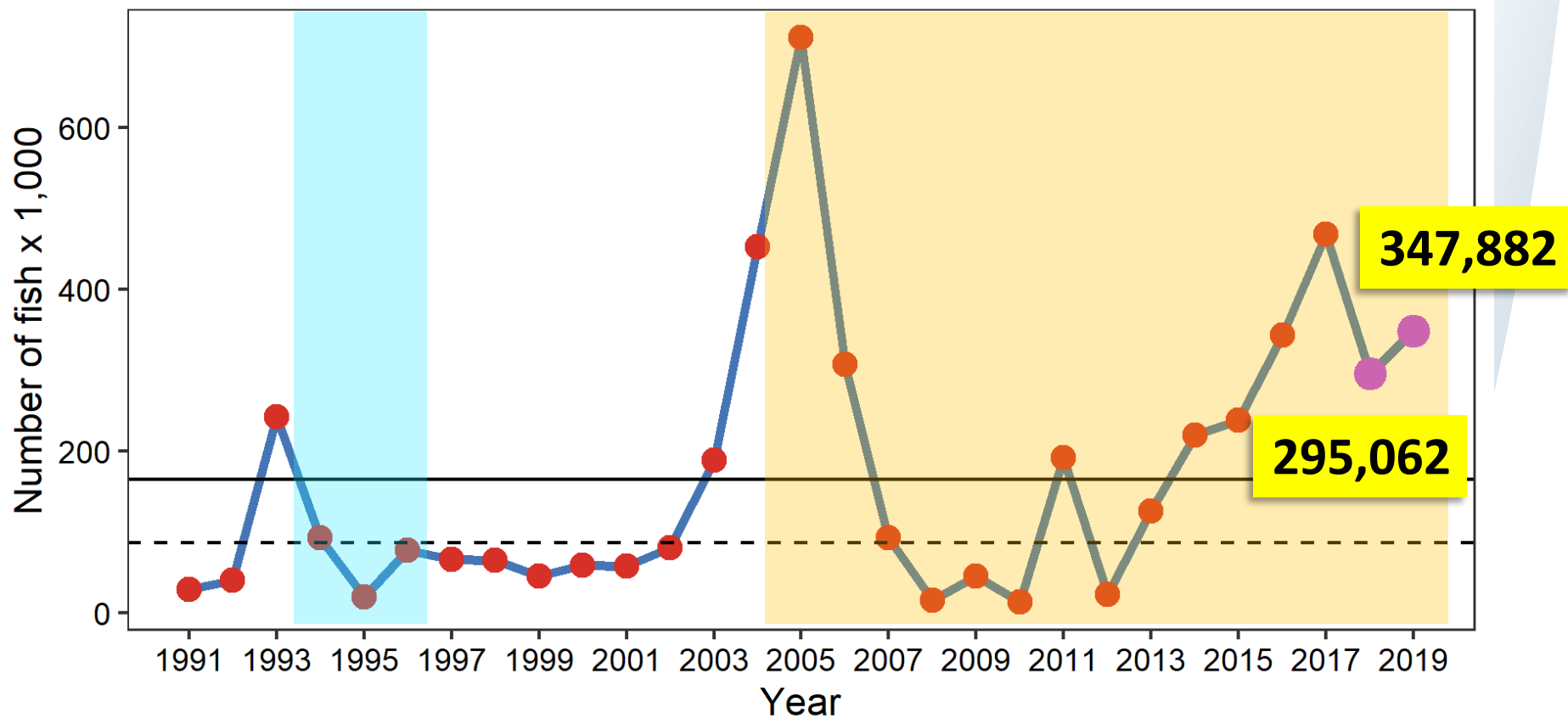# Genetic stock composition analysis of __chum salmon__ from the prohibited species catch of the __2018-2019__ Bering Sea walleye pollock trawl fishery and Gulf of Alaska groundfish fisheries

C. Kondzela, P. Barry, J. Whittle, J. Watson, E. Yasumiishi, and W. Larson

Auke Bay Laboratories
Juneau, Alaska

NPFMC meeting
April 2021
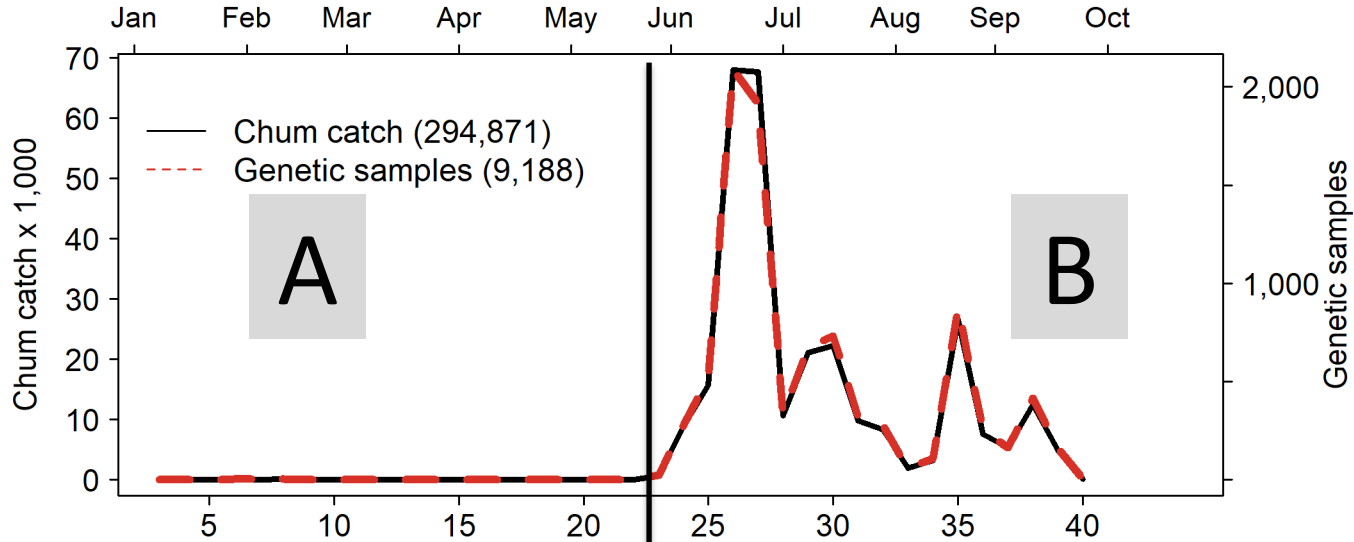Virtual

Bering Sea chum salmon bycatch

1994: Scales
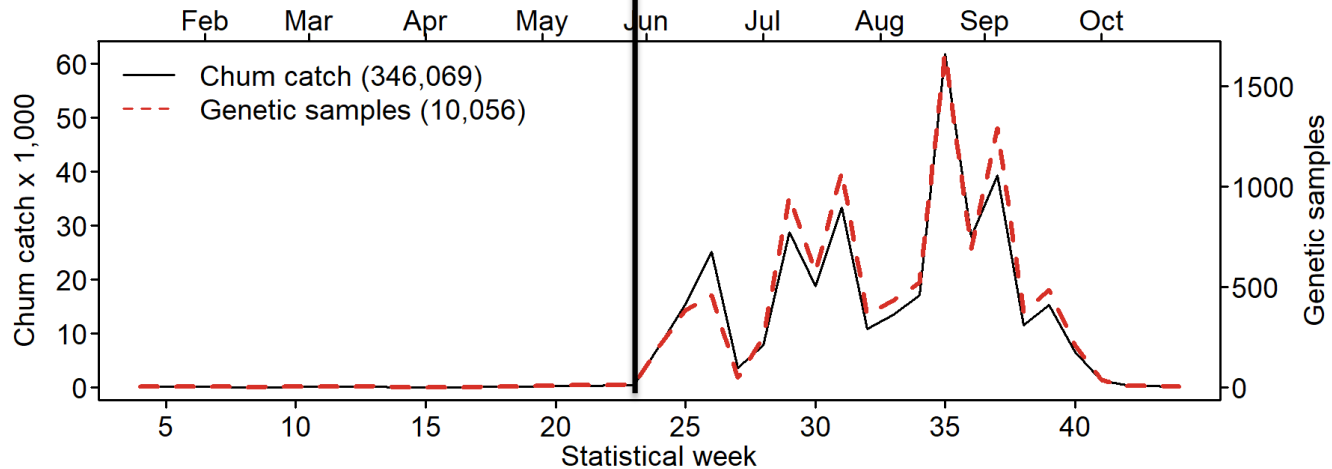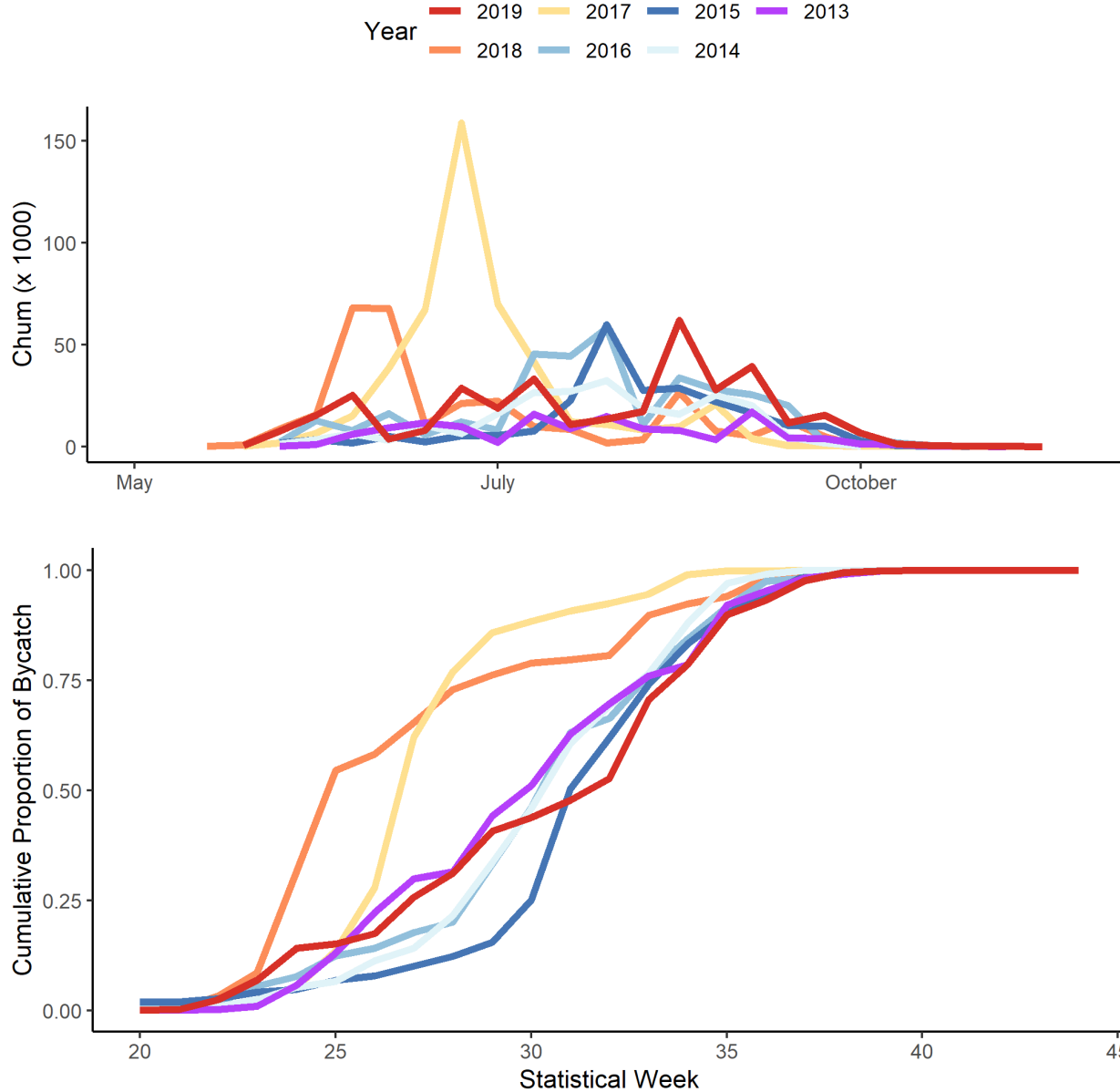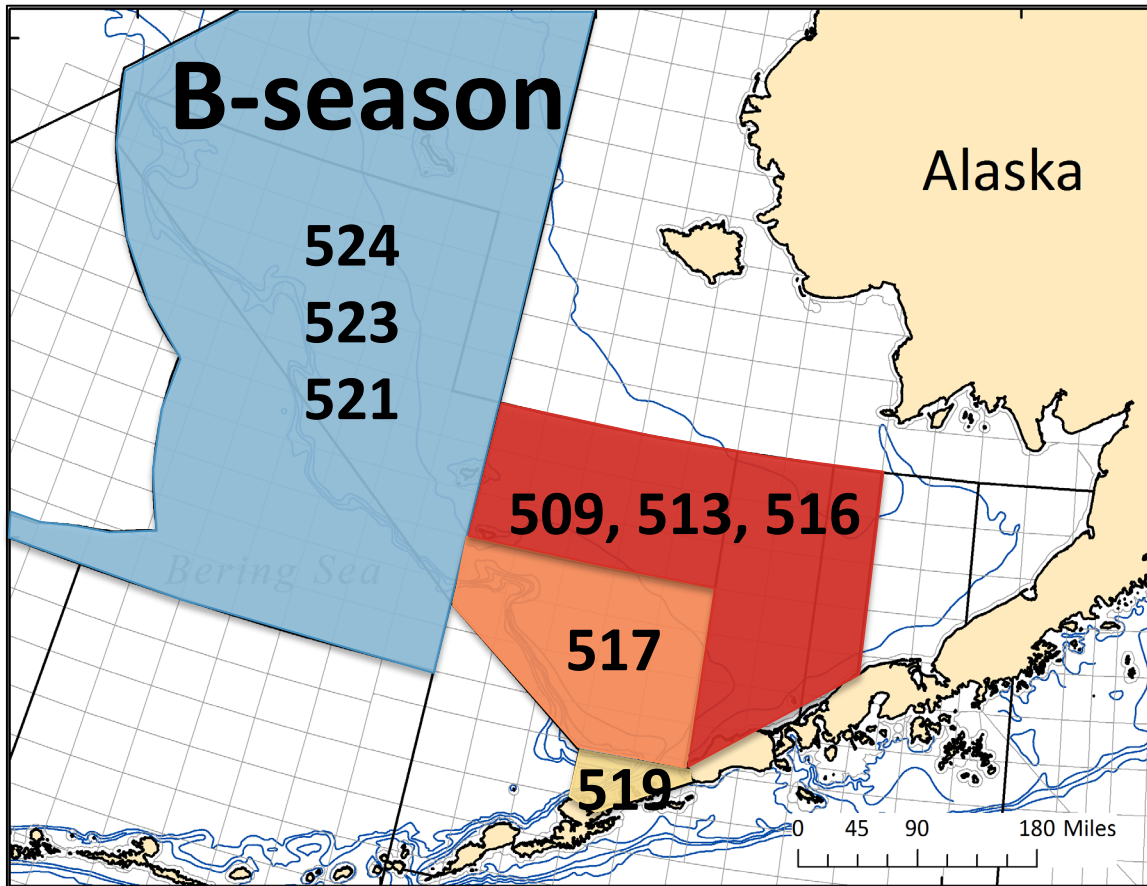1994 – 1996: Allozymes

