



NOAA
FISHERIES

2026 Acoustic-trawl survey of eastern Bering Sea shelf walleye pollock: preliminary results



Abigail McCarthy
and MACE Program

May 28 – August 10
NOAA Ship *Oscar Dyson*

Acoustic-trawl survey operations

4755 nmi of transects (additional 930 nmi in Northern Extension Transects)

Survey ~17 hrs/day (Sunrise to Sunset)

Abundance estimates use 38 kHz

- 16 m below surface to 0.5 m above seafloor

High backscatter “targeted” hauls

Fish lab sampling

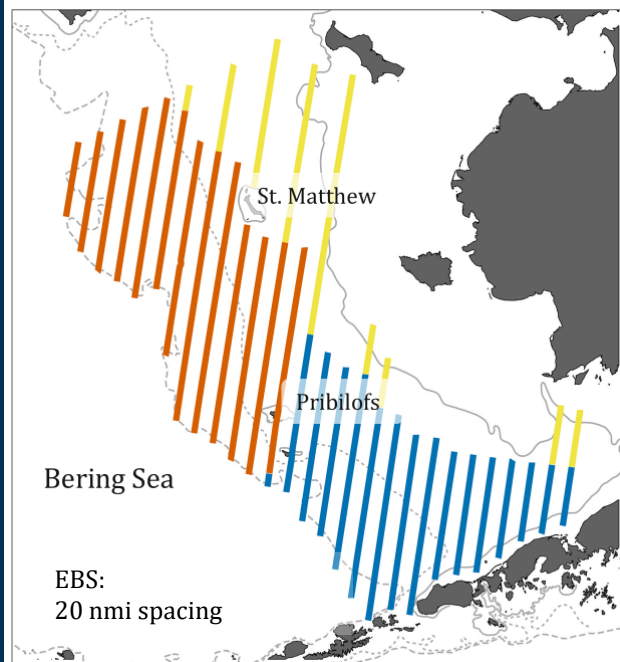
- Length, weight, maturity/histology, otoliths (for ages) from pollock
- Length & weight of other species

Special Studies

Advanced technology sampling

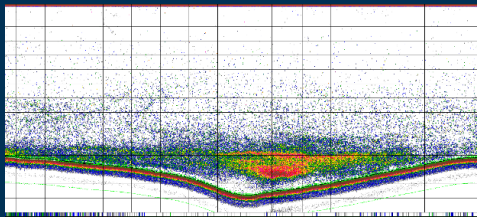
Physical oceanographic data

- Temp profile at CTD locations
- Continuous SST from ship's flow-through system



Acoustic-trawl survey methods

Acoustic data
collection along
parallel transects



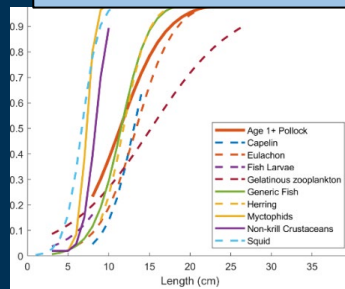
+

Targeted trawls and
fish sampling
(species and length
composition)



→

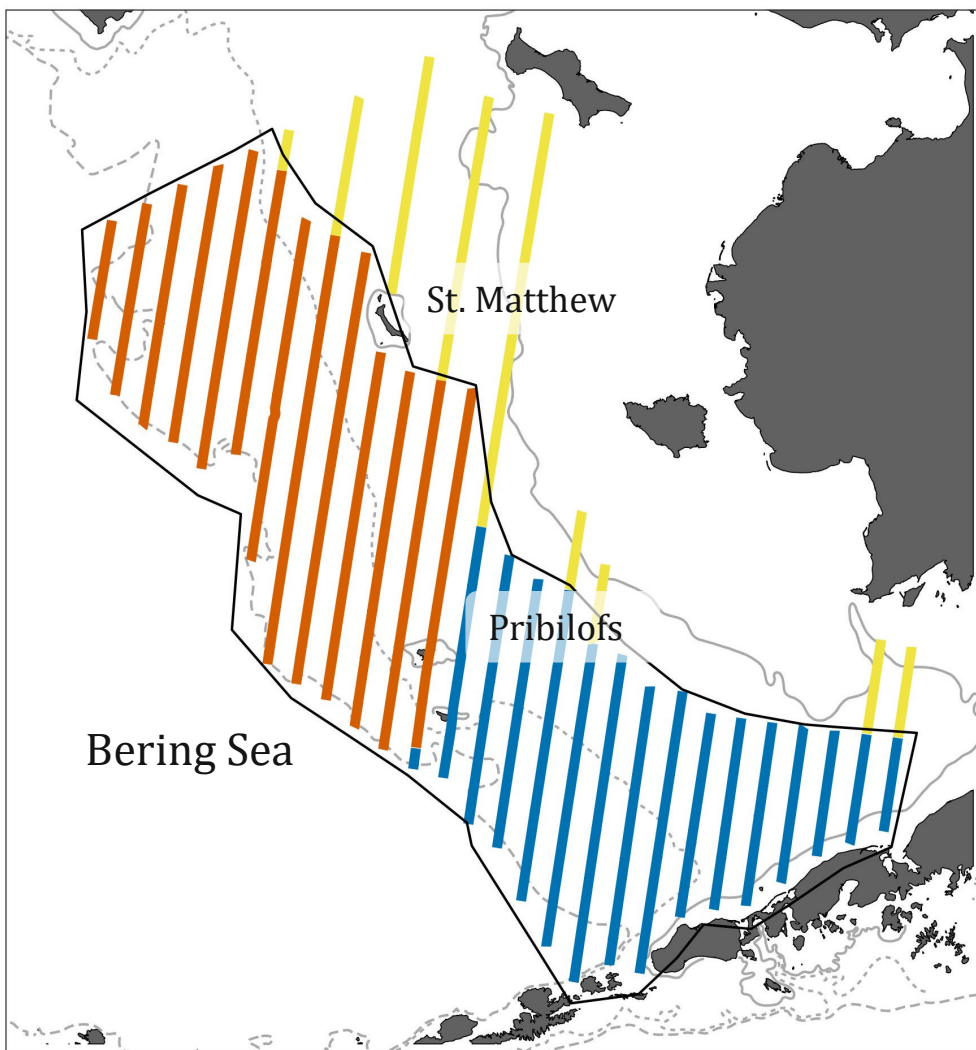
Net Selectivity
(escapement
correction)



