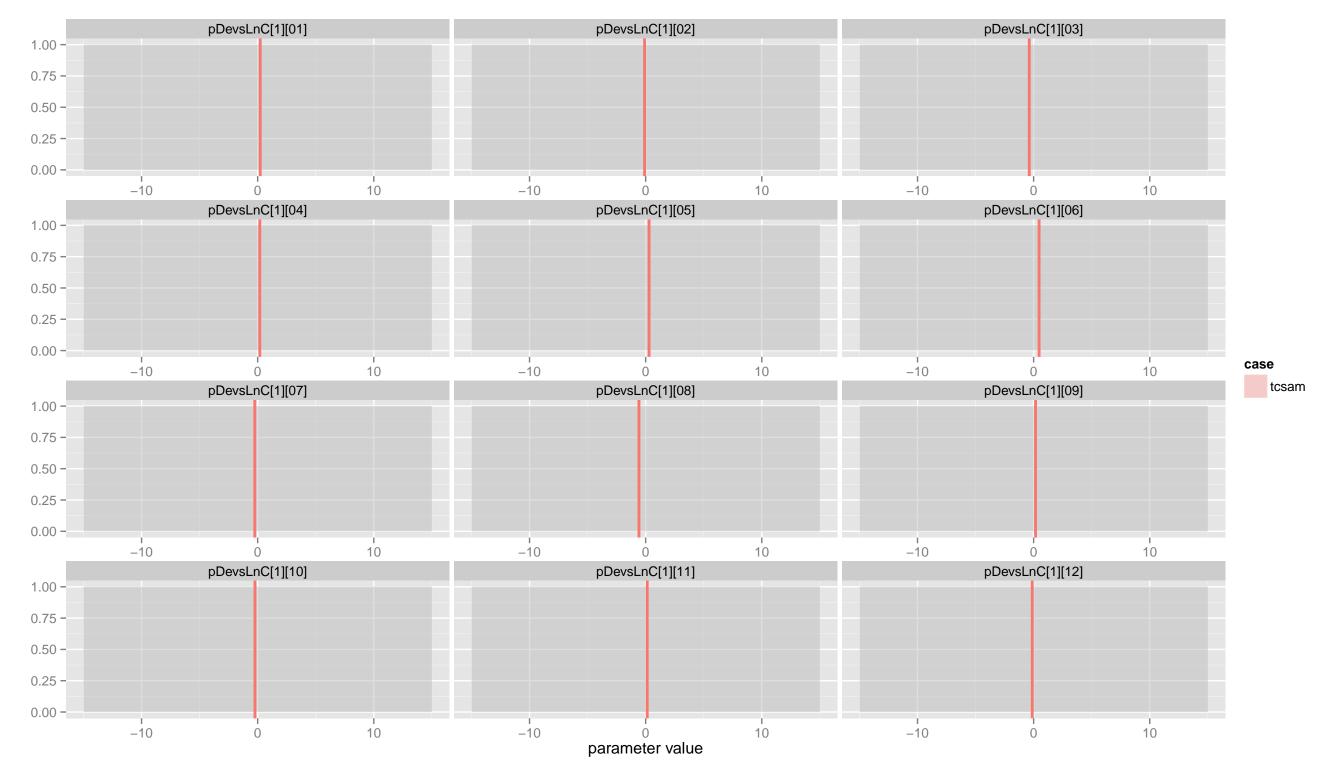
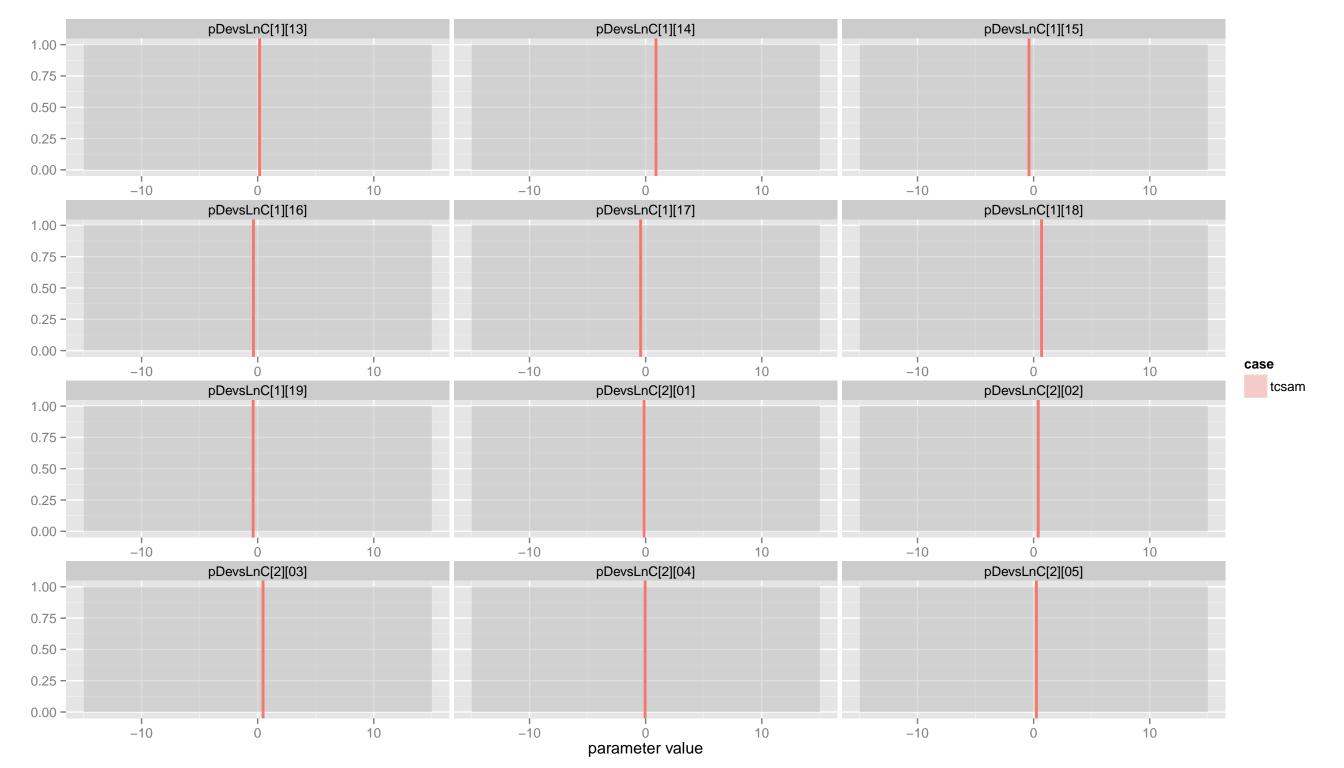
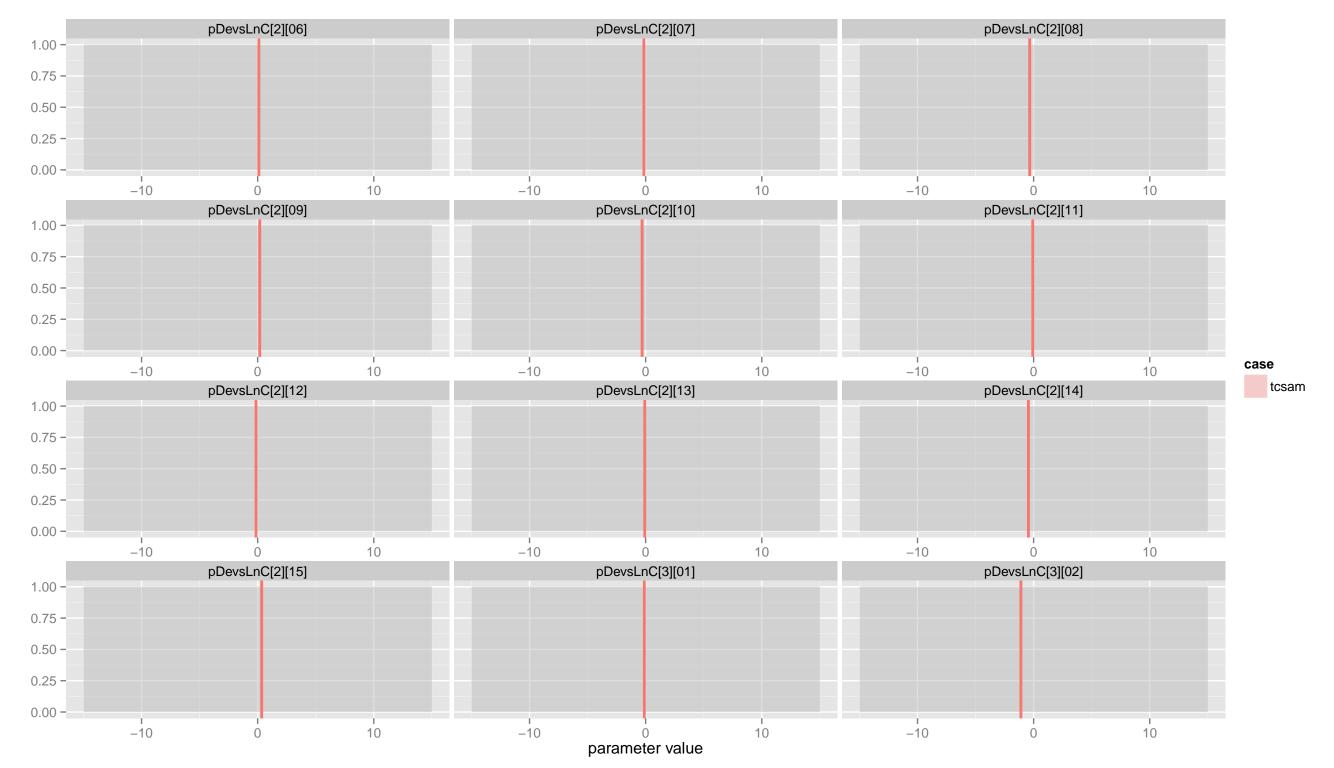
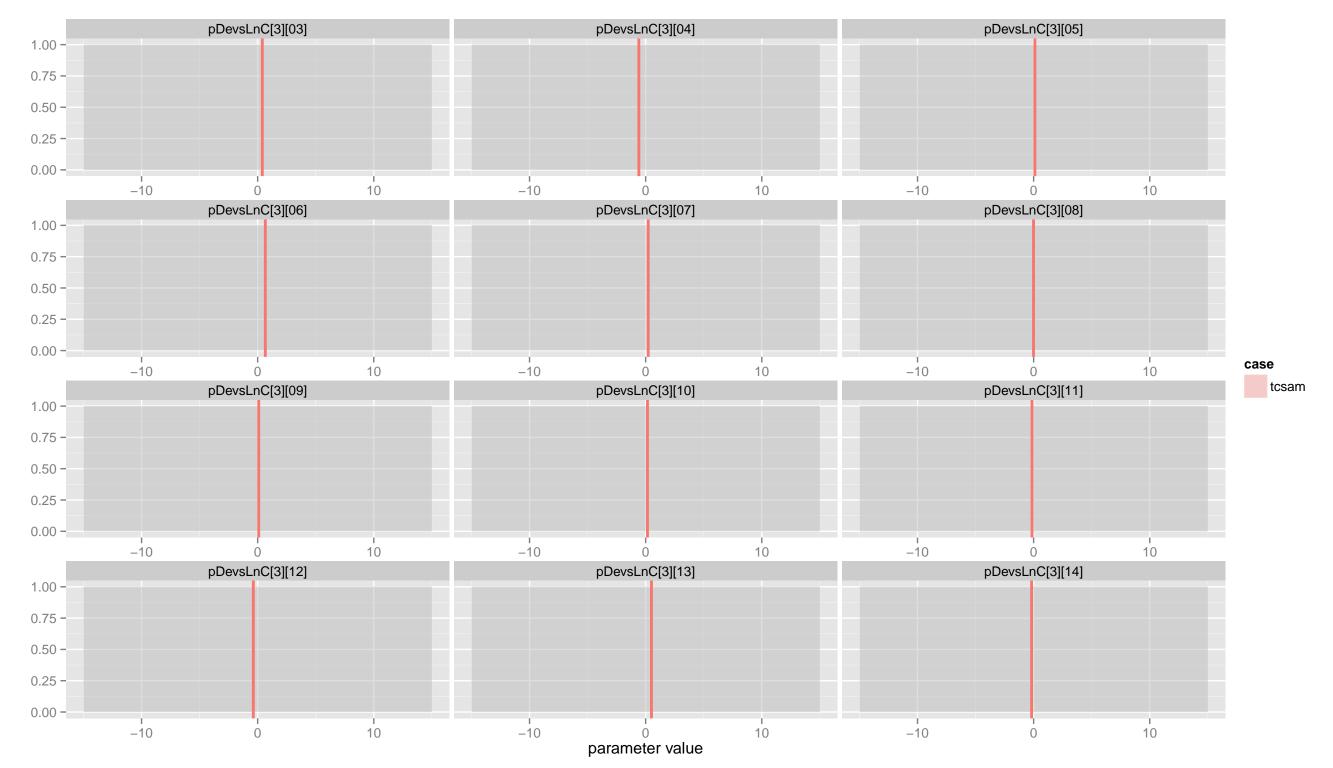


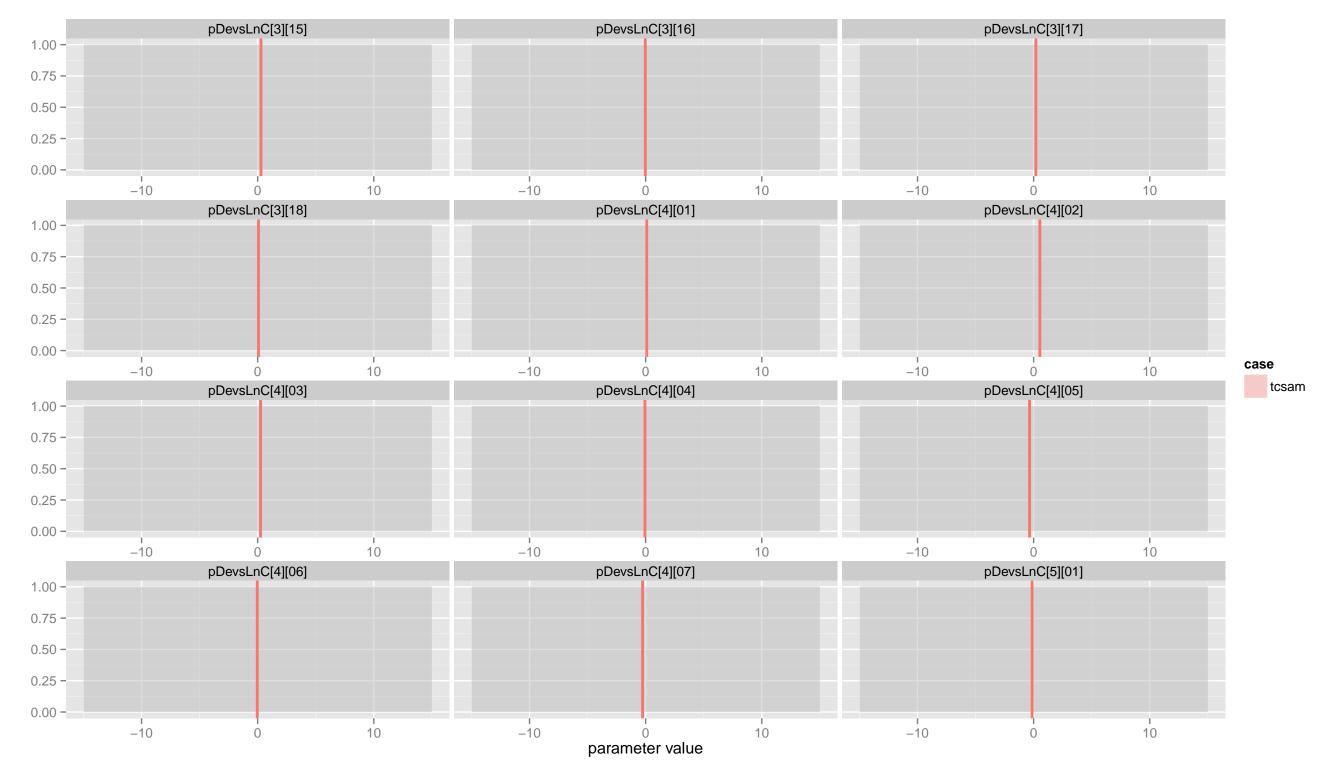
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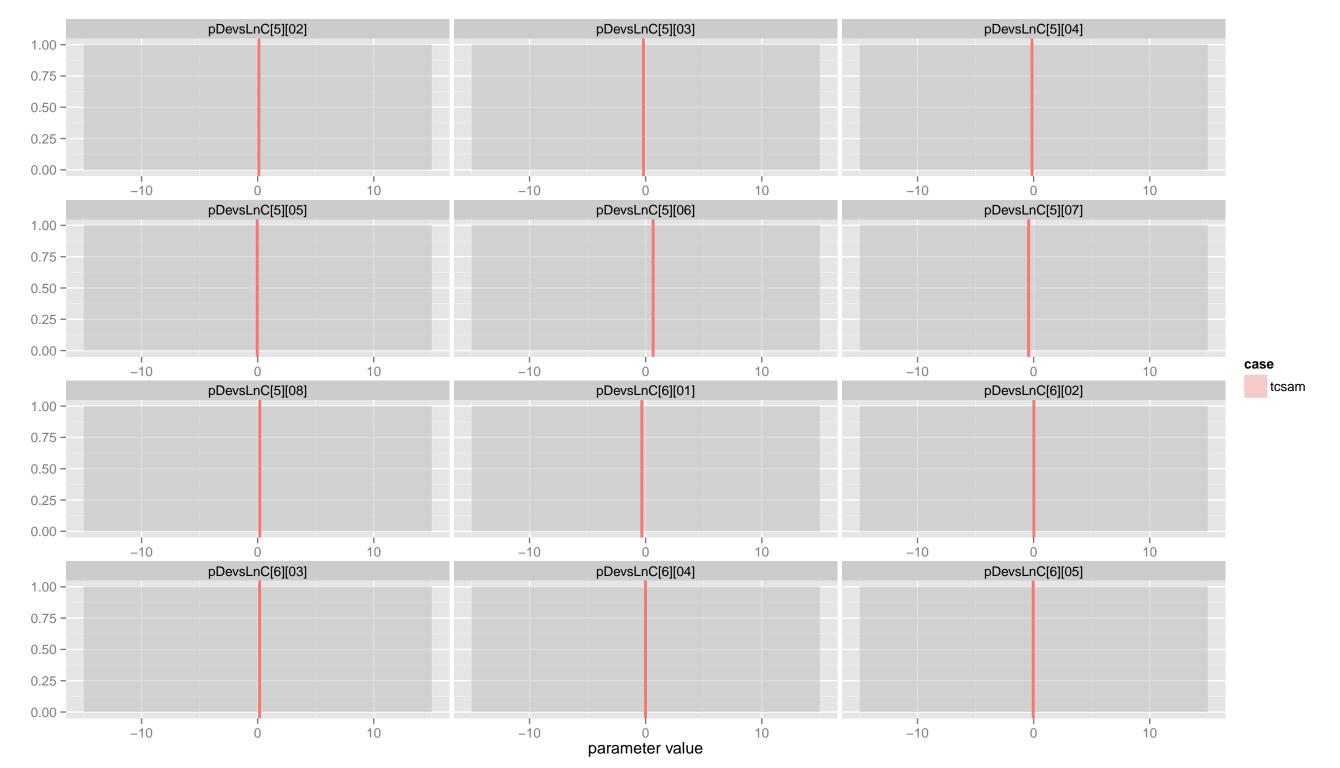


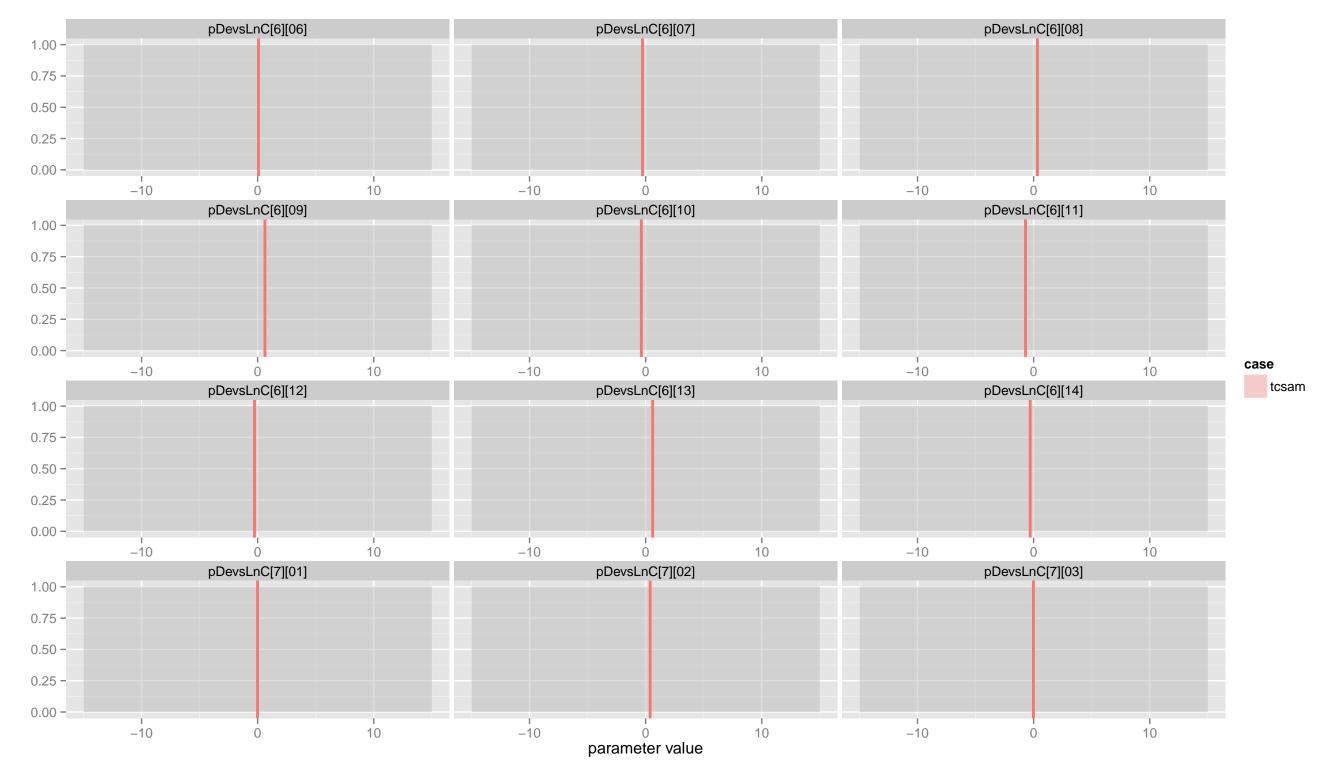


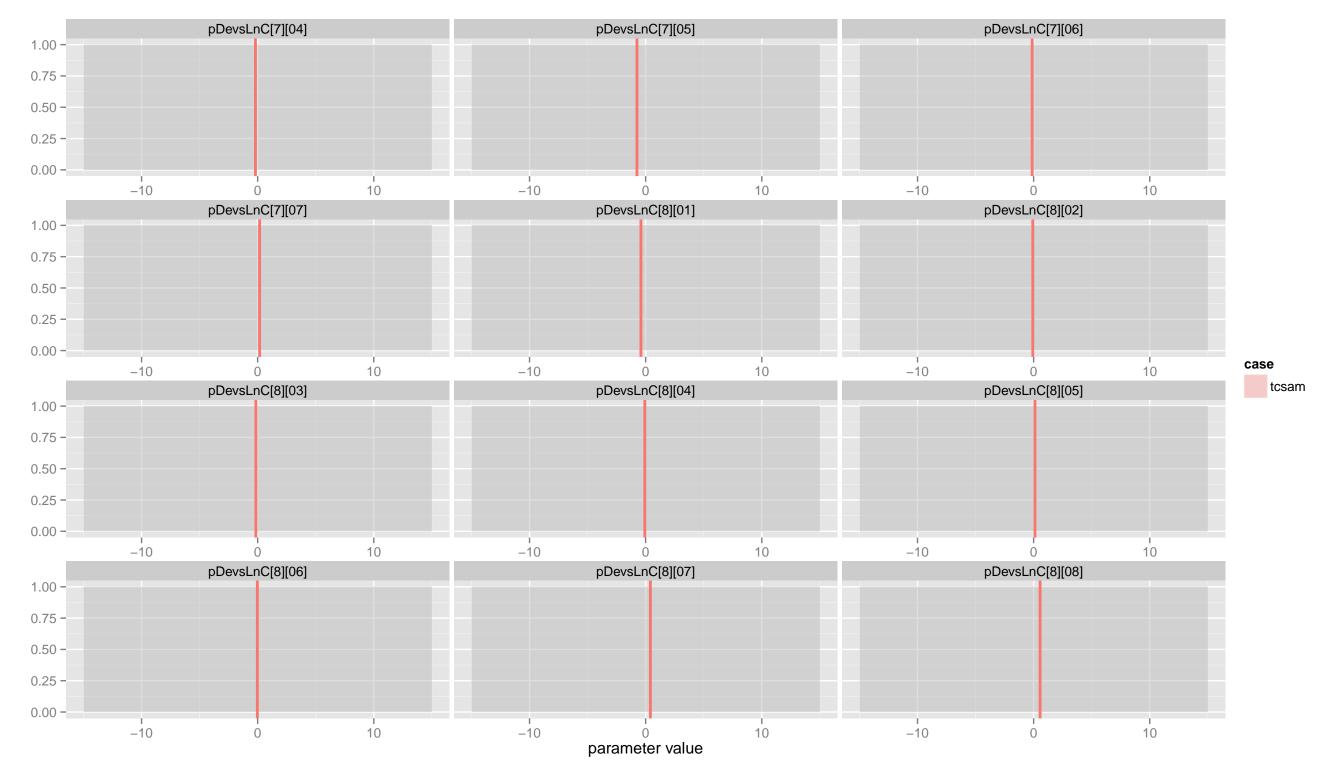


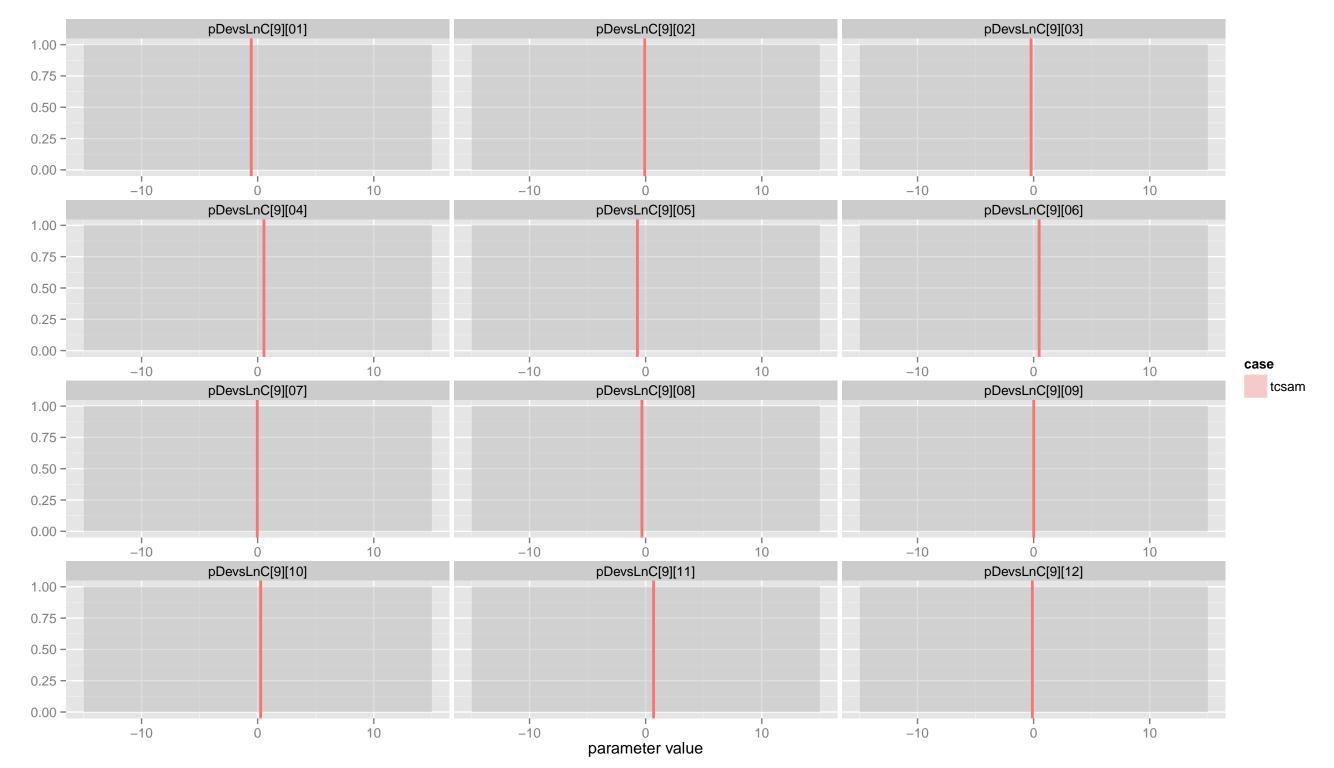


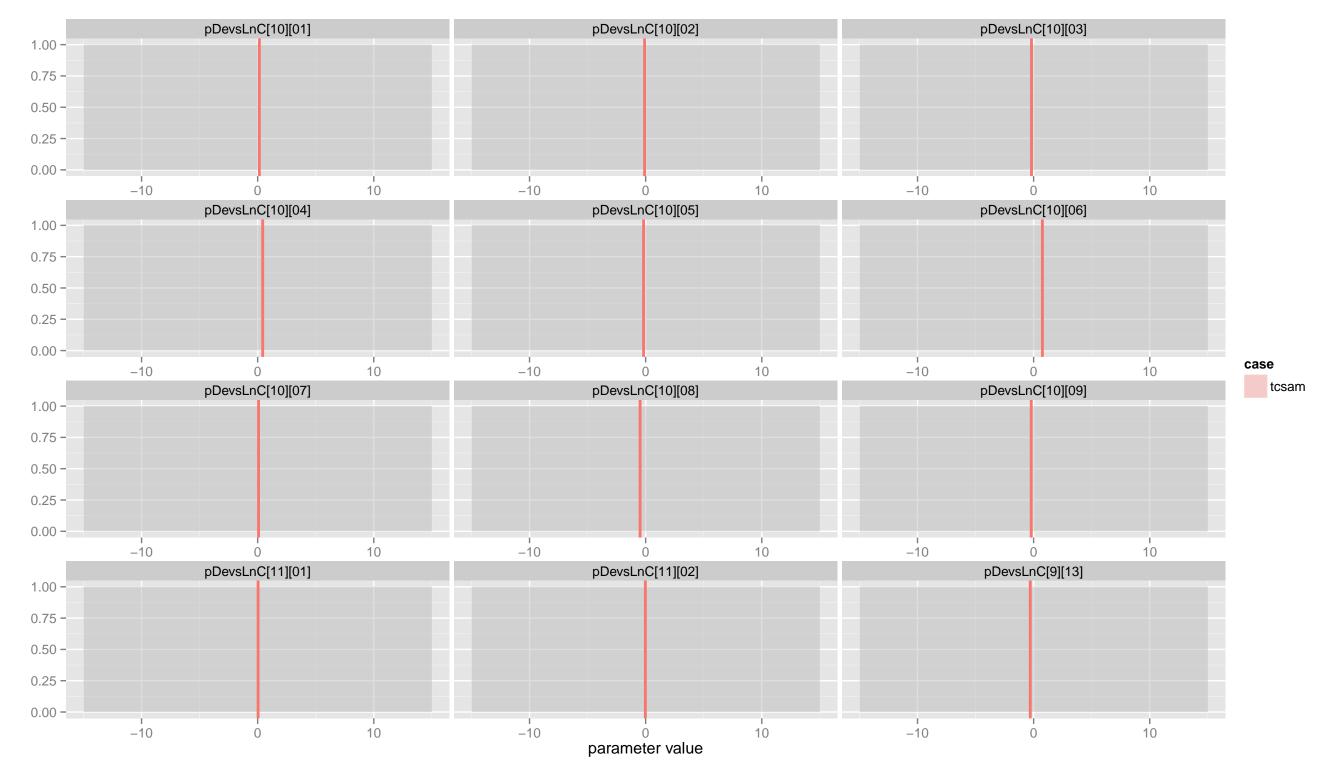


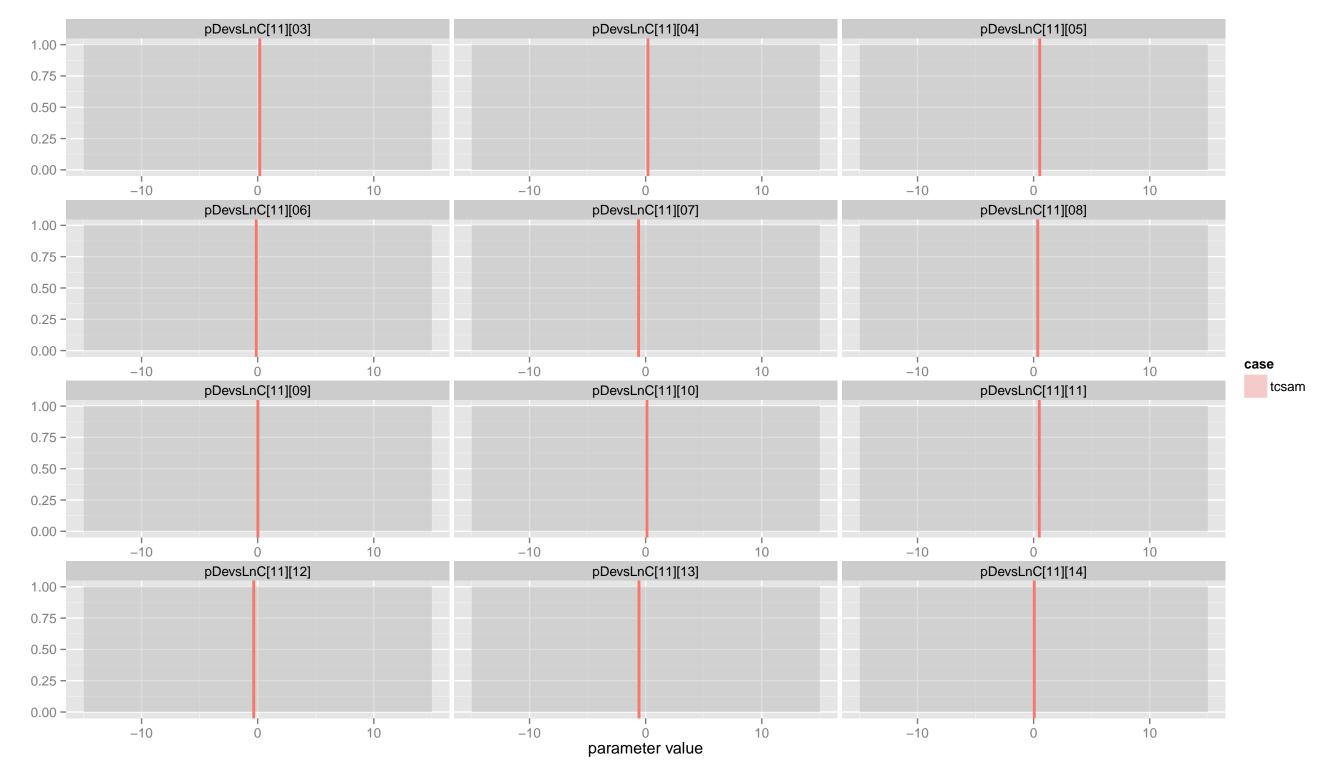


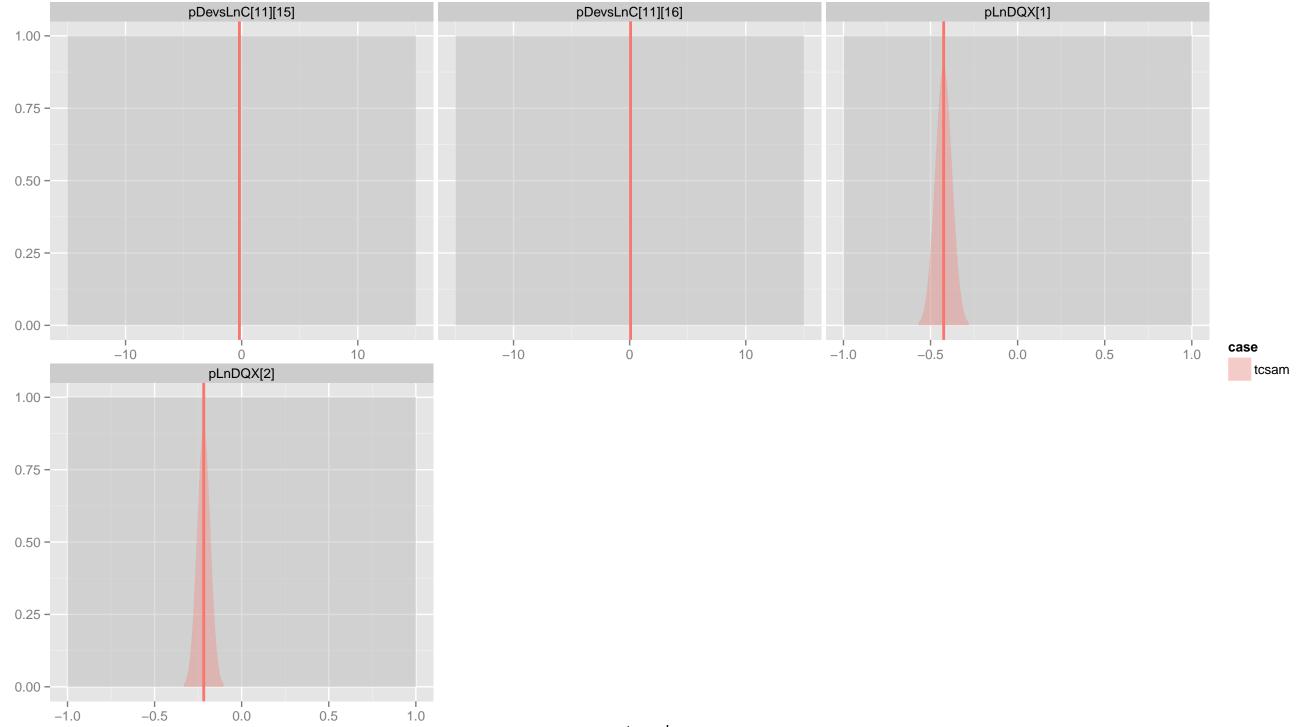




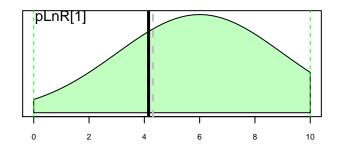


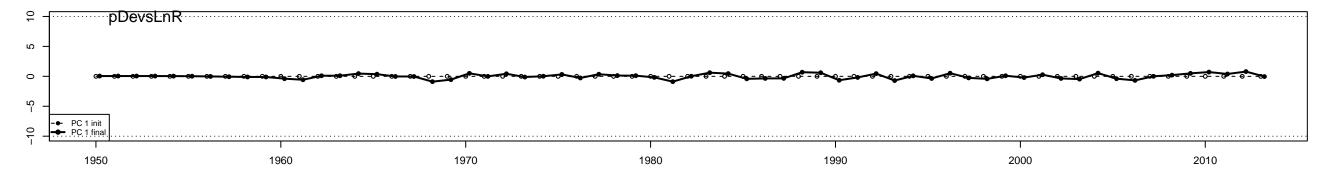


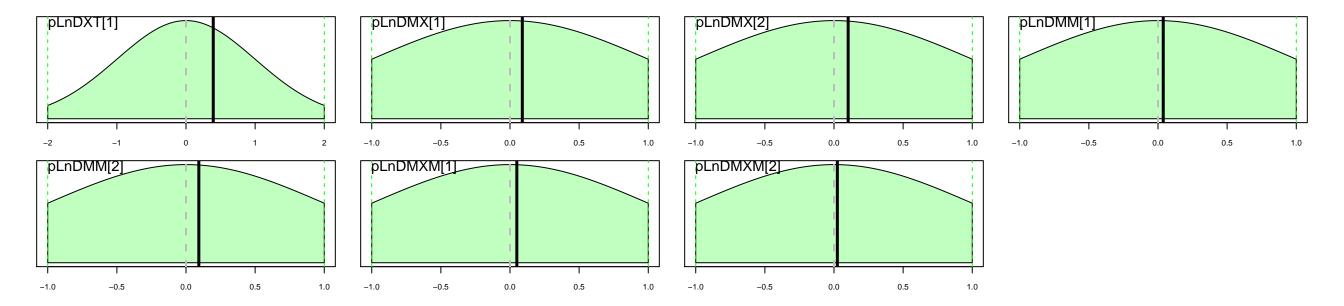


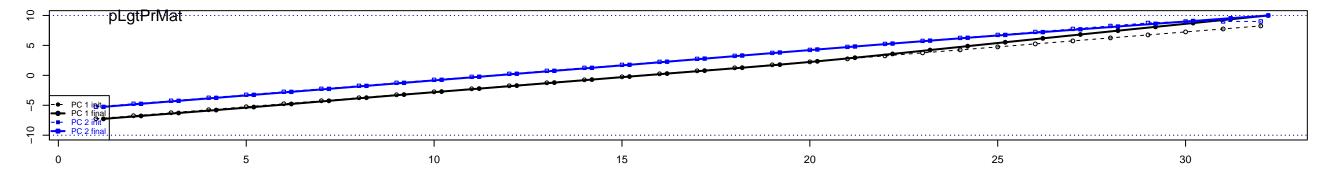


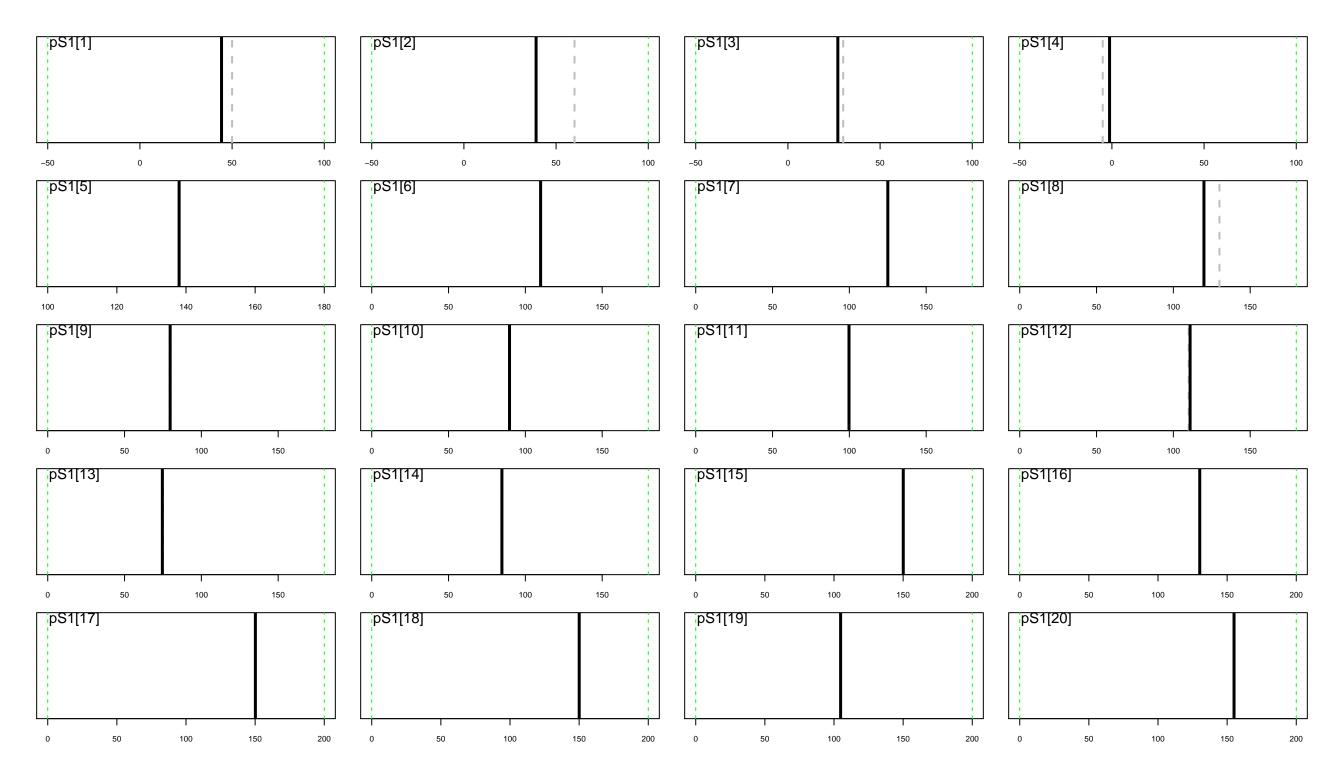
parameter value

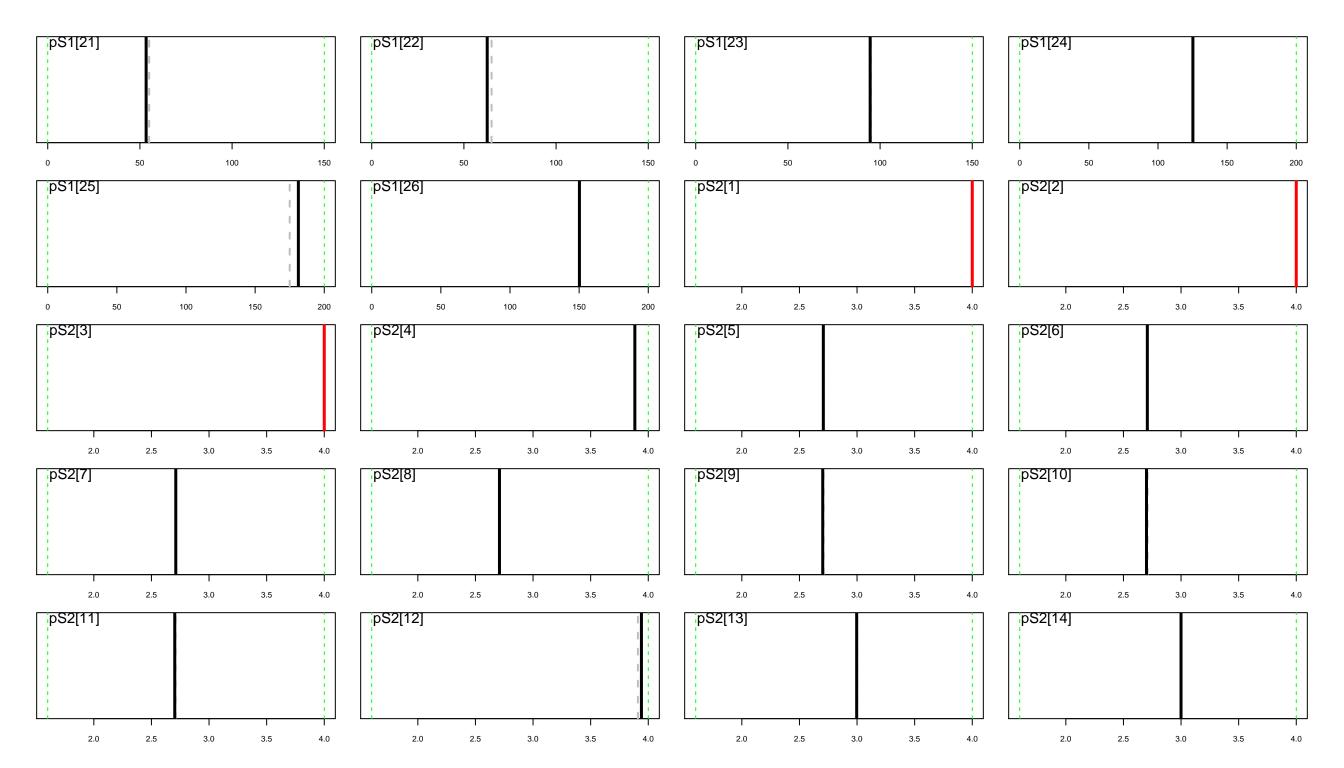


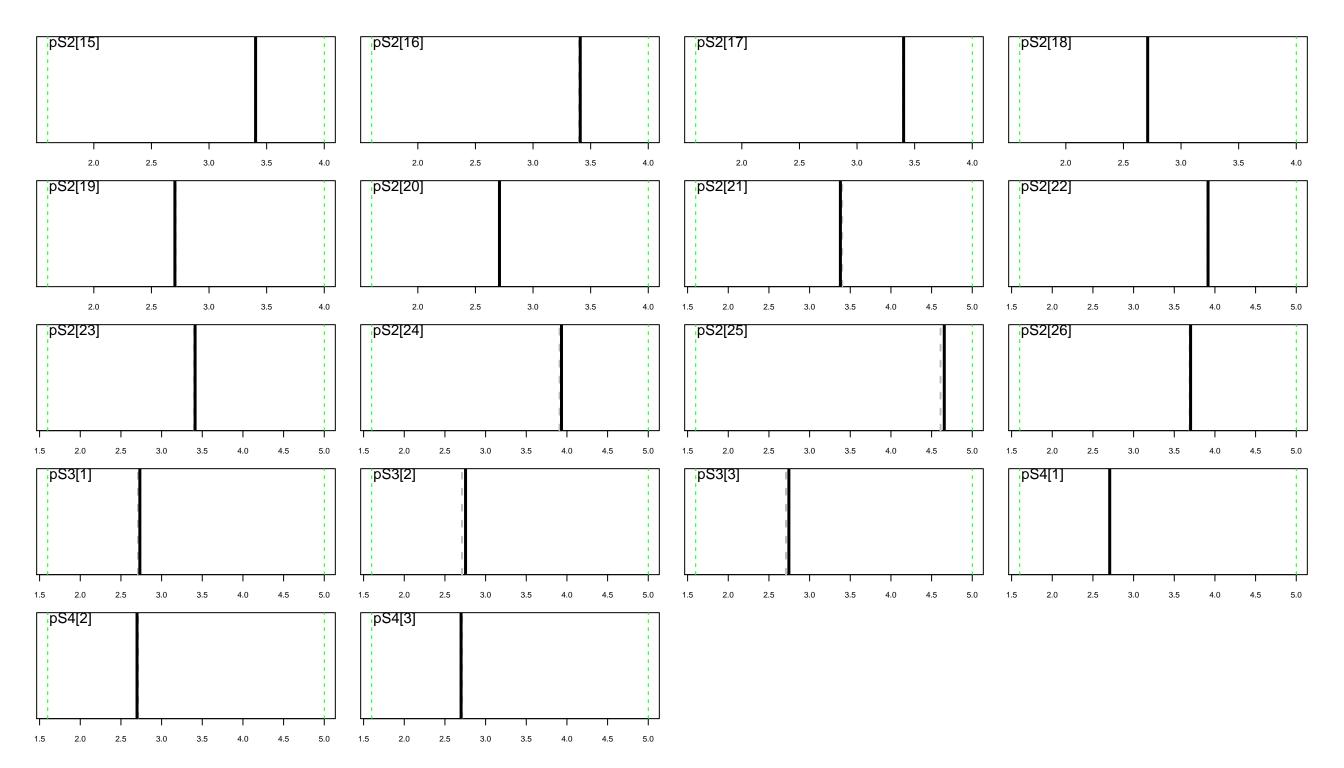


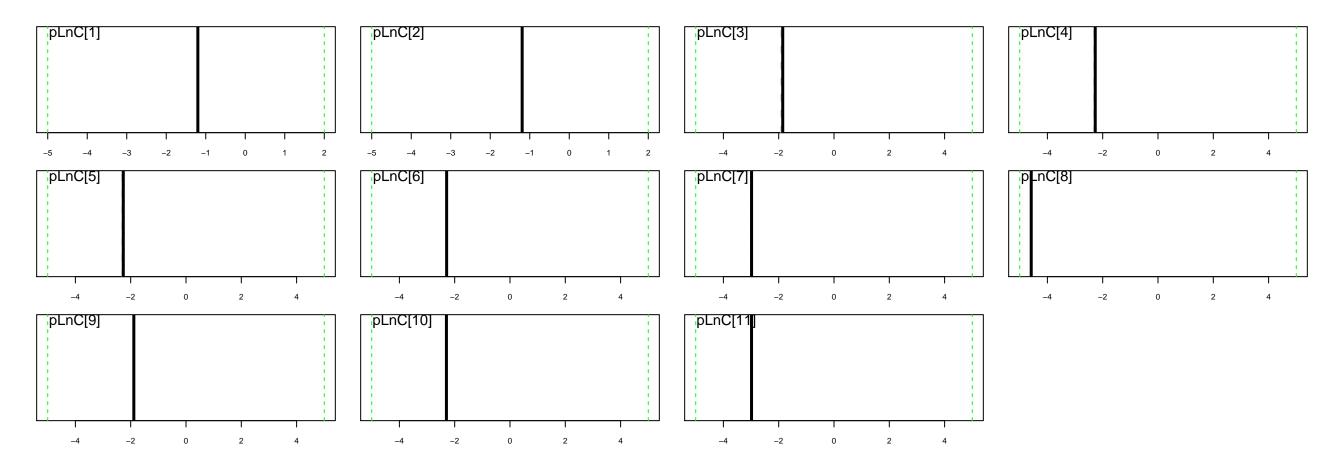


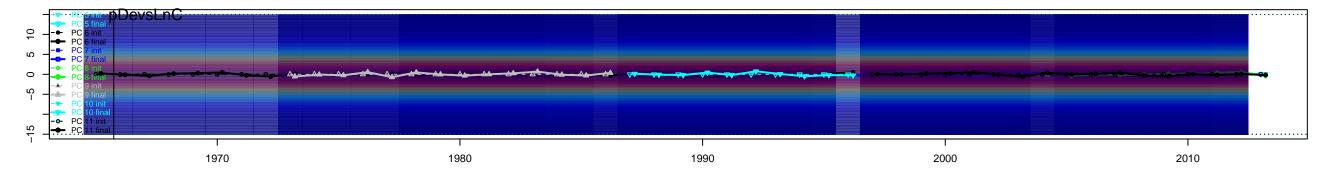


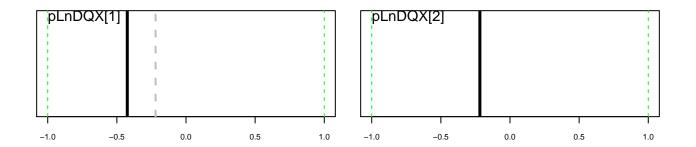


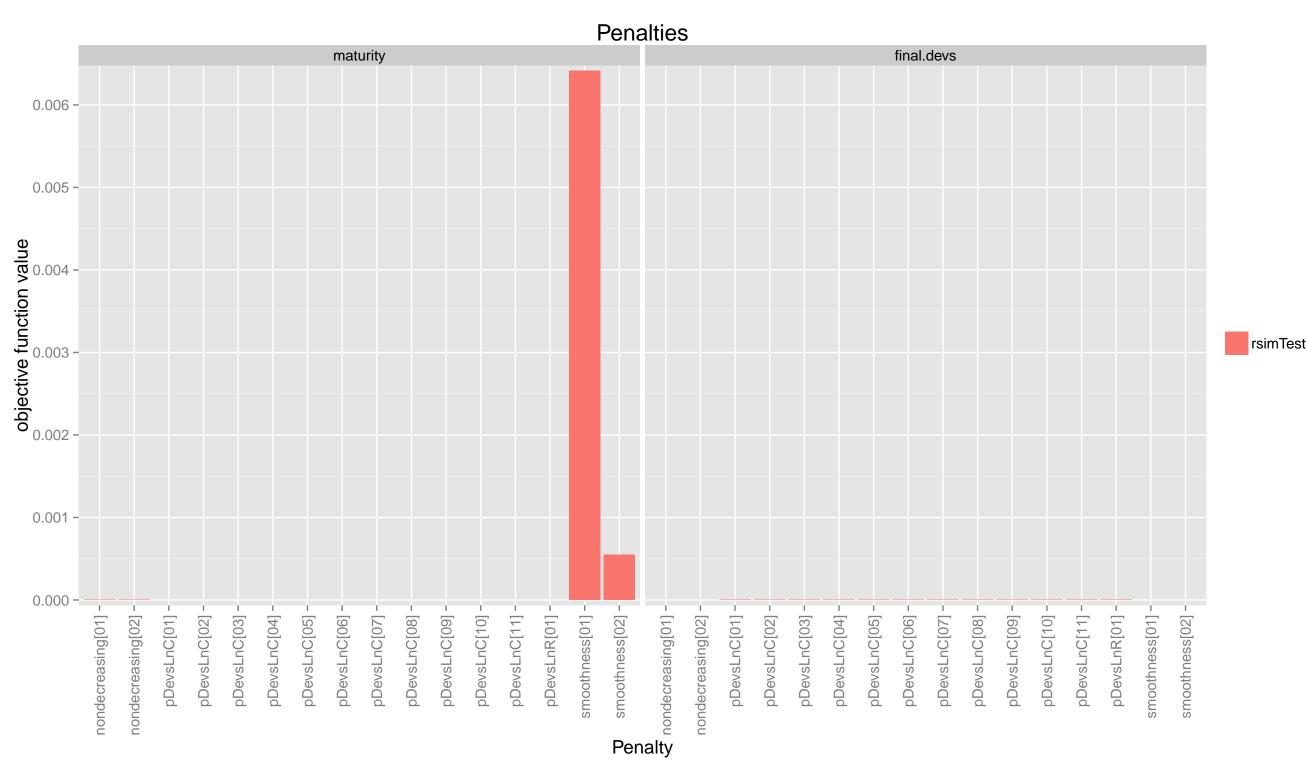




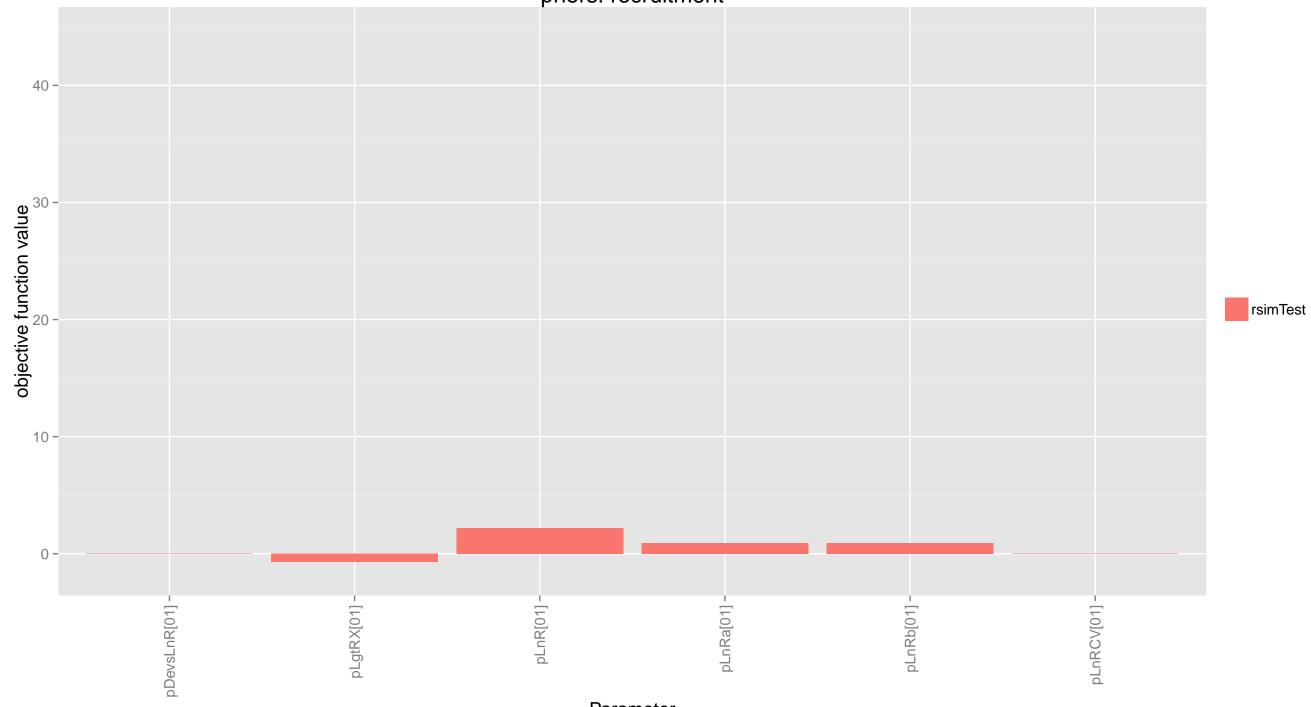




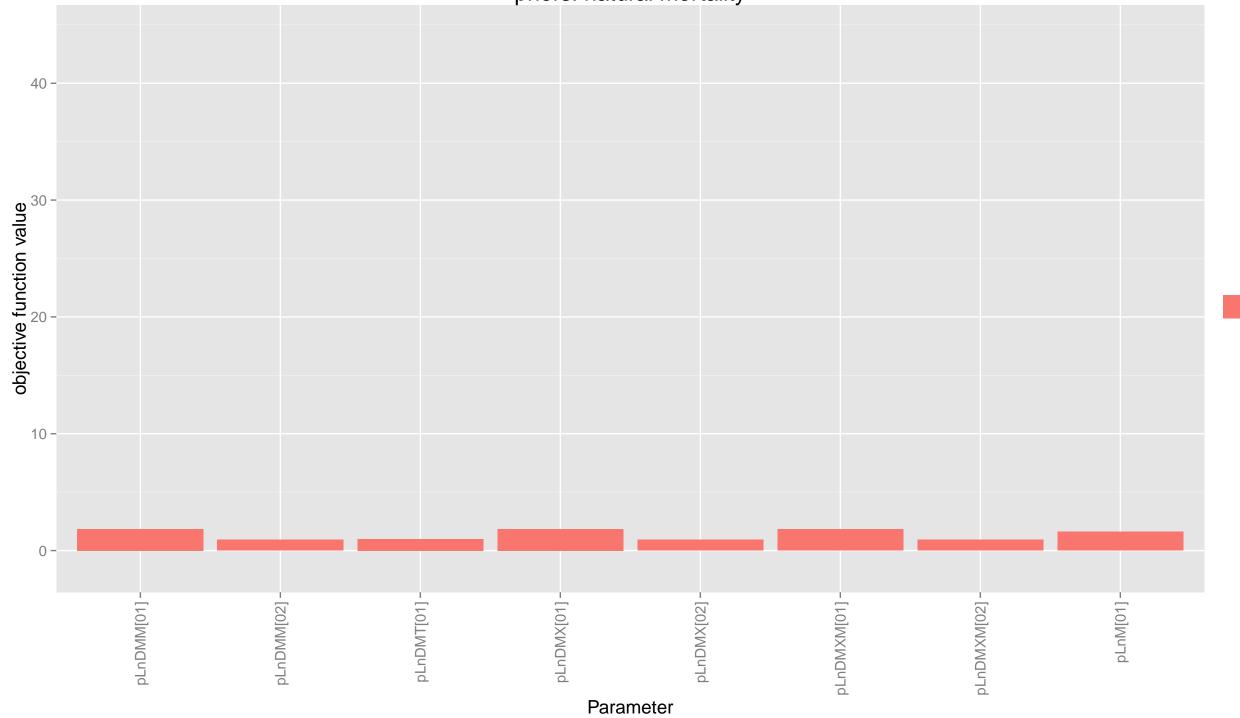




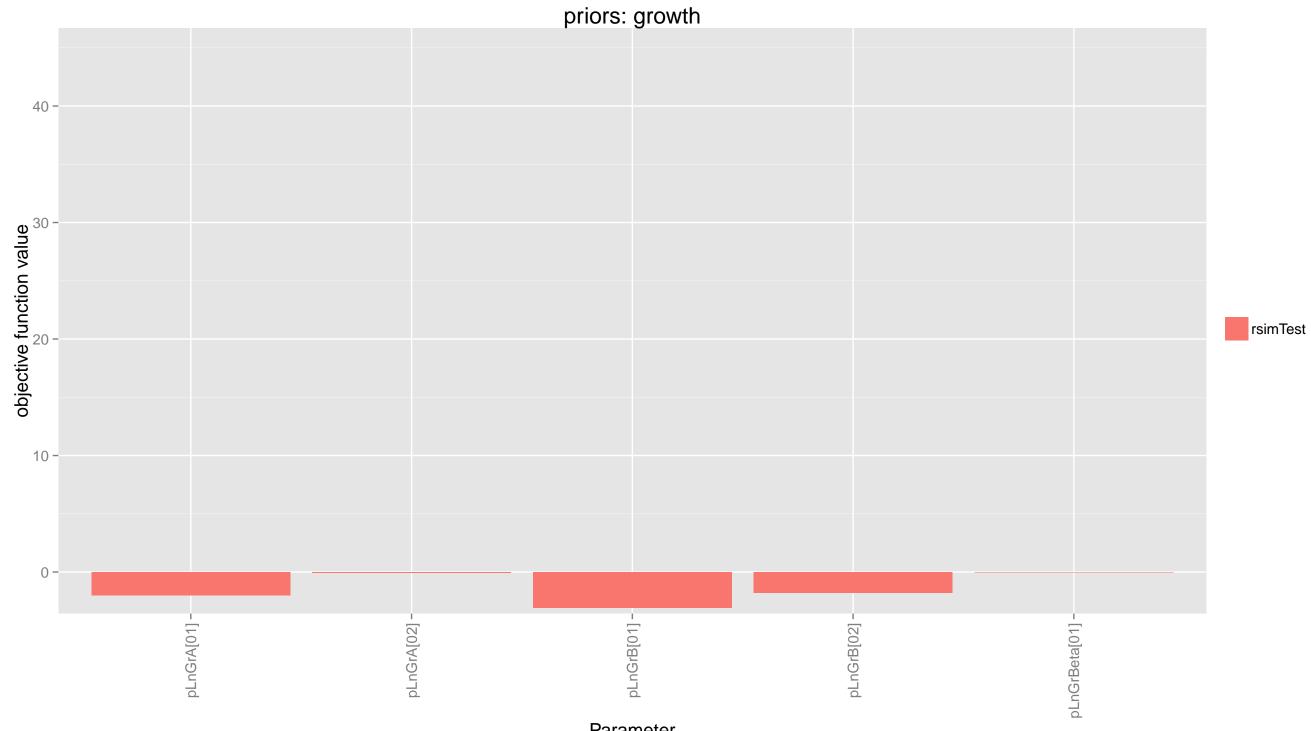
priors: recruitment



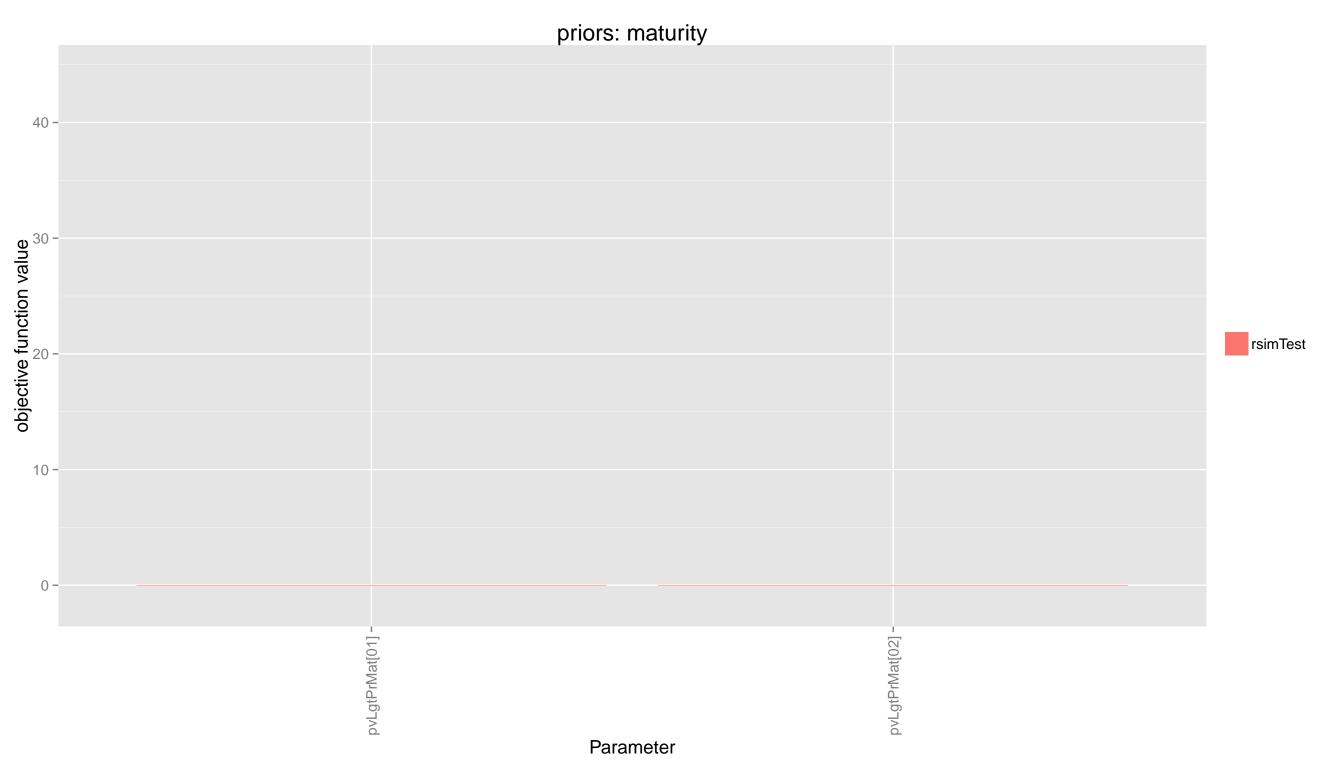
priors: natural mortality



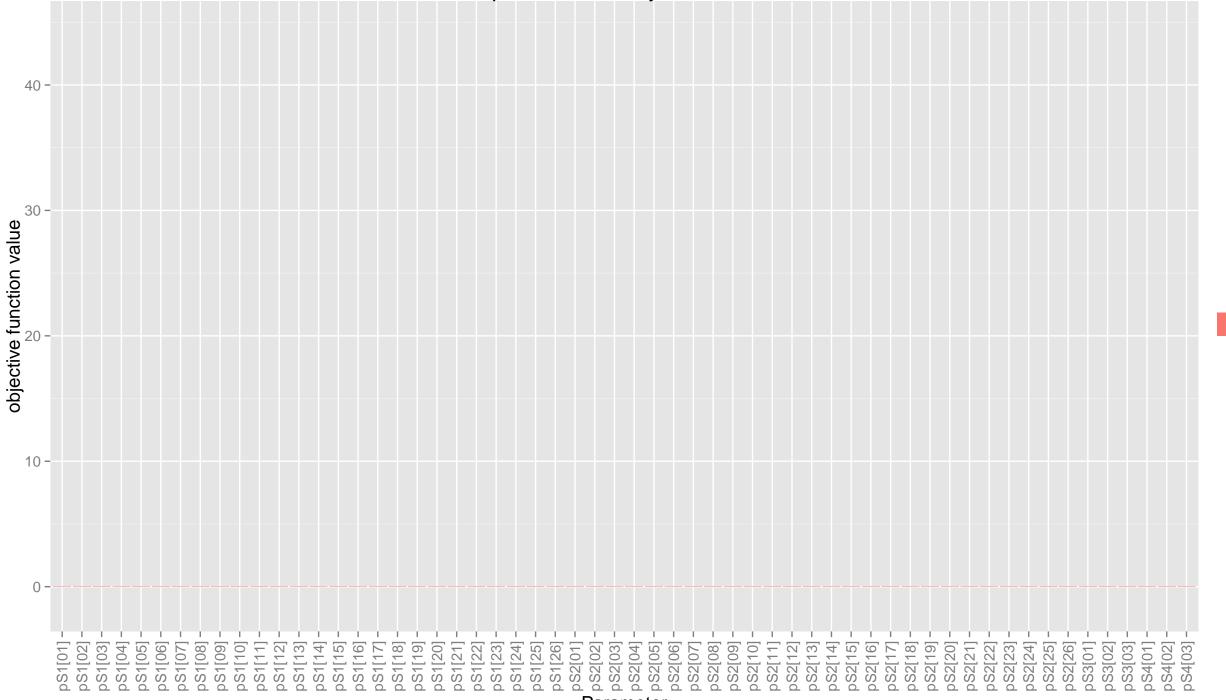
rsimTest



Parameter



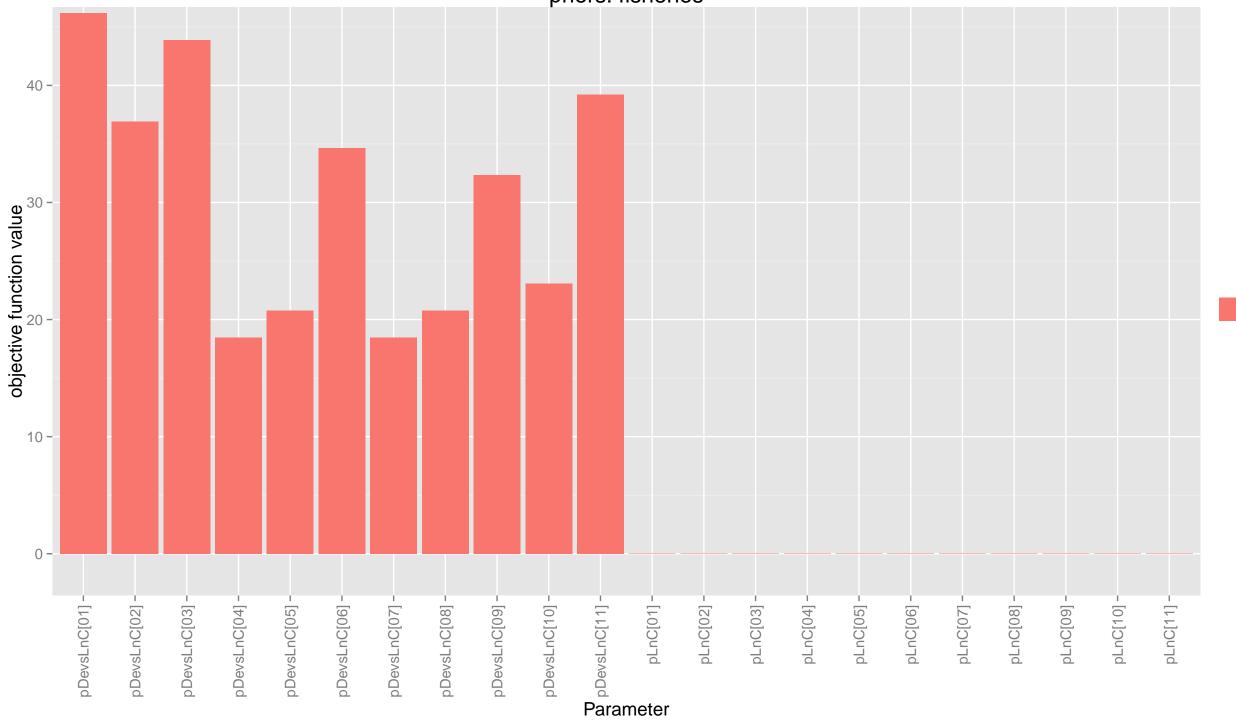
priors: selectivity functions



rsimTest

Parameter

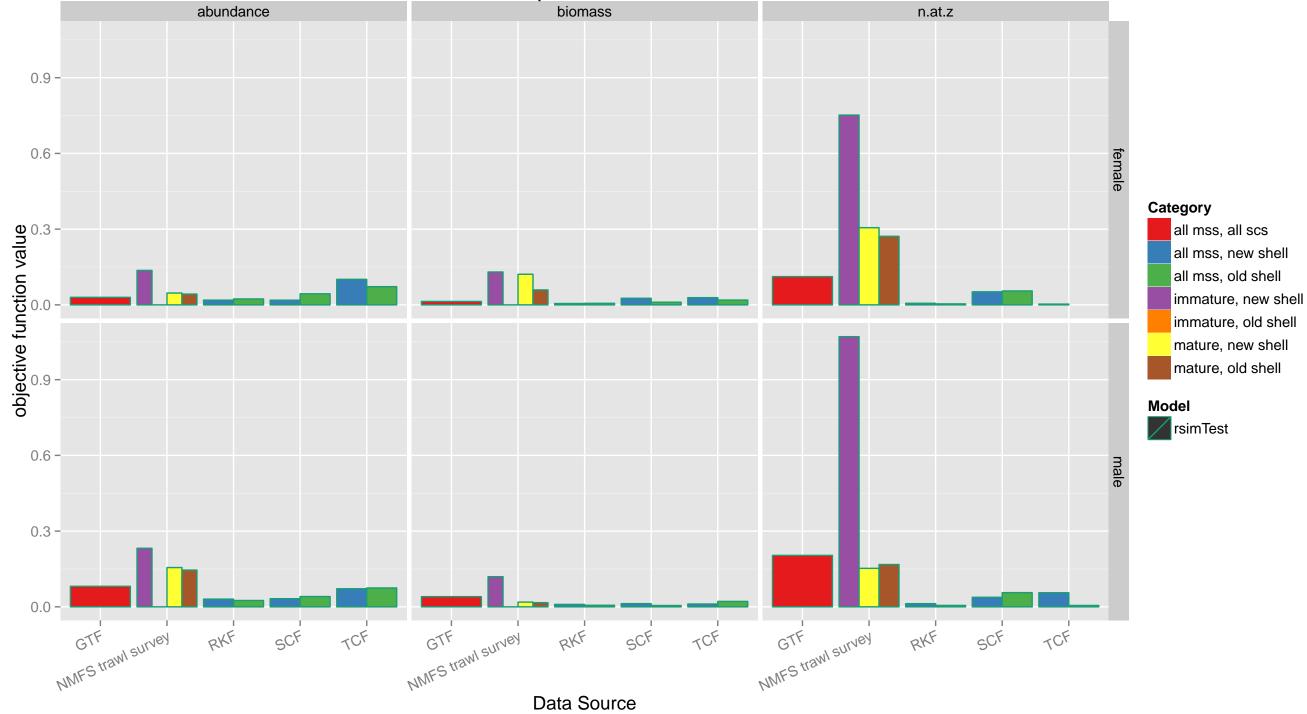
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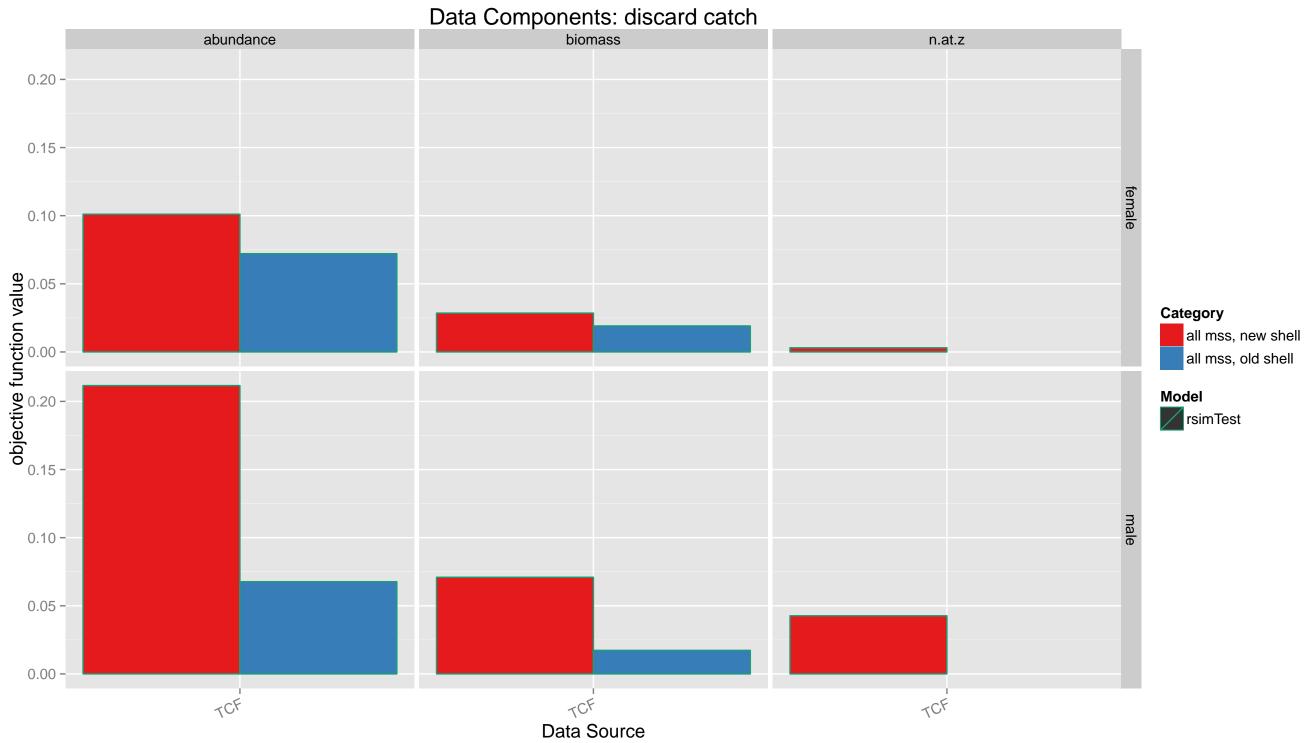


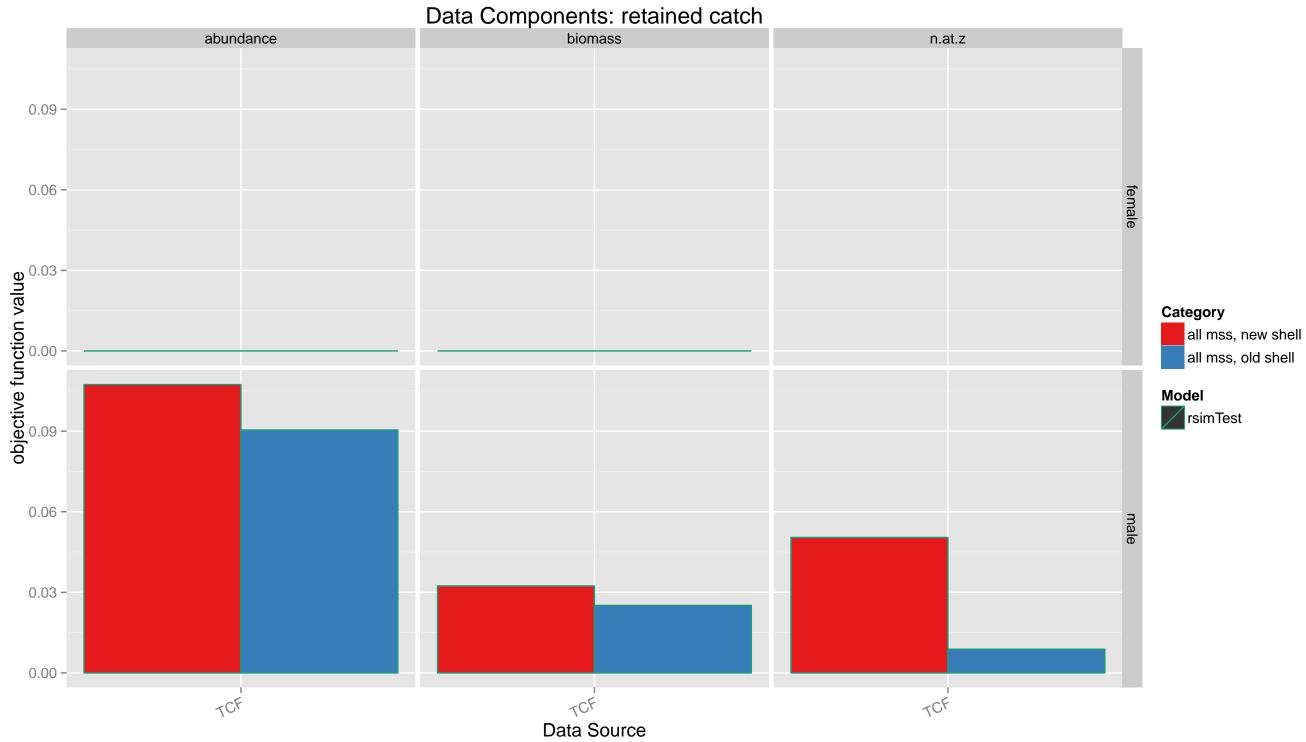
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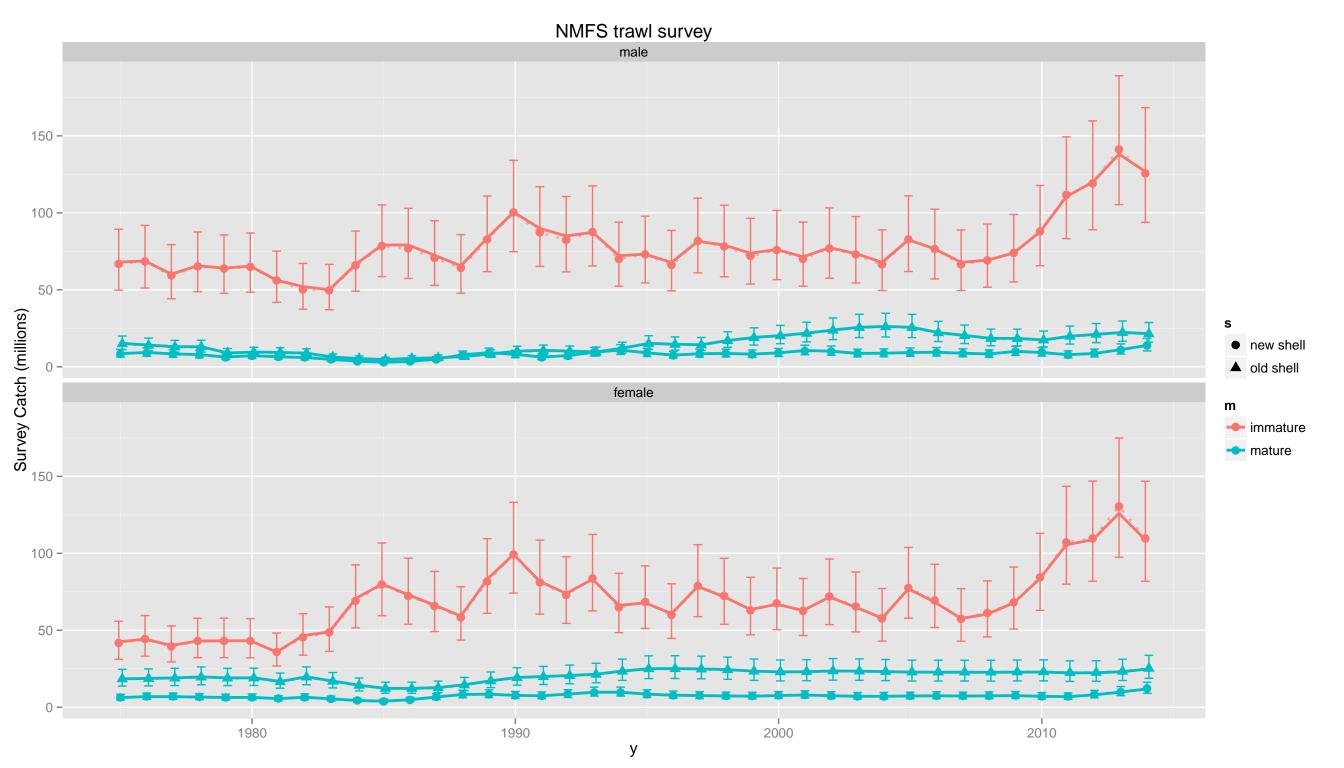
priors: surveys					
40 -					
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n value					
objective function value					rsimTest
jective					
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10-					
0					
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		рLnDQX[01] -	arameter	pLnQ[01] -	
	2 - 2	P	arameter	ā	

