

*Science, Service, Stewardship*



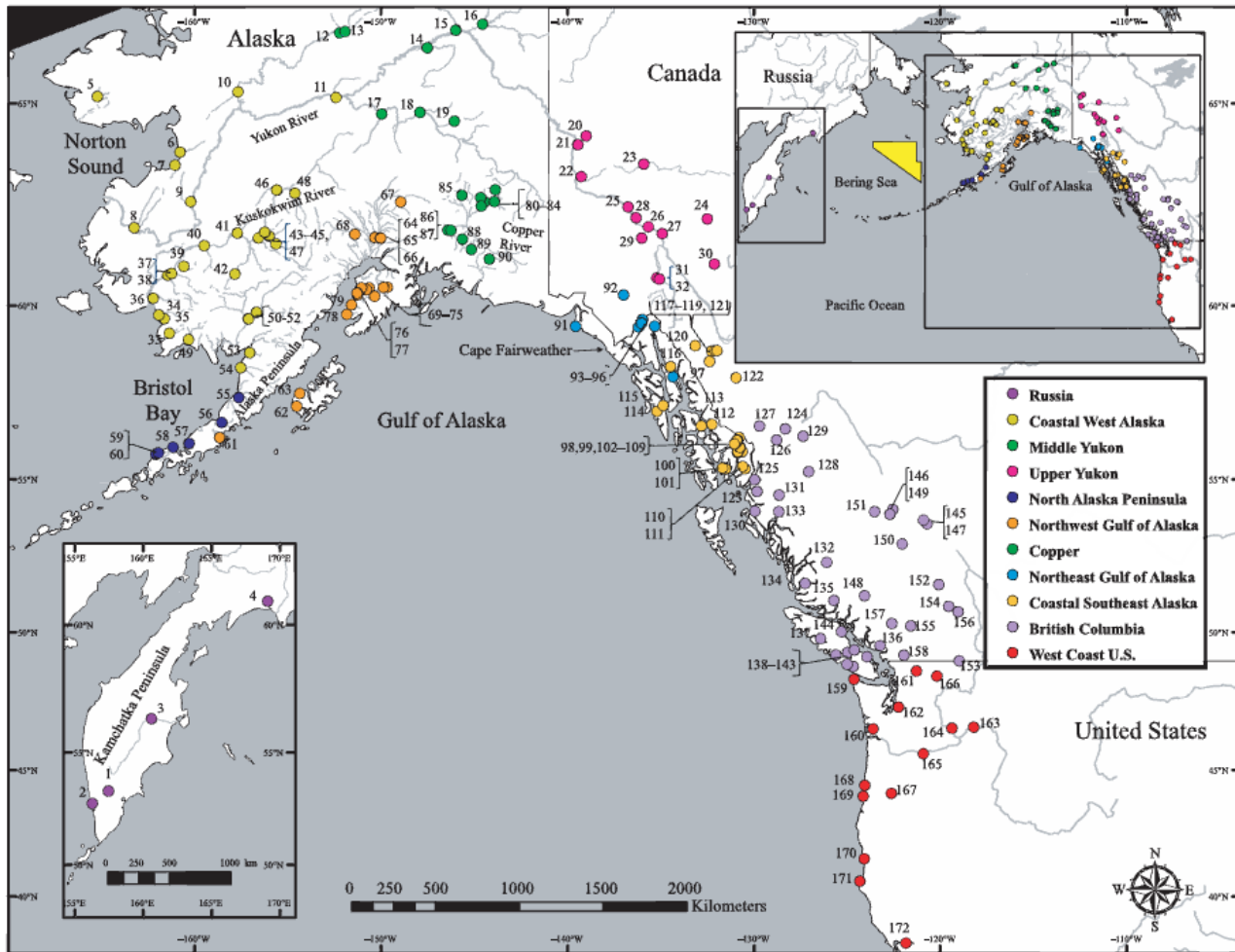
# ***Preliminary Genetic Stock Composition Analysis of the Chinook Salmon Bycatch from the 2021 and 2022 Bering Sea Pollock Trawl Fisheries***

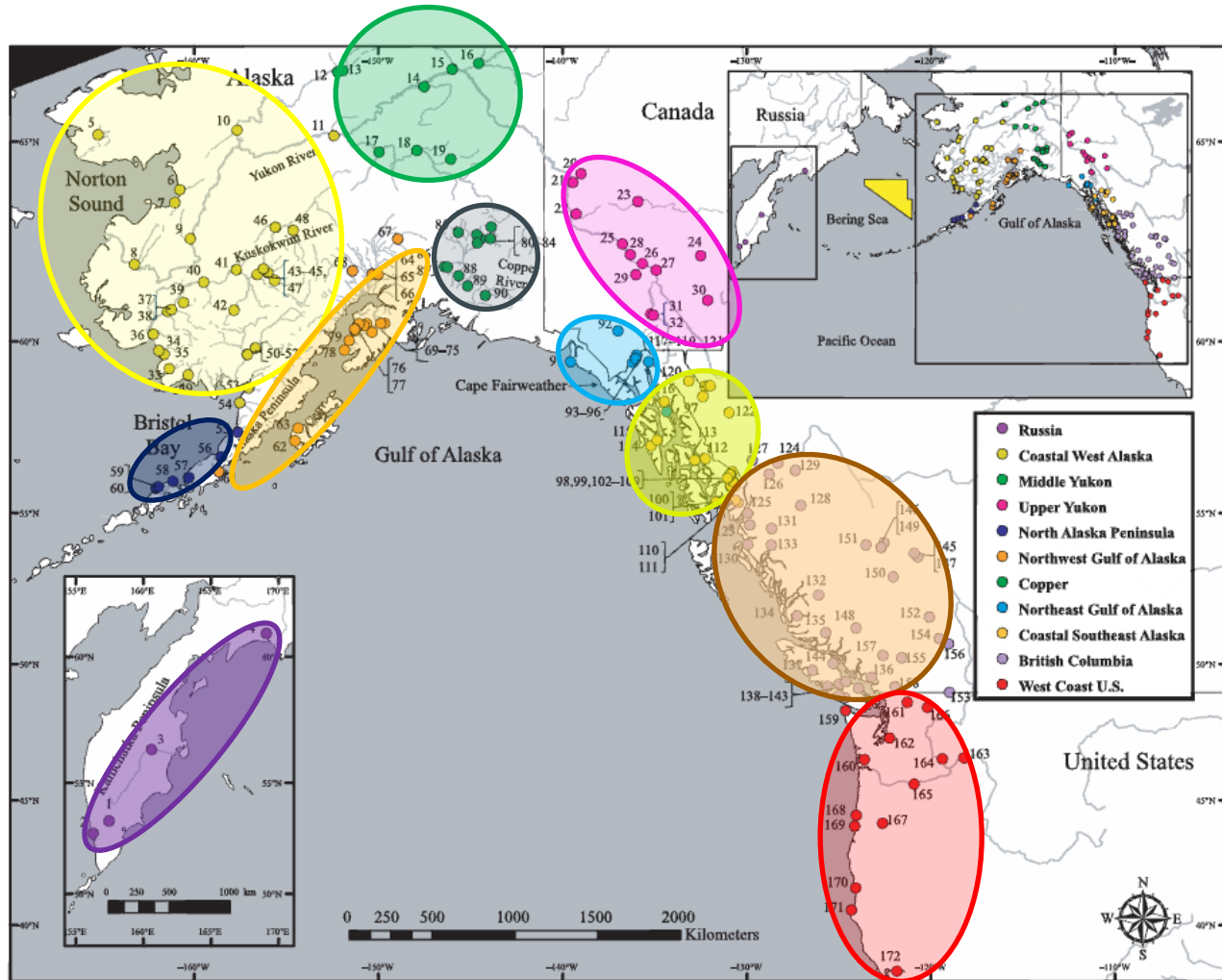
**C. M. Guthrie III, P. D. Barry, H. T. Nguyen, K. D'Amelio, K. Karpan,  
and W. A. Larson**

