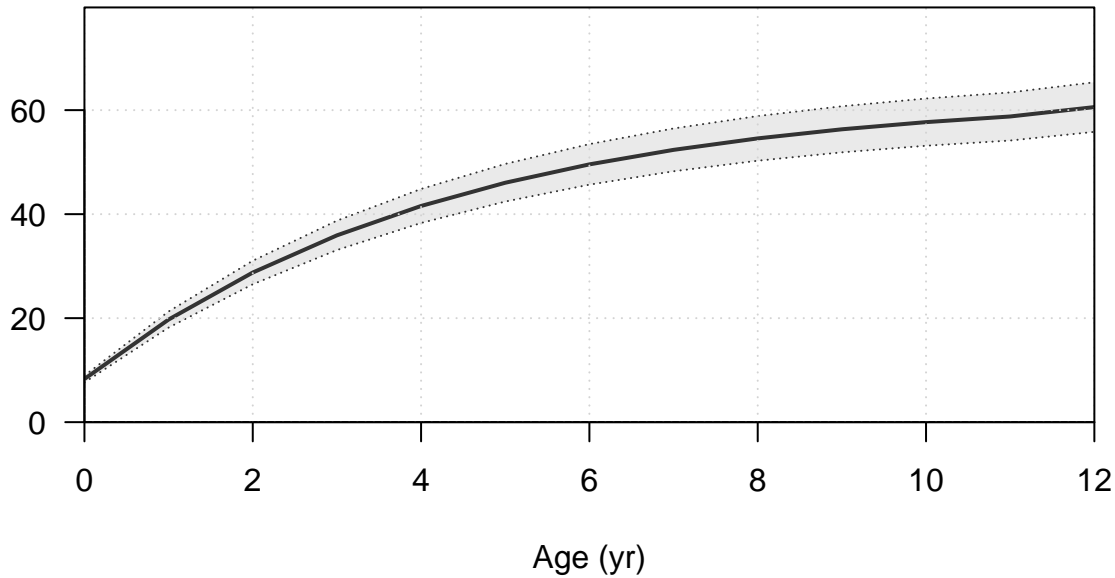
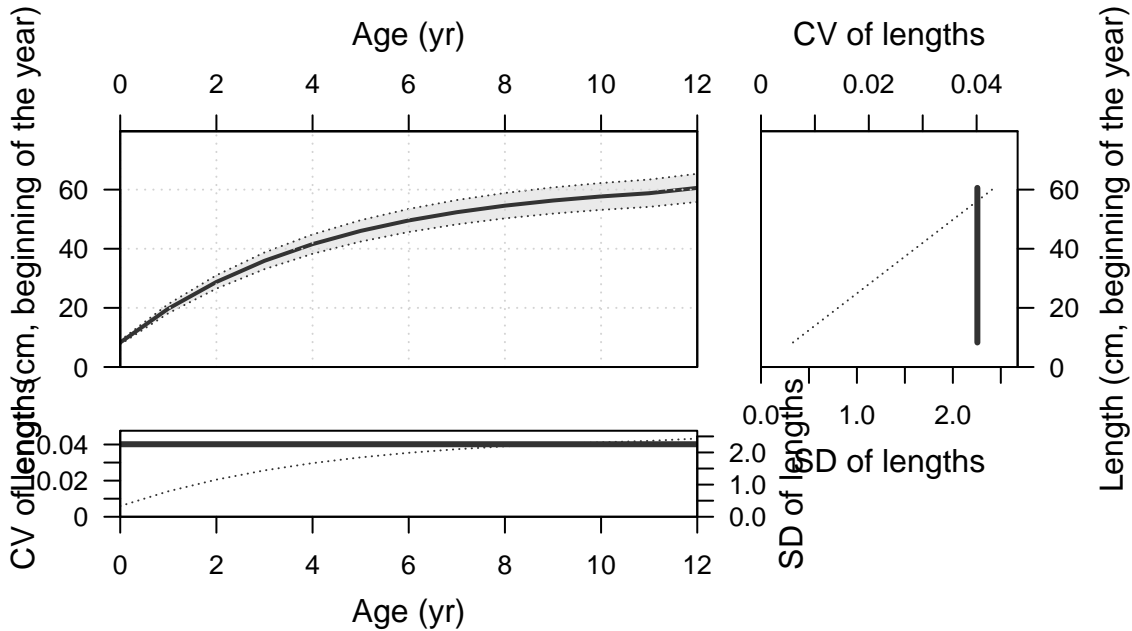
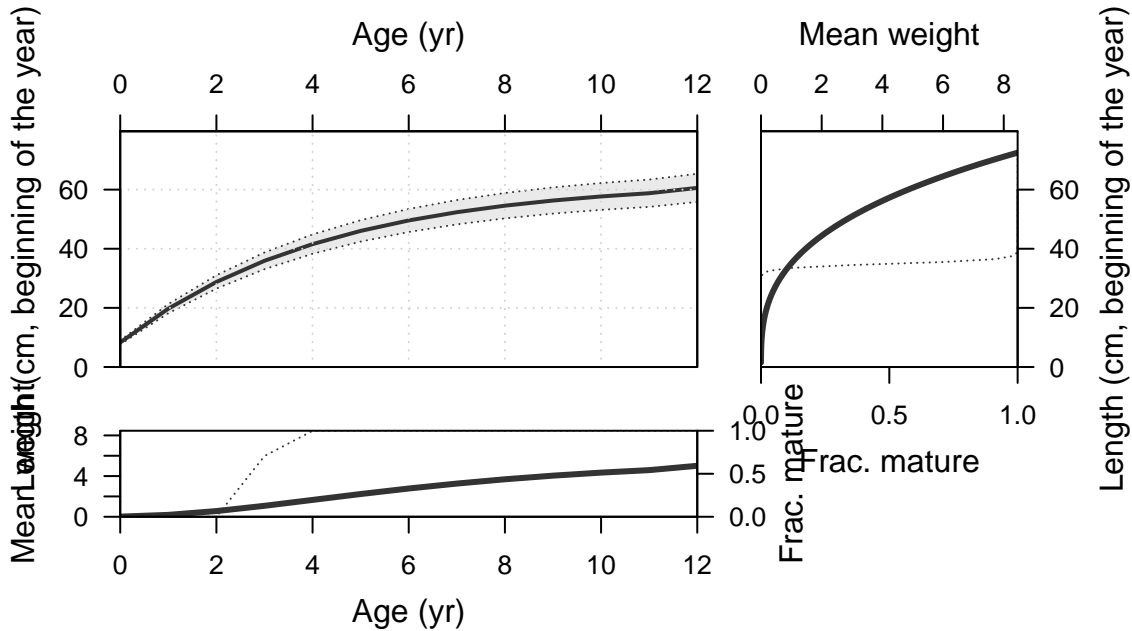


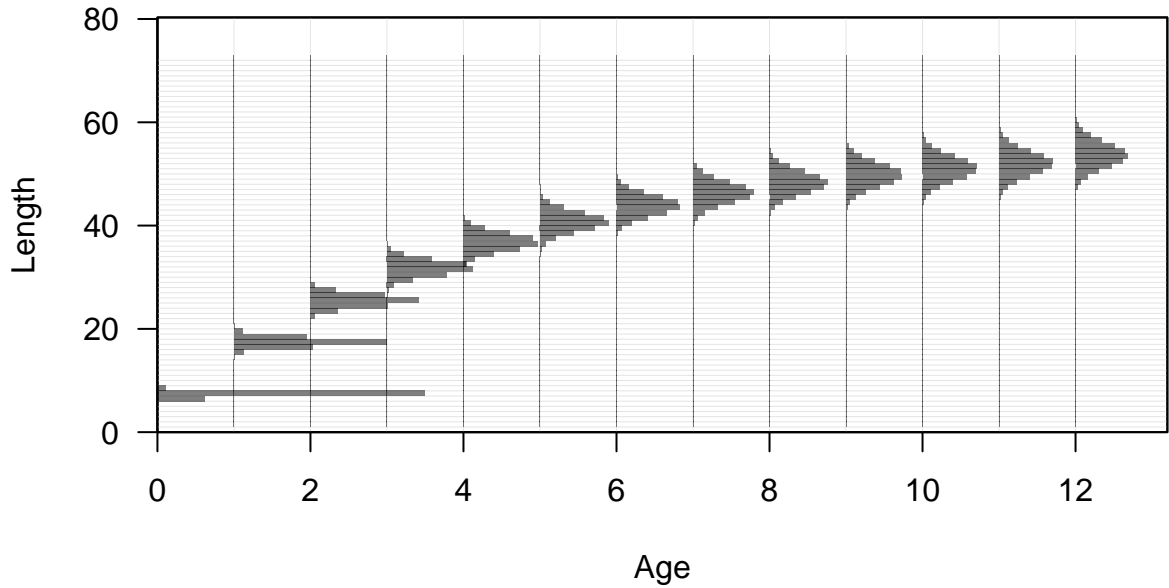
Plots created using the 'r4ss' package in R  
Stock Synthesis version: 3.30.19.0  
StartTime: Wed Aug 10 14:54:31 2022  
Data\_File: data.ss  
Control\_File: control.ss

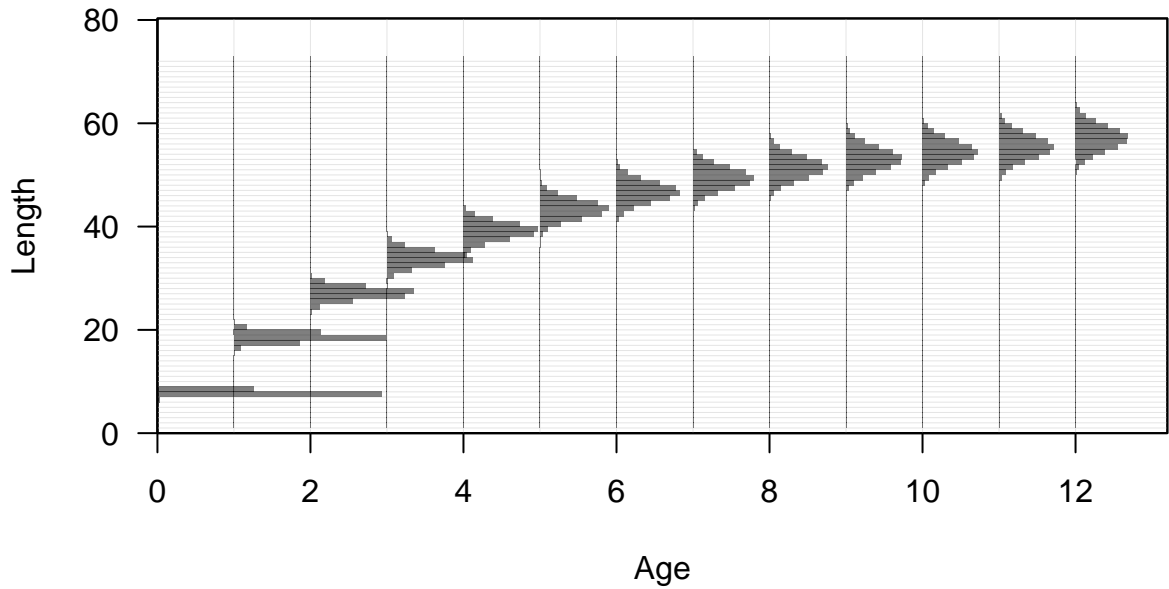
Length (cm, beginning of the year)

