

Plots created using the 'r4ss' package in R

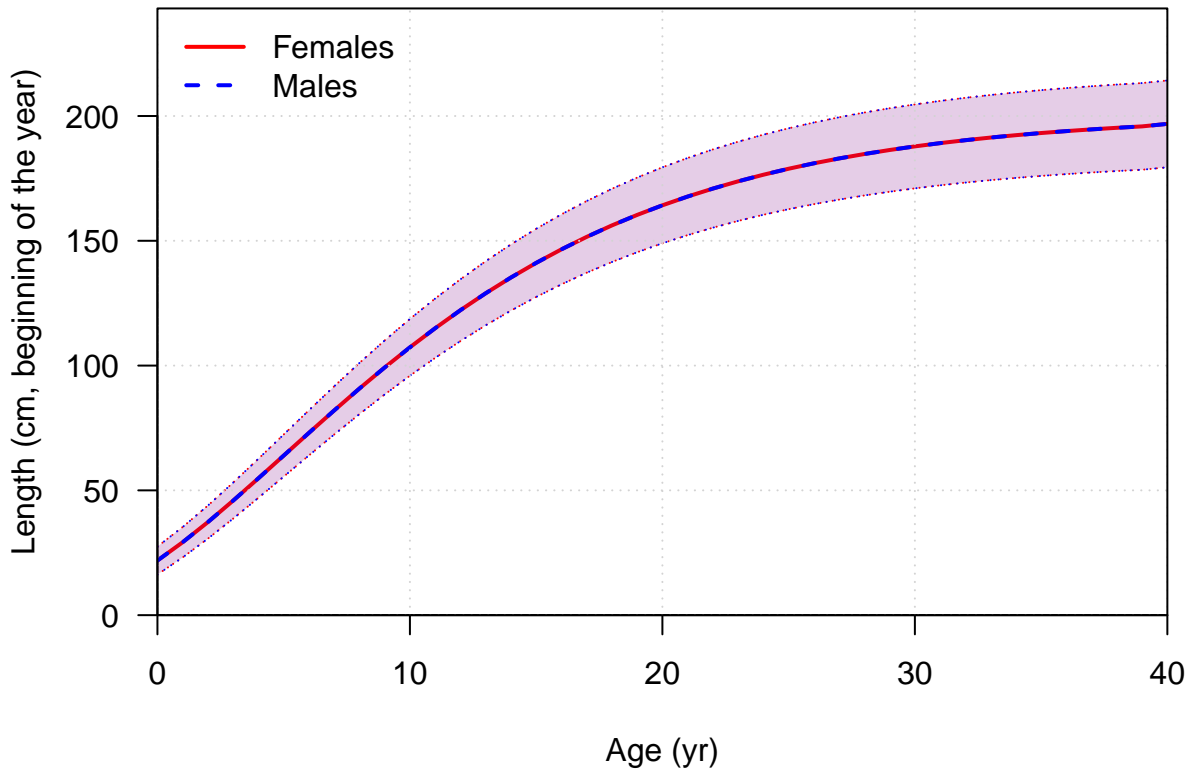
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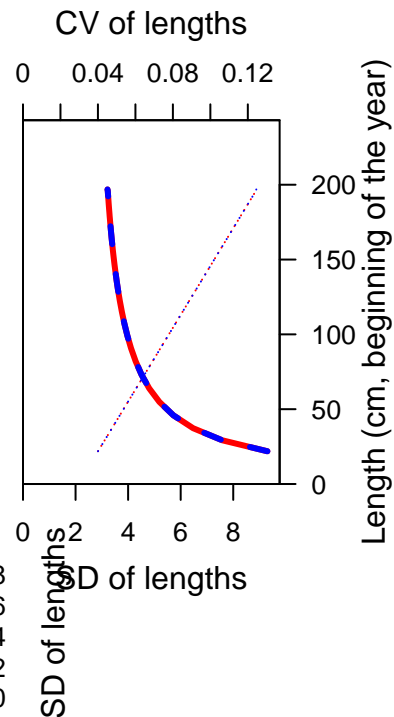
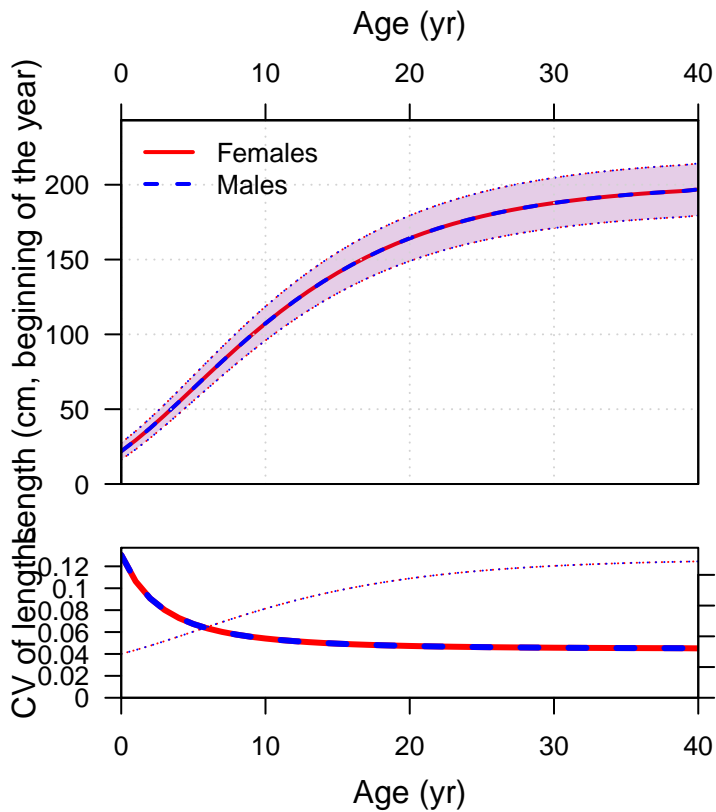
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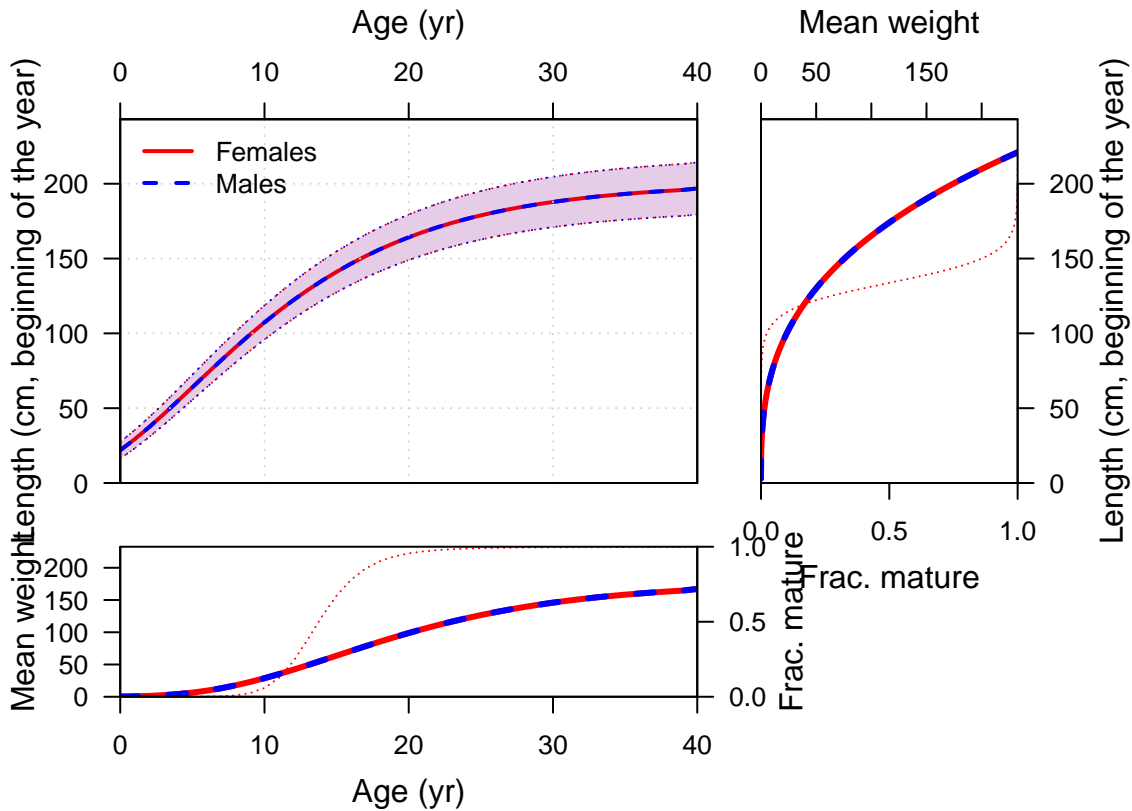
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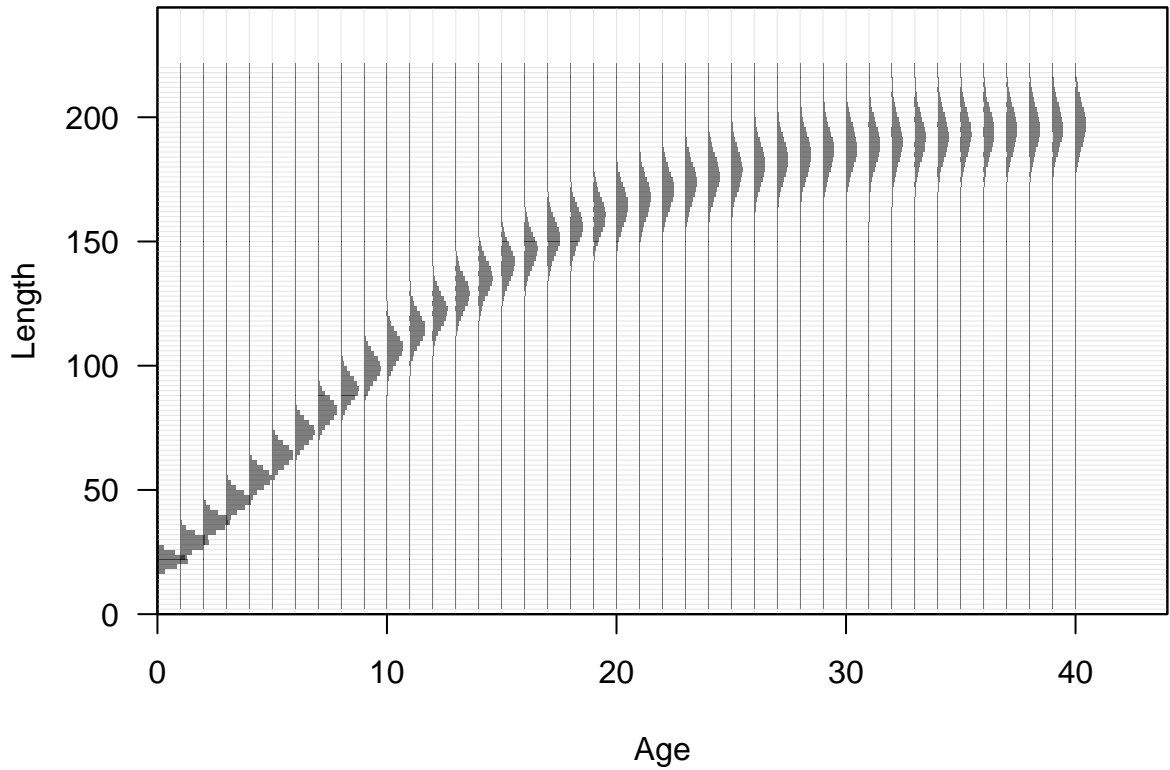
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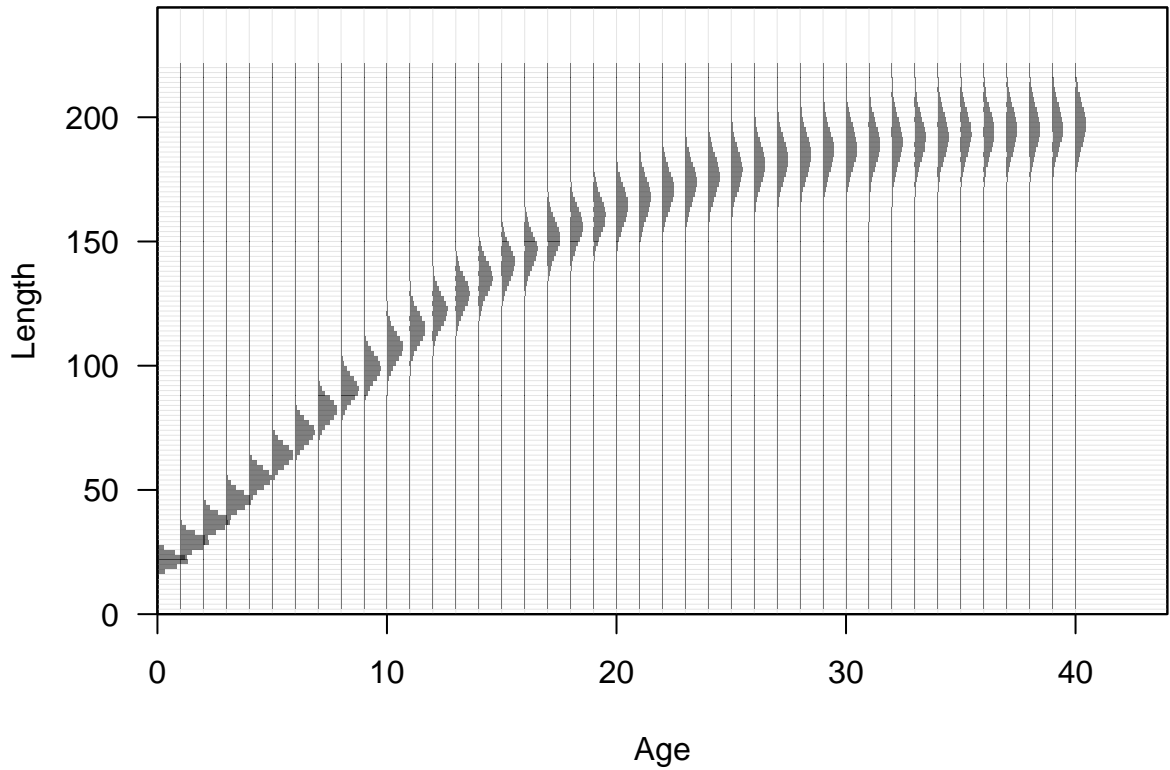
## Ending year expected growth (with 95% intervals)

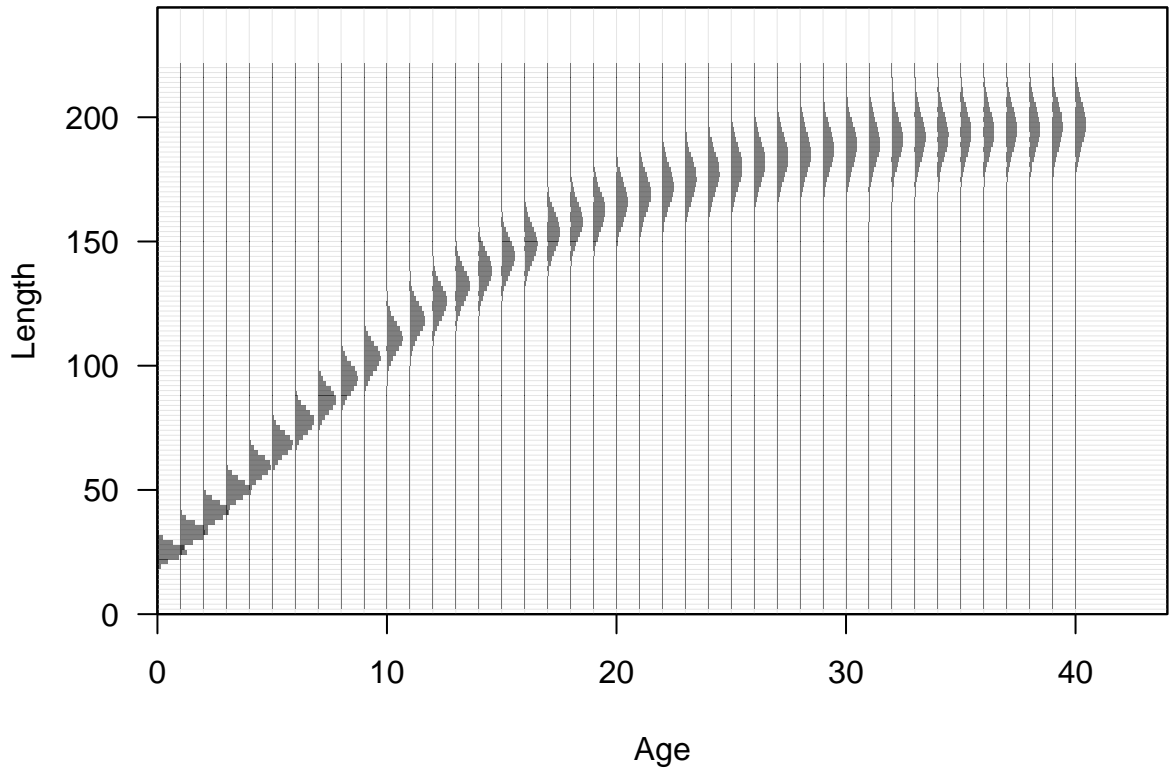


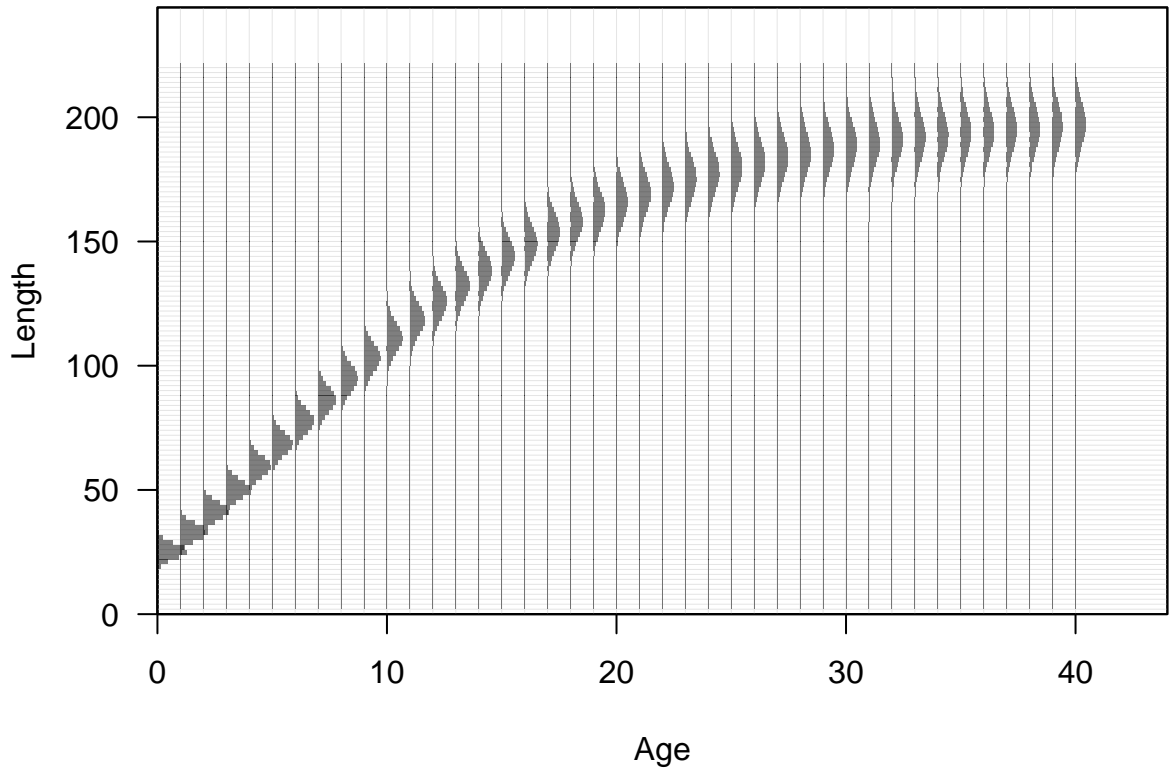




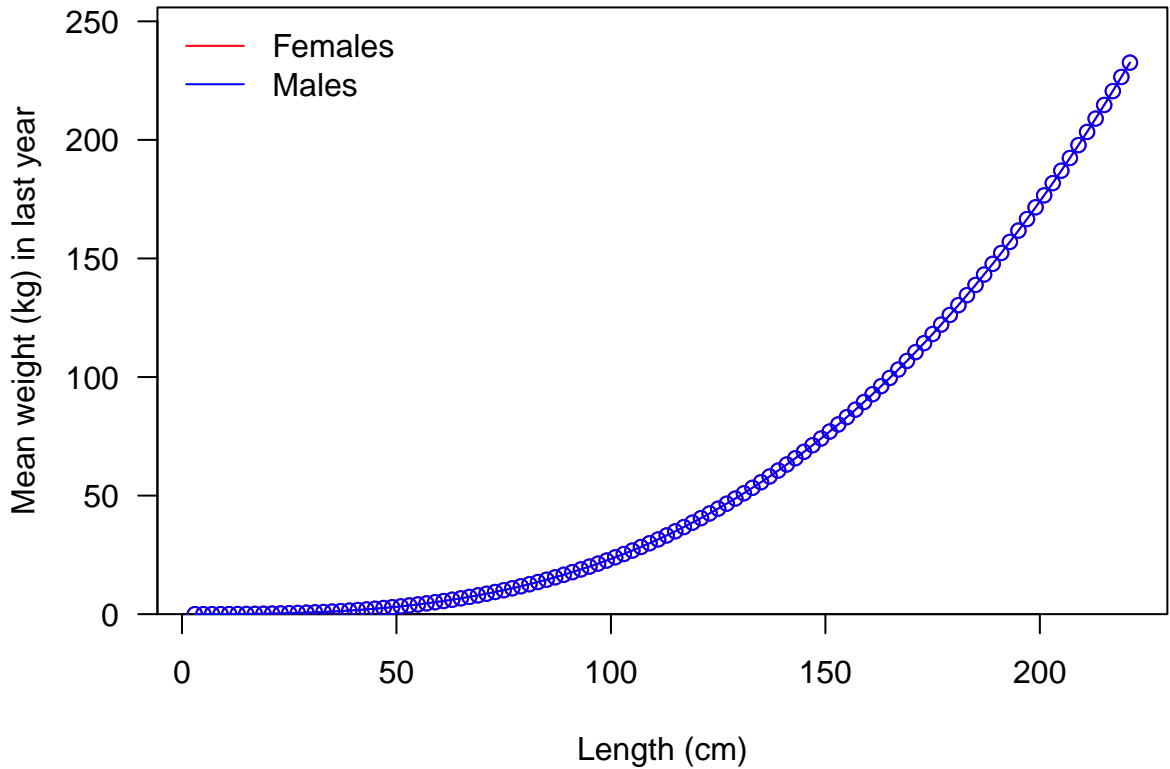


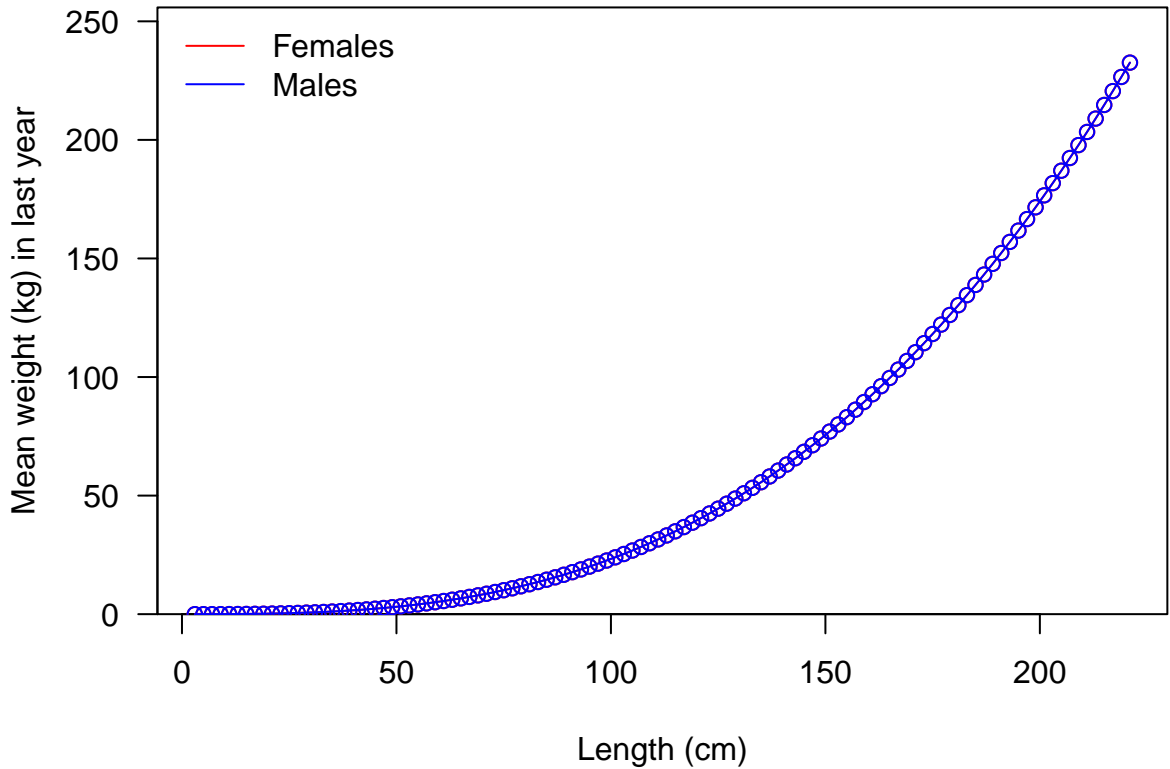


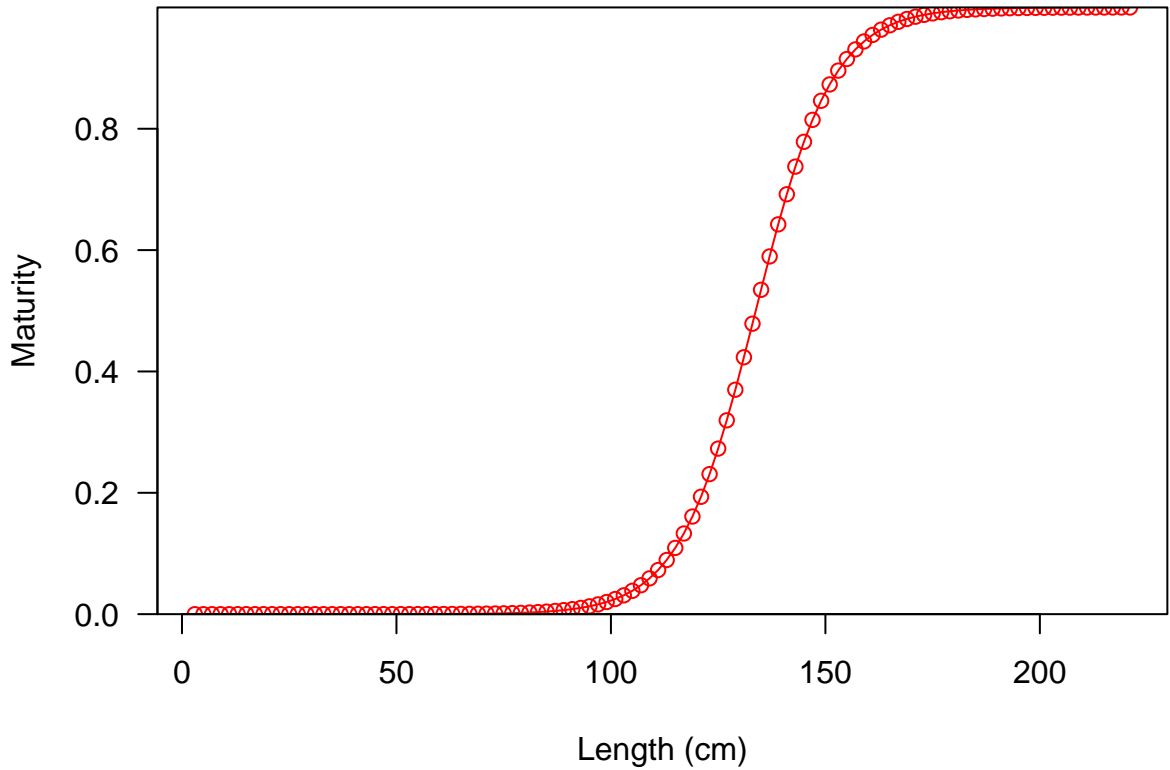


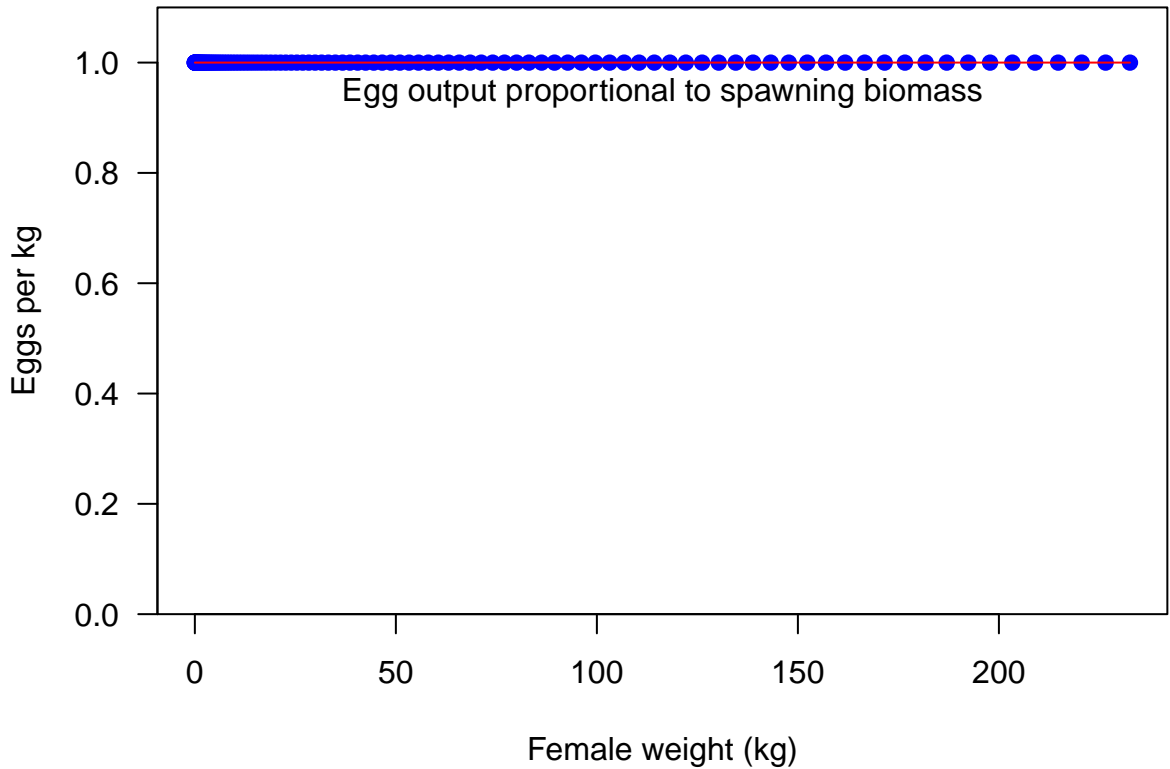


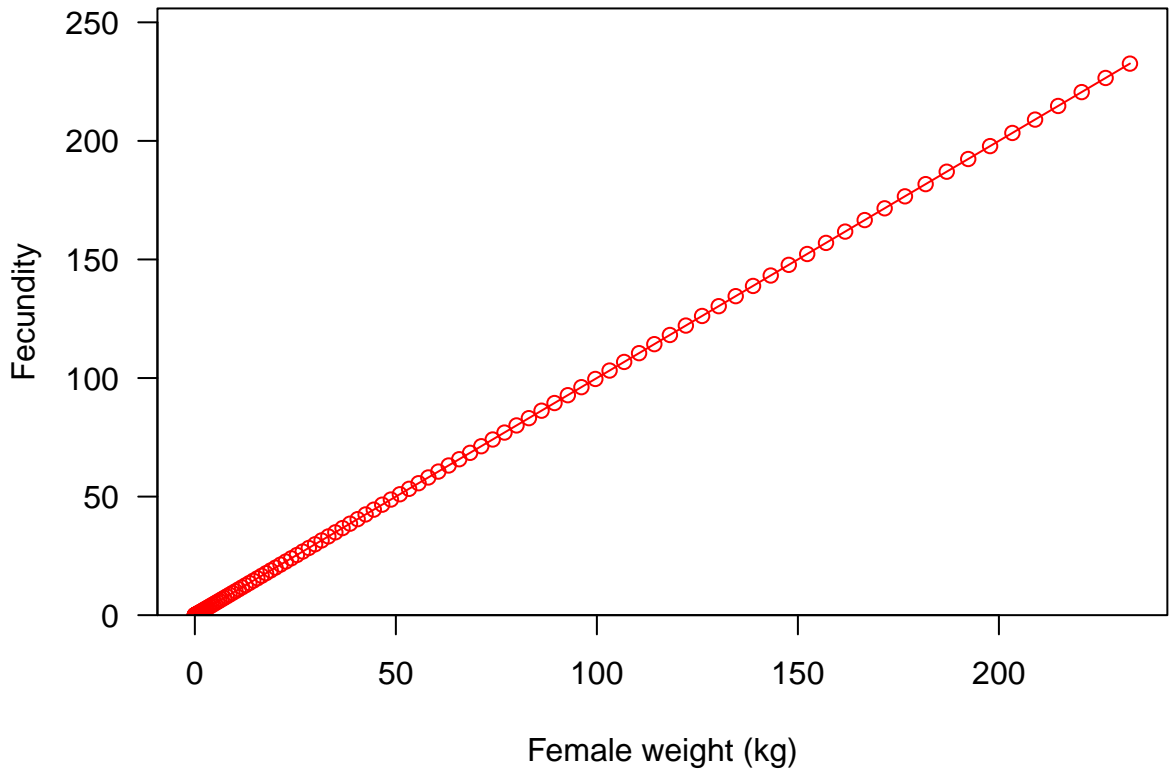


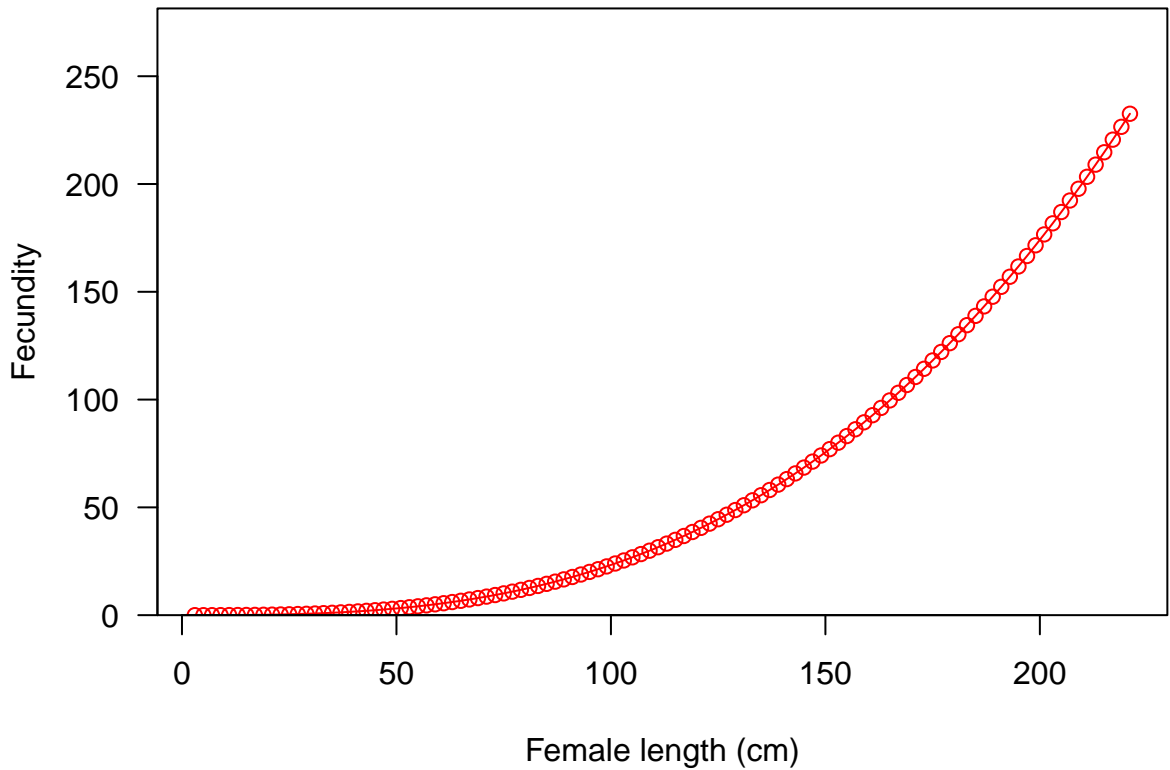


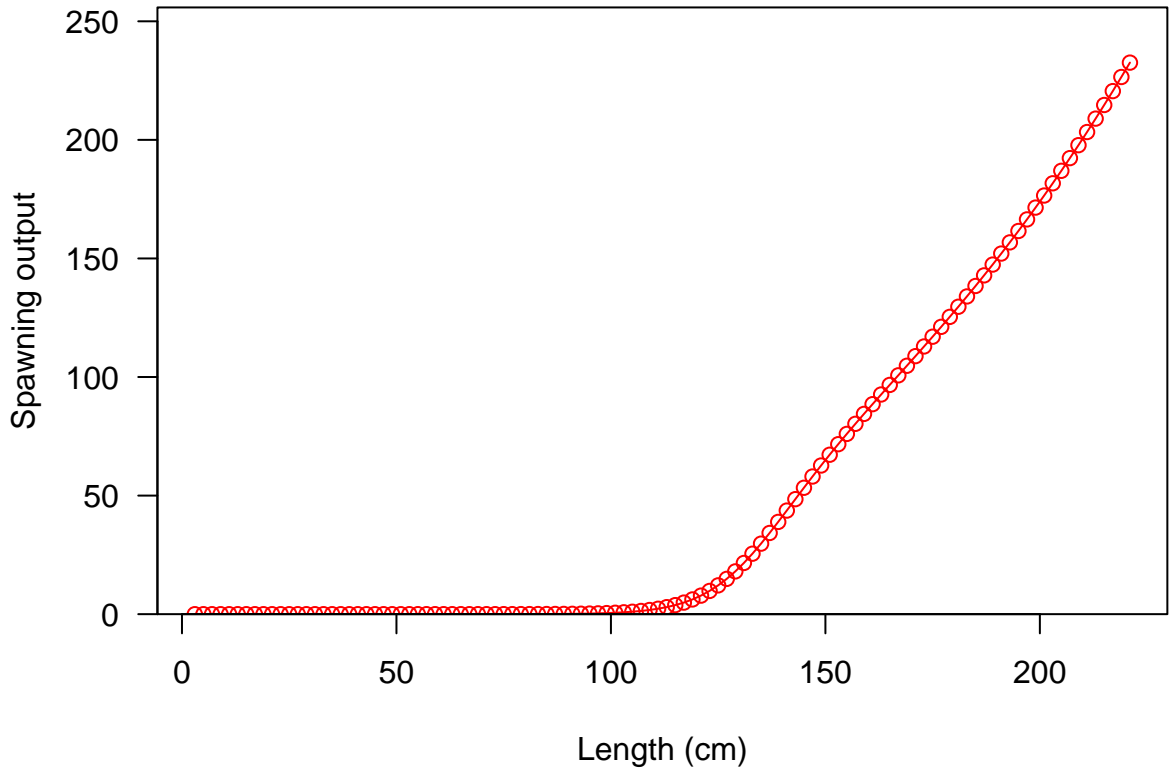


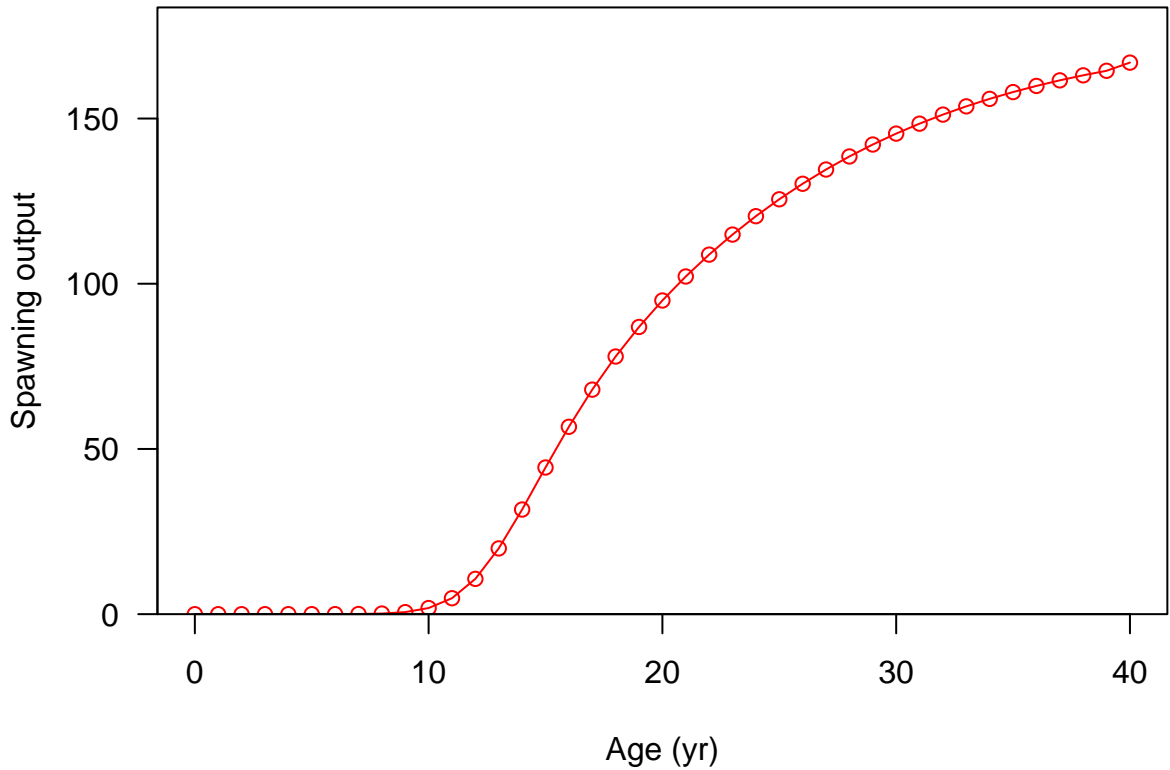






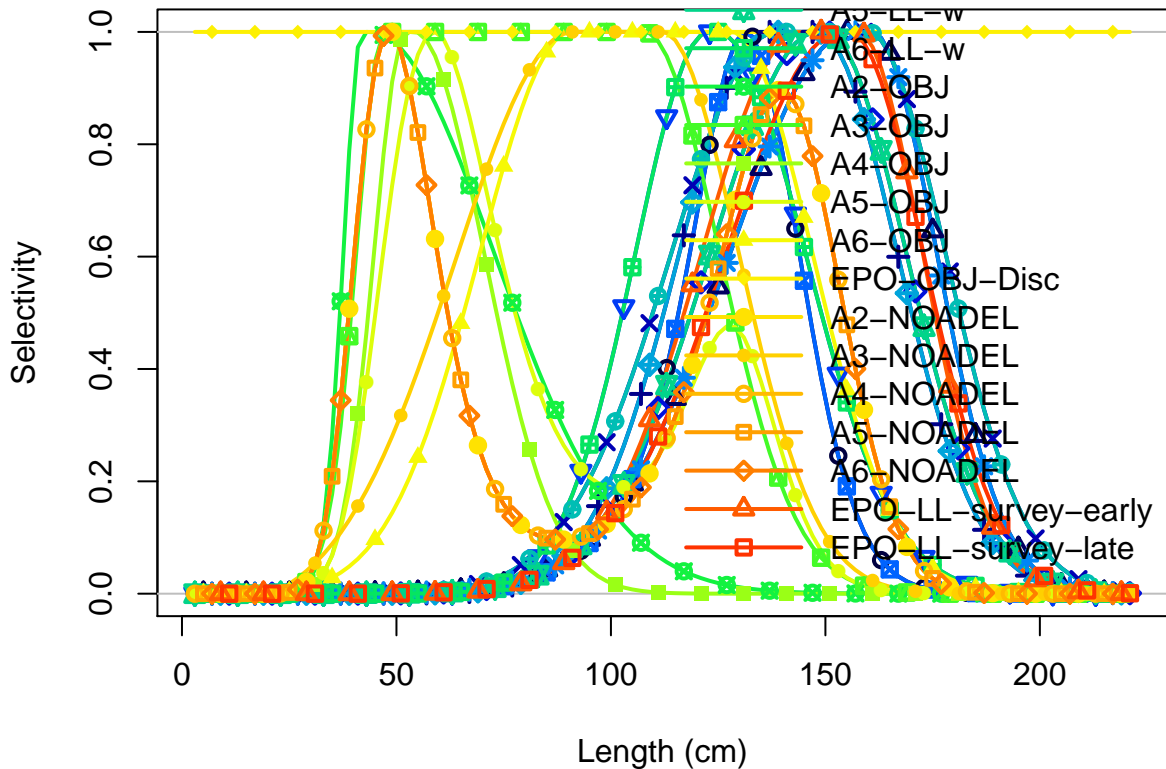




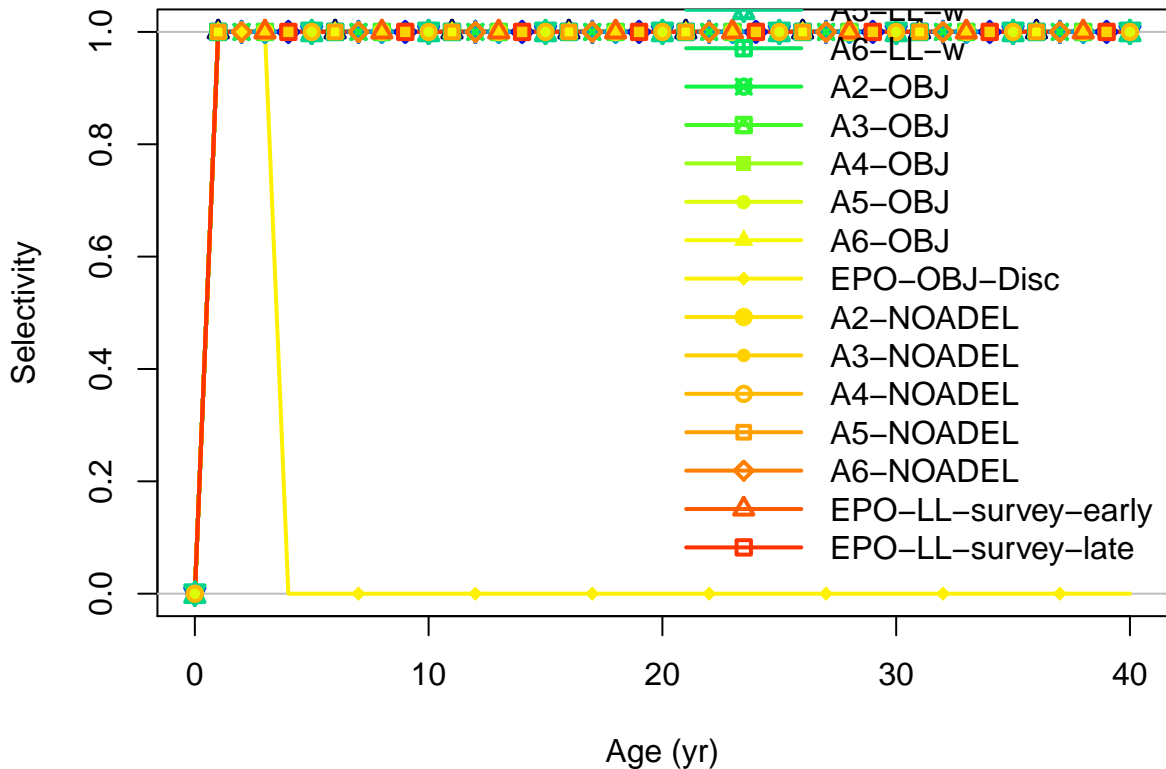




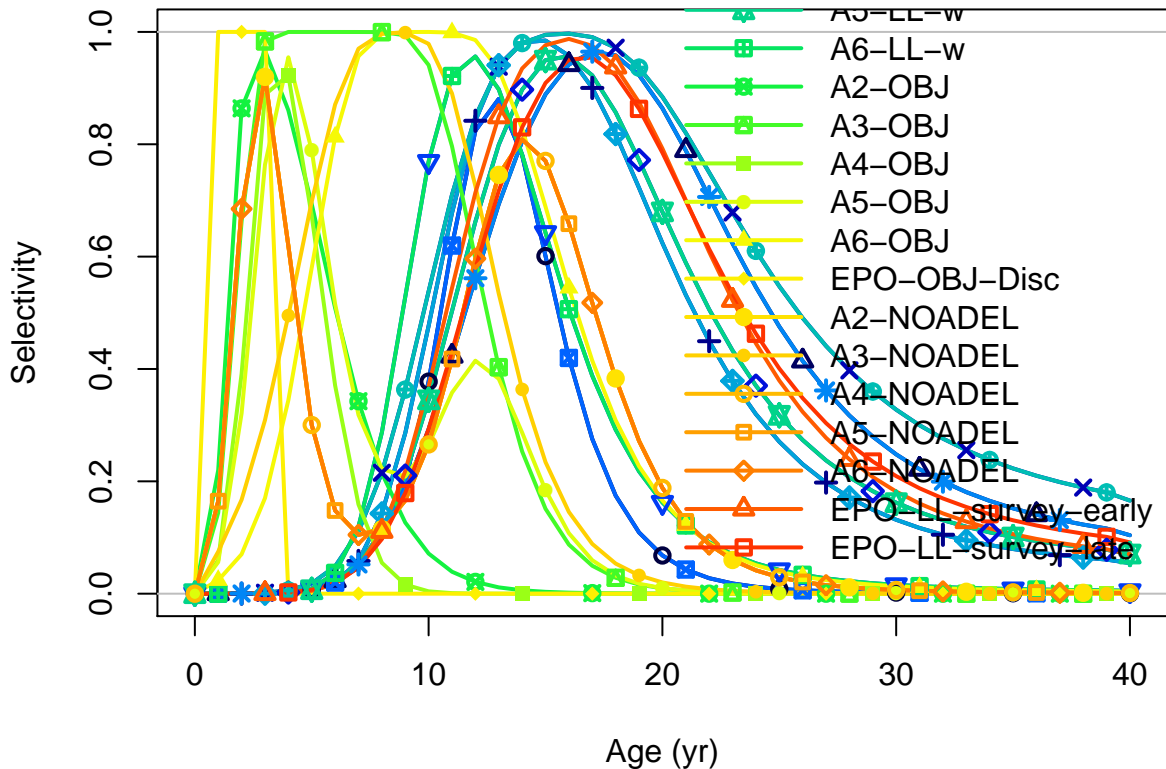
## Length-based selectivity by fleet in 180



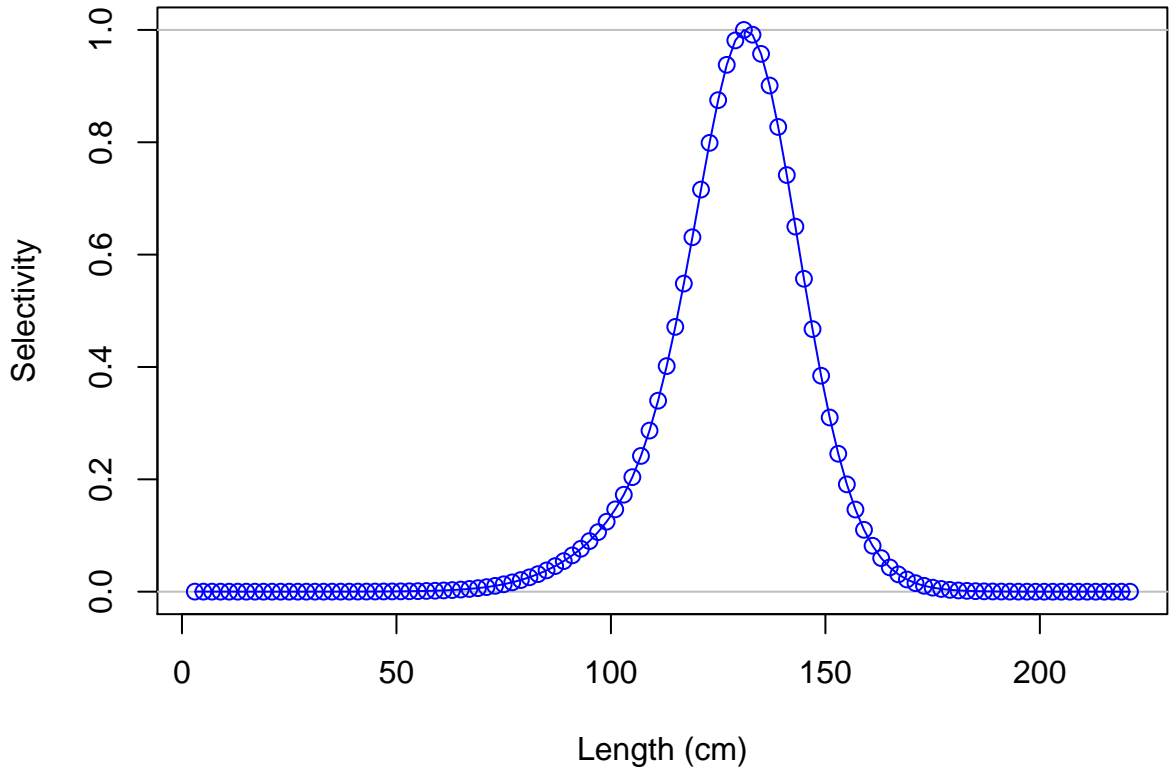
## Age-based selectivity by fleet in 180



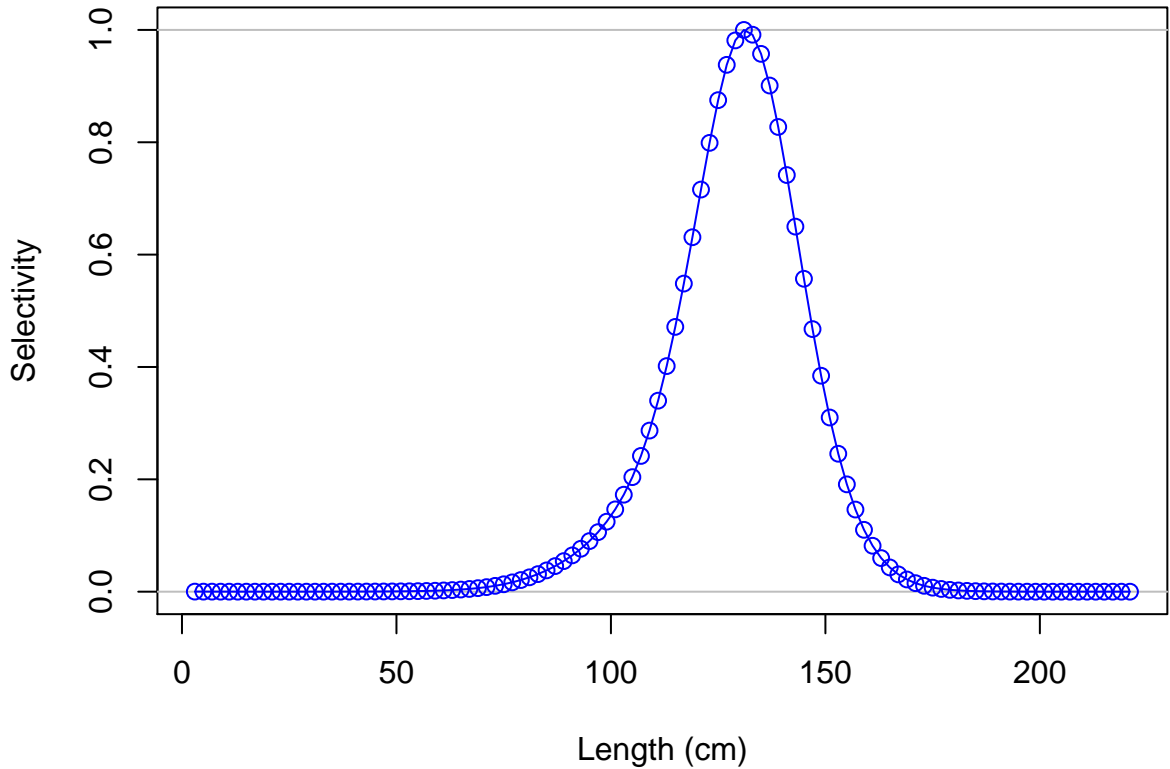
# Derived age-based from length-based selectivity by fleet in 180



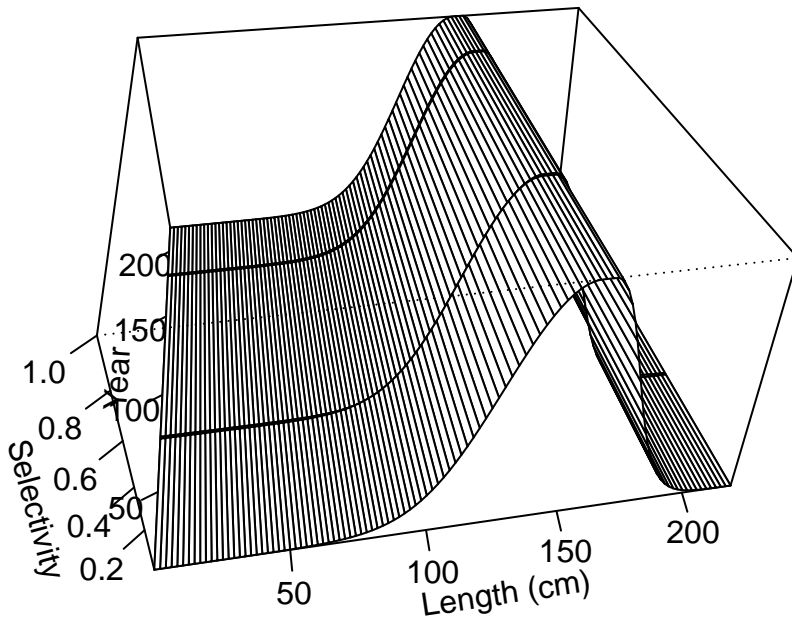
## Female ending year selectivity for A1-LL-n



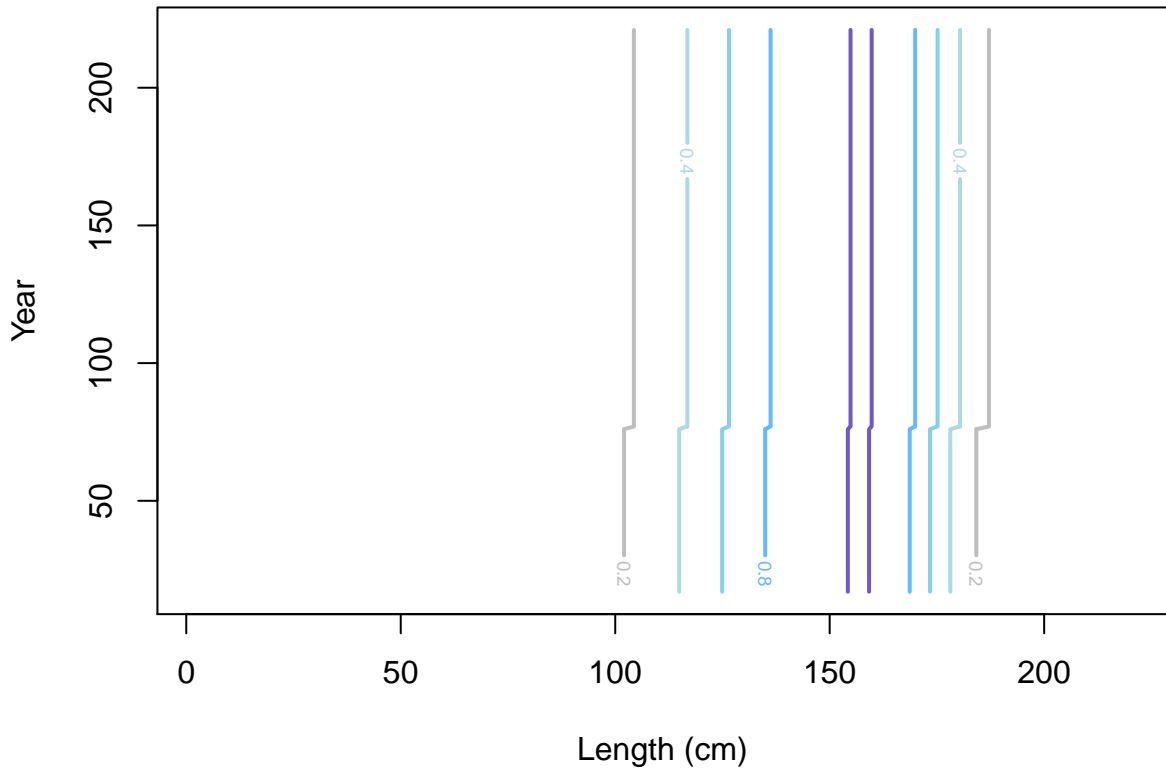
## Male ending year selectivity for A1-LL-n



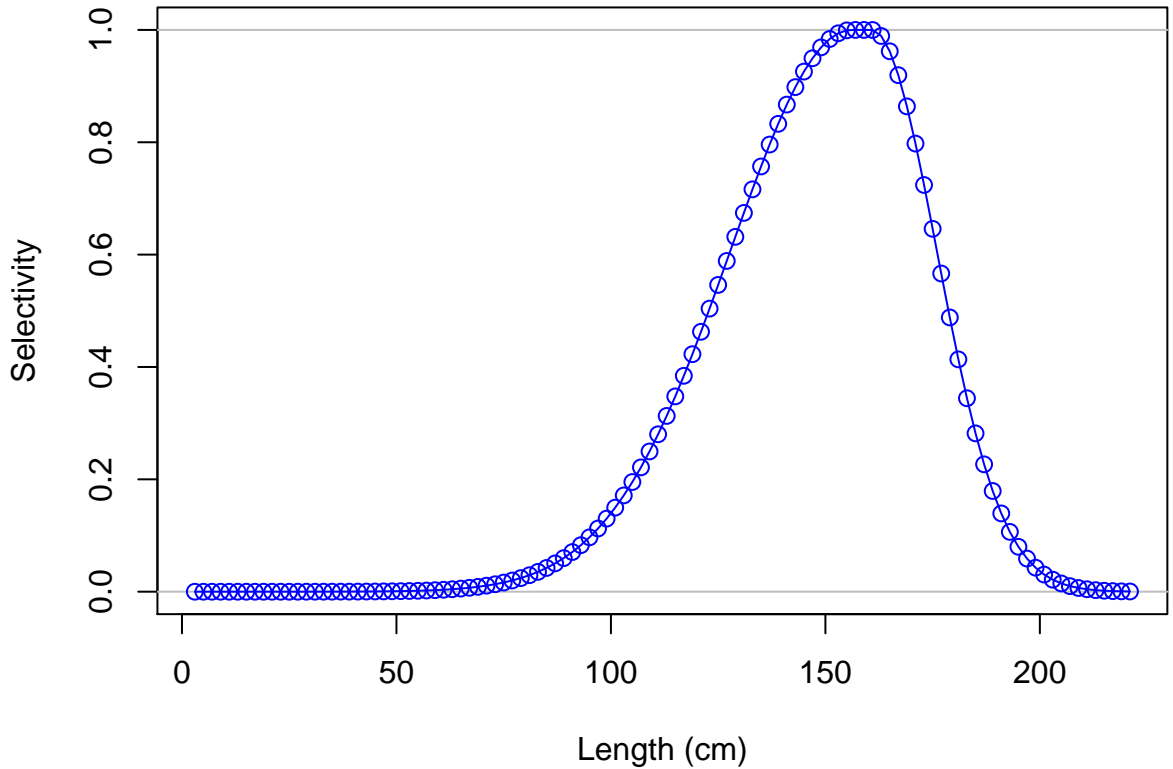
## Female time-varying selectivity for A2-LL-n



# Female time-varying selectivity for A2-LL-n

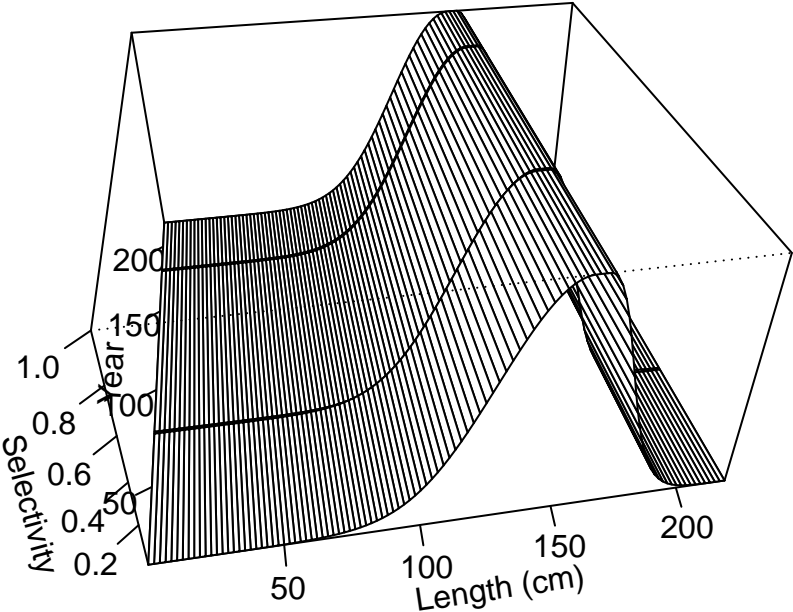


## Female ending year selectivity for A2-LL-n

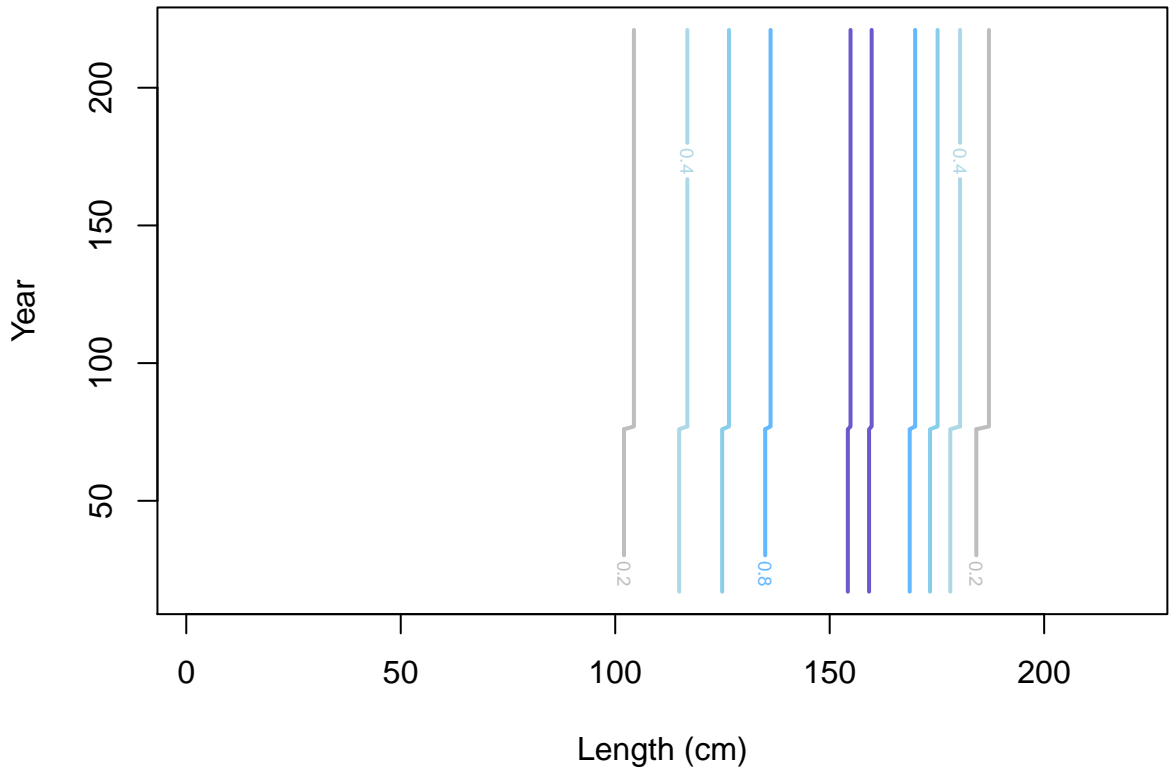




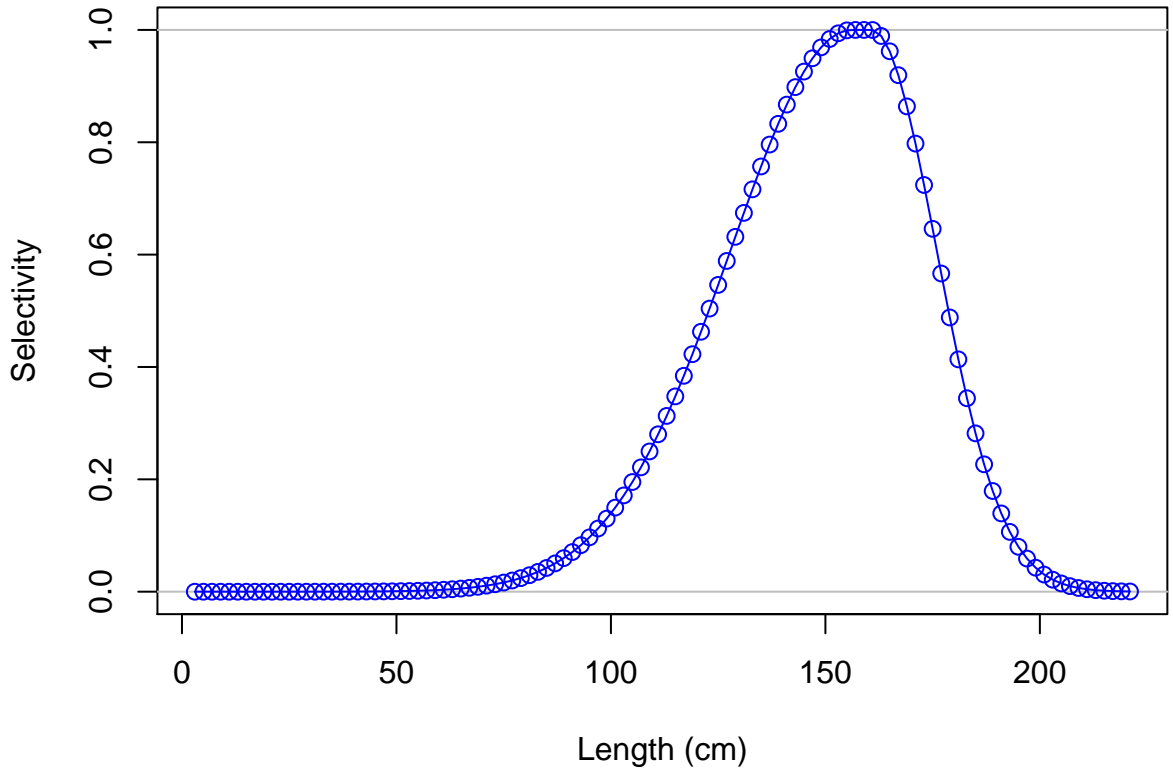
# Male time-varying selectivity for A2-LL-n



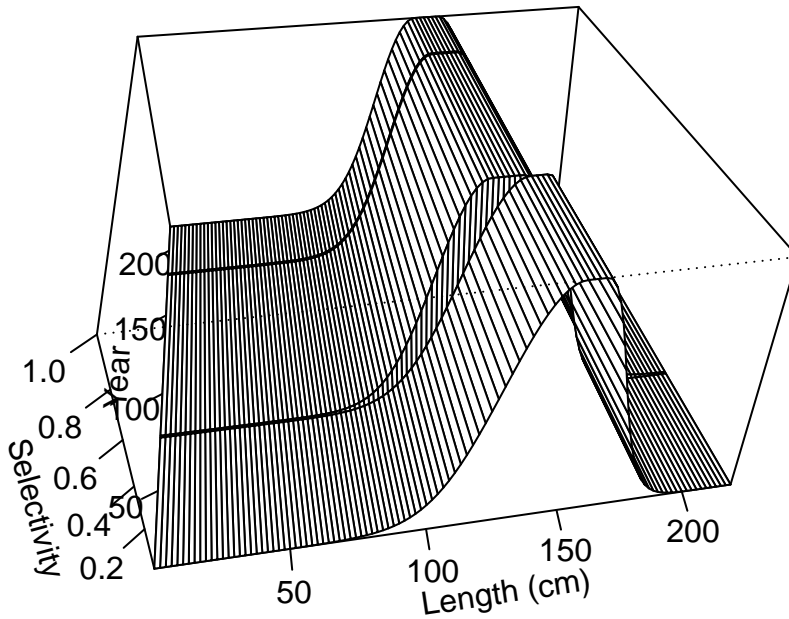
# Male time-varying selectivity for A2-LL-n



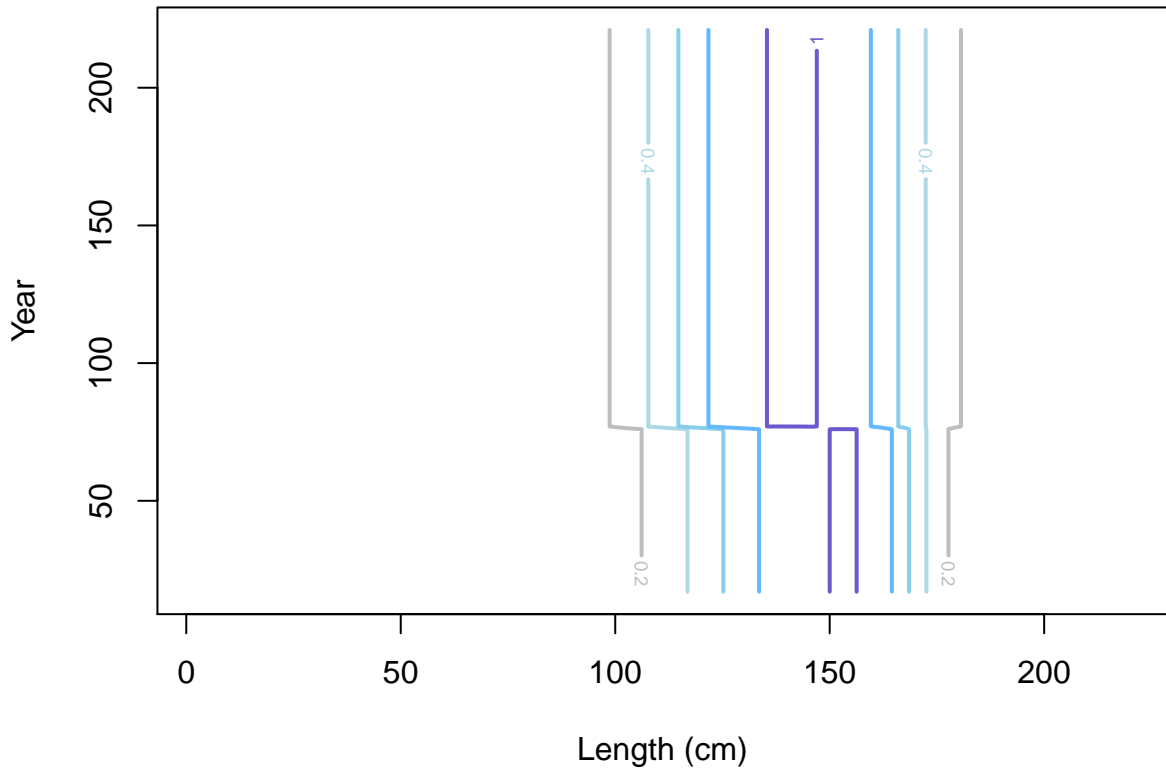
## Male ending year selectivity for A2-LL-n



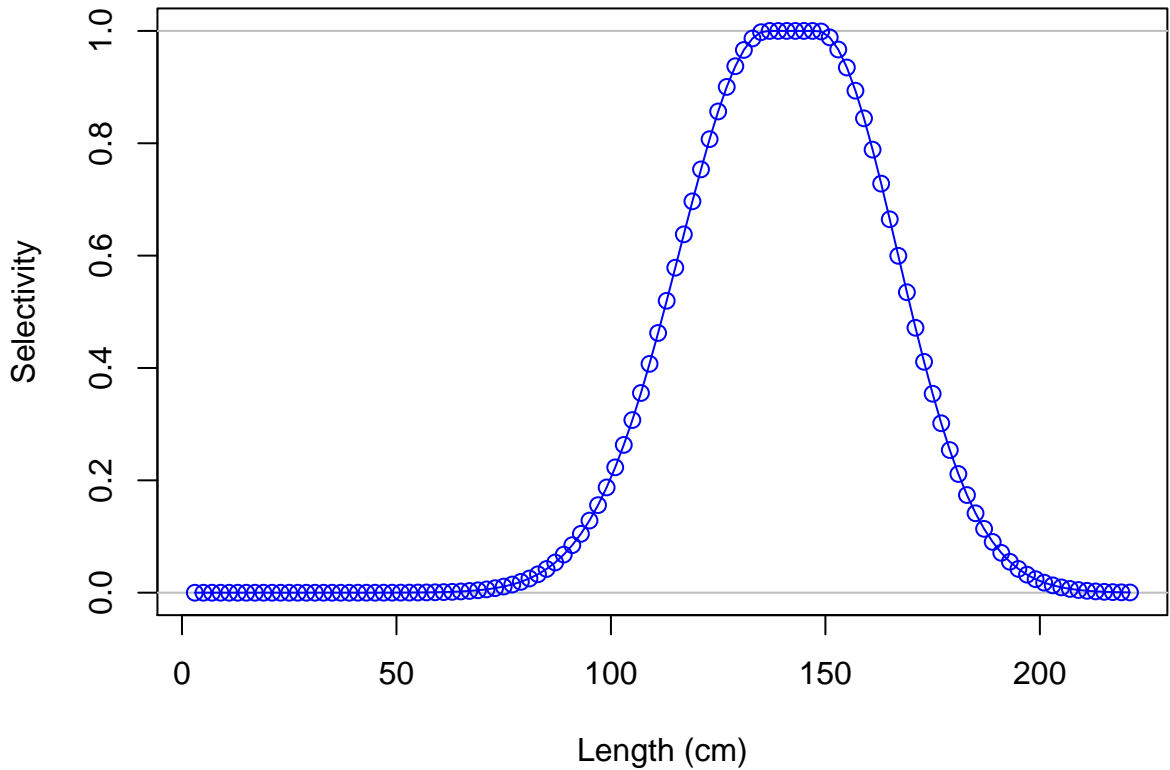
## Female time-varying selectivity for A3-LL-n



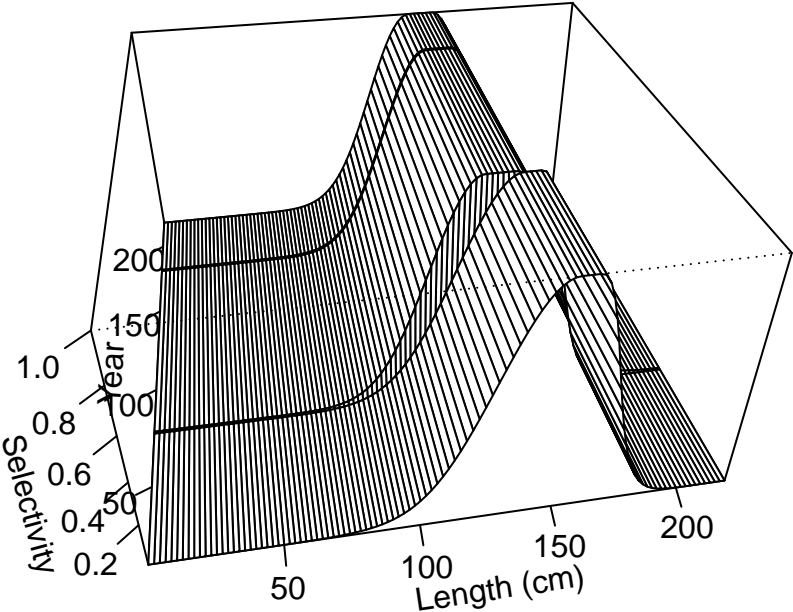
# Female time-varying selectivity for A3-LL-n



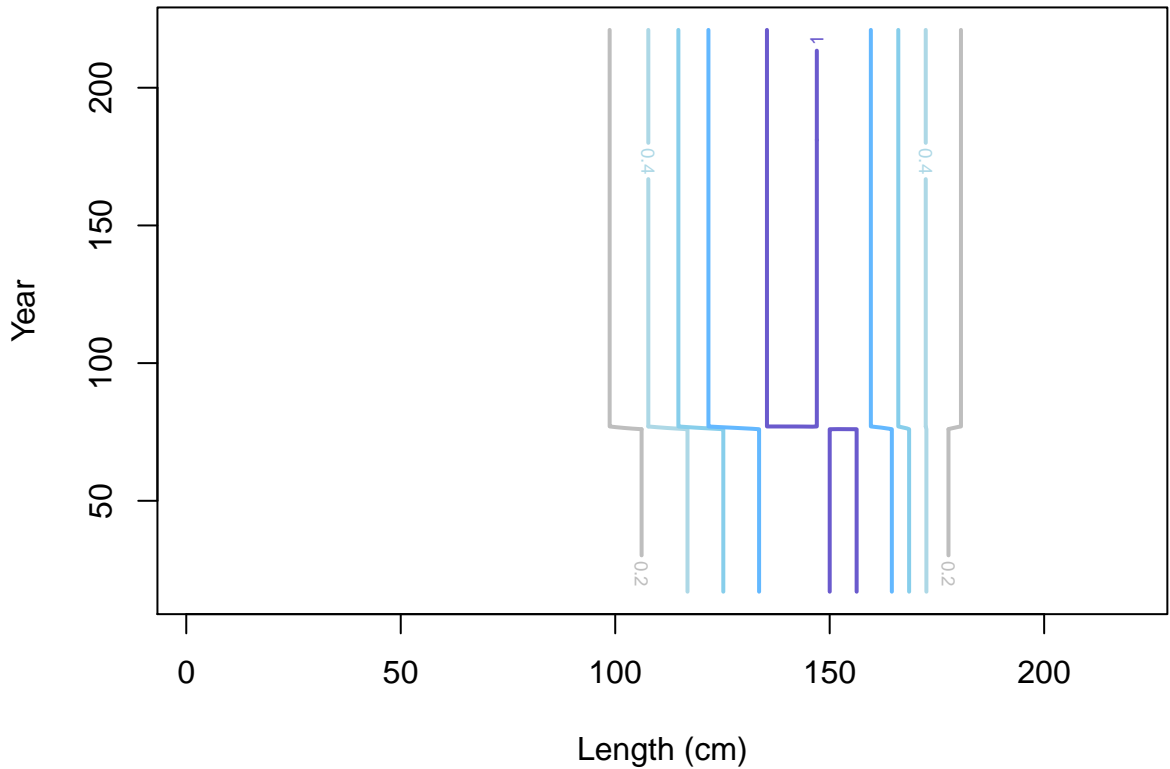
## Female ending year selectivity for A3-LL-n



# Male time-varying selectivity for A3-LL-n

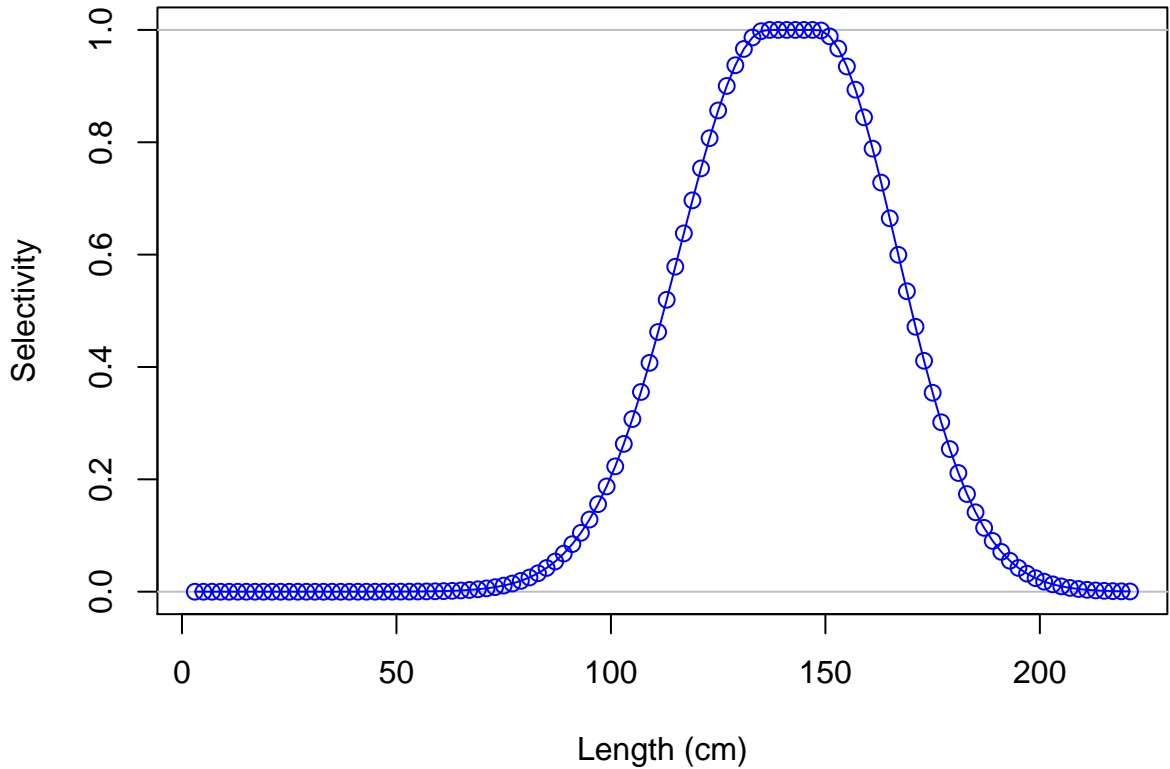


# Male time-varying selectivity for A3-LL-n

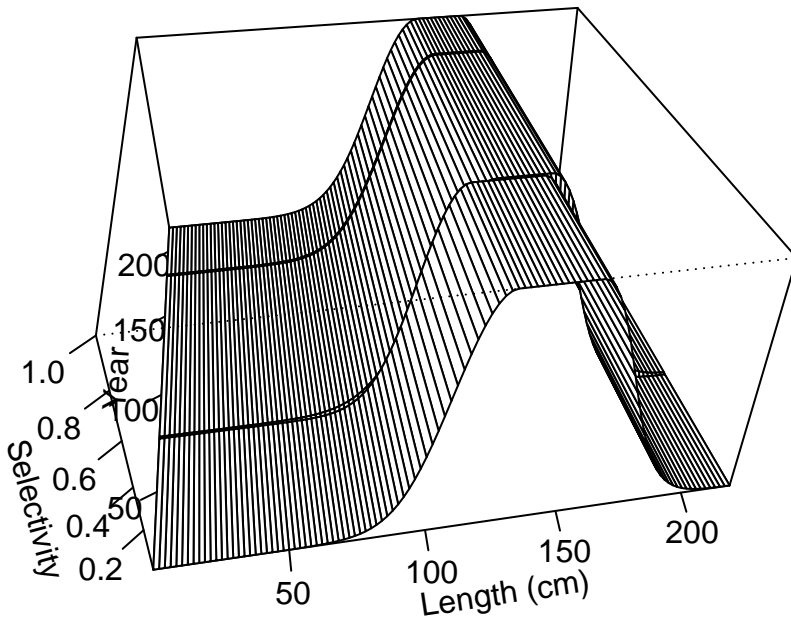




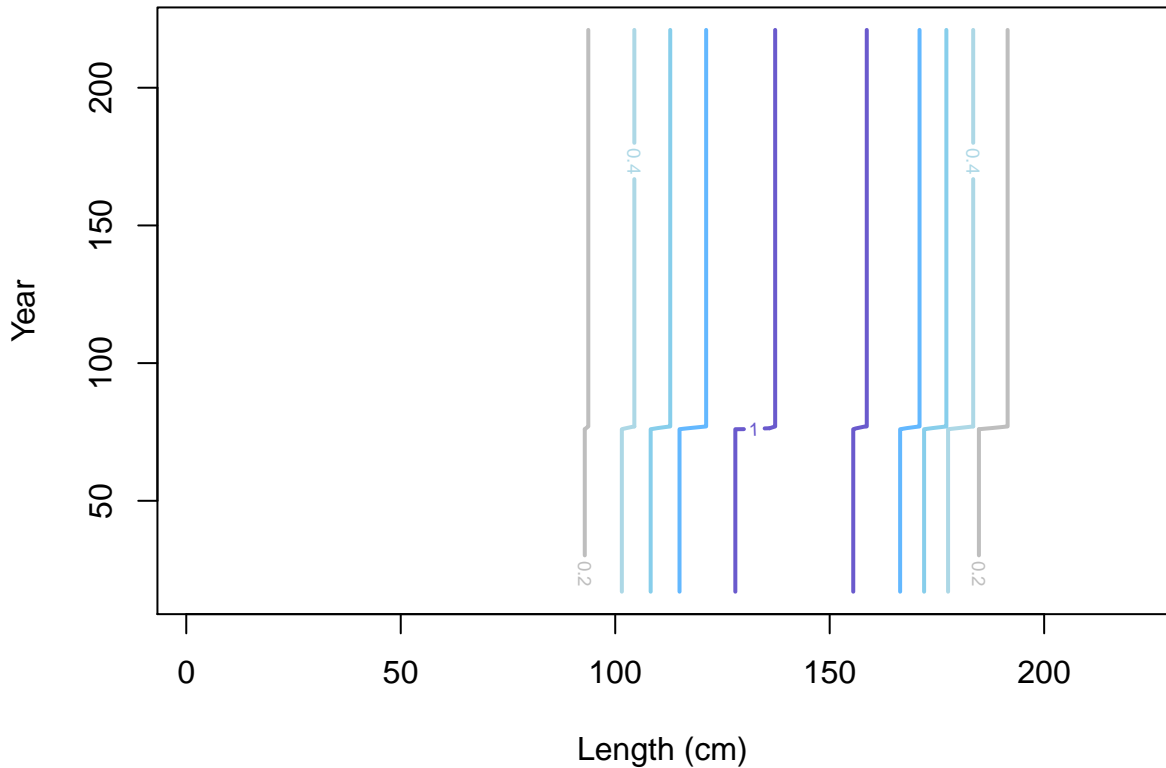
## Male ending year selectivity for A3-LL-n



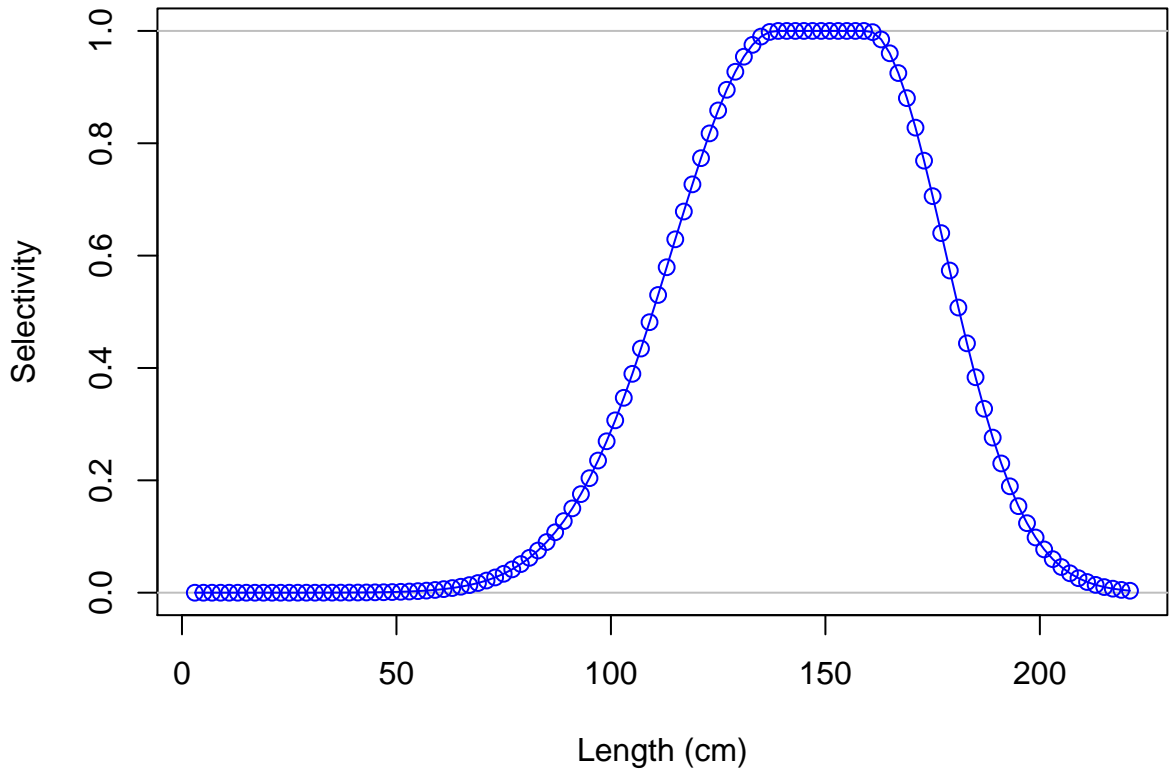
## Female time-varying selectivity for A4-LL-n



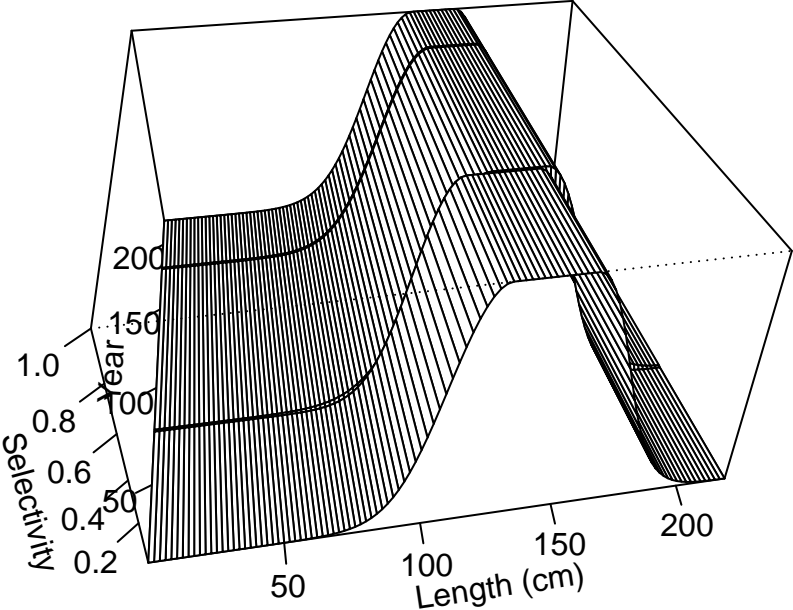
# Female time-varying selectivity for A4-LL-n



