

Science, Service, Stewardship



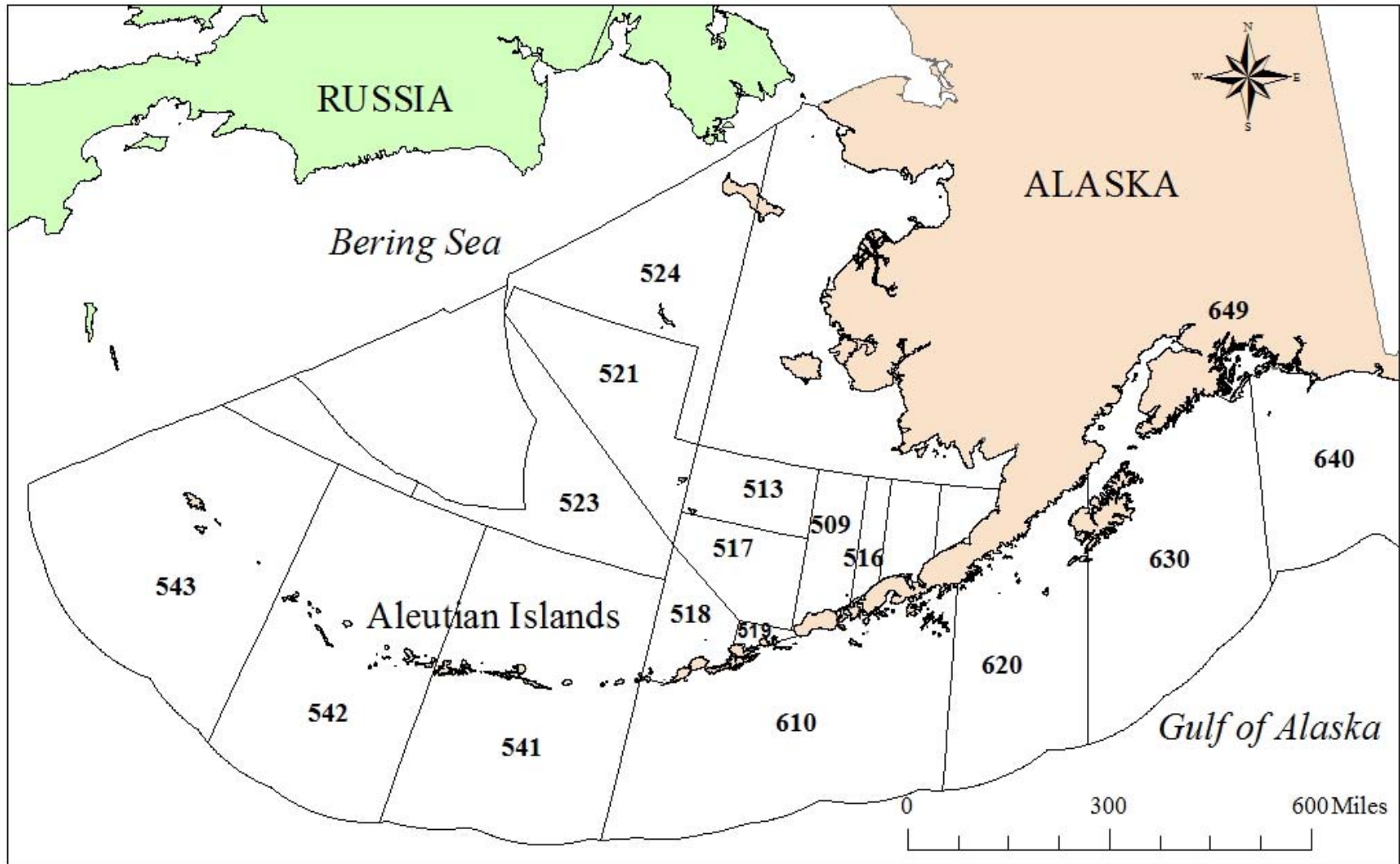
# Extension of Genetic Stock Composition Analysis to the Chinook Salmon Bycatch in the Gulf of Alaska Walleye Pollock (*Gadus chalcogrammus*) Trawl Fisheries, 2012

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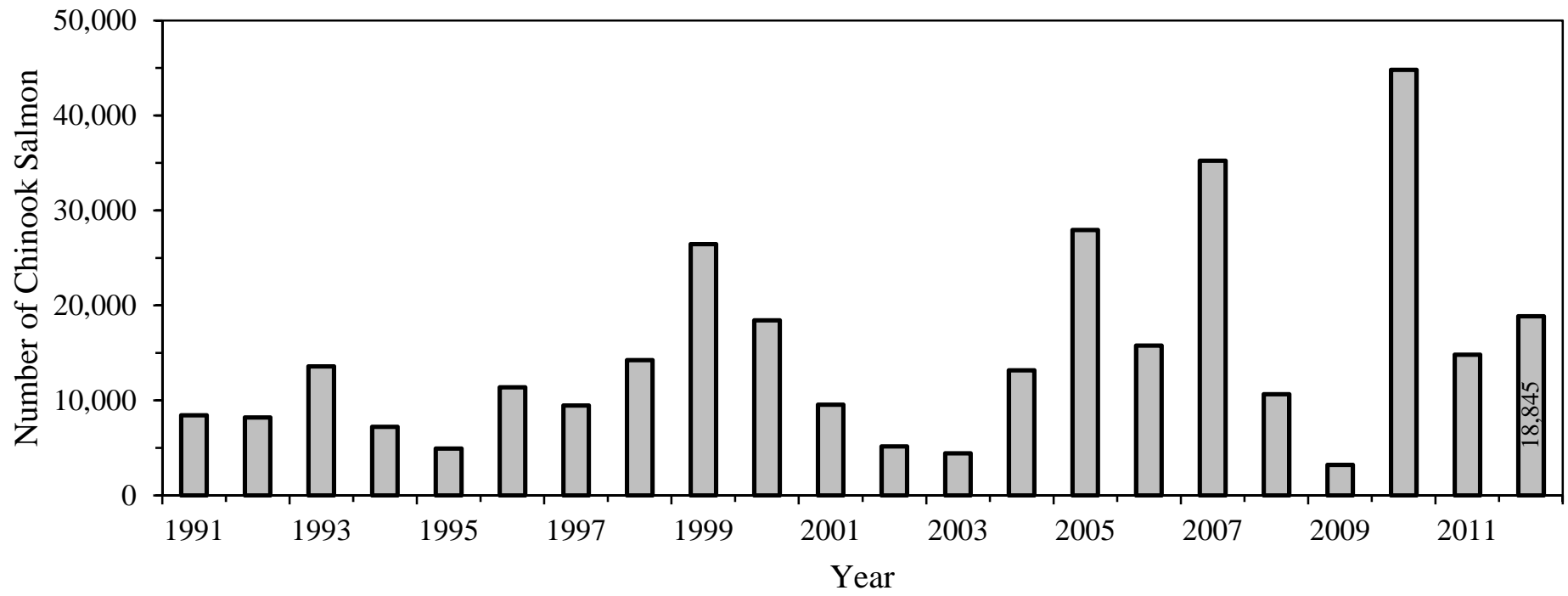
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Gene Conservation Laboratory  
Alaska Dept of Fish and Game  
Anchorage, AK

