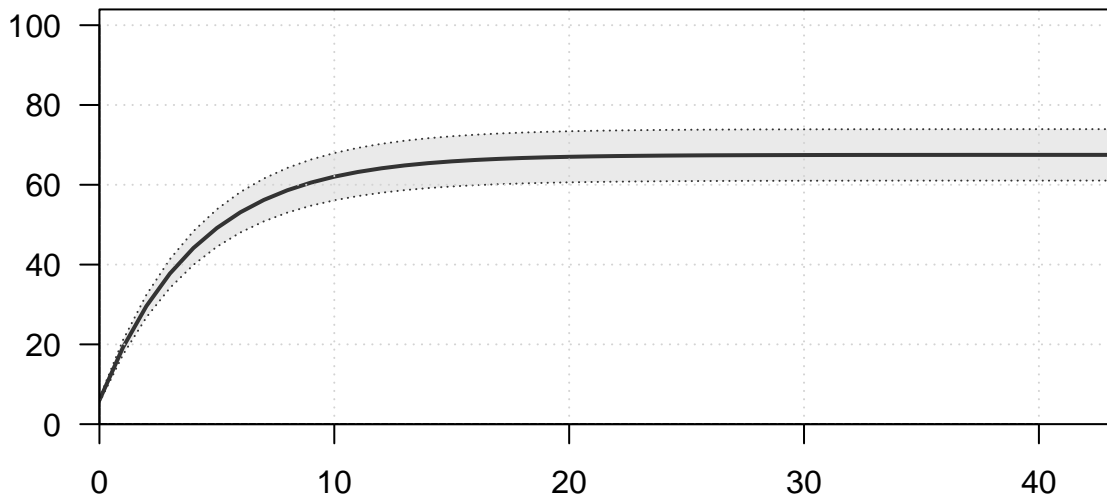
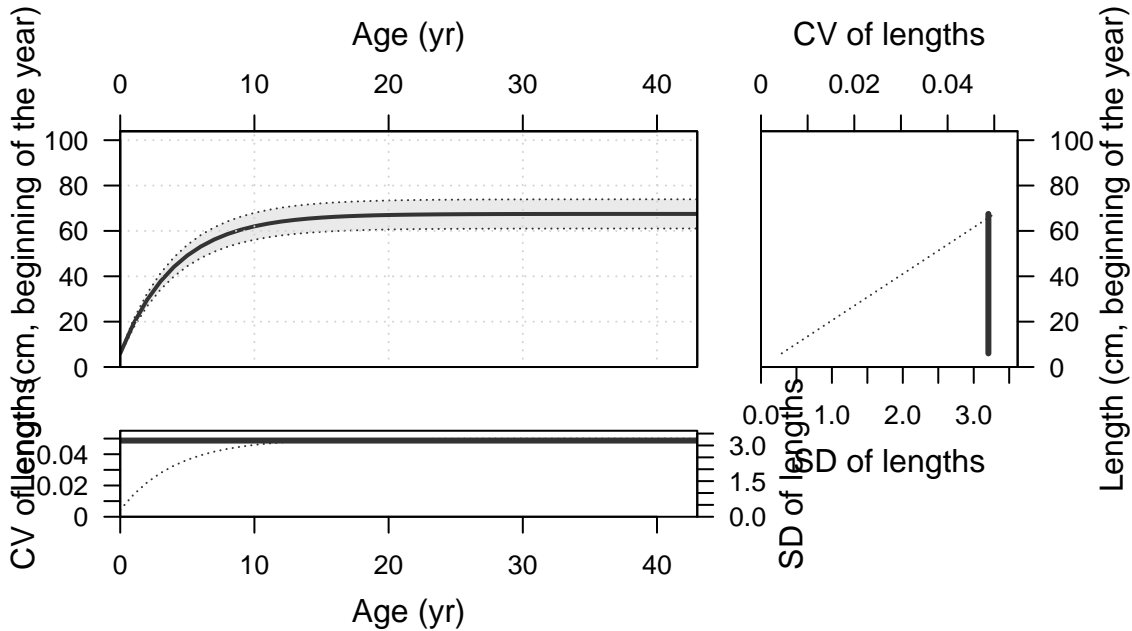


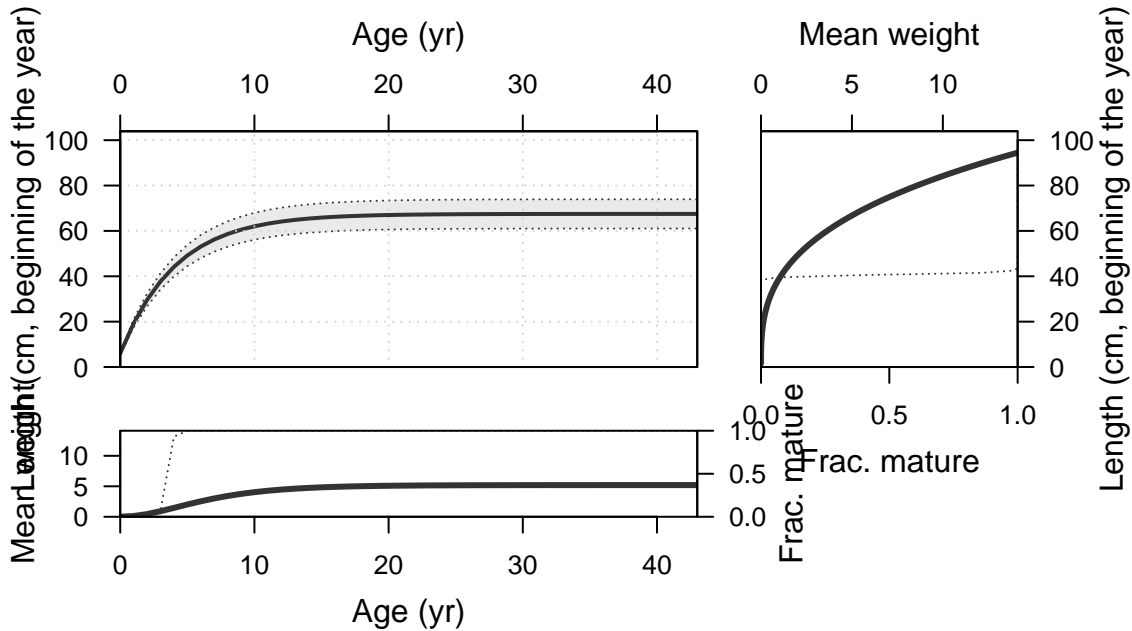
Plots created using the 'r4ss' package in R  
Stock Synthesis version: 3.30.21.0  
StartTime: Wed Sep 20 14:42:59 2023  
Data\_File: data.ss  
Control\_File: control.ss

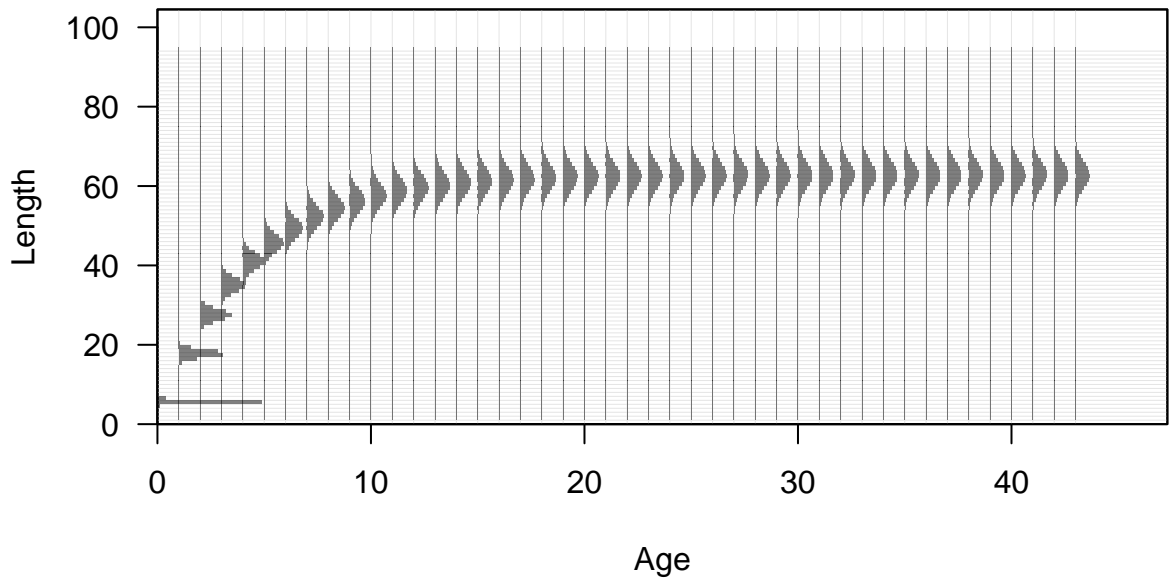
Length (cm, beginning of the year)

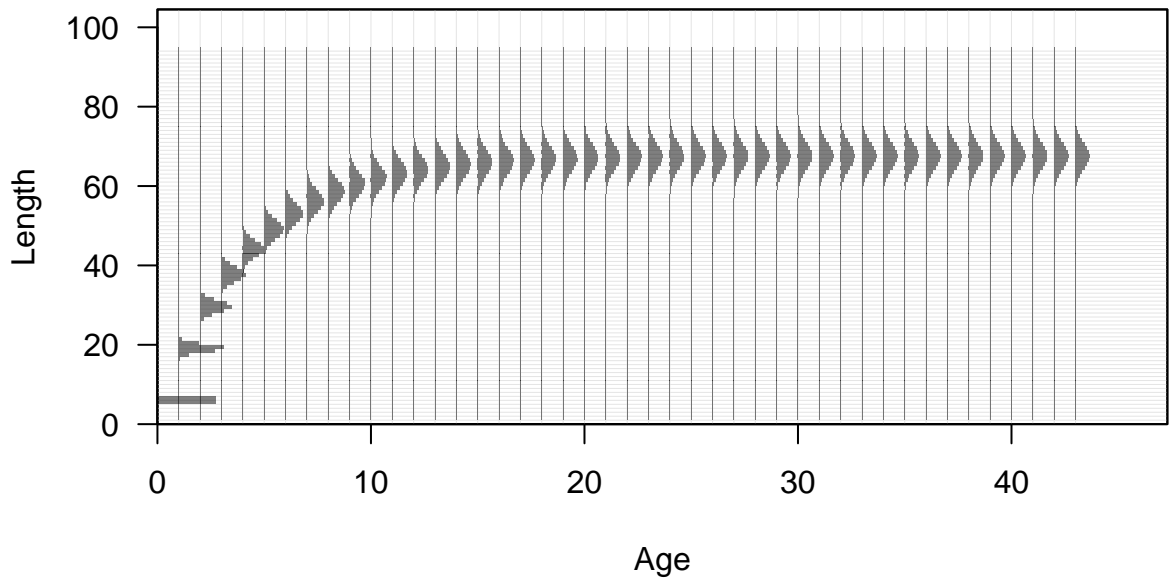


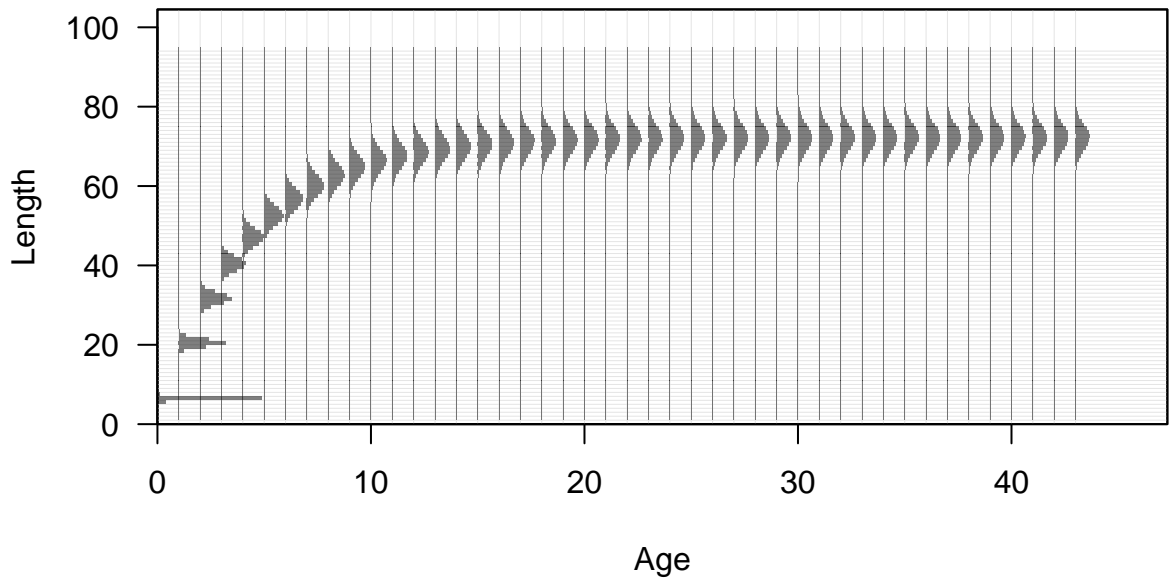
Age (yr)