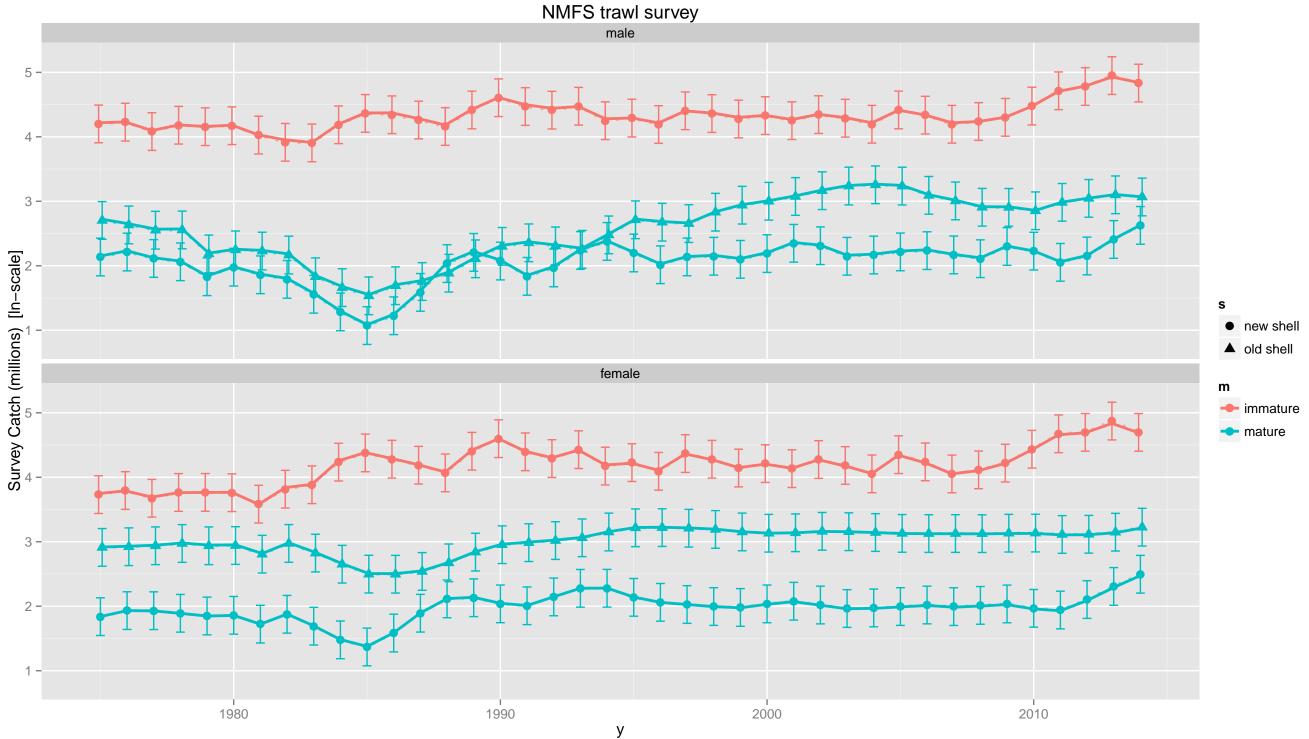
Data Components: total catch

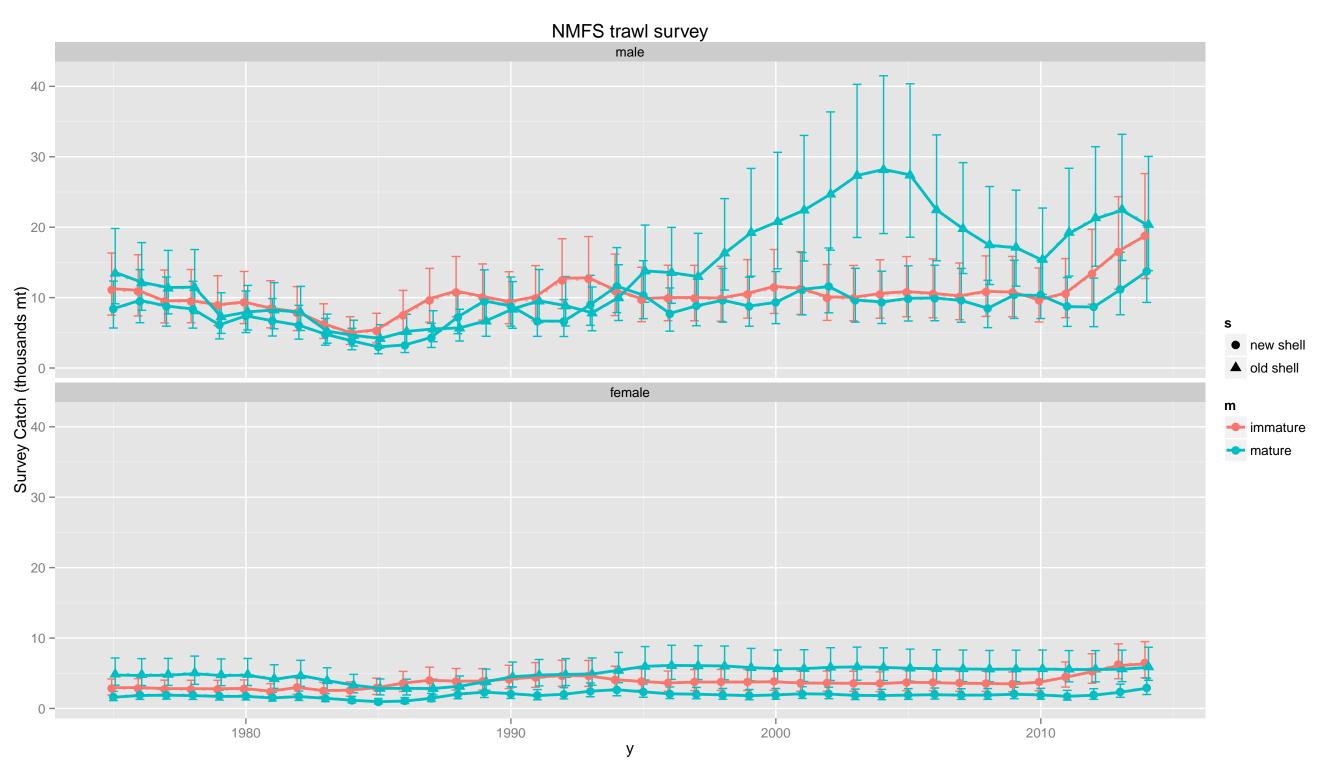


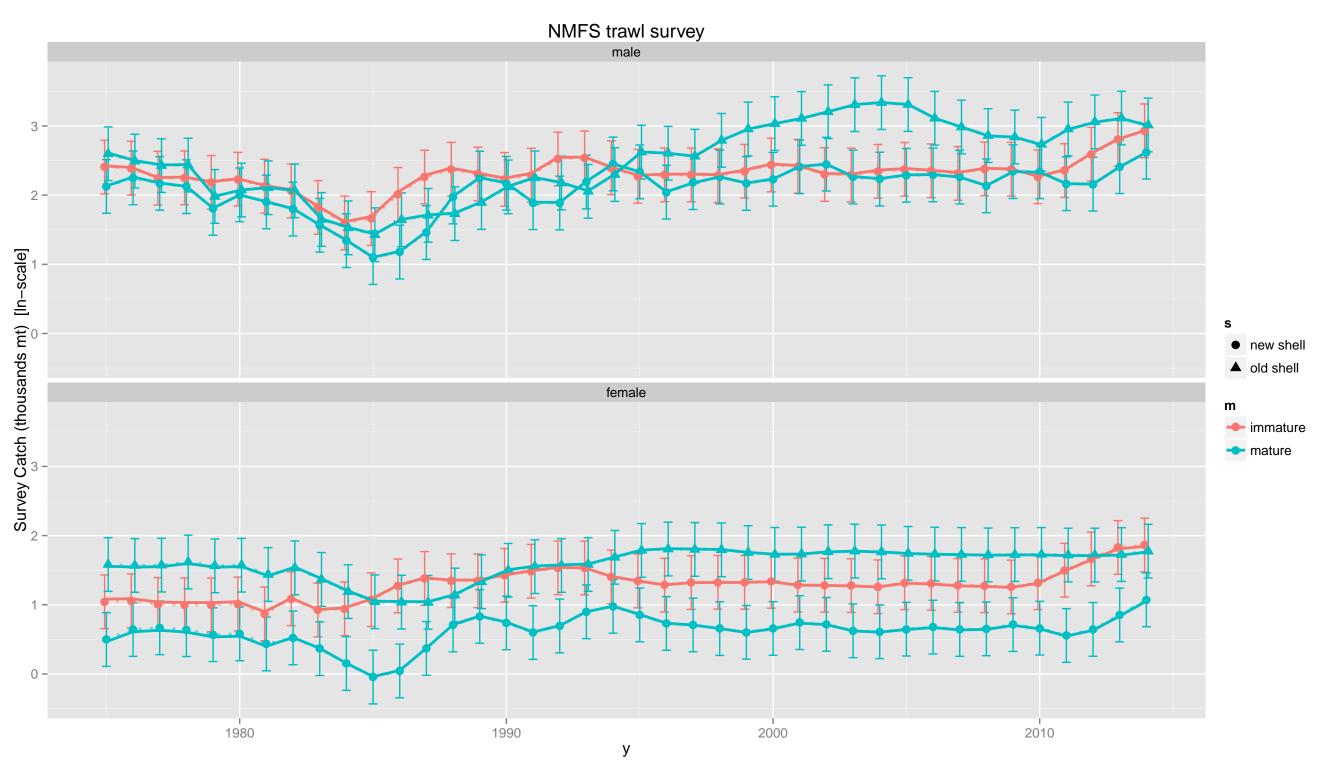




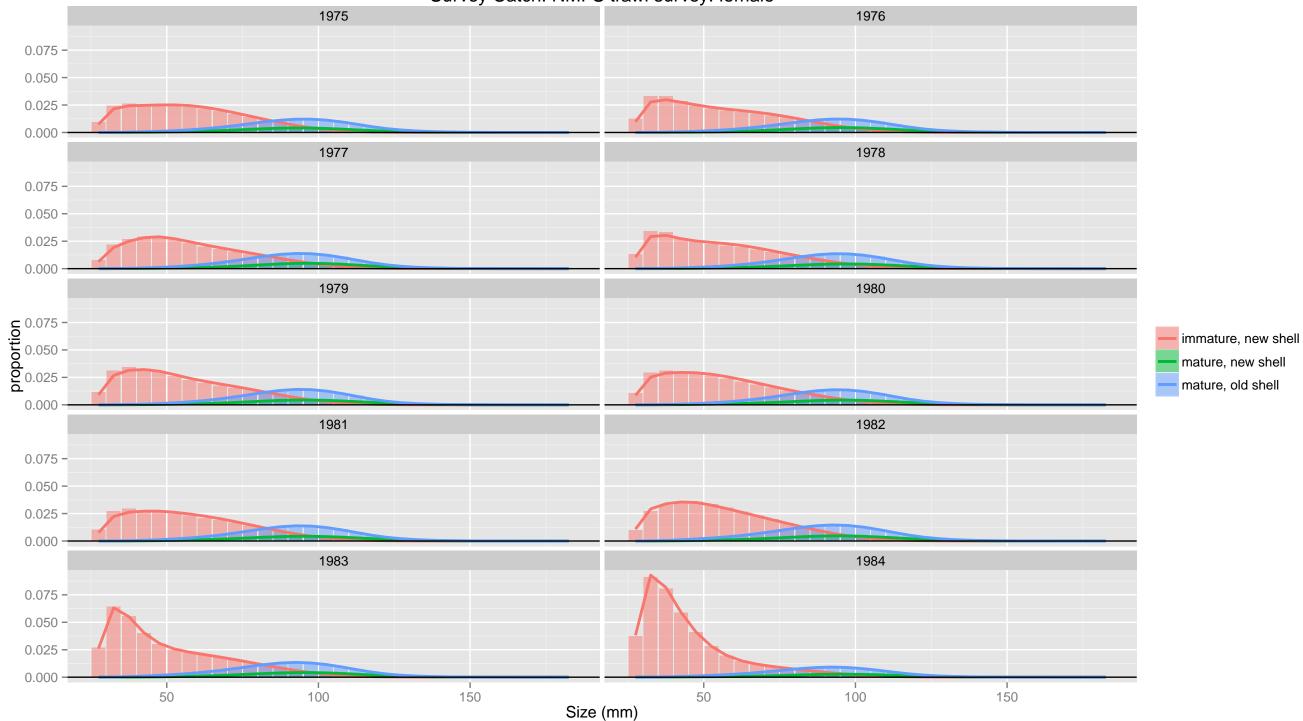




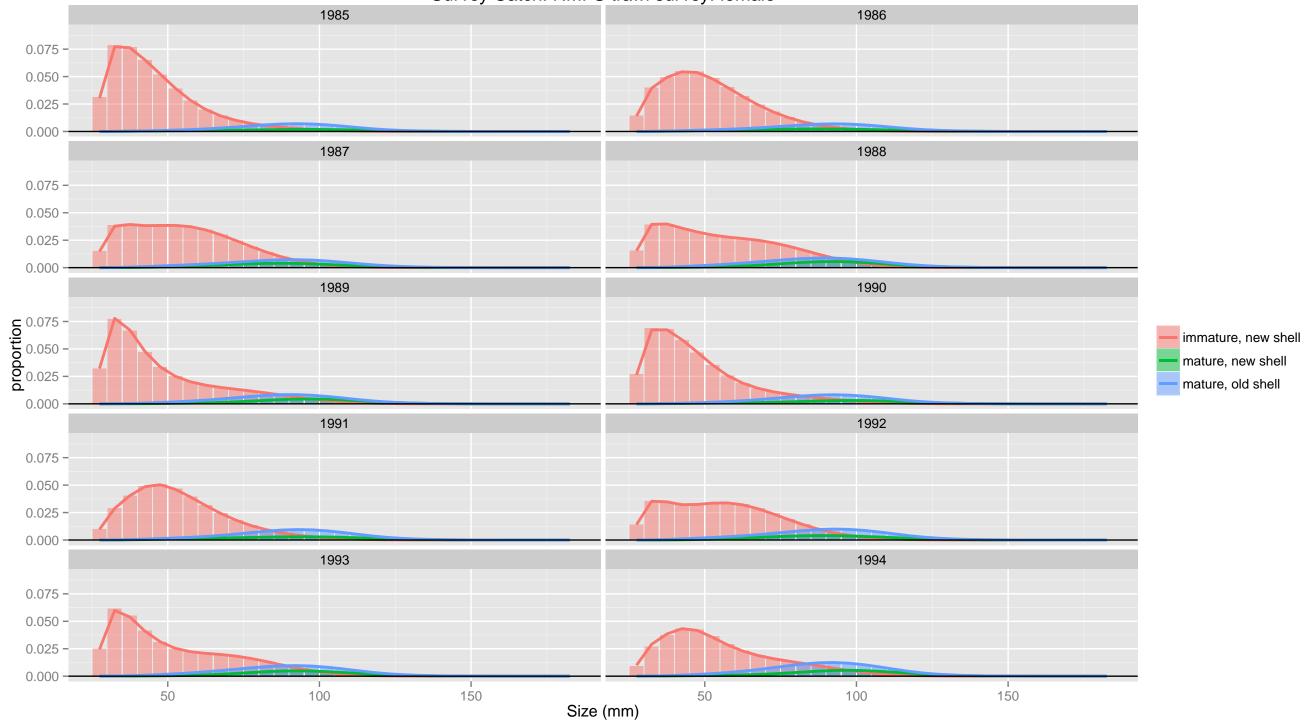




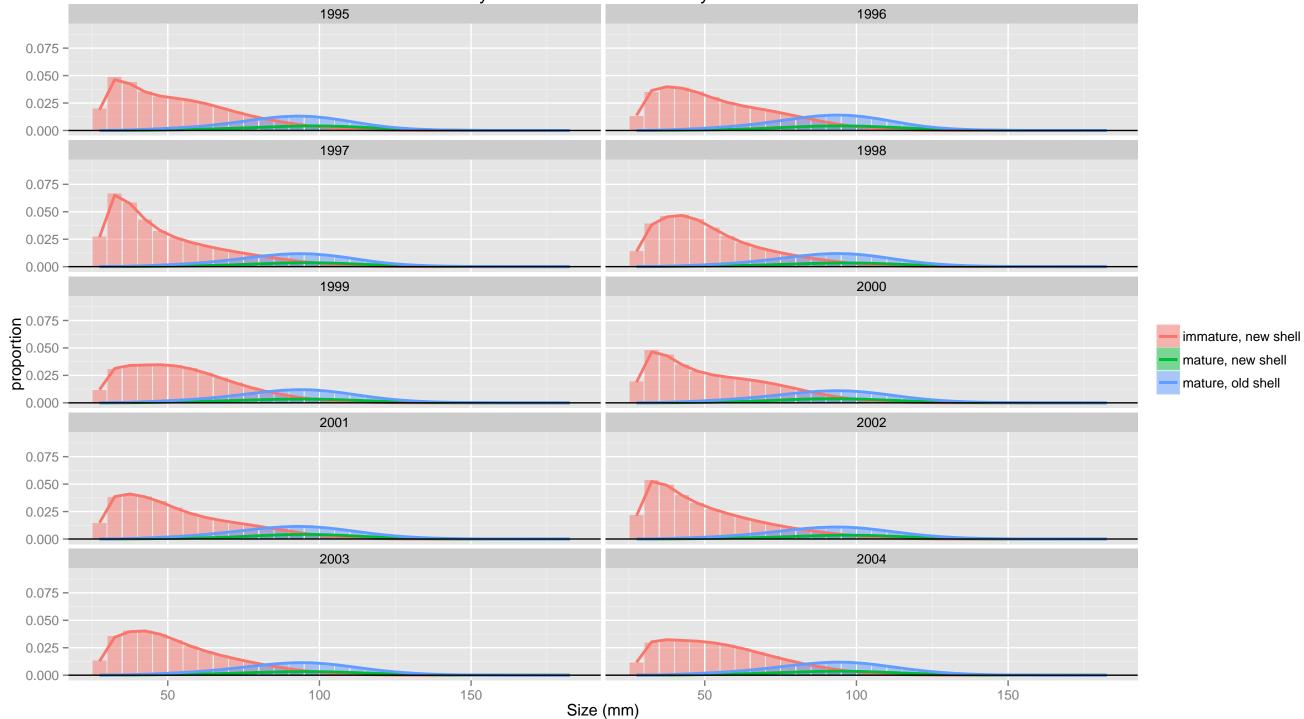
Survey Catch: NMFS trawl survey: female



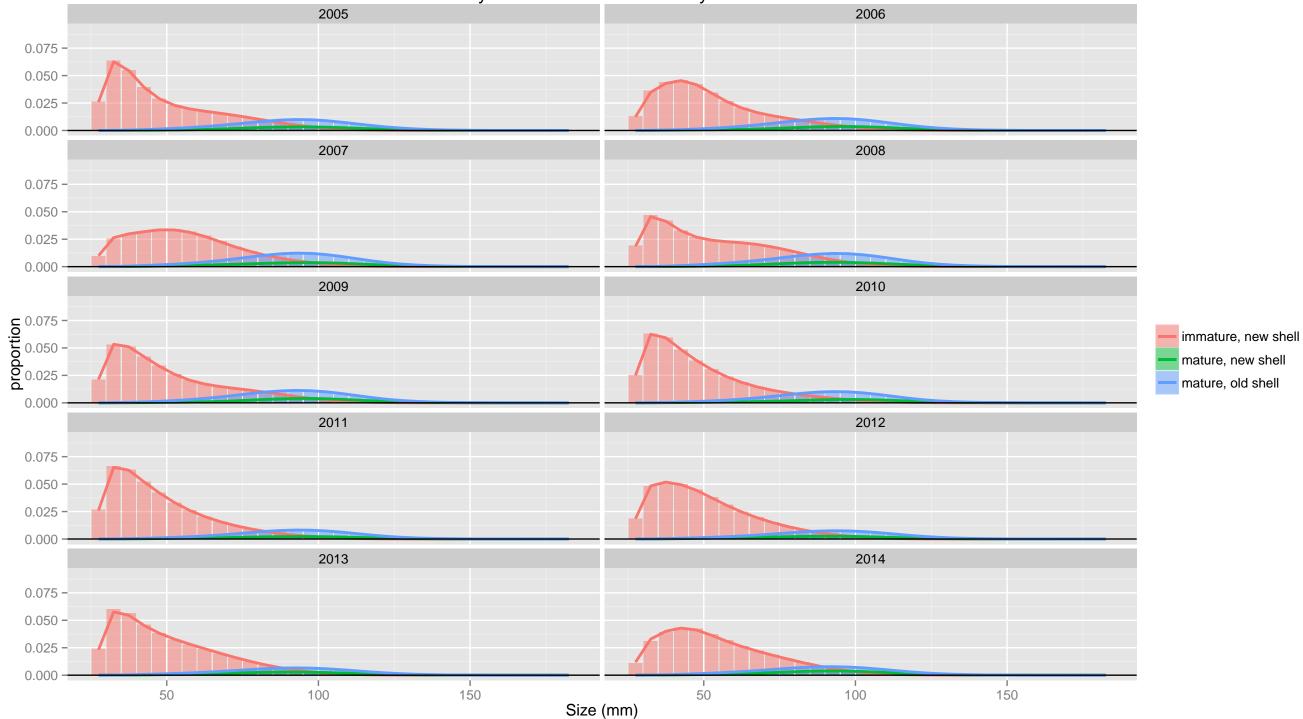
Survey Catch: NMFS trawl survey: female



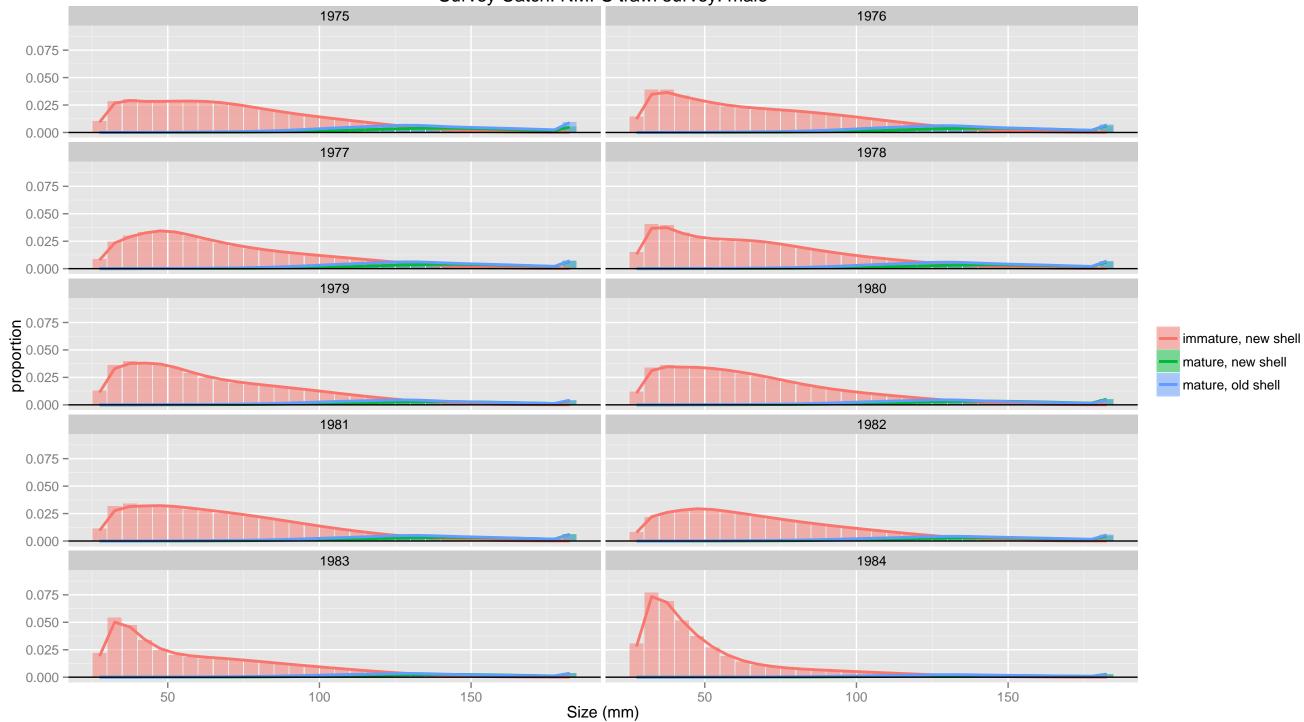
Survey Catch: NMFS trawl survey: female



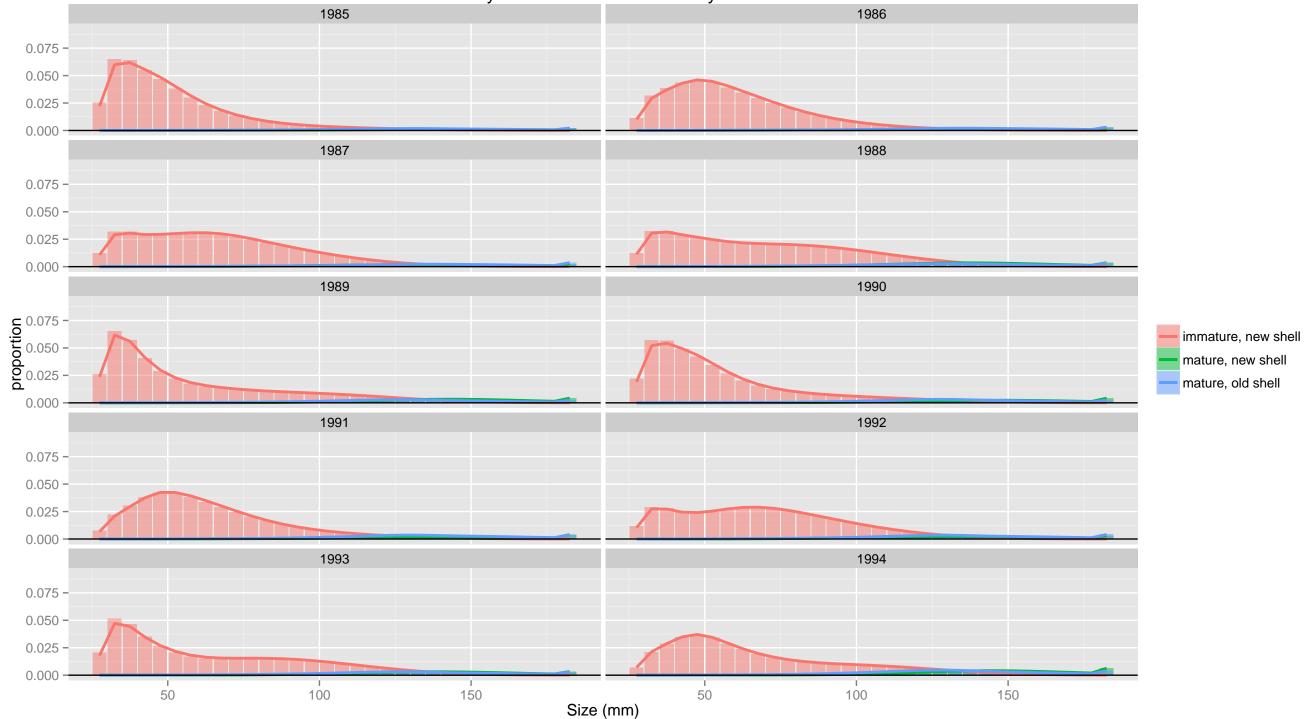
Survey Catch: NMFS trawl survey: female



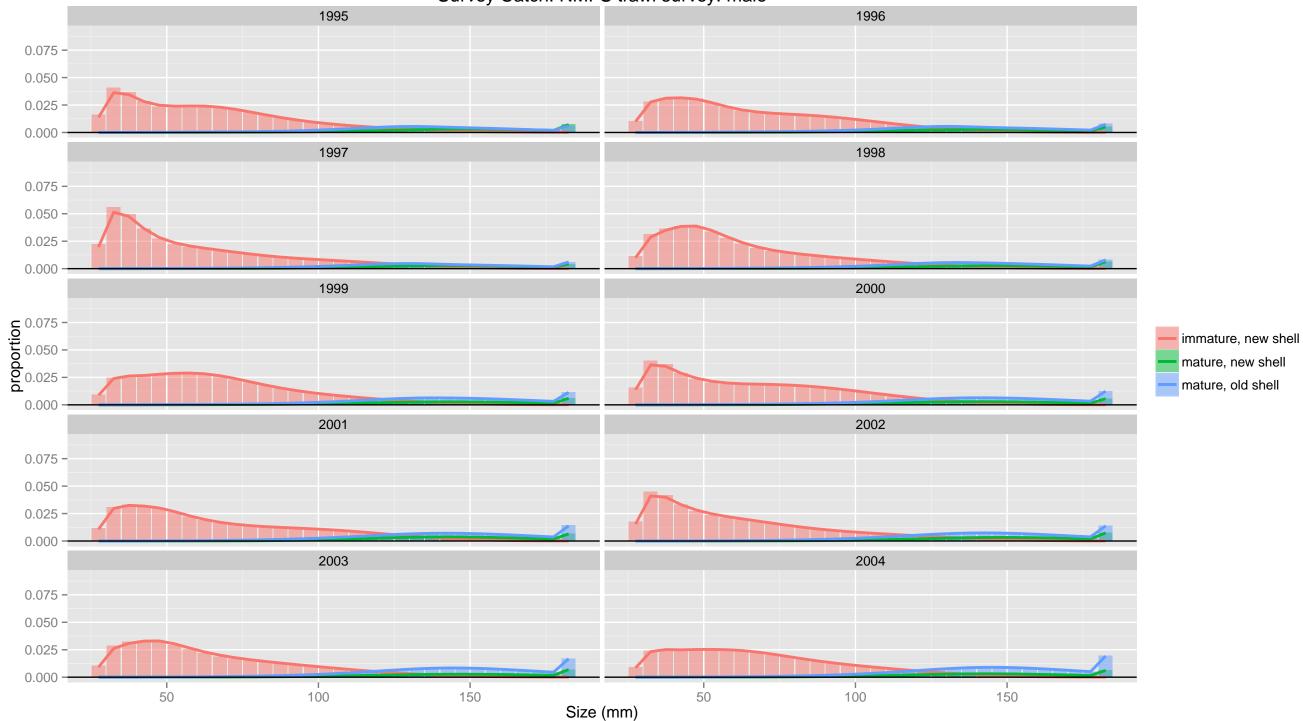
Survey Catch: NMFS trawl survey: male



Survey Catch: NMFS trawl survey: male

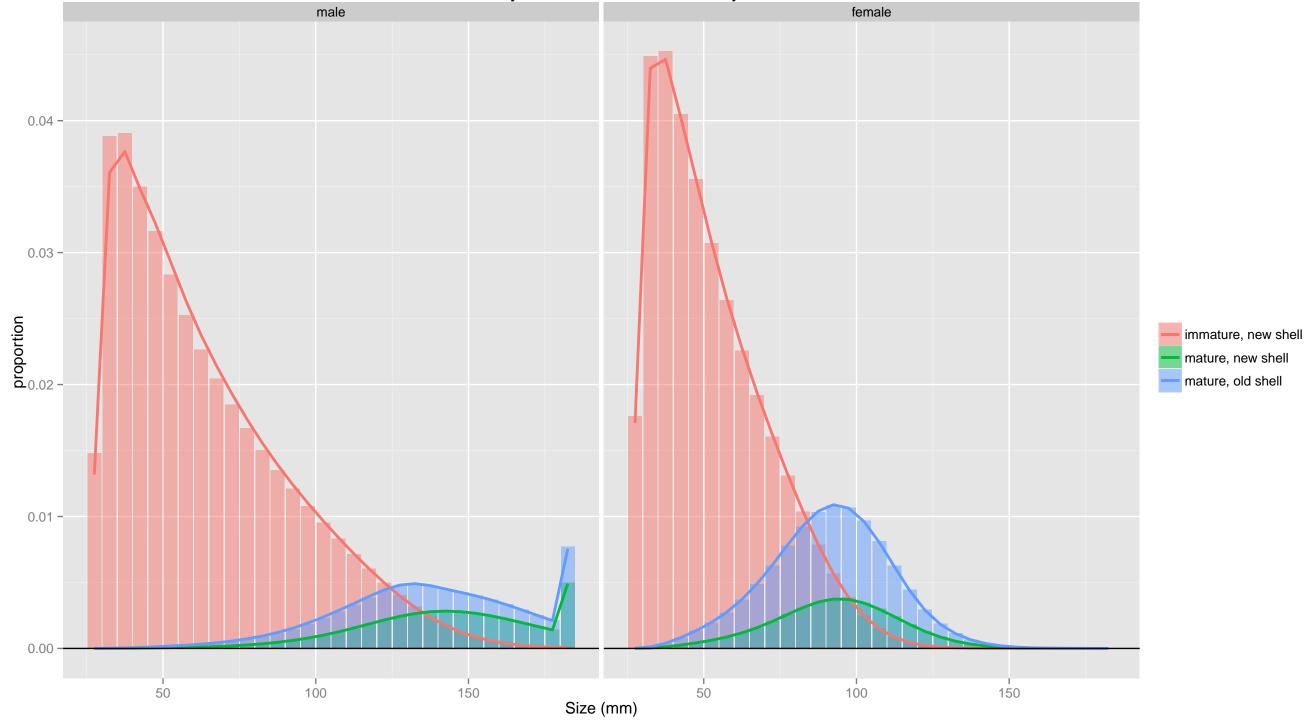


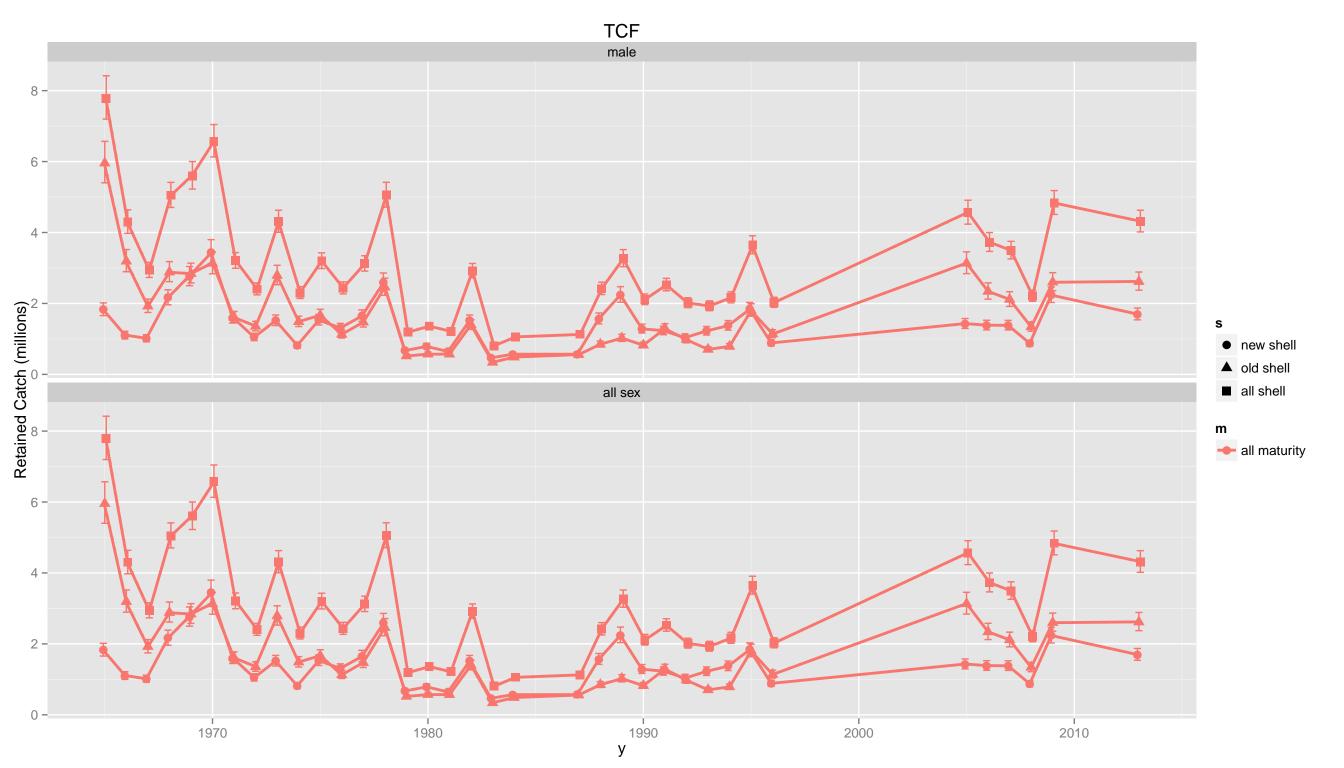
Survey Catch: NMFS trawl survey: male

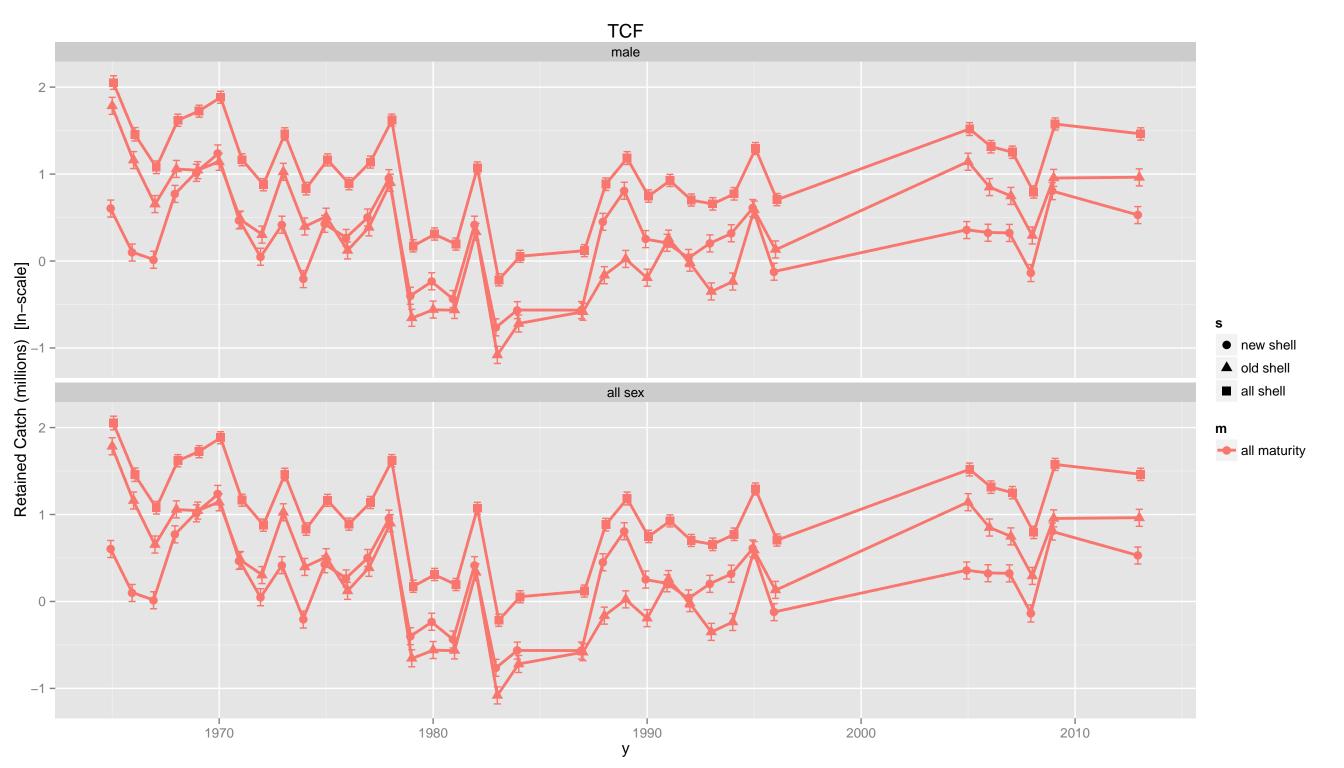


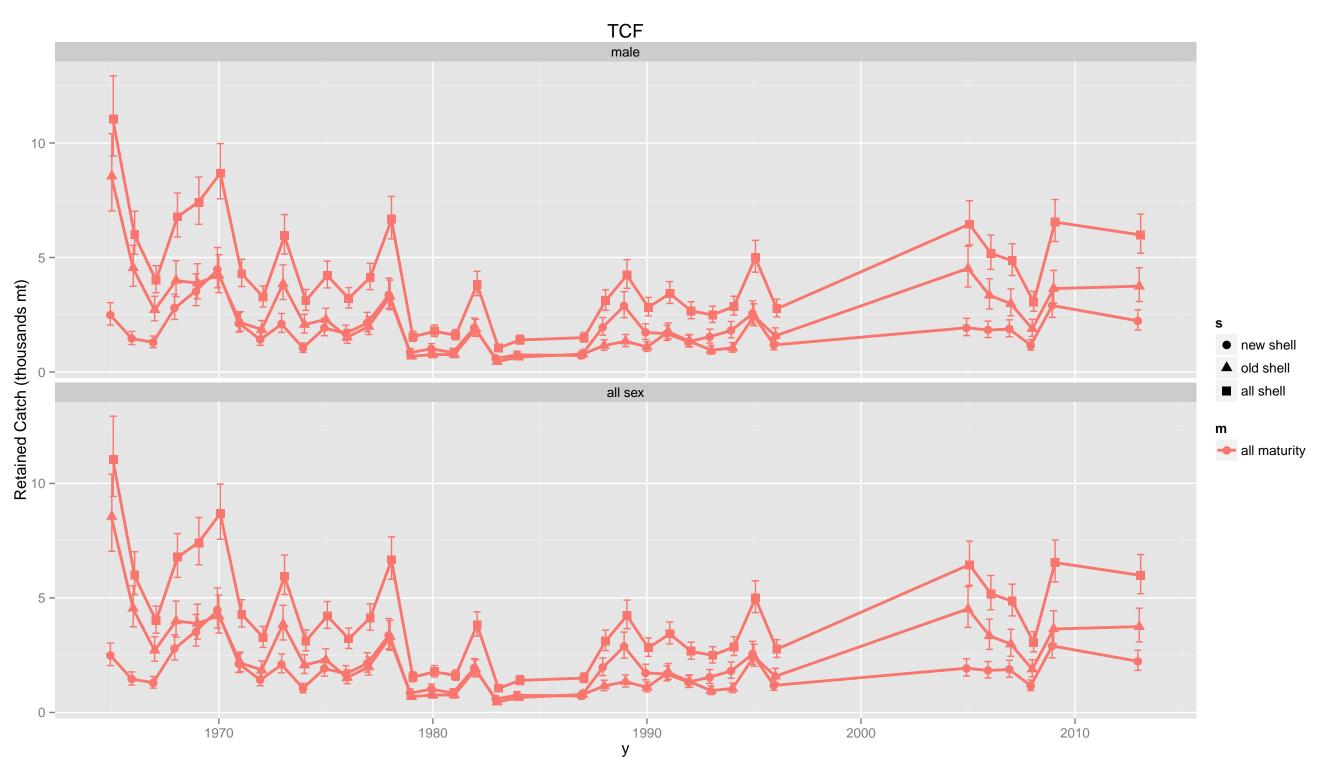
Survey Catch: NMFS trawl survey: male 2005 2006 0.075 -0.050 -0.025 -0.000 -2008 2007 0.075 -0.050 -0.025 -0.000 · 2009 2010 u 0.075 -brodoution 0.050 -0.025 immature, new shell mature, new shell mature, old shell 0.000 · 2011 2012 0.075 -0.050 -0.025 -0.000 -2013 2014 0.075 -0.050 -0.025 -0.000 -1 Т 100 50 150 100 50 150 Size (mm)

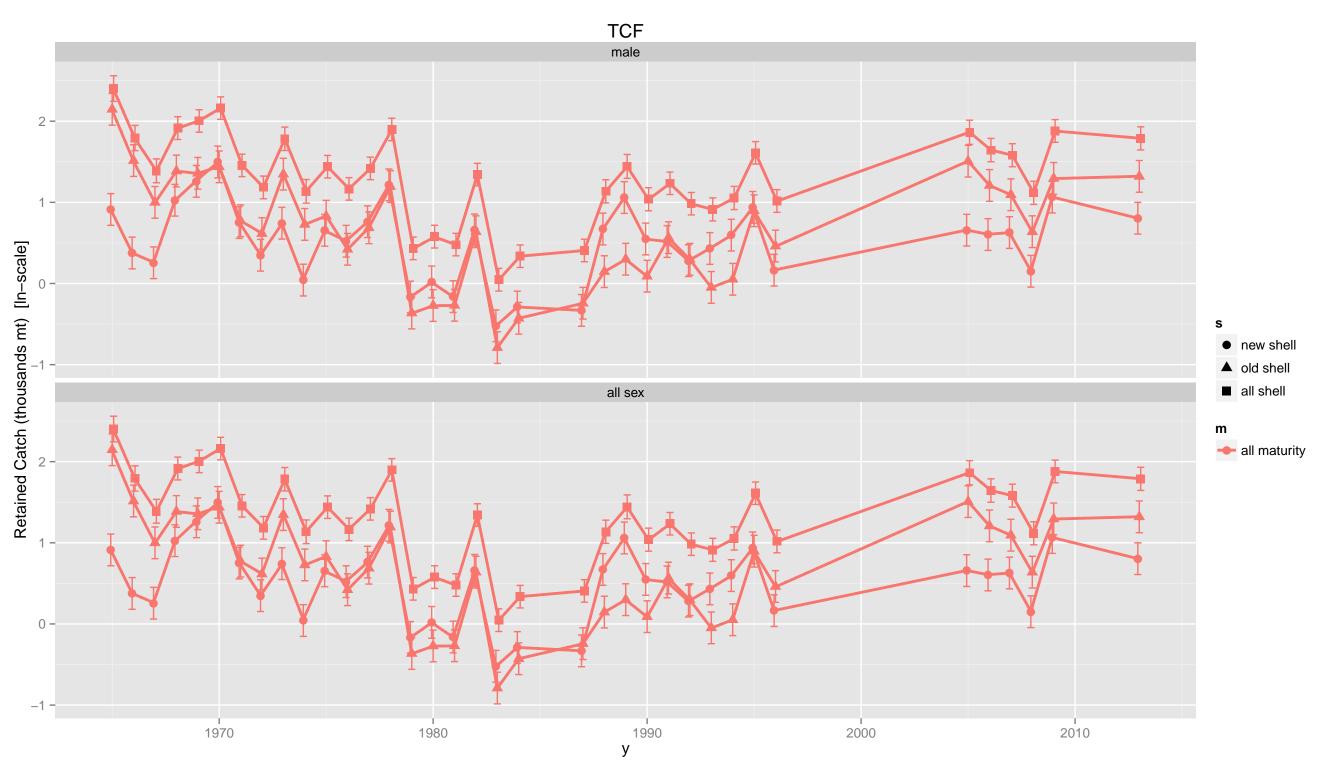
Survey Catch: NMFS trawl survey



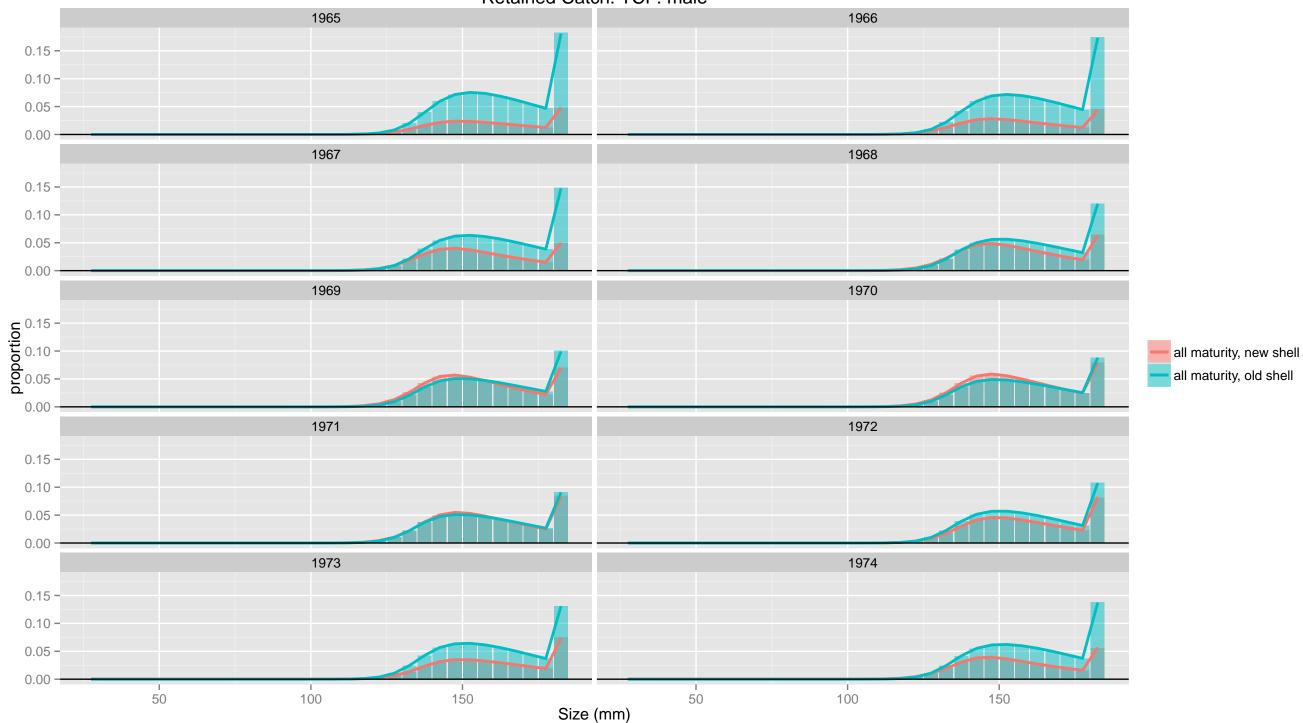




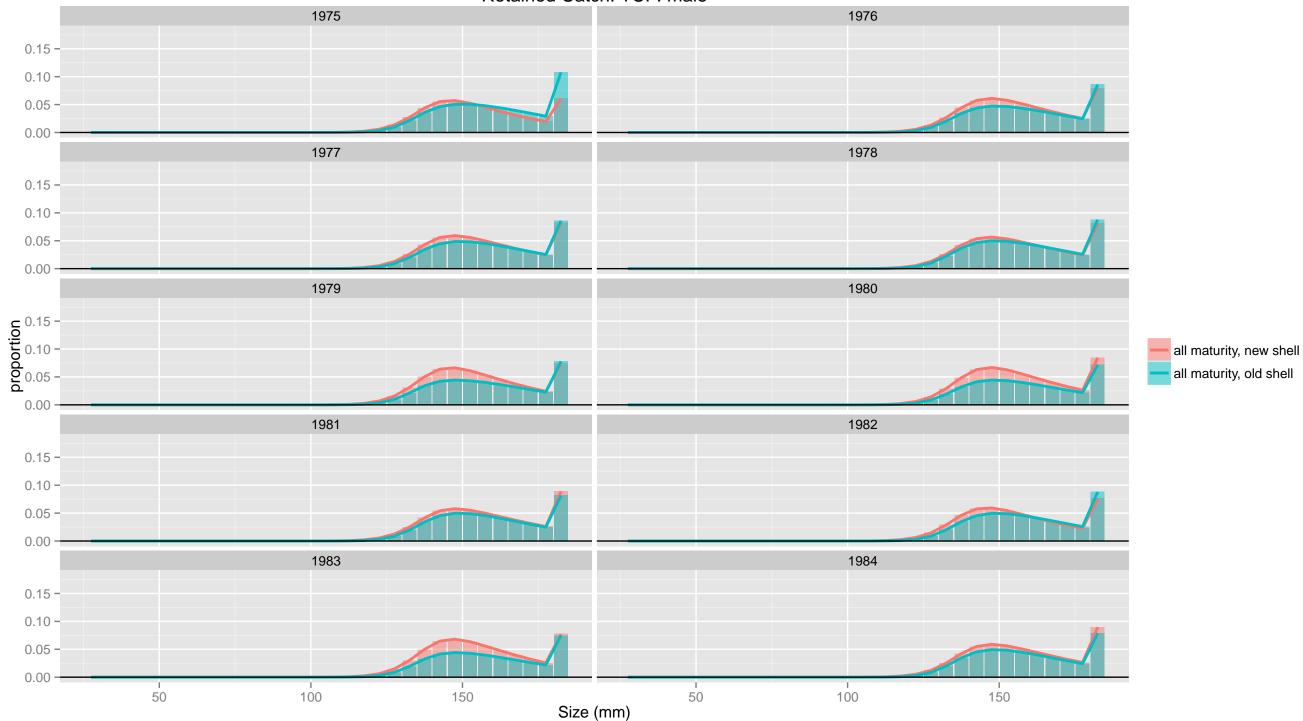




Retained Catch: TCF: male



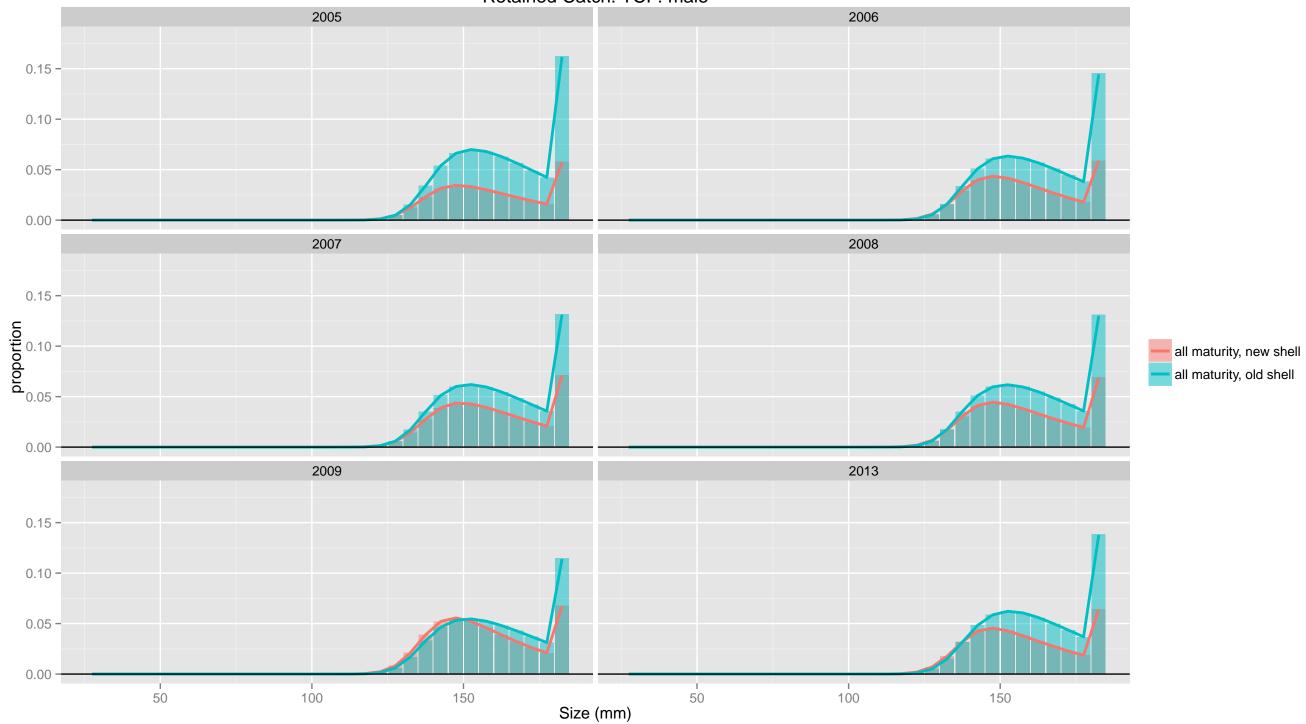
Retained Catch: TCF: male

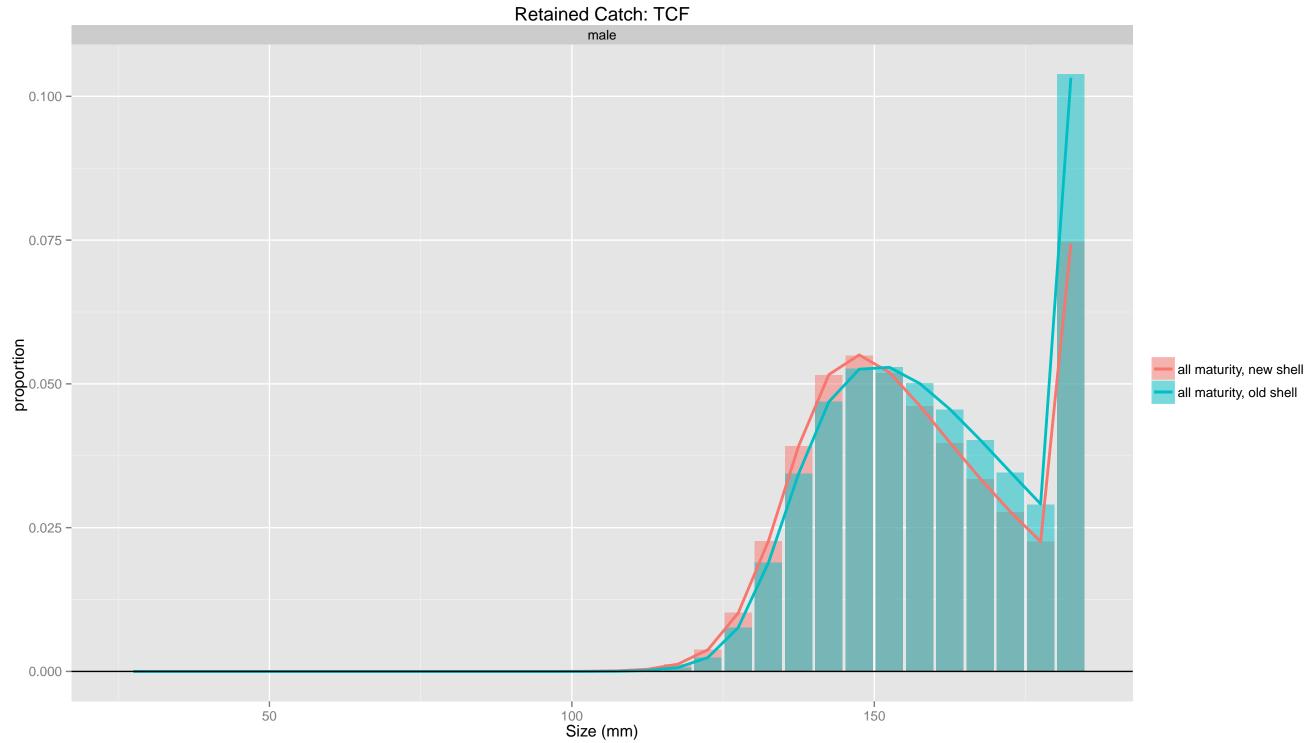


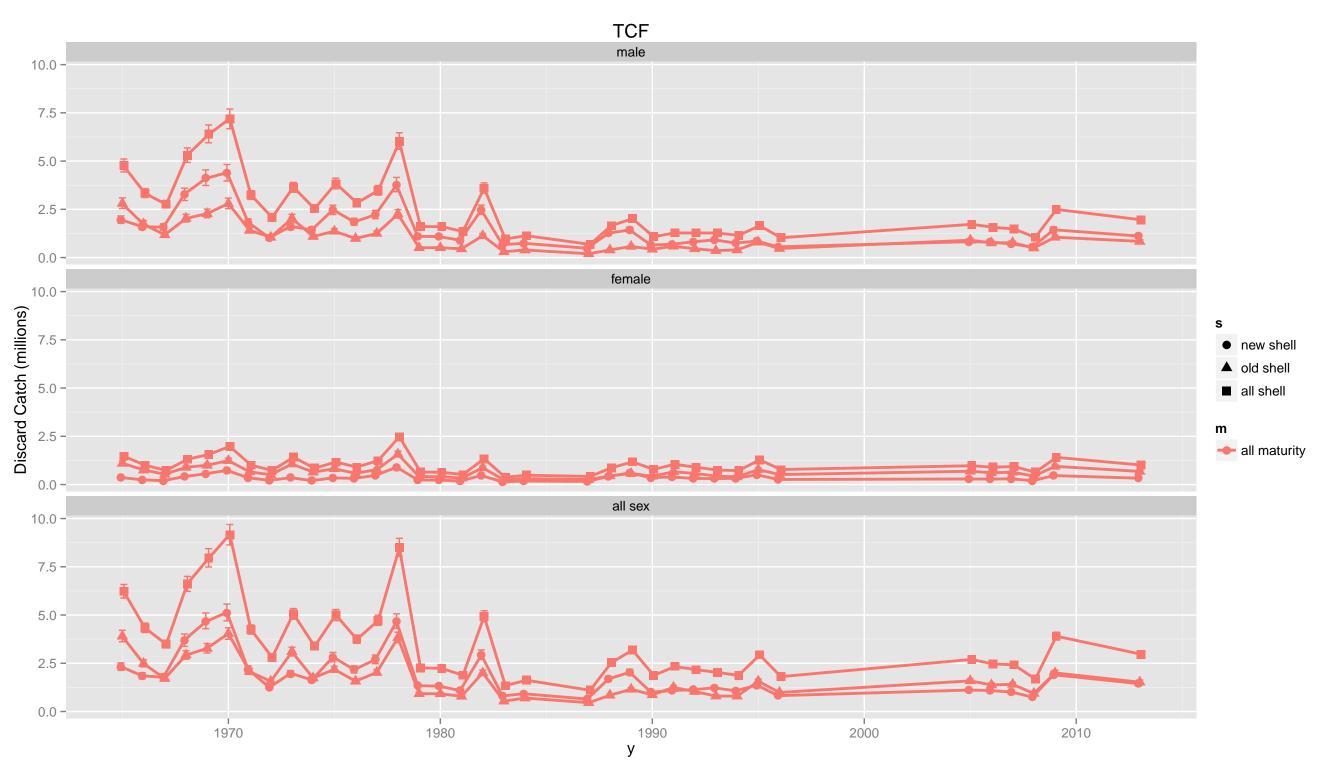
Retained Catch: TCF: male

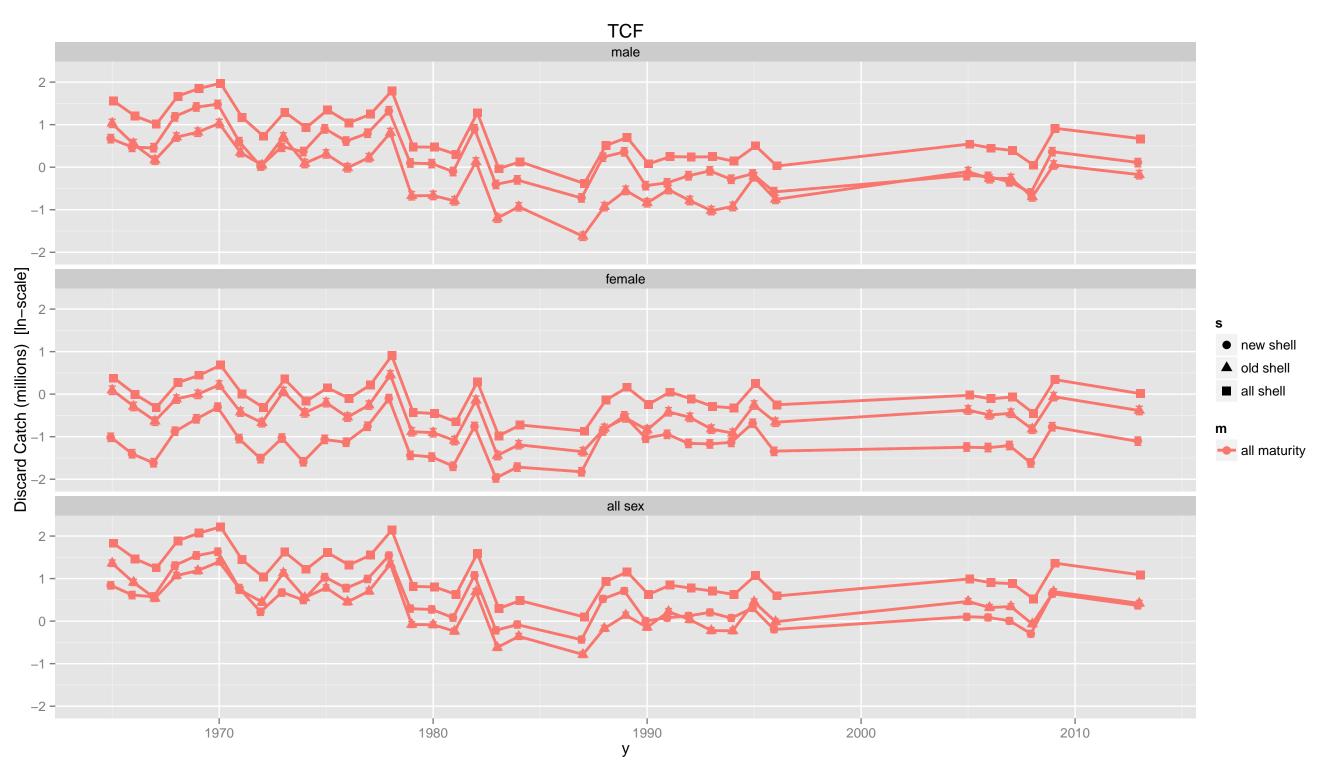


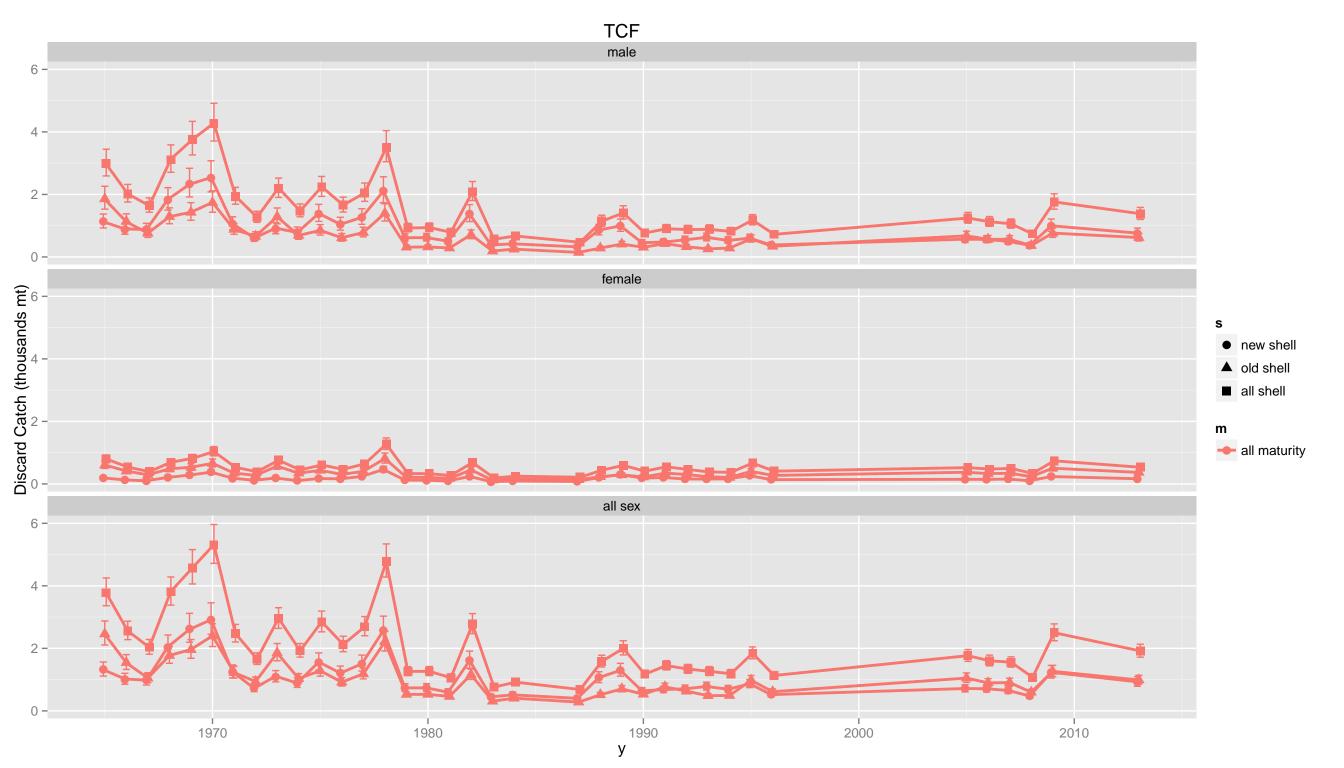
Retained Catch: TCF: male

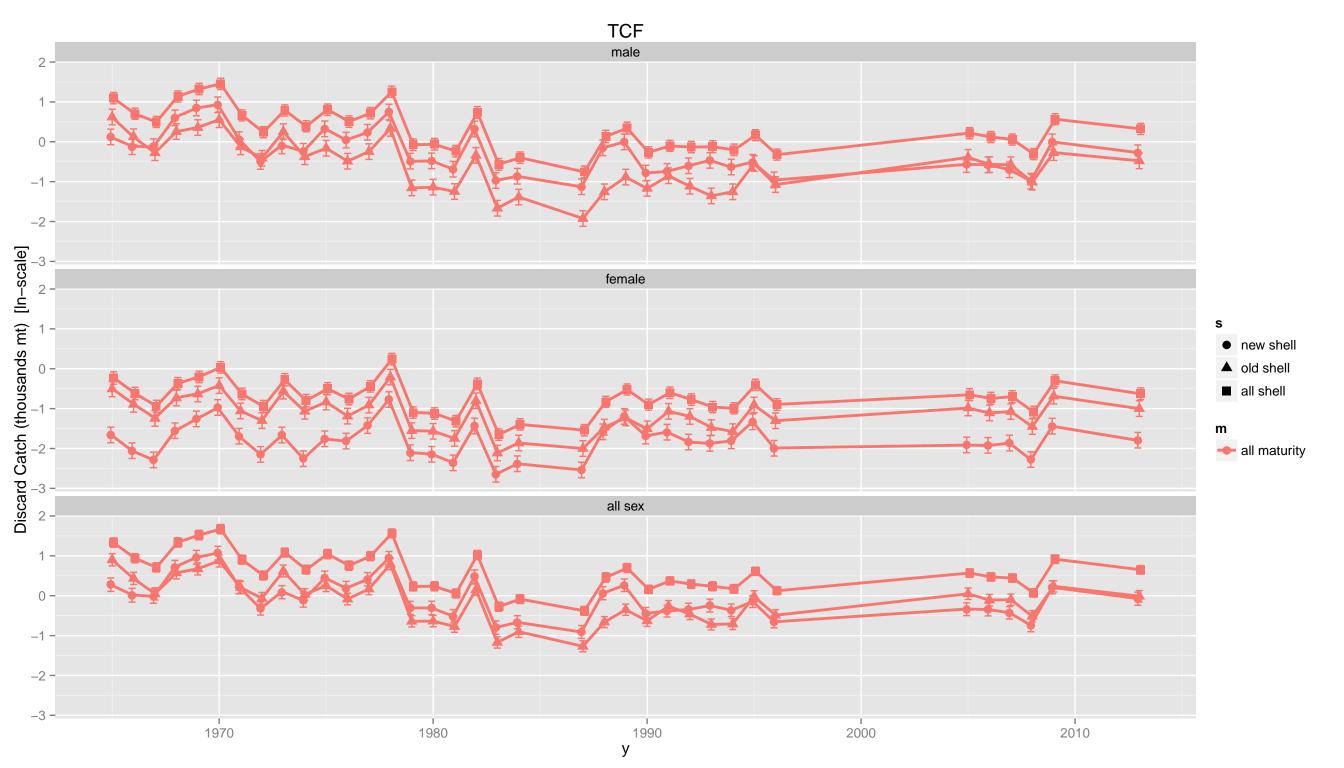


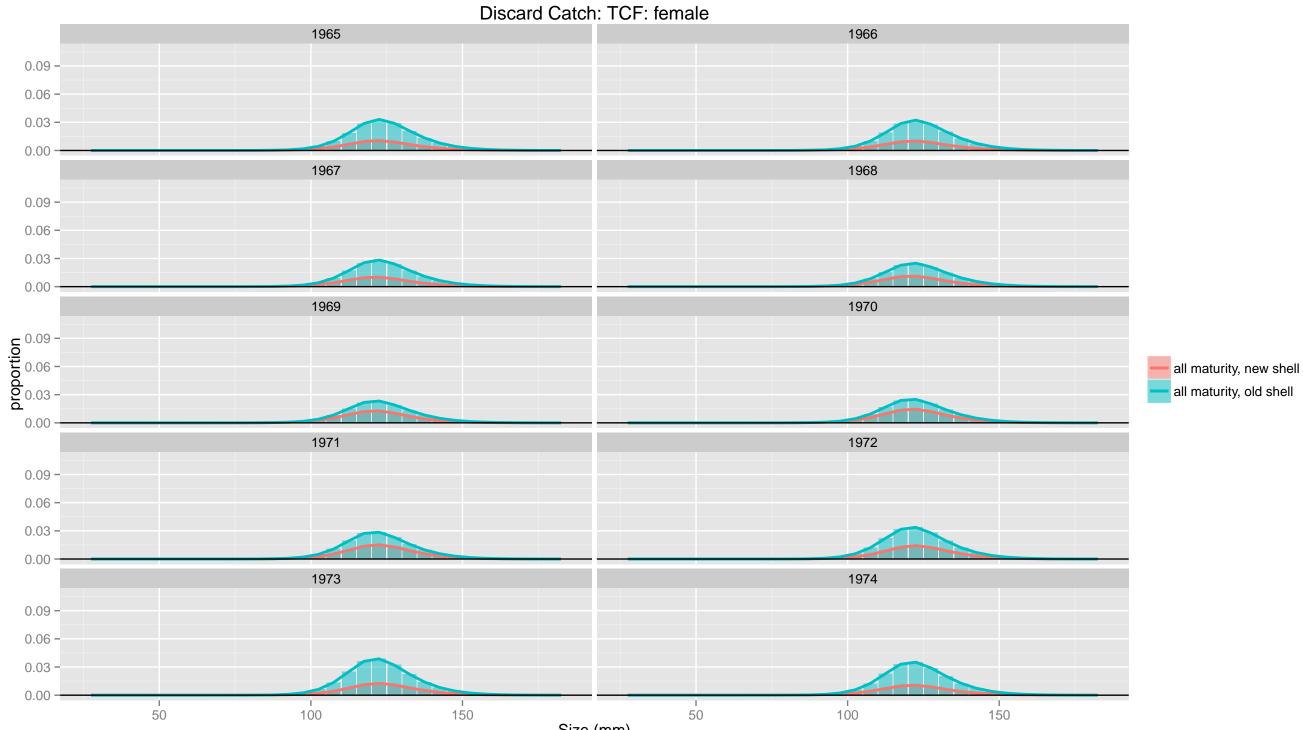




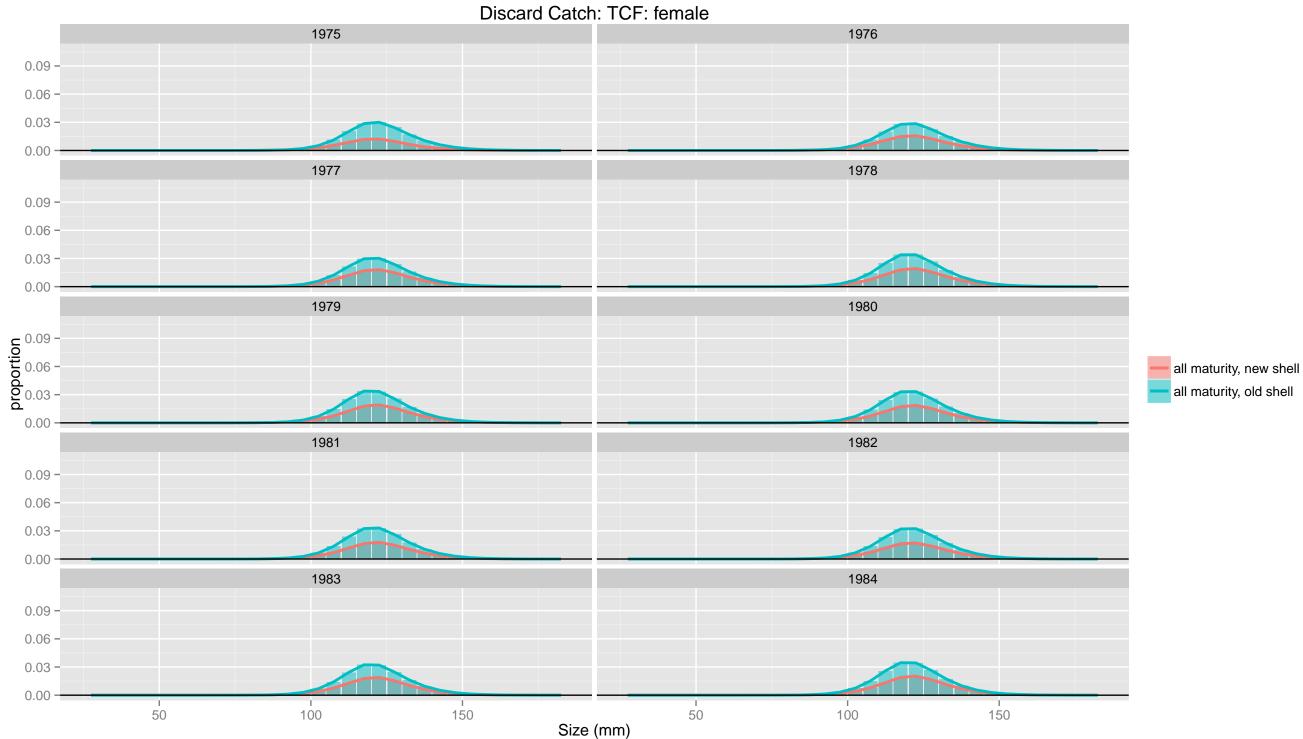


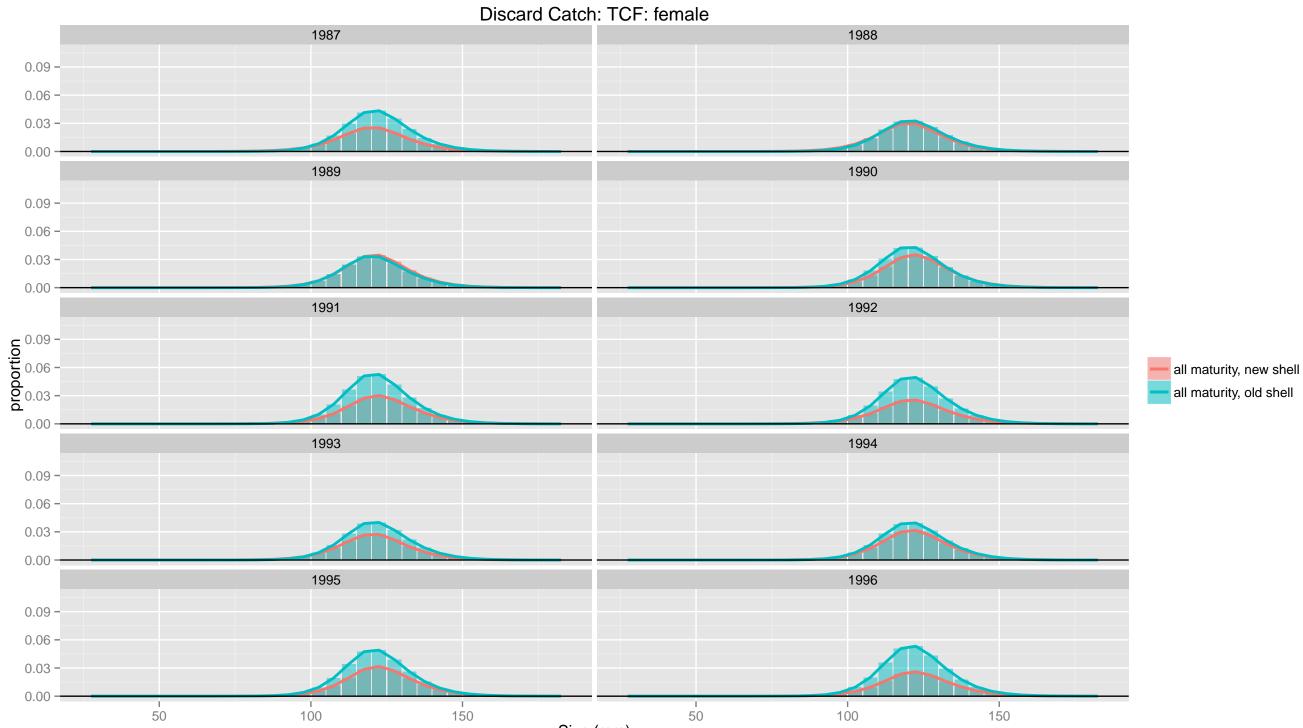






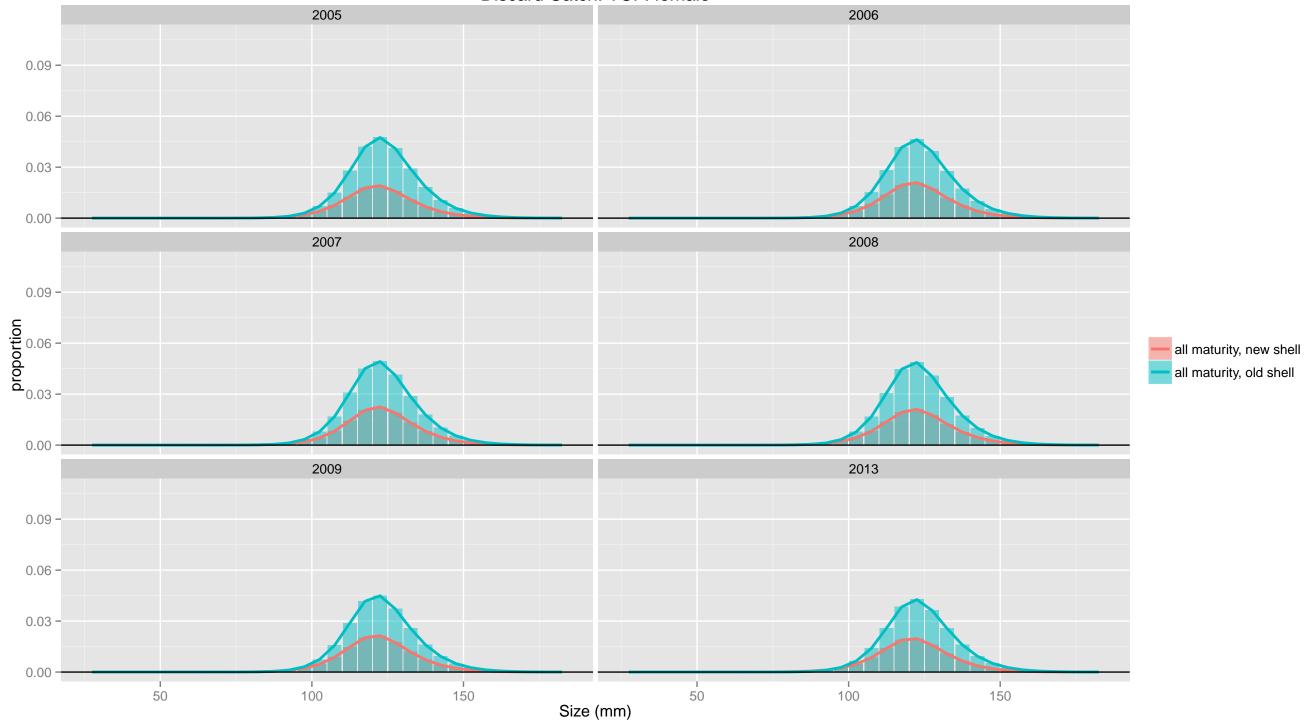
Size (mm)

