



Department of
Environmental
Conservation

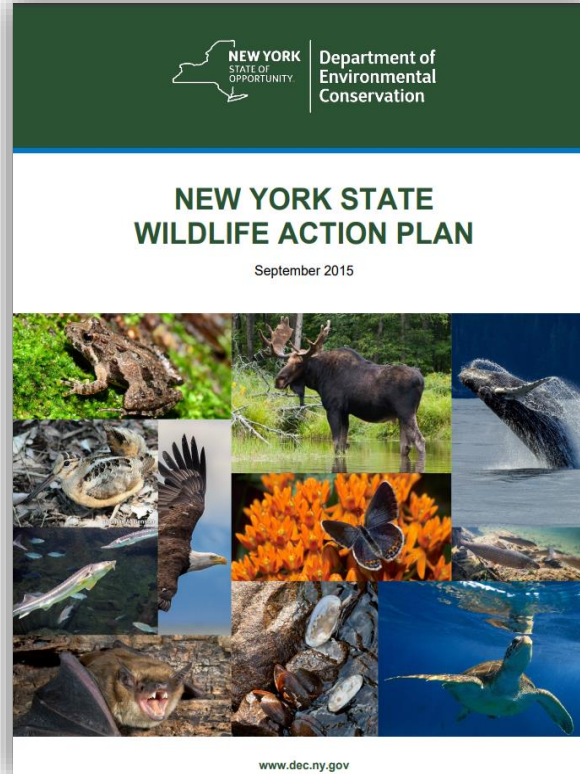
Whales in the New York Bight

NYSDEC Whale Monitoring Program

April 4, 2023

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Division of Marine Resources



“The full extent to which these endangered marine species use New York waters is currently unknown, thereby hindering comprehensive management and conservation efforts.”



WHO

Who, in terms of whales, can be found in the NYB?
(species, number of individuals, demographics)

WHAT

What do the surveys look like?
How is the monitoring effort conducted?

WHERE

Where within the NYB do whales/species occur?
(nearshore, shelf break, shipping lanes, wind energy areas)

WHEN

When are whales here? Is occurrence season or species specific? Are any species resident?

WHY

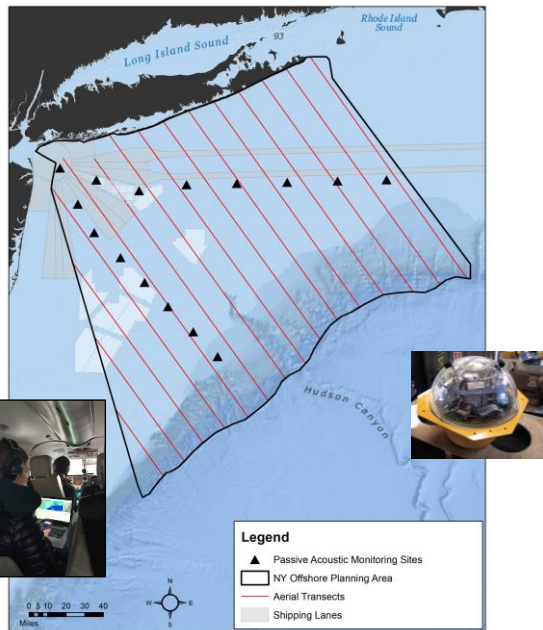
Why are whales here? Are they just migrating through?

Primary Goals

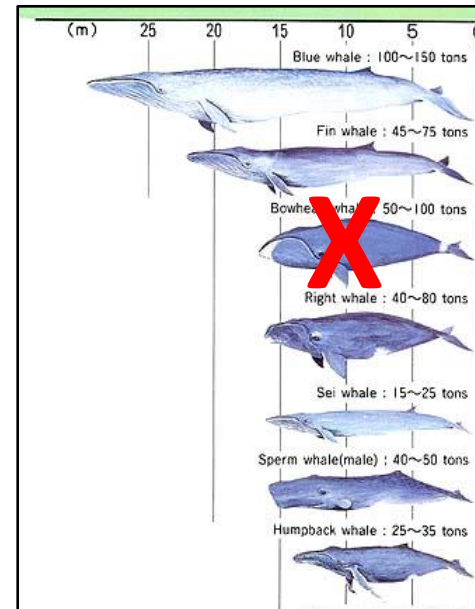
1. Determine the distribution and estimate relative abundance and density of the six priority species of large whales in the NYB.
2. Determine the monthly and seasonal occurrence* and inter-annual variability of the distribution and estimated abundance and density.
3. Record data about the behavior of sighted whales as much as possible.

