring, Maryland, was unavailable.
- The Marine Mammal Commission's final report on its national marine mammal needs and priorities review (based on six regional meetings in late 2012 and early 2013; see *Right Whale News*, June 2013) has been delayed, and the end-of-the-year completion date is now uncertain.
- The Southeast U.S. Right Whale Forum and Implementation Team meetings scheduled for 10-11 October were cancelled, precluding the usual reviews and information exchange.
- As of 20 November 2013, the Meeting Outcomes document for the 17 May 2013 Southeast U.S. Right Whale Implementation Team meeting had not yet been posted to the website.

Federal Appeals Court Rules in Favor of Navy in Florida Training Area Case

A federal appeals court in Atlanta ruled in favor of the U.S. Navy in early October in a dispute over the Navy's plans to conduct training in an area of the Atlantic ocean near a right whale calving and wintering ground. The *Daytona Beach News Journal* reported that the court upheld an earlier district court decision that found that the Navy took appropriate steps to meet federal rules. The court ruled that the Navy and the National Marine Fisheries Service had not violated the National Environmental Policy Act in the process of analyzing and permitting the proposed Underwater Shallow Water Training Range (USWTR) east of Jacksonville, Florida. (see also *Right Whale News*, August 2009)

Update on Navy Monitoring Programs

Contributed by Joel Bell, Naval Facilities Engineering Command Atlantic, Norfolk, Virginia

The Navy has made good progress recently. Items of most interest would be a listing of current monitoring projects for 2013/2014 under the new LOAs for Atlantic Fleet Training and Testing (AFTT) and Hawaii-Southern California Training and Testing (HSTT). These can be found on the Atlantic and Pacific tabs under Regions (www.navy-marinespeciesmonitoring.us/regions/). (see also *Right Whale News*, June 2012.) The next step here is adding individual project profile pages with more specifics about each project. We also have a blog for interesting items from various field projects (www.navy-marinespeciesmonitoring.us/blog/). New reports are added to the Reading Room as they become available including the 2009-2013 comprehensive reports for

Atlantic Fleet Active Sonar Training (AFAST), Hawaii Range Complex (HRC), and Southern California Range Complex (SOCAL). We also have a fairly comprehensive listing of publications and presentations that have resulted from work performed under the monitoring program if one looks at the last section in the Reading Room. Both the news clips and the Blog have an RSS feed that can be subscribed to as well.

Litigation and Issues Update

Contributed by Sharon Young, Humane Society of the United States

As a result of litigation filed on 8 August 2013 by The Humane Society of the United States, Whale and Dolphin Conservation, and Defenders of Wildlife, the National Marine Fisheries Service agreed to formally review the impact of commercial fishing operations on endangered right whales and to issue new rules to protect the species from entanglement in fishing gear. The agency's promised review, referred to as a "Biological Opinion" under the Endangered Species Act, will evaluate the impacts of the American lobster fishery on the survival and recovery of the species and determine whether additional risk-reduction measures will be required. The agency also agreed to include an incidental take statement, or a substantive explanation as to why one is not required and to include consideration of impacts from state-permitted lobster gear and gear from Canada in its evaluation.

The agency had failed to include consideration of these impacts in the previous Biological Opinion. In addition to issuing a new Biological Opinion, the settlement agreement also requires the agency to issue final rules to prevent future entanglements in vertical lines—lines running from buoys at the top of water all the way down to lobster pots and other gear at the ocean floor—by 1 July 2014. The agency first admitted these new rules were needed in 2003, and both right whales and humpbacks have continued to die or be seriously injured by commercial fishing gear during the last decade when the new rules have been languishing. In the meantime, the proposed rule has narrowed its scope to deal solely with vertical-line risk to whales from trap/pot gear and has not suggested additional risk reduction for gillnets, aquaculture, or other fisheries employing vertical lines. In addition, the agency proposes to offer to the states of Maine and New Hampshire exemptions from compliance with risk-reduction measures required of other states and in federal waters.

