

RIGHT WHALE NEWS

*An independent forum for right whale conservation and recovery,
published four times a year in February, May, August, and November*

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Mid-season Report from the SEUS Right Whale Calving Area

Contributed by Katie Jackson (Florida Fish and Wildlife Conservation Commission)

Where are the whales? I have heard this question more than usual this winter as calf detections have been low and whale sightings have been intermittent. So far, 128 Whale Alerts to Mariners have been disseminated from sightings in the Southeast U.S. (SEUS) and approximately 27% of these have been off Florida. These numbers are low compared to the 2010-2011 season when 292 Whale Alerts had been sent by mid-February of which 80% were off Florida (*Right Whale News*, February 2011). The contrast likely reflects in part the influences of weather patterns on behavior—the 2010-2011 winter season had a notably cold start. As discussed during the pre-season Right Whale Forum held in Jacksonville, 17 October 2011, warmer temperatures this winter may be affecting whale distribution in the SEUS in relation to sea surface temperature (SST) patterns, as well as the overall number of individuals documented by SEUS survey teams. As of 14 February 2012, six mother-calf pairs have been sighted and preliminary data indicate that 68 individual adult and juvenile whales (excluding calves) have been sighted from South Carolina to Florida. This total includes cataloged whales and whales with temporary intermatch or season codes that have not yet been matched to the catalog.

Based on photo-identification, size, and physical features, an estimated 51 of the 68 individuals are juvenile whales (eight years old or younger). Fifteen of these whales are likely 2011 and 2010 season calves (one- and two-year-old whales). The modest number of Whale Alerts and individual whales sighted so far this season is similar across the three more northerly survey sections: South Carolina/Northern Georgia (SCGA, 21 Whale Alerts of 32 individual whales); Northern Early Warning System (NEWS, 39 Whale Alerts of 39 individual whales); and Central Early Warning System (CEWS, 40 Whale Alerts of 33 individual whales). For the three more southerly sections, there have been only three sightings (a yearling and two mother/calf pairs) in the Southern Early Warning System (SEWS) survey area, and just one whale (another yearling) sighted south of the St. Augustine Inlet with no sightings south of Cape Canaveral by the combined efforts of the Marineland Right Whale Project and the Marine Resources Council sighting network. Many of the adult and juvenile whales have been sighted in at least two different survey areas, but 16 whales (including several adult males) have been

documented only by the SCGA survey team this season. All 2012 season mother-calf pairs have been sighted in at least two different SEUS survey areas.

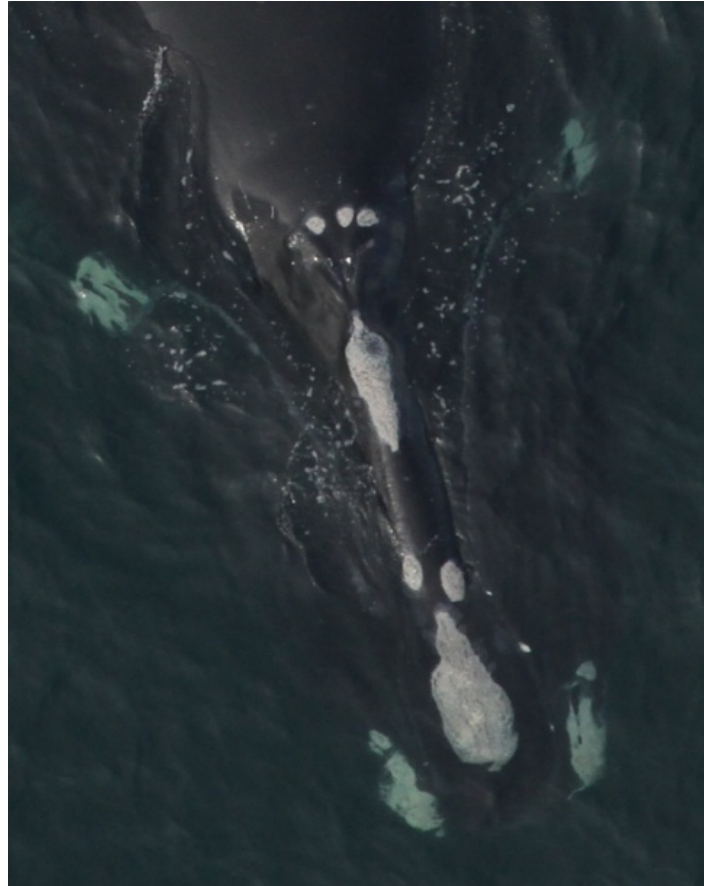
On 19 January 2012, the NEWS survey team sighted an entangled adult female, Catalog #1719. Although #1719 had significant new peduncle and fluke scarring, the entanglement did not appear life-threatening and the disentanglement team decided the whale could likely resolve the remaining entanglement without further intervention. Catalog #1719 was sighted again over 60 miles north the following day by the SCGA survey team, still heading north. Two additional whales, Catalog #3440 and #3940, were photographed by aerial survey teams with new entanglement wounds/scars, but were gear-free at the time of sighting.