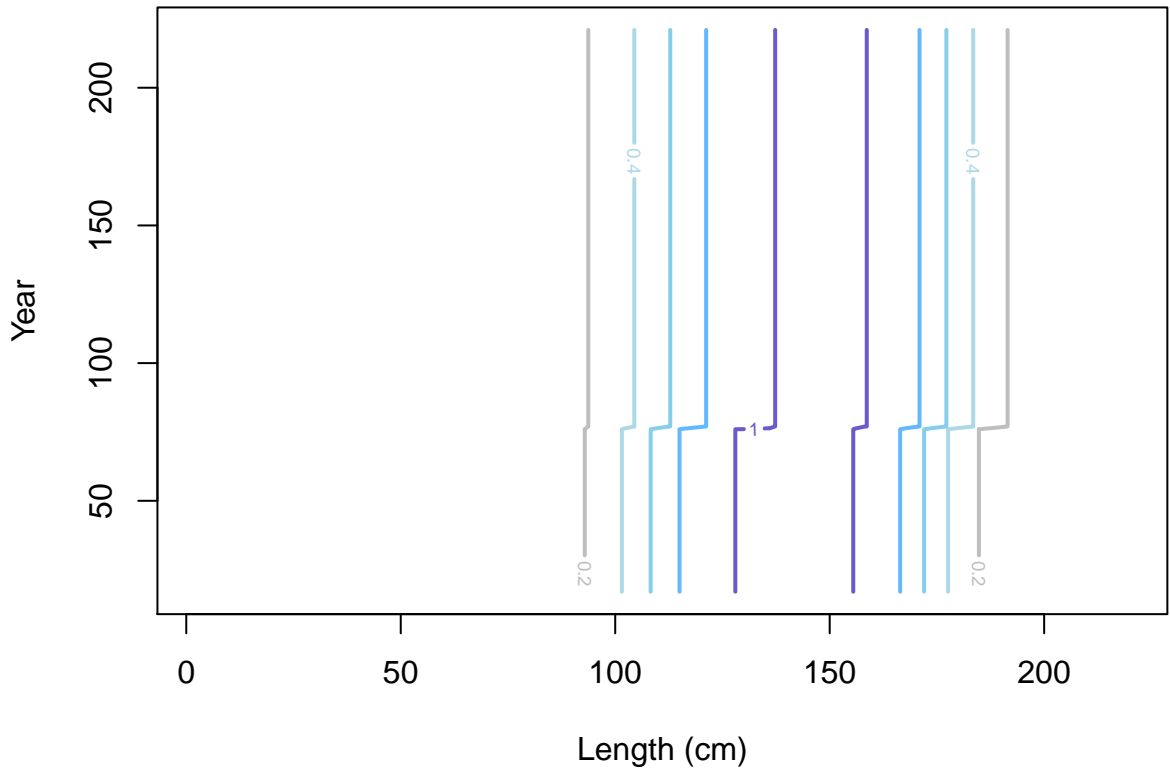
## Female ending year selectivity for A4-LL-n



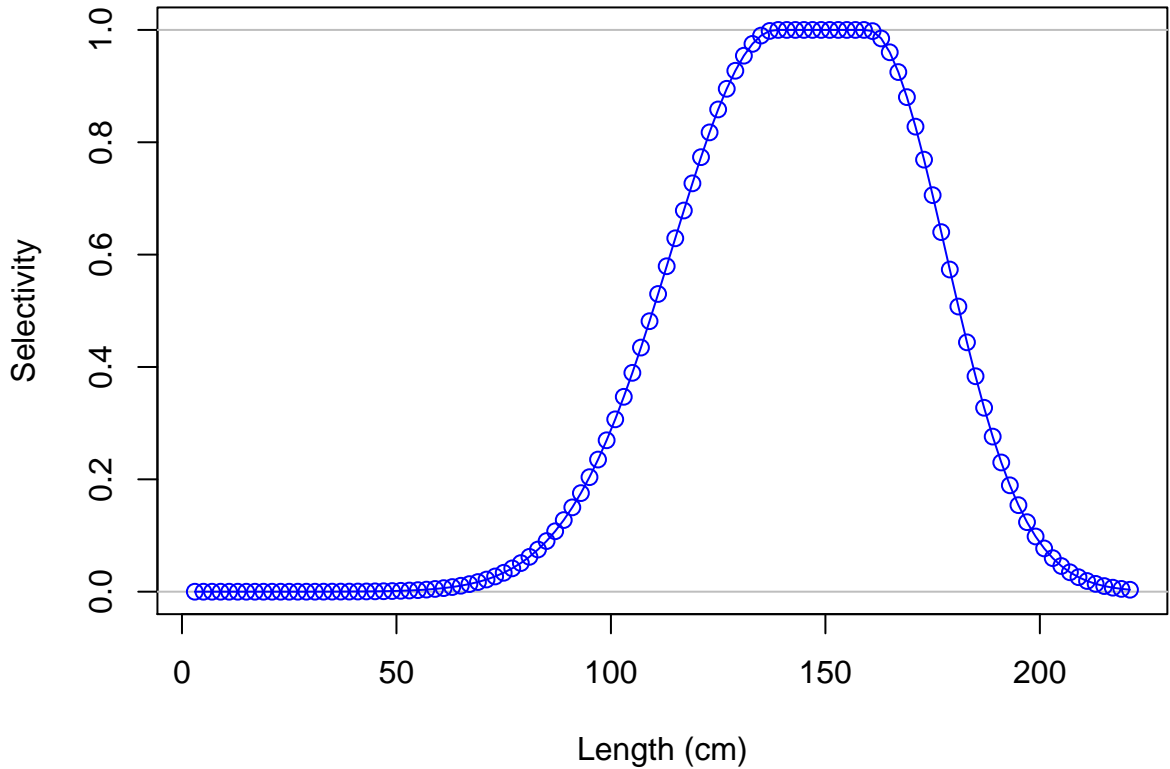
# Male time-varying selectivity for A4-LL-n



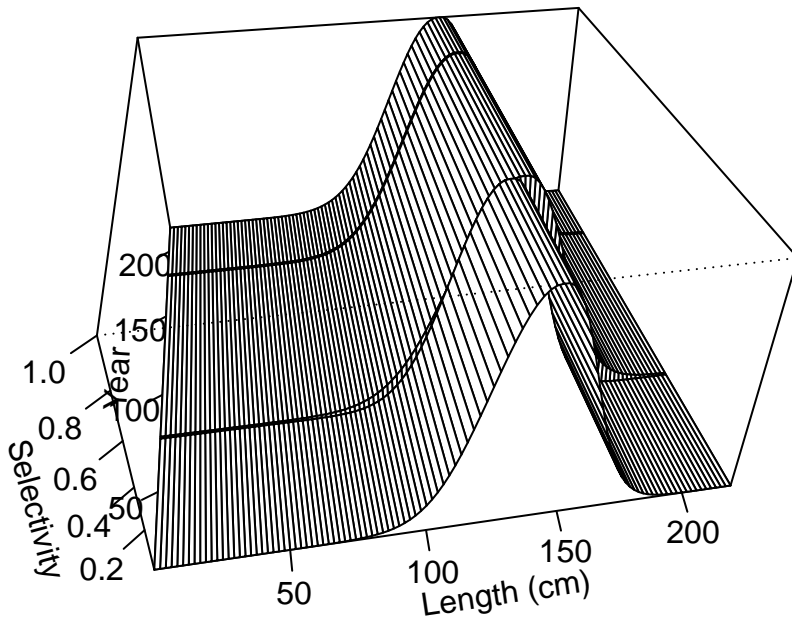
# Male time-varying selectivity for A4-LL-n



## Male ending year selectivity for A4-LL-n

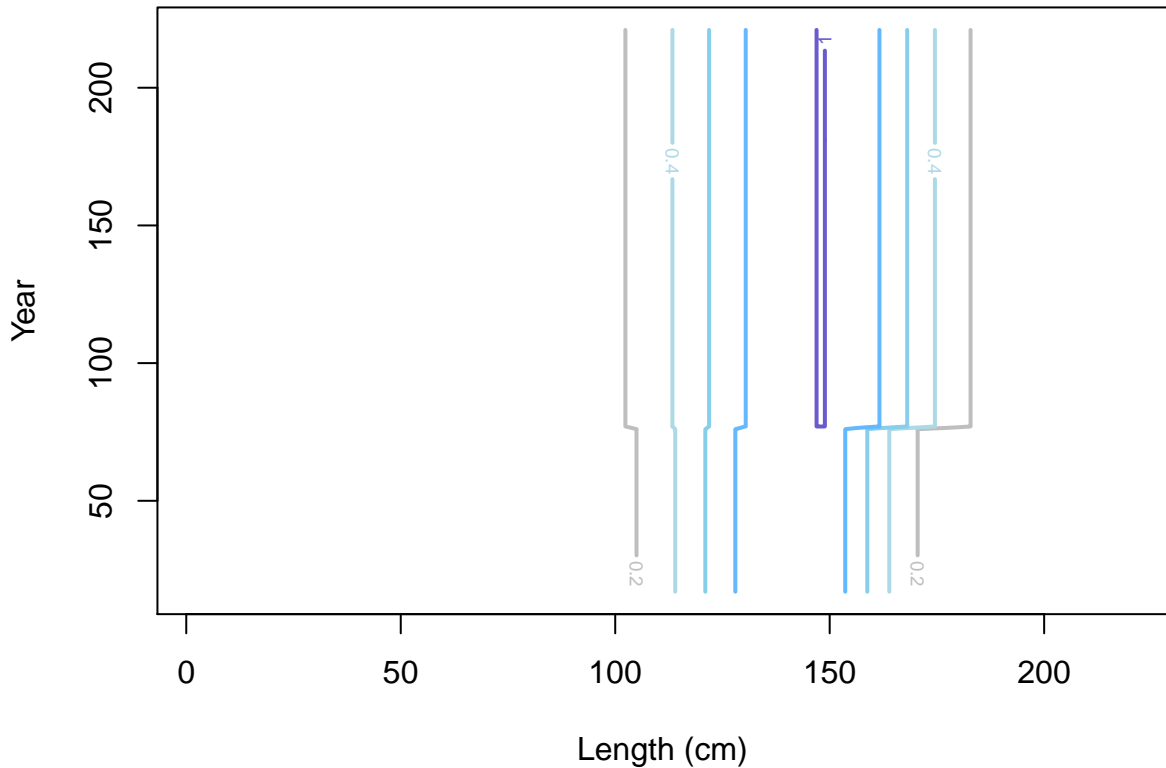


## Female time-varying selectivity for A5-LL-n

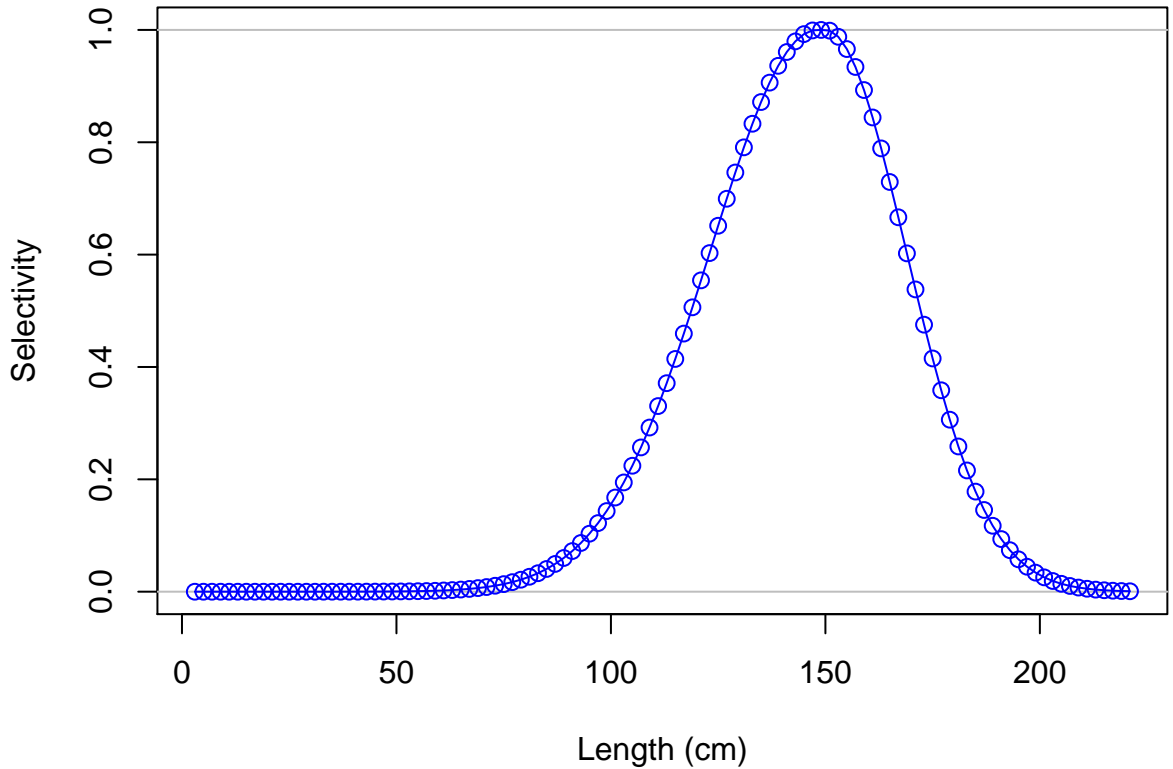




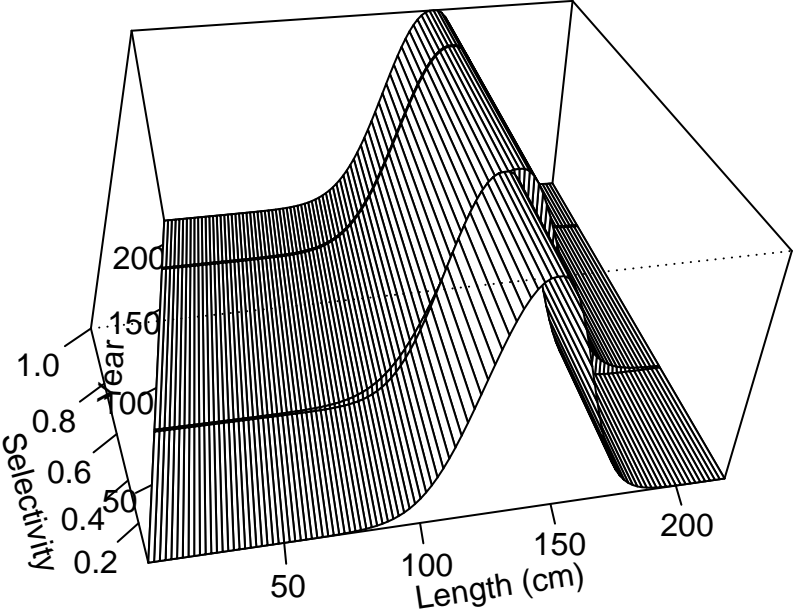
## Female time-varying selectivity for A5-LL-n



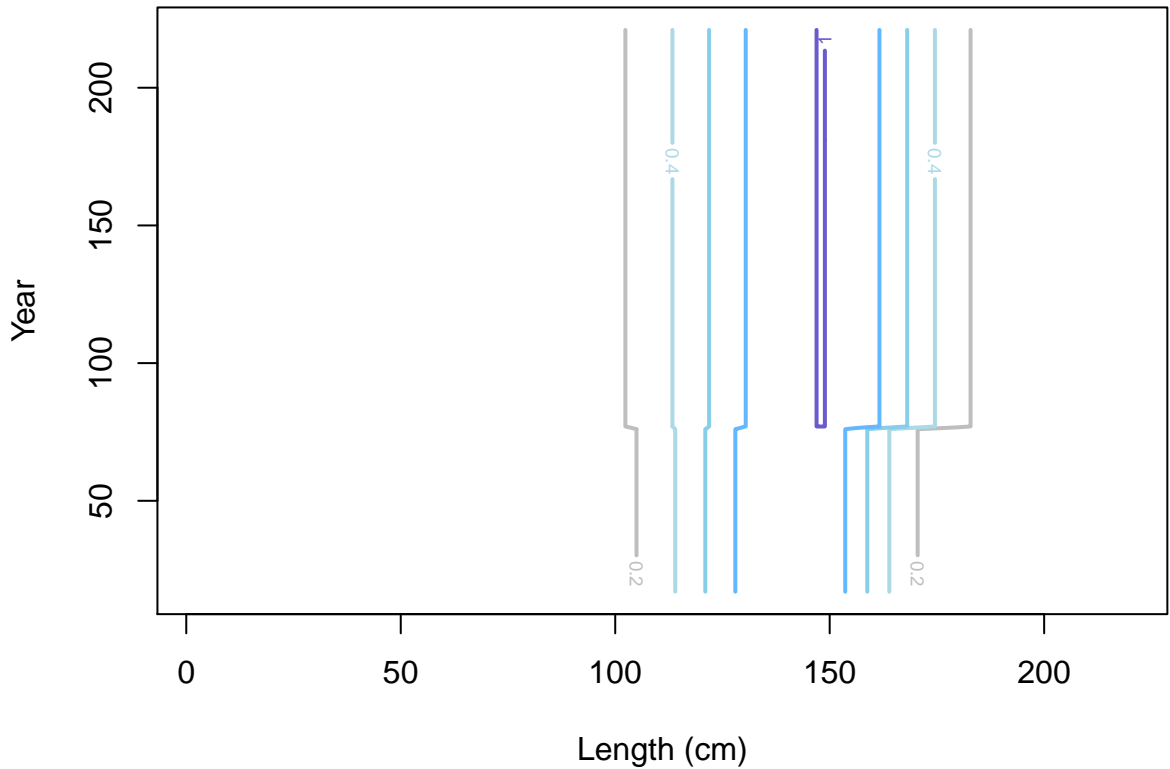
# Female ending year selectivity for A5-LL-n



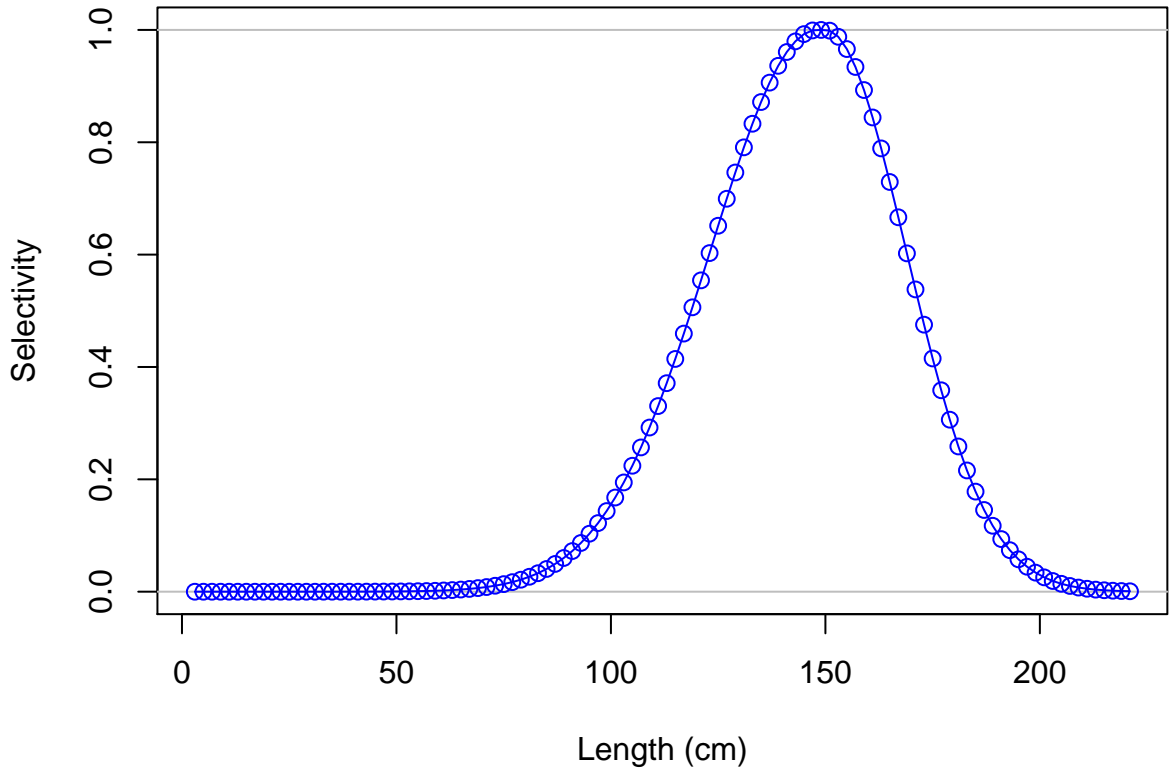
# Male time-varying selectivity for A5-LL-n



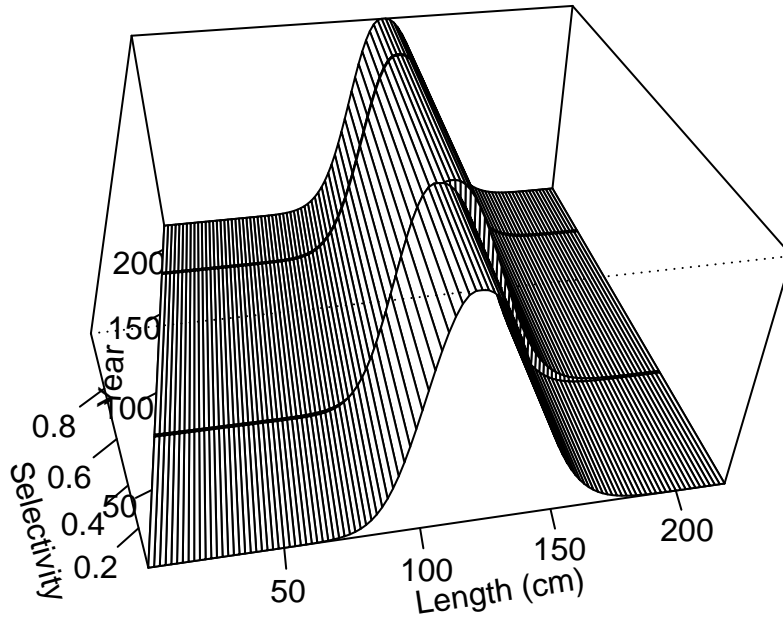
# Male time-varying selectivity for A5-LL-n



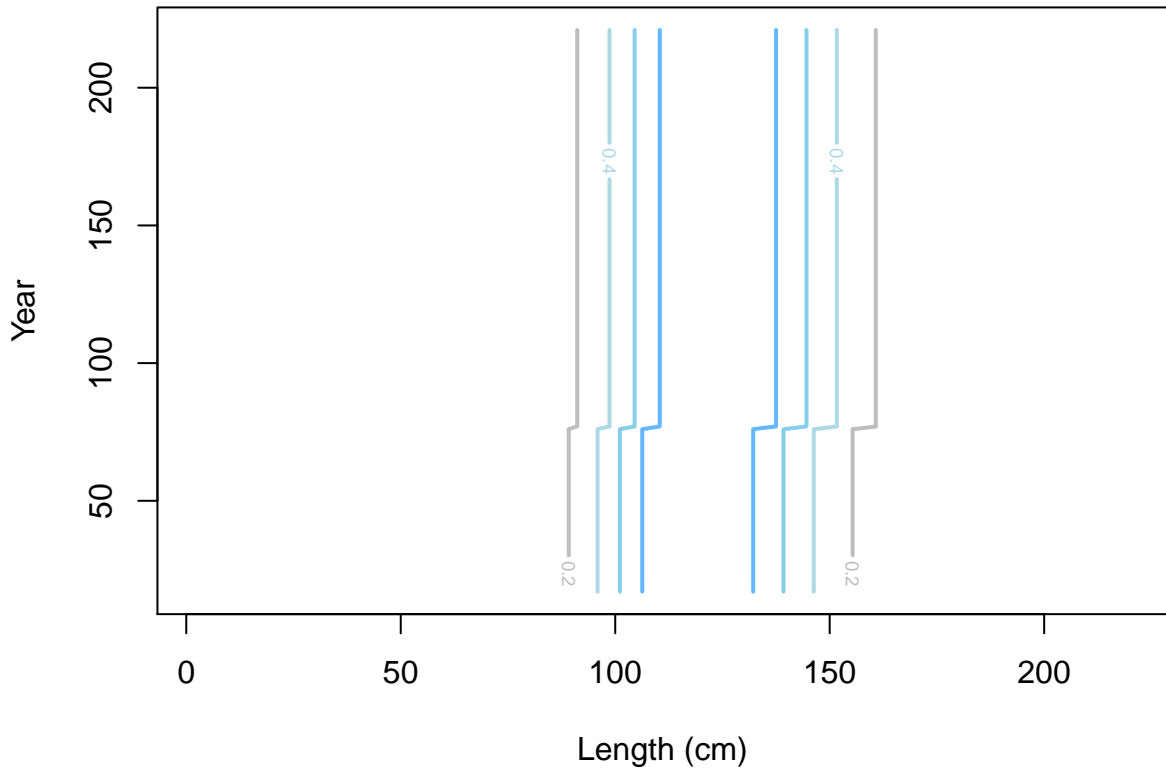
## Male ending year selectivity for A5-LL-n



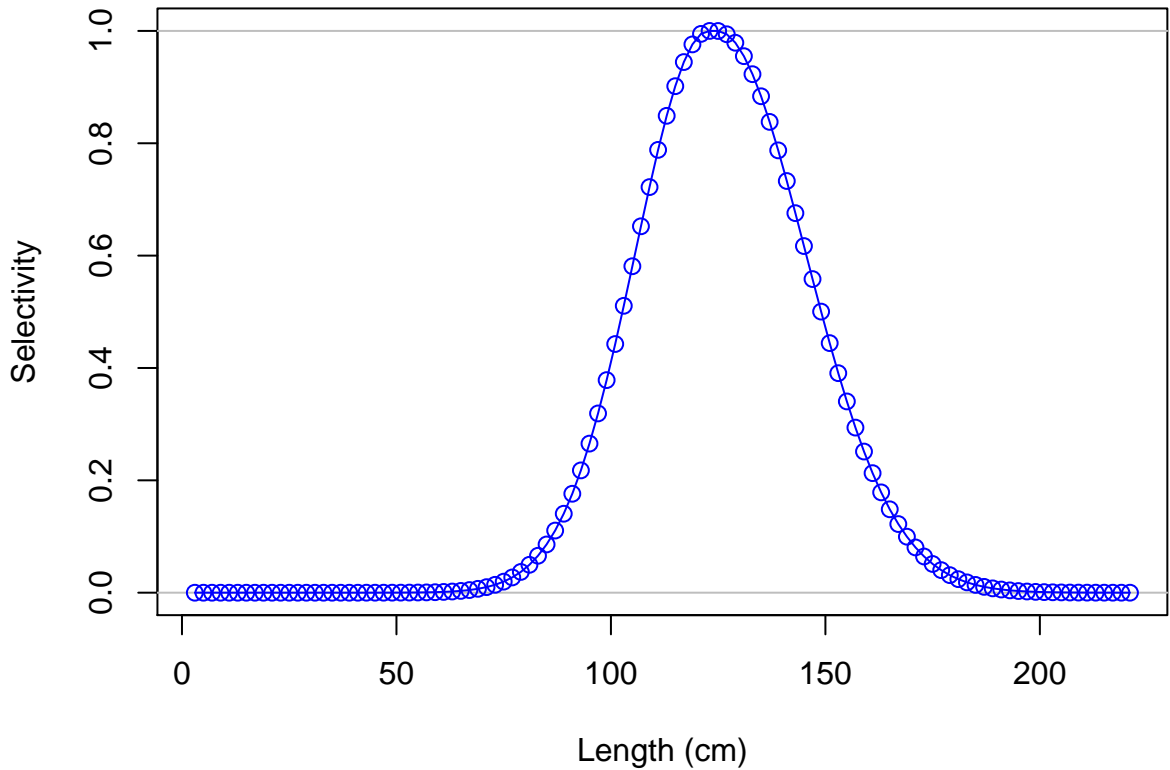
## Female time-varying selectivity for A6-LL-n



# Female time-varying selectivity for A6-LL-n

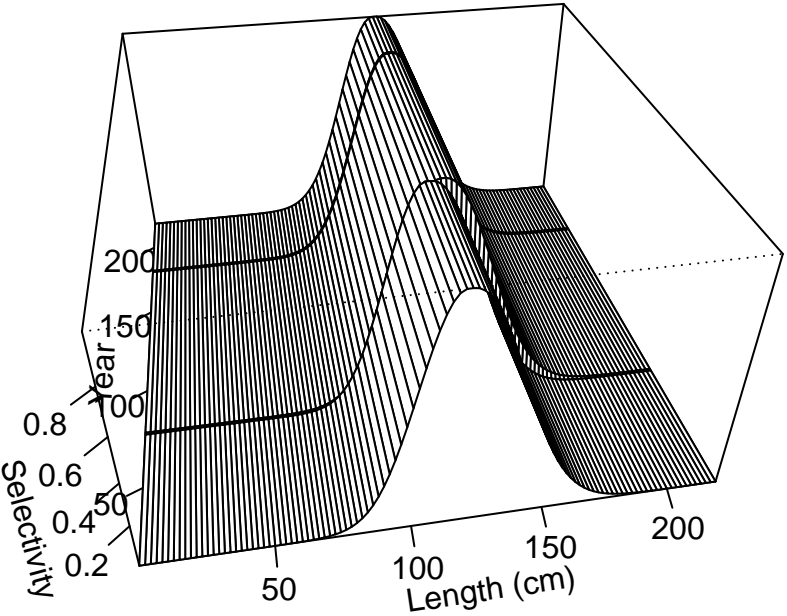


## Female ending year selectivity for A6-LL-n

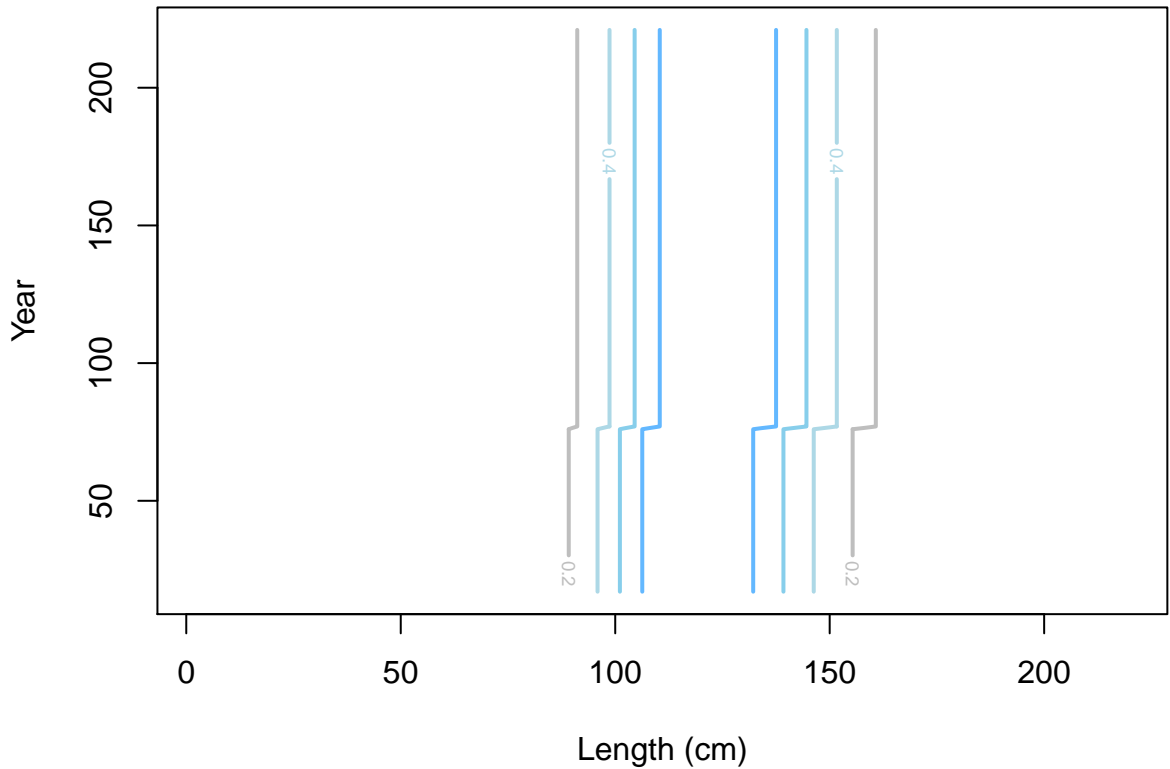




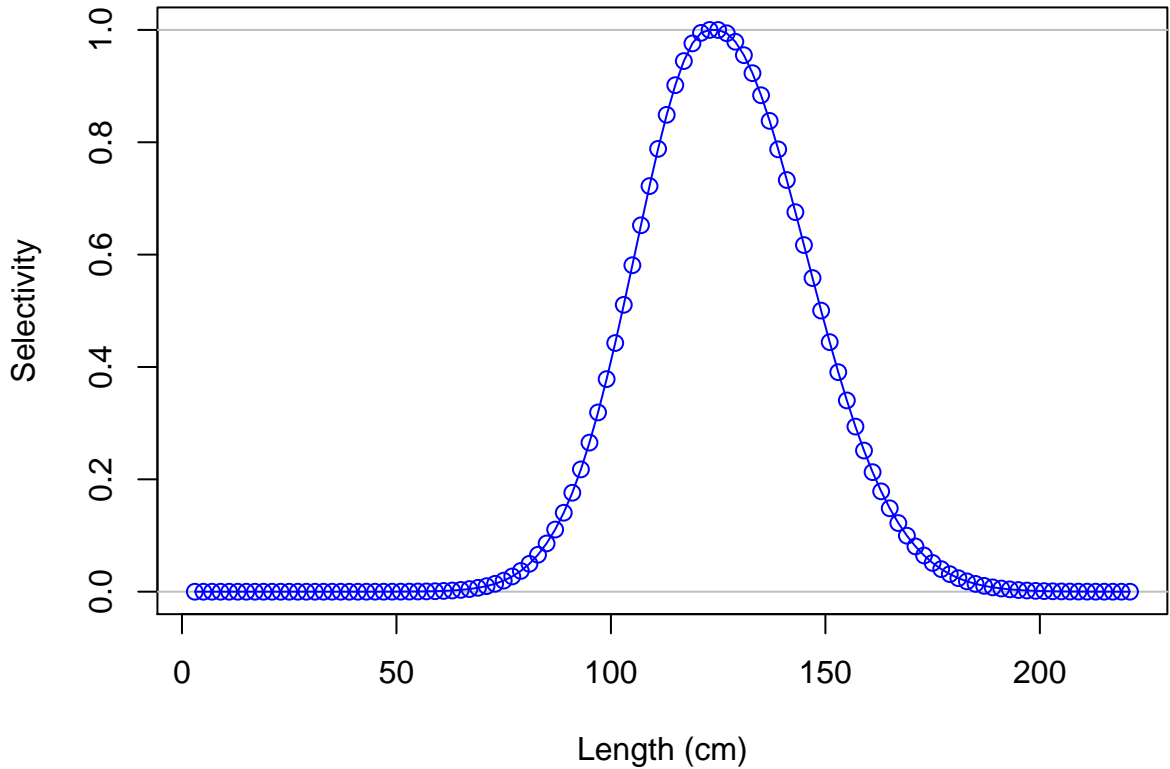
# Male time-varying selectivity for A6-LL-n



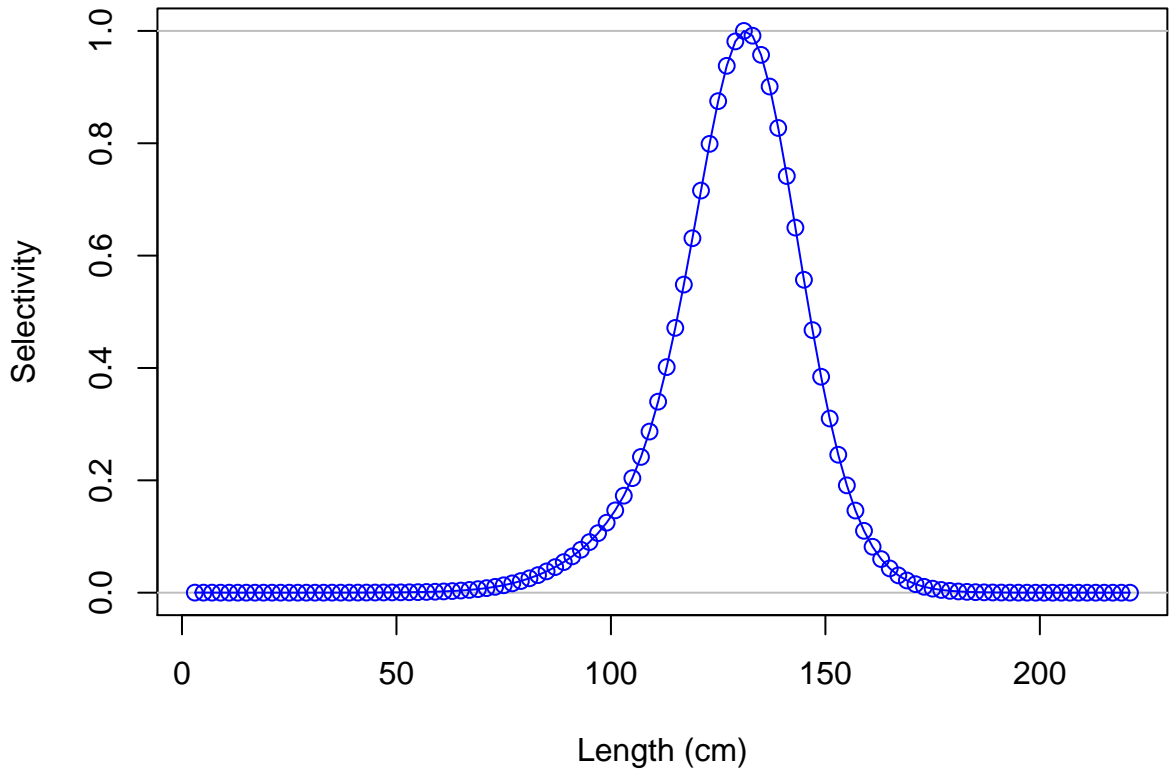
# Male time-varying selectivity for A6-LL-n



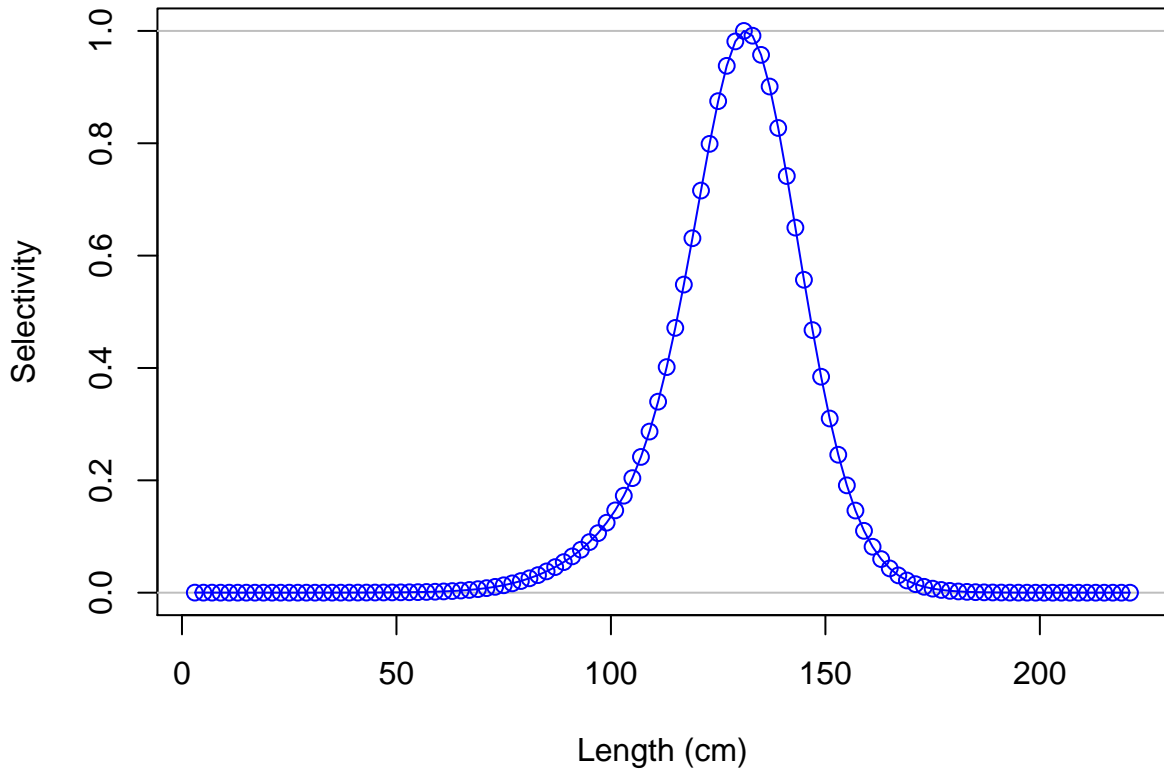
## Male ending year selectivity for A6-LL-n



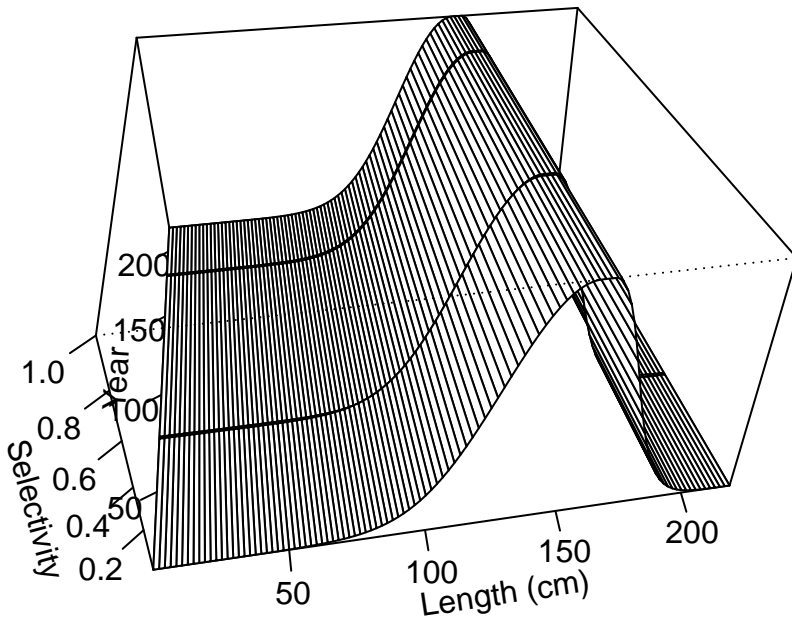
## Female ending year selectivity for A1-LL-w



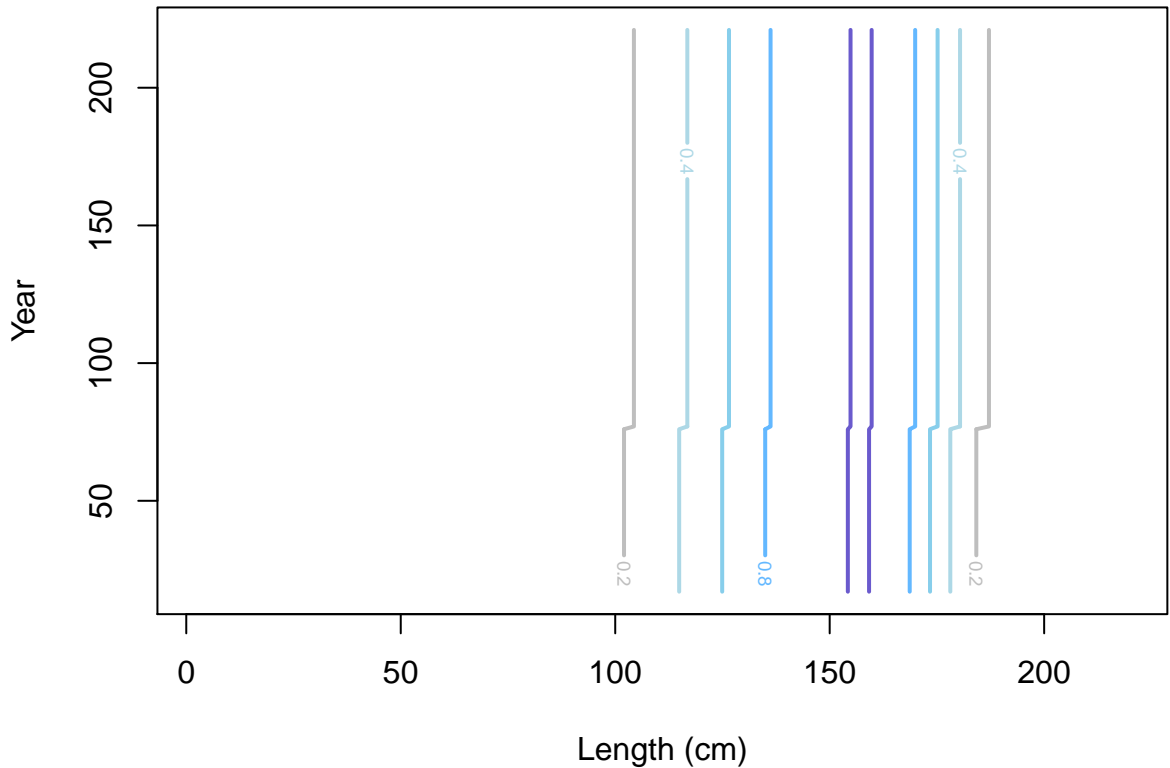
## Male ending year selectivity for A1-LL-w



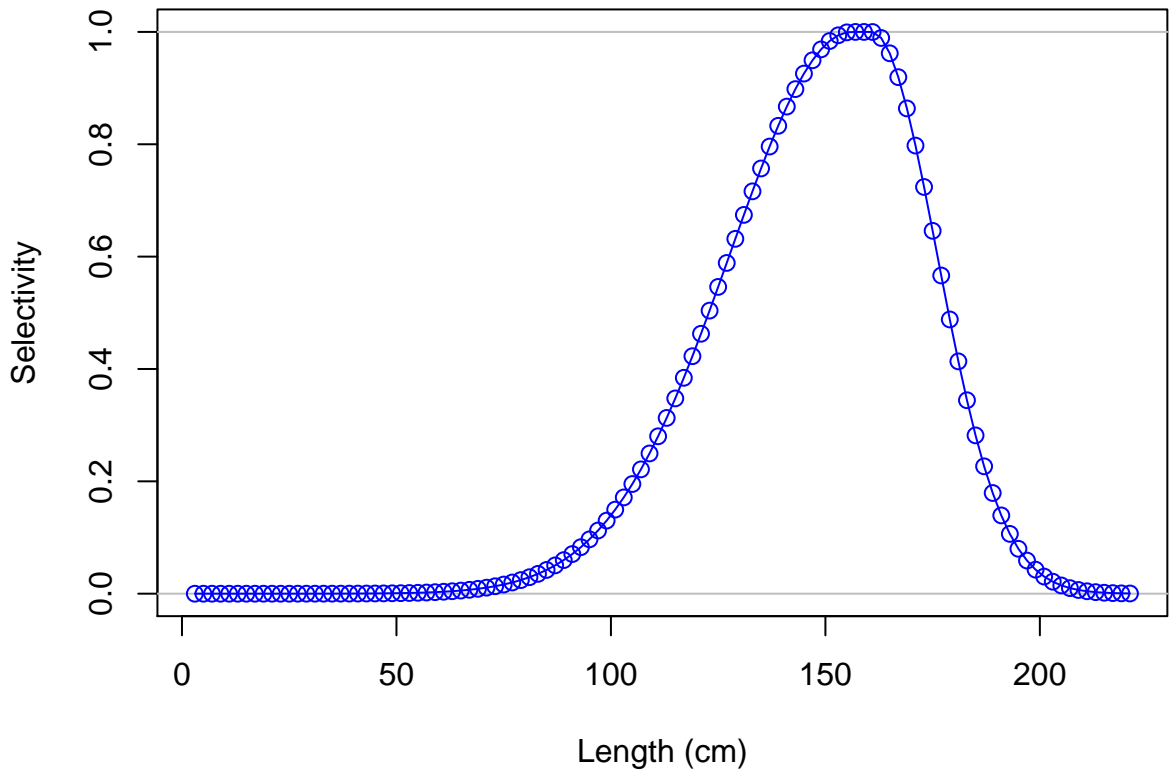
## Female time-varying selectivity for A2-LL-w



## Female time-varying selectivity for A2-LL-w

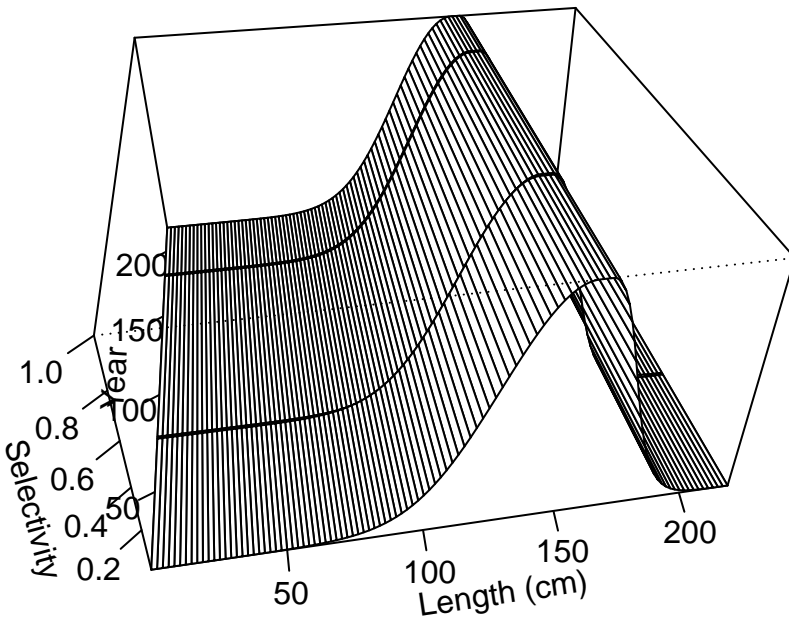


## Female ending year selectivity for A2-LL-w

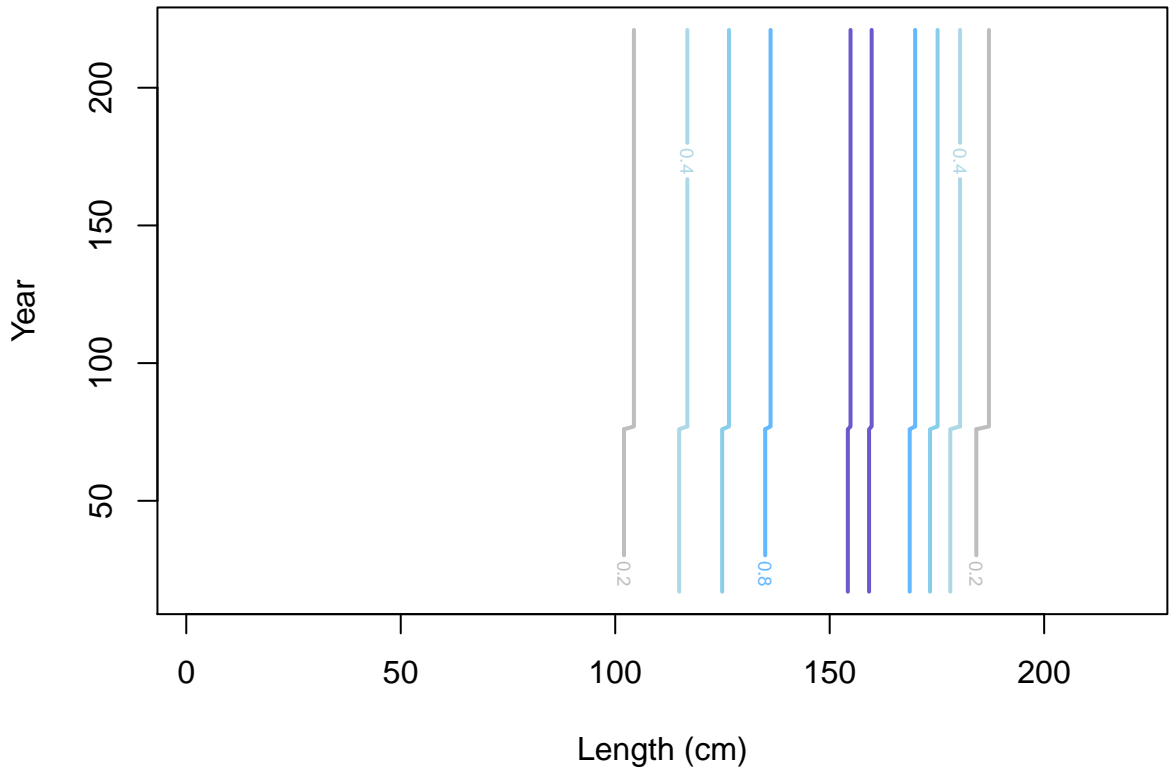




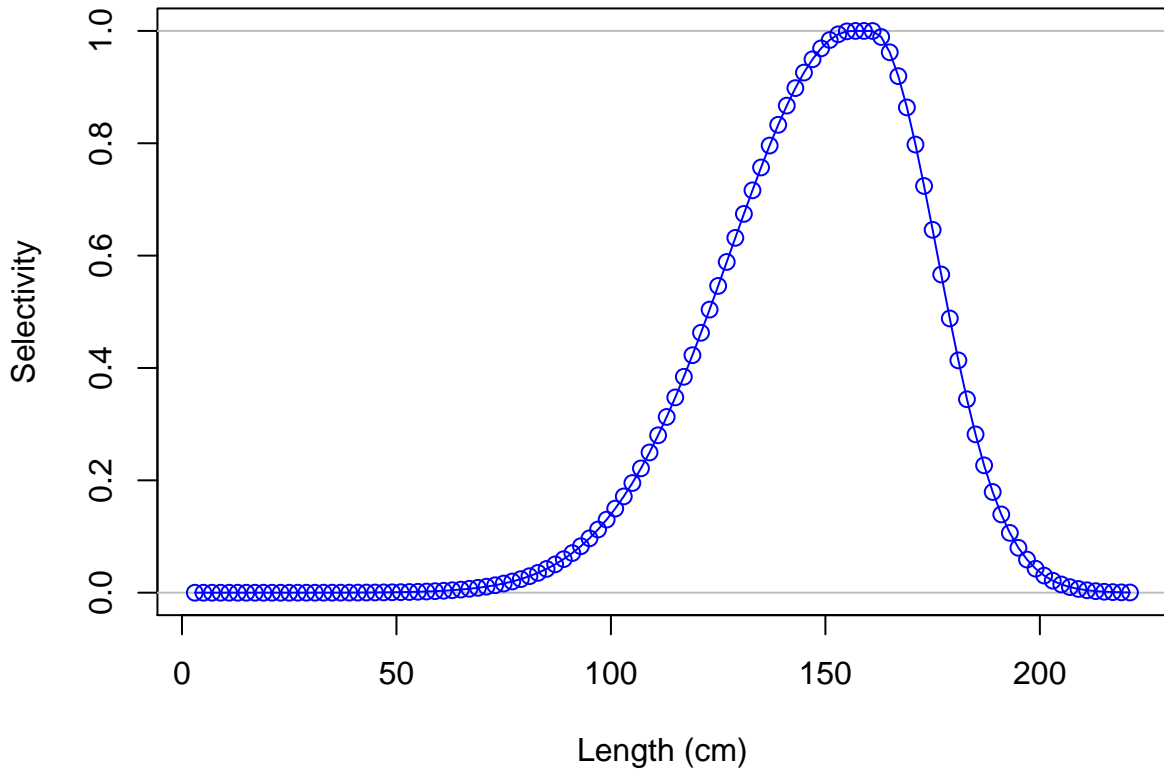
## Male time-varying selectivity for A2-LL-w



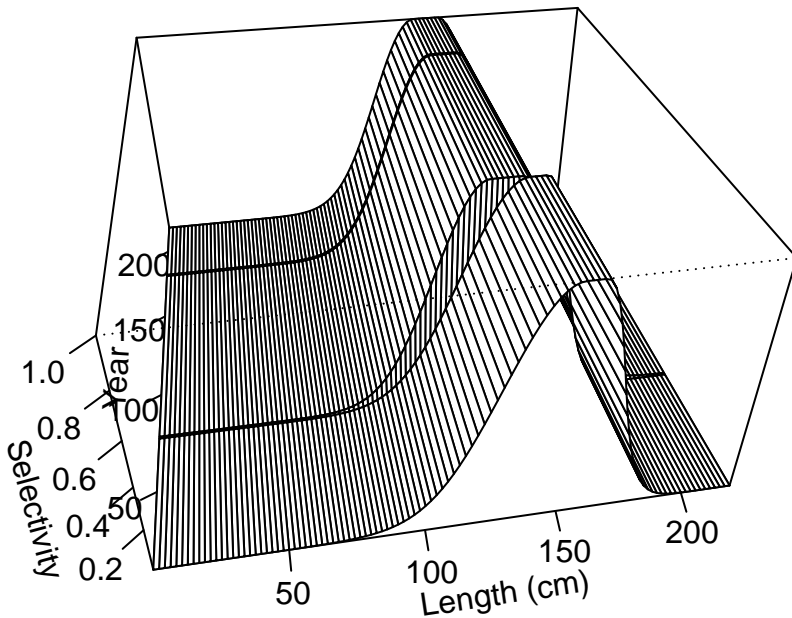
# Male time-varying selectivity for A2-LL-w



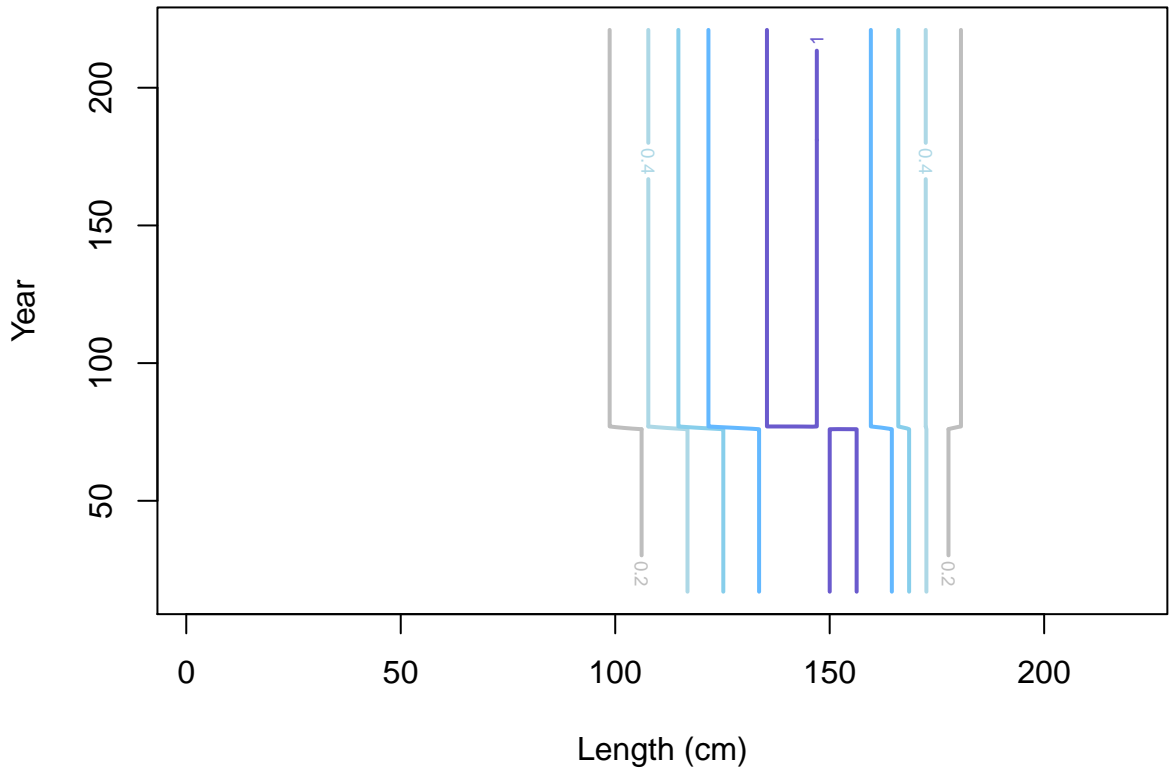
## Male ending year selectivity for A2-LL-w



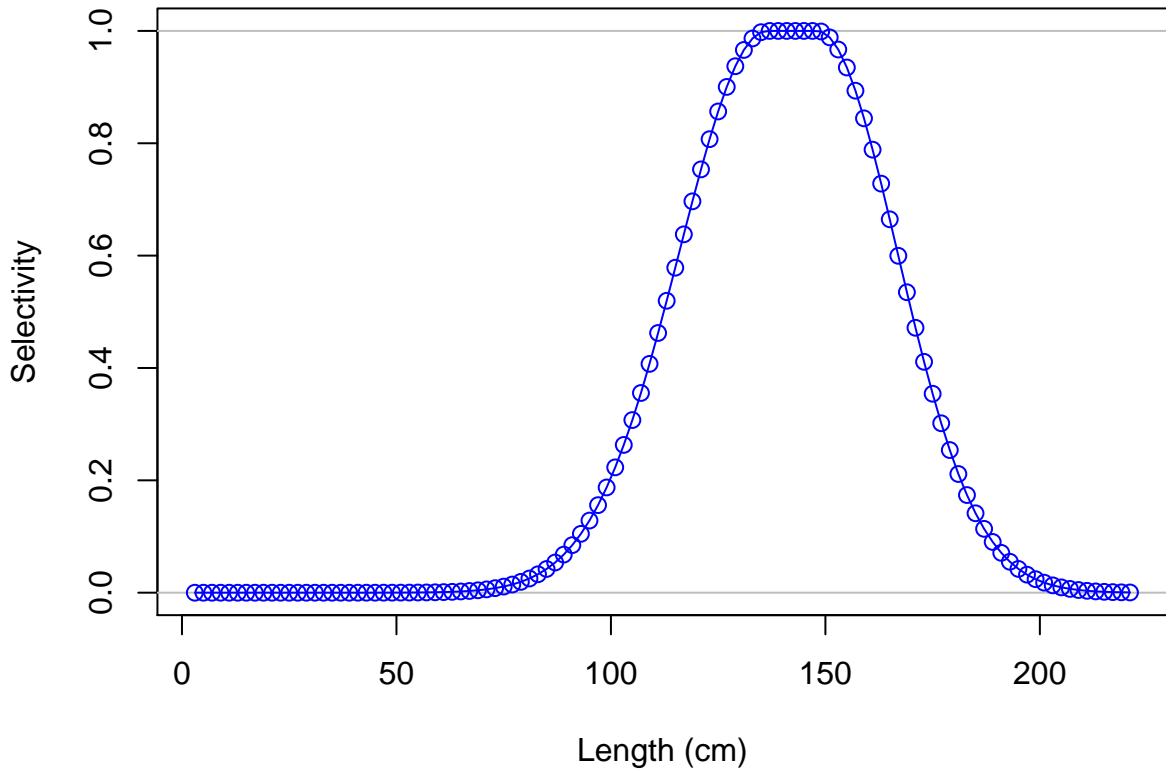
## Female time-varying selectivity for A3-LL-w



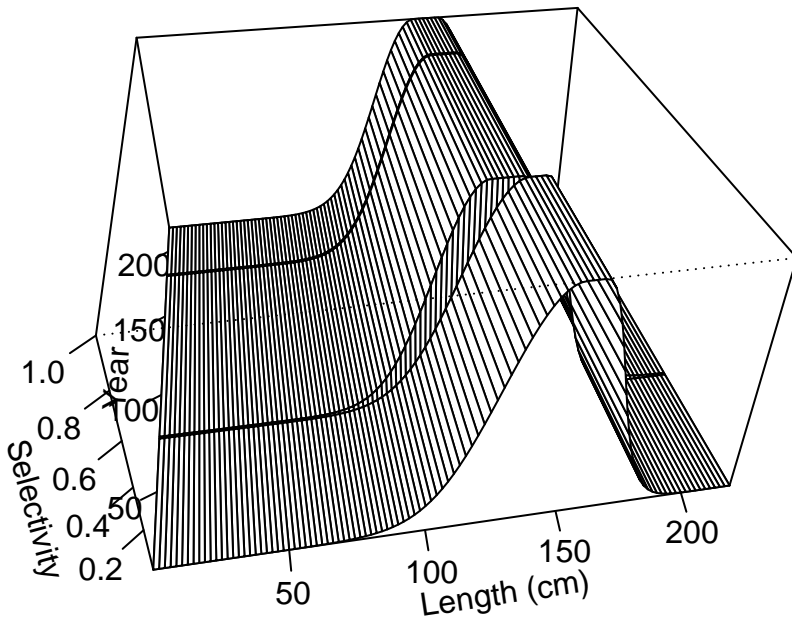
# Female time-varying selectivity for A3-LL-w



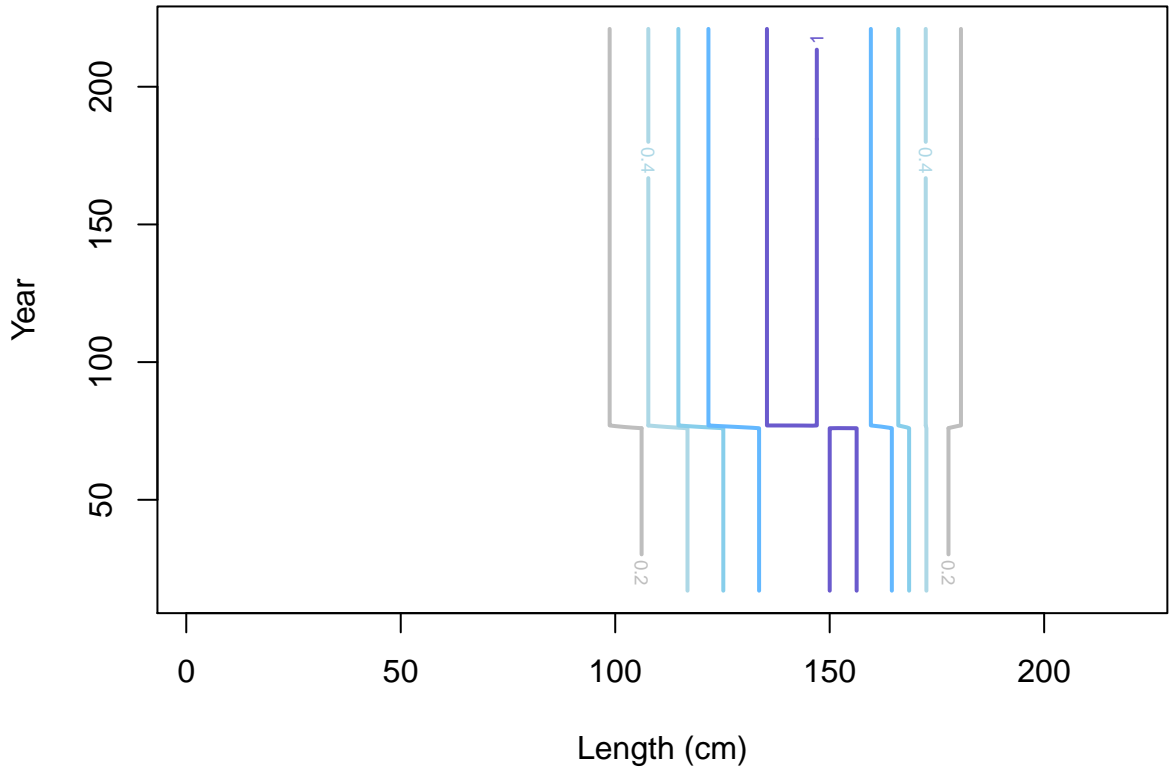
## Female ending year selectivity for A3-LL-w



# Male time-varying selectivity for A3-LL-w

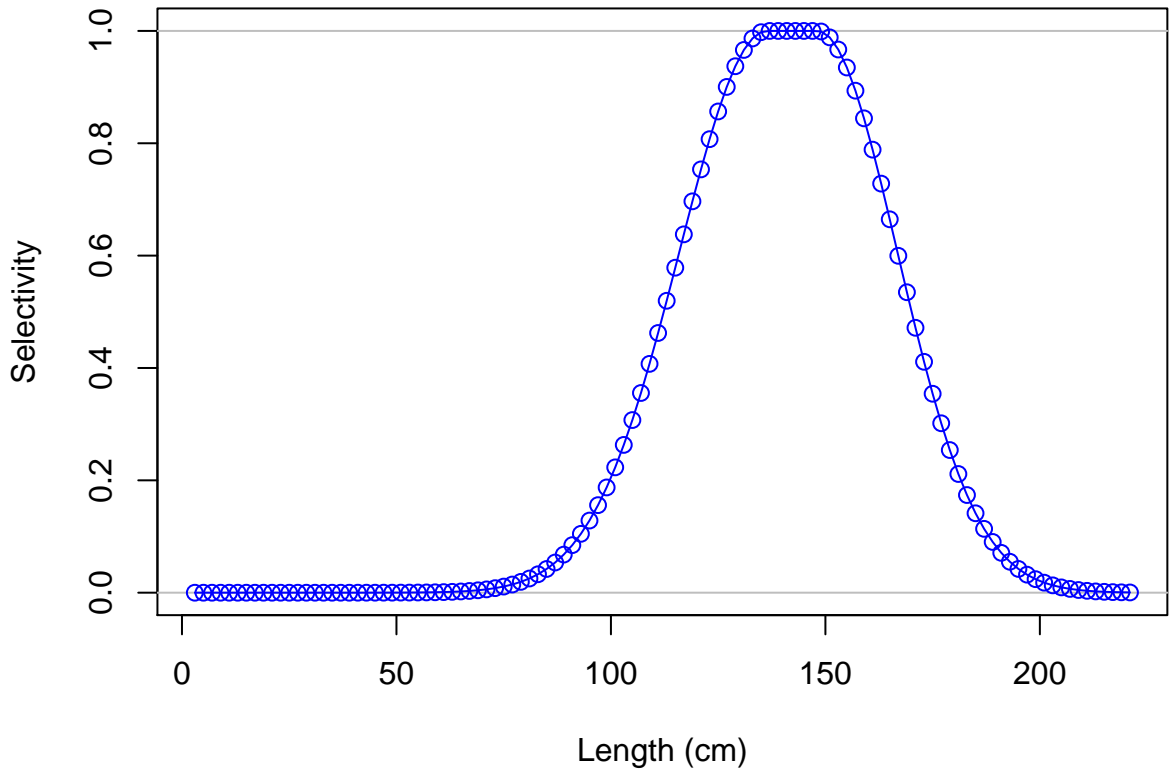


# Male time-varying selectivity for A3-LL-w

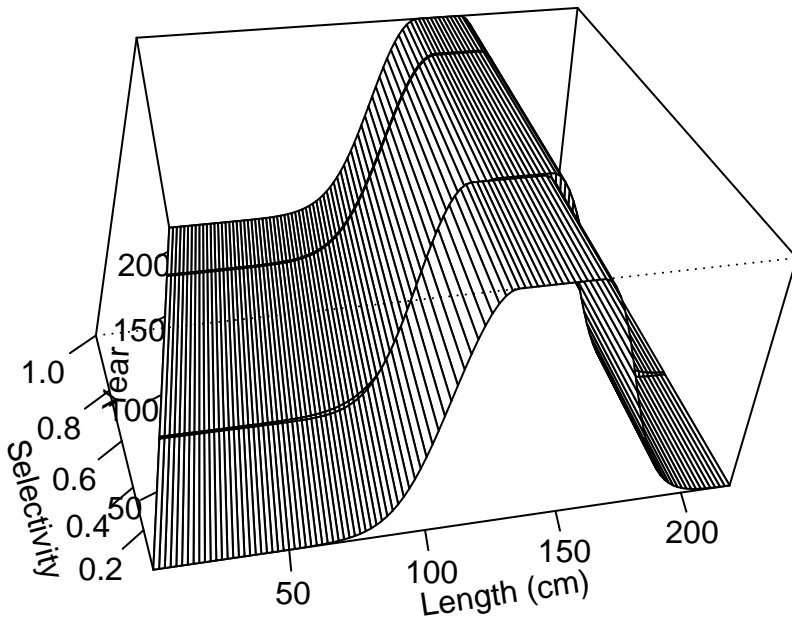




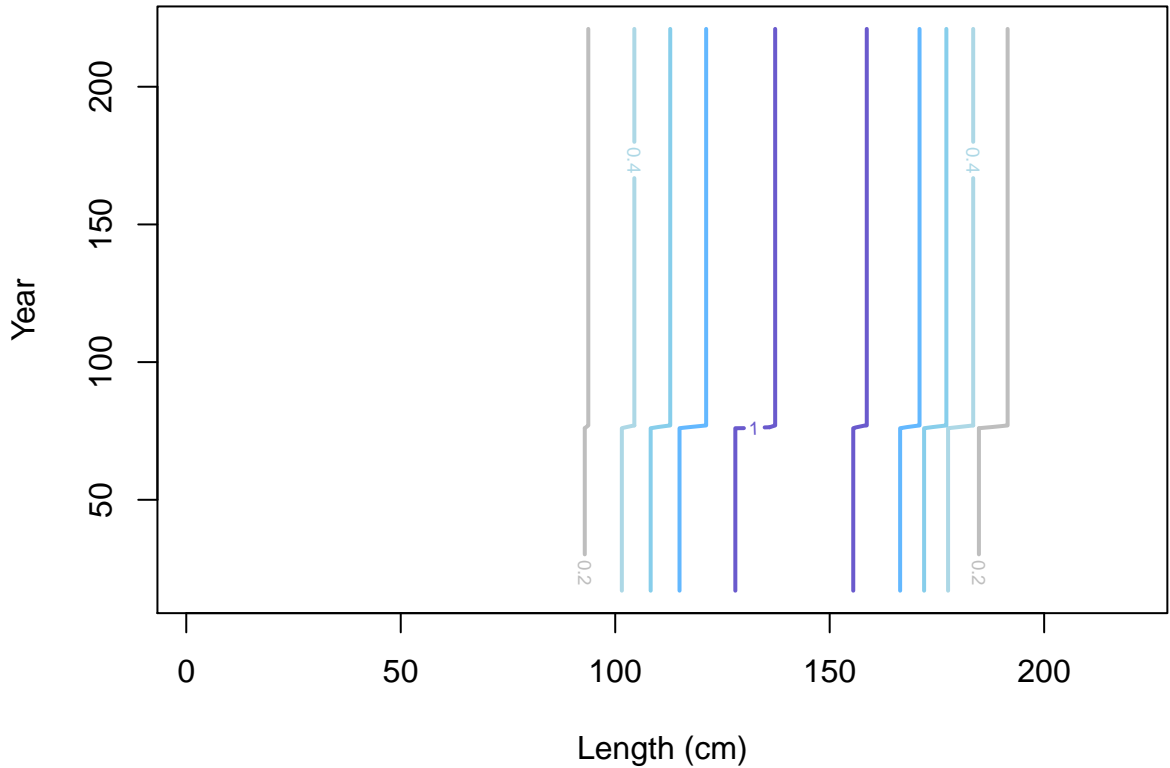
# Male ending year selectivity for A3-LL-w



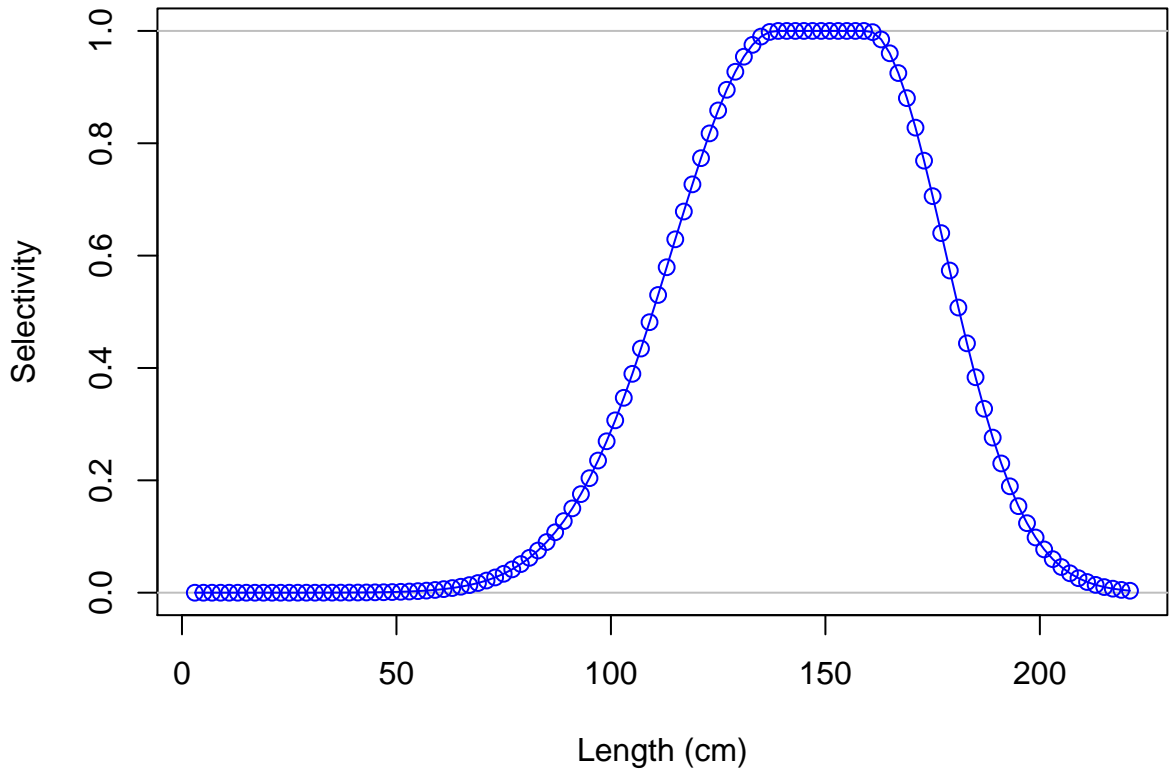
## Female time-varying selectivity for A4-LL-w



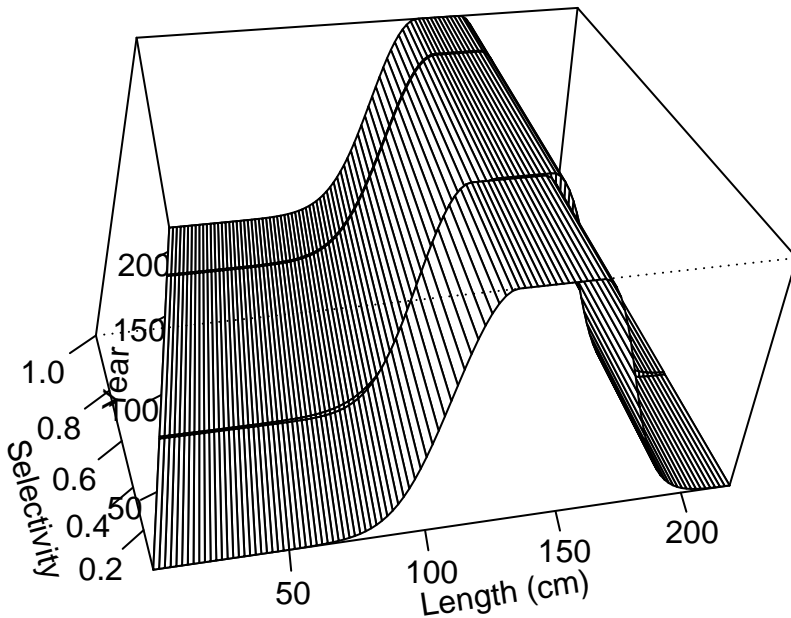
# Female time-varying selectivity for A4-LL-w



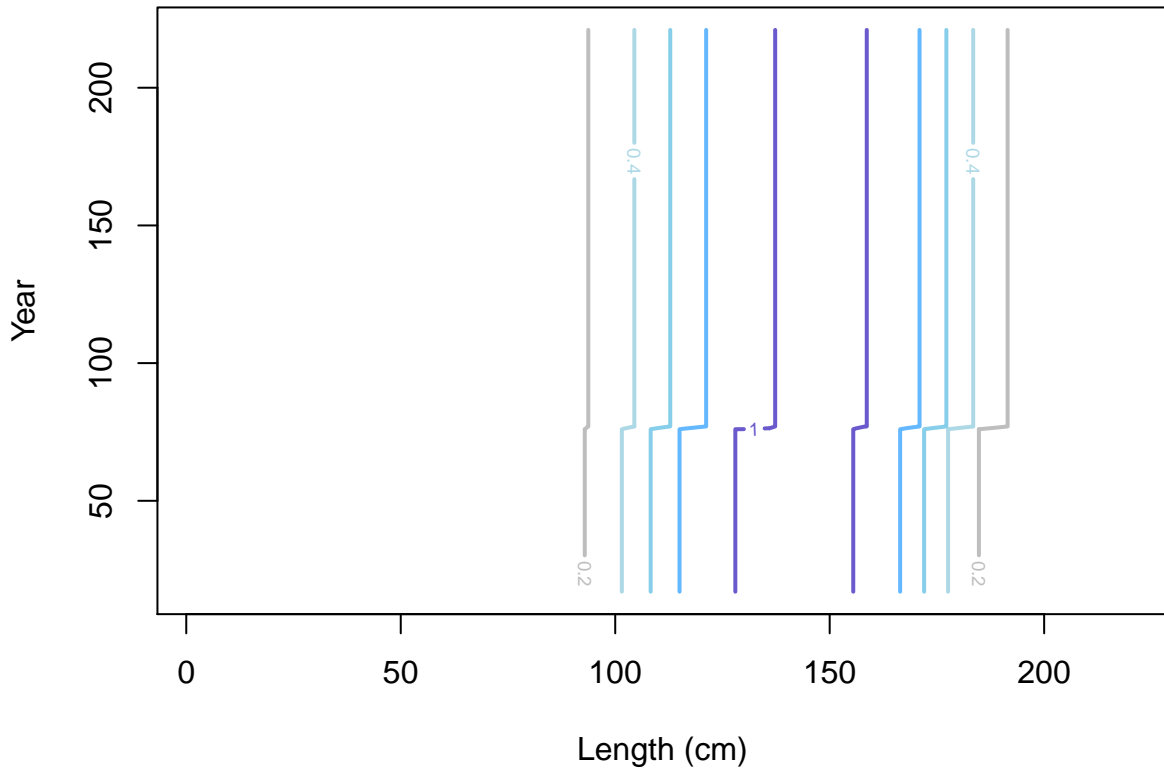
## Female ending year selectivity for A4-LL-w



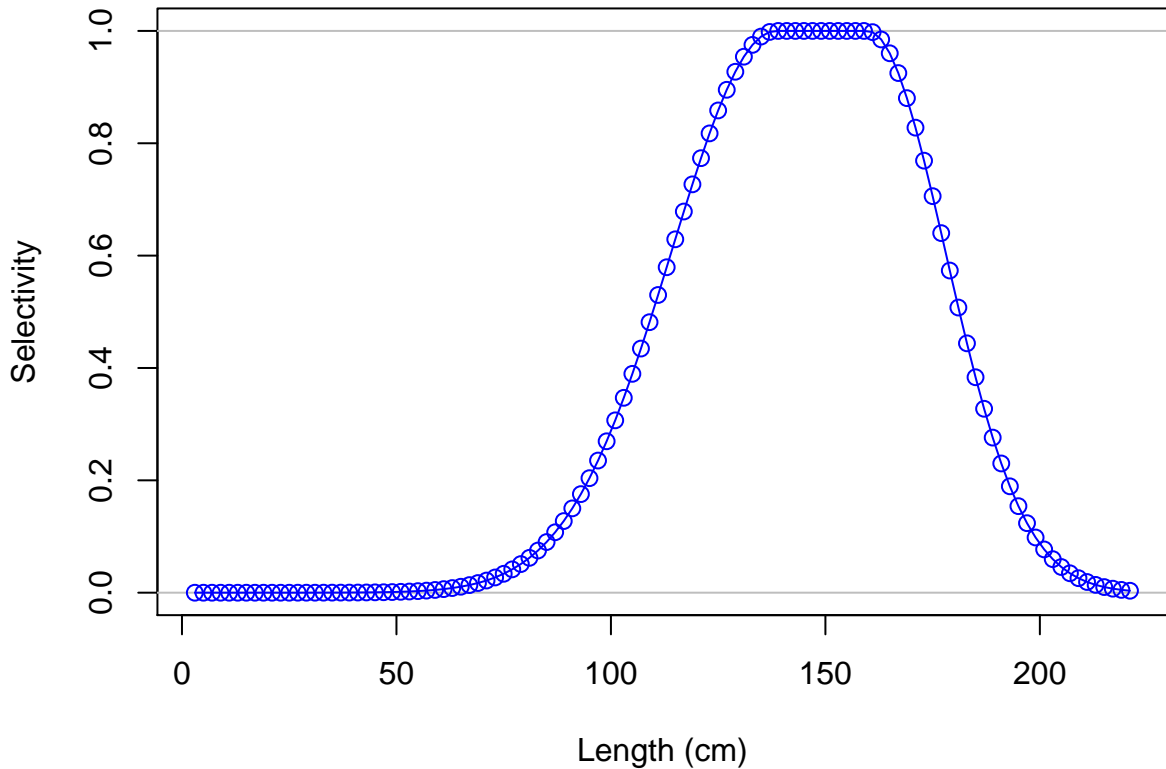
## Male time-varying selectivity for A4-LL-w



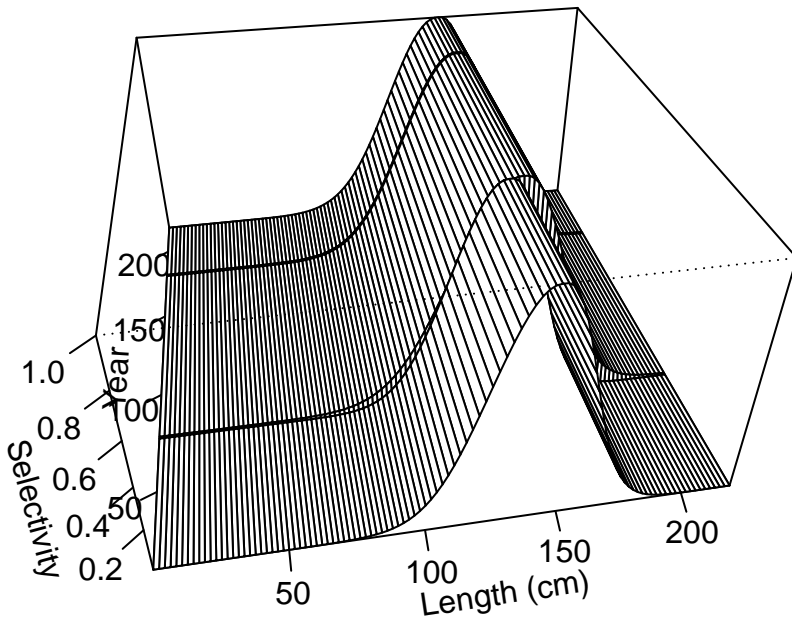
# Male time-varying selectivity for A4-LL-w



### Male ending year selectivity for A4-LL-w

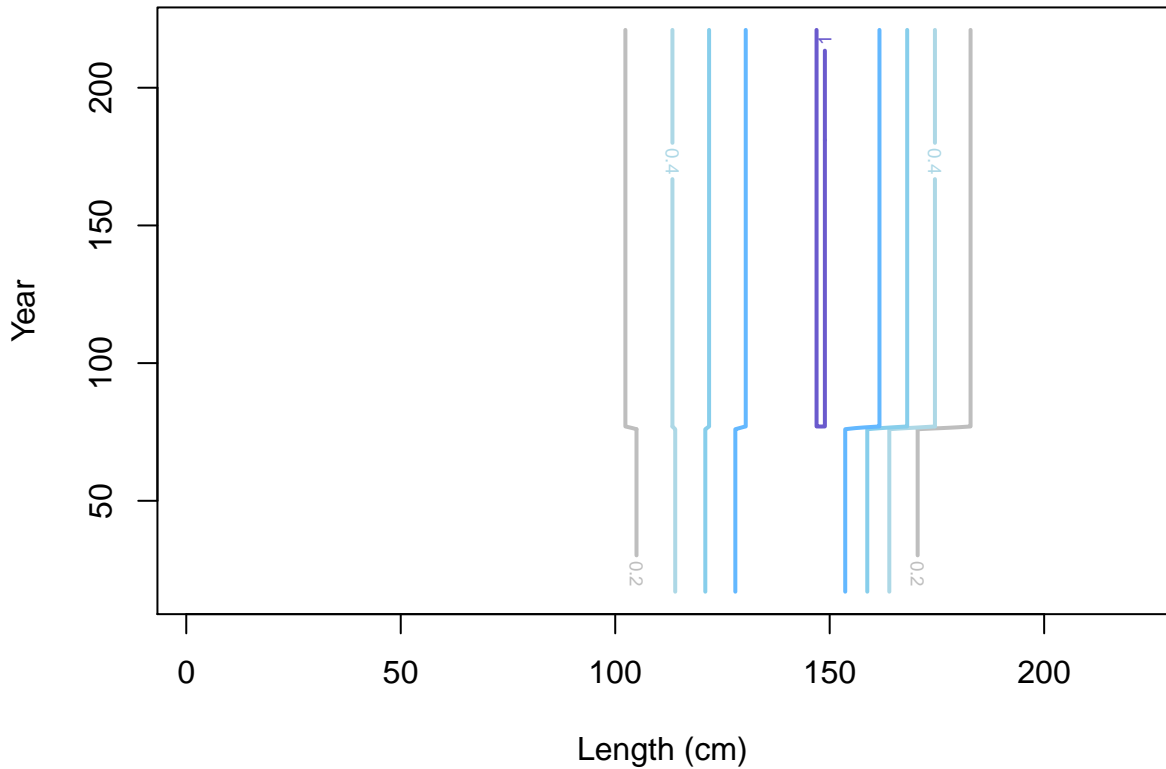


## Female time-varying selectivity for A5-LL-w

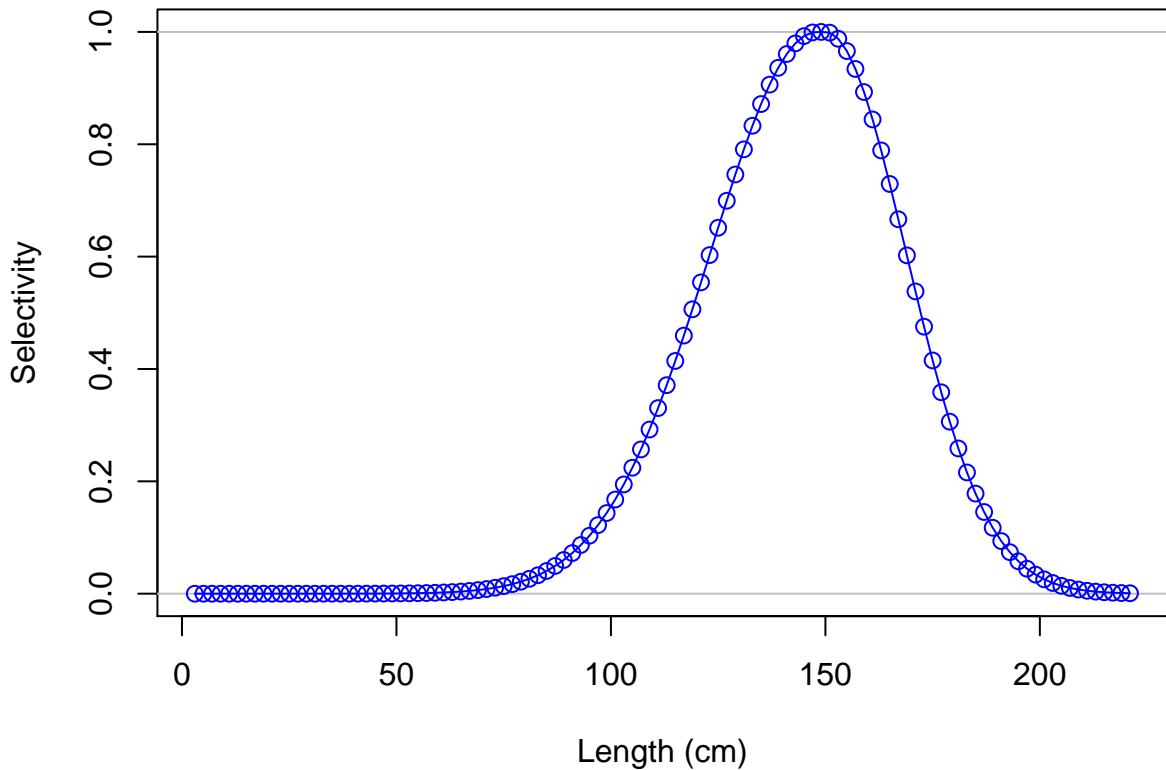




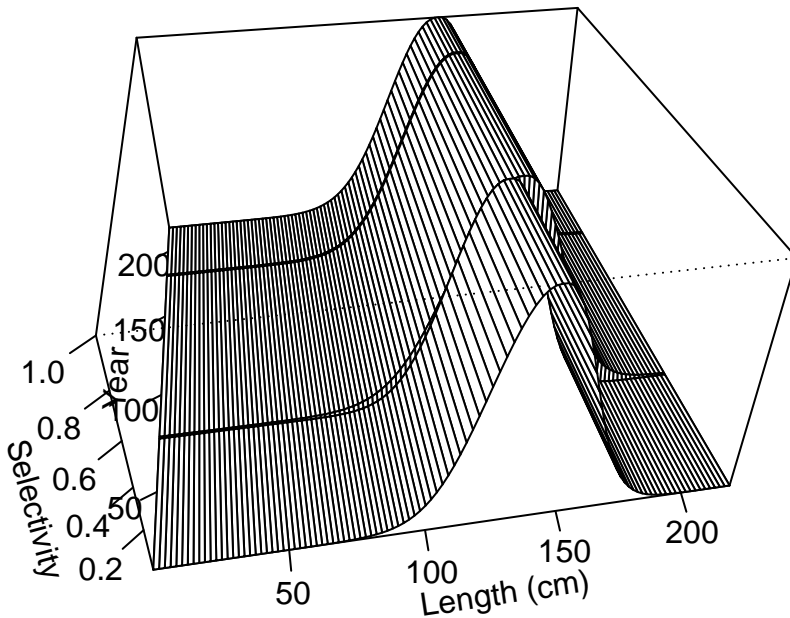
## Female time-varying selectivity for A5-LL-w



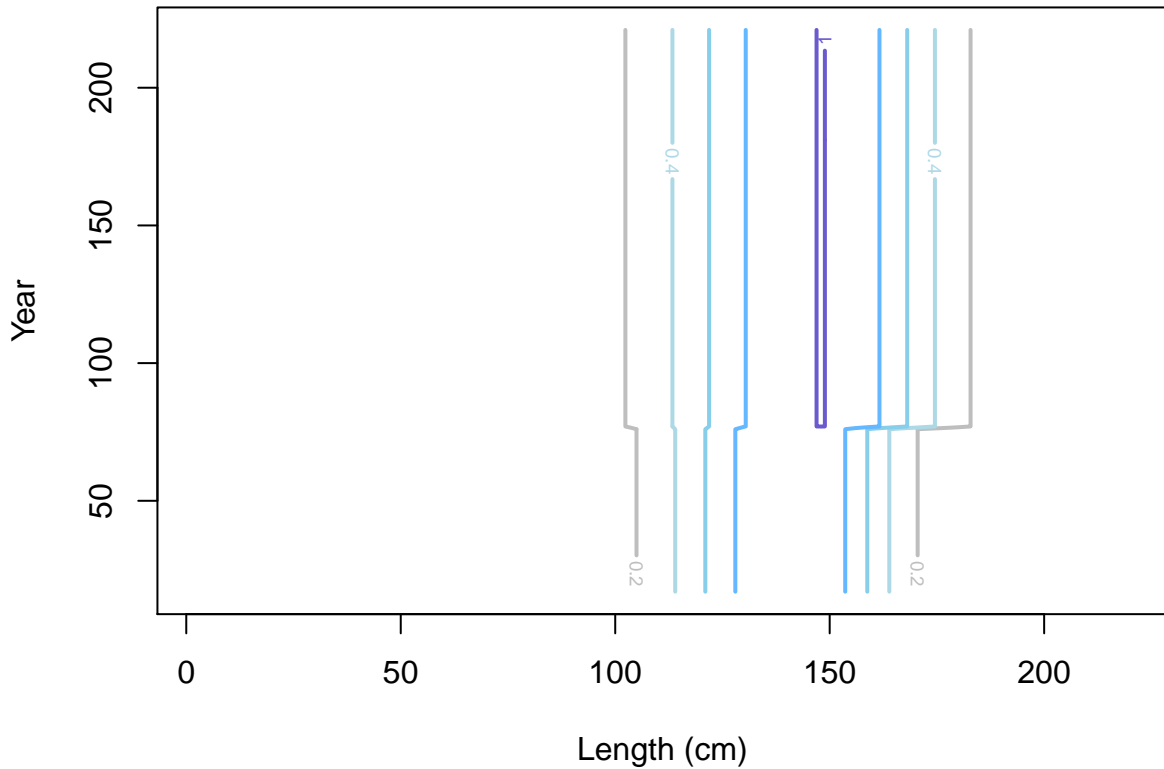
## Female ending year selectivity for A5-LL-w