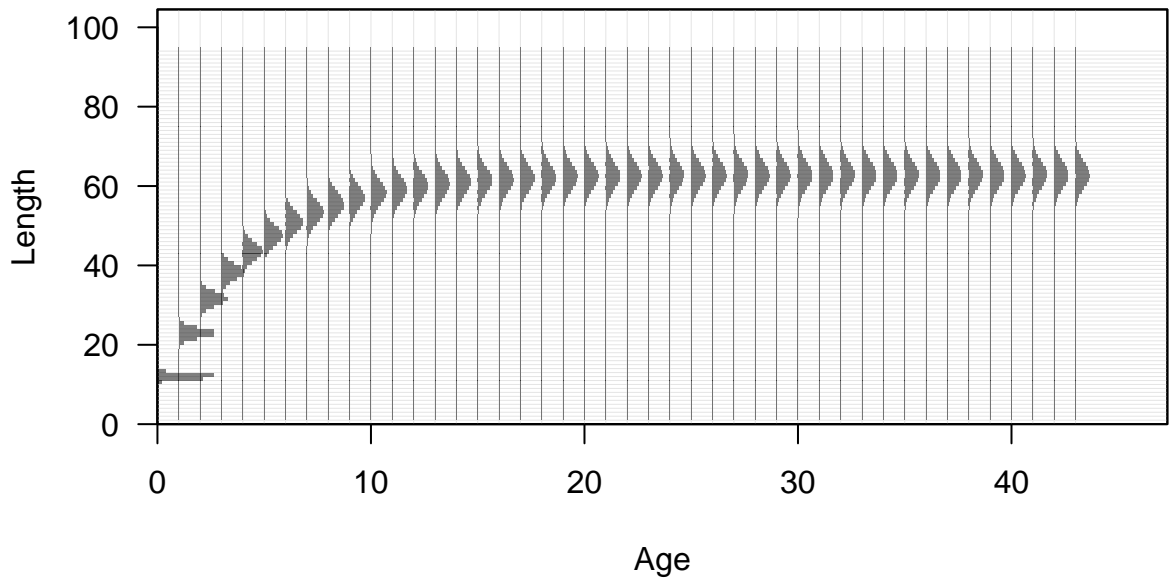




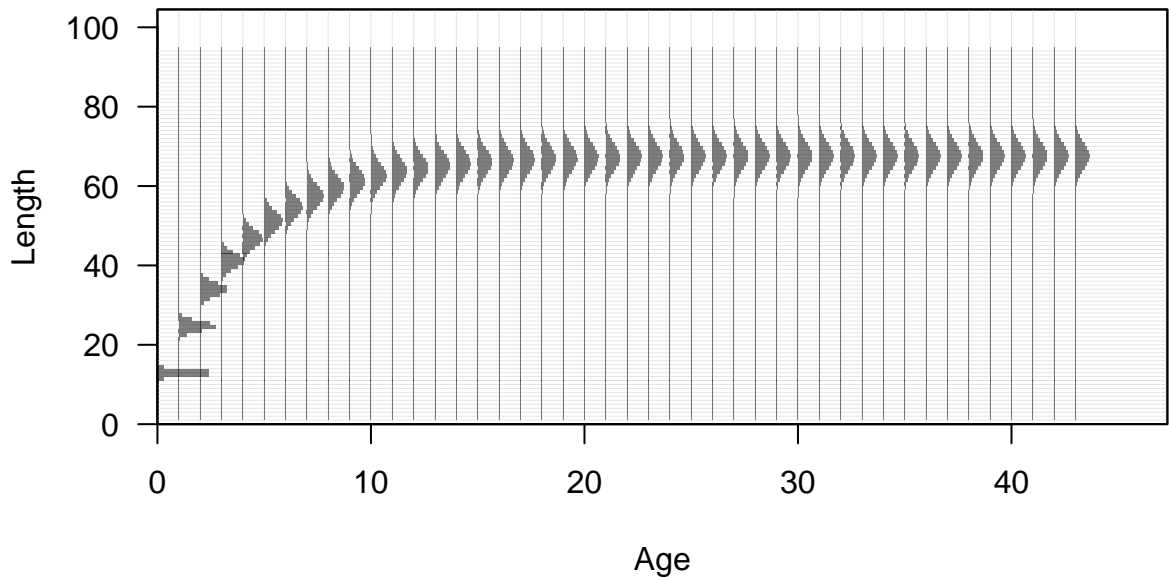


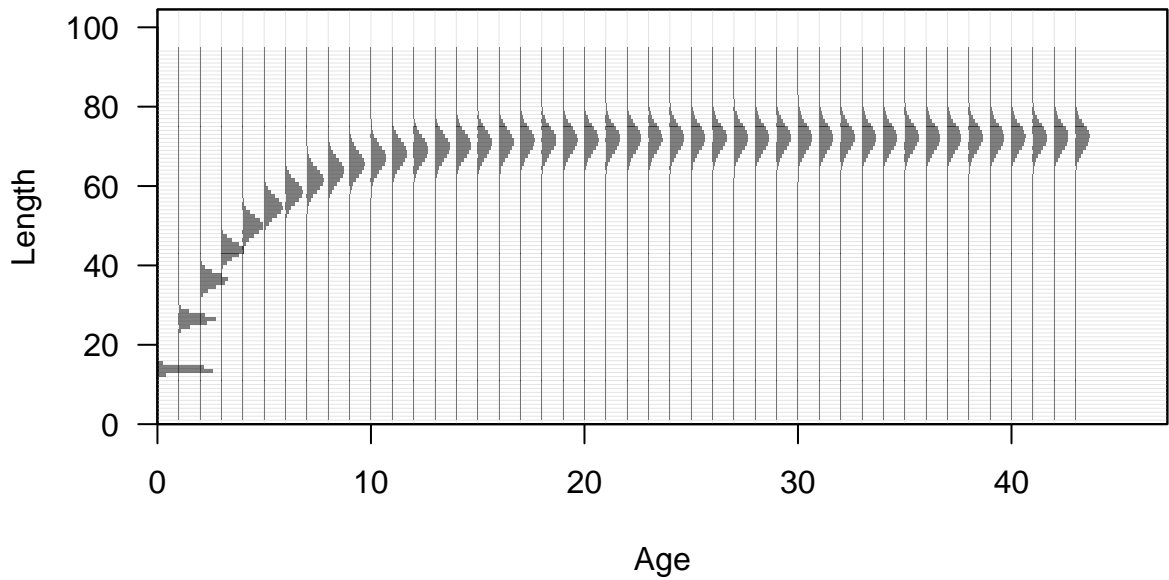


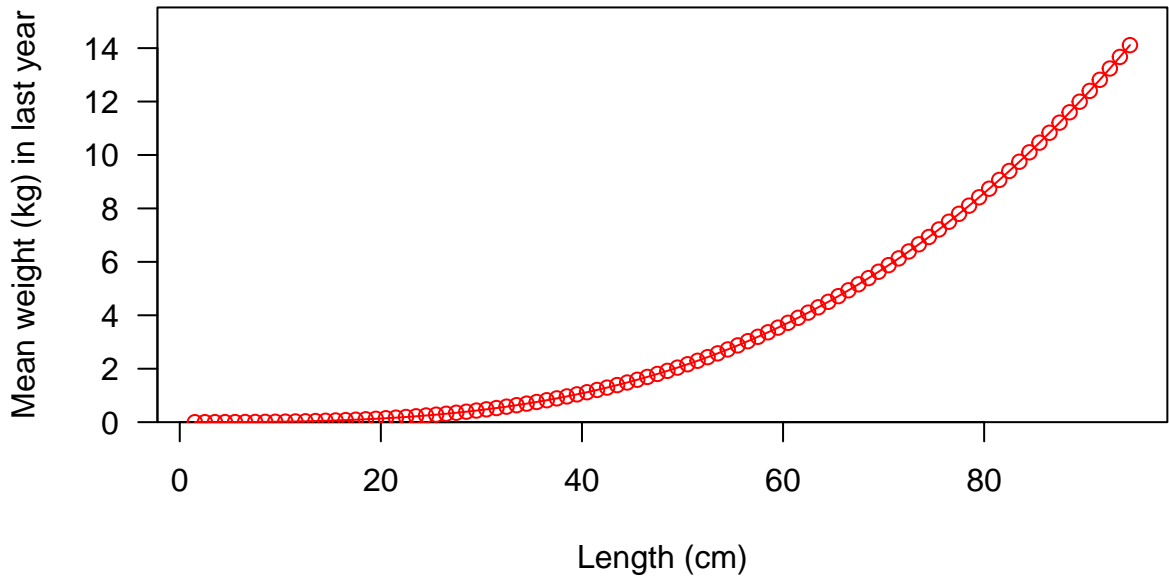


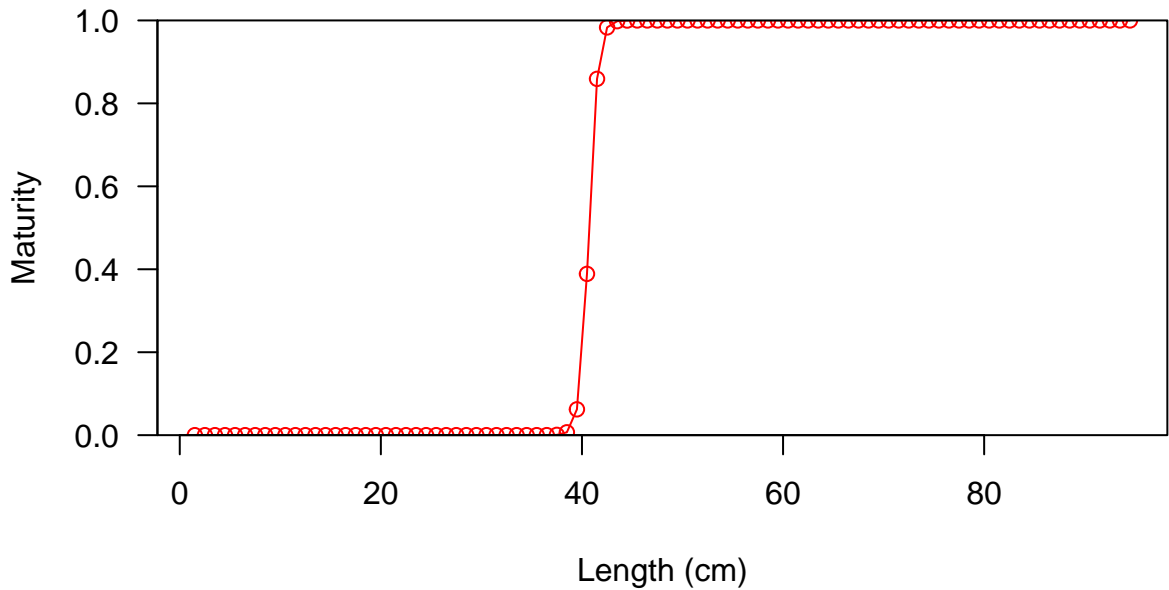


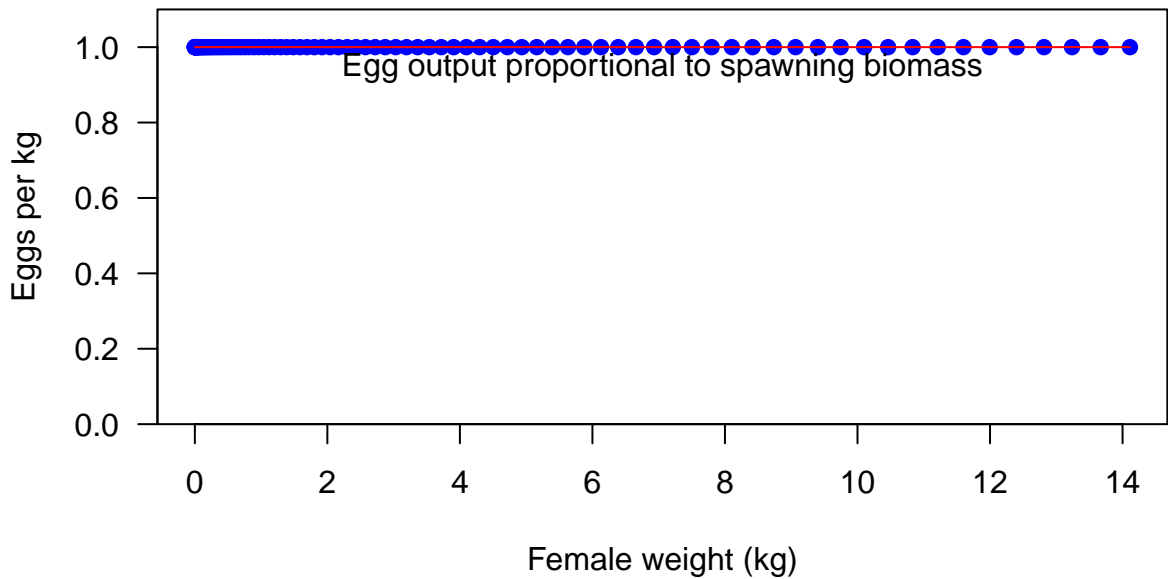




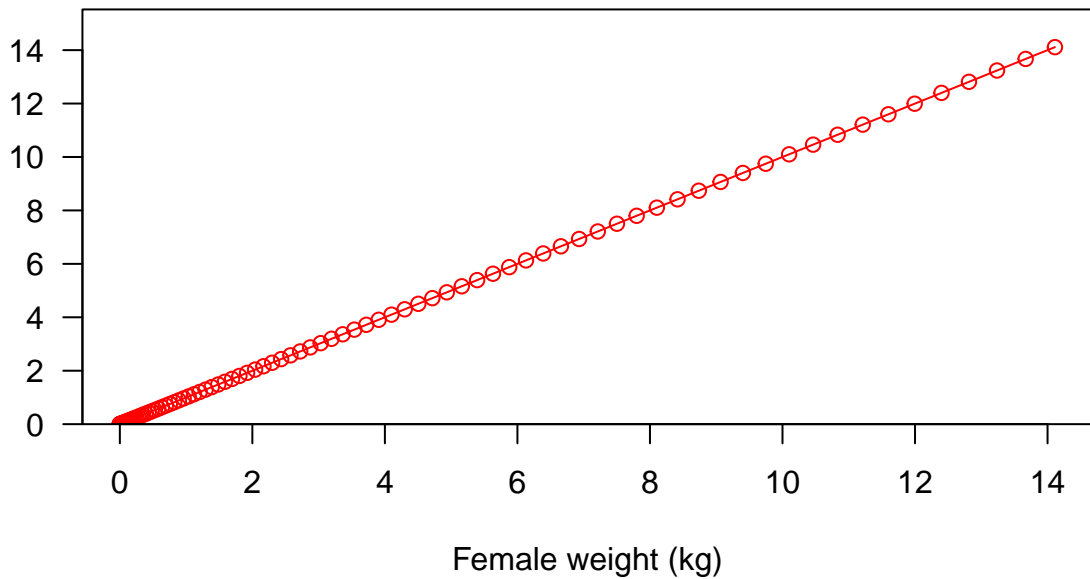




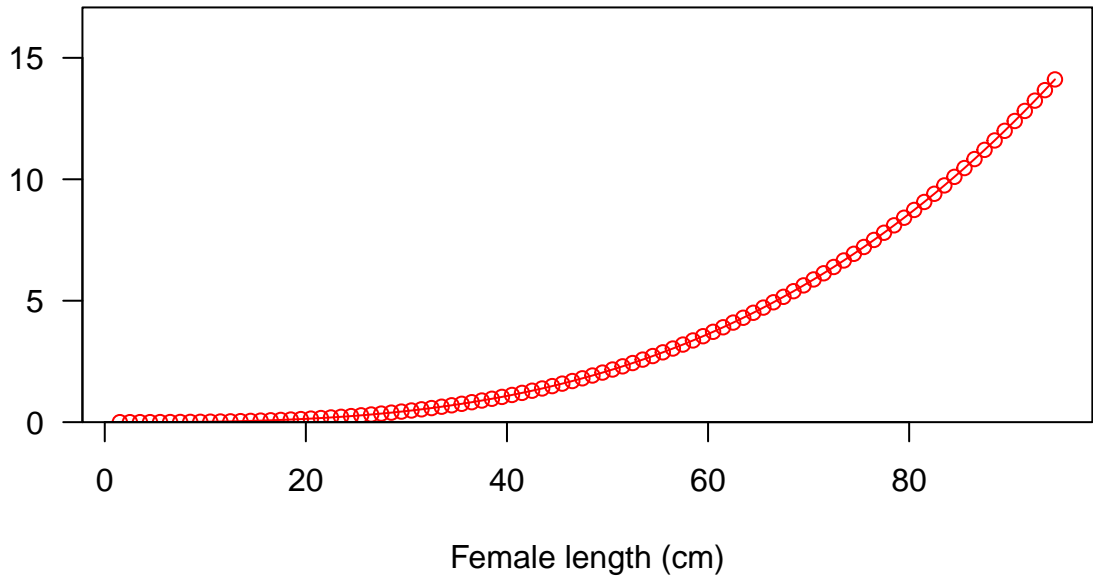




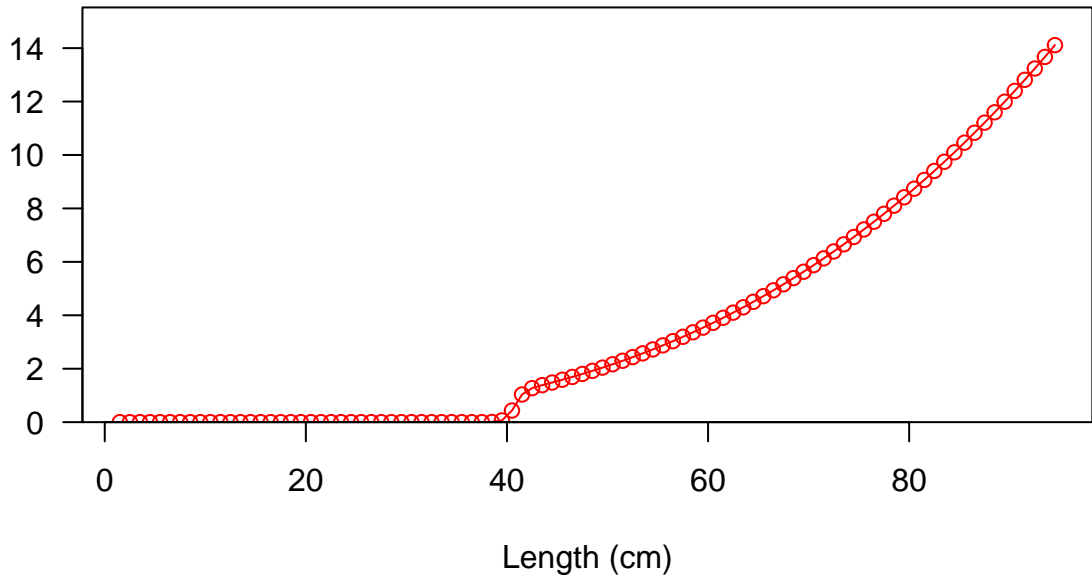
Fecundity



Fecundity

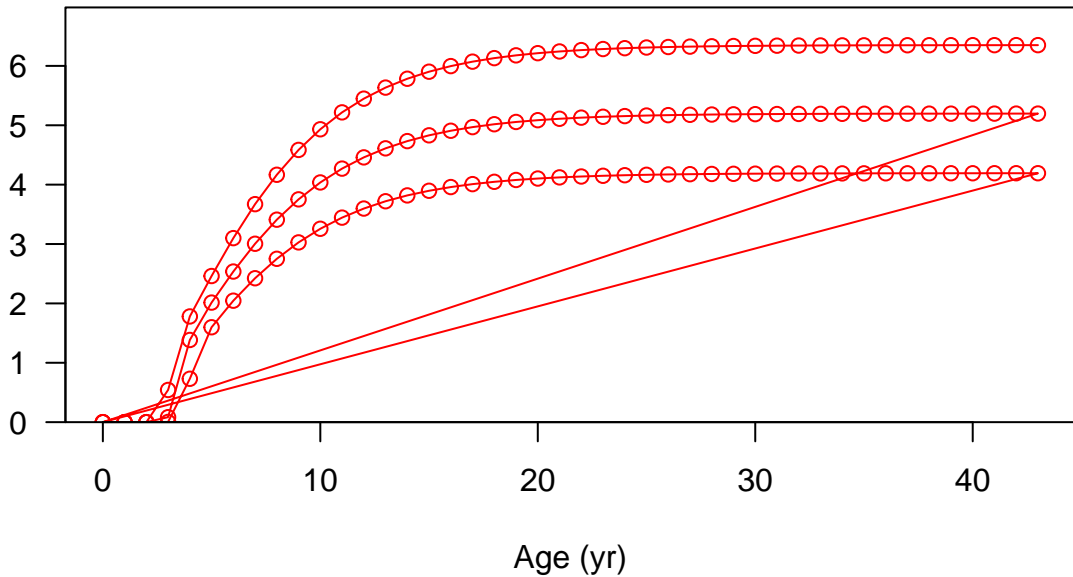


Spawning output

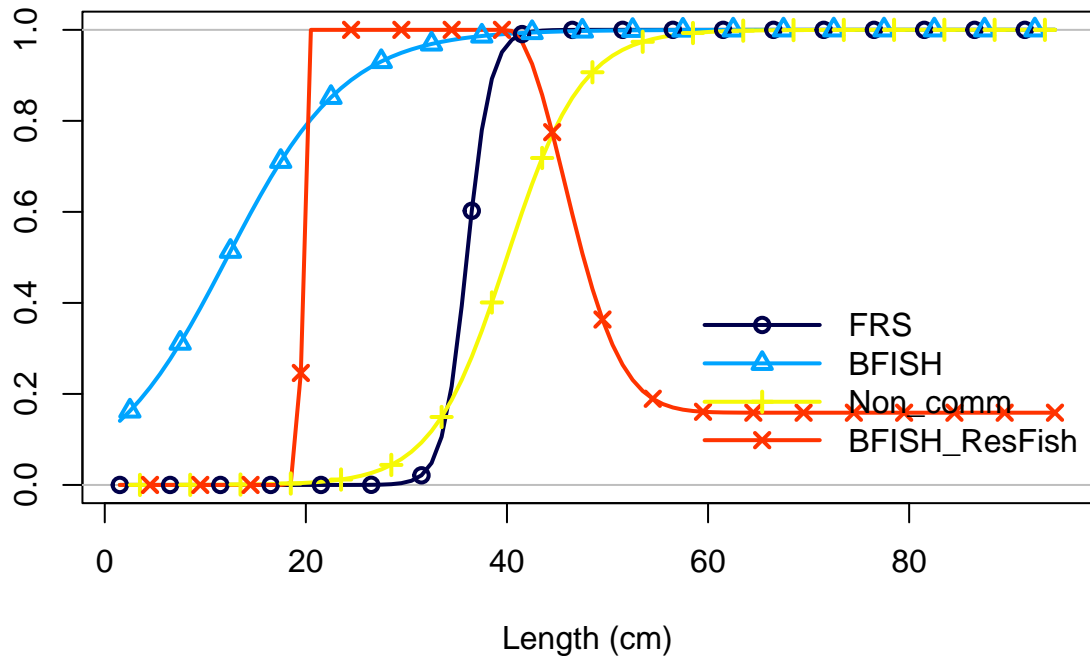




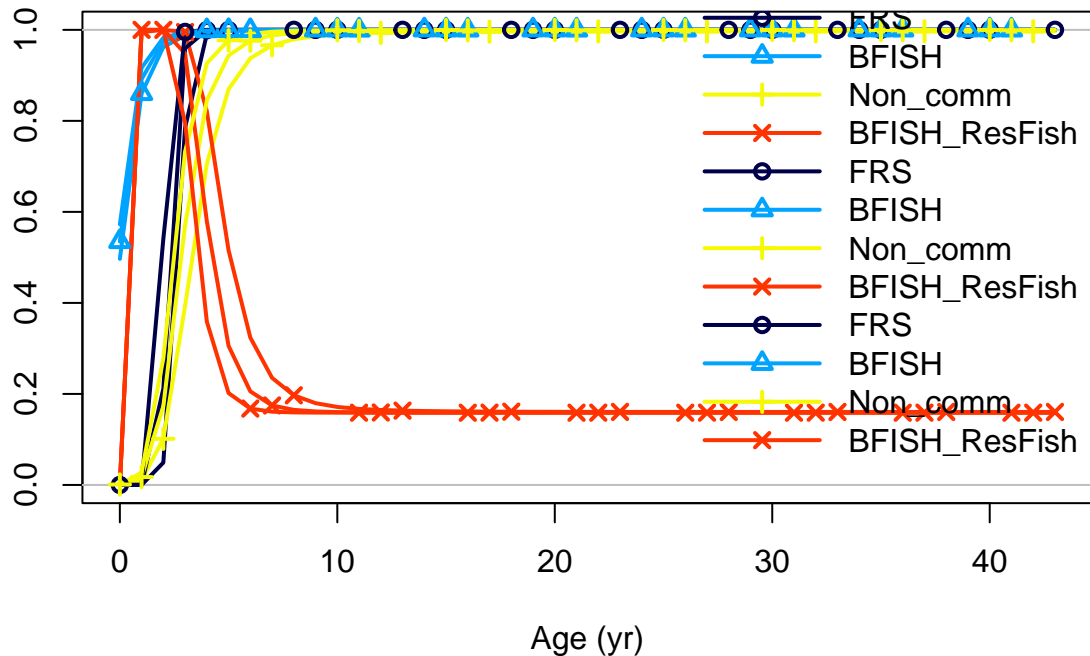
Spawning output



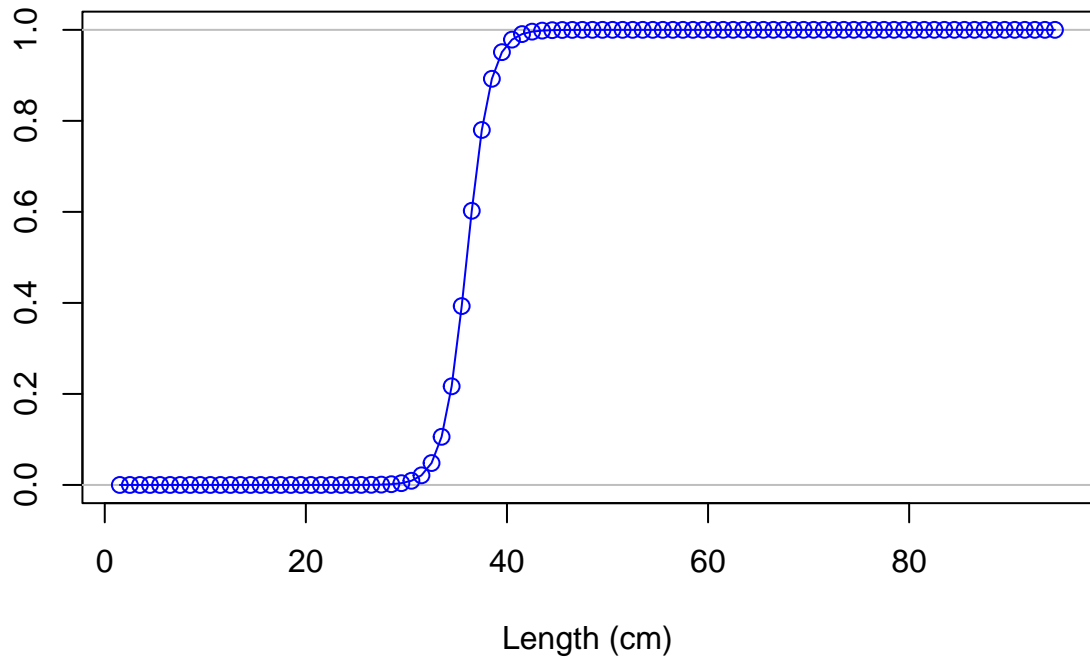
Selectivity



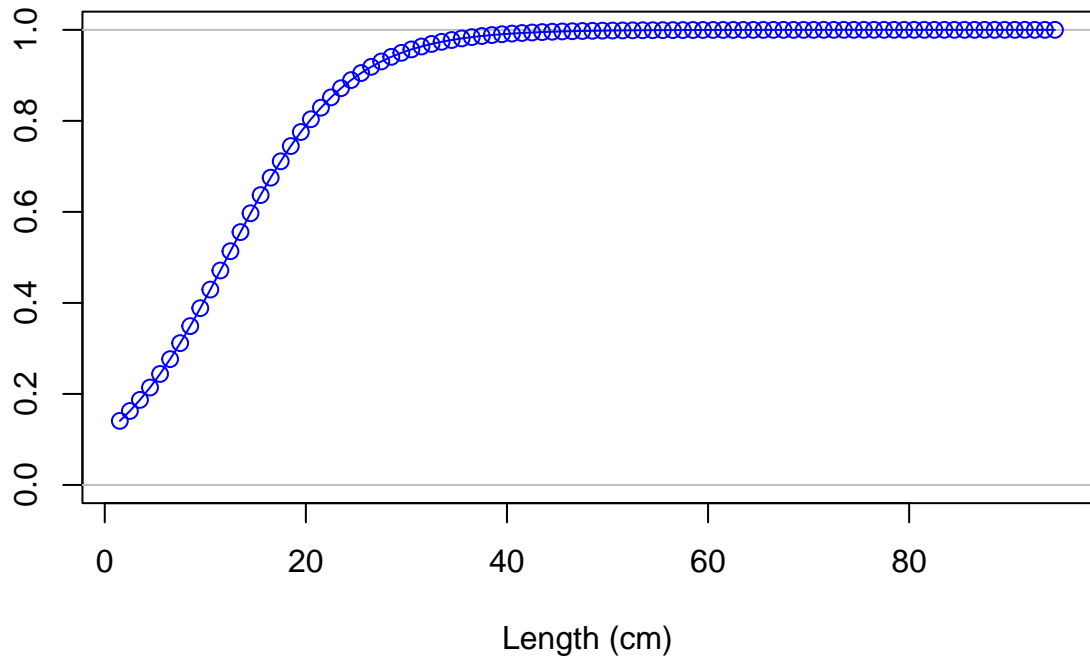
Selectivity



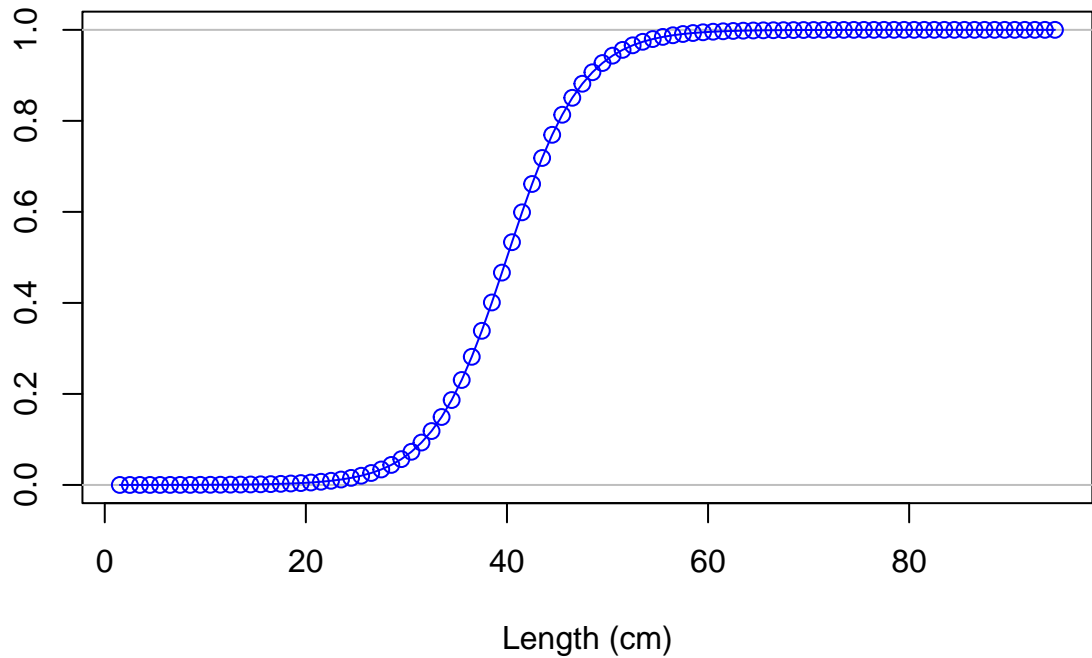
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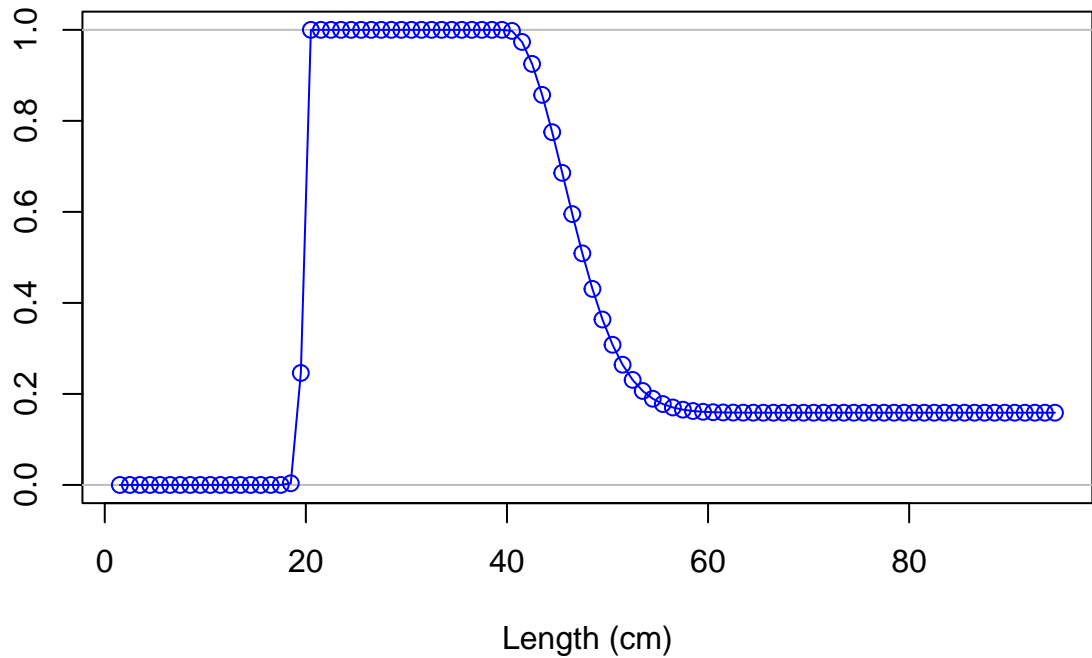
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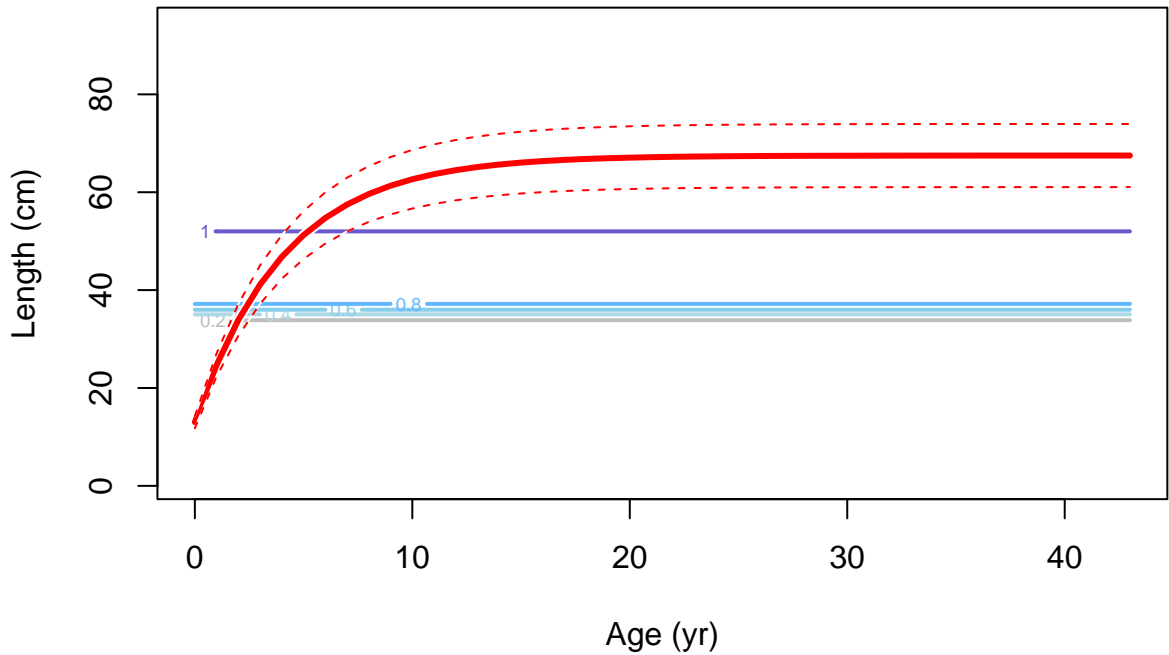


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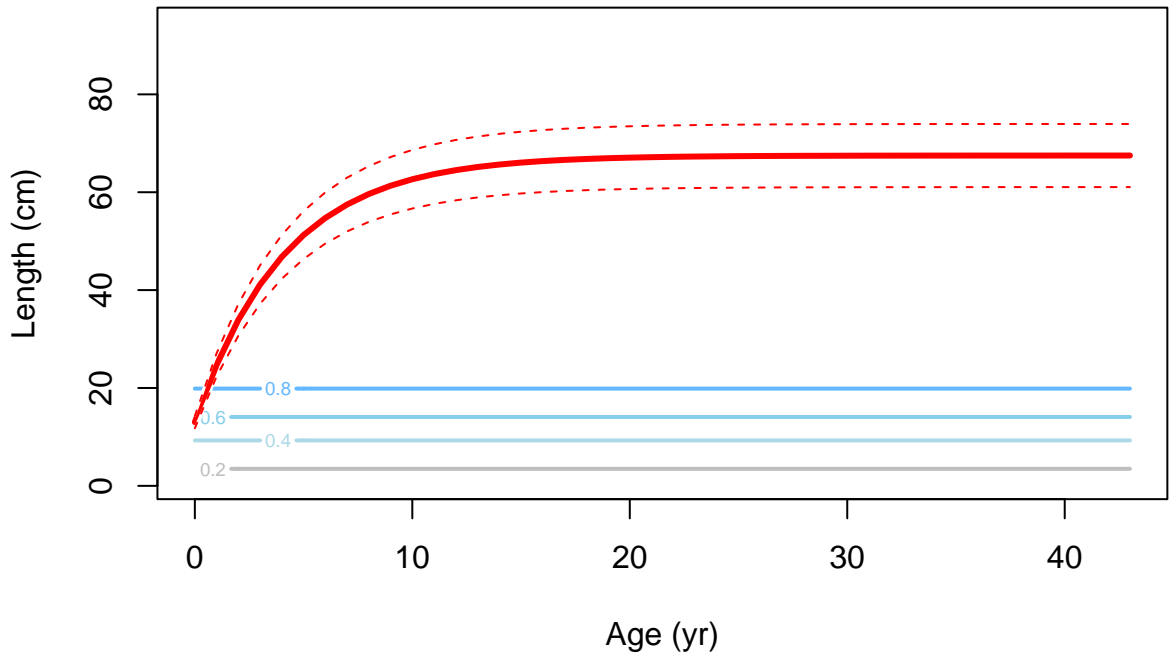


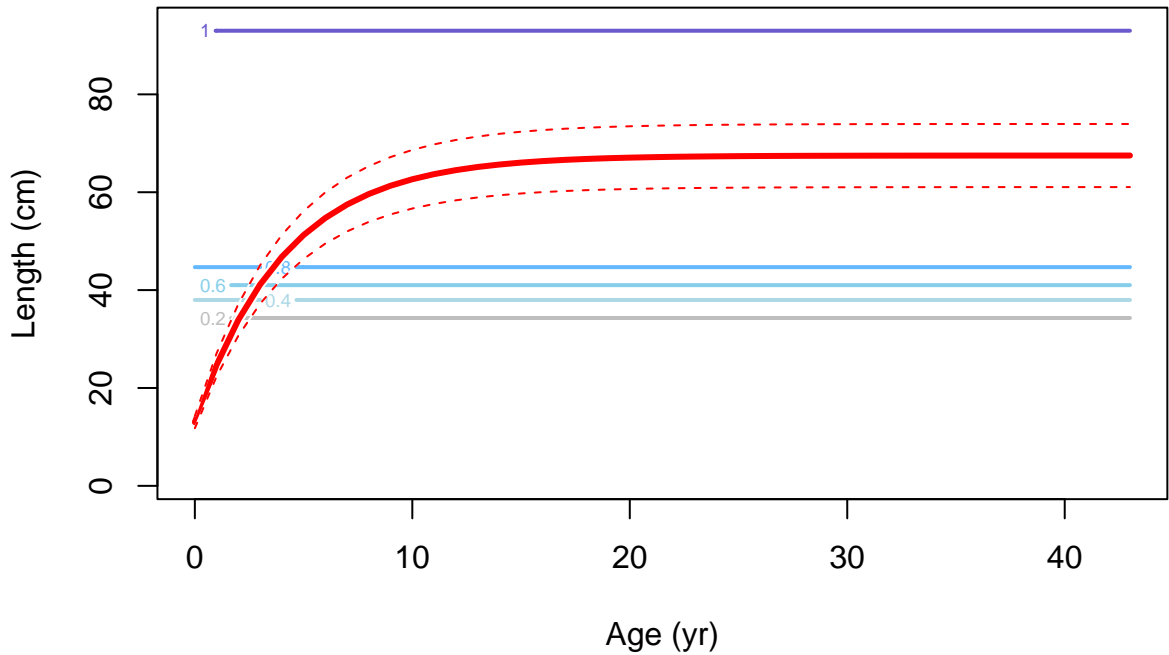
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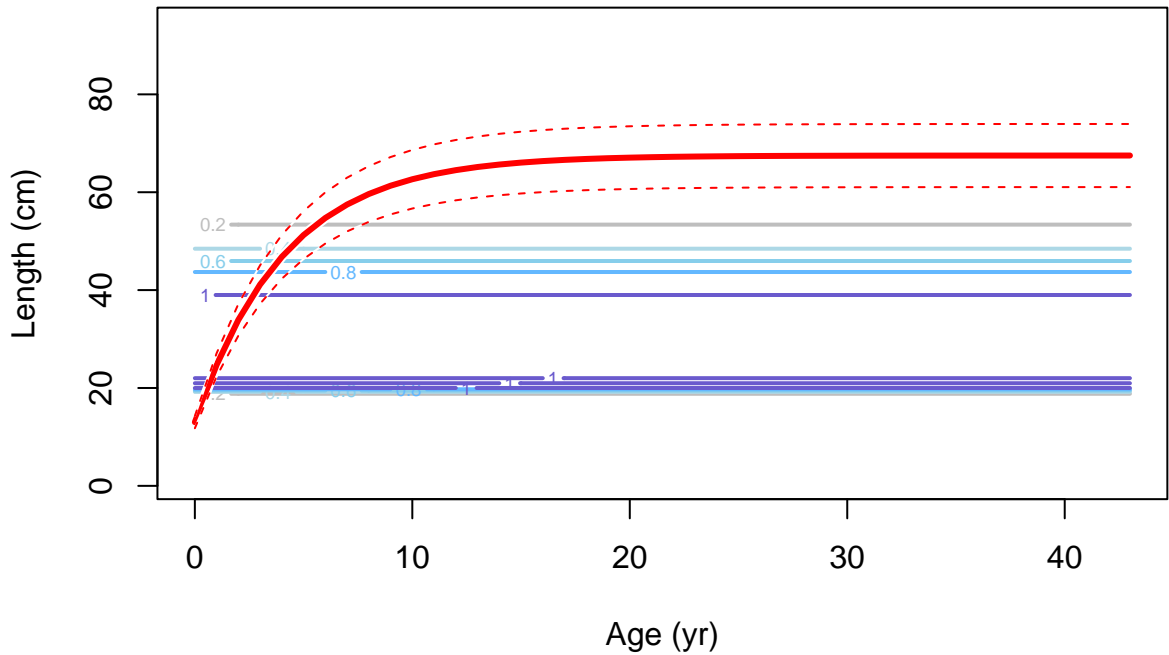


