

2021 Longline Survey GOA/EBS



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Plan Team Update

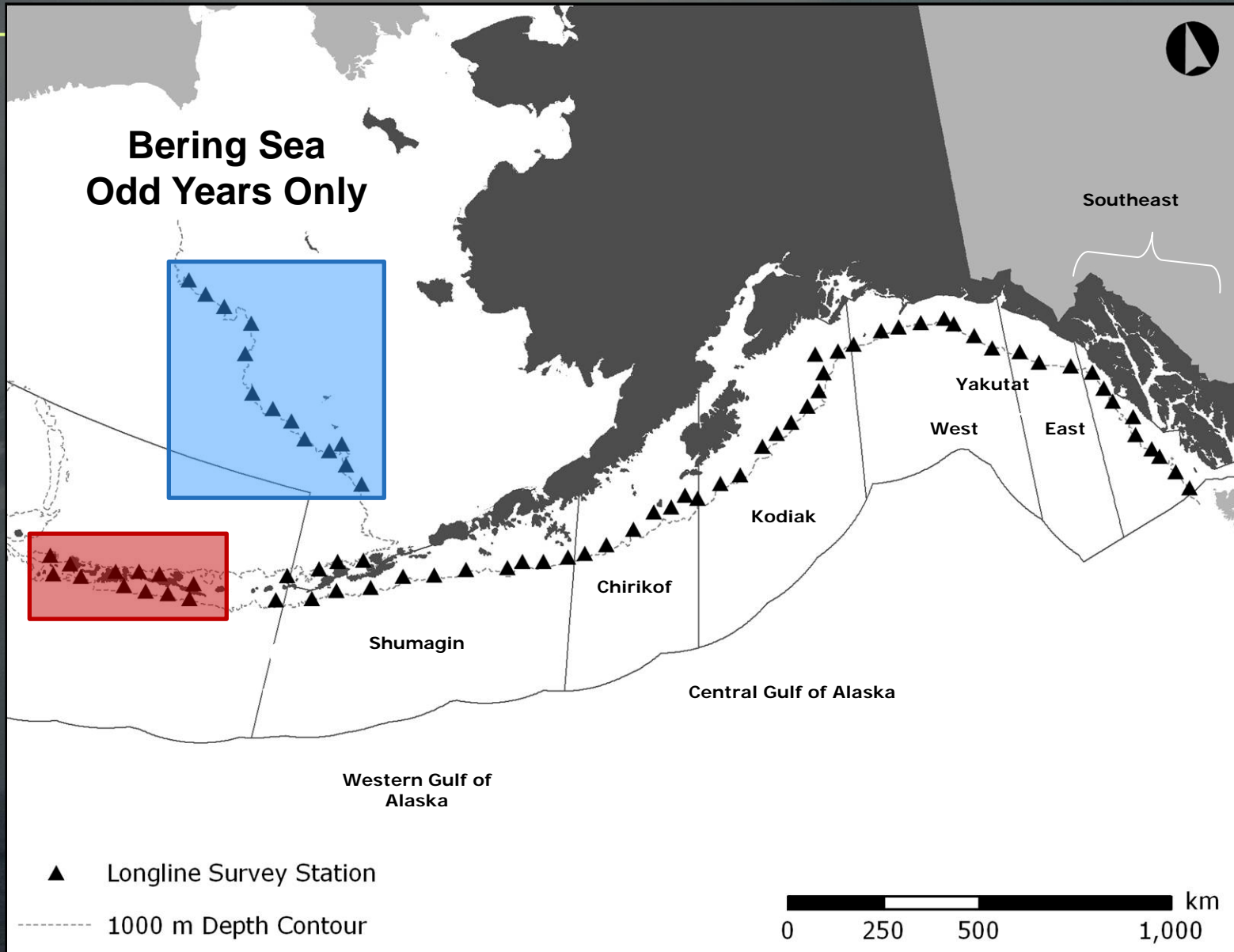
- 2021 Preliminary Relative Population Numbers (RPNs)
- 2021 Lengths (Sablefish/P Cod)
- Whale Interactions
- Subsurface Temperature
- Experimental Slinky Pots (3-days)
- New this year on AKFIN
 - Updated area sizes in calculations
 - Added variance estimates



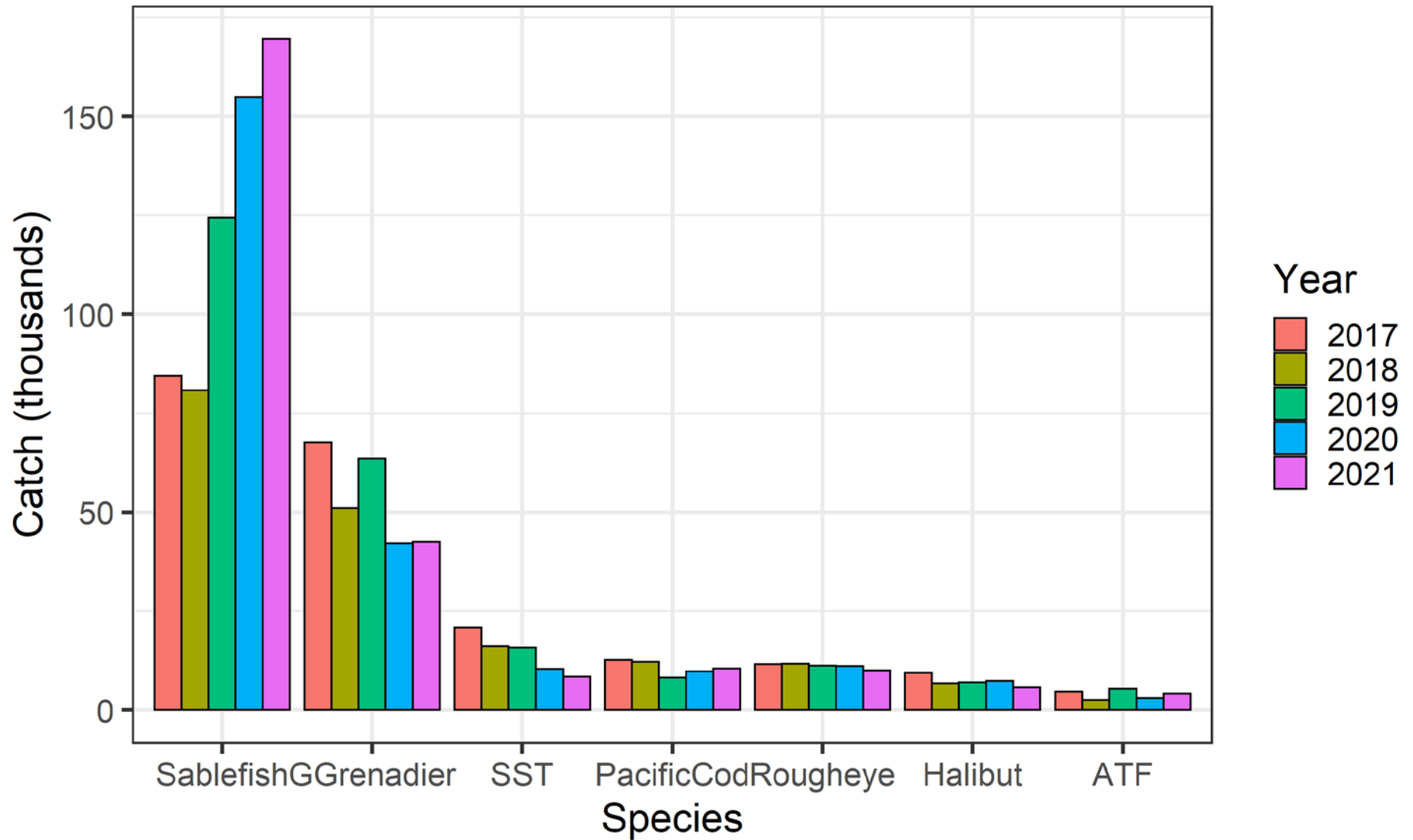
Survey in Numbers

- 615,690 hooks fished in 76 days
- 169,613 sablefish caught
- Tagged:
 - 6,156 sablefish
 - 315 shortspine thornyhead
 - 27 Greenland turbot
- Recaptured 31 tagged sablefish (18-NOAA, 7-Canadian, & 6-ADFG)
- 3,480 sablefish otoliths collected
- 147 temperature-depth profiles
- Eyeballs from 60 sablefish collected (RECA)

