

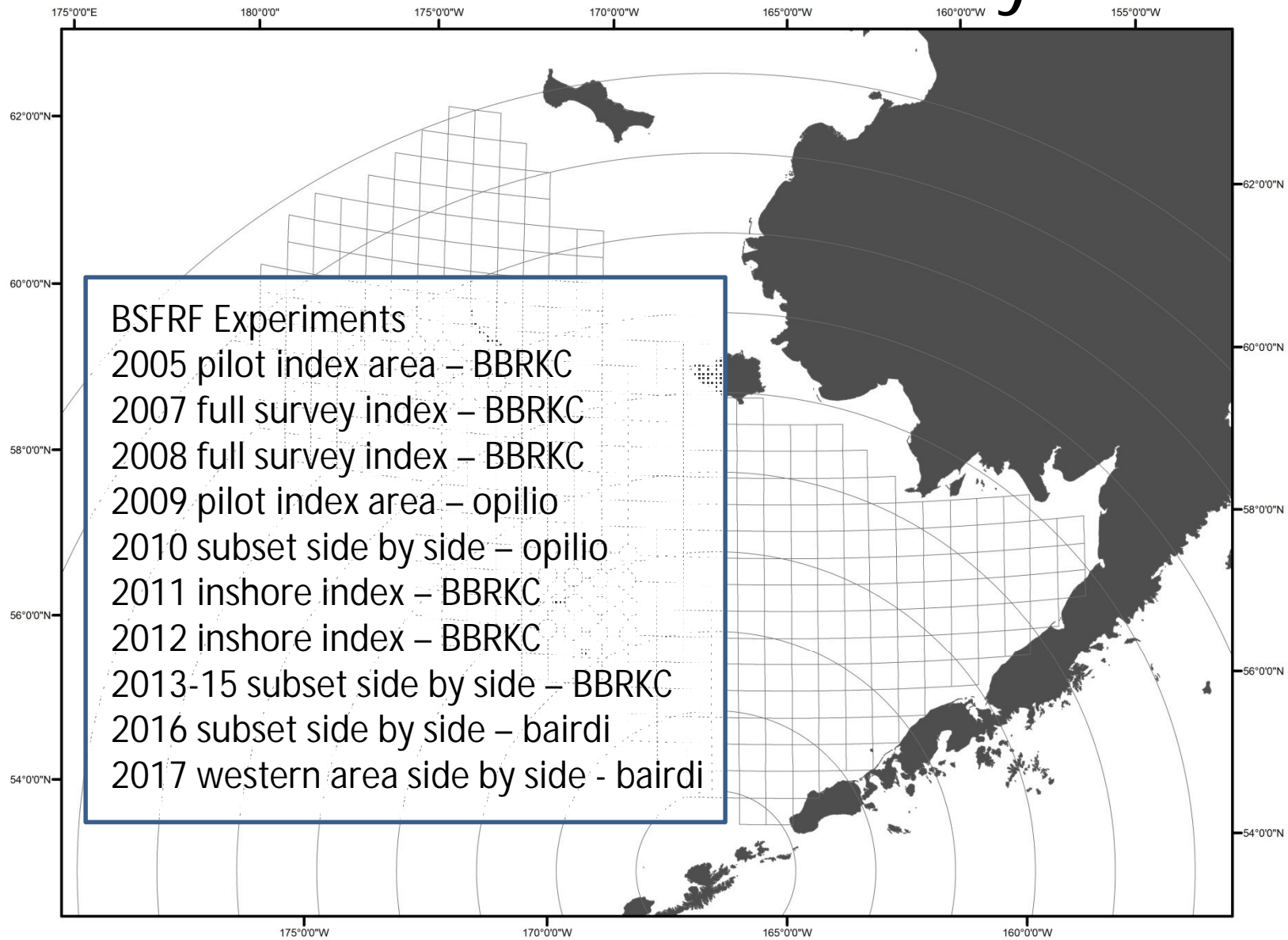
# BSFRF Research Update - BBRKC/Bairdi Surveys CPT – JANUARY 2017



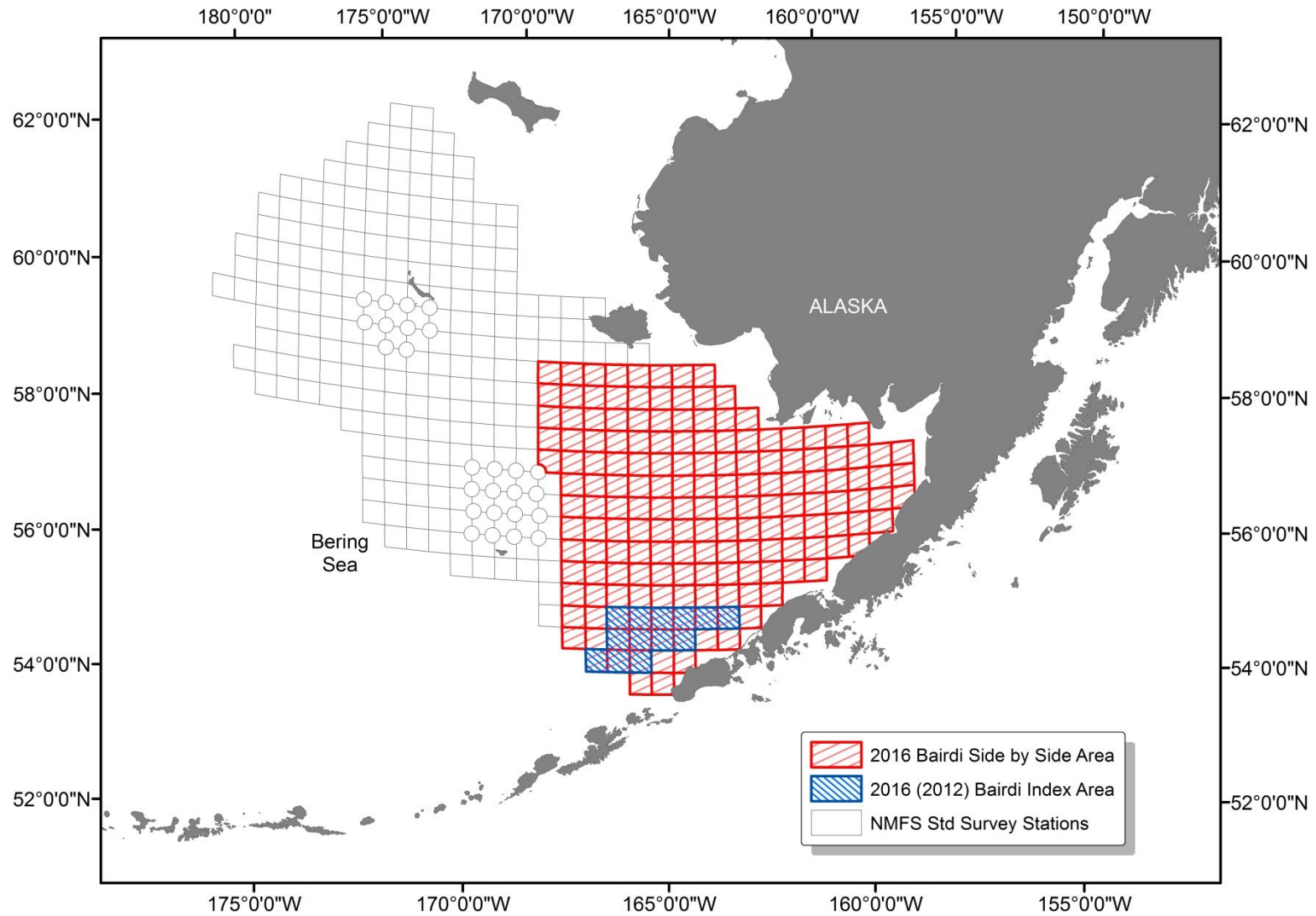
Scott Goodman, BSFRF  
January 17-18, 2017

Cooperative BSFRF Trawl Surveys  
Side by Side w/ NMFS Charters

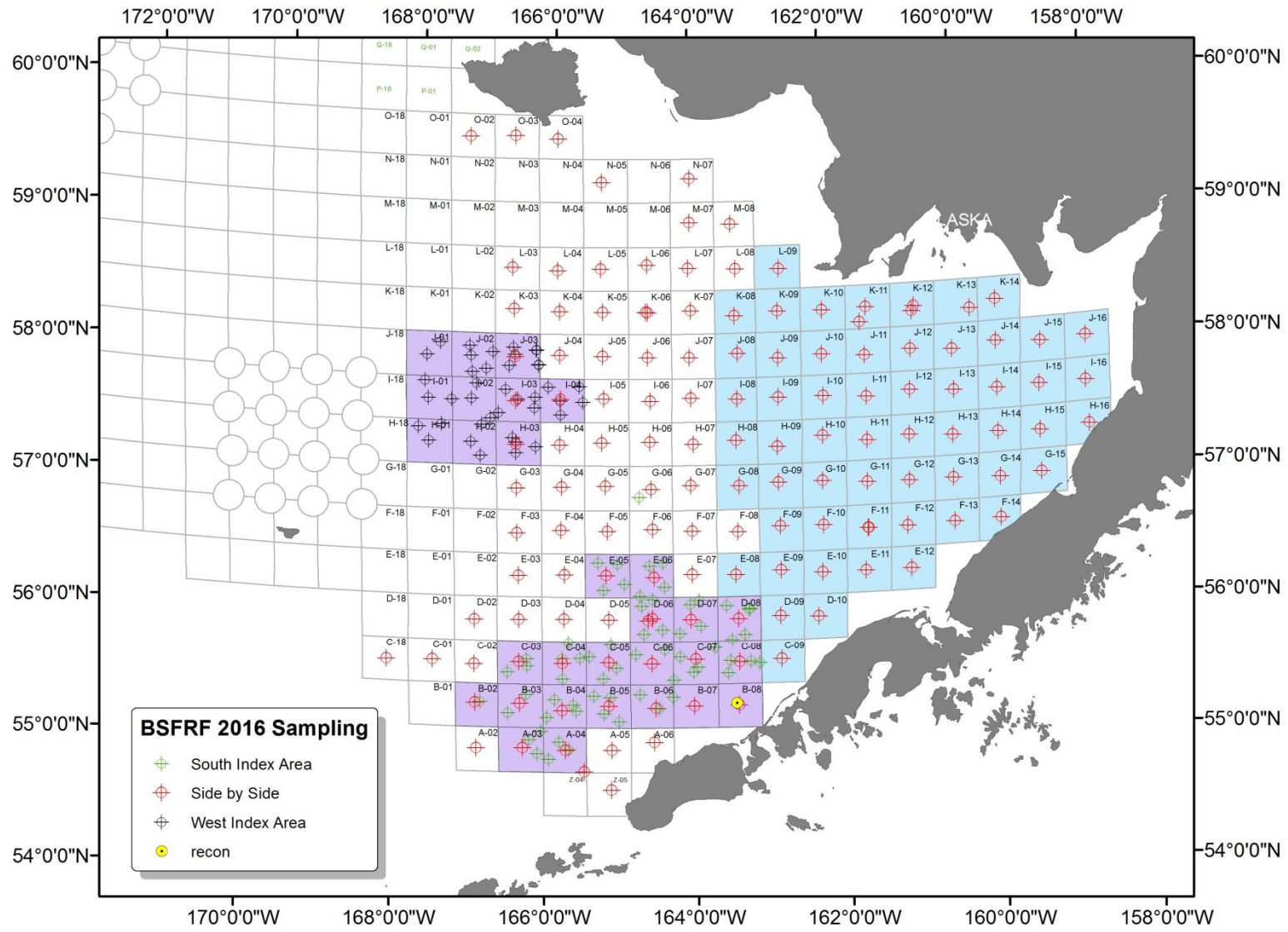
# NFMS Trawl Selectivity



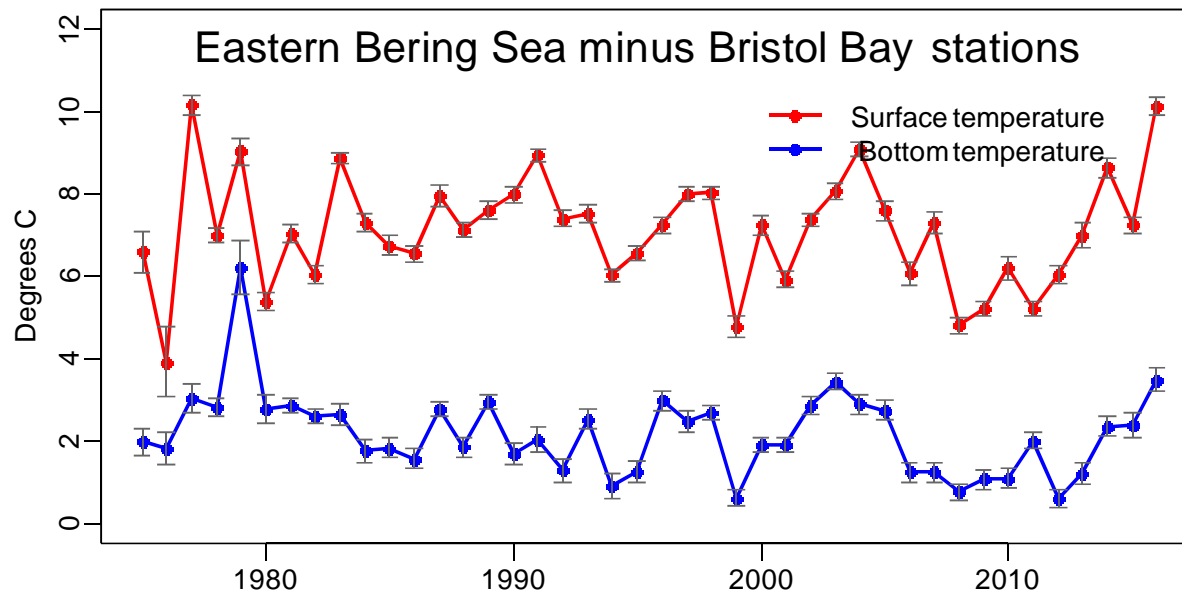
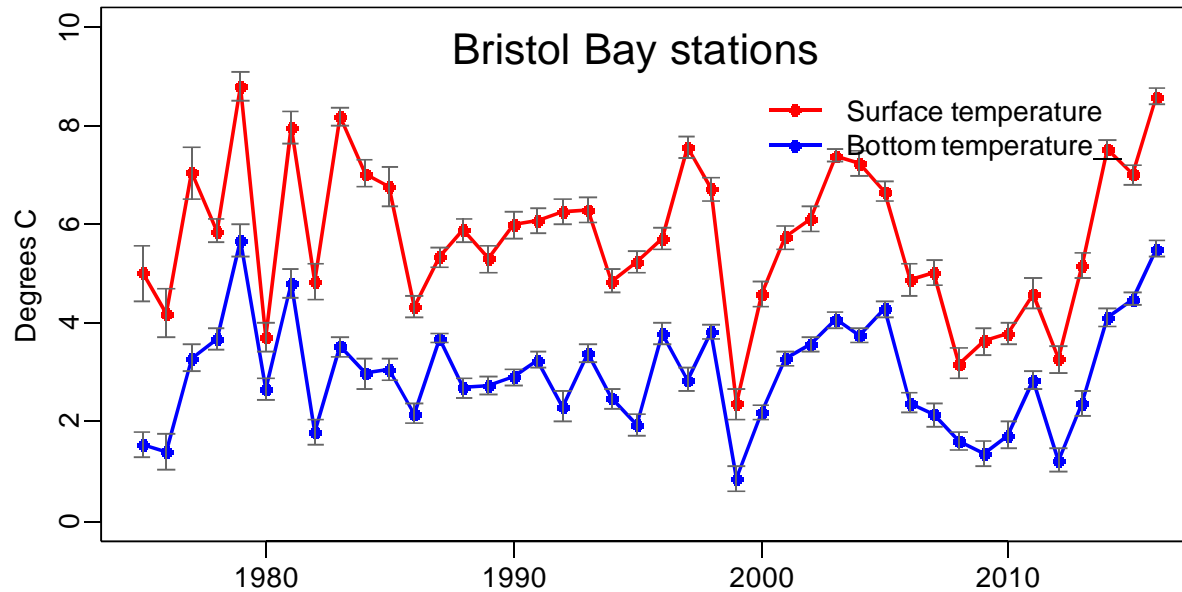
# 2016 Planned Sampling