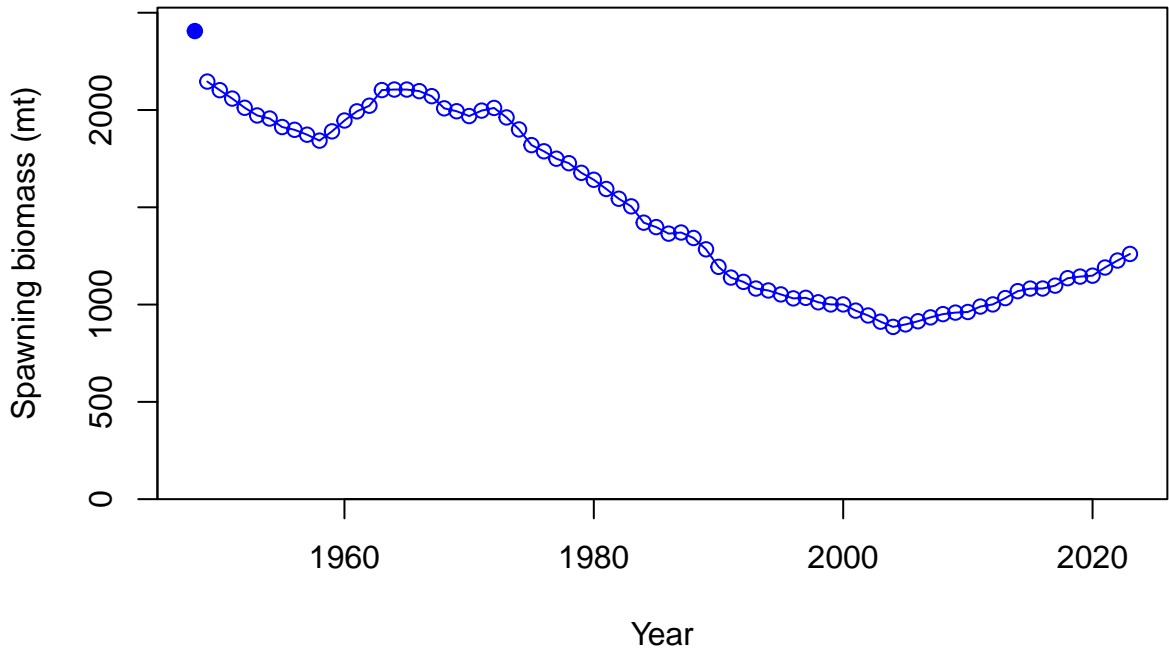


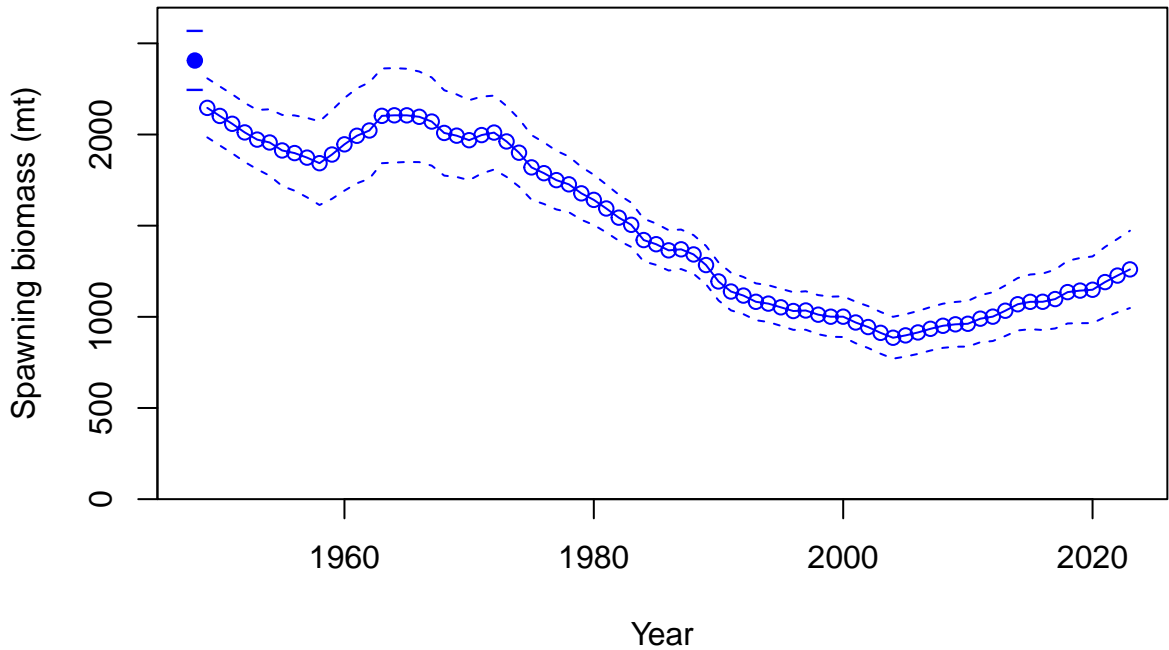




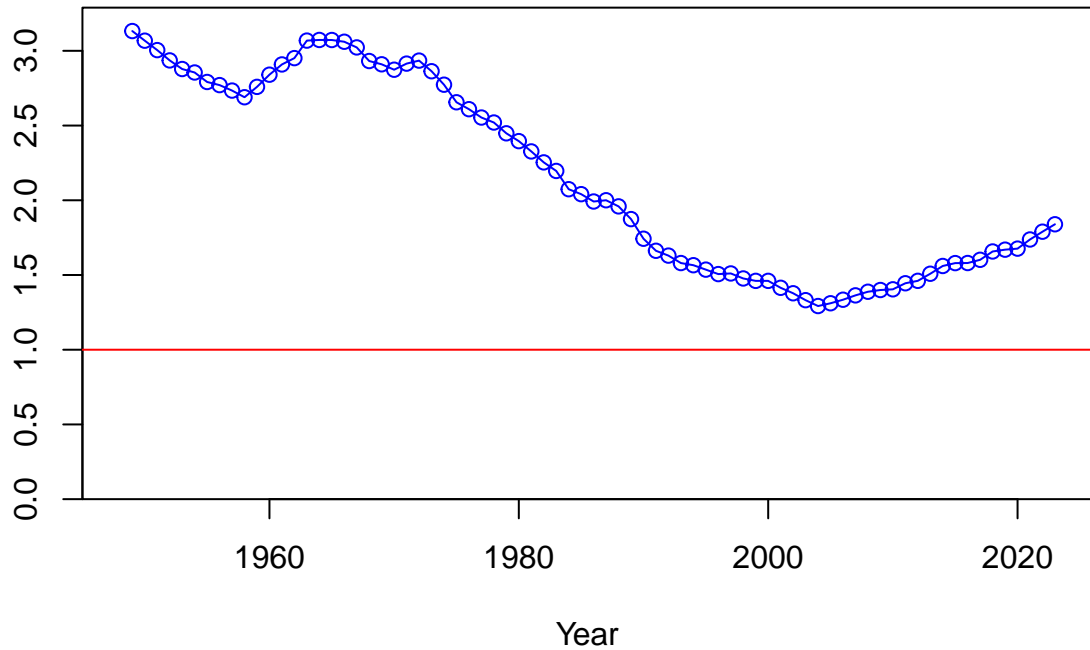




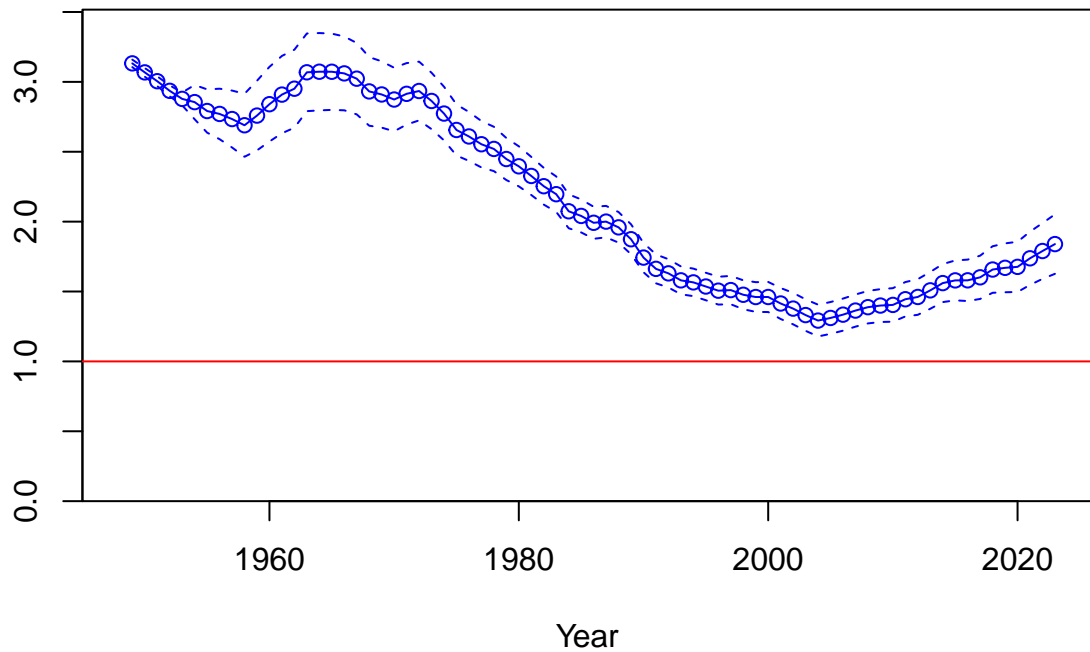


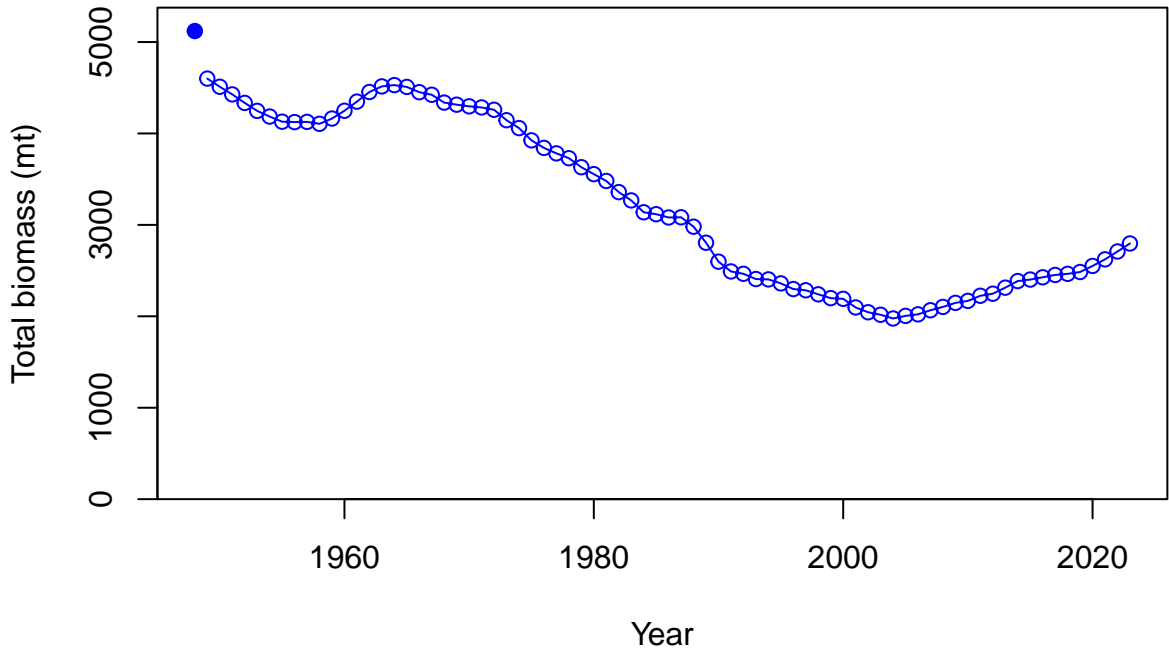


Relative spawning biomass:  $B/B_{MSY}$

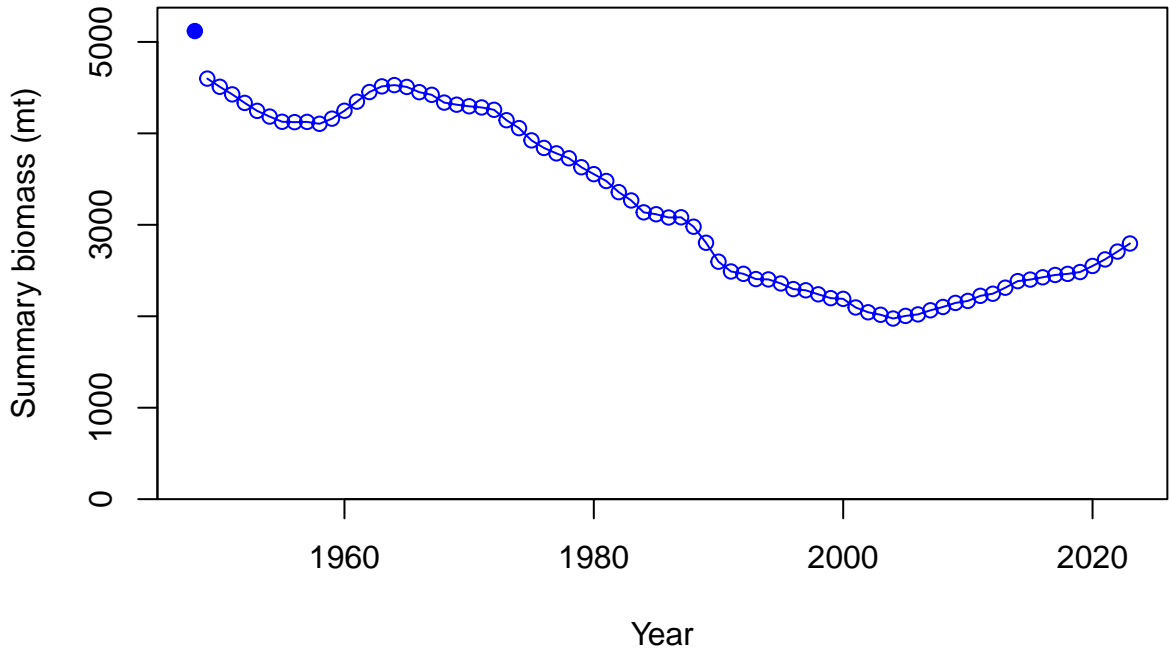


Relative spawning biomass:  $B/B_{MSY}$

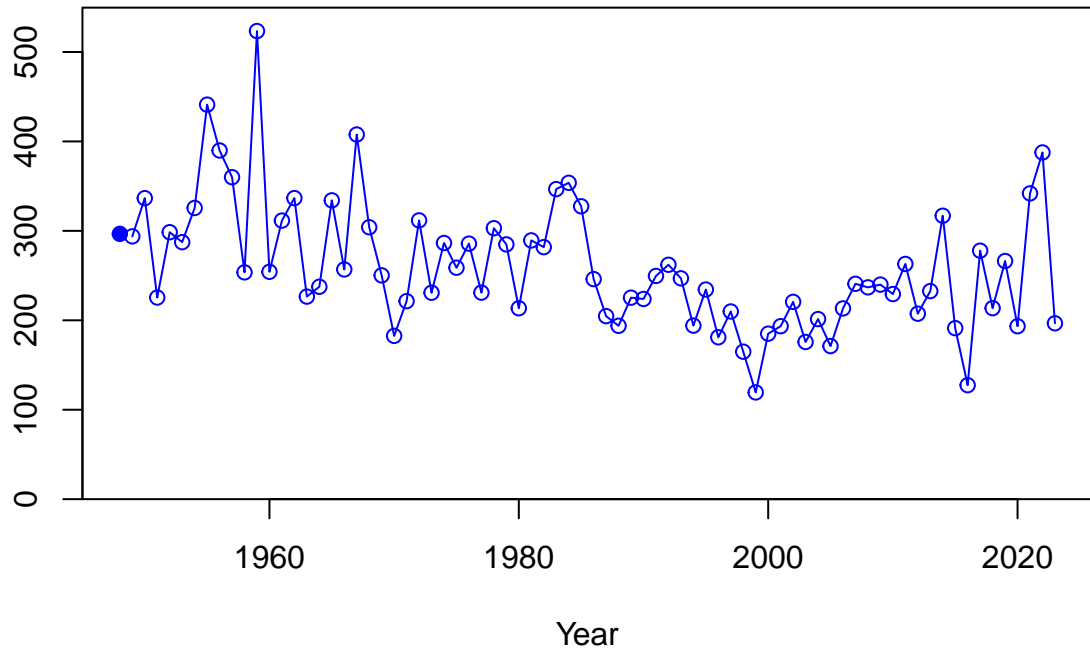


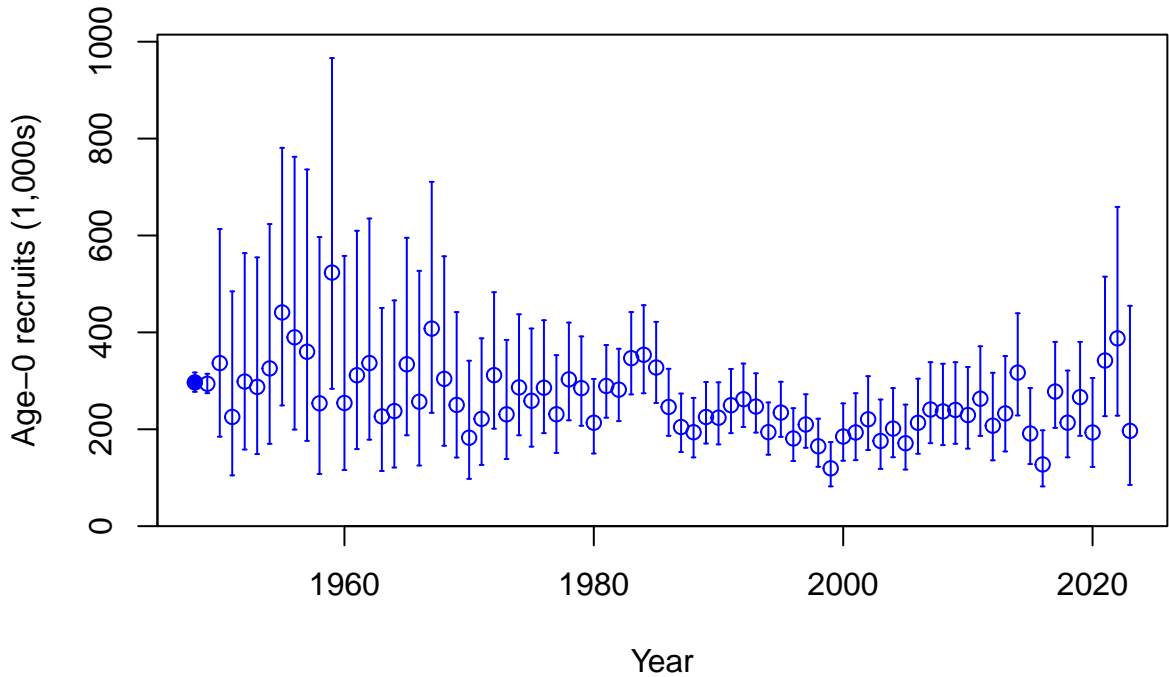




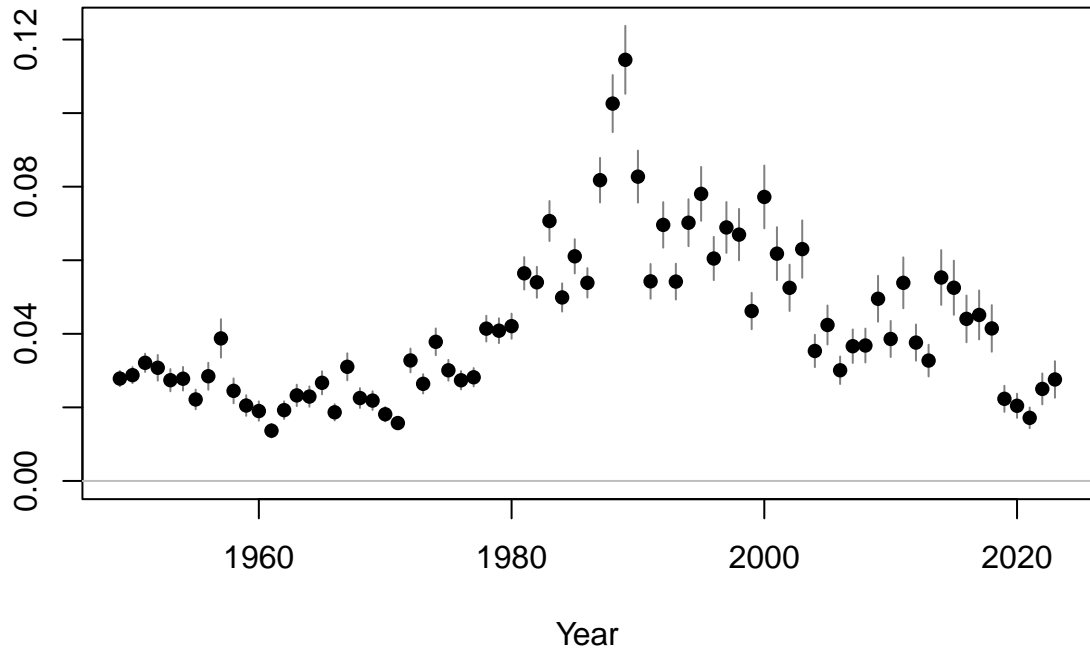


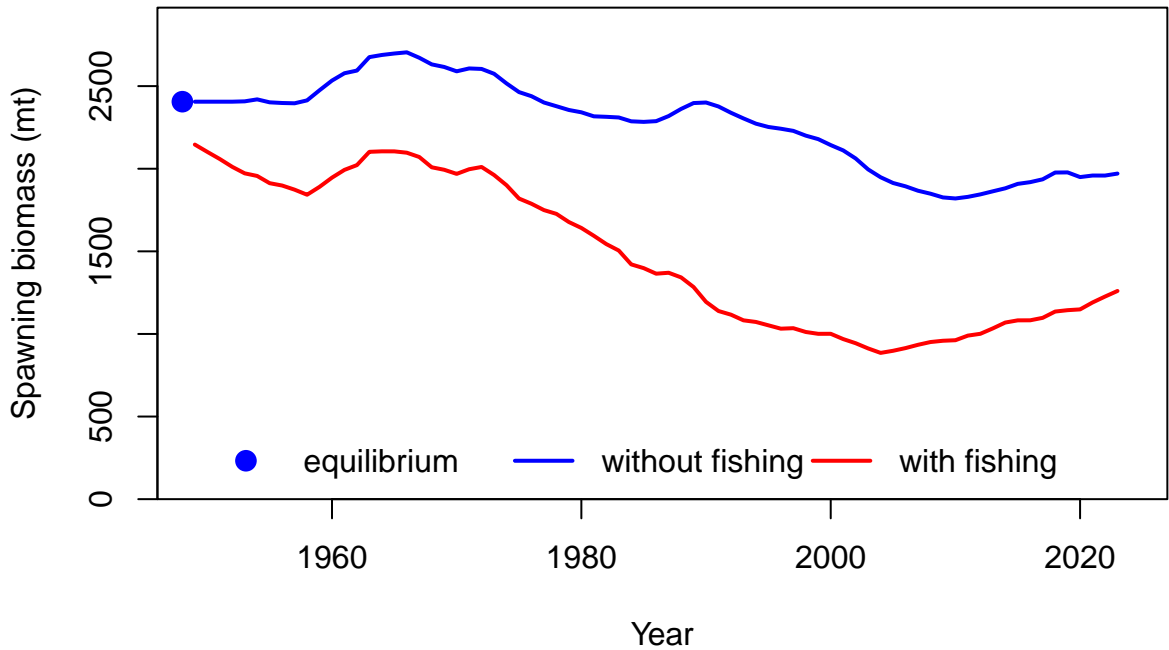
Age-0 recruits (1,000s)



