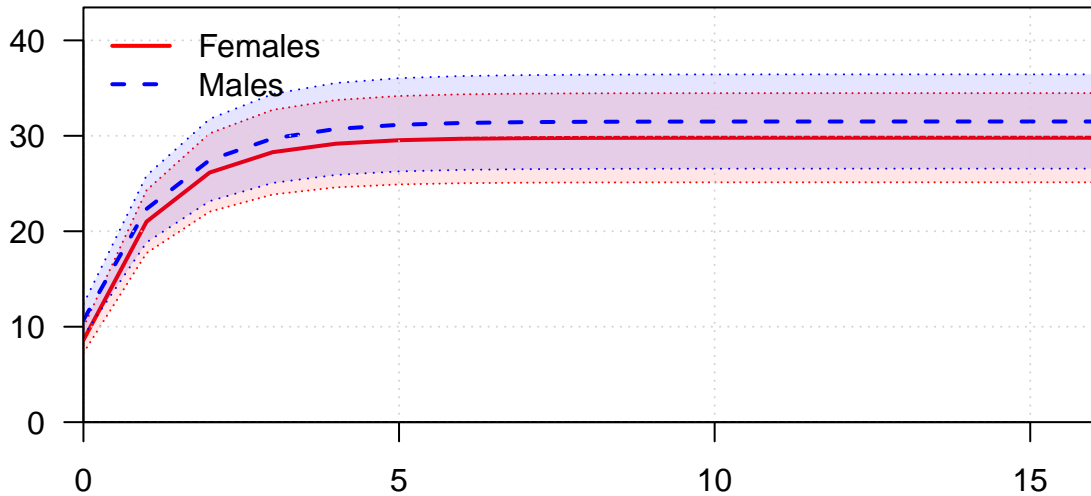
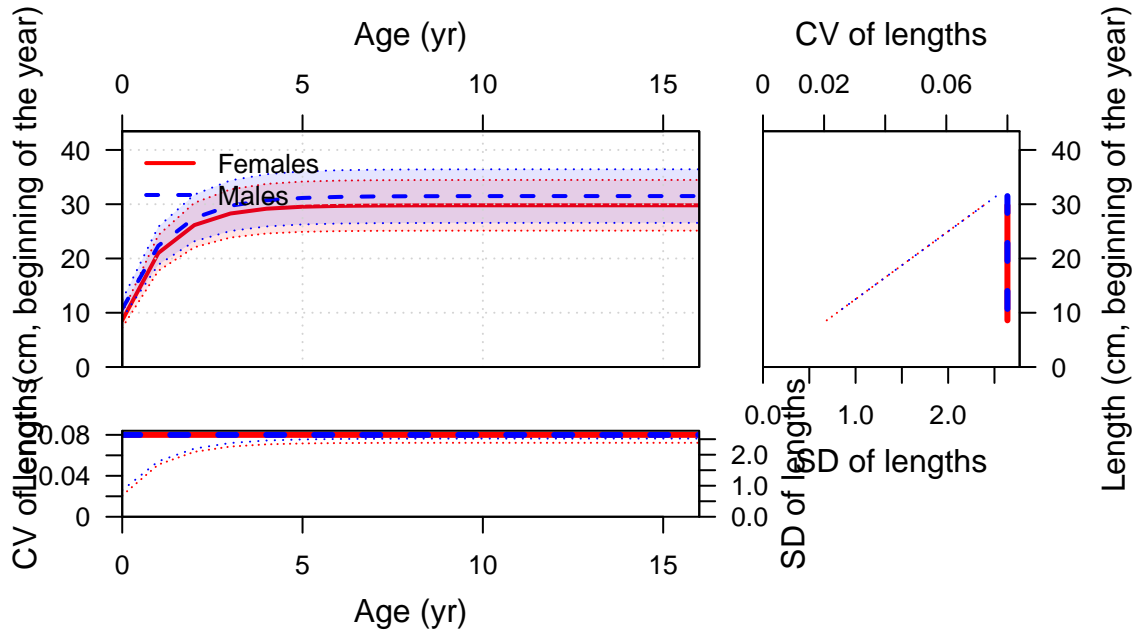


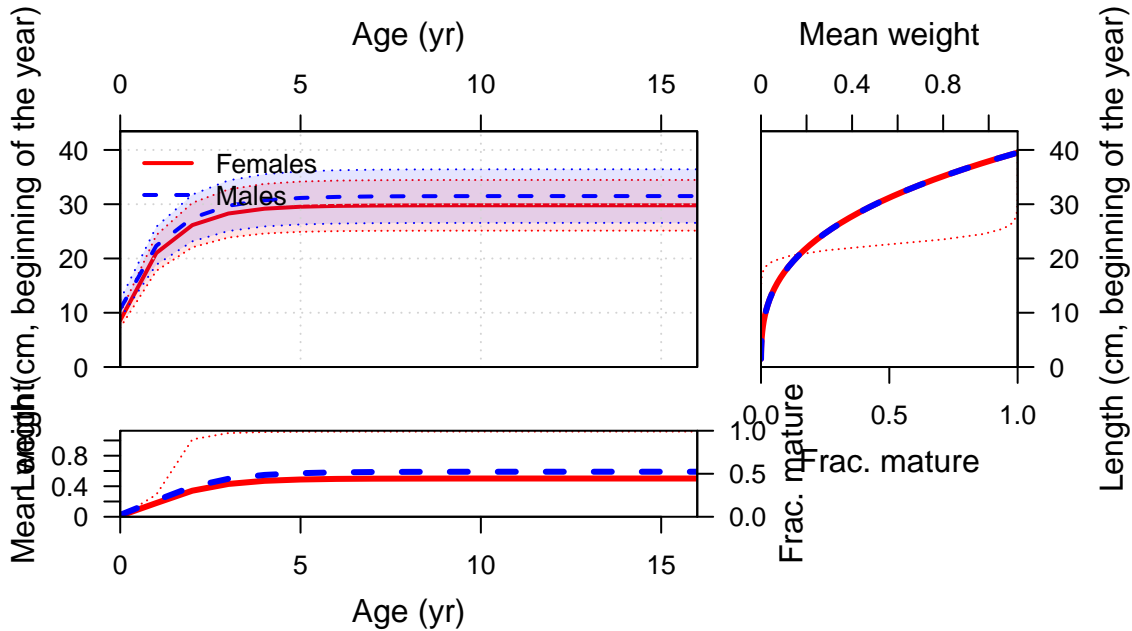
Plots created using the 'r4ss' package in R  
Stock Synthesis version: 3.30.19.0  
StartTime: Tue Jul 19 13:59:36 2022  
Data\_File: data.ss  
Control\_File: control.ss

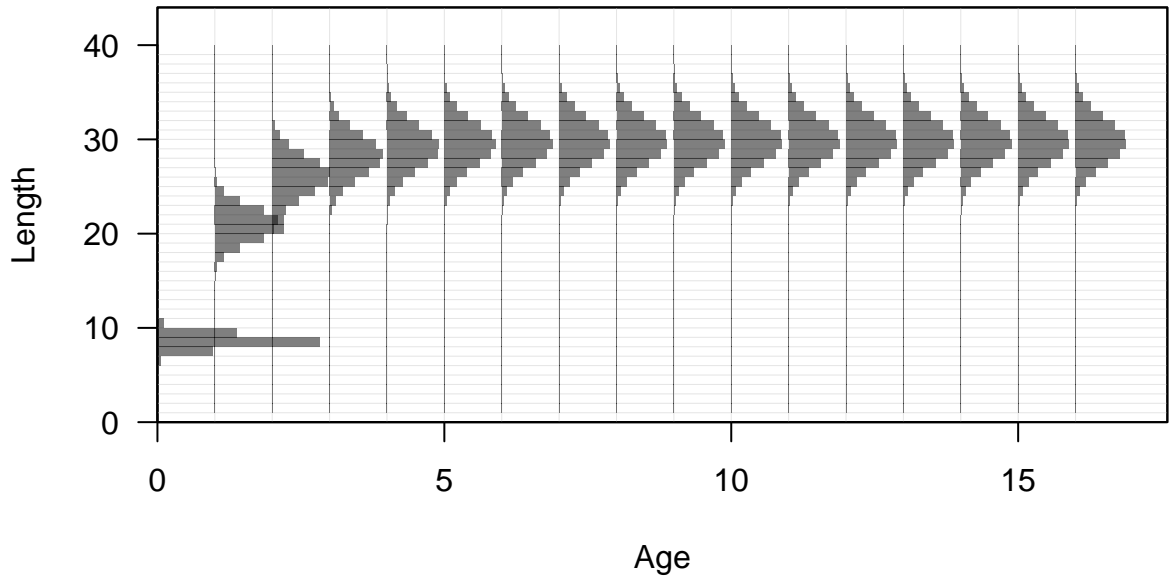
Length (cm, beginning of the year)

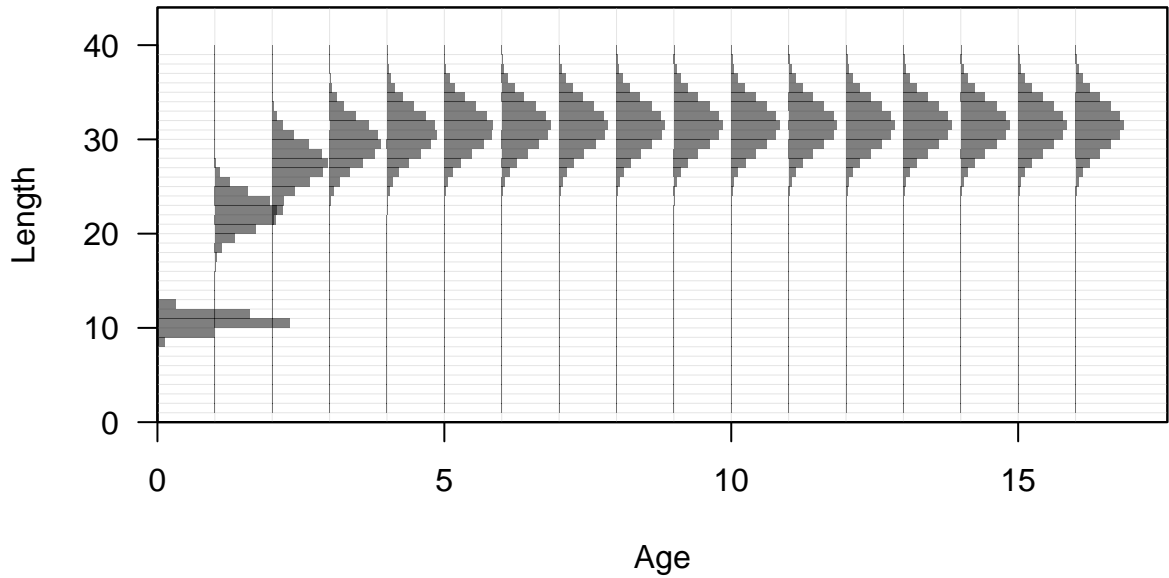


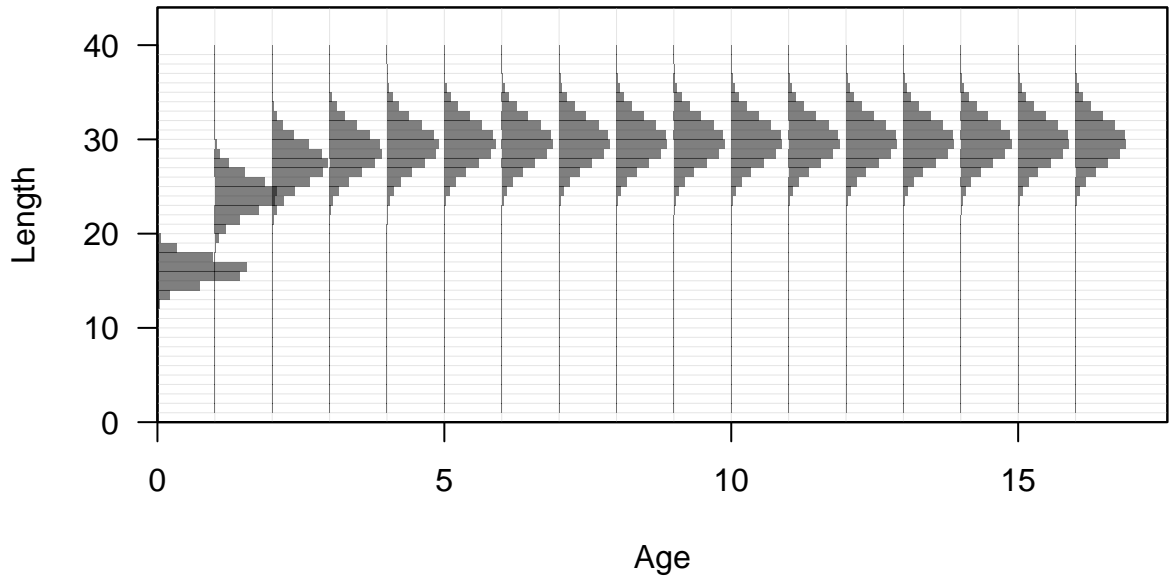
Age (yr)

