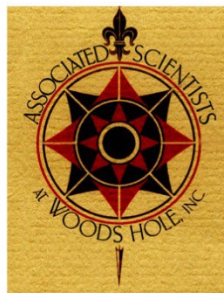


**Monitoring Endangered Right Whales
in Coastal Waters of Northeast Florida
by a Volunteer-Based Citizens Network**

2024–25 Season

**Annual Report to the
Volunteers, Colleagues, Collaborators, and Sponsors**

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Preface and Summary

The Marineland Right Whale Project was initiated in 2001 and completed its 25th field season in March 2025. It is one of about a dozen programs and organizations extending from Canada to Florida dedicated to the science and conservation of the critically endangered North Atlantic right whale, *Eubalaena glacialis*.

From two and half decades of work, we've learned that every season is different. In the previous 2023-24 season, the MRWP recorded only three fairly elusive sightings in our area, fewer than 15 of our 260+ volunteers saw any whales, perhaps due to a northward seasonal habitat shift. As we approached the 2024-25 season, we, as always, did not know what to expect. In fact, it turned out to be a successful season, with a higher number of sightings than the previous season, and more individual whales in our survey area than in the previous five seasons.

As of 30 Apr 2025, 11 new calves were documented. This calf count is down from the 20 calves born in the 2023-24 season, but close to the 10-year average of 12 calves per season. Four human-impacted individuals were reported.

The central metric for the North Atlantic right whale population is the population status. At the fall meeting of the North Atlantic Right Whale Consortium, 22-23 October 2025, an estimate of 384 as of the end of 2024 was given. This was an increase of eight, or 2.2%, consistent with an earlier population trend.

Our work was conducted under NOAA/NMFS research permit #26562.

2.0 Methods

2.1 Overview

During the course of 25 seasons, the volunteer sighting network has evolved, and refinements and innovation have been incorporated. In its present form, a number of interrelated components have proven essential to success:

- Dedicated survey teams
 - * Mobile
 - * Stationary (Community/Condo)
- Opportunistic sightings
- Right Whale Hotline
- Response teams

- Drone photos and videos
- Timely and effective communication with volunteers and collaborators
- Education and outreach
- Collaboration
- Data processing, analyses, synthesis, and presentation

The volunteer handbook, which provides essential information on right whale biology and survey protocols, is posted on the website: www.aswh.org.

2.2 Study Area and Sectors

The study area, monitored with a combination of a shore-based sighting network and complementary drone flights, is in the near-shore waters of northeastern Florida between Ponte Vedra Beach (latitude 30°10'N) and Canaveral Seashore (28°56'N), within 5 nautical miles (nmi) of the coast (Figure 1). This ~70nmi section is subdivided into seven sectors, each ~10 nmi in latitudinal extent). The shore-based monitoring extends south to Ponce Inlet (29°04'N), while some opportunistic monitoring extends farther south to Canaveral Seashore. (Note, in 2023, an additional sector to include Ponte Vedra was added to the north end of our monitoring area.)

2.3 Sighting Protocols

Sightings, photo documentation, and data collection are based on interrelated sources and responses. The initial sightings are made almost exclusively from the shore. The response, extended observations, and photographs may be from the shore, or air (drone), or a combination. Throughout, there are standardized search effort and data collection protocols. This includes photo documentation and photo-identification, which are essential to monitoring and data collection. The results are optimized through communication, collaboration, and by utilizing multiple platforms.

2.4 Shore-Based Lookouts

As described, the study area is divided into seven sectors. A shore-based volunteer sighting network works with experienced scientists. The volunteer sighting network includes two components: 1) scheduled, and 2) opportunistic observers. The scheduled observers, typically teams of two to four volunteers, are of two types: a) mobile and b) stationary. The mobile teams meet at 0800 hr at a designated point and travel by vehicle to a series of lookout stations where a 15-minute search is conducted at each. At the end of the series (typically five stations per team), they reverse the search and end back at the starting point.

The stationary teams (typically based in shore-front condos or housing communities) maintain lookouts from dune walkovers, or the balconies of shorefront buildings. In both cases, most watches are concluded by 1200 hr.

The opportunistic observers are residents and/or workers who have been provided information and the sighting-report hotline number; they report sightings made during the course of normal recreation or work. Opportunistic observers include, for example, the Volusia County Beach Patrol. (Wallet-size phone cards are widely distributed.)

The 200+ member volunteer sighting network and its several components provides effective coverage of our ~ 70 nmi section of coastal habitat.

2.5 Response Teams

A central location (an office in Marineland) is manned during daylight hours and is linked to the central call-in hotline maintained by the Blue World Research Institute. When a sighting is reported, a response team that includes experienced scientists and volunteers is deployed. The response team carries portable GPS units (Garmin 12XL or similar) and digital cameras with long lenses (*e.g.*, Canon EOS 60D with a Canon EF 600-mm image-stabilized f 4.0 telephoto lens fitted with either a 1.5 or 2.0 Canon tele-extender). On many occasions, the response includes a drone and drone operator.

Standardized protocols are followed for data collection. Bearings are measured using binoculars with built-in compasses (*e.g.*, Nikon OceanPro 7X50 Model #7441). Ranges are estimated visually by experienced observers. Data and sighting sheets are standardized and reviewed for quality control. Whenever possible, whale locations are recorded by the GPS function of the drone; otherwise they are estimated from shore.

2.6 Unmanned Aerial Systems (UASs)

Since the 2016 season, drones (unmanned aerial systems or UASs) replaced the AirCam airplane that we flew from 2007 through 2017. The MRWP currently has two drones, one DJI Phantom 3 Pro, and a DJI Phantom Pro 4 v.2. In addition, four volunteers operate a DJI Phantom Pro 4 v.2, a DJI Phantom 3, or a DJI Mavic 2 Pro. With a total of five drones and five operators, the plan is that for any given sighting event, at least two will be available. All drones are registered with the Federal Aviation Administration (FAA). As we are considered to be a commercial operation (*e.g.*, includes scientific research) under CFR 14, Part 107, our operators

have FAA Remote Pilot Certificates. Our operators are listed in our NOAA/NMFS research permit, #26562.

Because of the proximity of several coastal airports to our study area, we have applied for, and received, FAA airspace waivers for Northeast Florida Regional (SGJ), Flagler (FIN), and Ormond (OMN) airports. (This waiver provides for operations within five nautical miles of the airport). In addition, we have the AirMap app on our mobile phones to utilize the Low Altitude Authorization Capability (LAANC) and provide for operation within five nmi of Daytona Beach International (DAB). In the future, we will apply for authorization for New Smyrna Beach (EVB). The Canaveral Seashore National Park is closed to drone operations, making this section of the coast unavailable. (We are exploring whether an exemption might be possible.)

The protocol for drone use in the course of our work is as follows: When a sighting is reported, a response team is deployed. This will typically include one or more drone operators. An assessment will be made as to weather and sea state conditions, as well as the distance from shore to the whale(s)—*i.e.*, is it reasonably within range? This will determine our response options. If warranted, a drone will be deployed to first obtain high-quality identification photos and second, to record video that will contribute to behavioral studies. As detailed in our NOAA/NMFS permit, operators and assistants wear vests identifying them to the public as researchers. In many cases, images will be sent to members of the right whale team at Florida Fish & Wildlife Conservation Commission (FWC) for assessment in decisions about darting and boat/aircraft deployment. Likewise, if conditions or distance preclude a drone launch, this information will be relayed so that FWC has the option of deploying their aircraft for photo-ID.

2.7 Monitoring for Human-impacted Individuals

In the field and during photo archiving and analysis, particular attention is paid to noting and documenting human-impacted individuals. Impacts or potential impacts include ship/boat collisions, fishing gear entanglement, and harassment by boaters, paddle boarders/surfers, and jet skiers.

Data and photo documentation are submitted to NOAA law enforcement, the Whale-Vessel-Interaction database maintained by FWC, as well as the database and photo catalog maintained by the New England Aquarium, Boston, Massachusetts.

2.8 Phone Notification System

The phone notification system, which was implemented several years ago, has proven to be valuable. The system was temporarily discontinued in 2020–21 due to the pandemic to avoid groups gathering at a sighting location. Post-pandemic, the system has resumed. We contract with One Call Now, an automated telephone messaging service, to facilitate fast, efficient, and complete notification of survey team members during whale sightings. After importing the team members' names and contact numbers, One Call Now allows us to create a voice message and deliver it to certain sectors, or, to the entire list, within 20 minutes. Volunteers either answer the call live and hear the message, or, the service leaves a voice mail. Having the opportunity to see right whales is a high-priority goal, both as a reward for the volunteers' assistance, and, to help new volunteers establish their right-whale sight image for better detection/species identification during surveys and follows.

2.9 Sea-Surface-Temperature (SST)

Sea-surface temperature (SST) satellite images are received daily from the Naval Oceanographic Office, Stennis Space Center, Mississippi. The images are based on Advanced Very High Resolution Radiometer (AVHRR) reflective measurements interpolated, averaged, and analyzed within a 10 km (~5 nmi) grid. The SST value is ground-truthed with drifting buoys. The error estimate for the images with reference to the buoys is described as ± 0.5 degrees. In parallel, for a nearshore fine-grain measurement, we use the SAUF1 National Data Buoy Station at the end of the St. Augustine Pier. Data are posted on the National Data Buoy Center website (Station SAUF1-St. Augustine, Florida), and are available for download.

2.10 Outreach and Education

Engaging citizens and community is an important part of our core mission. Training and orientation sessions are given to volunteers and potential volunteers prior to, during, and at the end of the season. As the season progresses, updates with information and results are scheduled. We also give public talks, and respond to media requests, both print and television. We also partner with other organizations, *e.g.*, the Marineland Dolphin Adventure in Marineland, Florida, and the Blue Ocean Society, in Portsmouth, New Hampshire.

2.11 Data and Photo Analysis, and Submission

As is the custom, the right whale data and photos are submitted to the database and photo catalog maintained by the New England Aquarium. If humpback whale data and photos are taken, they are submitted to FWC, and subsequently to the Center for Coastal Studies, Provincetown, Massachusetts.

3.0 Results

3.1 Sighting Effort

Between the 2023 and 2024 seasons, the number of MRWP volunteers jumped from 188 to 261. In 2025 we maintained this increased volunteer participation, with 265 active volunteers. Volunteers continued to survey 70 nautical miles of coastline from Ponte Vedra Beach to Ponce Inlet (Figure 1). The survey area is partitioned into seven sectors, each ranging from between 5 nmi and 15 nmi latitudinal extent. Of the 265 volunteers, 200 were in mobile survey teams across all seven sectors, and 65 were in four stationary community-based teams in two sectors, including a new community team at Cinnamon Beach in Palm Coast (Figure 1). All told, volunteers contributed approximately 7,000 hours of sighting effort.

The 2025 shore-based daily surveys began on Sunday, 4 January, and ended on Saturday, 8 March, giving 64 potential survey days. Weather and sighting conditions were variable, and included cool and windy days that required us to cancel surveys on 13 days; on 9 days, people conducted partial surveys due to deteriorating conditions (Figure 2a). It seemed that weather was more challenging than average, and this hunch was borne out by the comparison of survey effort with the previous two years (Figure 2b).

3.2 Right Whale Sightings 2024–25

3.2.1 Right Whale Sightings Summary

In the Southeast US (SEUS) the Volunteer Sighting Network (VSN) is comprised of the Marineland Right Whale Project (MRWP) and the Blue World Research Institute (BWRI); the latter operates the right whale hotline. In the 2024–25 SEUS season, the VSN made or responded to 20 unique, verified right whale sightings (Table 1). Of these, many resulted in photography that

provided for individual identification. Between 5 January and 24 February 2025, 16 right whale alerts were attributed to the VSN.

The MRWP made or responded to 14 sightings of right whales (Table 2, Figure 3). The total number of individuals seen by MRWP was 15, comprised of 6 mother-calf pairs, one juvenile, and a pair of adult females. This is a highest number of individuals seen by our team during the past six years (Table 3).

The MRWP flew thirteen successful drone flights that yielded individual identification of 5 adult right whales (Table 4). On 23 February, our drone team photo-documented the 10th mother of the season, #3420, *Platypus* (Figure 4). *Platypus* is the daughter of #2460, *Monarch*, who was documented in Cape Cod Bay on 17 Apr as the 11th mother of the 2025 season. In two cases, a mother-calf pair remained unidentified; on 28 January, they were too far offshore for drone photography, and on 24 February, rain and wind prevented a drone flight (Table 2).