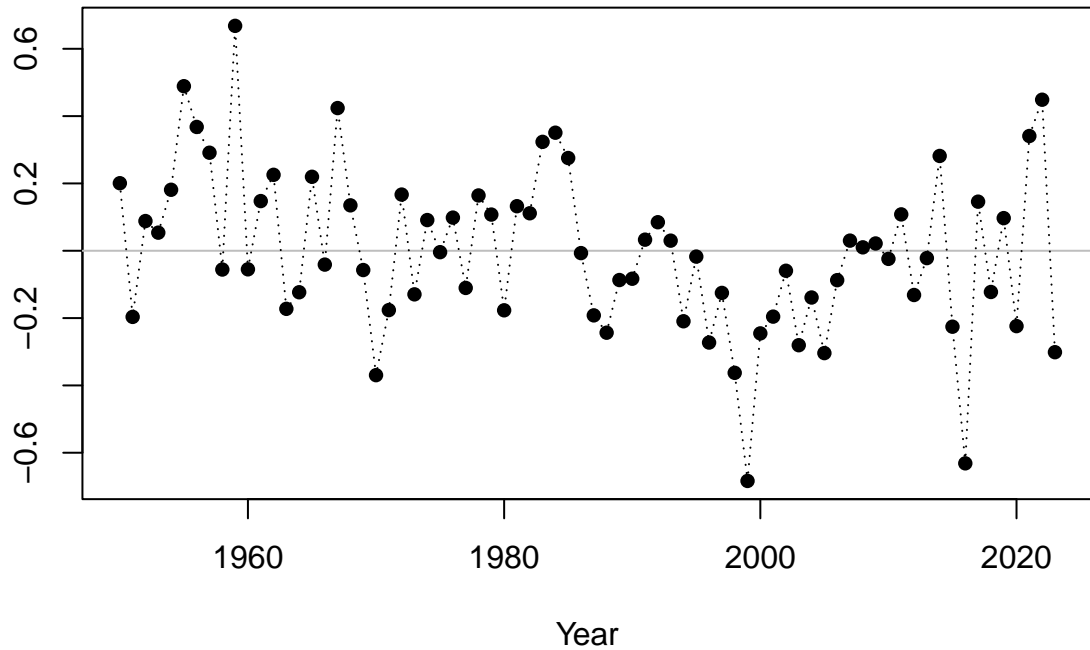


Summary Fishing Mortality

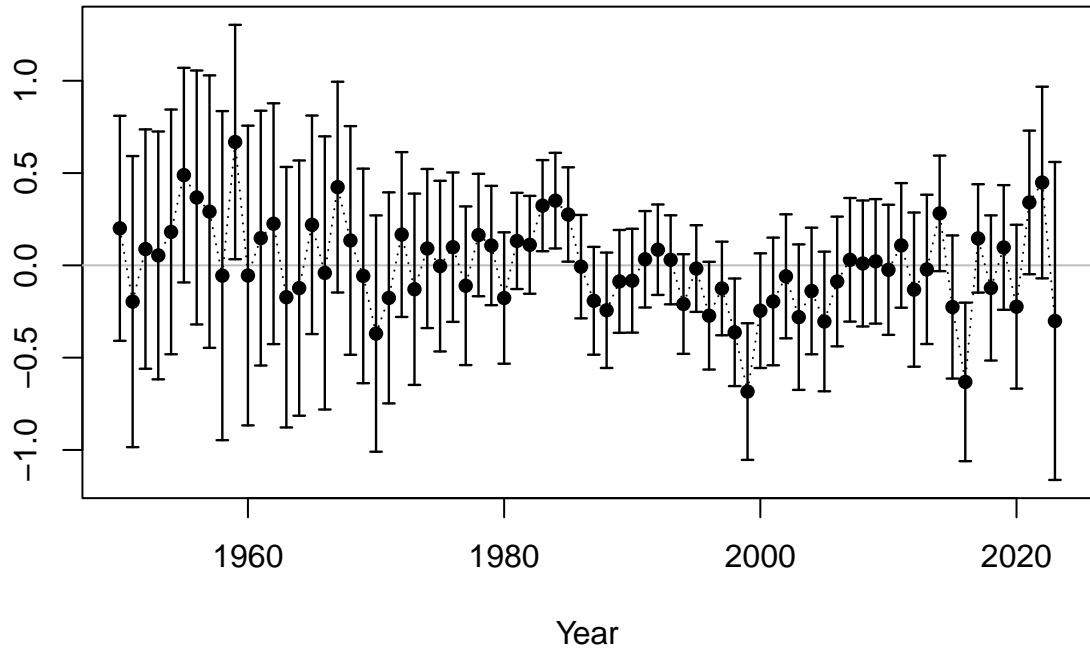




Log recruitment deviation

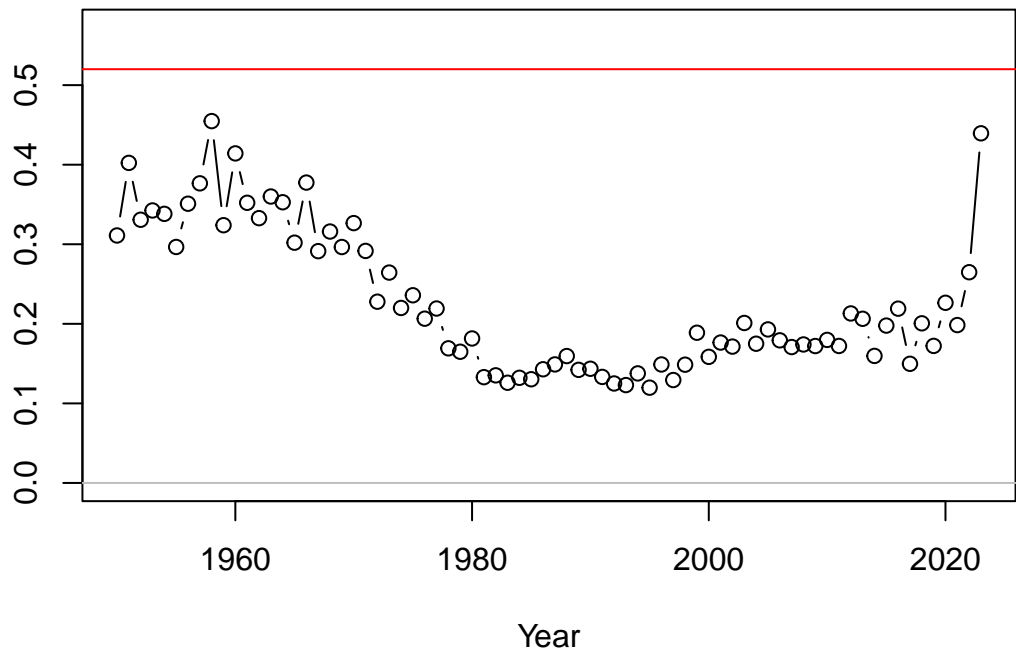


Log recruitment deviation

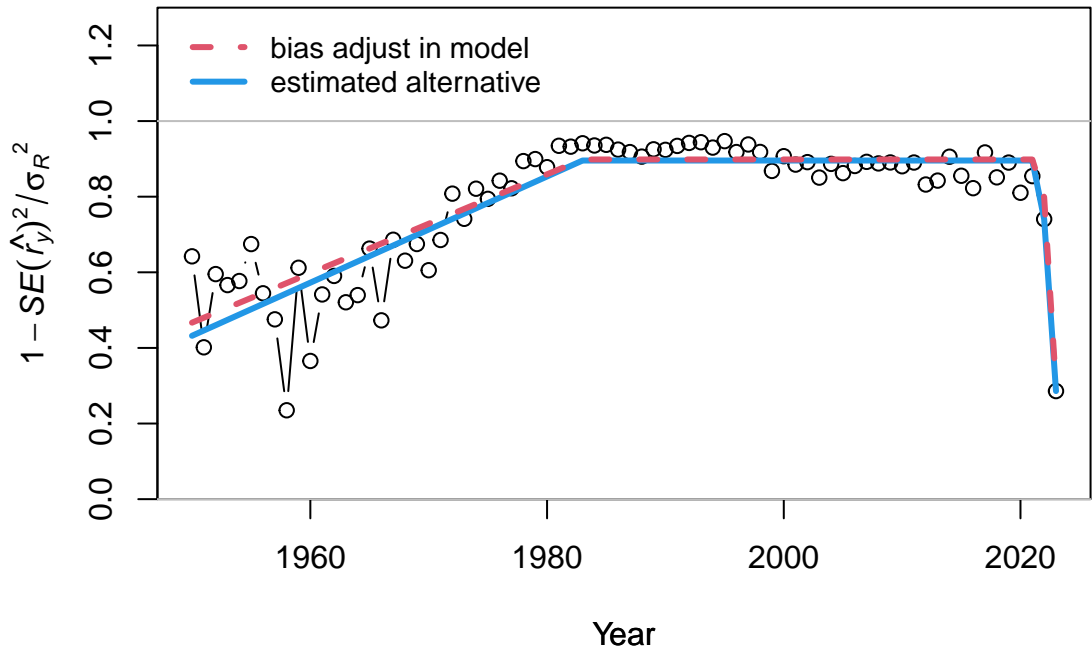


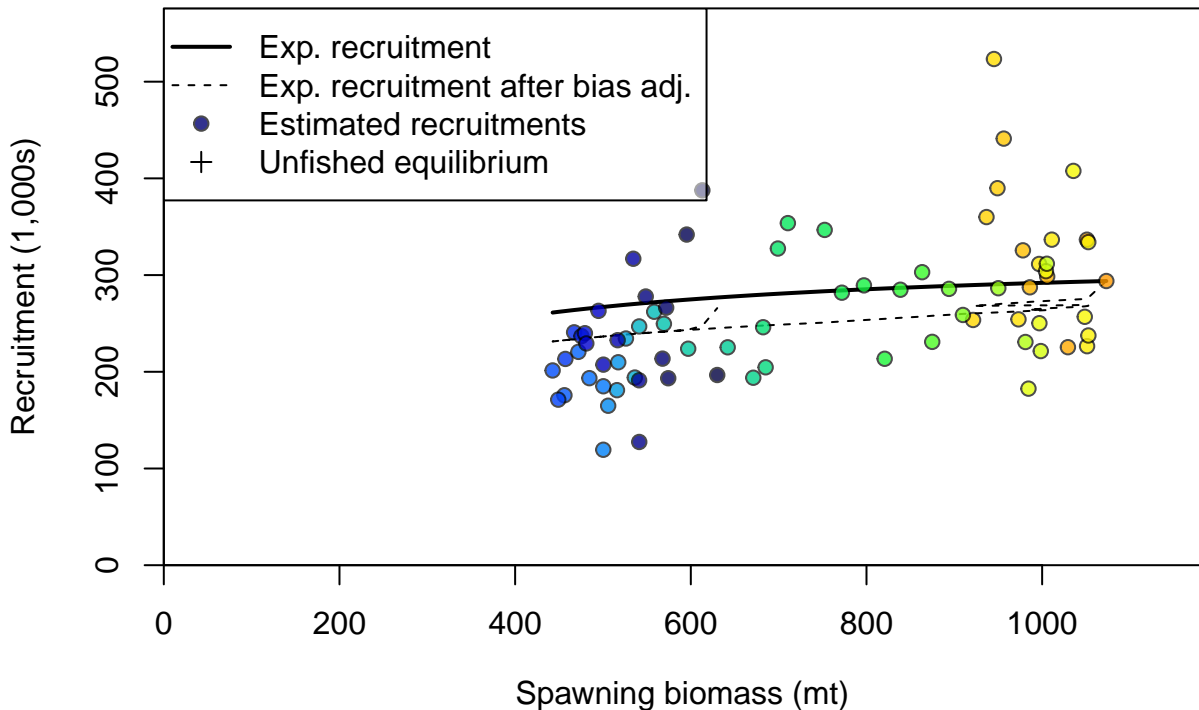
## Recruitment deviation variance

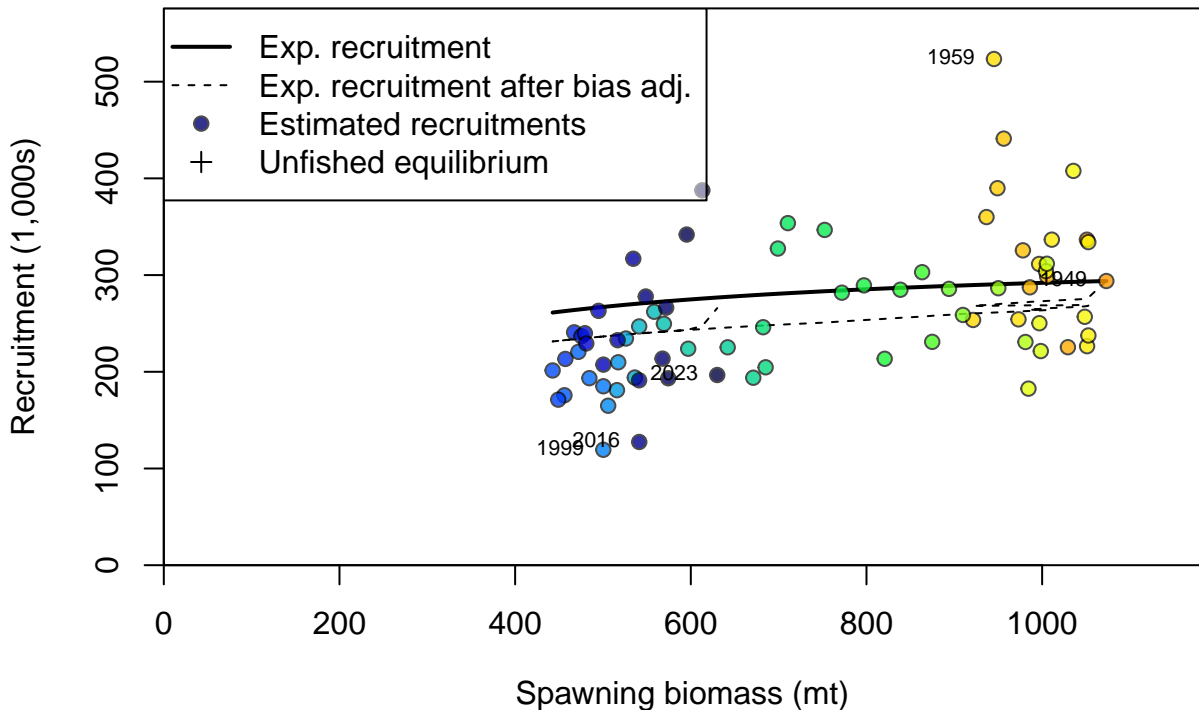
Asymptotic standard error estimate

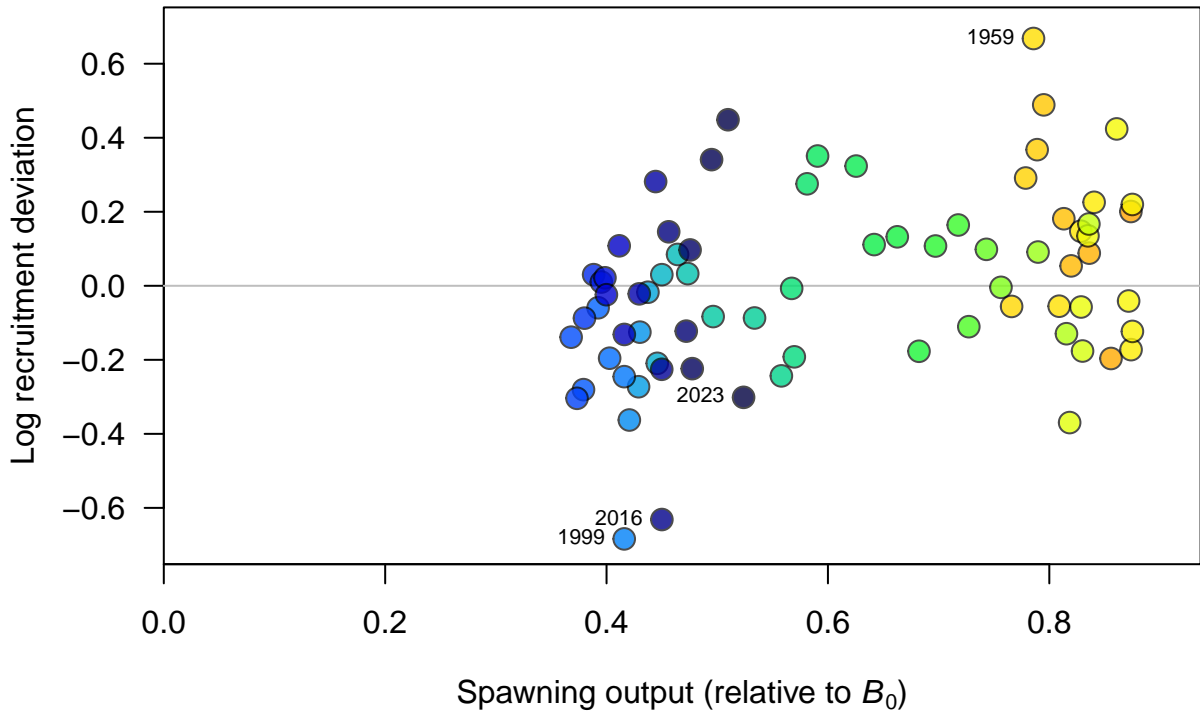


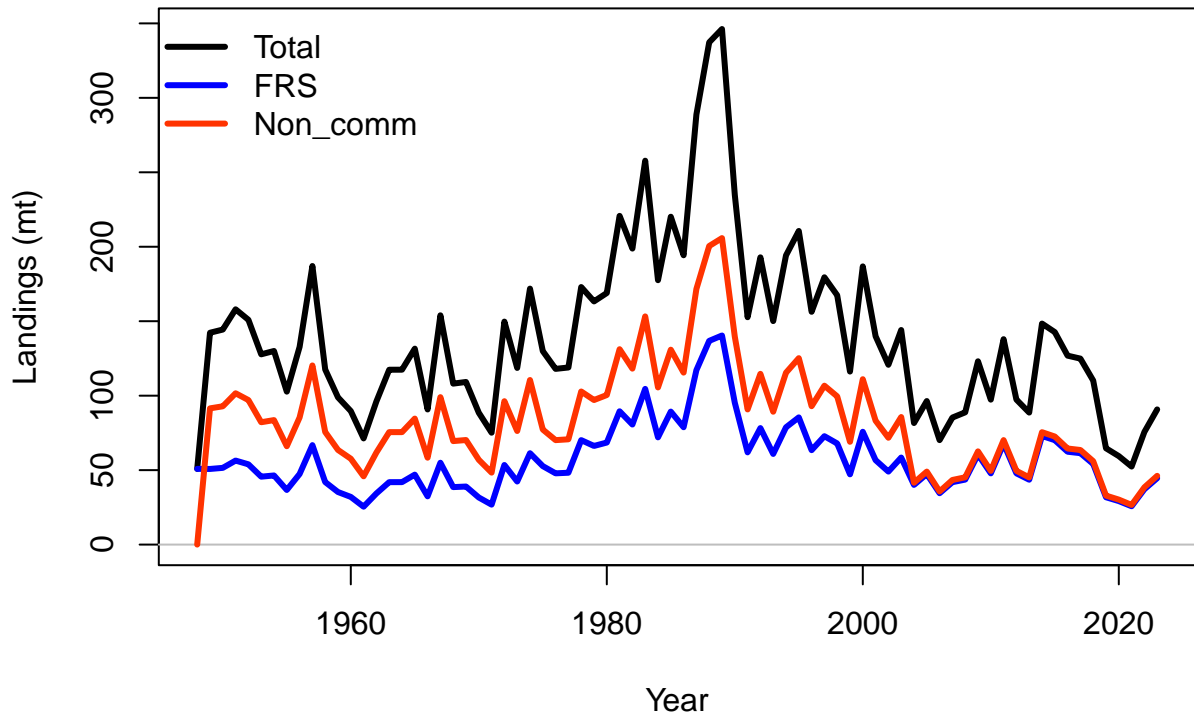


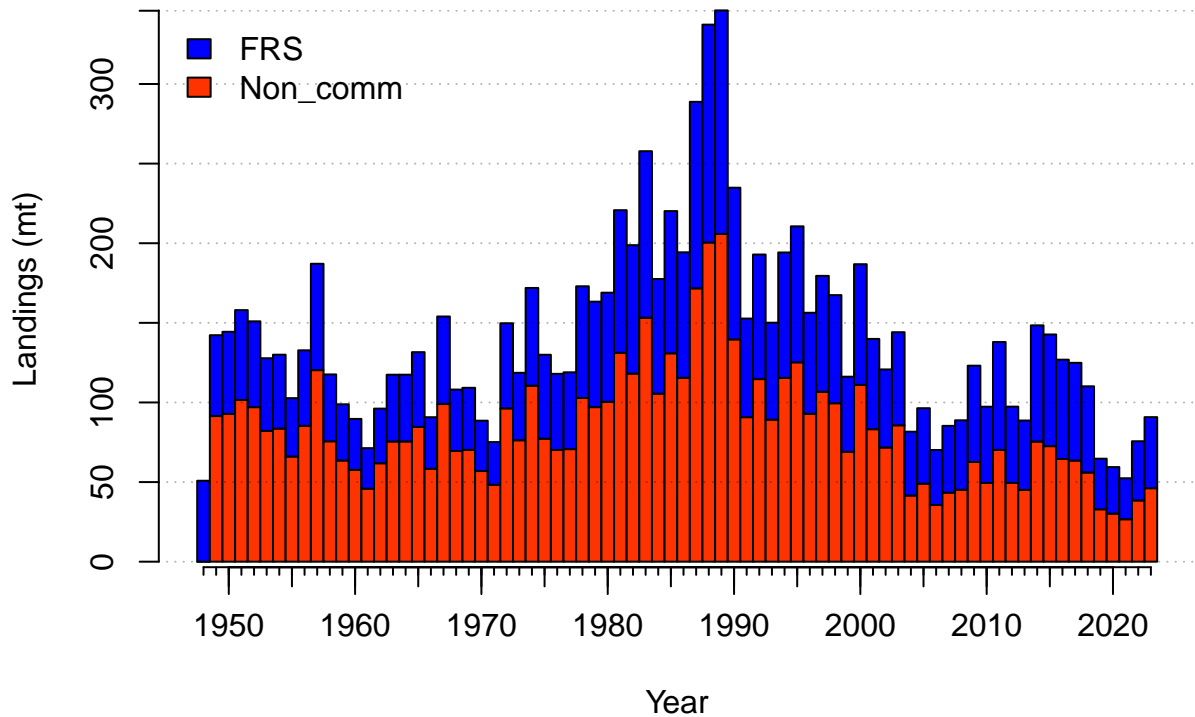


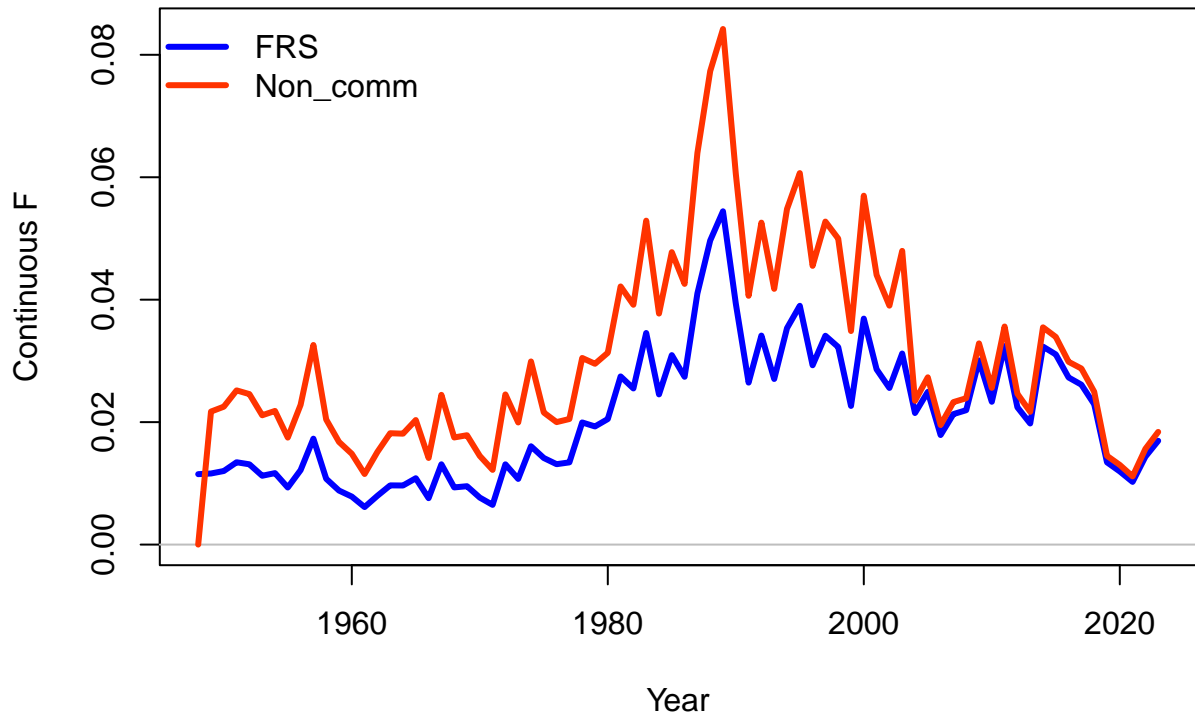




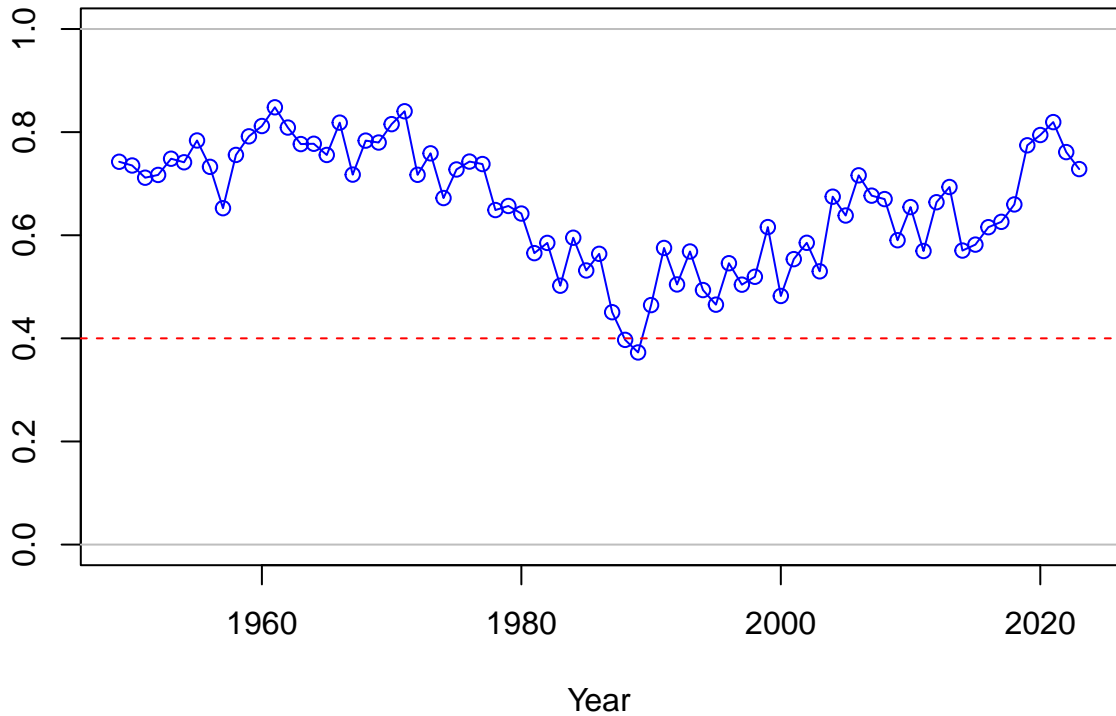






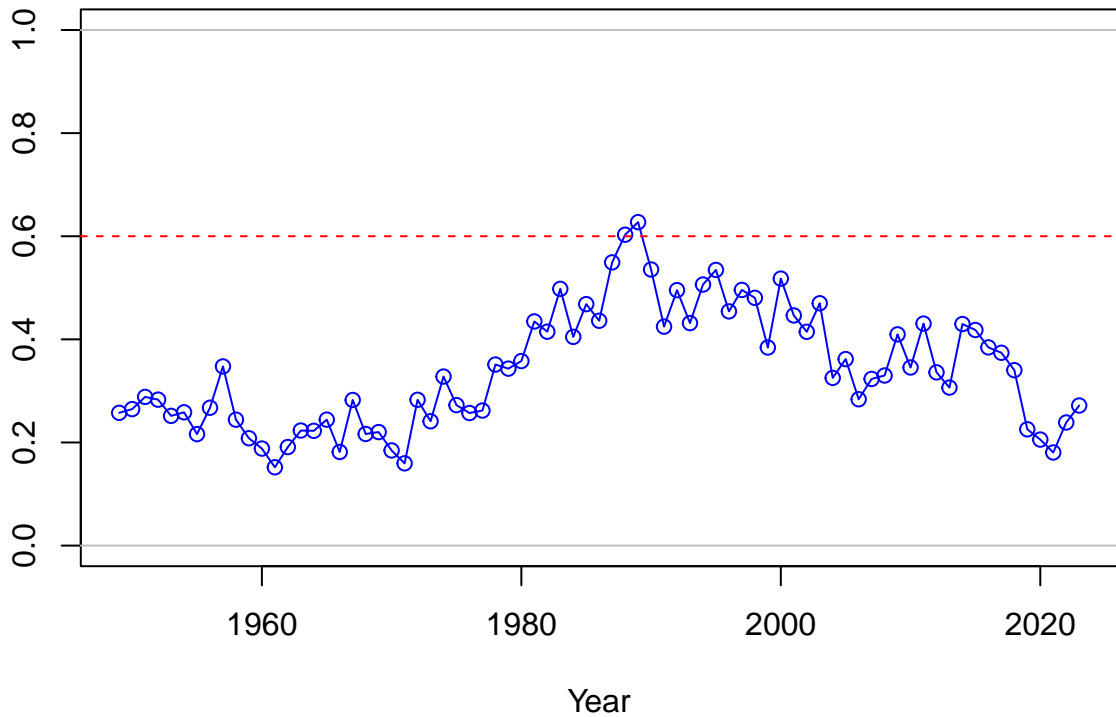


SPR

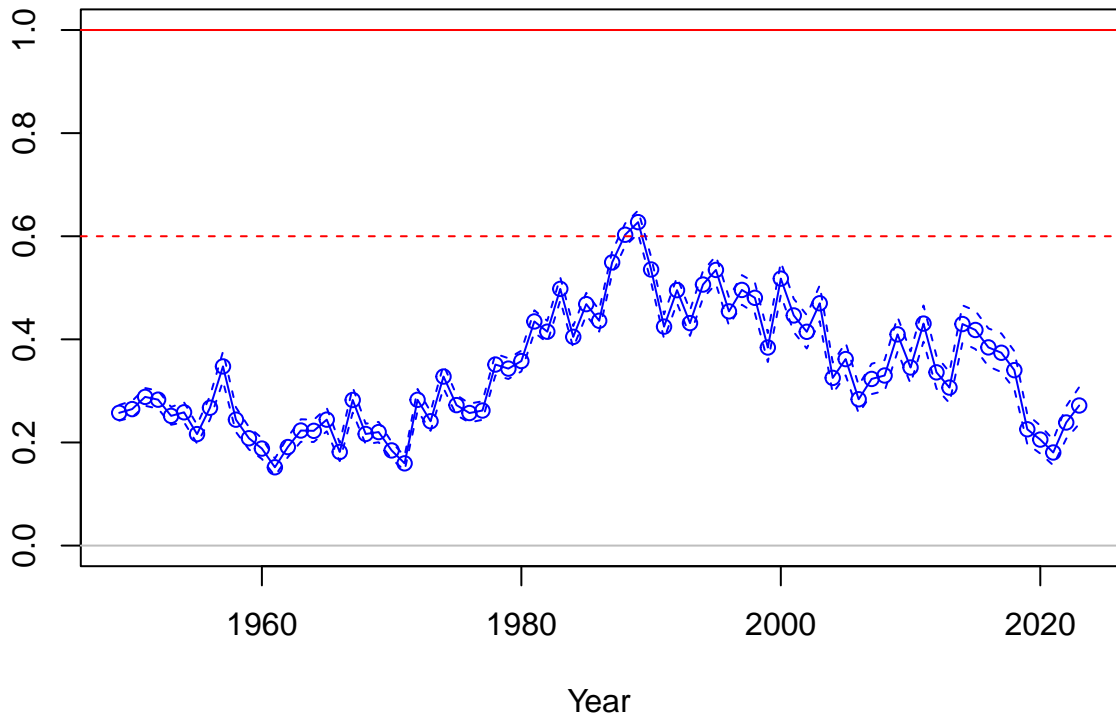


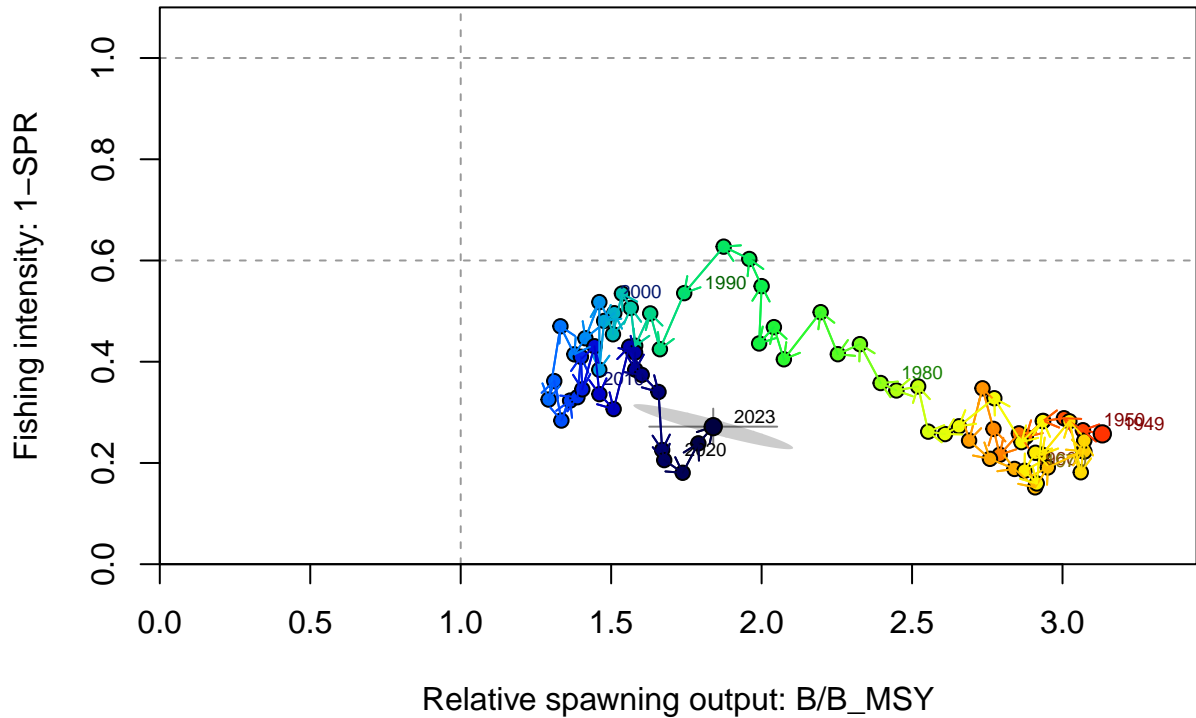


1-SPR

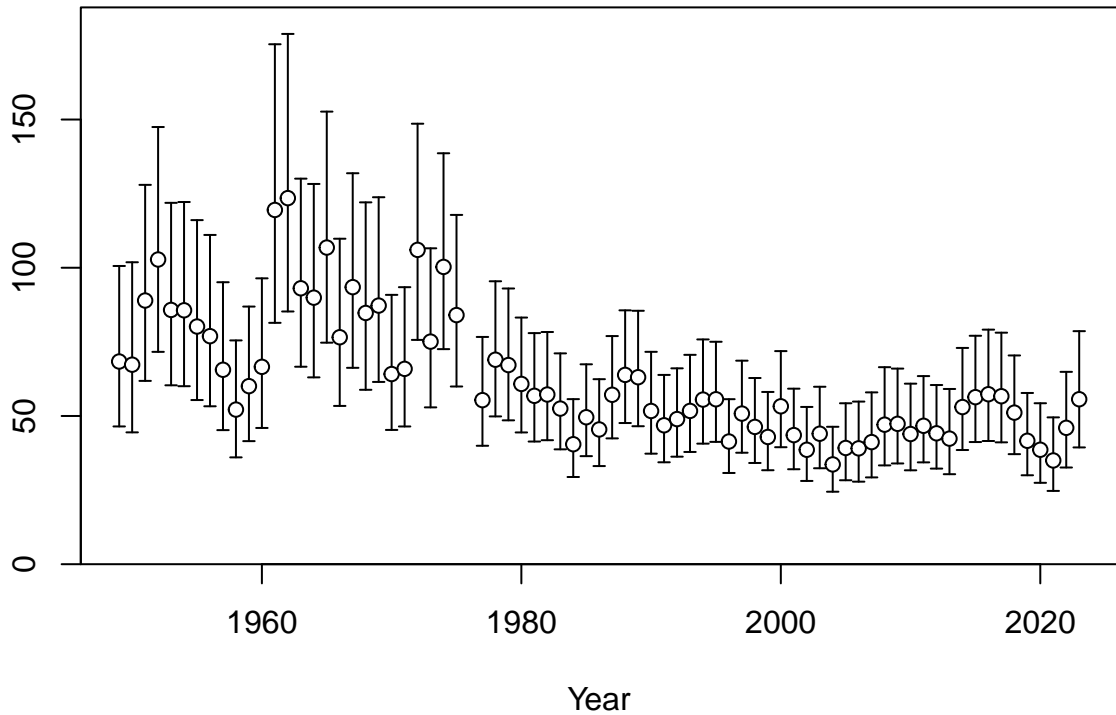


Fishing intensity: 1-SPR

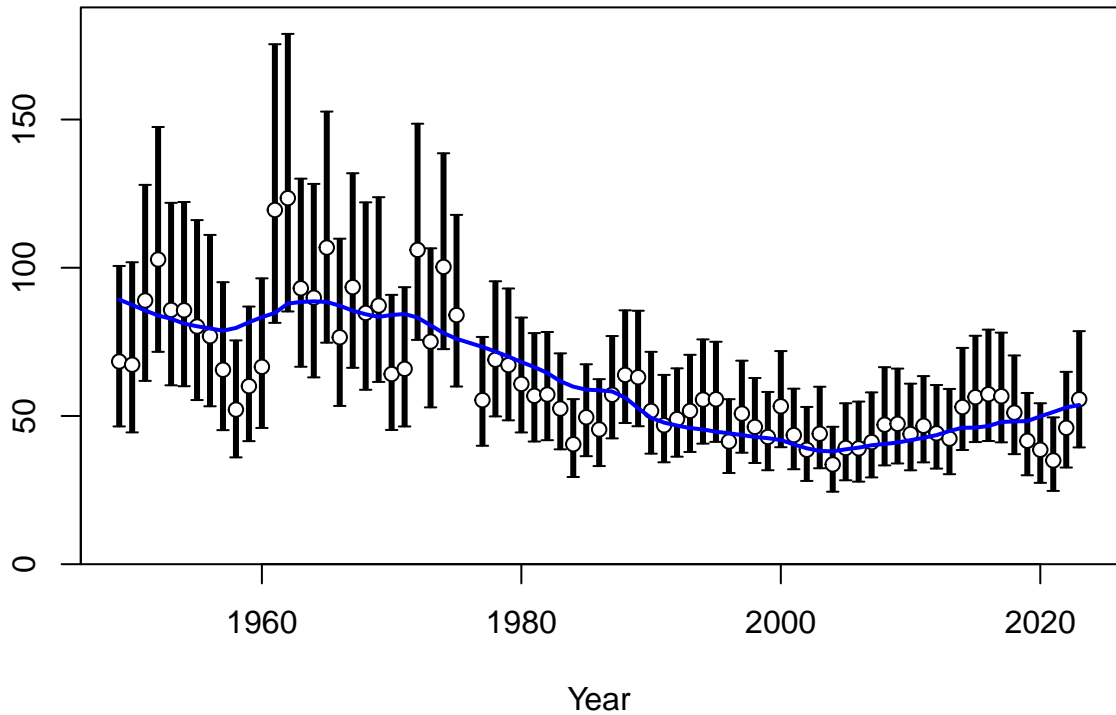




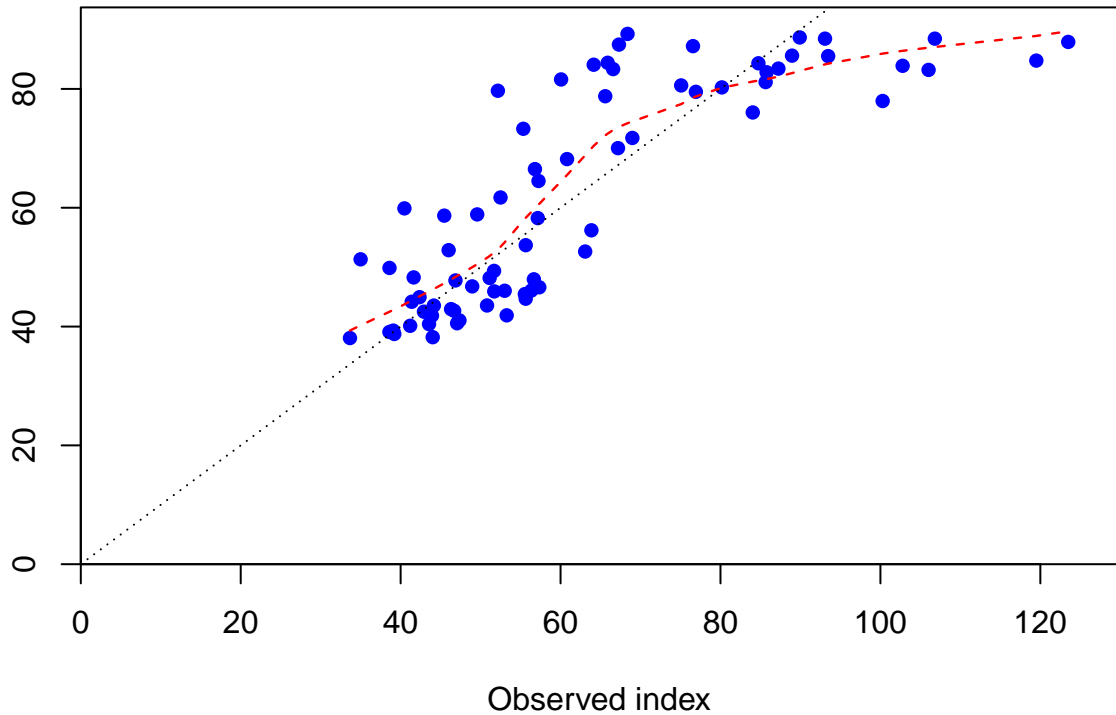
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Expected index



Log index

5.0  
4.5  
4.0  
3.5

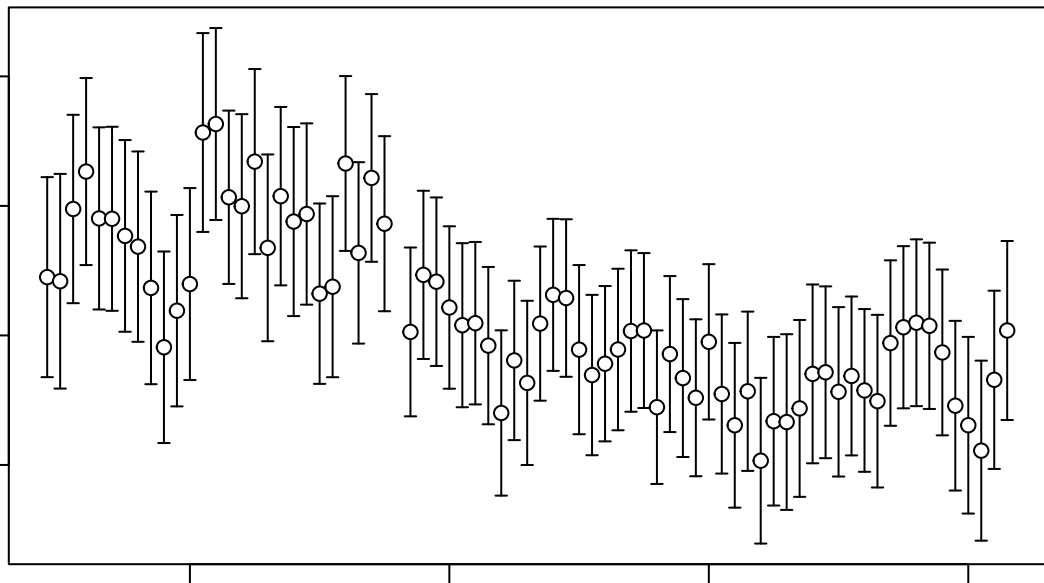
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1980

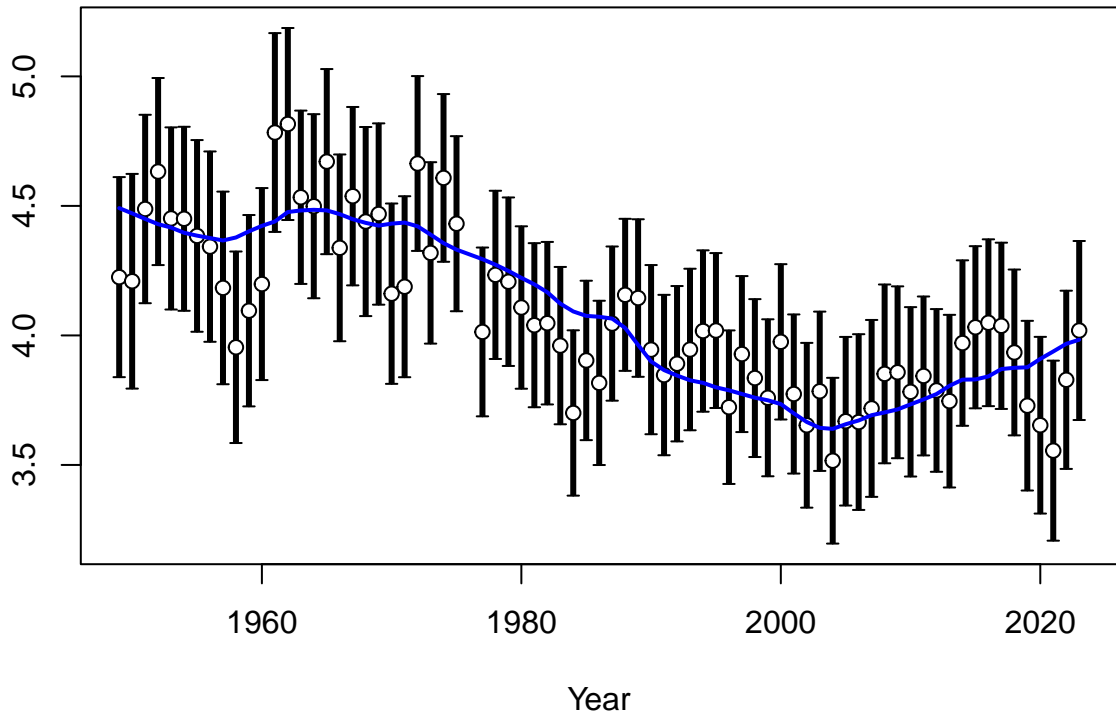
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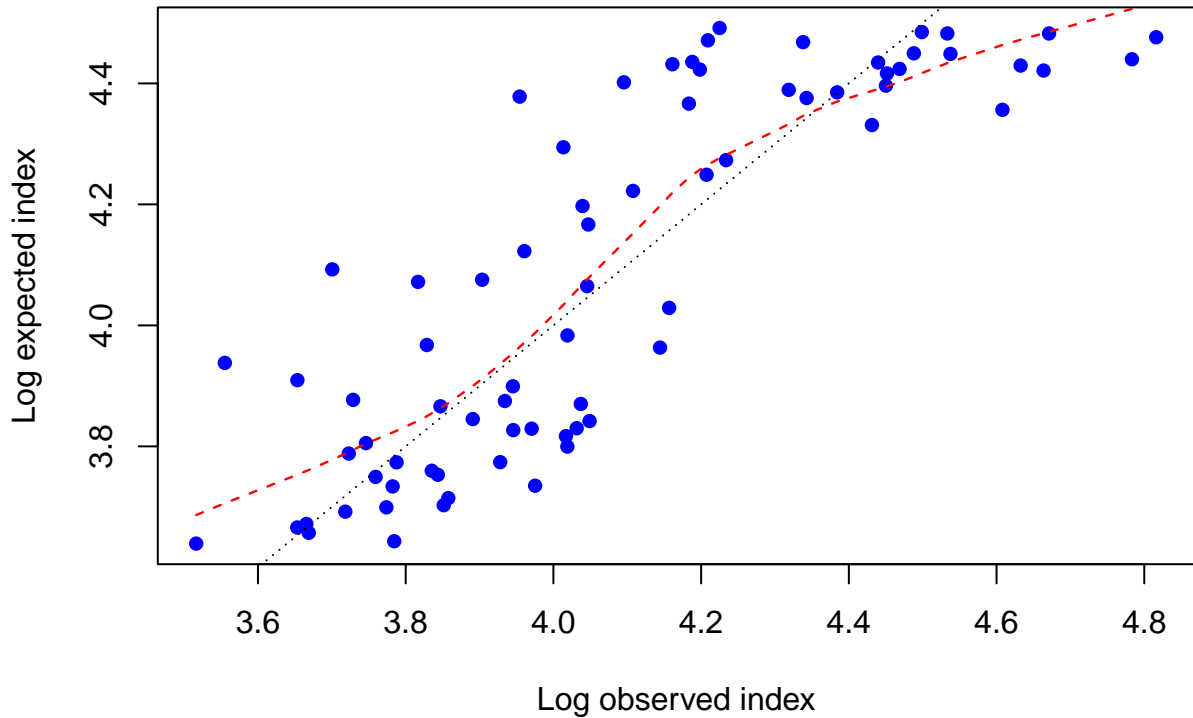
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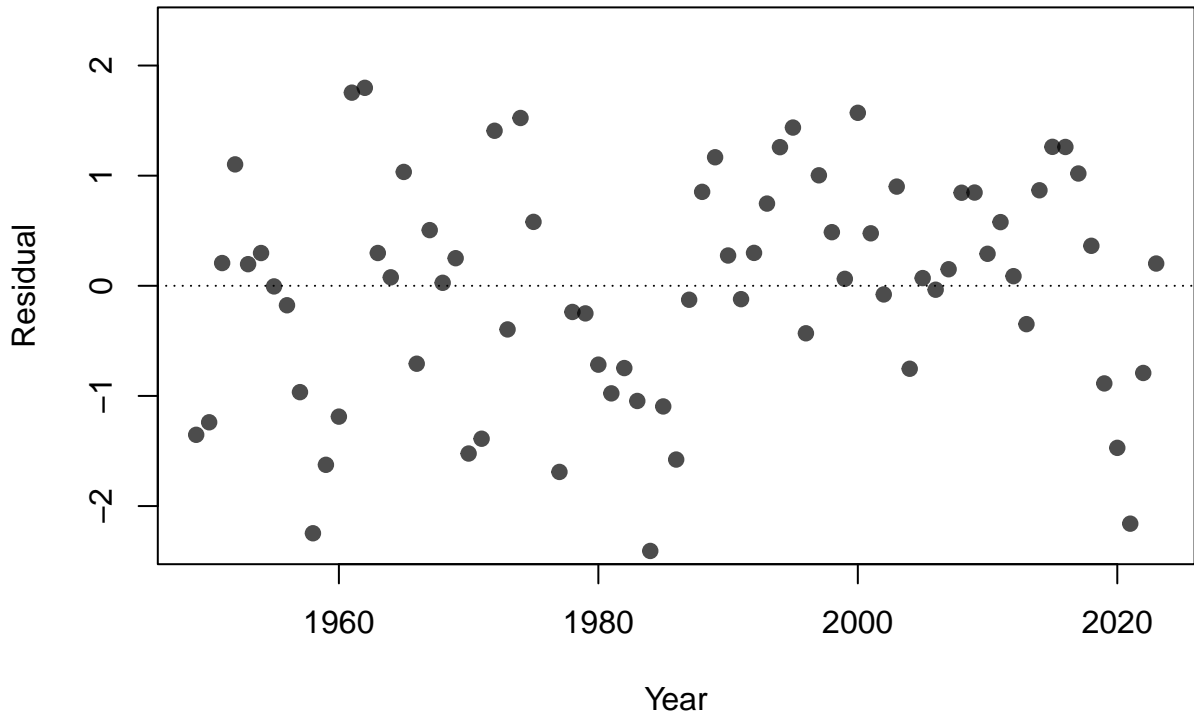


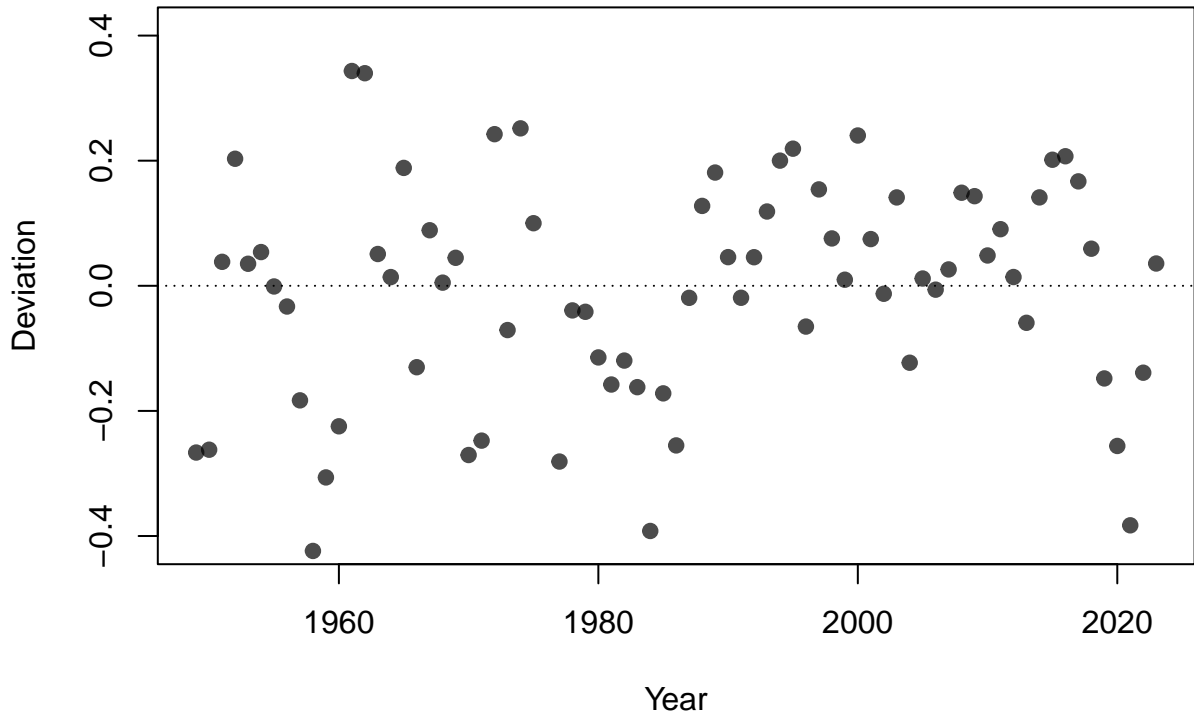
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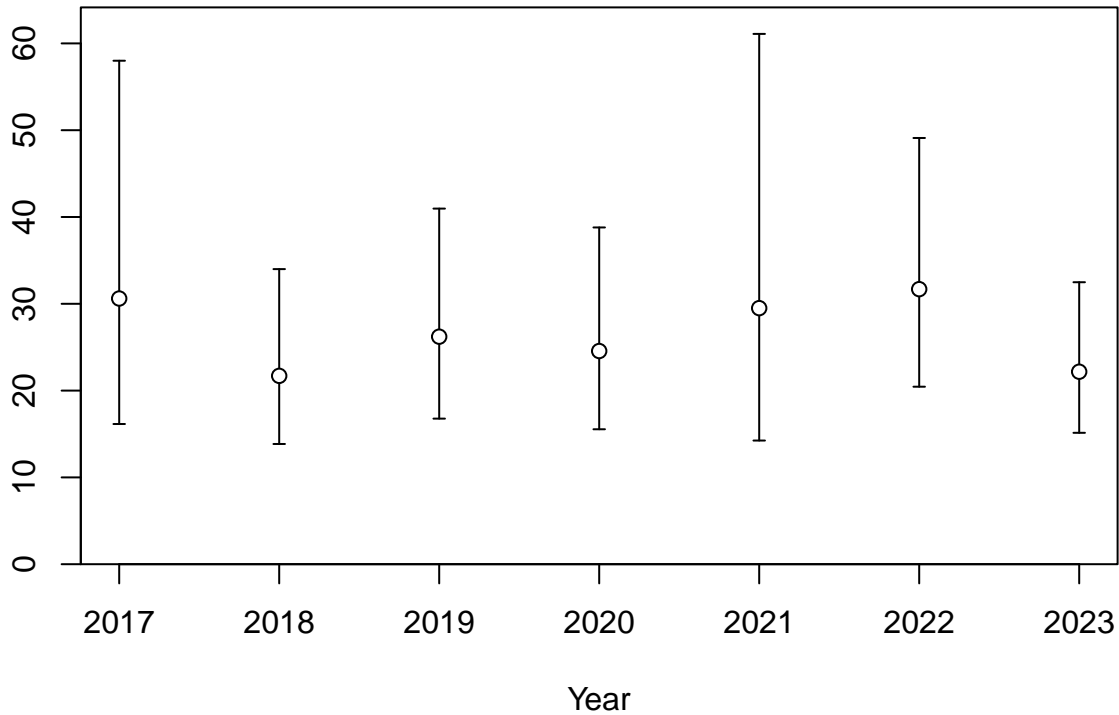




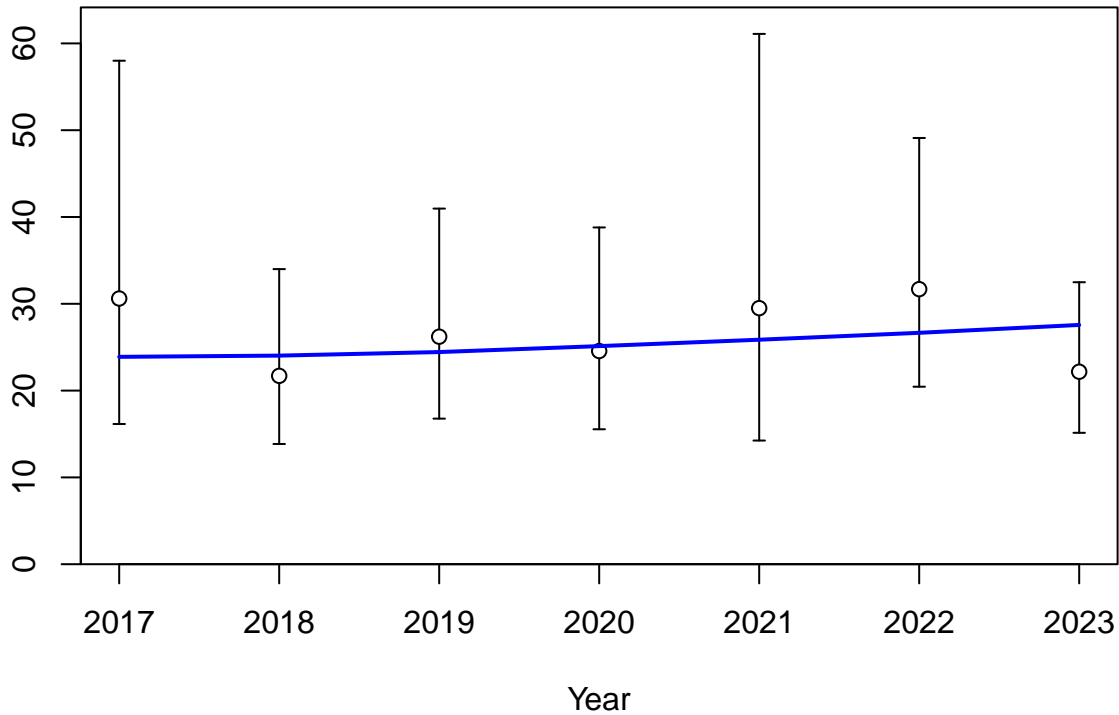


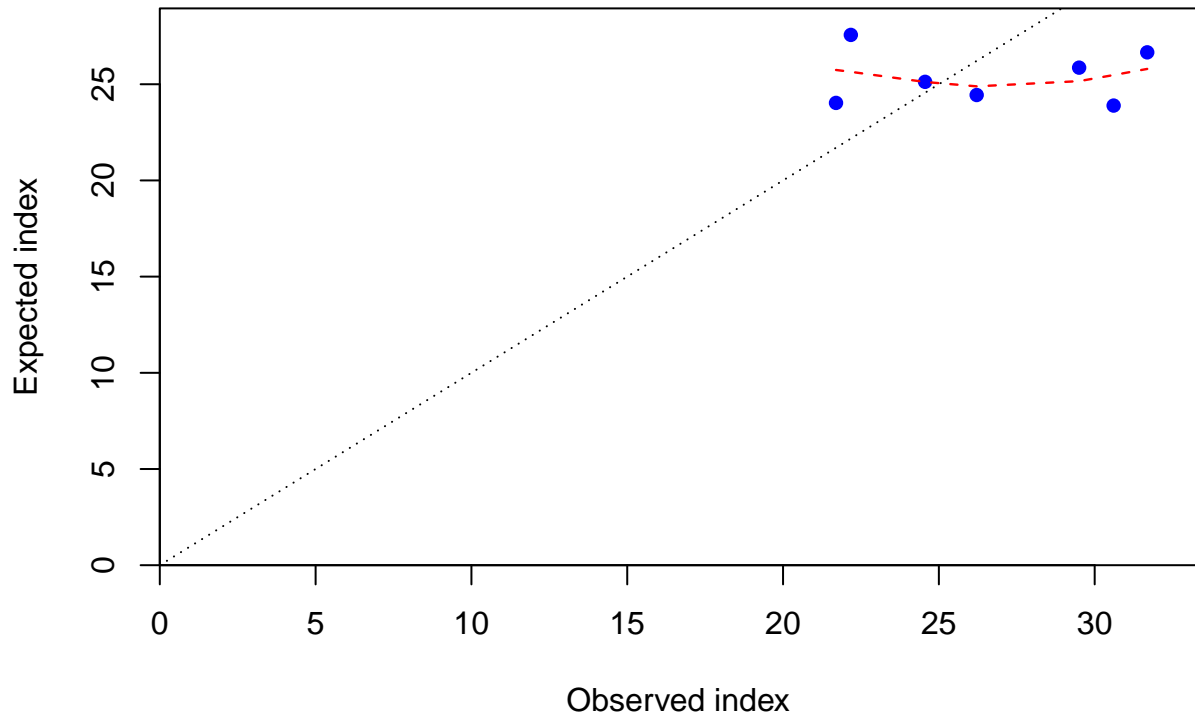


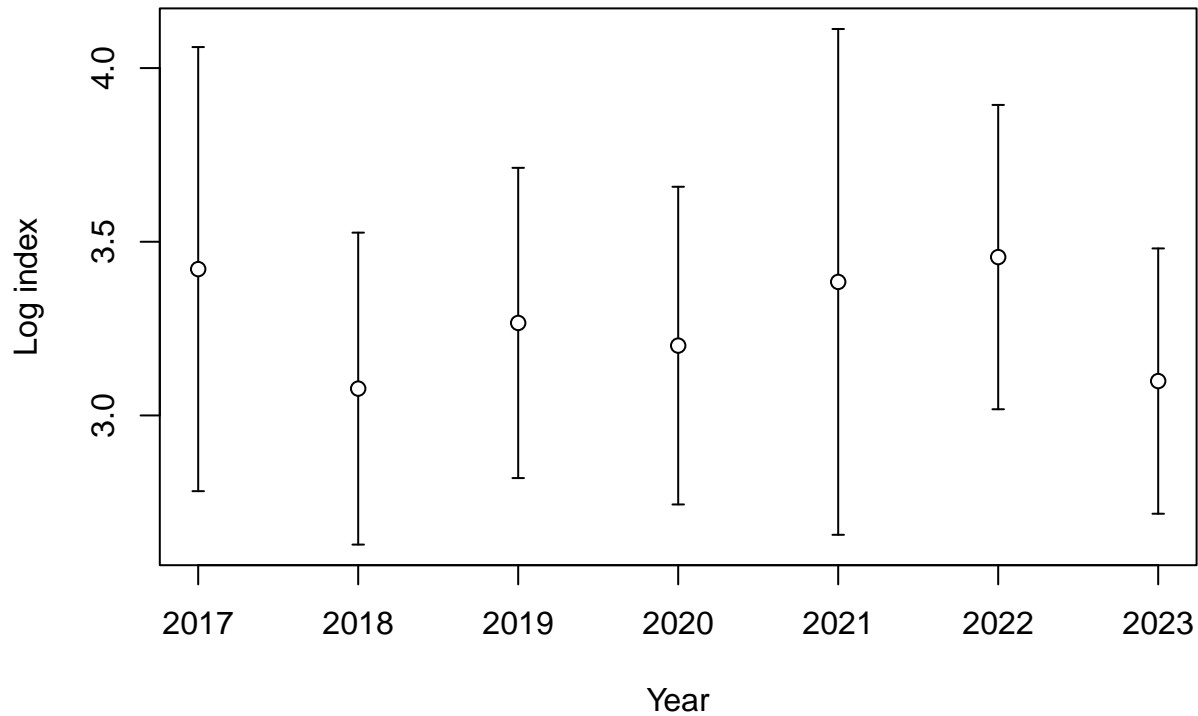
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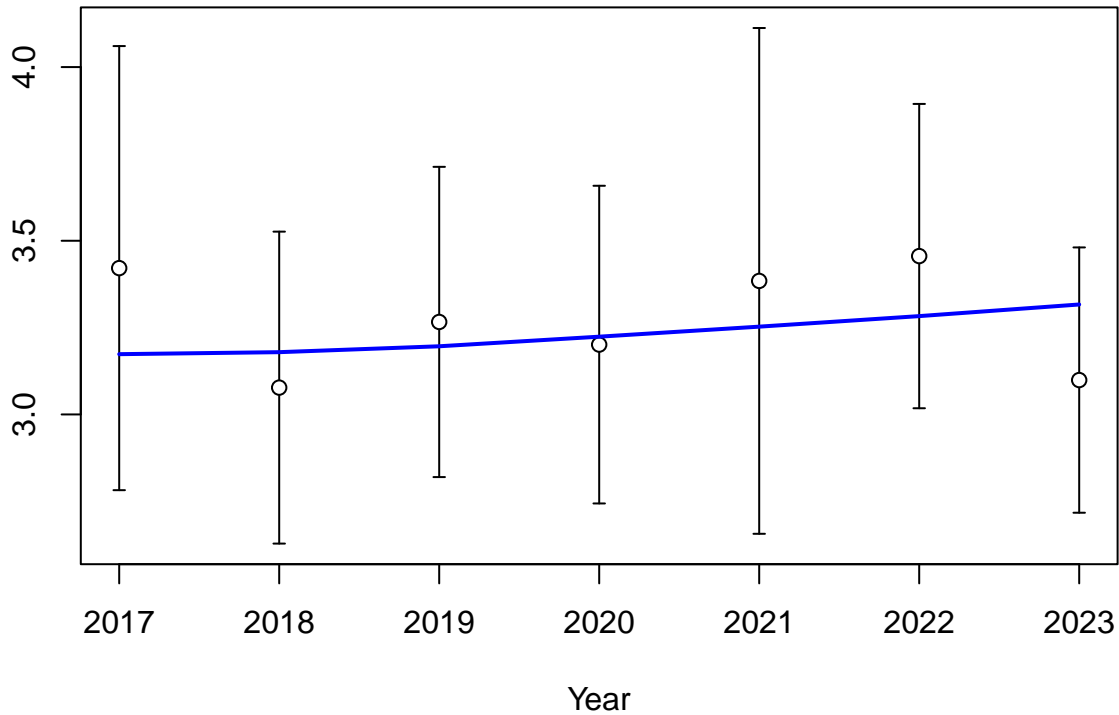
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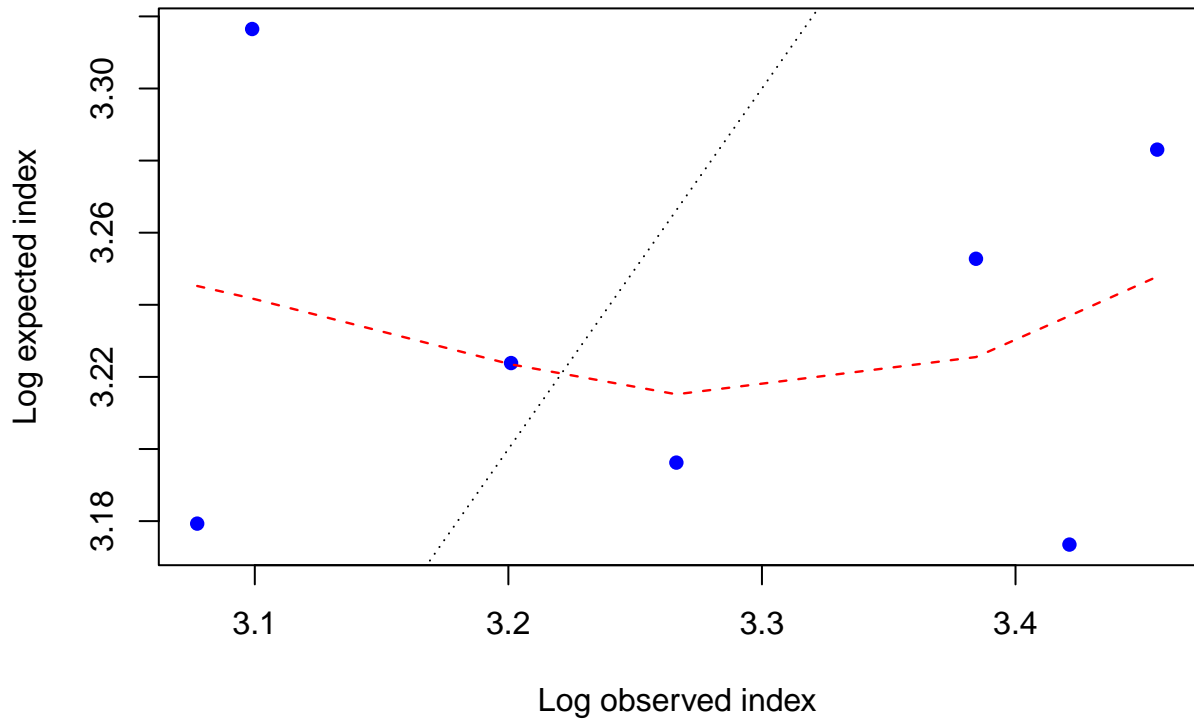