2005 – 2019: Microsatellites

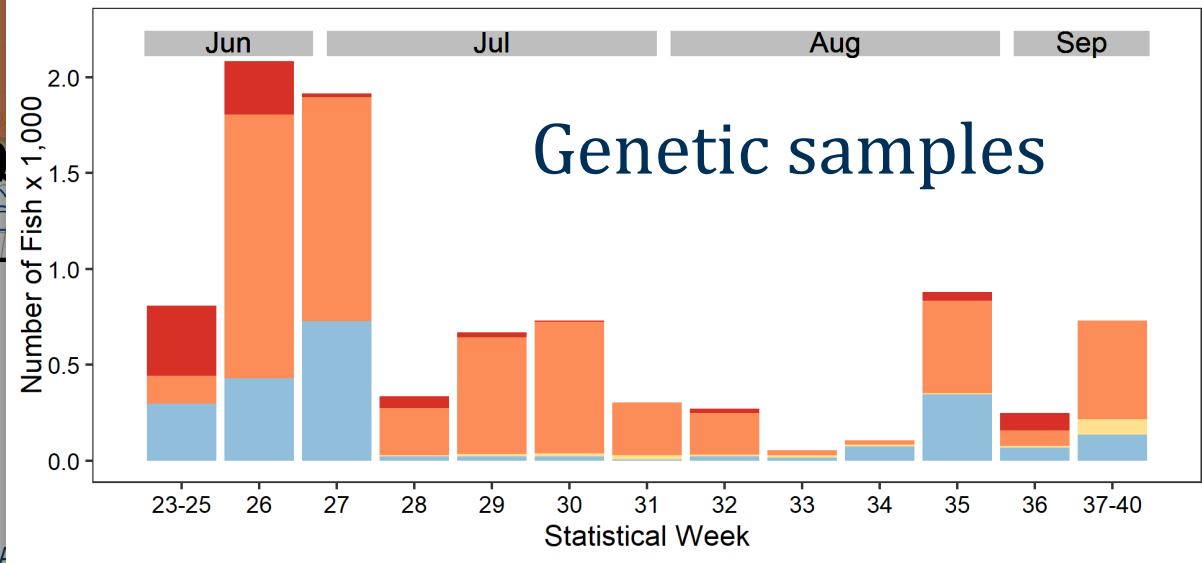347,882

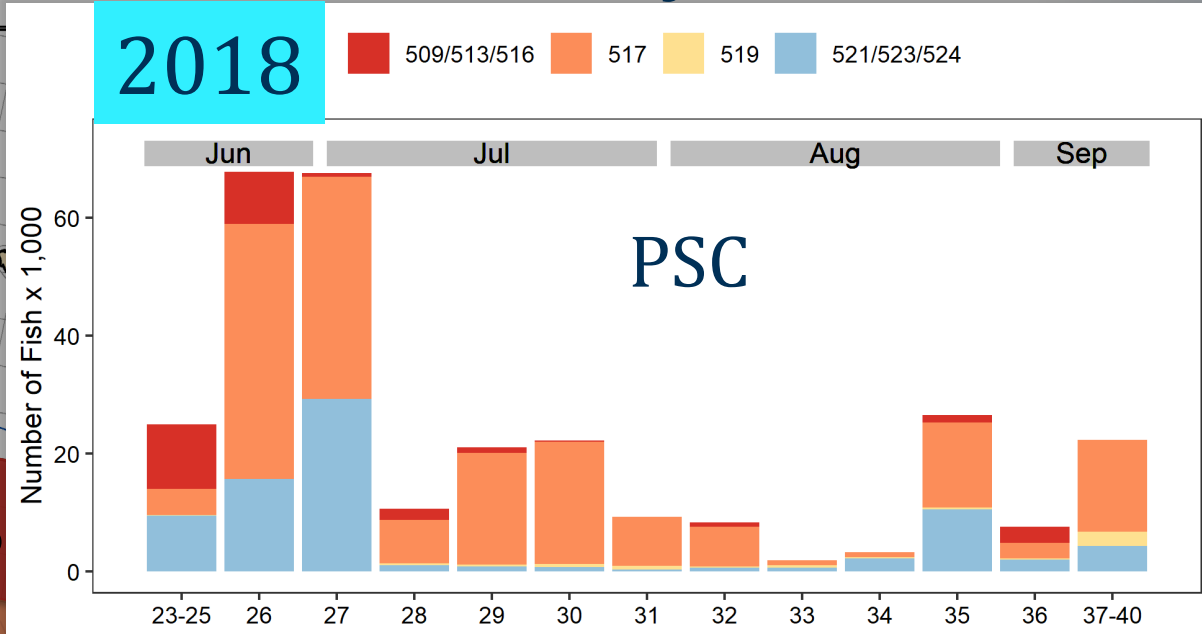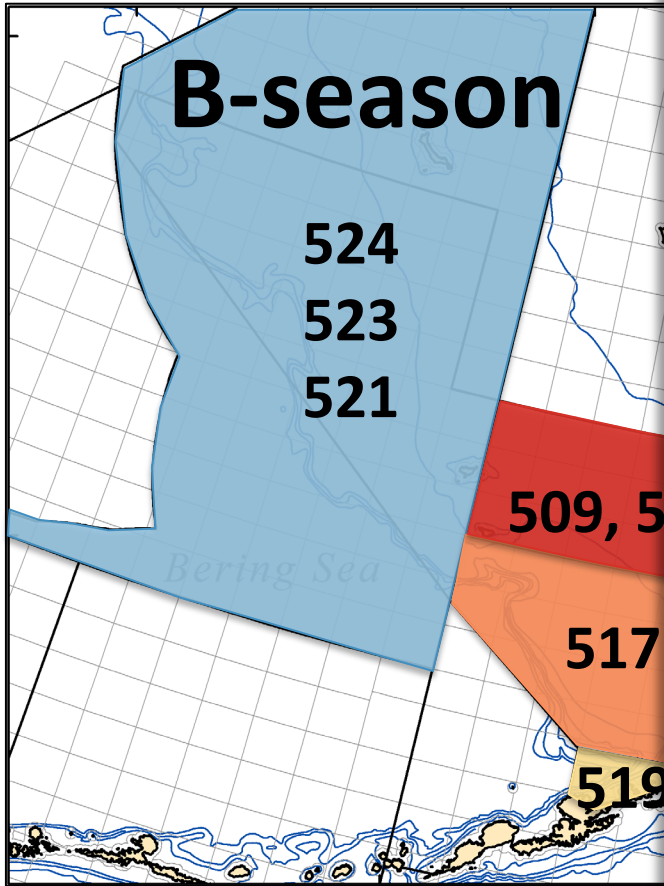295,062

