



**NOAA**  
**FISHERIES**

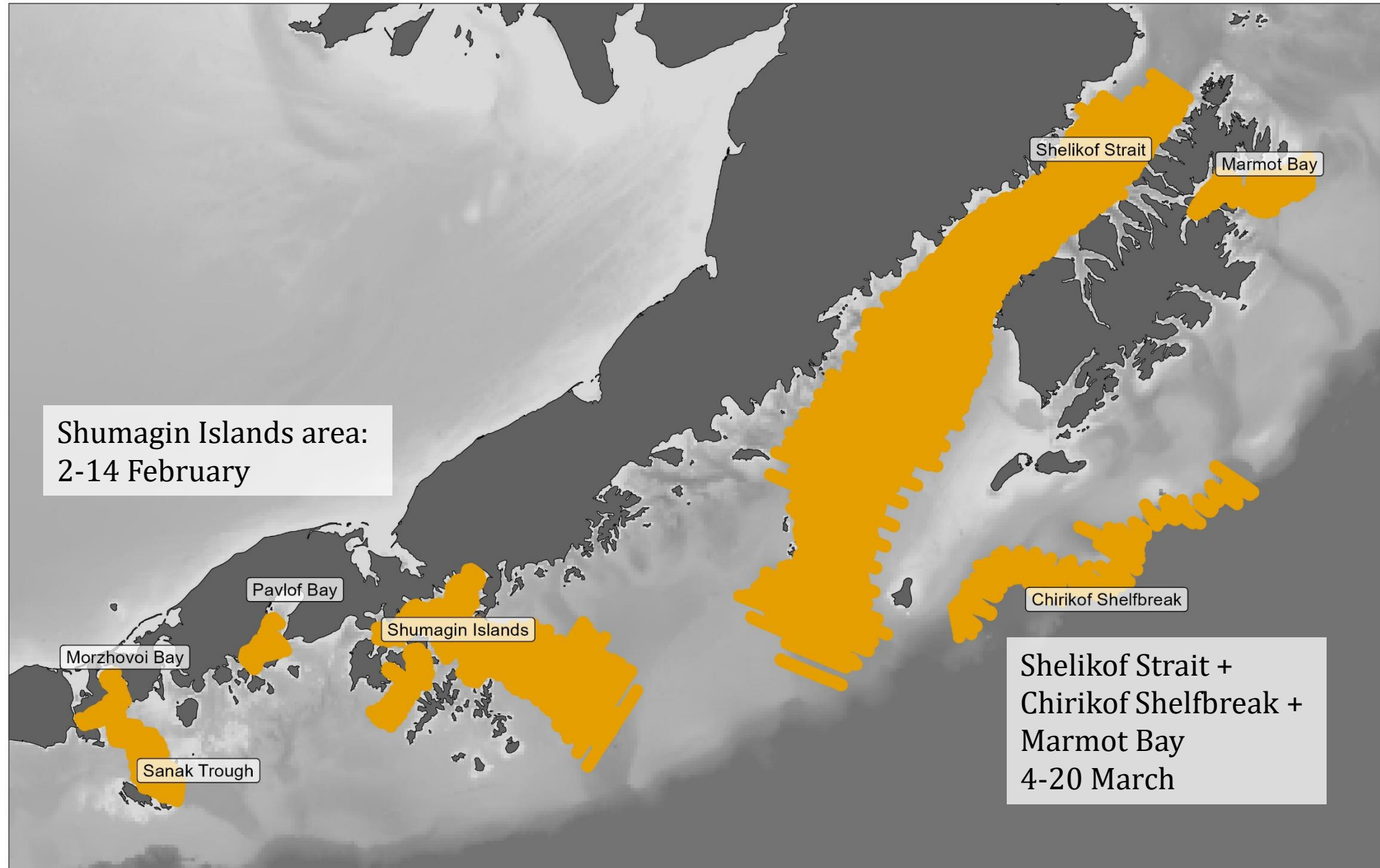
# Results of 2024 Winter pollock pre-spawning surveys in the Gulf of Alaska

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& MACE Staff

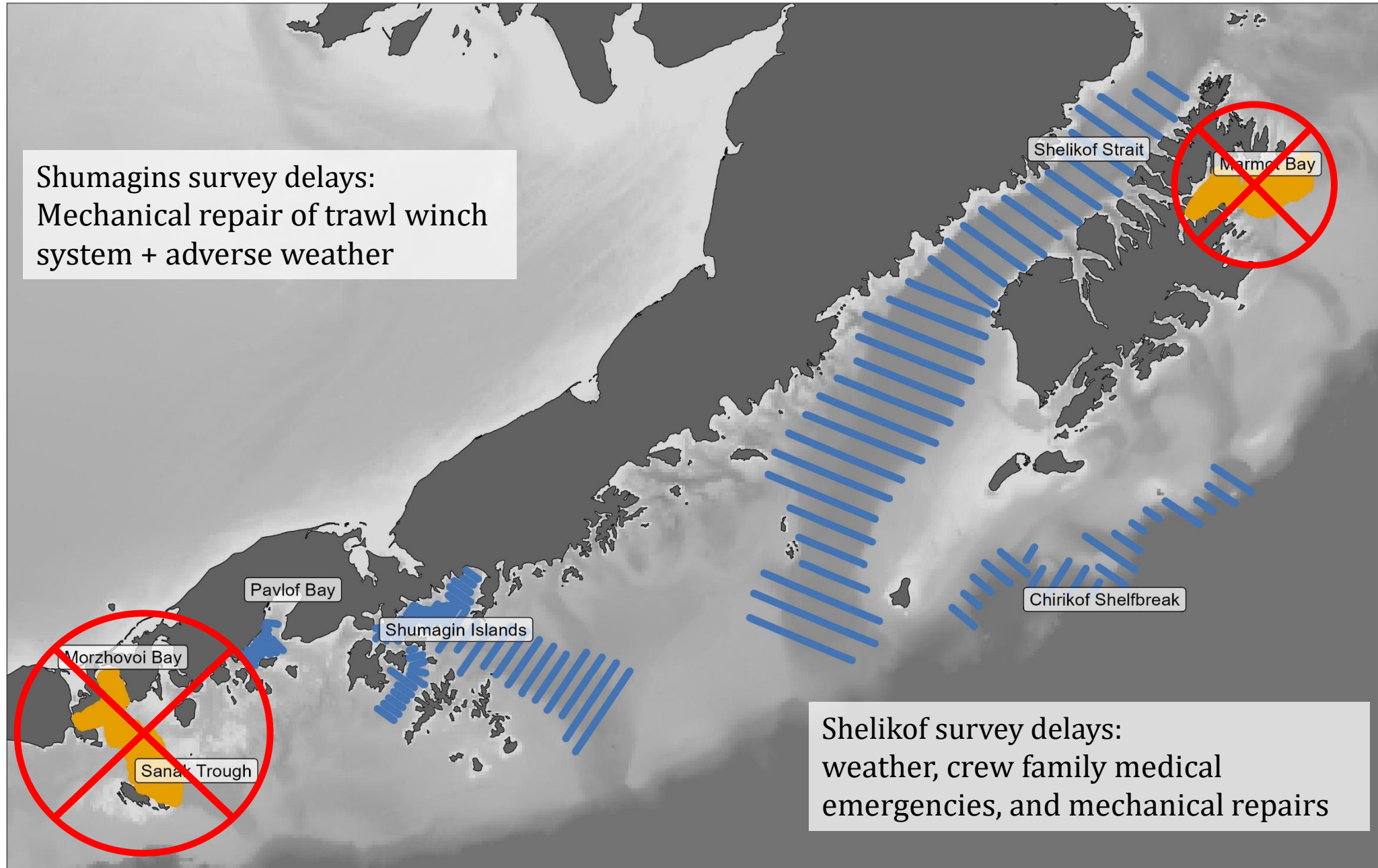
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# 2024 winter GOA AT survey plan



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# Acoustic-trawl survey methods

**1,619 nmi of transects**

**High backscatter “targeted” hauls**

**Survey 24 hrs/day**

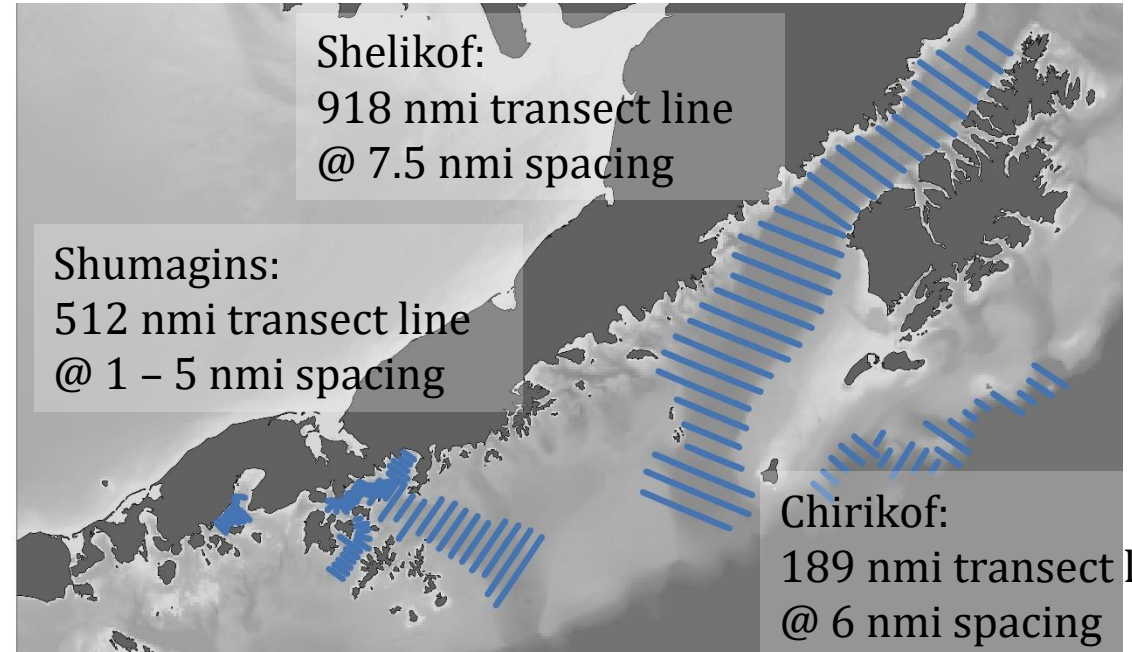
**Abundance estimates use 38 kHz**

- 16 m below surface to 0.5 m above seafloor

**Physical oceanographic data**

- Continuous SST from ship’s flow-through system

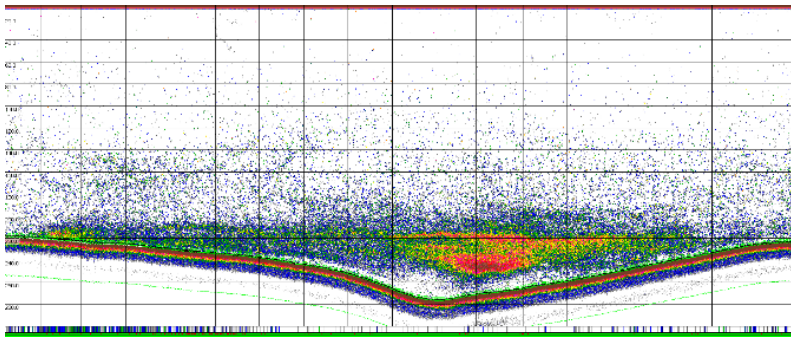
- Temp profile at trawl locations



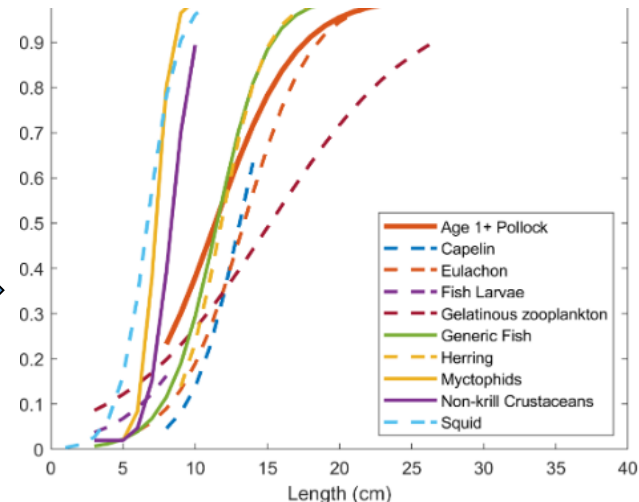
**Targeted trawls  
(species and length composition)**