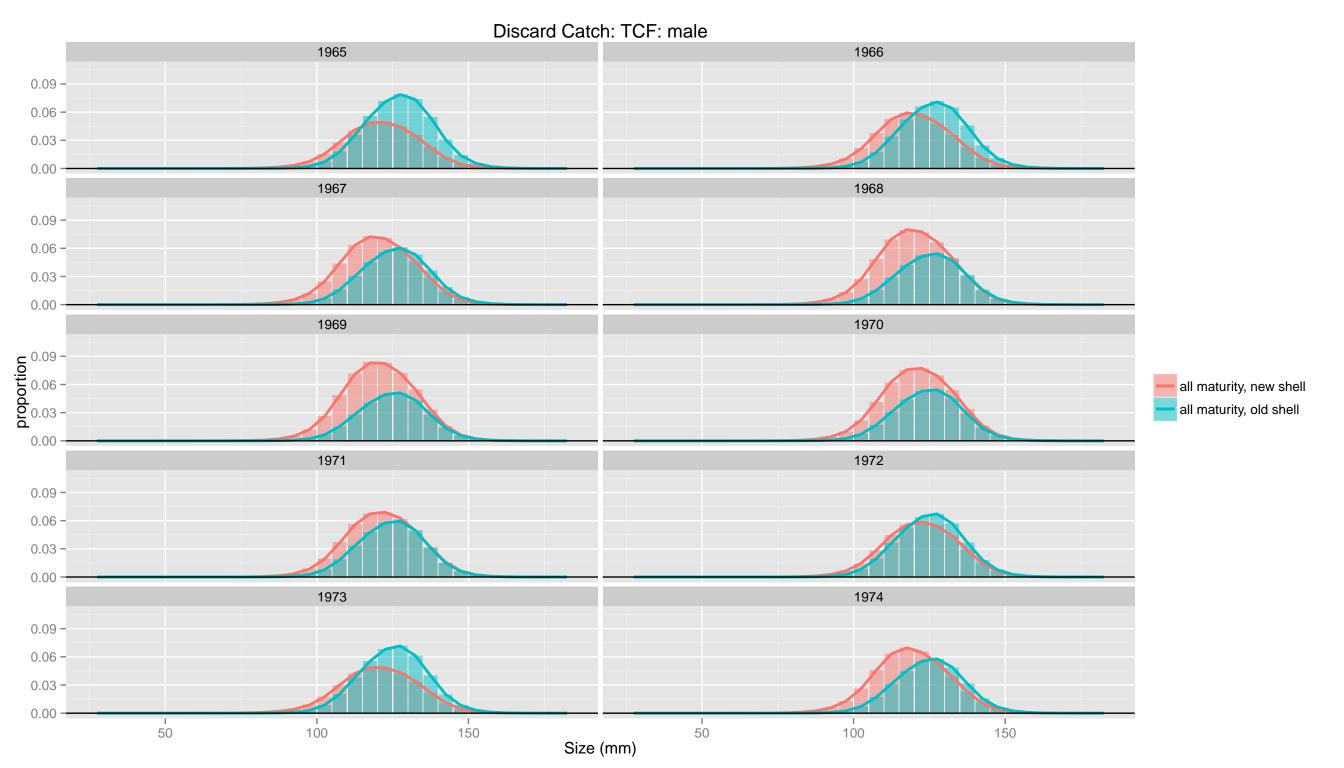


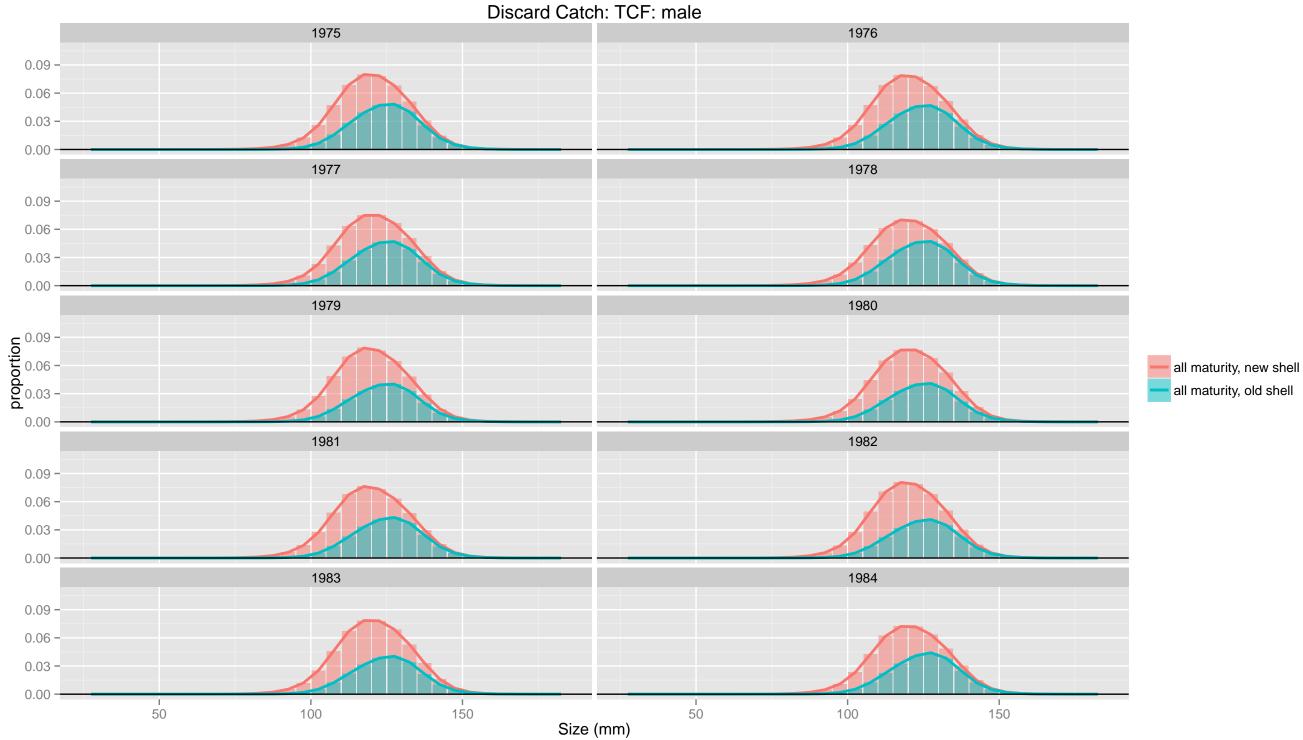


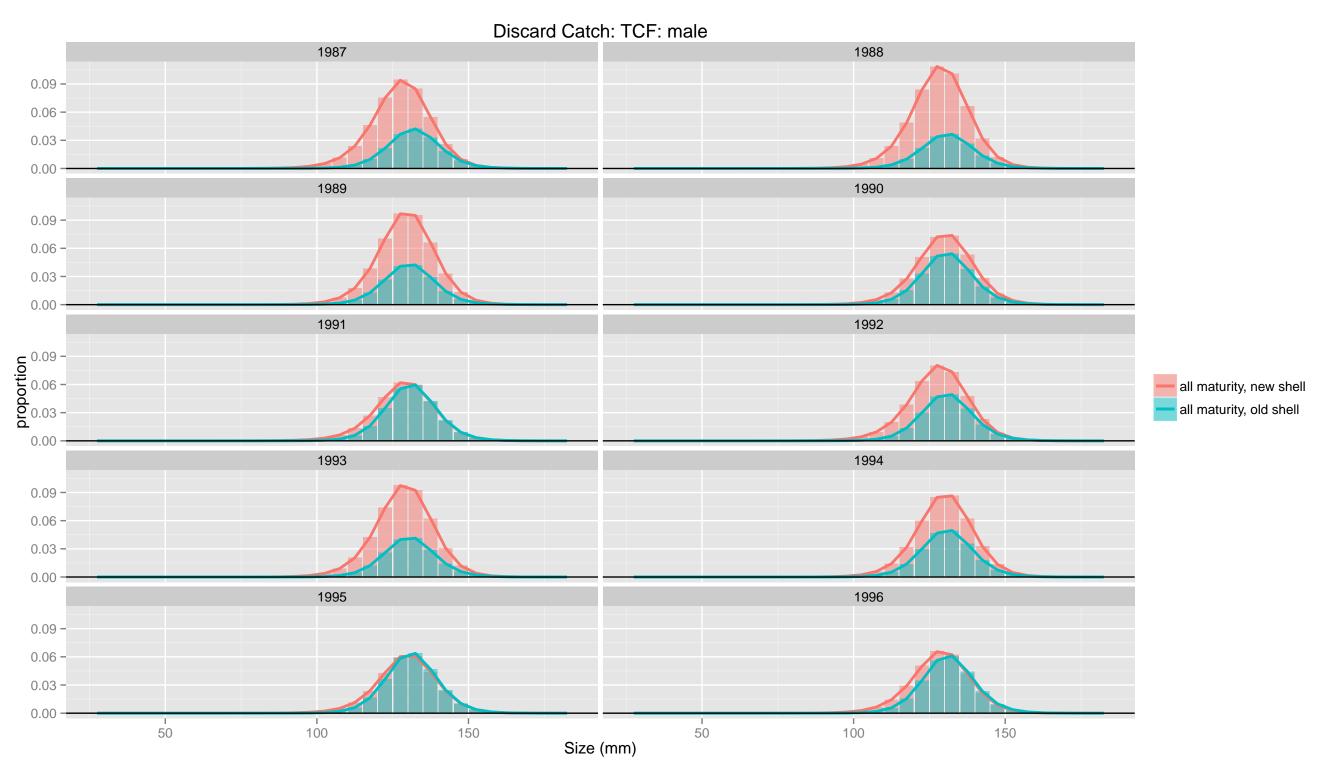
Size (mm)

Discard Catch: TCF: female

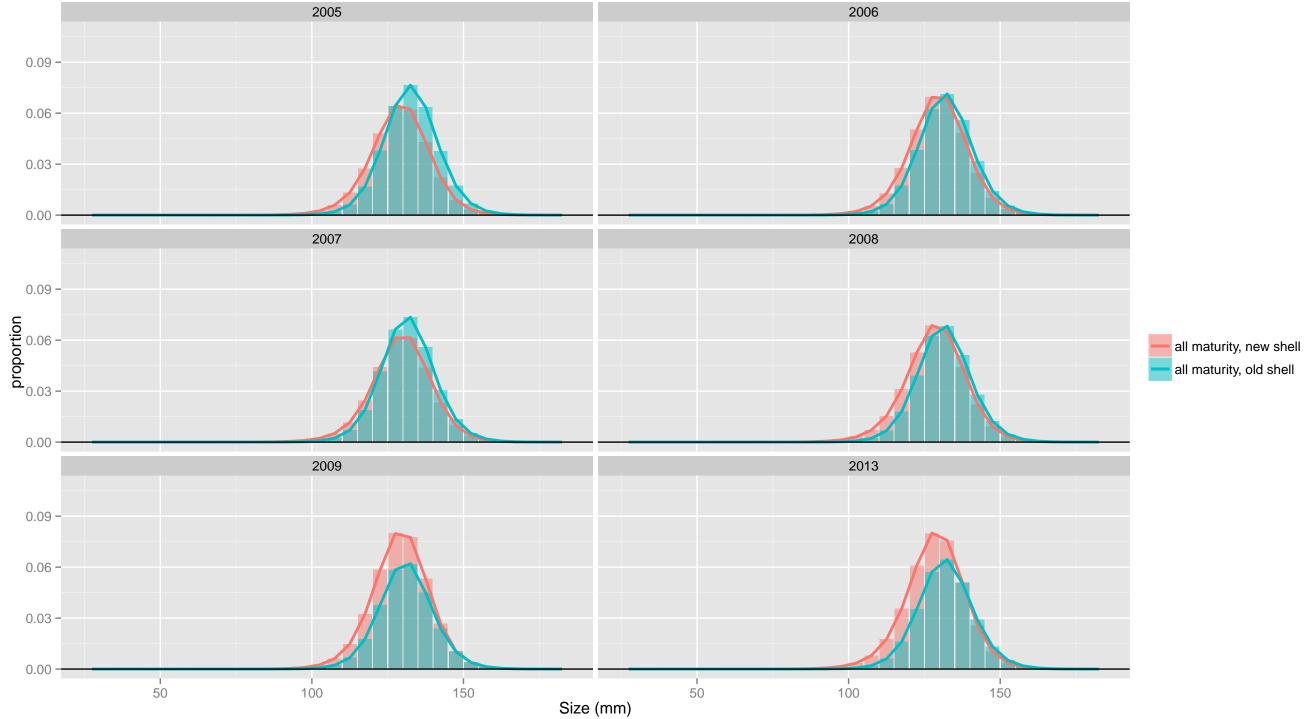




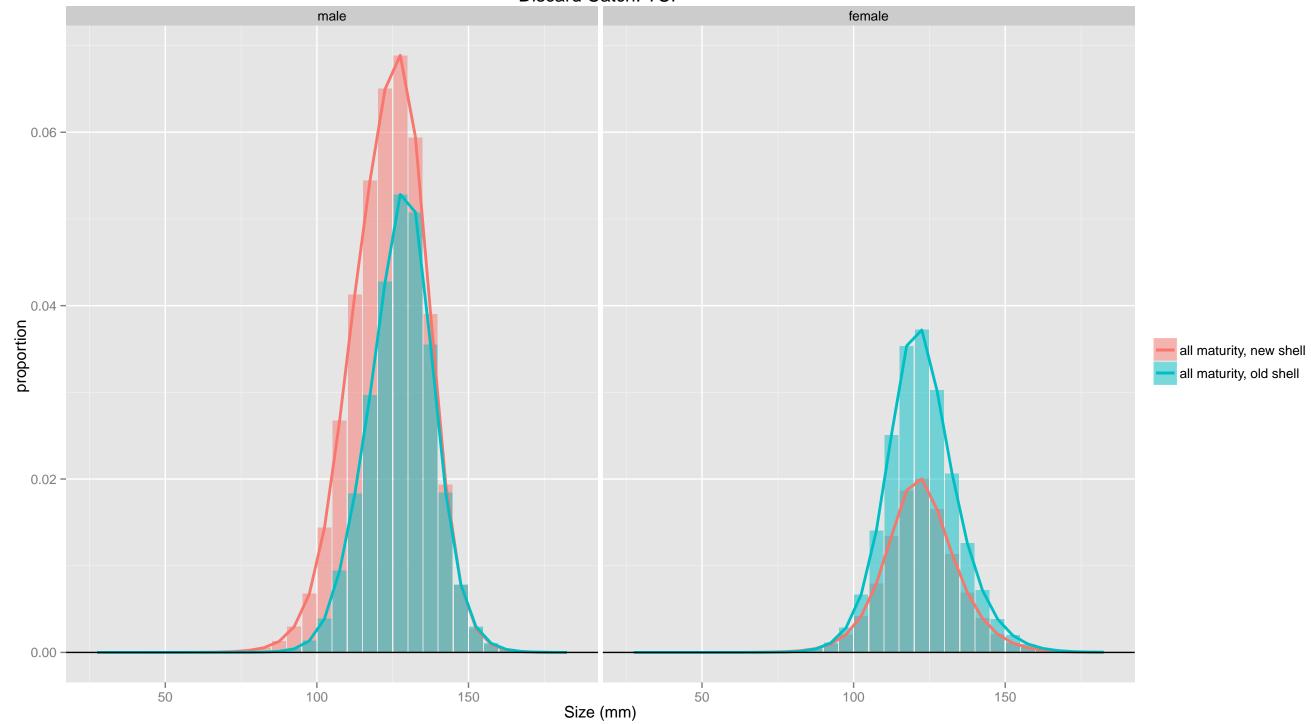


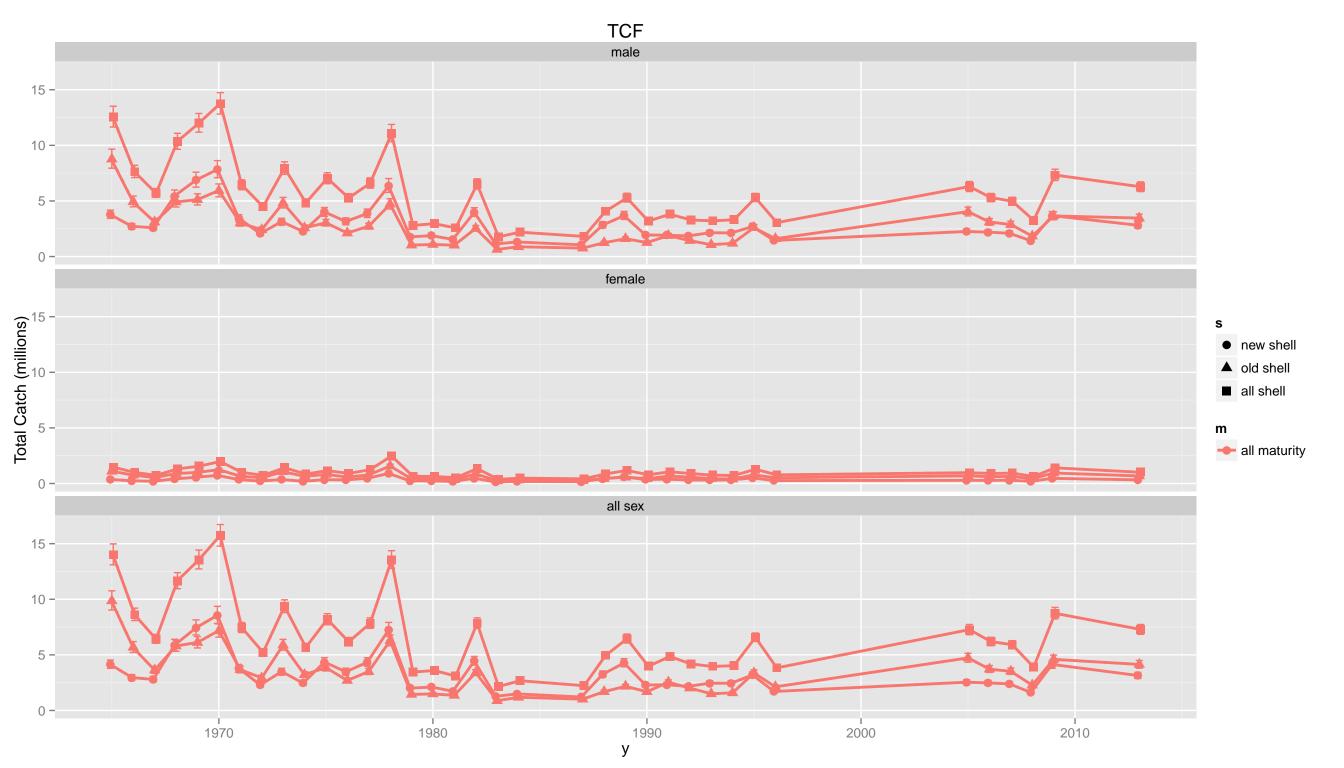


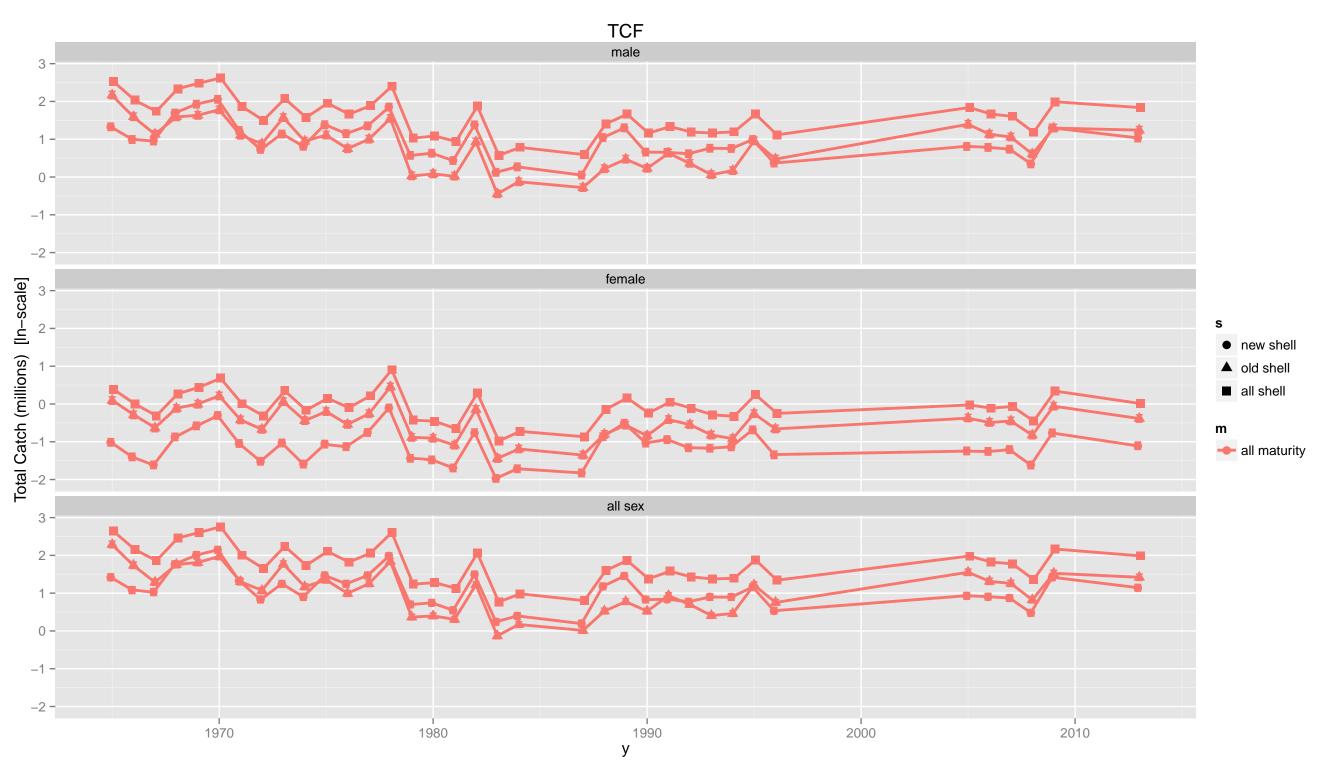
Discard Catch: TCF: male

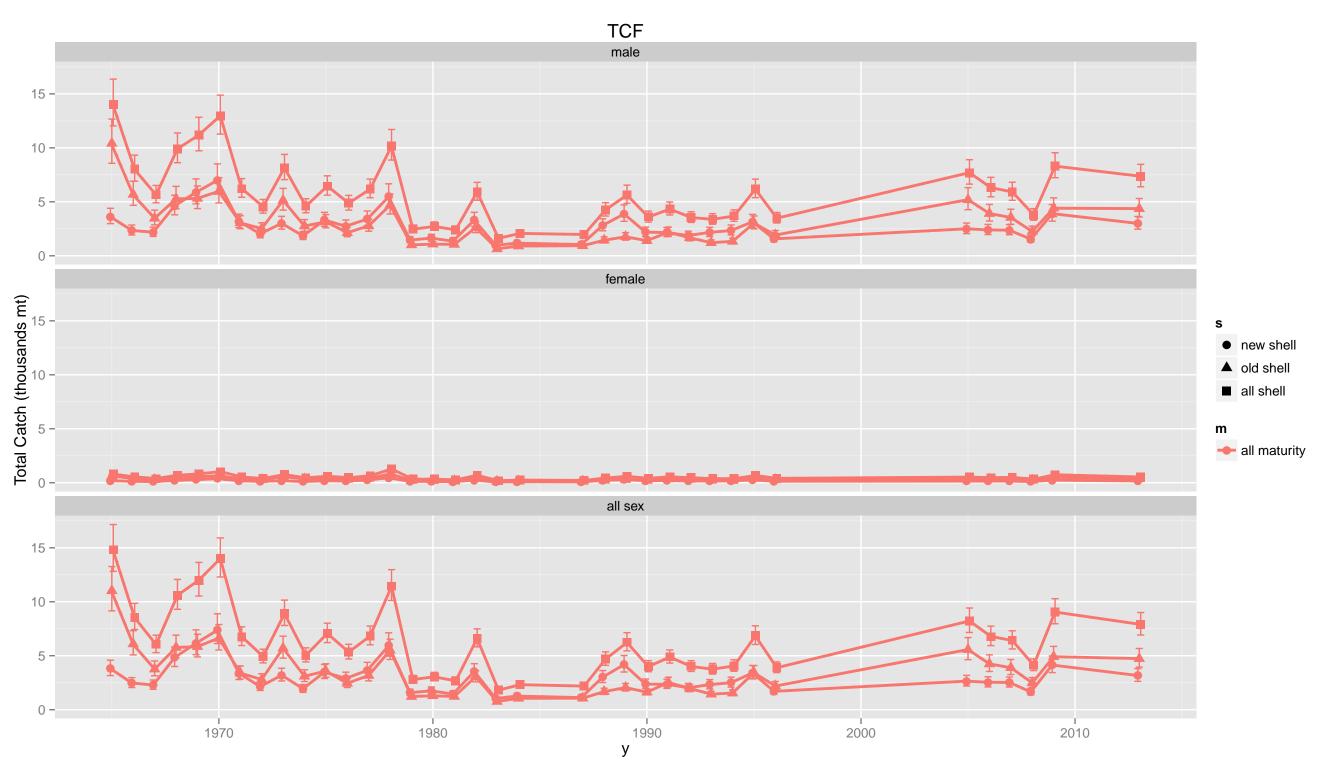


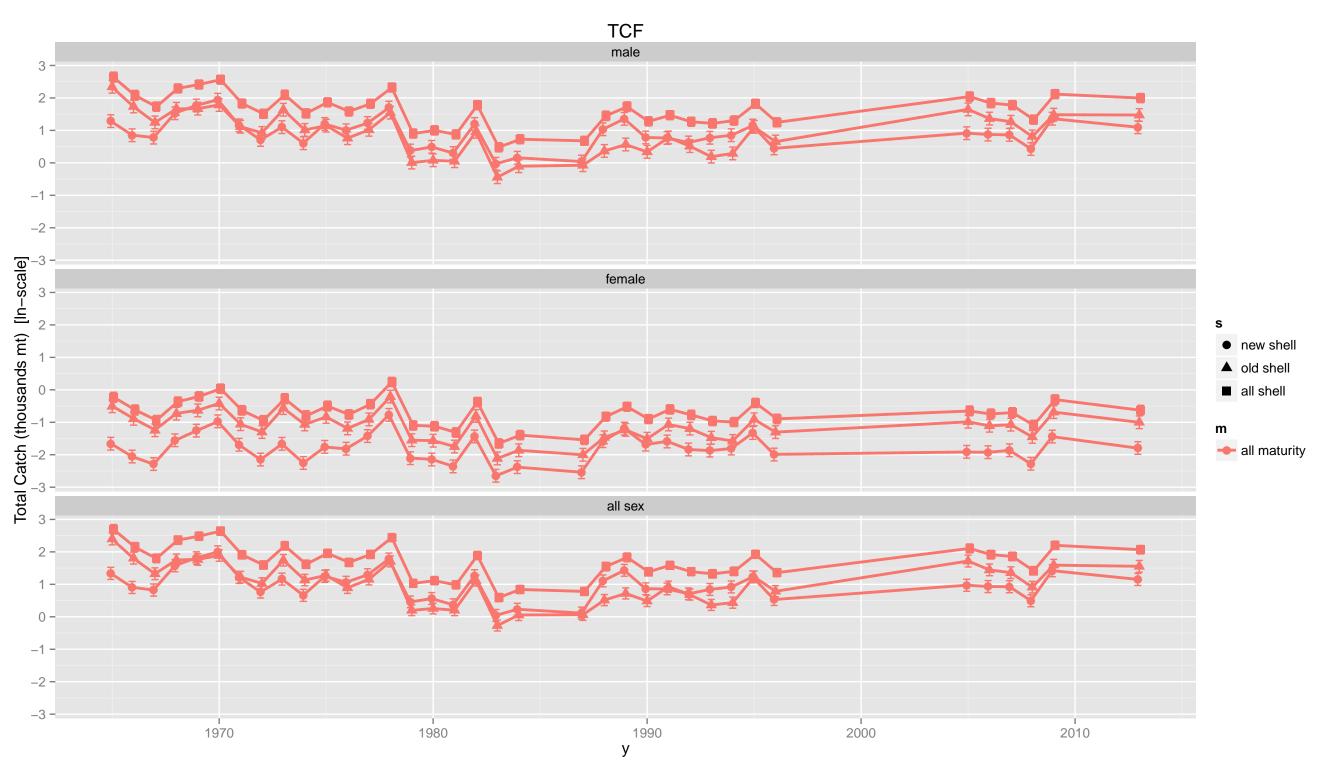
Discard Catch: TCF

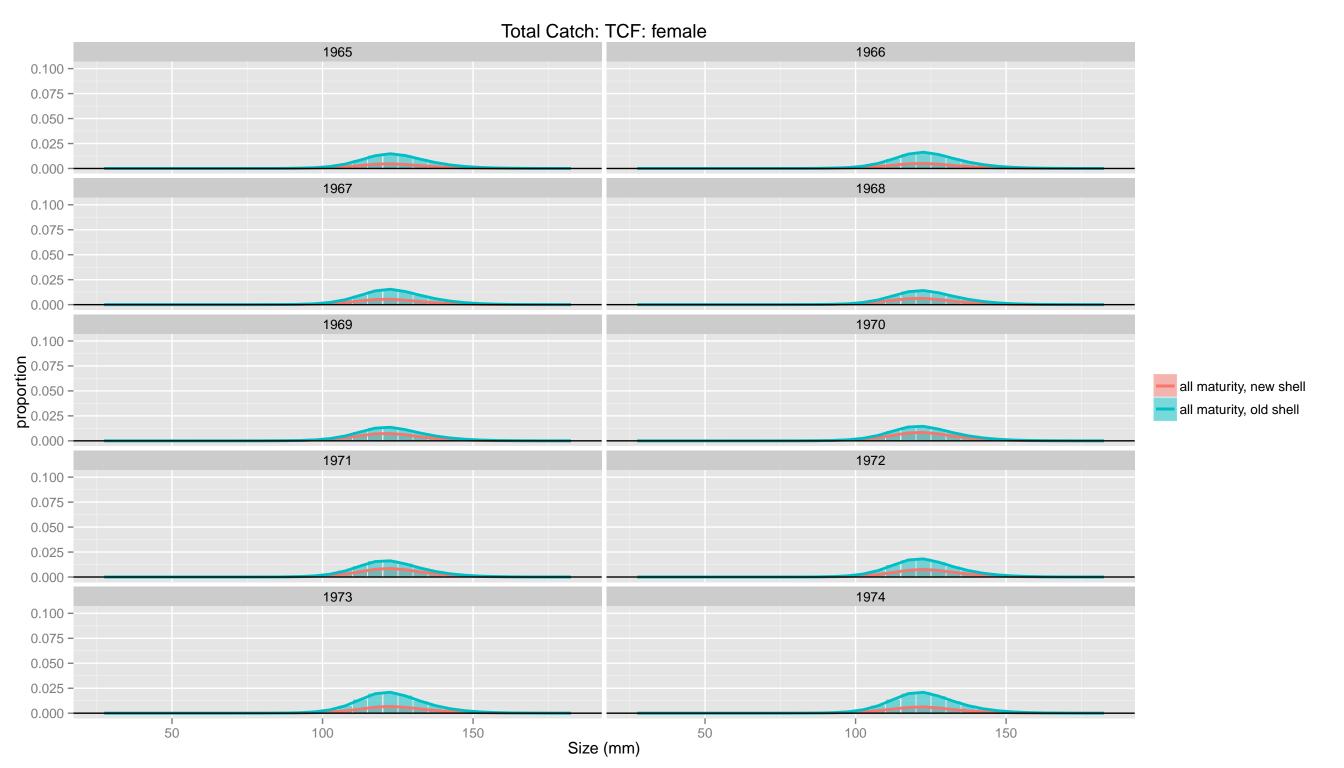


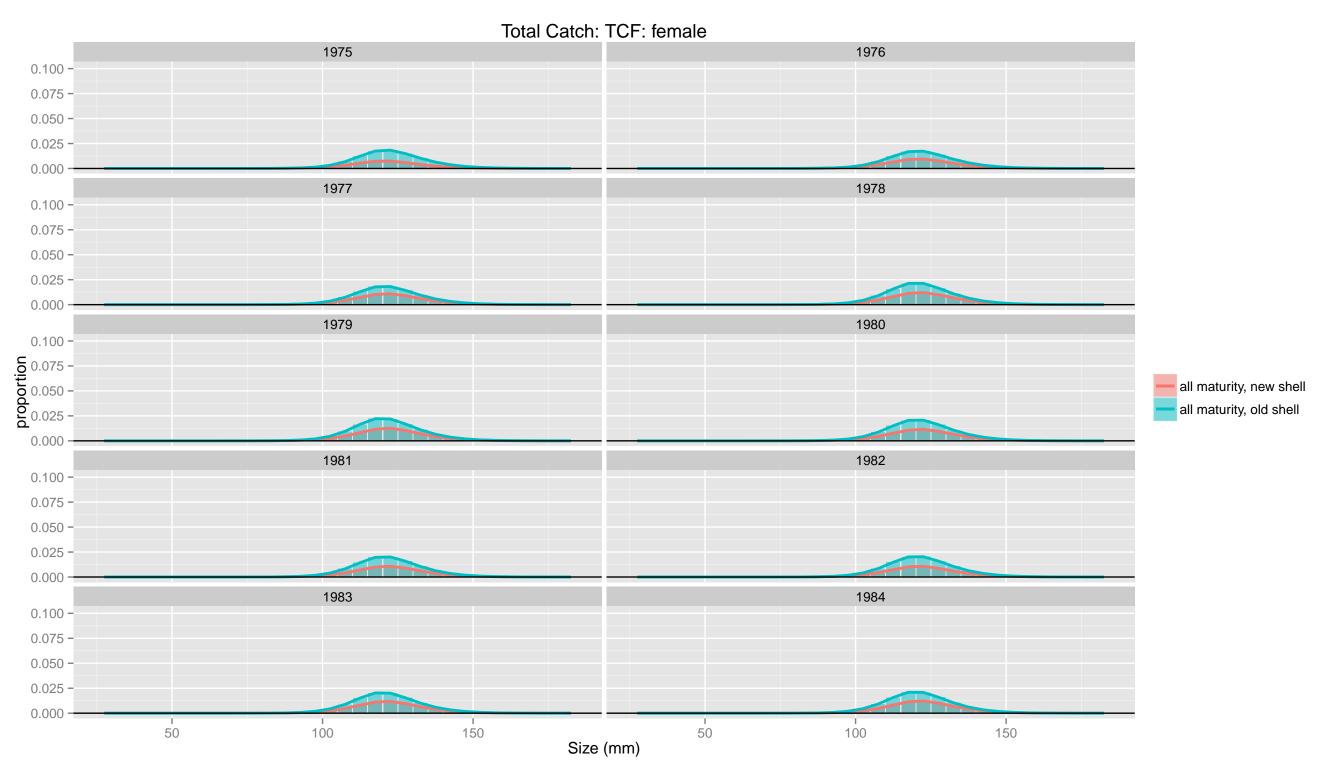


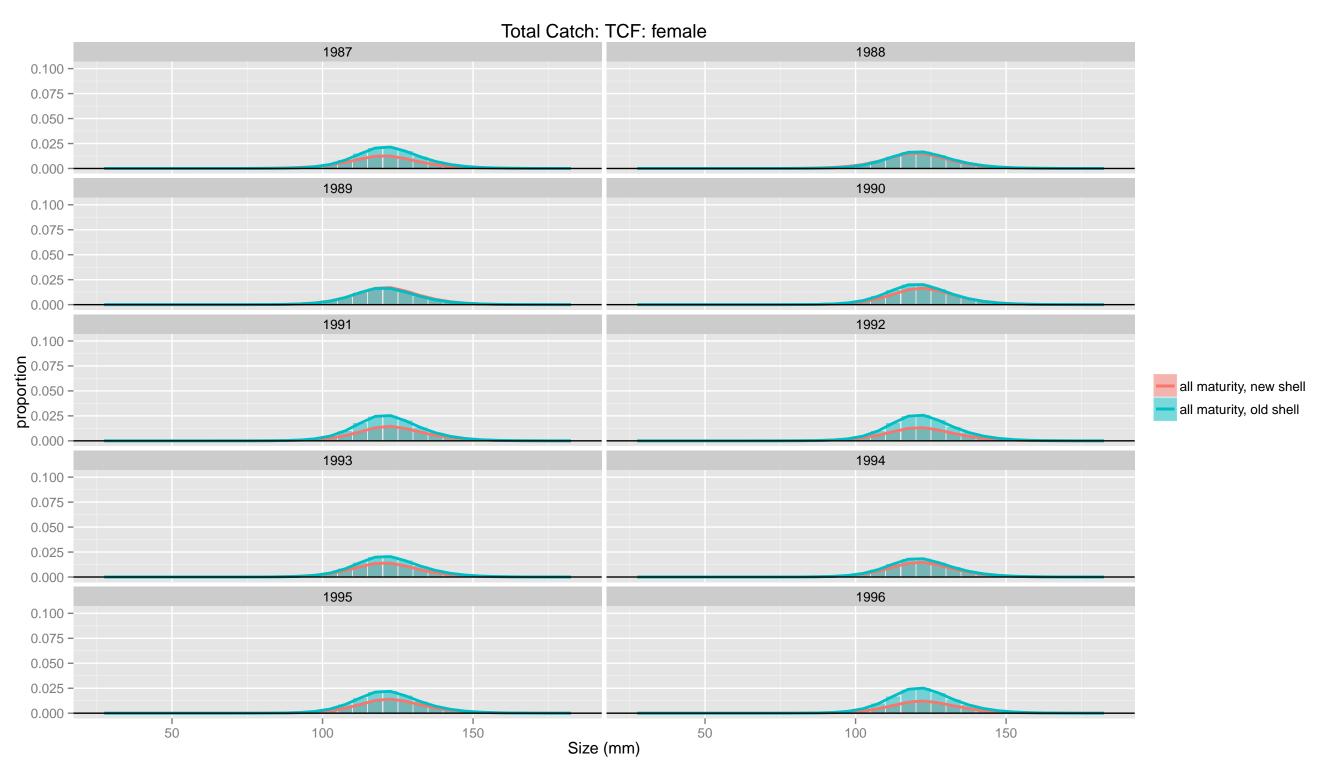


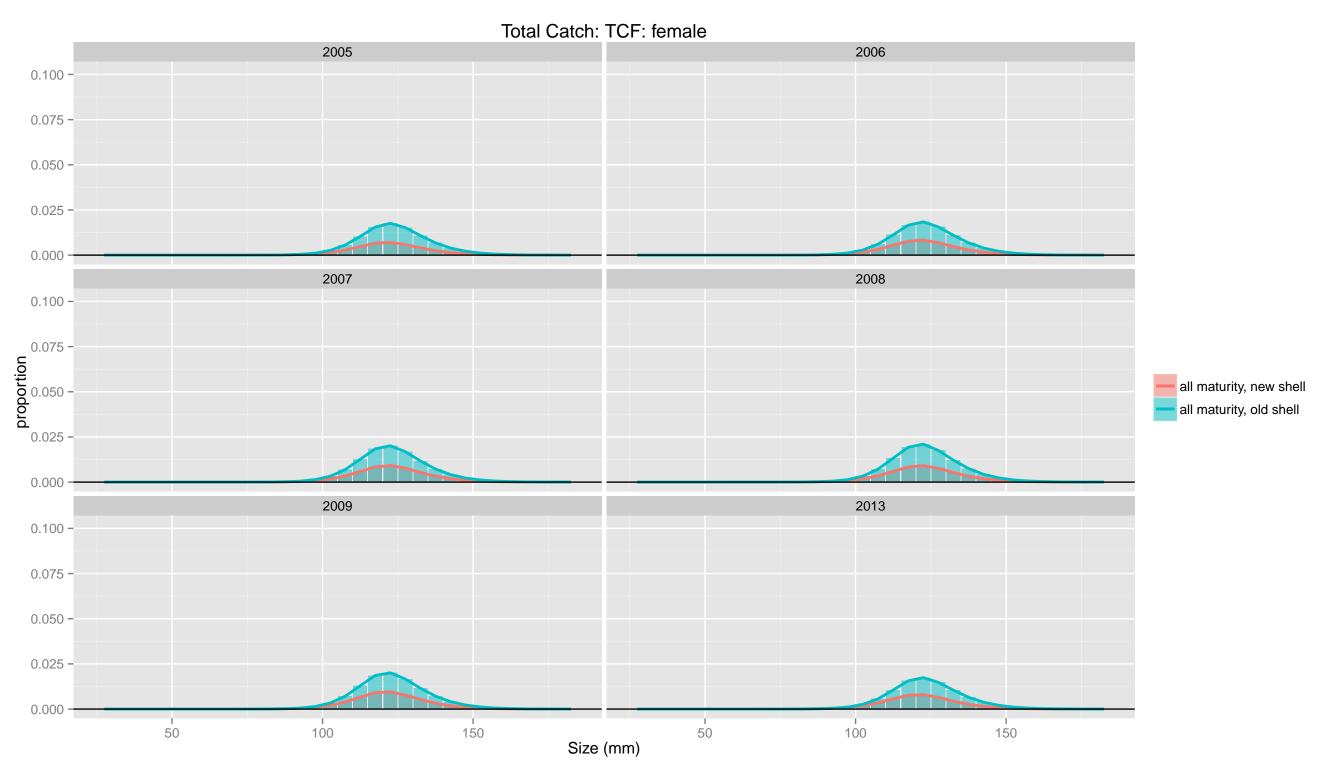


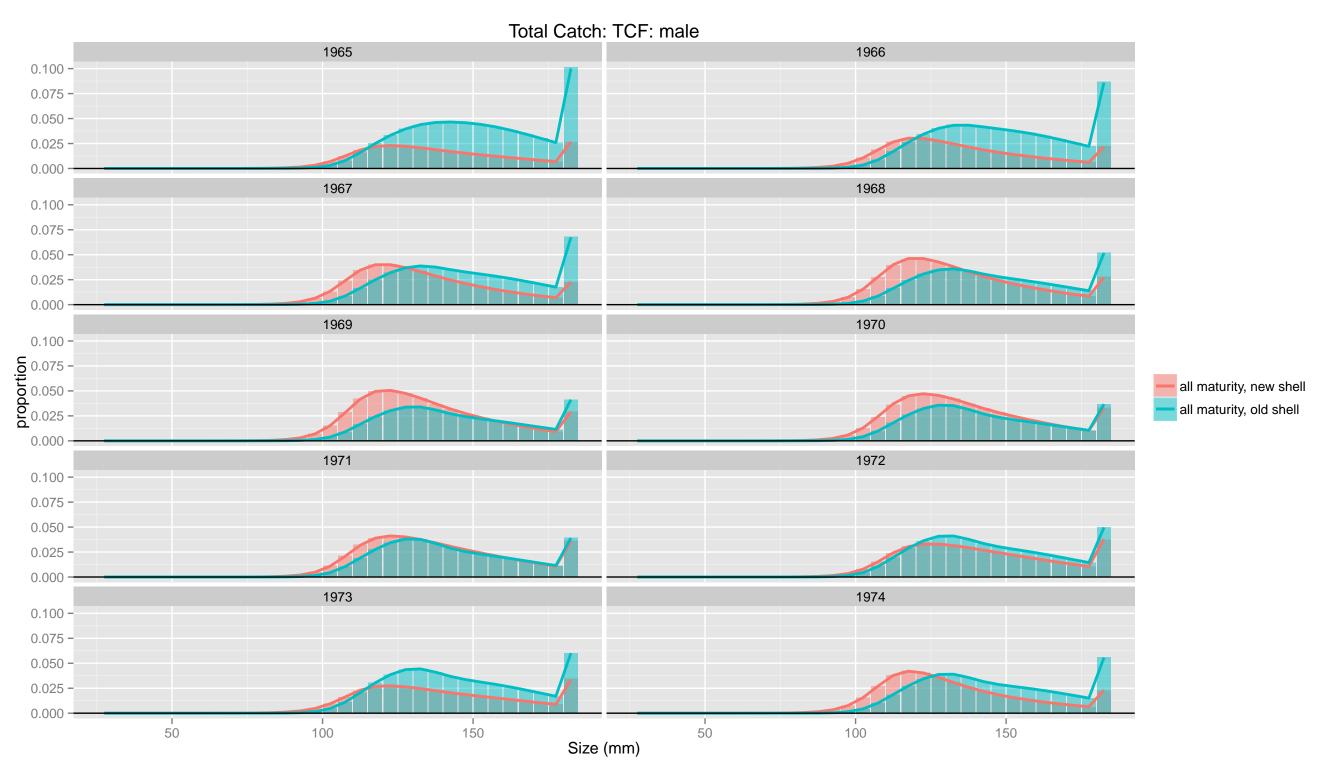


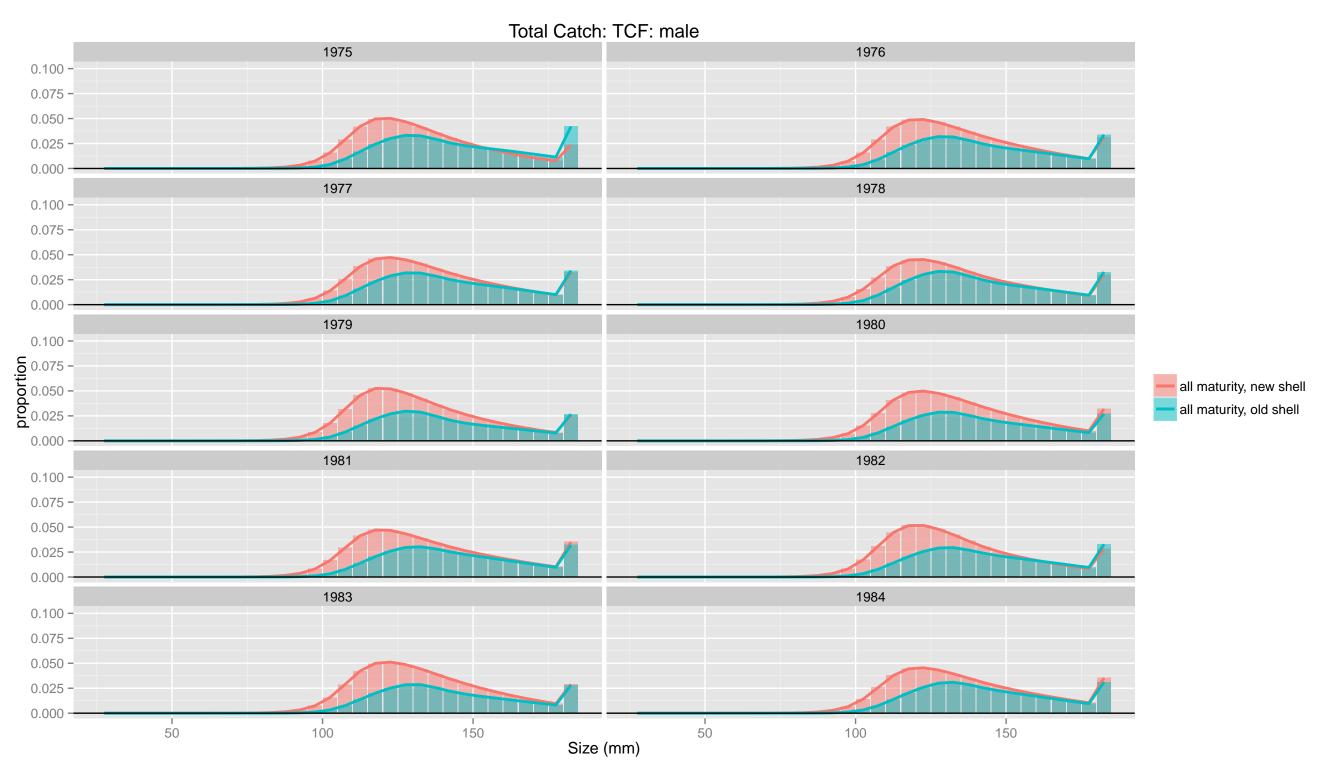


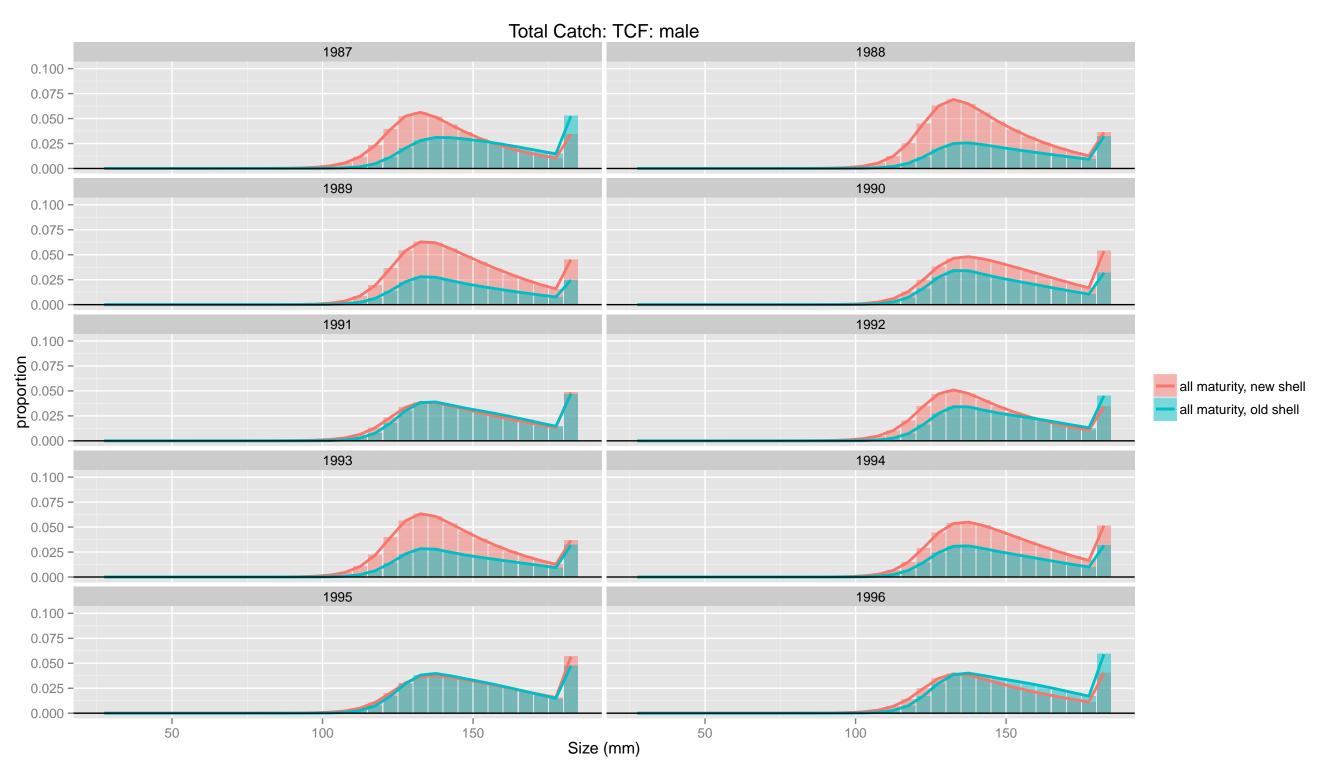


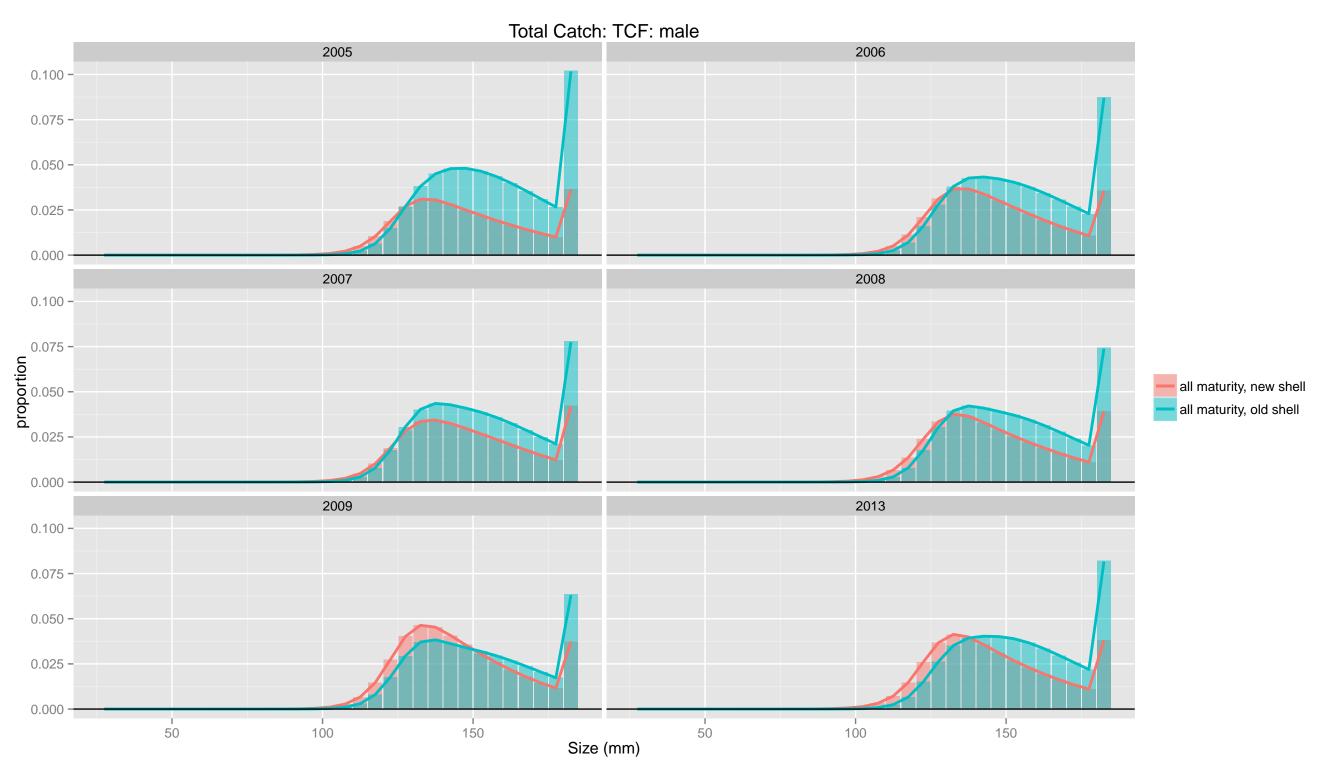


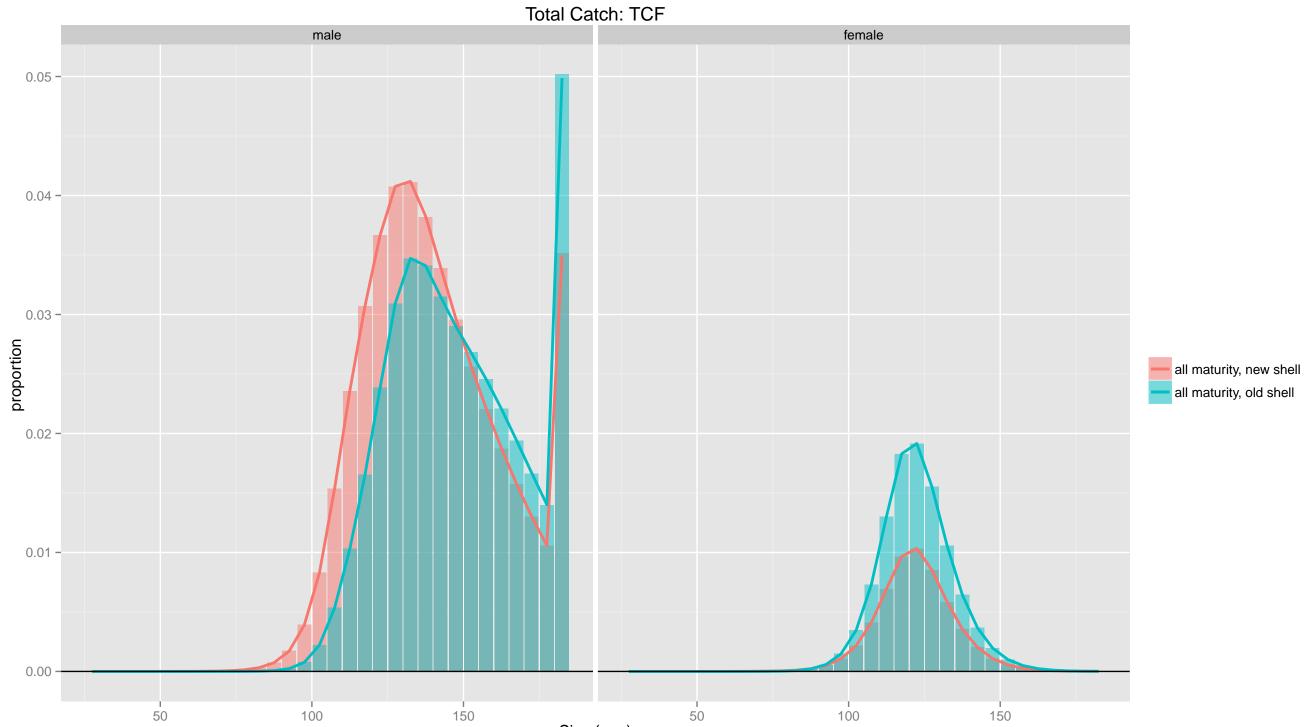




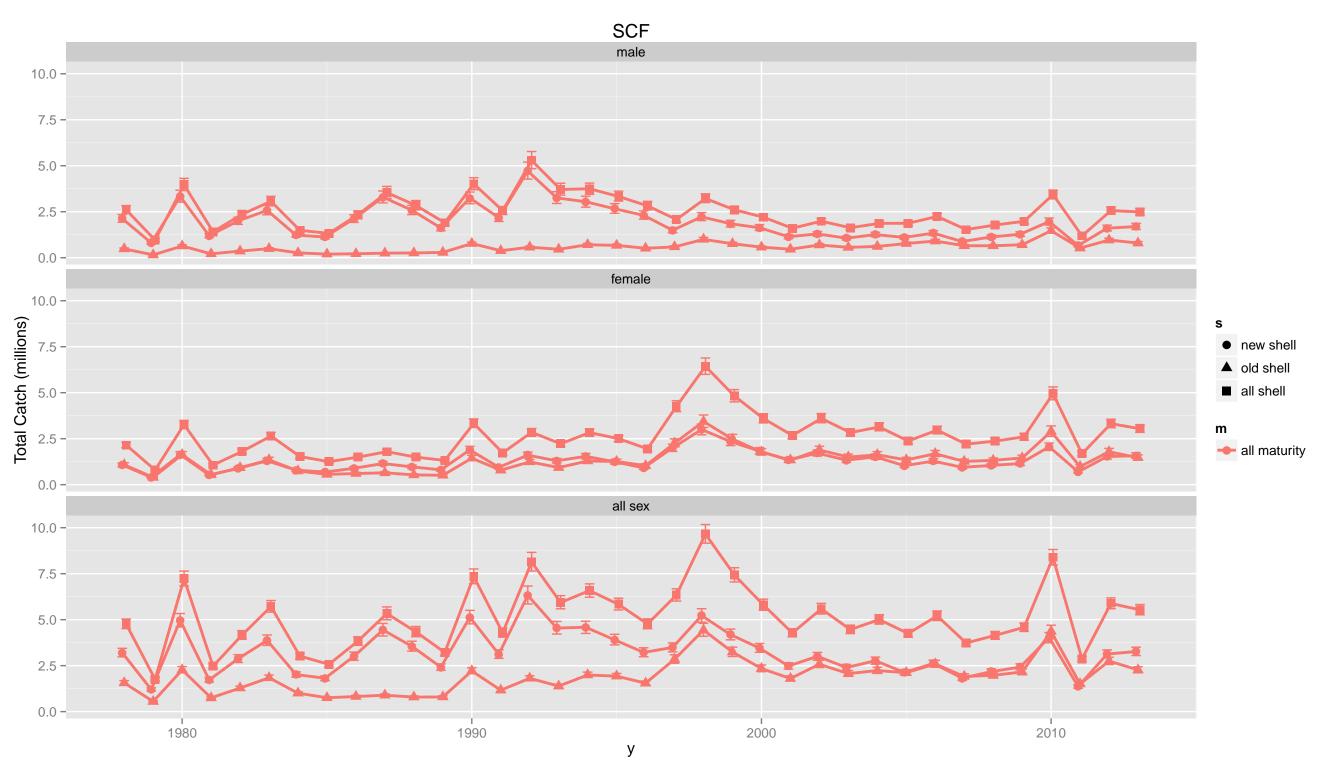


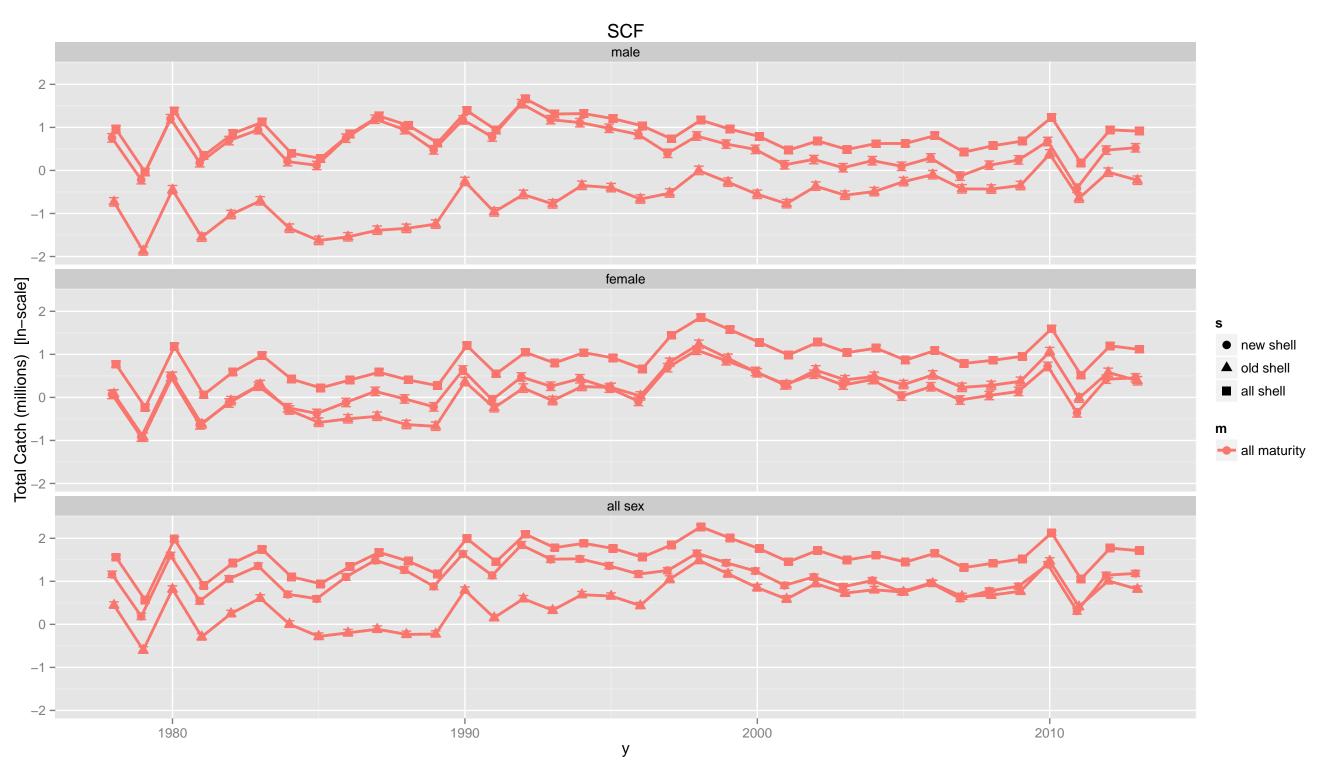


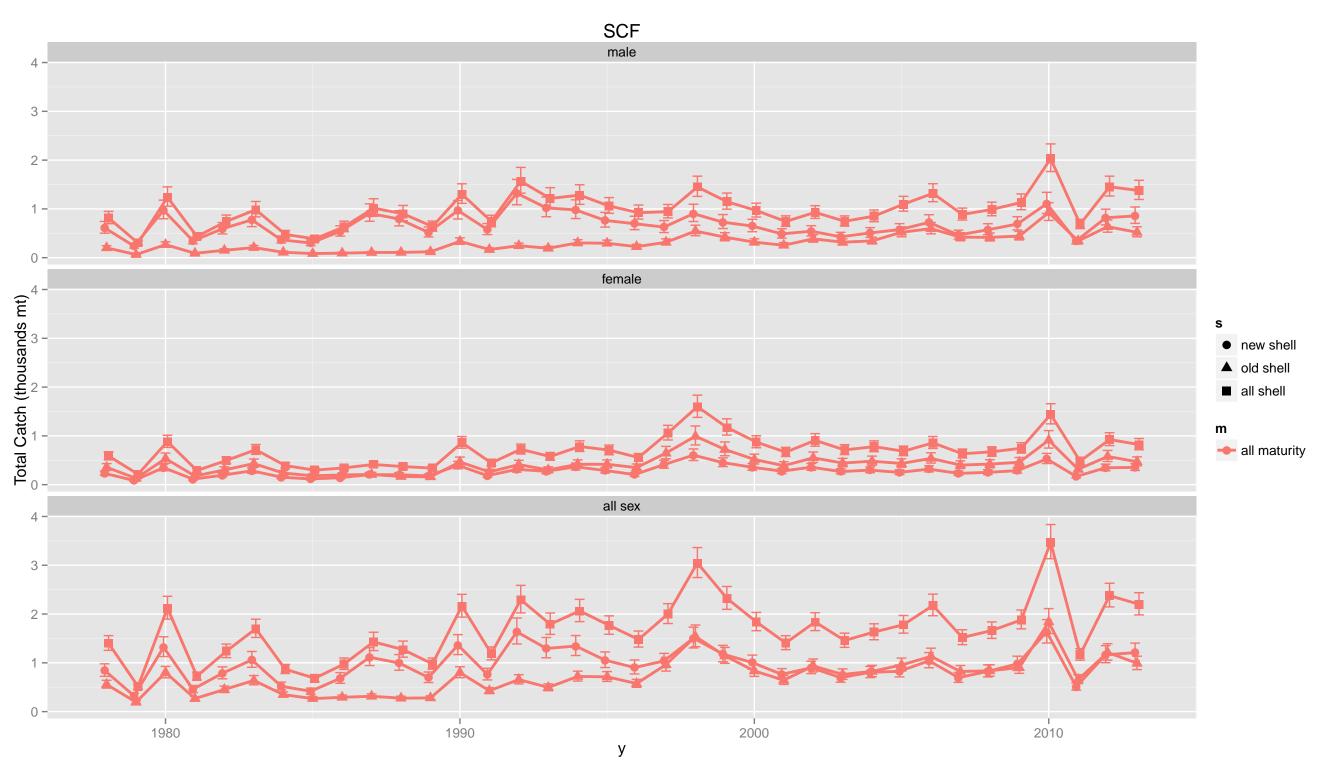


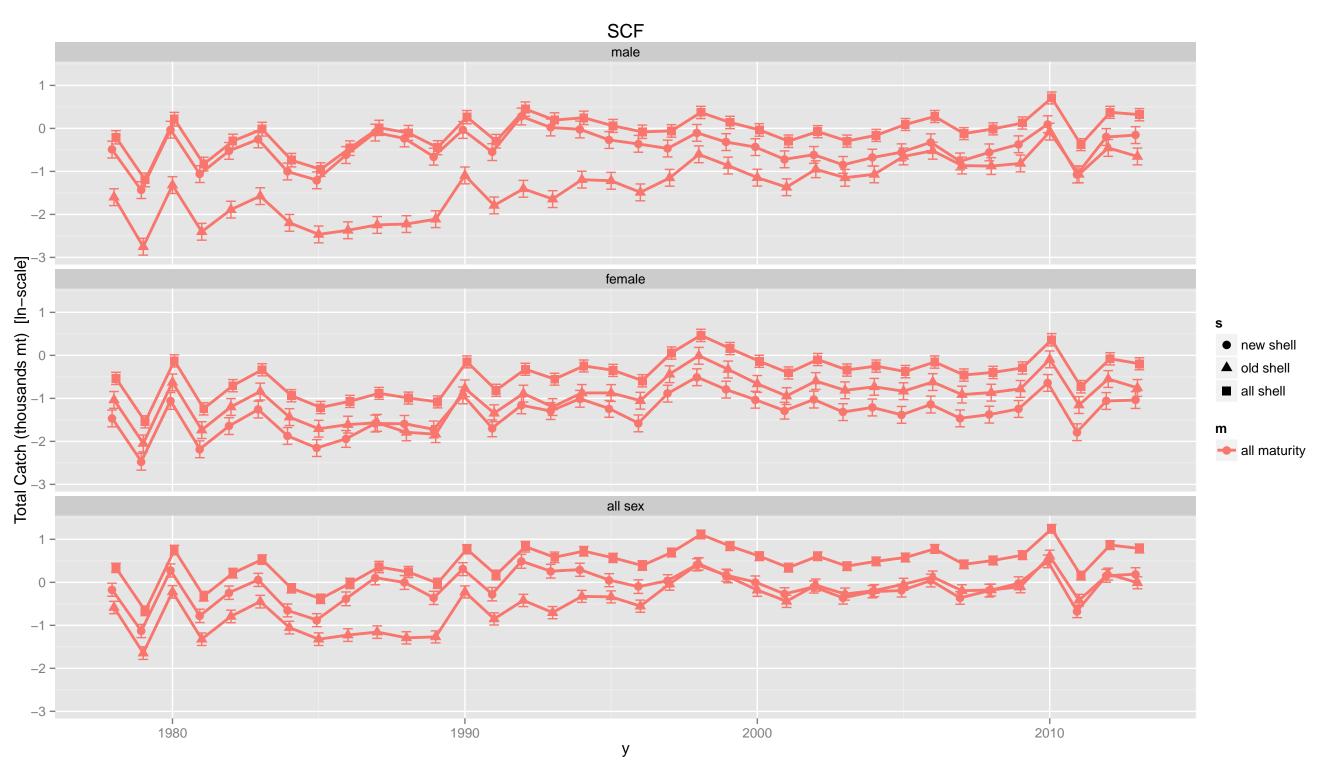


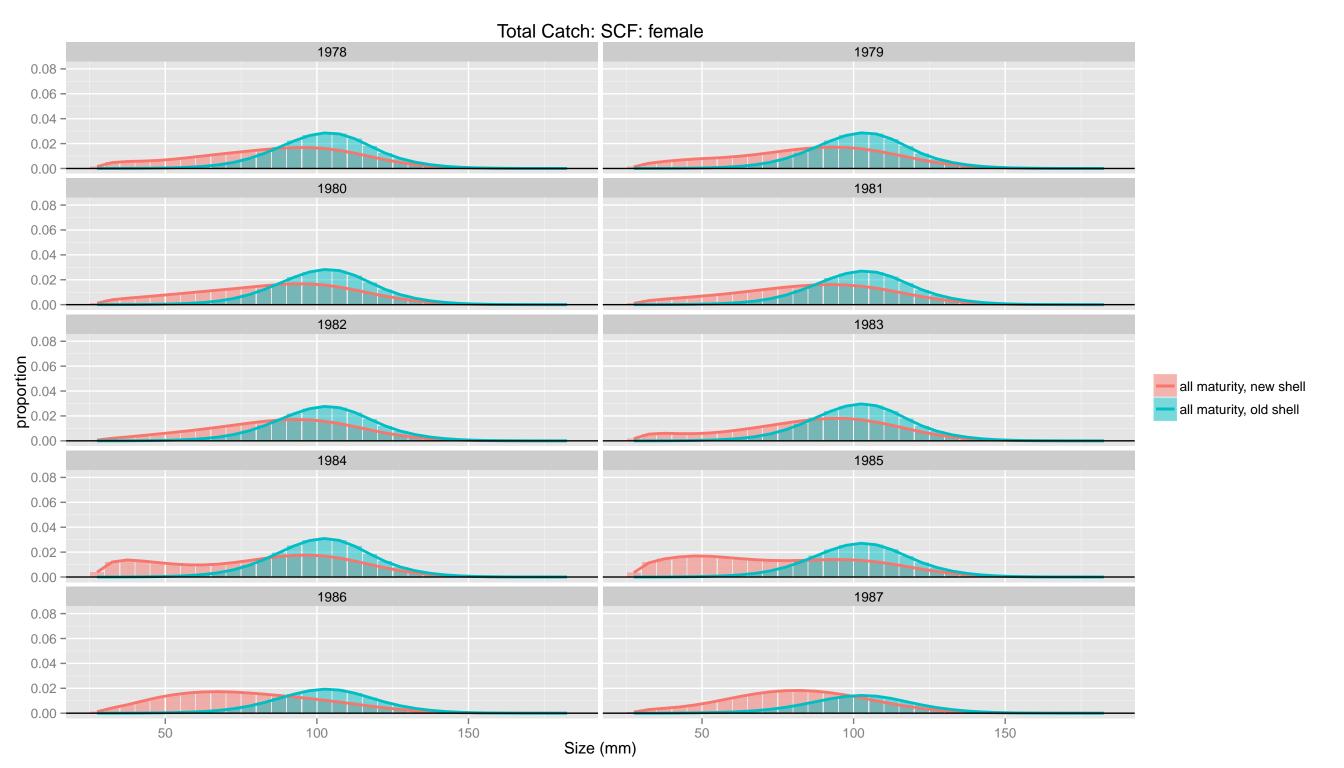
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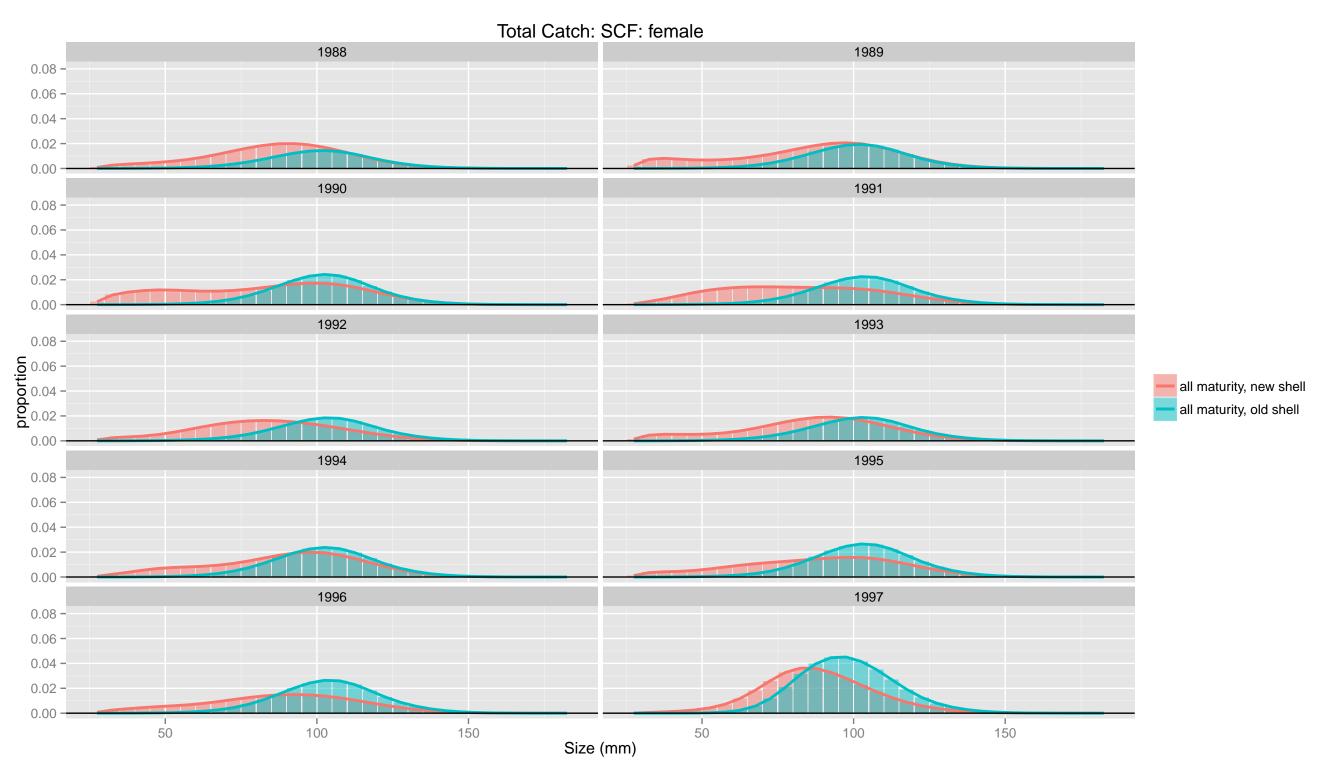