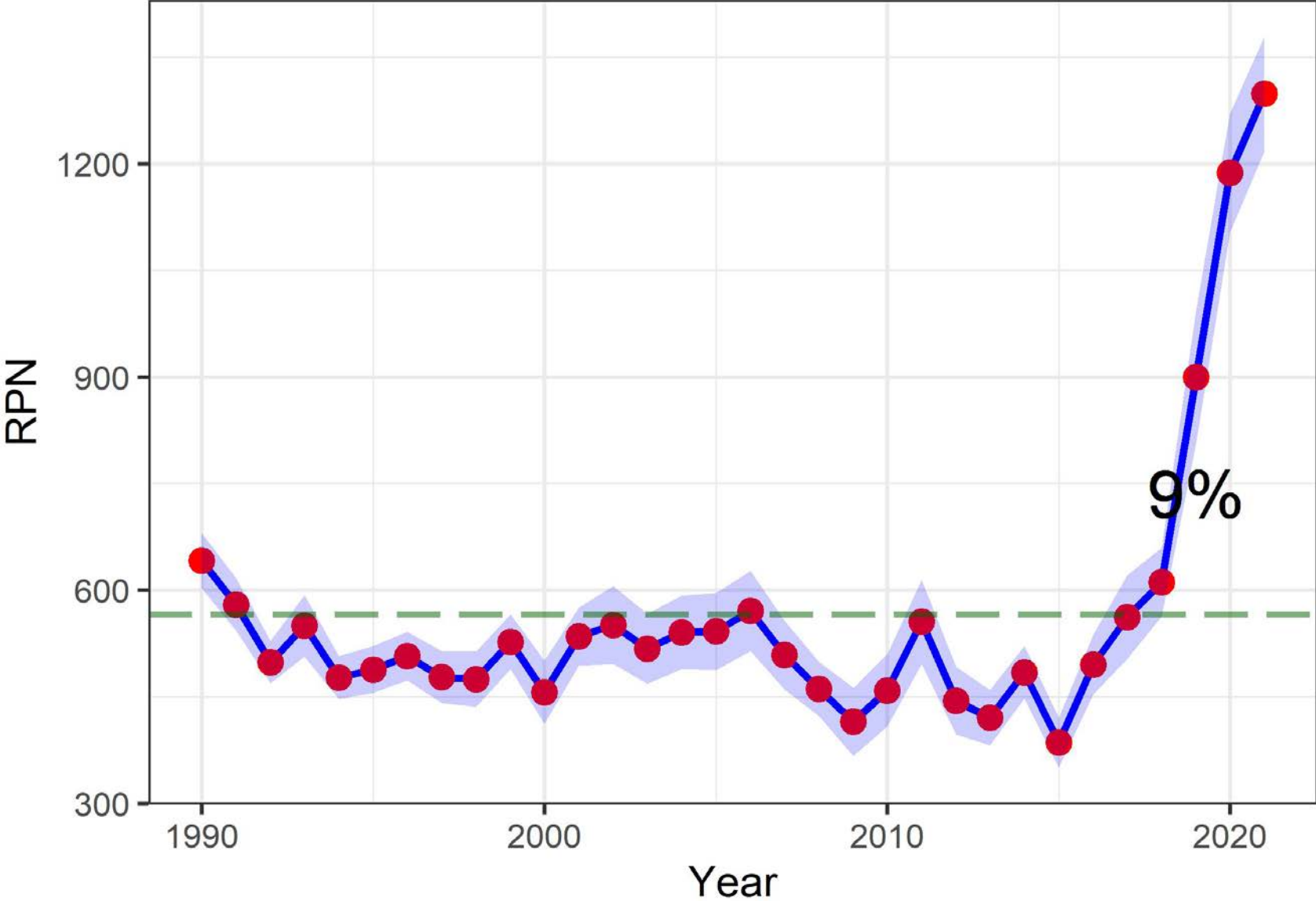
Survey Geographic Coverage



Recent raw catches by species

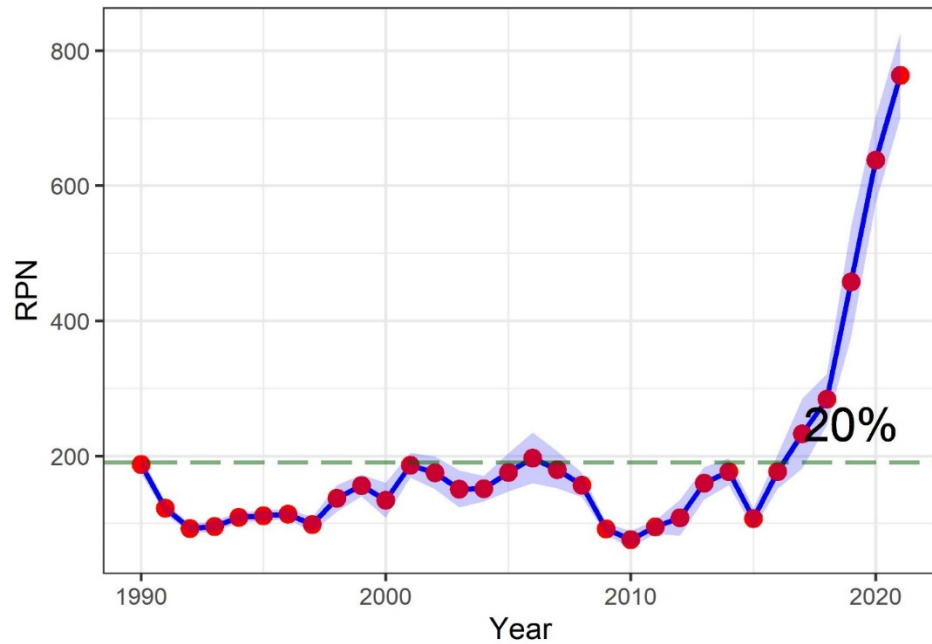


Alaska Sablefish longline survey RPNs

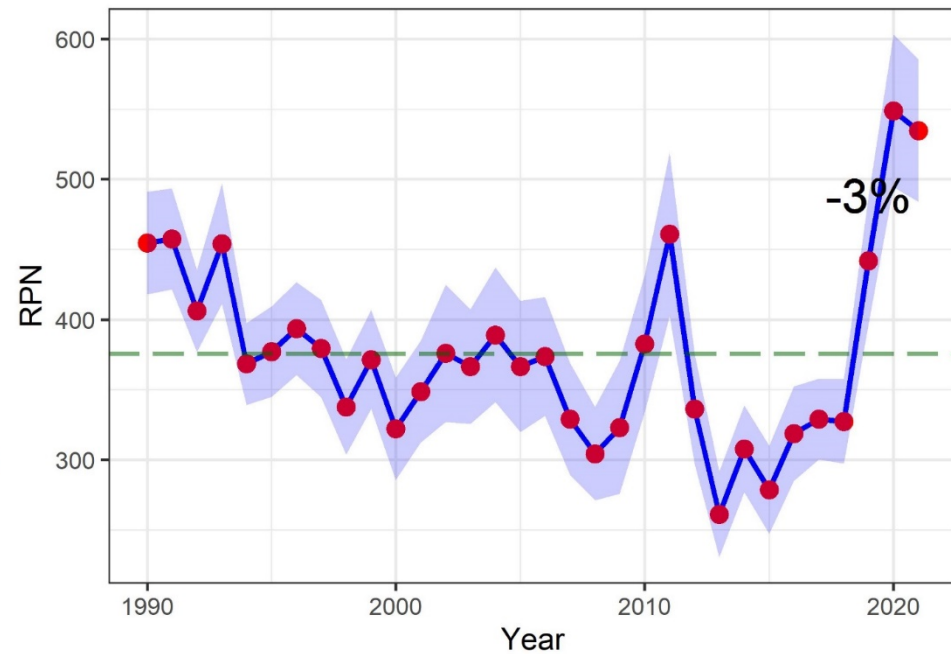


Breakdown by FMP

BSAI Sablefish longline survey RPNs

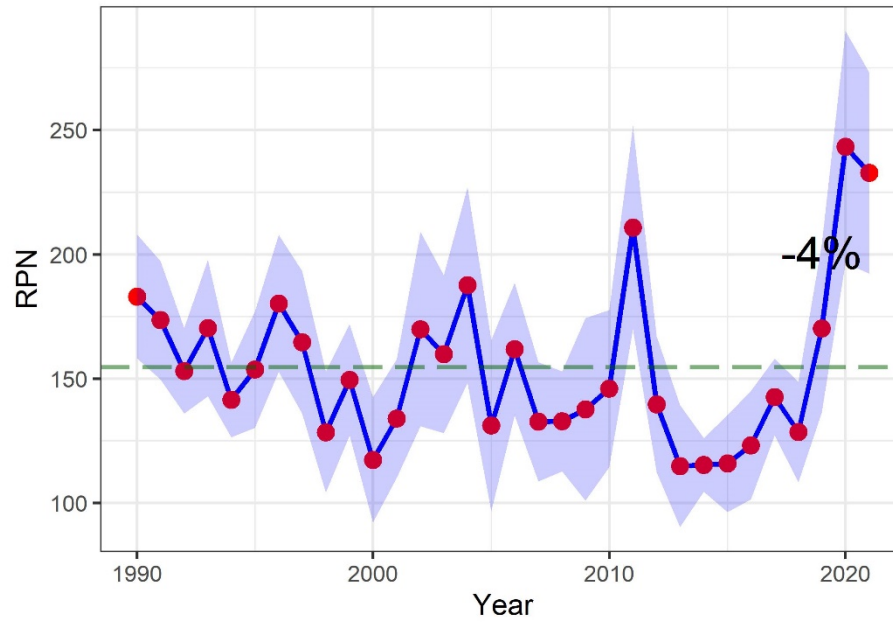


GOA Sablefish longline survey RPNs

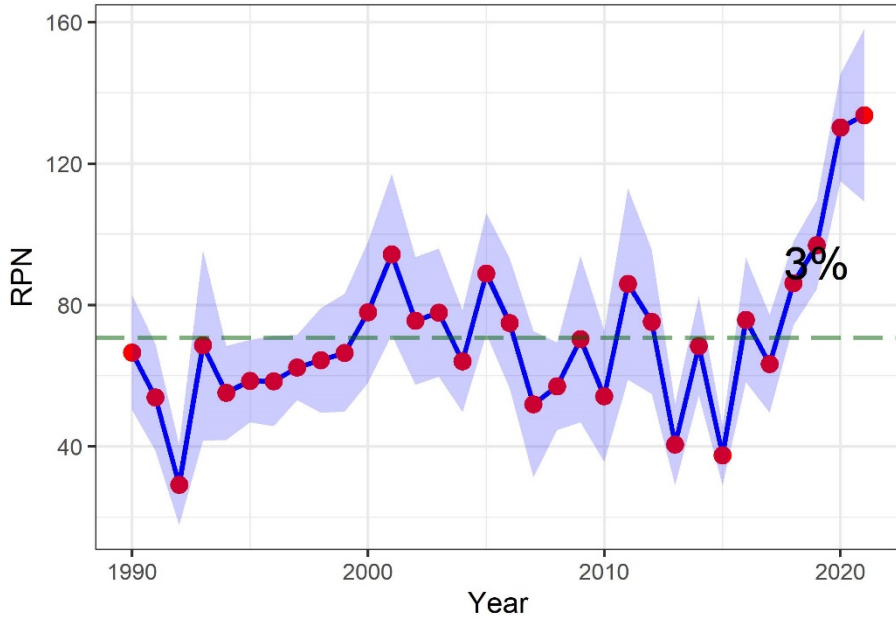


Just GOA

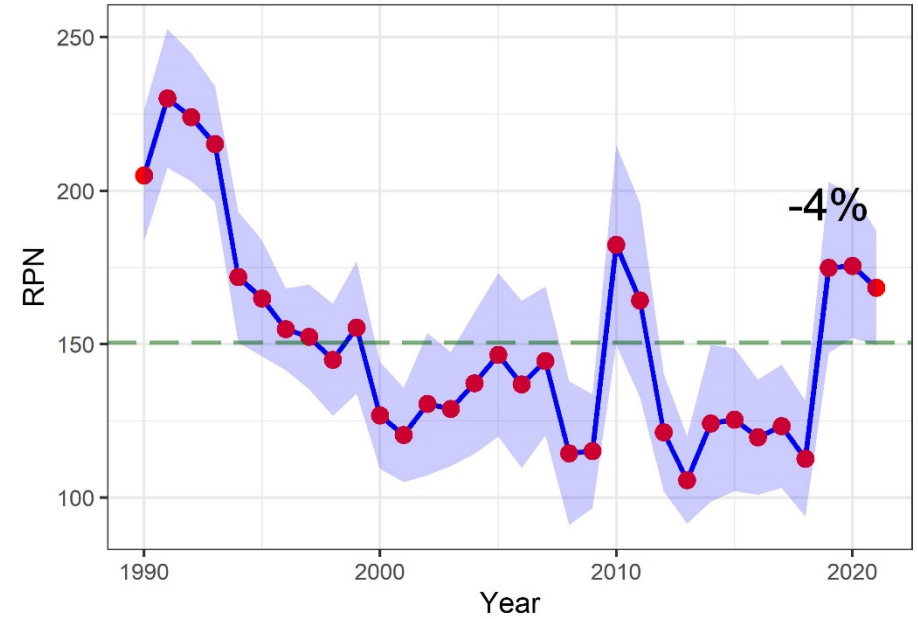
Central Gulf of Alaska Sablefish longline survey RPNs