**Net Selectivity  
(escapement correction)**

**Acoustic data collection  
along parallel transects**



+

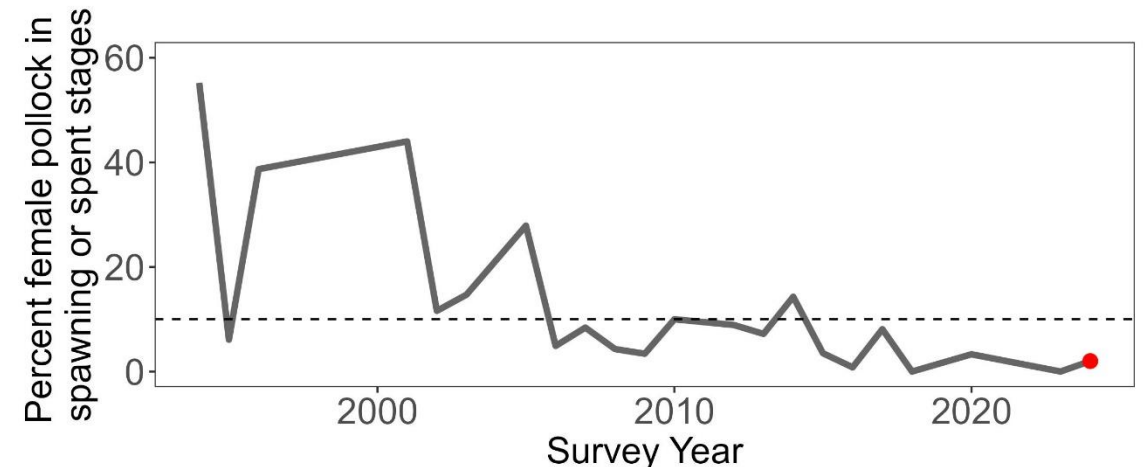
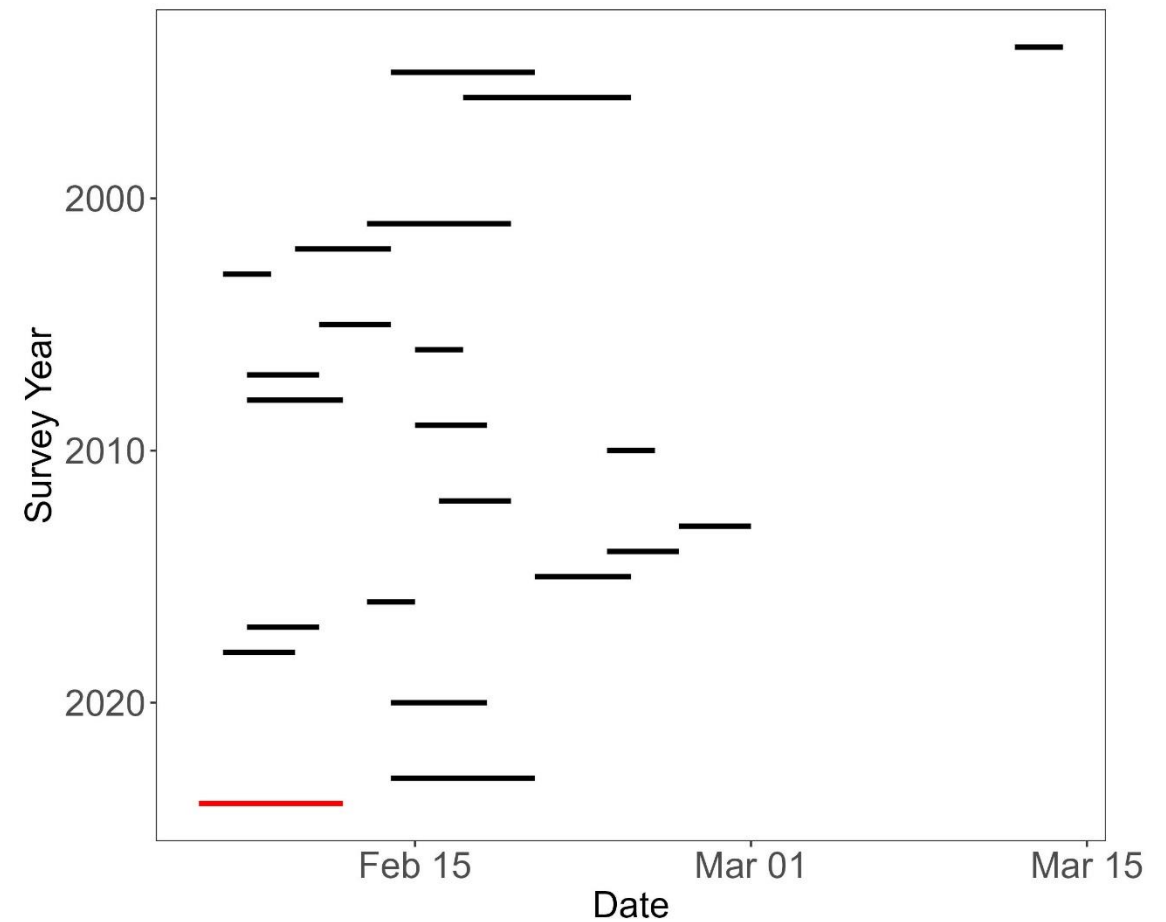
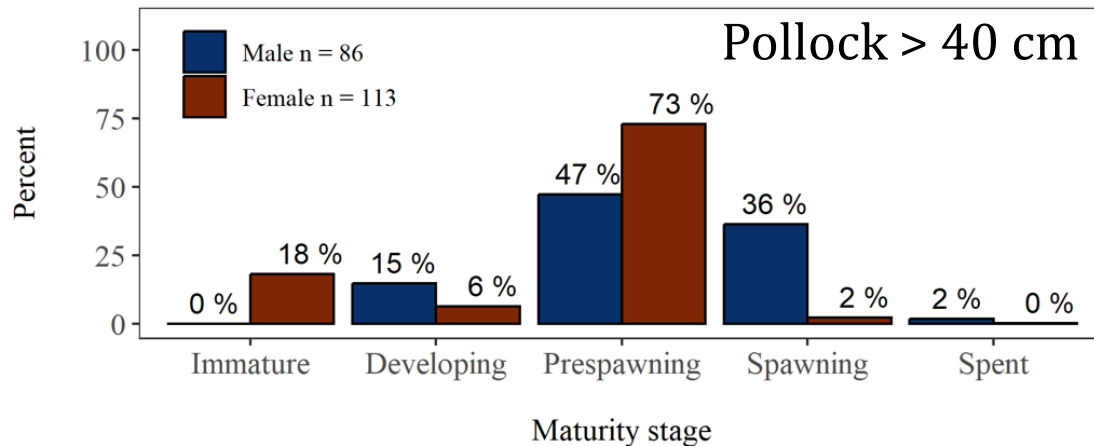


**Survey  
estimate**

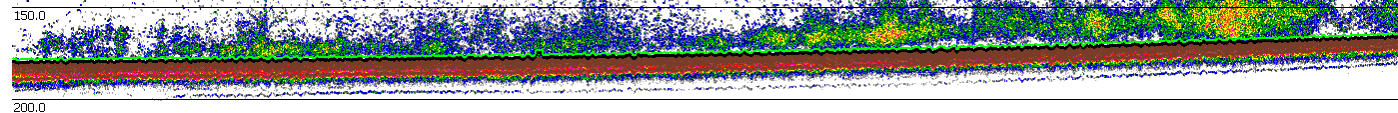
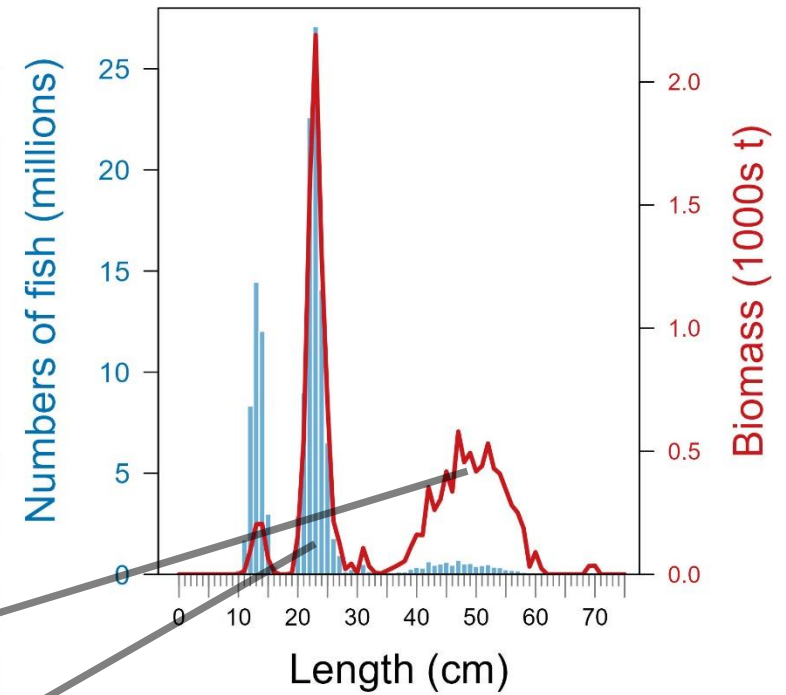
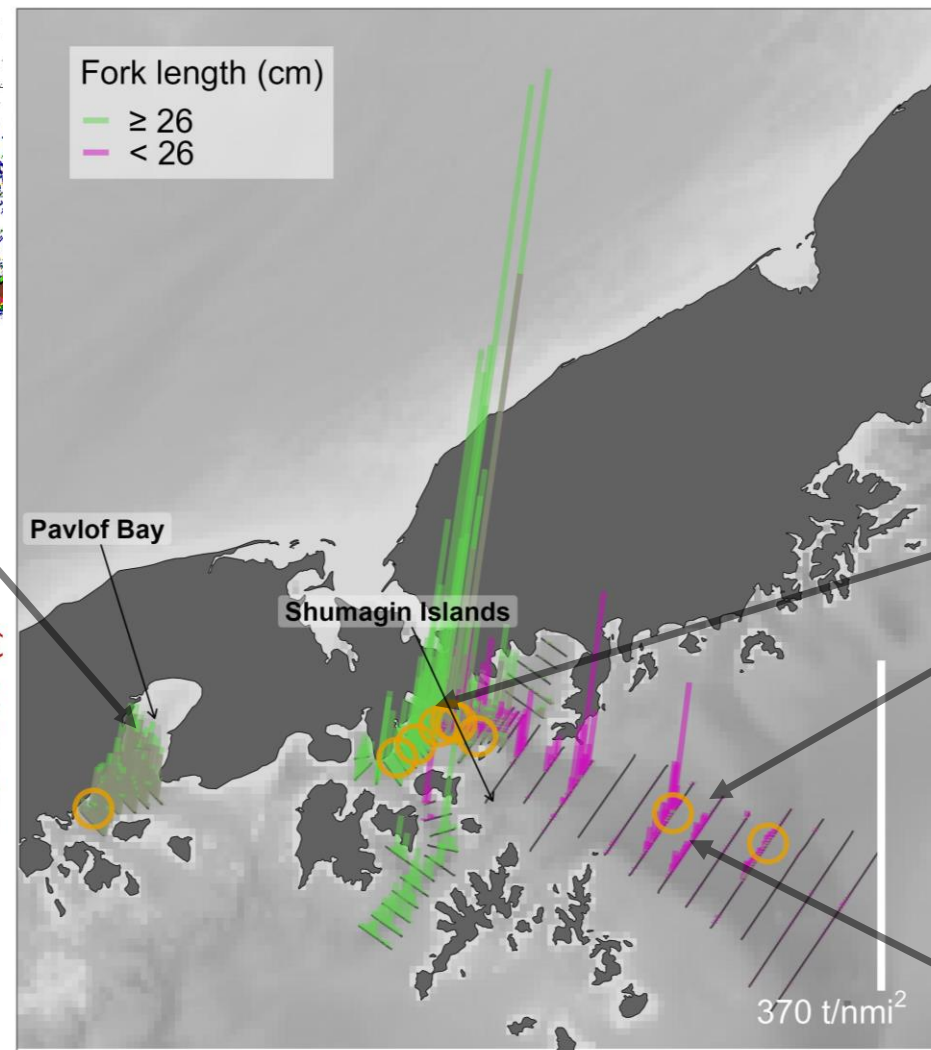
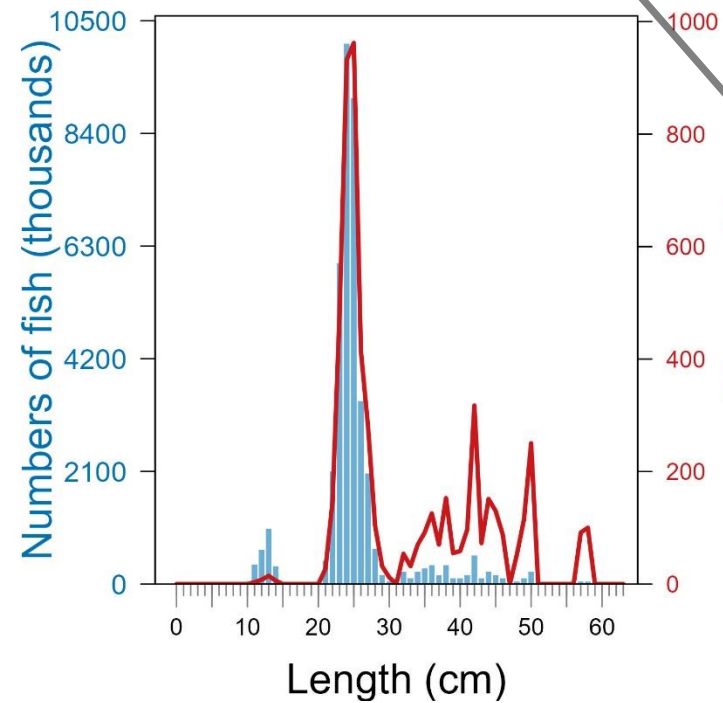
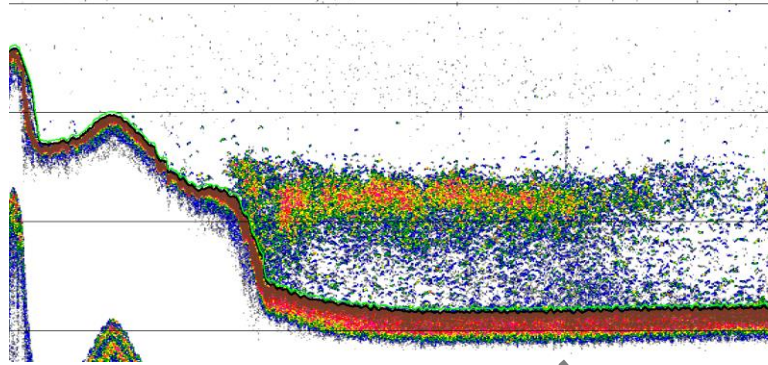
# Shumagins: Survey timing