→

=

Survey estimate

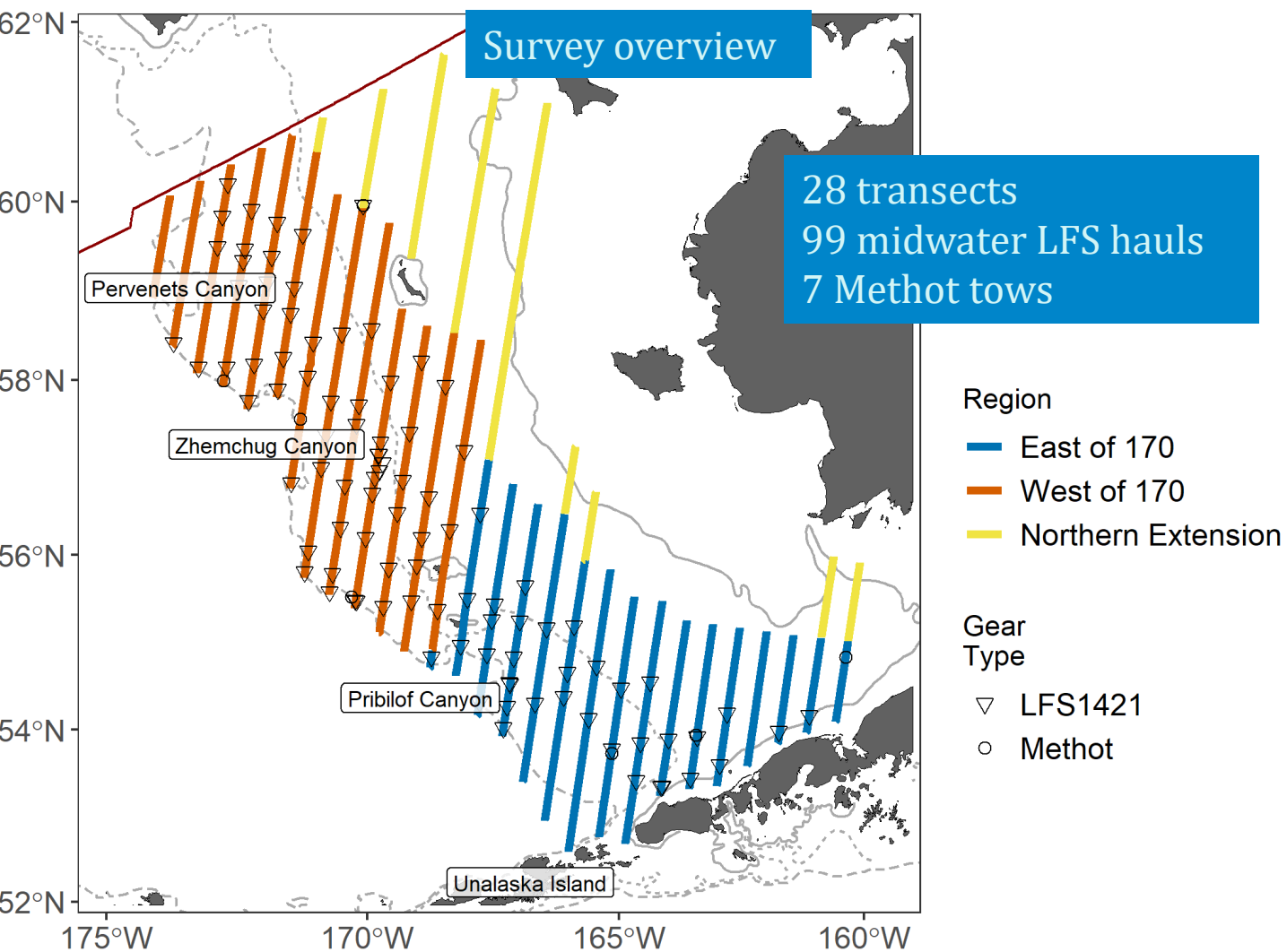


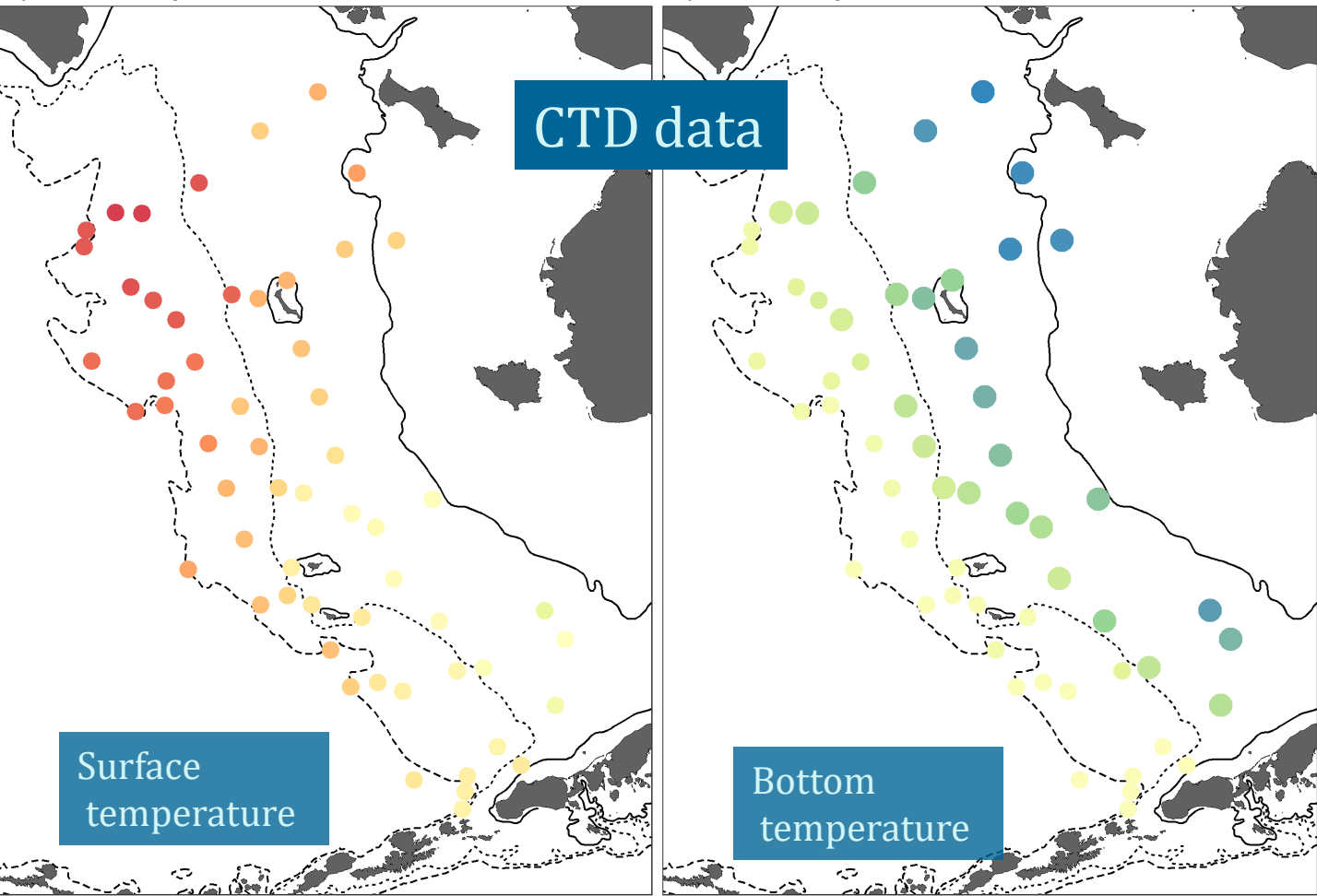
Region

- East of 170
- West of 170
- Northern Extension

Depth (m)

- 50
- 100
- 200





CTD data

Surface
temperature

Bottom
temperature

Temperature (°C)

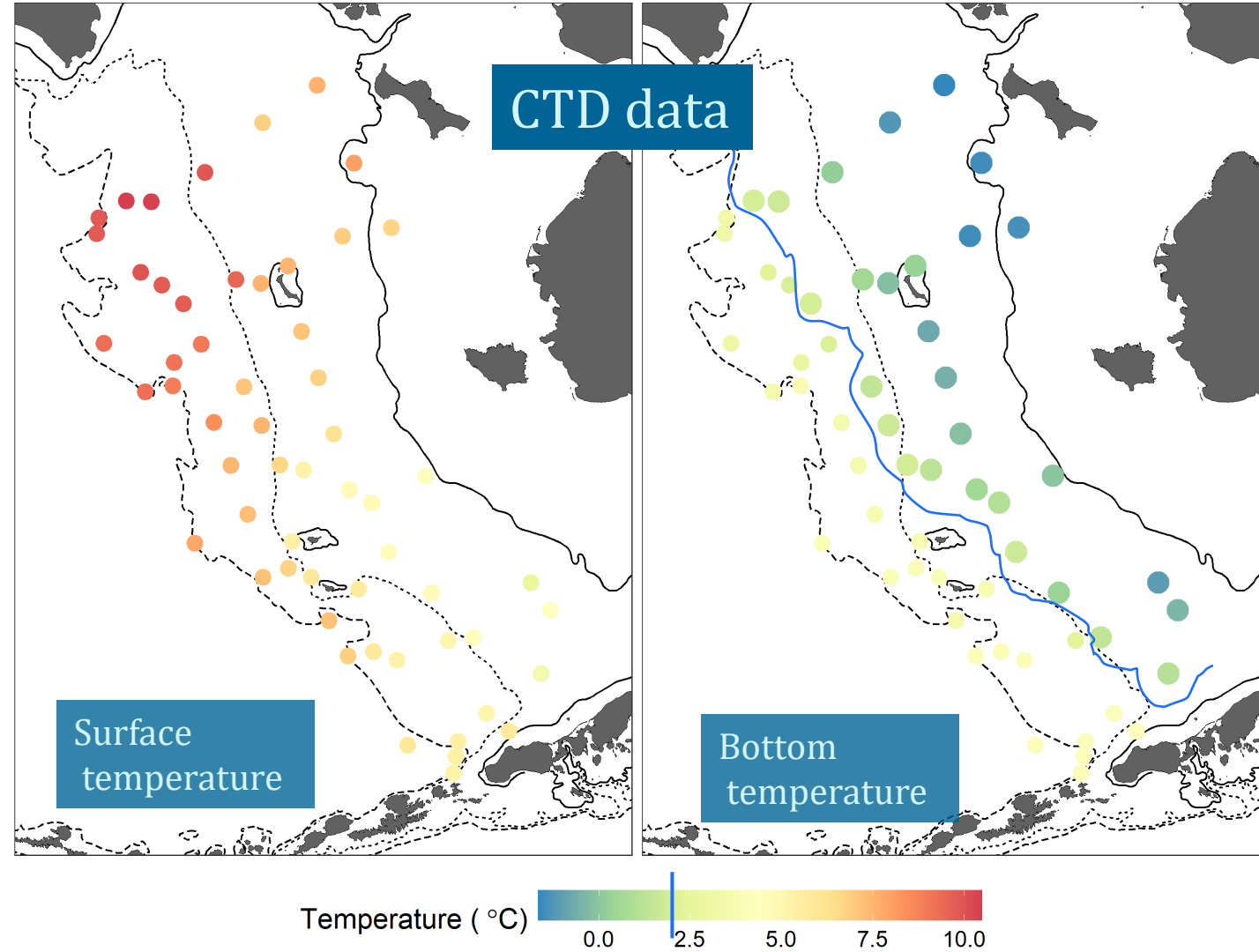
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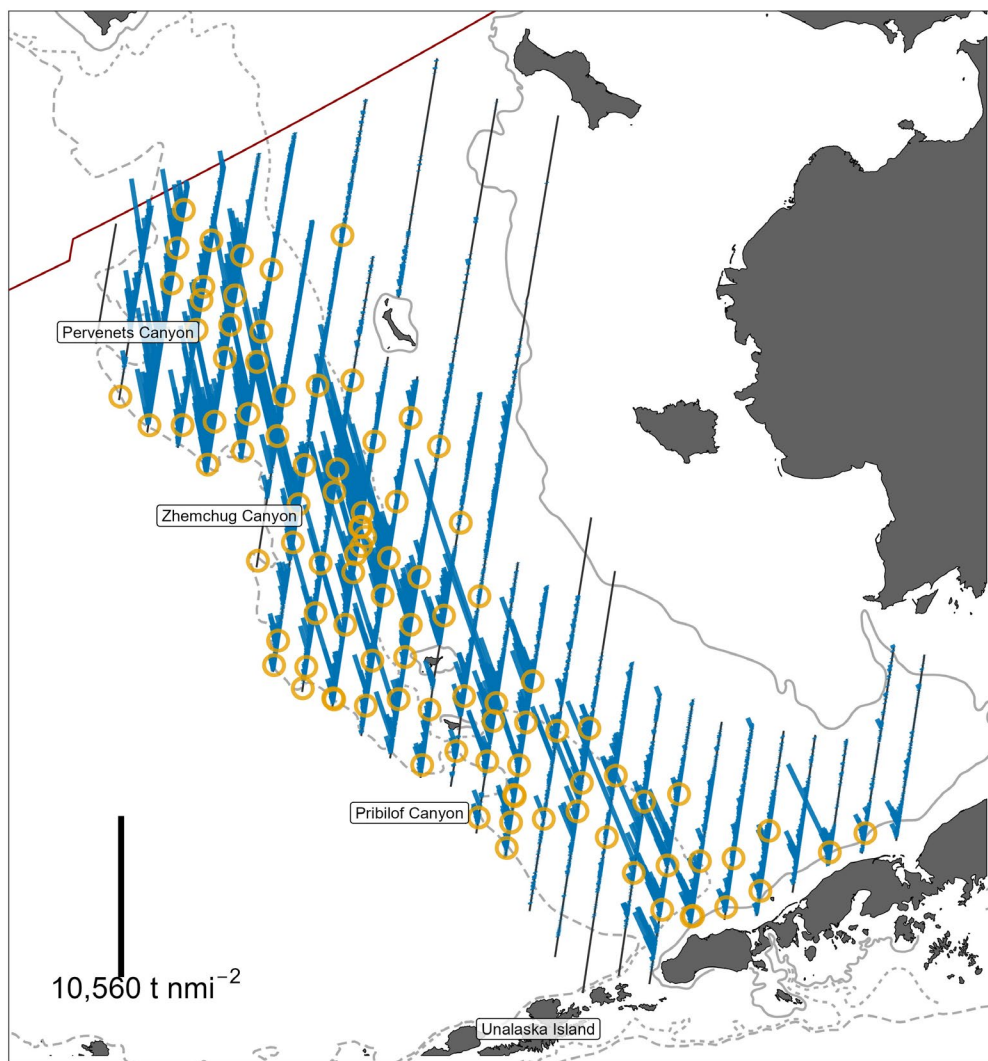
2.5