Bering Sea chum salmon bycatch

Bering Sea chum salmon bycatch

Bering Sea chum salmon bycatch

Bering Sea chum salmon bycatch

Bering Sea chum salmon bycatch

Chum salmon stock groupings

Beacham et al. 2009

Bering Sea chum salmon bycatch

U.S. Department of Commerce | National Oceanic and Atmospheric Administration | National Marine Fisheries Service
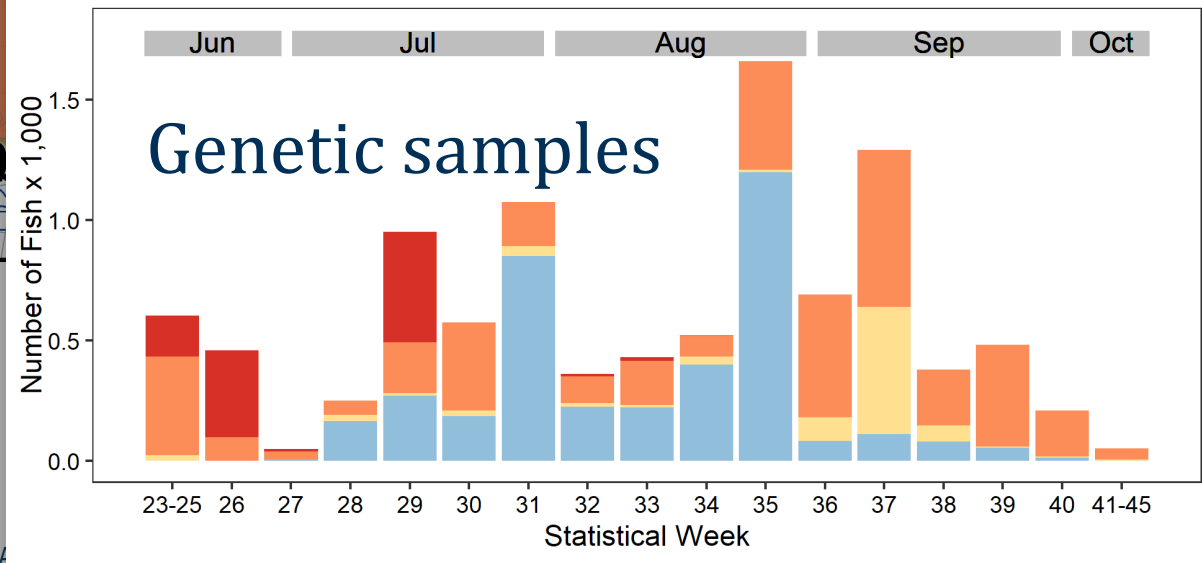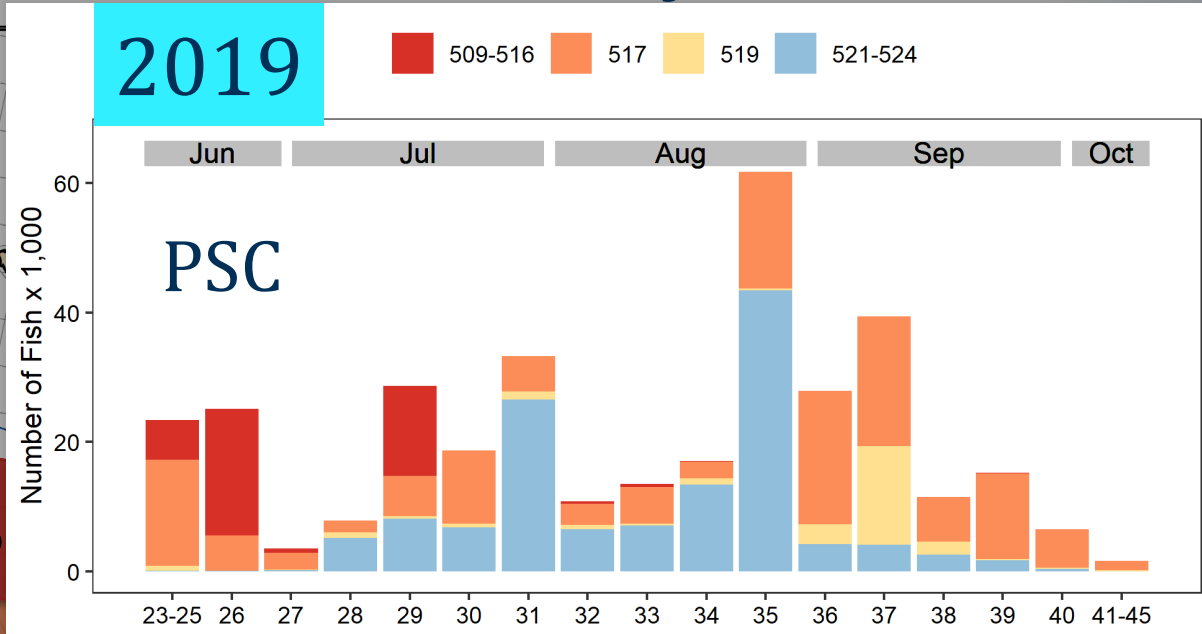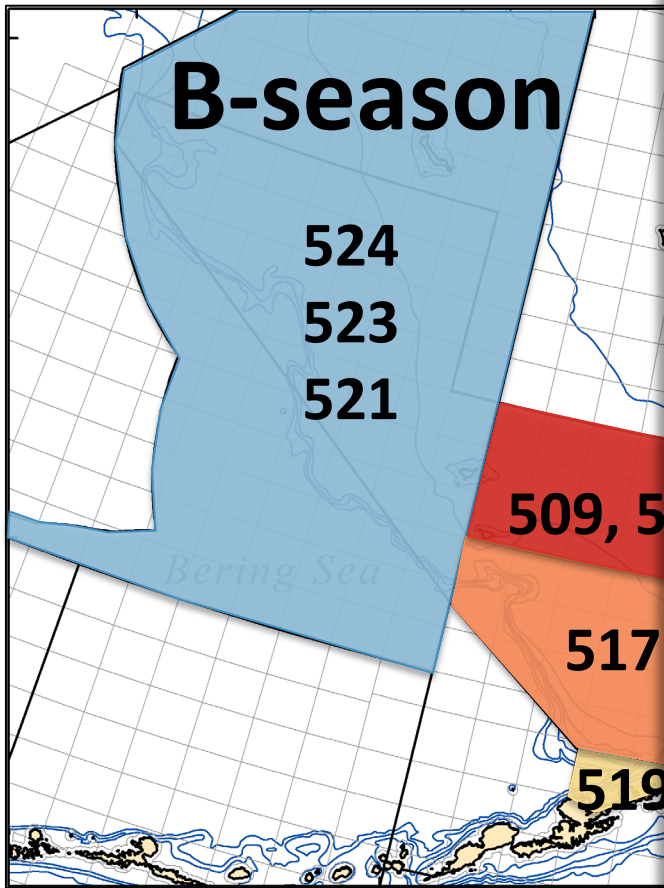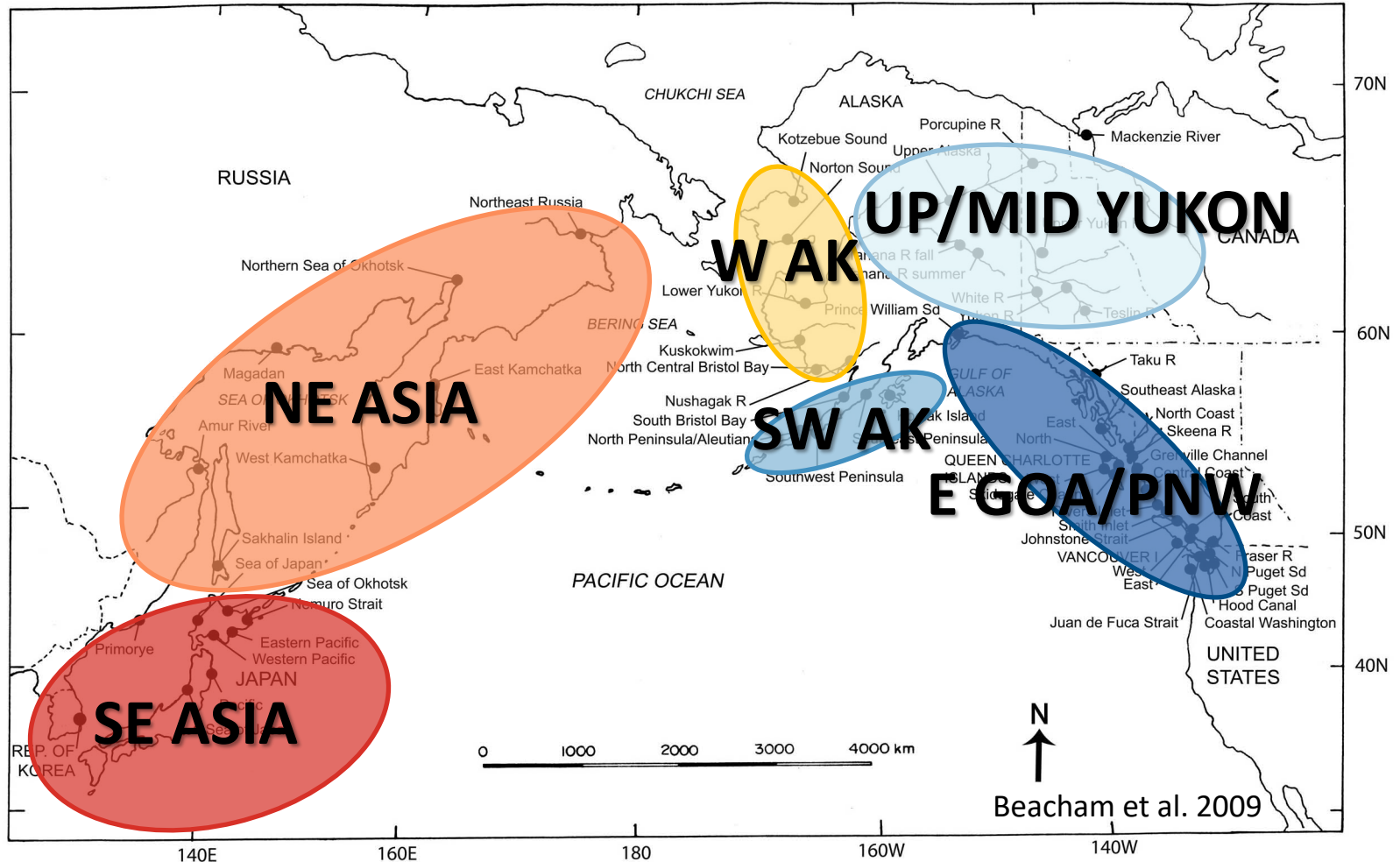
Bering Sea chum salmon bycatch