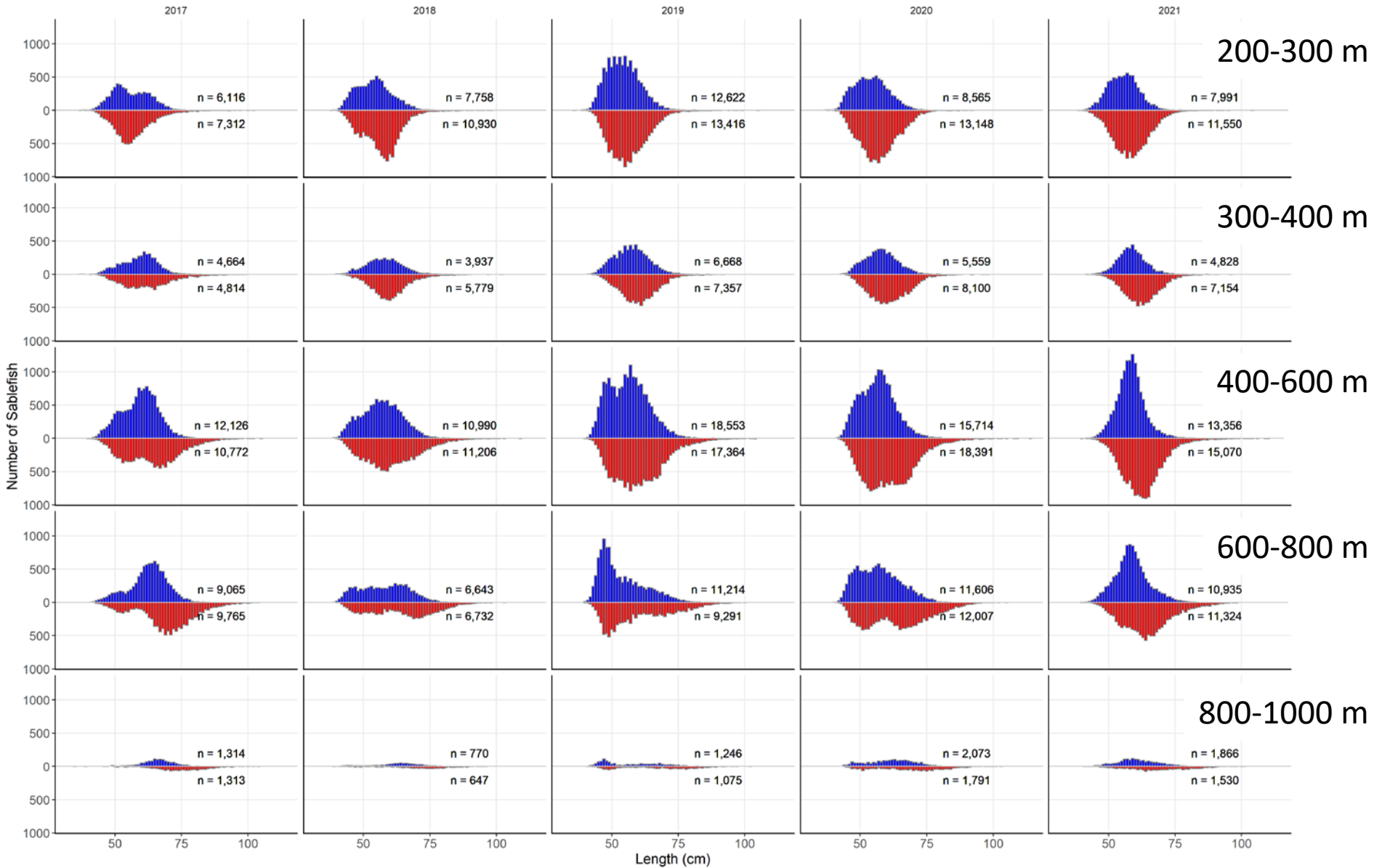
Western Gulf of Alaska Sablefish longline survey RPN



Eastern Gulf of Alaska Sablefish longline survey RPNs

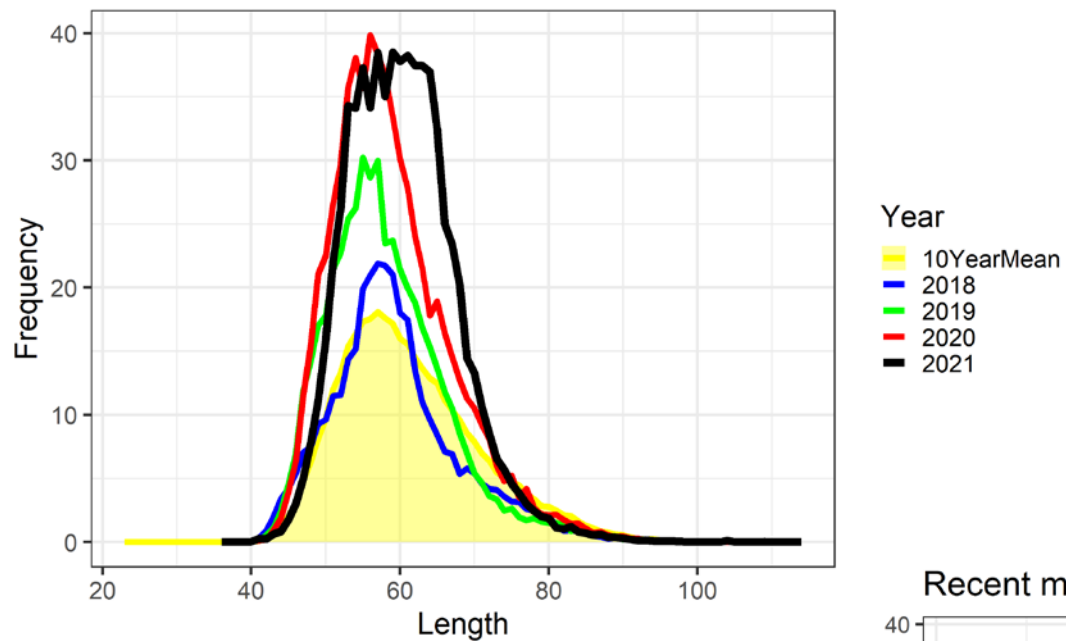


Sable Lengths (blue=Male, red=Female)

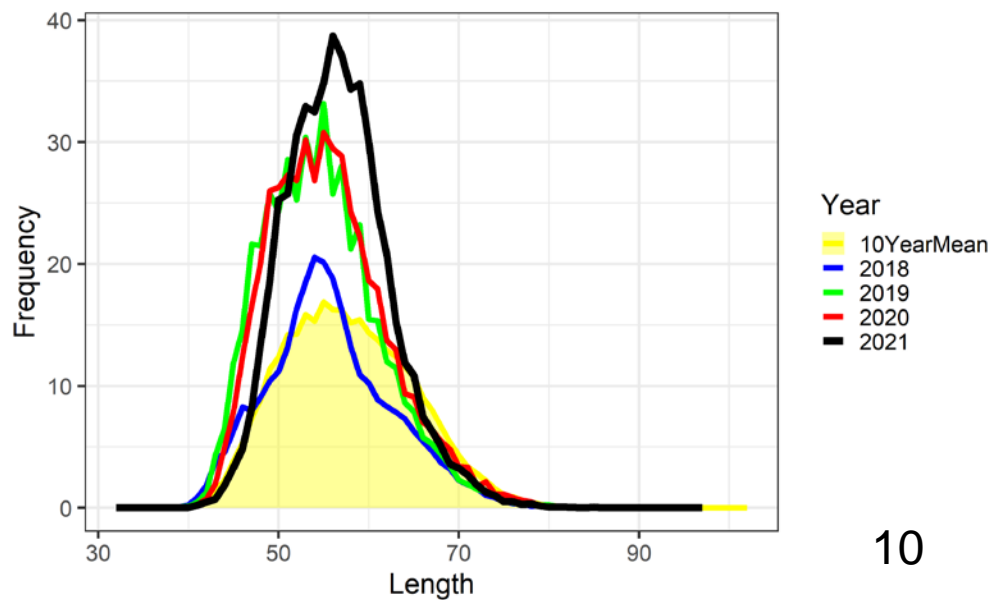


Sable Lengths to RPNs

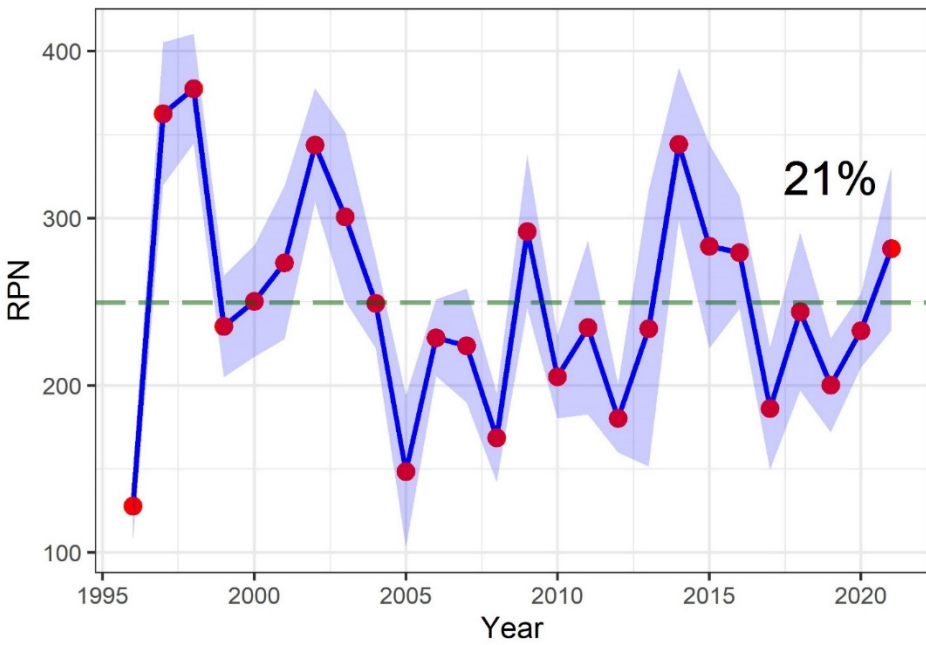
Recent female sablefish length frequencies



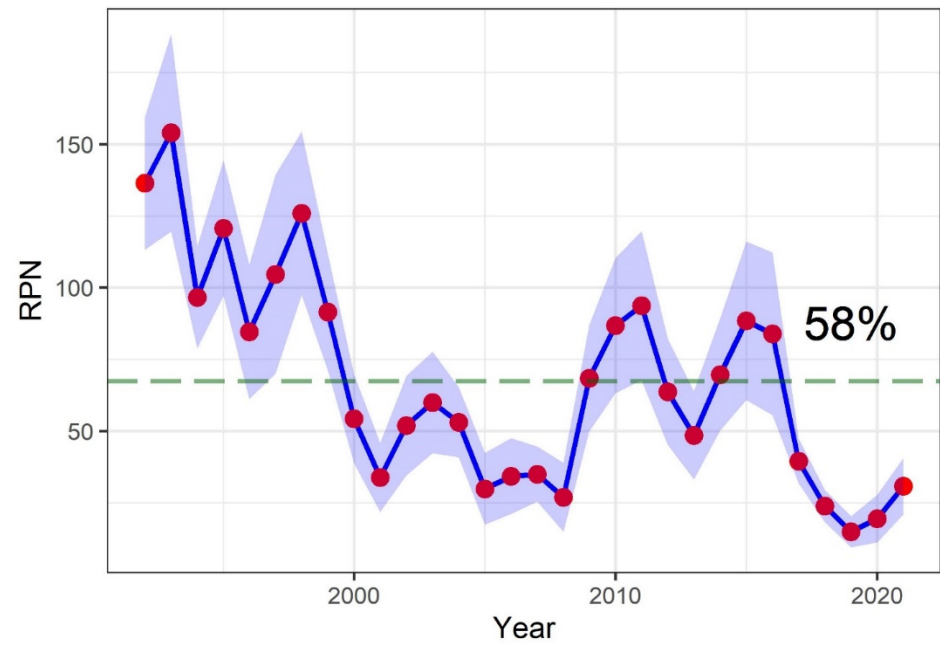
Recent male sablefish length frequencies