## Our winter surveys target pre-spawning adult pollock

- Goal: most adult females should be in pre-spawning maturity stage and spawning and spent females combined should be  $<10\%$  of observations
- 2% of female pollock  $> 40$  cm spawning/spent: timing appropriate

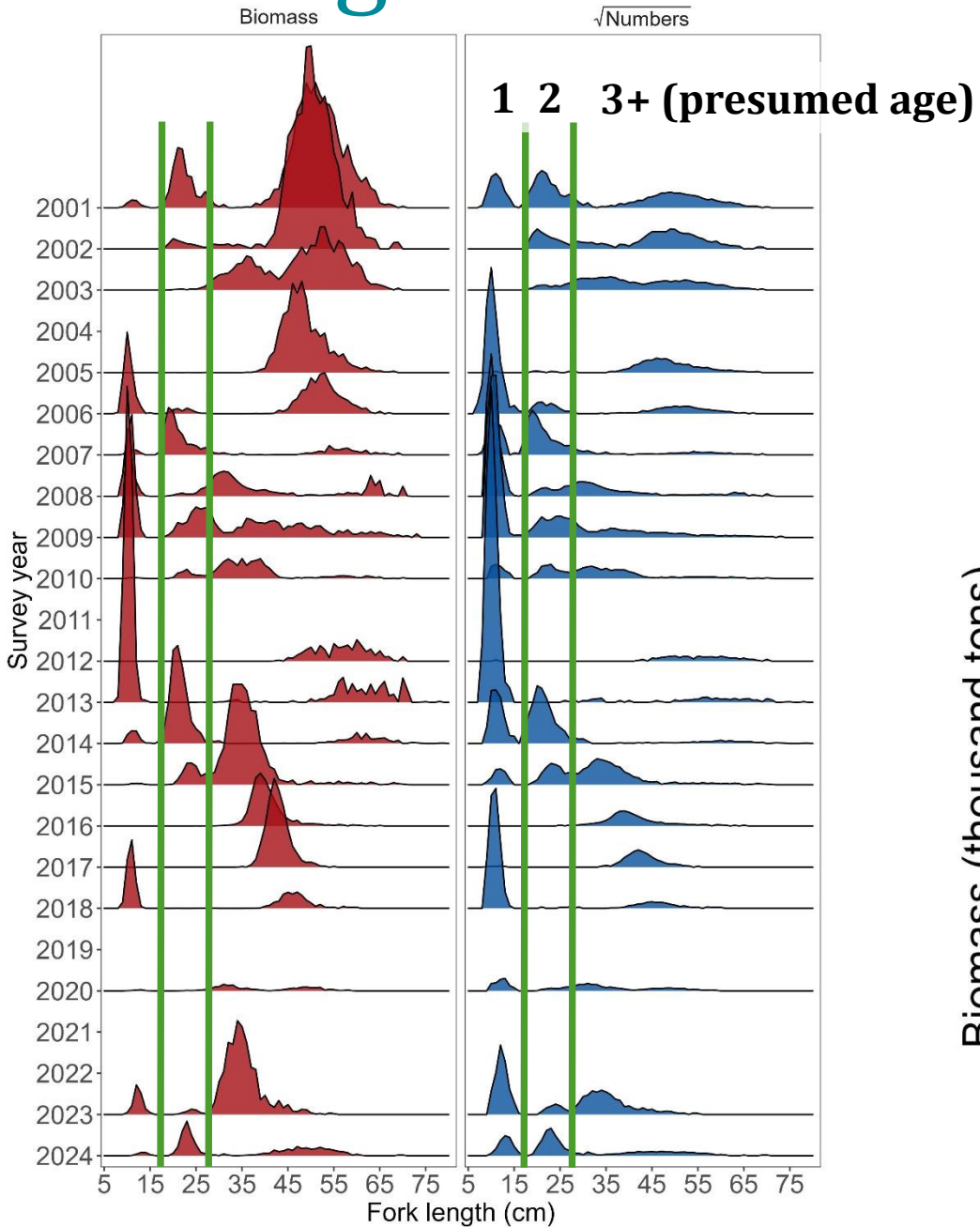


# Shumagins: Distribution and abundance



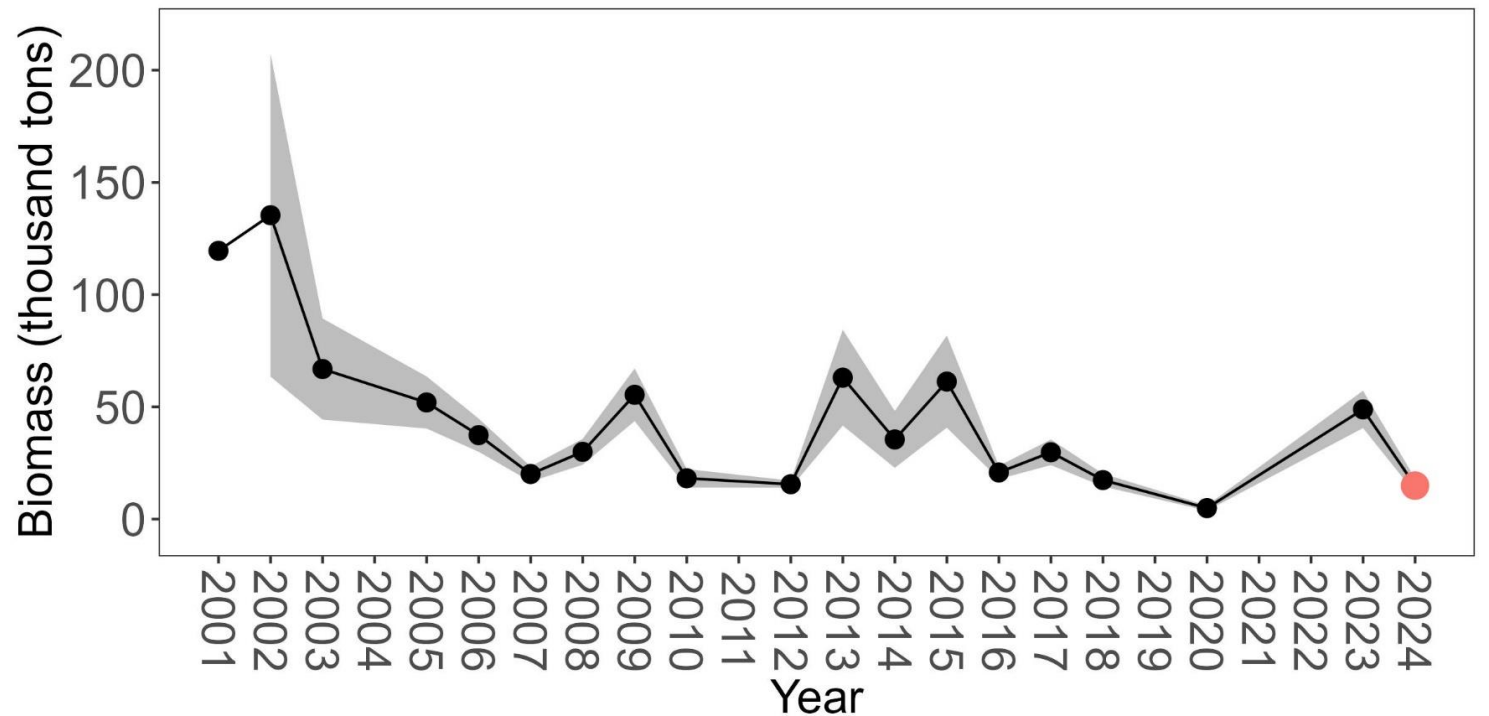


# Shumagin Islands: abundance

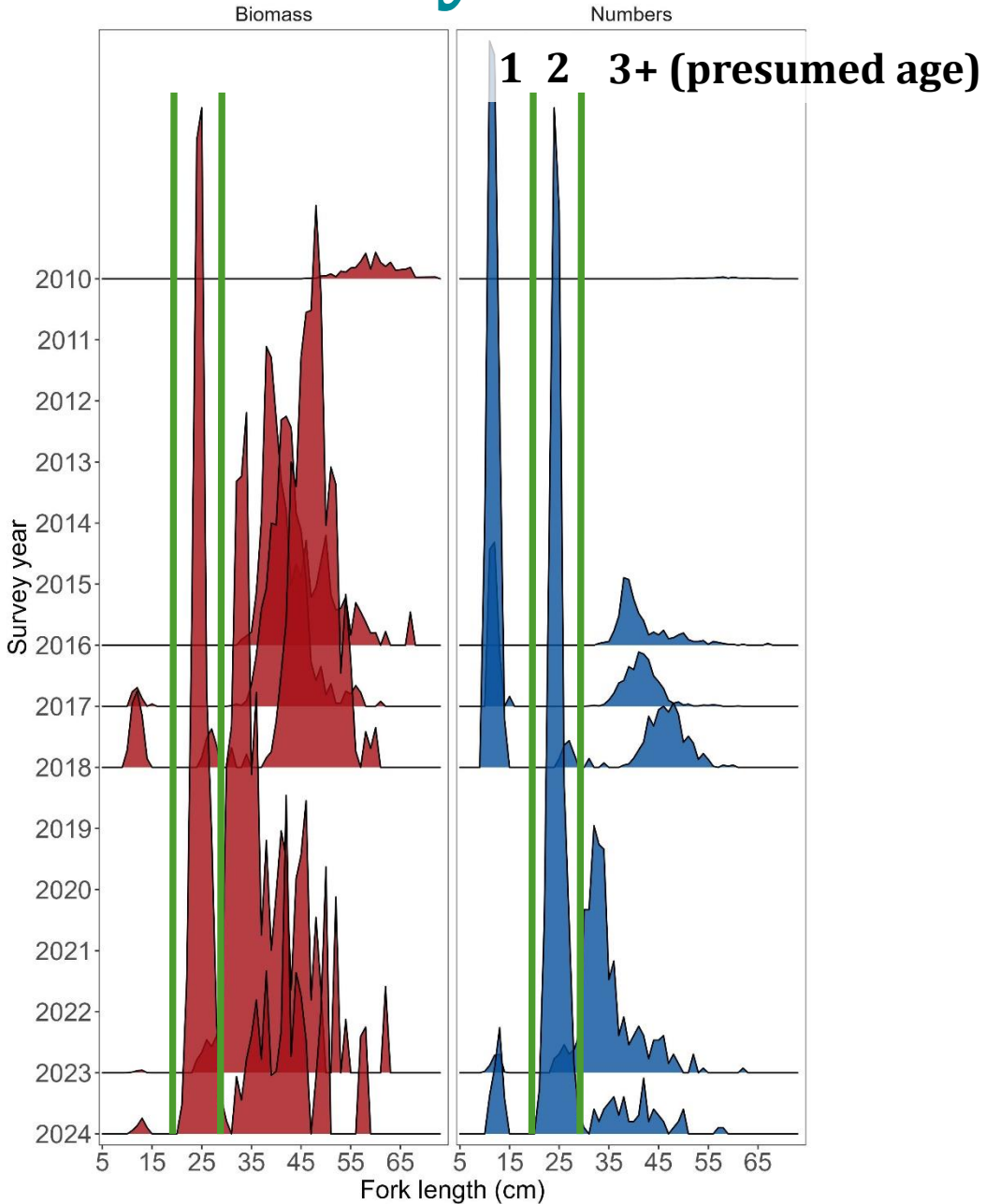


## 2024 pollock totals:

- 14.9 thousand tons (↓ ~70% from 2023)
- 134.9 million fish (↓ ~75% from 2023)
- Majority (by number) presumed age 1 + 2 pollock

