

January 2018 Survey Report for New York Bight Whale Monitoring Aerial Surveys

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ACRONYMS AND ABBREVIATIONS

hr	Hour
km	Kilometer
SE	Standard error

1.0 INTRODUCTION

Tetra Tech, Inc., in coordination with Smultea Environmental Sciences, LLC and Aspen Helicopters, Inc. (collectively, the “survey team”), is contracted by the New York State Department of Environmental Conservation (NYDEC), Division of Marine Resources to conduct 36 monthly line-transect aerial surveys focused on the six large whale species most likely to occur in the New York Bight. This survey report documents the survey effort and sightings from the January 2018 survey, representing the eleventh of the 36 surveys scheduled to occur under this contract.

2.0 EFFORT

The January 2018 survey occurred from January 4 – 11, 2018. A total of eight flights were conducted, representing a total of 19.92 hours in the air (i.e., from wheels up from the airport tarmac to wheels down on the tarmac for each flight). A total of 4,033.09 kilometers (km) were flown and included completion of 100 percent of the 15 transect lines. Flights were not conducted on January 4 and 5 due to snowstorms, and on January 6 a flight was attempted but aborted due to high winds. [Figure 1](#) shows the survey lines completed. Note effort occurred over frozen inland water at the top of Line 8, thus was recorded as “overland” rather than “transit”. [Table 1](#) presents the flight time durations and distances by effort type. Random effort type refers to a short period where the aircraft turned offline to confirm a potential malfunction with a propeller. Pilots deemed it a non-issue and transect effort was resumed.

TABLE 1. FLIGHT TIME AND DISTANCE BY EFFORT TYPE DURING THE JANUARY 2018 SURVEY

Survey Dates	Hours and Kilometers (km) by Type of Flight Effort												Total	
	Overland		Transit		Transect		Circling		Cross-Leg		Random		hr	km
	hr	km	hr	km	hr	km	hr	km	hr	km	hr	km		
January 6-12, 2018	1.39	269.84	6.63	1,435.12	10.33	2,028.73	0.94	171.83	0.59	118.70	0.05	8.86	19.93	4,033.08