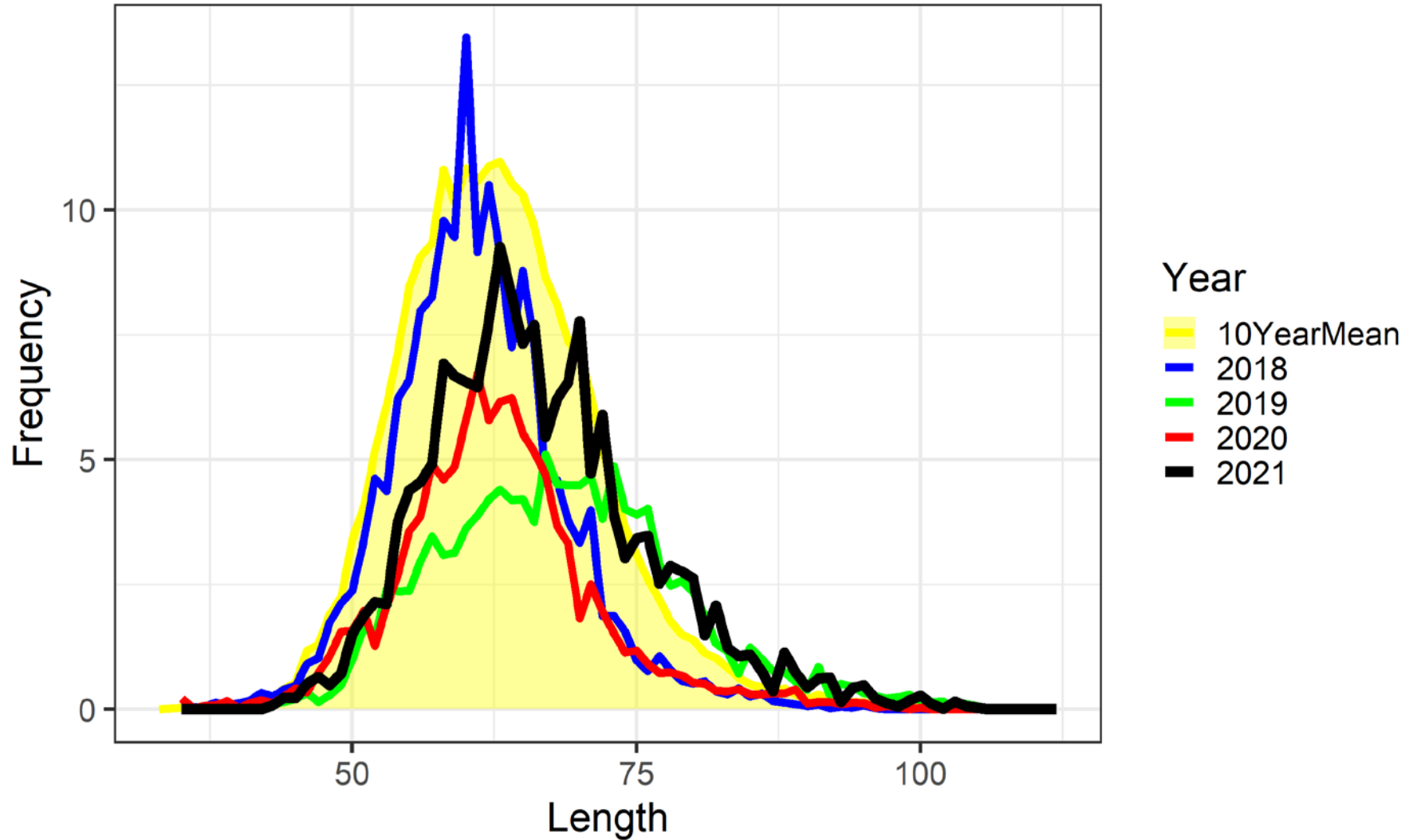
BSAI Pacific cod longline survey RPNs



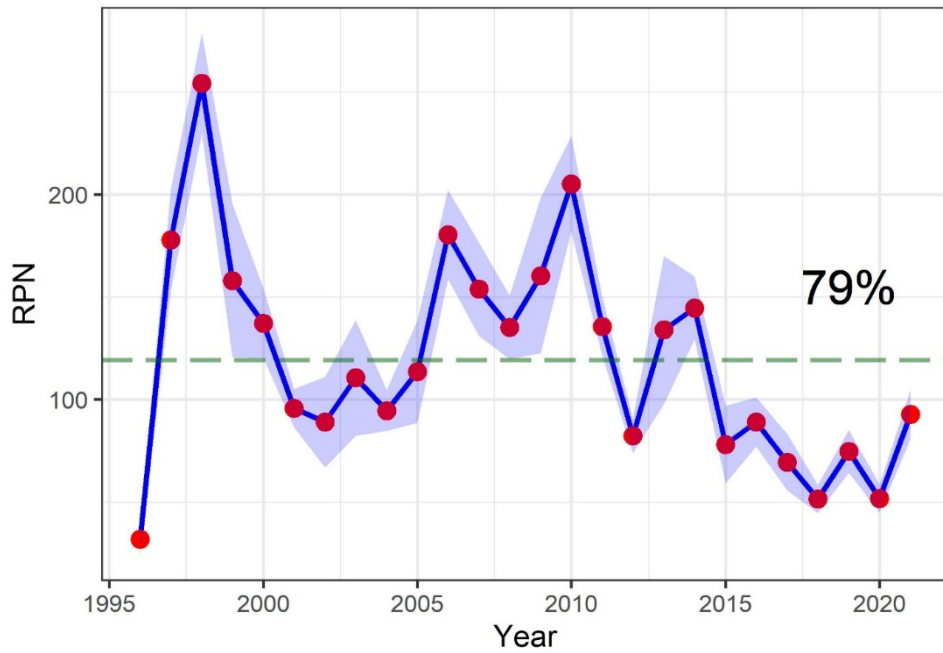
GOA Pacific cod longline survey RPNs



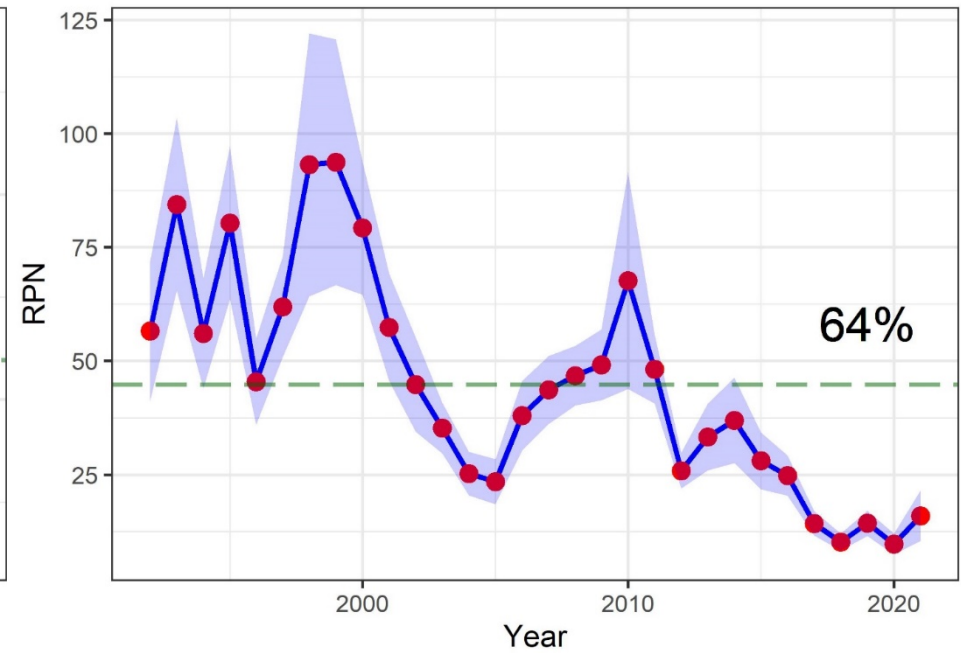
Recent P. cod length frequencies



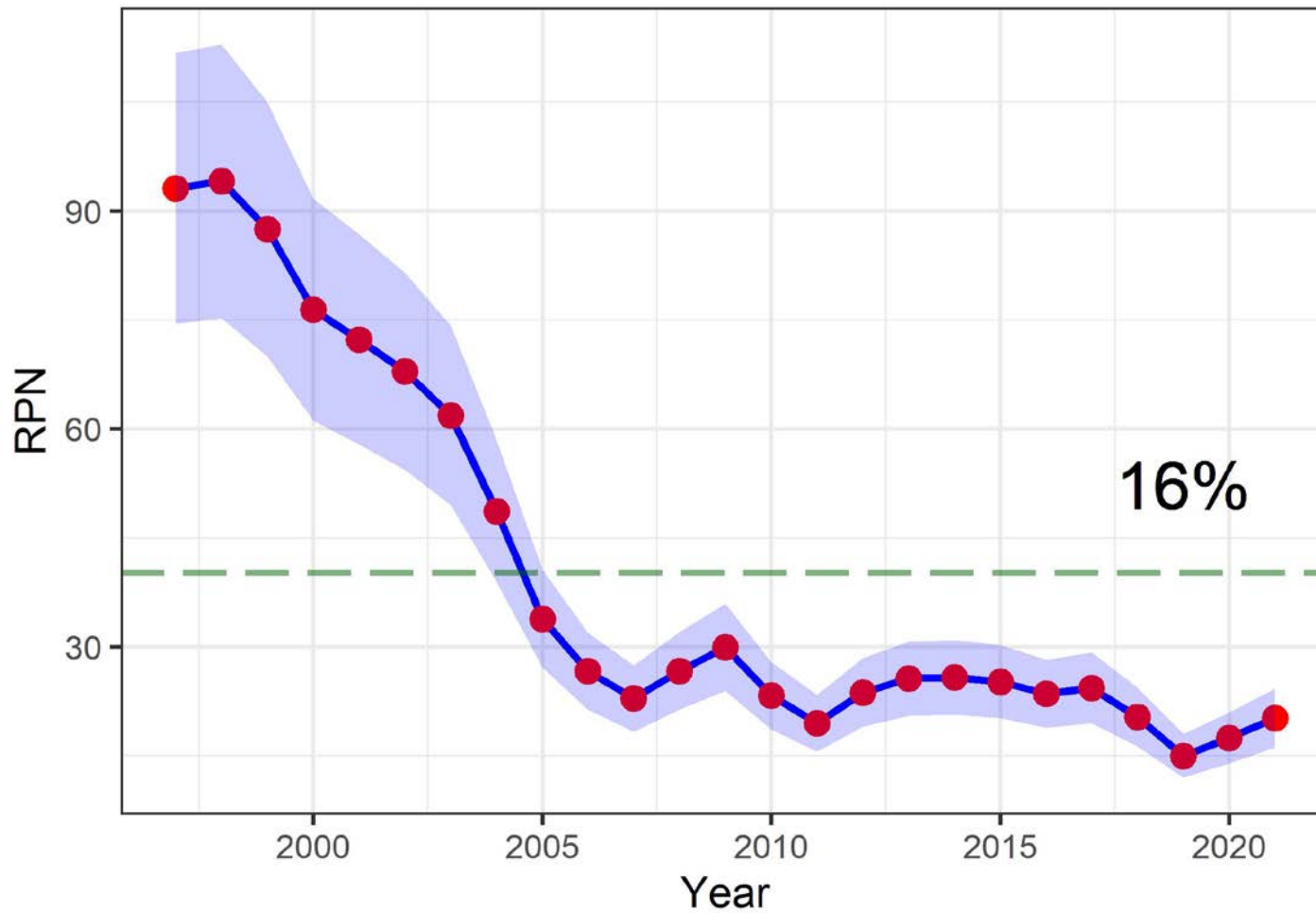
BSAI Kam/ATF longline survey RPNs



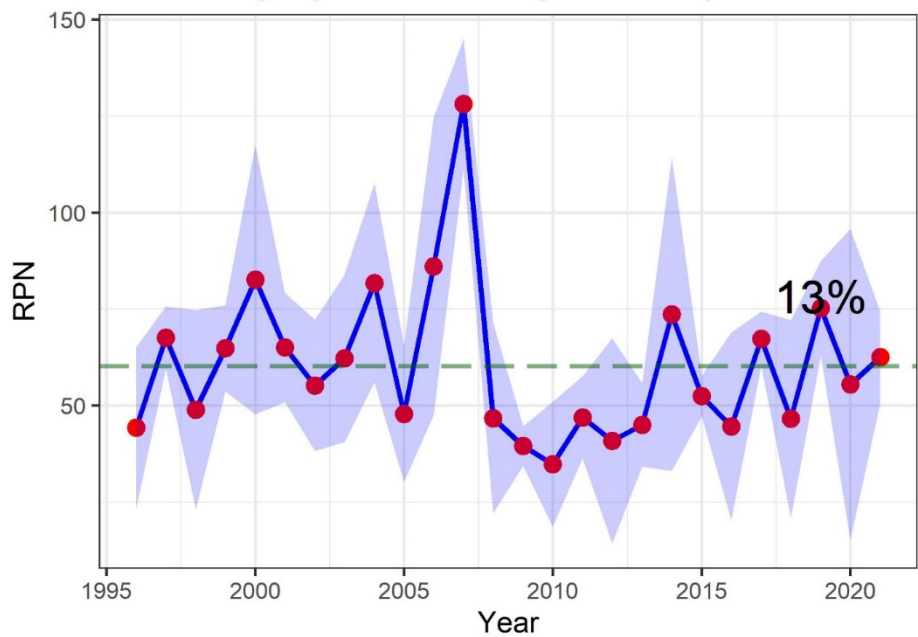
