

NOAA
FISHERIES

Results of 2026 Winter Pollock Pre-Spawning Acoustic-Trawl Surveys in the Gulf of Alaska



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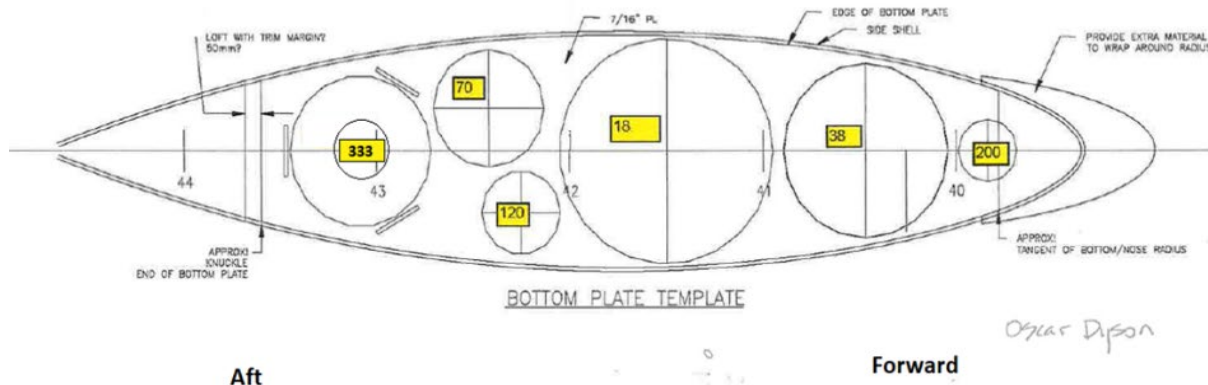
Winter Acoustic-Trawl Survey Equipment

Vessel: NOAA Ship *Oscar Dyson* (Commissioned 2005, 64 m, 2500 t, 3100 hp)

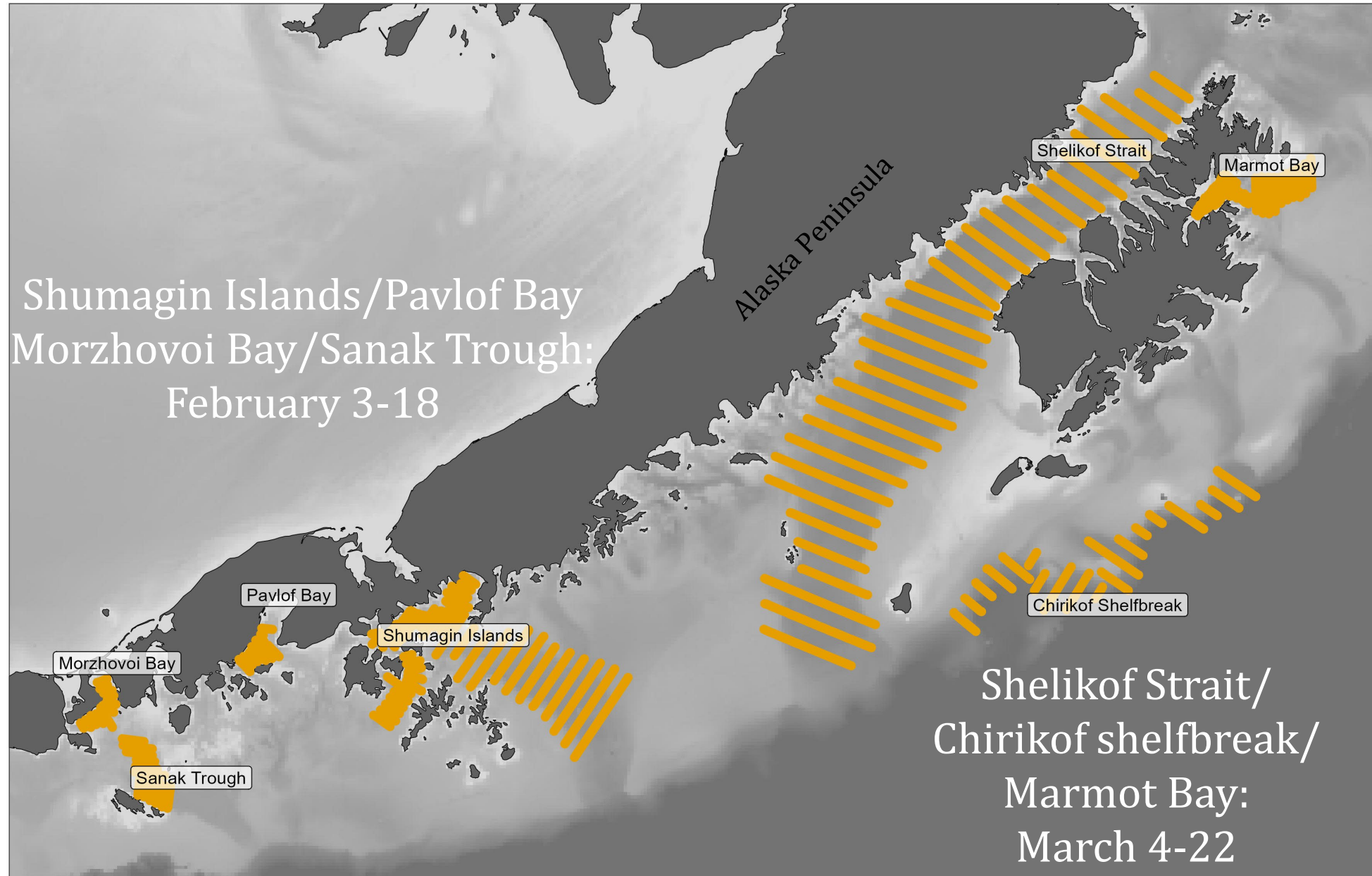
Acoustic System: Simrad EK80 echosounder (18, 38, 70, 120, 200, and 333 kHz)
Echoview software to analyze acoustic data

Net: Midwater - **LFS1421** (250 ft head/ft rope, vert. open ~9 fm,
net mesh 21 foot to 1/8 inch codend liner)

Transducer placement on centerboard



2026 Winter GOA AT Survey Plan



Acoustic-Trawl Survey Methods

Survey transect lines 24 hrs/day

Targeted hauls in high backscatter

Abundance estimates use 38 kHz

- 16 m below surface to 0.5 m above seafloor

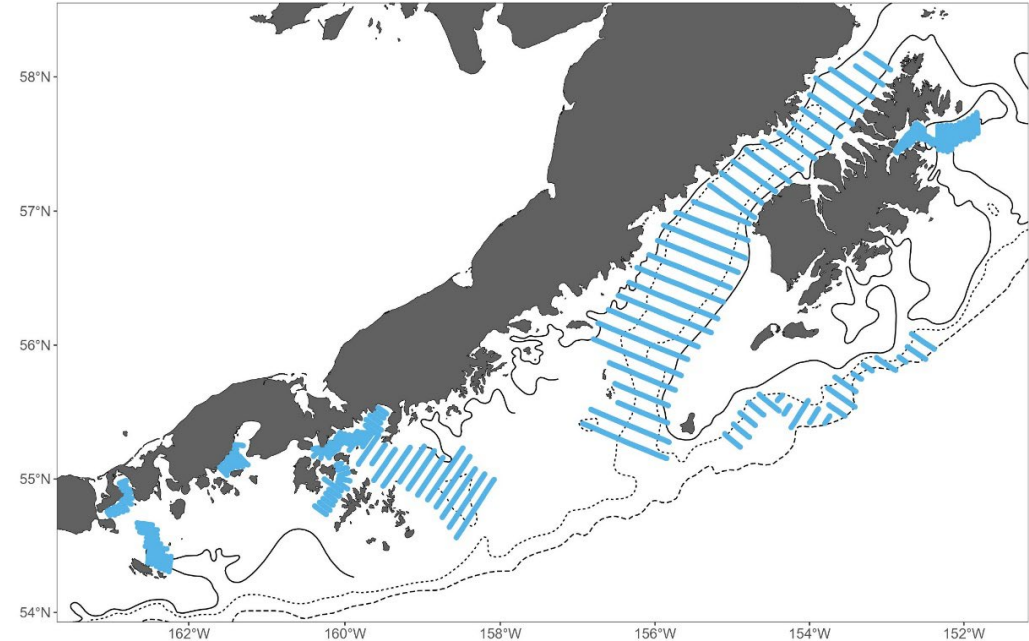
Biological samples

- lengths, otoliths, length-weight, maturities

Physical oceanographic data

- Continuous SST from ship's flow-through system

- Temp profile at trawl locations

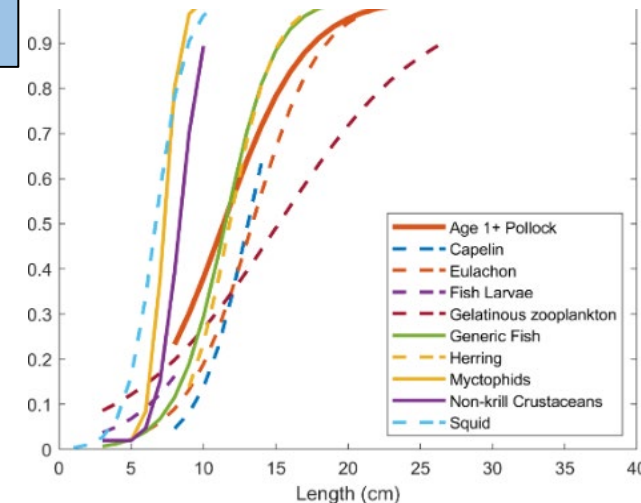


**Acoustic data collection
along parallel transects**

**Targeted trawls
(species and length composition)**



**Net Selectivity
(escapement correction)**

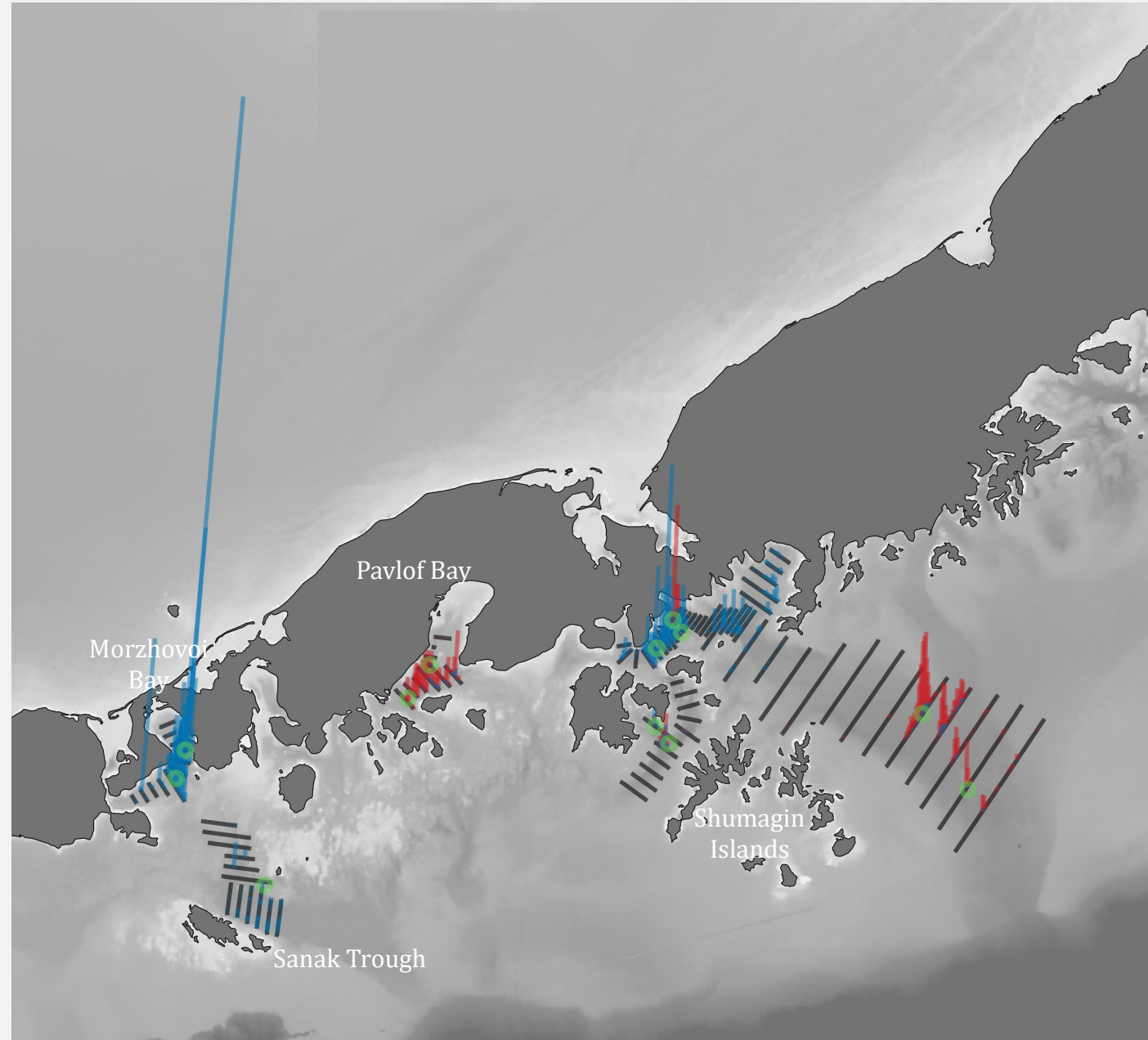


**Survey
estimate**

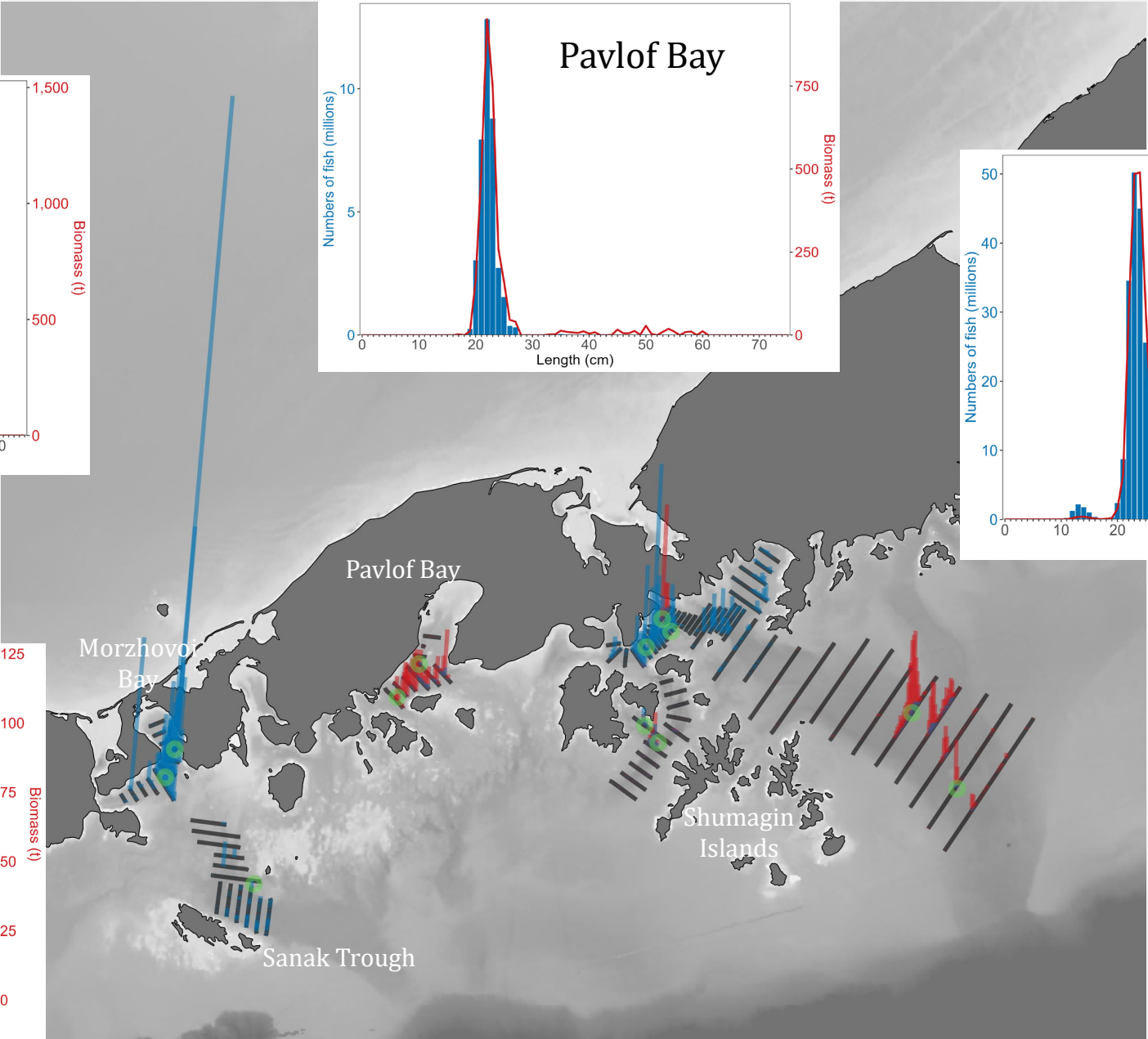
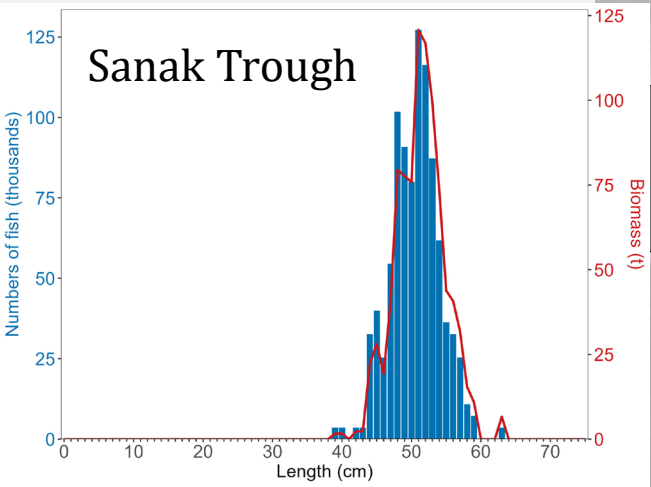
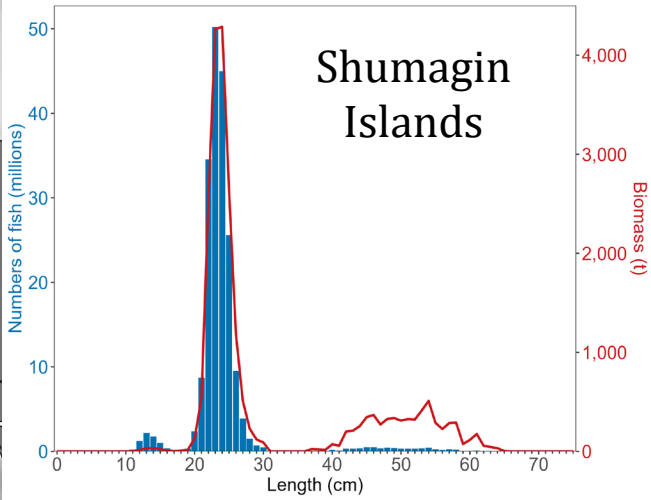
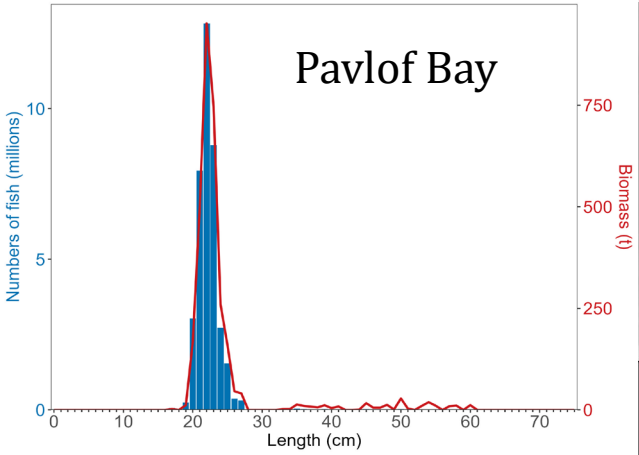
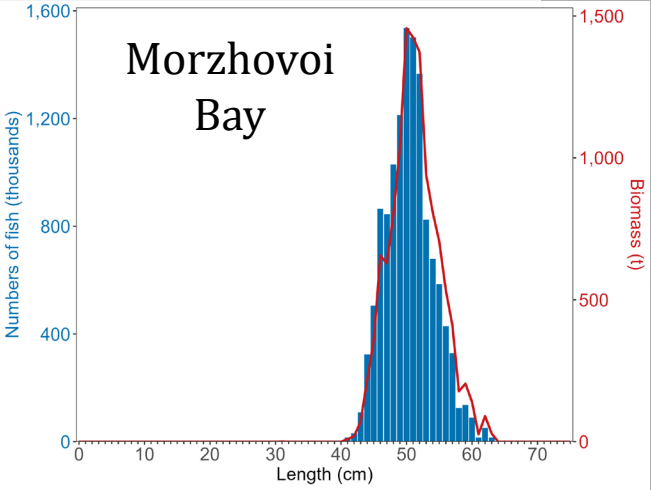
February 3-18,
2026