**NOAA**  
**FISHERIES**  
**SERVICE**

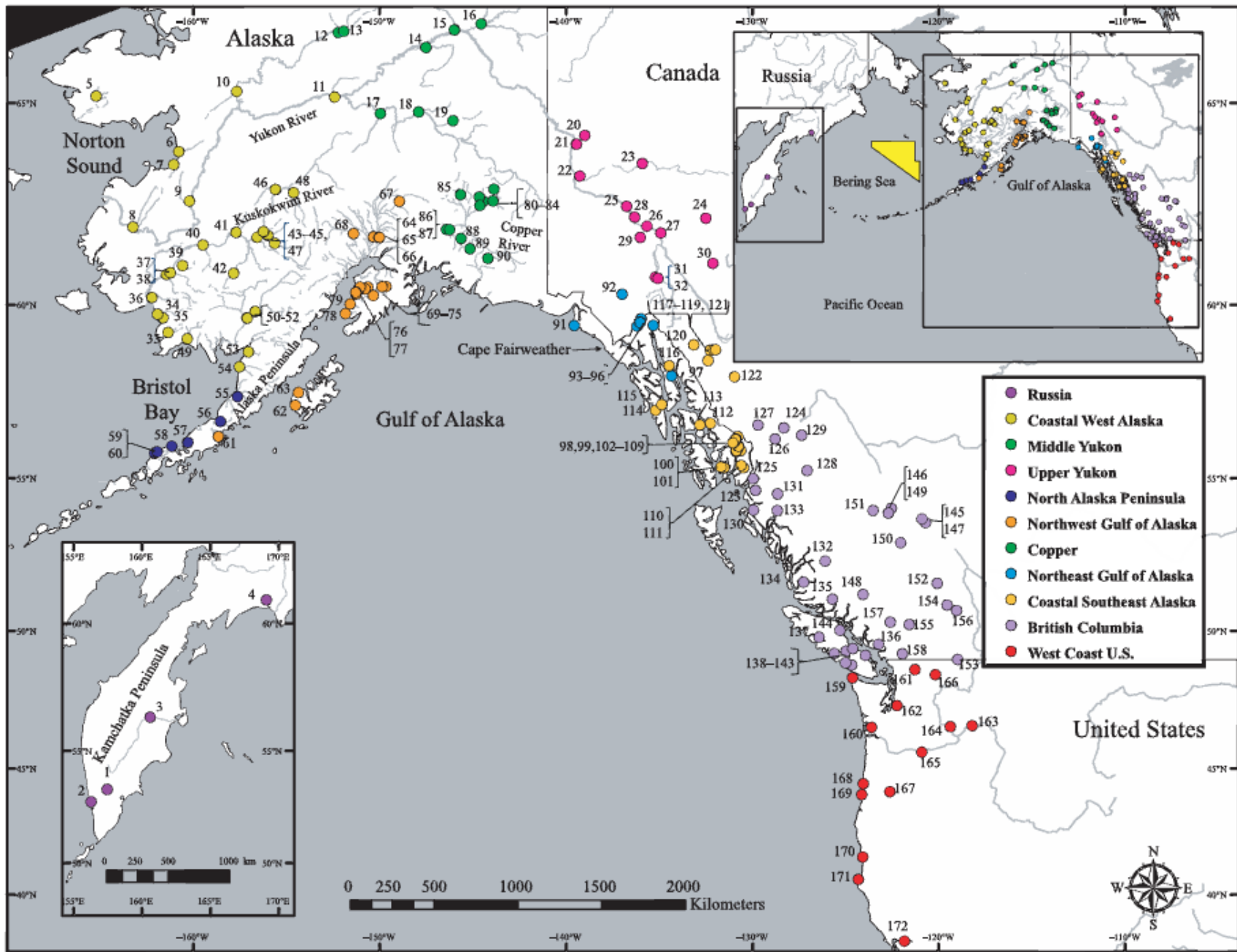
**October 8, 2014**

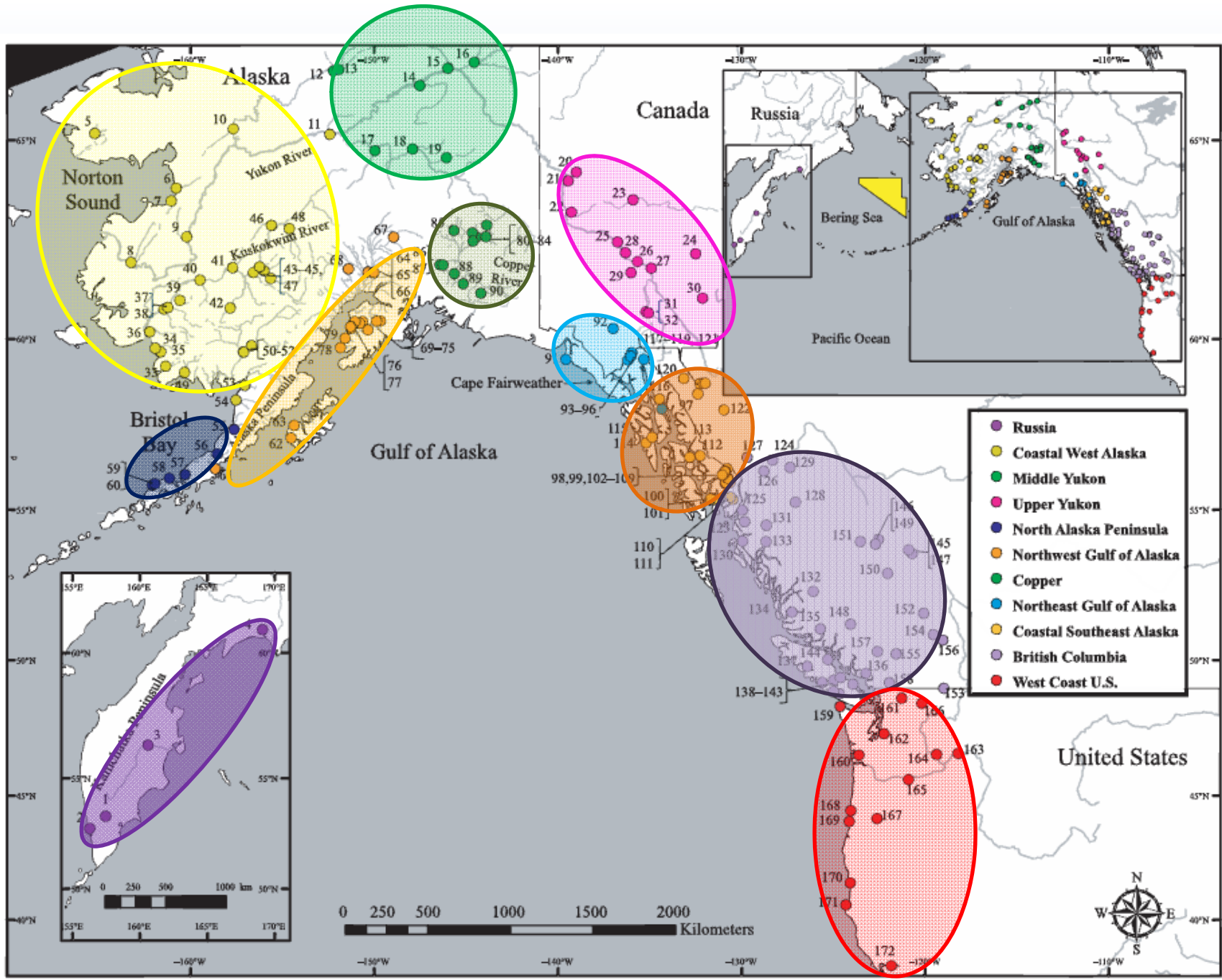


NMFS statistical areas associated with the Bering Sea-Aleutian Island (BSAI) and Gulf of Alaska (GOA) groundfish fisheries.



Yearly estimates for the Chinook salmon bycatch from the Gulf of Alaska pollock trawl fishery (NMFS 2012).