Genetics Program  
Auke Bay Laboratories  
Juneau, AK

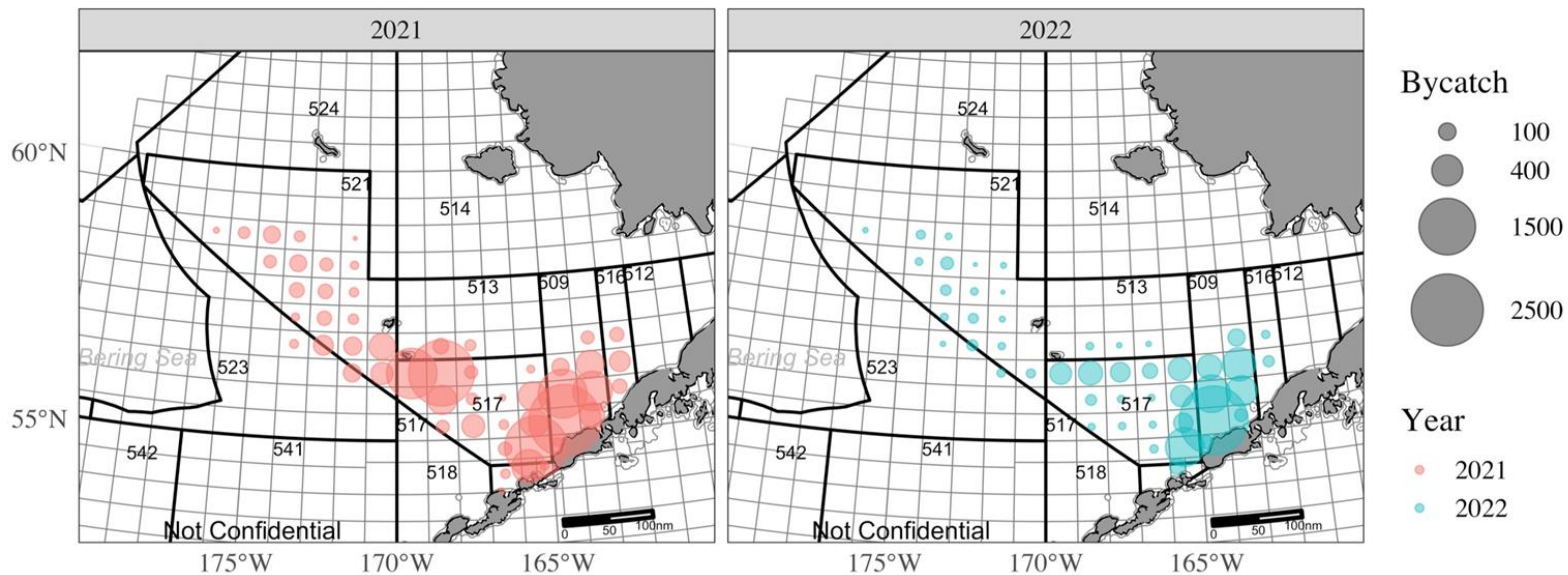
**NOAA  
FISHERIES  
SERVICE**

April 2023

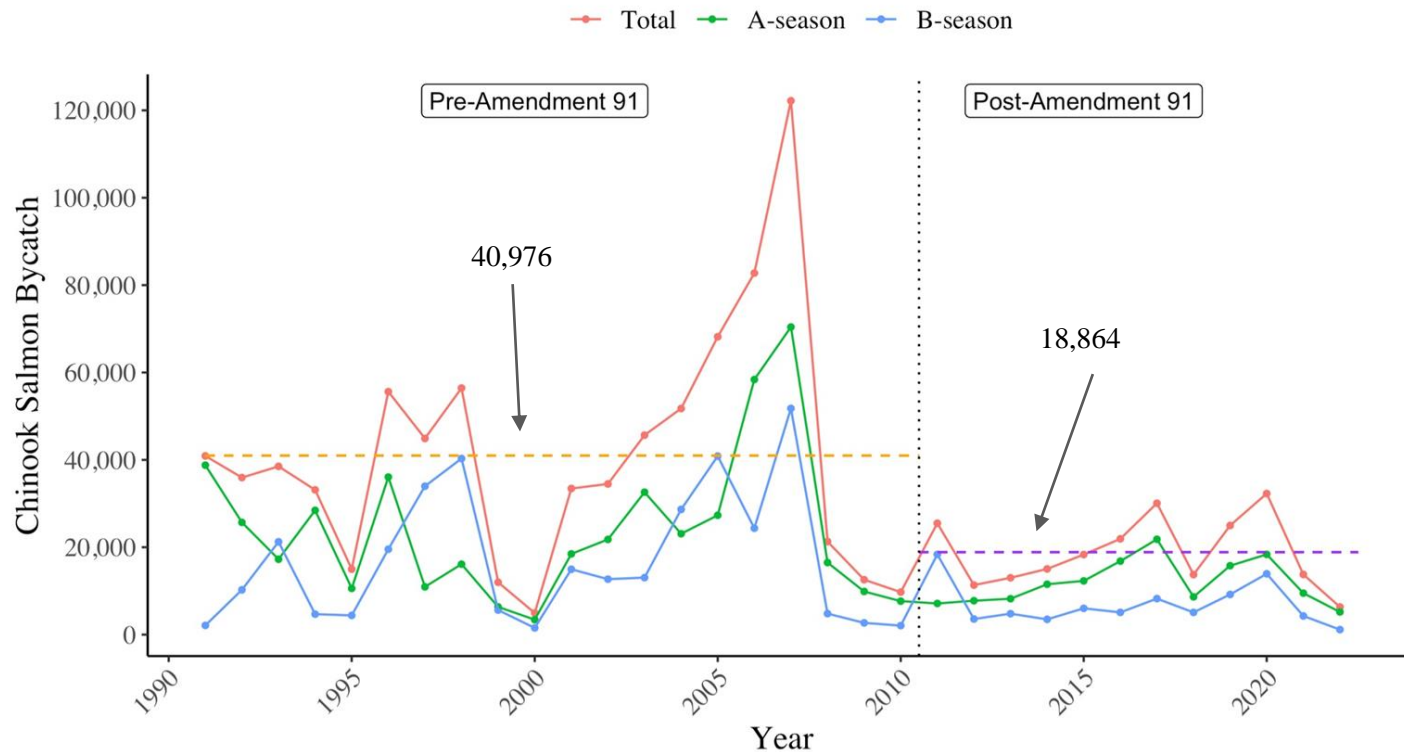




# Spatial Distribution of Chinook Salmon bycatch



# Chinook Salmon bycatch BSAI 1991 - 2022

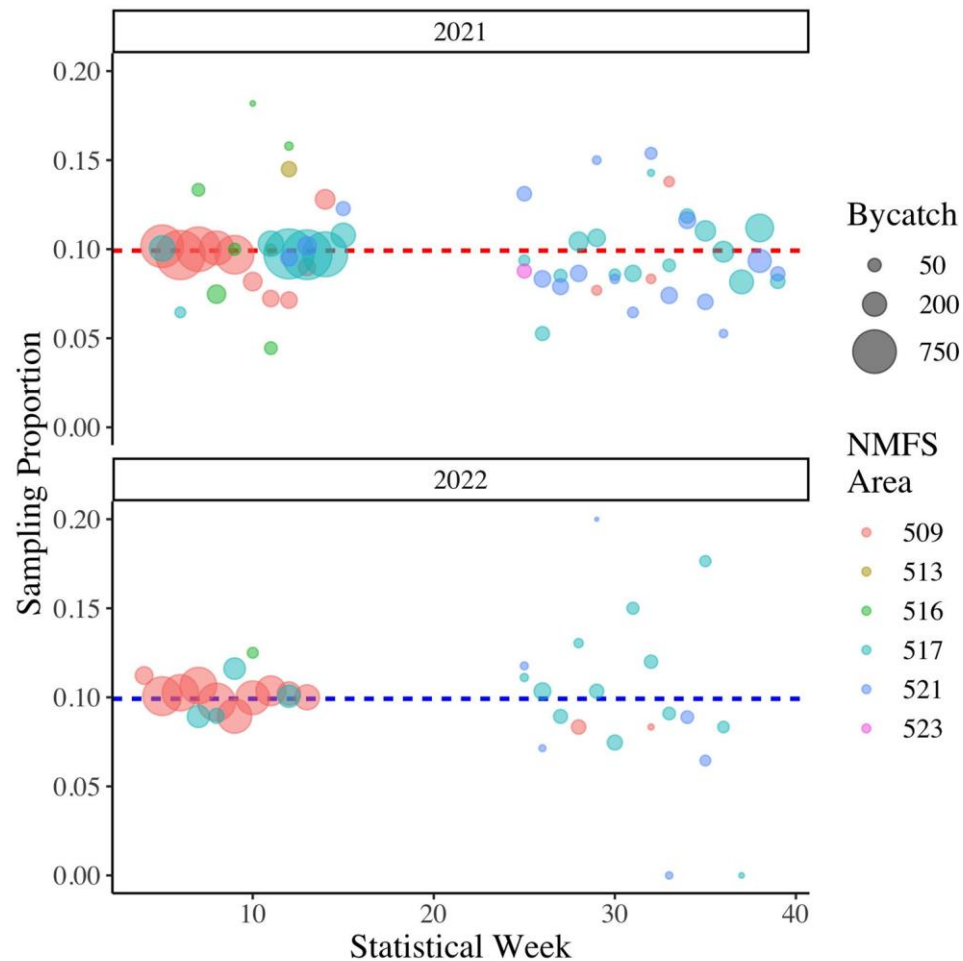


# Genetic Sampling

Observer Goal = 0.1 (1 in 10)

2021 = 0.0985

2022 = 0.0998



# Mixtures Analyzed

Yearly & Season (A & B)