# 2016 Actual Sampling

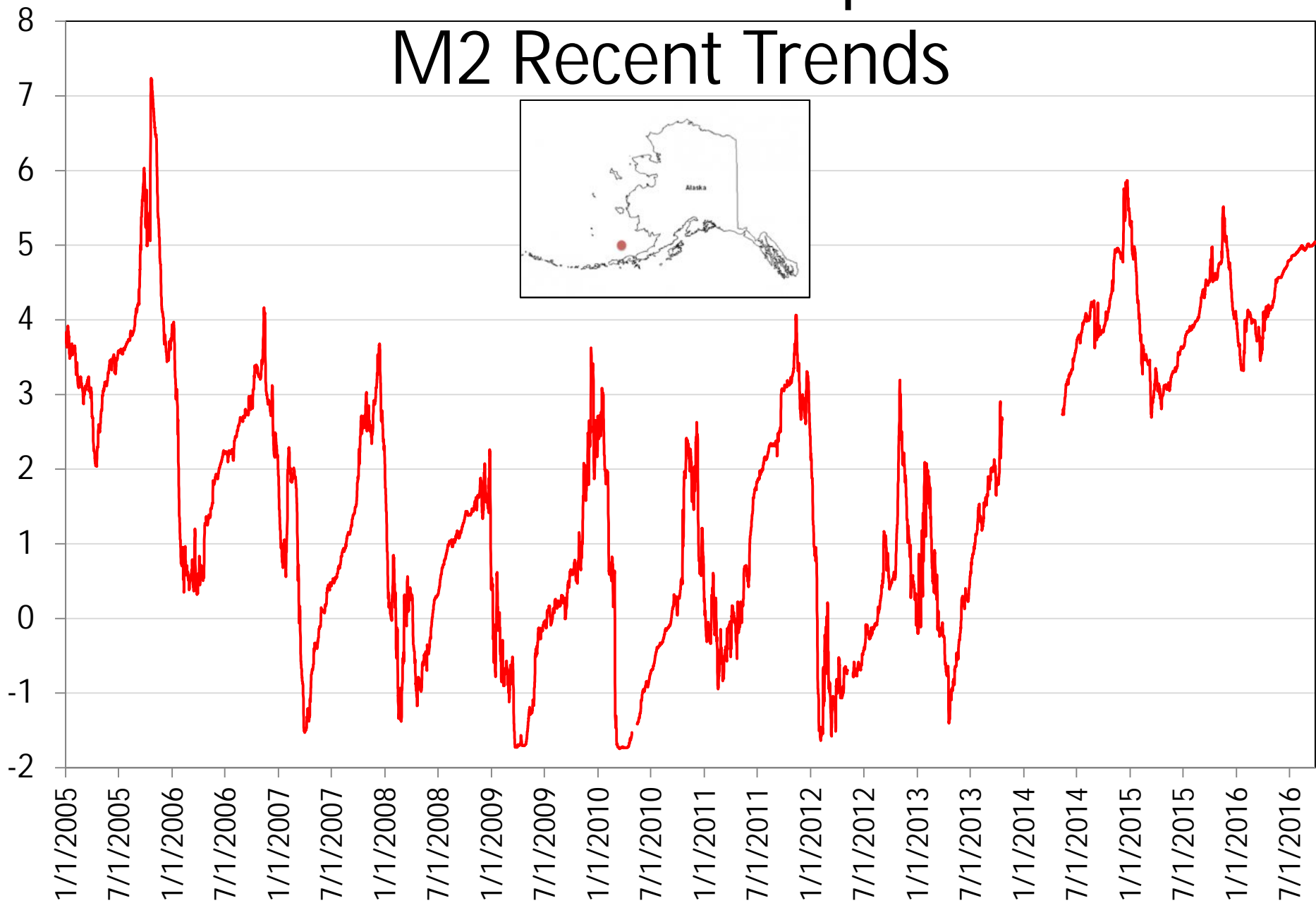


# Bering Sea Temp – Recent Trends

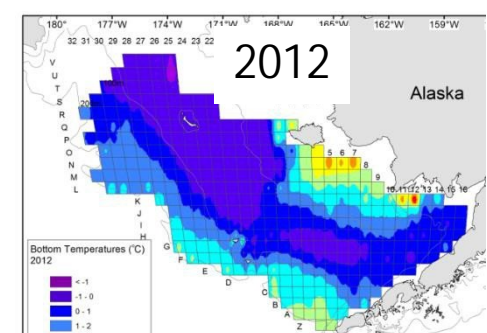
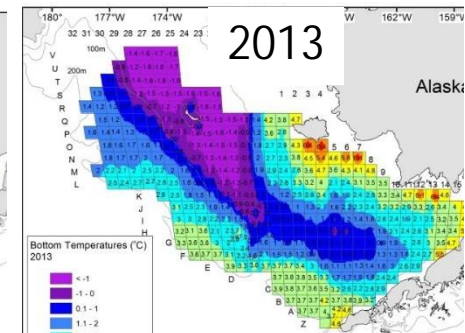
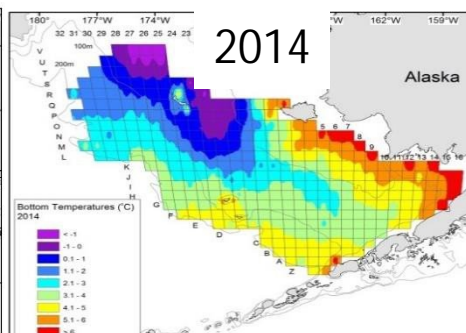
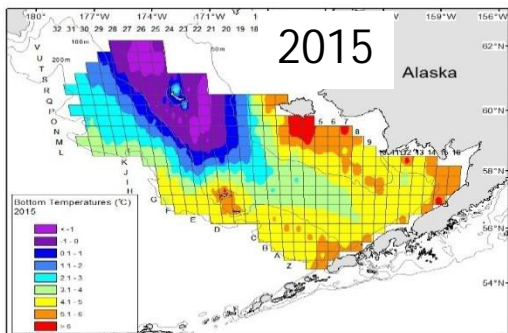
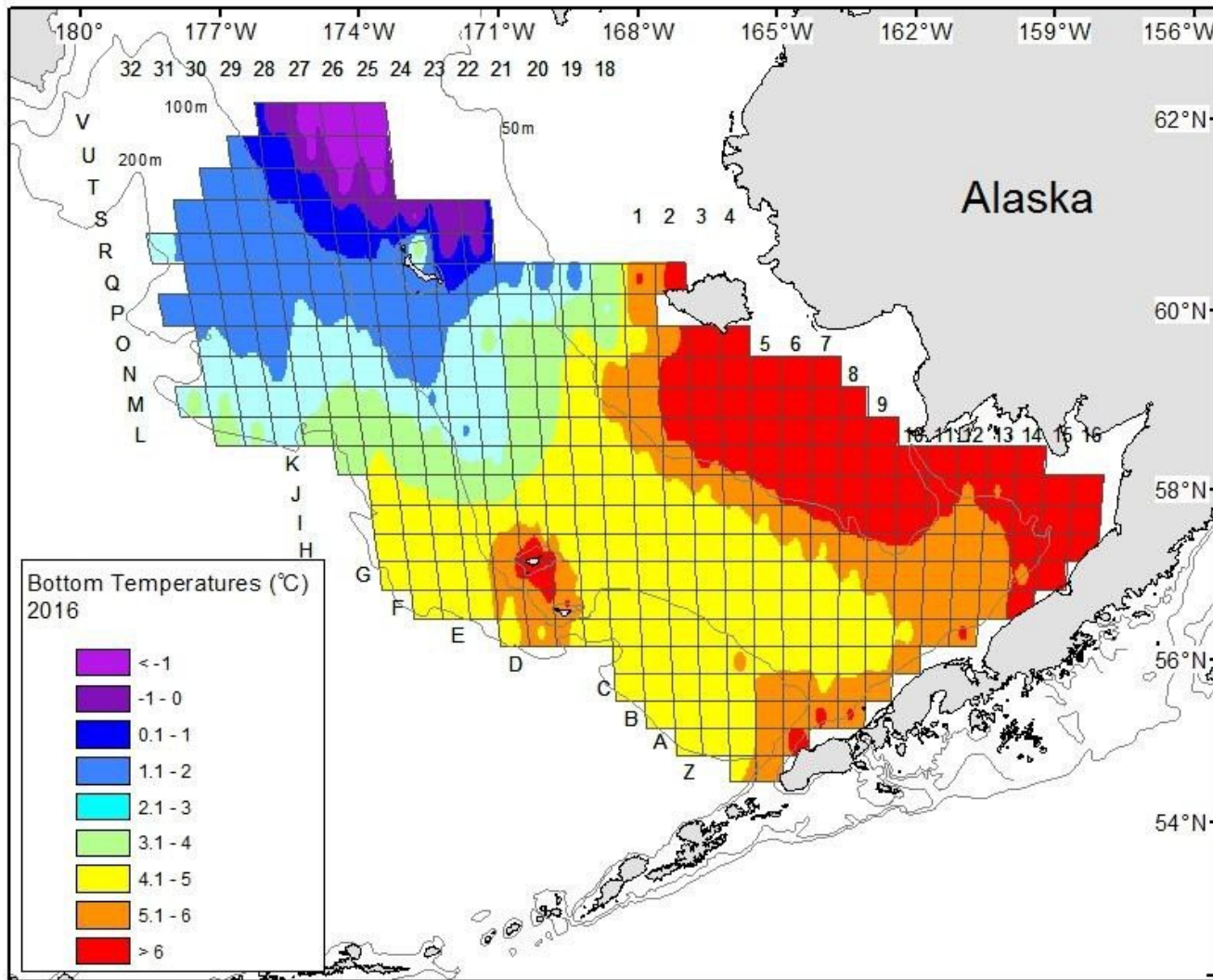