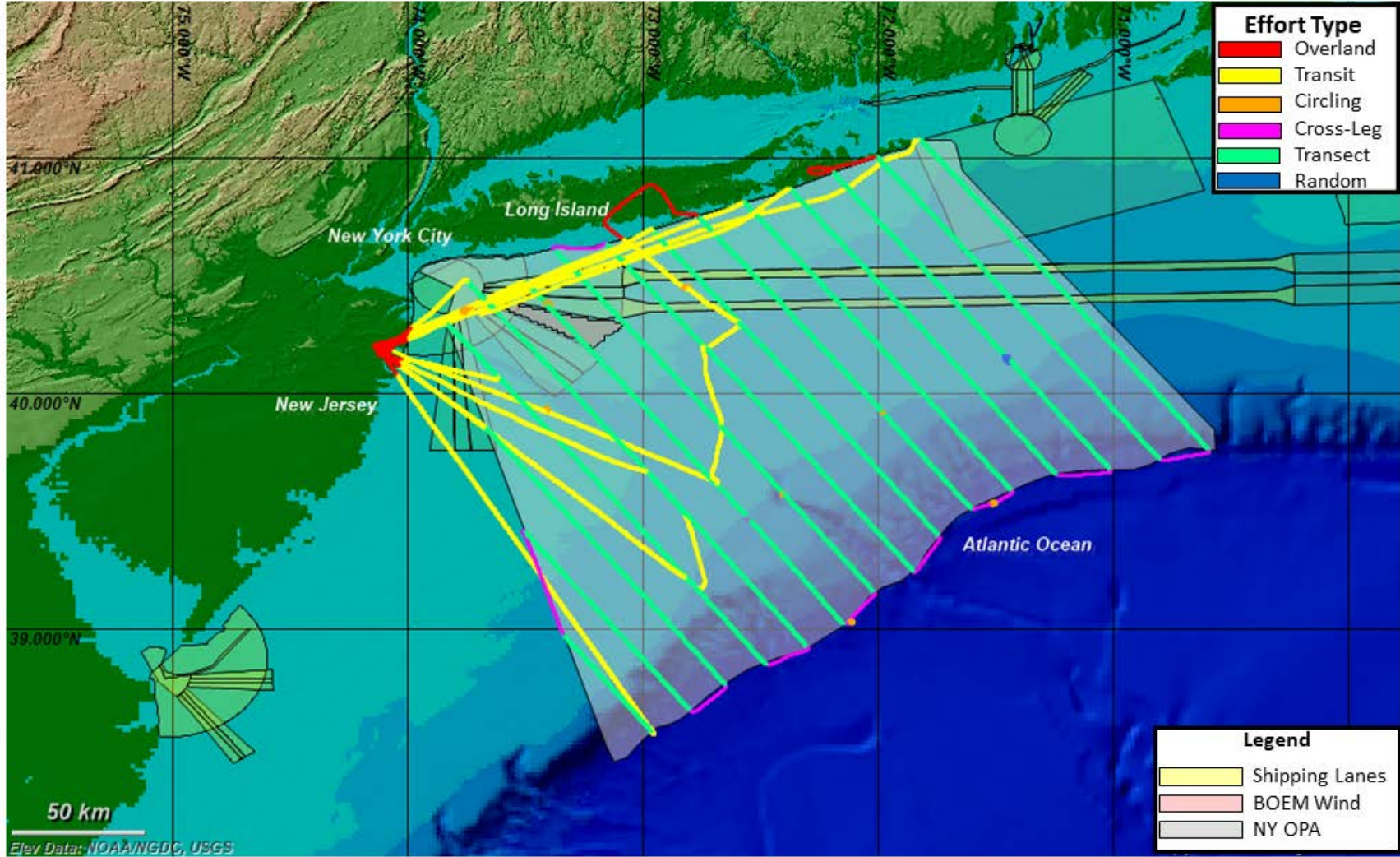


Figure 1. Survey Lines Flown by Effort Type during the January 2018 Survey

3.0 SIGHTINGS

Sightings are presented below based on the following subsections: (1) the six priority large whale species and unidentified whales, (2) other marine mammal sightings, (3) sea turtle sightings, (4) unusual or rare sightings, (5) sightings of dead, injured, stranded, or entangled marine mammals or sea turtles, and (6) other species/object sightings. [Figure 2](#) is a map of all large whale sighting locations, [Figure 3](#) is a map of all marine mammal sighting locations.

3.1 LARGE WHALE SIGHTINGS

A total of 10 sightings of an estimated 13 individual large whales were seen ([Table 2](#)). Eight of these sightings were identified to species and two were unidentified. Large whale sightings included one group (three individuals) of blue whales, two groups (two individuals) of fin whales, two groups (two individuals) of humpback whales, one group (two individuals) of North Atlantic right whales, one single minke whale and one single sperm whale. The North Atlantic right whale sighting (two individuals) was reported to the New England Right Whale Hotline by telephone after completion of the flight (i.e. within 24 hr).

TABLE 2. NUMBER OF LARGE WHALE SPECIES SIGHTED DURING THE JANUARY 2018 SURVEY

Common Name*	Scientific Name	Number of Groups	Total Number of Individuals	Mean Group Size (SE)
Blue Whale	<i>Balaenoptera musculus</i>	1	3	3 (NA)
Fin Whale	<i>B. physalus</i>	2	2	1 (NA)
Humpback Whale	<i>Megaptera novaeangliae</i>	2	2	1 (NA)
Minke Whale	<i>B. acutorostrata</i>	1	1	1 (NA)
North Atlantic Right Whale	<i>Eubalaena glacialis</i>	1	2	2 (NA)
Sei Whale	<i>B. borealis</i>	0	0	0
Sperm Whale	<i>Physeter macrocephalus</i>	1	1	1 (NA)
Unidentified Large Whale		2	2	1 (NA)
Total		10	13	

Notes:

*Listed in alphabetical order

NA = not applicable; SE = standard error

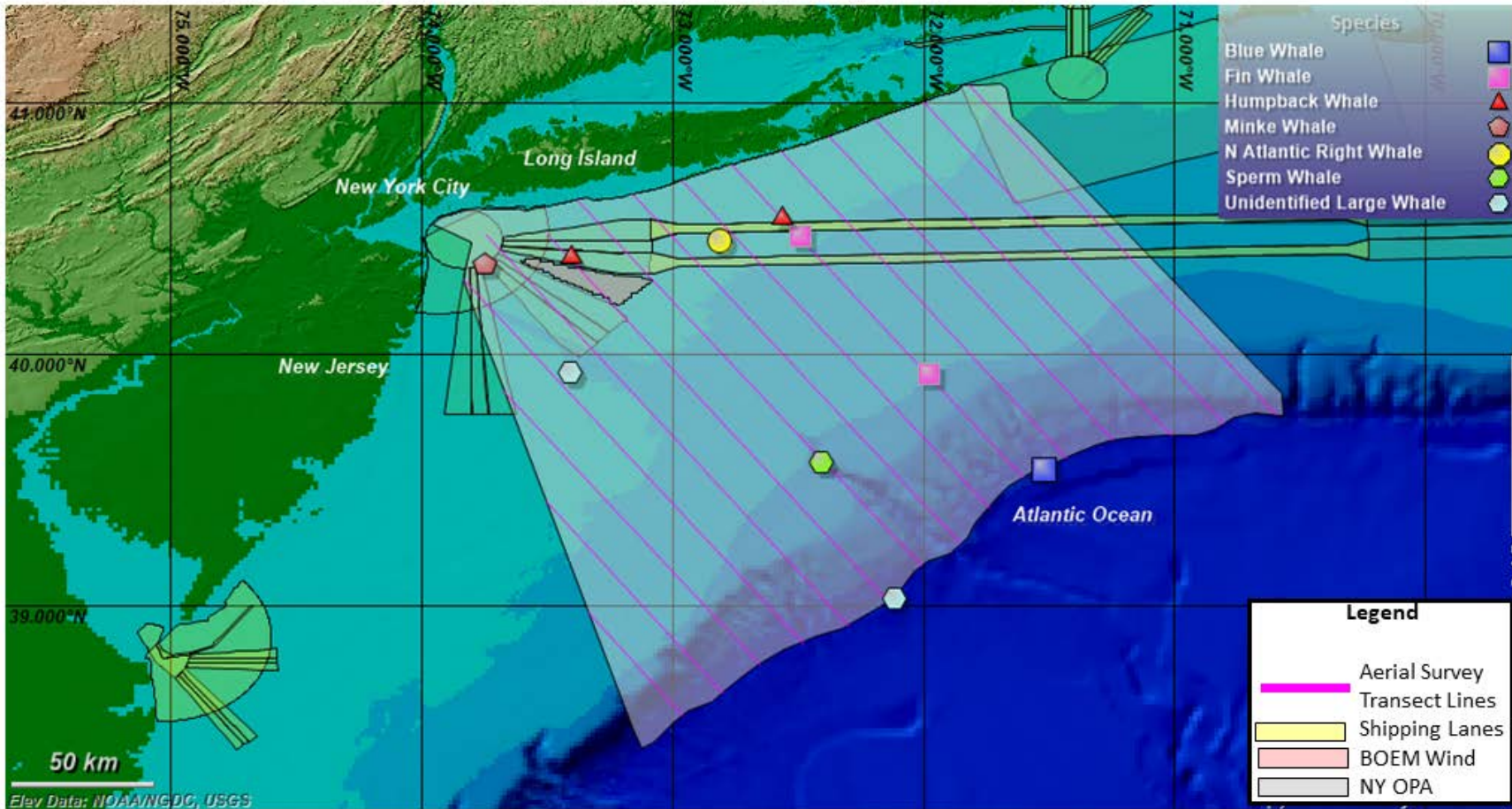


Figure 2. Locations of All Groups of Large Whales Sighted during the January 2018 Survey