Bering Sea chum salmon bycatch

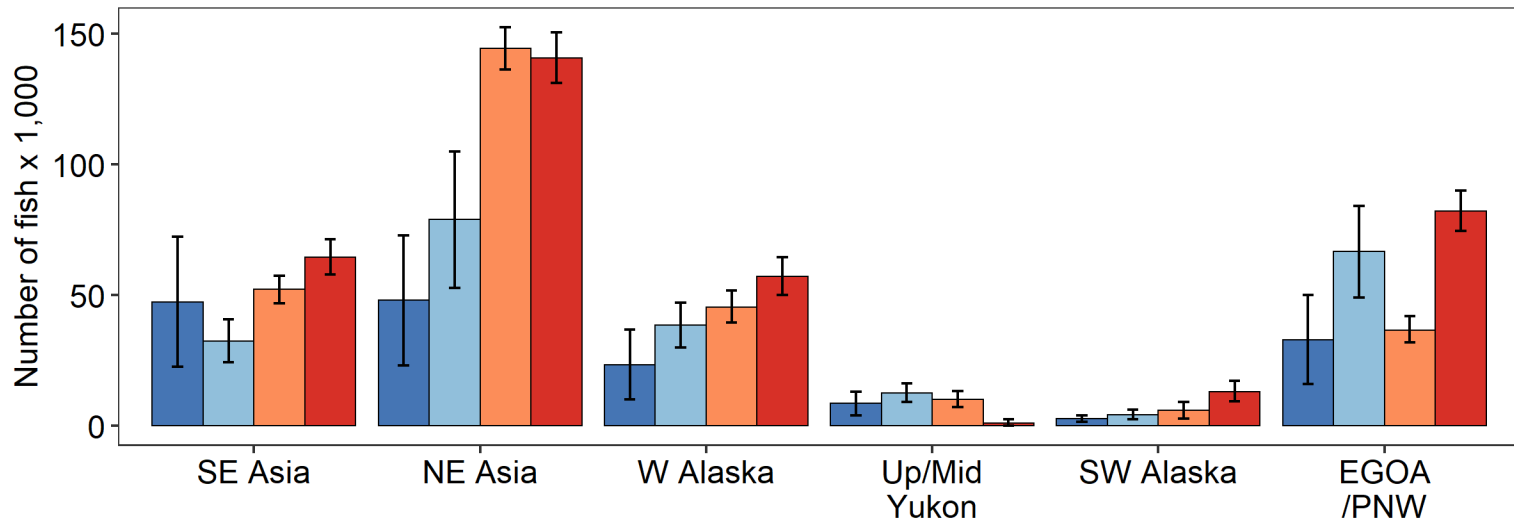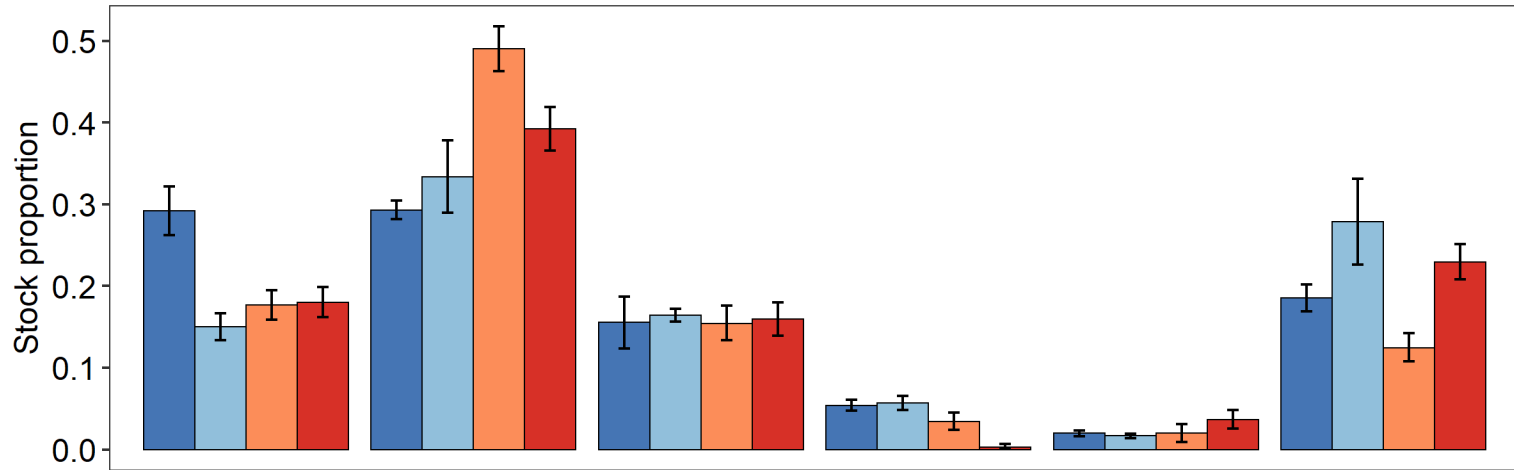# Bering Sea chum salmon bycatch

Bering Sea chum salmon bycatch

2018

2019

U.S. Department of Commerce | National Oceanic and Atmospheric Administration | National Marine Fisheries Service
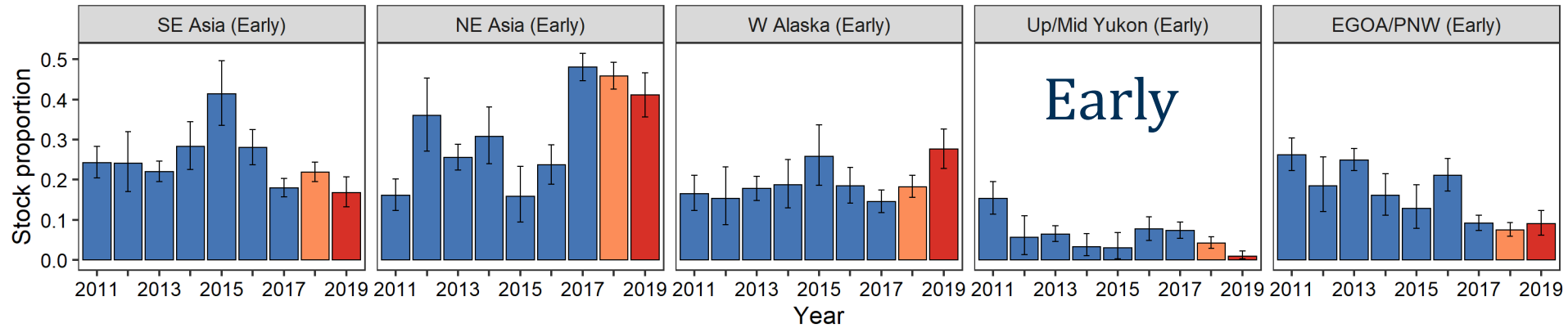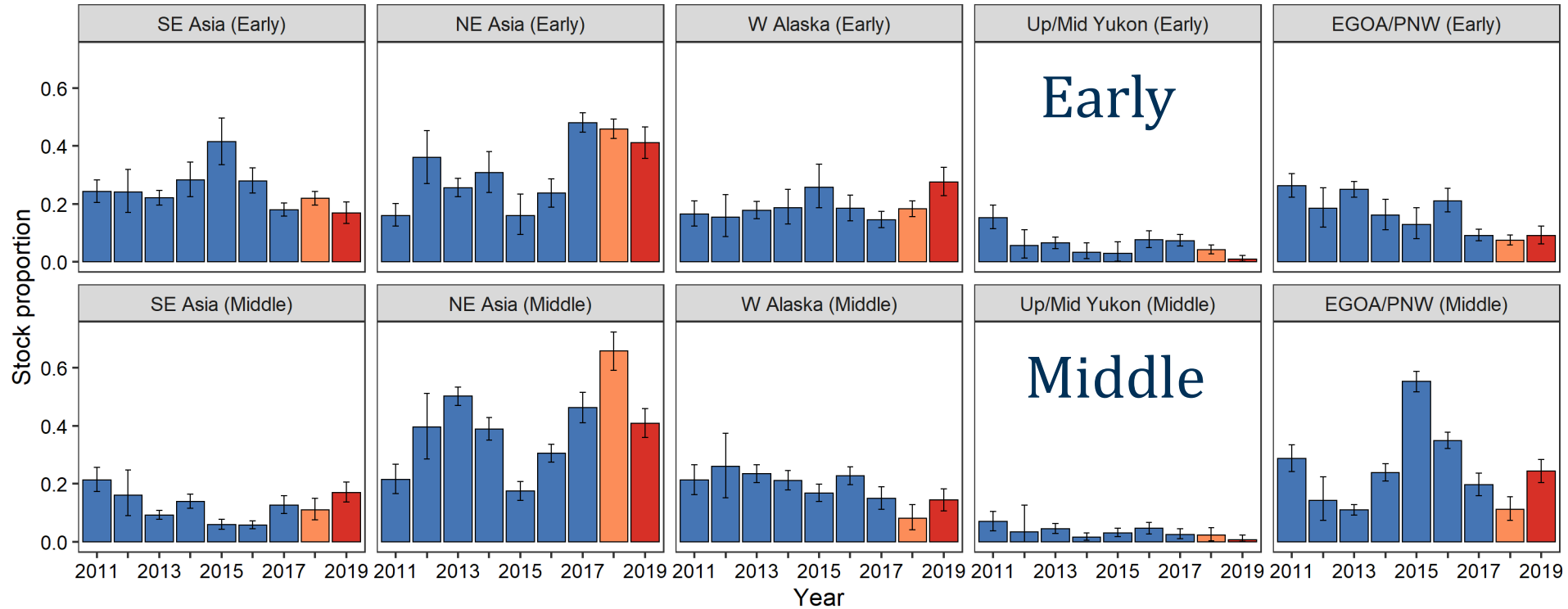
Bering Sea chum salmon bycatch 2018