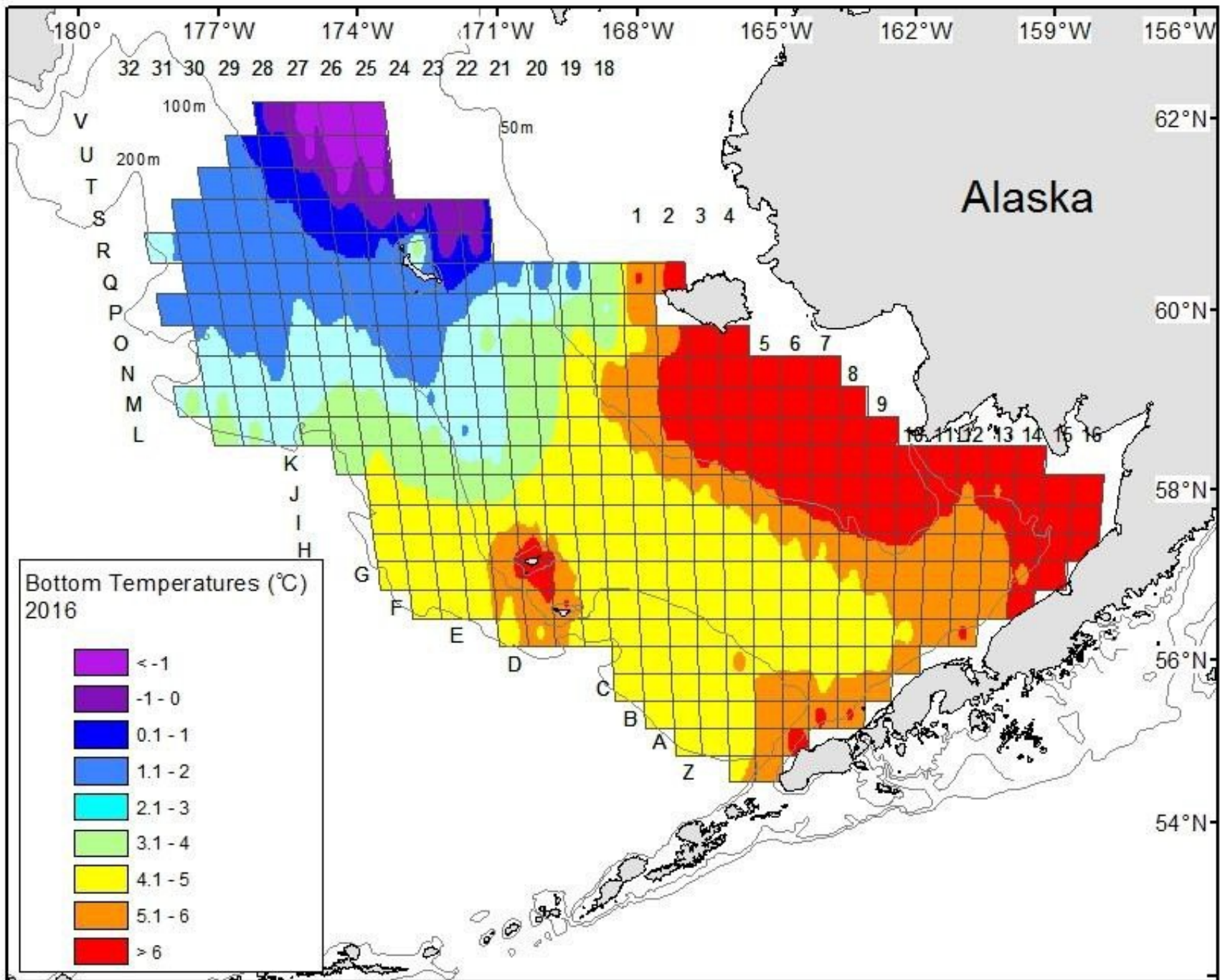
# Bottom Temp

## M2 Recent Trends



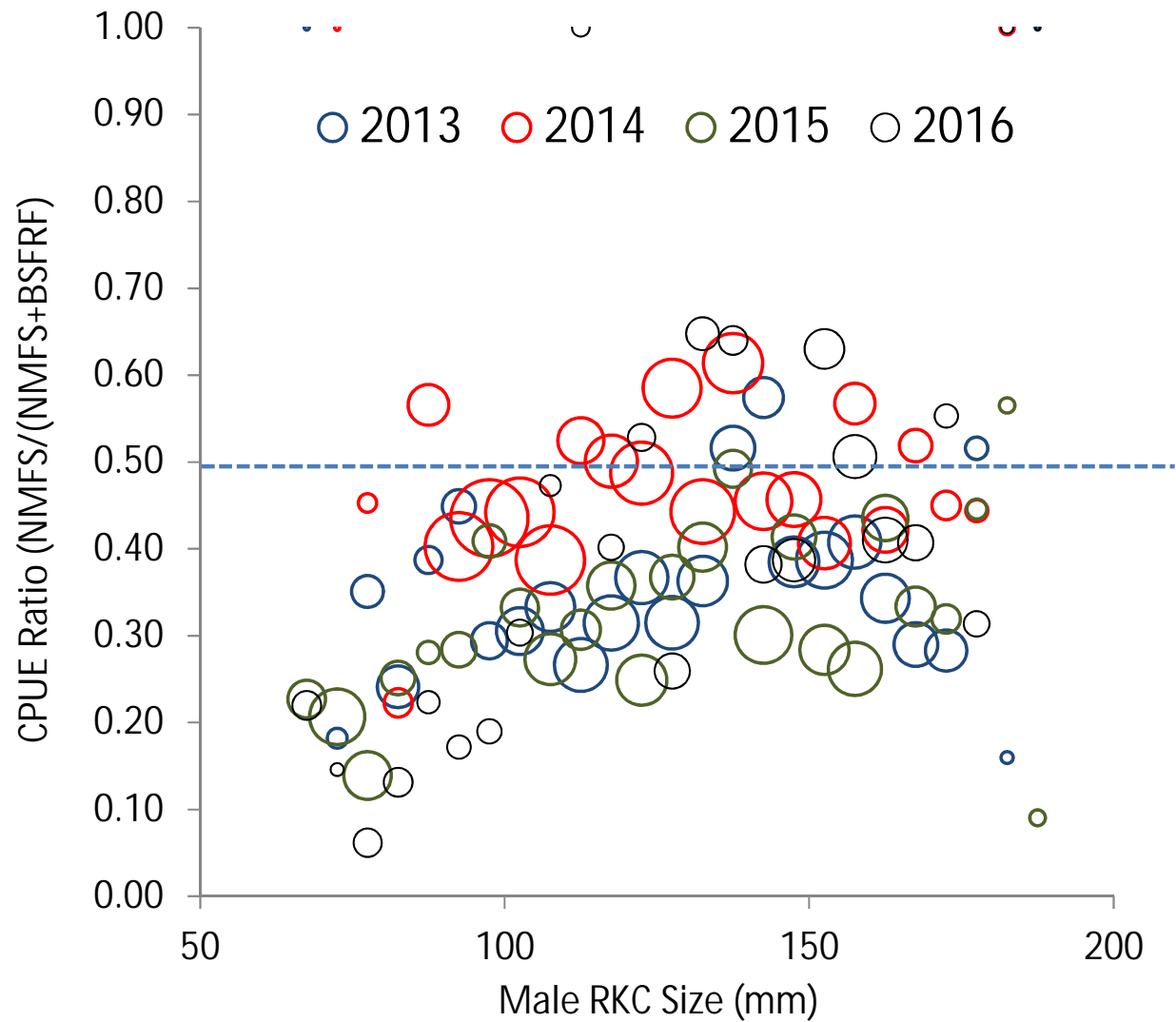
# 2016



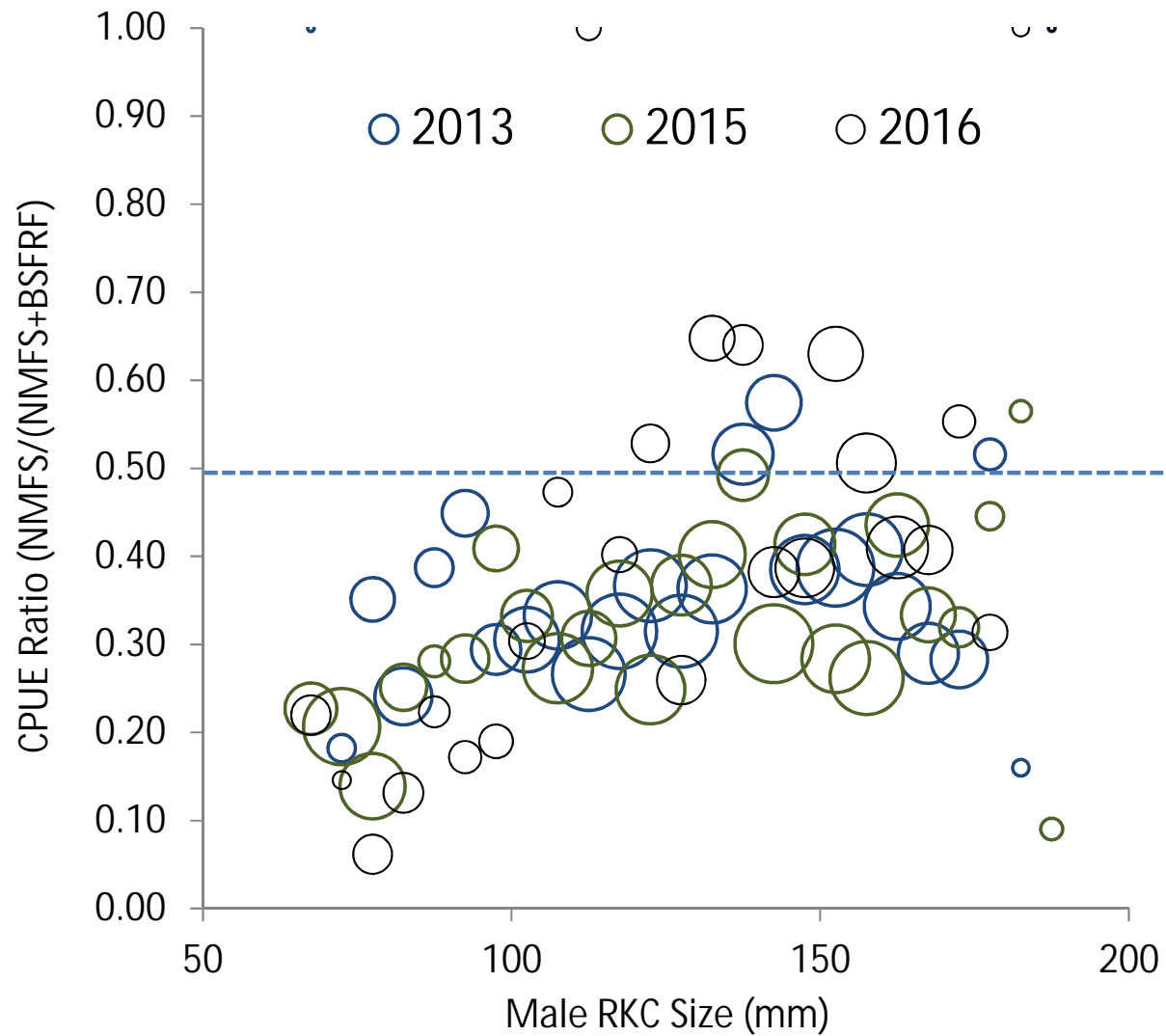




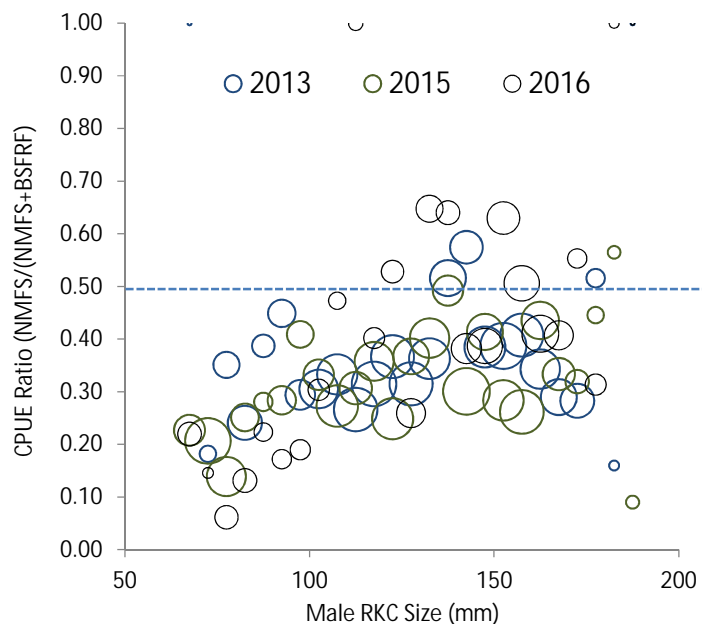
# BBRKC Trawl Selectivity 2013-2016



# BBRKC Trawl Selectivity 2013-2016



# Estimating Trawl Selectivity Accurately



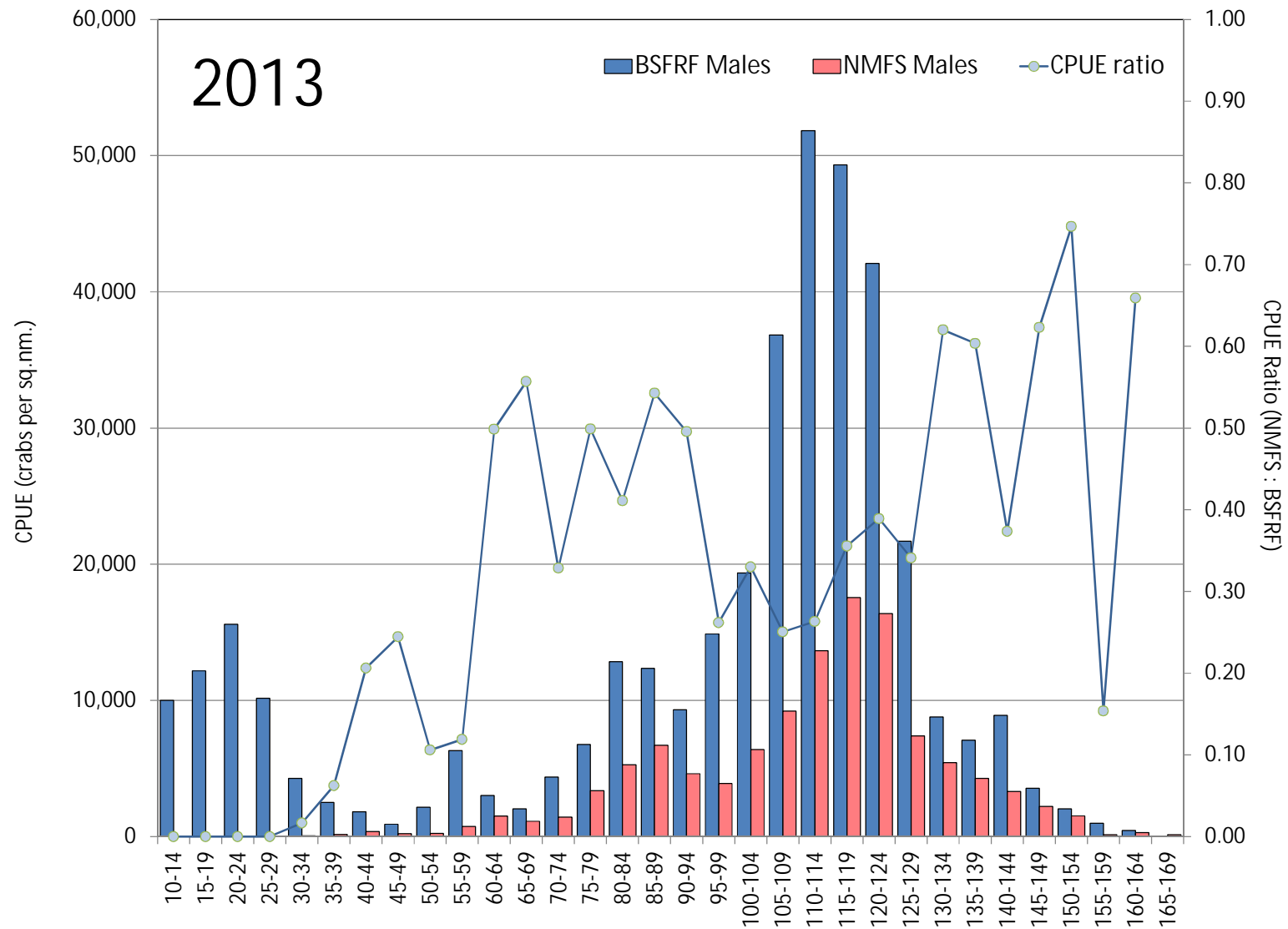
- Updating temporal/spatial trends
- Revising methods per model/species
- Addressing variability in data
- NMFS survey availability
- Other survey availability
- Model scenario selection
- Current models v. GMACs
- Spatial modeling
- Incorporating new data
- Consistent methods across models
- Reviewing influence of herding

# Bairdi Trawl Selectivity

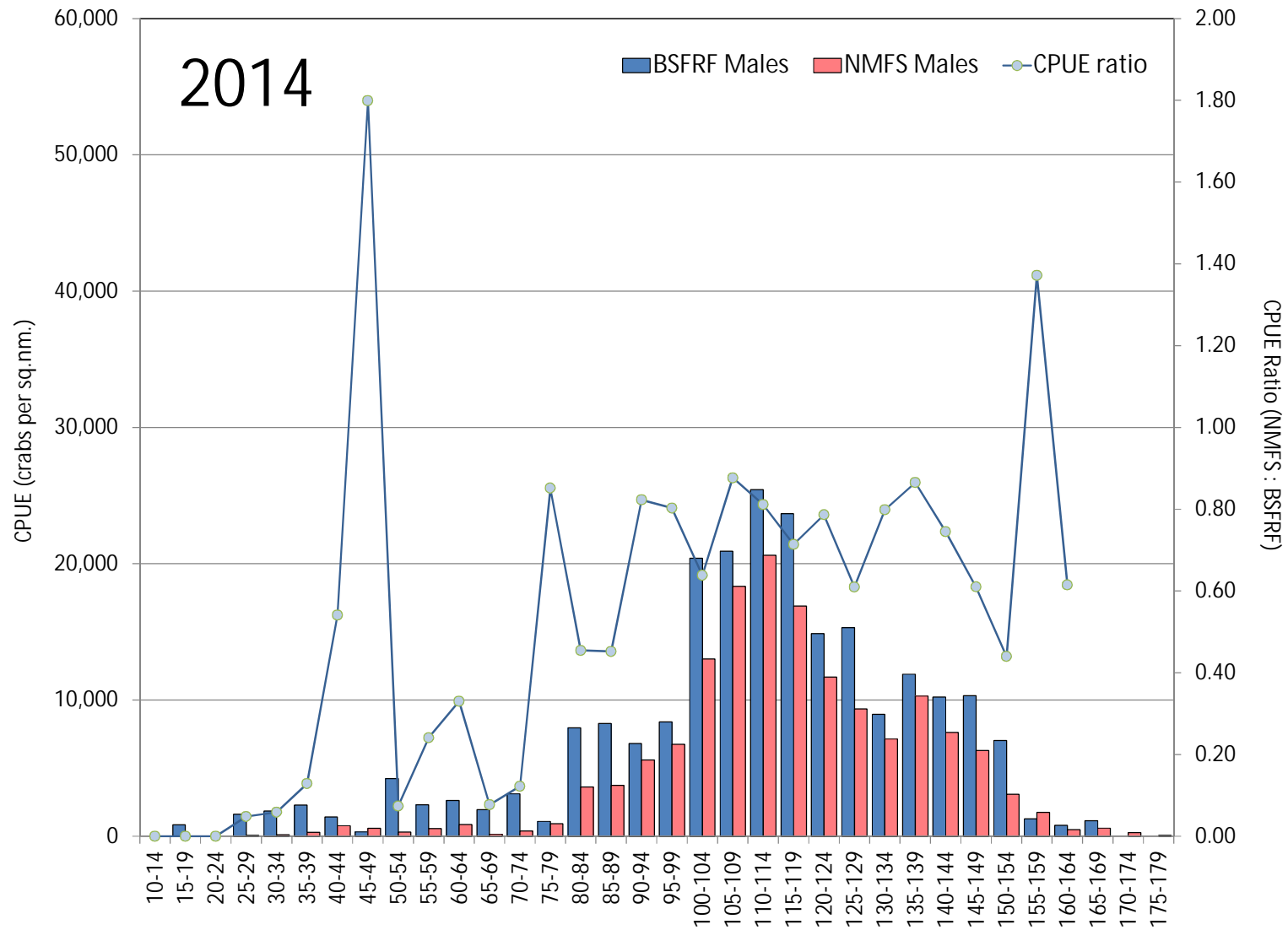
- What we have already? [variability/coverage]
- What is the strategy? [snow/king/Tanner]
- What we are doing this year? [mostly east]
- What's on the horizon – next year? [more west]