GOA Kam/ATF longline survey RPNs



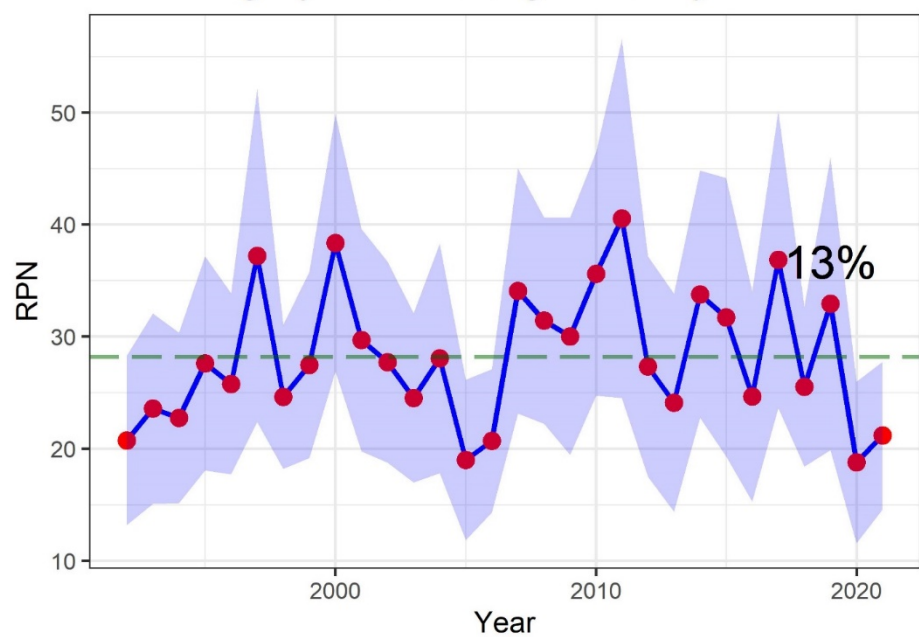
BSAI Greenland Turbot longline survey RPNs



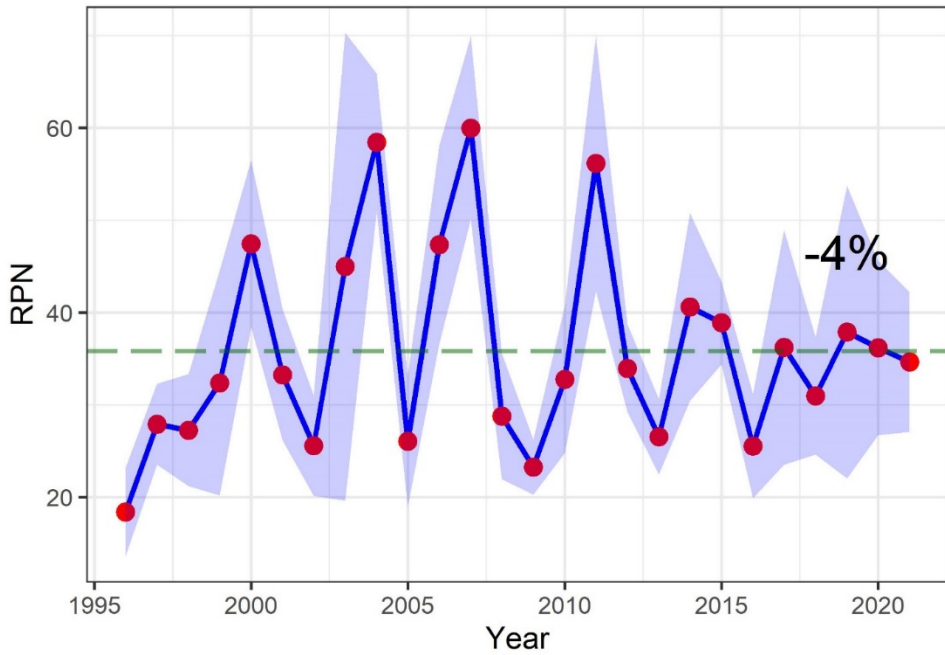
BSAI Rougheye rockfish longline survey RPNs



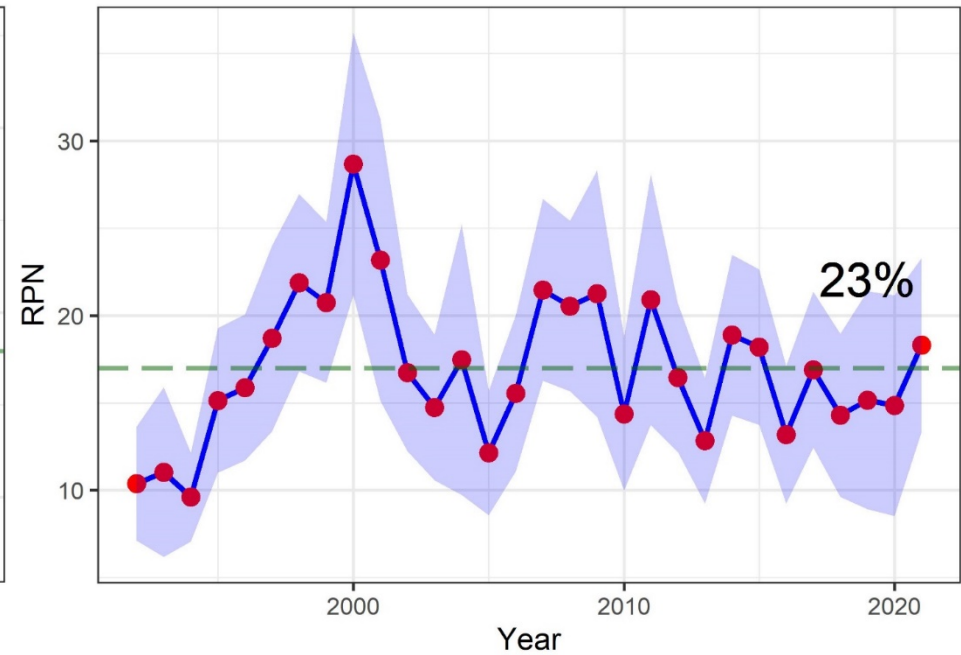
GOA Rougheye rockfish longline survey RPNs



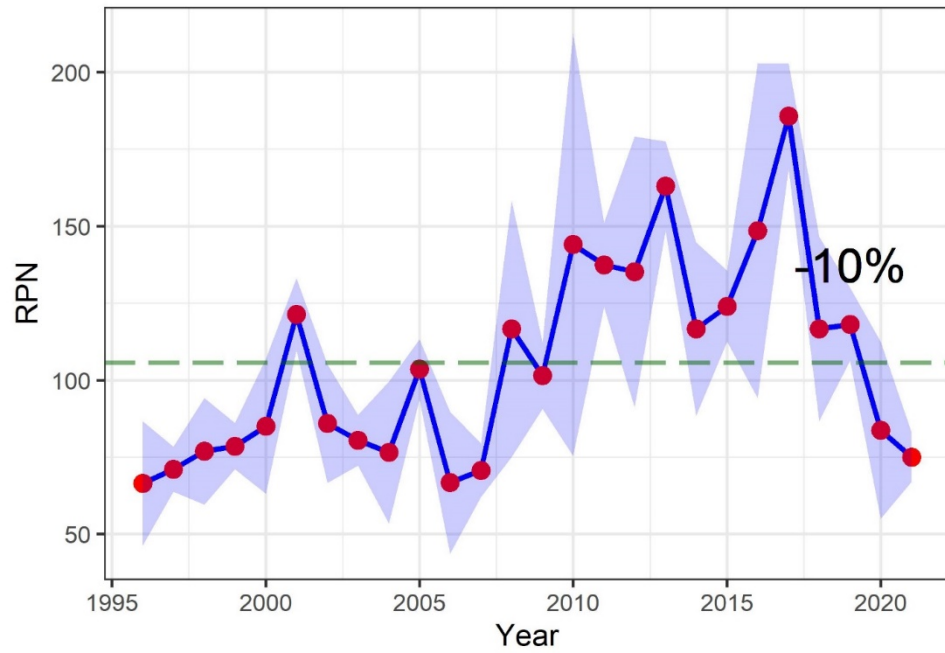
BSAI Shortraker rockfish longline survey RPNs