Bering Sea chum salmon bycatch
2018 ☐ ☐ 2019

Bering Sea chum salmon bycatch
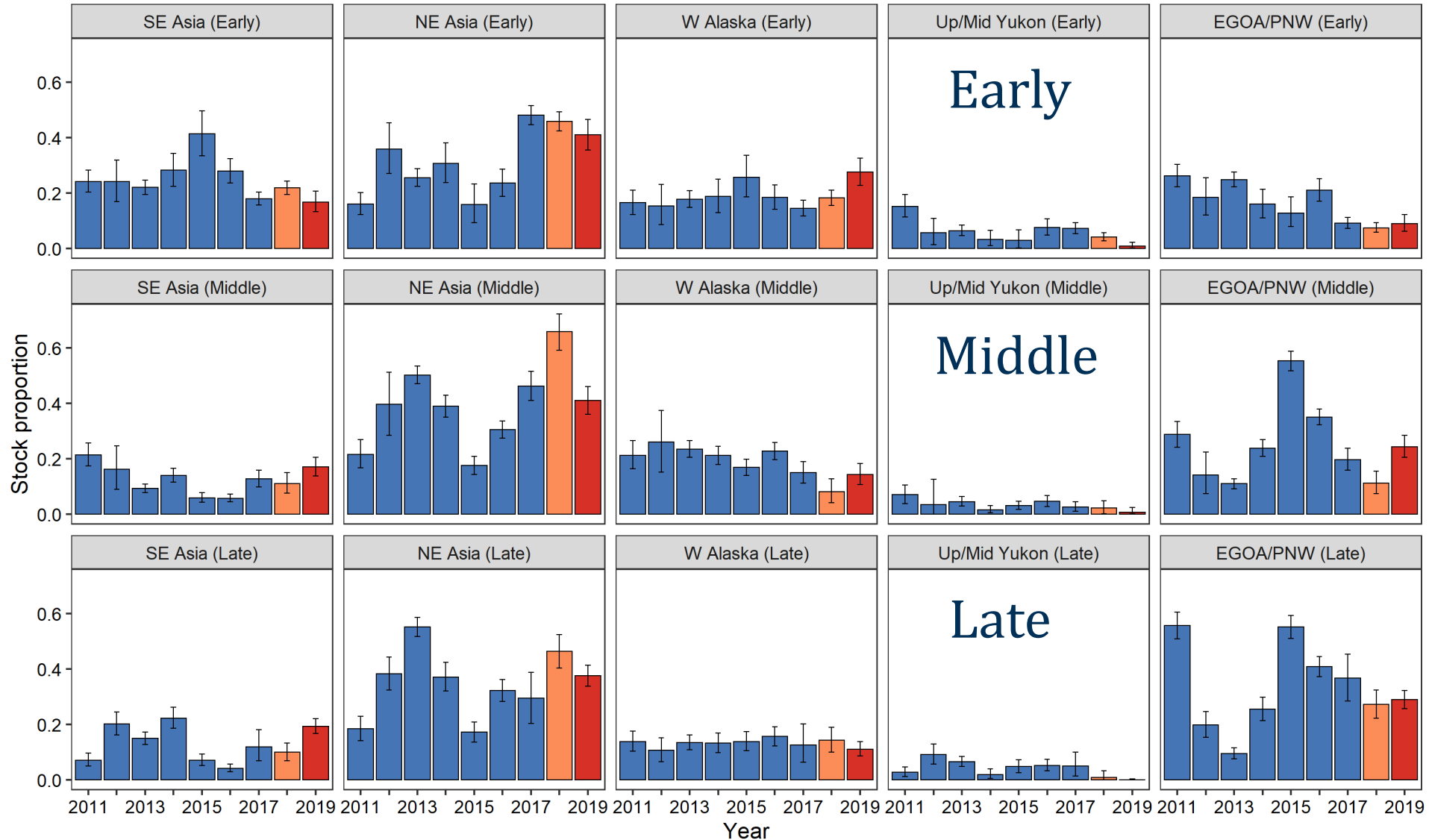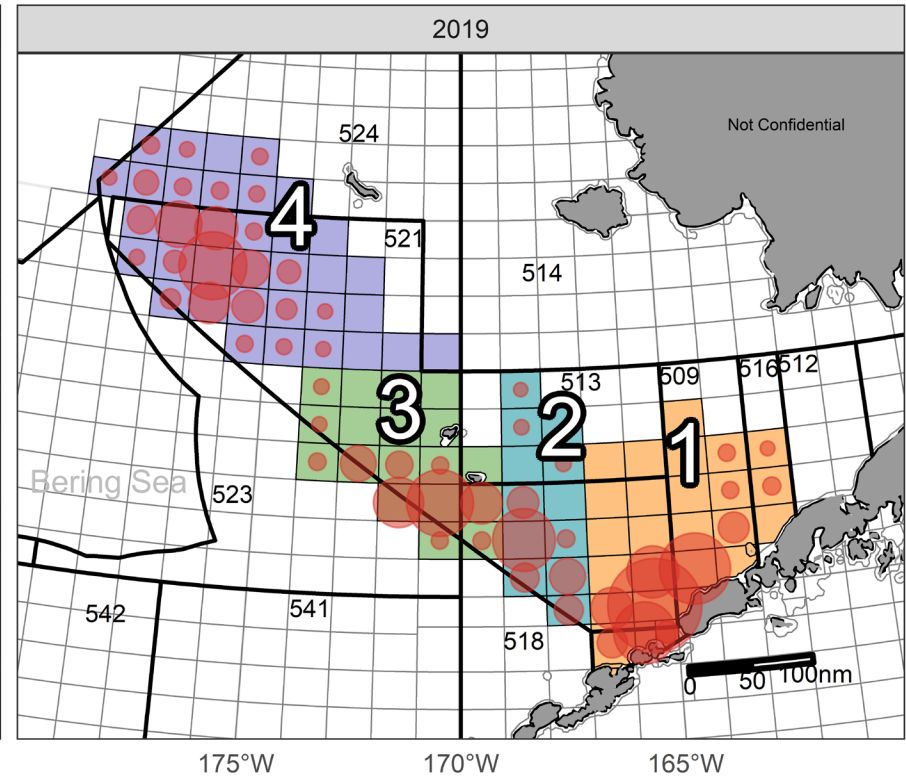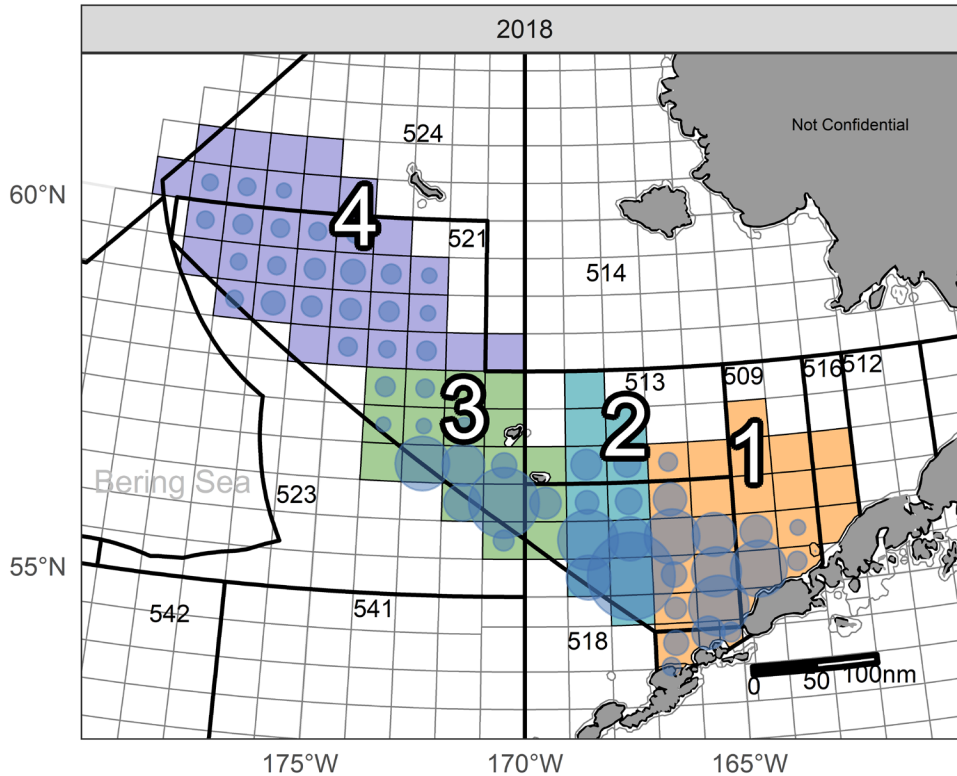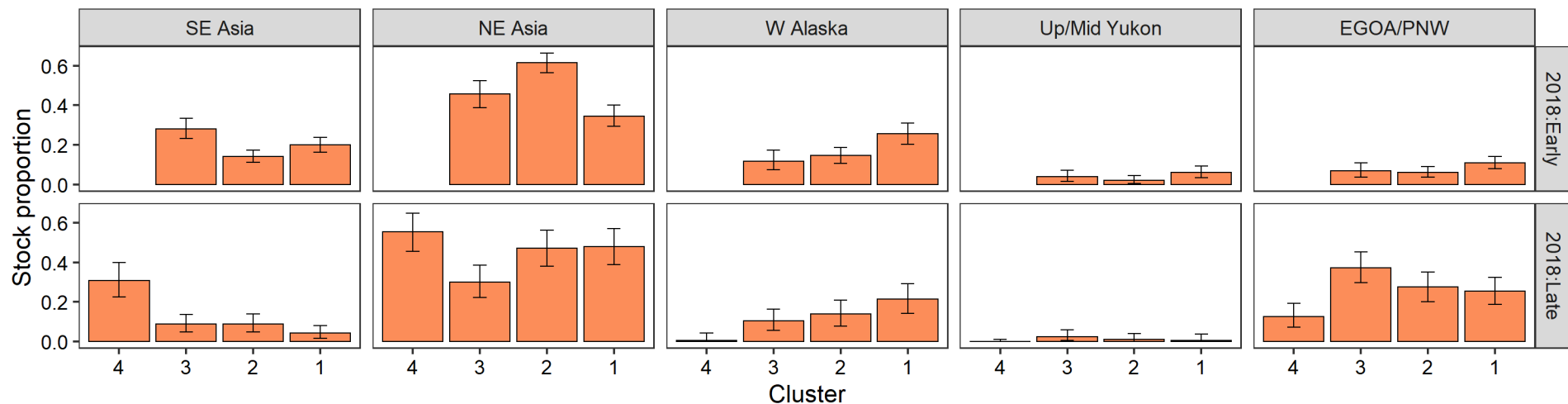