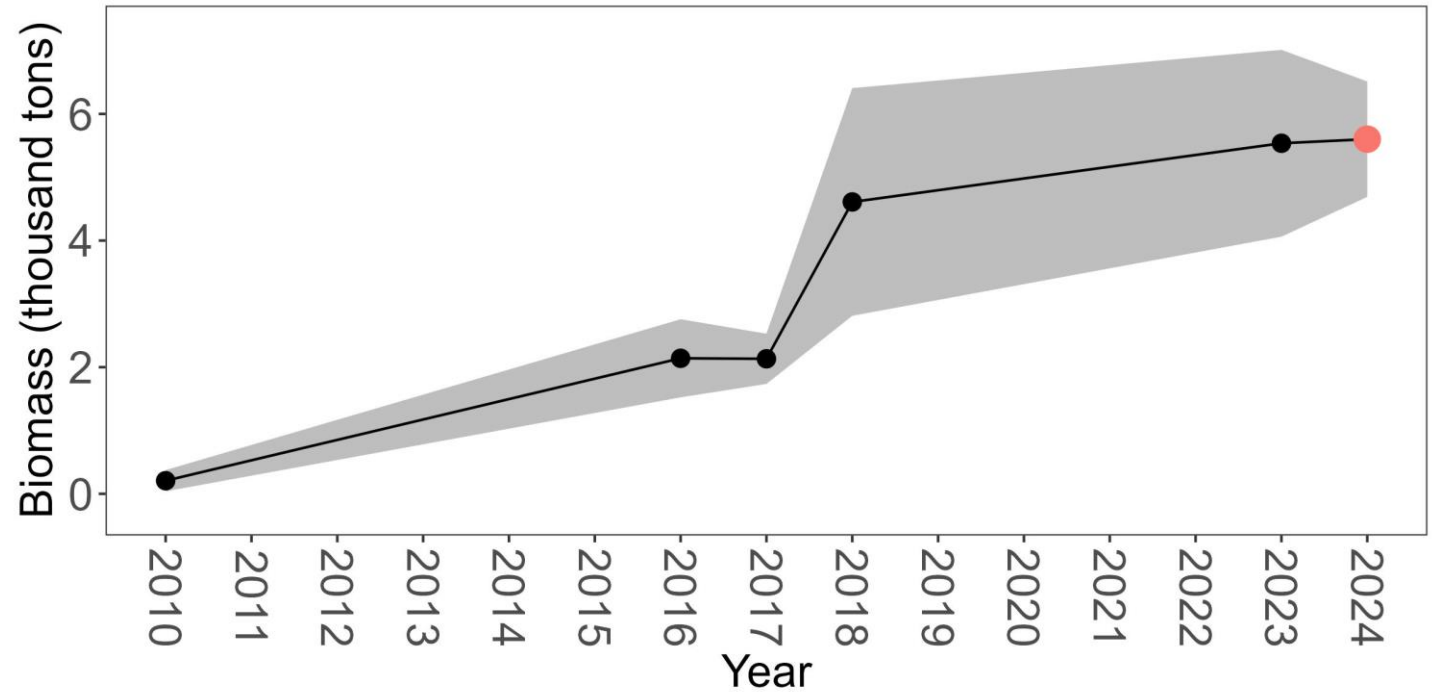


# Pavlof Bay: abundance



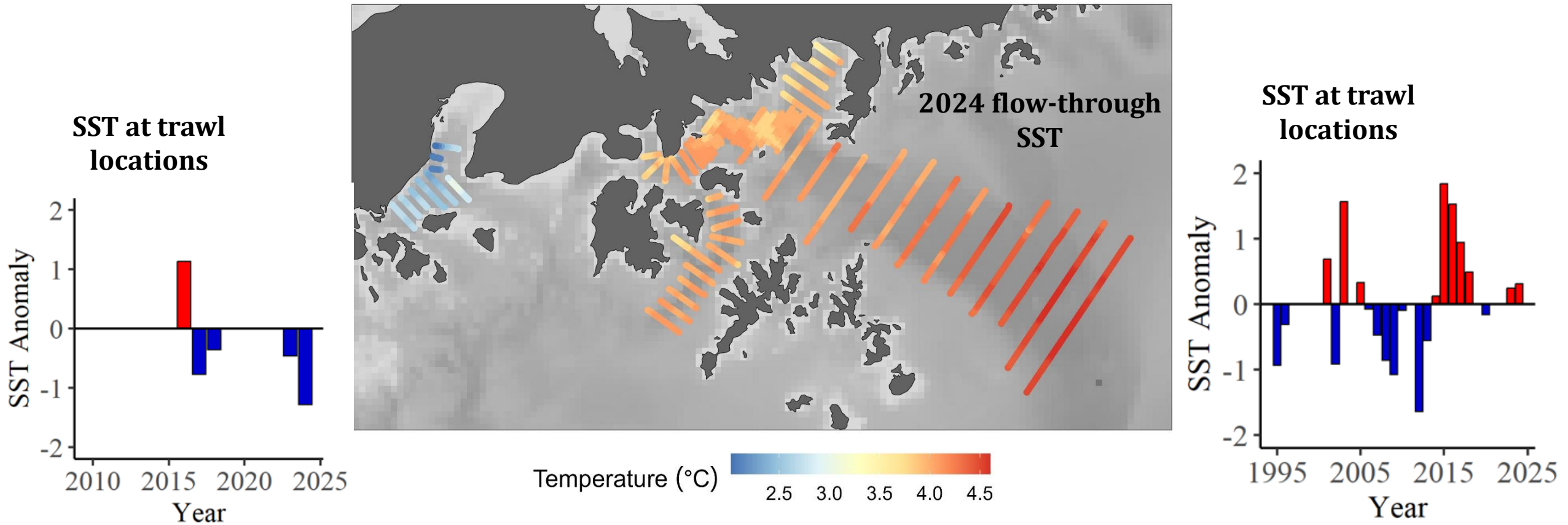
## 2024 pollock totals:

- 5.6 thousand tons ( $\uparrow$  1% from 2023)
- 40.5 million fish ( $\uparrow$  124% from 2023)
- Majority presumed age 2 (2022 YC)





# Shumagin Islands: SST

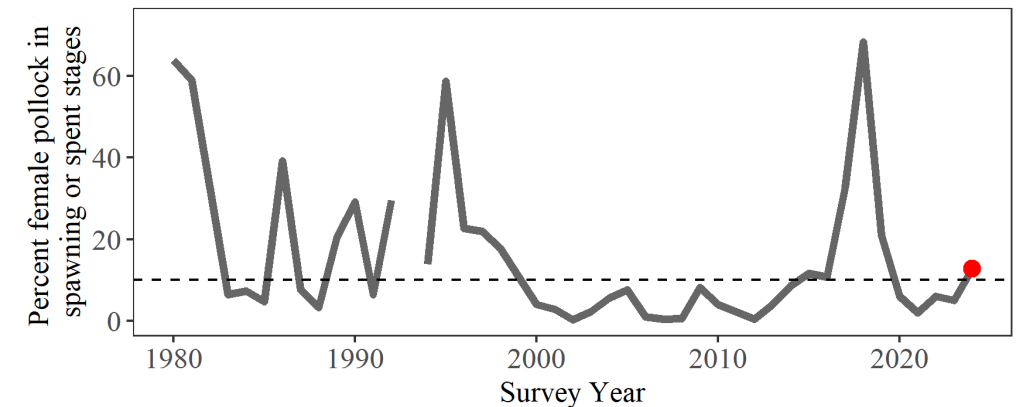
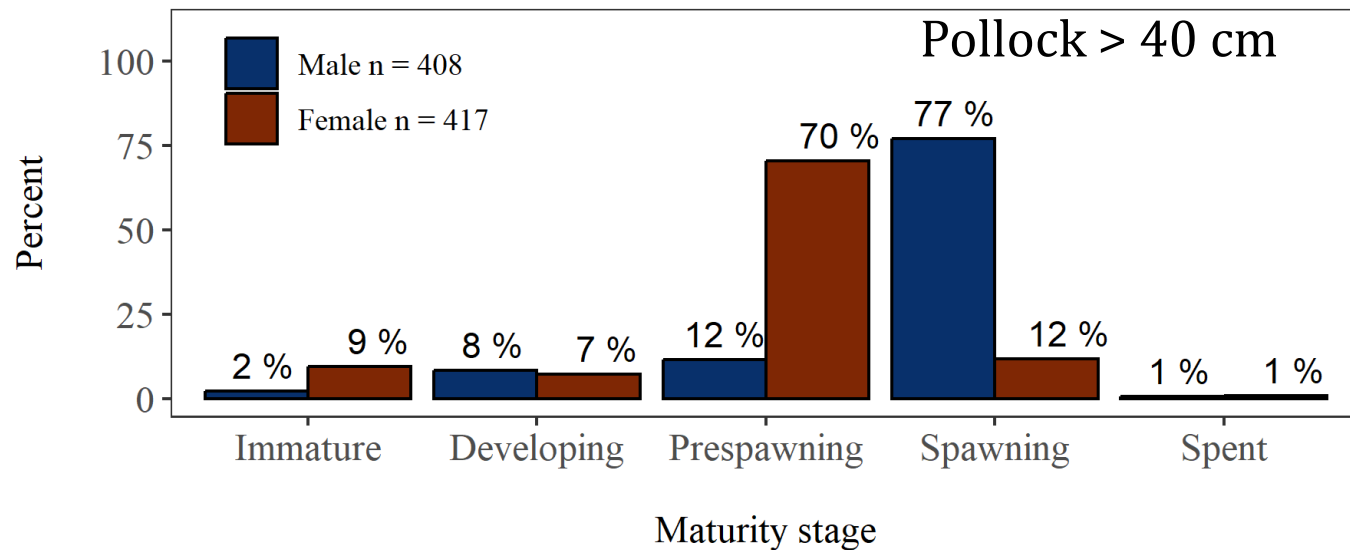
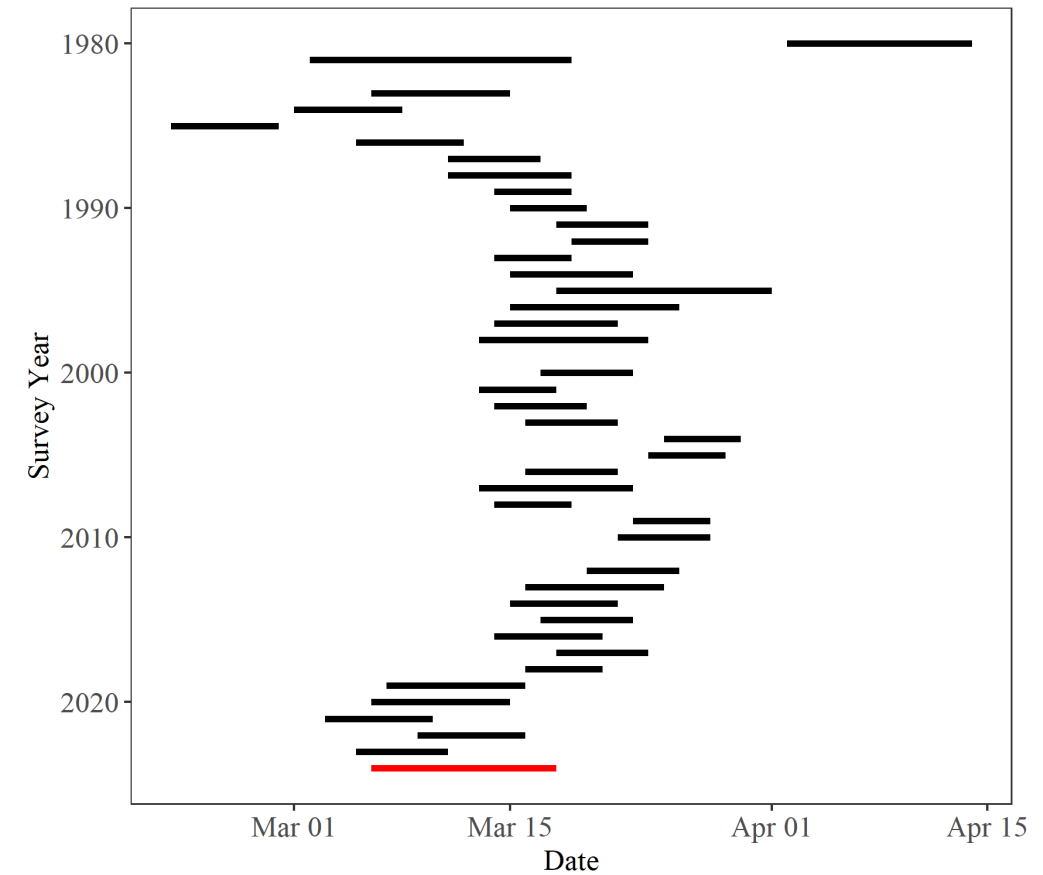


**Pavlof Bay** ↓ ~1° C  
from long-term mean

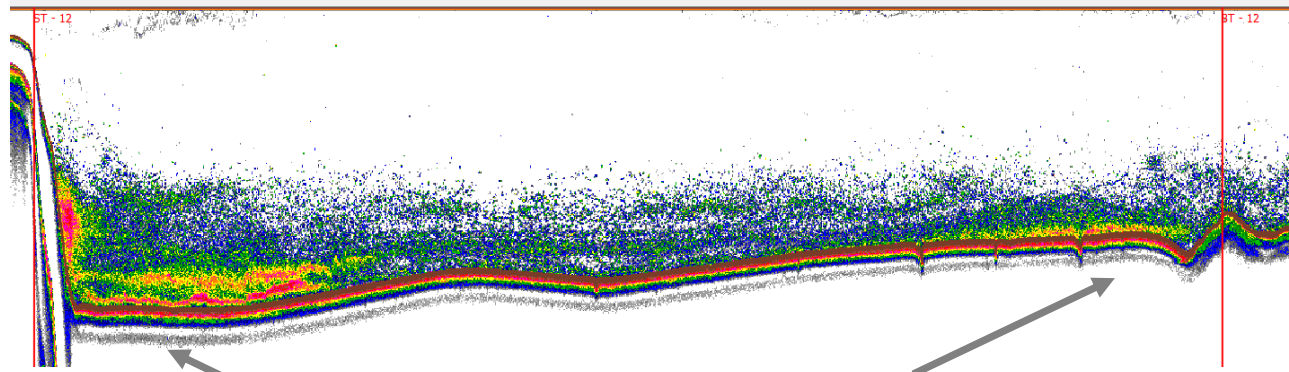
**Shumagin Islands** ↑ ~0.3° C  
from long-term mean

# Shelikof Strait: survey timing

- Survey start moved slightly earlier starting in 2019 due to more females observed in spawning/spent stages
- 13% females > 40 cm indicates survey timing close to appropriate