Mid-Atlantic Analyses Initiated

Contributed by Caroline Good, Duke University

The Southeast U.S. Right Whale Implementation Team has focused additional attention on the mid-Atlantic area. The mid-Atlantic, defined here as extending roughly from South Carolina to Nantucket, remains poorly characterized as a right whale habitat and migratory corridor. There is increasing evidence of both non-migratory and year-round use of the mid-Atlantic by right whales, which contradicts the conventional view of this region as solely a migratory corridor for mothers and calves. This gap in our understanding limits the ability of NOAA to develop

informed management plans for the area, which is of concern given the extensive shipping, fishing, and potential offshore energy development in the region. As a result, the Southeast Fisheries Science Center recently funded a year-long assessment of right whale distribution and movement in the mid-Atlantic region. We have begun to assemble all available data on right whales in the mid-Atlantic region. Datasets used in the assessment will include historical sightings and catches; aerial, shipboard and acoustic surveys; opportunistic sightings; strandings; entanglements; telemetry and any other useful data. Based on the extent of the data available, we will analyze the temporal and spatial characteristics of right whale observations, evaluate relative density, and investigate the association of whales with relevant habitat variables. The assessment will strive to elucidate the nearshore vs. offshore distribution of whales, the temporal extent of high-use vs. low-use periods, and where possible, characterize patterns of habitat use by individuals of different sexes and life stages.

Training Fishermen to Aid in Disentanglement and Reporting

*Contributed by Jamison Smith, Northeast Regional Office,
National Marine Fisheries Service*

Two recent events illustrate advances in increasing and improving the engagement of fishermen in aspects of right whale conservation, as well as a continuing need for improvement. On 12 July 2013, charter fishermen off Virginia Beach, working with oceanographic glider researchers from Oregon, came across an entangled right whale (Catalog #3123). After a thorough assessment of the situation, the fishermen, armed only with a large knife and a small video camera, took matters into their own hands to jump in the water, to try cutting the entangling lines. In the video, after a deliberate cut on one of the trailing lines, the weight of the gear appears to pull the remaining line through the whale's mouth and sink away from sight into the deep blue. While it appears that they were successful in removing the entangling gear, a good outcome for this animal, it could have easily gone any number of other ways, each with poor outcomes, both for the well-intentioned rescuers, and the whale. In this case there was lost information—both on the gear and on the whale.

Whale disentanglement can be dangerous, both for the responders and for the whale. Despite what some may have seen on YouTube or other social media, the entangled whale typically does not know that the responder is there to help (see also *Right Whale News*, June 2012). In fact, the process of disentanglement can add to the overall immediate discomfort of the animal and often elicits a fight-or-flight response from the animal. A reaction of either type can usually be assessed before hand by watching the animal's behavior and subsequently changing the entanglement response techniques. It is largely because of this danger that these activities are only authorized (under The Endangered Species Act and The Marine Mammal Protection Act) and conducted by highly trained and specially equipped responders.

Fishermen certainly have a major role in whale conservation and entanglement response. This select group of individuals are the experts when it comes to fishing gear and fishing techniques. In fact, fishermen have been receiving training and participating directly at various levels in the entanglement response networks on the west coast and the east coasts of the United States for

many years. For example, in mid-July 2013, Level 2 entanglement response training was conducted for the Cape Cod Commercial Fishermen's Alliance in Chatham, Massachusetts. This training was the second training workshop conducted, and the ultimate goal is to provide a small team of advanced entanglement responders to assist the Provincetown Center for Coastal Studies in local entanglement responses. This has proven to be a valuable partnership in the overall management and species conservation program with these endangered animals.

A good example of this partnership occurred off the coast of North Carolina. On 11 August 2013, a charter fisherman out of Cape Hatteras observed an entangled whale carcass being eaten by tiger sharks. They worked with NOAA to collect sighting information, including time, location, and both above- and underwater images and video. Based on this evidence, the New England Aquarium was able to ID the animal as Catalog #1311, a male born in 1983. The NEAq also provided key life-history information, such as the last confirmed sighting of this whale on 21 April 2013 in Cape Cod Bay when he was not entangled. All of this information is critical to make informed management decisions with the largest conservation impact.