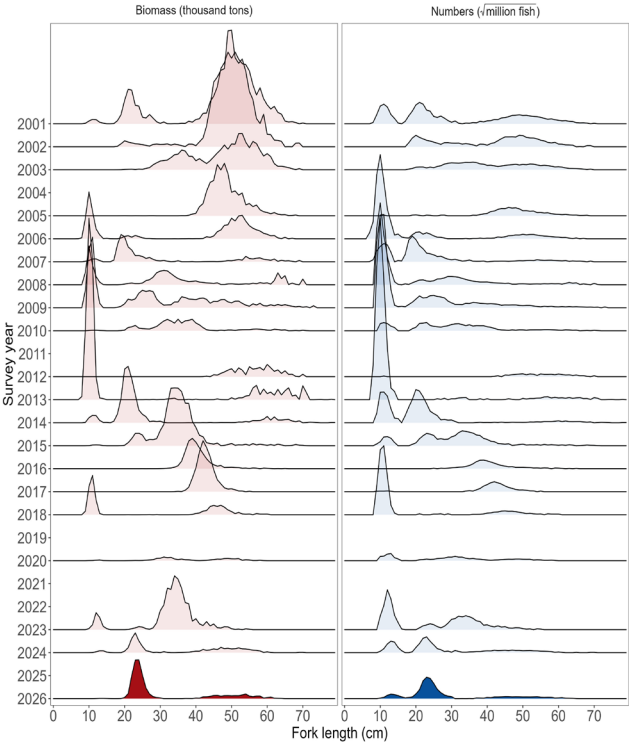
Shumagin Islands area



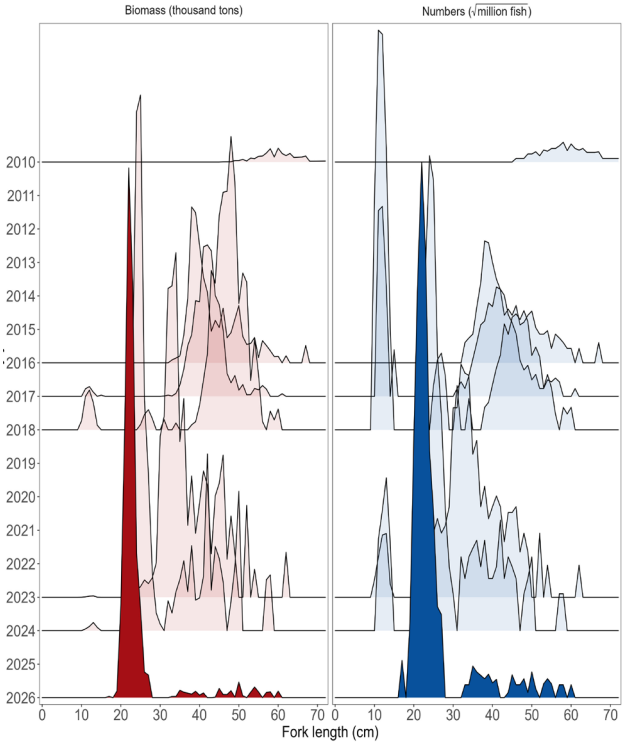
Shumagin Islands area



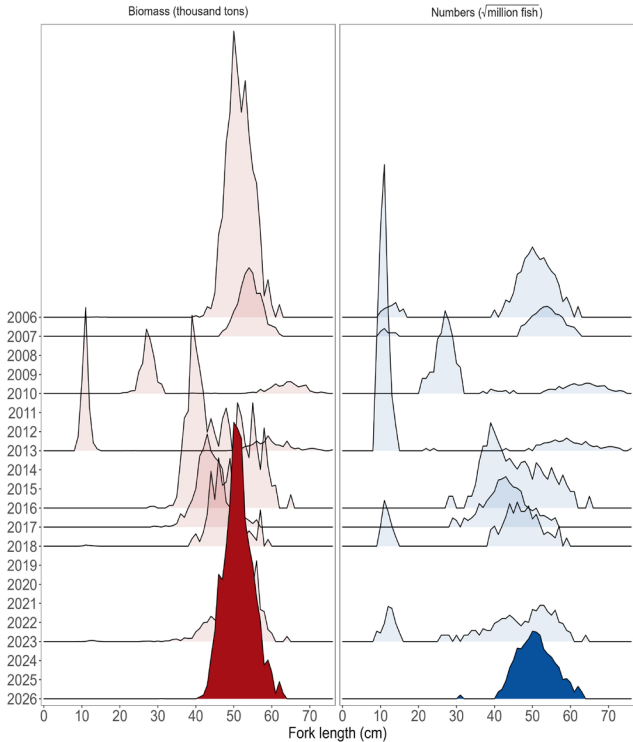
Shumagins



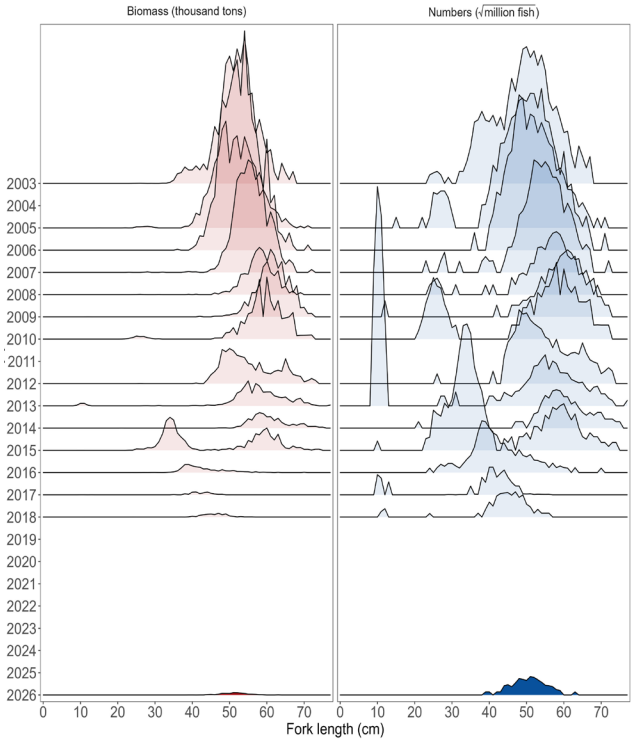
Pavlof B.



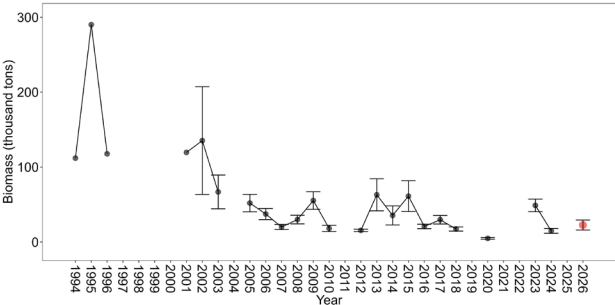
Morzhovoi B.



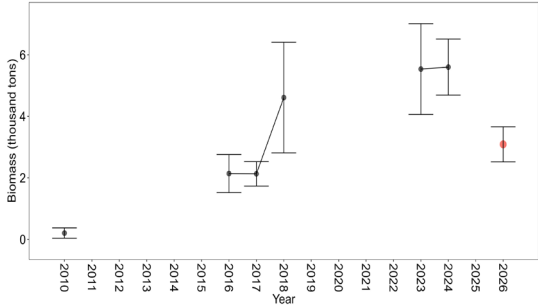
Sanak T.



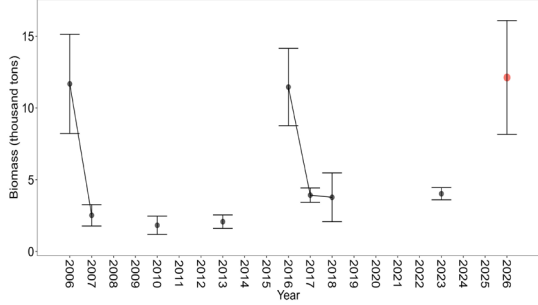
23 thousand t (↑ 52% from 2024)



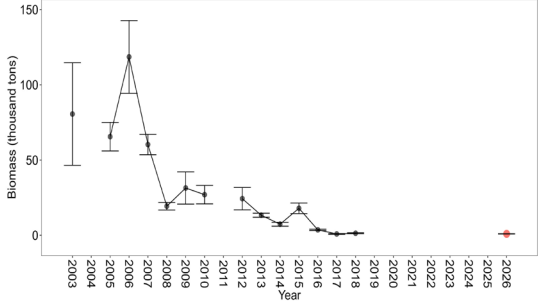
3 thousand t (↓ 45% from 2024)



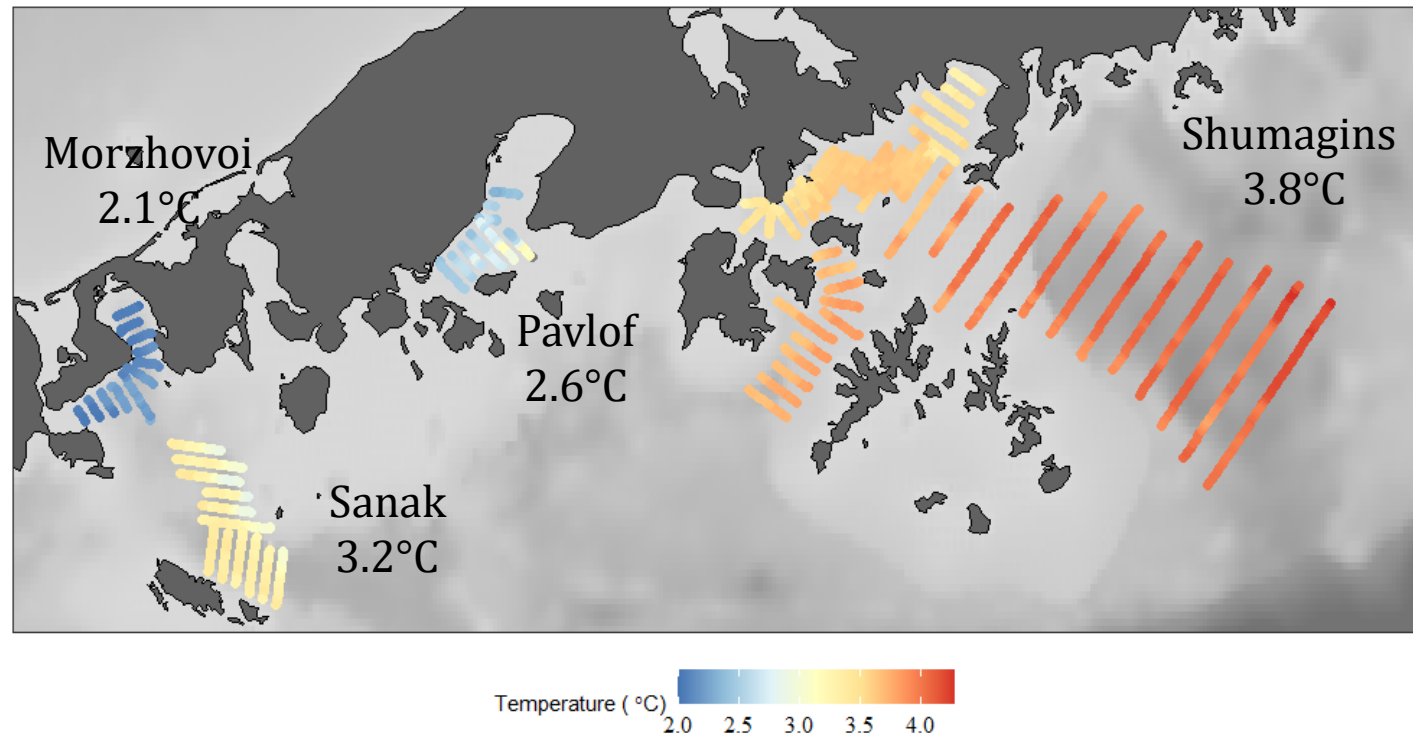
12 thousand t (↑ 202% from 2023)



911 t (↓ 31% from 2018)