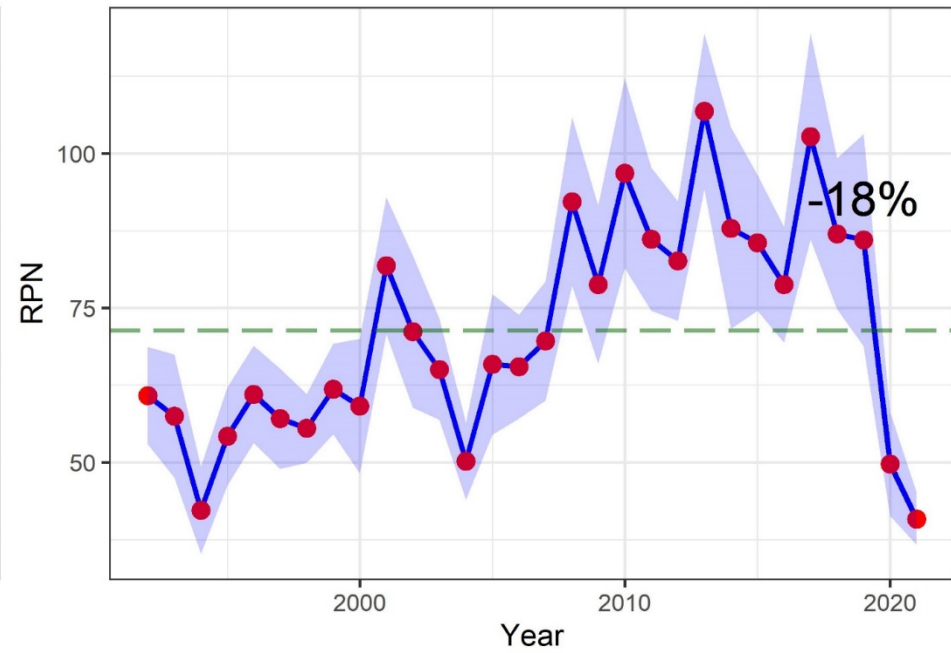
GOA Shortraker rockfish longline survey RPNs



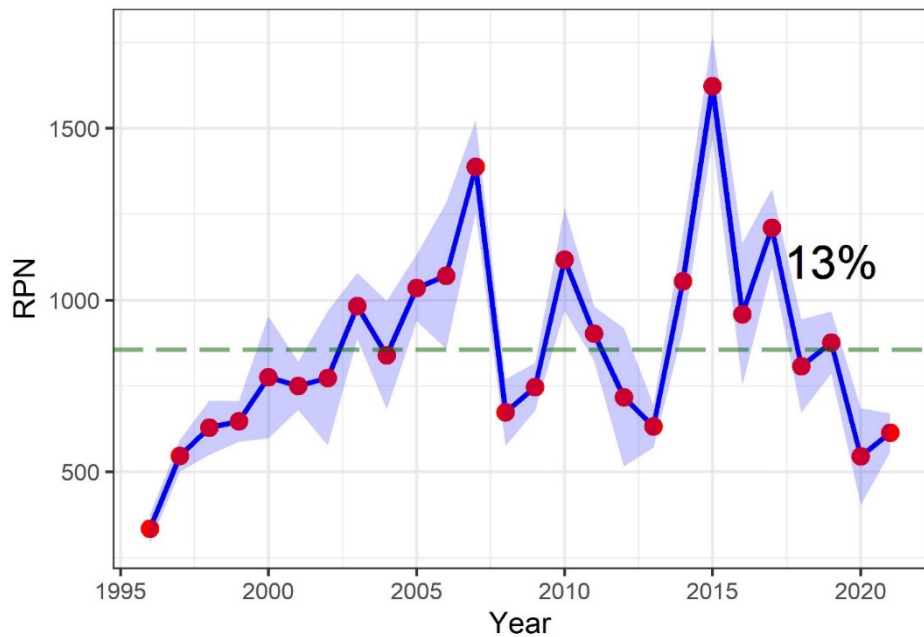
BSAI Shortspine thornyhead longline survey RPNs



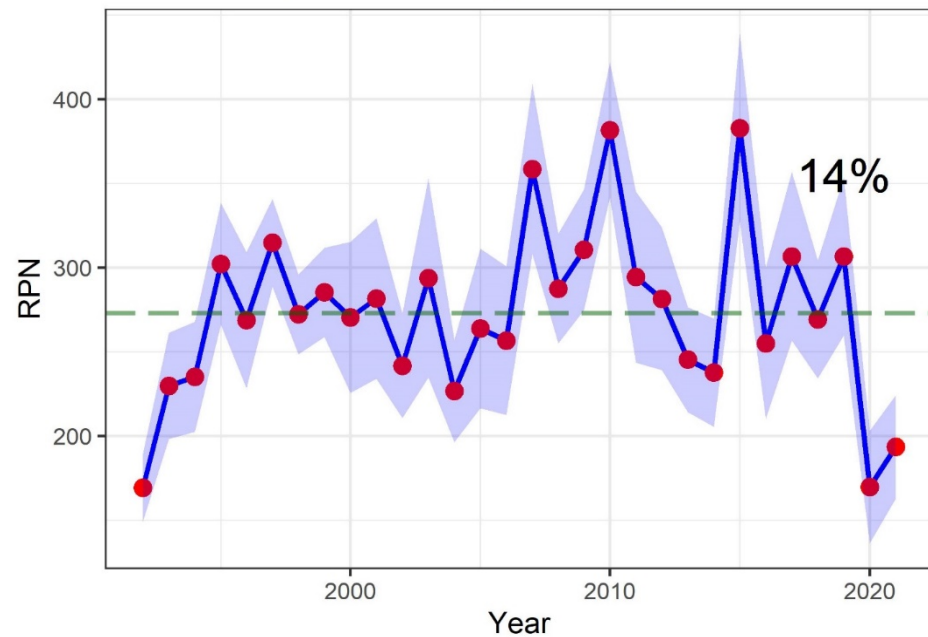
GOA Shortspine thornyhead longline survey RPNs



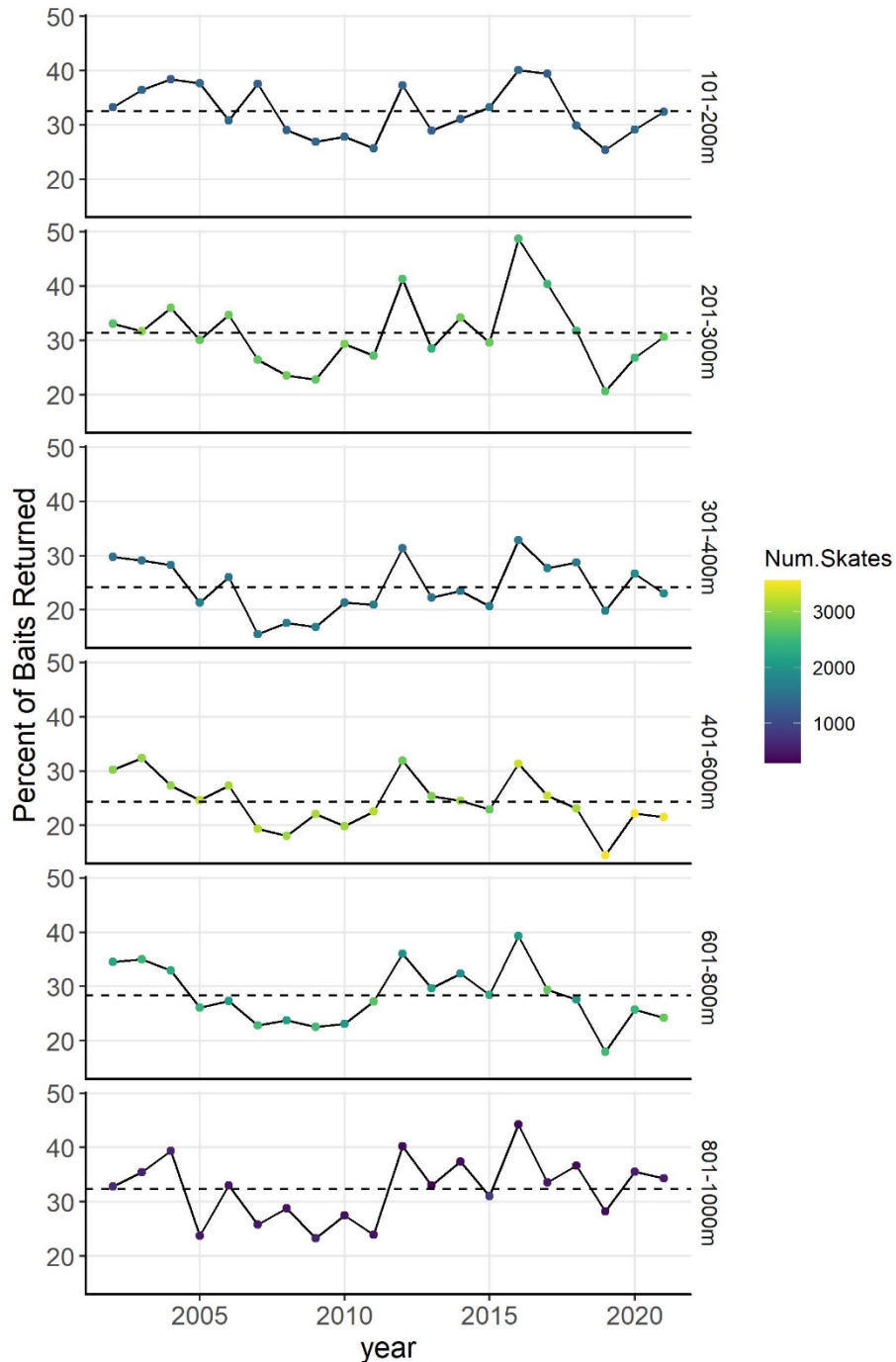
BSAI Giant grenadier longline survey RPNs