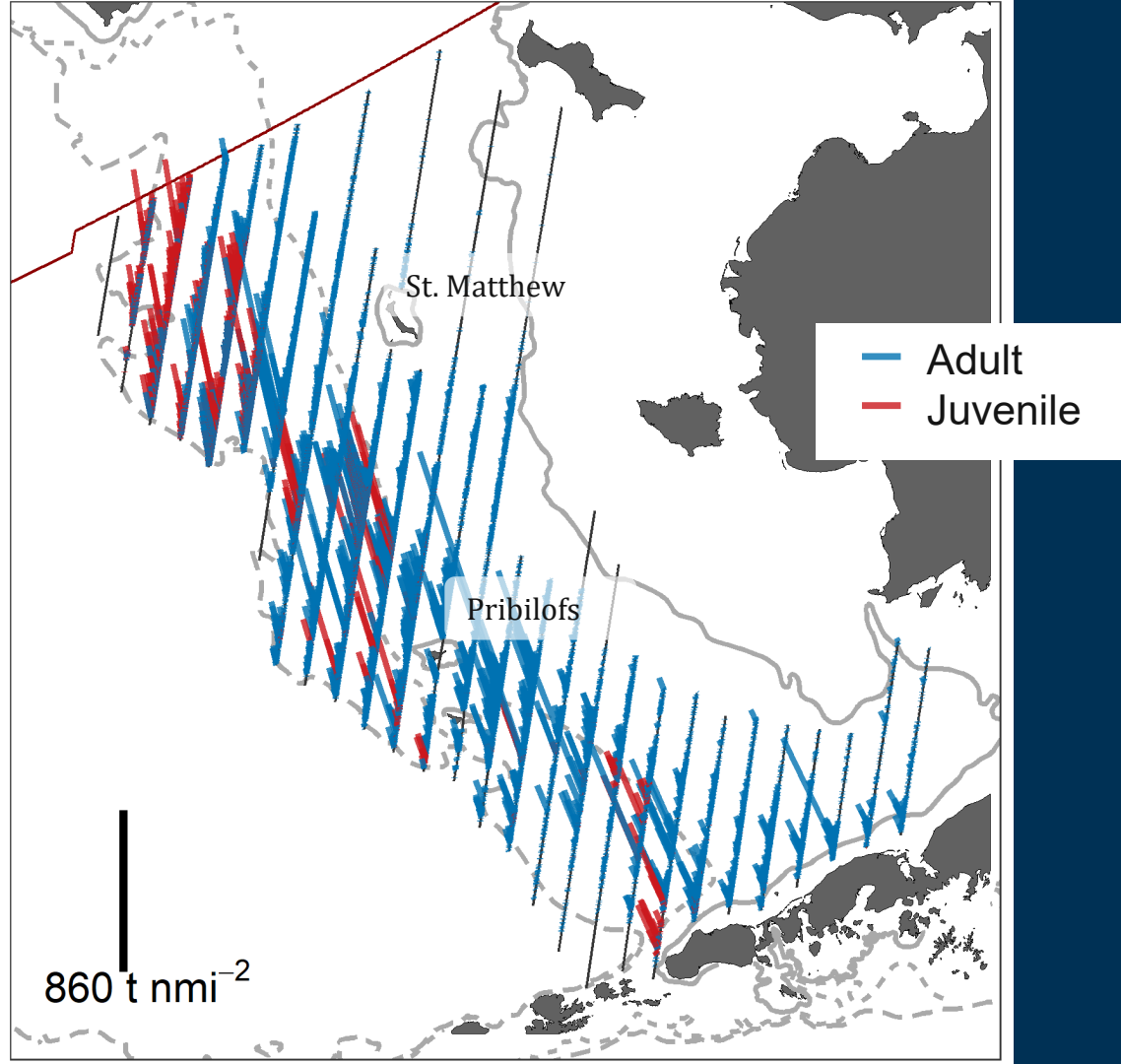
5.0

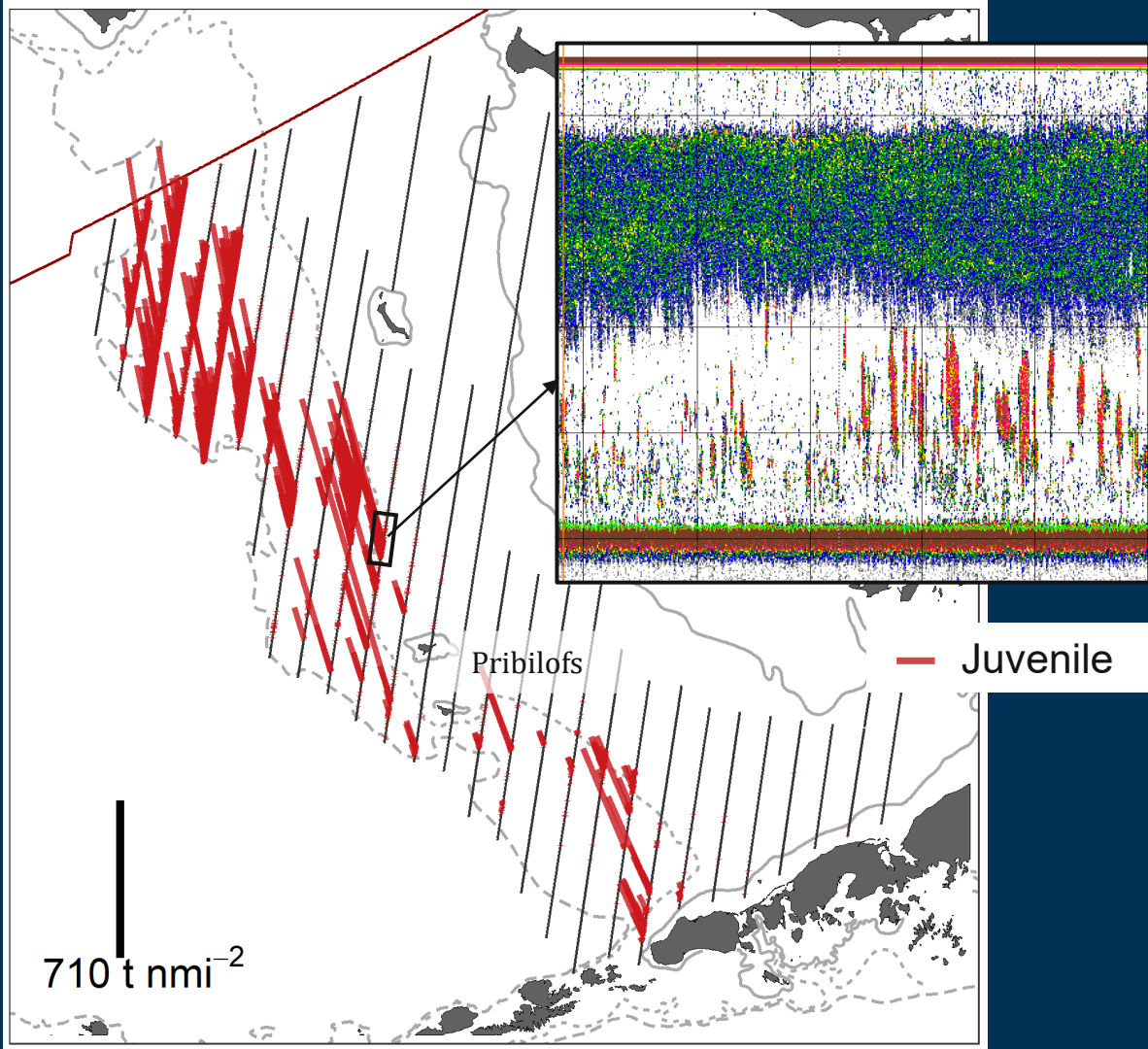
7.5

10.0









99 midwater LFS hauls, catch % by backscatter

Pollock

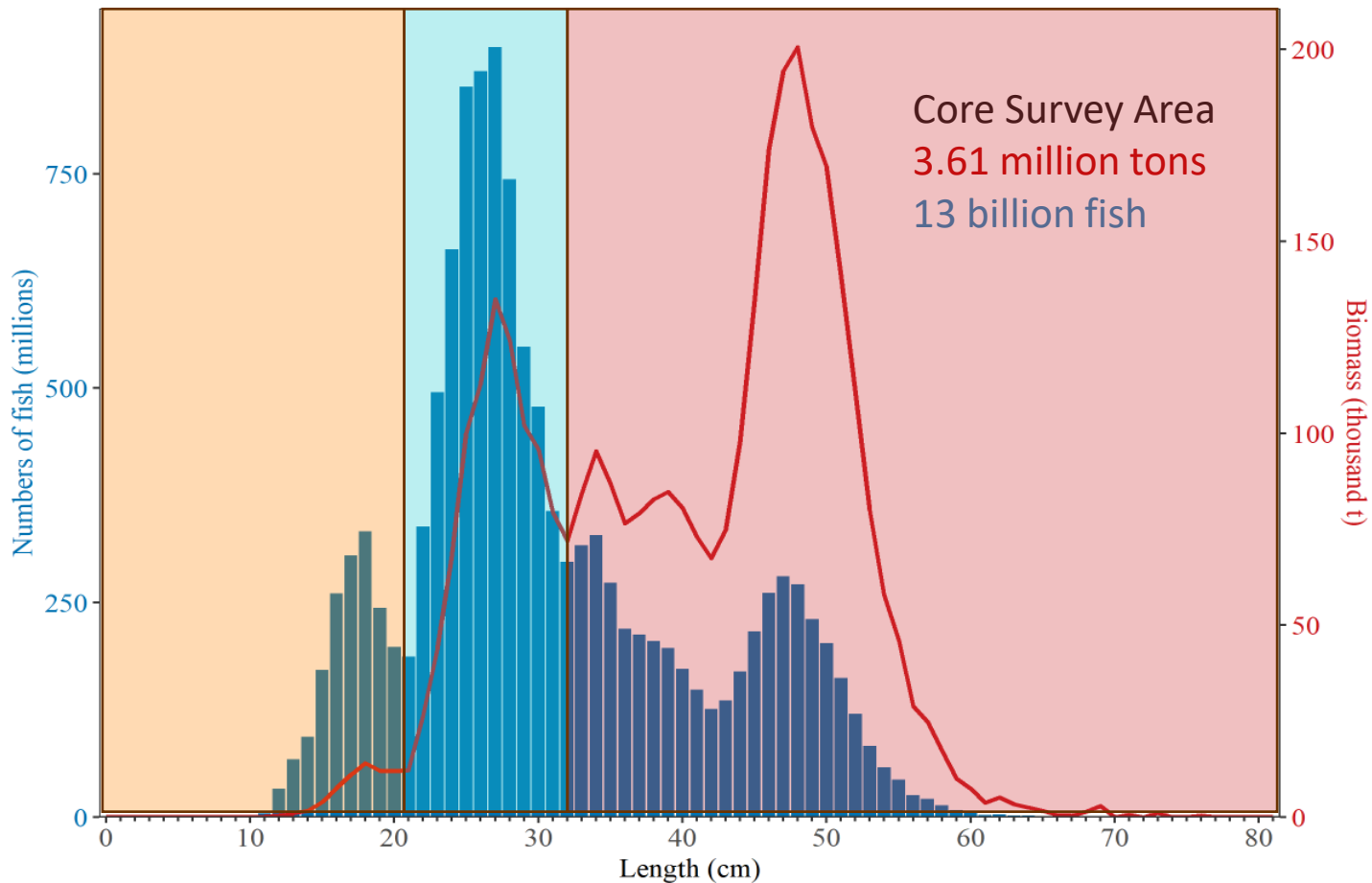
99%

Chrysaora jellies

Pacific Herring