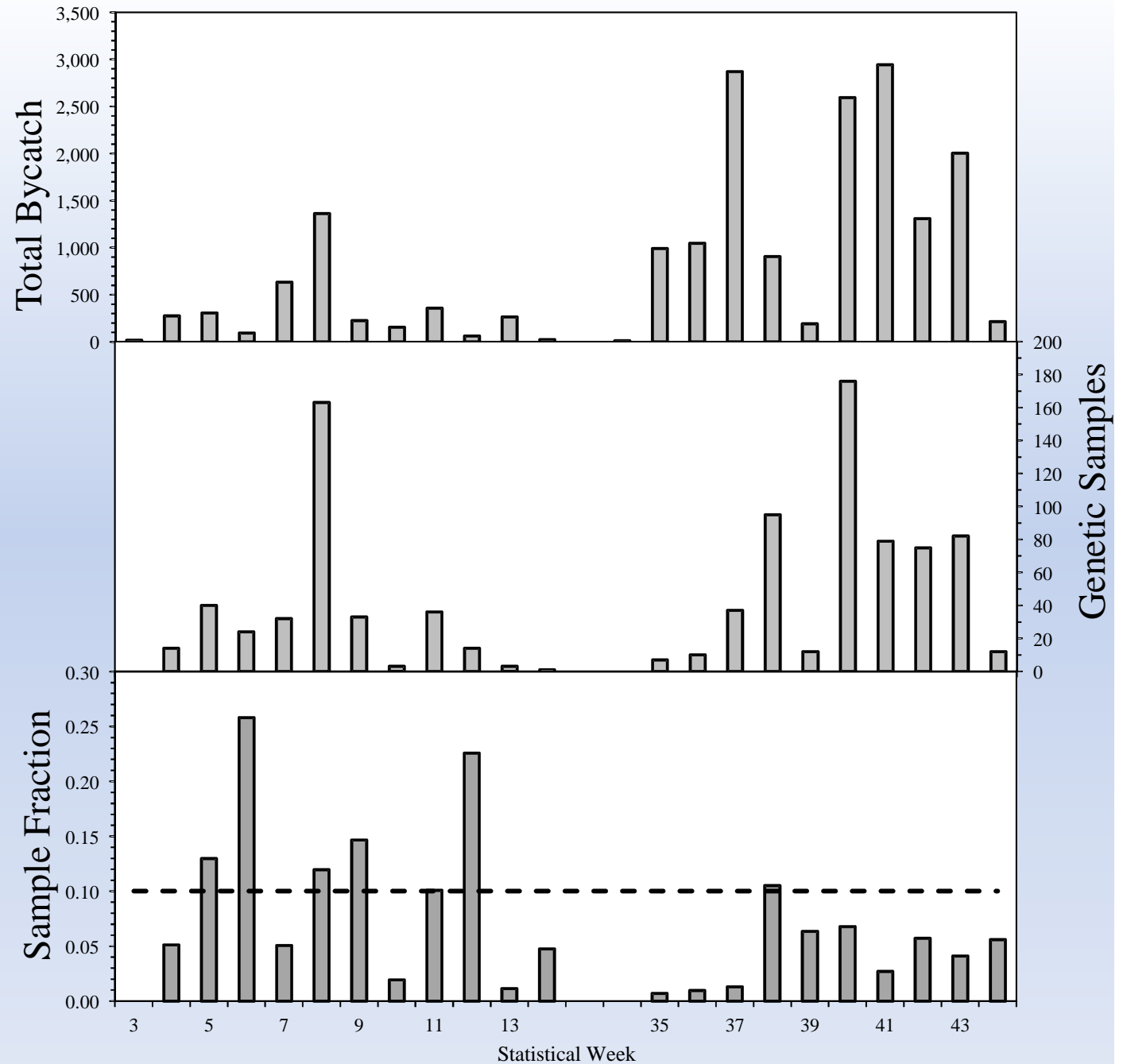


Templin et al., 2011

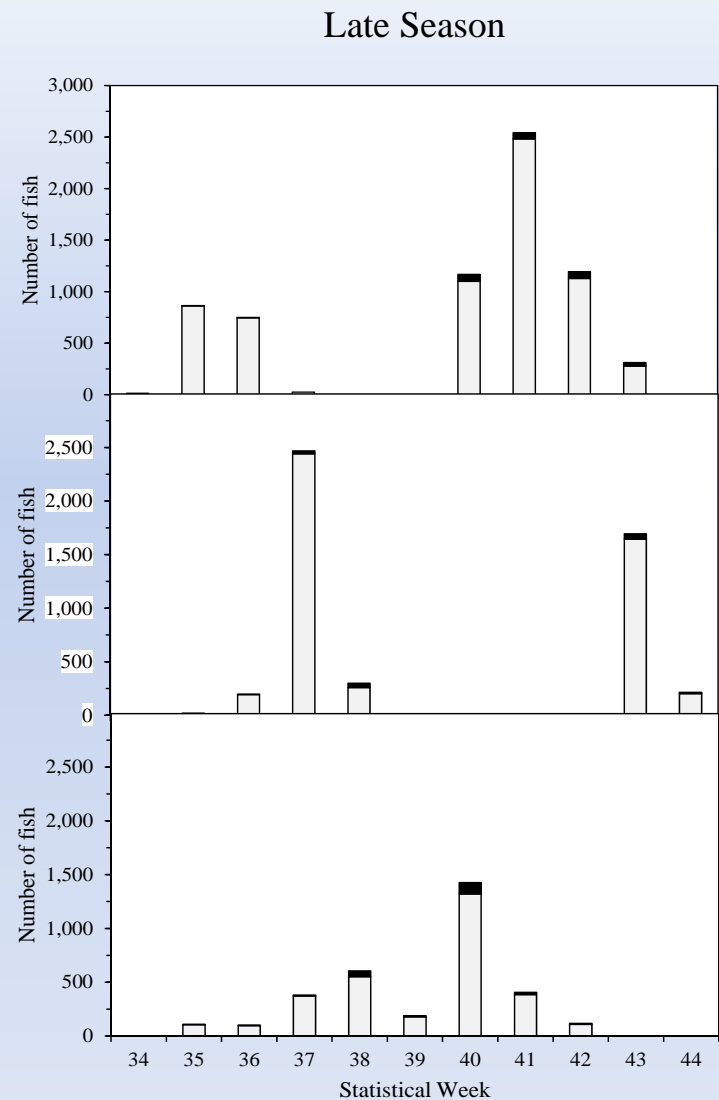
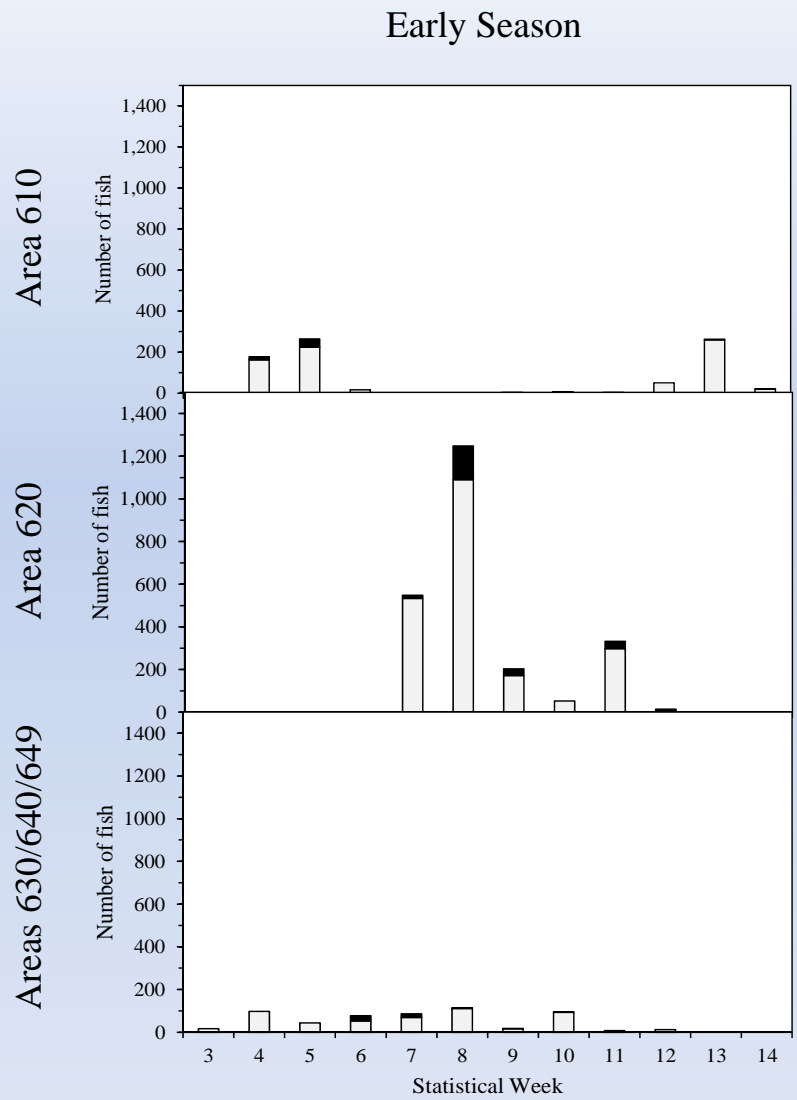
# Total Bycatch