We sighted one pair of adult females three times: sixteen-year-old #3940, *Koala*, and #4190, 14-year-old *Curlew* (Table 2). Sightings gathered by multiple institutions in the SEUS show this pair's unusual (but not unique) travel pattern (Figure 5). They were first sighted traveling together off South Carolina in late November. After spending time in the core distribution area (centered approximately on Amelia Island, Florida), the pair swam south past Miami, into the Gulf of Mexico, and were sighted on 2 February in the vicinity of Mobile, Alabama. They were next sighted to the east, off Panama City, Florida. In late February and early March, it looked like the pair might be starting their return trip; as on 23 February, the pair was seen off St. Petersburg, Florida. They were expected to round the corner and head north. However, by early April they had reversed course and were back off the Florida panhandle. On 11 April, they were sighted off Tampa, heading south and on 15 April, they were finally sighted outside of the Gulf, just off Bimini in The Bahamas (Figure 5). This is the first record of right whales in The Bahamas (New England Aquarium press release). It is possible that the pair rode the Gulf Stream northward. Excursions into the Gulf of Mexico, while unusual, do occur (Ward-Geiger *et al.* 2011). Between 2004 and 2020, three first-time mothers brought their calves into the Gulf. After exiting, the mother-calf pairs were not re-sighted until they got much further north; #3560, *Snow Cone*, was spotted off North Carolina (NARWC catalog), while the other two, #2360, *Derecha*, and #2503, *Boomerang*, were not re-sighted until the Great South Channel and the Bay of Fundy, respectively (Ward-Geiger *et al.* 2011). By 15 May, the pair was in the Gulf of St. Lawrence, and as mid-July approached, they had separated, but were nearby one another in the Shediac Valley area, ENE of Shediac, New Brunswick (Lindsey Jones, New England Aquarium, personal communication).

Finally, the combined efforts of the MRWP and the BWRI yielded a total of 19 sightings (Figure 6).

3.2.2 Humpback Whale Sightings

This season, 18 humpback whale alerts were attributed to the VSN (Table 1). The MRWP made or responded to 13 humpback sightings (Figure 7). Our first humpback whale sighting was off Ormond Beach on 1 January 2025; the others occurred much later in the season, between 12 February and 24 March 2025. We never saw more than one humpback at a time in our area. We had one successful drone flight over a single humpback off Matanzas Inlet on 23 March (Figure 8). The Florida Fish and Wildlife Conservation Commission (FWC) believes this was the first sighting of this individual this season; it was assigned a temporary identification of SEUS2528 for in-season tracking purposes.

3.2.3 Human Impacts

Several human impacts were reported in our area in the 2025 season. Of the four mother-calf pairs sighted by the MRWP in the 2025 season, three had evidence of human impacts (Figure 9). The one that did not, #3430, Minus One and calf, were sighted off South Ponte Vedra Beach on 3 January with no evidence of human impacts. Twenty-year-old *Caterpillar* has propeller scars on her back from an incident when she was two. A large chunk of 18-year-old *Check Mark's* tail was sliced off by an unknown source when she was six. A third mother, 21-year-old *Platypus*, #3420, was seen carrying gear when she was five, but with help from disentanglement teams, she was eventually able to free herself of the gear. *Platypus* has a large scar on her back resulting from an abscess (Figure 4, Figure 9), however the origin of the abscess is unknown (Philip Hamilton, NEAQ, personal communication).

In the three instances reported here, human impacts were incurred outside of the SEUS.essel strikes are implicated, with the source for #3420 listed as unknown. From this small sample, the conclusion of pervasive human impacts continues.

3.3 Sea Surface Temperature

As has been our practice for more than a decade, daily sea-surface temperature (SST) plots were obtained from the Naval Oceanographic Office, Stennis Space Center, Mississippi. Analyses of the connections between SST and whale distribution are underway; in the meantime,

one preliminary observation is worth noting. There was a prolonged stretch of strong northerly winds and cold weather advisories from 19 through 24 January. Aerial survey teams from South Carolina to Florida were grounded and MRWP cancelled shore-based surveys. On 25 January, as the seas began to settle, our volunteers conducted full surveys and FWC's plane surveyed as far north as St. Simons Island, Georgia, to search areas where mother-calf pairs had last been seen. No right whales were spotted.

The next day, warm weather and calm seas prevailed and a streak of sightings began. On 26 January, MRWP volunteers spotted *Check Mark* & calf off Marineland. BWRI received public photos of *Nauset* & calf just north of Cape Canaveral. On 27 January, MRWP volunteers sighted *Caterpillar* & calf off Flagler Beach, and FWC's aerial team spotted *Check Mark* & calf as well *Black Heart* & calf, 5 and 6 miles off Marineland. All told, there were four mother-calf pairs spotted over these two days. Prior to this prolonged wind event, the seven mother-calf pairs of the season-to-date were being sighted fairly regularly near--or north of--the Florida/Georgia border. After the winds abated, more than 50% of these pairs were spotted further south, between Marineland and Cape Canaveral. Had the mothers traveled south purposefully, in search of warmer water? Sea surface temperature plots before and after this wind event suggest that this is a plausible explanation (Figure 10). Another possibility is that the calves had been pushed southward by prevailing winds. Further inquiry into similar events may help us understand the proximal causes for this temporary southward shift in distribution of mother-calf pairs.

3.4 Collaboration with the Florida Fish and Wildlife Conservation Commission Team

We collaborate and communicate with FWC team on a near-daily basis. This collaboration includes several components, among them responding to public sighting reports, providing photos for identification of individual whales, and facilitating the genetic sampling of calves by maintaining visual contact with whales until the sampling vessel arrives (Table 1).

3.5 Professional Meetings and Participation

The MRWP provided summary information for a presentation at the (virtual) Southeast US right whale implementation team (SEIT) meeting, 21 May 2025.

In 2024, Jim Hain and Sara Ellis of the MRWP attended the annual meeting of the North Atlantic Right Whale Consortium, 23–24 October in Providence, Rhode Island, as did Julie Albert & Joel Cohen of the BWRI. In 2025, Jim Hain, Sara Ellis, and Julie Albert attended the annual meeting of the North Atlantic Right Whale Consortium, 22–23 October in New Bedford, Massachusetts. Terran McGinnis, MRWP, attended remotely.

3.6 Training and Public Outreach

As usual, we held three meetings with our volunteers: a season opener and training session in January, as well as a mid-season and final meeting in February and March, respectively (Table 4, Figures 11 and 12).

Before and during the season, the MRWP gave a number of talks between November 2024 and March 2025 (Table 4). Our volunteers set up educational displays at the Marineland Market on 2 Nov and 7 Dec 2024. Volunteers also manned a non-profit exhibit space at the two-day annual Right Whale Festival on Amelia Island, in November 2024 (Figure 13), and again in November 2025.

Sharing images, videos, and results with our volunteers is central to the program. To this end, volunteer drone pilot Jeff Greene made summary videos of three right whale sightings, including *Koala* and *Curlew* on 5 January, *Check Mark* & calf on 26 January, and *Caterpillar* & calf on 27 January. We also made a summary of the noteworthy sighting of *Platypus* and calf, a new mother-calf report for the calf 10th of the season. These videos may be viewed on the [YouTube channel of the Marineland Right Whale Project](#). As of 1 December 2025, the video of *Caterpillar* & calf had been watched 729 times, and the video of *Koala* and *Curlew* 402 times--both of which are new records of public engagement on our YouTube channel.

Volunteers helped MRWP modernize communications and broaden our reach by developing a sleek new website (marinelandrightwhale.org) as well as a project Facebook page (Figures 14a and 14b). They also designed new sightings cards with two QR codes that link to our website and an online donation page (Figure 14c).

We also maintain a blog (marinelandrightwhale.blogspot.com), which is updated regularly. We send “e-blasts” to volunteers, alumni, collaborators, supporters, and friends on a regular basis. These go out to about 570 persons. On a broader scale, volunteers receive notice of postings of *Right Whale News*, a publication of ASWH that is edited by Jim Hain and posted online by the North Atlantic Right Whale Consortium at www.narwc.org. *Right Whale News* has an overall readership of ~1,700.

There was a great deal of media interest in the pair of travelling adult females, *Koala* and *Curlew*. In early January, Sara Ellis was interviewed for an article in local newspapers, the *Palm Coast Observer* and *Ormond Beach Observer* (Table 4B). After the pair showed up near Mobile, Alabama, in February, Julie Albert of BWRI was interviewed for a national newspaper, *USA Today*; the resulting article featured aerial photos and video by BWRI's volunteer wildlife photographer, Joel Cohen (Table 4B).

3.7 Disposition of Data

Data and photographs were submitted to the Right Whale Catalog at the New England Aquarium, Boston, Massachusetts, on 19 July 2025. Archiving of data, images, videos, and reports is continuing. Our intentionally redundant backup system consists of two multi-Terabyte external hard drives stored in separate locations.

4.0 Discussion and Conclusions

The Marineland Right Whale Project continues to be a valuable contributor to right whale science and conservation. The experienced volunteers provide resources, skills, dedication, and experience.

4.1 Volunteers

Since the start of the program in 2001, and for the following 24 years, a group of dedicated and capable volunteers has formed the core of the program.

An important component of the volunteers' mission is public education and outreach (Table 4). Here, engaging the public involves not science and statistics, but storytelling and hands-on displays (Figure 13). These efforts are always subject to refinement, but, judging by responses and new volunteer sign-ups, they have been successful.

Additionally, the skills, dedication, and expertise the volunteers bring significantly help refine and evolve the program.

4.2 Sightings and Outlook

Between 2021 and 2024, our program had a steadily decreasing number of sightings (Figure 15). In 2024, the MRWP had only 3 sightings, even though there were many right whale sightings north of our survey area, suggesting a northward shift in distribution. We were curious. Was this normal variability, or, a sign of the future? In 2025 we saw 6 of the 11 mother calf pairs in our survey area, and a comparatively high number of individuals, indicating that 2024 was an exception, not necessarily the “new normal.” In addition to mothers and calves we saw a pair of adult females and one yearling, showing mixed usage of the wintering habitat.

Perhaps the best indicator of status and recovery of the right whale population is the annual calving reports. Variability has occurred during decades of monitoring (Figure 16). Strong calving took place in the 2000 to 2011 period. A general decline followed. In 2024, the birth of 20 calves was the strongest in a decade. While this season’s calving total of 11 is considerably lower, it is in line with the 10-year average.

The 2023 Annual Report of the North Atlantic Right Whale Consortium called for a continued commitment to both aerial and shipboard photo documentation to ensure that information necessary to evaluate individuals and the species as a whole are captured (Pettis & Hamilton 2024). The MRWP intends to continue survey effort and photo documentation.

4.3 Long-Term Studies

In the 25 years of the program, we have taken the view that, “Every day, every season, and every whale is different.” Large-scale metrics show general patterns layered over variability at many levels. Long-term studies have allowed for development for new technological and analytical approaches, helped address policy and management issues, and provided baseline data for evaluating trends and changes. This has implications for science and management—and funding (Kraus 2025). Long-term studies, as exemplified by the 25-year-long Marineland Right Whale Project have merit, and should be continued.

4.4 Population Status and Trend

Taking the broader view, the central metric for the North Atlantic right whale population is the population status. At the fall meeting of the North Atlantic Right Whale Consortium, 22–23 October 2025, an estimate of 384 as of the end of 2024 was given (Figure 17). This was an increase of eight, or 2.2%, consistent with an earlier population trend. This was the fourth consecutive year with an increase. Likewise, there were other promising hints. As described by

Jen Jakush at the May Southeast US Implementation Team meeting, there were four first-time mothers, and four mothers had an interval of only four years between calves. An improvement on both counts. We can be cautiously optimistic. We look forward to the 2026 season and what it might bring.

References and source materials

Hain, J. 2024. [Monitoring Endangered Right Whales in Coastal Waters of Northeast Florida by a Volunteer-Based Citizens Network: 2023–24 Season](#). Annual Report, 6 December 2024.

Kraus, S.D. 2025. Til death do us part? *Frontiers in Marine Science*, 09 June 2025. 10.3389/fmars.2025.1605/09.

Linden, D. 2024. Population size estimation of North Atlantic right whales from 1990-2023. US Dept Commerce Northeast Fisheries Science Center Technical Memorandum 324. 15 pp.