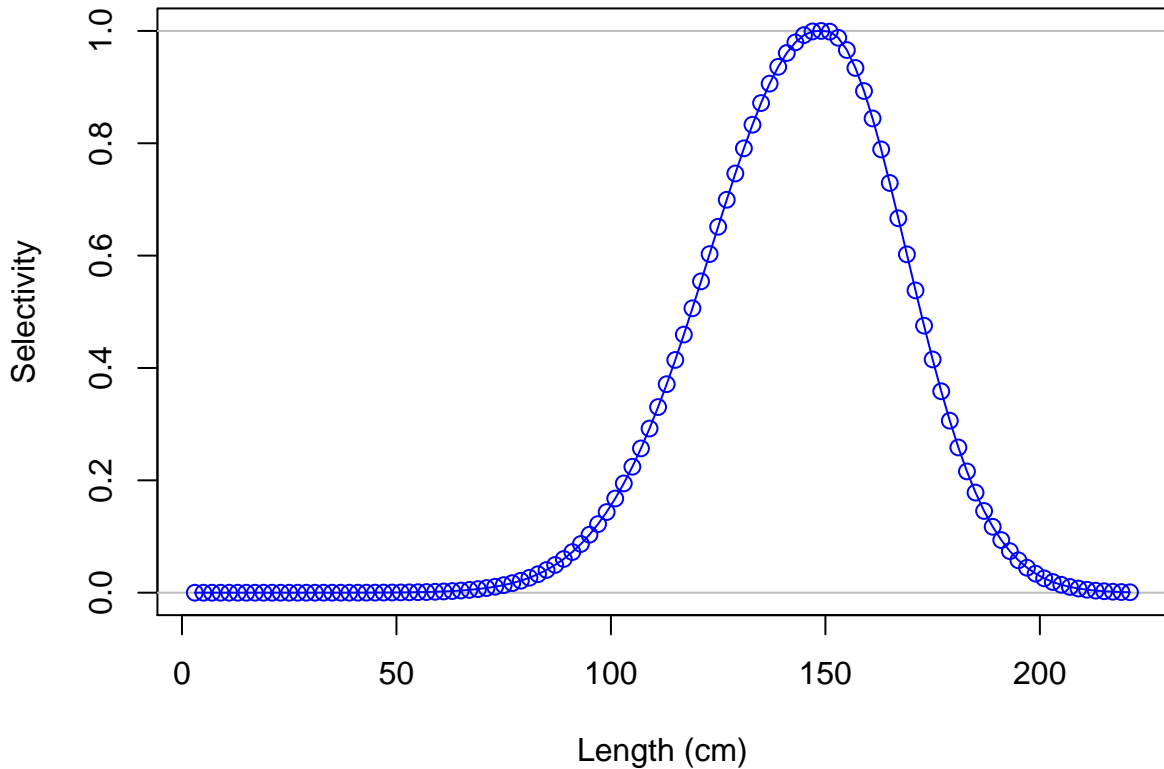
# Male time-varying selectivity for A5-LL-w



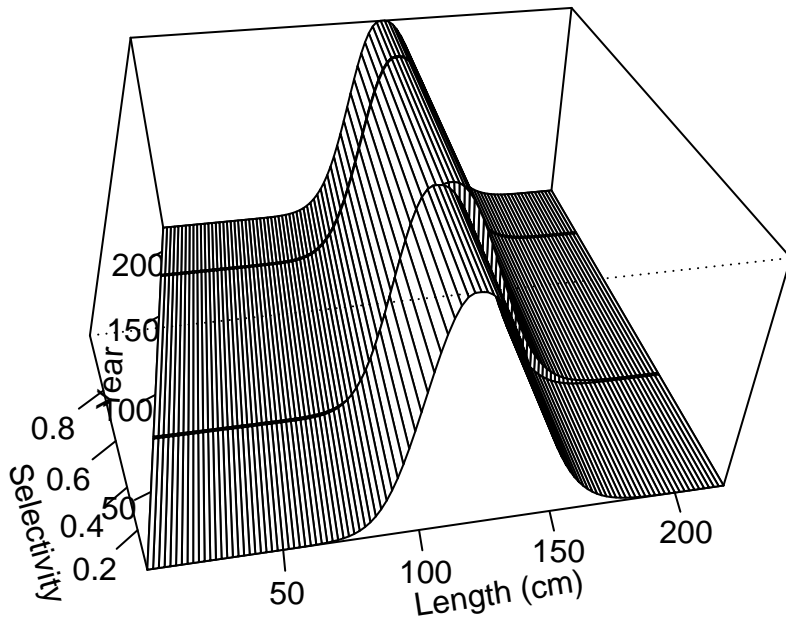
# Male time-varying selectivity for A5-LL-w



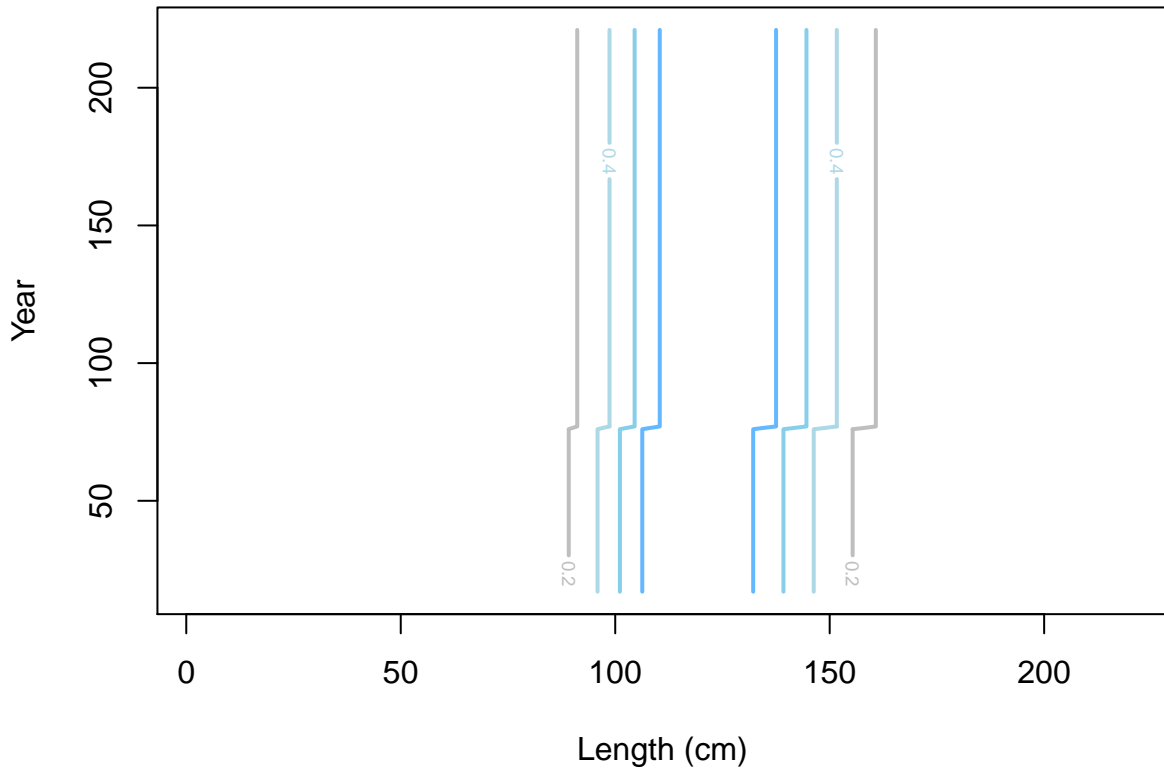
## Male ending year selectivity for A5-LL-w



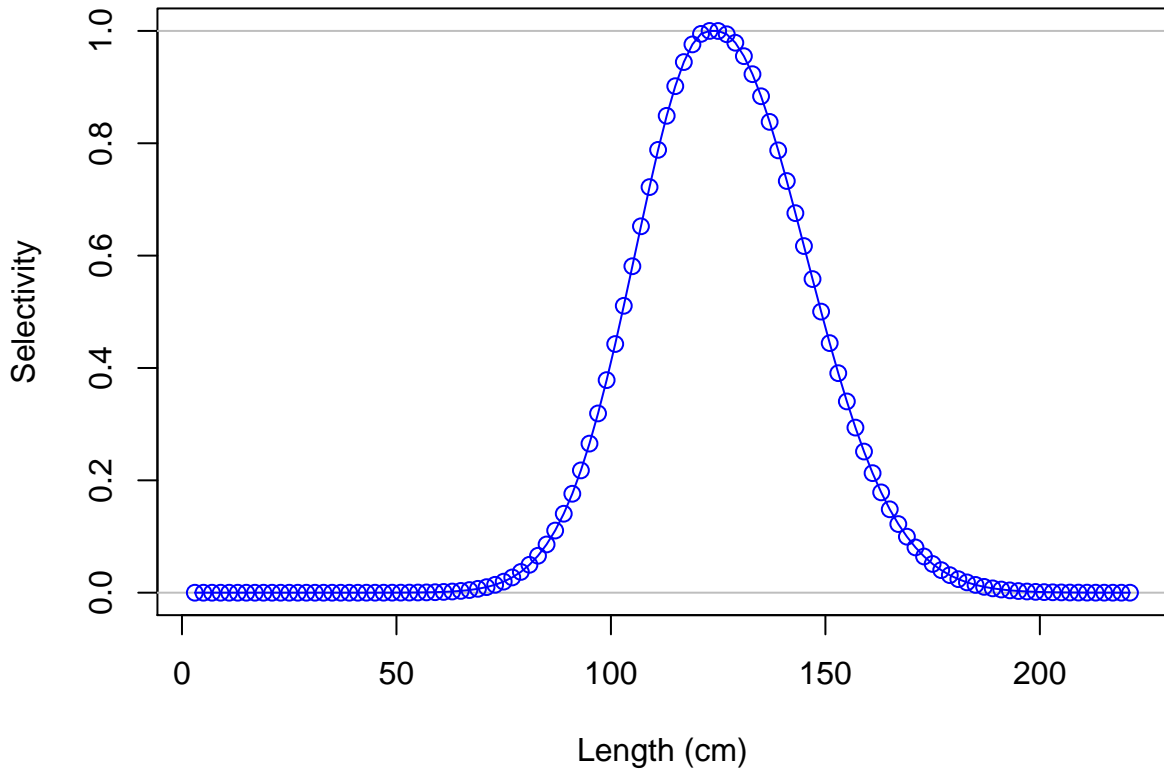
## Female time-varying selectivity for A6-LL-w



# Female time-varying selectivity for A6-LL-w

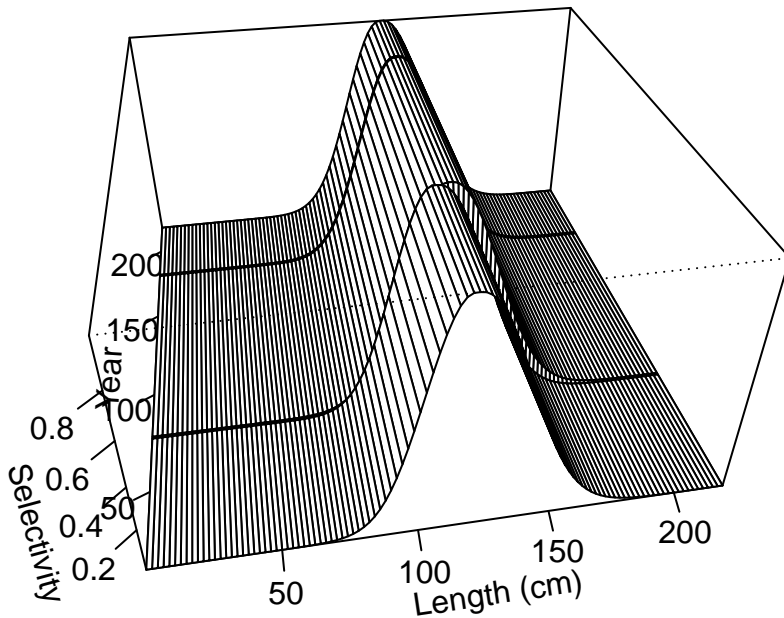


## Female ending year selectivity for A6-LL-w

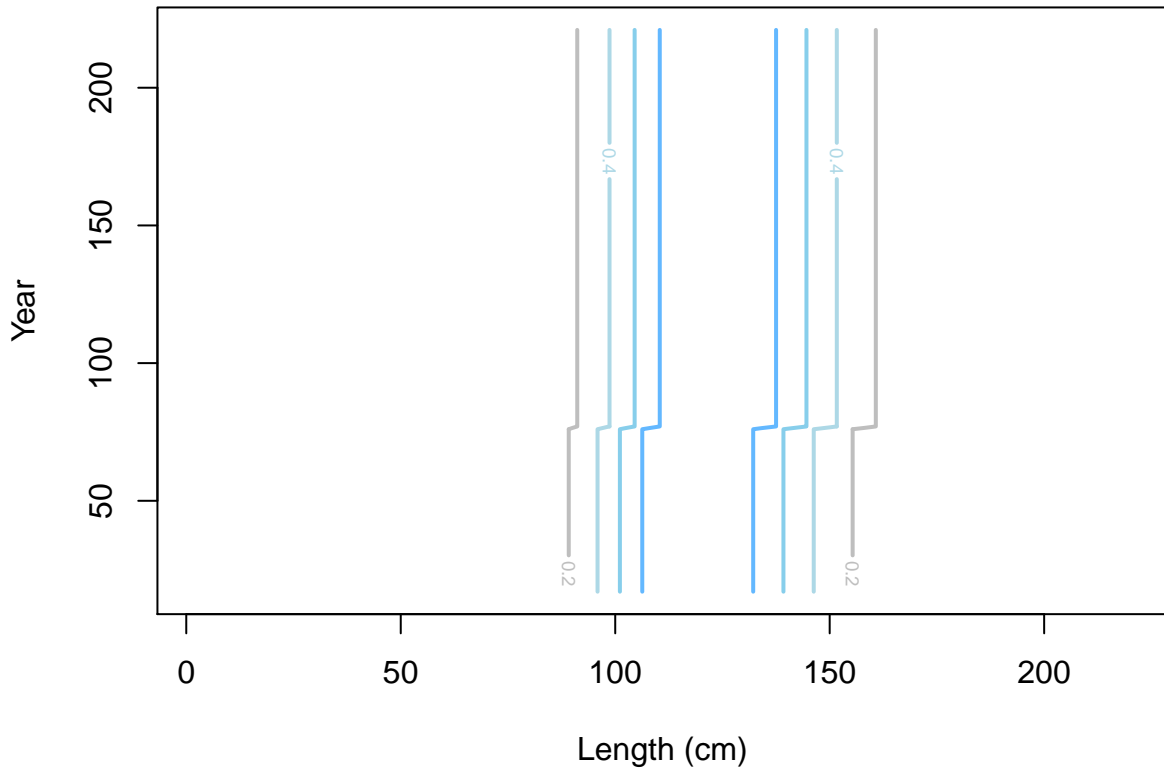




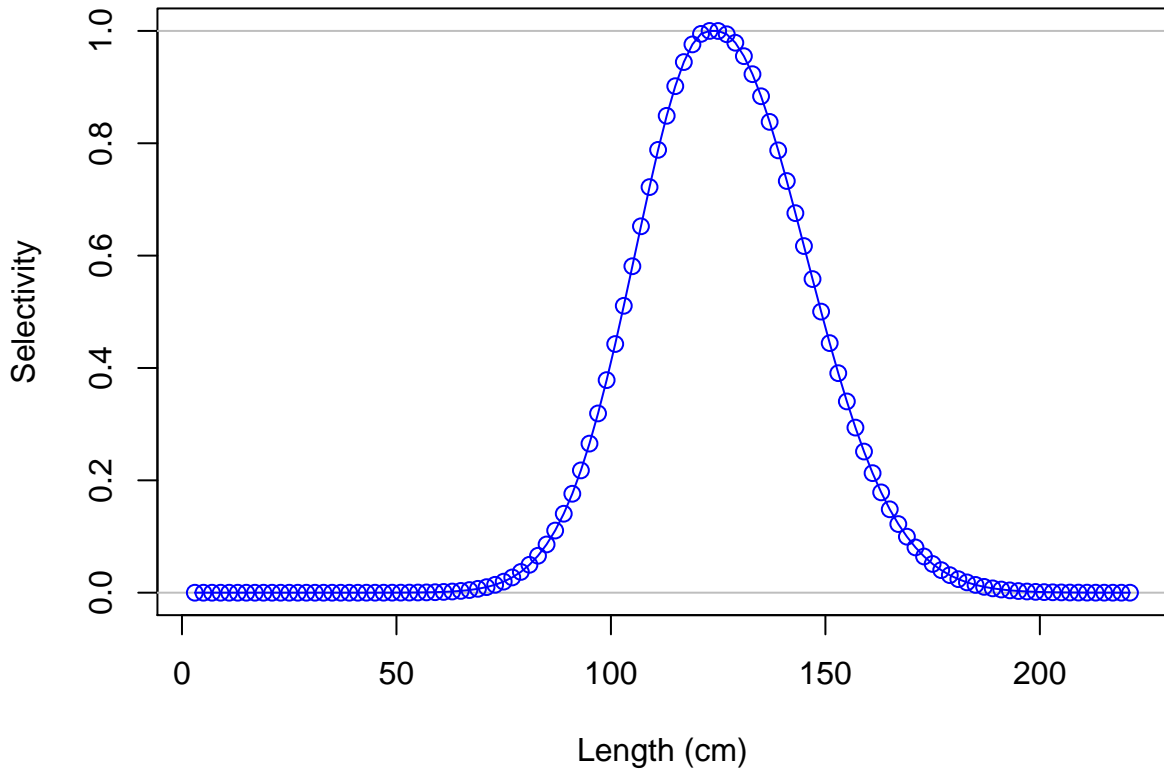
## Male time-varying selectivity for A6-LL-w



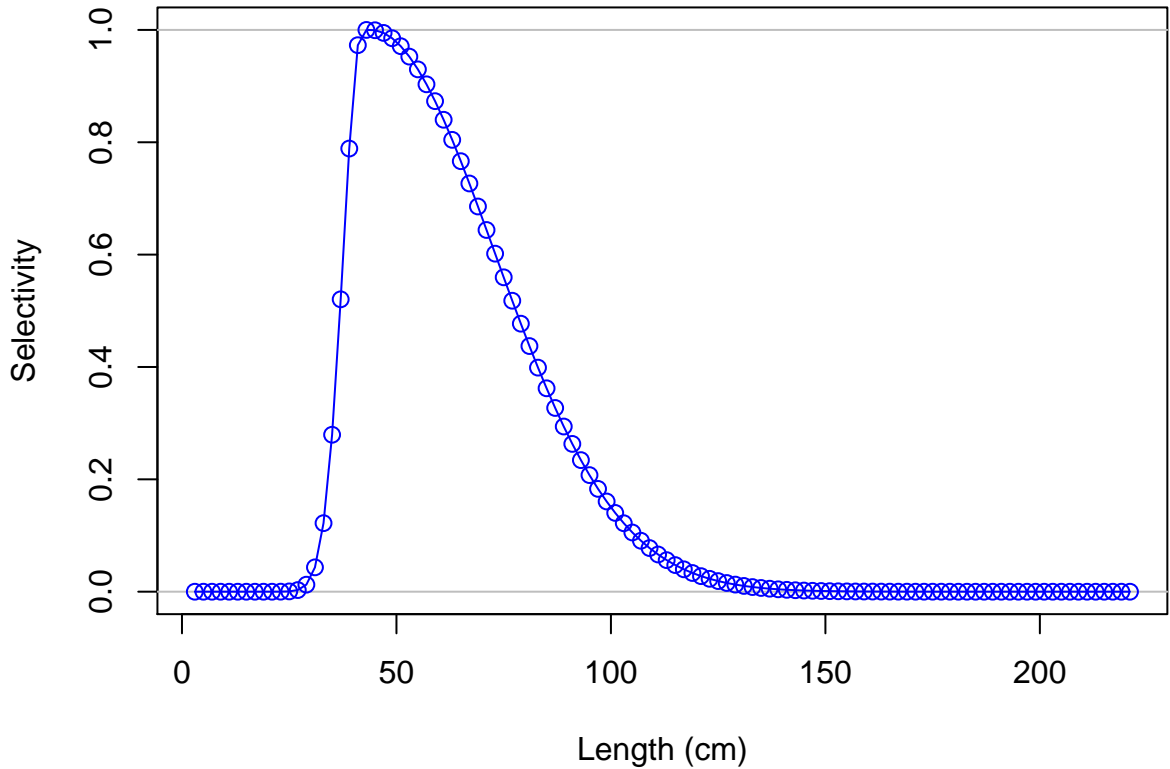
# Male time-varying selectivity for A6-LL-w



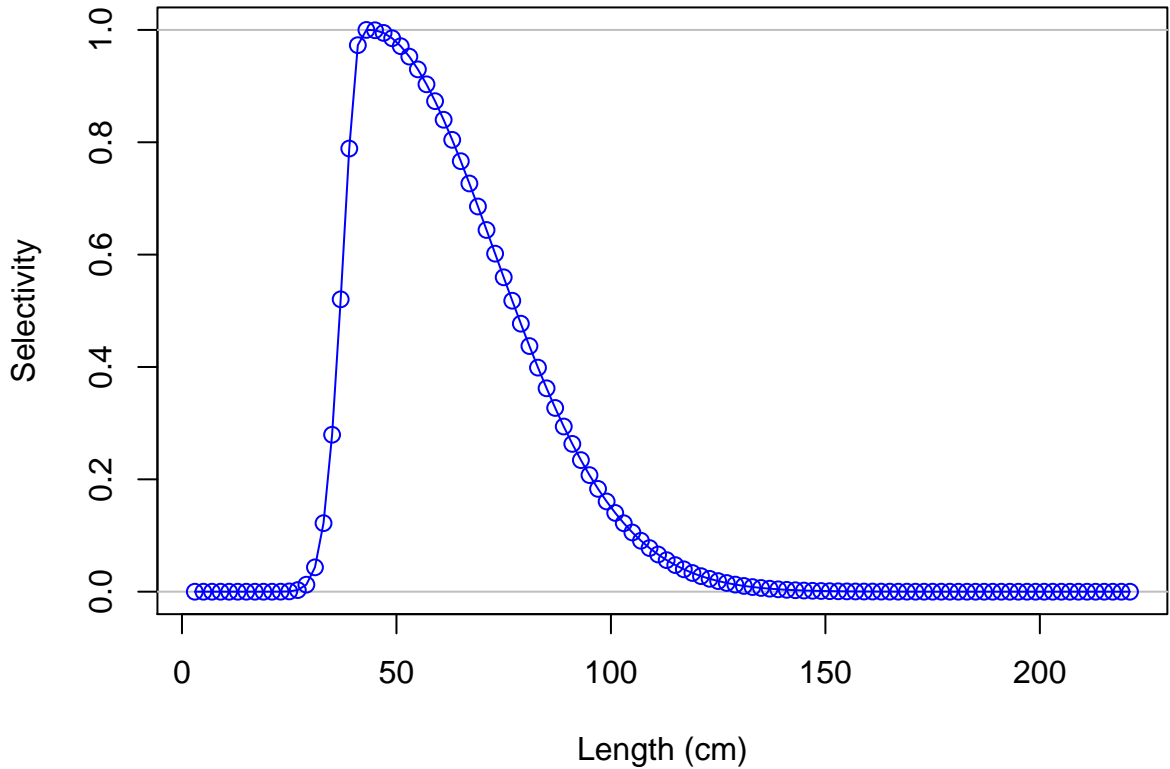
## Male ending year selectivity for A6-LL-w



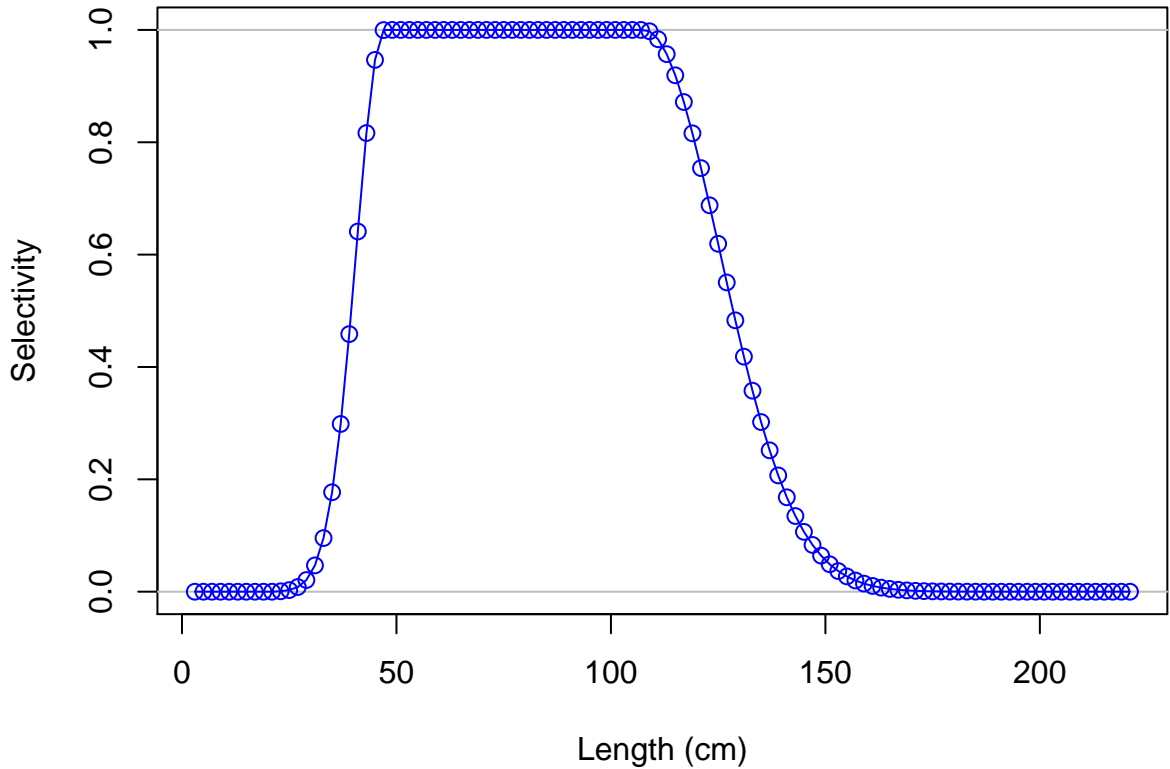
## Female ending year selectivity for A2-OBJ



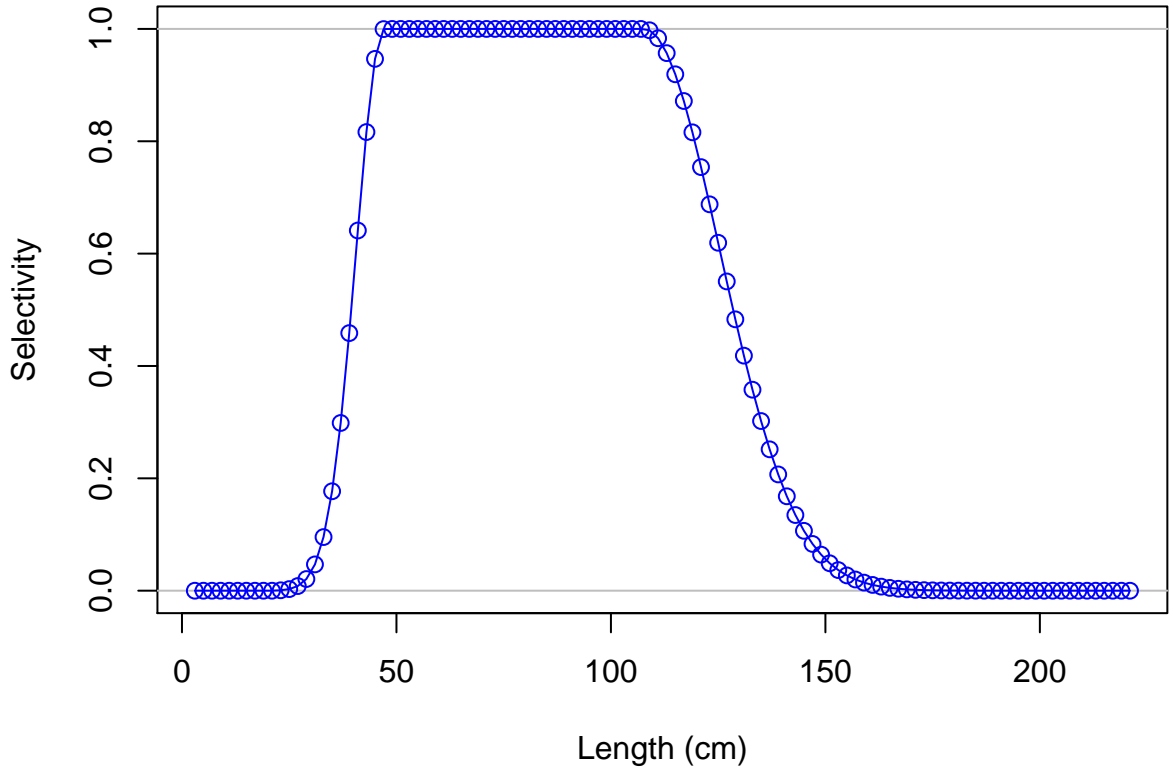
## Male ending year selectivity for A2-OBJ



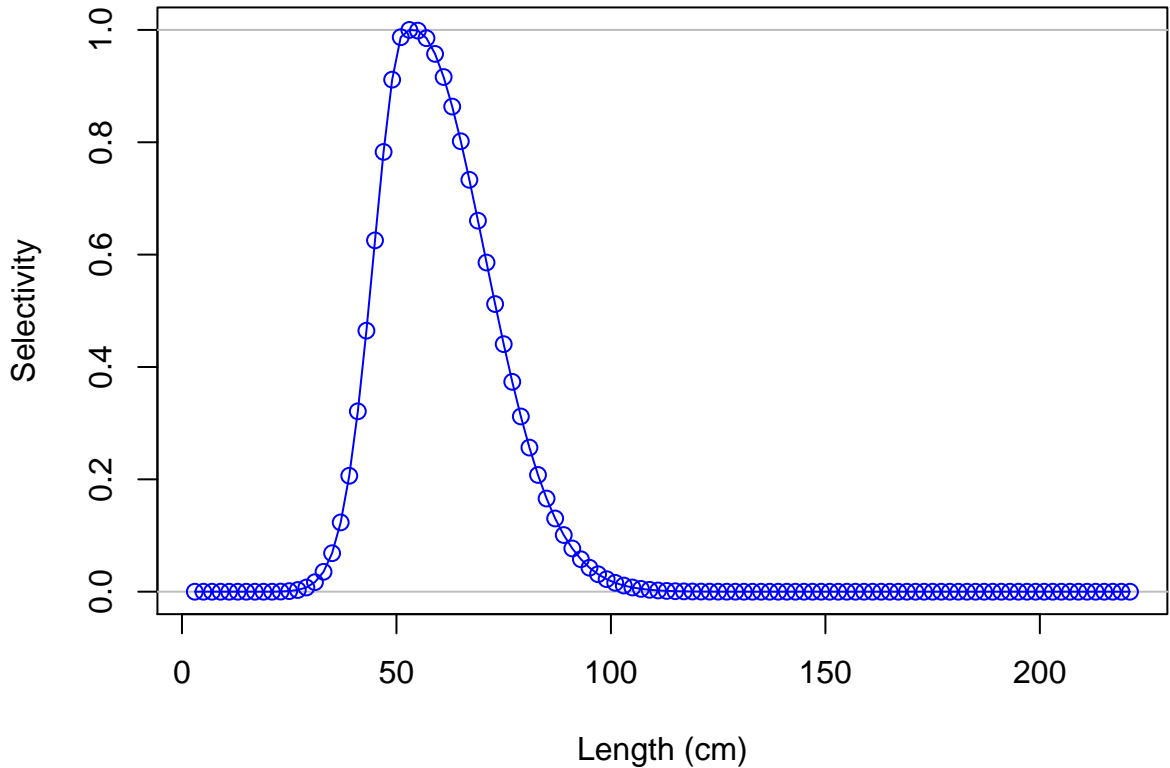
## Female ending year selectivity for A3-OBJ



### Male ending year selectivity for A3-OBJ

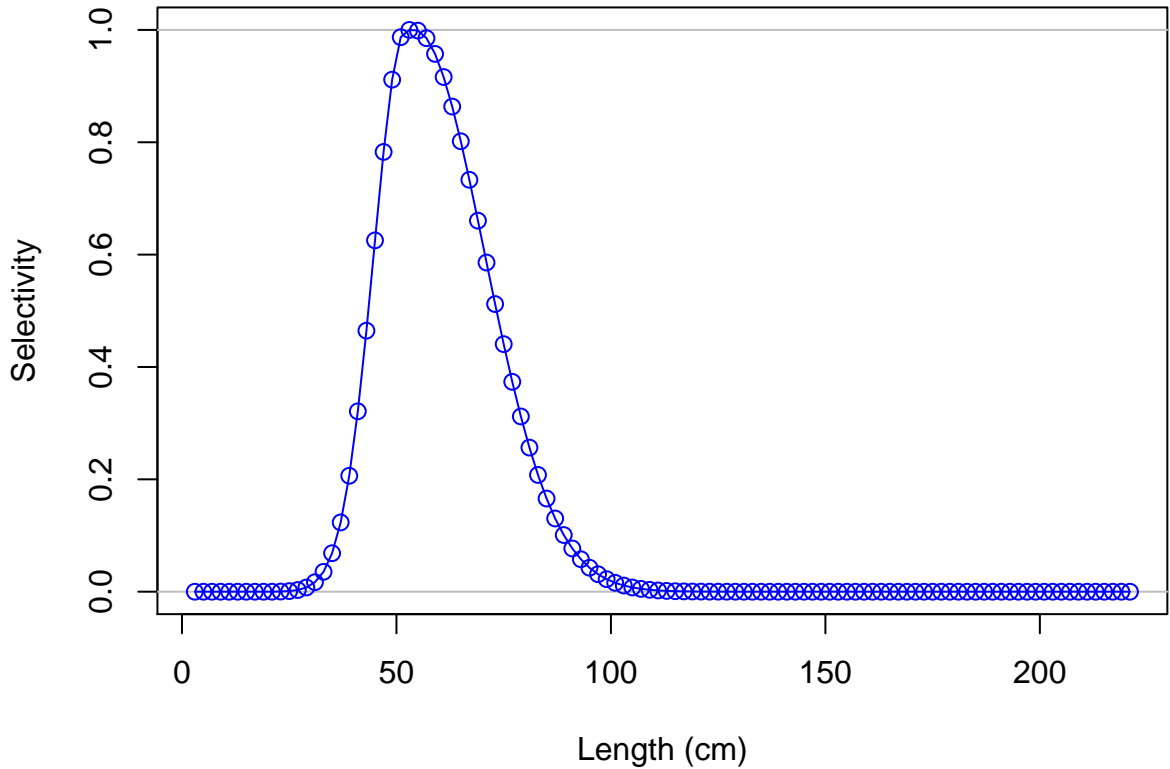


## Female ending year selectivity for A4-OBJ

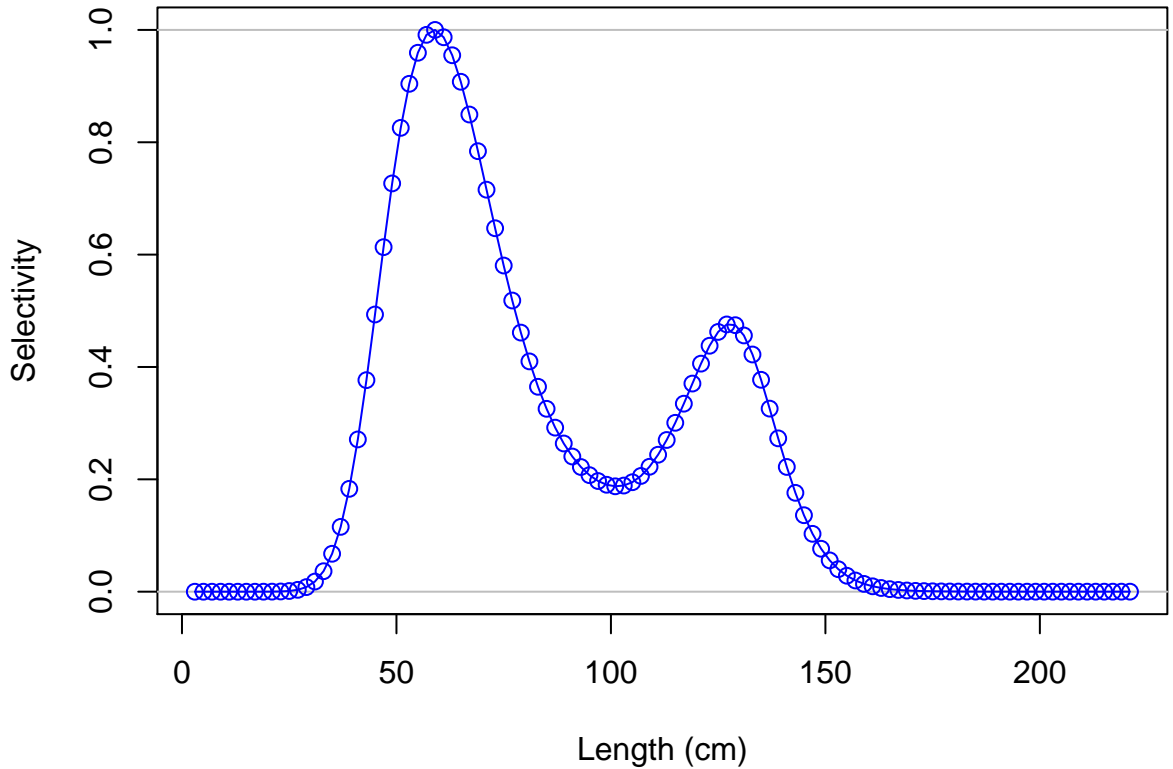




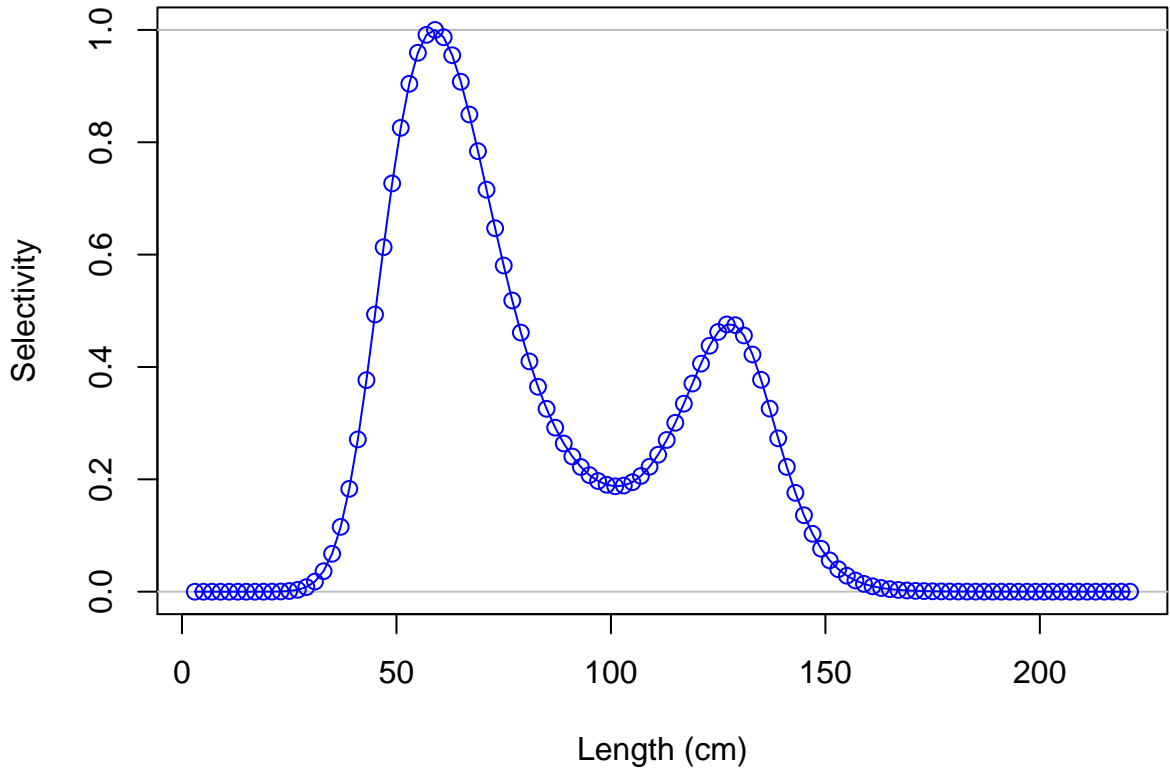
## Male ending year selectivity for A4-OBJ



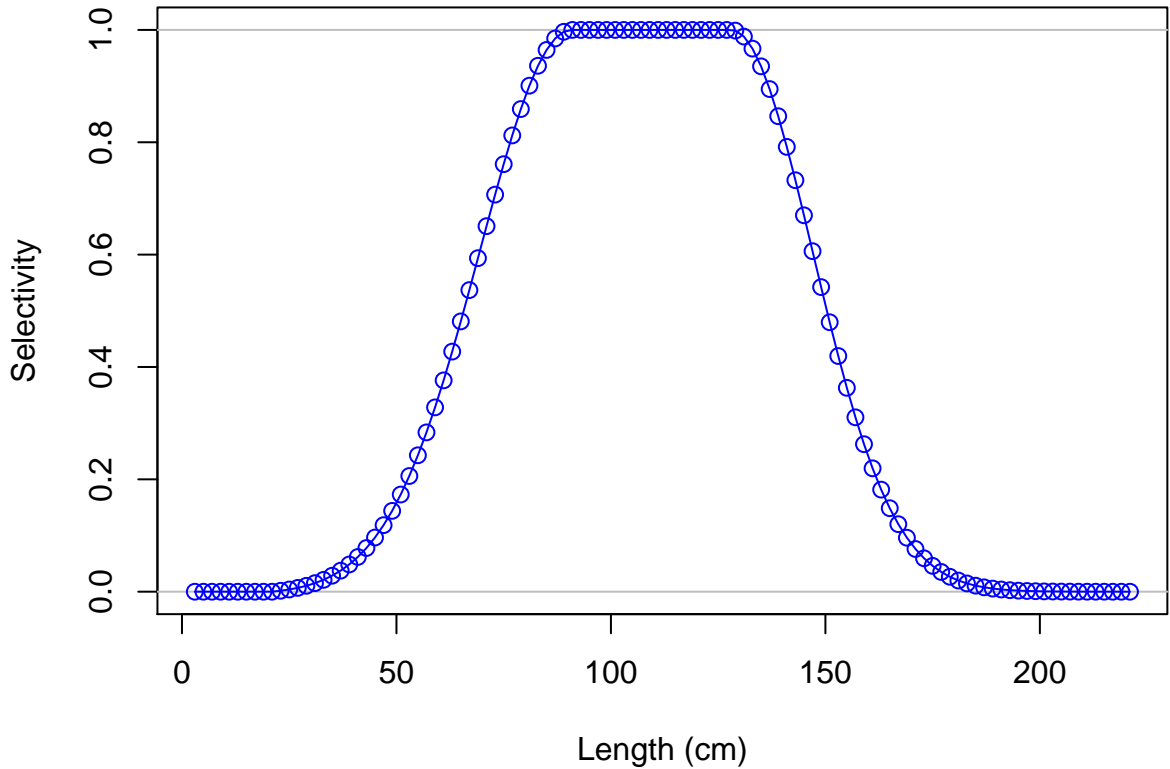
## Female ending year selectivity for A5-OBJ



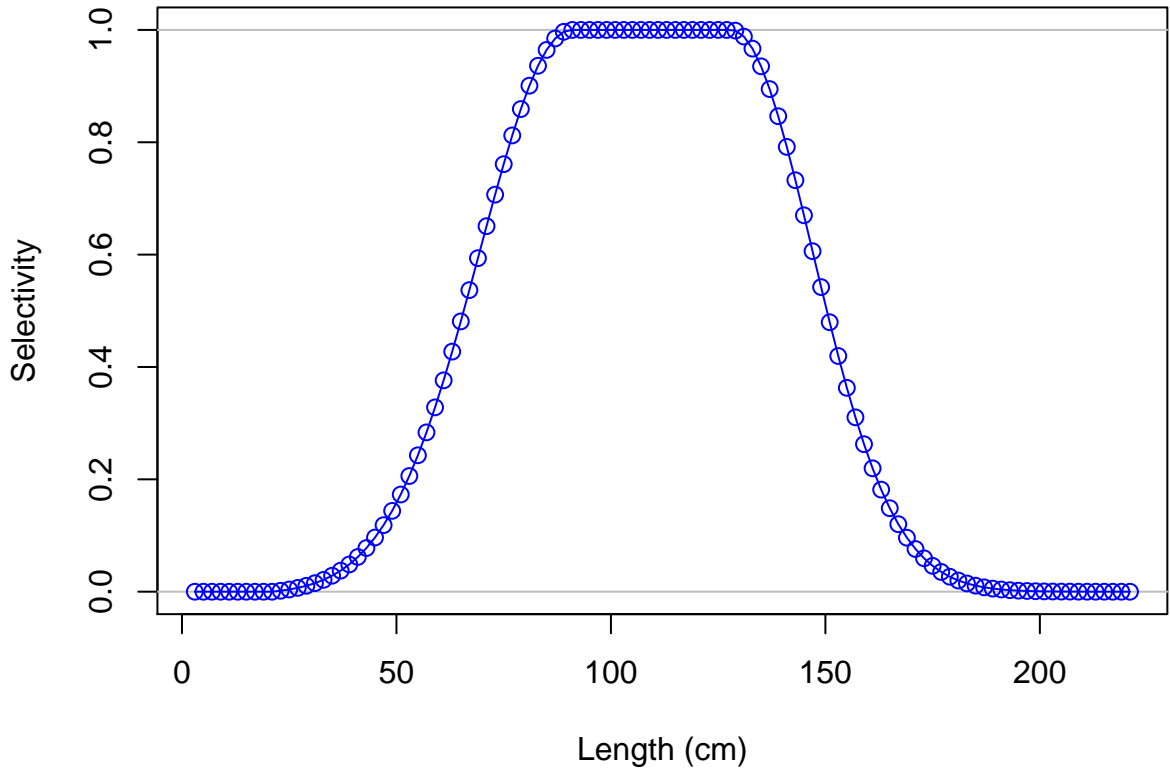
## Male ending year selectivity for A5-OBJ



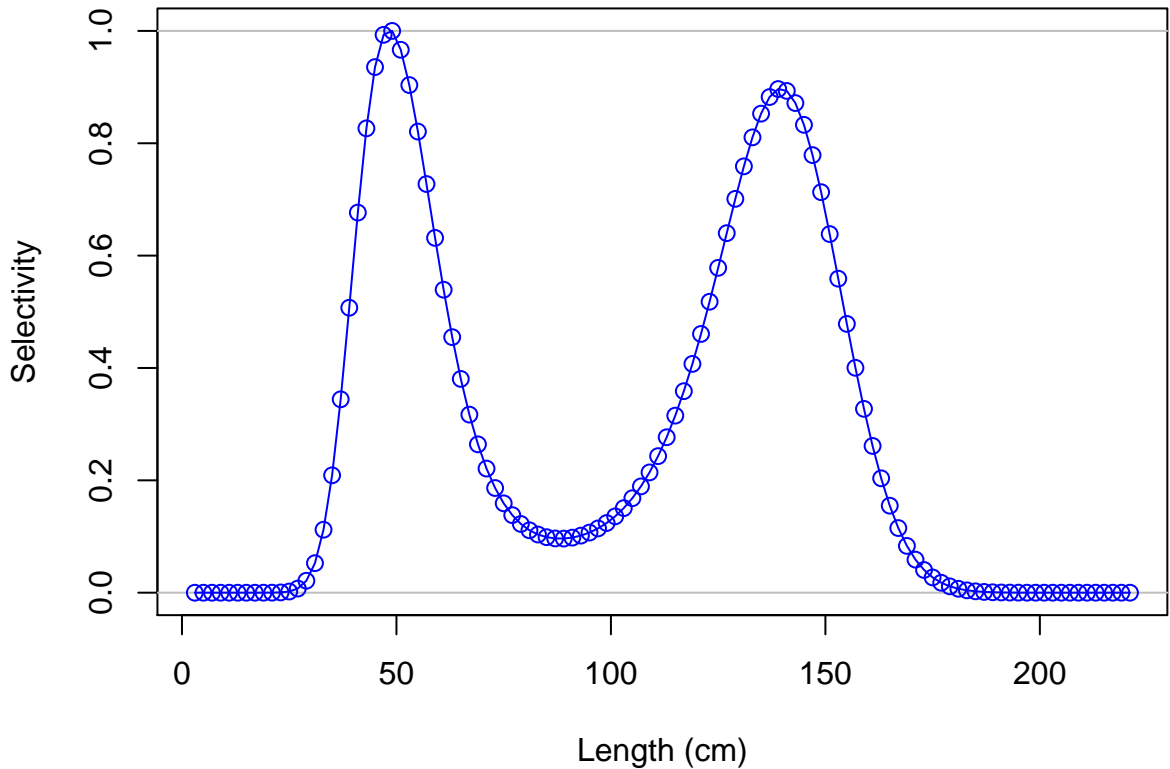
## Female ending year selectivity for A6-OBJ



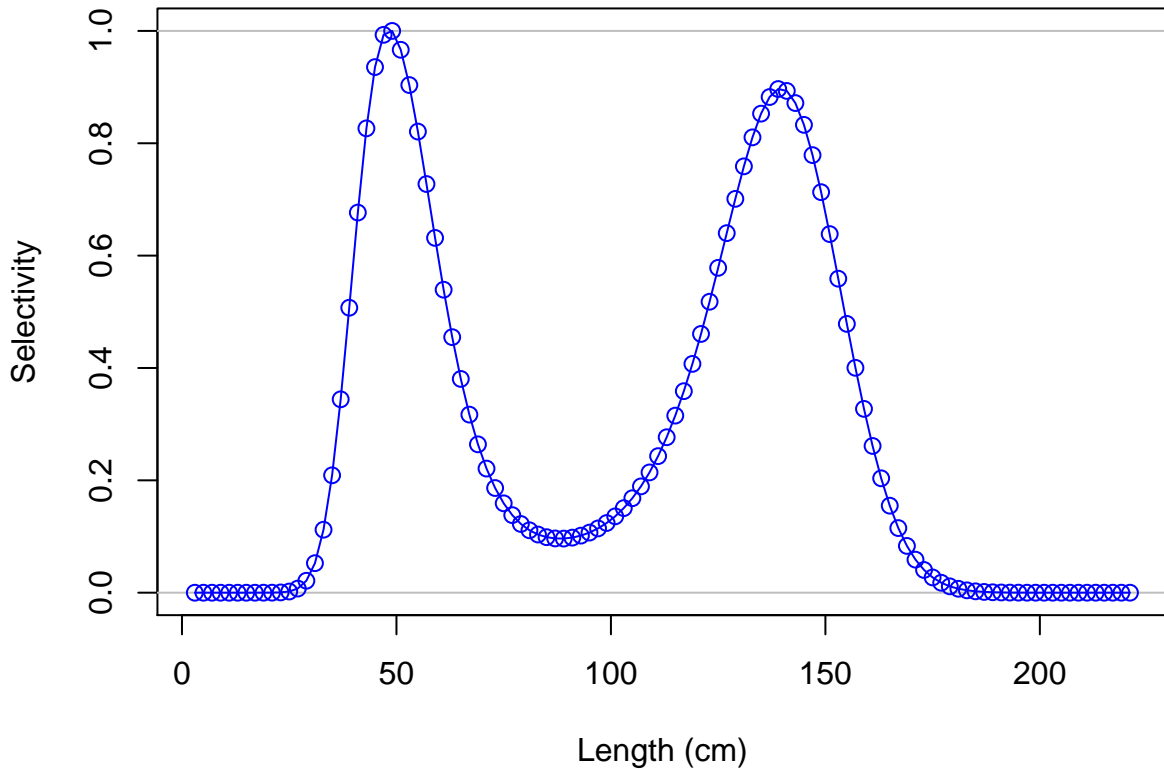
## Male ending year selectivity for A6-OBJ



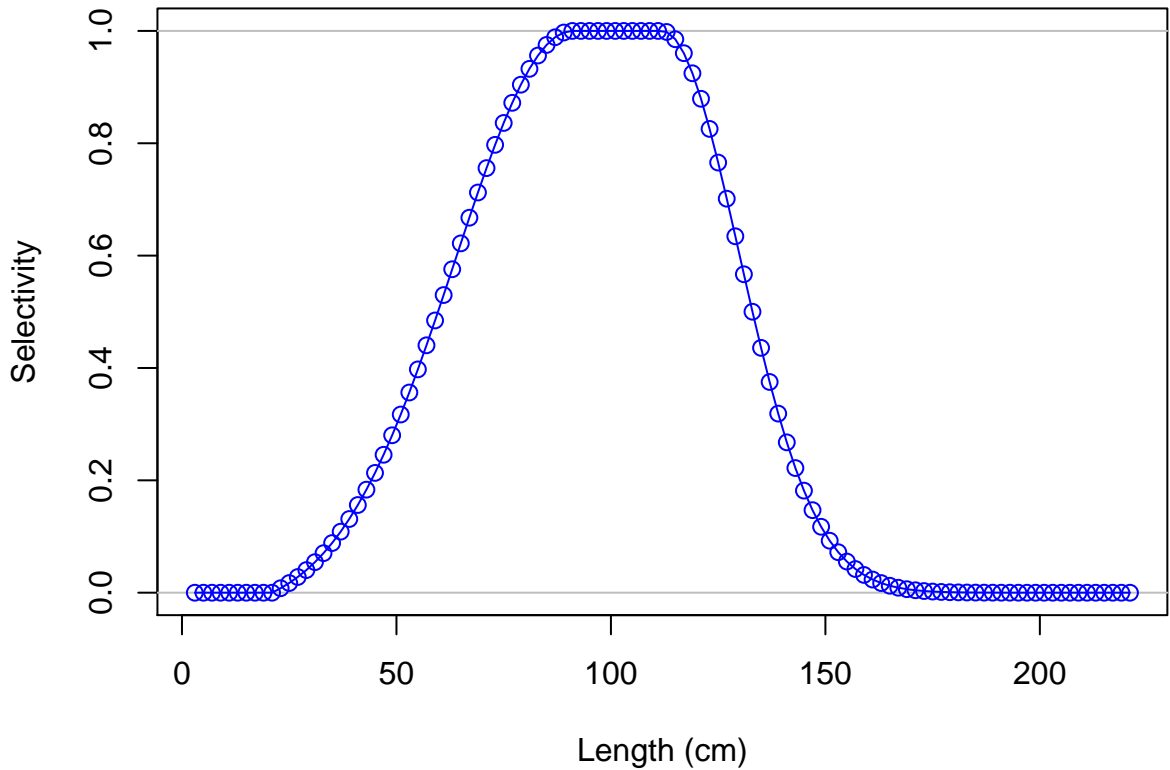
## Female ending year selectivity for A2-NOADEL



## Male ending year selectivity for A2-NOADEL

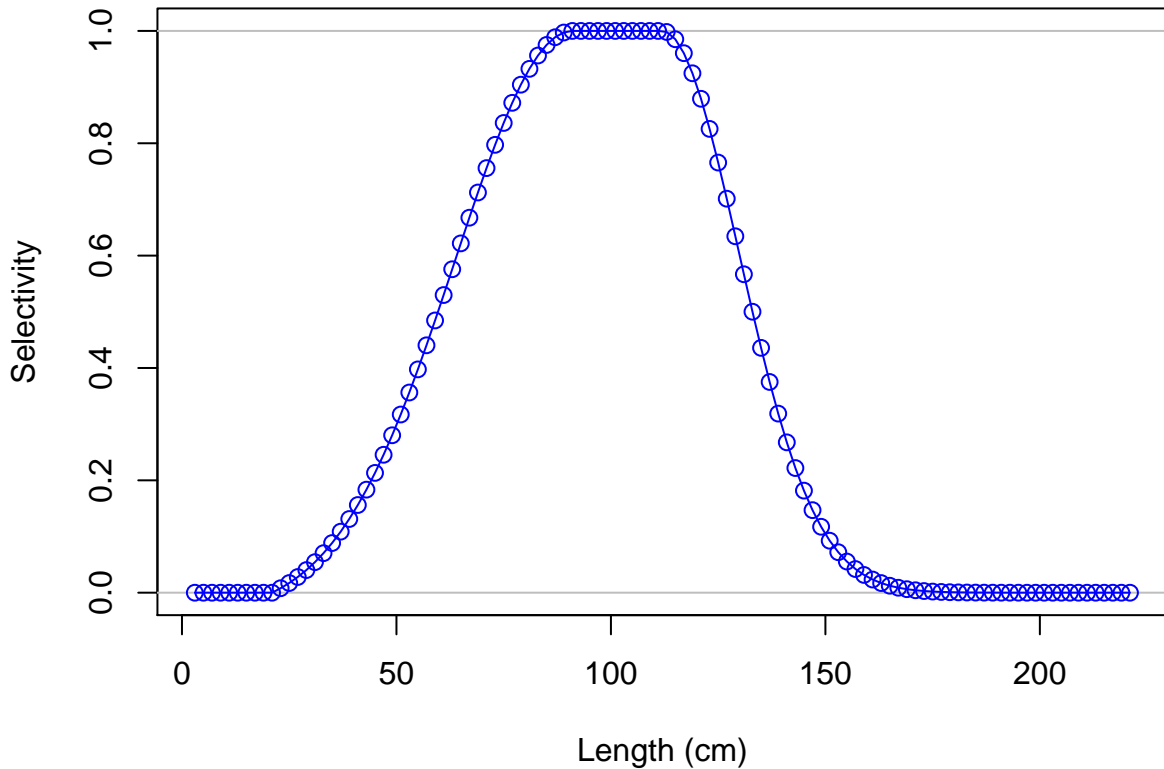


## Female ending year selectivity for A3-NOADEL

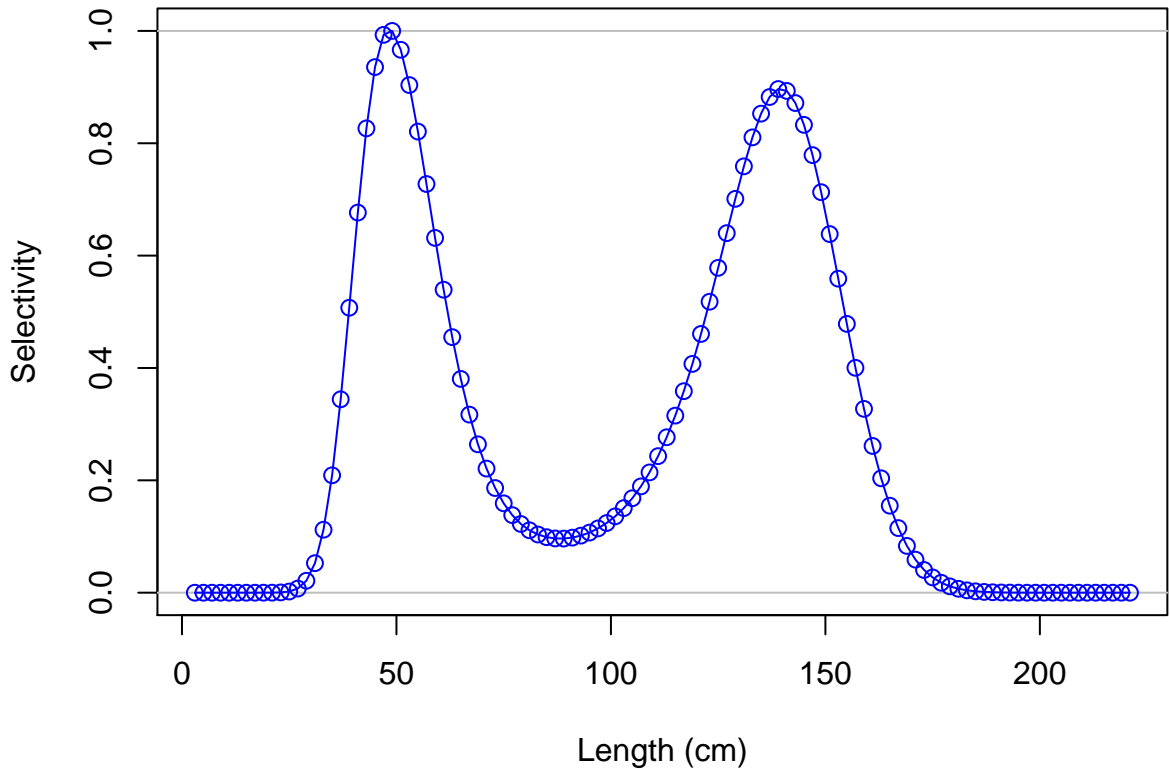




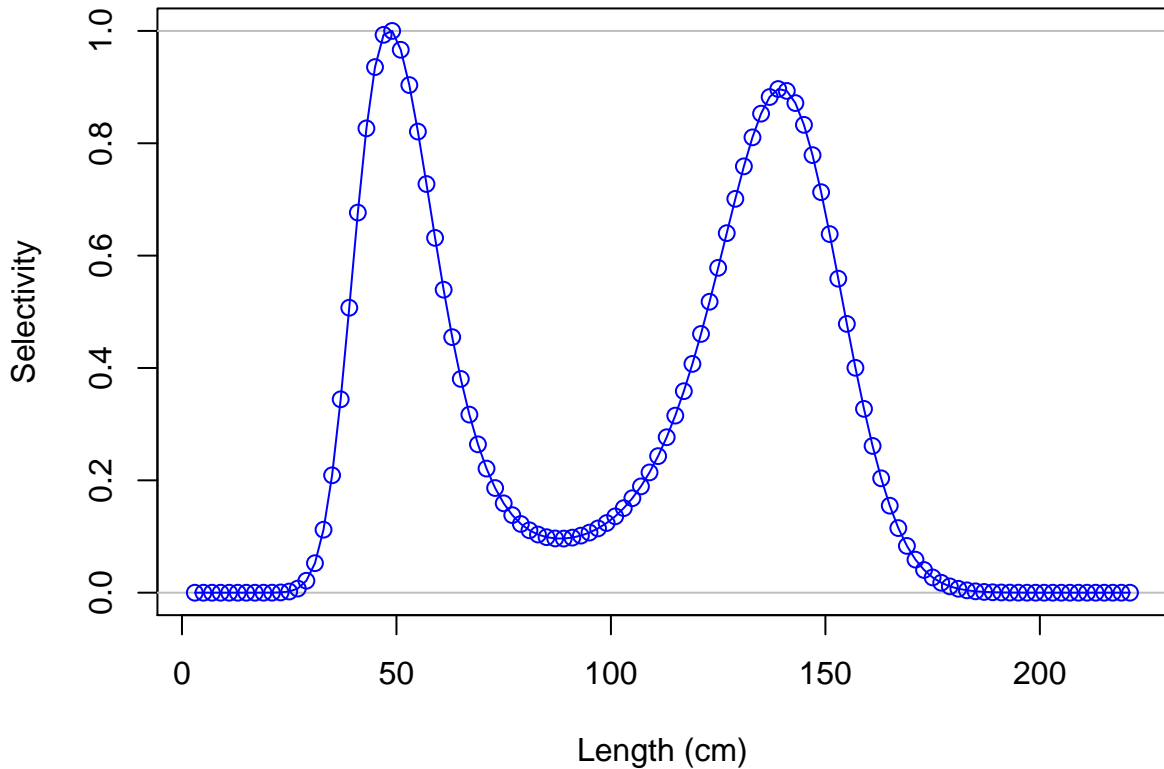
## Male ending year selectivity for A3-NOADEL



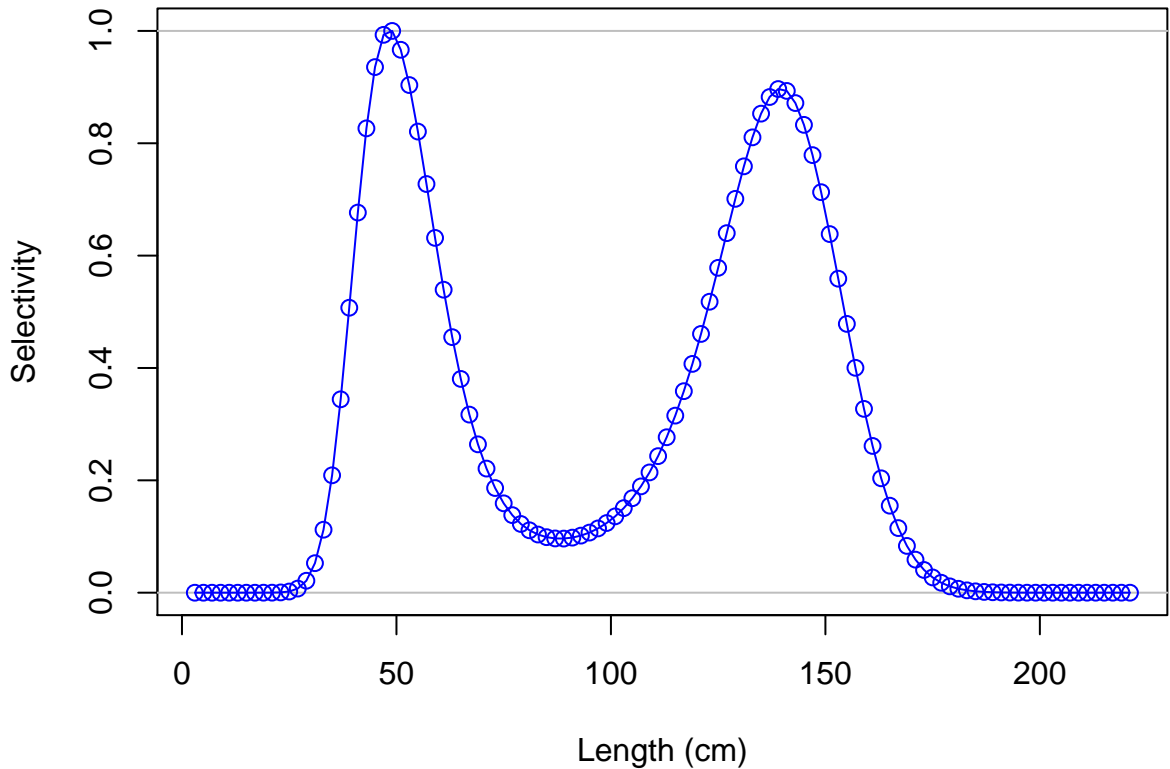
## Female ending year selectivity for A4-NOADEL



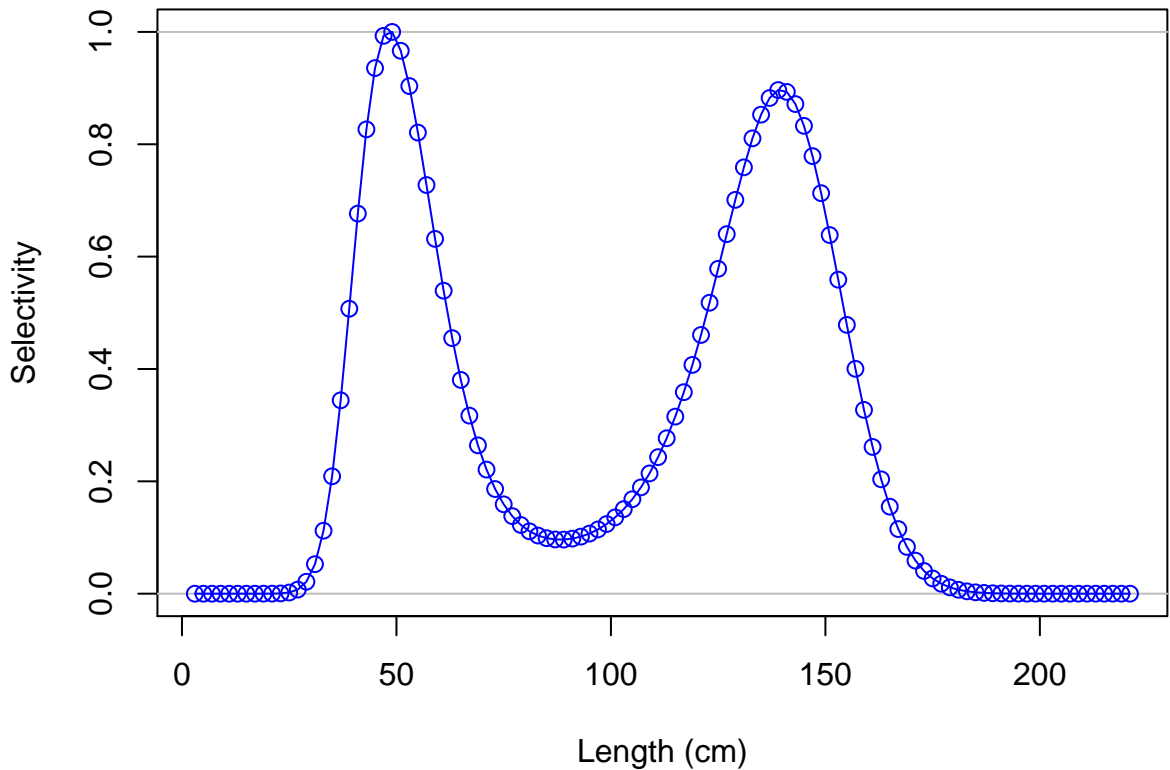
## Male ending year selectivity for A4-NOADEL



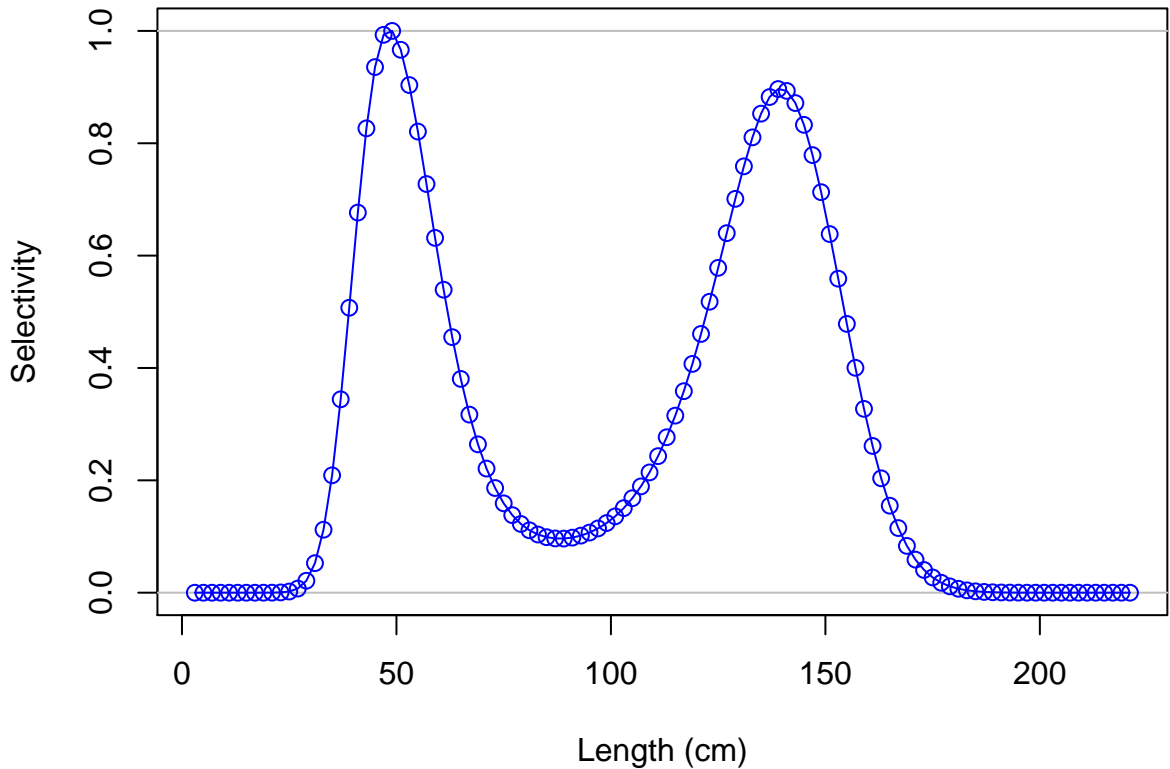
## Female ending year selectivity for A5-NOADEL



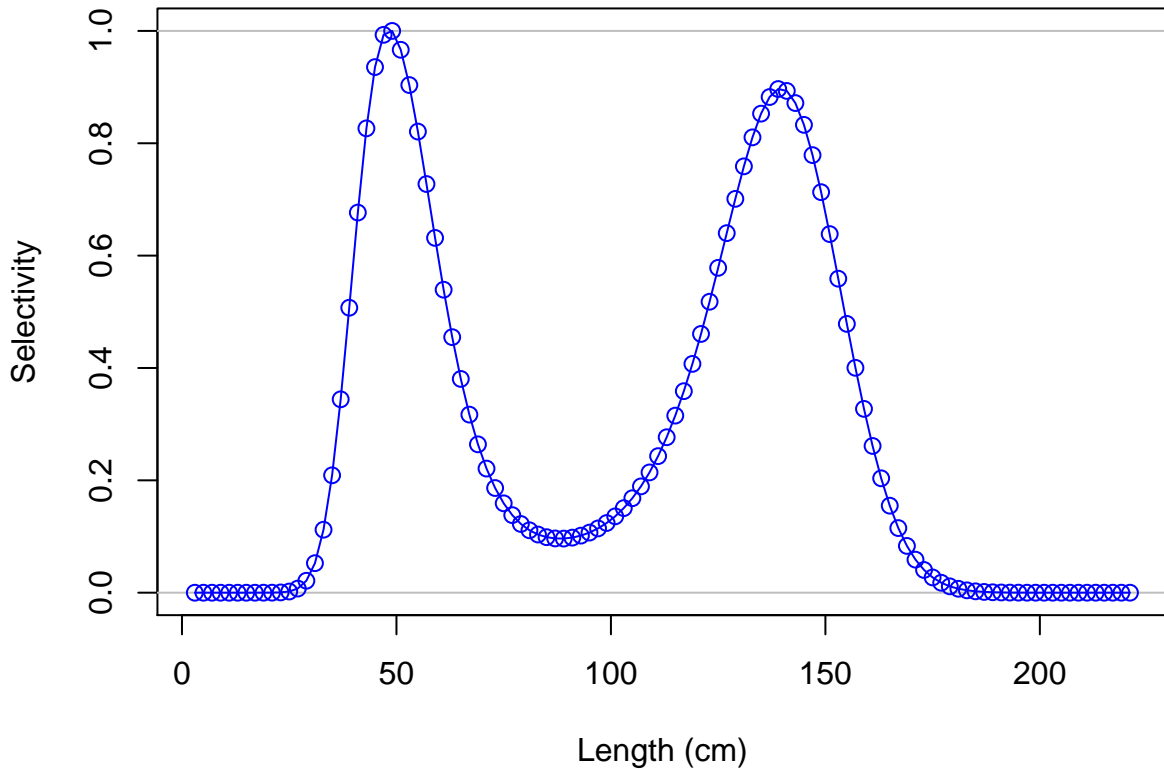
## Male ending year selectivity for A5-NOADEL



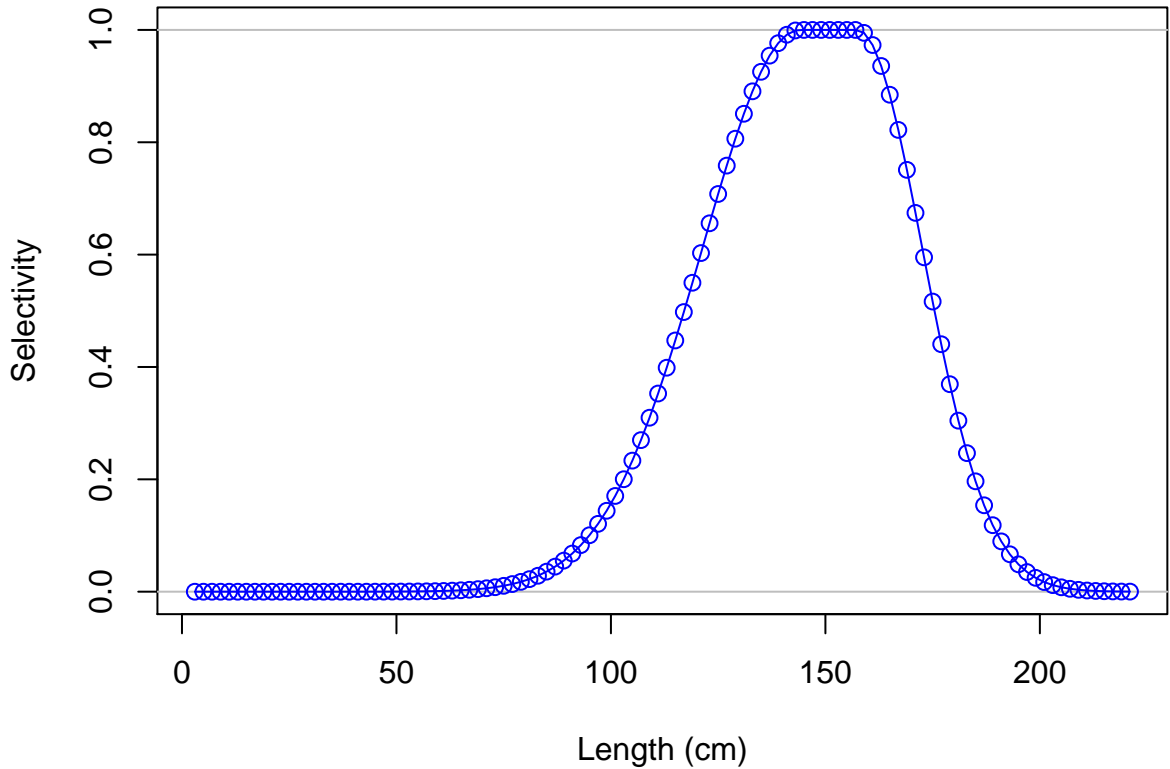
## Female ending year selectivity for A6-NOADEL



## Male ending year selectivity for A6-NOADEL

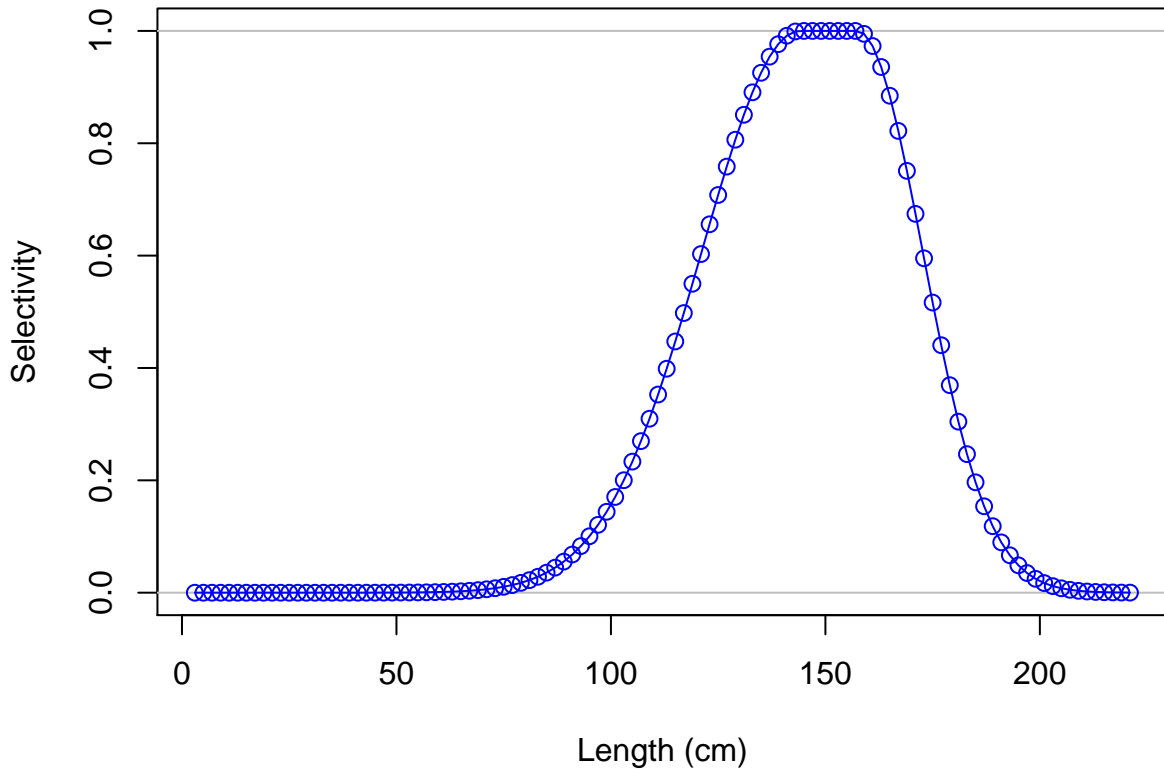


# Female ending year selectivity for EPO-LL-survey-early

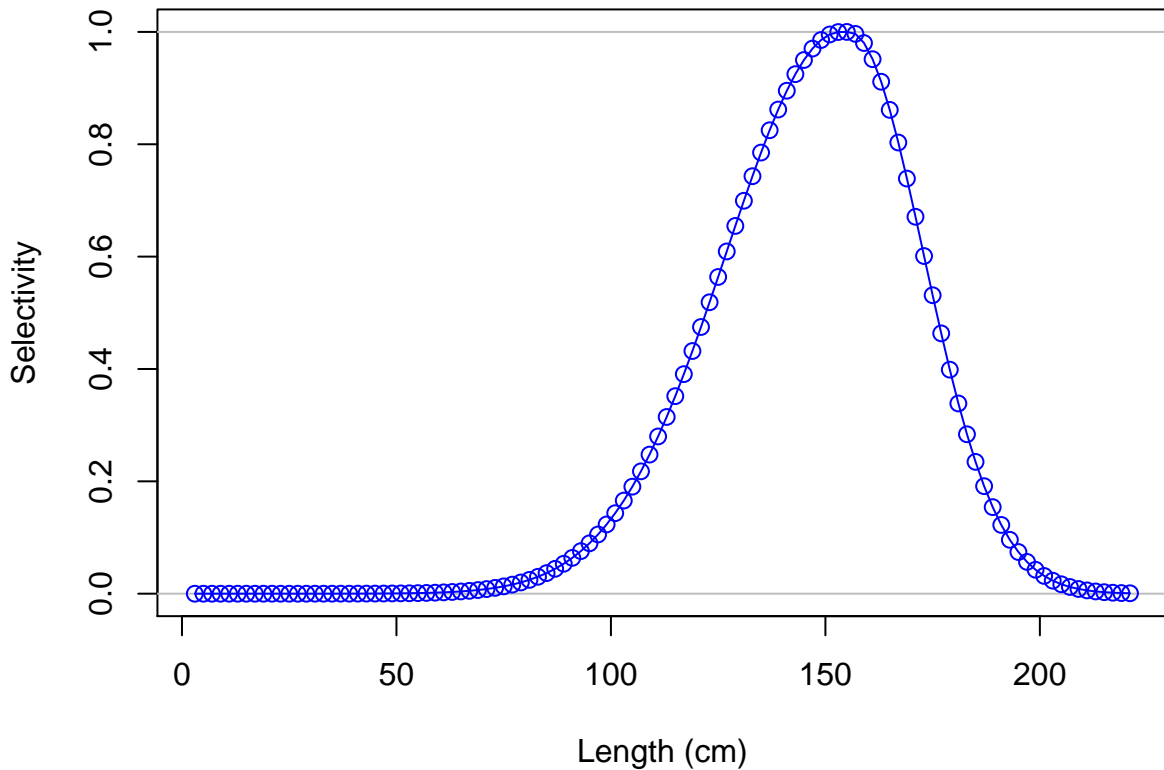




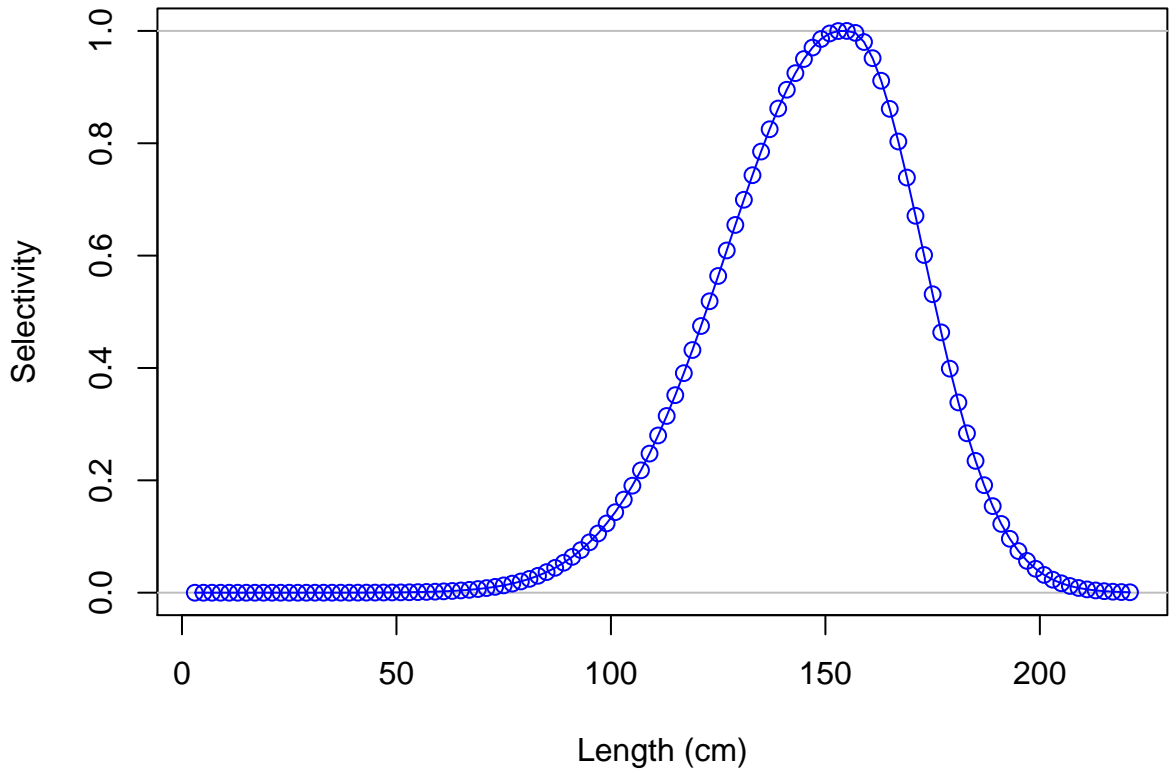
# Male ending year selectivity for EPO-LL-survey-early



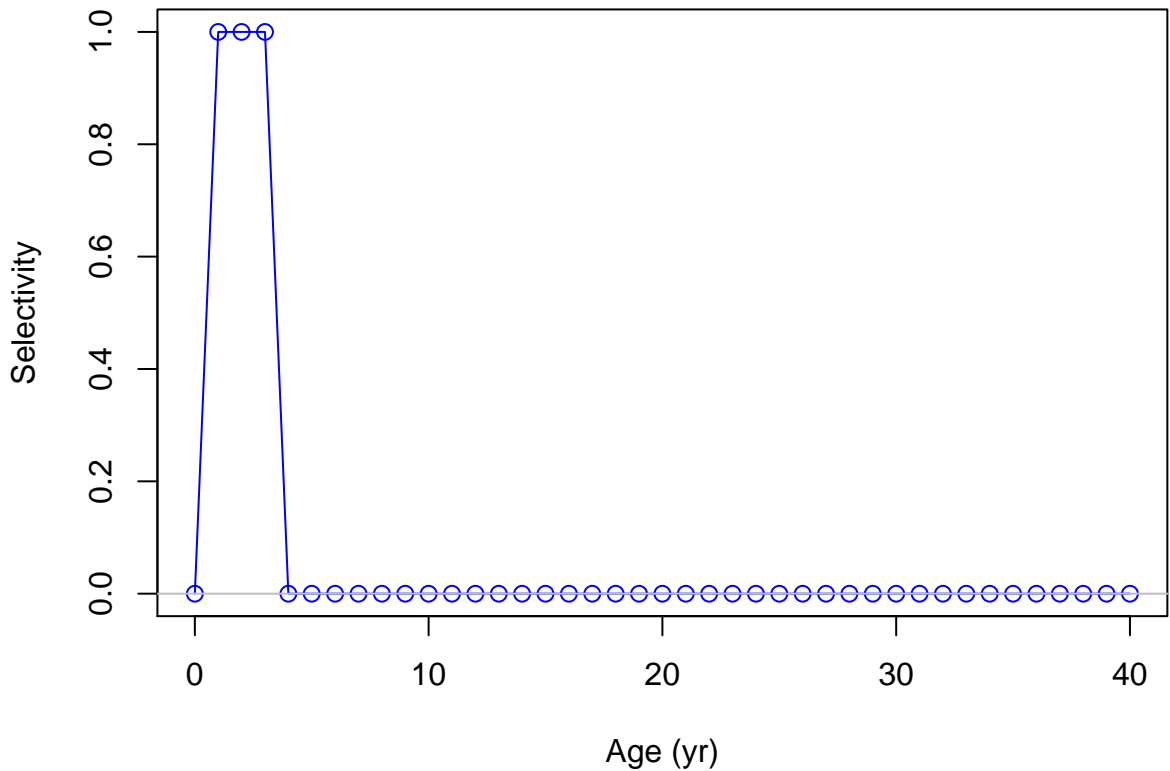
## Female ending year selectivity for EPO-LL-survey-late



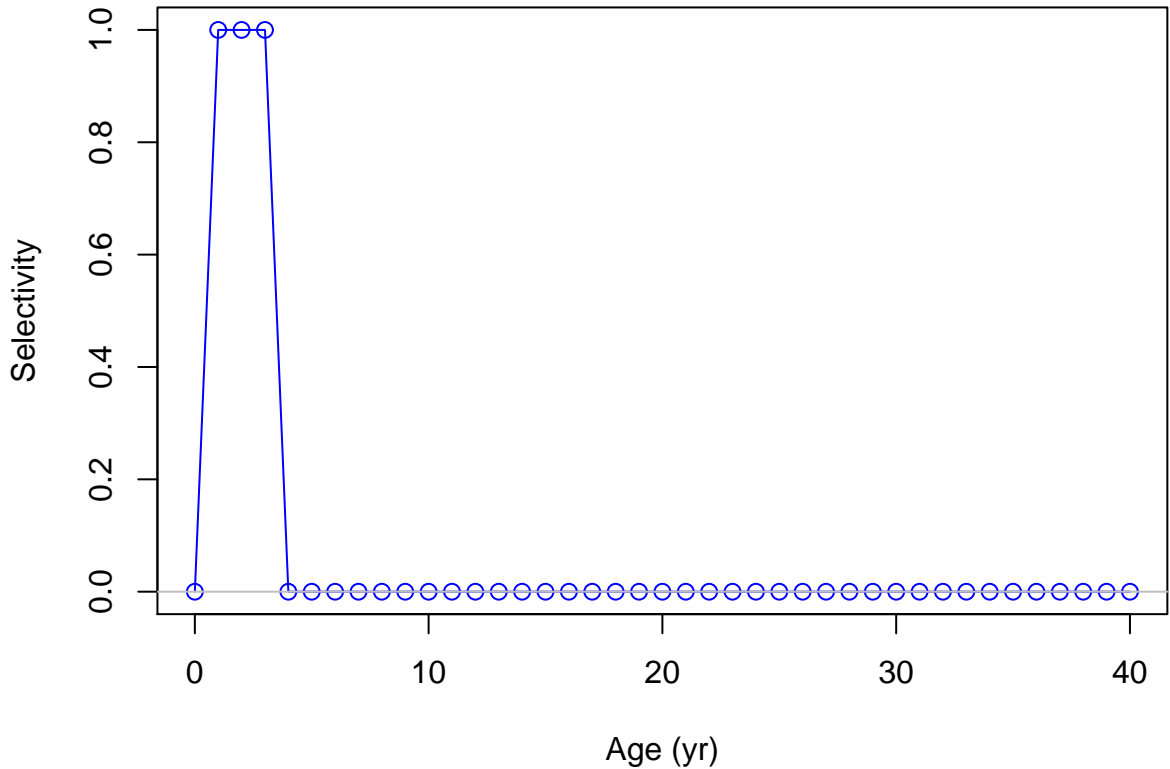
# Male ending year selectivity for EPO-LL-survey-late



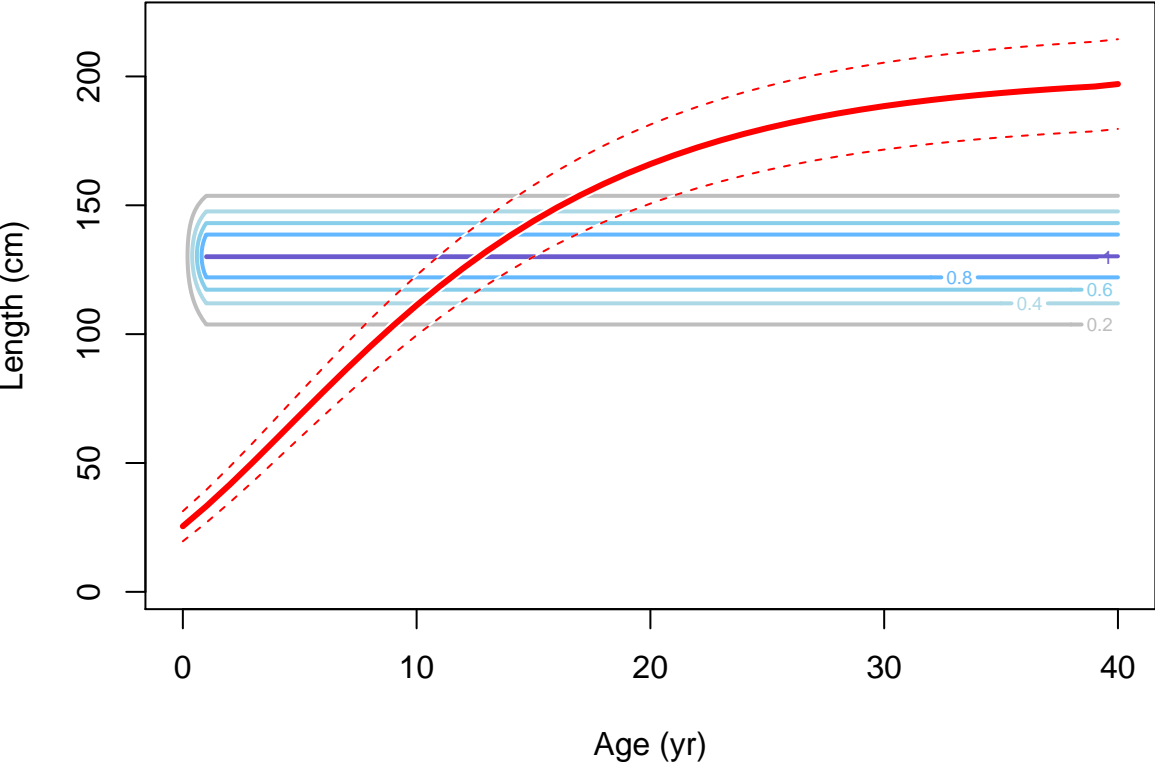
## Female ending year selectivity for EPO-OBJ-Disc



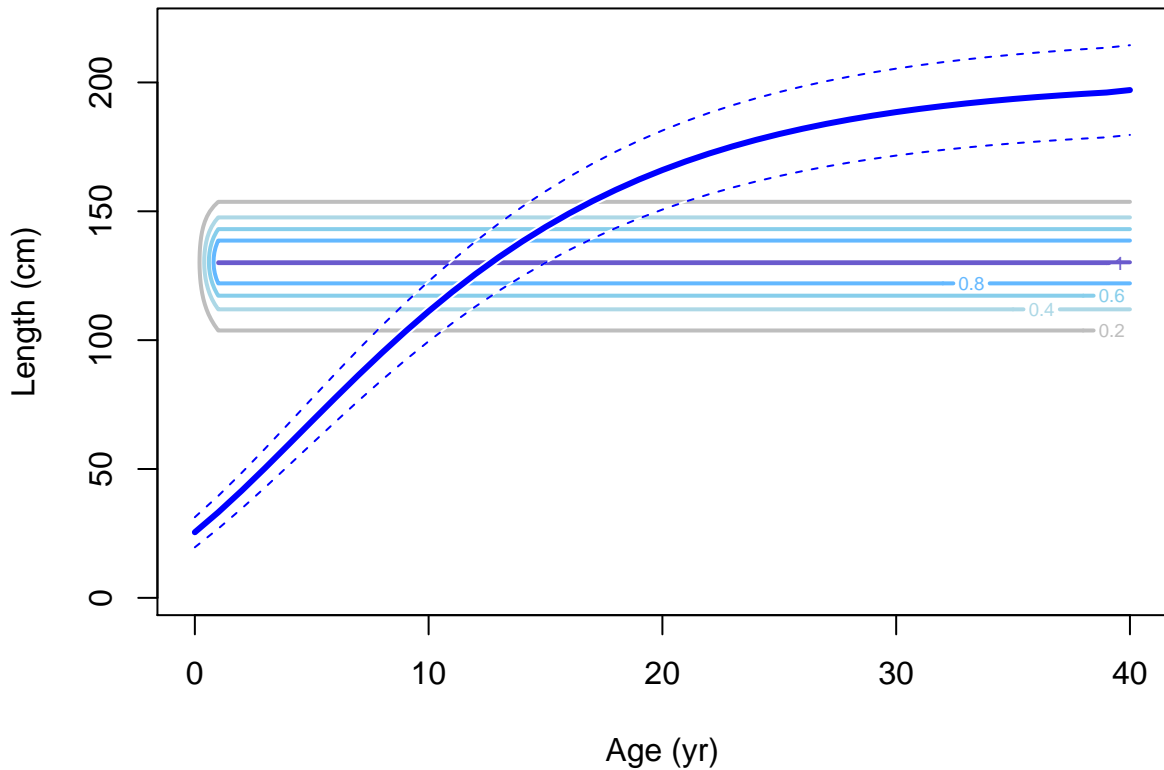
# Male ending year selectivity for EPO-OBJ-Disc