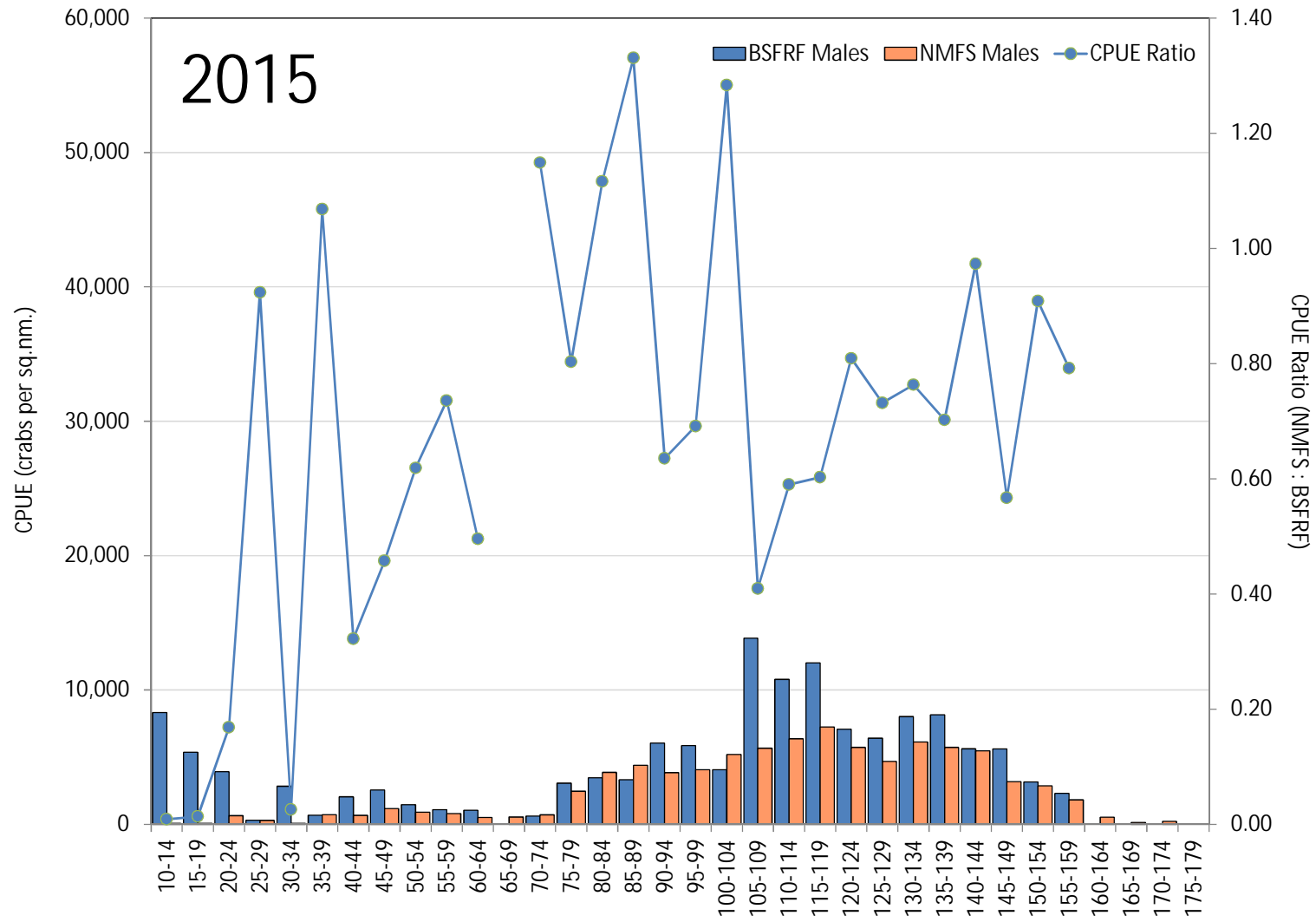
# Bairdi Trawl Selectivity – BSFRF data



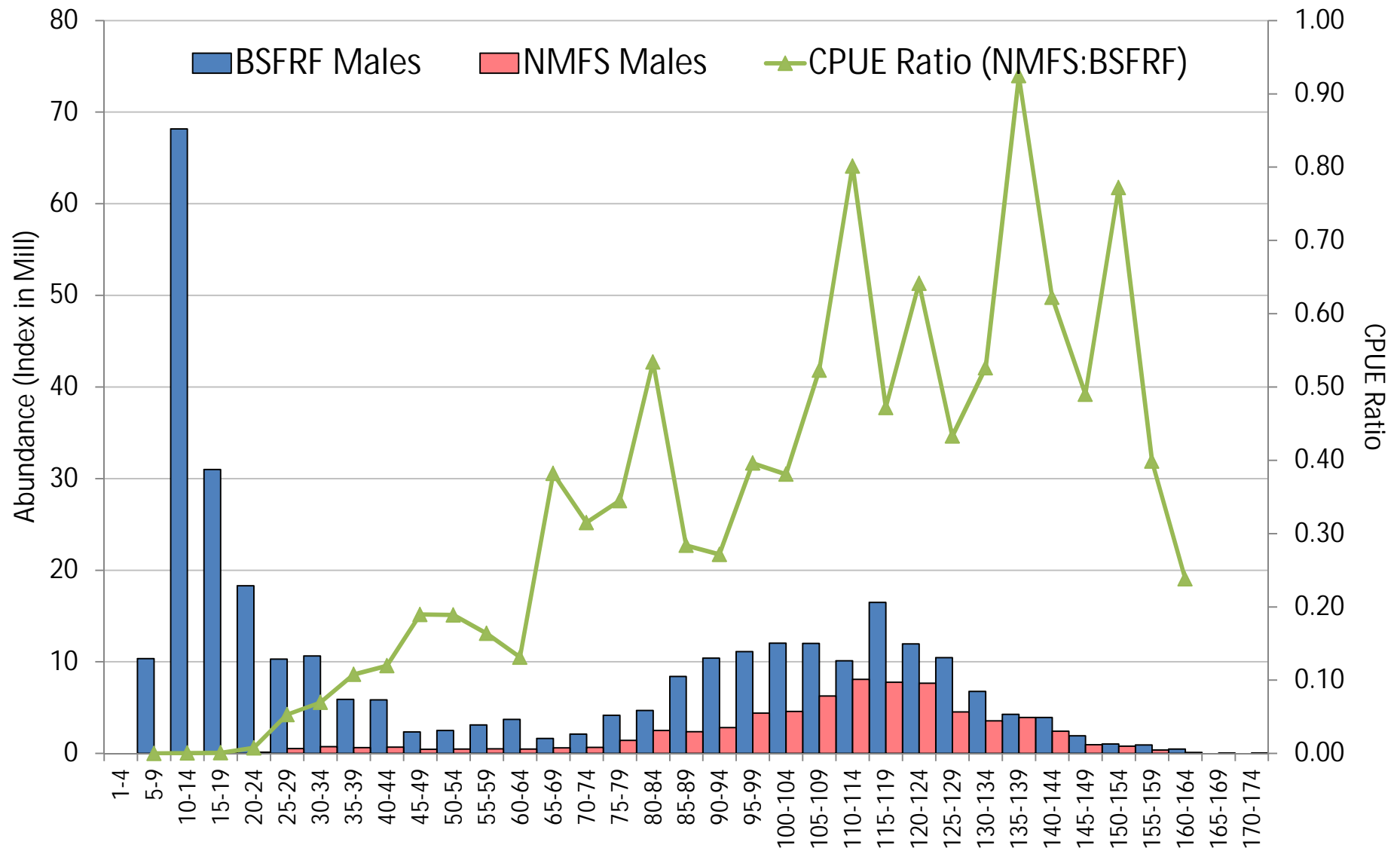
# Bairdi Trawl Selectivity – BSFRF data



# Bairdi Trawl Selectivity – BSFRF data

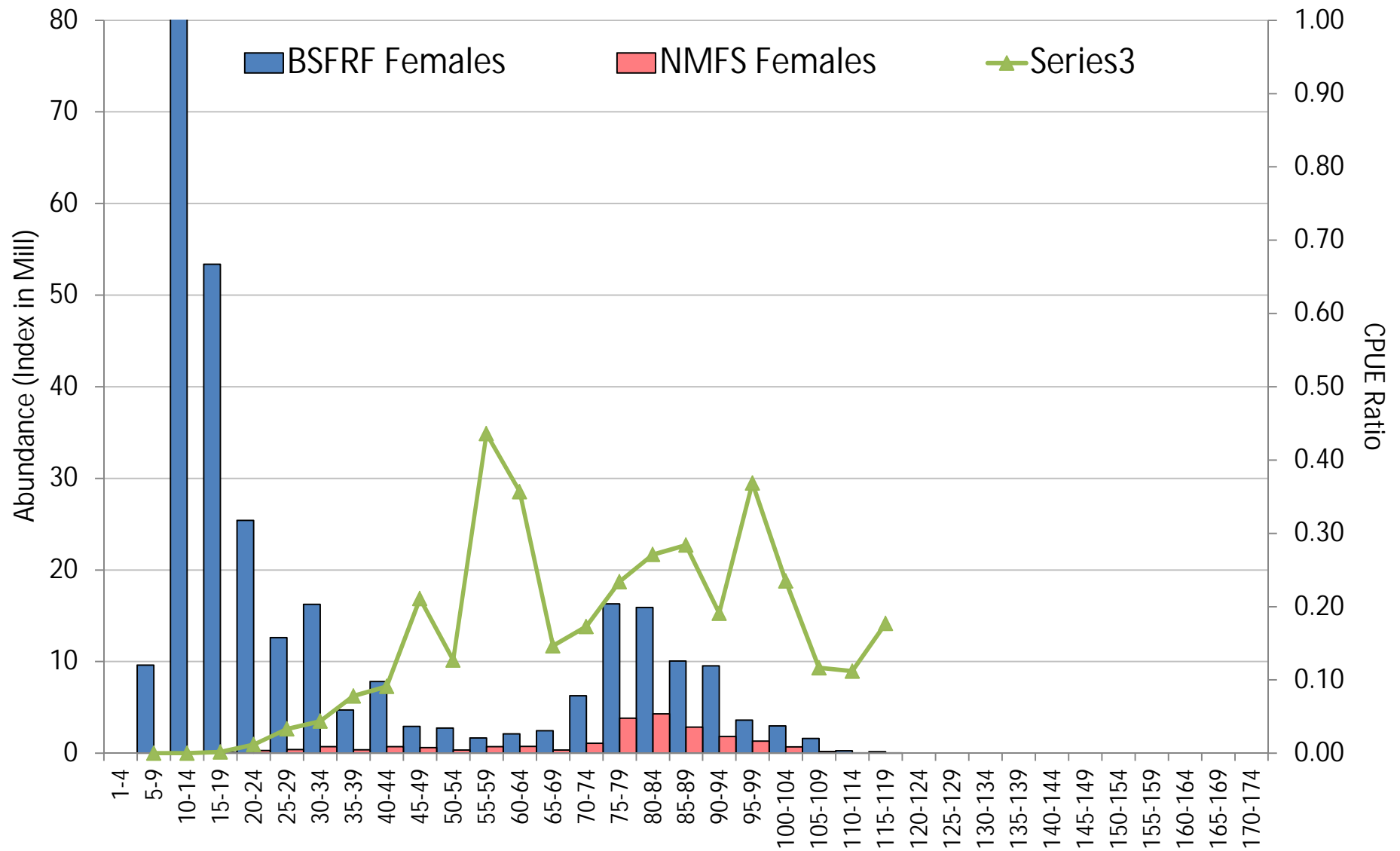


# Bairdi Trawl Selectivity 2016 – Expanded Side by Side

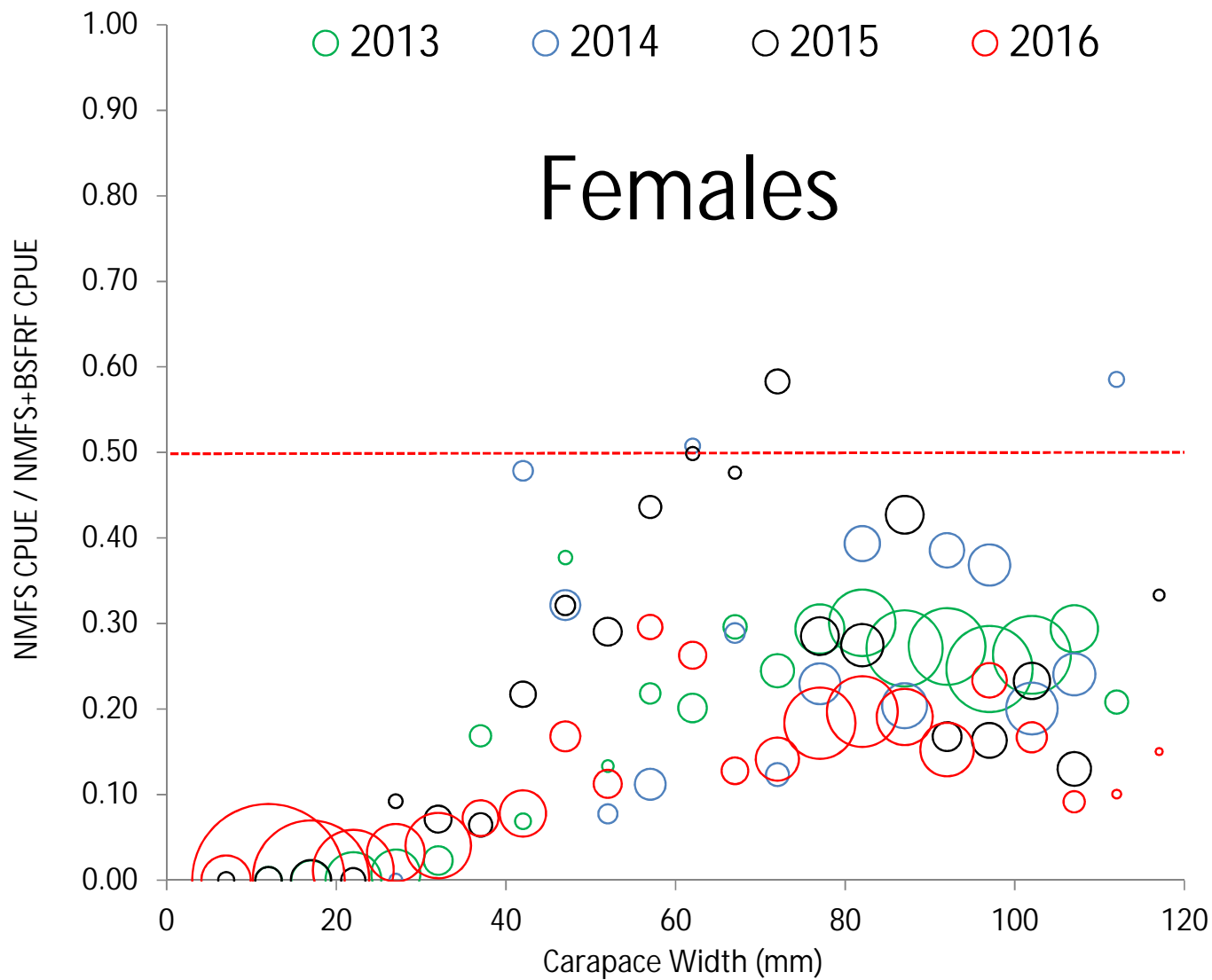




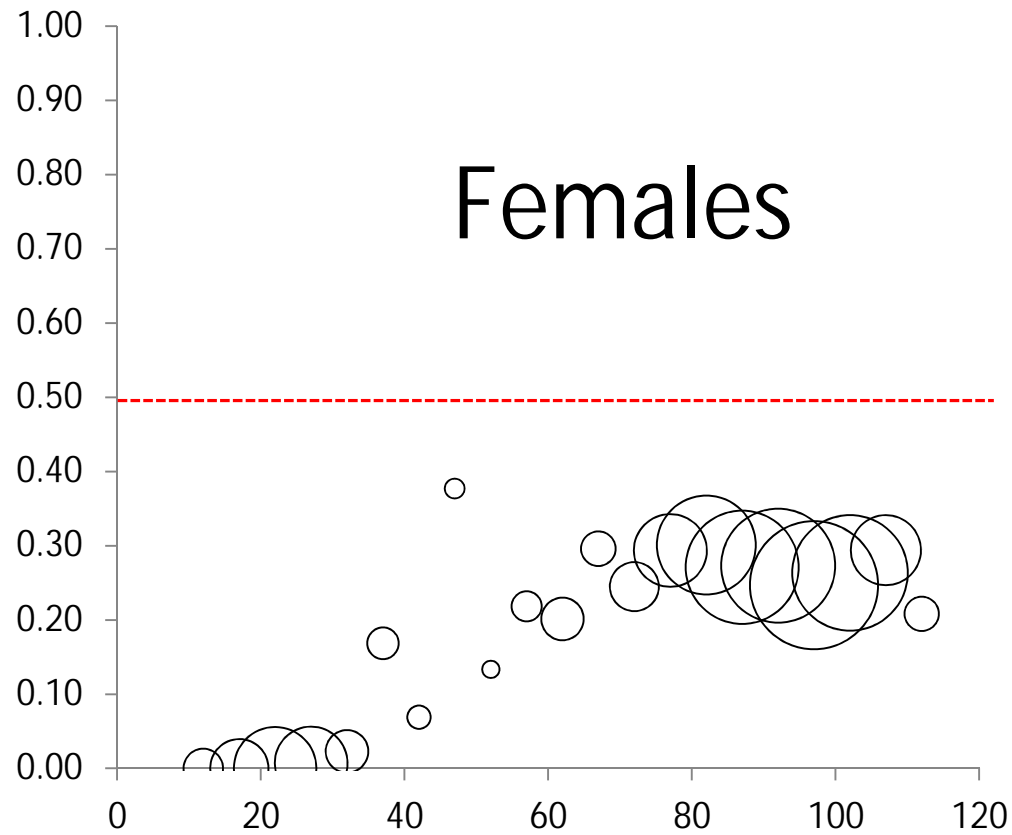
# Bairdi Trawl Selectivity 2016 – Expanded Side by Side