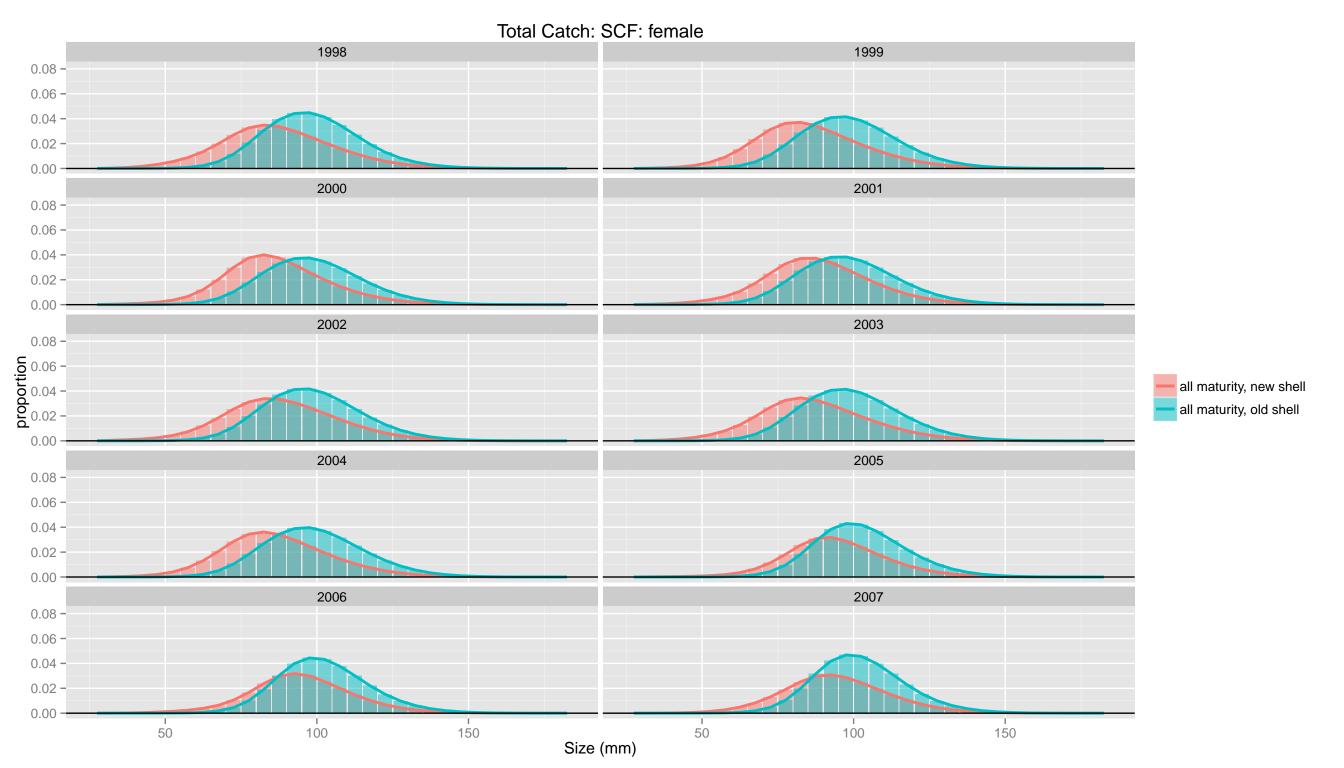




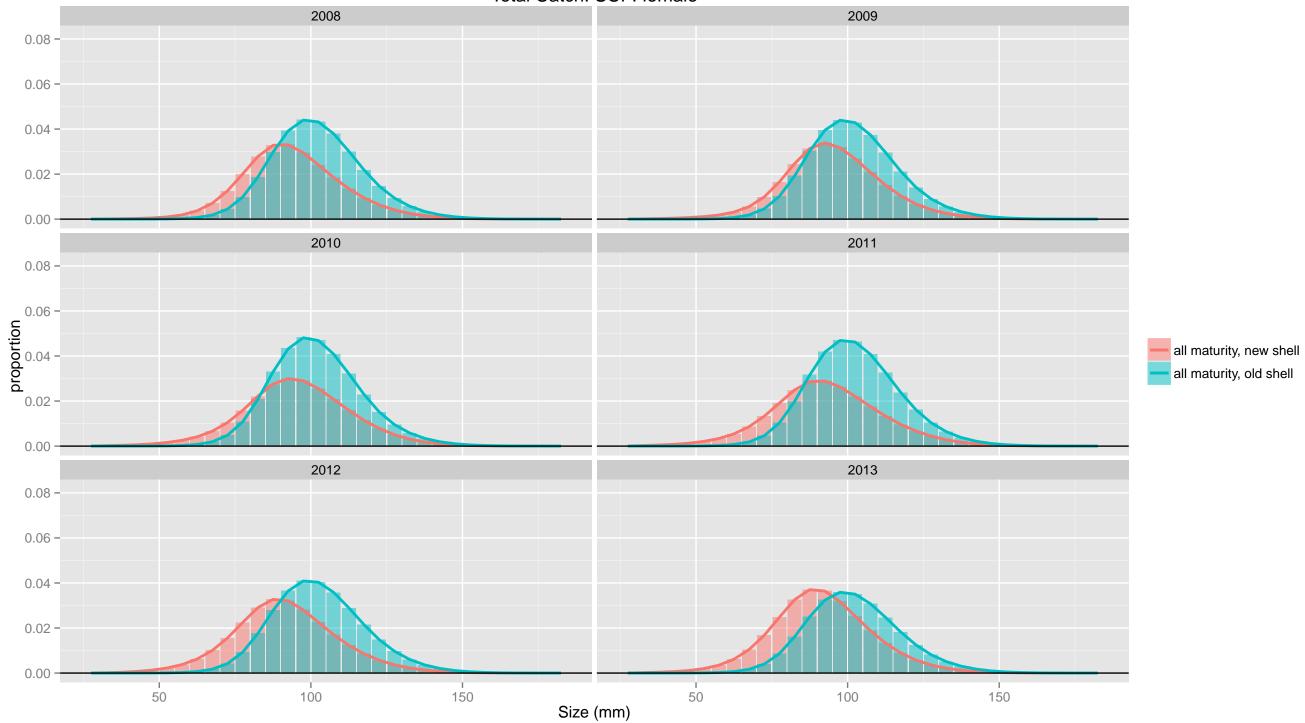


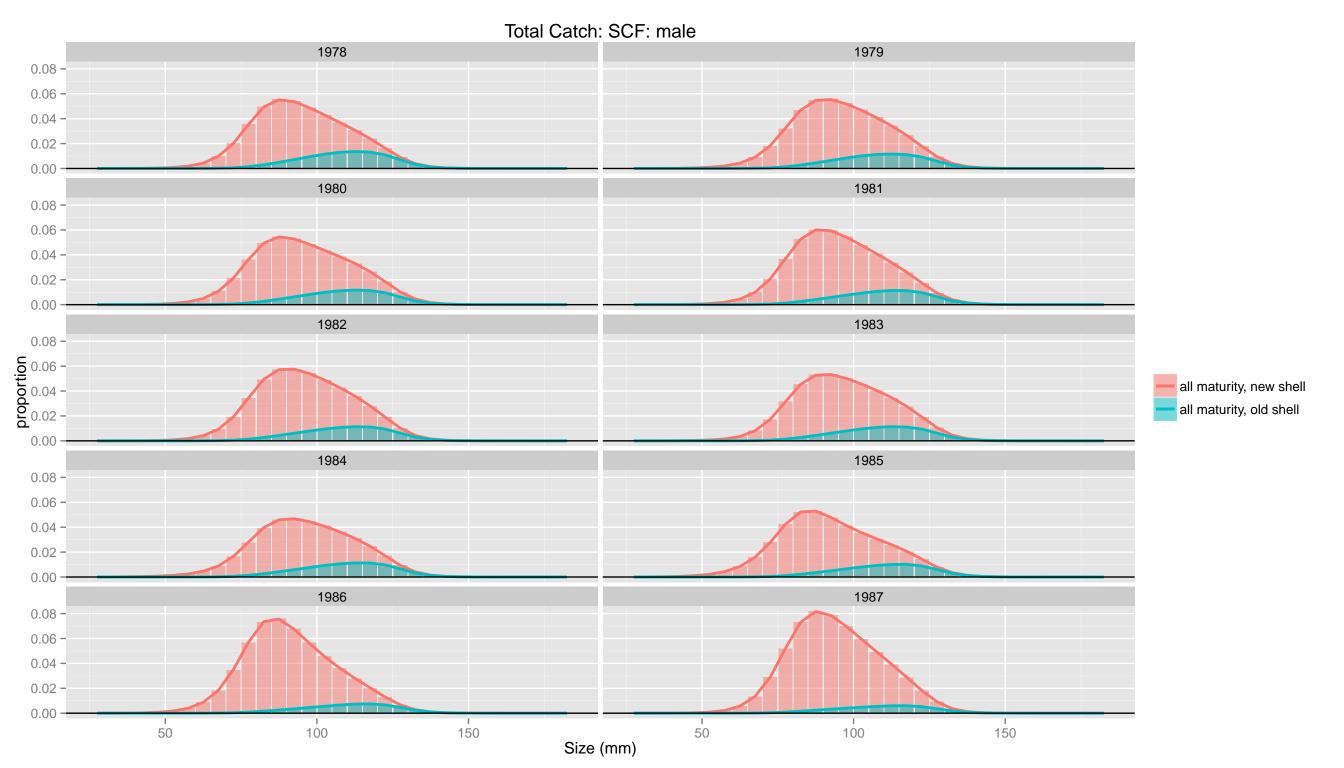


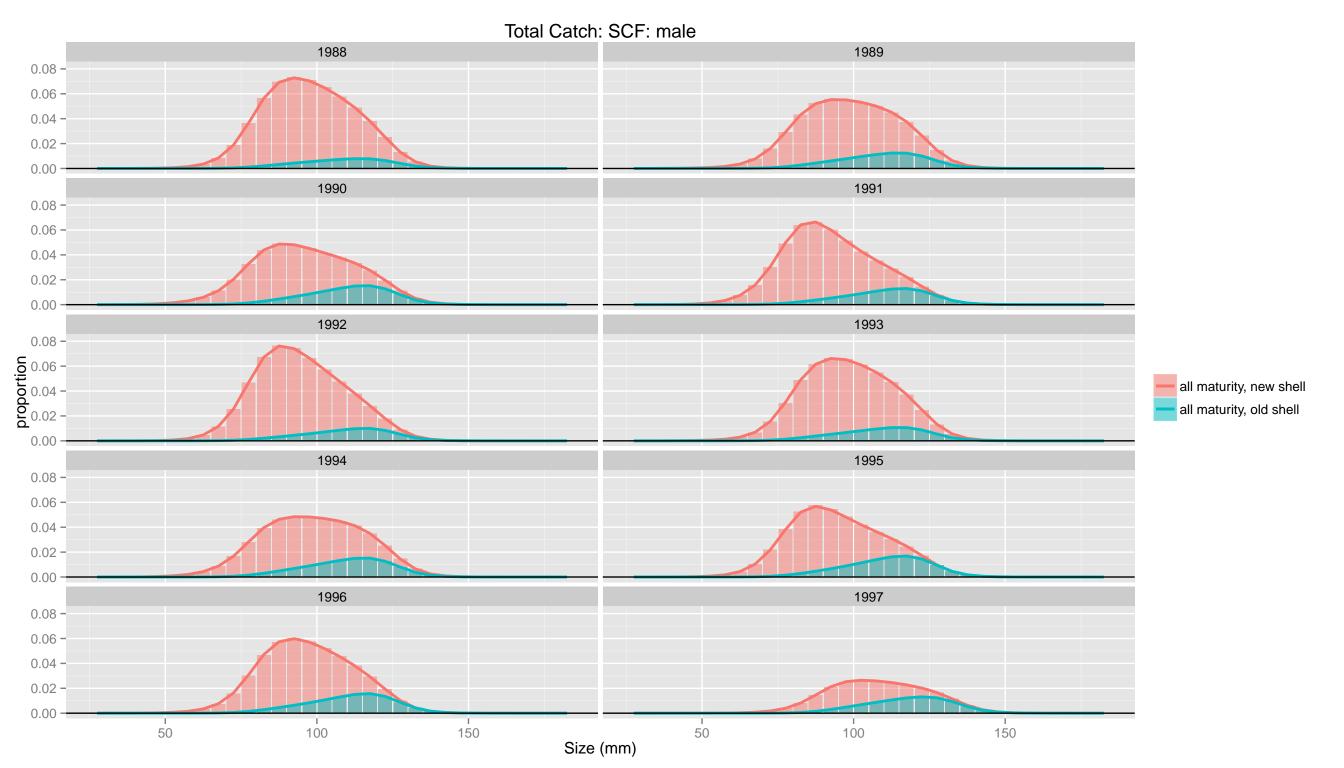


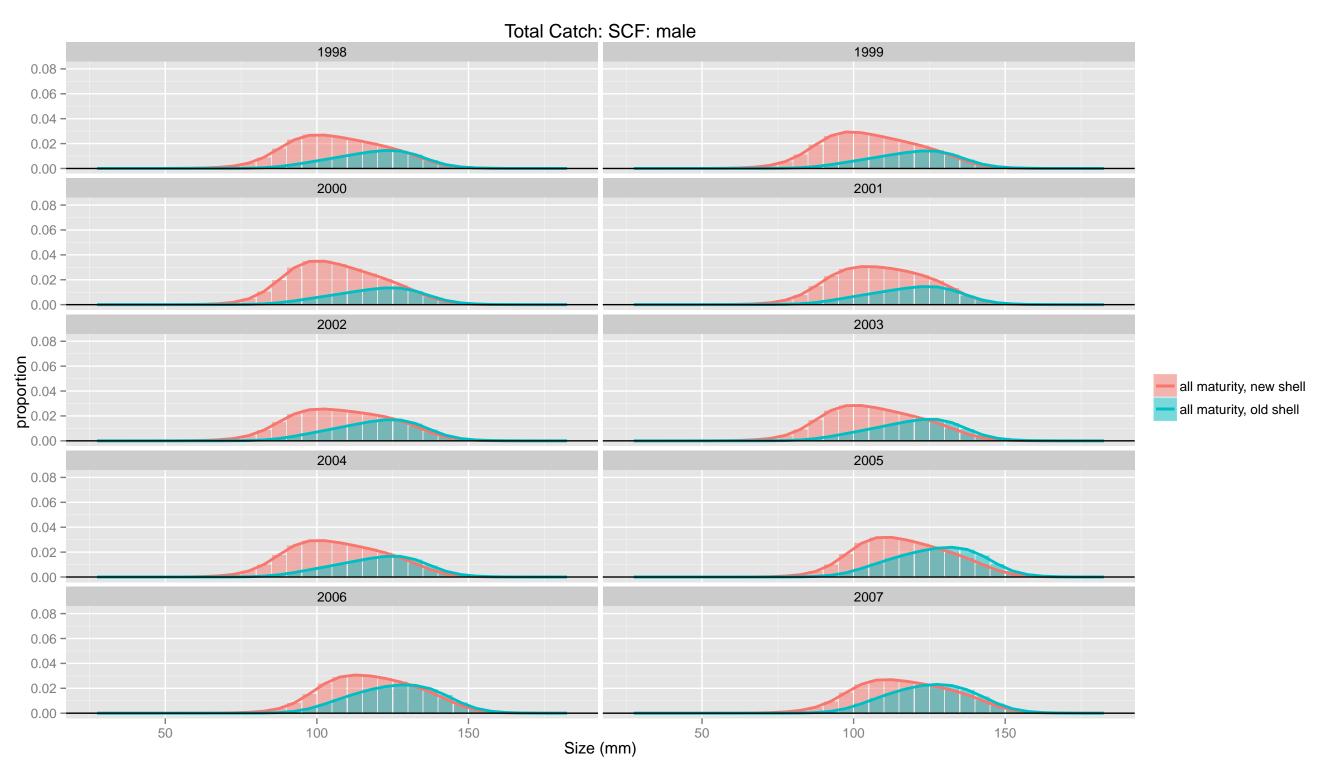


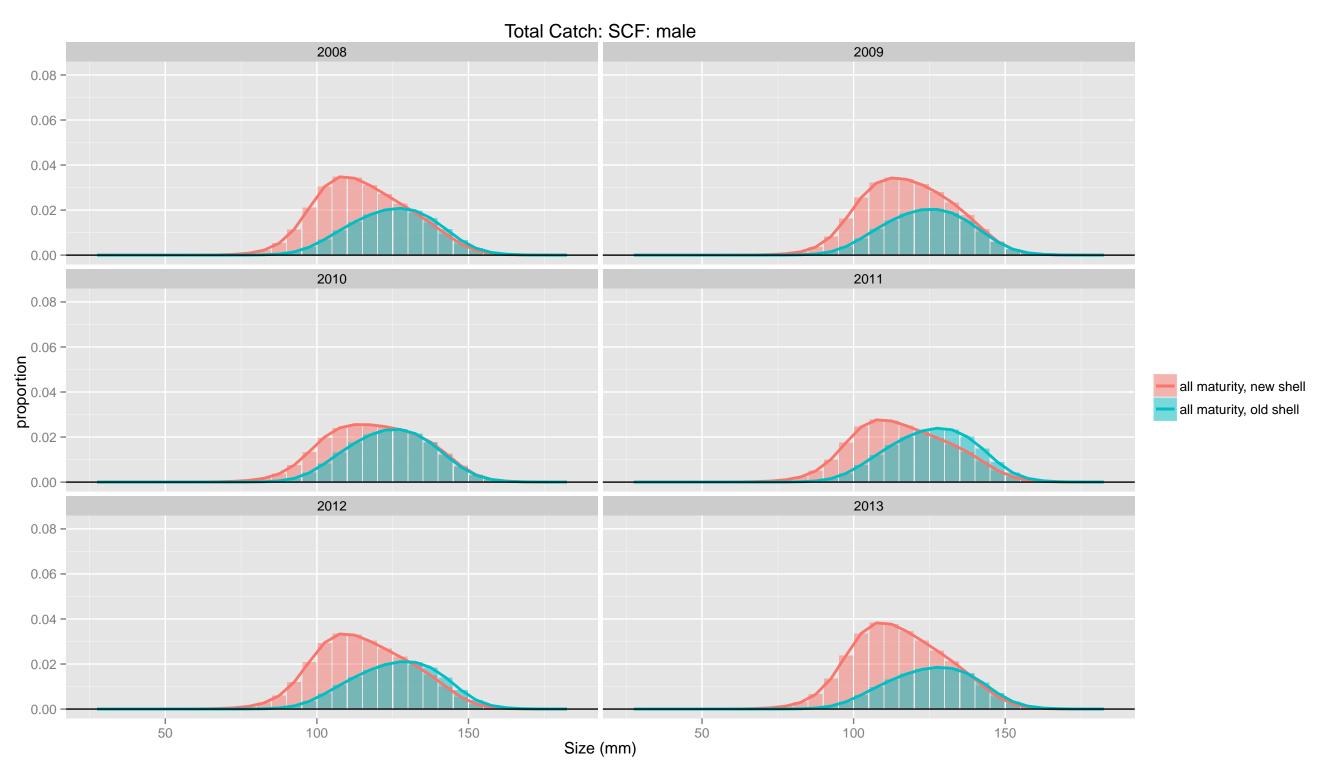
Total Catch: SCF: female

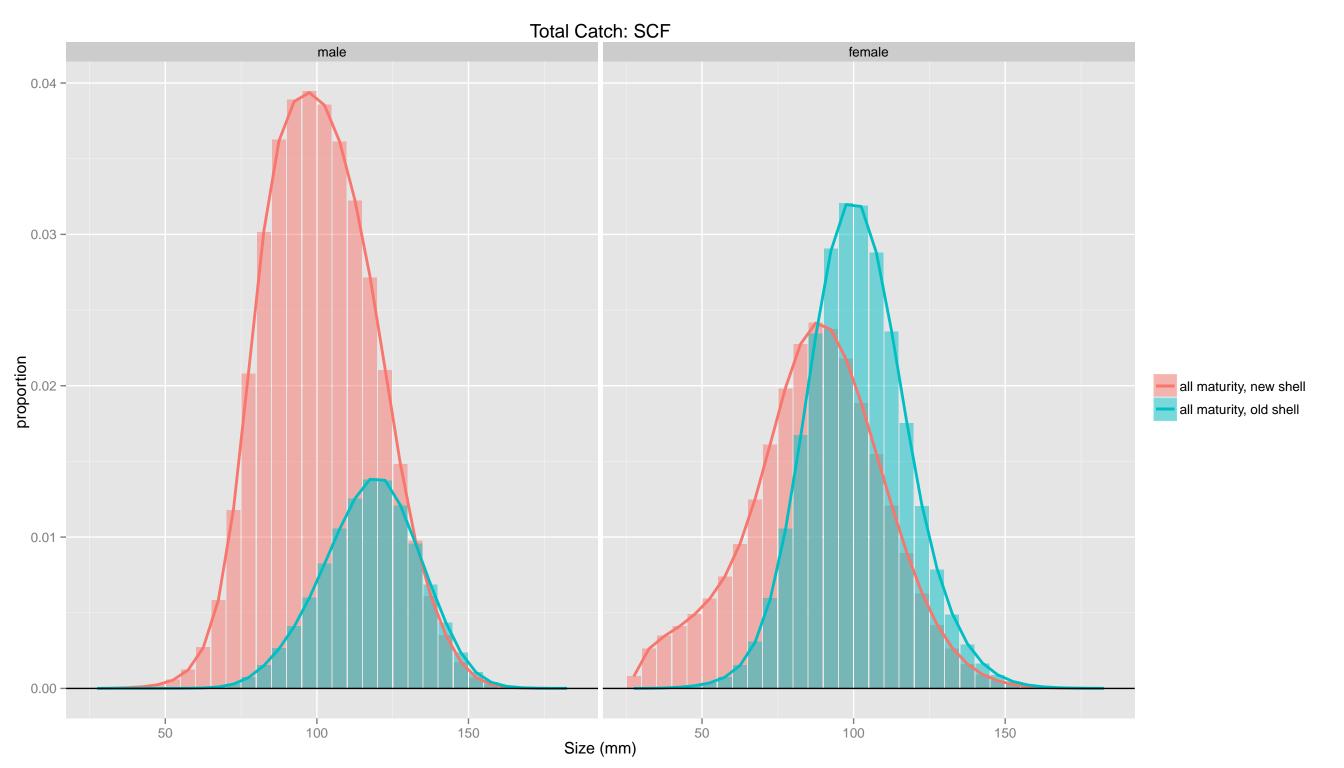


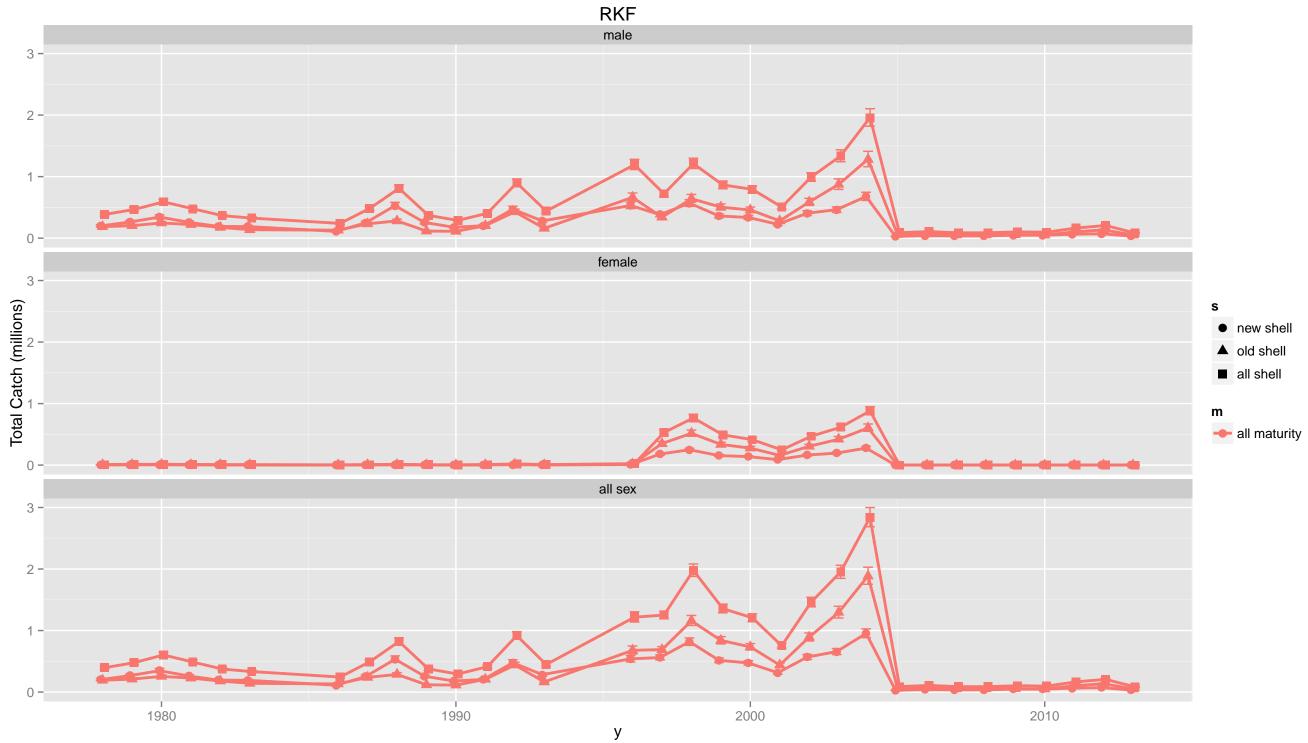


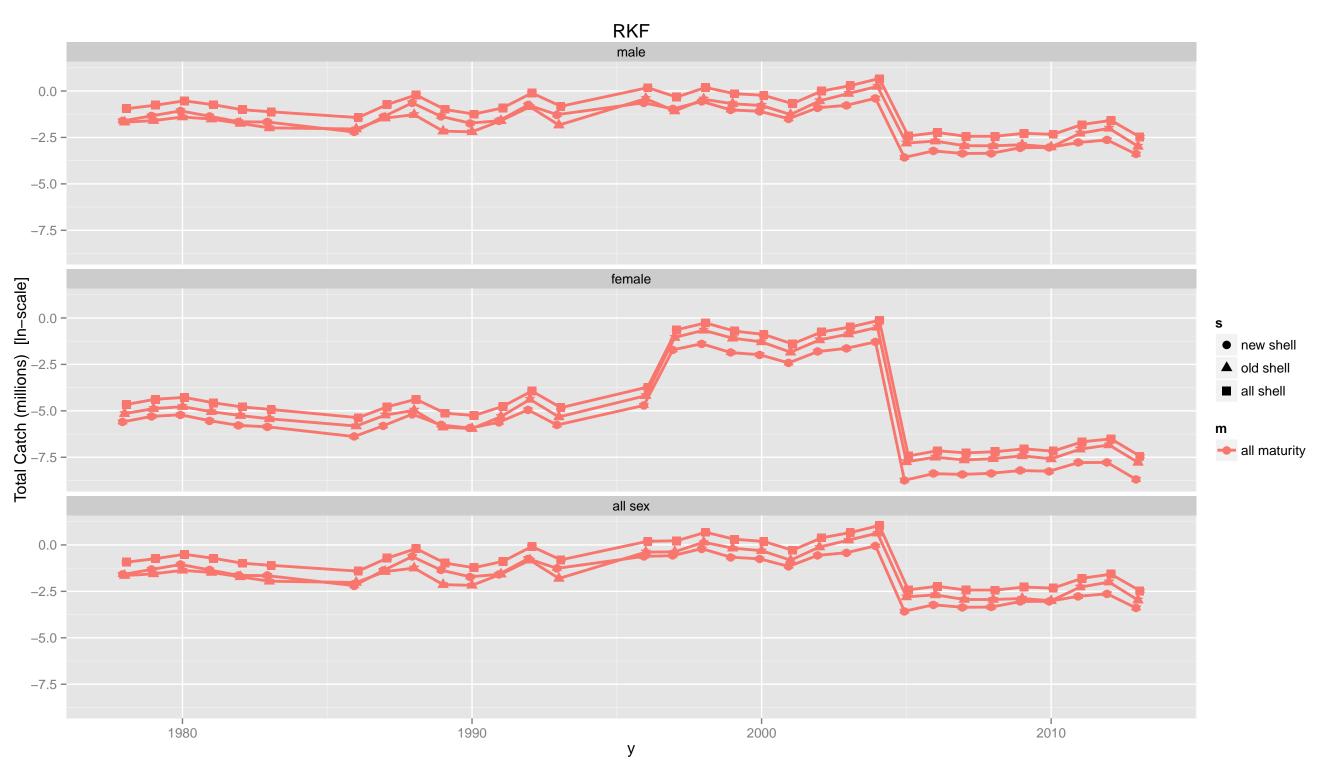


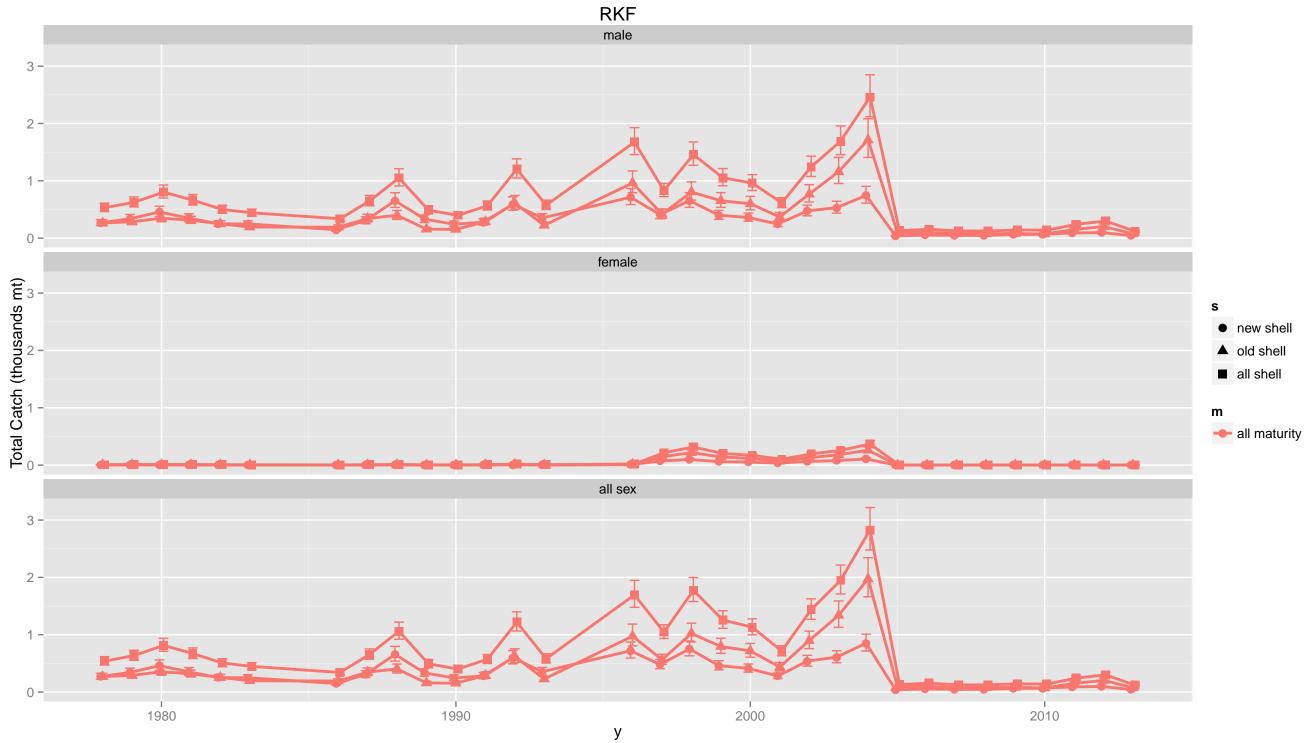


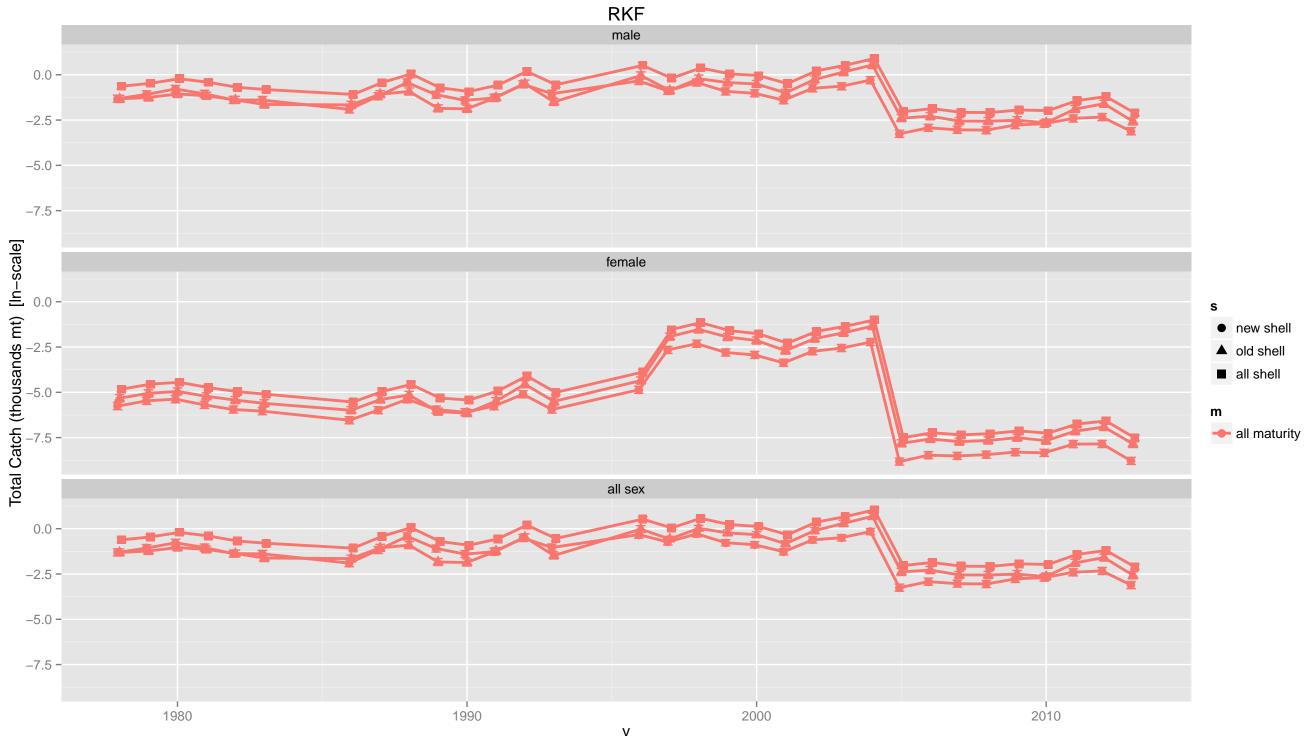






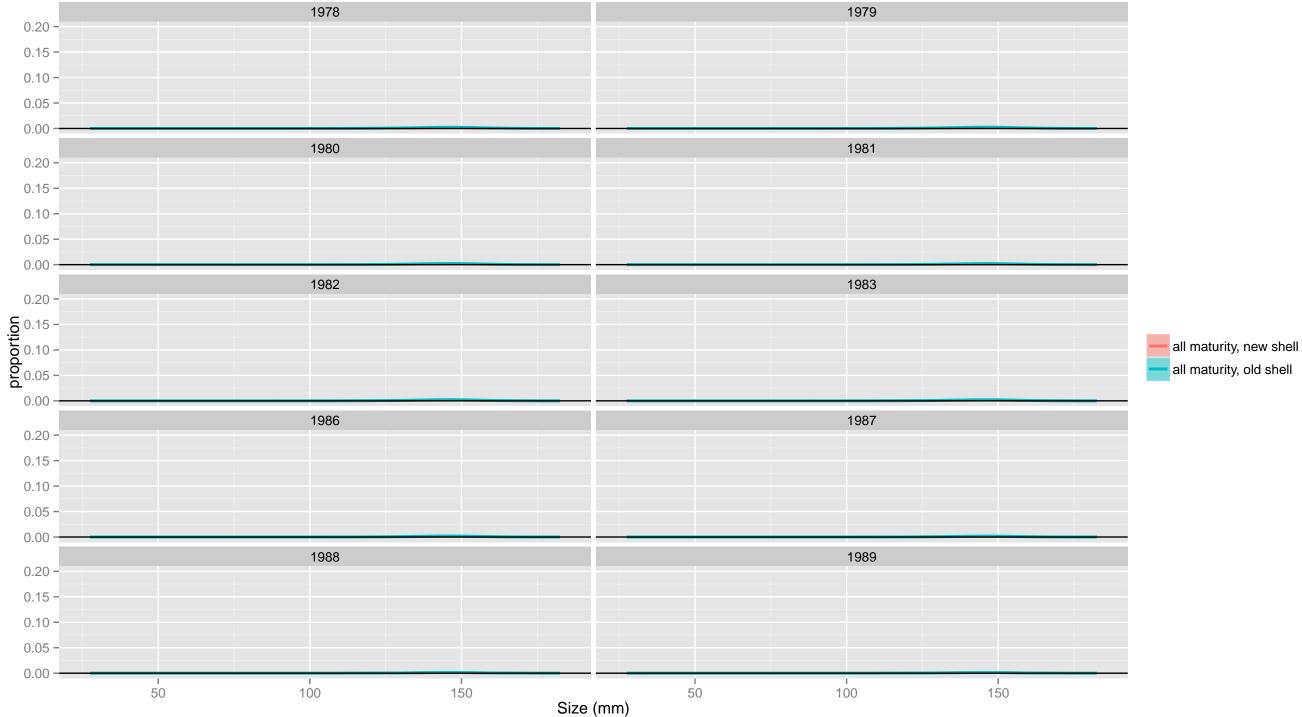




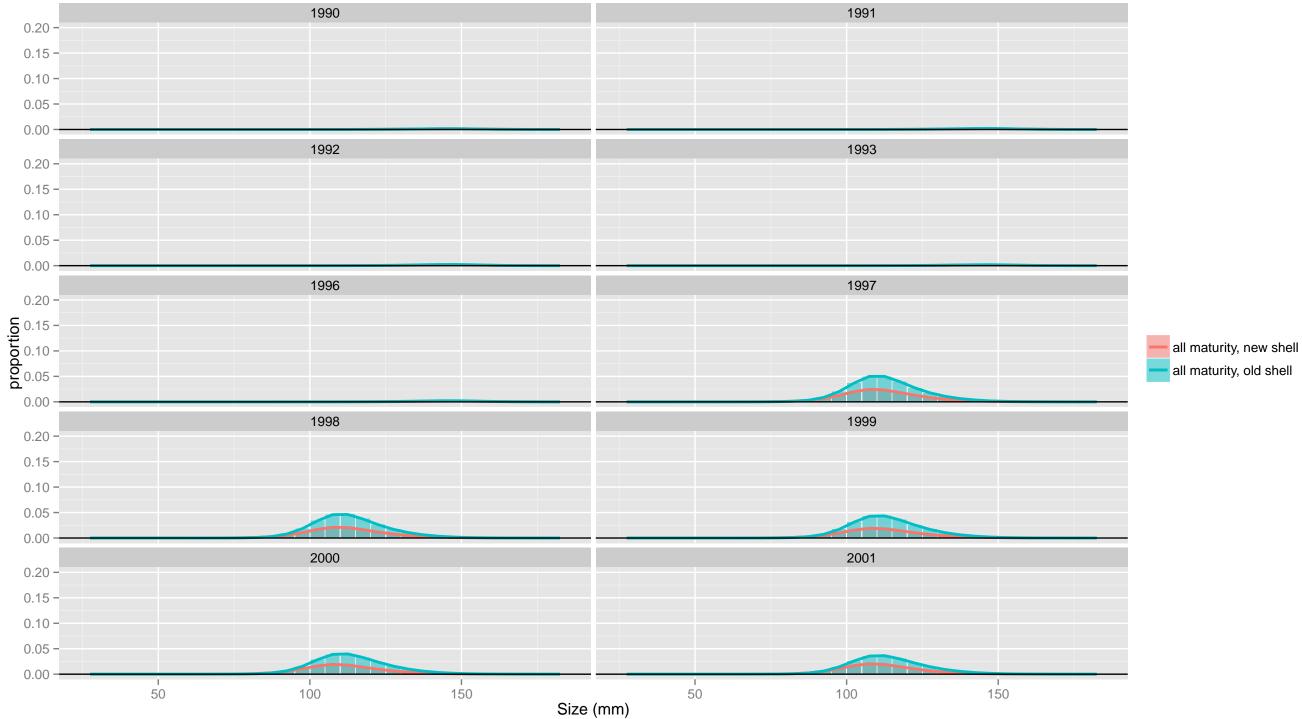


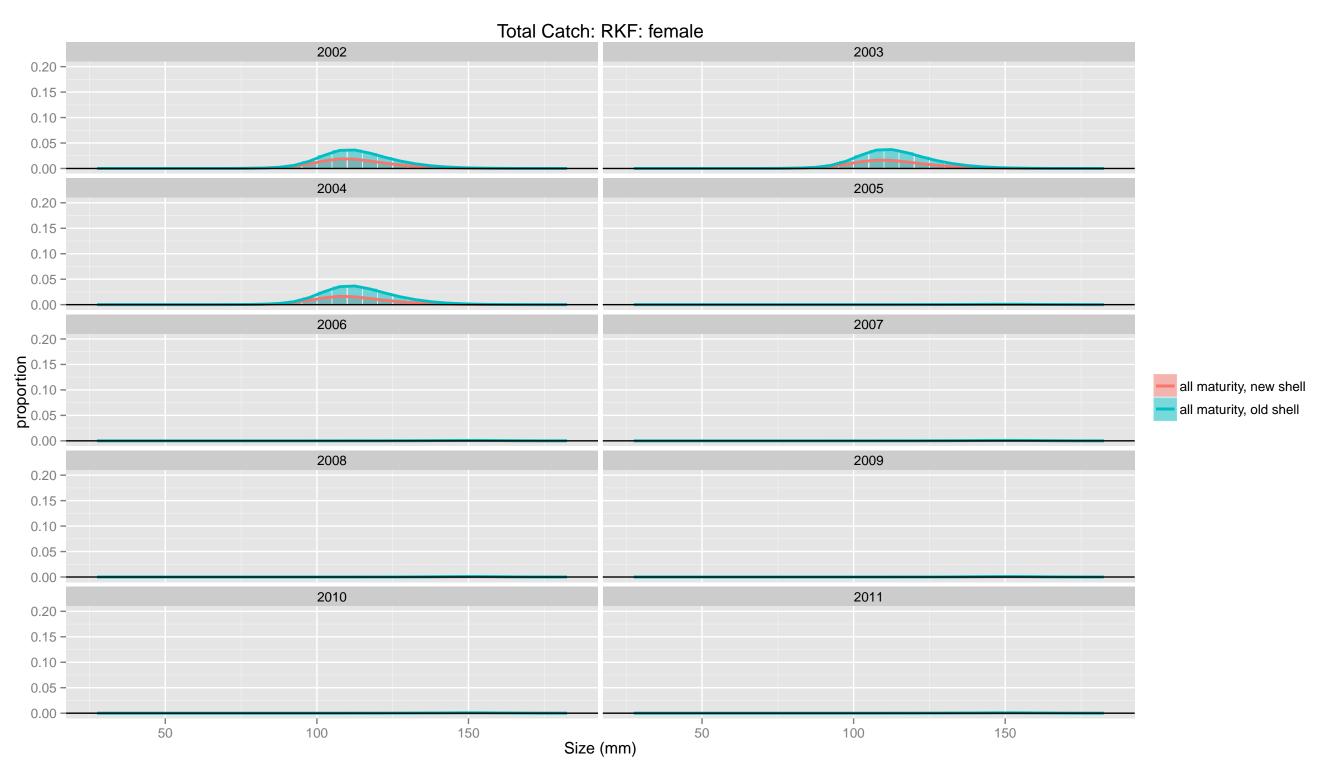
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Total Catch: RKF: female

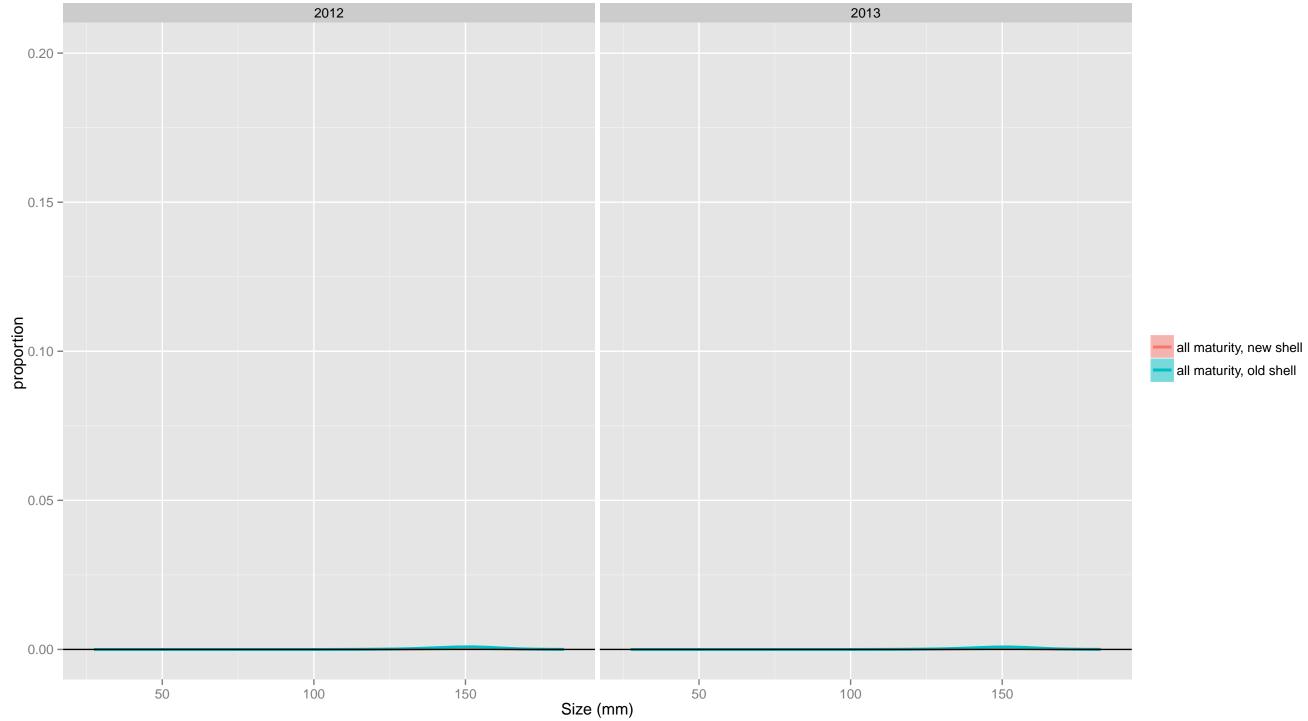


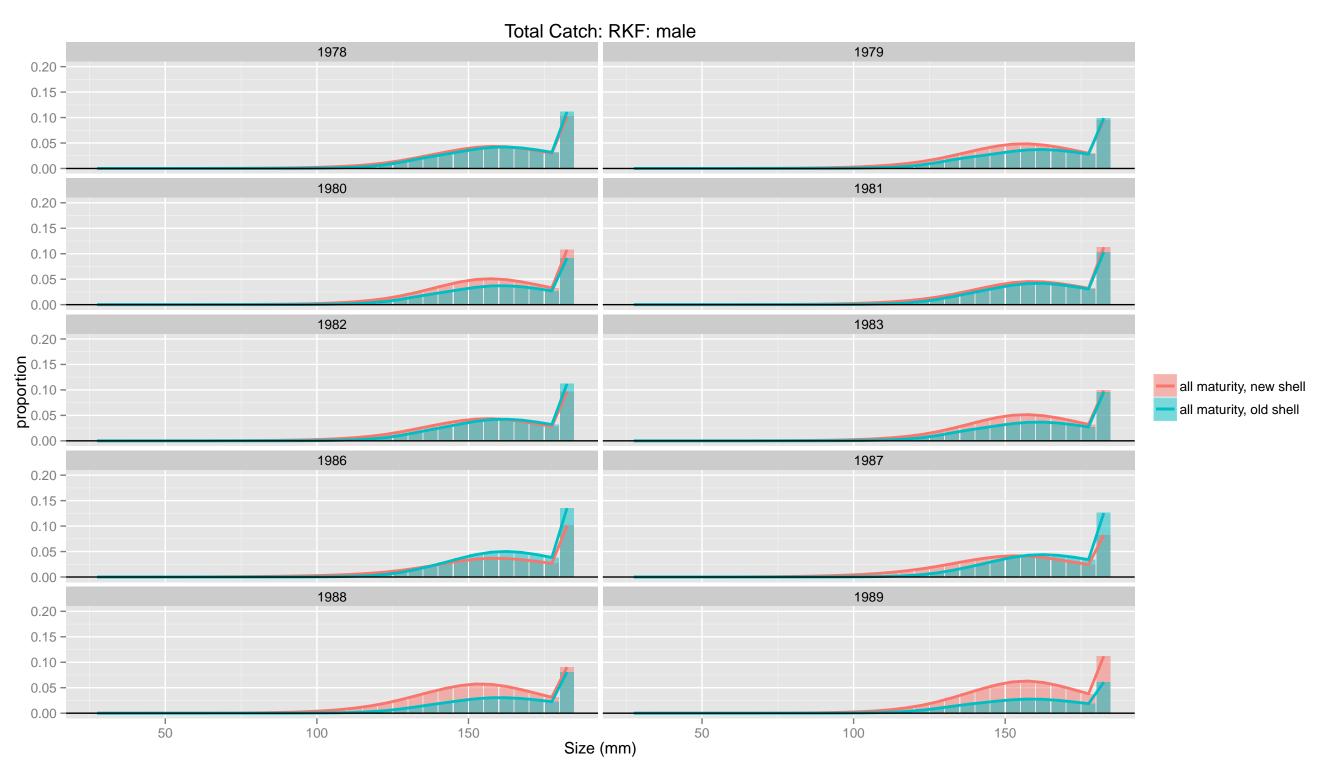
Total Catch: RKF: female

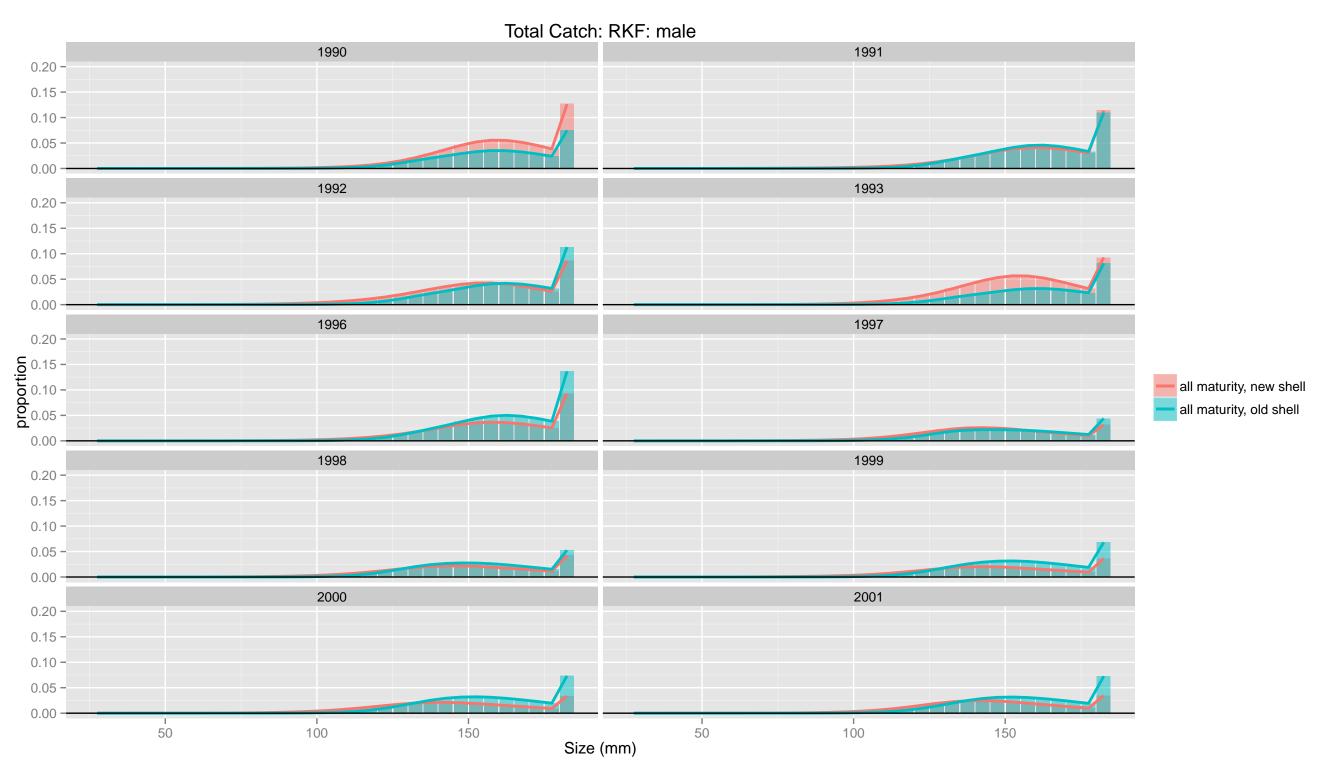


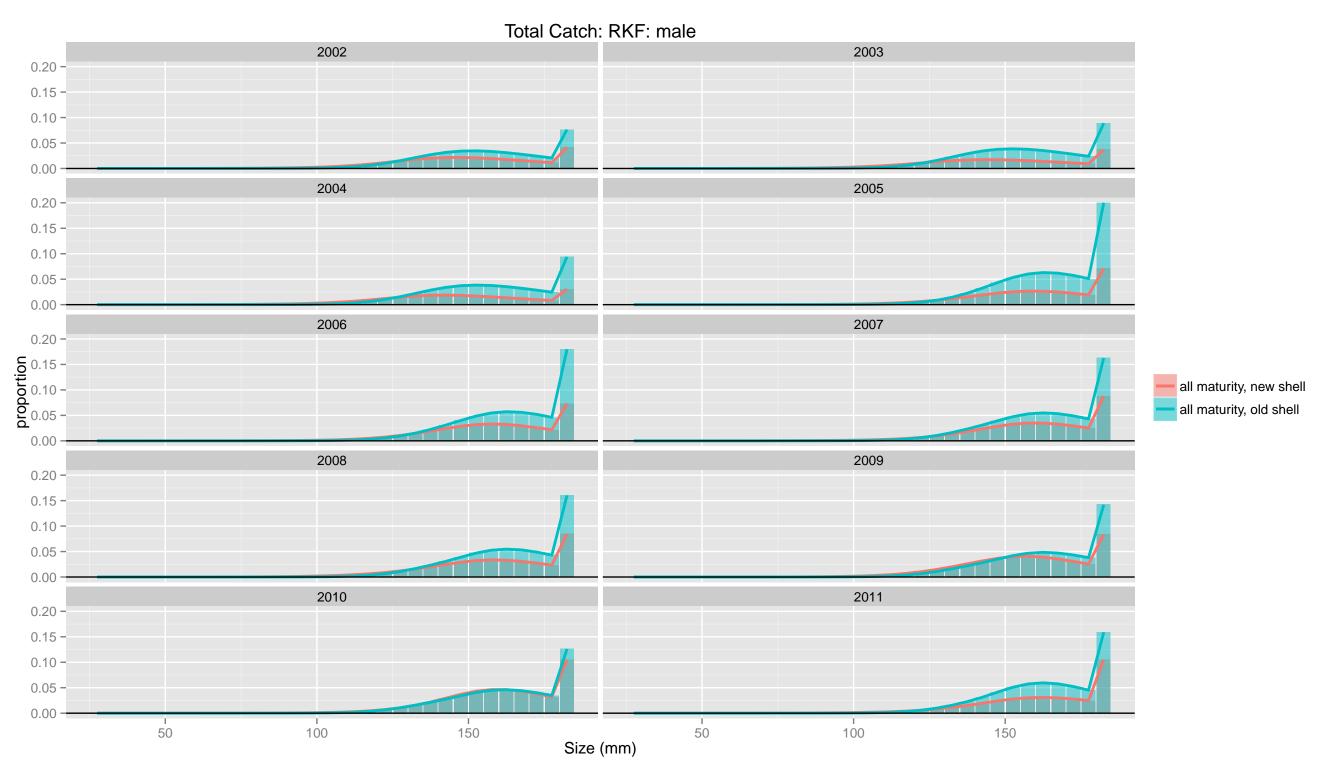


Total Catch: RKF: female

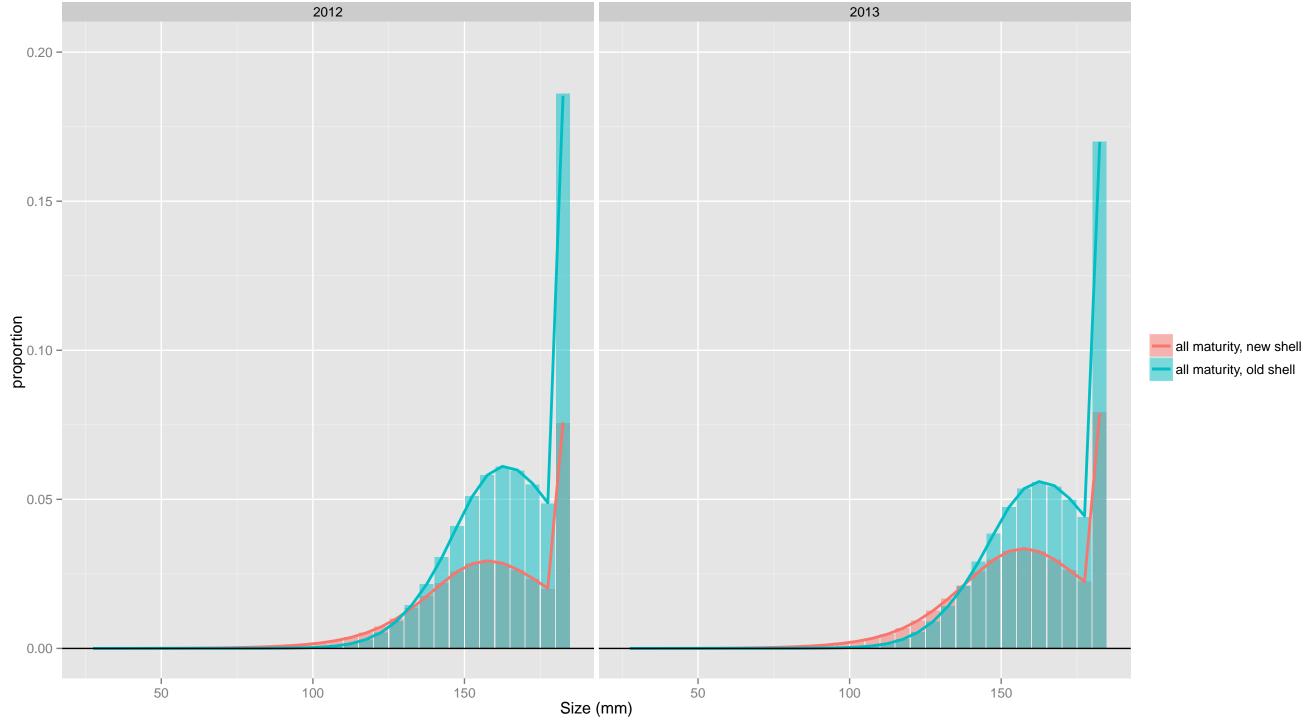




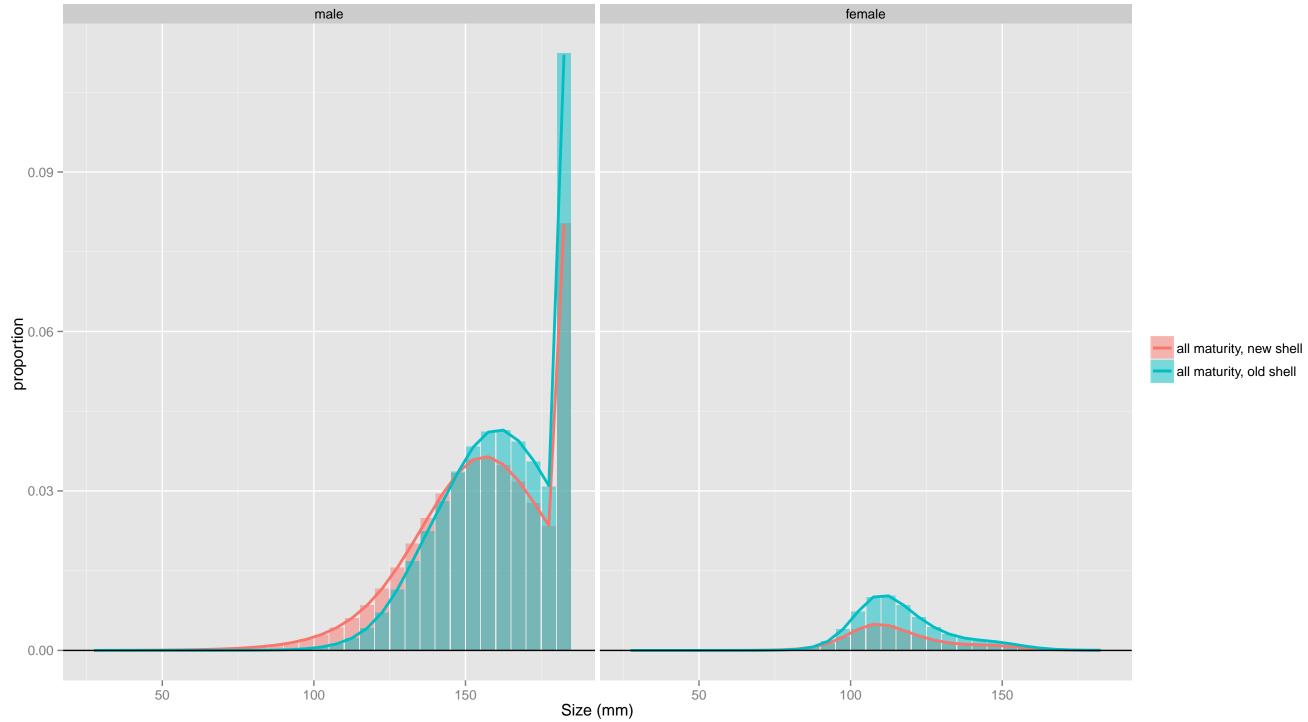


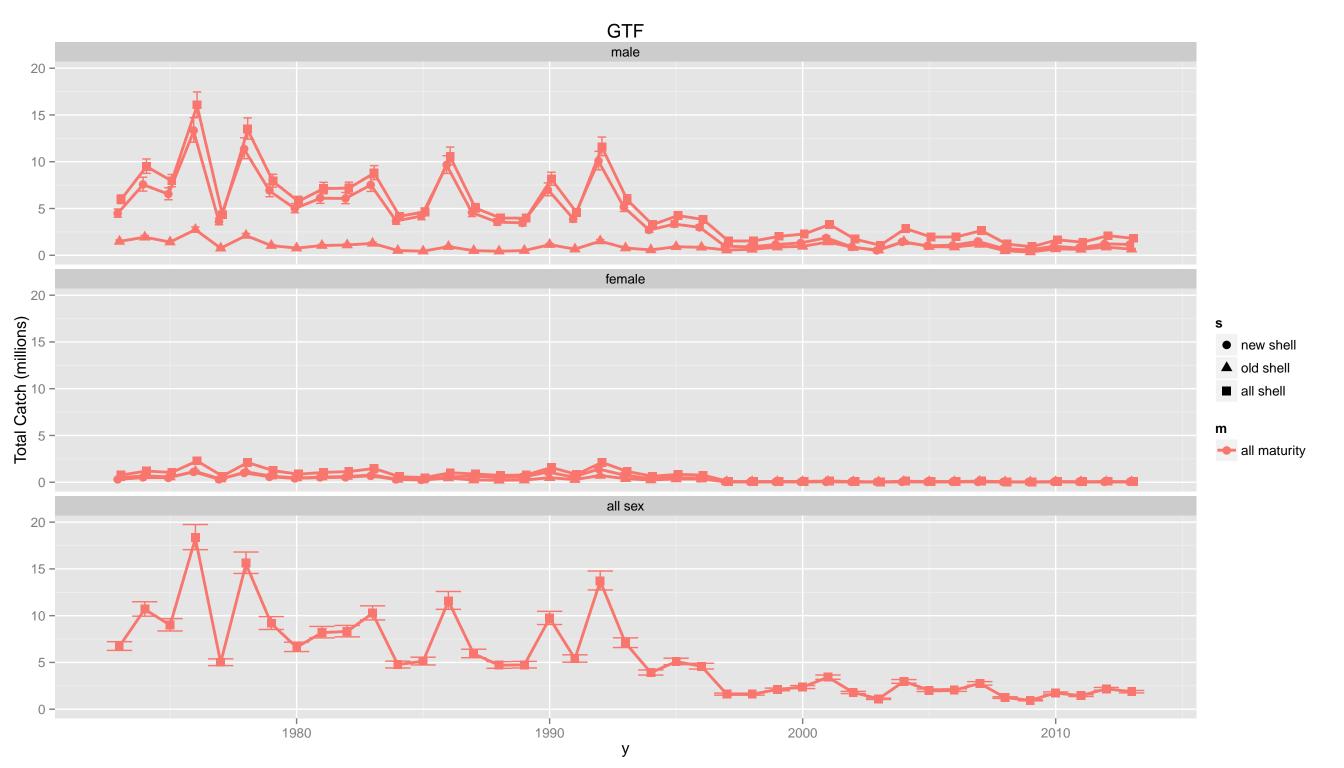


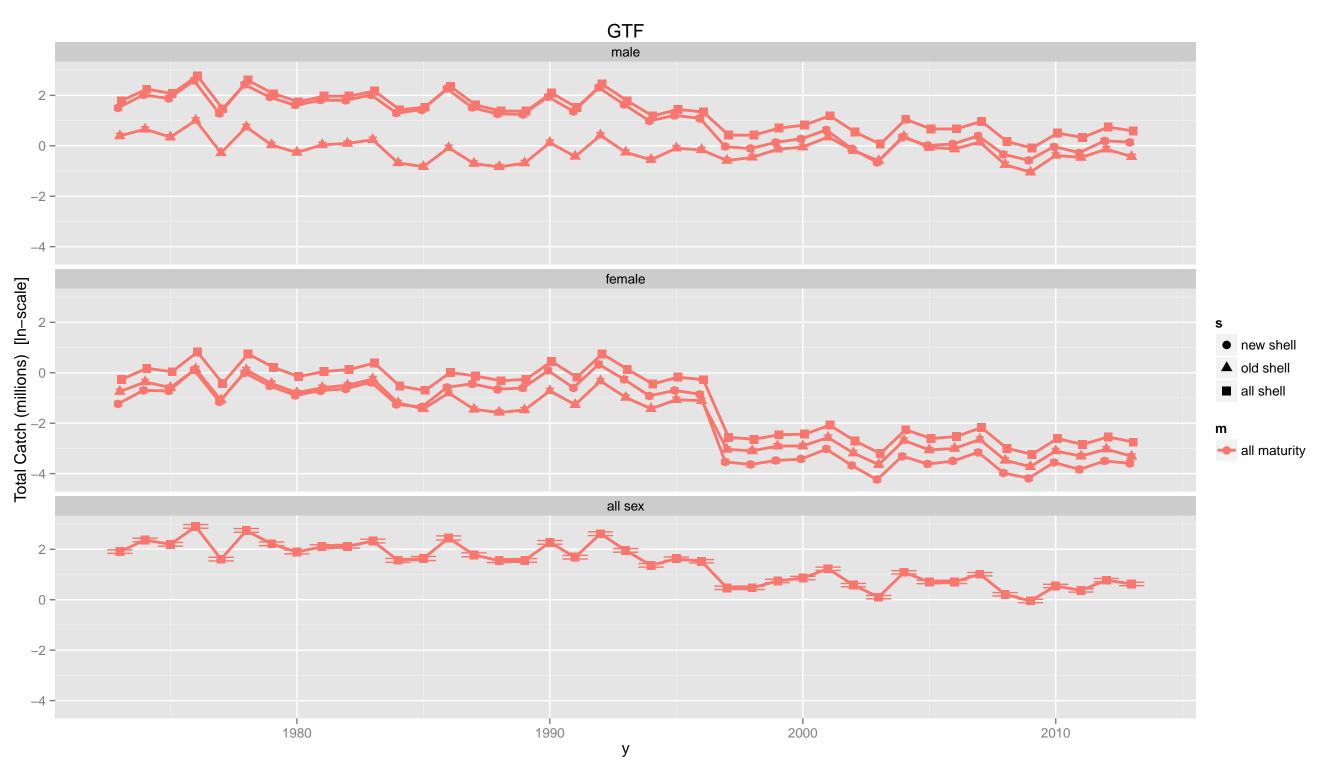
Total Catch: RKF: male

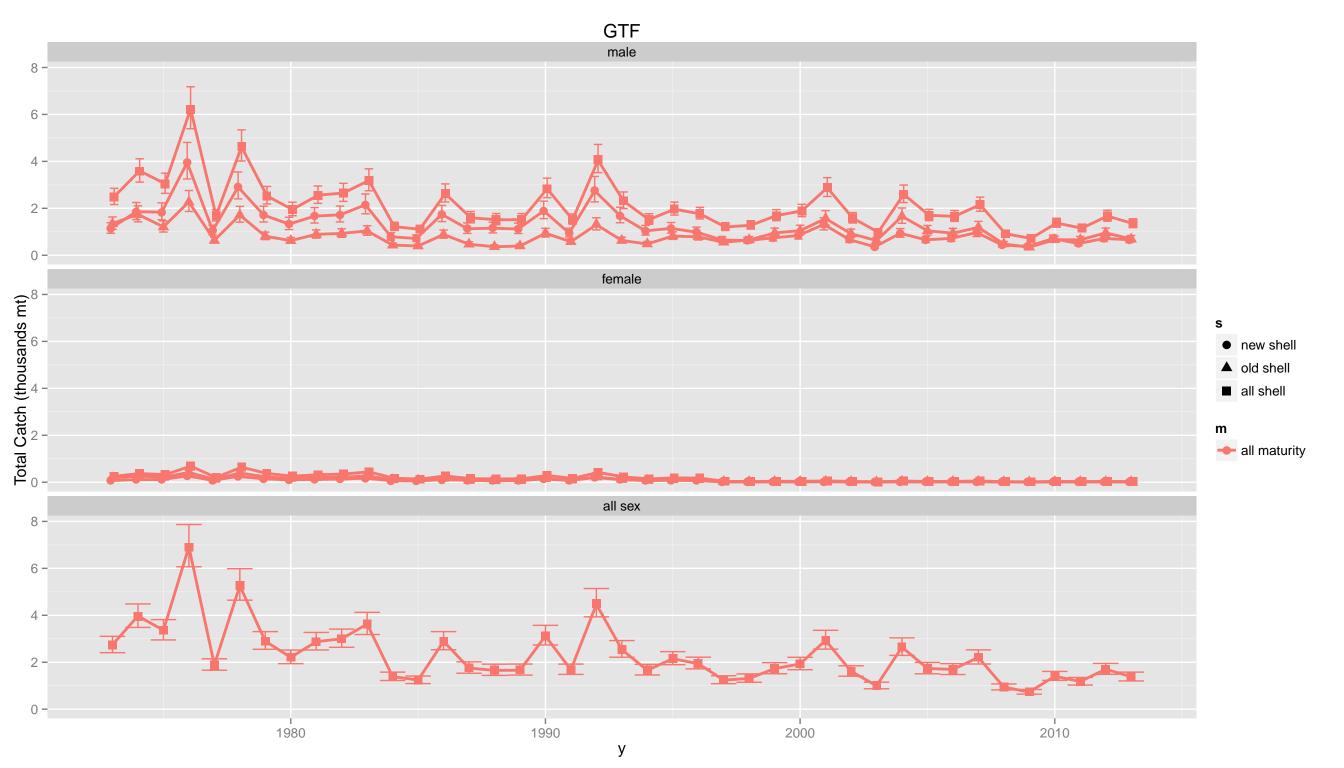


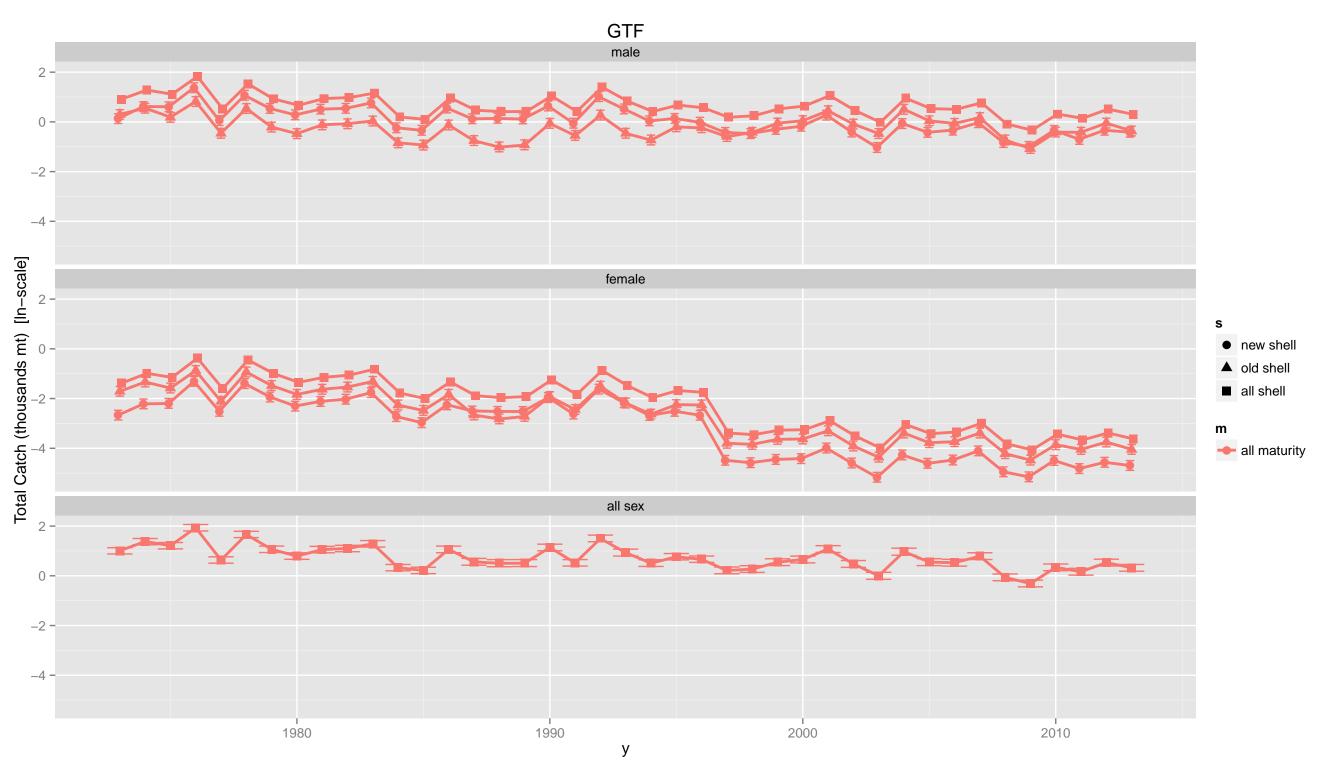


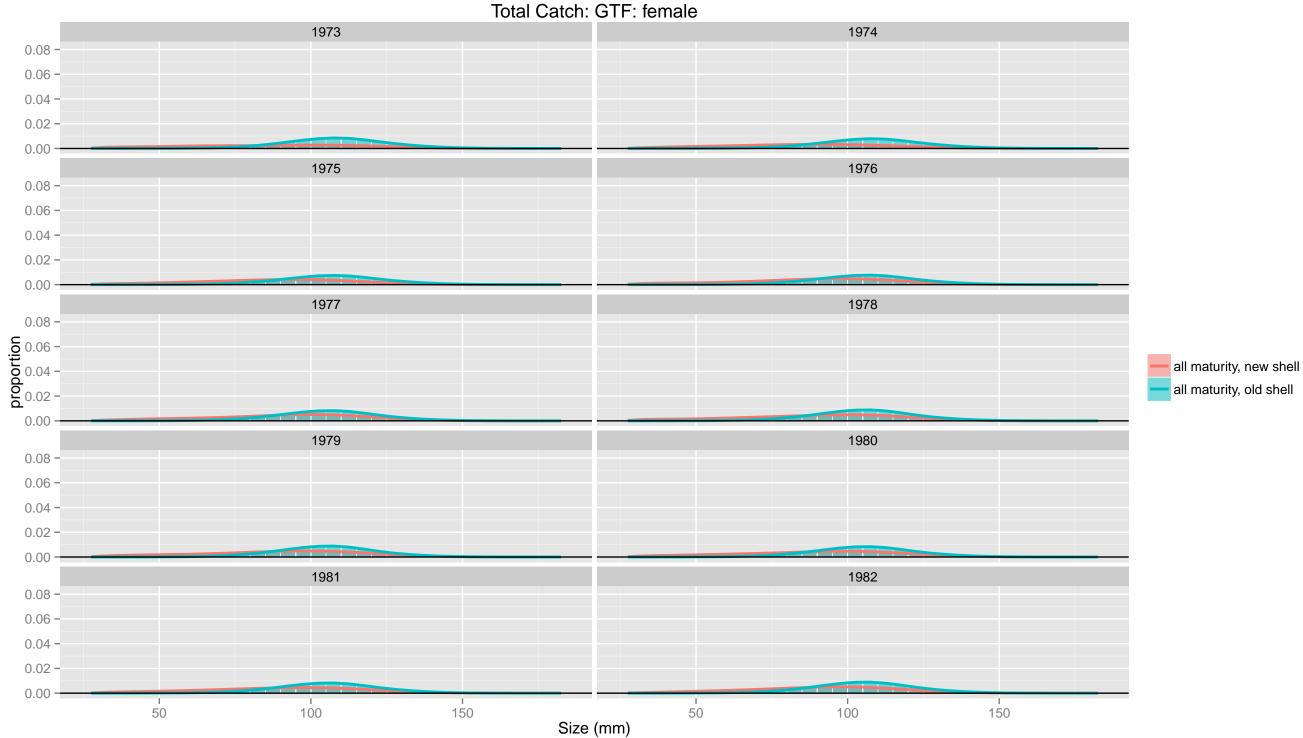


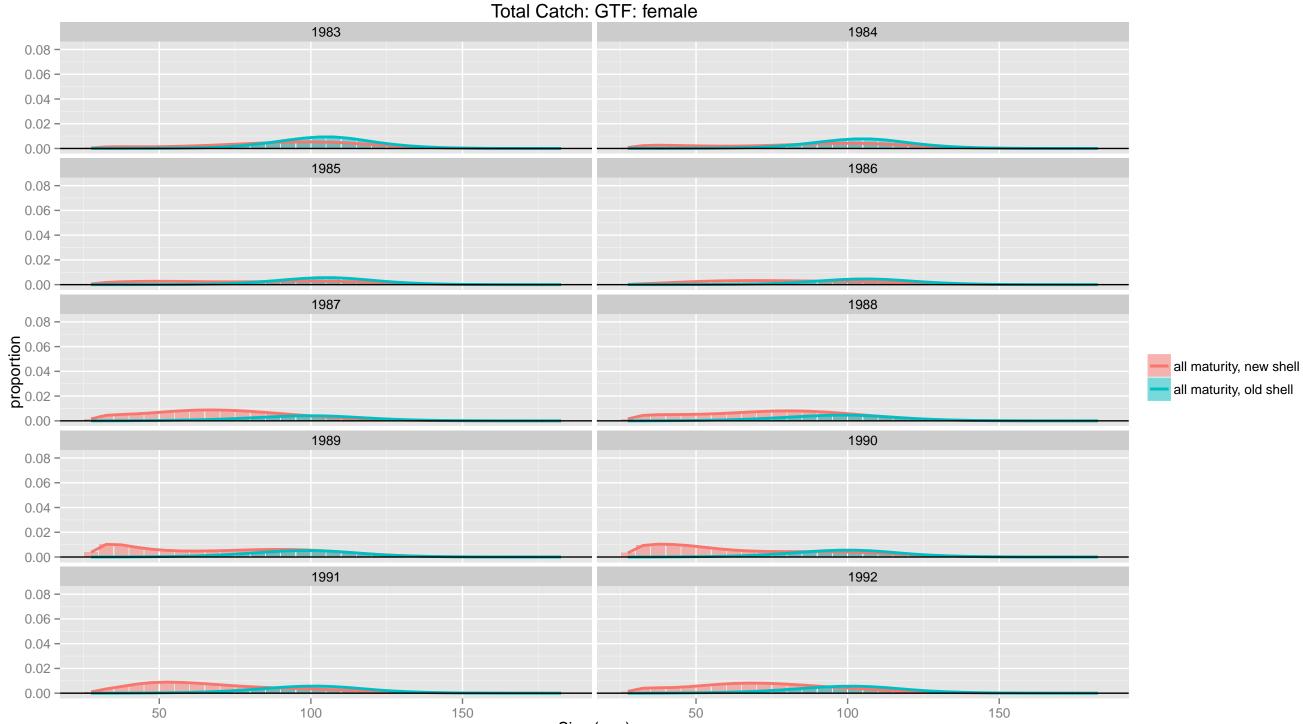




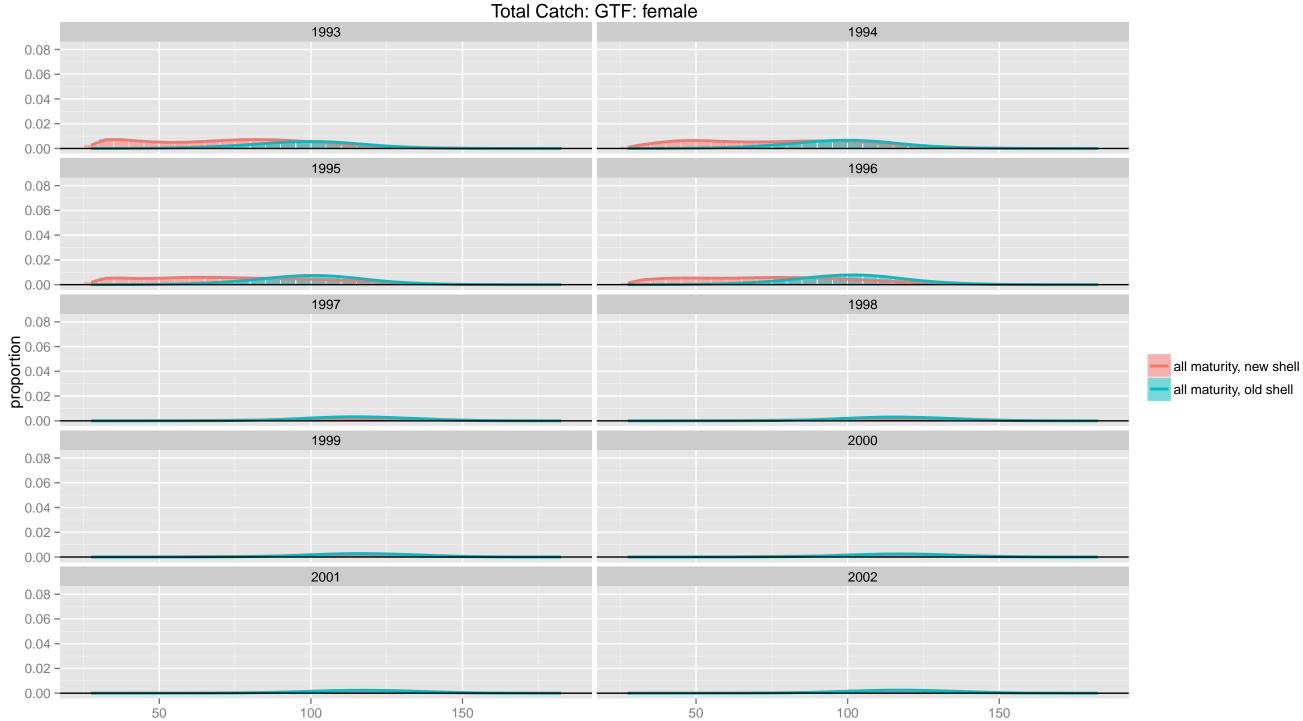






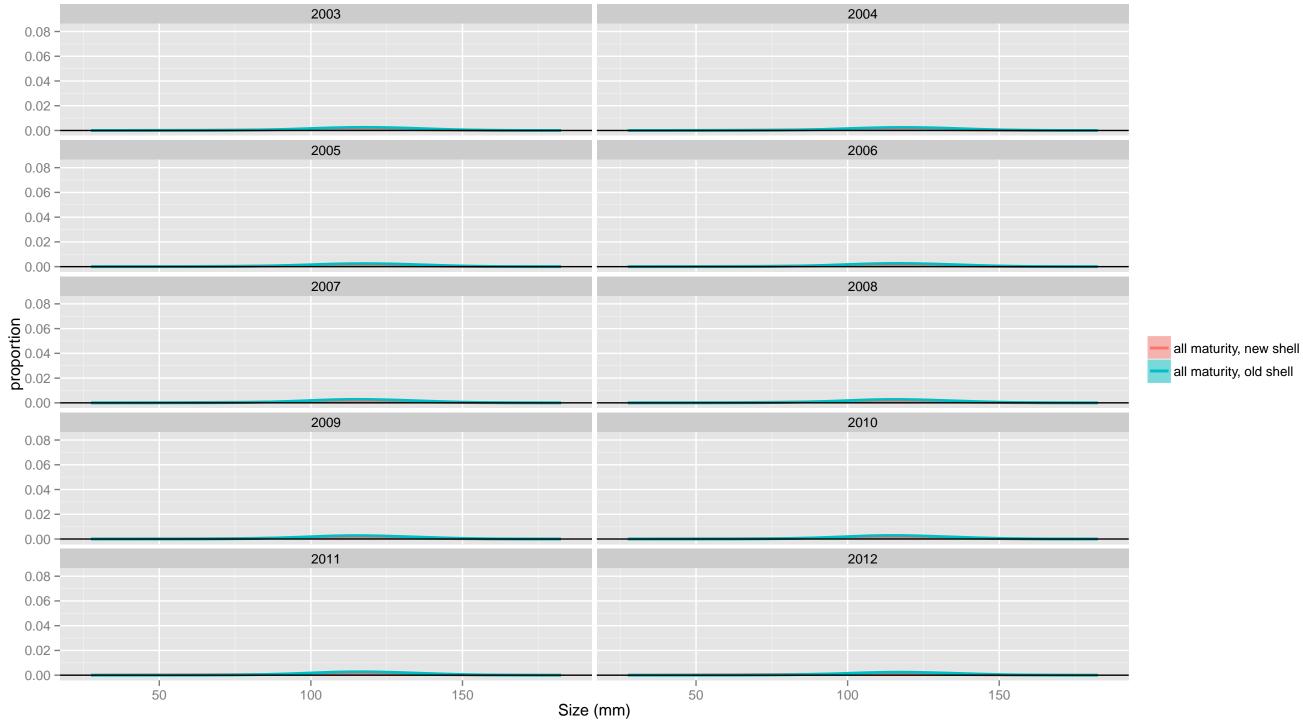


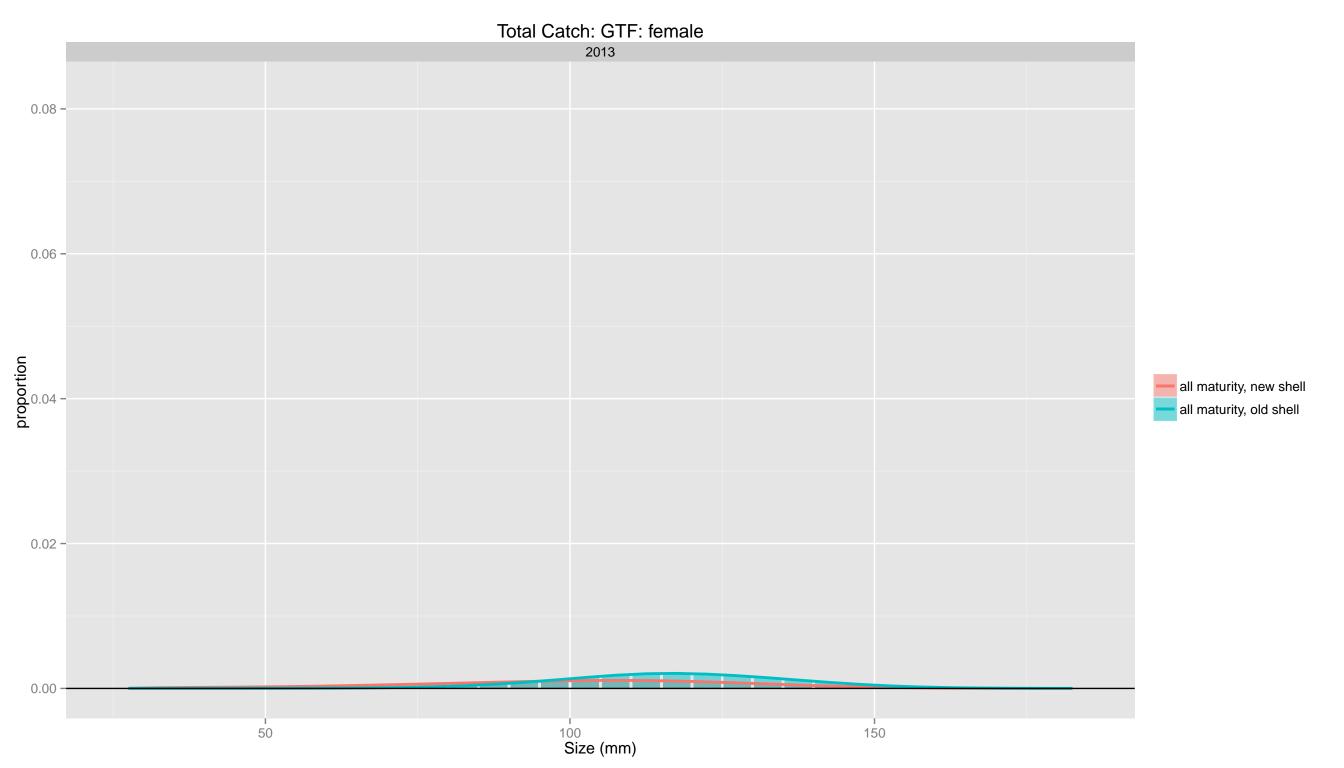
Size (mm)

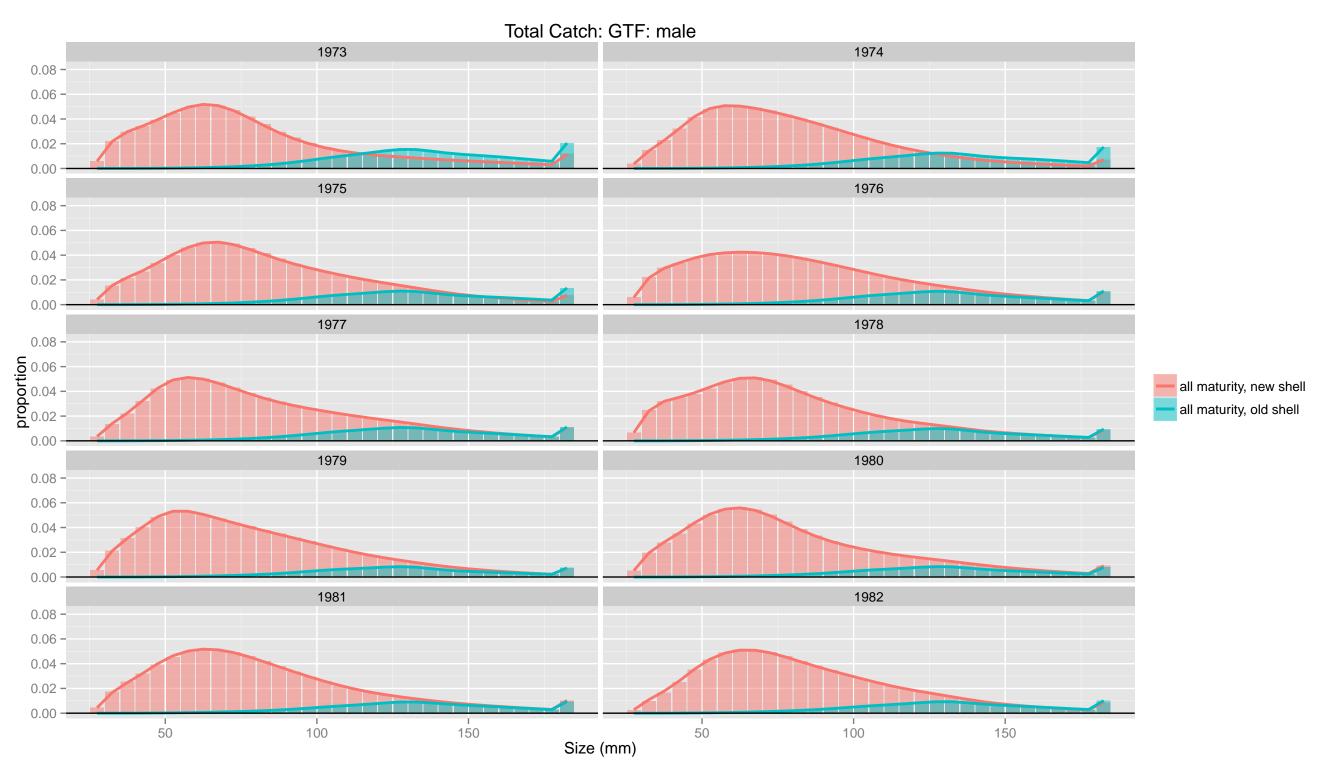


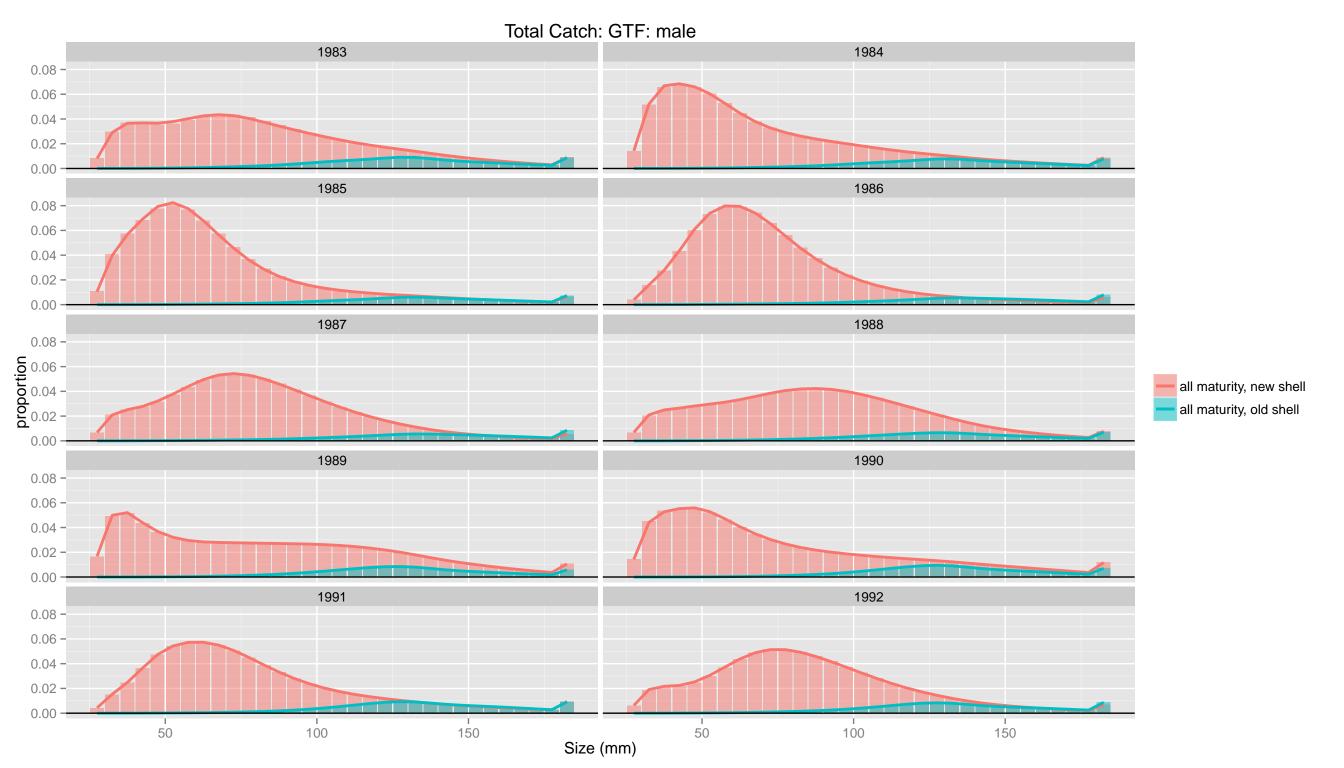
Size (mm)