The key to success is working together with all stakeholders, including fishermen, managers, researchers, whale biologists, entanglement responders, and others. This large group of diverse people form a Network that works together to seek out methods, whether for fishing or entanglement response, to safely and effectively minimize the risk to whales and responders, while allowing for healthy, sustainable fisheries.

Stakeholder interest and investment of time into learning more about how the Entanglement Response Network is structured and functions, understanding how to report and document an entanglement, and taking the training to learn the safest and most effective way to free these massive animals will be productive. As the saying goes, "It takes a village to raise a child." It too takes a collected effort by all stakeholders to save an endangered species.

(The YouTube videos can be seen by searching on "endangered whale rescue" for the 14 July 2013 event and/or on "sharks feasting on dead whale" for the 11 August 2013 event.)

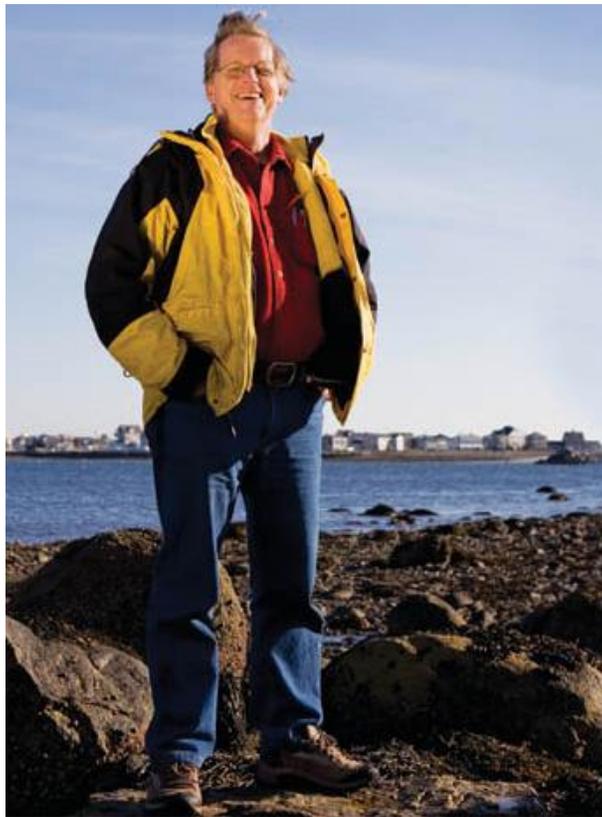
People and Changes

Donna S. Wieting is the new Director, Office of Protected Resources (OPR), NMFS, Silver Spring, Maryland. She started on 20 May 2013. Prior to this, she served six years at the National Ocean Service (NOS) Office of Ocean and Coastal Resource Management. She was at OPR from 1997 to 2007 before going to NOS.

Dr. William Y. Brown is the new Chief Environmental Officer for the Bureau of Ocean Energy Management (BOEM). Dr. Brown is the former CEO of the Woods Hole Research Center, has a law degree from Harvard, and a Ph.D. in zoology from the University of Hawaii. The announcement describes, "Dr. Brown will have a critical role in setting the scientific agenda for the nation's oceans, and in developing the research and analysis necessary for sound offshore energy and resource decisions."

Chris Clark Tribute at Consortium Meeting

An appreciation tribute was held at the North Atlantic Right Whale Consortium meeting on 6 November 2013 to honor Chris Clark's innovative research and passion for the conservation of right whales. Over the years he has inspired and influenced many scientists and policy makers. After many dedicated years as the director of Cornell University's Bioacoustics Research Program, the community looks forward to his continued work in the field. As presenter Sofie van Parijs, said simply, Chris Clark “walks the talk.” In his acceptance remarks Chris said, “I do what I do because I love the world. I don't particularly care why humpback whales sing, but mostly that we want to continue to see and hear them.” And finally, “we don't want to be in a situation, when, looking back, we wish we had done something different.”



Bioacoustics expert Chris Clark. (Photo: J. Scranton)

***Marine Mammal Science* Goes Electronic**

Editor Daryl J. Boness has announced that, beginning with the first issue of 2014, *Marine Mammal Science* will only be published electronically. There will no longer be printed versions of the journal.