New England Aquarium press release, 17 Apr 2025. For the first time ever, North Atlantic right whales are seen in The Bahamas. (<https://www.neaq.org/about-us/press-room/press-releases/first-time-ever-north-atlantic-right-whales-are-seen-in-the-bahamas/>)

Garrison, L. 2007. Defining the North Atlantic Right Whale Calving Habitat in the Southeastern United States: An Application of a Habitat Model. NOAA TECHNICAL MEMORANDUM NMFS-SEFSC-553. 61 pp.

Pettis H.M., and Hamilton P.K. 2024. North Atlantic Right Whale Consortium, Annual Report for 2023. www.narwc.org

Ward-Geiger, L. I., A. R. Knowlton, A. F. Amos, T. D. Pitchford, B. Mase-Guthrie and B. J. Zoodsma. 2011. Recent Sightings of the North Atlantic Right Whale in the Gulf of Mexico. *Gulf of Mexico Science* 29 (1): 74 –78.

www.fisheries.noaa.gov/national/endangered-species-conservation/north-atlantic-right-whale-calving-season-2025

www.neaq.org/2024-2025-north-atlantic-right-whale-mother-and-calf-pairs/

Acknowledgments

We are grateful for the good efforts and strong commitment of many, including Joy Hampp who provides program support with our blog and meeting logistics and Lorraine Cooley who volunteers as Administrative Assistant. Our capable drone operators Jack Dewhurst, Carol Logan, and Sara Ellis were joined this season by Jeff Greene, Michelle Ross, and Zoe Rauscher. Bill Gough, Martha Garito, and Anita Dodd Margulies are successful photographers who have donated photos to the program for use in our reports, presentations, and website, as well as the NARW catalog. Laura and Zoe Rauscher created our new website, Facebook page, and sightings cards. Program support was provided by the U.S. Army Corps of Engineers, Jacksonville District, the Batchelor Foundation, and private donors. In-kind services were provided by the University of Florida's Whitney Laboratory, Florida Department of Environmental Protection, the Guana-Tolomato-Matanzas National Estuarine Research Reserve, Marineland Dolphin Adventure, the Volusia County Beach Patrol, Inc., and many others. Collaboration and assistance with research and analysis was provided by the Blue World Research Institute, the Florida Fish and Wildlife Conservation Commission, and the New England Aquarium. Research was authorized by NOAA NMFS permit #26562.

Table 1. Summary of 2024-2025 sightings and responses by the Volunteer Sighting Network, a collaborative effort of the Marineland Right Whale Project and the Blue World Research Institute. (Sightings of humpback whales in blue font)

| DATE | TIME ¹ | LOCATION | LAT (N) | LONG (W) | RW CLASS | HDG | ALERT # VSN org | NOTES (Who sighted, etc.) | VERIFIED? PHOTOS? | PROVISIONAL ID |
|-------------|-------------------|--------------------------------|---------|----------|------------------------|-----|------------------------|---|-----------------------------------|--------------------------|
| 20 Dec 2024 | 10:56 | Cinnamon Bch. | 29 36.2 | 81 09.6 | 2 AD | S | FLWS007 | MRWP vol Mickey J called hotline; FWC photo'd w/plane; Jack Dewhurst responded but whales no longer visible so no drone flight | Yes, FWC | 3940 Koala & 4190 Curlew |
| 31 Dec 2024 | 13:10 | Flagler Water Tower | 29 26.4 | 81 05.4 | 1 whale, sp unverified | S | n/a | Tony Caruso forwarded shrimper's report of whale 1.5 miles offshore, by Flagler water tower. No photos. One pair of MRWP vols looked, and so did Tony. FWC plane too busy up north to come down | No | none |
| | | | | | | | | | | |
| 1 Jan 2025 | 16:30 | Ormond Beach | 29 22.5 | 81 04.4 | HUWH | | VSN001, MRWP | Laura Rauscher saw whale, solicited & submitted public photos. | Yes | N/A |
| 3 Jan 2025 | 16:00 | Marineland | 29 39.3 | 81 11.0 | 2 AD | | FLWS019 | Kelly Fischbach of MLD Dolphin Adventure called hotline, as did others | Yes, FWC plane; Jeff Greene drone | 3940 Koala & 4190 Curlew |
| 5 Jan 2025 | 13:06 | South Ponte Vedra Beach | 30 03.9 | 81 19.5 | MC | NE | FLWS020 | Public call to hotline by David Michaels, Shea Lox responded then Kim Jacomo with camera; FWC plane came | Yes, FWC | 2430 Minus One & calf |
| 5 Jan 2025 | 15:30 | Beverly Beach to Flagler Beach | 29 29.0 | 81 07.4 | 2 AD | S | VSN002, & VSN003, MRWP | Call to hotline from manager of Camptown Campground, Beverly Beach: Vinnie P, Jeff Greene, Sara, Tony Caruso, others | Yes, drone Jeff Greene | 3940 Koala & 4190 Curlew |
| 10 Jan 2025 | 16:46 | Melbourne | 27 56.1 | 80 28.7 | 2 AD | S | VSN004, BWRI | Julie Albert & Joel Cohen, BWRI | | 3940 Koala & 4190 Curlew |

| DATE | TIME ¹ | LOCATION | LAT (N) | LONG (W) | RW CLASS | HDG | ALERT # VSN org | NOTES (Who sighted, etc.) | VERIFIED? PHOTOS? | PROVISIONAL ID |
|-------------|-------------------|-----------------------------|---------|----------|----------|------|-----------------|---|--|-----------------------------------|
| 11 Jan 2025 | 16:34 | Fort Pierce | 27 33.3 | 80 19.0 | 2 AD | S | VSN005, BWRI | Julie & Joel, and Jamison Smith | Yes, Joel drone | 3940 Koala & 4190 Curlew |
| 12 Jan 2025 | 9:20 | Jensen Beach | 27 19.8 | 80 13.6 | 2 AD | S | VSN006, BWRI | Julie & Joel | | 3940 Koala & 4190 Curlew |
| 12 Jan 2025 | 15:45 | Boynton Beach | 27 10.9 | 80 08.6 | 2 AD | S | VSN007, BWRI | Julie & Joel | | 3940 Koala & 4190 Curlew |
| 16 Jan 2025 | 9:15 | Jensen Beach | 27 18.4 | 80 12.6 | HUWH | none | VSN008, BWRI | | | N/A |
| 18 Jan 2025 | 13:24 | Daytona Beach | 29 11.0 | 80 58.7 | yearling | S | VSN009, BWRI | BWRI, FWC plane and boat (biopsy dart) | Yes, FWC | SO84 (maybe 2024 calf of Limulus) |
| 26 Jan 2025 | 10:06 | Marineland | 29 39.7 | 81 12.4 | MC | S | VSN010, MRWP | Team 2 Sunday: Steve Yeh, Nicole Garnder & son Killian, Jason & Karen Danlovich | Yes, Sara, Jen Jakush: no ID pics until next location | 3705 Check Mark & calf |
| 26 Jan 2025 | 13:45 | Bay Dr Park | 29 35.5 | 81 10.1 | MC | S | VSN011, MRWP | Team 2 Sunday, Jeff Greene, Carol Logan; Robo Call: many vols arrived | Yes, drone Jeff Greene | 3705 Check Mark & calf |
| 26 Jan 2025 | 16:00 | N of Varn Park | 29 33.4 | 81 09.8 | MC | S | VSN012, MRWP | last location of day, reported by Hammock Dunes observers | n/a | 3705 Check Mark & calf |
| 26 Jan 2025 | 16:28 | Canaveral National Seashore | 28 51.5 | 80 46.4 | MC | S | VSN013, BWRI | John Kendall spoke with & showed Julie/Joel photos at SCBWF on 1/27; paged out on 1/27 | Yes, photos submitted to BWRI | 2413 Nauset & calf |
| 27 Jan 2025 | 11:46 | Flagler Beach | 29 30.0 | 81 06.7 | MC | S | VSN014, MRWP | Team 3 Monday, Russ & Lynda Hatfield, Tiffany Bleigh & Carolyn Hickey. 15th St N, Flagler. Far offshore at first. Slid in and turned N. Close enough for drone flights by ~2pm just N of pier | MRWP, 4 drone pilots: Sara, Michelle Ross, Jeff Greene, Jack Dewhurst, | 3503 Caterpillar & calf |

| DATE | TIME ¹ | LOCATION | LAT (N) | LONG (W) | RW CLASS | HDG | ALERT # VSN org | NOTES (Who sighted, etc.) | VERIFIED? PHOTOS? | PROVISIONAL ID |
|-------------|-------------------|-------------------------|---------|----------|------------|-----|-----------------|--|--|---|
| | | | | | | | | | also FWC plane | |
| 28 Jan 2025 | 9:19 | Crescent Beach | 29 44.1 | 81 11.8 | MC | N | VSN015, MRWP | Team 2 Tuesday, Deb Bryant, Rick & Kelle Klevorn | verified m/c by Sara, no photos | no ID |
| 30 Jan 2025 | 10:17 | Sunnyland Beach | 27 55.7 | 80 28.8 | HUWH | N | VSN016, BWRI | | | N/A |
| 31 Jan 2025 | 12:01 | Melbourne Bch | 28 08.0 | 80 33.6 | HUWH | N | VSN017, BWRI | | | N/A |
| 31 Jan 2025 | 14:25 | New Melbourne Bch | 27 59.1 | 80 30.7 | 2 HUWH | S | VSN018, BWRI | | | N/A |
| 31 Jan 2025 | | South Ponte Vedra Beach | 30 02.7 | 81 19.5 | MC | | OTHER139 | Construction worker reported late in day via App, Katie Jackson called to see if vols could verify. Dail Mengelkoch, Liz & Bon Hanahan, and Amy Gaunt searched. No joy in fading light | FWC paged out next morning based on Facebook video | likely Black Heart according to FWC |
| | | | | | | | | | | |
| 1 Feb 2025 | 8:52 | Melbourne Bch | 28 05.0 | 80 33.5 | HUWH | N | VSN019, BWRI | | BWRI, Joel | N/A |
| 3 Feb 2025 | 11:22 | Ponte Vedra Beach | 30 15.0 | 81 22.5 | 2 MC pairs | | FLWS042 | call to hotline, 2 Mc pairs off PVB. Julie called FWC plane. Shea Lox and Team 1N vols responded | FWC plane | 2413 Nauset & calf, 3503 Caterpillar & calf |
| 3 Feb 2025 | | Serenata | | | | | n/a | Dail Mengelkoch, Liz & Bob Hannahan, went to vols. False alarm, likely a buoy | | N/A |

| DATE | TIME ¹ | LOCATION | LAT (N) | LONG (W) | RW CLASS | HDG | ALERT # VSN org | NOTES (Who sighted, etc.) | VERIFIED? PHOTOS? | PROVISIONAL ID |
|-------------|-------------------|-------------------|---------|----------|------------|----------|--------------------|---|---|--|
| 5 Feb 2025 | 15:45 | Amelia Is. | 30 26.6 | 81 18.5 | MC | | VSN020, BWRI | | no | unknown |
| 10 Feb 2025 | 17:06 | Panama City Beach | 30 11.9 | 85 51.5 | 2 AD | | VSN021, BWRI | photos from helicopter tour? | | 3940 Koala 4190 Curlew |
| 12 Feb 2025 | 16:11 | Flagler Beach | 29 29.4 | 81 06.8 | HUWH | S | VSN022, MRWP | Sara saw breaching whale while exiting Break Awayz, 8th St N Flagler | no | N/A |
| 23 Feb 2025 | 10:10 | Ormond | 29 18.7 | 81 02.9 | MC | S | VSN023, MRWP | Carol Logan's friend Karen in Ormond condo reported. Add'l public calls to hotline. Rauschers and Team 5N & 5S vols; Sara & Lorraine | Zoe drone | 3420 Platypus & calf |
| 23 Feb 2025 | 11:03 | GTM North | 30 06.1 | 81 20.3 | HUWH | S | FLWS074 | Team 1N Sunday vols; logging whale misidentified as RIWH; Jen Jakush contacted Sara 3-7 after news blast re species mis-identification | FWC plane | N/A |
| 23 Feb 2025 | 11:11 | GTM area | 30 08.7 | 81 15.6 | Adult male | W | FLWS075 | 5 nmi offshore, picked up by FWC plane after HUWH sighting called in by Team 1N | FWC plane | 3380 Lemur |
| 23 Feb 2025 | 17:36 | Vilano Beach | 29 59.6 | 81 17.1 | MC | | FLWS079 | Public plus Mary Ballinger T1 Sunday; Liz Hanahan and Dail; did not see but got pics and video from public caller, Laura Loudon, 3890 Coastal Highway | FWC plane | 3292 Cashew & calf |
| 24 Feb 2025 | 9:26 | Crescent Beach | 29 46.1 | 81 14.8 | MC | no mov't | VSN024, MRWP | Team 1S Monday vols: Linda Burek called | Sam Henderson got land photos of breaching calf | unidentified, but Katie Jackson said calf is likely Cashew's w mother nearby |