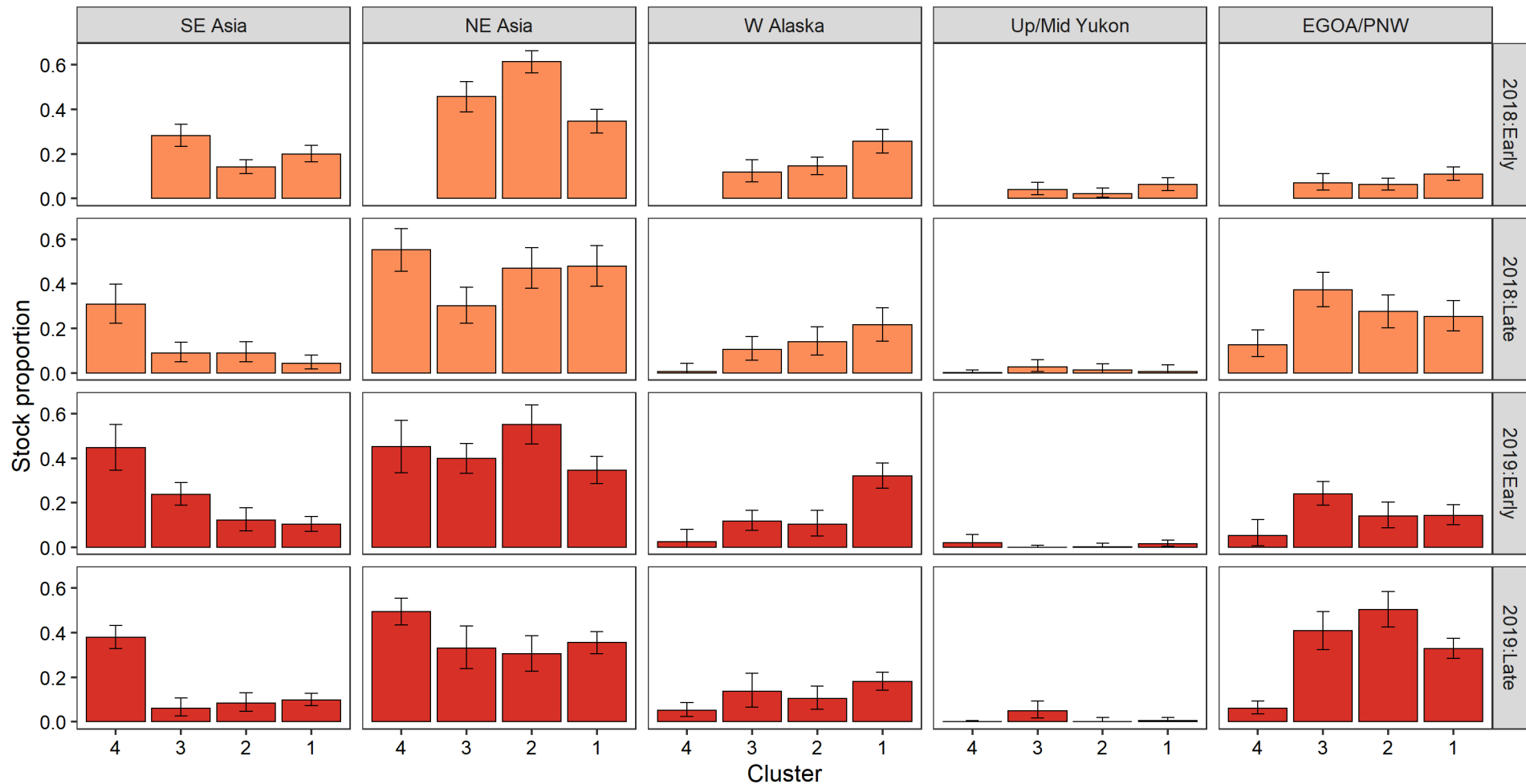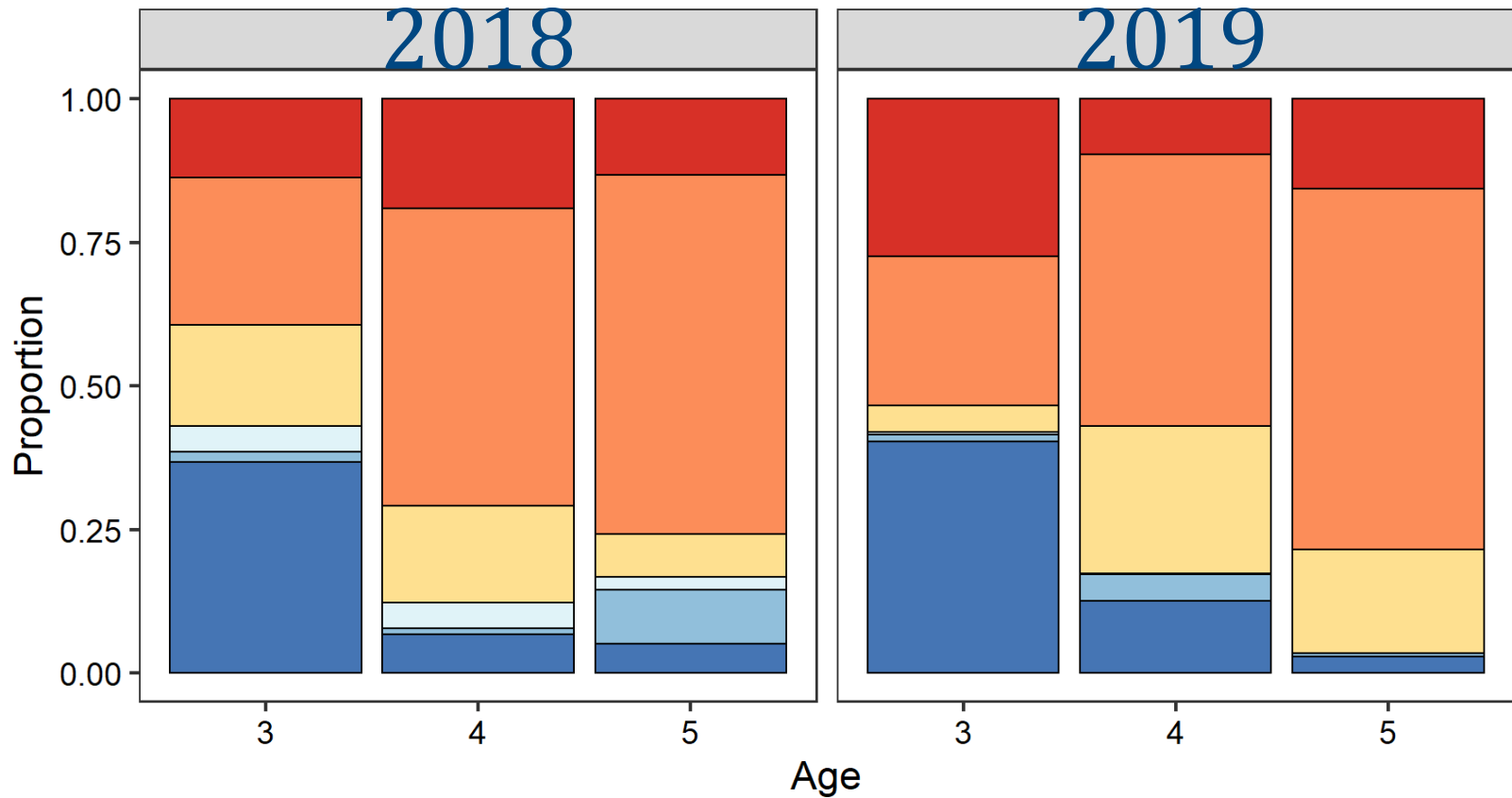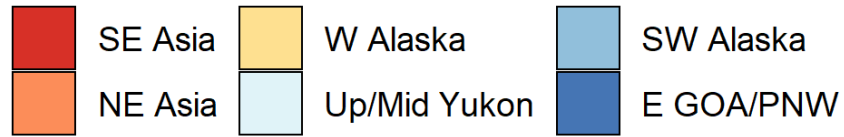
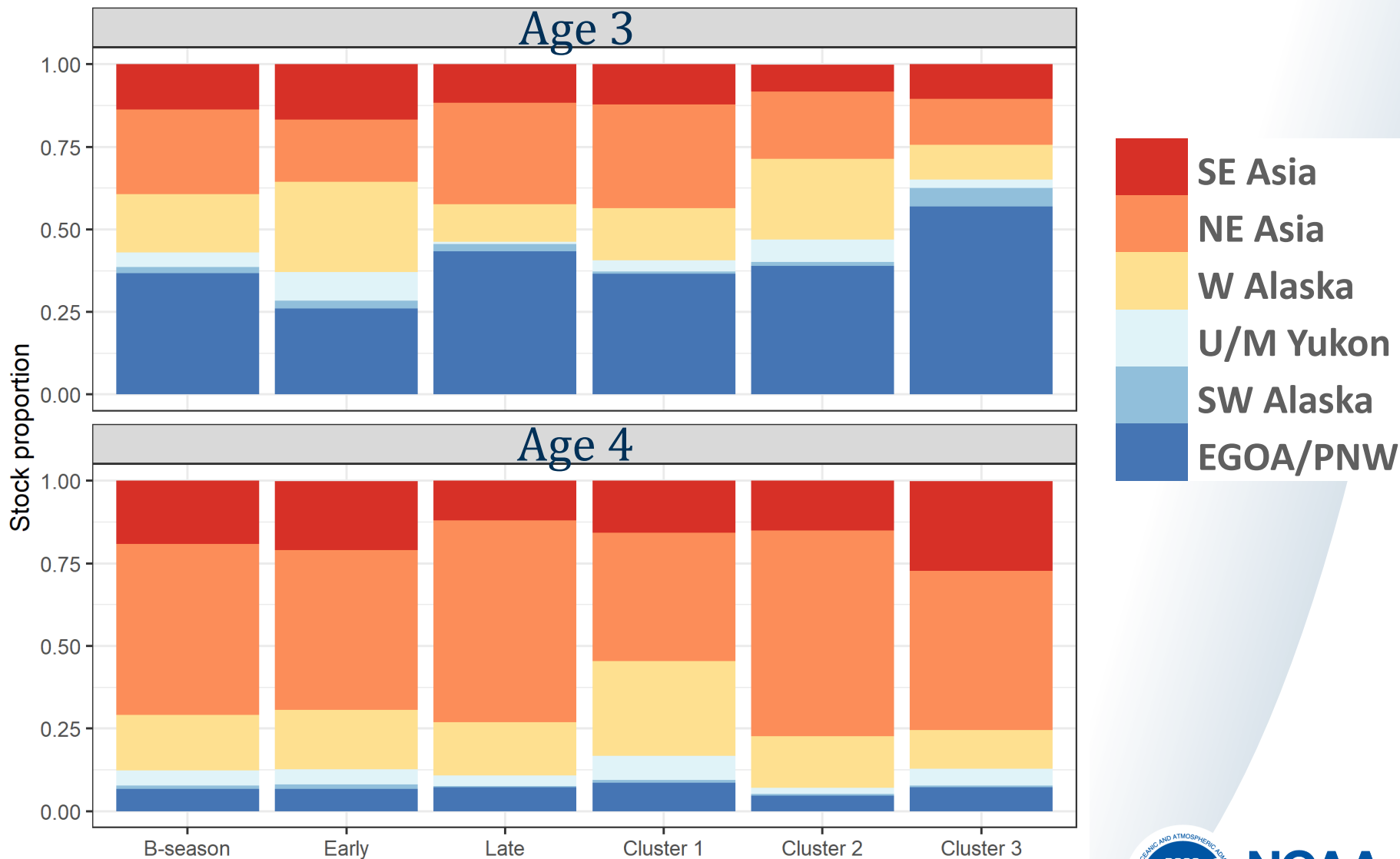# 2018 Bering Sea chum salmon bycatch

