



CARIBBEAN CETACEAN SOCIETY



Scientific Expedition Report

Ti Whale An Nou program 2024



Expedition date : 30th August - 22nd September 2024

Expedition number : 7th of 2024

Islands monitored : ABC - Dutch Caribbean - Aruba, Curacao, Bonaire

THE TI WHALE AN NOU PROGRAM

Meaning “our own little whales” in a creole mix, Ti Whale An Nou (<https://www.ccs-ngo.com/ti-whale-an-nou?lang=fr>) is a program started in 2021 focusing on cooperation, research, education and conservation of whales and dolphins. It is the largest scientific survey dedicated to obtaining essential information for conservation of cetaceans in the Caribbean region. It is a locally driven initiative led by Caribbean people, ensuring its longevity in our regions.

A minimum of 33 species of cetaceans have so far been documented in the Caribbean region, which is more than a third of the species known in the world. The Wider Caribbean Region serves as a crucial habitat, especially for reproduction and foraging, for the majority of these species. While some are already classified as endangered, data remains largely insufficient for many, suggesting that some populations might be in critical need of conservation without our knowledge.

The goal of each expedition is to address the lack of knowledge throughout the Caribbean region regarding the diversity, distribution, relative abundances and movement patterns of cetacean species, as well as learning about the threats they face. The missions have welcomed participants from all islands in the region to participate in training, building local capacity and experience in the field.

During the months of March to September of 2024 , six scientific expeditions of 15 days are programmed throughout all the islands of the Lesser Antilles. Each expedition starts in Martinique and expeditions are grouped by regions: North (Montserrat - Anguilla), Center (Martinique - Montserrat) and South (Grenada - Martinique).

This report is dedicated to the seventh expedition of 2024, which is the second standardized cetaceans survey in the ABC from CCS. The total crew of this expedition encompassed 27 people, including 2 captains arranging the crossing from Martinique to the ABC islands and back and the 2 expedition leaders. The crew participating the expedition for each respective island was composed of biologists, nature policy officers, marine park rangers, veterinarians, conservation managers, environmental consultants, representatives of Birds Caribbean, a marine biology student, and representatives of the outdoor industry. Overall five island nations were represented (Martinique, Aruba, Curacao, Bonaire and Jamaica).



LIST OF CREW

Expedition leader :

- **Stacey MAC DONALD** - CCS regional coordinator and WWF program advisor
- **Jeffrey BERNUS** - Director and founder of CCS

Skippers:

- **Carla AROZARENA**
- **Kofane ANDRIEUX**

ABC Crew for capacity building:

Aruba

- **Dilip Ramrattan** – Corporate Security Manager
- **Arjan de Groene** - WWF-NL, Seascope Coordinator Caribbean
- **Nathalie Houtman** - WWF-NL, Advisor Marine Species & Fisheries
- **Laura Gurrieri** - Ecologist
- **Yahaira Geerman** - Researcher Government Aruba, Department of Nature and Environment
- **Yesenia Arends** - Sub-inspector Government Aruba, Department of Nature and Environment



Bonaire

- **Gwenaëlle Versteegh** - CCS Ambassador and expedition leader in training
- **Daan Zeegers** - STCB Field officer
- **Jolanda van der Toorn** - Dive Instructor
- **Sannah Schep** - WWF-NL Communications intern
- **Casper Douma** - Founder Blue defenders
- **Fernando Simal** - Ecologist
- **Sophie Zeegers** - Ecologist, midwife
- **Tim van Wagensveld** - Ecologist & Program manager RoffaReefs/Blijdorp
- **Cristopher Ramirez** - Marine Park Ranger Stinapa Bonaire
- **Jeannine Toy** - Project manager Stinapa Bonaire



Curaçao

- **Boudino de Jongh** - CCS Ambassador, Entrepreneur
- **Catherine Martijn** - Biologist
- **Terrence Ching** - Ecologist, Founder of COIA
- **Roel Sambo** - Terrestrial Ranger CARMABI
- **Juan Manual Wyatt** - Marine park ranger CARMABI
- **Odette Doest** - Wildlife Veterinarian
- **Traci Wong** - Wildlife Caretaker



STANDARDIZED SCIENTIFIC PROTOCOL

During our surveys, acoustic detection with a towed hydrophone array was combined with visual observations from at least two observers on deck, allowing both methods to complement each other for effective cetacean presence / absence monitoring. This protocol is the same applied in all the islands of the Lesser Antilles since 2021 and may be applied in other islands of the Caribbean over the next years for better regional cooperation.

Survey Protocol

The visual observer effort was limited by daylight, from 06:00 to 18:00. Boat tracks were decided by the scientific expedition leader the day before, taking into consideration the weather conditions, the navigation time and the target arrival point. The crew was divided into three teams of at least two people. Each team performed a different role, which changed every two hours in the following order: (1) data entering, (2) visual observation, and (3) logistical support and resting.

Data Entering

During the expedition, two crew members used the ObsEnMer software (altitude creation company, release 3.08) in expert mode on an iPad 8th generation. The use of this software made it possible to record, in real time, the location of the boat during the survey and to locate every data point in space and time. Every hour, on the hour, from the beginning of the survey effort, the environmental conditions and the maritime traffic were recorded, as well as an acoustic point when the hydrophone was towed. Firstly, in situ environmental parameters are recorded in order to monitor and control the detection probability of cetaceans, as certain conditions may limit the detection of species at the surface. Secondly, vessel presence or absence is recorded, as well as the numbers and types of vessels, for a future co-occurrence study between cetaceans and maritime traffic. Lastly, each hour an acoustic point sample is conducted. During an acoustic point, biological and anthropogenic information was collected to determine the quality of the recordings, the intensity of the anthropogenic noise and the presence of certain characteristic species. An acoustic point was defined with ten minutes of at least two people listening with headphones. While listening, the team would also try to visually identify any cetacean vocalization by observing the spectrogram and/or the click detector module on the screen using PAMGuard software version 2.02.07 (Gillespie et al., 2008).



Visual Observation

During the daylight effort, two observers were placed at the front of the boat on either side of the mast in order to have the highest position without being hindered by the sails. Each observer covered an observation angle between 0° and 90° on each side, considering 0° the front of the boat. They observed the environment between these two angles and between the boat and the horizon. Their objective was to detect cetaceans by direct identification (e.g., dorsal fin, fluk , blows, breach) or to locate indicators that could potentially indicate the presence of cetaceans (e.g., splash, group of birds).