BSAI

Northwest vs. Southeast

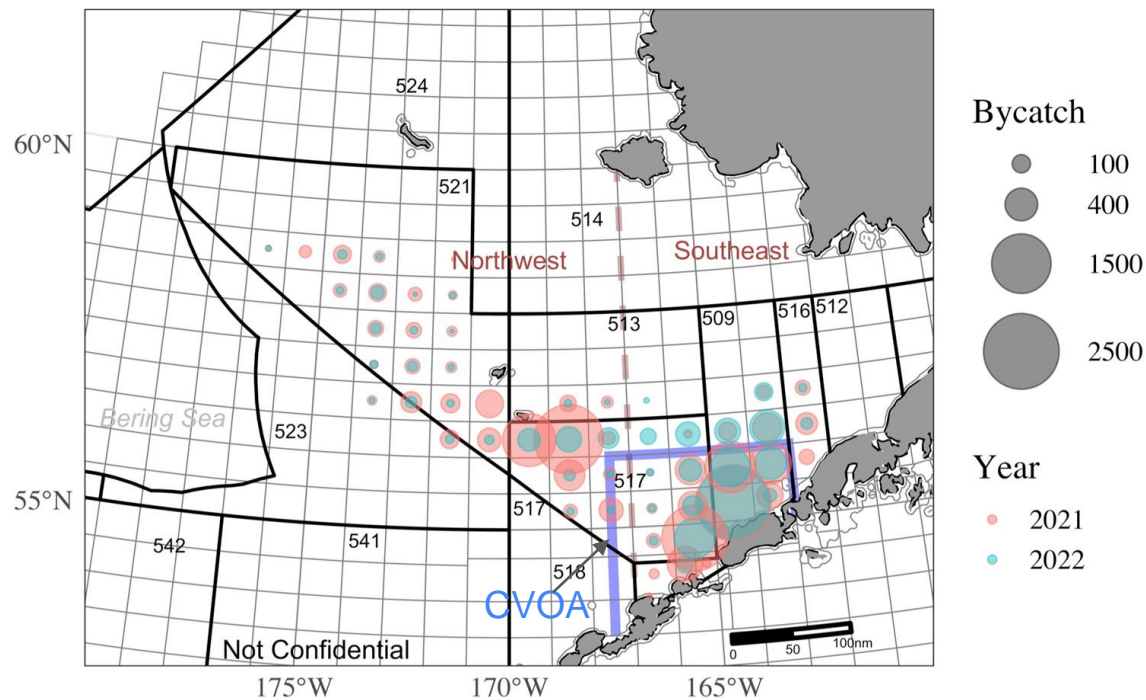
CVOA

NMFS 509

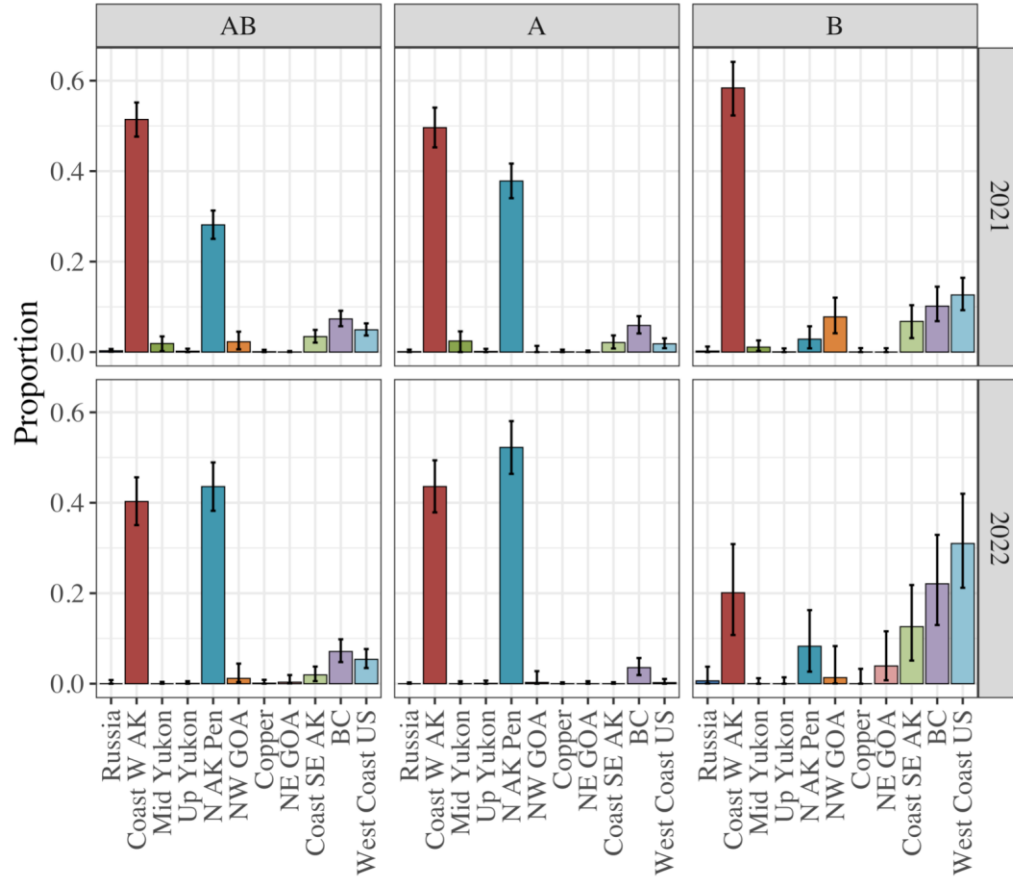
Ages:

2021 - 3, 4, & 5

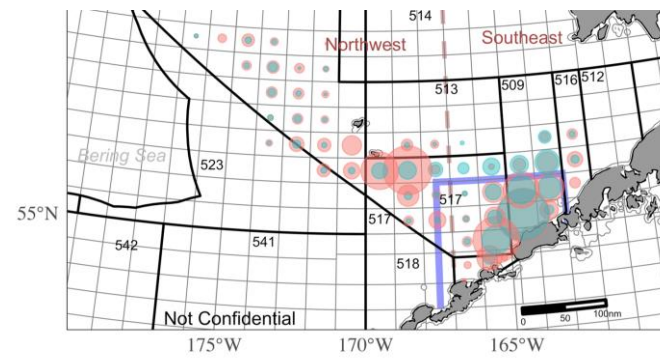
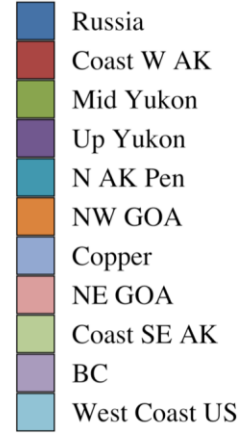
2022 - 4



# Chinook Salmon - Bering Sea



## Reporting Group



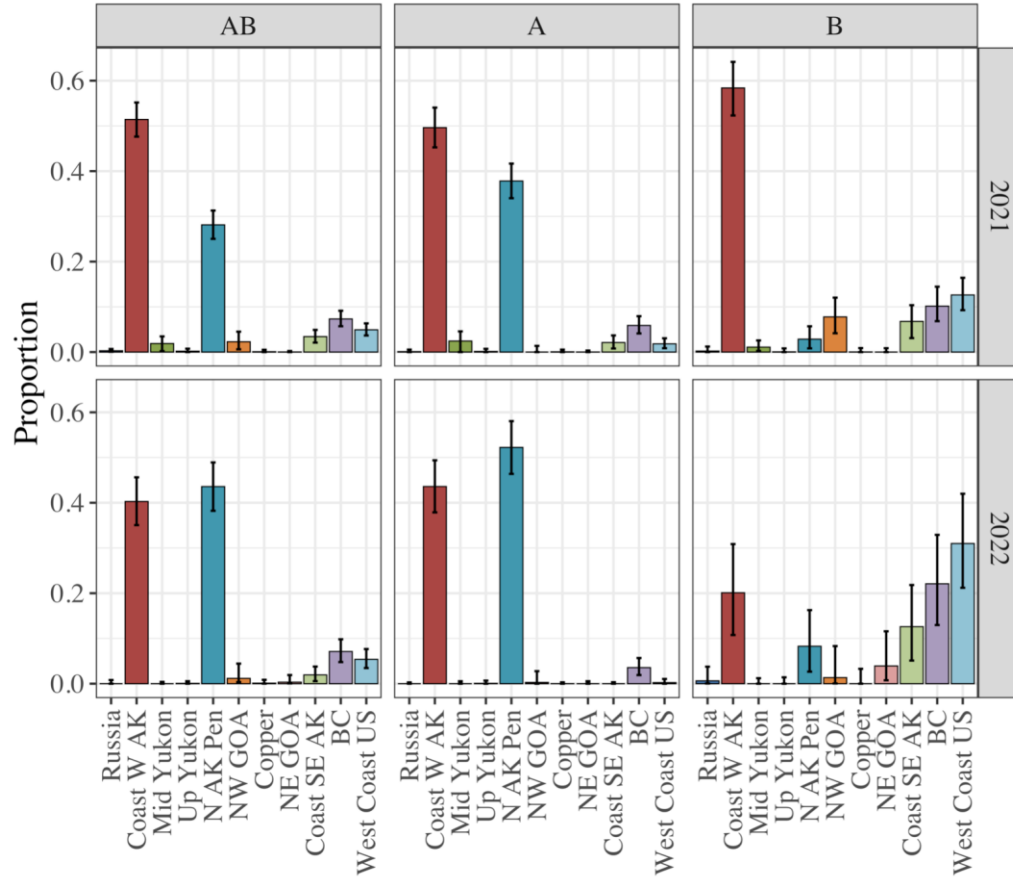


# River Systems Draining into Bering Sea

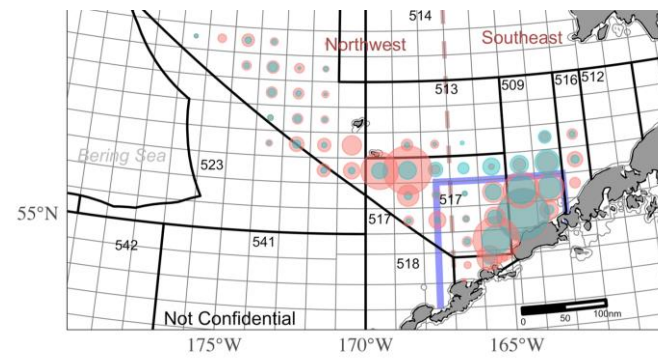
Year	Season	Bycatch	Region	Est. #	Num	95% CI	Mean	Prop	95% CI
2021	A & B	13784	Coast W AK	7,088	6,566-7,606	0.51	0.48-0.55		
			Mid Yukon	260	27-478	0.02	0-0.03		
			N AK Pen	3,878	3,450-4,313	0.28	0.25-0.31		
			Up Yukon	28	1-102	0.00	0-0.01		
			Total	11,165	10,044-12,499	0.81	0.73-0.91		
	A	9503	Coast W AK	4,716	4,300-5,136	0.50	0.45-0.54		
			Mid Yukon	231	0-435	0.02	0-0.05		
			N AK Pen	3,594	3,232-3,960	0.38	0.34-0.42		
			Up Yukon	14	0-68	0.00	0-0.01		
			Total	8,553	7,533-9,598	0.90	0.79-1.01		
B	4281	Coast W AK	2,500	2,239-2,747	0.58	0.52-0.64			
		Mid Yukon	47	10-110	0.01	0-0.03			
		N AK Pen	122	35-244	0.03	0.01-0.06			
		Up Yukon	2	0-35	0.00	0-0.01			
		Total	2,654	2,285-3,135	0.62	0.53-0.73			

Year	Season	Bycatch	Region	Est. #	Num	95% CI	Mean	Prop	95% CI
2022	A & B	6337	Coast W AK	2,553	2,222-2,891	0.40	0.35-0.46		
			Mid Yukon	0	0-26	0.00	0-0		
			N AK Pen	2,762	2,422-3,100	0.44	0.38-0.49		
			Up Yukon	4	0-35	0.00	0-0.01		
			Total	5,323	4,644-6,052	0.84	0.73-0.96		
	A	5185	Coast W AK	2,261	1,964-2,561	0.44	0.38-0.49		
			Mid Yukon	0	0-28	0.00	0-0.01		
			N AK Pen	2,709	2,405-3,010	0.52	0.46-0.58		
			Up Yukon	4	0-35	0.00	0-0.01		
			Total	4,978	4,369-5,634	0.96	0.84-1.09		
B	1152	Coast W AK	232	124-356	0.20	0.11-0.31			
		Mid Yukon	0	0-14	0.00	0-0.01			
		N AK Pen	95	31-187	0.08	0.03-0.16			
		Up Yukon	0	0-16	0.00	0-0.01			
		Total	323	155-573	0.28	0.13-0.5			