GOA Giant grenadier longline survey RPNs



Hook Competition

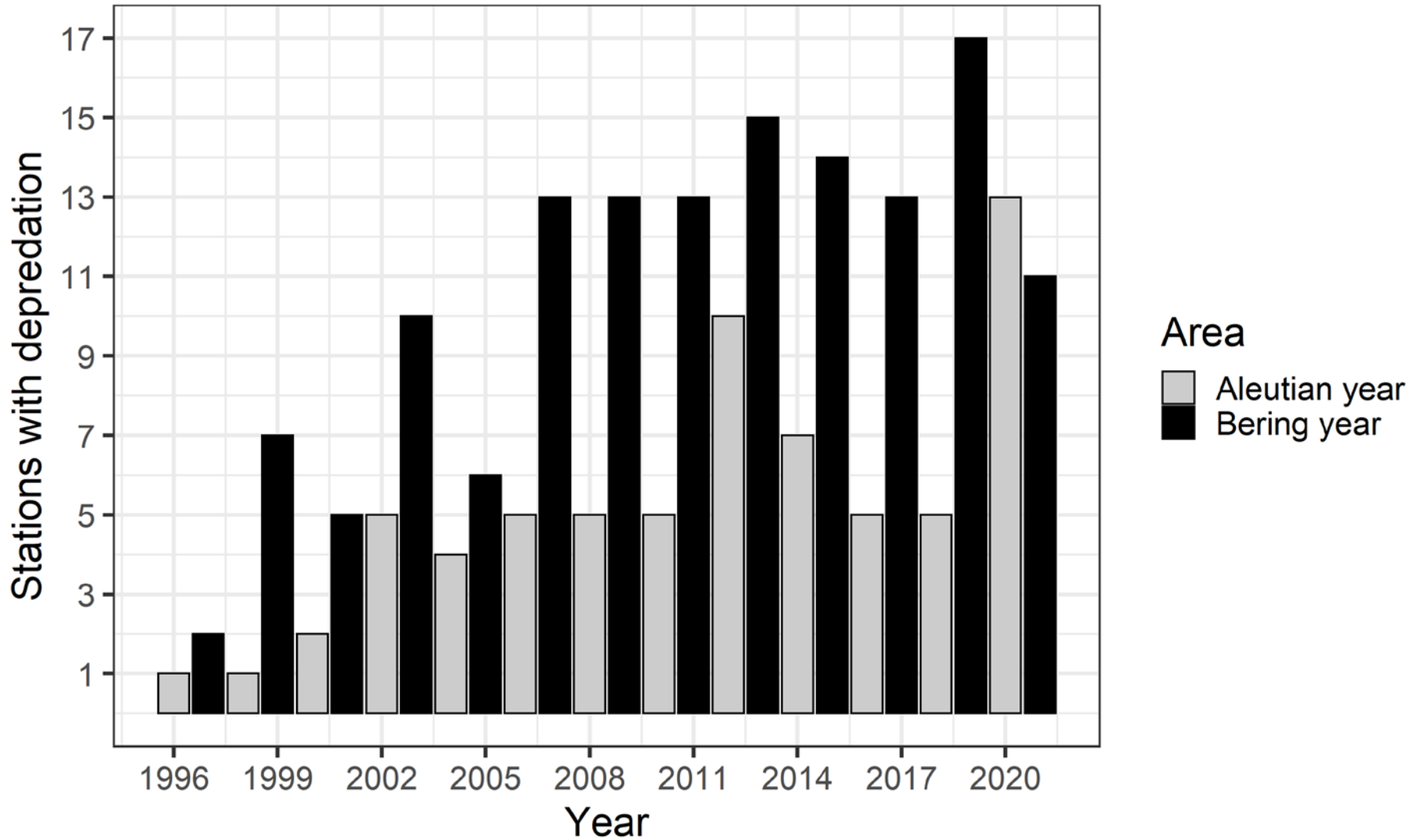


- Known issue with LL surveys
- Percent of hooks with bait returned used as a proxy for gear saturation
- 2019 actually more saturated than 2020, despite seeing RPN declines last year
- Will work with authors if concerned about specific stocks