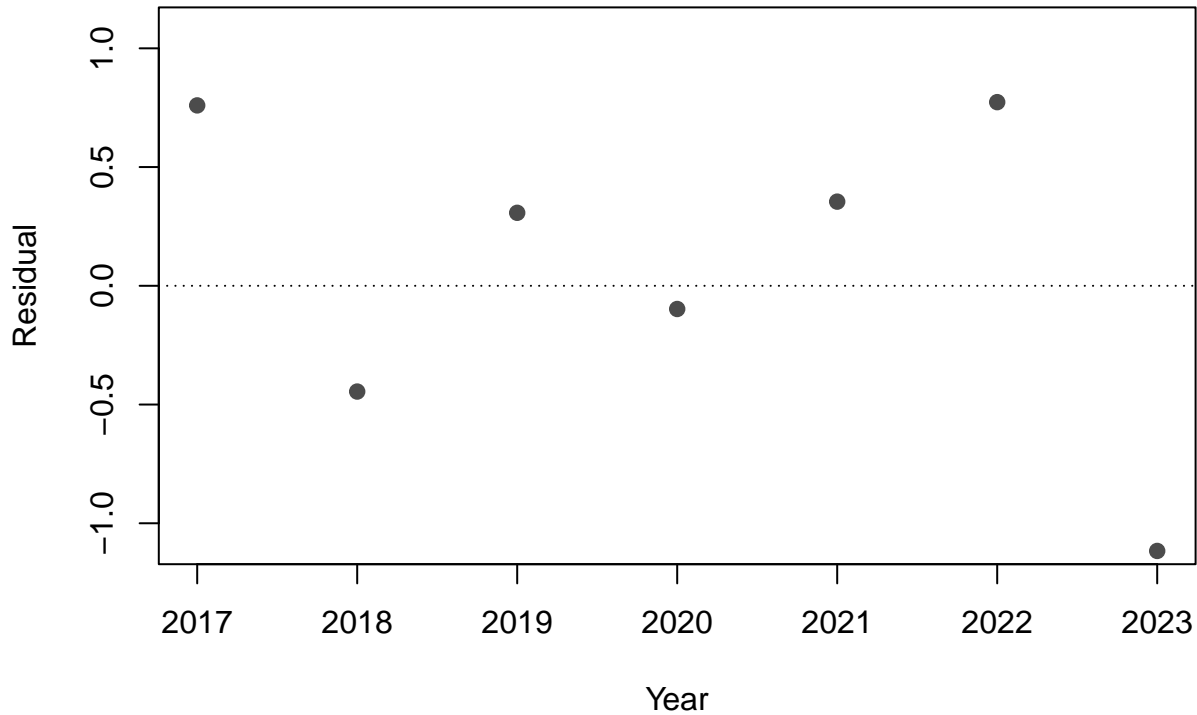


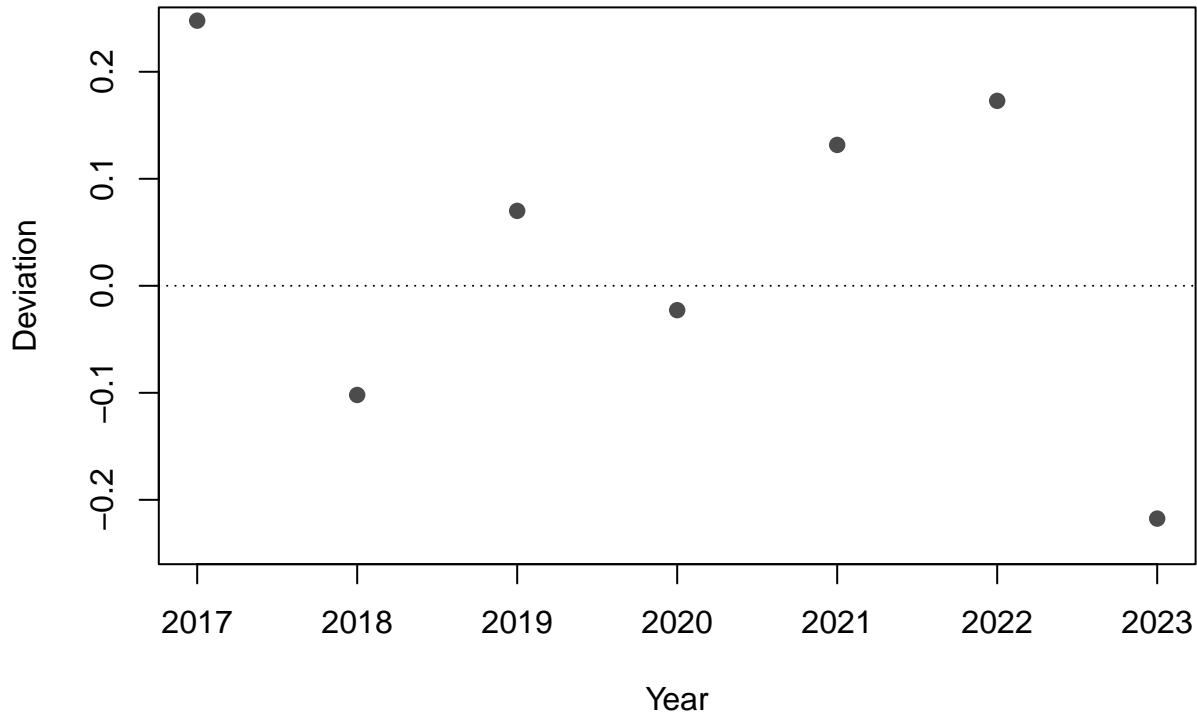
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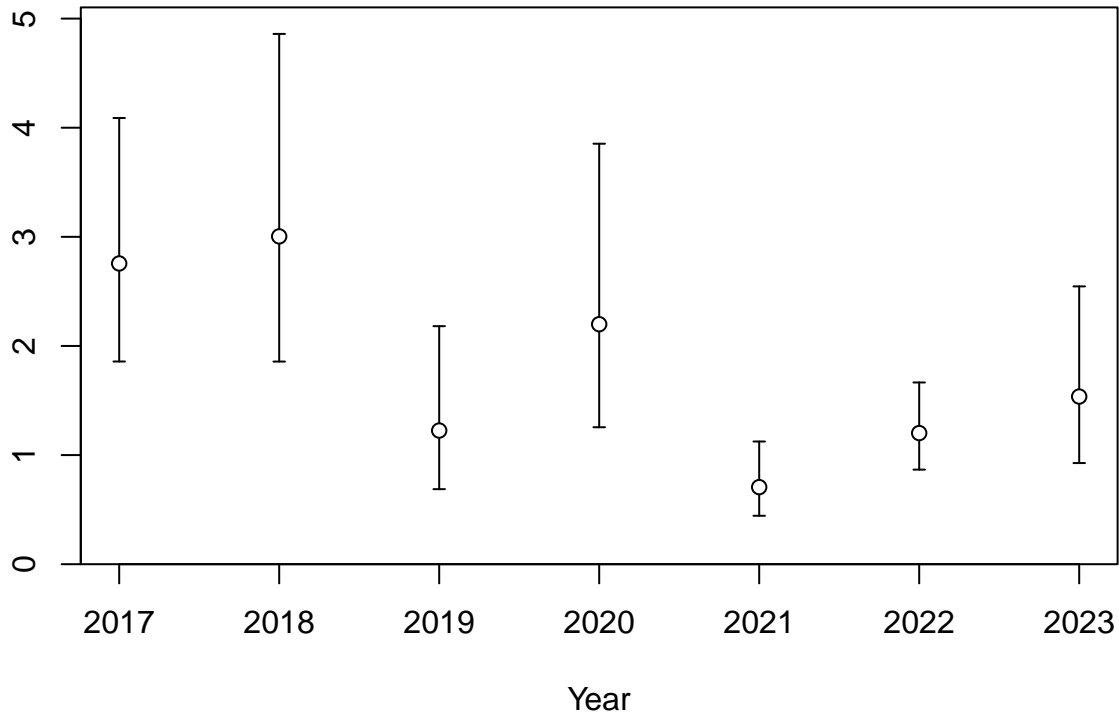




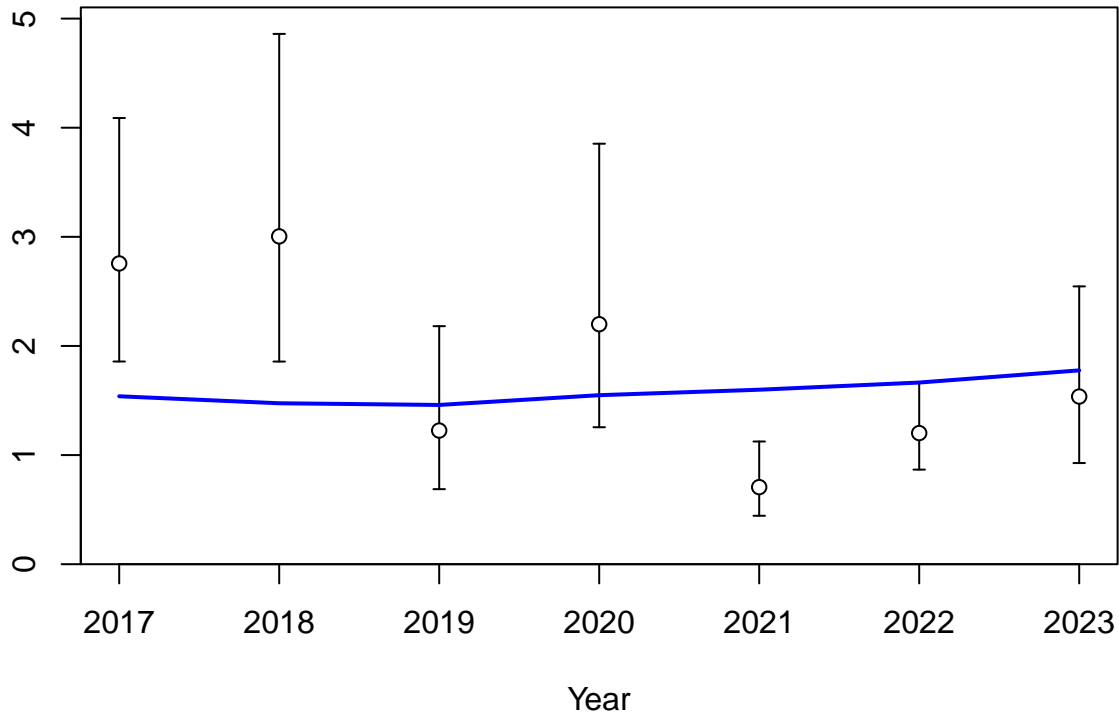


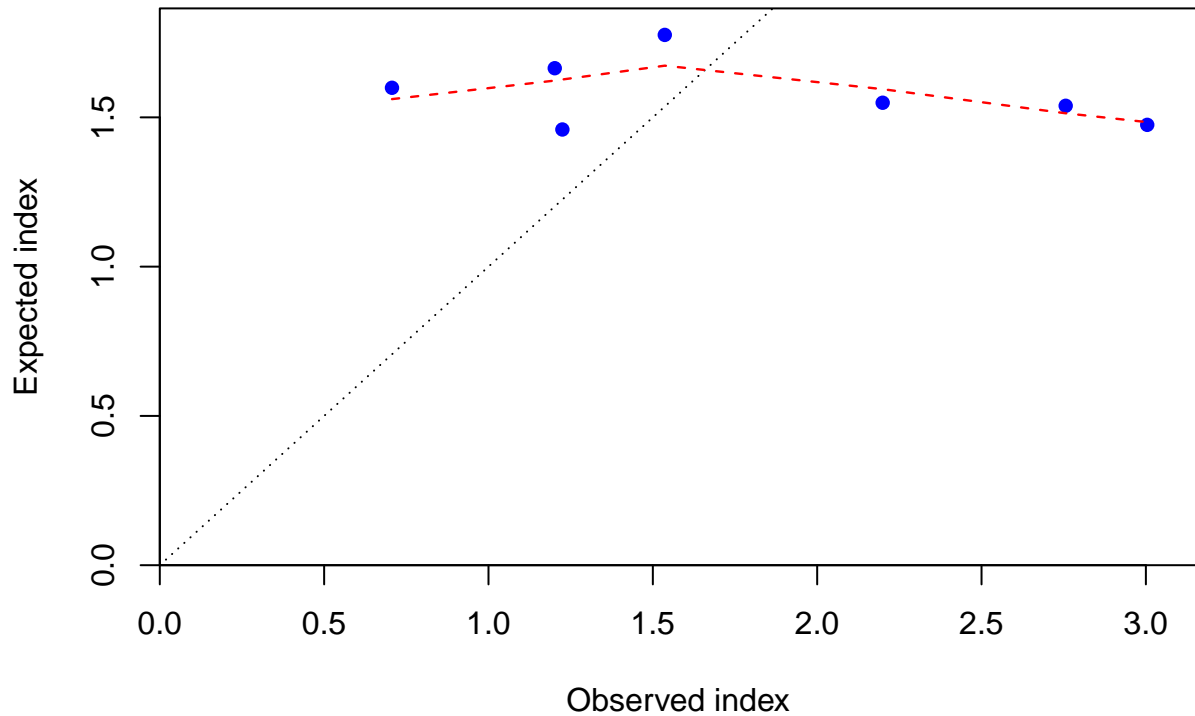


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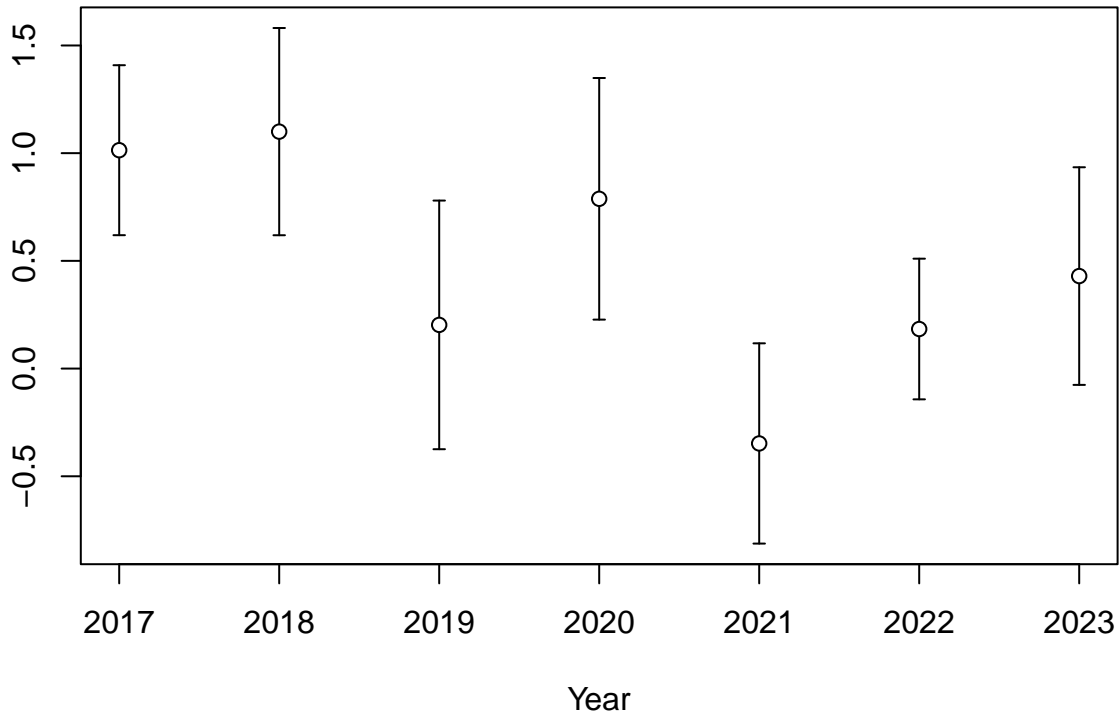


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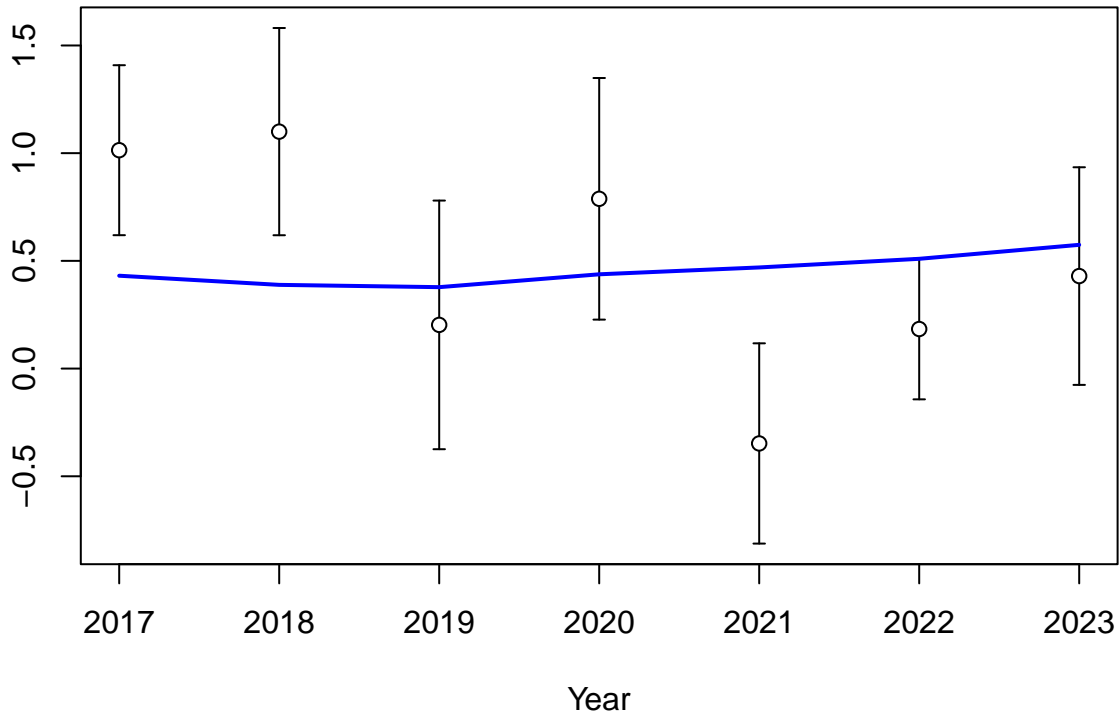




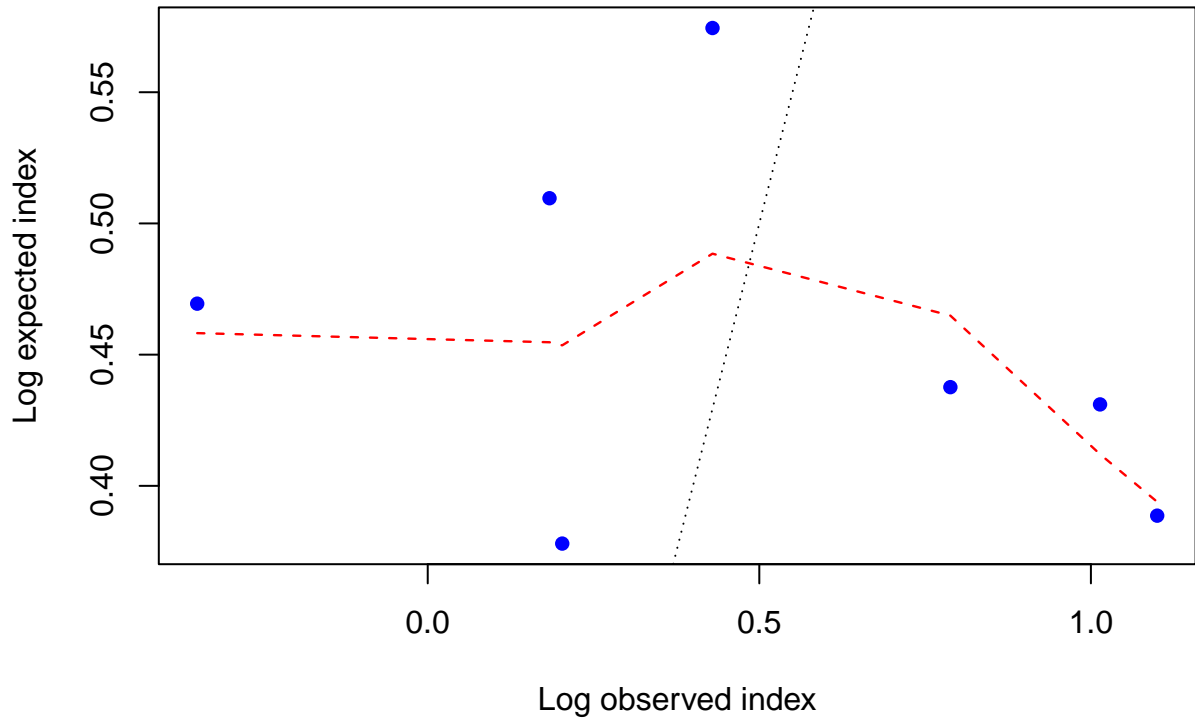
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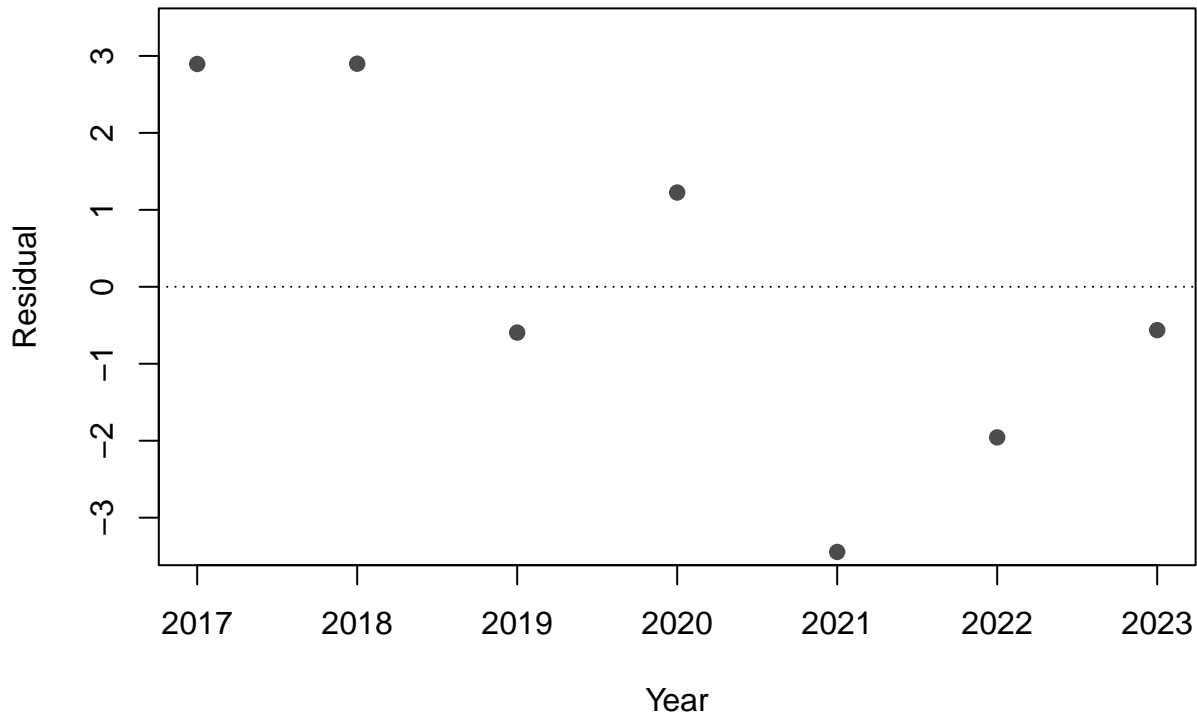


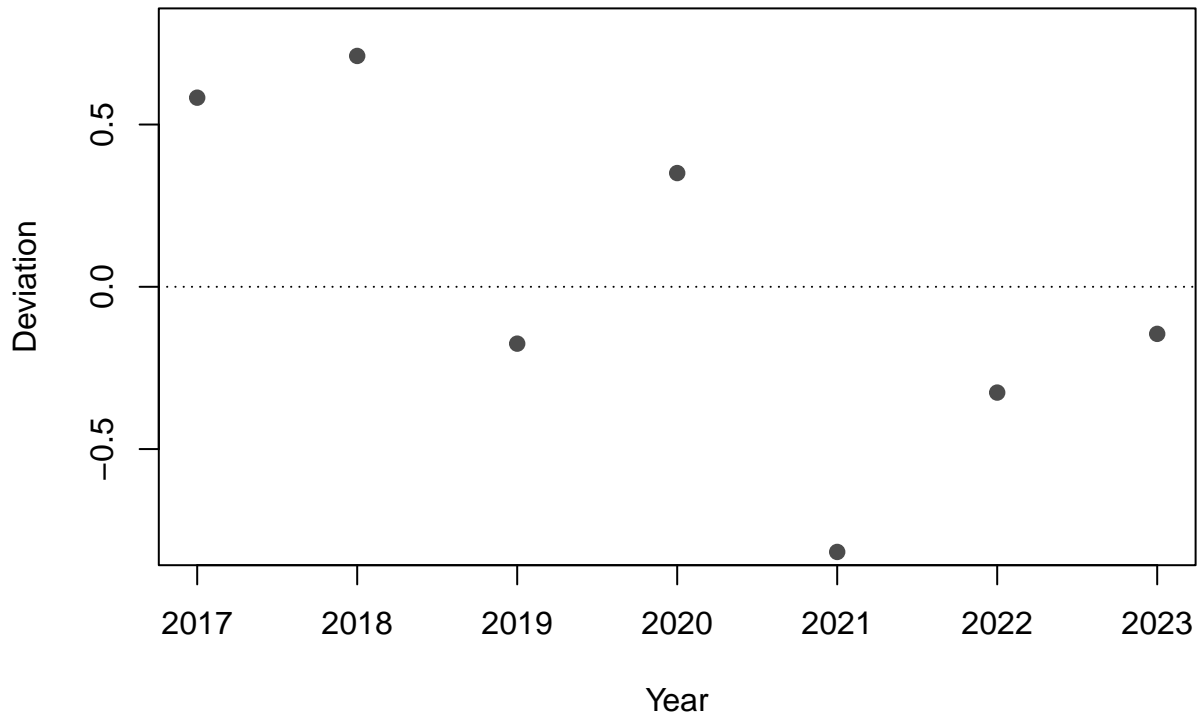
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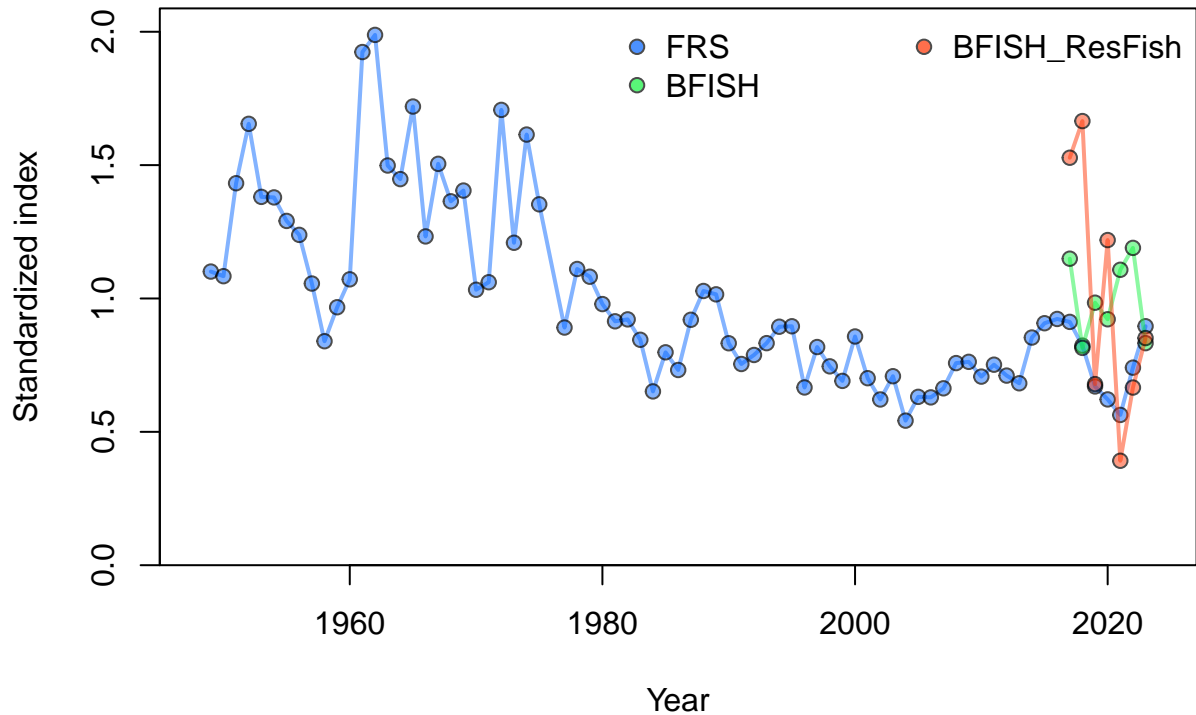