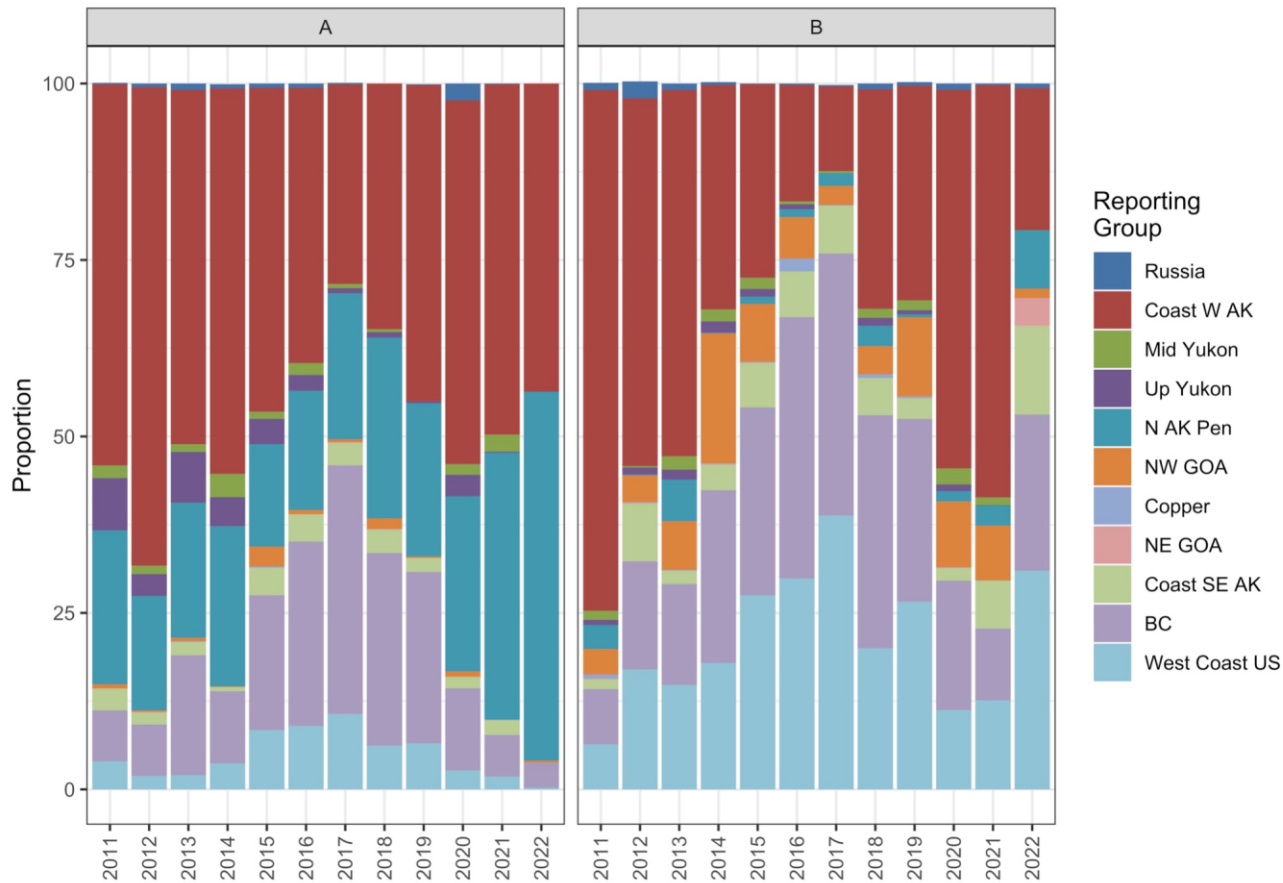
# Chinook Salmon - Bering Sea



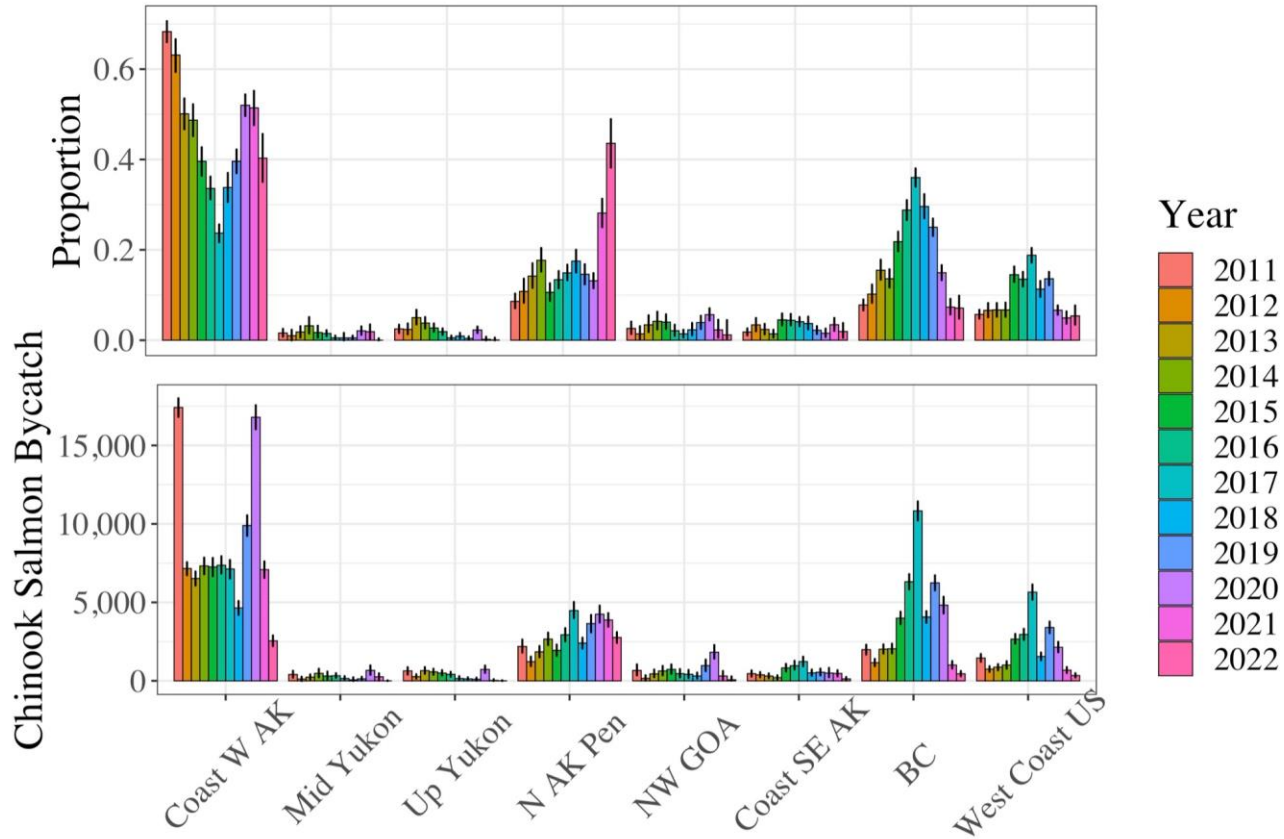
## Reporting Group



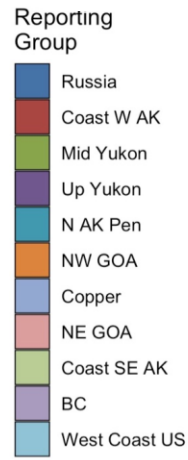
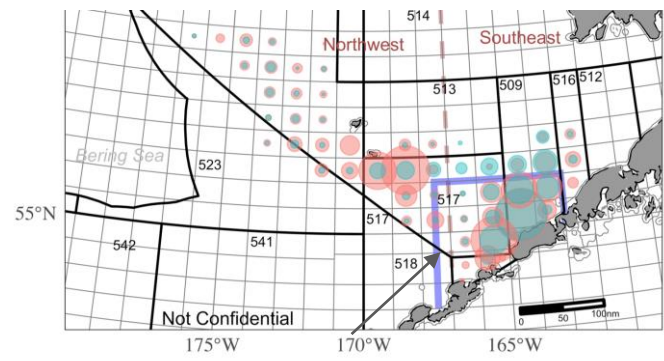
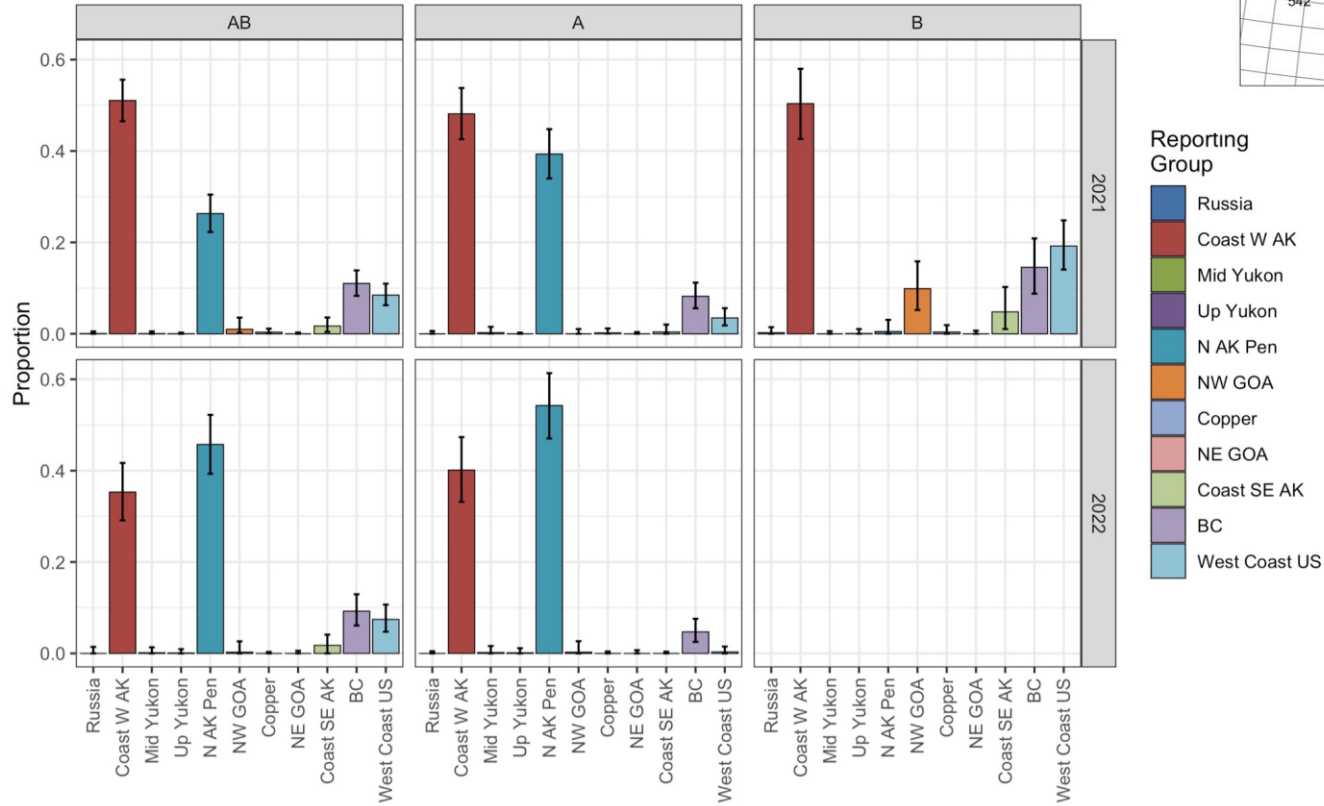
# Chinook Salmon Bering Sea Bycatch Seasonal Stock Differences