# Genetic Samples

# Sample Fraction

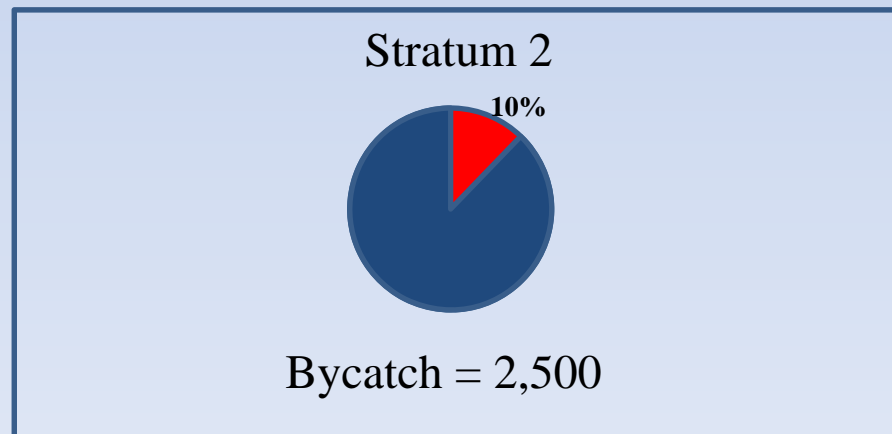
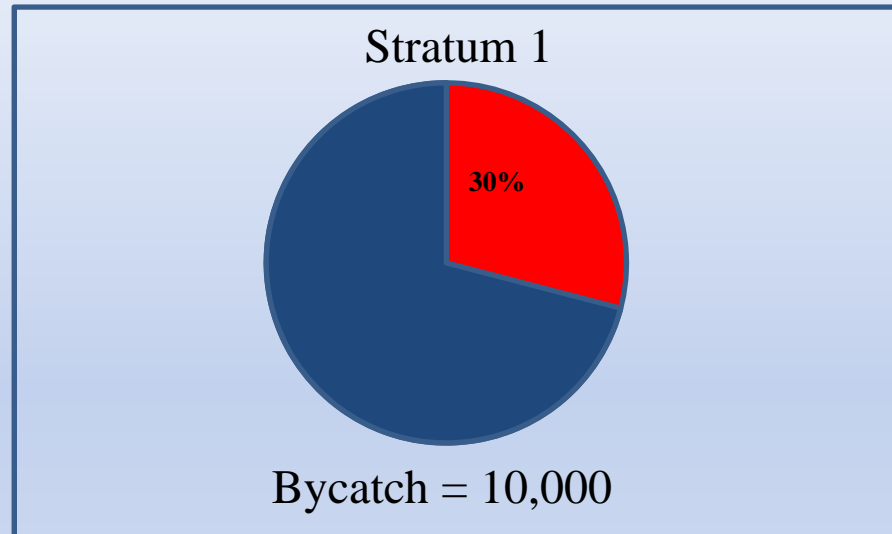