Methods

- 3-year time frame (2017-2020)
- Monthly aerial line-transect surveys
- 24/7 passive acoustic monitoring



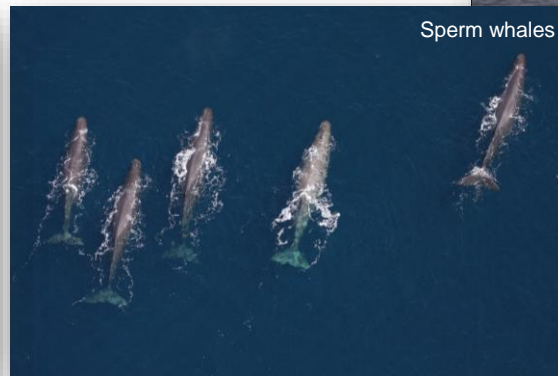
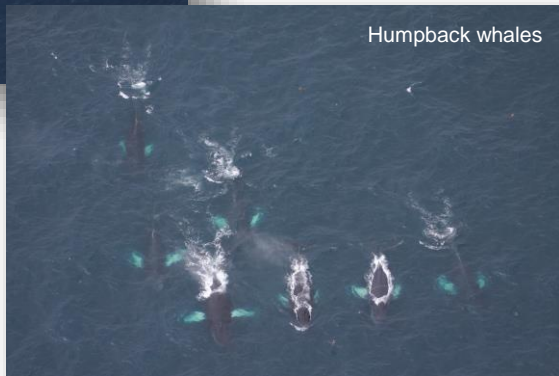
Species



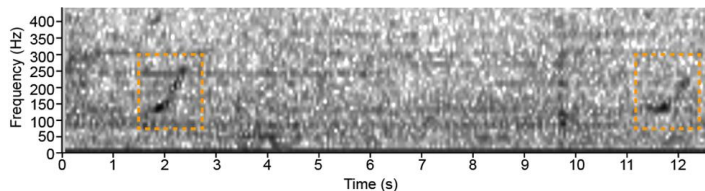
*PAM data analysis included weekly and daily occurrence.



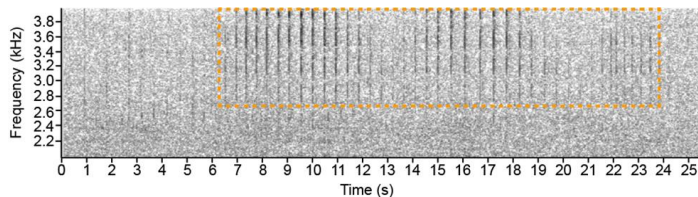
Large Whale Species	# of groups sighted	# of individuals sighted
Blue	3	5
Fin	124	207
Humpback	111	279
North Atlantic Right Whale	15	24
Sei	2	7
Sperm	32	72
Blue/Fin/Sei	3	3
Unid. Baleen Whale	1	1
Unid. Large Whale	27	31
TOTAL	318	629



