

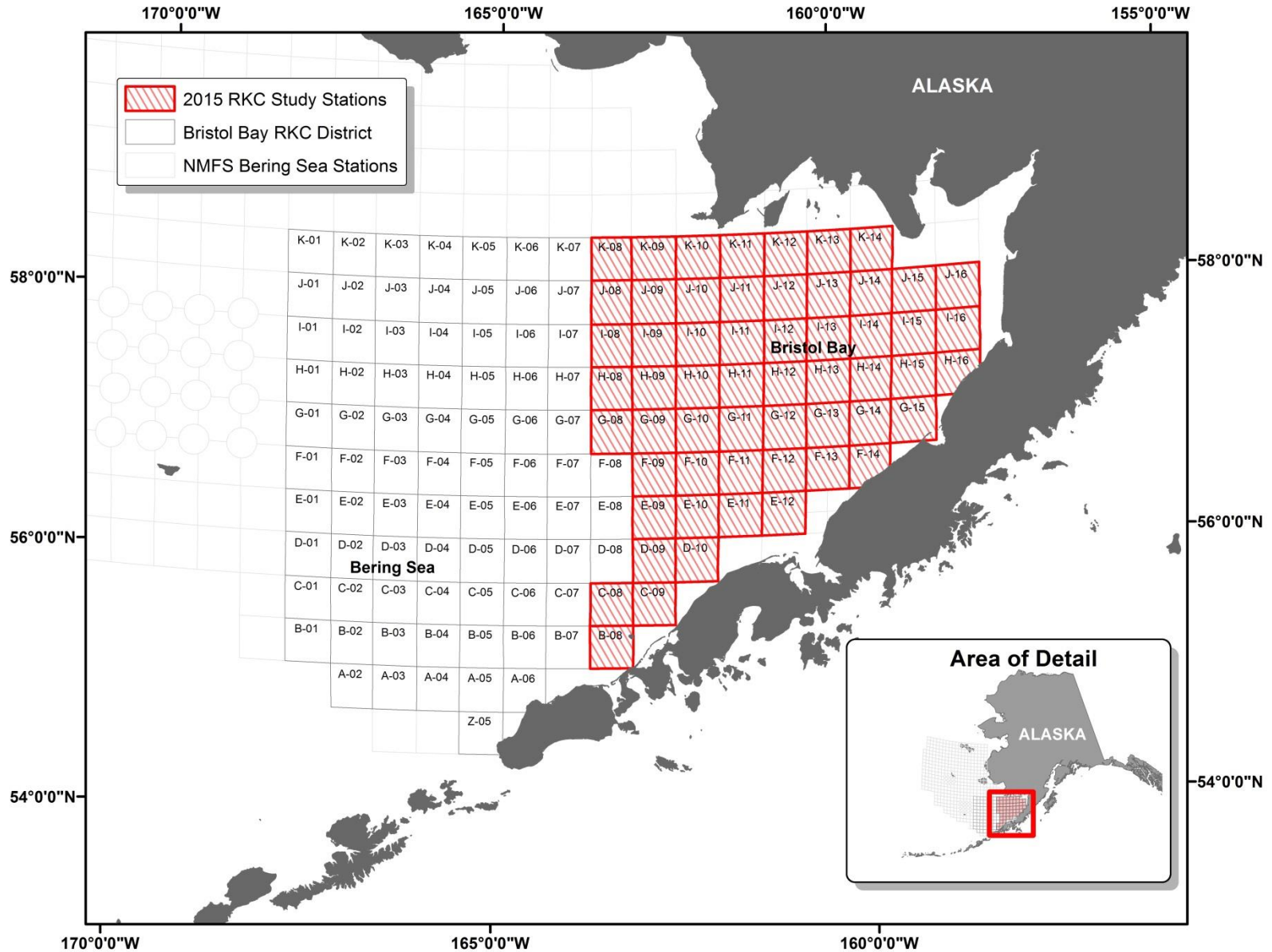
Bering Sea Fisheries Research Foundation Trawl Selectivity - Update

2016

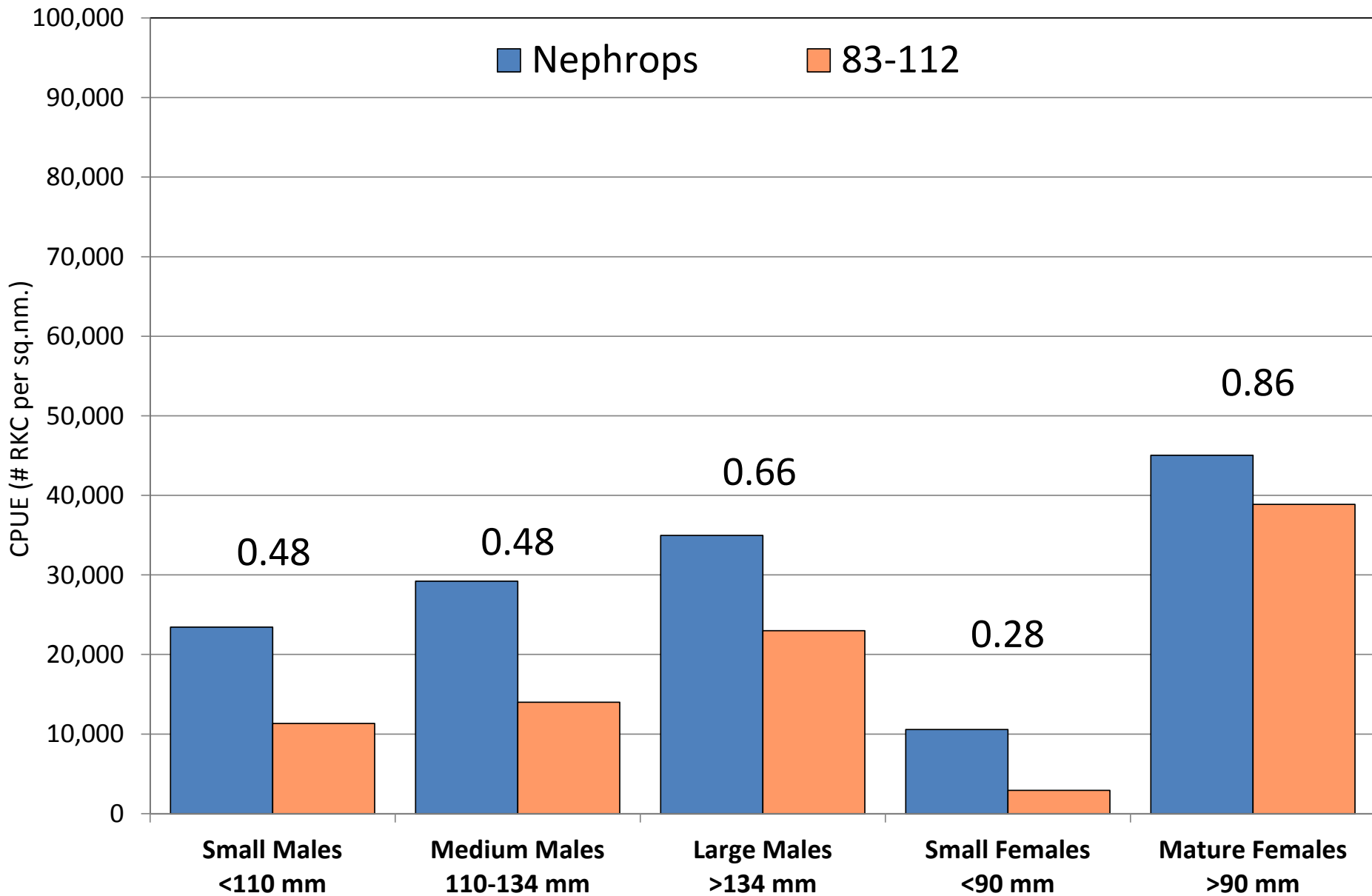
Cooperative Research
Between Government & Industry
Scott Goodman (September 14, 2015)



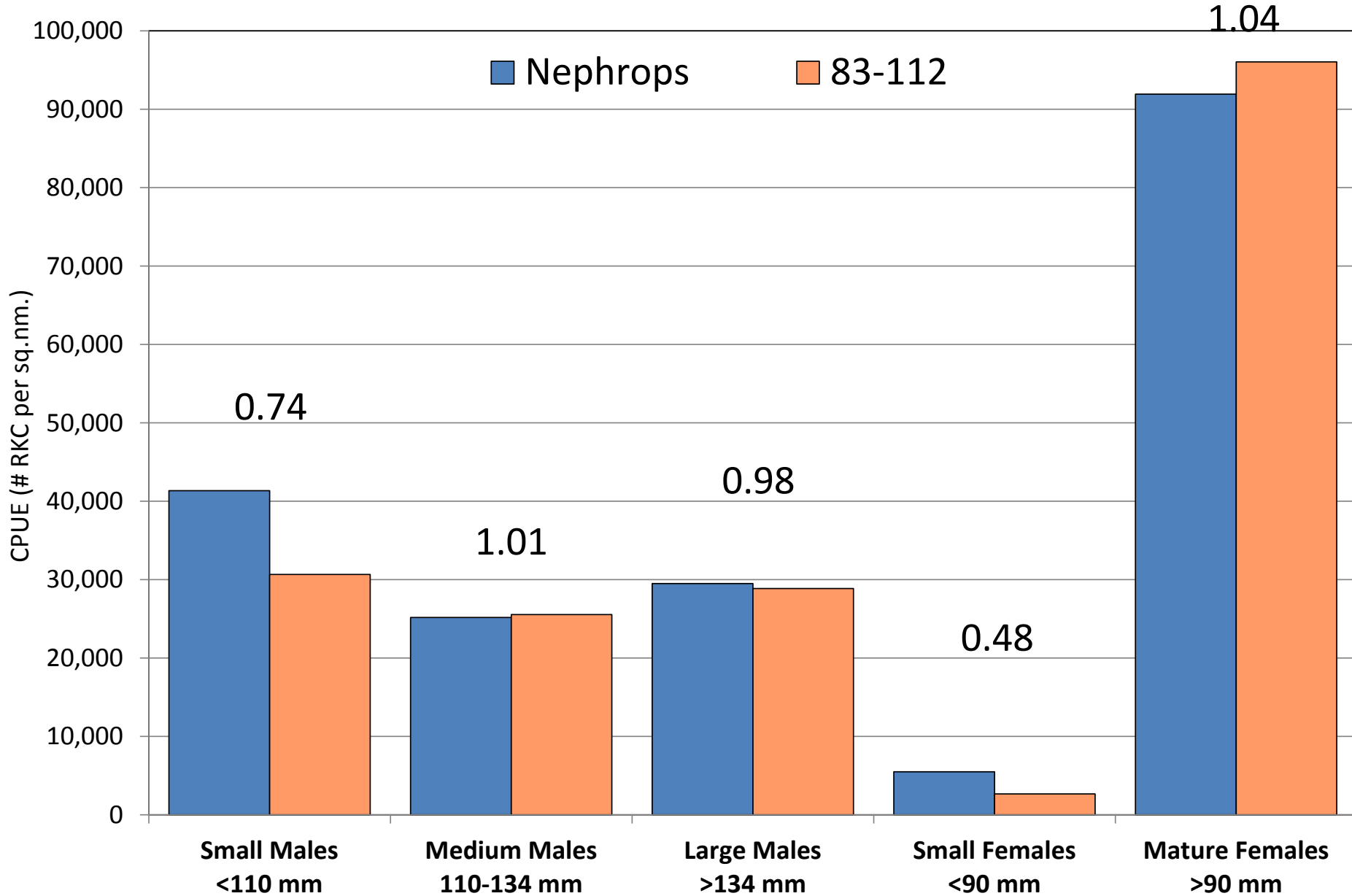
BBRKC Trawl Selectivity



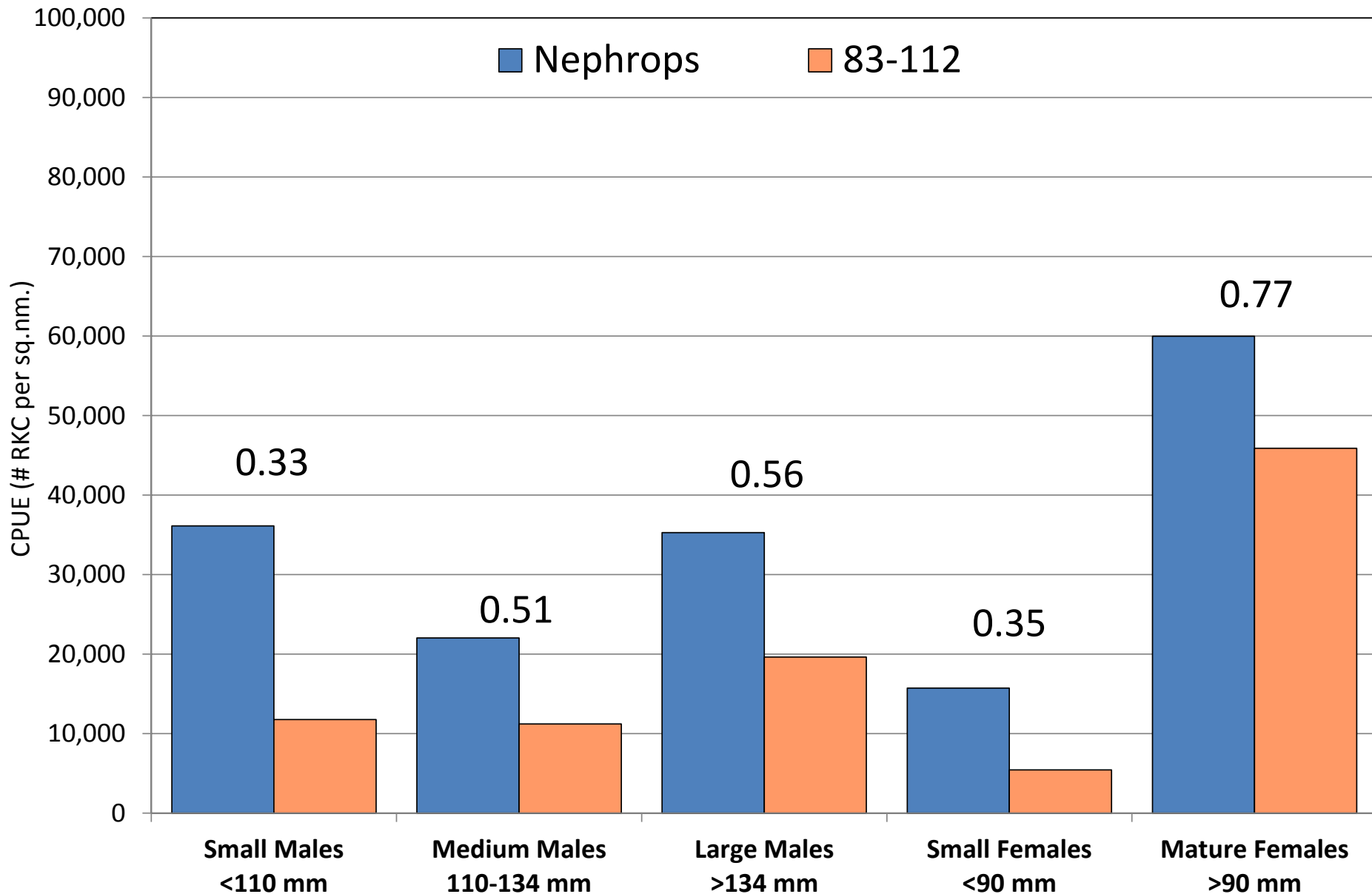
2013 Bristol Bay Red King Crab Selectivity Survey



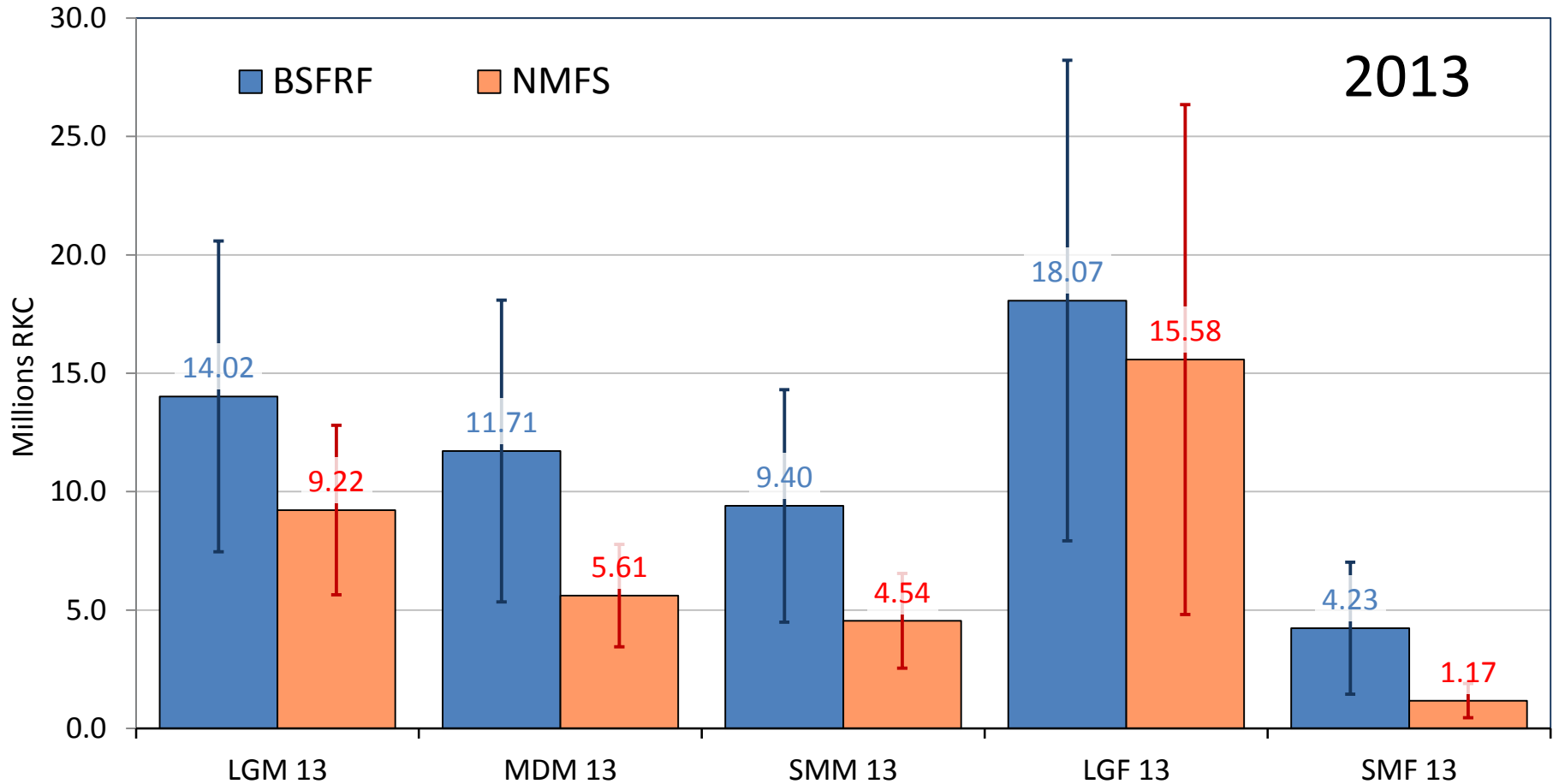
2014 Bristol Bay Red King Crab Selectivity Survey



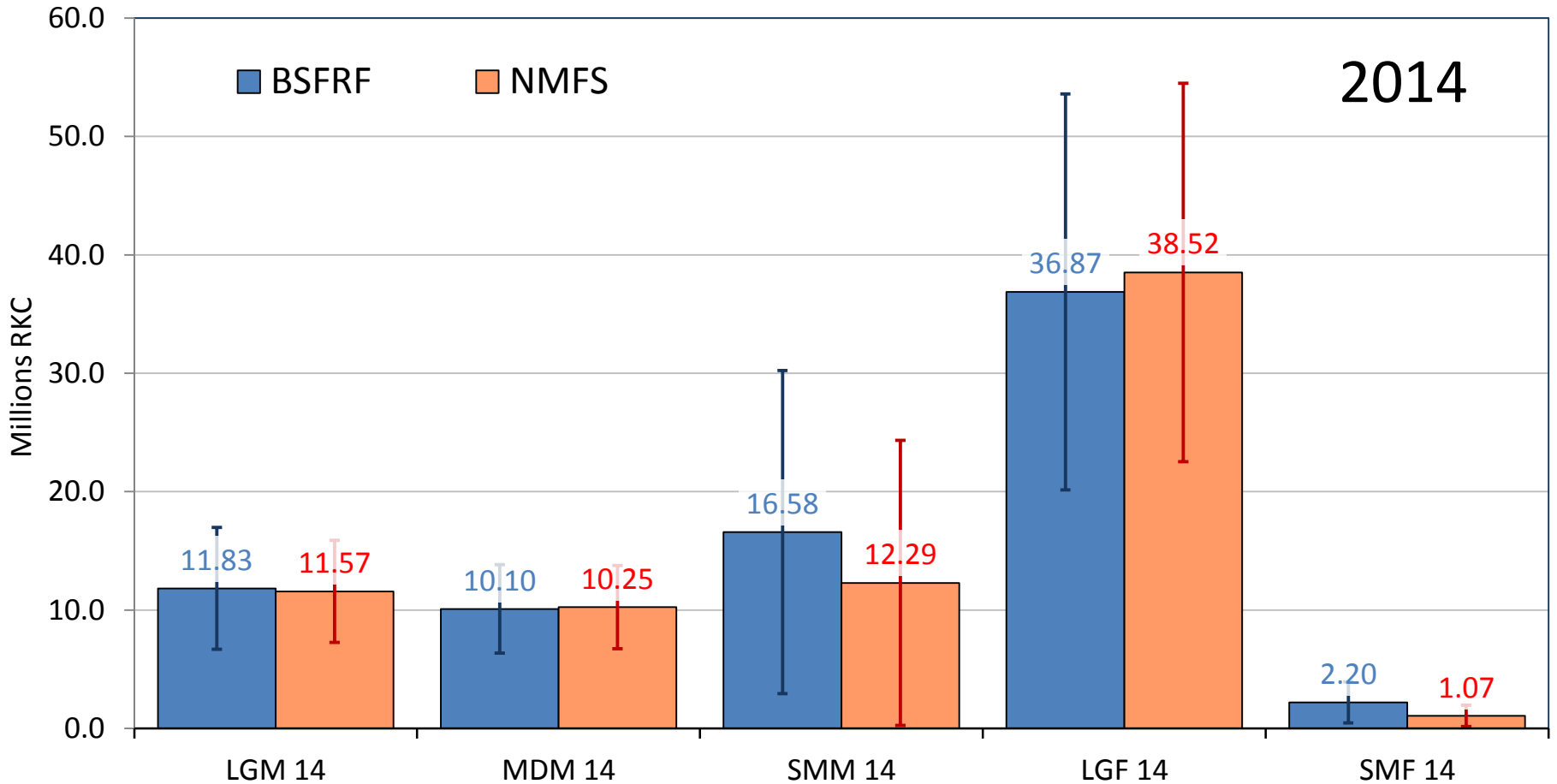
2015 Bristol Bay Red King Crab Selectivity Survey