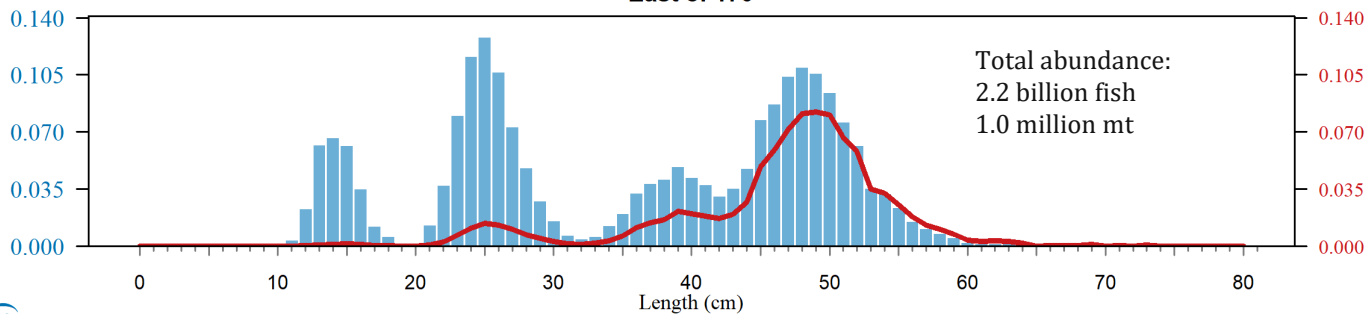
Chum Salmon

2026 EBS total pollock abundance to 0.5m off bottom

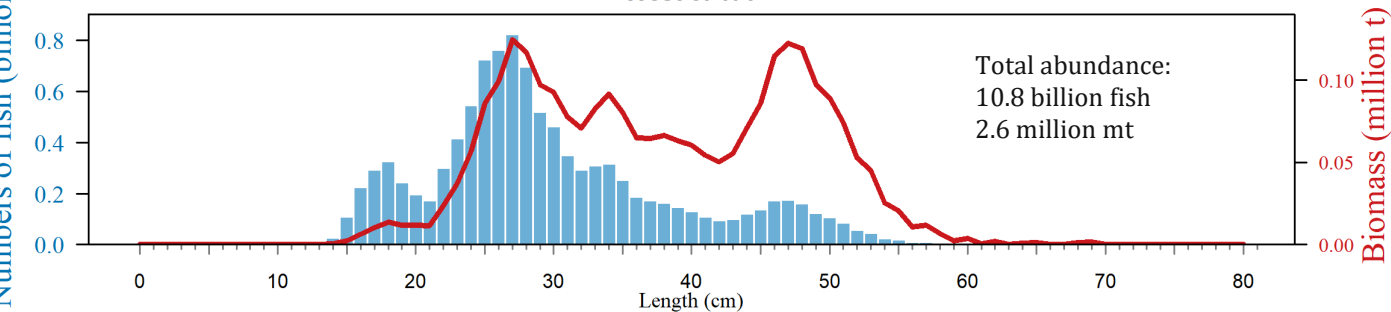


2026 EBS pollock abundance to 0.5m off bottom by region

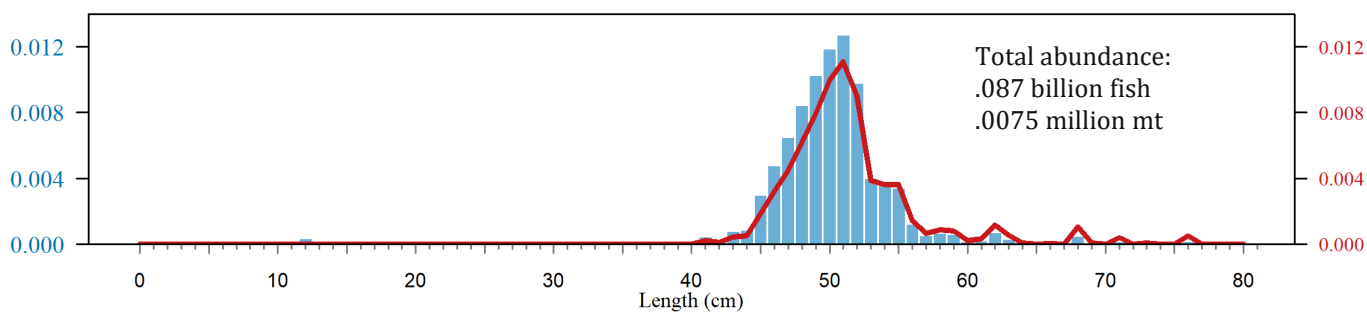
East of 170