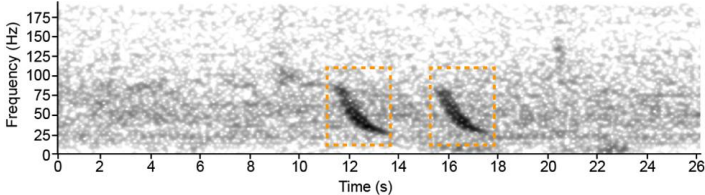
NARW



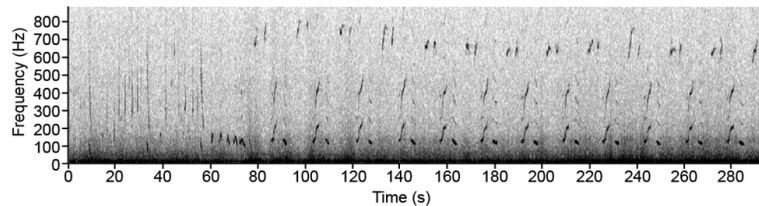
Sperm



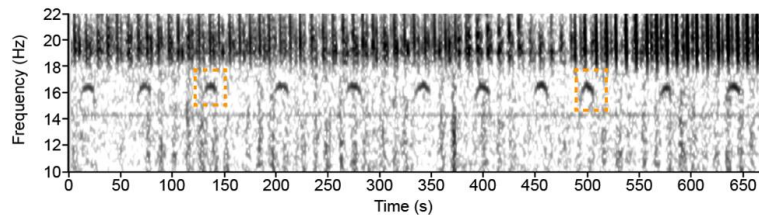
Sei



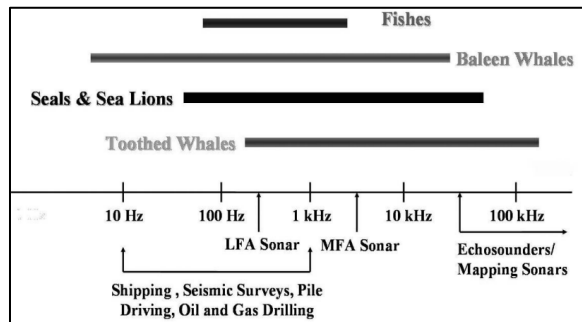
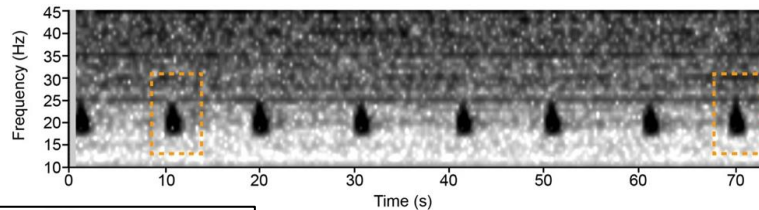
Humpback