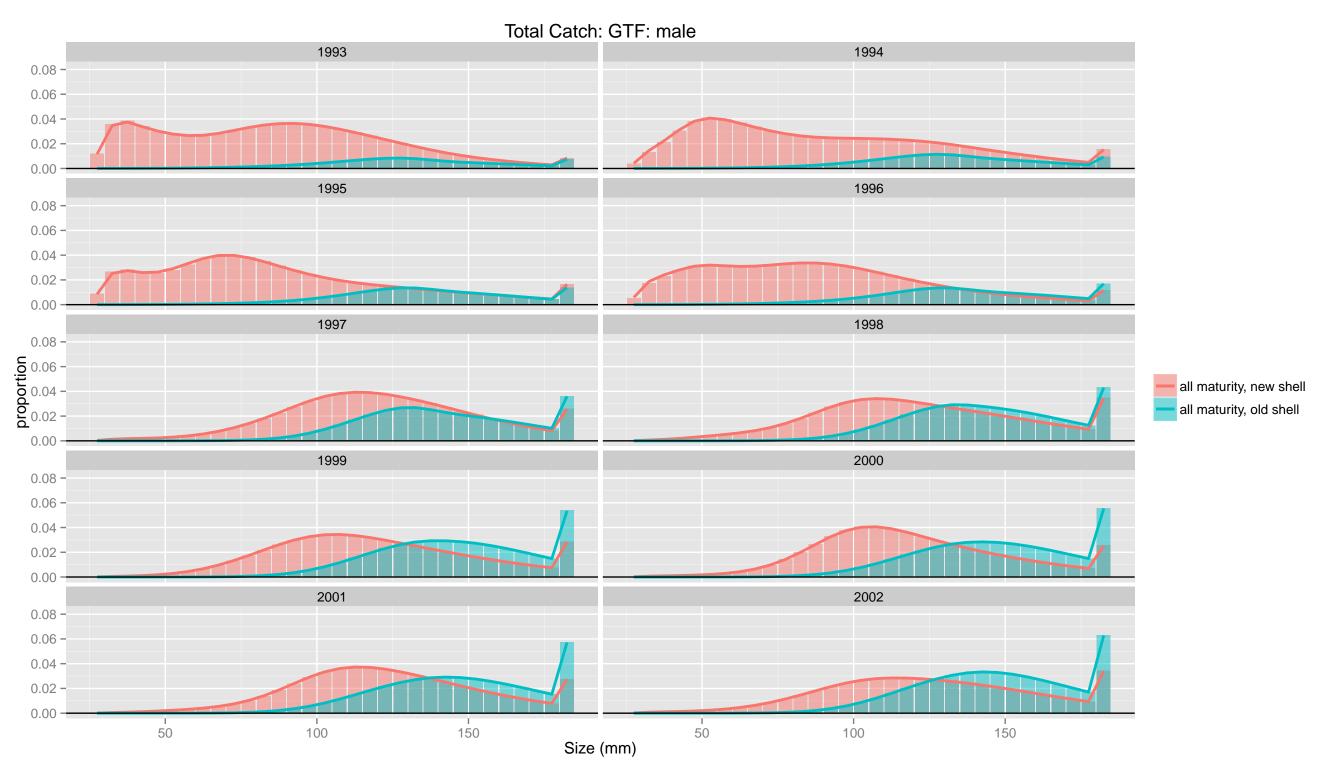
Total Catch: GTF: female

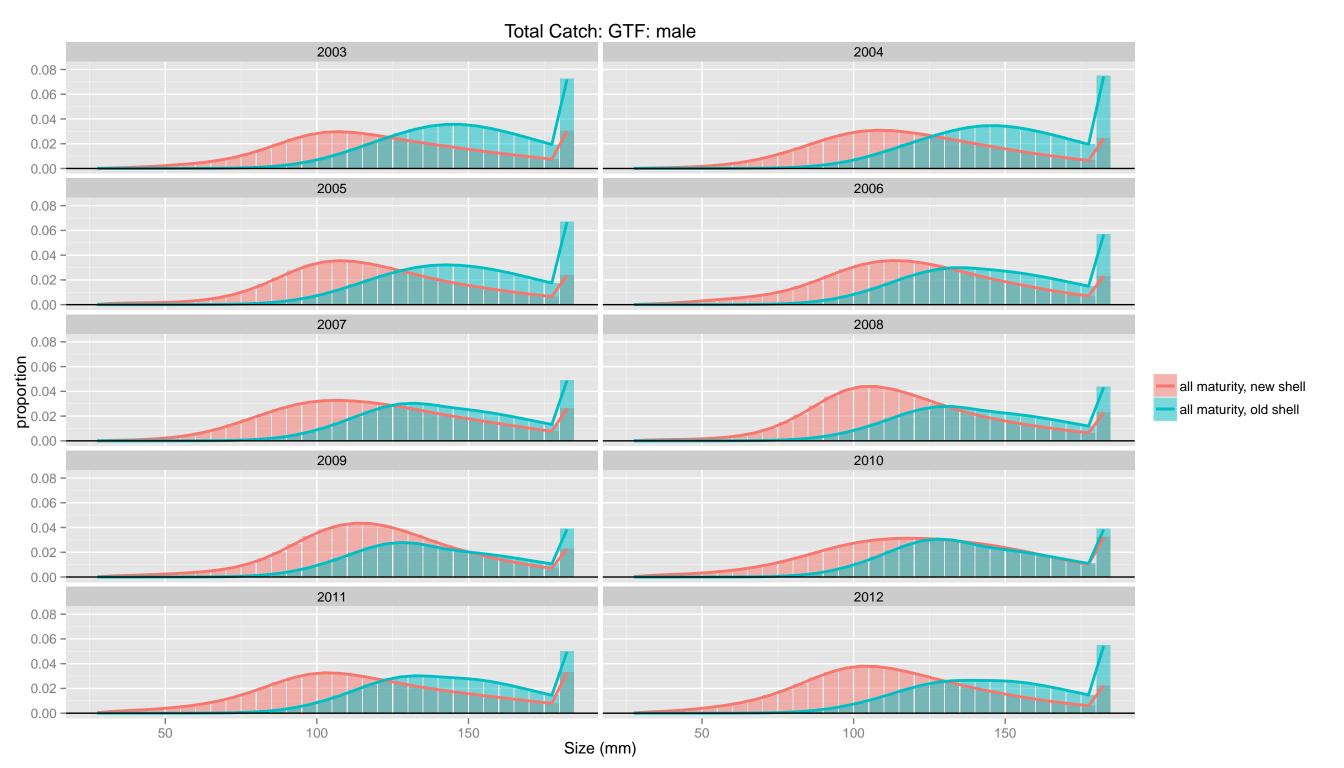


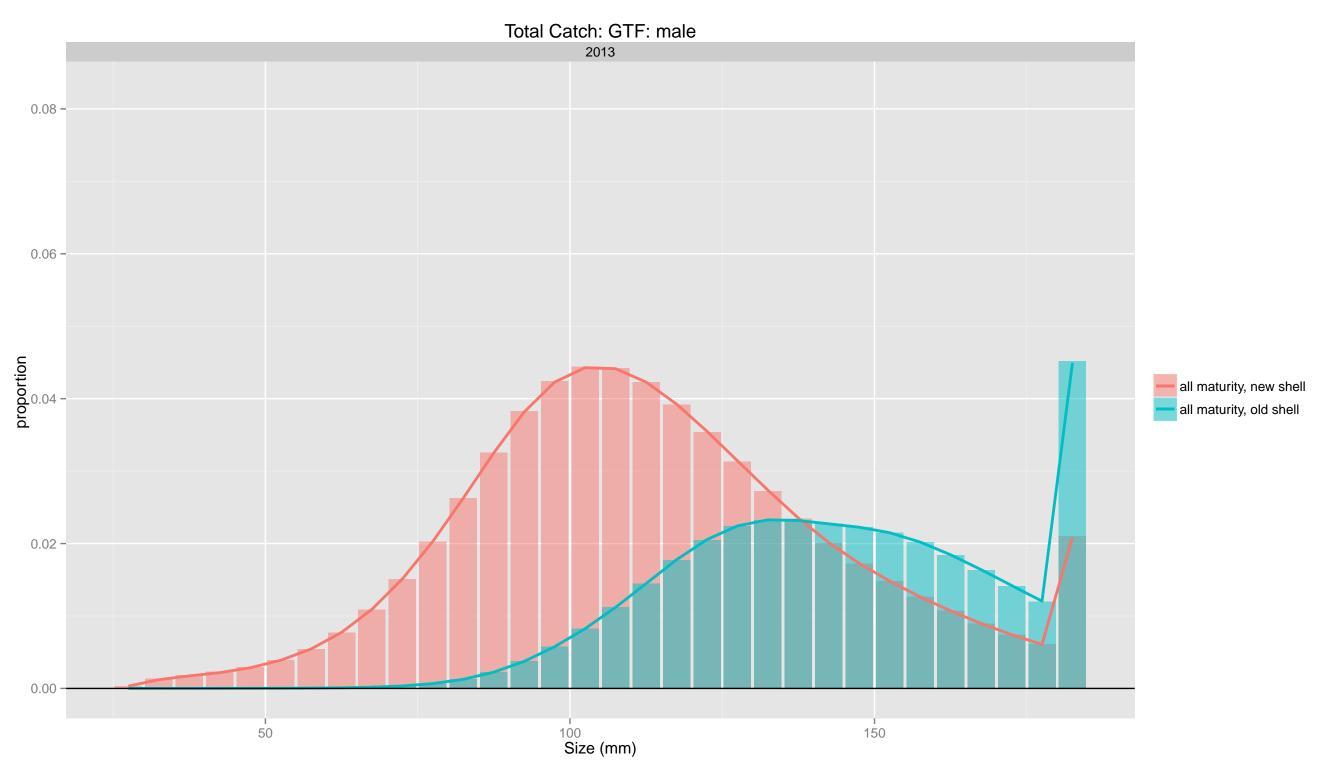




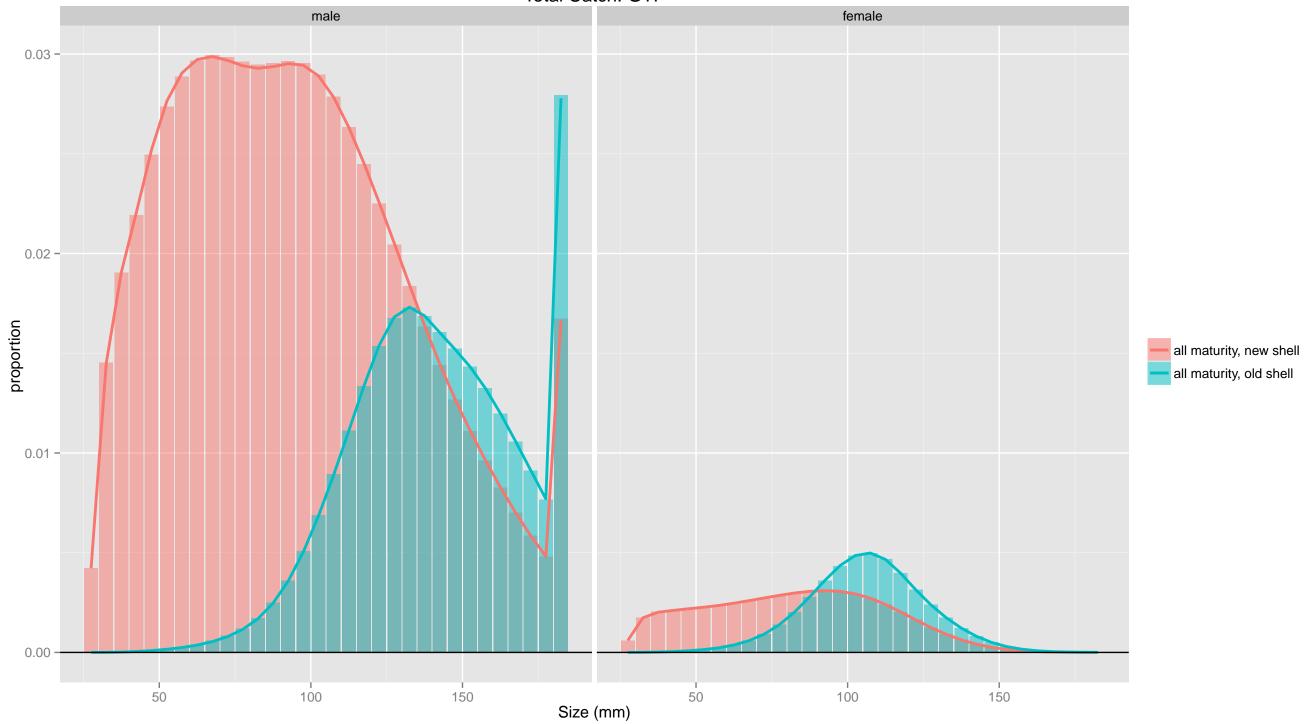


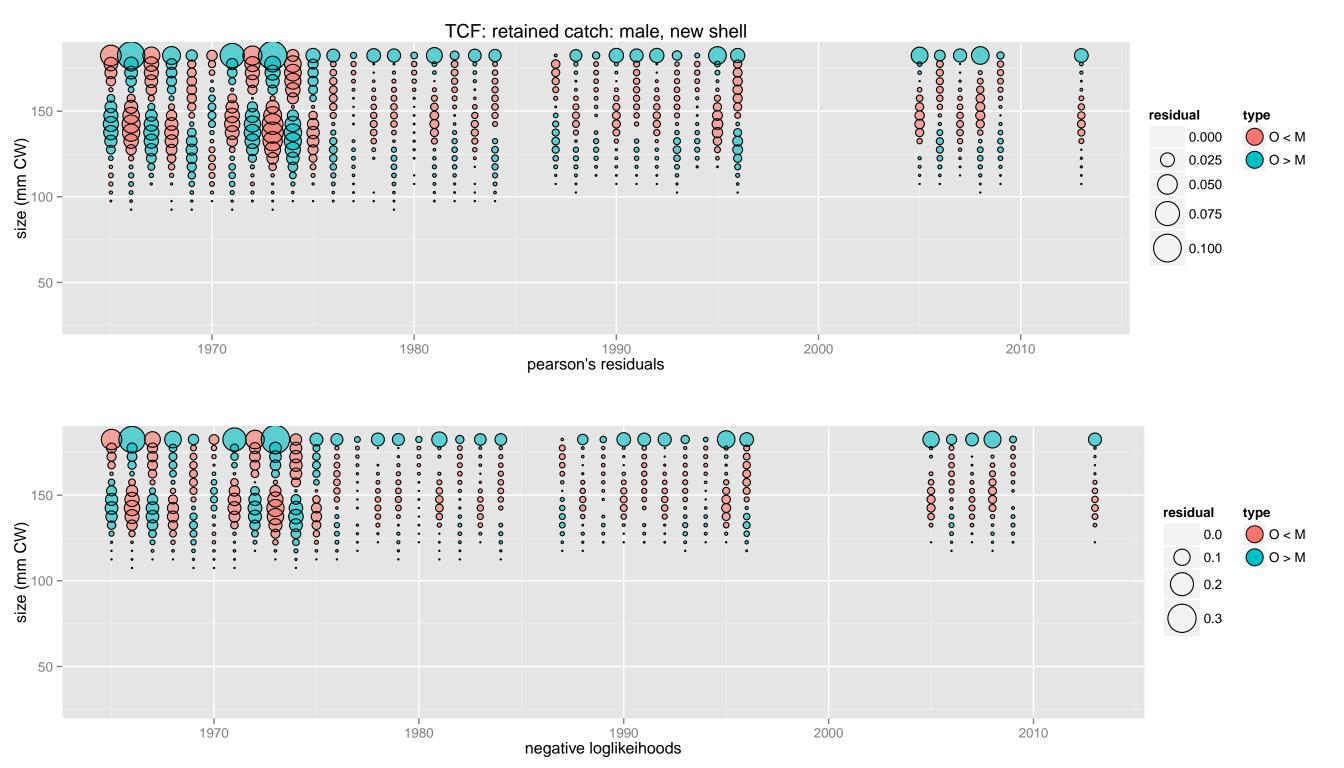


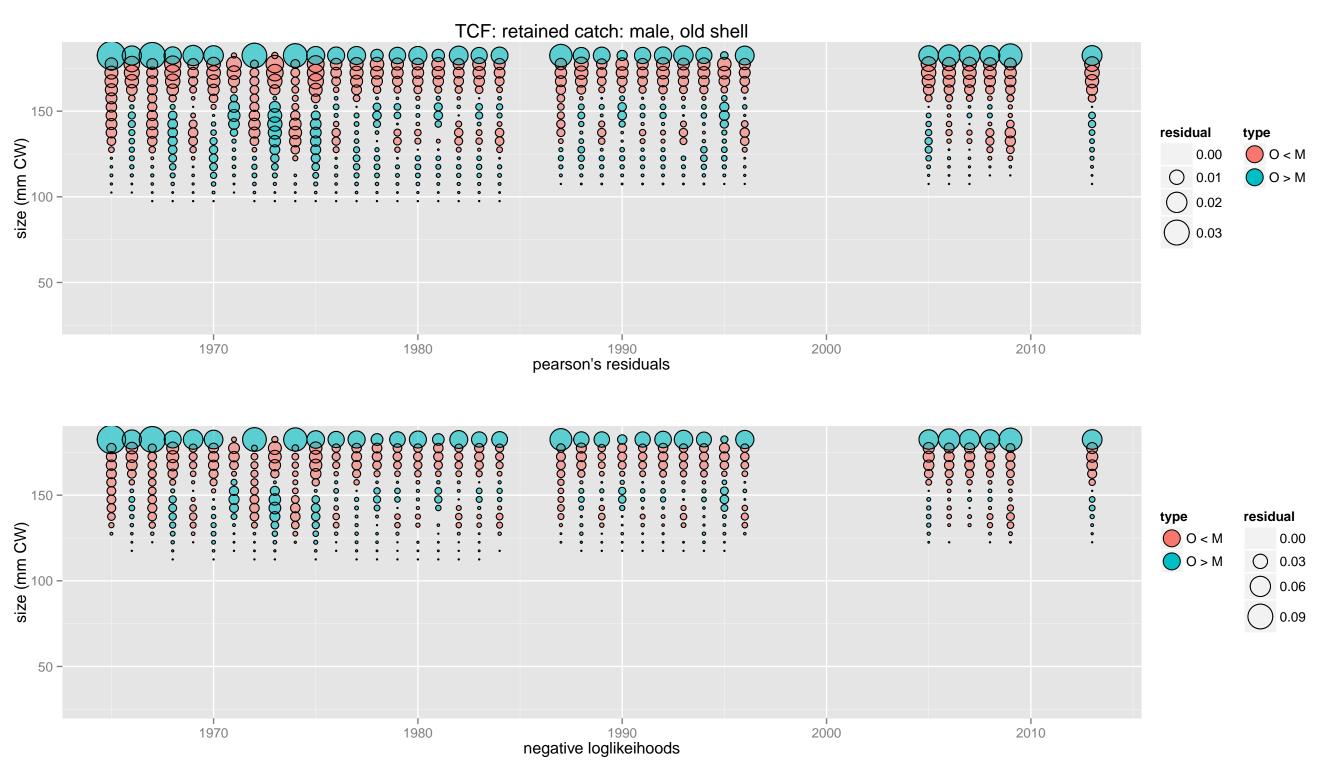




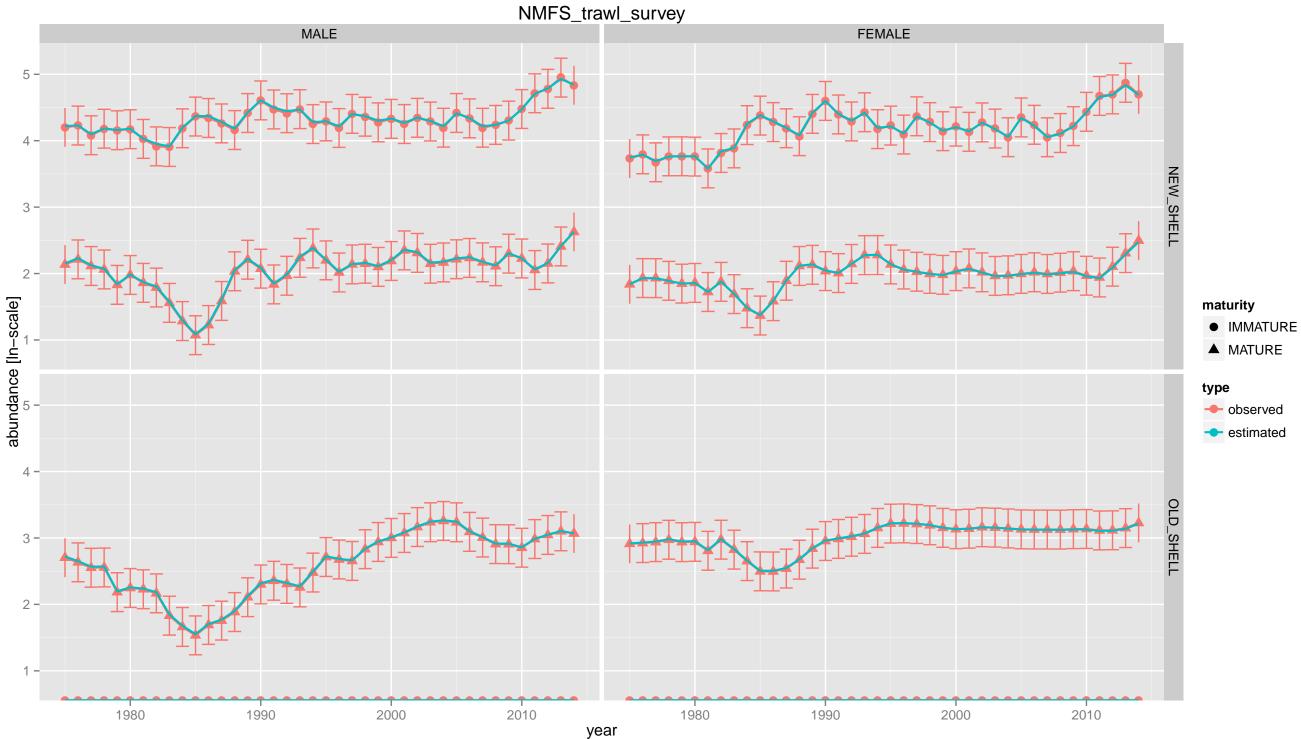






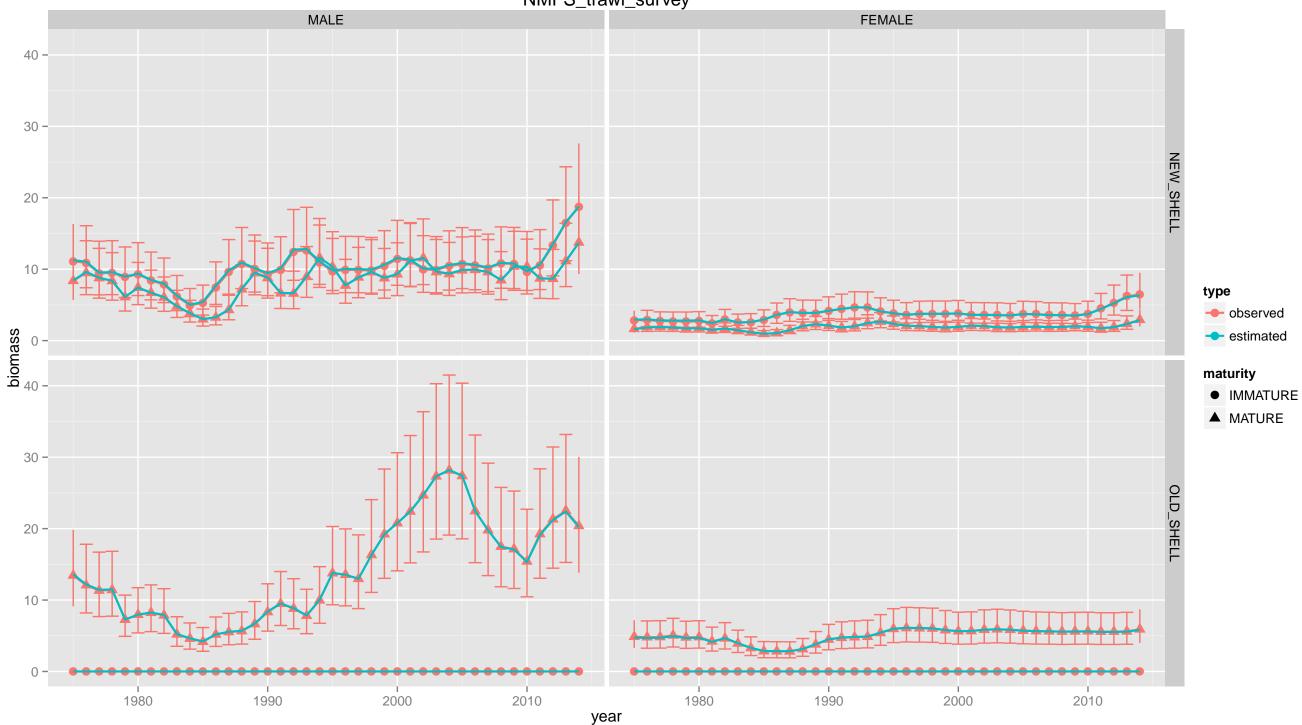




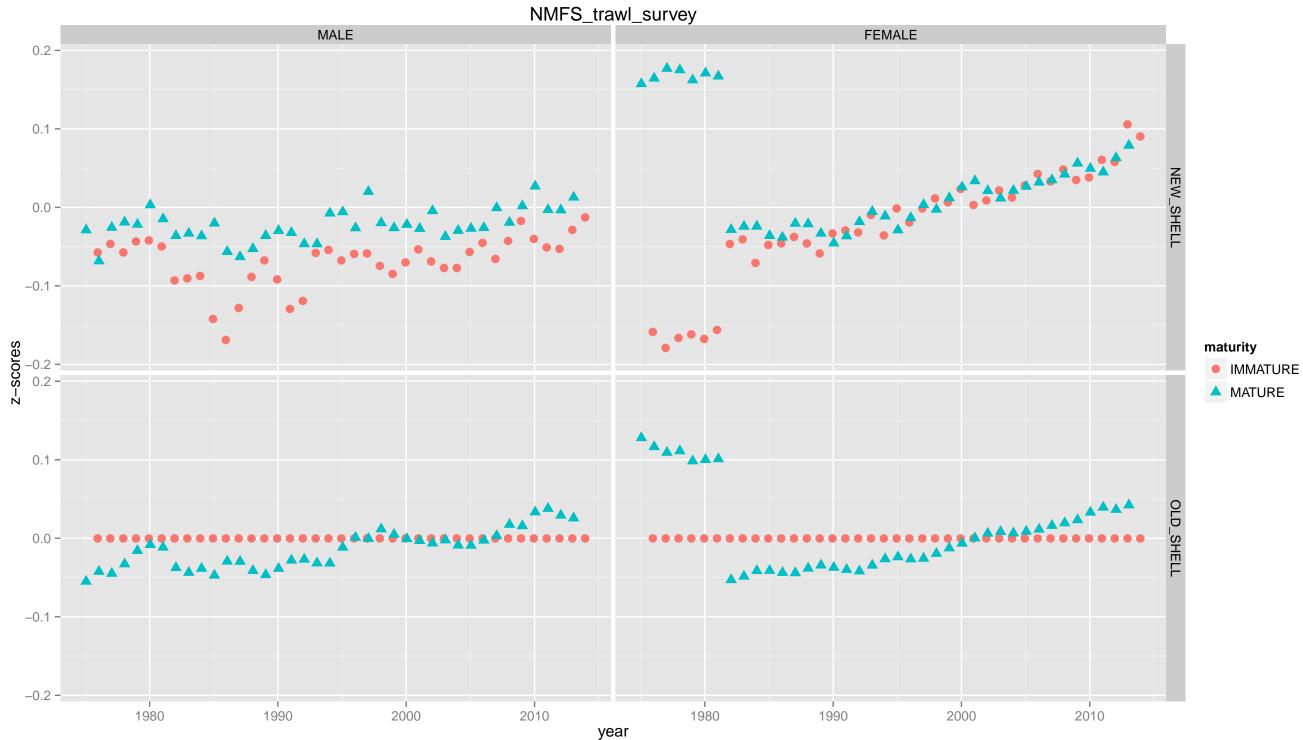




NMFS_trawl_survey







150 -			0 0 0 0 0 0 0 0 0 0 0 0 0																0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 0 0 0 0 0 0 0 0 0							0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
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50 -	1	<u> </u>									-	-		0					Õ																		

NMFS_trawl_survey: male, immature, new shell

150

size (mm CW)

5

1980

1990

2000

2010

type

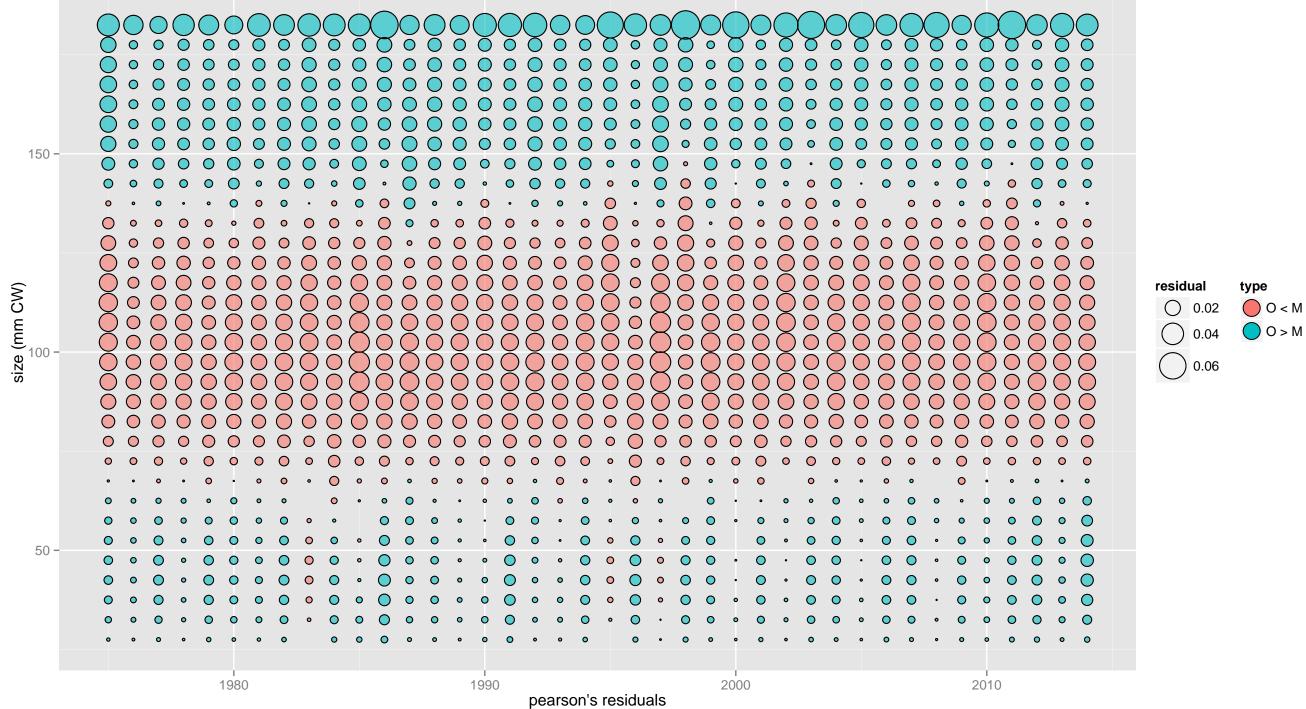
O < M

O > M

pearson's residuals

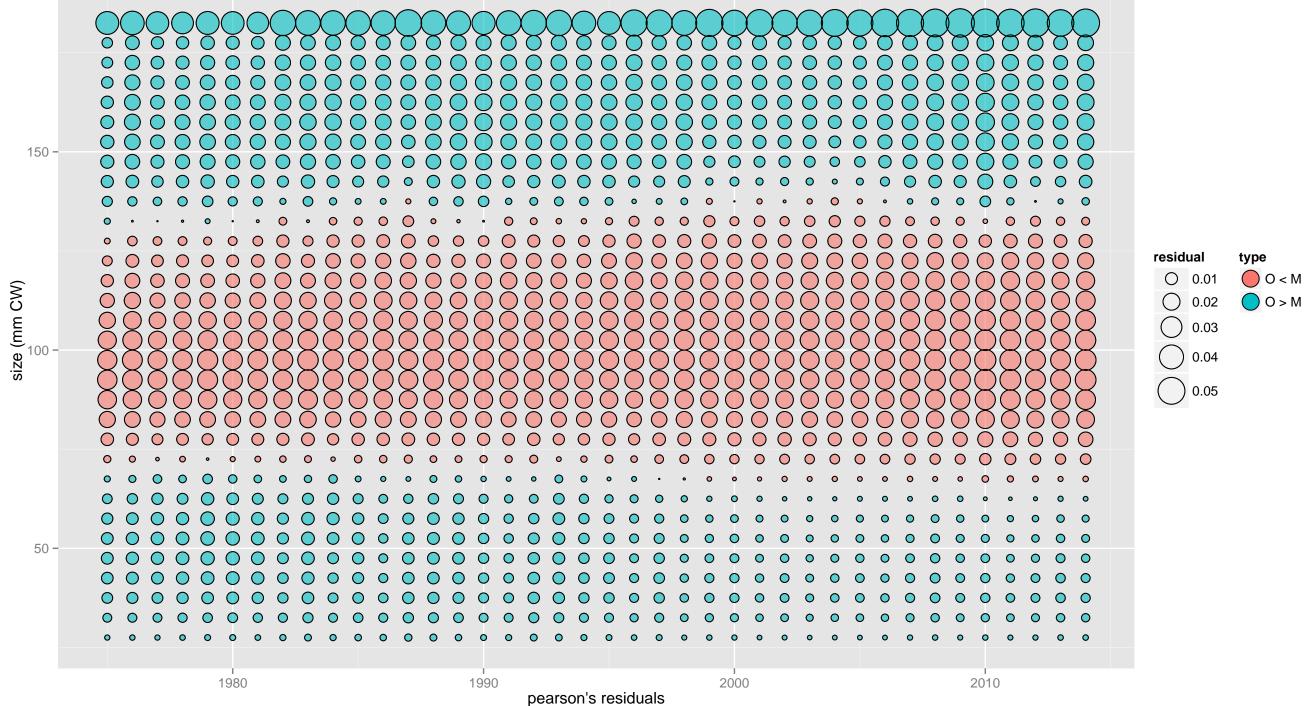
<pre></pre>

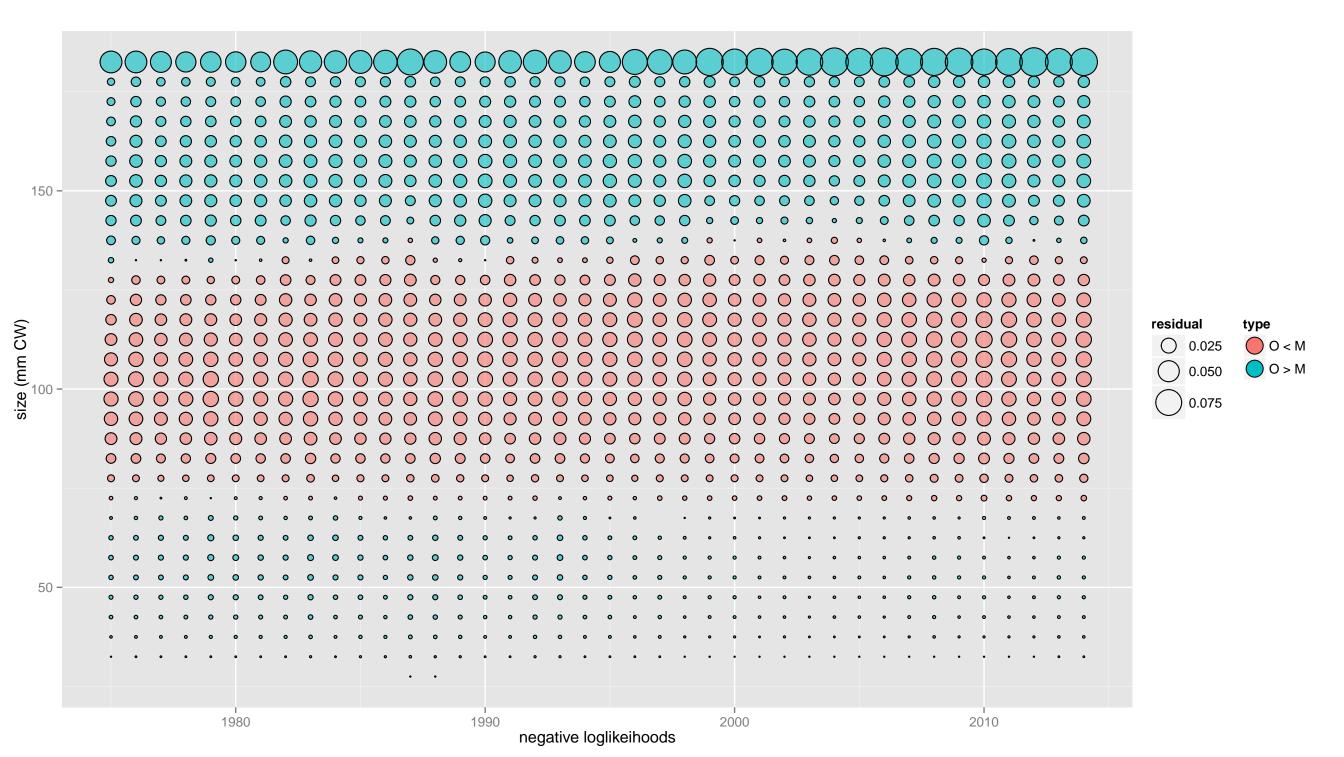
NMFS_trawl_survey: male, mature, new shell



Testul Tes
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NMFS_trawl_survey: male, mature, old shell

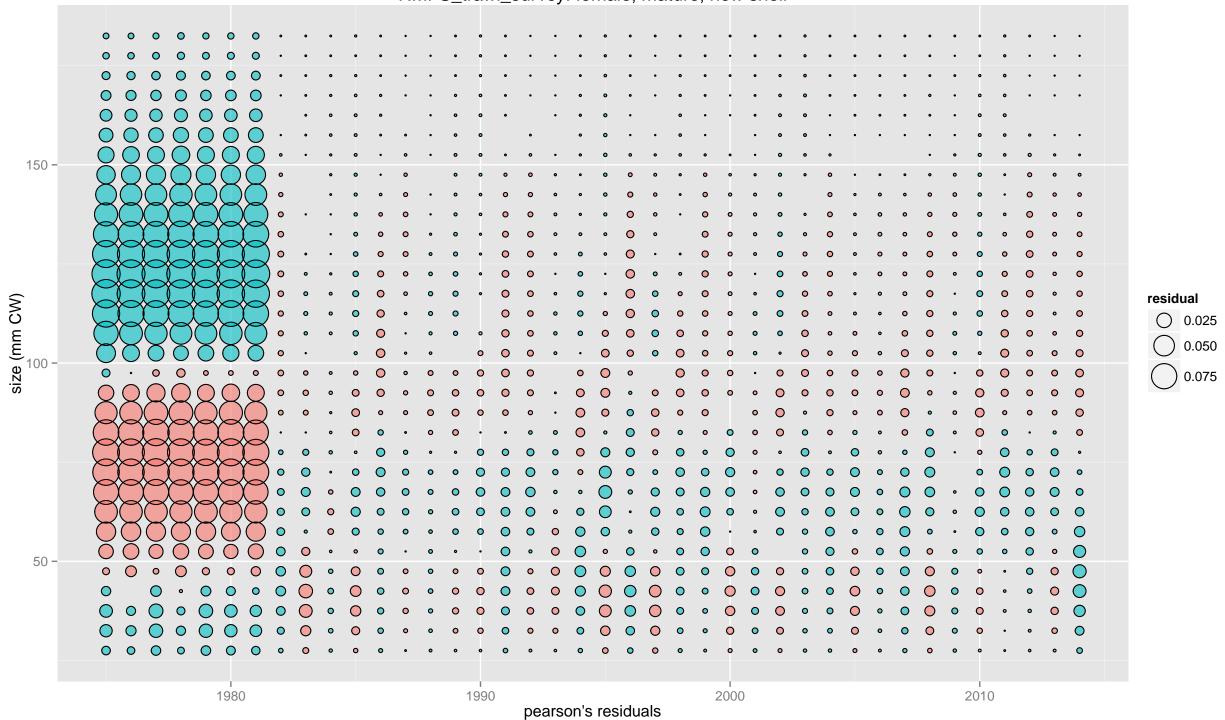




150 - 100 - 100 -		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
50		$\begin{array}{cccccccccccccccccccccccccccccccccccc$
50 -		$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	1980 1990 2000 pearson's residuals	2010

NMFS_trawl_survey: female, immature, new shell





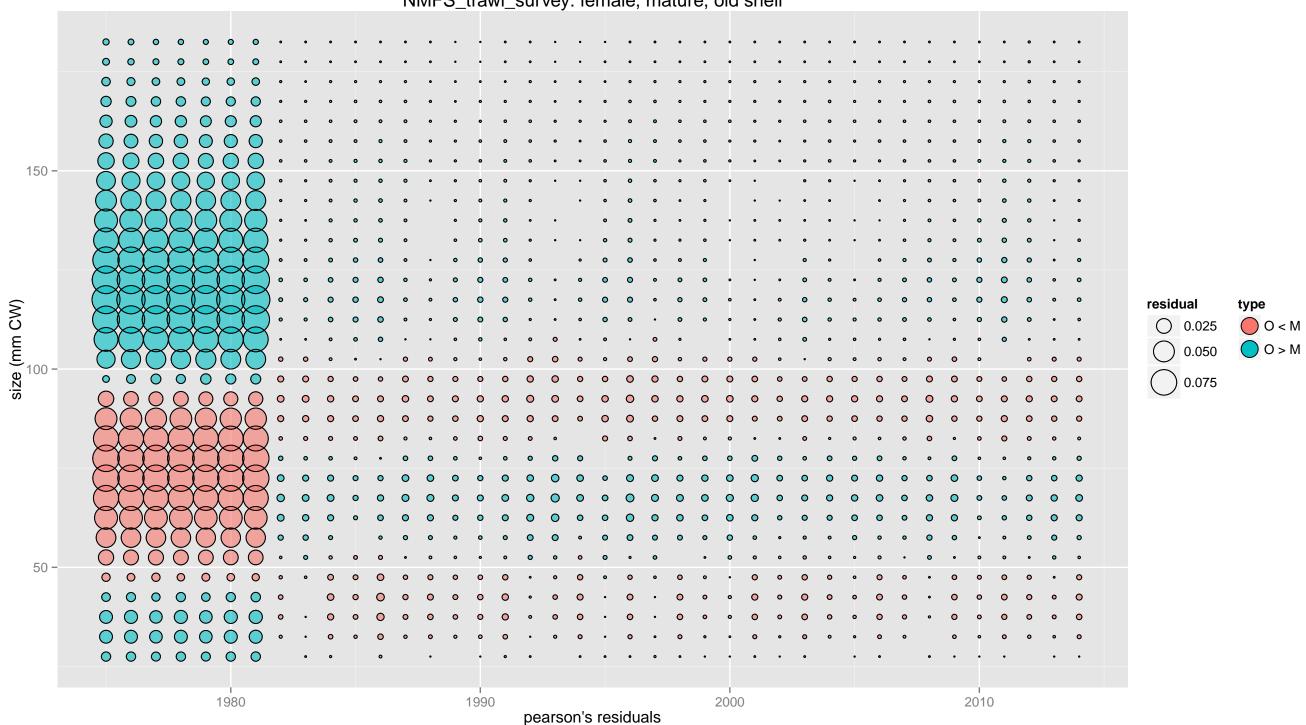
type

🔵 0 < M

🔵 O > M

NMFS_trawl_survey: female, mature, new shell

150 - size (mm CM) 50 -		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	• • • • • • • • • • • • • • • • • • • •	residualtype \bigcirc 0.025 \bigcirc \bigcirc 0.050 \bigcirc \bigcirc 0.075 \bigcirc \bigcirc 0.100
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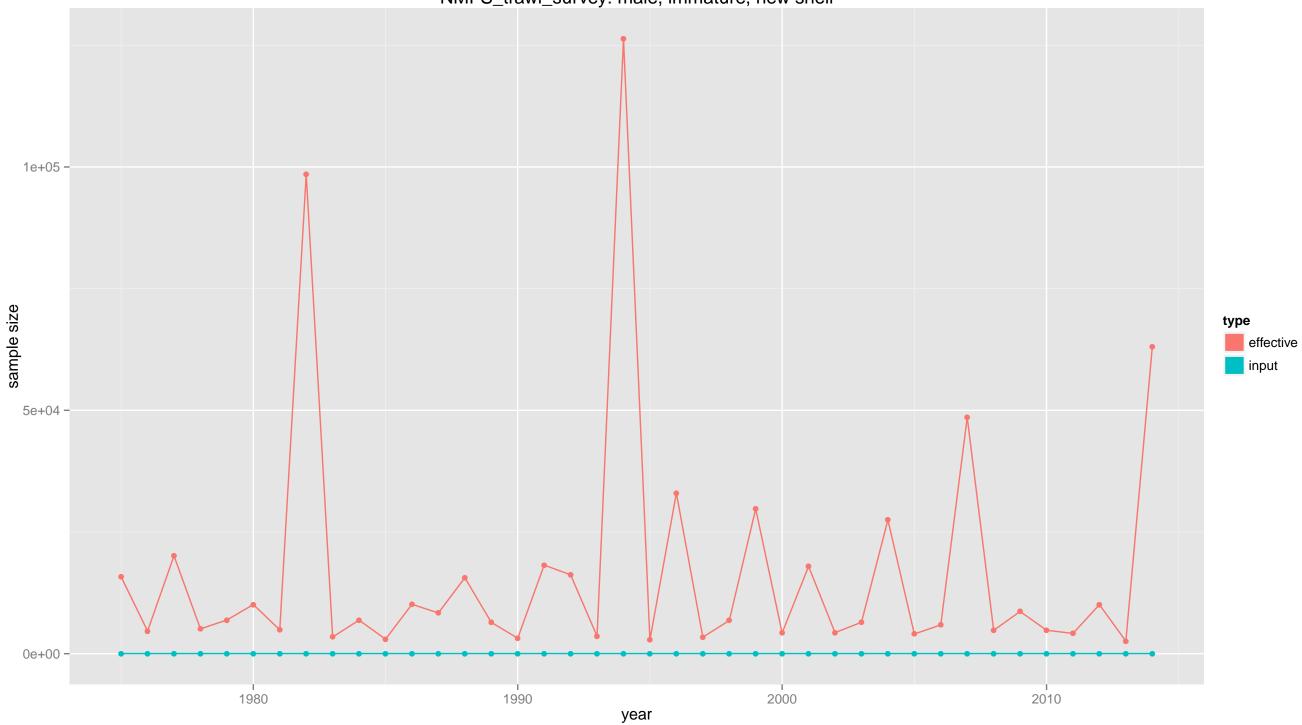
🔵 0 > M

NMFS_trawl_survey: female, mature, old shell

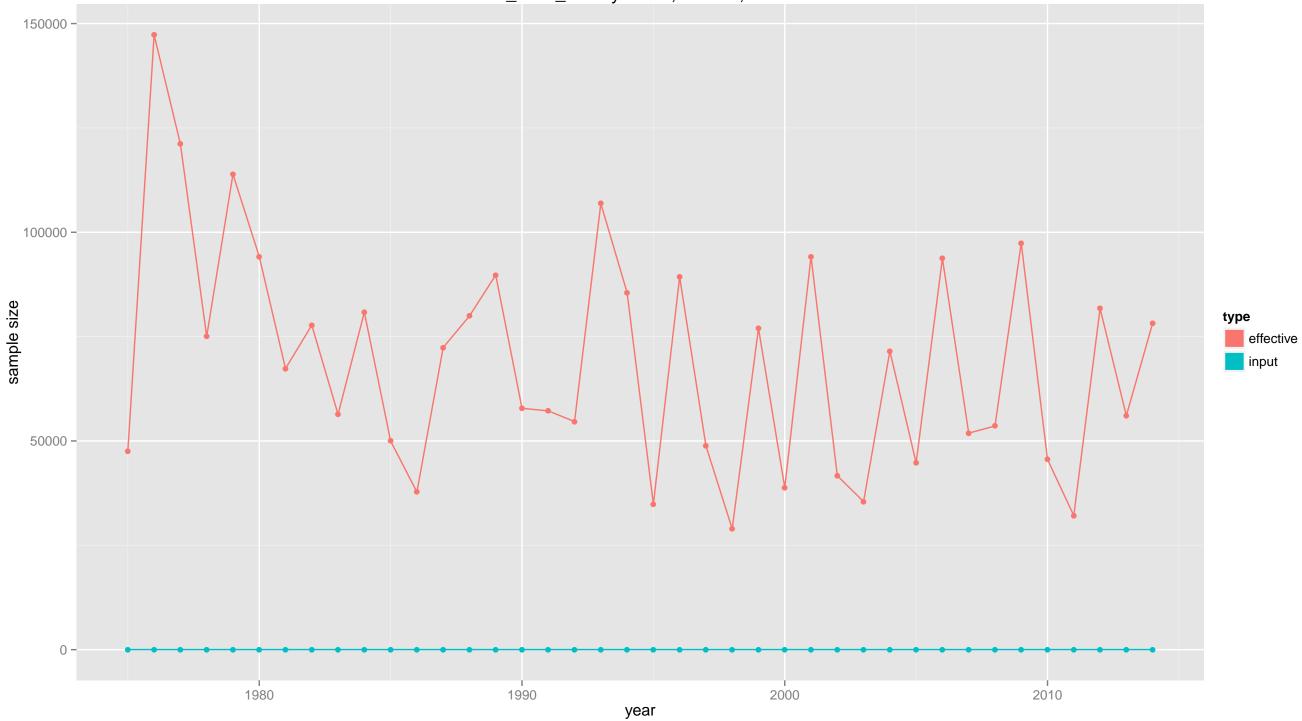
150 - 150 - 350 -		. .	<pre></pre>									
	1980 1990 2000 2010 negative loglikeihoods											

type O < M O > M

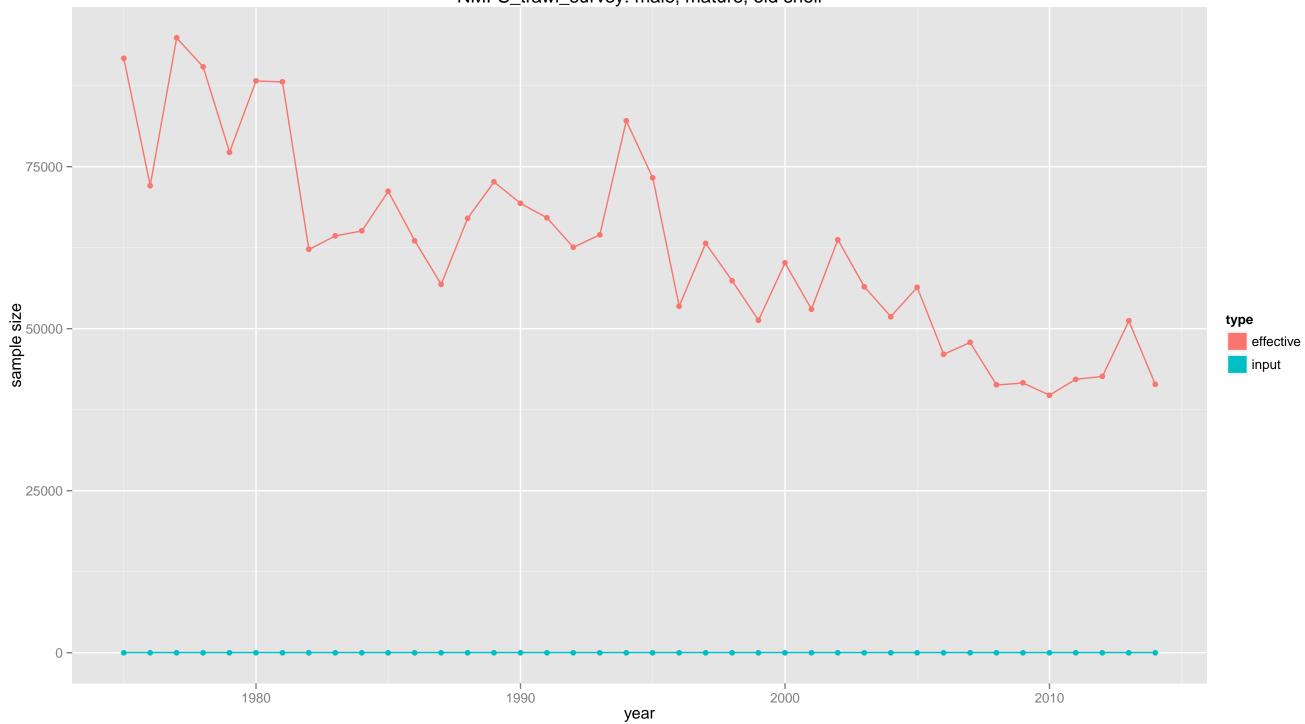
NMFS_trawl_survey: male, immature, new shell



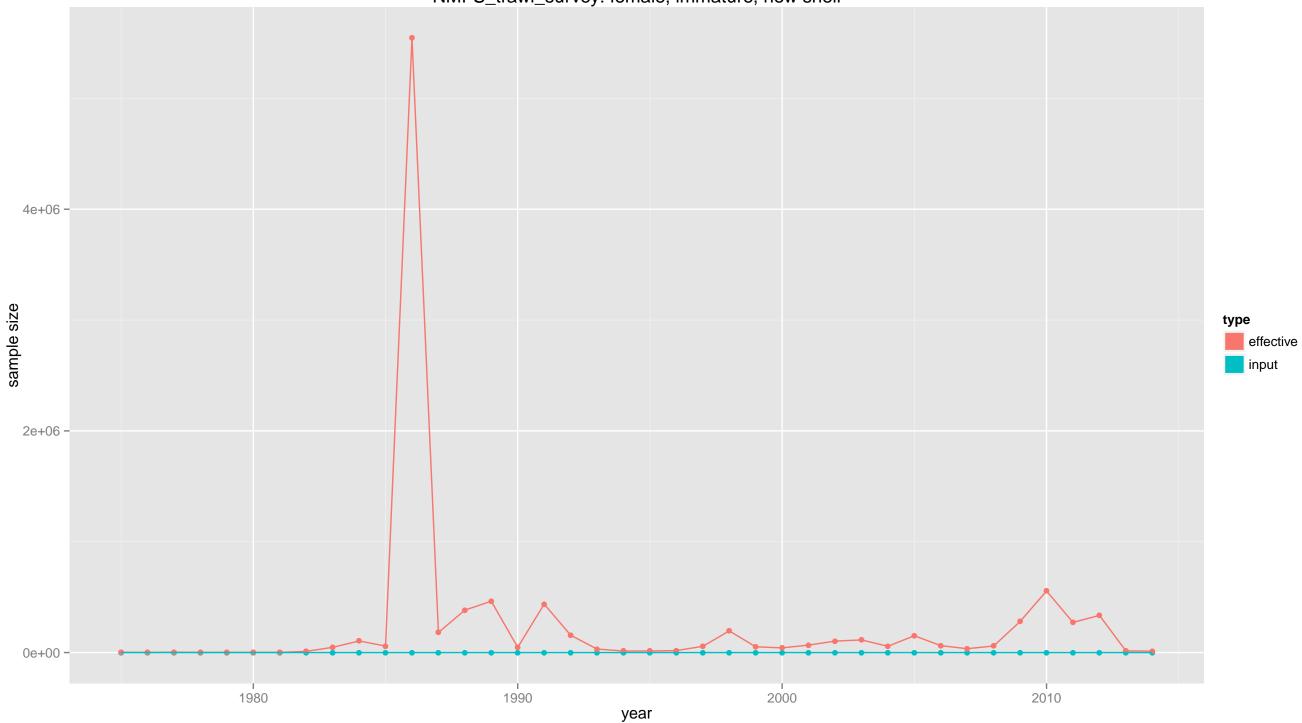
NMFS_trawl_survey: male, mature, new shell



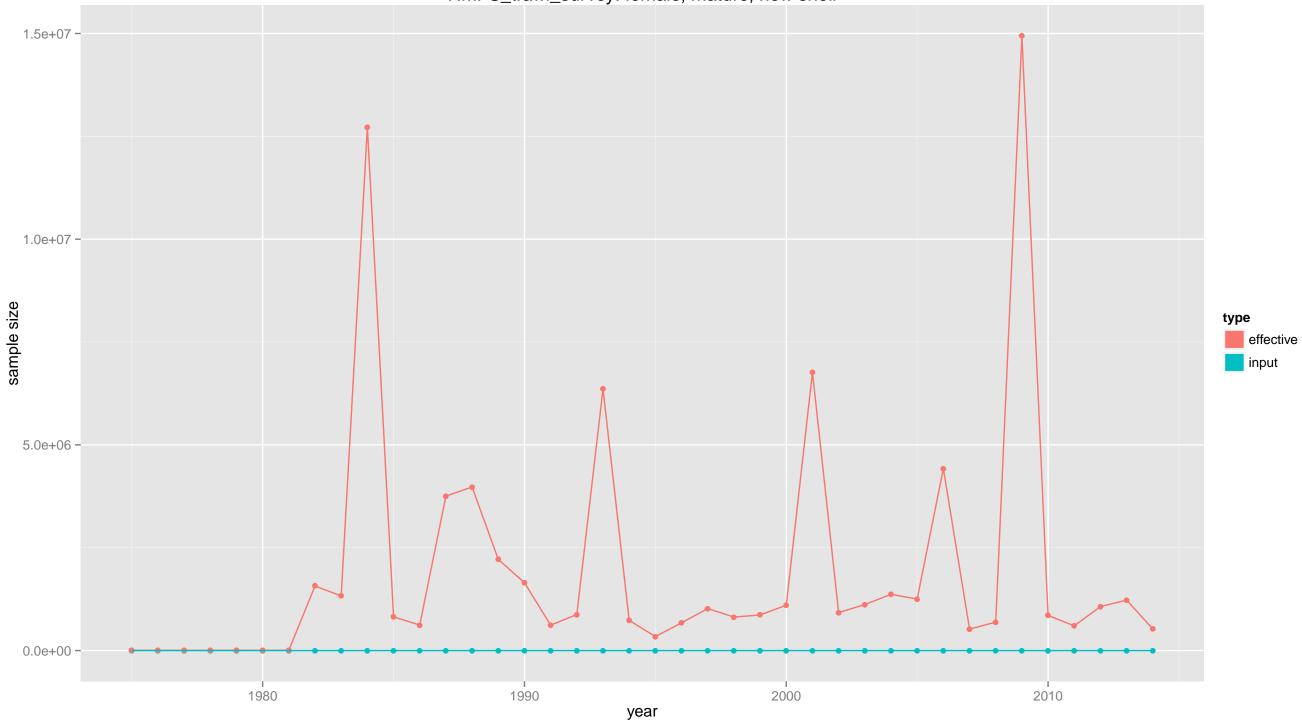
NMFS_trawl_survey: male, mature, old shell



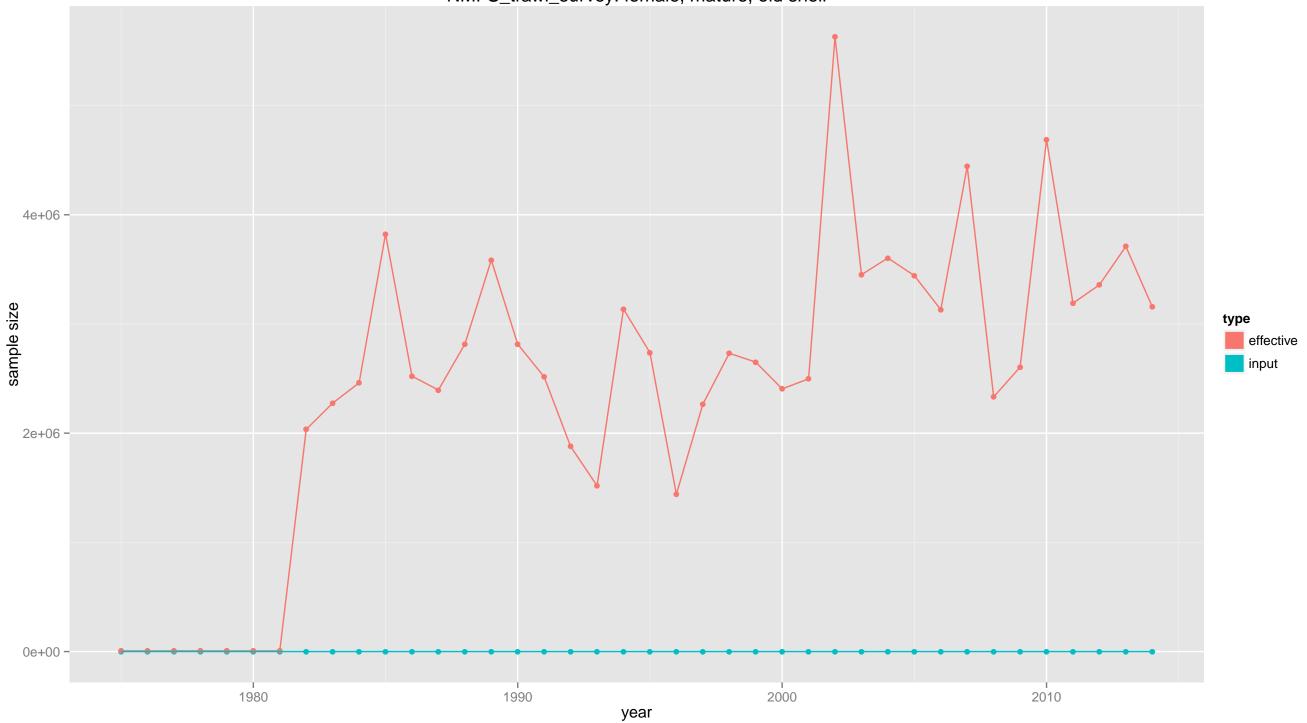
NMFS_trawl_survey: female, immature, new shell



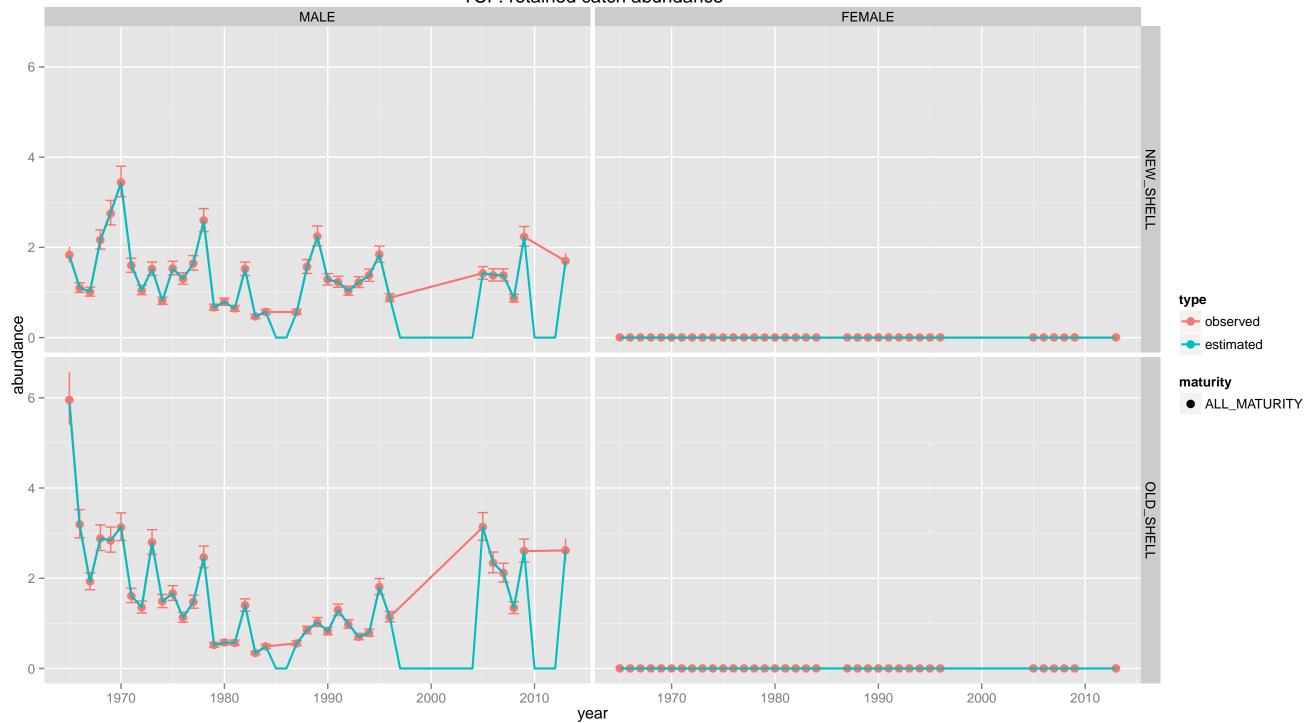
NMFS_trawl_survey: female, mature, new shell



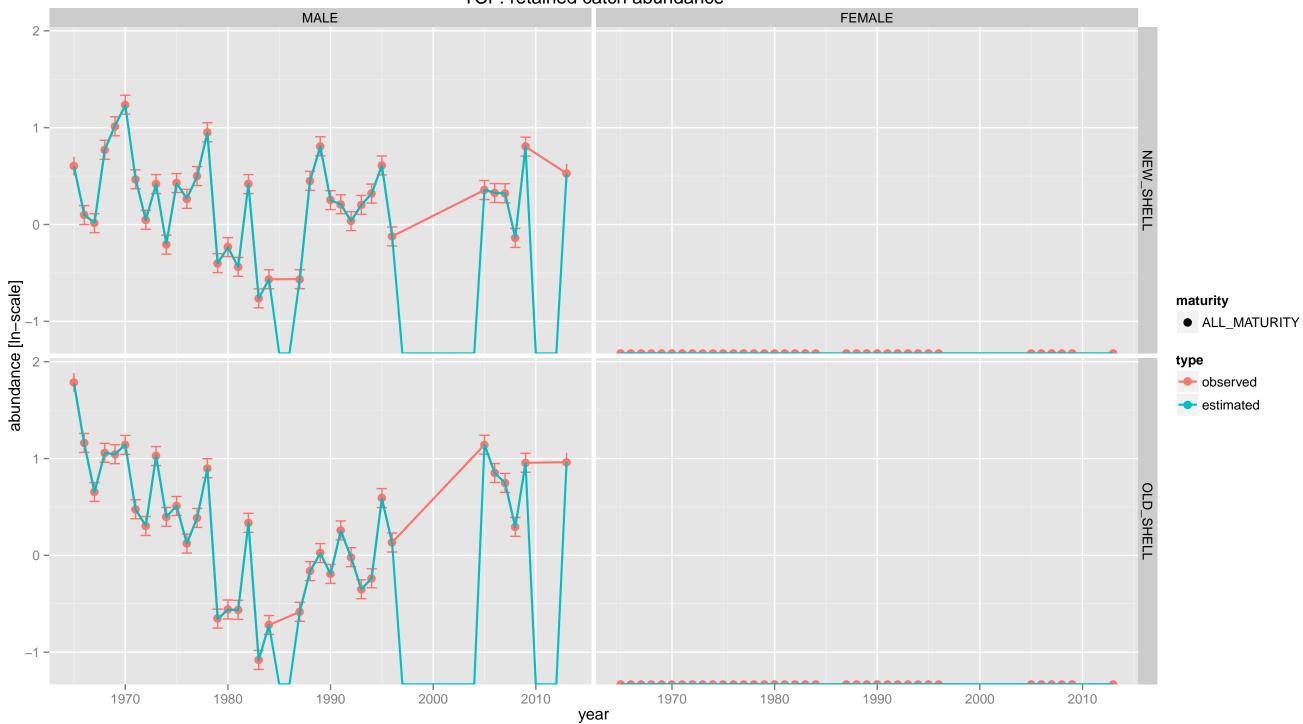
NMFS_trawl_survey: female, mature, old shell

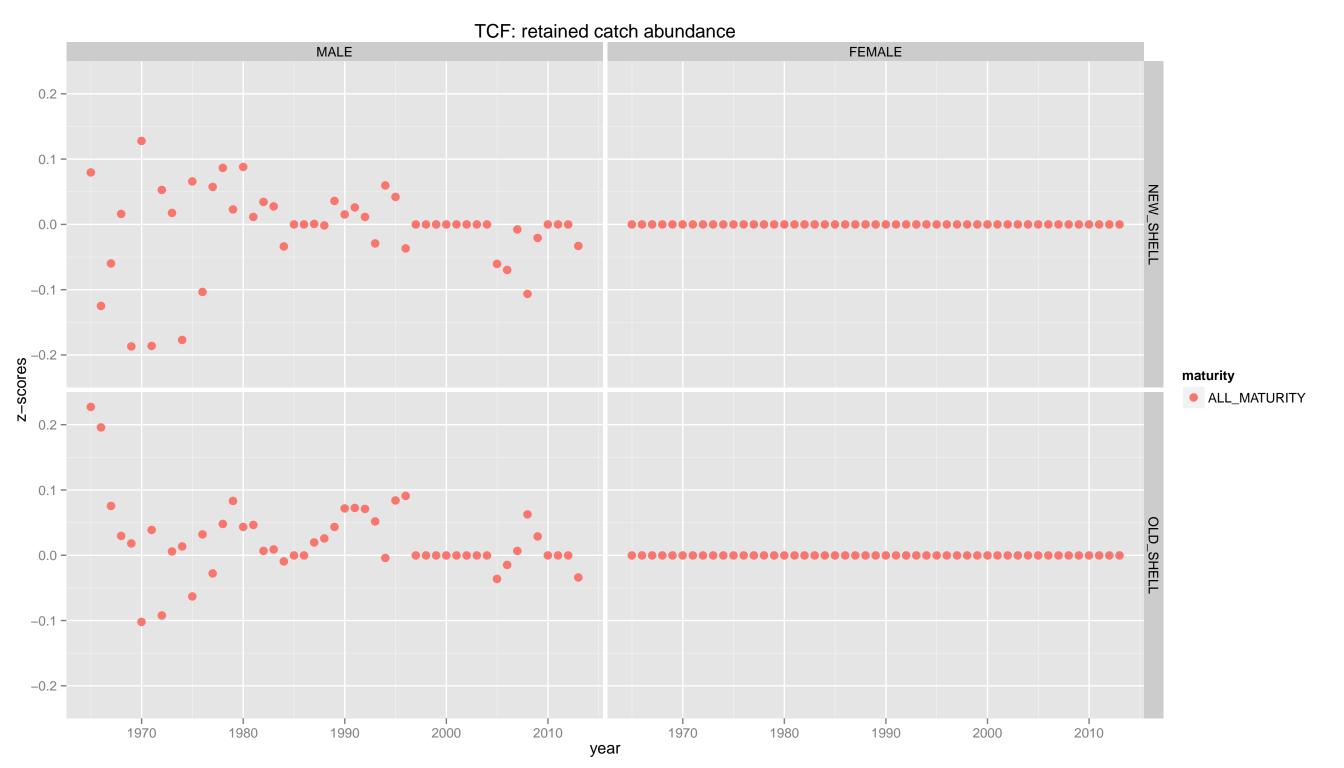


TCF: retained catch abundance

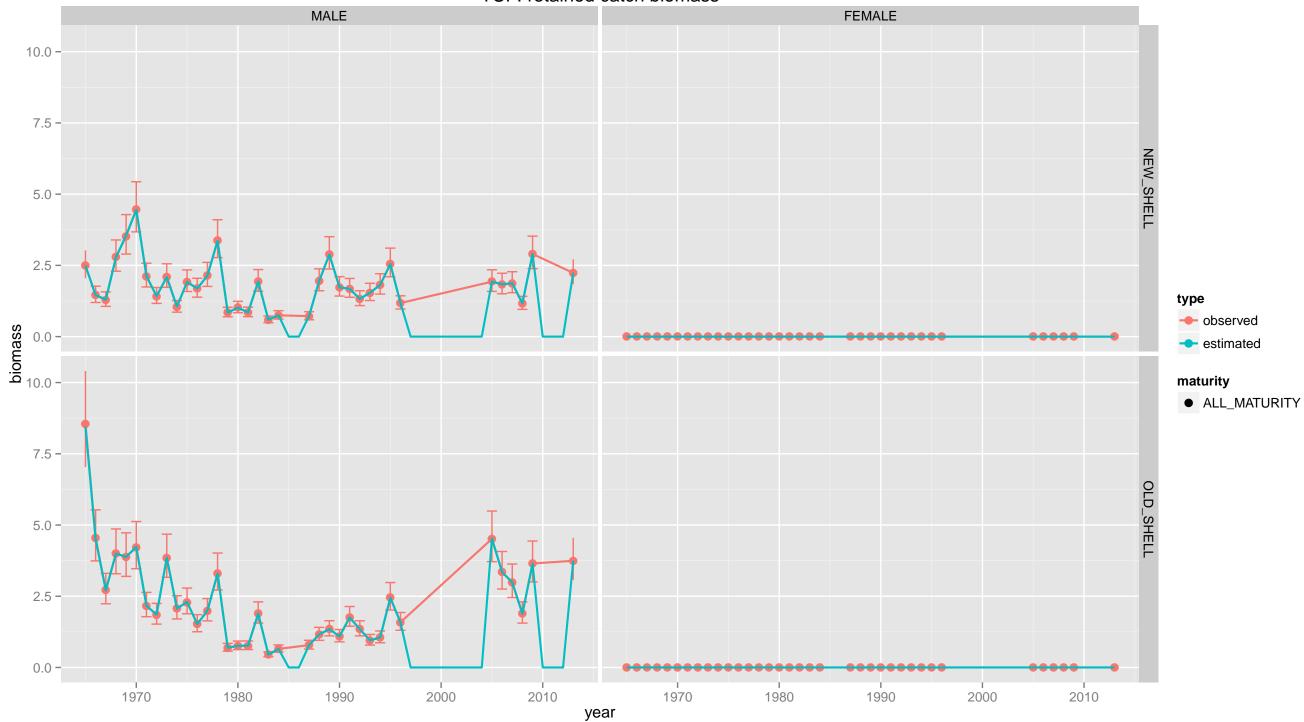


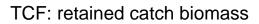
TCF: retained catch abundance

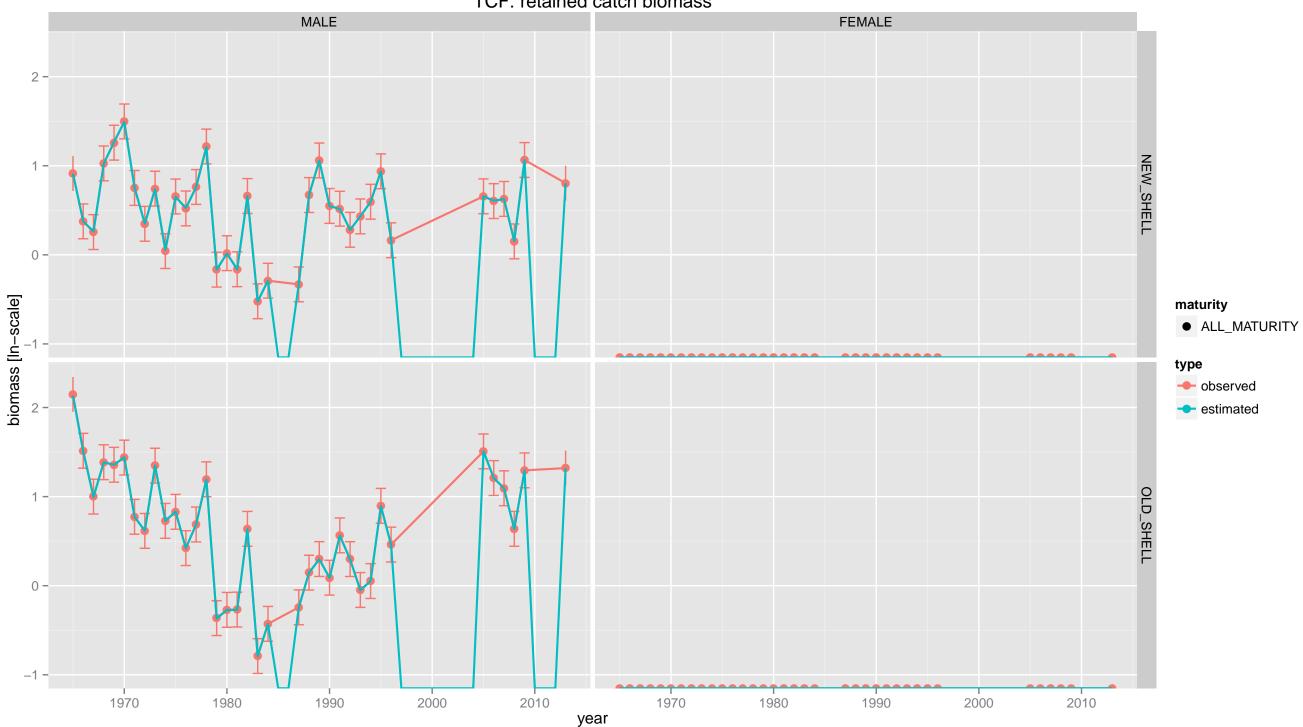


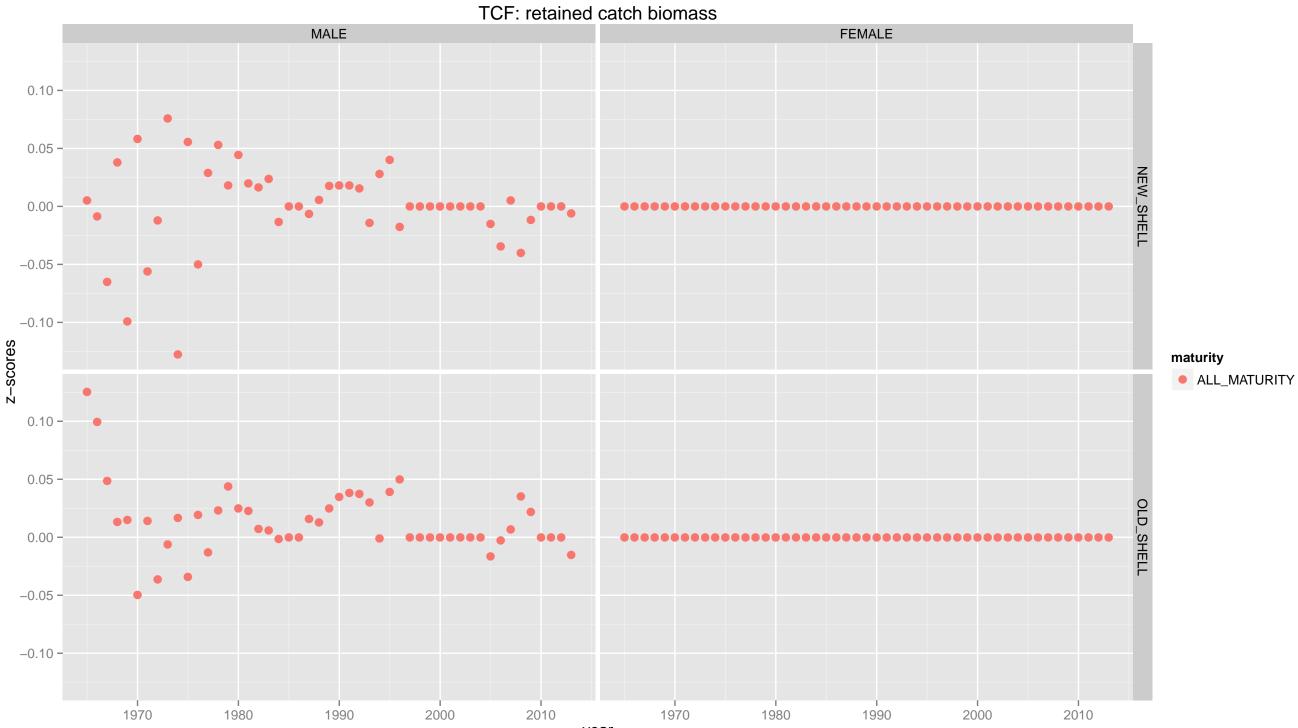


TCF: retained catch biomass









year

year

TCF: retained catch: male, new shell

150 -			$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				
size (mm CW)		0000000000000				•	residual type 0.000 0 < M
50	_						
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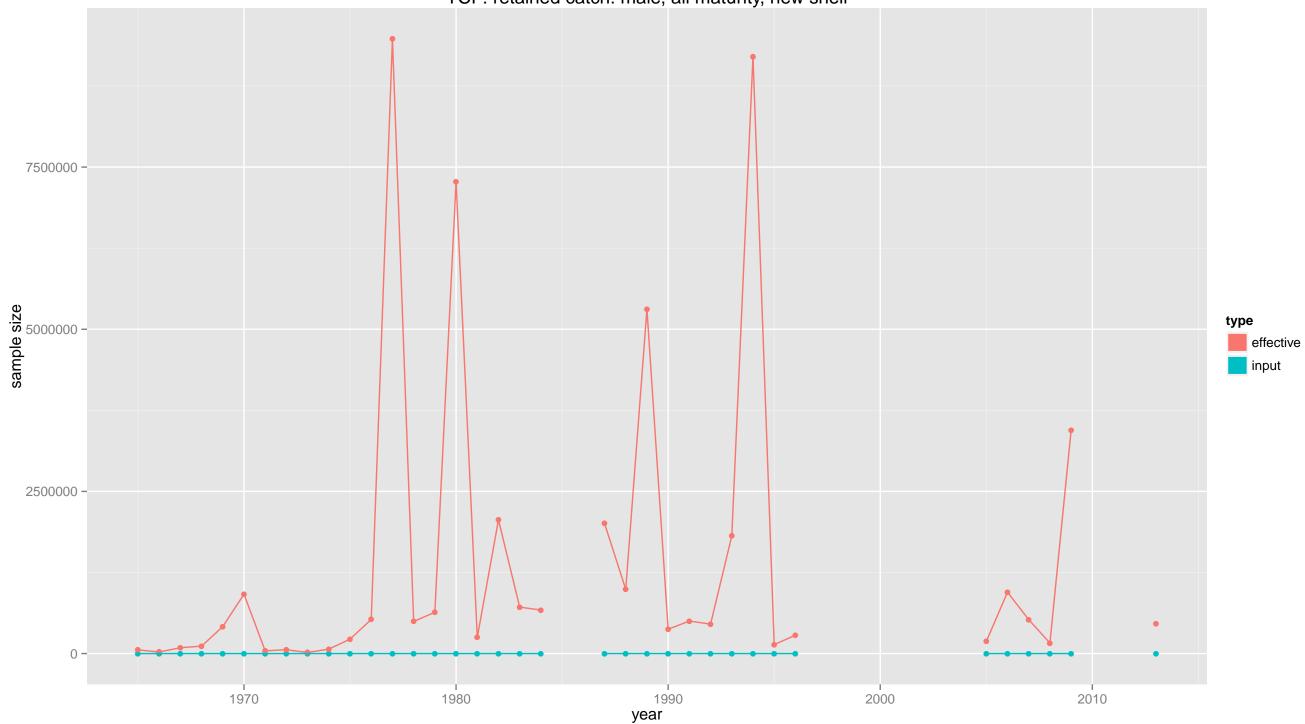
	101 101	● 0 < M
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TCF: retained catch: male, old shell

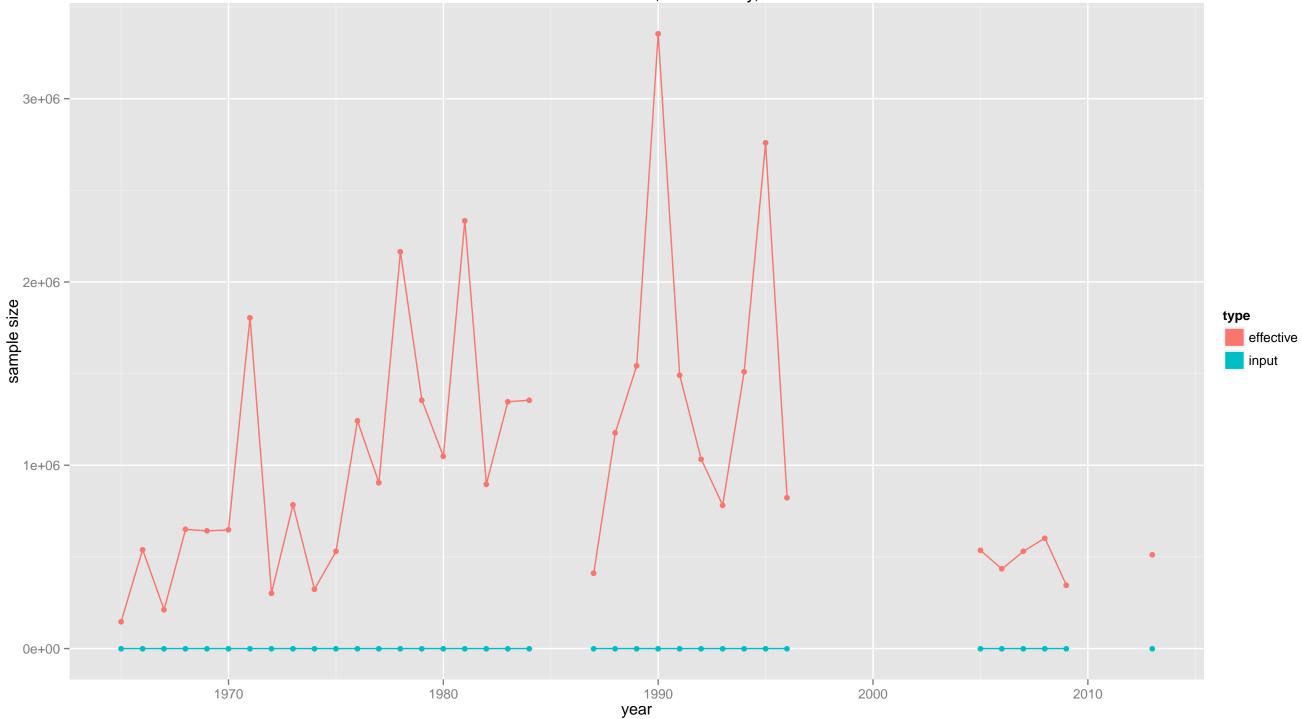
150				residual type 0.00 $\bigcirc O < M$ 0.01 $\bigcirc O > M$ 0.02 0.03
50 -	1980	1990 20 pearson's residuals	000 2010	

1970 1980 1990 2000 2010 negative loglikeihoods	150 - 100 - 50 -									10	typeresidual \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc 0.00 \bigcirc 0.03 \bigcirc 0.06 \bigcirc 0.09
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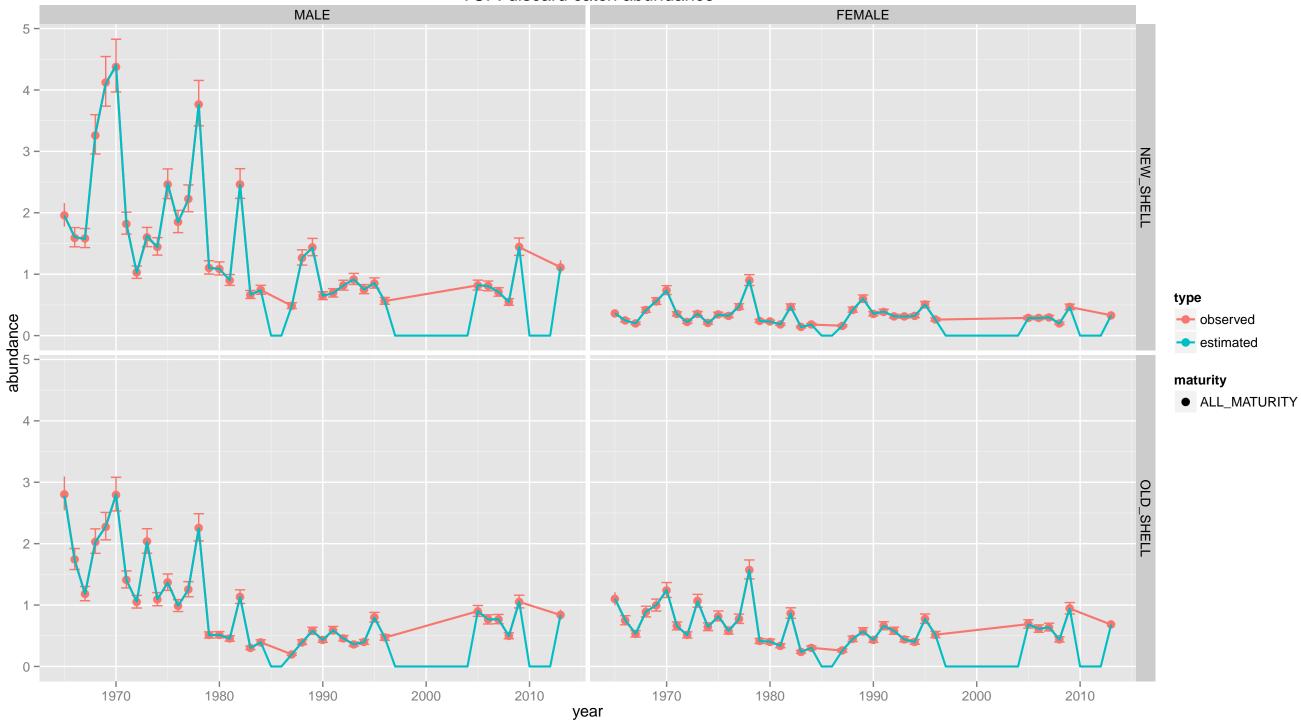
TCF: retained catch: male, all maturity, new shell

