

# Pingers in the Gillnet Fishery Meeting

Cornell Cooperative Extension Marine Program  
March 6, 2026



# Harbor Porpoise Population Summary

Presented by

**Elizabeth Stratton**, Greater Atlantic Regional Fisheries Office

**Dr. Debra Palka**, Northeast Fisheries Science Center



March 6, 2026 1:30 - 1:40 pm



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# Agenda

- Harbor Porpoise Take Reduction Plan Update
- Harbor porpoise population update
- Fishery interaction update



Harbor Porpoise  
Take Reduction  
Plan Update



Harbor porpoise  
population  
update



Fishery  
interaction  
update

# Harbor Porpoise Take Reduction Plan Update

- New in the Plan: amended the minimum allowed twine diameter from 0.9mm to 0.81mm in the Mid-Atlantic Management Area
- On hold: proposed rule to amend the language of the Plan to create a research exception, exploring a different process
- Planning for an update/monitoring meeting in late fall or early winter 2026
- (Previous meeting was June 2024)



# Harbor Porpoise Population Update



2021  
(published SAR) 2023

$N_{Best}$  = 85,765 85,765

PBR = 649 649

ZMRG = 65 65

Annual bycatch (CV) = 126 (0.18) 61 (0.19)

5-yr rolling bycatch (CV) = 145 (0.18) 136 (0.09)

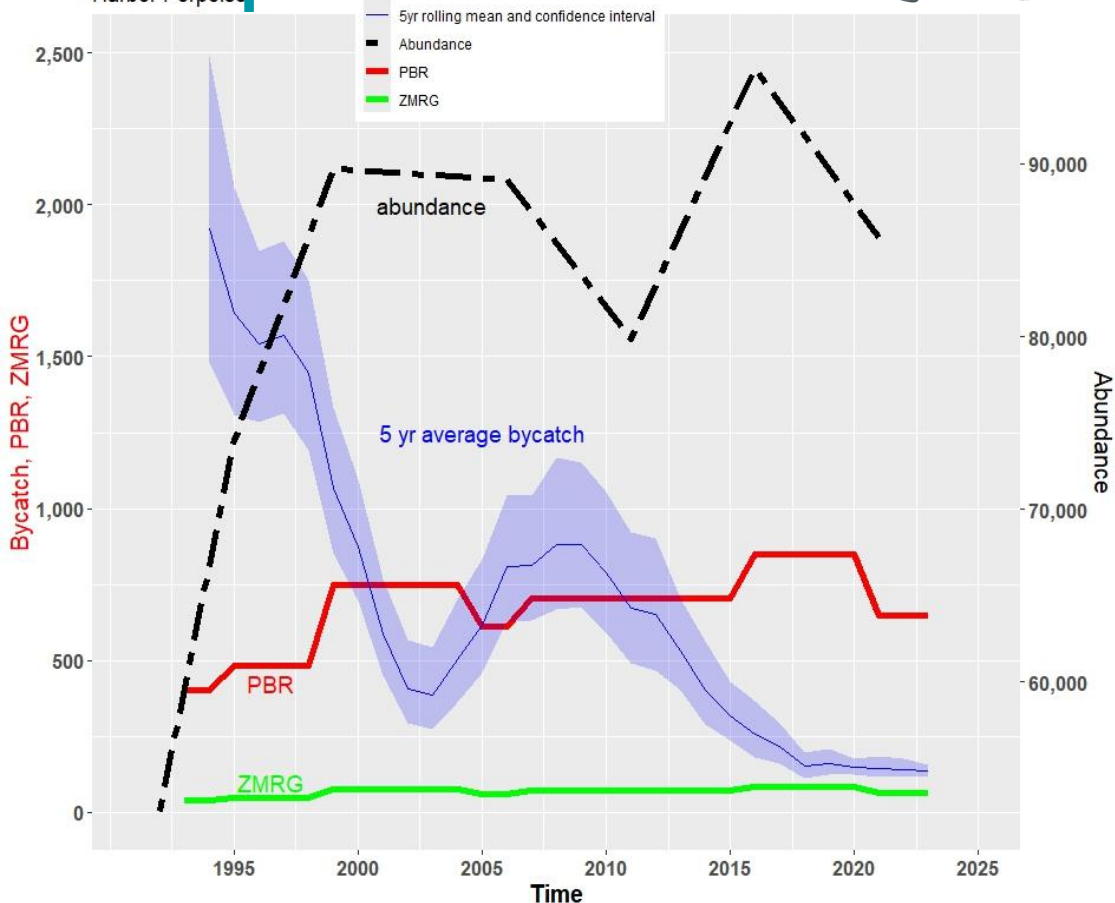
## Conclusion:



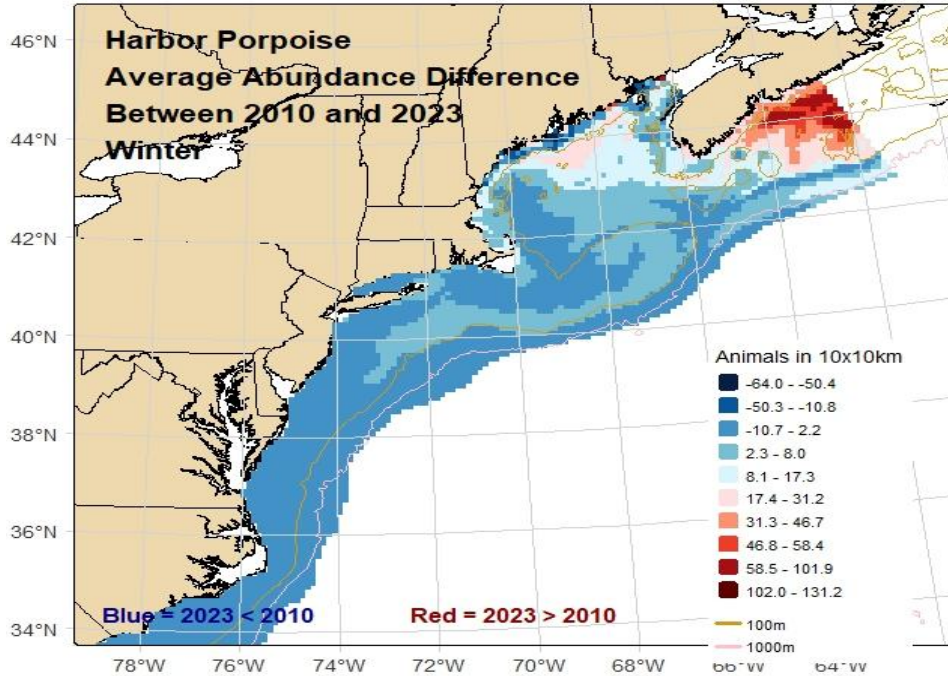
Population is not-strategic  
(bycatch < PBR)



Population is above ZMRG



# Investigating Spatiotemporal Shifts



Used density-habitat generalized additive models of 2010 - 2023 year round line transect abundance data

Recently, abundance in US waters:

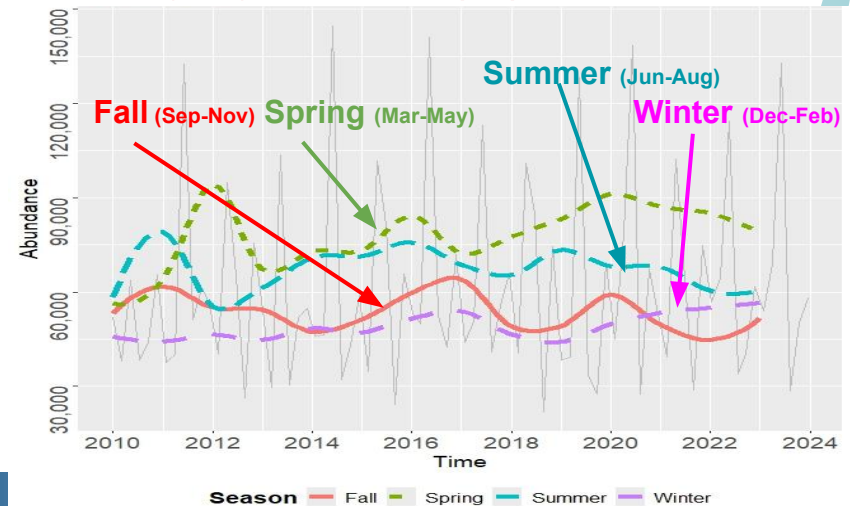
- Increased in fall and winter (Sep - Feb)
- Decreased in spring and summer (Mar - Aug)

