



**NOAA
FISHERIES**

2026 AFSC Longline Survey September Plan Team

Kevin Siwicke and Pat Malecha
Marine Ecology & Stock Assessment





Outline

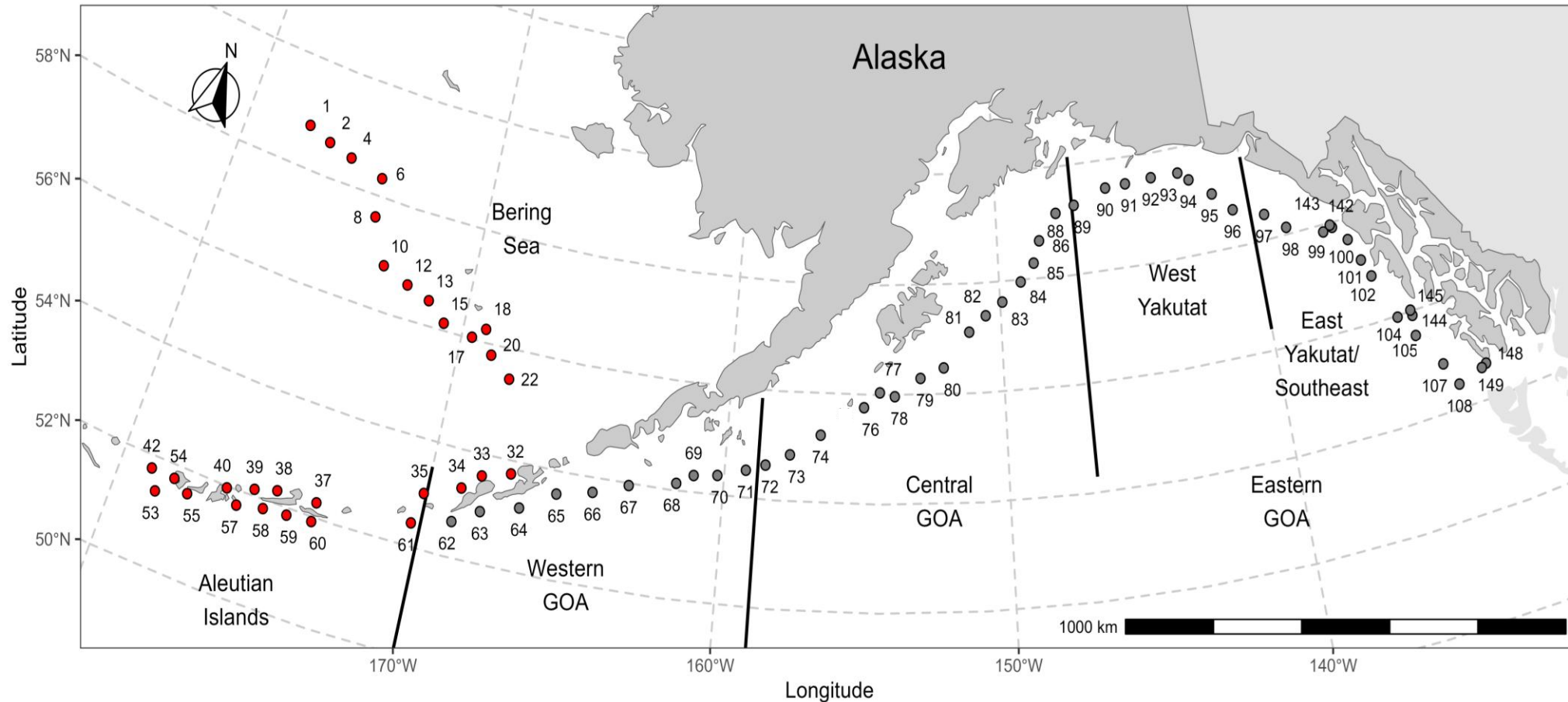
- Brief history of the survey
- Market-induced sampling change
- Survey protocols
- Index calculations
- Whale depredation
- 2026 survey results

Longline Survey History

- Japan/US cooperative: 1979 to 1994
 - GOA, BS, and AI sampled annually
- US: 1989 to present
 - GOA annually until 2023
 - BS/AI alternated biennially from 1996
 - 100% cost recovery through 2023
- No survey in 2024
- New vessel contract and modified sampling schedule beginning in 2025
 - Daily rate with cost-recovery offset
 - Fewer days at sea available annually
 - Sampling changes necessitated



Survey Stations and Sampling Frequency Change



- Bering Sea and Aleutian Islands – even years
- GOA – odd years

Survey Protocols -1



Catch:

- 100% hook accounting: Species, baited/unbaited, ineffective (bent, broken, etc.), and associated depth.
- >5 hooks ineffective; skate not included in index calculations

Lengths:

- Random sample, depth-stratified, sex
- Sablefish, thornyhead, cod, and rockfish, ATF/Kam, grenadiers

Ageing:

- ~2.2% of sablefish stratified by depth

Tagging:

- Random, skates # 10, 30, 50, 70, 100, 120, 140, and 160.
~3% of sablefish

Survey Protocols - 2

One skate of gear:

- 45 hooks hand-baited with squid mantle
- 100-m length, 2-m hook spacing, 7-lb lead ball on ends

One set:

- 90 skates set shallow to deep
- Buoys and anchors at both ends

One station:

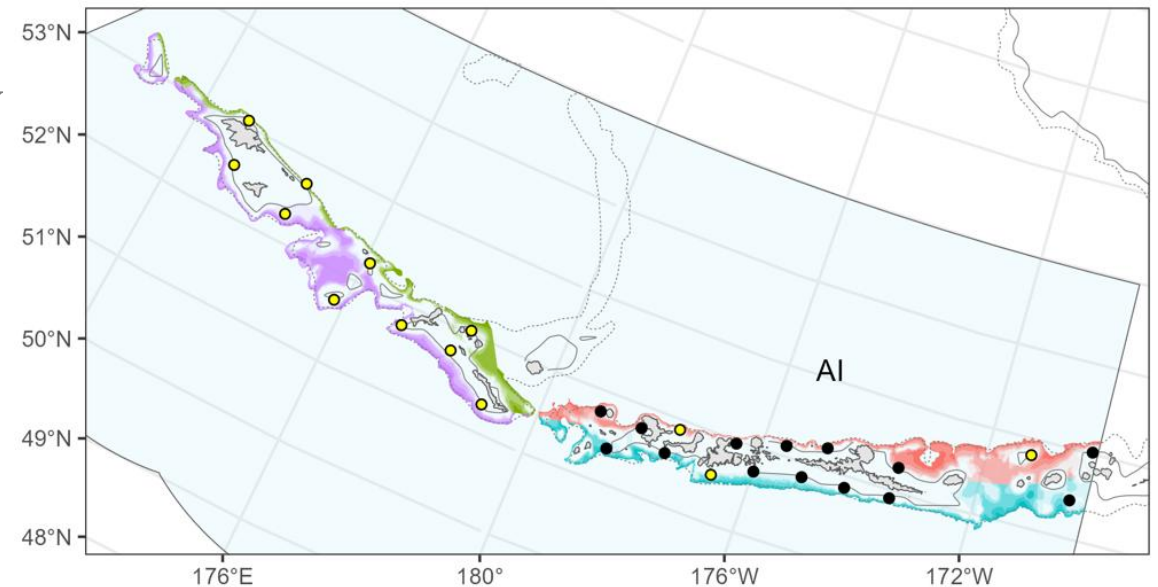
- Standard slope station is 2 sets end to end (180 skates in total, 18 km)
- Station locations based on cooperative survey and spaced 30 to 60 km apart
- Five depth strata