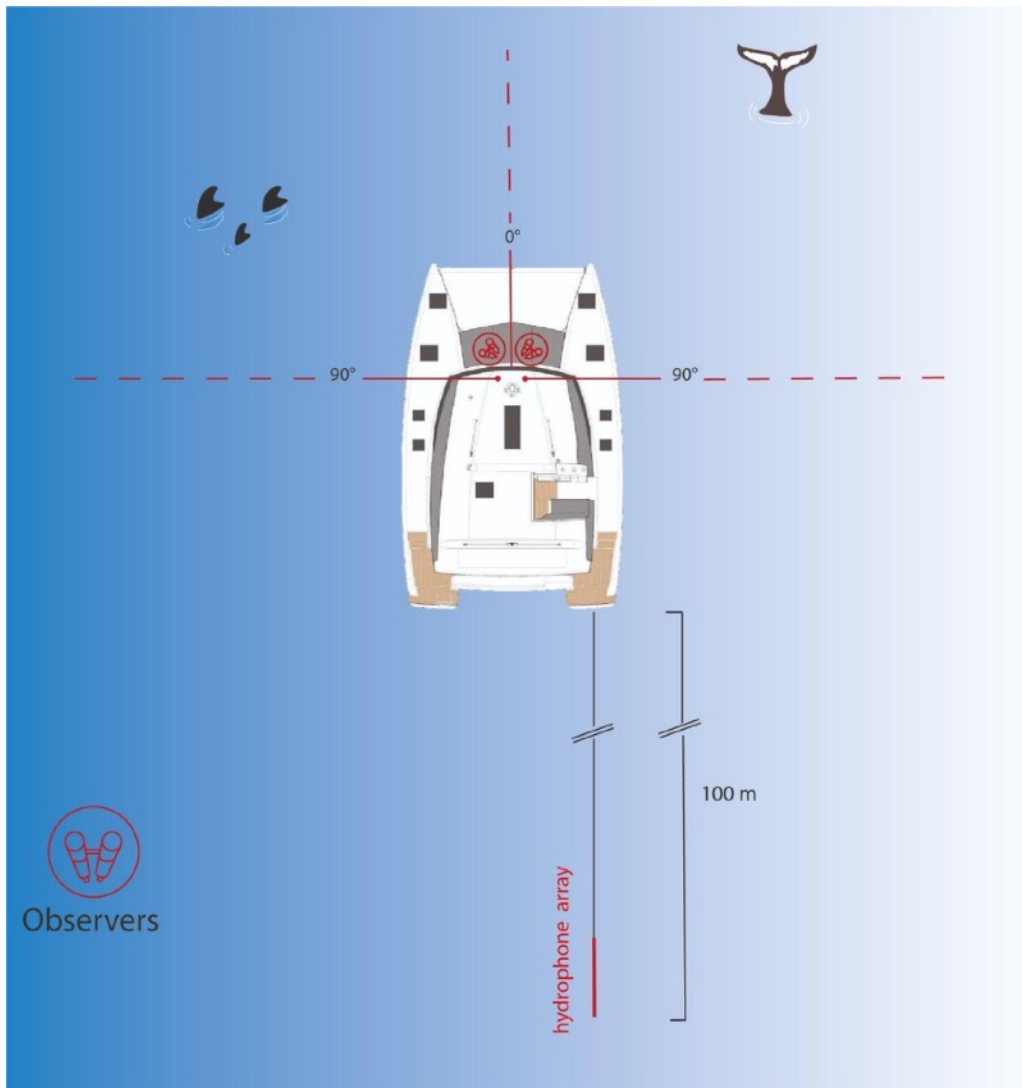


Figure 1: *Layout of the research vessel and the area observed during the effort.*

Logistical support

The team who were neither observing nor collecting data served as logistical support. They were responsible for several tasks: launching or removing the hydrophone, keeping watch on the maritime traffic to avoid boats crossing the path of the hydrophone and preparing the cameras so that they were available for photo identification when cetaceans were detected

Acoustic Monitoring

During the survey, whenever possible, a towed hydrophone array was used to detect cetacean vocalizations and clicks. The hydrophone was towed by the boat at a distance of 100m and deployed when the waters were at least 50m deep and with no more than moderate vessel traffic. The array is connected to a Data Acquisition Unit and a laptop with PAMGuard software. The PAMGuard software allows us to monitor cetacean vocalizations not only in real time, but also to inspect and confirm the detections and species offline after the survey.

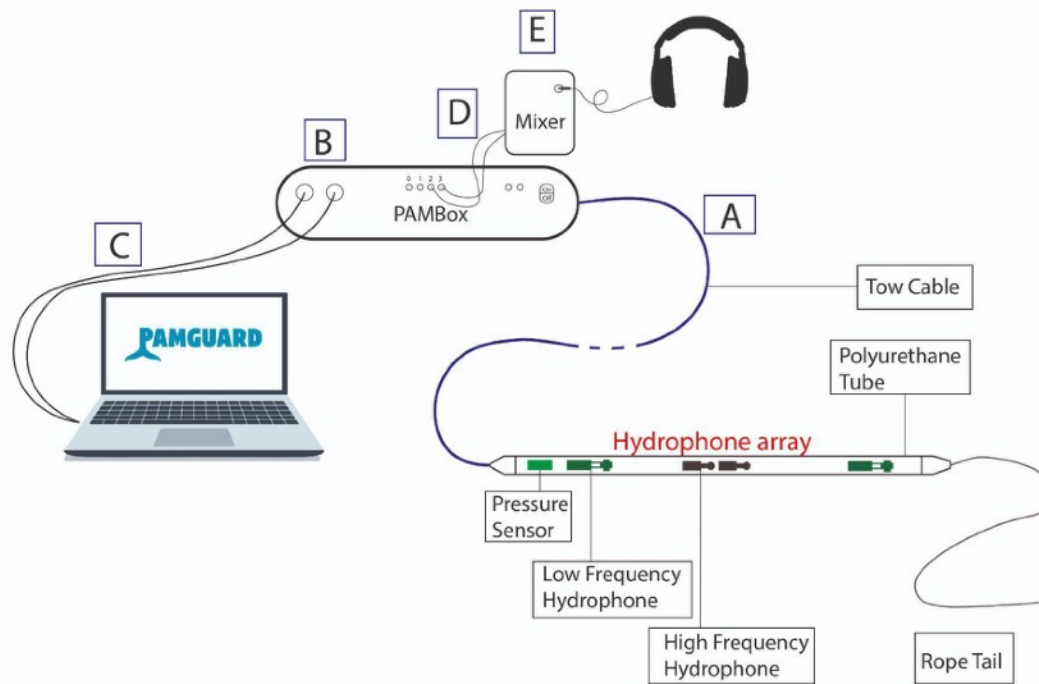


Figure 2: *Diagram of the Acoustic Configuration*

When cetaceans were visually detected, the observer signaled the presence of the animal(s) to the crew and continued the observation. The expedition leader would evaluate if the observation marked the start of a cetacean survey, where additional information such as photo-identification pictures would be collected. In either case, we recorded the GPS position at the time of the observation and entered the following data: identification of the species, distance to sighting, direction of individuals, estimated number of individuals, estimated number of juveniles and number of boats around the group.

If the decision was made to collect additional information, the logistics team would then undertake photo-identification. To do this, three cameras were used across the surveys: two Canon 90D and a Sony A7RIV with a 100-400 mm and 70-300 mm lens. The objective was to take photos of the underside of the fluke for humpback whales and sperm whales and the dorsal fin for all other species. Approach of the animal would always be done with respect, our skippers have been trained for cetacean research and approach to ensure the security of the crew and the animals.