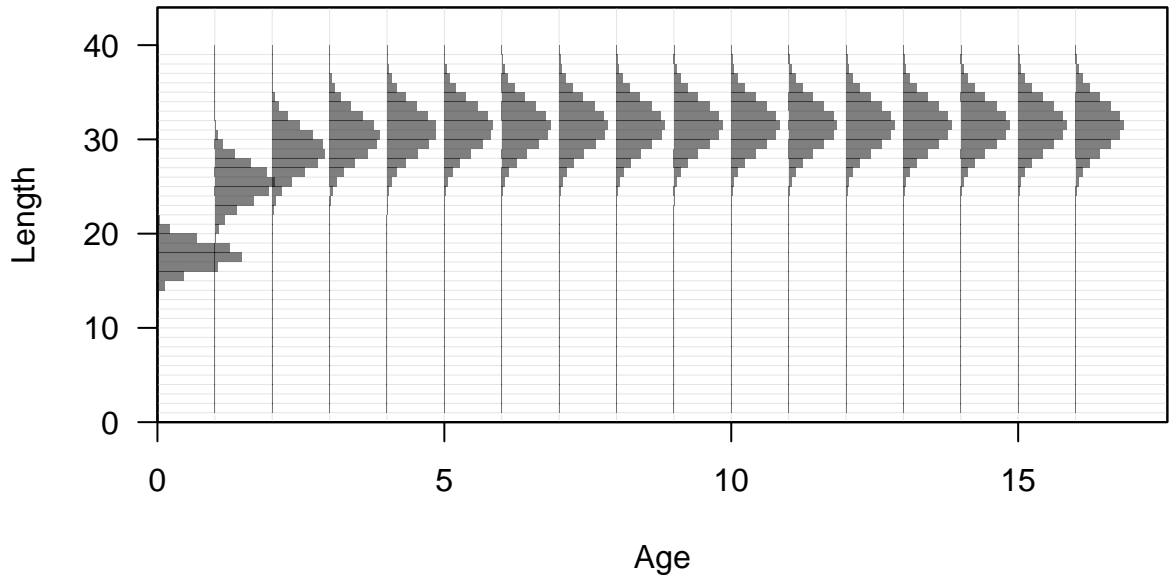




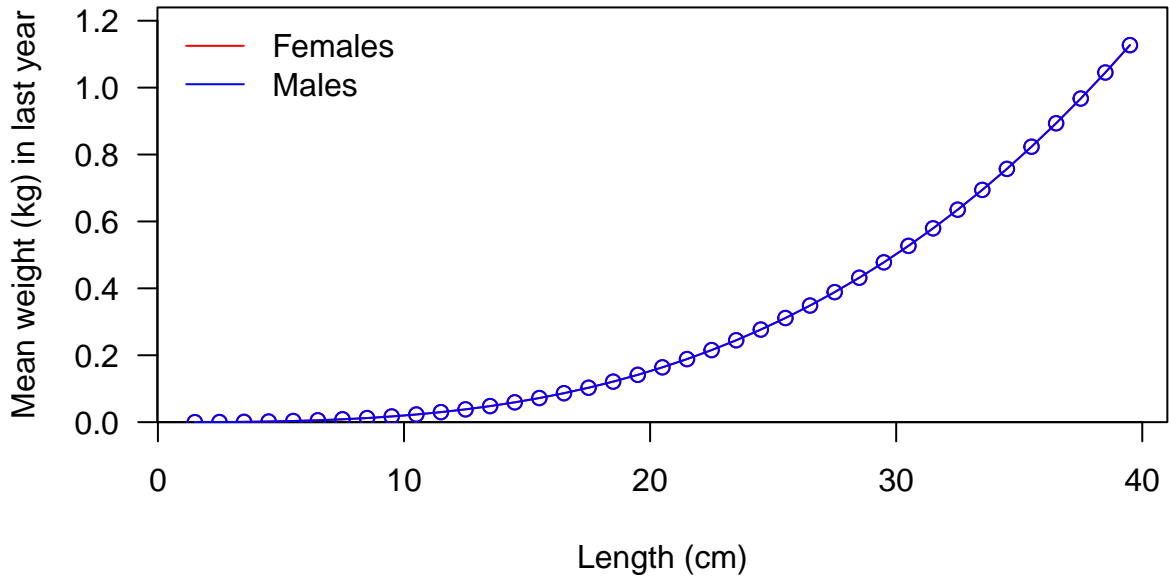


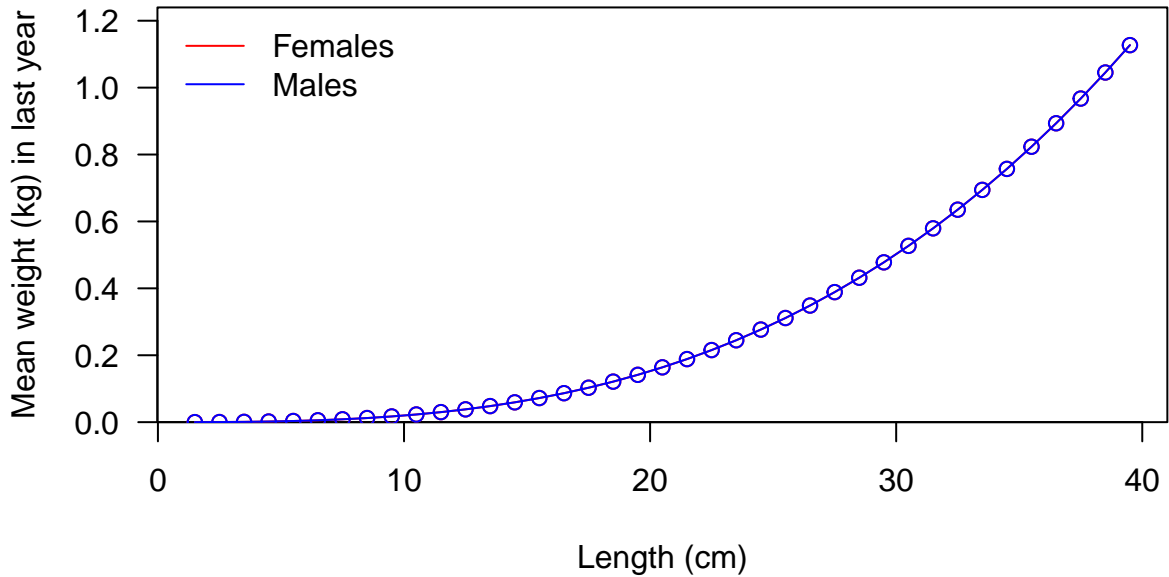


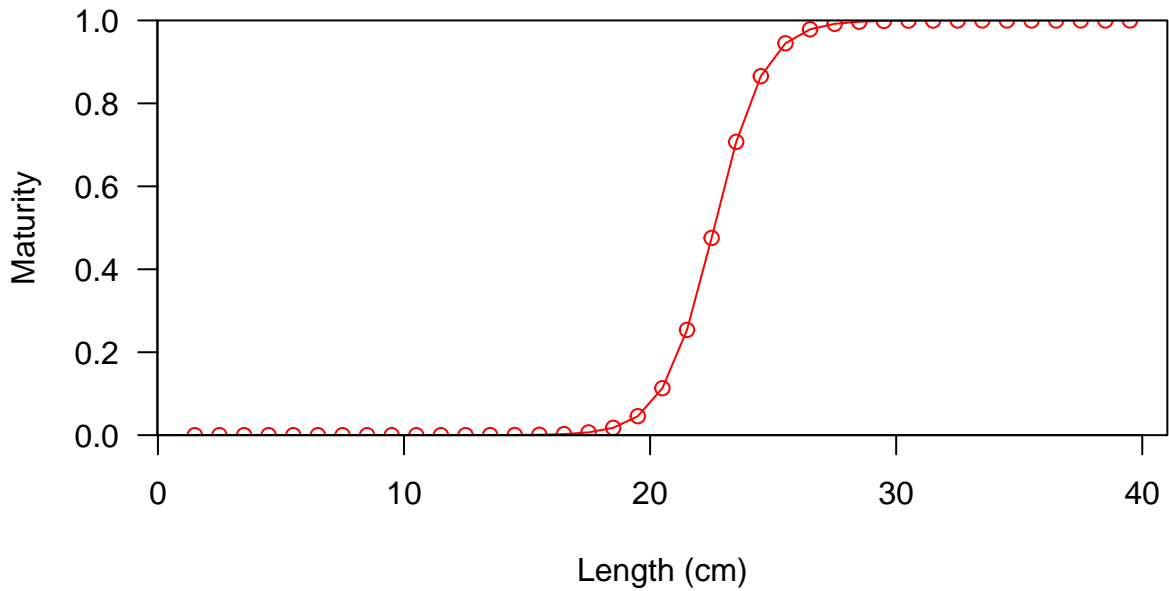


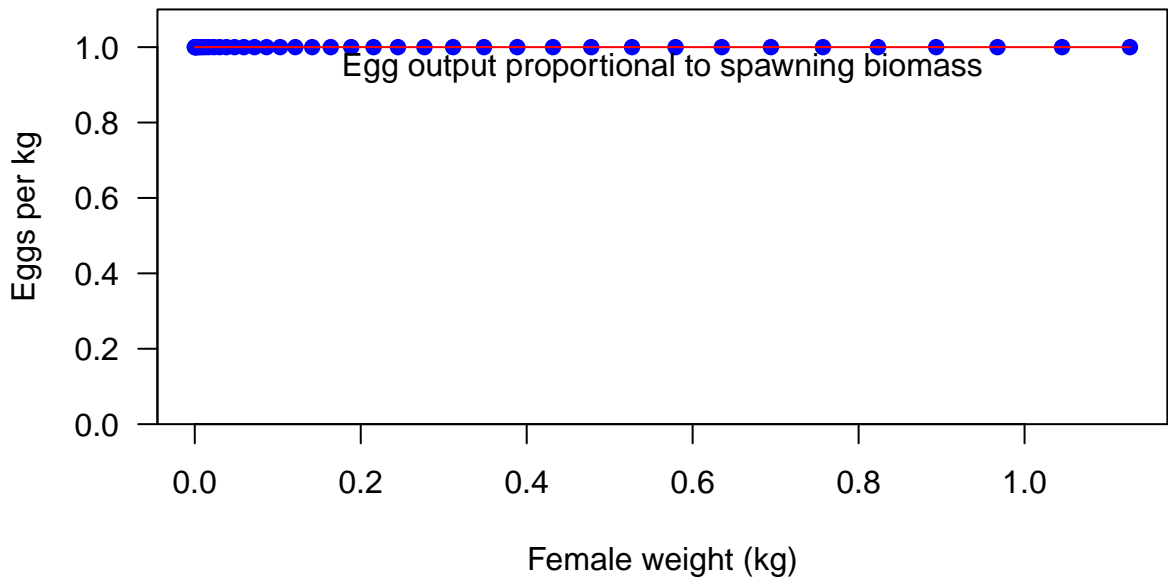


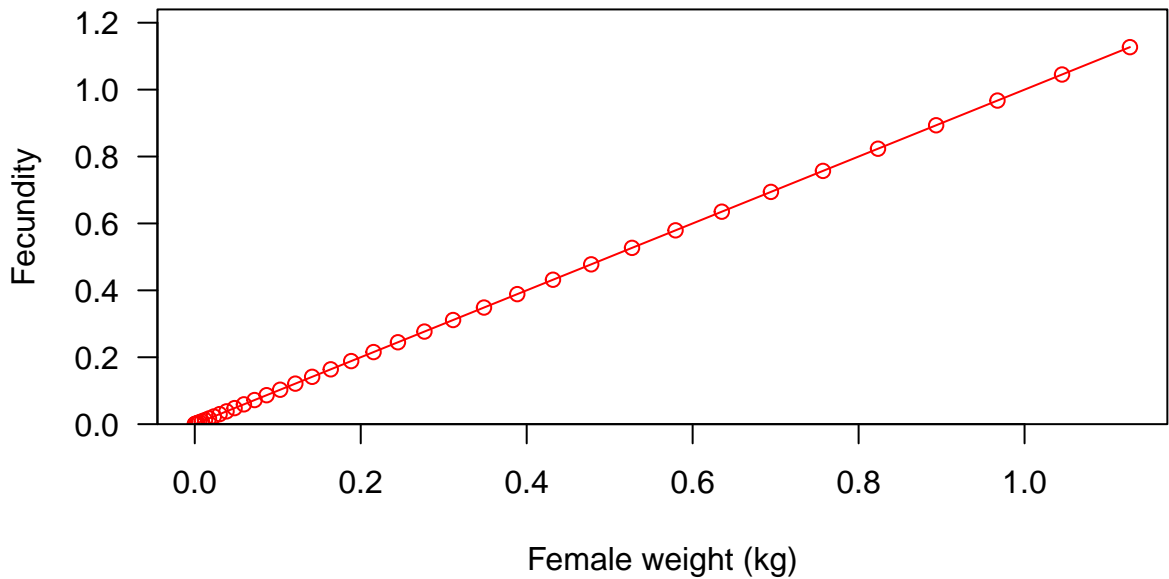


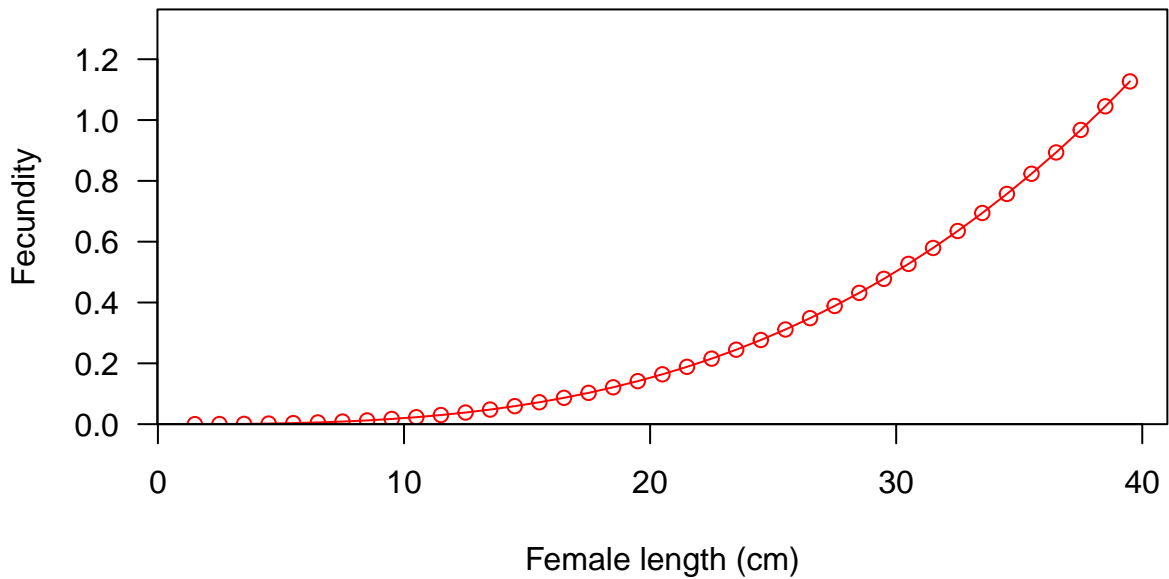


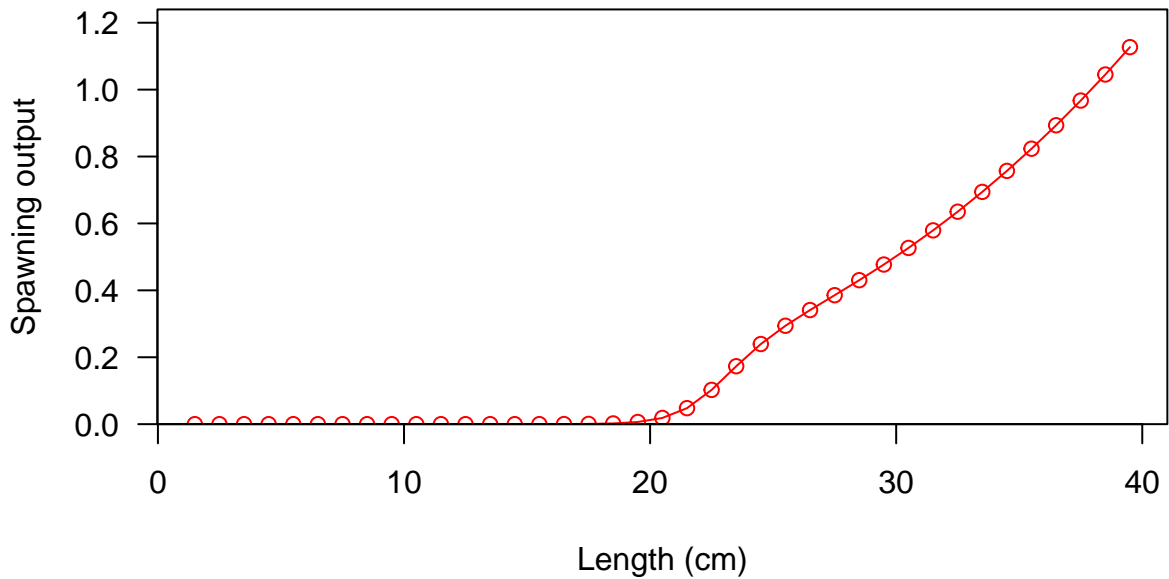


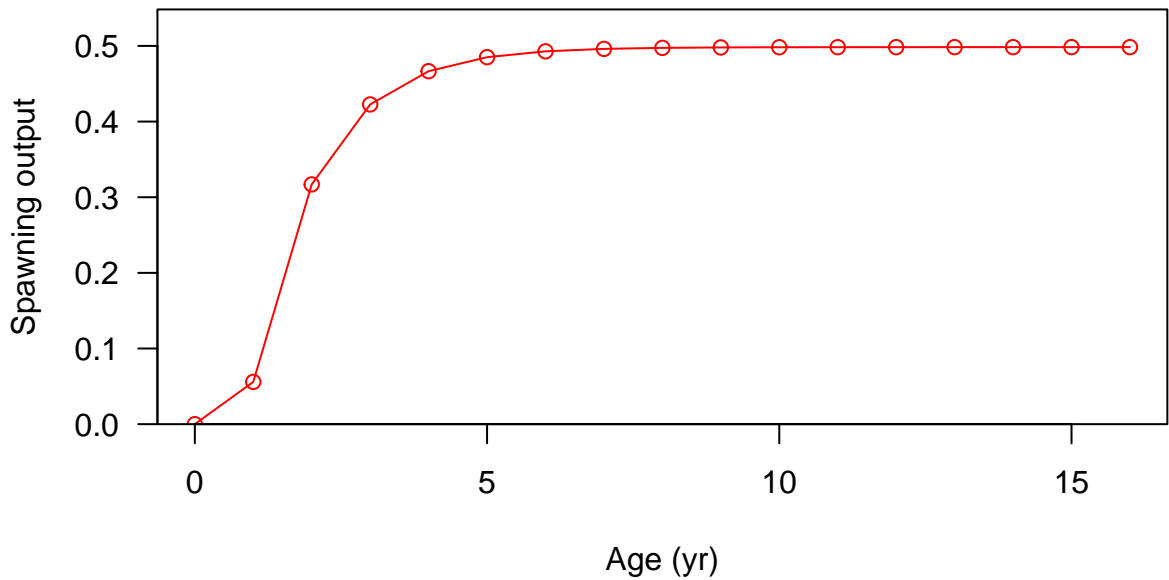




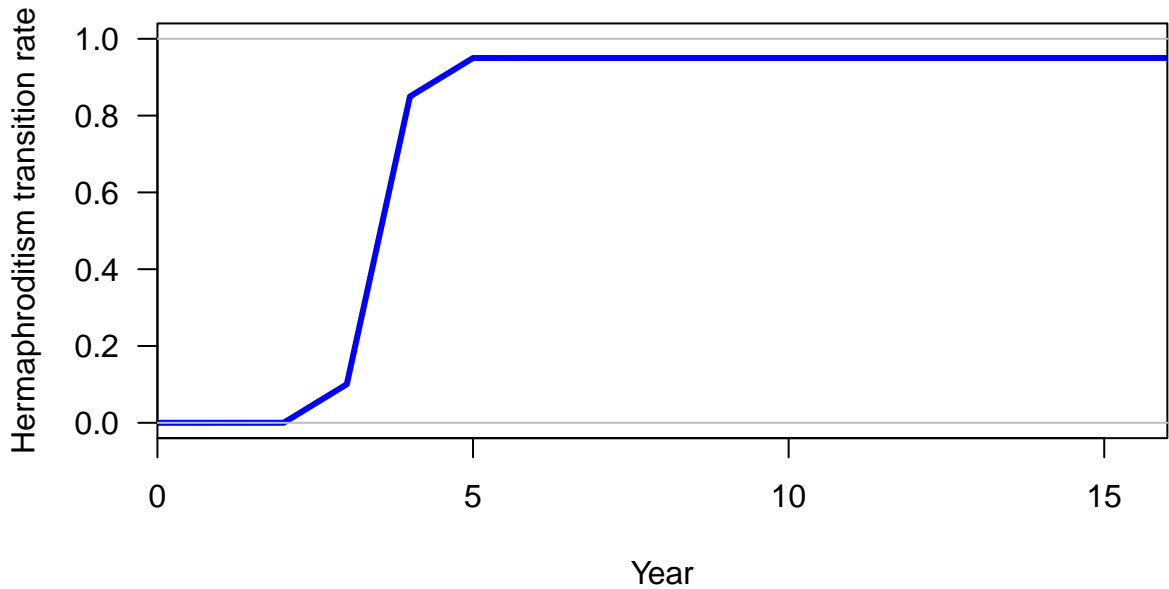




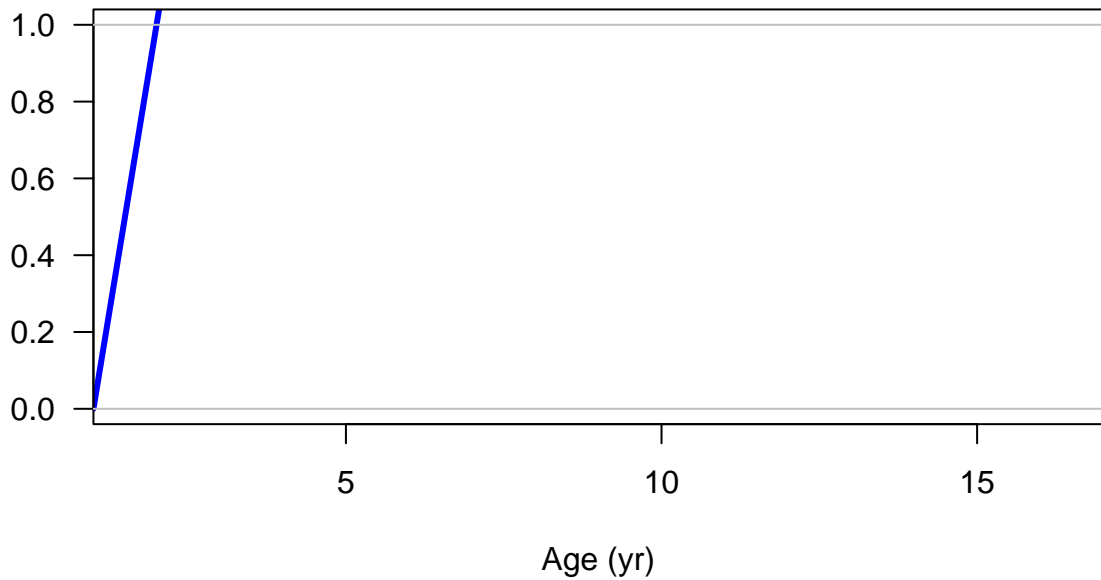




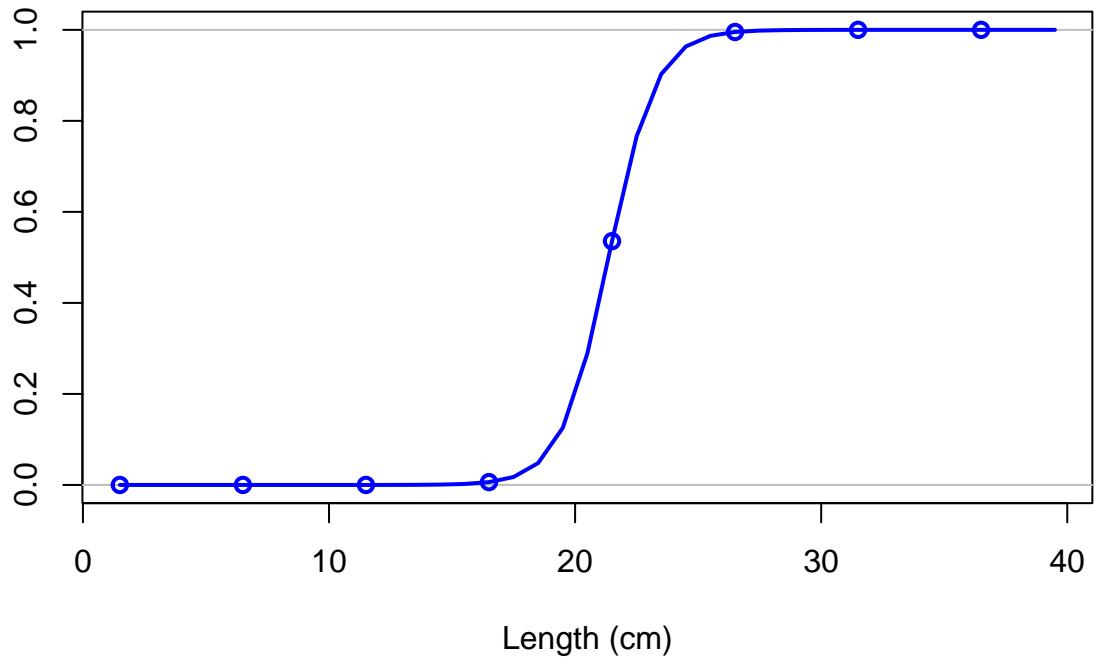




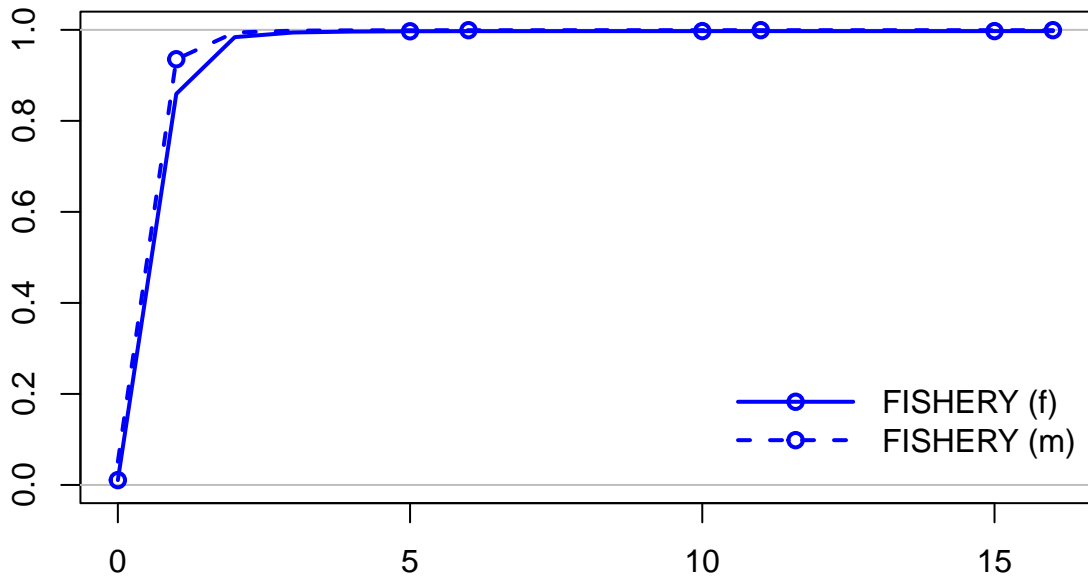
Fraction females by age at equilibrium



Selectivity

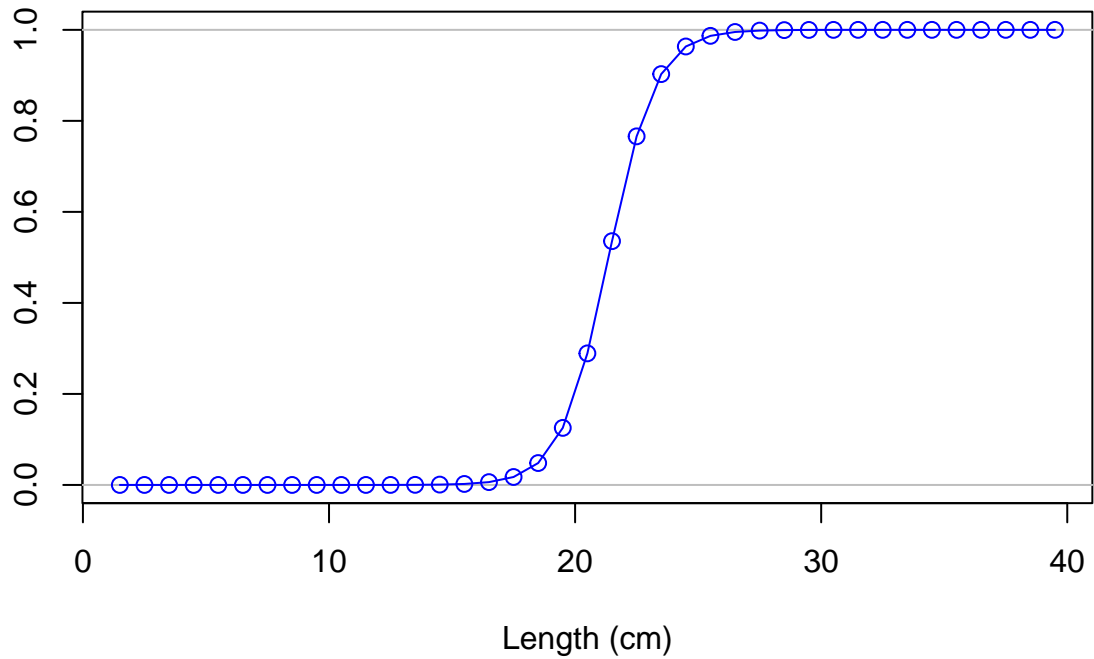


Selectivity

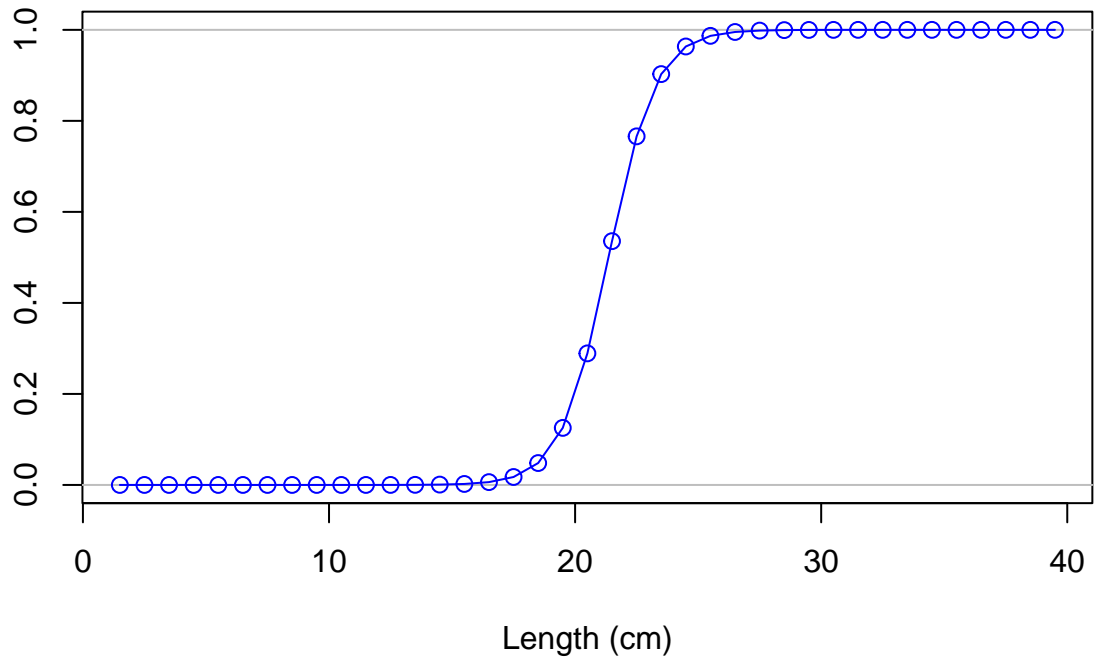


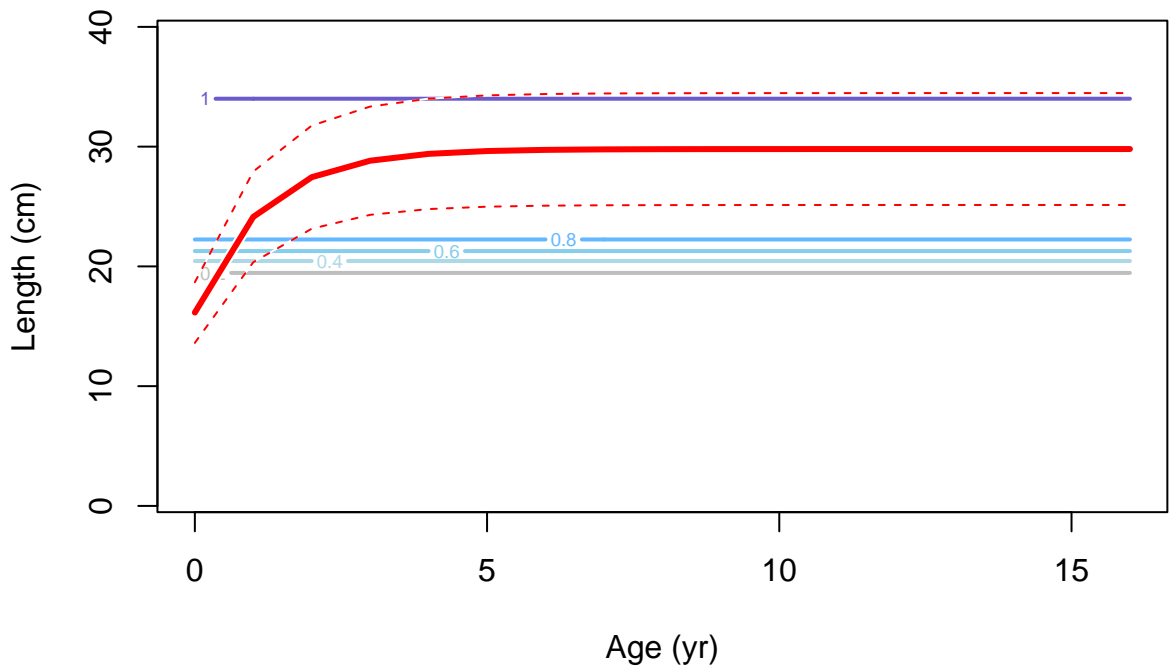
Age (yr)

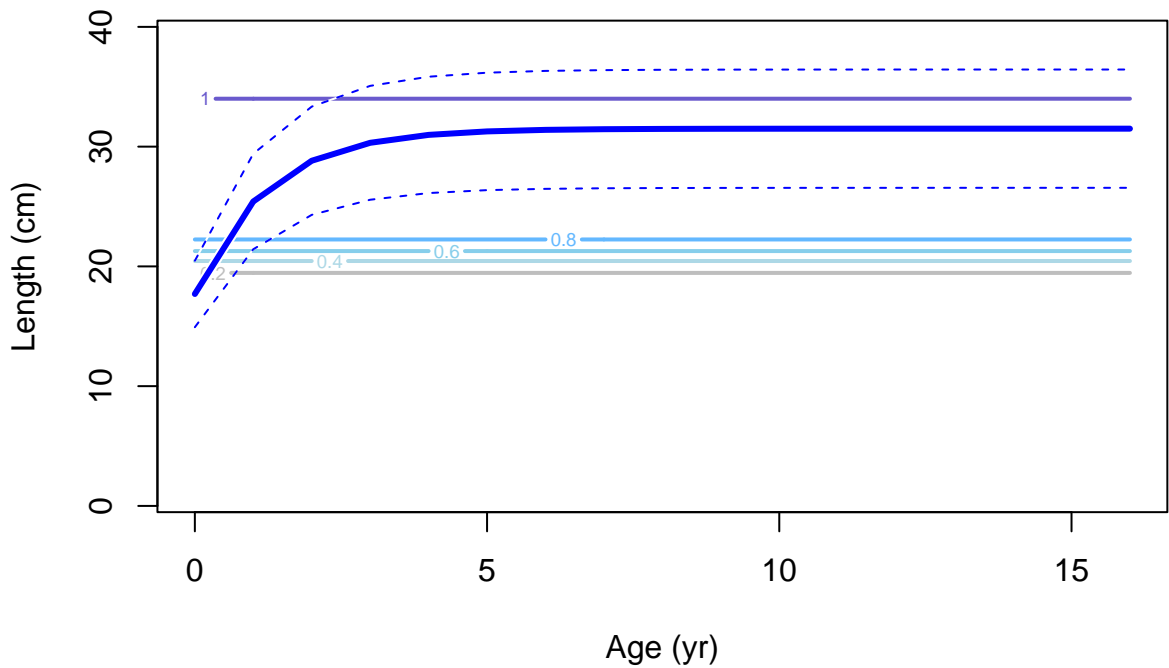
Selectivity



Selectivity

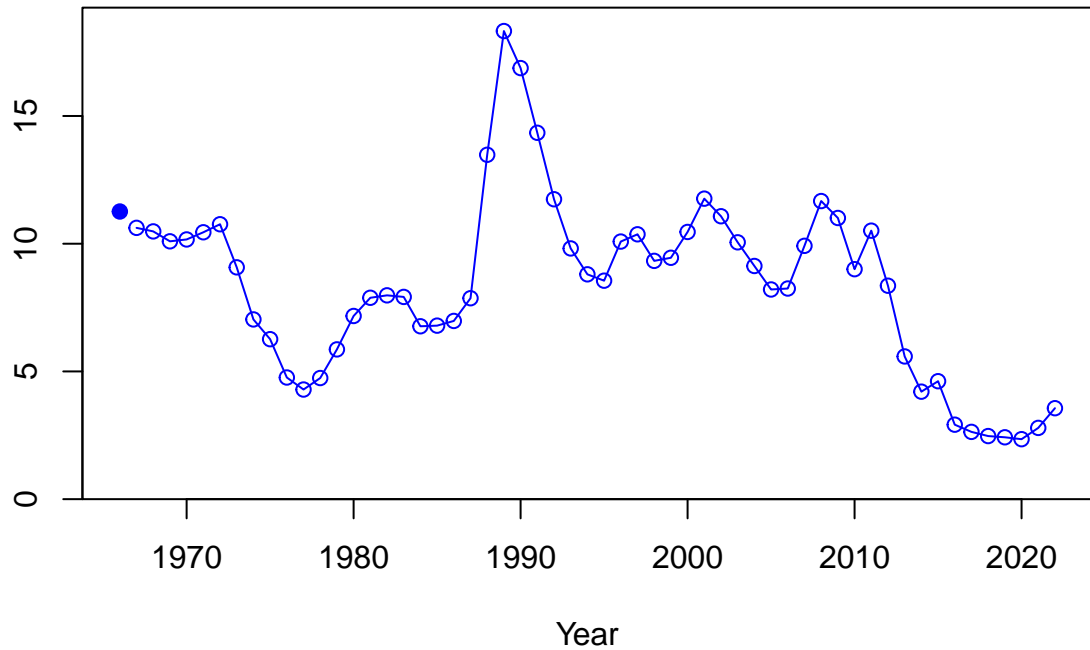




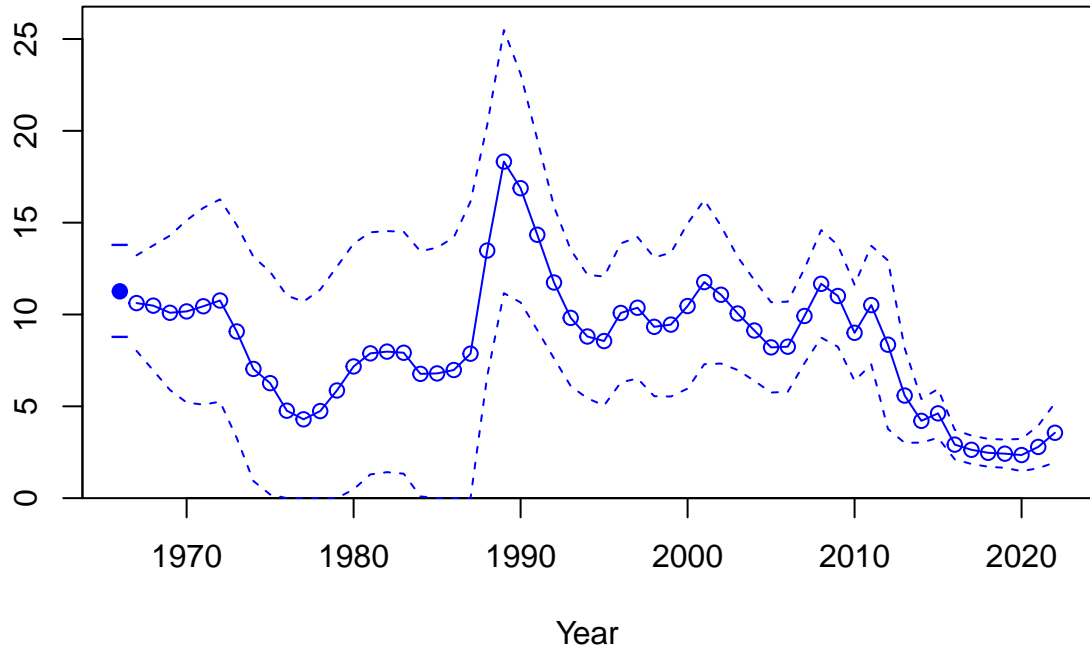




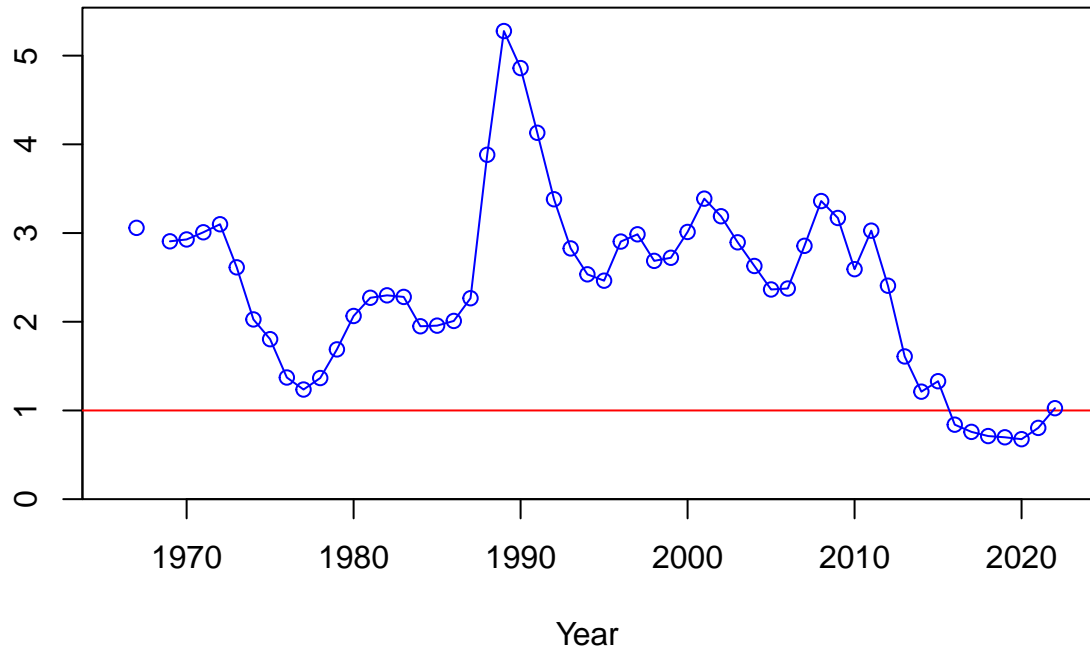
Spawning biomass (mt)