Catalog #3390 and calf were sighted in between the jetties at the St. Mary's River entrance on 1 February 2012, and a yearling whale, the 2011 calf of Catalog #2420, was sighted in the shipping channel outside the St. Johns River entrance on 10 February 2012. The CEWS survey team and law enforcement provided on-scene assistance to vessel traffic in the area until the whales swam clear of the shipping channels. Another yearling whale, the 2011 calf of Catalog #2746, was sighted by the SEWS team with two large linear wounds on its left side. The wounds appear consistent with a vessel strike and were acquired sometime between August 2011 and January 2012.

No dead whales have been sighted to date this winter; however, Catalog #1301 has been sighted several times since 24 January 2012 without her calf and the calf is presumed to be dead. The calf looked emaciated at its last sighting on 10 January 2012. (Image and further information on #1301 below.)

The EWS surveys continue through 31 March 2012 and the SCGA surveys will continue through 15 April 2012. The lower numbers of whale sightings, individual whales, and mother-calf pairs observed to date this season will likely generate many new questions for researchers as it has been over a decade since calving numbers were this low and none of the record-setting 39 2009-season mothers have returned to calve this season. The data collected this season will provide some additional insight into the relationships between available prey resources and calving intervals, as well as whale distribution in the SEUS relative to SST and other environmental parameters. Contributing sources included the three Early Warning System (EWS) aerial surveys conducted by Sea to Shore Alliance (formerly Wildlife Trust)/Georgia Department of Natural Resources (GDNr) and the Florida Fish and Wildlife Conservation Commission (FWC); the South Carolina/Northern Georgia (SCGA) aerial survey conducted by Sea to Shore Alliance; the New England Aquarium; the UNCW/Duke USWTR survey teams; the biopsy teams (FWC, GDNr and NOAA Northeast Fisheries Science Center); the Marineland Right Whale Project and Marine Resources Council (volunteer public sighting network); and opportunistic sightings by US Coast Guard, US Navy, Harbor Pilots, ship captains, recreational boaters, and other research teams. EWS and SCGA aerial surveys are funded by NOAA

Fisheries, US Army Corps of Engineers, US Coast Guard, US Navy, and South Carolina State Ports Authority.



Right whale Catalog # 1301, "Half Note," on 10 January 2012. This individual, like all others, has a history. This female was sighted on 20 December 2011 with a calf. The calf is believed to have been lost between 10 and 24 January 2012. She also lost calves in 2006 and 2008; and a calf born in 1989 (Catalog # 1931) has not been seen since 1990. (It is not known whether #1931 died or simply has not been sighted, but it is presumed dead at this time.) The only surviving offspring of this female is Catalog #3301, a male, "Neptune," born in 2003. This individual was struck and scarred by a vessel in 2003 while still a calf, and struck a second time in 2005 leaving a series of small scars on his head. His mother, female #1301, is now 29 years old and is the 1983 calf of Catalog # 1001, "Fermata." Fermata is the first whale in the North Atlantic right whale catalog, and is also the right whale identified as the "Georgia Match"—the first whale photographically matched between Georgia and Cape Cod and Canada—and the first evidence of the north-south, long-distance migration in North Atlantic right whales. (Image: Florida Fish and Wildlife Conservation Commission, NOAA Research Permit #15488)

