RIGHT WHALE NEWS

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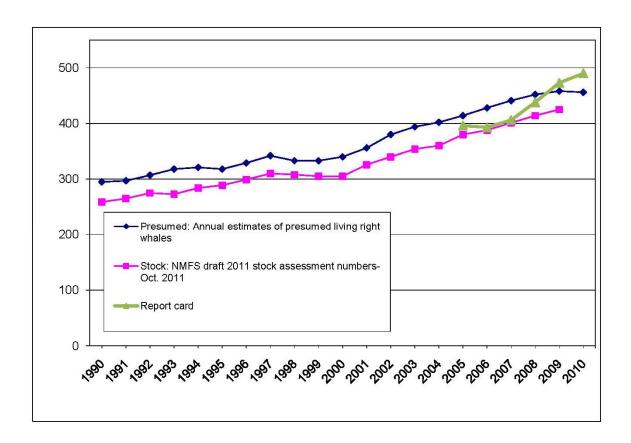
The 2010 North Atlantic Right Whale Population Estimate: 490

On 2 November 2011, the 2011 Annual North Atlantic Right Whale Report Card was presented to attendees at the Annual Meeting of the North Atlantic Right Whale Consortium. Based on the catalog of identified North Atlantic right whales for 2010, the New England Aquarium's best estimate of the cataloged population is 490. Note that this is an estimate of the *cataloged* population only; it is known from existing genetic analyses that the population includes uncataloged and genetically unsampled individuals, and therefore the population may be larger than currently estimated (Frasier *et al.* 2007). However, that unquantified increase may be offset by undetected and unpresumed deaths of cataloged whales, further complicating an accurate assessment of the *actual* population size.

The method used in the annual report card is just one of several to estimate the cataloged population size. The graph below includes the report card estimate along with two other techniques. The presumed-alive line (Knowlton *et al.* 1994) is a consistently measureable and easily available value, but it is not an accurate estimate of the recent population size due to lag time in data processing. The report card number (Pettis 2009) is the only number that assesses animals that have been photographed but not yet added to the catalog and is the best number for the previous year (*i.e.* the 2010 number can be calculated in 2011). The stock assessment numbers (Waring *et al.* 2011), which represent the minimum number of cataloged whales alive (*i.e.* the whale was either seen in that year, or seen both before *and* after), are published annually but are conservative and have a substantial delay.

It is important to note how close the older report card numbers (*i.e.* 2006-2007) are to the stock assessment estimations. This suggests that the report card method of estimation is able to provide information on the minimum population size 2-3 years before the stock assessment reports are published. The fact that the all but the last report card number are below the blue line means that the numbers in the report card are conservative.

The report included an assessment of the right whale population over time. Knowlton *et al.* 1994, based on presumed living right whales, estimated the population size at 295 individuals in 1992 (in the graph below, this number has been updated to 307, due mostly to data obtained since the original paper was published). Estimates beginning in the early 1990s show the gradual upward trend of the population during two decades.



Assessments of the North Atlantic right whale population based on three available methods. The three methods differ in terms of methods and timeliness. Additional detail is provided in the references below.

References:

Knowlton, A.R. and S.D. Kraus. 1994. Reproduction in North Atlantic right whales (*Eubalaena glacialis*). Canadian Journal of Zoology 72:1297-1305.

Frasier, T.R., B.A. McLeod, R.M. Gillett, M.W. Brown, and B.N. White. 2007. Right whales past and present revealed by their genes. Pages 200-231 *in* S.D. Kraus and R.M. Rolland, eds. The Urban Whale. Harvard University Press, Cambridge, MA.

Pettis, H. 2009. North Atlantic Right Whale Consortium Annual Report Card (01 November – 30 April 2009). International Whaling Commission Annual Meeting, May 2009. Reference Document SC/61/BRG1. Available at www.narwc.org.

Waring, G.T. *et al.* (eds.) 2011. DRAFT U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments – 2011. Available at: www.nmfs.noaa.gov/pr/sars.

SEUS Implementation Team Submits Concerns and Recommendations

The first meeting of the re-organized SEUS Right Whale Recovery Plan Implementation Team (SEIT) was held on 17 November 2010. The purpose included providing advice to the National Marine Fisheries Service/Southeast Regional Office (NMFS/SERO) on issues related to the status and conservation of right whales in the southeast U.S. (*Right Whale News*, December 2010). In August 2011, the first formal letter was written to the NMFS/SERO. The Team focused on five key points. The letter is included in its entirety below. Leslie Ward, Florida Fish and Wildlife Conservation Commission and SEIT Team Leader, has indicated that the response to the letter from SERO was positive and ongoing.