RESULTS

During Expedition 7 of 2024, 7 cetacean species were monitored during 28 observations. The studied species include the Atlantic spotted dolphin, Bottlenose dolphin, Pantropical spotted dolphin, Short finned pilot whale, Sperm whale, Spinner dolphin and Striped dolphin. The data collected on these species is summarized in Table 1, which provides details on their localization, identification certainty, group size estimates, calf presence, and other relevant information. This data serves as a valuable resource for understanding the distribution and behavior of these cetacean species in the surveyed regions.

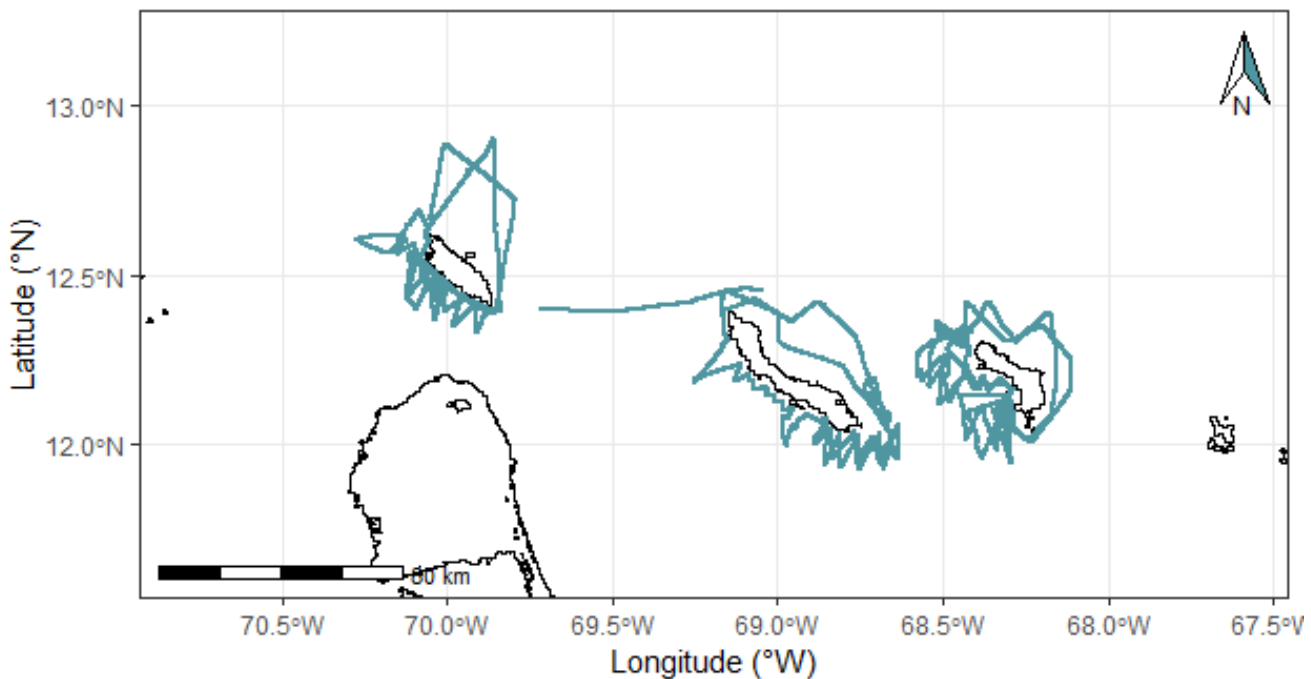


Figure 3: Track of boat surveys with positive observation effort for expedition 7 of 2024.

Cetacean Species monitored :

- Atlantic spotted dolphin (*Stenella frontalis*)
- Bottlenose dolphin (*Tursiops truncatus*)
- Pantropical spotted dolphin (*Stenella attenuata*)
- Short-finned pilot whale (*Globicephala macrorhynchus*)
- Sperm whale (*Physeter macrocephalus*)
- Spinner dolphin (*Stenella longirostris*)
- Striped dolphin (*Stenella coeruleoalba*)

Cetaceans sightings table :

Table 1: Cetacean sightings recorded during expedition 7 of 2024.

Obs ID	Localization	Species Name	Group size estimate	Max. group size estimate	Min. group size estimate	Juv Pres	Juv Nb
1	Curaçao	Atlantic spotted dolphin	22	30	15	Do not know	NA
2	Curaçao	Sperm whale	NA	NA	NA		NA
3	Aruba	Bottlenose dolphin	3	3	3	No	NA
4	Aruba	Pantropical spotted dolphin	70	100	50	Yes	6
6	Aruba	Bottlenose dolphin	15	30	5	Yes	1
7	Aruba	Atlantic spotted dolphin	NA	140	80	Yes	10
8	Aruba	Spinner dolphin	75	100	50	Yes	3
9	Aruba	Bottlenose dolphin	4	4	4	Yes	1
10	Aruba	Bottlenose dolphin	20	25	15	Yes	1
11	Aruba	Atlantic spotted dolphin	8	10	5	No	0
12	Bonaire	Short finned pilot whale	10	16	8	Yes	2
13	Bonaire	Spinner dolphin	80	120	50	Yes	15
14	Bonaire	Spinner dolphin	115	150	85	Yes	15
15	Bonaire	Atlantic spotted dolphin	35	40	30	Yes	3
16	Bonaire	Atlantic spotted dolphin	25	40	15	No	0
17	Bonaire	Spinner dolphin	95	120	70	Yes	1
18	Bonaire	Short finned pilot whale	50	70	30	Yes	10
19	Bonaire	Pantropical spotted dolphin	45	60	30	Yes	4
20	Bonaire	Atlantic spotted dolphin	40	70	20	Yes	1
21	Bonaire	Spinner dolphin	55	70	40	No	NA
22	Bonaire	Undetermined dolphin	NA	NA	NA		NA
23	Curaçao	Sperm whale	10	12	7	Yes	1
24	Curaçao	Pantropical spotted dolphin	40	60	20	Yes	2
25	Curaçao	Atlantic spotted dolphin	7	10	5	Do not know	NA
26	Curaçao	Pantropical spotted dolphin	3	3	3	No	0
27	Curaçao	Sperm whale	5	7	4	Do not know	NA
28	Curaçao	Striped dolphin	150	250	100	Yes	7