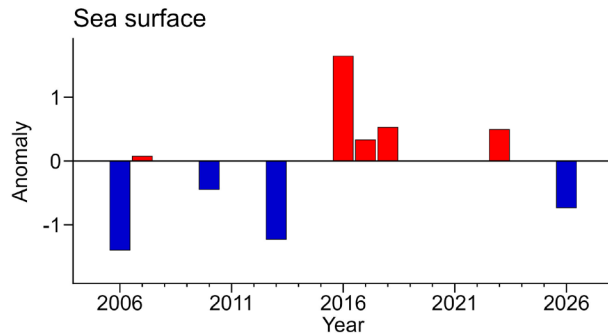
Water temperatures



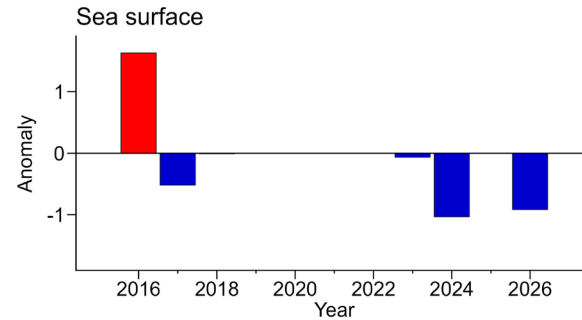
2026 flow-through SST

Water temperatures

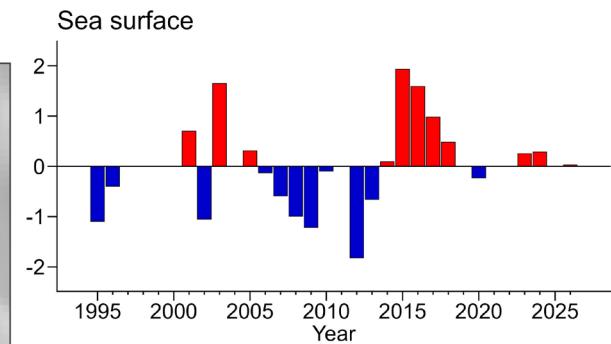
Morzhovoi



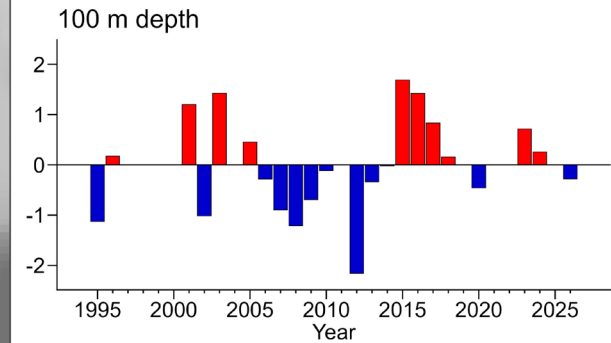
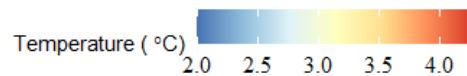
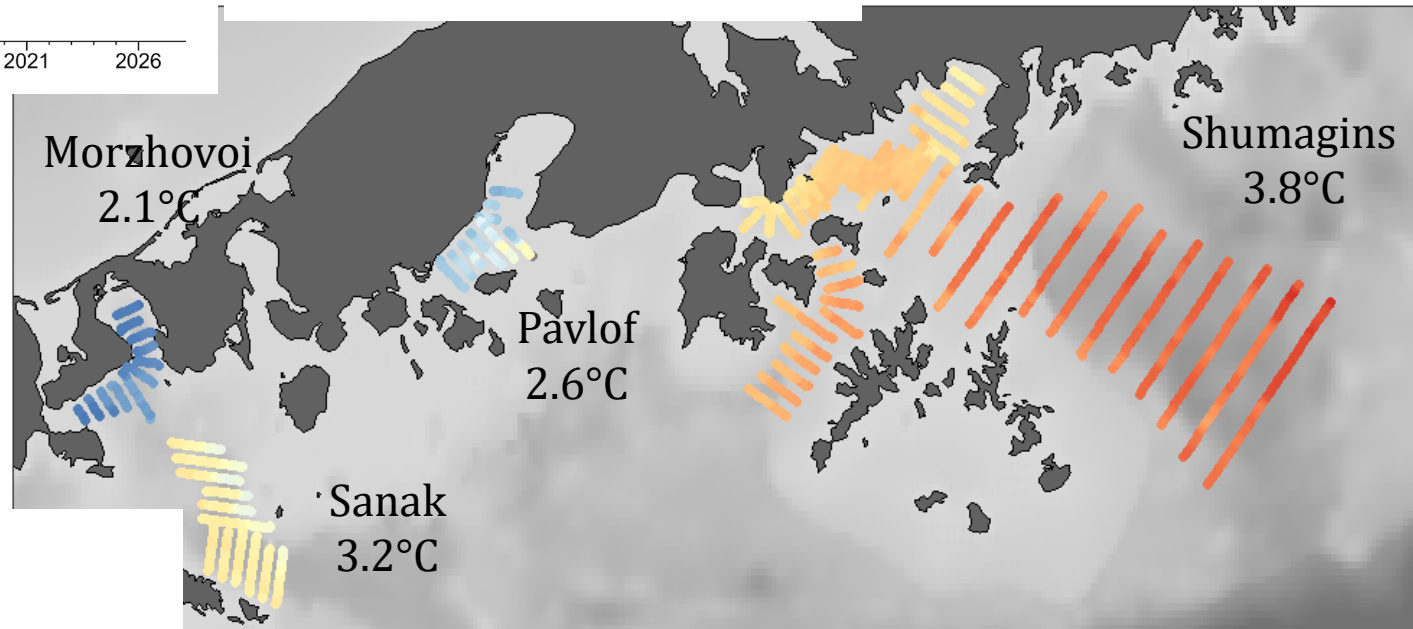
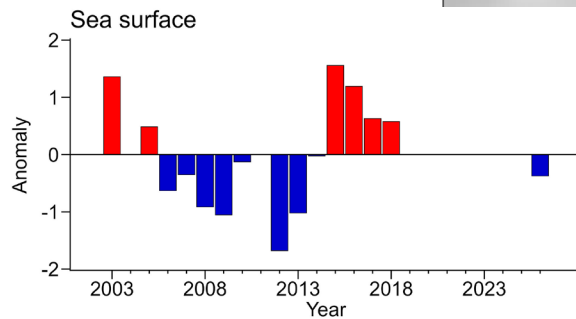
Pavlof