# Chinook Salmon - BSAI (A&B season)

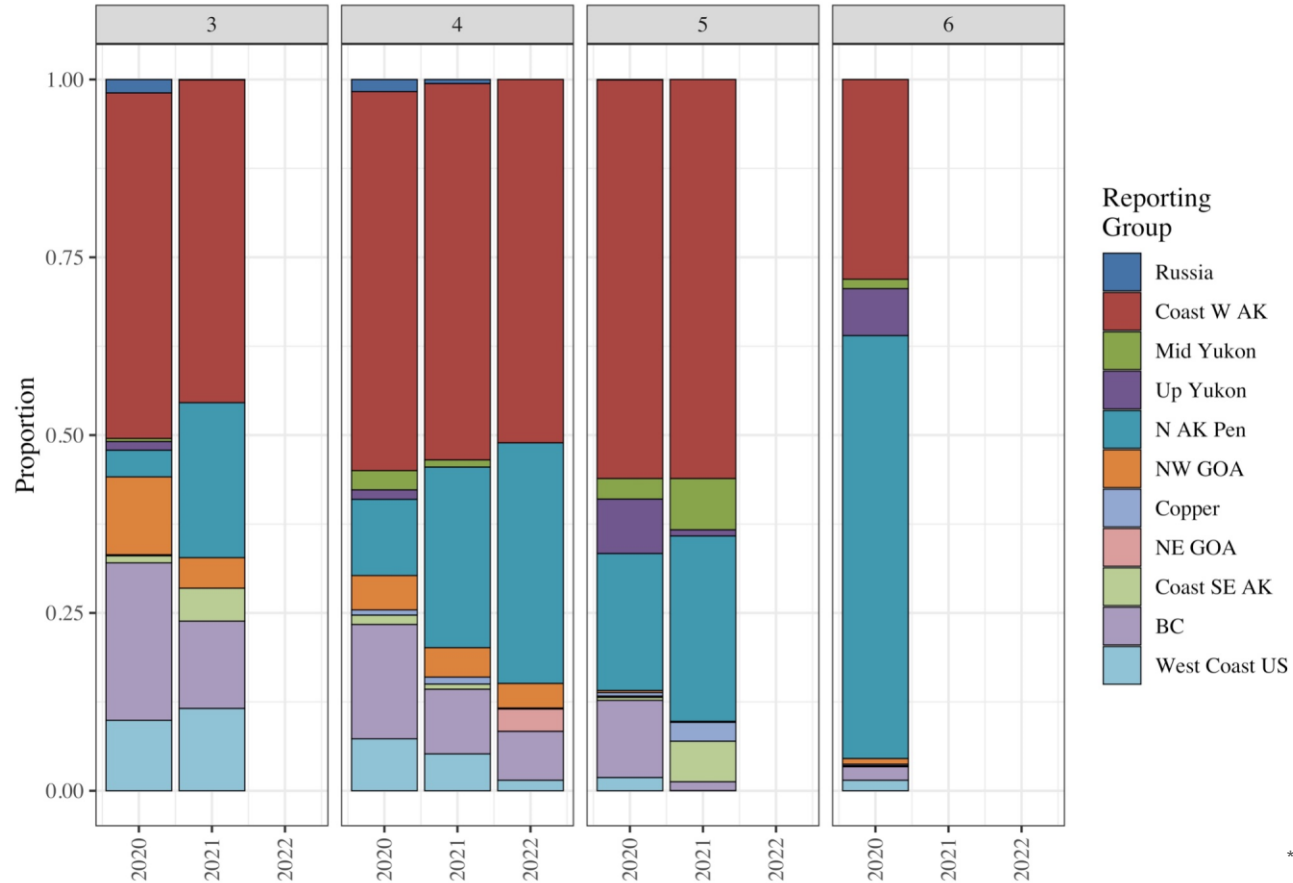


# Chinook Salmon - CVOA



CVOA

# Chinook Salmon - Age



\*Data for 2022 incomplete

Science, Service, Stewardship



# *Preliminary Genetic Stock Composition Analysis to the Chinook Salmon Bycatch Samples from the 2021 and 2022 Gulf of Alaska pollock Trawl Fisheries*

**C.M. Guthrie, III, P. D. Barry, H. T. Nguyen, K. D'Amelio, K. Karpan**

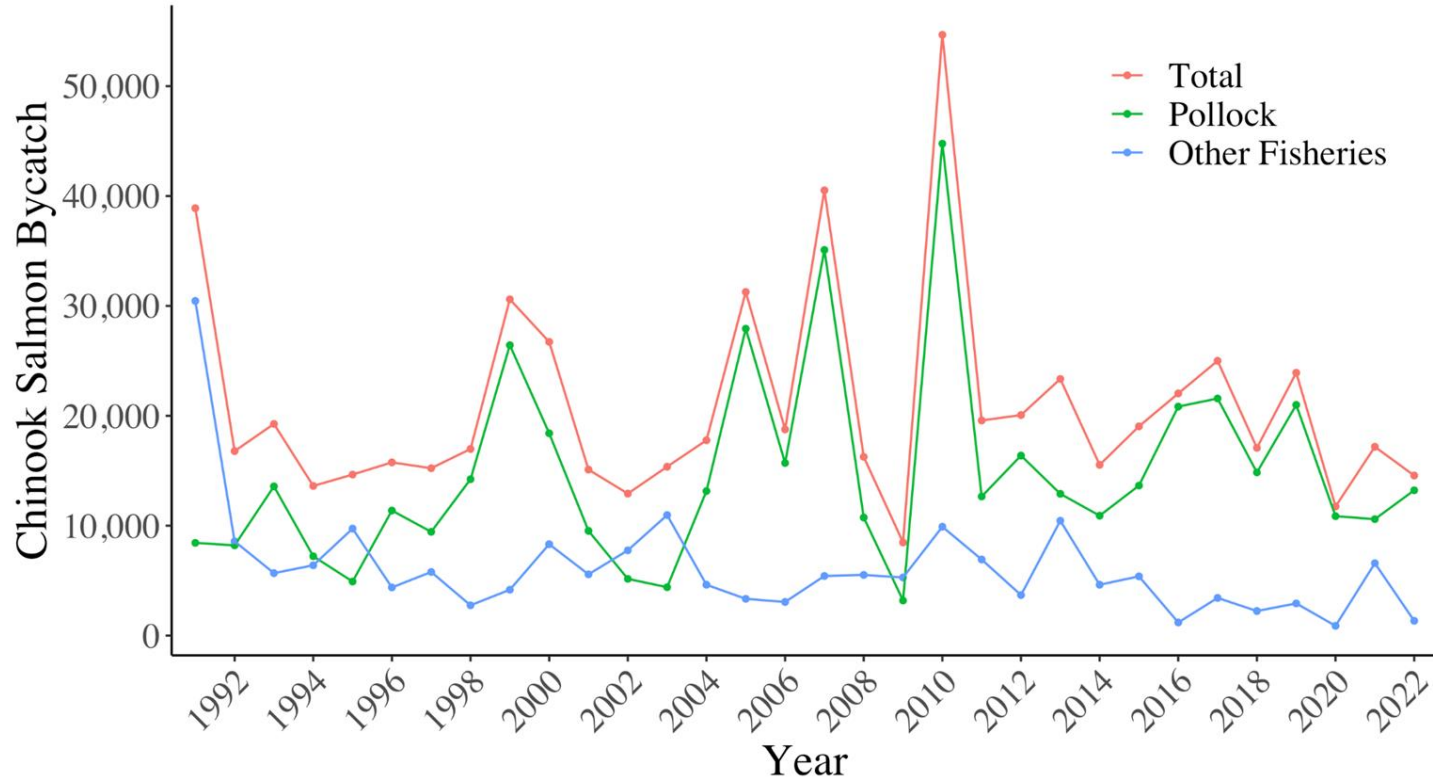
**and W. A. Larson**

Auke Bay Laboratories

Juneau, AK

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# Chinook Salmon bycatch GOA 1991 - 2022