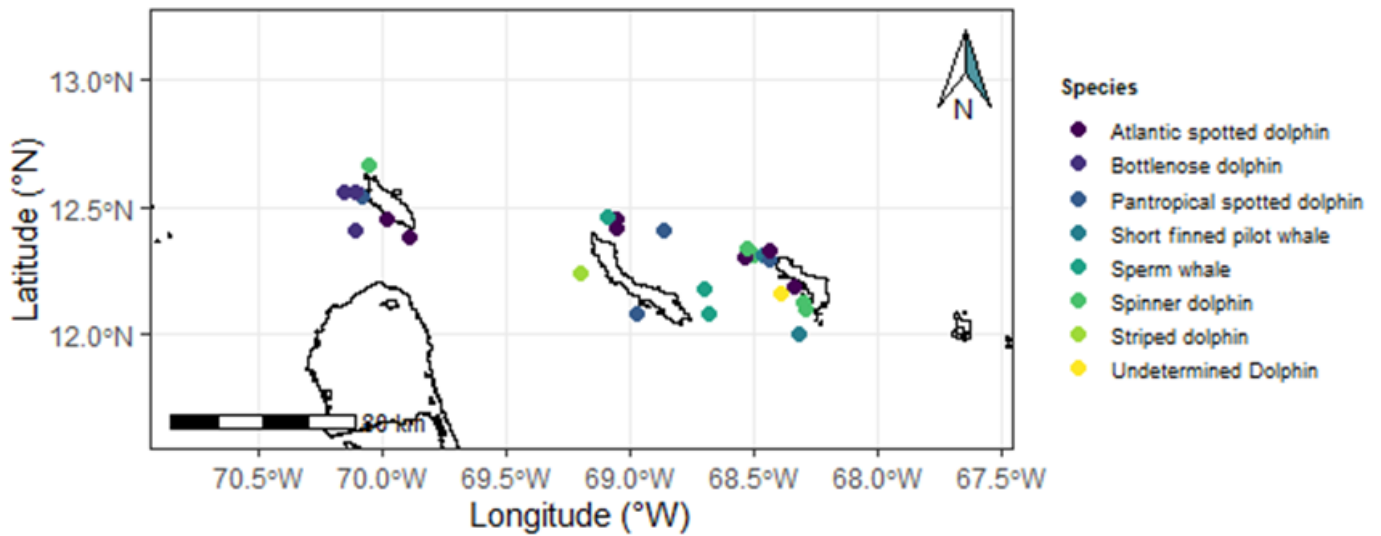


Figure 4 : Map of the confirmed cetacean sightings

Hydro acoustic sightings:

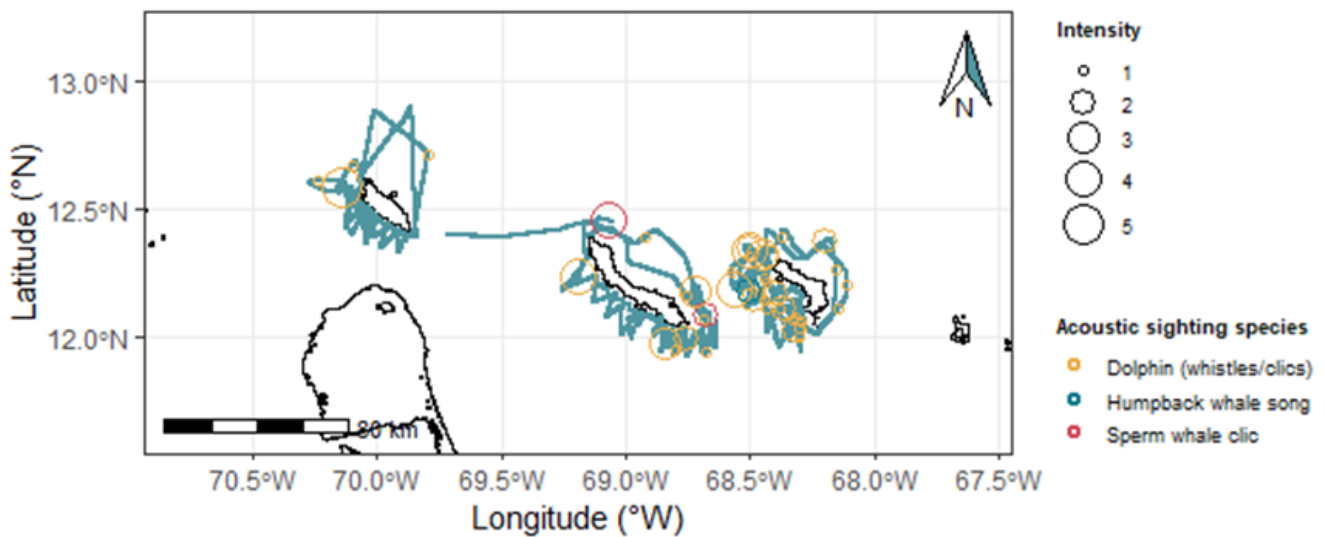


Figure 5: Study area of the acoustic sightings of Delphinidae whistle and clicks (orange circles), humpback whale songs (blue circles) and sperm whale click (red circles). The active acoustic survey is represented by the blue line.

Marine traffic:

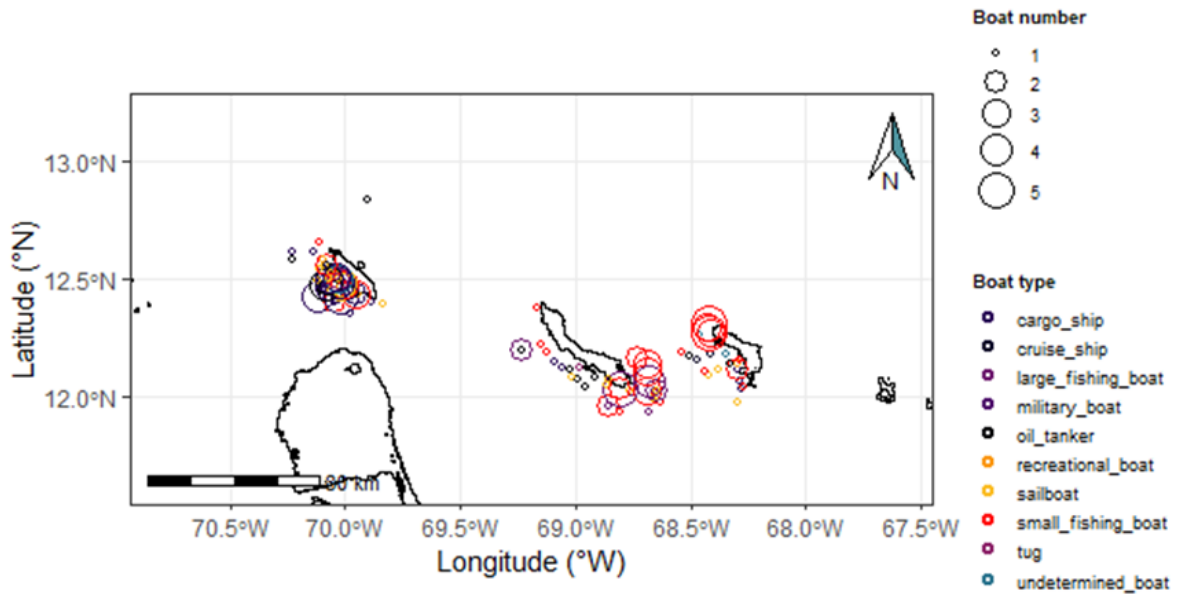
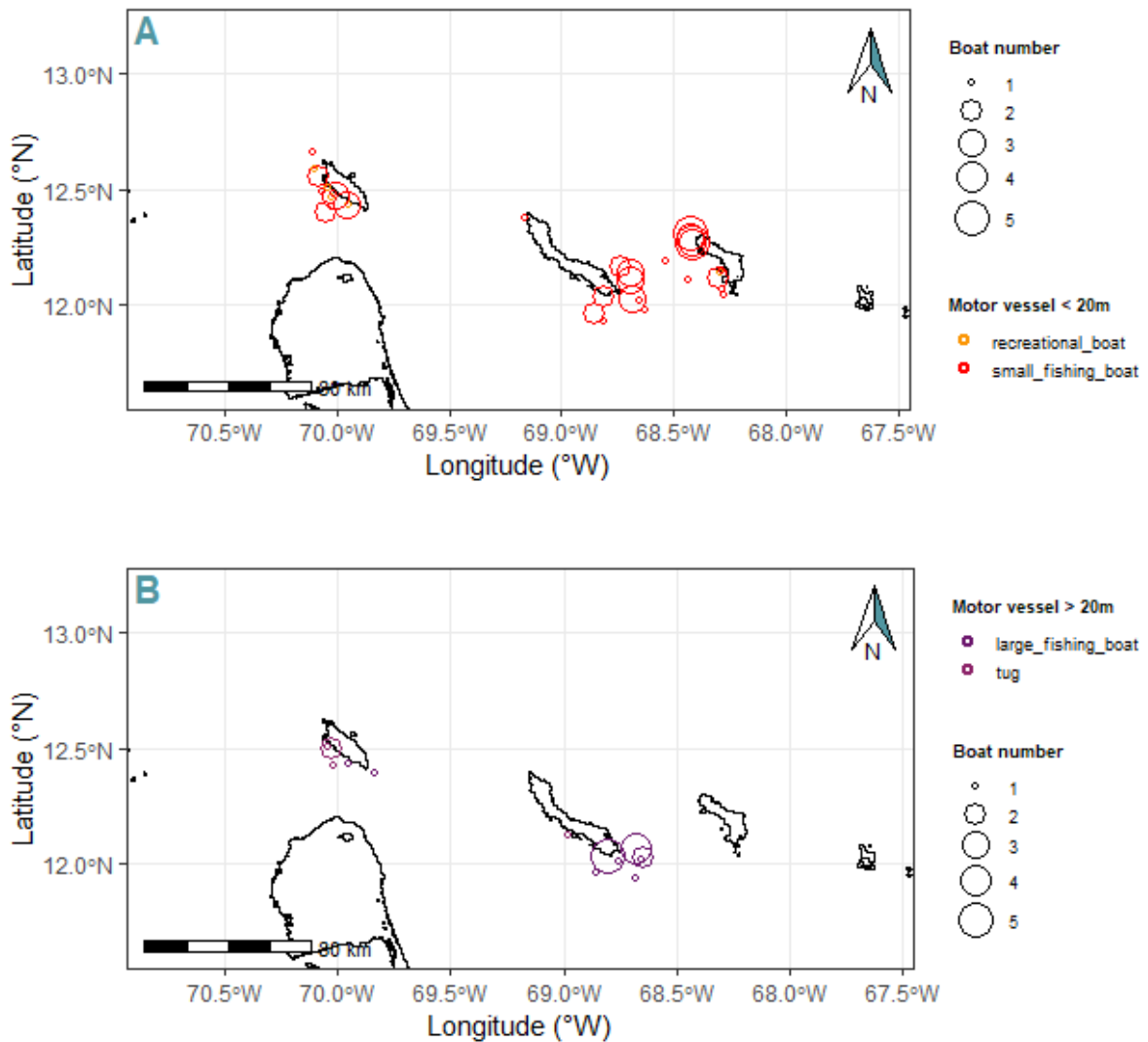


Figure 6.1: Map of the number and type of boats observed during visual survey.



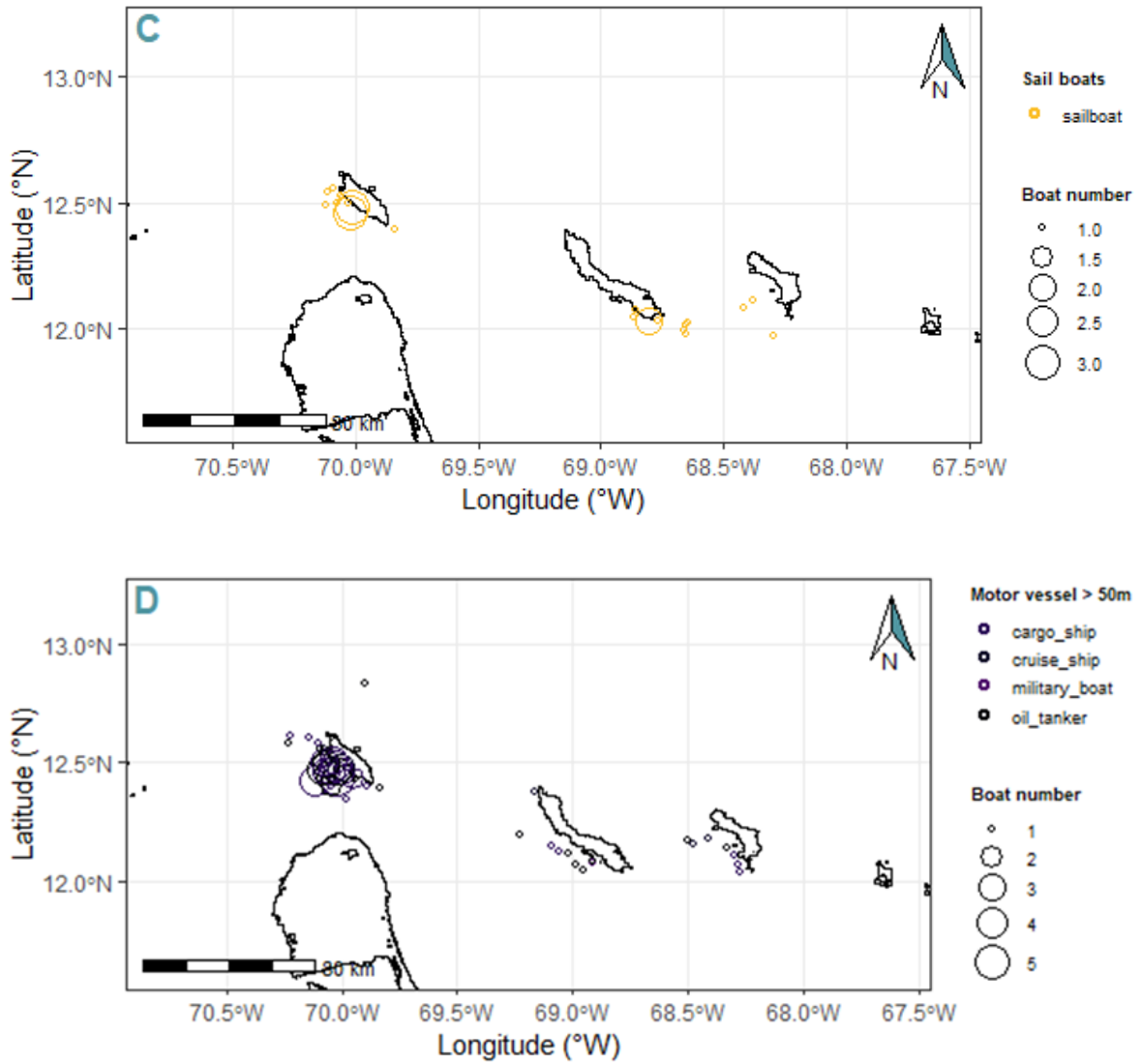


Figure 6.2: Maps of the different categories of boats observed during the visual survey with A) Motor vessel < 20m; B) Motor vessel > 20m; C) Sail boats; D) Motor vessel > 50m.