2023 compared to 2010 during Winter (Jan - May):

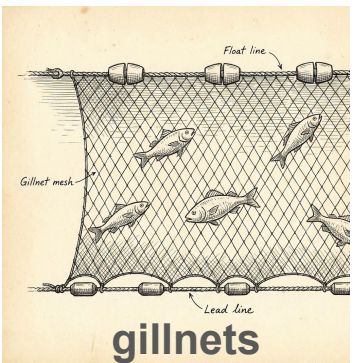
- (Blue) Fewer harbor porpoises south of New Hampshire
- (Red) More harbor porpoises off Nova Scotia

## Significant Habitat Covariates

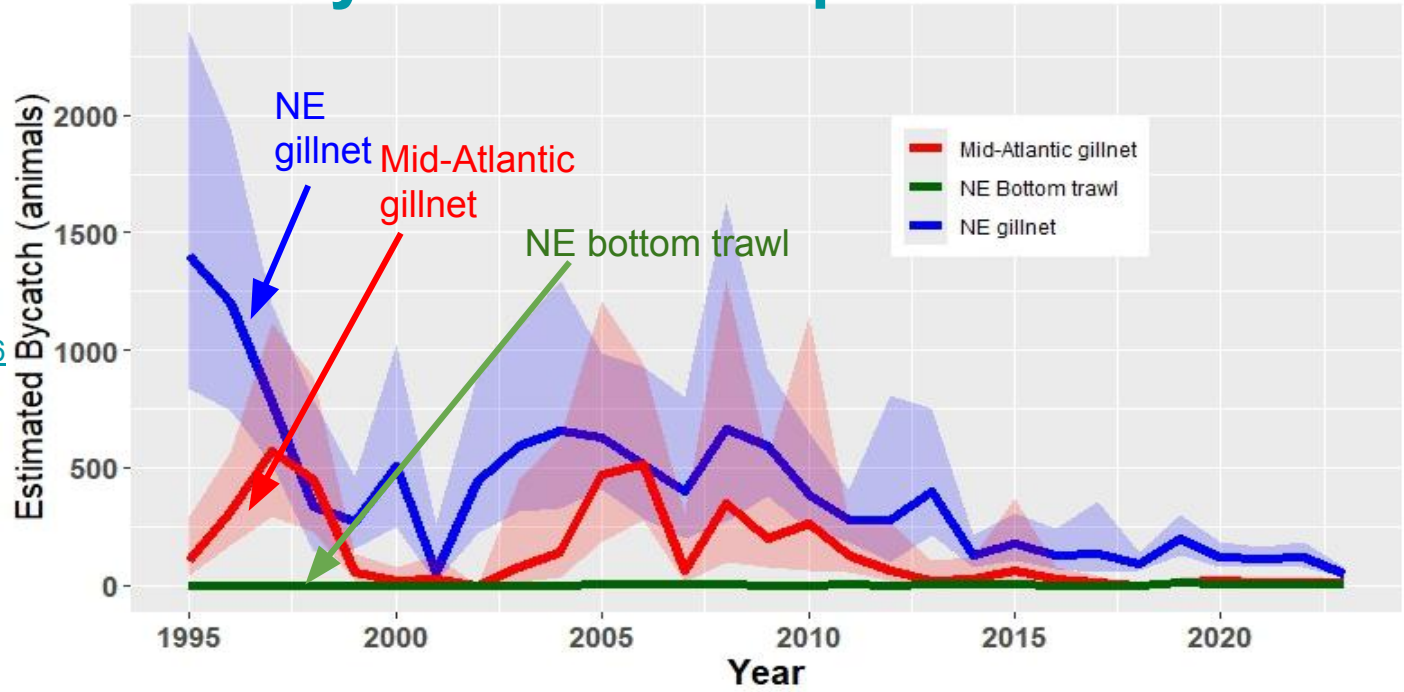
Sea surface temperature	Bottom temperature
Mixed layer thickness	Distance to 200 and 1000m isobaths
Bottom temperature	Latitude
Distance to S wall of Gulf Stream	



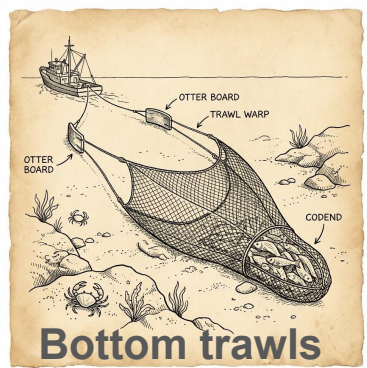
# Fishery Interaction Update



Precoda (2025) 2023 estimates  
<https://doi.org/10.25923/p3qz-az96>



**Conclusion:** Harbor porpoises, bycaught in gillnets and bottom trawls, have been decreasing in recent years



Precoda & Lyssikatos (2025)  
2023 estimates  
<https://doi.org/10.25923/xdk1-me07>





# Seal Research Summary

*Ellie Heywood, Protected Species Division,  
Conservation Ecology Branch*

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**All seal photos in this presentation collected under  
MMPA Permit #26939 issued to NMFS NEFSC**



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# agenda

- stock assessments
- seal & gillnet fishery interactions
- movement and dive behavior