# 2012 Total Bycatch and sample fraction by stratum



# Stratified estimate weighted by bycatch

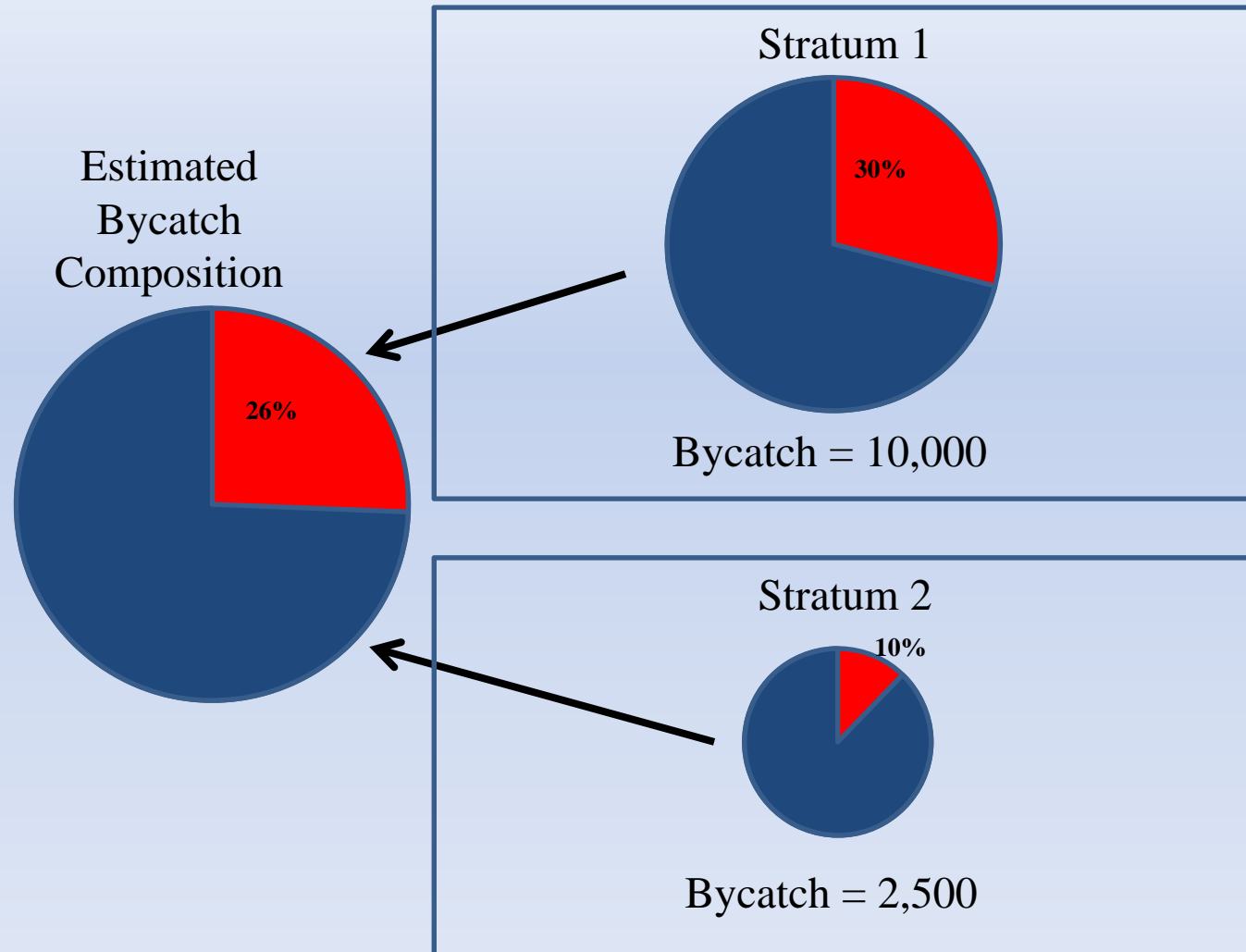
## Weighted





# Stratified estimate weighted by bycatch

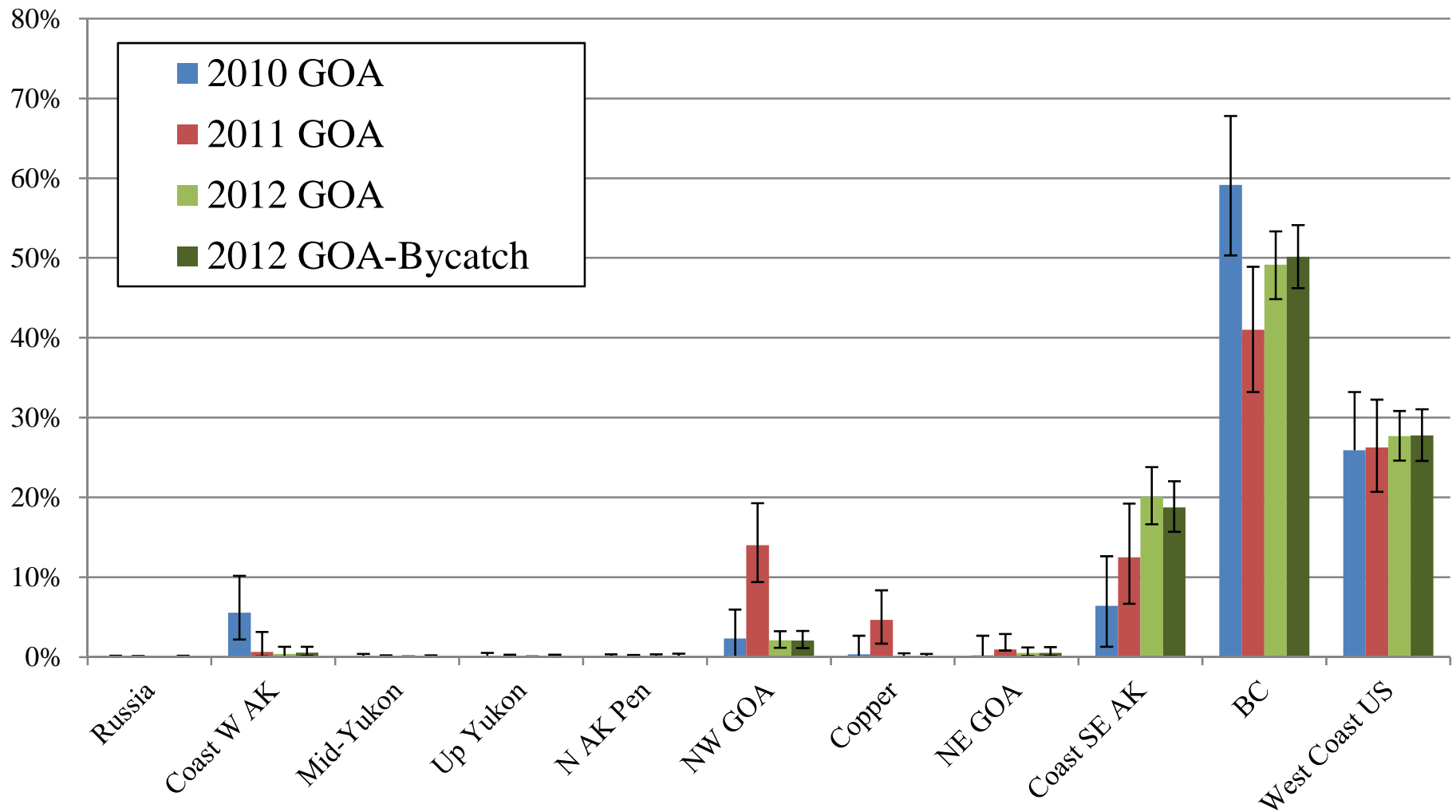
## Weighted



# Pollock – GOA

## 2012 Chinook Bycatch

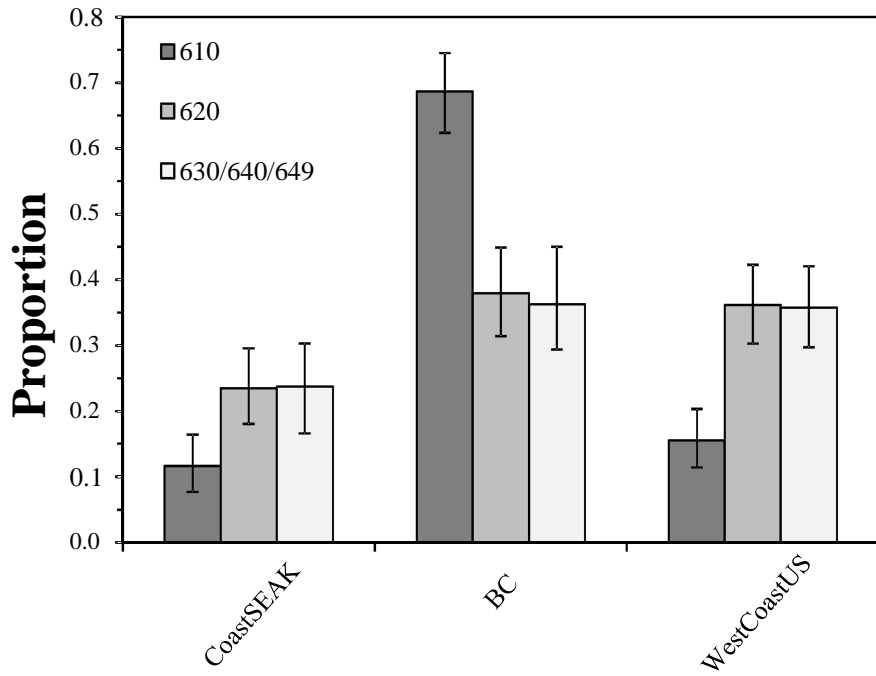
948 Samples



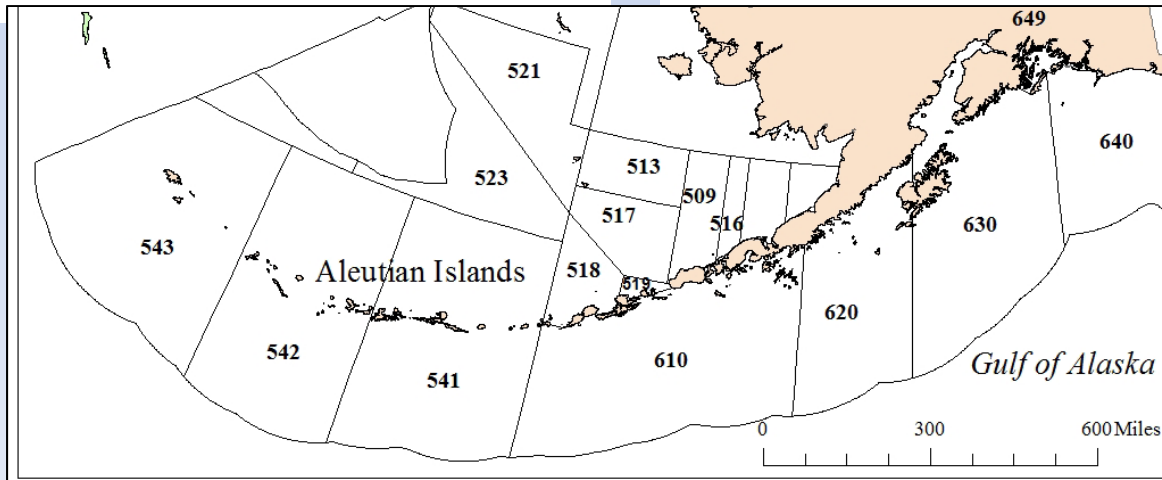
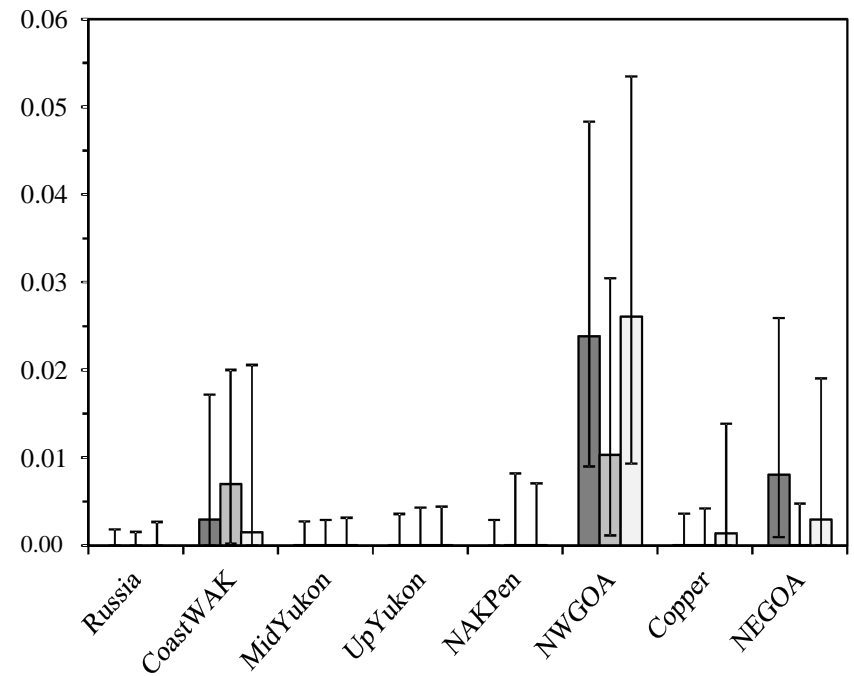
# 2012 GOA Chinook salmon stock composition estimates by area

