



# NORTH ATLANTIC RIGHT WHALE CONSORTIUM ANNUAL MEETING

22-23 October 2025  
New Bedford Whaling Museum

With Special Attendee (Onsite & Remote) Programming on 21 October 2025

## MEETING FORMAT AND AGENDA

### **Pre-Meeting:**

Prior to the meeting, all registered participants will receive a unique meeting site login code that will allow them to view all pre-recorded presentations in advance of the meeting. All underlined presentations should be viewed **in advance of the meeting** as they will not be shared live. Those presentations that are not underlined will be shared **live** during the meeting. The six-digit number preceding the presentation title corresponds to the video number on the meeting site.

Participants (both onsite and remote) may submit questions/comments for presenters in advance of the meeting using the question submission link on the meeting page.

### **Live Meeting:**

Remote participants will be able to view the meeting, including live presentations and discussions, using the zoom access links on the meeting site.

Each live presentation will be followed by a short Q&A session with the presenter. Following any live presentations within a session, a discussion panel will take place with all presenters within that session. Presenters who are onsite will gather at the front of the auditorium and presenters who are remote will be available via the virtual meeting platform. The panel will take questions/comments from both onsite and remote meeting participants. Remote participants will be able to come off mute to ask their questions. **Remote participants – please see meeting site for important information on queuing for questions during the meeting.**

**All meeting materials (both static and live) are intended for registered participants only and may not be shared in any capacity. All participants have agreed to the meeting Code of Conduct. There is no external recording (including but not limited to video, audio, screenshots, or photography) or sharing (including social media) of any material (including but not limited to presentations, presentation content, discussions) without explicit consent of the presenter, speaker, moderator, etc. The meeting will be recorded to facilitate the synthesis of meeting notes to be distributed to participants only.**

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live

## **Meeting Site Information**

The onsite meeting will take place at the **New Bedford Whaling Museum**. We will be using three levels of the venue during our meeting. Additionally, registration check-in will take place in the museum lobby.

Access to each of the floors below is available by both stairs and elevators.

### **Lobby and Lower Level**

#### **Lobby**

- 10/22 and 10/23 Check In

#### **Cook Memorial Theater**

- 10/22-10/23 Main Meeting Room
- 10/21 Workshop - Reconsidering North Atlantic Right Whale Detection Ranges, Source Levels, and Ambient Noise Assumptions in the March Towards a Real-time PAM Listening Network

#### **Conference Room**

- By reservation only

### **Main Level**

#### **Lagoda Room**

- 10/22 Reception

#### **Media Lab**

- By reservation only

### **Upper Level**

#### **Harbor View Gallery**

- 10/22-10/23 Lunch, Breaks and Breakout Session seating
- 10/21 Workshop - Bridging the Divide: Disentangling Conflict to Meet Challenges Collaboratively

**Wi-Fi information:** NBWM Public Wireless    **password:** nbwm2019

**The entire museum is open to meeting participants. Please respect the museum's policy of no food or drinks in the theater. The museum also requests that food and drinks not travel between spaces.**

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live

## **ROPELESS AND NARWC 2025 ANNUAL MEETINGS SPECIAL PROGRAMMING**

### **Tuesday, October 21, 2025**

#### **Workshops**

There are two workshops being held on the afternoon of October 21, 2025. These are independently organized - please see Workshop page at narwc.org for more information and registration information.

**3:30-5:30PM: Bridging the Divide: Disentangling Conflict to Meet Challenges Collaboratively** (Harbor View Gallery) *Please note that this workshop does NOT have remote participation available.*

Are you frustrated with conflict getting in the way of solutions in the take reduction process? Are you struggling to make connections, communicate, and collaborate? Participants in this workshop will learn practical, dignity-centered skills arising from research and on-the-ground experience to build understanding and get things done, even when stakes are high and tempers are hot. We will discuss common pitfalls that arise when people with different perspectives are trying to solve problems together. Participants will discuss and practice dignity-centered engagement techniques and how they apply to current programs and activities. They will leave with new, more effective ways to connect and collaborate.

**3:30-5:30PM: Reconsidering North Atlantic Right Whale Detection Ranges, Source Levels, and Ambient Noise Assumptions in the March Towards a Real-Time PAM Listening Network** (Cook Memorial Theater)

This is a technical workshop that will focus on defining guidelines for currently accepted North Atlantic right whale source levels, detection ranges, and ambient noise assumptions, as based upon the best available science. The goals of this workshop are to 1) develop a framework for determining assumptions used for modelling NARW detection ranges, including topics such as source level distribution, ambient sound distribution within appropriate decade bands, and detection methods, including thresholds and probability of detection, that align with the best available science, 2) lead a discussion to incorporate these scientific community-accepted guidelines in US regulatory actions , 3) engage stakeholders from the scientific, regulatory, conservation, and industrial sectors, and 4) carry these newly defined guidelines forward in the development of an autonomous real-time PAM listening network. This workshop is meant to define these guidelines using the best available science, with the ultimate goal of implementing these guidelines in the creation of a larger PAM listening network.