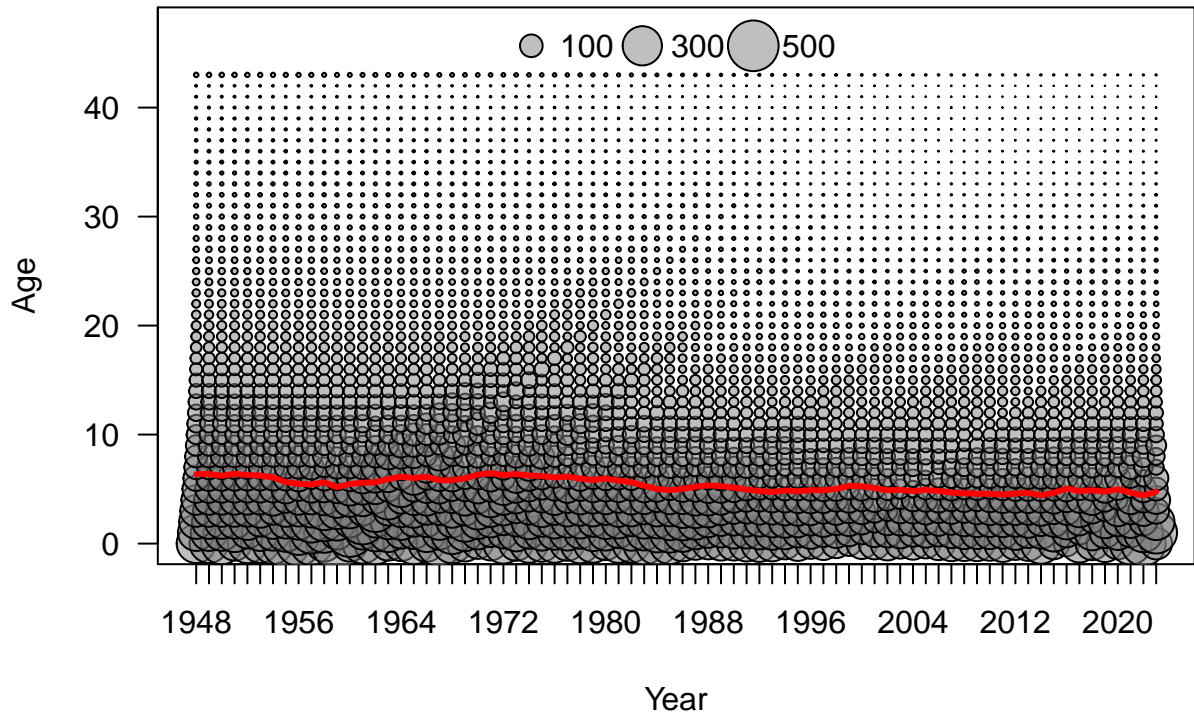


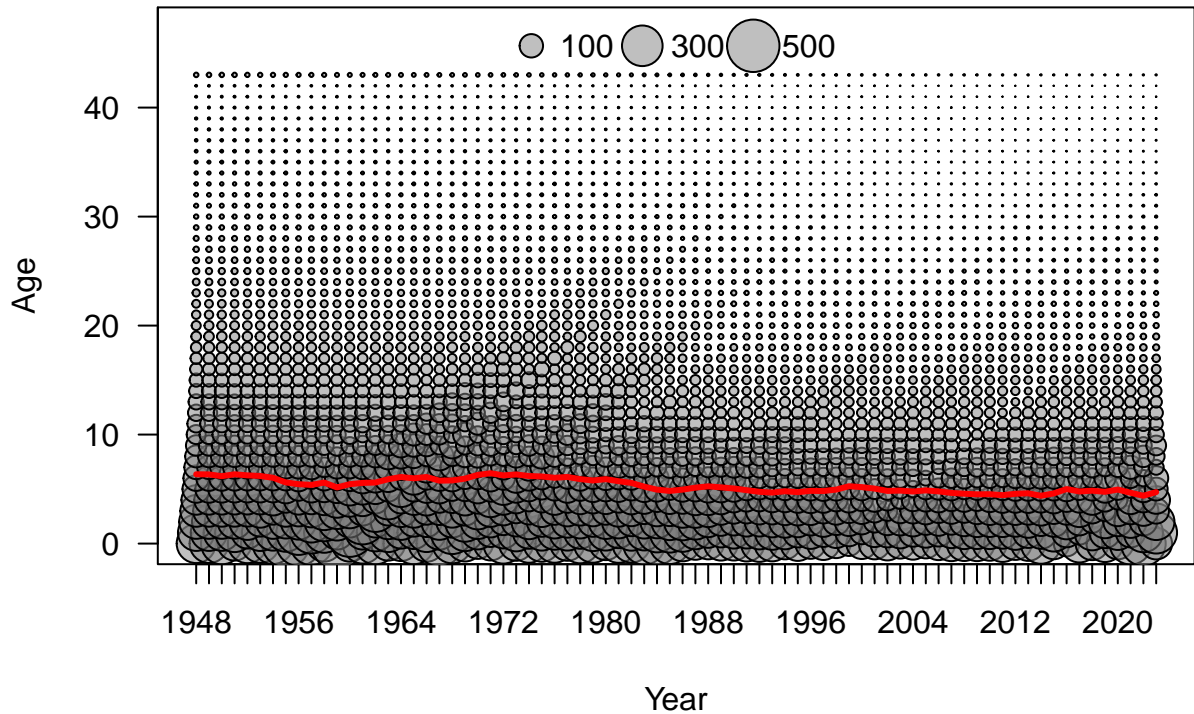


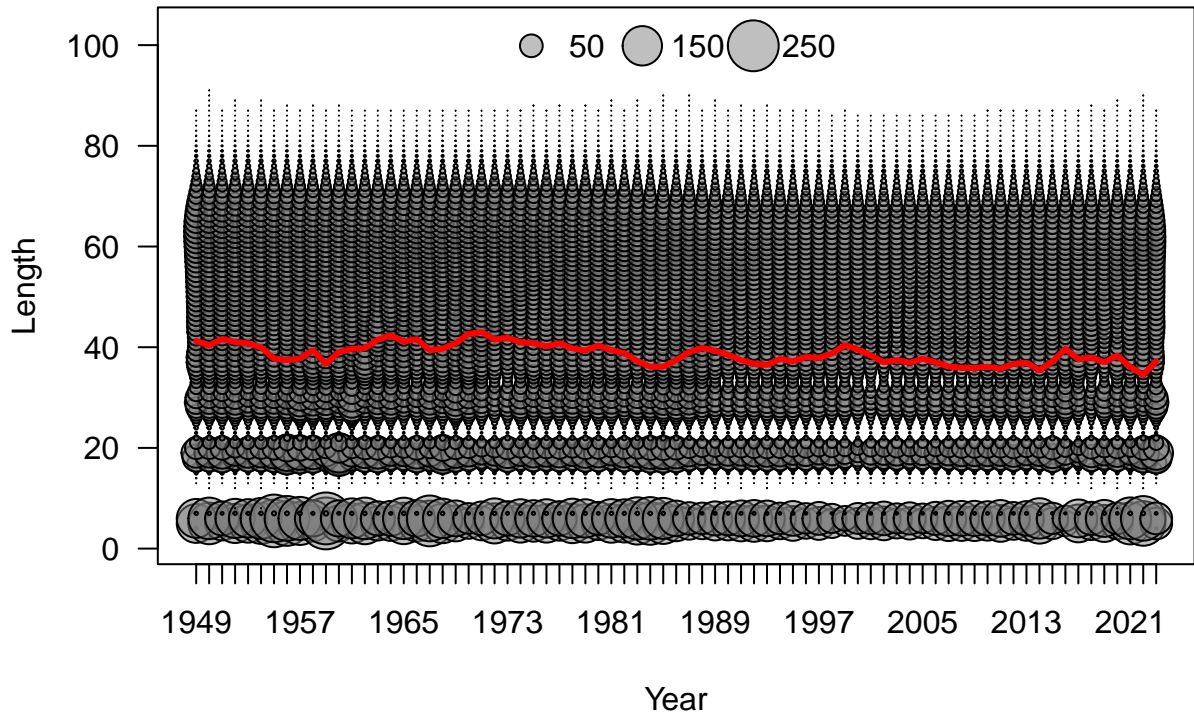


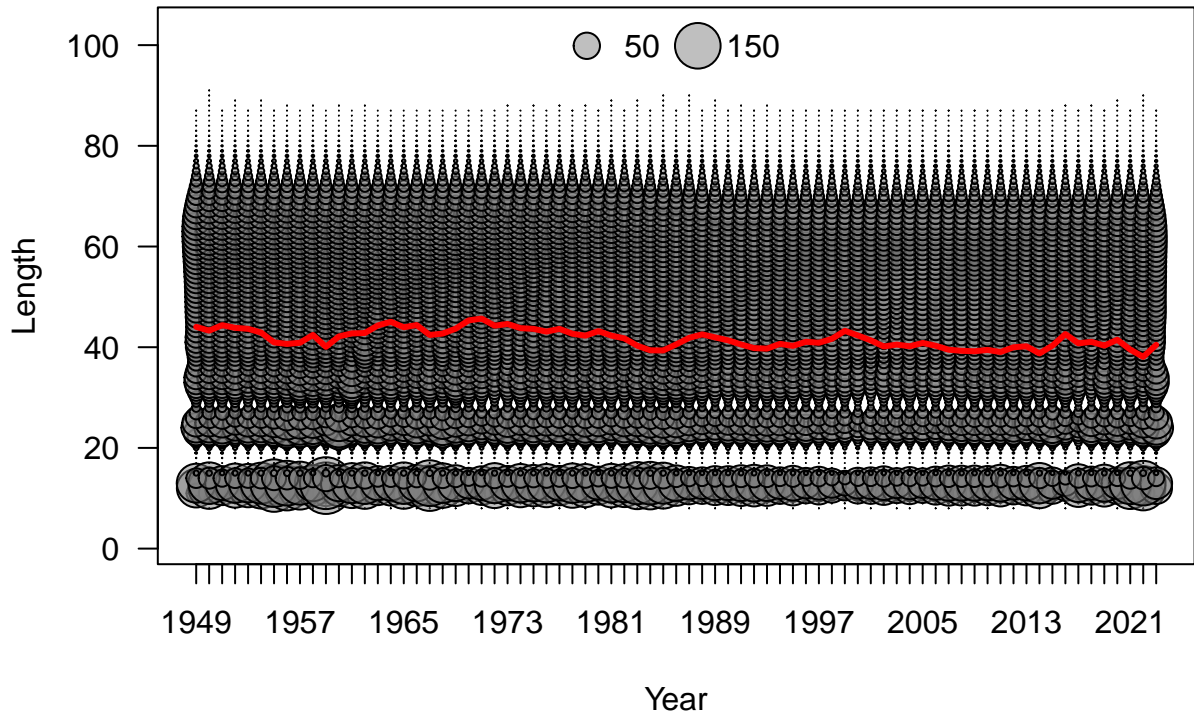




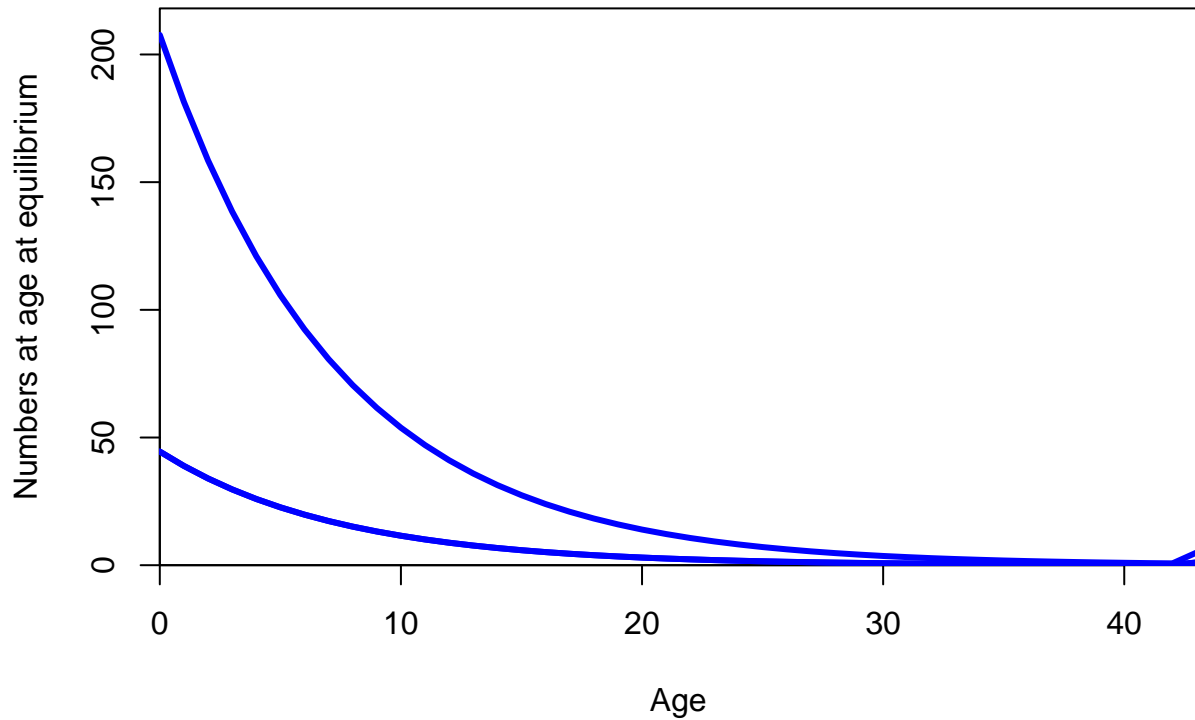


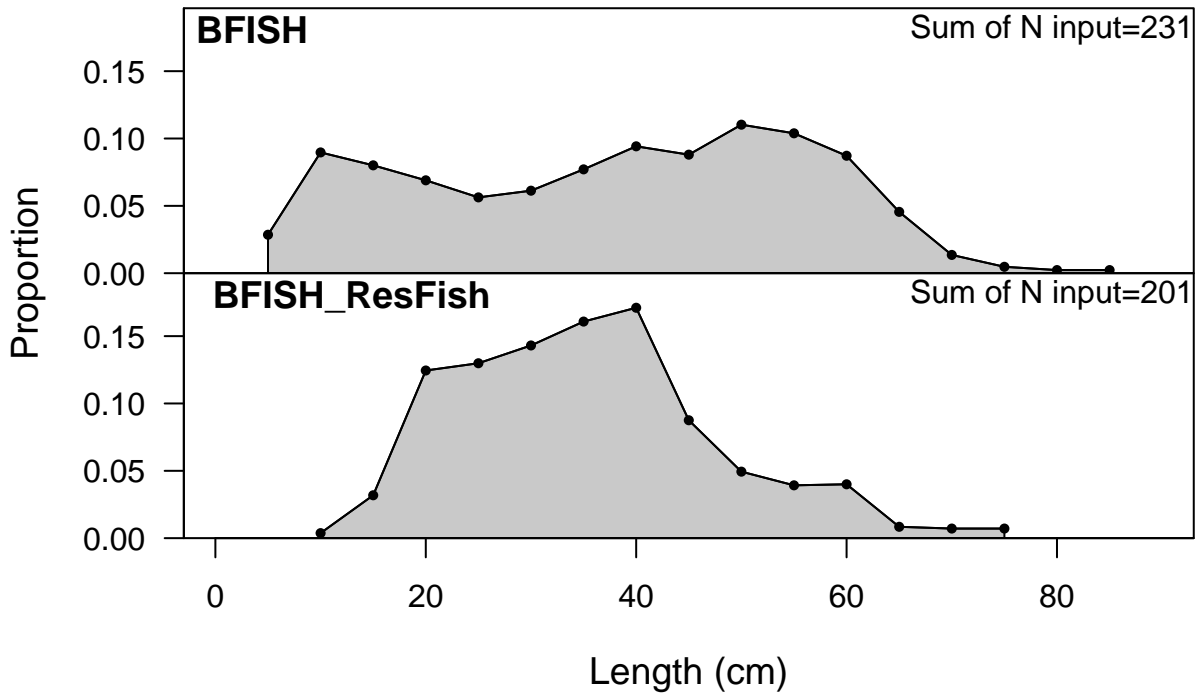


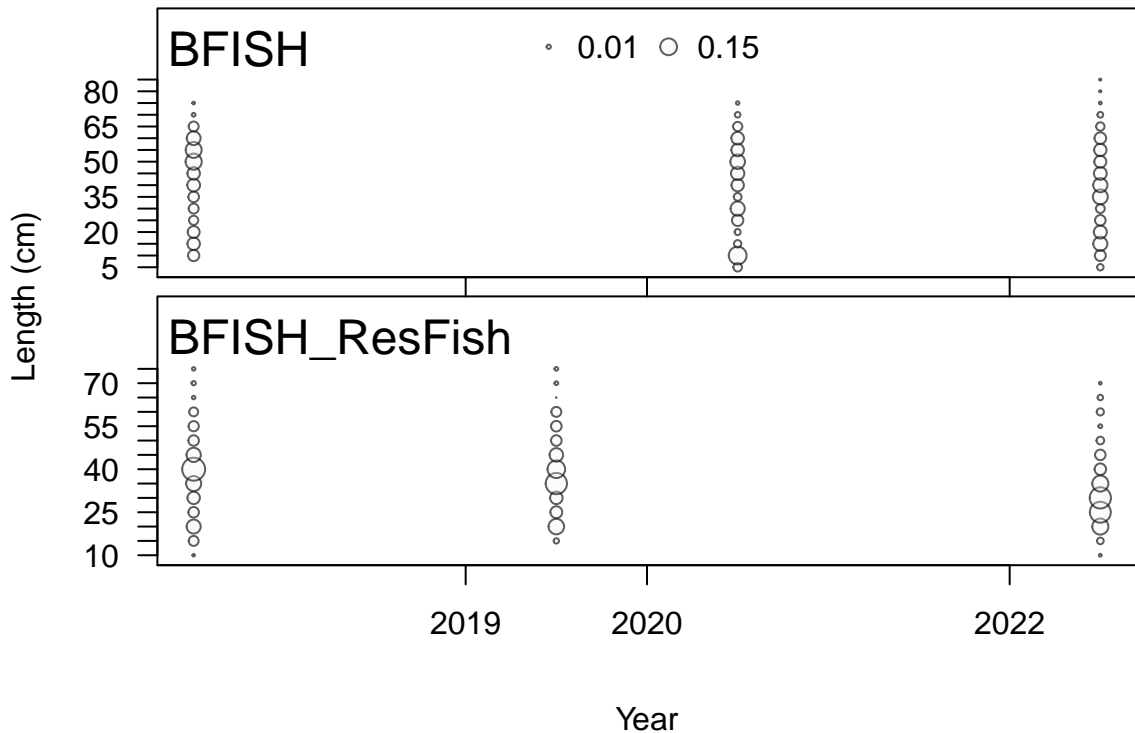




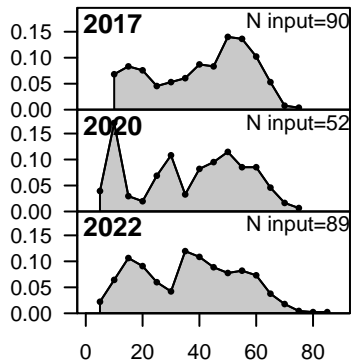




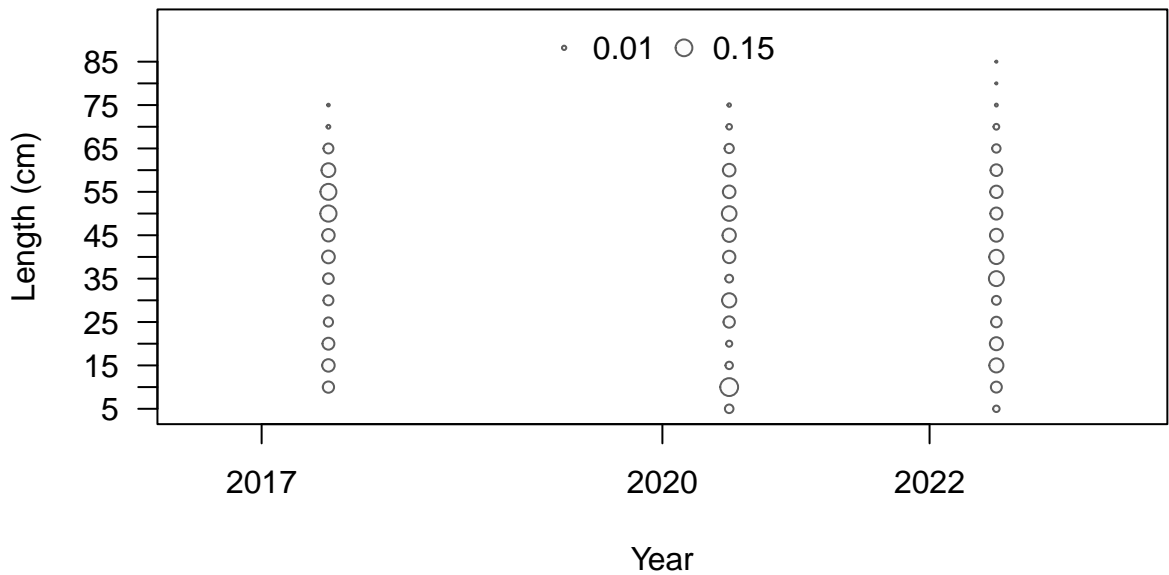




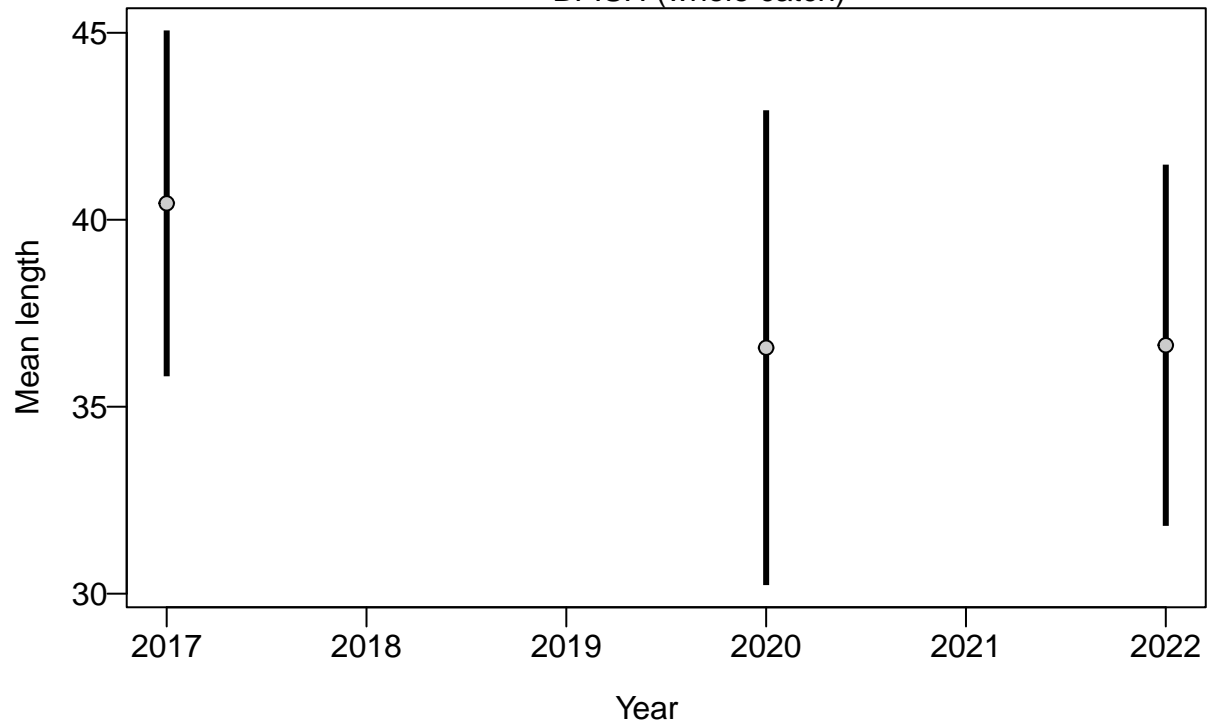
Proportion



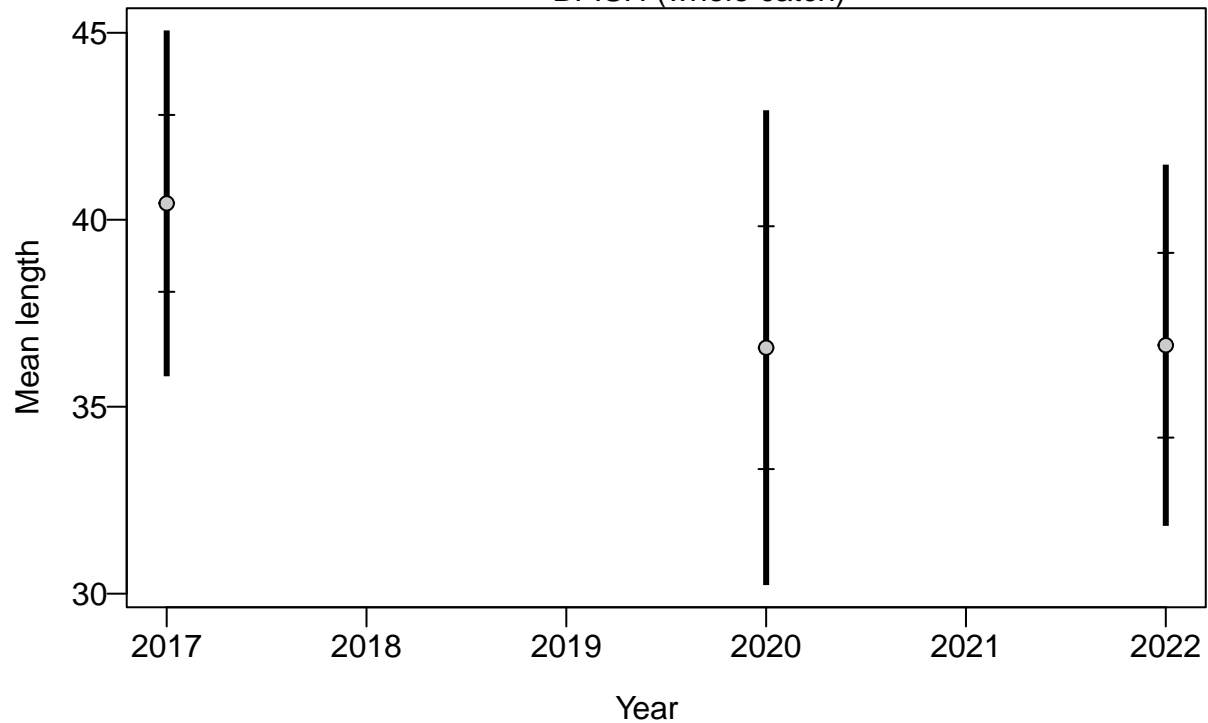
Length (cm)



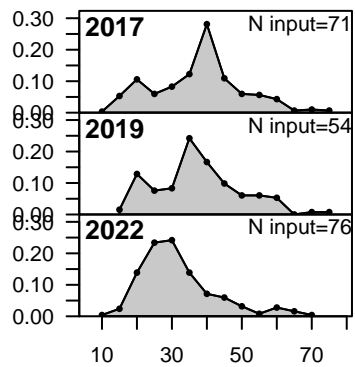
BFISH (whole catch)



BFISH (whole catch)

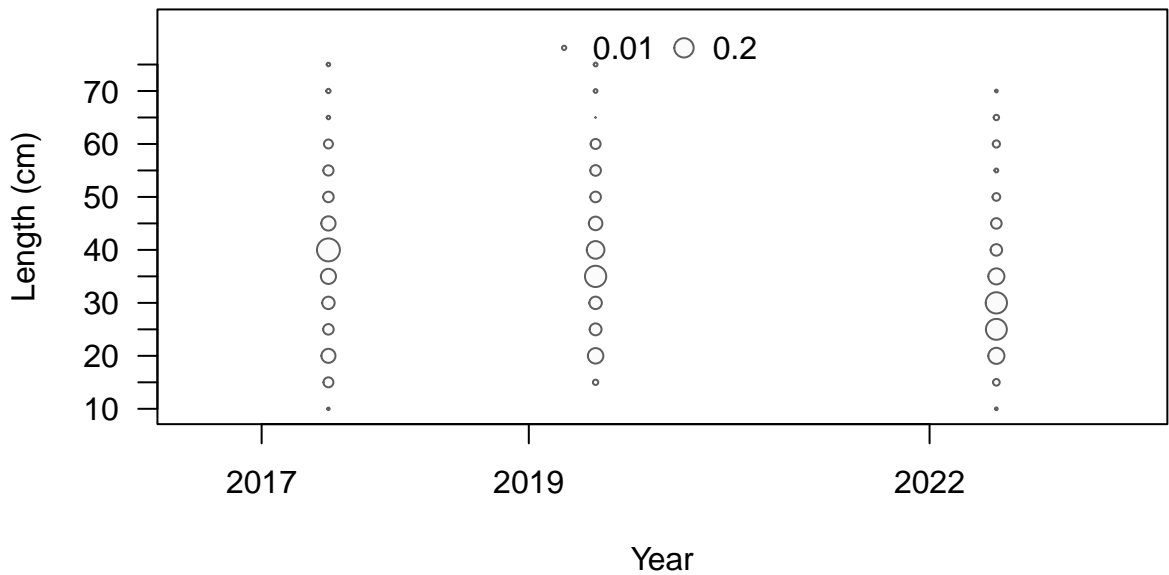


Proportion

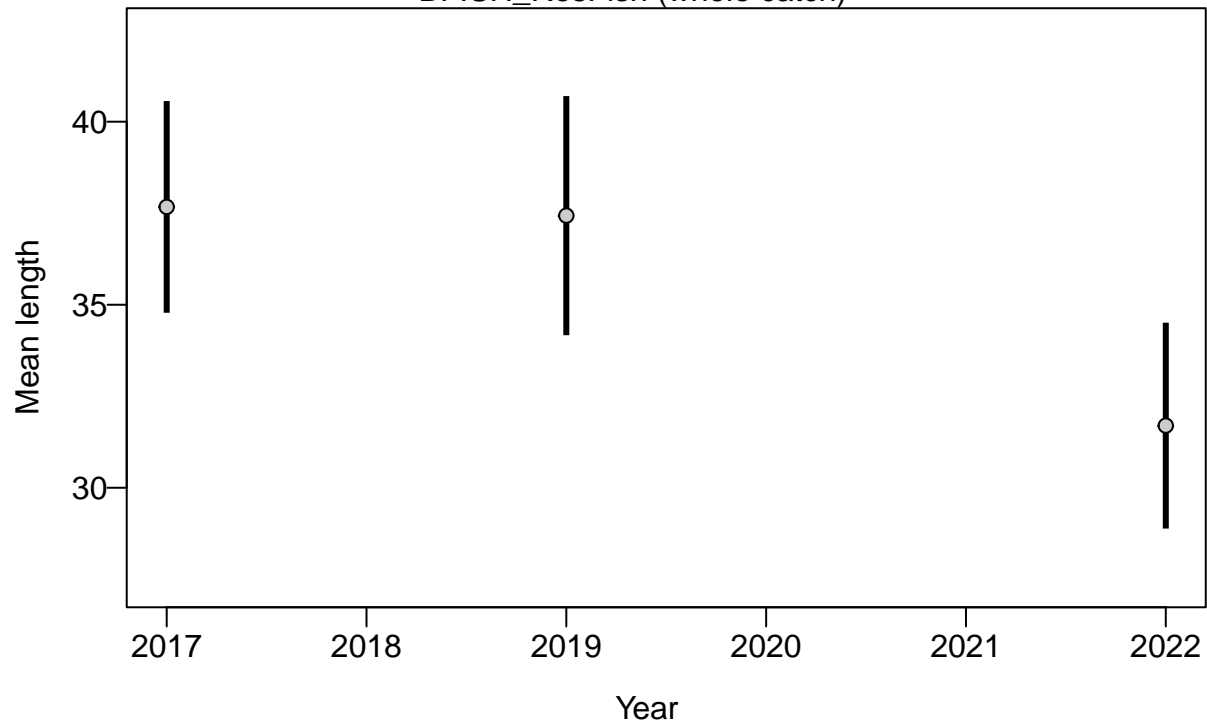


Length (cm)

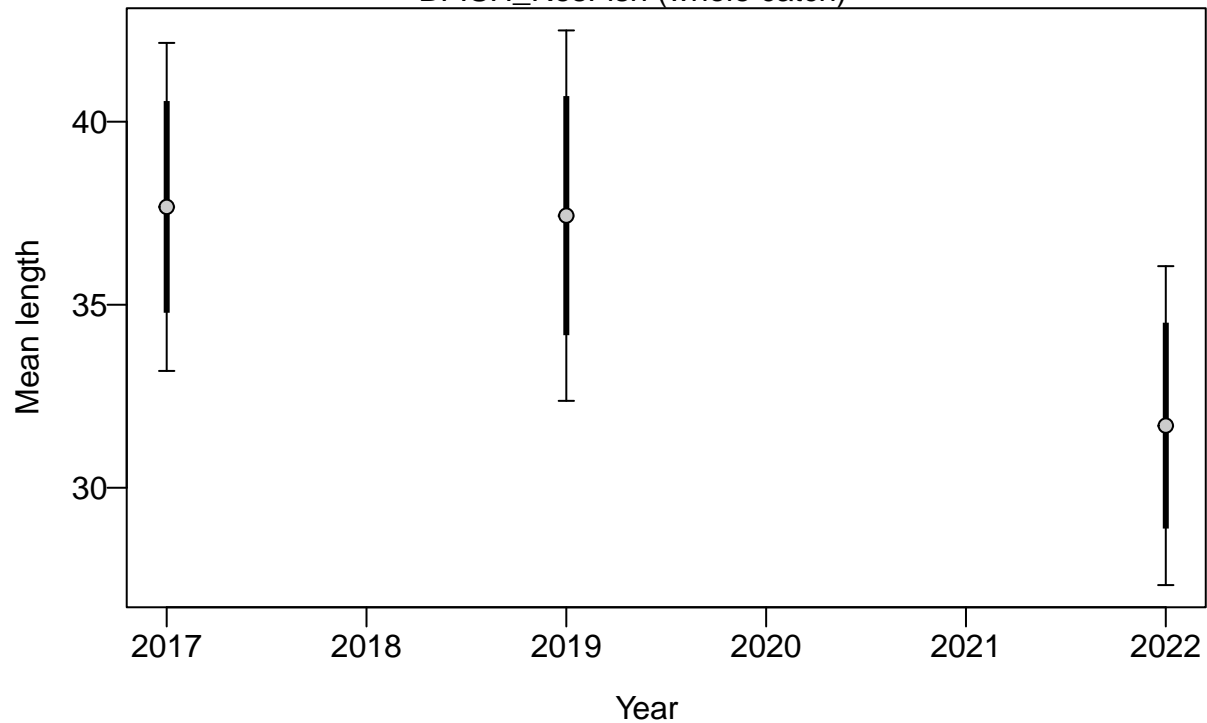


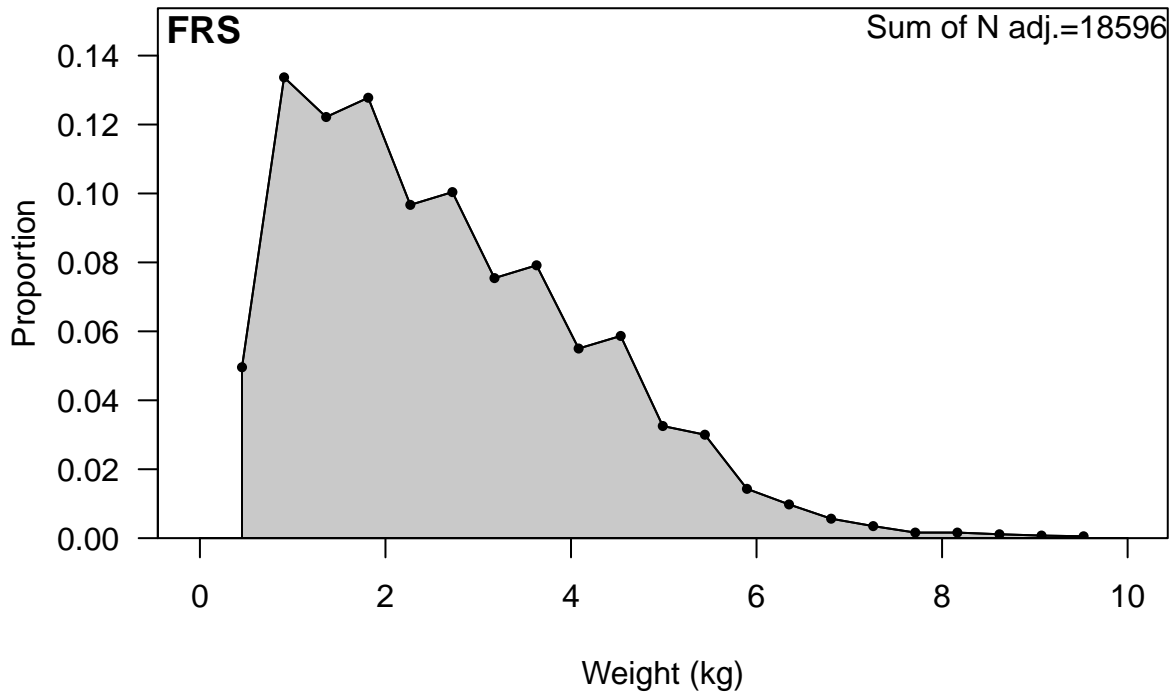


BFISH\_ResFish (whole catch)

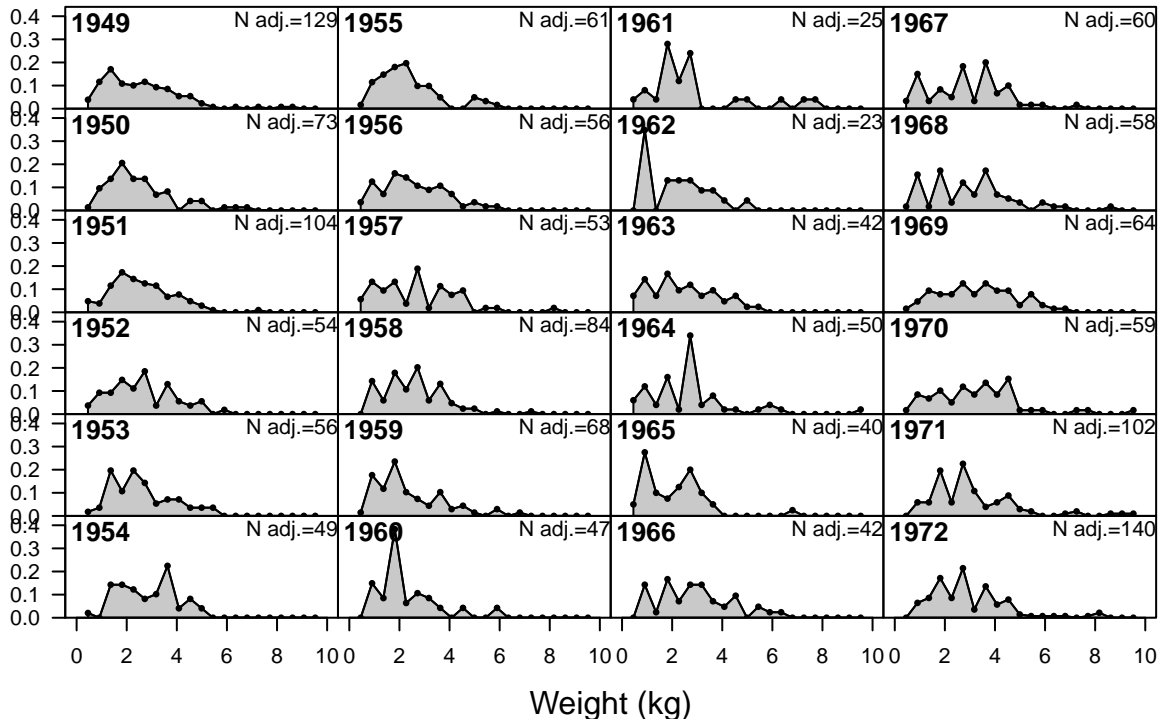


BFISH\_ResFish (whole catch)