| DATE | TIME ¹ | LOCATION | LAT (N) | LONG (W) | RW CLASS | HDG | ALERT # VSN org | NOTES (Who sighted, etc.) | VERIFIED? PHOTOS? | PROVISIONAL ID |
|-------------|-------------------|----------------|---------|----------|----------|------|-----------------|--|---|--------------------|
| 26 Feb 2025 | 12:05 | Marineland | 29 40.0 | 81 12.7 | HUWH | S | VSN025, MRWP | Team 2 Wednesday spotted from boardwalk | Bill Gough | N/A |
| 26 Feb 2025 | 9:57 | Ponce Inlet | 29 05.4 | 80 55.1 | MC | | FWLS080 | MRWP responded to FWC request to try to keep eyes on Cashew & calf | FWC plane | 3292 Cashew & calf |
| 26 Feb 2025 | 11:32 | Ponce Inlet | 29 05.5 | 80 54.1 | MC | | FLWS081 | same as above | FWC plane | 3292 Cashew & calf |
| 26 Feb 2025 | 18:22 | Bay Drive Park | 29 37.6 | 81 11.7 | HUWH | S | VSN026, MRWP | Nicole Gardner, Team 2 Sunday called Sara | Nicole's husband, Travis video & screen shots | N/A |
| 27 Feb 2025 | 10:10 | Flagler Beach | 29 30.5 | 81 08.2 | HUWH | N | VSN027, MRWP | Sara confirmed from Java Joint | yes, no pics | N/A |
| 27 Feb 2025 | 11:30 | Malacompra | | | m/c RW?? | S, E | n/a | Beach Patrol at Varn Park told Team 3 he saw mc pair a earlier at Malacompra. Team 2 thought they saw whales too. Sara saw what appeared to be M-c pair heading S. Tried to fly drone but no go. Called in drone pilots to Old Salt park, but no resighting. FWC plane boxed area but found only 2 single HUWH | NO | none |
| 27 Feb 2025 | 13:29 | Cinnamon Beach | 29 35.3 | 81 10.3 | HUWH | NE | FLWS083 | calls to hotline, Cinnamon Beach calls, after FWC sighted by plane; likely the Flagler whale; breaching, tail fluke | FWC plane, photo to Julie | |

| DATE | TIME ¹ | LOCATION | LAT (N) | LONG (W) | RW CLASS | HDG | ALERT # VSN org | NOTES (Who sighted, etc.) | VERIFIED? PHOTOS? | PROVISIONAL ID |
|-------------|-------------------|----------------------|---------|----------|----------------------|----------|-----------------|---|--|----------------------|
| 28 Feb 2025 | | PVB to Jax Beach | | | 1 RIWH HUWH? ? | N | n/a | Shea & Curt Lox, never verified | NO | none |
| 28 Feb 2025 | 13:30 | Fernandina Beach | 30 35.9 | 81 25.9 | HUWH | SE | VSN028, AIWA | Candis Whitney with tips from Sara relayed by Maine friends in Amelia Is. condo | No | N/A |
| 28 Feb 2025 | 13:42 | PVB to Vilano | 29 59 | 81 18.4 | species unidentified | SE | VSN029 | call to hotline, vols from Team 1N, new Turtle Shores plus Liz & Bob Hanahan responded; definite whale but species not verified; whale was approaching St Aug Inlet late in day so FWC paged w/out species ID | No | none |
| | | | | | | | | | | |
| 1 Mar 2025 | 13:59 | Daytona Beach Shores | 29 13.8 | 80 59.1 | MC | no mov't | FLWS085 | public report to FWC, Team 5S vol Susan Bennett responded first; engaged w beach cleanup kids @ Frank Rendon Park, who helped re-sight whales; vol Celine Sullivan + Julie & Joel arrived. Whales too far offshore for successful drone imagery | FWC plane & vessel; Facebook video James Brody from Sunglow Pier obtained by FWC | 3420 Platypus & calf |
| 1 Mar 2025 | 10:31 | St Aug pier | 29 51.4 | 81 15.8 | HUWH | no mov't | VSN030, MRWP | Team 1S Saturday sighted; slow moving, broad back. 3 drone flights Sam Henderson & Jack Dewhurst, no luck. > 1 mile off pier | Lily Pinkham | N/A |
| 1 Mar 2025 | 10:45 | Ponte Vedra Beach | 30 09.9 | 81 21.3 | HUWH | S | OTHER2 41 | report to FWC Law Enforcement; Team 1N Saturday vols responded, left after FWC got pics | video sent to Tom Pitchford | N/A |

| DATE | TIME ¹ | LOCATION | LAT (N) | LONG (W) | RW CLASS | HDG | ALERT # VSN org | NOTES (Who sighted, etc.) | VERIFIED? PHOTOS? | PROVISIONAL ID |
|-------------|-------------------|----------------------------|---------|----------|----------|----------|-----------------|---|---|----------------------------|
| 1 Mar 2025 | 14:30 | Vilano Beach | 29 56.7 | 81 17.6 | HUWH | S | VSN031, MRWP | video sent to vol Dail Mengelkoch by public caller she met on Feb 23 | video from Laura Louden, 3890 Coastal Highway | N/A |
| 2 Mar 2025 | 9:40 | Ocean Hammock Park | 29 49.9 | 81 15.5 | HUWH | N | VSN032, MRWP | Liz Hanahan Team 1S Friday: saw probable HUWH off St Aug pier, based on blow. Sent team to Ocean Hammock. Mike Alyea joined. Breaching, long pecs | No | N/A |
| 4 Mar 2025 | 11:50 | N Flagler Beach | 29 30.1 | 81 07.9 | HUWH | N | VSN033, MRWP | Jane Monaghan called it in. Responders = Team 4 Sharon Ewing, Team 3 John & Linda Wilson, Team 2 Rick & Kelle Klevorn, Sara. Saw breaching, long pecs | No | N/A |
| 4 Mar 2025 | 11:30 | Ponte Vedra Beach | 30 13.7 | 81 22.3 | HUWH | S | VSN034, BWRI | | | N/A |
| 7 Mar 2025 | 12:49 | St Aug Bch to Crescent Bch | 29 46.6 | 81 15.0 | HUWH | S | OTHER259 | St John County staff called in to FWC, response by Team 1S vols, Sara & Lorraine, Tom Pitchford of FWC. Jack Dewhurst flew, but no joy, whale moving quickly S, not at surface long | Not us (FWC received or took? pics) | N/A |
| 23 Mar 2025 | 10:45 | Matanzas Inlet | 29 42.9 | 81 12.8 | HUWH | no mov't | VSN035, MRWP | Kathy V (wife of Team 2 vol) called Sara and sent pics. Was fishing off Inlet, thought they saw a log. Approached "log" to fish below it and discovered | Kathy V from boat, Jeff Greene drone | SEUS2528 per Katie Jackson |

| DATE | TIME ¹ | LOCATION | LAT (N) | LONG (W) | RW CLASS | HDG | ALERT # VSN org | NOTES (Who sighted, etc.) | VERIFIED? PHOTOS? | PROVISIONAL ID |
|-------------|-------------------|---------------|---------|----------|----------|-----|-----------------|--|--|----------------|
| | | | | | | | | it was a whale. Sara & Jeff Greene responded | | |
| 24 Mar 2025 | 10:09 | Beverly Beach | 29 30.6 | 81 07.9 | HUWH | S | VSN036, MRWP | Sara, Lorraine & Team 2 Robin Holman. Also Terry Clark, Team 3 Russ Hatfield, Linda & John Wilson from their 3 condo balconies | verified visually by Sara, Terry, and Linda. No photos | N/A |

¹ time typically assigned when verified and photographed

Table 2. Verified right whale sightings, made or responded to by the MRWP, 2024–2025 season (additional sightings on the same day of the same individual(s) are not included)

| Date | Location | Class | Provisional ID |
|-------------|--------------------------------|---------------------|--|
| 20 Dec | Palm Coast | 2 adult females | 3940 <i>Koala</i> & 4190 <i>Curlew</i> |
| 3 Jan | Marineland | 2 adult females | 3940 <i>Koala</i> & 4190 <i>Curlew</i> |
| 5 Jan | Beverly Beach to Flagler Beach | 2 adult females | 3940 <i>Koala</i> & 4190 <i>Curlew</i> |
| 5 Jan | South Ponte Vedra Beach | mother-calf pair | 2430 <i>Minus One</i> & calf |
| 18 Jan | Daytona Beach | yearling | SO84 |
| 26 Jan | Palm Coast | mother-calf pair | 3705 <i>Check Mark</i> & calf |
| 27 Jan | Flagler Beach | mother-calf pair | 3503 <i>Caterpillar</i> & calf |
| 28 Jan | Crescent Beach | mother-calf pair | No ID |
| 3 Feb | Ponte Vedra Beach | 2 mother-calf pairs | 2413 <i>Nauset</i> & calf, 3503 <i>Caterpillar</i> & calf |
| 23 Feb | Ormond Beach | mother-calf pair | 3420 <i>Platypus</i> & calf |
| 23 Feb | Vilano Beach | mother-calf pair | 3292 <i>Cashew</i> & calf |
| 24 Feb | Crescent Beach | mother-calf pair | No ID (likely <i>Cashew</i> & calf) |
| 26 Feb | Daytona Beach Shores | mother-calf pair | 3292 <i>Cashew</i> & calf |
| 1 Mar | Daytona Beach Shores | mother-calf pair | 3420 <i>Platypus</i> & calf |

Table 3. Number of sightings and individuals seen by the MRWP, 2024–2025

| Year | # of sightings | # of individuals (including calves) | # of classes of right whales seen |
|-------------|-----------------------|--|---|
| 2020 | 15 | 5 | 2 m-c pairs, 1 yearling |
| 2021 | 30 | 14 | 4 m-c pairs, 2 adult F, 3 adult M, 1 yearling |
| 2022 | 23 | 9 | 3 m-c pairs, 2 adult F, 1 yearling |
| 2023 | 13 | 5 | 1 m-c pair, 2 yearlings, 1 two-yr old |
| 2024 | 3 | 3 to 5 | 2 unidentified m-c pairs, 1 yearling |
| 2025 | 14 | 15 | 6 m-c pairs, 2 adult females, 1 yearling |

Table 3. Successful drone flights MRWP, 2024–2025 season

| Date | Location | Pilot(s) | # of flights over whales | Provisional ID |
|----------------|-----------------|--|---------------------------------|-------------------------------|
| 3 Jan | Marineland | Jeff Greene | 1 | <i>Koala & Curlew</i> |
| 5 Jan | Flagler Beach | Jeff Greene | 3 | <i>Koala & Curlew</i> |
| 26 Jan | Palm Coast | Jeff Greene Carol Logan | 1 1 | <i>Check Mark & calf</i> |
| 27 Jan | Flagler Beach | Sara Ellis, Michelle Ross Jeff Greene Jack Dewhurst | 1 1 2 1 | <i>Caterpillar & calf</i> |
| 23 Feb | Ormond Beach | Zoe Rauscher | 2 | <i>Platypus & calf</i> |
| 23 Mar | Matanzas Inlet | Jeff Greene | 1 | Humpback SEUS2528 (per FWC) |
| TOTALS: | | Right whales | 13 | 5 adults identified |
| | | Humpbacks | 1 | 1 adult identified |

Table 4. Presentations and media interviews, 2024–25 season

A: MRWP Volunteer Training/Informational

| Date | Presenter | Detail |
|-------------|---|--|
| 19 Dec 2024 | Terran McGinnis Craig Hall | MRWP Cinnamon Beach Team volunteer training and information session, Cinnamon Beach Community Center, Palm Coast, FL (10 attendees) |
| 3 Jan 2025 | Sara Ellis | 25th Season Opener and volunteer training, UF Whitney Lab, Marineland, FL (166 attendees) |
| 30 Jan 2025 | Terran McGinnis Shea Lox Kim Jacomo | MRWP Team 1 North volunteer training and information session, Guana Tolomato Matanzas National Estuarine Reserve, Ponte Vedra, FL (40 attendees) |
| 8 Feb 2025 | Sara Ellis | Mid-season Update, UF Whitney Lab, Marineland, FL (109 attendees) |
| 15 Mar 2025 | Sara Ellis | End-of-season Summary, UF Whitney Lab, Marineland, FL (110 attendees) |