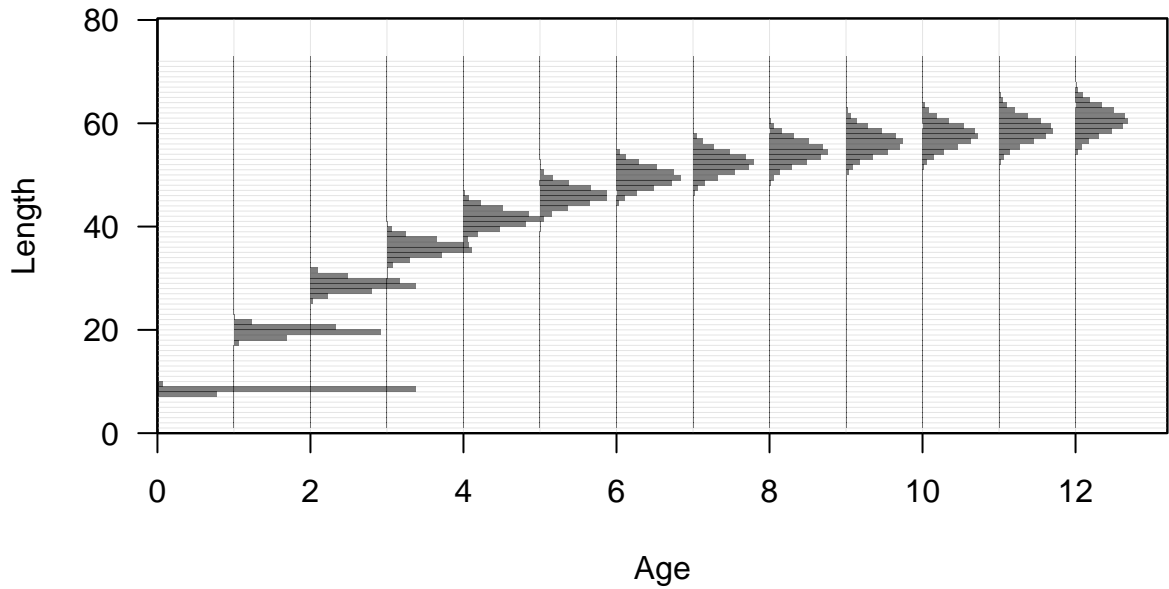


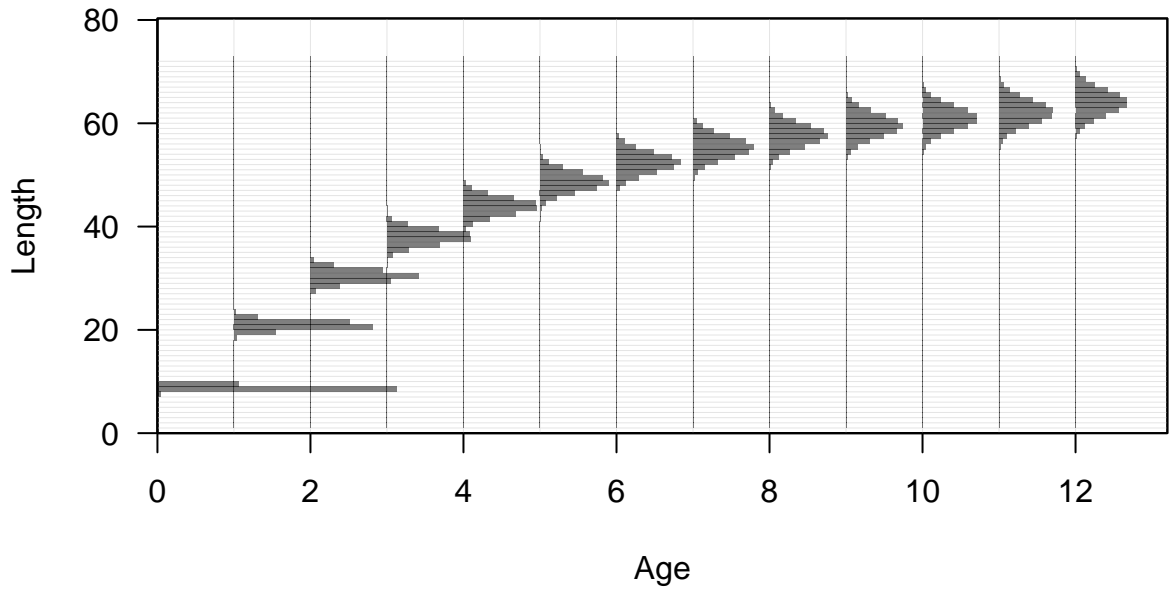




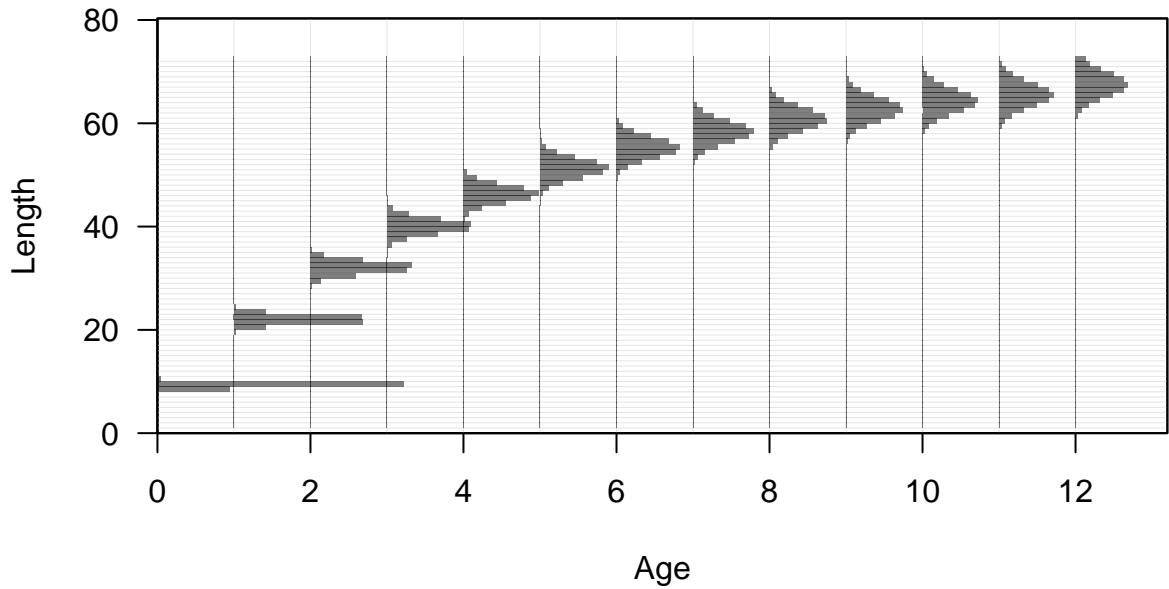


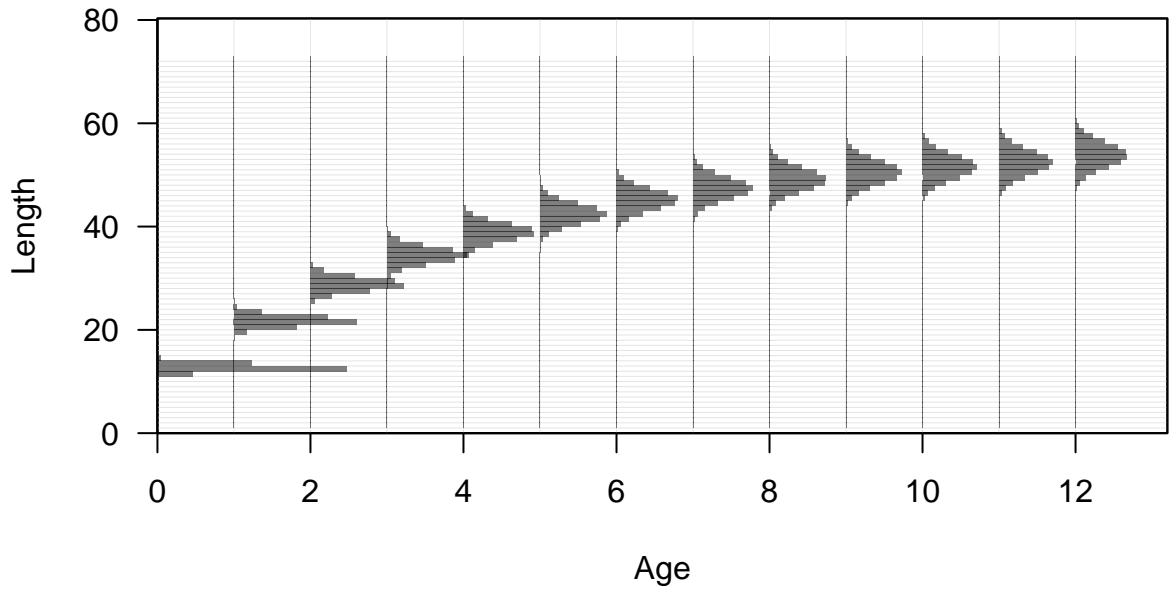


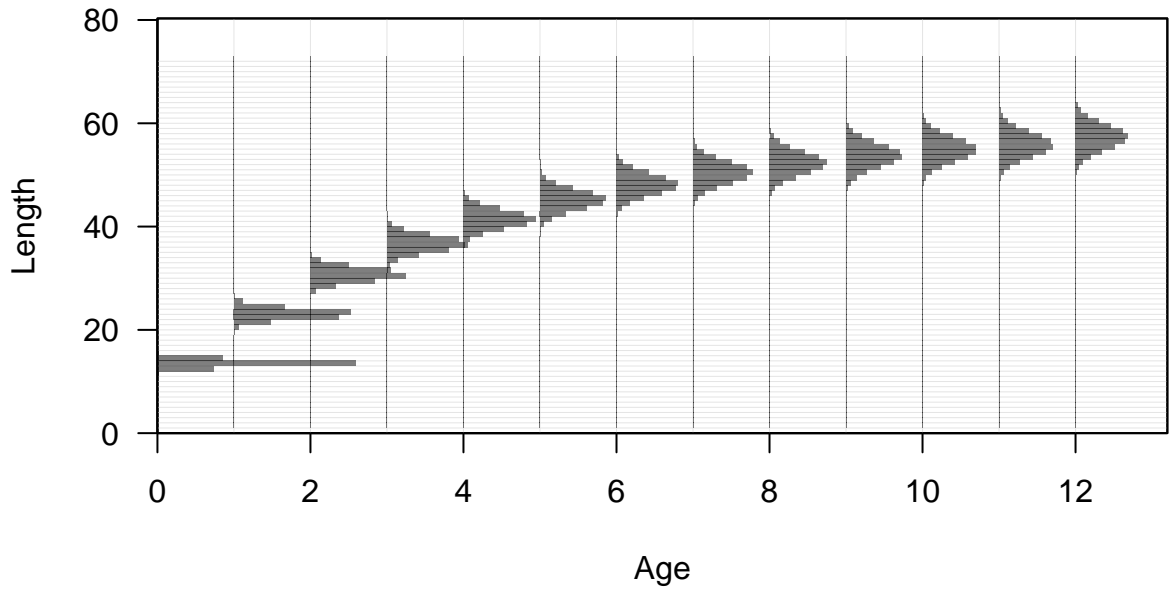


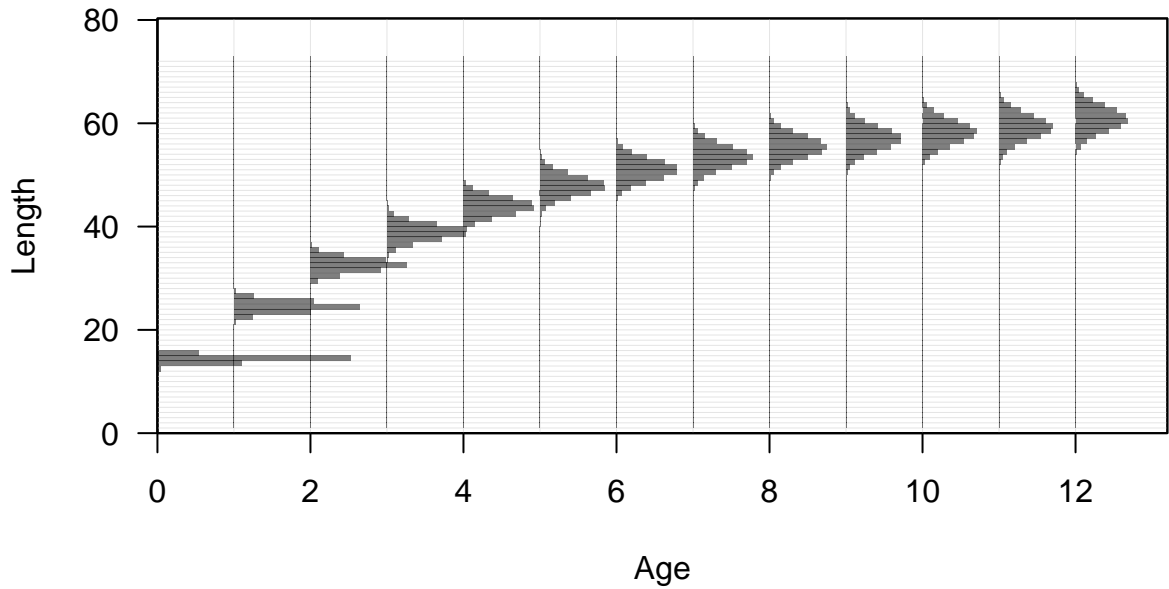


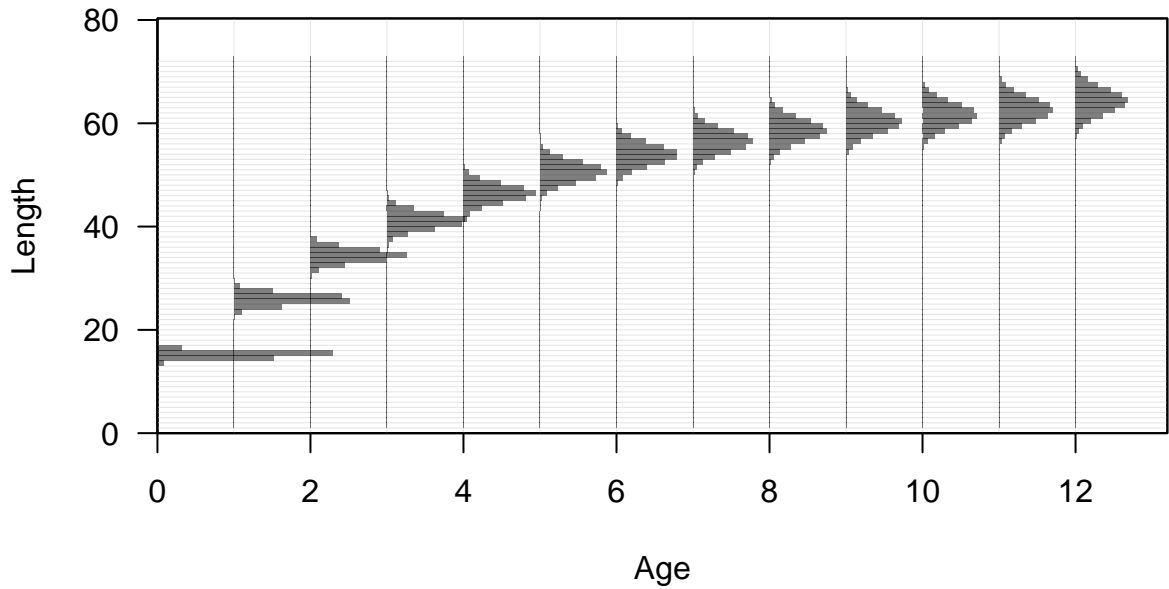


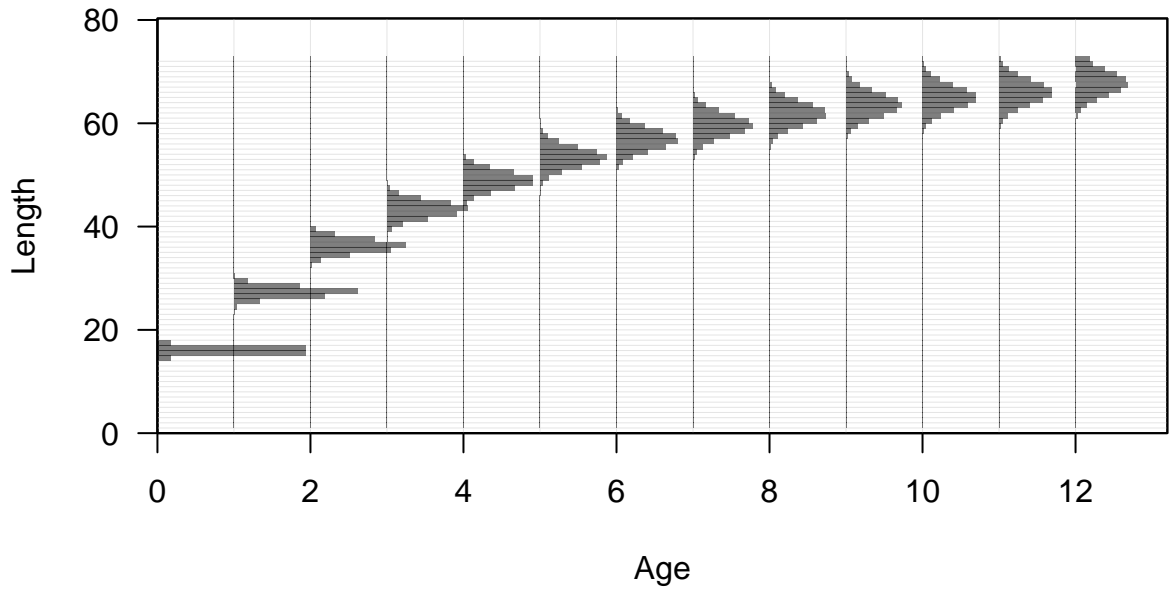




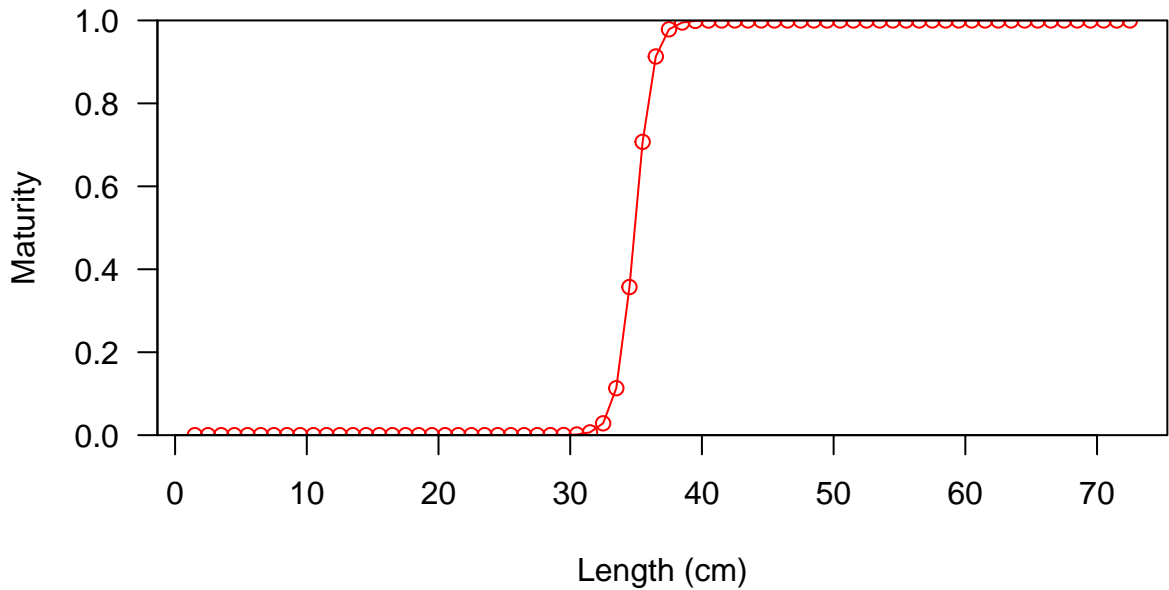








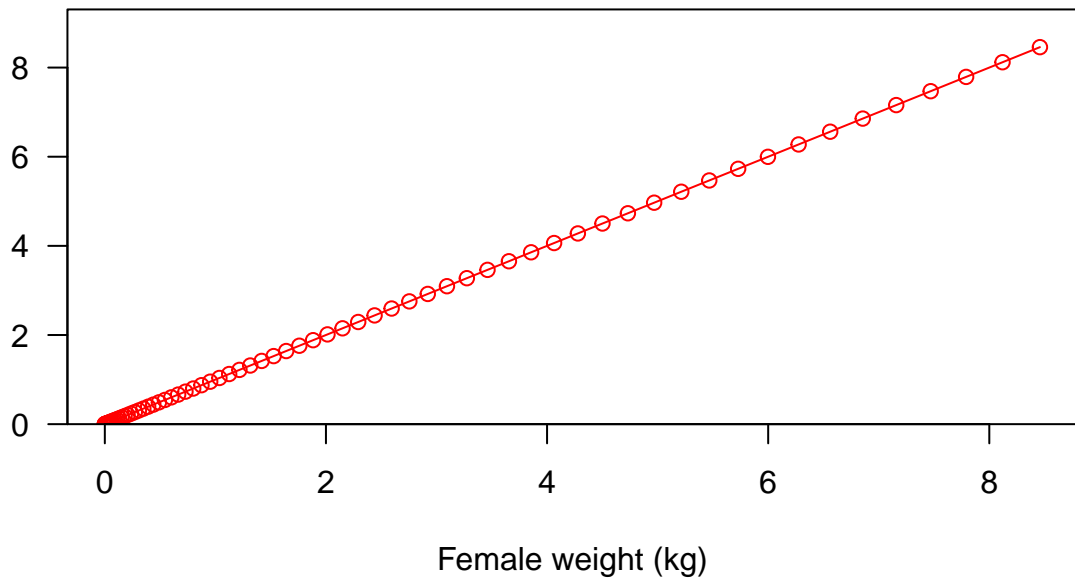








Fecundity



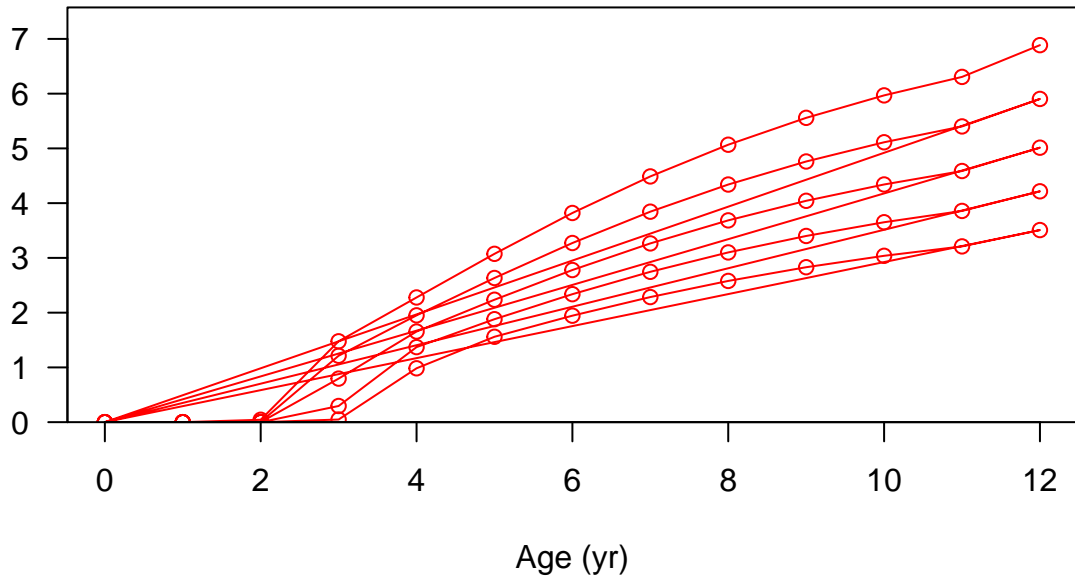
Fecundity



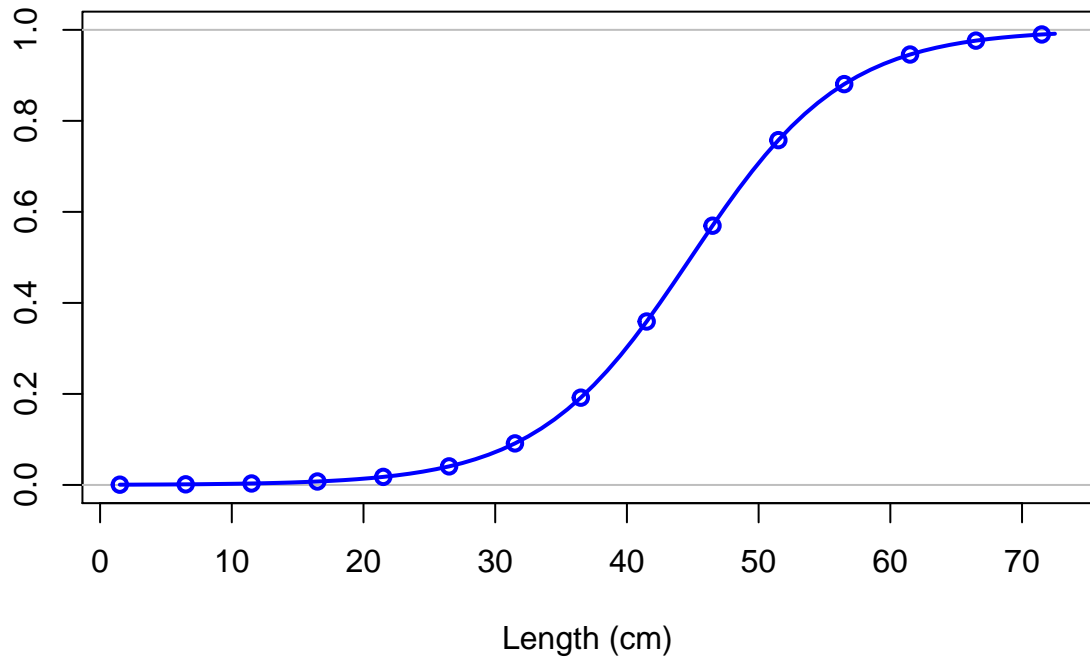
Spawning output



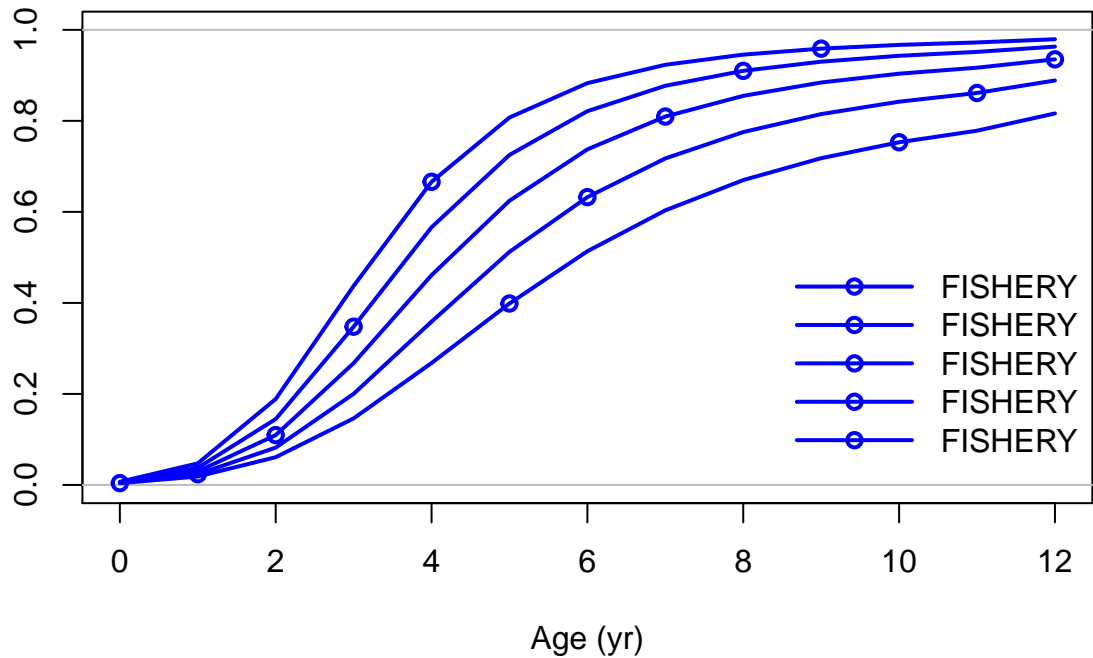
Spawning output