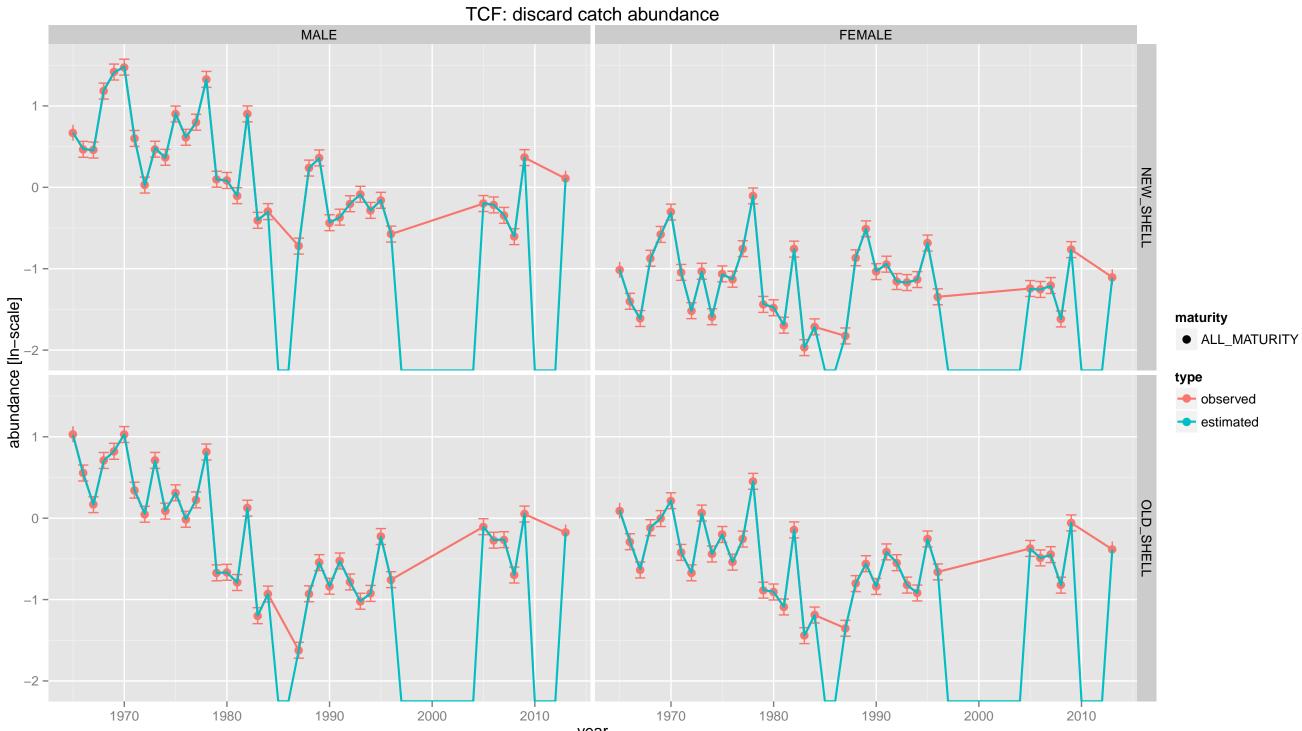


TCF: retained catch: male, all maturity, old shell

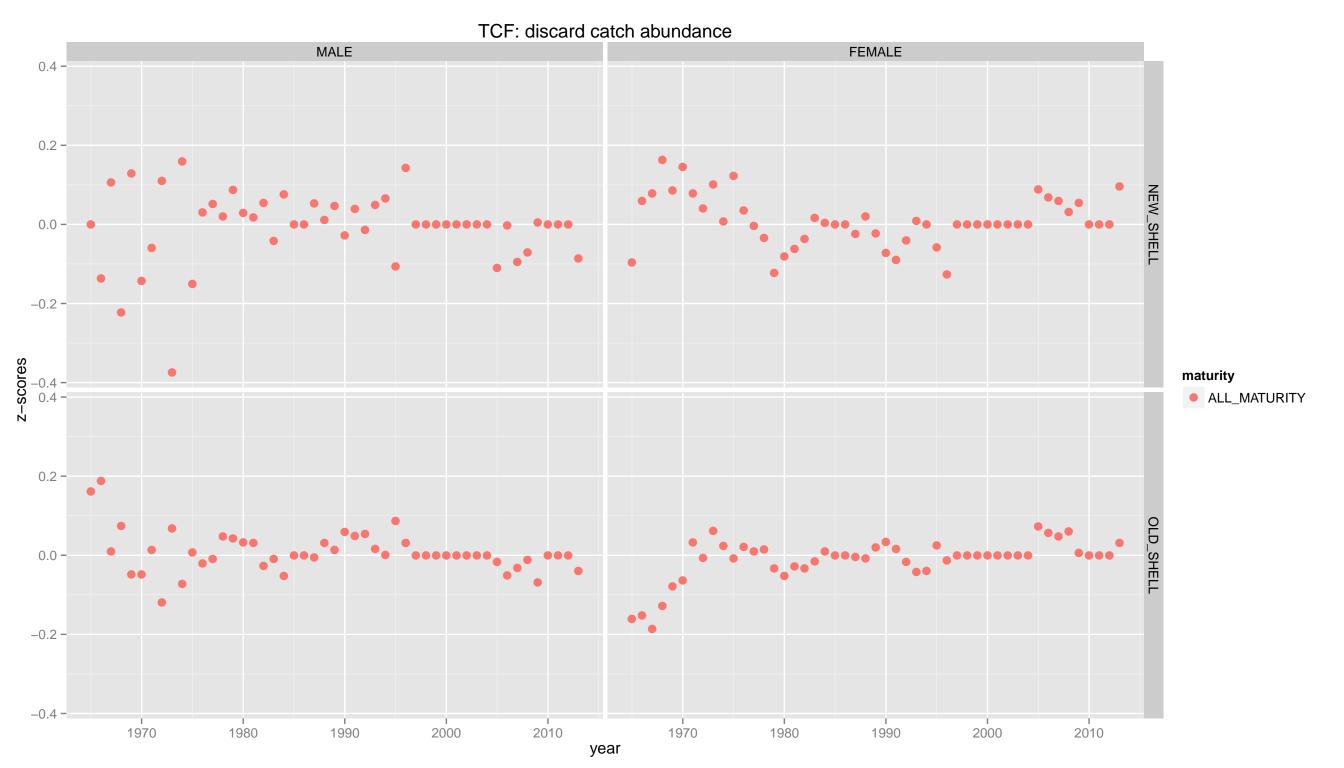


TCF: discard catch abundance

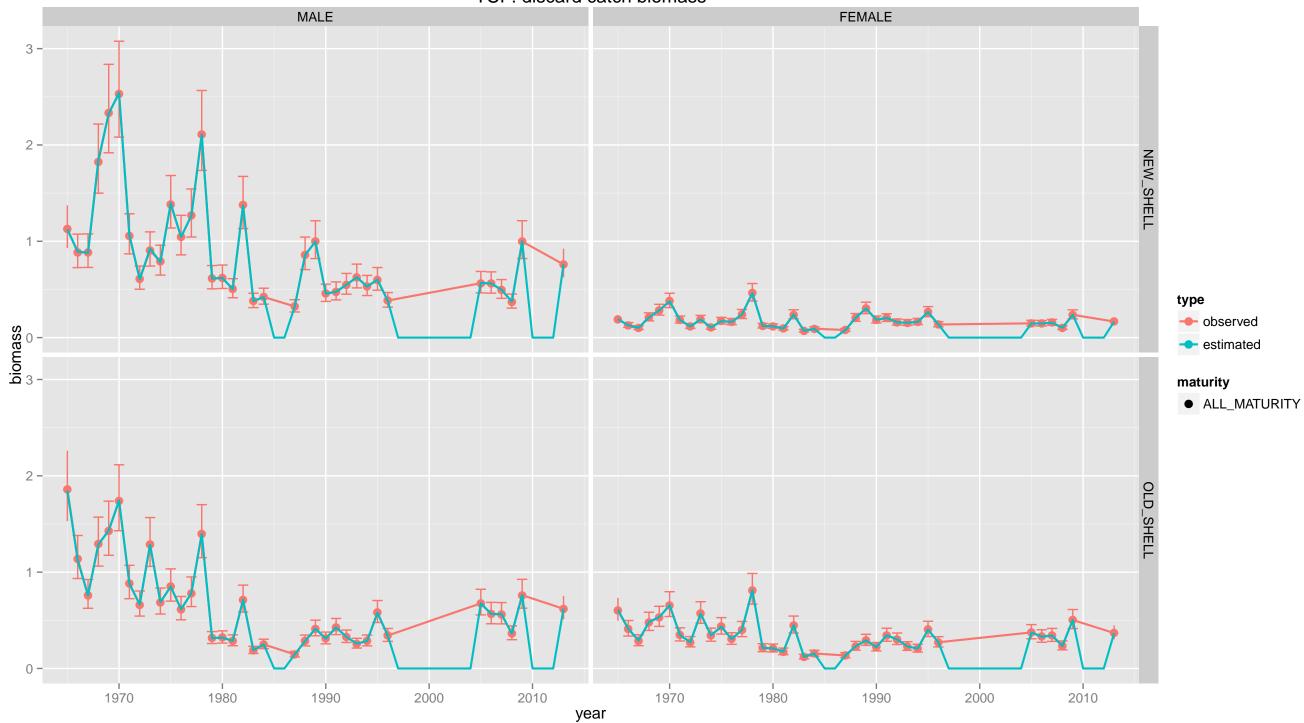




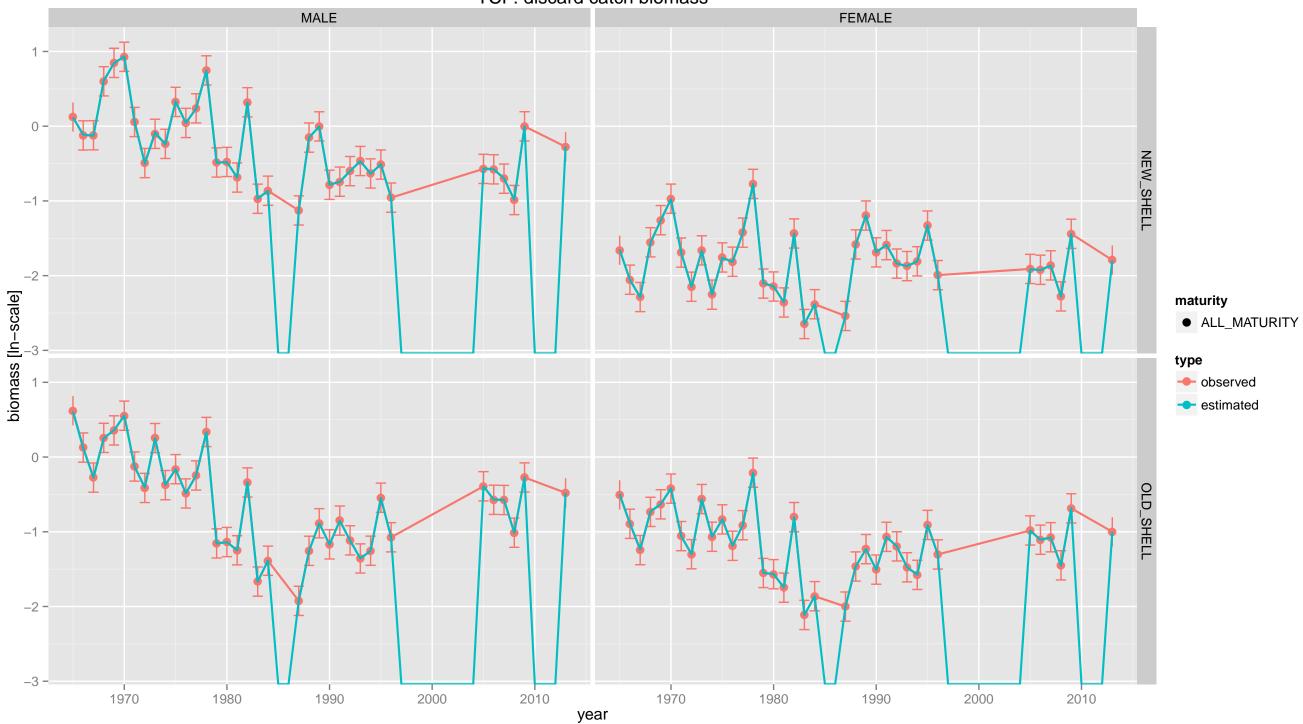
year

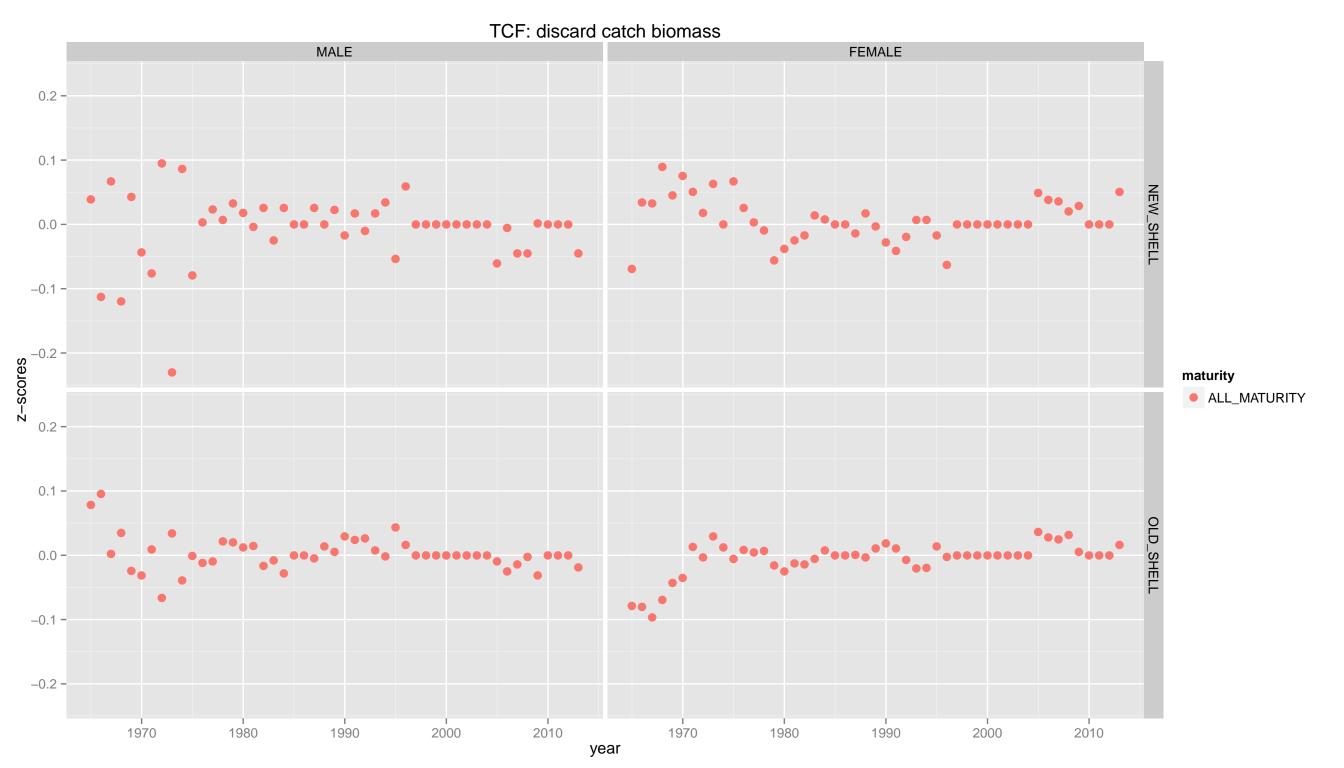


TCF: discard catch biomass



TCF: discard catch biomass





TCF: discard catch: male, new shel	TCF:	discard	catch:	male,	new	shell
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150 - size (mm CM) 50 -	• •	1990	 . .
		pearson's residuals	

150 - 100 - 100 - 50 -					typeresidual \bigcirc
	1370	1300	negative loglikeihoods	2010	

TCF: discard catch: male, old shell

100 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
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1970 1980 1990 2000 2010 negative loglikeihoods
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			1000	pearson's residuals	2010	
		1970	1980	1990 20	2010	
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				ard catch. lemale, new shell		

type O < M O > M

TCF: discard catch: female, new shell

150

size (mm CW)

50



size (mm CW)

type

🔵 0 < M

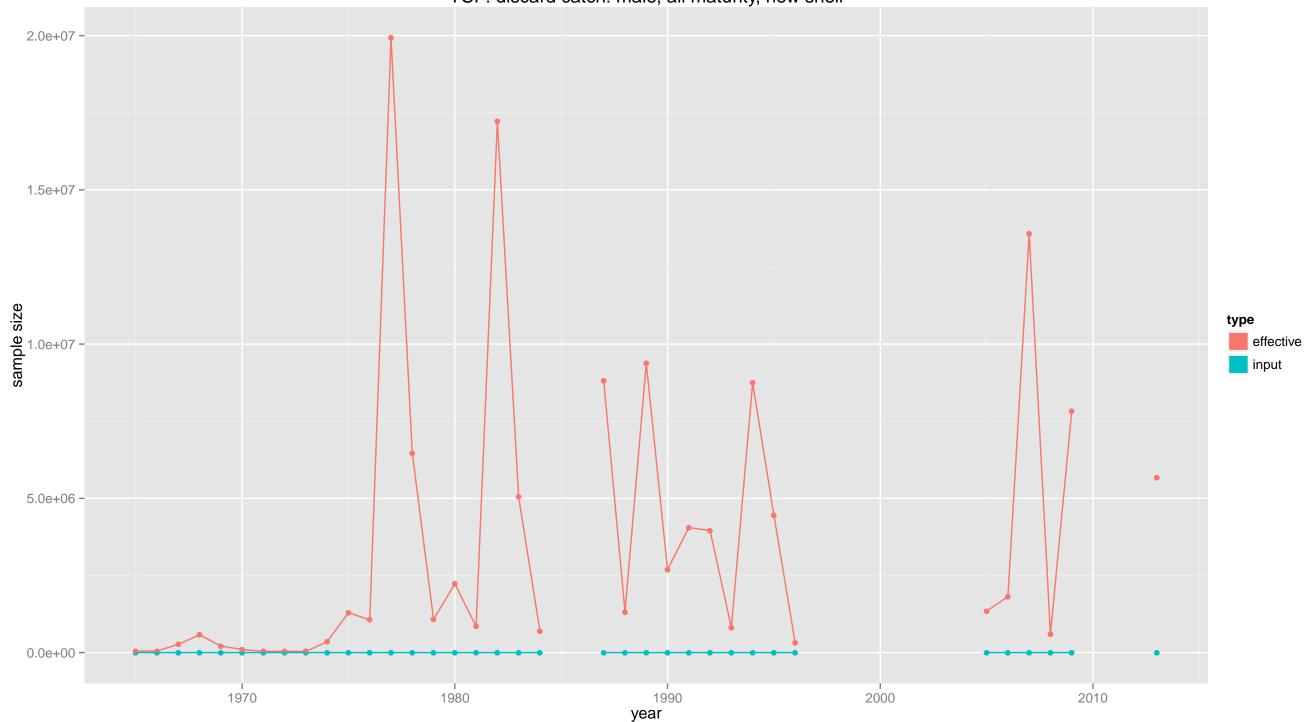
) O > M

TCF: discard catch: female, old shell

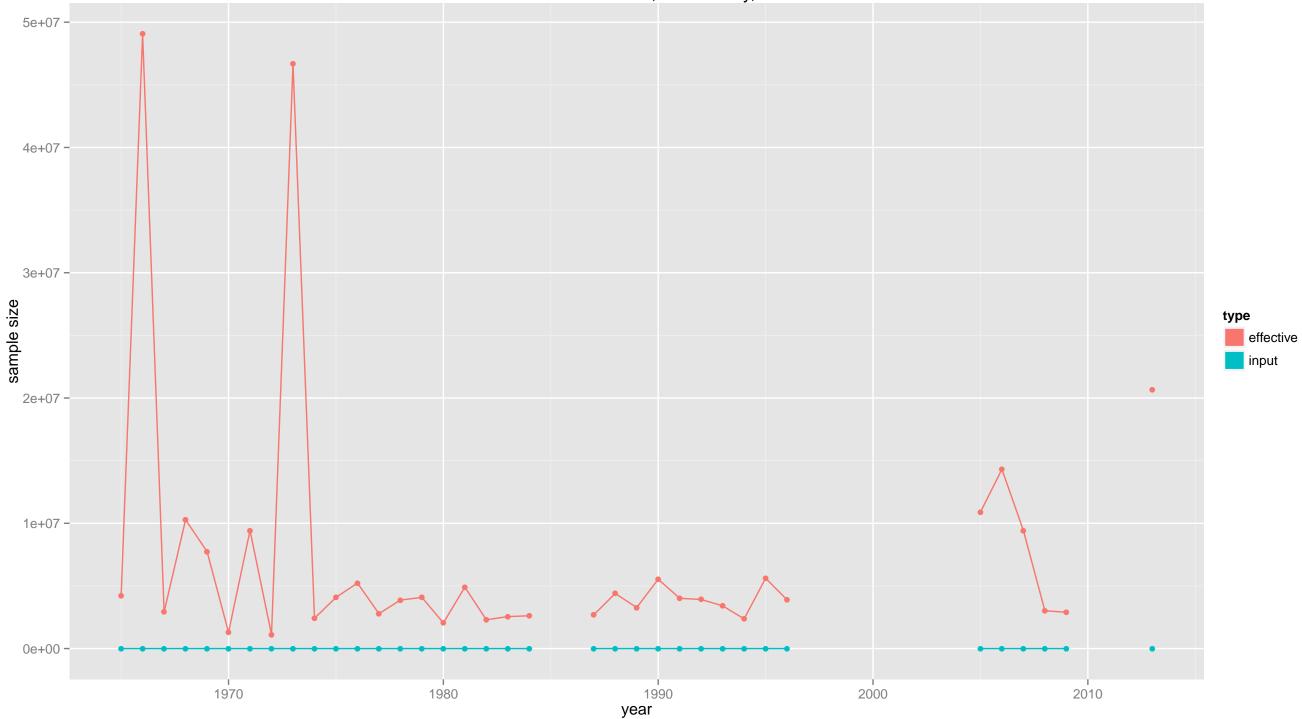
150 - size (mm CM)																										· · · · · · · · · · · · · · · · · · ·						idual 0.00 0.01 0.01	0 5 0 5	type	0 < N	
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size (mm CW)

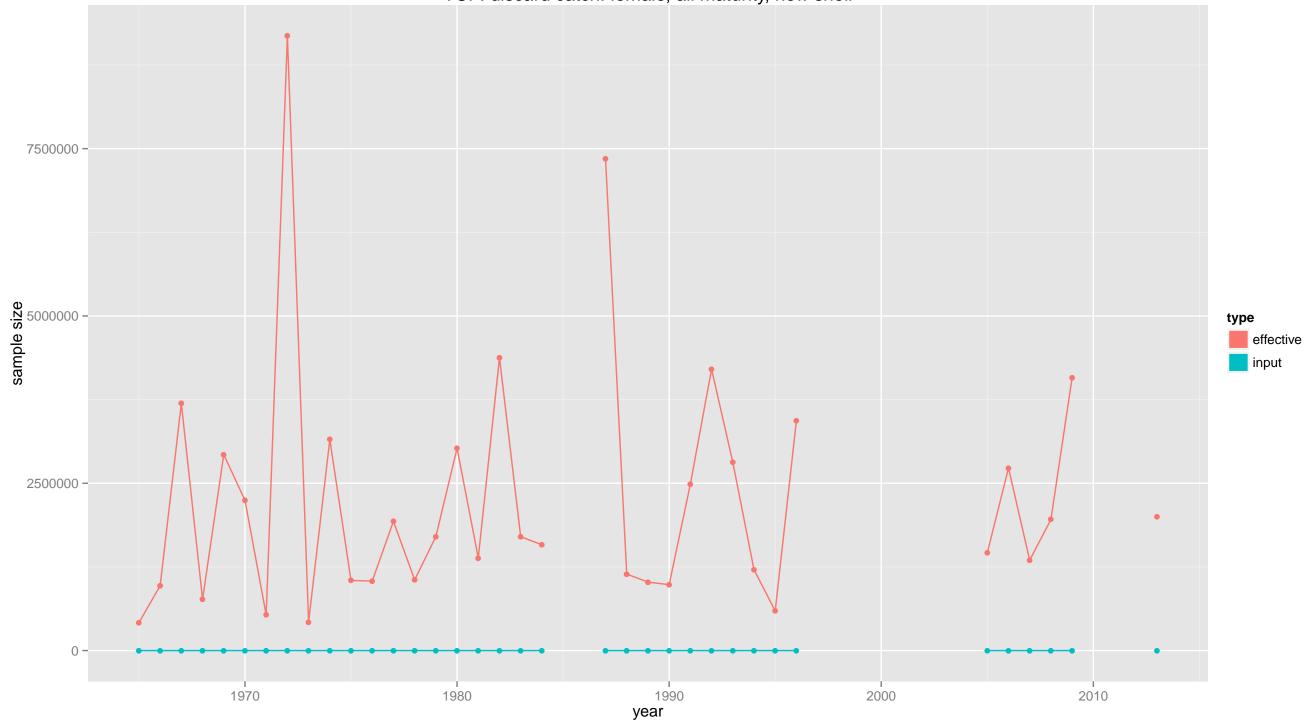
TCF: discard catch: male, all maturity, new shell



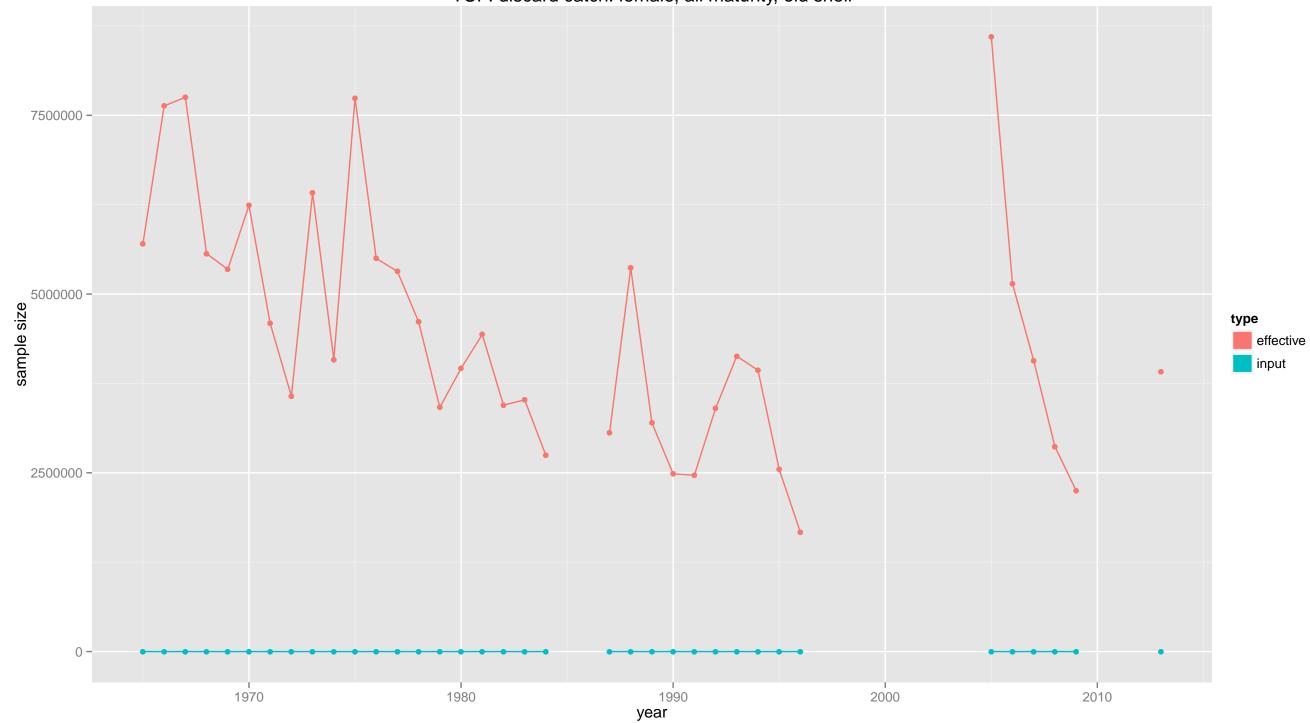
TCF: discard catch: male, all maturity, old shell

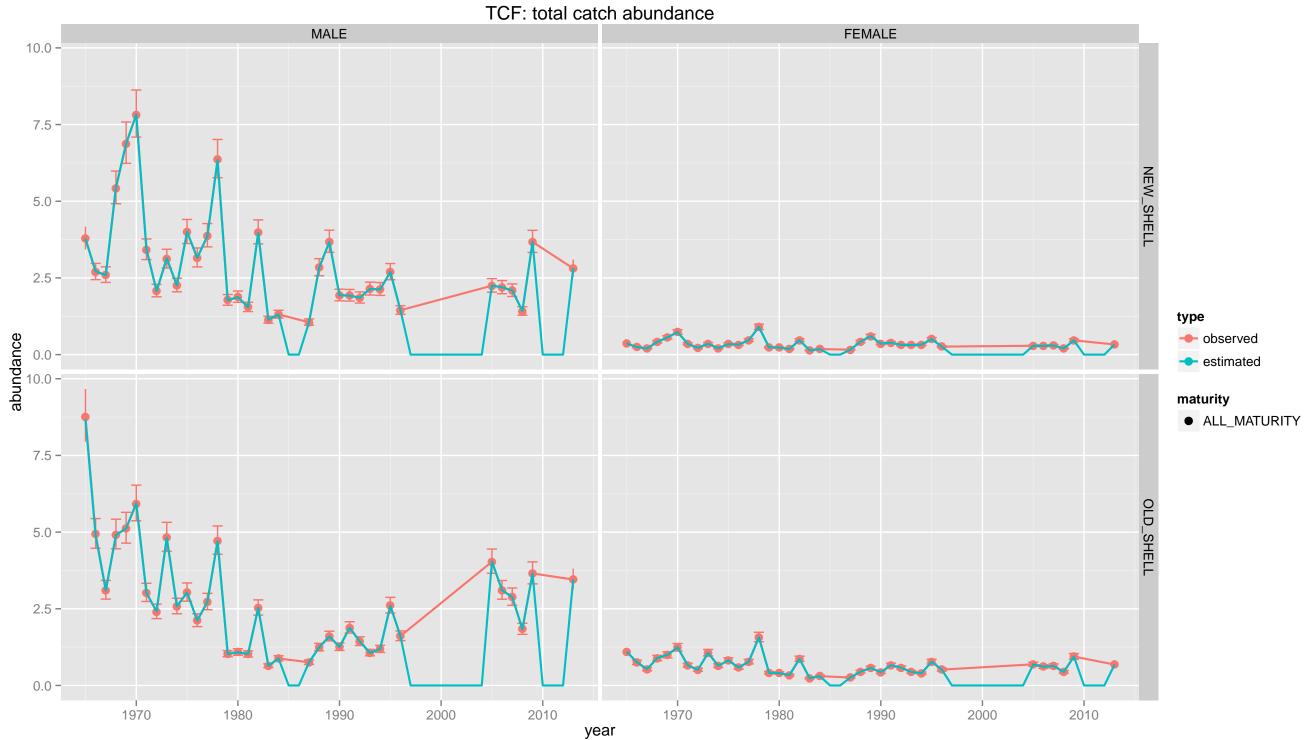


TCF: discard catch: female, all maturity, new shell

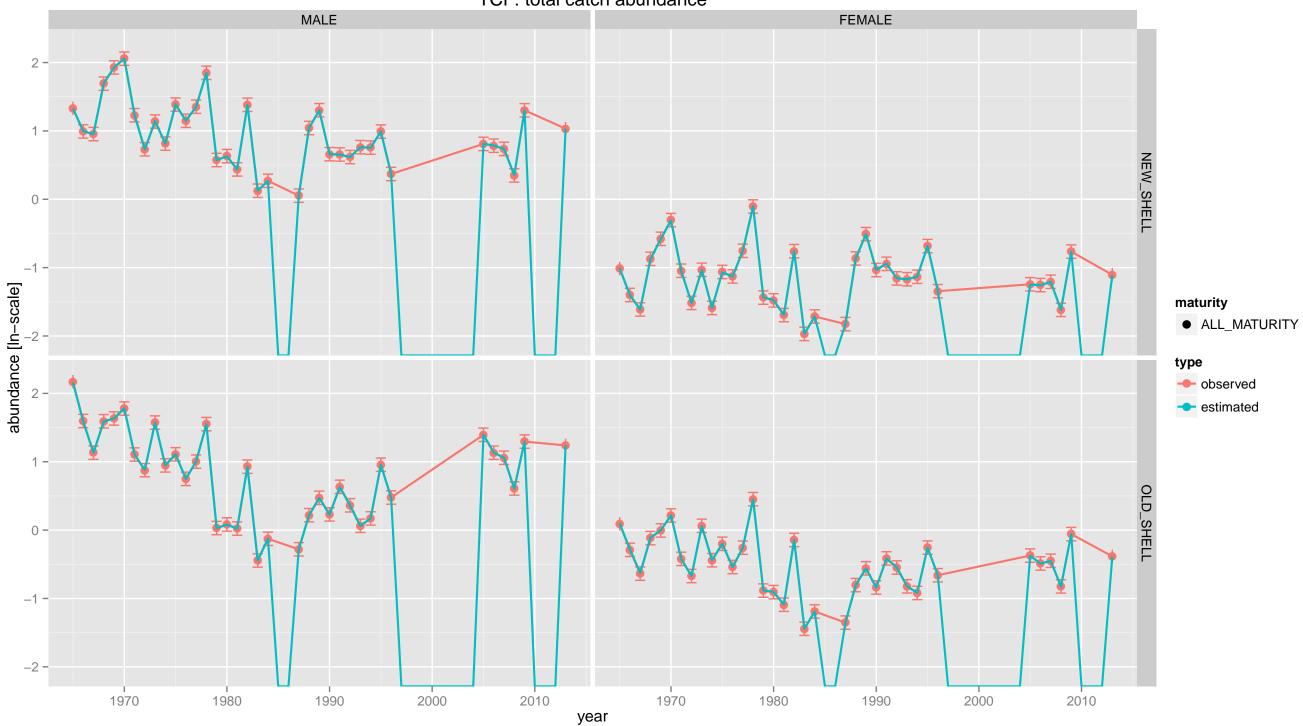


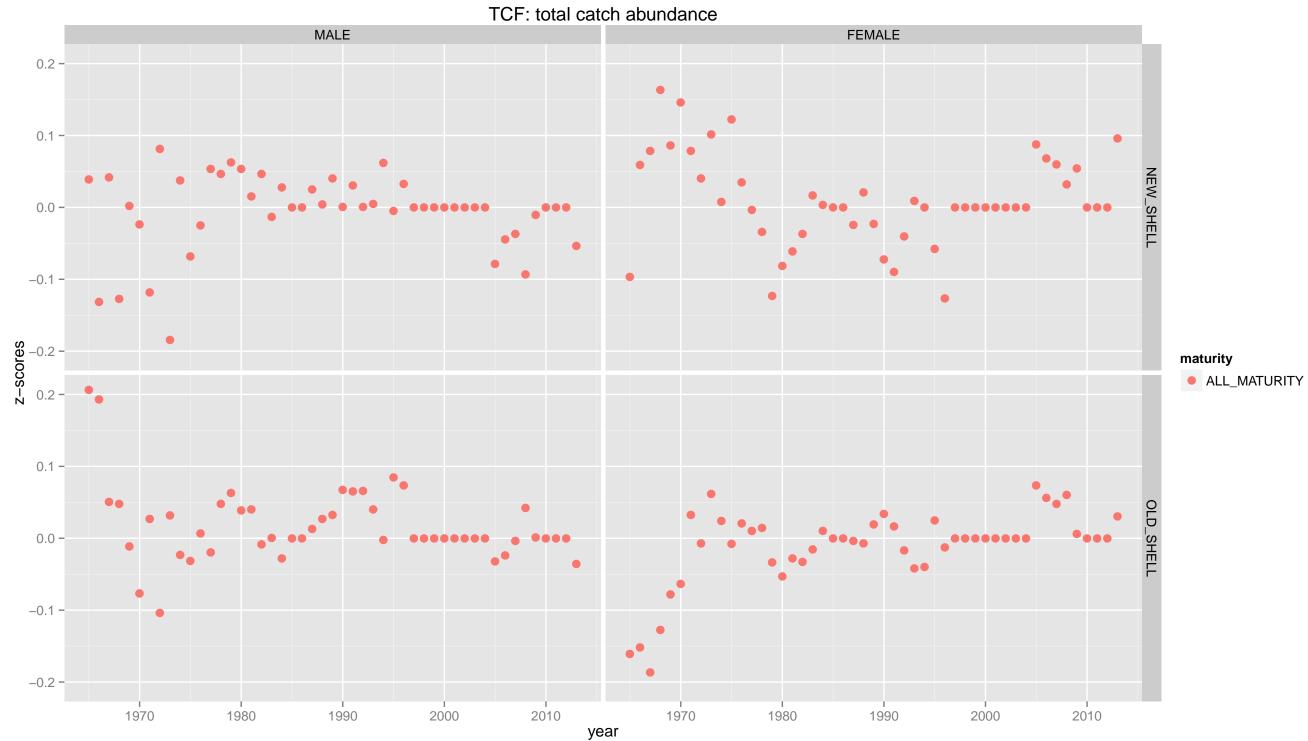
TCF: discard catch: female, all maturity, old shell



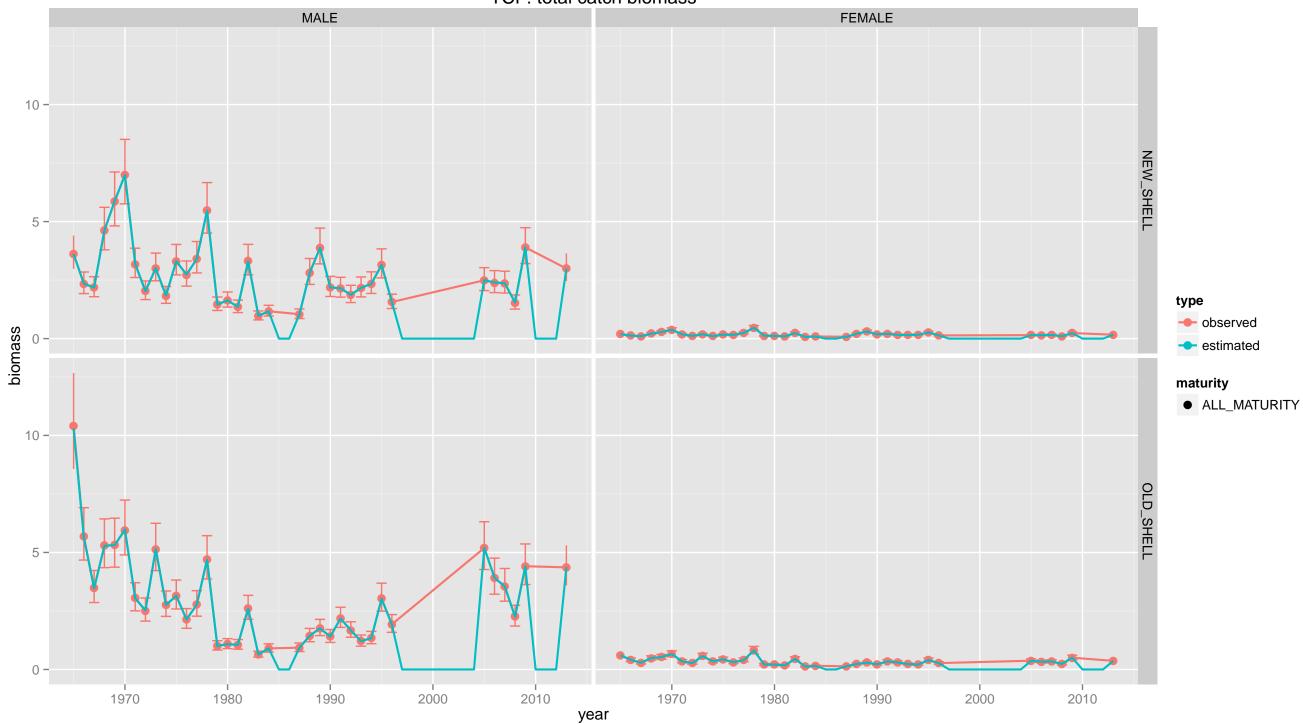


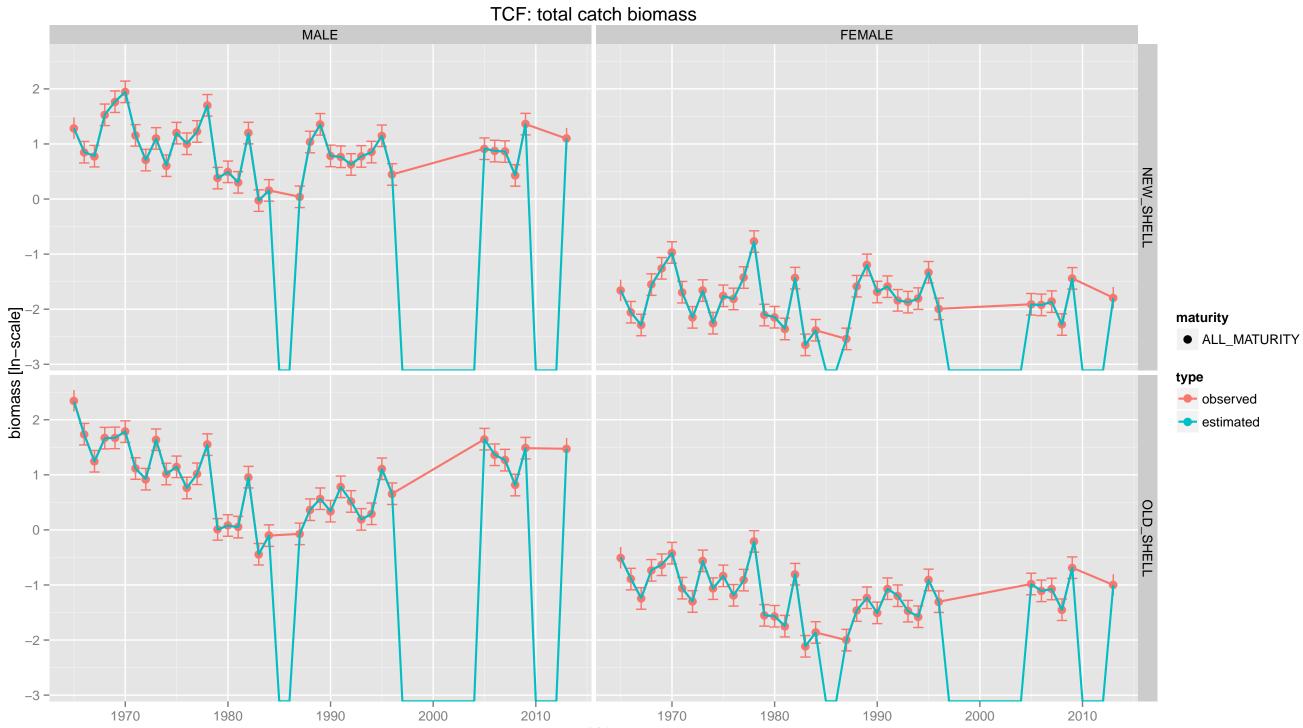
TCF: total catch abundance





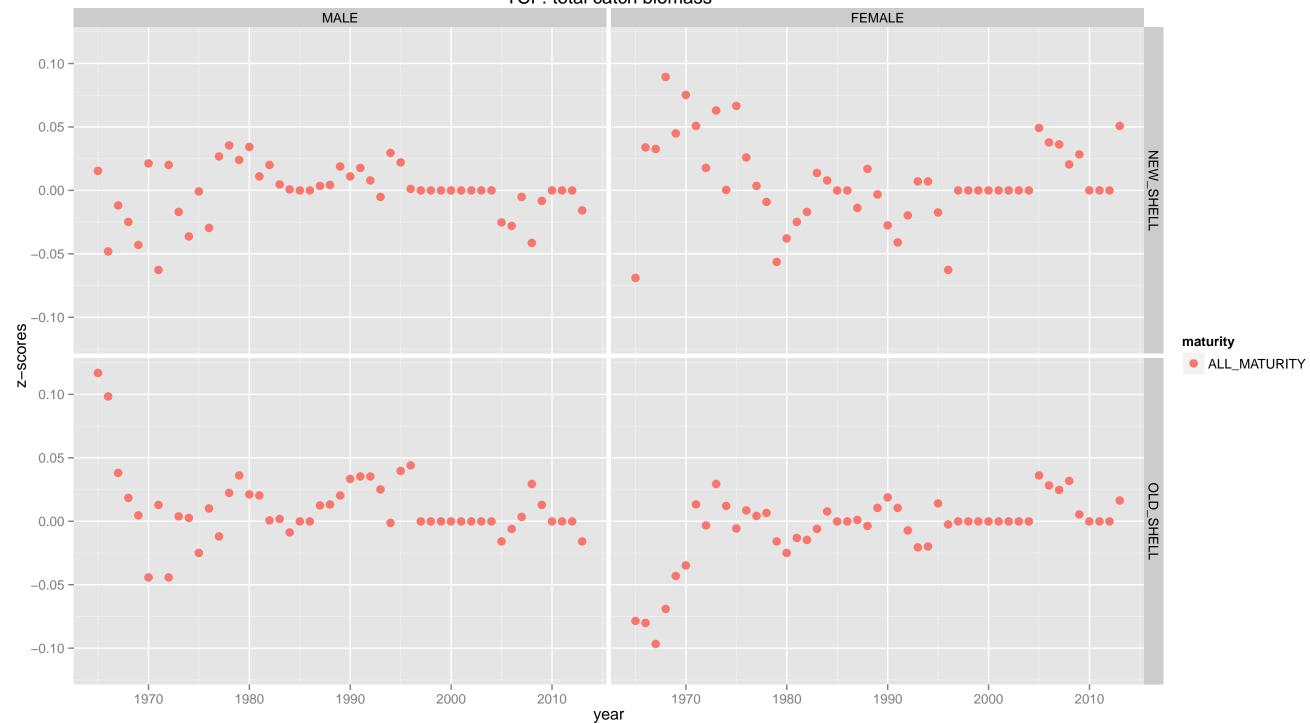
TCF: total catch biomass





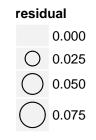
year

TCF: total catch biomass



TCF: total catch: male, new shell

150 - size (mm CM) 100 -				 ○ ○
50 -	• • • • • • • • • • • • • • • • • • •			•
	1970 1980	1990 2 pearson's residuals	2000 2010	



150- 0	150 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0				$ \begin{array}{c} 0.00 \\ 0.05 \\ 0.10 \\ 0.15 \end{array} $
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TCF: total catch: male, old shell

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	1970 1980	1990 2000 pearson's residuals	2010	
		pearson's residuals		

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TCF: total catch: female, new shell

size (mm CW)



) O > M

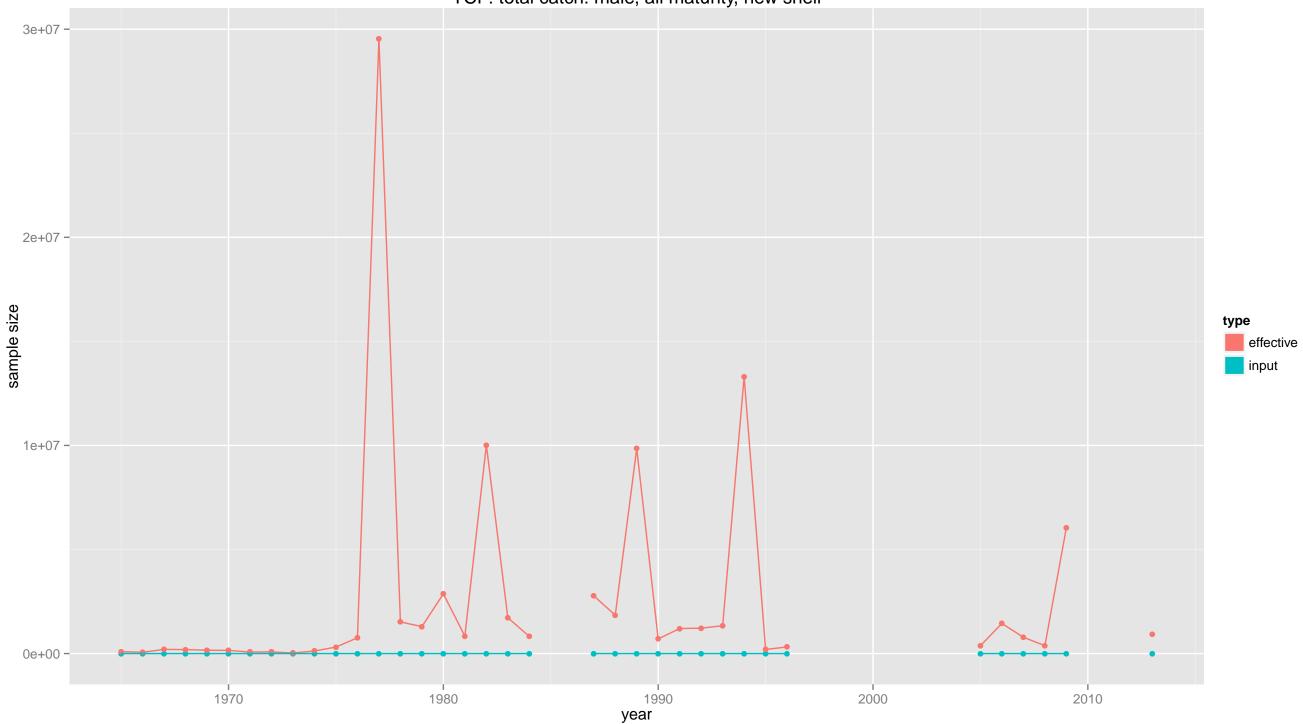
size (mm CW)

TCF: total catch: female, old shell

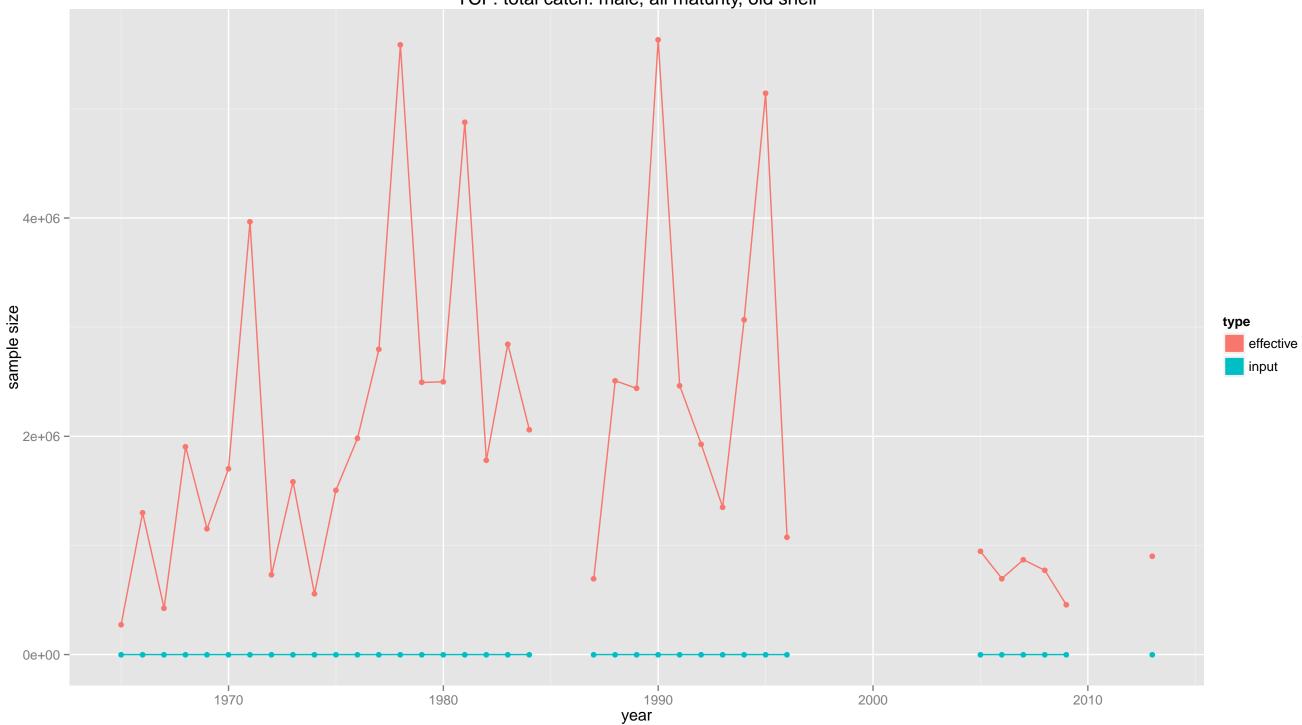
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size (mm CW)

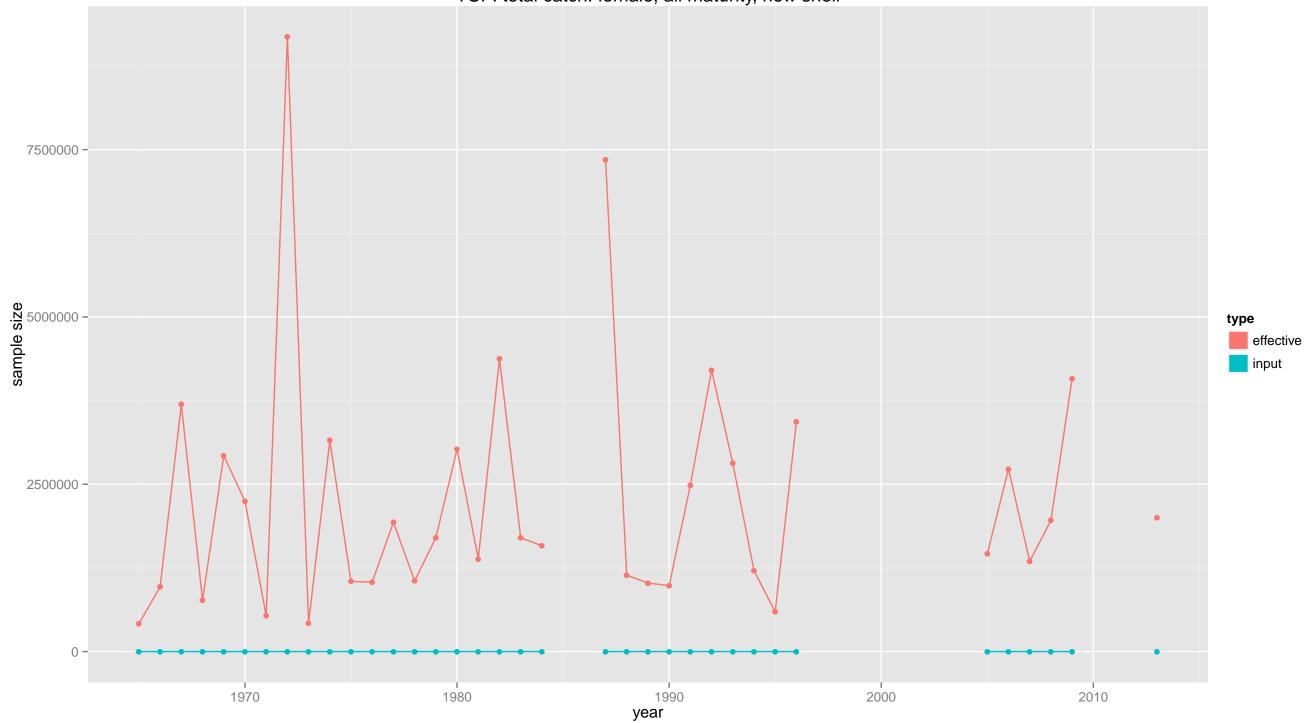
TCF: total catch: male, all maturity, new shell



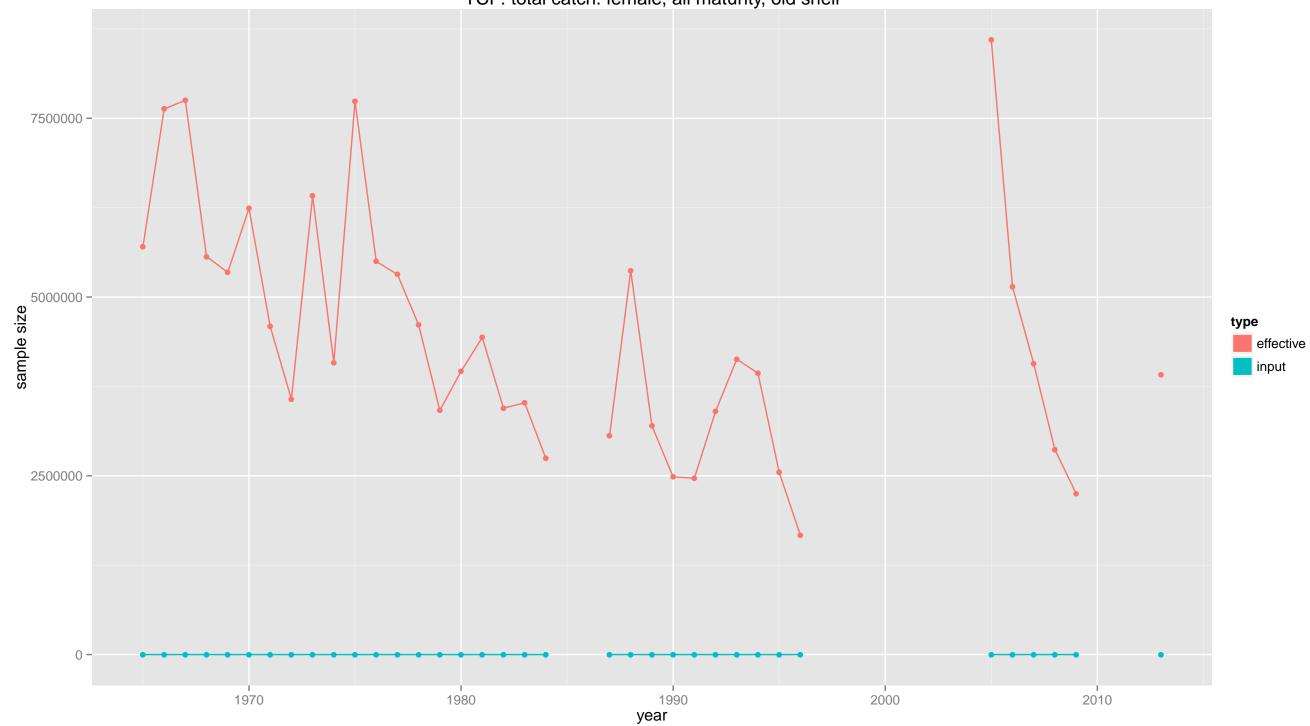
TCF: total catch: male, all maturity, old shell



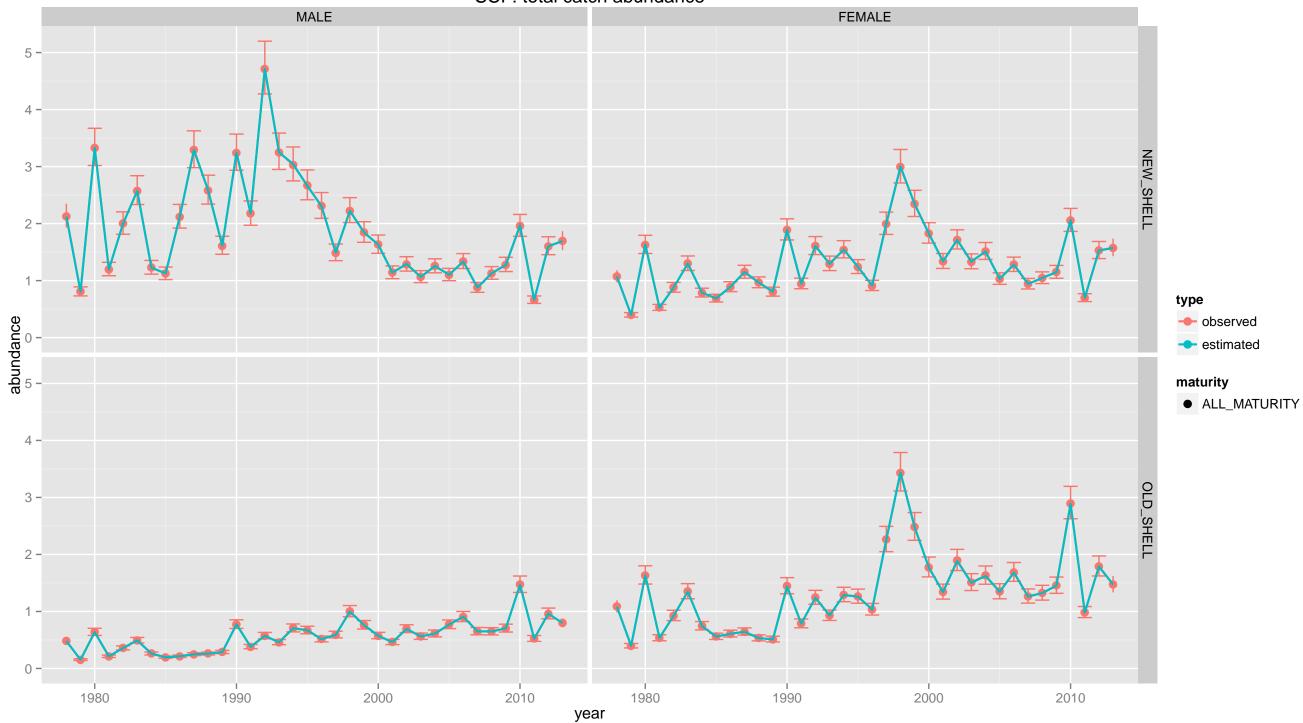
TCF: total catch: female, all maturity, new shell

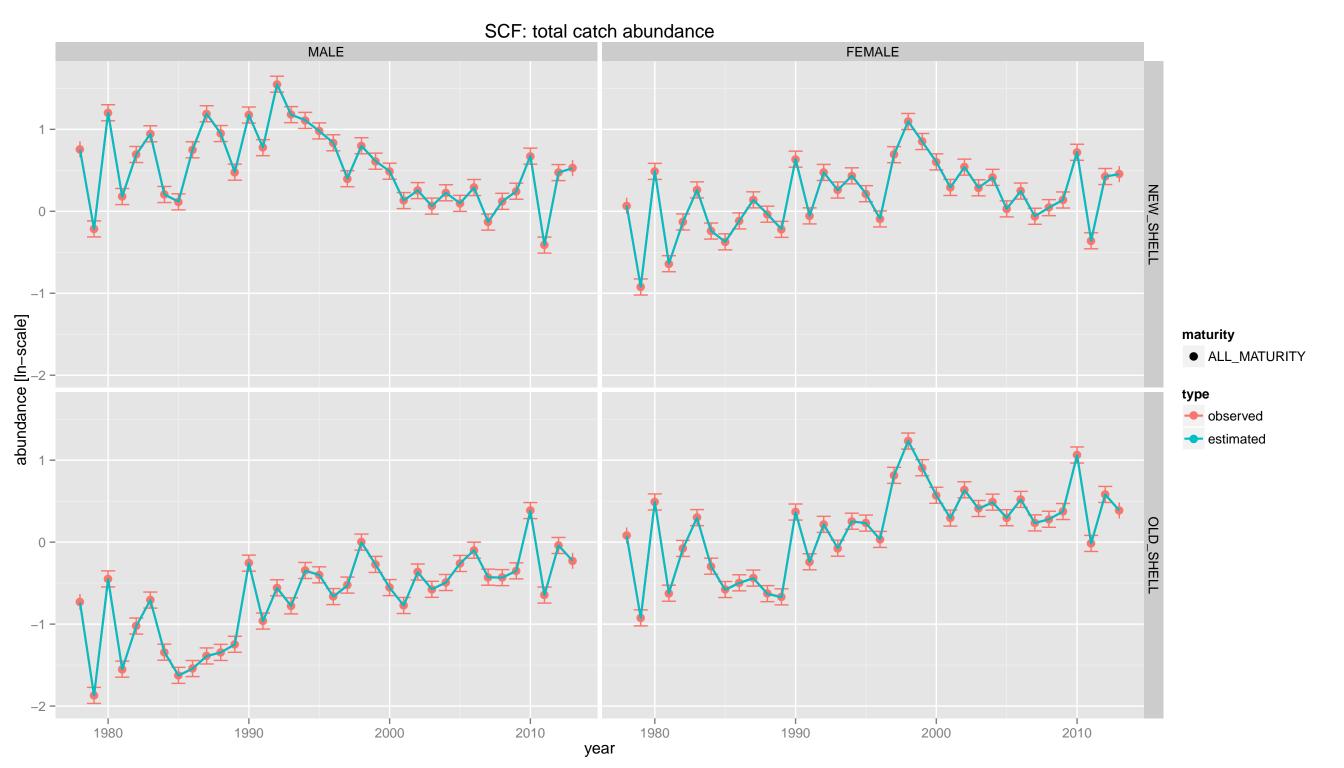


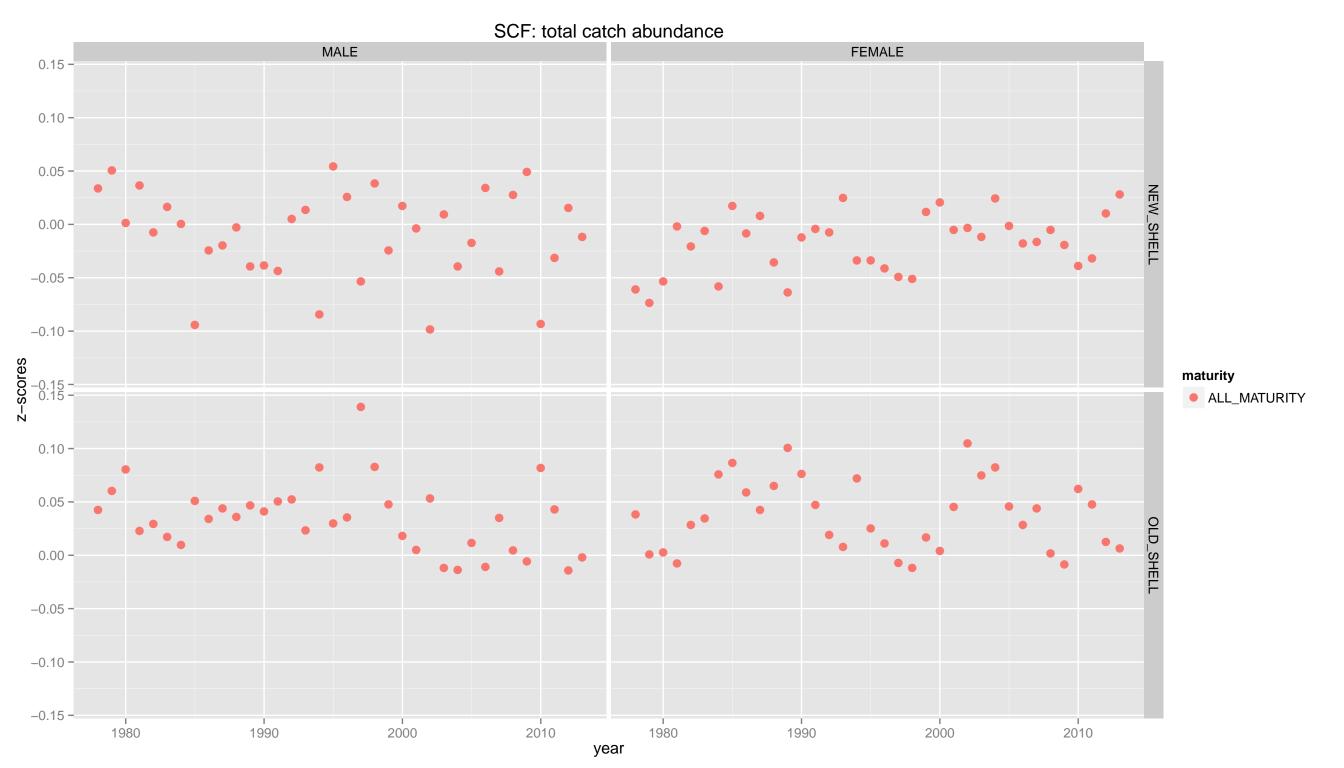
TCF: total catch: female, all maturity, old shell

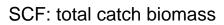


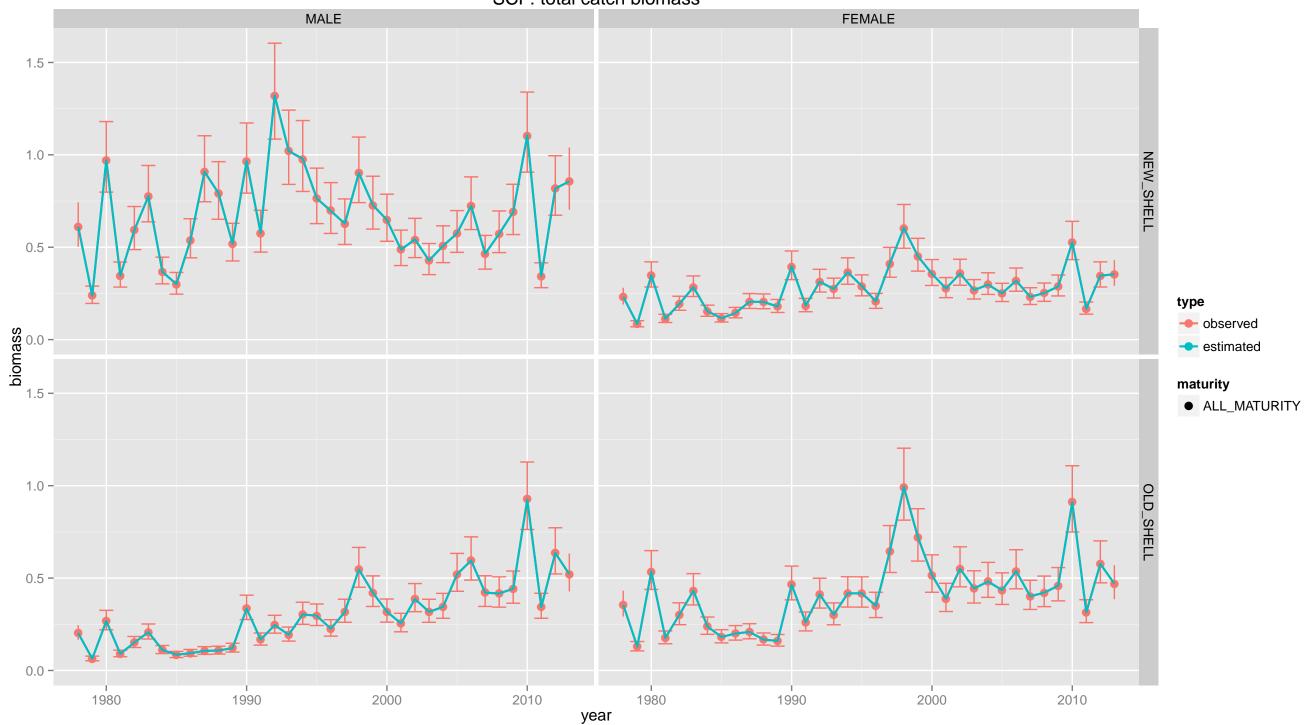
SCF: total catch abundance





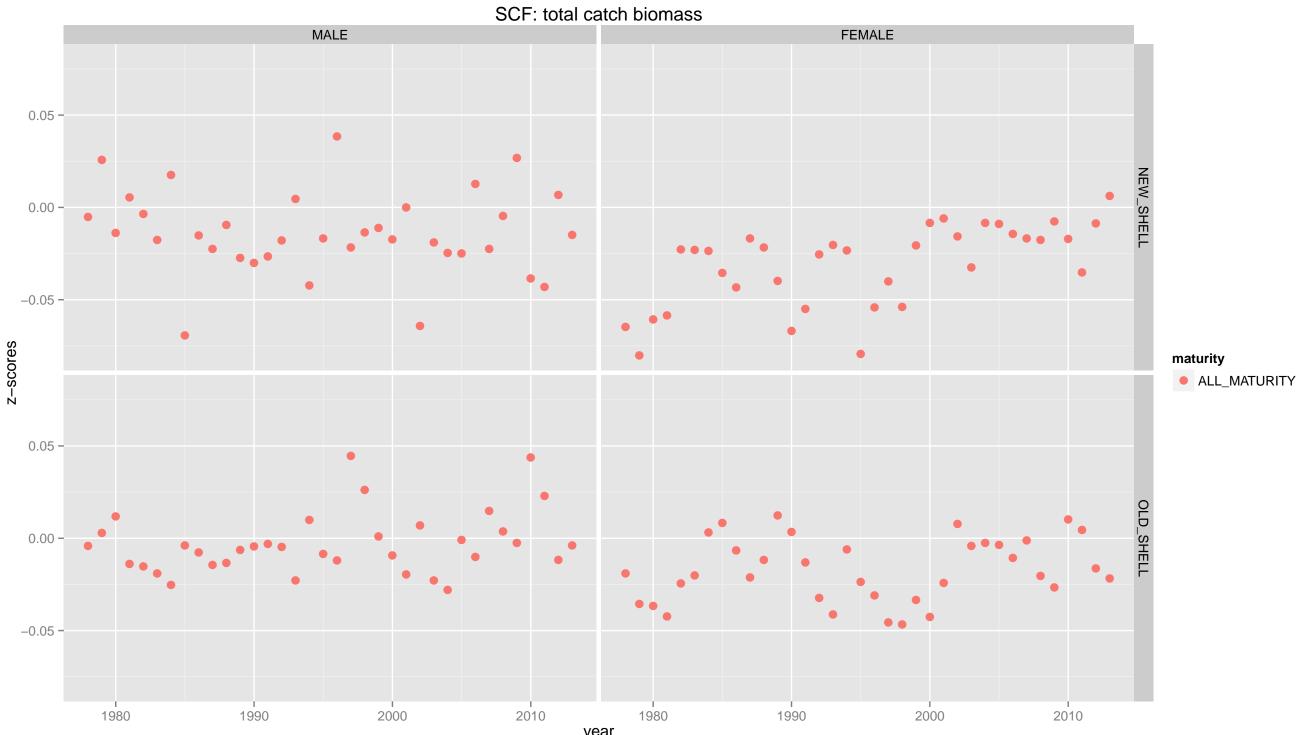








year

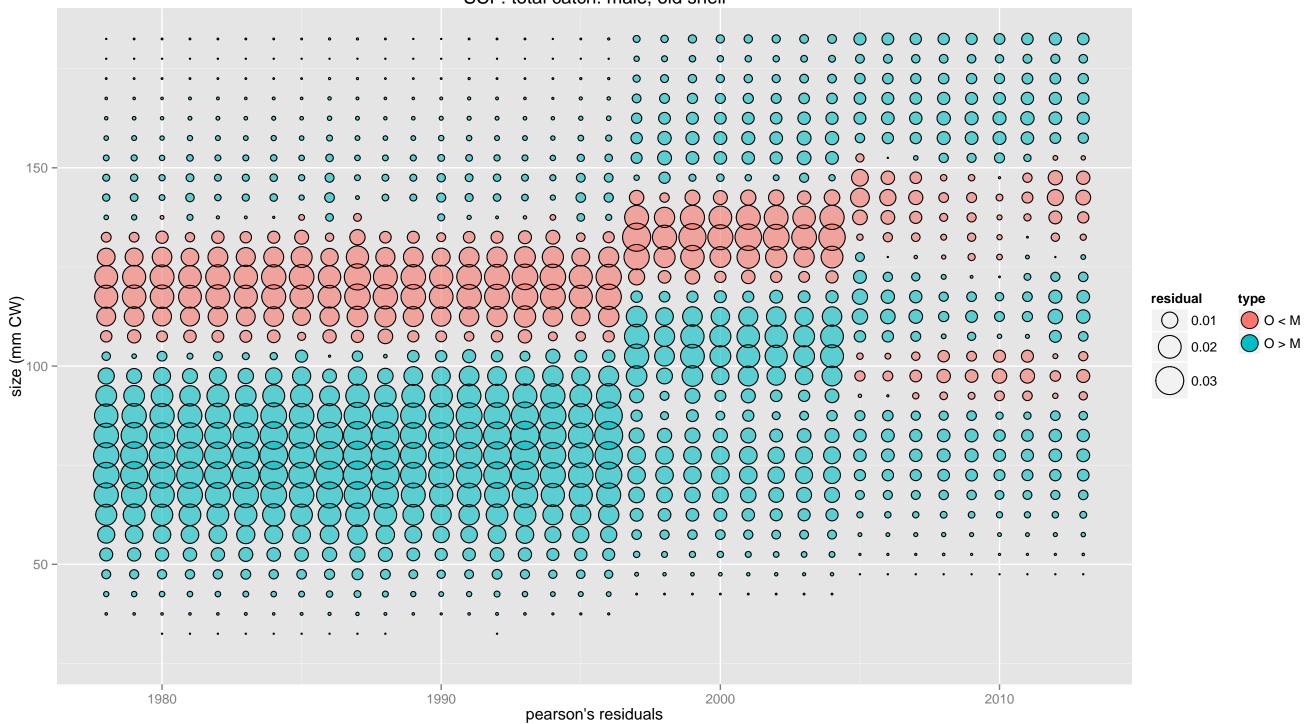


year

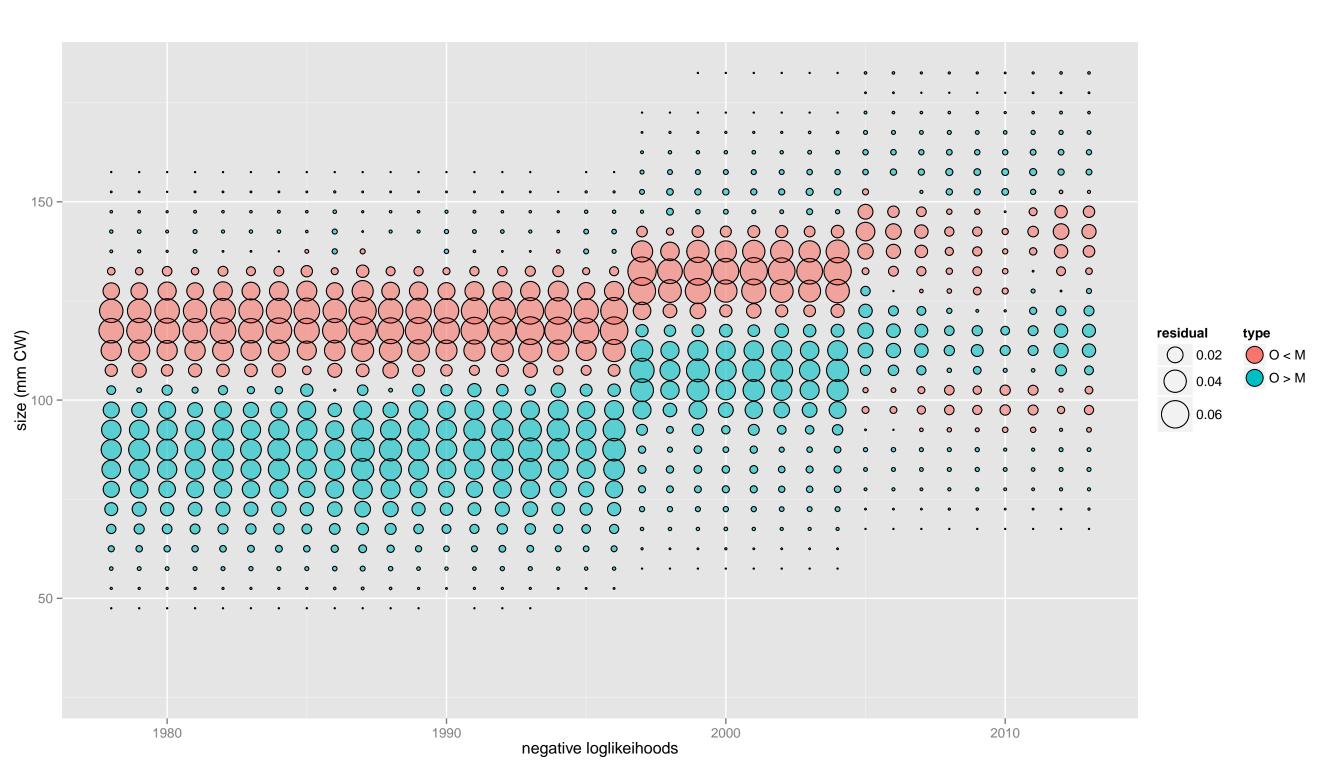
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SCF: total catch: male, new shell

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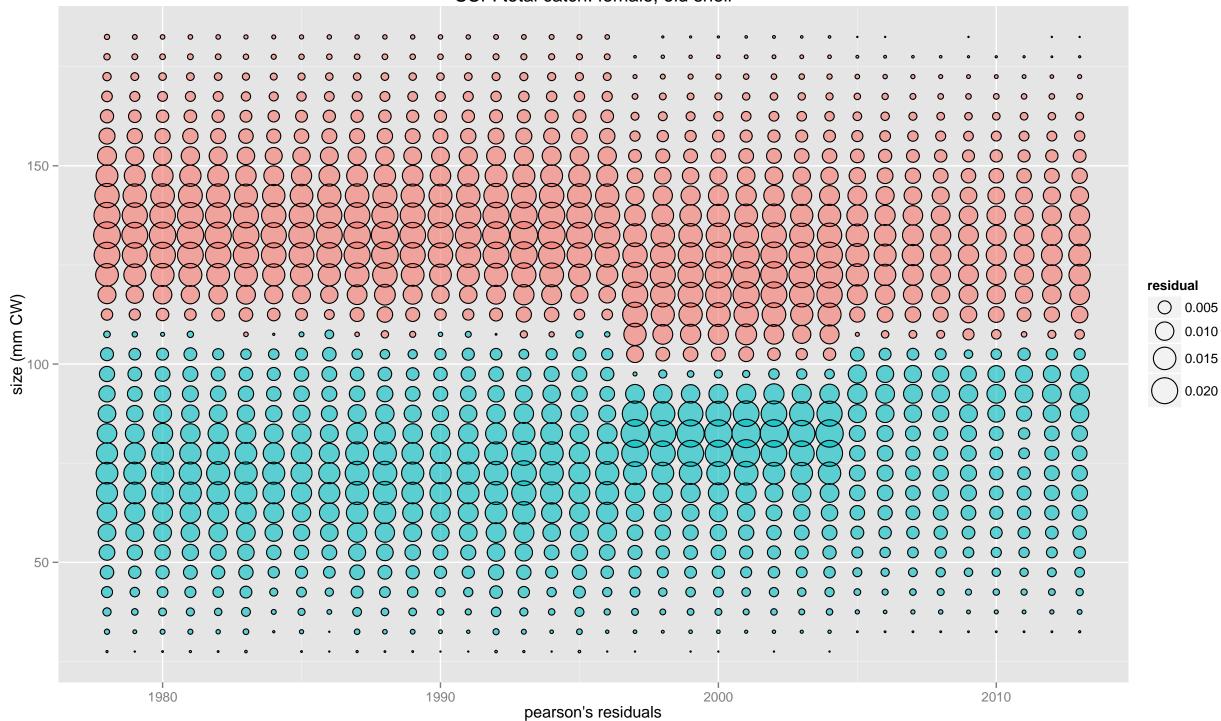
SCF: total catch: male, old shell



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SCF: total catch: female, new shell