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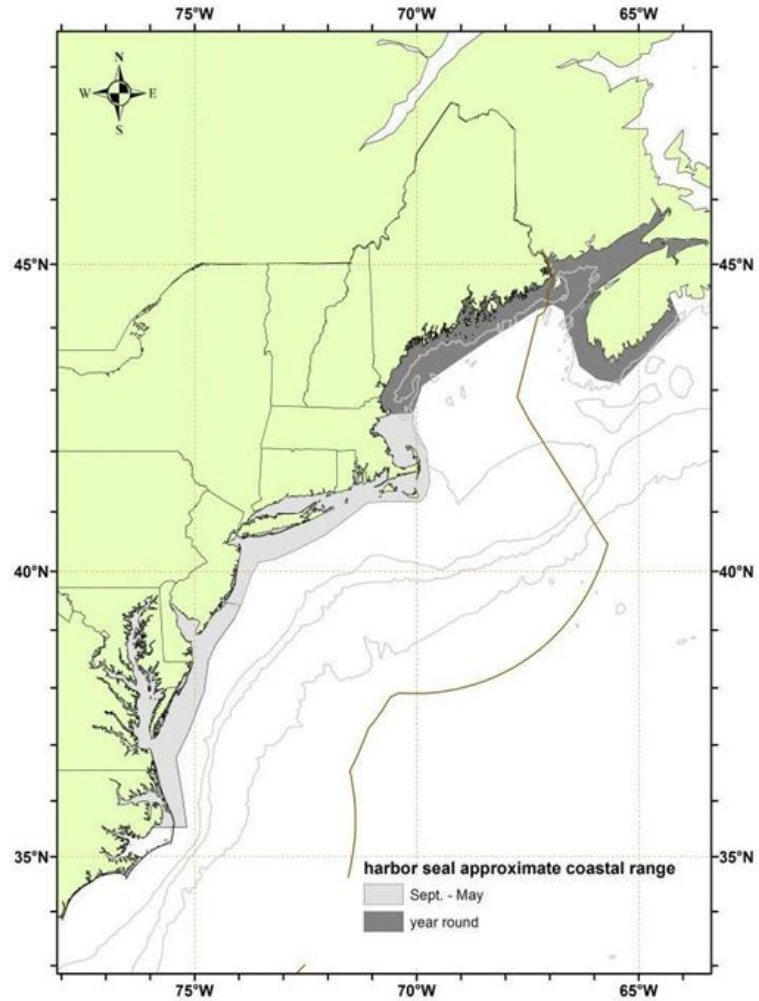
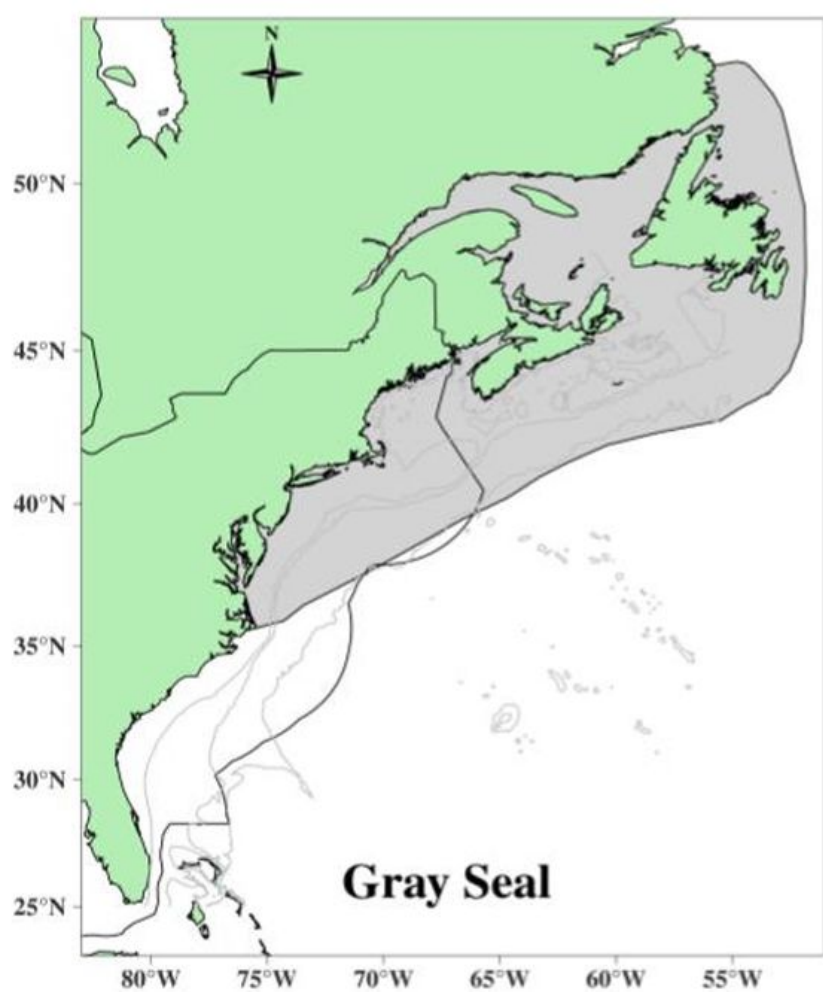
An aerial photograph showing a large colony of seals, likely California seals, resting on a sandy beach. The seals are densely packed in some areas and more spread out in others. The ocean waves are visible on the left side of the frame. The text "stock assessment updates" is overlaid in a large, light-colored font at the top of the image.

# stock assessment updates

2025-2026 aerial survey work



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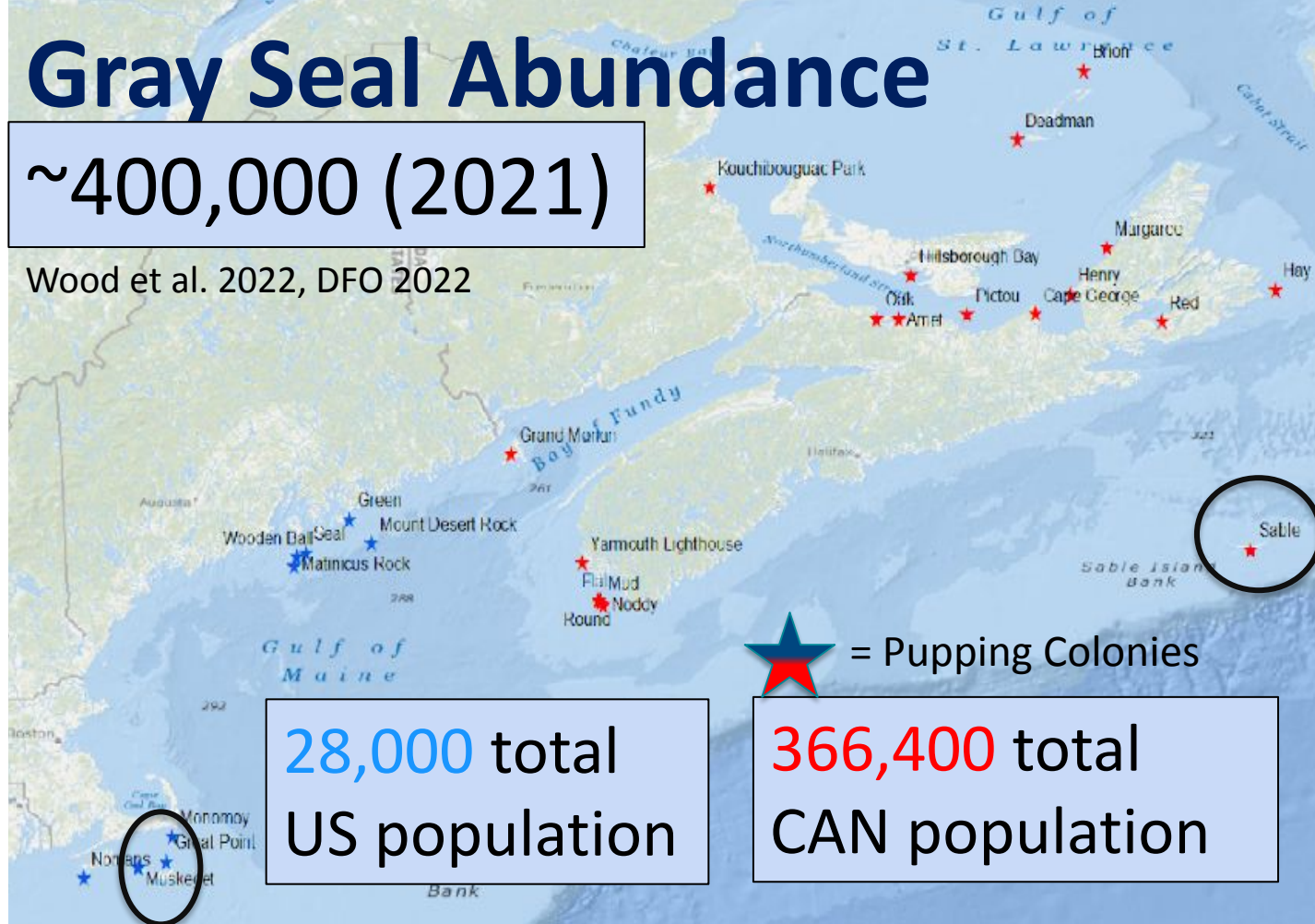


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# Gray Seal Abundance

~400,000 (2021)