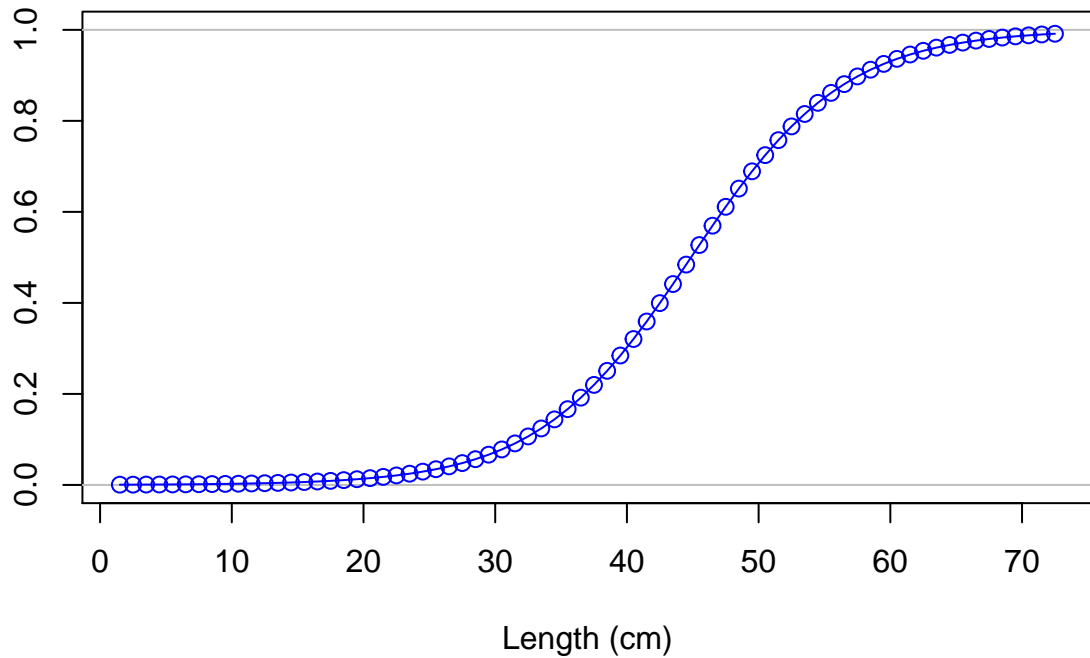
Selectivity



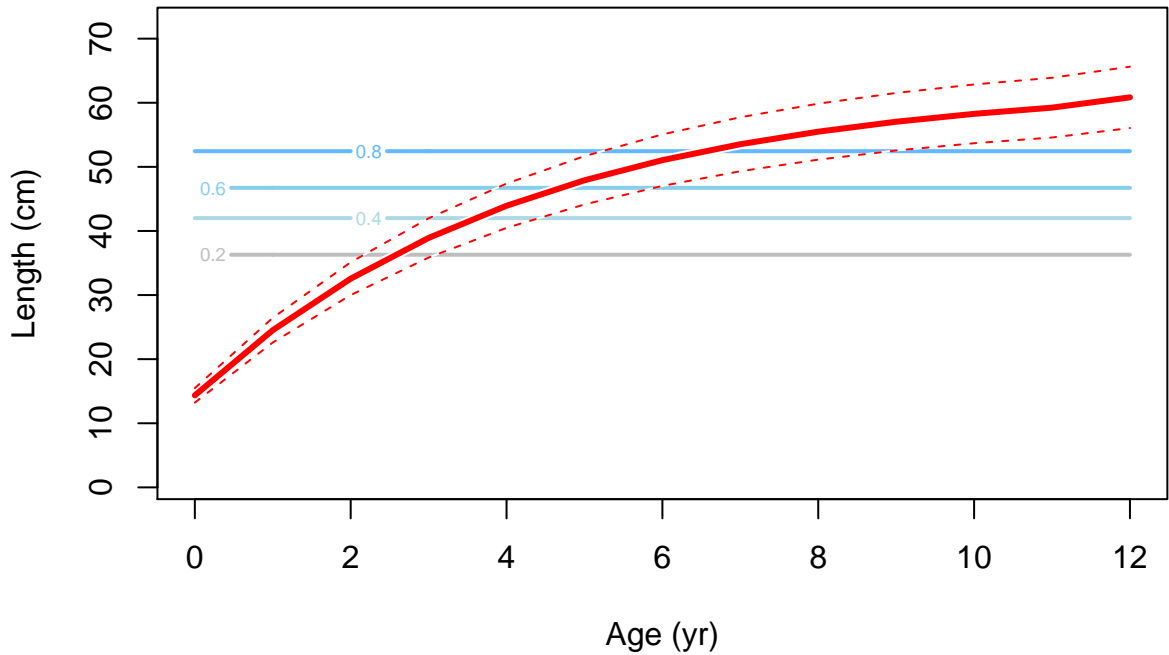
Selectivity

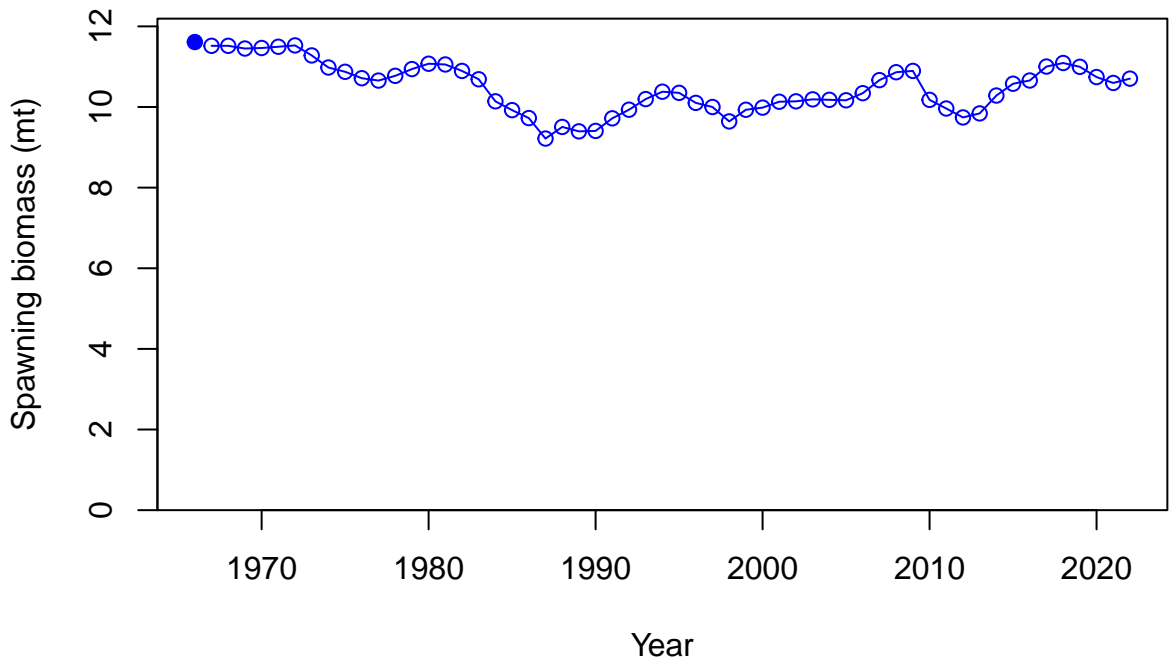


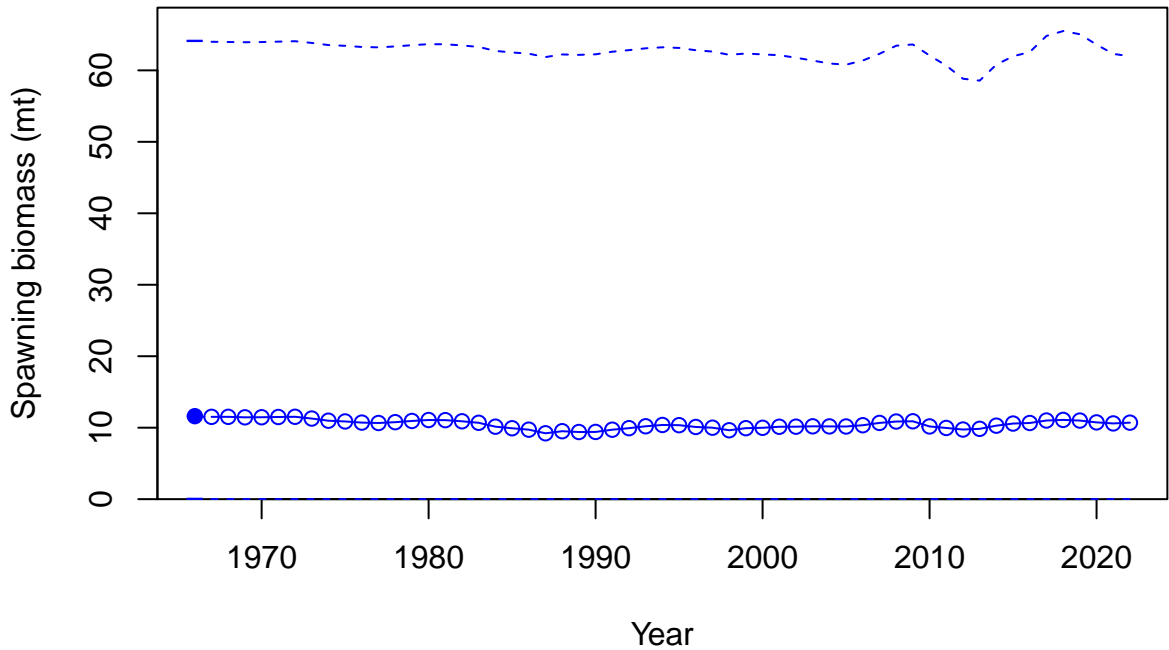
Selectivity



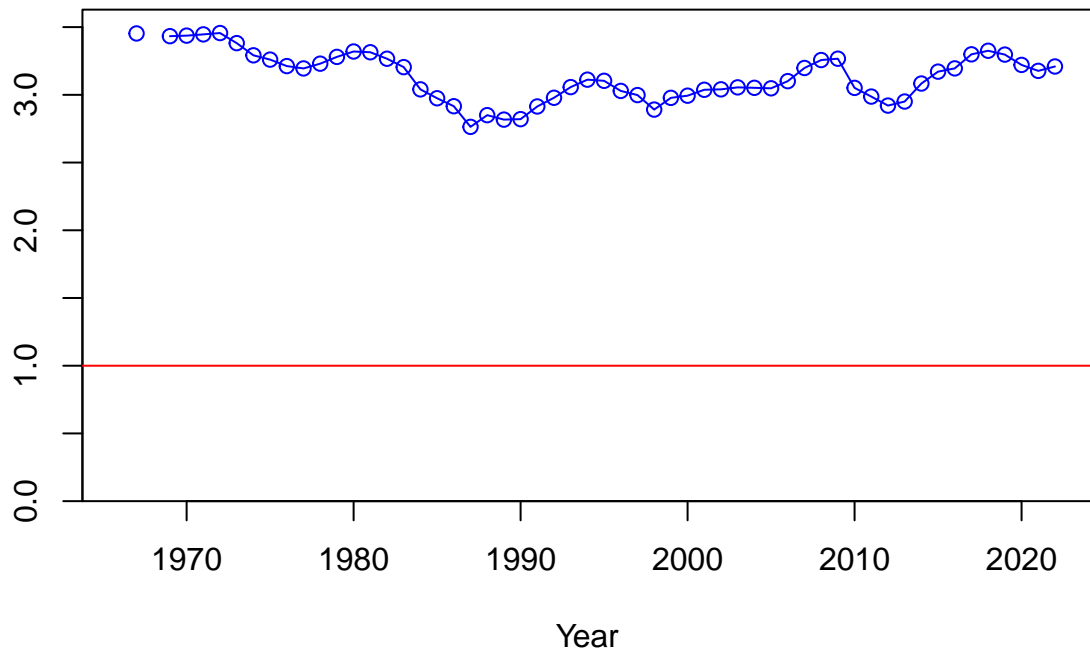




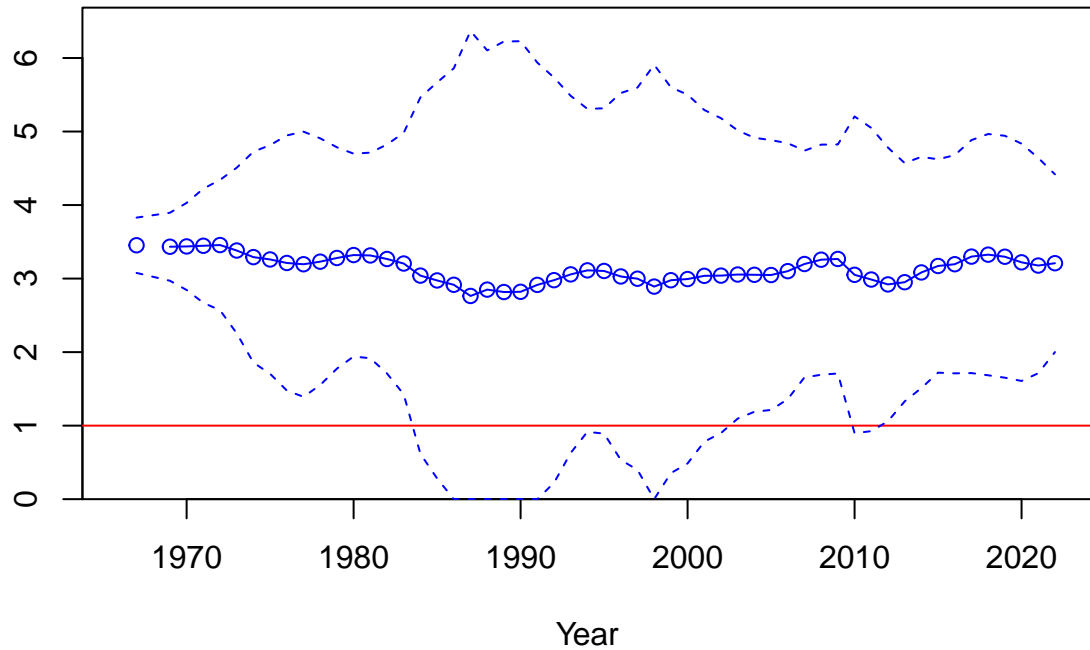


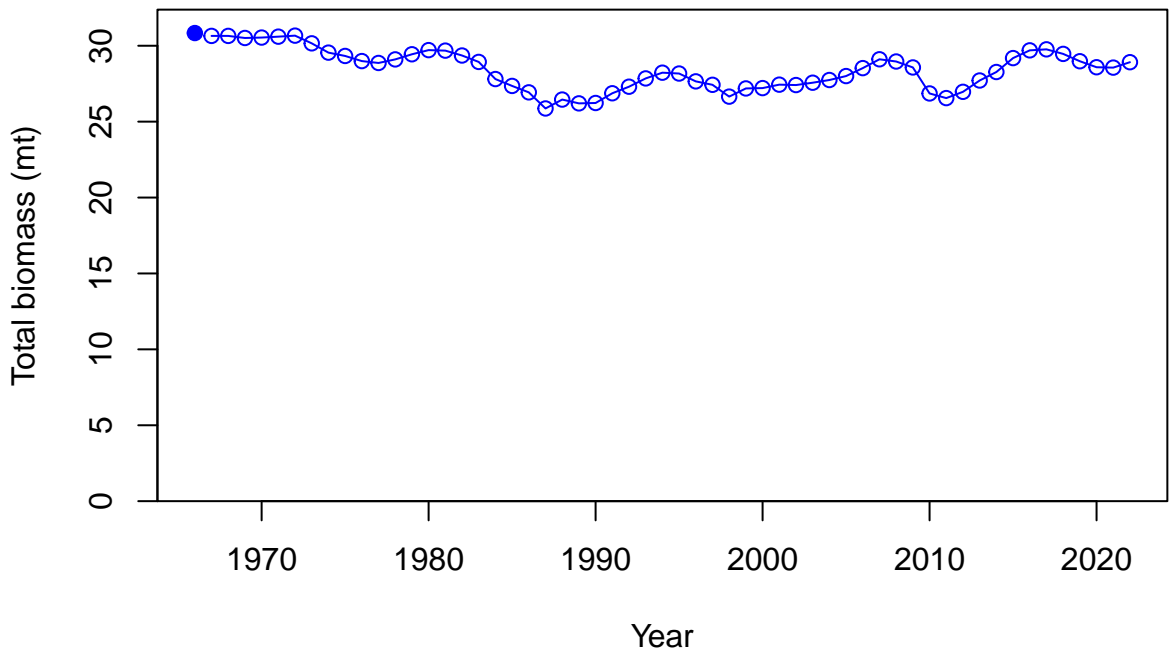


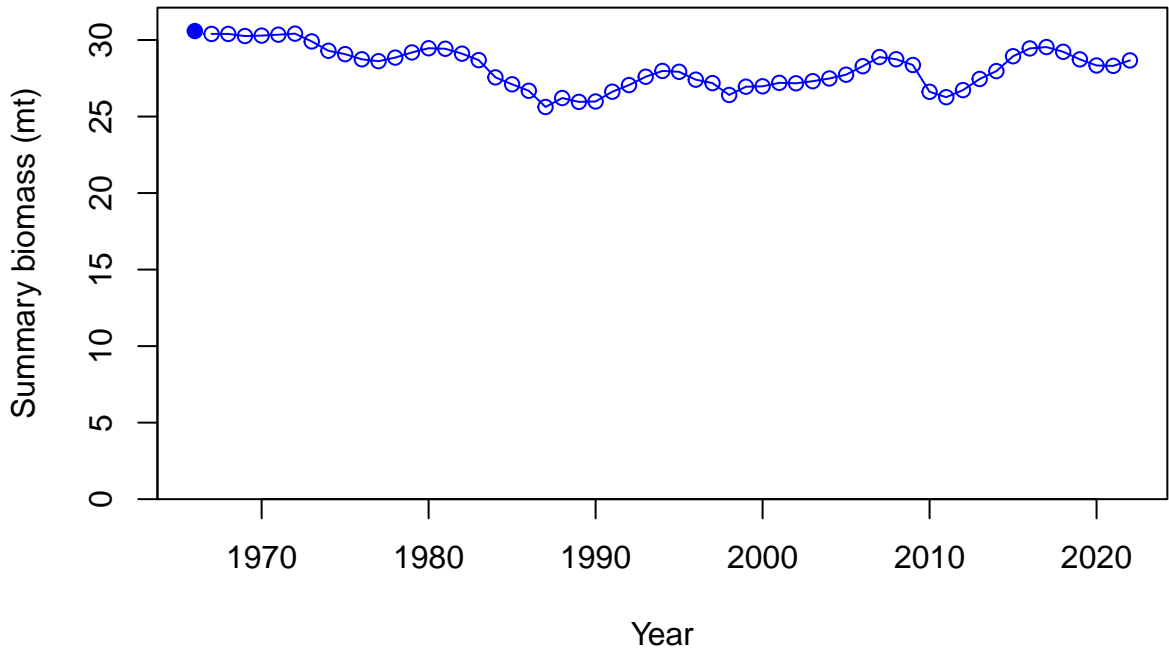
Relative spawning biomass:  $B/B_{MSY}$



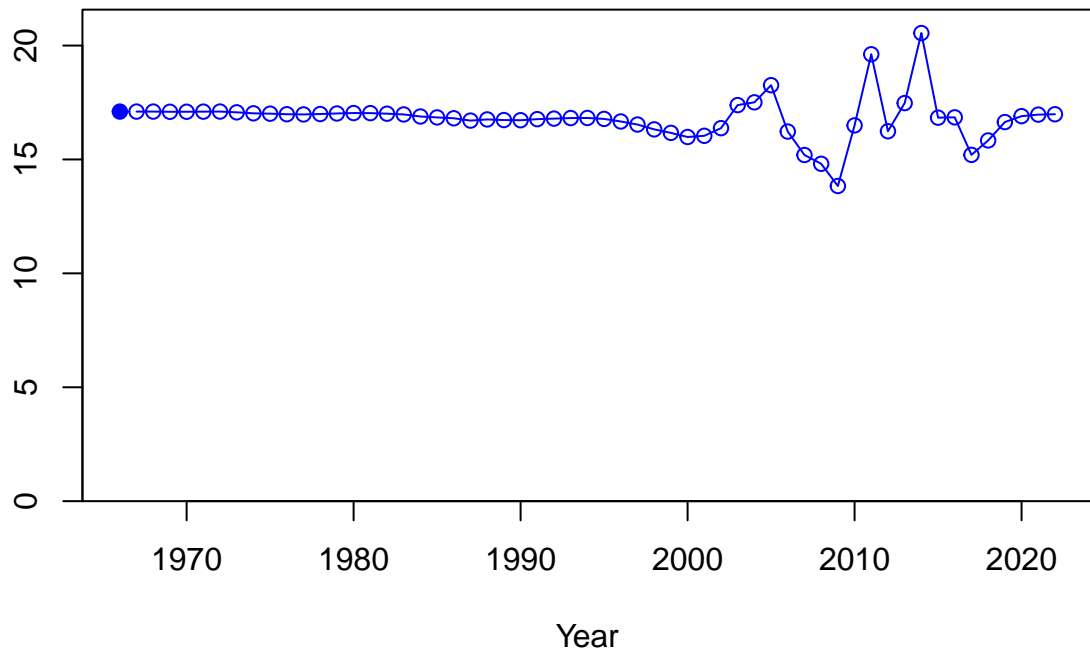
Relative spawning biomass:  $B/B_{MSY}$



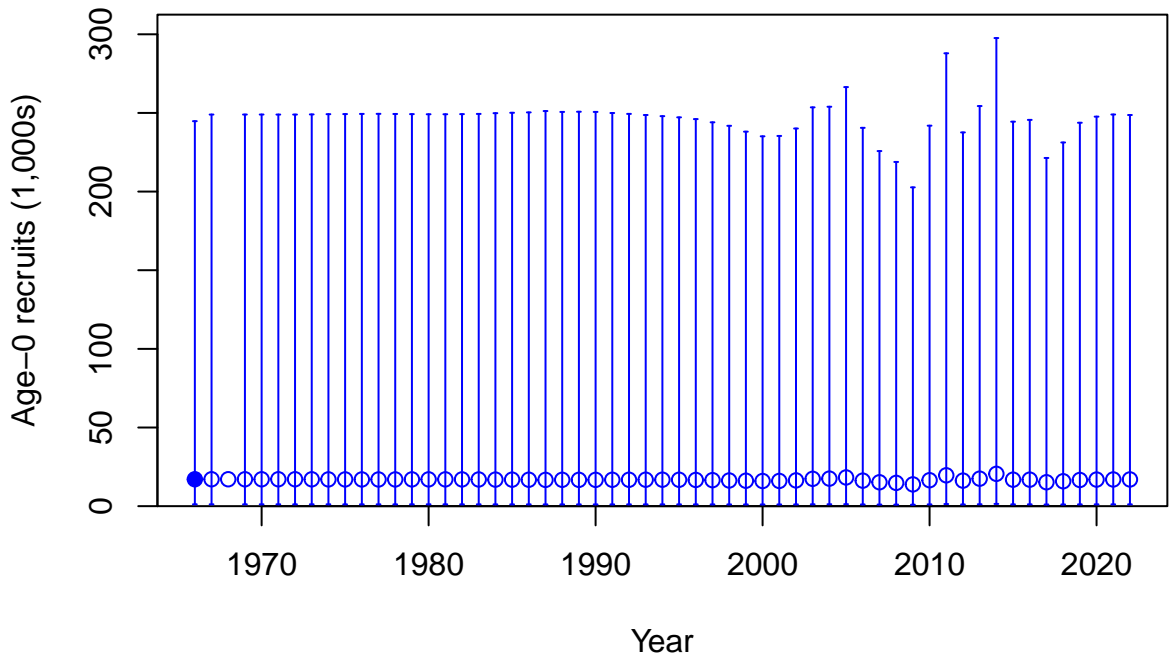




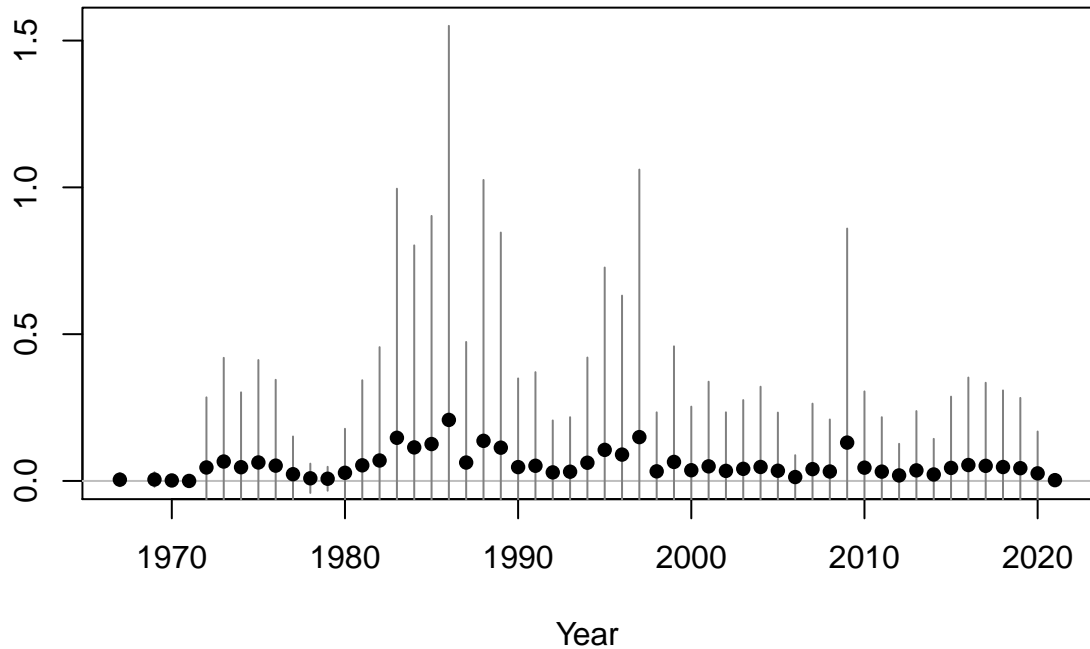
Age-0 recruits (1,000s)