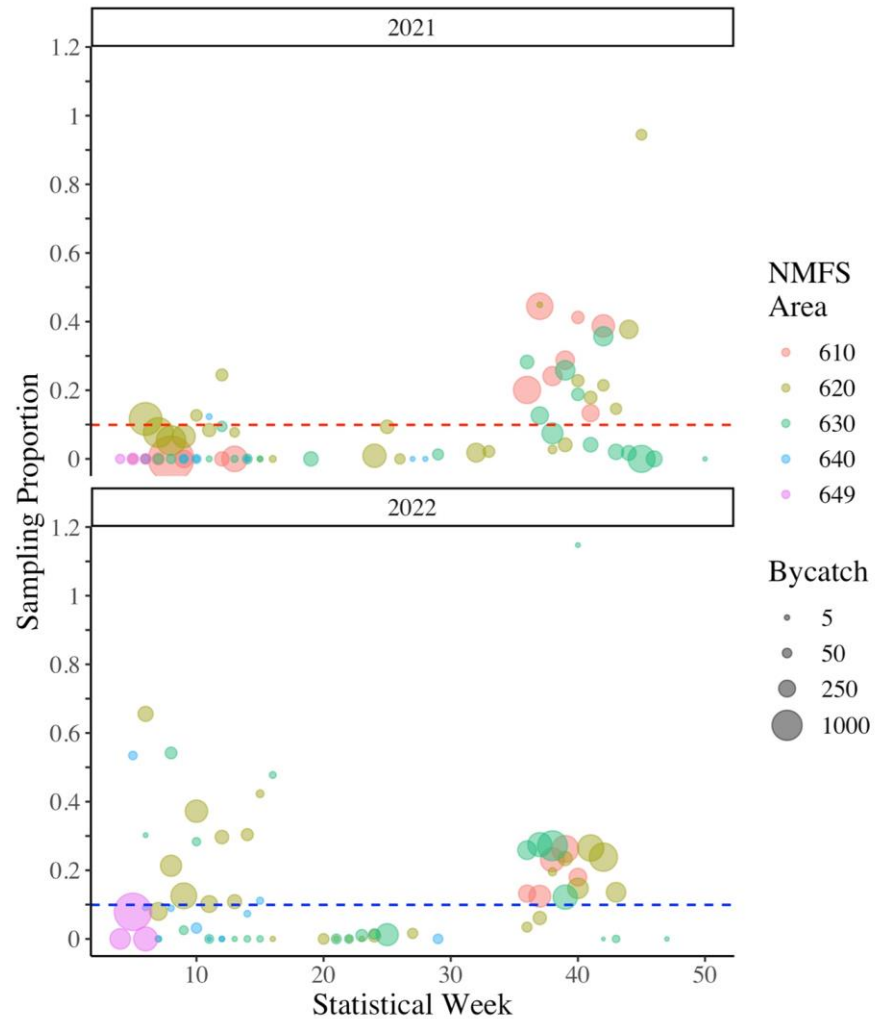




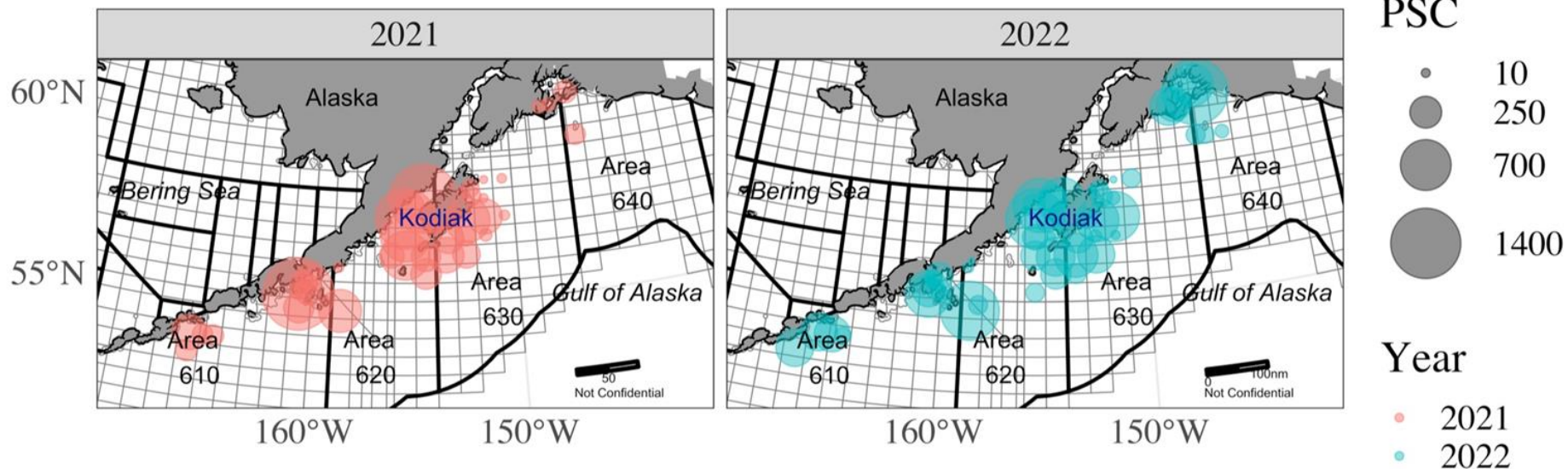
# Genetic Sampling

Different sampling than BSAI

Random with respect to vessel



# Spatial Distribution of Chinook Salmon bycatch



GOA

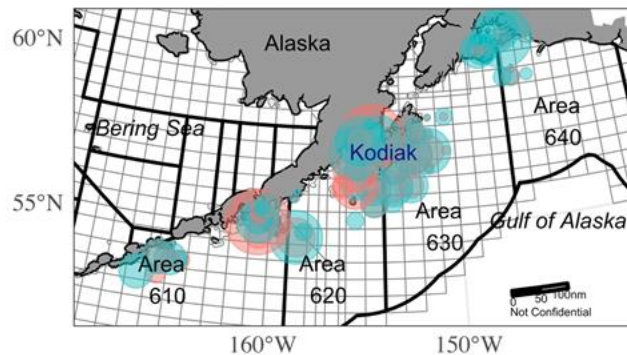
Akutan

Shumigan Islands

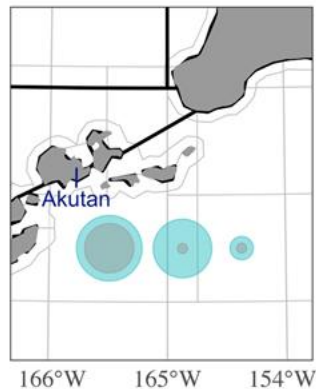
Shelikof Strait

SE Kodiak

A



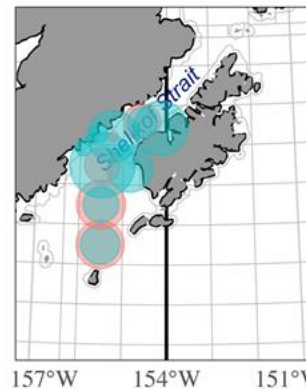
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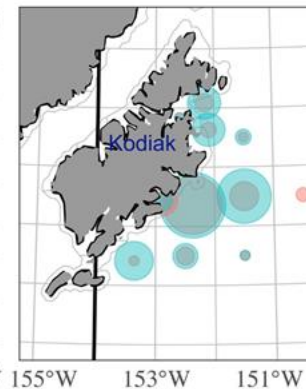
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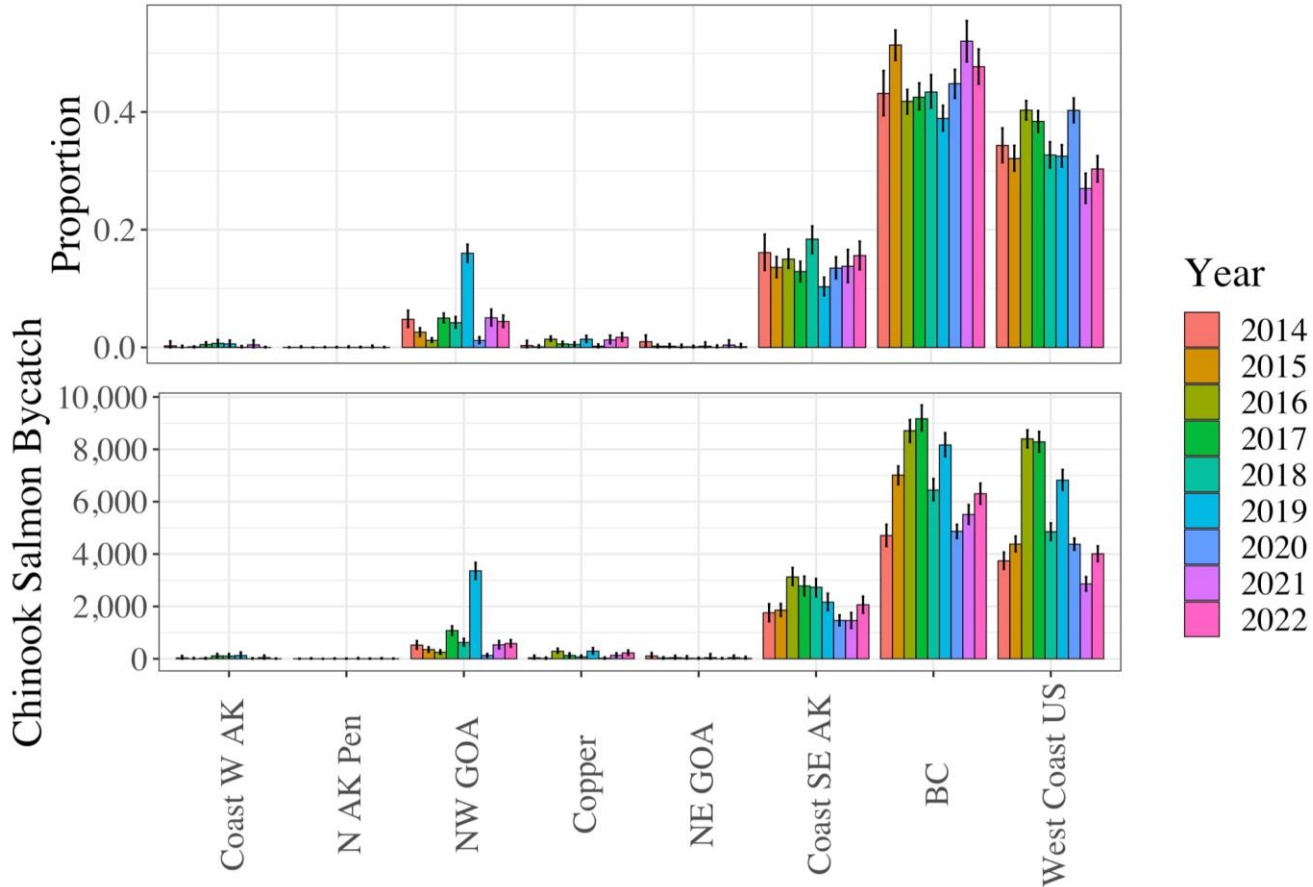
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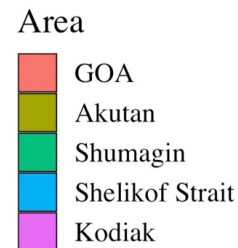
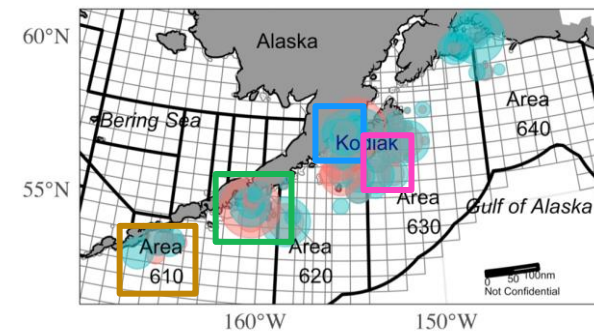
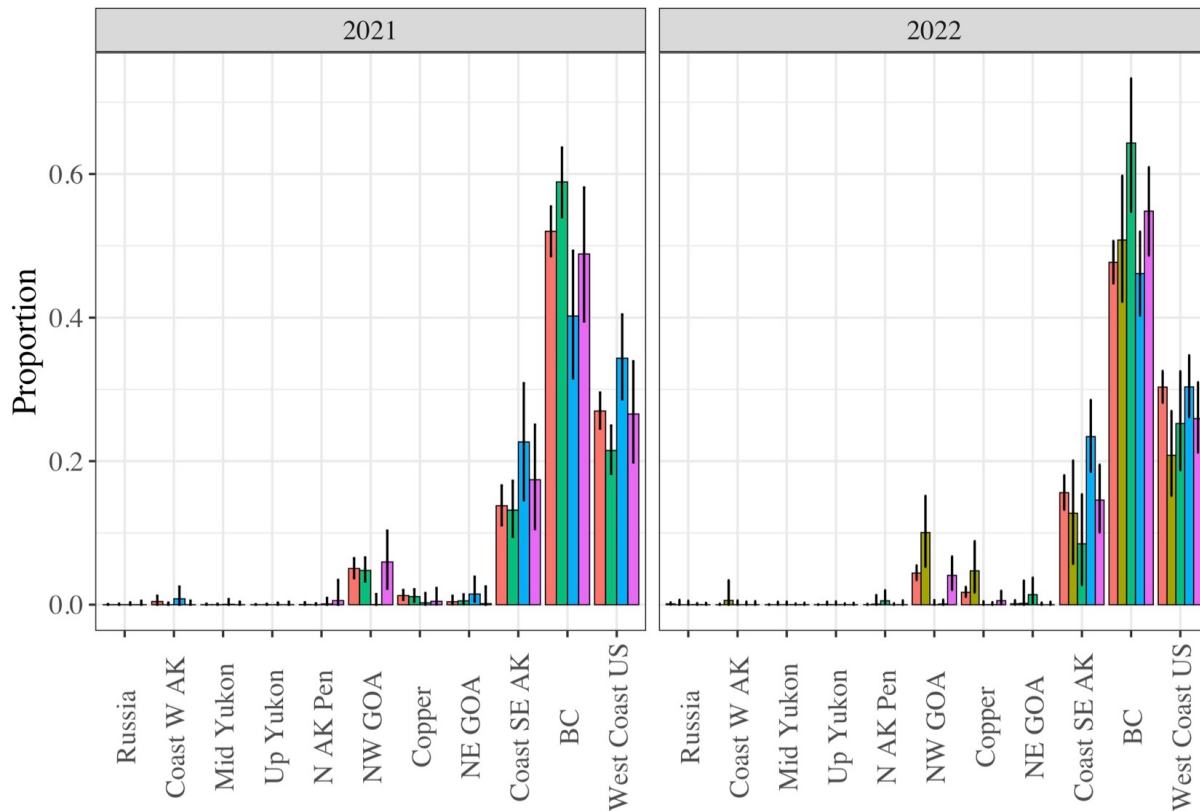
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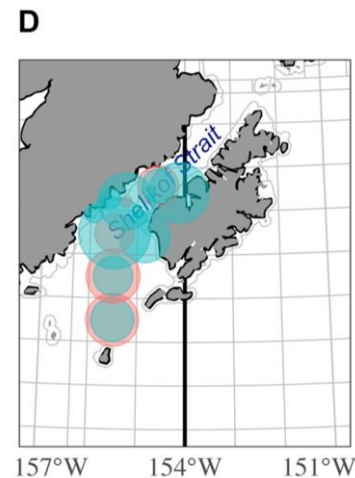
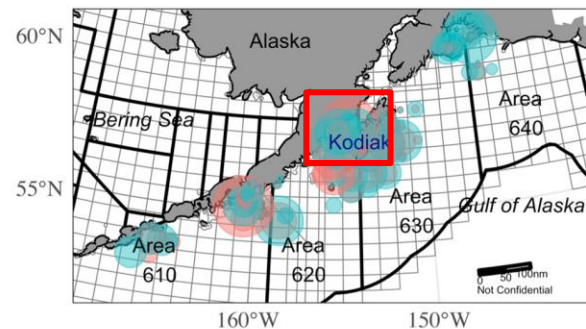
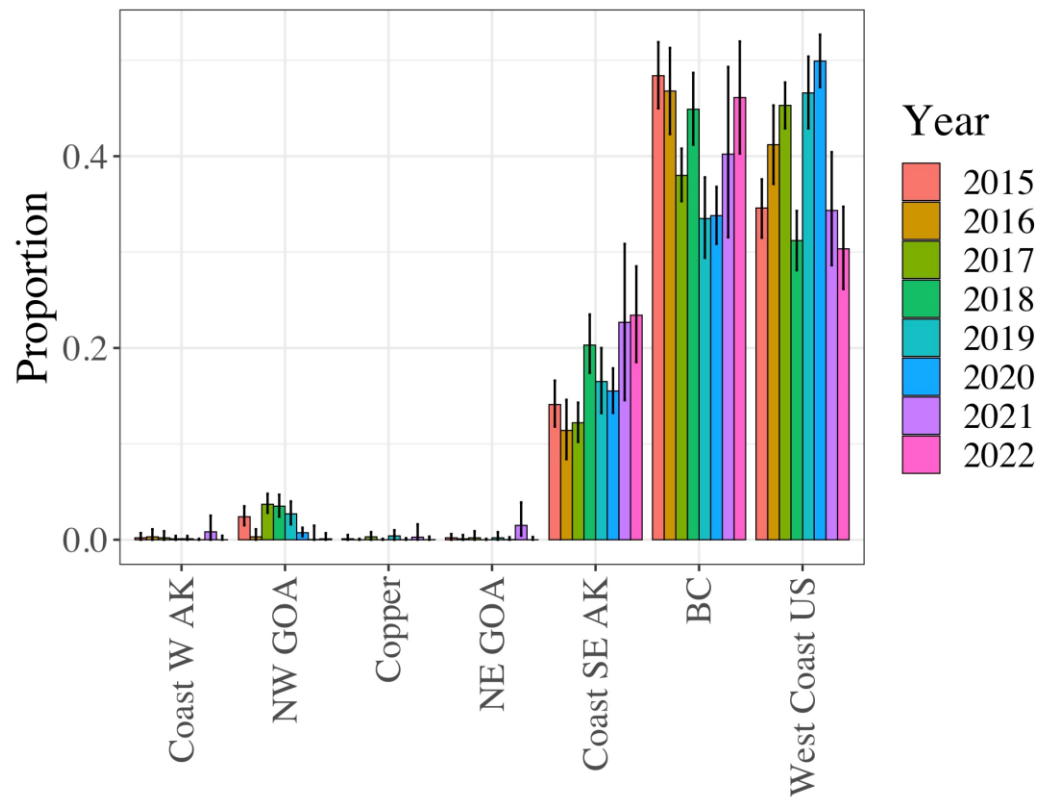
# Chinook Salmon GOA Bycatch - Pollock