Blue

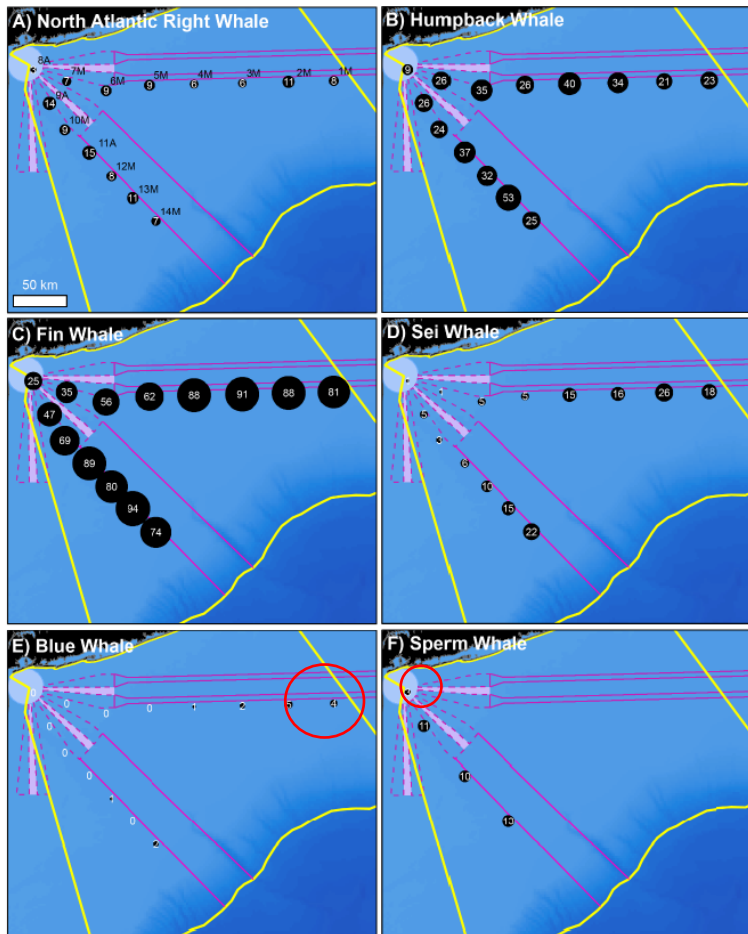


Fin

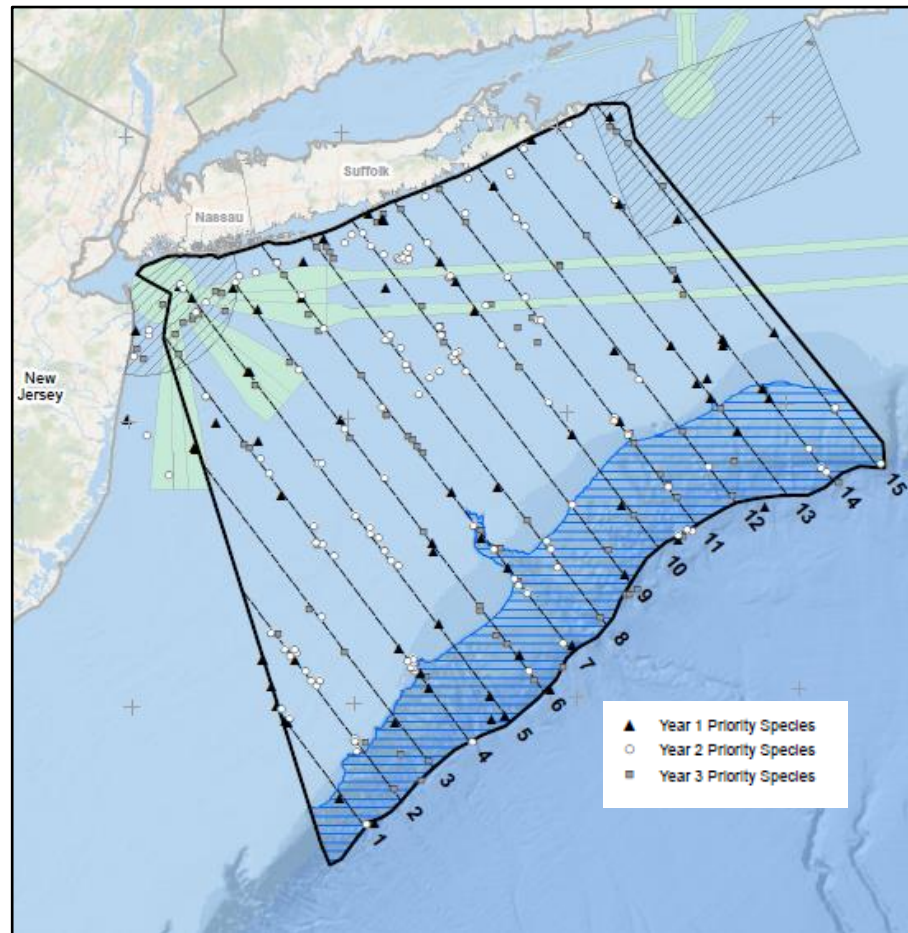


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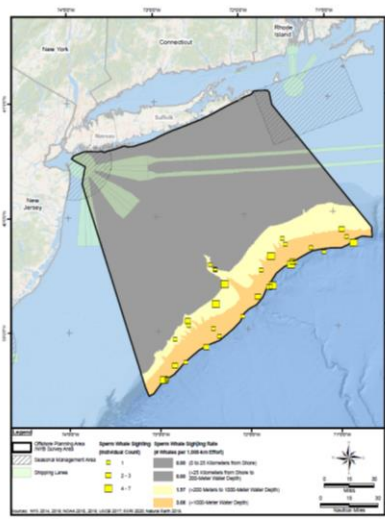
Passive Acoustic