B: Public Outreach & Education, Volunteer Recruitment

| Date | Presenter | Detail |
|----------------|---|--|
| 2 Nov 2024 | 10 MRWP volunteers | Info table at Marineland Market, Marineland, FL |
| 7 Dec 2024 | 11 MRWP volunteers | Info table at Marineland Market, Marineland, FL |
| 2 & 3 Nov 2024 | Shea Lox, Kim Jacomo, Jeannie Cardany, Sue Delegal | Info table at Right Whale Festival, Amelia Island, FL |
| 21 Nov 2024 | Terran McGinnis, Marineland Dolphin Adventure | “North Atlantic Right Whale: Past, Present, and Future” Ocean Art Gallery, Ormond Beach, FL (10 attendees) |
| 3 Dec 2024 | Terran McGinnis | “North Atlantic Right Whales” Hammock Community Center, Palm Coast, FL (45 attendees) |

Table 4 **B**: Public Outreach & Education, Volunteer Recruitment (continued)

| Date | Presenter | Detail |
|----------------|---|--|
| 5 Dec 2024 | Terran McGinnis | “North Atlantic Right Whales” St Johns County Library, Ponte Vedra Branch, Ponte Vedra, FL (40 attendees) |
| 7 Jan 2025 | Sara Ellis interviewed by Jarleene Almenas, Palm Coast Observer | “ Koala and Curlew's travels: Female right whales spotted off Flagler Beach ” Palm Coast Observer and Ormond Beach Observer, 8 Jan 2025 (features photo by MRWP volunteer Jeff Greene) |
| 11 Jan 2025 | Terran McGinnis | “North Atlantic Right Whales” University Women of Flagler, Grand Haven Golf Clubhouse, Palm Coast, FL (40 attendees) |
| 13 Jan 2025 | Julie Albert & Joel Cohen (BWRI), Sara Ellis | “Whale Watcher’s Forum, Voices for the Ocean” Flagler County Library, Palm Coast, FL (11 attendees) |
| 21 Jan 2025 | Terran McGinnis | “North Atlantic Right Whales” Florida Master Naturalist Program, virtual presentation (28 attendees) |
| 25 Jan 2025 | Terran McGinnis | “North Atlantic Right Whales” Flagler County Library, Palm Coast, FL (38 attendees) |
| 4 Feb 2025 | Julie Albert interviewed by Dinah Pulver, USA Today | “ A pair of whales are making a baffling journey along the US Gulf Coast ”, USA Today, 6 Feb 2025 (features photos and video by BWRI’s Joel Cohen) |
| 12 Feb 2025 | Sara Ellis | “North Atlantic Right Whales: How You Can Help!” presentation and information table, Gamble Rogers State Park (35 attendees) |
| 19 Feb 2025 | Terran McGinnis | “North Atlantic Right Whales” Probus Group, Cypress Knoll Golf and Country Club, Palm Coast, FL (20 attendees) |
| 22 Mar 2025 | Terran McGinnis | “North Atlantic Right Whales” Flagler County Library, Palm Coast, FL (30 attendees) |
| 1 & 2 Nov 2025 | Shea Lox, Kim Jacomo, Cindy Hall, and other volunteers | Info table at Right Whale Festival, Amelia Island, FL |

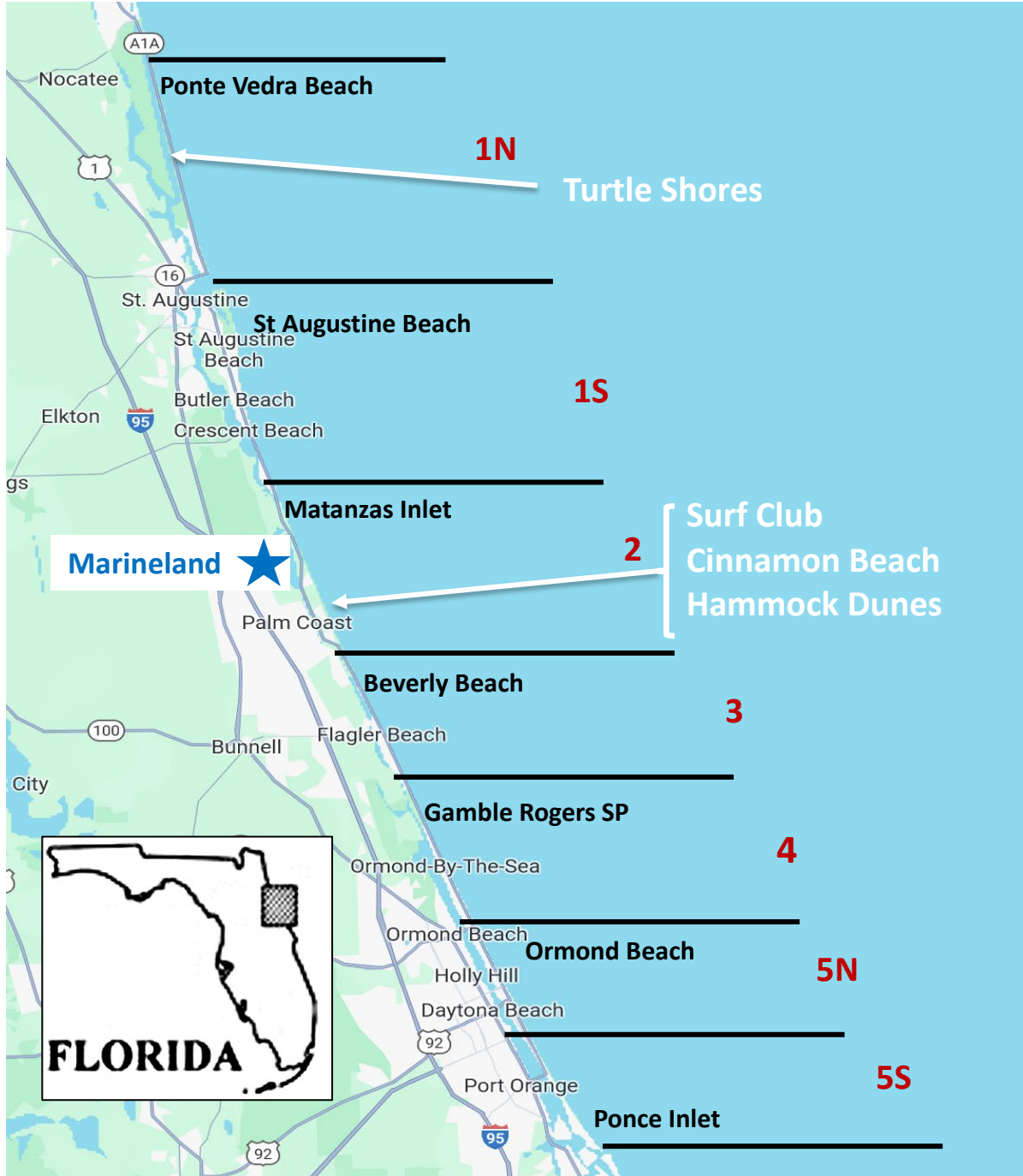
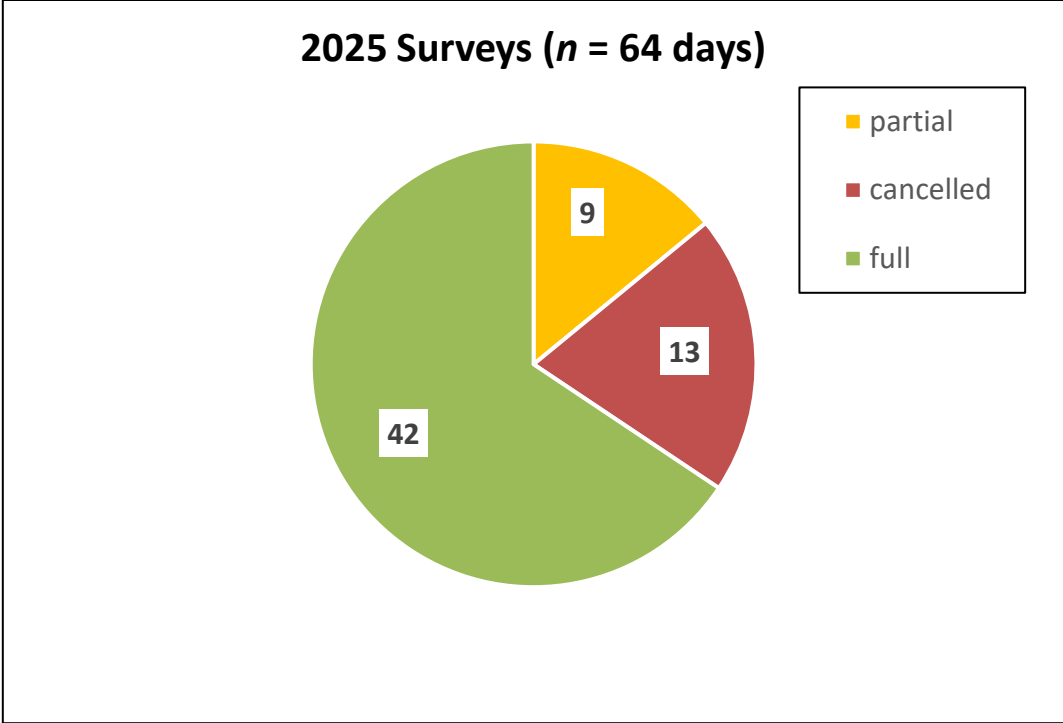
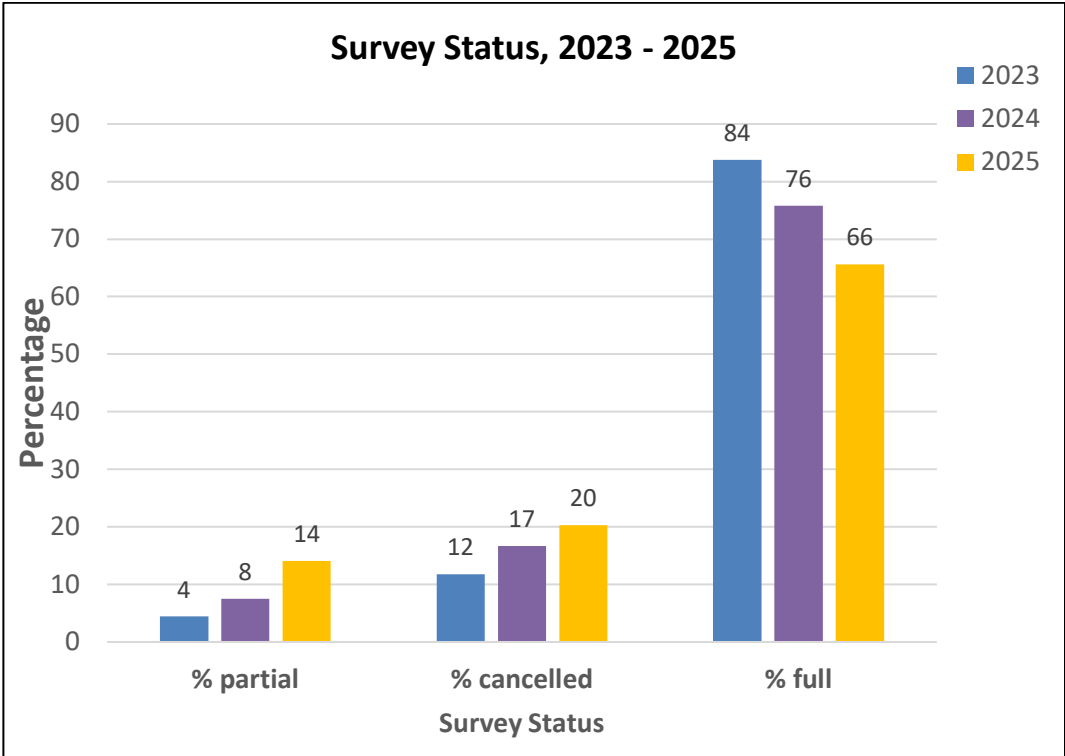


Figure 1. The 70-nautical mile section of coastline in Northeast Florida is partitioned into seven sectors, each ranging from between 15 nmi (Sector 1N) to 5 nmi (Sector 5N) latitudinal extent. Monitoring and responses in the area south of Daytona Beach to New Smyrna Beach is shared with our partner, Blue World Research Institute.