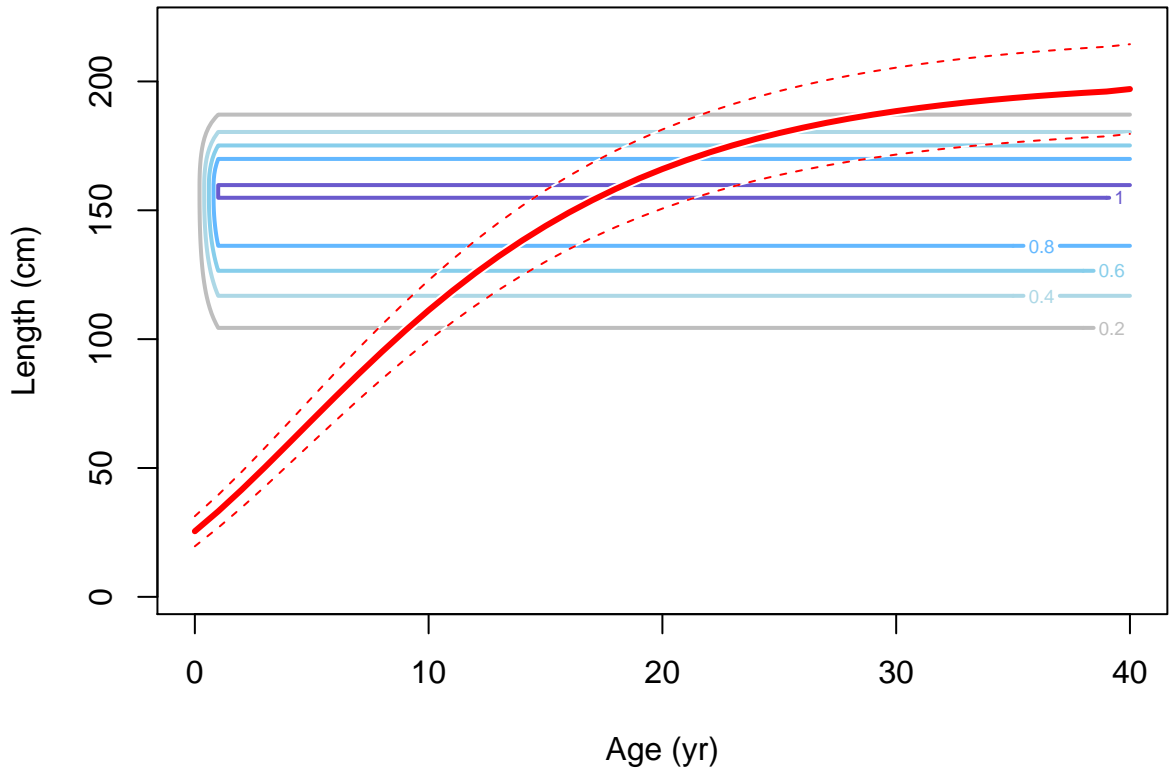
# Female ending year selectivity and growth for A1-LL-n



# Male ending year selectivity and growth for A1-LL-n

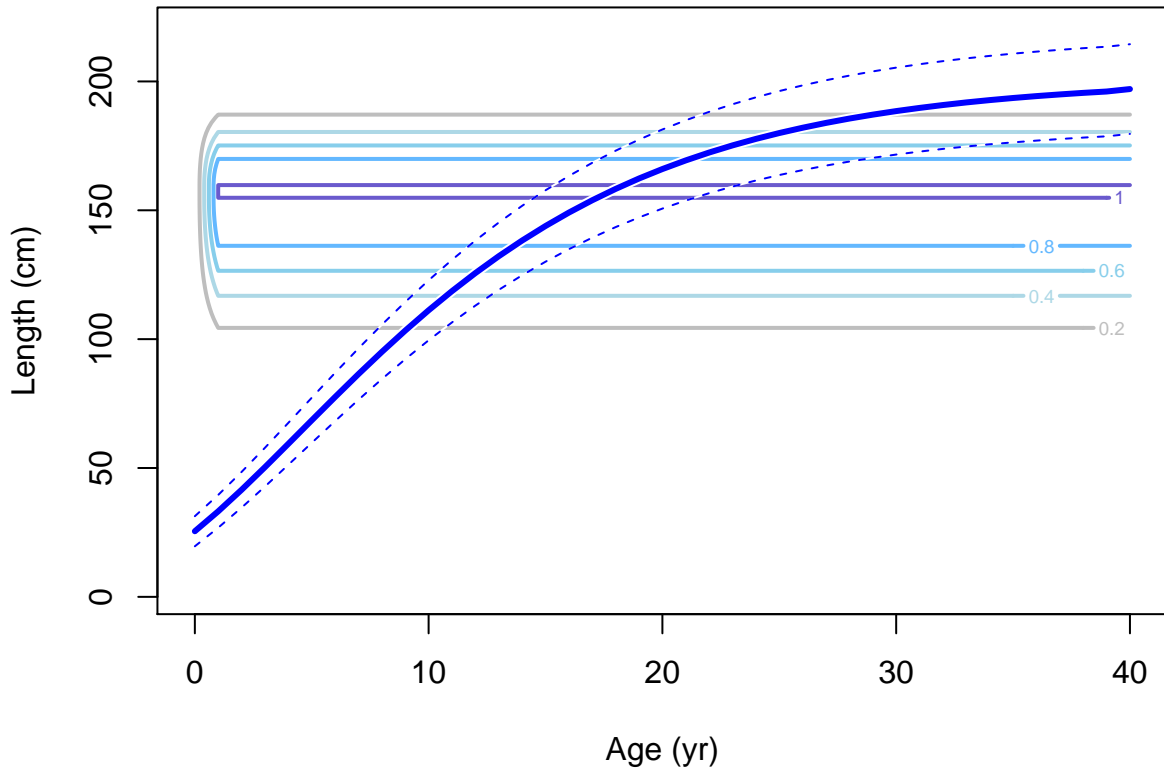


## Female ending year selectivity and growth for A2-LL-n

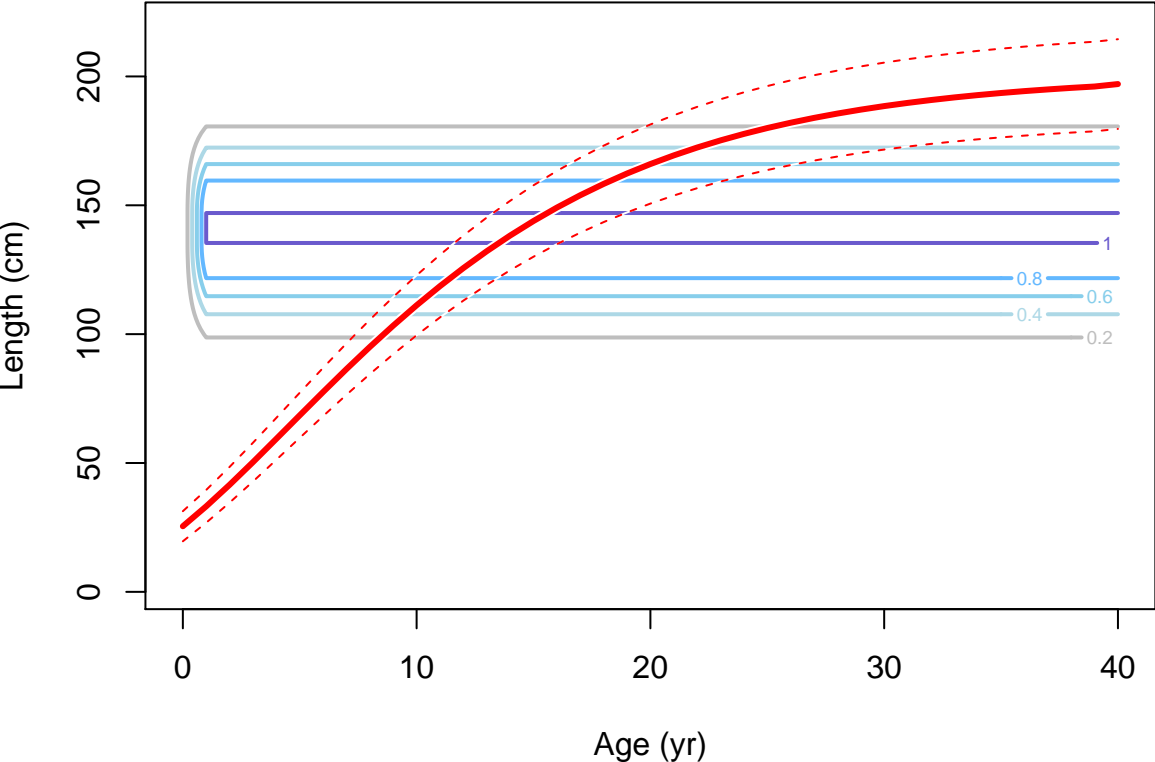




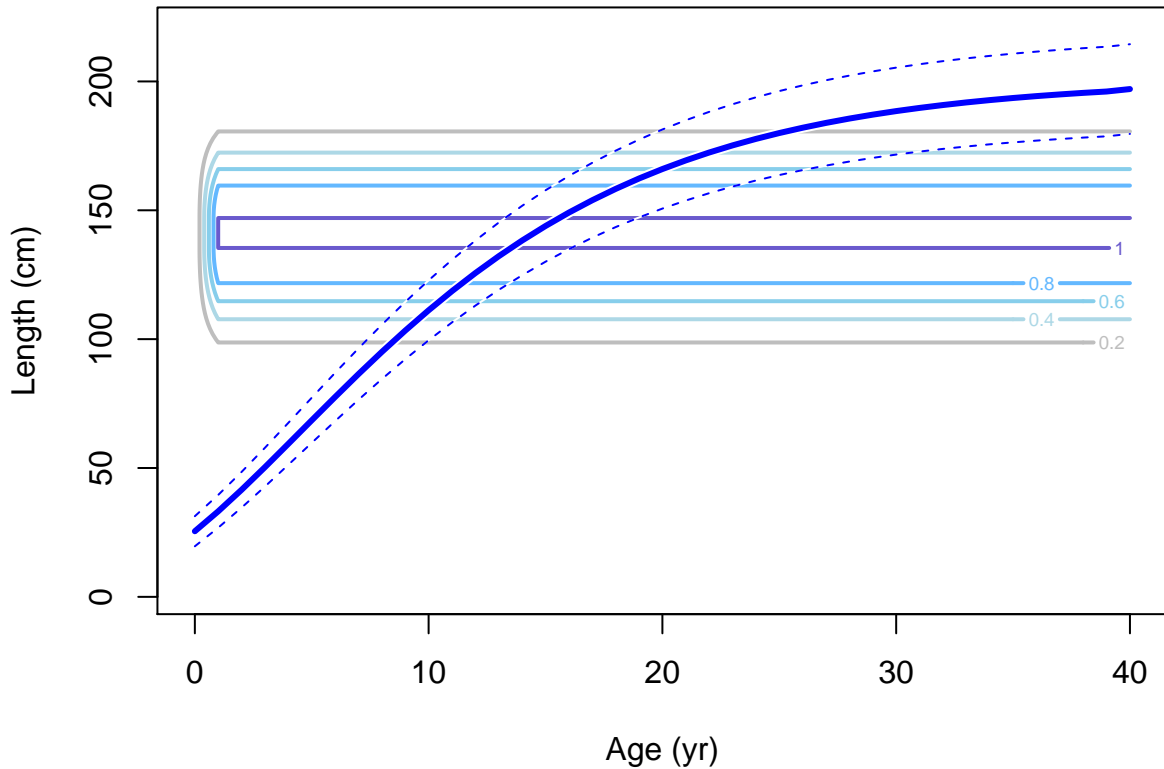
# Male ending year selectivity and growth for A2-LL-n



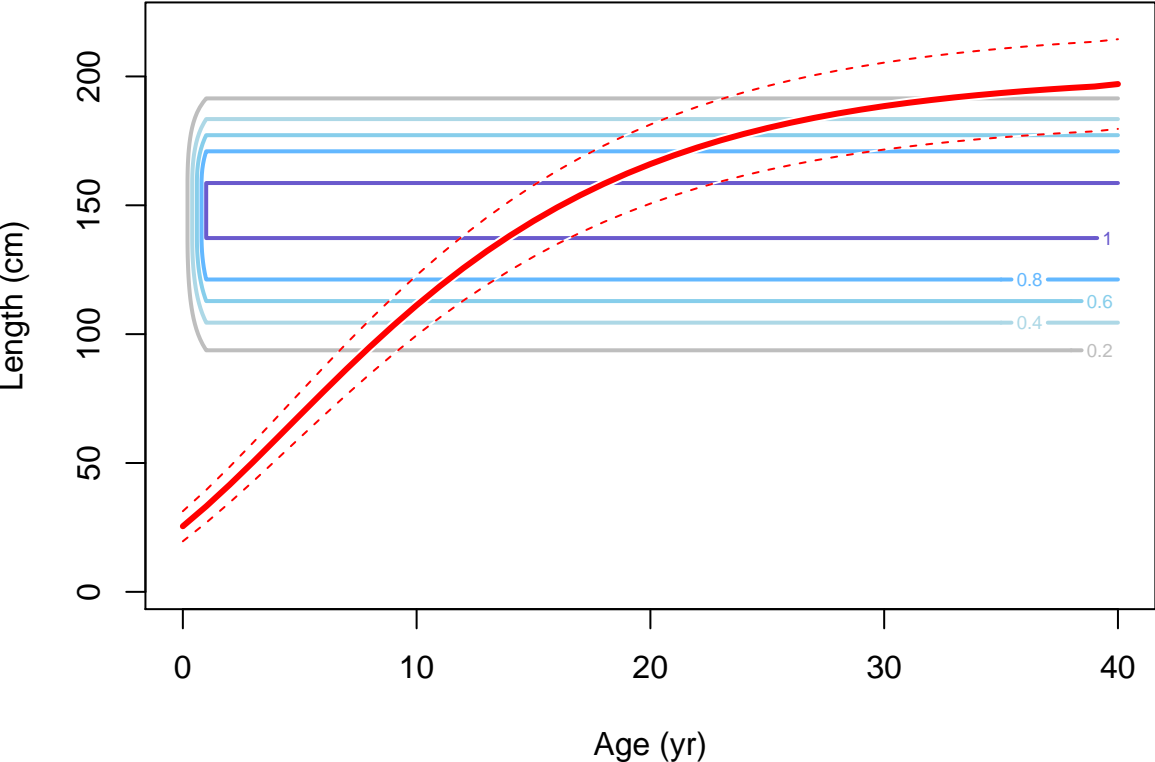
# Female ending year selectivity and growth for A3-LL-n



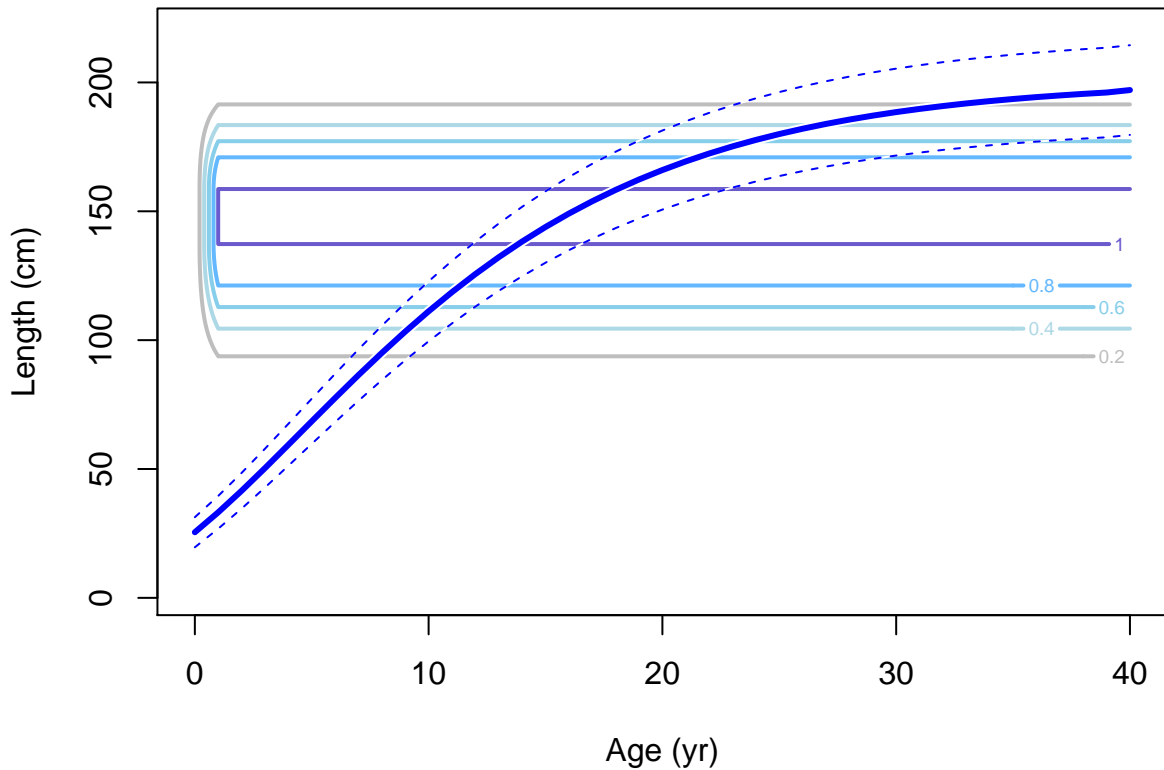
# Male ending year selectivity and growth for A3-LL-n



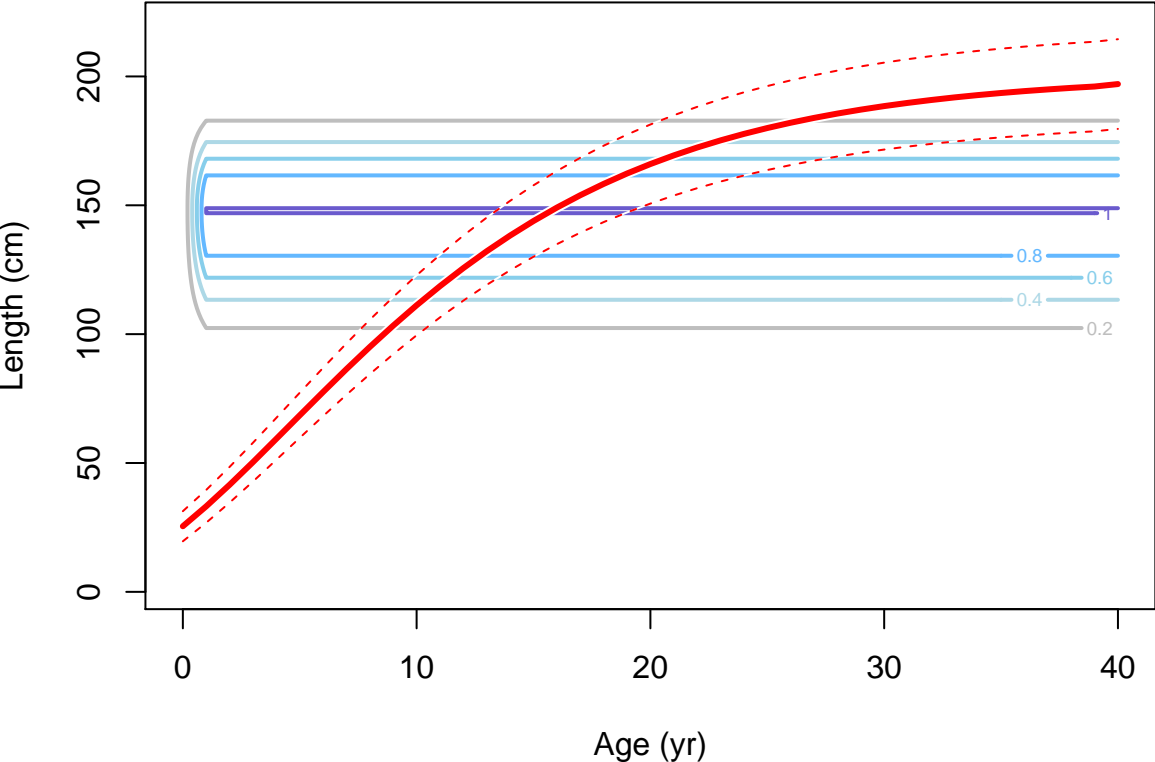
# Female ending year selectivity and growth for A4-LL-n



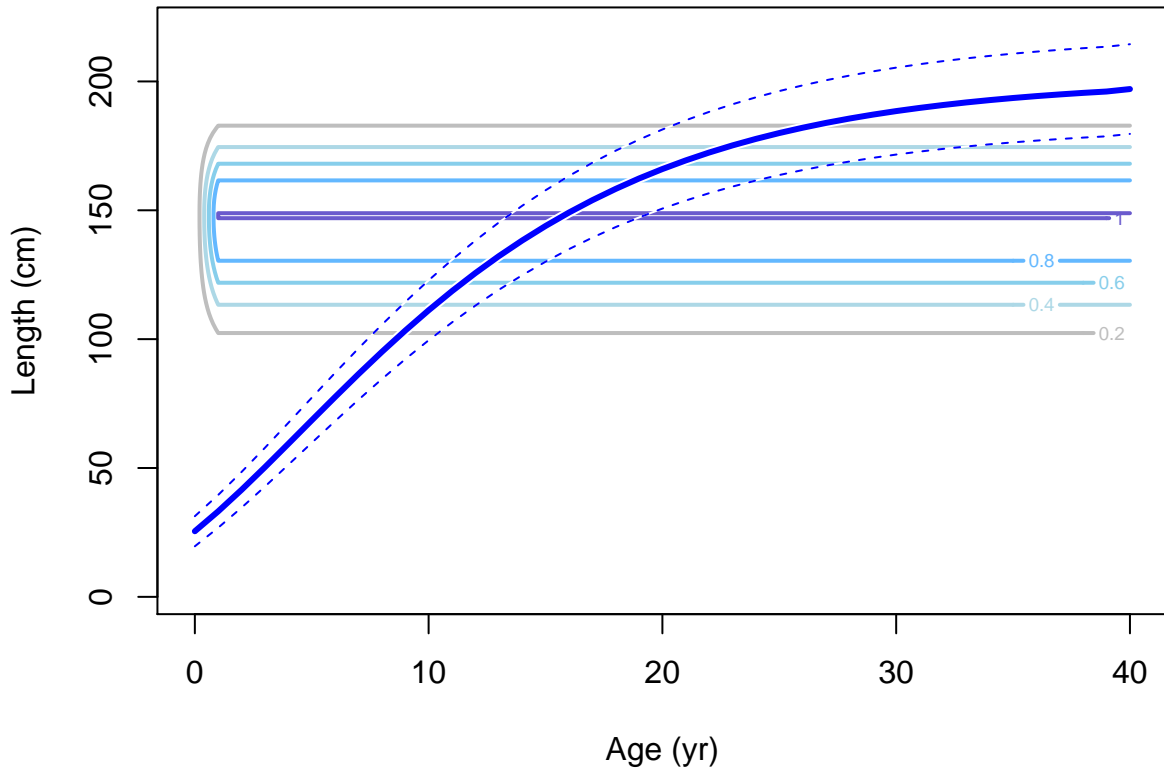
# Male ending year selectivity and growth for A4-LL-n



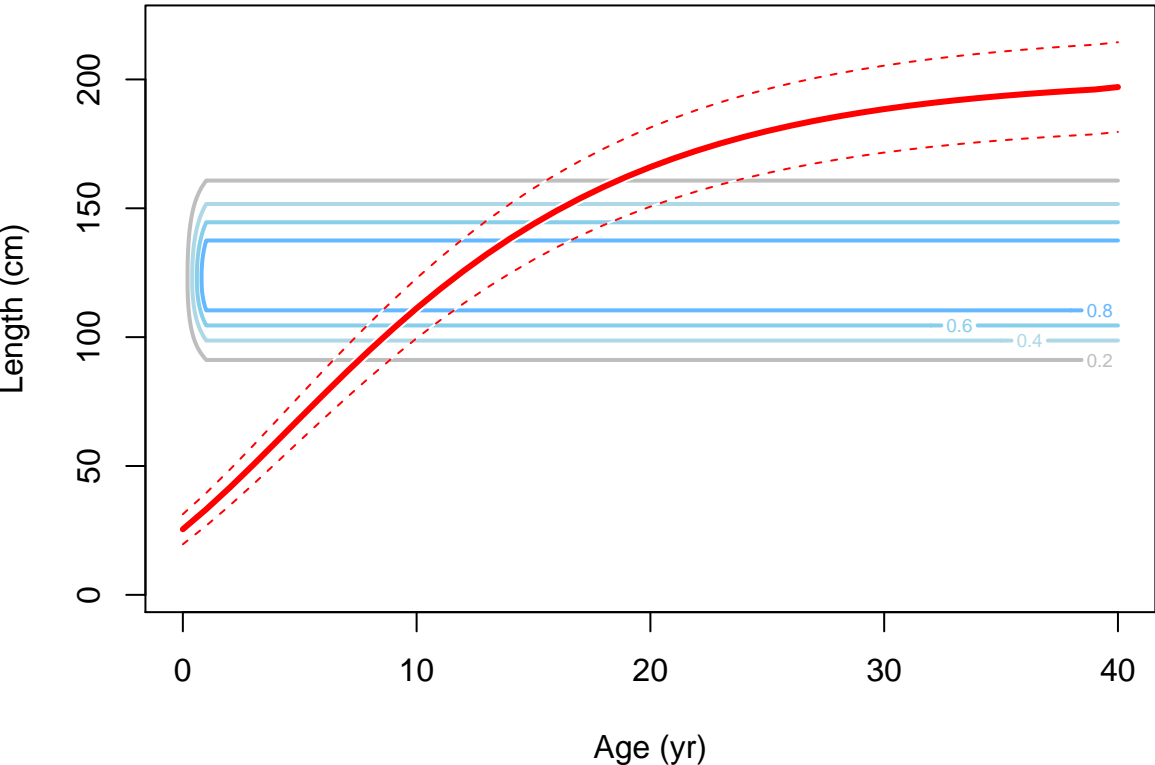
# Female ending year selectivity and growth for A5-LL-n



# Male ending year selectivity and growth for A5-LL-n

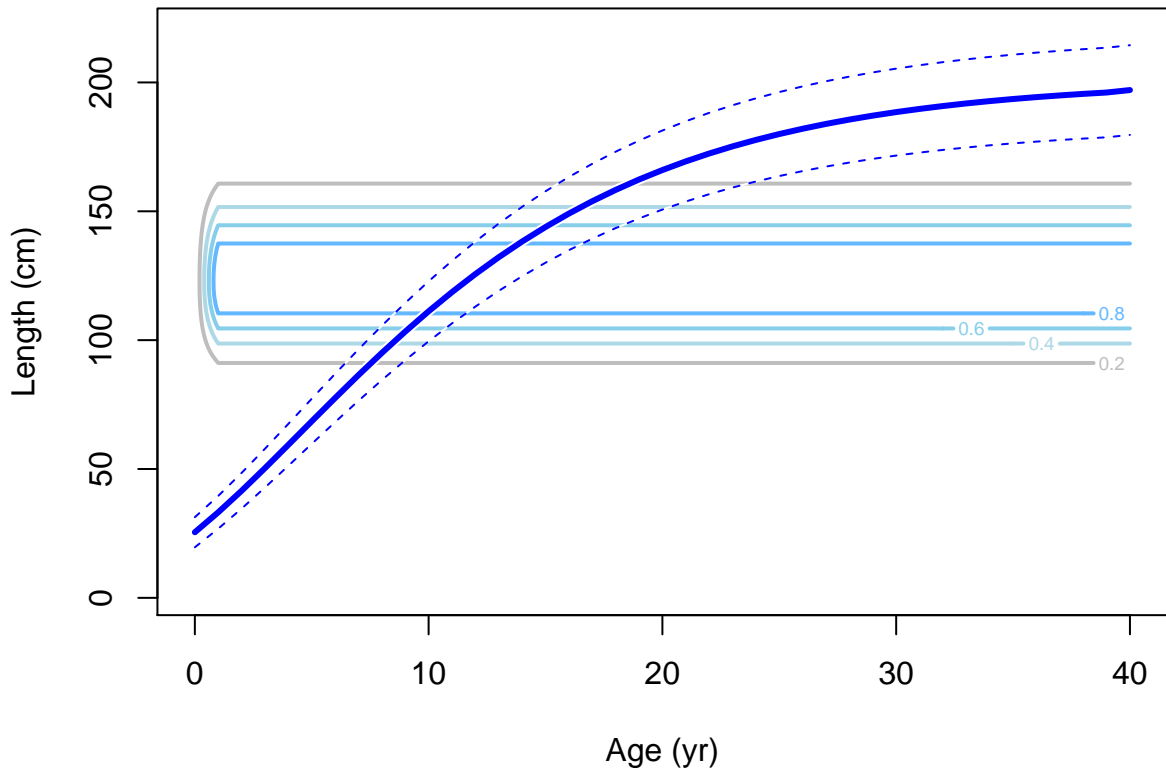


# Female ending year selectivity and growth for A6-LL-n

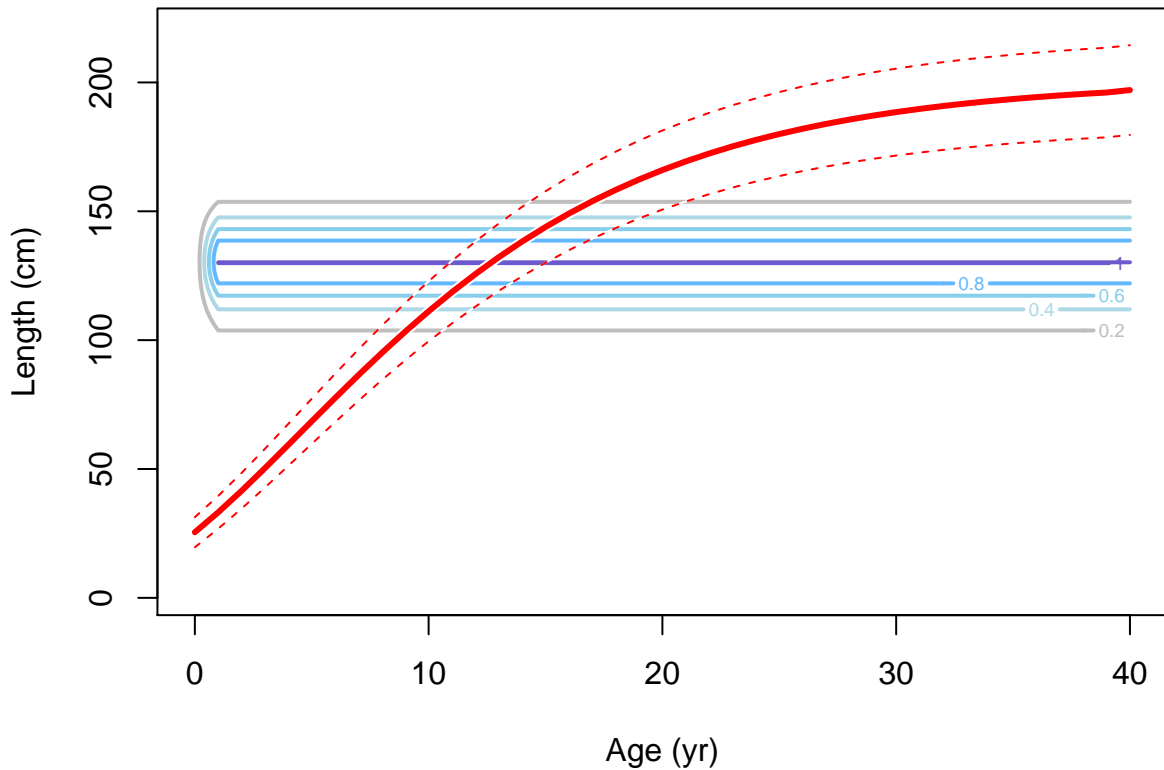




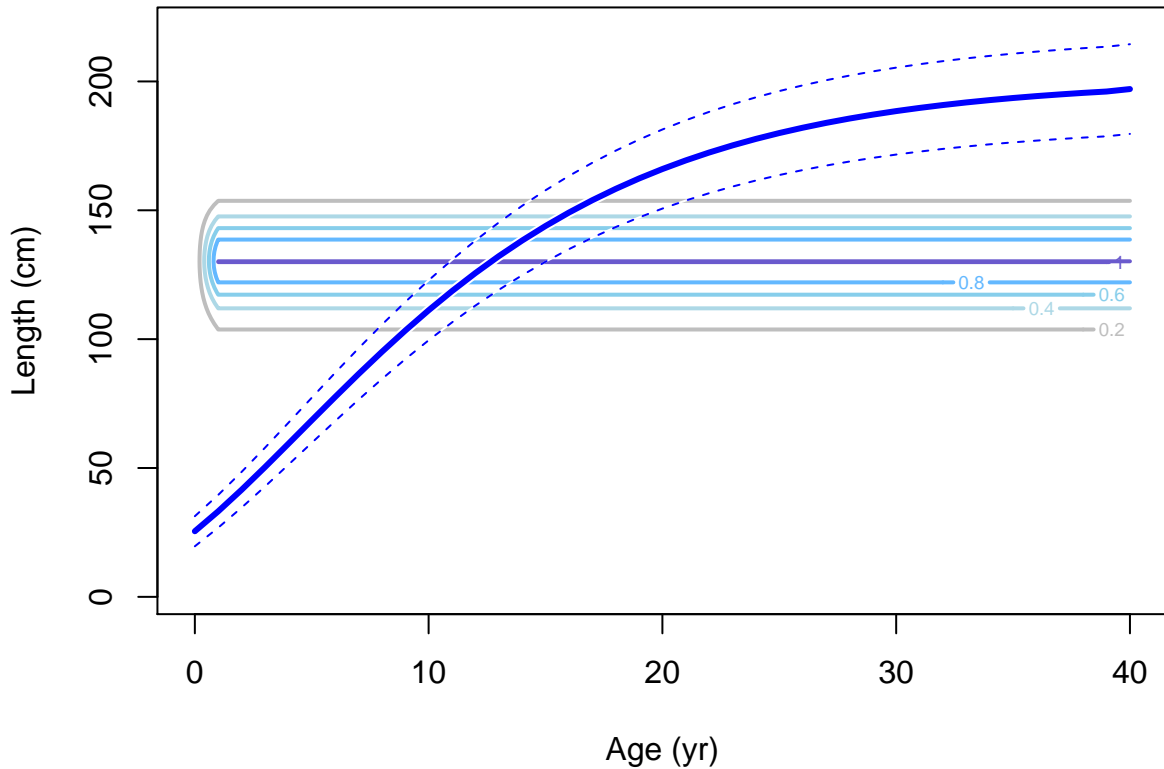
# Male ending year selectivity and growth for A6-LL-n



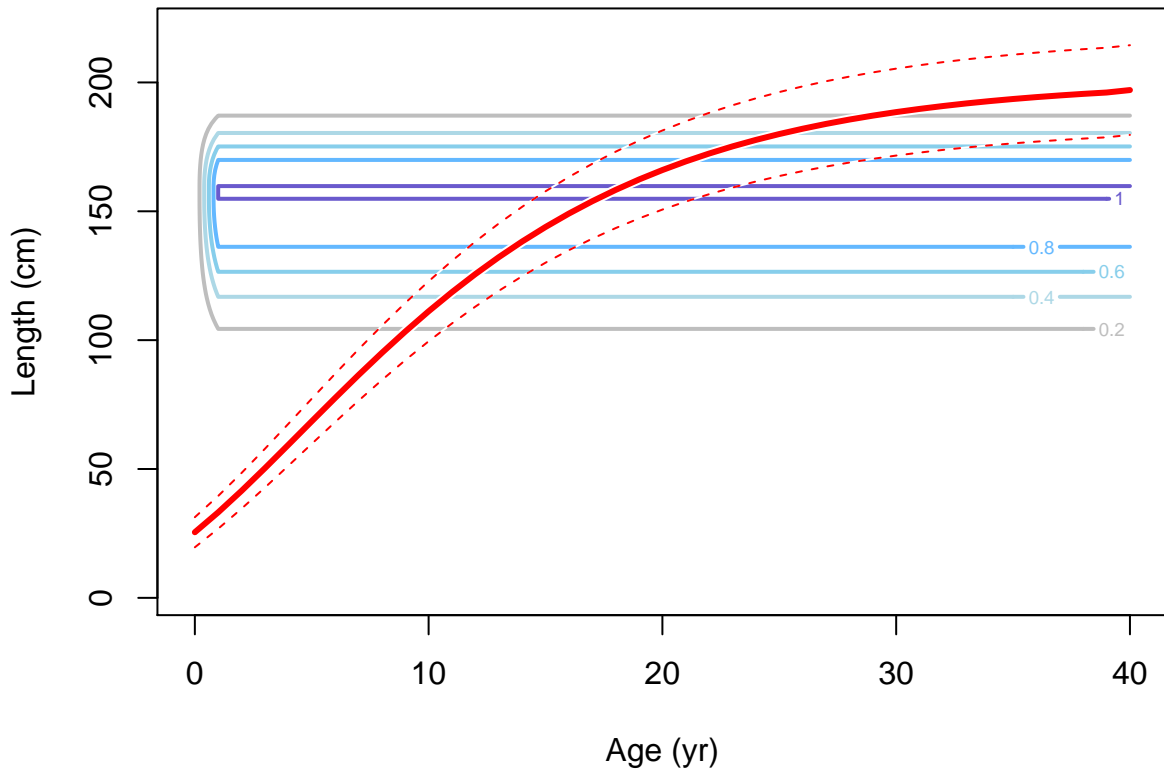
## Female ending year selectivity and growth for A1-LL-w



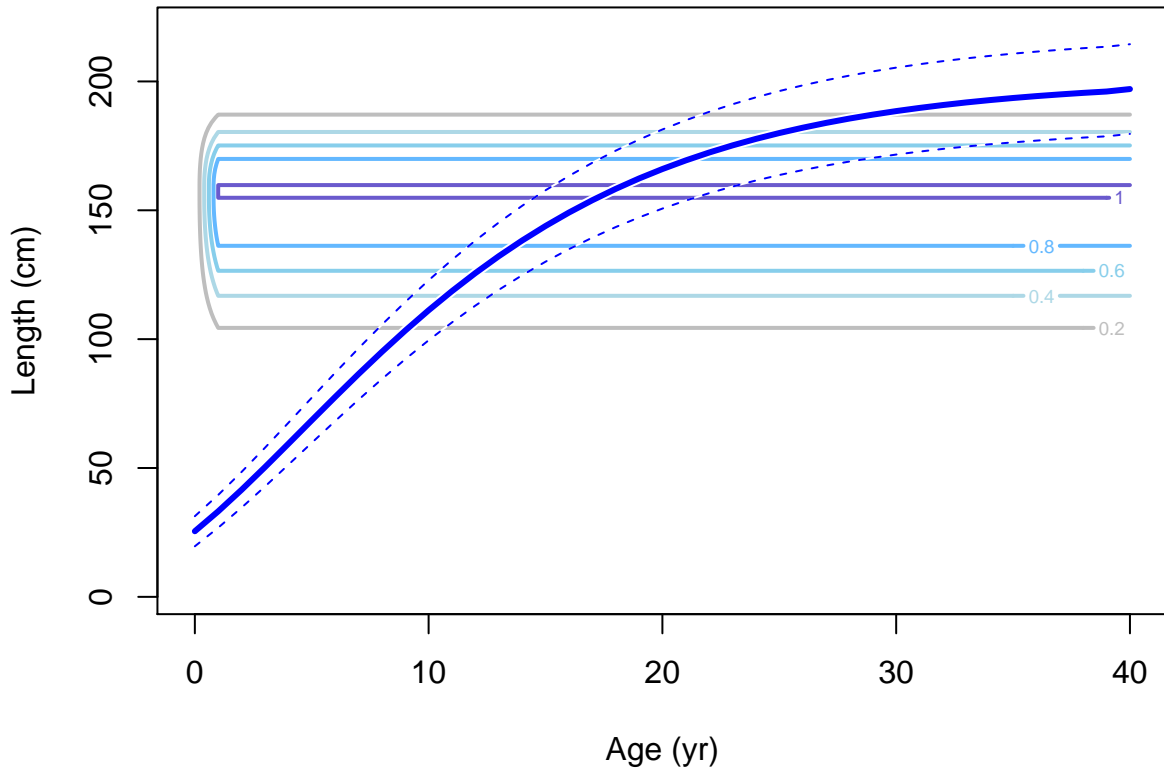
# Male ending year selectivity and growth for A1-LL-w



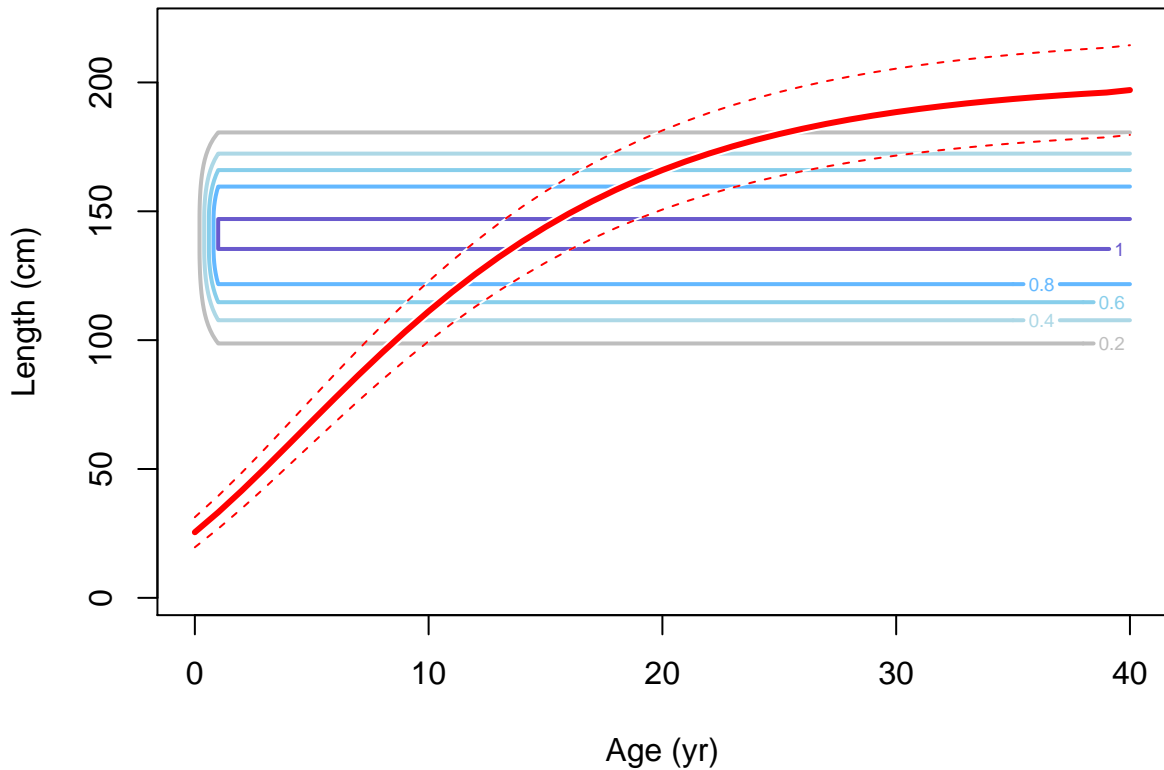
## Female ending year selectivity and growth for A2-LL-w



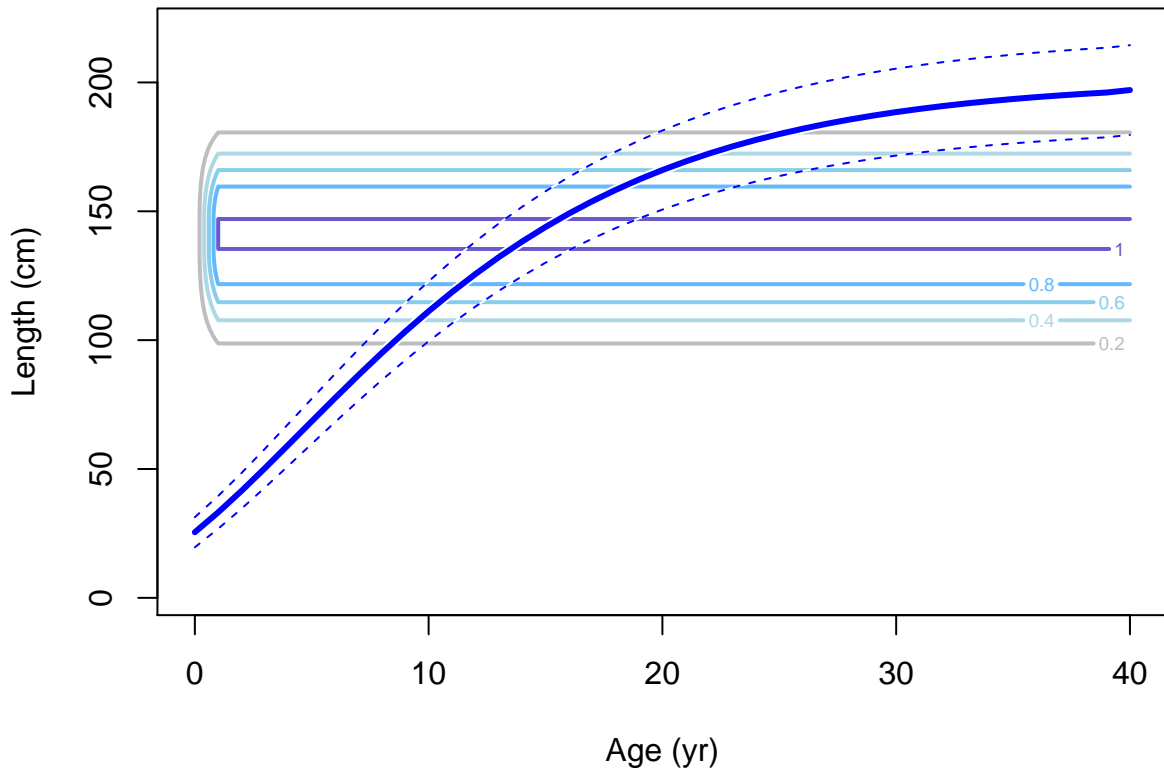
## Male ending year selectivity and growth for A2-LL-w



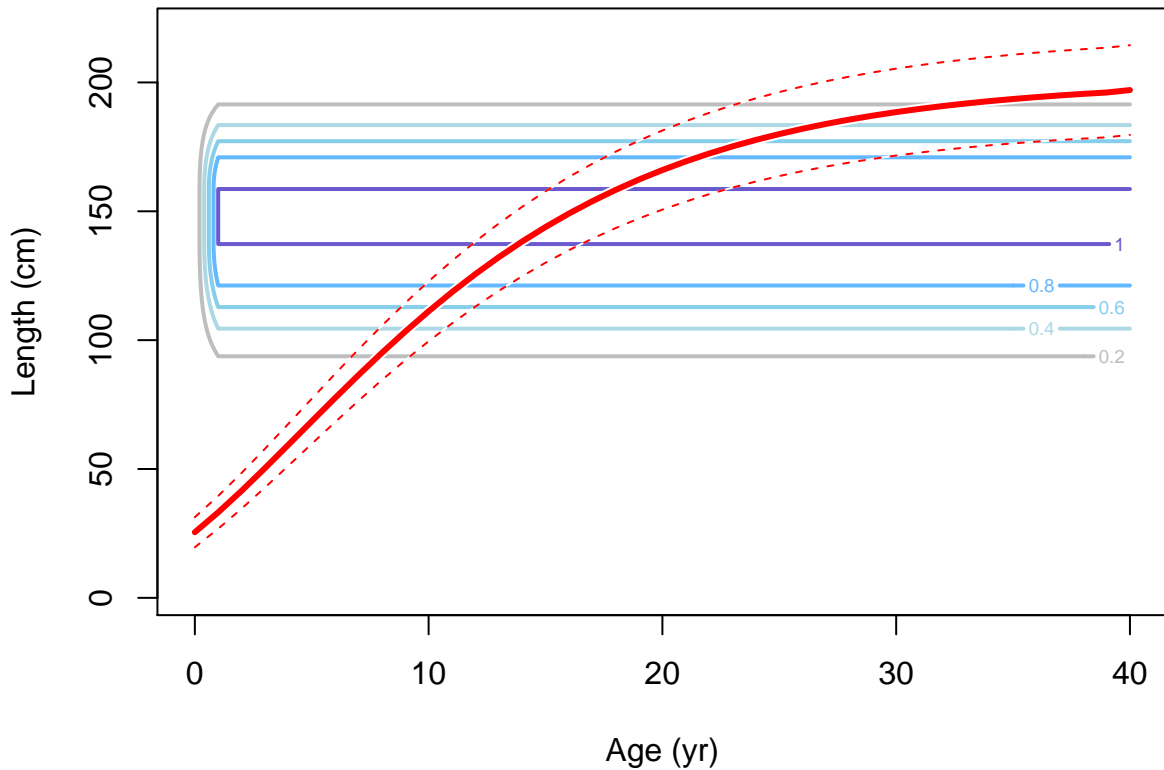
## Female ending year selectivity and growth for A3-LL-w



# Male ending year selectivity and growth for A3-LL-w

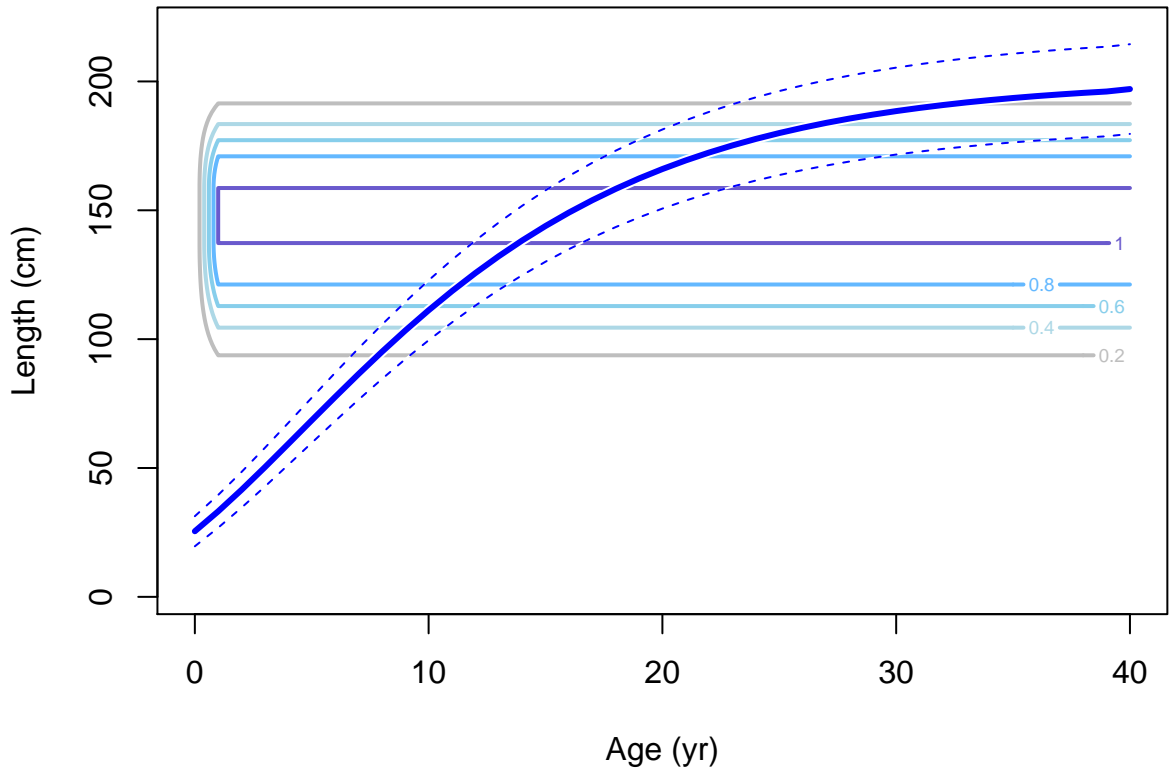


## Female ending year selectivity and growth for A4-LL-w

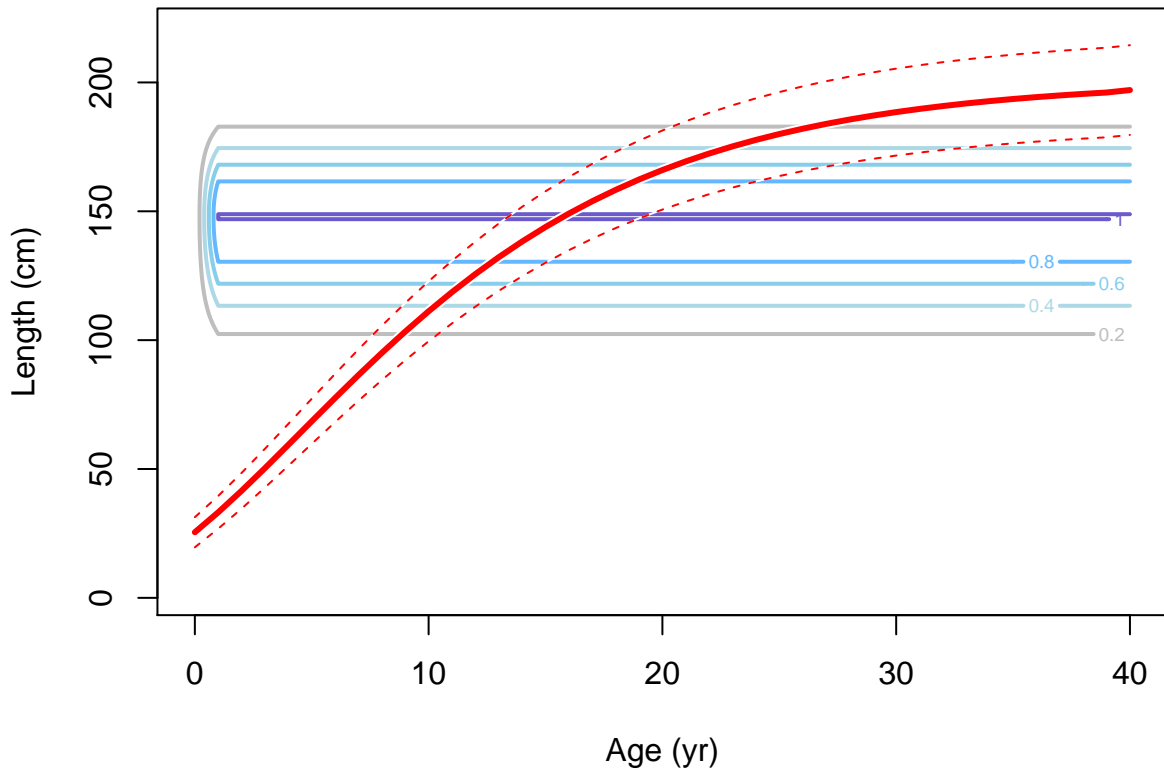




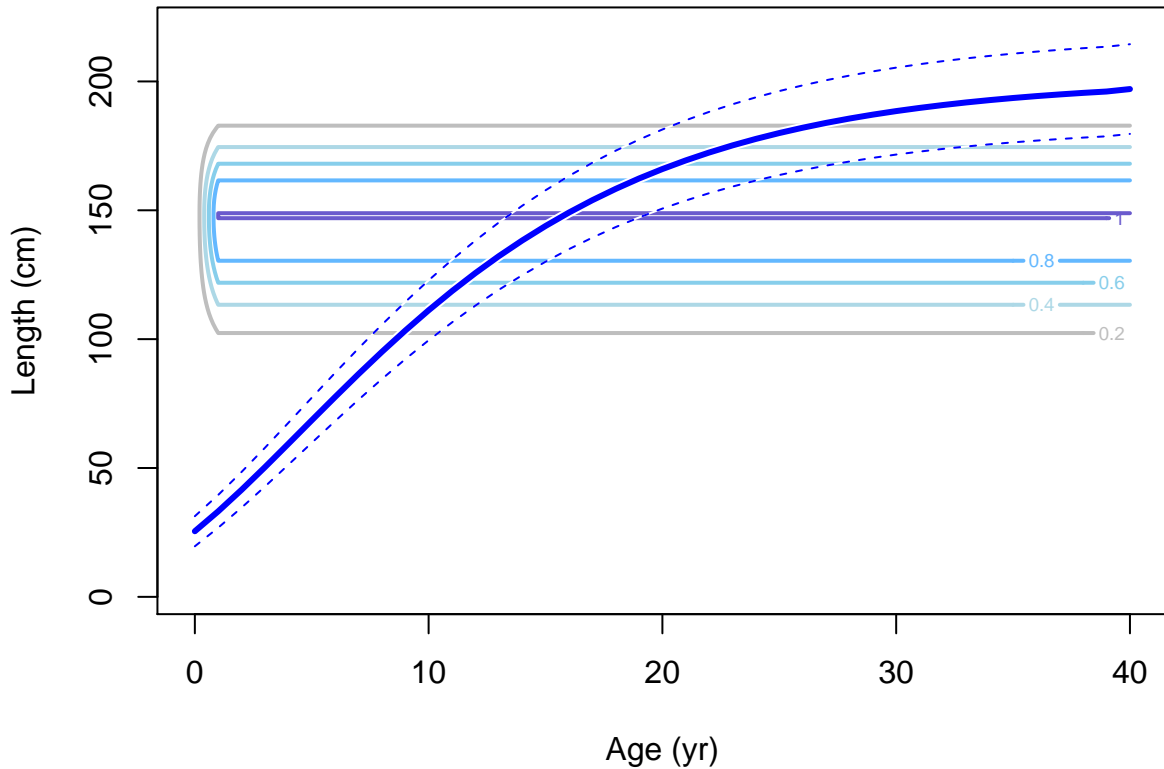
# Male ending year selectivity and growth for A4-LL-w



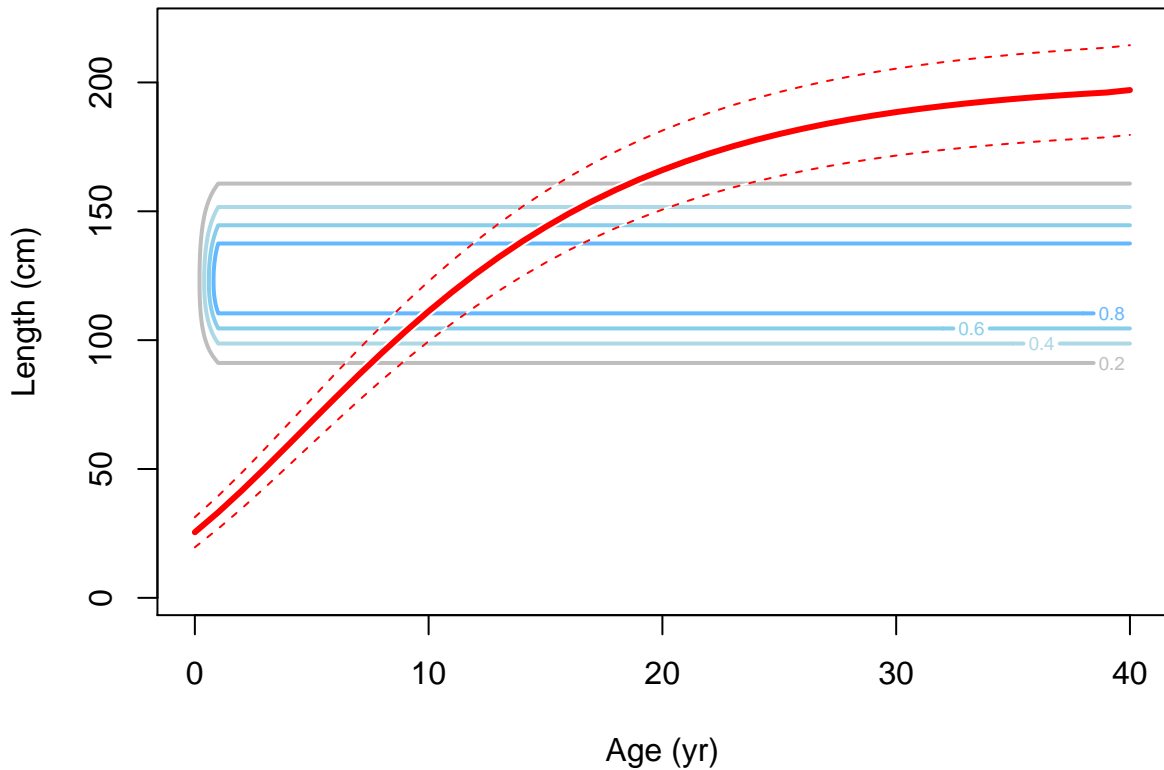
## Female ending year selectivity and growth for A5-LL-w



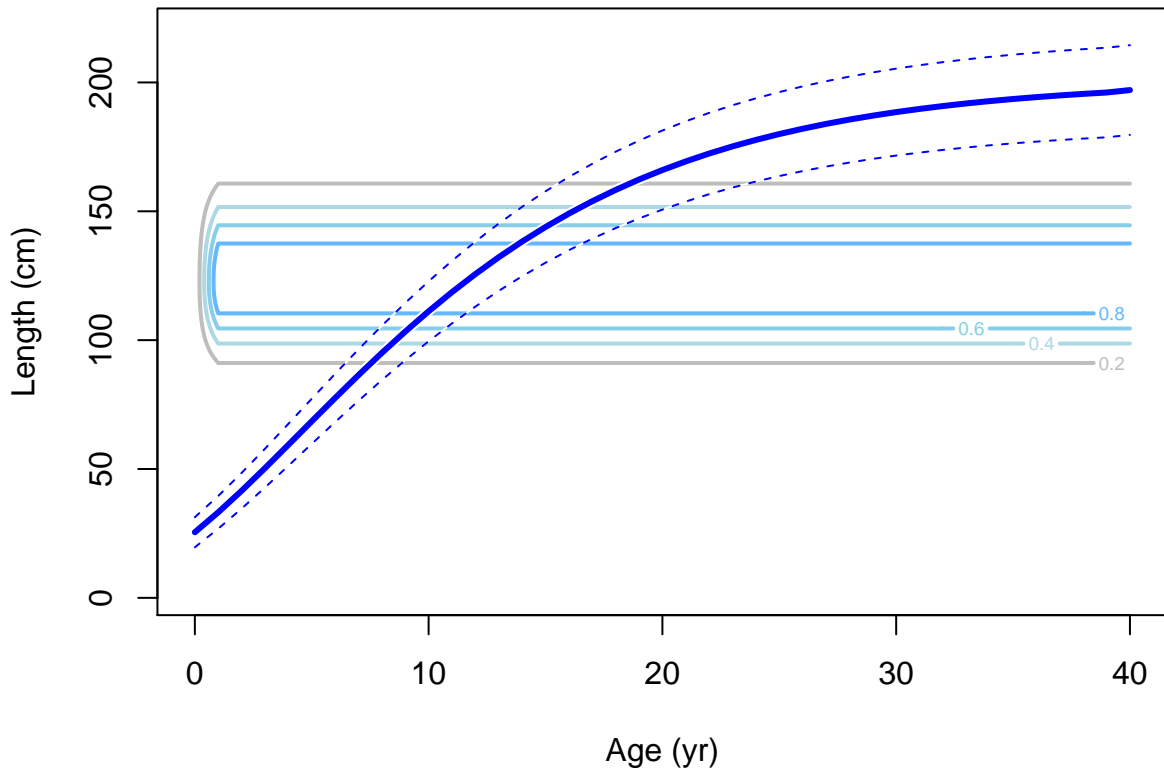
## Male ending year selectivity and growth for A5-LL-w



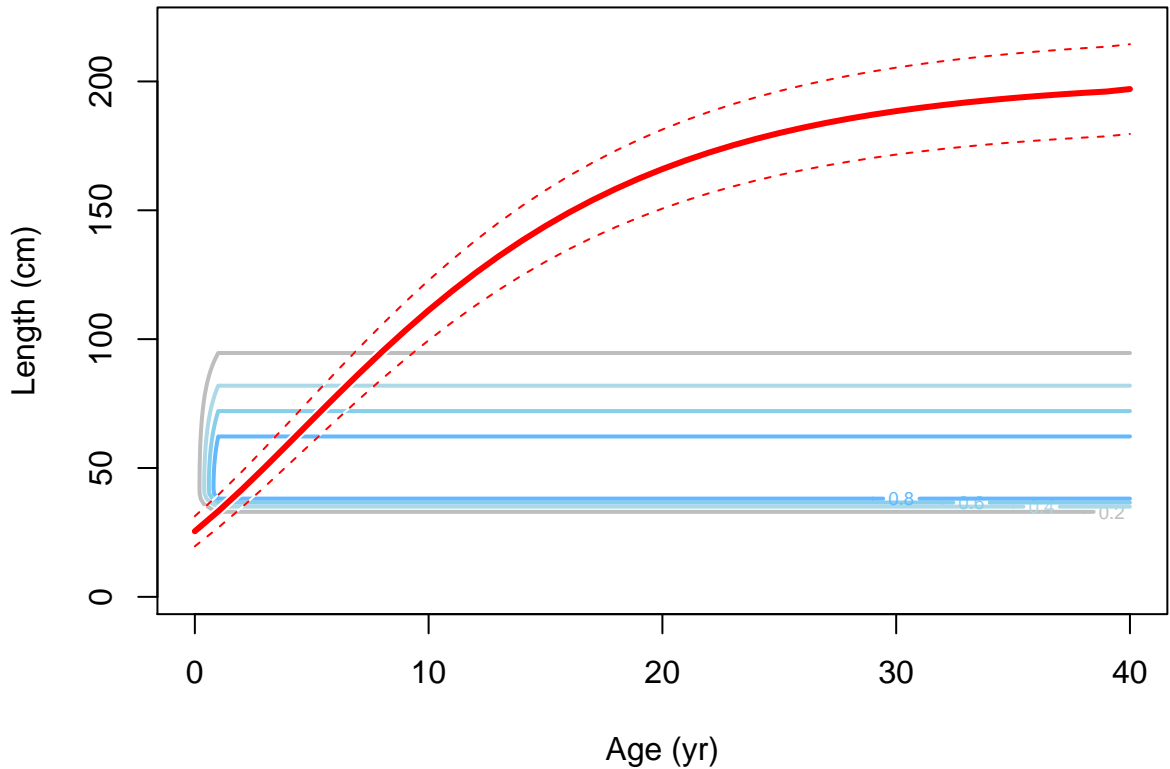
## Female ending year selectivity and growth for A6-LL-w



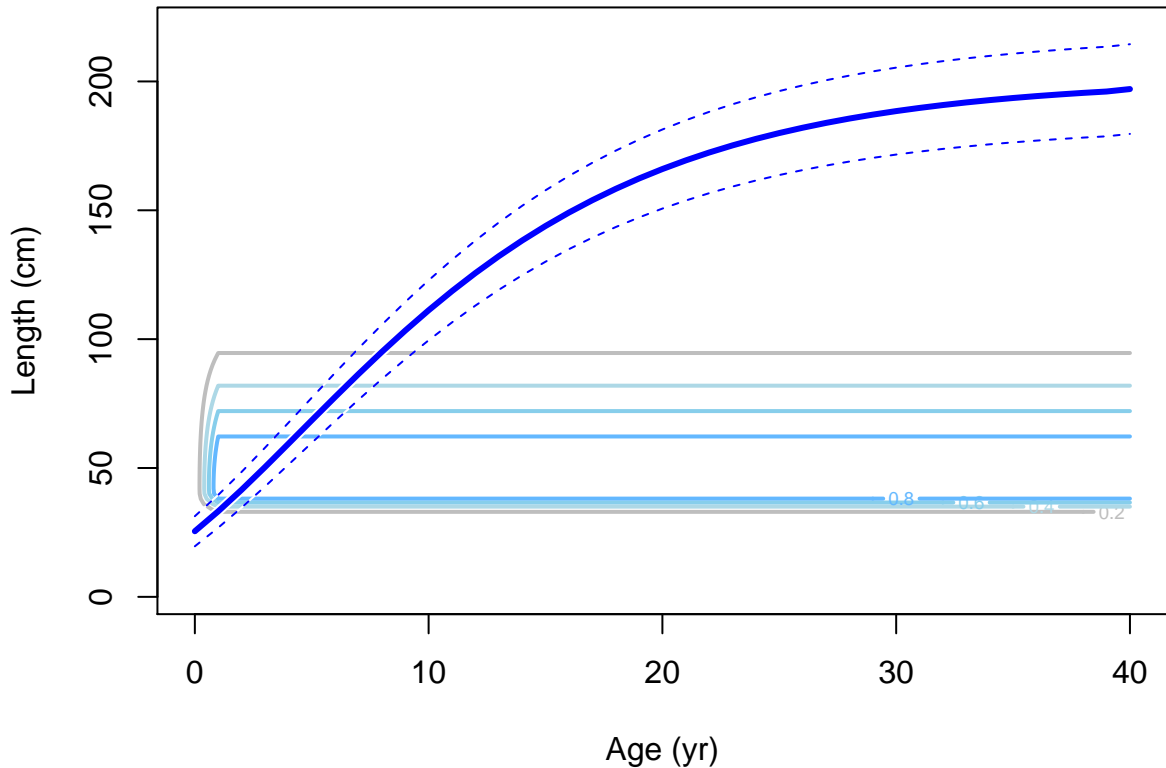
# Male ending year selectivity and growth for A6-LL-w



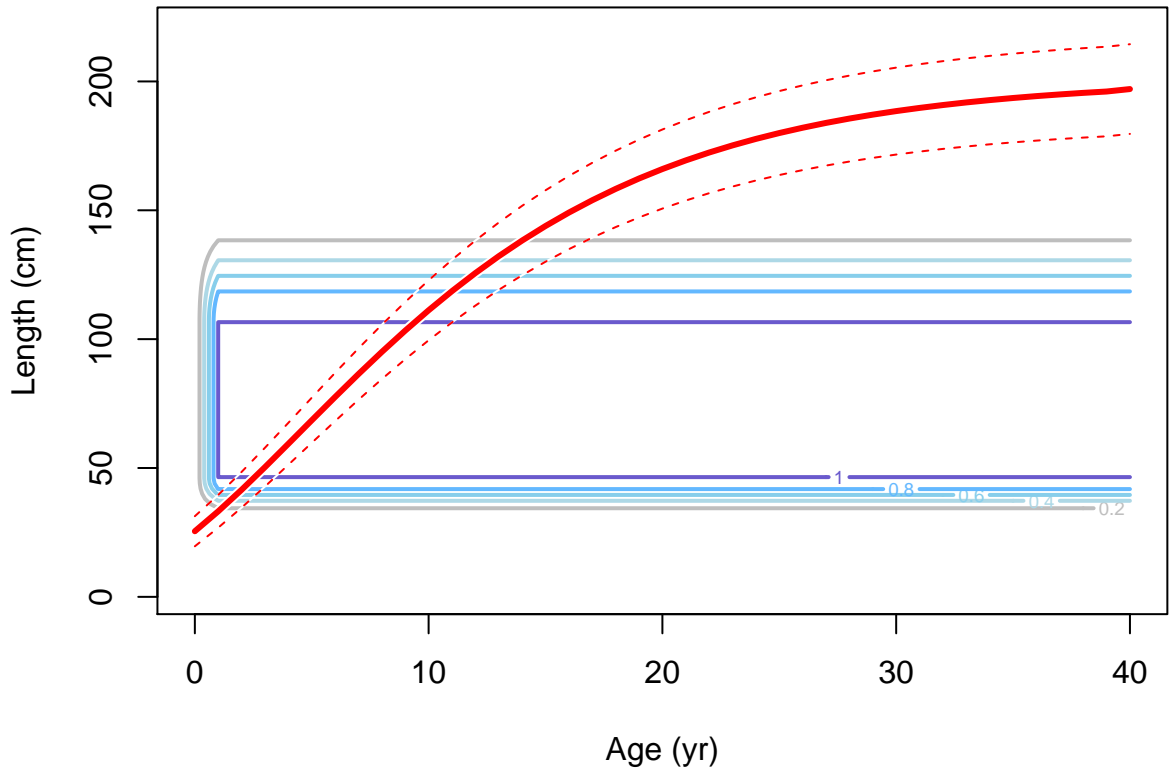
## Female ending year selectivity and growth for A2-OBJ



# Male ending year selectivity and growth for A2-OBJ

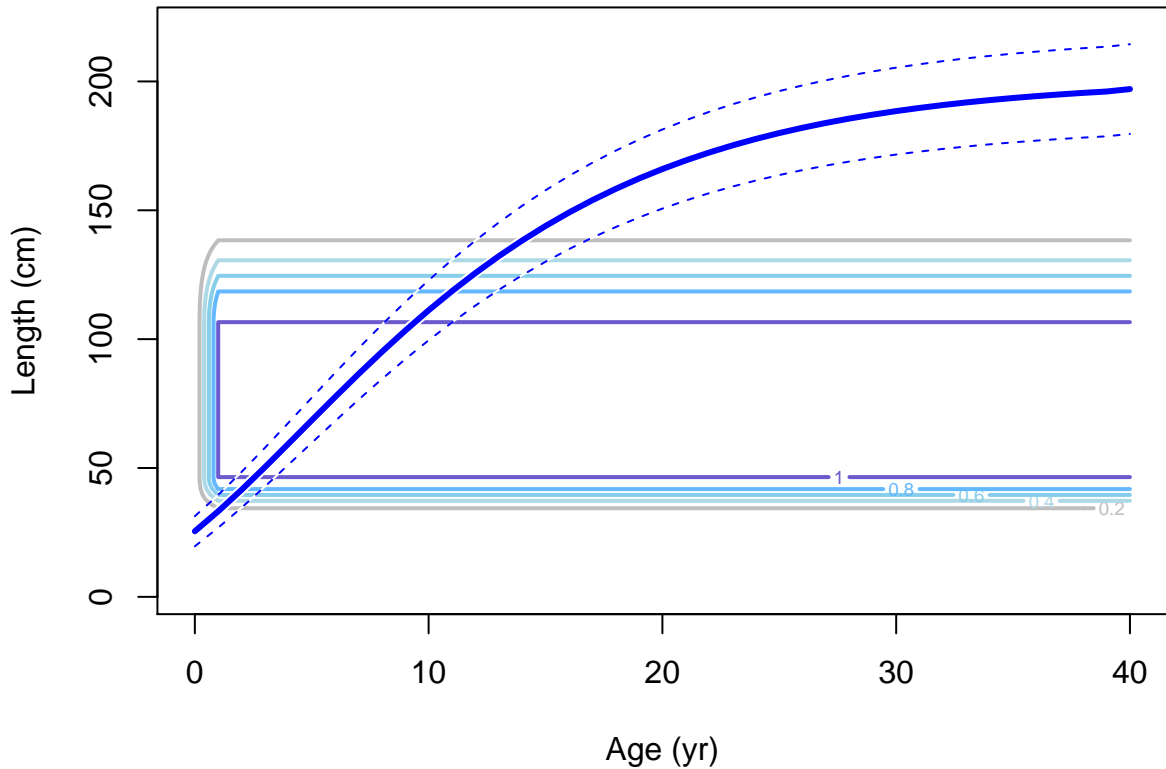


# Female ending year selectivity and growth for A3-OBJ

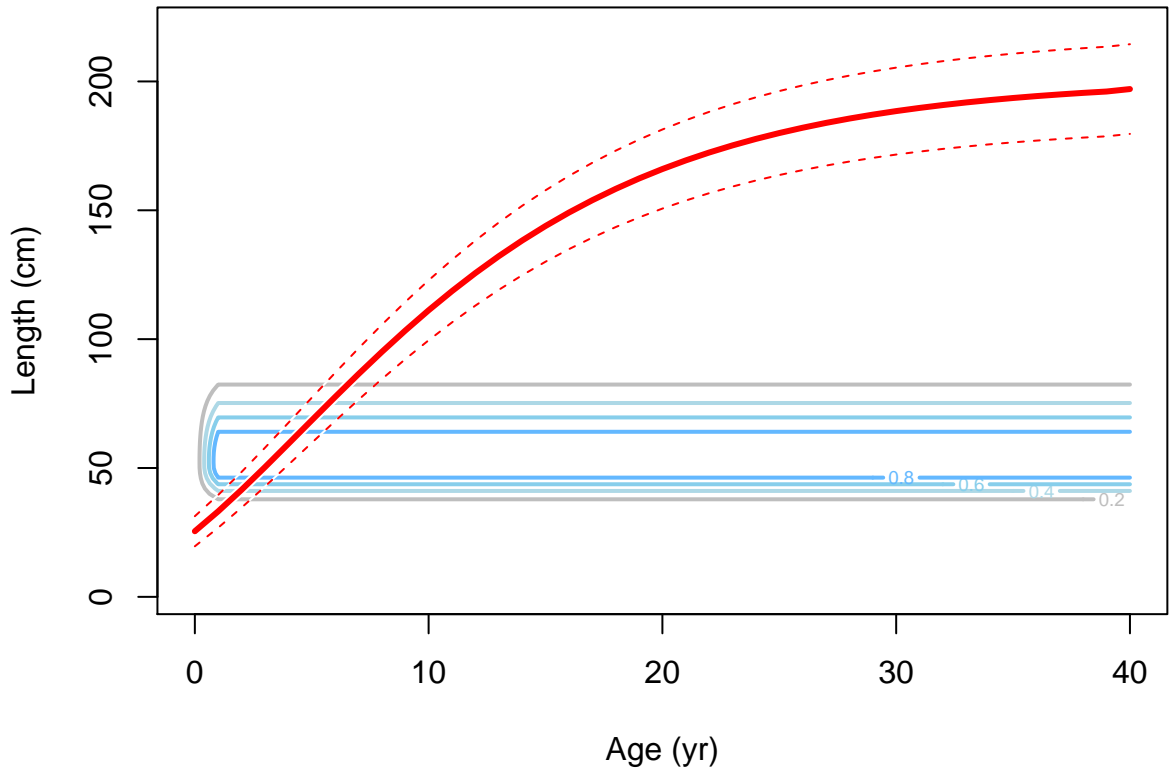




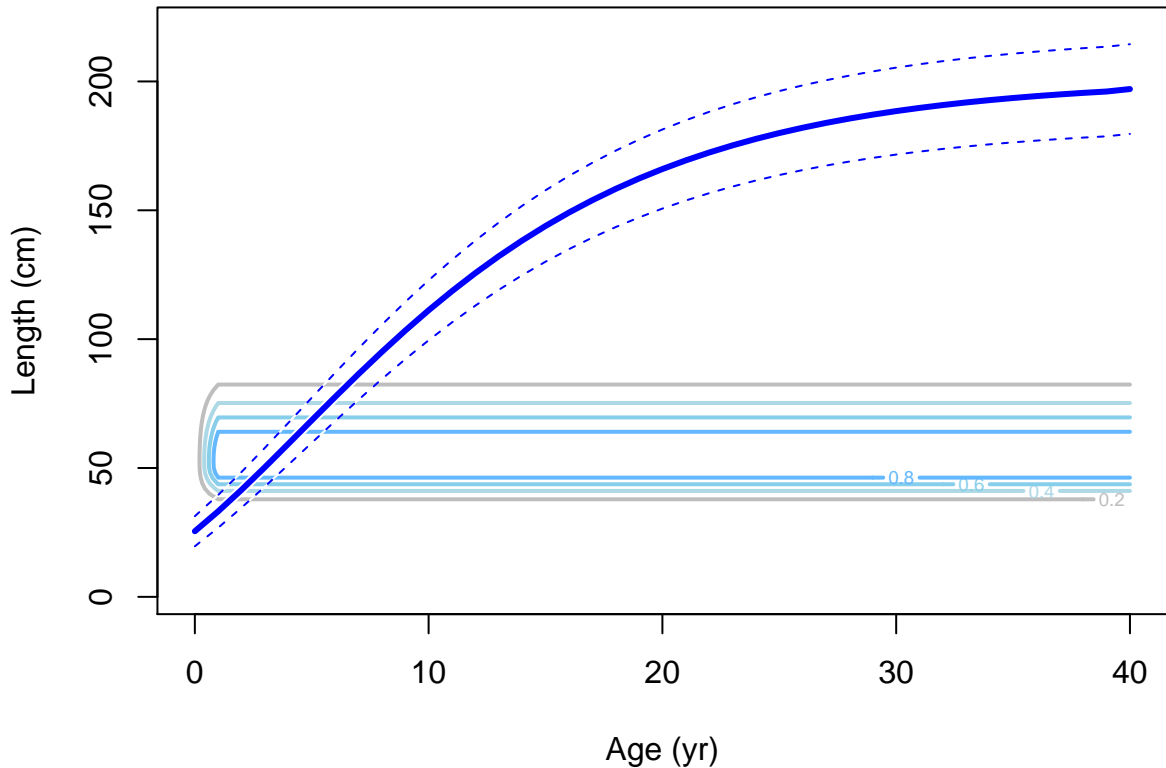
# Male ending year selectivity and growth for A3-OBJ



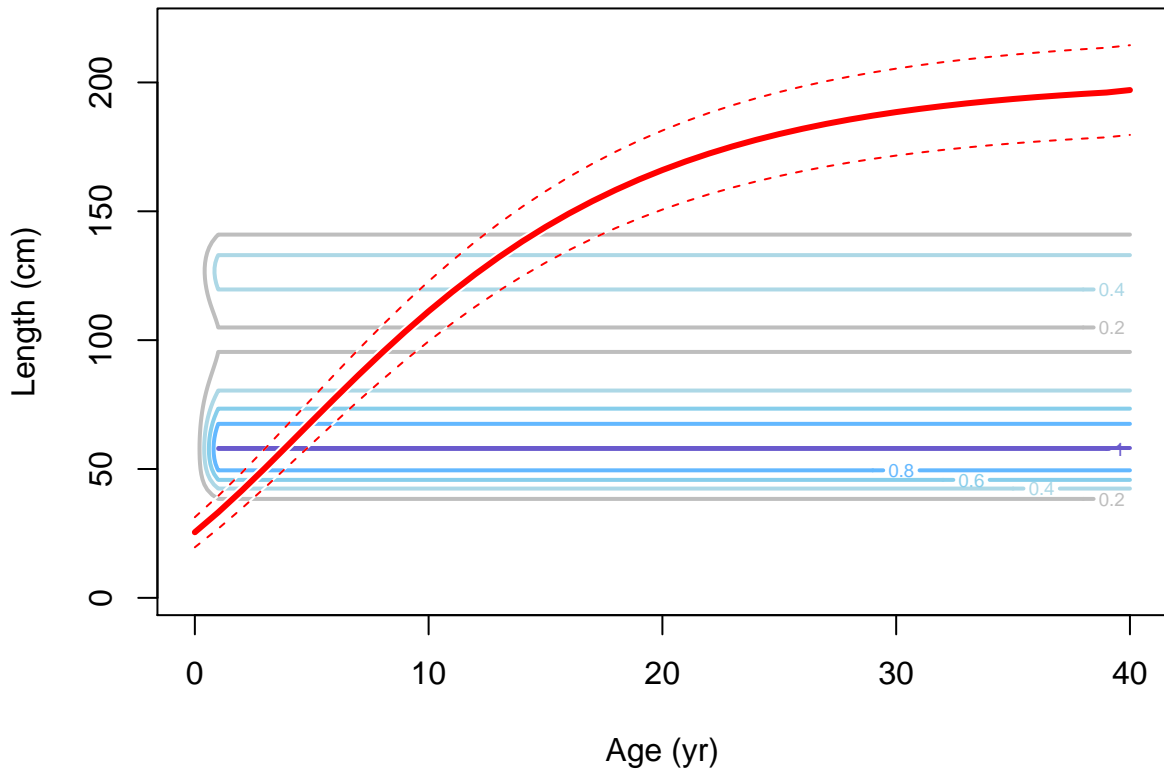
## Female ending year selectivity and growth for A4-OBJ



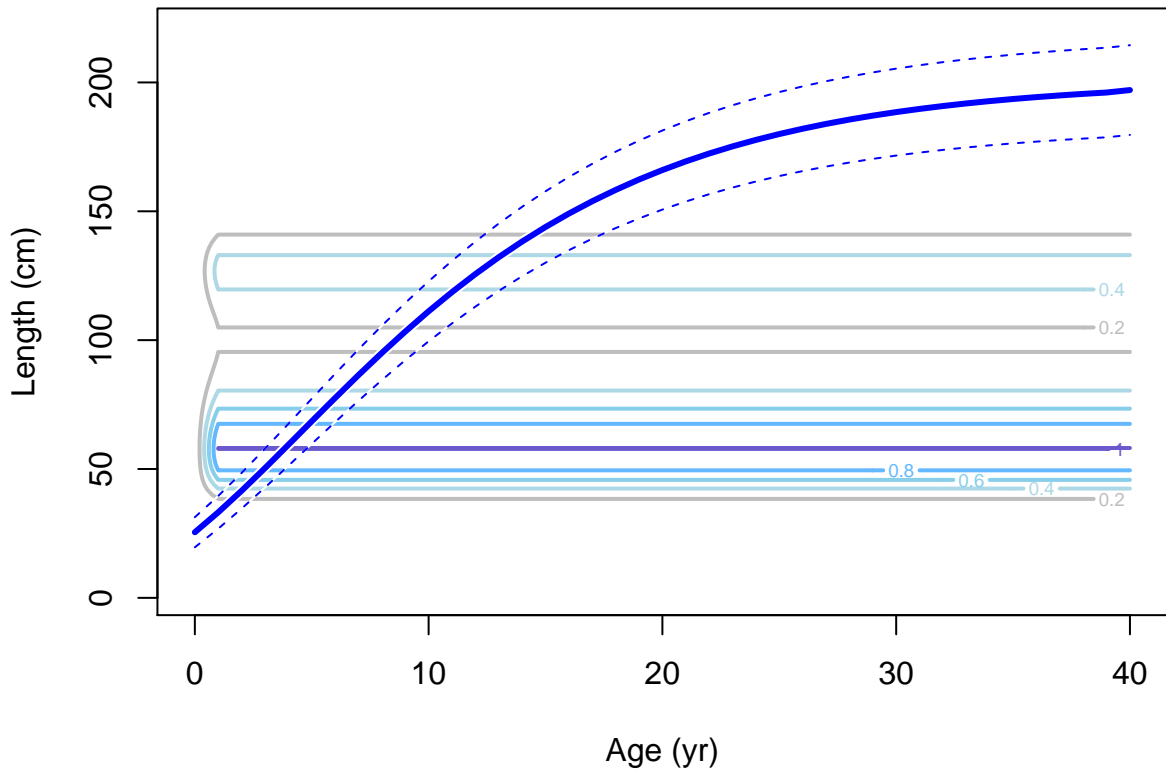
## Male ending year selectivity and growth for A4-OBJ



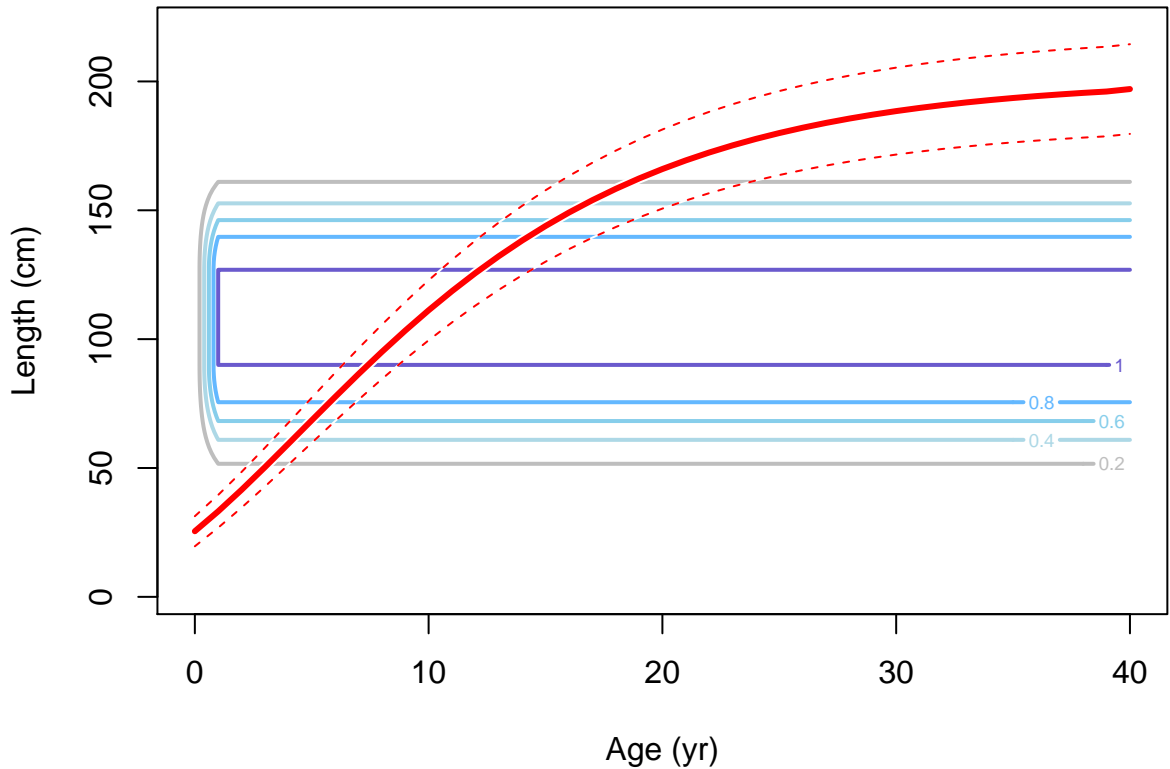
## Female ending year selectivity and growth for A5-OBJ



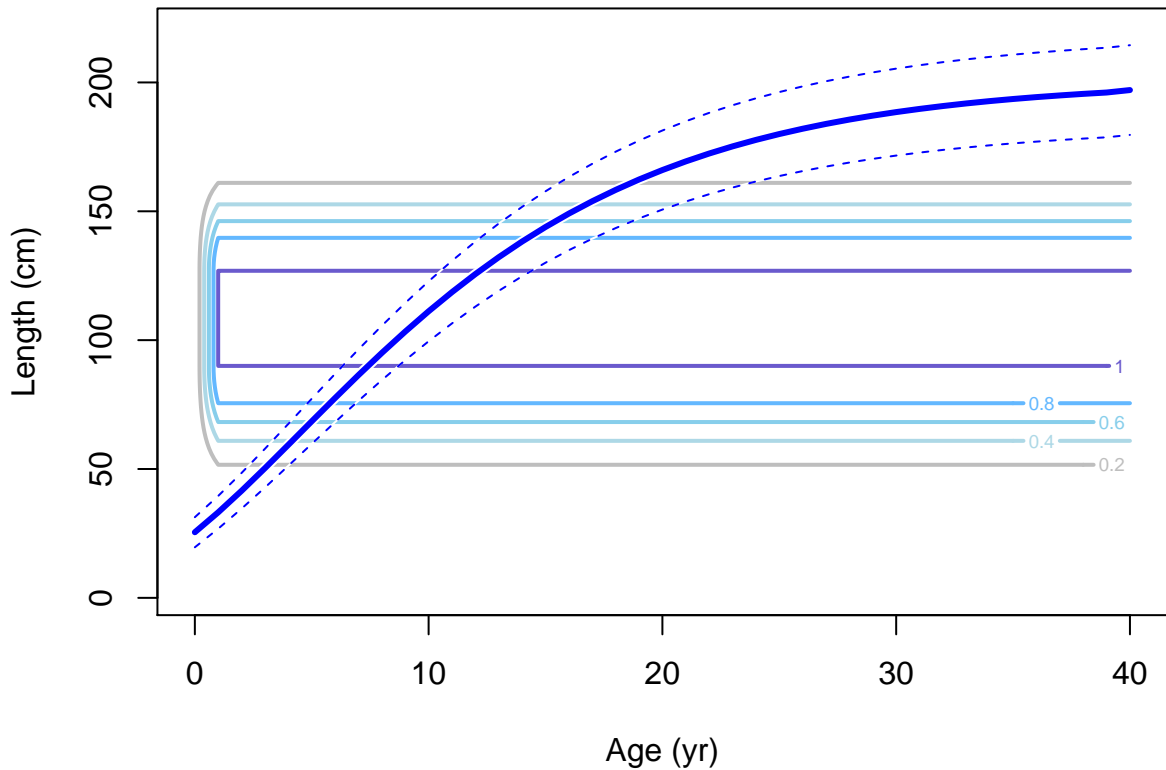
# Male ending year selectivity and growth for A5-OBJ



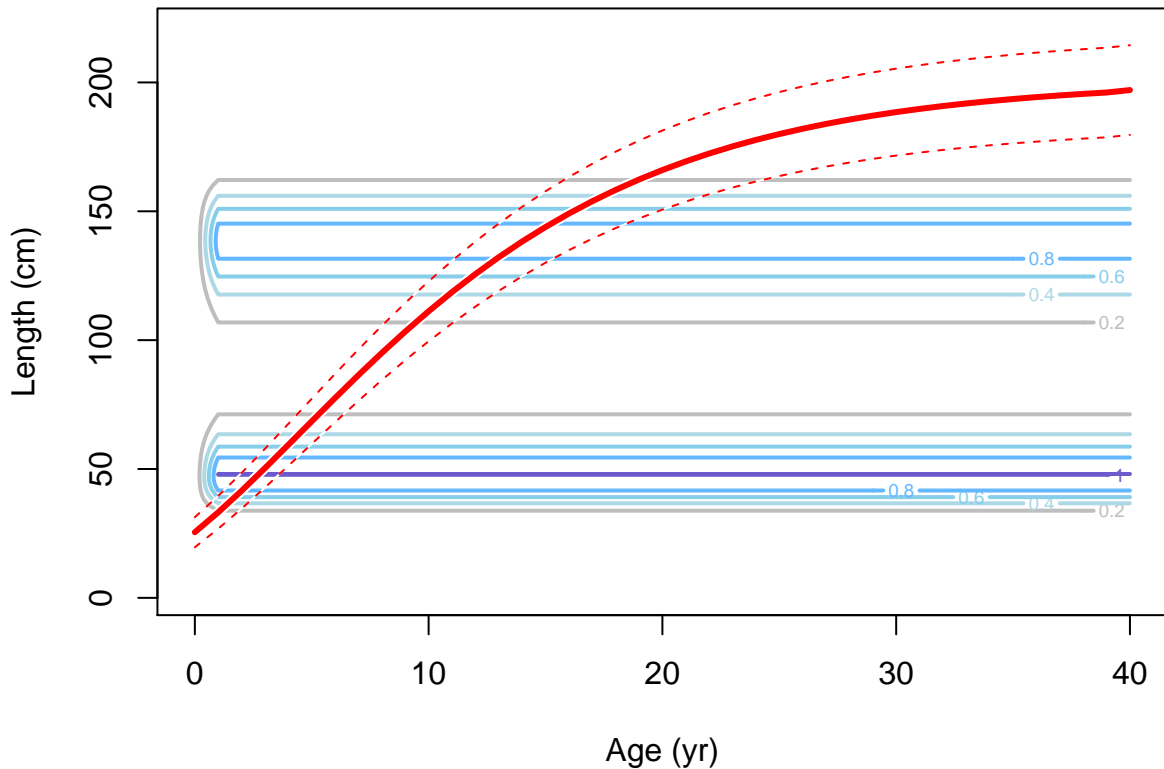
## Female ending year selectivity and growth for A6-OBJ