## Median and 95% CI

### Major Contributors



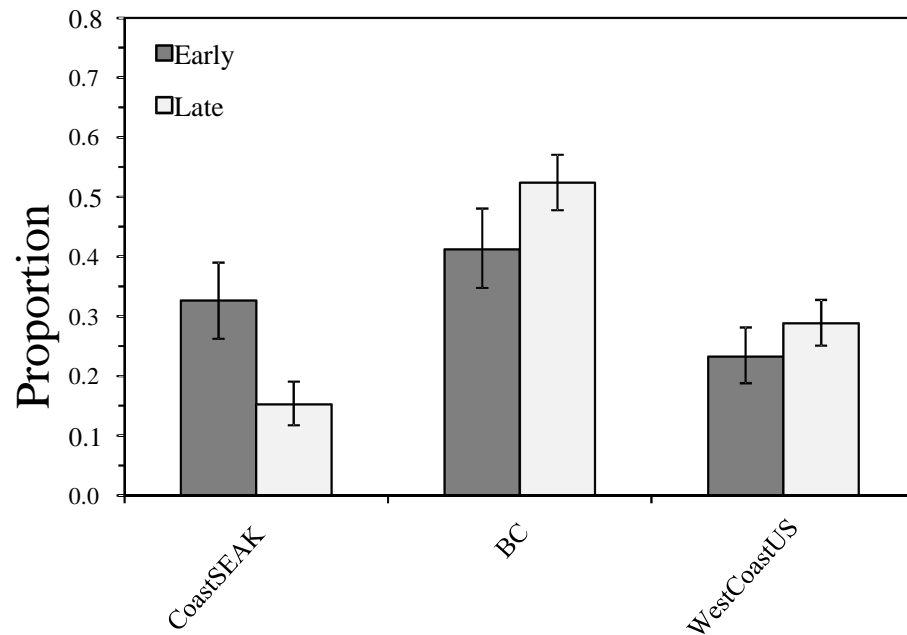
### Minor Contributors



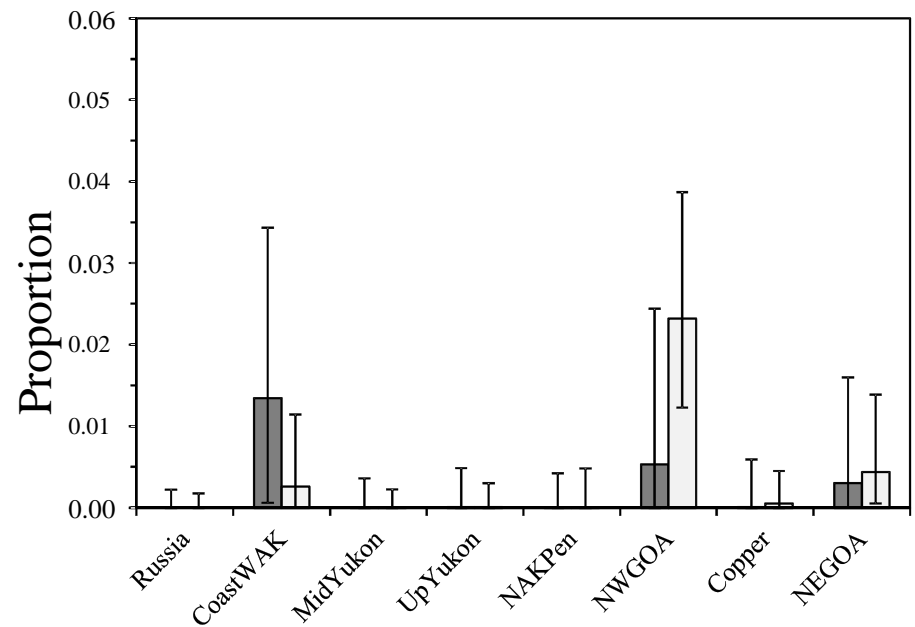
# 2012 GOA Chinook salmon stock composition estimates by season

Median and 95% CI

## Major Contributors



## Minor Contributors



	Whole Season (H = 18,845; n = 948)				
		95% CI			
Reporting Group	Mean	2.5%	97.5%	Median	SD
Russia	3	0	29	0	9
Coastal Western AK	106	20	242	97	57
Middle Yukon R.	5	0	37	1	12
Upper Yukon R.	9	0	50	3	15
N AK Peninsula	10	0	75	1	22
NW Gulf of AK	385	205	616	376	105
Copper R.	18	0	73	11	21
NE Gulf of AK	94	17	230	83	56
Coastal SEAK	3,536	2,955	4,149	3,528	305
British Columbia	9,450	8,710	10,194	9,450	378
West Coast US	5,229	4,632	5,846	5,225	309
<b>Total</b>	18,845				

**Table 8.**– Reporting group-specific estimates of number of Chinook salmon taken as bycatch in the 2012 Gulf of Alaska pollock trawl fishery.

# Sampling in 2012 was opportunistic and at a low rate (< 10%), but:

1. Distribution across time/area strata allows adequate representation
  - Strata with small sample sizes had sample fractions >7%
  - Strata with small sample fractions had reasonable sample sizes (>135)
2. Stock compositions between early & late periods and among areas were relatively similar
  - Indicates that stock compositions were fairly consistent across space and time
3. Bycatch was dominated by three reporting groups, reducing the potential bias from estimating many smaller contributions.