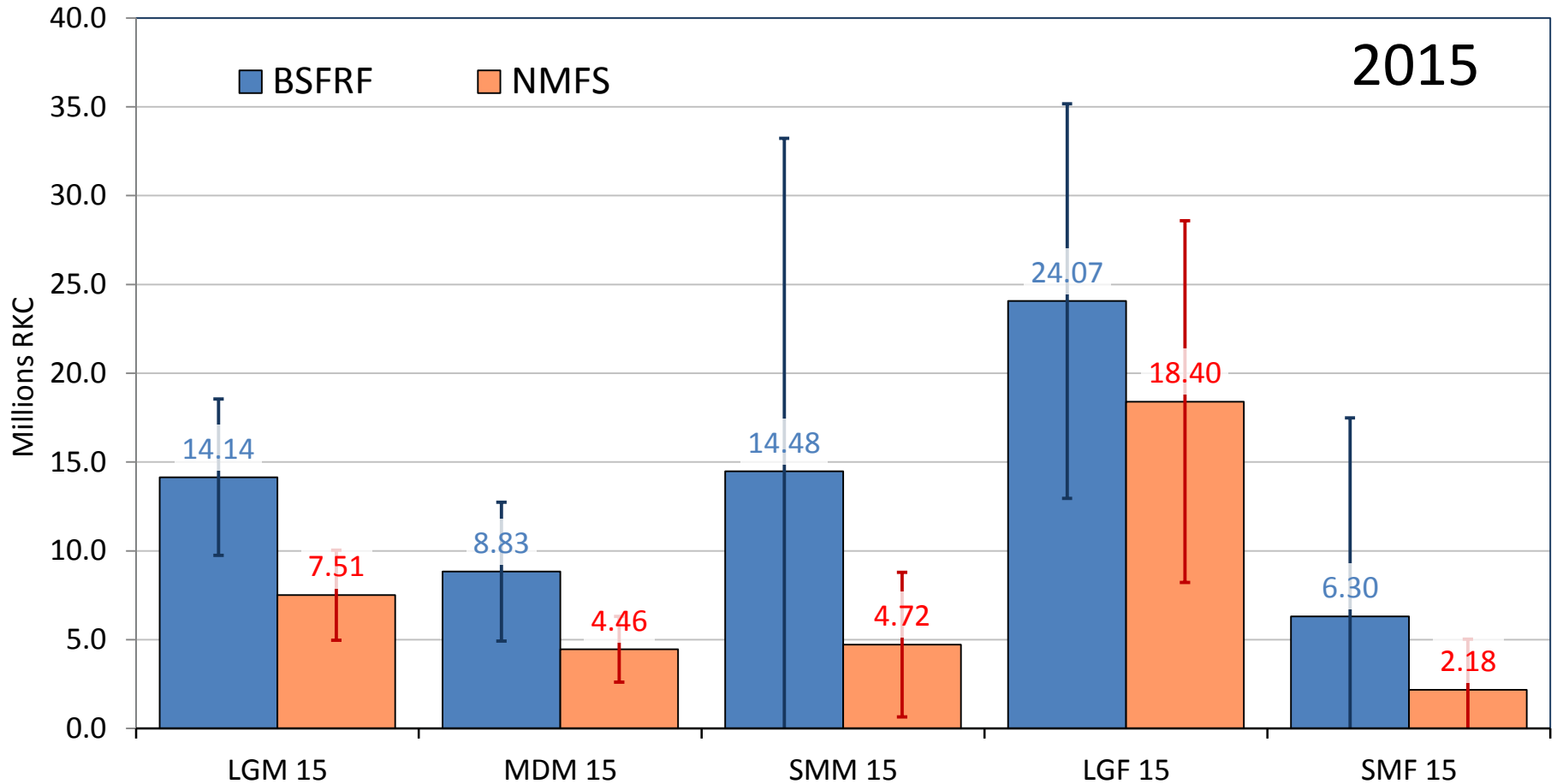
Abundance Estimates



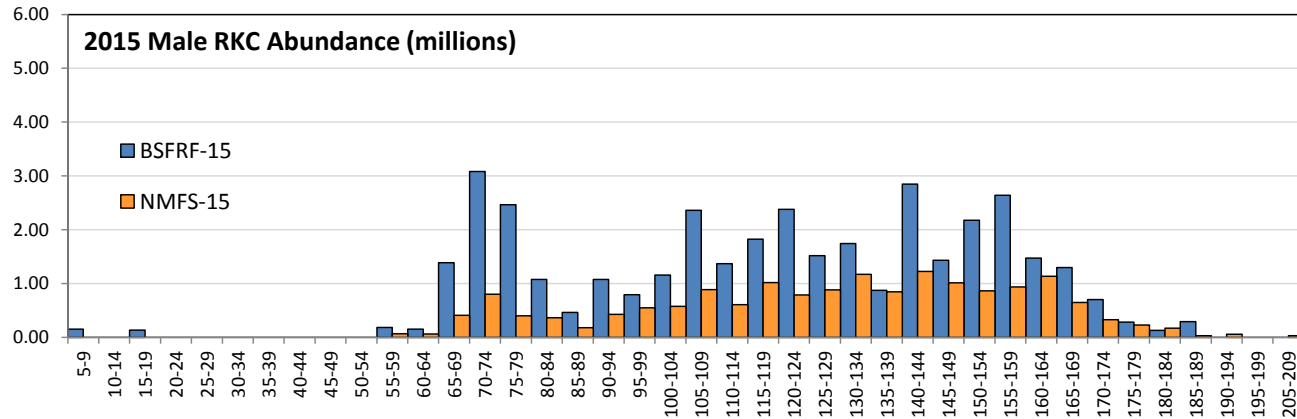
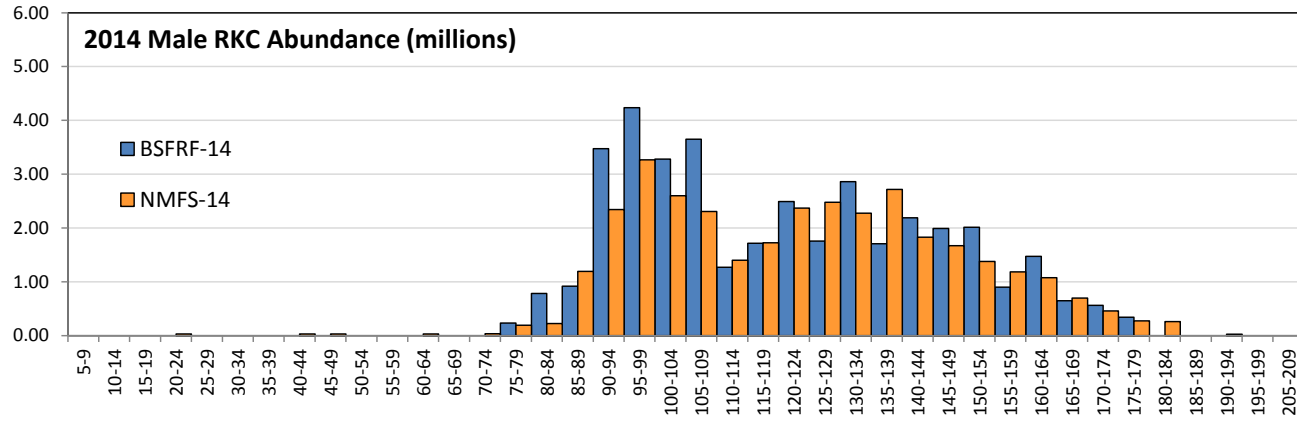
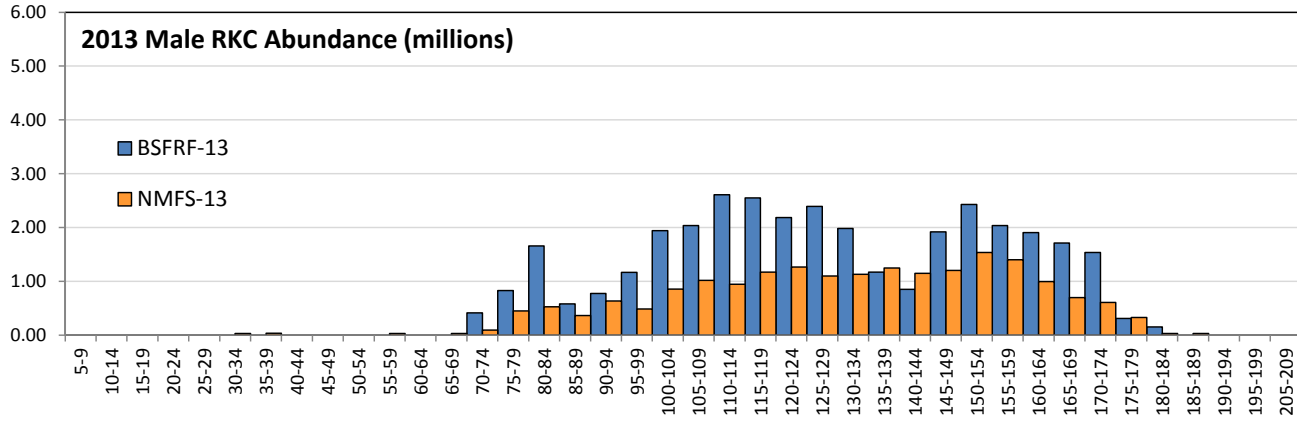
Abundance Estimates



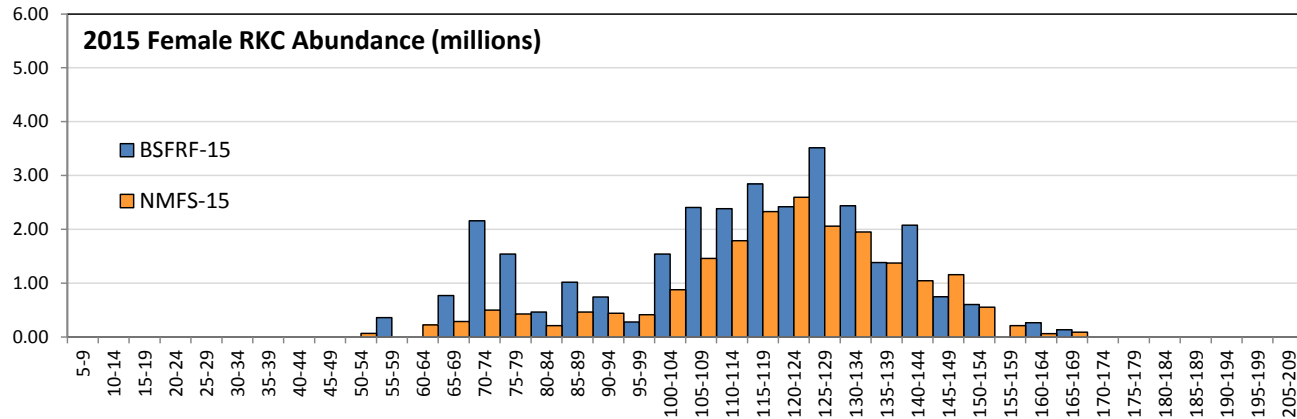
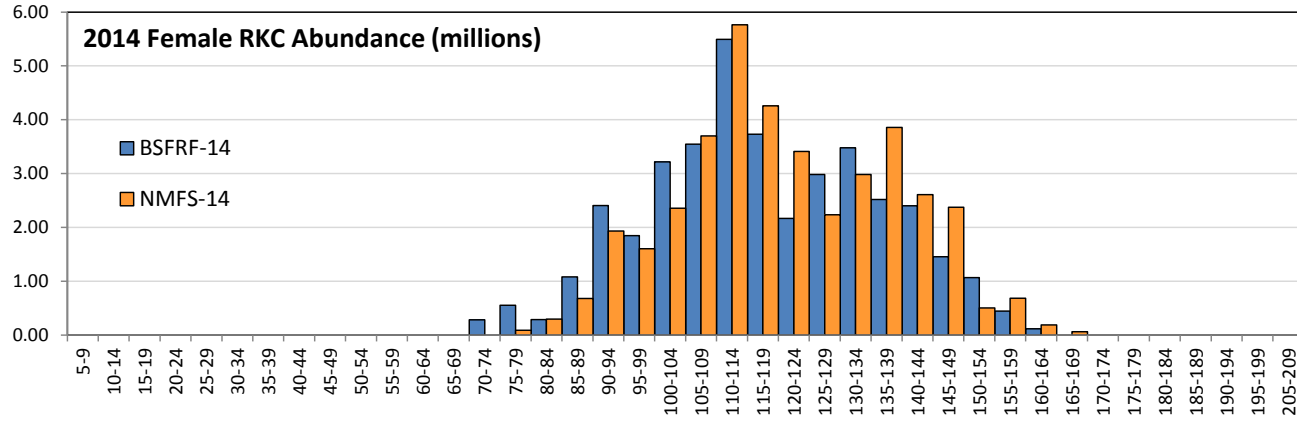
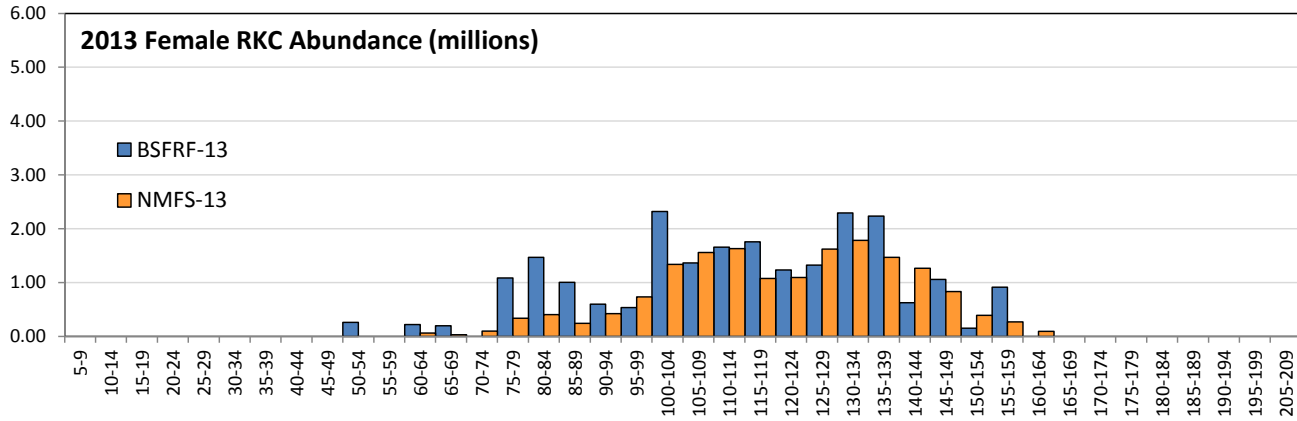
Abundance Estimates