# Male ending year selectivity and growth for A6-OBJ

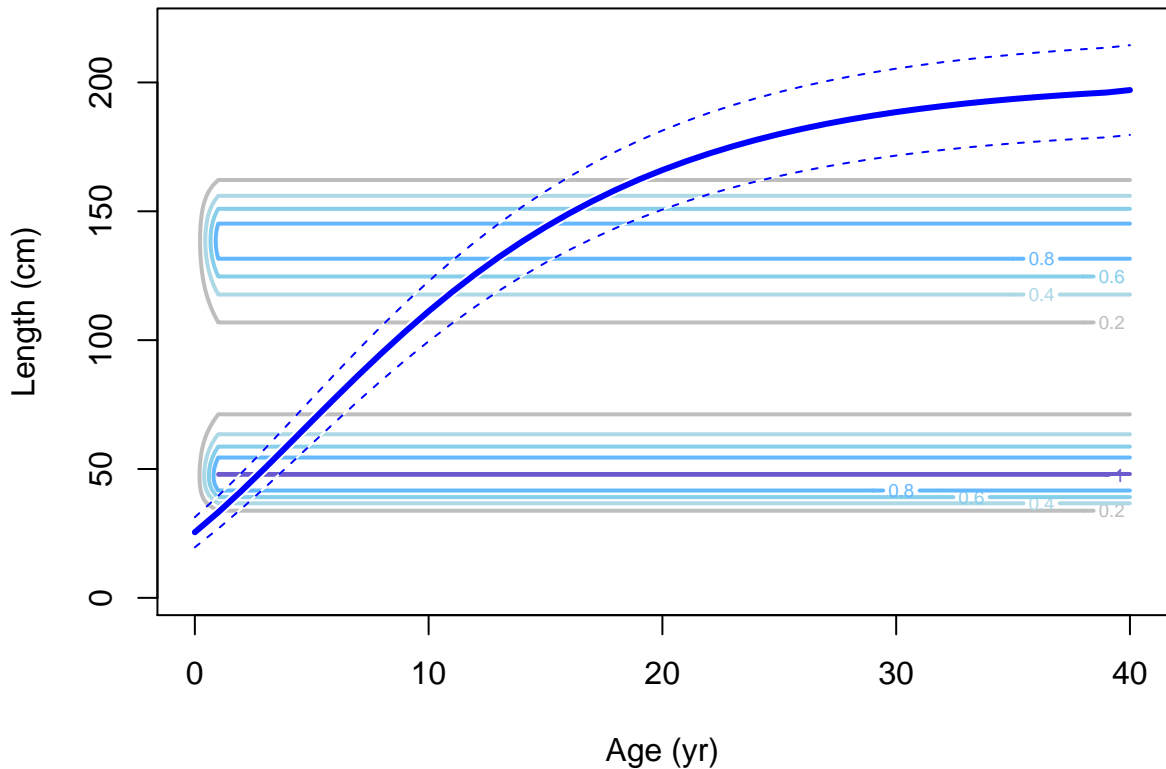


## Female ending year selectivity and growth for A2-NOADEL

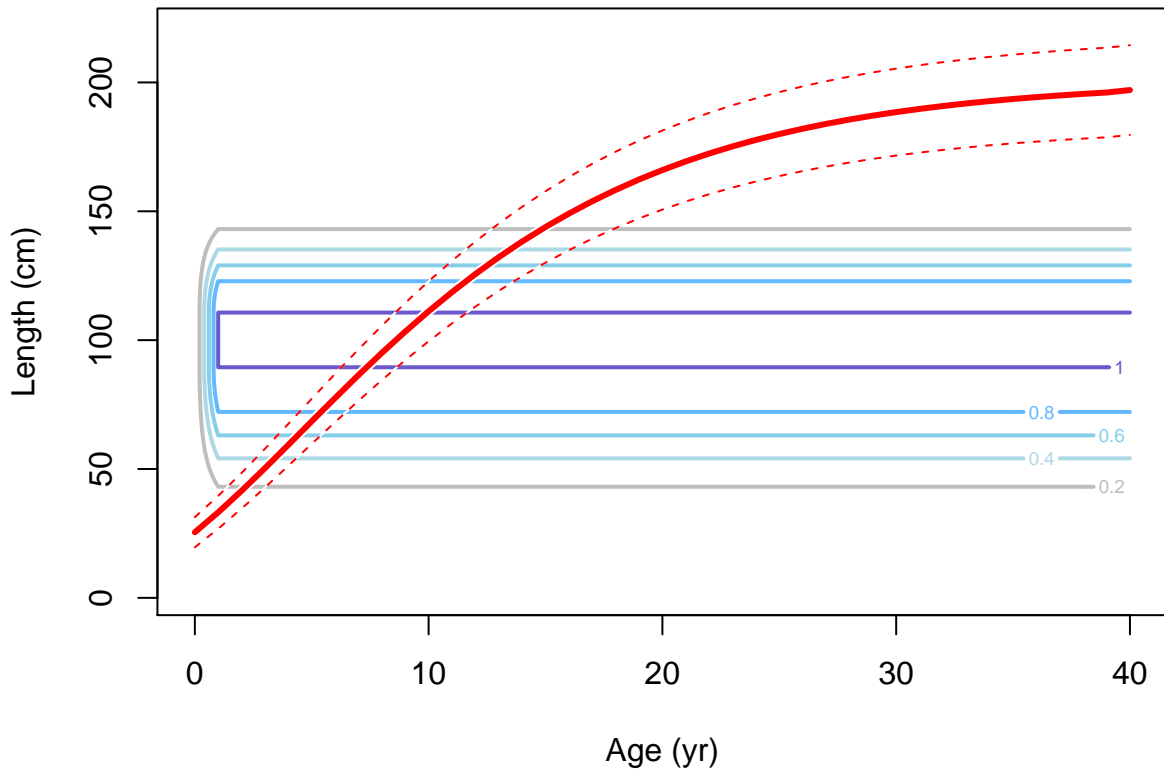




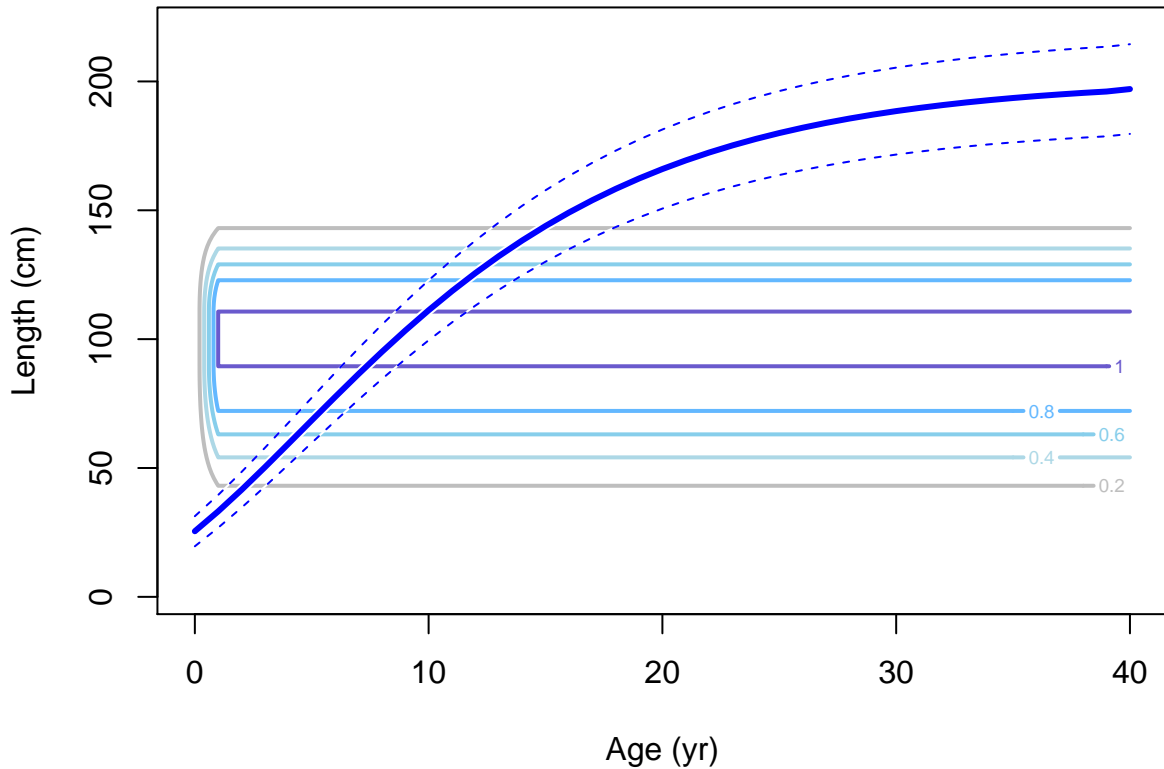
# Male ending year selectivity and growth for A2-NOADEL



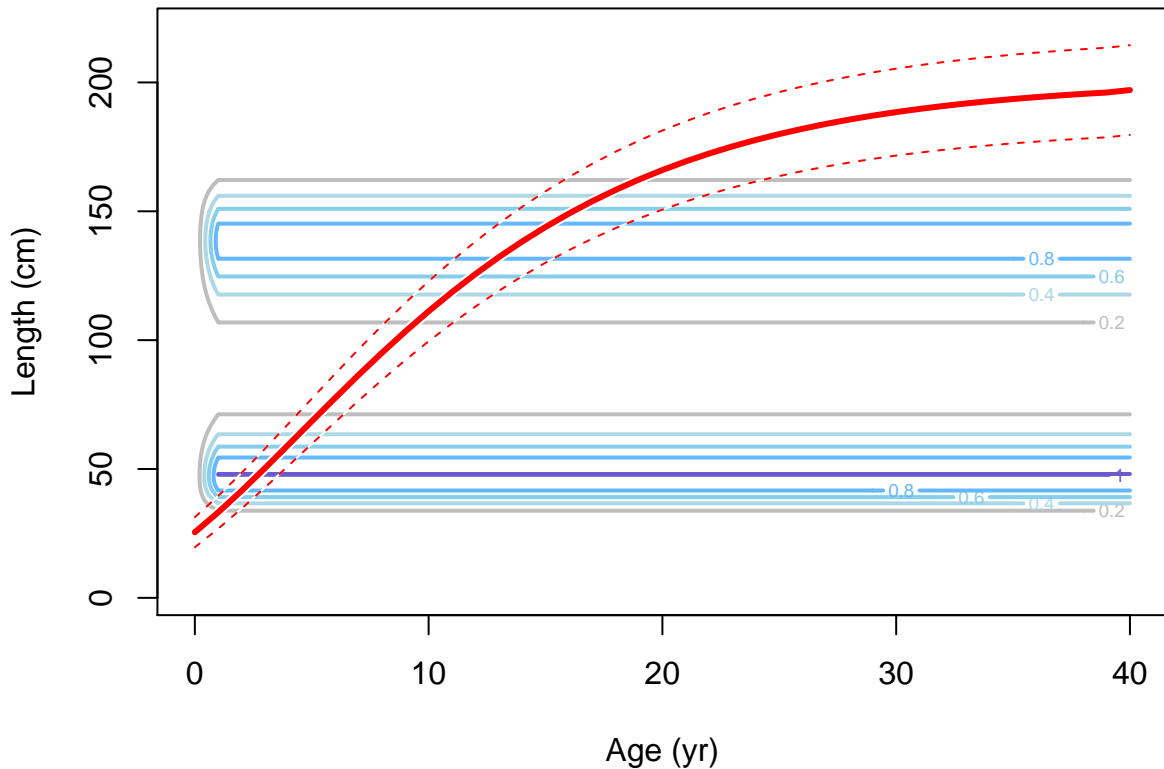
## Female ending year selectivity and growth for A3-NOADEL



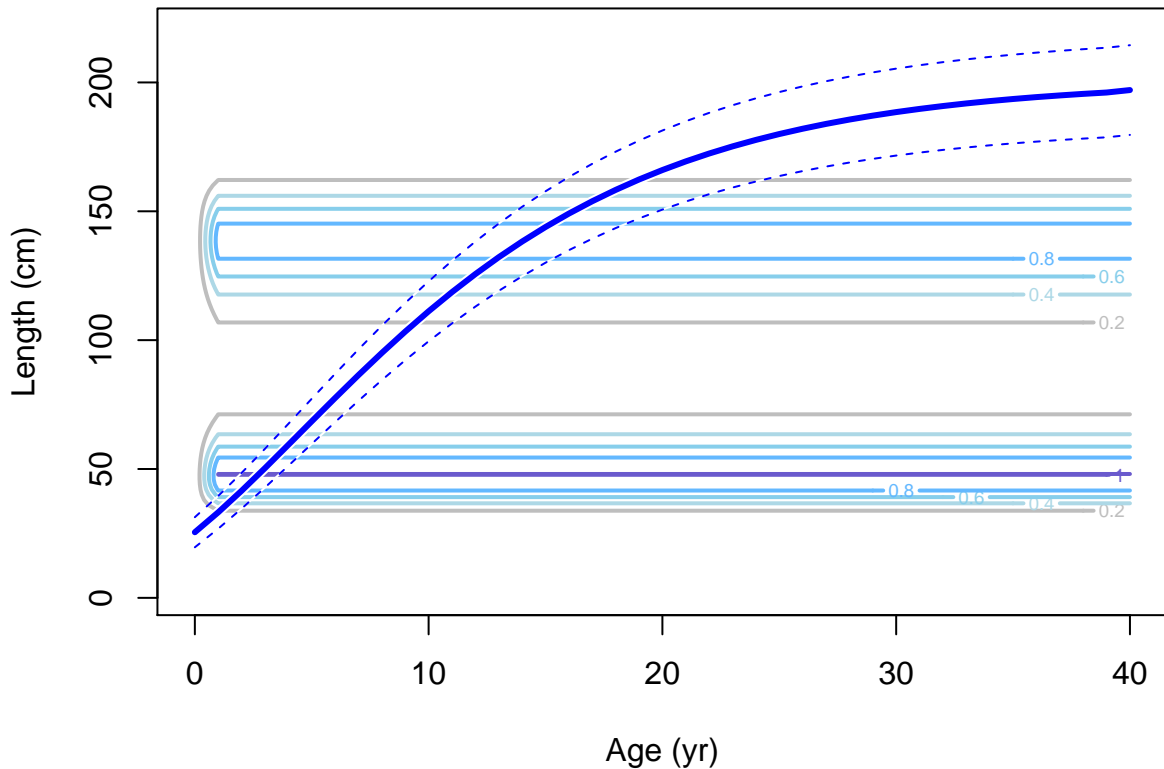
# Male ending year selectivity and growth for A3-NOADEL



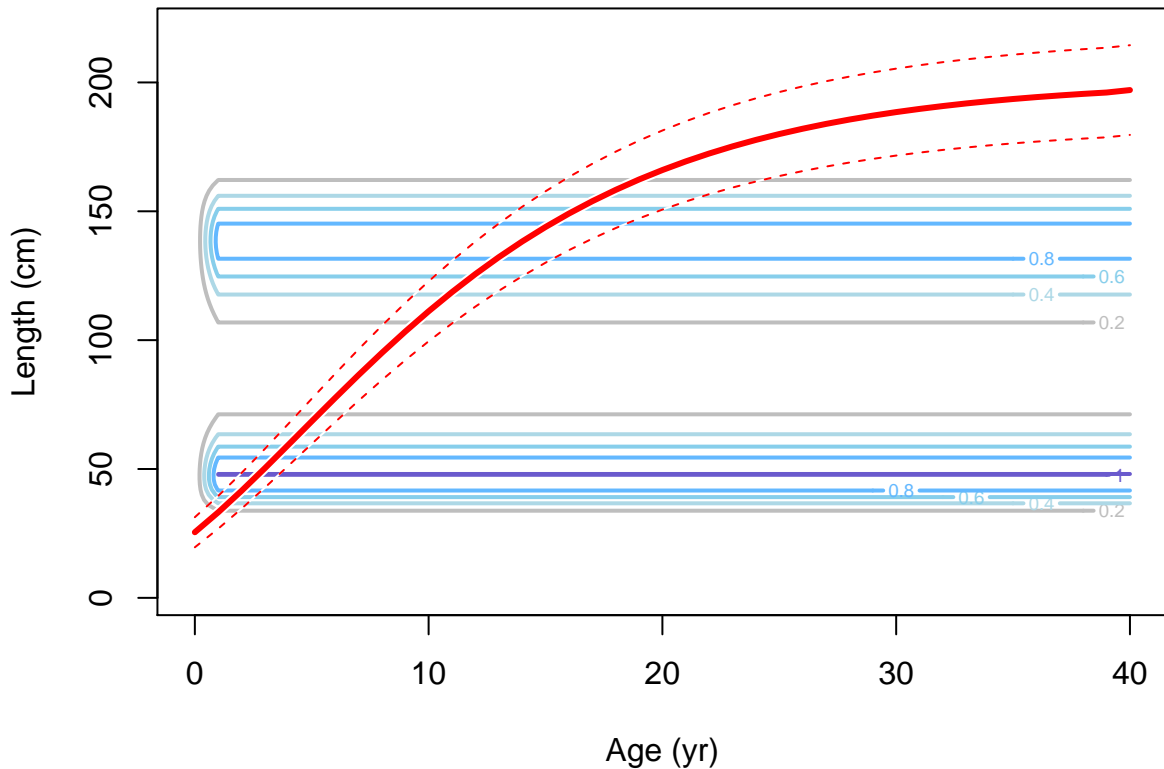
## Female ending year selectivity and growth for A4-NOADEL



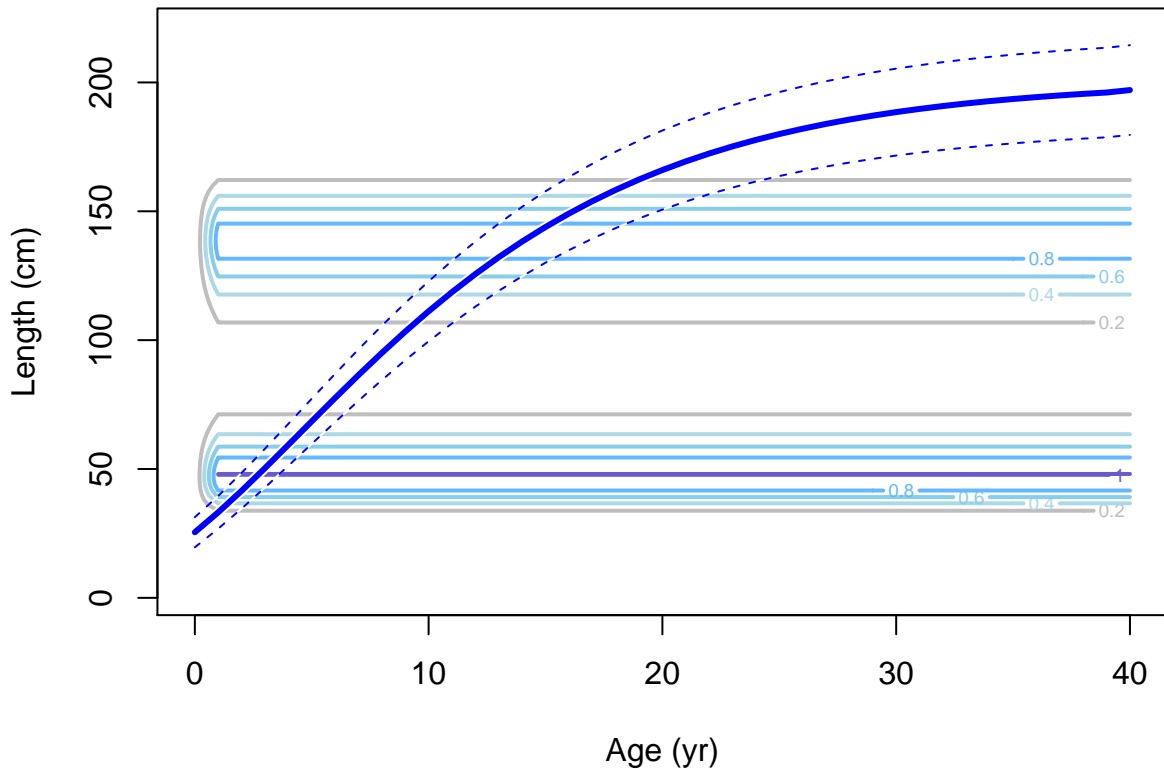
# Male ending year selectivity and growth for A4-NOADEL



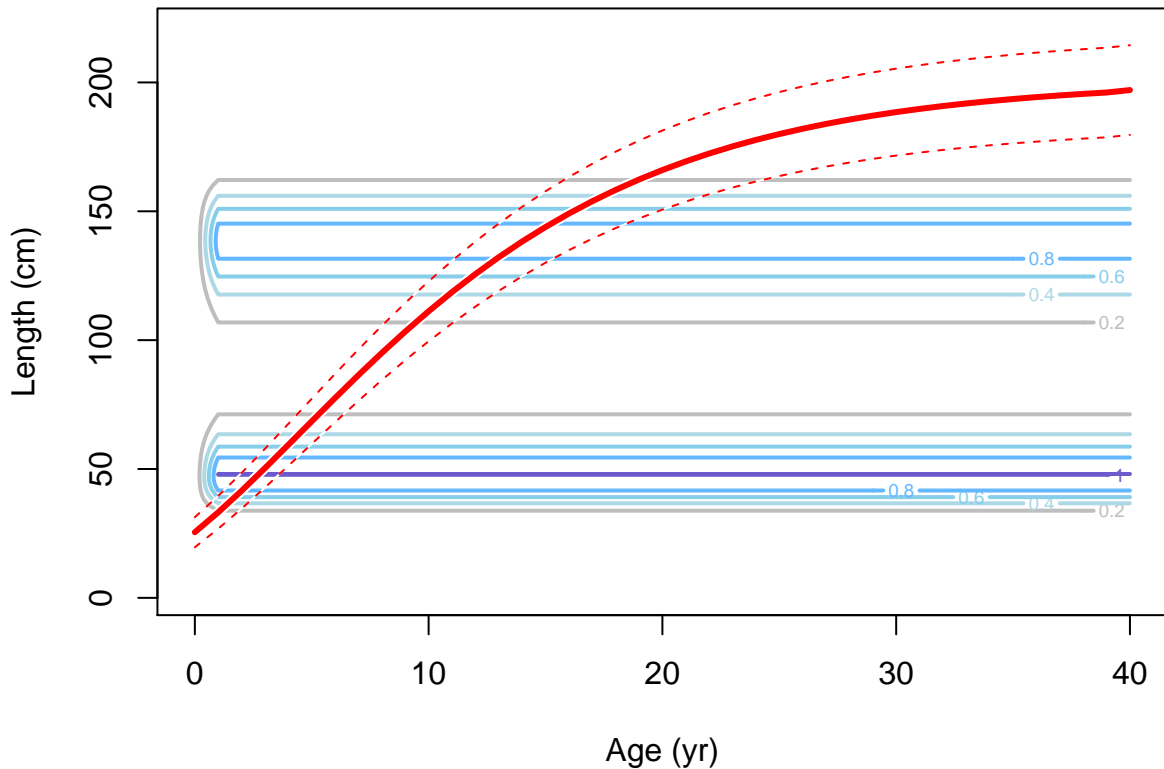
## Female ending year selectivity and growth for A5-NOADEL



# Male ending year selectivity and growth for A5-NOADEL

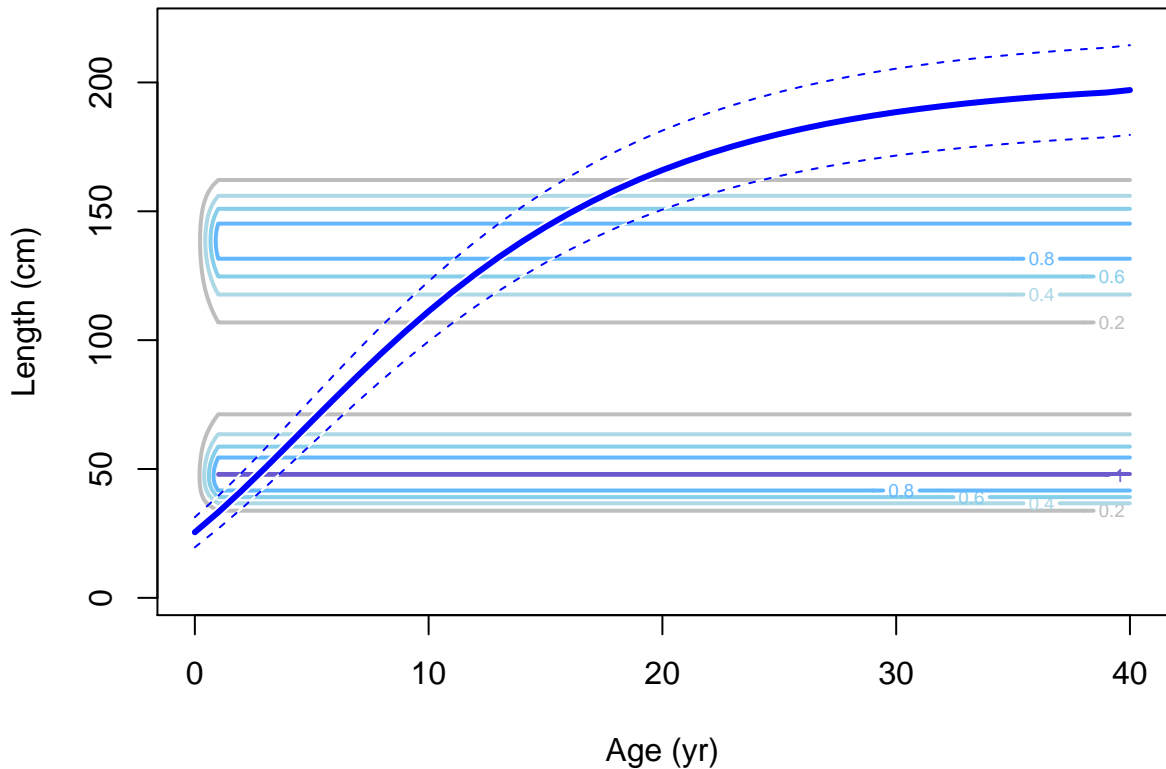


# Female ending year selectivity and growth for A6-NOADEL

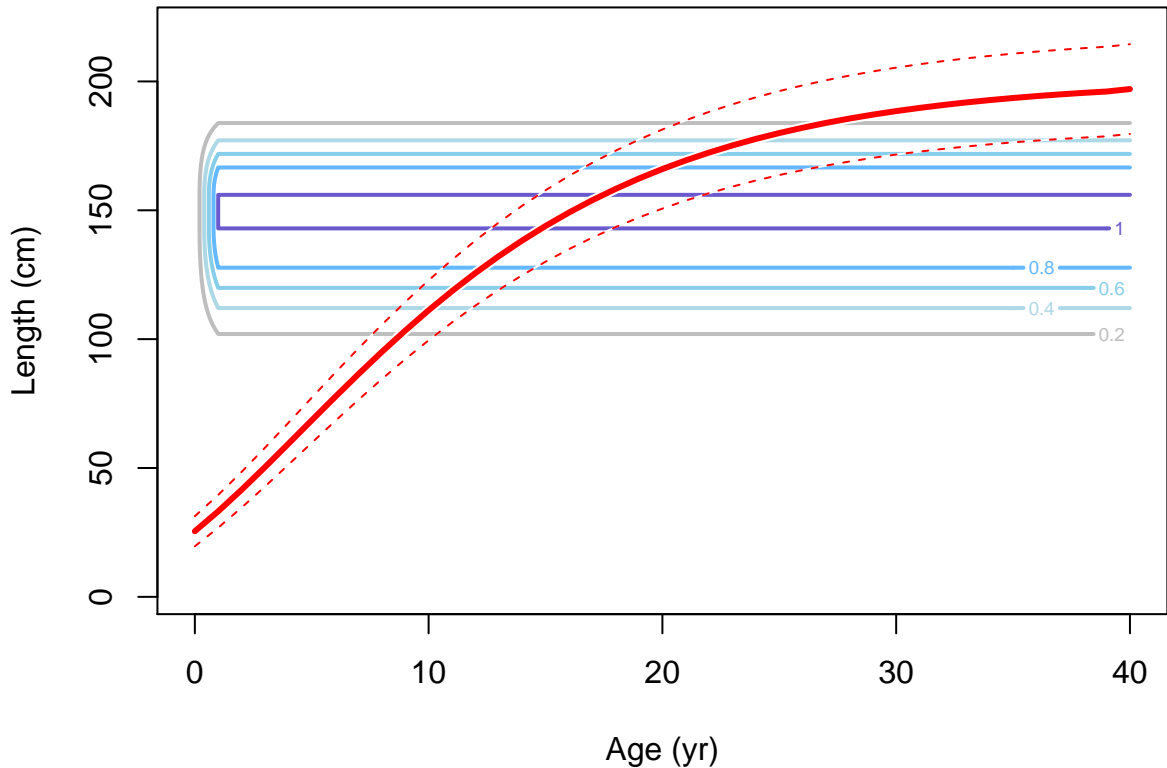




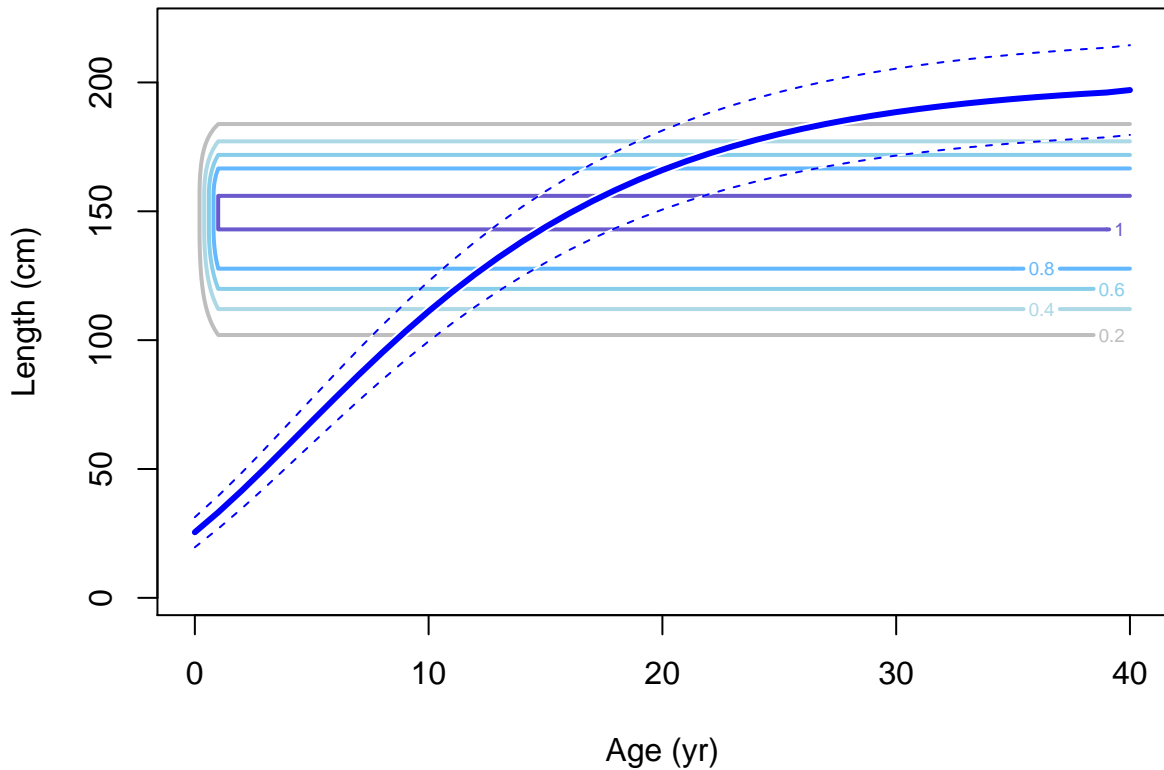
# Male ending year selectivity and growth for A6-NOADEL



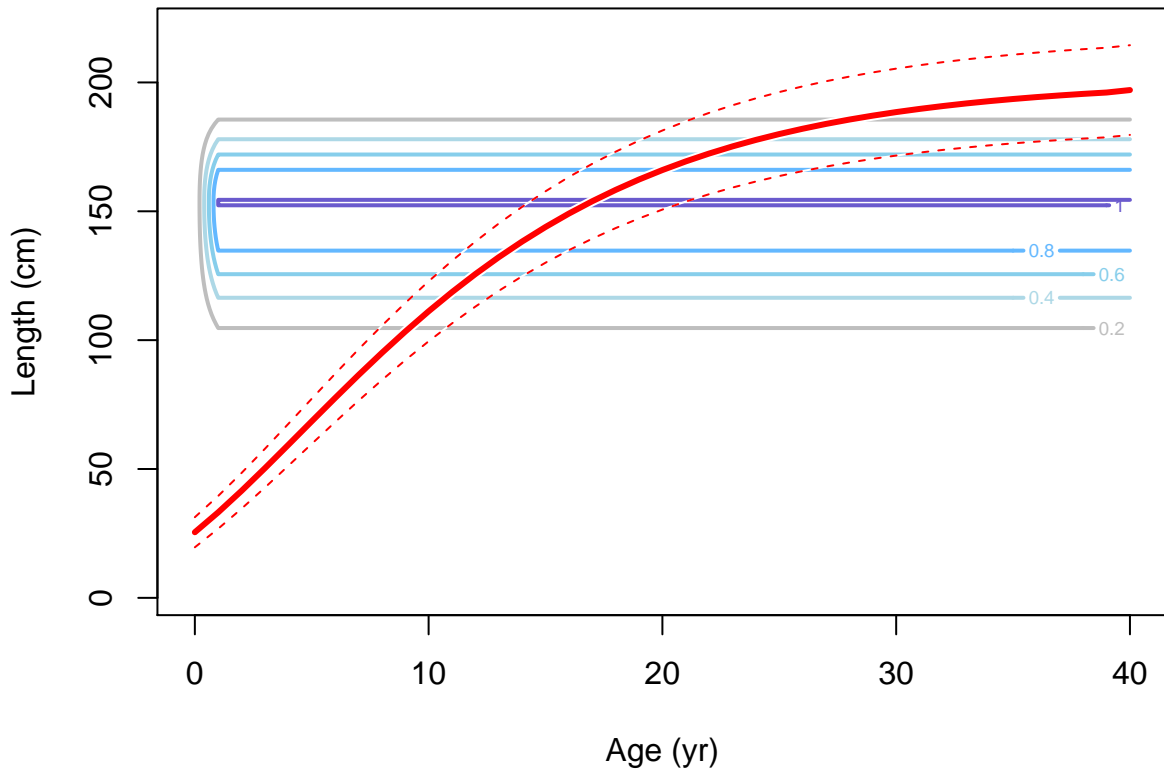
# Female ending year selectivity and growth for EPO-LL-survey-early



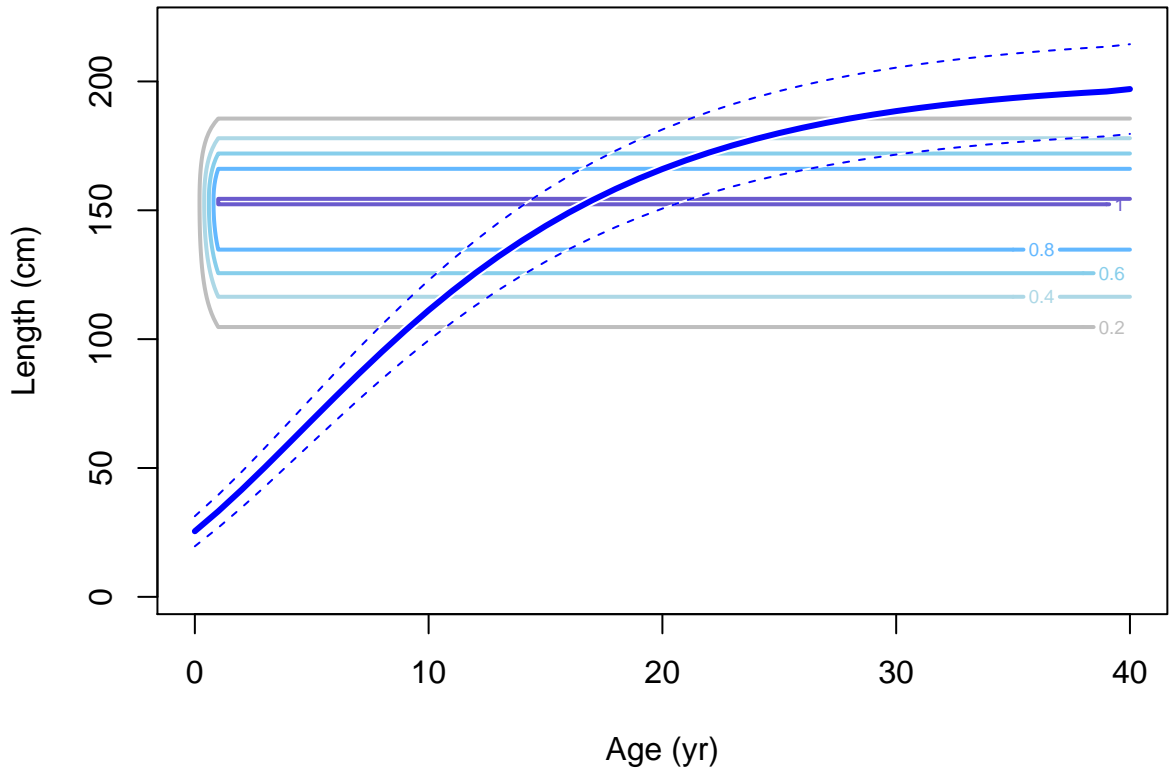
# Male ending year selectivity and growth for EPO-LL-survey-early



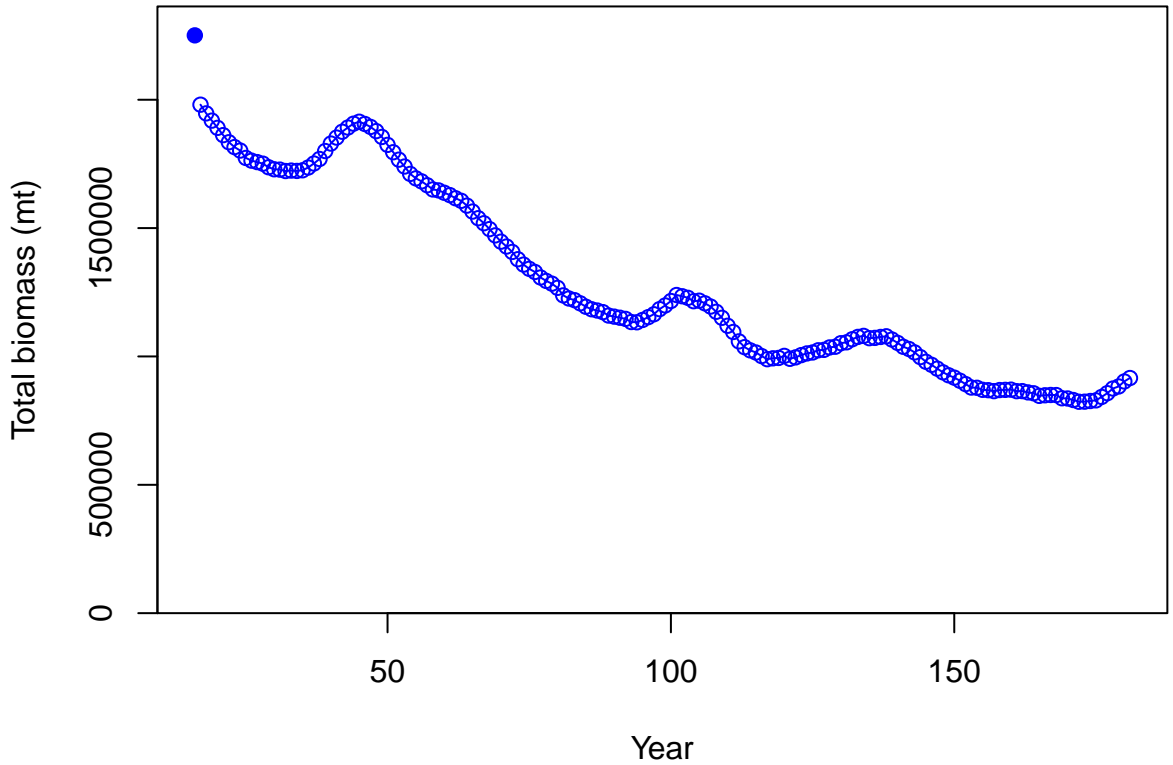
# Female ending year selectivity and growth for EPO-LL-survey-late



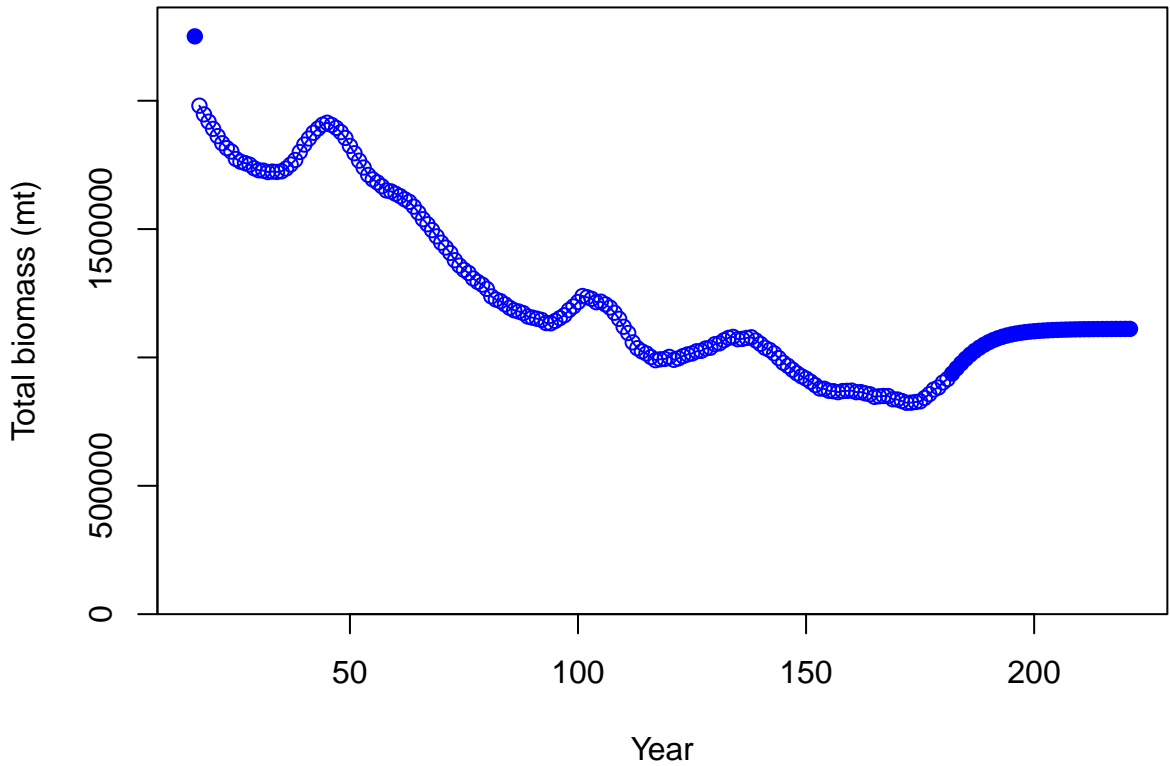
# Male ending year selectivity and growth for EPO-LL-survey-late



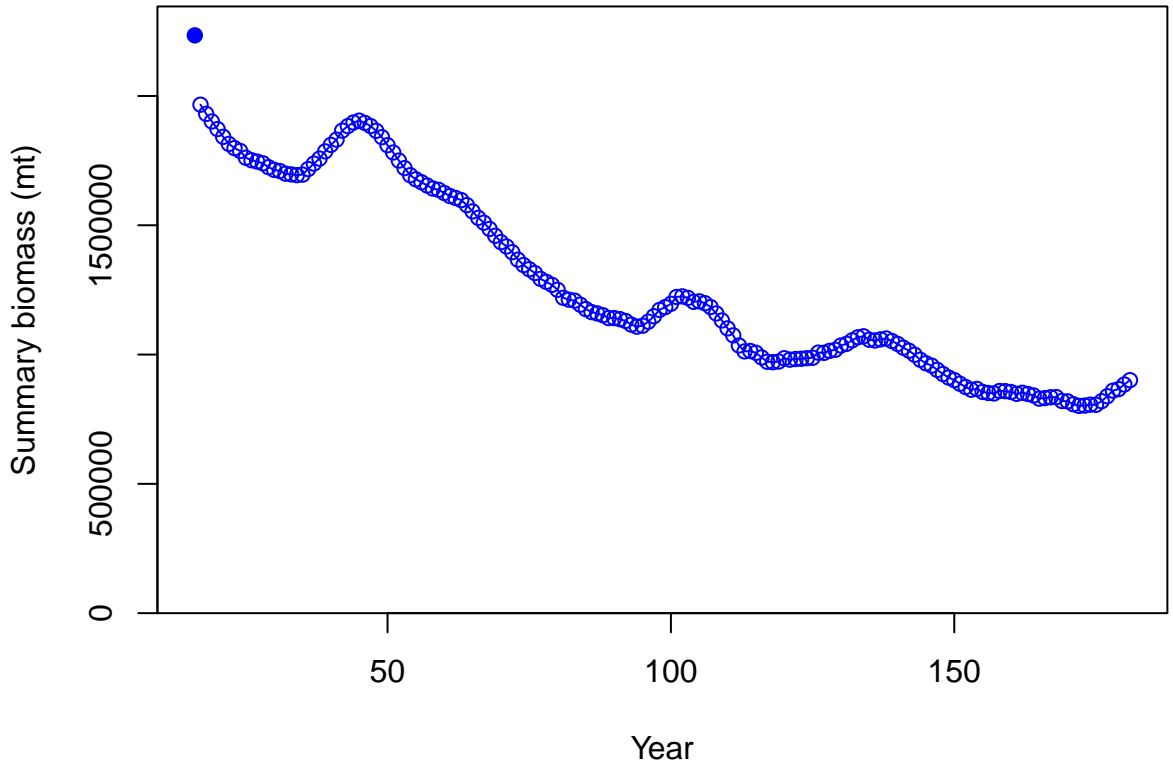
# Total biomass (mt)



Total biomass (mt) with forecast

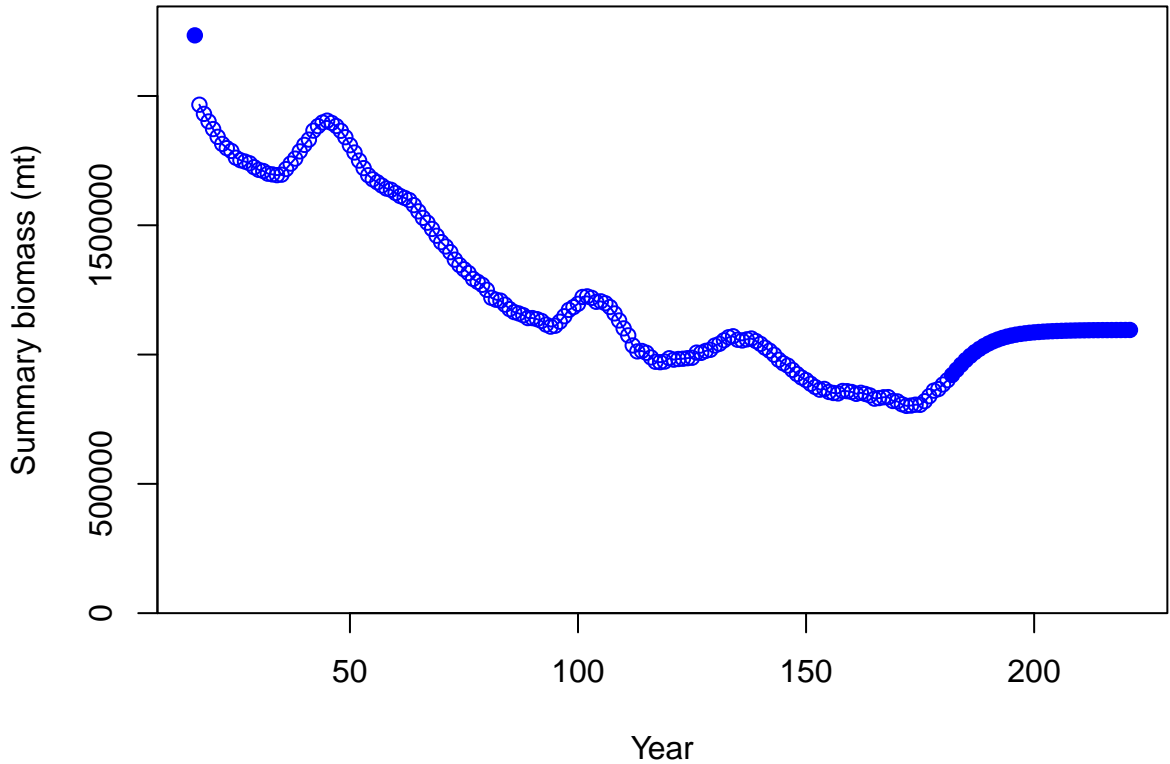


# Summary biomass (mt)

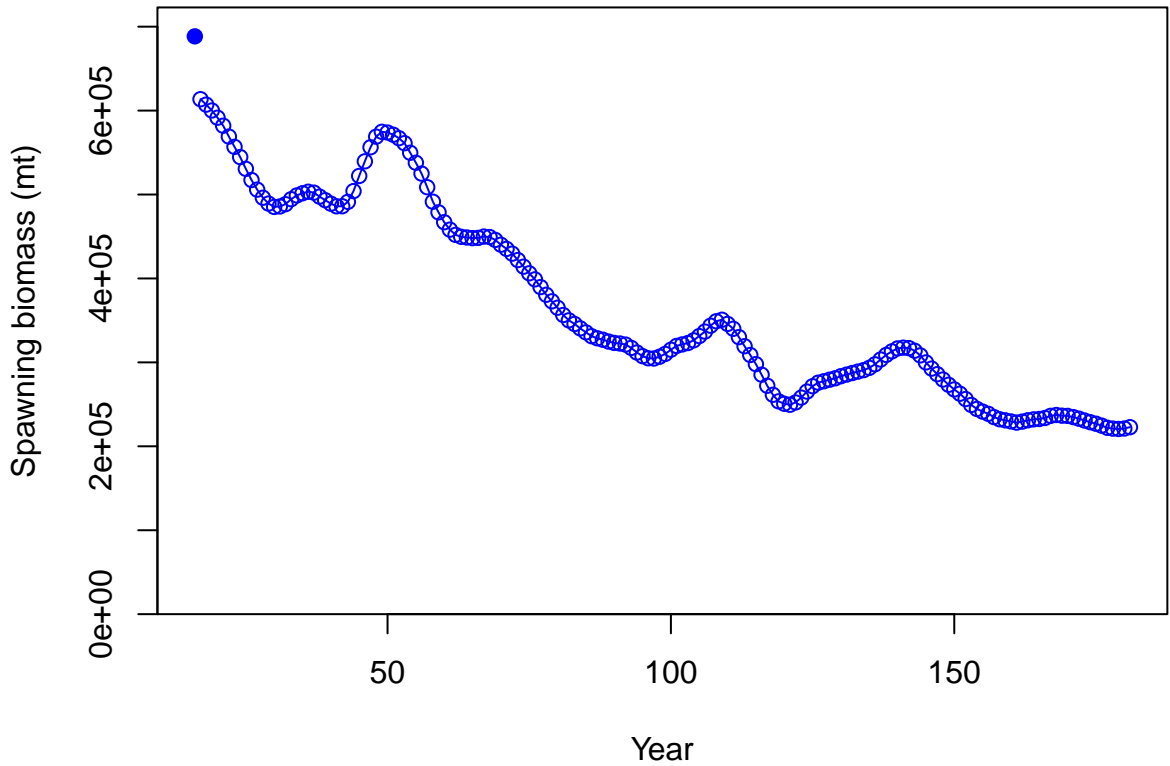




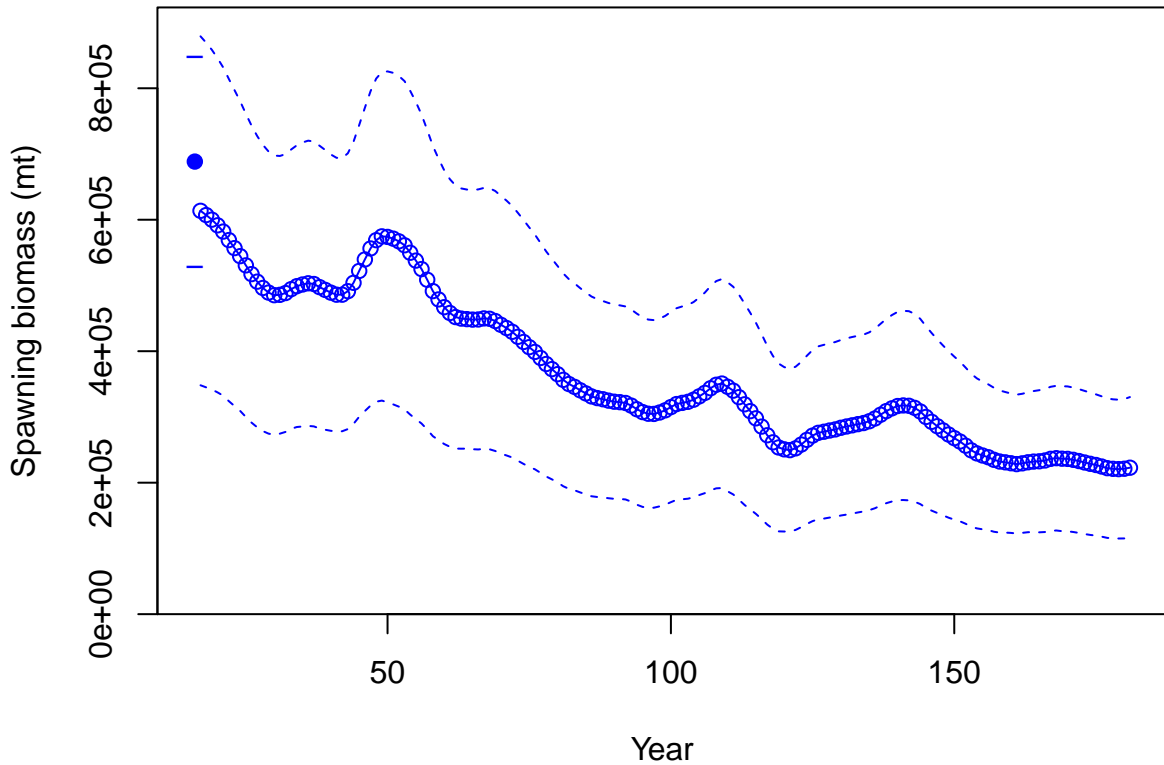
Summary biomass (mt) with forecast



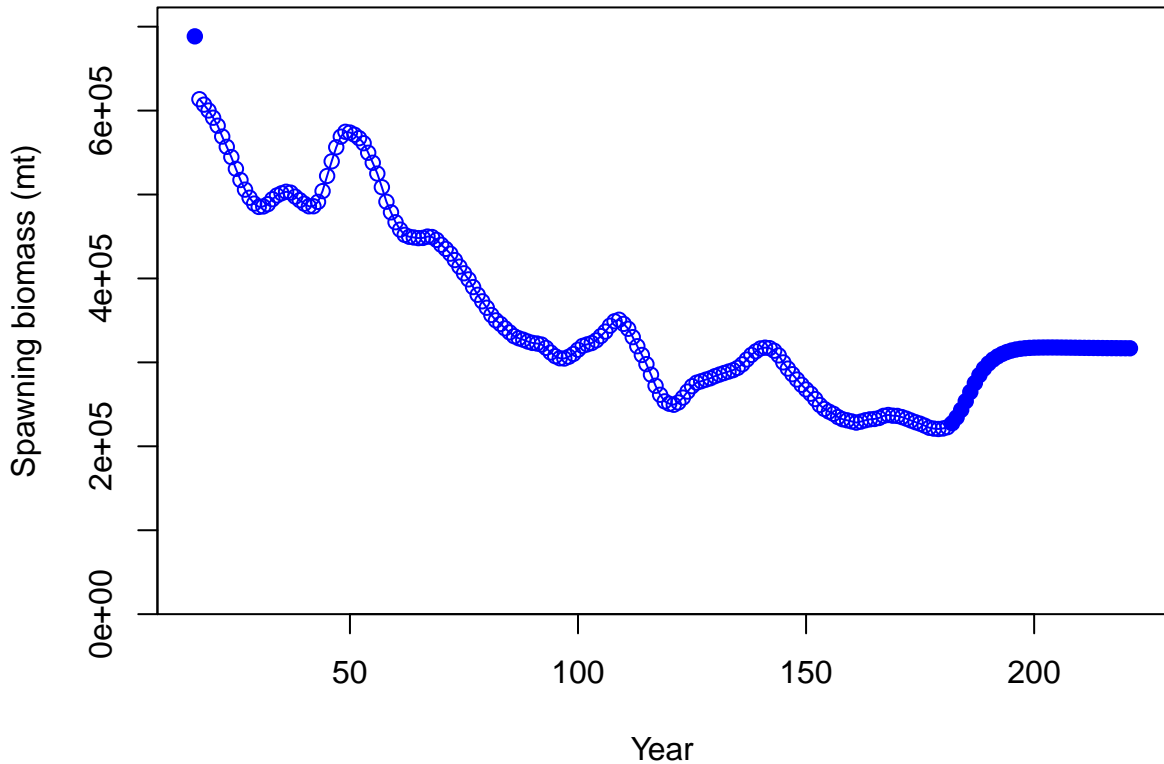
# Spawning biomass (mt)



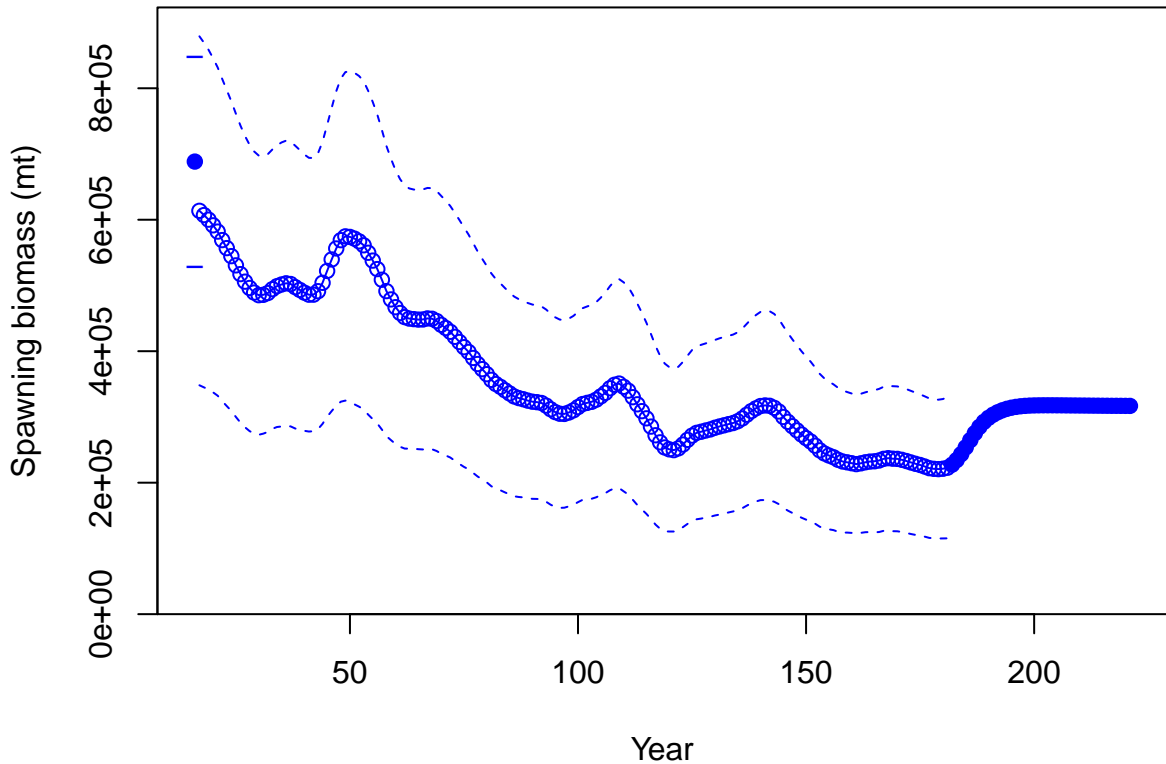
# Spawning biomass (mt) with ~95% asymptotic intervals



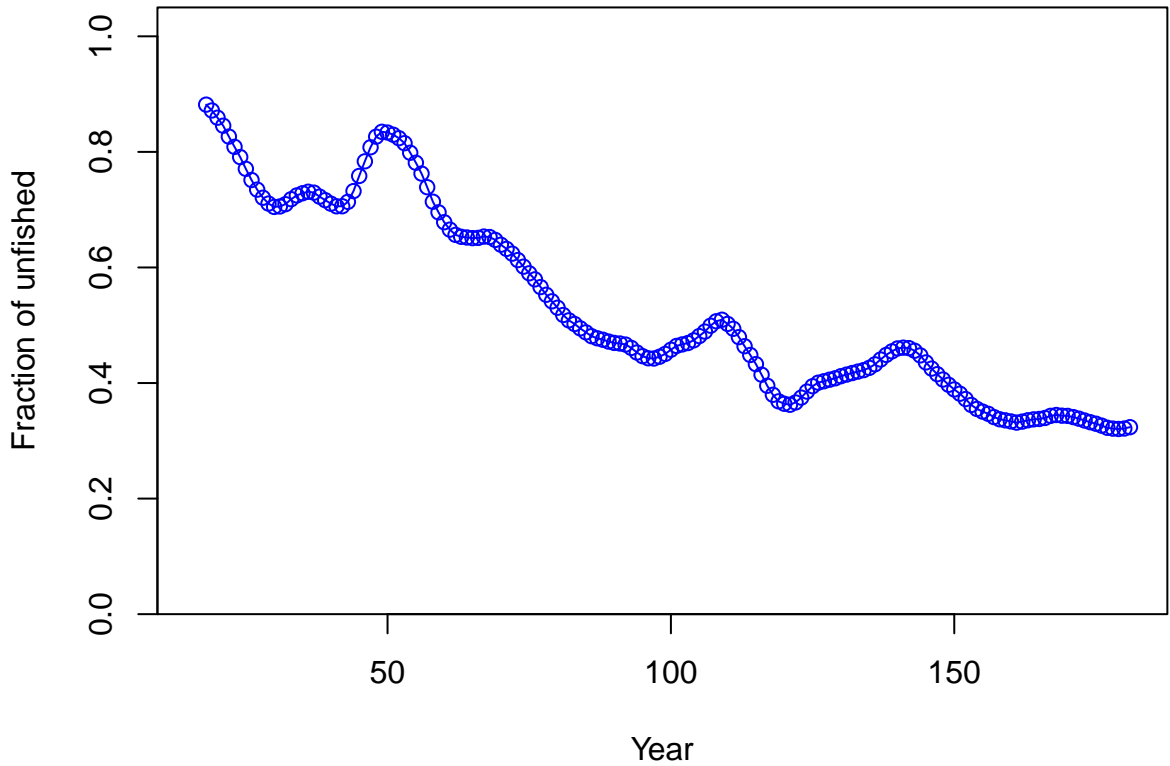
## Spawning biomass (mt) with forecast



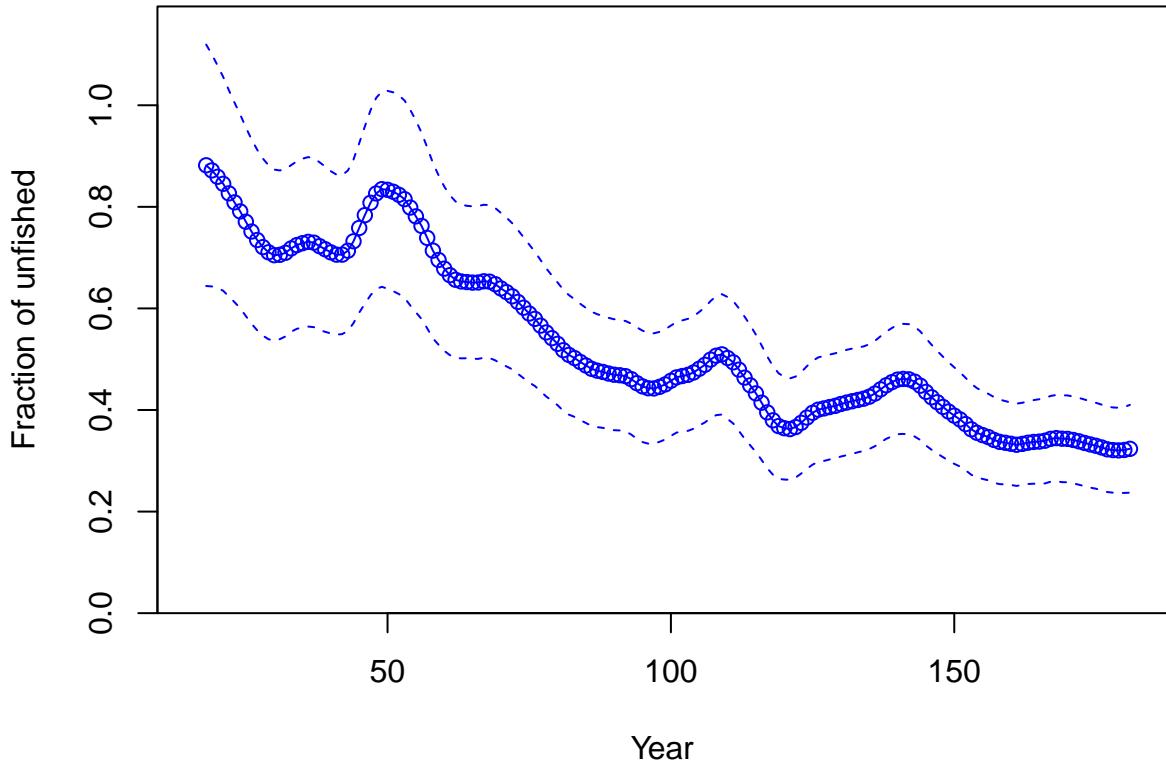
# Spawning biomass (mt) with forecast with ~95% asymptotic intervals



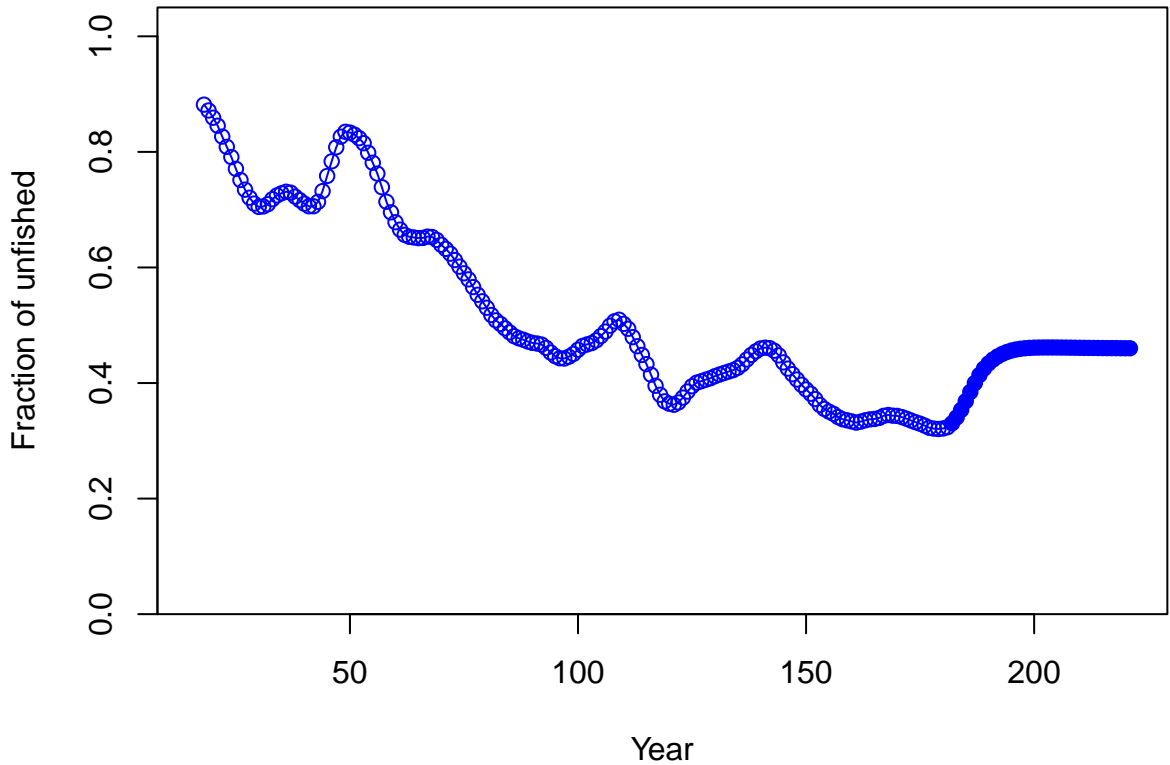
## Fraction of unfished



Fraction of unfished with ~95% asymptotic intervals

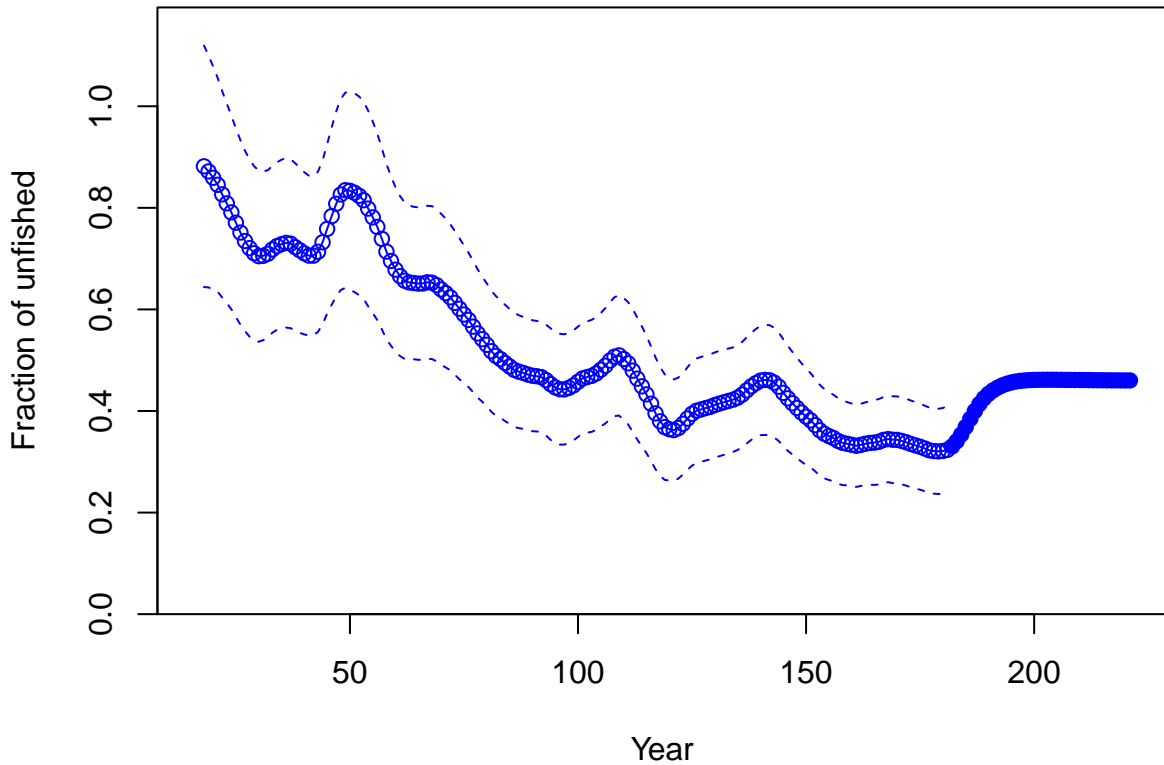


**Fraction of unfished with forecast**

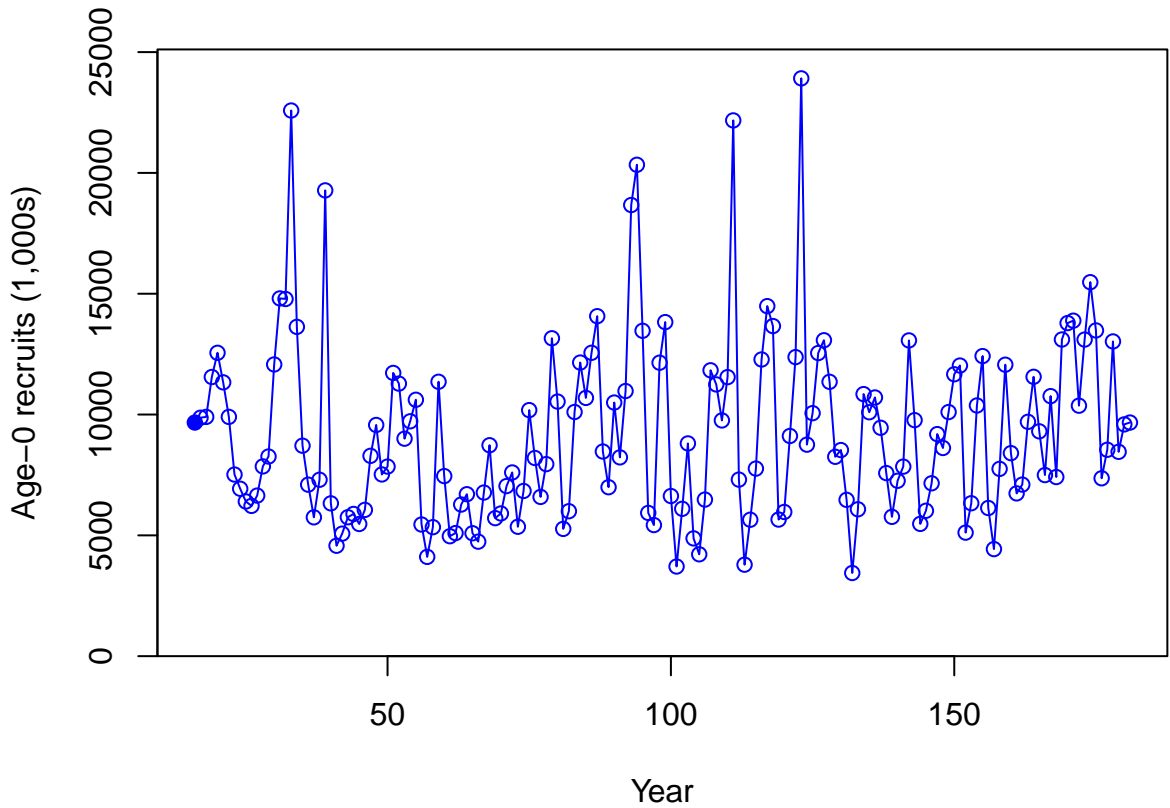




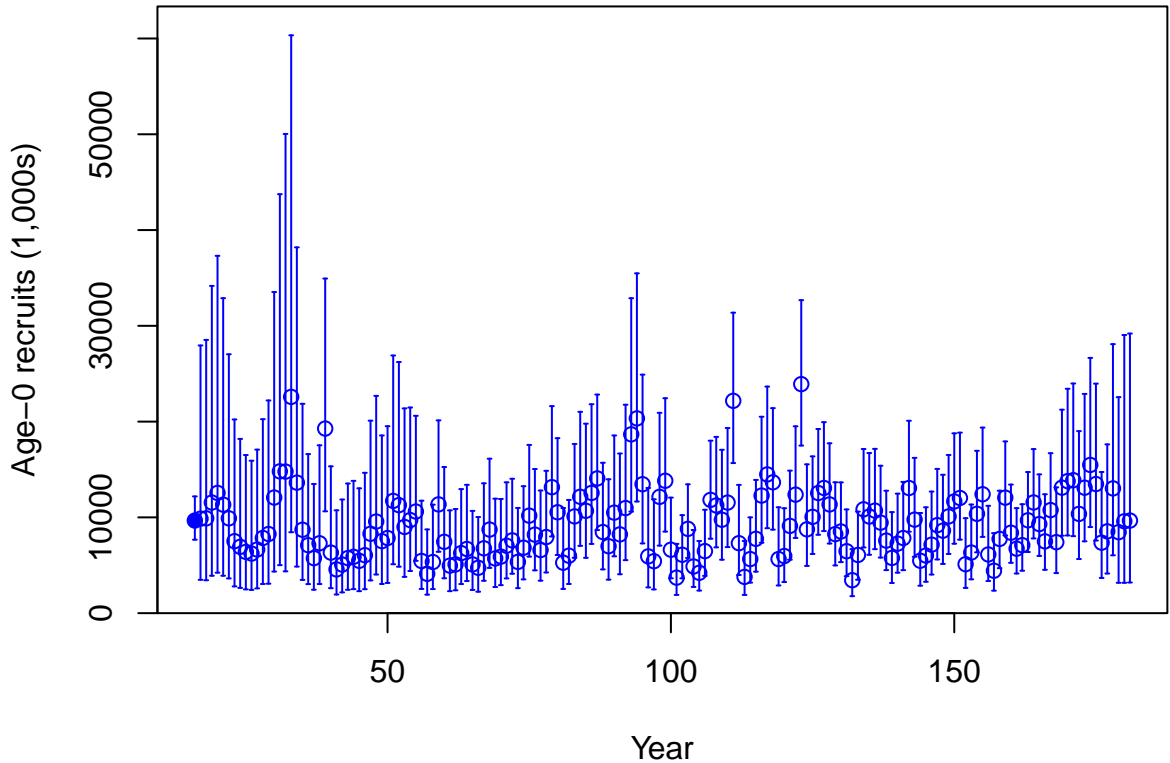
# Fraction of unfished with forecast with ~95% asymptotic intervals



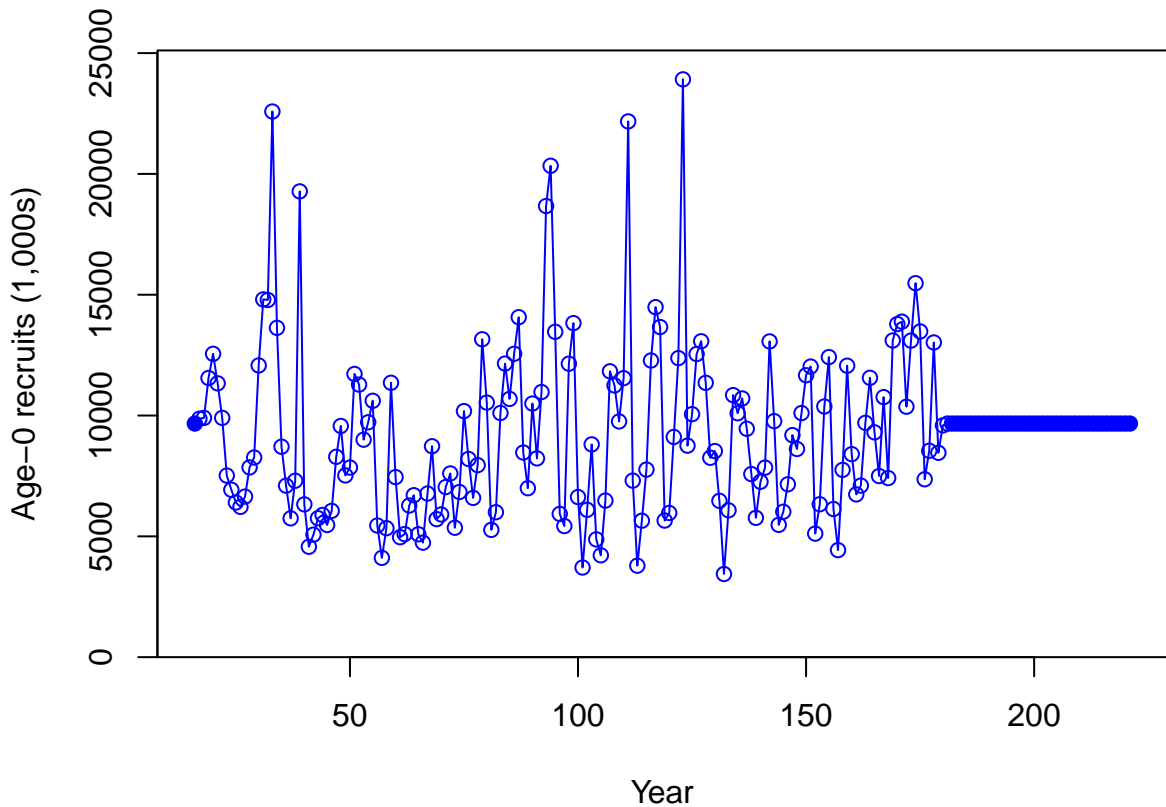
### Age-0 recruits (1,000s)



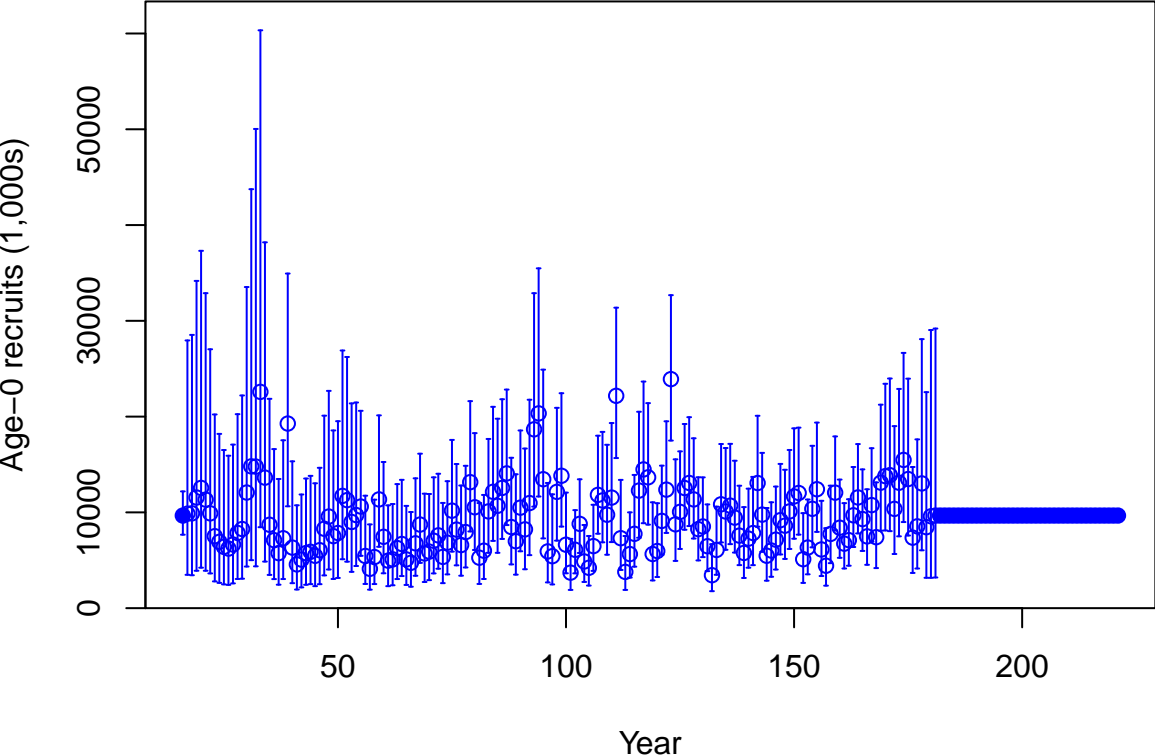
# Age-0 recruits (1,000s) with ~95% asymptotic intervals



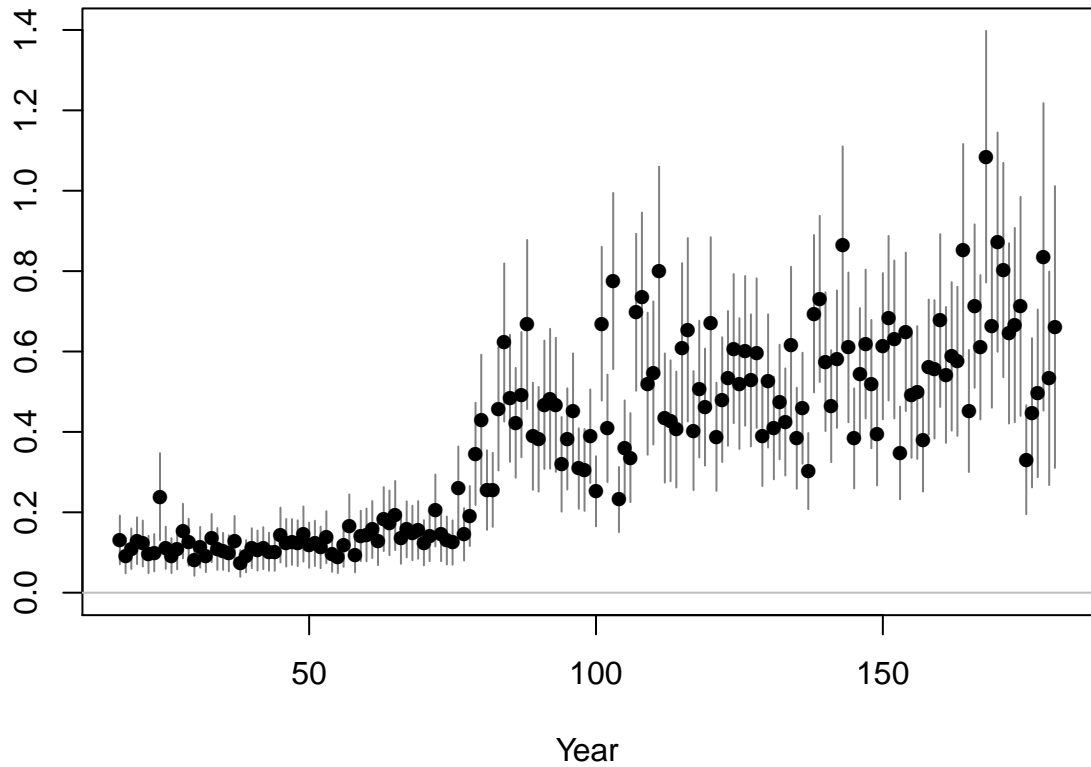
**Age-0 recruits (1,000s) with forecast**

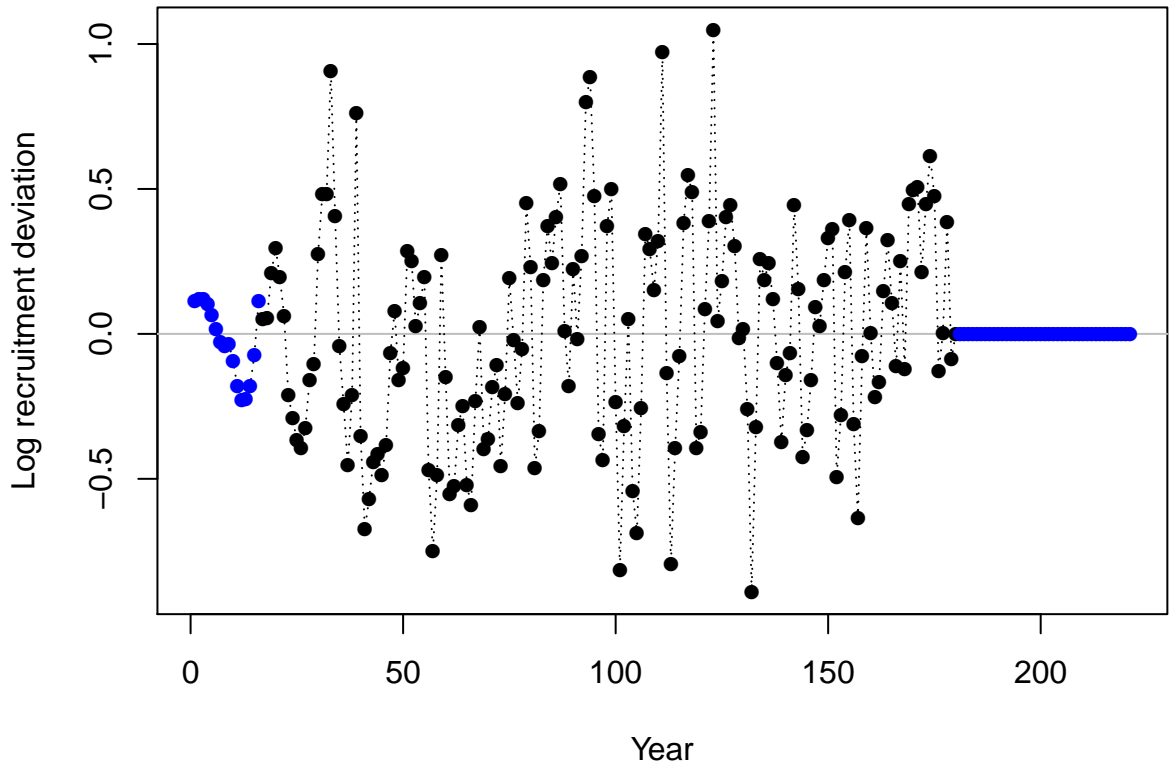


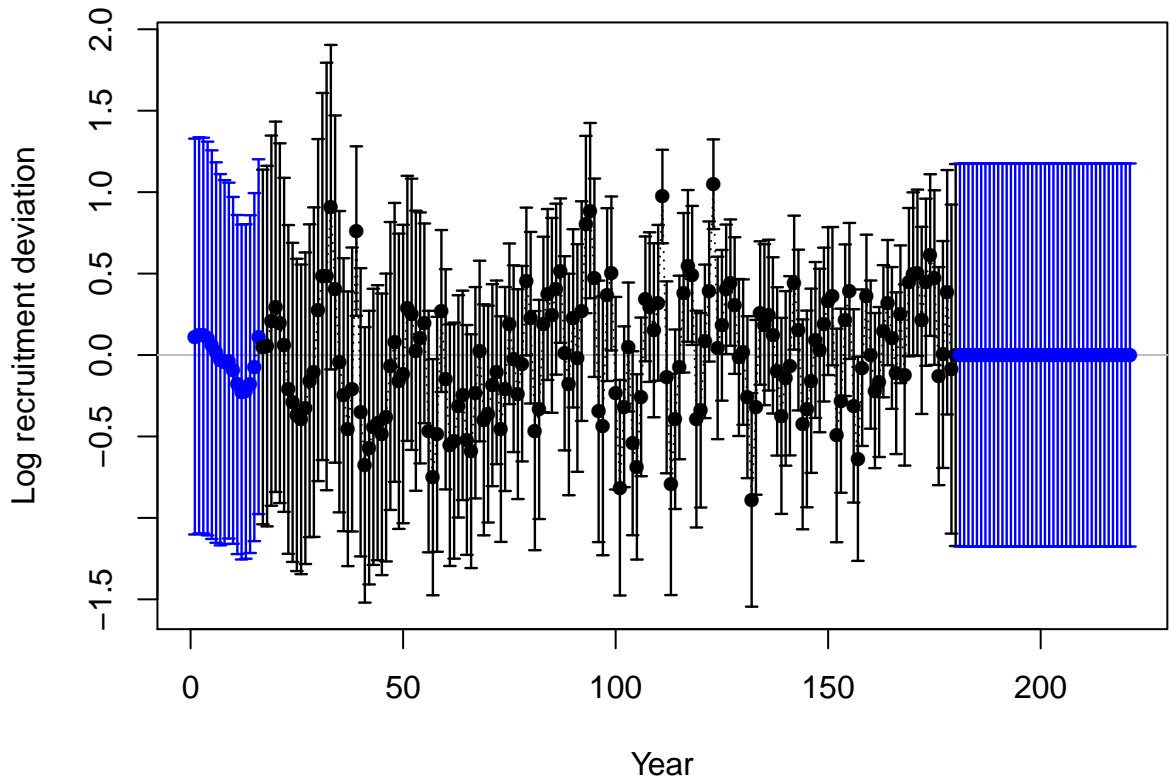
**Age-0 recruits (1,000s) with forecast with ~95% asymptotic intervals**