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type

0.010

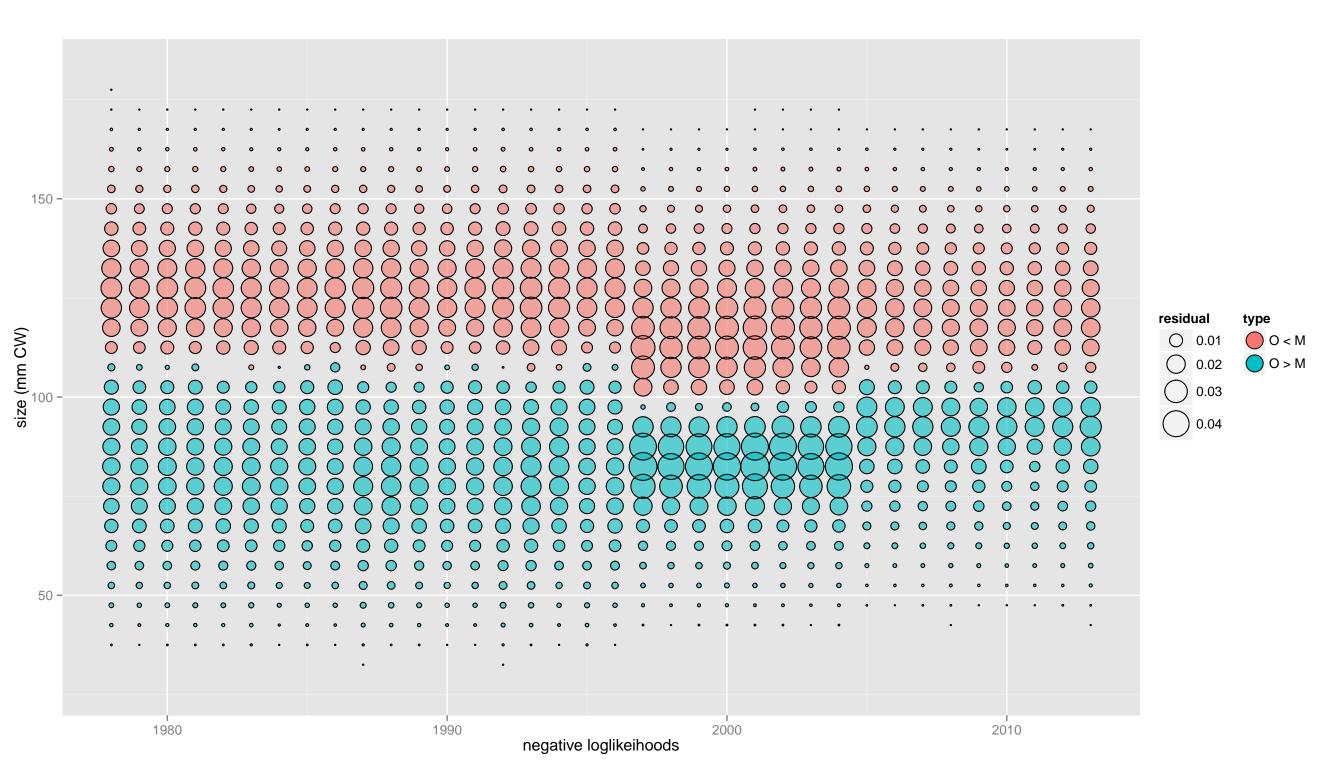
0.015

0.020

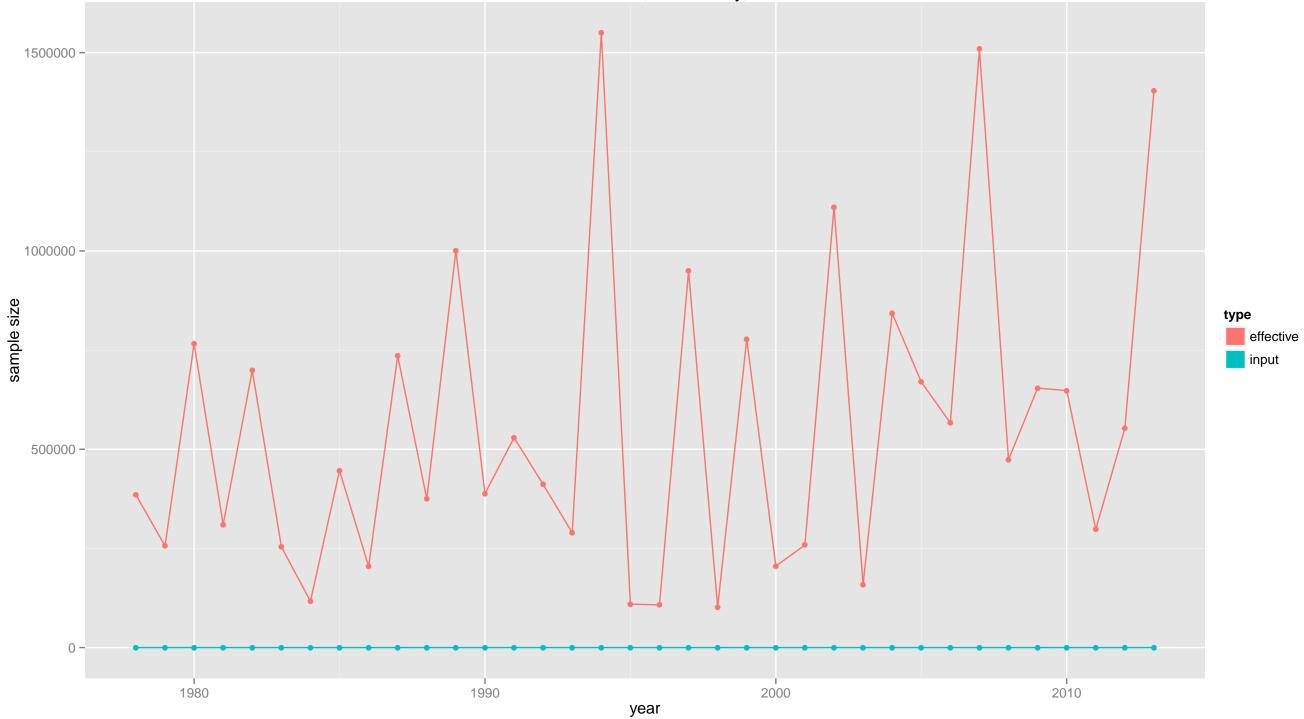
🔵 0 < M

O > M

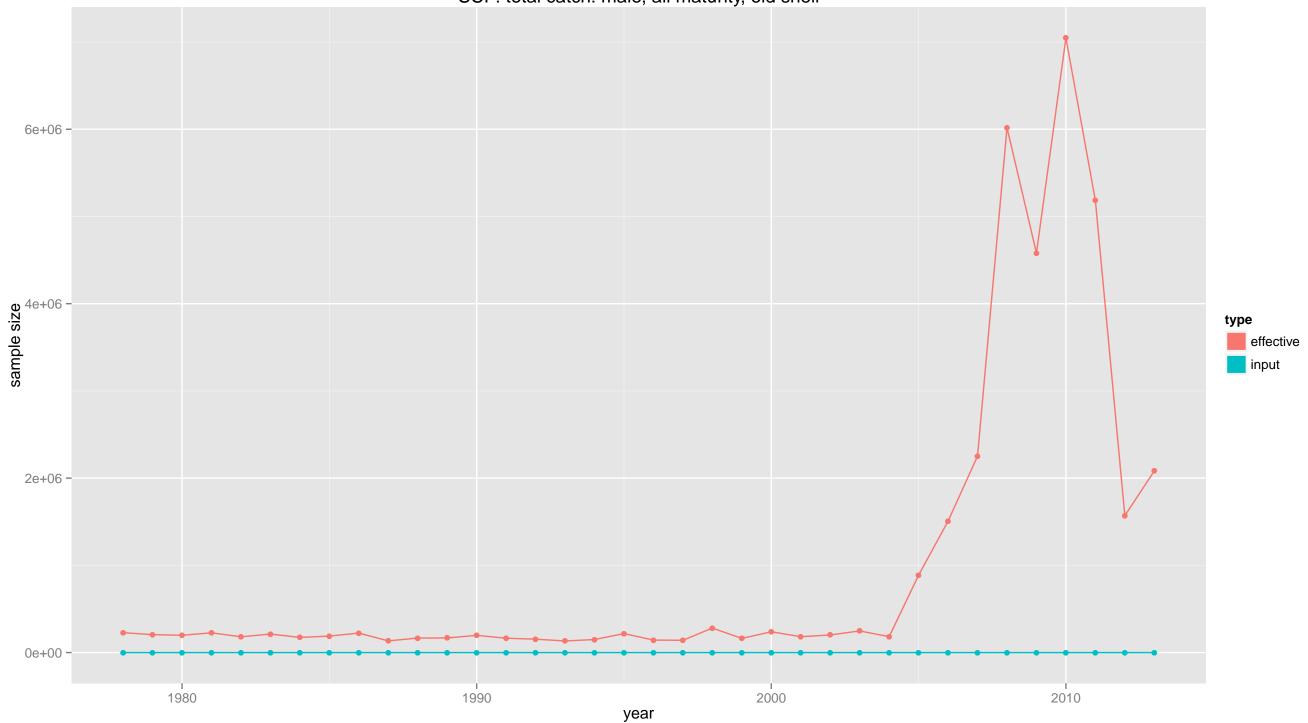
SCF: total catch: female, old shell



SCF: total catch: male, all maturity, new shell



SCF: total catch: male, all maturity, old shell

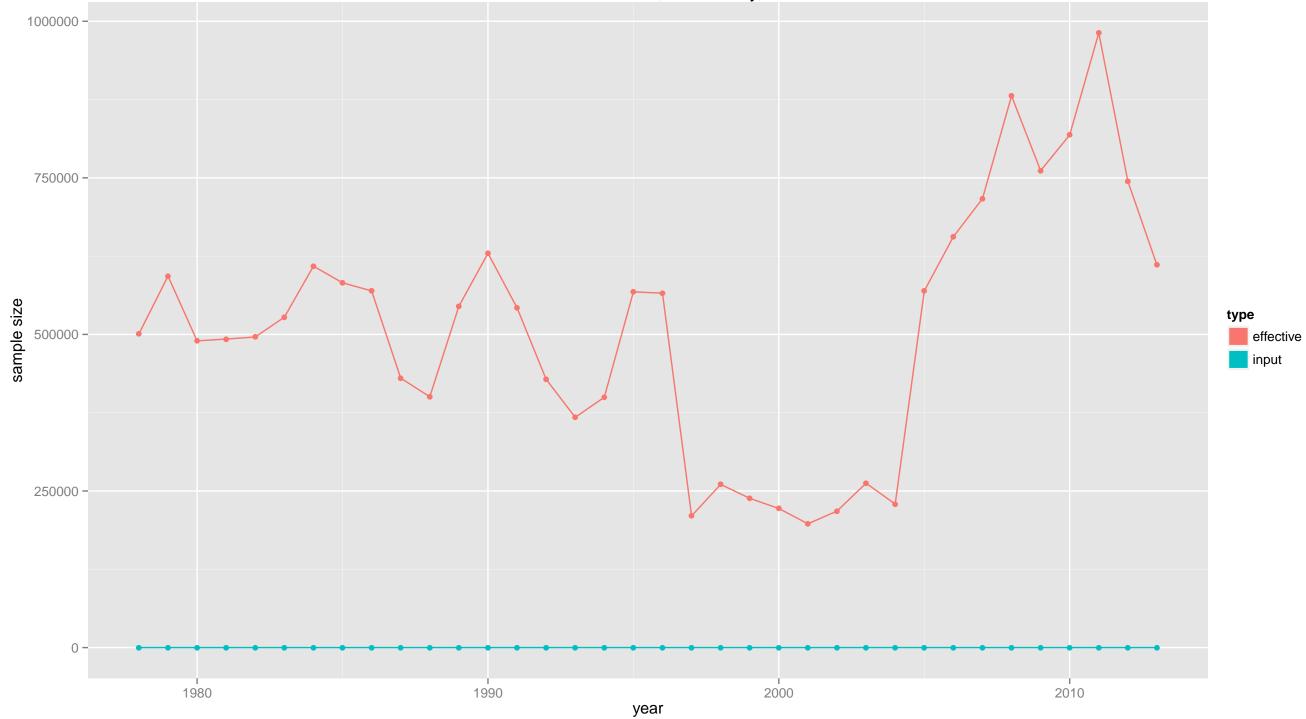


SCF: total catch: female, all maturity, new shell

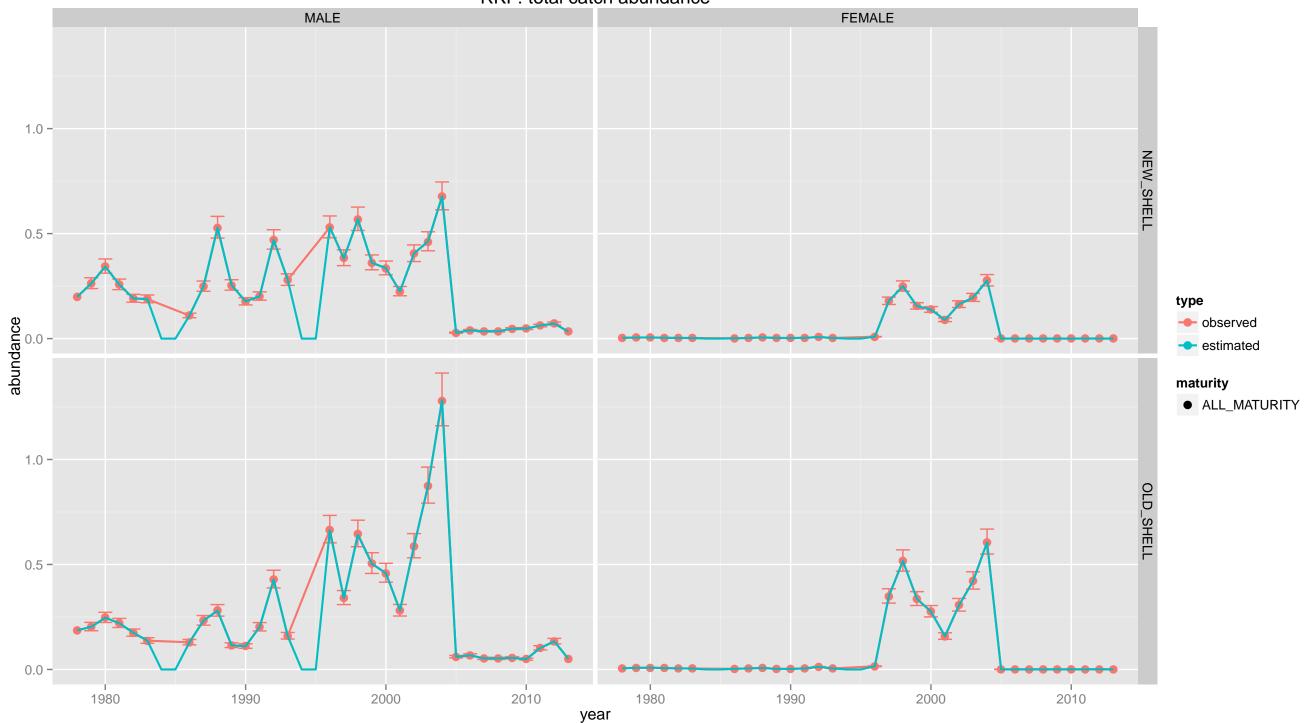


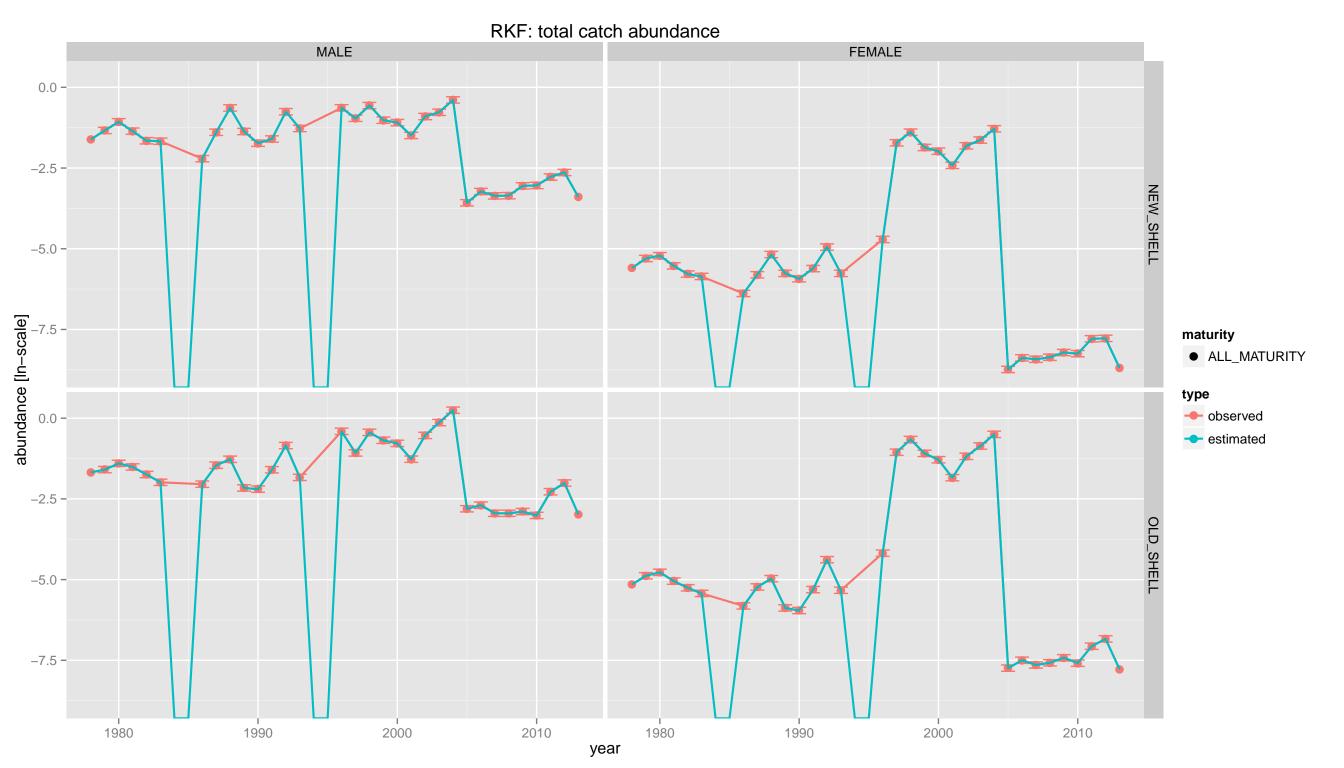
year

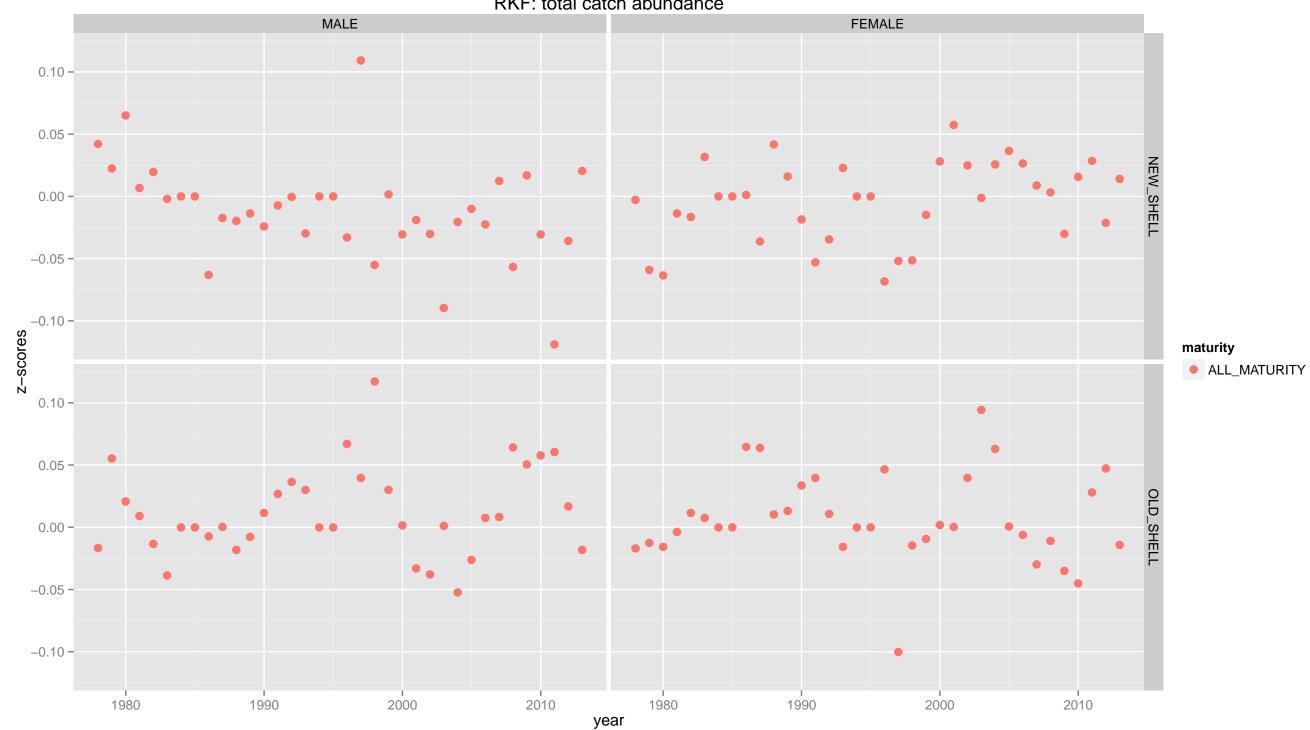
SCF: total catch: female, all maturity, old shell



RKF: total catch abundance

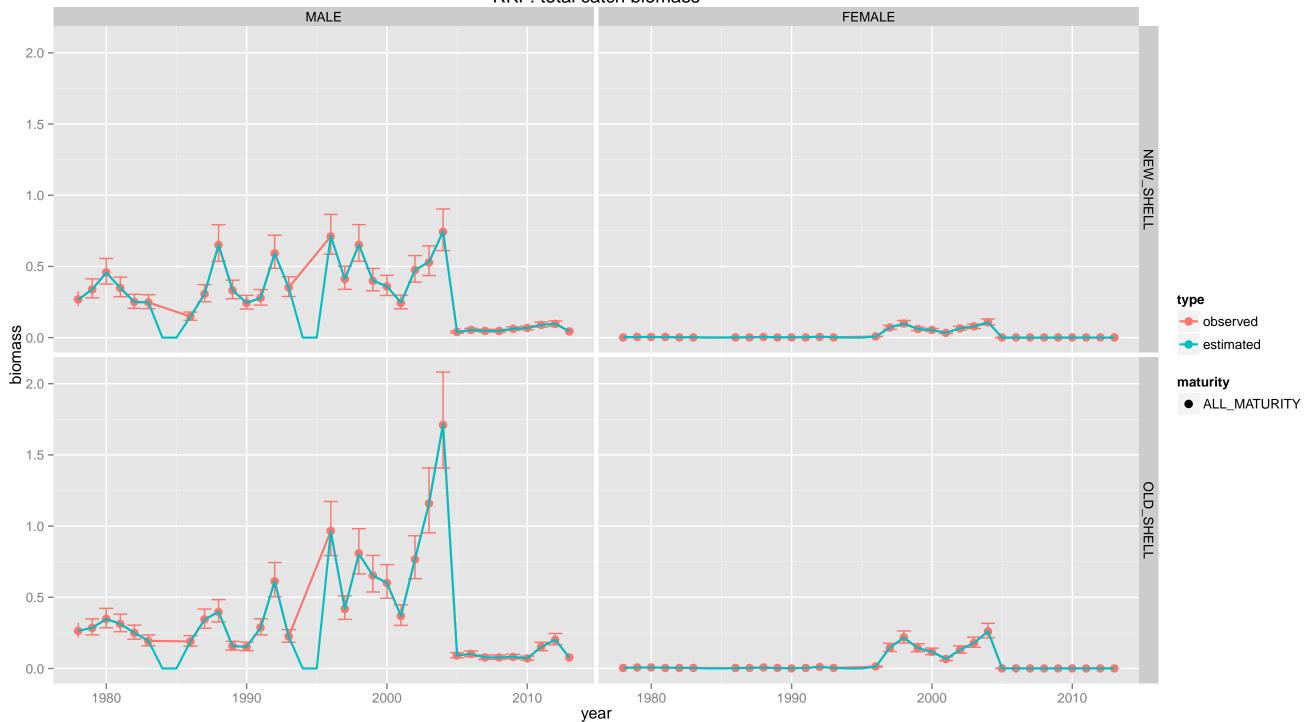


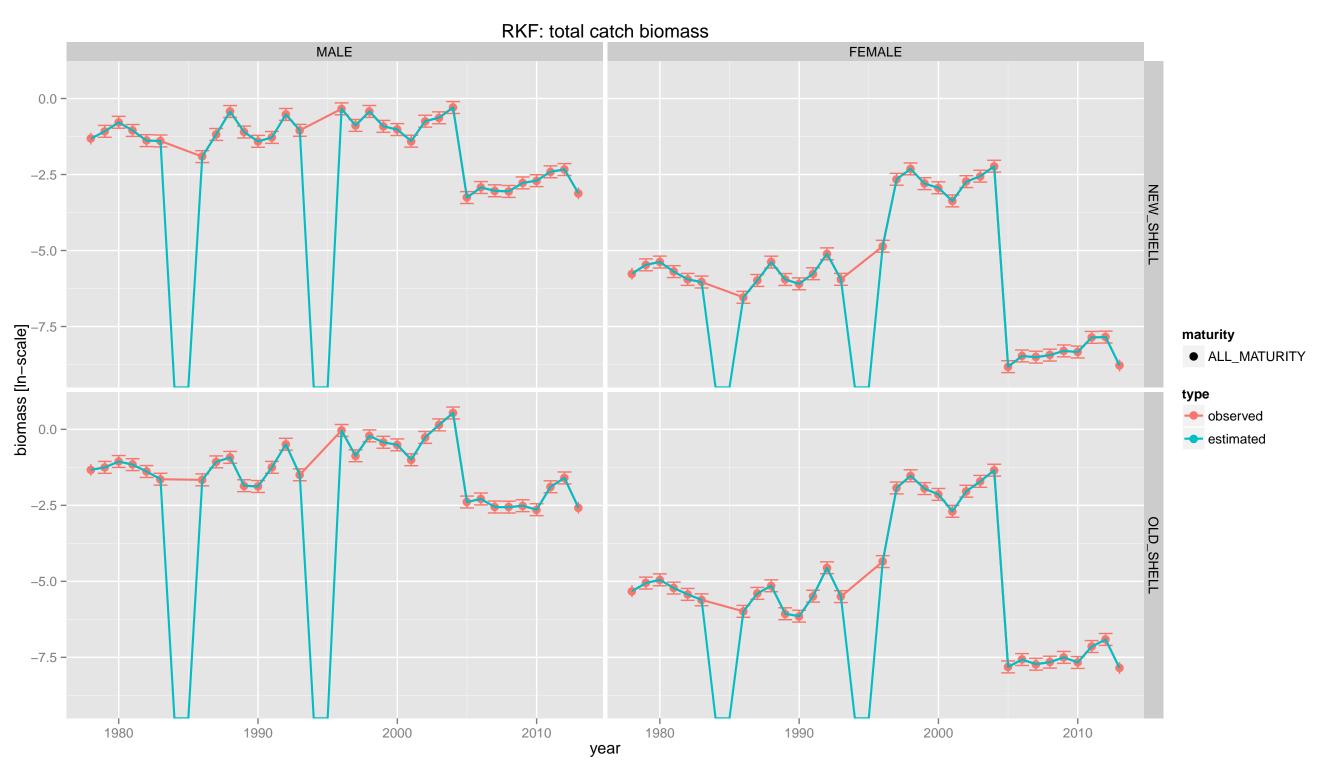


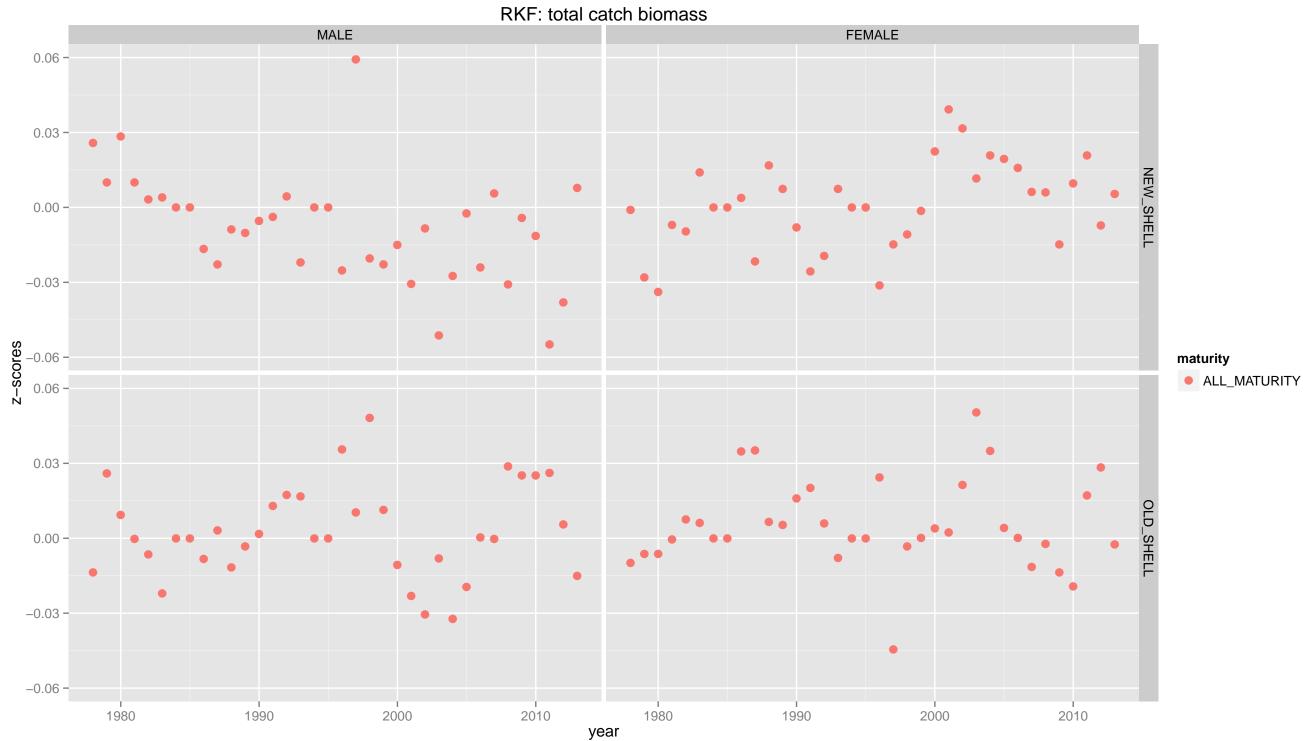


RKF: total catch abundance

RKF: total catch biomass







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RKF: total catch: male, new shell

size (mm CW)

Image: constraint of the constraint

	RKF: total catch: male, old shell	
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RKF: total catch: male, old shell

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RKF: total catch: female, new shell

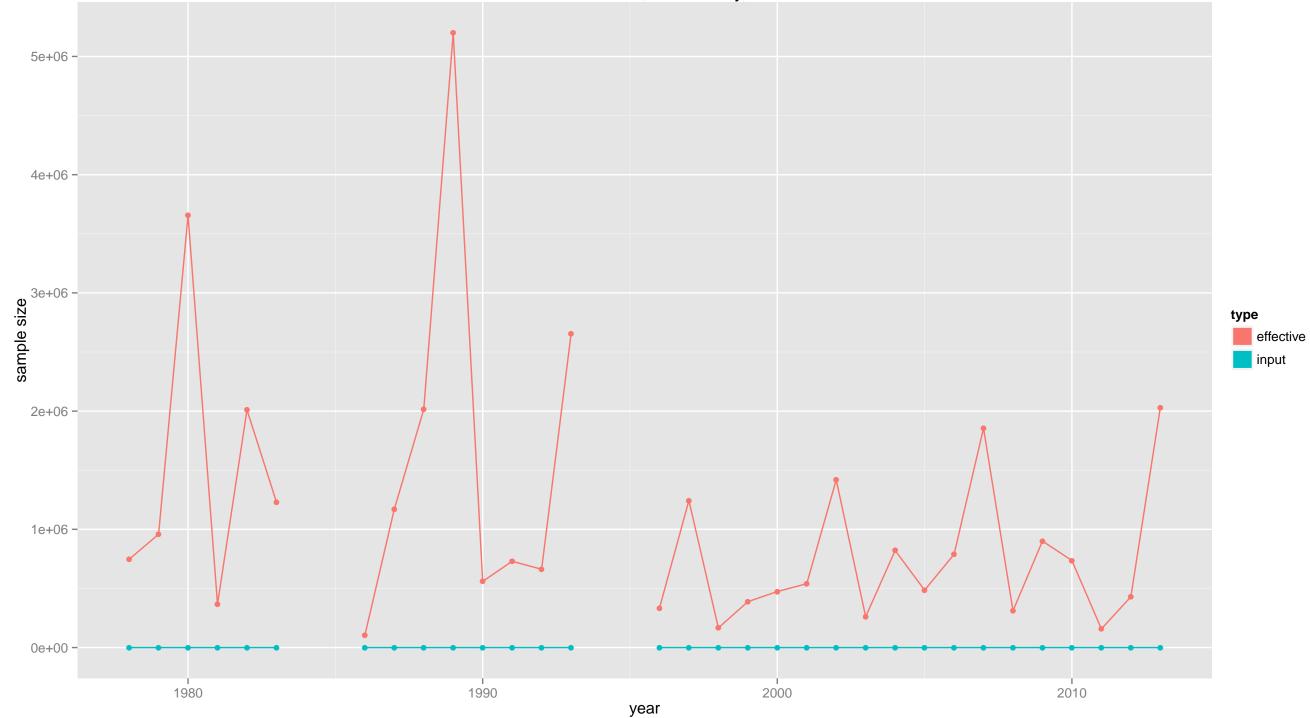


150 - size (um CM) 50 -					residual type 0.000 ● ○ M 0.005 ● ○ M 0.010 0.015 ○ N
	1980	1990 pearsor	2000 n's residuals	2010	

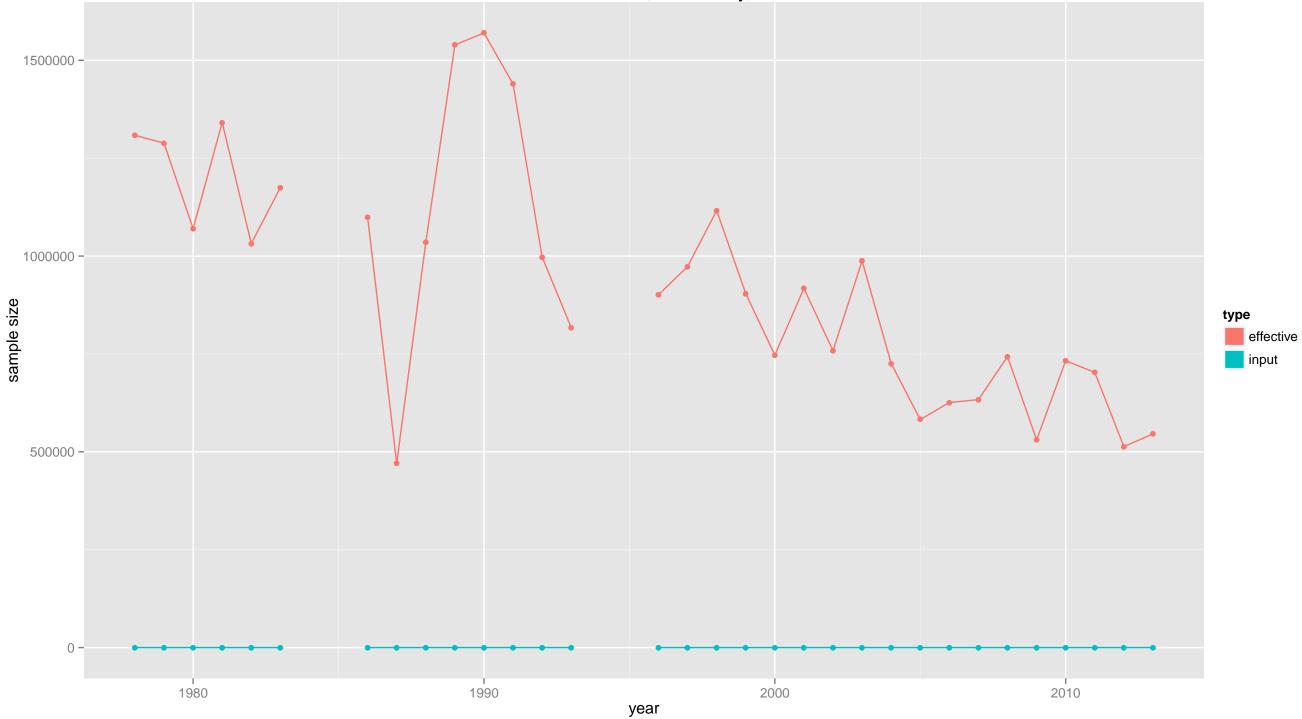
RKF: total catch: female, old shell



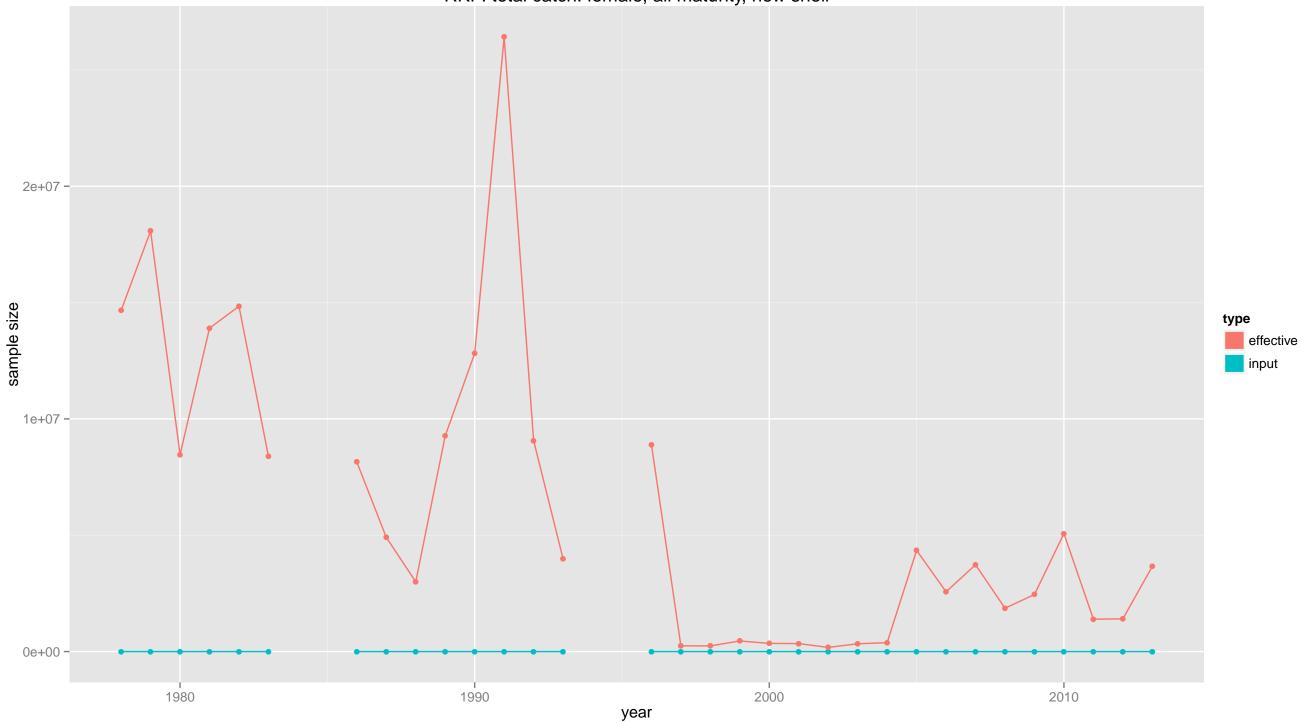
RKF: total catch: male, all maturity, new shell



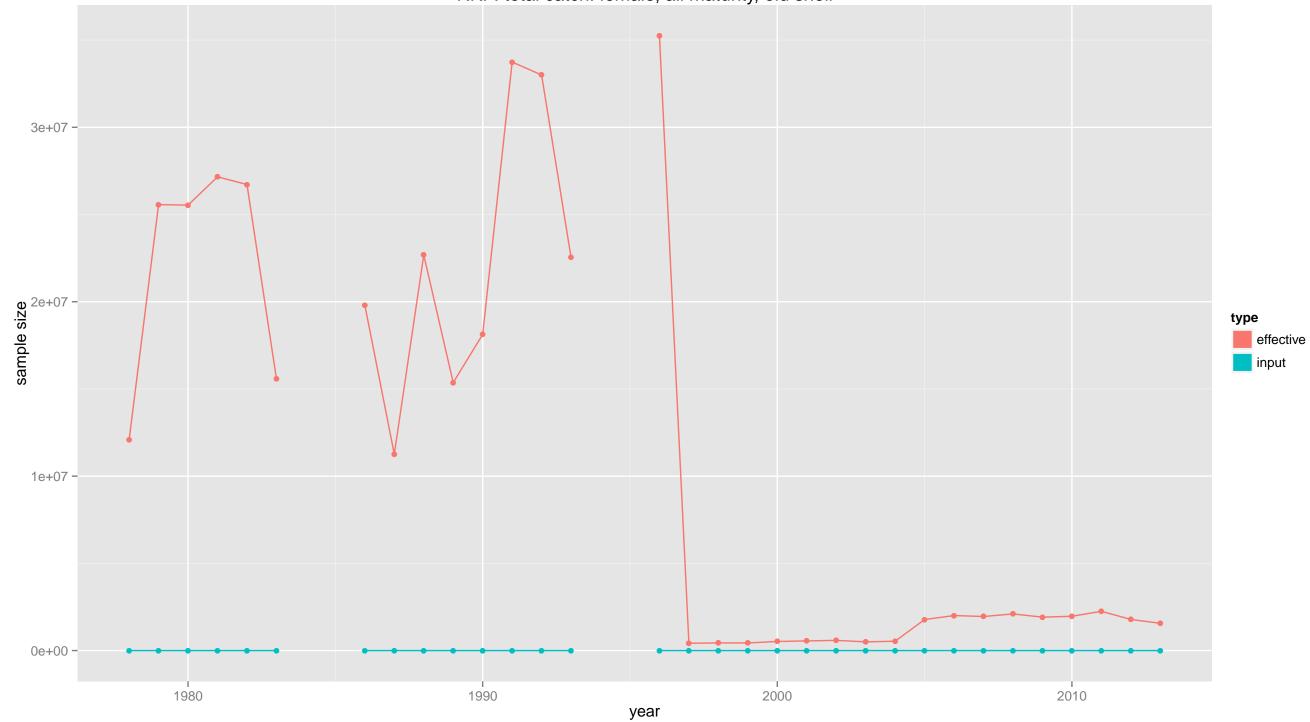
RKF: total catch: male, all maturity, old shell



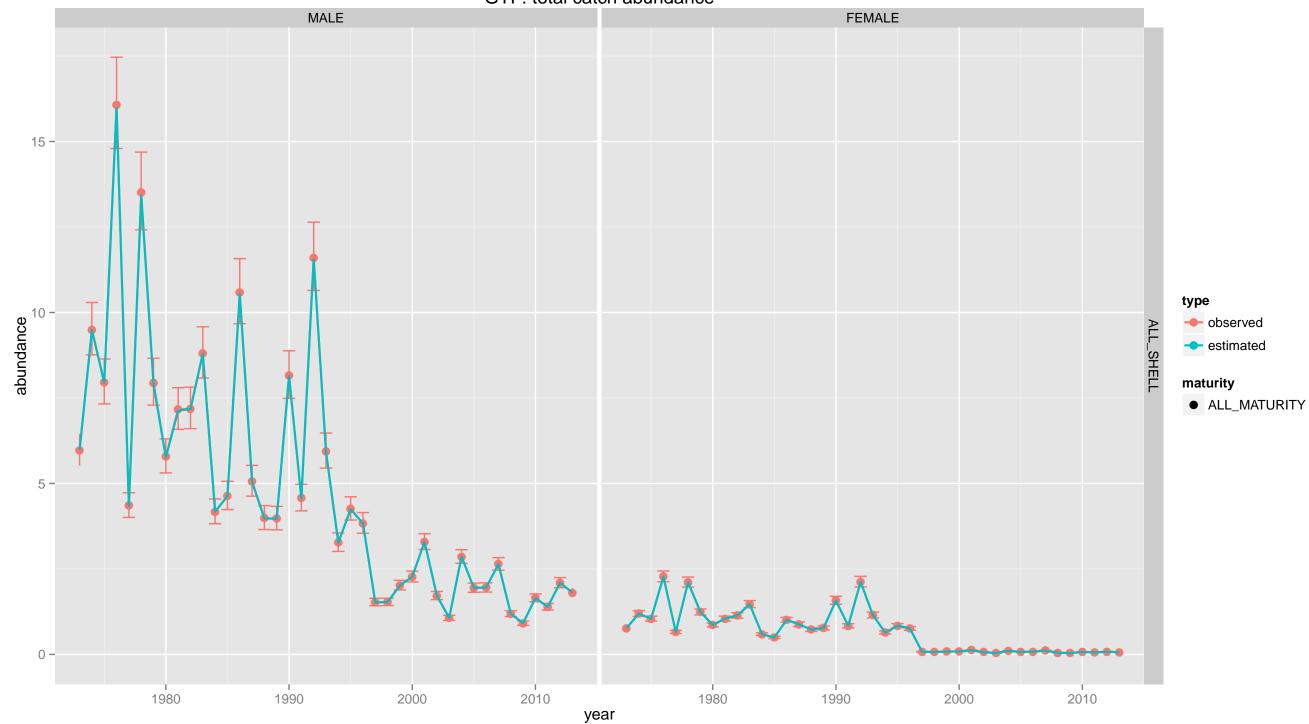
RKF: total catch: female, all maturity, new shell

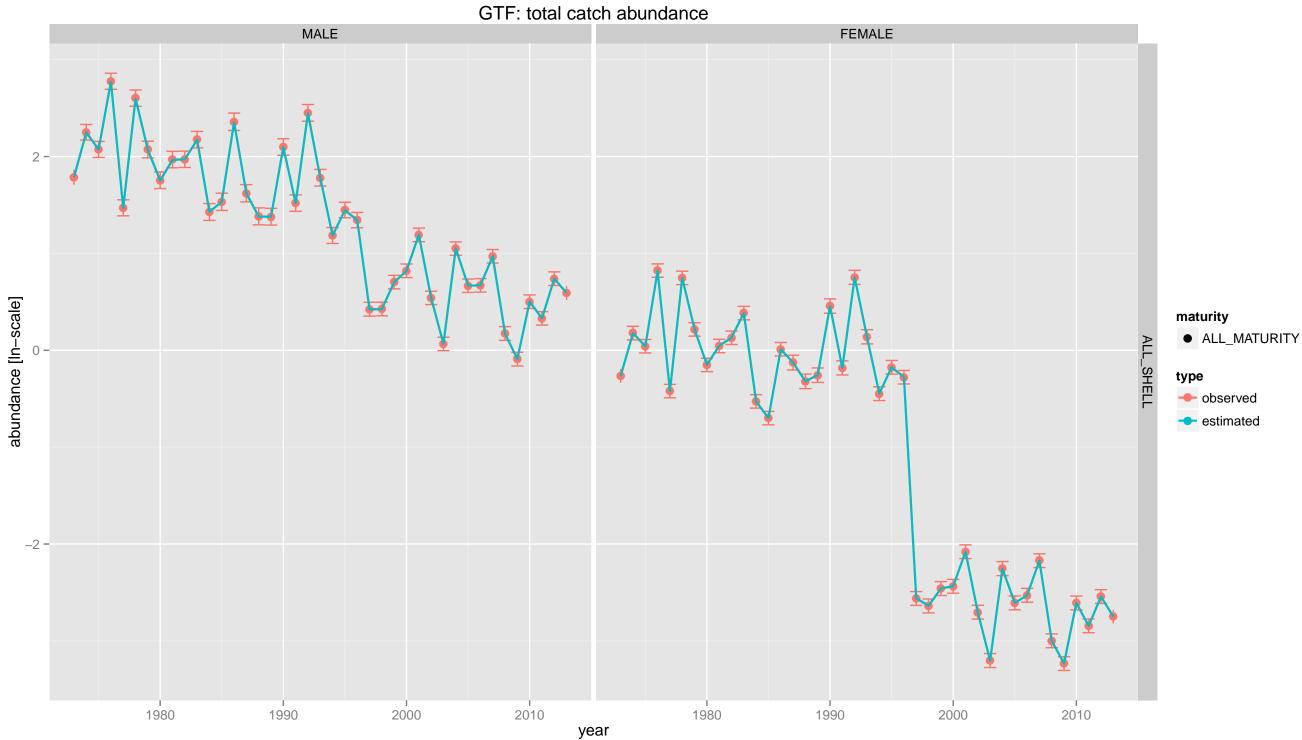


RKF: total catch: female, all maturity, old shell



GTF: total catch abundance

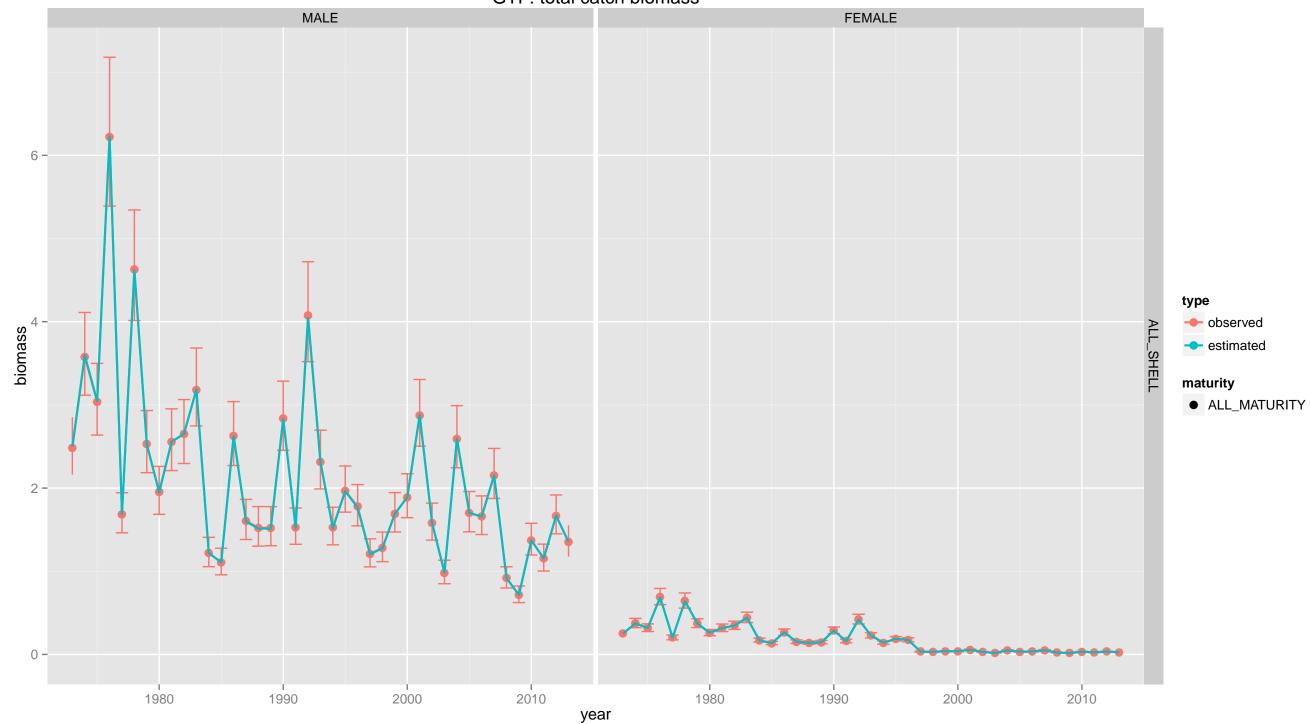




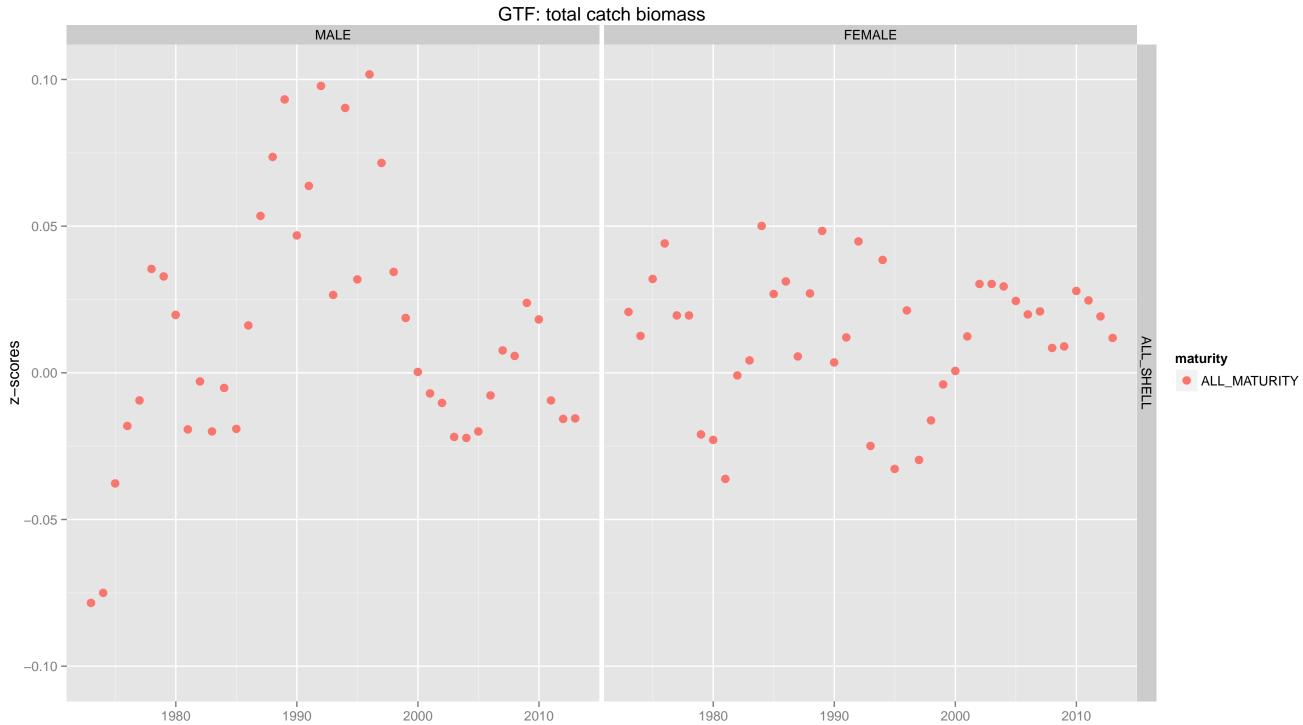
GTF: total catch abundance



GTF: total catch biomass







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C) 0	0	0	0	igodol	0	0	\bigcirc	0	0	0	•	0	•	•	0	•	•	•	0	0	\circ	0	•	0	•	0	•	•	0	•	0	0	0	0	•	•	0	•
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size (mm CW)

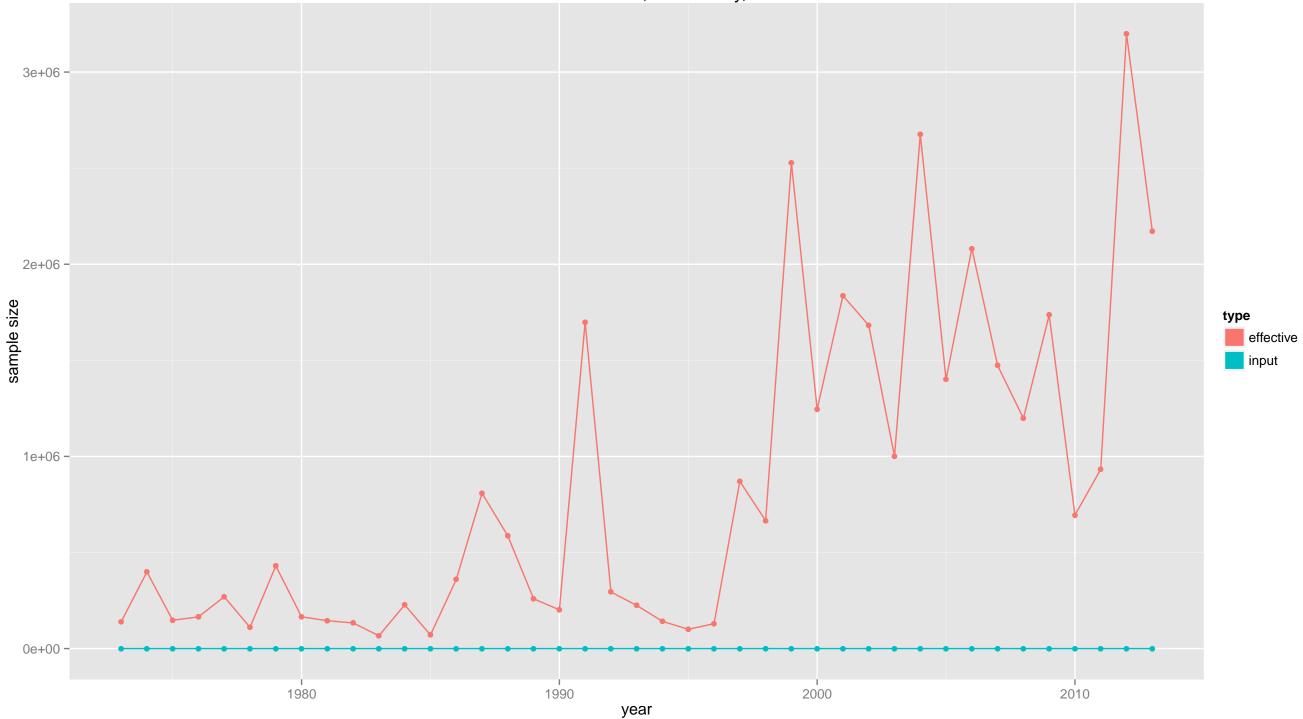
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GTE: total catch: female

size (mm CW)

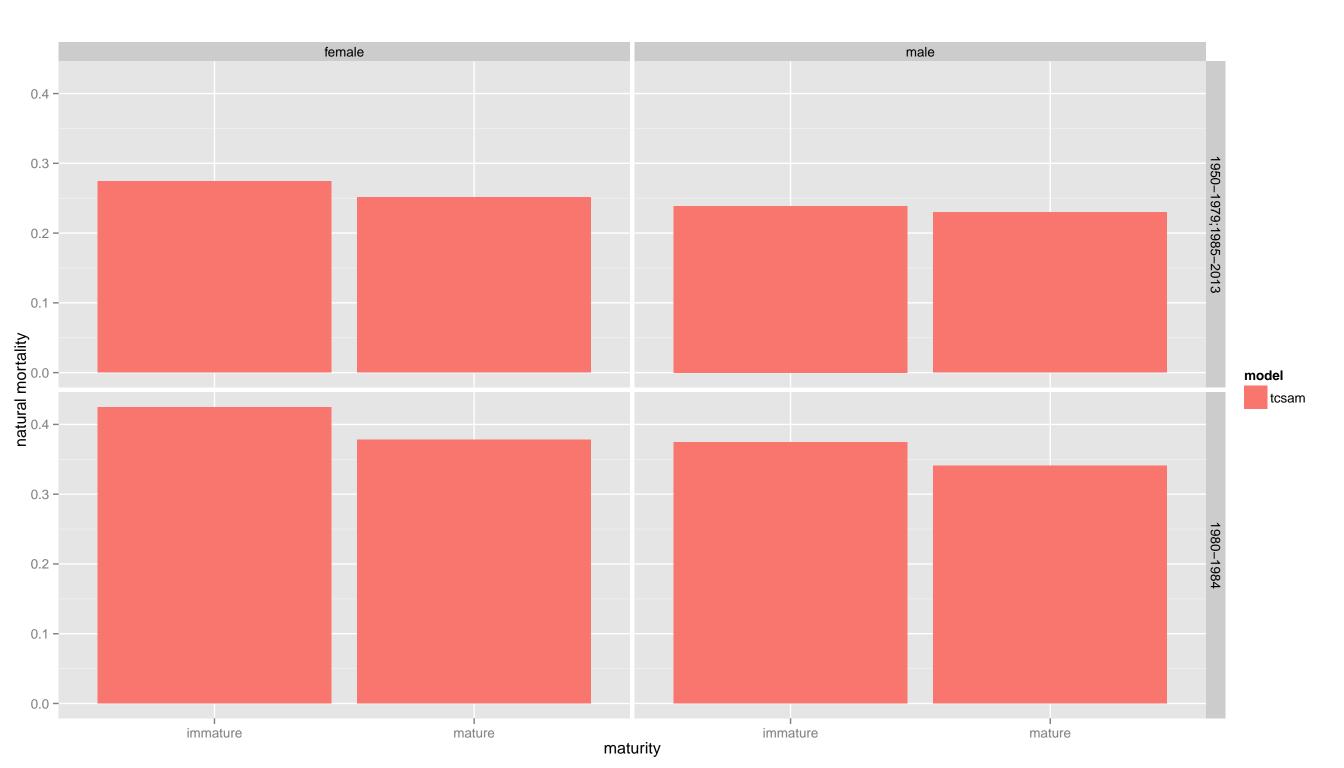
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GTF: total catch: male, all maturity, all shell

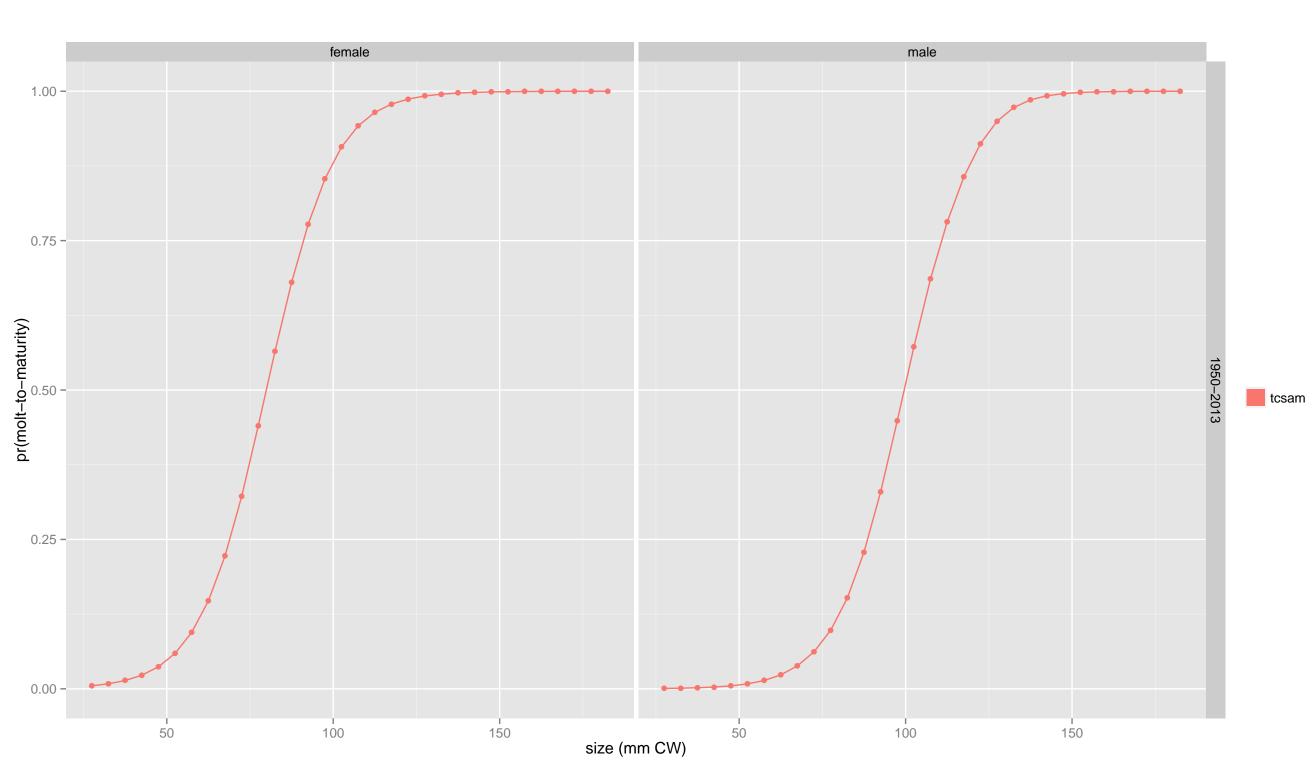


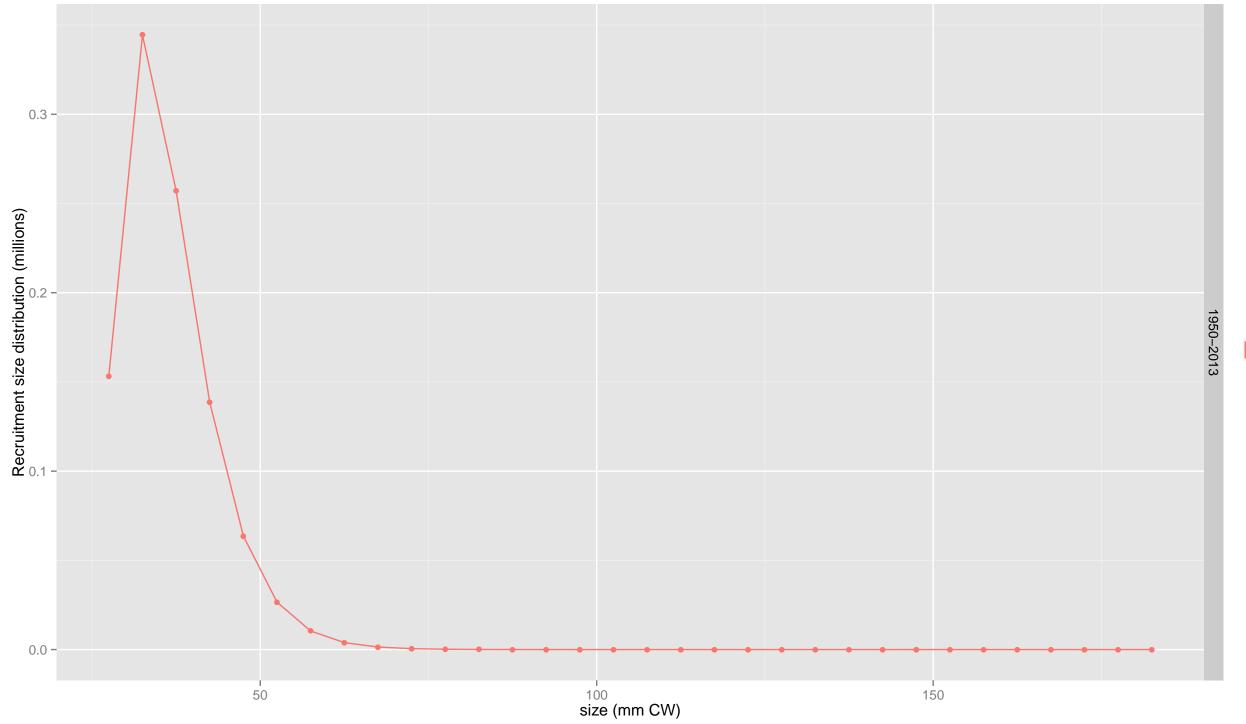
GTF: total catch: female, all maturity, all shell



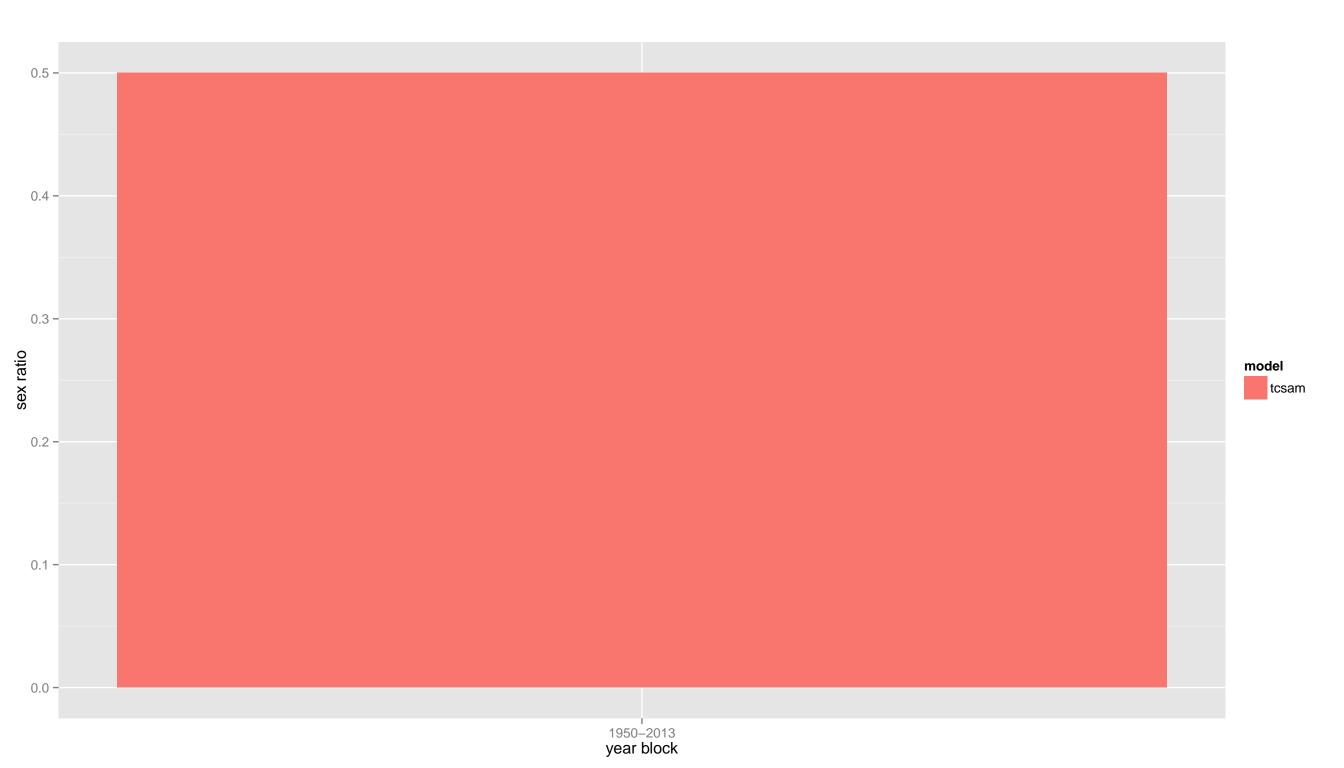


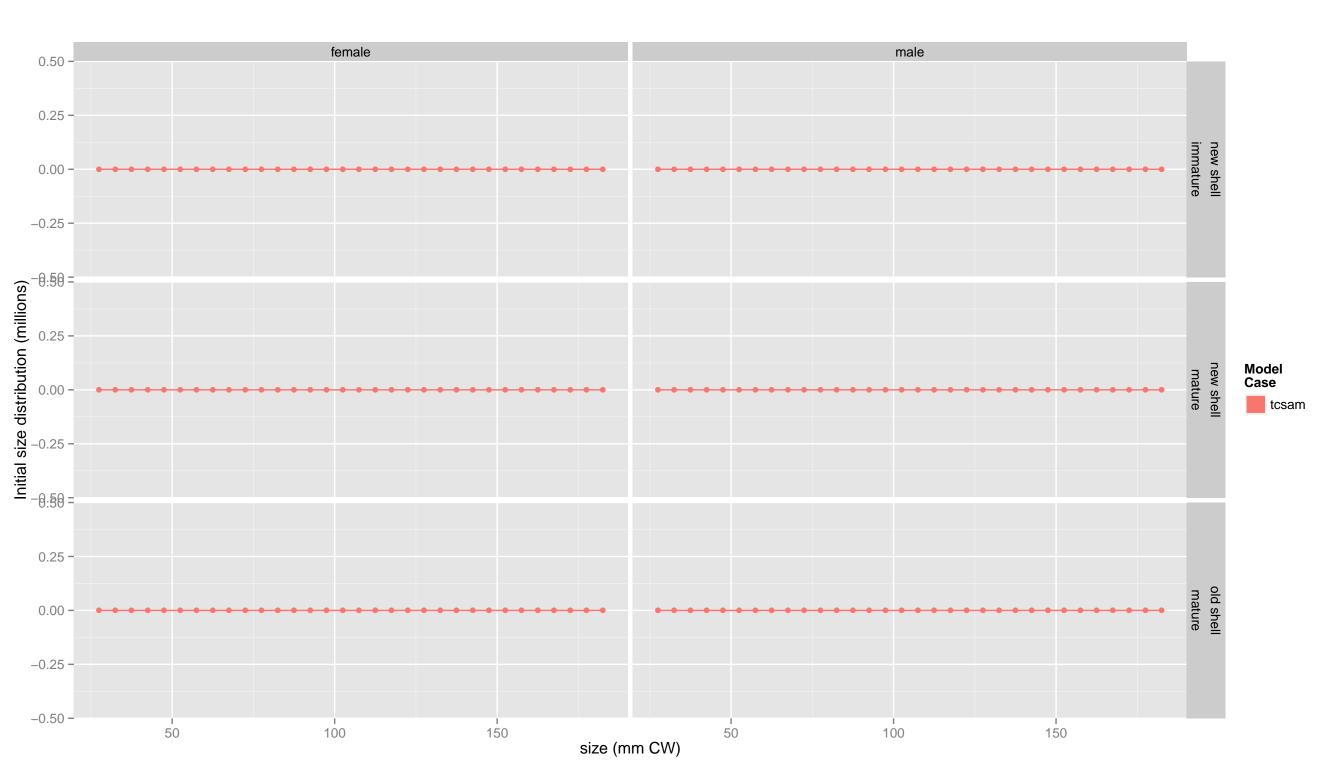
	female	male
post-molt size (mm CW)		0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.75 0.00 0.25 0.50 0.25 0.50 0.25 0.50 0.25 0.50 0.25 0.50 0.75 0.00 0.25 0.50 0.25 0.00 0.25 0.50 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.50 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.05 0.00 0.25 0.00 0.05
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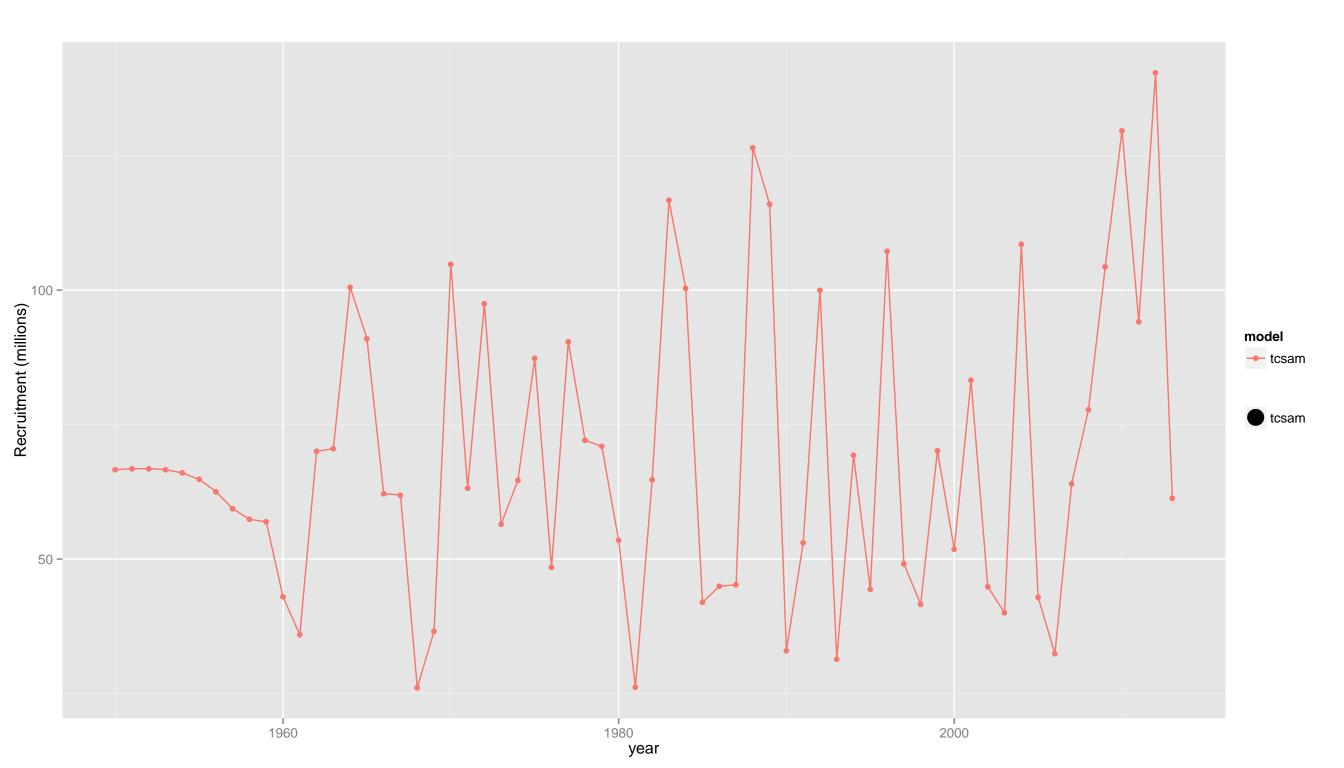


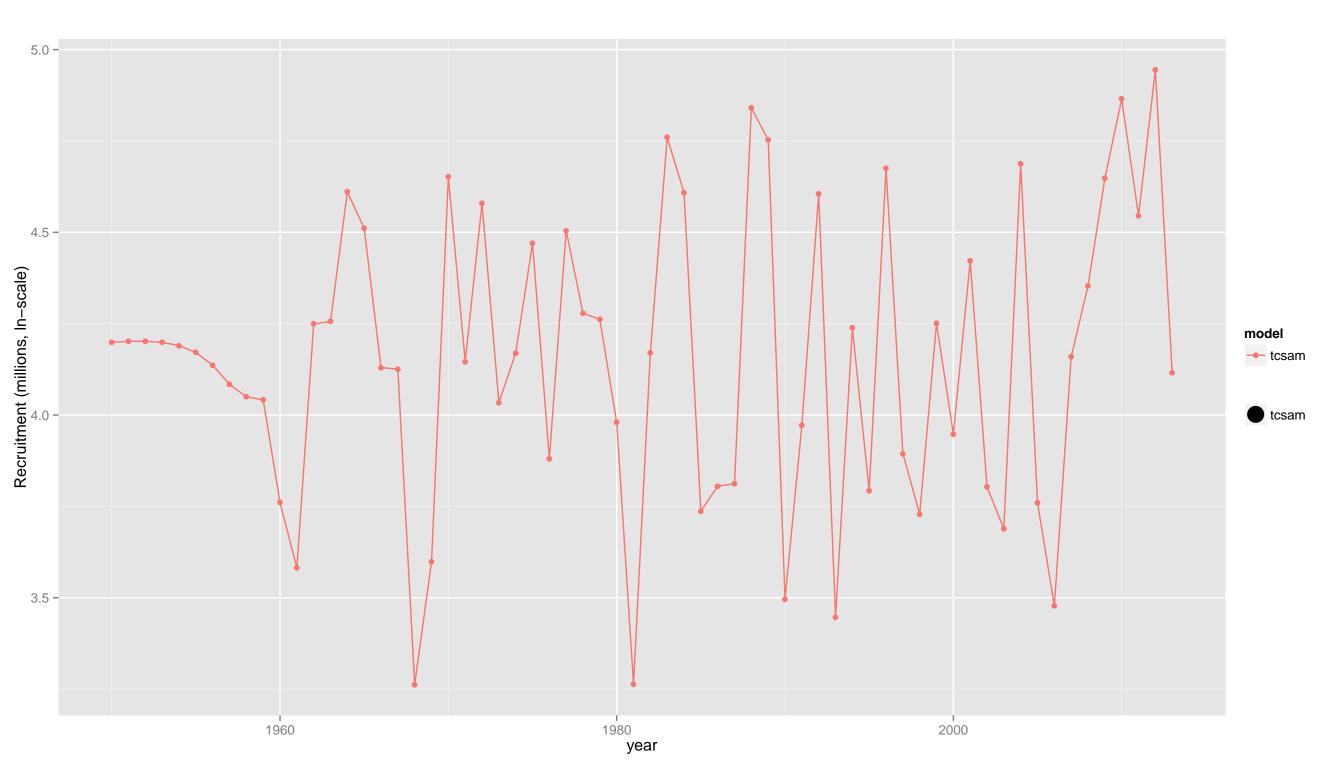


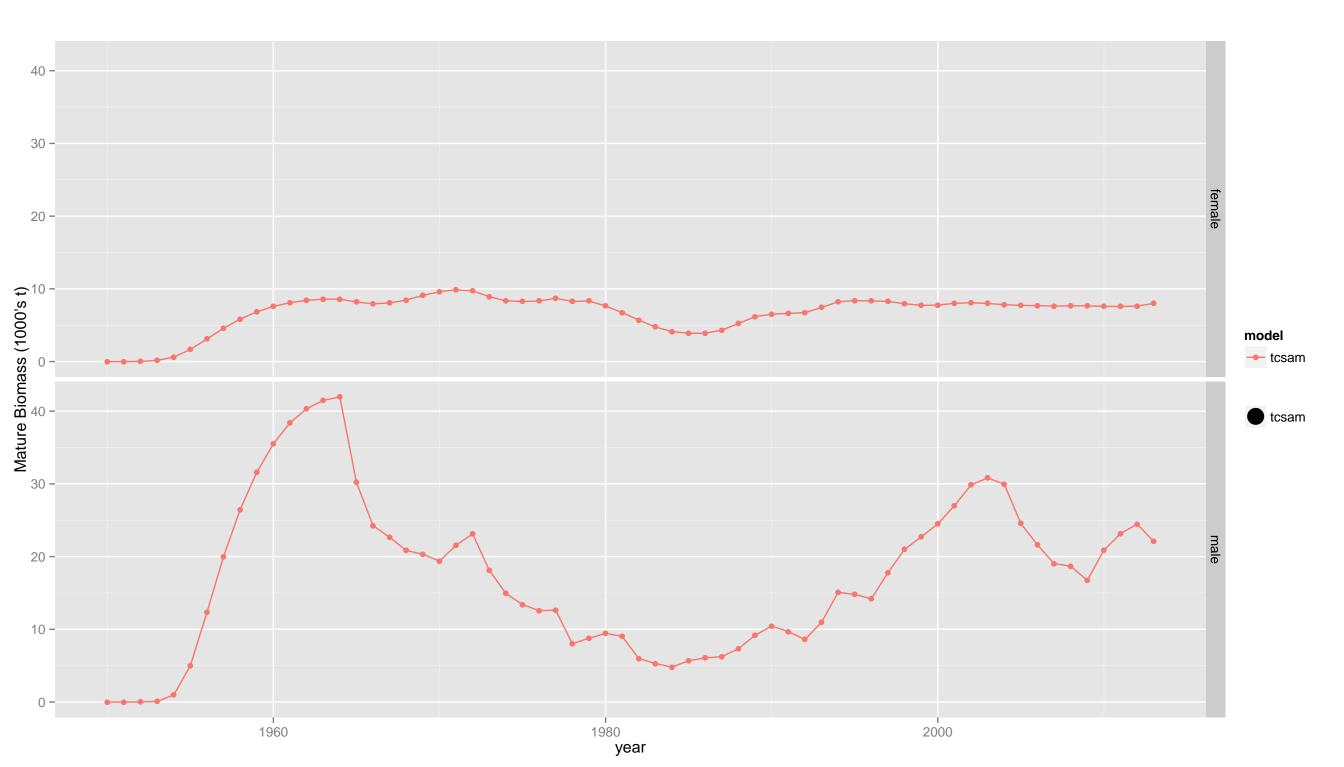
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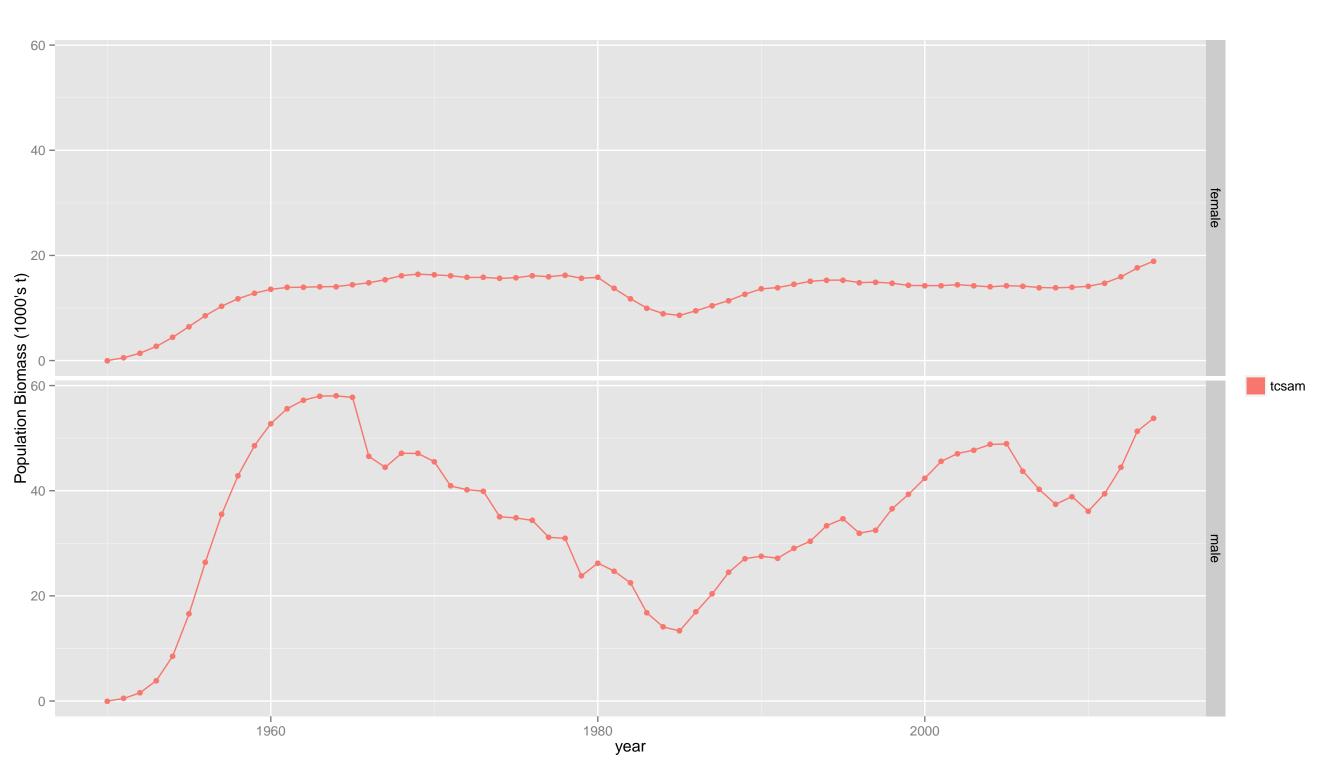