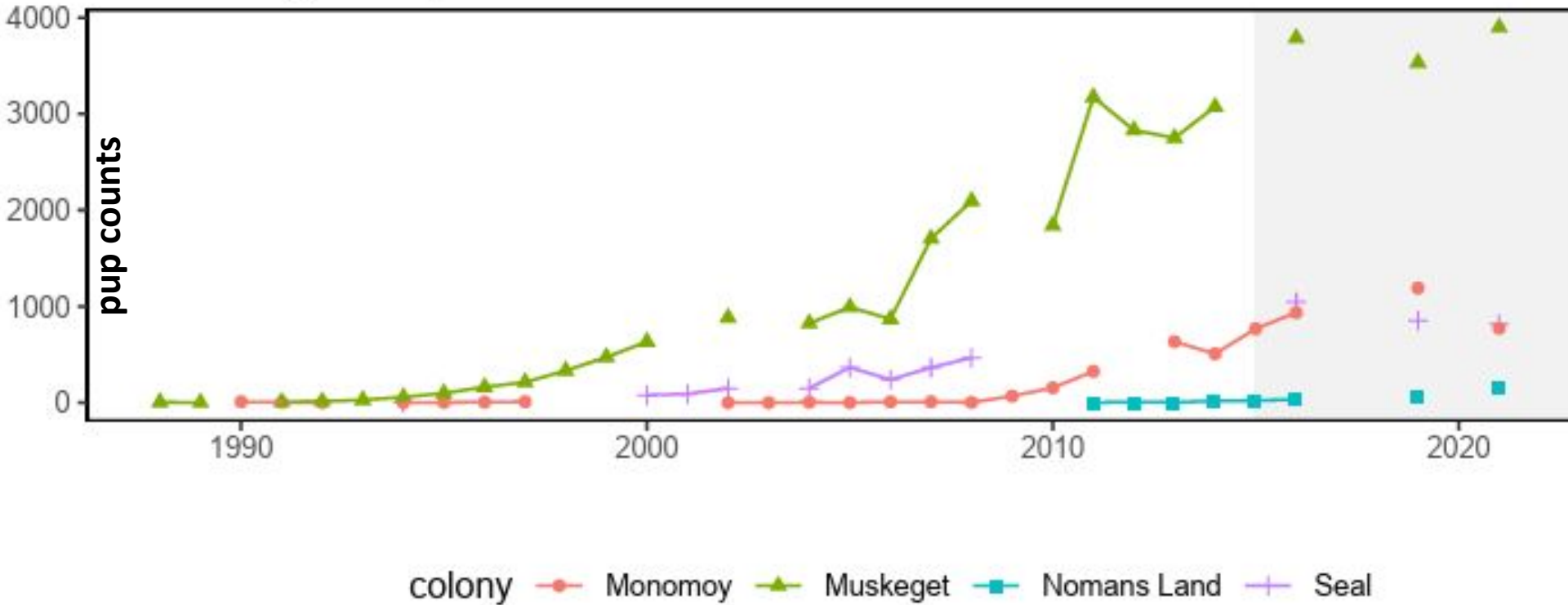
Wood et al. 2022, DFO 2022



28,000 total  
US population

★ = Pupping Colonies  
366,400 total  
CAN population

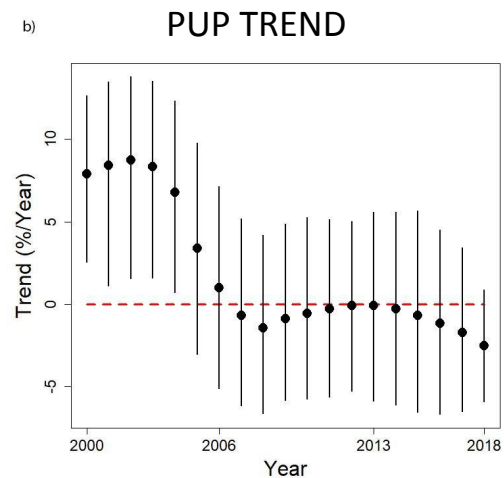
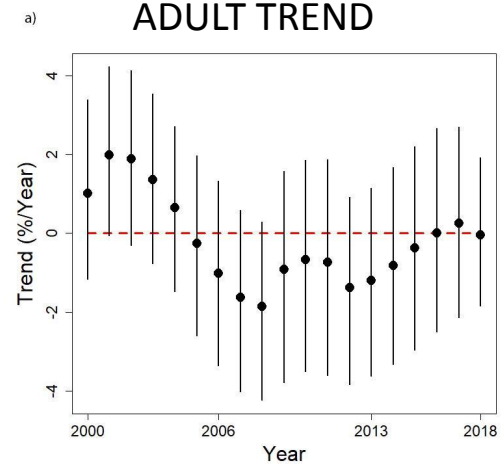
# grey seal pup counts at 4 largest colonies



# Harbor Seals

## current estimate (2018): ~61,000

Sigourney et al. 2021, *Marine Mammal Science*



# stock assessment reports

Species	Year	Area	Abundance Estimate <sup>a</sup>	Potential Biological Removal
Grey seal	2021	U.S. Colonies	27,911 <sup>bc</sup>	1,512
Harbor seal	2018	Maine coast	61,336	1,729

a. model-based estimates derived from pup surveys.

b. abundance estimate derived from total population size to pup ratios in Canada, applied to U.S. pup counts.

c. total grey seal population estimate including Canadian Maritime colonies ~400,000