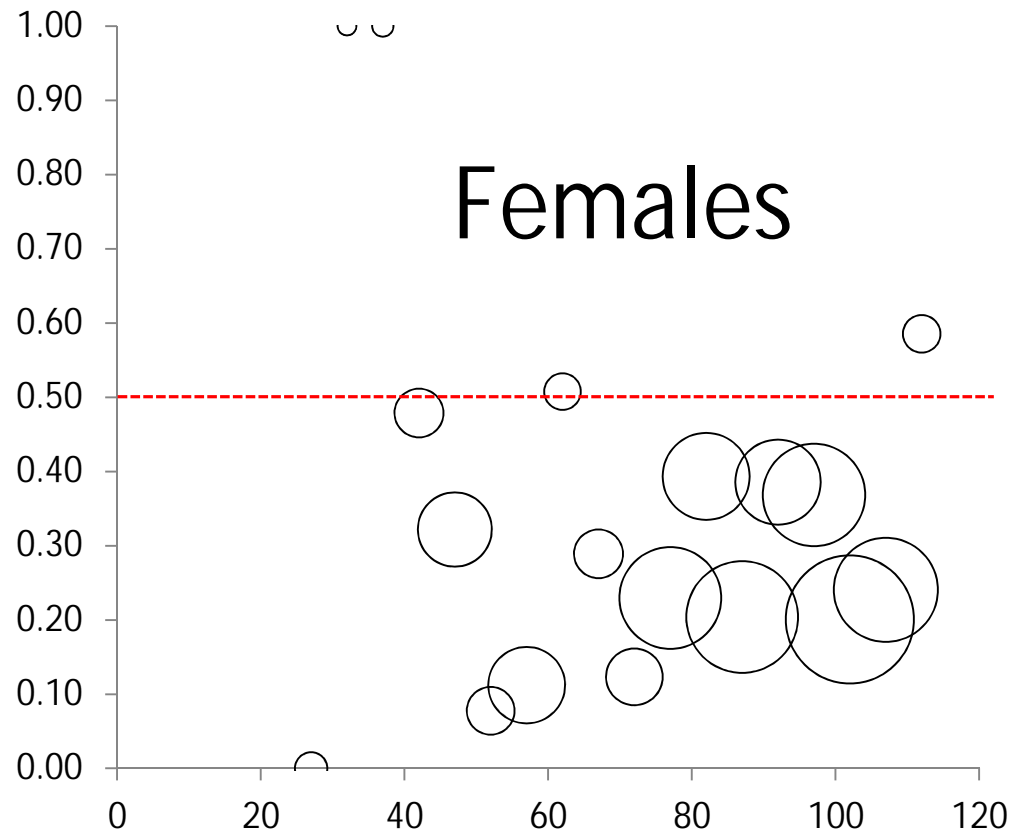
# Bairdi Trawl Selectivity 2013-2016



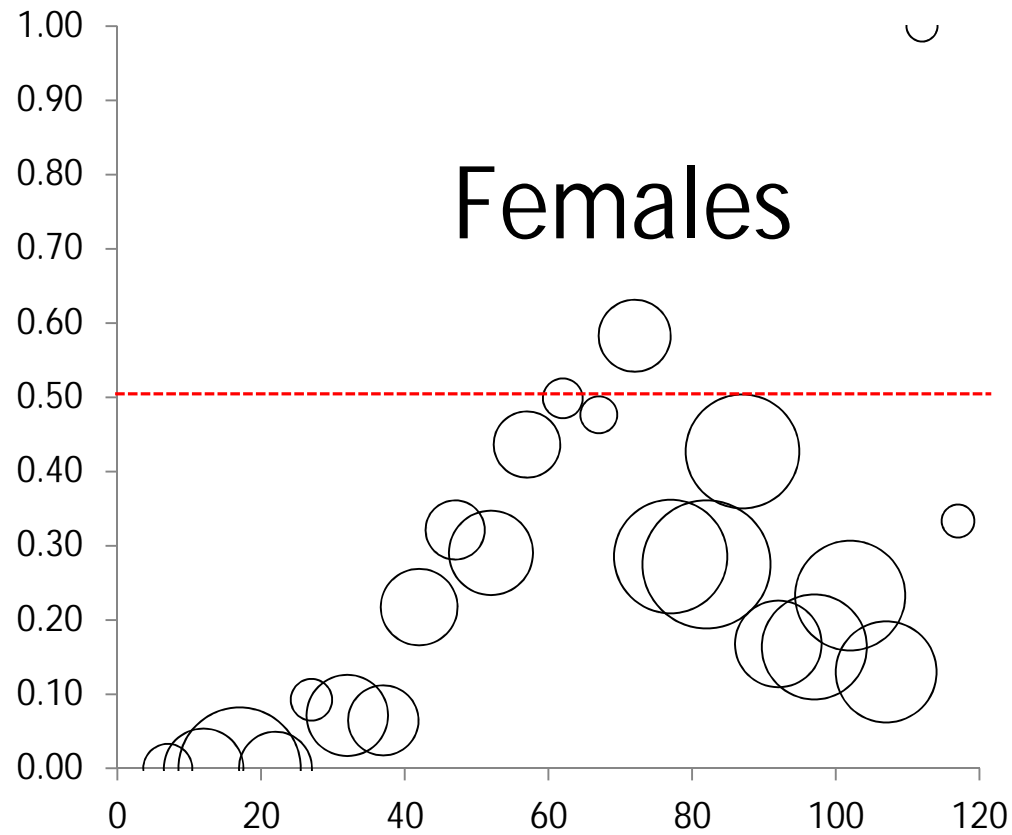
# Bairdi Trawl Selectivity 2013



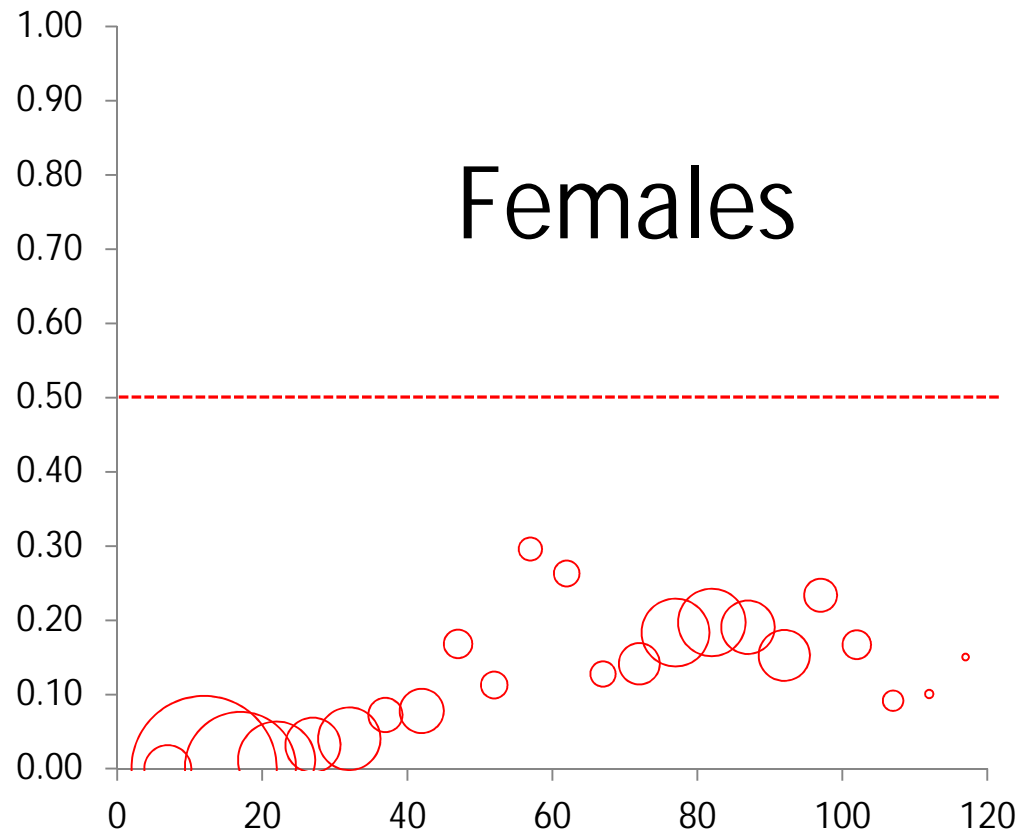
# Bairdi Trawl Selectivity 2014



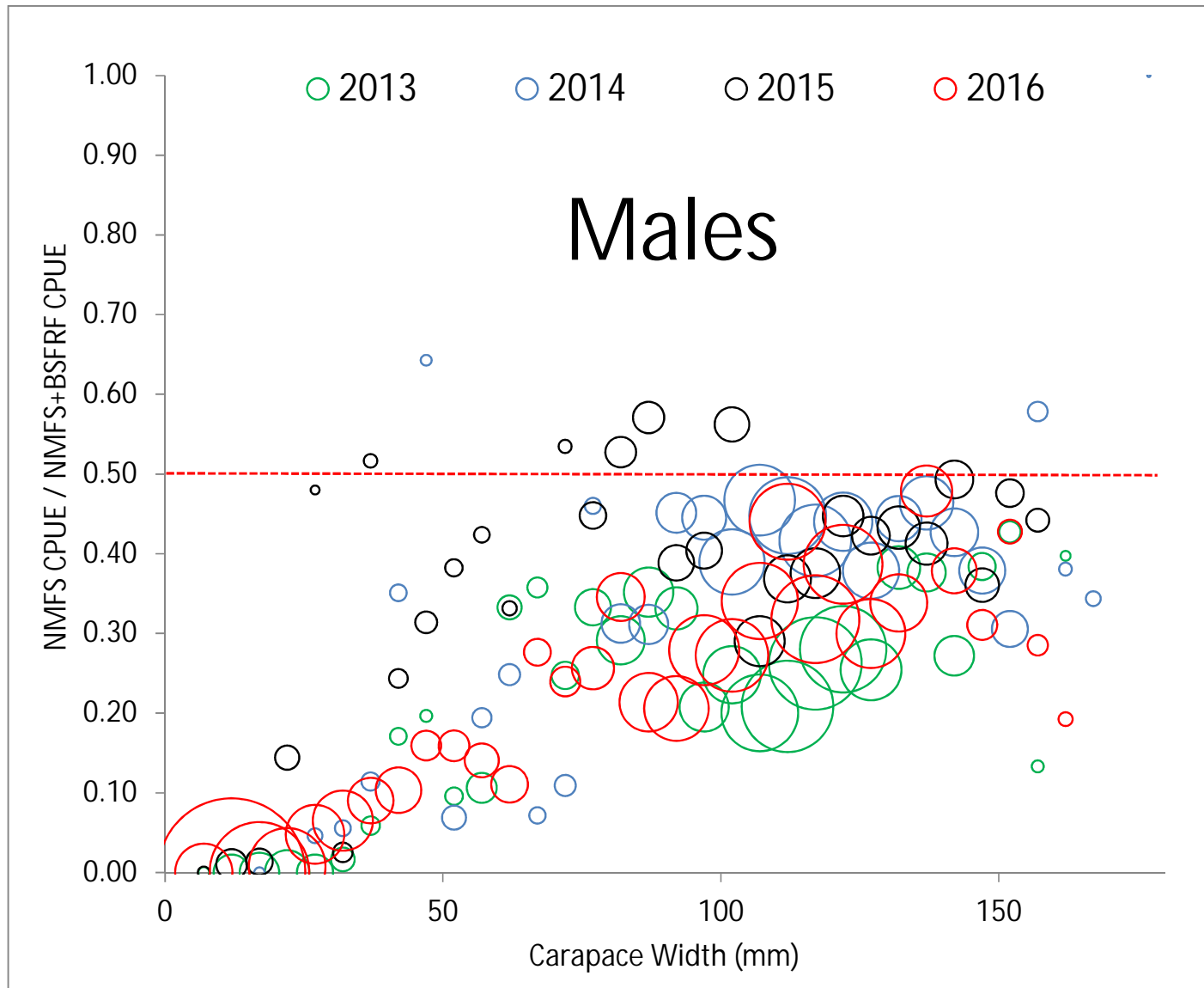
# Bairdi Trawl Selectivity 2015



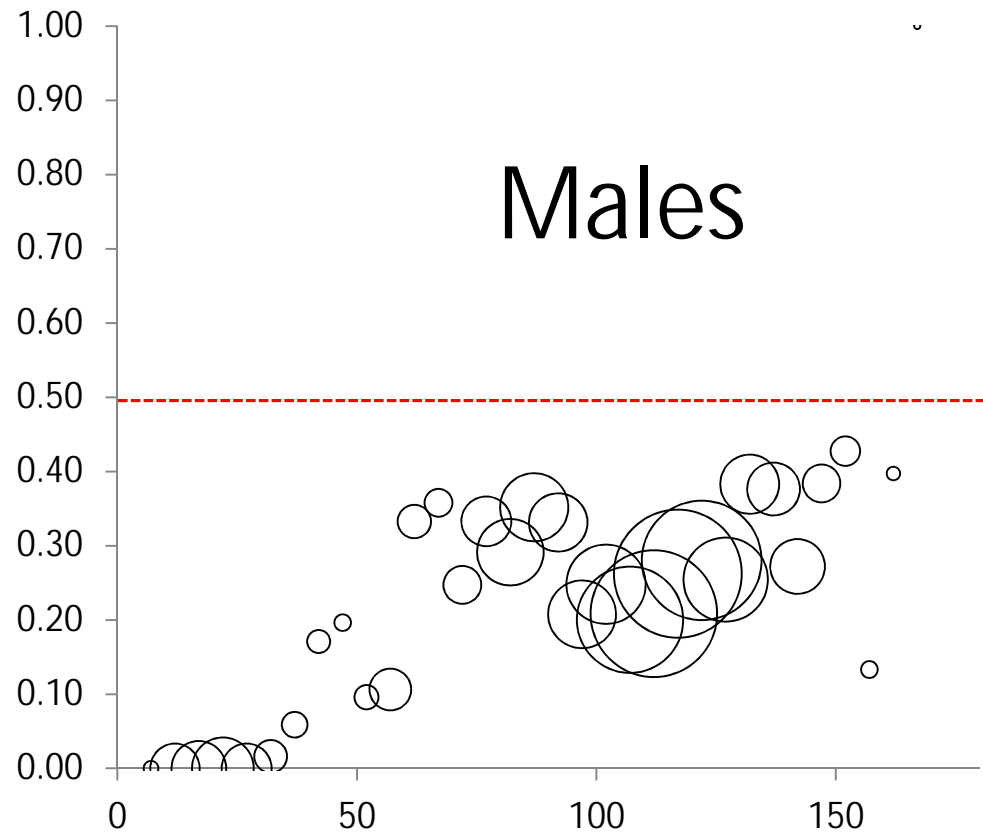
# Bairdi Trawl Selectivity 2016



# Bairdi Trawl Selectivity 2013-2016

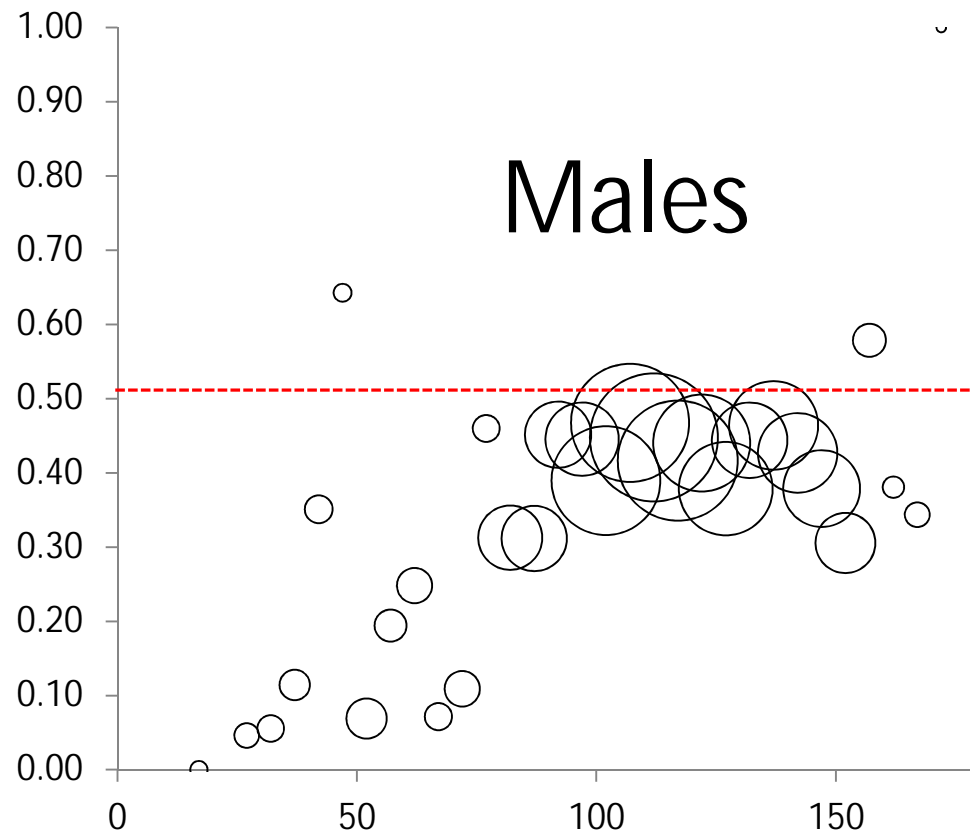


# Bairdi Trawl Selectivity 2013

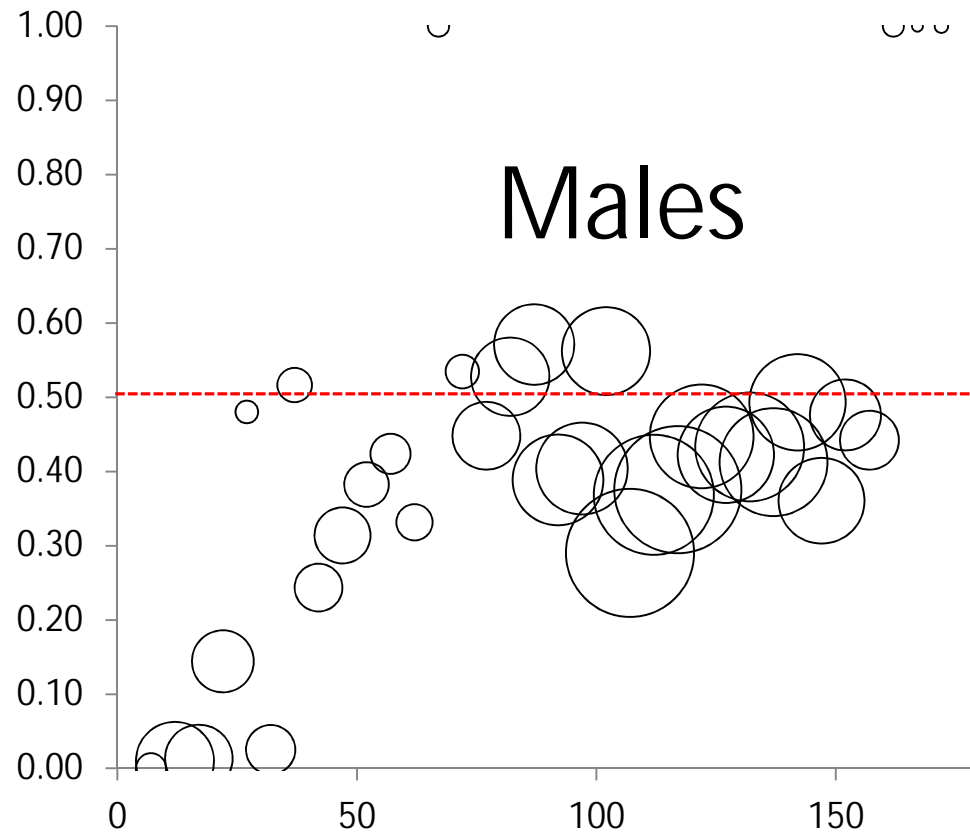




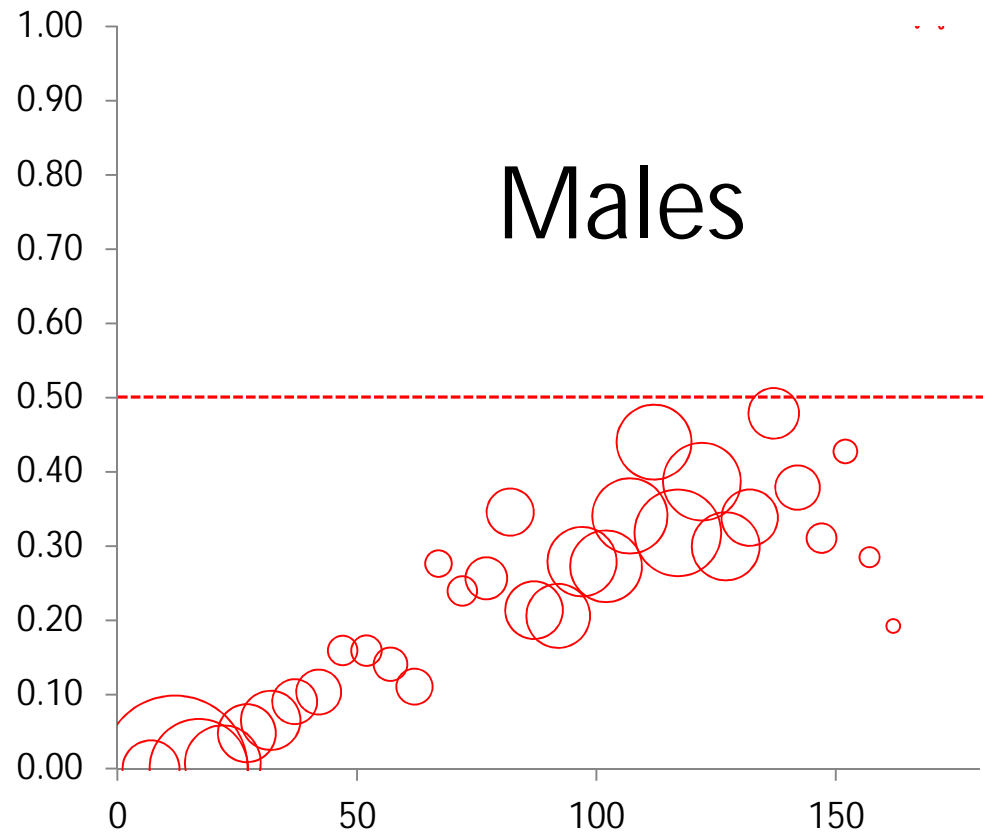
# Bairdi Trawl Selectivity 2014



# Bairdi Trawl Selectivity 2015



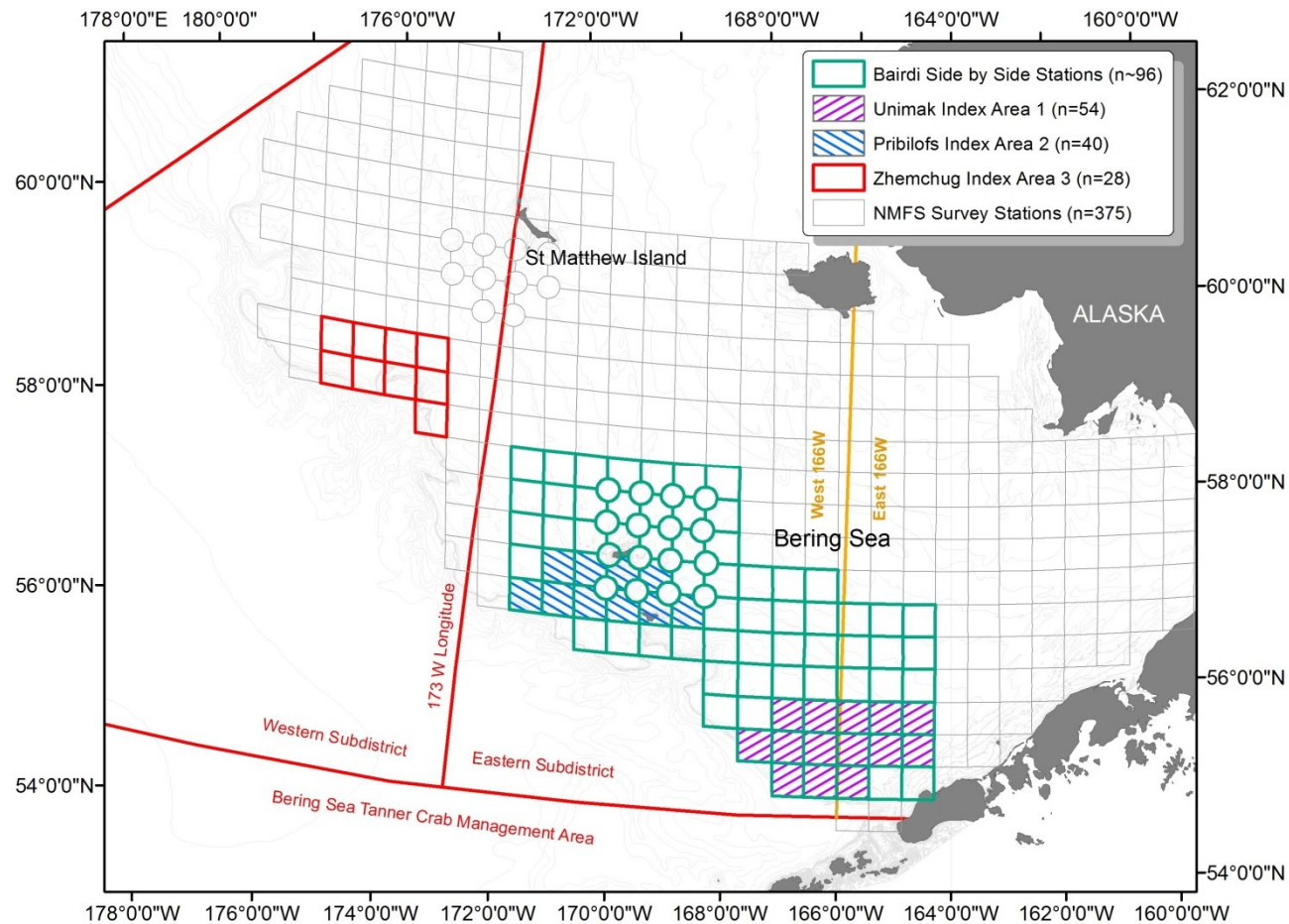
# Bairdi Trawl Selectivity 2016

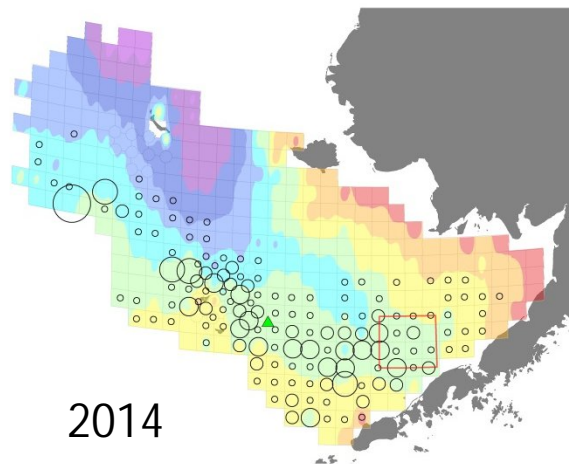
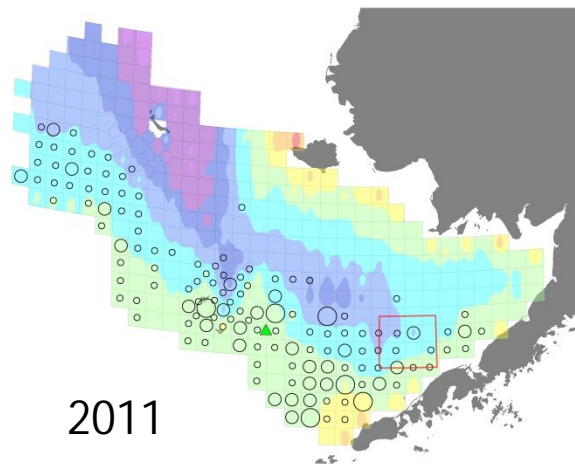
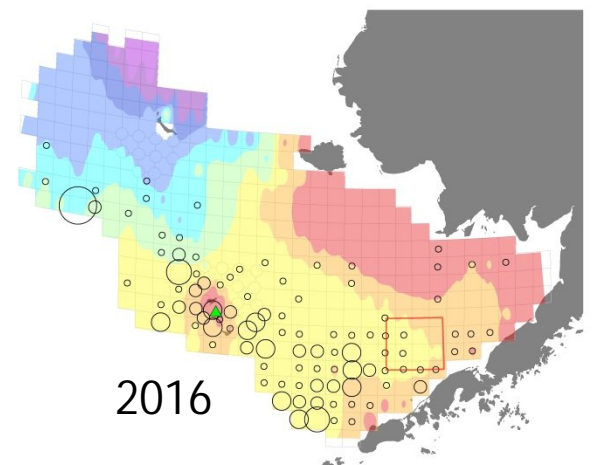
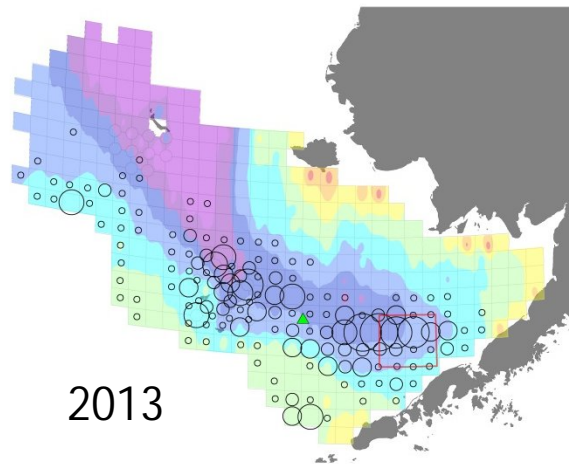
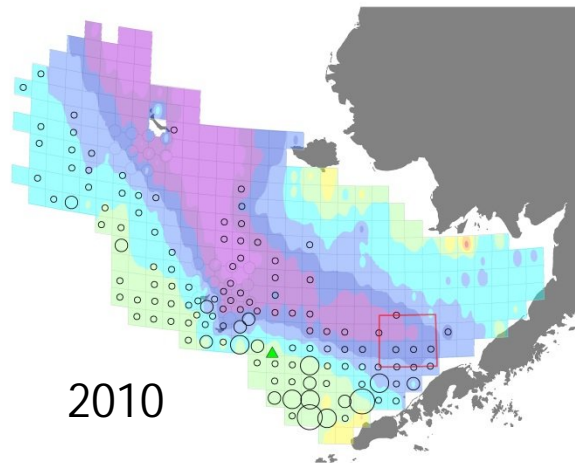
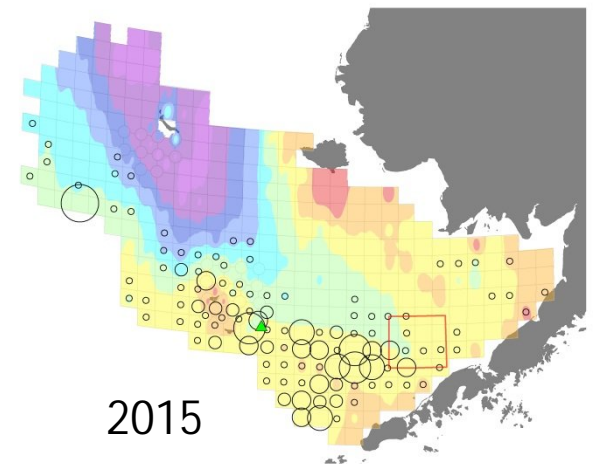
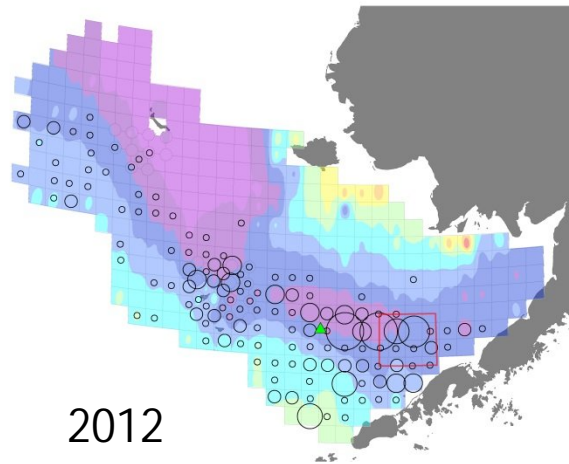
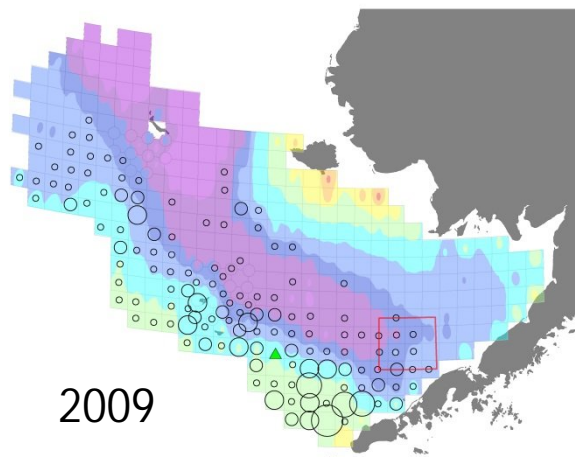