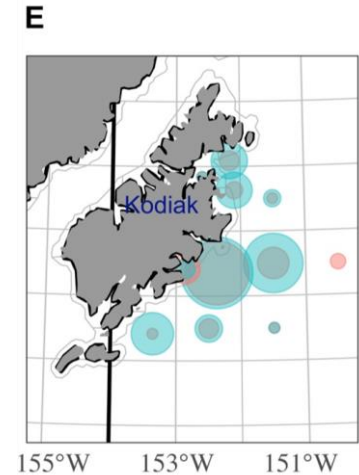
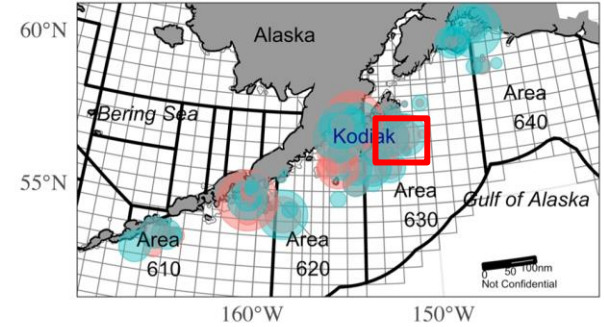
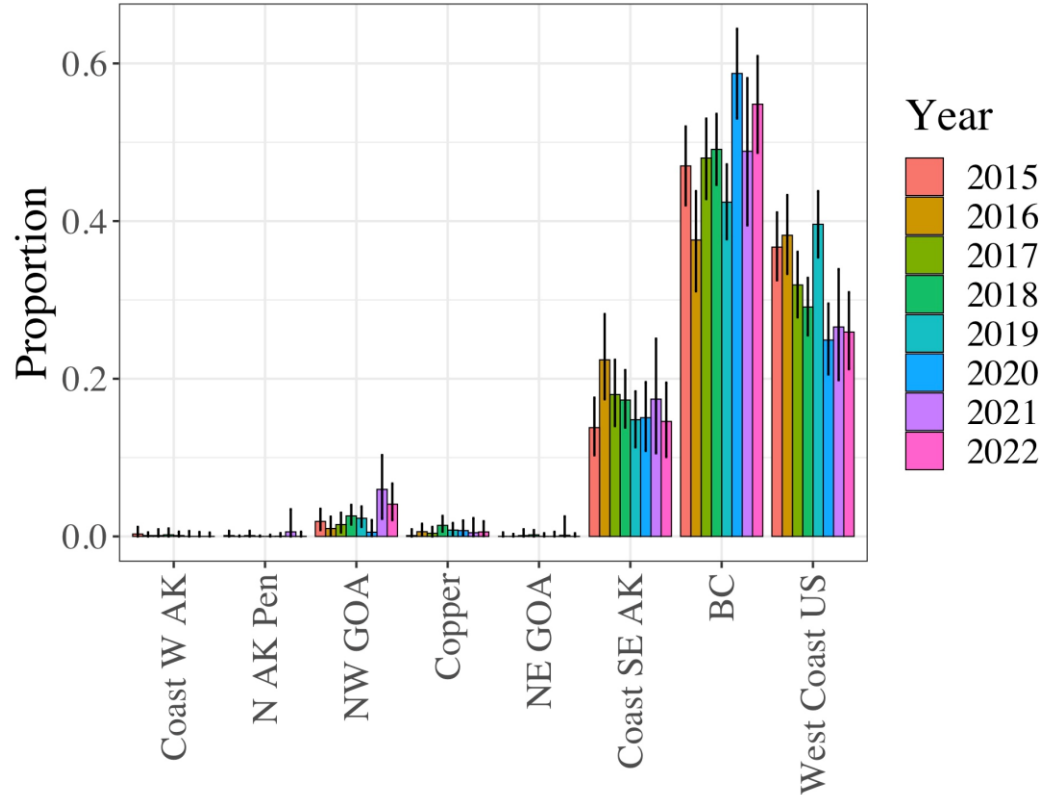
# Chinook Salmon Areas within GOA Bycatch - Pollock