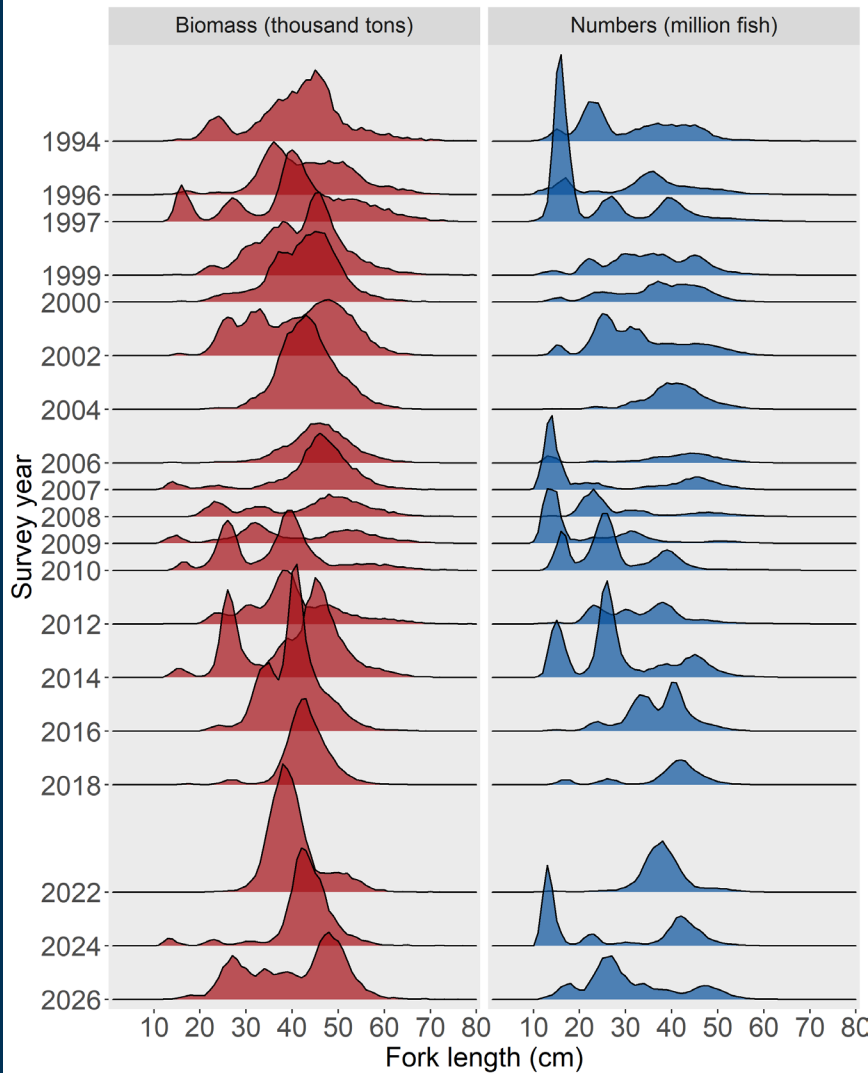
West of 170



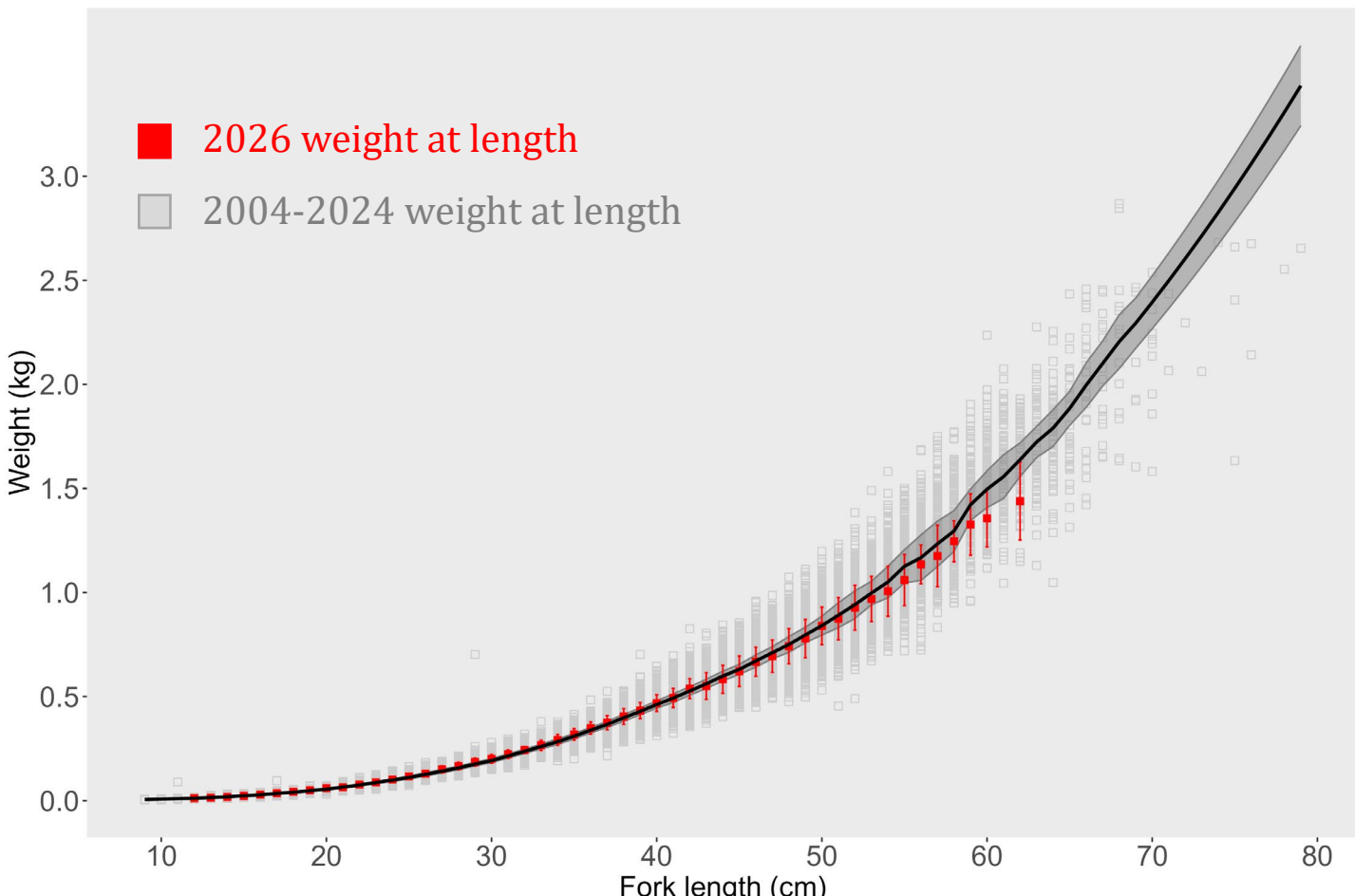
Northern Extension



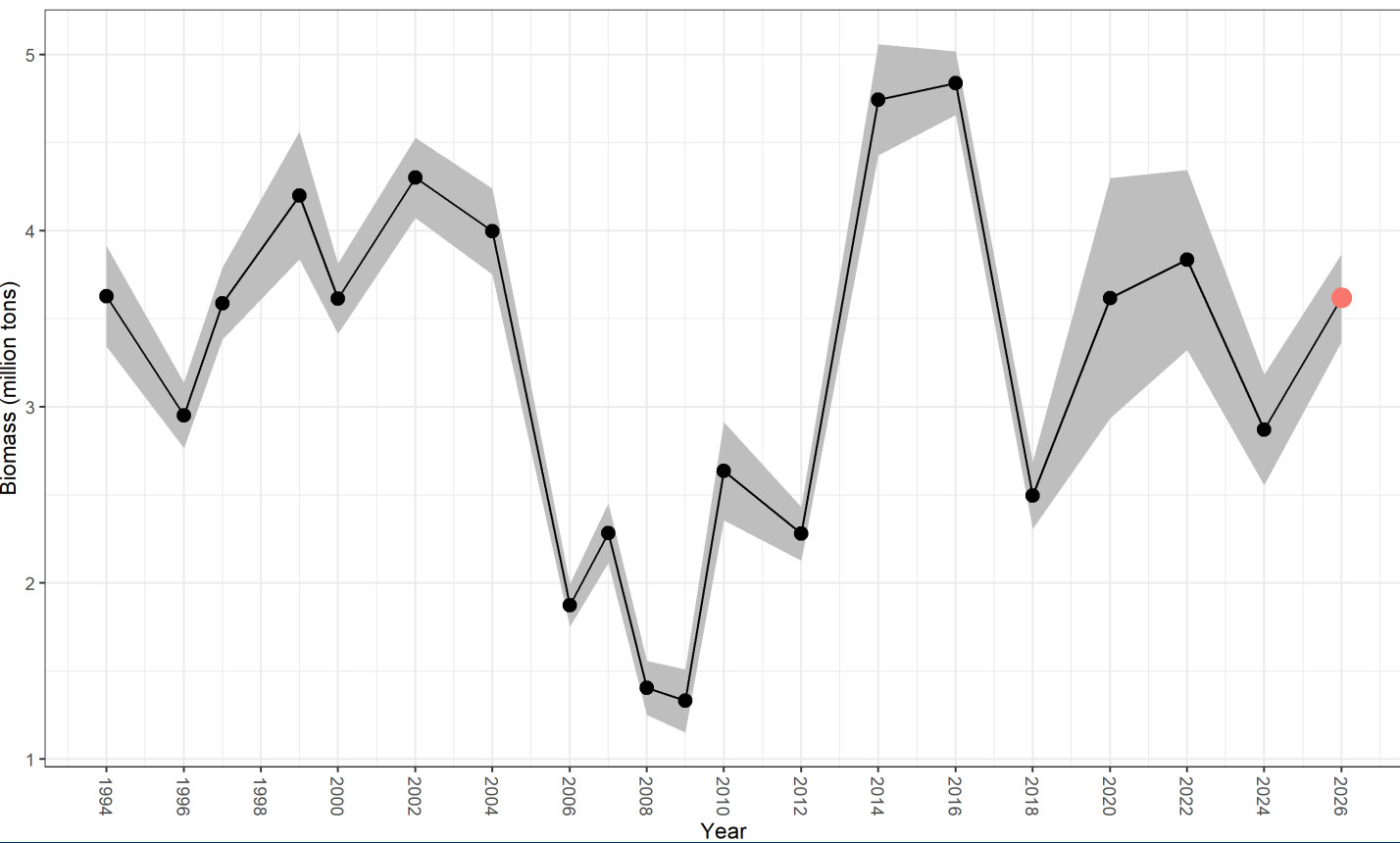
Historical length distributions 1994-2026



Weight at length for historical EBS surveys

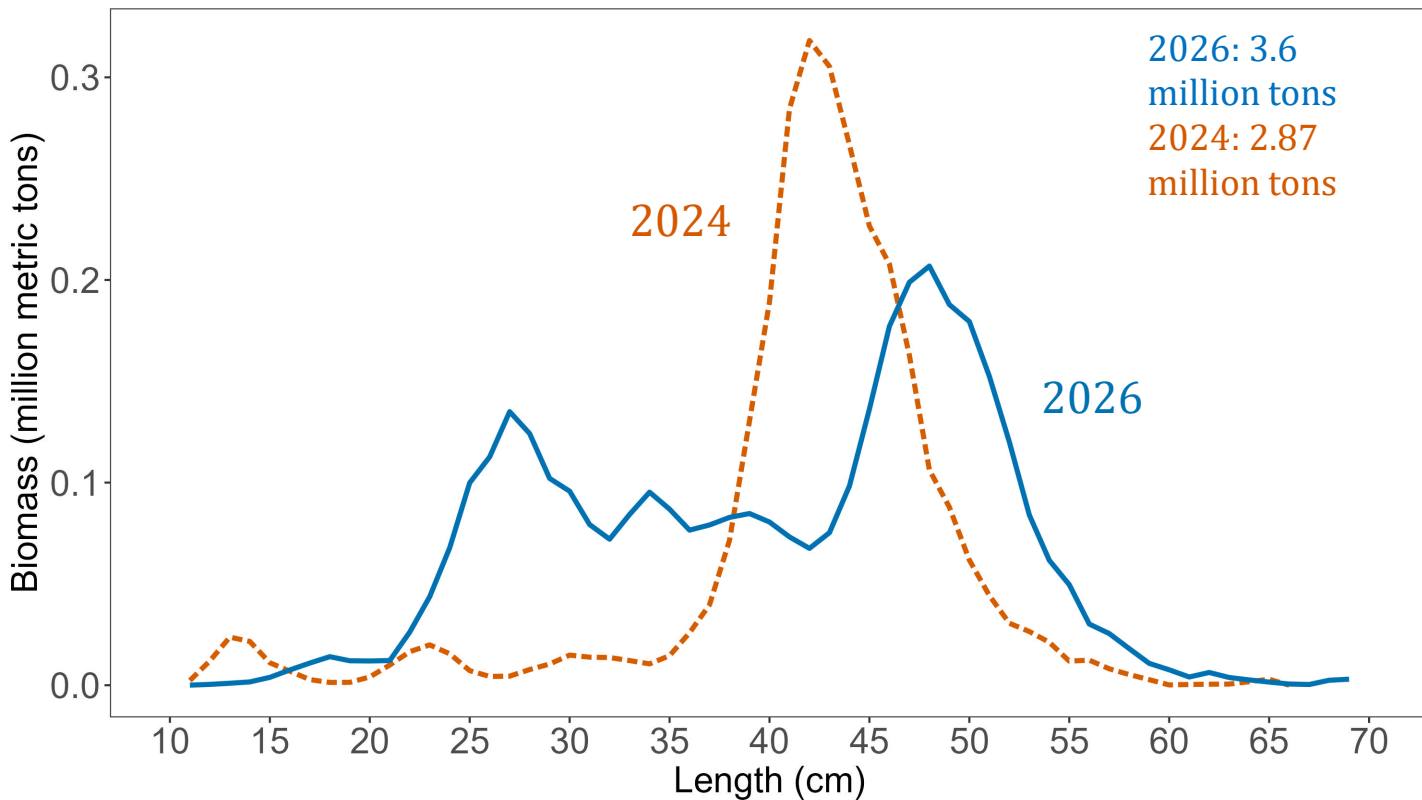