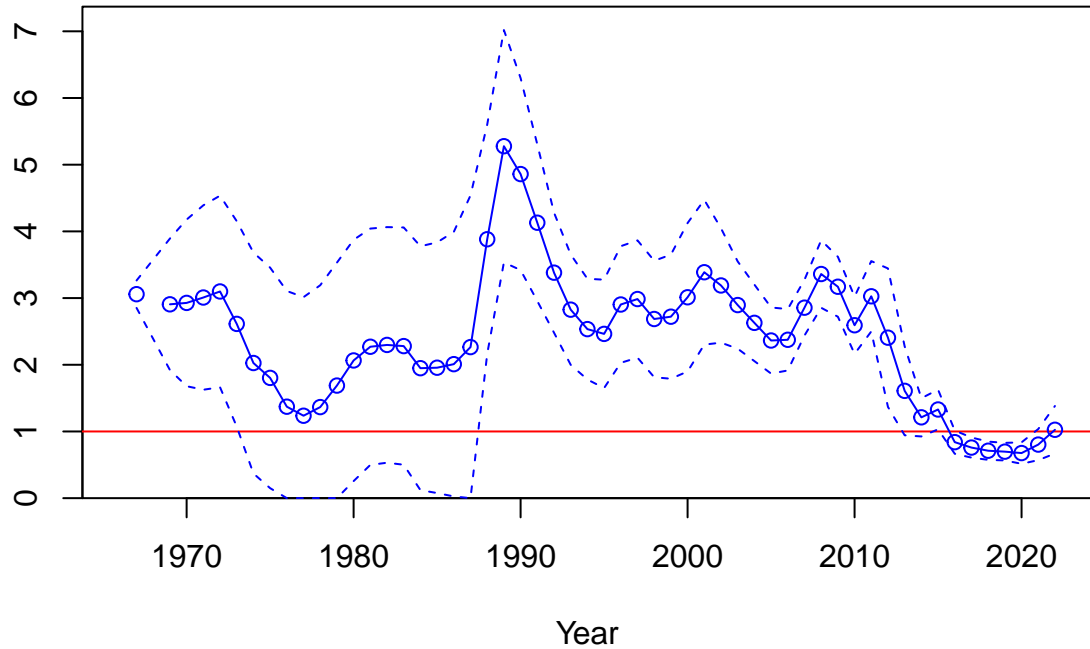
Spawning biomass (mt)

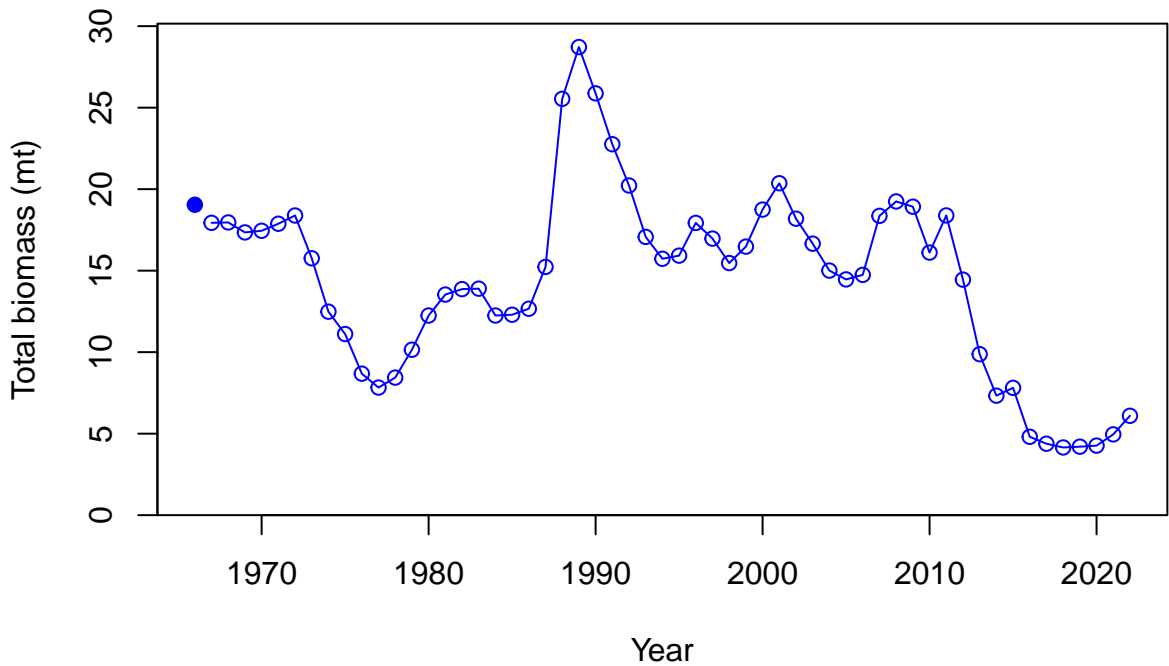


Relative spawning biomass:  $B/B_{MSY}$

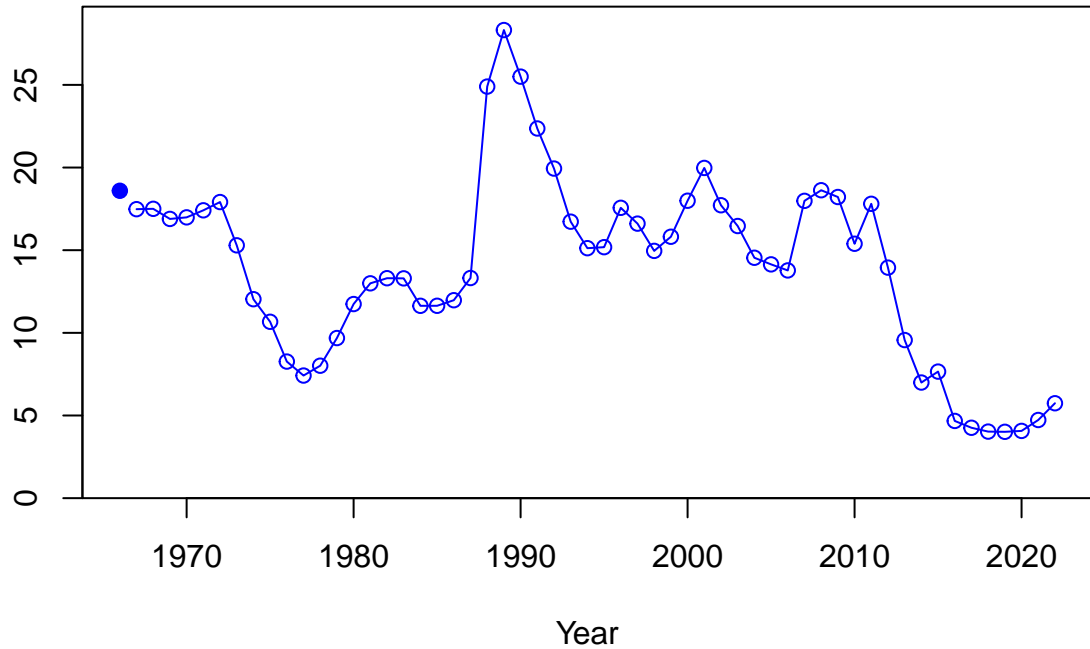


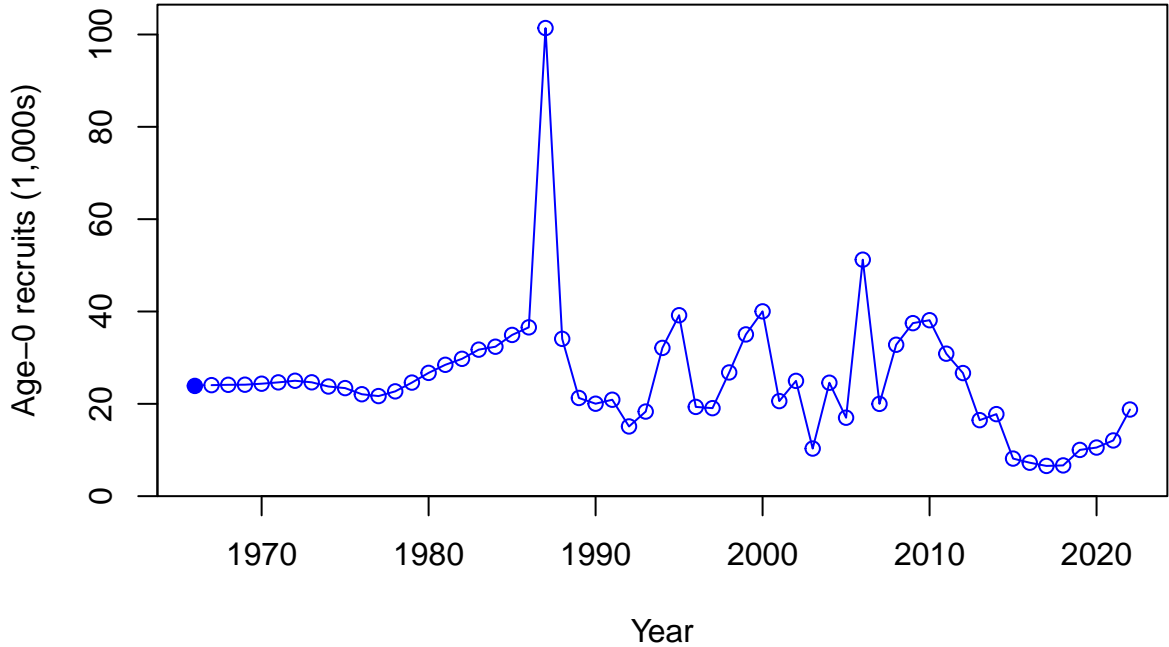
Relative spawning biomass:  $B/B_{MSY}$

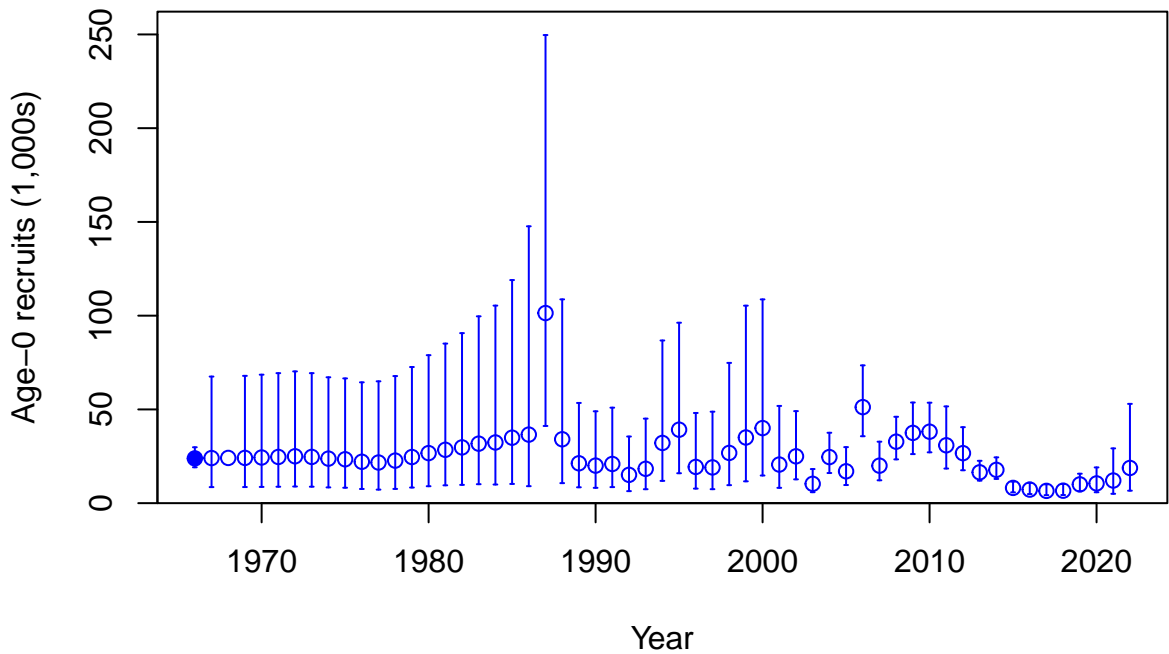




Summary biomass (mt)