2a



2b

Figure 2. A crude measure of sighting conditions is provided by those days with good weather and good sighting conditions—as indicated by the survey effort. *a)* Percentage of full, partial, and cancelled survey days for the 2025 MRWP survey effort. *b)* Comparison of 2025 survey conditions with those of the two previous survey seasons.

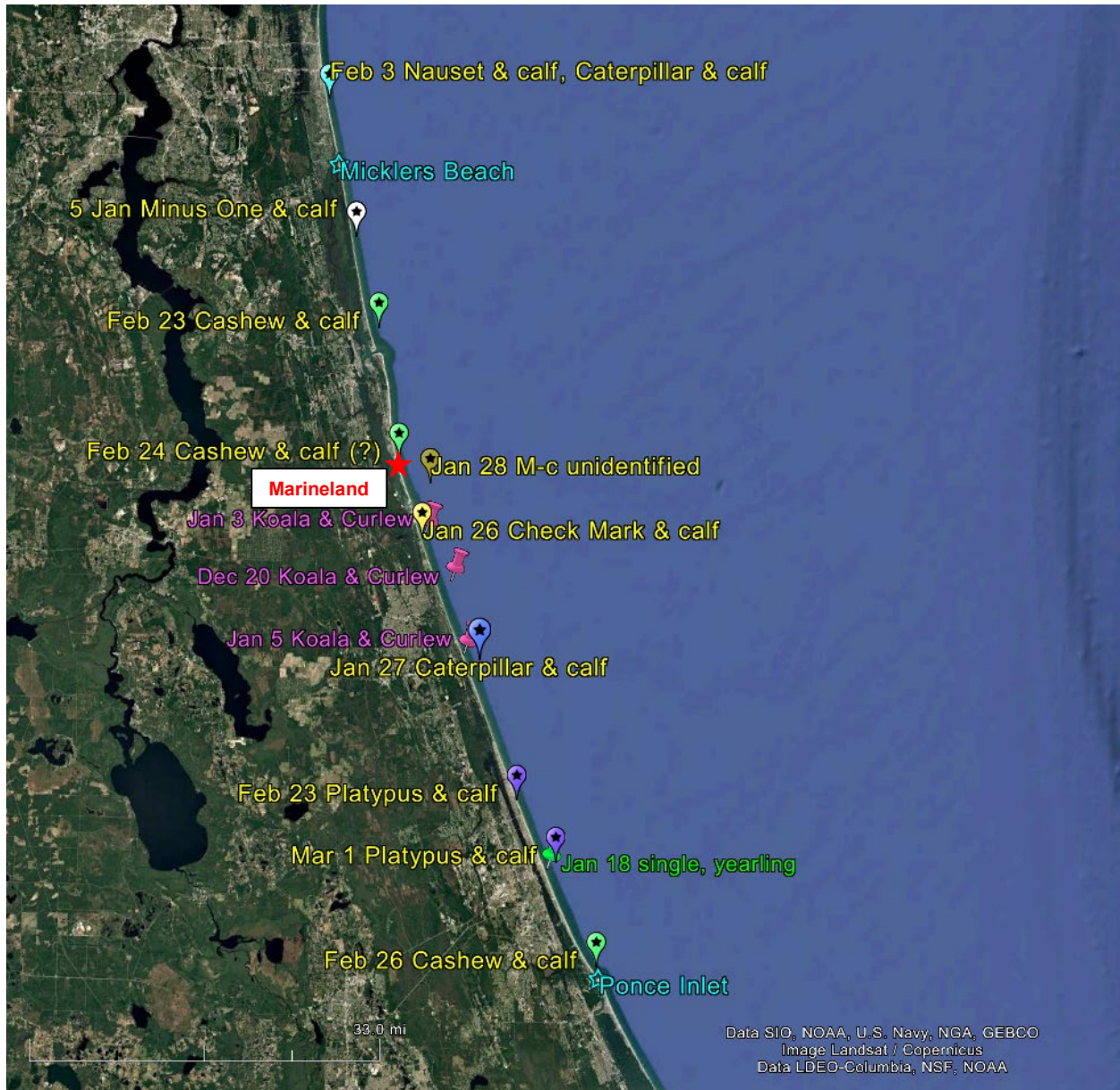


Figure 3. Members of the Marineland Right Whale Project made or responded to 14 verified sightings of 15 individual right whales between 20 Dec 2024 and 1 Mar 2025.



Figure 4. On 23 February 2025, MRWP photo-documented the 10th calf of the season, with its mother #3420, *Platypus*, off Ormond Beach, FL. (Image: MRWP, Zoe Rauscher, NOAA Permit #26562)

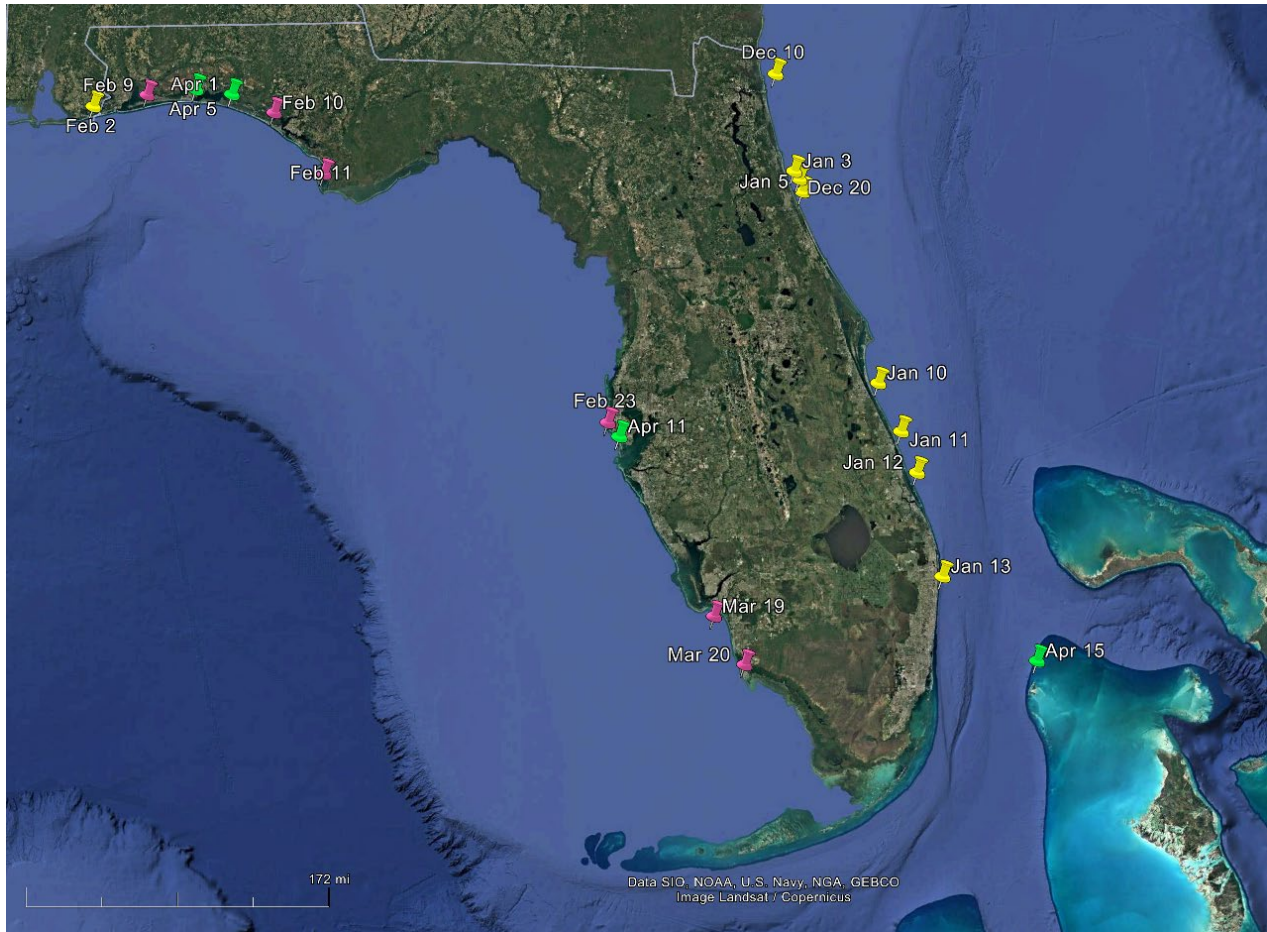


Figure 5. Sightings of #3940, *Koala*, and #4190, *Curlew*; 10 Dec 2024 to 2 Feb 2025 (yellow), 9 Feb to 20 Mar 2025 (pink), and 1 to 15 Apr 2025 (green). (Based on preliminary data collected by CMARI, GDNR, FWC, MRWP, BWRI, NOAA Fisheries, and the public.)

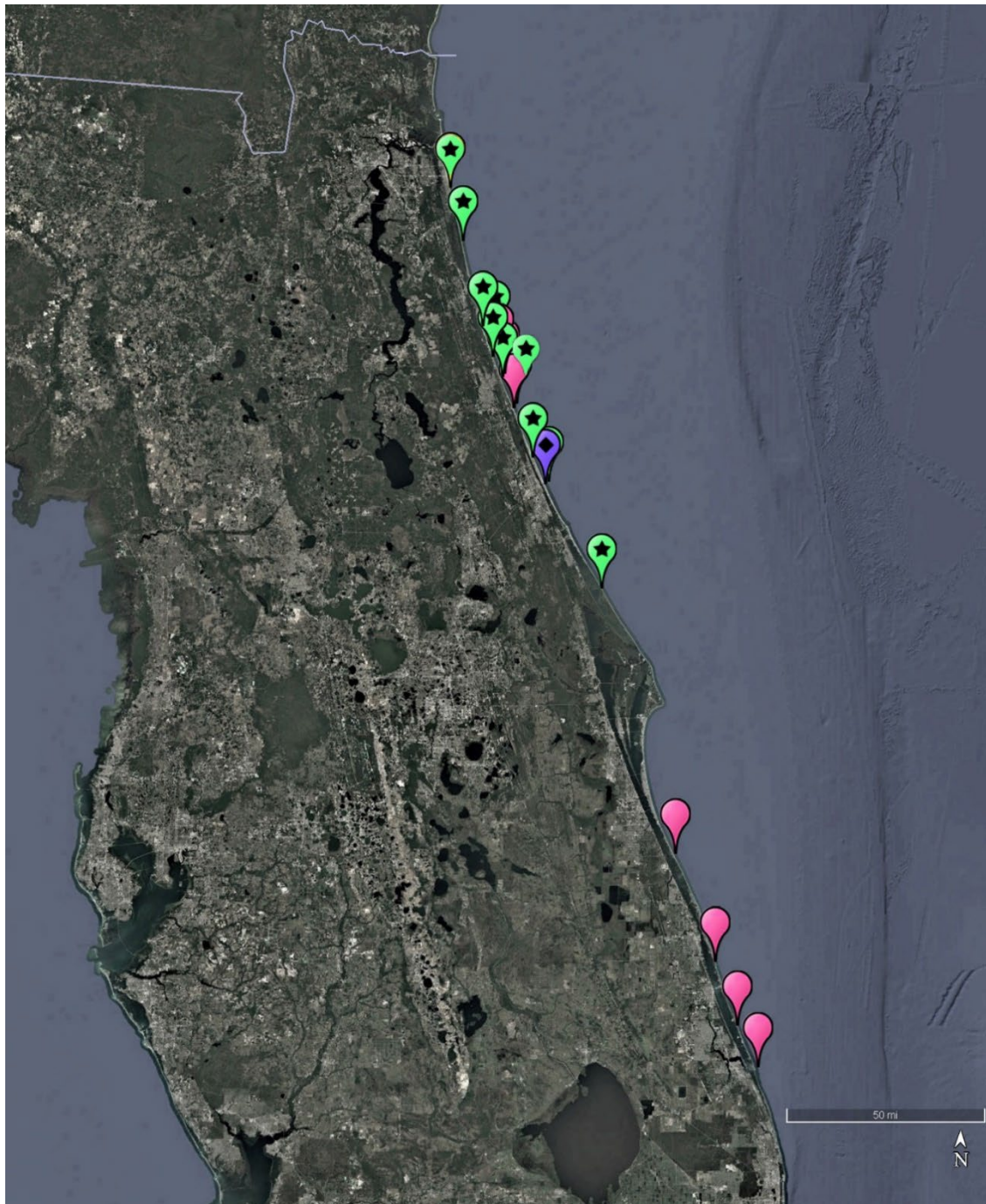


Figure 6. Verified right whale sightings during the 202425 SEUS season by the shore-based volunteer sighting network, through the combined efforts of the Marineland Right Whale Project and the Blue Water Research Institute. Collaboration with the Florida Fish and Wildlife Research Institute occurred. Total n =19. Key: mother-calves=green, pair=magenta, single=blue.