Seabird species monitored :

- Black-capped Petrel (*Pterodroma hasitata*)
- Bridled Sooty Tern (*Onychoprion fuscatus*)
- Bridled Tern (*Onychoprion anaethetus*)
- Brown Booby (*Sula leucogaster*)
- Brown Noddy (*Anous stolidus*)
- Brown Pelican (*Pelecanus occidentalis*)
- Common Tern (*Sterna hirundo*)
- Gull-billed Tern (*Gelochelidon nilotica*)
- Laughing Gull (*Leucophaeus atricilla*)
- Least Tern (*Sternula antillarum*)
- Magnificent Frigatebird (*Fregata magnificens*)
- Masked Booby (*Sula dactylatra*)
- Osprey (*Pandion haliaetus*)
- Red-footed Booby (*Sula sula*)
- Royal Tern (*Thalasseus maximus*)
- Sandwich Tern (*Thalasseus sandvicensis*)
- Sooty Tern (*Onychoprion fuscatus*)
- Terns spp.
- Unidentified Booby
- Unidentified Jaeger
- Unidentified Noddy
- Unidentified Shearwater



Table 2: Seabird sightings recorded during expedition 7 of 2024.

Species	Nbr of observation (Obsenmer)
Black capped petrel	3
Bridled Sooty tern	2
Bridled tern	1
Brown booby	316
Brown noddy	66
Brown pelican	7
Common tern	30
Gull billed tern	2
Laughing gull	13
Least tern	106
Magnificent frigatebird	161
Masked booby	20
Osprey	8
Red footed booby	437
Royal tern	125
Sandwich tern	1
Sooty tern	1
Terns spp	339
Unidentified booby	236
Unidentified Jaeger	1
Unidentified Noddy	17
Unidentified Shearwater	2



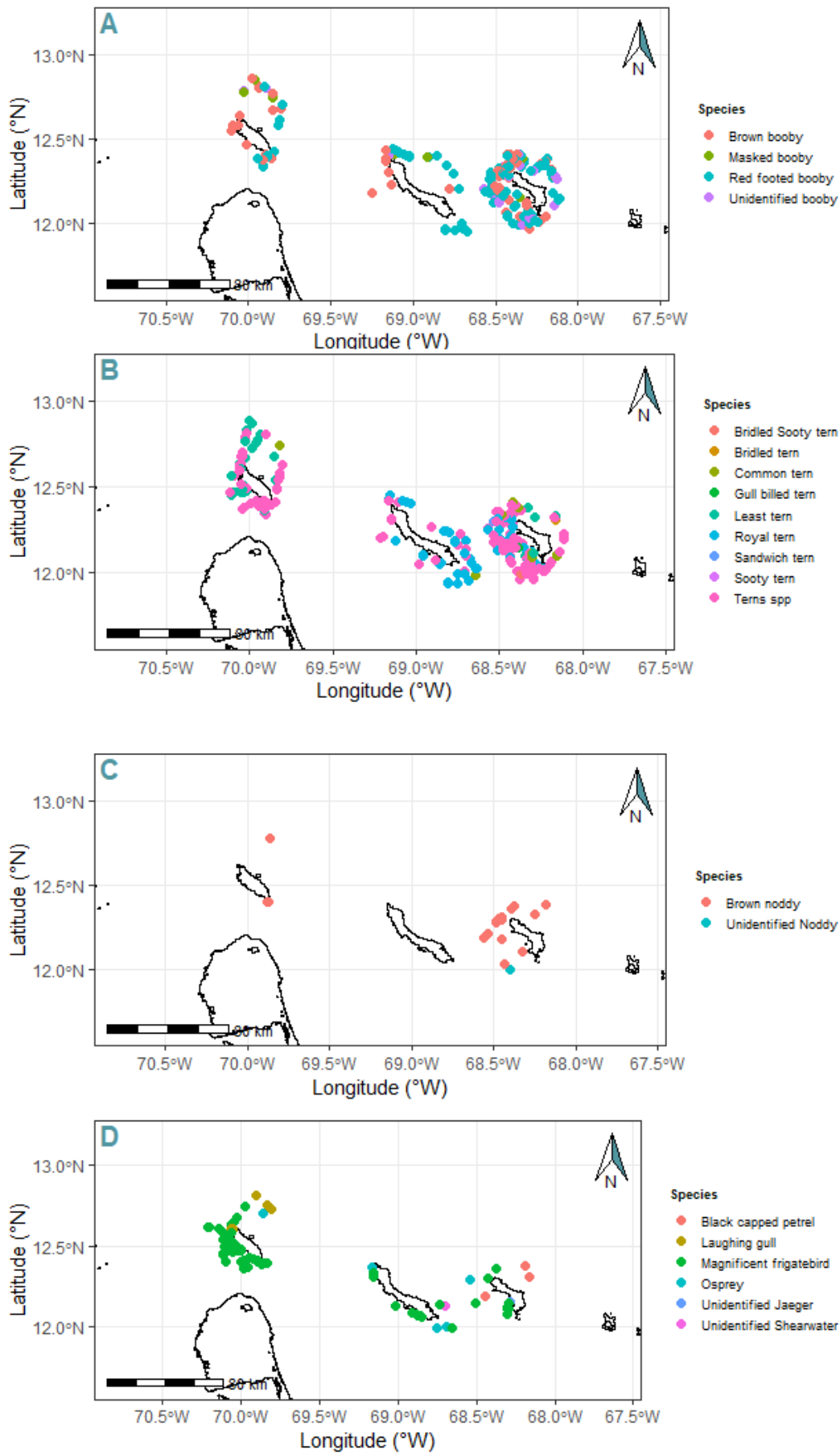


Figure 7: Maps of sightings seabirds families recorded during expedition 7 of 2024 with A) Booby sightings; B) Terns sightings; C) Noddy sightings; D) Others sightings.