# **Preliminary Genetic Stock Composition Analysis from 2013 Gulf of Alaska Federal Trawl Fisheries**

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Juneau, AK

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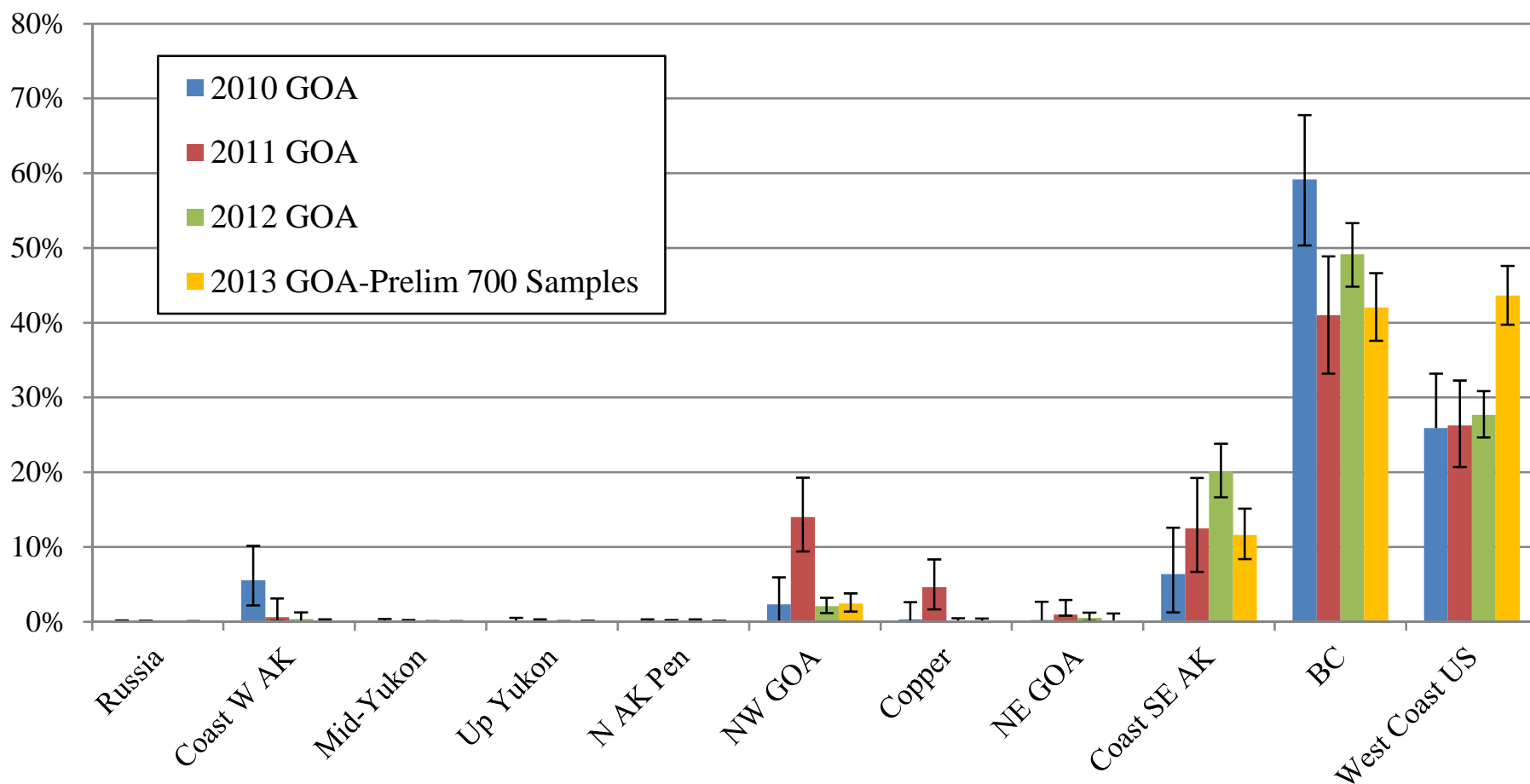
**John Gauvin**