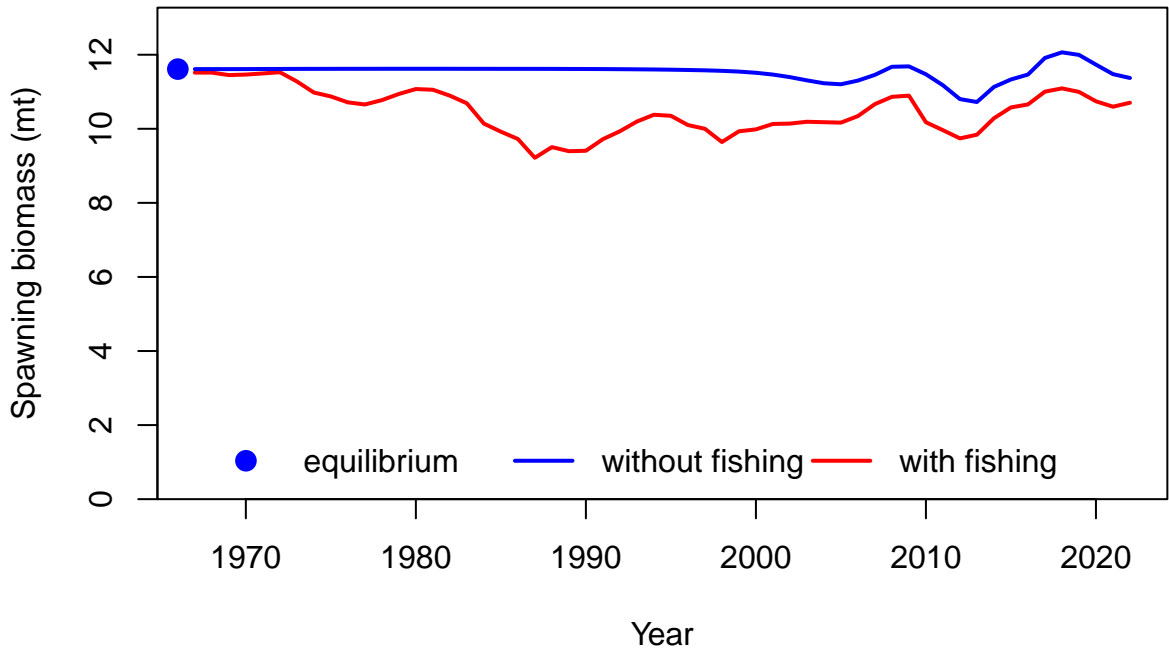






Summary Fishing Mortality





Log recruitment deviation

0.2  
0.1  
0.0  
-0.1

1970

1980

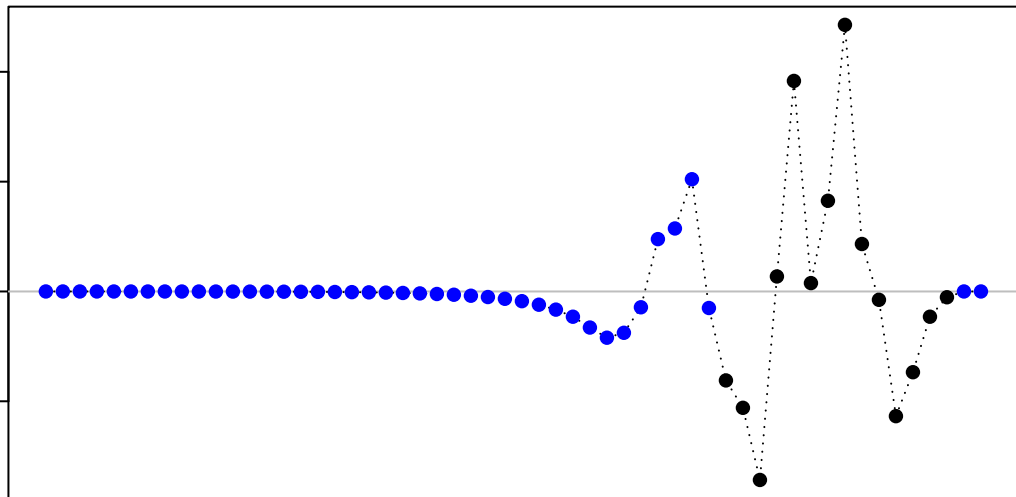
1990

2000

2010

2020

Year



Log recruitment deviation

0.5  
0.0  
-0.5

1970

1980

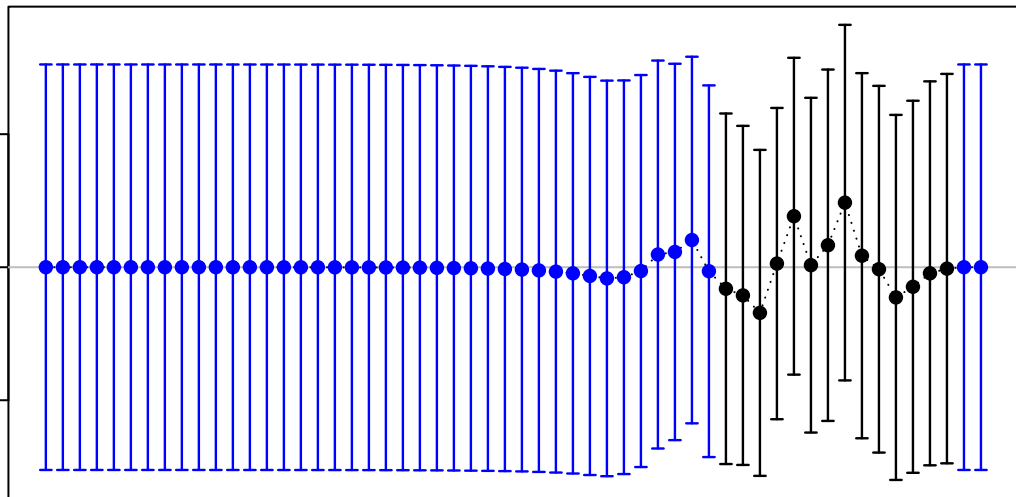
1990

2000

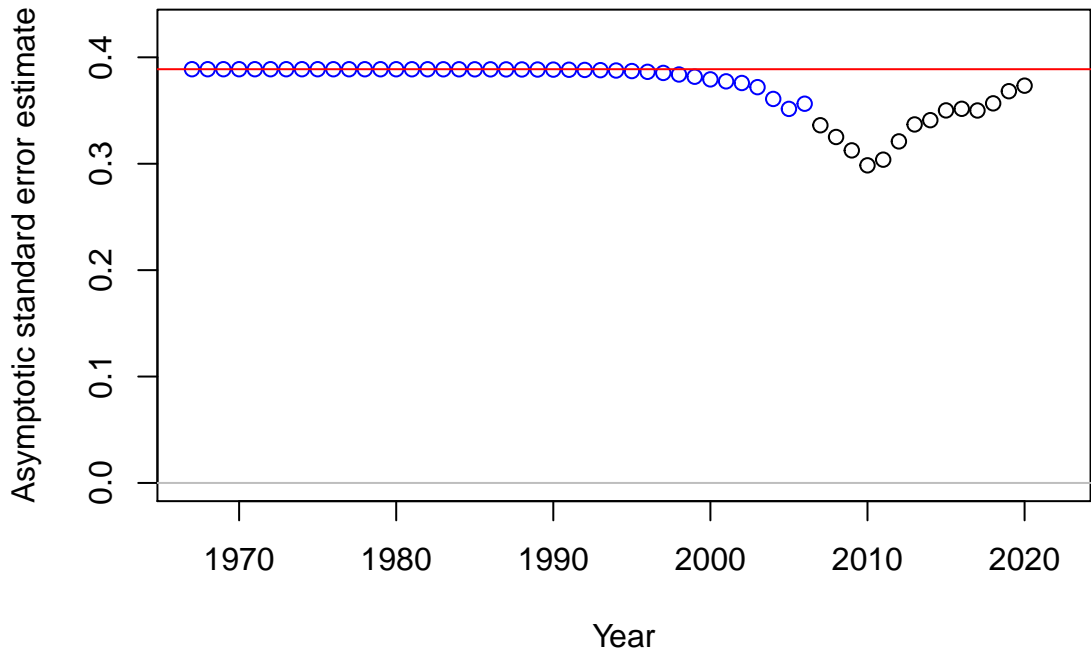
2010

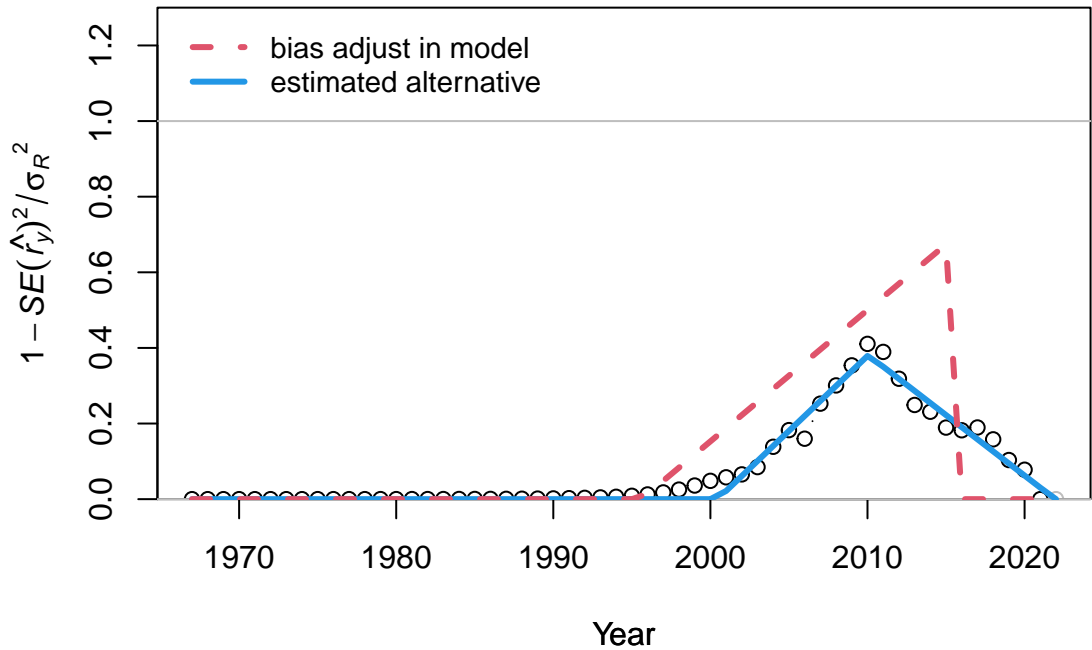
2020

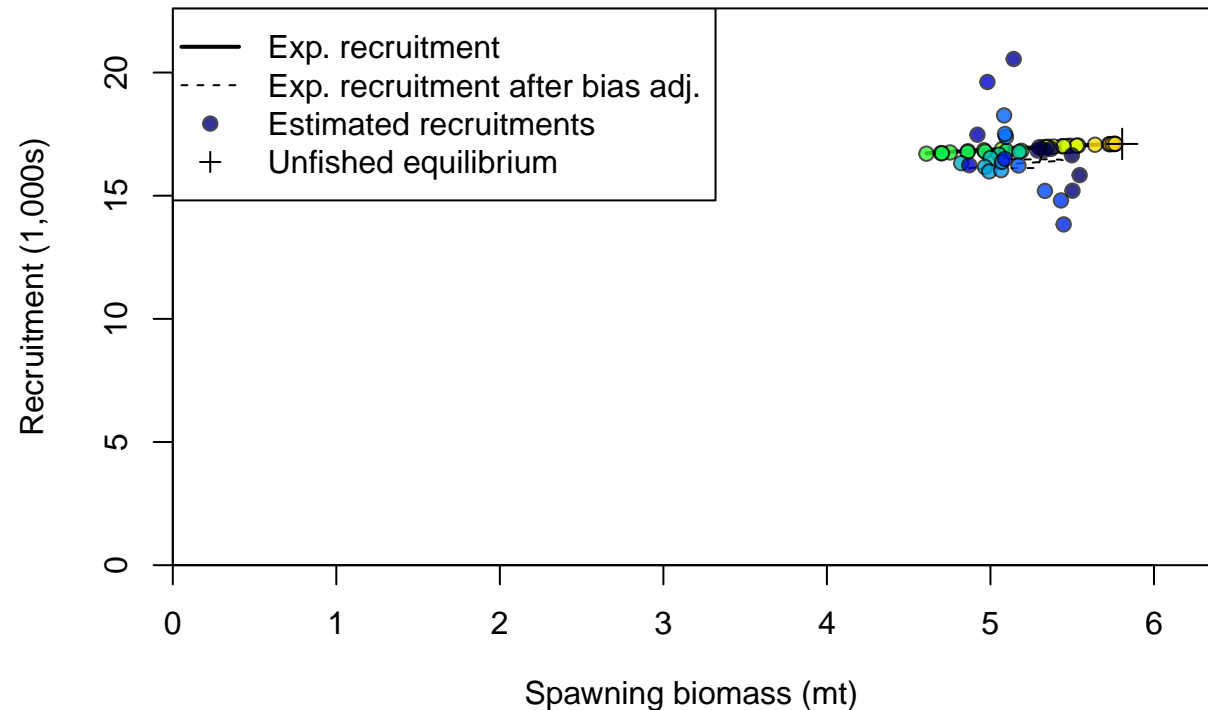
Year



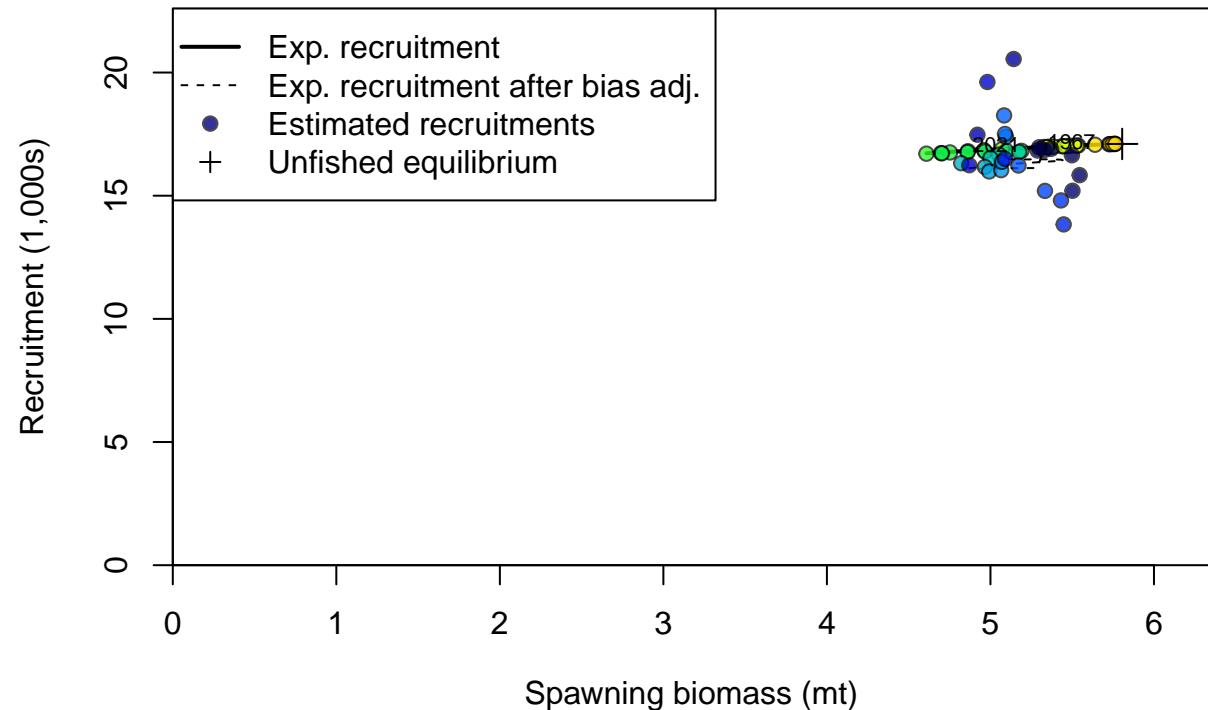
## Recruitment deviation variance











Log recruitment deviation

0.2  
0.1  
0.0  
-0.1  
-0.2

0.0

0.2

0.4

0.6

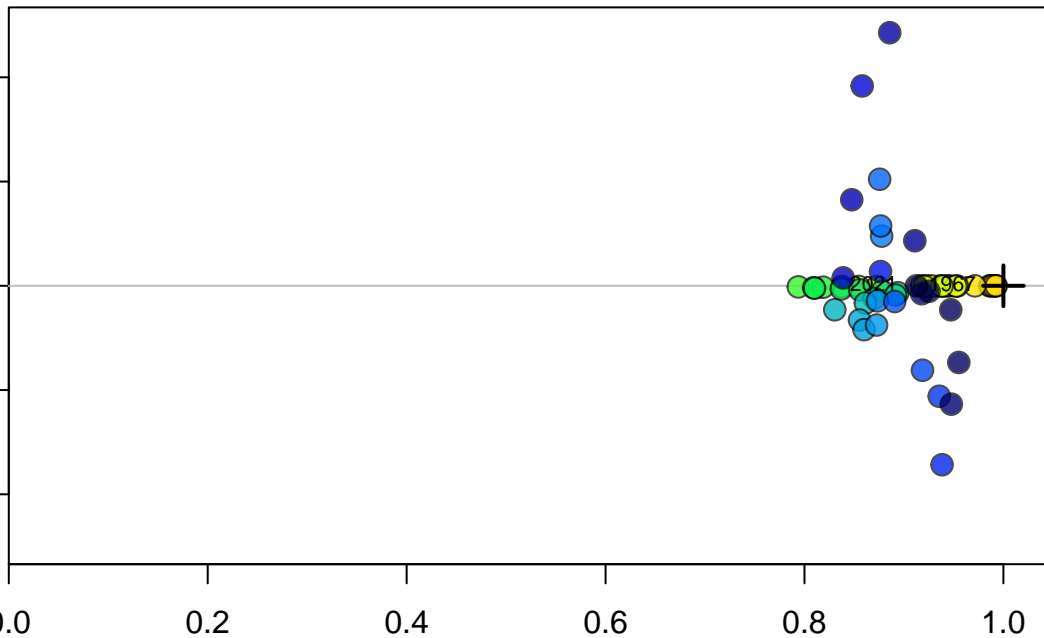
0.8

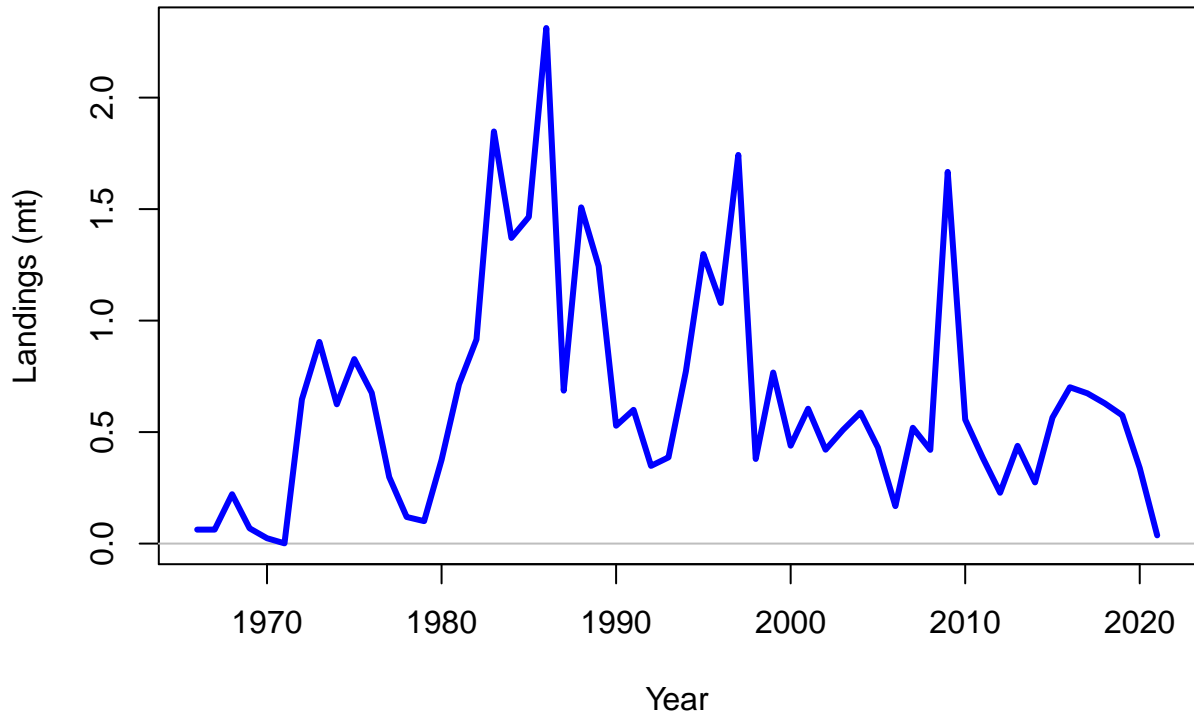
1.0

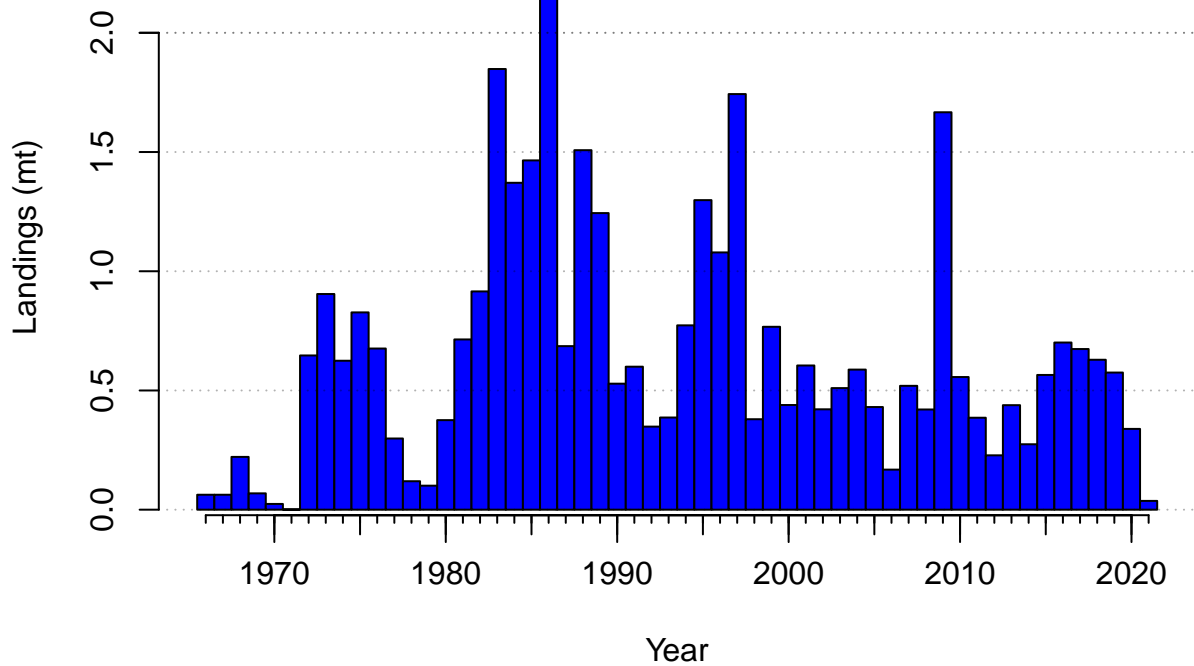
Spawning output (relative to  $B_0$ )