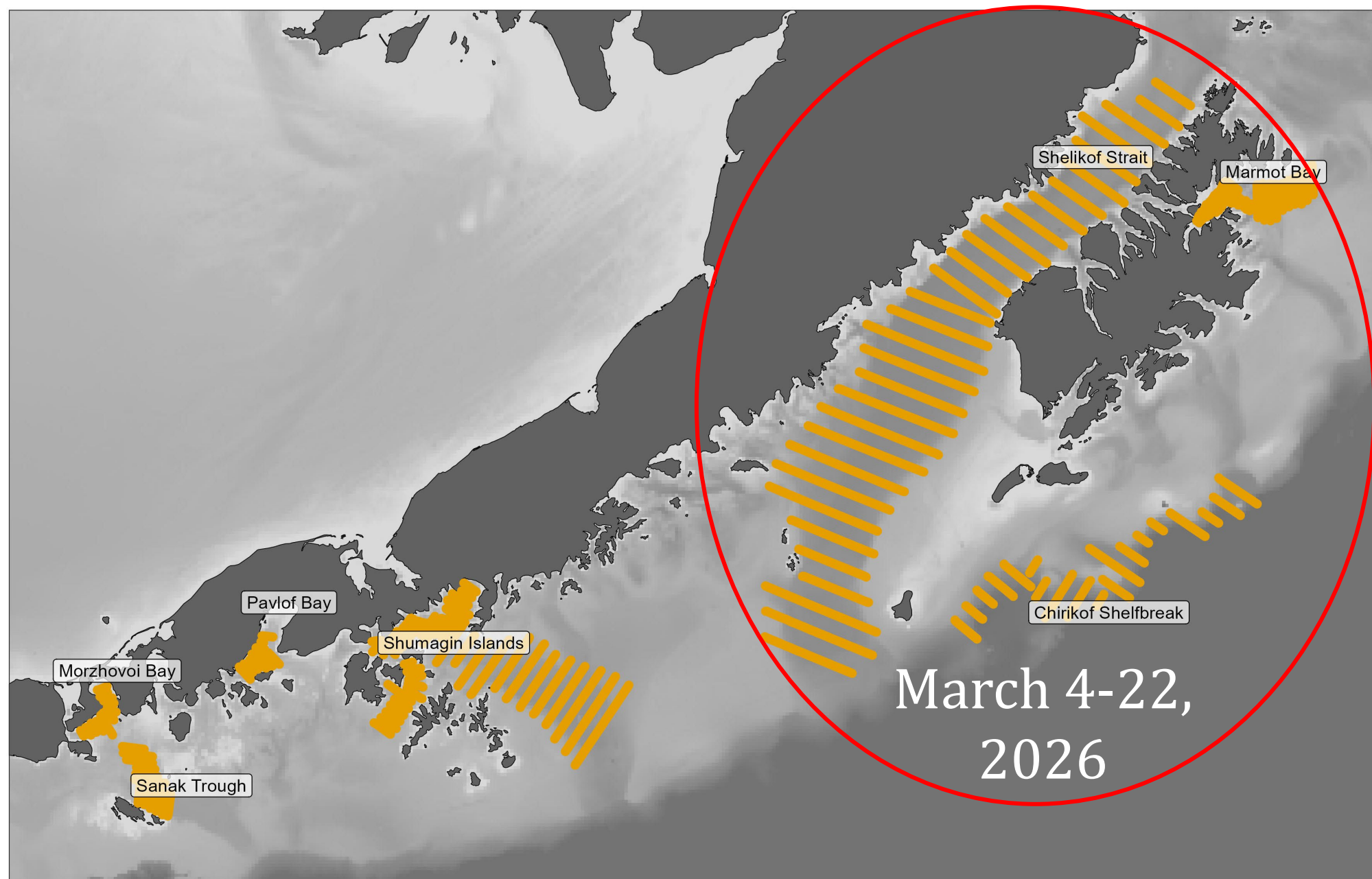
Shumagins



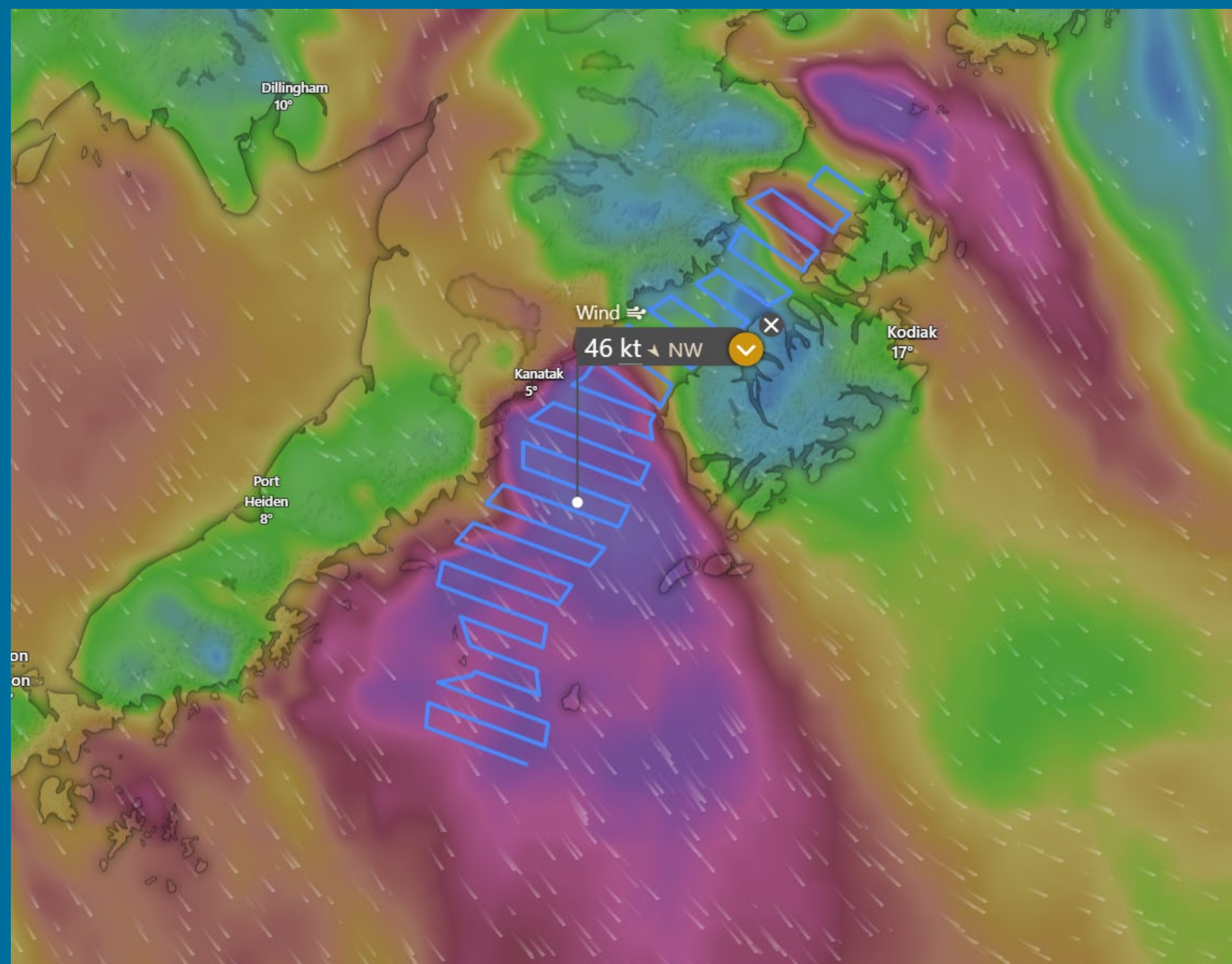
Sanak



2026 flow-through SST



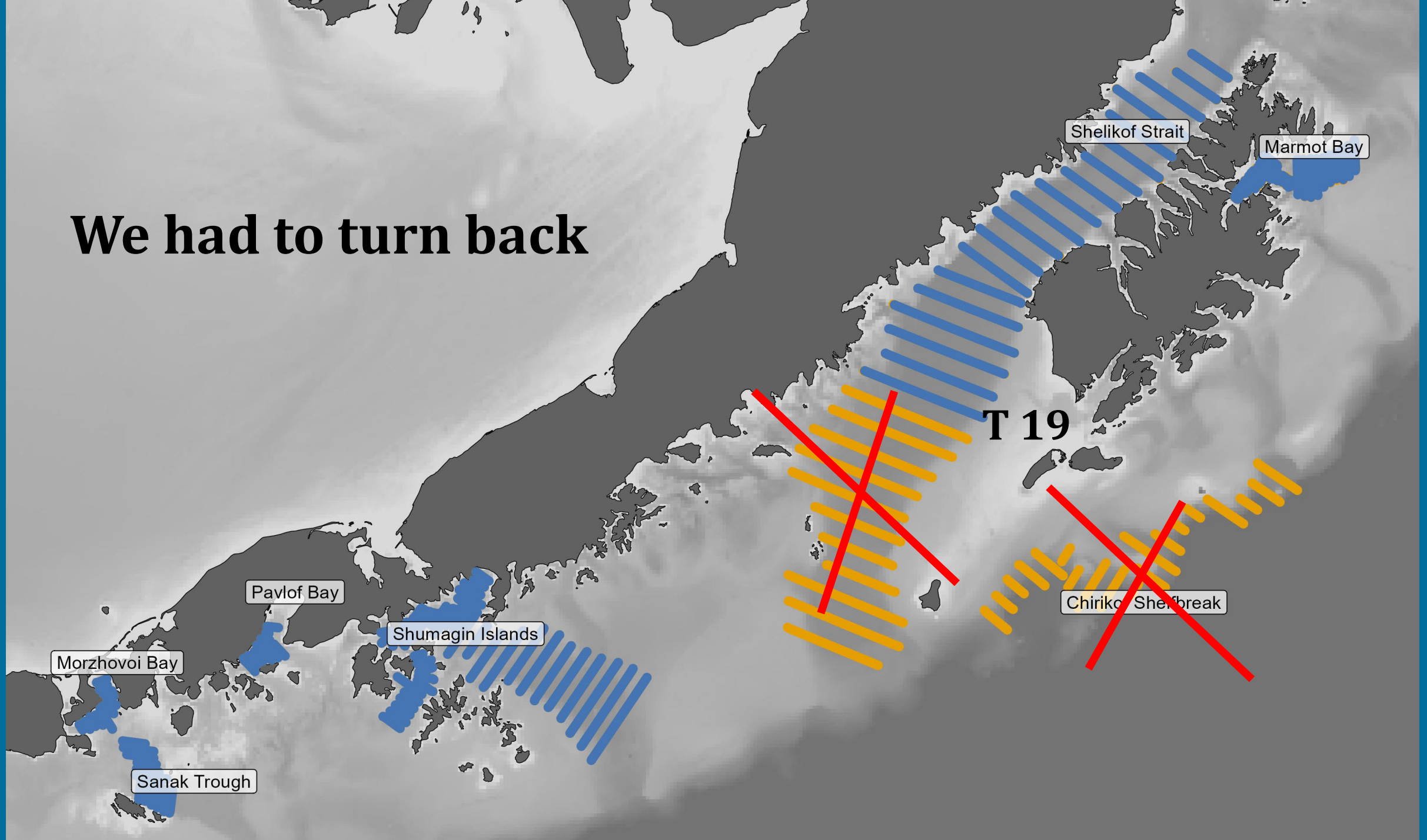
But then we
had weather



And everything froze

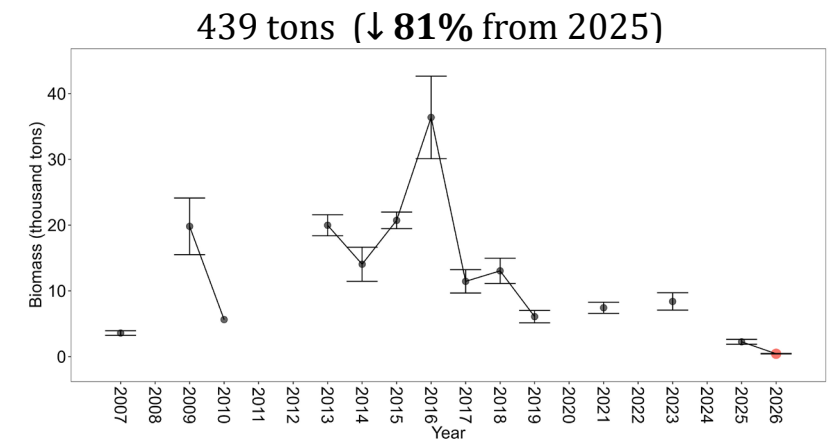
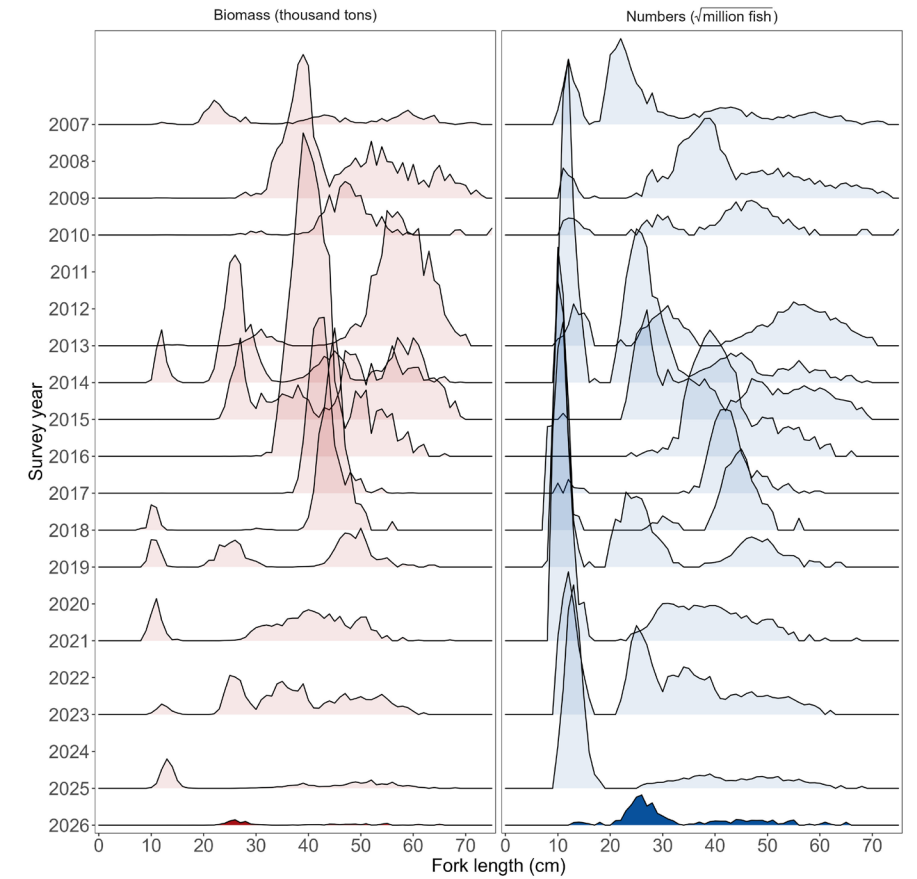
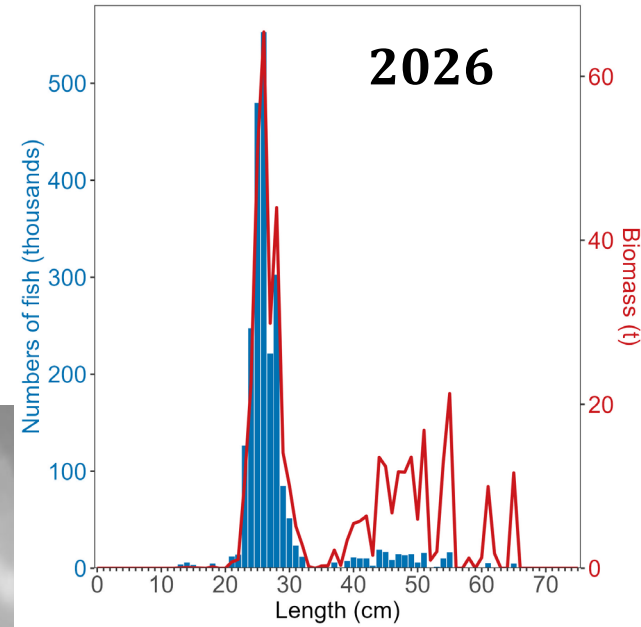
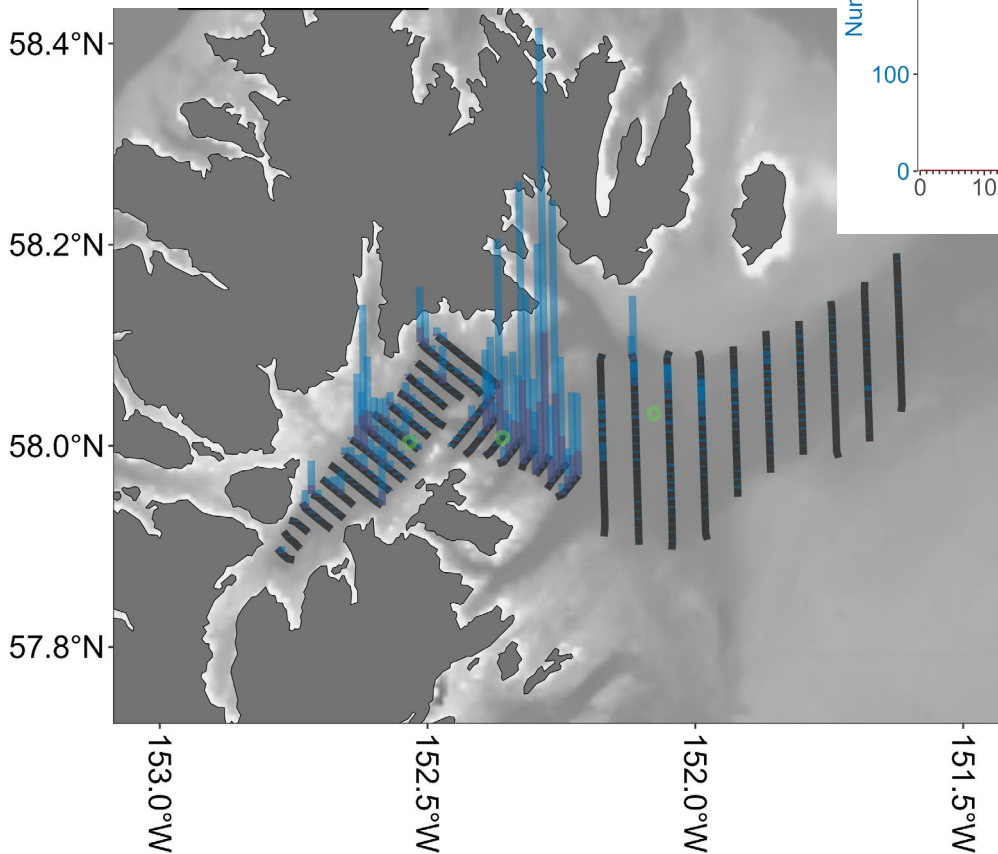


We had to turn back



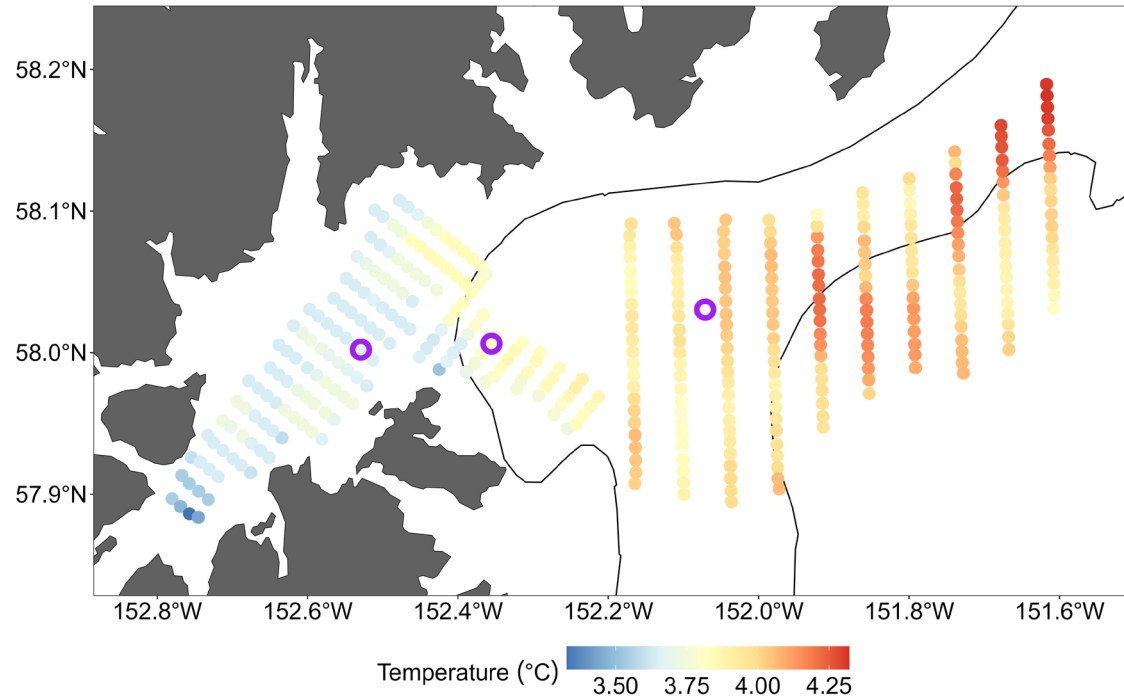
Marmot Bay: Distribution and Abundance

- Sparse aggregations in Spruce gulley

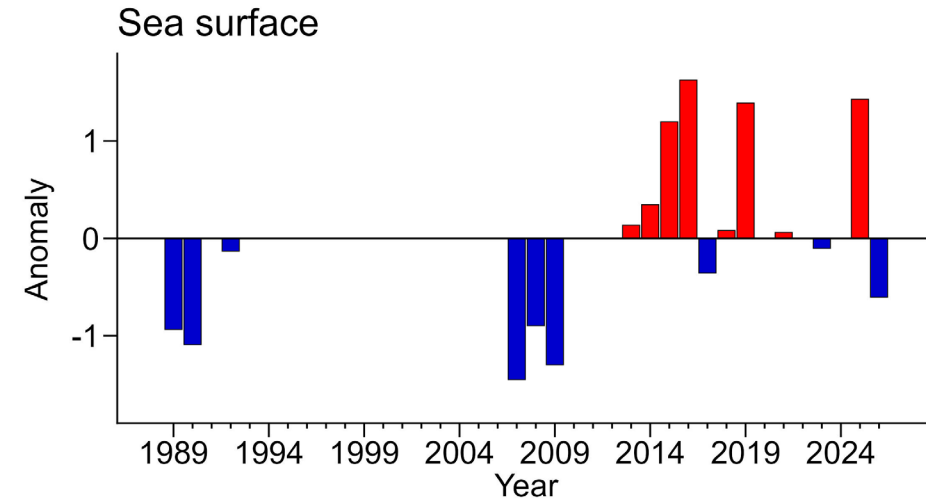


Marmot Bay: Temperatures

**2026 flow-through
SST**
Mean = 3.9°C

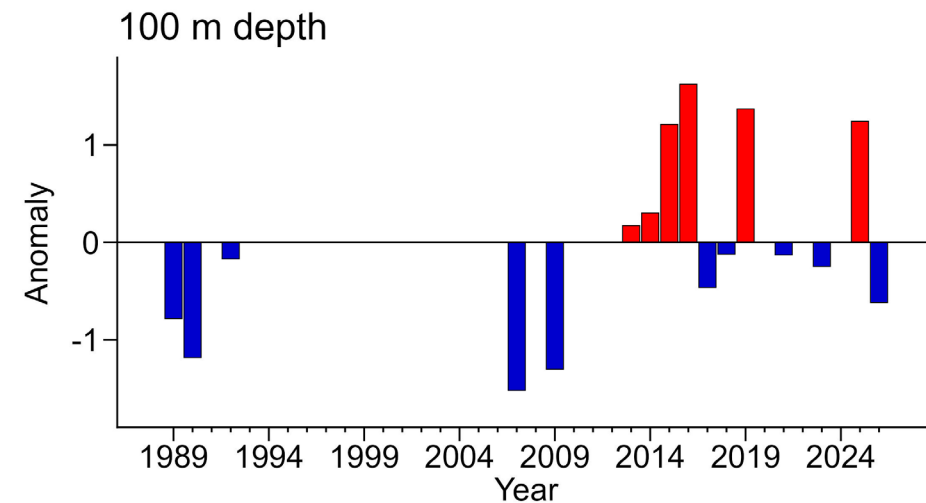


**Temperatures at
trawl locations**



↓ 0.6°C

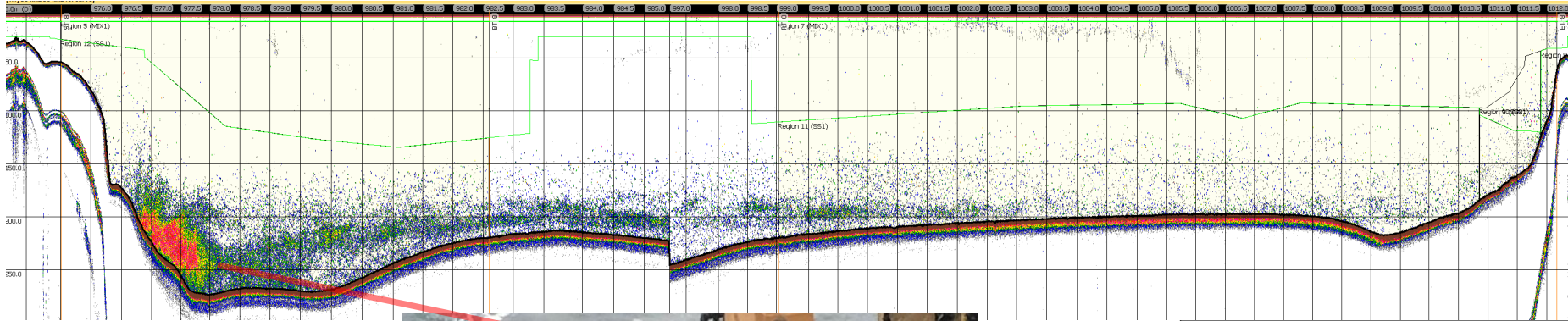
historical
mean (4.0°C)



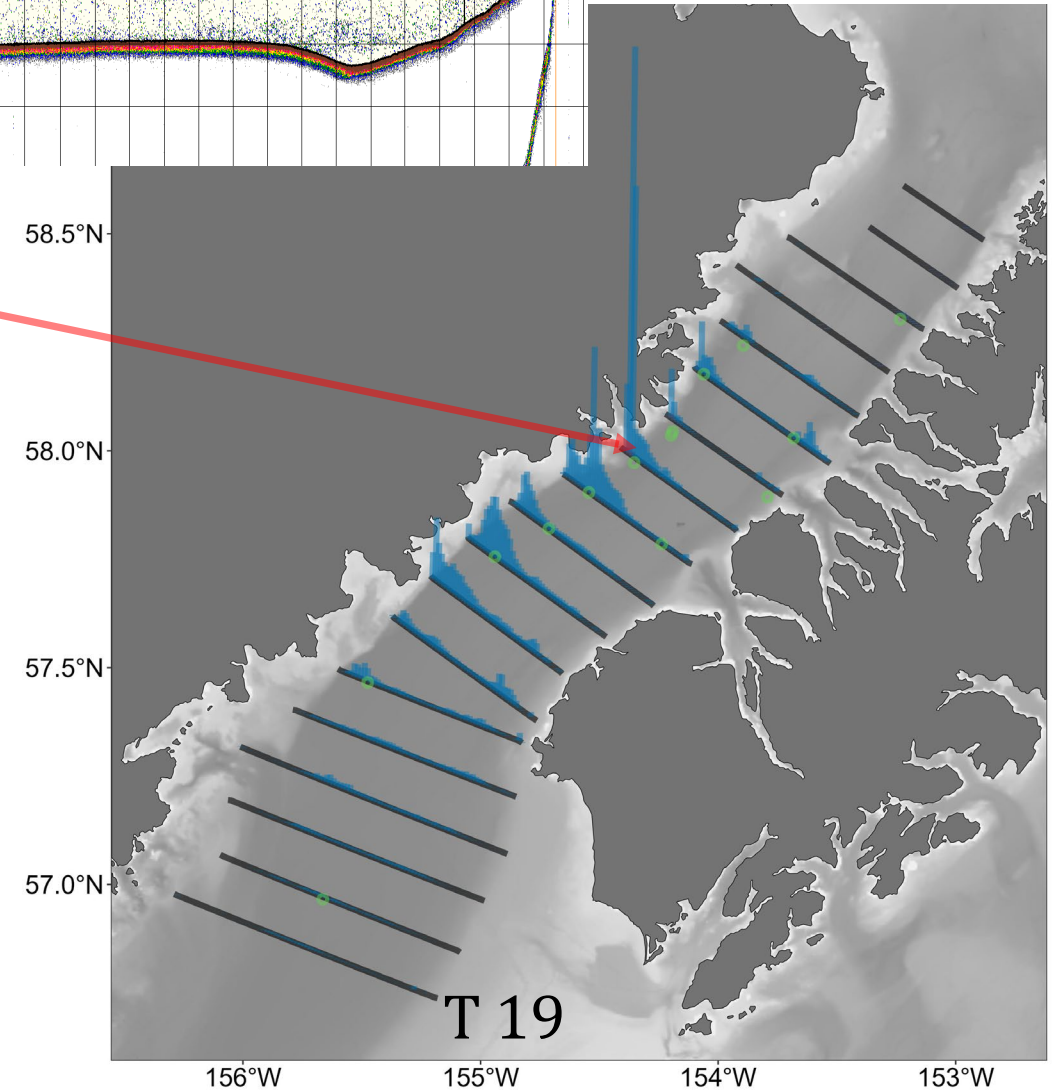
↓ 0.6°C

historical
mean (4.2°C)