Atlantic Scientific Review Group Discusses Right Whales

On 8-10 February 2012, the Atlantic Scientific Review Group (ASRG) met at the Goldstein Marine Mammal Research and Rehabilitation Center, Mote Marine Laboratory, Sarasota, Florida. (For information on the SRGs, see the website listed below.) Following on discussions within the right whale community beginning in late 2010 and a discussion at the ASRG meeting in February 2011, and linked to a letter from the North Atlantic Right Whale Consortium to NOAA administrator Jane Lubchenco (*Right Whale News*, September 2011) expressing concern about right whale management, issues, and budget—a full day was devoted to presentations and discussions by National Marine Fisheries Service (NMFS) staff on right whale management and science. The tone of the meeting was set by the Chair, Andrew Read, who expressed that the purpose was to aid NMFS in making difficult decisions on priorities for right whale scientific



The Atlantic Scientific Review Group, Mote Marine Laboratory, 8 February 2012. L to R: Daniel Odell, Divide, Colorado; Robert Kenney, University of Rhode Island; Jack Lawson, Department of Fisheries and Oceans Canada; Douglas Nowacek, Duke University; Joseph DeAlteris, University of Rhode Island; Richard Seagraves, Mid-Atlantic Fishery Management Council; Randall Wells, Chicago Zoological Society; Michael Moore, Woods Hole Oceanographic Institution; and Andrew Read, Duke University.

Not shown: Sharon Young, Humane Society of the United States; Buddy Powell, Sea to Shore Alliance; and James Gilbert, University of Maine.

research. Michael Simpkins, Chief, Protected Species Branch, Northeast Fisheries Science Center (NEFSC) described that the NEFSC had completed internal discussions in December, that trade-off decisions were likely, and that discussions were timely. Read concluded the introduction by describing that the ASRG comments and recommendations would be provided to NMFS and other stakeholders (website provided below). Following are summaries of the key topics, with an overall summary and information sources at the conclusion.

Budget. “Budget constraints” and an “atmosphere of shrinking budgets” were heard frequently. Although no exact figures were reported, NMFS indicated that it has received general reductions in the overall NMFS budget for fiscal years (FY) 2011 and 2012, with uncertainties for FY2013. However, marine mammal budgets for FY2011 and 2012 were reported as similar to FY2010. At the same time, salaries and labor costs are increasing, with less money for field projects and studies. Reductions were reported in several areas including gear research and aerial surveys (more information on this topic below).

Fishing Gear Take Reduction. The Northeast Regional Office (NERO) reported that in 2003, by consensus, the Atlantic Large Whale Take Reduction Team (ALWTRT or Team) identified two major sources of serious injury and mortality associated with large whale interactions with commercial trap/pot and gillnet gear. The two major sources of risk are entanglements associated with: 1) ground lines (rope between trap/pot gear, and rope between gillnet anchoring system and gillnet); and 2) vertical lines (buoy lines) for trap/pot and gillnet gear. NERO reported that the sinking-ground-line rule went into effect in 2009, and that NMFS intends to publish a final rule in 2014 to address vertical line entanglement. The 5-year vertical-line-rule development process, under the auspices of the Team, is a participatory process, with stakeholders invited to submit proposals for solutions. A principal analysis initiative is the development of a co-occurrence model, which evaluates areas where high gear density and high large-whale sightings per unit effort co-occur, and that ultimately identifies the greatest risk of entanglement. Gear marking was also discussed. At one point, an ASRG member offered a different approach. Based on a paper by Myers *et al.* (2007), which showed that in some areas where reduced lobster fishing effort in Canadian waters occurred, there were relatively higher catches, while a heavier lobster fishing effort in U.S. waters resulted in relatively lower catches. It was suggested that a reduced fishing effort, accompanied by fishing allowed with whale-safe innovations in “hot spots” or productive areas constituted a “win-win” situation. It was opined that, given the money that the fishing industry has spent with little hope of reward, this method was seen as providing positive reinforcement and an incentive to the industry for creative

solutions. NMFS noted that closing an area and allowing only fishermen that use “ropeless” fishing gear was discussed by the Team but not pursued at this time.