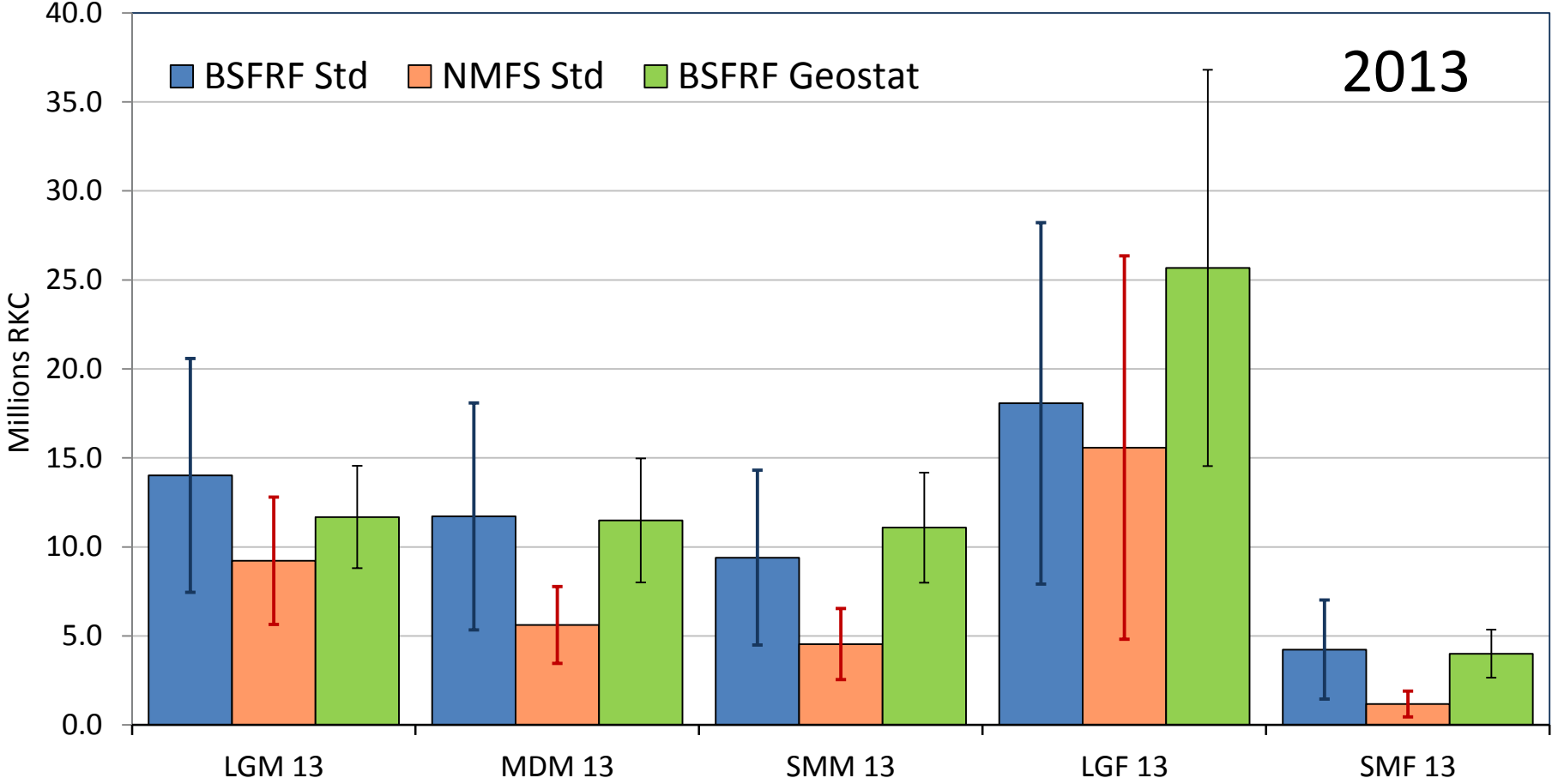
2013-2015 Male RKC Comps @ 5mm Size



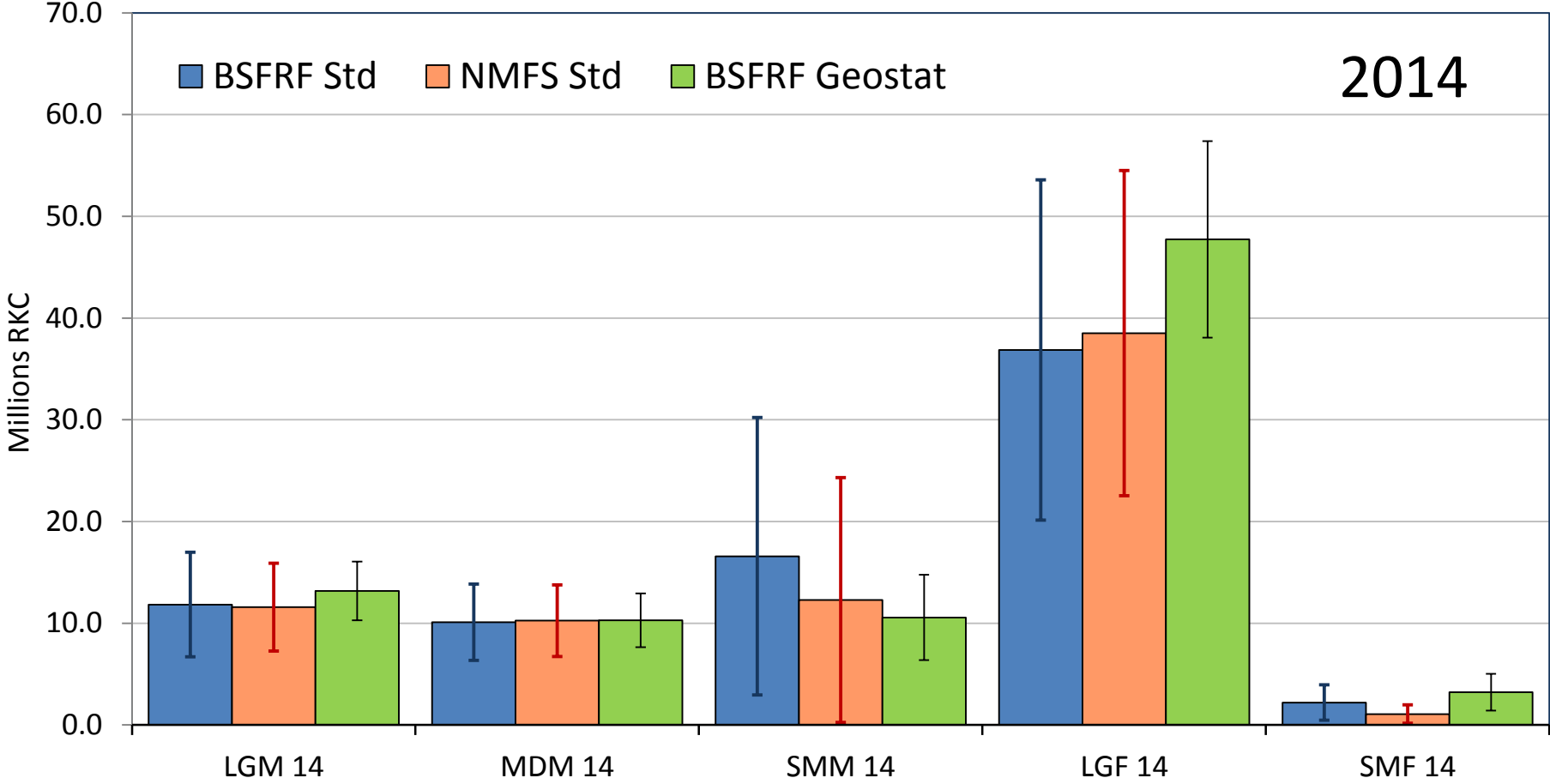
2013-2015 Female RKC Comps @ 5mm Size



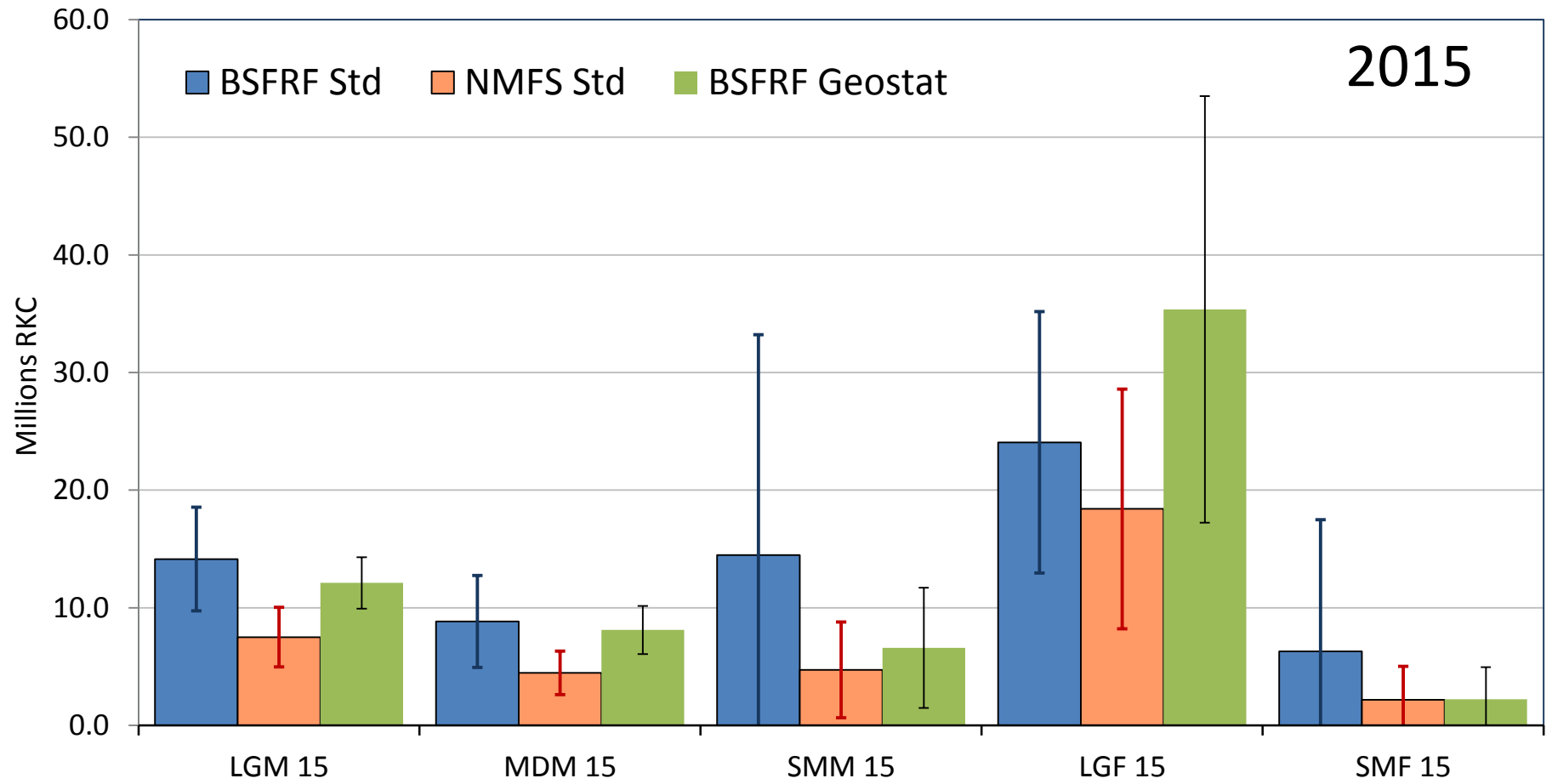
Geostatistical Summaries (SBS+Prerecruit)



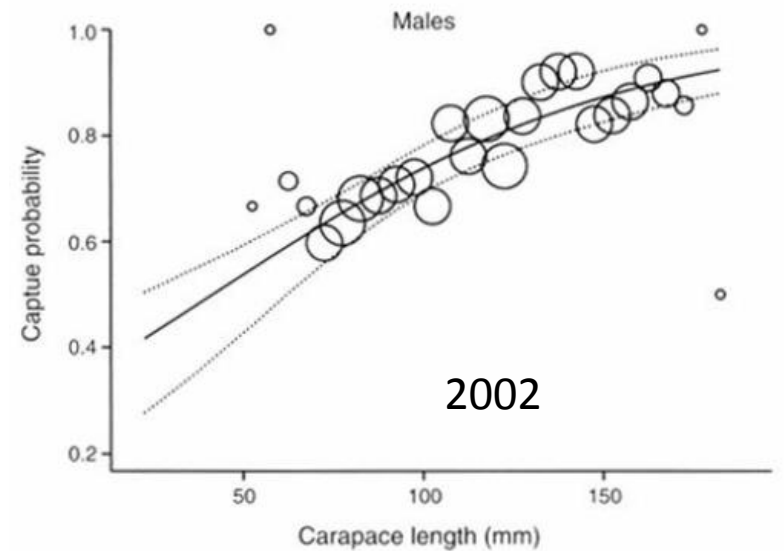
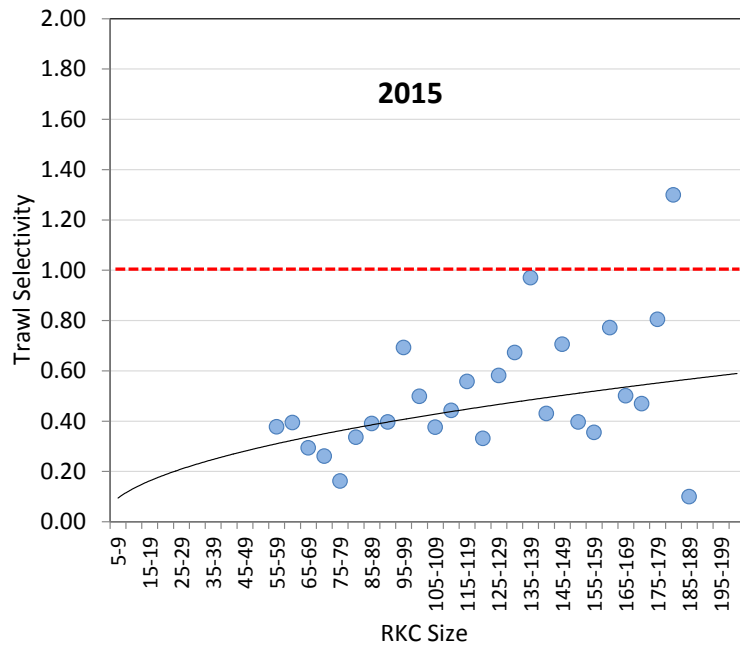
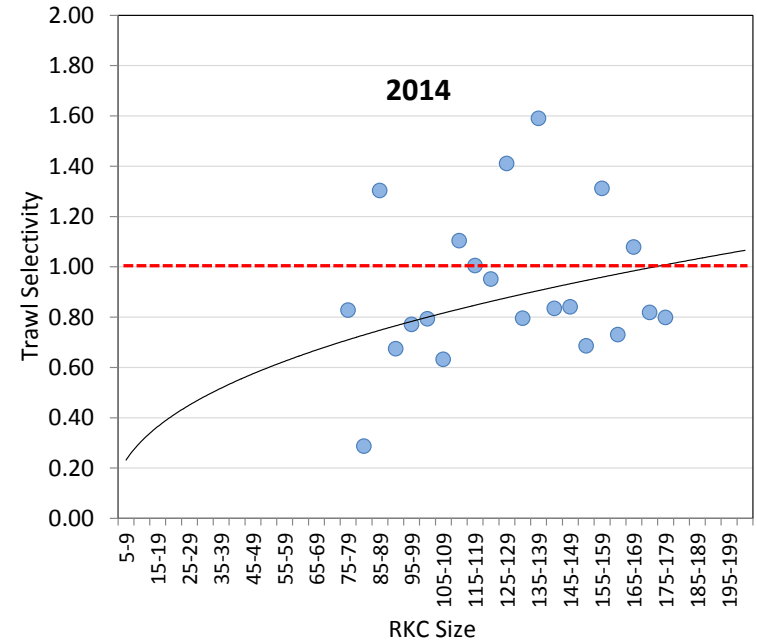
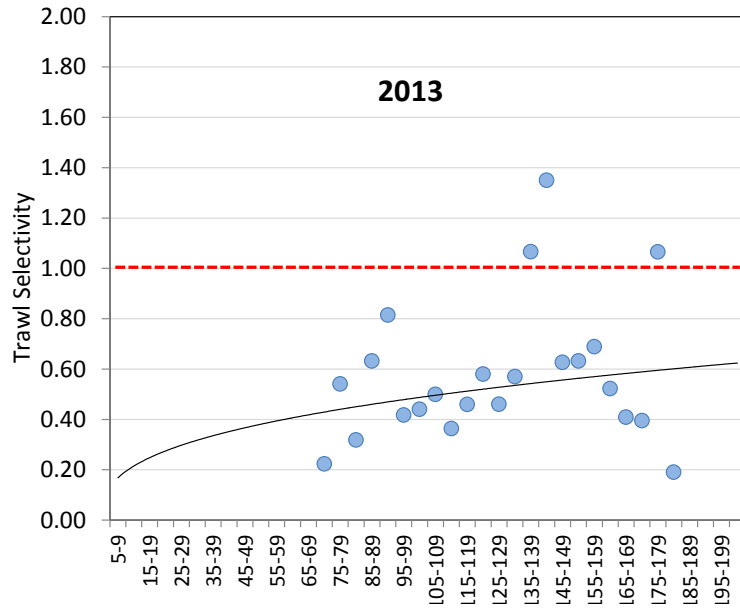
Geostatistical Summaries (SBS+Prerecruit)



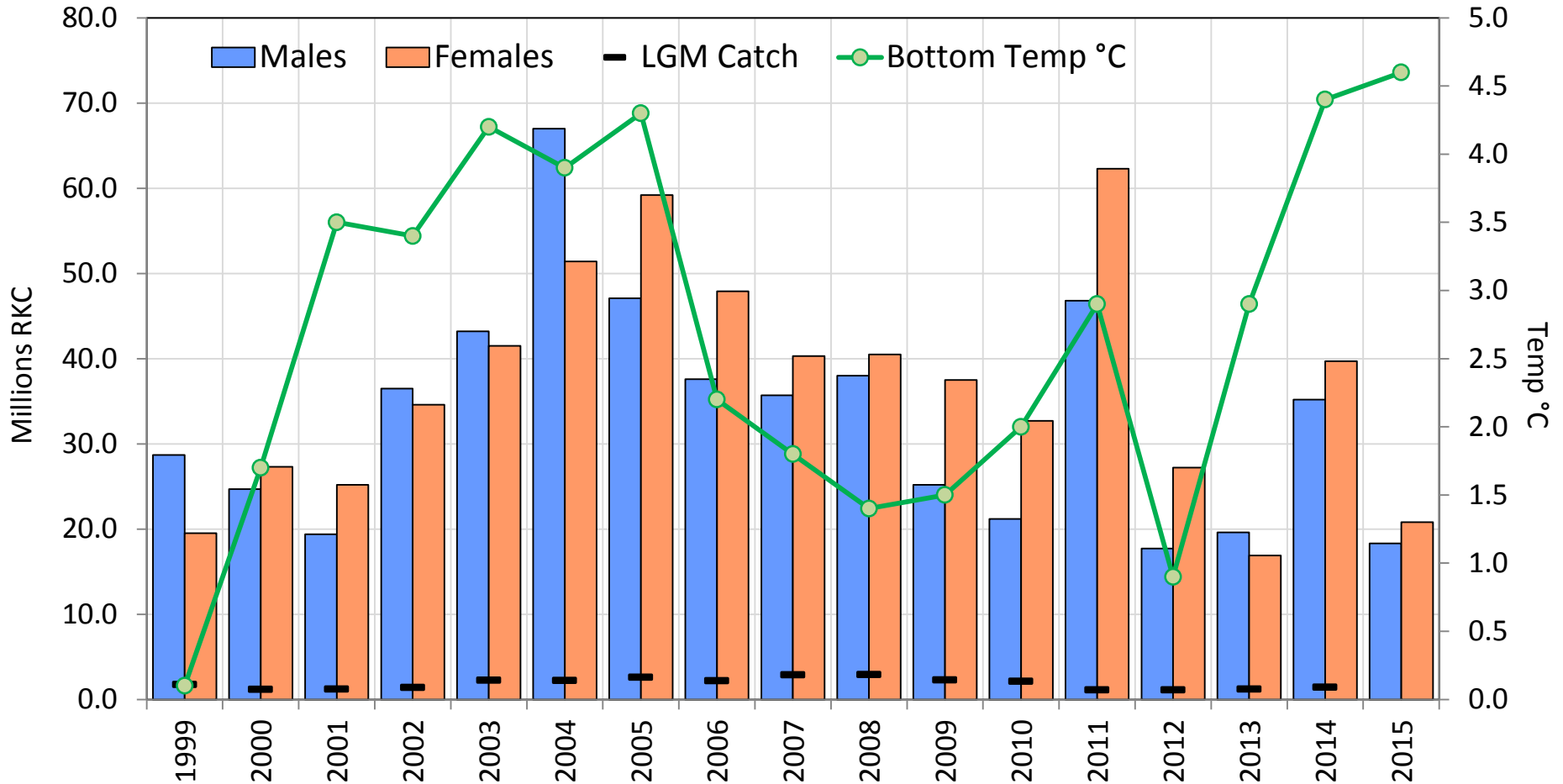
Geostatistical Summaries (SBS+Prerecruit)



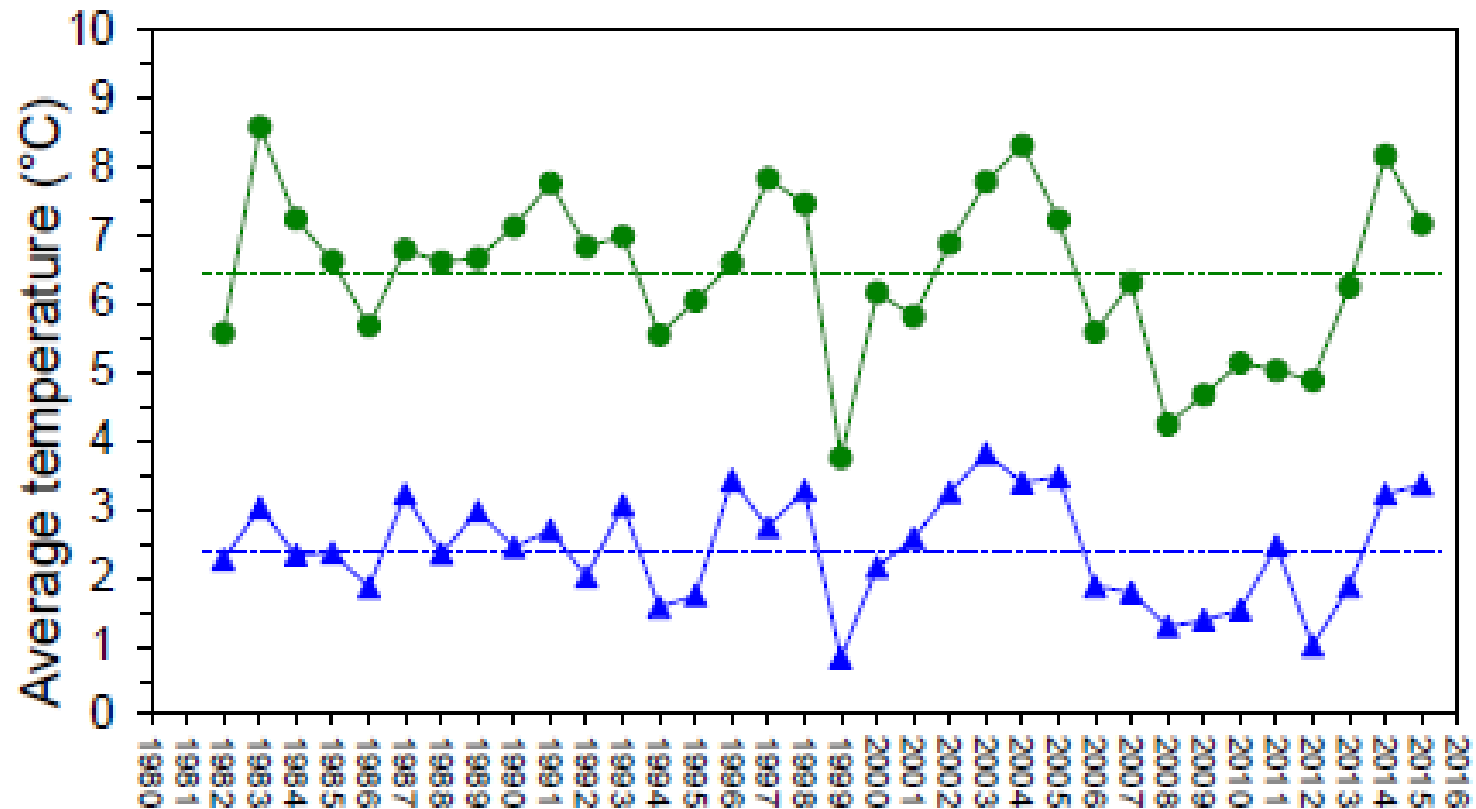
Trawl Efficiency – CPUE Ratio (NMFS:BSFRF) & Underbag



