

# RIGHT WHALE NEWS

*An independent forum for right whale conservation and recovery,  
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## **Ocean Policy Task Force Hears About Right Whales**



Regina Asmutis-Silvia, Whale and Dolphin Conservation Society, speaks; Jane Lubchenco, NOAA administrator, listens. Several speakers brought the topic of right whales to the attention of the Ocean Policy Task Force at a public hearing in Providence, Rhode Island, 24 September 2009. (Photos: J. Hain)

The Ocean Policy Task Force came to listen. Many and diverse persons came to speak. In a four-hour public hearing, more than 80 statements were submitted. These statements included three from the right whale community: Mason Weinrich, Whale Center of New England; Regina Asmutis-Silvia, Whale and Dolphin Conservation Society; and Jim Hain, Associated Scientists at Woods Hole and Editor of *Right Whale News*.

On 12 June 2009, President Barack Obama sent a memorandum to the heads of executive departments and agencies calling for a national policy to better meet the Nation's stewardship responsibilities for the oceans, coasts, and Great Lakes (*Federal Register* 74(183): 48521, 23 September 2009). An Interagency Ocean Policy Task Force, led by the Chair of the Council on Environmental Quality, was established. The task force was given the responsibilities of developing recommendations that include: a) a national policy that ensures the protection, maintenance, and restoration of the health of the ocean, coastal, and Great Lakes ecosystems and resources, b) a United States framework for policy coordination of efforts to improve stewardship of the oceans, our coasts, and the Great Lakes, and c) an implementation strategy that identifies and prioritizes a set of objectives the United States should pursue to meet the

objectives of a national policy. By December 2009, the Task Force, comprised of 24 senior-level Federal policy officials, has the charge of developing, with appropriate public input, a recommended framework for coastal and marine planning. In the course of its work, the Task Force has undertaken a public engagement process to both hear from and involve stakeholders and interested parties. Of the five regional public hearings, the only east-coast meeting was in Providence, Rhode Island, on 24 September 2009 (Rhode Island Convention Center).

The first of the “right whale speakers” was Mason Weinrich (speakers were given 3 minutes or less; presentations were necessarily concise). Among the points made were: 1) Supportive in general of the need for a unified policy; 2) Support the goal of eco-system based management, but with the realization that data holes make it difficult to implement. While we should use the best available data to implement an ecosystem-based management approach immediately, strong support for information gathering and modeling support is necessary to strengthen the overall strategy in an iterative process; 3) The plan currently ignores the National Marine Sanctuary program, but should include incorporating this program and describe whether it plans to increase funding for an under-funded program; 4) The nine Priority Objectives included in the interim plan are good but should be increased to include an objective to recover endangered species, including critical habitat and recovery plan objectives; and 5) Pay attention to marine mammal hotspots as areas of special significance, because large whales and other marine mammals can act as sentinels of the ocean system to help detect important areas as well as changes and issues in their early stages.

Regina Asmutis-Silvia offered the following: 1) The critically endangered North Atlantic right whale is an example of the need for effective, and comprehensive, ocean planning to prevent conflicts that will be harmful to this species. The entire habitat for this species ranges from the waters off Florida to the Gulf of Maine. Currently fewer than 400 North Atlantic right whales remain from a population that once exceeded 10,000. According to the National Marine Fisheries Service, the loss of one right whale per year from human causes jeopardizes the species survival. Yet, in less than a 2-year period, at least 12 right whales were killed from anthropogenic causes; 2) Risks to this species continue to escalate as proposals for offshore energy generation off the U.S. east coast increase with sites off the coasts of Georgia, New Jersey, Massachusetts, and Maine now in consideration. The U.S. Navy is currently requesting an undersea warfare training site off Jacksonville, Florida, just east of the only known calving area for the species. And, near-coastal shipping proposals are being considered along the entire east coast of the U.S.; 3) As a result, on 15 September 2009, WDCS along with the Center for Biological Diversity, Humane Society of the United States, Ocean Conservancy, and Defenders of Wildlife petitioned the Secretary of Commerce to increase Critical Habitat for this species. Our petition encourages more appropriate protections for the species in the most needed areas and requests an effective use, and enforcement of existing laws, including the Endangered Species Act; 4) For right whales as well as other whales, waterfowl, migratory passerines, fish and turtles, it is critical to do more forward thinking, and consider cumulative impacts to species and habitats, rather than proceeding with site-specific development, only to regret it later. The promise made by President Obama, to return to science-based management and act as a steward for the ocean, must be kept.