# Harbor Seal Pupping Aerial Survey (2025)

## SURVEY SCOPE



10 survey days: 13-27 May



Pupping sites in coastal New Hampshire and Maine

## METHODOLOGY



Twin otter aircraft



Oblique shots through observer window with zoom lenses

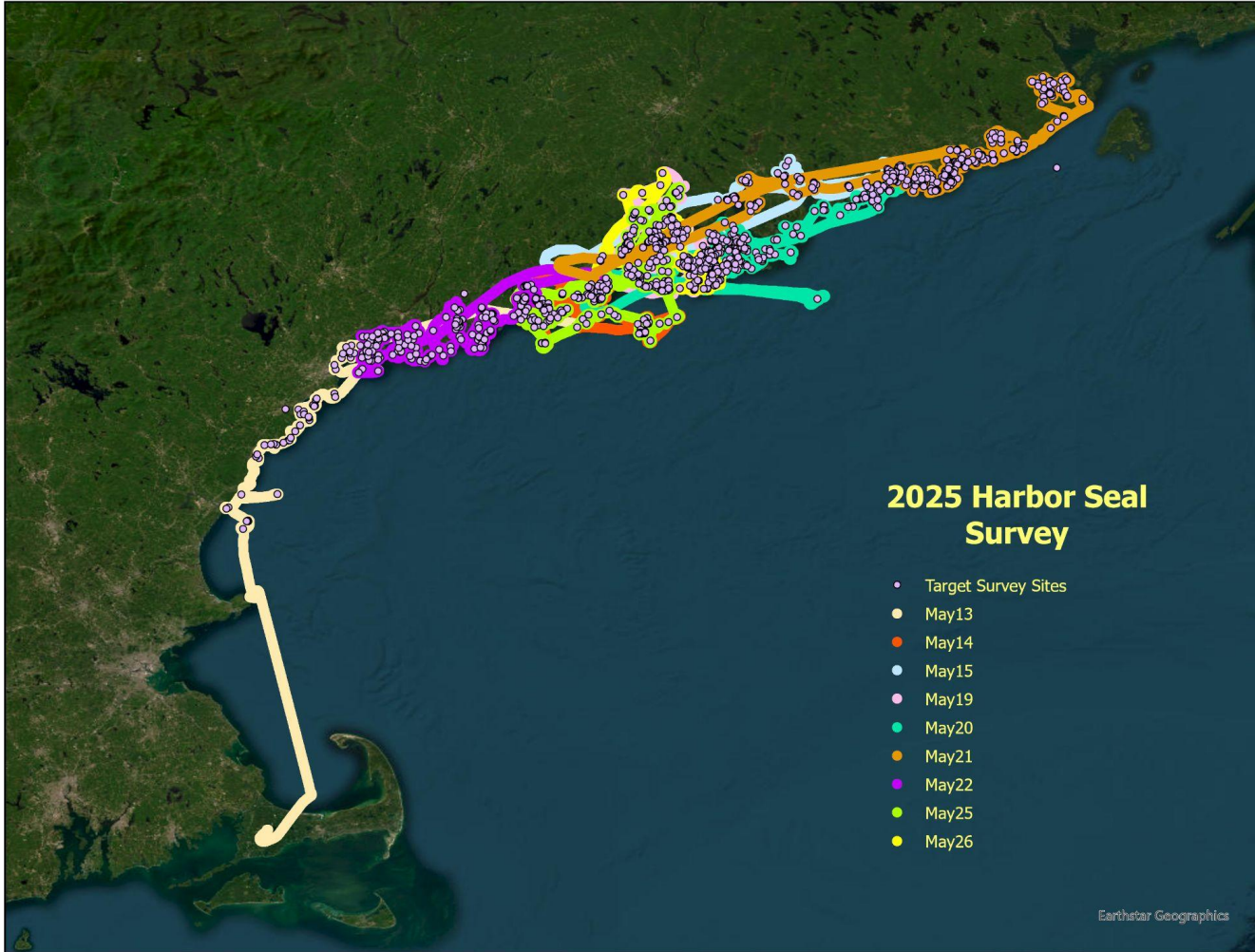
## STATUS



Analysts conducting counts



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# Grey Seal Pupping Aerial Survey (2026)

## SURVEY SCOPE



2 survey days: January 5th & 8th



Comprehensive coverage of pupping colonies between New York and Maine

## METHODOLOGY



Twin otter aircraft



Belly-mounted camera system with color, infrared, and ultra-violet lenses

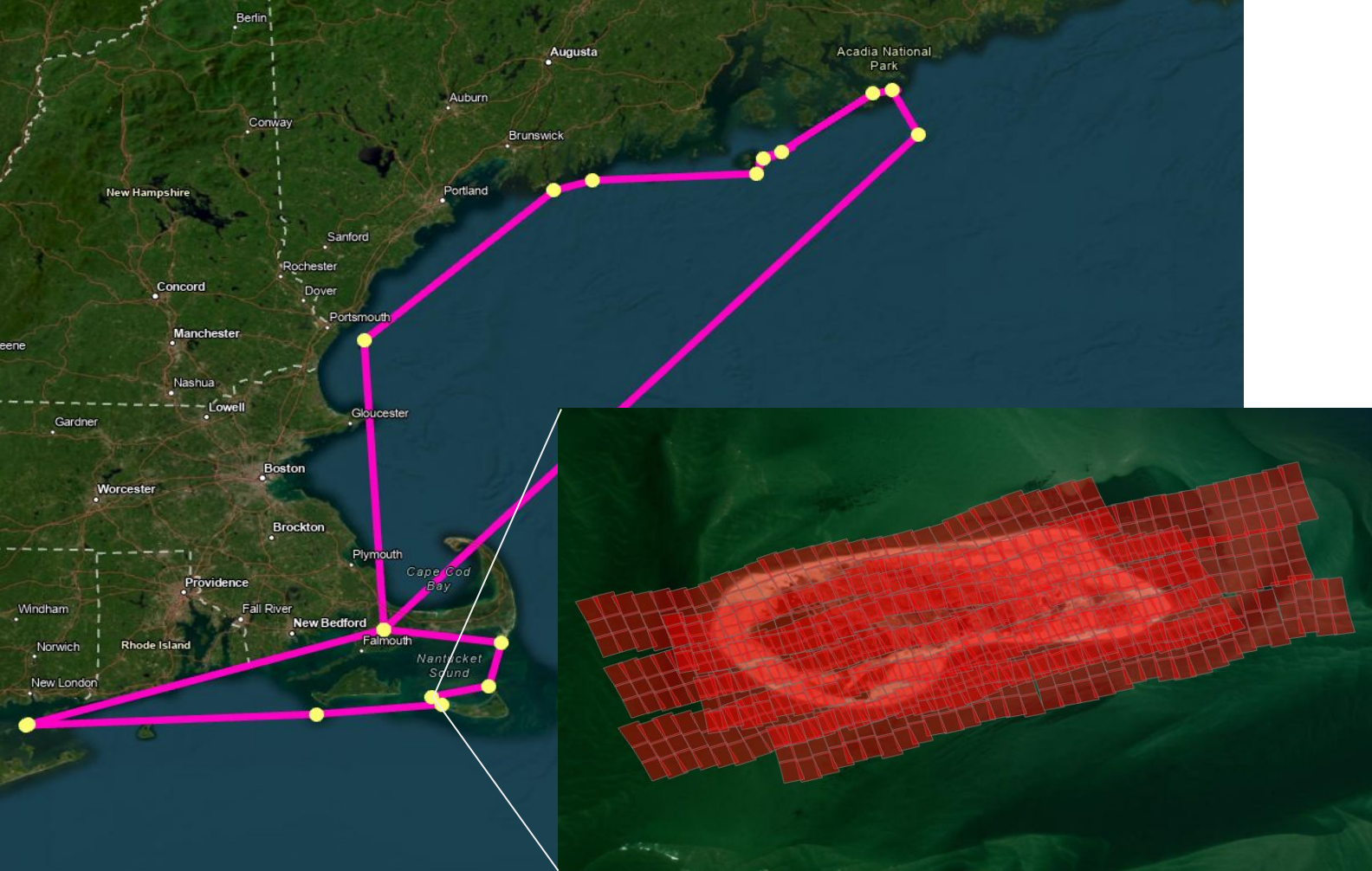
## STATUS



Analysts conducting counts



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# gillnet fishery interactions