# Bairdi Trawl Selectivity – Next Steps

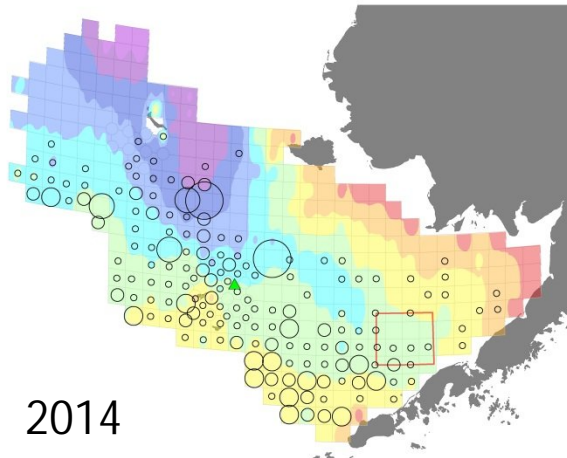
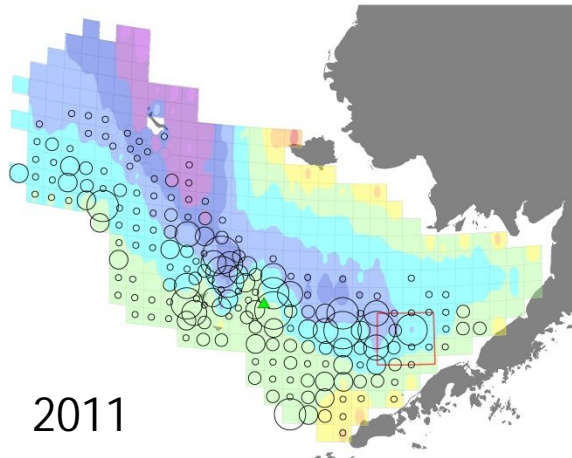
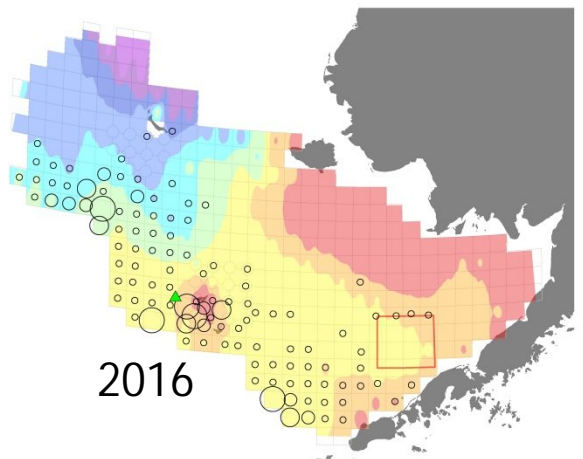
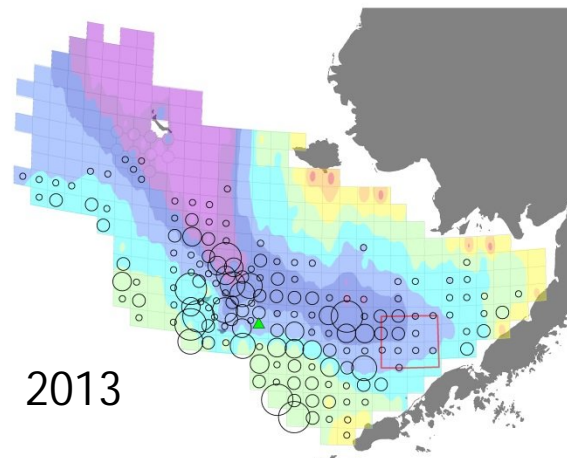
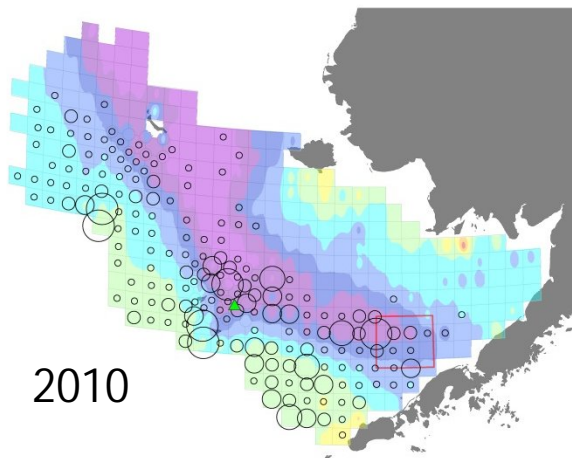
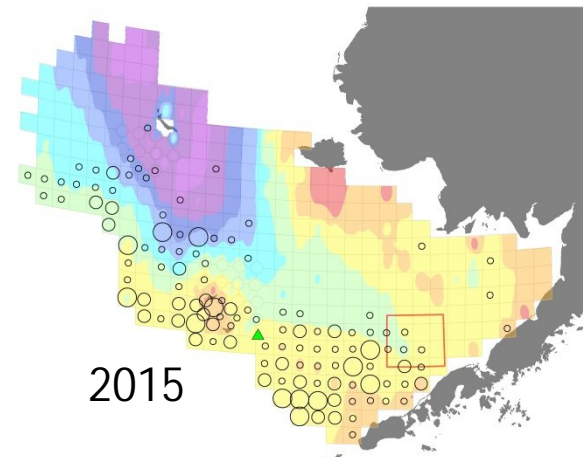
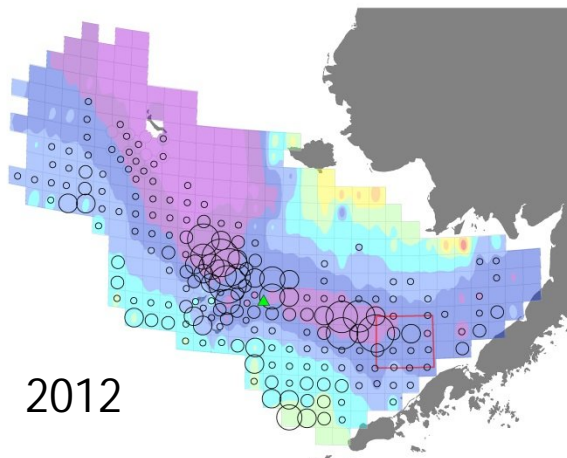
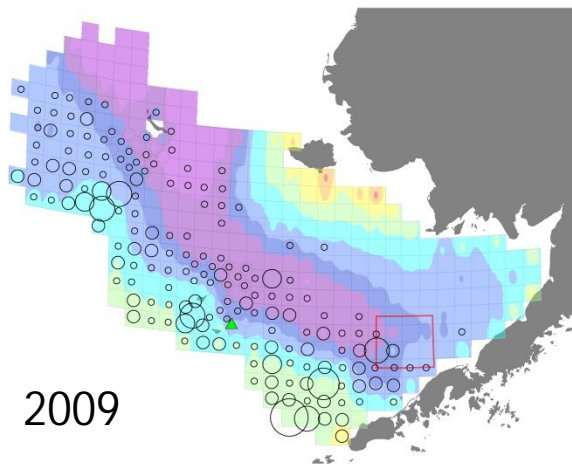
- Incorporating data into model
- Choosing modeling methods
- Increasing samples - survey data from western stock areas
- Reviewing other information from current data

# Bairdi Projects – On the Horizon

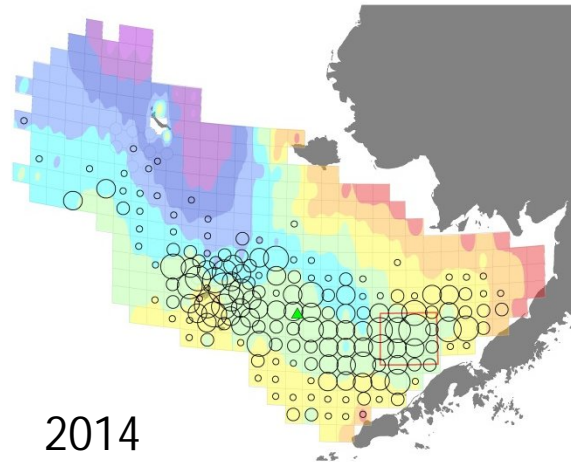
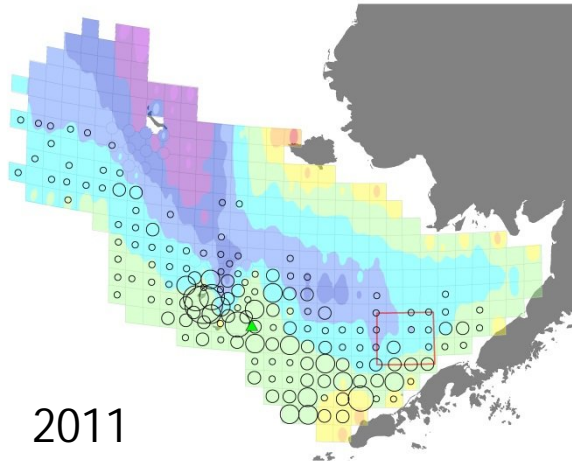
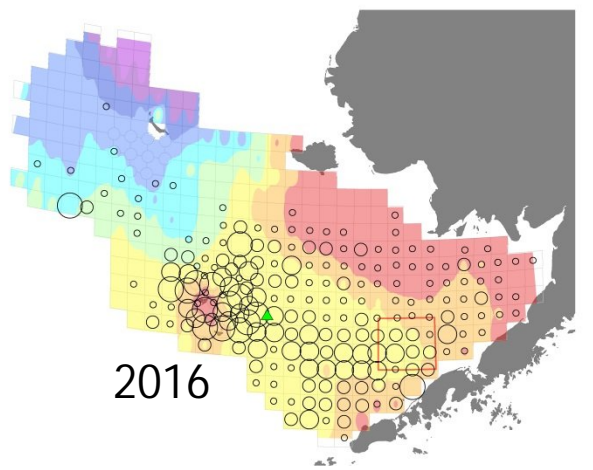
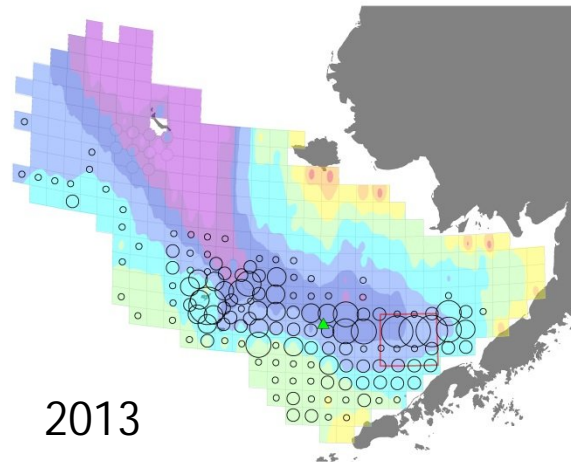
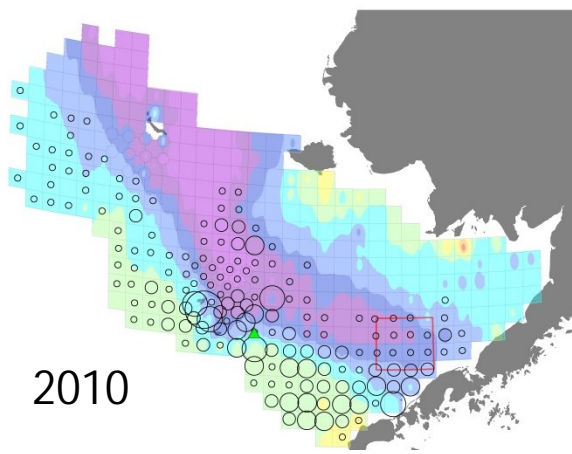
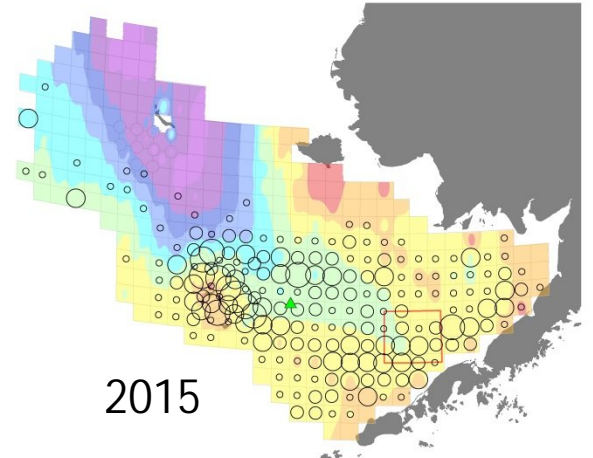
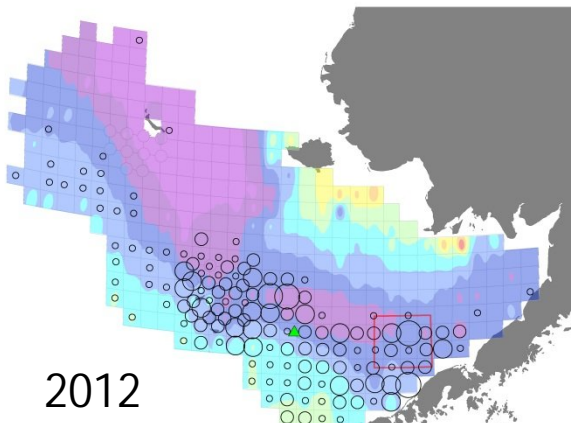
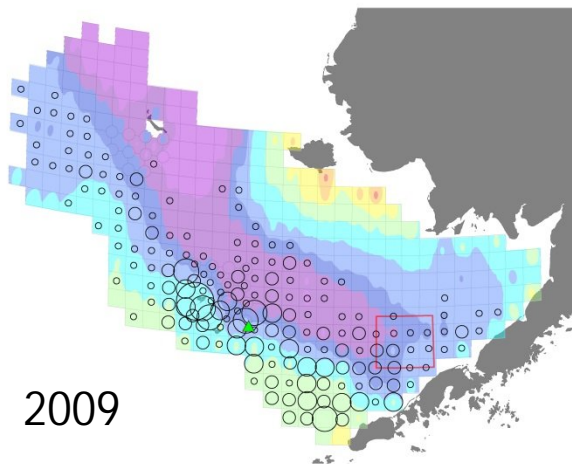




Mature Female Bairdi  
[observed]  
(NMFS Survey Data)