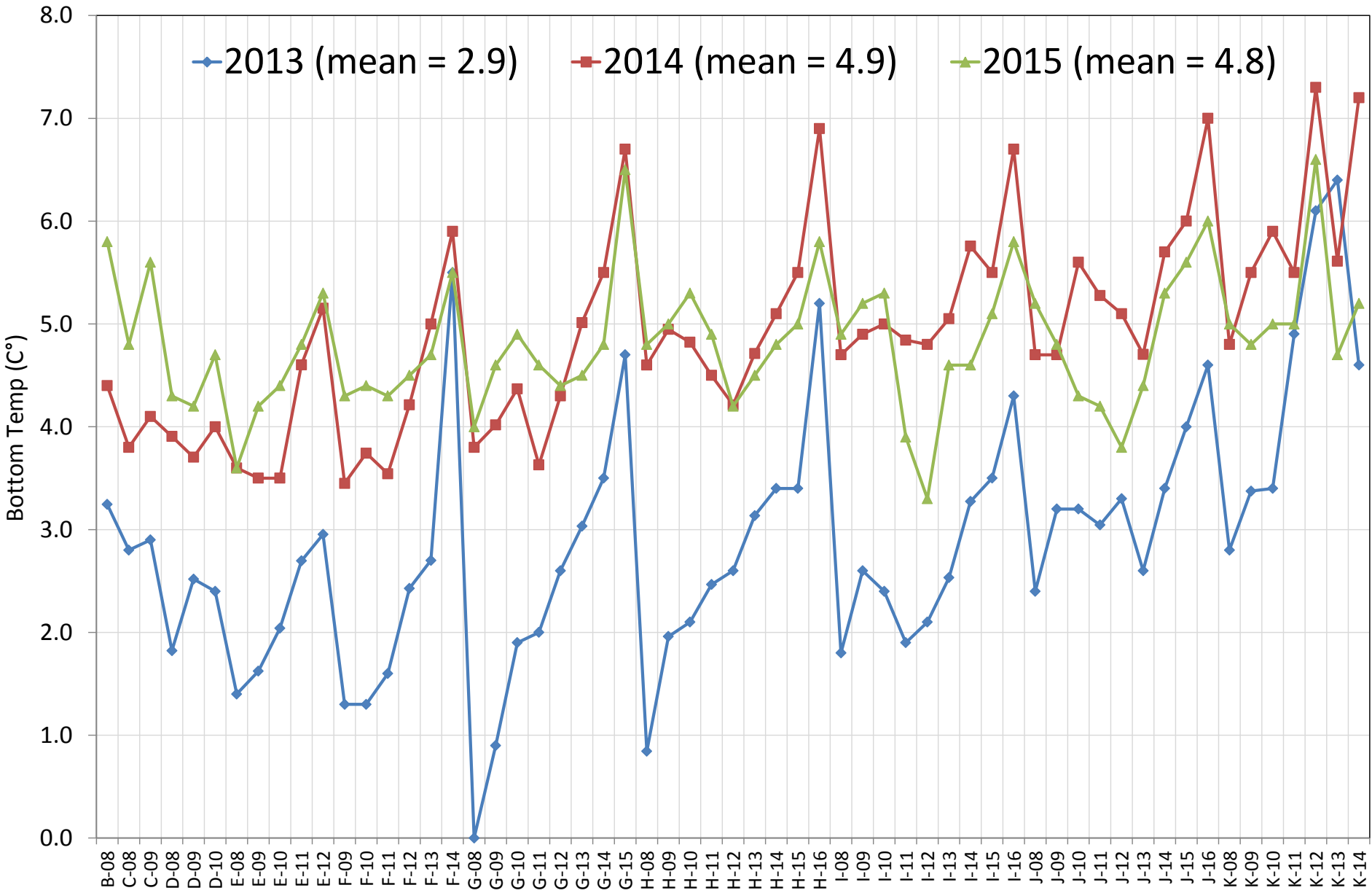
Temp v. Abundance



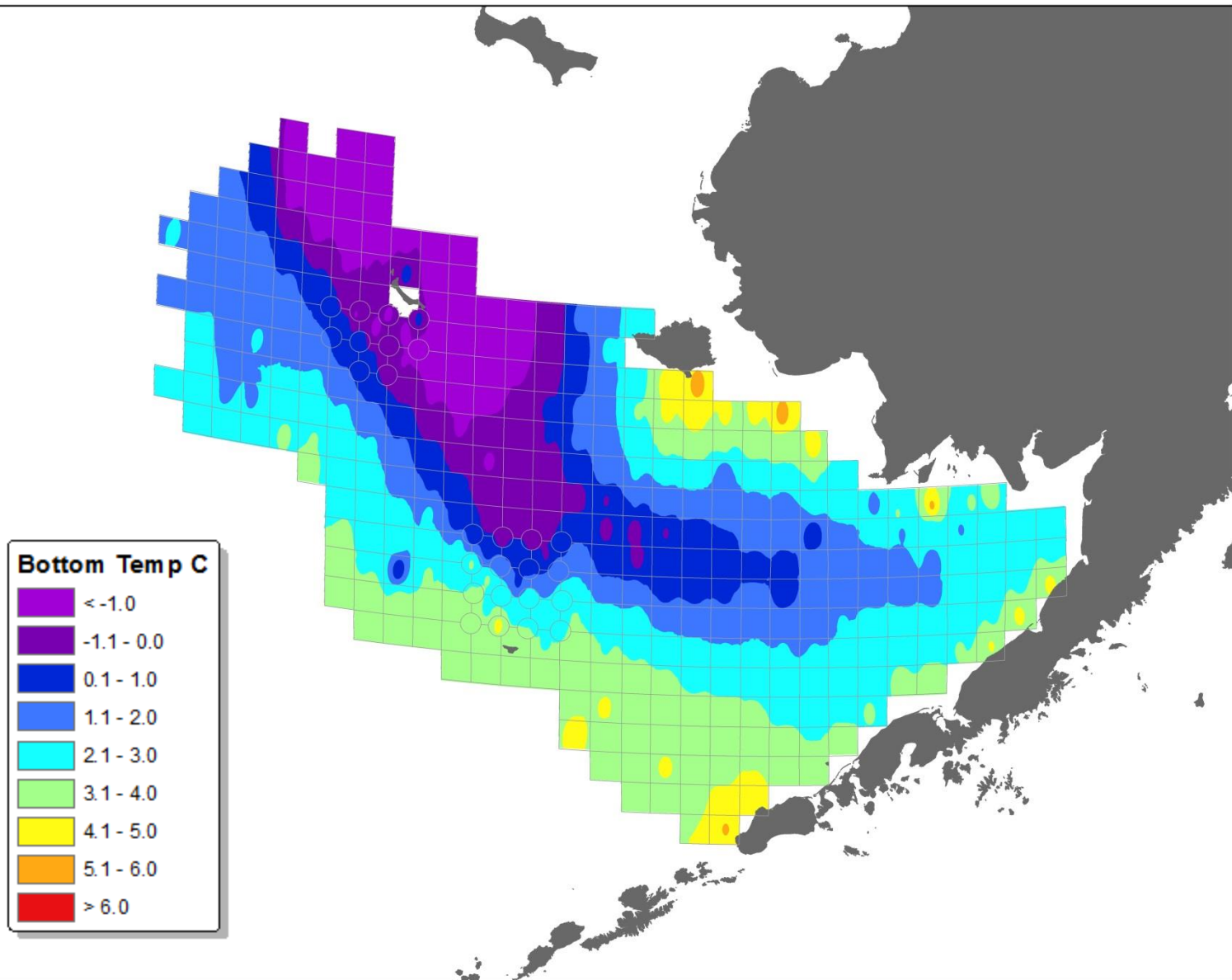
Annual Summer Temp Comparison (All NMFS Stations)



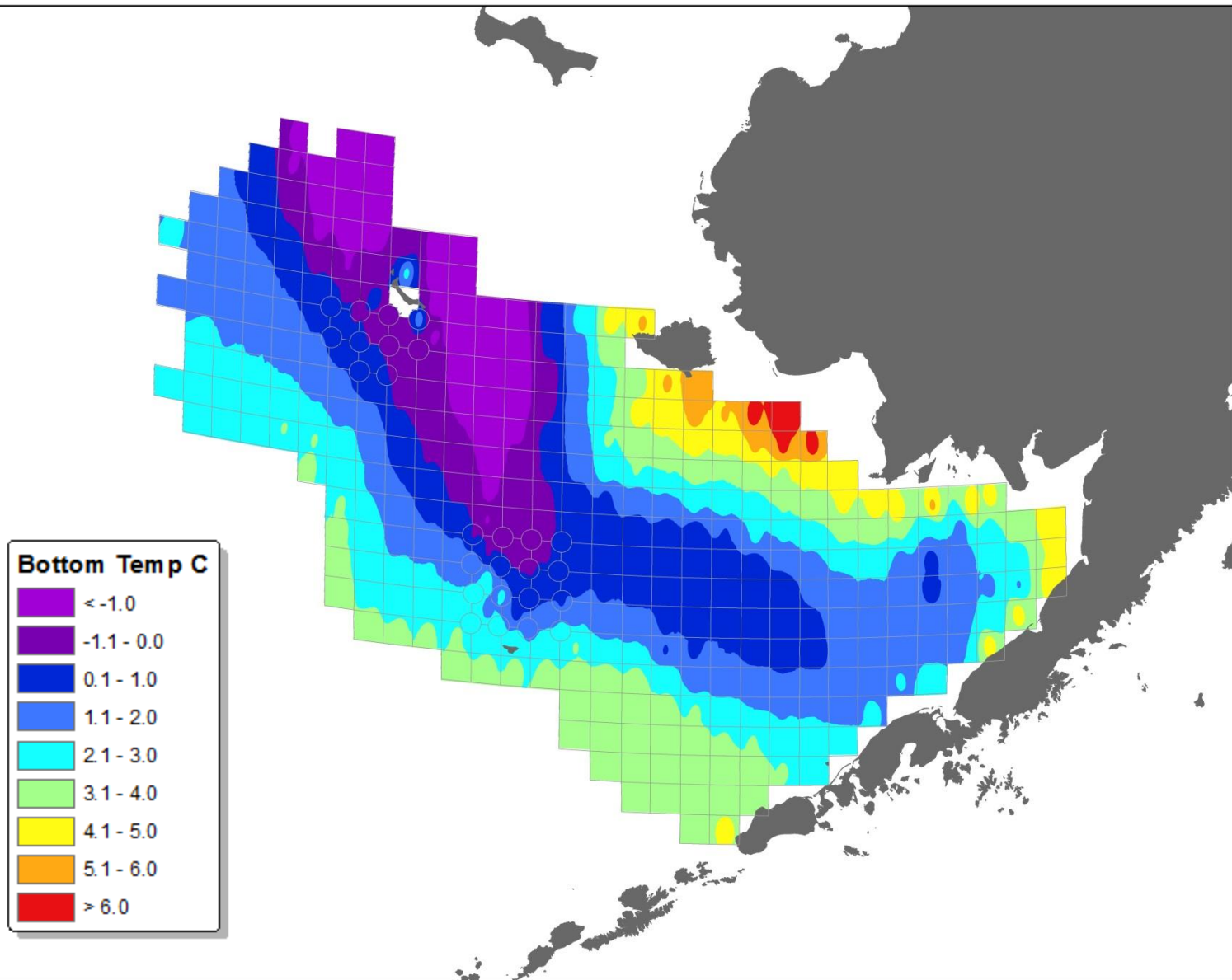
Bottom Temp Comparison (60 NMFS Stations)