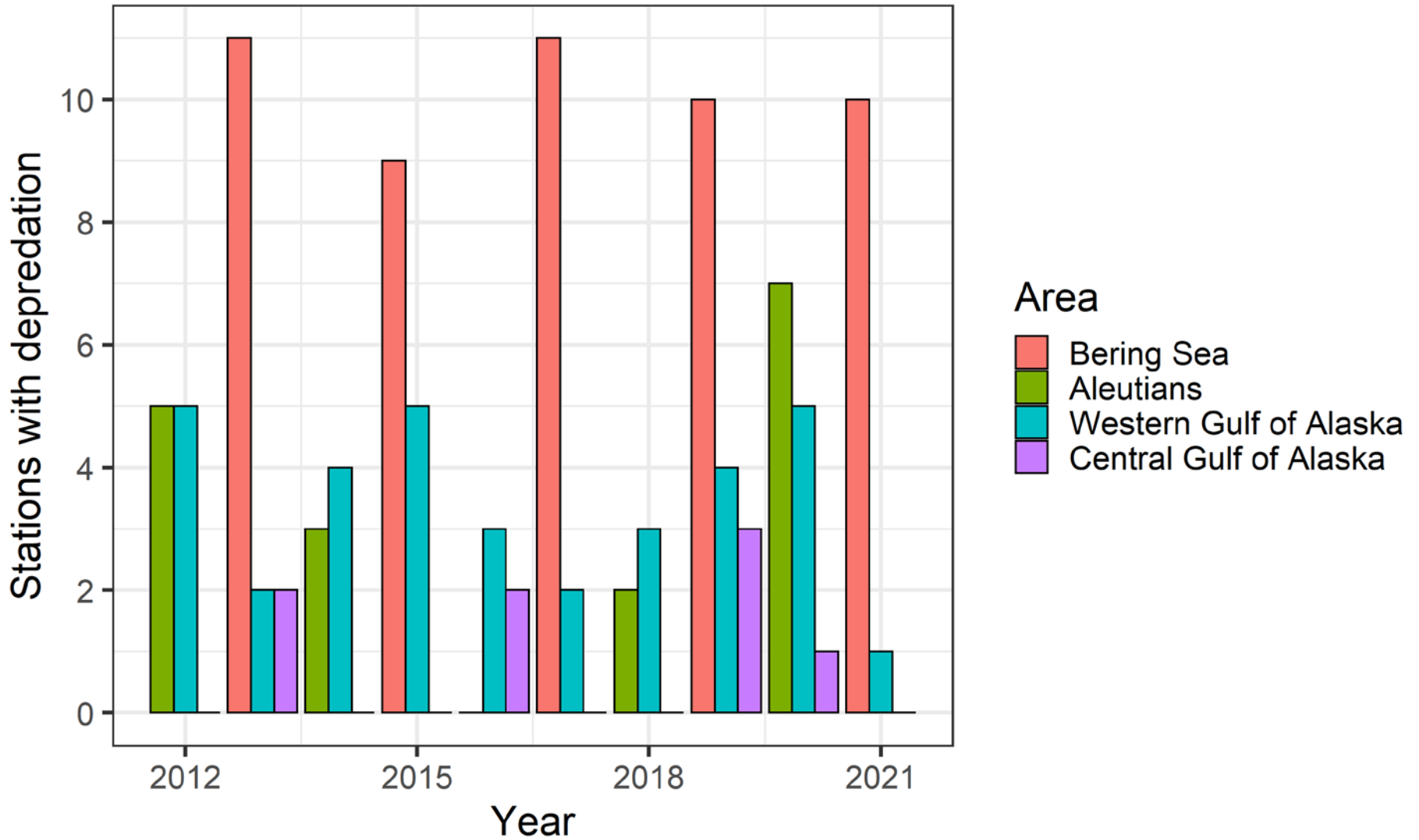
Whale Interactions



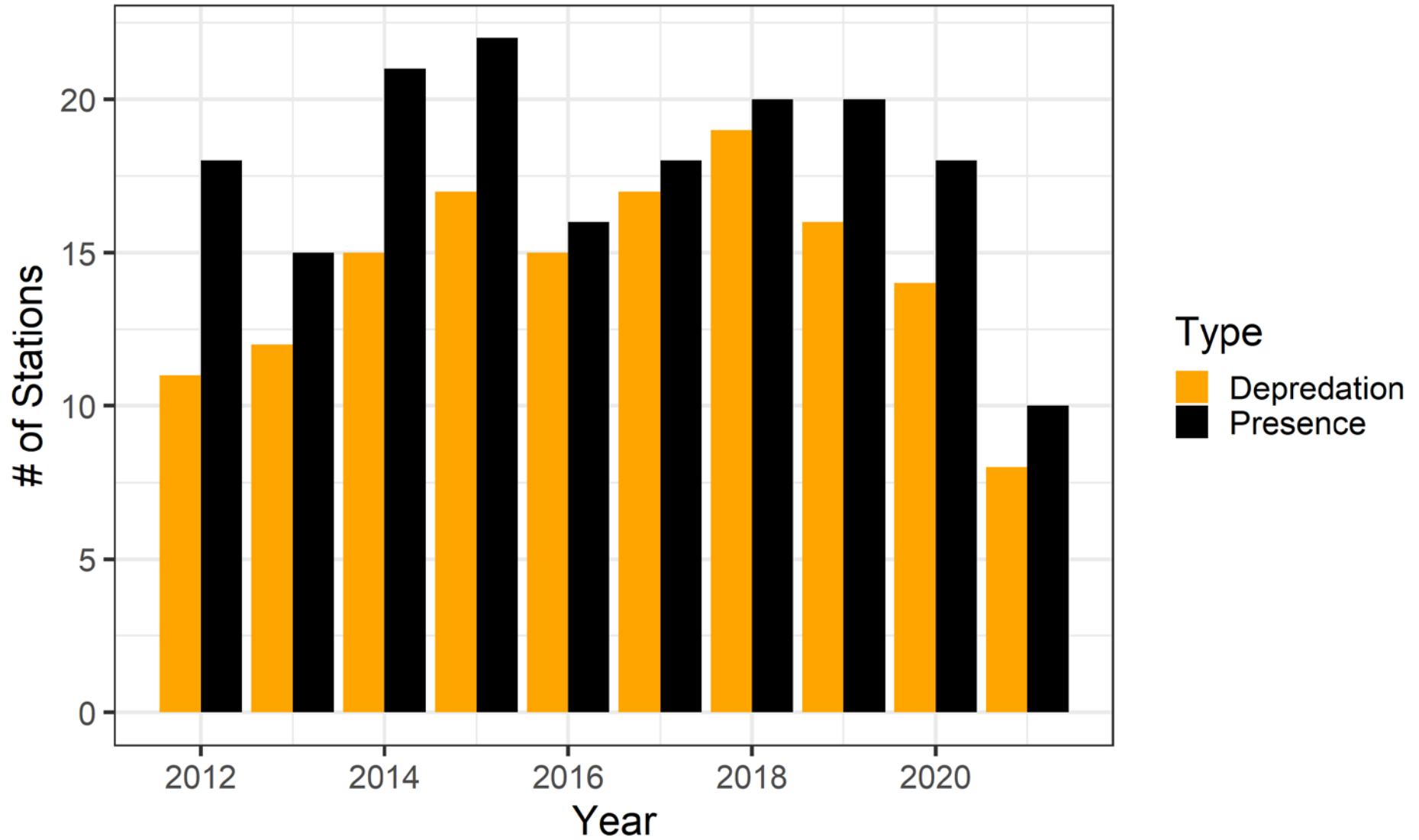
Killer whale depredation



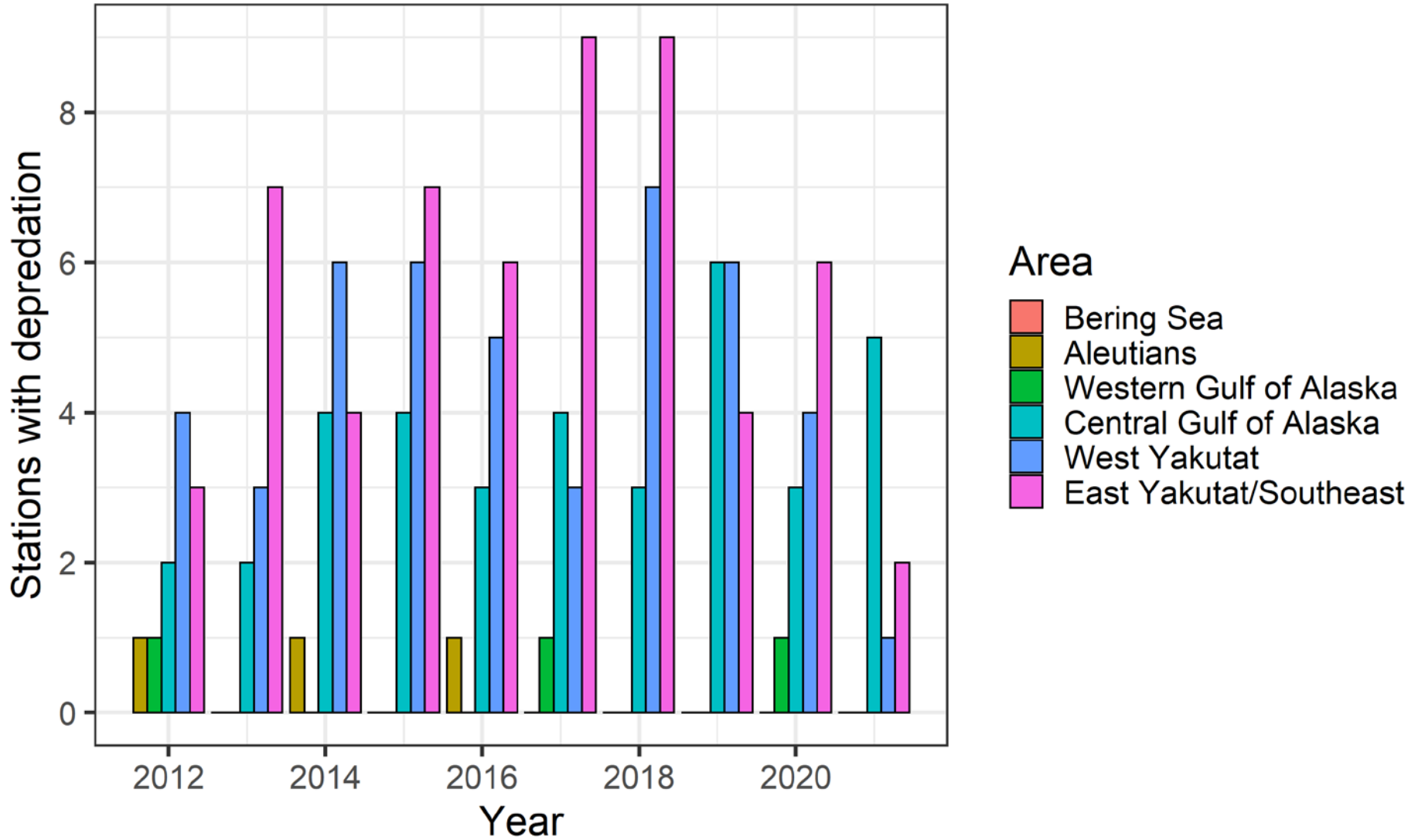
Killer whale depredation



Sperm whale interactions



Sperm whale depredation



Subsurface Temperatures (~250 m)

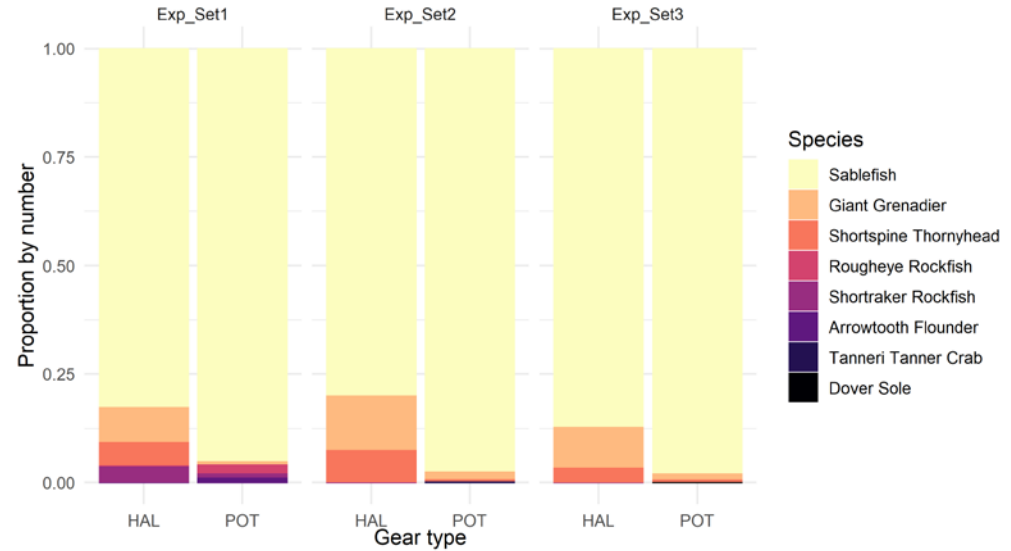
Area-weighted temperature (246-255 m bin)



3-days of HAL/Slinky pot comparisons



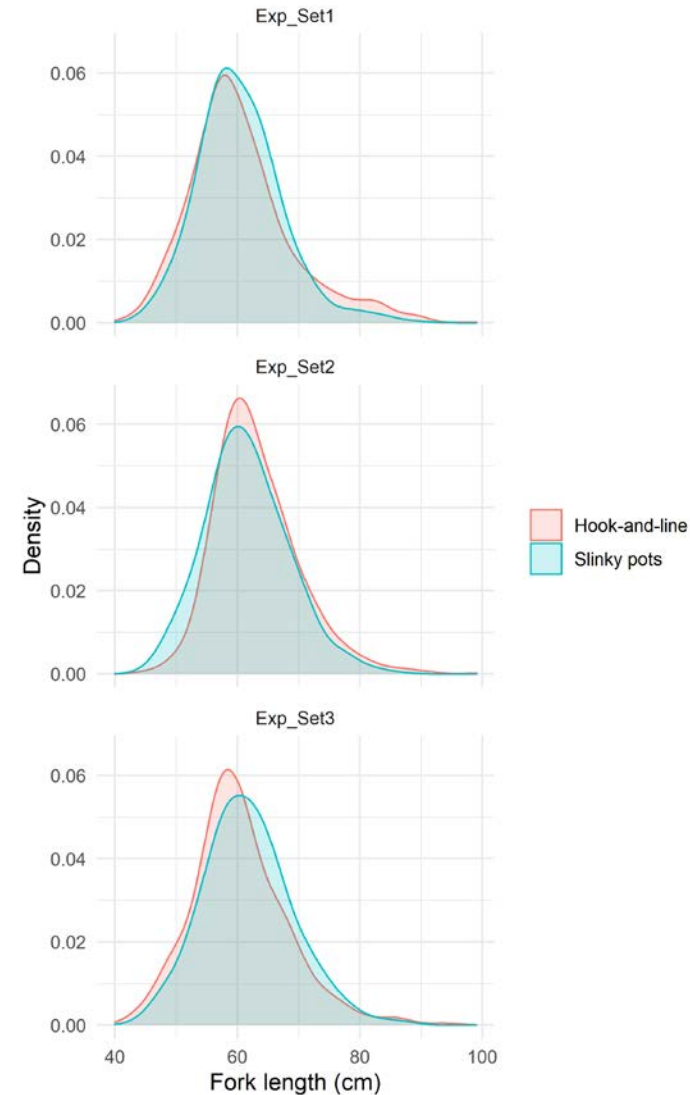
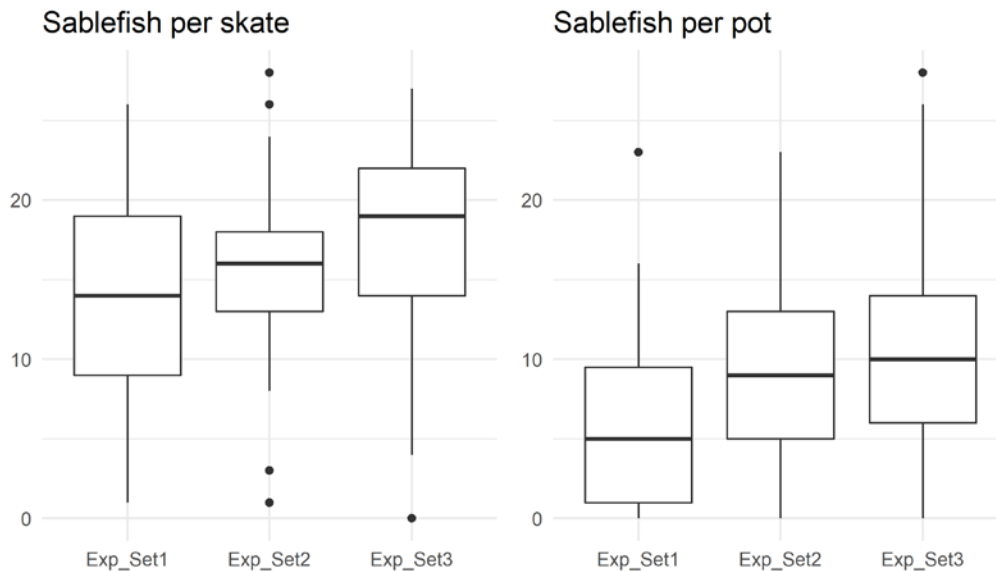
Hook vs. slinky pot catch composition
(Fish and crustacean species only)



- Considerably less bycatch in pots

Sablefish comparisons

- Catch rates increased consistently for HAL and pots by set (below)
- Sizes of fish captured were similar between the gear types (right)



2021 Summary

- Sablefish continue to increase, though mainly in the west
- Whale depredation down overall, normal in the EBS
- Modest increases in several species (e.g., cod, grenadier)
 - Hook competition exists in LL surveys, though the percent of baits returning does not suggest this is a concern in recent years
- Subsurface temperature not alarming, but need to pay attention as this may be inching warmer
- Slinky pot research shows promise
 - Bycatch reduction good in the fishery

Acknowledgements

- Contractors: Jason Wright, Gregory Jay, & Sarah Bird
- Additional MESA chief scientists: Pete Hulson, Katy Echave, Jane Sullivan
- FV Alaskan Leader captains & crew
- RACE Division