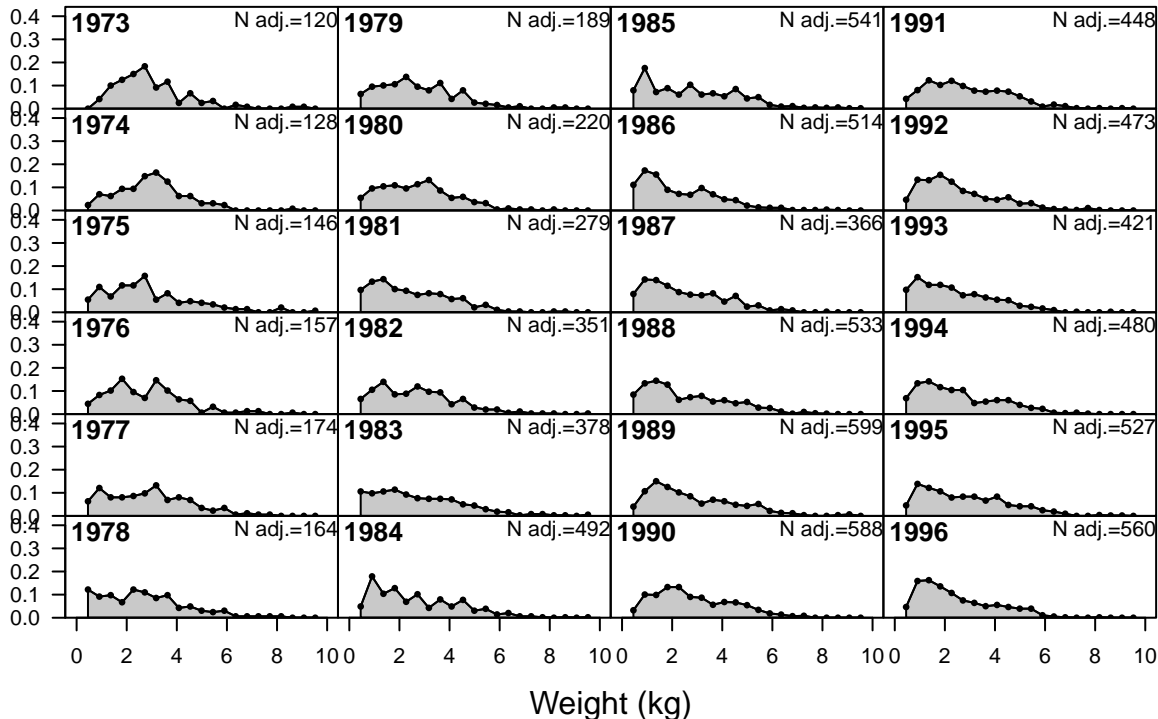




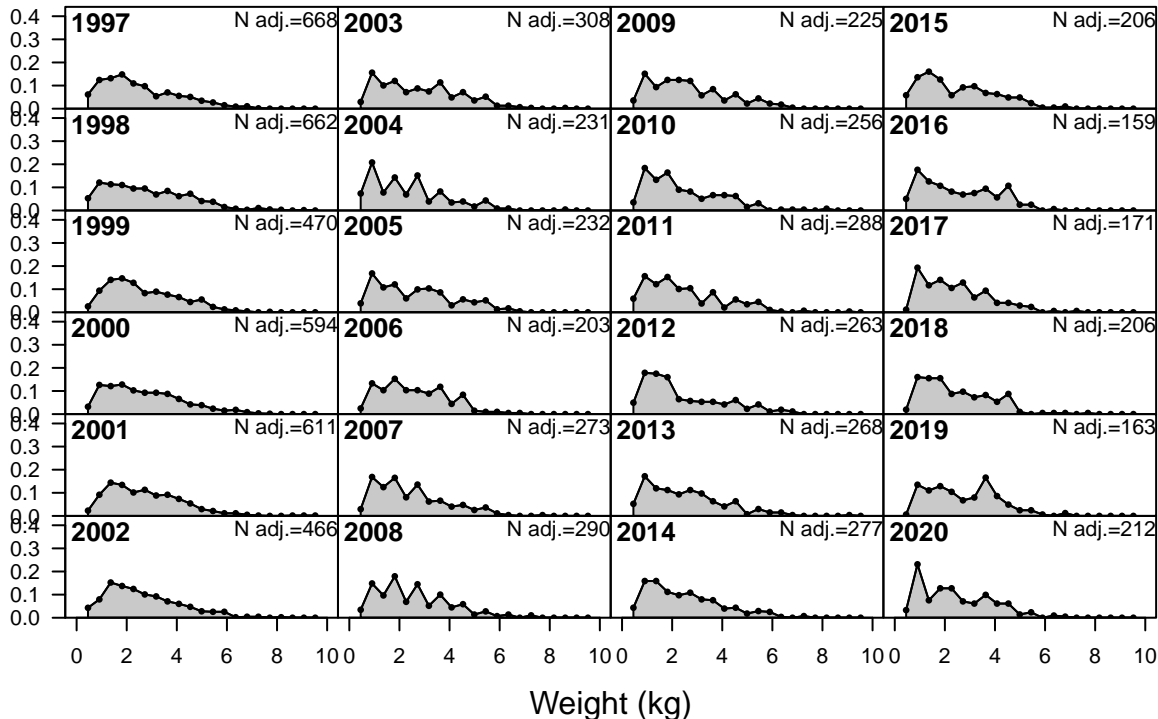
Proportion



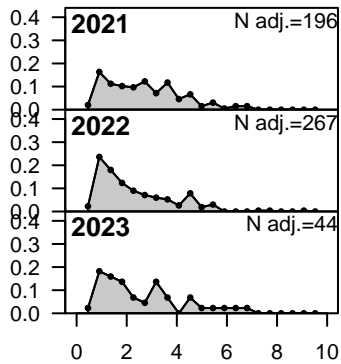
Proportion



Proportion



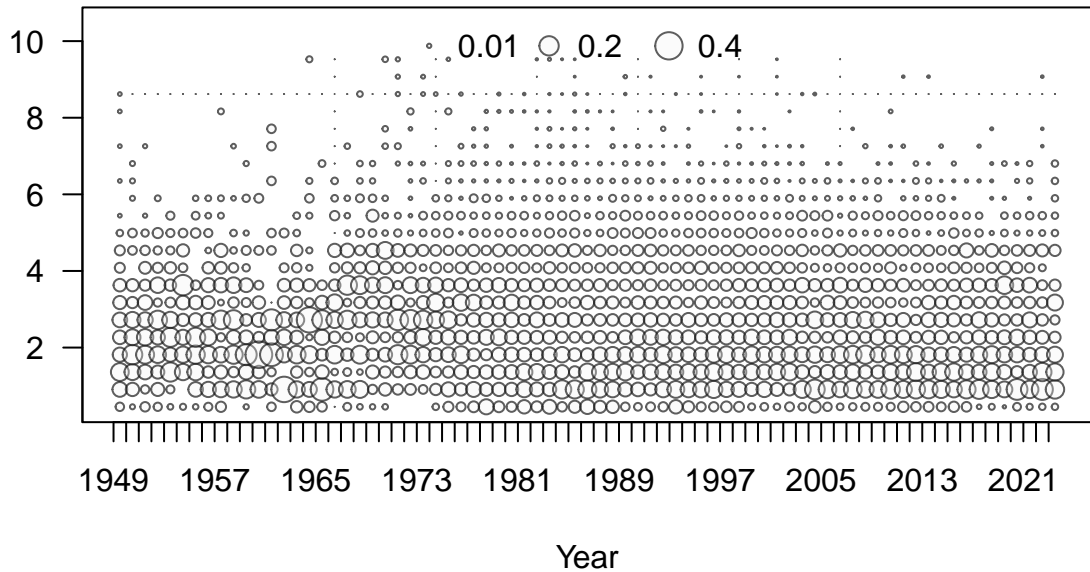
Proportion



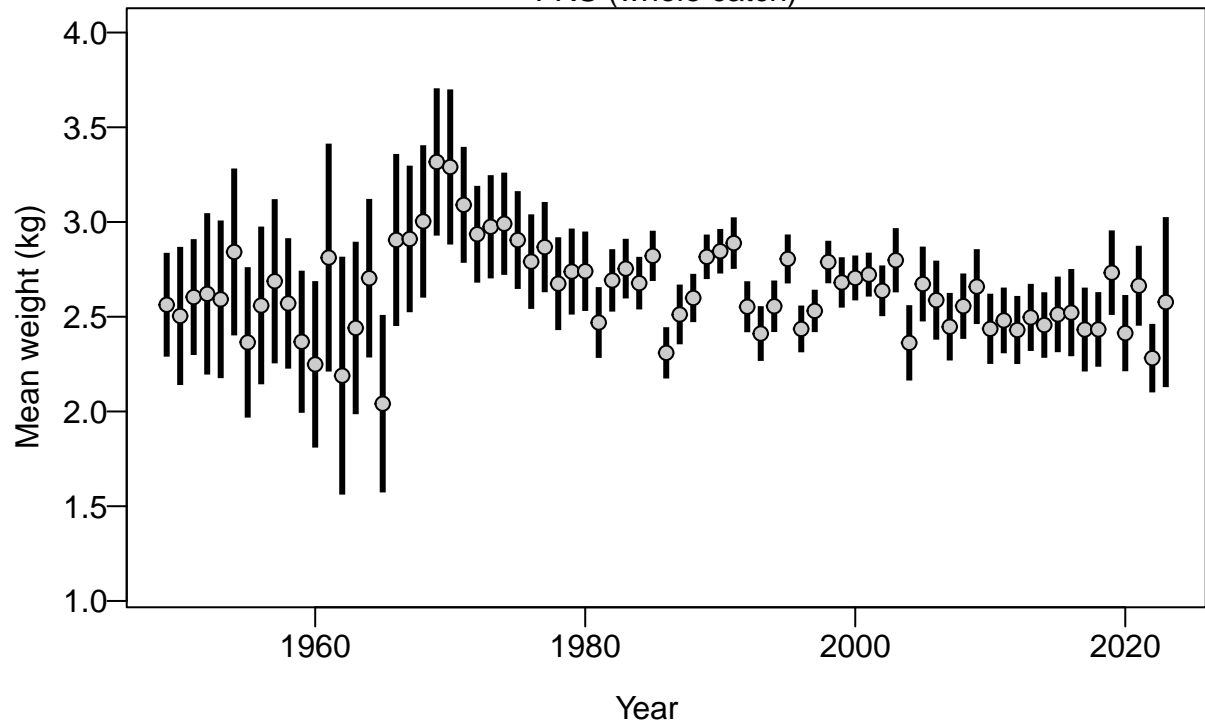
Weight (kg)



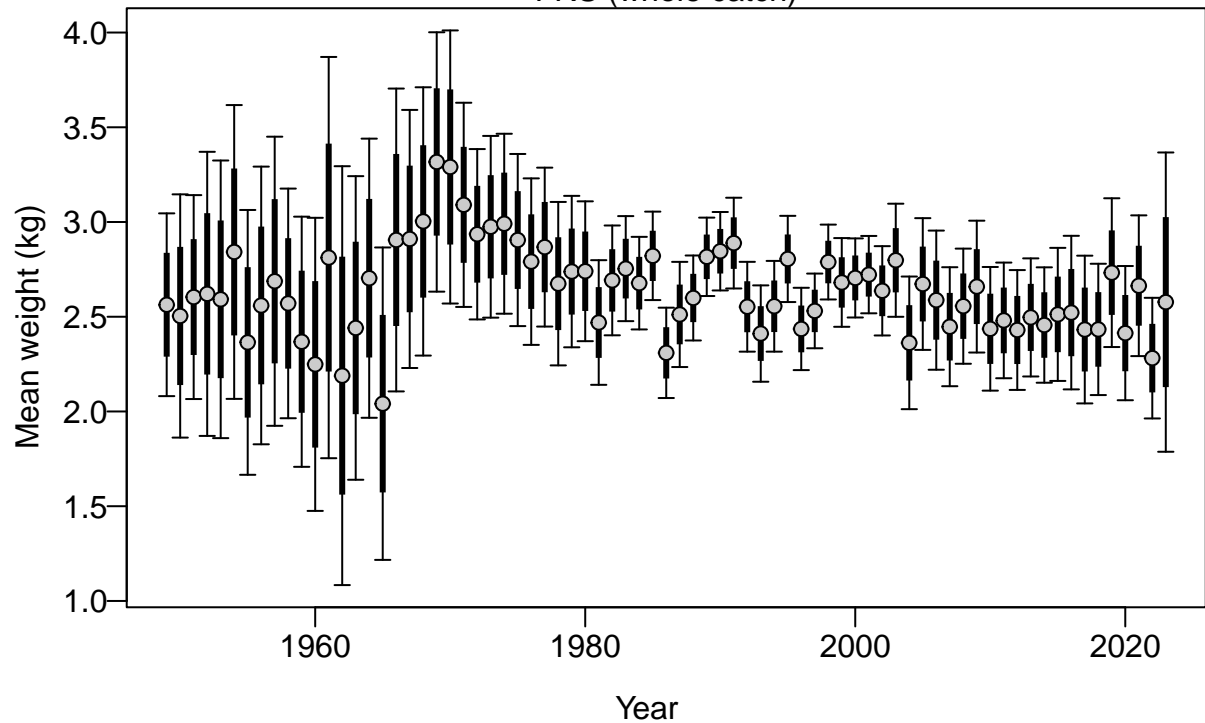
Weight (kg)

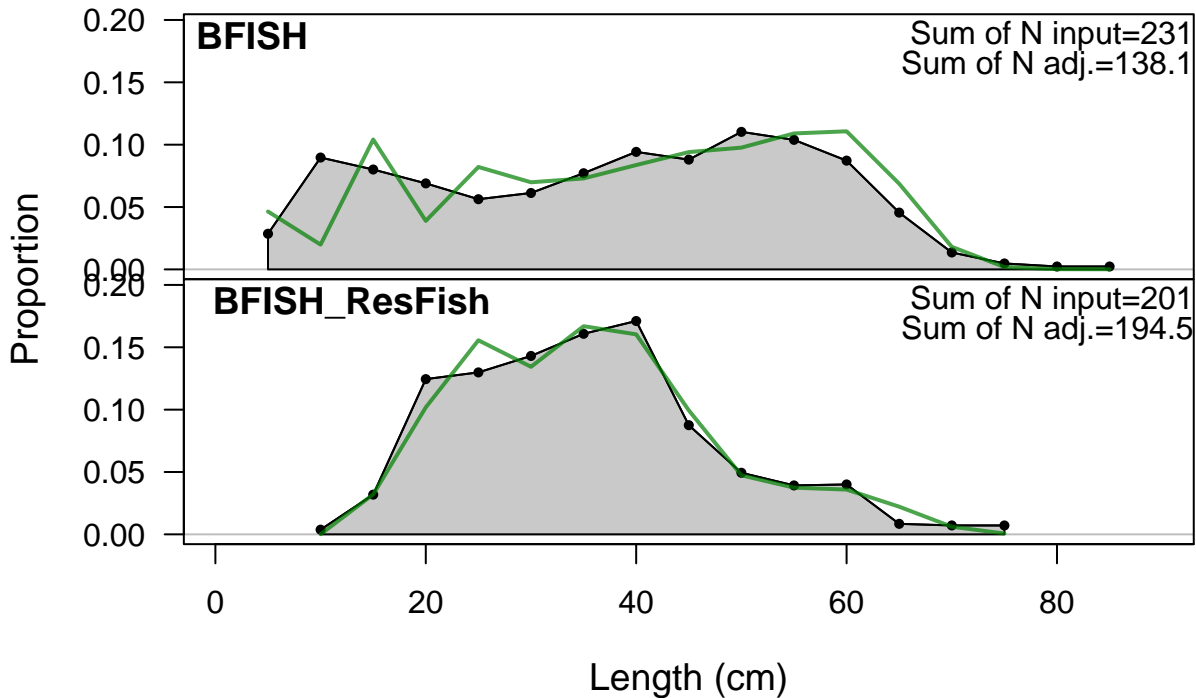


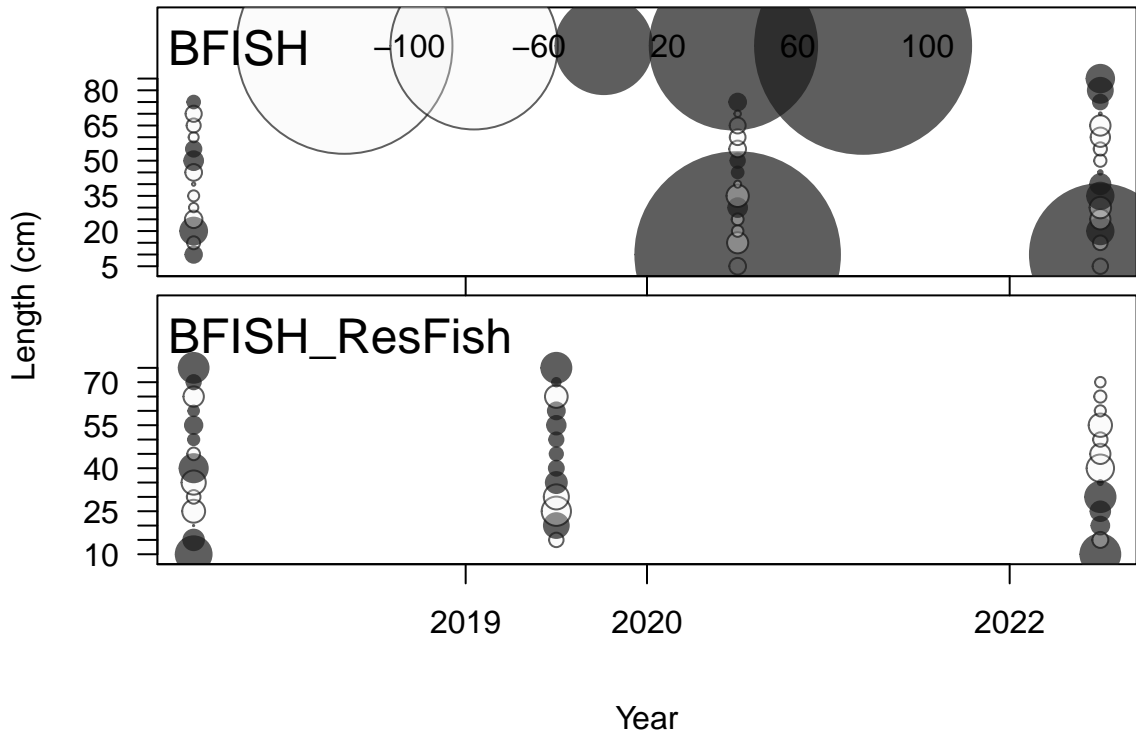
FRS (whole catch)



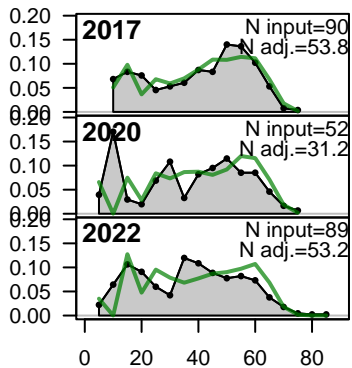
## FRS (whole catch)



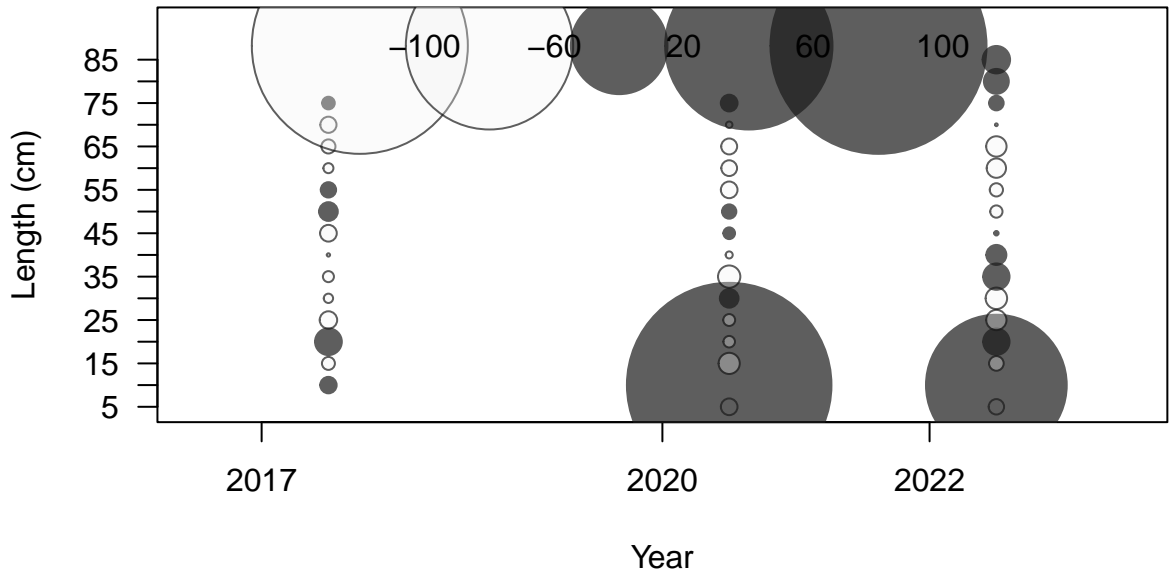




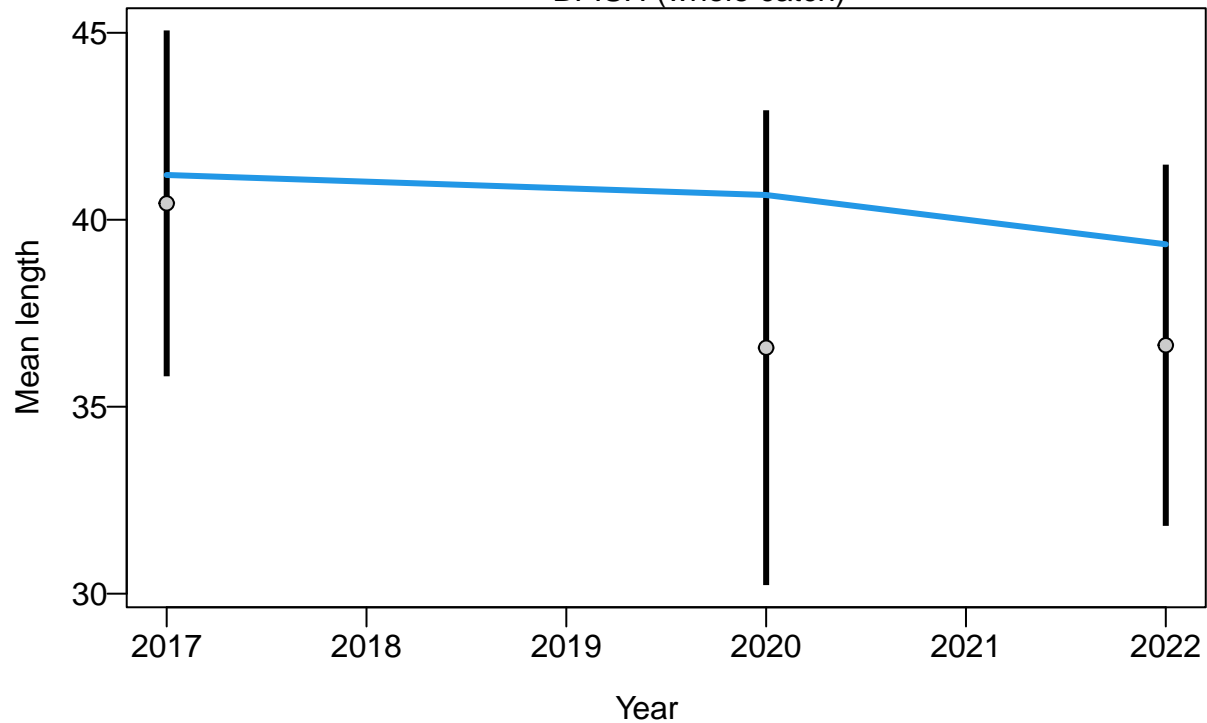
Proportion



Length (cm)

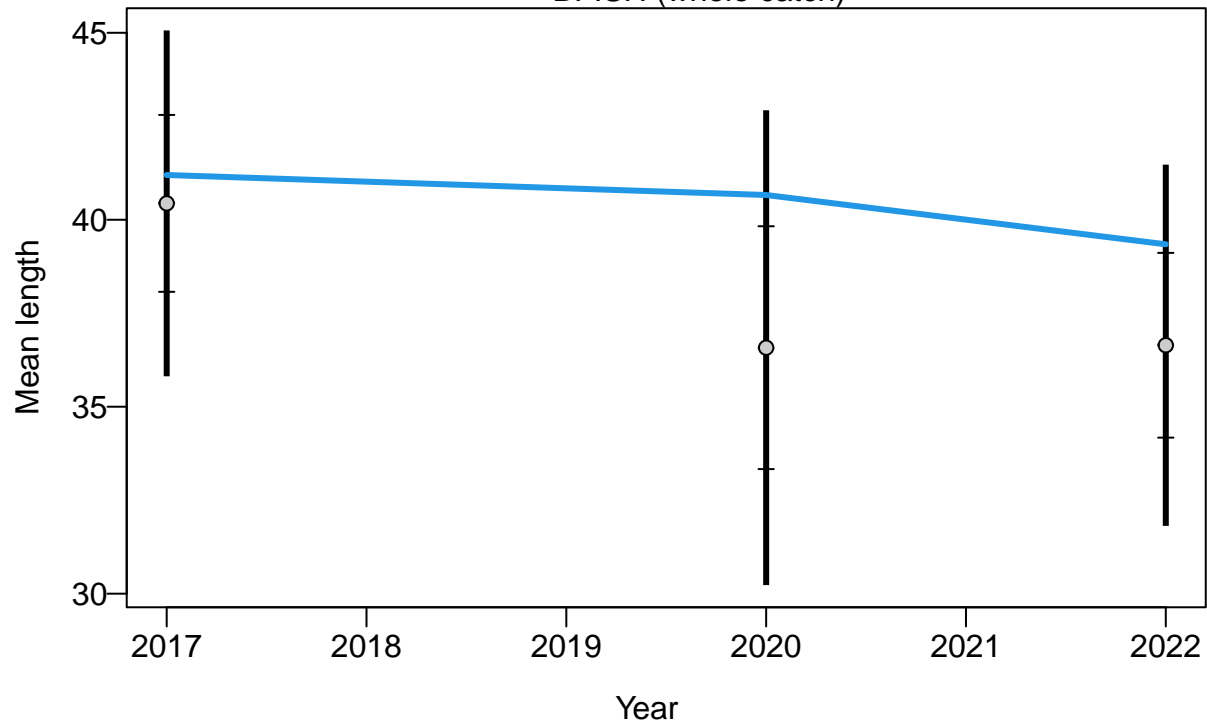


BFISH (whole catch)

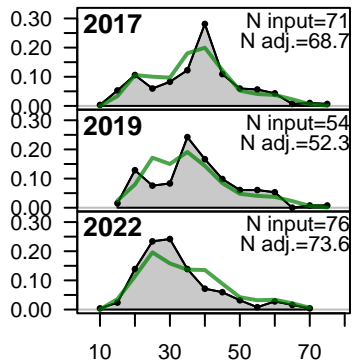




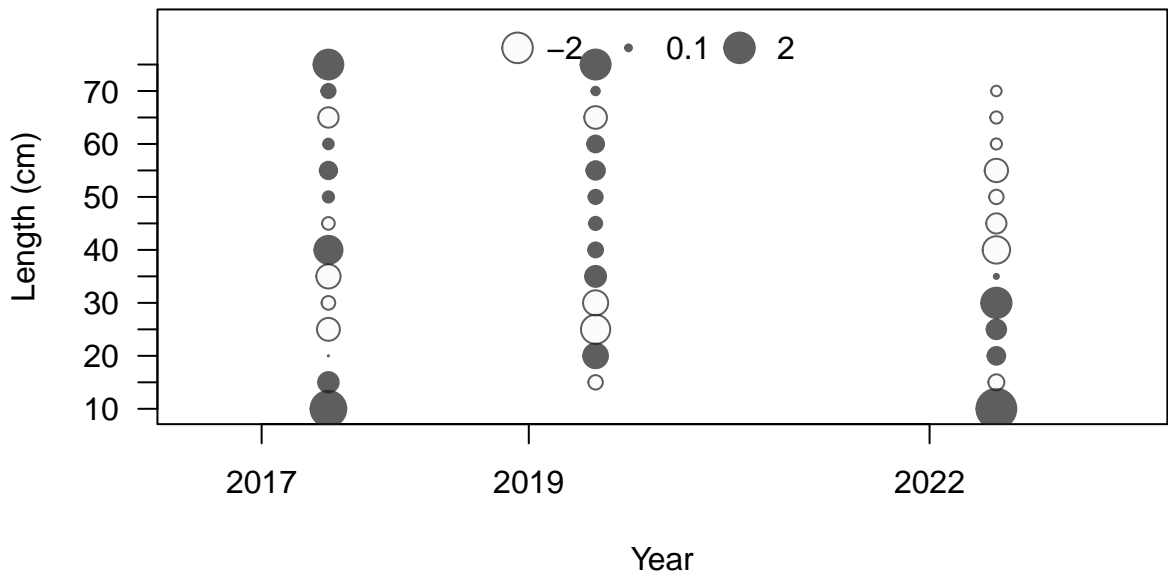
BFISH (whole catch)



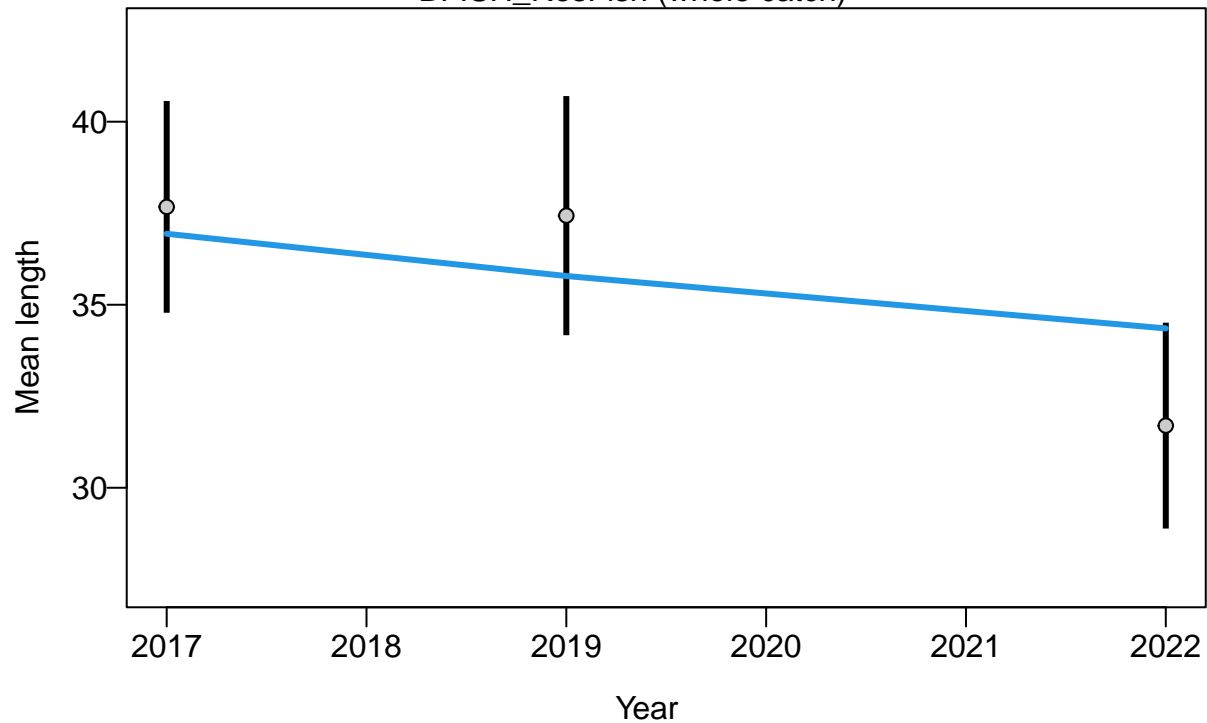
Proportion



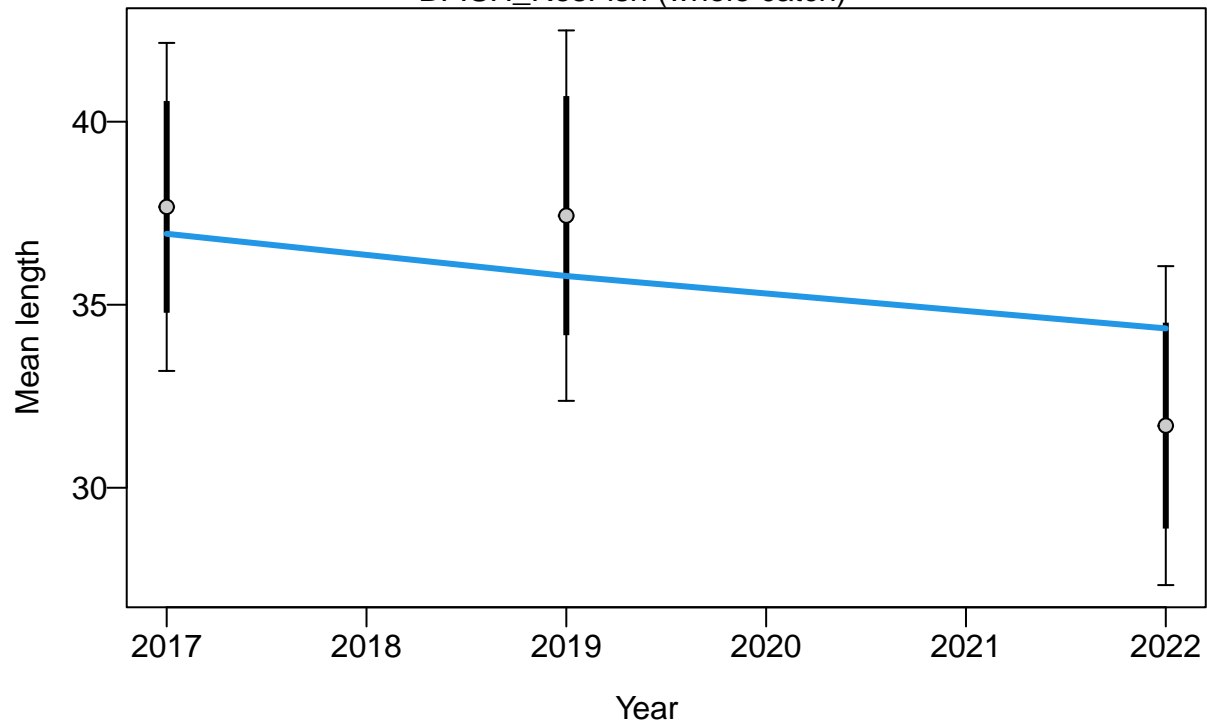
Length (cm)