IMPACT:

Impact on cooperation:

In 2024, the Caribbean Cetacean Society reaffirmed its commitment to fostering collaboration and capacity building across the Caribbean region. This year's efforts brought together a diverse group of 25 dedicated participants from the ABC islands and beyond, representing governments, biodiversity conservation NGOs, island development organizations, marine park authorities, and wildlife caretakers. This collective effort created a dynamic platform for shared learning and innovation, amplifying regional cooperation and strengthening individual and organizational capabilities.

Against the rich backdrop of cultural and professional diversity, participants engaged in meaningful discussions, identifying shared goals, addressing common challenges, and exploring pathways for future collaboration. Notably, national park rangers, ecologists, and marine park managers exchanged scientific insights and cultural perspectives on the presence and behavior of whales and dolphins in ABC-waters. Policy advisors and government representatives contributed by highlighting how this research and other conservation initiatives can be leveraged to inform sustainable marine resource management across the region. The presence of two representatives of WWF-NL led to engagement in discussions on the application of the research of CCS to regional conservation strategies and enhanced collaboration.

Beyond scientific knowledge-sharing, this year's collaboration underscored the value of cultural exchanges in fostering trust and mutual understanding. These interactions served as a foundation for collective action, emphasizing the need for both expansion and effective enforcement of marine mammal sanctuaries in the Dutch Caribbean and the wider region. The participants unanimously agreed on the importance of pooling knowledge, expertise, and resources to address the complexities of marine conservation in the Caribbean.

One of the key achievements in 2024 has been the advancement and continuation of locally led expeditions in the ABC islands. These expeditions adhere to standardized protocols and data-sharing agreements, ensuring consistency and comparability of data across the region. This standardized approach not only strengthens scientific efforts but also translates collected data into actionable insights for improved marine mammal management. Through this collaborative framework, the Caribbean Cetacean Society and its partners are taking concrete steps towards a sustainable future for marine conservation. The successes of 2024 exemplify the power of partnership, reinforcing the idea that by working together, we can create lasting impacts for marine ecosystems and the communities that depend on them.

Impact on research:

A total of 28 observations of 7 different species were recorded during the expedition, which is considered a high number. Several noteworthy findings emerged during this expedition. Similar to 2023, Atlantic spotted dolphins were frequently sighted, with proportions higher than those observed around other islands in the Lesser Antilles. Additionally, there was a significant number of spinner dolphin sightings in Bonaire. Through photo-identifications, we confirmed that the same group of spinner dolphins was observed multiple times in Bonaire. These dolphins were sighted both nearshore and further offshore, exhibiting a range of behaviors, including resting, traveling, and hunting. These observations enhance our understanding of the distribution and behavior of these species in the Antilles, representing a substantial improvement in our knowledge of these marine mammals' habitats.

Across all species observed, calves and juveniles were frequently recorded on all three islands, including several sightings of neonates. These findings emphasize the critical nursery habitat roles of Aruba, Bonaire, and Curaçao. Additionally, the sighting of striped dolphins can be considered exceptionally rare and of high scientific value. While it is known that striped dolphins occur in the waters of the ABC islands, this is only the second time this species has been recorded by CCS across its expeditions in the past four years in the Caribbean. The first recorded sighting by CCS was in the Saba Bank.

In Curaçao, nine new sperm whales were identified during the expedition, sighted on two different days. It is too early to determine the nature of the relationships between these individuals, as at least two sightings of the same individuals together over different years are required to conclude if they belong to the same social unit. However, it is certain that all individuals observed during each sighting belonged to the same group, which could comprise several social units. Notably, these nine individuals did not match any of the 13 sperm whales identified during last year's ABC expedition. This suggests the presence of a previously undocumented subpopulation of sperm whales residing in the southern Caribbean region, which may not migrate further north. Acoustic analysis conducted last year revealed the presence of a well-known vocal clan, EC1, which is prevalent throughout the Lesser Antilles. However, as this is only the second year of sampling in the ABC islands, it remains too early



to draw concrete conclusions about the social structure of this subpopulation or their use of these waters. Further analysis of the acoustic data collected during this expedition could shed light on the cultural connections between these individuals.

What is clear is that these sperm whales have not been studied before, providing valuable new insights into the potential distribution of Eastern Caribbean vocal clans—not only in the Lesser Antilles but across the Caribbean as a whole. As new Marine Protected Area (MPAs) have been established in the Dominican Republic and are planned to be established in Dominica to safeguard cetaceans, it is imperative to continue research in this unique region. Expanding conservation efforts to include the entire Caribbean chain would be a critical step toward ensuring the protection of these remarkable marine mammals..

This year, pilot whales were once again observed in Bonaire, including large groups with juveniles. However, no matches with previous sightings have been identified thus far.

During the various observations in all three islands, individuals exhibited notable scars, indicating the presence of threats and highlighting the need for measures to mitigate these risks. More importantly, a significant observation was made in Bonaire on threats present. While the waters of Bonaire are an officially designated marine mammal sanctuary, because of the close proximity of the dolphins to shore, a lot of interaction and harassment was observed. Boats were passing by on top and very close to the dolphins causing disturbance which was visible in the behaviors of the animals. This shows that while a sanctuary is beneficial, if there is no education and continuous enforcement presence, the threats can grow.

In addition to the data collected during research expeditions, CCS gained a local ambassador on Bonaire who has been collecting additional dolphin data from shore. Photo-ID data from these efforts confirmed a match of bottlenose dolphins between Curaçao and Bonaire. Moreover, the spinner dolphins sighted during the expedition were the same group recorded for several weeks prior, suggesting a prolonged stay in Bonaire's waters and indicating residential behavior. Interestingly, bottlenose dolphins observed earlier in the year were no longer sighted after the arrival of the spinner dolphins, nor were they recorded during the expedition's monitoring period. This observation may suggest an interaction between the two species that was previously undocumented.

Our efforts also contributed to advancements in mapping the offshore distribution of seabirds, with numerous black noddy sightings—an occurrence considered rare in the Lesser Antilles. These findings emphasize the importance of continued research to better understand the ecological roles of seabirds in the Caribbean's offshore environments and to inform effective conservation measures.

Lastly, one sighting of a manta ray and one devil ray were recorded in Aruba, marking the first observations of these species by CCS since the expeditions began in 2021. Although no photo identification could be obtained due to weather conditions and CCS's protocol.

Impact on conservation:

A central element of the Ti Whale An Nou program revolves around enhancing the capabilities and knowledge of participants with diverse backgrounds and experiences throughout the Caribbean. These initiatives aim to empower new leaders, fostering collaborative conservation efforts across the islands. The capacity-building efforts extend beyond individuals engaged in marine environment monitoring or management; they also encompass training for captains in boat handling skills, minimizing disruptions to cetaceans. This not only ensures the well-being of these marine mammals but also cultivates responsible captains.

During expeditions, we conscientiously manage our ocean footprint, utilizing ocean-safe products. All onboard products, from sunscreens to soaps and cleaning agents, adhere to simple and environmentally friendly ingredients such as Savon de Marseille and white vinegar. Additionally, we uphold a no-canned-tuna policy to address bycatch issues, including dolphins, often associated with this fishery.