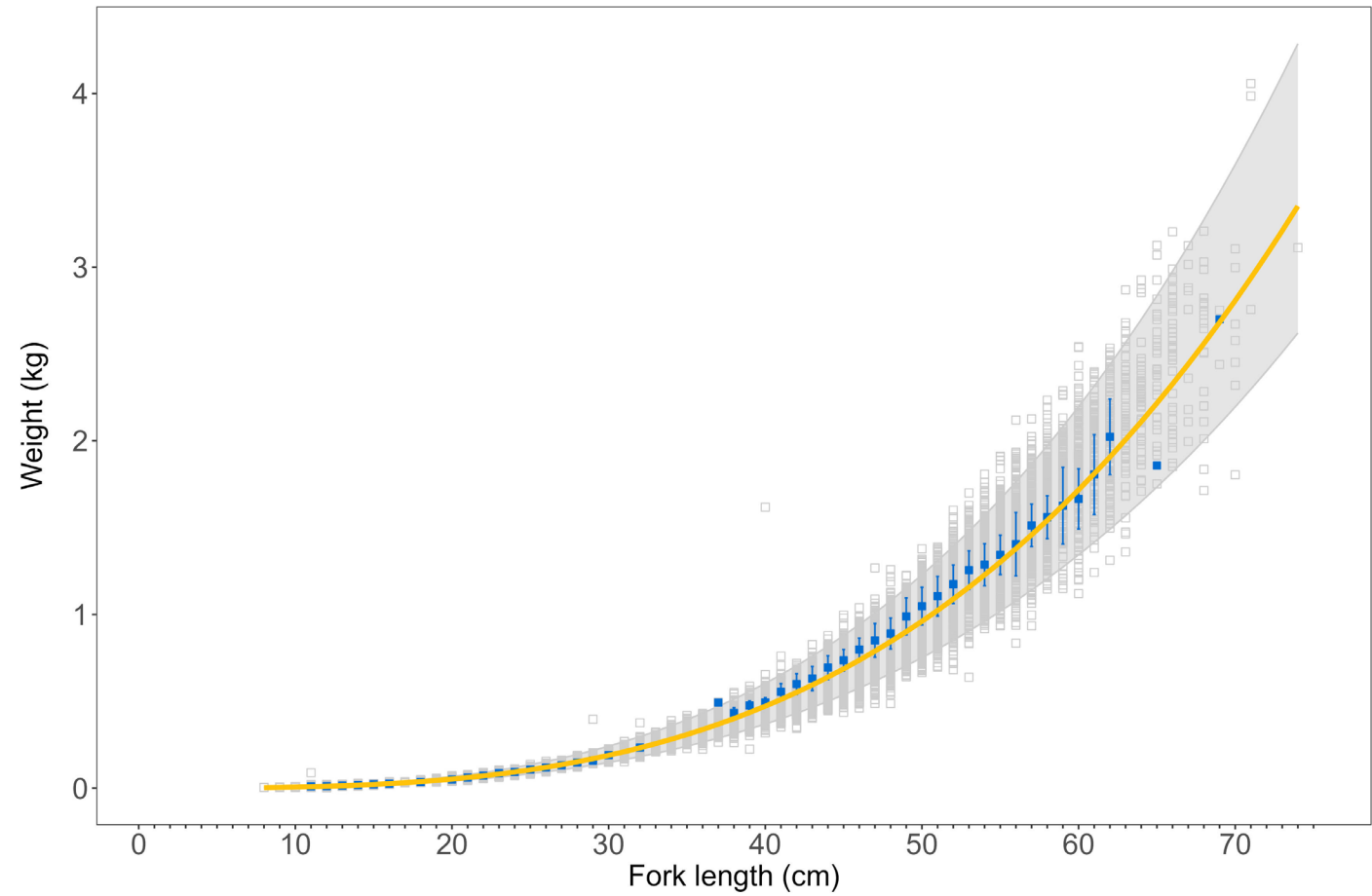
Shelikof Strait: Distribution



13 trawl
midwater
trawl samples



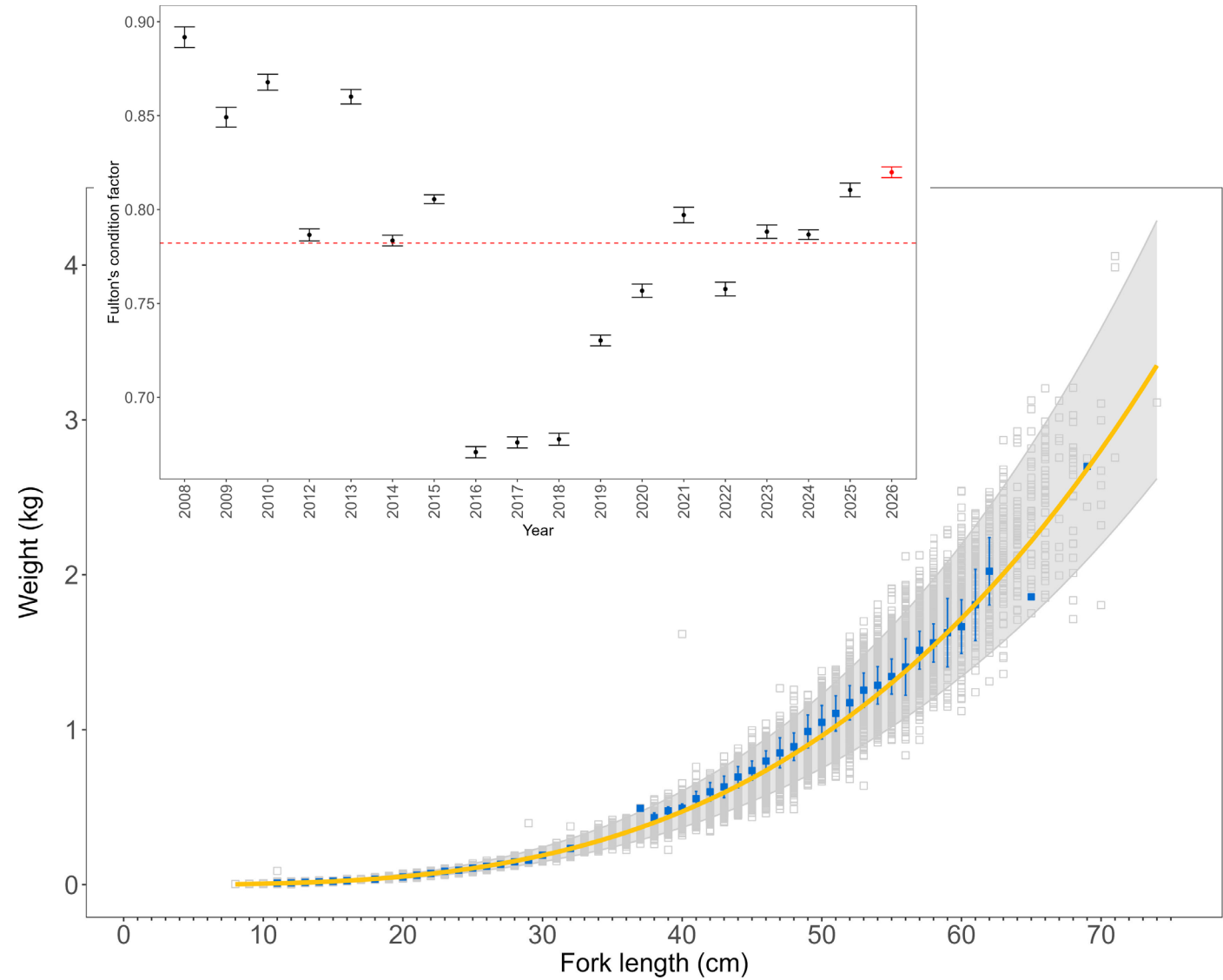
Shelikof Strait: Length/Weight



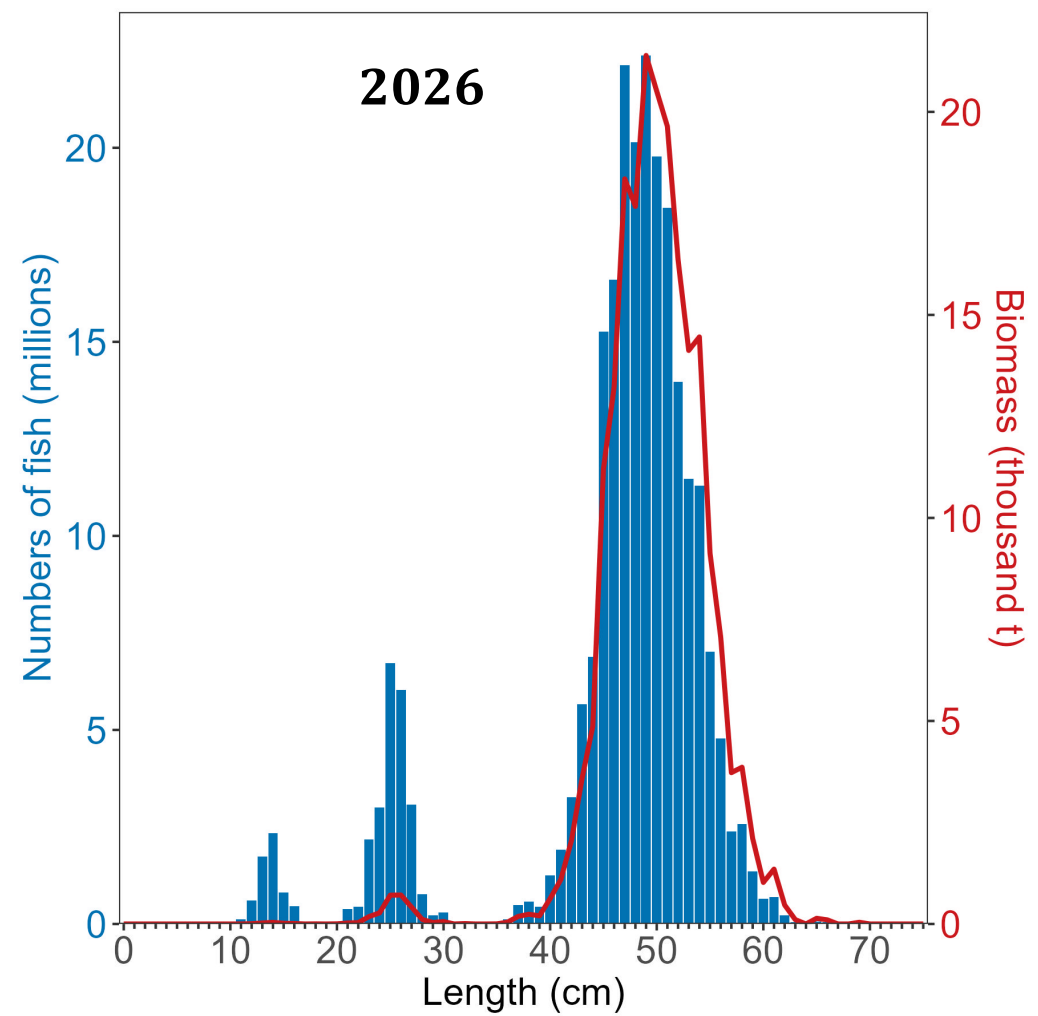
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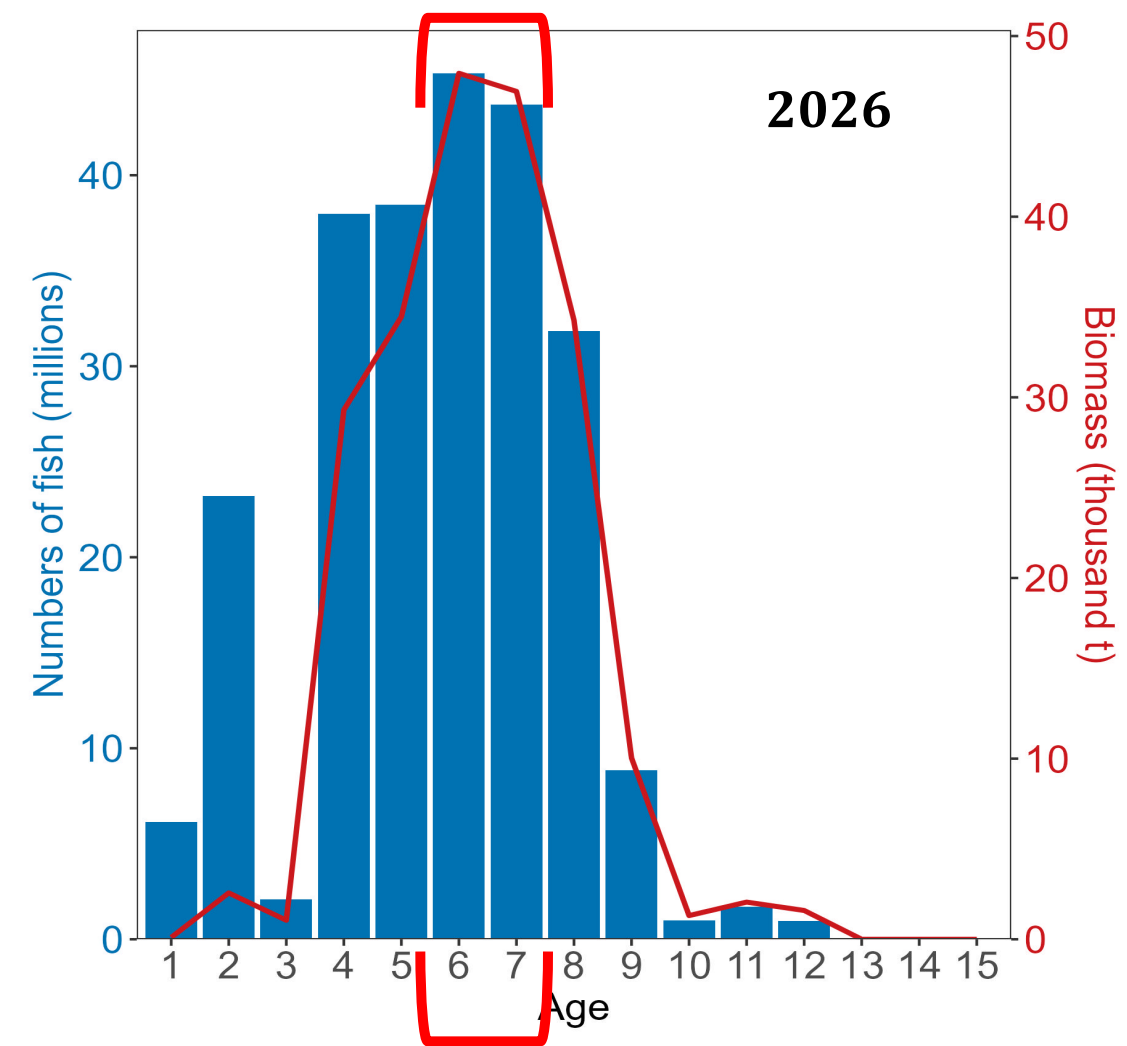
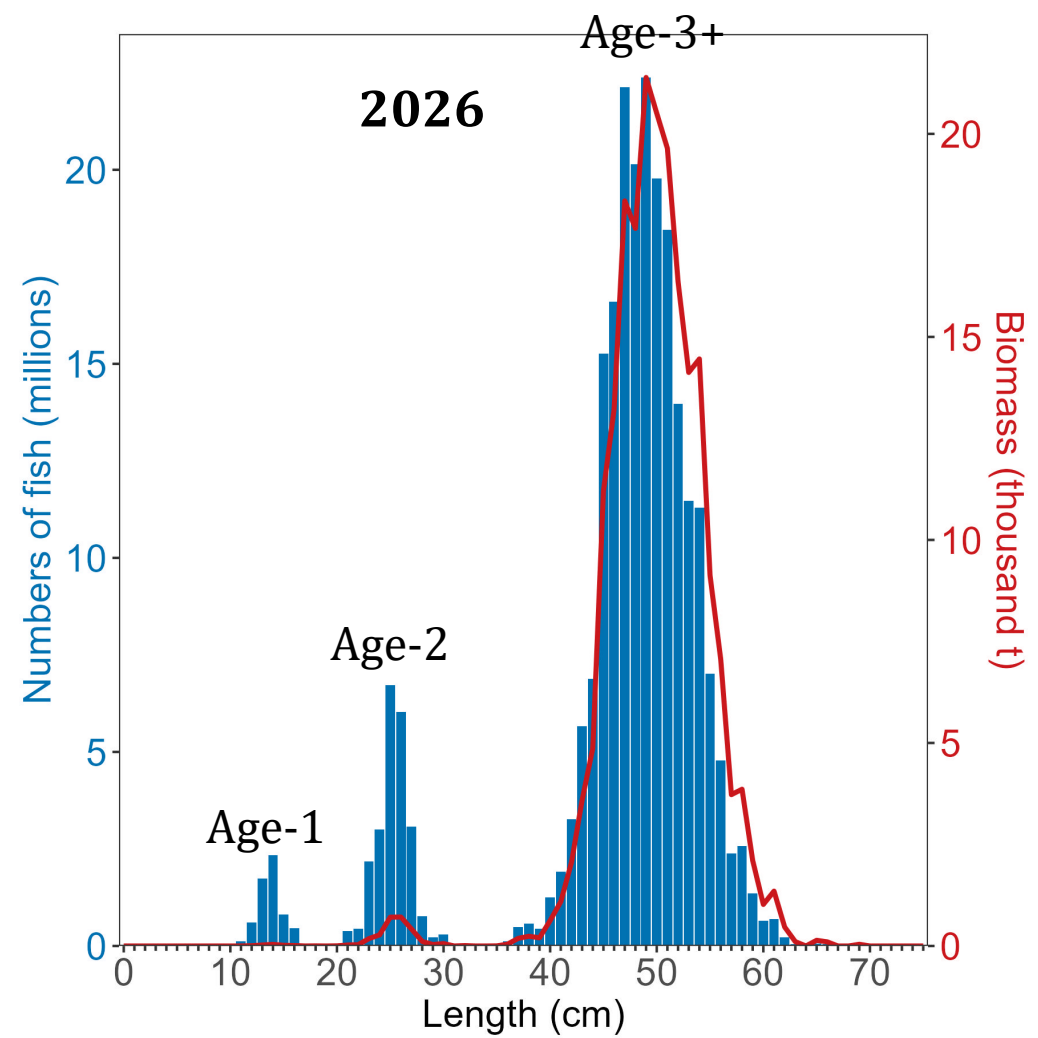
Shelikof Strait pollock > 40 cm