Depth Strata	Min depth (m)	Max depth (m)
3	201	300
4	301	400
5	401	600
6	601	800
7	801	1000

Relative Population Numbers (RPN)

- Calculated from mean skate CPUE by station, depth, area
- Mean CPUEs multiplied by area size to obtain RPNs
- Area RPNs summed to management area, FMP, Alaska-wide
- Previously used annual GOA RPN percentage change to extrapolate to unsampled areas (BS or AI) to get annual Alaska-wide RPN
- Without annual GOA survey, RPNs for unsampled areas no longer can be extrapolated
- Western AI RPN previously extrapolated by multiplying eastern AI RPN by historical West/East catch ratios from co-op survey (1983-1994)
 - $NWAI:NEAI = 0.1820$; $SWAI:SEAI = 0.6581$
- Discontinued extrapolating WAI RPN



Whale depredation

- Determined by chief scientist with input from skipper and biologists as well as an assessment of damaged fish and catch rates before and after whales are present.
- When killer whale depredation is determined, the skate at which it starts through when it ends (usually end of the day) are removed before index calculations as sablefish catches can drop dramatically.
- When sperm whale depredation is determined, a depredation correction factor (1.18) is applied to the station so that estimates are not artificially deflated.



2026 BSAI Survey in Numbers

- 16 BS and 14 AI stations sampled (2 June – 4 July)
- 234,900 hooks fished
- 50,381 sablefish caught
- 1,149 sablefish otoliths collected (length/weight/sex)
- Tagged
 - 1,371 sablefish
 - 36 shortspine thornyhead
 - 8 Greenland turbot
- Recaptured 11 tagged sablefish (10-NMFS, 1-Canadian), and 1 SST (NMFS)
- 56 temperature-depth profiles