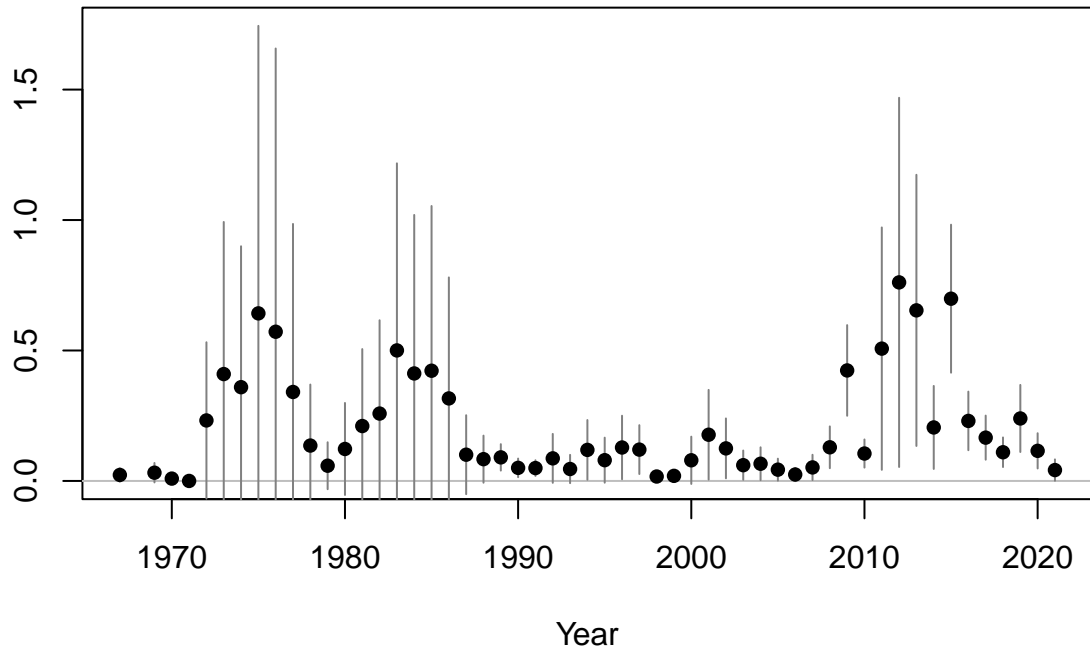


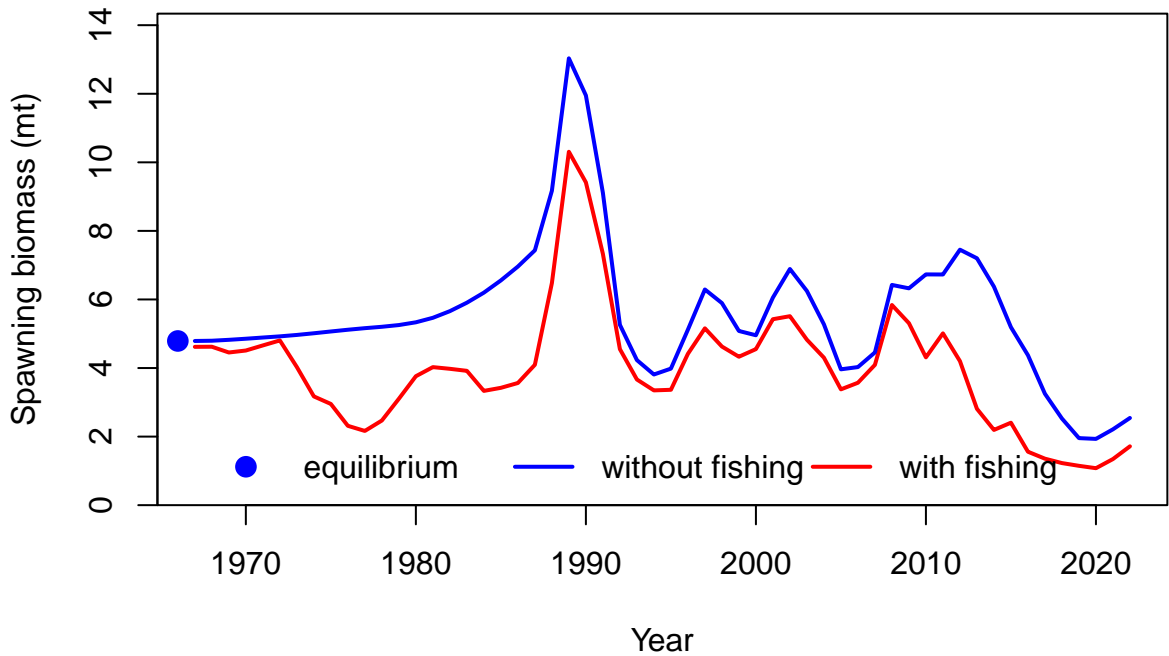




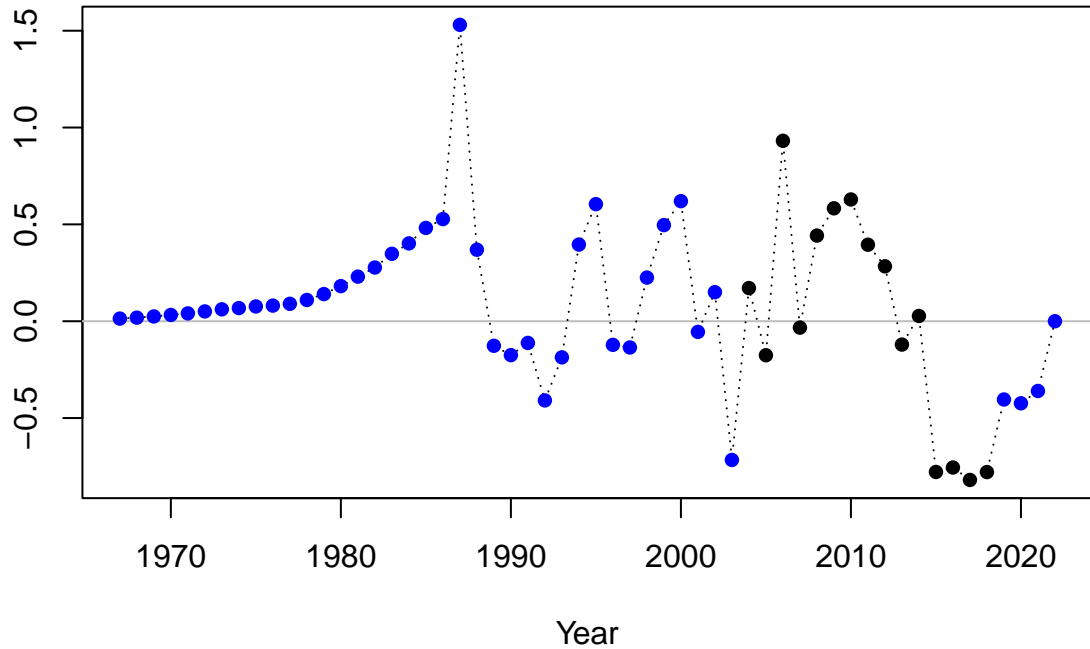


Summary Fishing Mortality





Log recruitment deviation



Log recruitment deviation

2  
1  
0  
-1

1970

1980

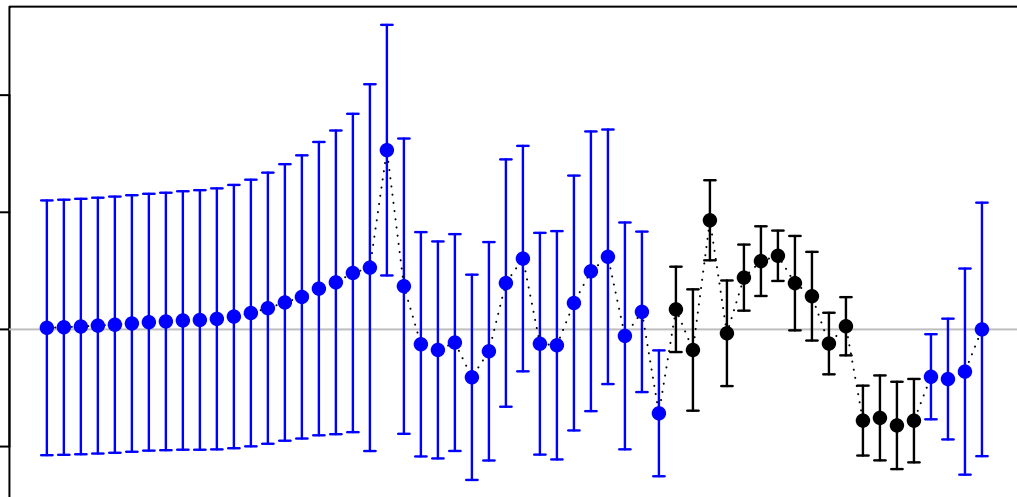
1990

2000

2010

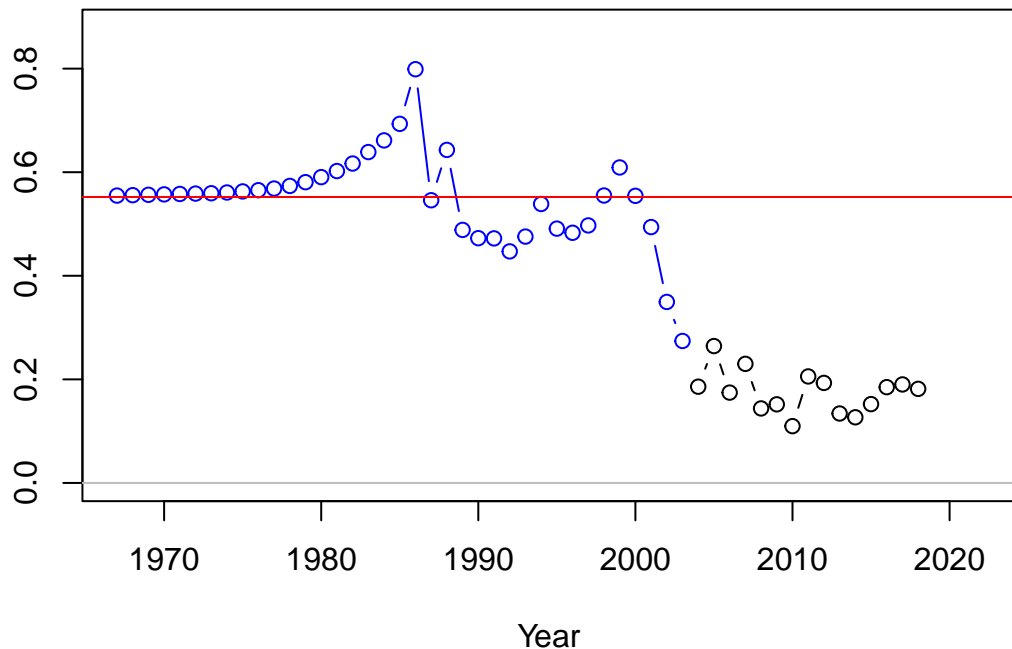
2020

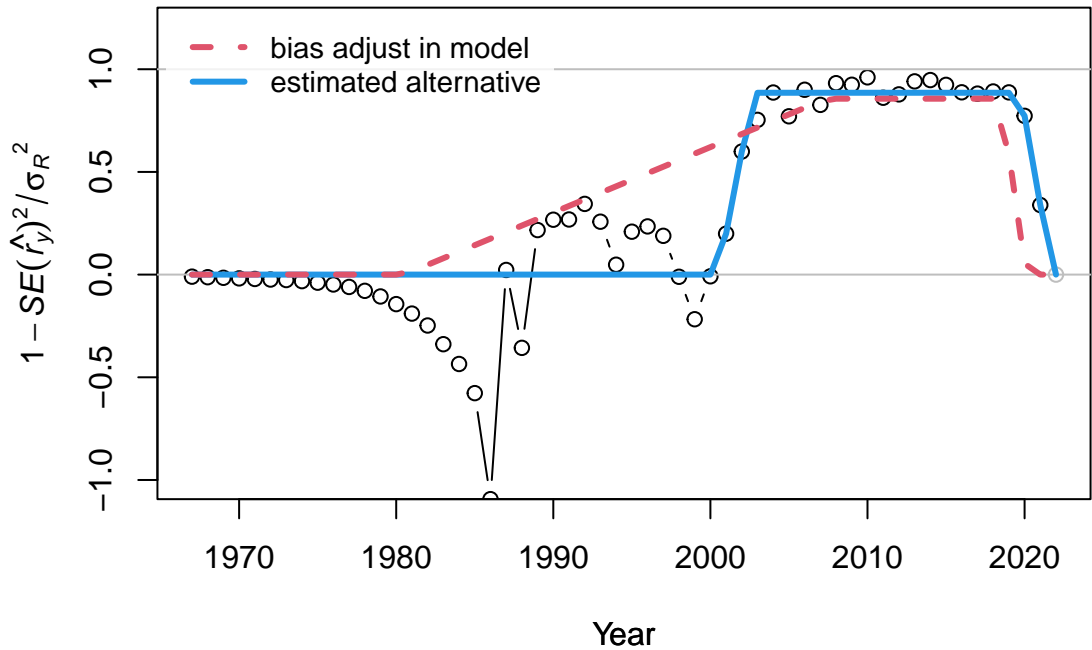
Year

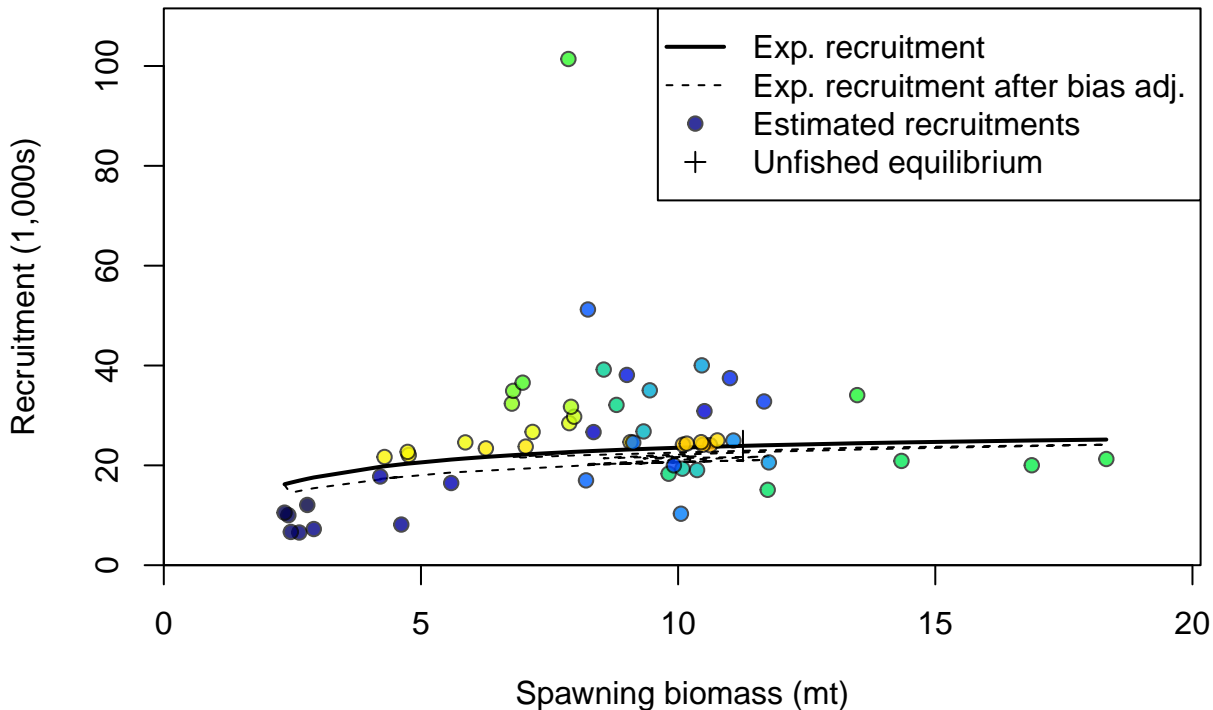


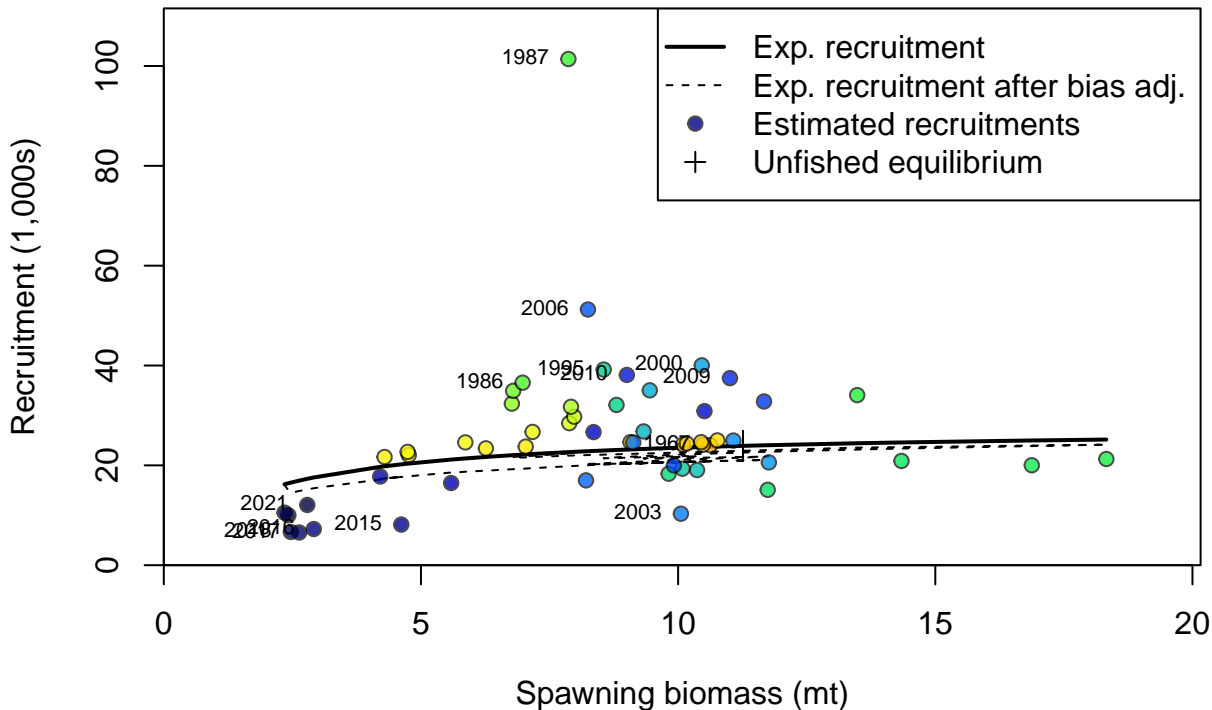
## Recruitment deviation variance

Asymptotic standard error estimate



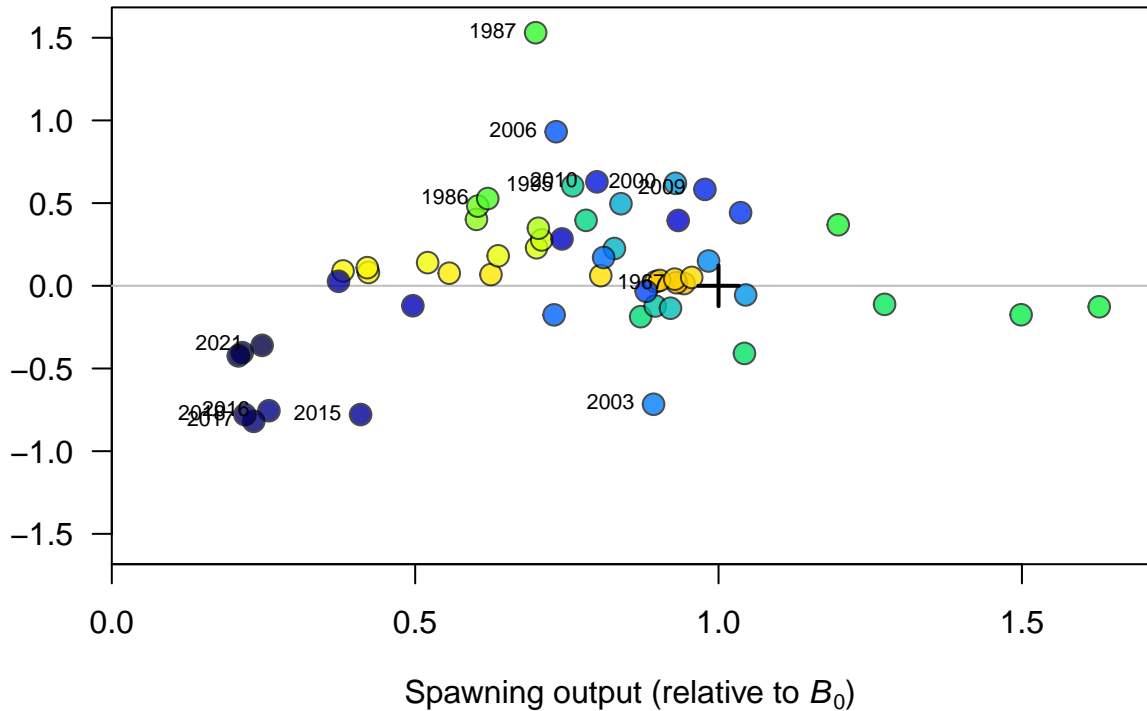


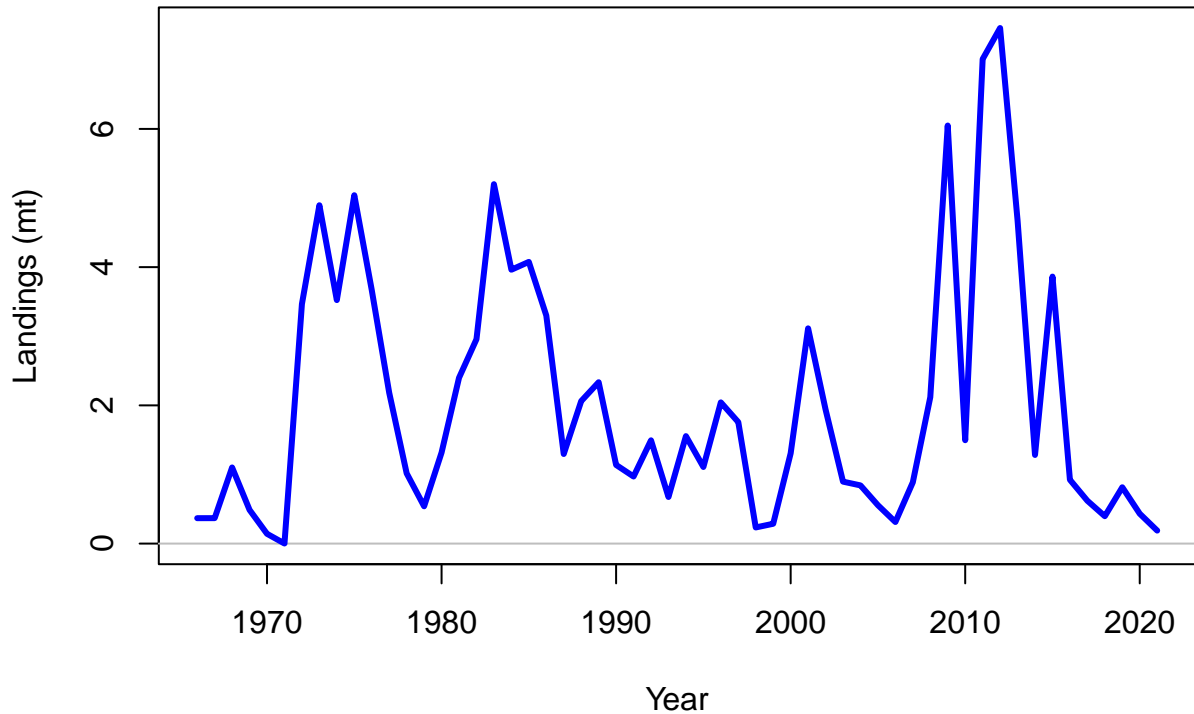


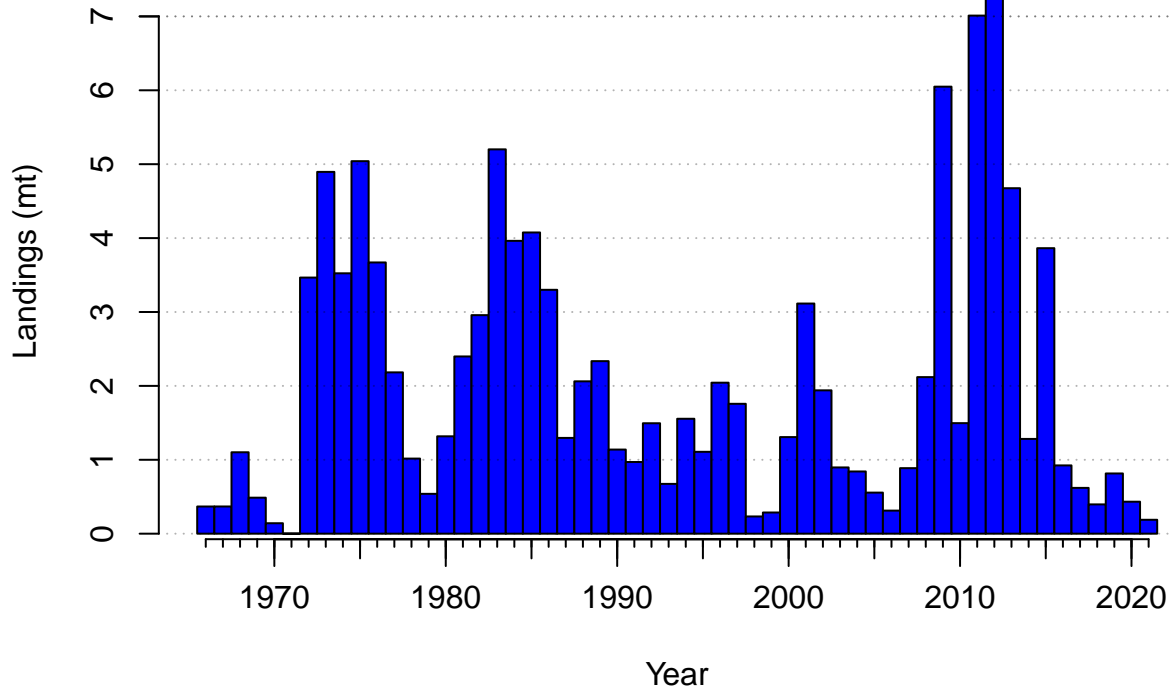




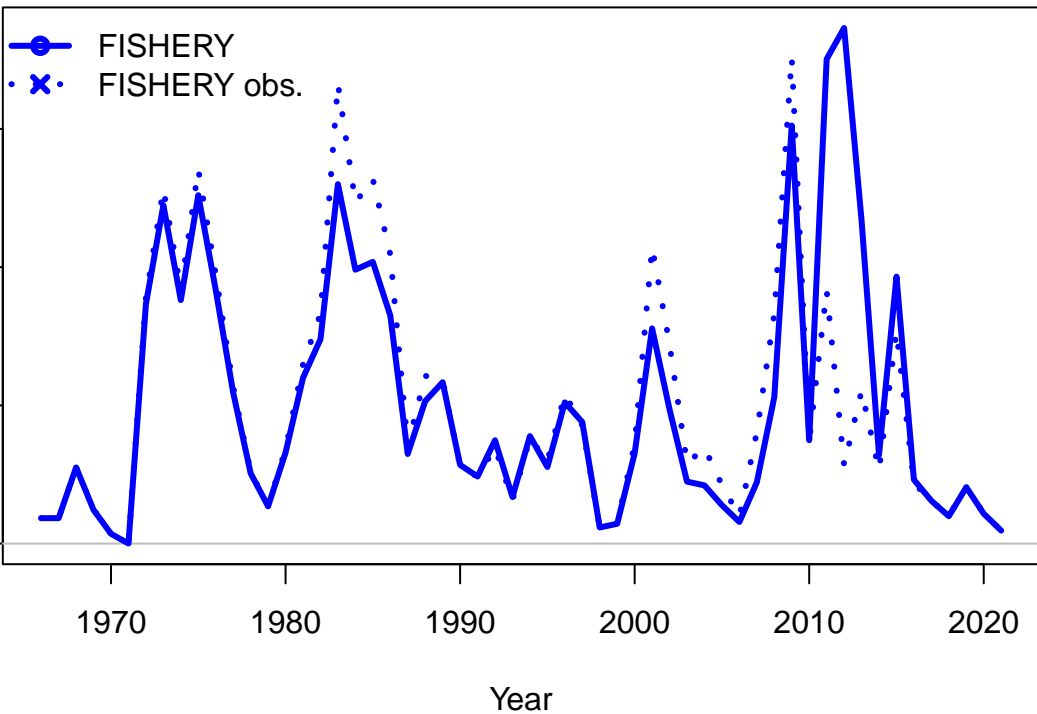
Log recruitment deviation

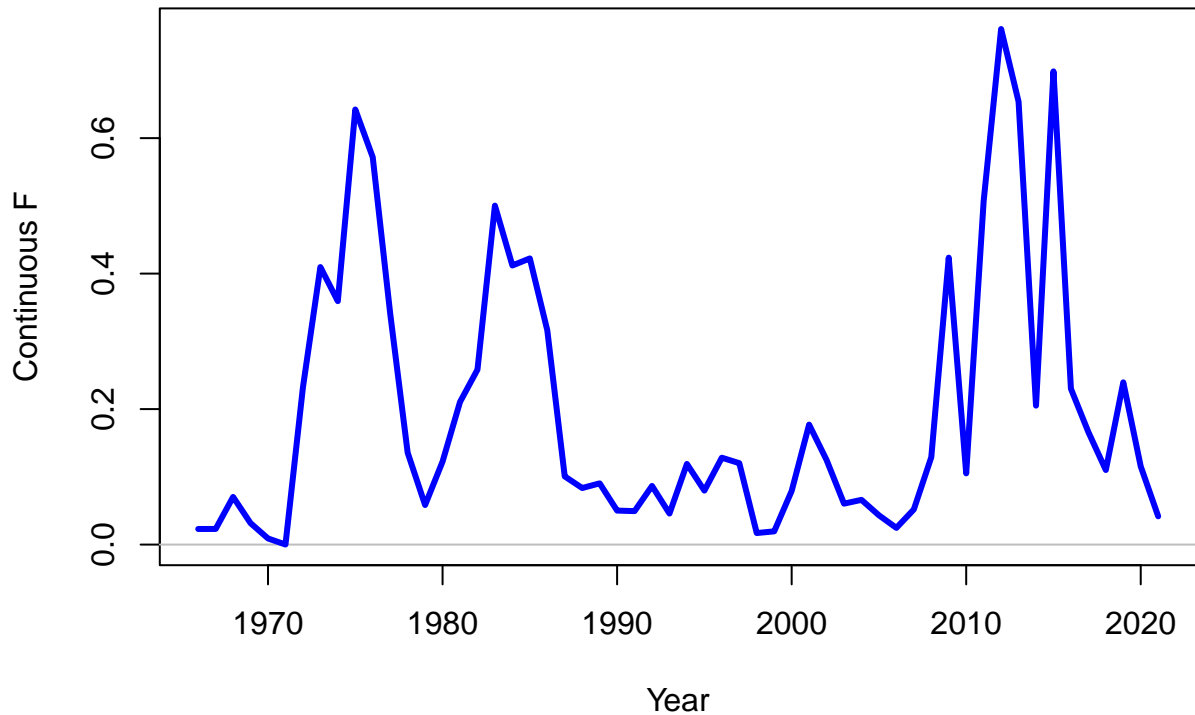




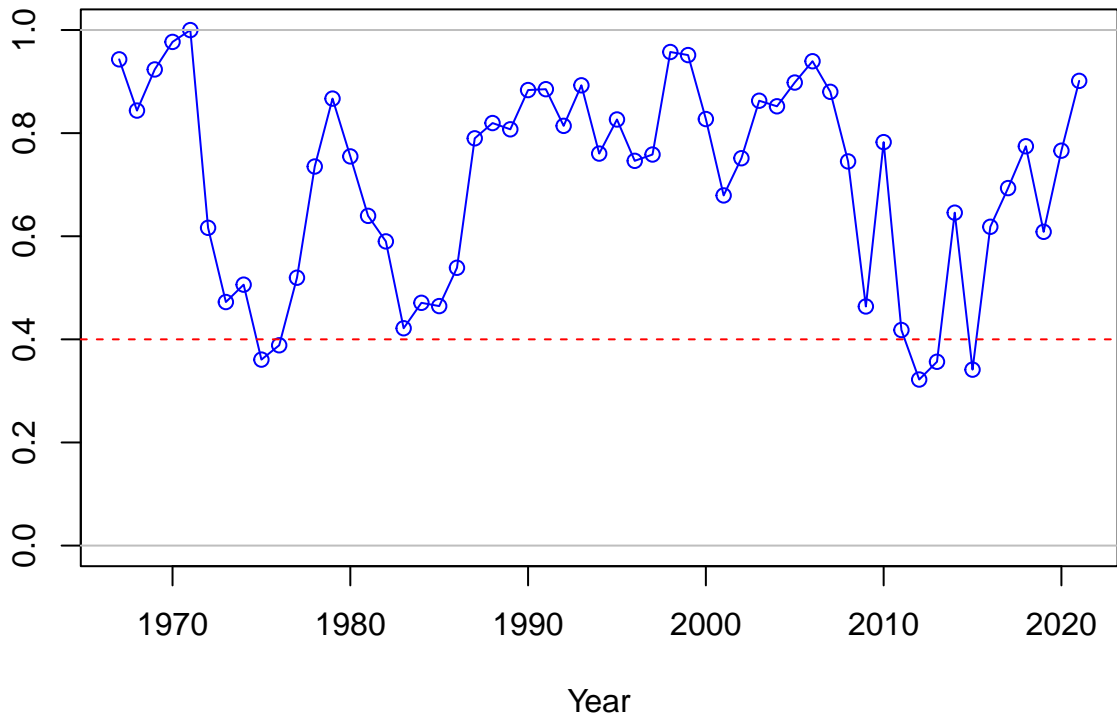


Observed and expected Landings (mt)