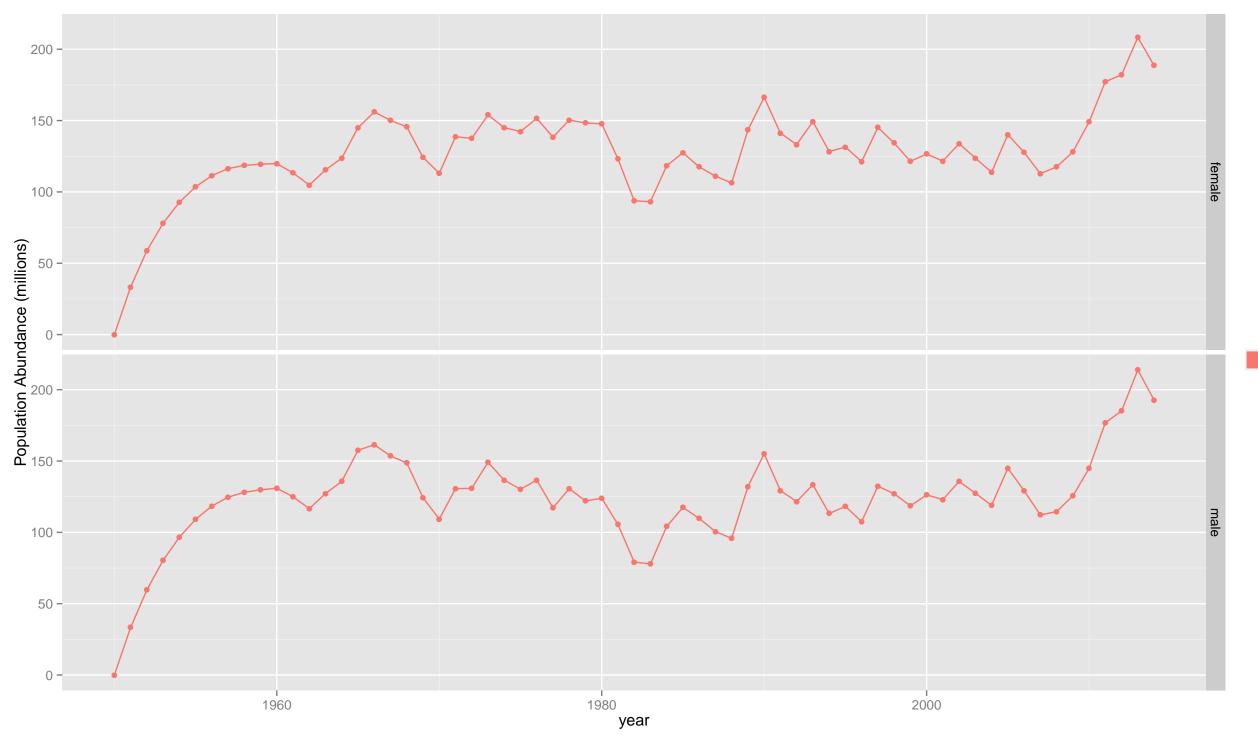






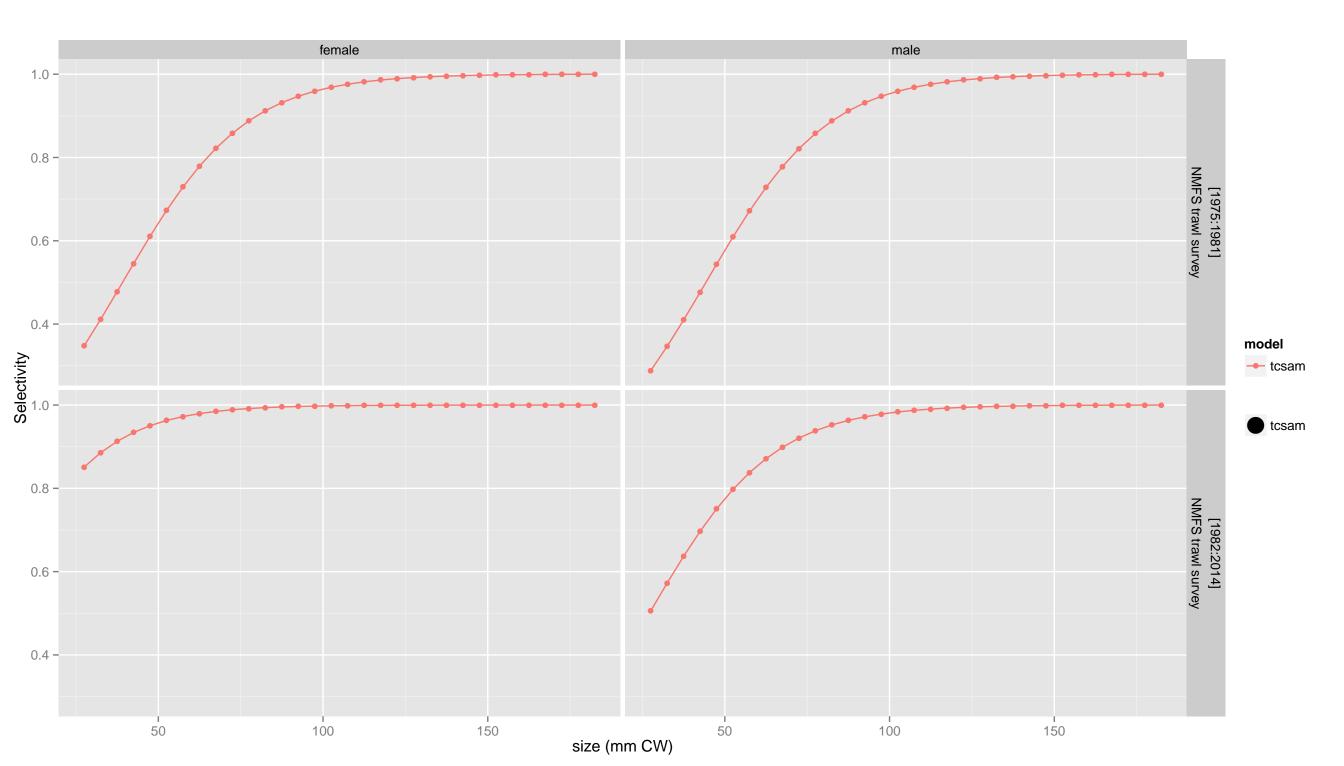


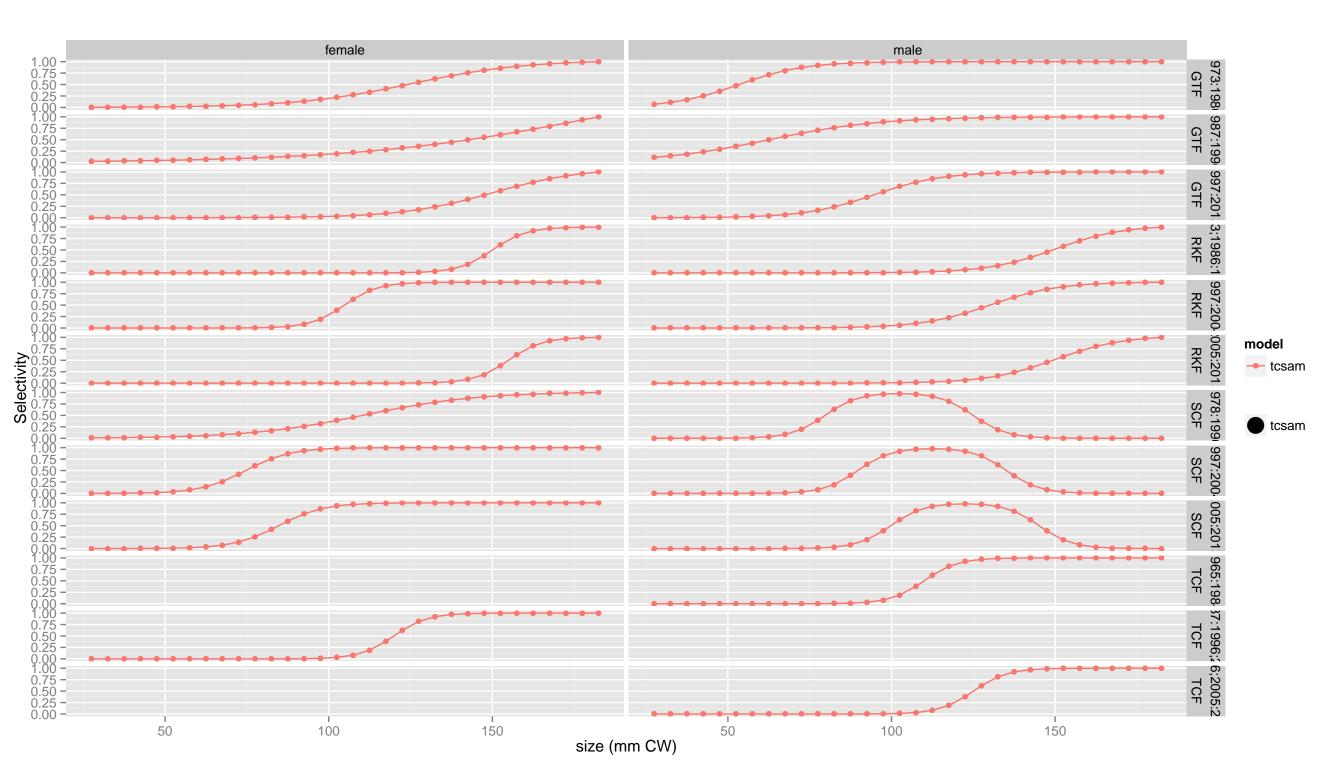


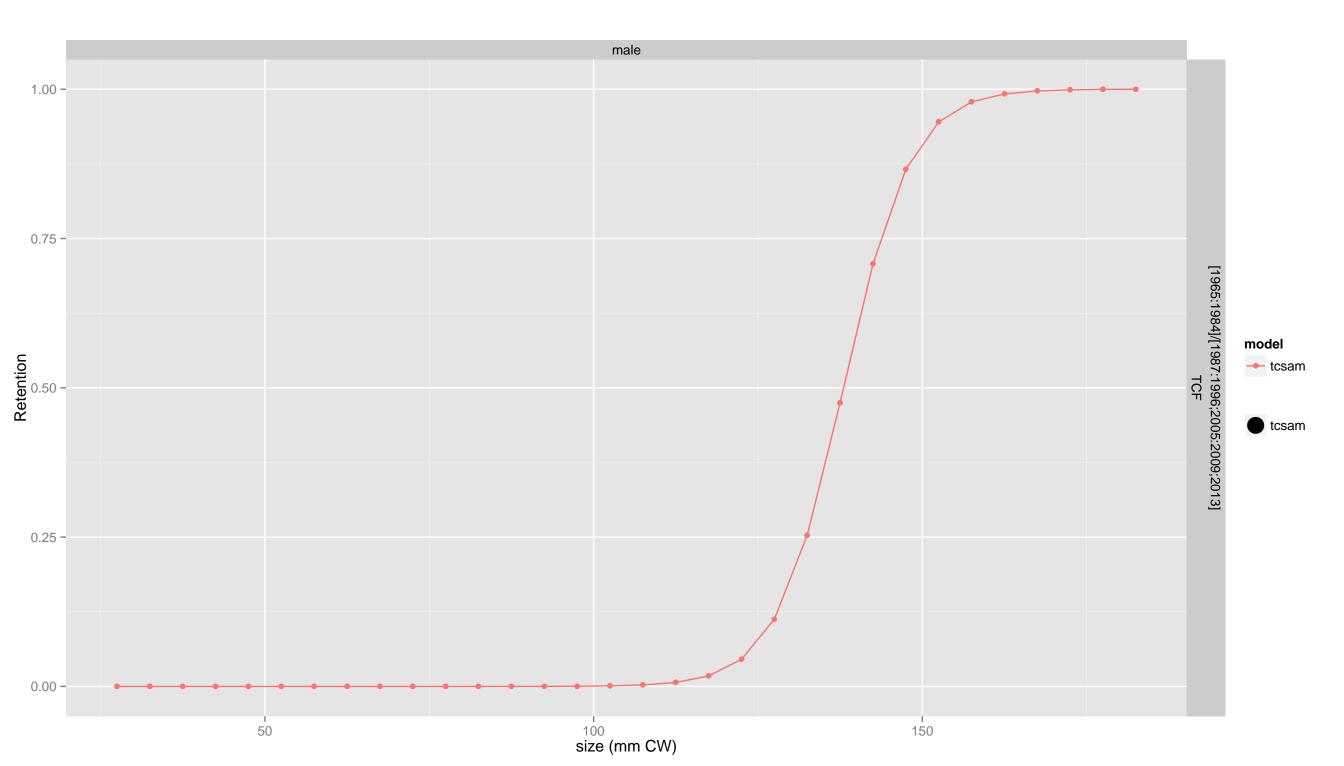


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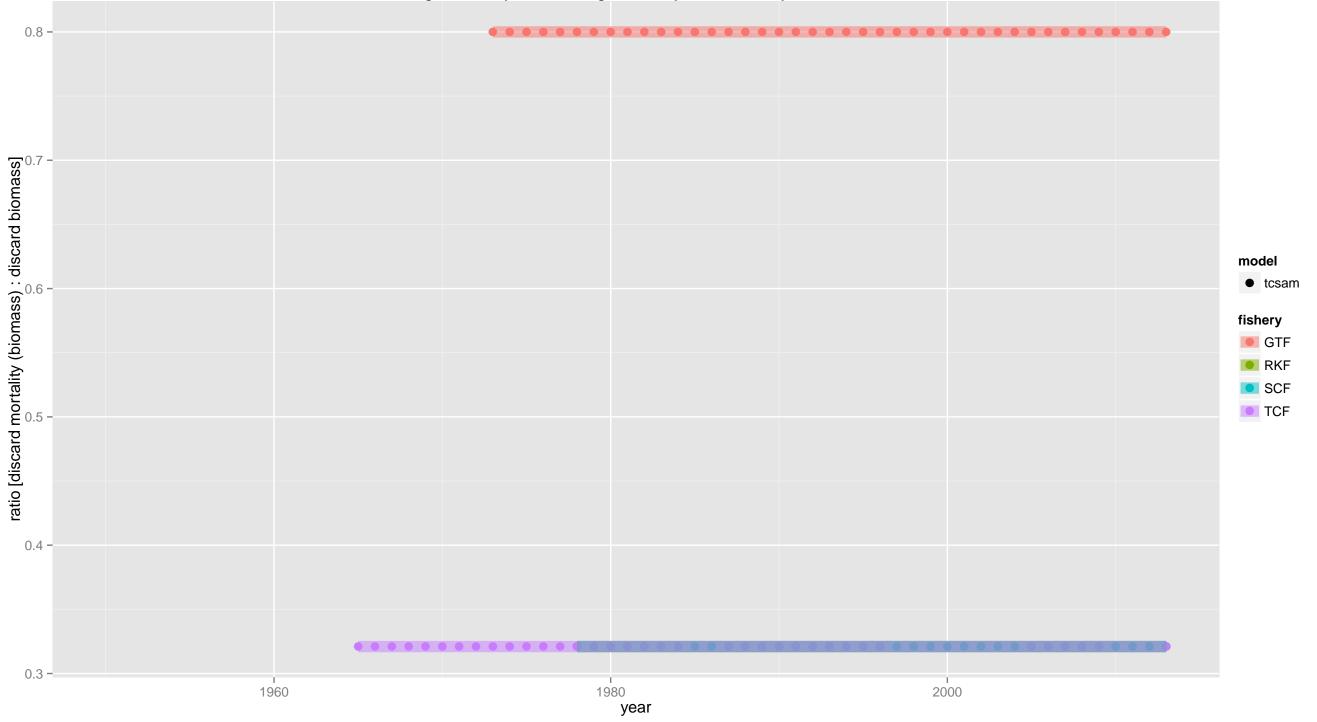
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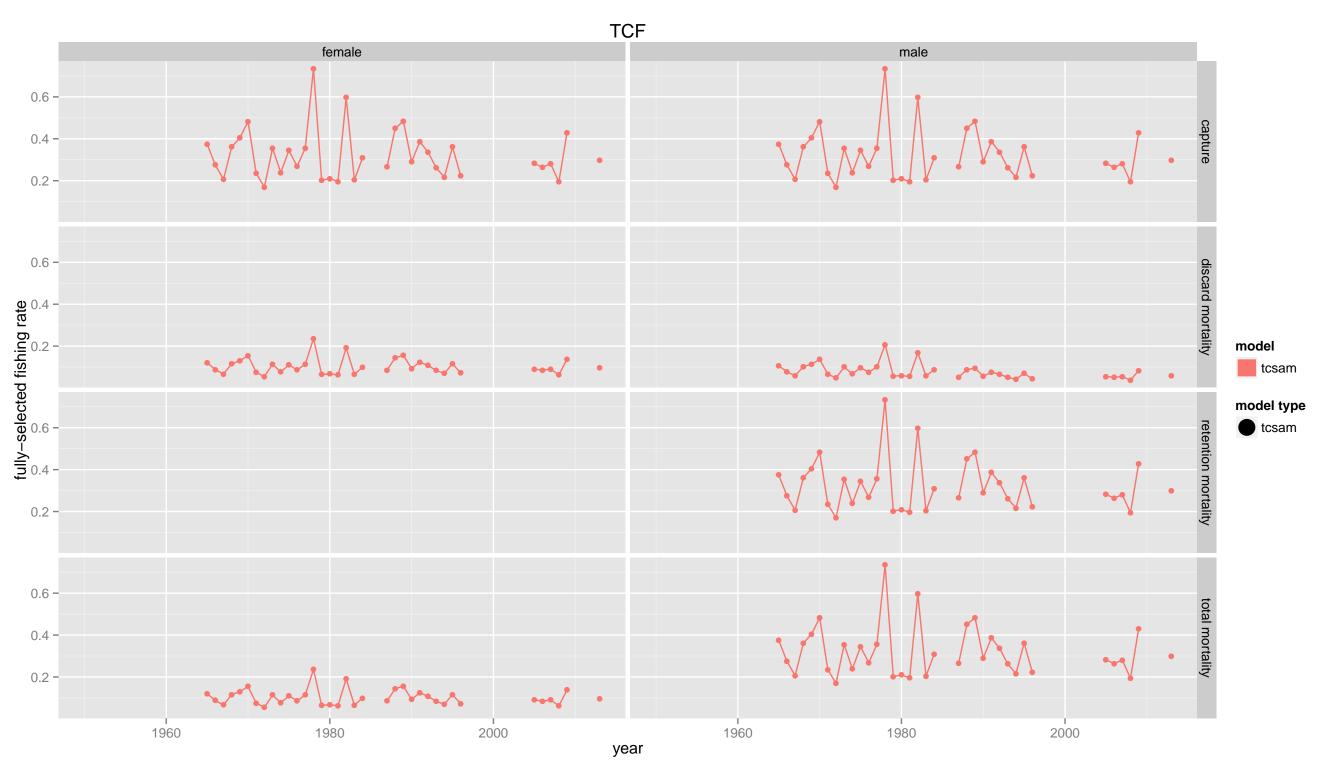


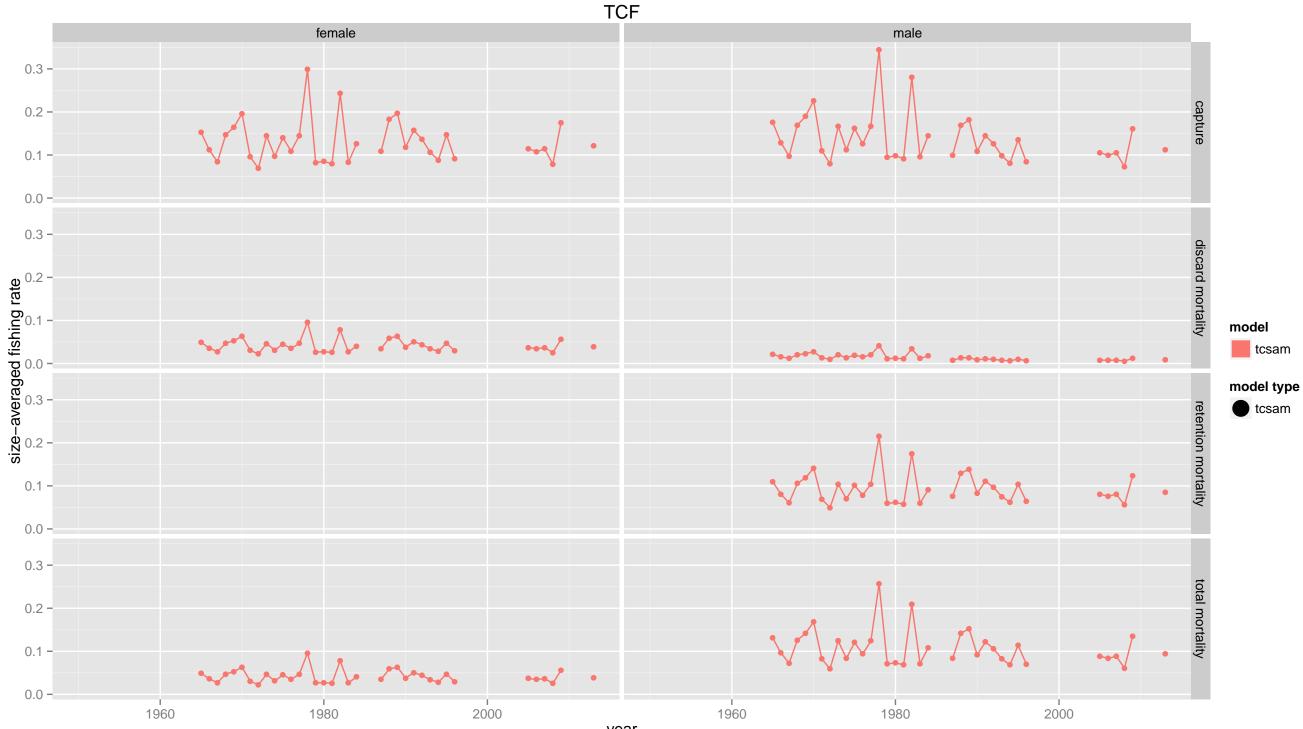


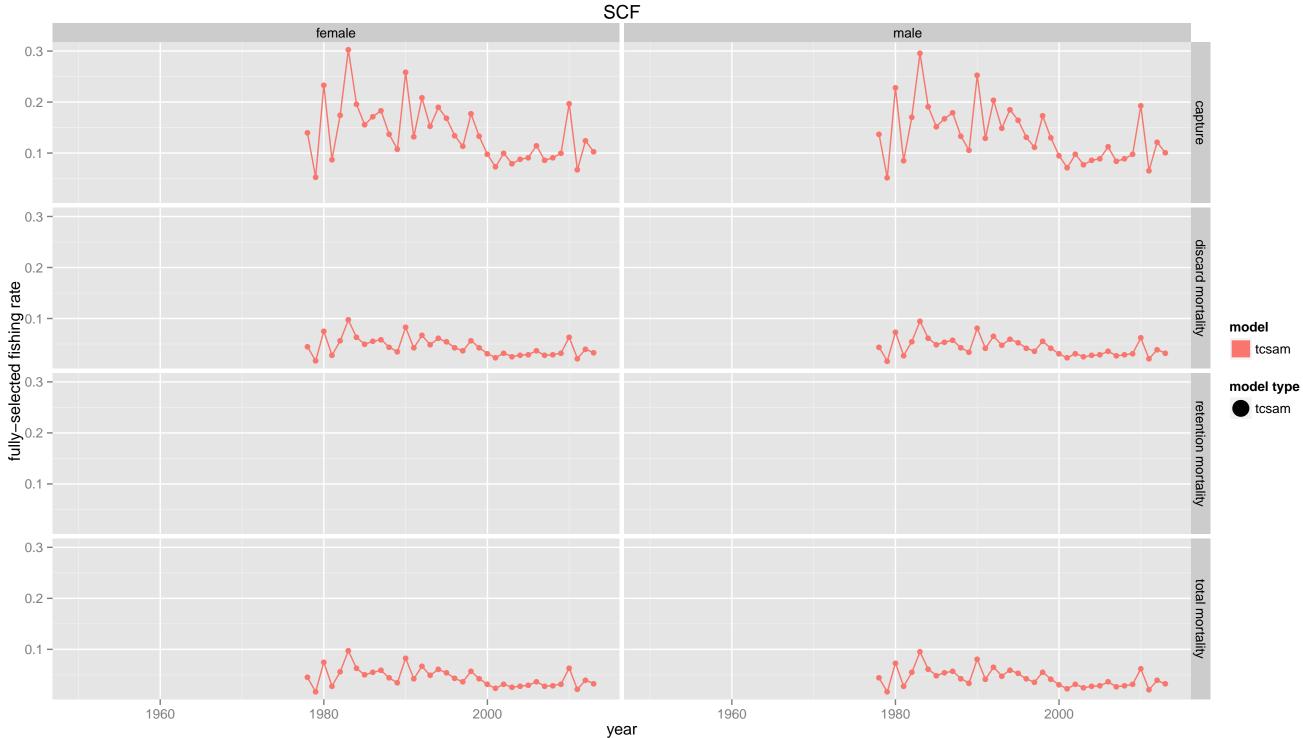


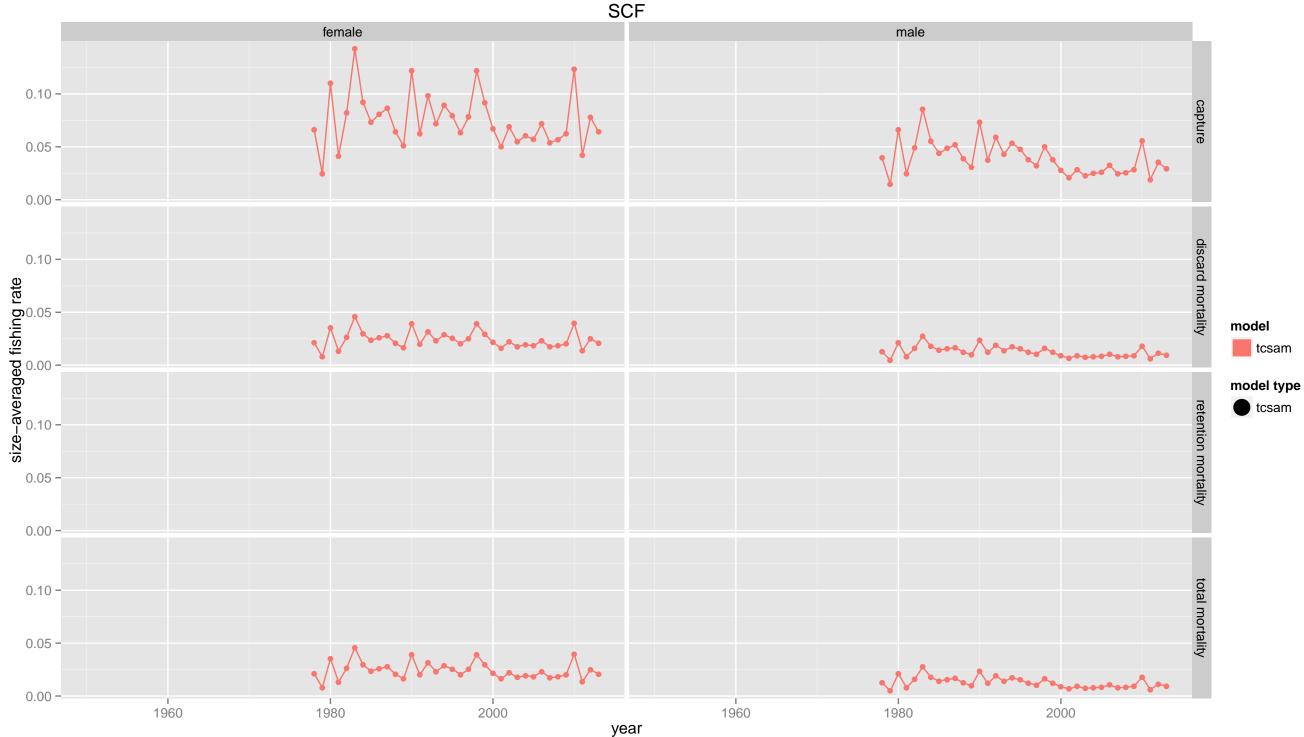
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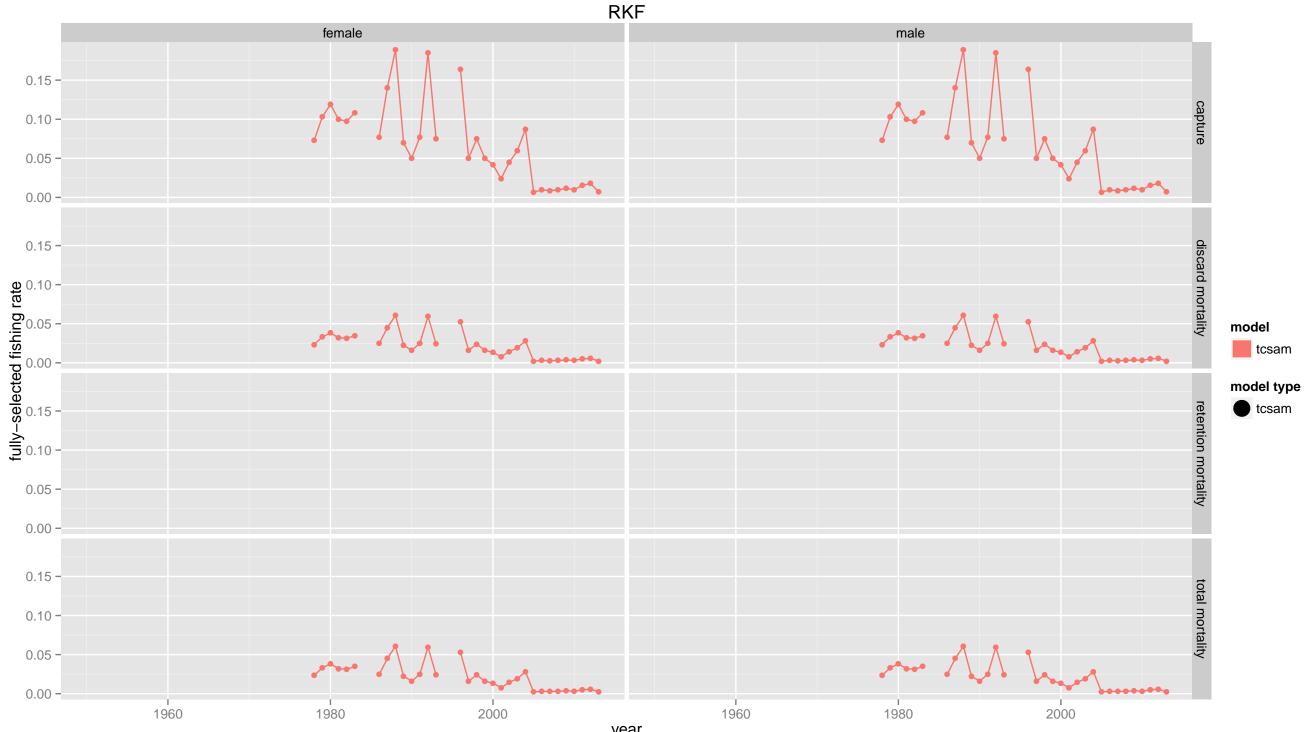


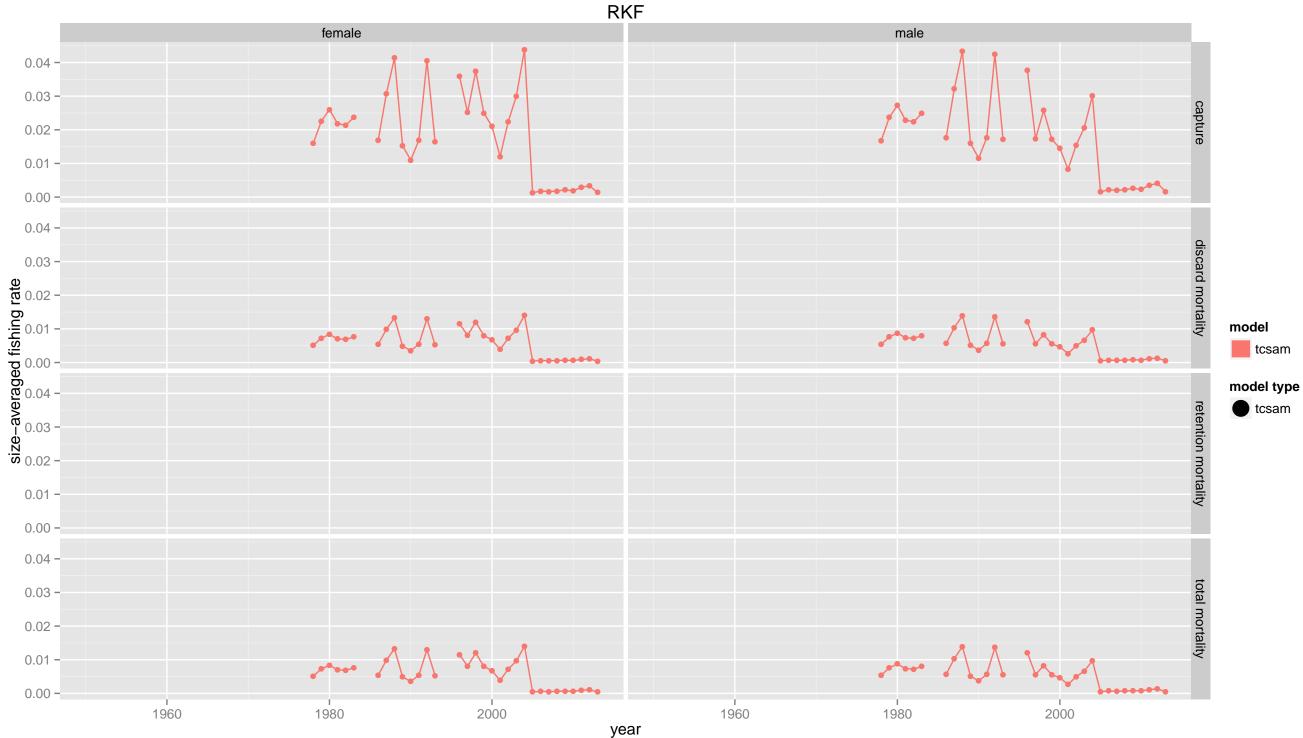


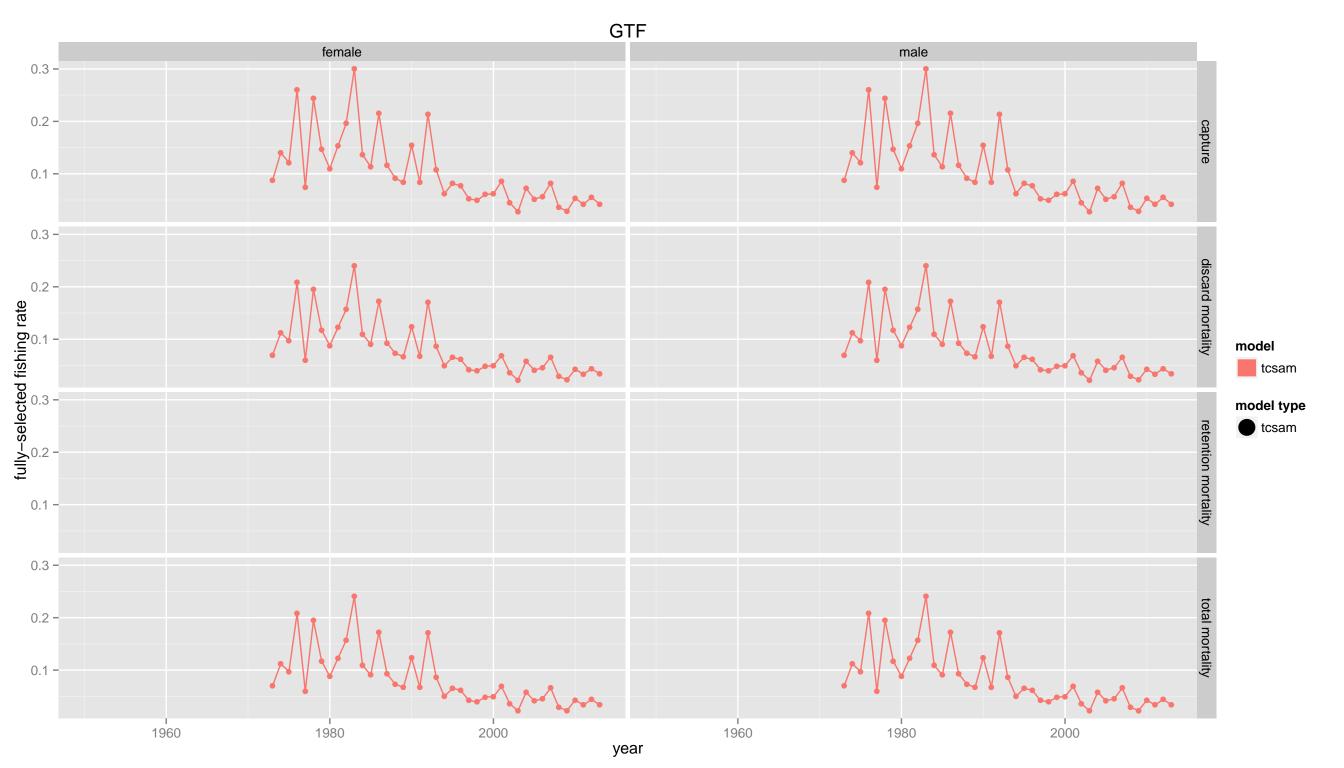


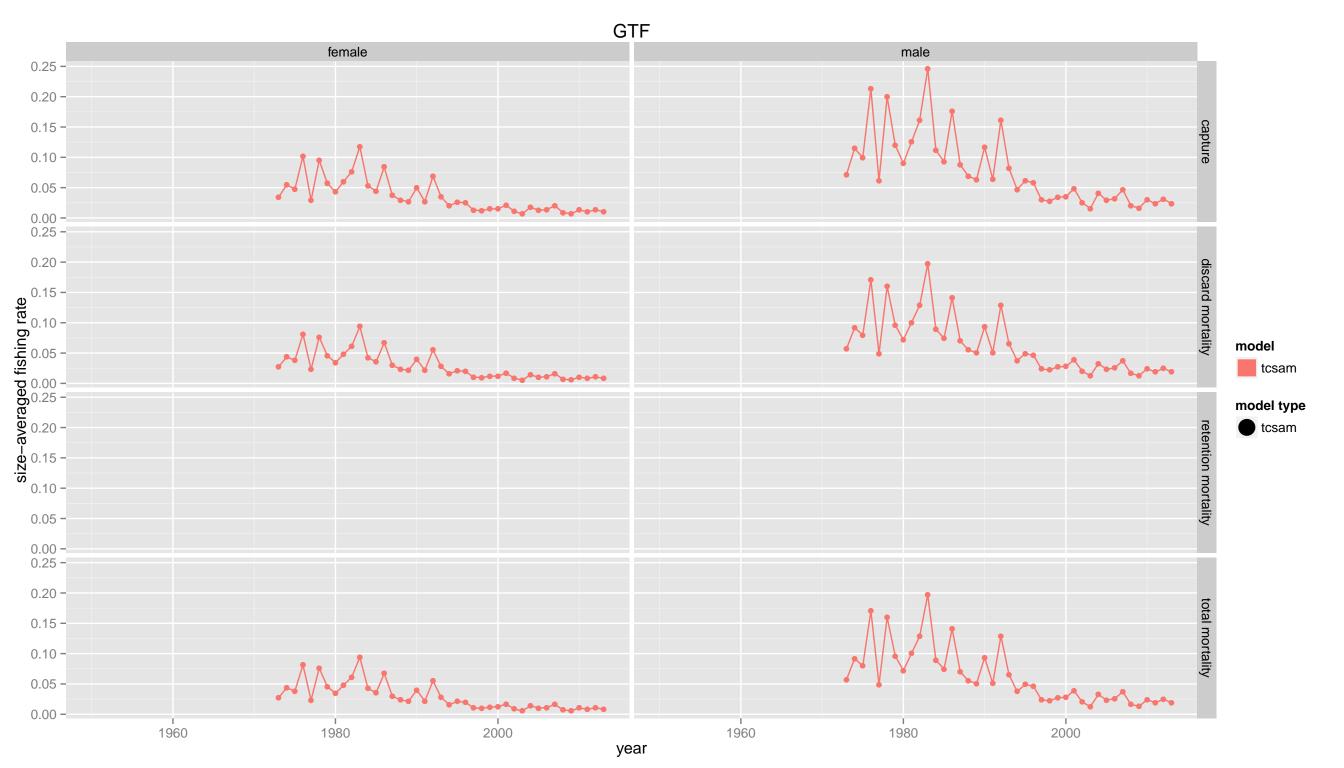


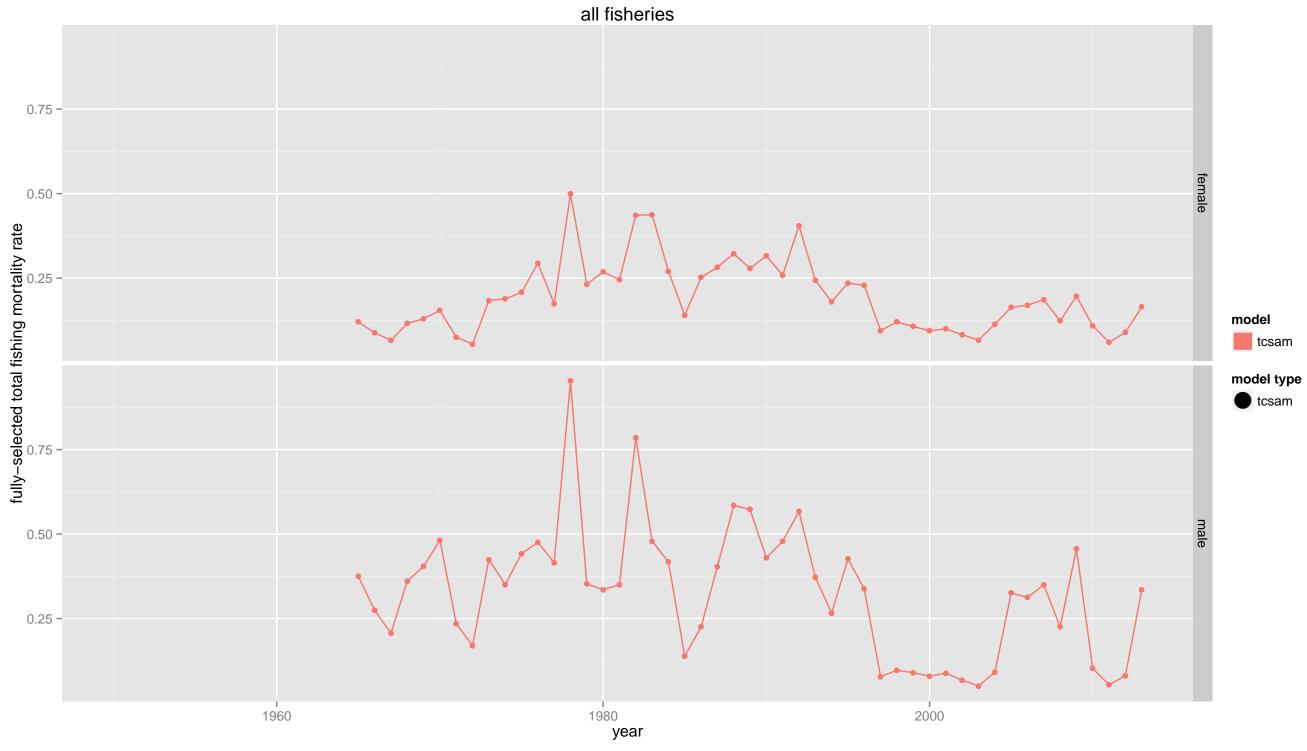


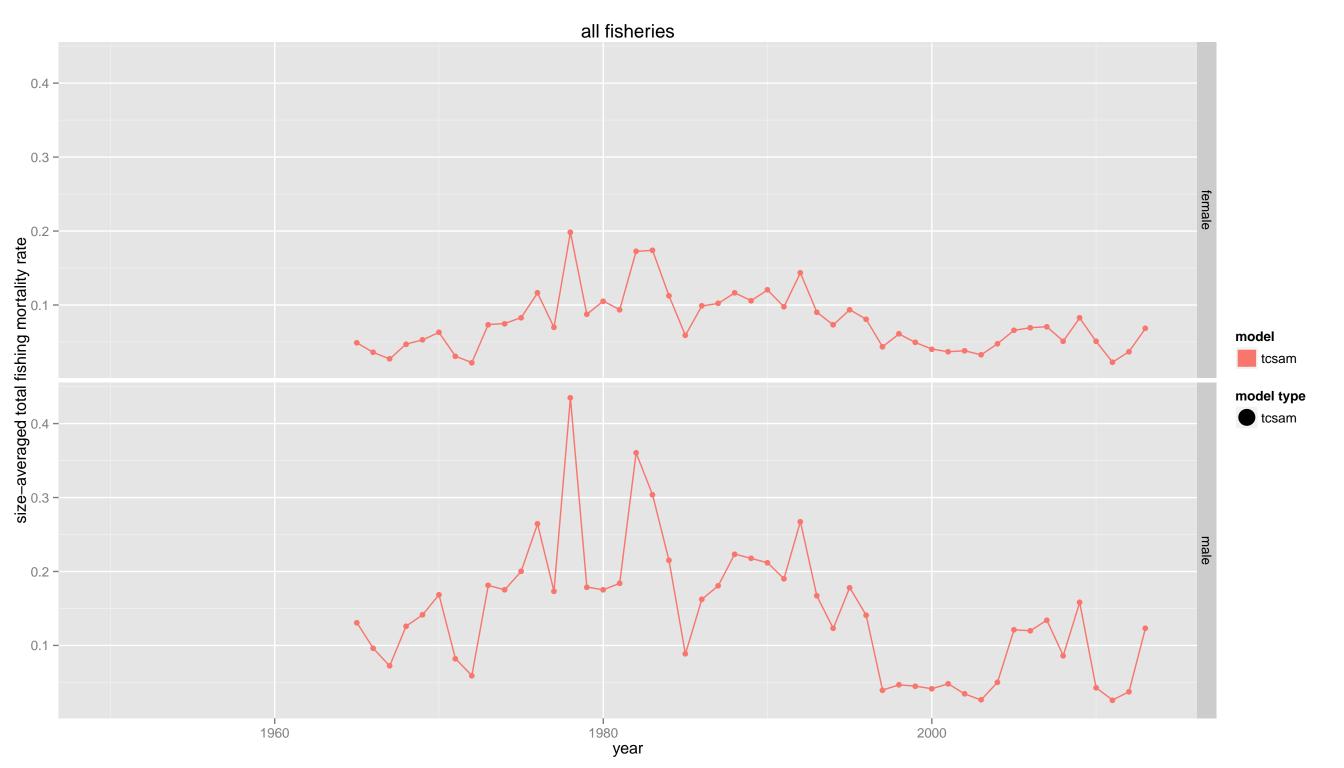


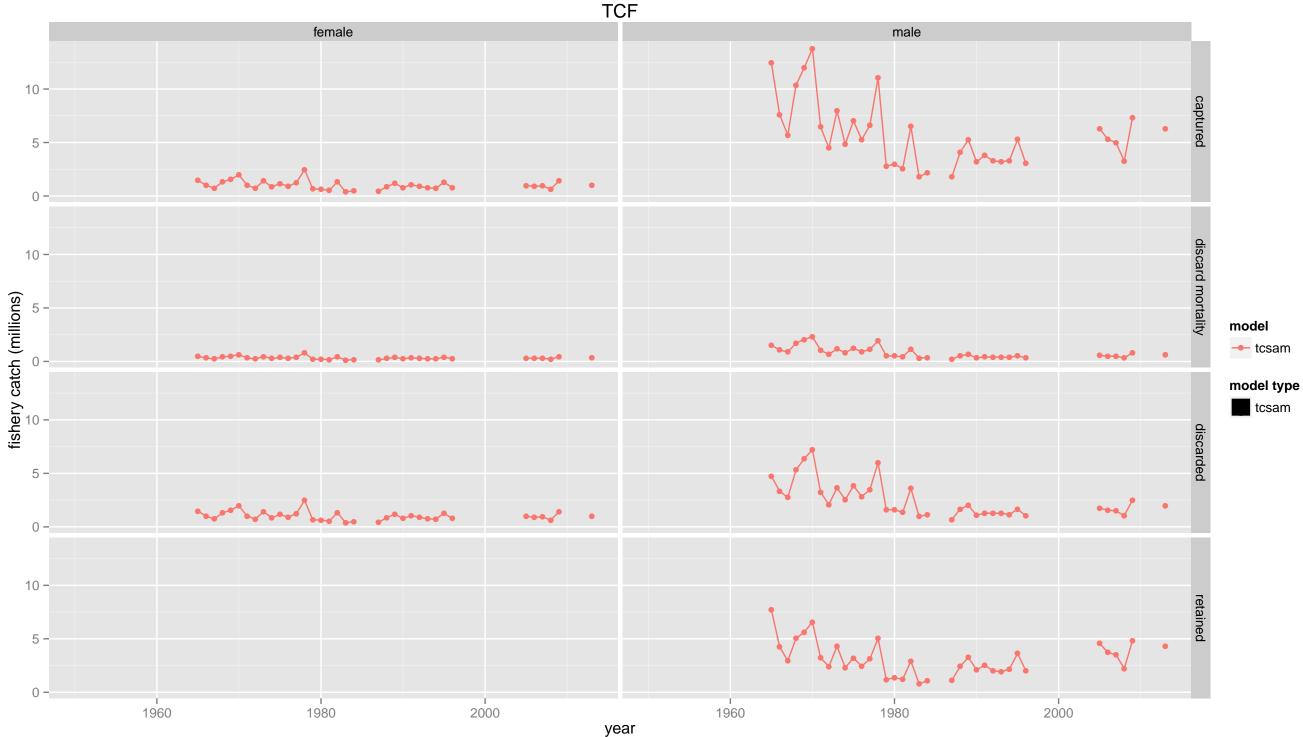


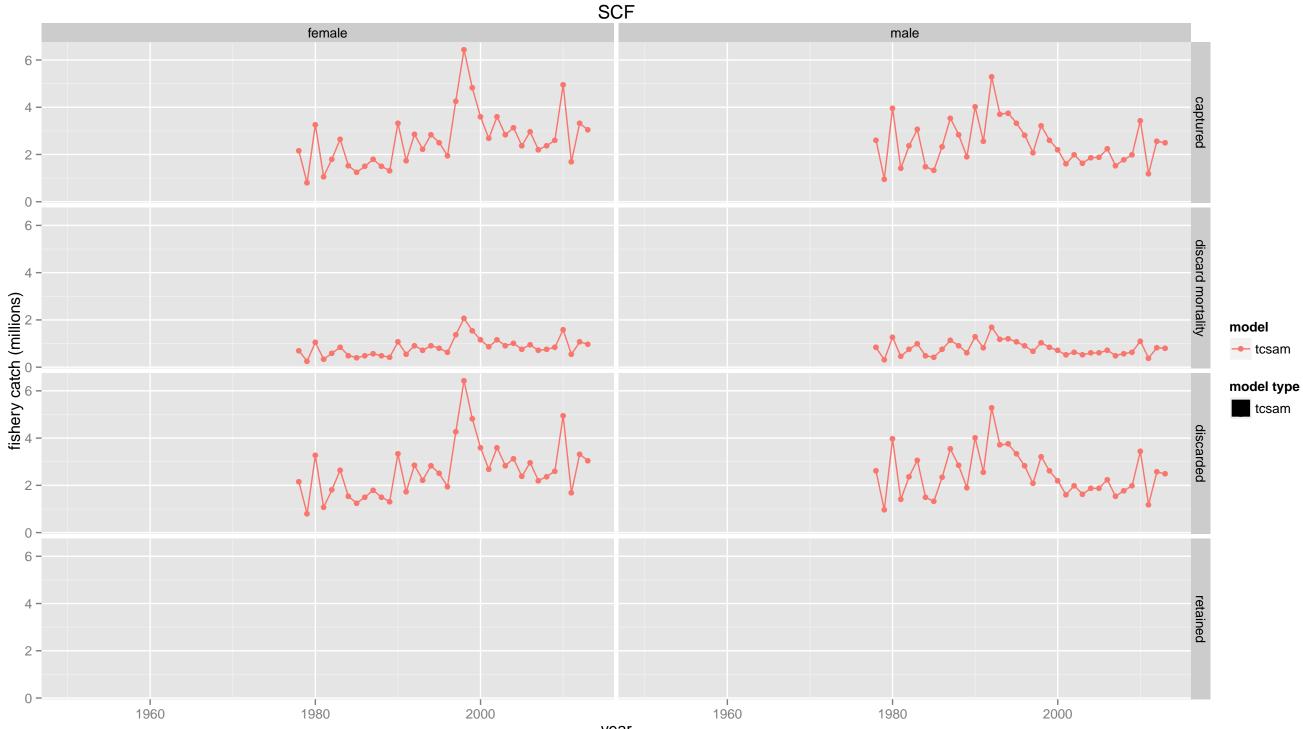


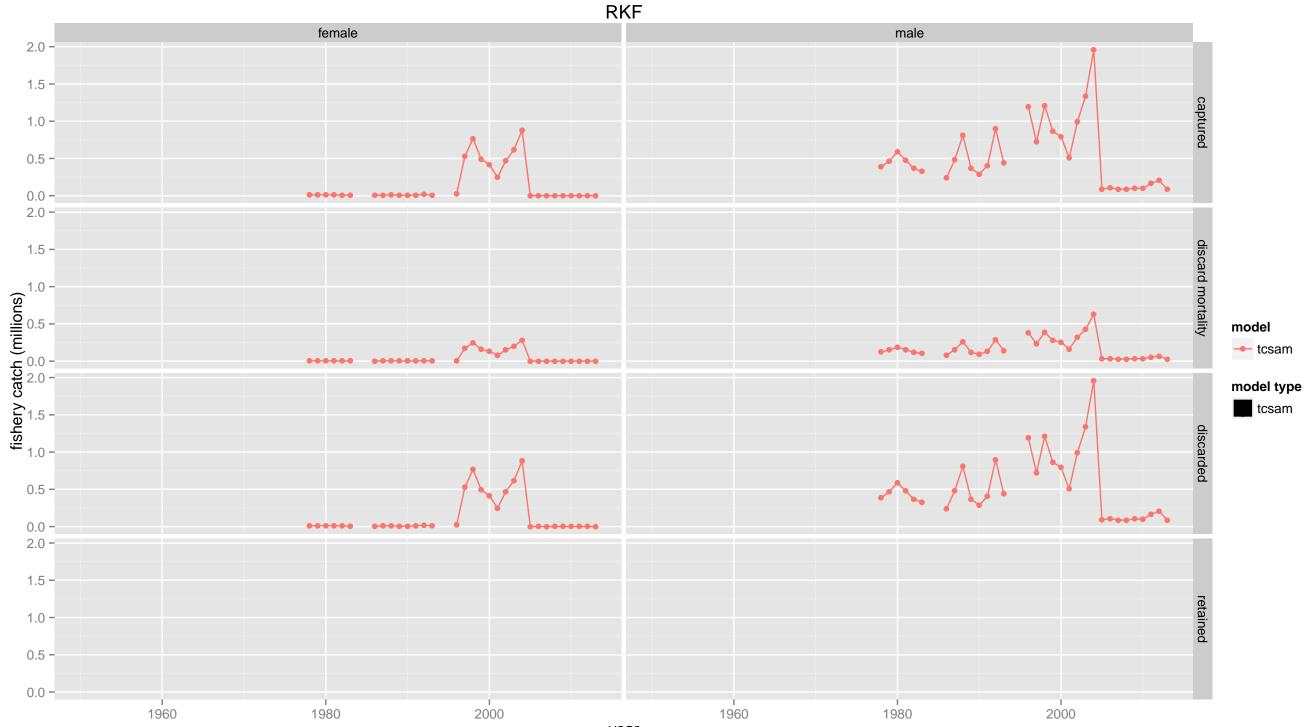


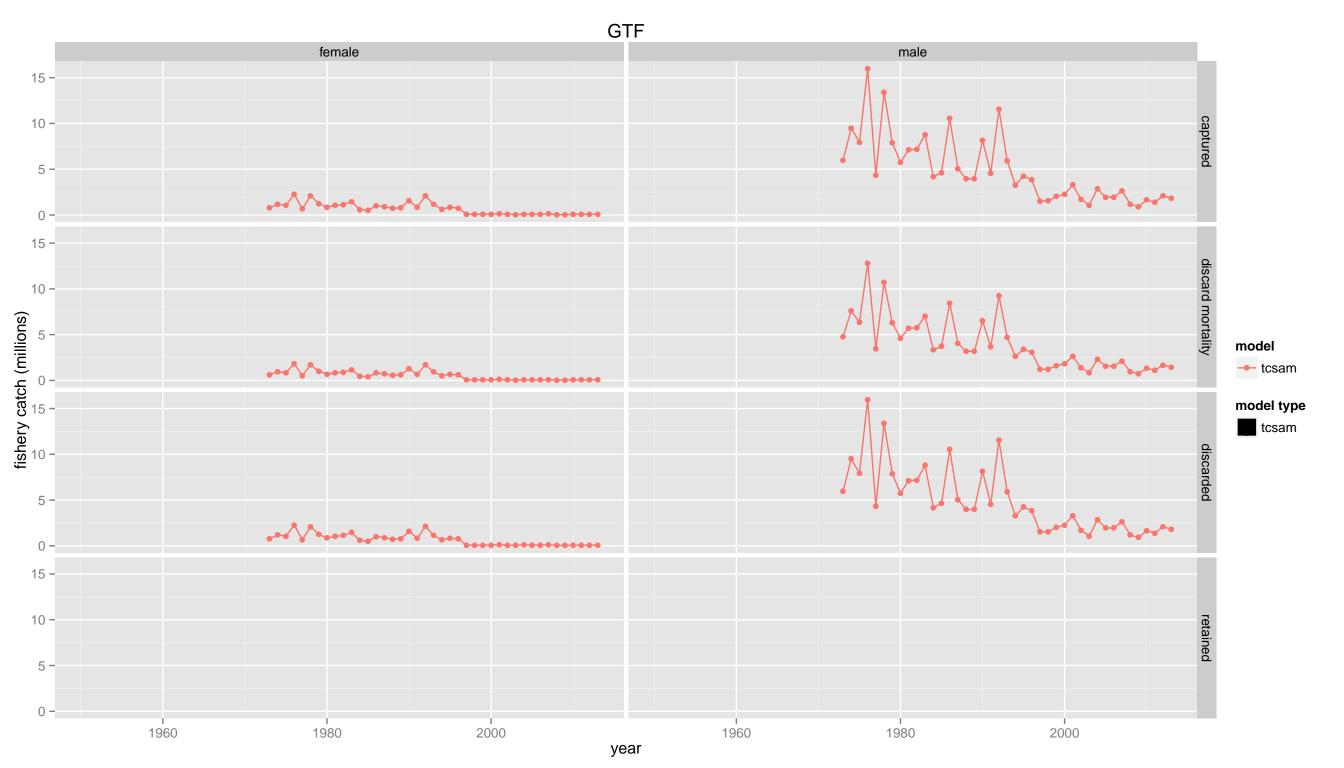


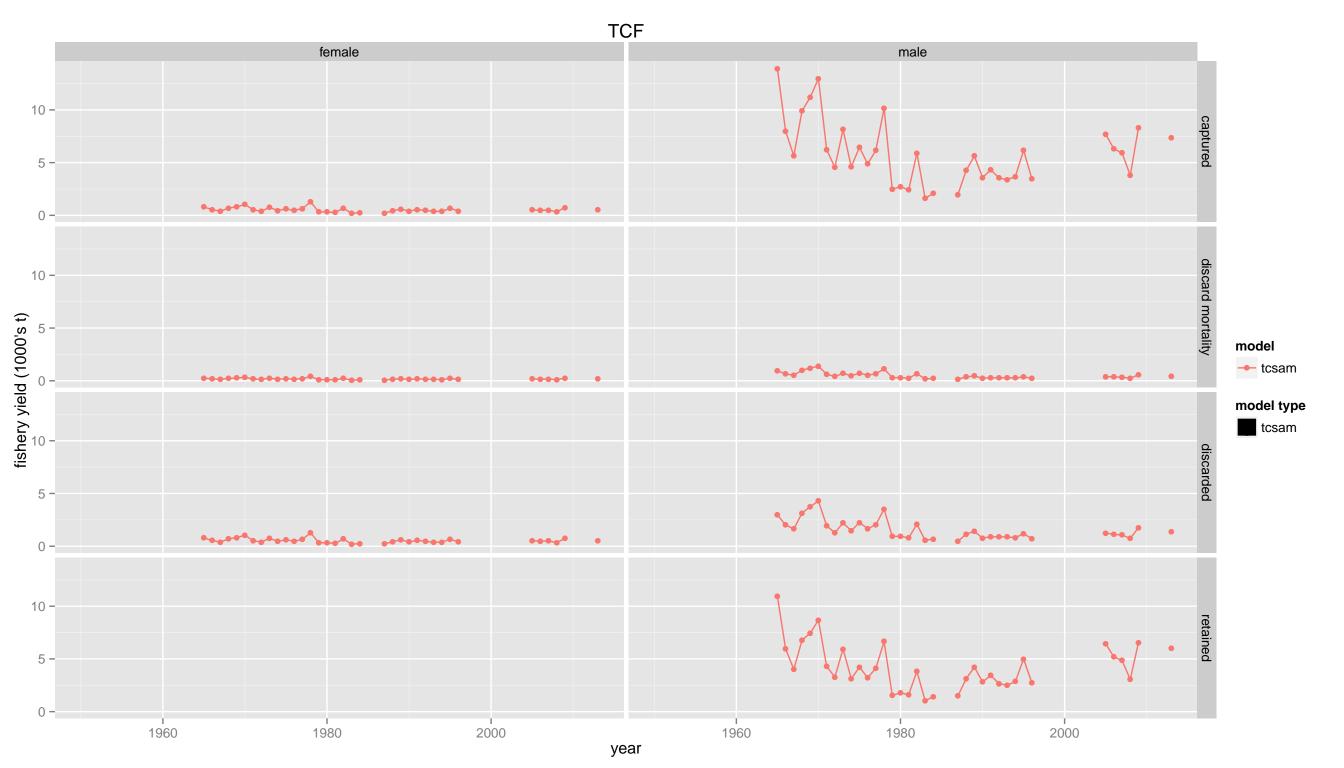




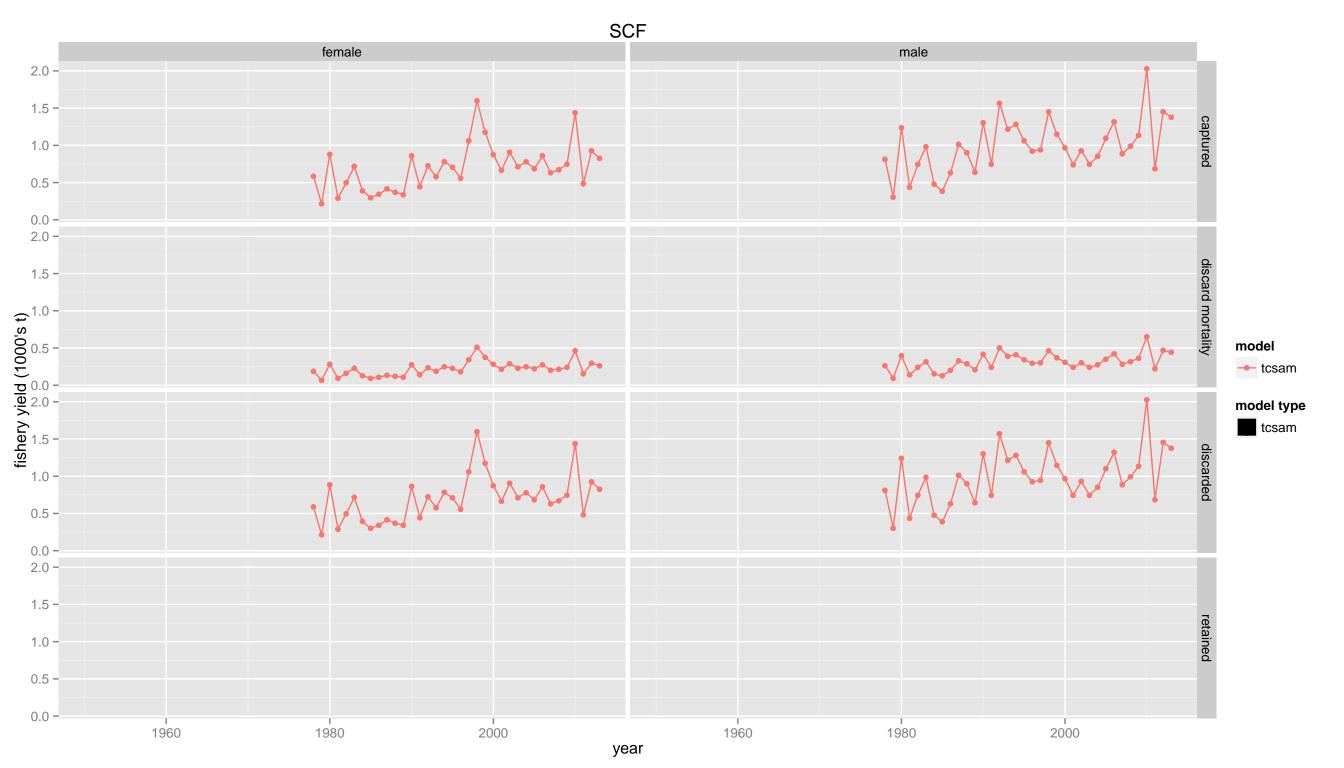


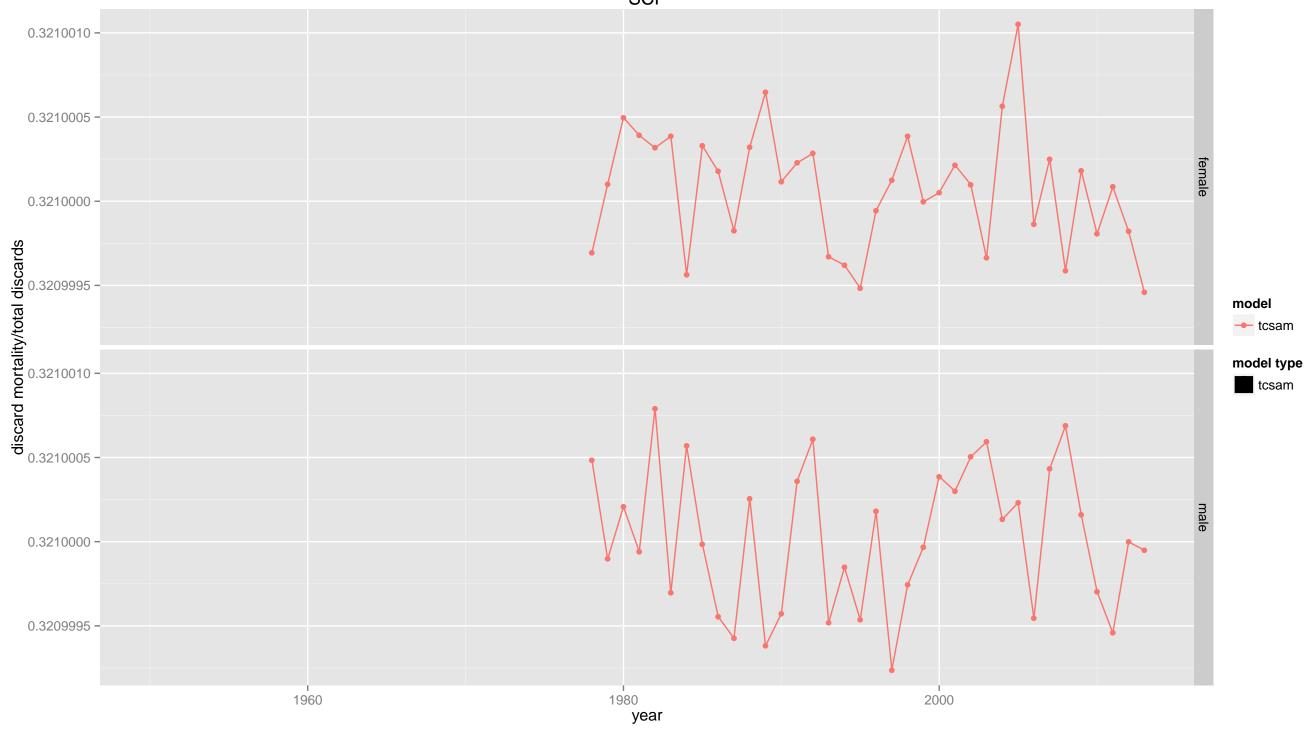




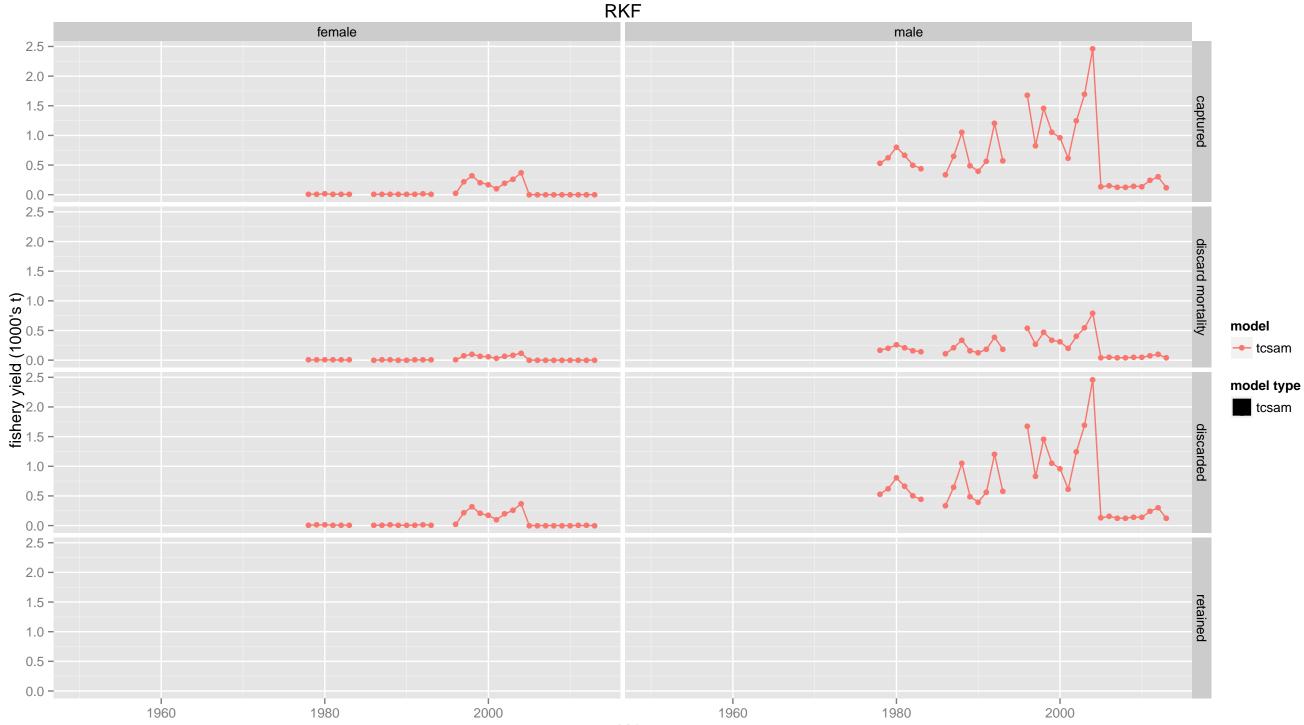


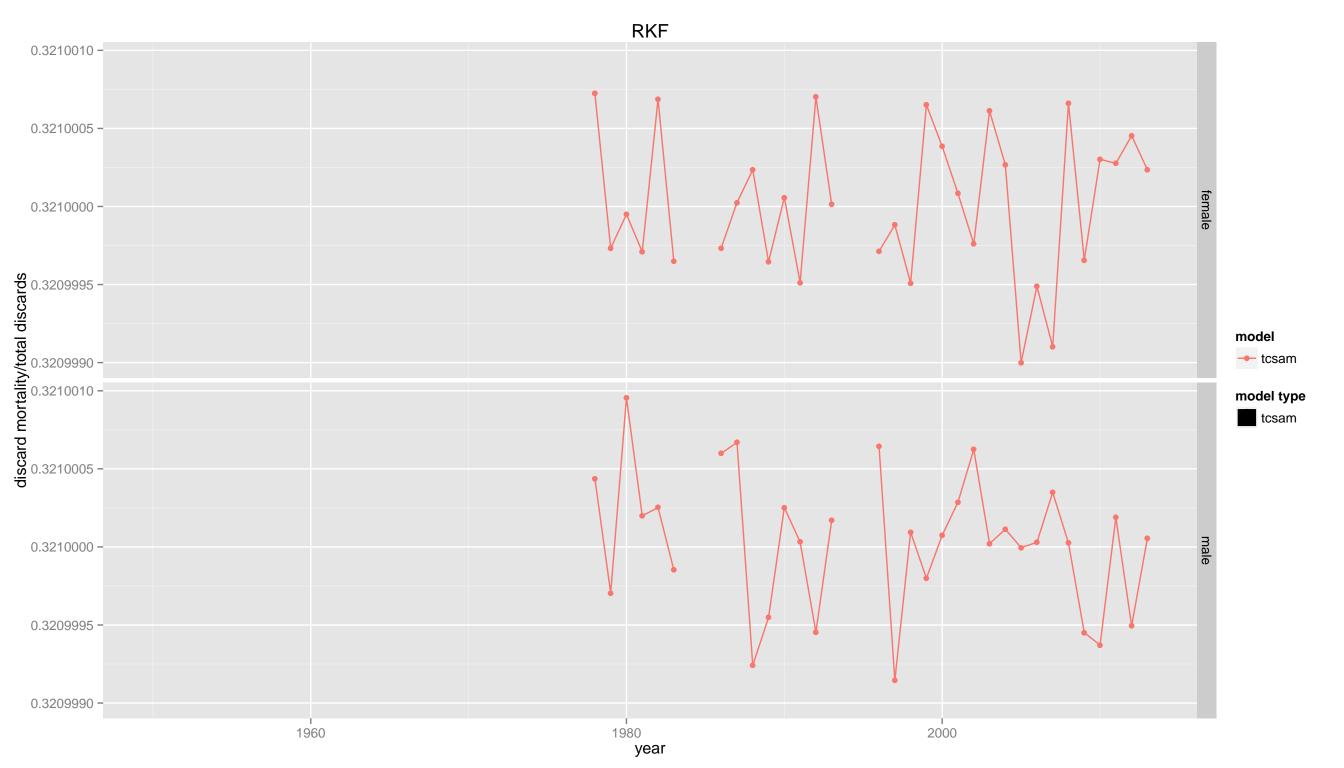


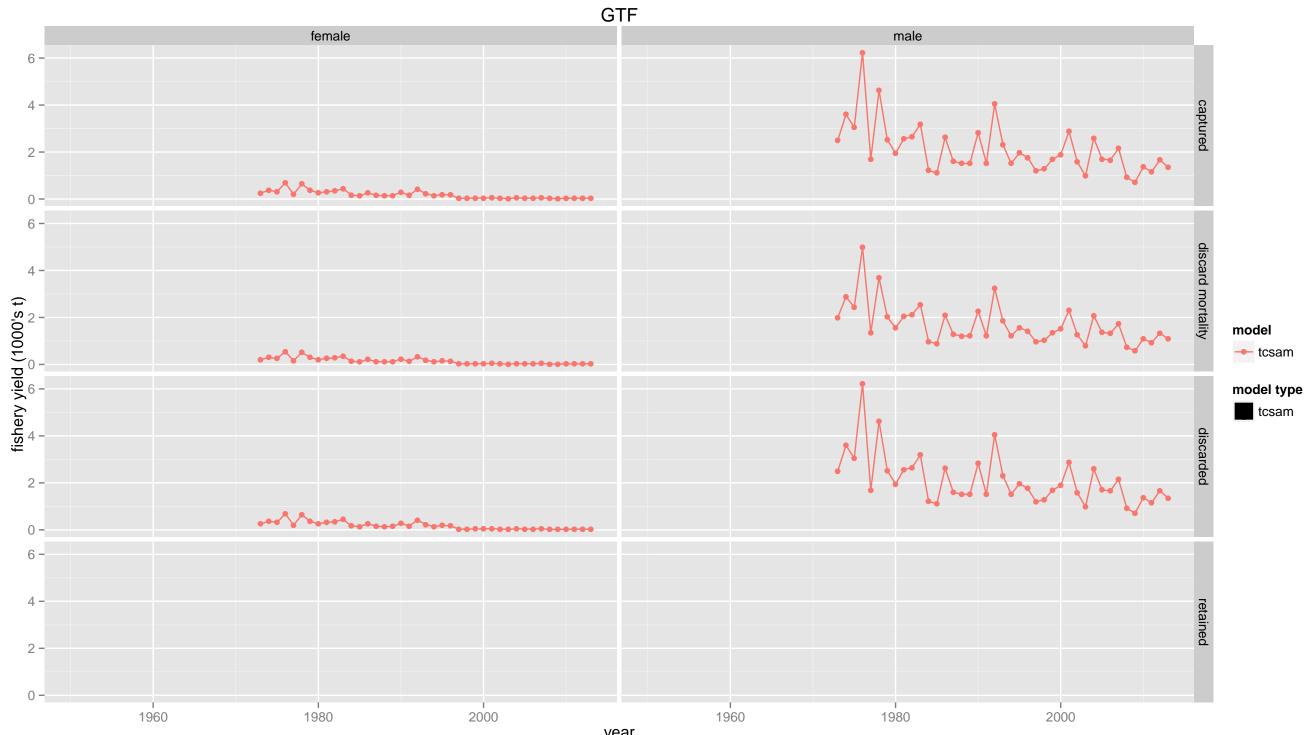


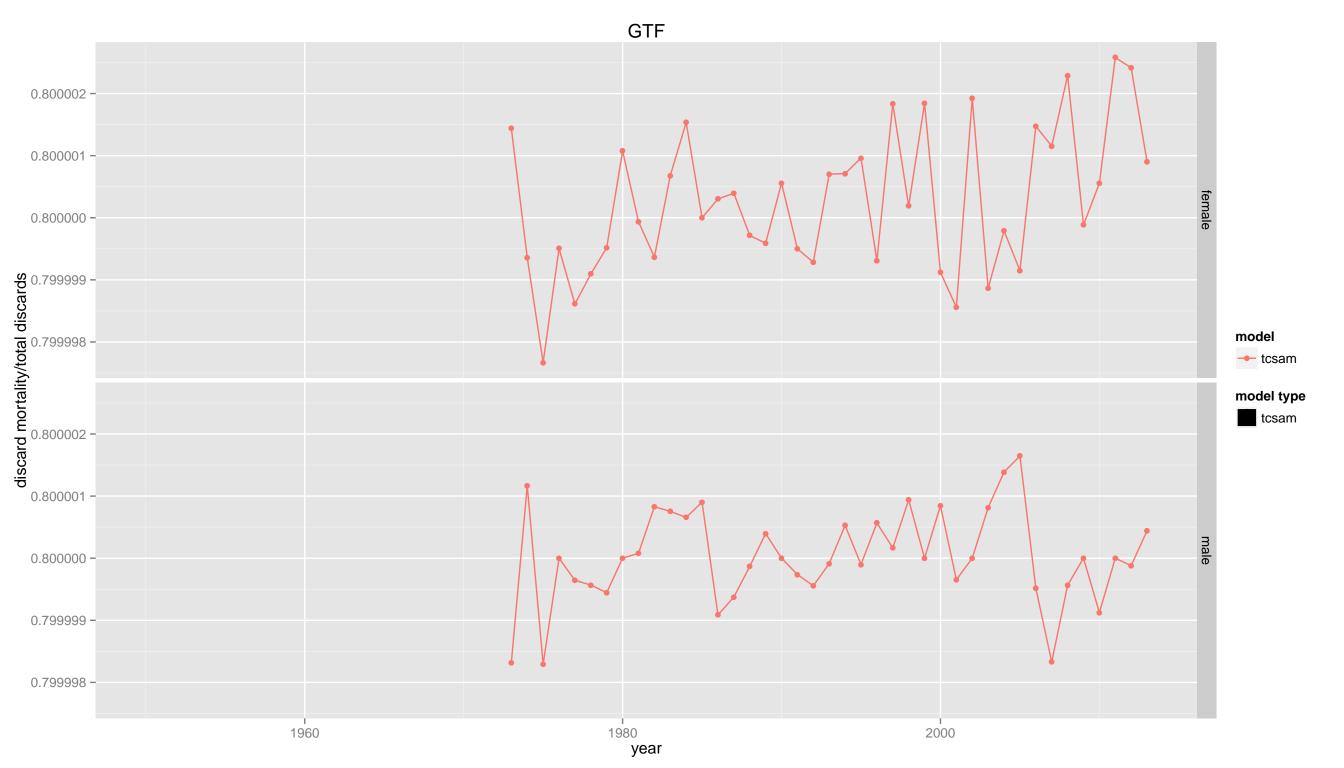


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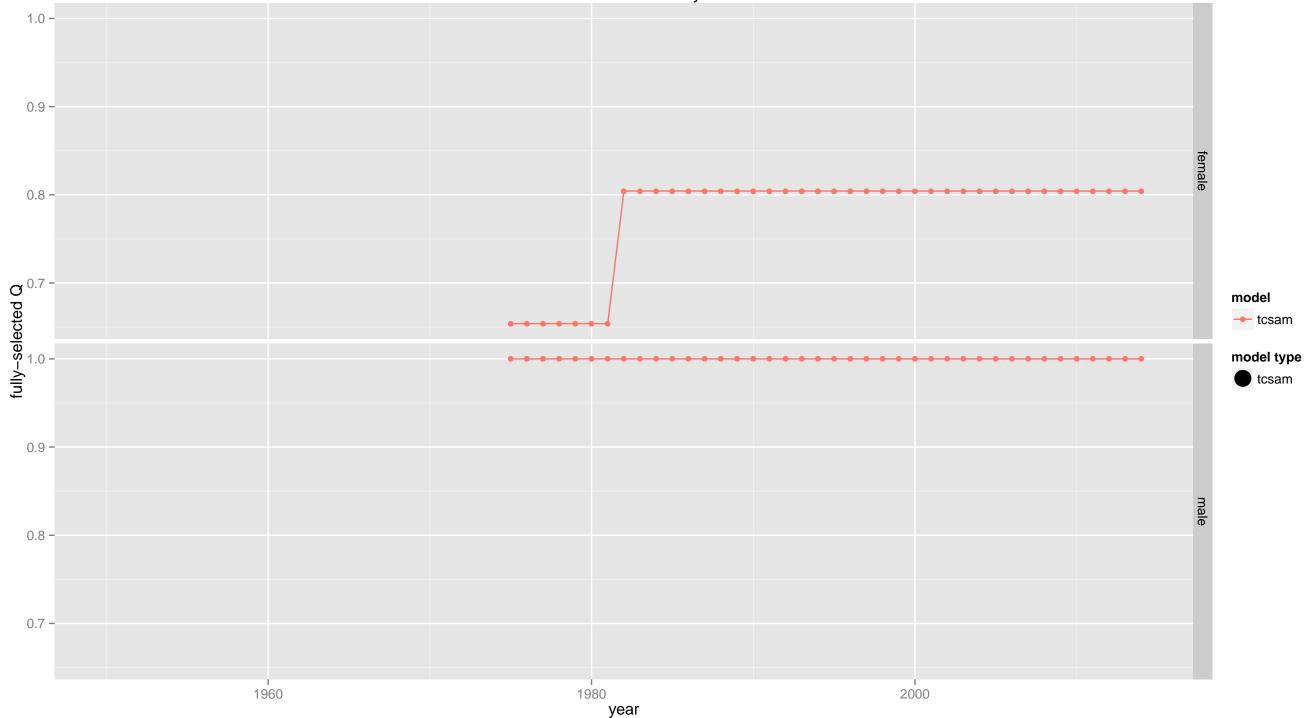




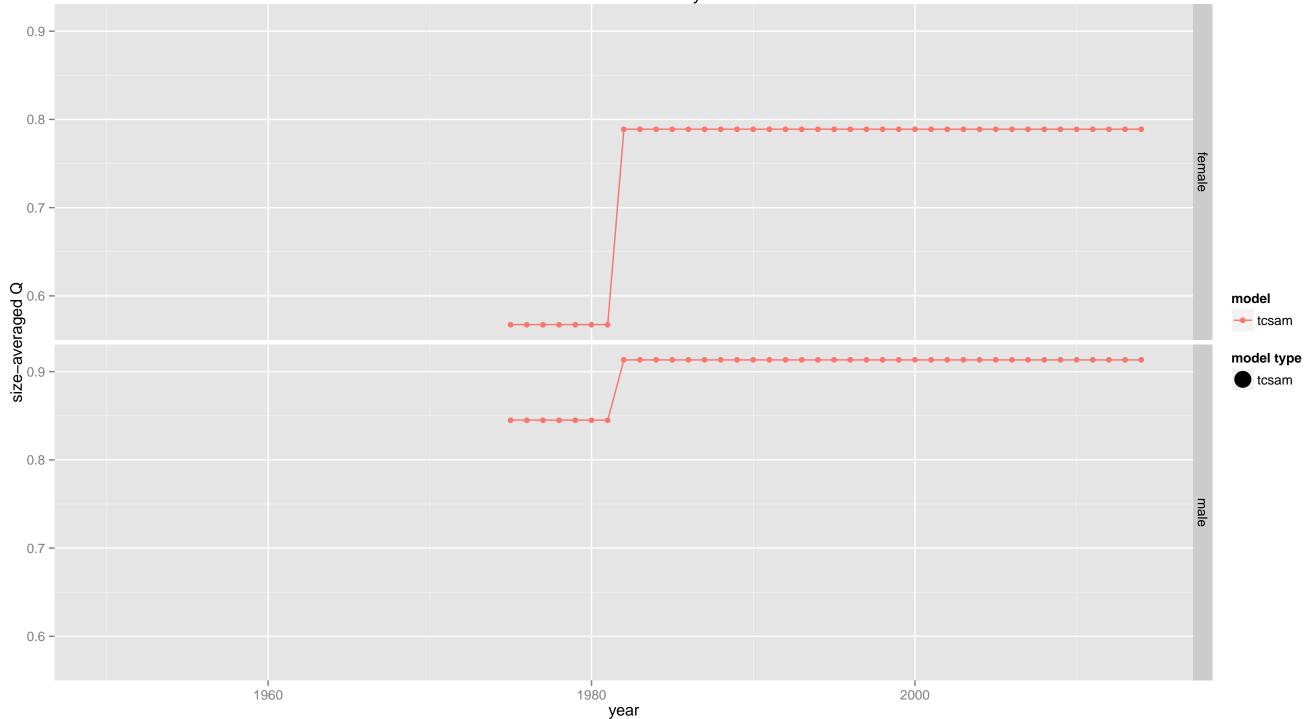


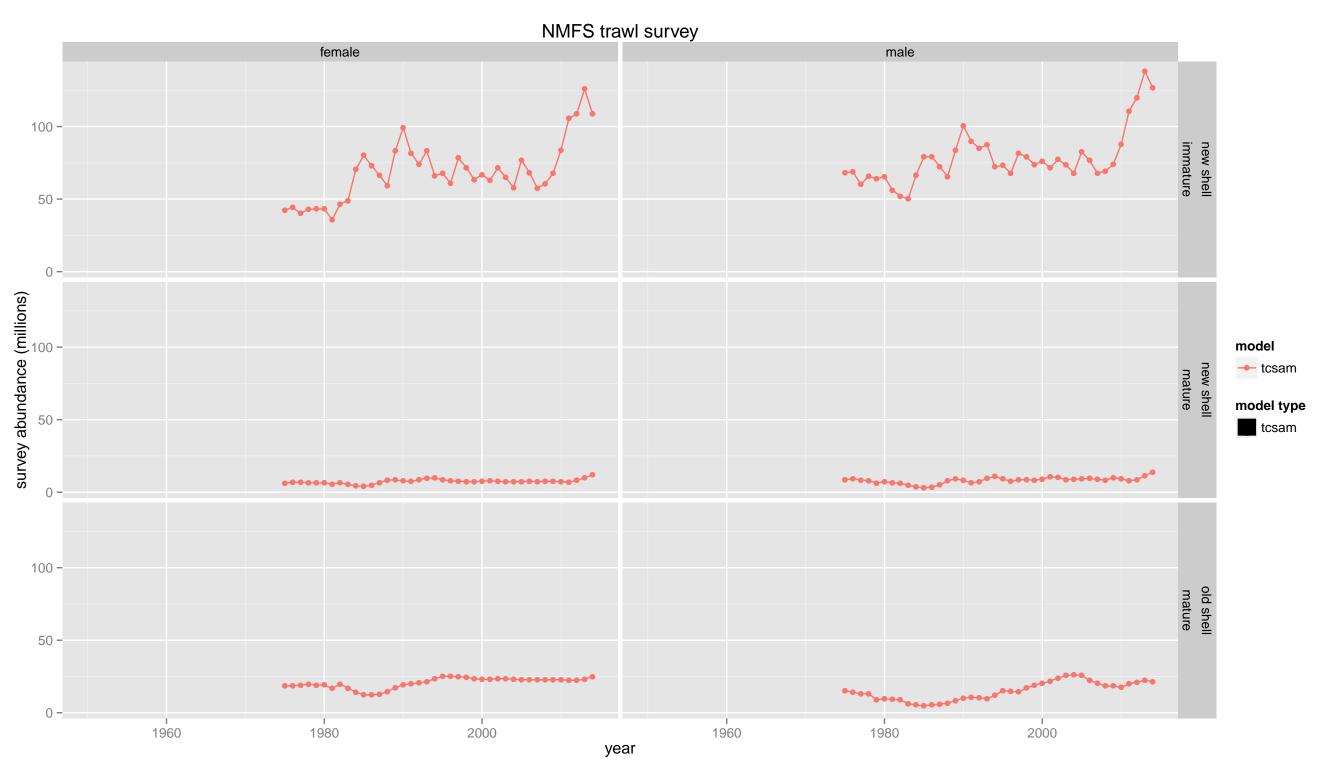


NMFS trawl survey



NMFS trawl survey





NMFS trawl survey