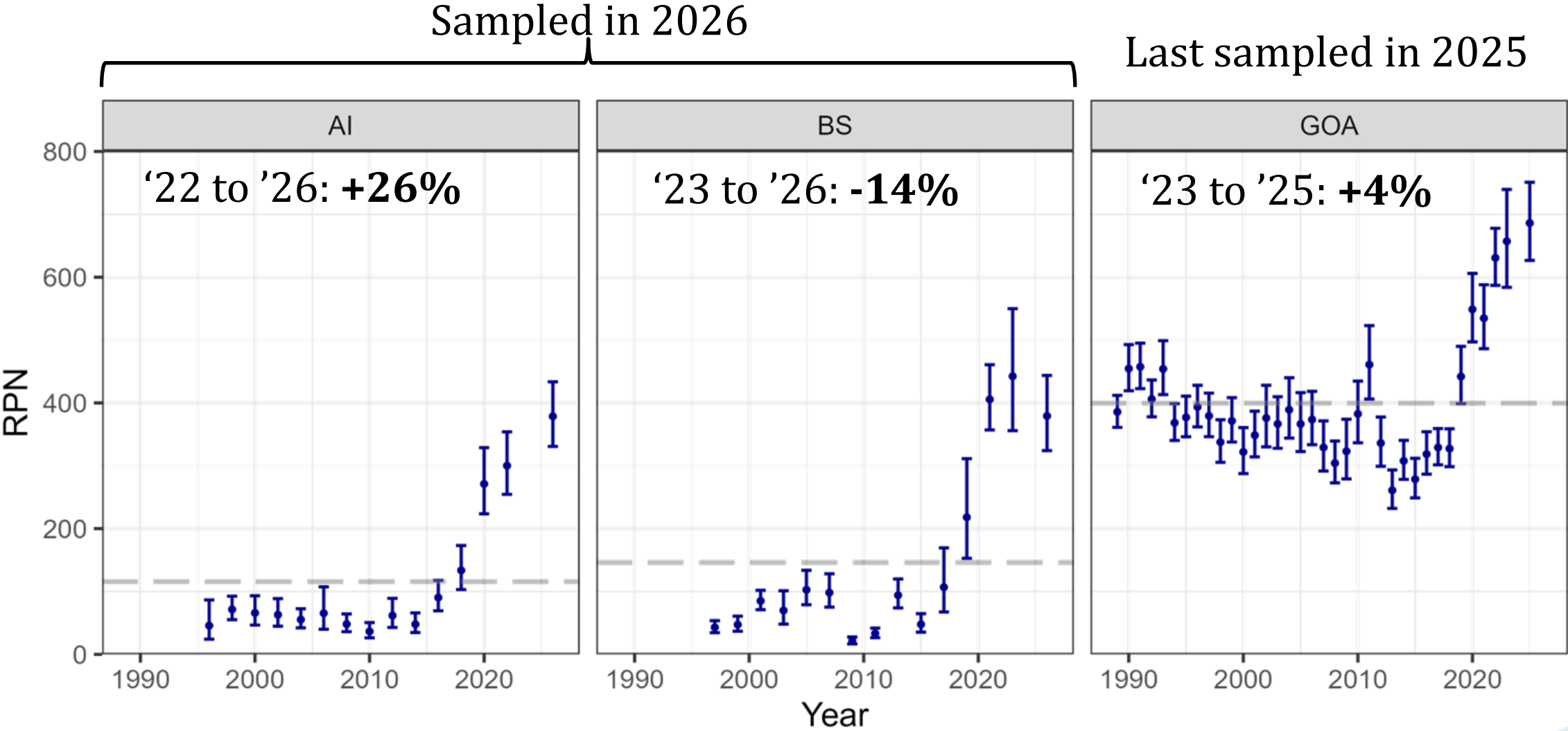


2026 BSAI Species Lengths

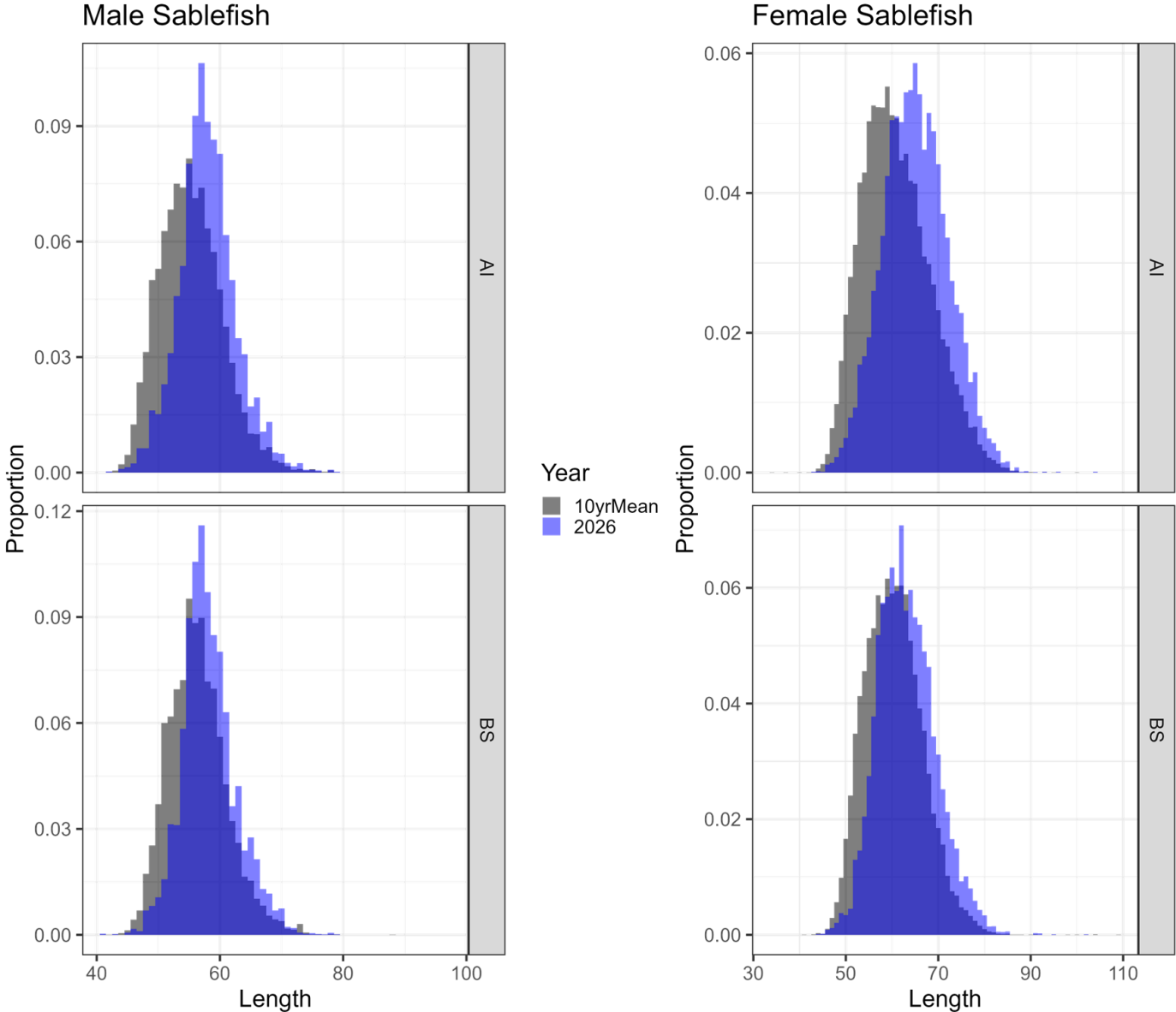
Common name	Lengths collected
sablefish	19,396
Pacific cod	5,088
Rougheye/blackspotted rockfish	2,351
shortraker rockfish	1,541
giant grenadier	1,536
shortspine thornyhead	1,354
arrowtooth flounder	782
Kamchatka flounder	482
Greenland turbot	256
Pacific grenadier	12
redbanded rockfish	9
dusky rockfish	8
yelloweye rockfish	1
Total	32,816



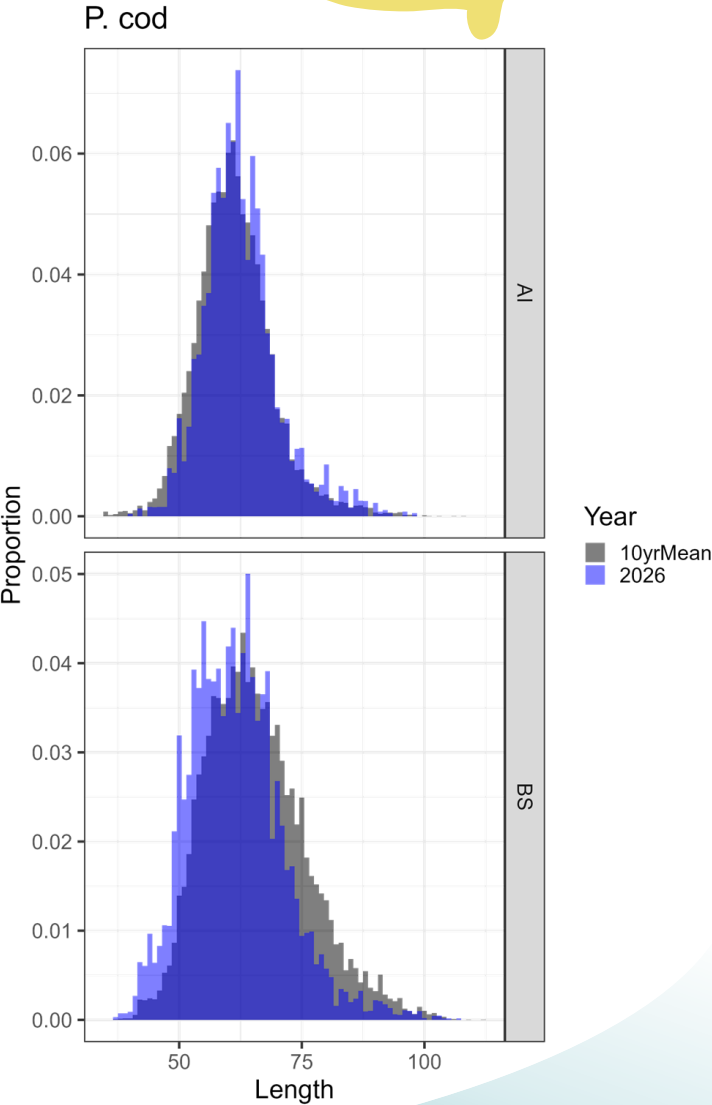
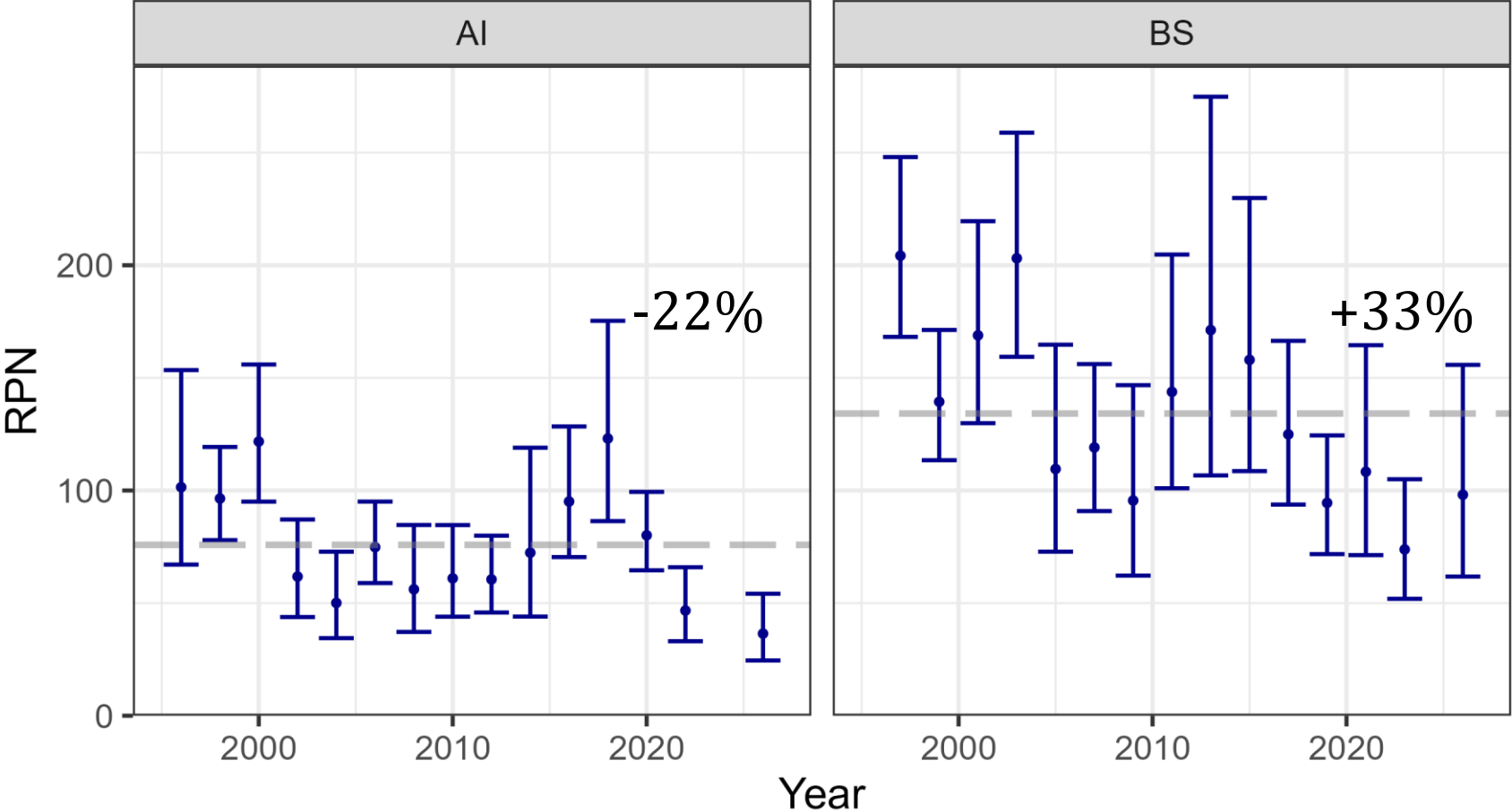
Sablefish RPNs