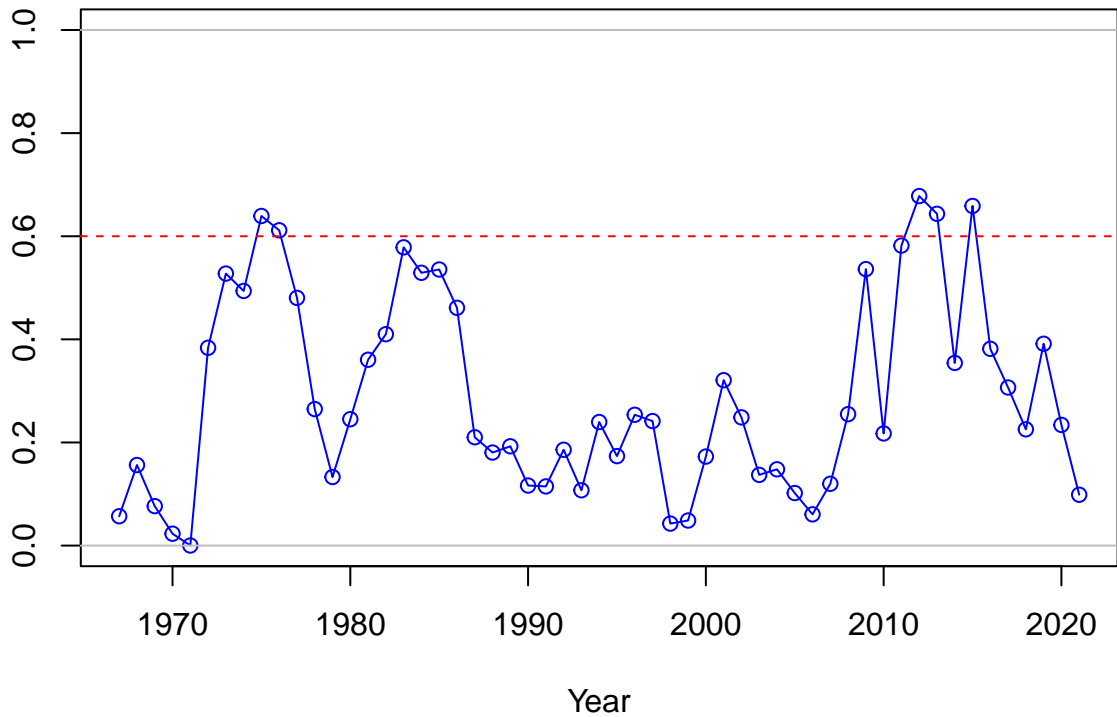




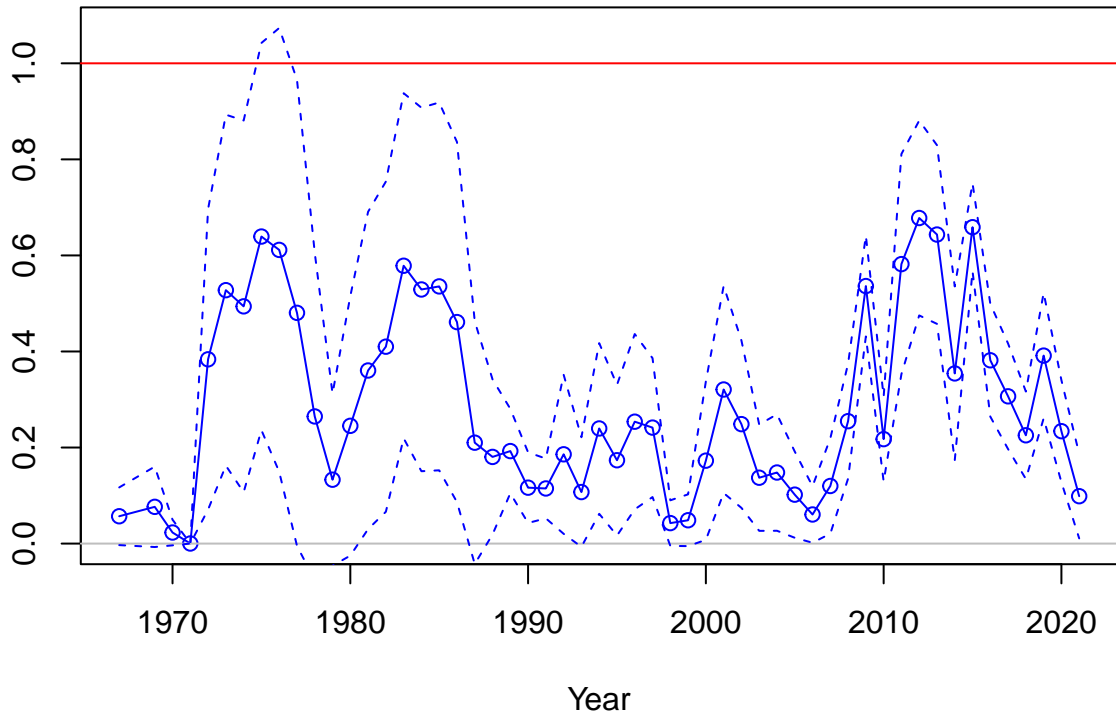
SPR



1-SPR

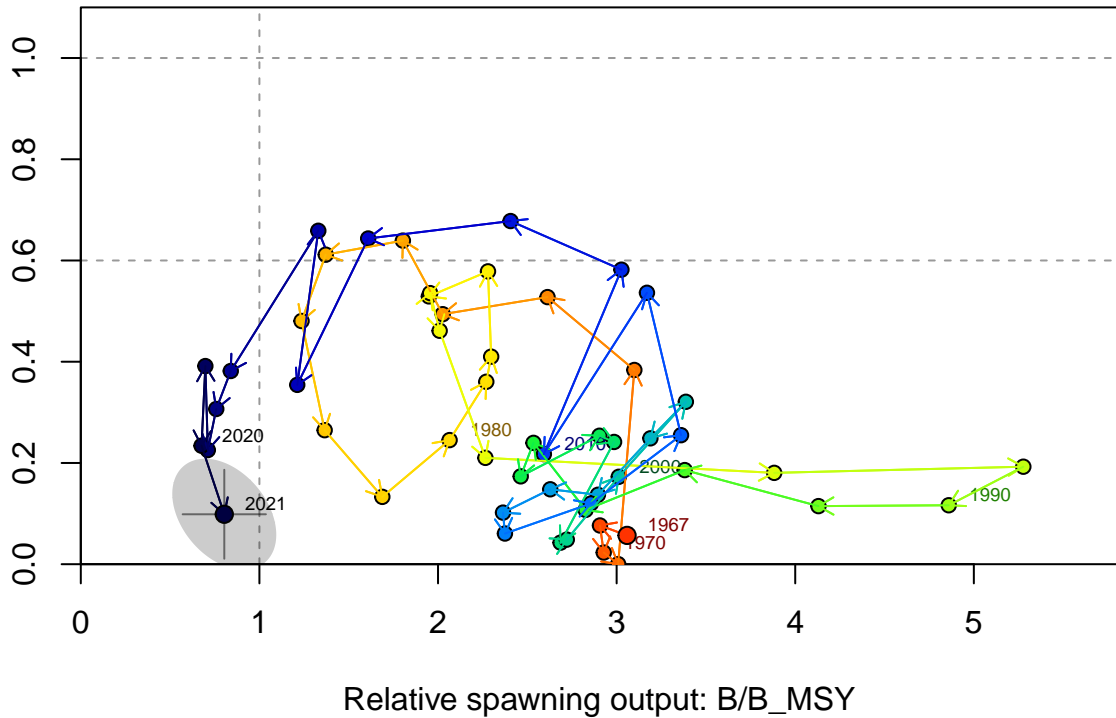


Fishing intensity: 1-SPR

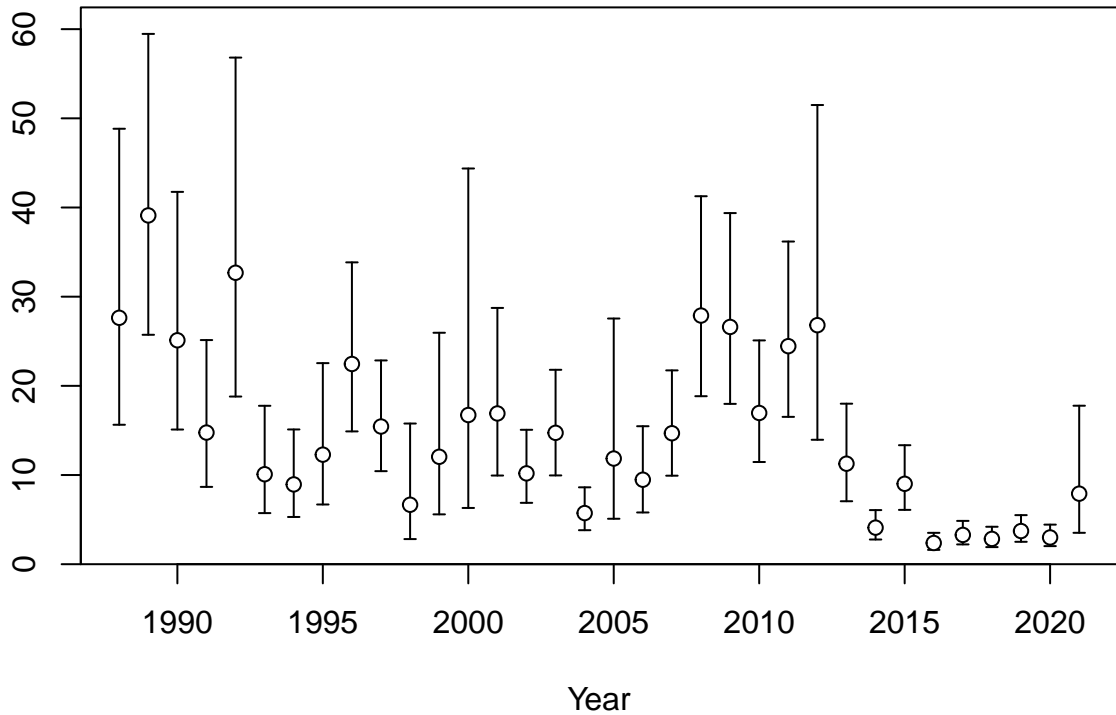




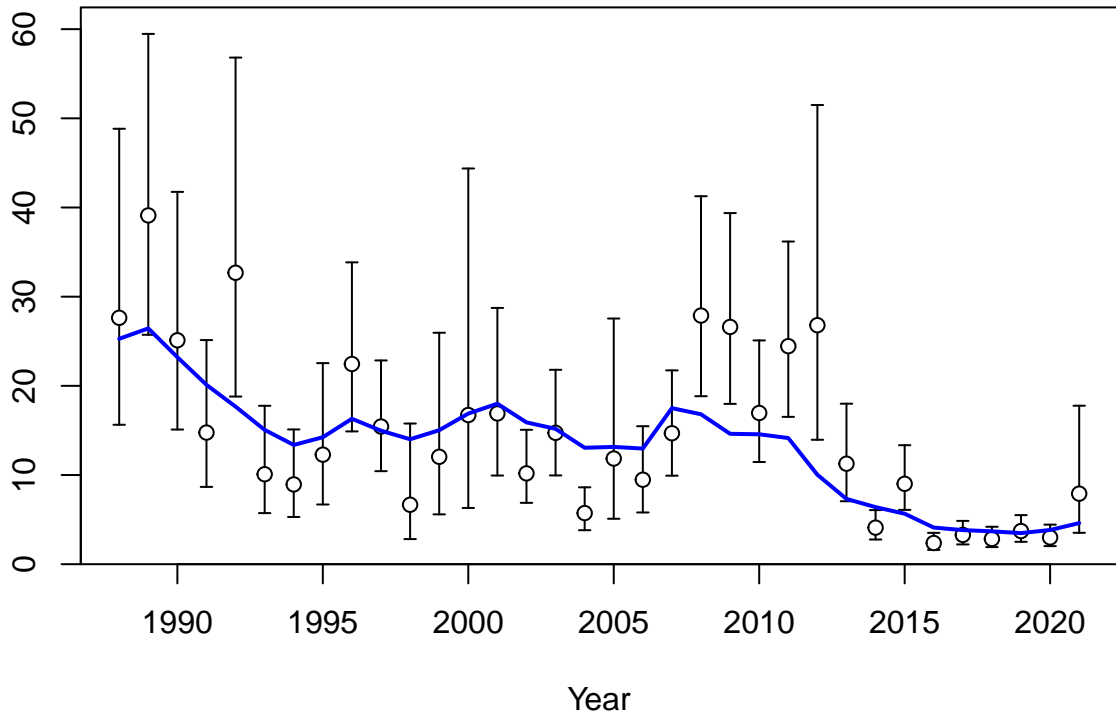
Fishing intensity: 1-SPR

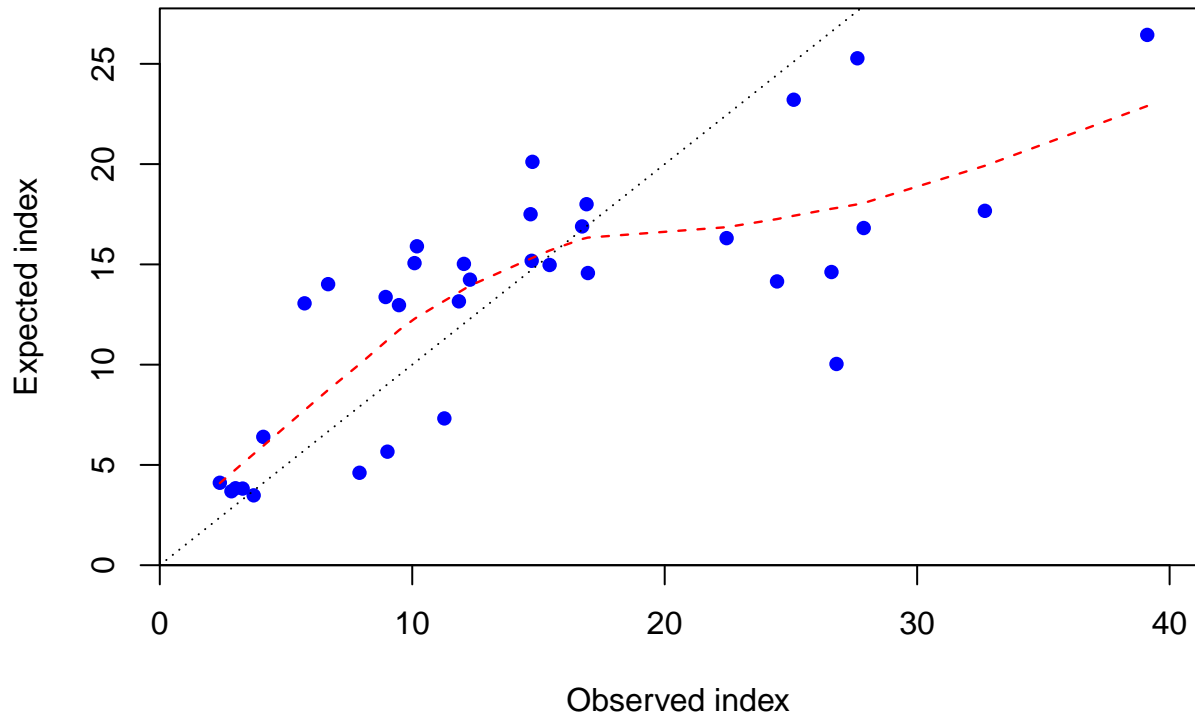


Index



Index





Log index

4  
3  
2  
1

1990

1995

2000

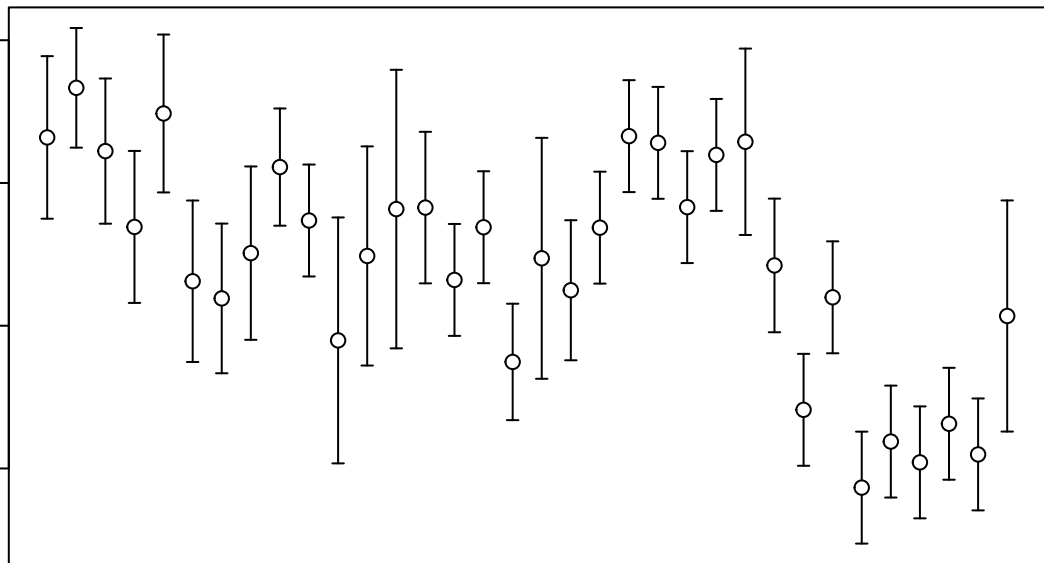
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2010

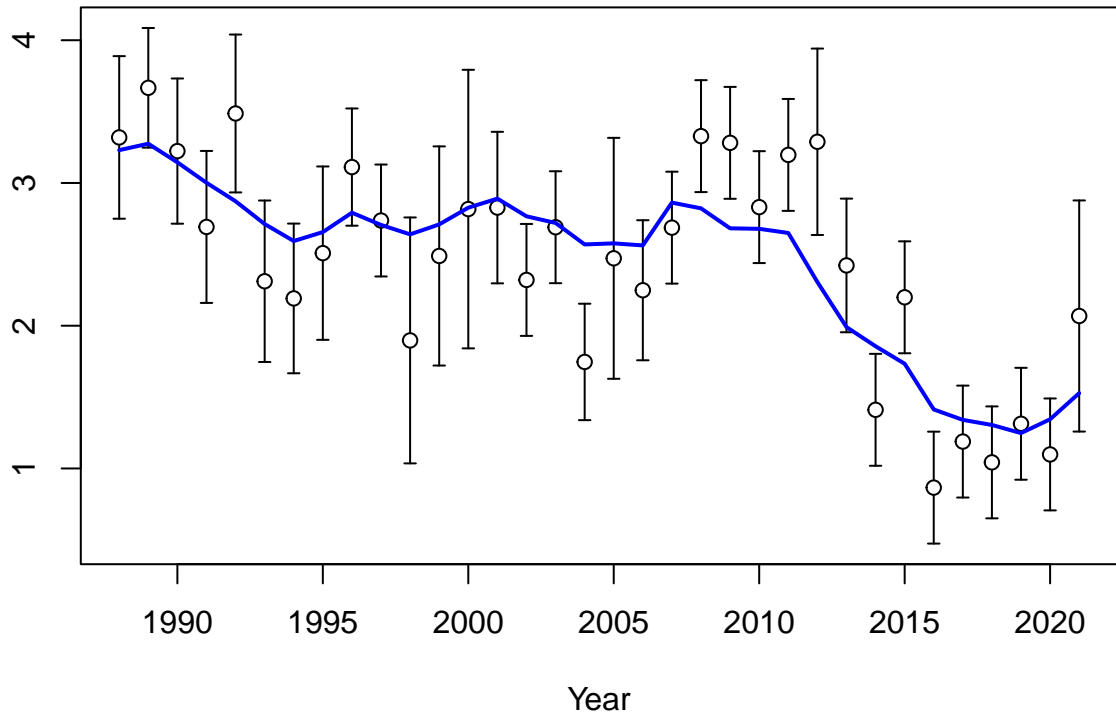
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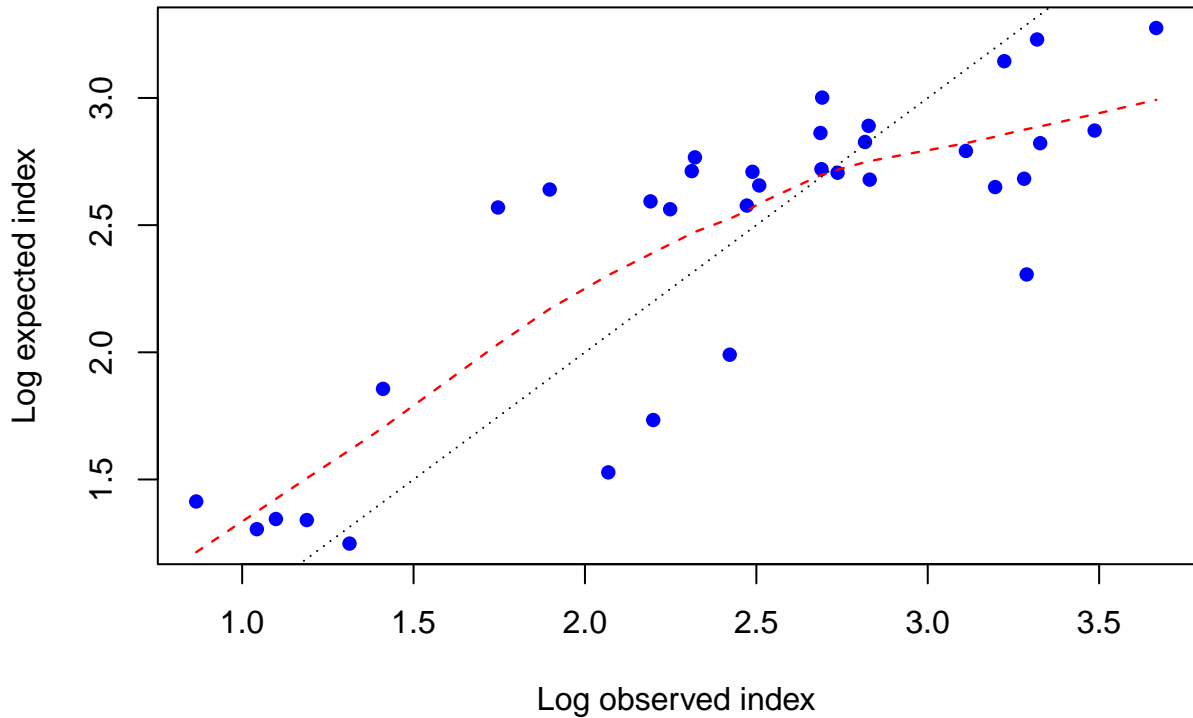
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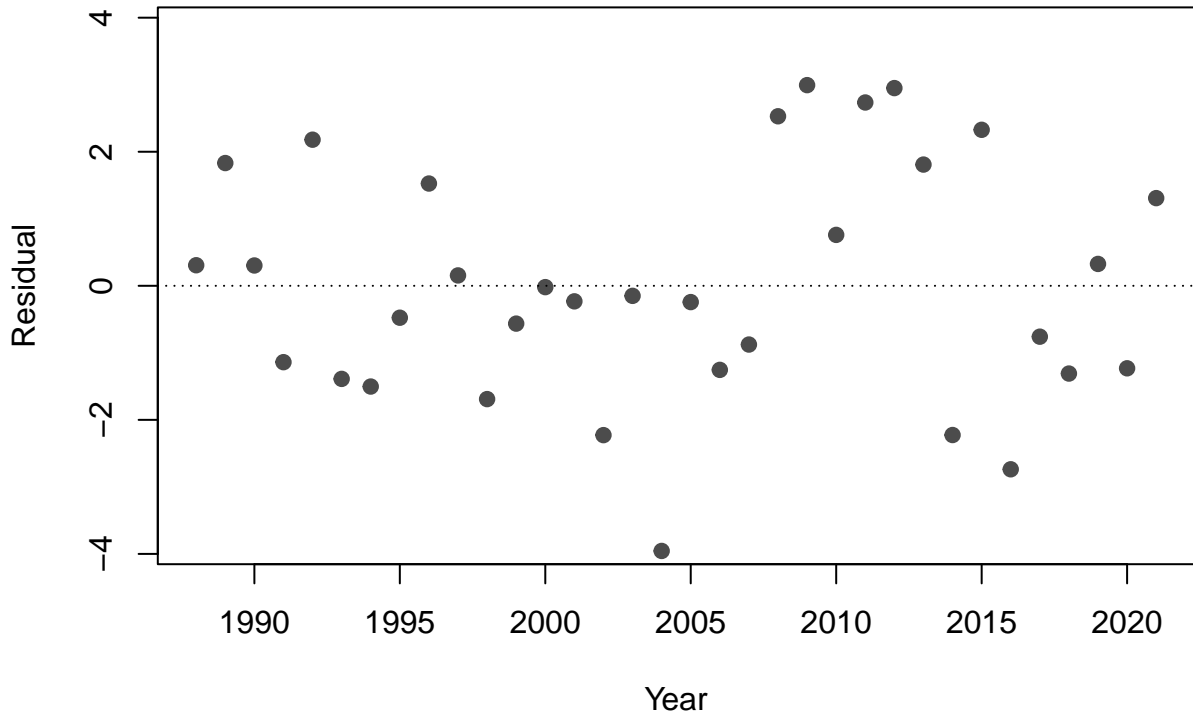
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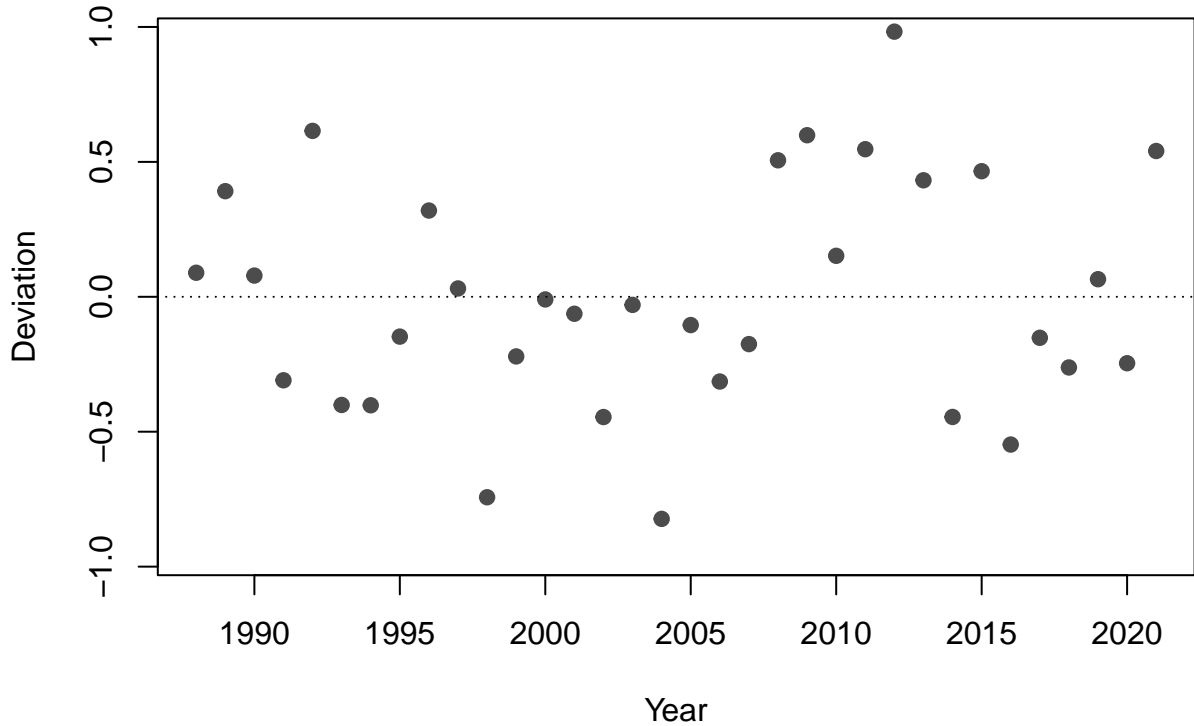
Log index