Alaska Seafood Cooperative  
Seattle, WA

# Pollock – Preliminary GOA 2013 Chinook Bycatch

736 Samples, 700 Genotyped 13,513 Bycatch

*Samples Not Normalized*

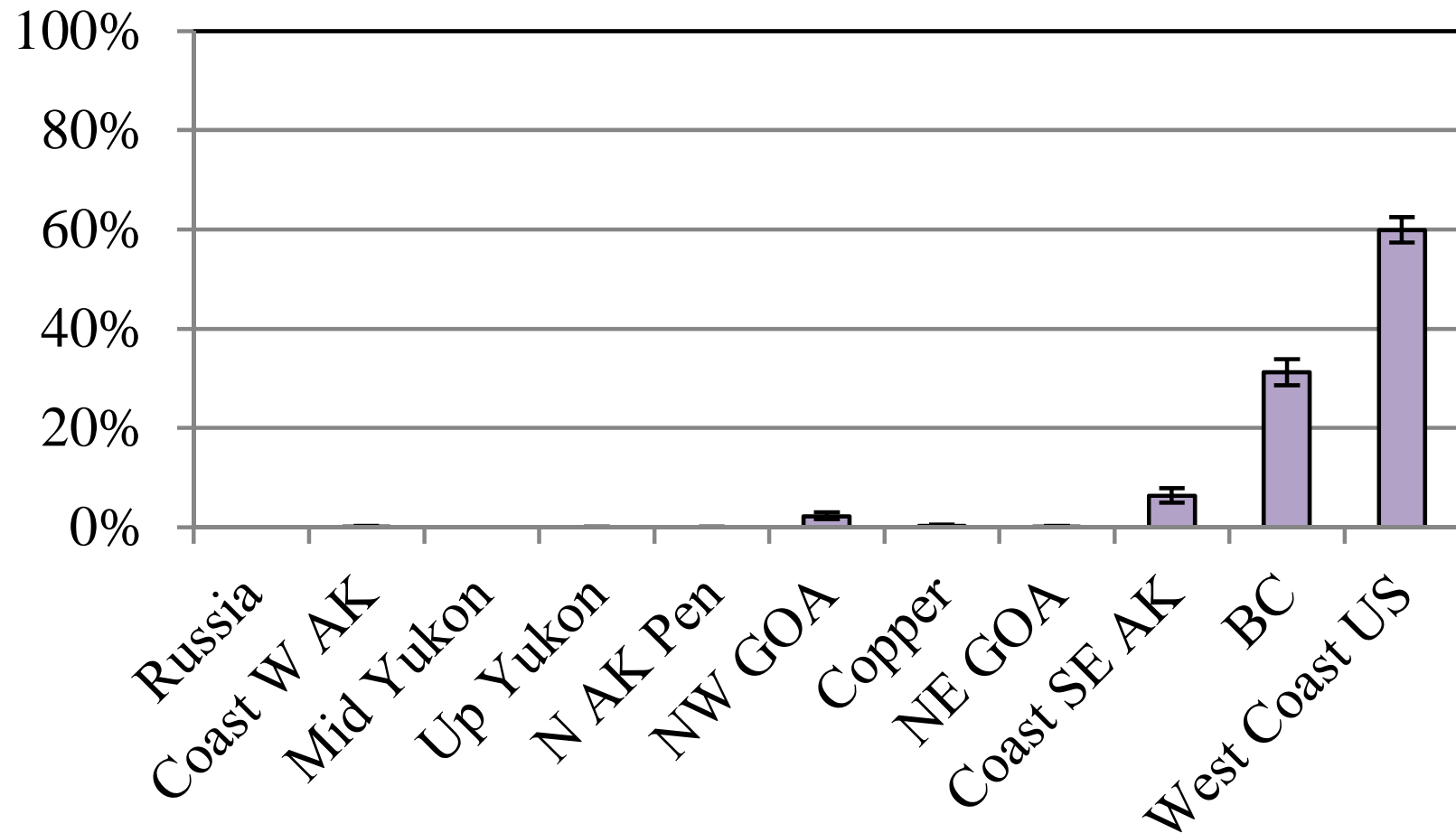




# Rockfish - GOA

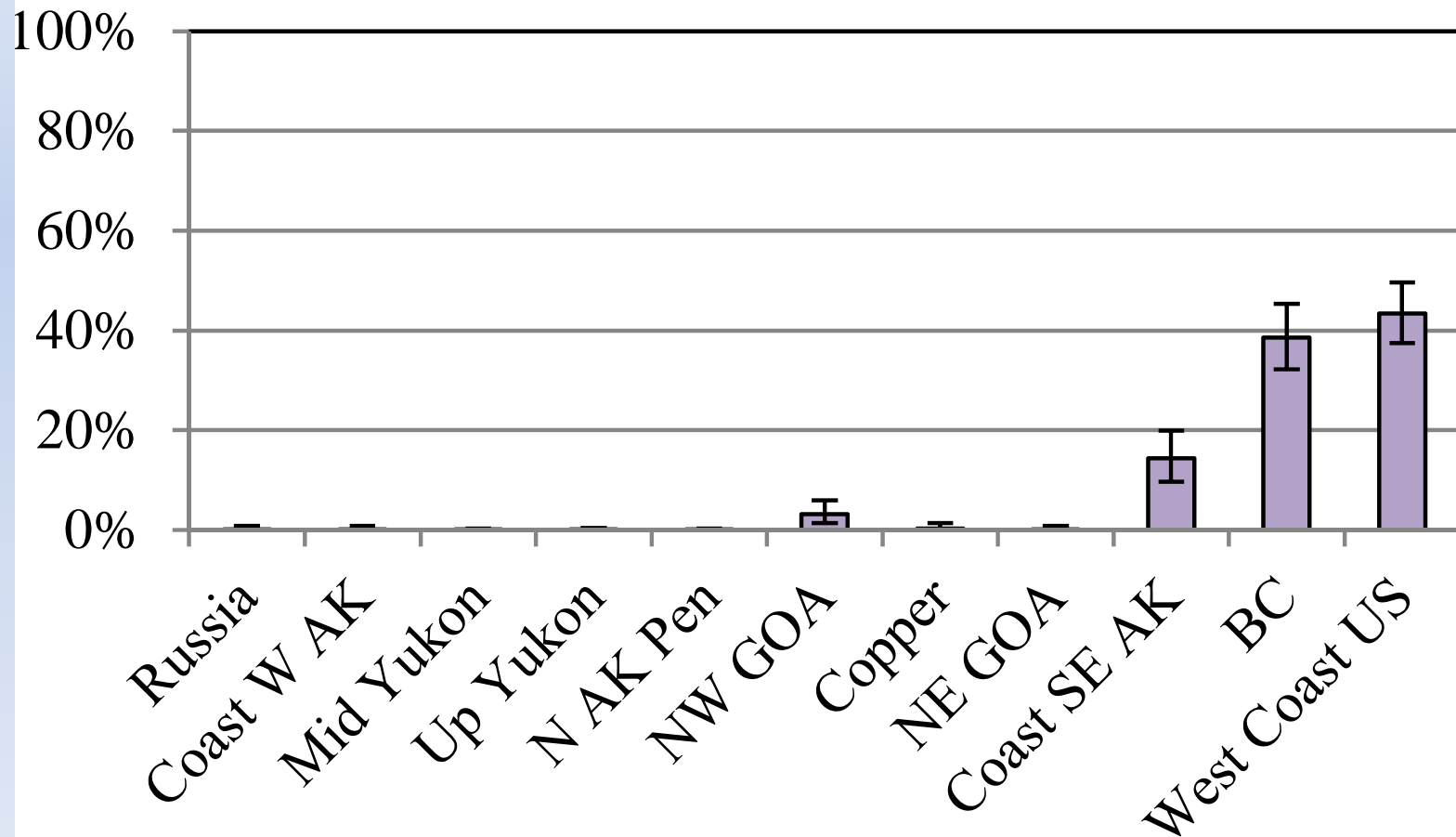
## 2013 Chinook Bycatch

2,070 samples, 2,029 genotyped  
May 1, 2013 to Nov 15, 2013



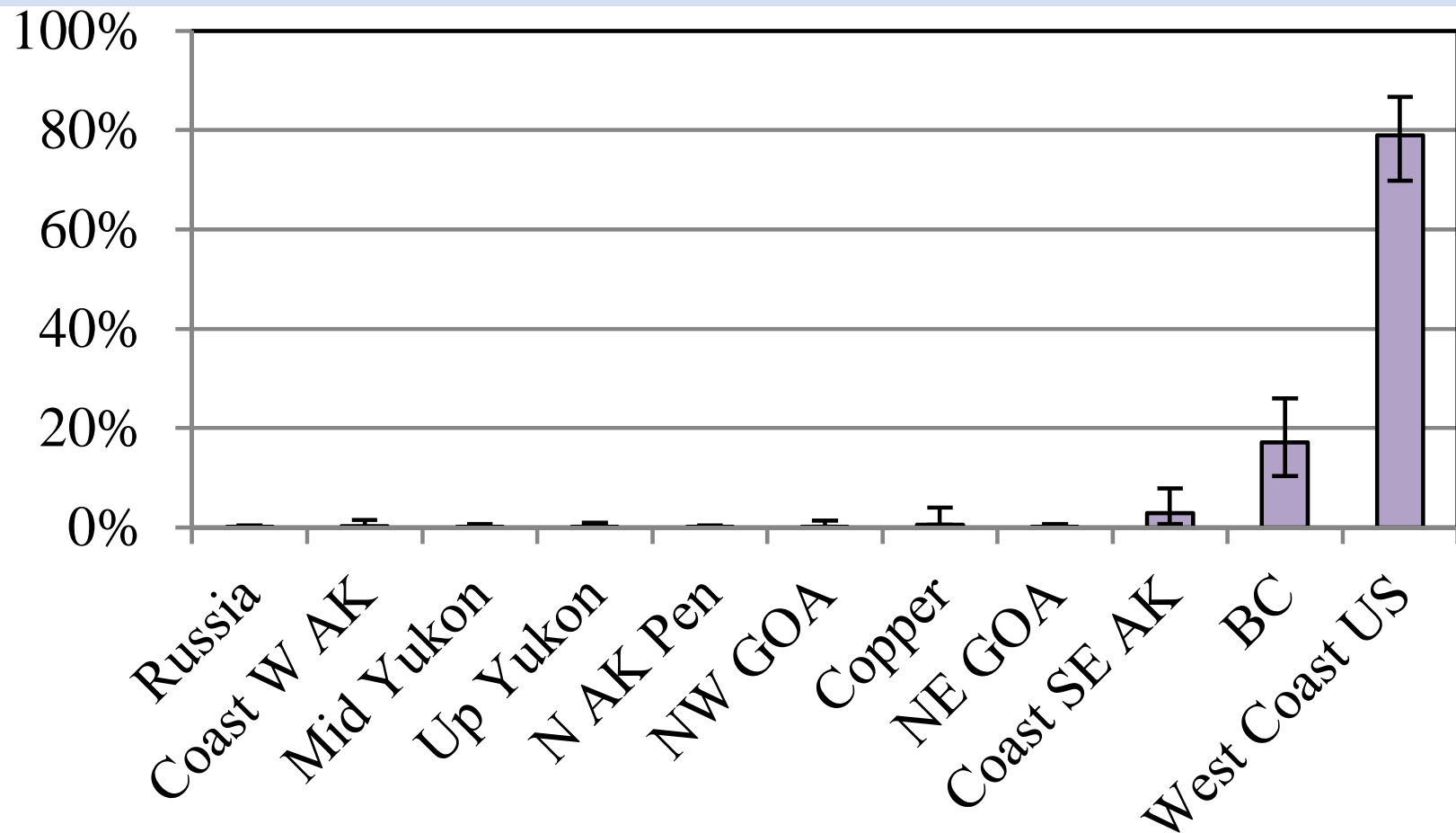
# Arrowtooth Flounder 2013 Chinook Bycatch

66 tows, 302 Samples, 279 Genotyped  
April 28, 2013 to May 18, 2013



# 2013 Chinook Salmon Excluder Samples

F/V Caravelle Haul 18 on April 11, 2013  
105 Samples, 95 Genotyped



# Acknowledgements

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Bill Templin  
Jim Jasper

## Alaska Groundfish Data Bank

Julie Bonney  
Katy McGauley

## Alaska Seafood Cooperative

John Gauvin

## Salmon Excluder Device Test

John Gauvin  
Katy McGauley

## Funding

NMFS AKSSF NPFRR