Summary Fishing Mortality

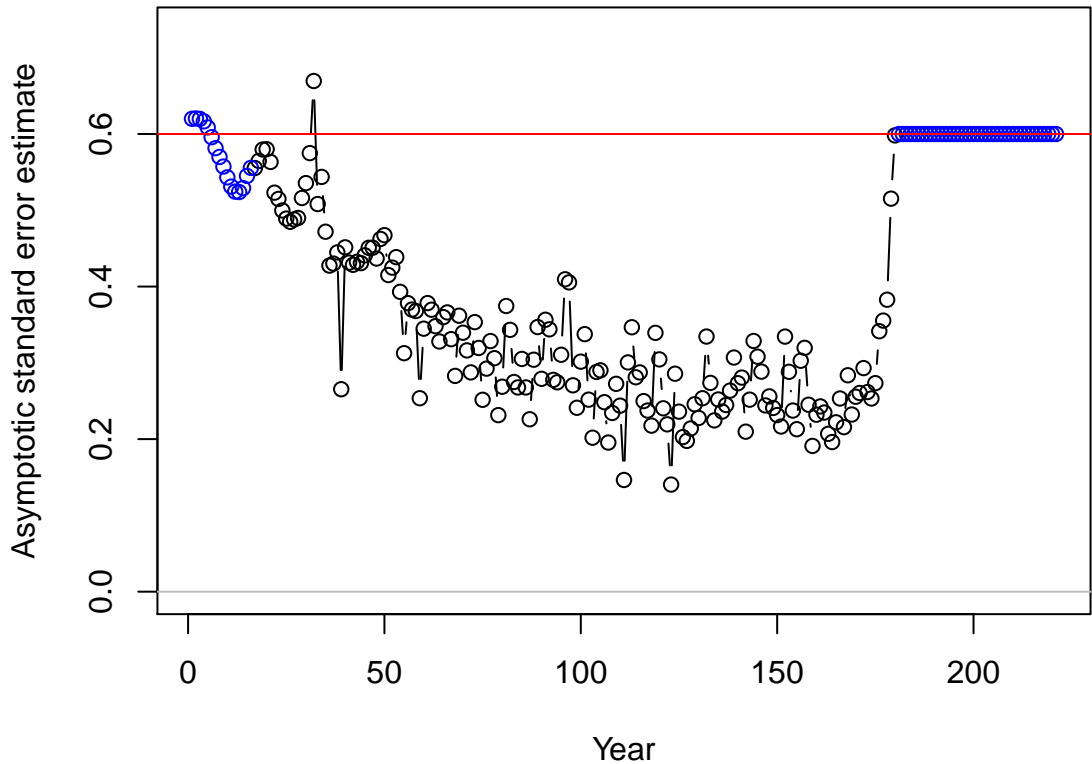


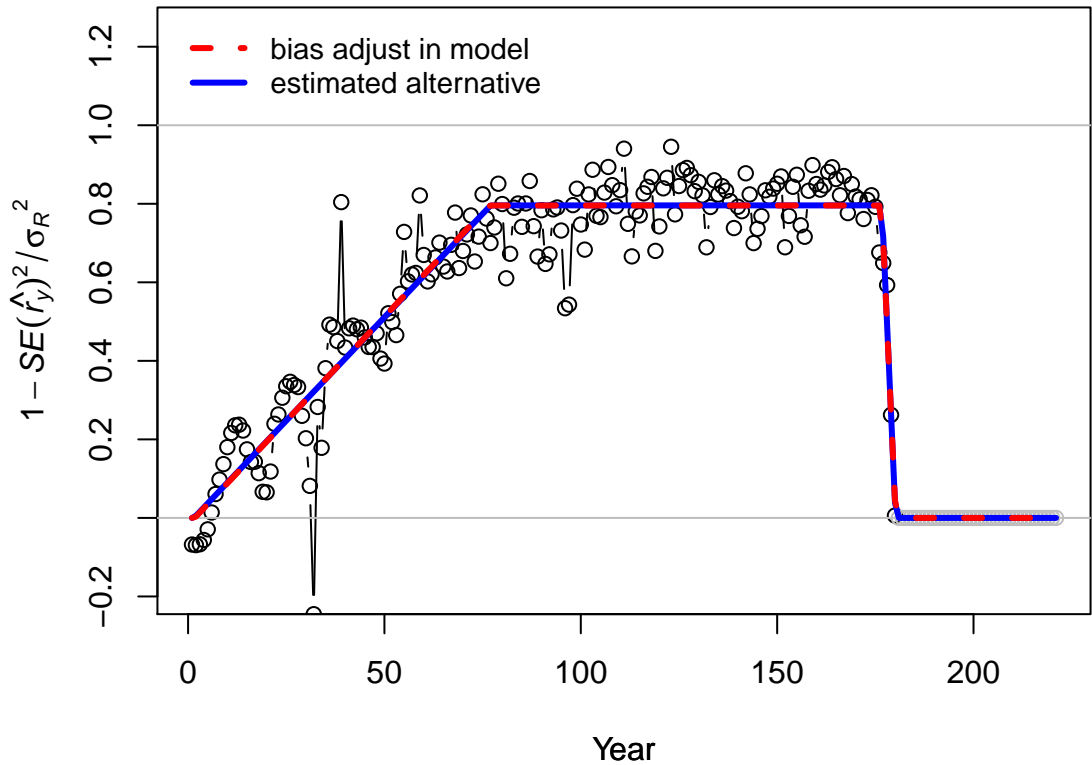




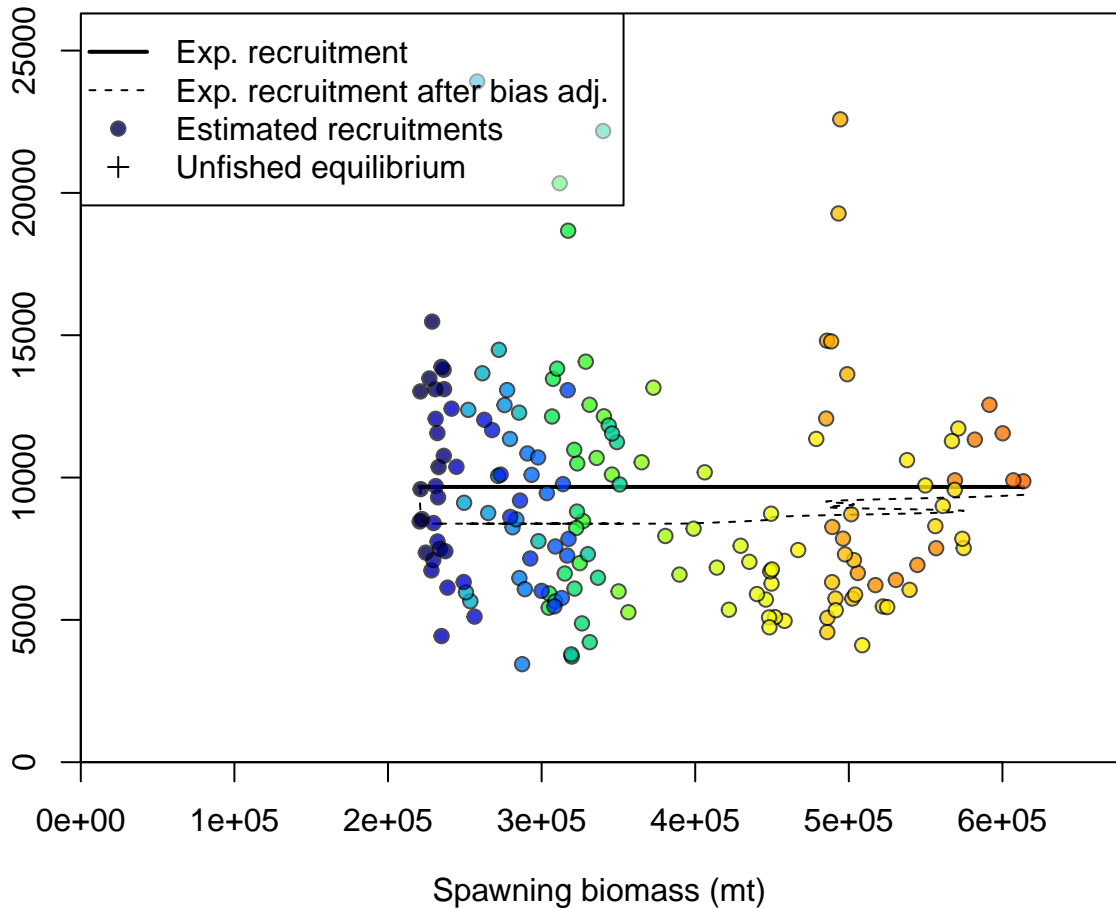


# Recruitment deviation variance

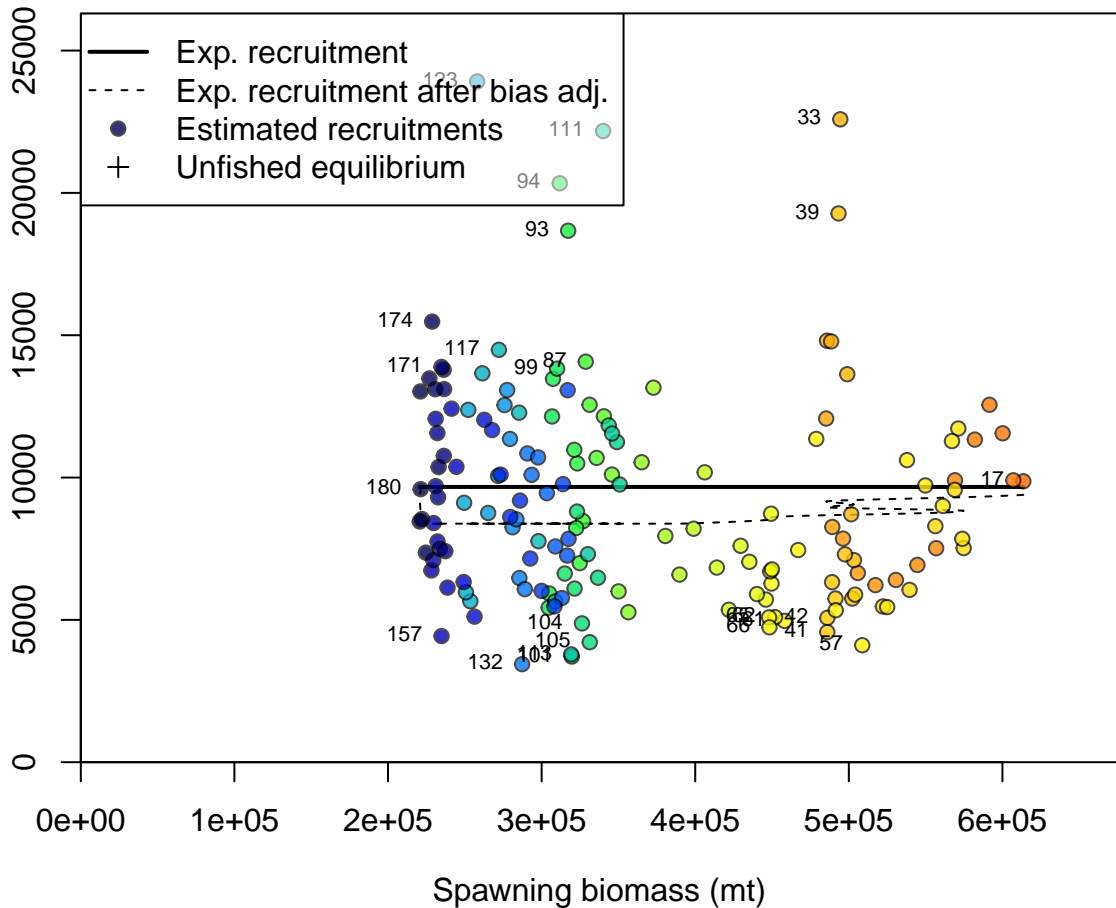


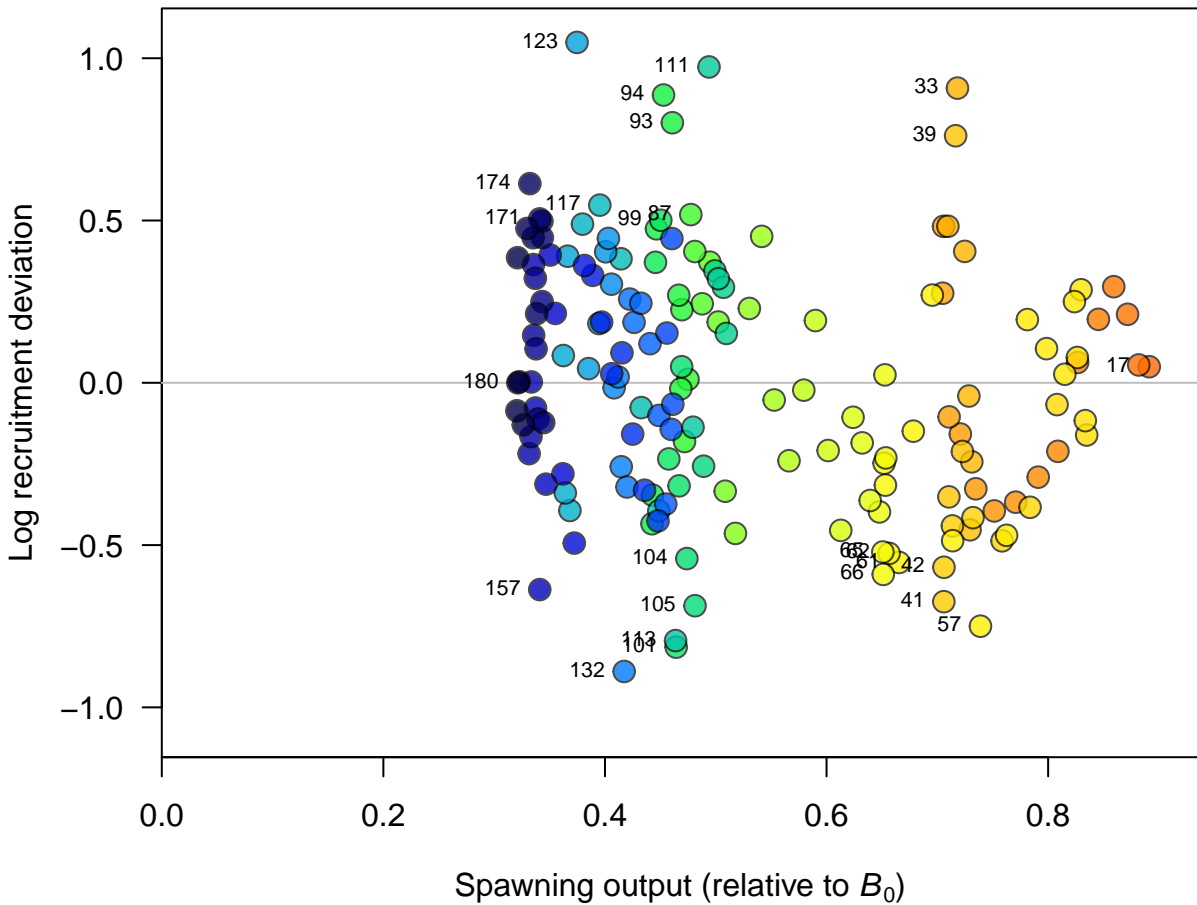


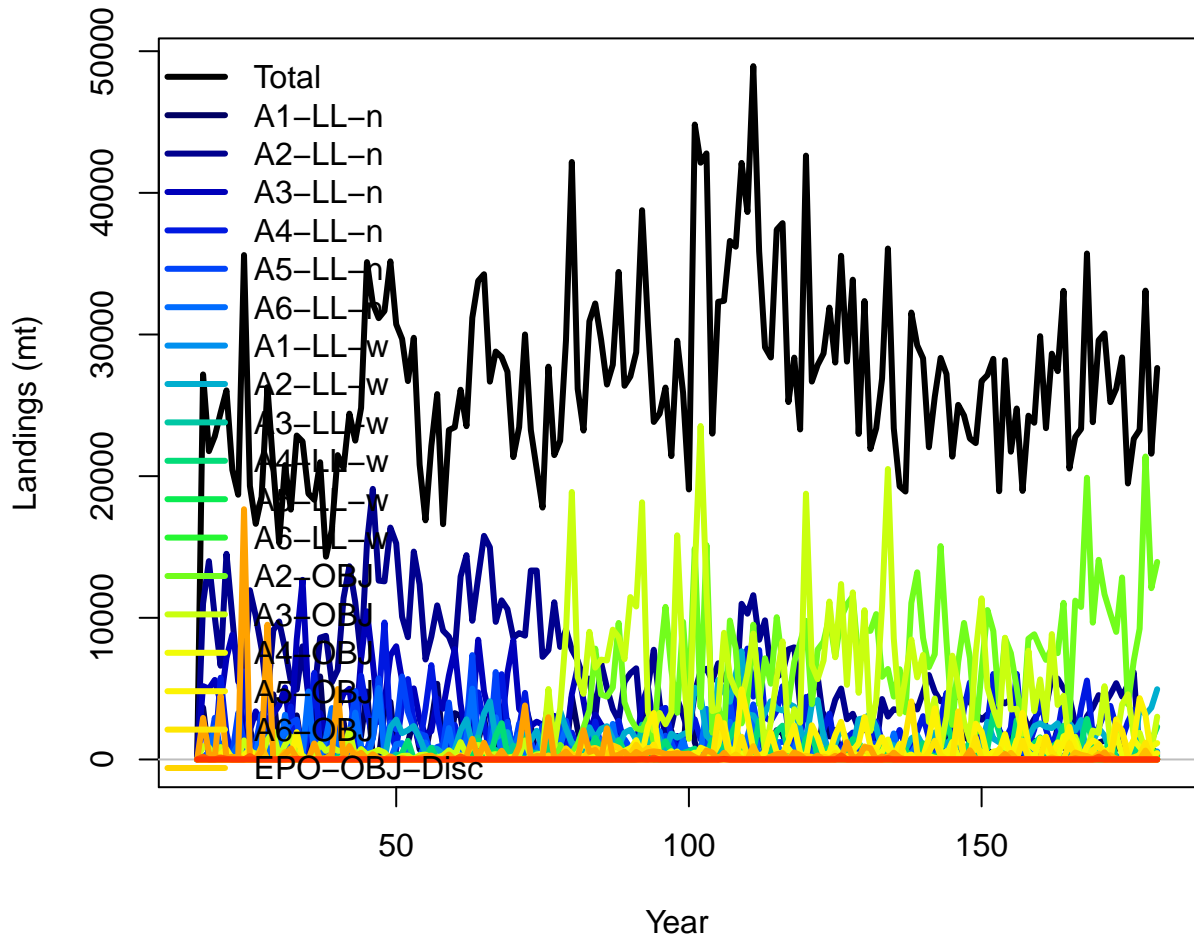
Recruitment (1,000s)



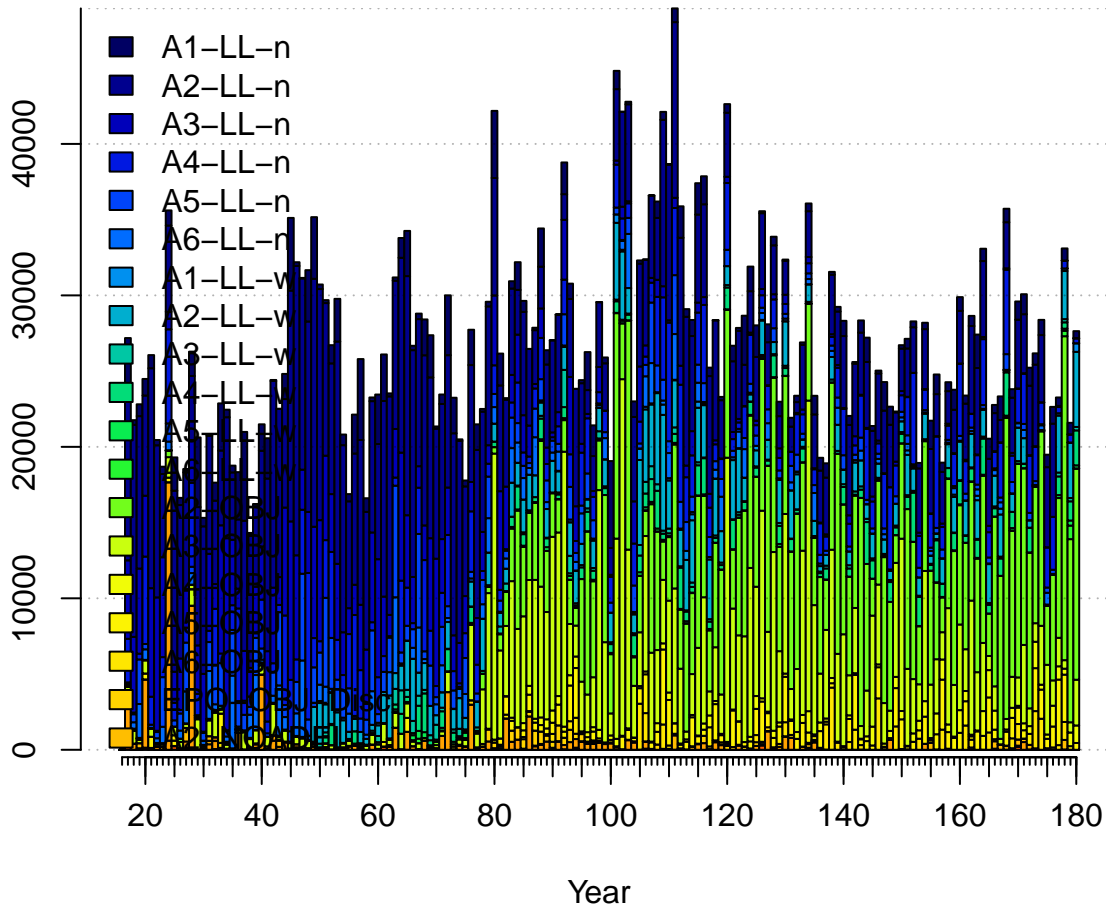
Recruitment (1,000s)



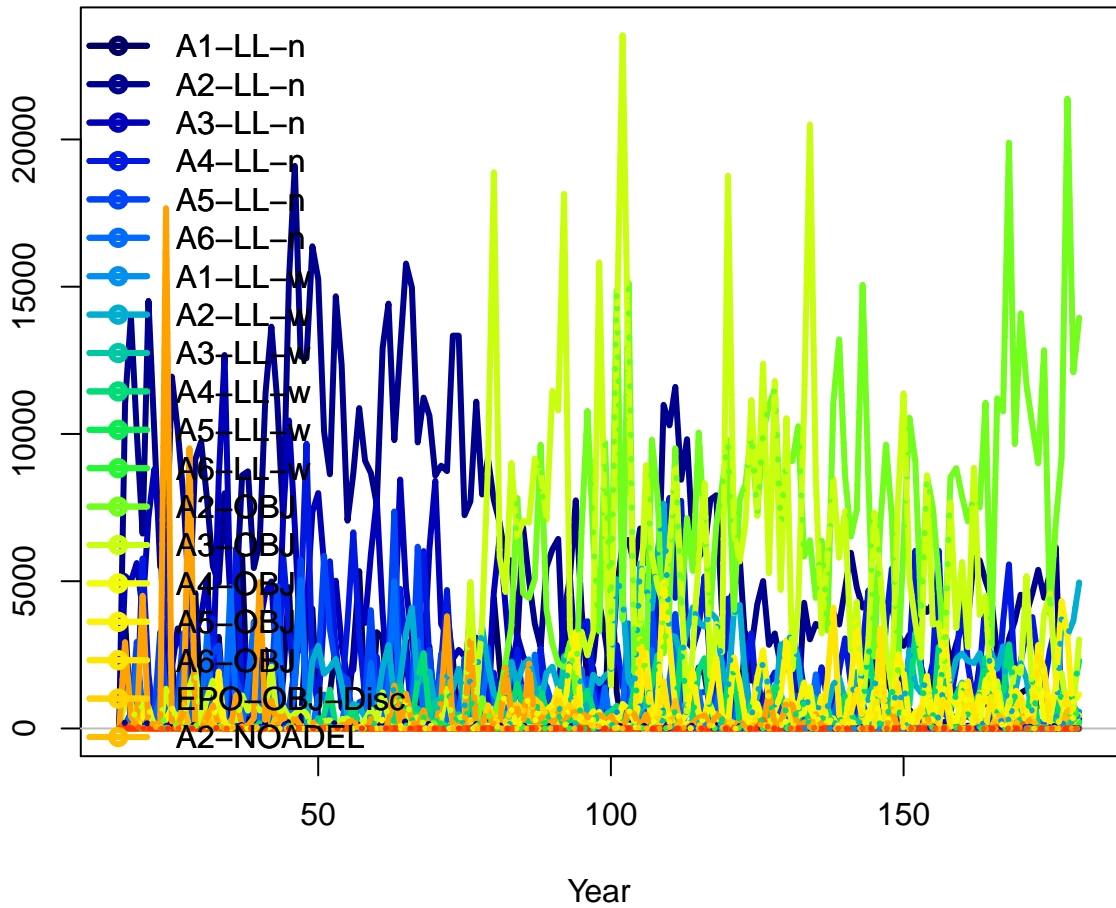




Landings (mt)



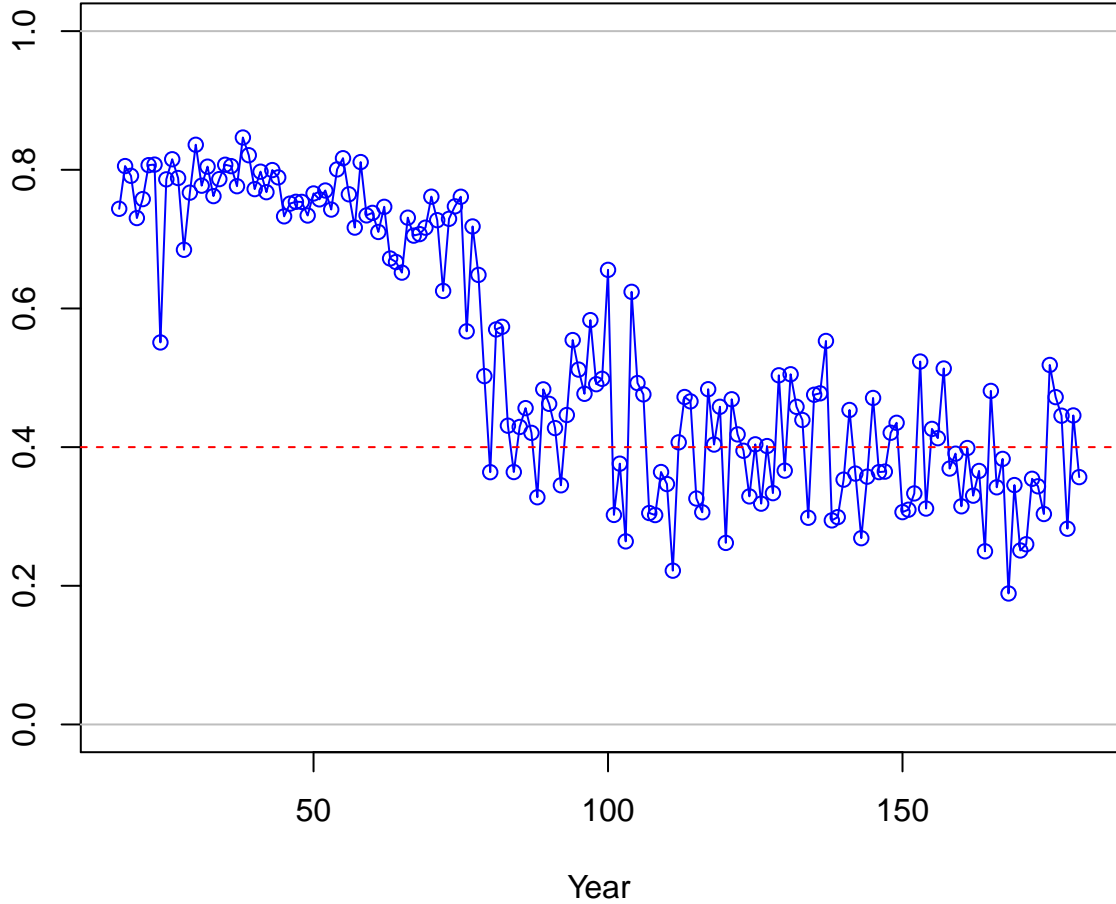
Observed and expected Landings (mt)



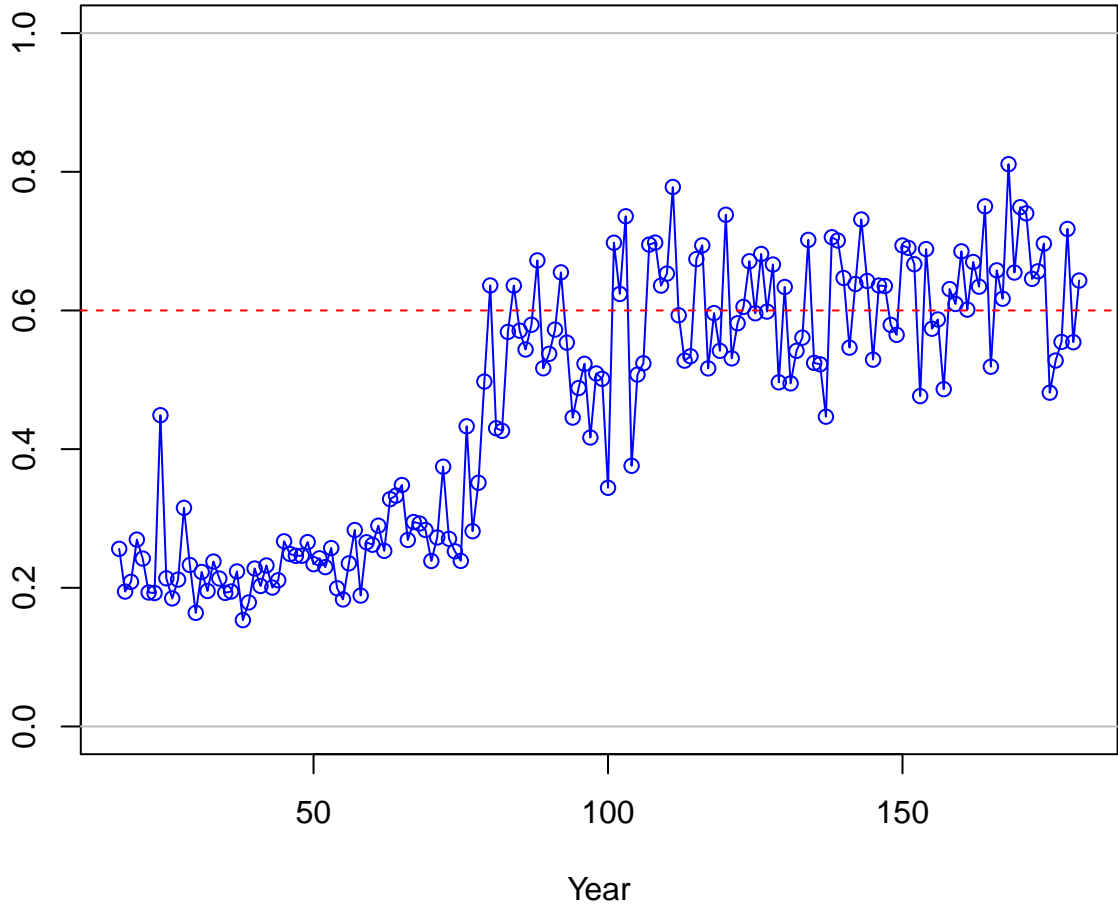


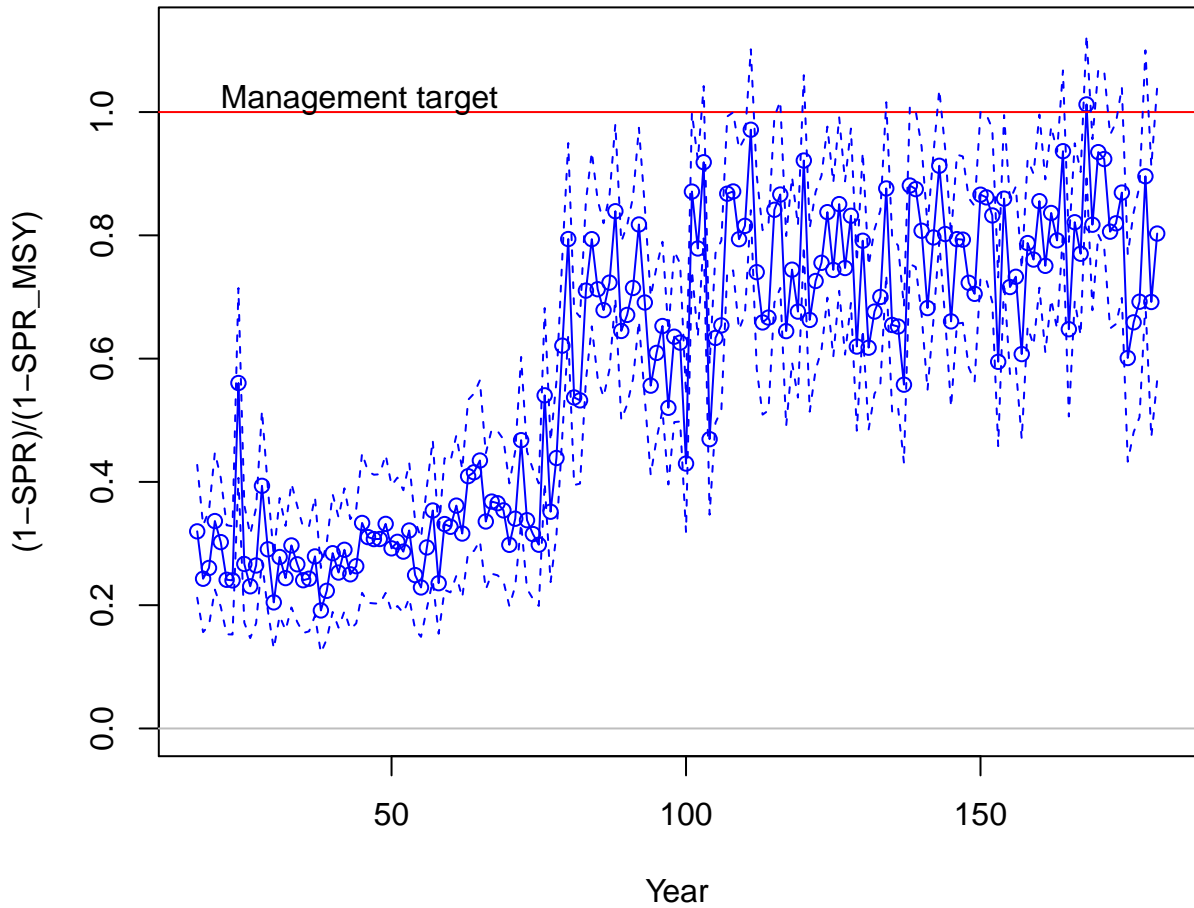


SPR

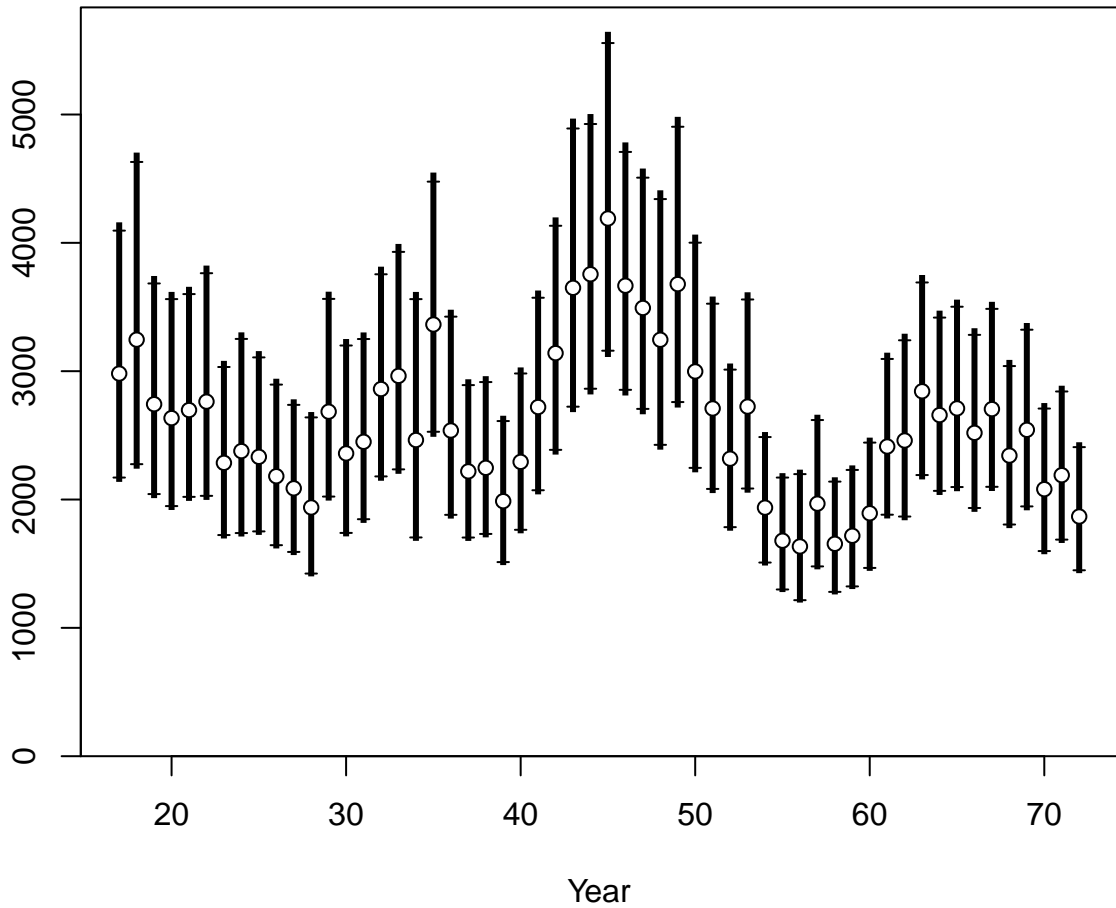


1-SPR

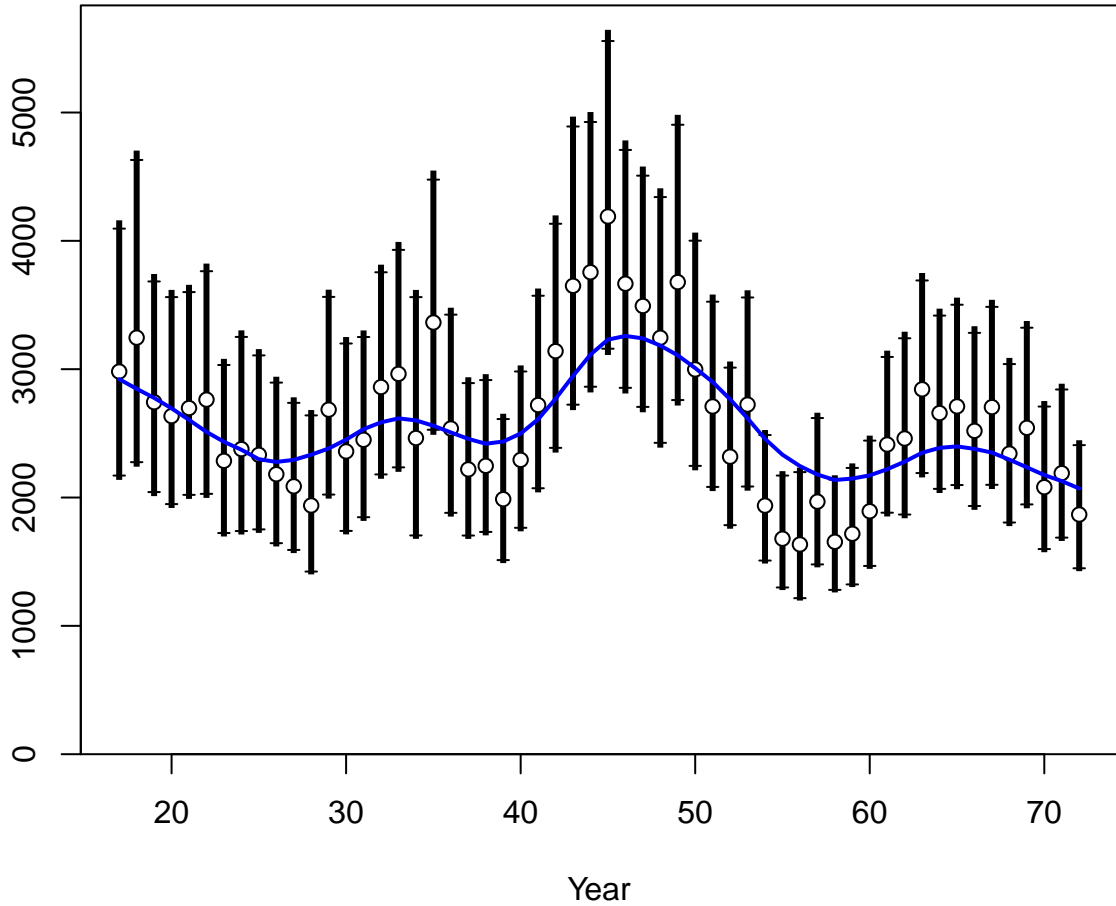




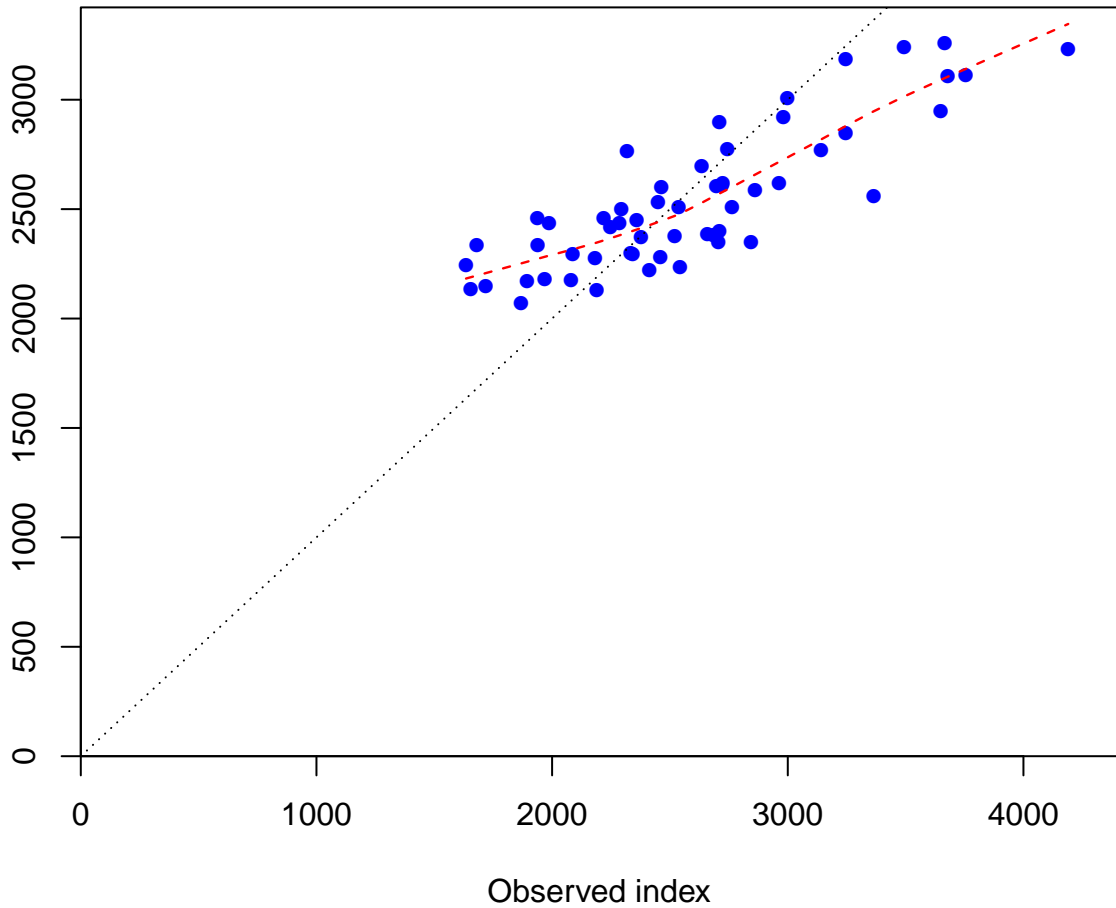
Index



Index



Expected index



Log index

8.5

8.0

7.5

20

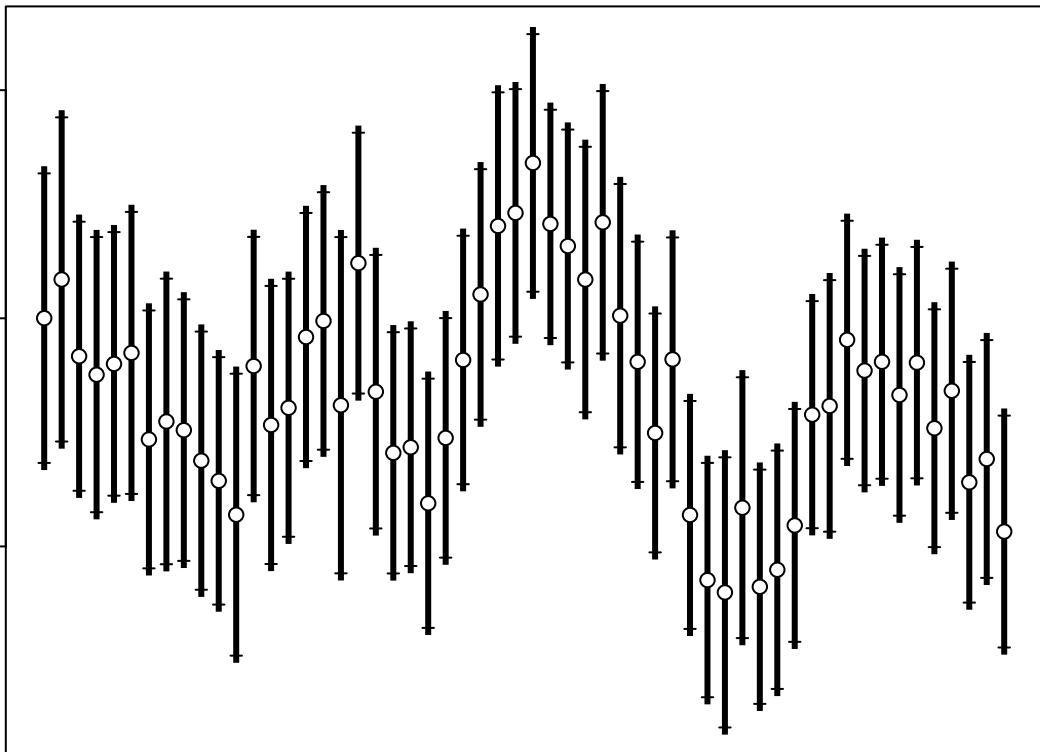
30

40

60

70

Year





Log index

8.5

8.0

7.5

20

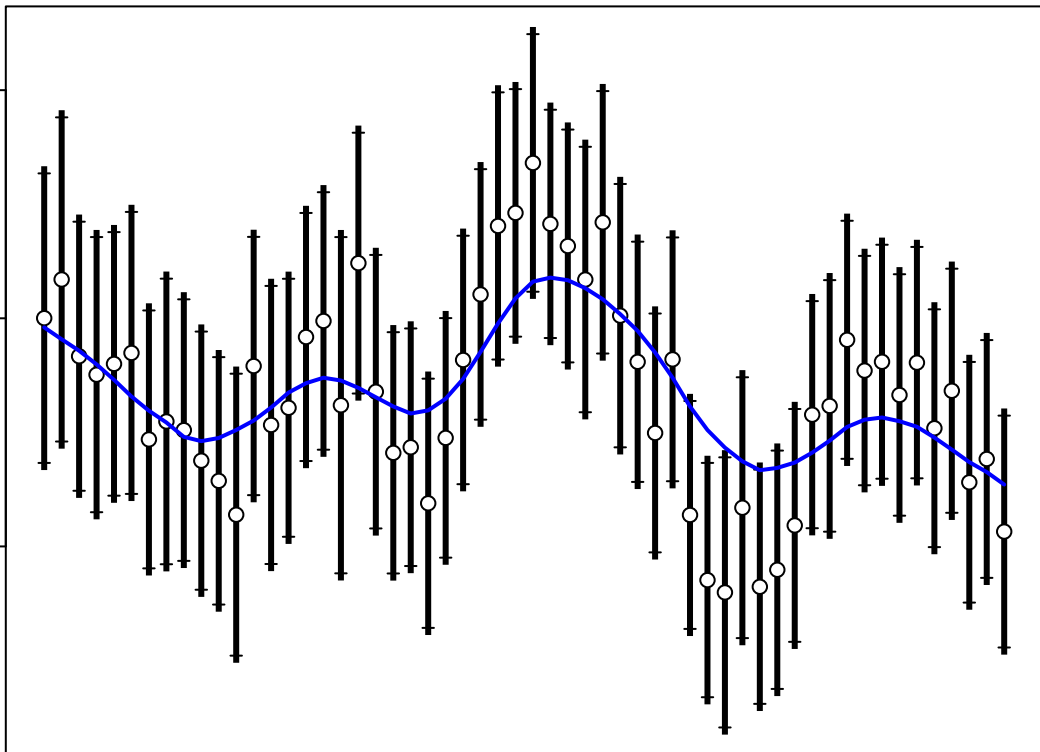
30

40

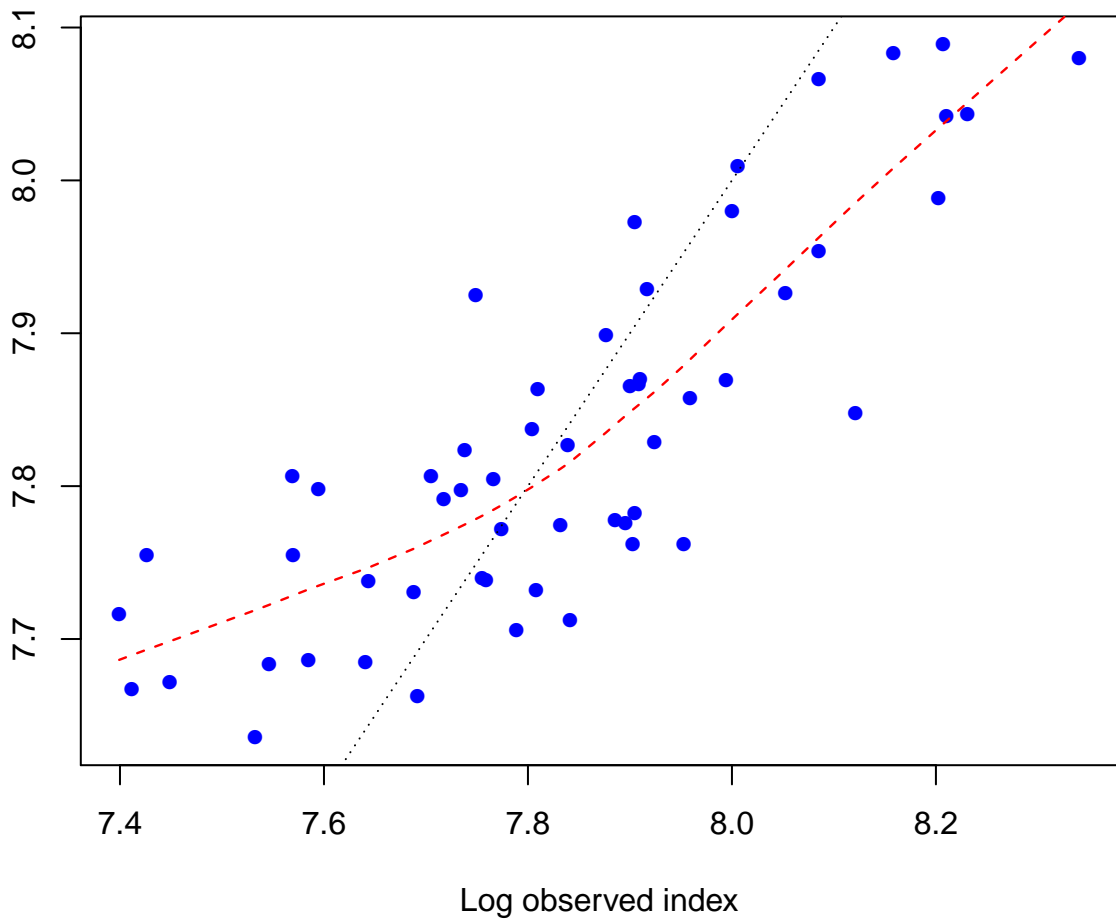
60

70

Year

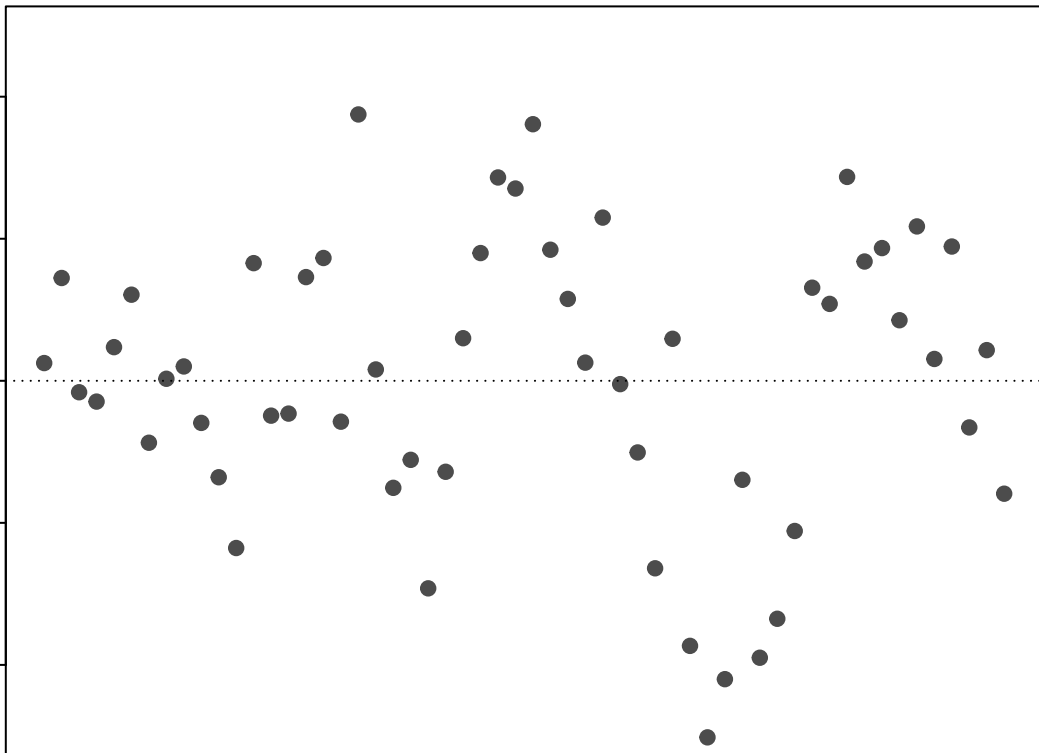


Log expected index



Residual

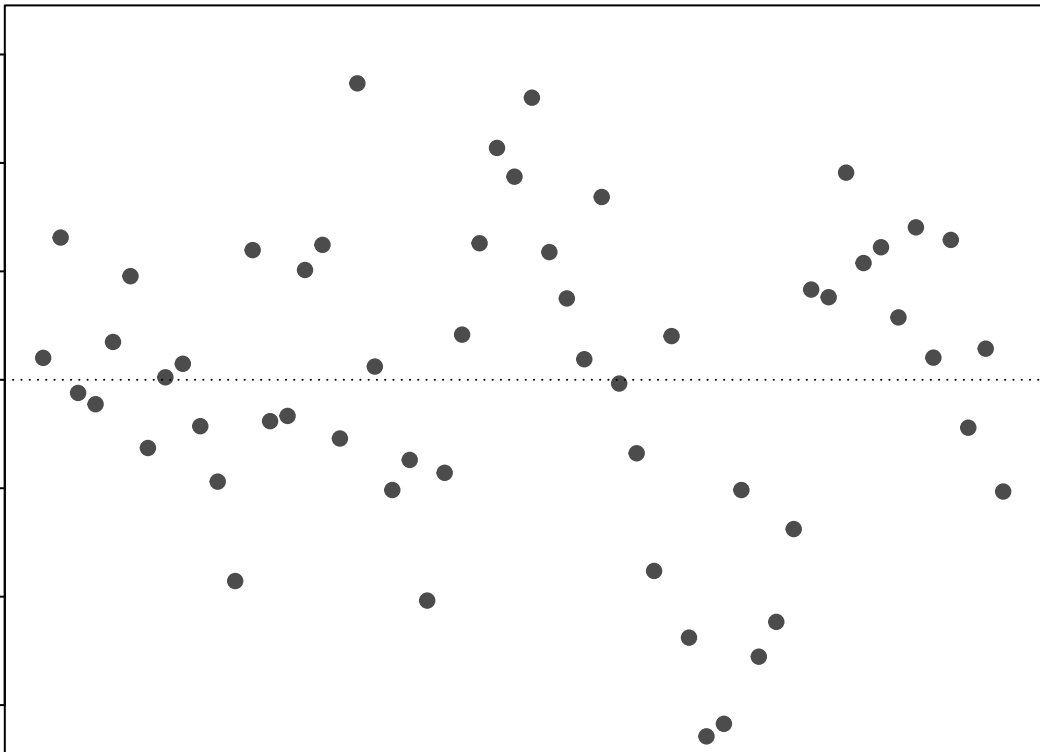
2  
1  
0  
-1  
-2



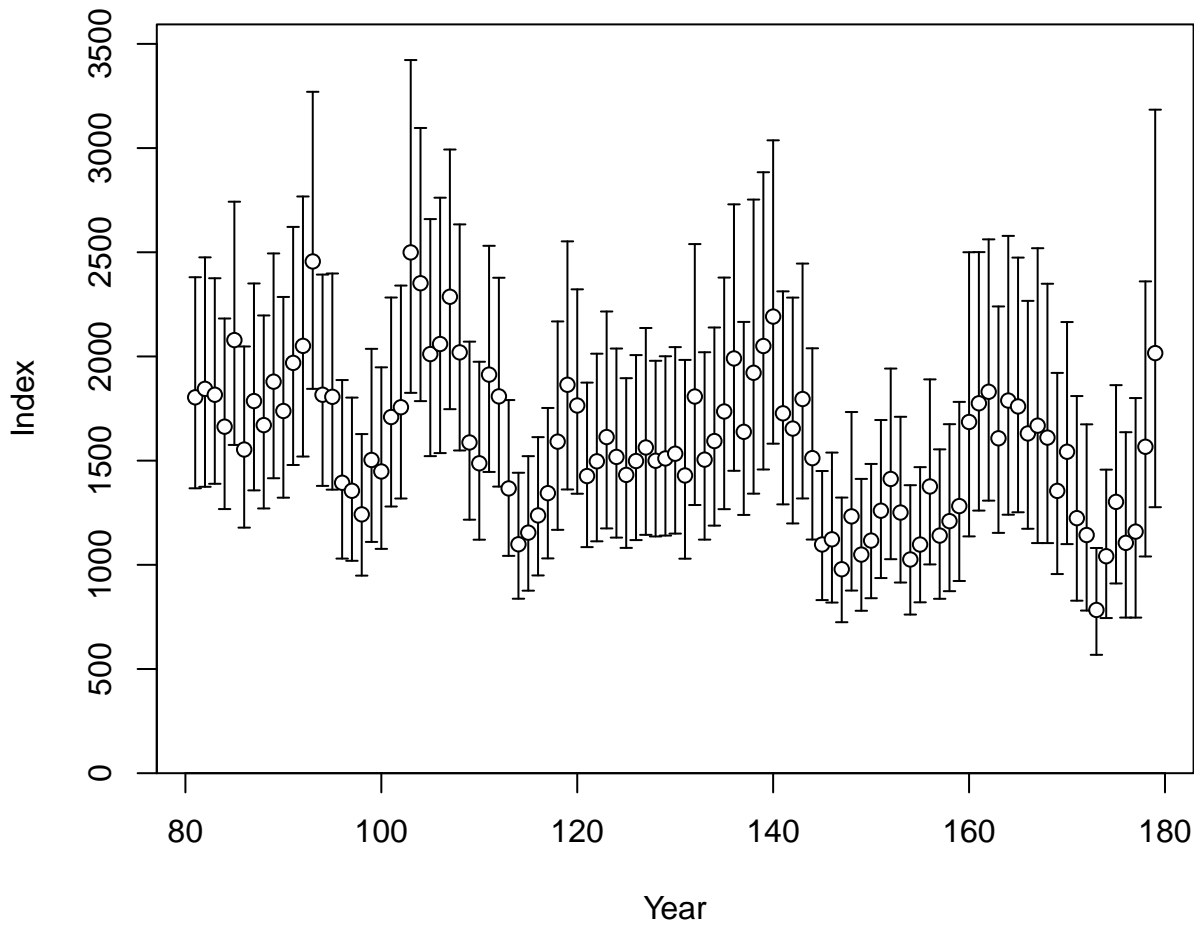
Year

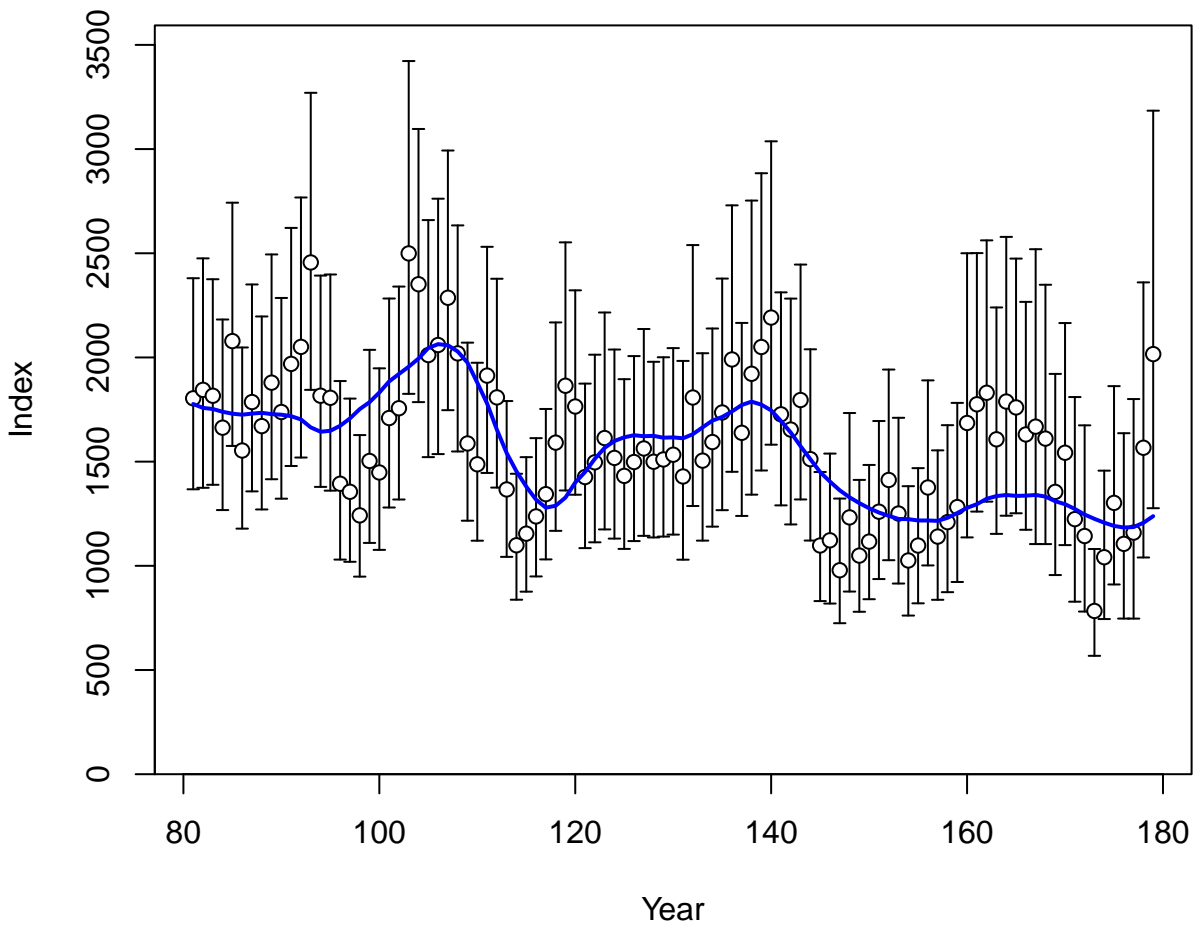
Deviation

0.3  
0.2  
0.1  
0.0  
-0.1  
-0.2  
-0.3

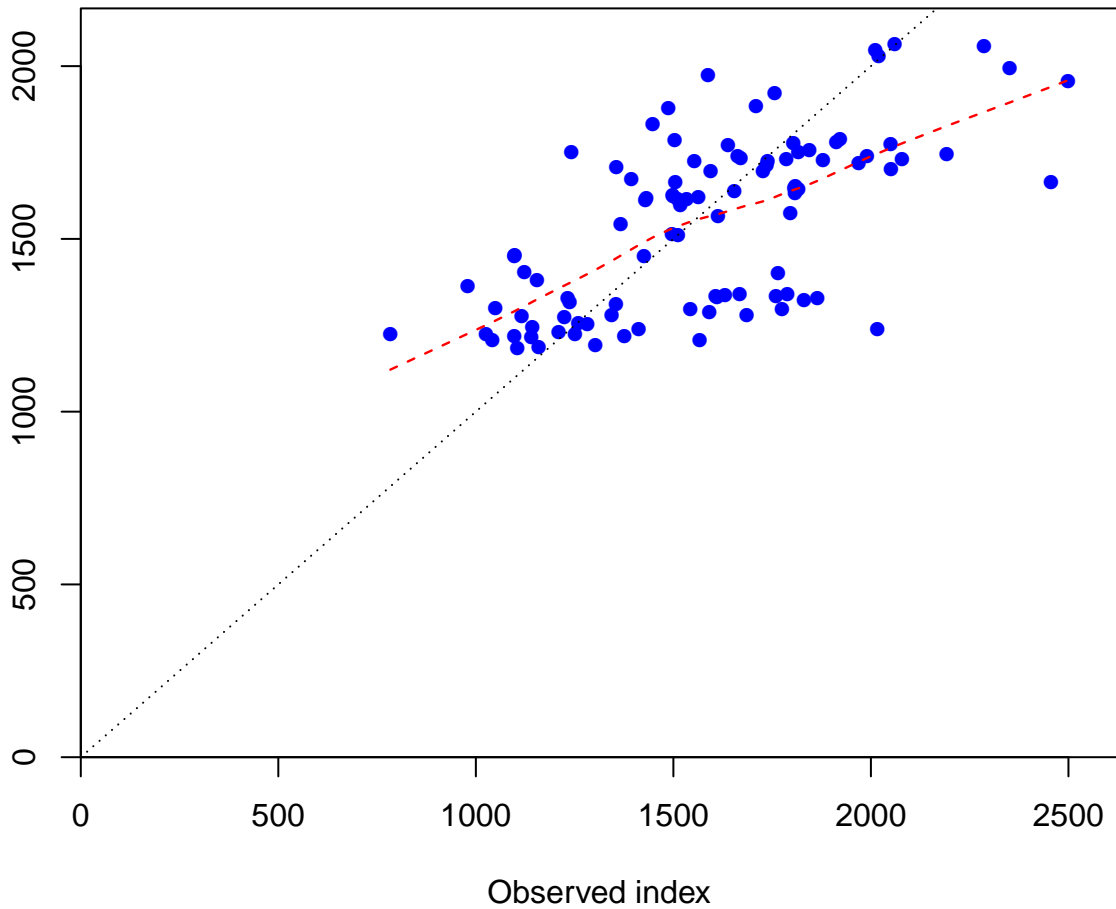


Year





Expected index



Log index

8.0  
7.5  
7.0  
6.5

80

100

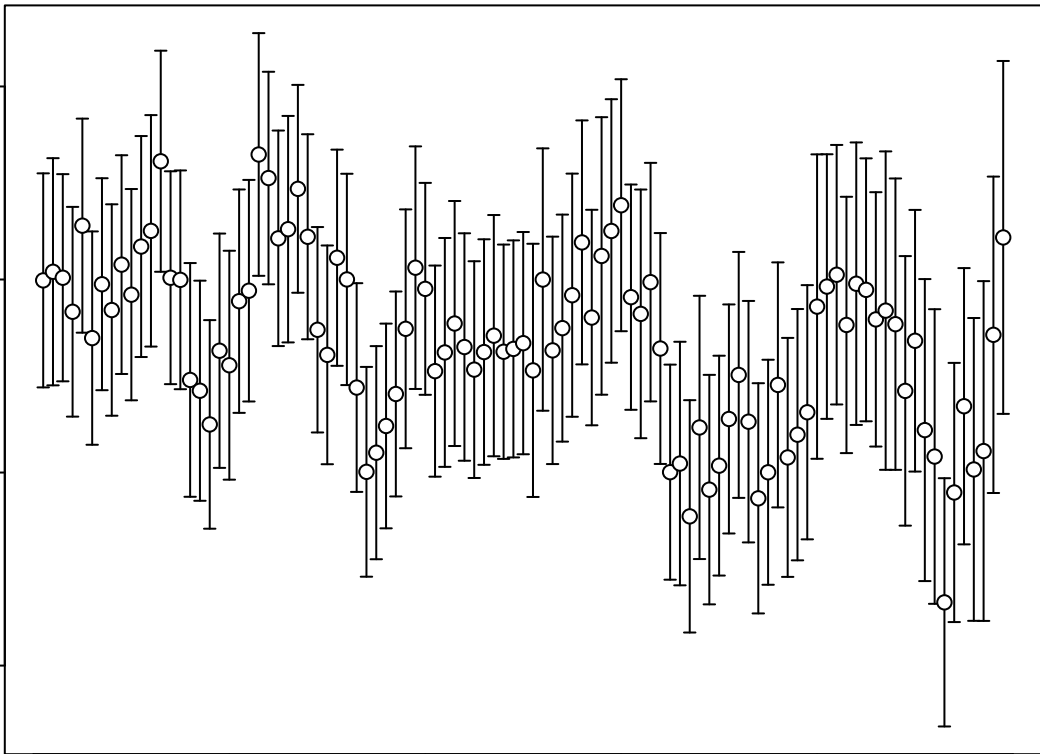
120

140

160

180

Year





Log index

8.0  
7.5  
7.0  
6.5

80

100

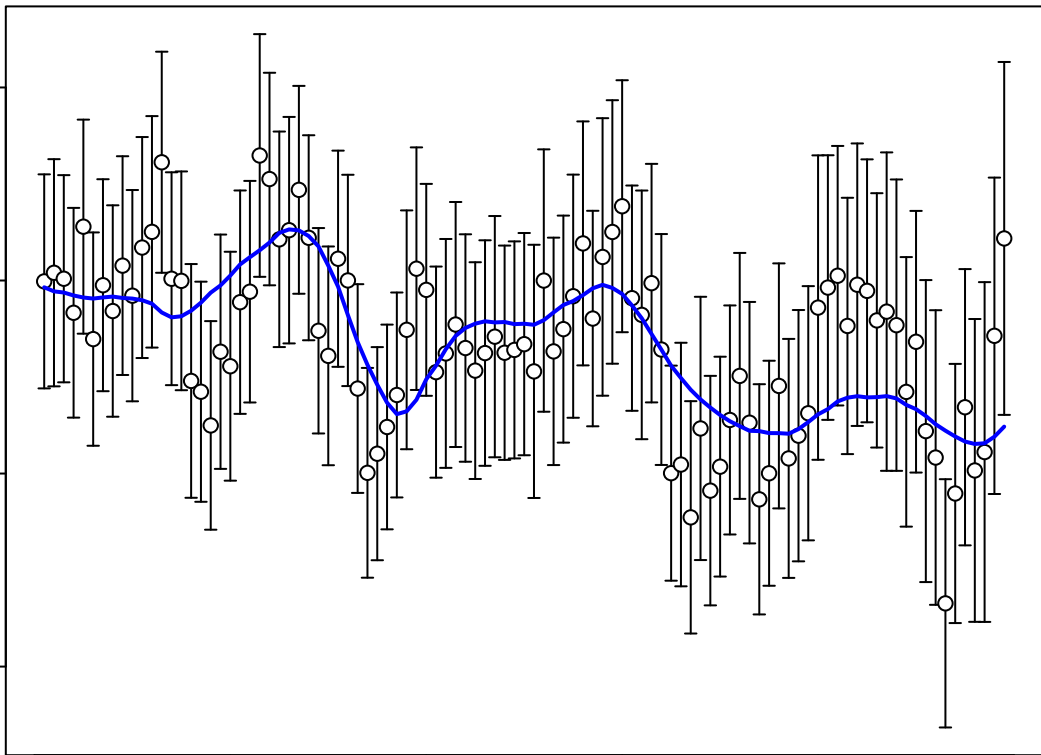
120

140

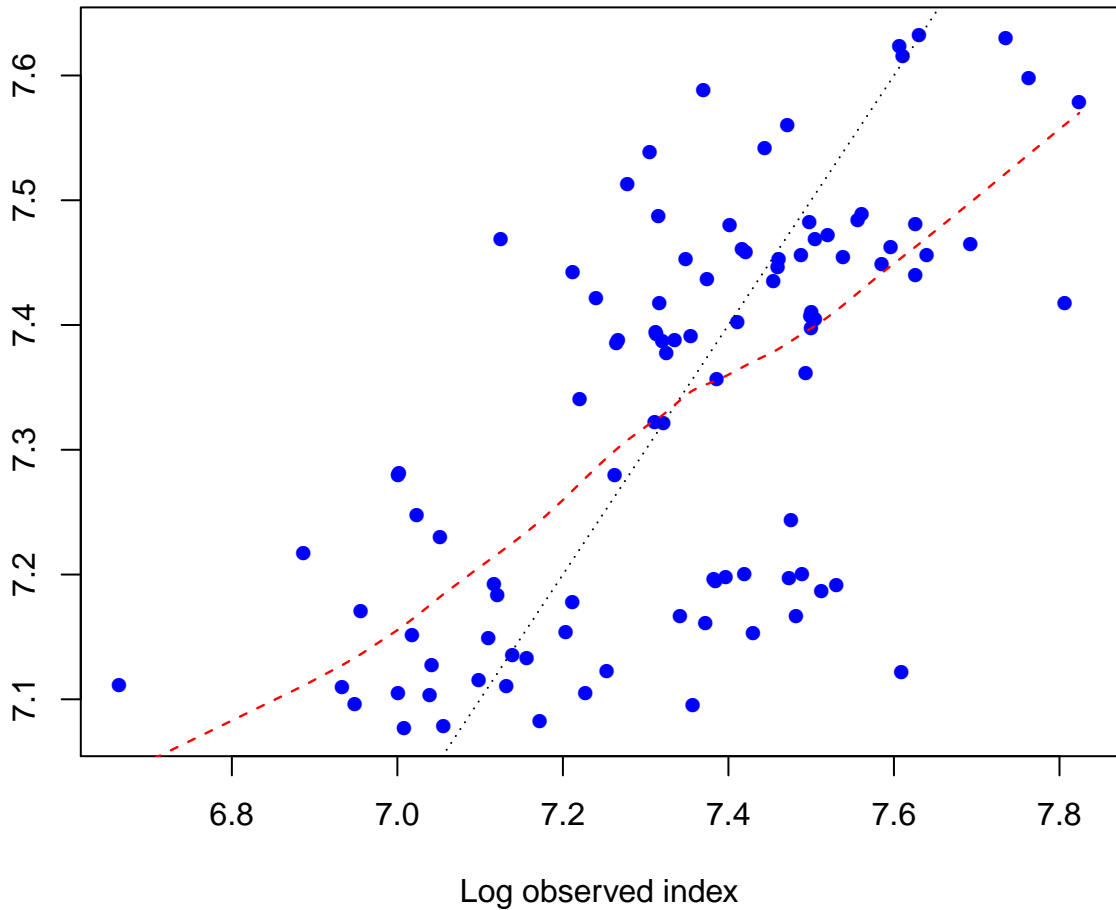
160

180

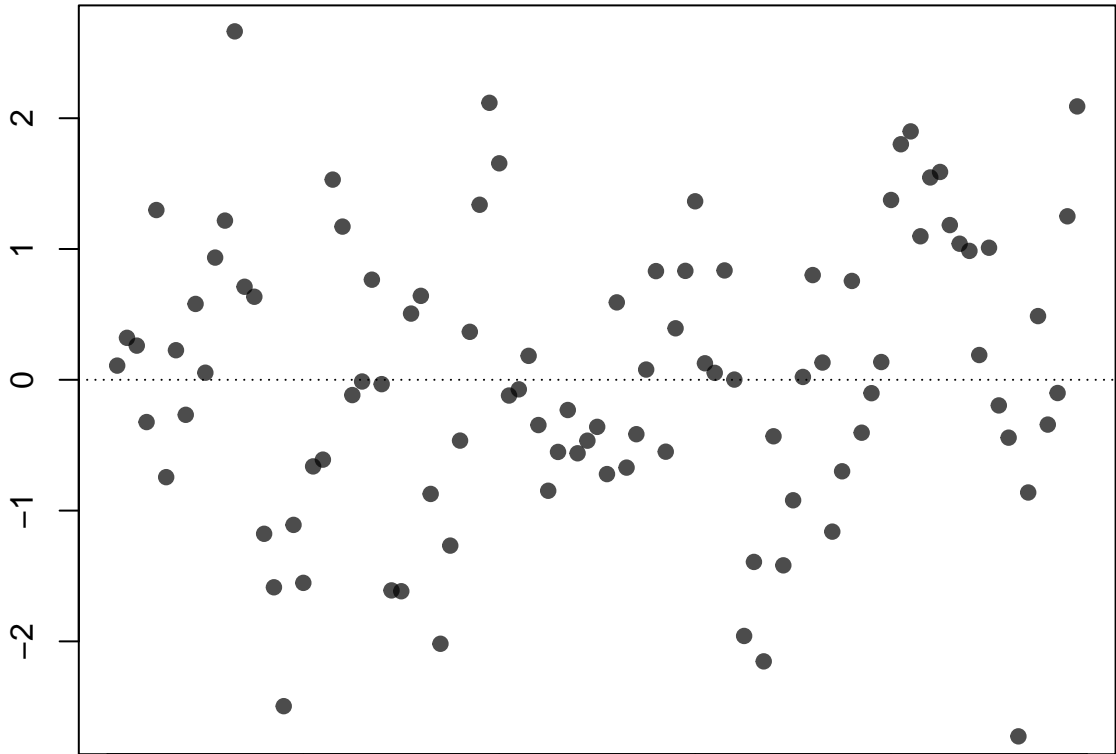
Year



Log expected index

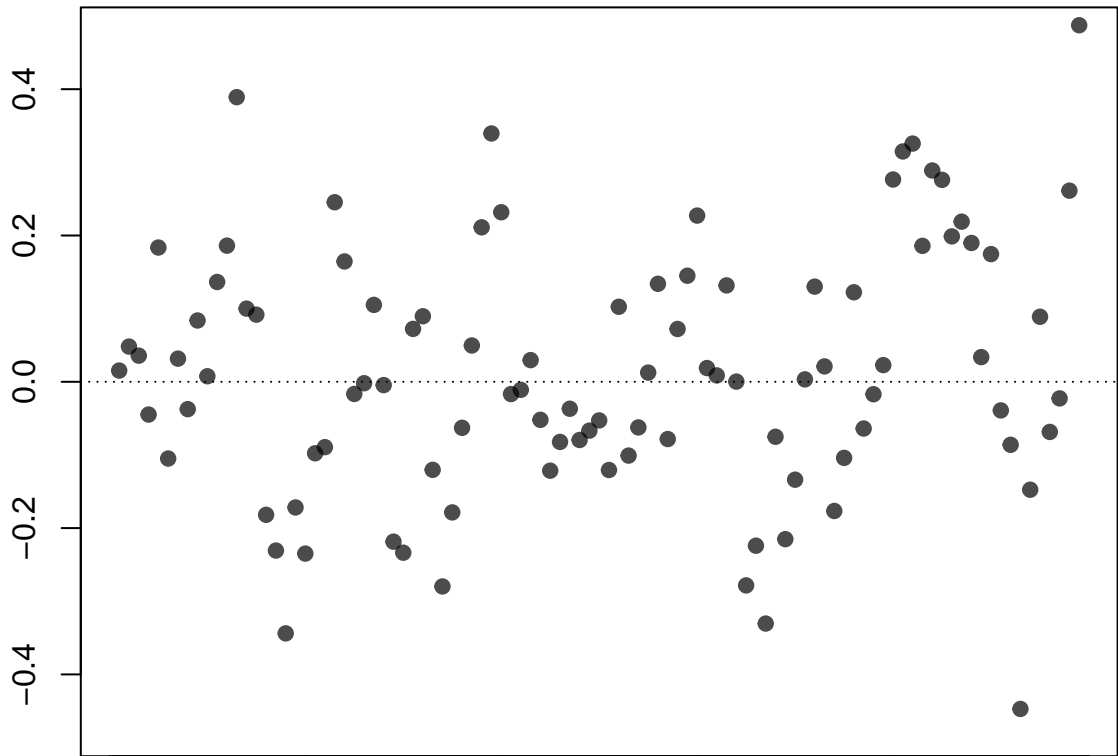


Residual



Year

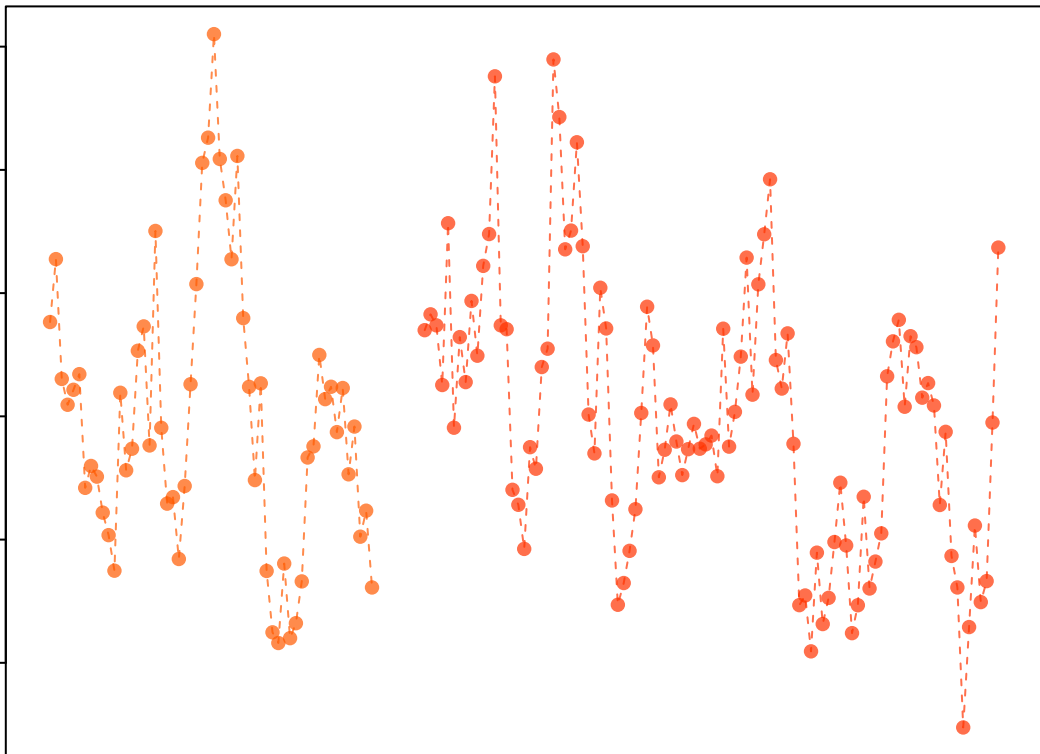
Deviation



Year

Standardized index

1.6  
1.4  
1.2  
1.0  
0.8  
0.6



50

100

150

Year

Age

40

30

20

10

0

○ 2 ○ 6 ○ 10

16

27

38

49

60

71

82

93

106

120

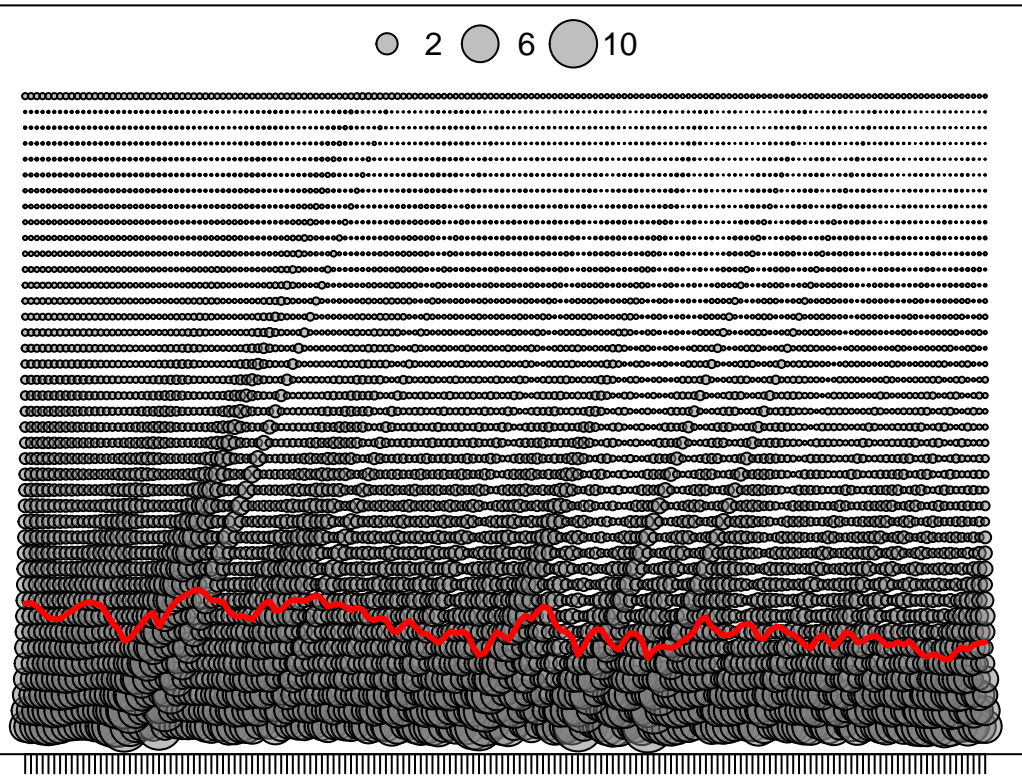
134

148

162

176

Year



Age

40

30

20

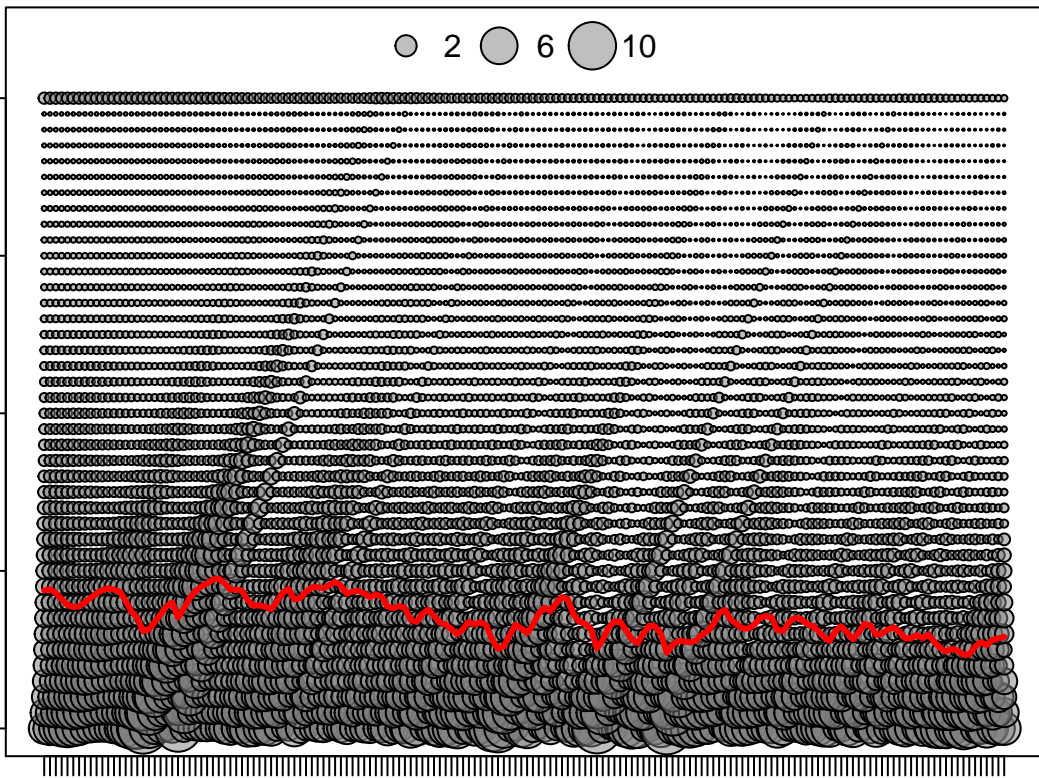
10

0

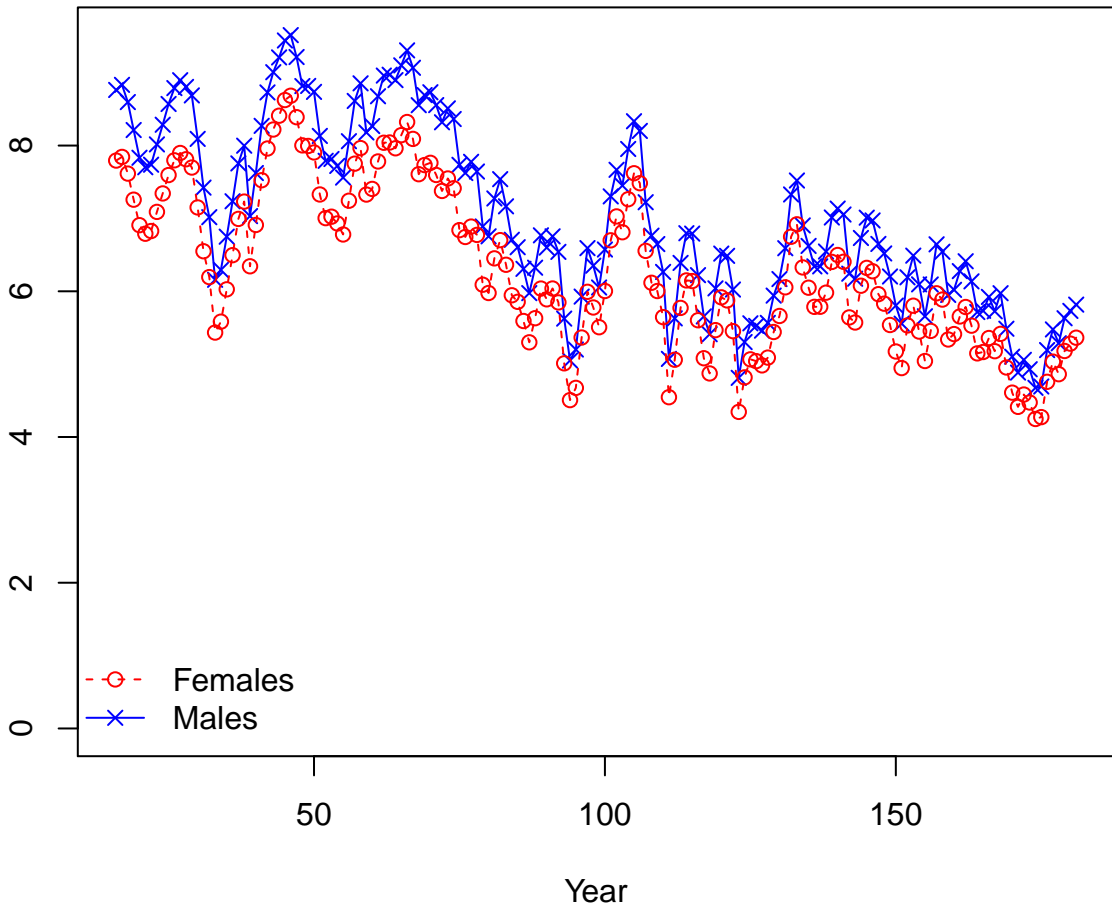
○ 2 ○ 6 ○ 10

16 27 38 49 60 71 82 93 106 120 134 148 162 176

Year



Mean age (yr)





Age

40

30

20

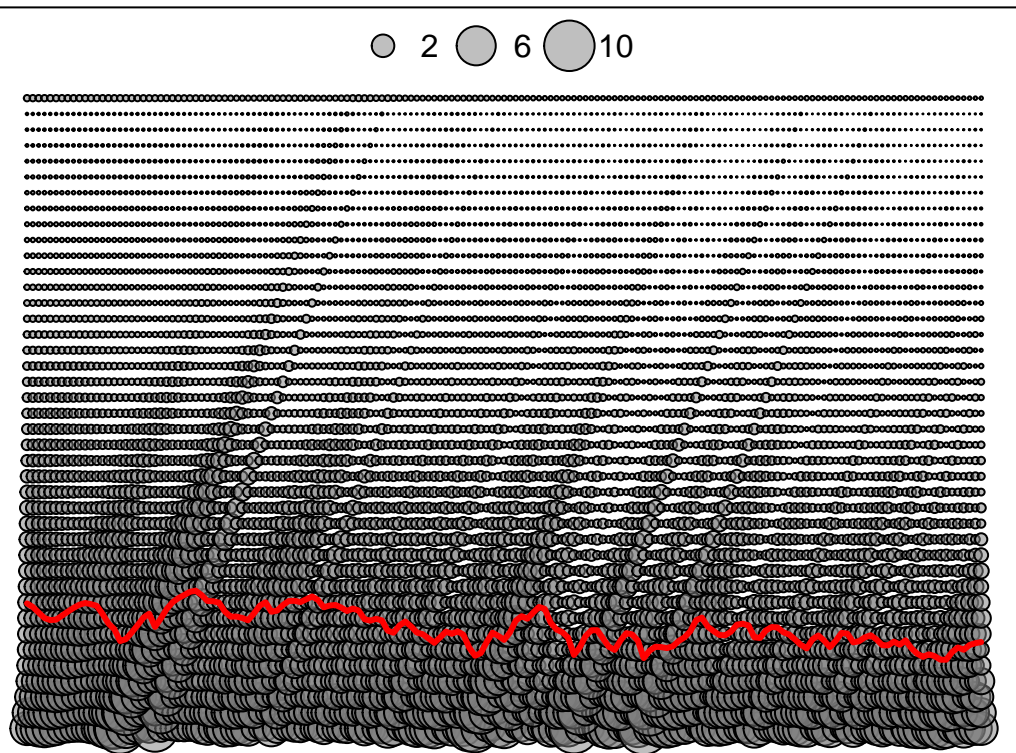
10

0

○ 2 ○ 6 ○ 10

16 27 38 49 60 71 82 93 106 120 134 148 162 176

Year



Age

40

30

20

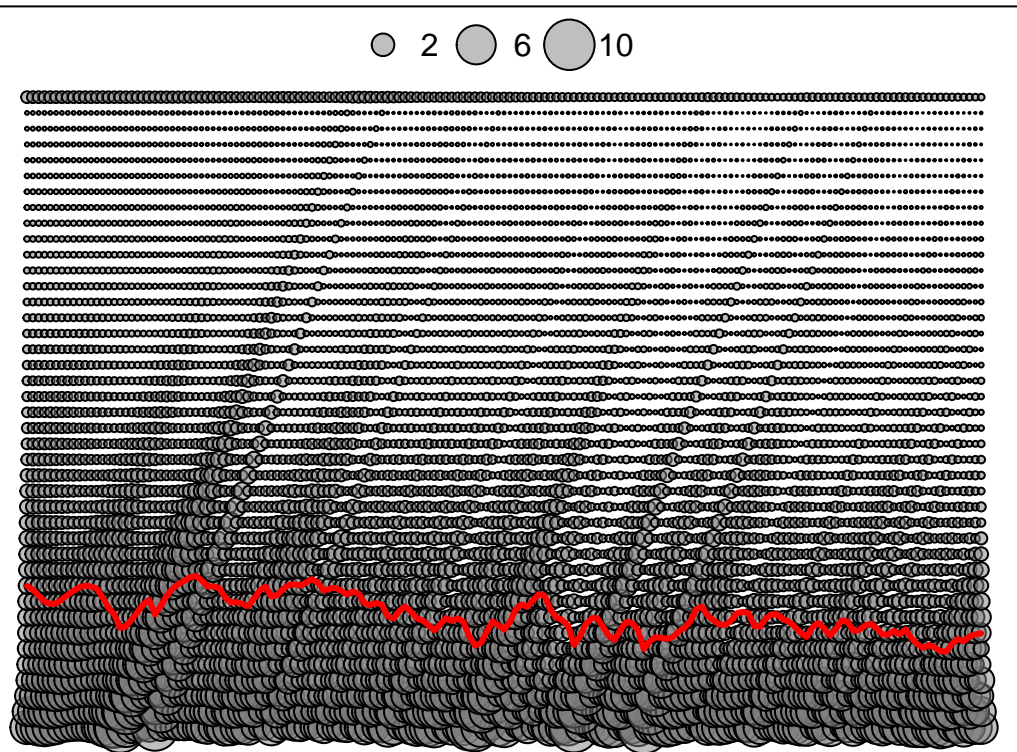
10

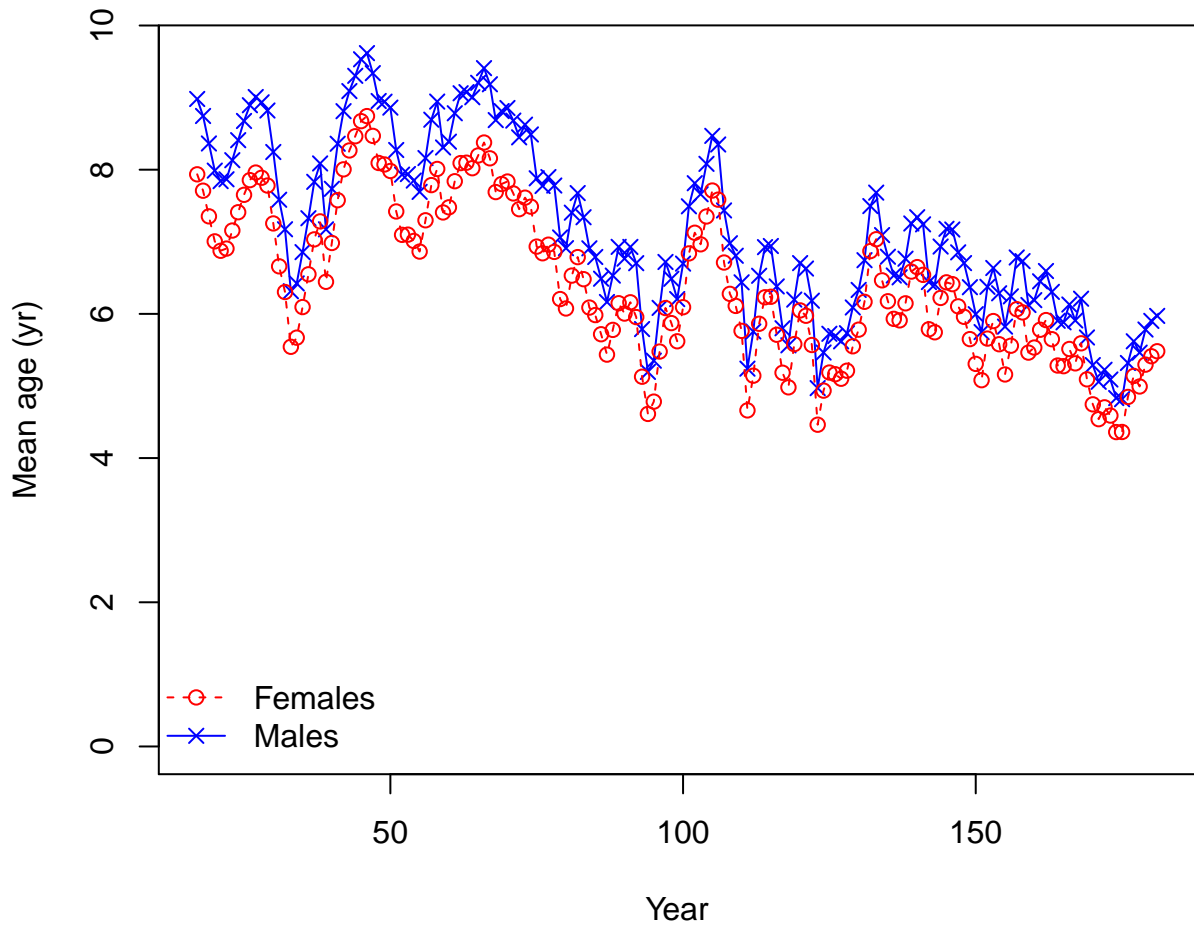
0

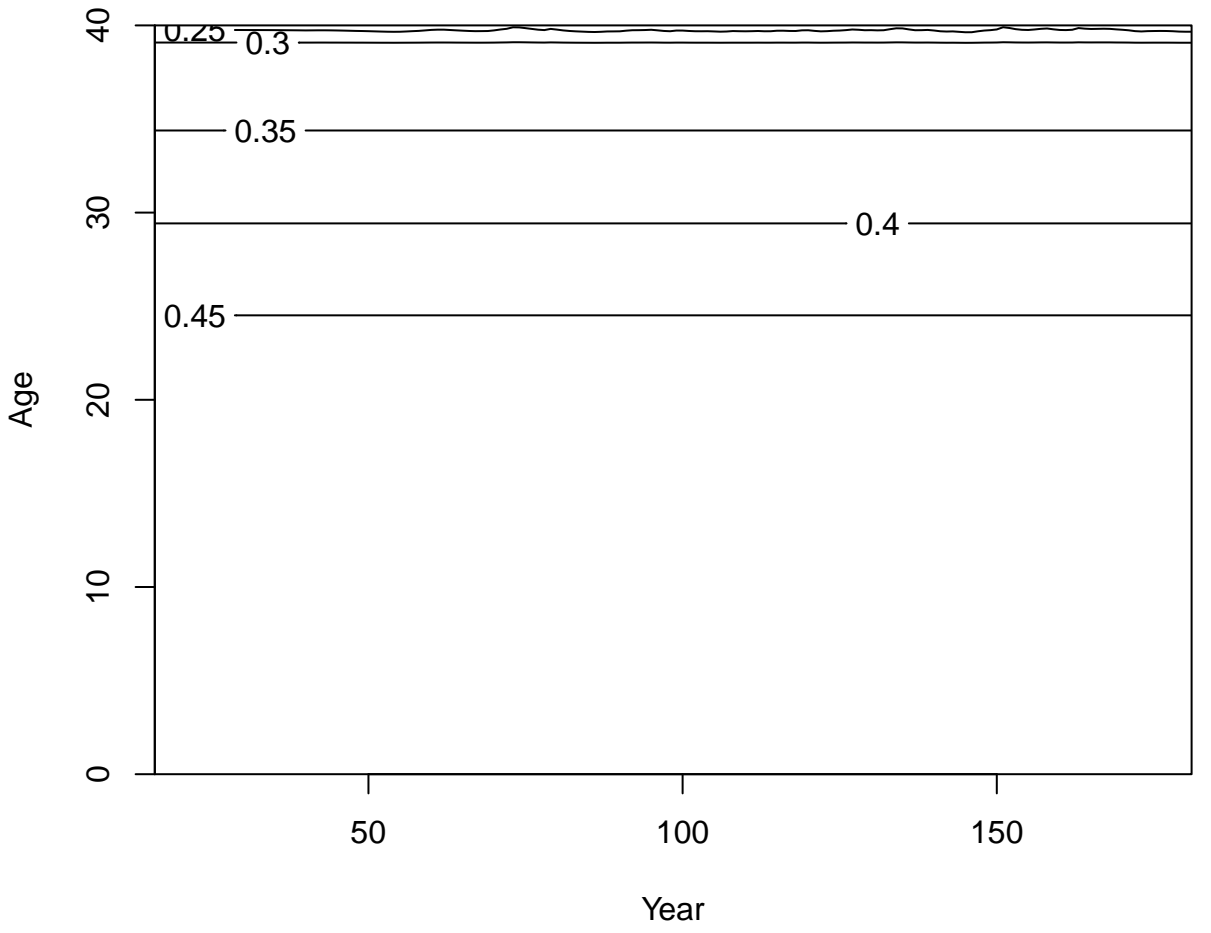
○ 2 ○ 6 ○ 10

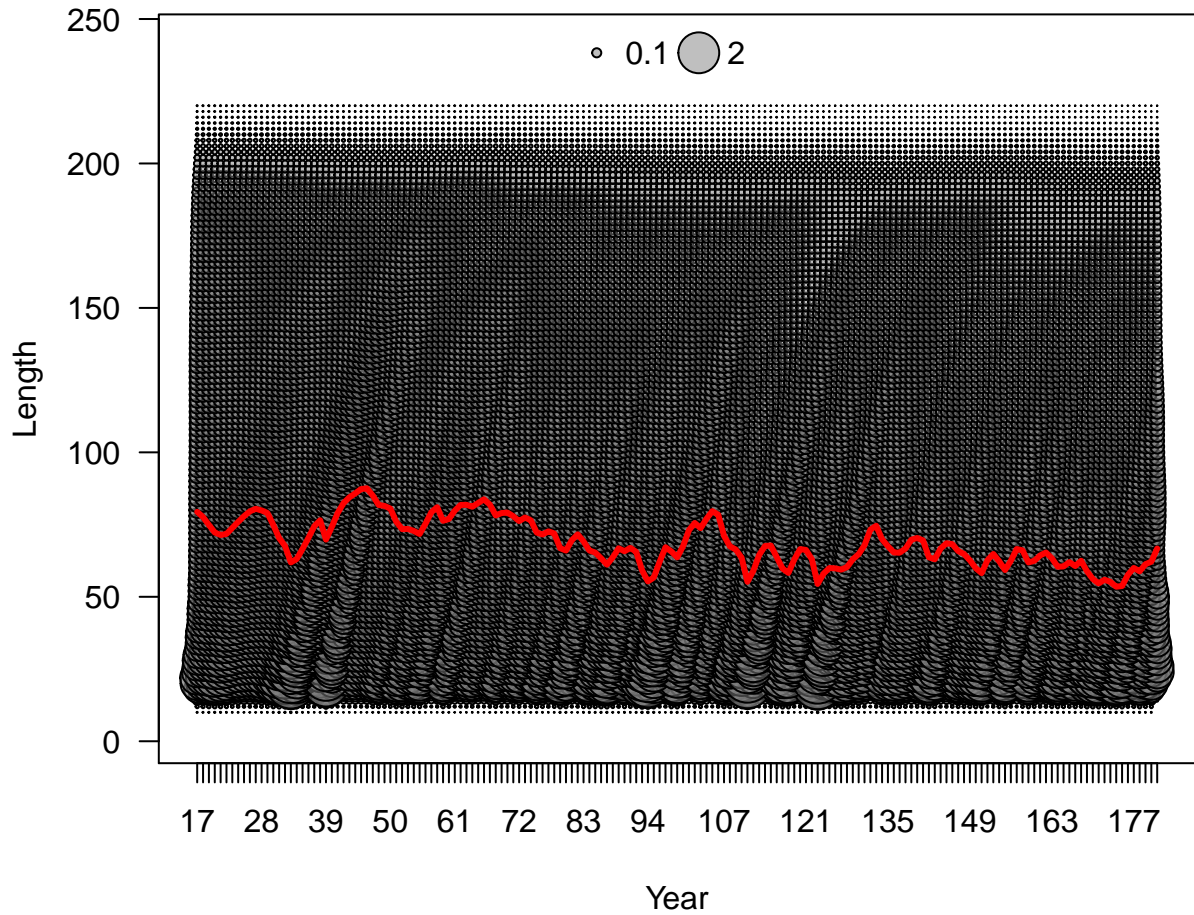
16 27 38 49 60 71 82 93 106 120 134 148 162 176