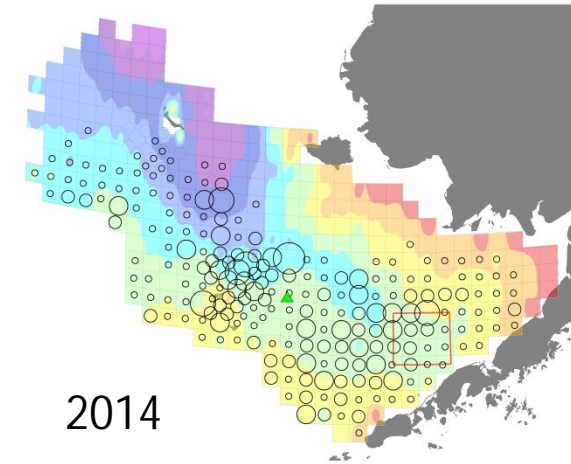
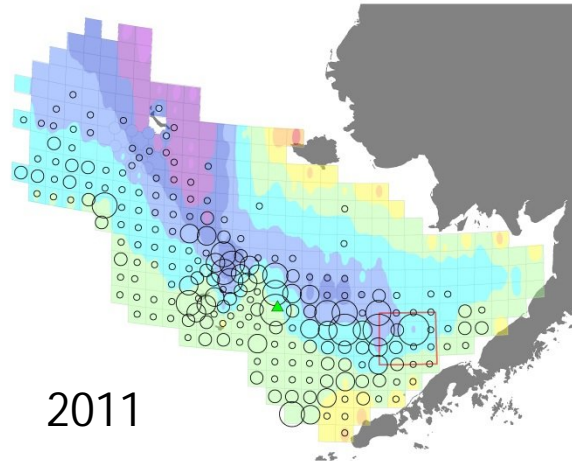
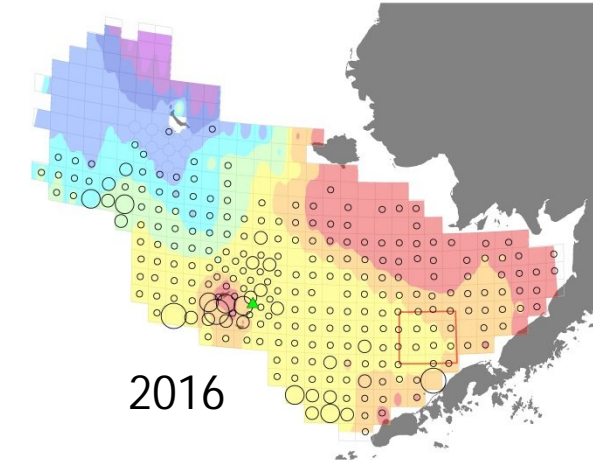
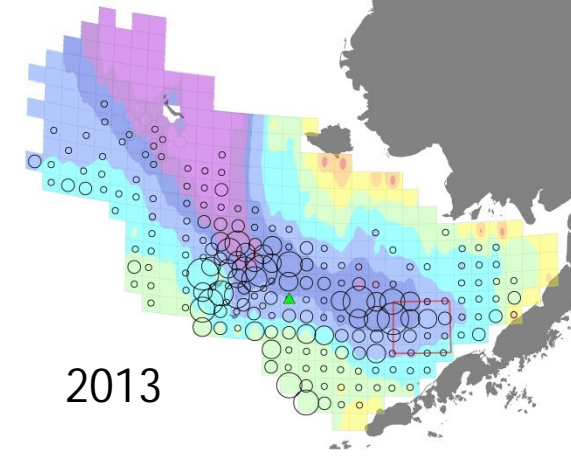
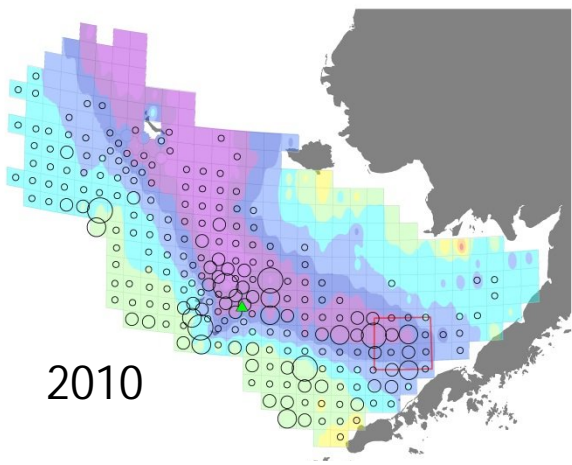
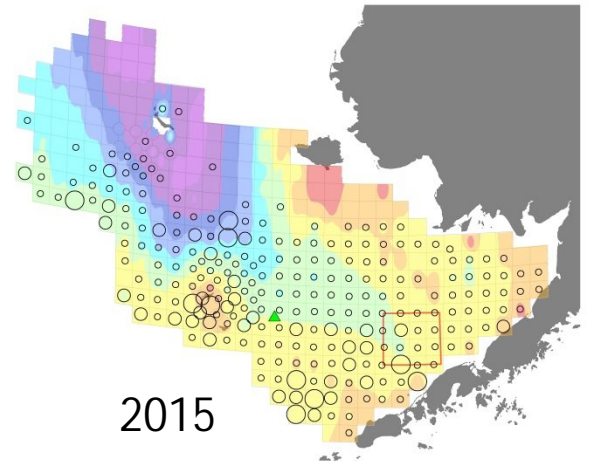
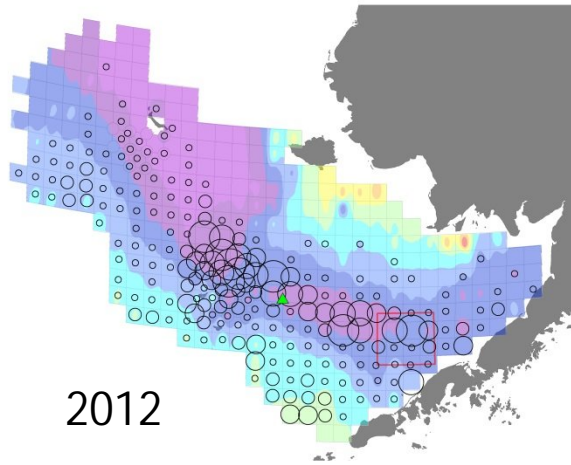
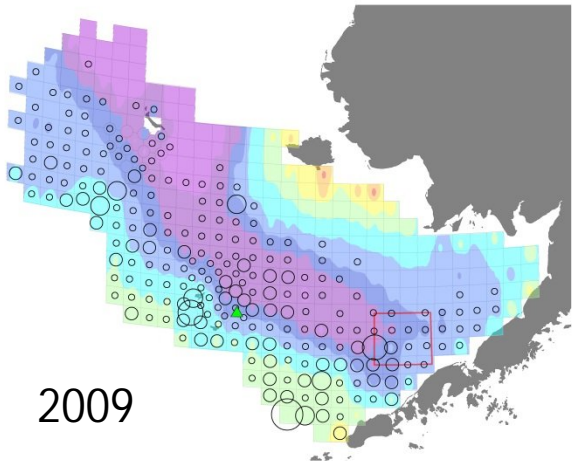


Immature Female Bairdi  
[observed]  
(NMFS Survey Data)

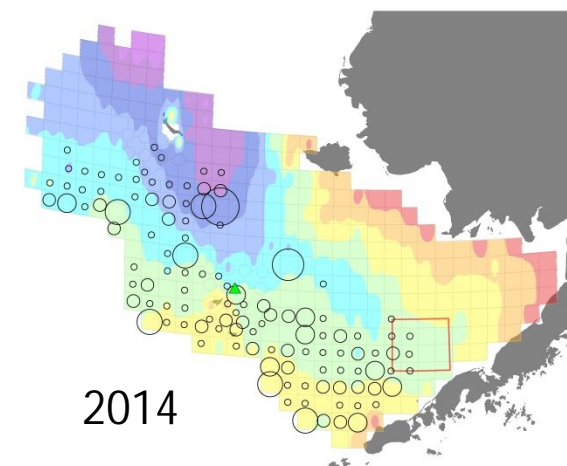
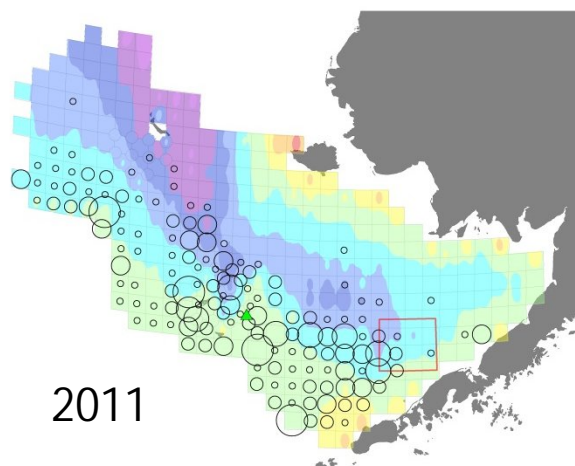
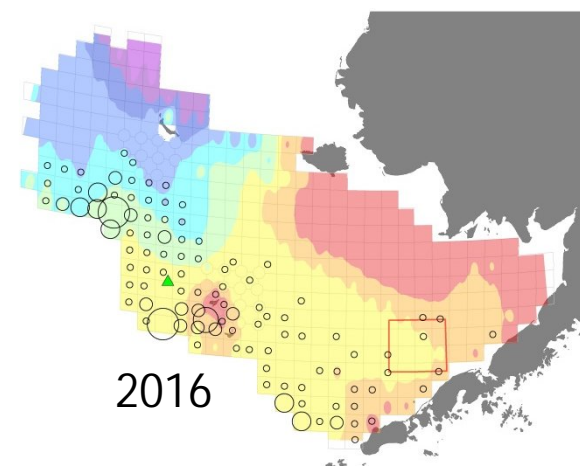
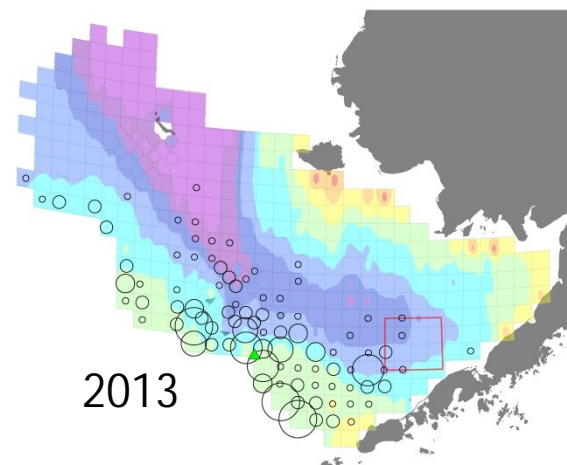
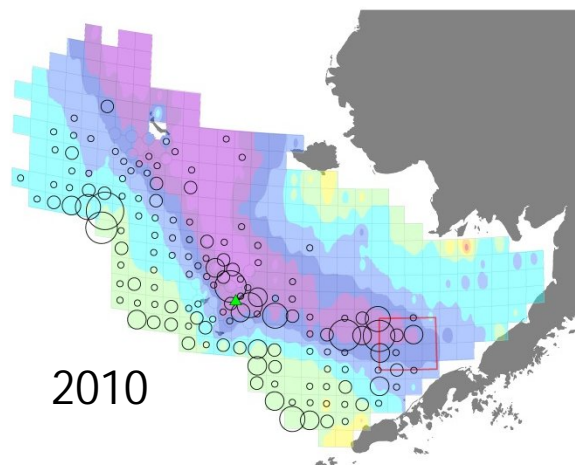
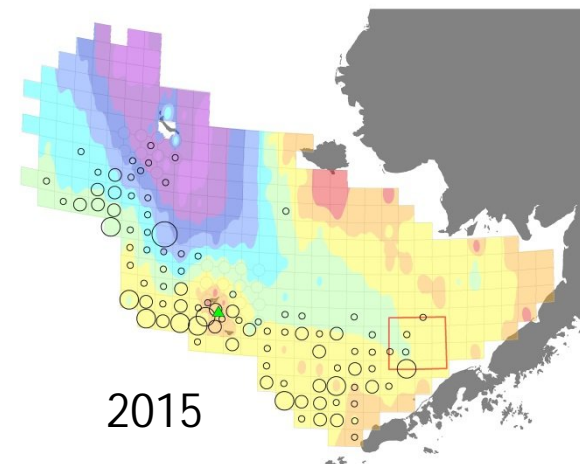
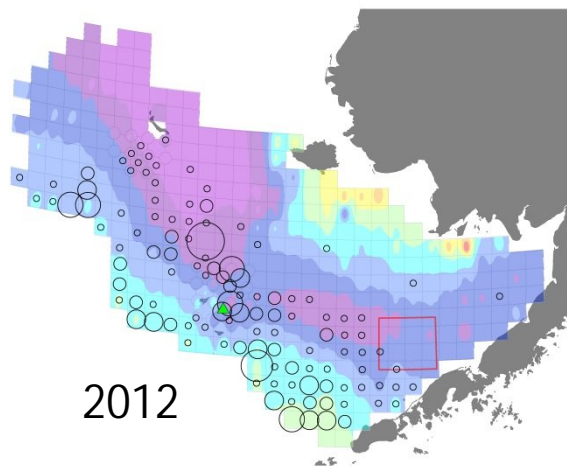
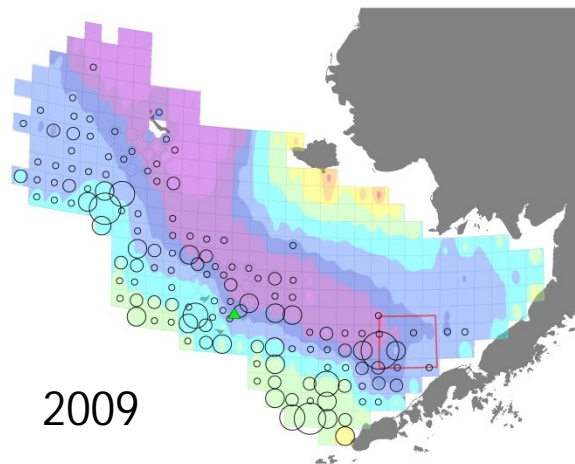


Mature Male Bairdi  
[observed]  
(NMFS Survey Data)

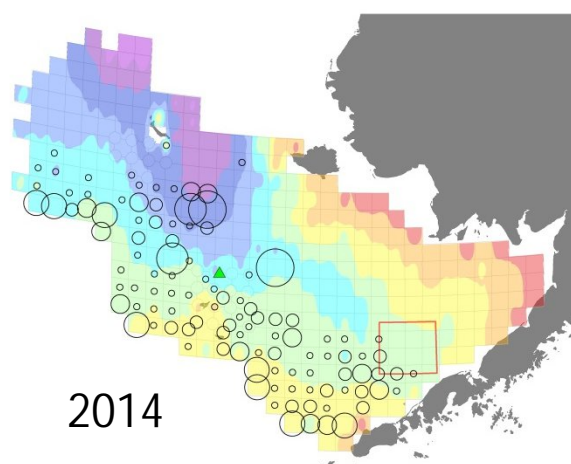
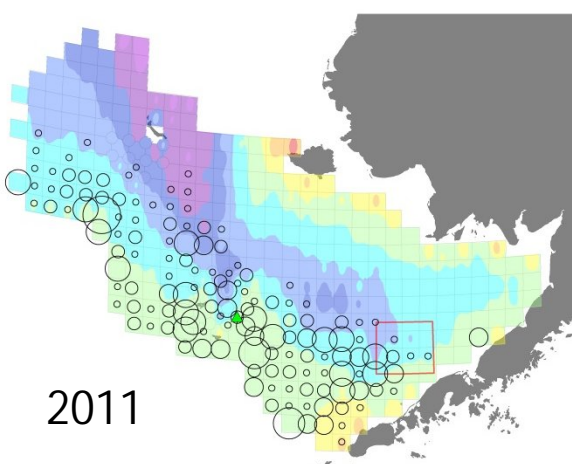
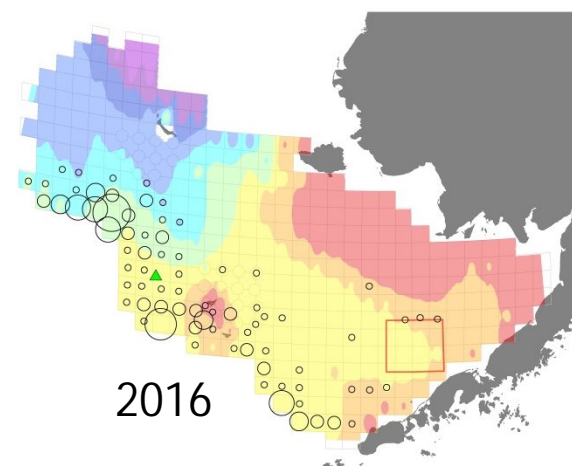
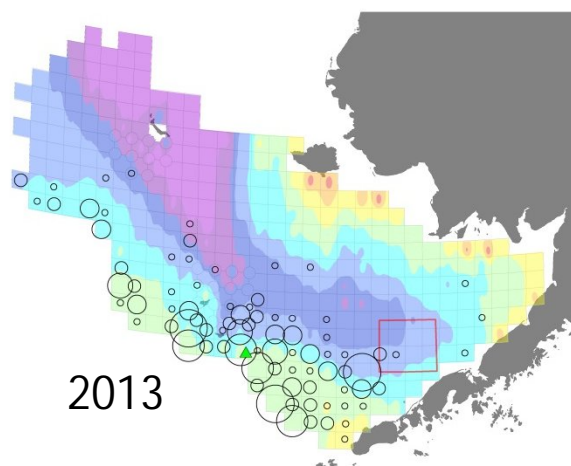
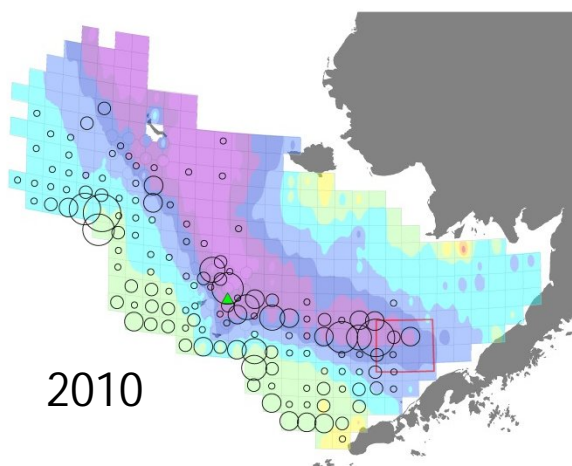
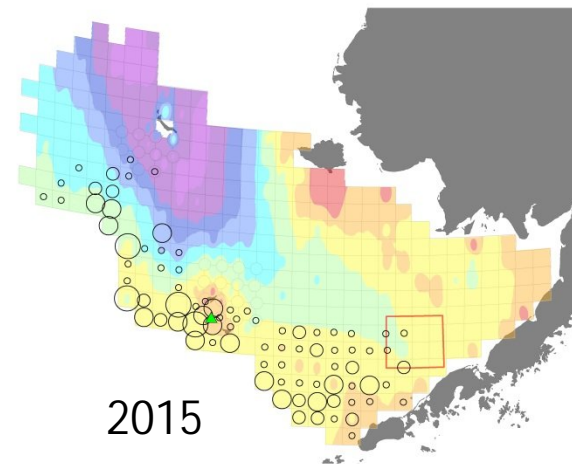
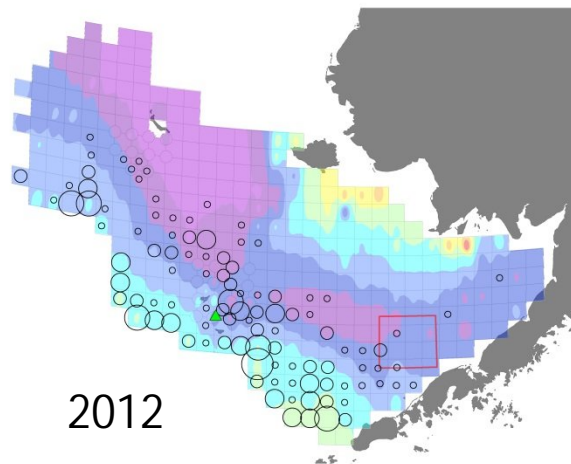
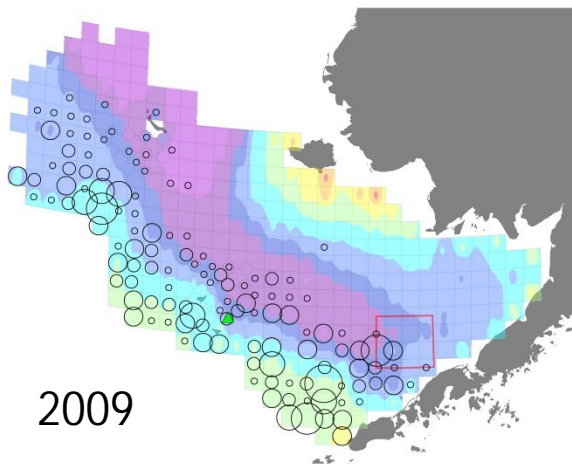




Immature Male Bairdi  
[observed]  
(NMFS Survey Data)