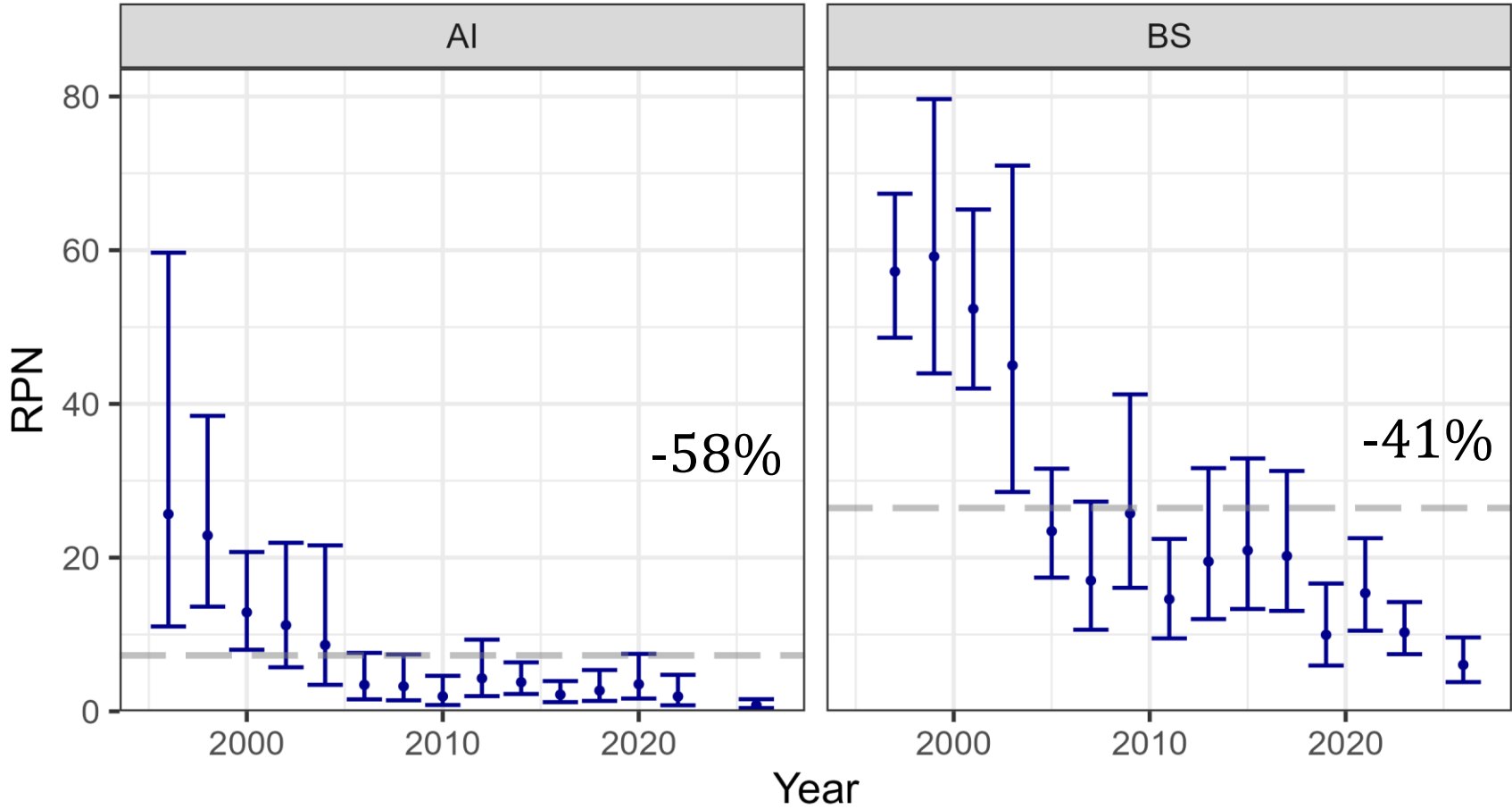
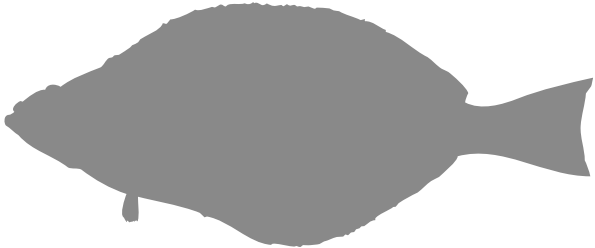
Sablefish Lengths