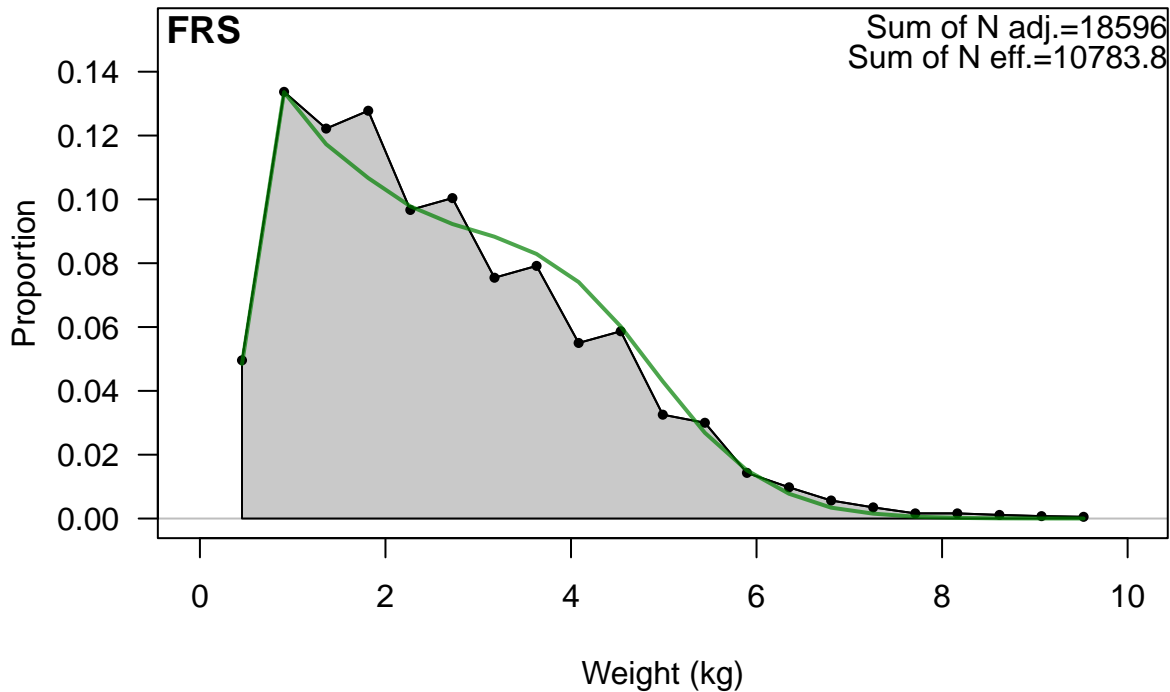


BFISH\_ResFish (whole catch)

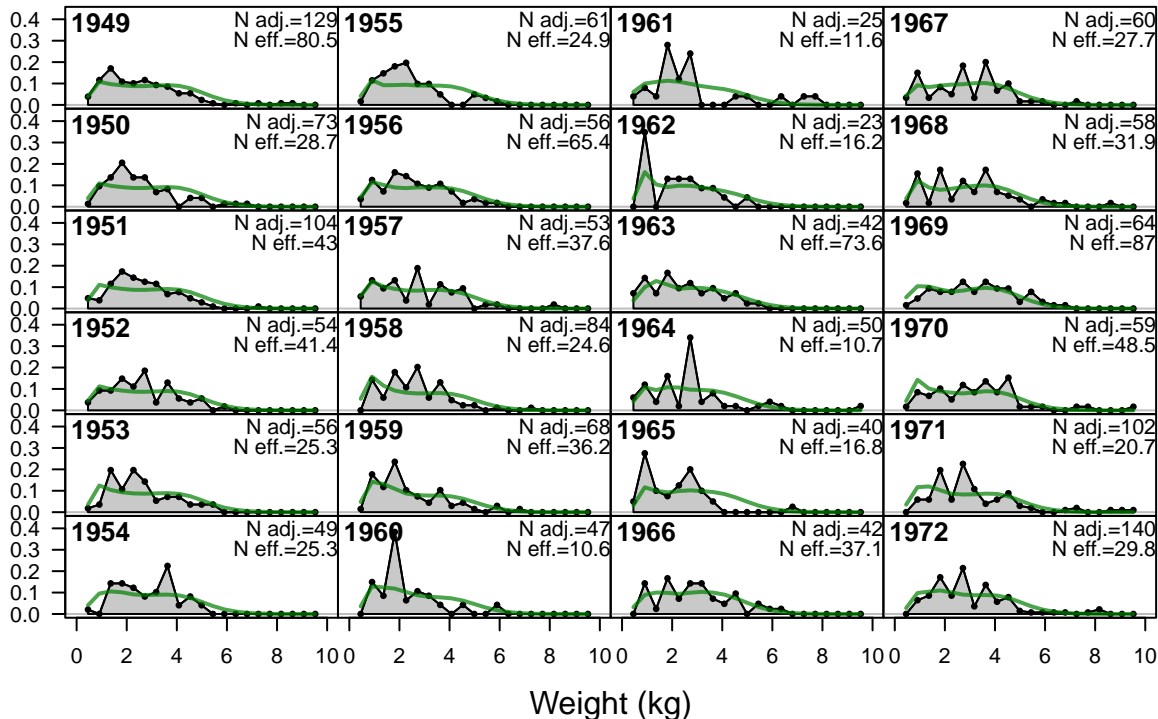


BFISH\_ResFish (whole catch)

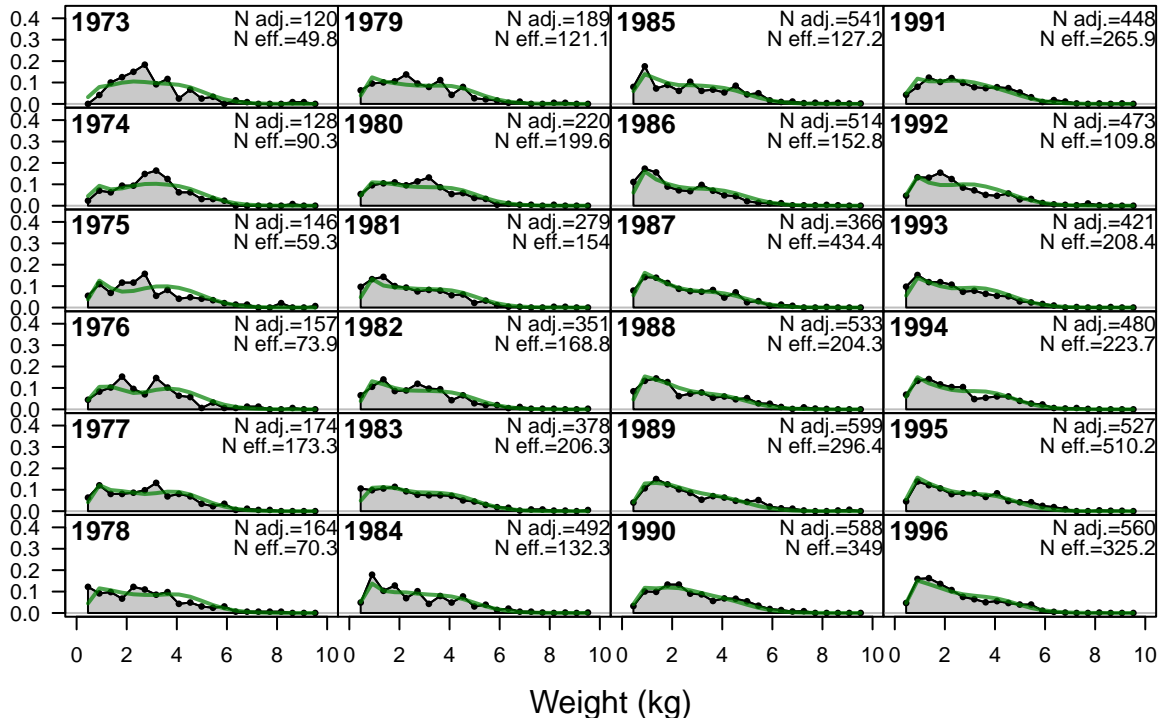




Proportion

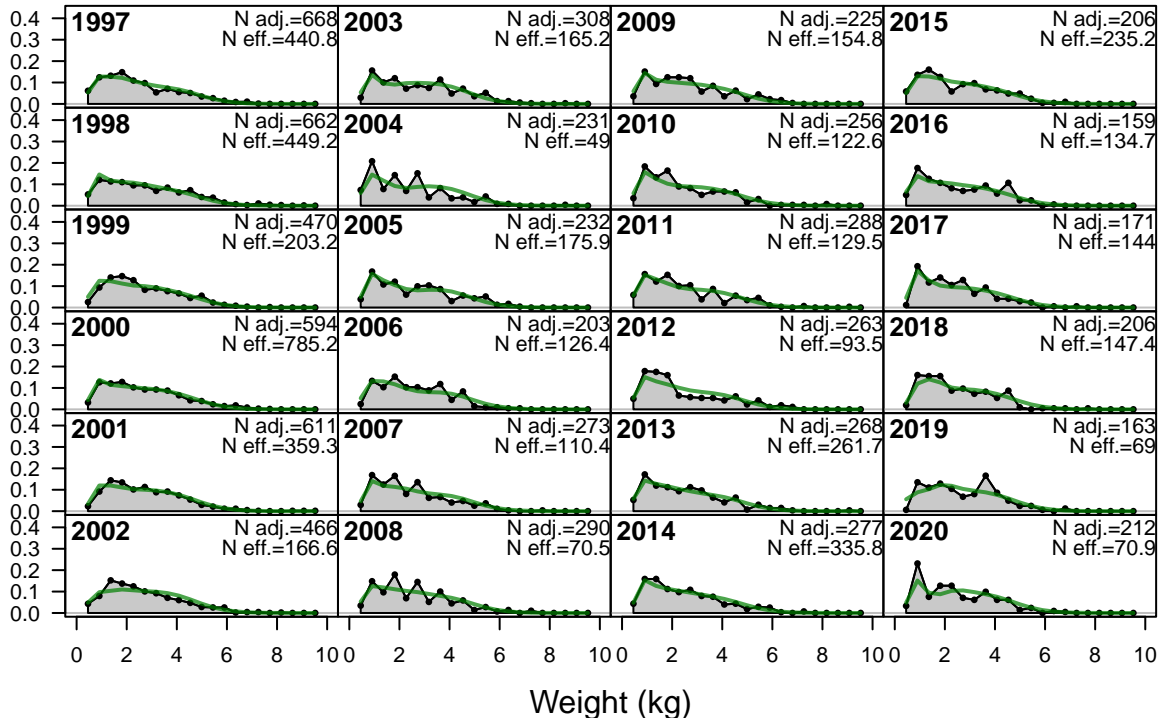


Proportion

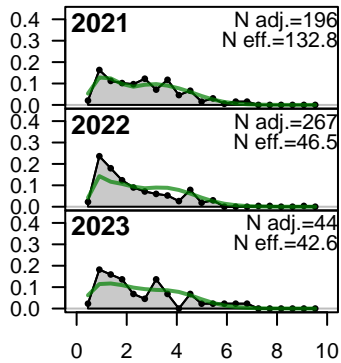




Proportion

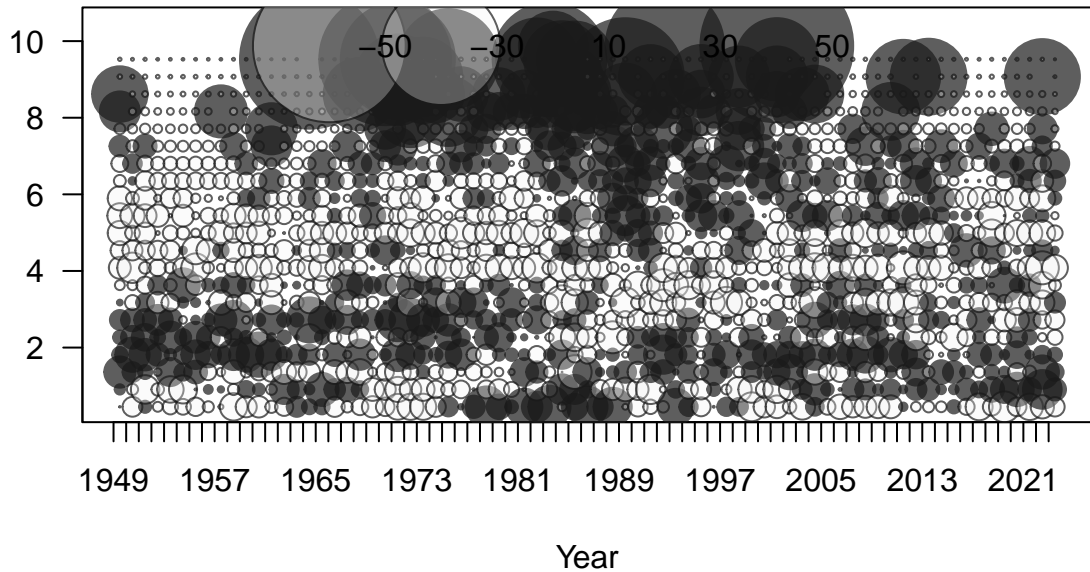


Proportion

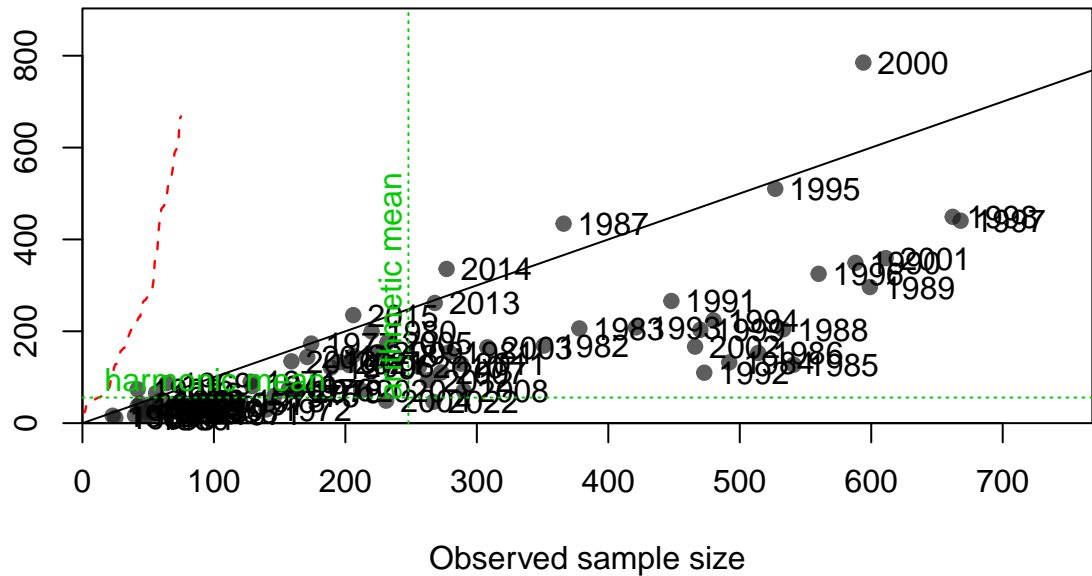


Weight (kg)

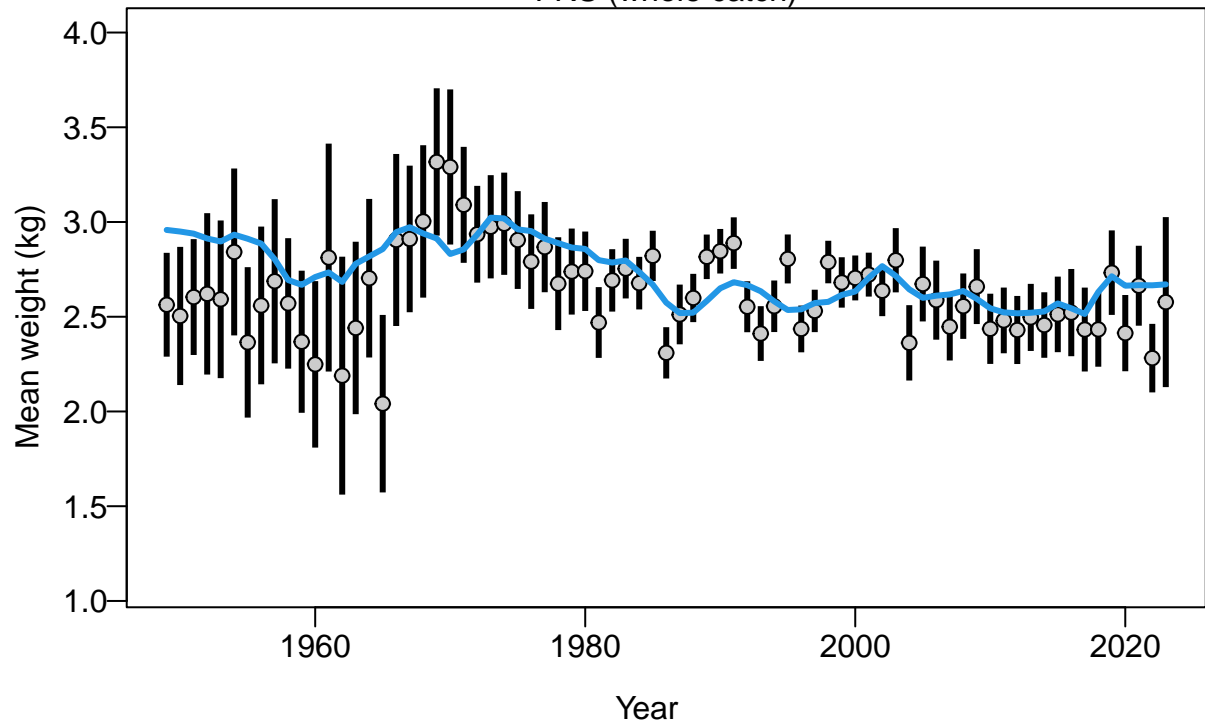
Weight (kg)



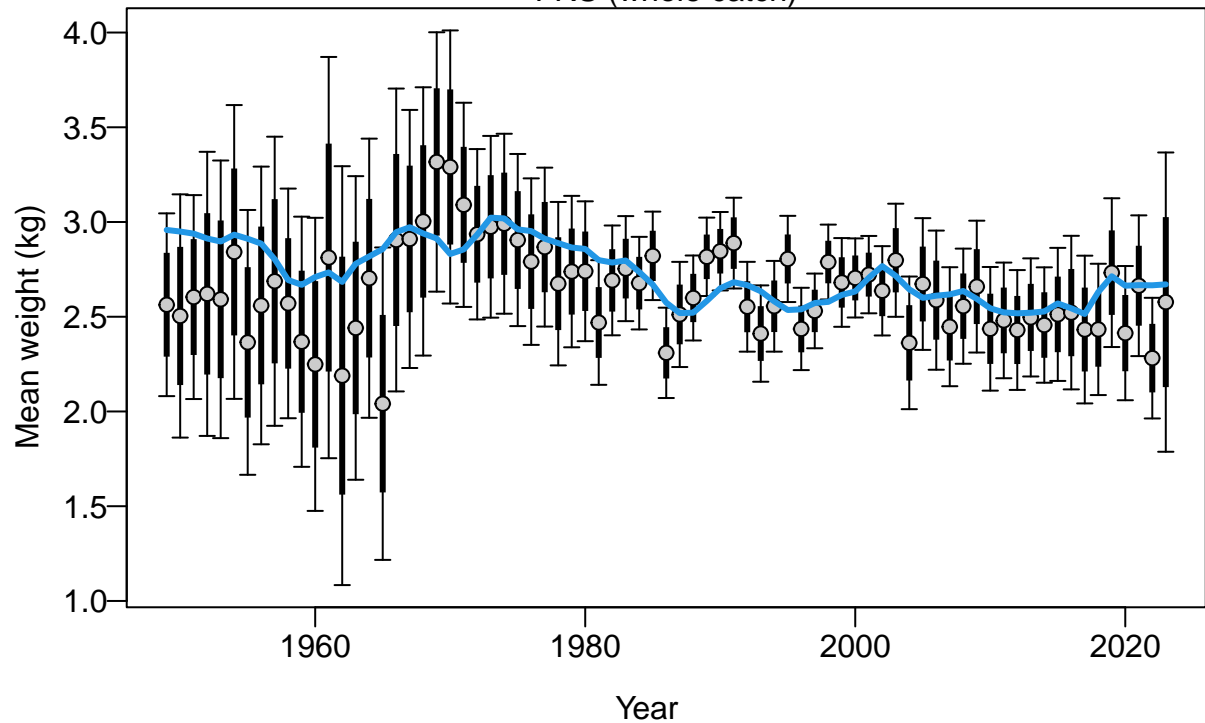
Effective sample size

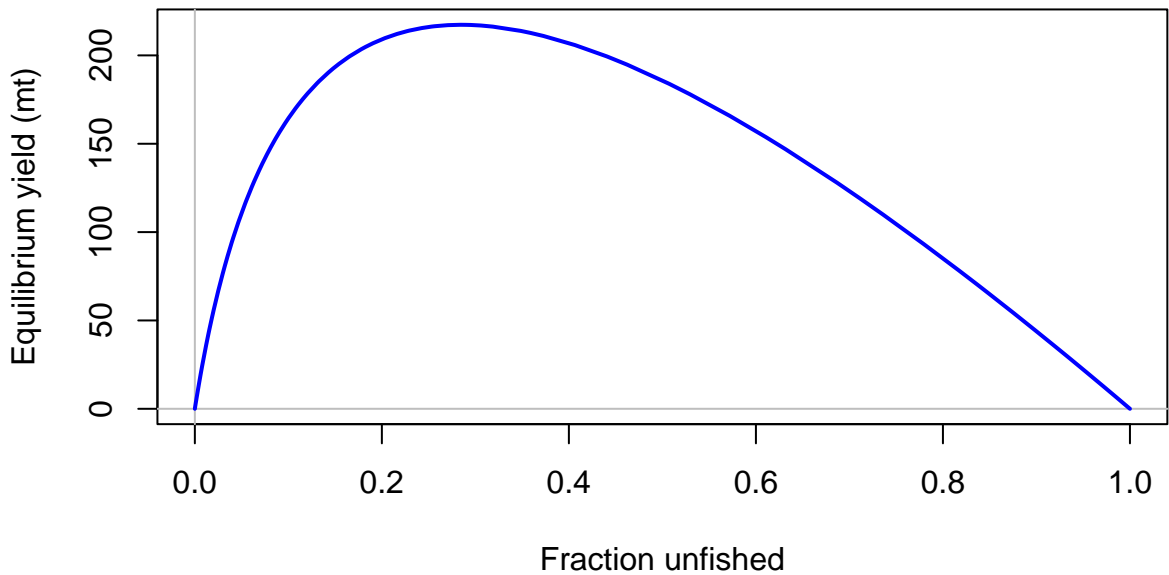


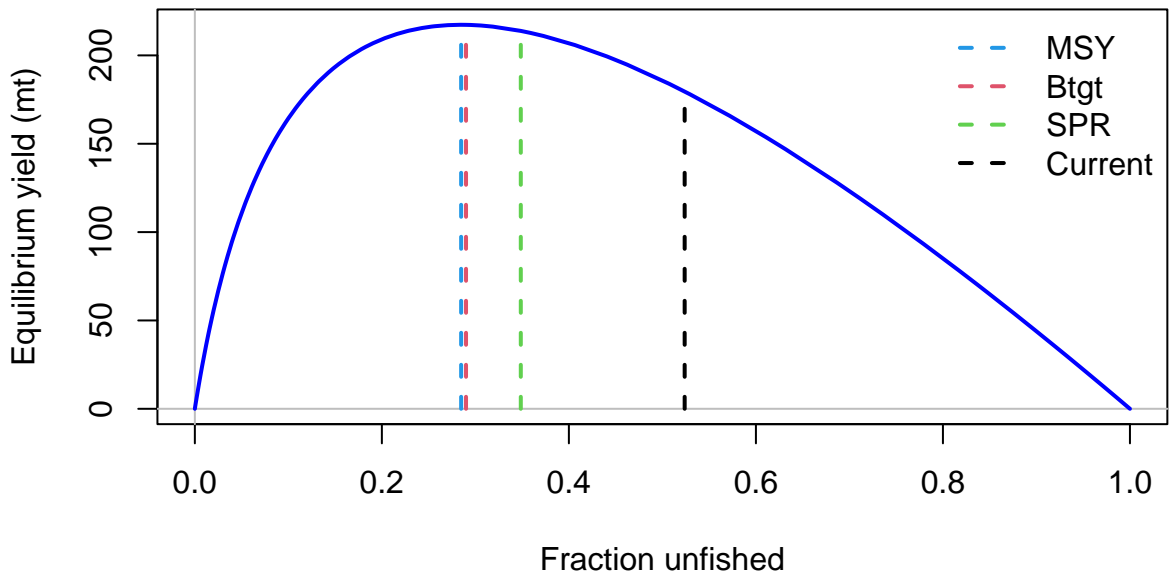
FRS (whole catch)



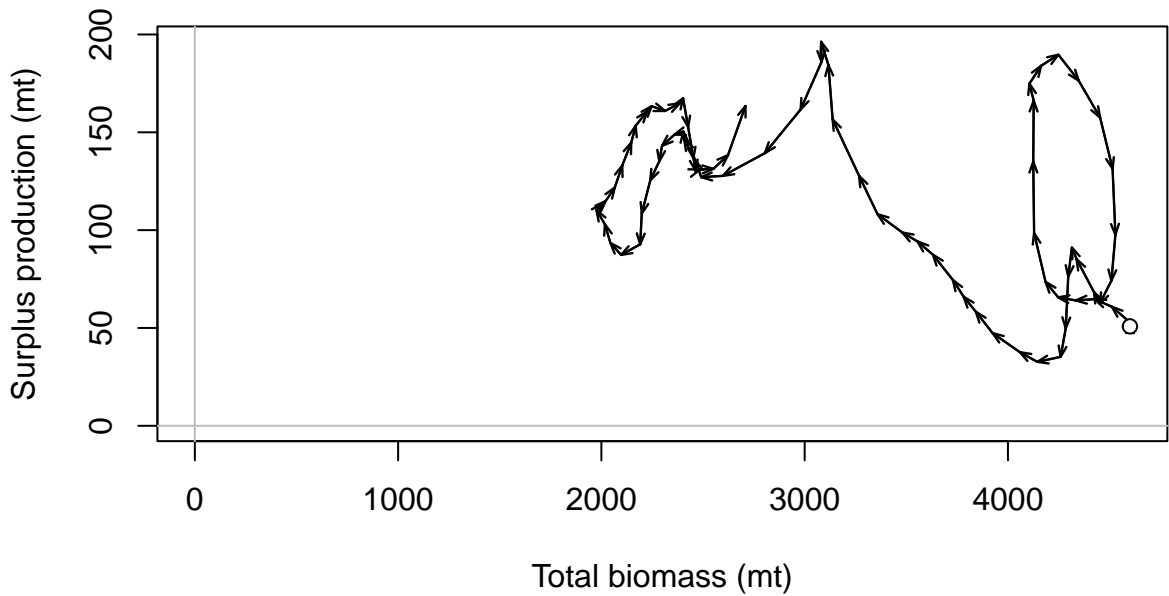
FRS (whole catch)

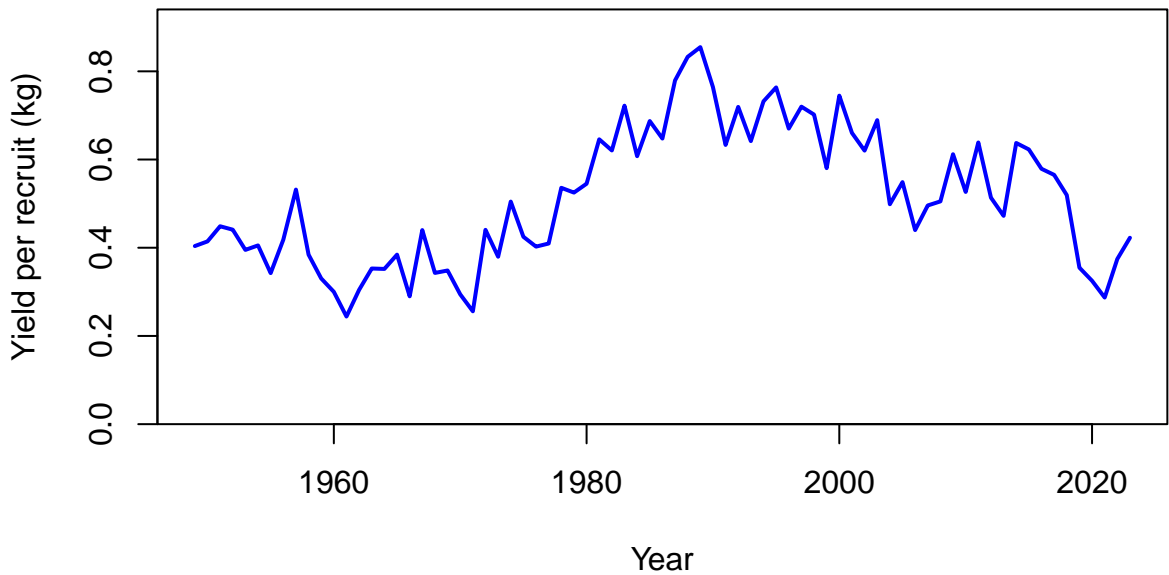


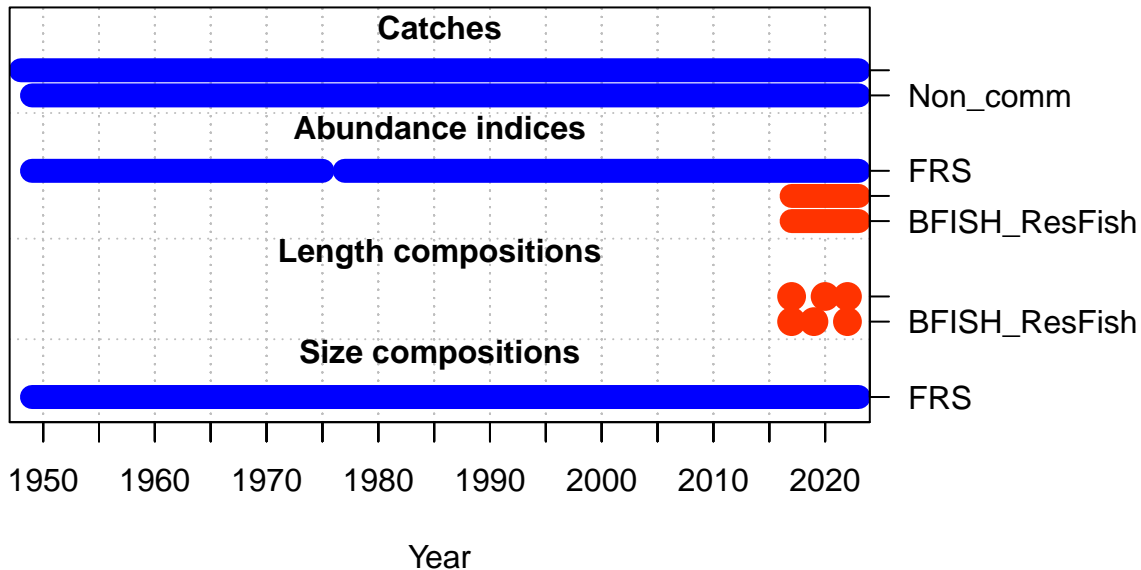


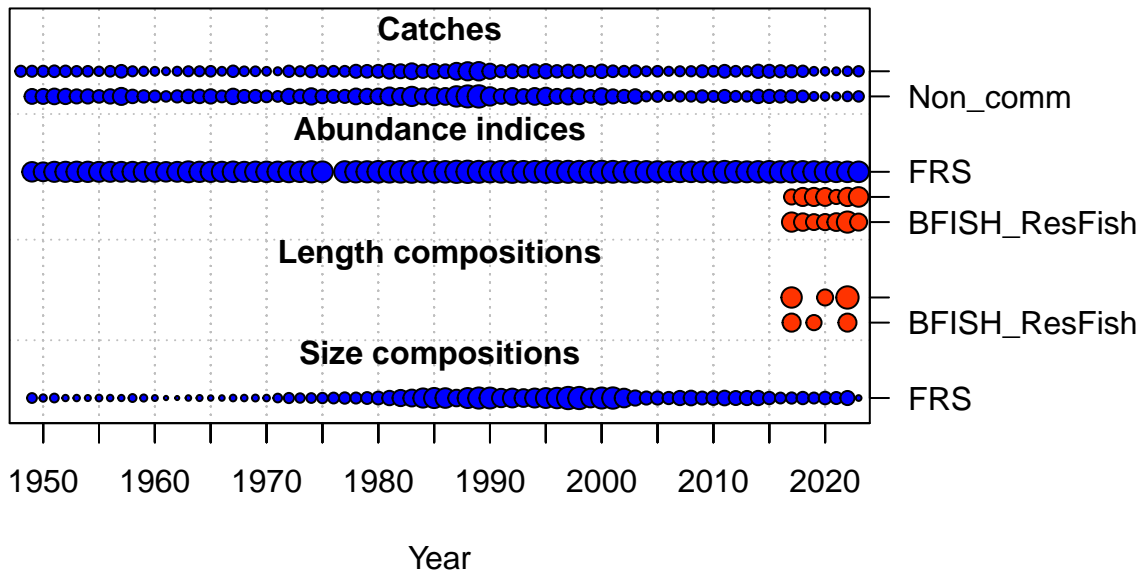




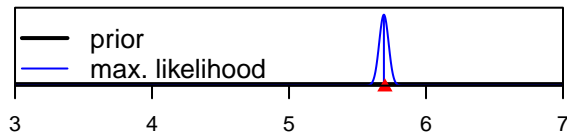




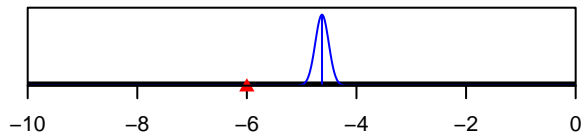




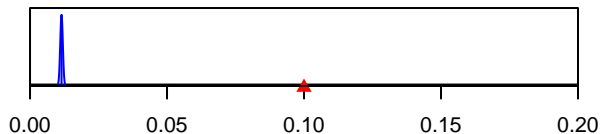
SR\_LN(R0)



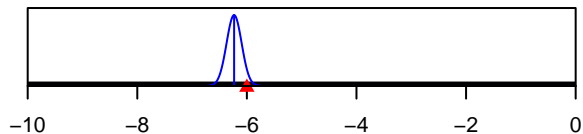
LnQ\_base\_BFISH(2)



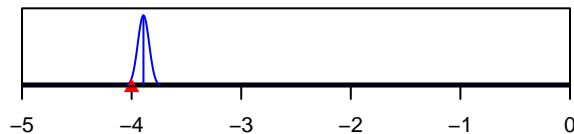
InitF\_seas\_1\_flt\_1FRS



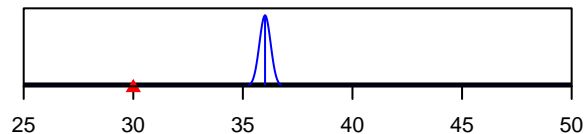
LnQ\_base\_BFISH\_ResFish(4)



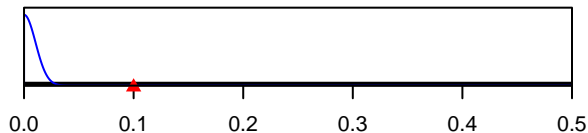
LnQ\_base\_FRS(1)



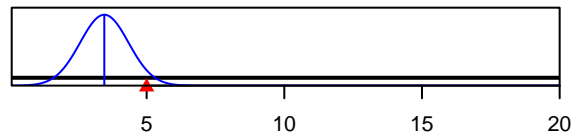
Size\_inflection\_FRS(1)



Q\_extraSD\_FRS(1)

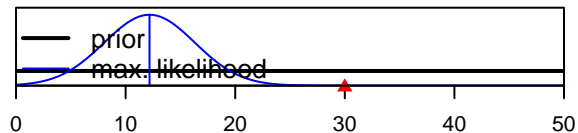


Size\_95%width\_FRS(1)

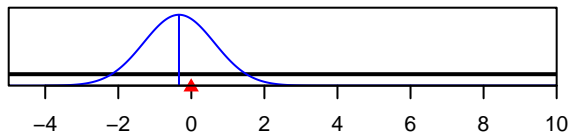


Parameter value

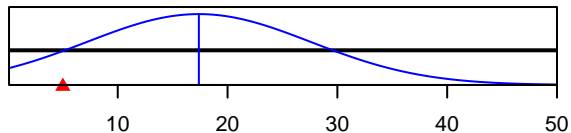
Size\_inflection\_BFISH(2)



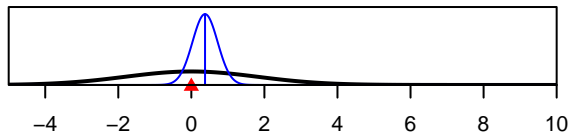
Size\_DbIN\_ascend\_se\_BFISH\_ResFish(4)



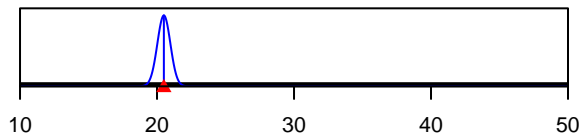
Size\_95%width\_BFISH(2)



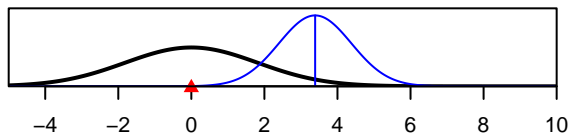
ln(DM\_theta)\_Len\_P1



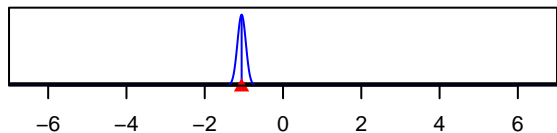
Size\_DbIN\_peak\_BFISH\_ResFish(4)



ln(DM\_theta)\_Len\_P2



Size\_DbIN\_top\_logit\_BFISH\_ResFish(4)



ln(DM\_theta)\_Sz\_P3