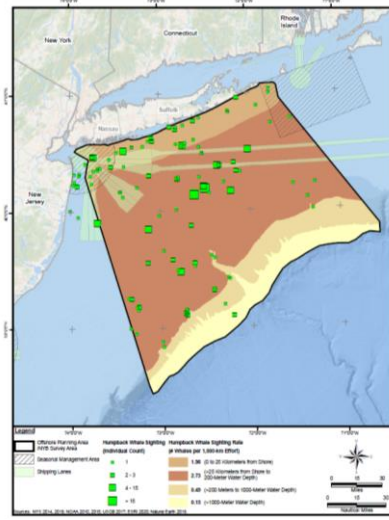
Aerial



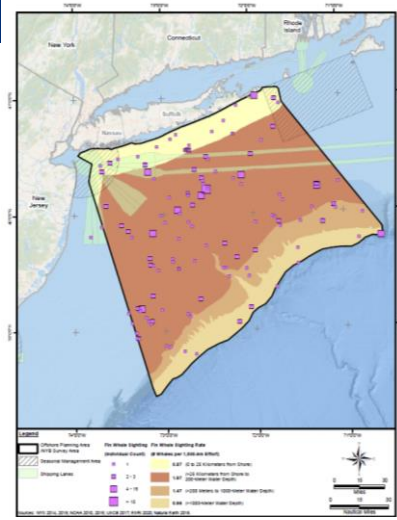
Sperm



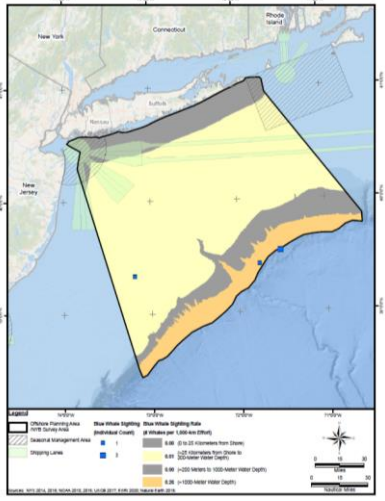
Humpback



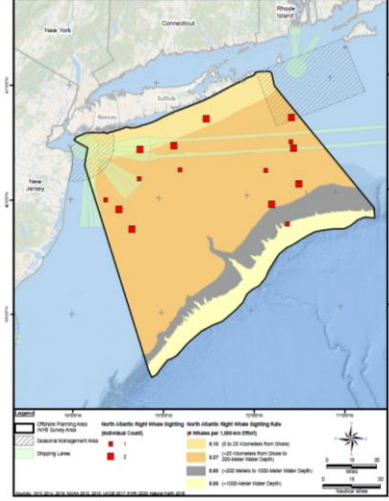
Fin



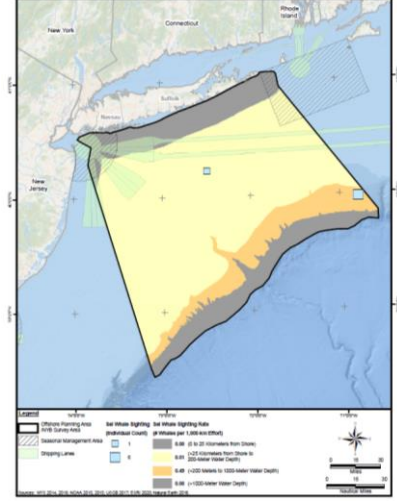
Blue

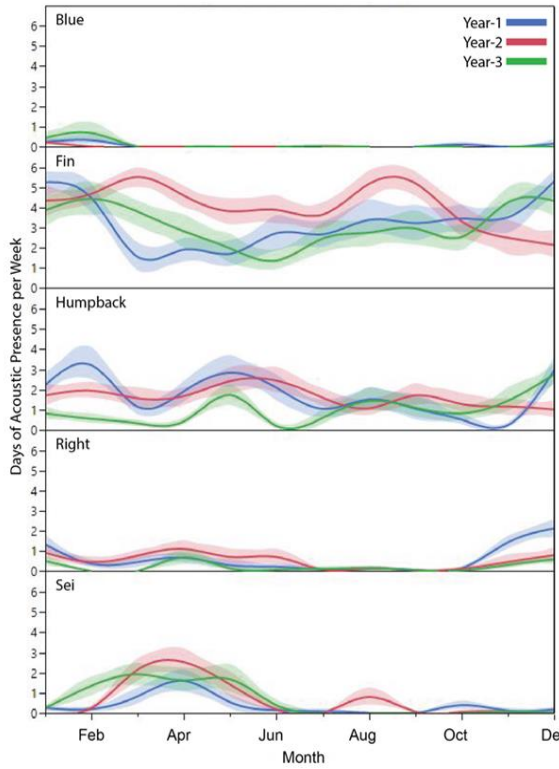
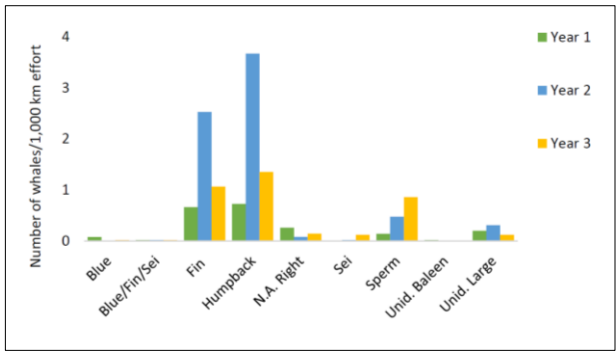