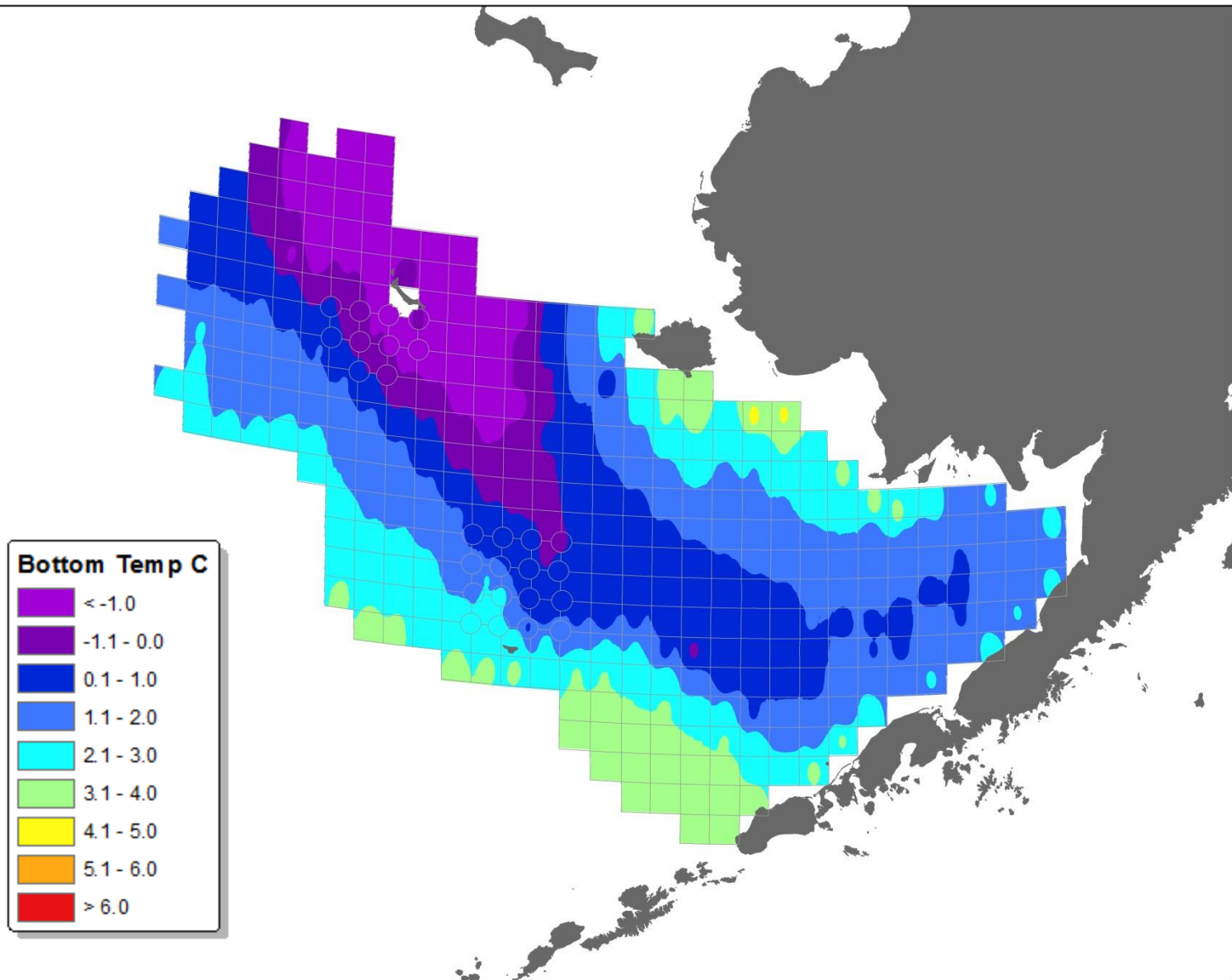
2006 Bristol Bay Cold Pool



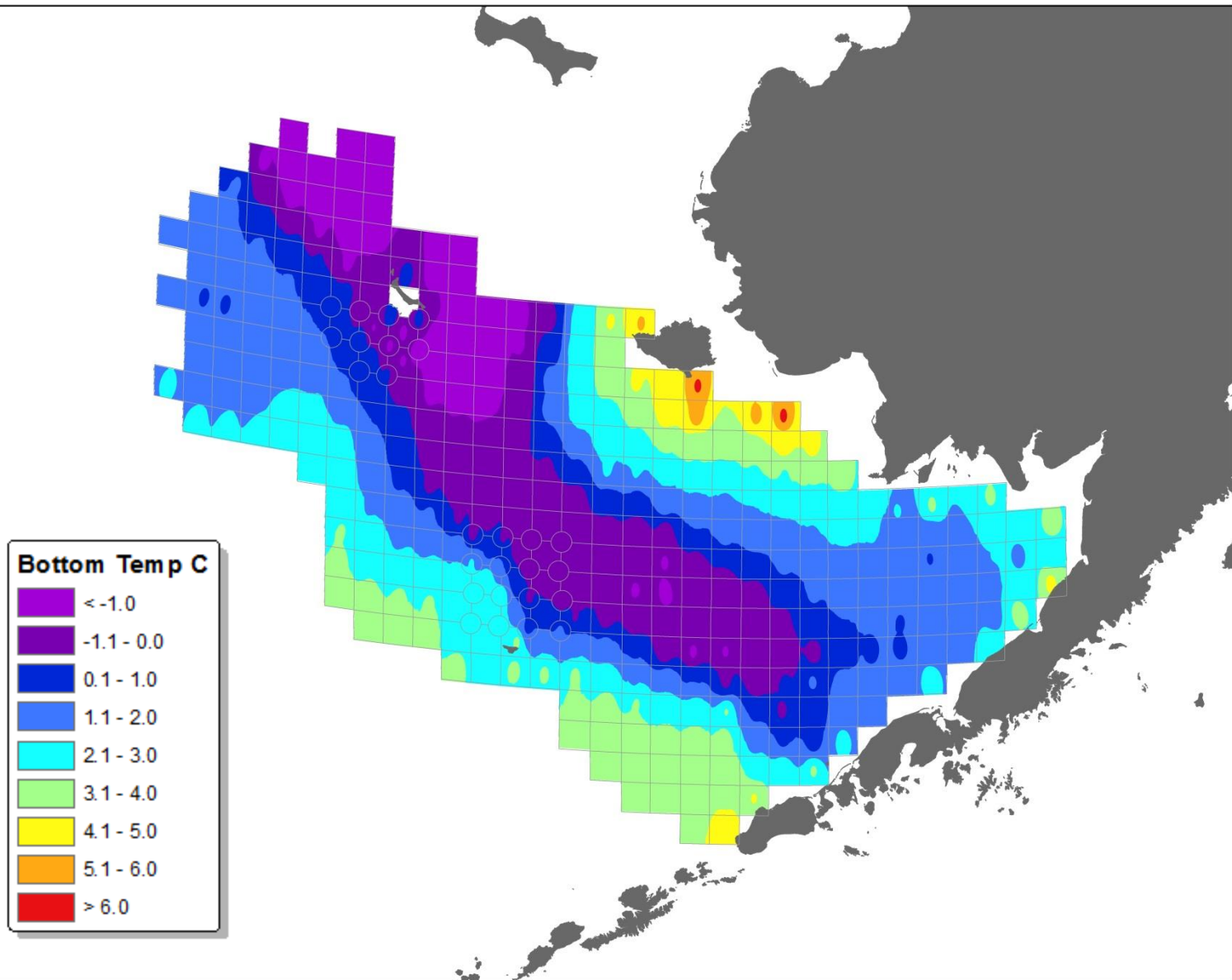
2007 Bristol Bay Cold Pool



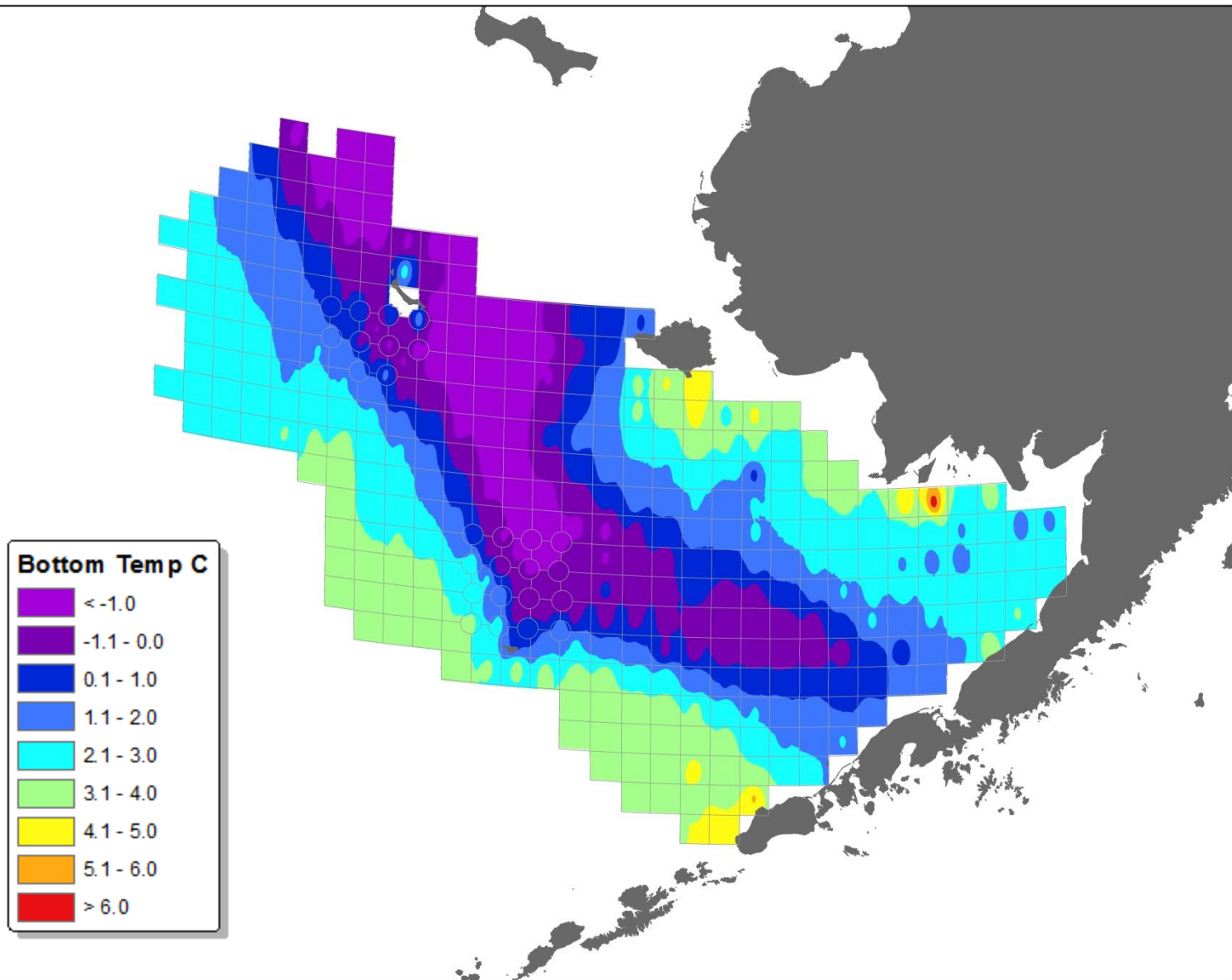
2008 Bristol Bay Cold Pool



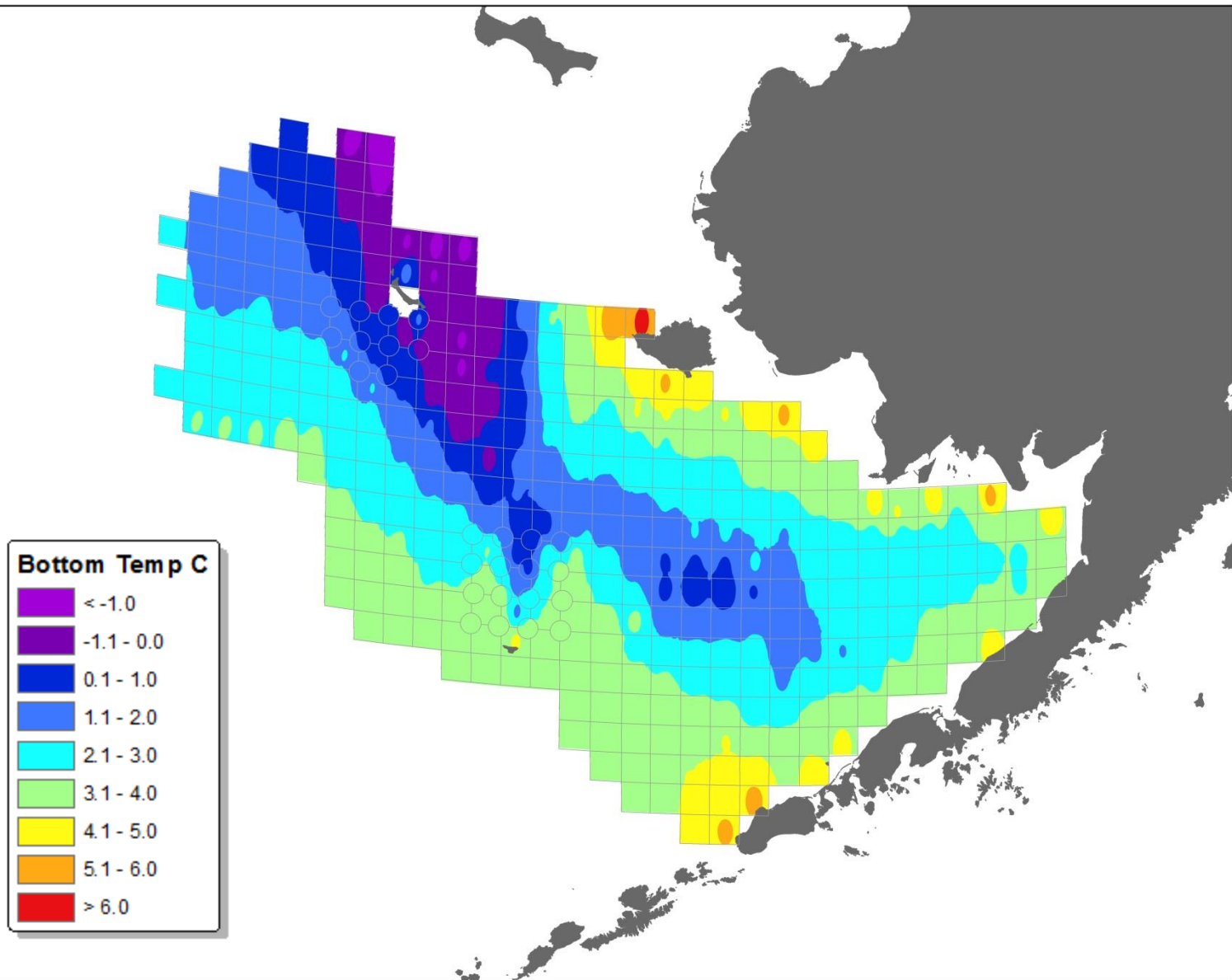
2009 Bristol Bay Cold Pool



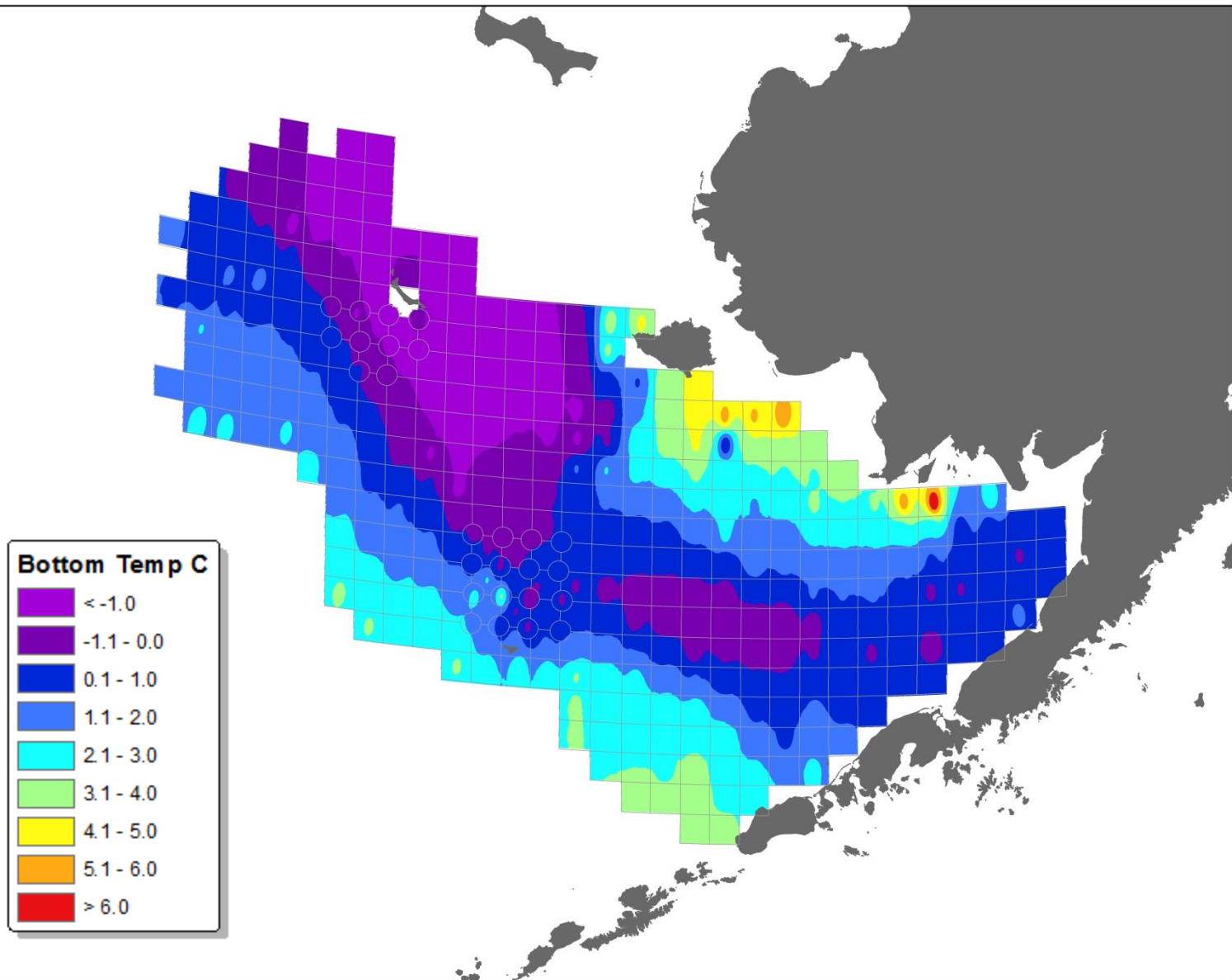
2010 Bristol Bay Cold Pool



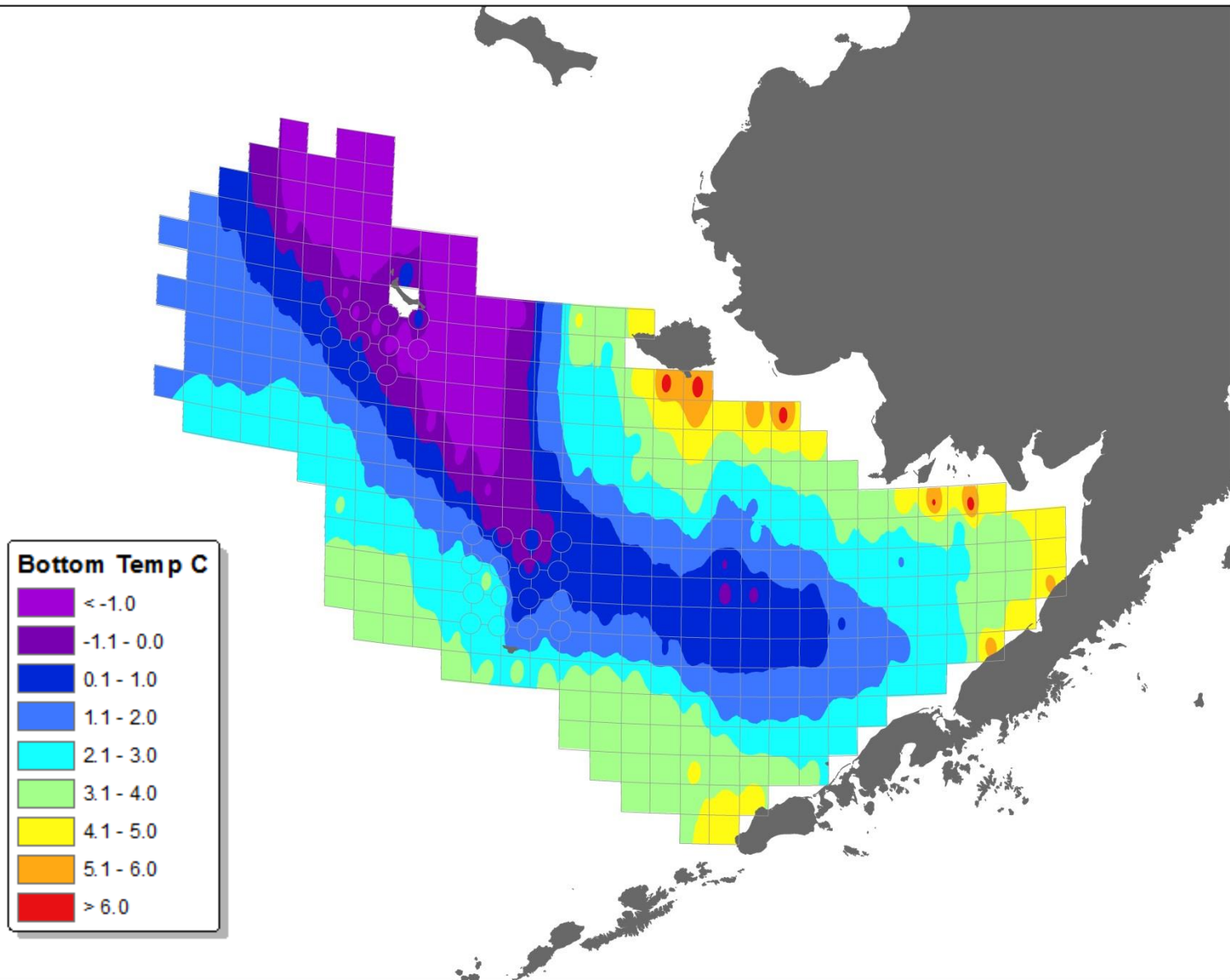
2011 Bristol Bay Cold Pool



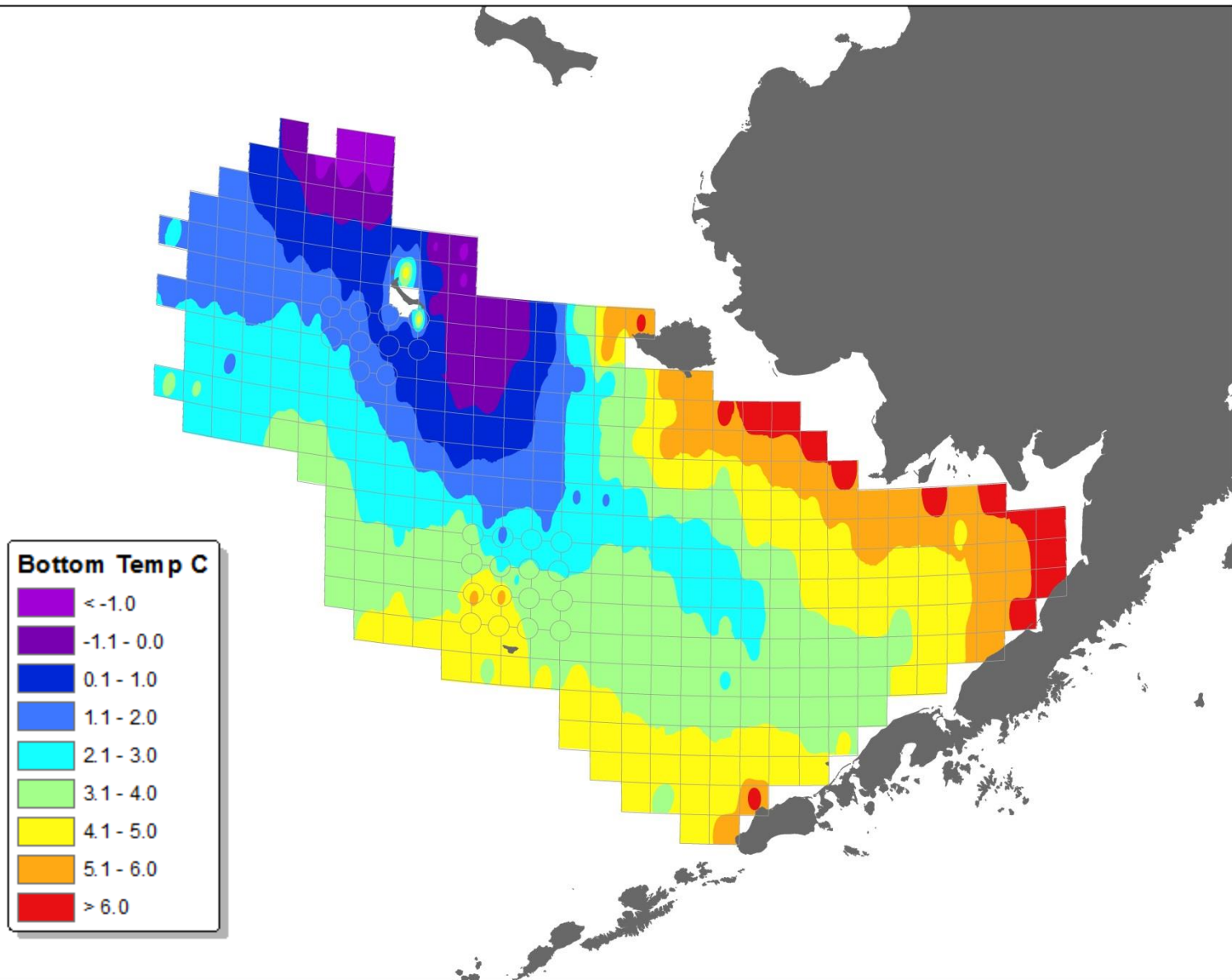
2012 Bristol Bay Cold Pool



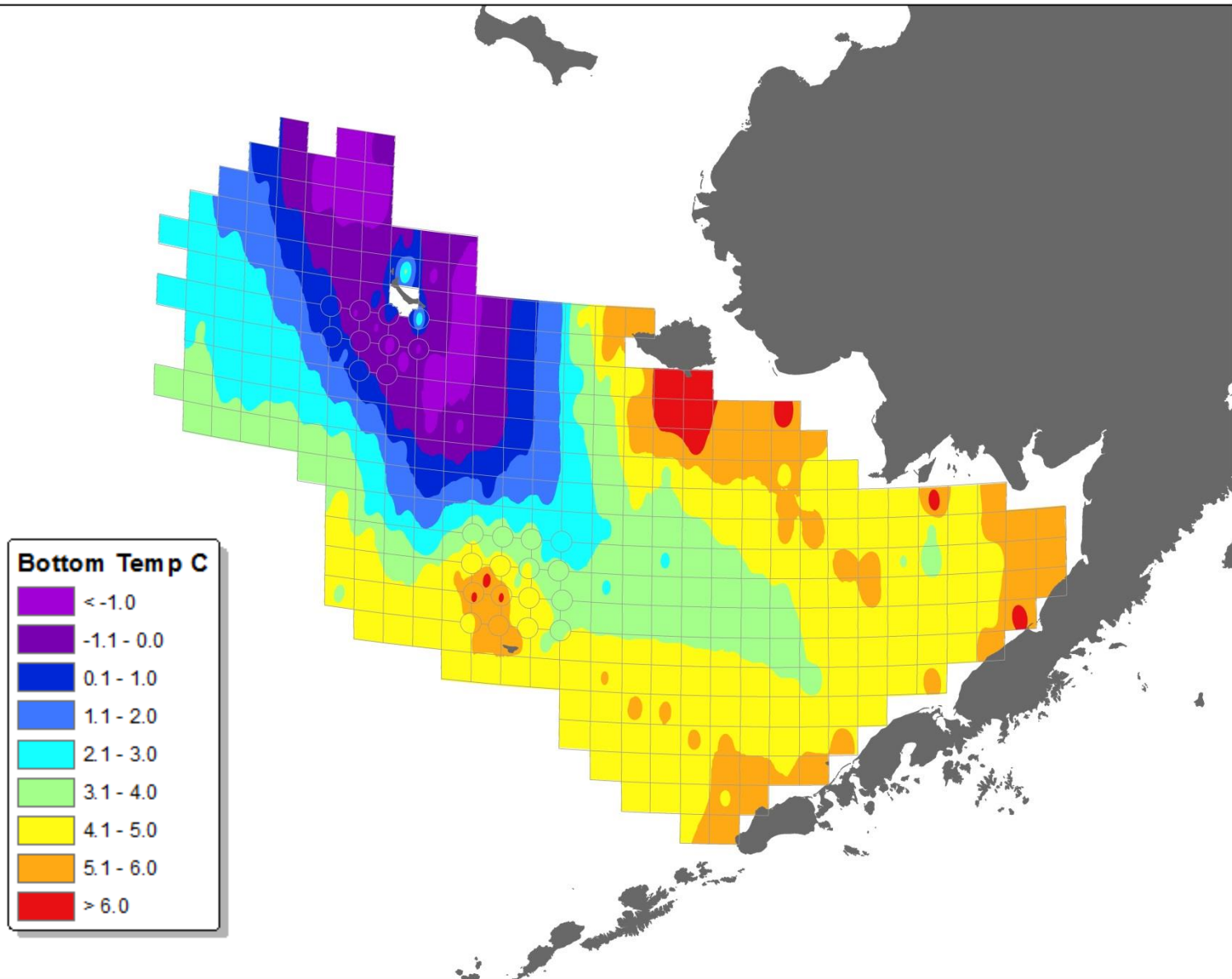
2013 Bristol Bay Cold Pool



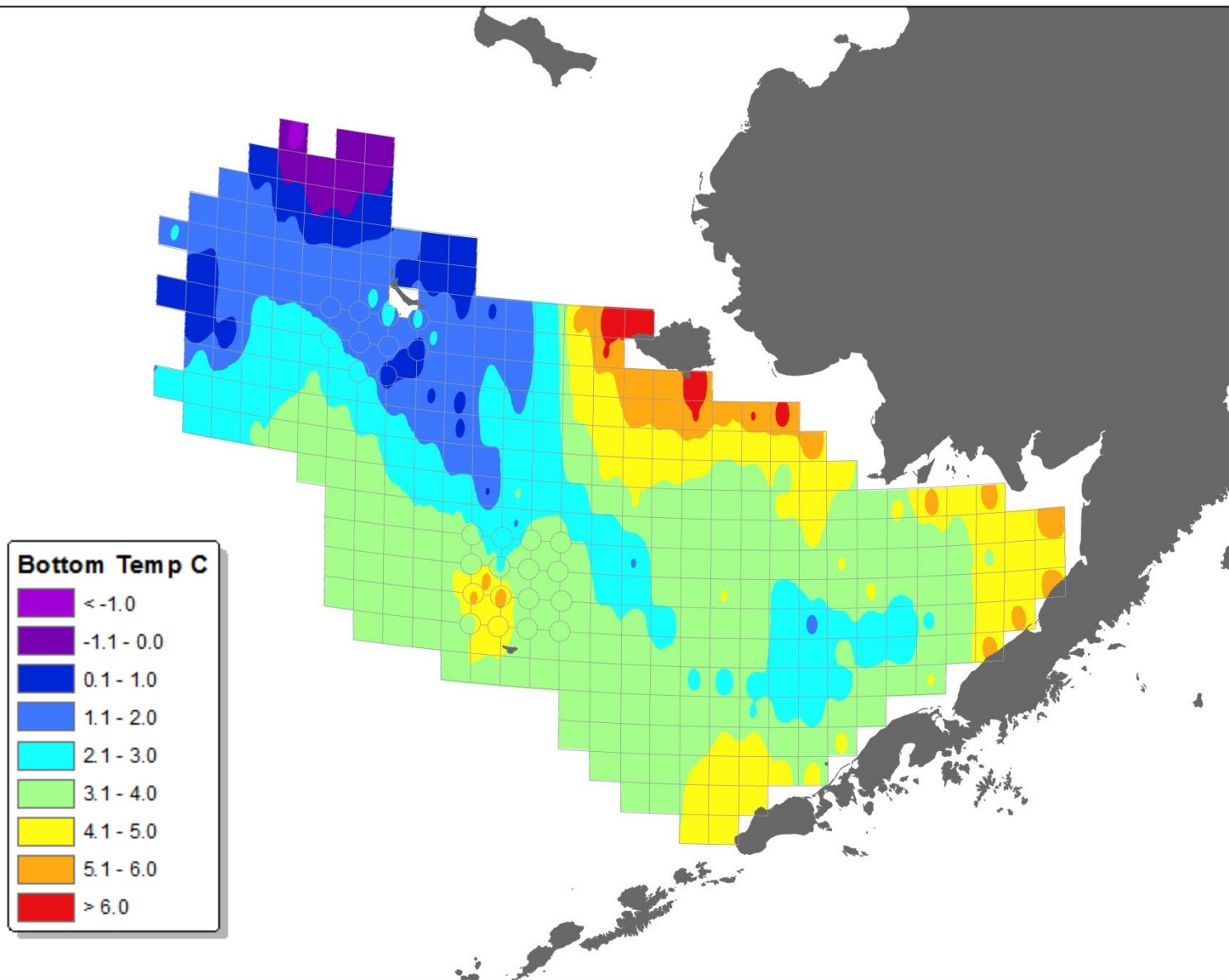
2014 Bristol Bay Cold Pool



2015 Bristol Bay Cold Pool



2002 Bristol Bay Cold Pool



Prior on selectivity – RKC Underbag 2002

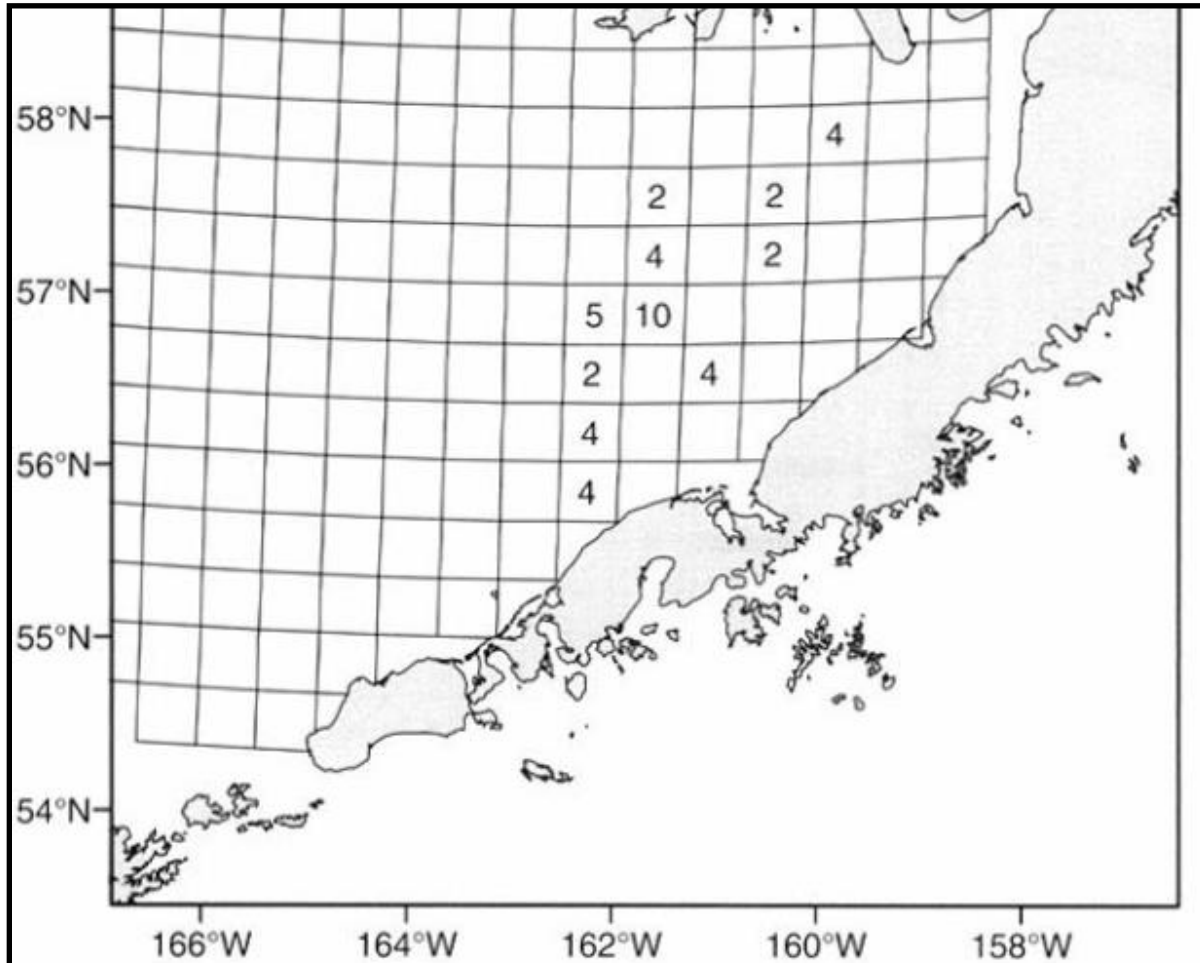


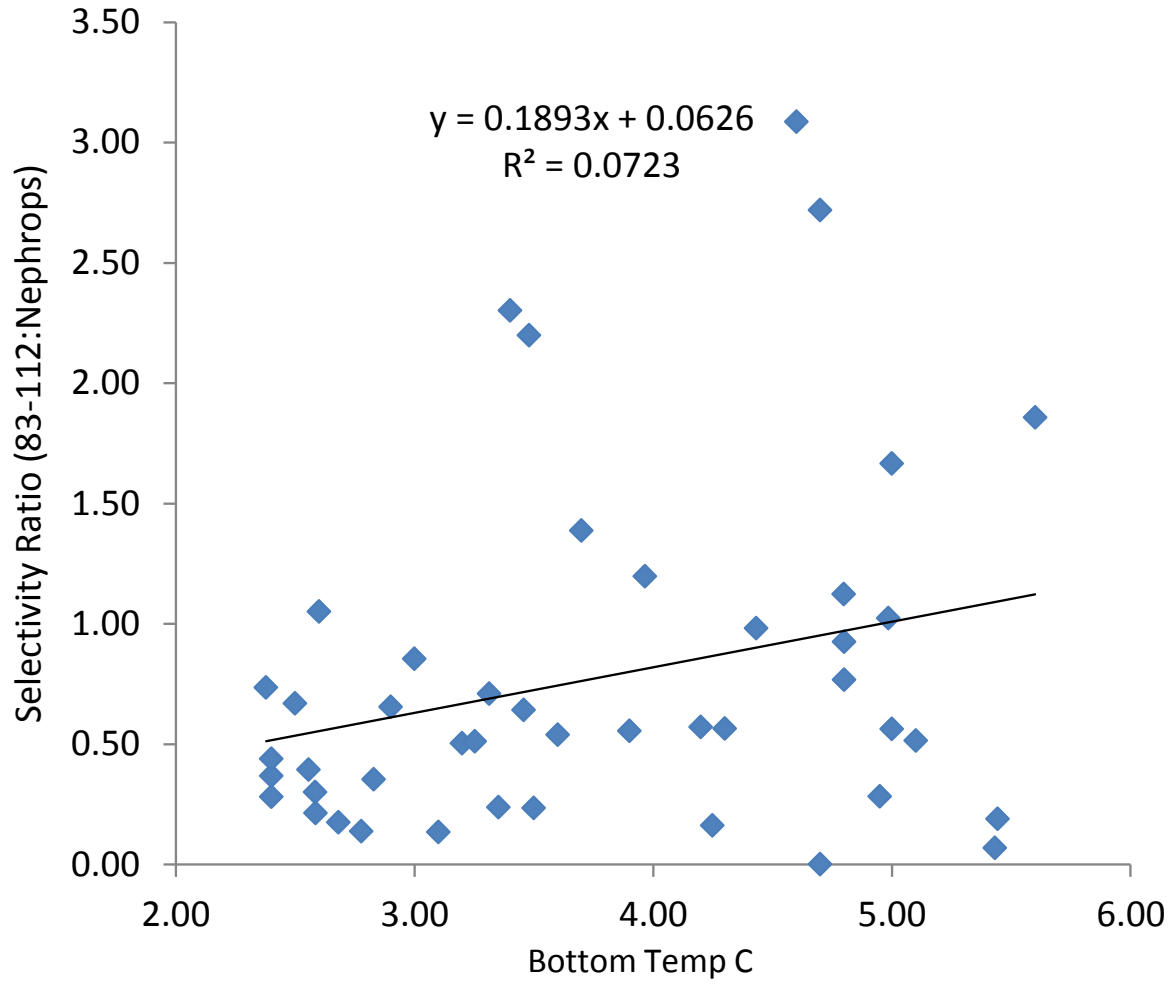
Figure 2