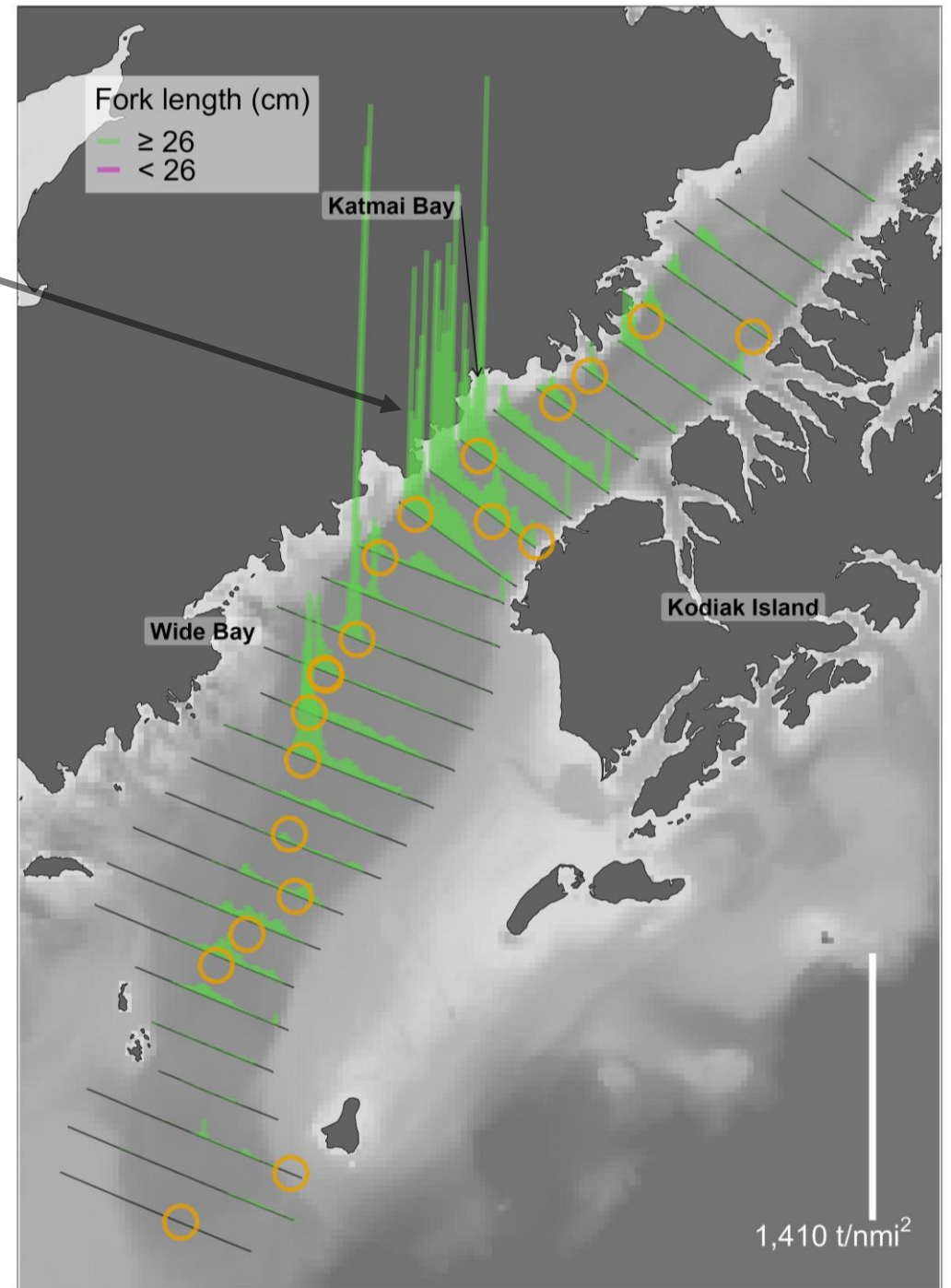
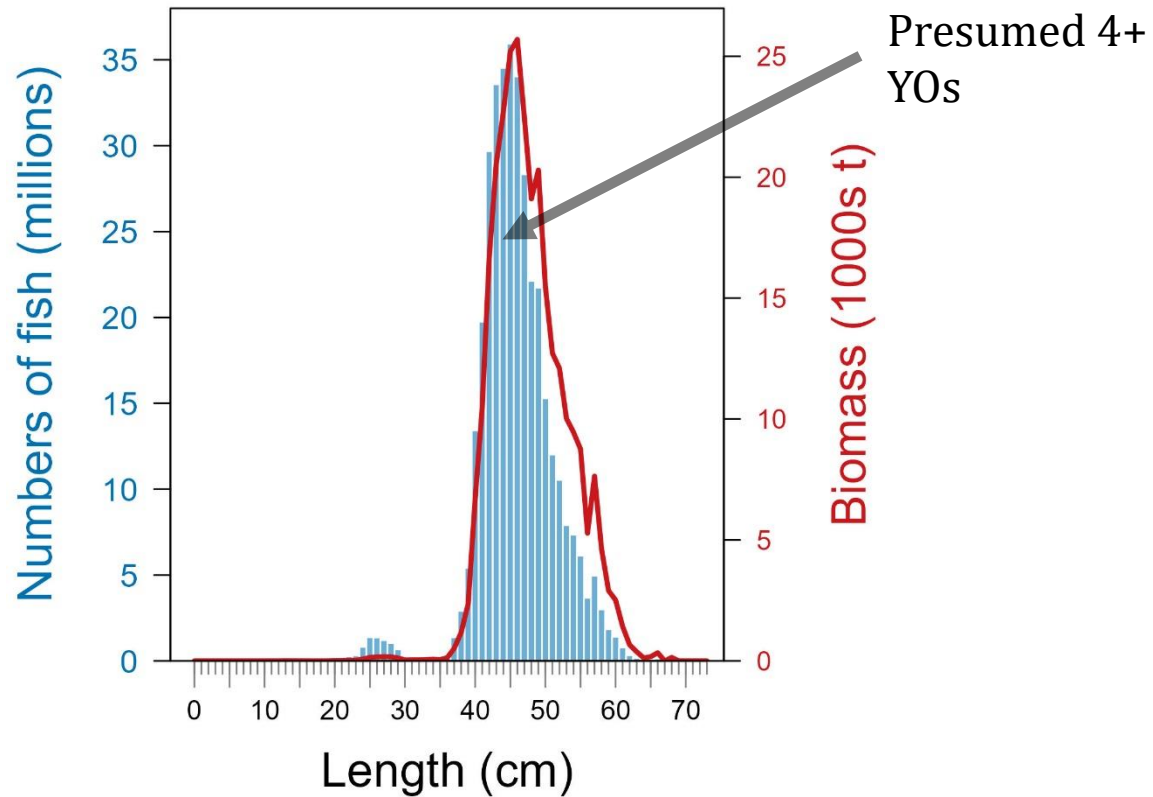


# Shelikof: Distribution



Near Alaska Peninsula

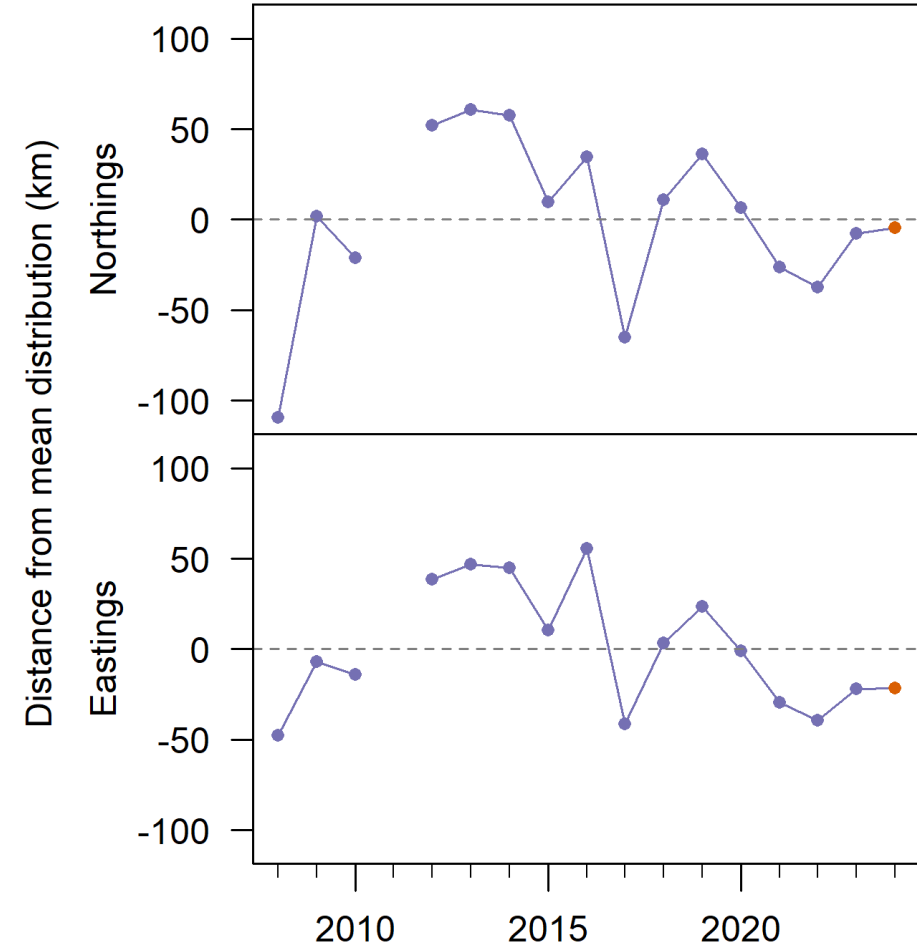
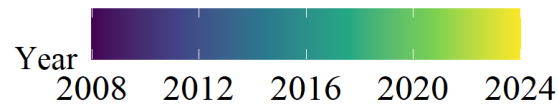
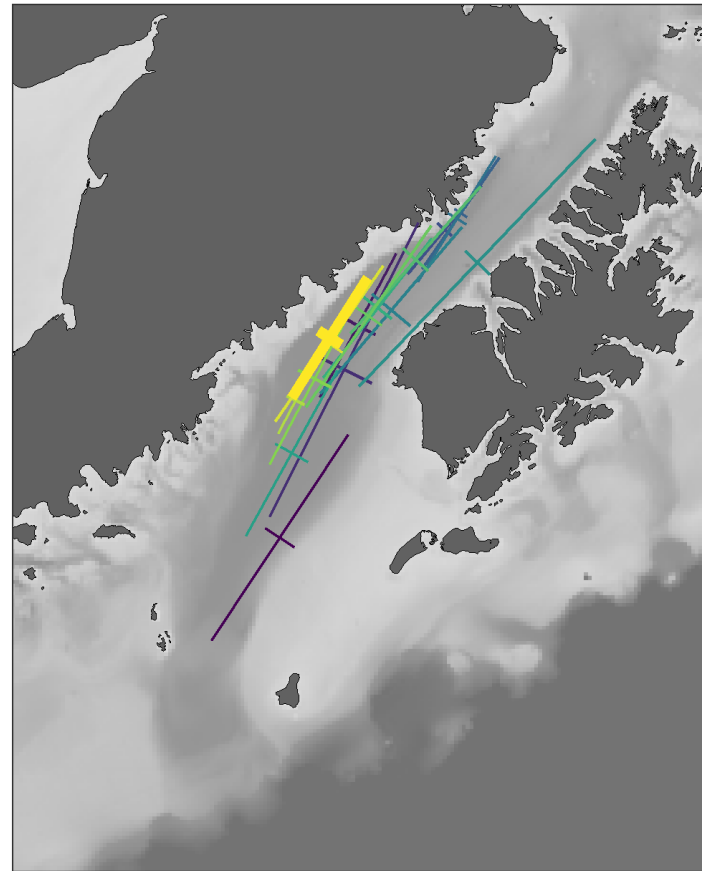
Near Kodiak Island