#### **Social Meet and Greet**

6PM Rose Alley Ale House, 94 Front Street, New Bedford, MA 02740

Are you a student or early career researcher? Is this your first year attending the Consortium meetings? Are you looking to connect with other meeting attendees? Join us for a casual gathering. Food and drink available for purchase. Please RSVP on the meeting site.

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live

# NORTH ATLANTIC RIGHT WHALE CONSORTIUM

2025 Annual Meeting

Agenda

Wednesday, October 22, 2025

**800-830AM Check In - New Bedford Whaling Museum Lobby**

Coffee - Lobby area

PLEASE NOTE - NO COFFEE allowed in Theater, only water with lid

**830AM Opening**

*Heather Pettis, North Atlantic Right Whale Consortium Chair*

**850AM NOAA remarks**

*Michael Asaro, NOAA Fisheries*

**900AM Session 1: Population Status Updates**

*Moderated by Rob Schick, Southall Environmental Associates, Inc.*

**01.01.01 North Atlantic right whale identification catalog update (Full)**

- *Lindsey Jones, Anderson Cabot Center for Ocean Life, New England Aquarium*

**01.01.02 North Atlantic right whale genetics catalog update (Full)**

- *Tim Frasier, Saint Mary's University*

**01.01.03 North Atlantic right whale attached gear entanglements and response 2025 (Speed)**

- *Bob Lynch, Center for Coastal Studies*
- *Moe Brown, Canadian Whale Institute/Campobello Whale Rescue Team*

**01.01.04 Near real time monitoring of North Atlantic right whale injuries 2025 (Speed)**

- *Heather Pettis, Anderson Cabot Center for Ocean Life, New England Aquarium*
- *Allison Henry, NOAA/Northeast Fisheries Science Center*

**01.01.05 Update on the North Atlantic right whale Unusual Mortality Event: 2017-Present (Speed)**

- *Deborah Fauquier, National Marine Fisheries Service*

**1015AM Break (Upstairs in Harbor View Gallery)**

**1045AM Session 2: Distribution**

*Moderated by Erin Meyer- Gutbrod, University of South Carolina*

**01.02.01 U.S.-Canada transboundary density surface model for the North Atlantic right whale (Full)**

- *Jason Roberts, Duke University*

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live

- 01.02.02 **Right whales on the (L)edge: A wintertime aggregation in a historically important habitat** (Speed)  
 • *Katherine McKenna, Anderson Cabot Center for Ocean Life, New England Aquarium*
- 01.02.03 **Intra-seasonal trends in the occurrence of surface active groups in Cape Cod Bay and adjacent waters** (Speed)  
 • *Annie Bartlett, Center for Coastal Studies*
- 01.02.04 **Movement behavior of North Atlantic right whales: A retrospective analysis of historical satellite tag data** (Speed)  
 • *Daniel Palacios, Center for Coastal Studies*
- 01.02.05 **Important habitats of the North Atlantic right whale (*Eubalaena glacialis*) in Eastern Canadian waters** (Speed)  
 • *Stephanie Ratelle, Fisheries and Oceans Canada*
- 01.02.06 **Fisher-led detection of North Atlantic right whales in coastal lobster fishing areas of the southern Gulf of St. Lawrence** (Speed)  
 • *Lyne Morissette, M-Expertise Marine Inc., Institut des sciences de la mer de Rimouski (UQAR-ISMER)*
- 01.02.07 **Using vessel-based photo-identification data to improve aerial survey abundance estimates**  
 • *Jess McCoppin, Center for Coastal Studies*
- 01.02.08 **Not just passing through: Southern New England is more than a pathway to calving grounds**  
 • *Orla O'Brien, Anderson Cabot Center for Ocean Life, New England Aquarium*
- 01.02.09 **The effects of an oceanographic regime shift on U.S. North Atlantic right whale density estimates**  
 • *Camille Ross, Anderson Cabot Center for Ocean Life, New England Aquarium*
- 01.02.10 **An investigation and characterization of sightings of North Atlantic right whales south of Cape Canaveral, FL**  
 • *Kara Shervanick, NOAA Fisheries - Southeast Regional Office*