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August 12, 2011

Dr. Roy Crabtree, Regional Administrator National Oceanic and Atmospheric Administration National Marine Fisheries Service Southeast Regional Office 263 13th Avenue South St. Petersburg Florida 33701-5505

Dear Dr. Crabtree:

NOAA Fisheries Service Southeast Region North Atlantic Right Whale Implementation Team (SEIT) members have actively participated in two meetings and conference calls since the establishment of the Team last year. The Team reviewed and discussed the step-down outline of the North Atlantic Right Whale Recovery Plan relative to Southeast recovery efforts. We submit the following recommendations in order to help guide recovery activities:

(1) Illustrate boundaries of Seasonal Management Areas (SMAs) along the U.S. East Coast on NOAA navigation charts. The purpose of the SMAs is to reduce the likelihood of deaths and serious injuries to right whales that result from collisions with vessels equal to 65 ft and longer. In an effort to increase protection efforts and improve compliance in managed areas, the Team recommends that the boundaries be included in key navigation materials including navigation charts. We recommend investigating "chart corrections" (either through Local Notice to Mariners or Notice to Mariners) as a method for having SMA's illustrated temporarily or seasonally on navigation charts if permanent boundary illustrations are not possible at this time.

- (2) Timely, consistent, high-quality post-mortem examinations of right whale carcasses are critical to understanding ongoing and emerging threats that right whales face. The Team recommends that NOAA support capacity building for carcass salvage and necropsies so that stranding networks are able to respond as effectively as possible. Processes for responding to reports of dead right whales including clear communication lines within NMFS for receiving reports and the retrieval of carcasses should be reviewed. In addition, outreach to coastal communities is important to help promote the reporting of large whale carcasses.
- (3) Prevention of entanglement is critical given the significant consequences of entanglement related impacts to the species. Whale disentanglement operations are

important, but outcomes are difficult to predict and disentanglement efforts do not solve the serious, ongoing bycatch problem. A total of five (possibly six) entangled right whales were reported during the 2010-2011 calving season in the Southeast. None of the five animals were known to be entangled previously. Important findings from these cases include: a) two of the entanglements were consistent with Northeast or Canadian trap/pot gear and both cases will likely result in death; b) one, and possibly a second case involved entanglement in apparent gillnet gear; c) one calving female was entangled in unknown gear that likely originated in the Southeast; and d) none of the whales could be completely disentangled despite considerable capability, effort, and expense.

Gear removed from entangled whales must be identified as soon as possible in order to understand what gear types and fisheries have the greatest risks to whales. We recommend that SERO facilitate the local and expeditious examination of gear removed from entangled whales in the Southeast prior to submitting the gear to the NOAA gear team located in the Northeast. The Team highly recommends that fishery gear experts from the Southeast be identified by NOAA in order to serve as experts in the examination of removed gear and in evaluating if the gear was likely from fisheries in the Southeast region (SER). However, the Team recommends that such an examination be carried out as soon as possible after the disentanglement event so that the development of a gear analysis report by the NOAA gear team for the Atlantic Large Whale Take Reduction Team is timely and is not hindered by this additional step. Importantly, a broad-scale gear marking requirement would facilitate understanding where entanglements occur to assist in resolving the right whale entanglement problem.

Entanglements documented during the 2010-2011SEUS calving season:

- Gear from one right whale (EG#3911) first sighted on December 25, 2010 was
 consistent with floating groundline used in the trap or pot fishery of the U.S. east
 coast sinking groundline exemption areas or in Canadian waters. Despite
 extensive disentanglement and sedation efforts, the whale subsequently was found
 dead and the primary cause of death was due to entanglement related injury.
- A cow (EG#3010) traveling with her calf was observed gear-free in the Southeast on December 31, 2010 and then observed with an entanglement on January 19, 2011 off the coast of St. Augustine, Florida.
- EG#3712, a four year old of unknown sex, was seen on January 30th off of St. Augustine entangled in a thin line with netting and small black floats.