Ship Strike Reduction Efforts. NMFS HQ provided an update on efforts to assess the effectiveness of the ship speed/strike regulations. The five metrics are: 1. Biological, 2. Human behavior (monitoring vessel operations), 3. Outreach and raising mariner awareness, 4. Economic impacts, and 5. Dynamic Management Areas (DMAs). In an analysis based on time intervals between ship-strike events, Richard Pace, NEFSC, described that the results to date are inconclusive, and additional time would be needed to detect changes. One member inquired whether other analyses might be possible/useful. Regarding vessel operations, compliance with the ship-speed restrictions has improved in 2011. A number of vessels were issued Notices of Violations in late 2010 and 2011 for exceeding the speed limits and were assessed fines. Regarding DMAs where advisories are provided and observance of the 10-knot speed limit is voluntary rather than required, responses were described as minimal, and the measure was deemed not successful. Lastly, a report assessing the ship-speed rule (addressing all five metrics) is being finalized and will be provided to NMFS leadership, whereupon NMFS expects to soon make its decisions regarding the next steps. The report will be provided to the ASRG, and made available to the public in the form of a NOAA Technical Memorandum. The ASRG will be invited to comment on the report when it is released. Whether there will be an opportunity for public review and comment is unknown. In all this, there is a time factor. The “sunset clause” in the original rule of December 2008 calls for the existing rule to expire in December 2013. NMFS HQ describes the time required to develop and publish a new rule can take up to 24 months, but it is unknown at present how long a potential rulemaking might take in this case.

Aerial Surveys. The Southeast Regional Office (SERO) described that aerial surveys were under review. A central question was where to focus efforts given limited resources. Approximately half of the NMFS right whale budget in the SEUS is directed to aerial surveys. Likewise, the Northeast Fisheries Science Center described that flight hours in 2012 were reduced due to funding constraints. The implications of reduced effort were described as decreased confidence in the ability to enumerate serious injury and mortality, impacts on estimating survival rate, impacts on monitoring changes that relate to efficacy of the ship-strike rule (management efforts), decreased detection of entangled right whales, and decreased contributions to the photo-identification catalog and database. In addition to aerial survey efforts funded through the respective Centers, the NERO and SERO noted that they also fund aerial survey efforts through state cooperative grants. The ASRG discussed the need for analysis of optimal survey design relative to various objectives and resource constraints.

Passive Acoustic Monitoring. The Southeast Fisheries Science Center (SEFSC) reported on the application of passive acoustic monitoring (PAM), and specifically the ability to detect and localize right whales. System deployments have occurred since 2004 and continue through 2012. The comparison of acoustic and visual detections is under analysis. Shippers desire real-time tracking of individual right whales, but PAM provides a general presence of animals in an area over longer time frames. One member expressed the goal of making the visual and acoustic detection tools complementary. On a more general note, noise in the ocean is receiving increasing attention, and various initiatives are underway (see website below).

Critical Habitat. The NERO reported on the right whale critical habitat review (*Right Whale News*, May 2010). Revision of the existing critical habitats has been under study for several years. NMFS is evaluating potential critical habitat areas along the entire Atlantic seaboard from Maine through Florida. The NERO and SERO are completing their reviews. The agency anticipates publishing the findings/rulemaking in mid-summer 2012. At that time, the proposed rule will be open for public comment. The comments received will be considered in preparing the final rule.

Summary. The information presented was diverse and the discussion free-flowing. The task before the ASRG was not an easy one. Funding, timetables, agency constraints, sometimes divergent stakeholder views, and challenging science were all on the table and the subjects of careful deliberation. At the end of the day, “The principal questions for right whales, the cost-benefit analysis of various management actions, research priorities/needs, and providing the best possible advice to the agency” were the stated objectives. In discussions that followed, the ASRG met to develop its recommendations. The Chair, Andrew Read, advised that letters will be submitted to NMFS and to the Fish and Wildlife Service within a month (the plural “letters” is because the ASRG meeting was three days long and included topics other than right whales), at which point the NMFS letter/recommendations will be posted on the NMFS SRG website (see below). These are interesting times—for right whales and their stewards. There is a lot happening: take reduction team, scientific review group, fishing gear entanglements, sunset clause of ship-strike rule, budget constraints, economic considerations, and environmental and biological variability. *Right Whale News* will update these topics as information becomes available.