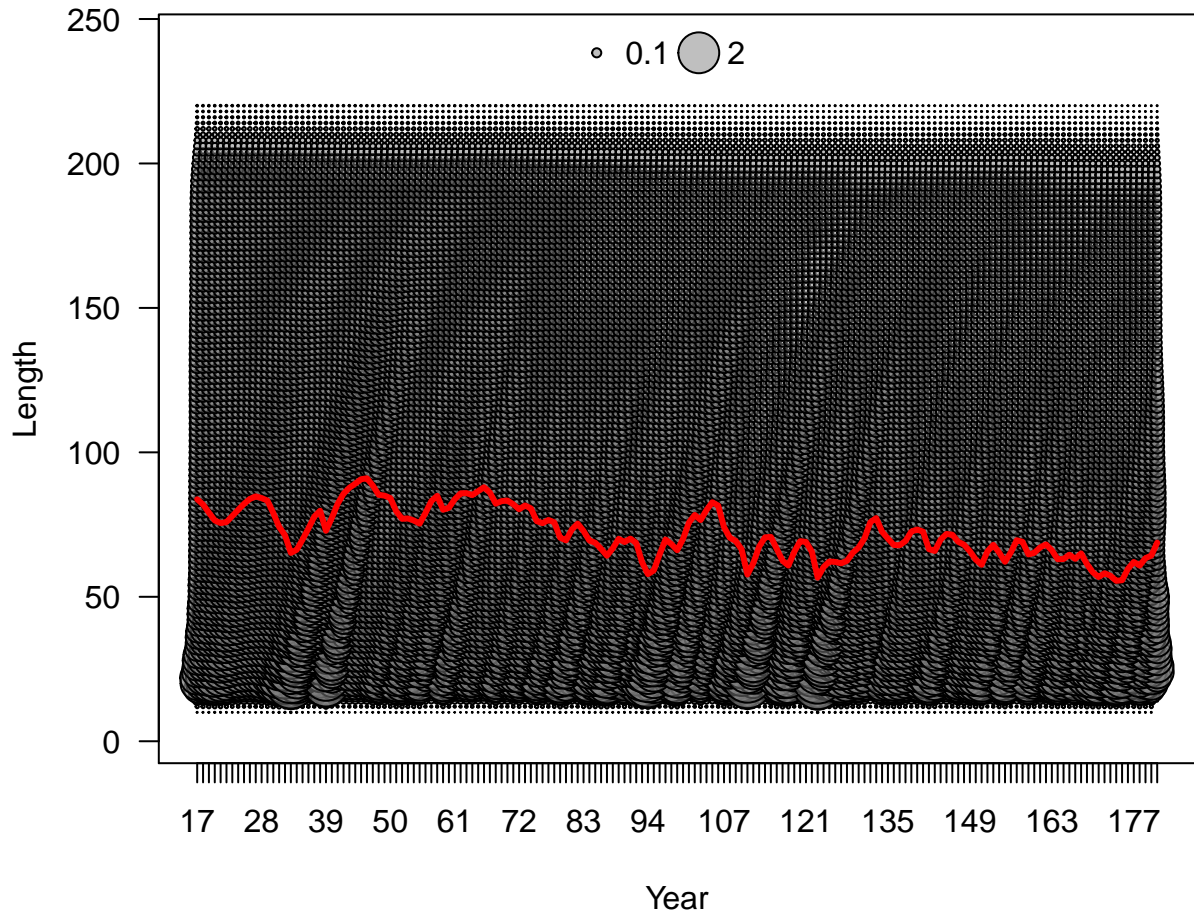
Year

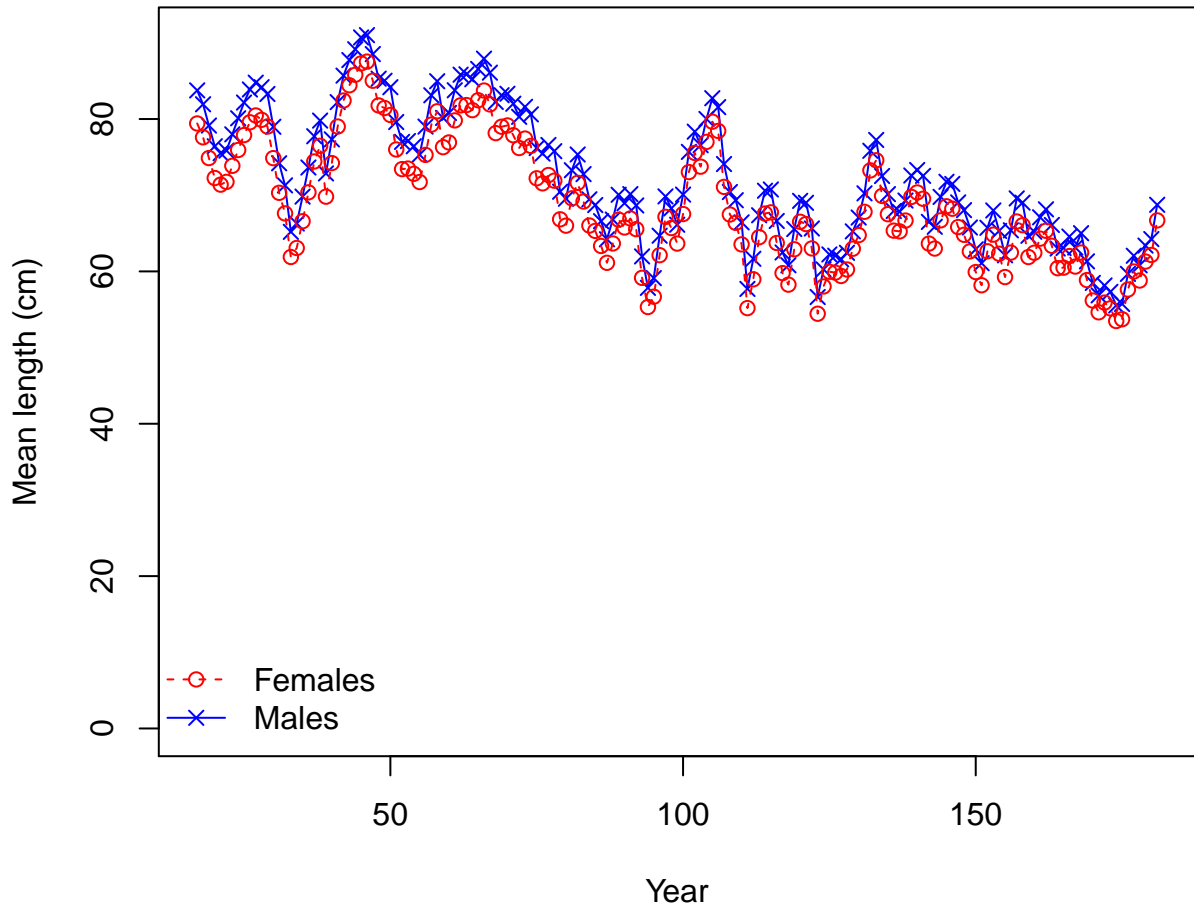


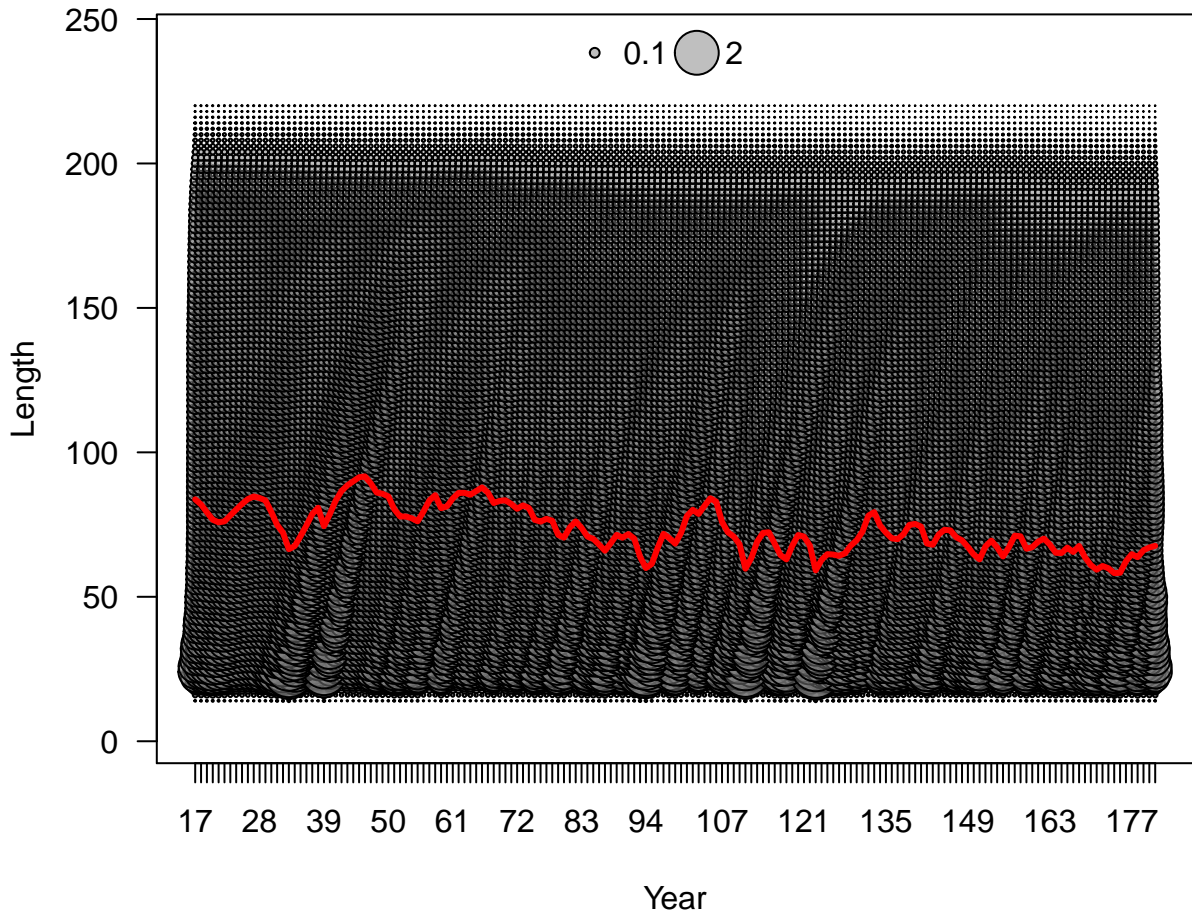




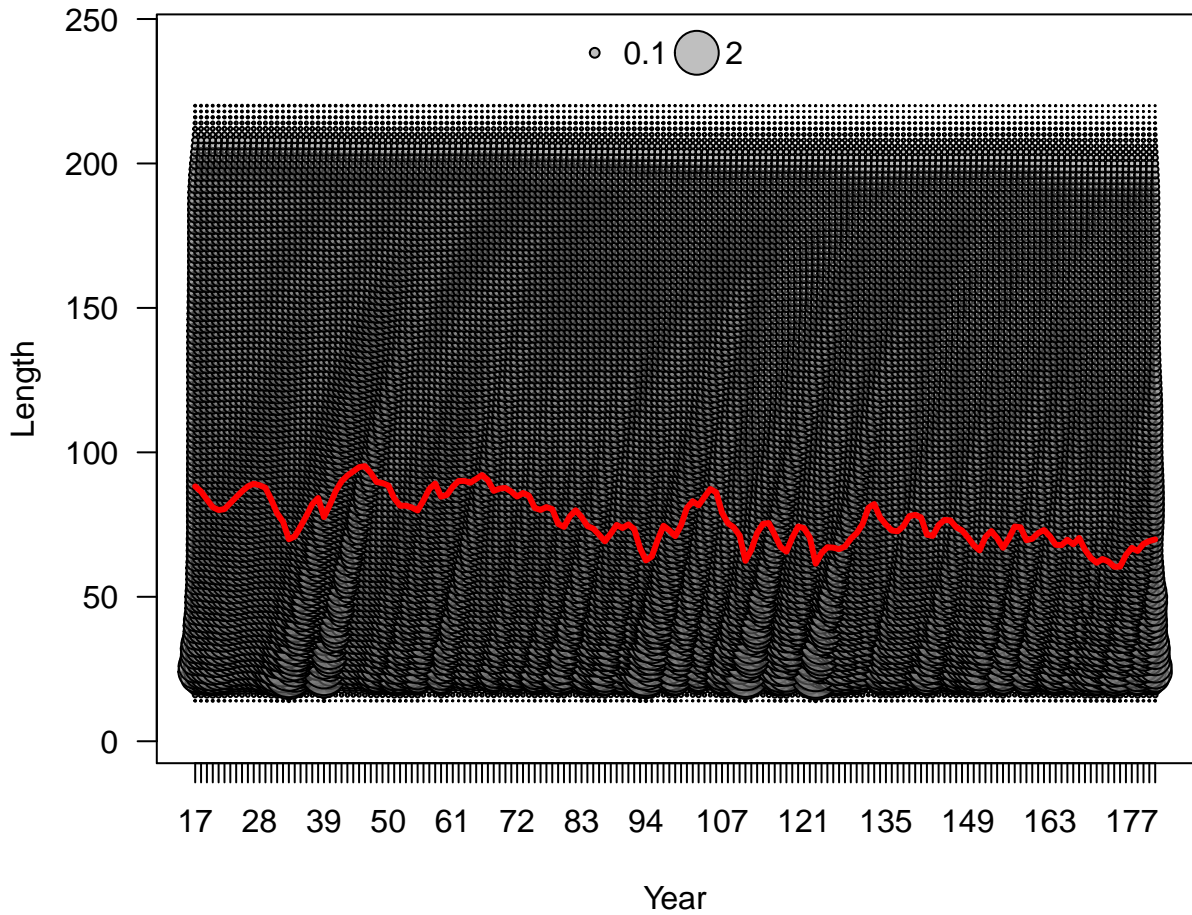


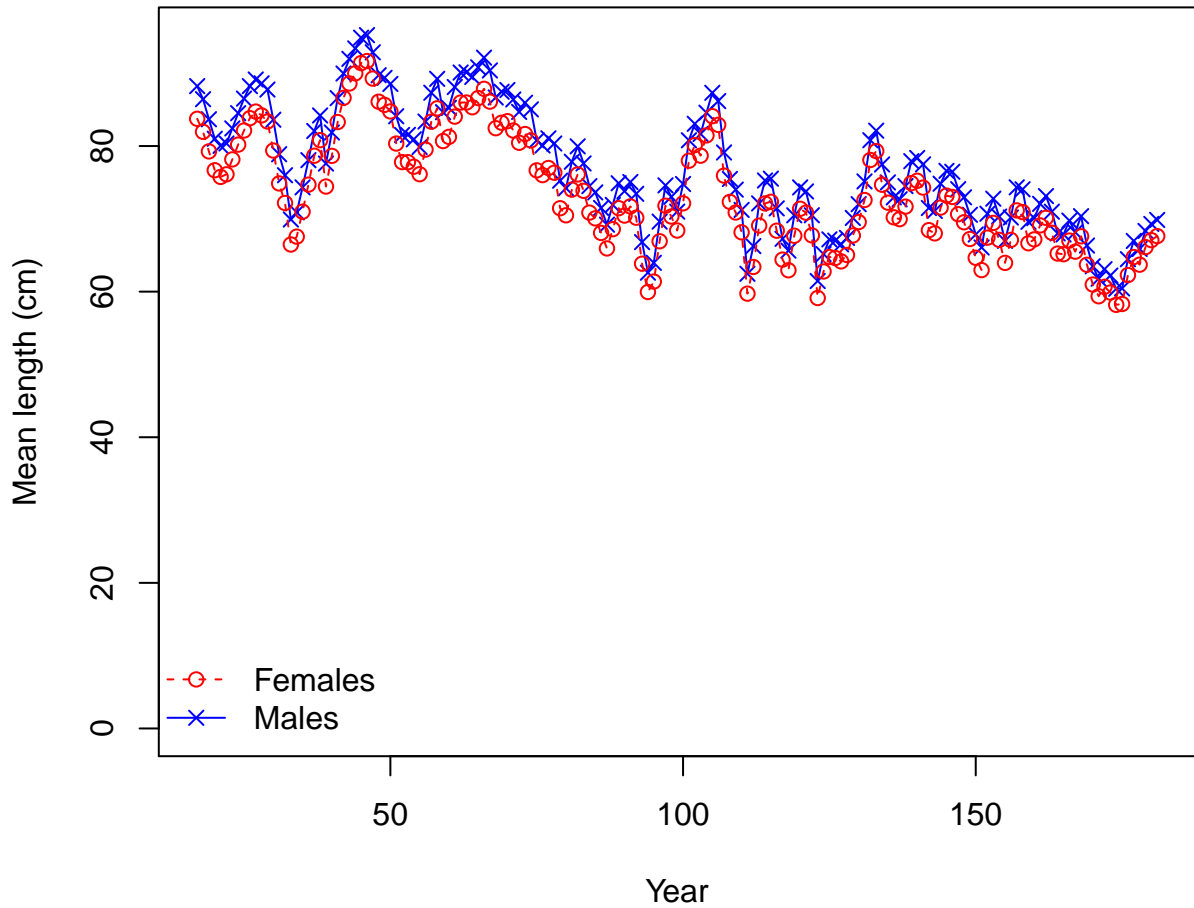




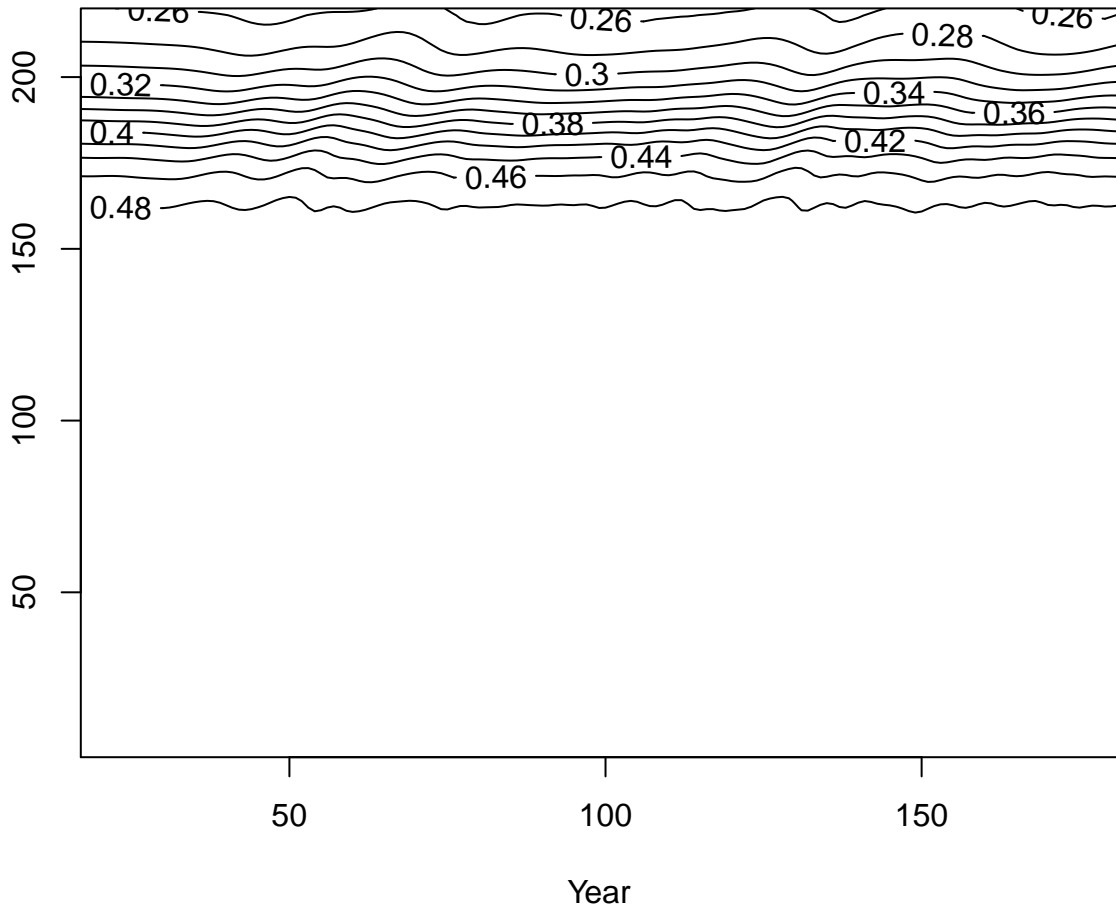


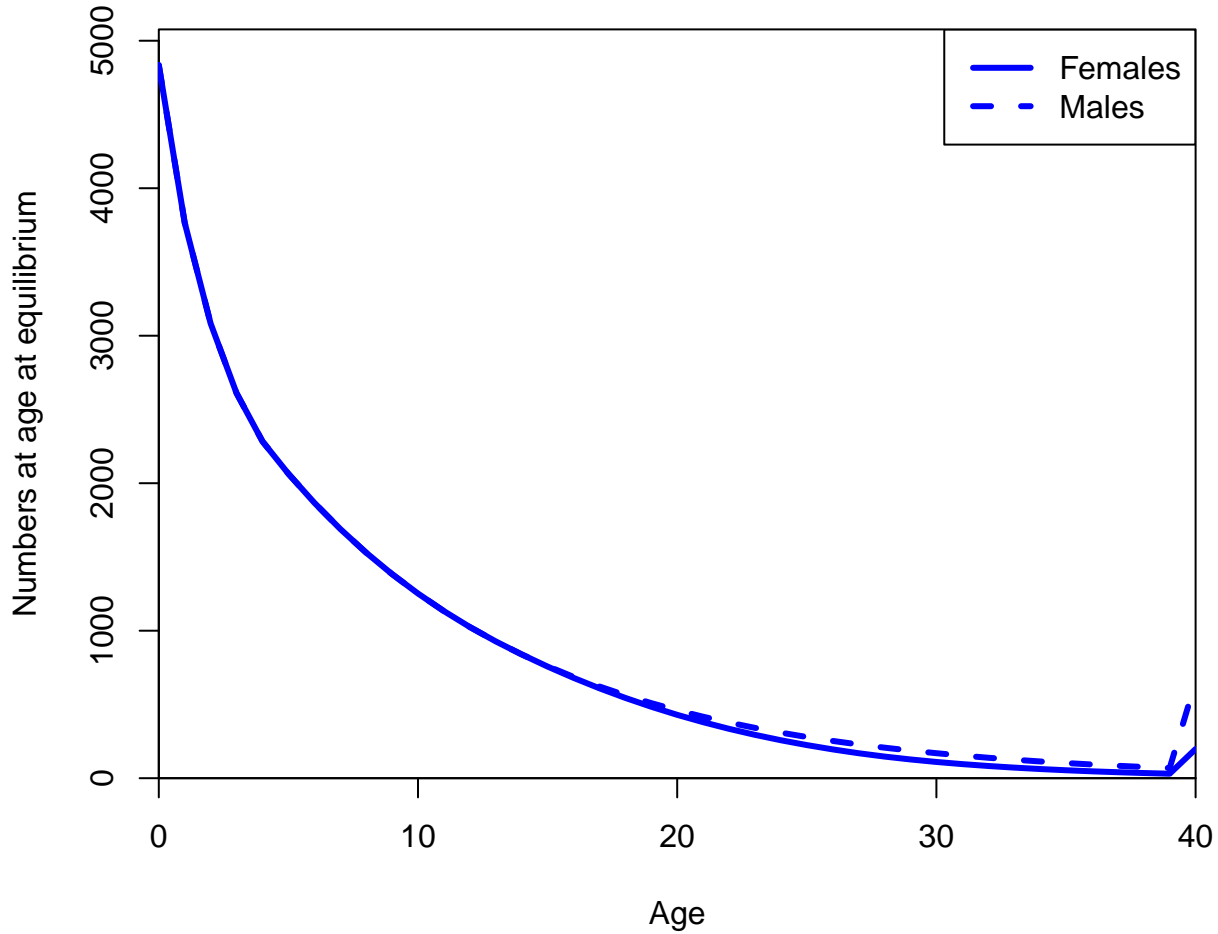


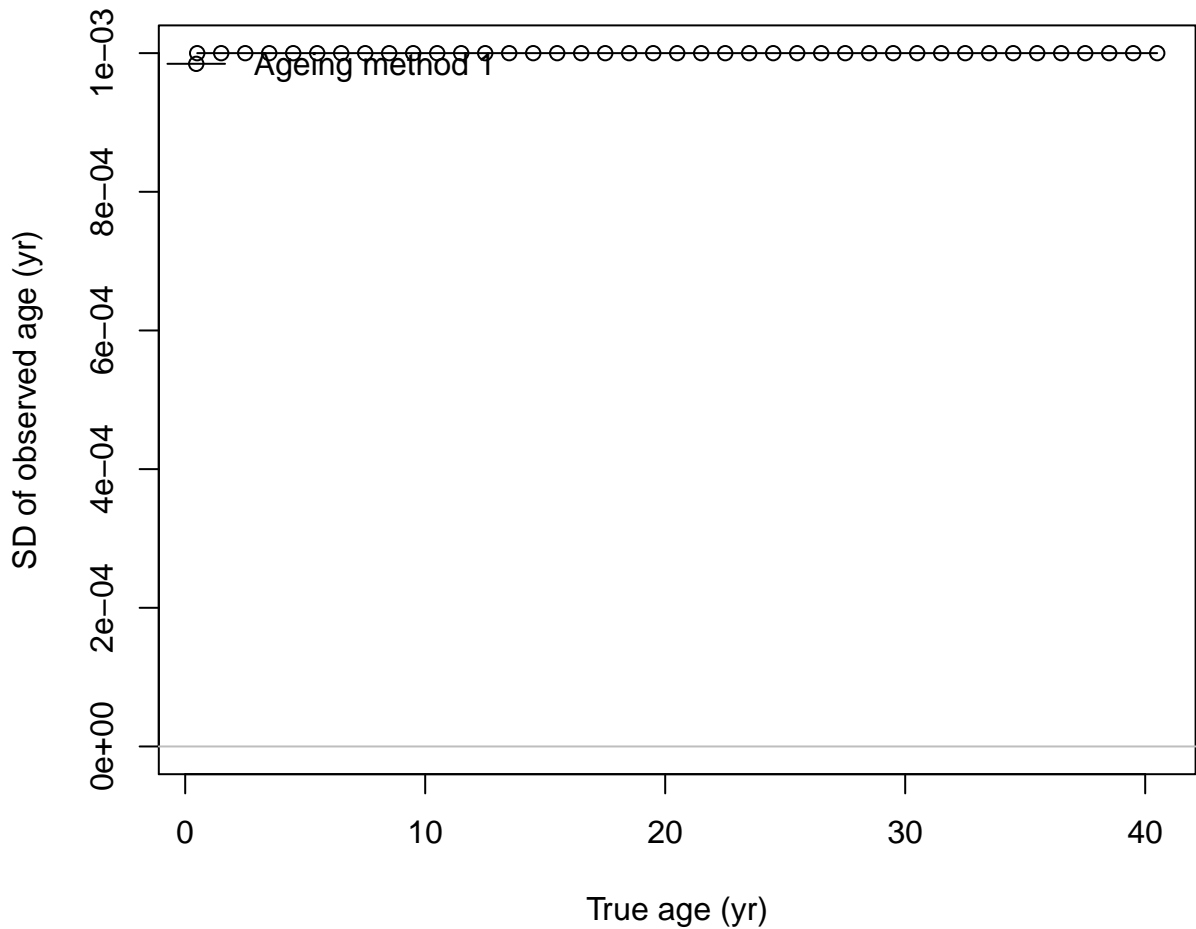




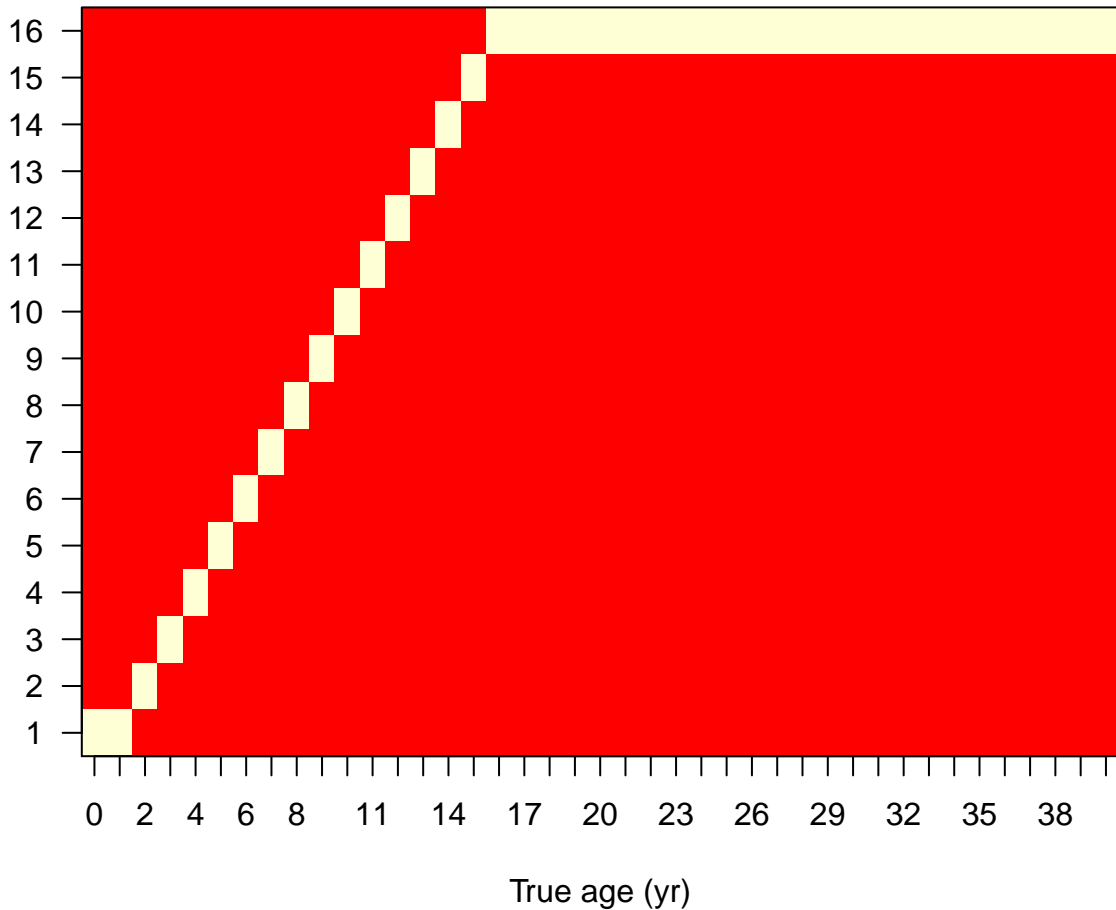
Length



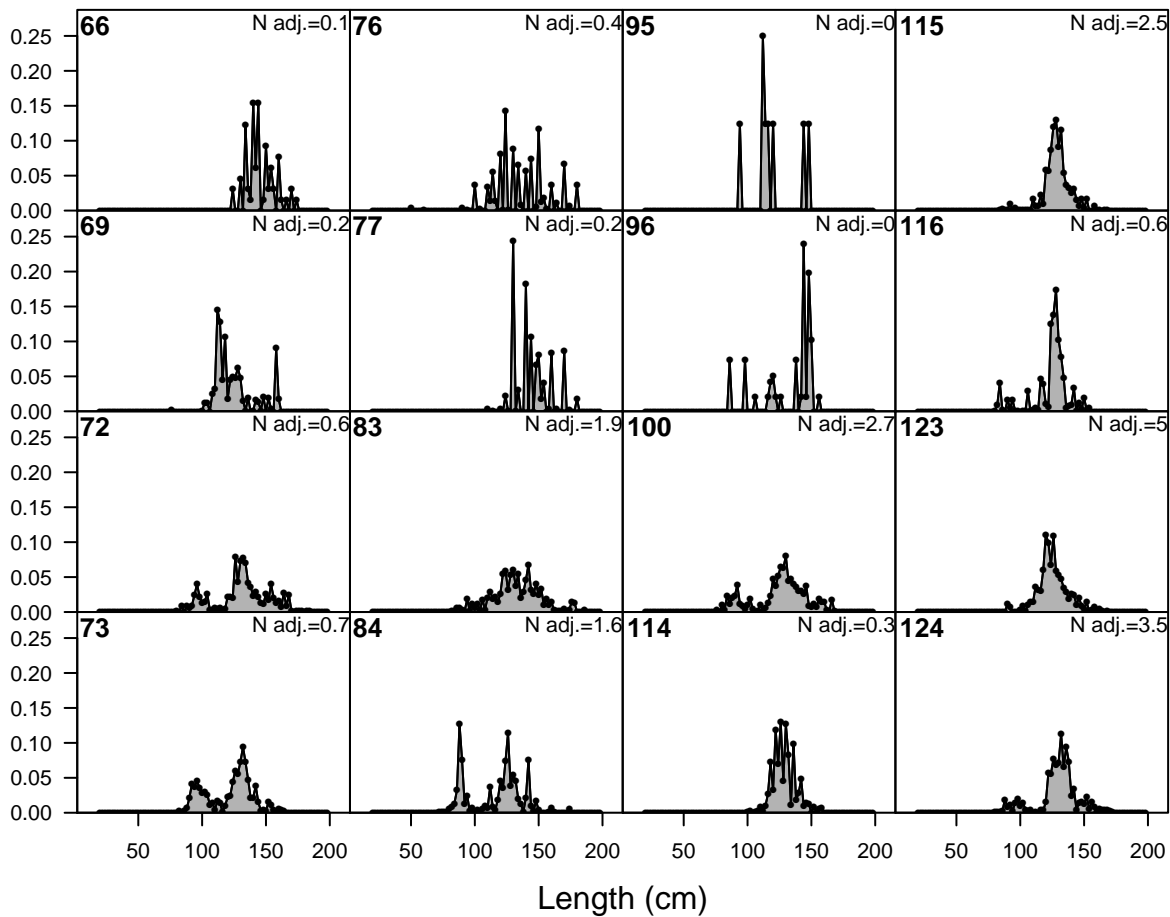


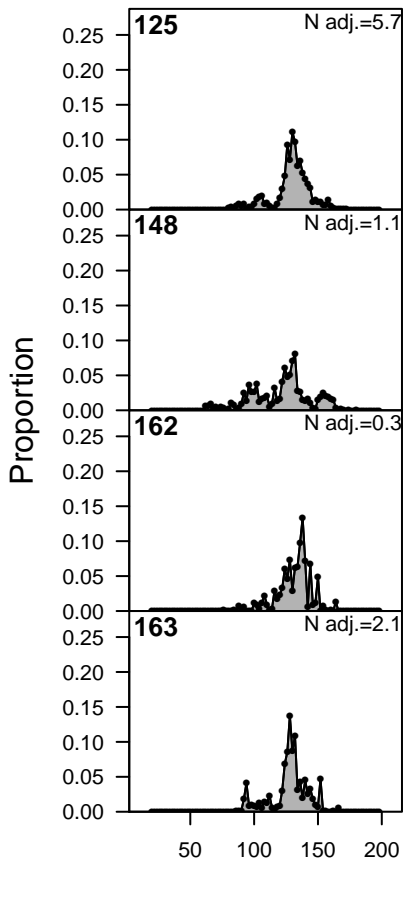


Observed age (yr)



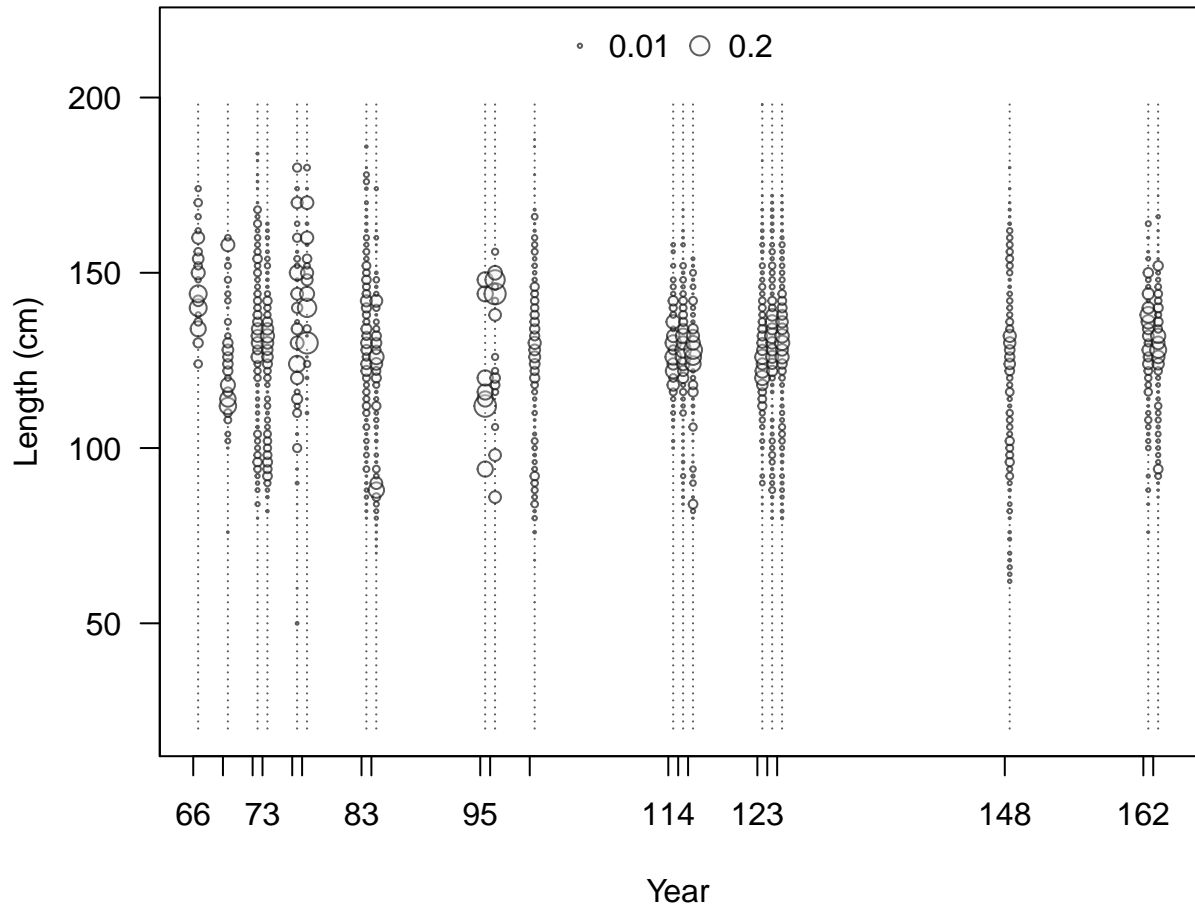
Proportion



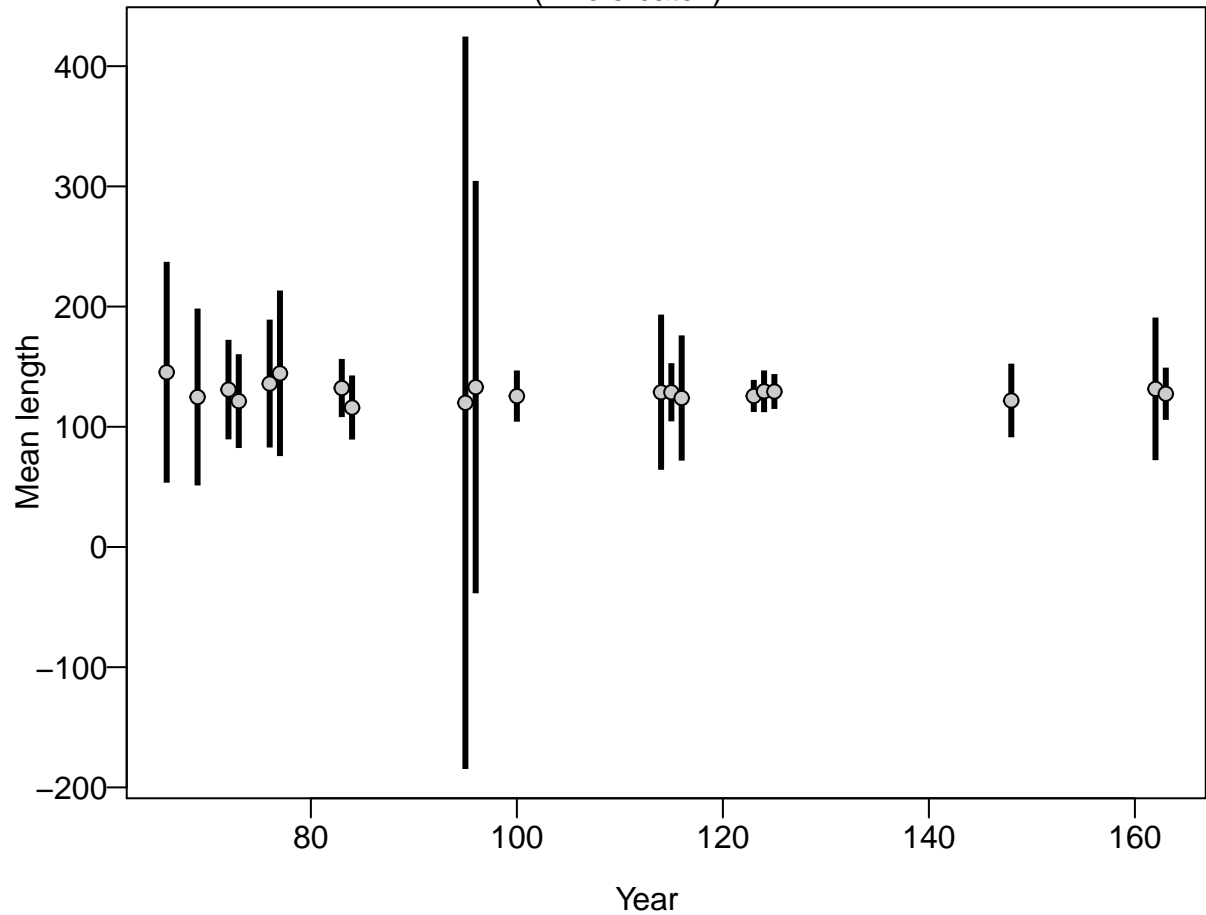


Length (cm)

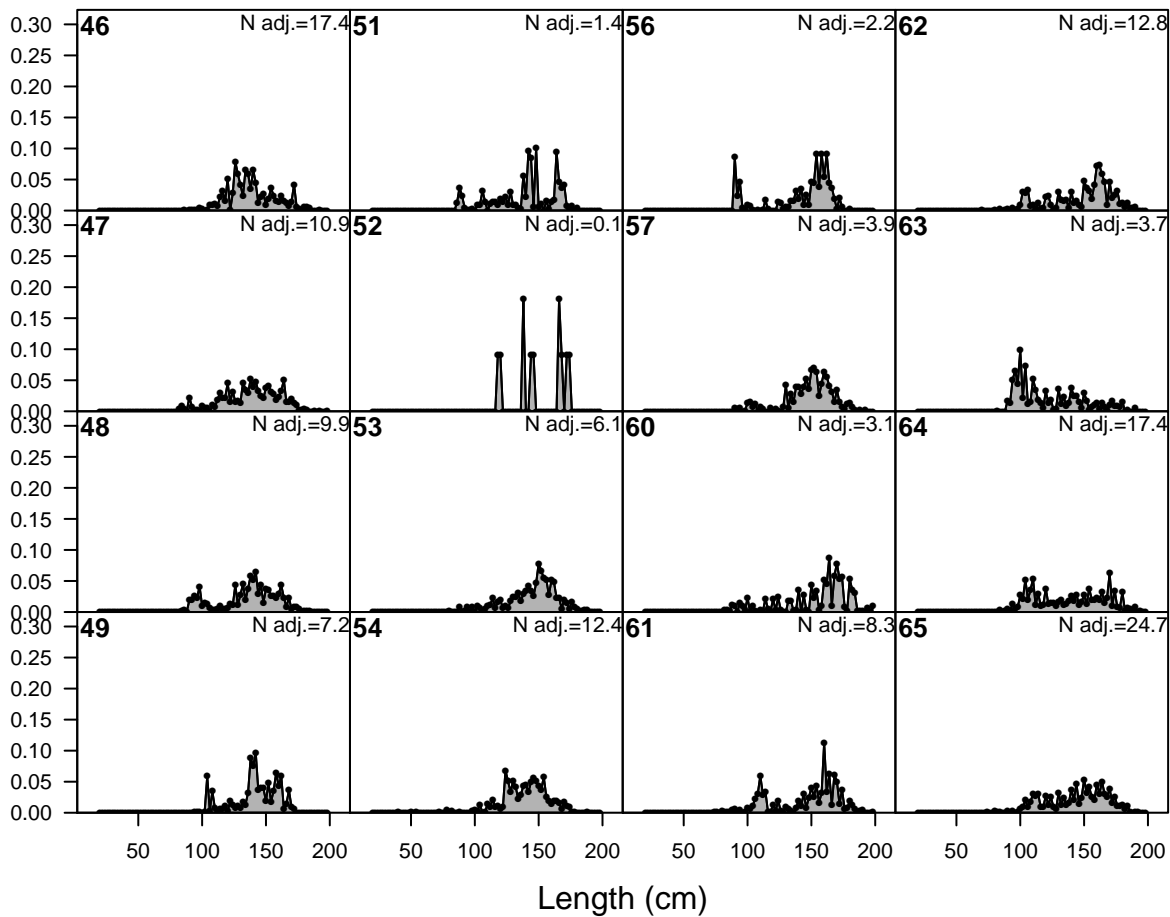




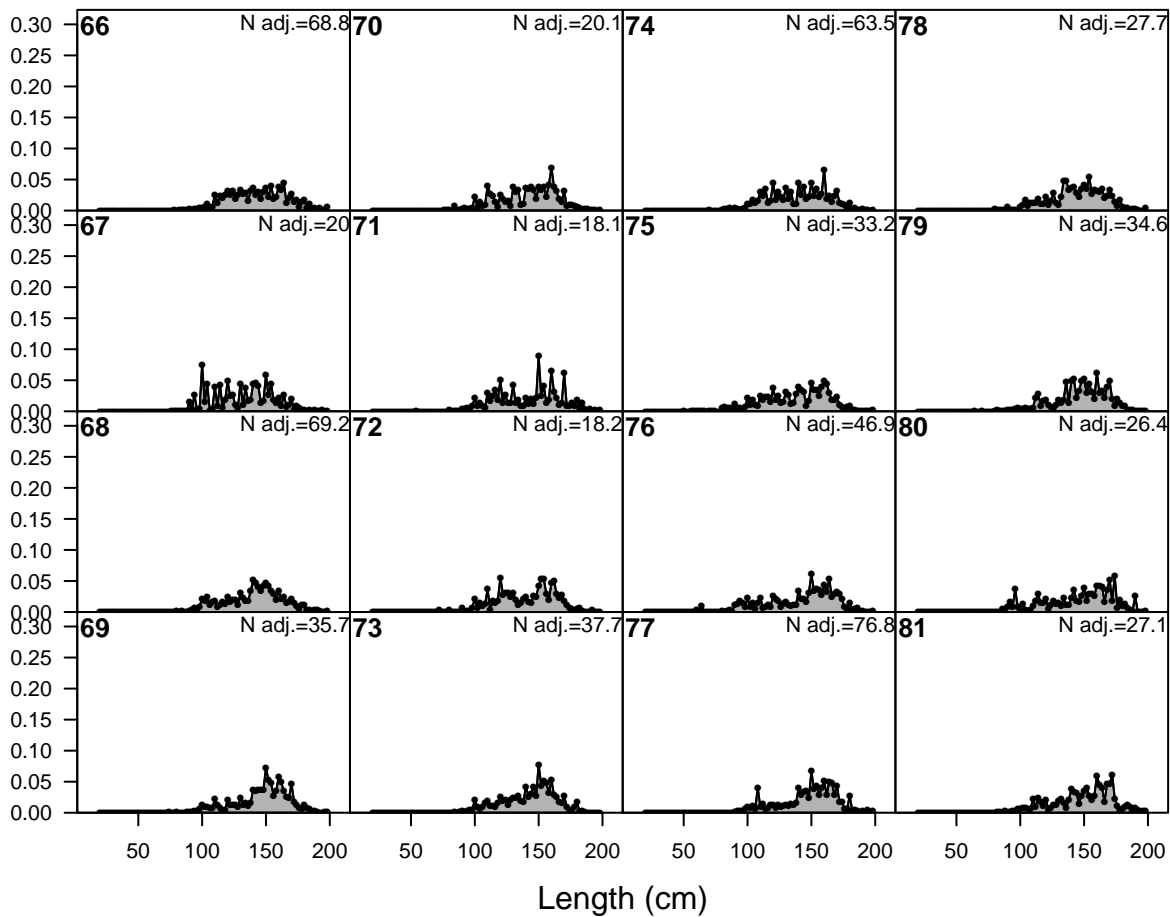
A1-LL-n (whole catch)



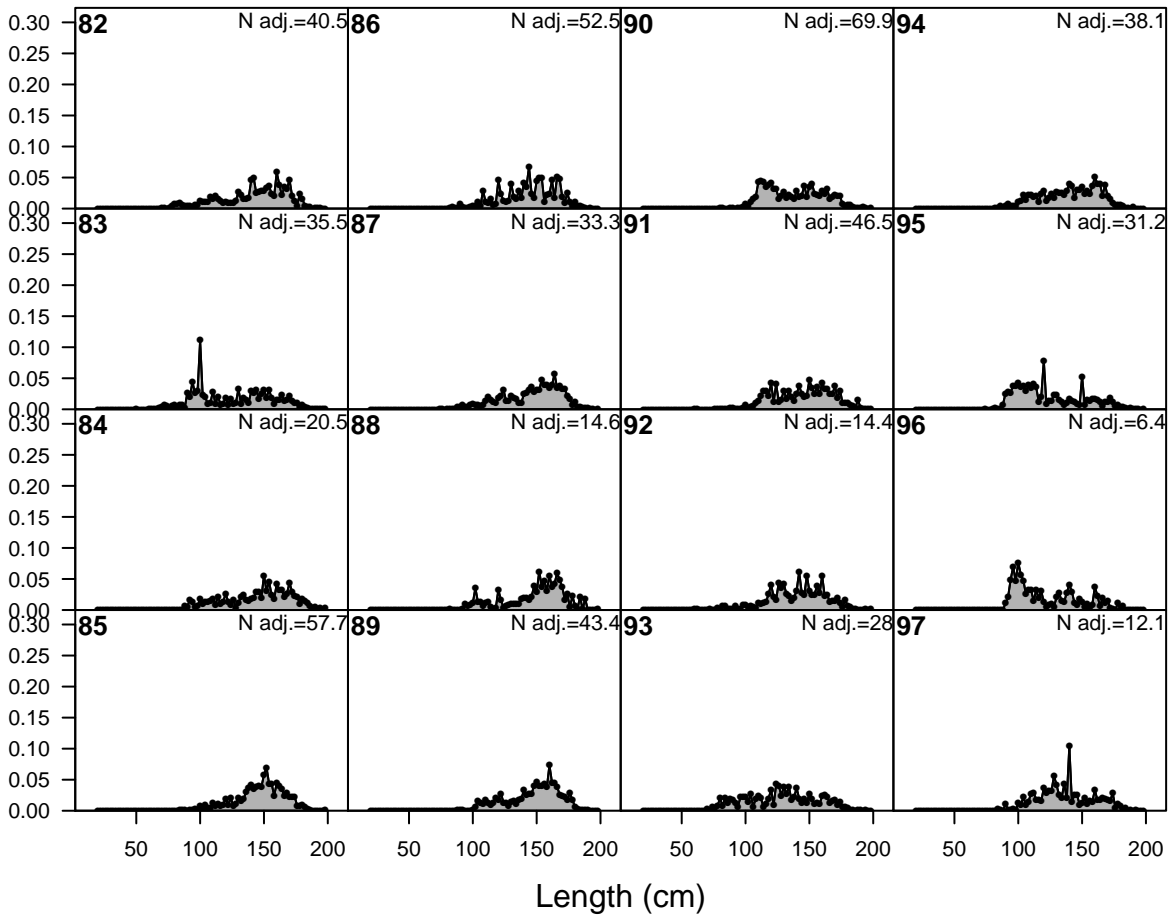
Proportion



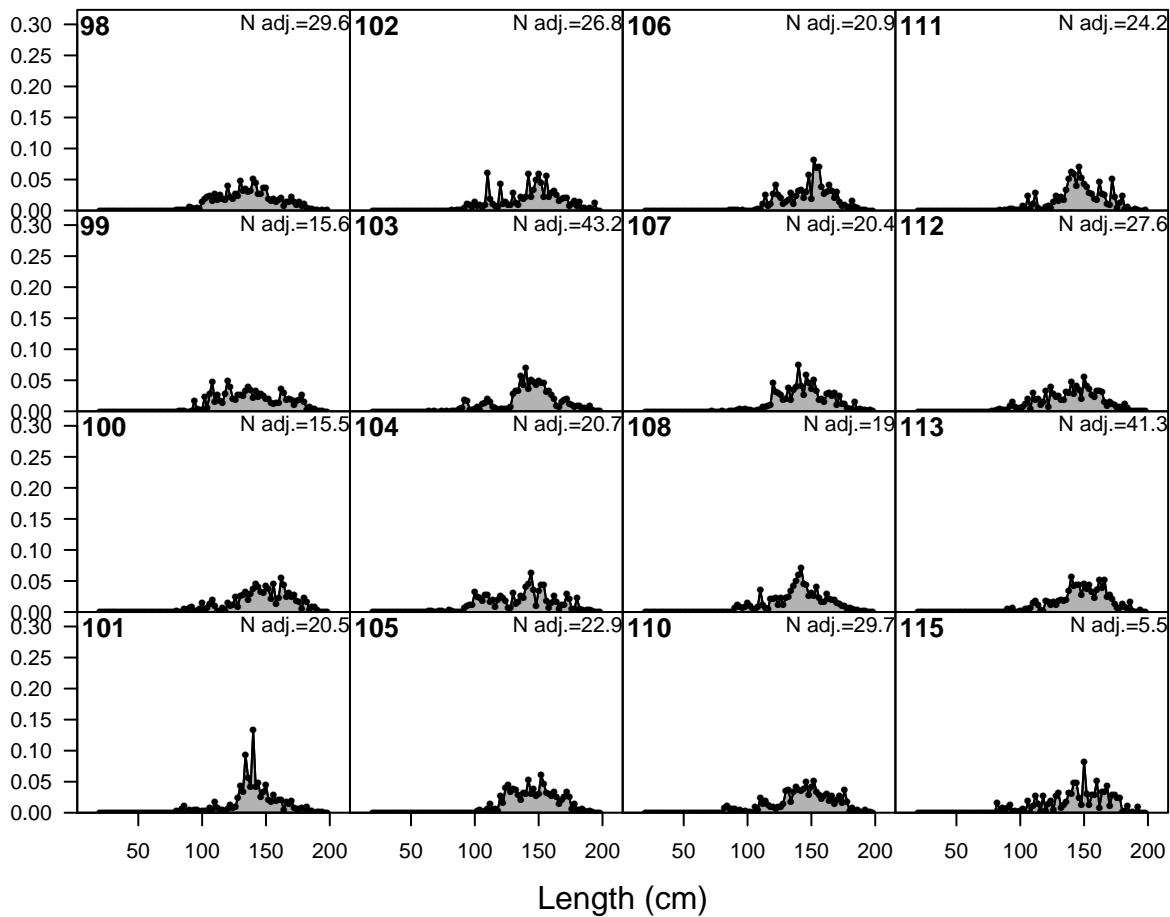
Proportion



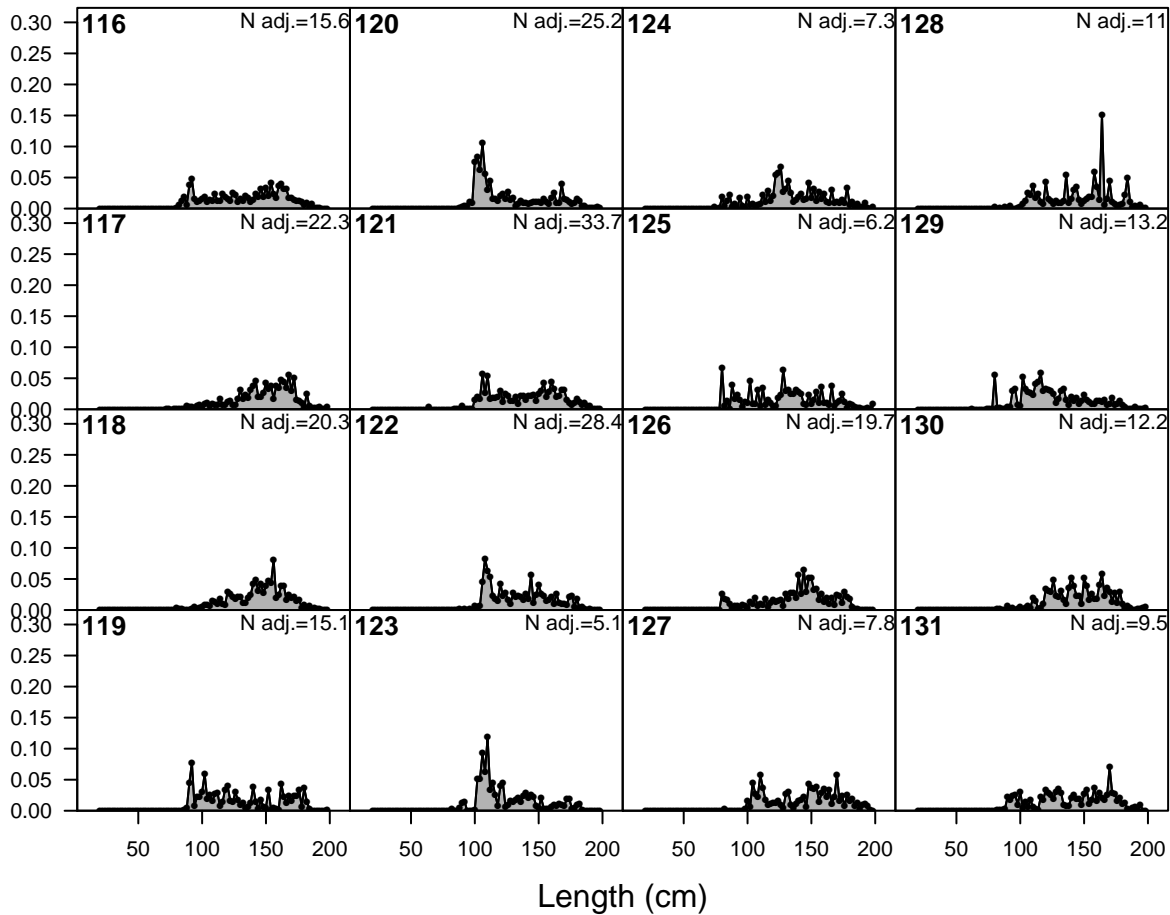
Proportion



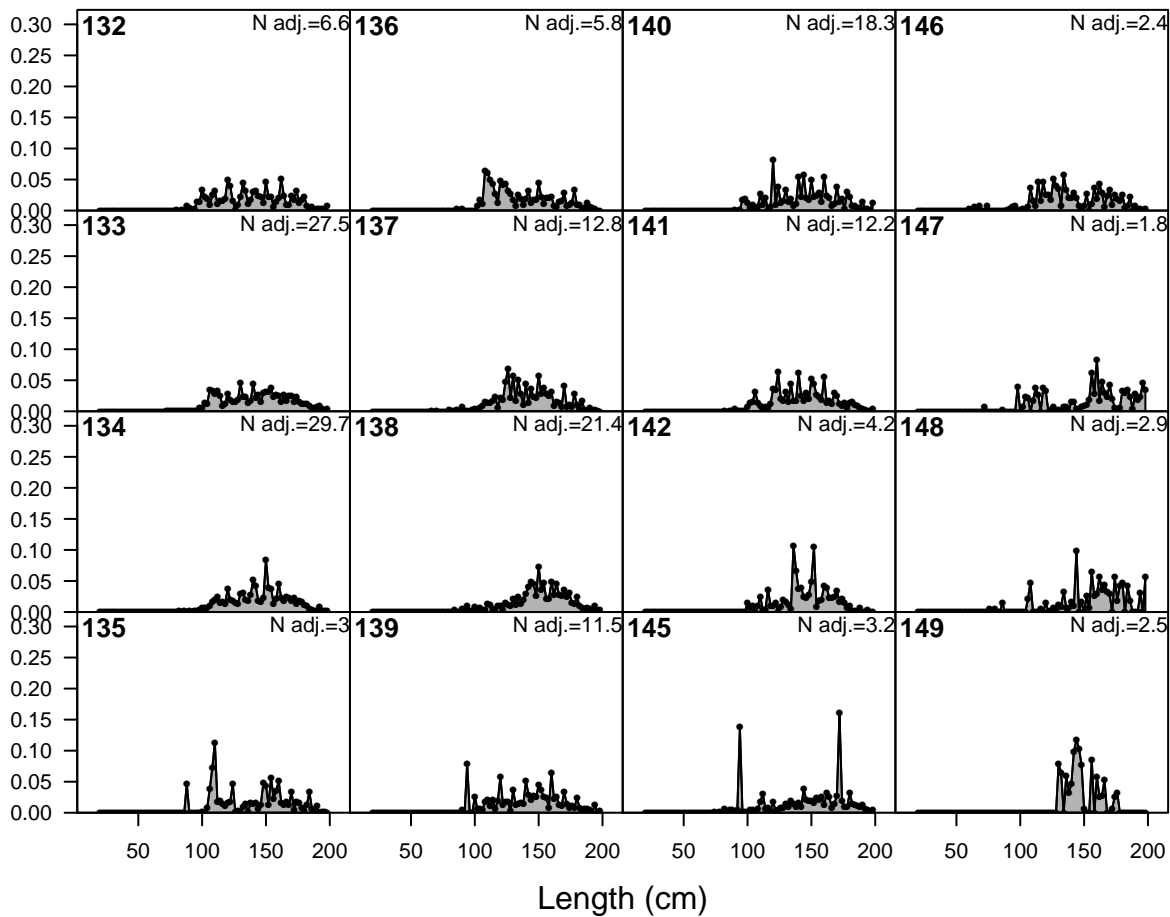
Proportion



Proportion

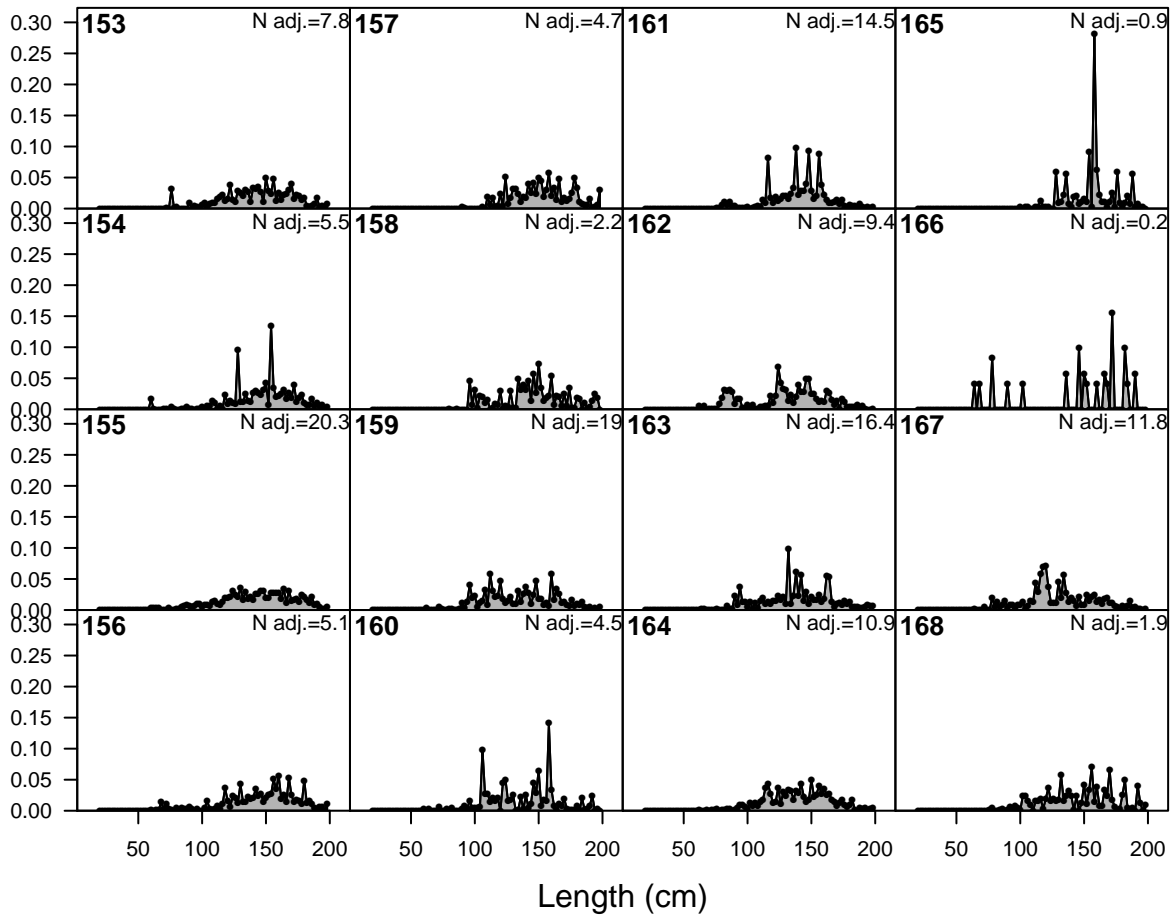


Proportion

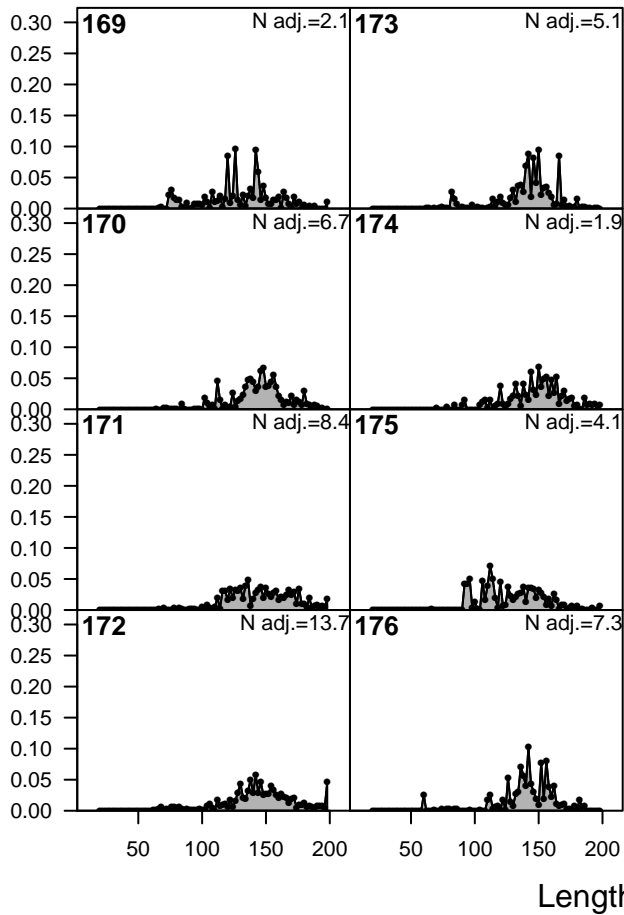


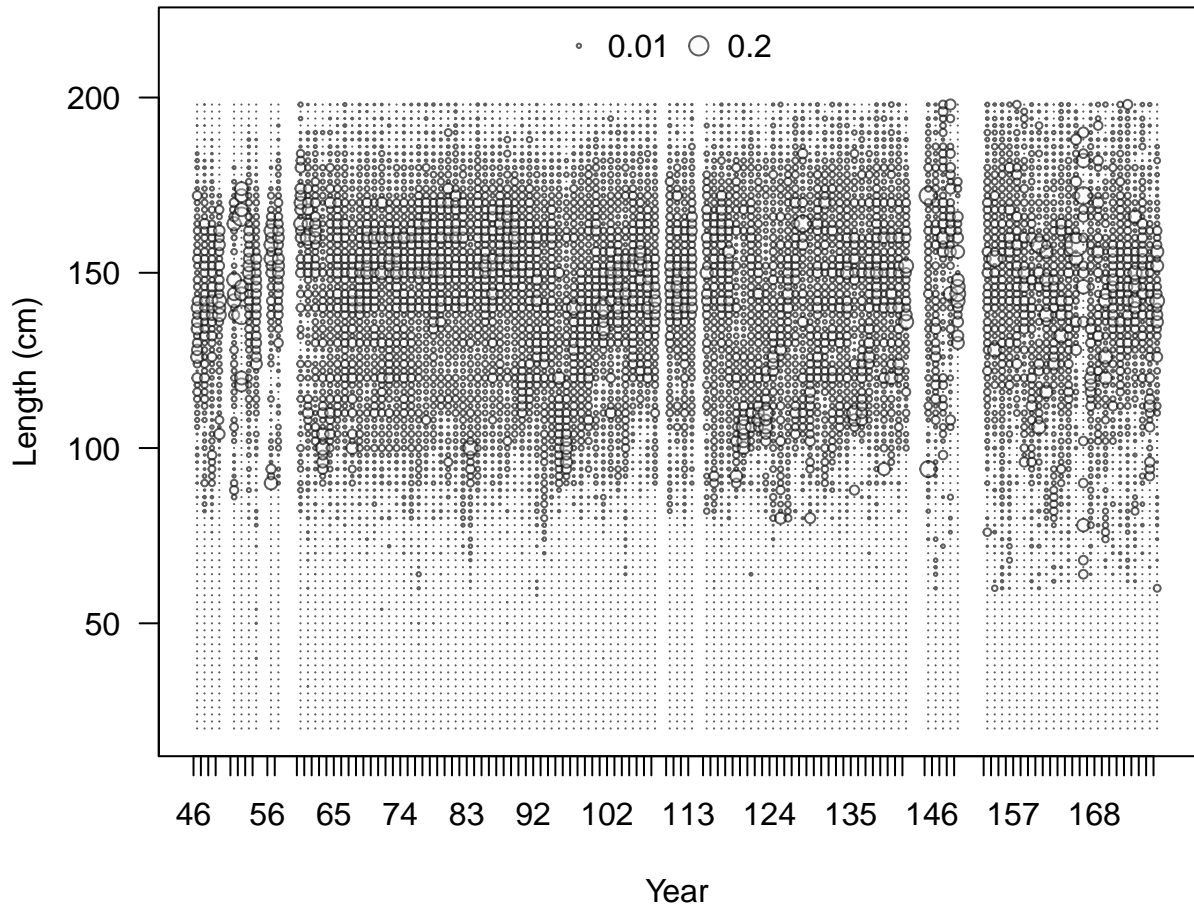


Proportion

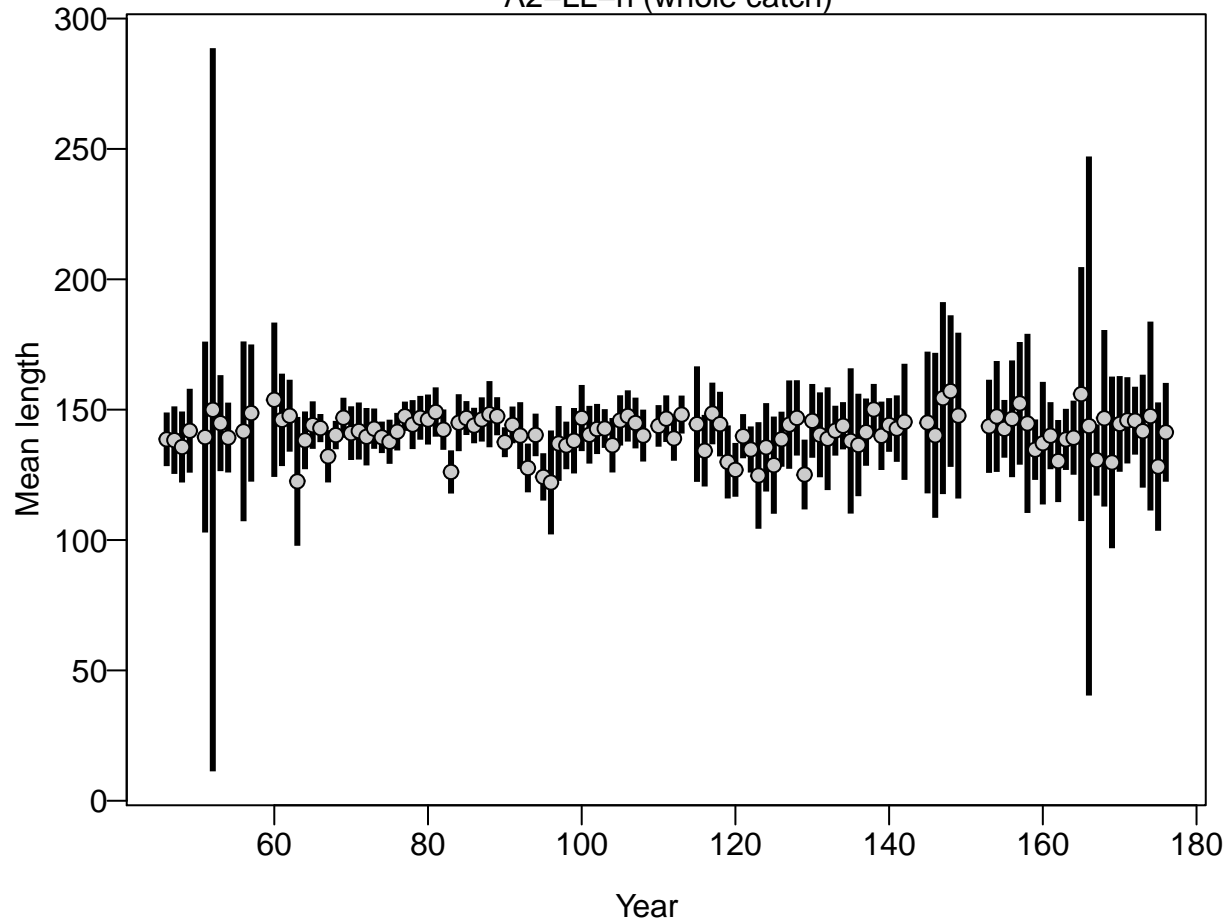


Proportion

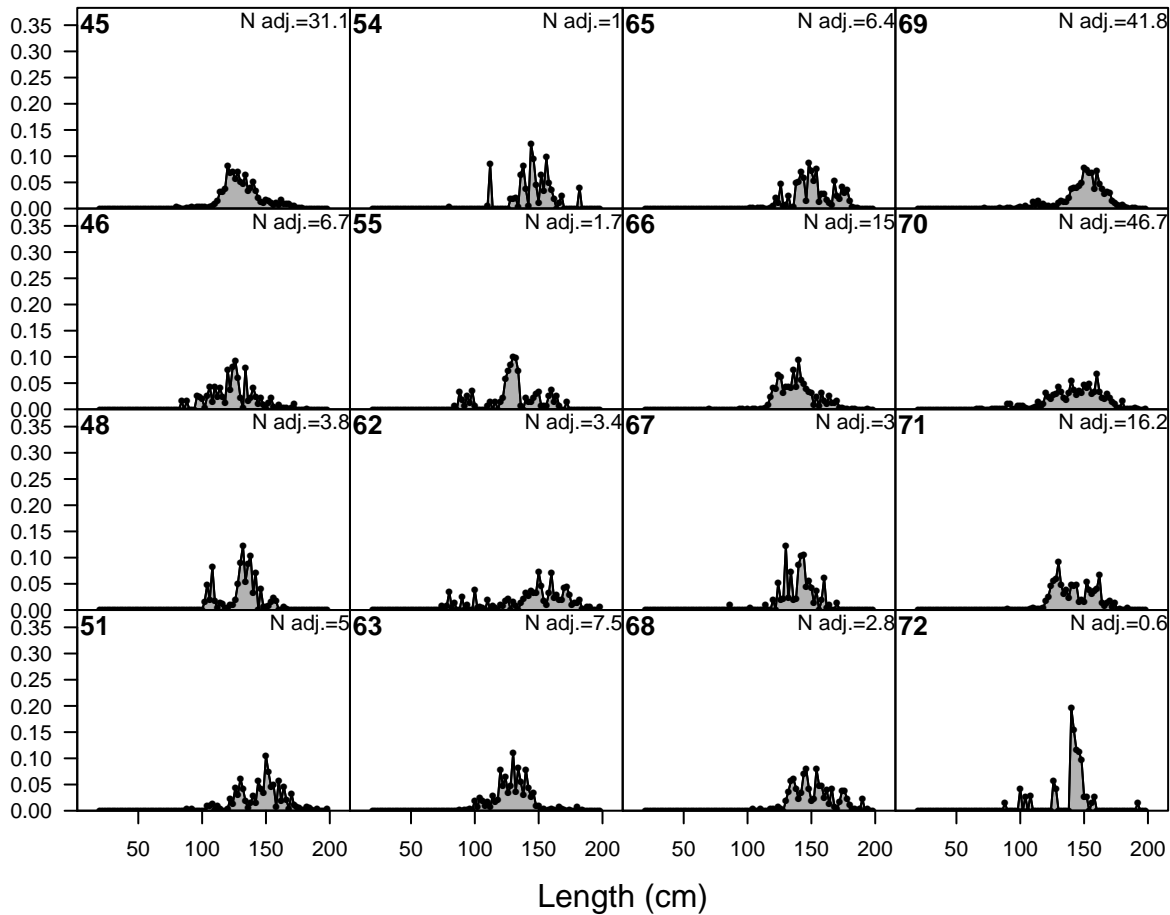




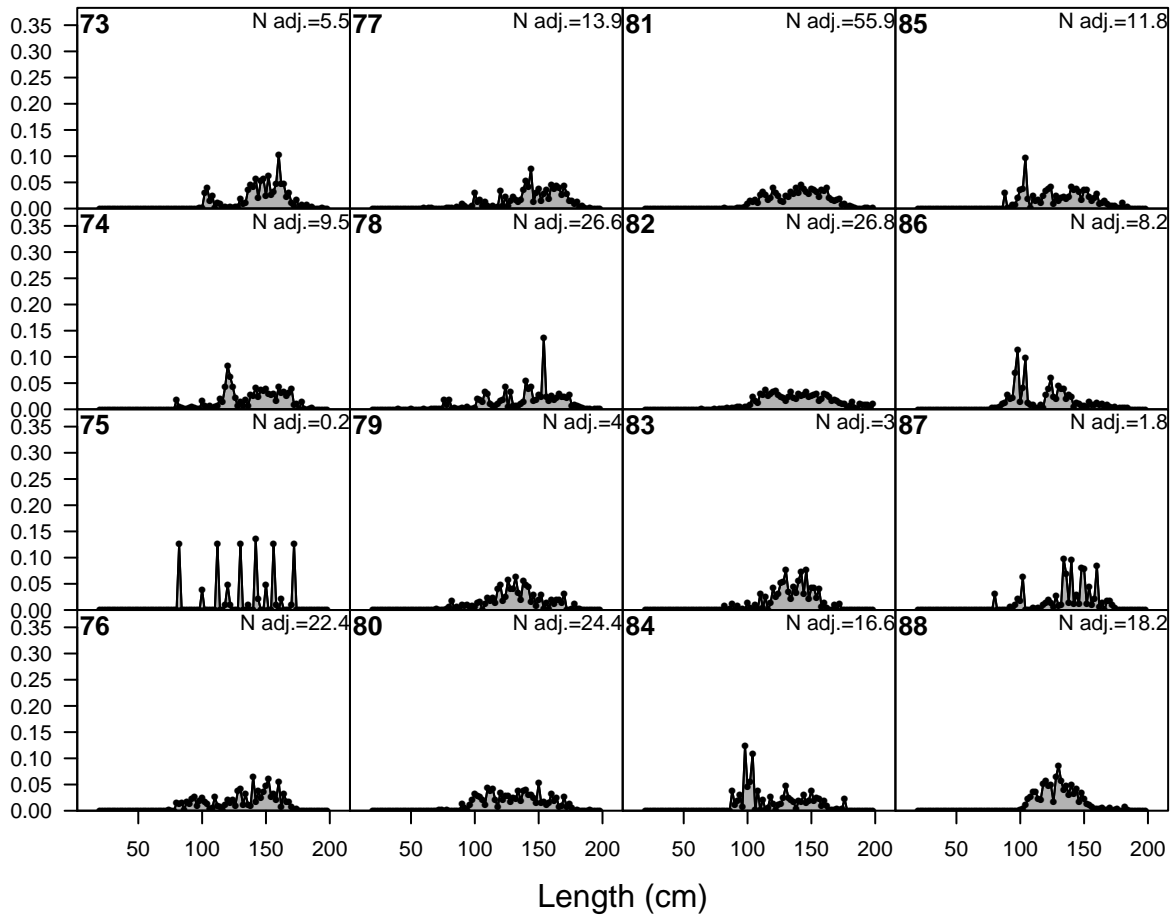
A2-LL-n (whole catch)