Jim Hain was speaker number 49, and spoke at three hours into the hearing. He offered the following: 1) The conservation and recovery of the North Atlantic right whale is a specific

project that could be considered by the task force. It not only involves an endangered species and its habitat, but involves maritime and fishing interests, indirect effects (pollution, habitat loss), the military, agencies, and sometimes contentious issues. It is a manageable topic, yet at the same time, complex. While indications are that the right whale population has turned the corner and the population may be increasing, this introduces more challenges—as the potential for human interactions and habitat issues may likely increase. This will be a challenging scientific and ocean policy topic for years to come. This topic can serve as a model for implementation; 2) A perception is that this Task Force is weighted in favor of government entities. The interim report speaks principally of Federal, State, tribal, and local authorities. Yet, a great deal of the expertise and history lies outside government, with non-government investigators and organizations. While the Ocean Research and Resources Advisory Panel (ORRAP) includes academia, the involvement of non-government investigators and organizations should be strengthened; 3) Based on the Interim Report, there exists a “Fatal Flaw.” That is, and related to the government role, and continuing to use the right whale topic as an example, the government agency with lead responsibility—the National Marine Fisheries Service—admittedly has a challenging task. At the same time, the agency is conflicted and bureaucracy is an impediment to progress and common sense. Investigators and organizations external to the agency struggle with sometimes contentious oversight, transparency, accountability, permitting, and budget issues. One issue is the agency interpretation of rules and regulations. The report speaks of government coordination as well as the obstacles. An item that requires emphasis is the performance of the agencies themselves. On some days and on some topics, the agencies are self-invested, conflicted, and dysfunctional. Prior to seriously contemplating interagency coordination, problems must be identified within agencies and solutions found. Else, problems within the agencies will undercut the efforts to achieve useful coordination and results; and 5) In conclusion, the mission and goals of the Task Force, and the implementation of a National Policy, could be applied to conservation and recovery of right whales—a topic that includes a diversity of science and management issues—and requires addressing needed improvements in government functioning.

An Interim Report was published 10 September 2009. The final report is due to the President 9 December 2009. For reports and further information, see [www.whitehouse.gov/oceans](http://www.whitehouse.gov/oceans) or [www.whitehouse.gov/administration/eop/ceq](http://www.whitehouse.gov/administration/eop/ceq).

## **North Atlantic Right Whale Population Size for 2008: 438**

At the North Atlantic Right Whale Consortium Meeting, 17-18 November 2009, New Bedford, Massachusetts, the tradition of presenting the “North Atlantic right whale report card” was continued. In past years, the information on population status, reproduction, mortalities, entanglements, vessel strikes, and survey efforts was largely informal and for the information of Consortium members. However, based on the desire and the need to more widely provide the best available information, the report for the period 1 November 2007 to 30 April 2009 was presented to the International Whaling Commission’s Scientific Committee as Paper # SC/61/BRG11, and subsequently posted on the Consortium’s website ([www.rightwhaleweb.org](http://www.rightwhaleweb.org)) under the Resources tab and then the Publications tab. Additionally, the 2009 Annual Report Card Addendum for the period 1 May through 31 October 2009 is posted on the website.

The report card and the addendum provide current and comprehensive information on the consortium, research activities, and the essential population parameters. Among the information presented is that in 2008, the best estimate of catalogued North Atlantic right whales was 438 individuals.