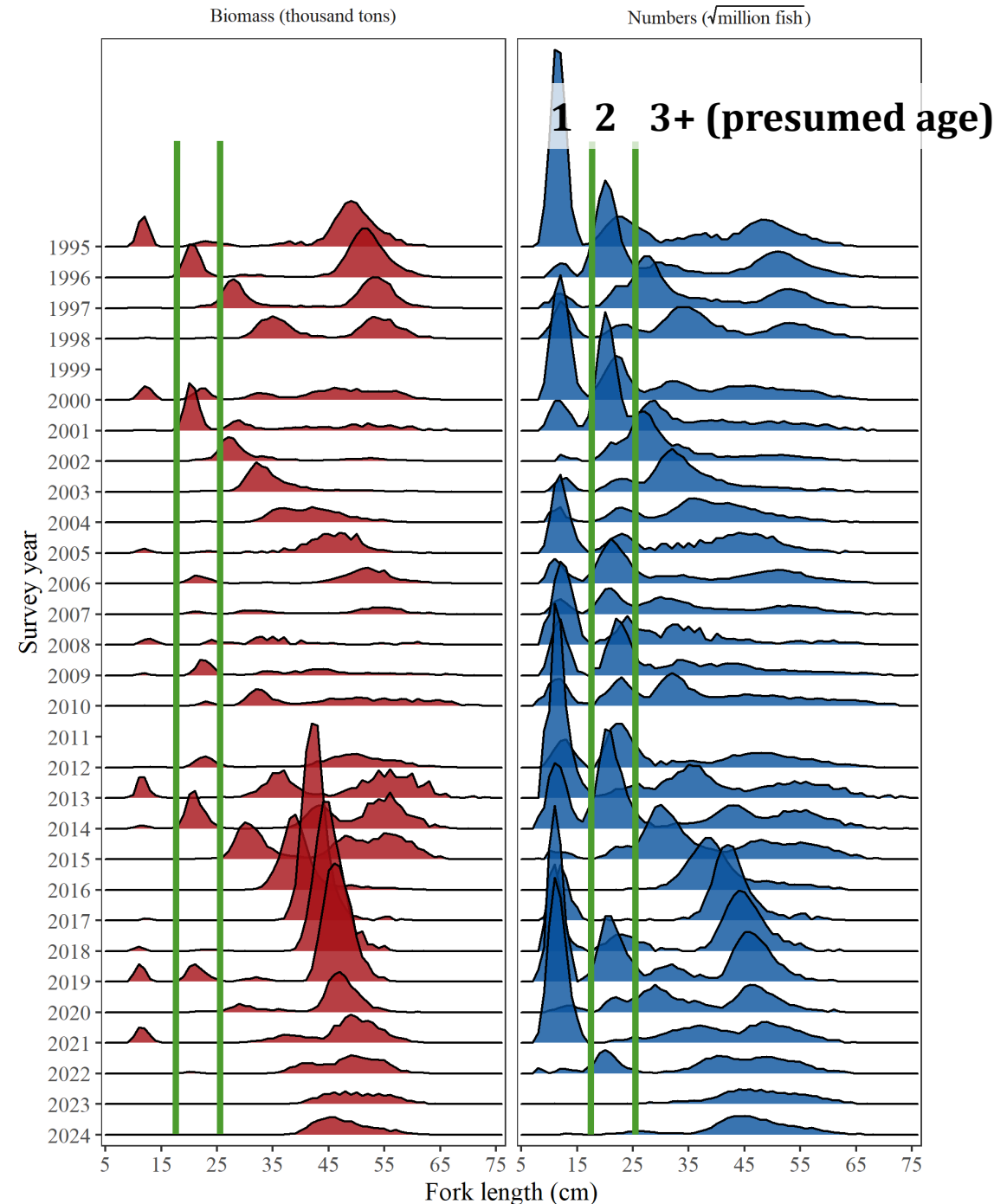
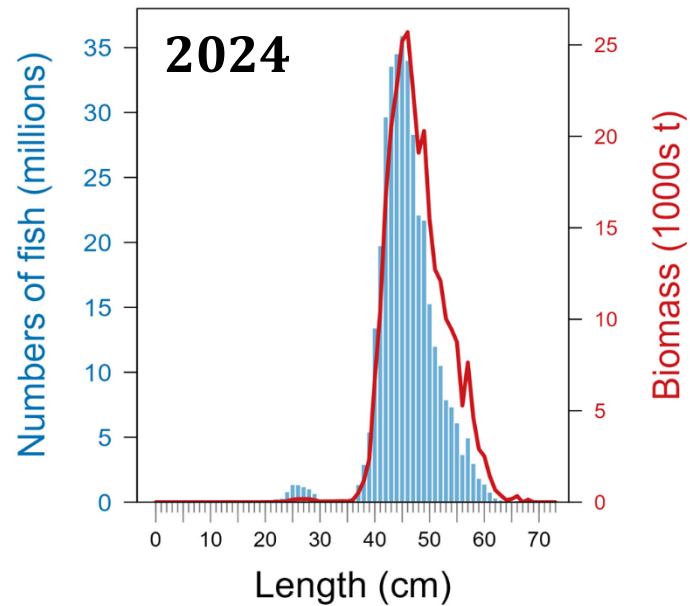
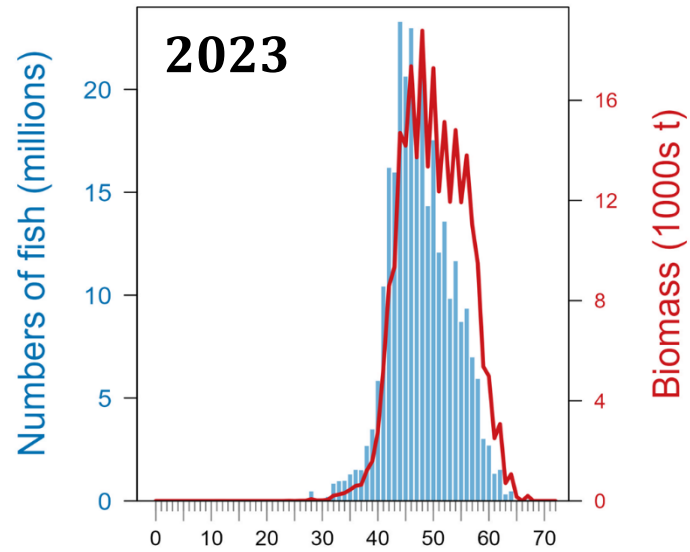
# Shelikof: Distribution

- Mean location of pollock biomass (center of gravity) relatively stable since 2021 (near Katmai Bay)
- Reduced inertia axes indicates relatively contracted distribution in 2024.

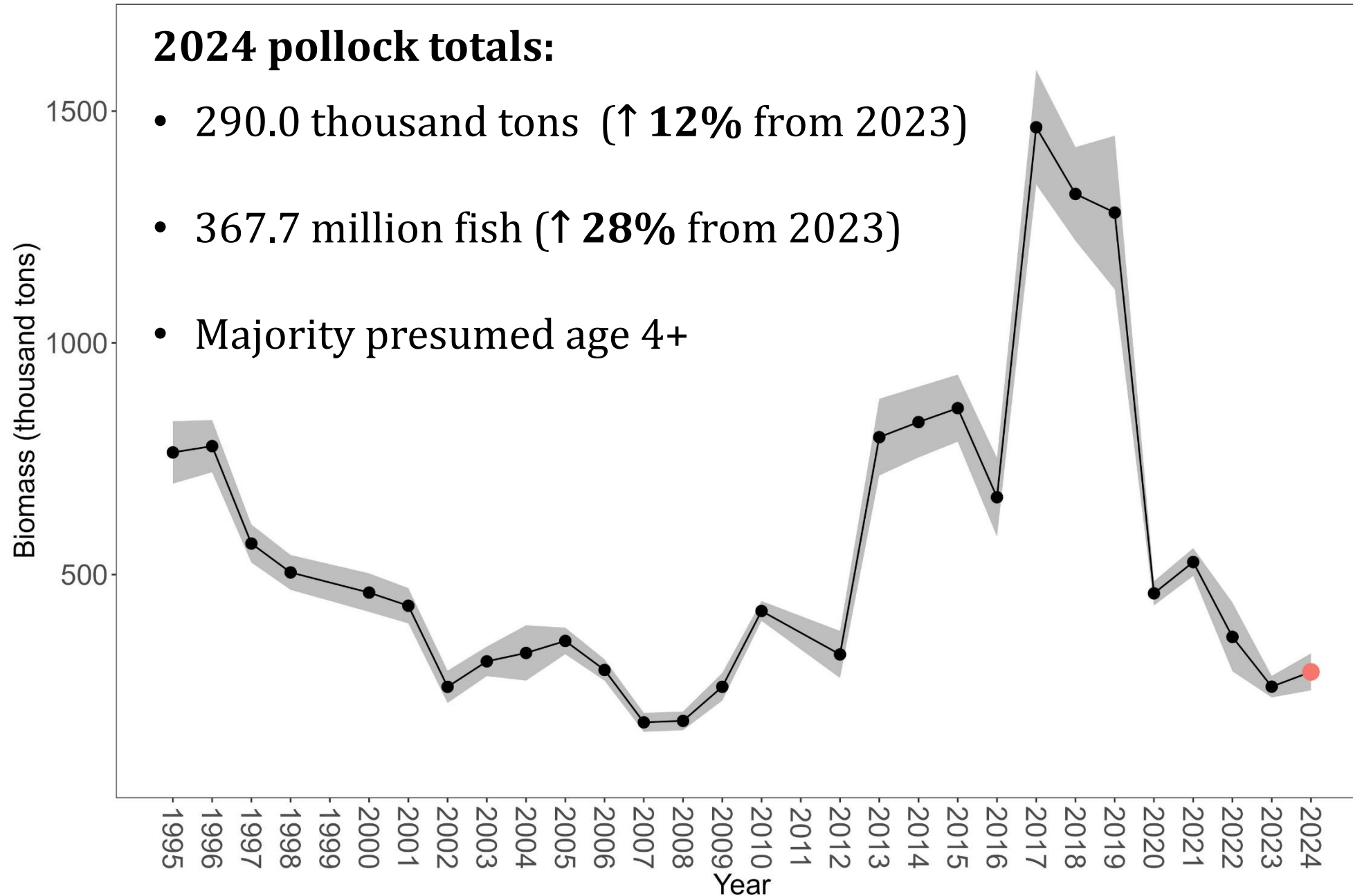


# Shelikof: Abundance

- **2024** fish length distributions are roughly similar to **2023**
- Few age 1 or 2 fish seen in 2024
- McKelvey Index: low/weak age 1 year class