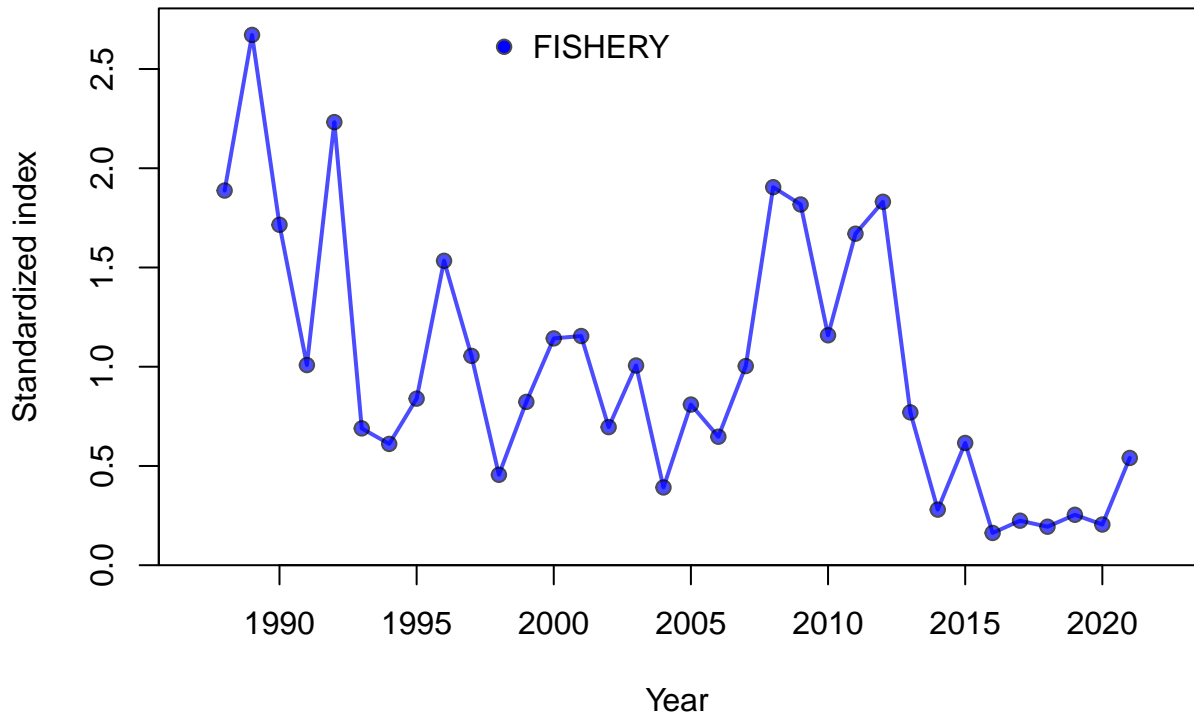


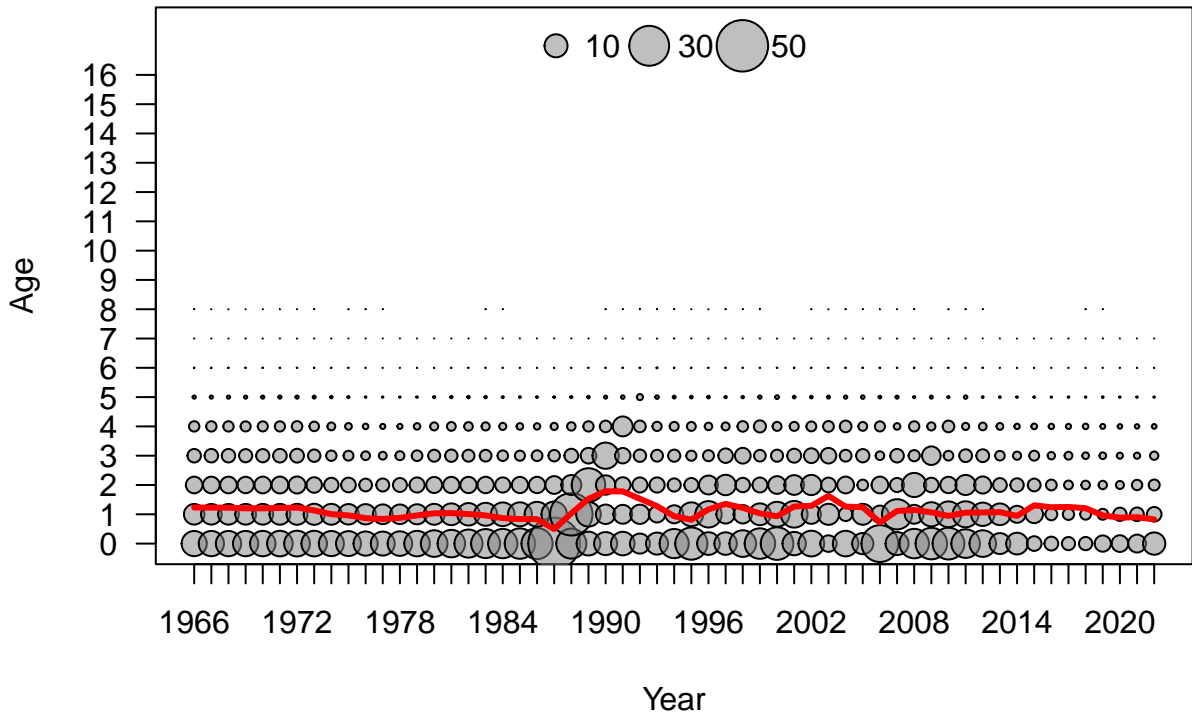




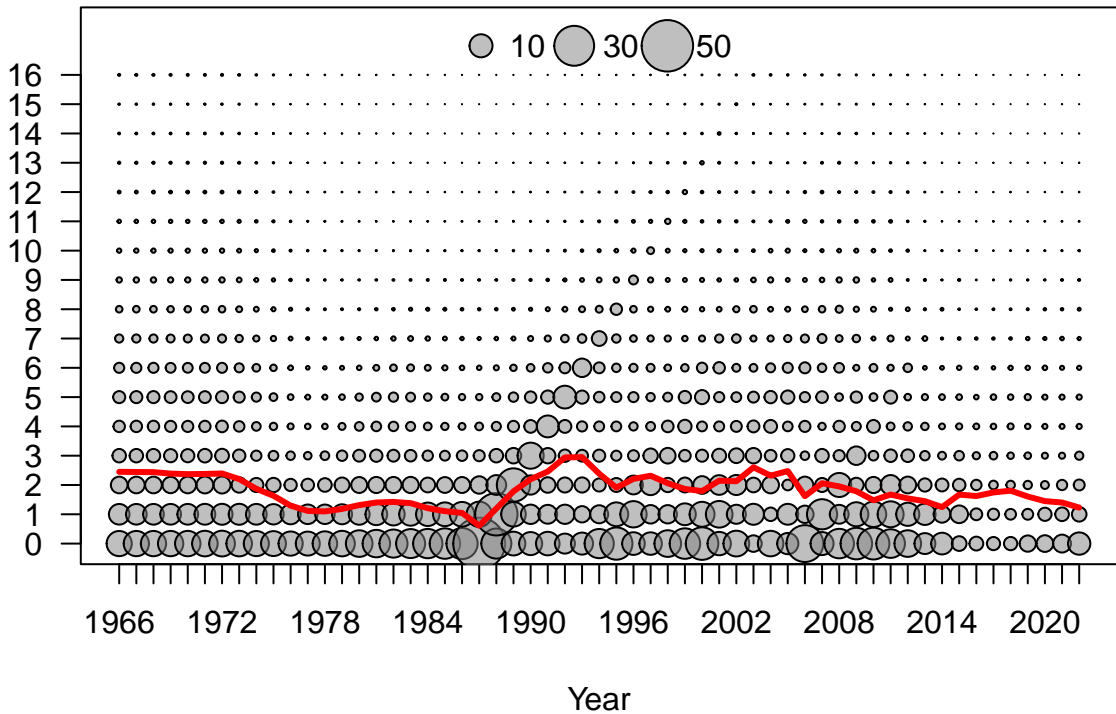




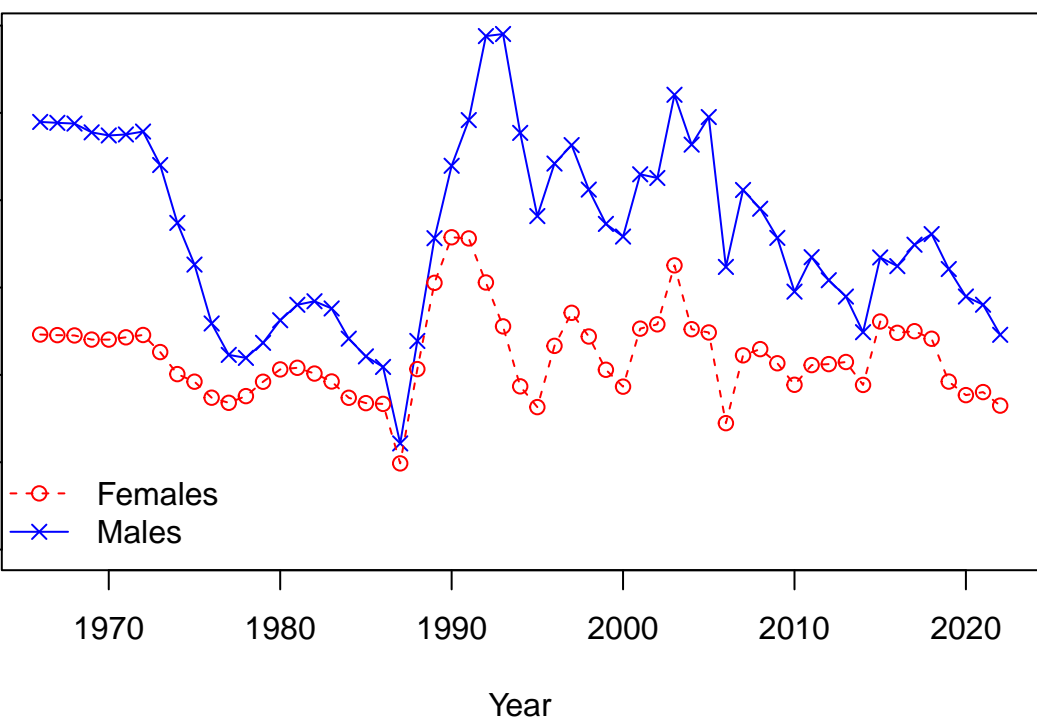


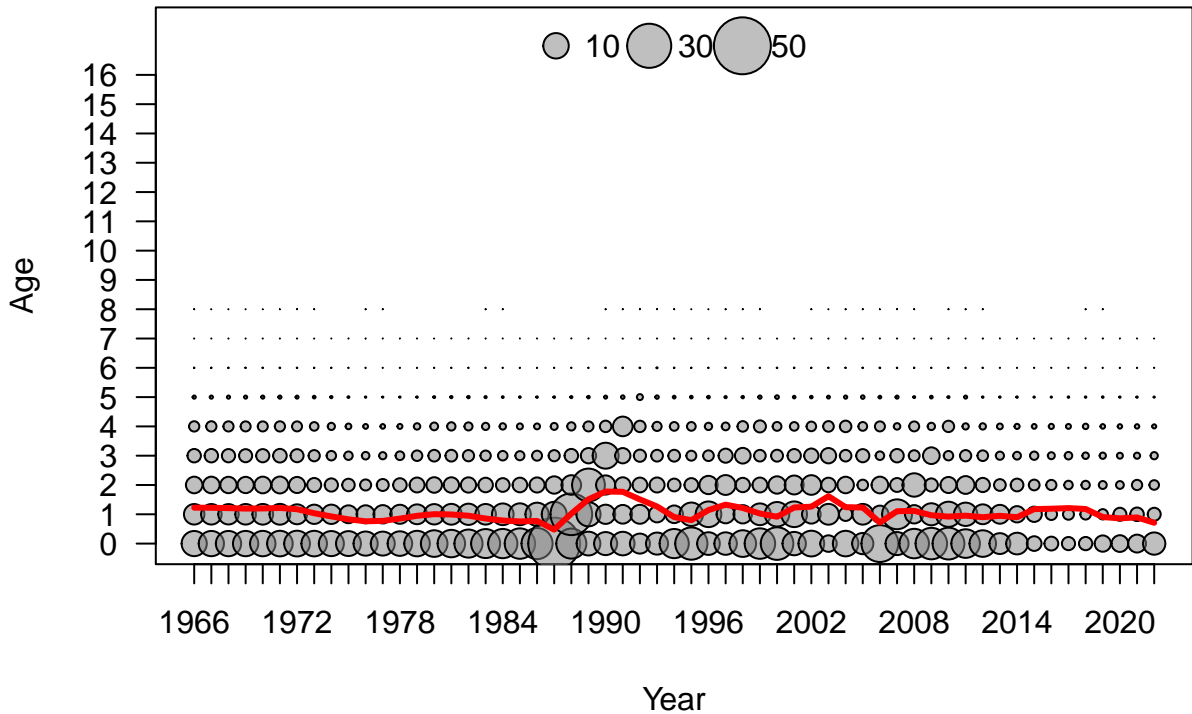


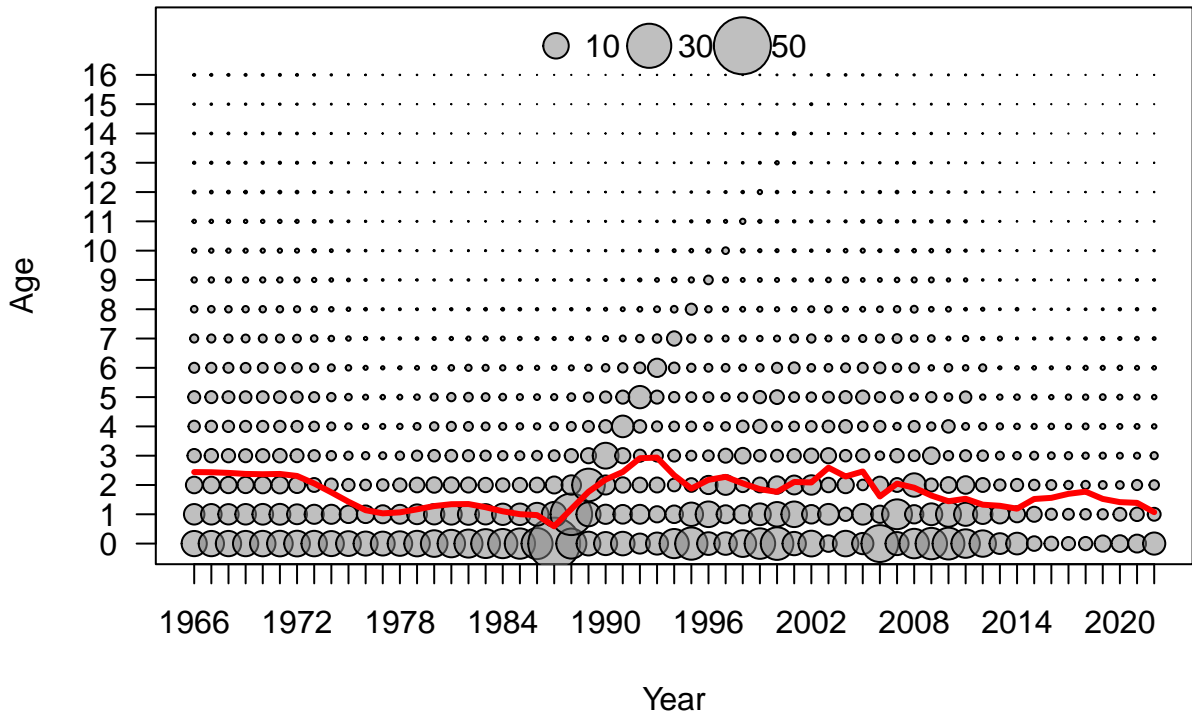
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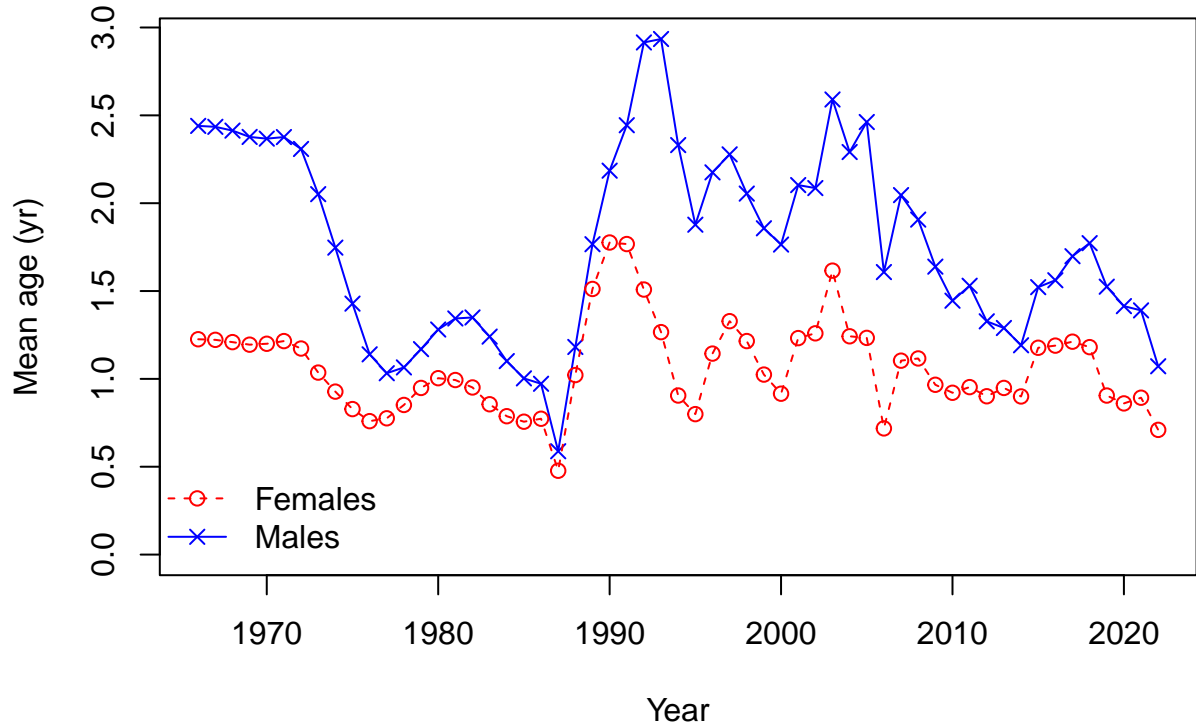


Mean age (yr)