**1215PM Lunch (Upstairs in Harbor View Gallery)**

*Due to the size of the meeting, we will have lunch in two shifts - while one half of participants are at lunch, the other half are invited to explore the New Bedford Whaling Museum exhibits*

- *If your last name begins with A-M, please proceed upstairs to lunch at 12:15.*
- *If your last name begins with N-Z, please proceed to lunch at 1:00PM.*

**Film Session: "Calvin is Back!"**

*Looping in the Cook Memorial Theater during lunch*

The Calvineers have been studying right whales for 20 years. They have focused on the Life History of Calvin the female right whale which tells the story of all right whales. In 2022, when Calvin was last seen with severe wounds to her peduncle, many were worried that Calvin would be gone forever. She was not seen for three years and even the Calvineers were worried. But in 2025 Calvin returned and was sighted south of Nantucket and later in the Gulf of Saint Lawrence. This video celebrates Calvin's return.

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live

**145PM**      **Session 3: Anthropogenic Interactions and Mitigation**  
*Moderated by Jessica Redfern, Anderson Cabot Center for Ocean Life at the New England Aquarium*

- 01.03.01 **Efforts to determine likely country of origin of North Atlantic right whale entanglements to evaluate management efficacy** (Full)  
● *Amy Knowlton, Anderson Cabot Center for Ocean Life, New England Aquarium*
- 01.03.02 **A North Atlantic right whale aggregation in a productive Gulf of Maine lobster fishing area: A case study for dynamic management** (Full)  
● *Julia Stepanuk, State of Maine Department of Marine Resources*
- 01.03.03 **Tradeoffs within the Blue Economy: An example with North Atlantic right whales and renewable energy development** (Full)  
● *Laura Ganley, Anderson Cabot Center for Ocean Life, New England Aquarium*
- 01.03.04 **Connecting data to decisions: The evolution of Whale Insight and FishPro to support NARW awareness and protection** (Speed)  
● *Adèle Labbé, Fisheries and Oceans Canada*
- 01.03.05 **A real-time PAM framework for vessel strike reduction management** (Full)  
● *Paige Hanson, Azura Consulting LLC in support of NOAA Fisheries Northeast Fisheries Science Center*
- 01.03.06 **Whale Alert - Expanding the reach & impact of boater directed citizen science applications**  
● *Virgil Zetterlind, Whale Alert*
- 01.03.07 **Model-based tool for assessing technology driven vessel strike risk reduction**  
● *Casey Corrado Kirsch, MITRE*
- 01.03.08 **Predicting North Atlantic right whale spatiotemporal persistence conditional on an initial detection**  
● *Jamie Brusa, Azura Consulting, LLC. in support of NOAA Northeast Fisheries Science Center*

**330PM**      **Break (Upstairs in Harbor View Gallery)**

**400PM**      **Session 4: Health/Physiology/Genetics**  
*Moderated by Tim Frasier, St. Mary's University*

- 01.04.01 **Update on the North Atlantic right whale health assessment strategy** (Speed)  
● *Shasta McClenahan, NOAA, NMFS, Office of Protected Resources*
- 01.04.02 **Monitoring the body condition of North Atlantic right whales using quantitative aerial photogrammetry** (Full)  
● *John Durban, Anderson Cabot Center for Ocean Life, New England Aquarium*
- 01.04.03 **North Atlantic right whale baleen analysis: an update on male and female reproductive cycles, including cryptic reproductive failure** (Full)  
● *Nadine Lysiak, Anderson Cabot Center for Ocean Life, New England Aquarium*

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live

## 445PM Discussion Part 1

Historically, conservation efforts aimed at protecting North Atlantic right whales have originated from regulatory action in both the US and Canada. Shifts in social, political, and economic landscapes have provided increased opportunities for exploring alternative actions outside of such regulatory processes. During this panel discussion, we will hear from several participants engaged in such efforts and will have the opportunity for an open discussion on these and other ongoing efforts to move forward right whale conservation outside of regulatory processes. We welcome attendees to come to the meeting prepared to discuss and offer additional ideas on this topic.

Short bios and project descriptions for our panelists are included in the abstract booklet.