The annual eastern Bering Sea survey station grid showing the number of successful tows per station block made during the 2002 red king crab capture efficiency study. Each block represents a 400-nmi² area.

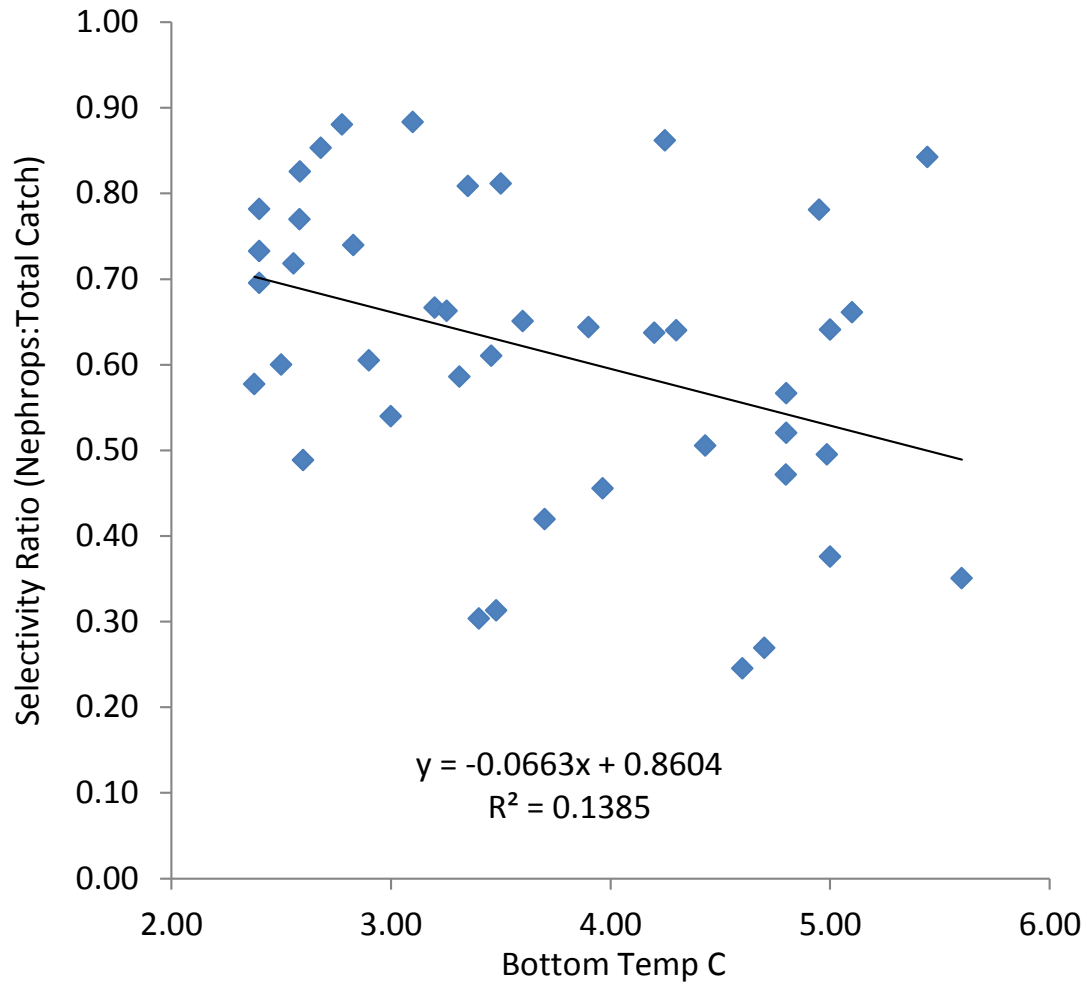
Trawl Selectivity Variability

Info	2013	2014	2015
BSFRF Charters	<i>Ocean Hope 3 Half Moon Bay</i>	<i>Ocean Hope 3 Sunset Bay</i>	<i>Ocean Hope 3 Half Moon Bay</i>
NMFS Charters	<i>Aldebaran Alaska Knight</i>	<i>Vesteraalen Alaska Knight</i>	<i>Vesteraalen Alaska Knight</i>
Total Sample	60	60	60
Avg Bottom T	2.9	4.9	4.8
LGM Selectivity	0.66	0.86	0.56
MTF Selectivity	0.98	1.04	0.77
Trawl Video	No	5	60+

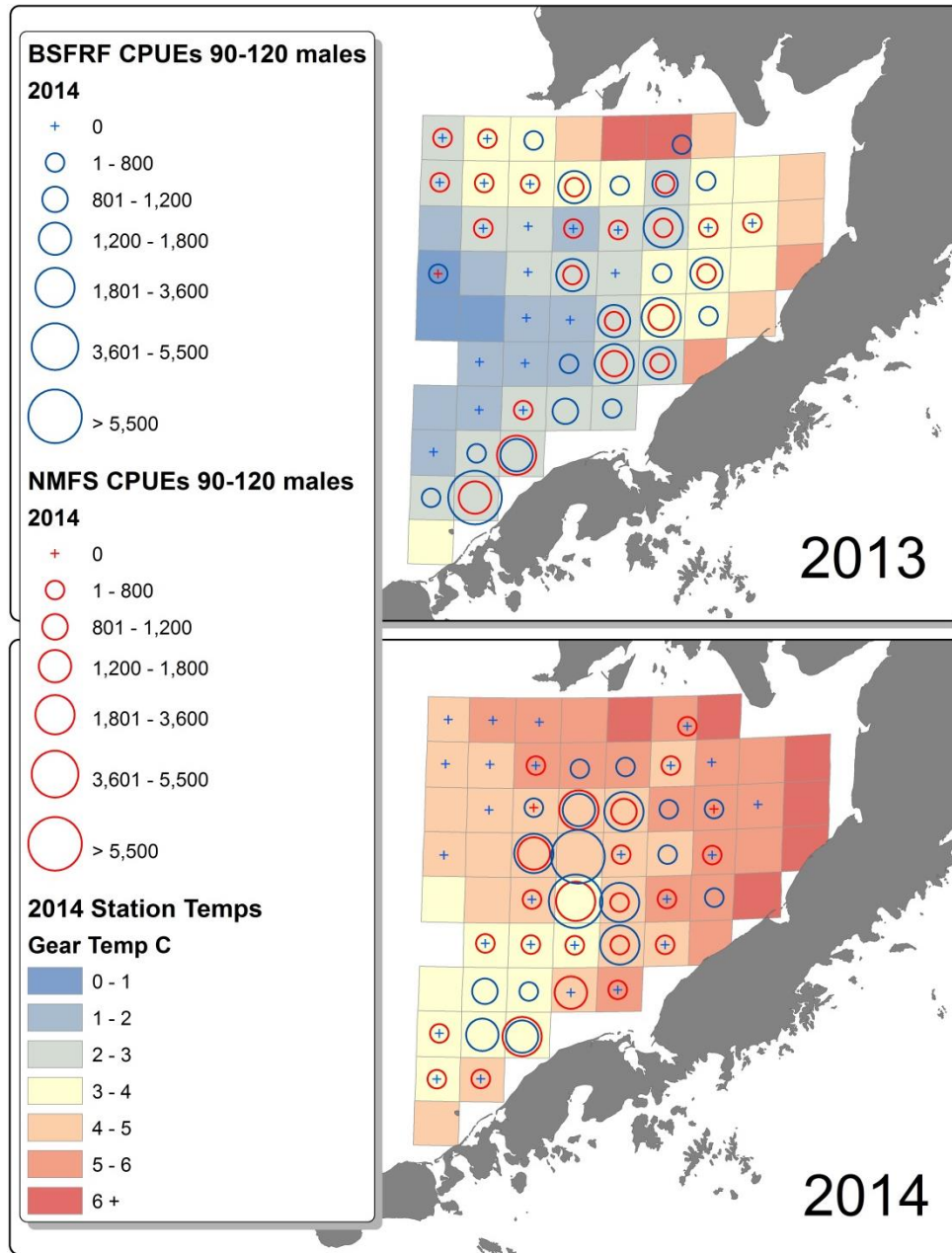
Temp v. Trawl Selectivity

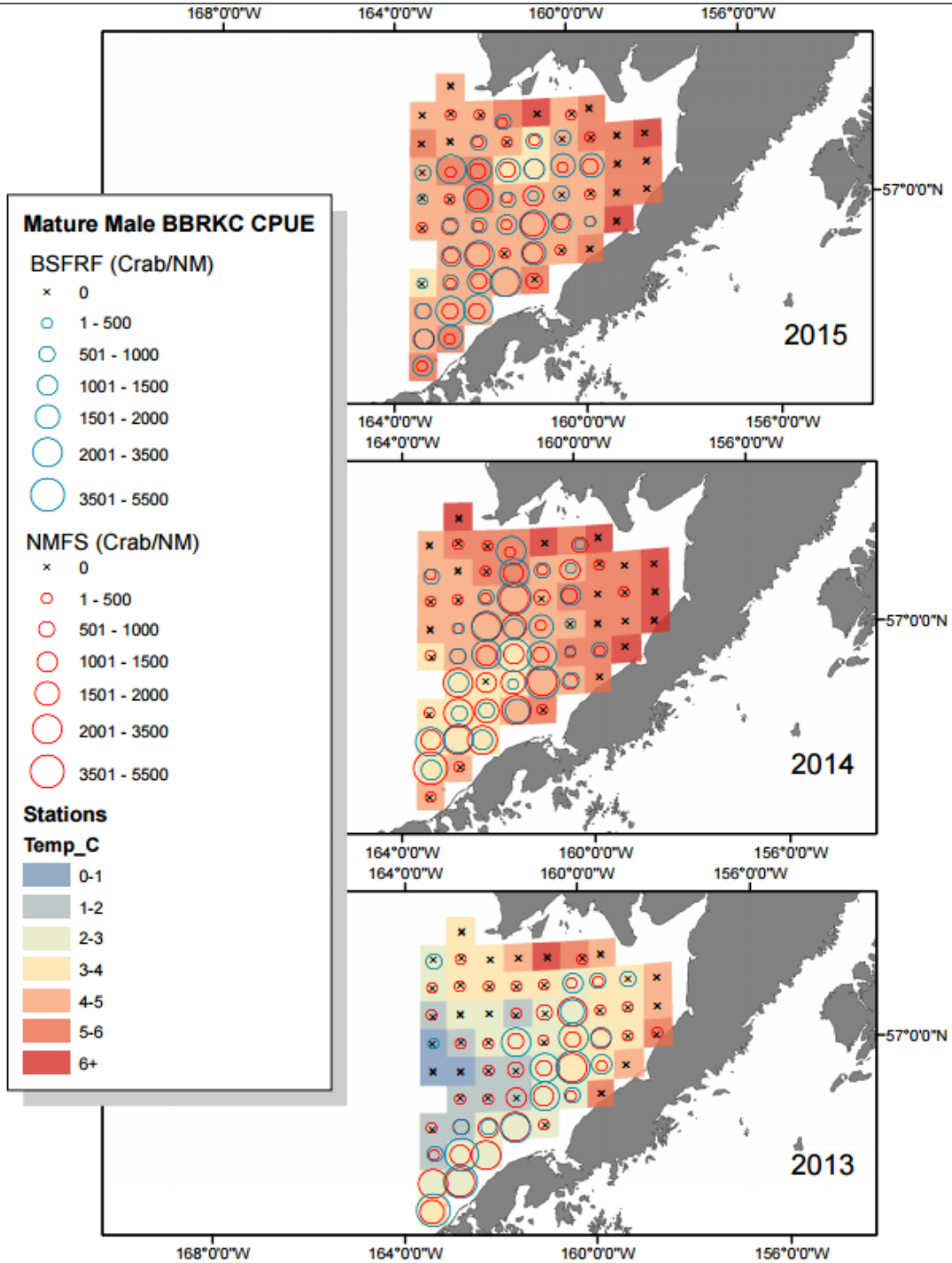


Temp v. Trawl Selectivity

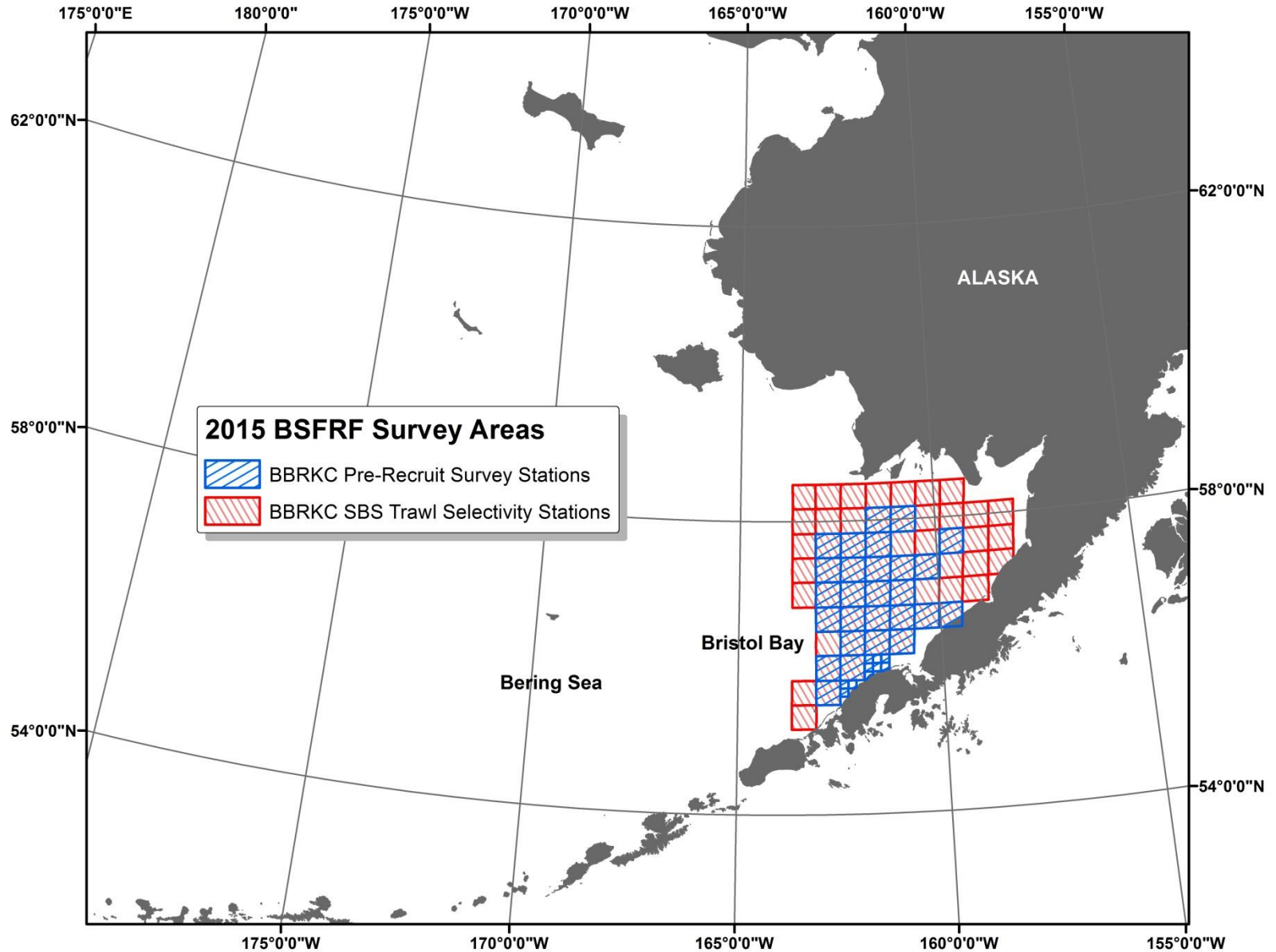


CPUE and temperature comparison (2013 v. 2014) from BSFRF BBRKC trawl selectivity side-by-side survey at 59 sampling stations.