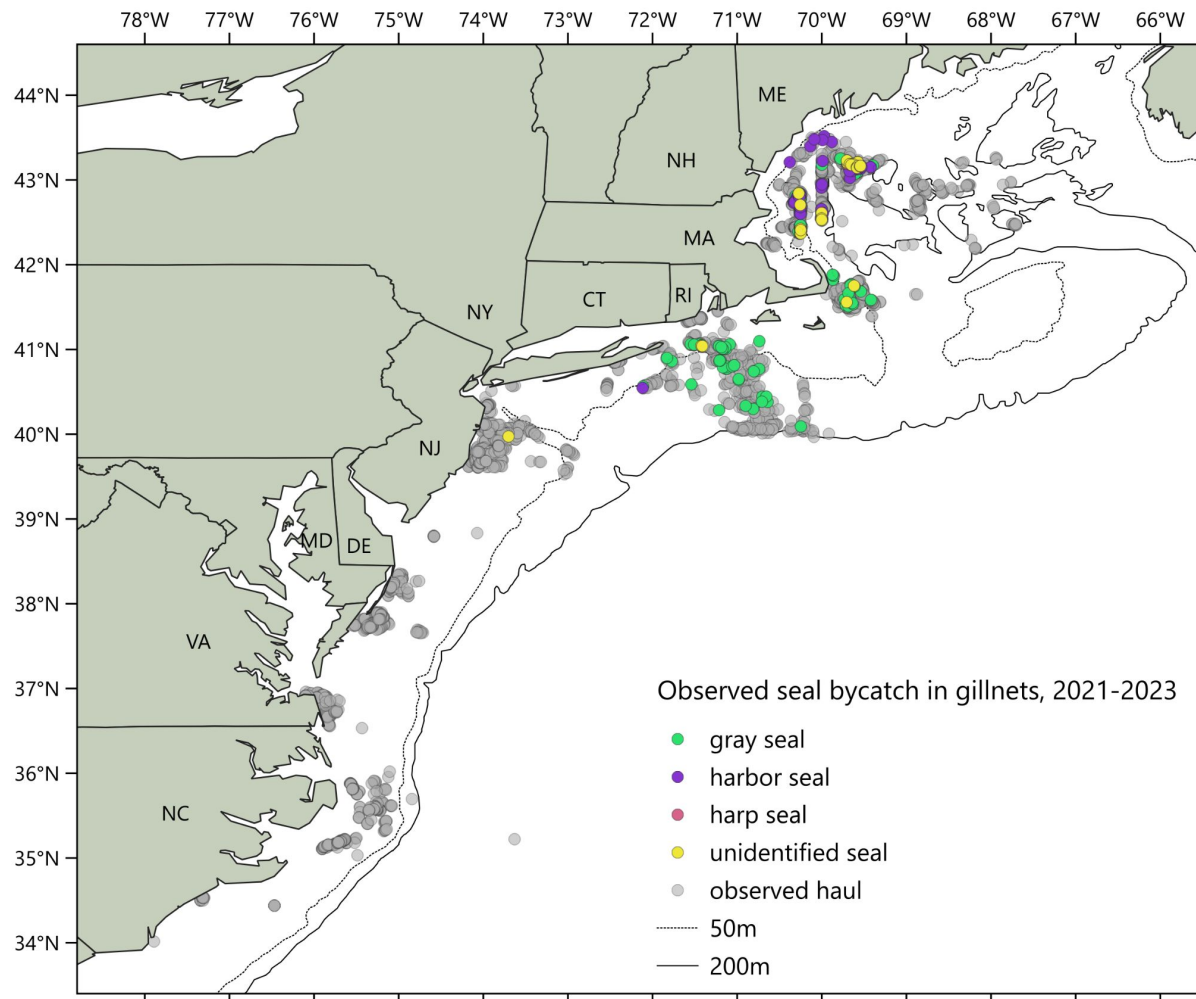
New England and mid-Atlantic waters

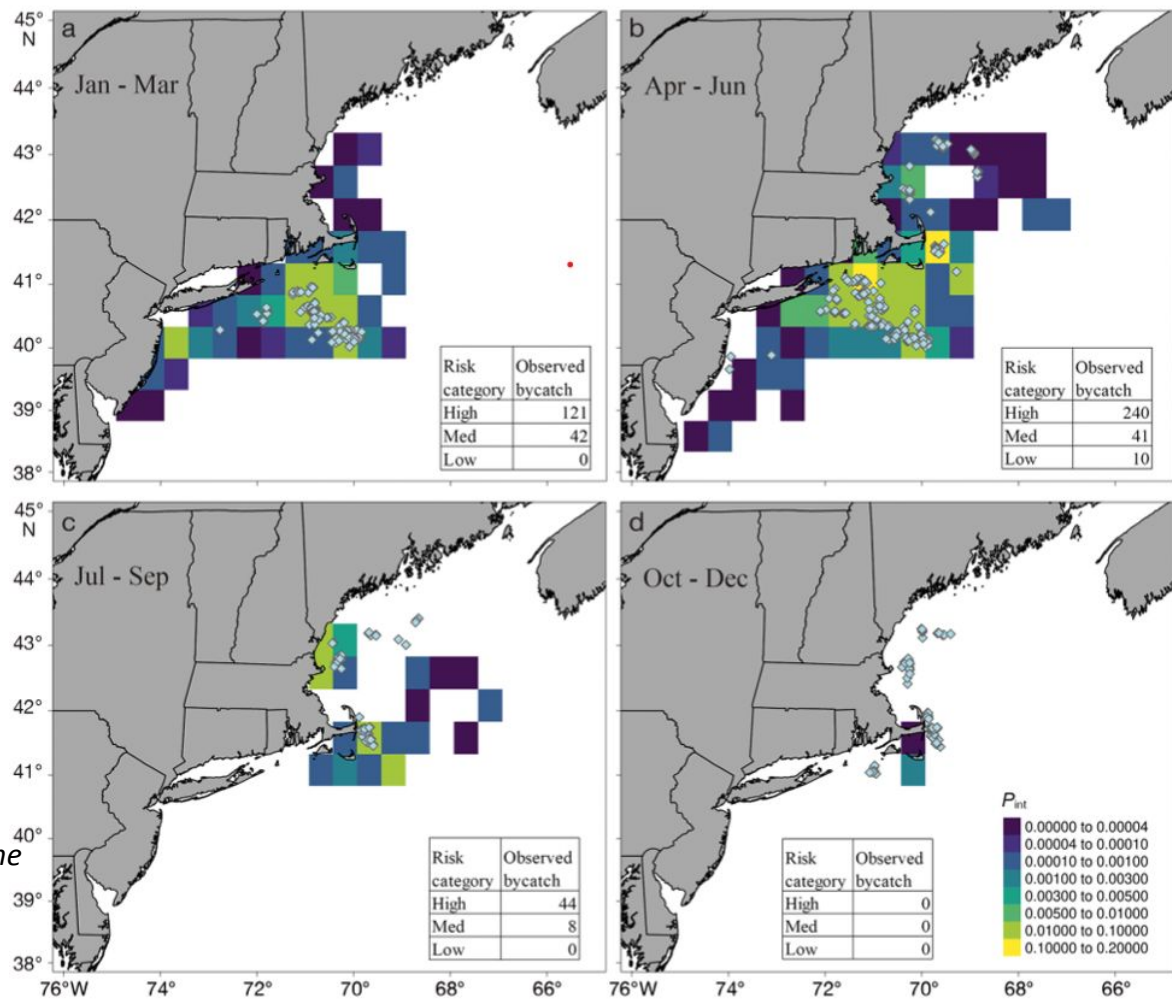


Image of underwater gillnet courtesy of collaborative research led by Dr. Dre Bogomolni!



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Murray et al., 2021 *Marine Ecology Progress Series*



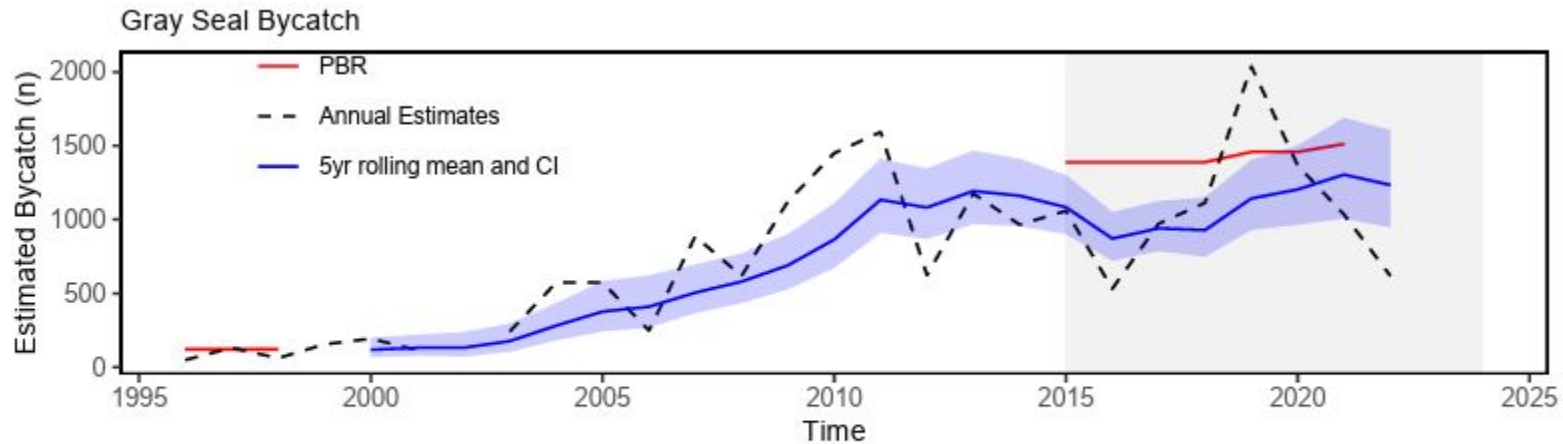


Figure 26: Gray Seal average bycatch estimate for gillnet fisheries (blue) and the potential biological removal (red).