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- EG#3760, a four year old of unknown sex, was seen on February 13, 2011 off the
 coast of Georgia with a length of twisted monofilament netting through the
 mouth. The animal was partially disentangled.
- A fifth case involved an unidentified right whale also seen February 13, 2011
 further north along the Georgia coast with a severely entangled right flipper and
 some trailing gear. The animal may match (pending genetic analysis) a highly
 decomposed carcass found stranded in South Carolina on March 17, 2011. The
 carcass was found with a severe rope entanglement on the right flipper.
- (4) Two vessel struck right whales were reported in the SER during the 2010-2011 calving season. The first animal was seen swimming off the southern coast of South Carolina on 20 January, 2011. The animal (EG# 3853), a three year old of unknown sex, was observed by a team conducting right whale aerial surveys. The team took multiple images of the animal during the encounter that showed large, roughly equidistant, parallel lesions caused by a propeller. The images were used to conduct a wound analysis that showed the propeller to be greater than 48" in diameter. This animal had been sighted 5 days earlier on 15 January, 2011 without these wounds. The second right whale (NCARI 006 EG# 1308) was found stranded on 27 March, 2011 at Nags Head, NC. The necropsy found multiple skull and vertebral fractures and concluded that the cause of death was likely due to vessel strike. The whale had given birth to a calf during the winter calving season and therefore the death of the cow implies the death of her dependent calf as well. In addition to the above cases, a carcass of a reproductive female, EG#1303, was found floating 8 miles off the Virginia coast on March 17, 2011 but was not able to be relocated for retrieval and necropsy. The proximity of both carcasses to a major shipping and military port at the Chesapeake Bay entrance area is a concern.

The Team recommends that forensic analysis for characterizing vessels from propeller-induced wounds on right whales may be enhanced by refining vessel size classification categories in the larger vessel categories. Four propeller classification categories were previously summarized for manatees and range from small outboards to very large inboards including mega yachts, tugs, and ships. The refinement of vessel classification categories in the larger propeller range may help shed greater diagnostic light on vessel-related mortalities of right whales.

The Team also recommends that the risk of vessel strikes to large whales in the mid-Atlantic region be thoroughly evaluated including a comparison of the above events with spatial gaps between management areas and a review of monitoring and outreach efforts as well as compliance levels for all vessel types using mid-Atlantic ports. NOAA Fisheries organizes administration of research and management responsibilities using a regional approach. The Chesapeake port entrance area is near the regional boundaries that define the NE and SE Regions and therefore clarification of responsibility within the mid-Atlantic area is needed to facilitate conservation actions.

(5) NOAA Fisheries should update the North Atlantic right whale recovery plan. The latest revisions were written in 2001 and 2004 with focus on actions largely intended for a relatively short-term (5-year) schedule. New or updated recovery actions should be identified and prioritized in light of emerging information, scientific advancements, and implemented management actions.

The Team appreciates the feedback we have received from NOAA regarding results of recent mortality investigations, entanglement cases, analyses of propeller cut dimensions on living animals, and enforcement activities as appropriate. The Team underscores the importance of receiving timely information as that will impact our efforts to advise the SERO on issues related to the status and conservation of right whales.

On behalf of the SEIT, thank you for the opportunity to communicate our concerns and recommendations to you. Please do not hesitate to contact me if you have questions or comments about this information.

With kind regards,

Leslie Ward-Geiger SEIT Team Leader

Cc: SEIT Team Members Barb Zoodsma, Team Liaison

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Southeast Implementation Team: Key Outcomes for the October 2011 Meeting

The North Atlantic Right Whale Recovery Plan Southeast U.S. Implementation Team (SEIT) conducted a meeting on 18 October 2011 in Jacksonville, Florida. The meeting was preceded by a Southeast Right Whale Forum on 17 October at the same location. The meeting was attended by 11 of the 13 Team members: Nancy Allen, Lance Garrison, Clay George, Mike Getchell, Bill Kavanaugh, Amy Knowlton, Bill McLellan, Katie Moore, Cathy Sakas, Leslie Ward-Geiger, and Tom Wright. Greg Schweitzer and Barb Zoodsma NMFS/SERO, were in attendance as was Jim McGlaughlin, SERO's contracted shipping liaison. David Harter, Hilton Head Island Sportfishing Club, and Sharon Young, Humane Society of the United States, were absent.

The following materials were distributed via email to the SEIT prior to the meeting and hard copies were provided at the meeting:

- Draft meeting agenda (developed following SEIT agenda planning call)
- Focused discussion paper produced by SERO, SERO Requests Input on SE Calving Area Aerial Surveys.
- Discussion paper produced by SEIT aerial sub-committee: Aerial Surveys for Detection of North Atlantic Right Whales in the Southeastern U.S.: Conceptual Framework Developed by the Southeast U.S. North Atlantic Right Whale Recovery Plan Implementation Team Sub-Committee.

(*Right Whale News* has been advised by NMFS/SERO that the above documents are for internal use only and not available to the public.)