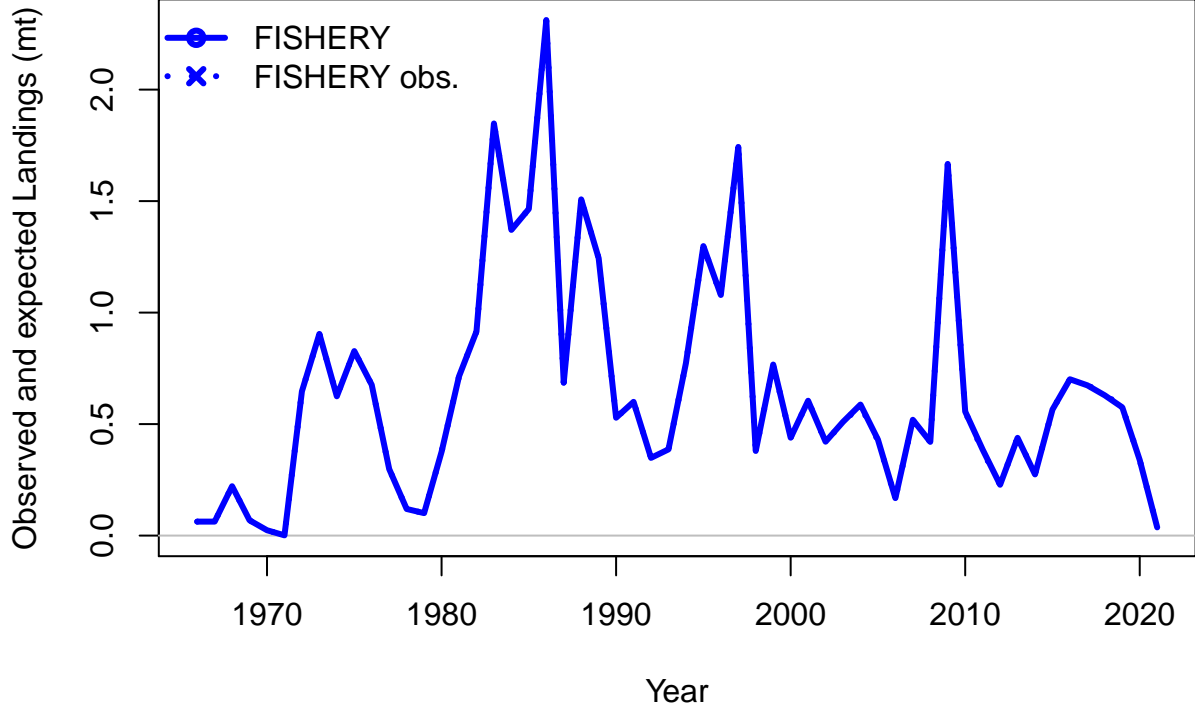
2021

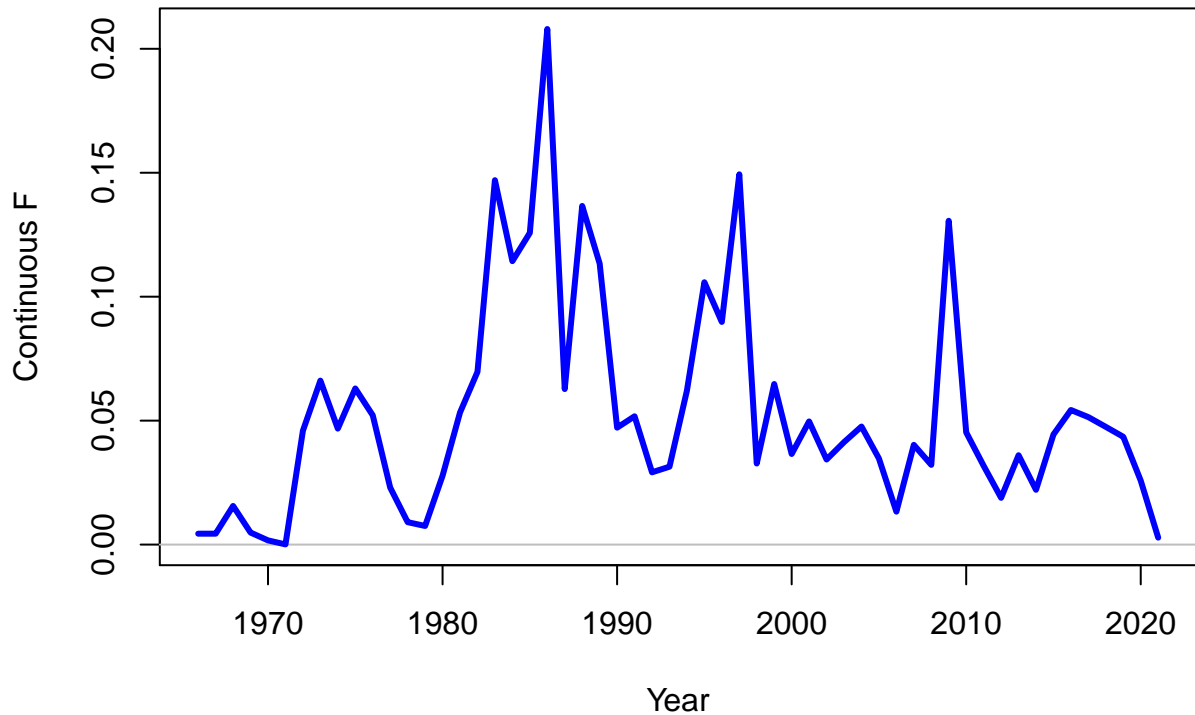
1967



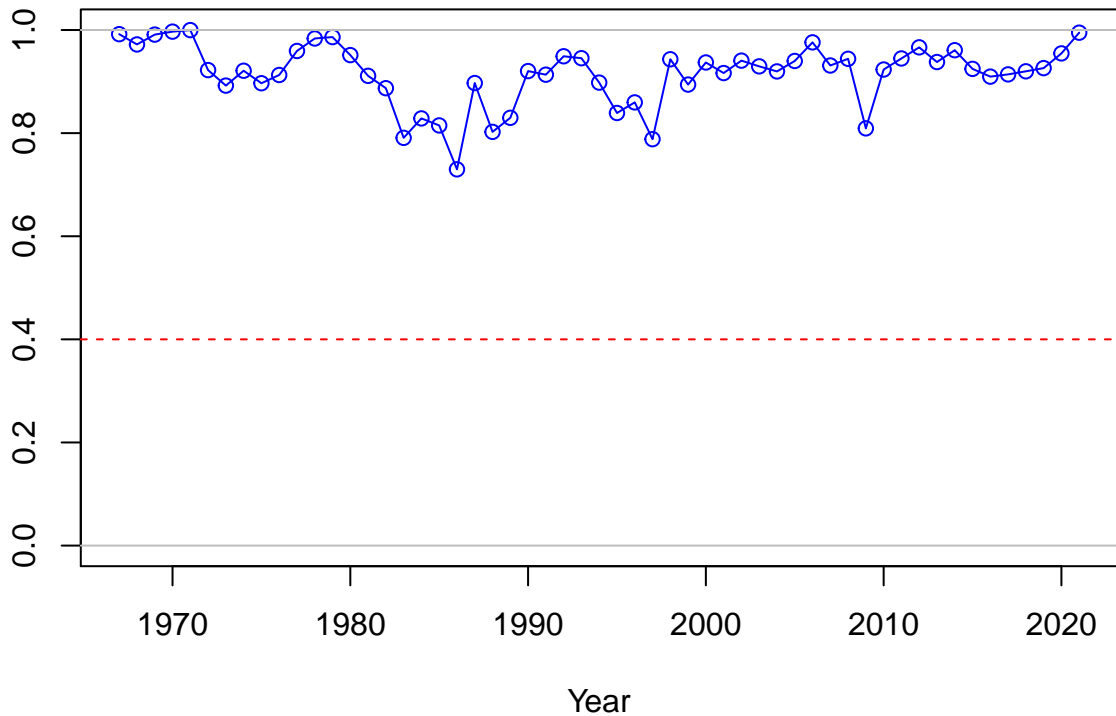




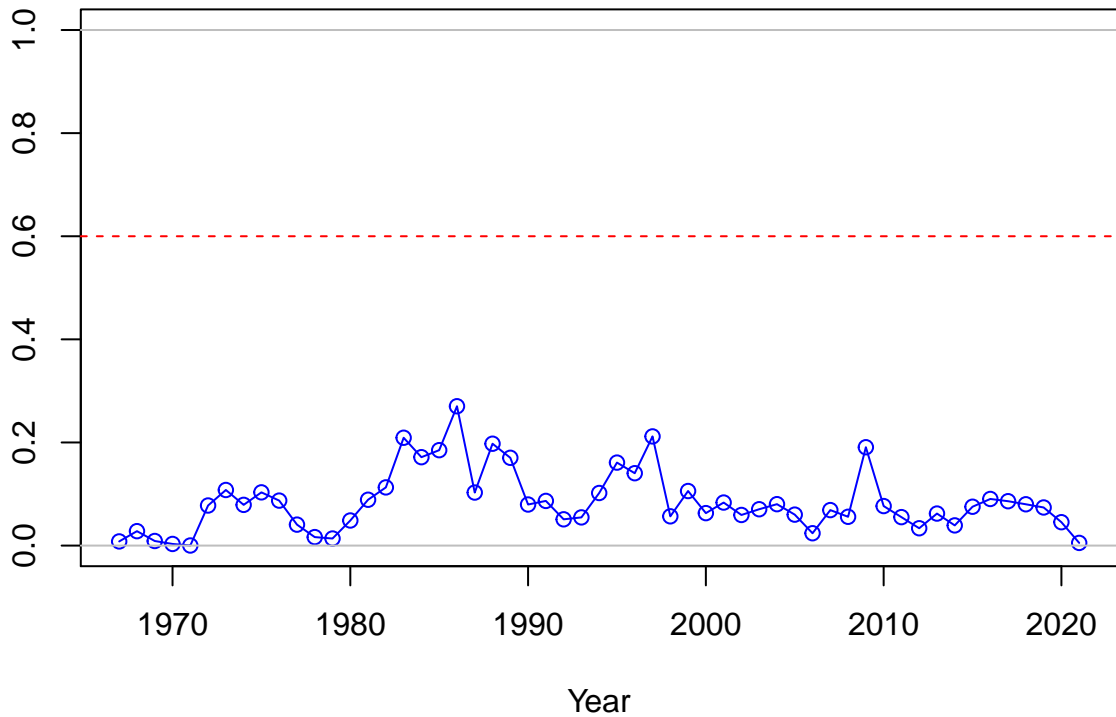




SPR

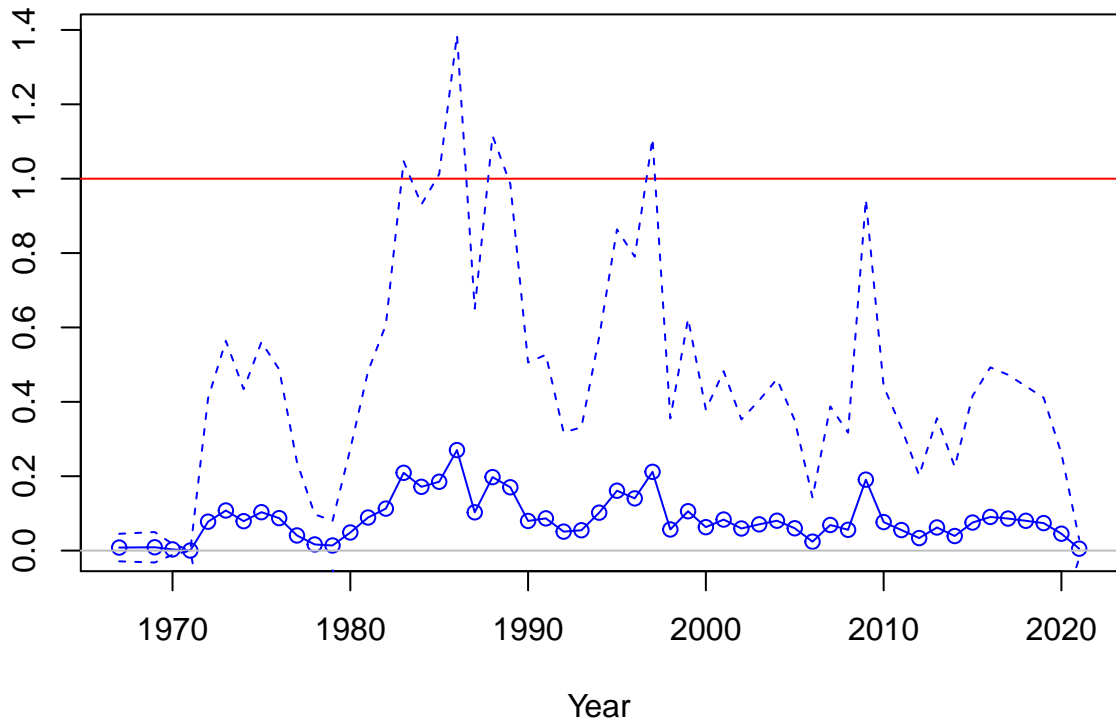


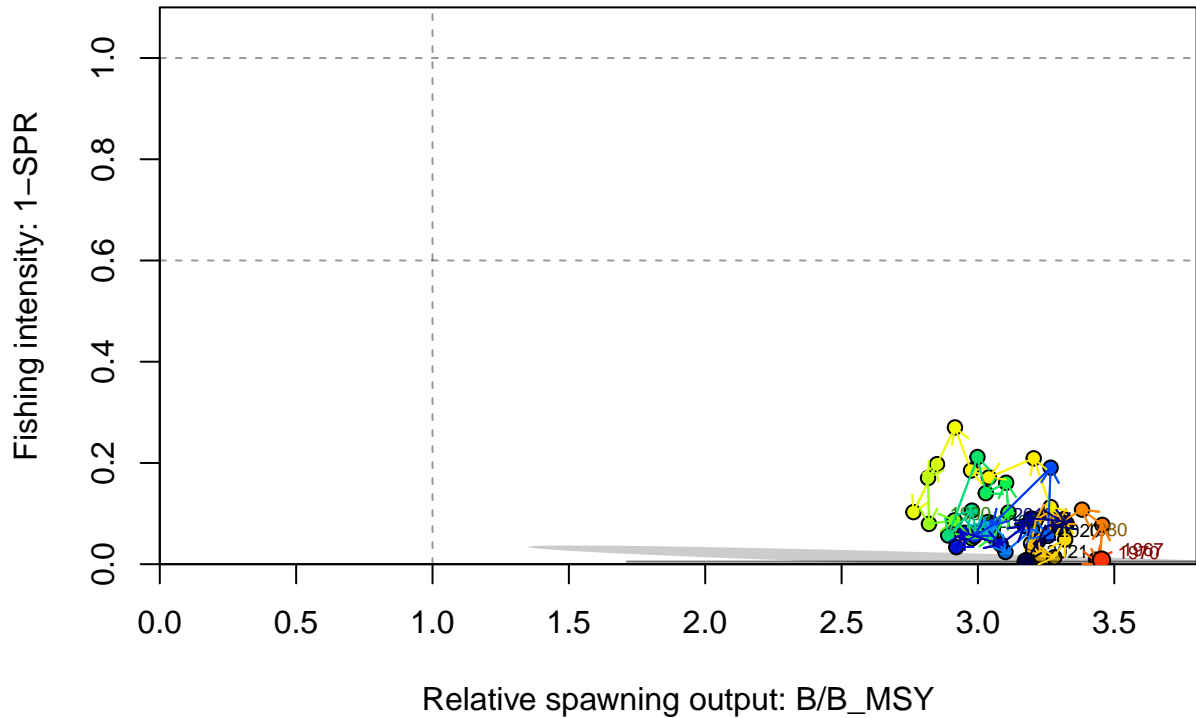
1-SPR



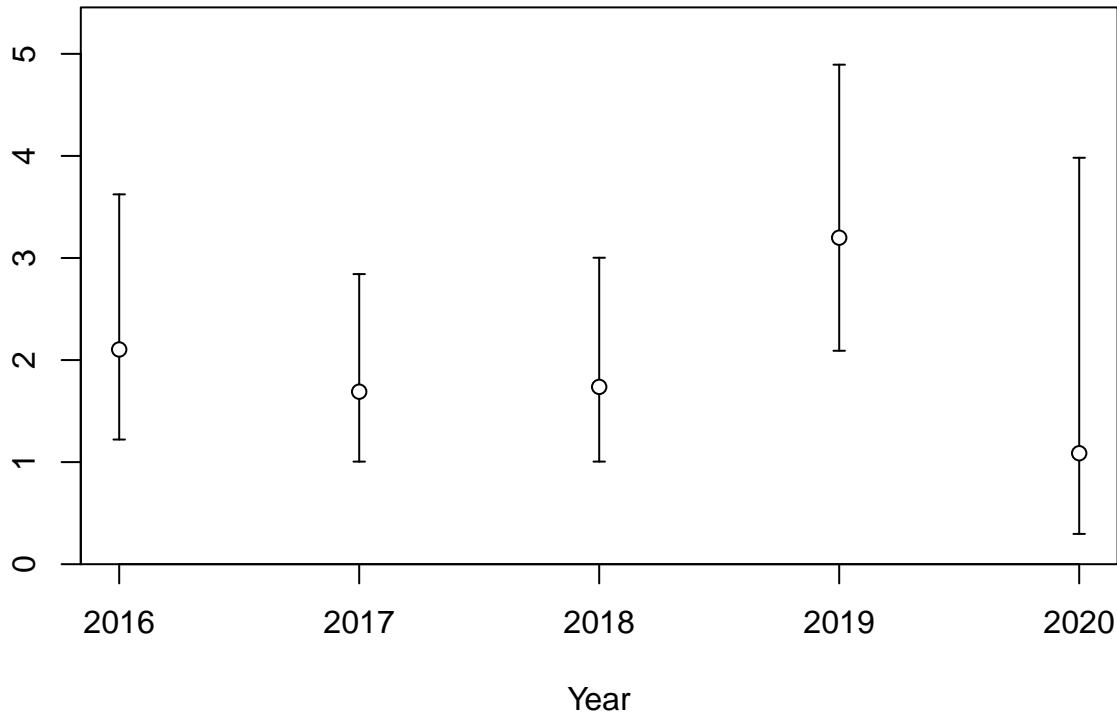


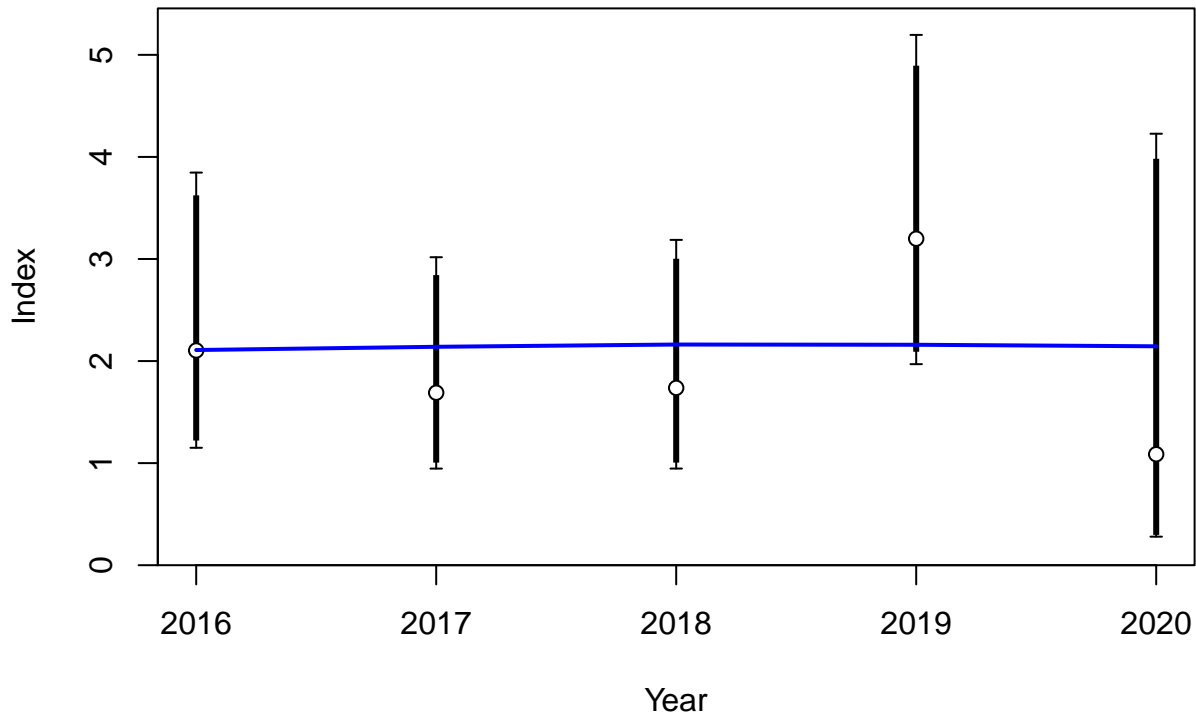
Fishing intensity: 1-SPR

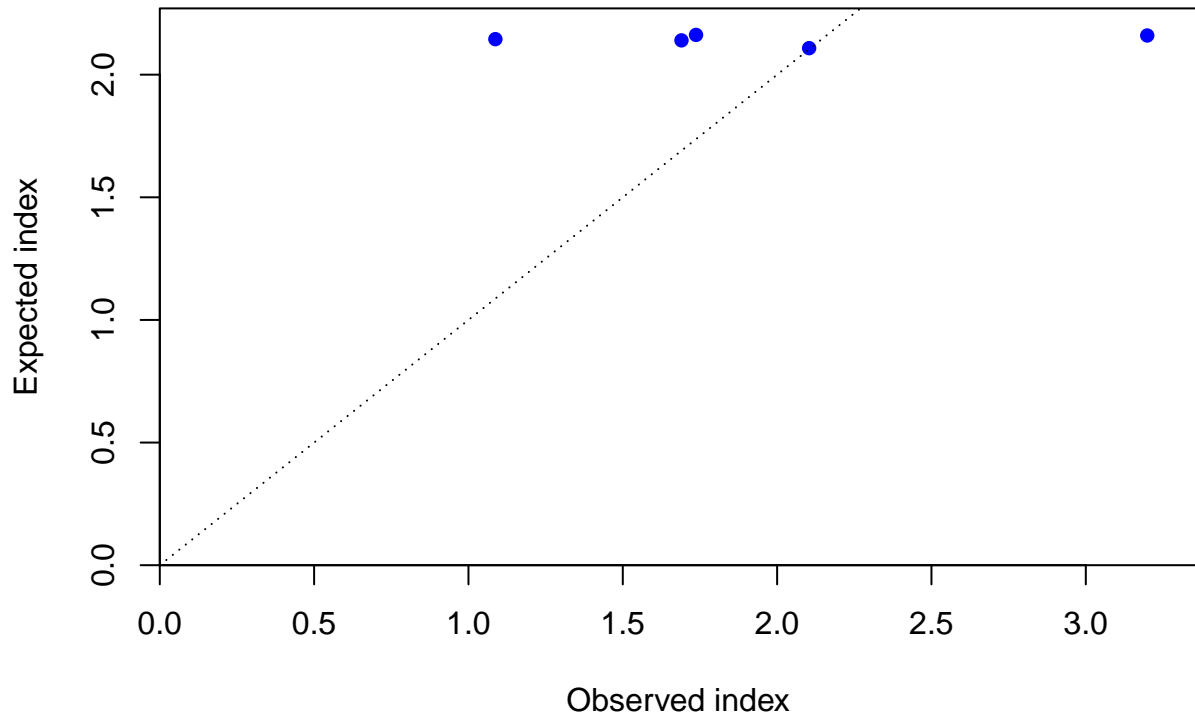