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For information on the Scientific Review Groups, meeting minutes, and recommendations
www.nmfs.noaa.gov/pr/sars/group.htm

For information on NMFS marine mammal/protected resources budgets:
www.nmfs.noaa.gov/pr/about/budget.htm

For information on cetaceans and sound in the ocean:
www.st.nmfs.noaa.gov/cetsound

Atlantic Large Whale Take Reduction Plan:
www.nero.noaa.gov/whaletrp/

Atlantic Large Whale Take Reduction Plan Monitoring Strategy:
www.nero.noaa.gov/whaletrp/reports/5a_ALWTRP%20Monitoring%20Strategy.pdf

Ship Strike Reduction:
www.nero.noaa.gov/shipstrike/ and www.nmfs.noaa.gov/pr/shipstrike/

Stranding and Disentanglement Program:
www.nero.noaa.gov/prot_res/stranding/

Northeast Region Marine Mammal Grant Program:
www.nero.noaa.gov/prot_res/mmgp/

Research Priorities and Needs for Protected Resources Division in the Northeast Region:
www.nero.noaa.gov/prot_res/research/

Grants and Research Projects:
www.nero.noaa.gov/prot_res/GrantsResearchProjects/

Current status of right whales (*Eubalaena japonica*) in the North Pacific and the Okhotsk Sea

Contributed by Philip Clapham, Catherine Berchok, Yulia Ivashchenko, Amy Kennedy, Brenda Rone, and Alex Zerbini, National Marine Mammal Laboratory, Seattle, Washington

Right Whale News tends to focus on the population of North Atlantic right whales, *Eubalaena glacialis*. However, the Pacific counterpart similarly warrants attention and concern. This species is considered to exist in two discrete populations: eastern and western (Brownell *et al.* 2001). The range of eastern North Pacific right whales is believed to encompass the Gulf of Alaska (GoA) and the Bering Sea (BS), while the western population inhabits the northwestern Pacific and the Okhotsk Sea (OS). Recent genetic and photo-ID mark-recapture methods gave independent estimates of approximately 30 animals for the eastern population (Wade *et al.* 2011). Although this may represent a sub-population that inhabits the BS in summer, and could therefore under-represent total abundance, the recent paucity of sightings strongly suggests that the overall eastern population is not much larger; as such, this is the smallest large whale population in the world for which an abundance estimate exists. There is no reliable estimate for the western stock, but sightings suggest that a few hundred animals may remain there, possibly along the eastern coast of Sakhalin Island or in offshore waters to the east and north.

North Pacific right whales were subject to intensive hunting by commercial whalers beginning in the 19th century. The precarious status of these remnant populations is the consequence of extensive and unregulated whaling that began in the GoA in 1835, moved to the OS in about 1846, and drove both populations to commercial extinction in just a few decades. As previously reported in *Right Whale News* (May 2011) the situation was compounded by illegal Soviet catches in the 1960s, which took 661 right whales (529 in the east and 132 in the Okhotsk Sea); this probably represented the bulk of the remaining population, at least in the eastern Pacific (Ivashchenko *et al.* 2011, Ivashchenko and Clapham, in review).

Research on North Pacific right whales has been sporadic at best in the eastern population, and essentially nil in the OS. Work has been stymied by the remote habitats concerned (unlike North Atlantic right whales, there are no study areas close to an inhabited coast) as well as by a lack of funding. Beginning in 2007, the Bureau of Ocean Energy Management (BOEM, formerly Minerals Management Service) funded the National Marine Mammal Lab (NMML) to conduct surveys for right whales in the southeastern BS as part of an effort to assess environmental impacts of potential oil and gas development in the North Aleutian Basin (NAB). During 2007-2009, NMML conducted aerial and shipboard surveys of the region, as well as acoustic monitoring and satellite tagging. BOEM funding was withdrawn in 2010 when the Obama Administration removed NAB from consideration as a lease sale area, but with some emergency assistance from NMFS, a short ship survey was conducted in the summer of that year. With the exception of a few days of opportunistic surveys piggy-backed onto other cruises, there has been no sighting effort in the region since. However, passive acoustic detectors remain deployed in the area, and are recycled every year.

Eighty sightings of right whales were made during these various surveys, but photo-

identification indicated that only 12 individuals were involved. One noteworthy result is that the aerial survey had considerable success in detecting right whales acoustically through sonobuoys deployed from the aircraft; in one case, a right whale was visually found after an acoustic detection in a Beaufort 7 sea state (Rone *et al.* 2012)!