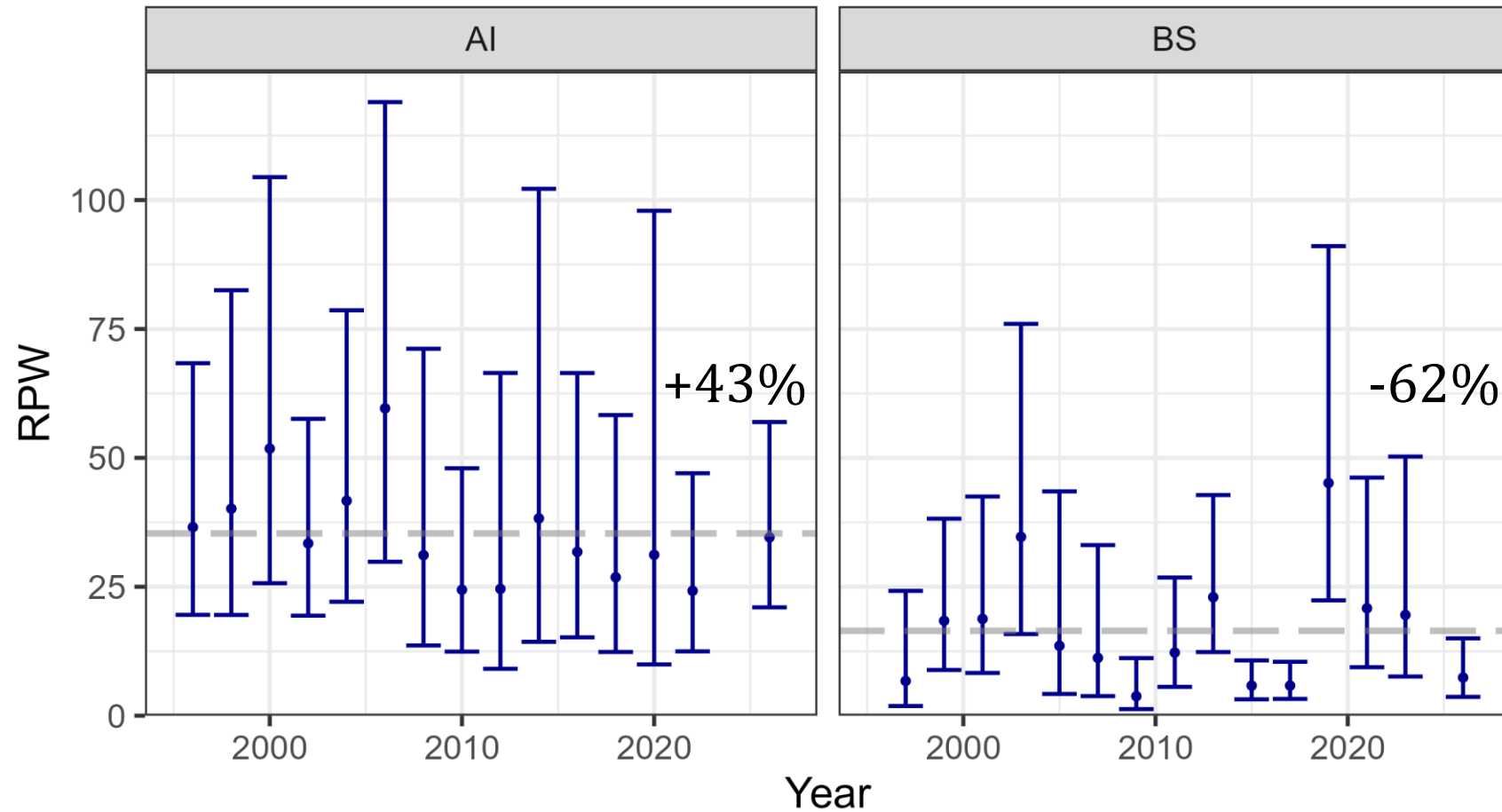
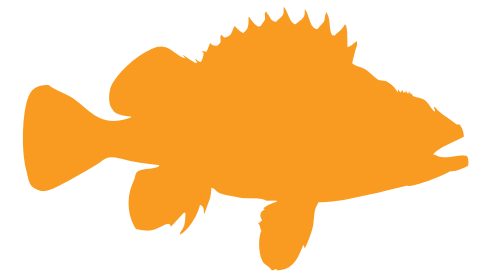
Pacific Cod



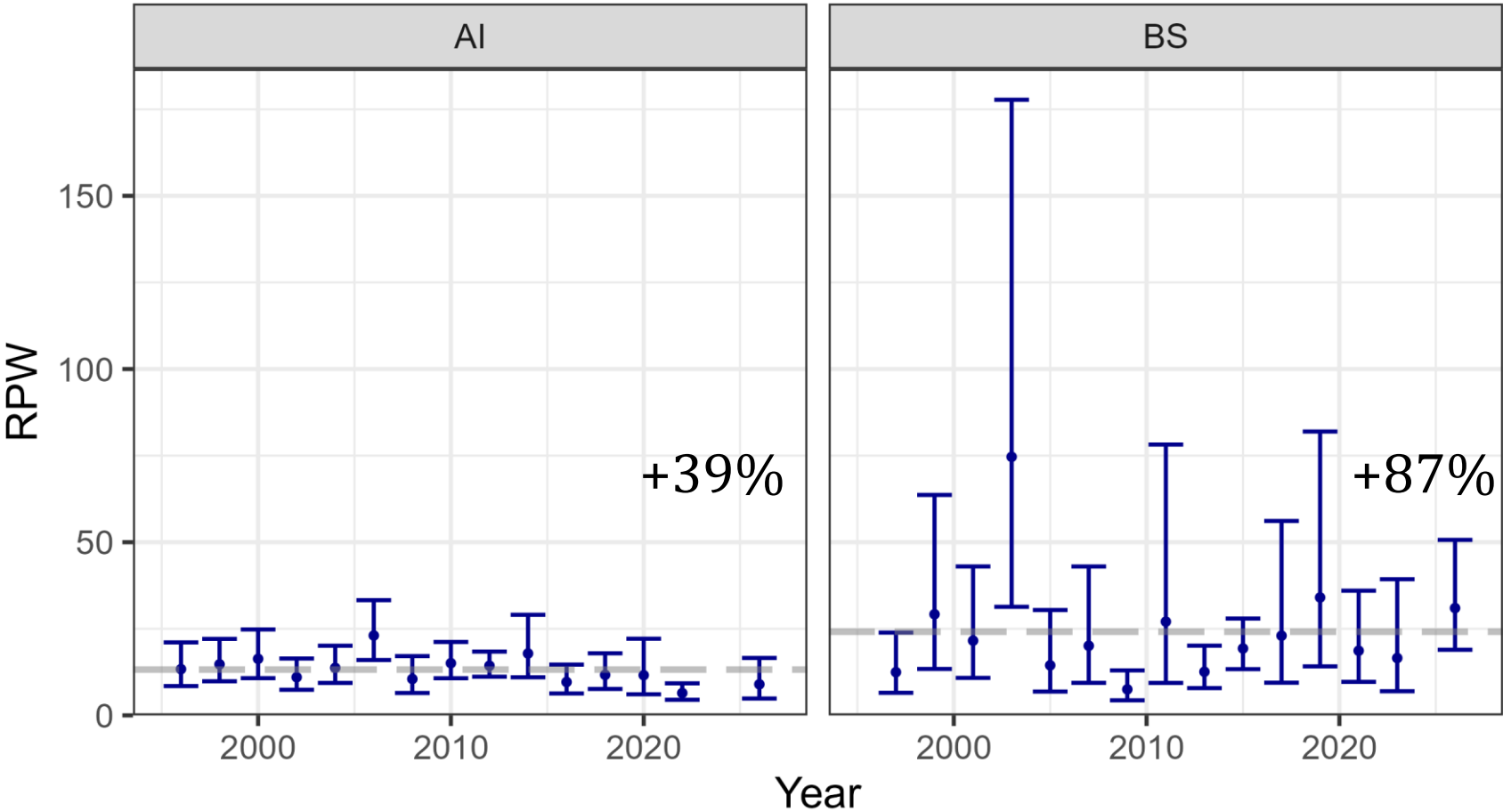
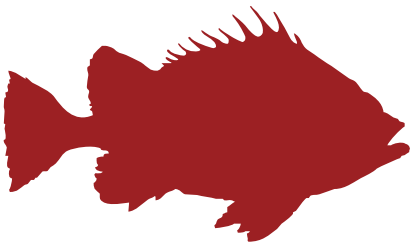
Greenland Turbot