In early December, however, *Right Whale News* was provided with the key outcomes for the meeting. The eight-page document provided by the NMFS Southeast Regional Office has been summarized as follows:

- The Team asserted its continued interest in the status of developing demographically-based recovery criteria and the need to better understand the extent that population metrics are reliant on SEUS monitoring efforts. For example, SEUS efforts are important to monitor vital rates such as age-specific survival, age-specific reproduction, and lifetime reproductive success.
- B. Zoodsma consulted with HQ the report on the effectiveness of the ship-strike rule will be available to the SEIT when it is released to the public.
- There has been no additional movement on the passive acoustic monitoring front. The topic will be moved to future agenda. Discussion on the SEFSC auto-detection buoys was deferred.
- A conversation between the SEIT and T. Frasier has not happened re: timely/accessible genetics info.

The SEIT focused the majority of its time on aerial survey-related discussions, in particular the Early Warning System (EWS). B. Zoodsma acknowledged that reviewing the effectiveness of the Southeast U.S. aerial surveys was more challenging than originally anticipated. However, the SEIT discussions have been very helpful on many levels, including challenging the SERO to contemplate what specific aerial survey-related questions SERO seeks input on. (The SERO's questions are explicitly laid out in the focused discussion paper that was produced by SERO.) The driving force behind this effort is that SERO invests ~51% of their right-whale-specific budget into SE aerial surveys. Given such a large investment, SERO seeks input on whether we are focusing on appropriate objectives and if the aerial surveys are efficiently and effectively addressing those objectives. Additionally, budgets are likely to shrink – either due to overall budget reductions, or the need to implement additional recovery actions (*e.g.* revisit mid-Atlantic vessel-strike mortalities) and we would like input on how surveys should be modified to

accommodate potential financial changes. B. Zoodsma suggested the conversation be restricted initially to the core calving area surveys (SC-FL) because of the significant budgetary investment and this is likely where SERO funds would come from to implement outstanding recovery tasks. Modification to contract scope of works can be considered on an annual basis but must be mutually agreeable between NOAA and contractor (large changes in scope may require resolicitation of contract).

Following on this introduction, the Team identified the major aerial survey objectives:

- Reduce or eliminate vessel collisions with right whales.
- Monitor trends in human-related injuries so that ongoing and emerging threats are recognized and risks reduced.
- Monitor the need for regulatory mechanisms.
- Protect important habitat, and characterize habitat use patterns and distribution and detect changes.
- Contribute demographic information for use in population models.
- Promote stewardship through public awareness via timely distribution of information.

A number of information needs were identified while discussing SEIT feedback to SERO on the management objectives in the core calving area that are best accomplished through aerial surveys. The information needs include the following:

- Correct Whale/Vessel Interaction incidents per unit of effort to determine if certain areas have greater incidence of interactions than other areas.
- How fast/far do whales in the core calving area move? Is movement rate different between demographic groups? (this question relates to EWS alerts/potential bin use for more general sighting updates)
- What proportion of time are environmental conditions appropriate for detecting whales? (EWS discussion)
- How many and where have entangled whales been detected by aerial surveys since 2004?
- Do aerial surveys contribute relevant information to serious injury determinations?
- What amount of demographic information is contributed by vessel-based work in the SE? Is the vessel based work dependent to some extent on aerial surveys?
- How does sightings per unit of effort from GA/SC surveys compare to other areas?
- Need to update habitat models –this should be an important part of this analysis since the more refined the habitat model is, the more refined the risk-assessment model is (management boundaries).

Information used to evaluate effectiveness of current aerial survey strategies relative to management objectives, information gaps, and alternative actions is being developed. A suggested next step will be for NMFS/SERO to present information and concepts to the Atlantic Scientific Review Group at its 8-12 February 2012 meeting for feedback

Canadian Department of Fisheries and Oceans 2011 Update

Contributed by Cathy Merriman, Species at Risk Biologist, Fisheries and Oceans Canada

Fisheries and Oceans Canada (DFO) has been preparing an Action Plan which, based on the recommendations of the Recovery Network, focuses on the threat of entanglement in fishing gear. An early draft of the Action Plan was reviewed by stakeholders and recovery partners in the spring of 2011. During the summer and fall the document was developed further and is undergoing internal DFO review. DFO expects to make a new draft available for stakeholder and Network review in the fall of 2011, and to publish the document in the spring of 2012.

DFO has also been developing a Protection Order under the Species at Risk Act that prohibits the destruction of any part of right whale critical habitat in Canadian waters.