Calendar

23 November 2013. 5th Annual Right Whale Festival, Seawalk Pavilion, Jacksonville Beach, Florida.

9-13 December 2013. Society for Marine Mammalogy's 20th Biennial Conference on the Biology of Marine Mammals. Dunedin, New Zealand.

4 May 2014. Right Whale Festival. New England Aquarium. Boston, Massachusetts. Details in future issues.

5-6 November 2014. North Atlantic Right Whale Consortium Annual Conference, New Bedford Whaling Museum, New Bedford, Massachusetts.

Scientific Literature and Reports

Baumgartner, M.F., D.M. Fratantoni, T.P. Hurst, M.W. Brown, T.V.N. Cole, S.M. Van Parijs, and M. Johnson. 2013. Real-time reporting of baleen whale passive acoustic detections from ocean gliders. *Journal of the Acoustical Society of America* 134(3):1814-1823.

Baumgartner, M.F., N.S.J. Lysiak, H.C. Esch, A.N. Zerbini, C.L. Bechok, and P.J. Clapham. 2013. Associations between North Pacific right whales and their zooplanktonic prey in the southeastern Bering Sea. *Marine Ecology Progress Series* 490:267-284.

Conn, P.B. and G.K. Silber. 2013. Vessel speed restrictions reduce risk of collision-related mortality for North Atlantic right whales. *Ecosphere* 4(4):1-15.

Couvat, J. and D. Gambaiani. 2013. Evaluation of the technical solutions and management measures implemented at the international level to reduce the risks of collisions between ships and large cetaceans. *Souffleurs d'Ecum*. La Celle, France. 106pp.

Davies, K.T.A., T. T. Ross, and C.T. Taggart. 2013. Tidal and sub-tidal current influence on deep copepod aggregations along a shelf-basin margin. *Marine Ecology Progress Series* 479:263-282.

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Frasier, T.R., R.M. Gillett, P.K. Hamilton, M.W. Brown, S.D. Kraus, and B.N. White. 2013. Postcopulatory selection for dissimilar gametes maintains heterozygosity in the endangered North Atlantic right whale. *Ecology and Evolution* 3(10):3483-3494.

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- Mullen, K.A., M.L. Peterson, and S.K. Todd. 2013. Has designating and protecting critical habitat had an impact on endangered North Atlantic right whale ship strike mortality? *Marine Policy* 42:293-304.
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- Reeve, L.L.N. 2013. Of whales and ships: Impacts on the great whales of underwater noise pollution from commercial shipping and proposals for regulation under international law. *Ocean and Coastal Law Journal* 18(1):127-166.
- Roman, J., I. Altman, M.M. Dunphy-Daly, C. Campbell, M. Jasny, and A.J. Read. 2013. The Marine Mammal Protection Act at 40: Status, recovery, and future of U.S. marine mammals. *Annals of the New York Academy of Sciences* 1286:29-49.
- Shadwick, R.E., J.A. Goldbogen, J. Potvin, N.D. Pyenson, and A.W. Vogl. 2013. Novel muscle and connective tissue design enables high extensibility and controls engulfment volume in lunge-feeding rorqual whales. *Journal of Experimental Biology* 216:2691-2701.
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Right Whale News

Right Whale News is a publication of Associated Scientists at Woods Hole. It is disseminated online through the courtesy of the North Atlantic Right Whale Consortium. The Editor is Jim Hain. The editorial board consists of Julie Albert, Robert Kenney, Scott Kraus, Hans Neuhauser, and Amy Whitt.

The current and back issues of *Right Whale News* published between 1994 and 2013 are available at the North Atlantic Right Whale Consortium website, www.narwc.org—under the *Right Whale News* tab.

To submit ideas, article topics, and comments, contact Editor Jim Hain at jhain@earthlink.net and place “RWN Editorial” in the subject line. To subscribe, contact Heather Pettis at hpettis@neaq.org and place “RWN Subscribe” in the subject line.

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