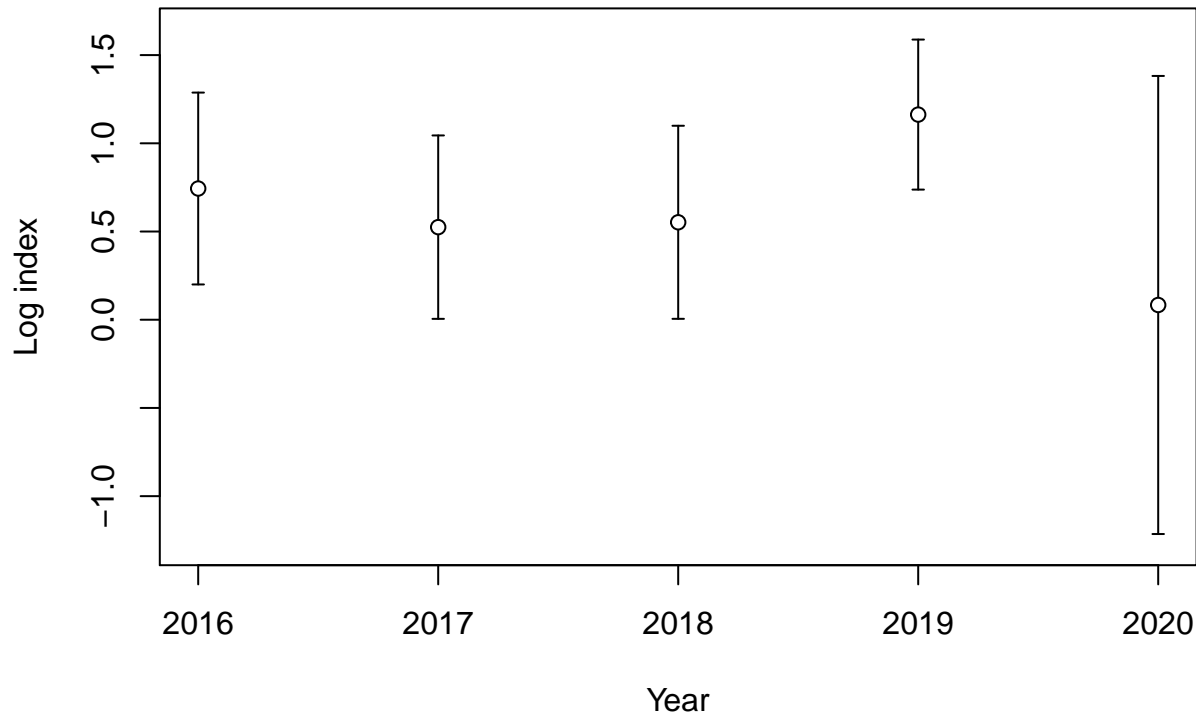


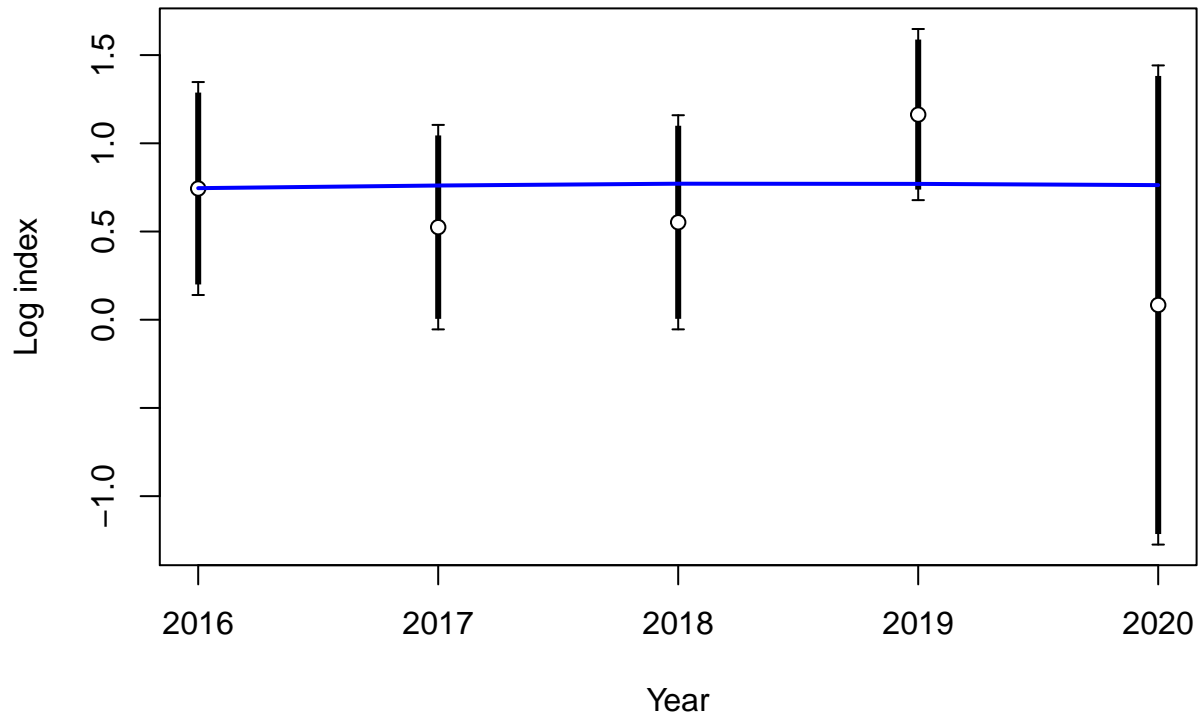
Index

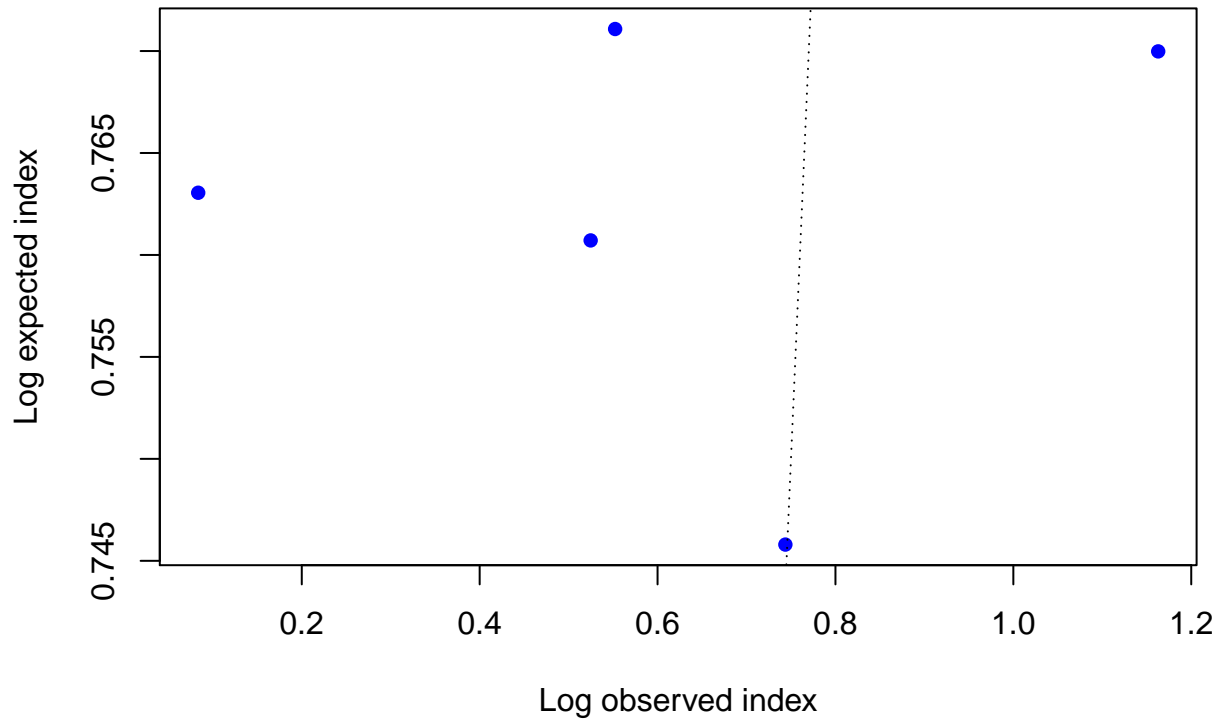






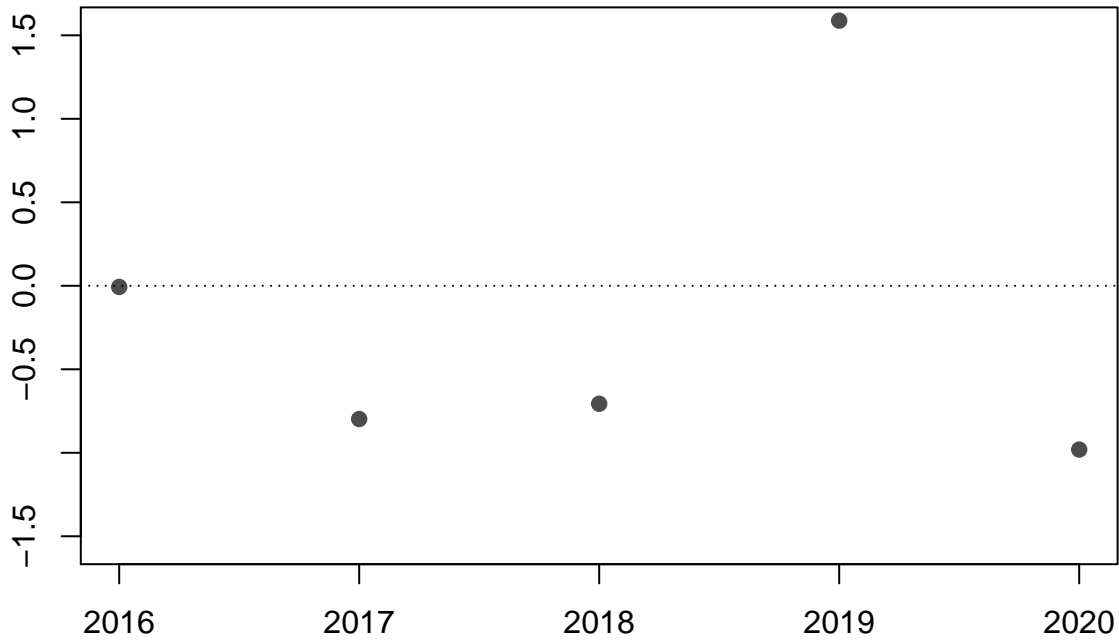




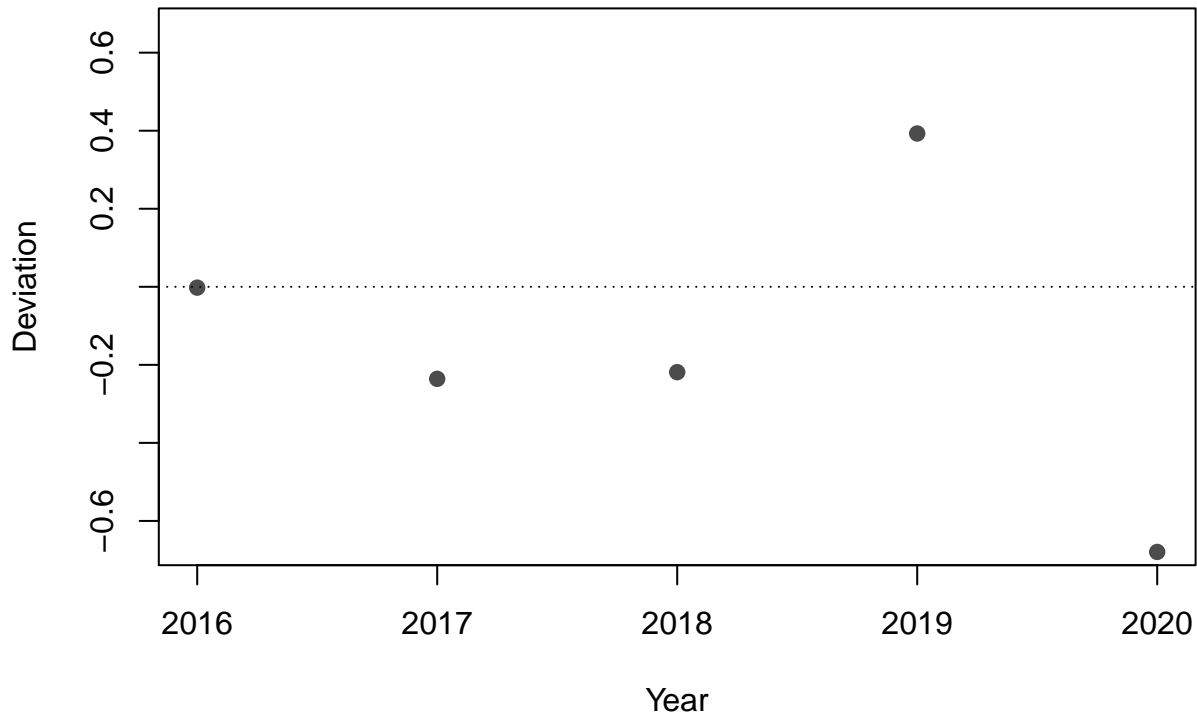


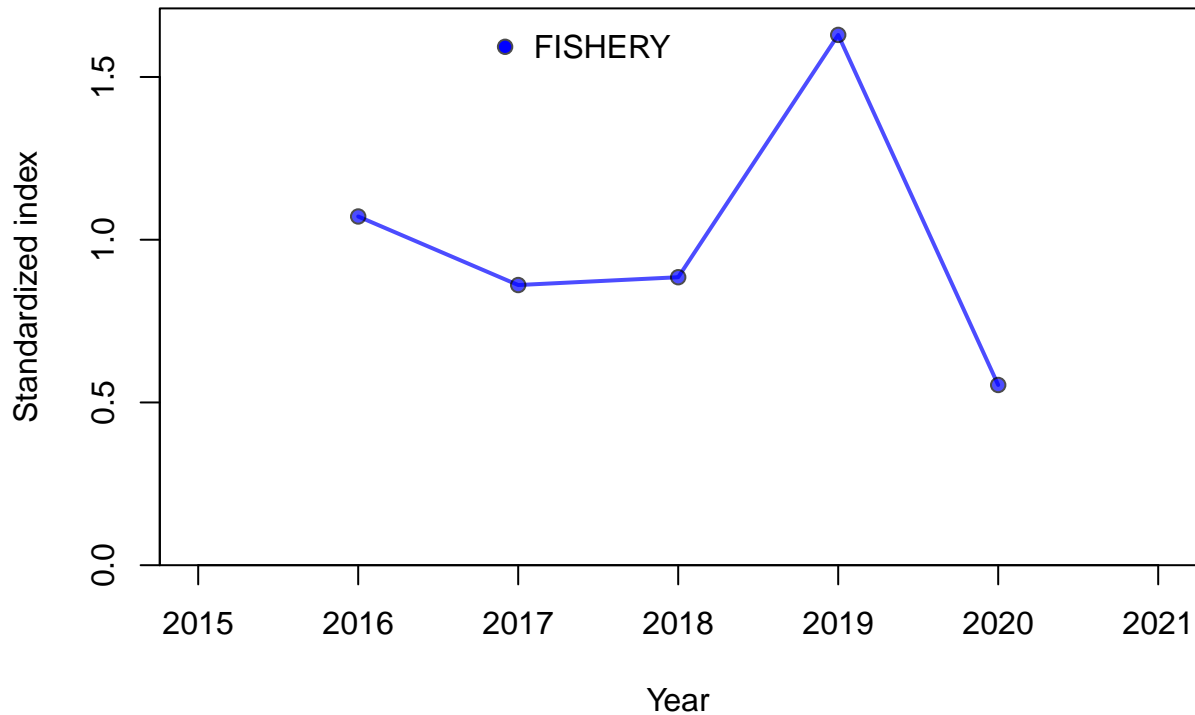


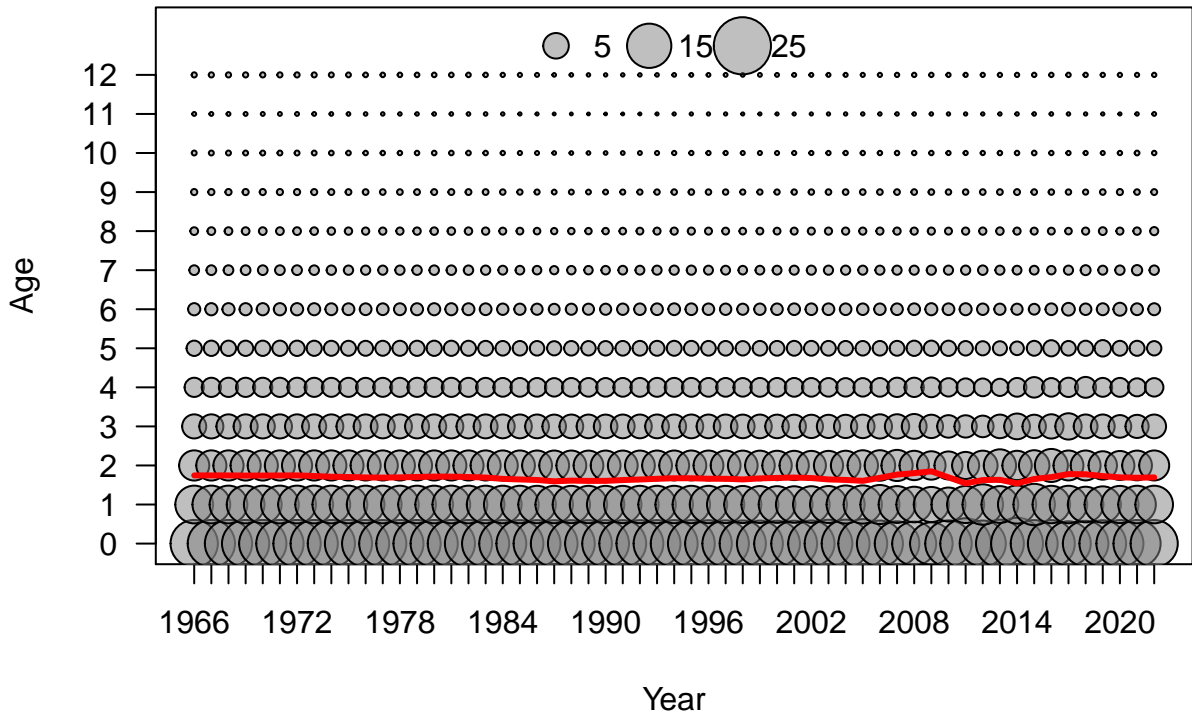
Residual

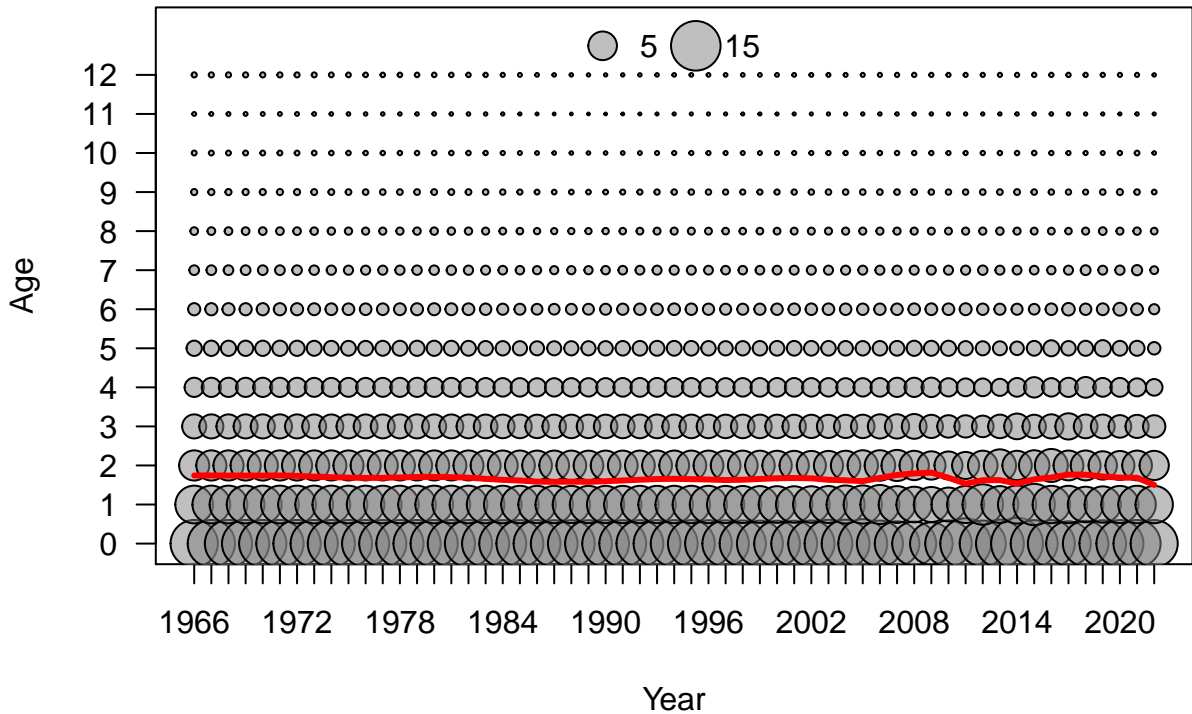


Year

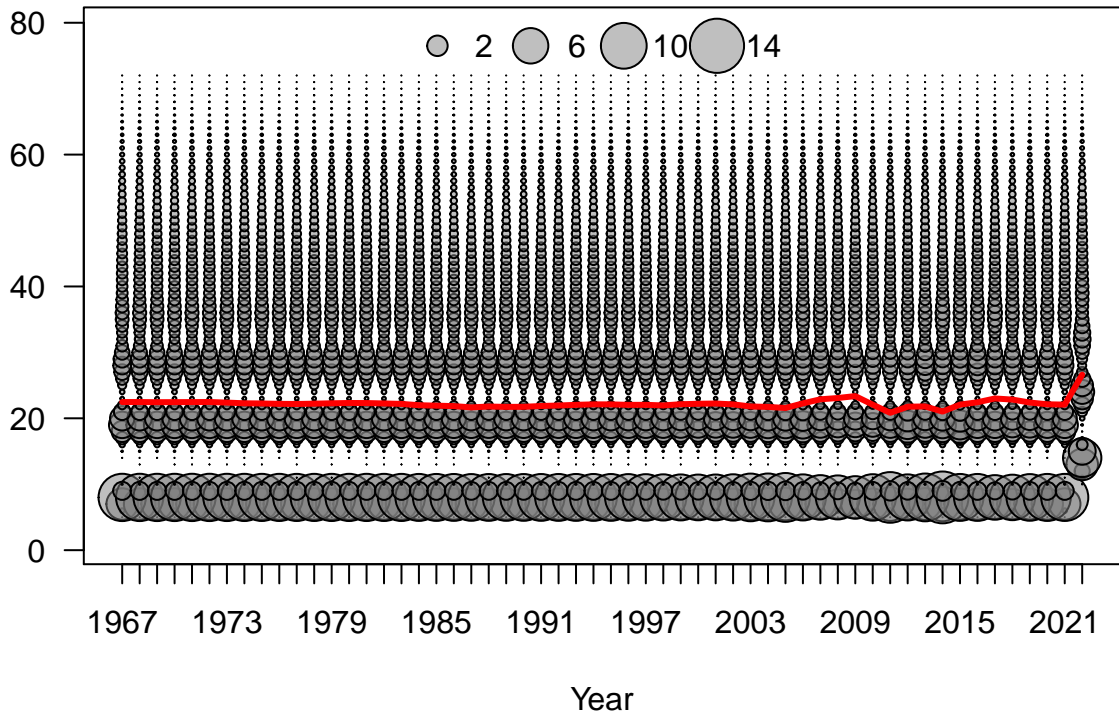