Meanwhile DFO has been continuing its activities to reduce the likelihood of right whales encountering fishing gear.

- DFO continues to support the Lobster Mitigation Strategy in Lobster Fishing Areas 36, 37 and 38.
- In partnership with Dalhousie University scientists, DFO has completed an analysis of the relative risk of right whales interacting with different fisheries in Maritimes region. This paper has just been published: Vanderlaan, A.S.M, Smedbol, R.K. and C.T. Taggart. 2011. Fishing-gear threat to right whales (*Eubalaena glacialis*) in Canadian waters and the risk of lethal entanglement. Can. J. Fish. Aquat. Sci. 68: 2174-2193.
- Efforts to train Fishery Officers to conduct disentanglements, while meeting some delays, are continuing. Caches of gear have been distributed, and interest from Officers is high.
- DFO support for non-government disentanglement teams (mainly Campobello Whale Rescue Team) continues. We were able to secure a second fast rescue craft (FRC) for them, which has benefited the team's efforts.
- No right whale necropsies have been conducted this year.
- Trying to increase surveys (be it vessel-based or aerial) just before and during the opening of the lobster season in November.

The SARA (Species at Risk Act) Registry is the Government of Canada's website for information on listed species. The link for the right whale is: www.registrelep-sararegistry.gc.ca/species/species/betails_e.cfm?sid=780#docs

Book Review

Jim Hain

Philbrick, Nathanial. 2011. Why Read Moby-Dick? Penguin Group, New York NY. 131 pp.

Moby Dick, the familiar classic 1851 novel by Herman Melville, is long, convoluted, digressive, and bombastic. It was required reading for many, and/or optional reading for many more. On the other hand, the recent, Why Read Moby-Dick, by Nantucket author Nathanial Philbrick, is short, direct, and quietly thoughtful. Maybe we all read Moby Dick too early in life. Philbrick points out that, "Coming to a great book ... after having accumulated essential life experience can make all the difference." Moby Dick has been flensed and tried out many times by many authors, but Philbrick's concise and engaging perspective describes the setting of the 1851 novel as reflective of a nation in turmoil over slavery and on the brink of civil war. In preparing the novel, however, Melville experienced a course change. In the late summer of 1850, Melville thought he was finished with his whaling novel, basically a description of the whale fishery based on his own voyage aboard the Acushnet. The novel was essentially complete. Then, in a turn of fate, he met Nathanial Hawthorne, who, as Melville described, "... was possessed by this great power of blackness." In less than a year, Melville subsequently rebuilt his entire novel, and, in a "psychically corrosive experience," created Ahab and the encounter with the White Whale. Just as whale oil provided light in its time, Why Read Moby Dick sheds light in our time on the backstory behind this classic tale.

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On 30 December 1840, Herman Melville, age 21, was signed aboard the whaler *Acushnet* in Fairhaven, Massachusetts, just across the river from the whaling port of New Bedford. Nineteen months later he deserted the ship in the Marquesas Islands. Those 19 months, however, resulted in quite a story. (Logbook images courtesy of the New Bedford Whaling Museum)

Help Wanted

Associate Editor – Right Whale News

Right Whale News seeks an Associate Editor. The position involves identifying current topics of interest, researching topics, acquiring supporting information, fact-checking, preparing draft article(s), and reviewing the issue prior to publication. Qualifications include a diverse background in the science, politics, and management of right whales, with some prior writing, editorial, and publishing experience. The task load is shared with the Editor. The position is voluntary, but some travel expenses may be provided. At some point, the Associate Editor may be considered to assume the role of Editor. Send expressions of interest to Editor Jim Hain at jhain@earthlink.net.

Calendar

8-12 February 2012. Atlantic Scientific Review Group meeting, Mote Marine Laboratory, Sarasota, Florida. For further information, contact Beth Josephson, NMFS liason (Elizabeth.Josephson@noaa.gov) or Andy Read, ASRG chairperson (aread@duke.edu).

24-27 April 2012. Florida Marine Mammal Health Conference IV, Mote Marine Laboratory, Sarasota, Florida. For information see: conference.ifas.ufl.edu/marinemammal/index.htm

Scientific Literature and Reports

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Vanderlaan, A.S.M, Smedbol, R.K. and C.T. Taggart. 2011. Fishing-gear threat to right whales (Eubalaena glacialis) in Canadian waters and the risk of lethal entanglement. Canadian Journal of Fisheries and Aquatic Science 68:2174-2193.

Right Whale News

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To submit ideas, article topics, and comments, contact Editor Jim Hain at <u>jhain@earthlink.net</u> 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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