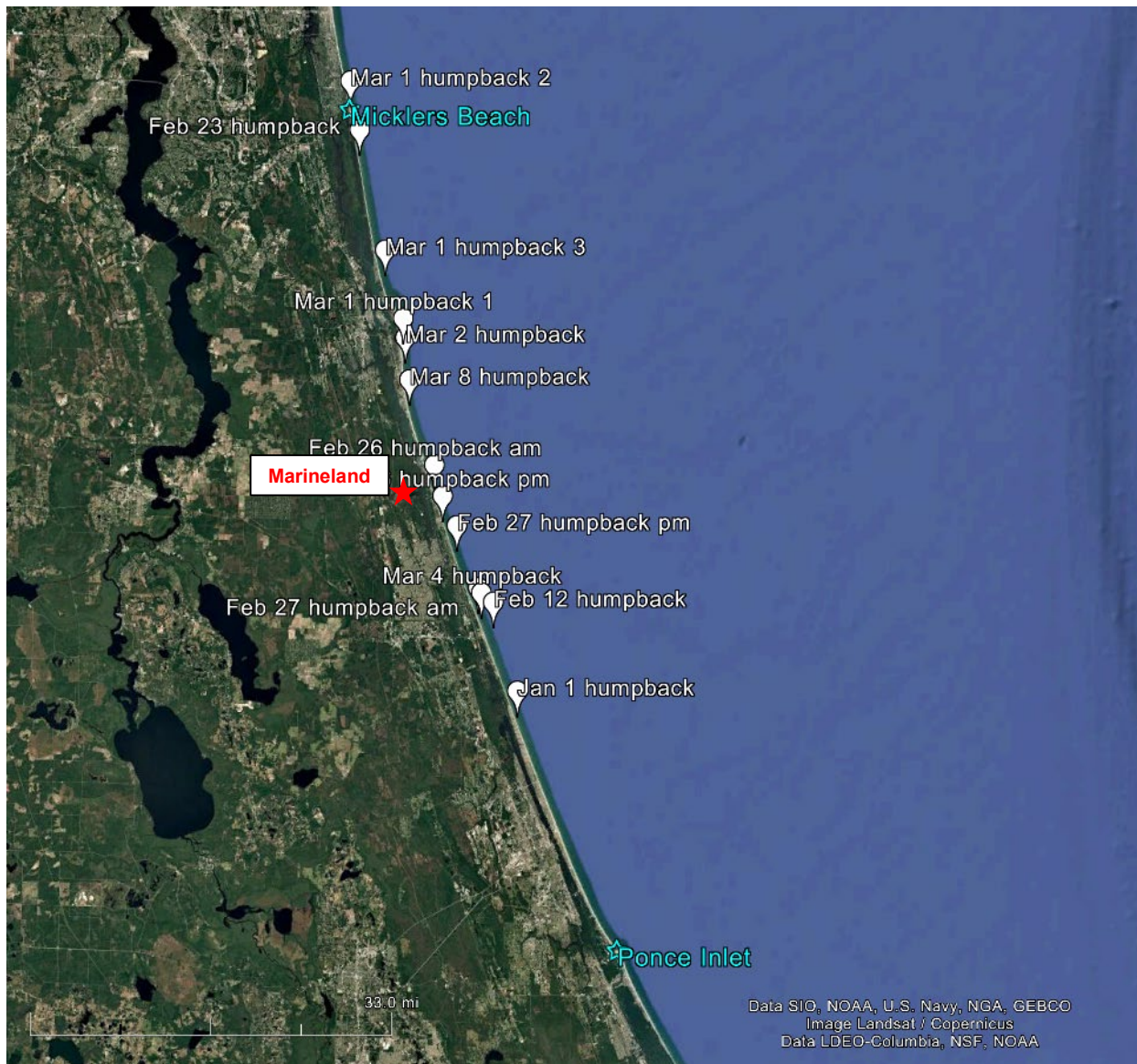


Figure 7. Members of the Marineland Right Whale Project made or responded to 13 verified sightings of single humpback whales between 1 Jan and 8 Mar 2025.



Figure 8. MRWP had one successful drone flight over a single humpback off Matanzas Inlet on 23 Mar 2025. FWC believes this was the first sighting of this individual in the 2024-25 season. It has been assigned a temporary identification of SEUS2528 for in-season tracking purposes. (Image: MRWP, Jeff Greene, NOAA Permit #25652)



Figure 9. One of four mother-calf pairs sighted during the 2024-25 season by the Marineland Right Whale Project had evidence of human impact: A. #3503, *Caterpillar*, while B, calf of *Check Mark*, and C. #3420, *Platypus*, and have injuries of unknown origin.

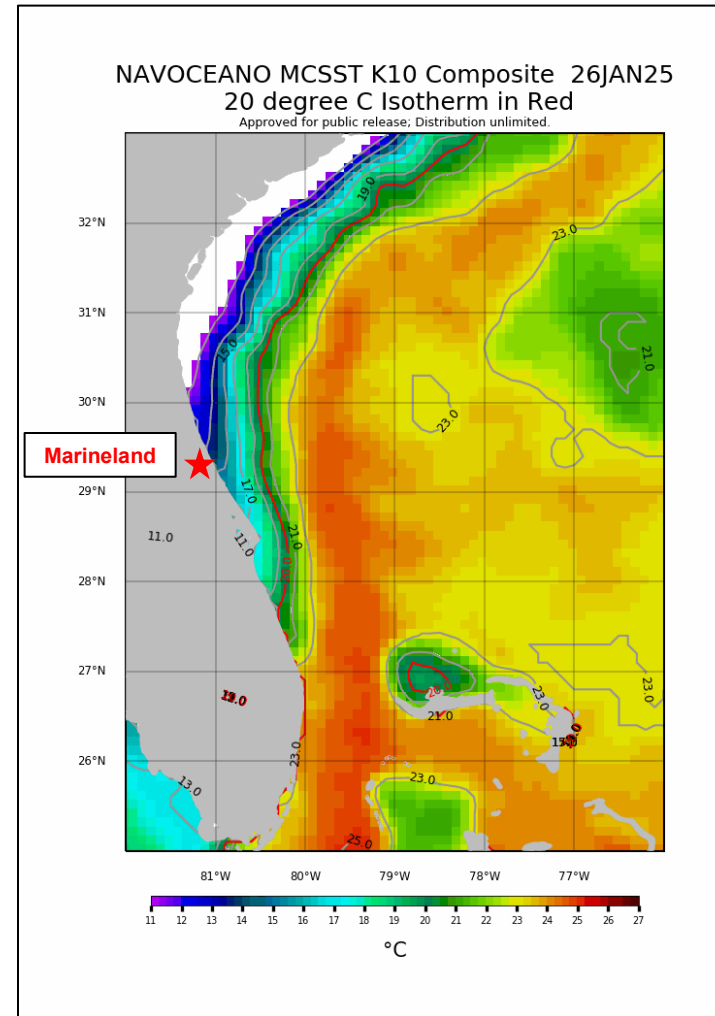
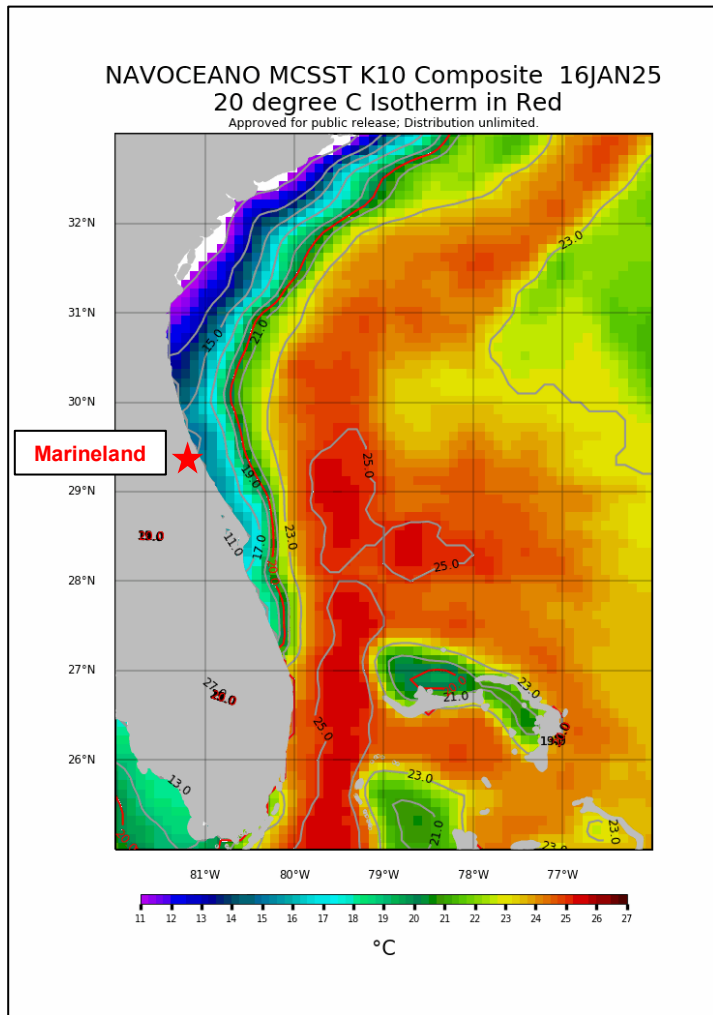


Figure 10. Sea surface temperature plots provided by the Naval Oceanographic Office for 16 and 26 January 2025. Ideal temperatures for wintering right whales are thought to be around $\sim 16^{\circ}\text{C}$ (Garrison, 2007), depicted here as light blue to turquoise. Before a 5-day period of strong northerly winds (19–24 January) these temperatures were found close to shore near the Florida/Georgia border ($\sim 30^{\circ}42'\text{N}$ latitude), while afterwards these temperatures had shifted further south. Before the prolonged northerly wind event, the 7 m-c pairs to date were being sighted fairly regularly near--or north of--the Florida/Georgia border. After the winds abated, four of these 7 pairs were spotted further south, between Marineland and Cape Canaveral.



Figure 11. Since 2002, the Marineland Right Whale Program has depended on Team Leaders to coordinate volunteers in sectors within our survey range. In 2025, fifteen Team leaders helped coordinate 265 volunteers in seven sectors, from Ponte Vedra Beach to Ponce Inlet, FL. They were honored at the final meeting with certificates of appreciation.



Figure 12. At the final meeting, 25 volunteers—nearly a quarter of those present—raised their hands to indicate they had seen a right whale for the first time this season.



a

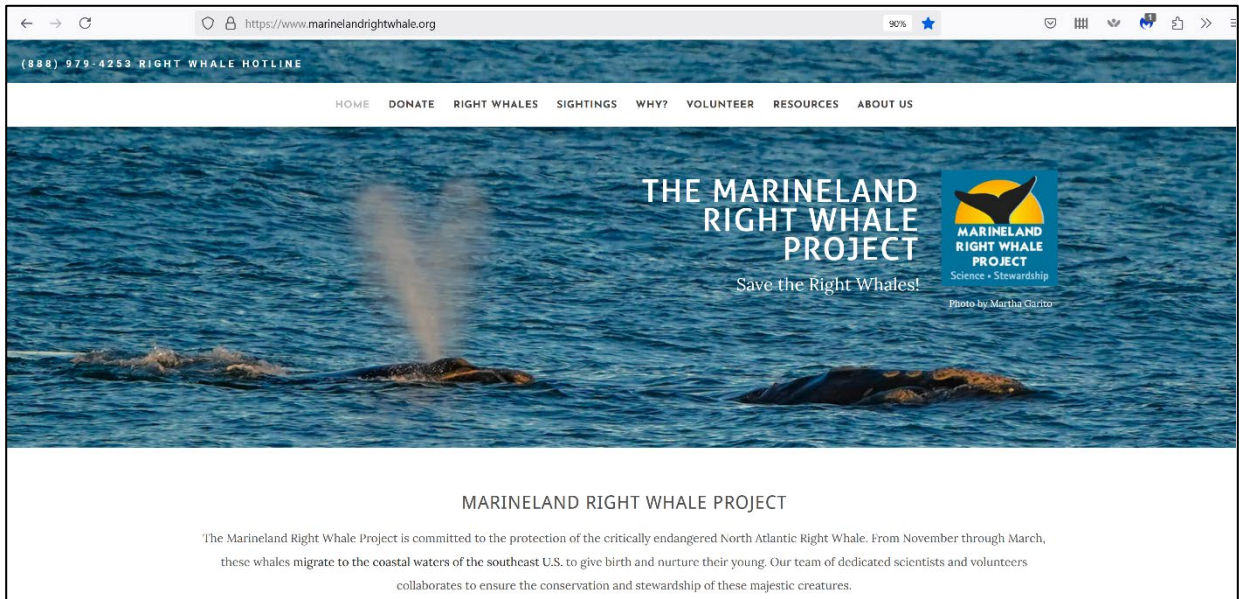


Figure 13. Outreach and education are core components of our mission. In November and December, 2024, volunteers successfully interacted with members of the public at *a*) the Marineland Market and *b*) the Right Whale Festival.