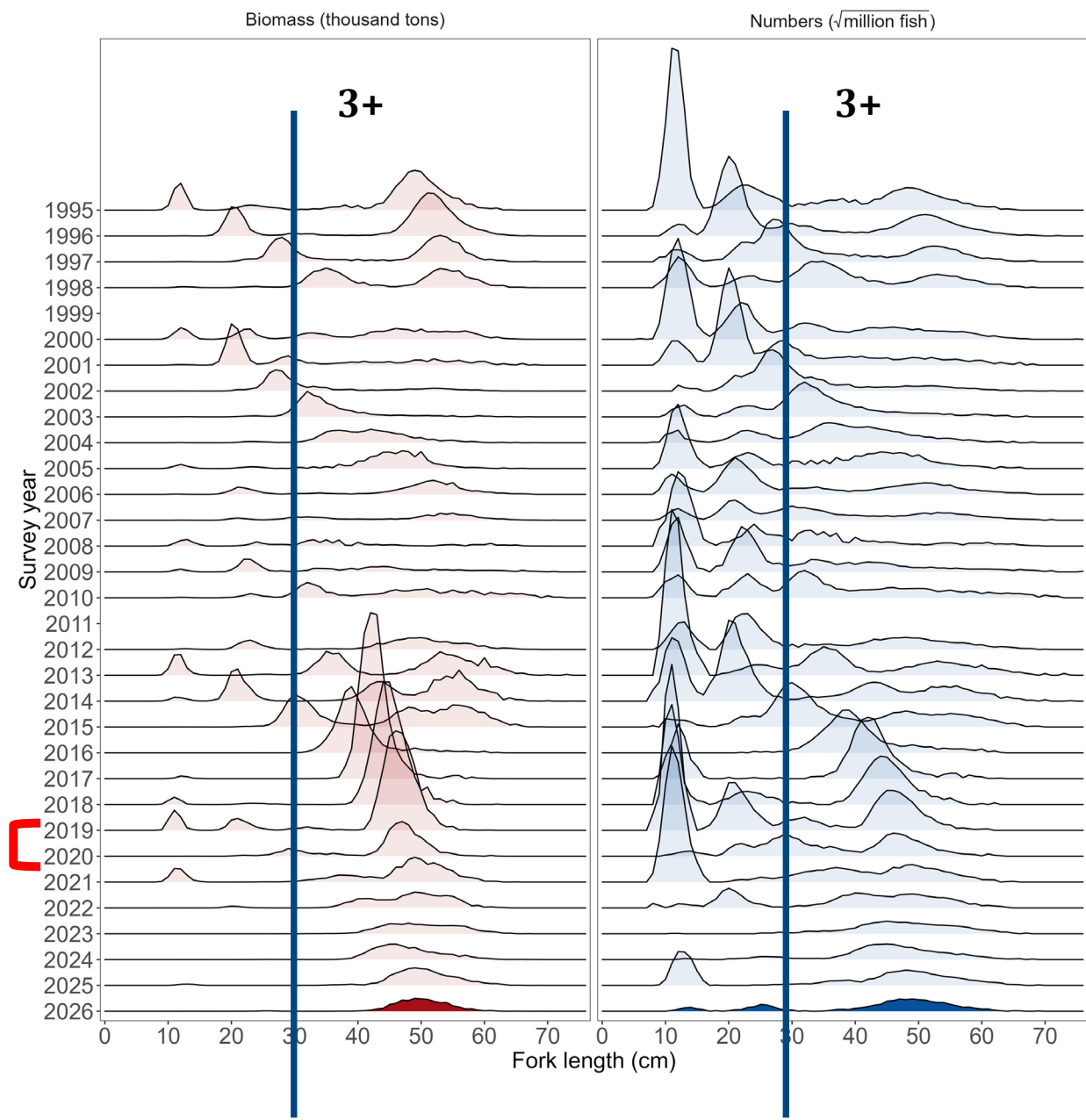
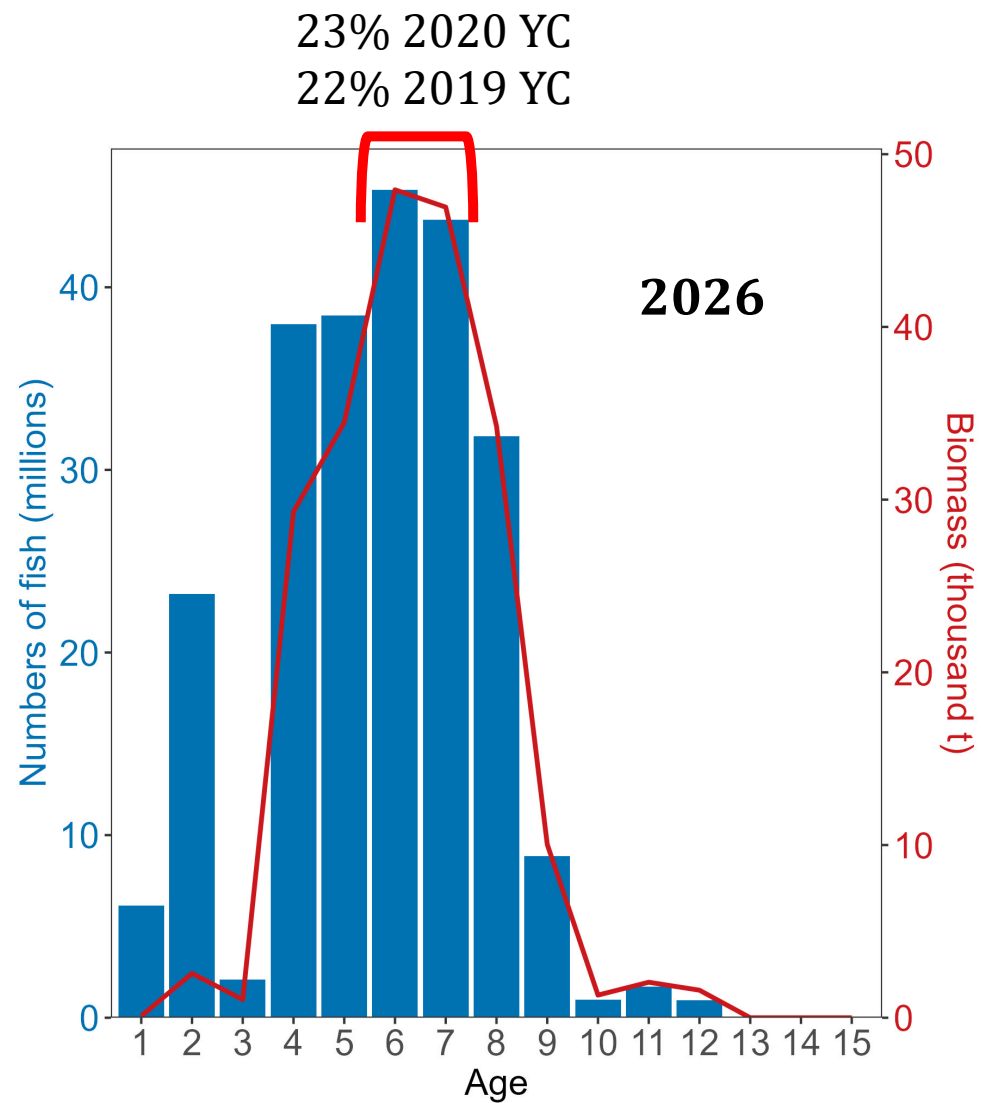
Shelikof Strait: Abundance