The data derived from our research initiatives plays a crucial role in shaping adaptive conservation measures. By providing valuable insights into the behaviors, habitats, and threats faced by marine mammals, this information forms the basis for tailoring conservation strategies to meet the specific needs and challenges of the Caribbean region. The implementation of actions grounded in scientific evidence enables stakeholders and managers to select measures that effectively achieve the desired conservation goals.

Results Symposium

Following the expedition, CCS organized a symposium in Curacao where the preliminary results were presented. This symposium marked a pivotal moment in regional conservation efforts. The symposium brought together over 40 stakeholders, including representatives from conservation organizations, the private sector, and governments of the ABC islands. Attendees included delegations from Carmabi, DCNA, FKUP, VNACS, Directie Natuur & Milieu (Aruba), Piskabon (Bonaire), and STINAPA Bonaire, reflecting the importance of inter-island cooperation in addressing conservation challenges. The event featured presentations led by CCS Director Jeffrey Bernus and Regional Coordinator Stacey Mac Donald, followed by a panel discussion exploring the implications of the research findings for conservation in the region. The panel discussion, wherein the minister of Health, Environment and Nature participated, underscored the necessity of collaborative efforts to safeguard marine mammals. A more comprehensive report of the symposium will be provided separately.





Impact on education :

The 2024 research expedition on whales and dolphins in the ABC islands, conducted under the Ti Whale An Nou program, showcased advancements in capacity building and collaboration across the region. Park rangers and government representatives actively participated in the expedition, acquiring essential skills in cetacean research and marine ecology.

These acquired capabilities not only enhance their likelihood of encountering cetaceans but also strengthen their ability to contribute to the effective protection of these species and their habitats. The expertise gained empowers these representatives to better understand and safeguard marine mammals, creating a lasting impact on local conservation efforts.

The program also prioritized comprehensive training for local representatives on each participating island, equipping a broader range of individuals with the knowledge necessary to support ongoing conservation and research initiatives. This effort included training a new expedition leader, further building capacity within the region and ensuring continuity of data collection on the islands.

The participation of park rangers from Curaçao reinforced collaboration with the national park authority, Carmabi, underscoring the importance of inter-agency cooperation. The return of trained participants to their respective communities, armed with deepened knowledge and enhanced skills, fosters sustained conservation efforts and strengthens the collective understanding of cetaceans in the Caribbean.

Limitations/ challenges:

The 2024 expedition faced some logistical and operational challenges that highlighted areas for improvement in future endeavors. Permitting in Curaçao continued to present timing issues, with permits being granted close to the start of the monitoring period. A multi-year permit for future expeditions could alleviate the administrative burden on Curaçao's government and streamline preparations for future expeditions.

Despite increased familiarity with the process, customs procedures in Curaçao remain the most time-consuming and logistically complex in the Caribbean region. Discussions about establishing a customs office near the Spanish Waters Marina offer a promising solution, though no timeline for its implementation has been confirmed.

Weather conditions also impacted the expedition's effectiveness. While Bonaire experienced optimal weather, providing excellent visibility for cetacean sightings, Curaçao's weather was marginal, making observations more challenging. Aruba's conditions were better than Curaçao's but not as ideal as Bonaire's, emphasizing the importance of factoring weather variability into planning.

The high costs of boat rentals posed another significant challenge. Once again, a vessel was rented from Martinique, as it remains the most economical option. However, this approach extends the expedition duration considerably, requiring prolonged commitments from captains and making this the longest and most physically demanding CCS expedition to date.

These challenges underscore the importance of addressing logistical bottlenecks, improving local infrastructure, and enhancing planning processes to ensure smoother operations in future expeditions.





Future perspectives :

Over the past four years, the Caribbean Cetacean Society (CCS) has conducted annual expeditions across the Lesser Antilles, continuing to build a robust foundation of knowledge about marine life in the region. The 2024 expedition marked the second standardized cetacean survey for the ABC islands, reaffirming CCS's commitment to establishing consistent, reliable data collection protocols. These standardized expeditions are vital for understanding cetacean behavior and habitats, and we aim to repeat them annually in the coming years.

This year's expedition also emphasized the importance of empowering local continuity. Building a dedicated local team to sustain and expand these efforts is crucial for ensuring long-term success. To achieve this, we continue to prioritize training local participants in our standardized protocols, equipping them with the skills needed to carry forward the work initiated during these expeditions.

The movement patterns of various species observed during the expedition further highlight the need to extend the Yarari Sanctuary. species travel between Bonaire, Aruba, and Curaçao, underscoring the importance of protecting interconnected habitats across the ABC islands. Expanding the sanctuary's coverage and implementing a comprehensive management plan would be pivotal in safeguarding marine biodiversity. Proper enforcement measures must also be established to mitigate threats and ensure the effective protection of endangered species.

This proposed extension aligns with broader regional trends, as other Caribbean islands have already expanded or initiated the creation of new marine protected areas (MPAs) to safeguard critical habitats. Following their lead, the ABC islands have a unique opportunity to enhance conservation efforts by creating a connected, well-managed sanctuary network.

Achieving these goals requires strengthening the funding mechanisms that support these initiatives. Adequate resources will enable us to address data deficiencies in key regions, support enforcement measures, and ensure the continuity of research. With enhanced funding, we can amplify our efforts, paving the way for expanded sanctuaries and the effective protection of vital marine ecosystems.

Research approach

All photos taken during the expedition have been taken with a Tele lens that allows us to zoom in and maintain a safe distance during data collection. Approaching of cetaceans, even for research, should be stopped at any sign of disturbance (change of direction, speed, etc).

Underwater pictures have been taken with a GoPro from the boat when dolphins approached the boat by themselves. We are discouraging any in water activities with cetaceans as it is prohibited by law and could be dangerous.

This document is a scientific expedition report with scientific goals and a standardized protocol. It is in no case a boat trip or whale watching activity.

Our captains and expedition leaders have been trained and would stop the study if sign of harassment would be observed.

All research has been done under permits obtained in each islands for the period of expedition. Local organisations have been included as much as possible and invited to the expedition several months prior to expedition.



Acknowledgement :

This work has been achieved thanks to the financial support of the World Wide Fund for Nature (WWF-NL), Rotary Club Curacao, WWF-Whales & Dolphins Initiative, Profound, Kooyman BV and SPAW RAC.

We would also like to express our gratitude to all the team who joined us, our expedition leader, our ambassador Boudino de Jong, our ambassador and expedition leader in training, Gwen Versteeg, the regional coordinator Stacey, and the captains for their unrelenting dedication to this work.

Special thanks on this expedition goes to the, COIA, STINAPA Bonaire, Carmabi Curacao, Sea Turtle Conservation Bonaire, Aruba Conservation Foundation, Aruba Marine Mammal Foundation, the government of Aruba - Directie Natuur & Milieu, the government of Curaçao and the Ministry of Infrastructure and Water Management for their support to this mission.





The Caribbean Cetacean Society team

Science & conservation together !

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