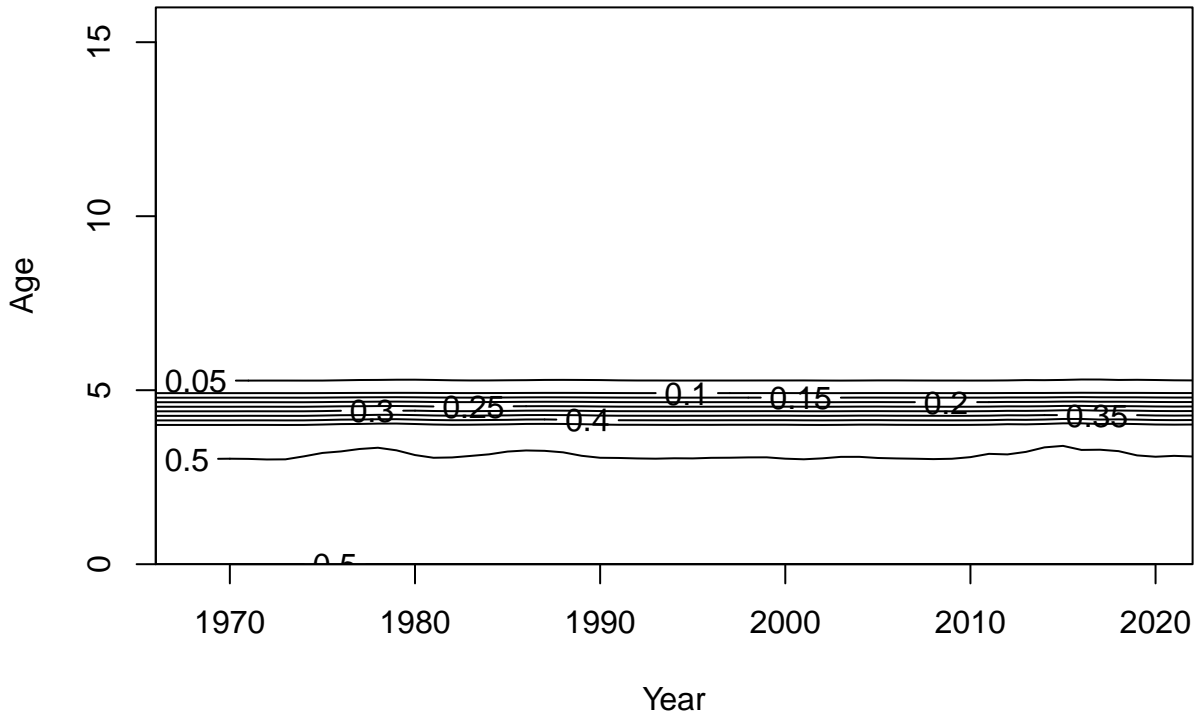


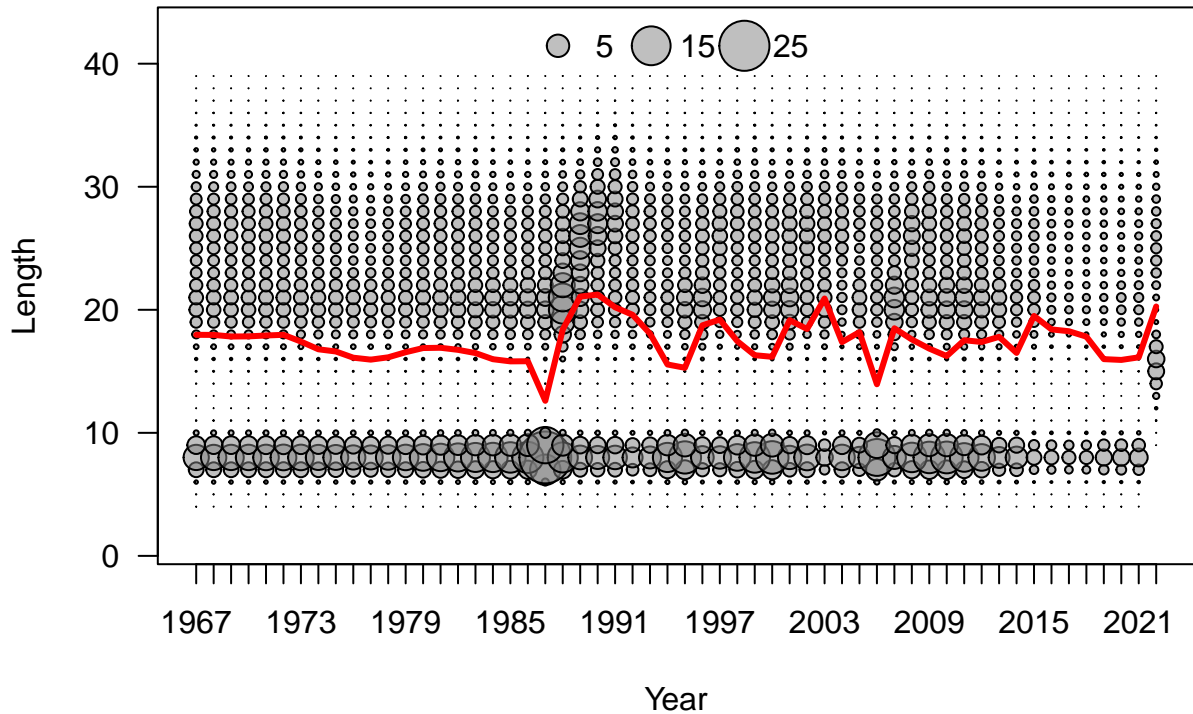


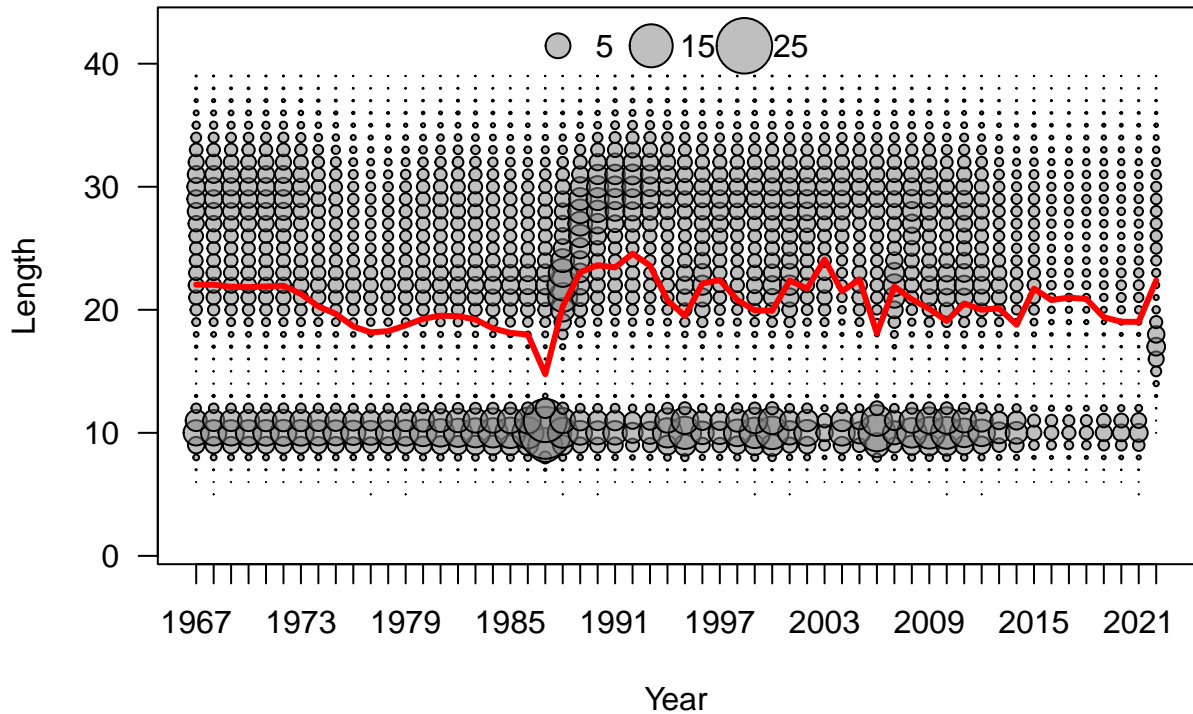


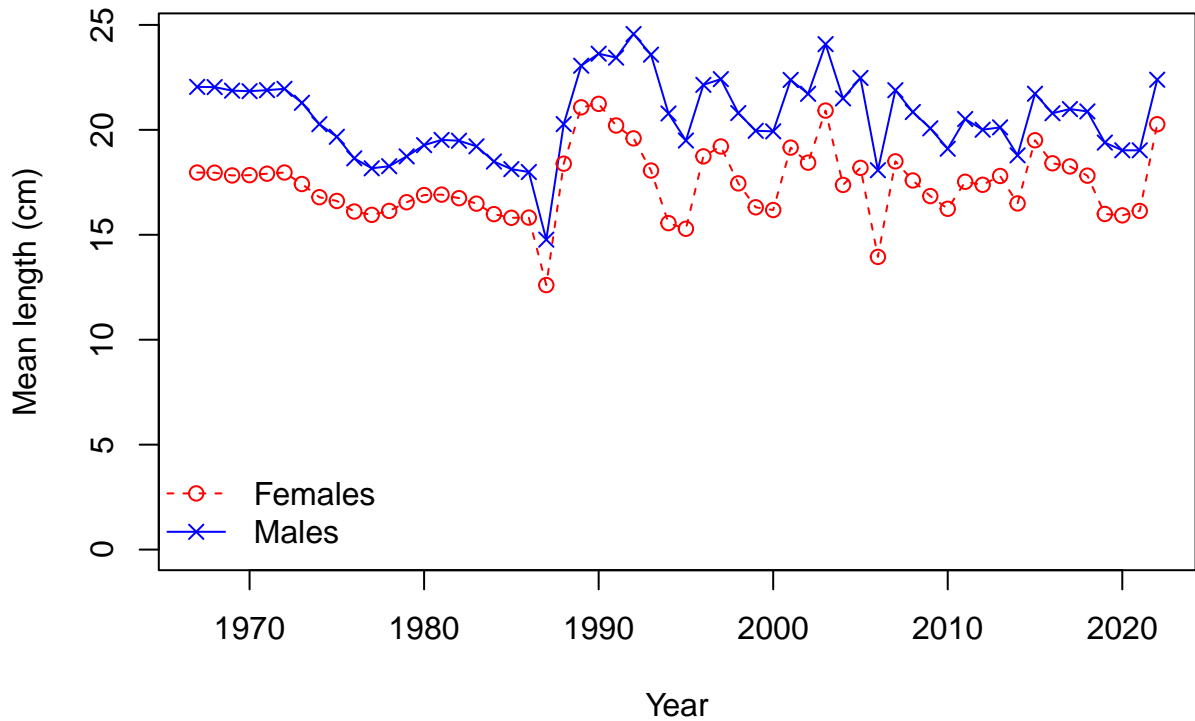


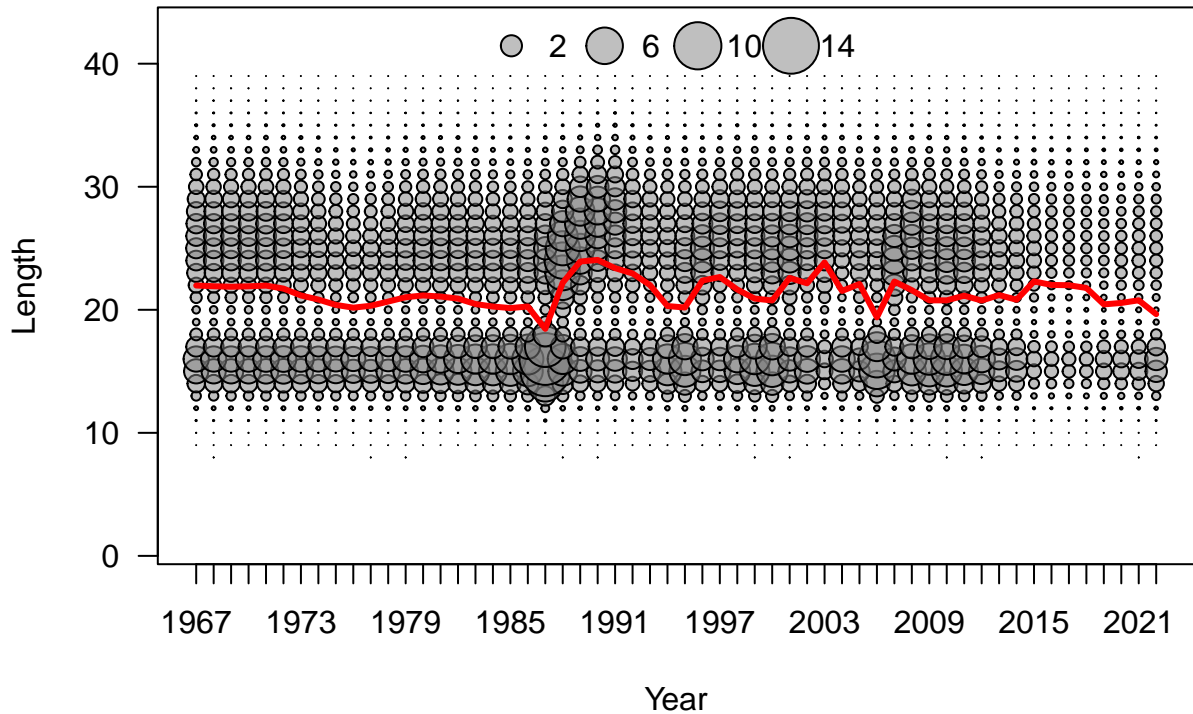


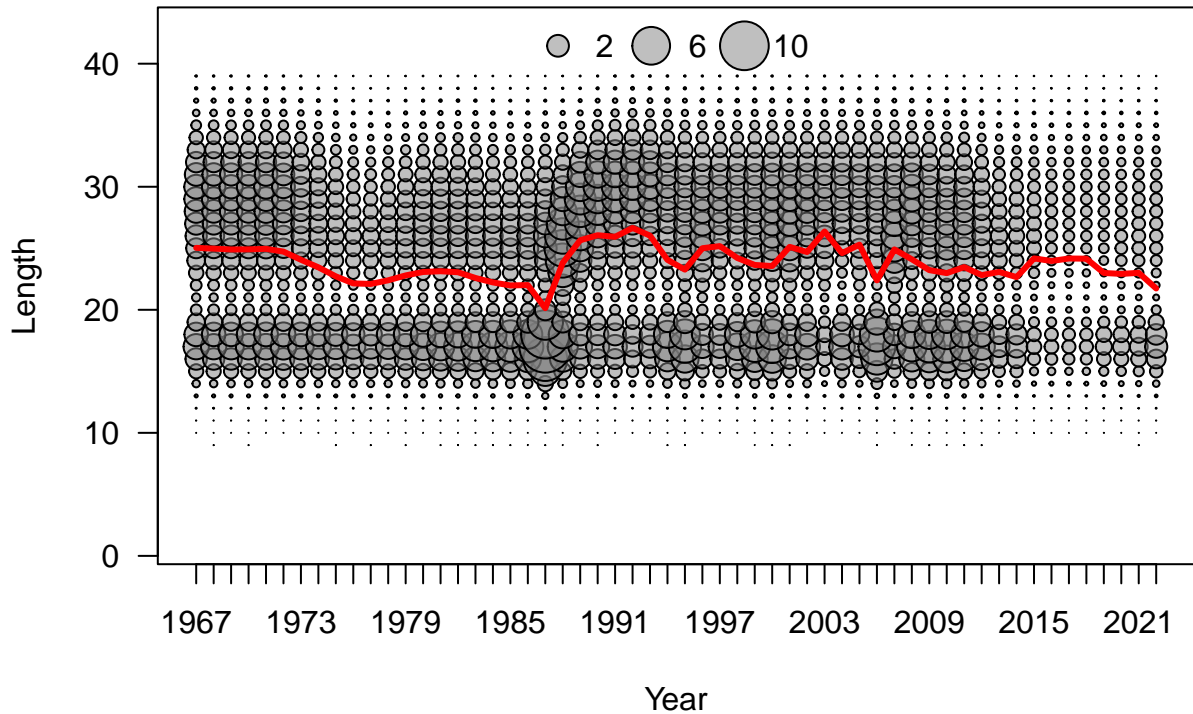


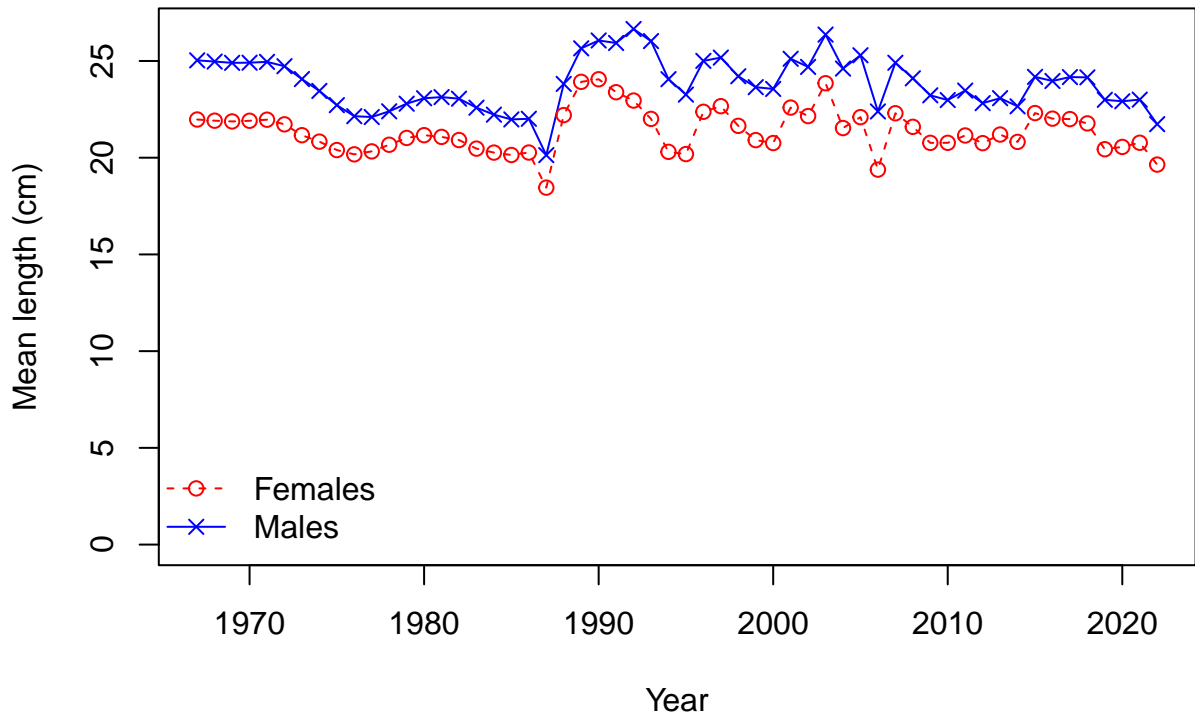


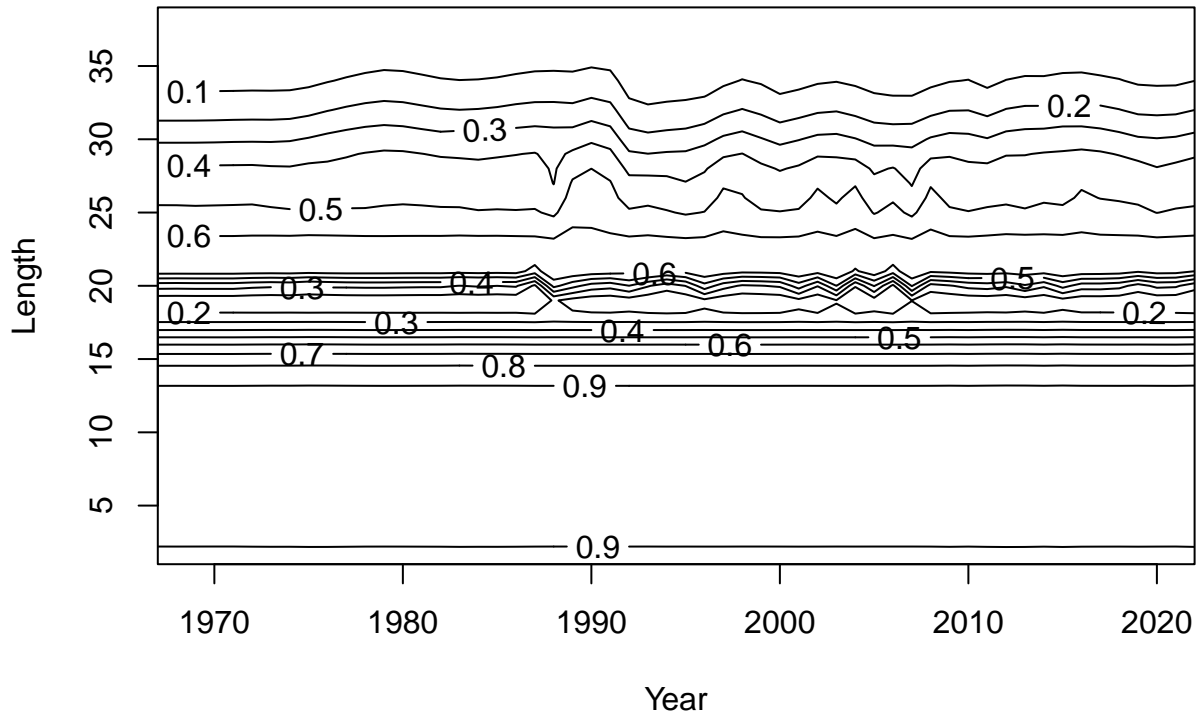




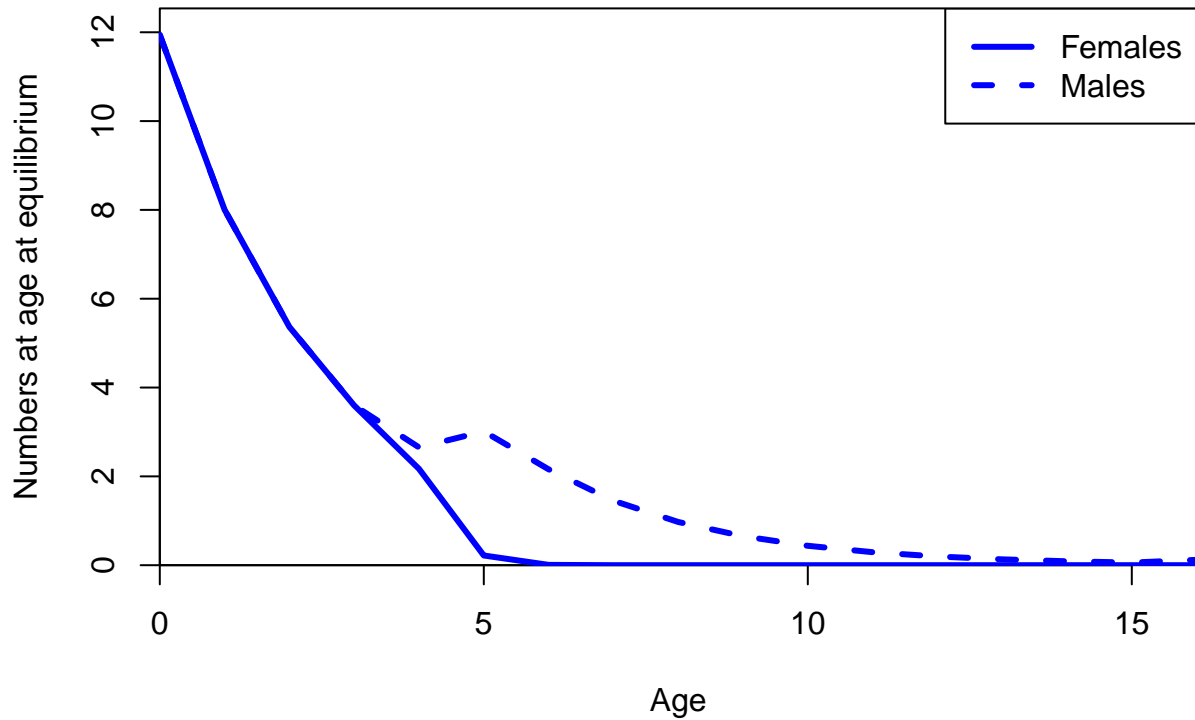


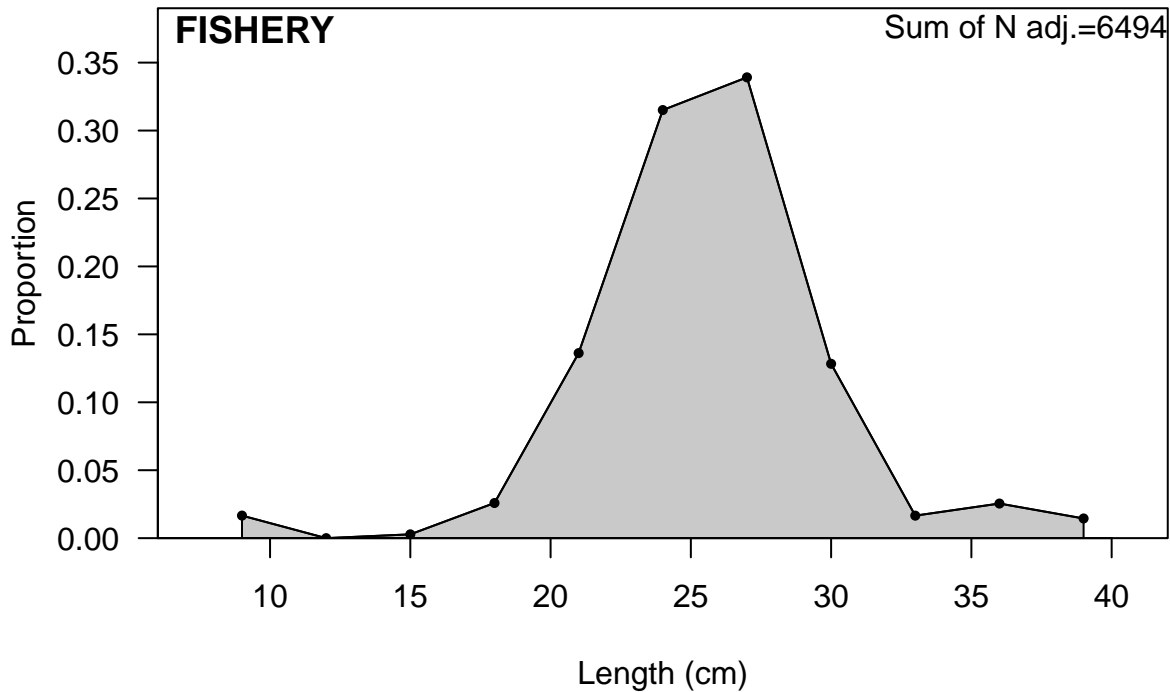


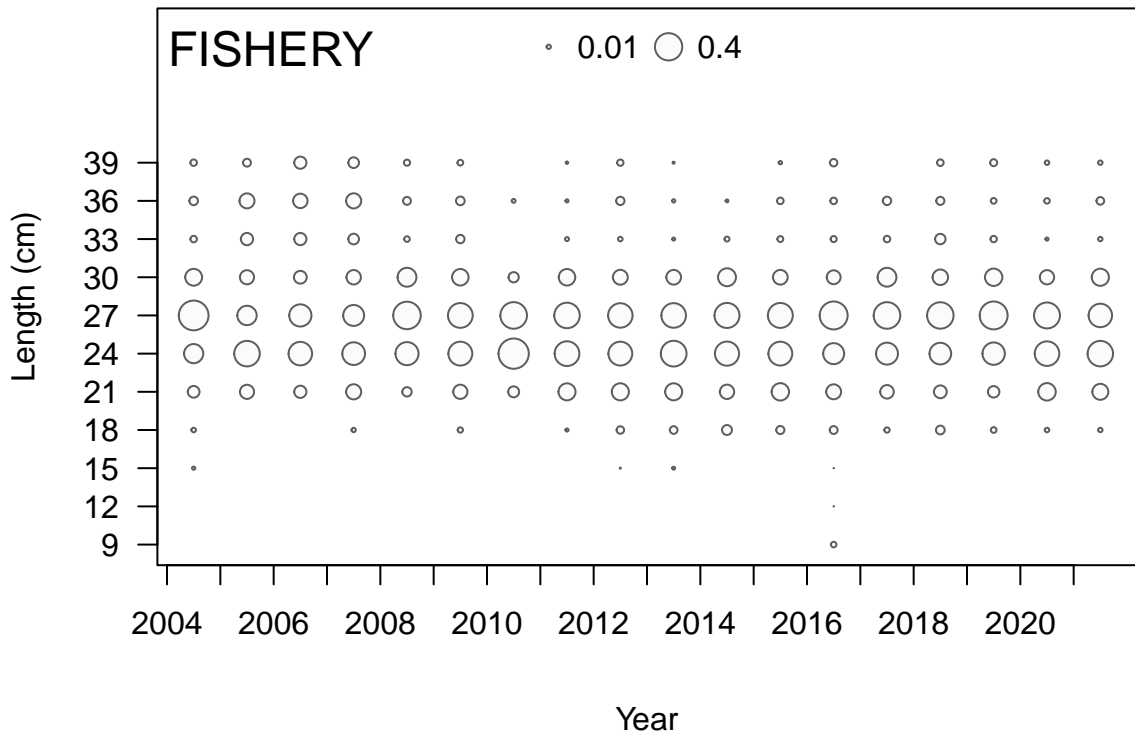




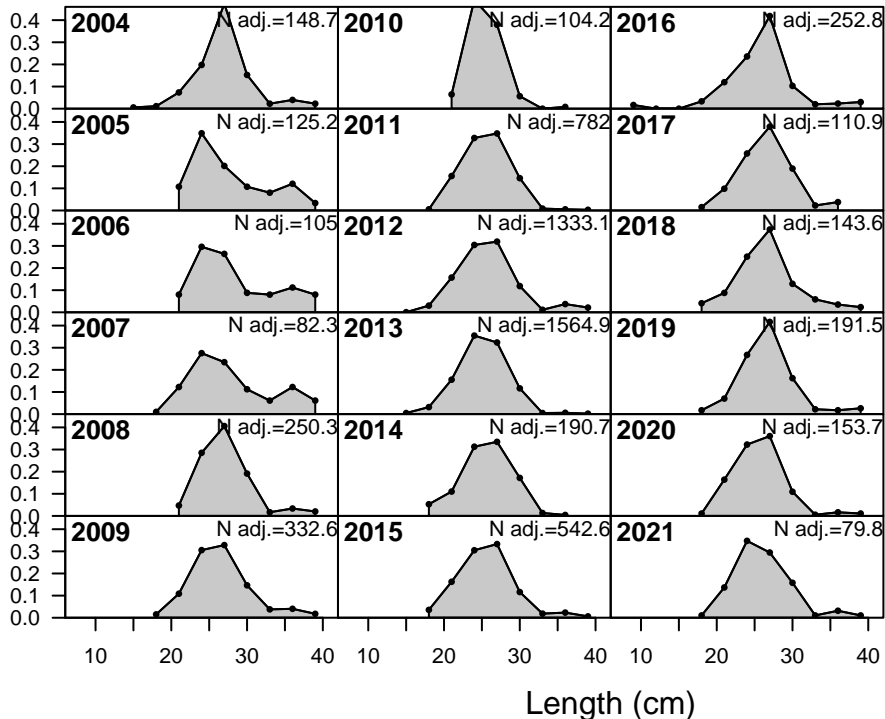


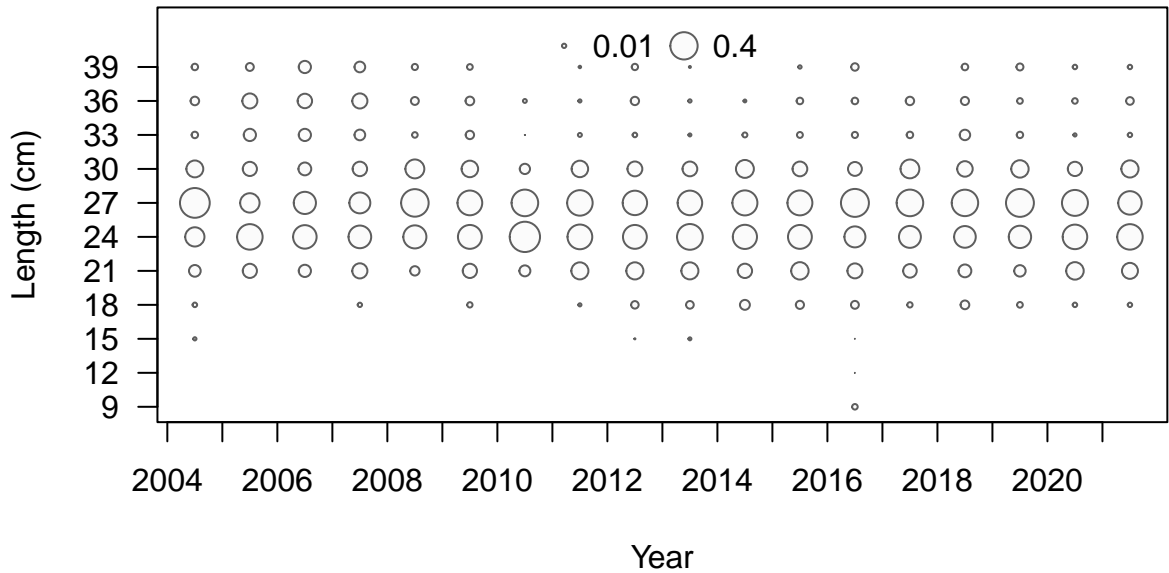




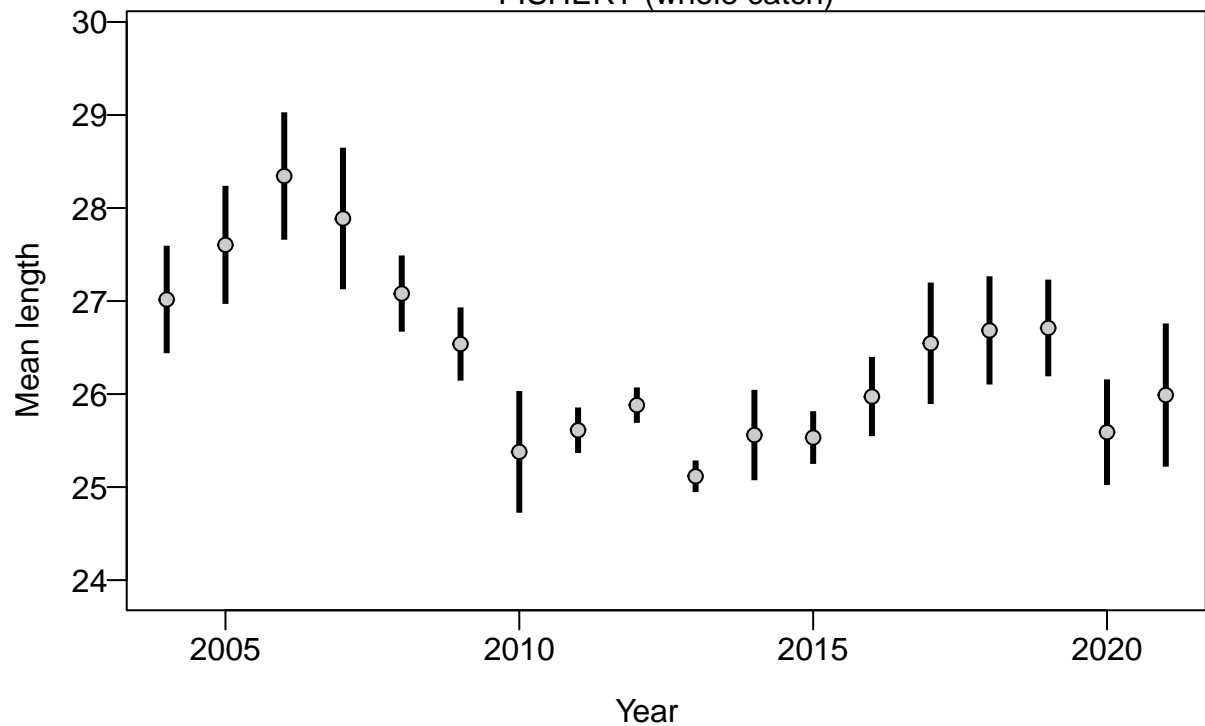


Proportion



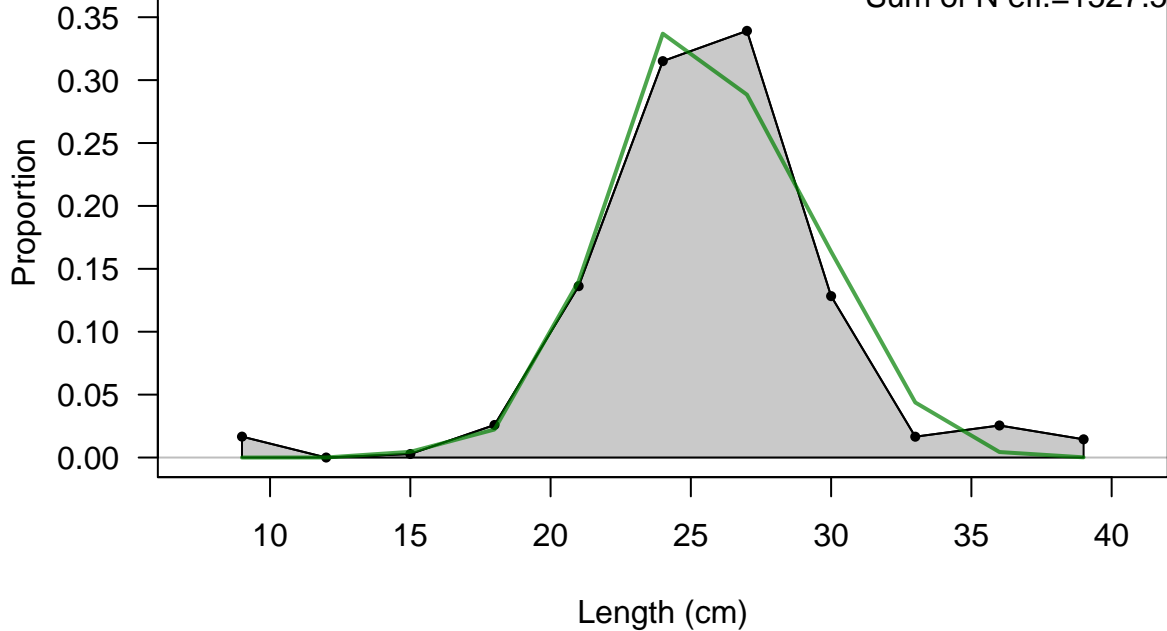


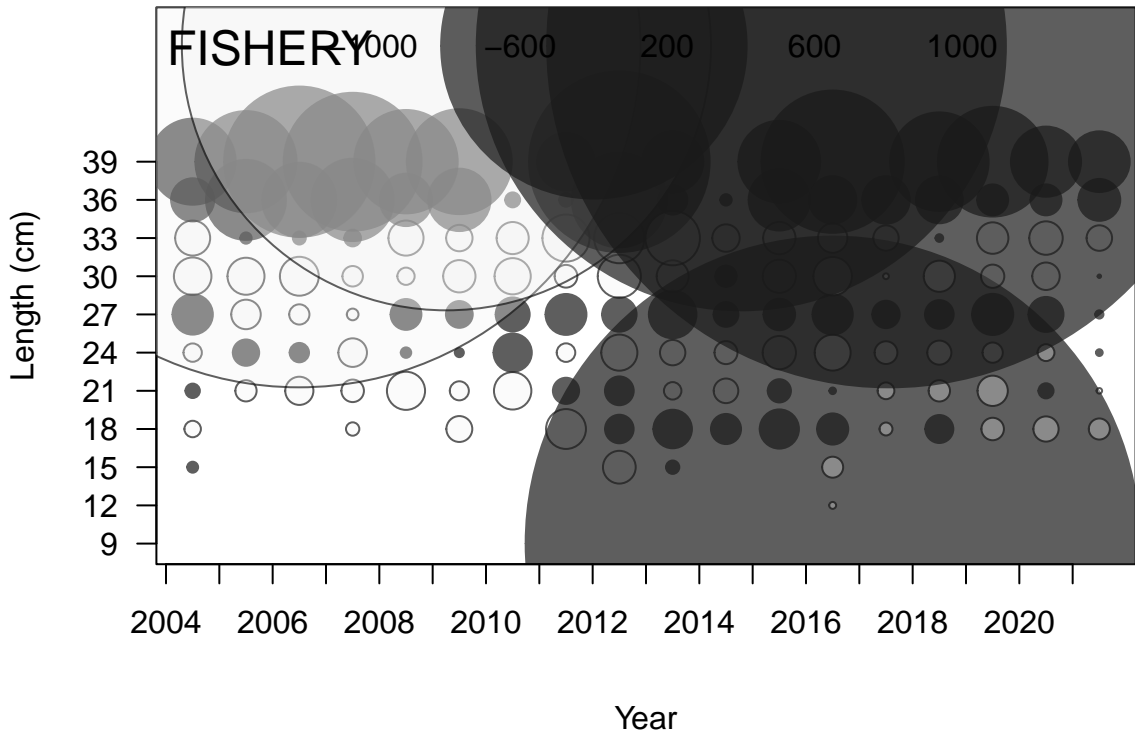
FISHERY (whole catch)