Bering Sea chum salmon bycatch

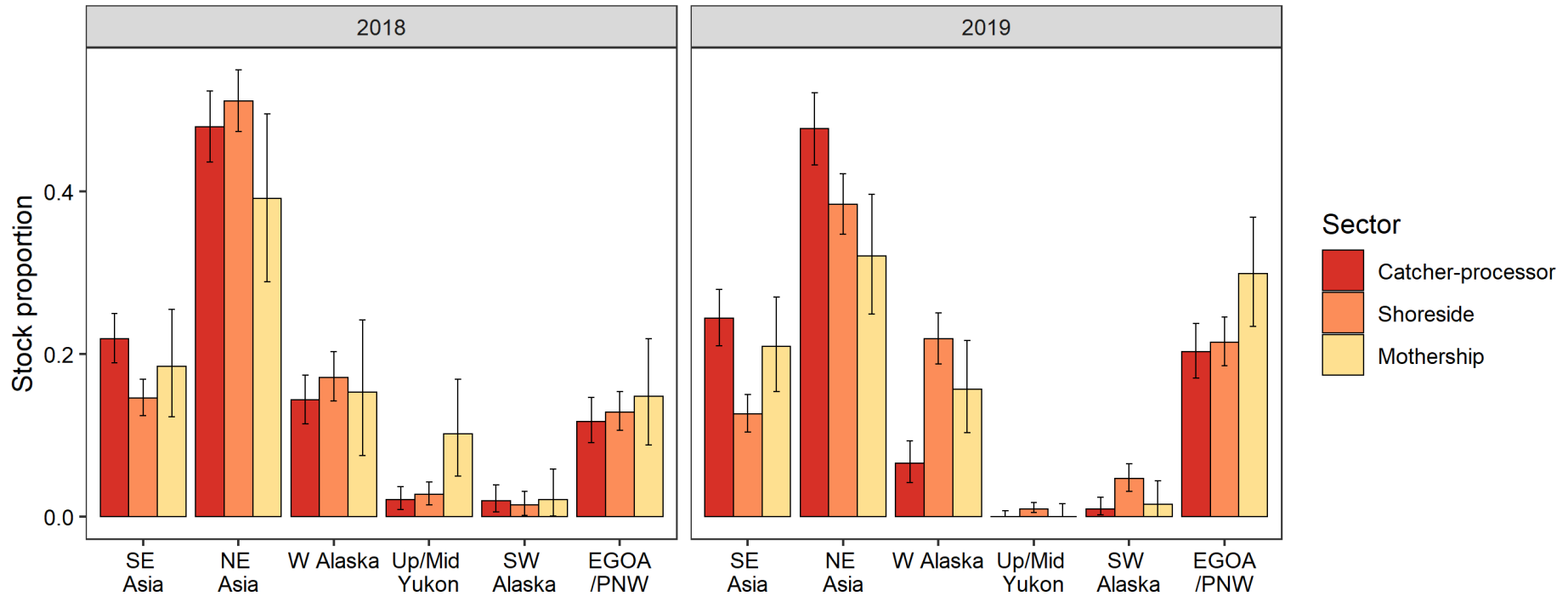U.S. Department of Commerce | National Oceanic and Atmospheric Administration | National Marine Fisheries Service

Bering Sea chum salmon bycatch

2018   2019
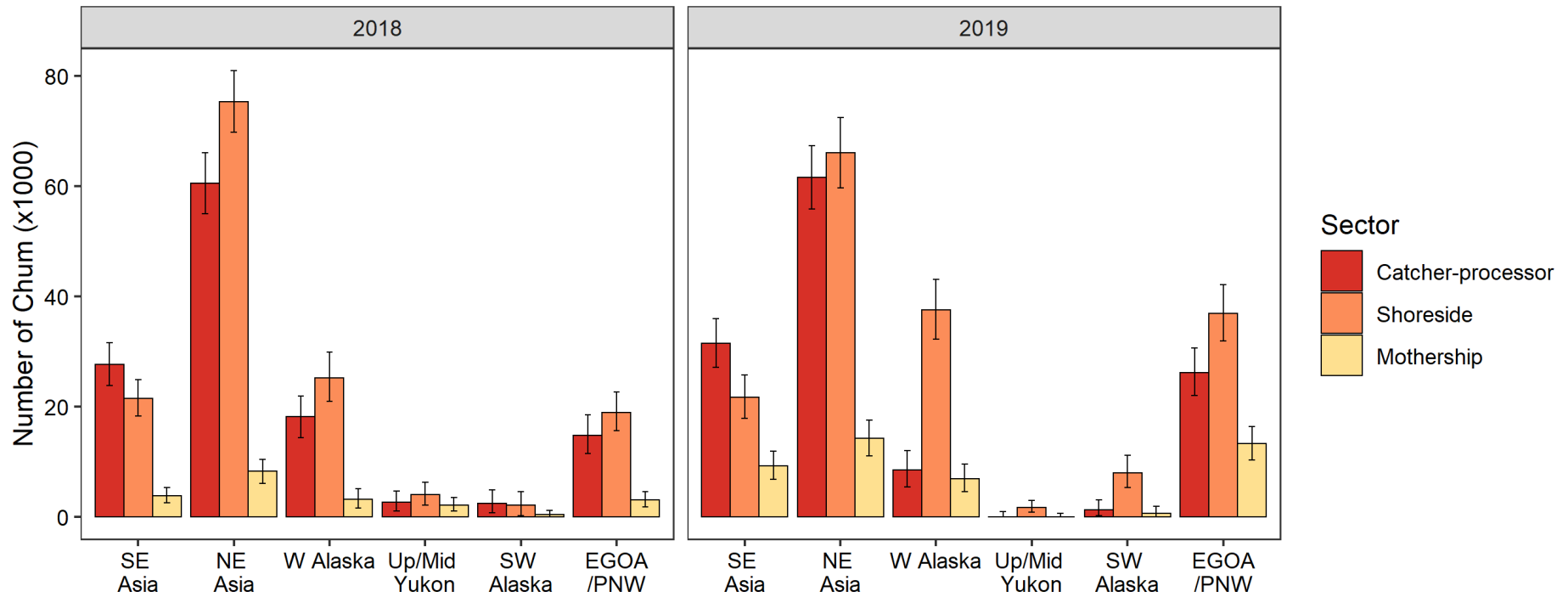
2018 GOA chum salmon bycatch