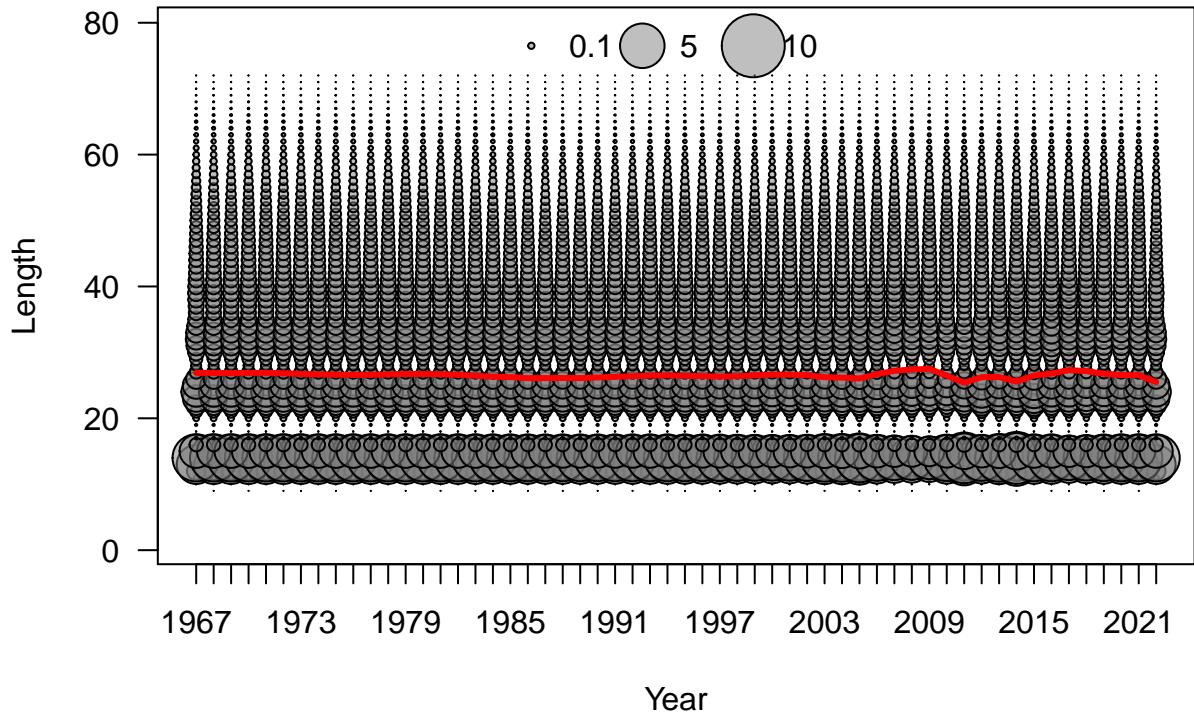


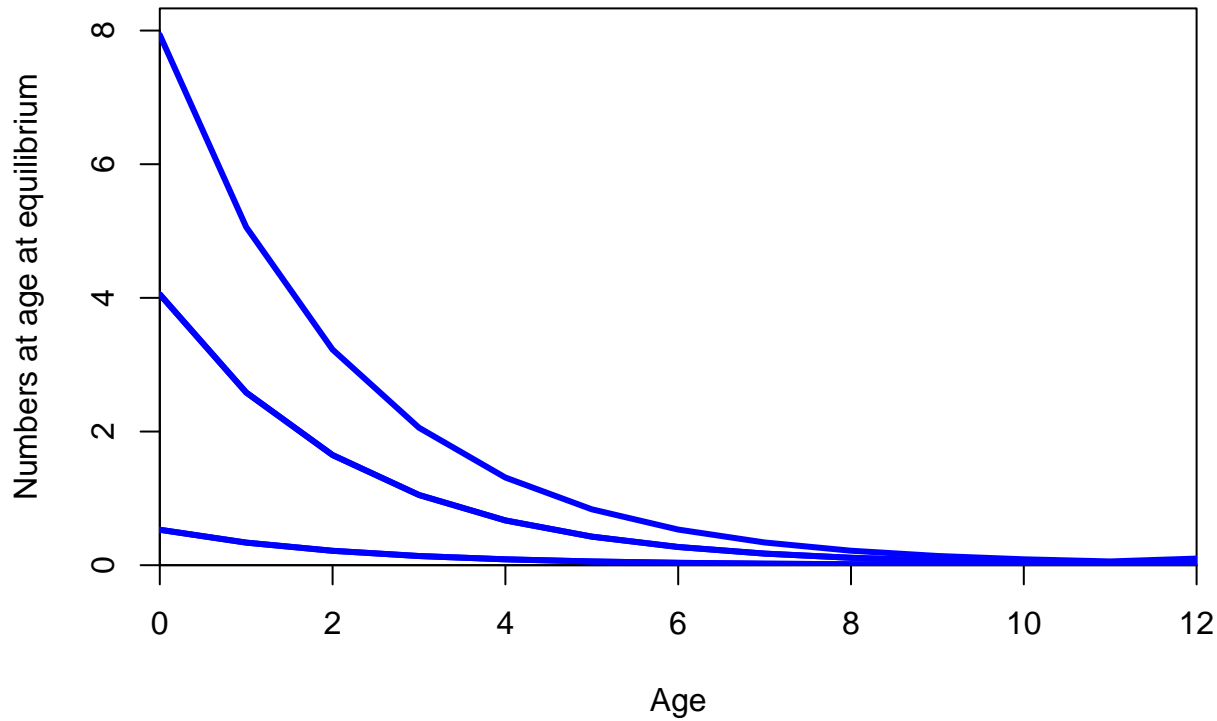




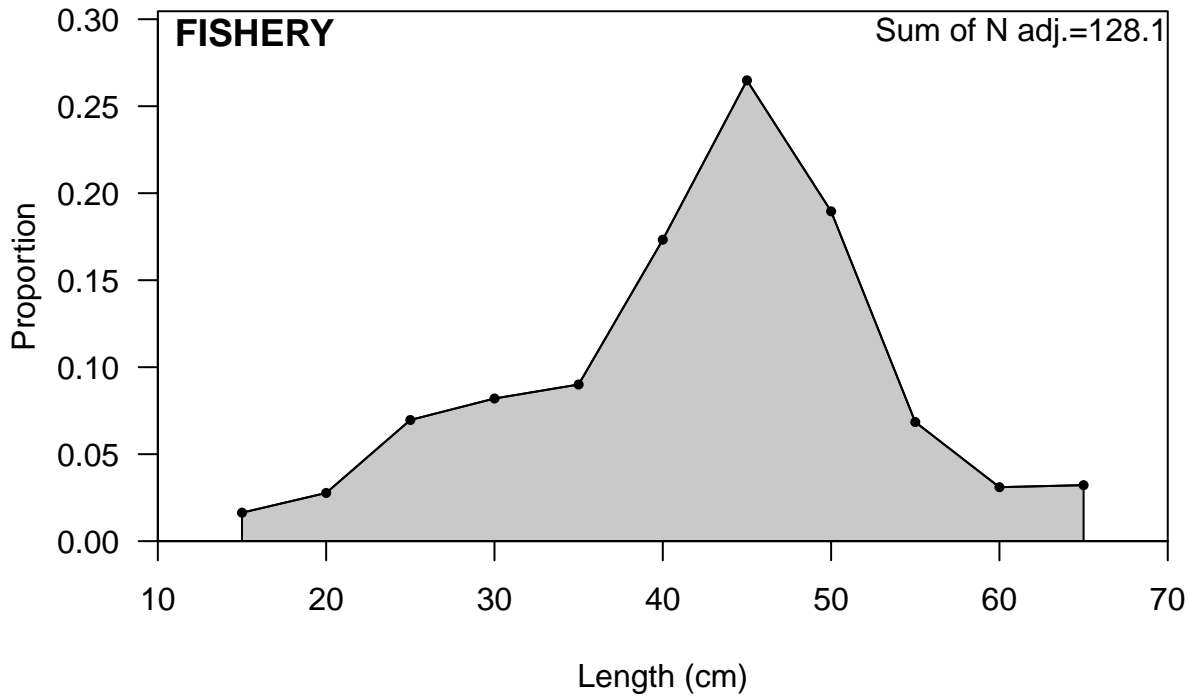
Length





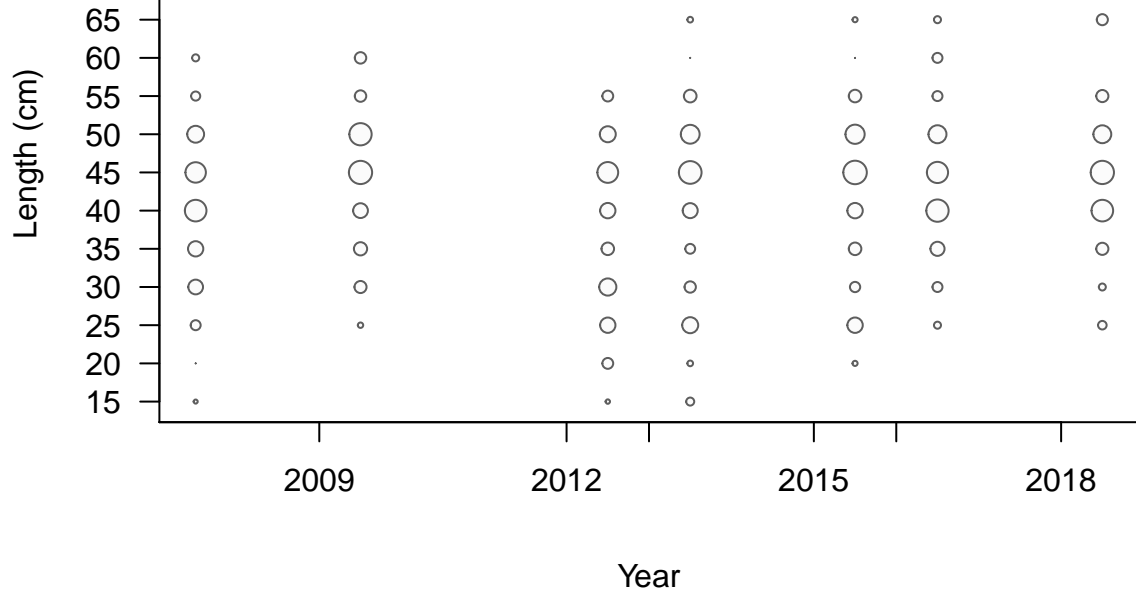




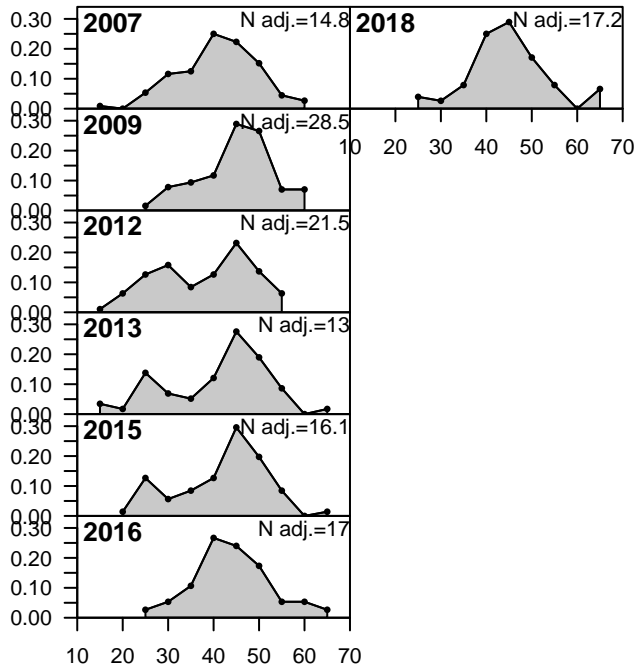


# FISHERY

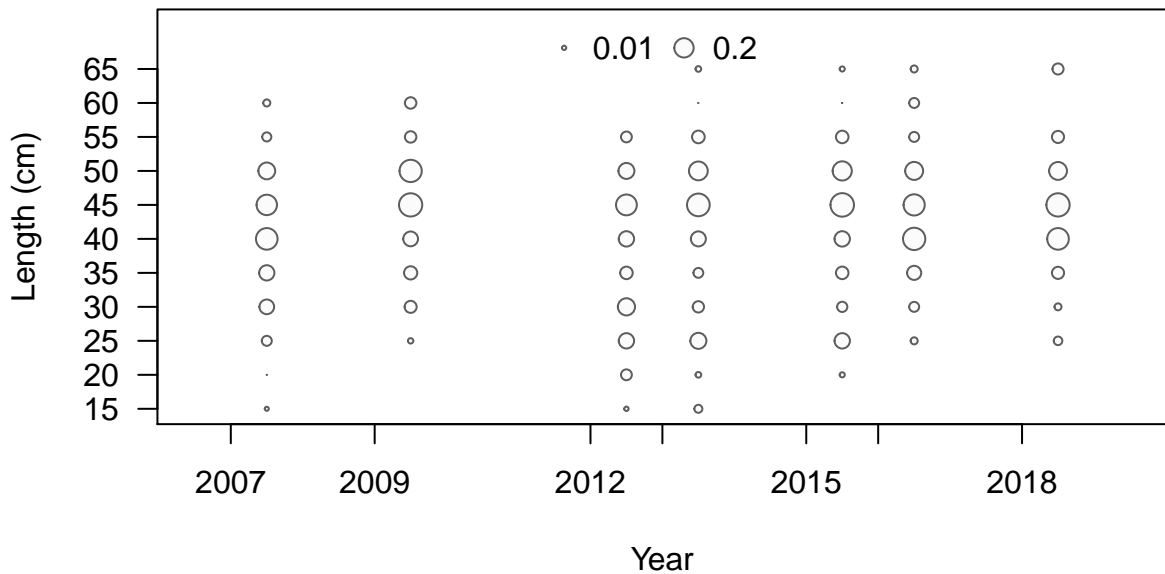
• 0.01 ○ 0.2



Proportion

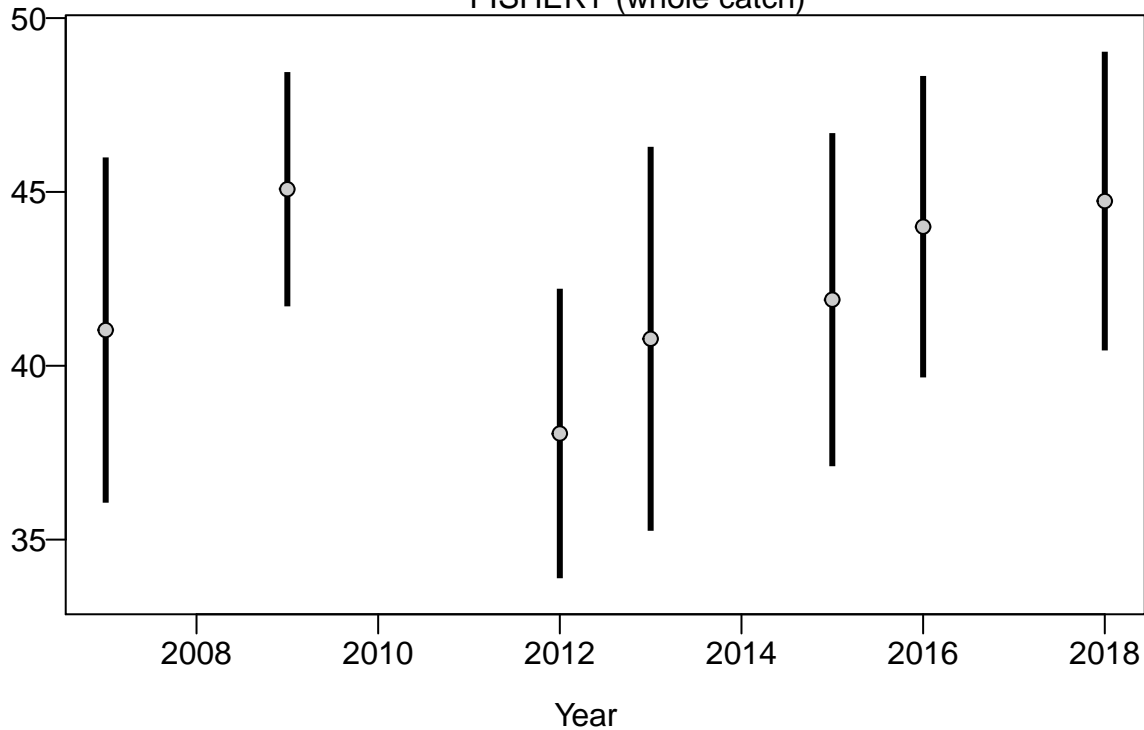


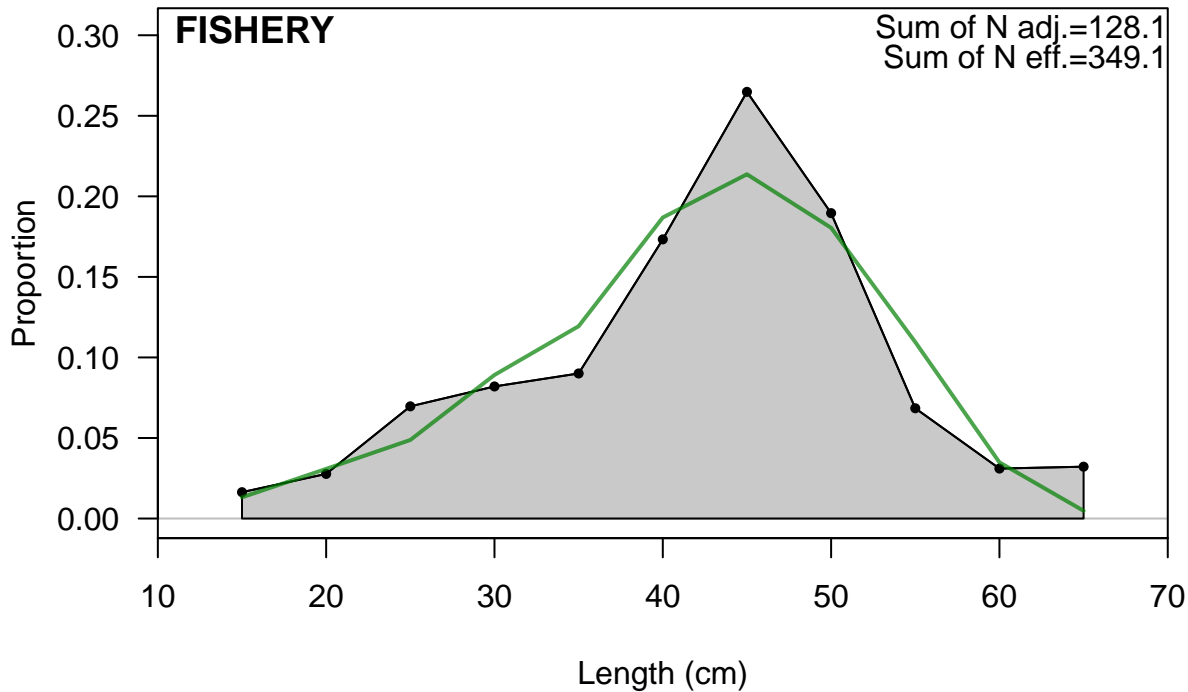
Length (cm)