Panelists:

- **Michelle Cho**
  - *BalanceBlueLab, Anderson Cabot Center for Ocean Life at the New England Aquarium*
- **Liddy Clever**
  - *Save Sea Life*  
*See also abstract Public engagement on the North Atlantic right whale: A study of awareness at coastal Georgia marinas*
- **Dr. Tora Johnson**
  - *Sustainable Prosperity Initiative at Sunrise County Economic Council*
- **Greg Reilly**
  - *Greg Reilly, International Fund for Animal Welfare (IFAW)*  
*See also abstract Disseminating near real-time right whale information to mariners*
- **Jenn Thornhill Verma and Lauren Owens Lambert**
  - *Pulitzer Center Ocean Reporting Network / The Globe and Mail*
  - *Conservation Photographer/Photojournalist, The Globe and Mail*  
*See also abstract Lessons from 'Entangled,' a news media series on protecting North Atlantic right whales*
- **Rachel Rhodes**
  - *Benioff Ocean Science Laboratory at University of California, Santa Barbara*
- **Heather Wood**
  - *CMA CGM America*

**600-730PM Day 1 Wrap Up**  
**Reception – Lagoda Room**  
*Light appetizers and cash bar*  
*Attendees on own for dinner*

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live

## NARWC 2025 ANNUAL MEETING

Thursday, October 23, 2025

- 800AM**      **Check In - New Bedford Whaling Museum Lobby**  
Coffee - Lobby area  
PLEASE NOTE - NO COFFEE allowed in Theater, only water with lid
- 830AM**      **Business Meeting**
- 900AM**      **Session 1: Management**  
*Moderated by Amy Knowlton, Anderson Cabot Center for Ocean Life at the New England Aquarium*
- 02.01.01    **Protecting North Atlantic right whales in Massachusetts: an update of ongoing efforts (Full)**  
● *Leah Crowe, Massachusetts Division of Marine Fisheries*
- 02.01.02    **Canada's 2025 fisheries measures to protect North Atlantic right whales: updates to shallow water protocols and Whalesafe gear pilots (Full)**  
● *Melissa Landry, Fisheries and Oceans Canada*
- 02.01.03    **Unusual Mortality Event prompts increased legislation and partisan variation at state and federal level (Full)**  
● *Erin Meyer-Gutbrod, University of South Carolina*
- 02.01.04    **Recovery potential assessment for the North Atlantic right whale (*Eubalaena glacialis*)**  
● *Angelia Vanderlaan, Fisheries and Oceans Canada*
- 02.01.05    **Transport Canada (TC) update on North Atlantic right whale vessel management measures**  
● *Chantal Bois, Transport Canada*
- 02.01.06    **Fisheries and Oceans Canada: An update on key research and monitoring activities for North Atlantic right whales (*Eubalaena glacialis*)**  
● *Katia McKercher, Fisheries and Oceans Canada*
- 02.01.07    **Canada's Whalesafe Gear Strategy 2025 update**  
● *Haley Welsh, Fisheries and Oceans Canada*
- 02.01.08    **Development and implementation of a North Atlantic right whale Emergency Response Plan**  
● *Mendy Garron, NOAA / NMFS*
- 1030AM**    **Break (Upstairs in Harbor View Gallery)**
- 1100AM**    **Session 2: Acoustics**  
*Moderated by Genevieve Davis, NOAA Northeast Fisheries Science Center  
Hansen Johnson, Anderson Cabot Center for Ocean Life at the New England Aquarium*

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live

- 02.02.01 **North Atlantic right whale acoustic presence in the Mid-Atlantic Bight** (Full)  
 ● *Renea Briner, Azura Consulting LLC in support of NOAA Fisheries Northeast Fisheries Science Center*
- 02.02.02 **Observed spatial and temporal trends of North Atlantic right whale occurrence over the past decade offshore Maryland, U.S.A.** (Full)  
 ● *Kirsten Silva, University of Maryland*  
 ● *Caroline Tribble, University of Maryland*
- 02.02.03 **Characterizing spatiotemporal variability in North Atlantic right whale upcall activity** (Full)  
 ● *Hana Koilpillai, Azura Consulting LLC in support of NOAA Fisheries Northeast Fisheries Science Center*
- 02.02.04 **Insights into variability in call rate and call type in North Atlantic right whales by behavioral state** (Speed)  
 ● *Susan Parks, Syracuse University*
- 02.02.05 **Expanding the North Atlantic right whale call library used in acoustic monitoring** (Full)  
 ● *Sara Tennant, Syracuse University*
- 02.02.06 **Near real-time PAM to detect and localize North Atlantic right whales off Eastern Canada: Understanding species density, vocal repertoire, and movements with PAM** (Speed)  
 ● *Katie Kowarski, JASCO Applied Sciences (Canada) Ltd (not present at meeting)*  
 ● *Adam Frankel, JASCO Applied Sciences (Canada) Ltd (presenting author)*
- 02.02.07 **Validated acoustic dataset for North Atlantic right whales in Cape Cod Bay: Detection, localization, and ecological applications** (Speed)  
 ● *Tina Yack, Duke University*