BBRKC Pre-recruit Surveys



2015 Bristol Bay Red King Crab Pre-recruit Survey

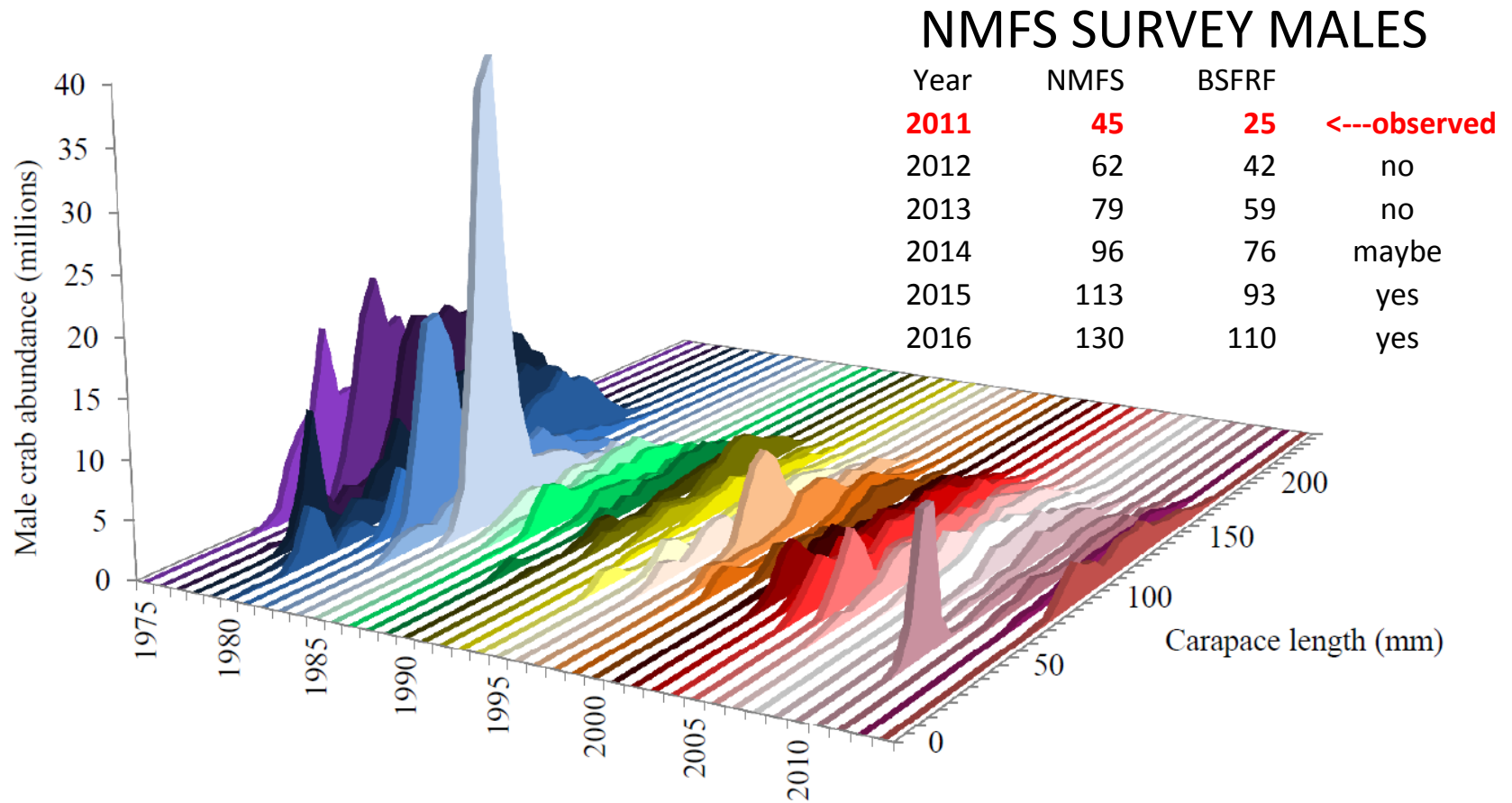


Figure 21. Historical size frequency by 5 mm length classes of Bristol Bay District male red king crab (*Paralithodes camtschaticus*), 1975 to 2014.

2015 Bristol Bay Red King Crab Pre-recruit Survey

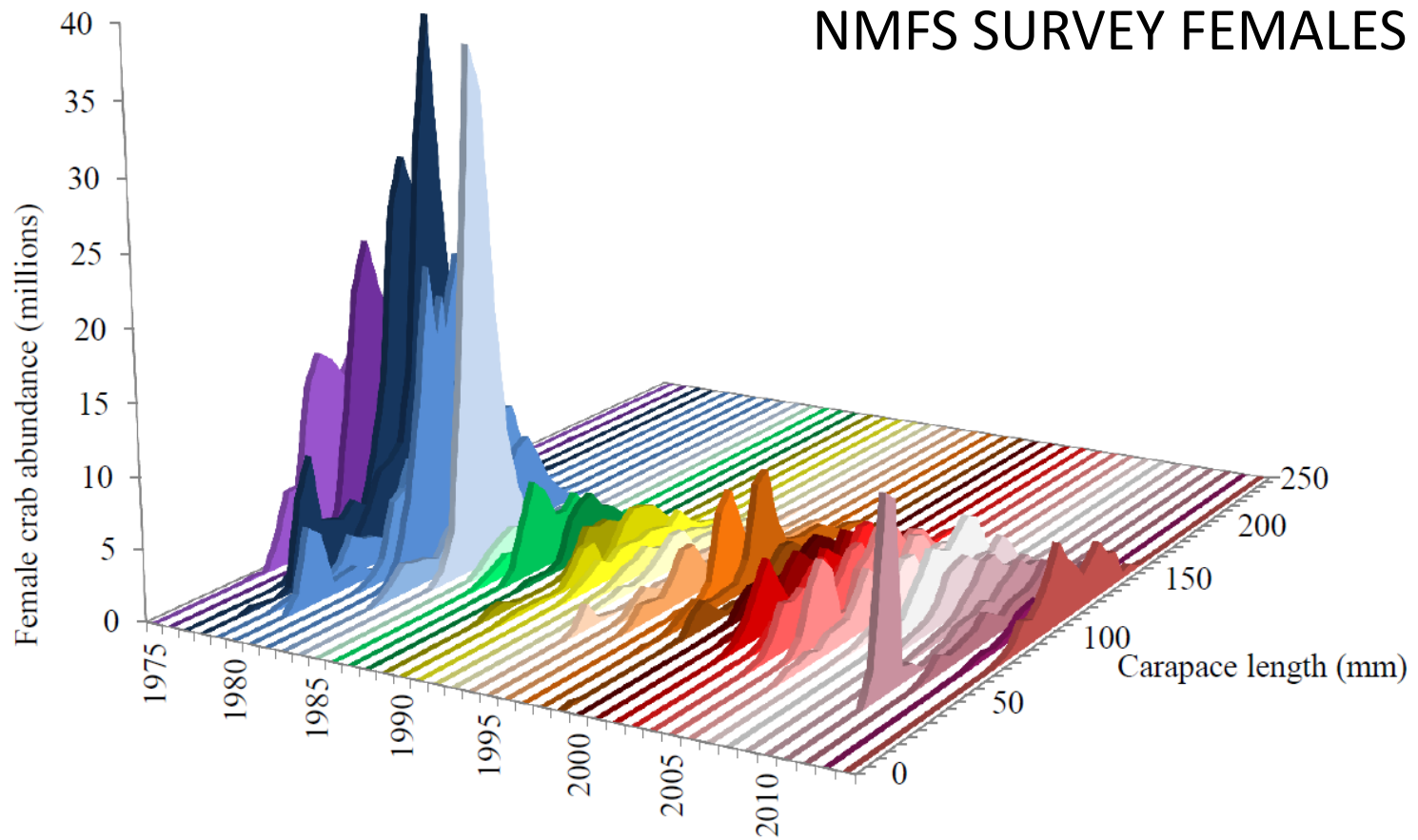
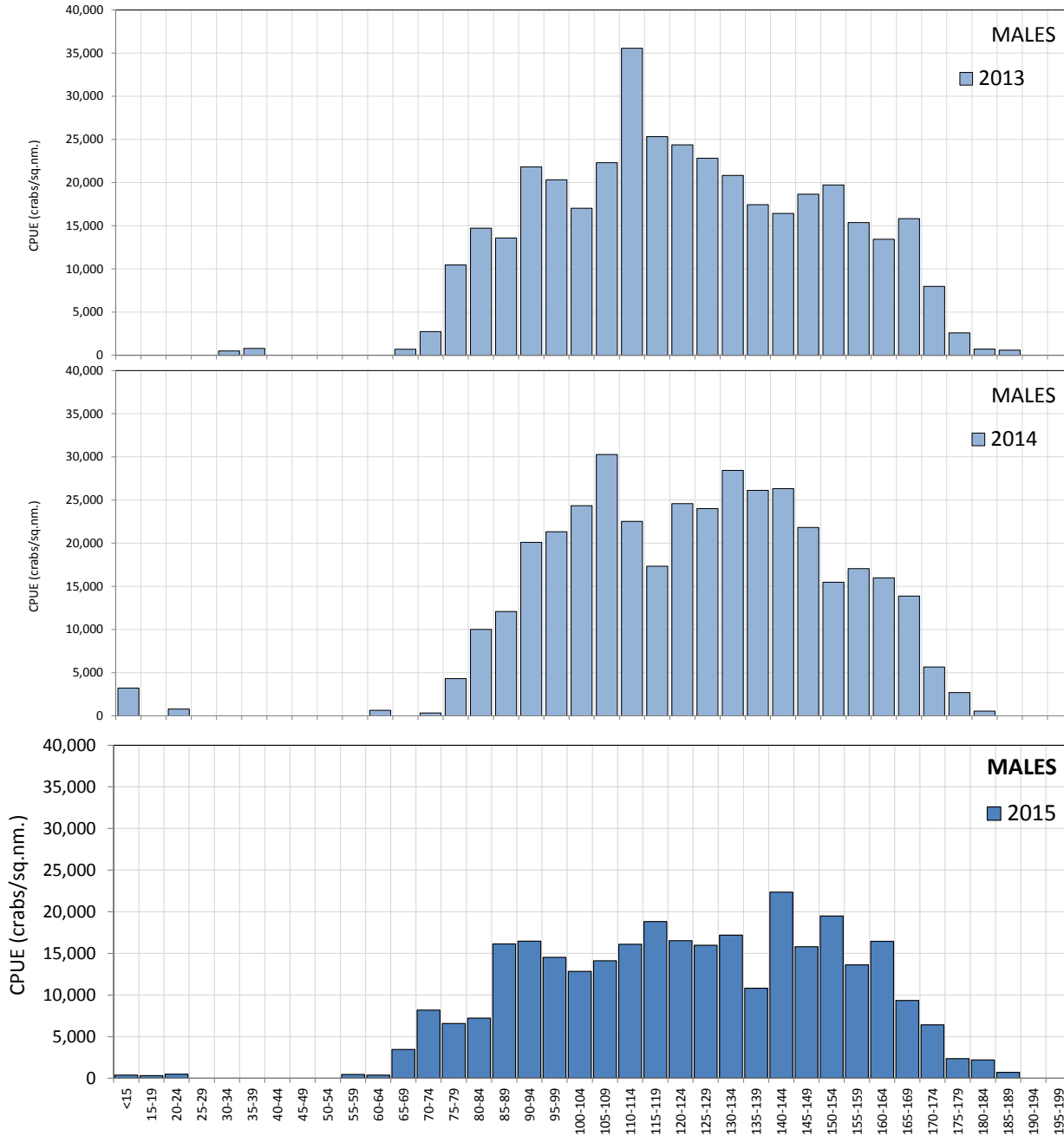
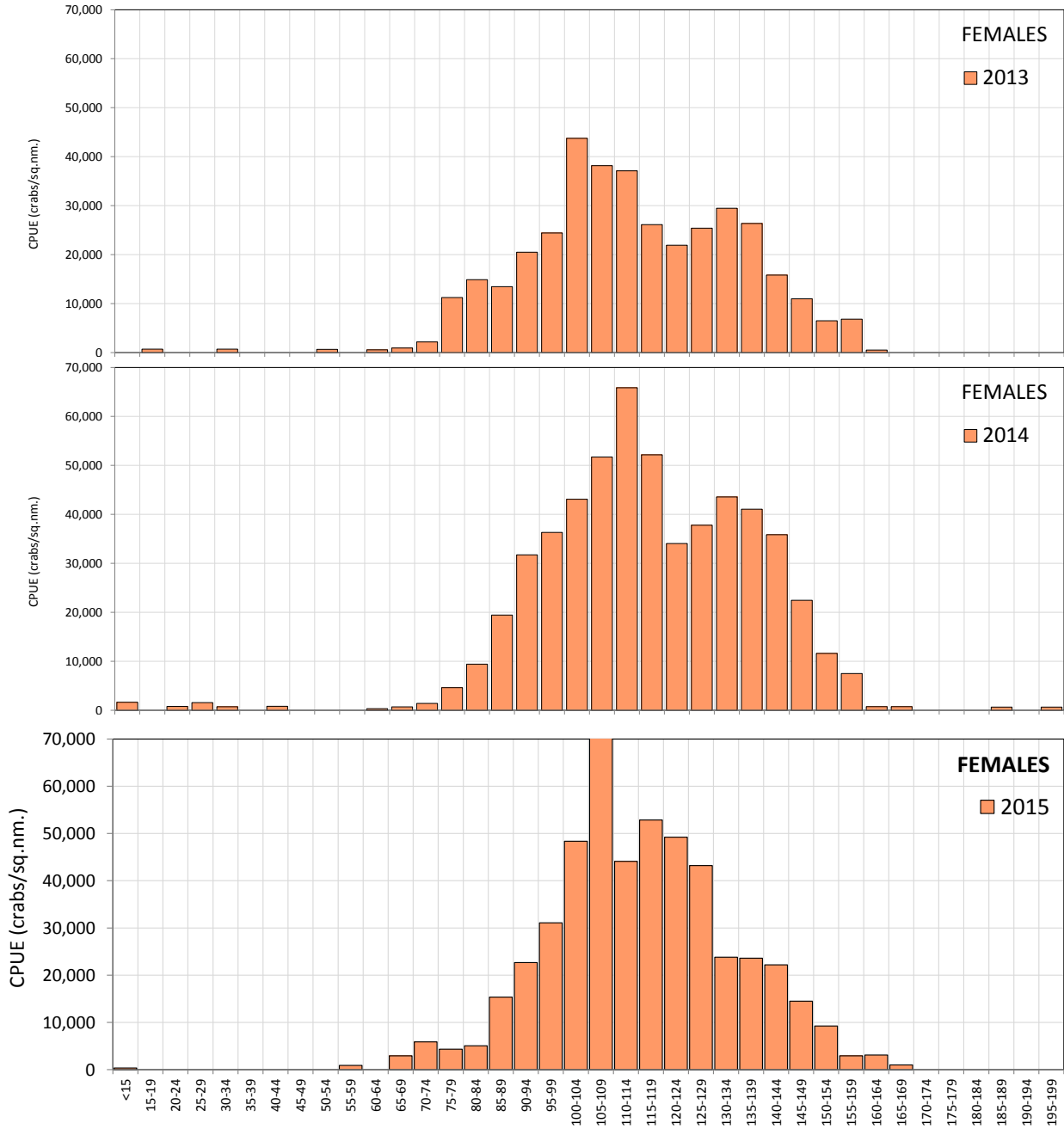


Figure 22. Historical size frequency by 5 mm length classes of Bristol Bay District female red king crab (*Paralithodes camtschaticus*), 1975 to 2014.

2013-15 BBRKC Pre-recruit Survey - LF



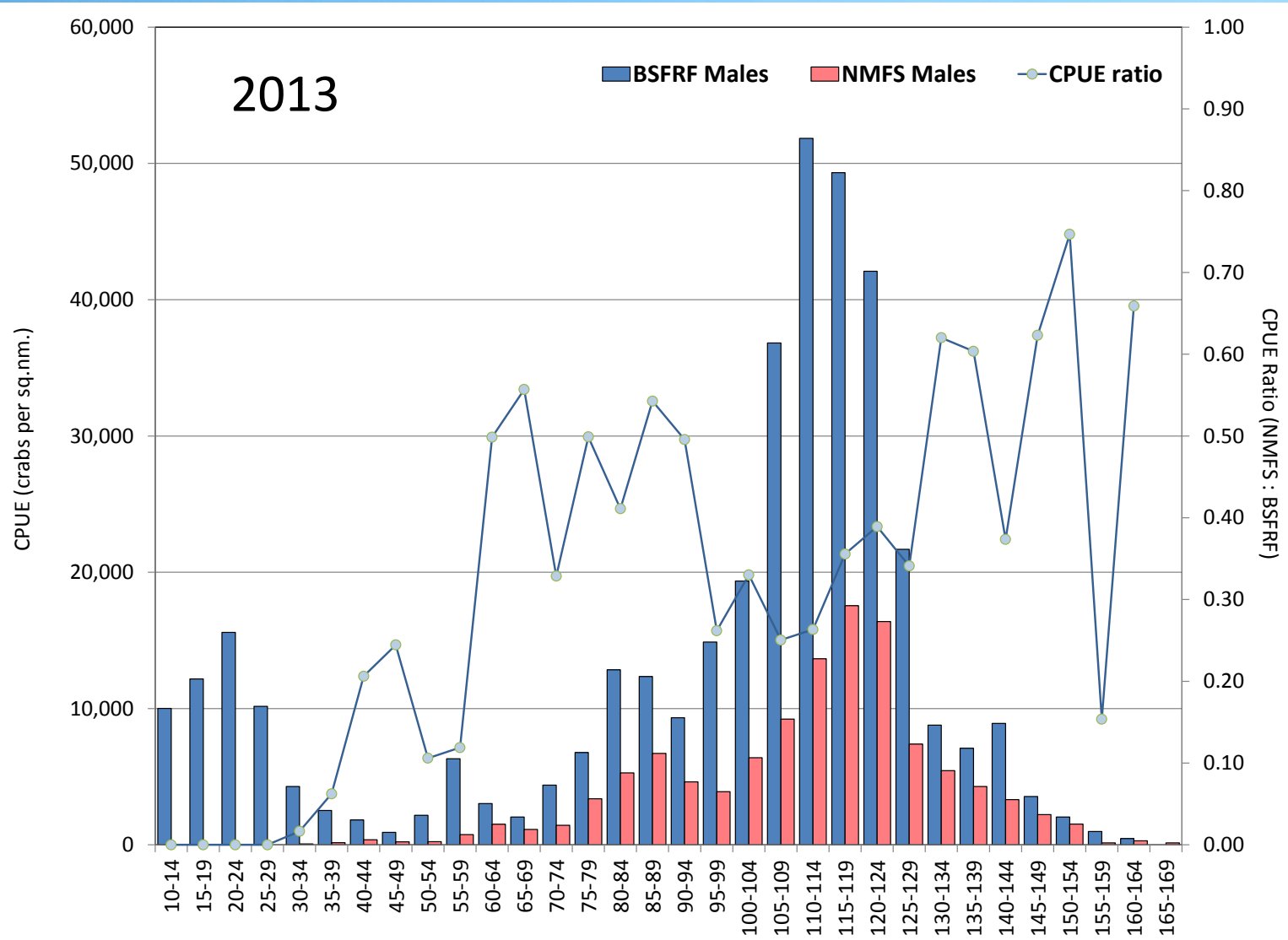
2013-15 BBRKC Pre-recruit Survey - LF



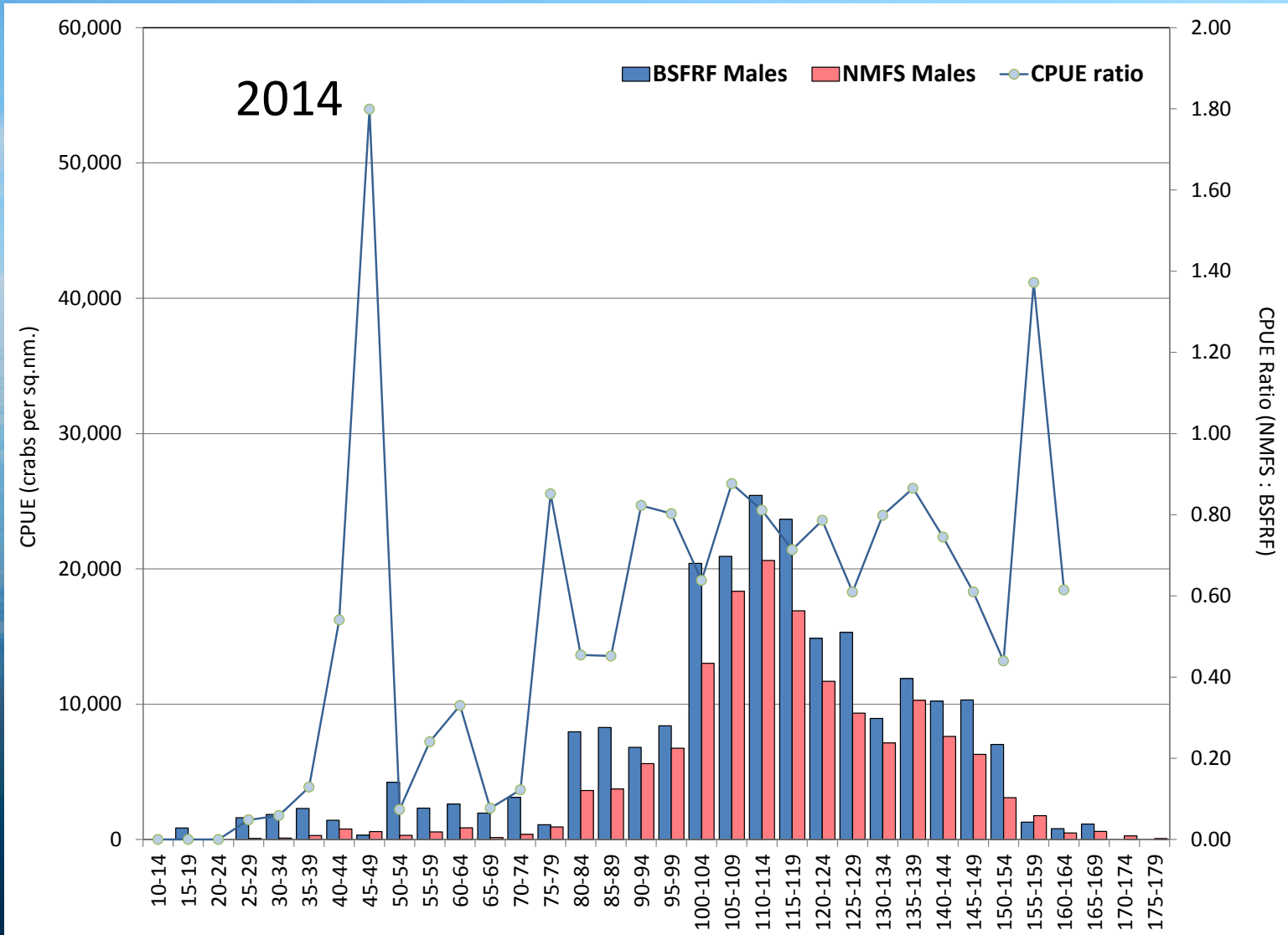
2013-15 Tanner Crab Selectivity (collected during RKC surveys)