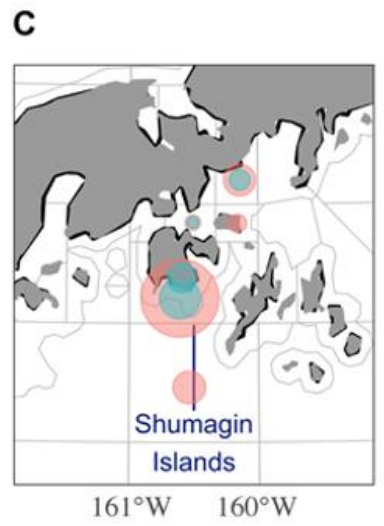
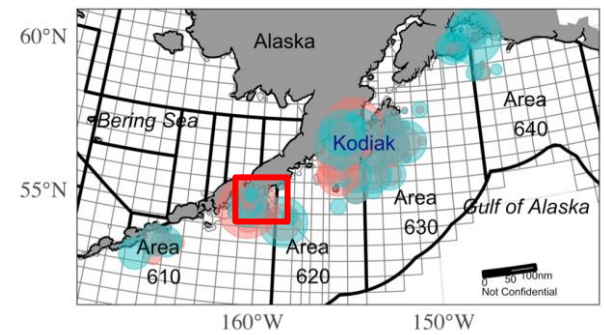
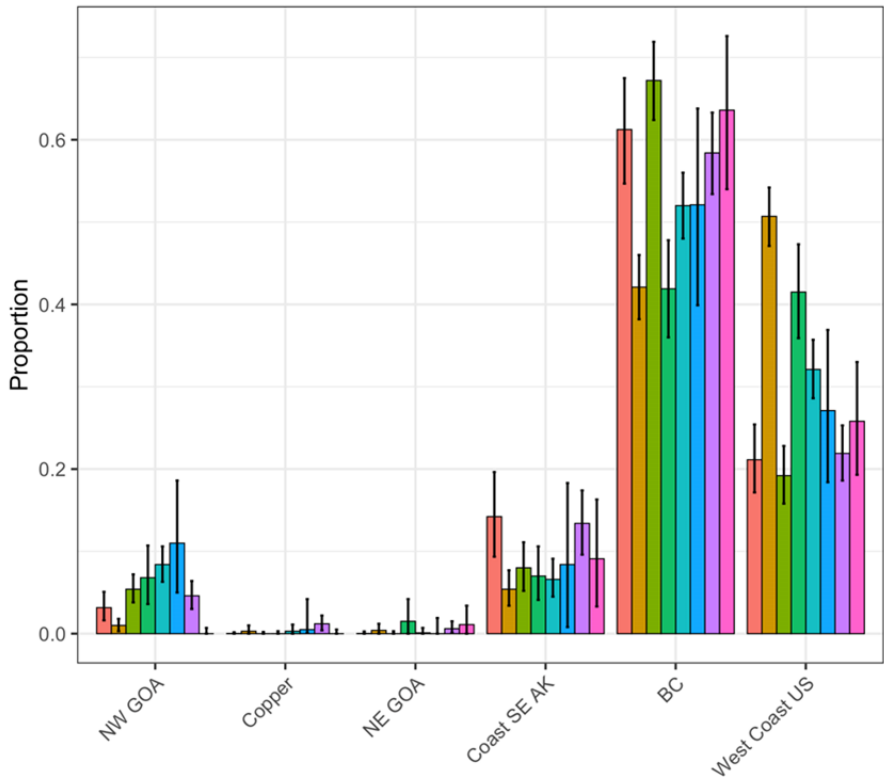
# Shelikof Strait 2015-2022



# Chinook Salmon – SE Kodiak 2015-2022



# Chinook Salmon – Shumagin I. Late 2015-2022







# Acknowledgements



## NMFS

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Bev Agler

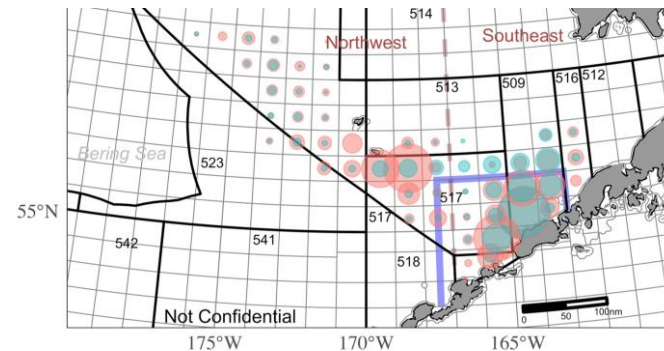
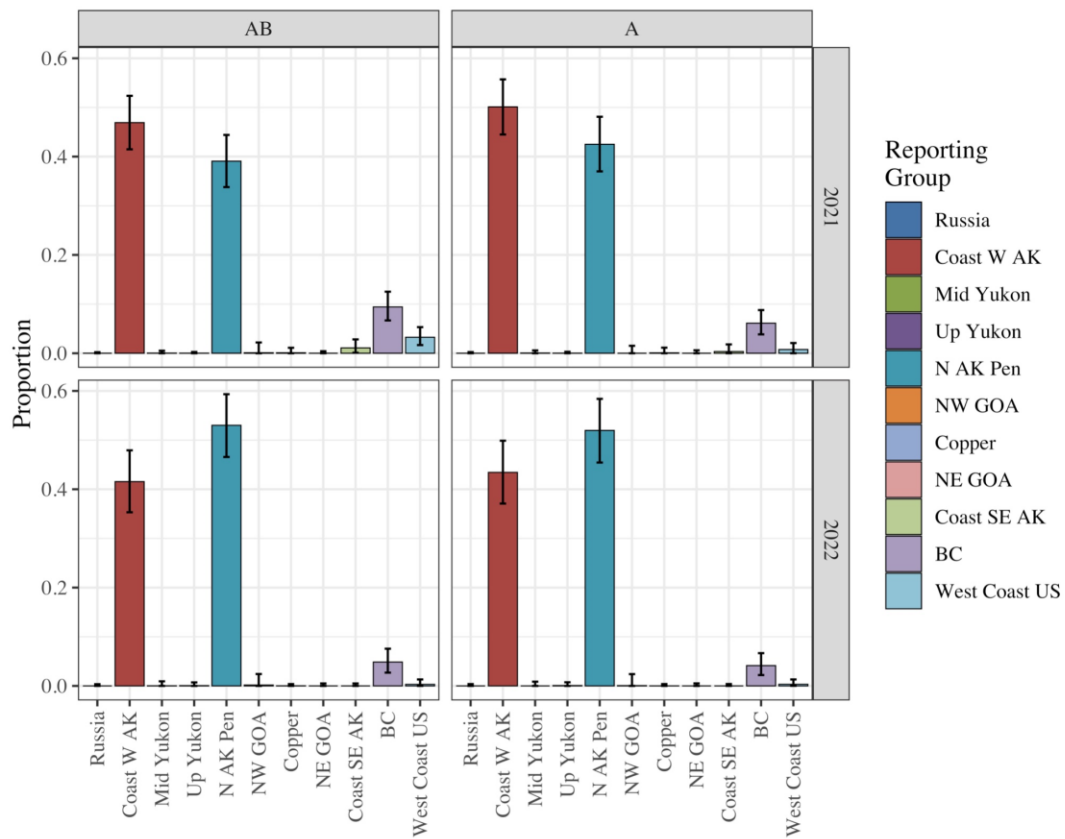
Jodi Neil

CWT reporting

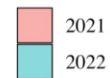
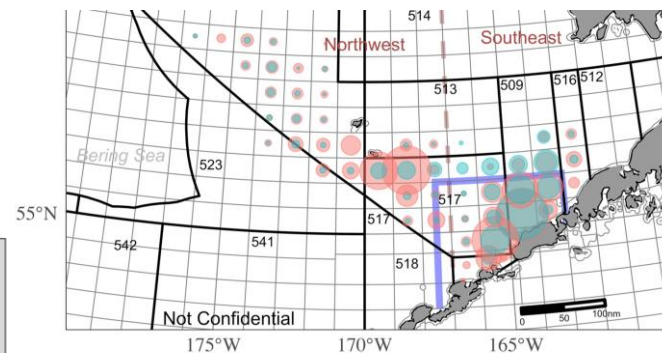
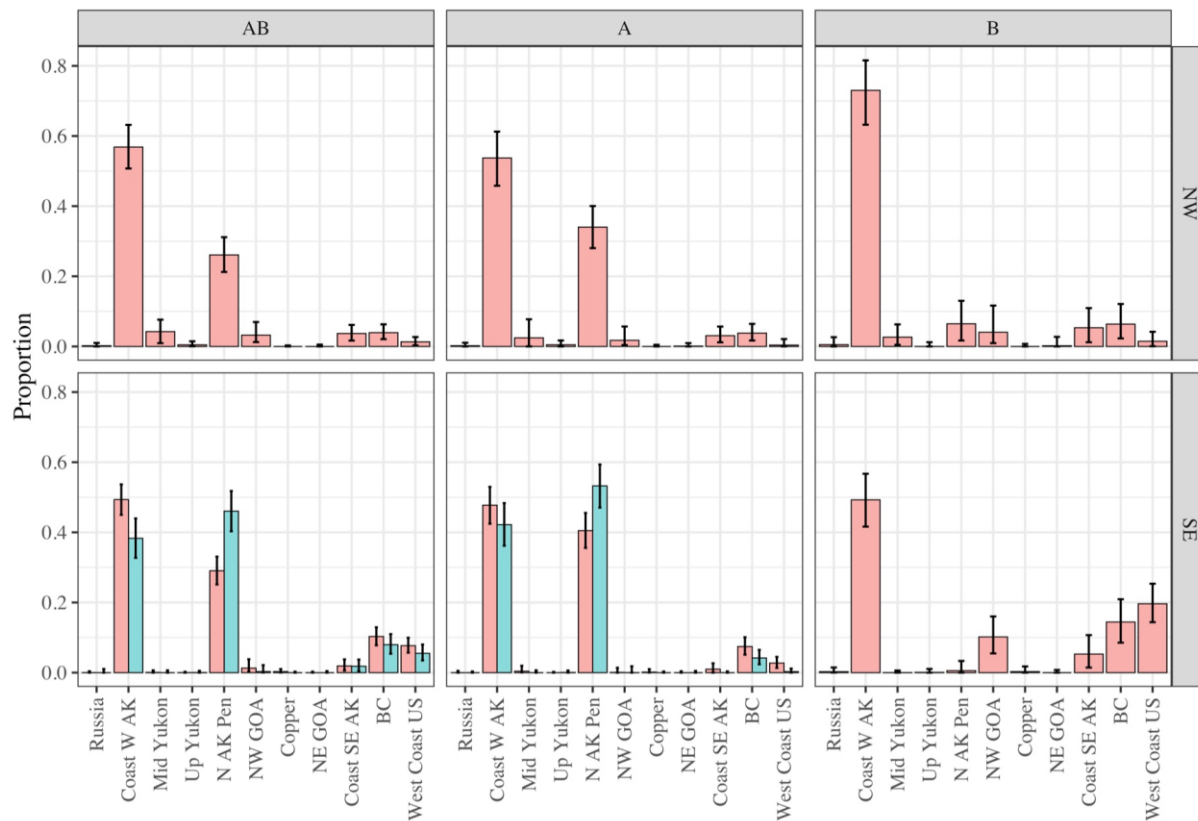
# Acknowledgements

# BSAI Extra Slide Section

# Chinook Salmon - NMFS 509



# Chinook Salmon - Northwest vs. Southeast



# GOA Extra Slide Section



# Chinook Salmon GOA Bycatch - Pollock