## **Reflections, Questions, and Concerns**

*Contributed By Monica Zani and Amy Knowlton, New England Aquarium*

The close of 2009 is quickly approaching, which makes it a great time to reflect on the broad array of right whale events during the past year. 2009 brought us a record number of calves, with 39 cow/calf pairs documented off the coast of North Carolina, South Carolina, Georgia, and Florida. The 39 cows included eight first-time mothers and, for three of the mothers, their 2009 calf represented their 8<sup>th</sup> documented offspring. North Atlantic Right Whale Consortium members up and down the coast and throughout the year continued to document some of these 39 cow/calf pairs. But, not all 39 calves were seen after the calving season. Of the 39 mother/calf pairs documented, 20 were seen in the Bay of Fundy in the summer by the New England Aquarium—a slightly lower number than what would be expected on average (the percentage of m/c pairs that come to the Bay of Fundy averages 61%, which would translate to 24 m/c pairs expected). In addition to the 20 documented in the Bay of Fundy, 6 other m/c pairs have tentatively been matched by springtime survey efforts of other teams. So what happened to the 13 calves still unaccounted for?

This question is hard or impossible to answer. First, we know at least two right whale calves died during the calving season. One calf live-stranded on a beach in North Carolina whereas the other was found floating off the coast of Florida and towed ashore. Neither of calves was positively identified, which begs the question as to how many right whale calves were actually “born.” We know that 39 cow/calf pairs were documented and two dead calves were documented. The live stranded calf is likely from a cow that was never documented with its calf (therefore likely not included in the total 39). However, the calf found floating dead off the coast of Florida is likely a calf that had been documented as part of a cow/calf pair (and therefore likely included in 39).

Secondly, we typically do not document all calves born in a given year outside the calving ground. It may be that some m/c pairs are using offshore spring and summer habitats and thus not as easily detected. Also, we may miss some detections in a given habitat, especially if the pair does not reside there long. Fortunately, since the majority of the calves were biopsy darted on the calving ground, a link between new juveniles seen in the years ahead to a calf will hopefully be made for many of these missing calves.

The level of new entanglement scars seen in the Bay of Fundy m/c pairs was cause for concern. Four of the 20 Bay of Fundy calves showed signs of entanglement interaction. Catalog #1240's calf had quite serious wounds around the tail stock and we are concerned about its fate. Two of the cows (from the 20) also two showed signs of new entanglement interaction (#1817 and #2611) and one cow was entangled and later disentangled (#1151). Additionally, we know that

#1151 was documented with her calf in the Bay of Fundy and seven days later documented without her calf during her disentanglement near Jeffreys Ledge. So we are concerned about the fate of #1151's calf.

As the 2010 calving season is fast approaching it may shed some light on the missing 2009 calves as perhaps some yearlings will be documented this winter with or without their mothers. These sightings, along with the ongoing biopsy efforts in both the south and the north, will help us learn what happened to the 39 calves born in the 2009 season.

*(Readers of Right Whale News are familiar with the right whale photographic catalog and associated database and their value. Perhaps less well known is the corresponding and similarly valuable archive and database of DNA for the species. On 17 November 2009, attendees at the North Atlantic right whale consortium meeting heard about advances and developments in this area. These are summarized in the following. Editor)*

## **North Atlantic Right Whale DNA Bank**

*Contributed by Sonia J. Seto, Trent University, Ontario, Canada*

*“We have here only five loaves of bread and two fish,” they answered. “Bring them here to me,” he said. And he directed the people to sit down on the grass. Taking the five loaves and the two fish and looking up to heaven He gave thanks and broke the loaves. Then He gave them to the disciples and the disciples gave them to the people. They all ate and were satisfied and the disciples picked up twelve basketfuls of broken pieces that were left over. The number of those who ate was about 5000 men besides women and children.” (Matthew 14:15-21)*

Miracles such as the one that occurred in the biblical story above illustrate one method where a little can be turned into a lot. Limited amounts of DNA have been a serious problem with the North Atlantic right whale DNA bank housed at the Natural Resource DNA Profiling and Forensic Centre (NRDPFC) wildlife research lab at Trent University, but fortunately, new molecular approaches have provided a way to overcome this without needing a miracle. Since August 1988, tissue samples from both live and dead whales have been collected and stored at the research lab. DNA profiling has been used to identify individuals and study the behavior, demographics, ecology, and evolutionary biology of North Atlantic right whales. To date, the DNA bank consists of 878 DNA samples extracted from the tissue samples that have been collected by a large number of collaborators. However, only a limited amount of DNA is extracted from the tissue samples, which makes it difficult for the extensive DNA profiling, especially for functional genes. One way to ensure that an unlimited source of DNA is available is to use a molecular technique called whole genome amplification (WGA).