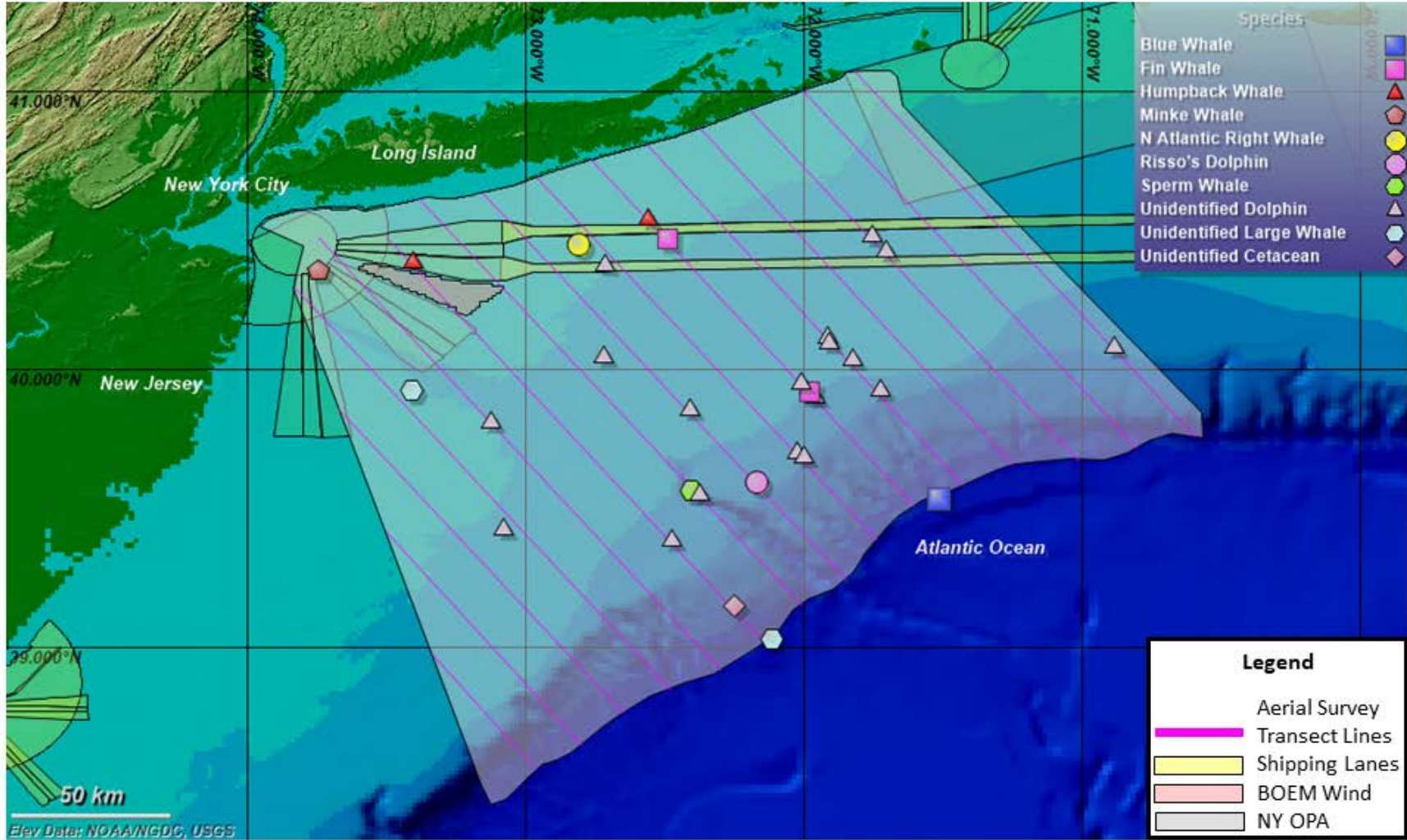


Figure 3. Locations of All Groups of Marine Mammals Sighted during the January 2018 Survey

3.2 OTHER MARINE MAMMAL SIGHTINGS

A minimum total of 20 sightings of an estimated 454 individual marine mammals other than the six priority whale species were observed (Table 3). This included one group (estimated 12 individuals) of Risso's dolphin, one single unidentified cetacean and 18 groups (estimated 441 individuals) of unidentified dolphins (note, in accordance with the project scope of work, dolphins were not circled to confirm species).

TABLE 3. OTHER MARINE MAMMAL SIGHTINGS DURING THE JANUARY 2018 SURVEY*

Common Name**	Scientific Name	Number of Groups	Total Number of Individuals	Mean Group Size (SE)
Risso's Dolphin	<i>Grampus griseus</i>	1	12	12 (NA)
Unidentified Cetacean		1	1	1 (NA)
Unidentified Dolphin		18	441	24.5 (10.49)
Total		20	454	

Notes:

*Some species identifications are preliminary and not certain due to not circling/photographing

**Listed in alphabetical order

NA = not applicable; SE = standard error

3.3 SEA TURTLE SIGHTINGS

There were no sea turtles observed during this survey.

3.4 UNUSUAL OR RARE SIGHTINGS

There were no unusual or rare sightings.

3.5 STRANDING AND ENTANGLEMENT REPORTS

There were no sightings of dead, injured, stranded, or entangled marine mammals or sea turtles during this survey.

3.6 OTHER SIGHTINGS

In addition to those described above, there were other types of non-marine mammal sightings. To focus observation efforts on searching for large priority whale species, only the sighting type, time, and general location of these other sightings were recorded opportunistically as feasible, with additional details recorded into the voice recordings (e.g., estimated body length and coloration, behavior, and group size). We used hot keys on the laptop running the software Mysticetus to mark the locations of these sightings when doing so would not interfere significantly with priority

observation efforts (e.g., in areas where all sightings were relatively low). The sightings below consist of those for which general locations were noted using the computer in the field; thus, they should be considered *minimum numbers* of sightings. Review of the voice recorder data would be required to fully enumerate these sightings (e.g., we orally recorded the time of these sightings, which could be merged with GPS in the future to determine locations).