EBS pollock historical biomass to 0.5 m off bottom

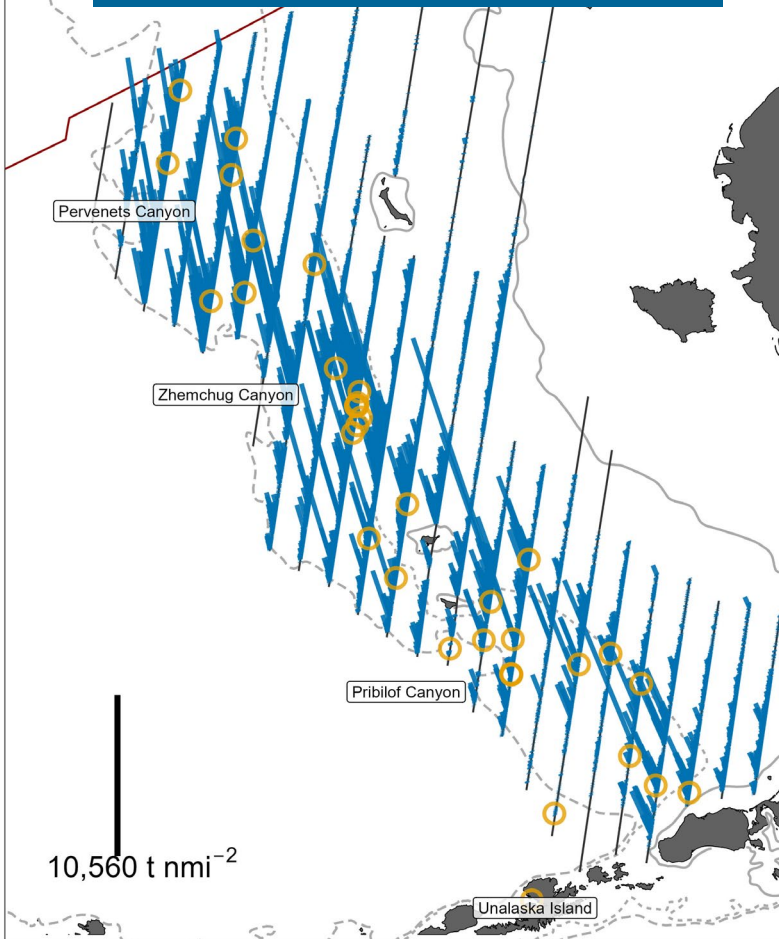


2026 vs. 2024 biomass at length

Biomass



37 ELF deployments



ELF:
Experimental Low
Frequency device designed
to acoustically measure
pollock lengths