WGA is used to generate multiple copies of the entire genome from small amounts of DNA. Once the DNA is extracted from the tissue sample, WGA is immediately performed to amplify the DNA before the stock is too low and becomes less representative of the original DNA. Typically, a 300-fold increase of DNA is generated from the WGA method. The analyses of specific genes showed that a larger amount of WGA DNA was needed in order to obtain the

same polymerase chain reaction (PCR) amplification success as the smaller amount of original DNA that did not go through WGA method. Genetic analyses of microsatellite loci showed that approximately 10 times more WGA DNA is required as a template in PCR. The DNA profiles of the WGA samples, however, are identical to the original DNA.

The act of breaking and passing the bread and fish among 5000 people can be thought of as WGA. To ensure that the bank is safe, multiple storage techniques and locations are desirable. DNA banks are commonly stored frozen. Keeping samples frozen for shipping can sometimes be difficult and inconvenient when dry ice and special packaging are required. Storage at room temperature (RT) would have many advantages. No longer would DNA need to be frozen and become vulnerable to destruction during a power outage. This would provide additional insurance for the existing frozen bank.

GenTegra™, a recently developed product by GenVault Corporation, is an inert mineral medium that preserves the DNA dry and keeps it stable at RT for long-term use. The use of GenTegra™ tubes for storing WGA DNA dry at RT and at 37°C (accelerated aging of DNA) for two weeks was investigated. Through genetic analysis, it was discovered that WGA DNA stability of those stored in GenTegra™ at RT and 37°C were comparable to those stored frozen. This alternative storage method allows the creation of another bank in a different location and DNA would now be easily shipped to other laboratories.

The genetic research on North Atlantic right whales has led to the development of a web-based DNA database used to identify and monitor individuals; much like photographic identification. Currently, the database contains DNA profiles for 472 different live and dead whales, which represent 69% of the total number of individuals that have been identified. Of those individuals that are currently alive, there are DNA profiles for 81% of them. The genetic data collected from the samples have helped link 157 calves to their mothers and have assigned 90 fathers. With the ongoing research on the North Atlantic right whale, preserving high DNA quality and quantity is essential.

## **Fishing Gear That Entangles Right Whales: Source Identification is an Issue**

*Contributed by Jamison Smith, Large Whale Disentanglement Coordinator,  
National Marine Fisheries Service, Gloucester, Massachusetts*

Entanglement in fishing gear is a major cause of anthropogenic injury and mortality in North Atlantic right whales. *Right Whale News* has reported on disentanglement efforts, most recently in RWN 17(2), May 2009. The recovered gear can provide valuable information that may further our understanding of how and when entanglements occur and assist NOAA's National Marine Fisheries Service (NMFS) in the development of conservation measures intended to reduce serious injury and mortality of all large whale species that utilize waters along the east coast. Recovered gear can also assist NOAA's Office of Law Enforcement with determining the compliance of the fishing gear with the regulations designed to reduce entanglement risk to large

whales. However, in 69% of cases, recovered gear is unable to be tracked to general gear type or fishery.

During the time period between 1997 and 2007 there were 58 entangled right whales reported to the Network and confirmed. This figure represents the minimum number of entangled right whales. In 24 of the cases (41% of total cases), Network responders were able to remove and recover some portion of the entangling gear. General gear type (*i.e.* trap fishery, gillnet fishery, etc.) was identified in 18 of the 24 cases (31% of total cases). Of those 18 cases, it was possible to identify the specific fishery in 13 cases (22% of total cases).

Recovered gear is documented and archived by NMFS gear expert, John Kenney, in North Kingstown, Rhode Island. The gear is available for inspection, and indeed, numerous persons have made arrangements with John to go to the warehouse and inspect the gear. This has included fishing industry representatives and researchers. In March 2009, as part of the annual Maine Fishermen's Forum, NMFS conducted an "open house" whereby all of the gear recovered from east coast large whale entanglements between 1997 and 2005, along with reports regarding the disposition of the gear, were on display for the general public to view.