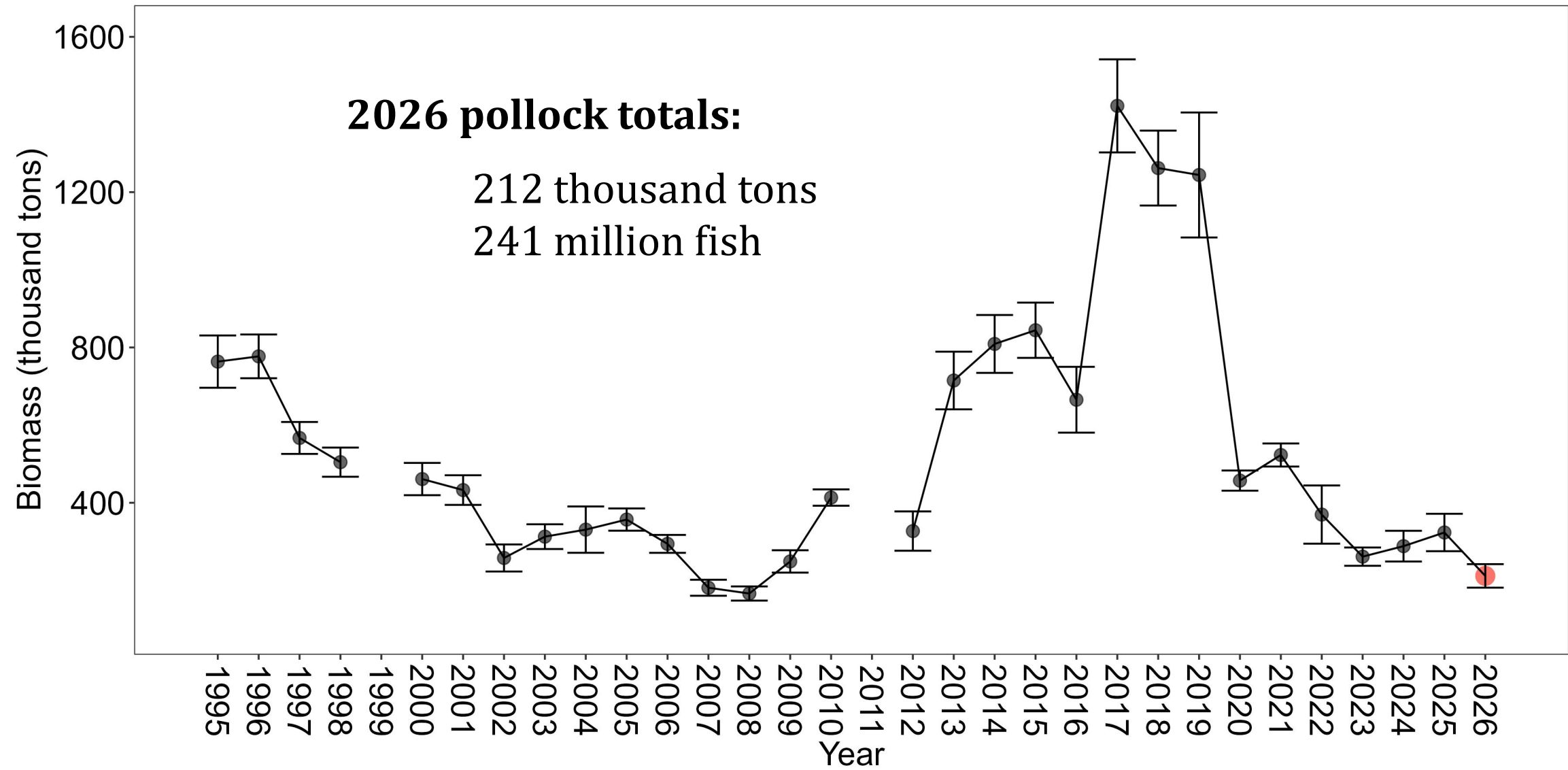
Shelikof Strait: Abundance



Shelikof Strait: Abundance

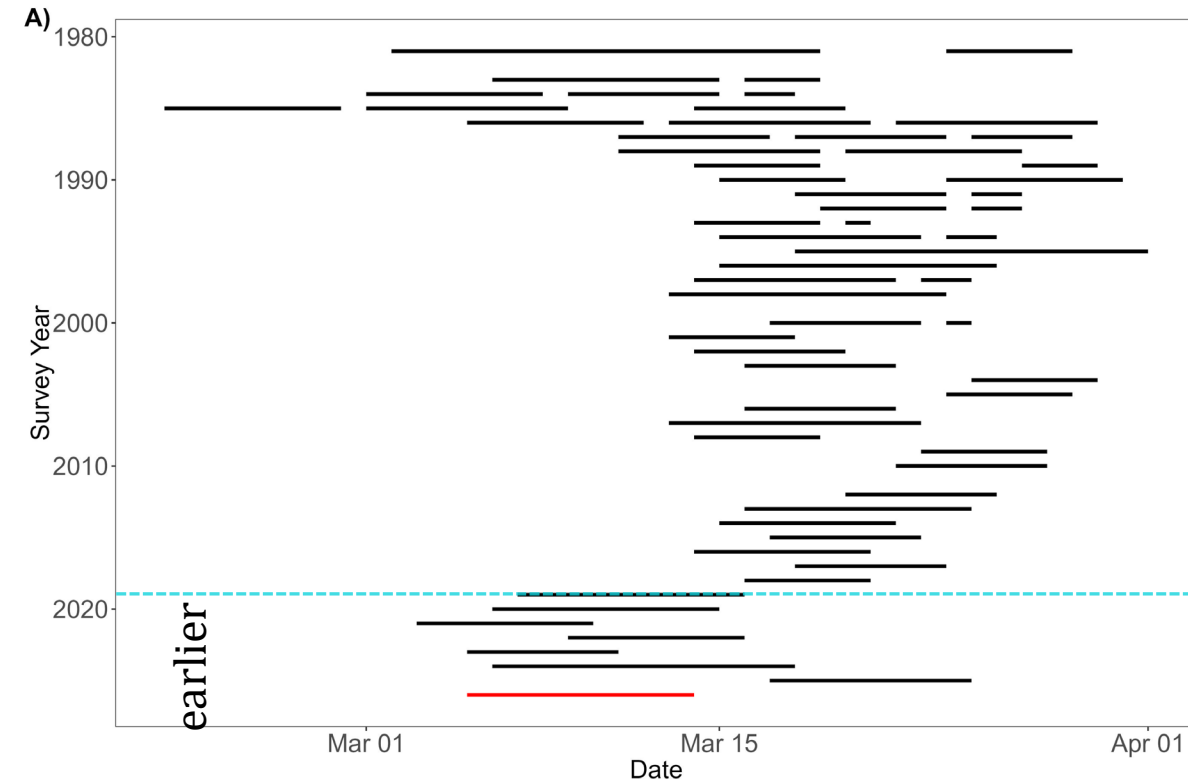


Shelikof Strait: Biomass



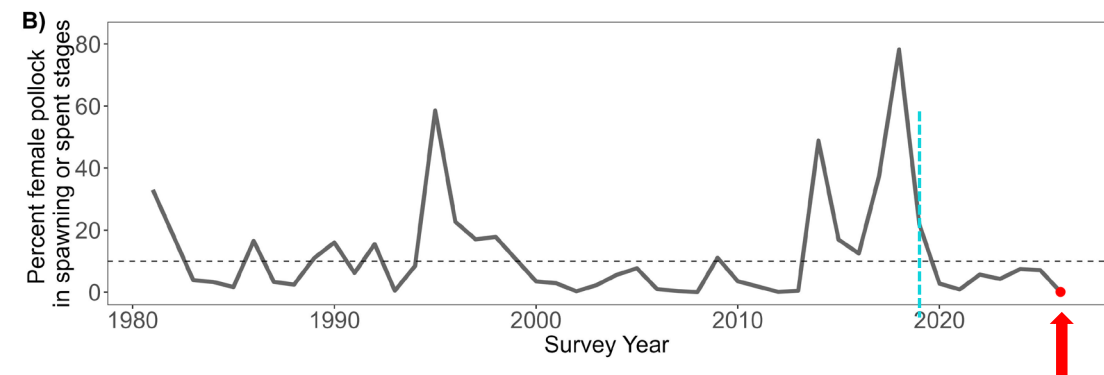
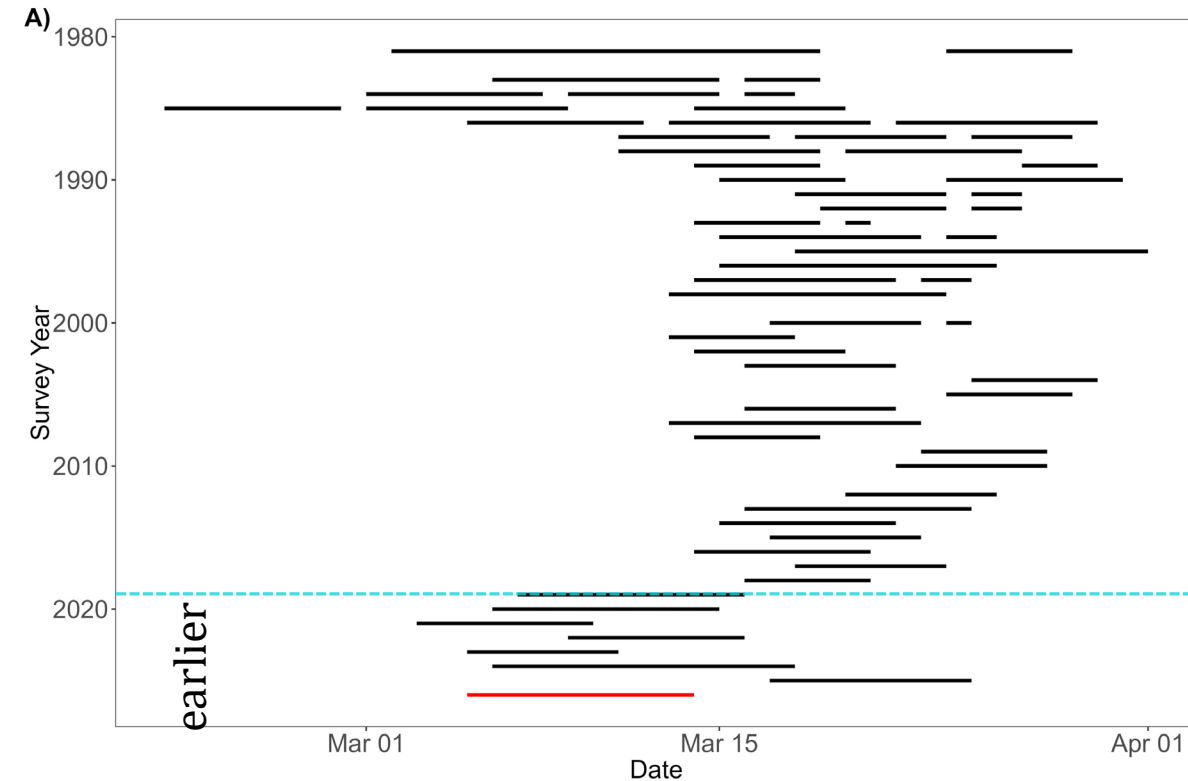
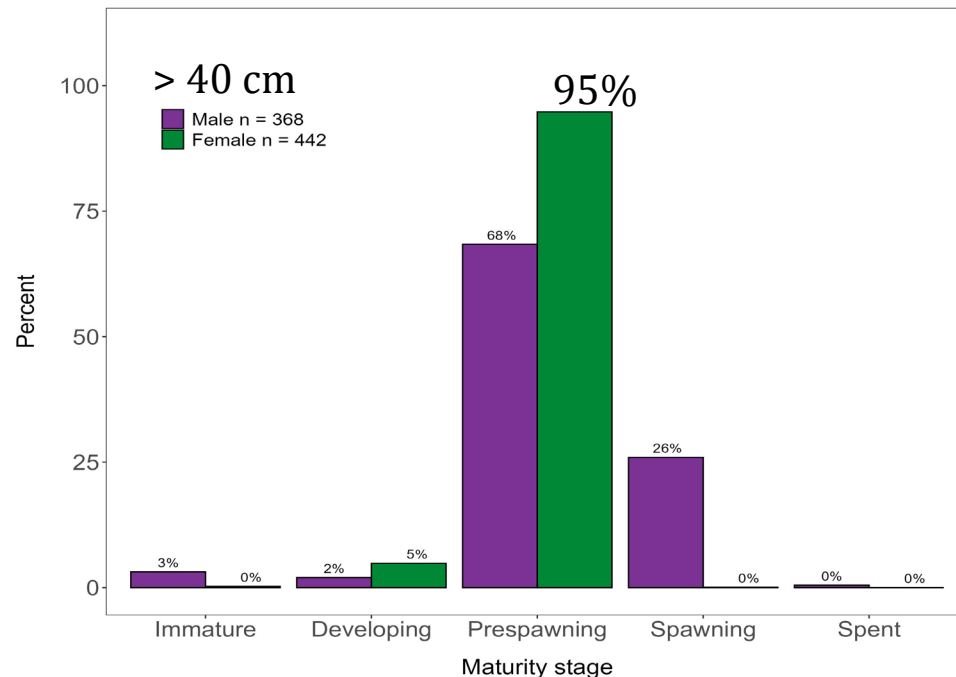
Shelikof Strait: Survey Timing

- Our AT survey estimates the pre-spawning pollock abundance
- In 2018, 68% of the adult females were in the spawning/spent maturity stages, ideally $\leq 10\%$ females spawning/spent
- In 2019 the survey start date was moved earlier in March



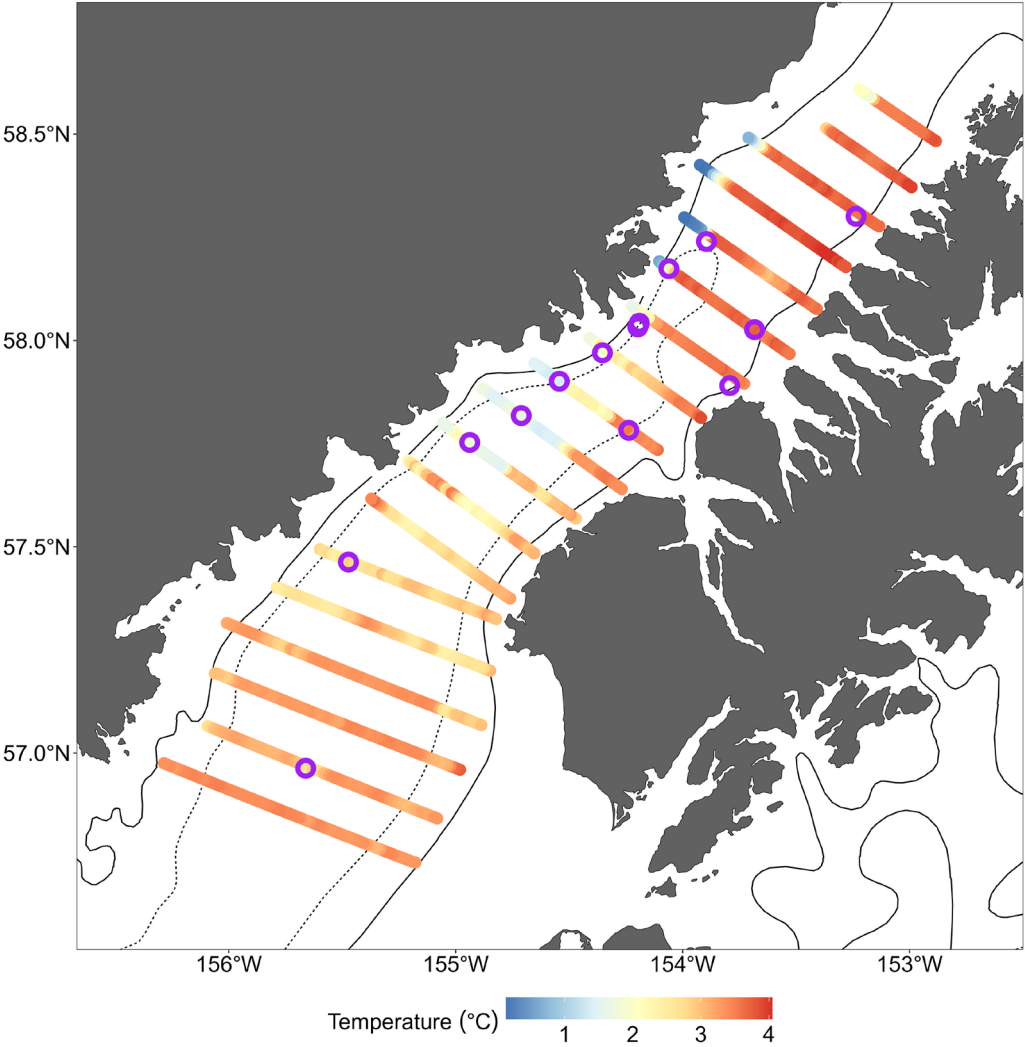
Shelikof Strait: Survey Timing

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- In 2018, 68% of the adult females were in the spawning/spent maturity stages, ideally $\leq 10\%$ females spawning/spent
- In 2019 the survey start date was moved earlier in March
- 2026: No females >40 cm spawning/spent indicating our survey timing was adequate

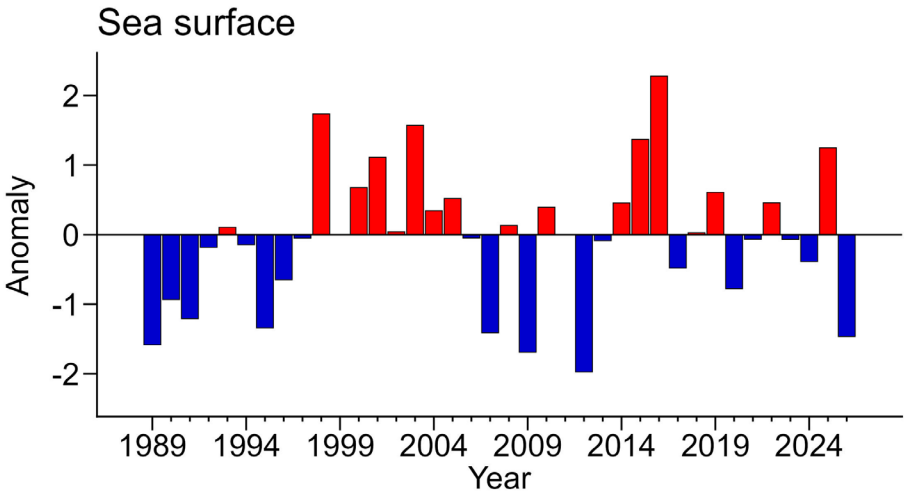


Shelikof Strait: Temperatures

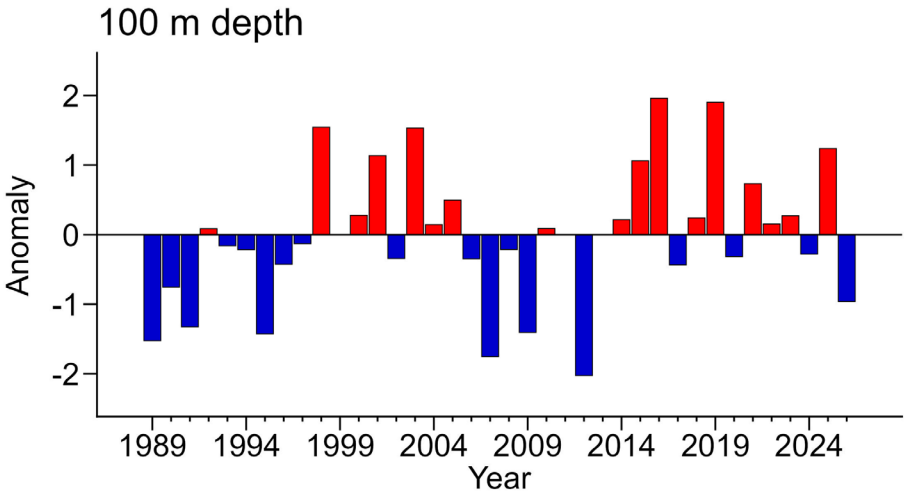
2026 flow-through
SST
Mean = 3.0°C



Temperatures at
trawl locations



↓ 1.4°C
Historical
mean (3.6°C)



↓ 0.9°C
Historical
mean (4.2°C)

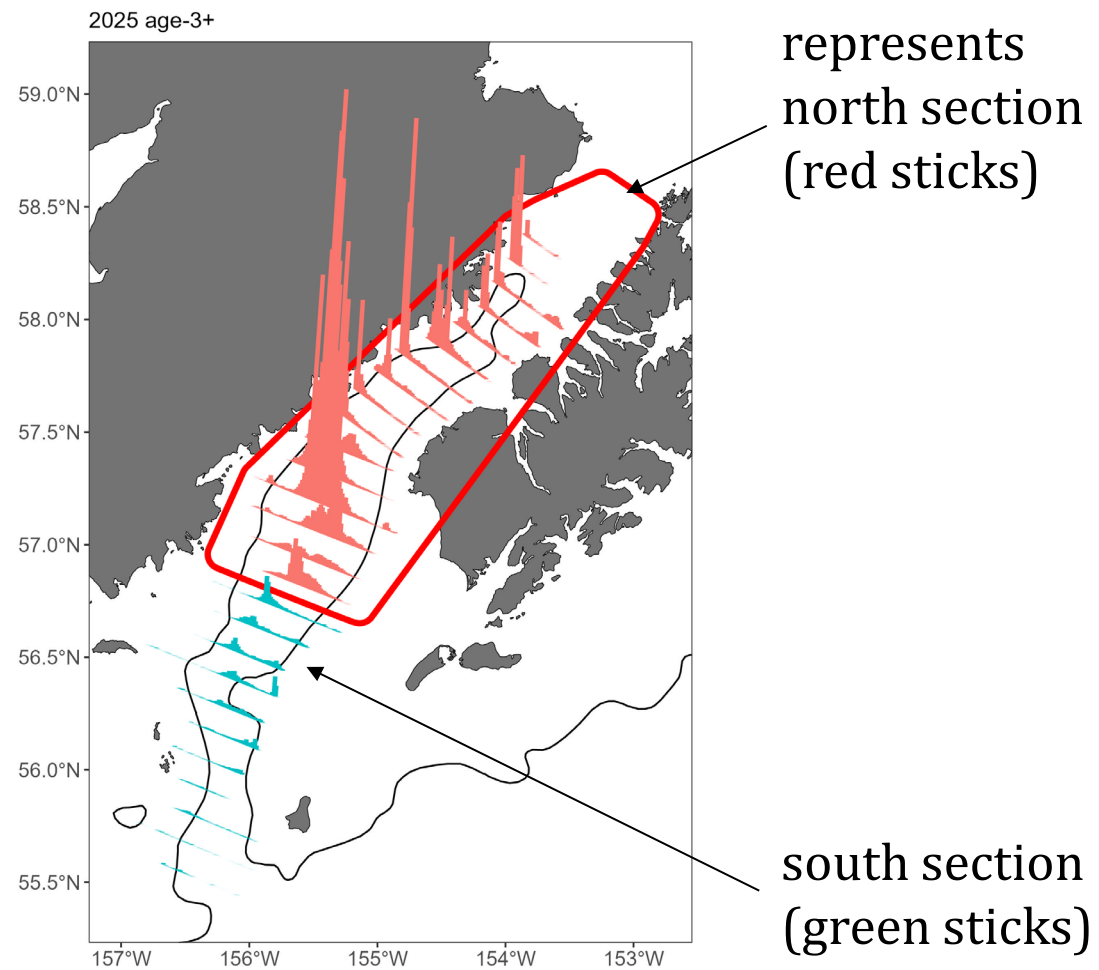
So, what about the 11 un-surveyed transects in Shelikof?

- estimate the adult biomass using historical data

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-estimate the adult biomass using historical data

Example:

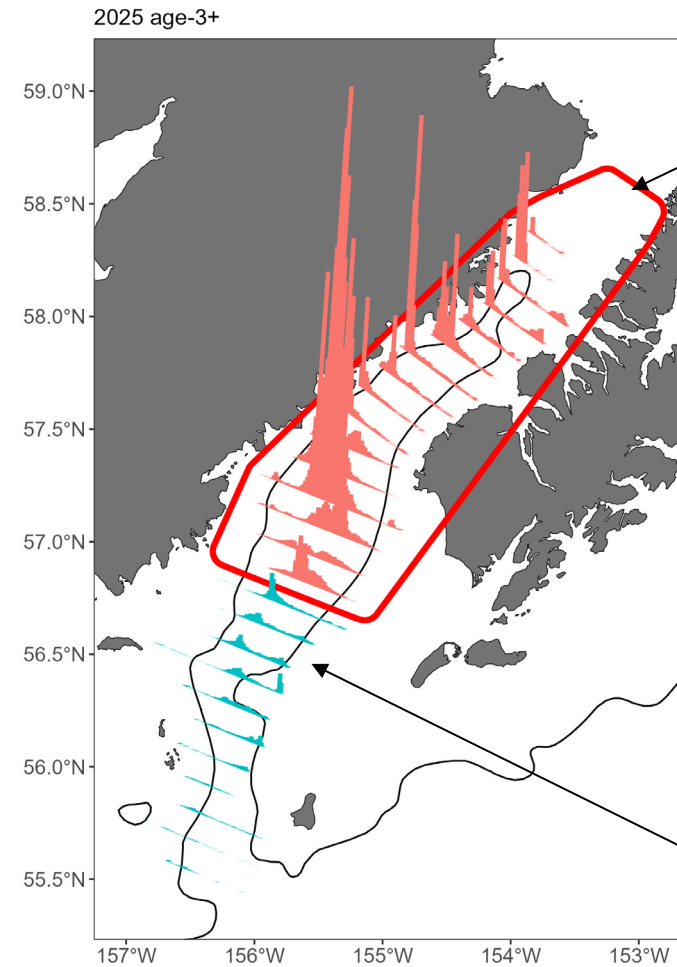


So, what about the 11 unsurveyed transects in Shelikof?