- Minimum one (single individual) mola mola sighting

4.0 PROBLEMS ENCOUNTERED

There were no problems encountered during the January 2018 survey.

5.0 PHOTOGRAPHS

The following photographs provide an overview of some of the sightings during this survey. Additional photographs will be included in the data deliverable.



Figure 4. North Atlantic right whales, photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)



Figure 5. North Atlantic right whales, photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)

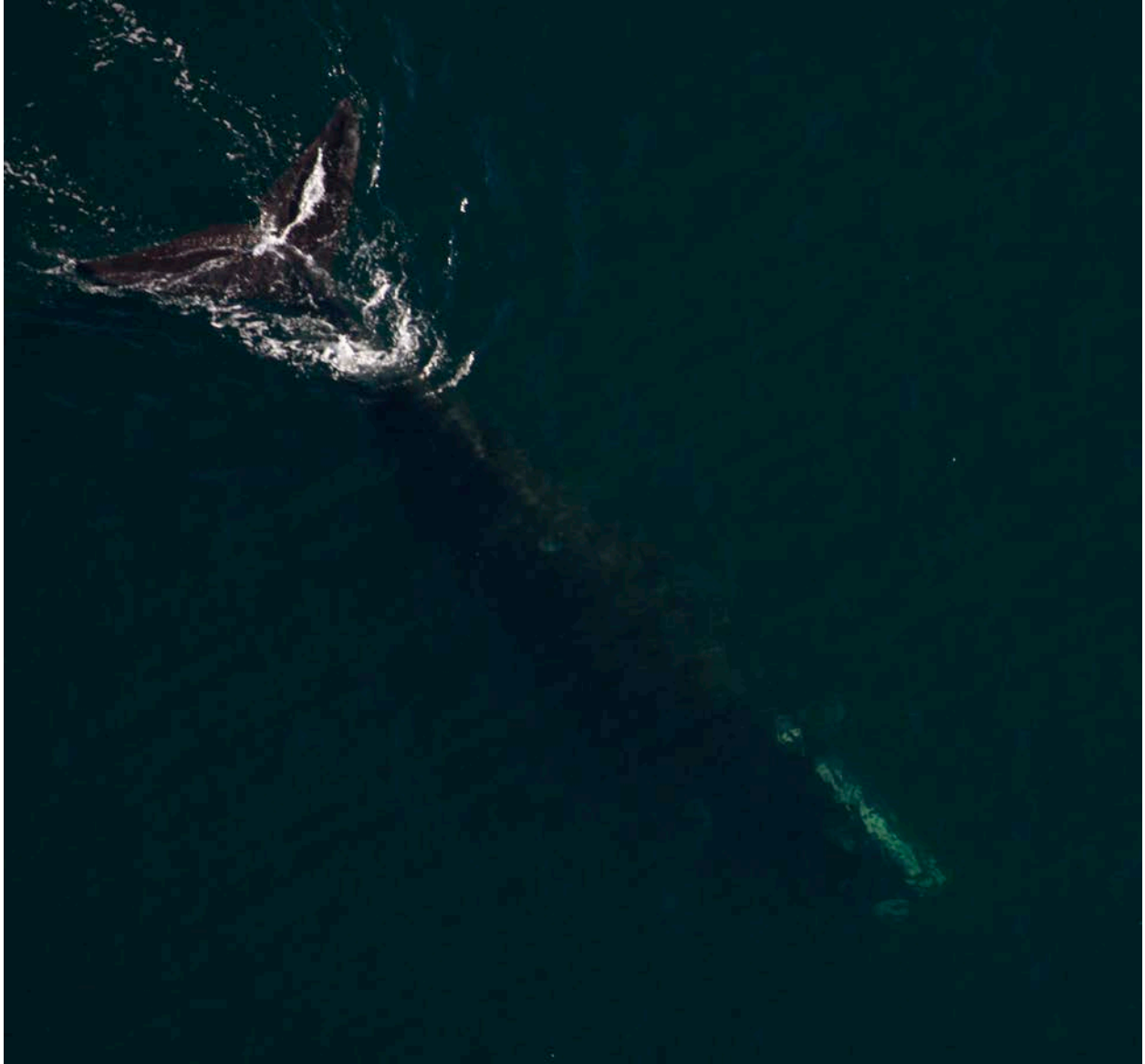


Figure 6. North Atlantic right whale, photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)



Figure 7. Blue whales, photo credit: Kate Lomac-MacNair (Smultea Environmental Sciences)