**1215PM Lunch (Upstairs in Harbor View Gallery)**

*Due to the size of the meeting, we will have lunch in two shifts - while one half of participants are at lunch, the other half are invited to explore the New Bedford Whaling Museum exhibits*

- *If your last name begins with N-Z, please proceed upstairs to lunch at 12:15.*
- *If your last name begins with A-M, please proceed to lunch at 1:00PM.*

**Student/Early Career Roundtables – Harbor View Gallery**

Join professionals in the right whale community as they share their career journeys and experiences. Host bios are provided in the abstract booklet. Look for reserved tables for onsite hosts. The remote session will be moderated by a current NARWC Board Member and will start with brief introductions followed by opportunities to join remote hosts in their own breakout rooms for discussion. See meeting site for zoom link.

**145PM Session 3: Feeding Ecology**

*Moderated by Mark Baumgartner, Woods Hole Oceanographic Institution*

- 02.03.01 **Joint spatiotemporal modeling of zooplankton and whale abundance in a dynamic marine environment** (Full)  
 ● *Robert Schick, Southall Environmental Associates, Inc.*

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live

- 02.03.02 **Combining individual movement and prey models to understand demographic habitat-use patterns** (Full)  
 • *Abigail Kreuser, University of South Carolina*
- 02.03.03 **Assessing hydrodynamic impacts of offshore wind turbine structures in the Nantucket Shoals region** (Full)  
 • *Josh Kohut, Rutgers University*
- 02.03.04 **Dominance of *Calanus hyperboreus* in near-bottom zooplankton layers in the southern Gulf of St. Lawrence during late spring and its significance for North Atlantic right whale foraging ecology** (Speed)  
 • *Kevin Sorochan, Fisheries and Oceans Canada*
- 02.03.05 **Feeding ecology and diet of North Atlantic right whales using fecal DNA and high throughput sequencing** (Speed)  
 • *Sabine Angier, Graduate School of Oceanography, University of Rhode Island*

**245PM Break (Upstairs in Harbor View Gallery)**

**315PM Session 4: New Technology and Emerging Science**  
*Moderated by Kim Davies, University of New Brunswick*

- 02.04.01 **Spatial and temporal distribution of copepods in outer Bay of Fundy right whale habitat** (Full)  
 • *Liam Brennan, Department of Biological Sciences, University of New Brunswick*
- 02.04.02 **A deep learning-based tool for the automated detection of NARWs in thermal video data** (Speed)  
 • *Charlotte DeBossu, Naval Undersea Warfare Center Division Newport*  
 • *Christin Murphy, Naval Undersea Warfare Center Division Newport*
- 02.04.03 **Shared escalation, divergent focus: U.S. and Canadian news coverage of the North Atlantic right whale before and during an Unusual Mortality Event** (Speed)  
 • *Amadi Afua Sefah-Twerefour, University of South Carolina*
- 02.04.04 **Heat signatures of free-swimming North Atlantic right whales (*Eubalaena glacialis*) from drone-based infrared thermography** (Full)  
 • *Gina Lonati, The Marine Mammal Center, University of New Brunswick Saint John, Anderson Cabot Center for Ocean Life at the New England Aquarium*
- 02.04.05 **Astaxanthin-based satellite remote sensing of *Calanus finmarchicus* reveals potential monitoring of North Atlantic right whale feeding habitats**  
 • *Rebekah Shunmugapandi, Bigelow Laboratory for Ocean Sciences*
- 02.04.06 **The role of calf-year habitat use on long-term North Atlantic right whale site fidelity to Cape Cod Bay**  
 • *Ryan Schosberg, Center for Coastal Studies*
- 02.04.07 **Development and application of a low-cost, open-source drifting recorder for acoustic monitoring of North Atlantic right whales during vessel surveys**  
 • *Hansen Johnson, Anderson Cabot Center for Ocean Life, New England Aquarium*
- 02.04.08 **The benefits of prefiltering for capturing the elusive North Atlantic right whale eDNA**  
 • *Christine Hudak, Center for Coastal Studies*

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live

**430PM**      **Short Break**

**445PM**      **Discussion Part 2**

*Follow up to Day 1 discussion - Look for 10/22 evening email from NARWC with additional thought/discussion points to guide us.*

**600PM**      **Meeting Wrap**

\*A login is required to access the Meeting page via the NARWC website ([www.narwc.org](http://www.narwc.org))

\*Times listed are EDT

\*Underlined talks should be viewed **in advance** of the meeting and will not be shared live