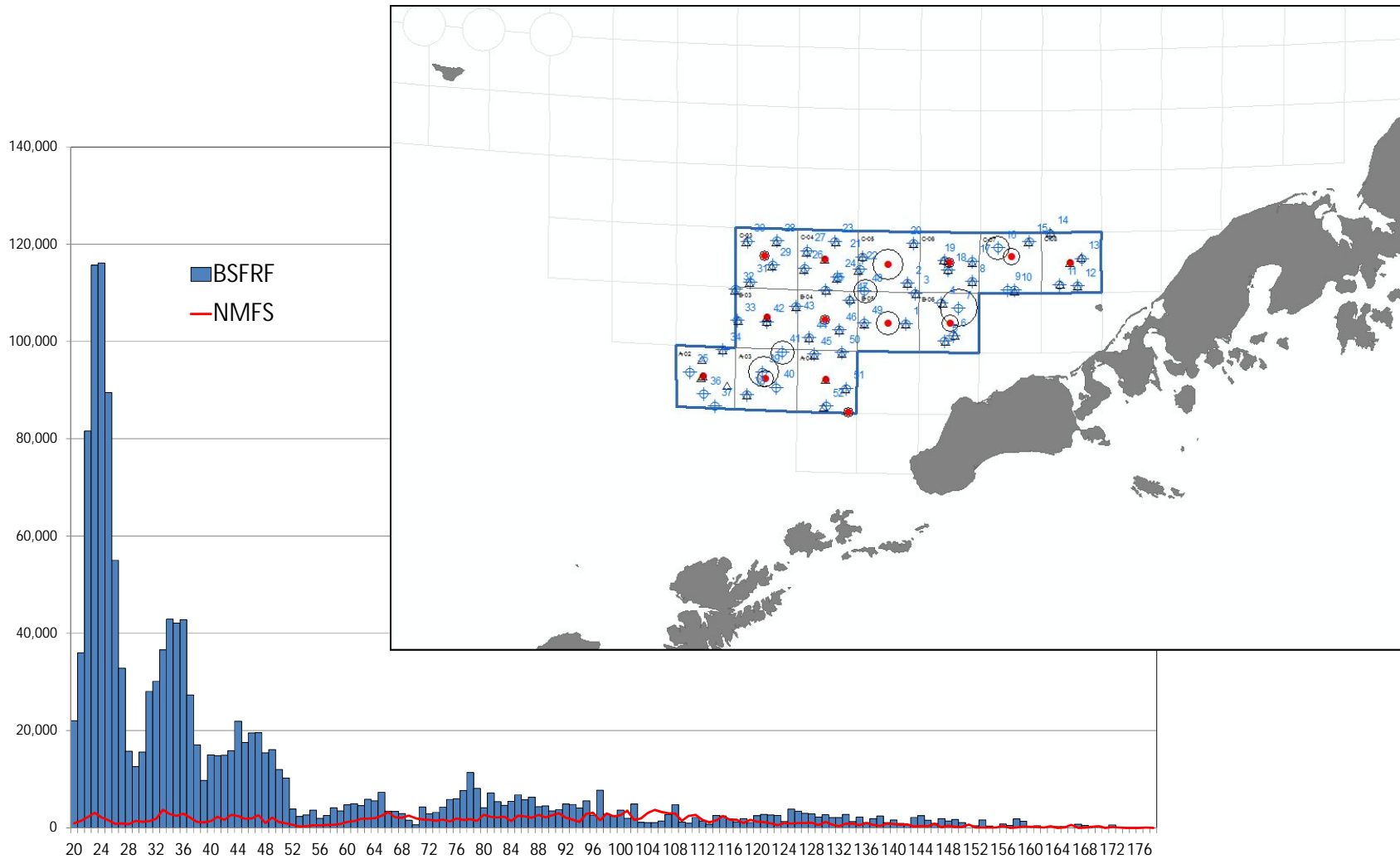
Sub 41 mm Male Bairdi  
(NMFS Survey Data)



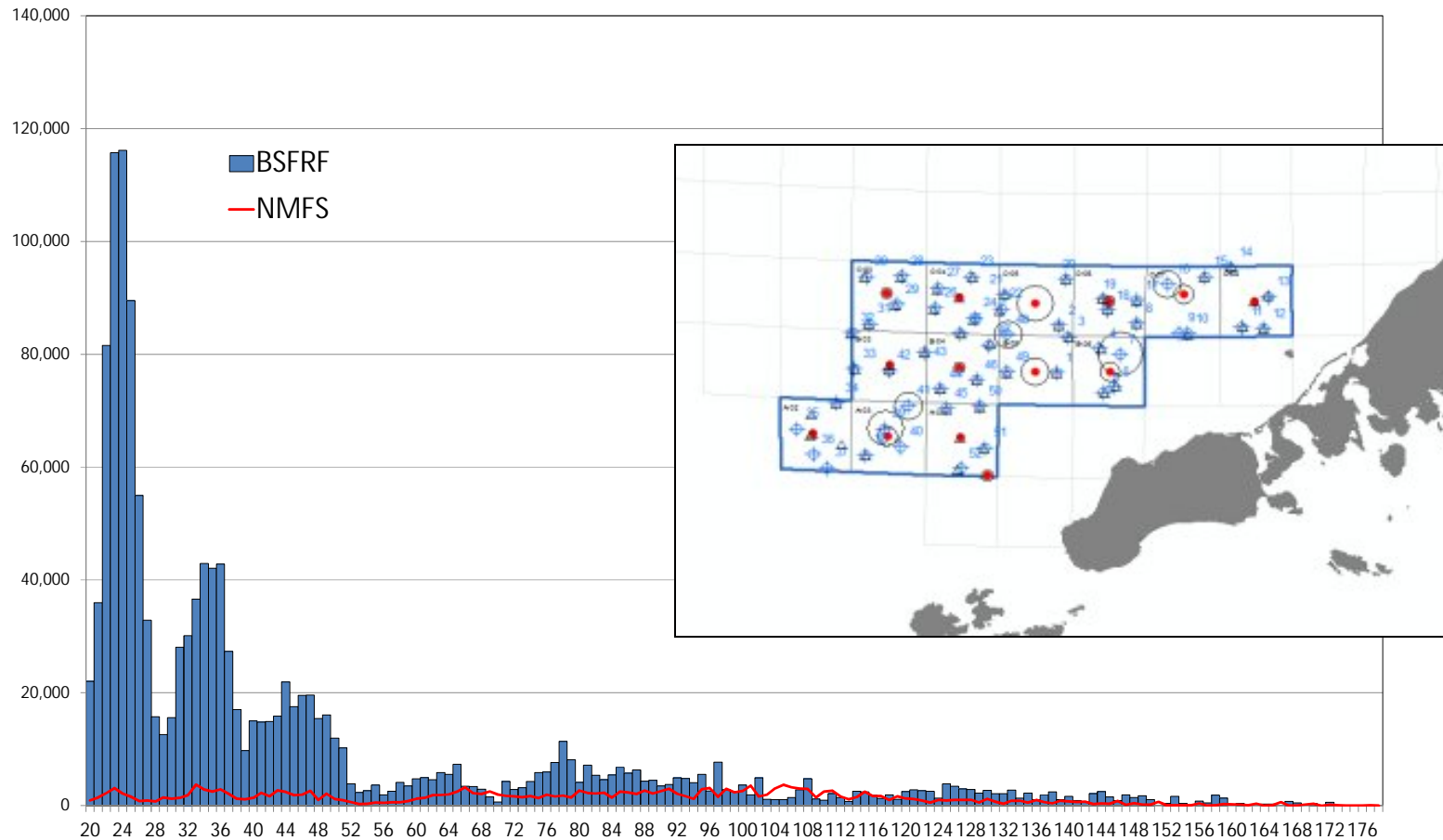
Sub 41 mm Female Bairdi  
(NMFS Survey Data)

# Bairdi Trawl Selectivity 2016

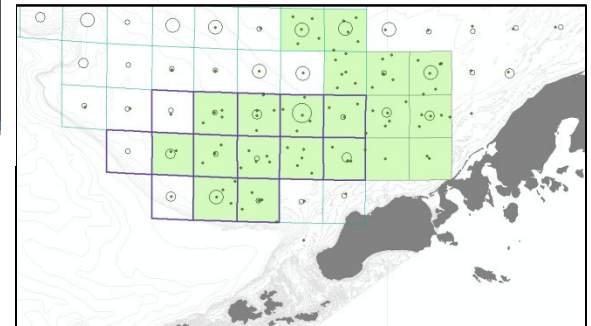
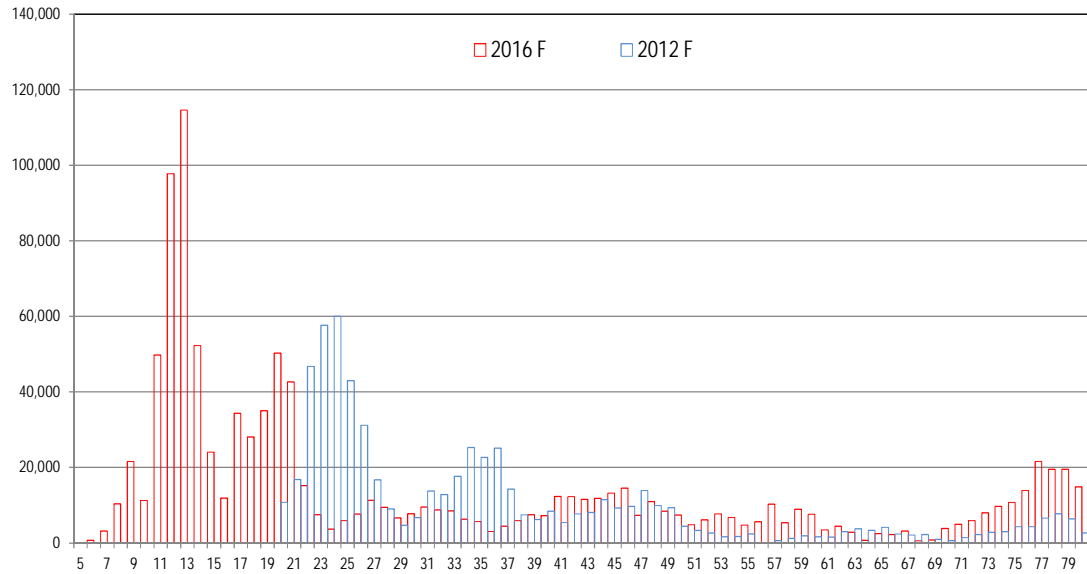
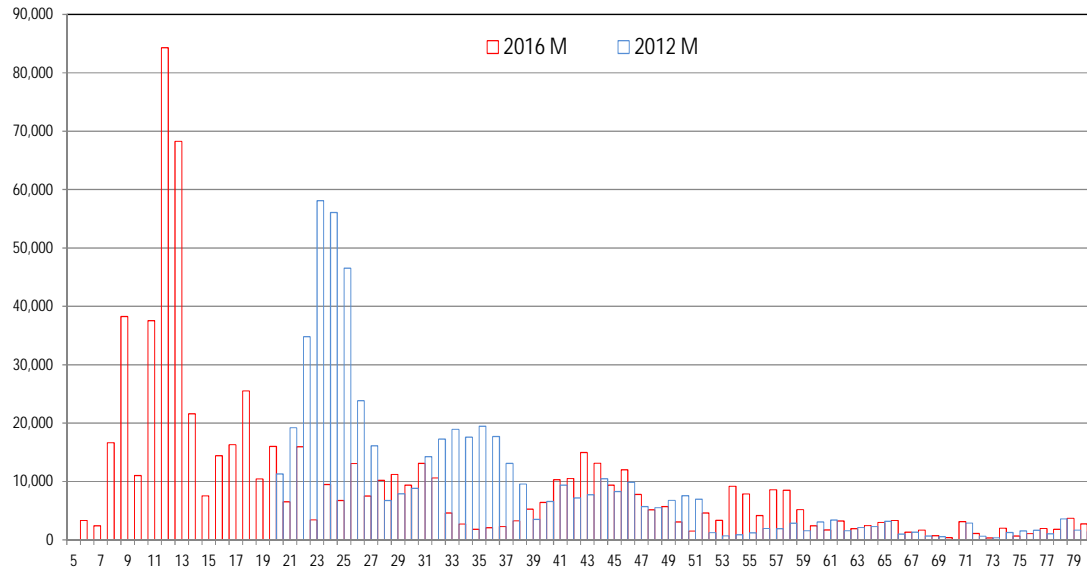
## Two Surveys



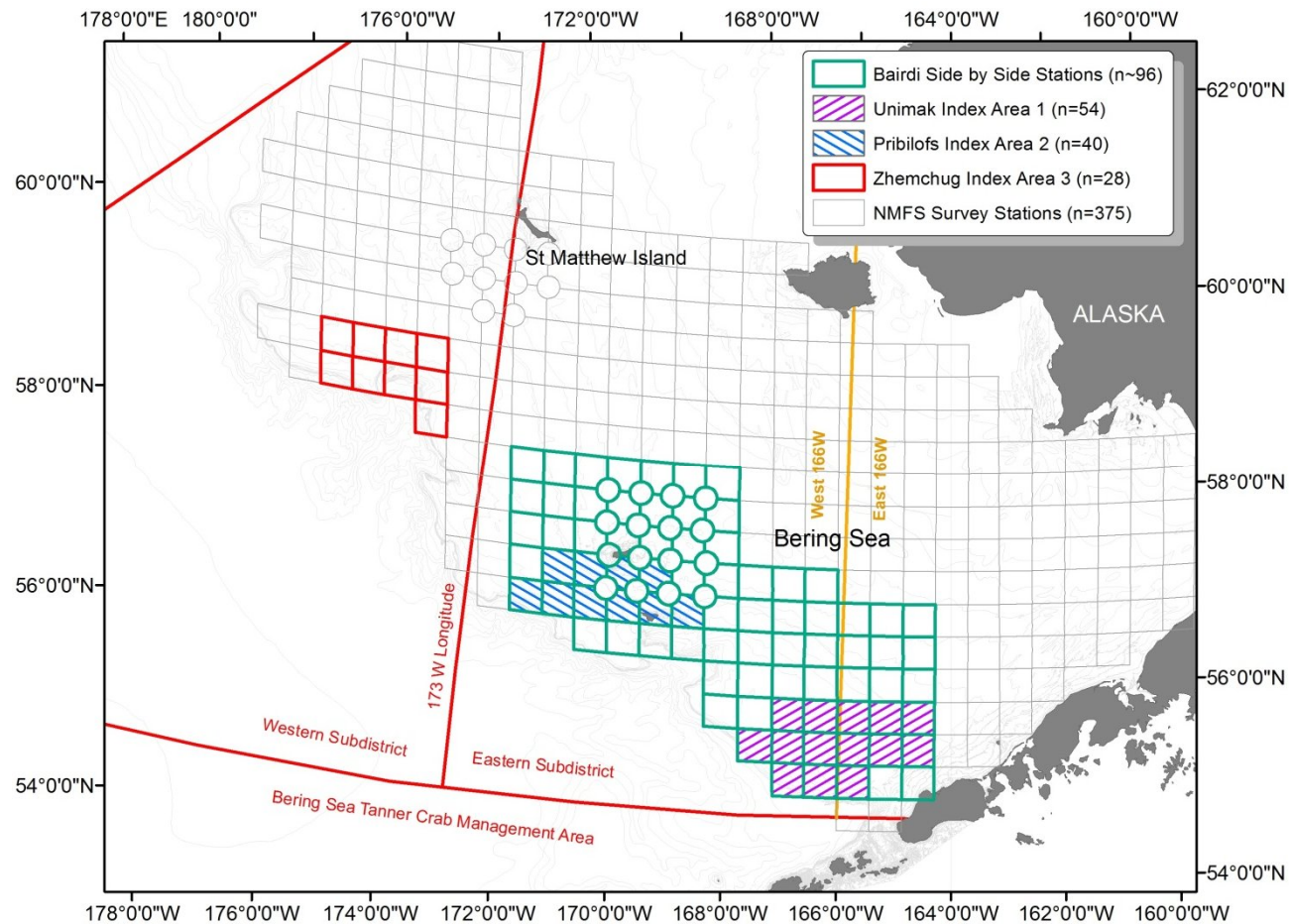
# Bairdi Trawl Selectivity 2012-16



# Bairdi Trawl Selectivity 2012-16

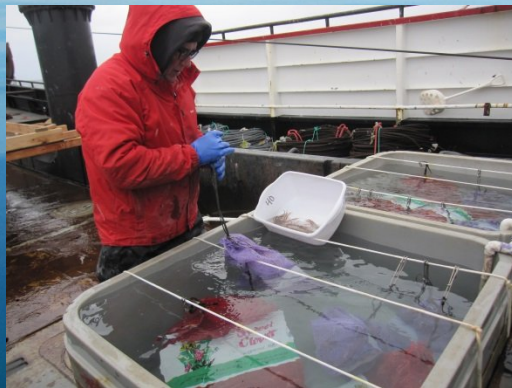


# Bairdi Projects – On the Horizon



# Ongoing Crab Growth Research, 2012-16

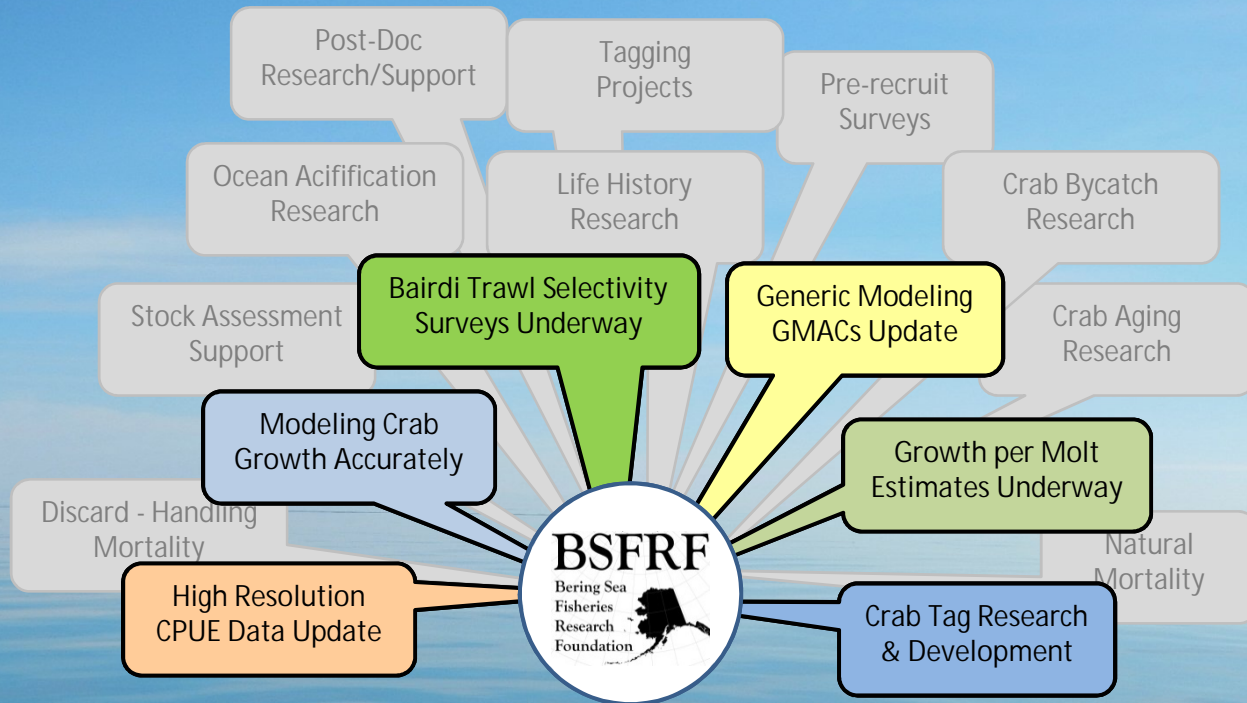
- BSFRF chartered F/V Sunset Bay for 10 day charter, April – (2012, 2015, 2016)
- Live collection of Snow & Tanner crab males and females with Nephrops trawl
- Pre-molt crabs retained for transport to Dutch Harbor for holding during molting
- Split methods; 1 group onshore at Westward tanks, 1 group in water @ harbor
- Currently ongoing monitoring – about 150 cumulative growth points to date



- Warm water in Spring 2016 allowed for collection in area usually under ice
- Potentially continuing into 2017 to fill in remaining size/sex gaps



# BSFRF Research



Who We Are...

Harvesters - Processors



Cooperative Research Partners



# Questions