**Grey seals:** not threatened or endangered (ESA), non-strategic (MMPA), 2017-2021 average annual human-caused serious injury and mortality **does not exceed PBR**. Total fishery-related M/SI >10% of PBR so bycatch is **not considered insignificant under zero mortality rate goal**.

**Harbor seals:** not threatened or endangered (ESA), non-strategic (MMPA), 2015-2019 average annual human-caused serious injury and mortality **does not exceed PBR**. Total fishery-related M/SI >10% of PBR so bycatch is **not considered insignificant under zero mortality rate goal**.



Photo credit: Milton Levin



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# movement and dive behavior

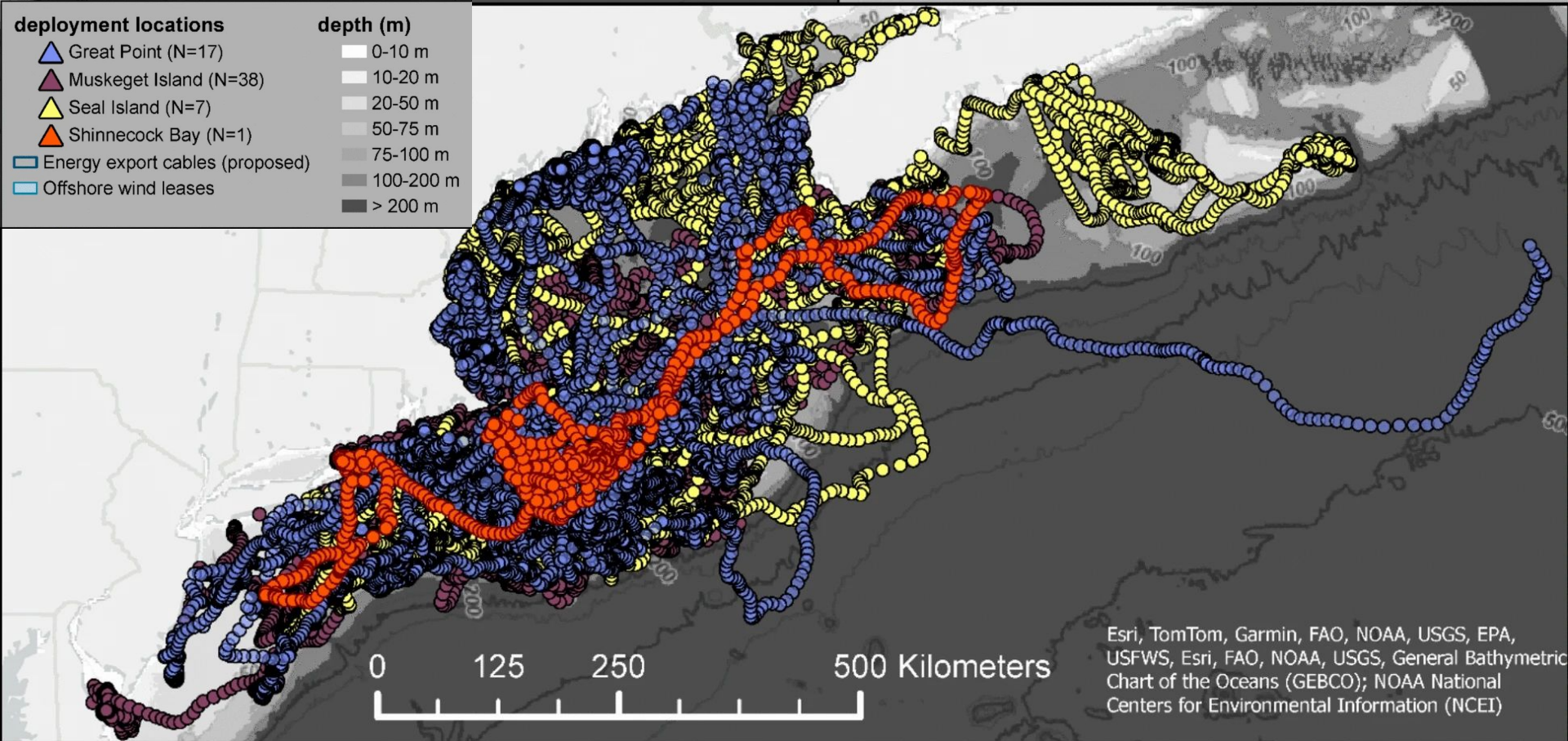
## grey seal pups



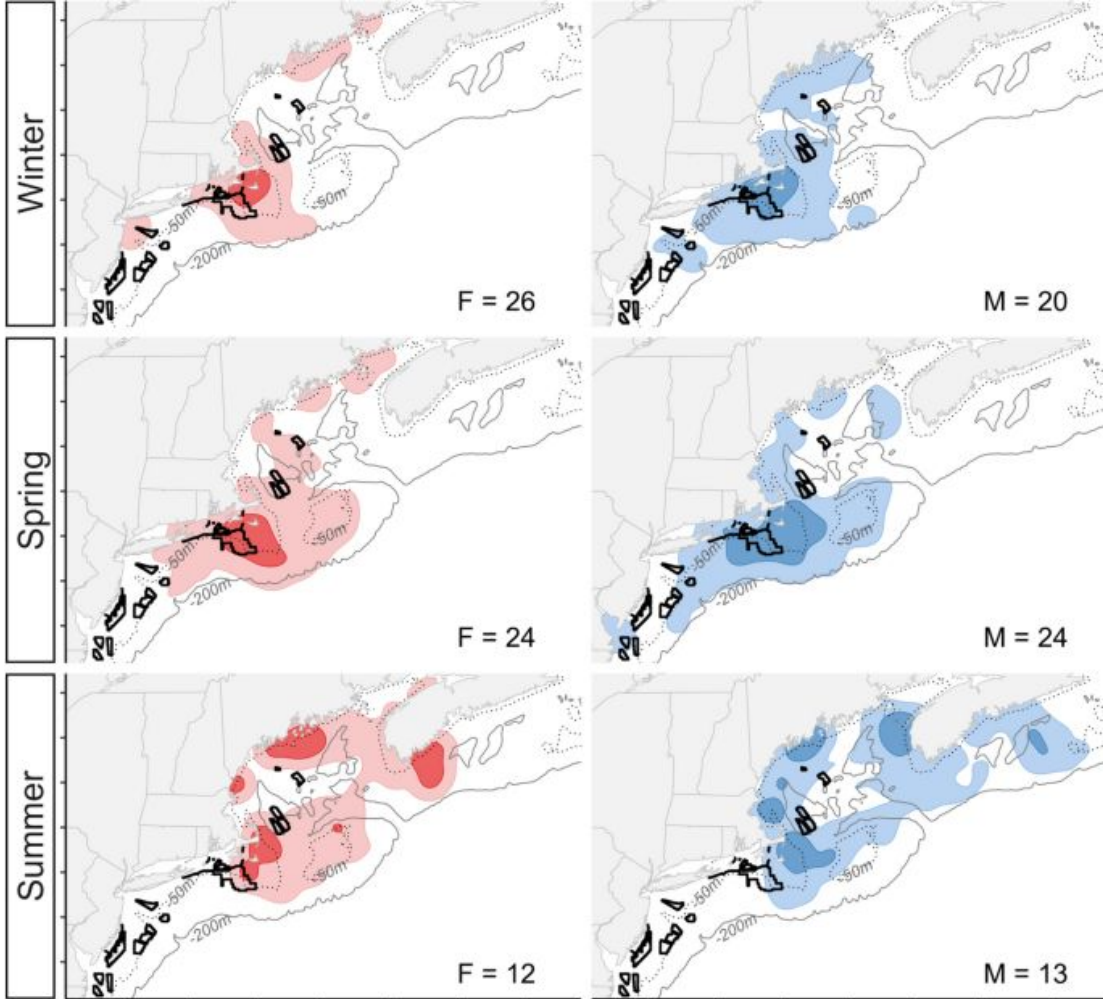
Photo credit: Milton Levin



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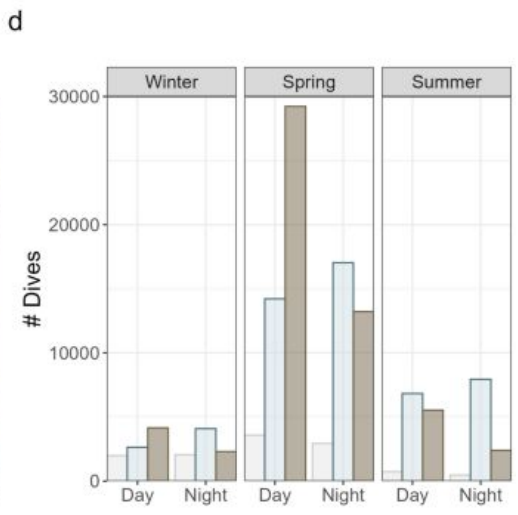
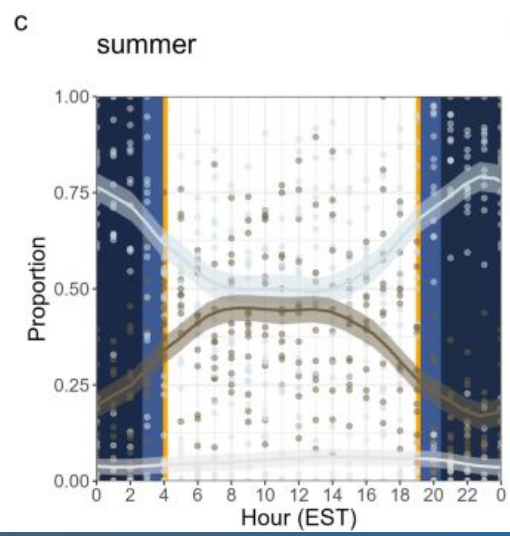
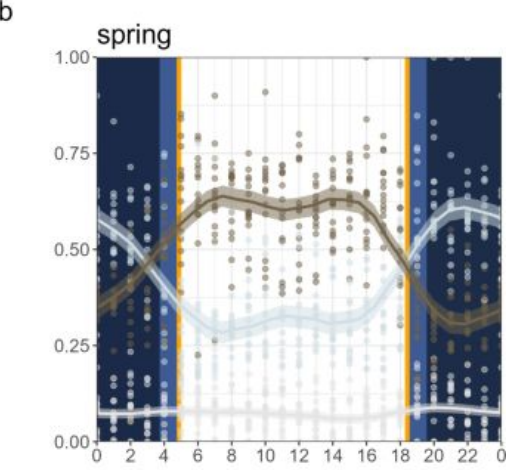
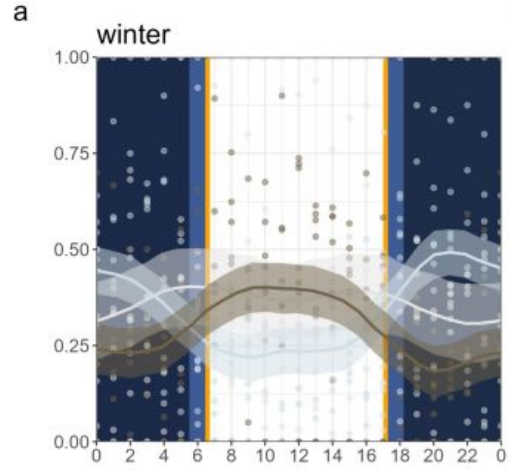
Heywood et al., 2025 *Animal Biotelemetry*

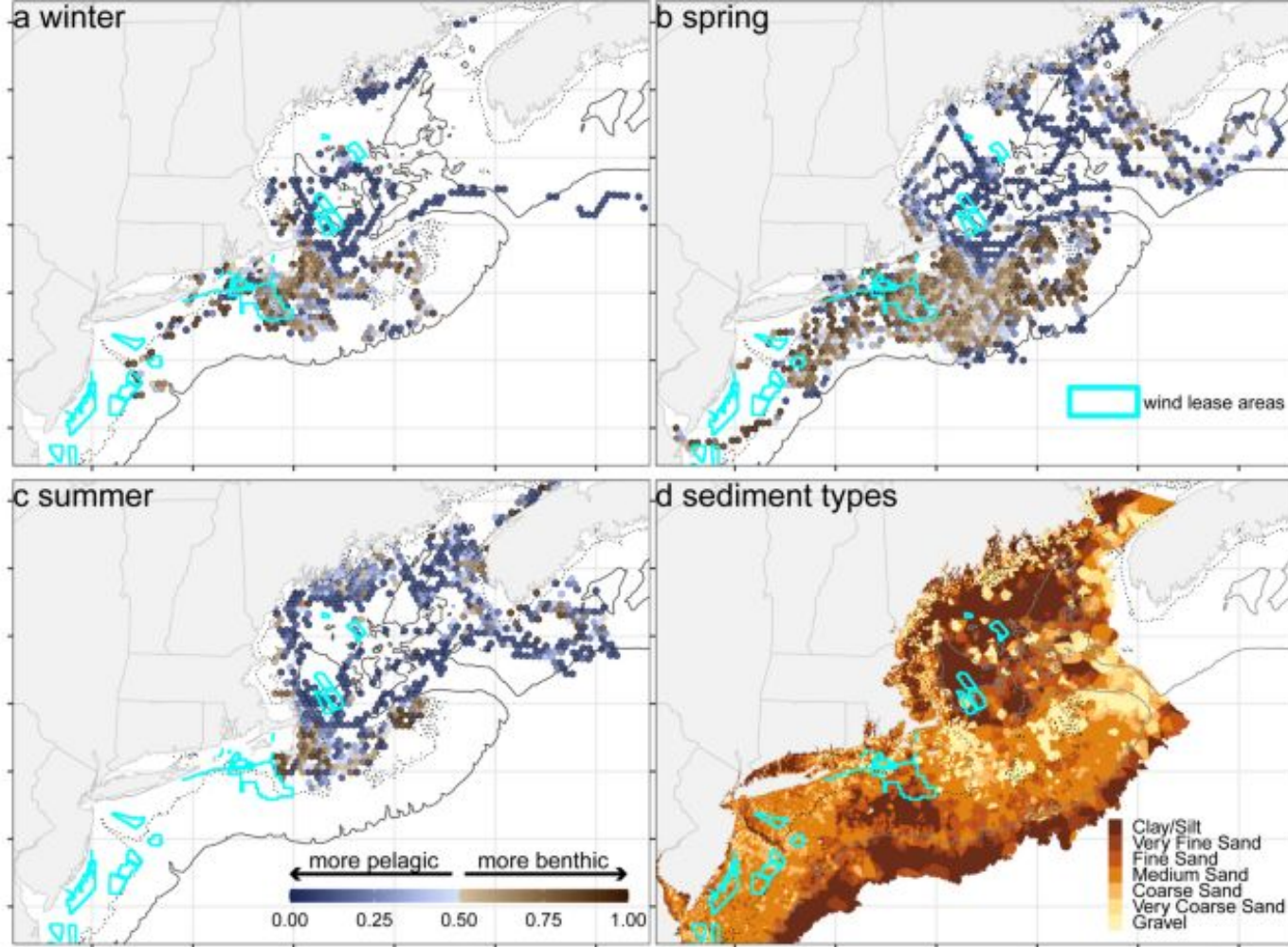


Heywood et al., 2025  
*Animal Biotelemetry*



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Heywood et al., 2025  
*Animal Biotelemetry*



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# estimated seal bycatch in gillnets