Krill scan: modernizing sampling and estimates

- Important ecosystem indicator
- Few samples collected with current methods
- Pocketnets could expand sampling
- Computer vision (CV) can provide more timely estimates
- 73 trawls this summer
 - All scanned, lengthed with CV
 - Few for traditional lengthing
 - Microscope measurements for 177 individuals from 8 trawls



CatCAM testing



Mooring retrieval



Special Studies

Project	Institution
pollock for observer training	NOAA AFSC Fisheries Monitoring and Analysis
lamprey collection for food habitats study	NOAA NWFSC Ecosystem Analysis
pollock ovaries for long-term maturity studies	NOAA AFSC Age and Growth
whole fish collection for genetic vouchers	NOAA NWFSC Genetics and Evolution Program/University of Washington
seabird observers- distribution and abundance studies	USFWS
salmon sampling- habitat use and migration studies	NOAA AFSC Auke Bay Lab
sand lance collection for genetics	NOAA AFSC Age and Growth/ University of Washington
pollock and herring collection for harmful algal blooms study	NOAA NWFSC Environmental Chemistry Program
salmon shark tagging	Stanford

Bering Sea Acoustic Trawl Survey Summary

- Total biomass estimate of 3.6 million metric tons is up 25% compared to 2024 survey
- More juvenile pollock in the EBS than in recent survey years
- Age 2s largest since 2012 year class
- More Age 1 fish W170 than E170, as is often the case
- Adult fish dominate in terms of biomass, juveniles dominate numbers
- Cold pool was more extensive than in 2022 & 2024, fish pushed south onto shelf
- Still preliminary- will change slightly with addition of bottom trawl data

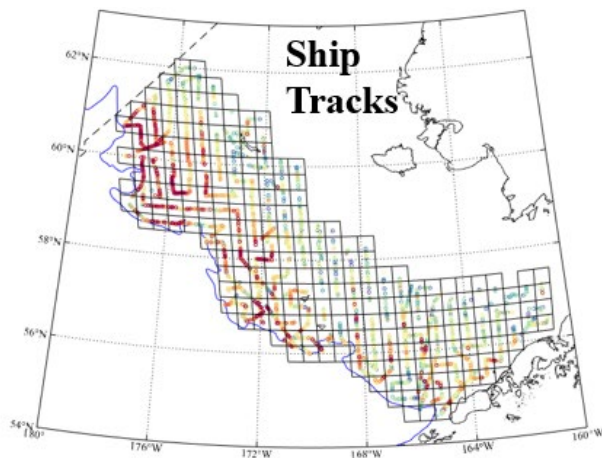
Acoustic Vessel of Opportunity (AVO) index of midwater pollock backscatter from bottom trawl survey acoustics

N. Lauffenburger, D. Bryan

- Annual index of midwater pollock backscatter from bottom trawl survey acoustics in the EBS
 - This works well because the midwater is primarily pollock
- There are no concurrent midwater trawls:
 - Do not know pollock size composition from AVO data
- Provides information on midwater pollock in years when the acoustic-trawl survey is not conducted (odd years)

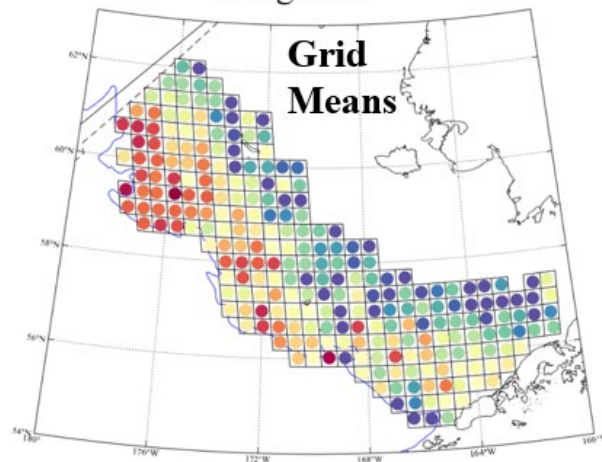
AVO 2026

Latitude

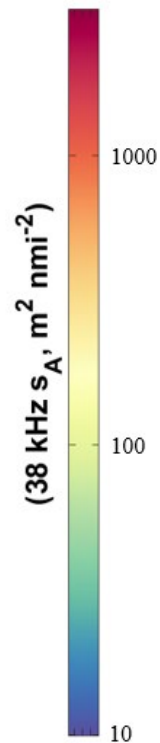


Longitude

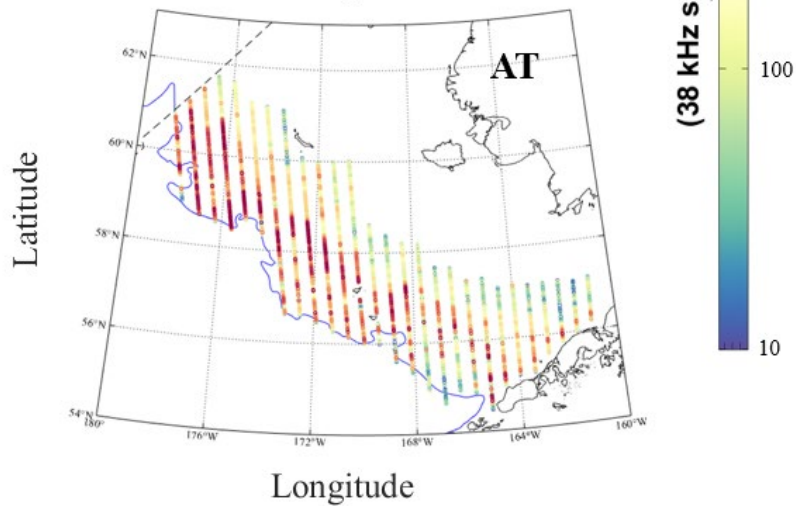
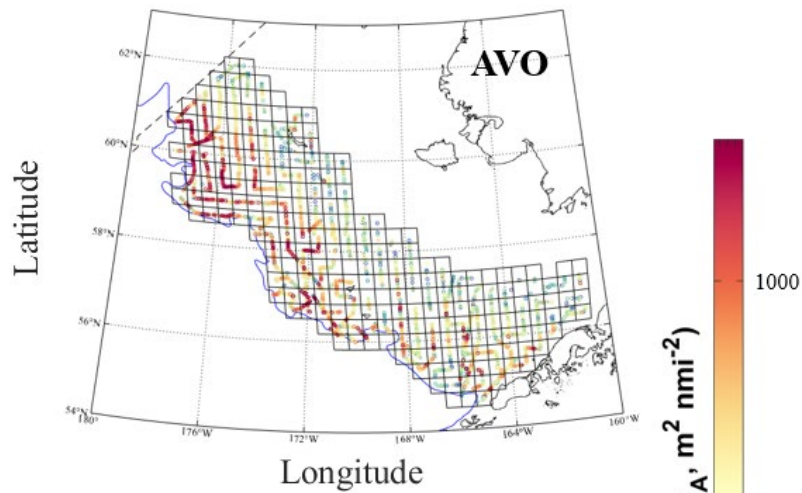
Latitude