Gear identification has been a topic of discussion by the Atlantic Large Whale Take Reduction Team (ALWTRT), the Southeast Right Whale Implementation Team, and the North Atlantic Right Whale Consortium. The Atlantic Large Whale Take Reduction Plan (ALWTRP) was recently modified to include a modest expansion of gear-marking requirements for surface buoys and buoy lines. Although NMFS initially proposed broader gear marking requirements as part of its original proposed rule, public testimony and written comments supported further technological development before additional broad-based gear marking could be required. NMFS continues to modify the ALWTRP using the best available information, but has noted that information obtained from gear marking can help develop appropriate management measures.

To that end, NMFS is committed to seeking further methods to assist in identifying fishing gear found on entangled whales through improved techniques for removing and recovering fishing gear from entangled animals, as well as developing effective gear marking methods and techniques. NMFS, in collaboration with the ALWTRT, is currently developing another amendment to the ALWTRP to further reduce risk associated with vertical lines. Among other conservation measures, this action will likely include additional gear-marking strategies. NMFS is investigating several potential gear marking options that it intends to share with the ALWTRT at its 2010 meeting.

## **2<sup>nd</sup> Annual Whale Naming: Millipede wins!**

*Contributed by Philip Hamilton, New England Aquarium*

The North Atlantic Right Whale Consortium held its second successful whale naming prior to this year's meeting. There were 137 names submitted by 16 people from 9 different organizations. The result was 20 newly named right whales. The winning names came from 10 people from 8 different organizations. One name, Palmetto, was suggested by Alice Drive Elementary School

in South Carolina. This is the school that successfully petitioned the legislature to make right whales the state migratory marine mammal. Palmetto is an adult female, #1970, that is often seen off South Carolina, and she was named for her callosity pattern that looks like a Palmetto tree. One of the whales, #3520, had 15 different names suggested for it—and Millipede was the winner!



Right whale # 3520, Millipede, a female born in 2005, was the winner of the 2<sup>nd</sup> annual naming contest. (Photographed by Jessica Taylor of the New England Aquarium on 22 February 2007 off the Florida coast)

Millipede was named for a long series of propeller scars along her right side that looks like the many-segmented body of a millipede (see photo). She was hit by a small boat between the age of 7 and 12 months. Luckily the scars appear to be superficial and appear to be healing. Another whale, #1911, was named for her ever-changing callosity. She is now called *Mystique* to cue us into her callosity, which can appear to change from a continuous pattern (connected from the blowholes to the front of the rostrum) to broken in a single year! An adult male, #1112, was named *Javelin* for a scar on his right side, and another adult male, #2018, was named *Dalmatian* for an extensive spotted pattern of scars on his lower jaw. To see pictures of any of these whales, go the Consortium's catalog web site at [www.neaq.org/rwcatalog](http://www.neaq.org/rwcatalog).

## **Back Issues of *Right Whale News* Posted**

With thanks to the efforts of former editor, Hans Neuhauser, and webmaster, Yan Guilbault, New England Aquarium, nearly all of the back issues of *Right Whale News* are now posted on the Consortium's website: [www.rightwhaleweb.org](http://www.rightwhaleweb.org). A next step, indexing the issues, is being initiated.



## A Bill of Rights for Right Whales

At the North Atlantic Right Whale Consortium Meeting, New Bedford, Massachusetts, on 18 November 2009, the third year-class of Calvineers—8<sup>th</sup> graders from the Adams School, Castine, Maine—made a presentation. Among the slides was this one:

### *A Right Whale Bill of Rights*

**We, the last surviving Right Whales of the North Atlantic believe we have certain rights, Among which are:**



- The right to swim freely through the ocean without being hit by ships or entangled by fishing gear.
- The right to hear, and be heard by, our relatives.
- The right to raise our children without interference.
- The right to natural habitat with plenty of room and food.
- The right to swim in waters uncluttered by plastic and chemical pollution.

The Right Whale Bill of Rights was developed by Calvineer Josie Schamle while researching animal rights for The CALVIN Project's educational PowerPoint. (Image courtesy of Adams School, Castine, Maine)

## Calendar

4 May 2010. Southeast U.S. Right Whale Recovery Plan Implementation Team (SEIT) meeting. Location to be determined. For information, contact SEIT co-chair, Leslie Ward at [Leslie.Ward@MyFWC.com](mailto:Leslie.Ward@MyFWC.com).

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## *Right Whale News*

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