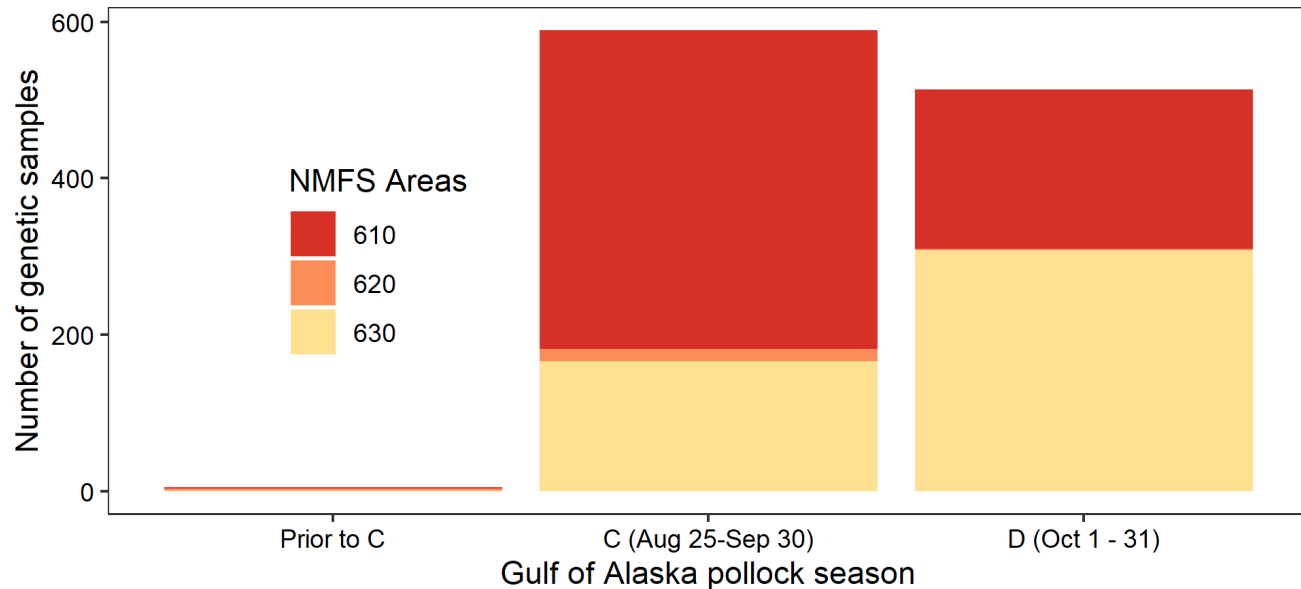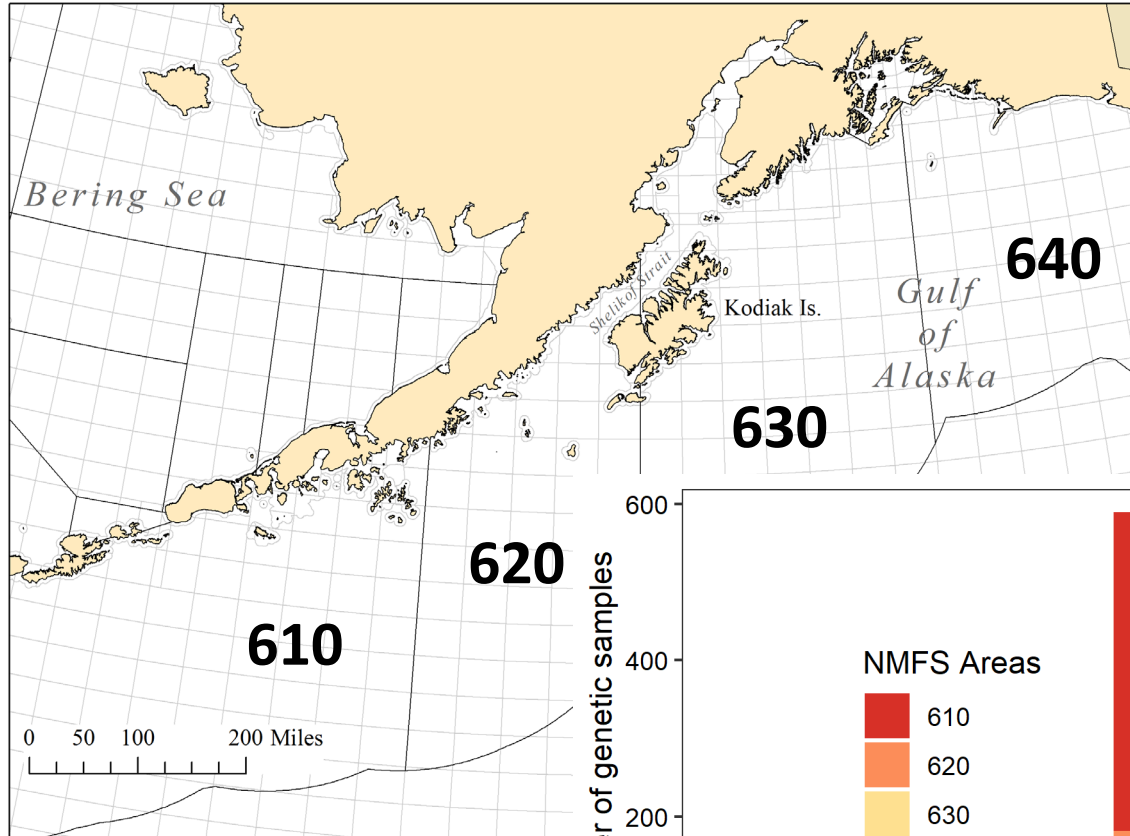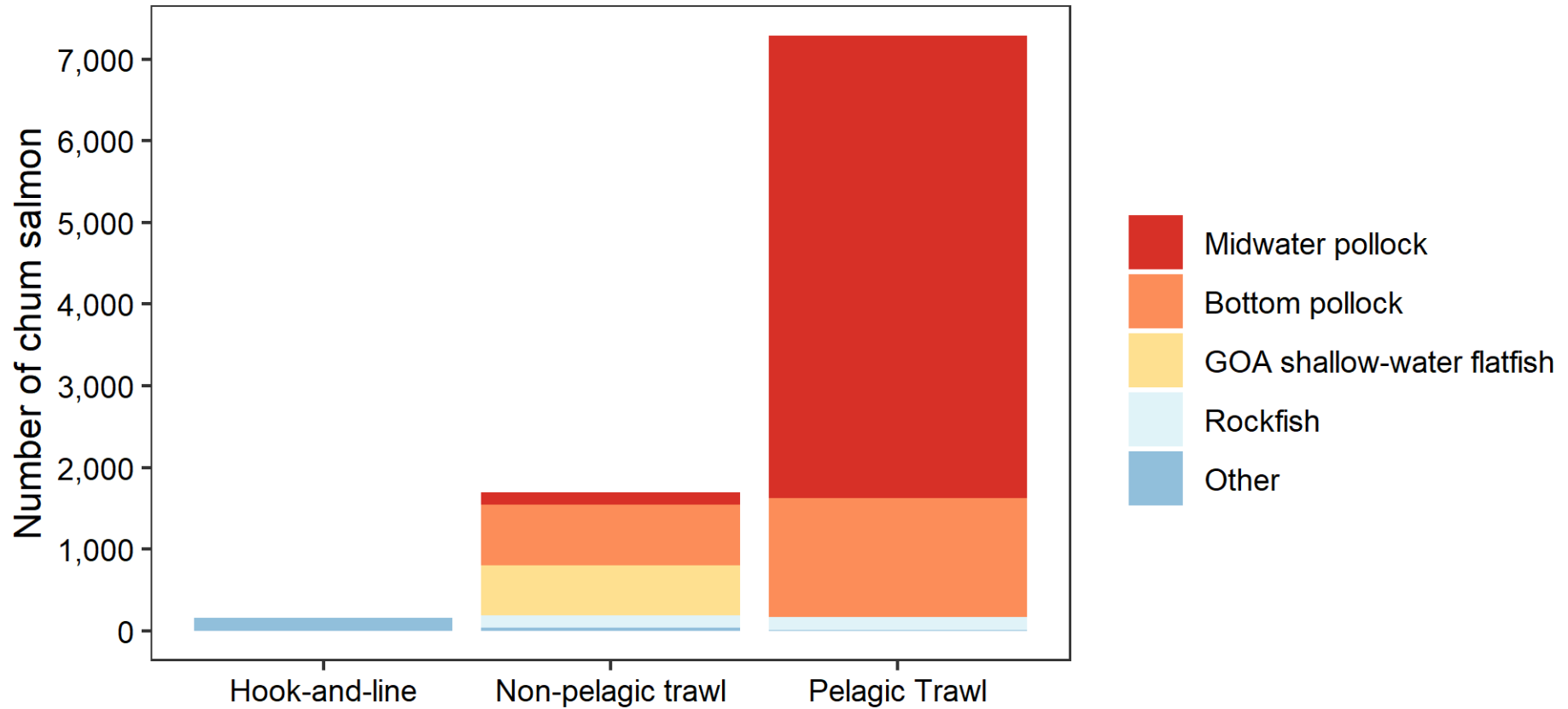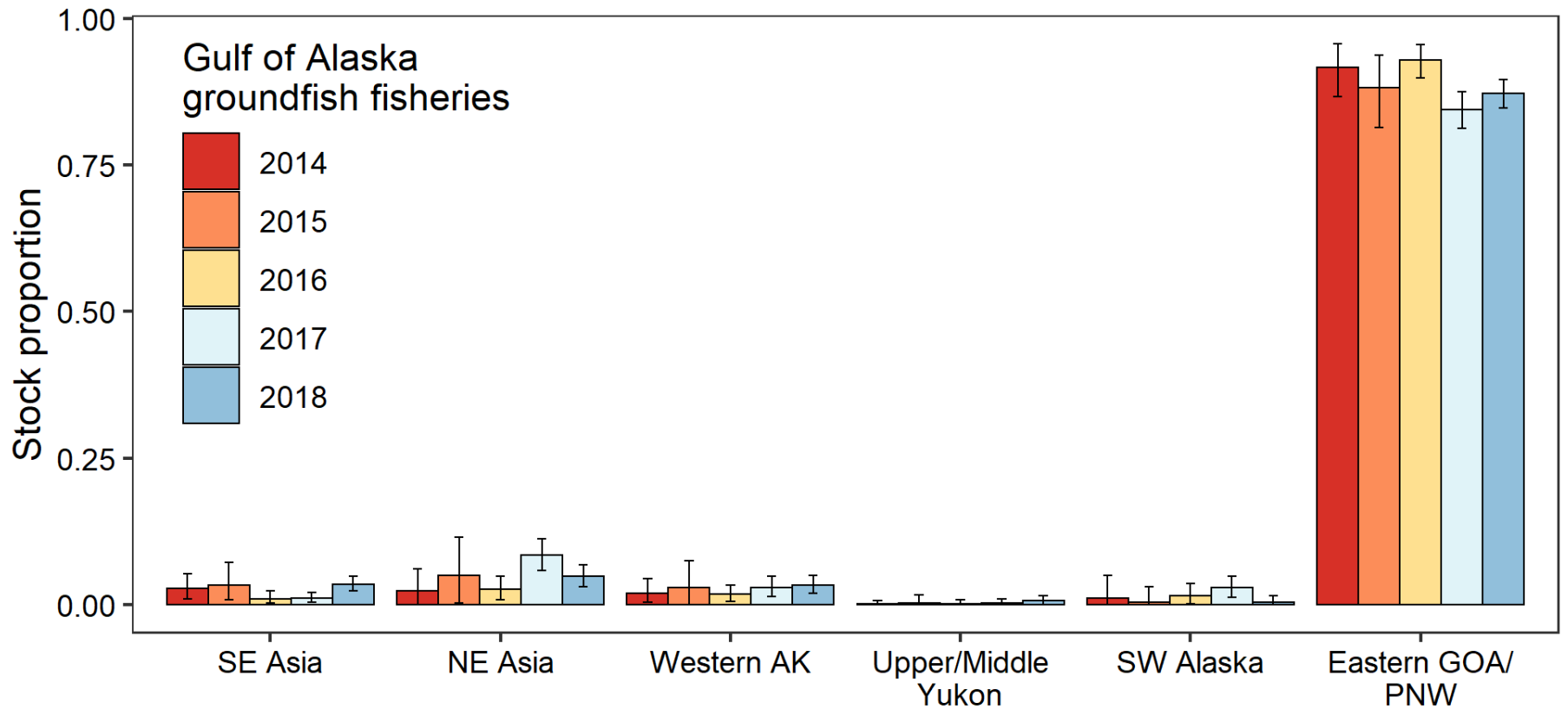# 2018 GOA chum salmon bycatch

GOA chum salmon bycatch

2020 Bycatch

- 11 Microsatellites ➡ 91 SNPs (GTseq)

96-SNP, 310 pop chum baseline developed by ADFG
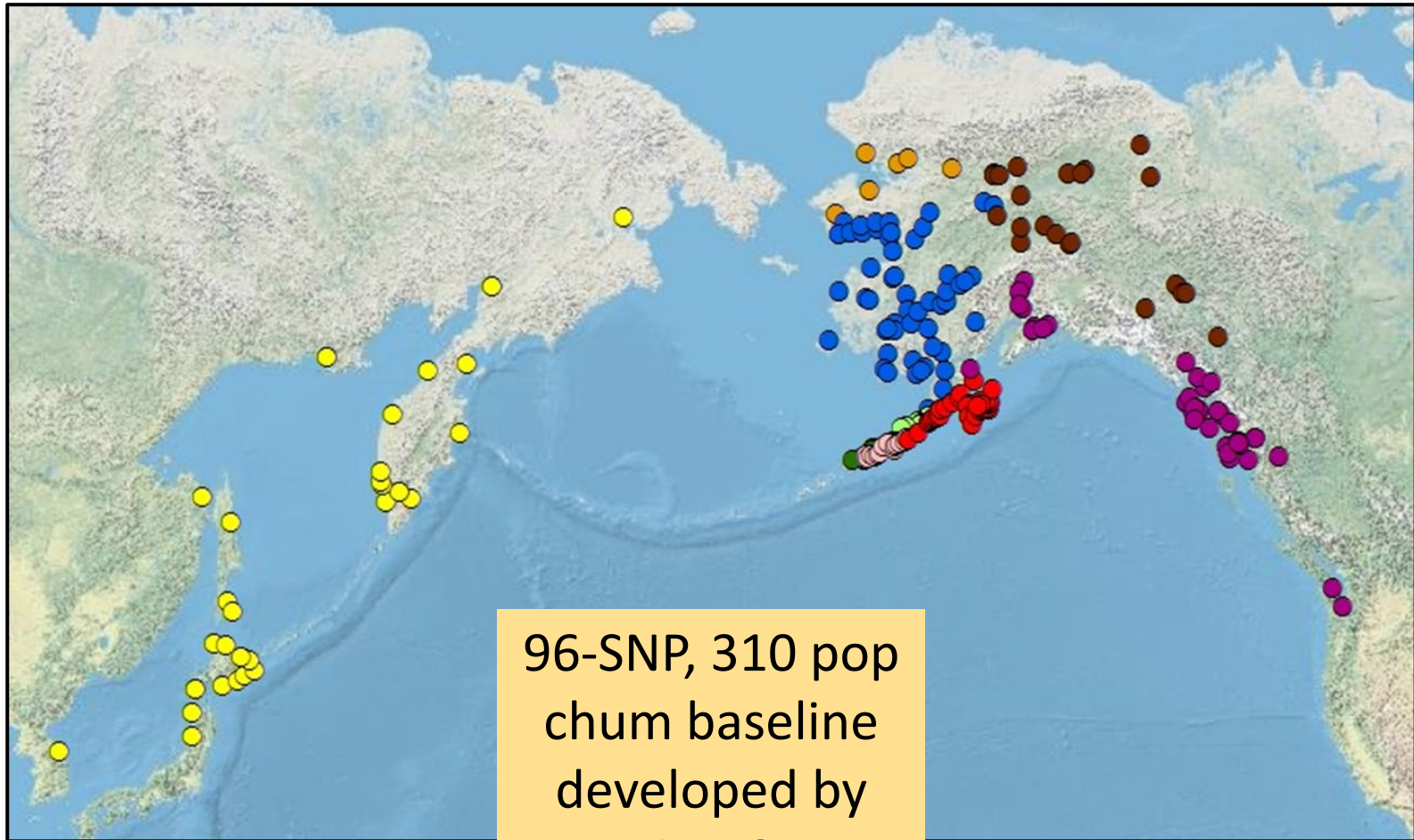
Next steps

- 10 years of systematic sampling, genetic and age analyses behind us.

- New technologies, staff, PCCRC post-doc – well-positioned to analyze trends.

- Over the next year, concerted effort to integrate:
  - ✓ spatial and temporal distributions of bycatch
  - ✓ genetics and age
  - ✓ fishing fleets/sectors
  - ✓ environmental information

- Improve stock-specific bycatch avoidance.

NOAA FISHERIES

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Bering Sea chum salmon bycatch