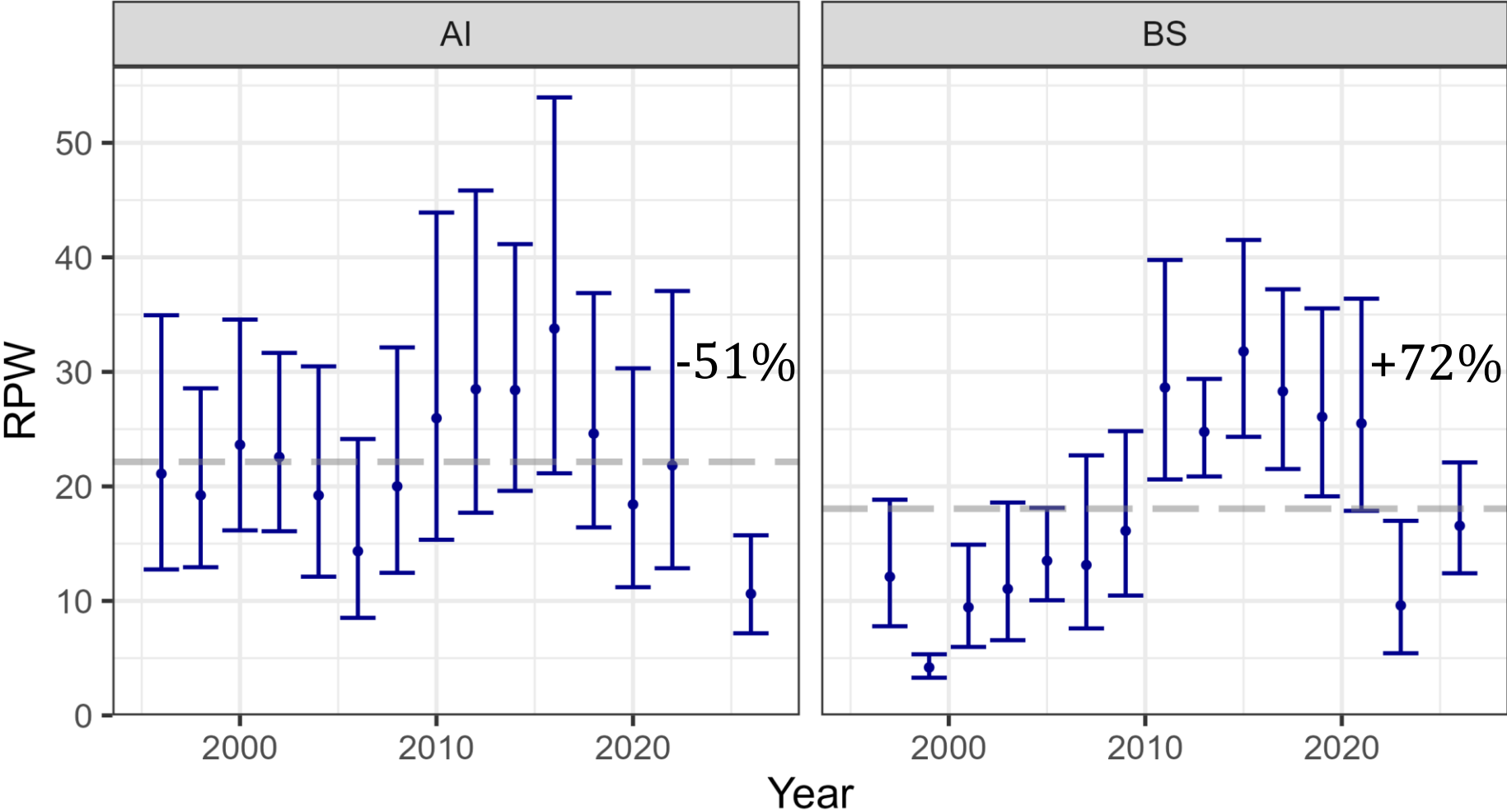
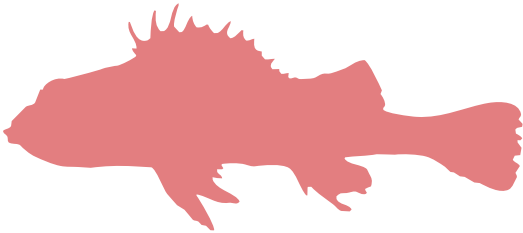
Rougheye/Blackspotted Rockfish