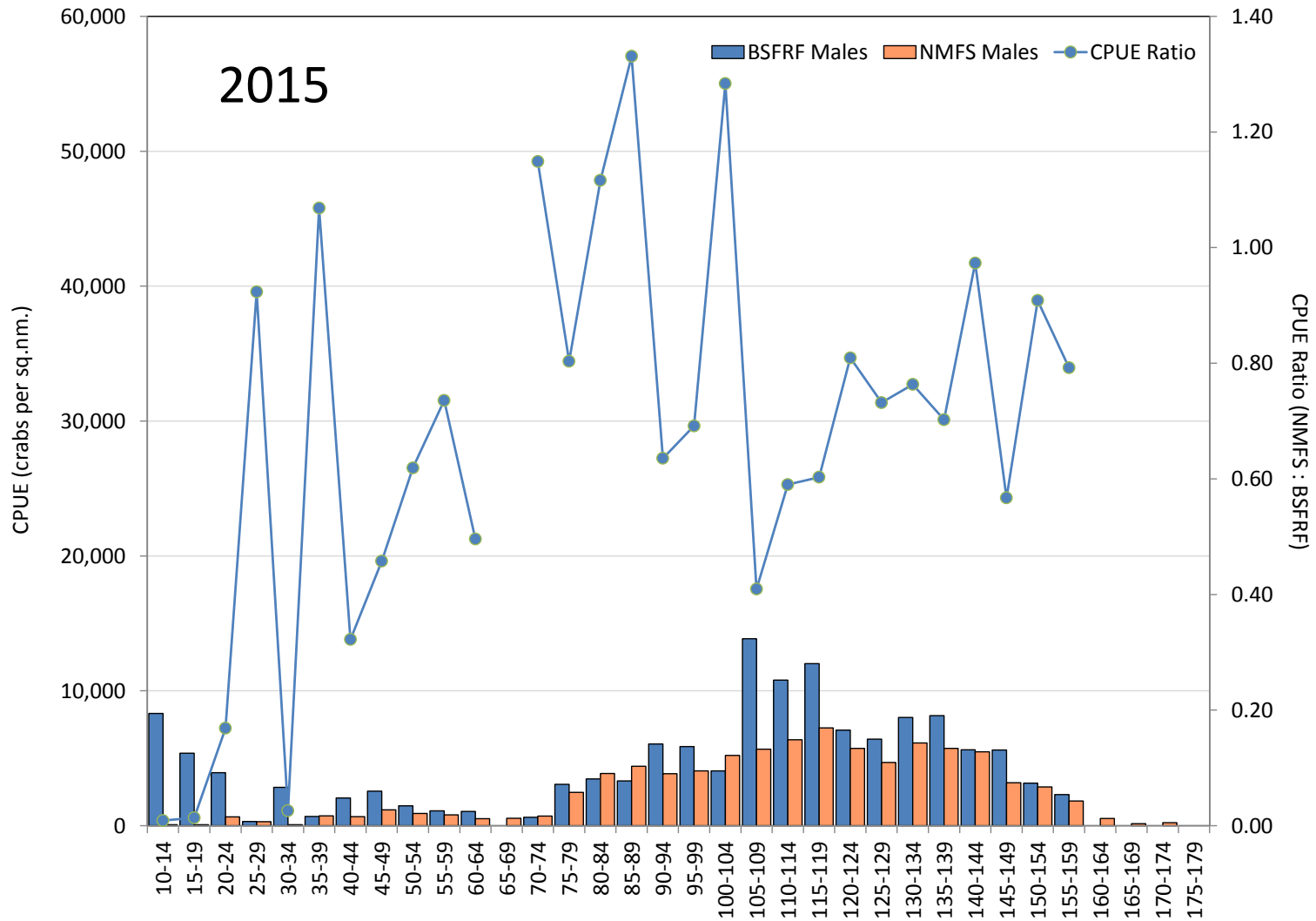
2013-15 Tanner Crab Selectivity (collected during RKC surveys)



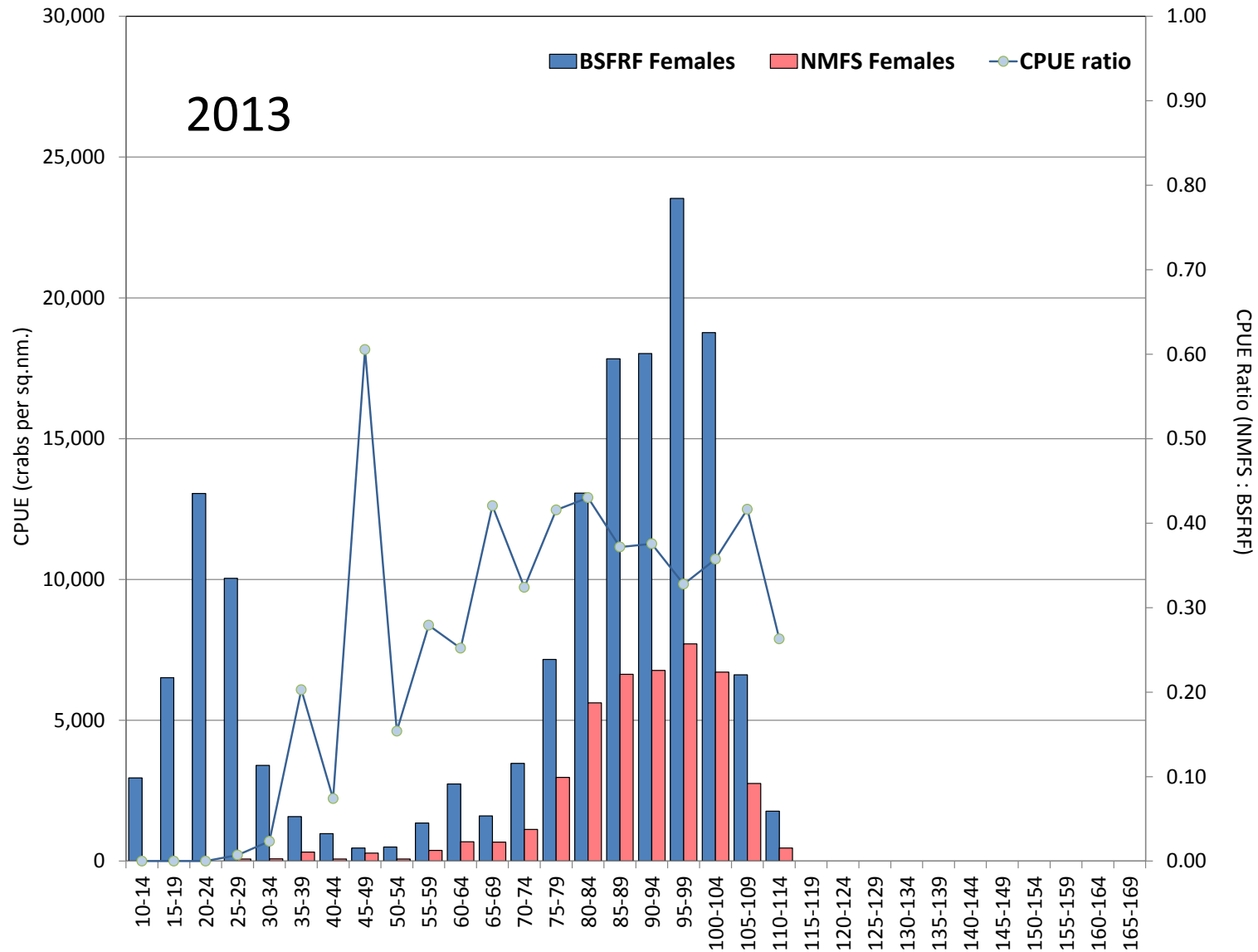
2013-15 Tanner Crab Selectivity (collected during RKC surveys)



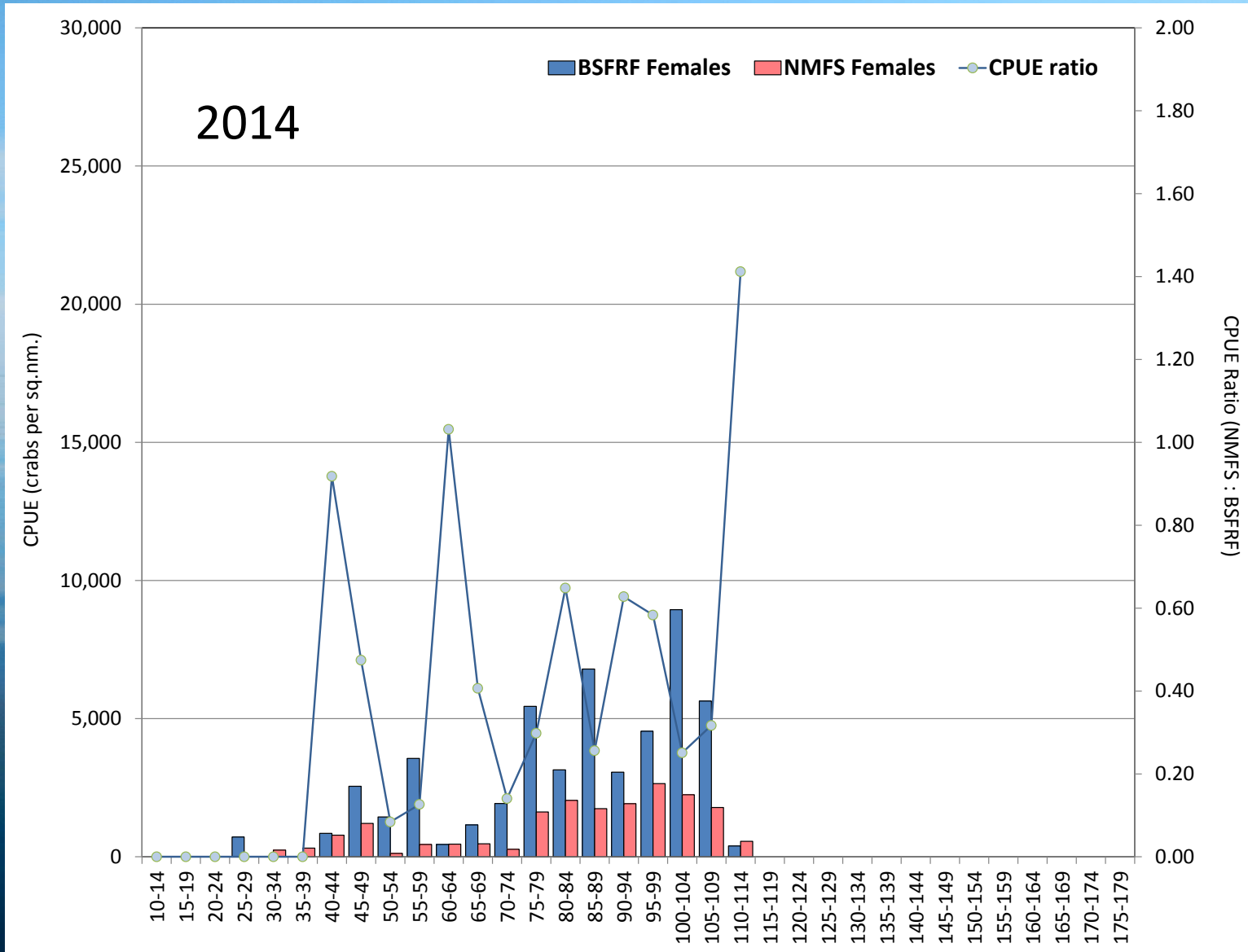
2013-15 Tanner Crab Selectivity (collected during RKC surveys)



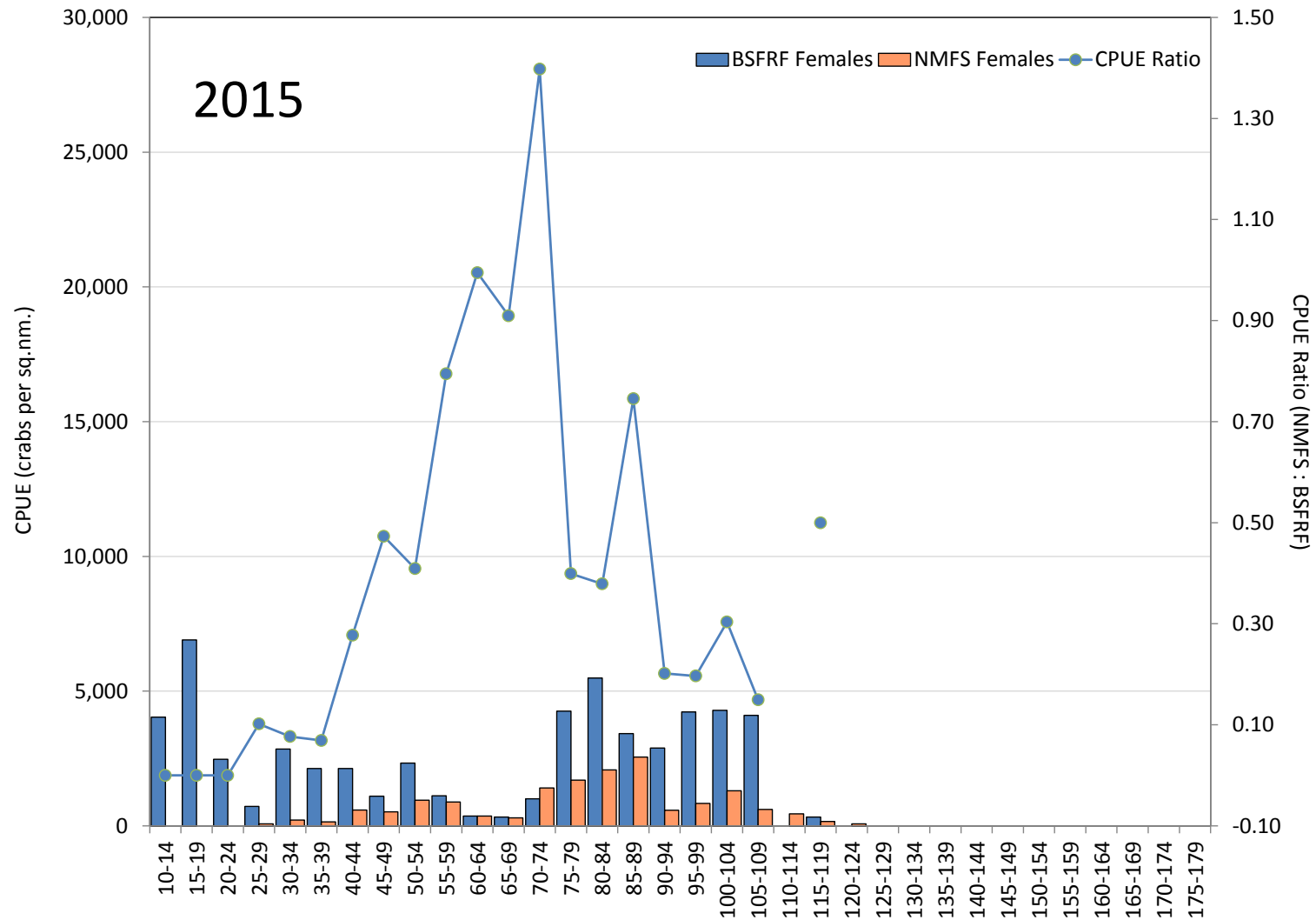
2013-15 Tanner Crab Selectivity (collected during RKC surveys)



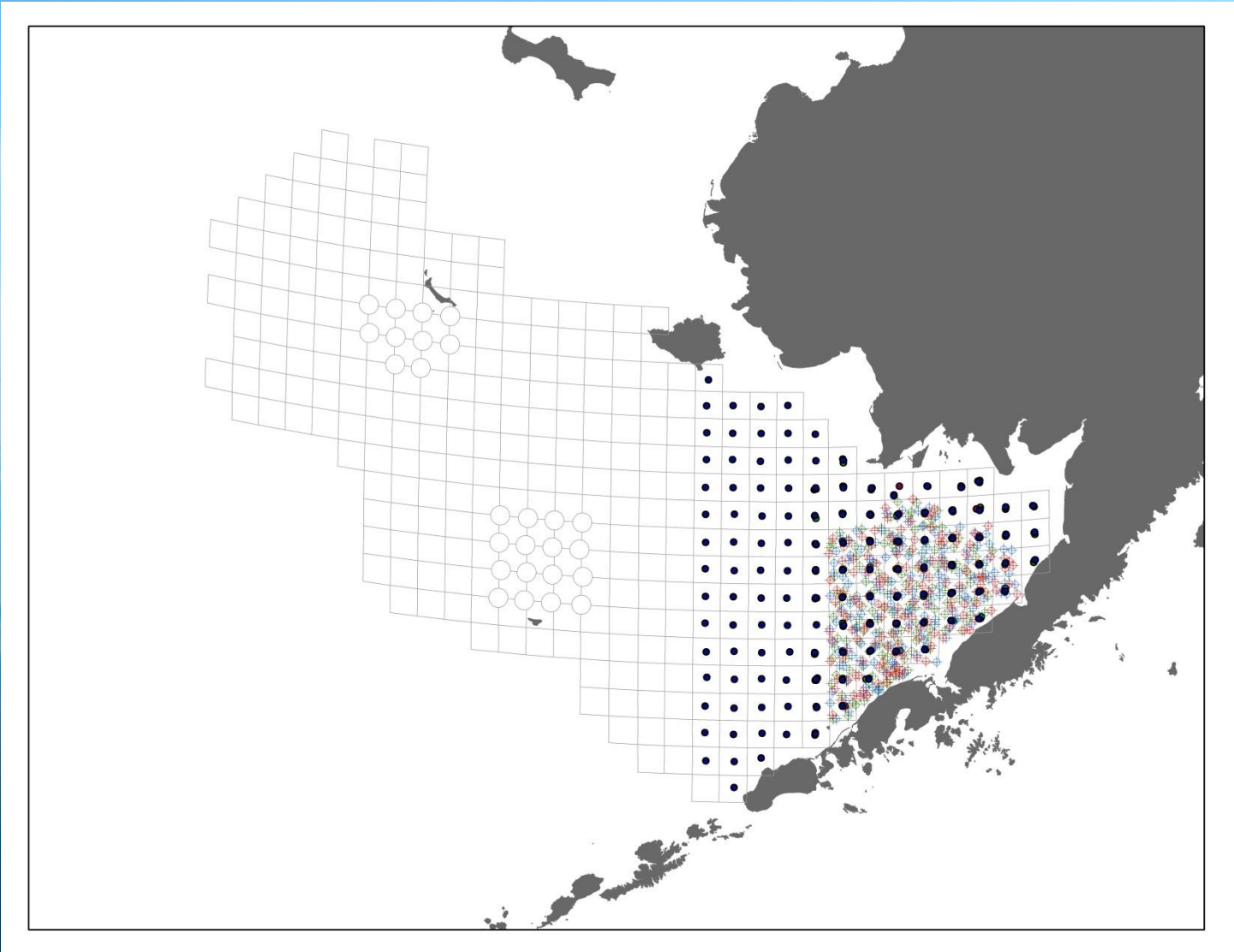
2013-15 Tanner Crab Selectivity (collected during RKC surveys)



2013-15 Tanner Crab Selectivity (collected during RKC surveys)



2013-15 Tanner Crab Selectivity Spatial Coverage



Bering Sea Fisheries Research Foundation Trawl Selectivity - Update

2016

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Between Government & Industry
Scott Goodman (September 14, 2015)