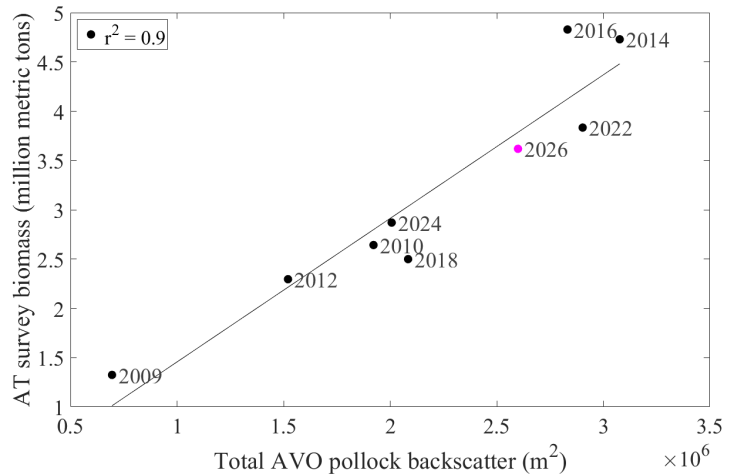
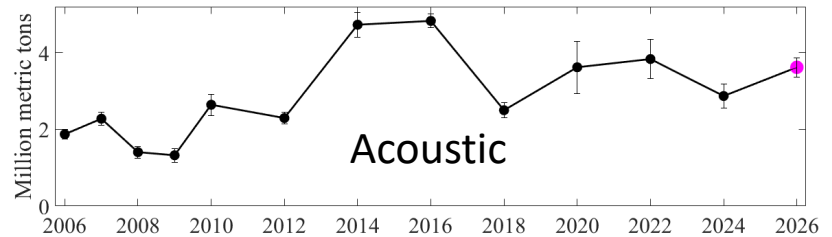
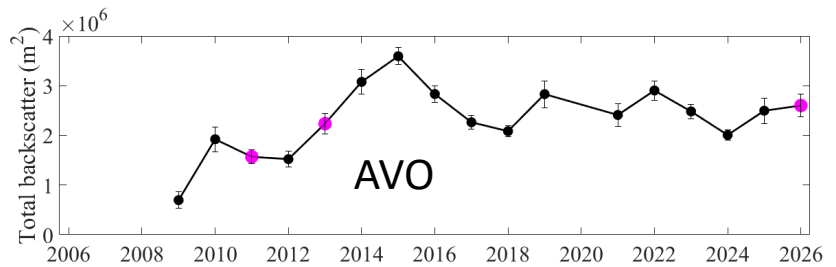
Longitude



2026



AVO Index Time Series

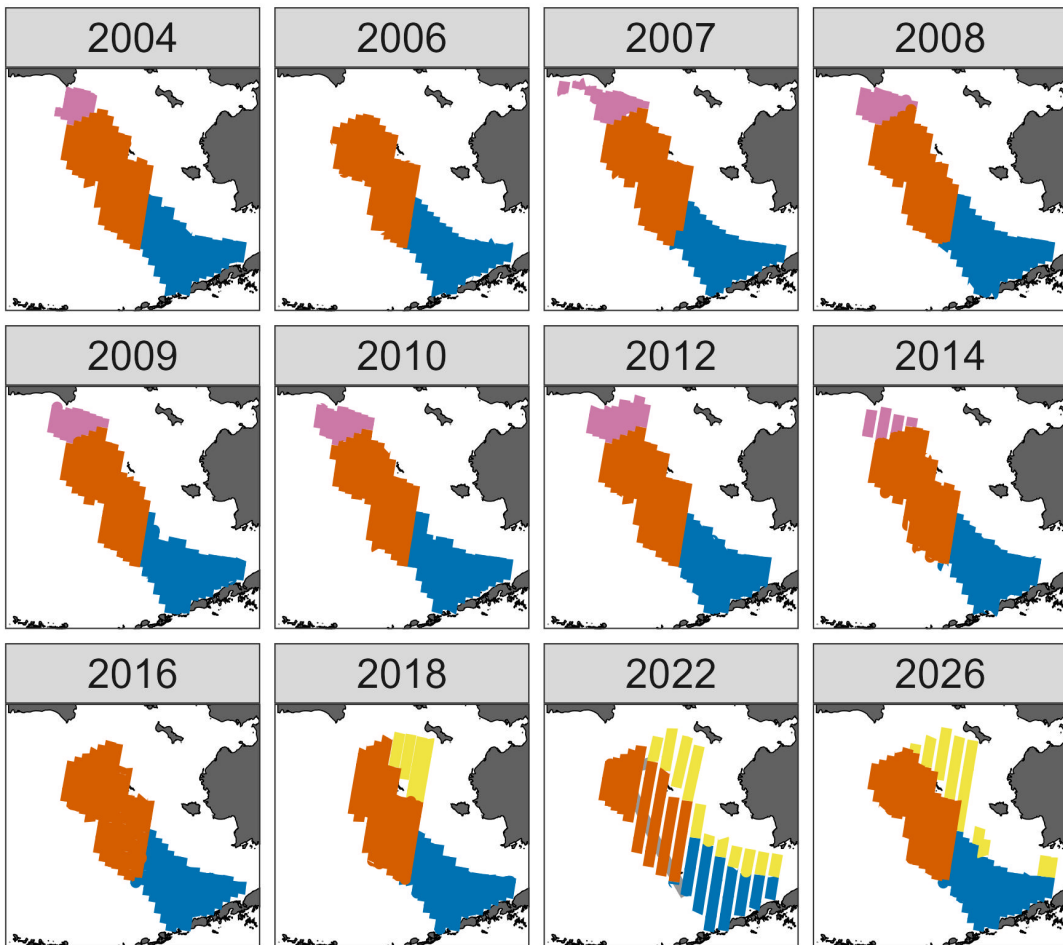


Questions?

Many thanks to MACE staff, NWFSC and volunteer help, the TAS program, the Kodiak lab and the officers and crew from the *Oscar Dyson*.

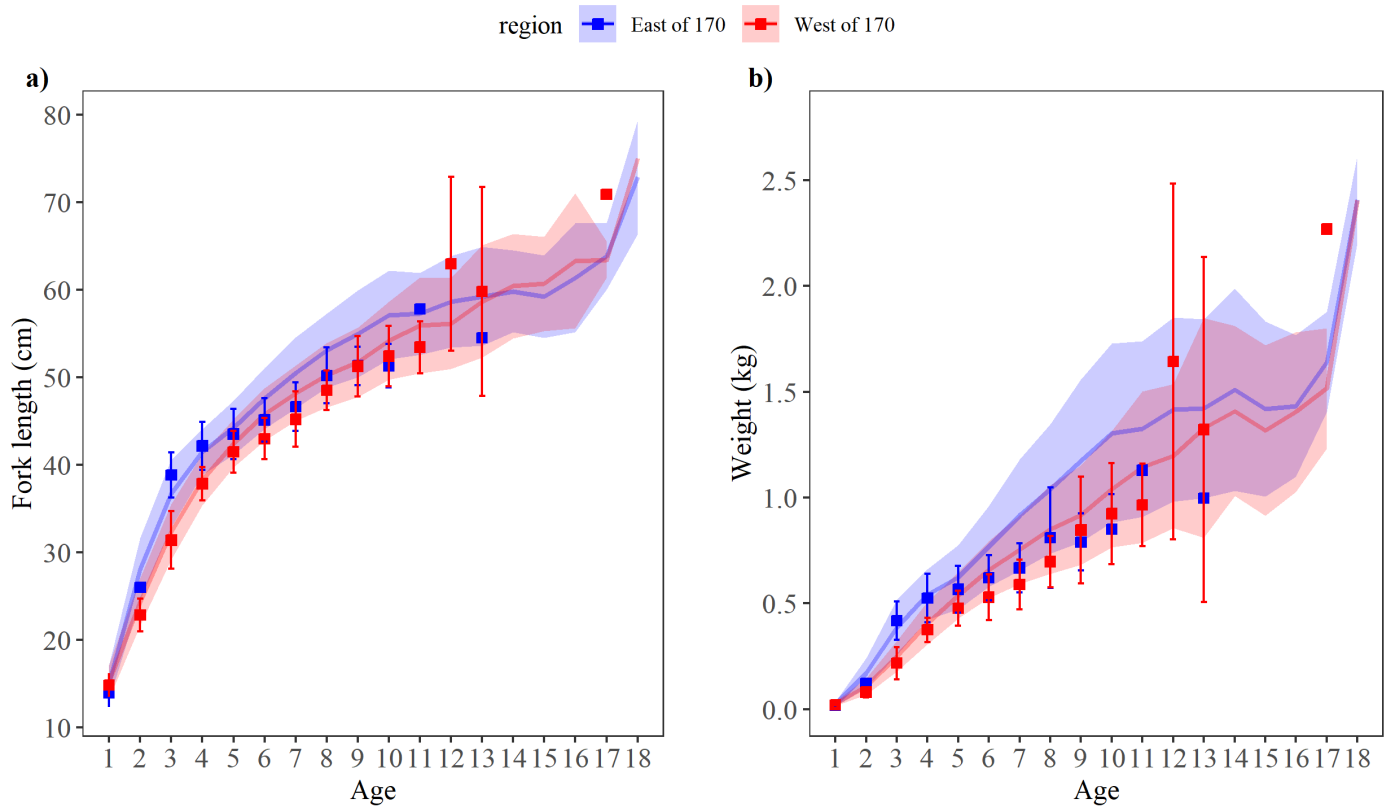
Also Lyle.





2024 length- and weight- at age data

Ribbons show 1 SD for 2004-2022



2024 vs. 2022 biomass at length