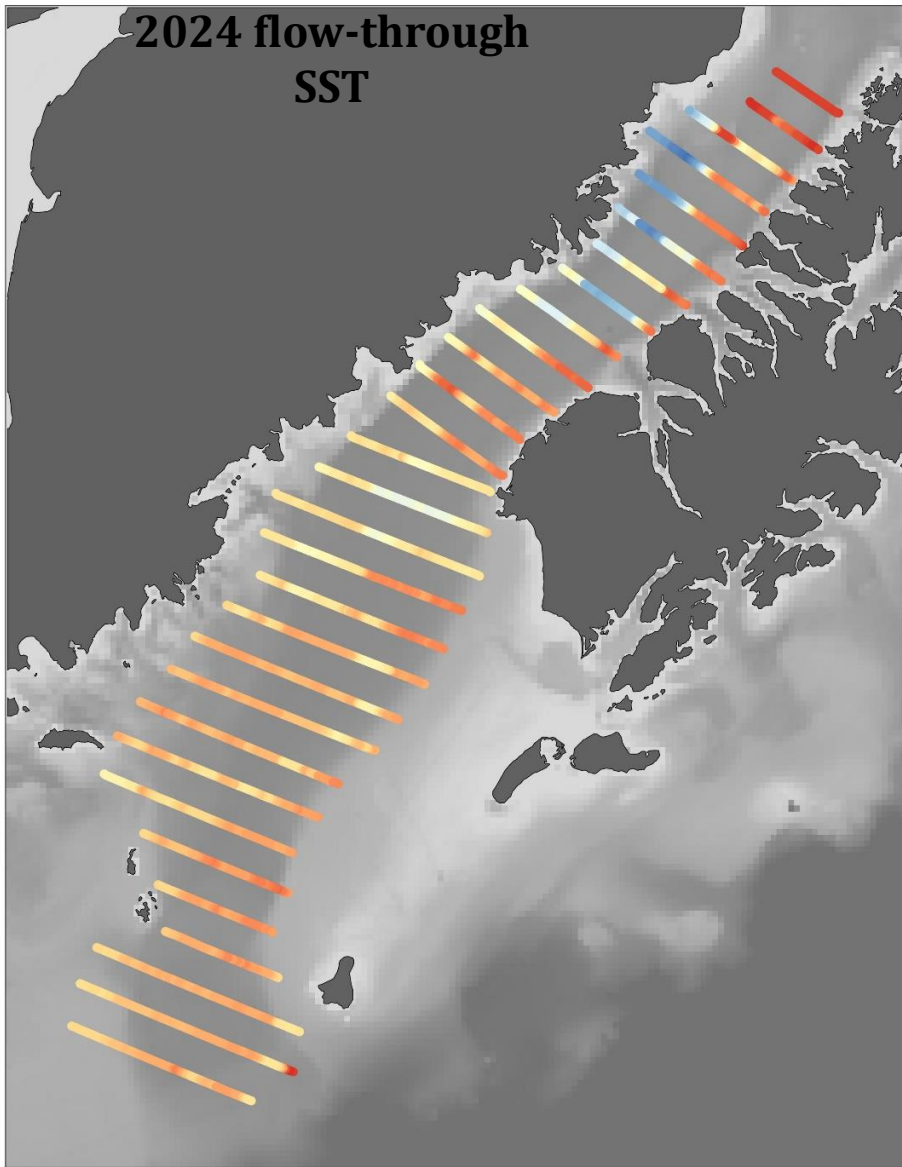


# Shelikof: Biomass



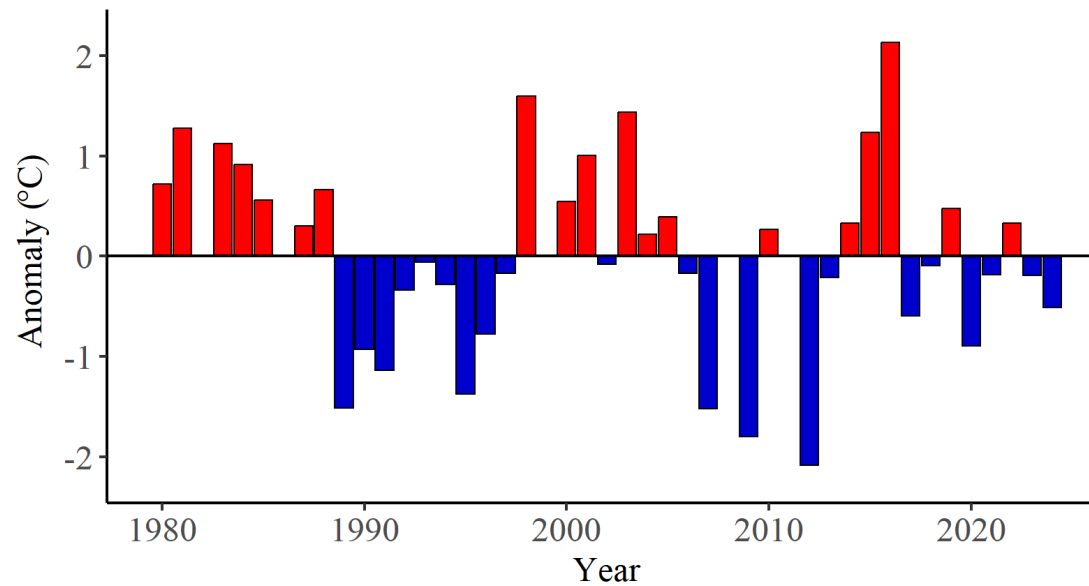


# Shelikof: Temperatures



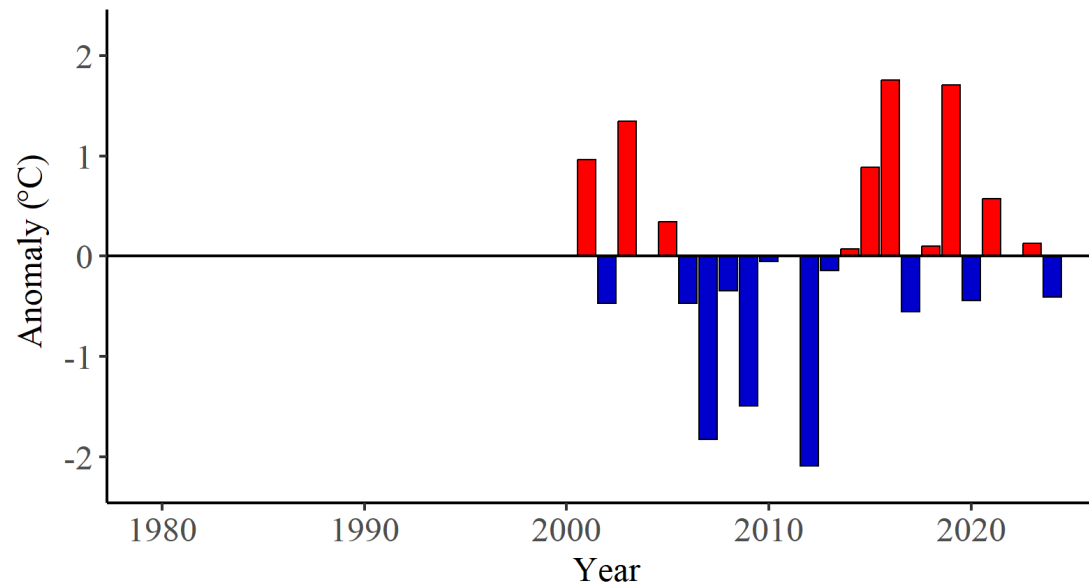
## Temperatures at trawl locations

Sea surface



↓ ~0.5° C  
from long-term mean

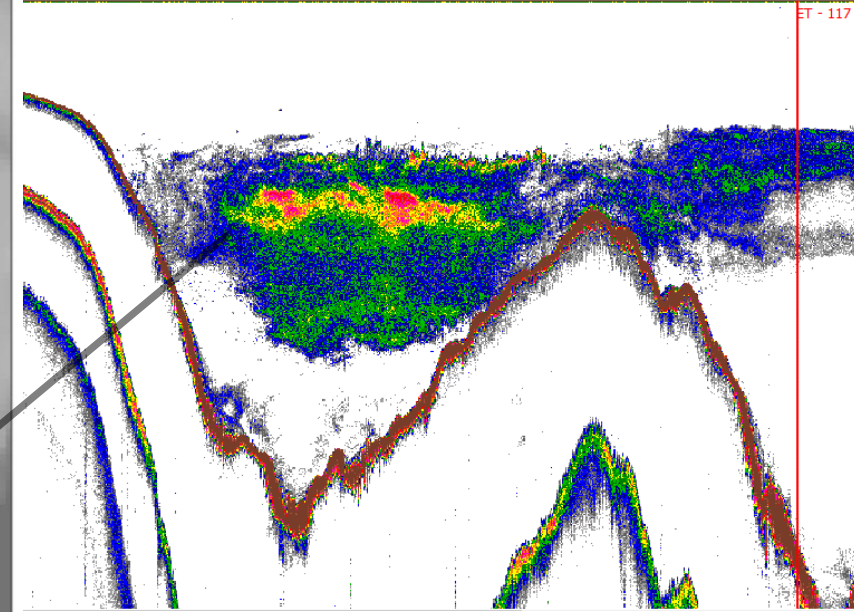
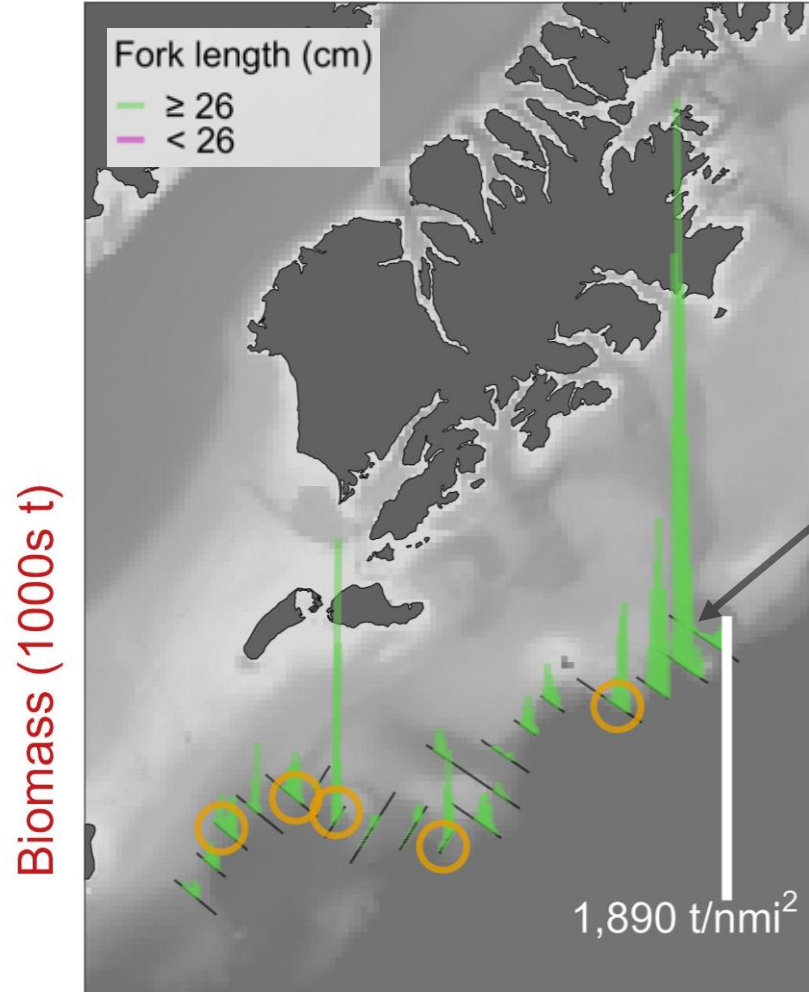
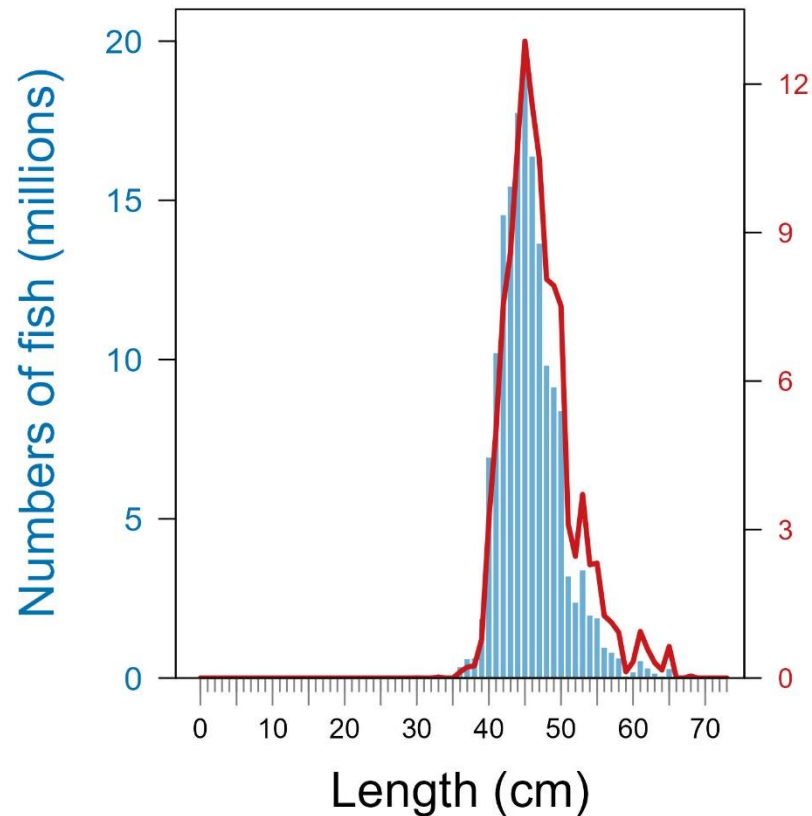
100 m depth



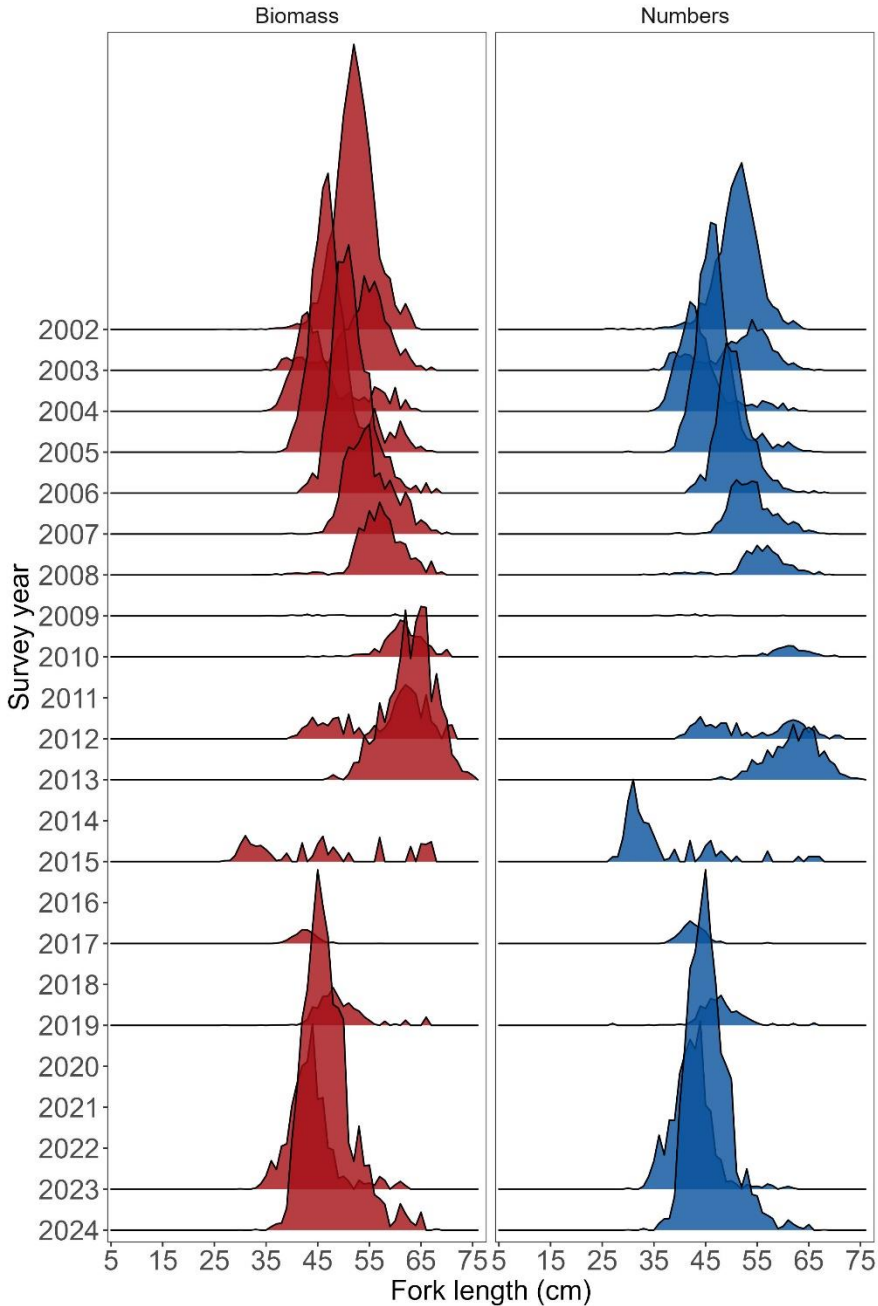
↓ ~0.4° C  
from long-term mean

# Chirikof Shelfbreak: distribution and abundance

- Dense aggregations of pollock mixed with Pacific ocean perch
- Population is presumed age 4 + pollock