# FISHERY

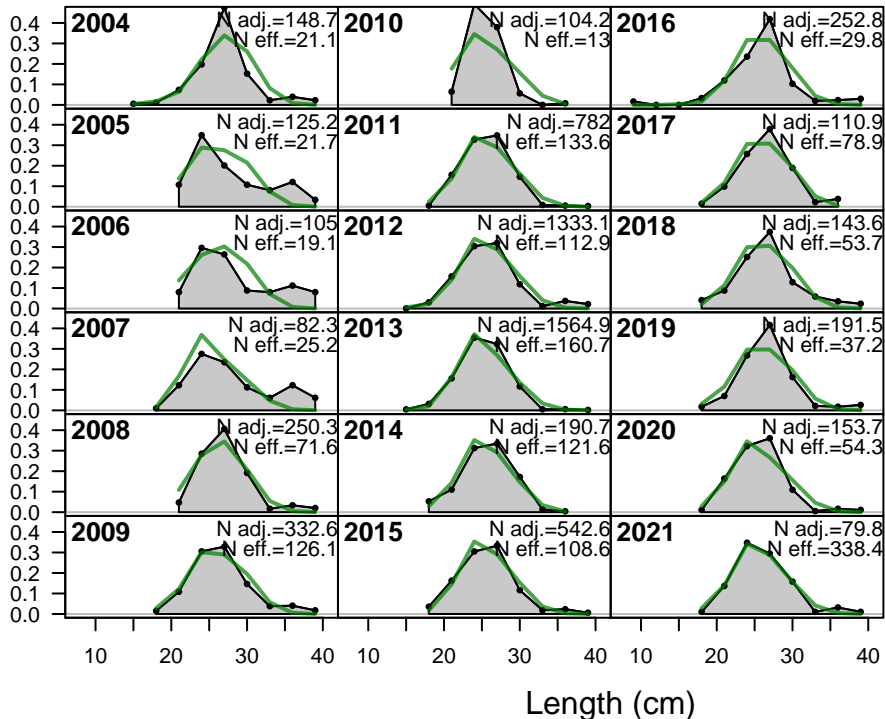
Sum of N adj.=6494  
Sum of N eff.=1527.5

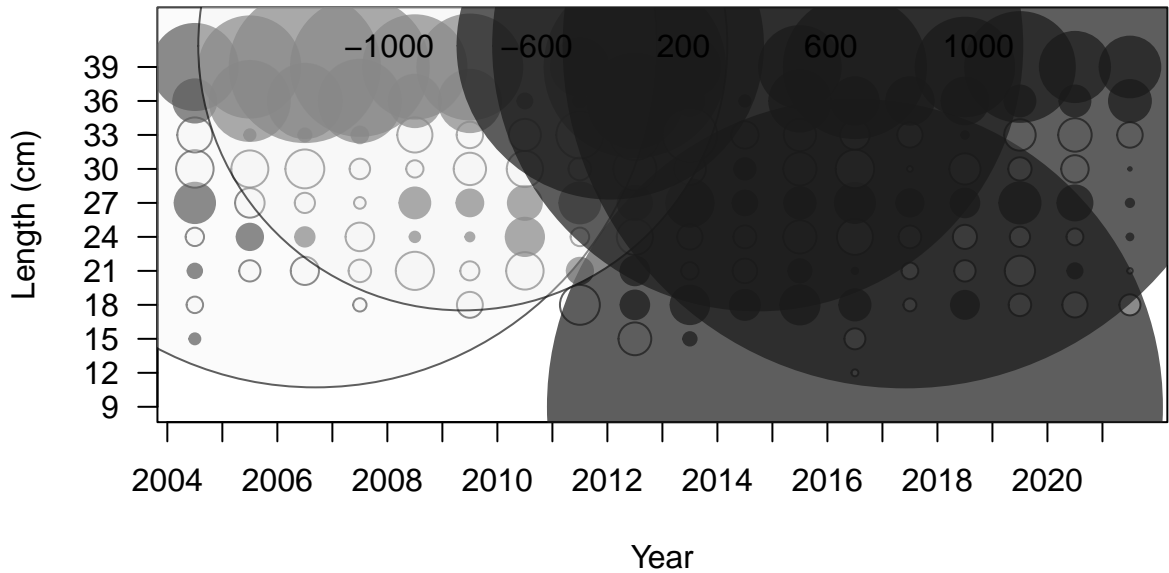




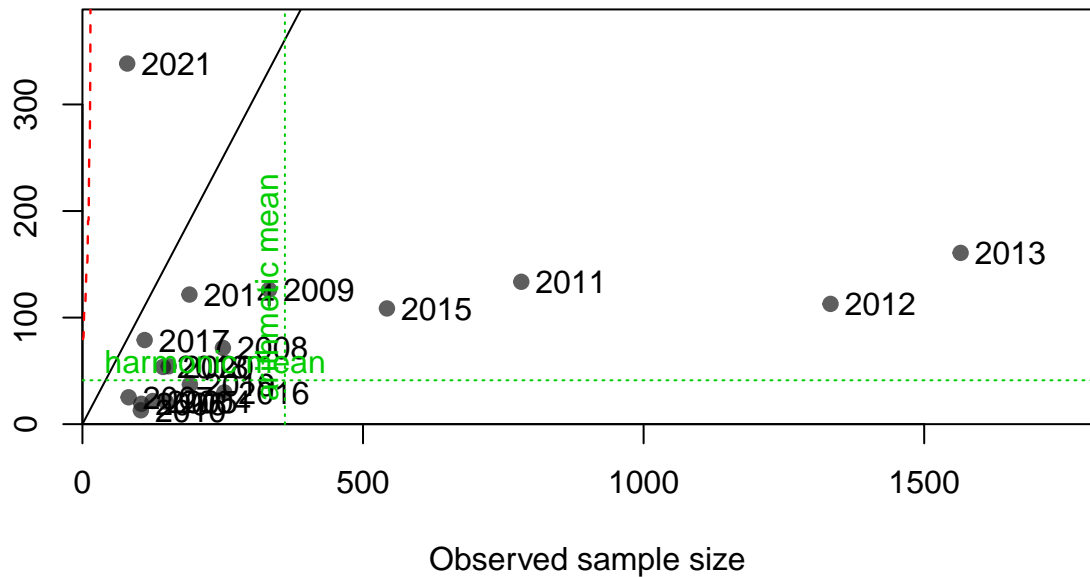


Proportion

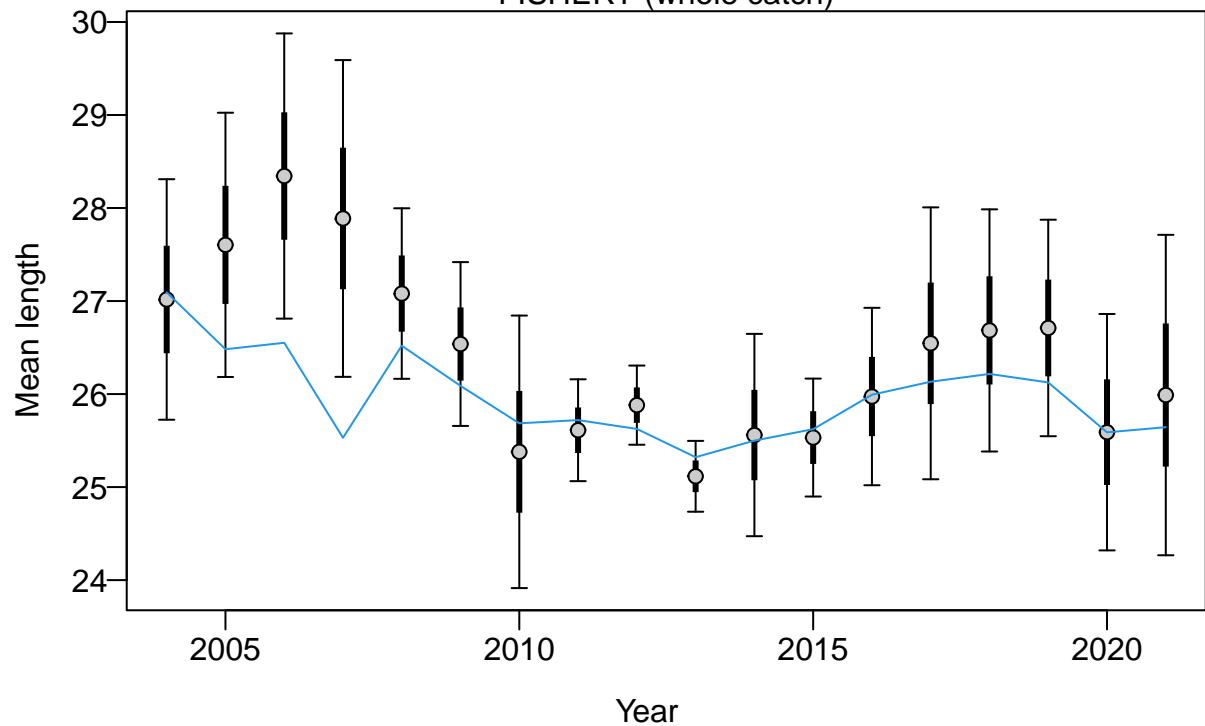


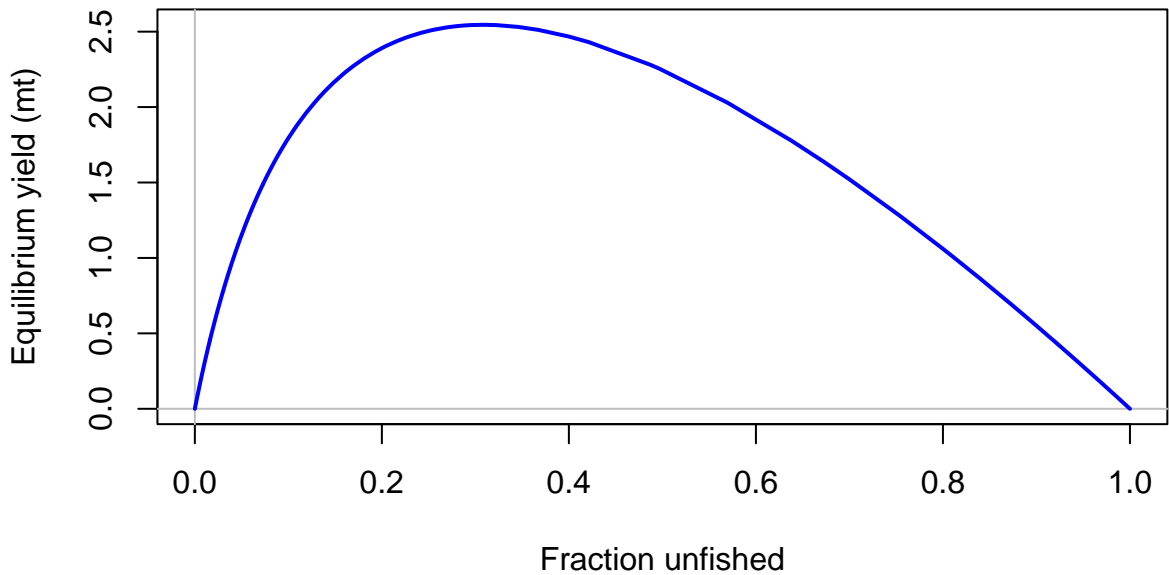


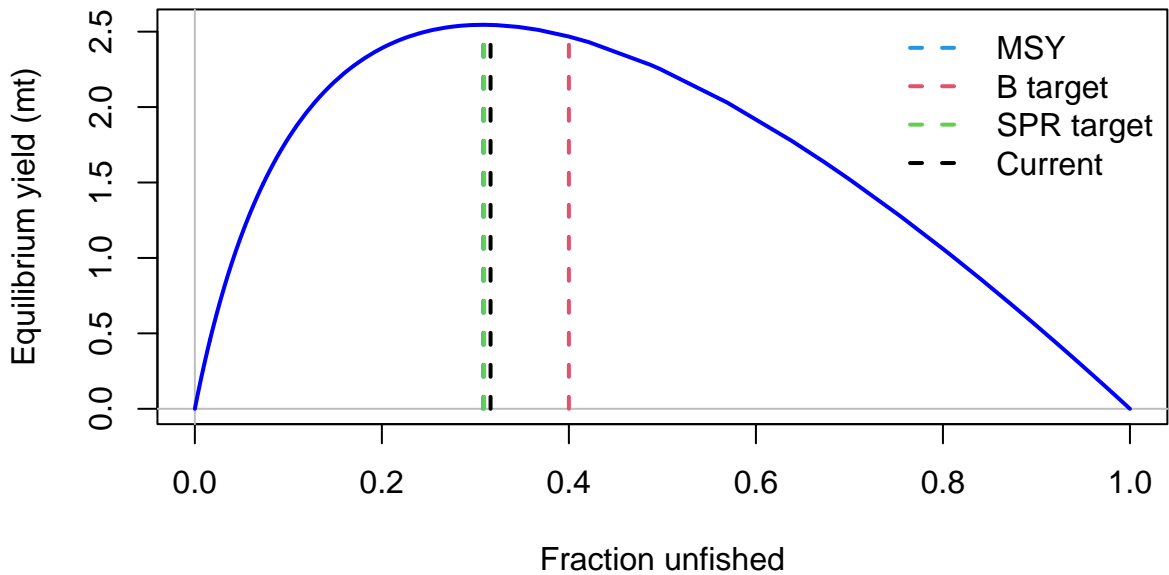
Effective sample size

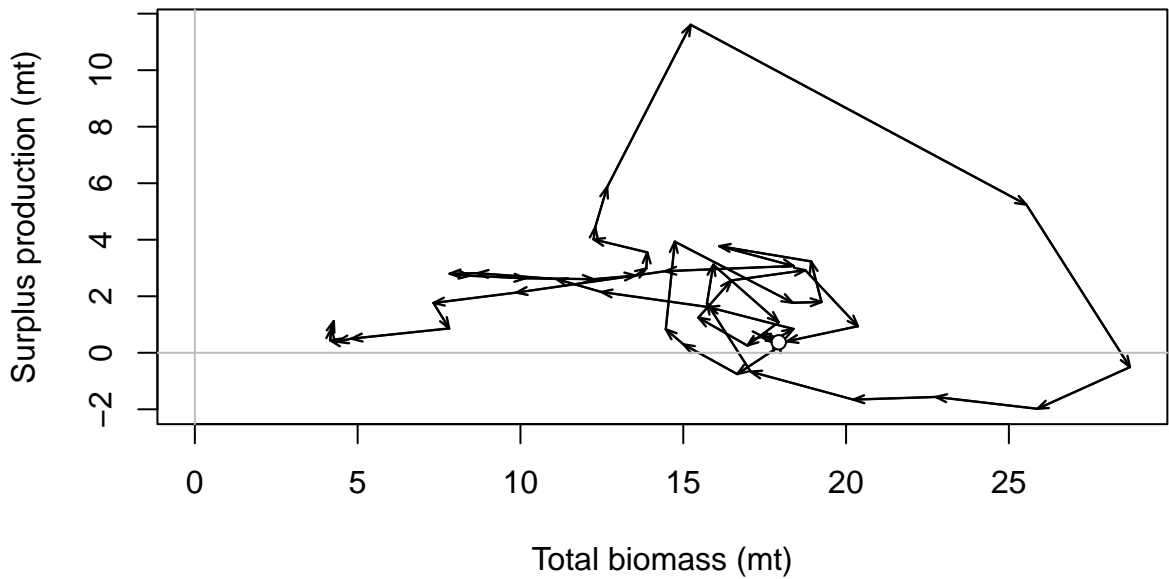


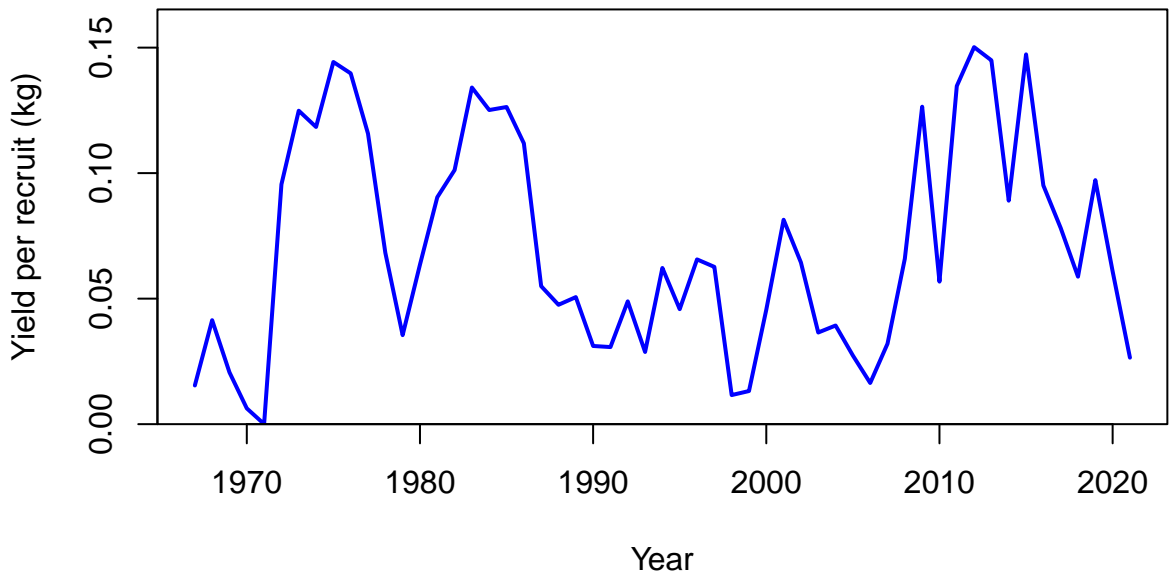
FISHERY (whole catch)



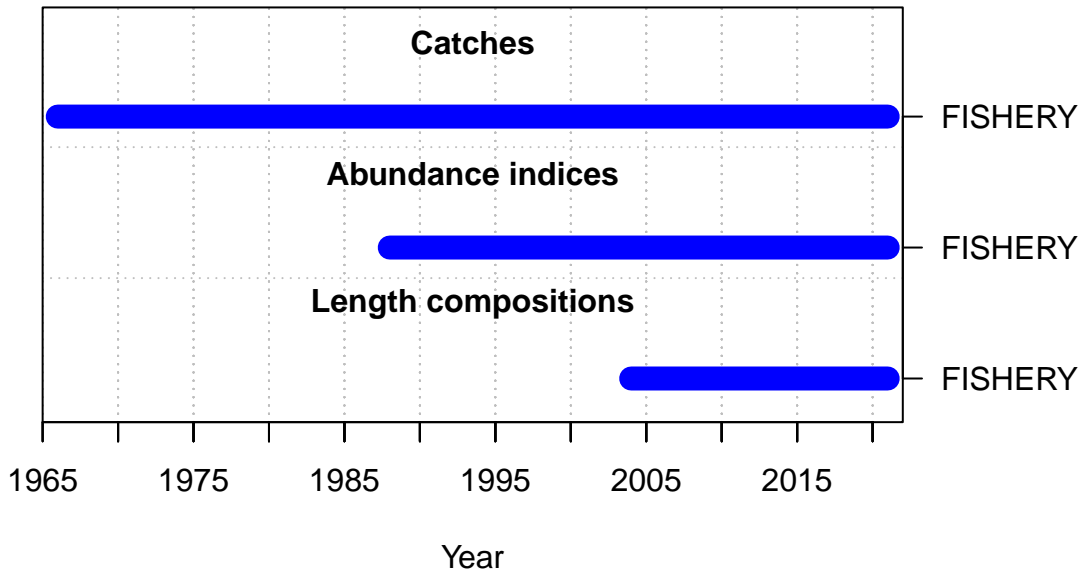


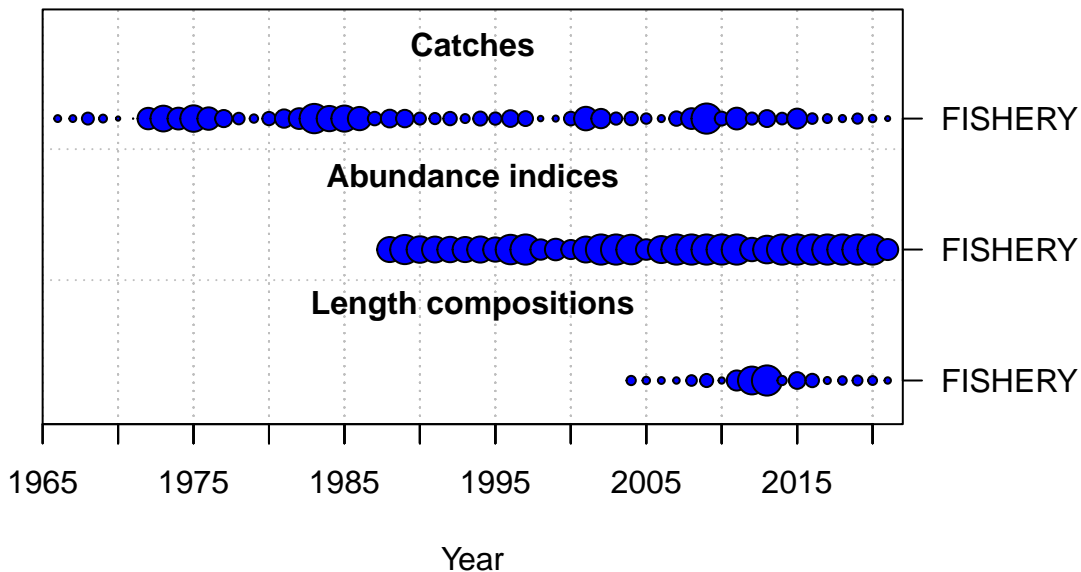






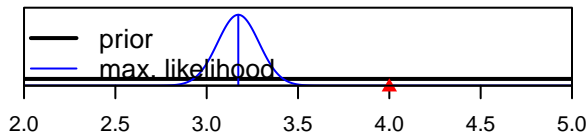




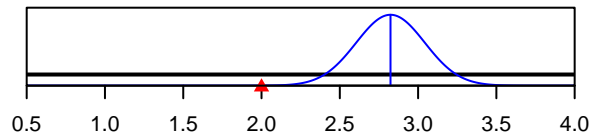


Density

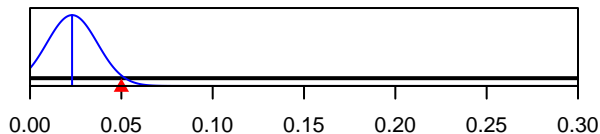
SR\_LN(R0)



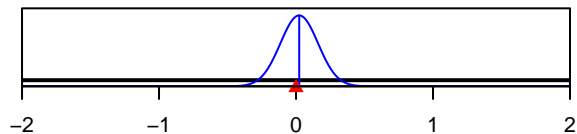
Size\_95%width\_FISHERY(1)



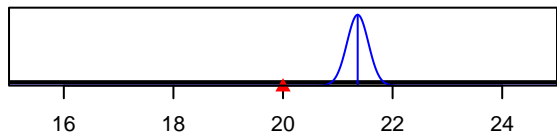
InitF\_seas\_1\_flt\_1FISHERY



LnQ\_base\_FISHERY(1)



Size\_inflection\_FISHERY(1)



Parameter value