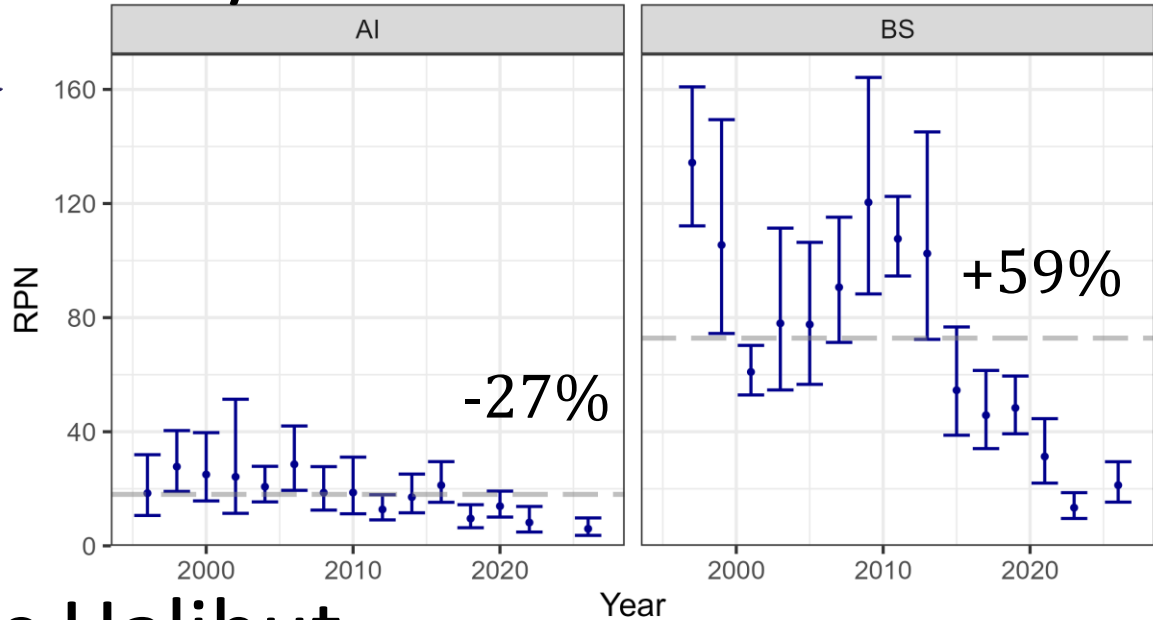
Shorttraker Rockfish



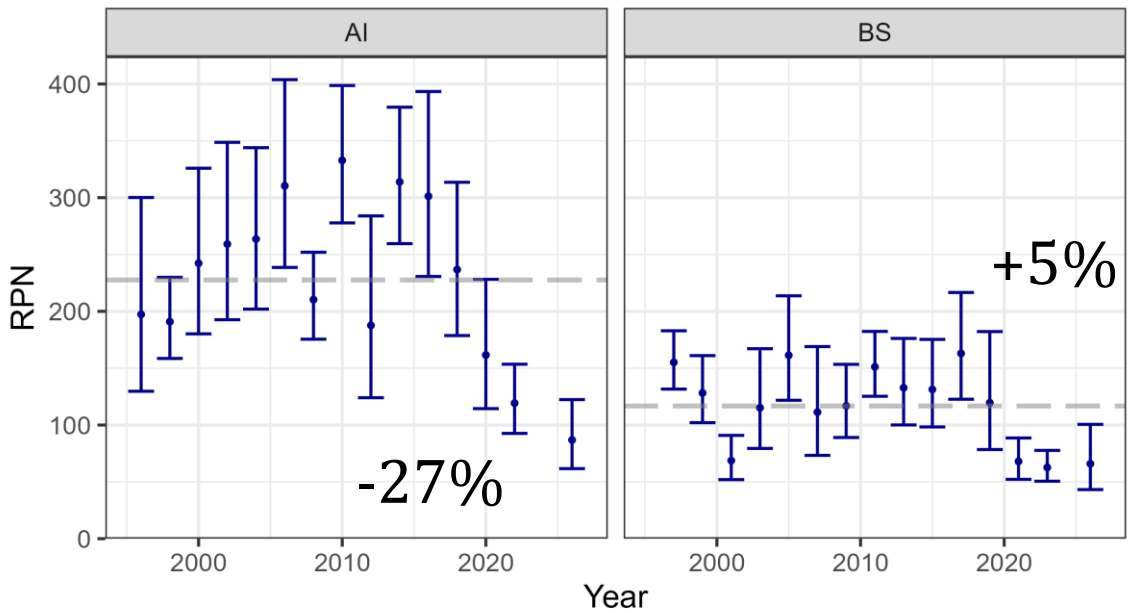
Shortpine Thornyhead



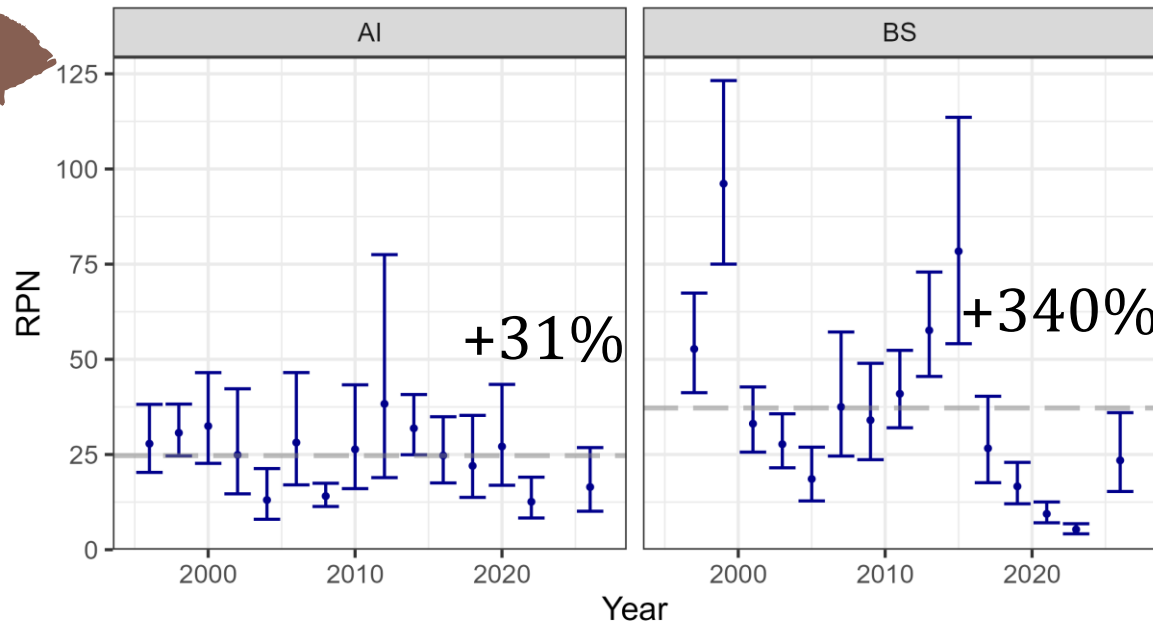
Kamchatka/Arrowtooth



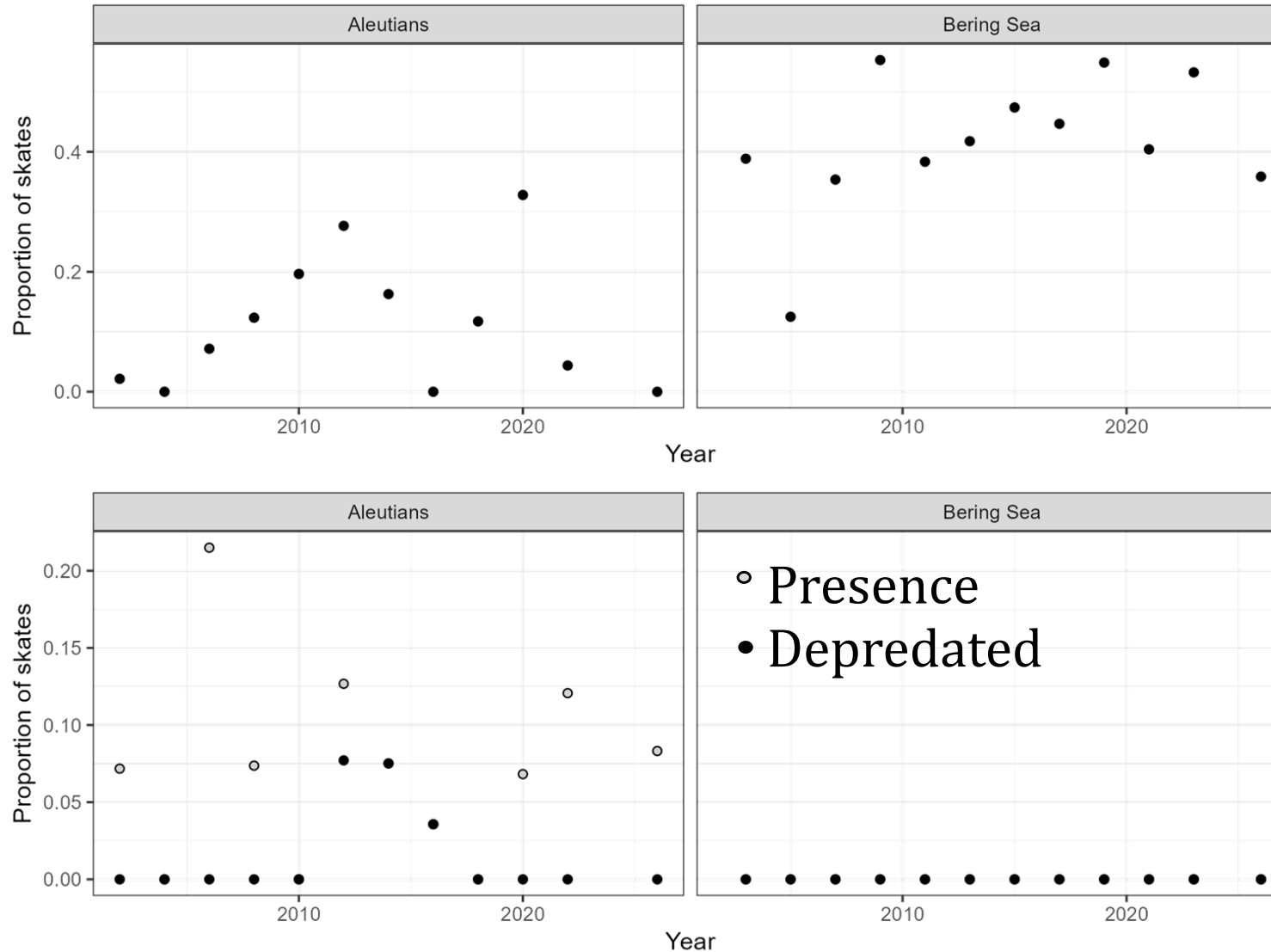
Giant Grenadier



Pacific Halibut



2026 Whale Depredation



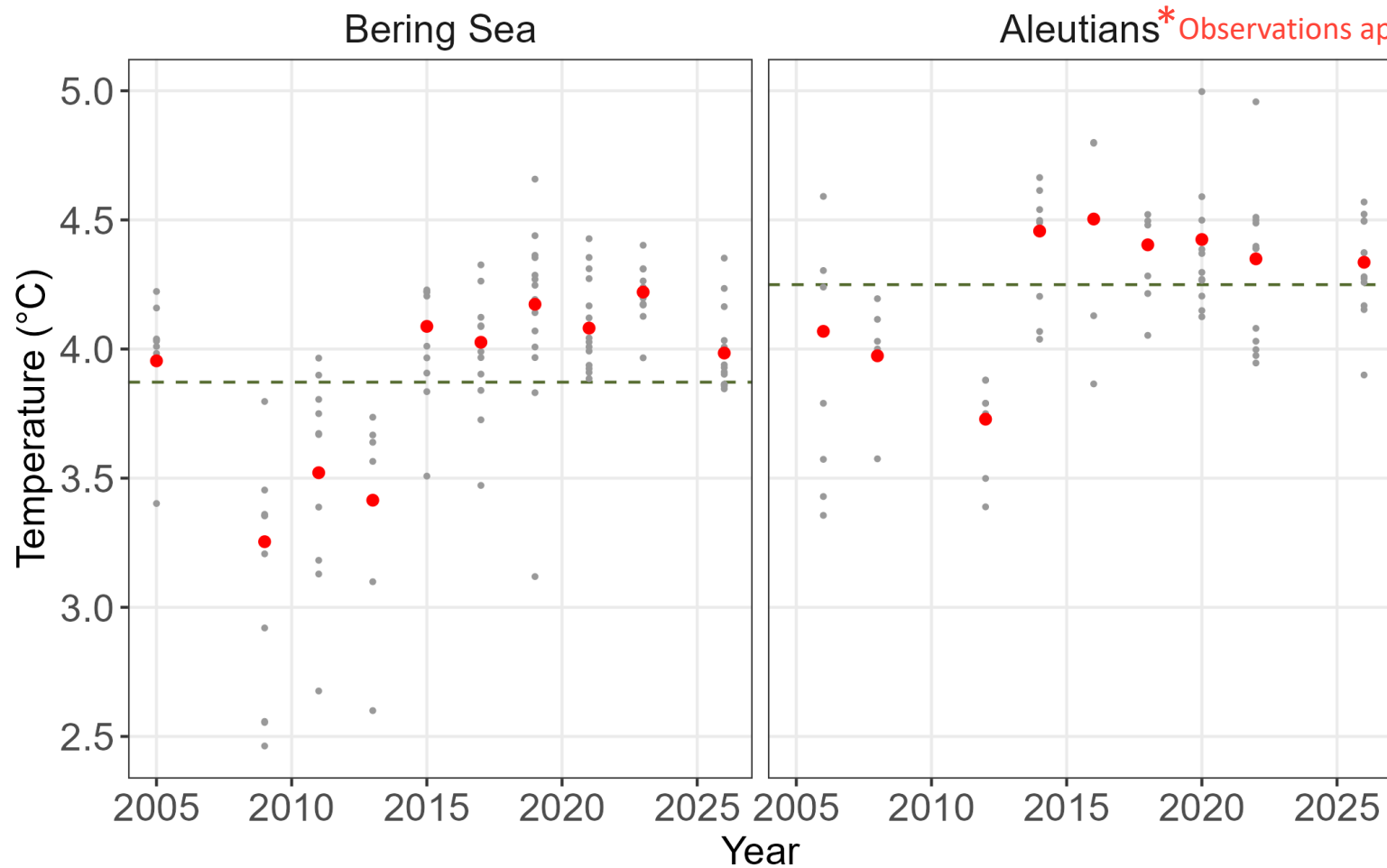
Killer whales



Sperm whales



Subsurface Temperature Index (250m)



Thank You!



- ABL Field staff: Ben Williams, Andrew Dimond, Katy Echave, Katie D'Amelio
- Contract Biologists: Jessica Miller and Bailie Hampton
- FV Alaskan Leader captain (Andy Billings), crew, and staff
- RACE Net Loft: Shawn Russell, Sand Borrego, Lorin Anderson