Satellite transmitters were attached to four whales; these were tracked for an average of 40 days (range: 30-58), providing information on distribution from July to October. All movements were restricted to a relatively small region of the southeastern BS, confirming the importance of this area as a feeding ground. Mark Baumgartner and colleagues from Woods Hole Oceanographic Institution conducted parallel studies of right whale habitat during the shipboard cruises.

Results from analysis of the passive acoustic monitoring show a near year-round presence of right whales in the southeastern BS, with a peak in August/September; a sharp decrease in detections in early January may reflect migration out of the BS. In this regard, an interesting side note is that a Soviet scout vessel recorded four sightings of single right whales moving through Unimak Pass toward the Pacific Ocean on 12 January 1964 (Petukhov 1964). Two of these animals were marked with Discovery tags, but it is not known whether the tags were ever recovered.

Despite these hints, the location of wintering or calving grounds for North Pacific right whales remains a mystery. A photographic match between a right whale seen in Hawaii on 2 April 1996 and resighted in the BS on 30 July of that same year represents the first documented movement of an individual between low and high latitudes; the individual was sighted again in the BS in 2008. However, there is no historical evidence that Hawaii was ever a significant winter habitat; the same applies to California and Mexico, where a small number of right whale sightings have been made in the last few decades (Brownell *et al.* 2001).

In the western North Pacific, right whales were killed by historical shore whaling operations off the coasts of Japan and Korea, but there are few clues regarding where this population goes to calve. Reproduction in North Pacific right whales appears to be very low generally, especially in the east where not a single calf was documented in the 20th century, and where only a couple have been observed since.

The good news—such as it is—is that there appears to be relatively low interaction between eastern North Pacific right whales and fishing gear, though a right whale died in a gill net off Kamchatka in 1989. Neither is there evidence of ship strikes. However, the obvious caveat here is that any mortalities would likely pass unrecorded in the remote areas in which right whales are found. Nonetheless, analysis of scarring does not suggest an extensive entanglement problem, and the amount of fixed gear deployed in the BS and GoA is a tiny fraction of that encountered

by North Atlantic right whales. The Marine Conservation Alliance and other fishing organizations have been very proactive on this issue, and have worked closely with NMML scientists to assess the extent of overlap between whales and gear.

However, the emerging issue for right whales—and many other cetaceans in this region—is the exponential increase in ship traffic through the Bering Sea (and concomitant increase in noise and pollution) resulting from the inevitable opening of the Northwest Passage and Northern Sea Route from Europe as sea ice continues to diminish in the Arctic.

Current evidence strongly suggests that right whales are now perilously close to extinction in the eastern North Pacific, and surveys are urgently needed to better assess the status of this population. This is particularly important for the Gulf of Alaska, which has received little or no survey effort in the years following the Soviet catches, and the Okhotsk Sea, which remains largely unstudied. In the eastern North Pacific, aerial or shipboard surveys, together with extensive passive acoustic monitoring, would go a long way towards establishing the status of what may well be the world's most endangered population of large whales. However, the amount of funding currently dedicated to research on this species is ... zero.

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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

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

10 May 2012. SEUS Right Whale Forum, Samburu Room, Jacksonville Zoo and Gardens, Jacksonville, Florida, 9:00 a.m. to 4:00 p.m. For further information, contact Tom Pitchford, tom.pitchford@MyFWC.com.

11 May 2012. Southeast U.S. Right Whale Recovery Plan Implementation Team meeting. As in previous meetings, the meeting will be closed to the public. However, the SEIT has requested a recurring time slot on the Forum agenda during which they will make themselves available to Forum participants for information exchange. For further information, contact Barb Zoodsma, barb.zoodsma@noaa.gov.

A Special Request to Right Whale Scientists

Right Whale News attempts to provide comprehensive lists of recent scientific literature involving right whales (see following). If you find that a publication of yours has not been included in *RWN*, please notify the Editor at jhain@earthlink.net so that it can be listed. We would also like to include advance notice of articles that have been accepted for publication.

Scientific Literature and Reports

Anonymous. 2011. Report of the southern right whale die-off workshop. *Journal of Cetacean Research and Management* 12 (Supplement 1):367-396.

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Right Whale News

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Current and back issues of *Right Whale News* published between 1994 and 2011 are available at the North Atlantic Right Whale Consortium website, www.narwc.org—select 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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