-estimate the adult biomass using historical data

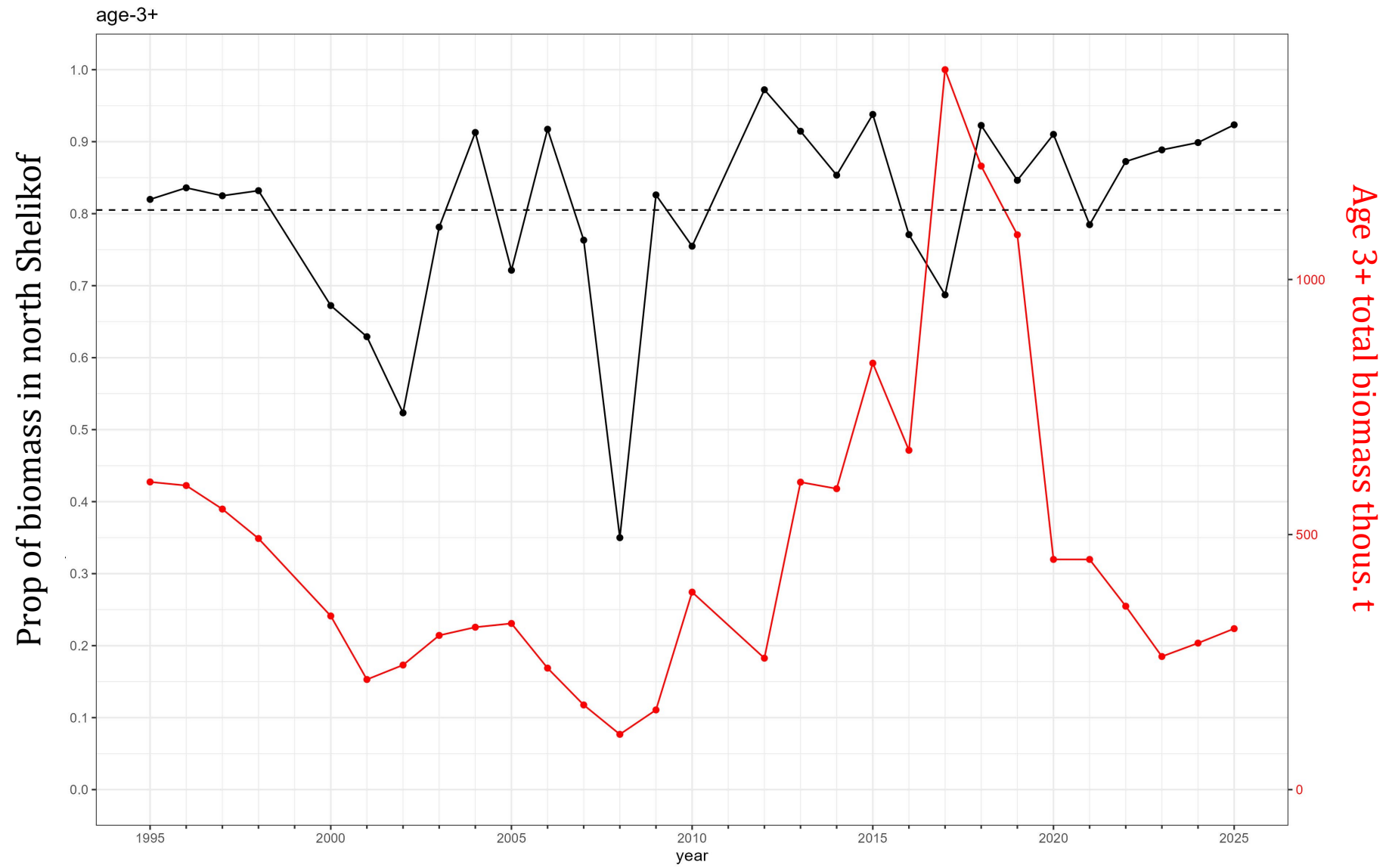
**For 2025, we found that 92%
of the adult pollock were in
the north section.**

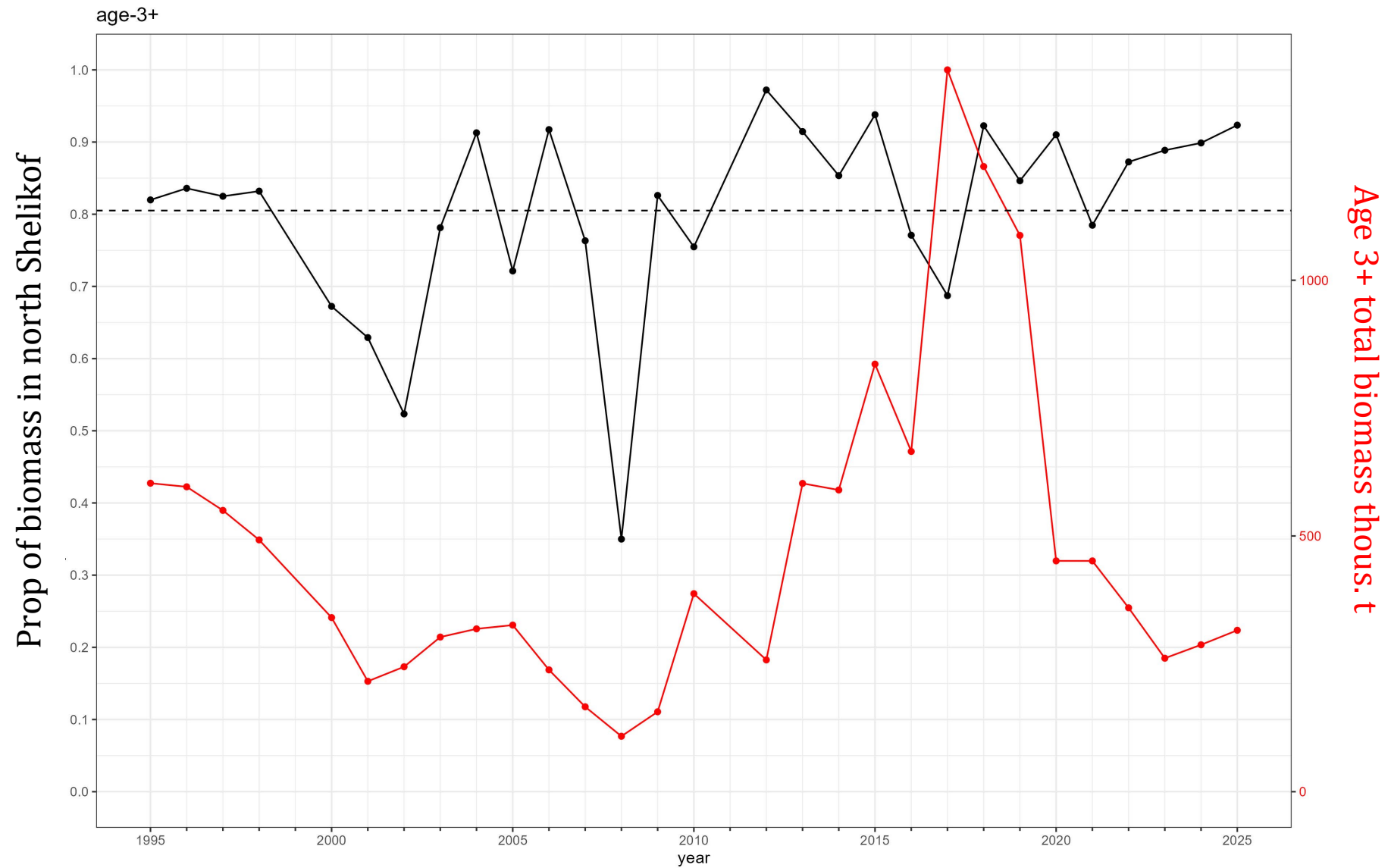
Example:



Red box
represents
north section
(red sticks)

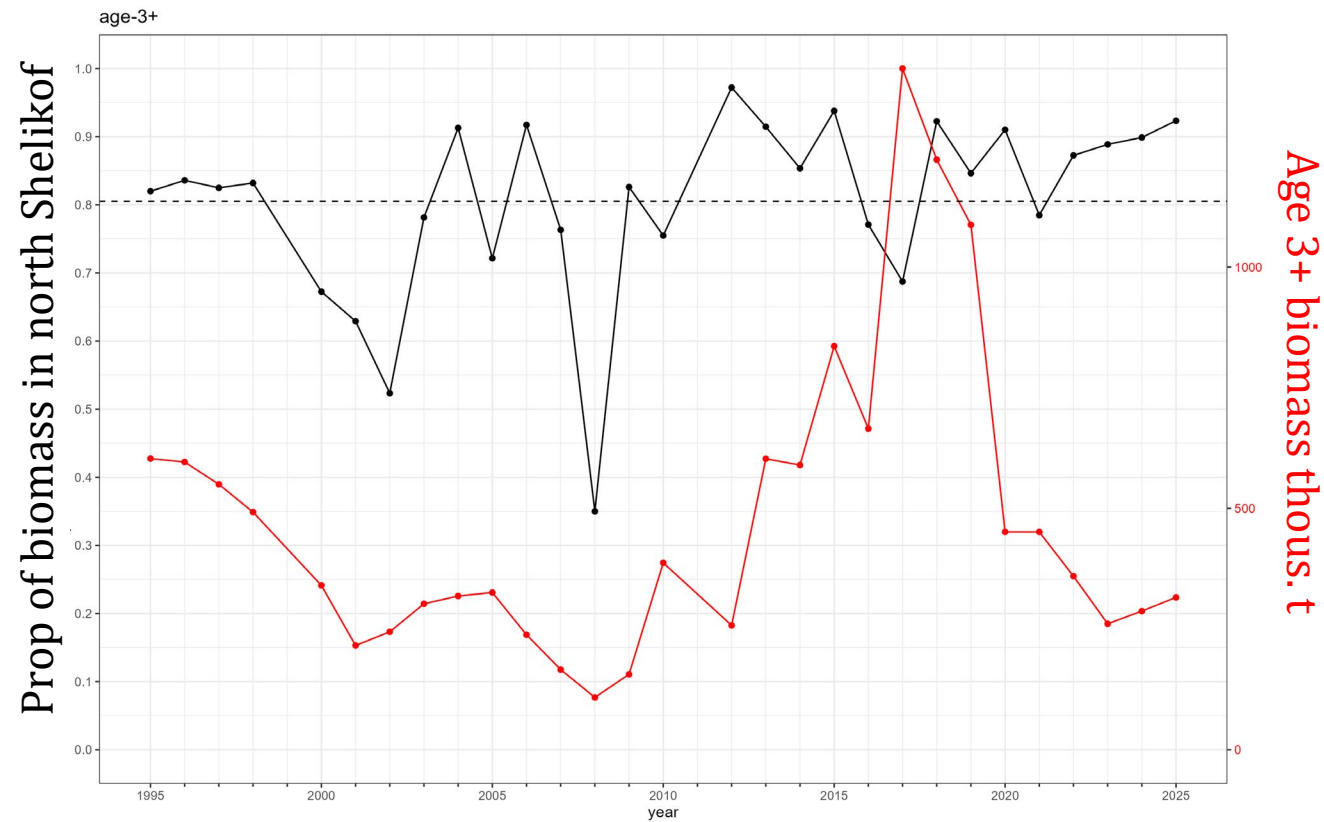
south section
(green sticks)





1995-2025, avg proportion 81% (± 0.13) in north (dashed line)

2018-2025 avg proportion 88% (± 0.05) in north



1995-2025, avg proportion 81% (± 0.13) in north

If we assumed that 81% of the 2026 adult biomass was in the north section then we could add 19% to our 2026 biomass estimate of adults (208,950 t), totaling 248,560 t

88% avg proportion (± 0.05) in north 2018-2025

If we assumed that 88% of the 2026 adult biomass was in the north section then we could include 12% to our 2026 biomass estimate (208,950 t), totaling 234,023 t

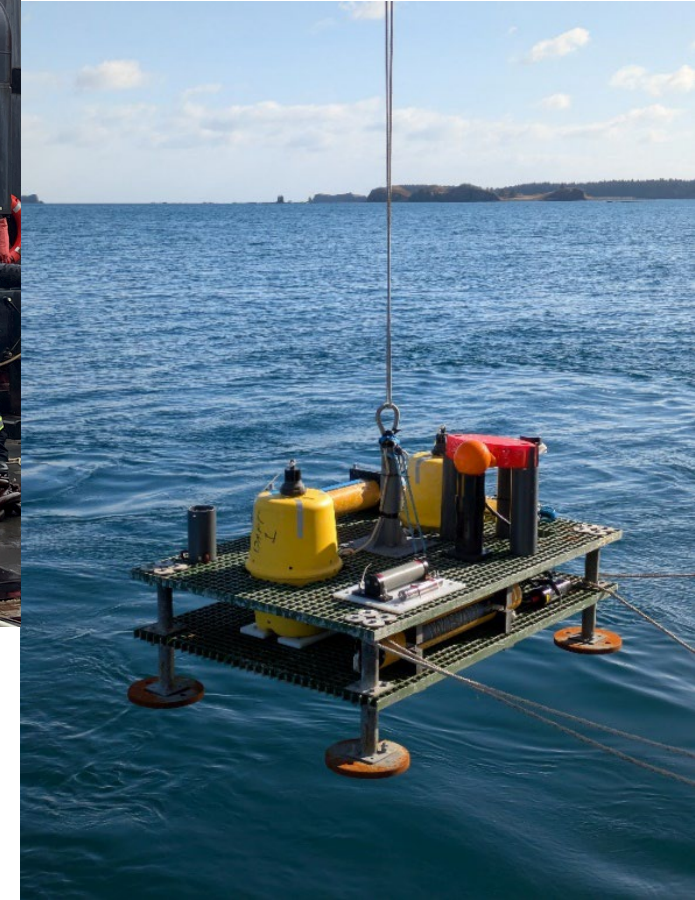
Other projects



Experimental Low Frequency (ELF) transducer testing to investigate pollock size classification (Shumagins)



Deployed transducer/hydrophone mooring in Shelikof to investigate pollock vocalizations during spawning (Shumagins)



Recovered transducer mooring after long-term equipment test (Shelikof)

Take away:

Not many 1 year old pollock but we found some 2-year-old pollock during both the Shumagin and Shelikof cruises

Probably fewer age-3+ pollock in Shelikof than last year but depends on how the estimate in the southern Strait is handled

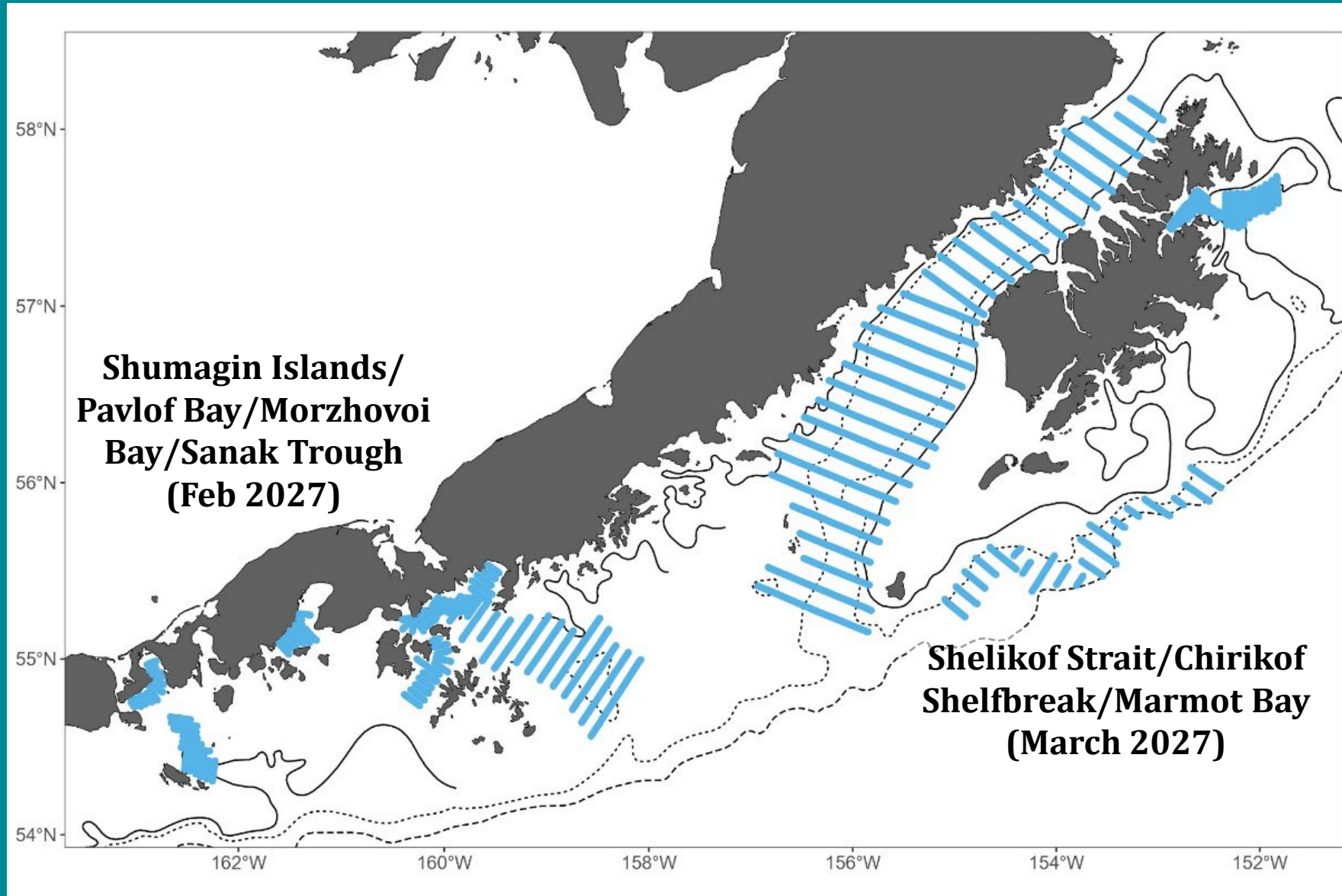
It was cold

Thank you to all participants of the Shumagins and Shelikof cruises!!

Special guests: S. Rooney, A. Spear, J. Reum, J. Hoff, C. Bassett

Thank you to the officers and crew of the NOAA Ship *Oscar Dyson*

Winter 2027 Survey Plans – NOAA Ship *Shimada*



Questions?

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(denise.mckelvey@noaa.gov)

MACE Program Manager: Sandy Parker-Stetter
(sandy.parker-stetter@noaa.gov)