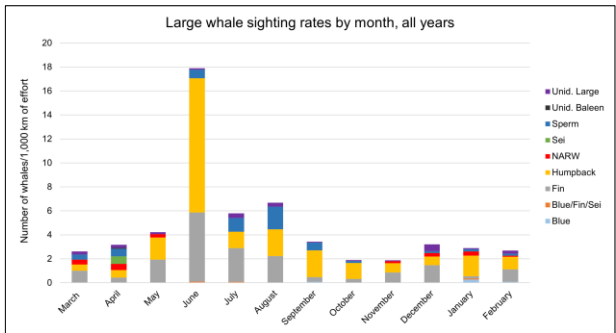
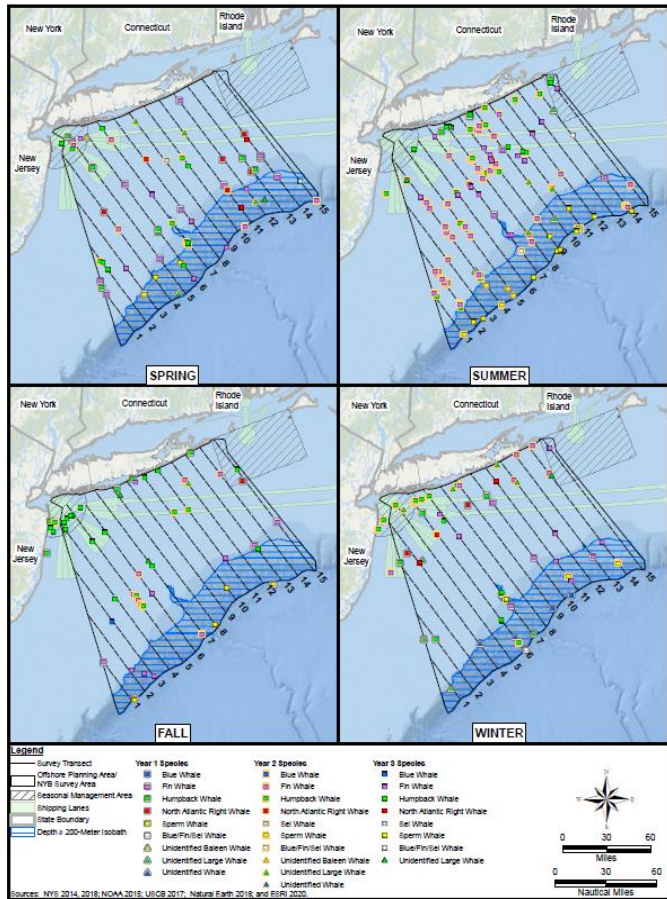


NARW



Sei





Passive Acoustic

NEW YORK STATE Department of Environmental Conservation

Aerial



Feeding Mating?
Socializing Migrating
Nursing Resting



Some Takeaways

The New York Bight provides important habitat for large whales.