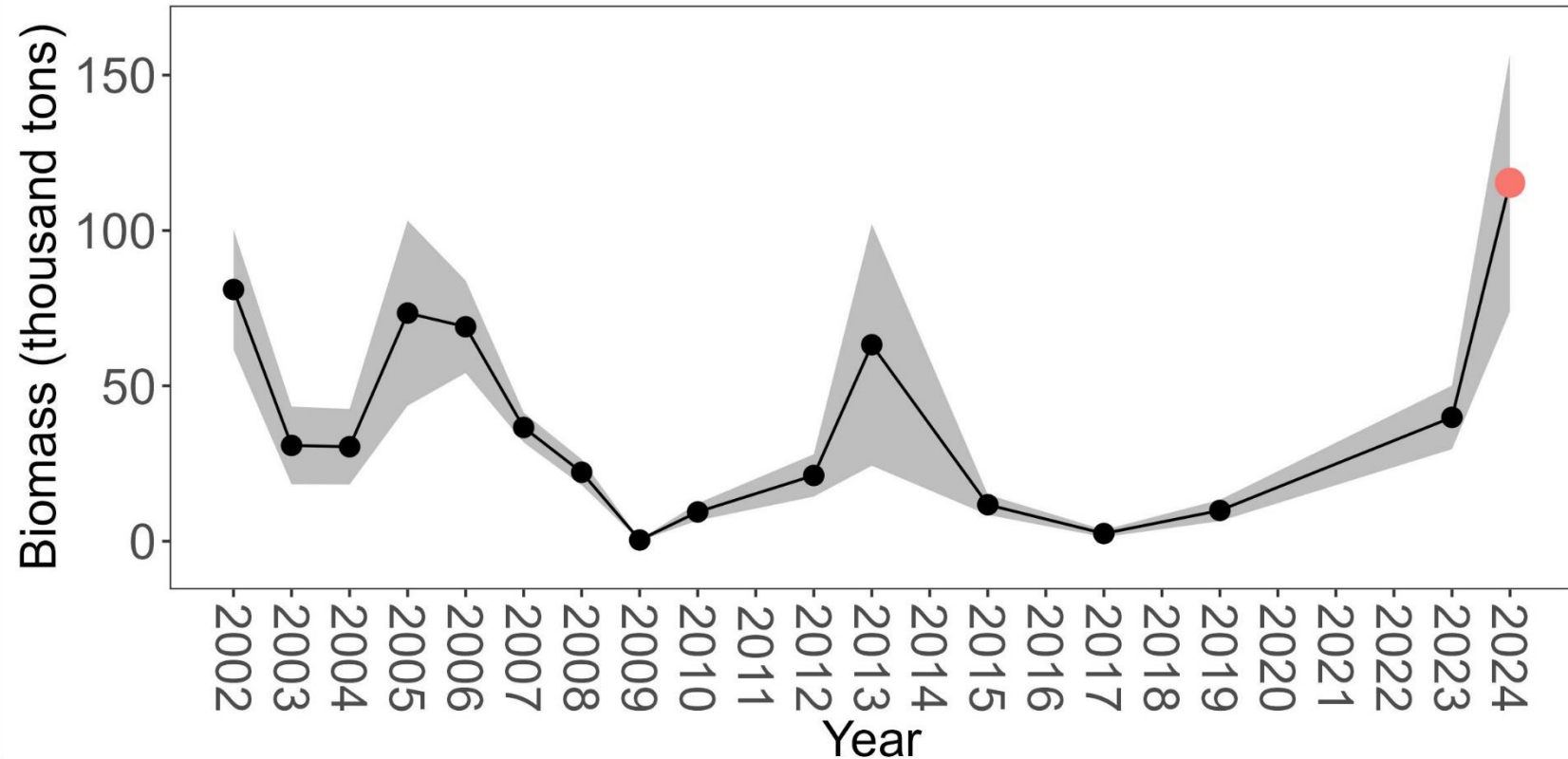


# Chirikof Shelfbreak: abundance



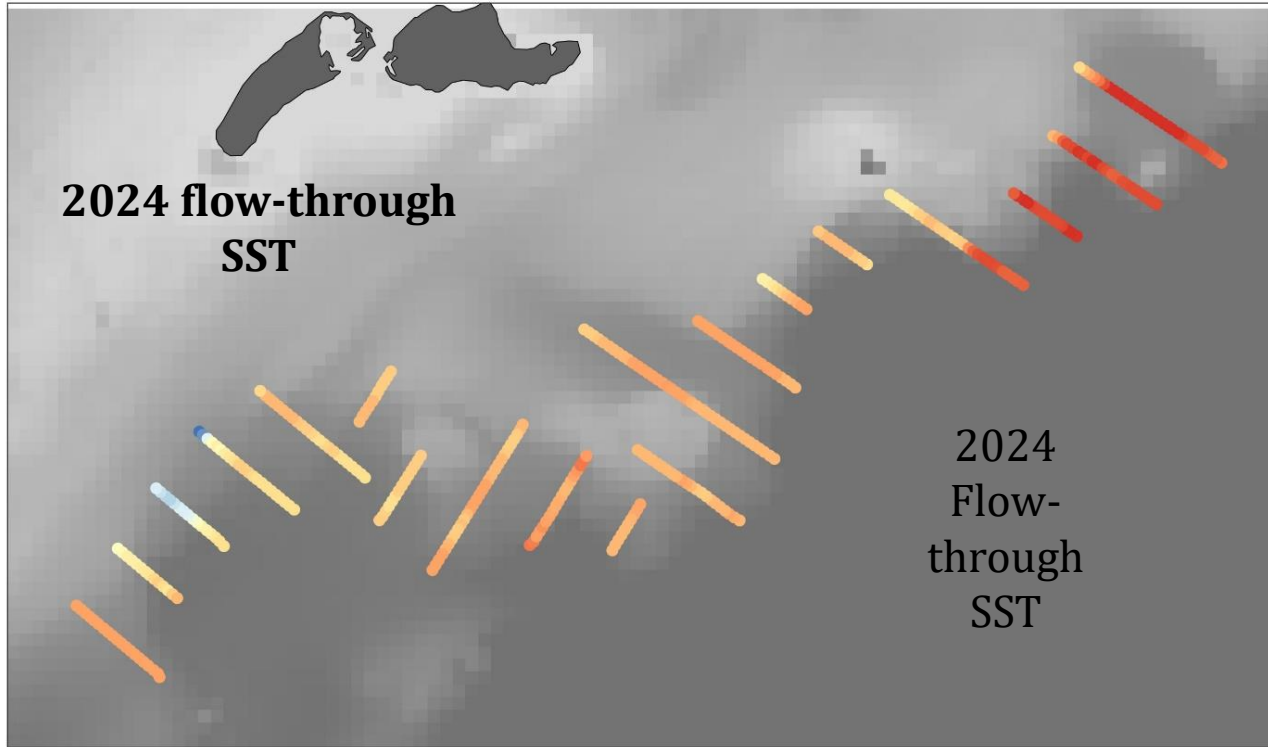
## 2024 pollock totals:

- 115.3 thousand tons (↑ **189%** from 2023)
- 163.2 million fish (↑ **135%** from 2023)
- Majority presumed age 4+

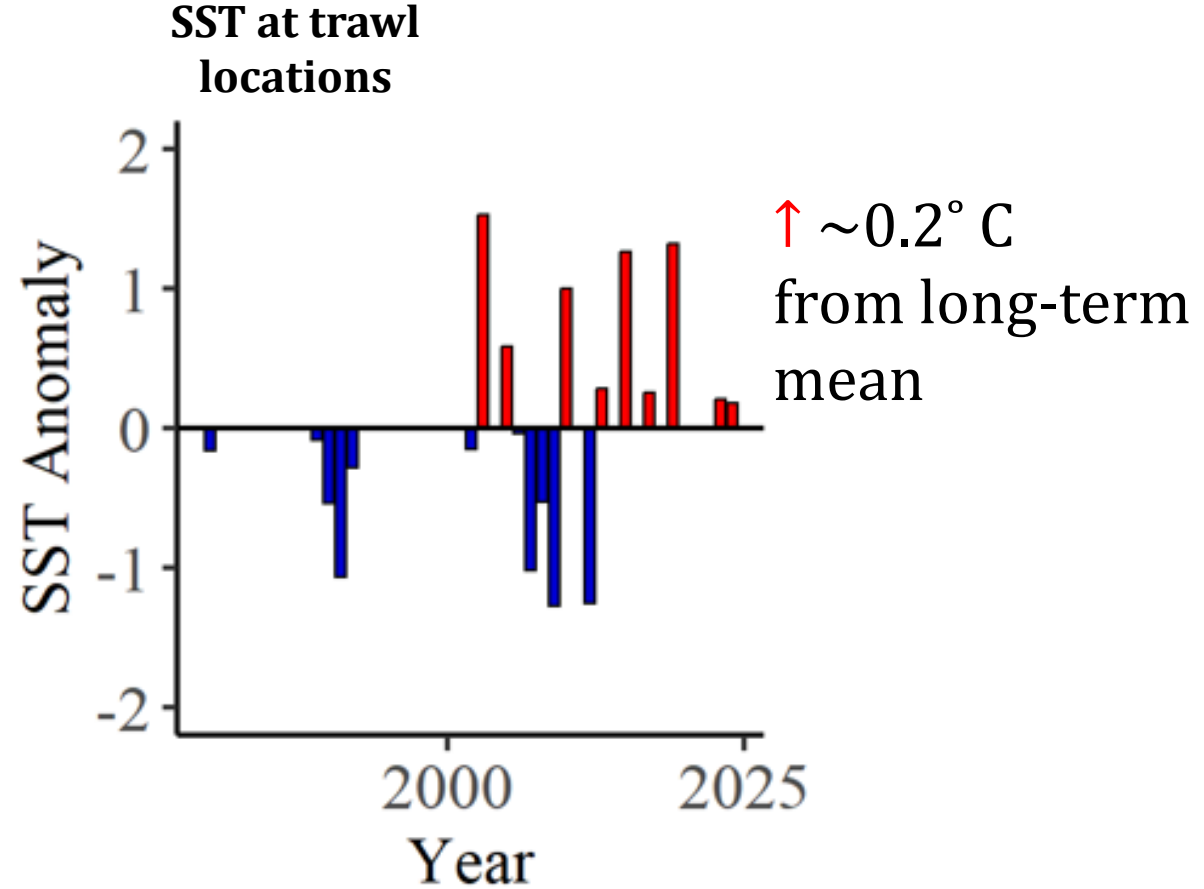




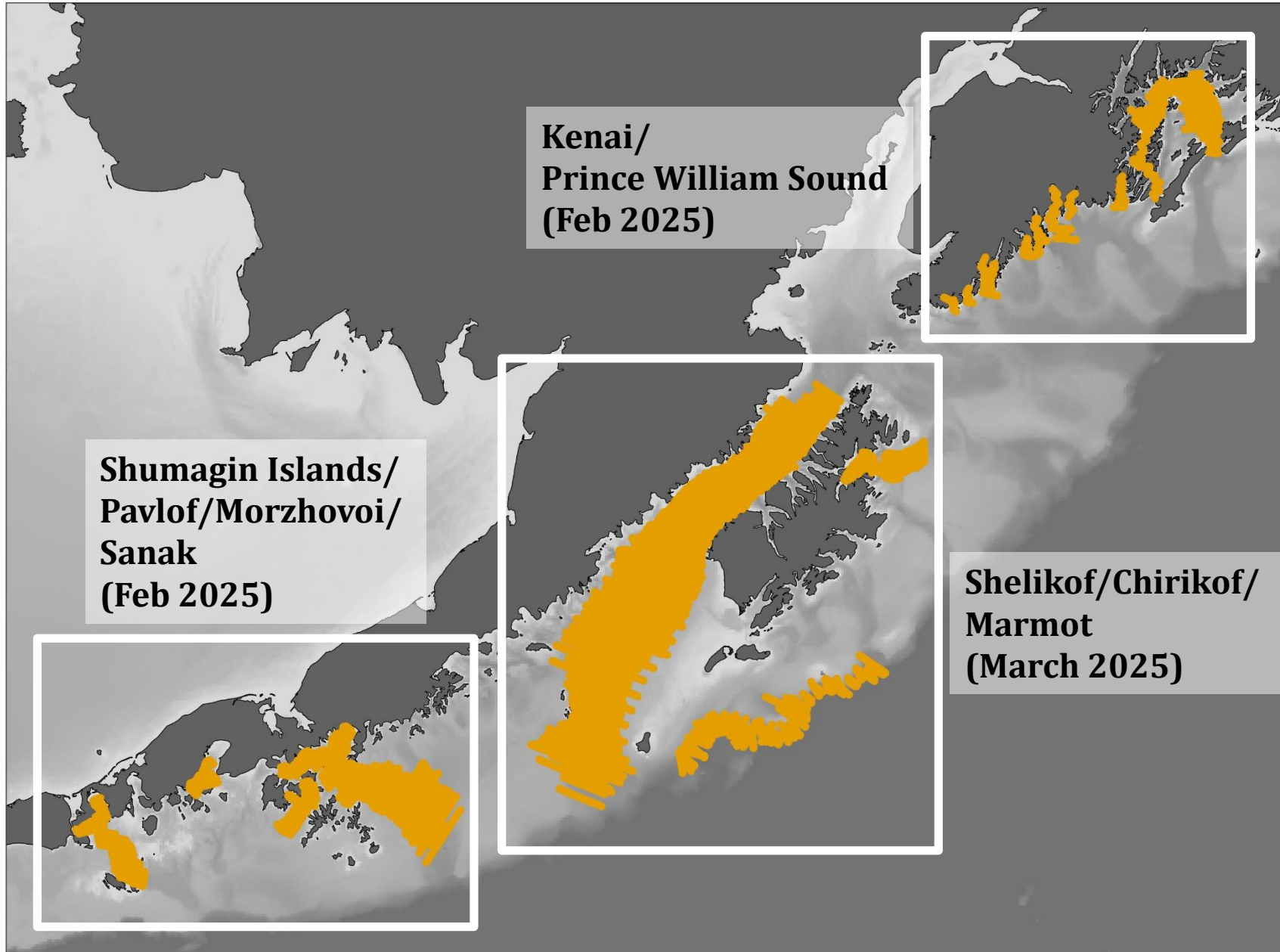
# Chirikof Shelfbreak: SST



Temperature (°C) 3.0 3.5 4.0 4.5 5.0



# Winter 2025 survey plans





# Questions?



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