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

Bering Sea
Odd Years Only

Western Gulf of Alaska
Central Gulf of Alaska
Shumagin
Kodiak
Chirikof
Yakutat
Southeast
Kodiak
West
East

▲ Longline Survey Station

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1000 m Depth Contour

0 250 500 1,000 km
Breakdown by FMP

BSAI Sablefish longline survey RPNs

Year

1990 2000 2010 2020

RPN

20%

GOA Sablefish longline survey RPNs

Year

1990 2000 2010 2020

RPN

-3%
Sable Lengths (blue=Male, red=Female)

- 200-300 m
- 300-400 m
- 400-600 m
- 600-800 m
- 800-1000 m
Sable Lengths to RPNs

Recent female sablefish length frequencies

Recent male sablefish length frequencies

Year
- 10YearMean
- 2018
- 2019
- 2020
- 2021
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

![Bar chart showing stations with depredation by area from 2012 to 2021.

- Central Gulf of Alaska: Low in all years.

Areas:
- Bering Sea
- Aleutians
- Western Gulf of Alaska
- Central Gulf of Alaska]
Subsurface Temperatures (~250 m)

Area-weighted temperature (246-255 m bin)

Bering Sea

Aleutians

Western Gulf of Alaska

Central Gulf of Alaska

Eastern Gulf of Alaska
3-days of HAL/Slinky pot comparisons

- 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
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