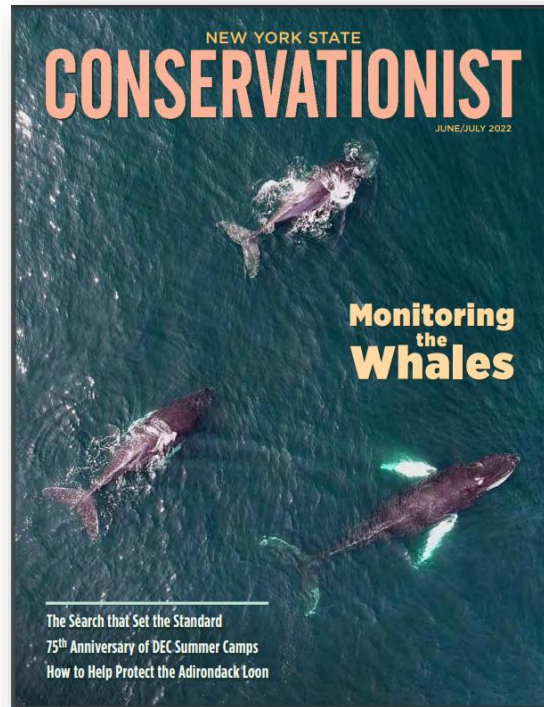
All species

All corners of the NYB

Year-round

But, interannual variation

More “why” research needed

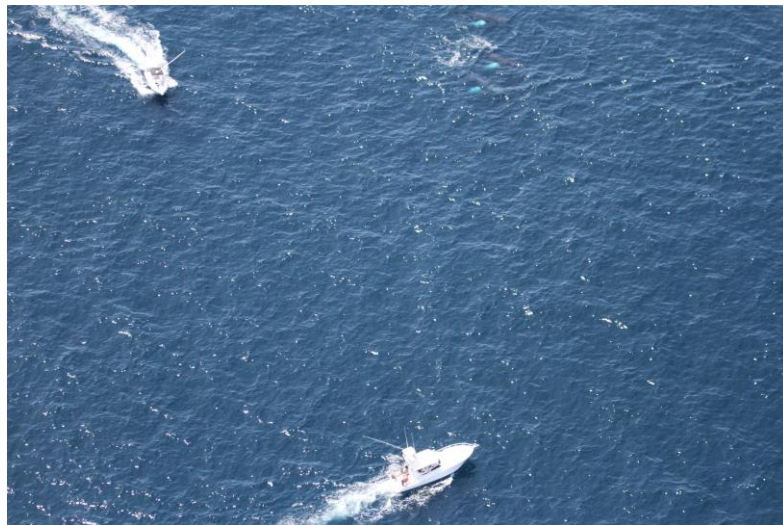


Whale Monitoring Program Publications

- Zoidis, et al. 2021. Distribution and density of six large whale species in the New York Bight from monthly aerial surveys 2017 to 2020. *Continental Shelf Research*.
- Lomac-MacNair, et al. 2022. Fin, Humpback, and Minke whale foraging events in the New York Bight as observed from aerial surveys, 2017-2020. *Aquatic Mammals*.
- Rickard, et al. 2022. Evidence of large whale socio-sexual behavior in the New York Bight. *Aquatic Mammals*.
- Zoidis, et al. *In Press*. Sperm Whale (*Physeter Macrocephalus*) Behaviors, Activities, and Group Formations Previously Unobserved in the New York Bight as Noted from Aerial Surveys 2017–2020.

Next Steps (2024/2025)

- Oceans & Great Lakes Environmental Protection Fund
- \$2.6 million for 3 years
- Continuation of aerial surveys and passive acoustic monitoring



Thank You

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NYSDEC Whale Monitoring Program website:

<https://www.dec.ny.gov/lands/113647.html>

Aerial data:

<https://seamap.env.duke.edu/dataset/2209>

Passive acoustic data:

<https://apps-nefsc.fisheries.noaa.gov/pacm/#/narw>



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