FISHERY (whole catch)

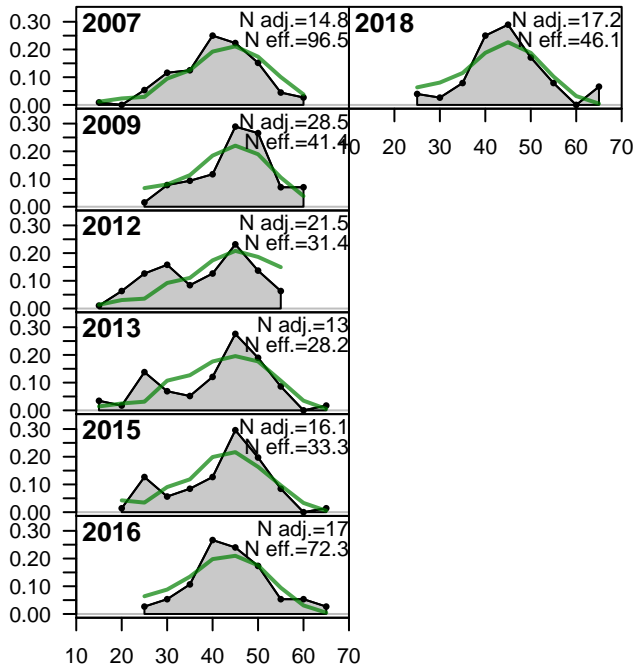
Mean length





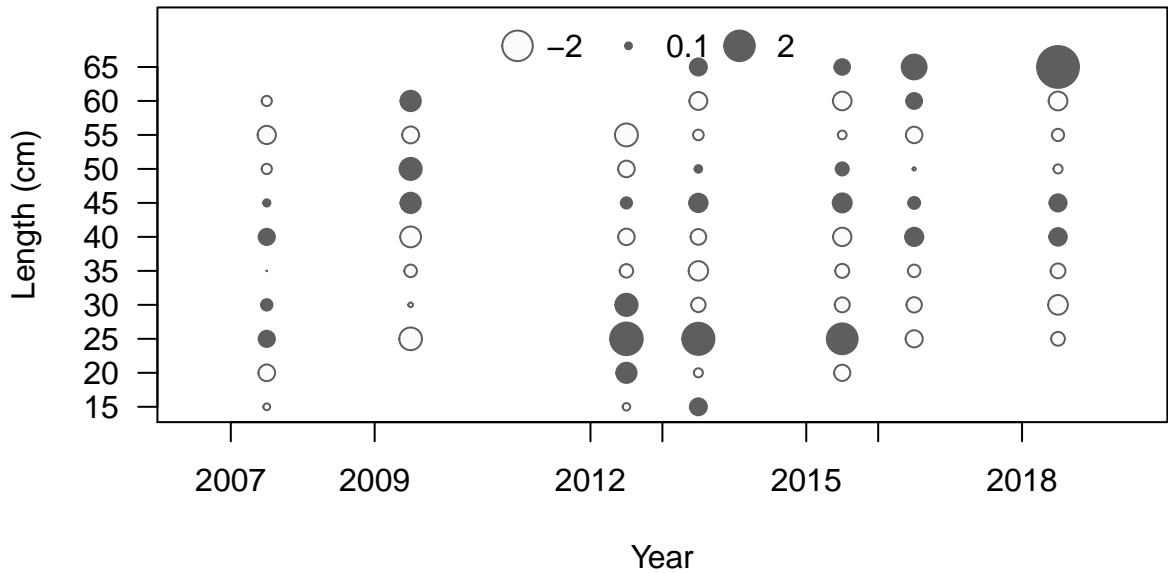


Proportion

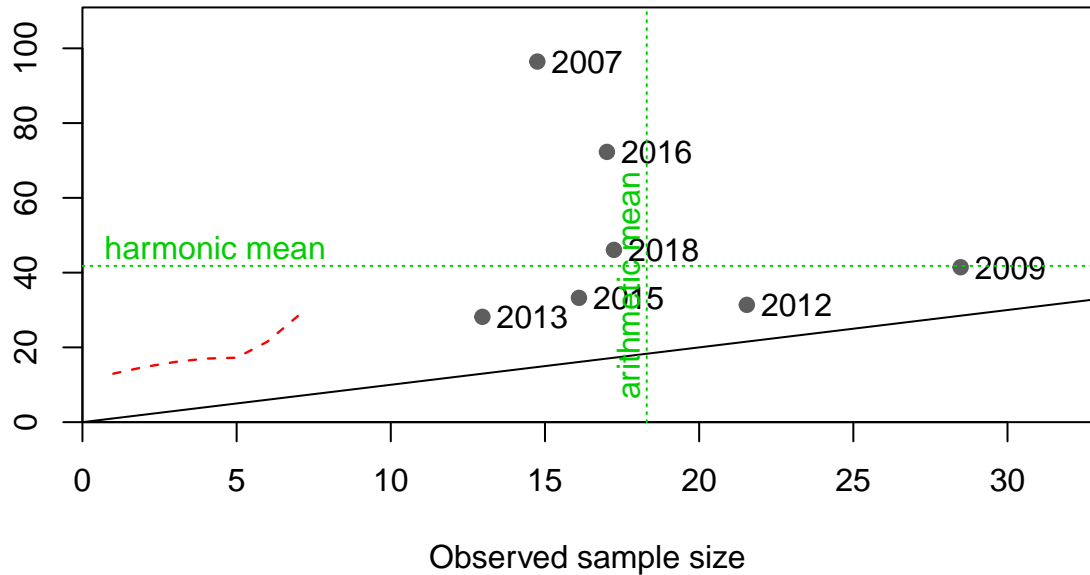


Length (cm)





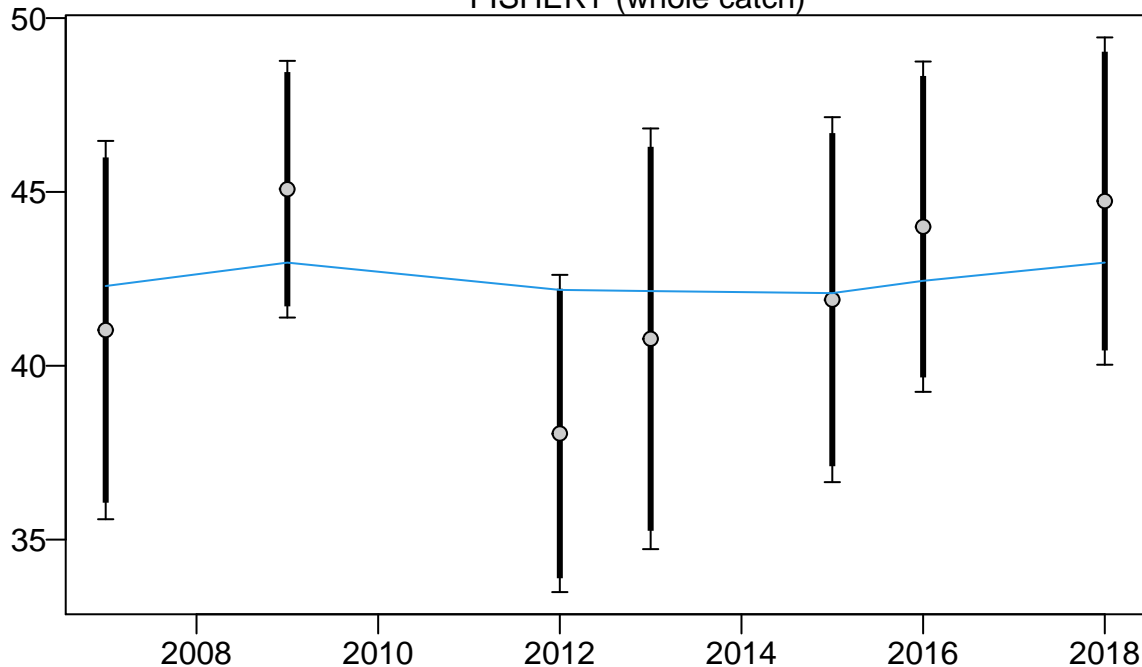
Effective sample size

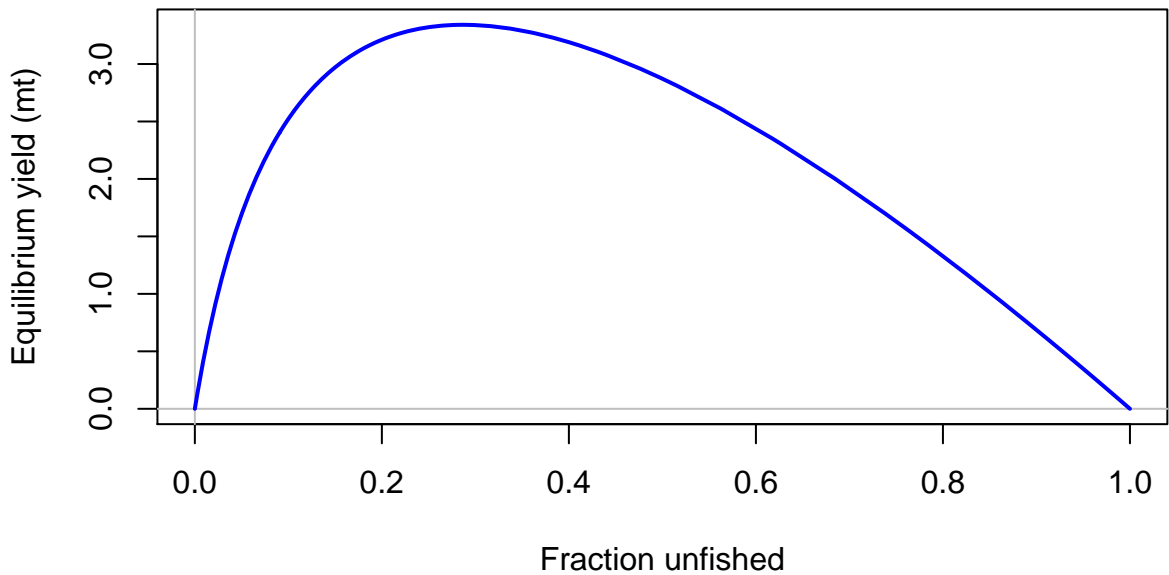


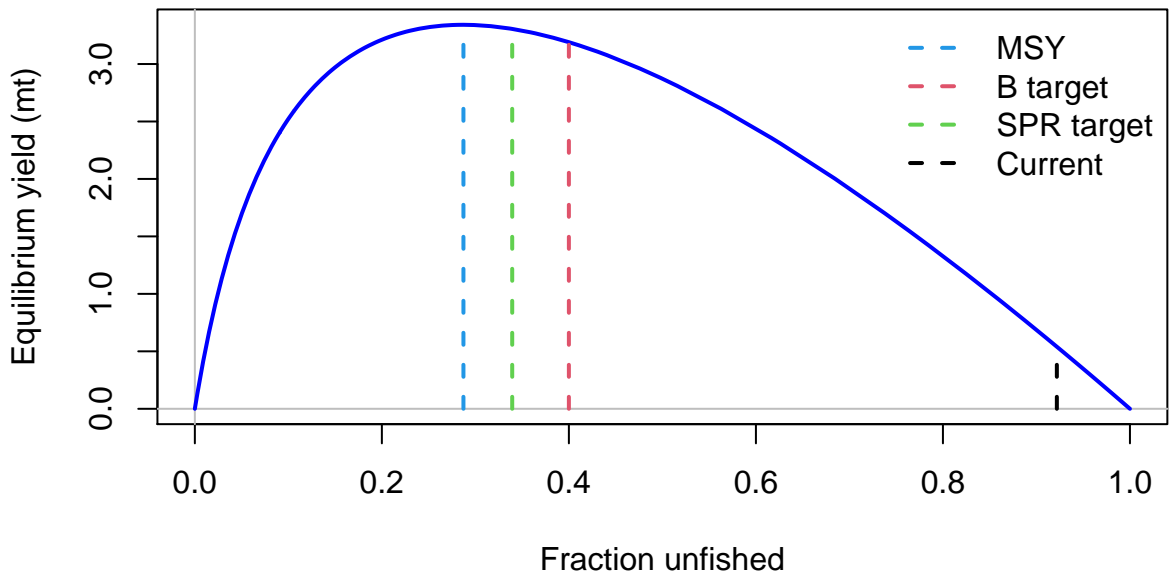
FISHERY (whole catch)

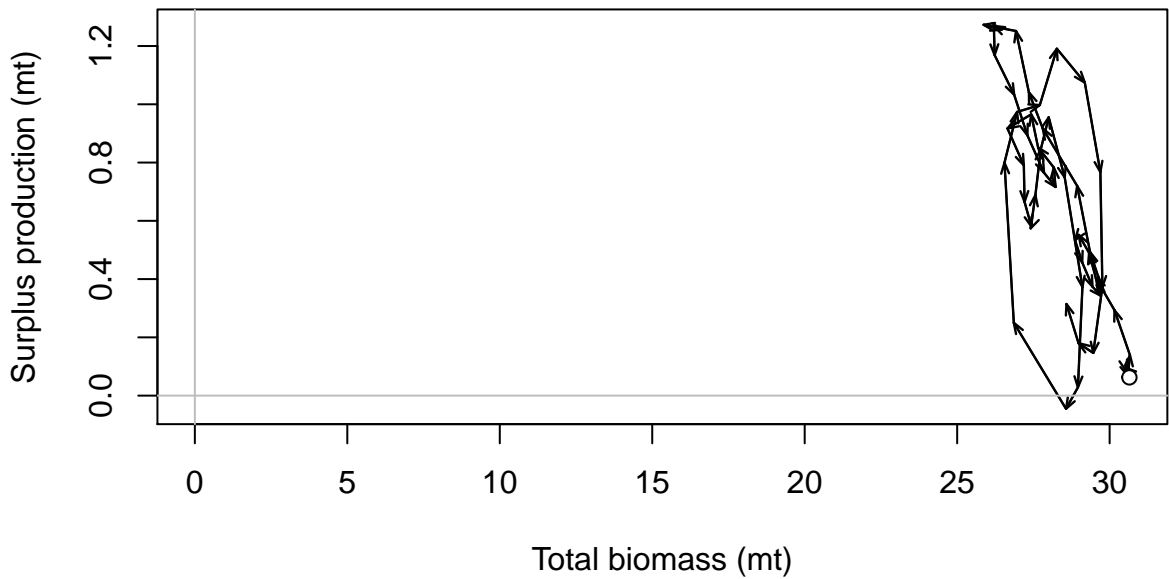
Mean length

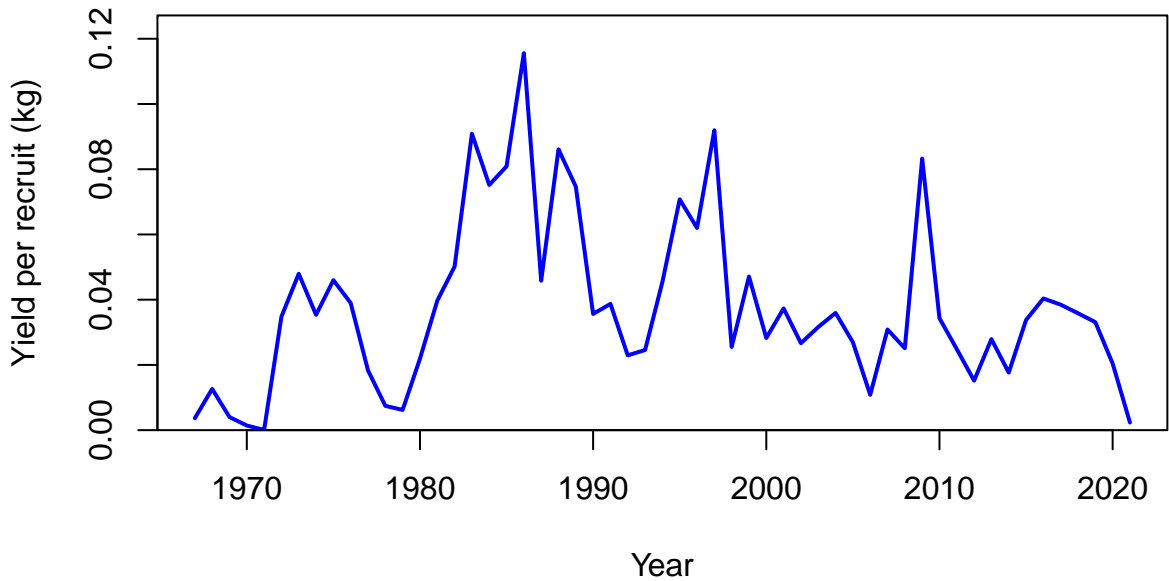
Year

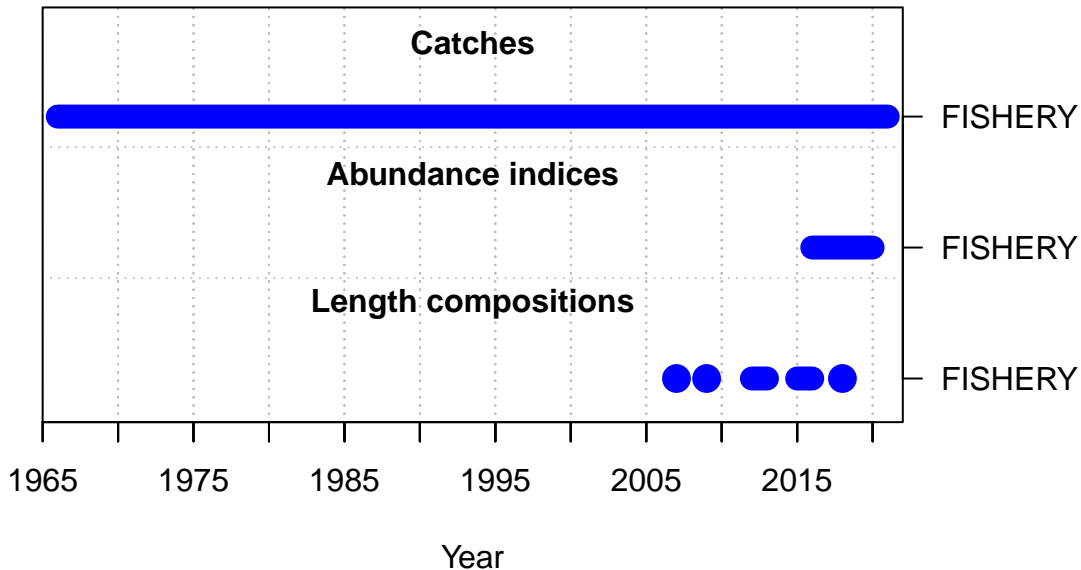




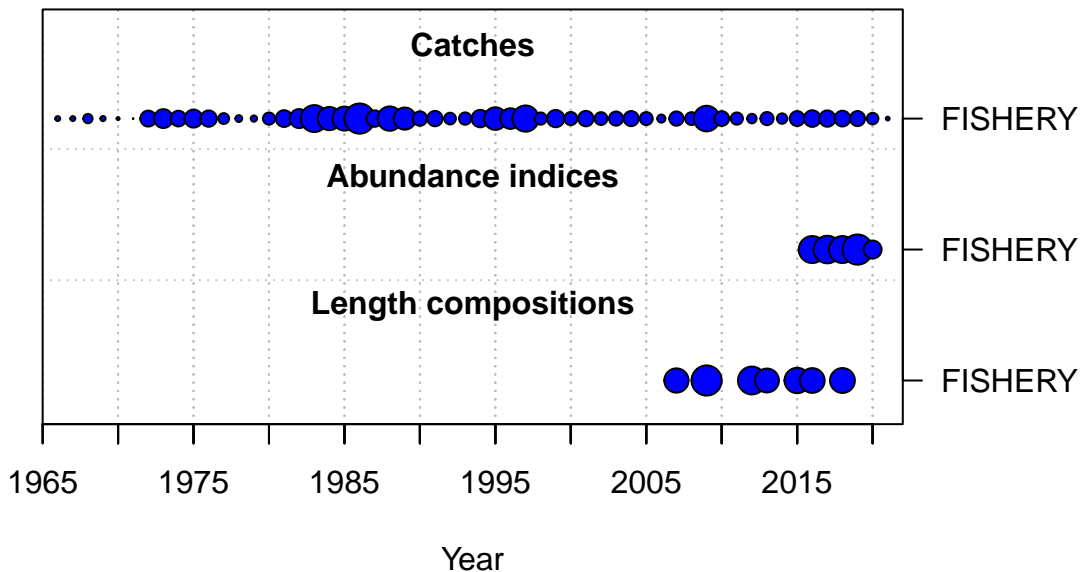




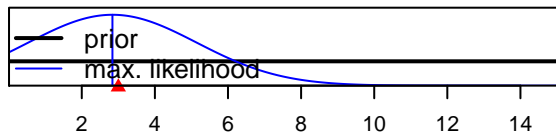




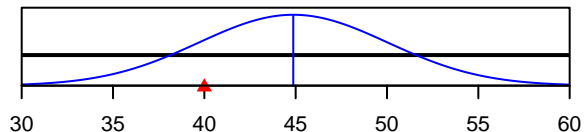




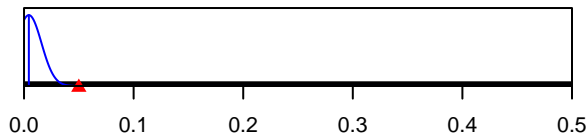
SR\_LN(R0)



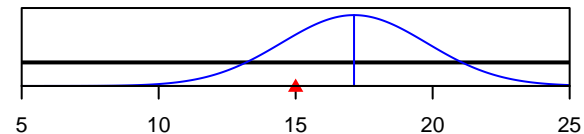
Size\_inflection\_FISHERY(1)



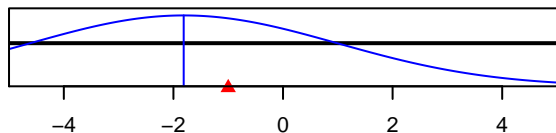
InitF\_seas\_1\_flt\_1FISHERY



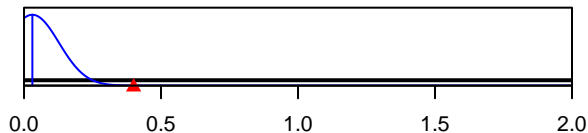
Size\_95%width\_FISHERY(1)



LnQ\_base\_FISHERY(1)



Q\_extraSD\_FISHERY(1)



Parameter value