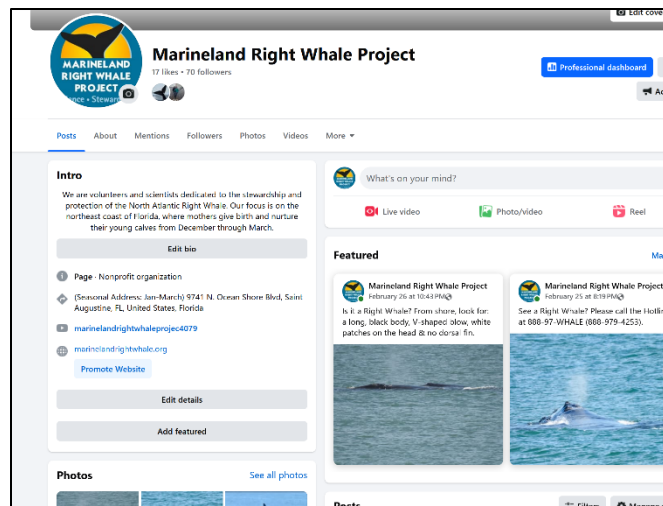


b





a)



b)



c)

Figure 14. In 2025, MRWP modernized its communications and broadened its reach by developing a) a new website ([marinelandrightwhale.org](https://www.marinelandrightwhale.org)), b) a Facebook page, and c) new sightings cards with QR codes that link directly to MRWP’s website and online donation page.

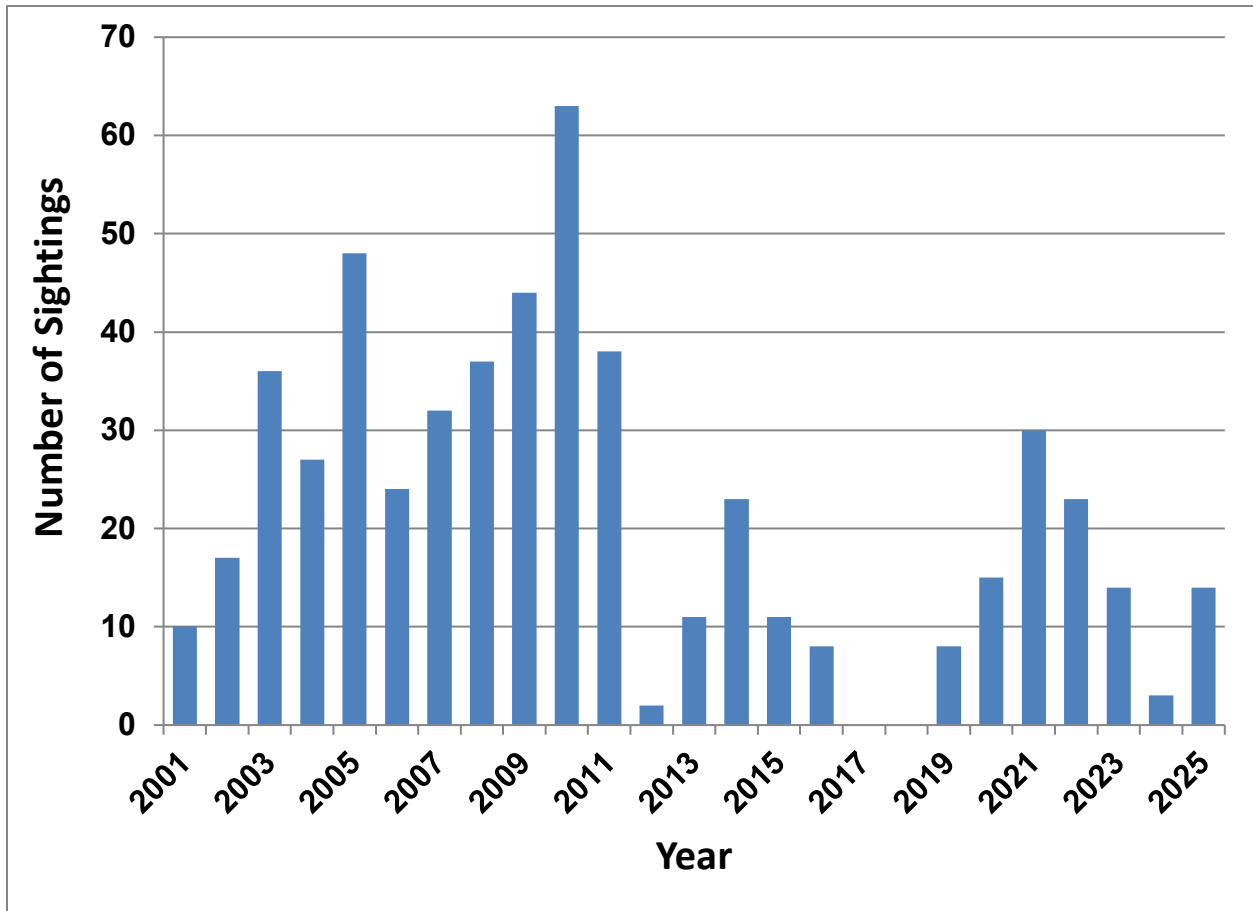


Figure 15. Total annual right whale sightings and responses by the Marineland Right Whale Project, 2001 through 2025.

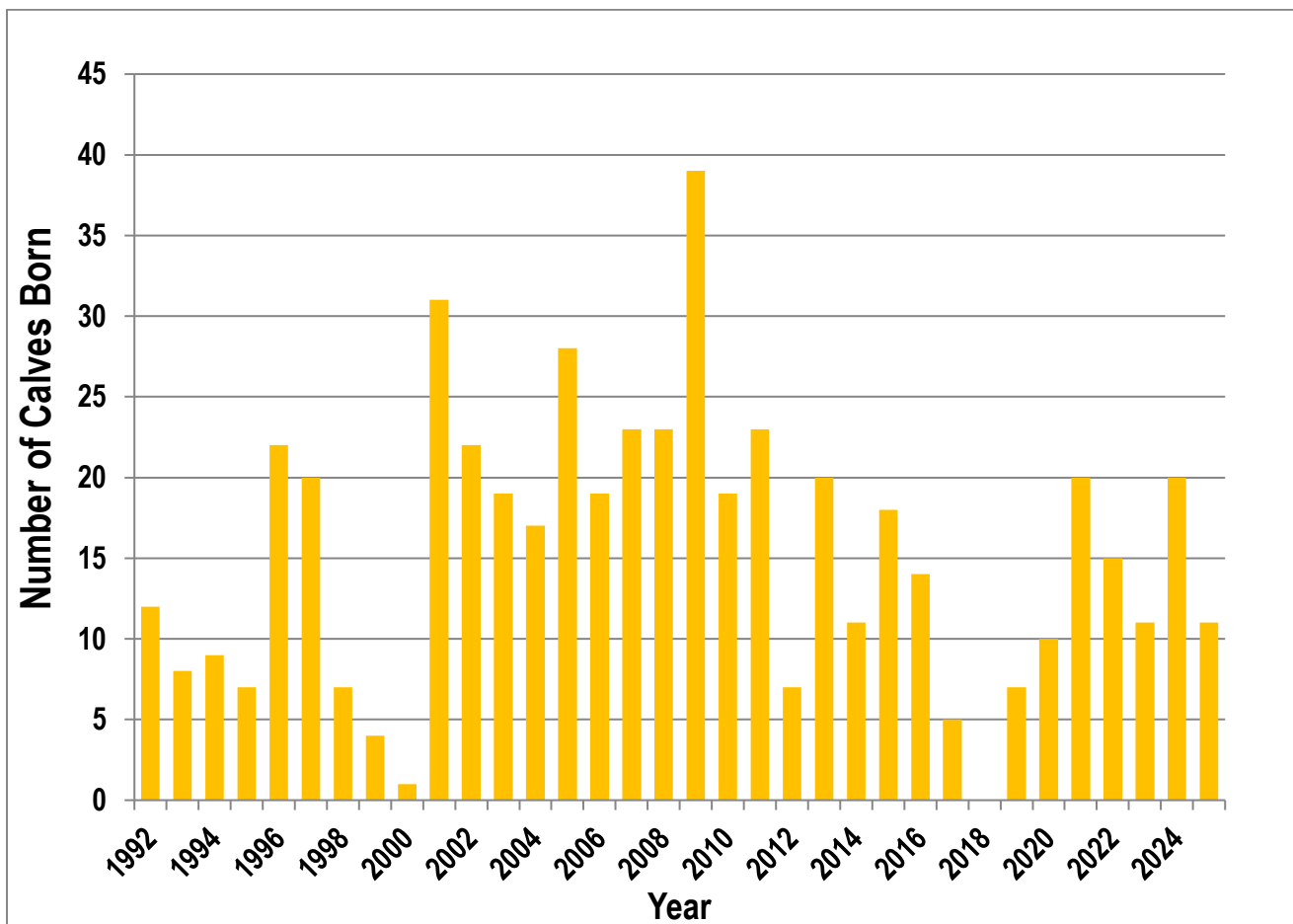


Figure 16. Total annual calf production by North Atlantic right whales, 1992 through 2025. Records compiled by the New England Aquarium.

North Atlantic Right Whales 1990-2024
as of October 2025

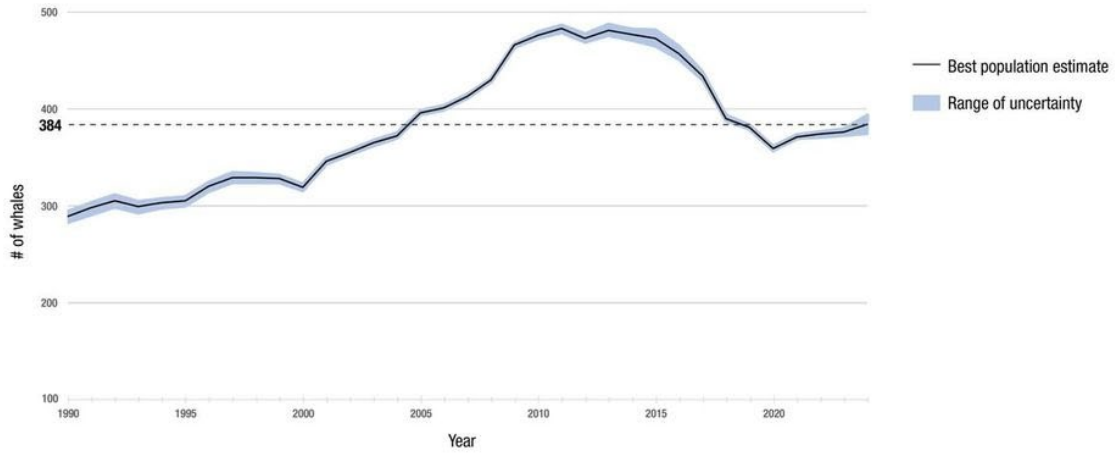


Figure 17. The population trend for the North Atlantic right whale, as of the end of December 2024. The recent years suggest a leveling off of the previous downward trend, with a hint of an increase (~2.1%) in the trend. The point estimate for December 2024 is 384 (+10/-9) individuals. (Source: New England Aquarium and National Marine Fisheries Service.)