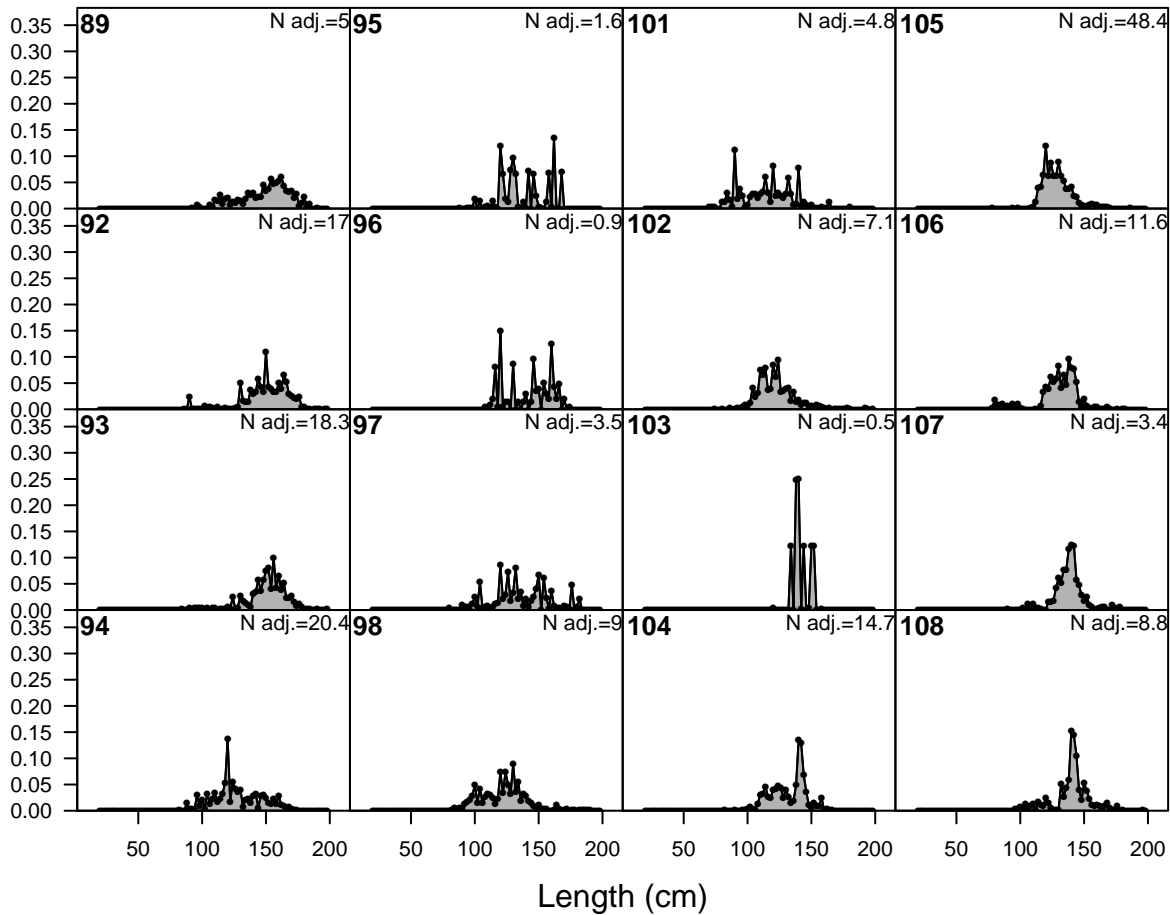
Proportion



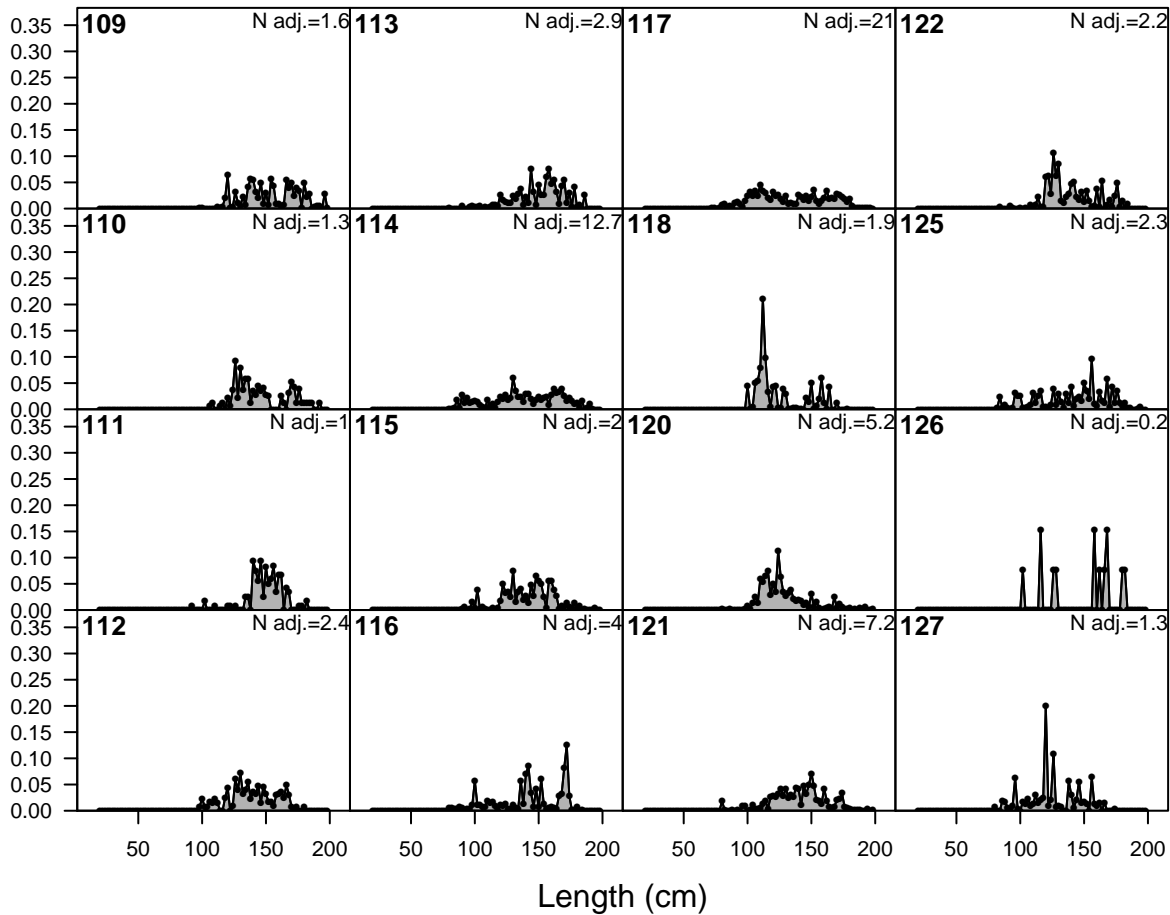
Proportion



Proportion

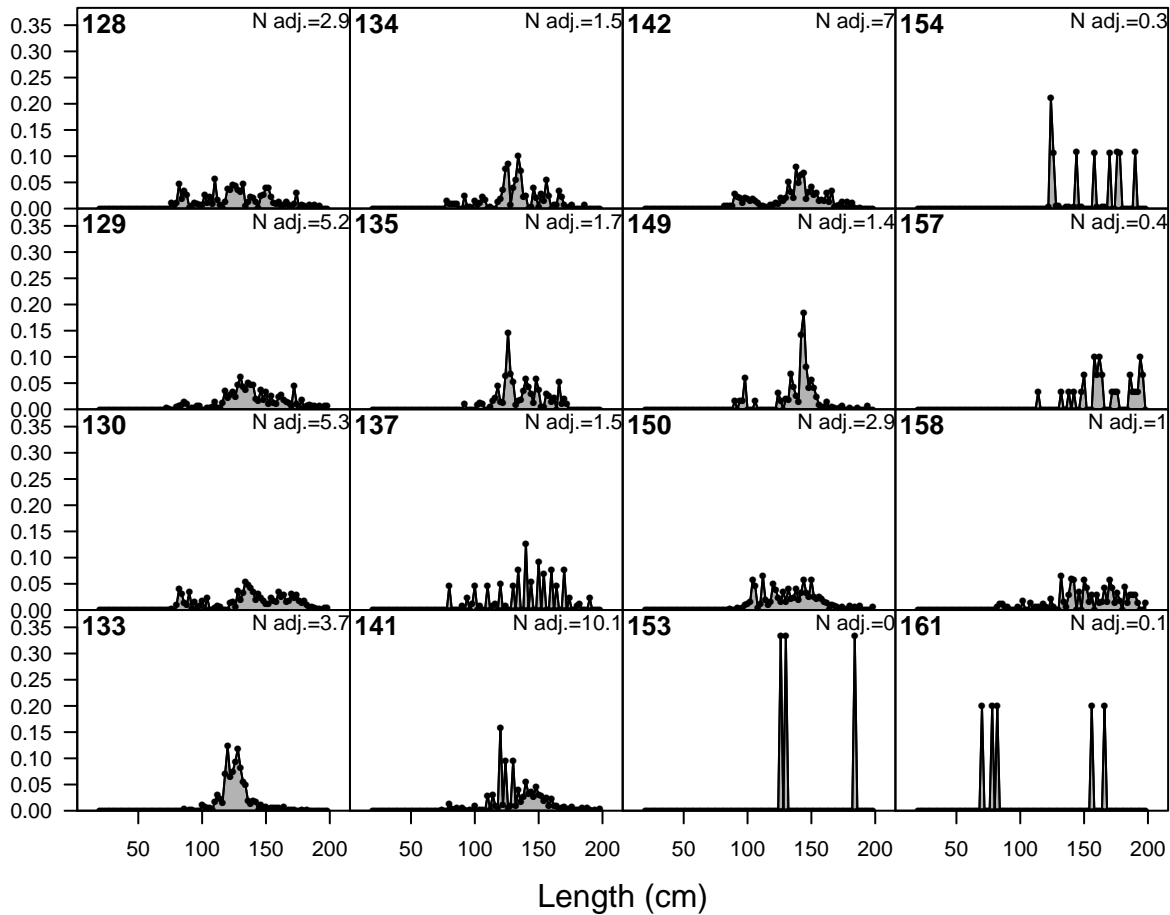


Proportion

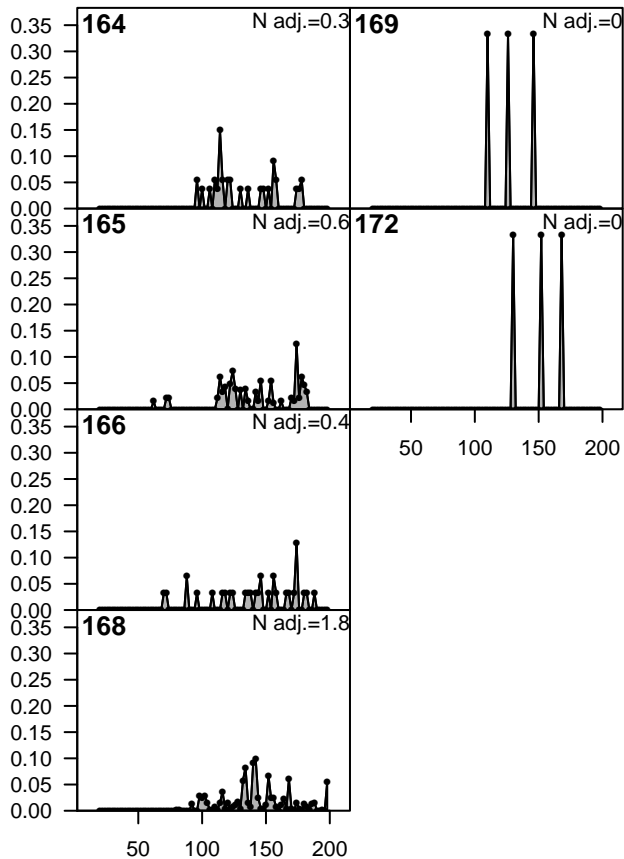




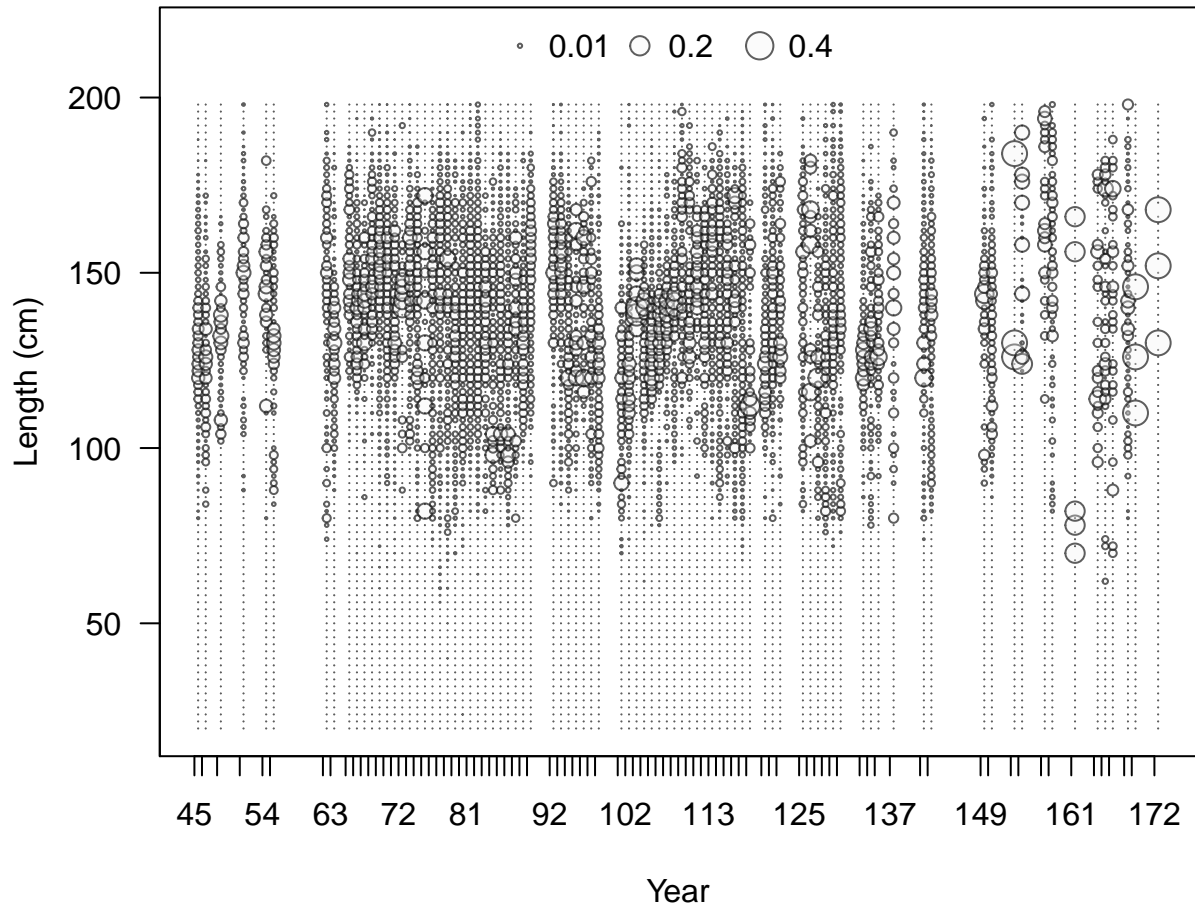
Proportion



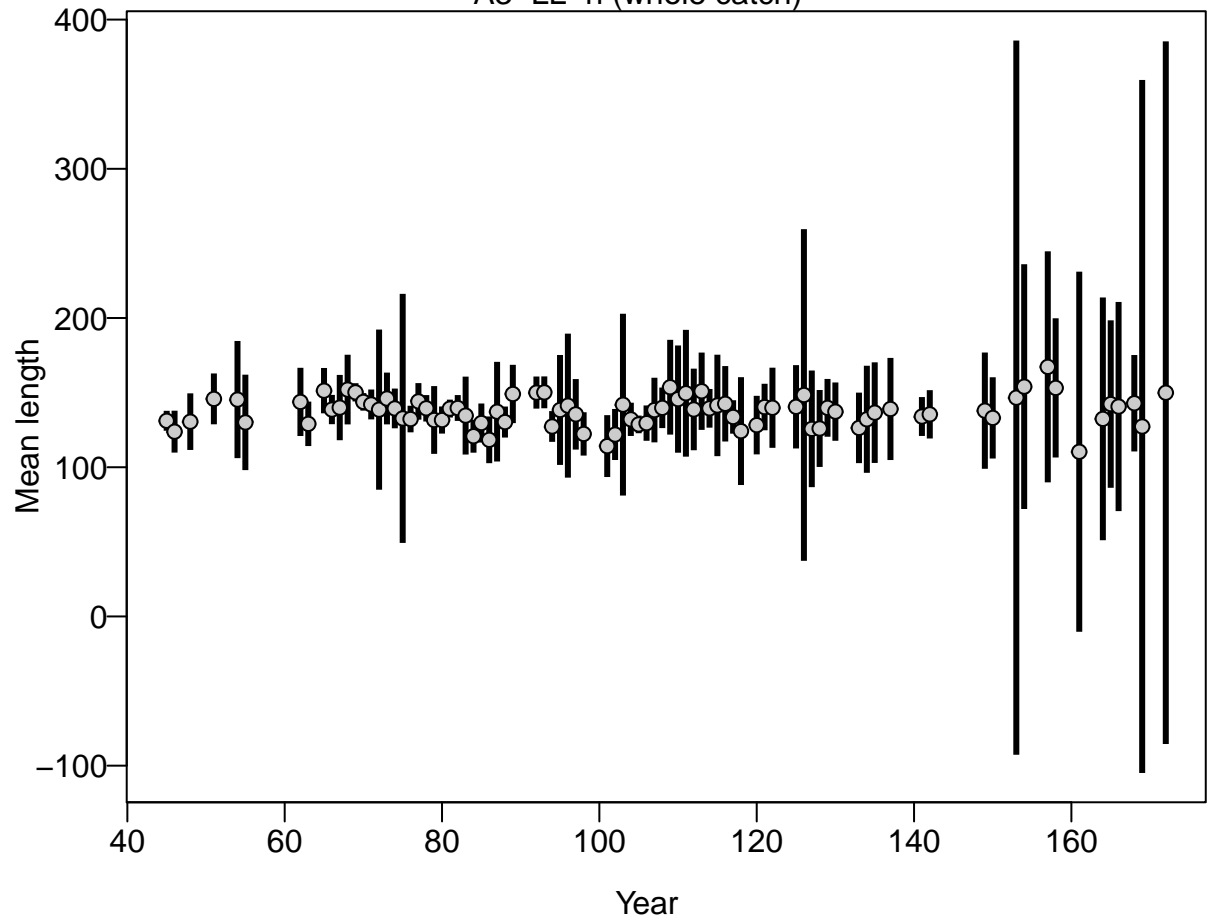
Proportion



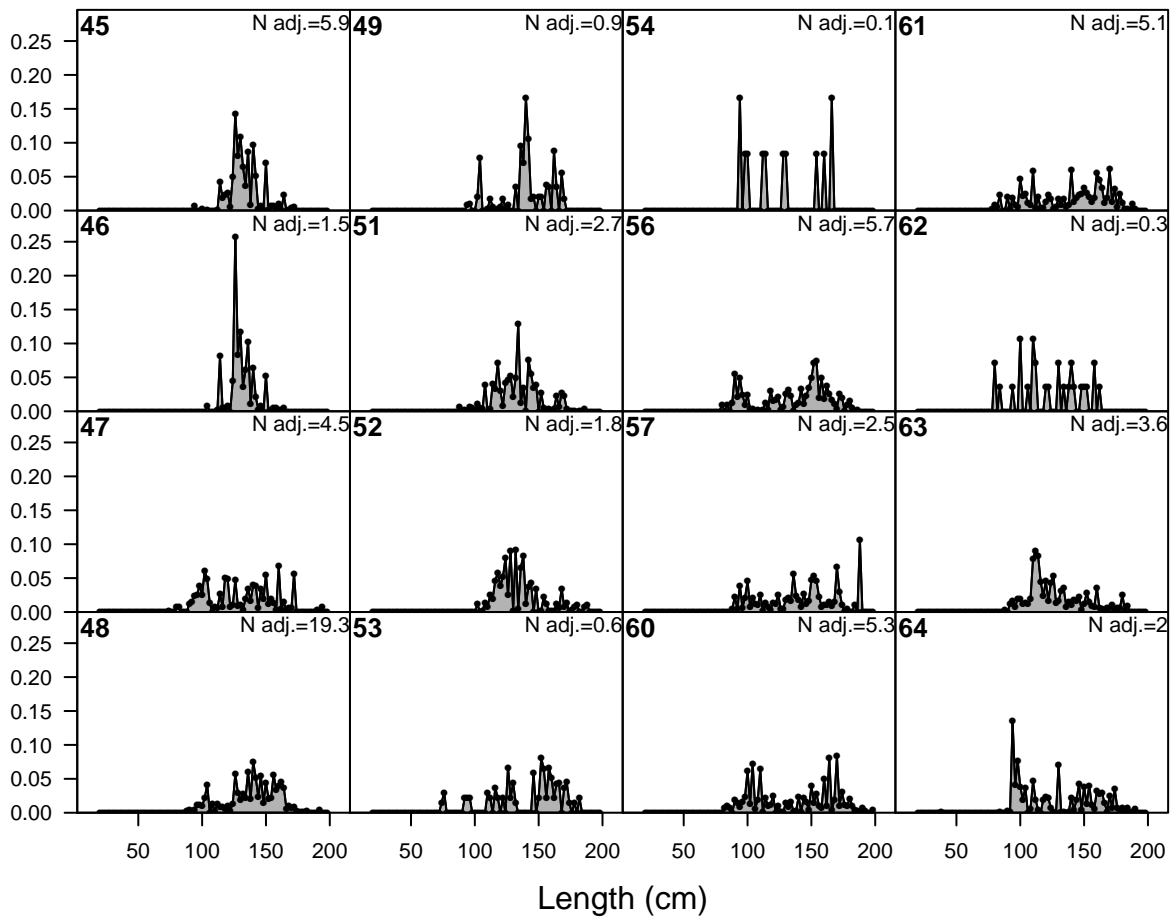
Length (cm)



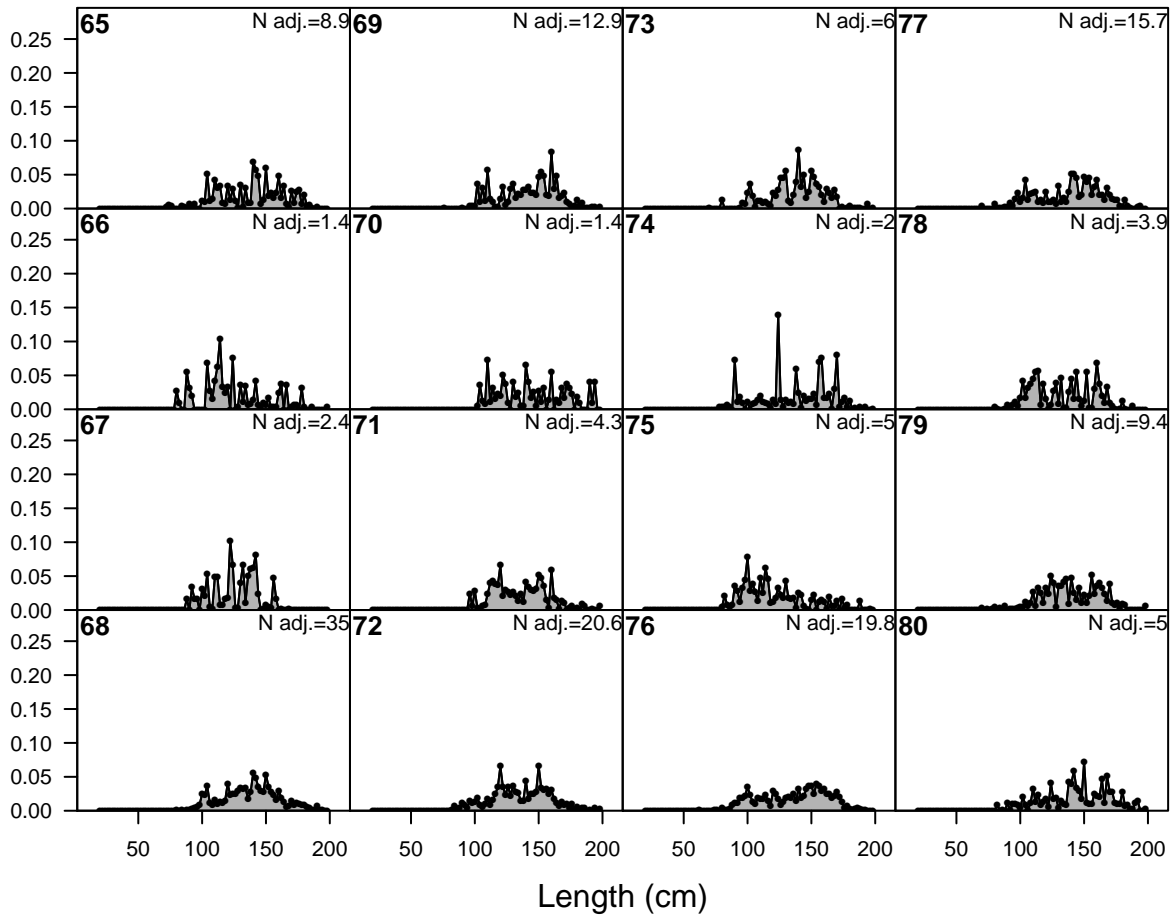
A3-LL-n (whole catch)



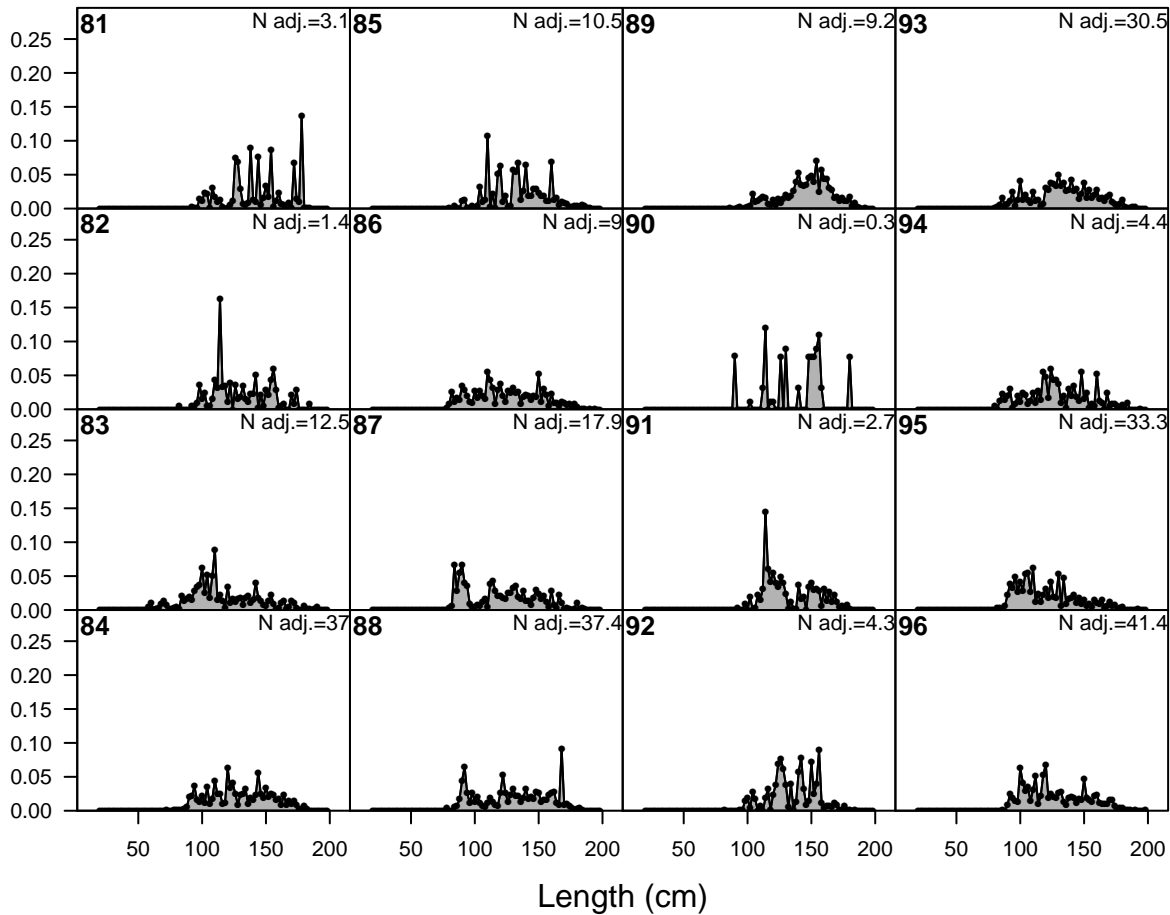
Proportion



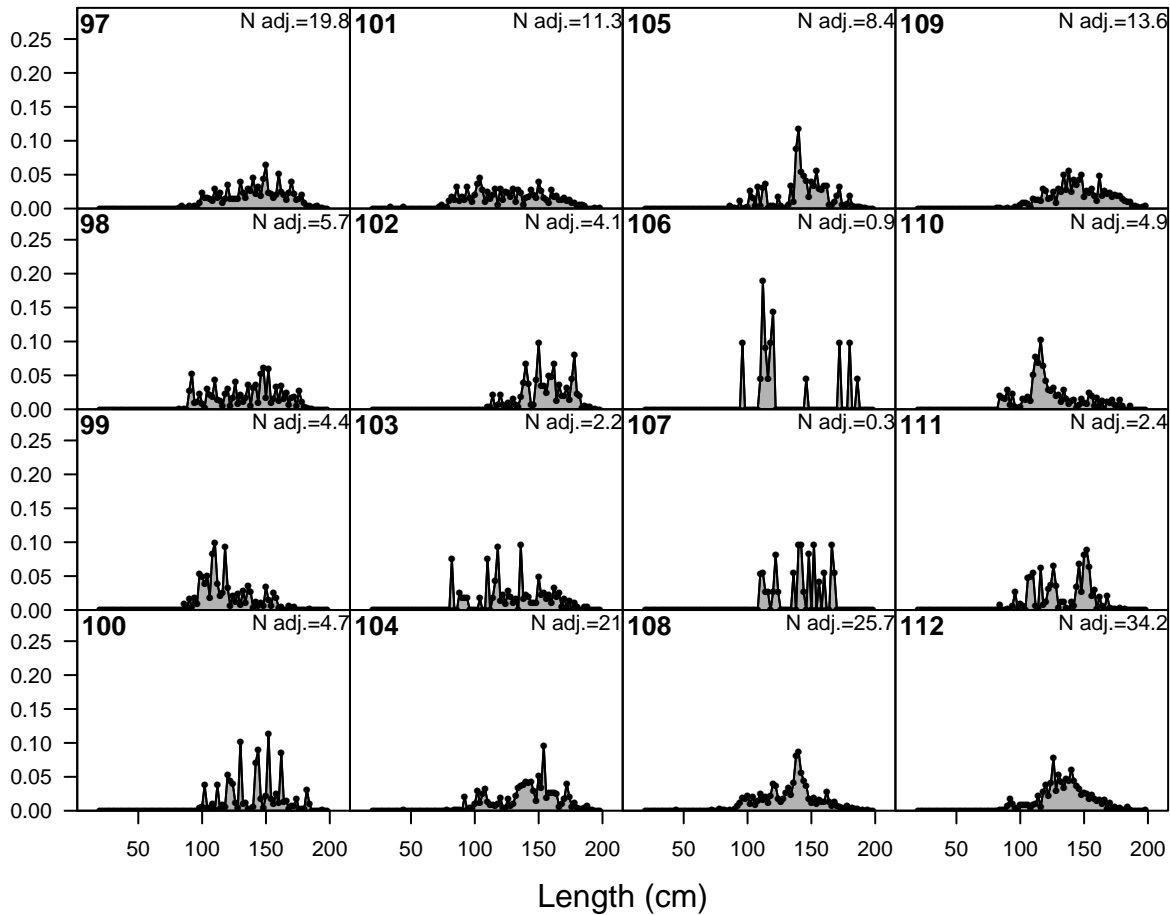
Proportion



Proportion

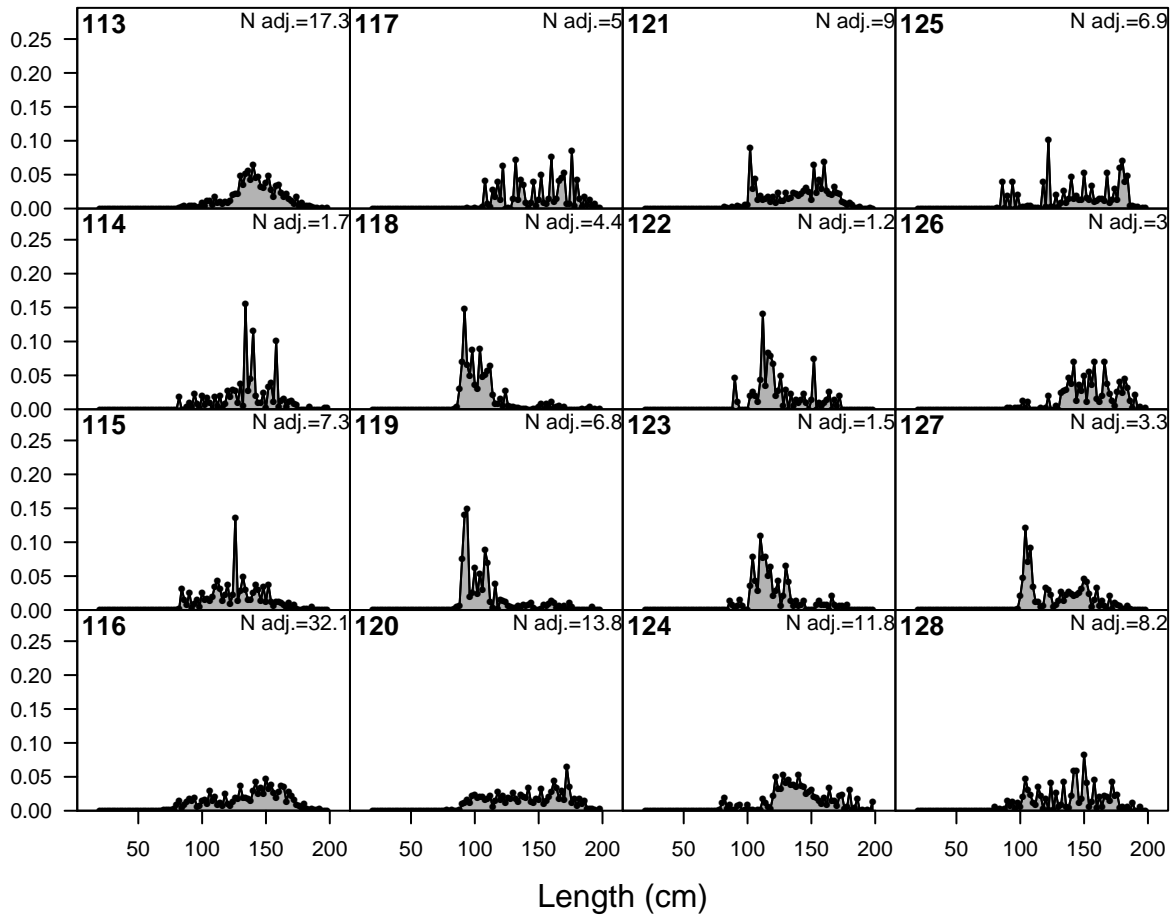


Proportion

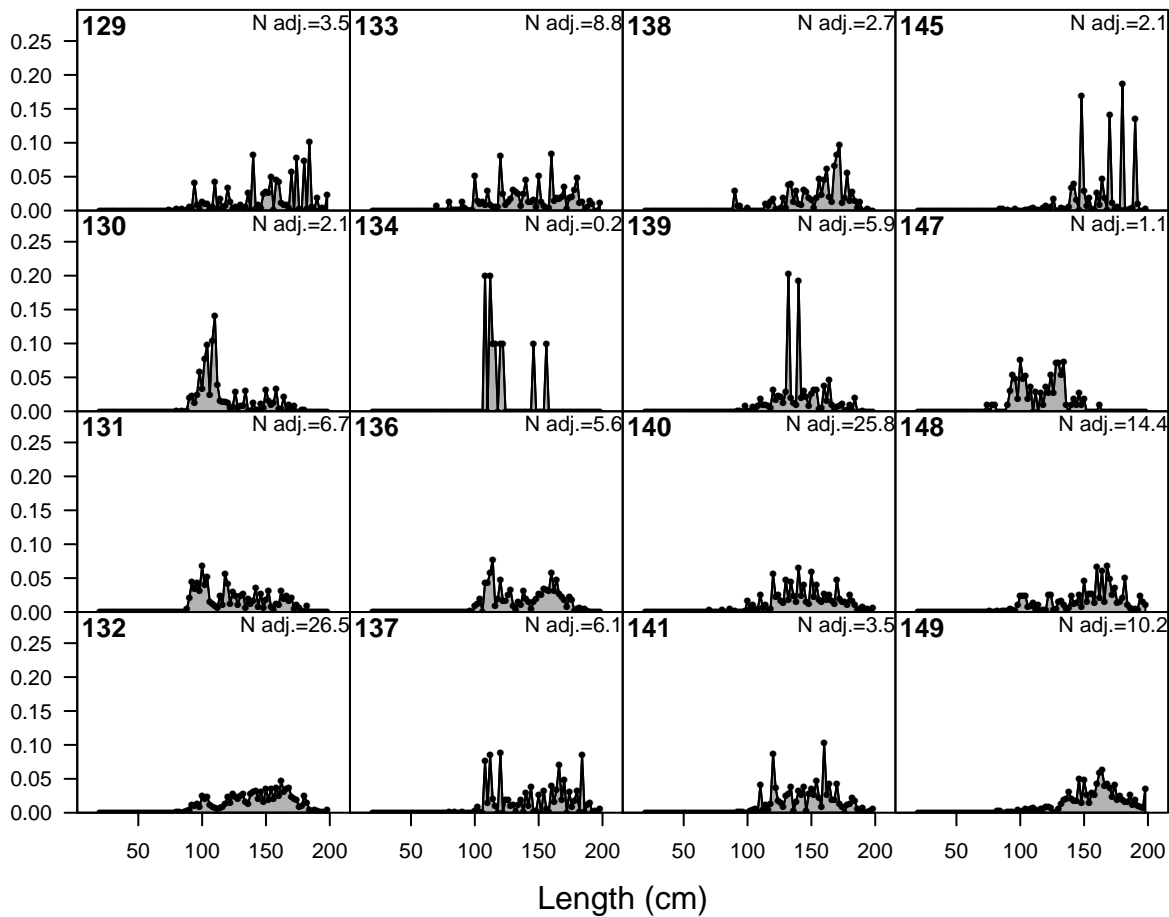




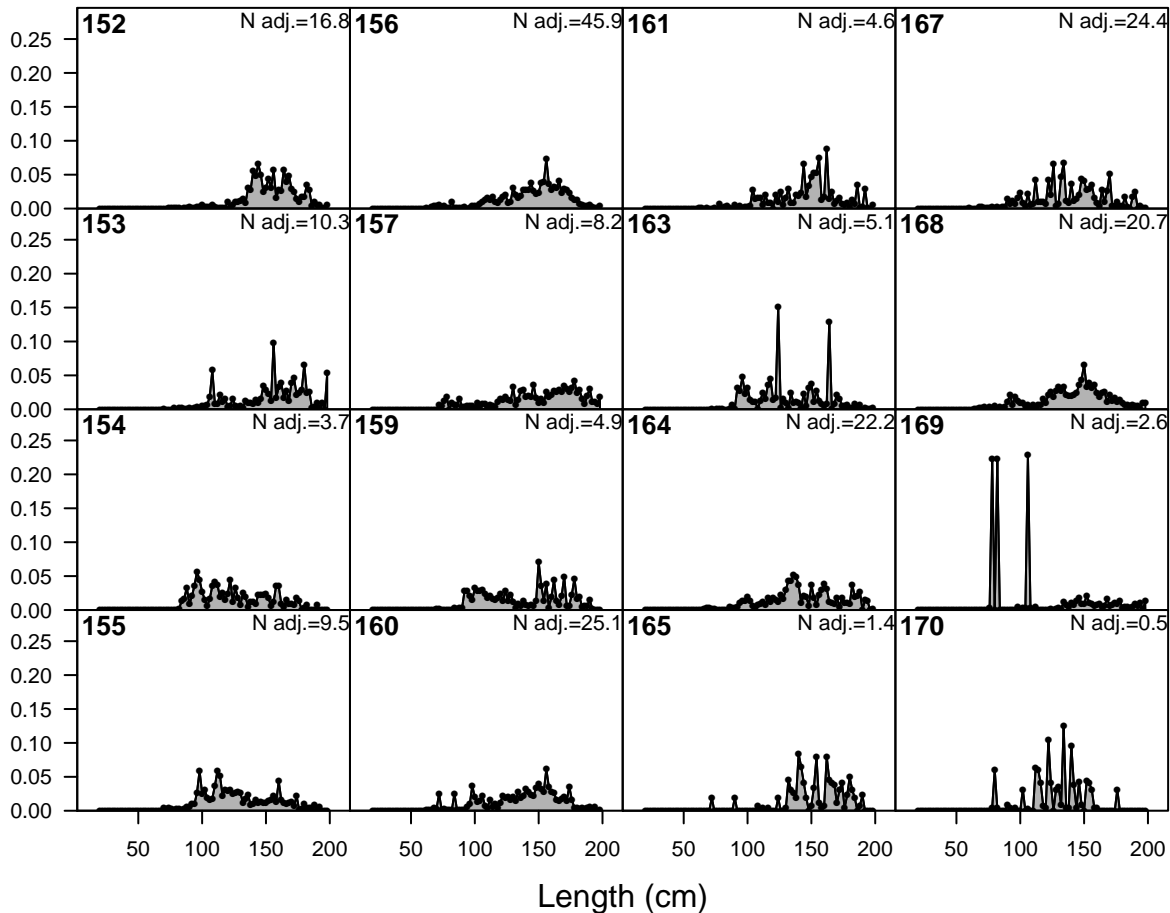
Proportion



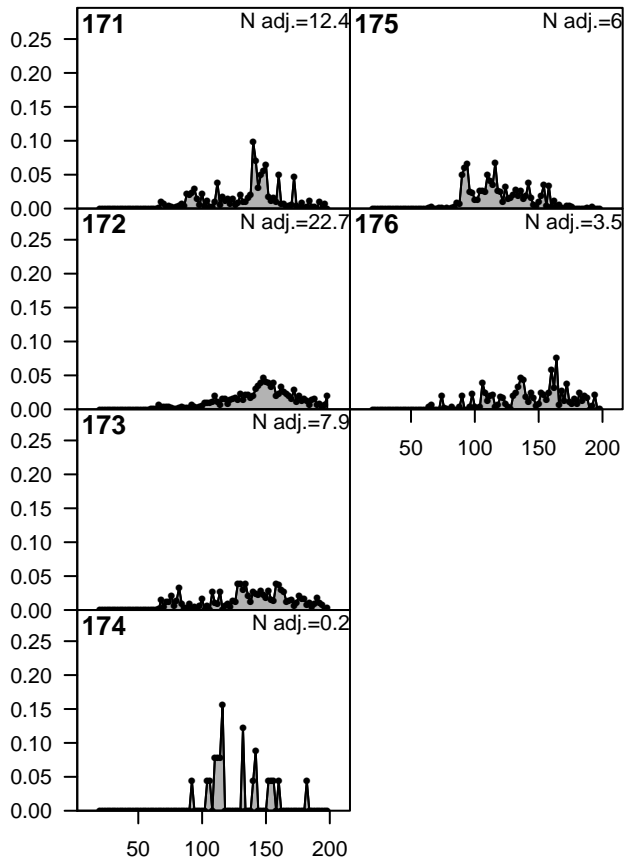
Proportion



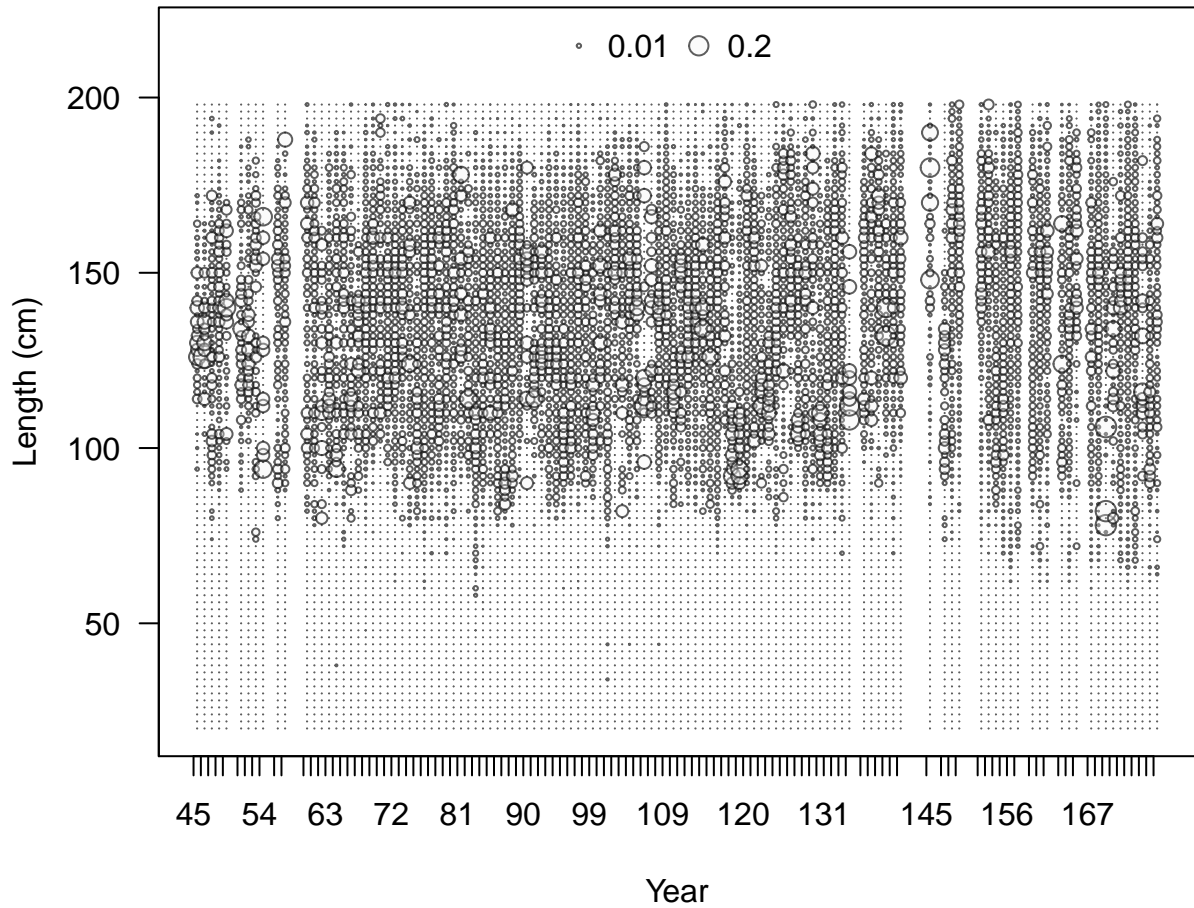
Proportion



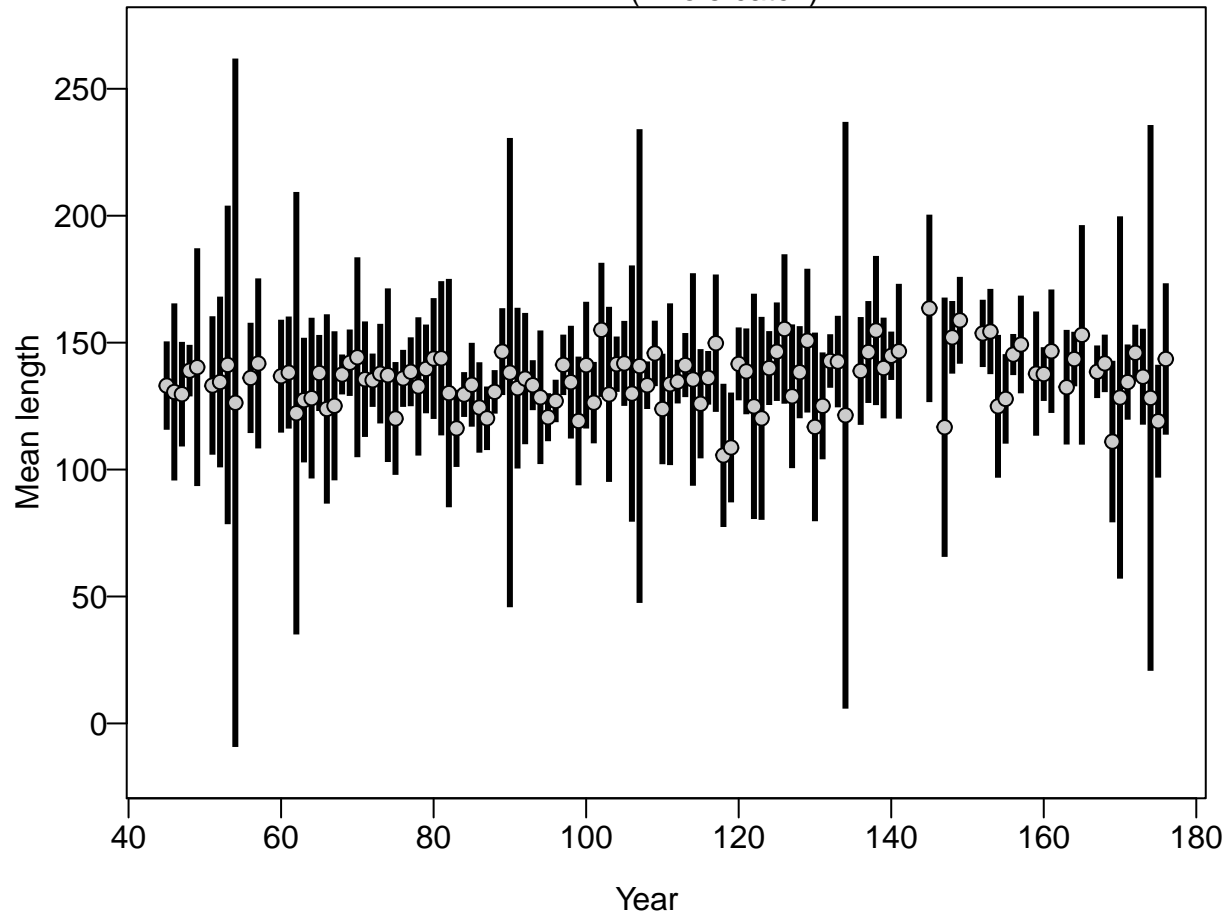
Proportion



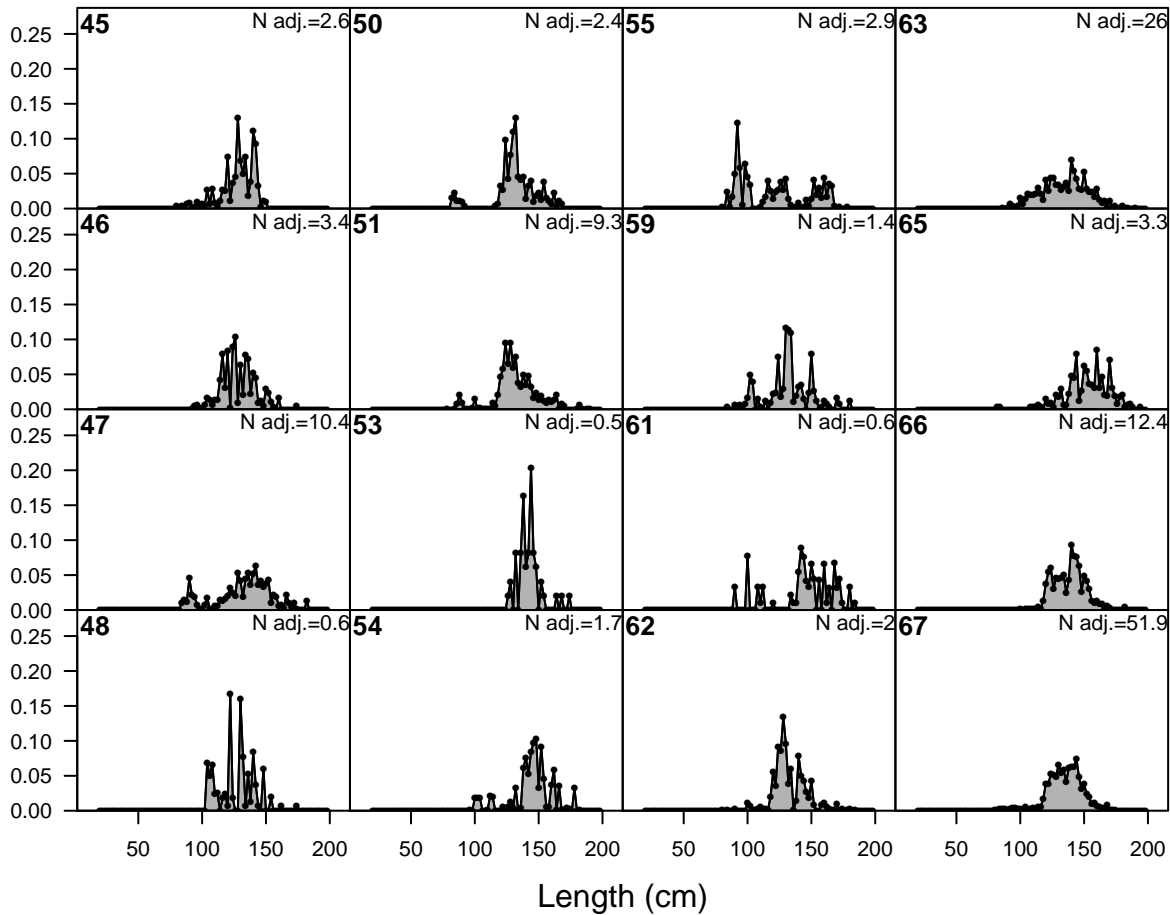
Length (cm)



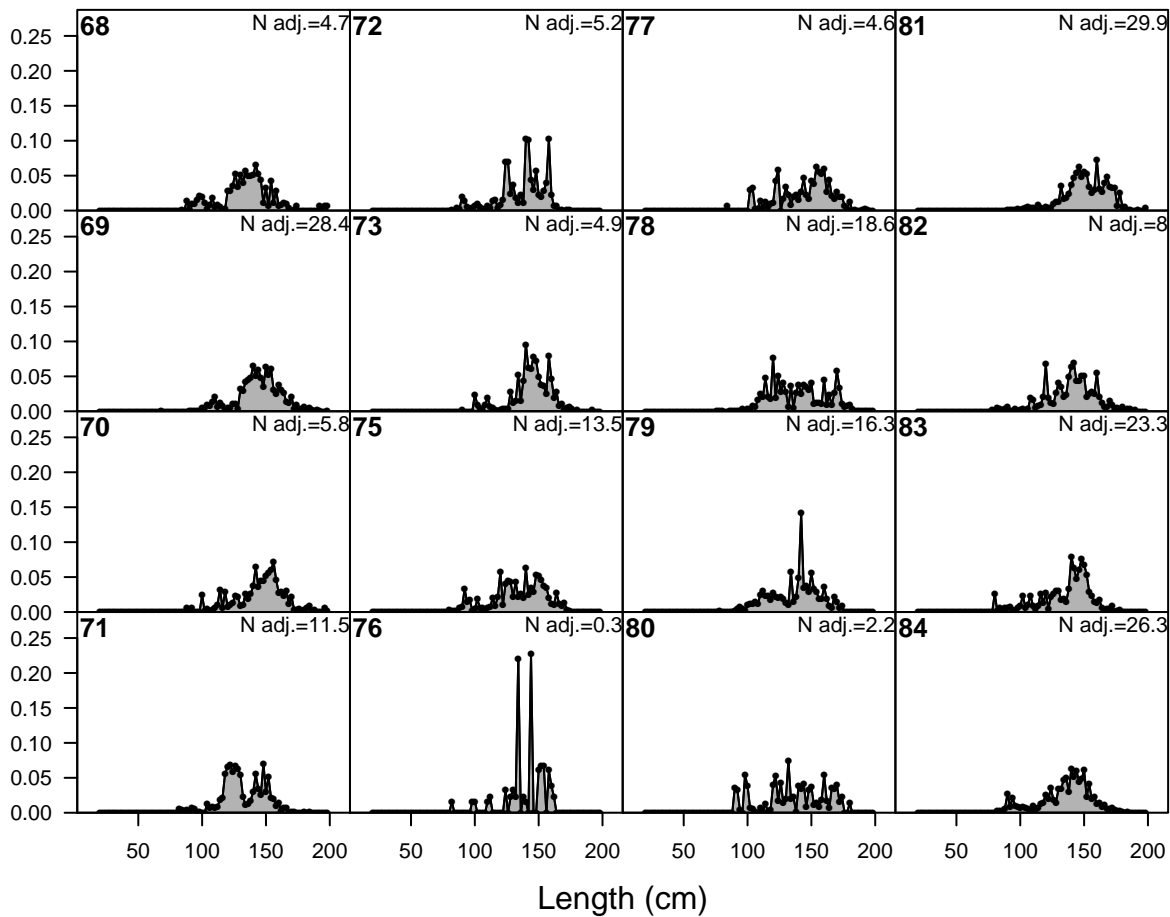
A4-LL-n (whole catch)



Proportion

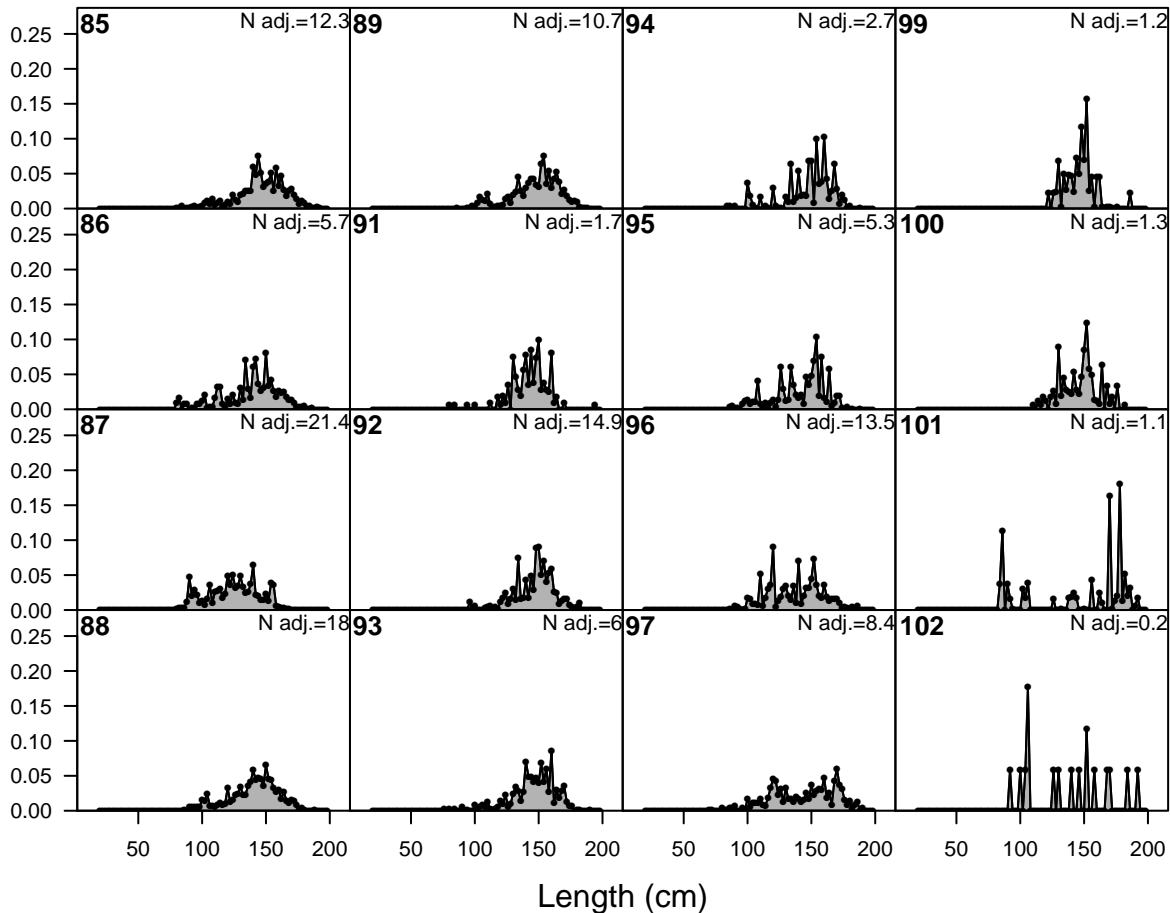


Proportion

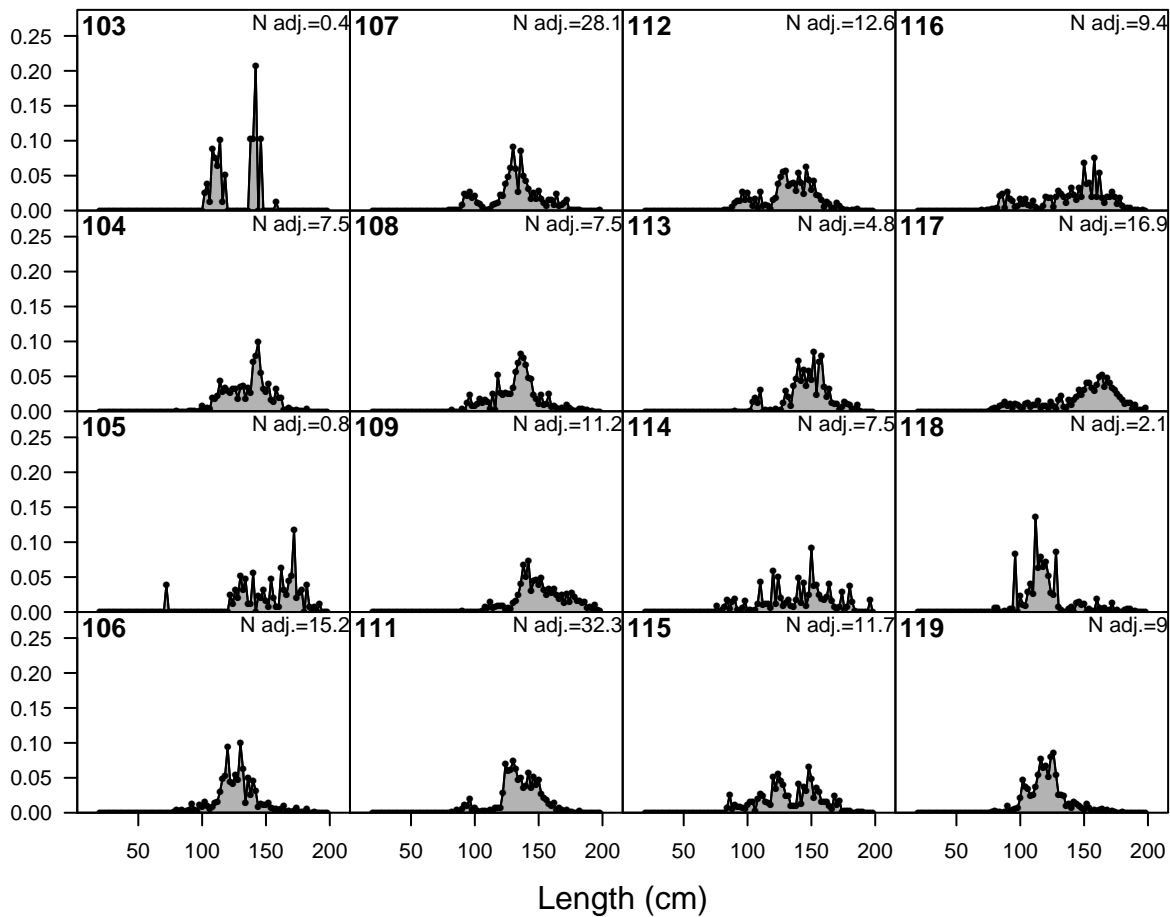




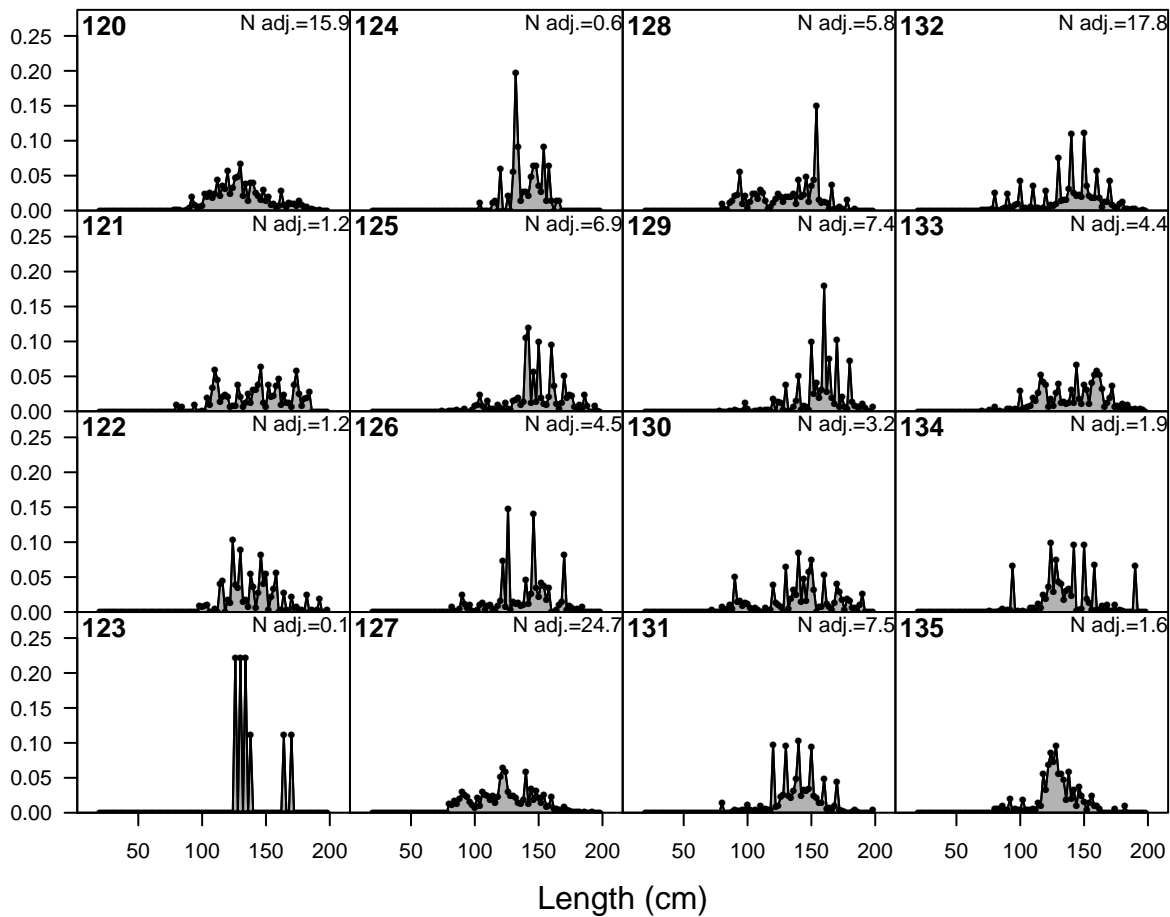
Proportion



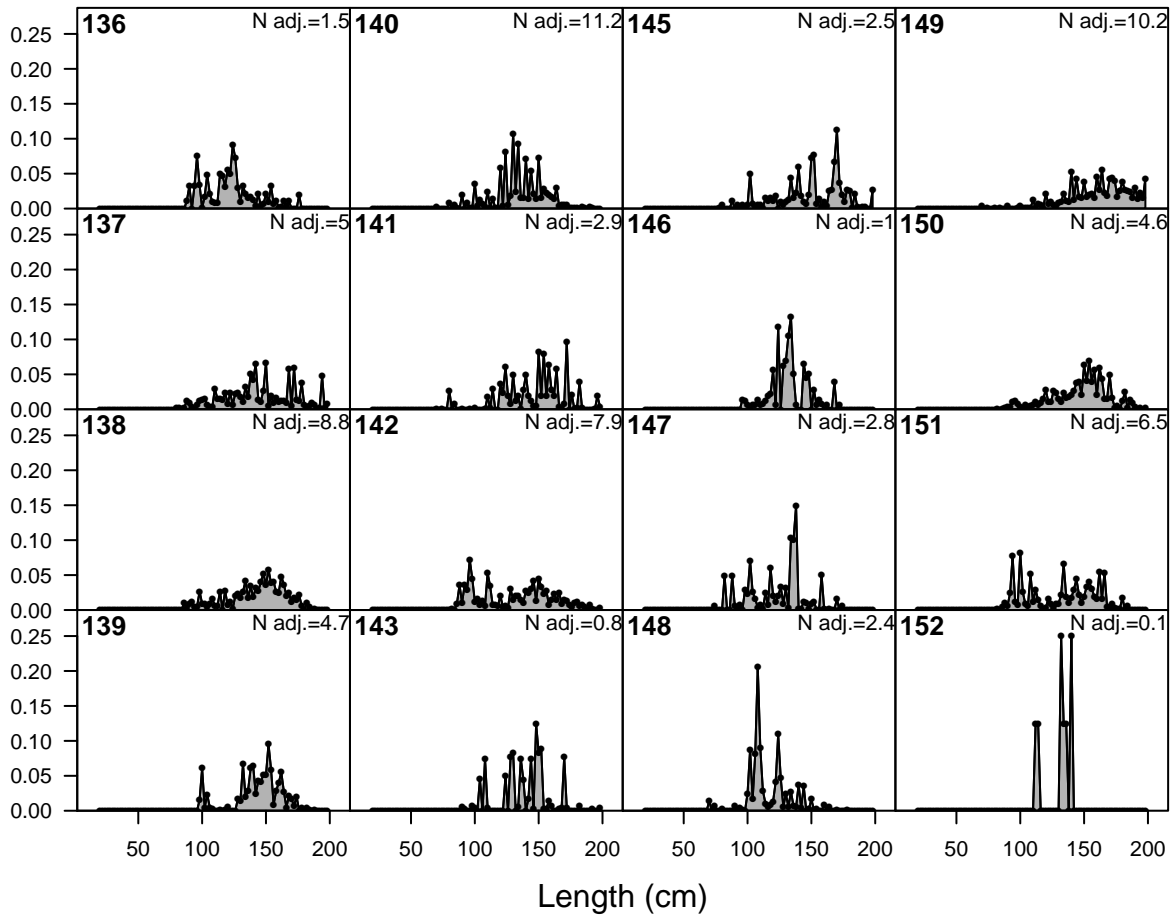
Proportion



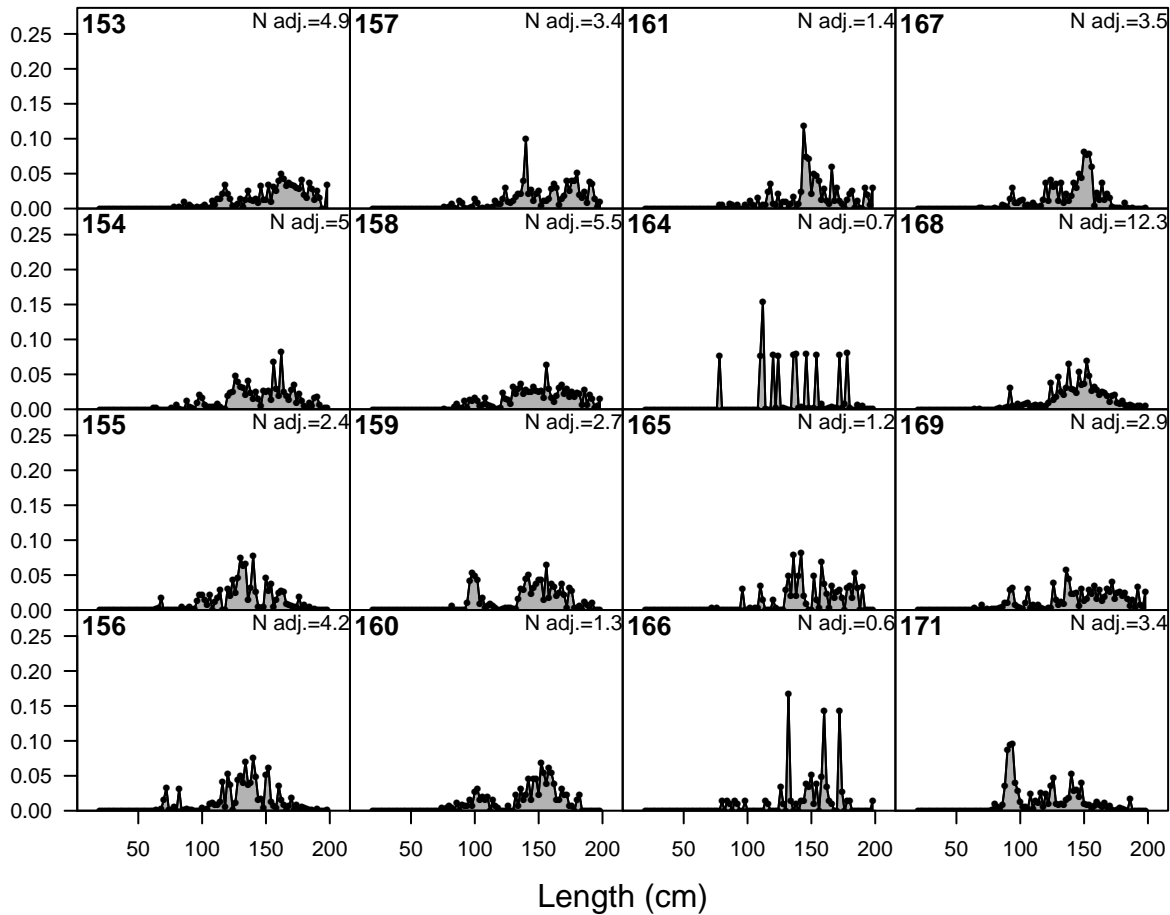
Proportion

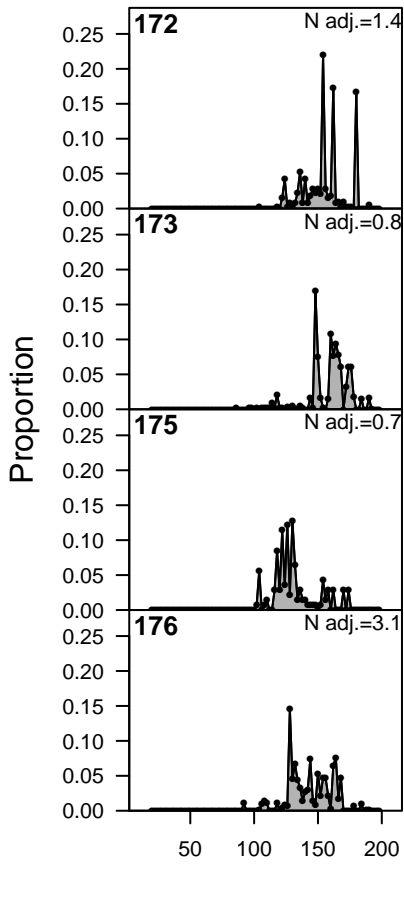


Proportion

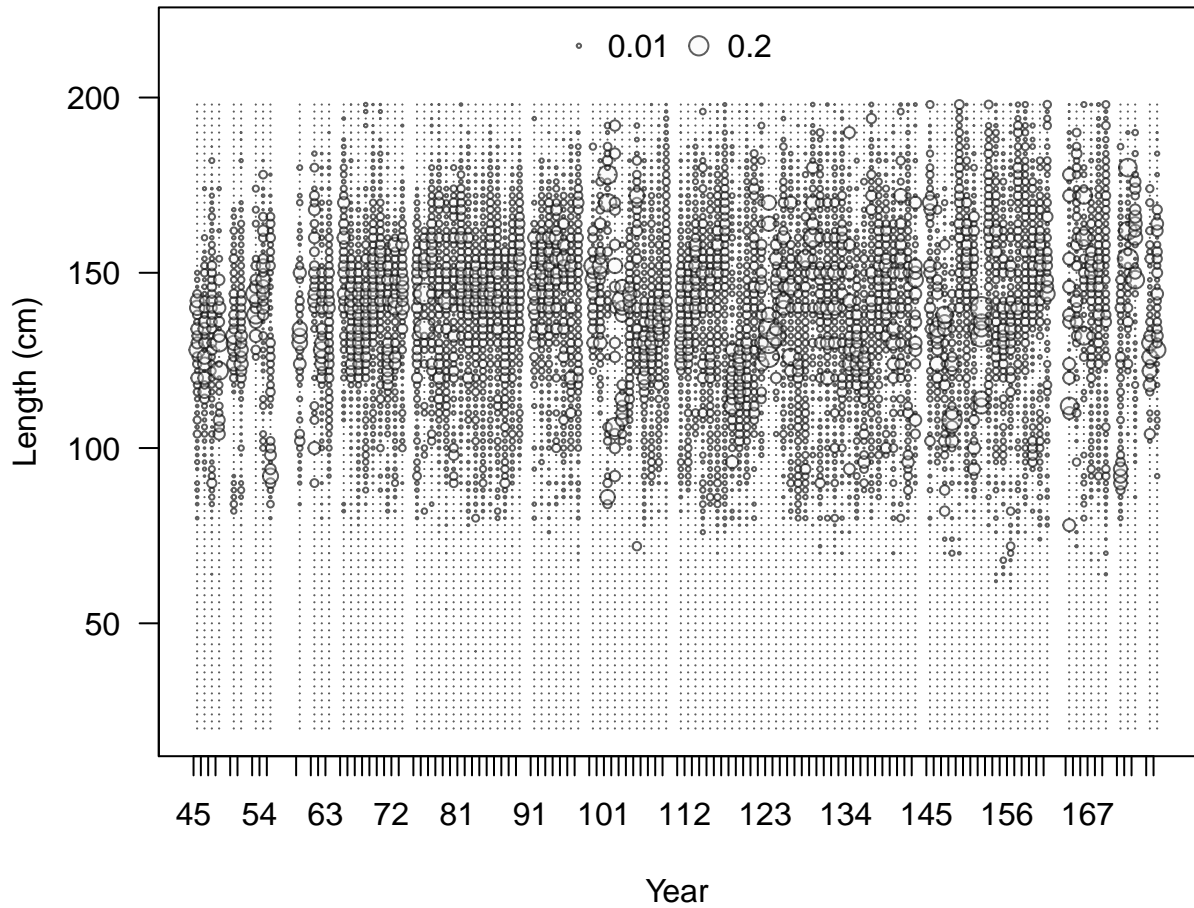


Proportion

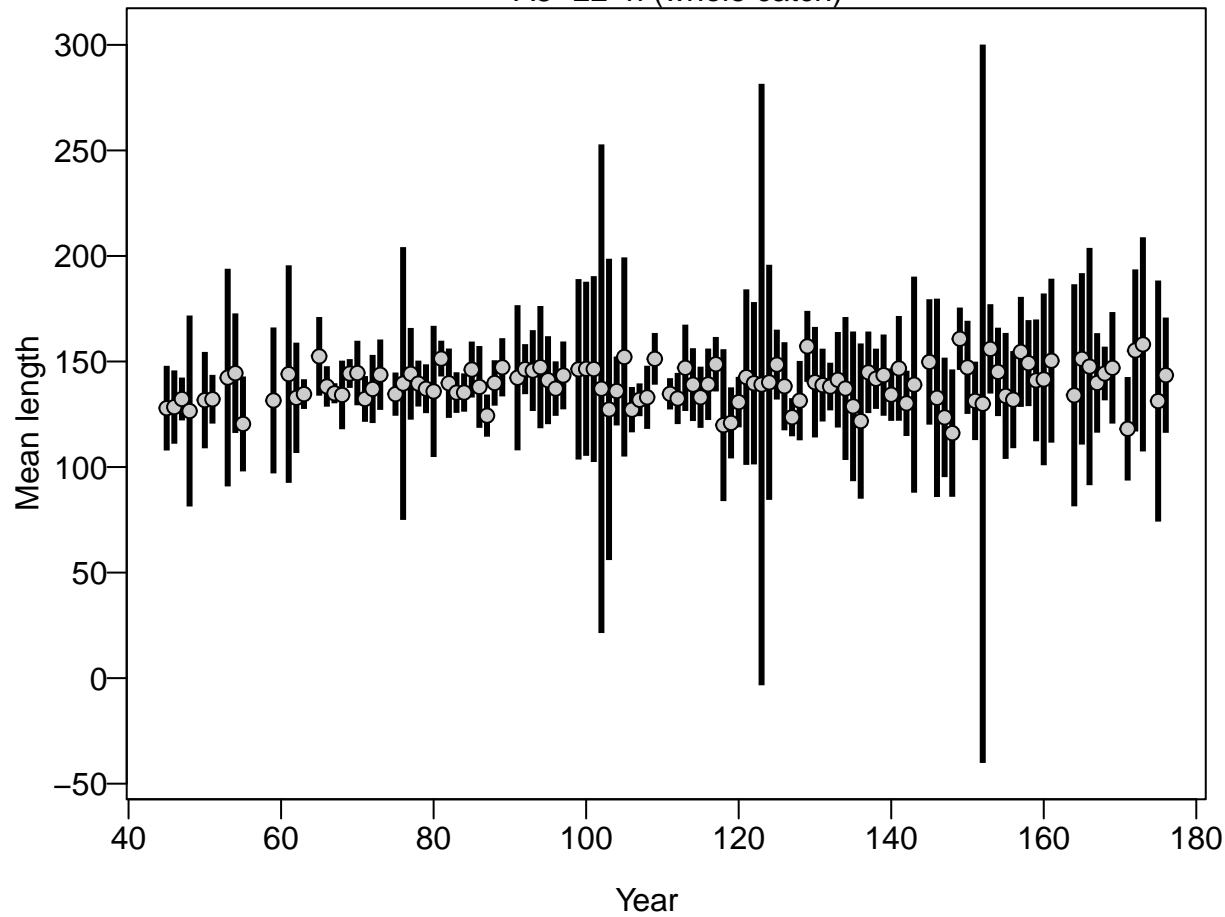




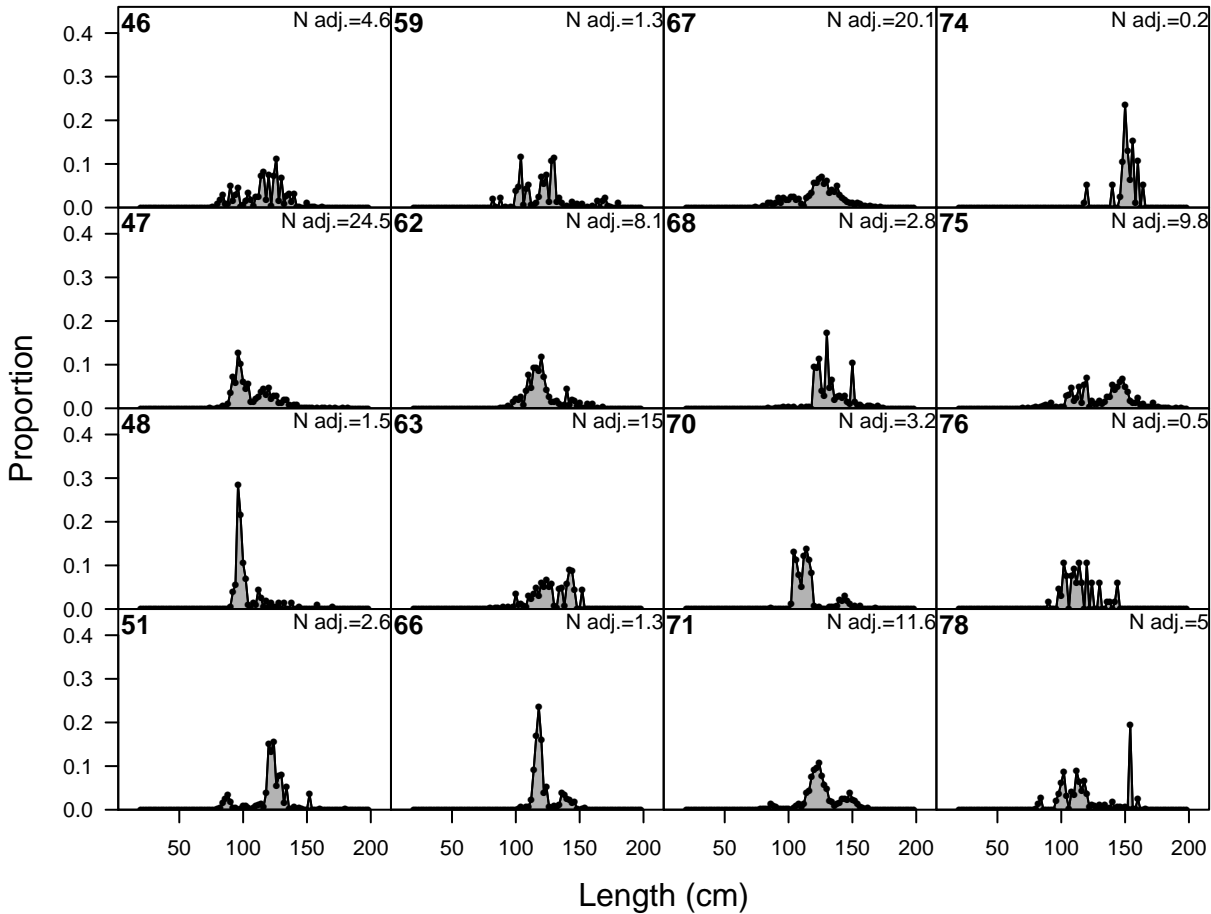
Length (cm)

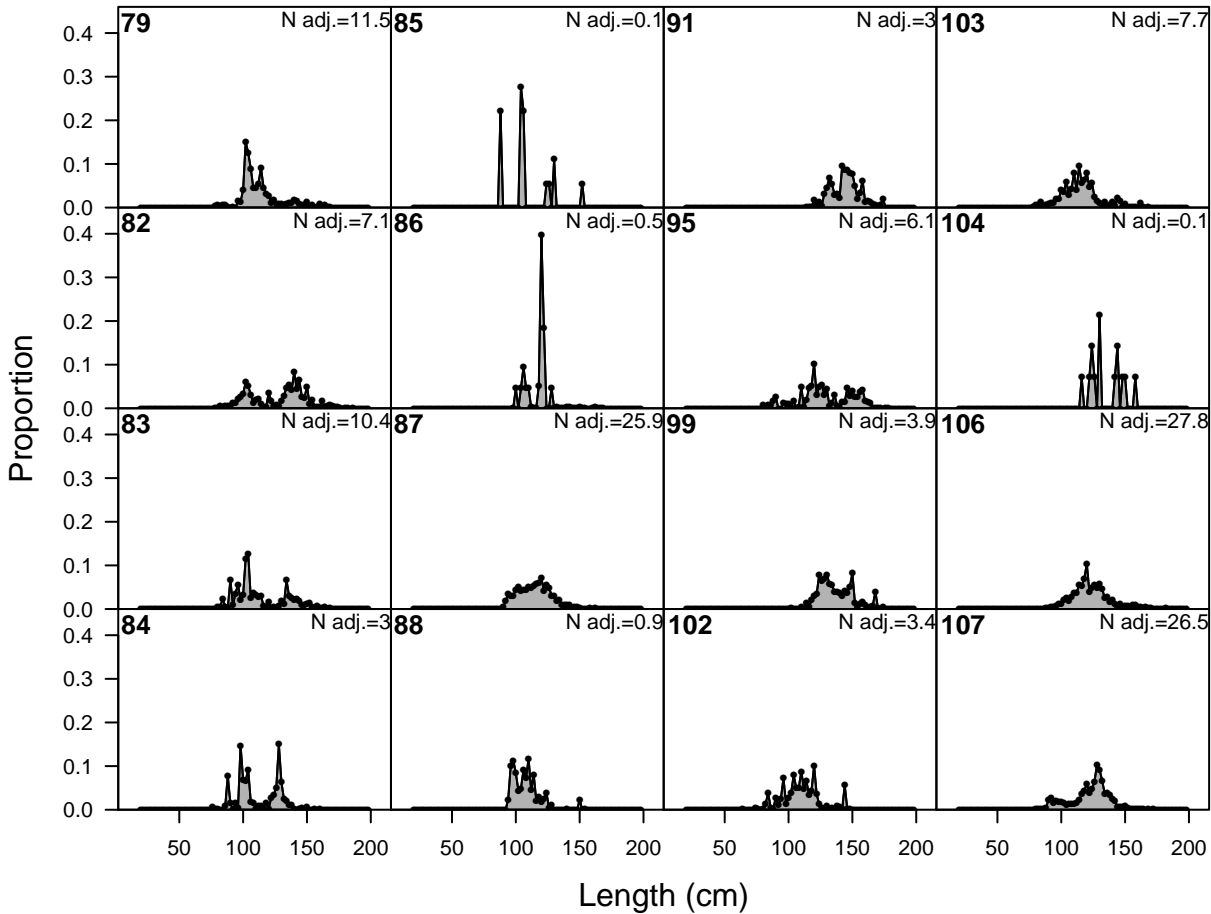


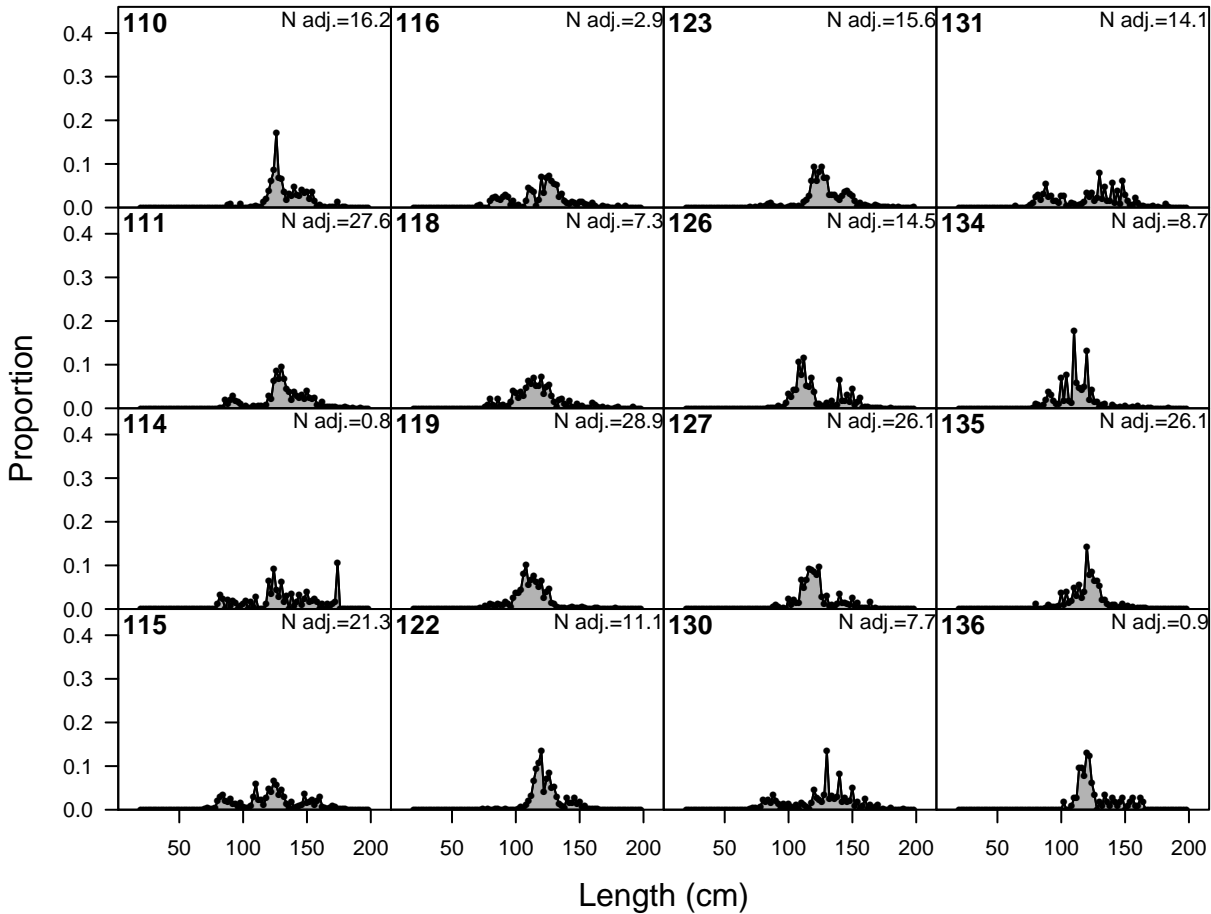
A5-LL-n (whole catch)

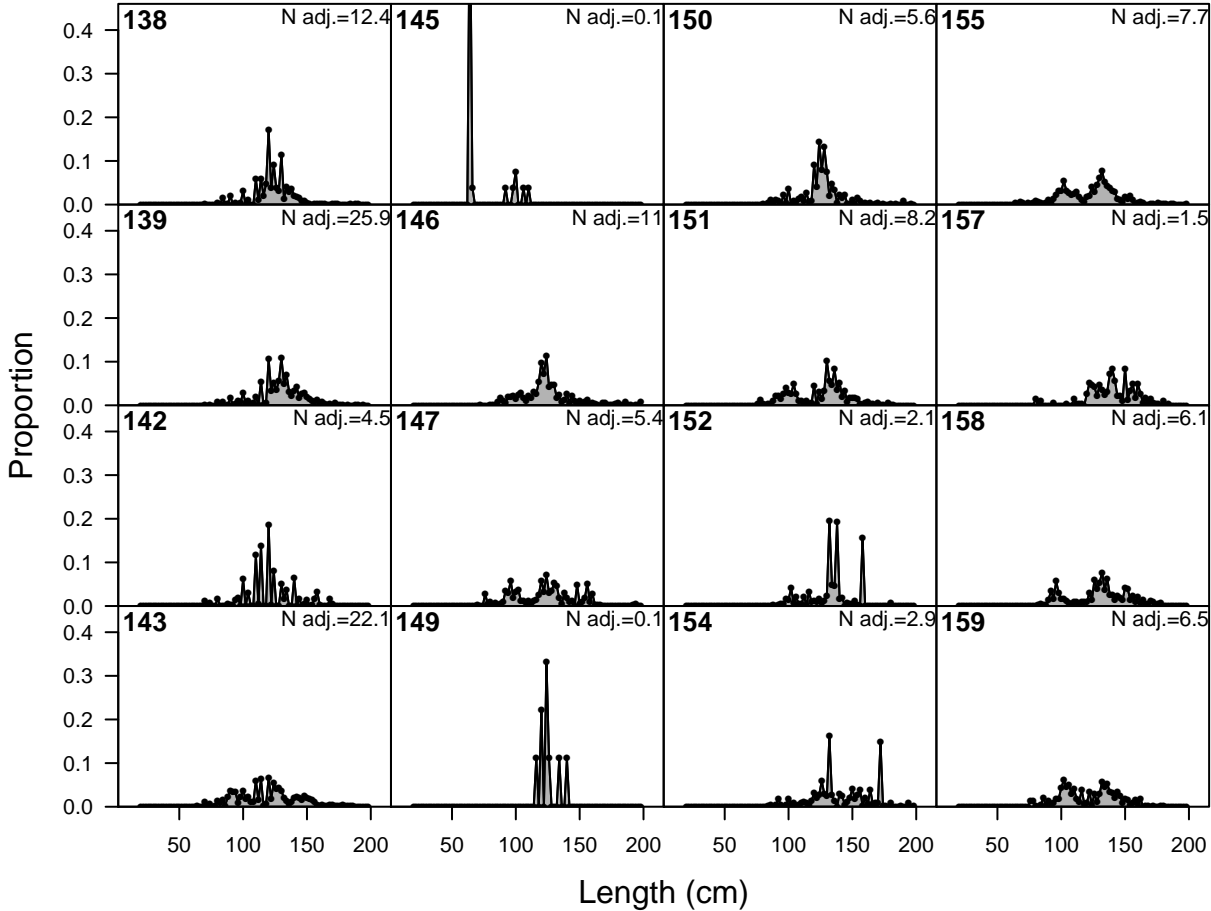


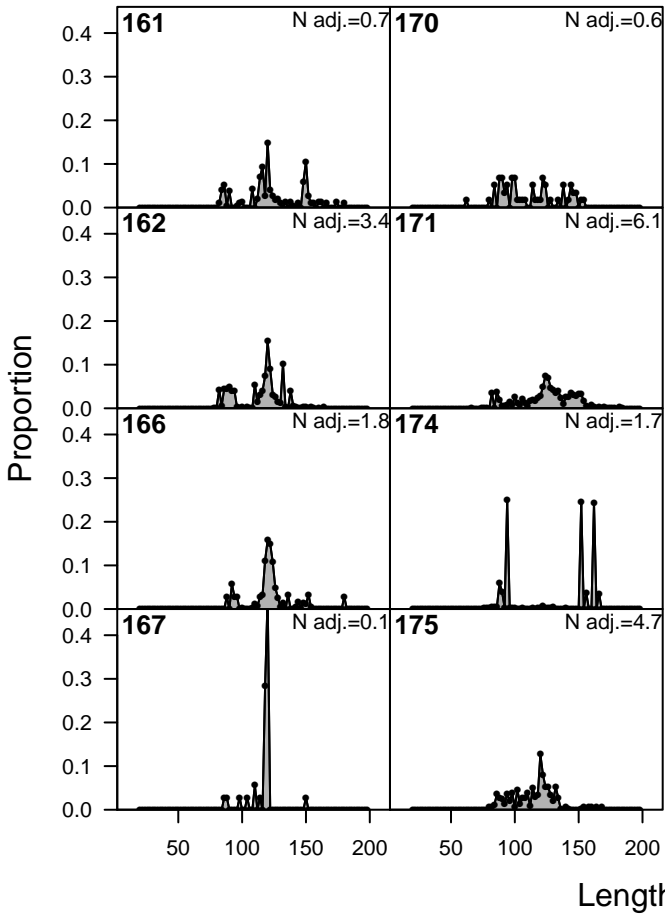


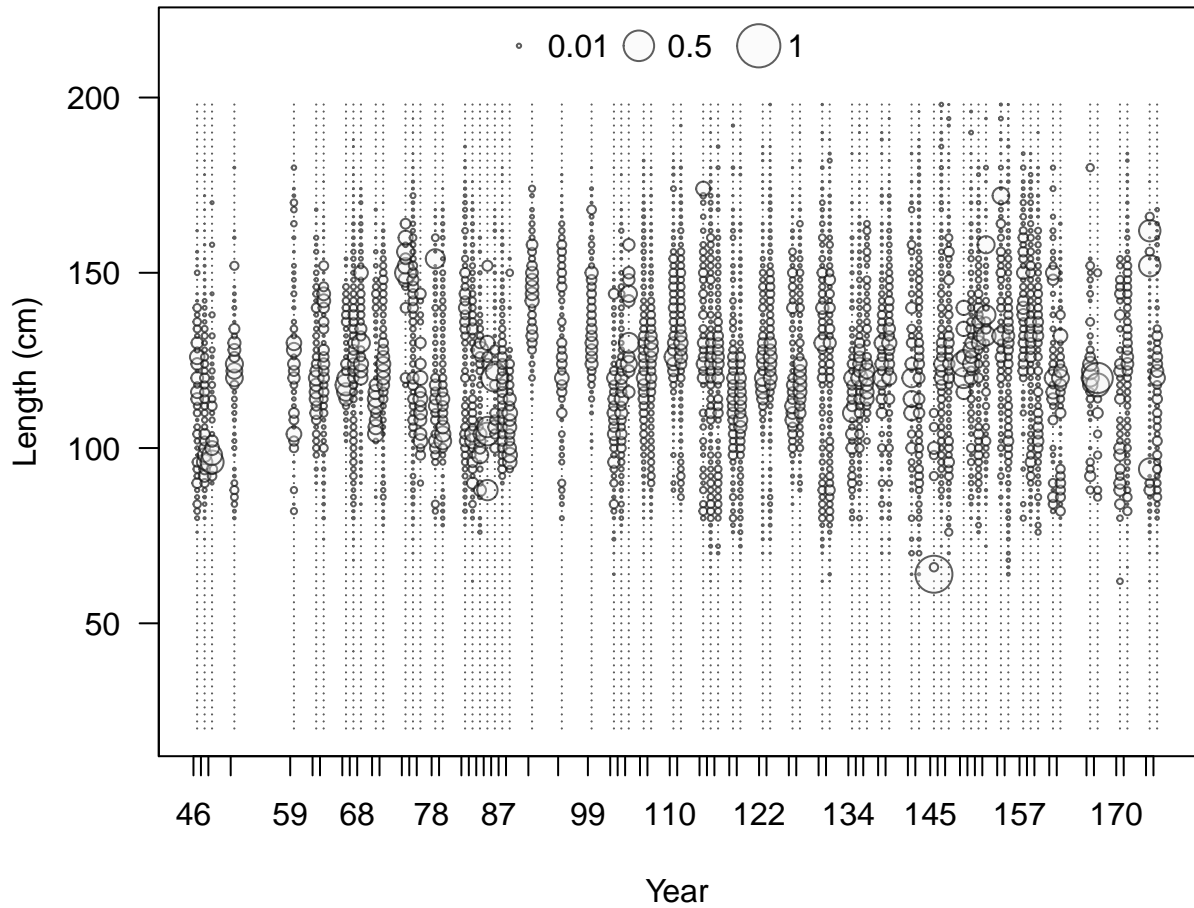




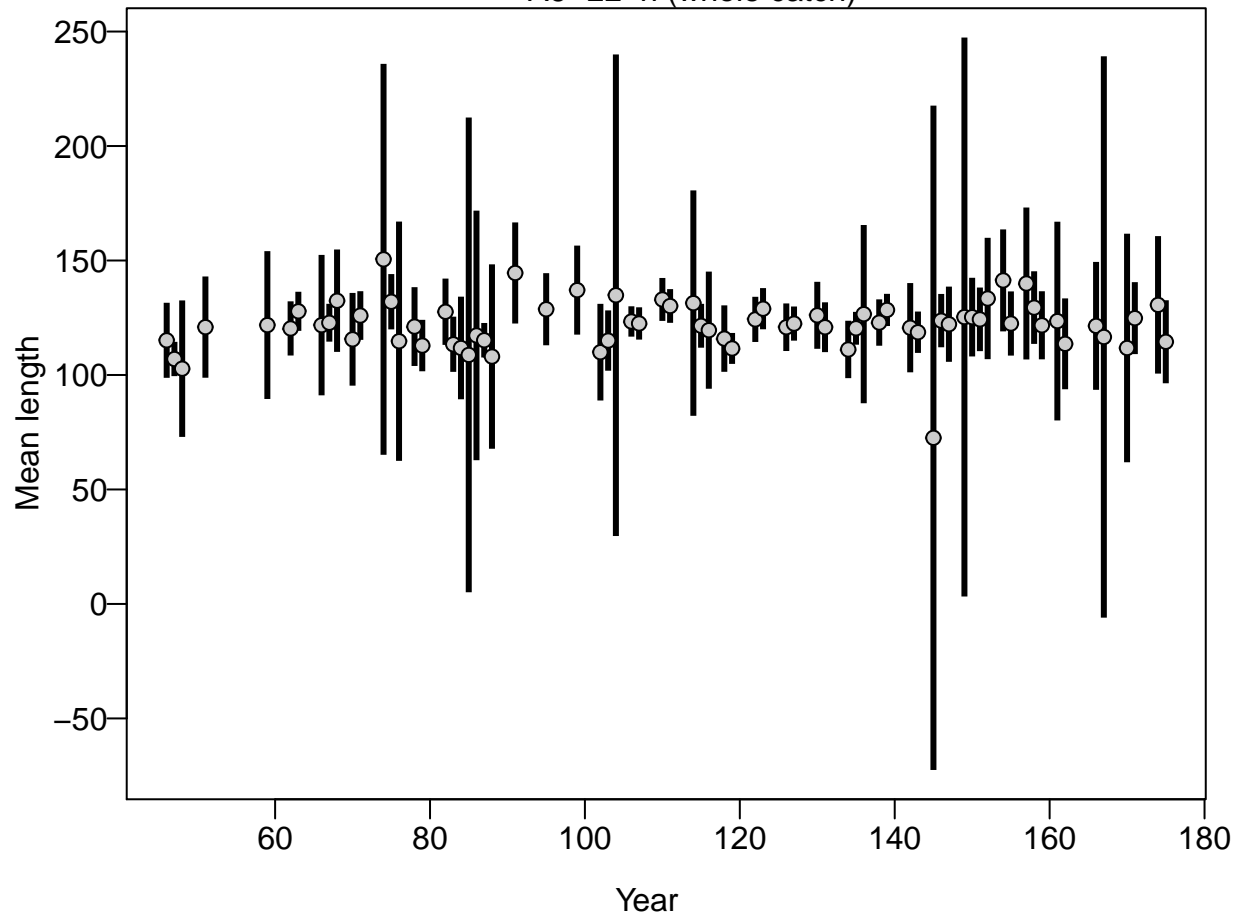


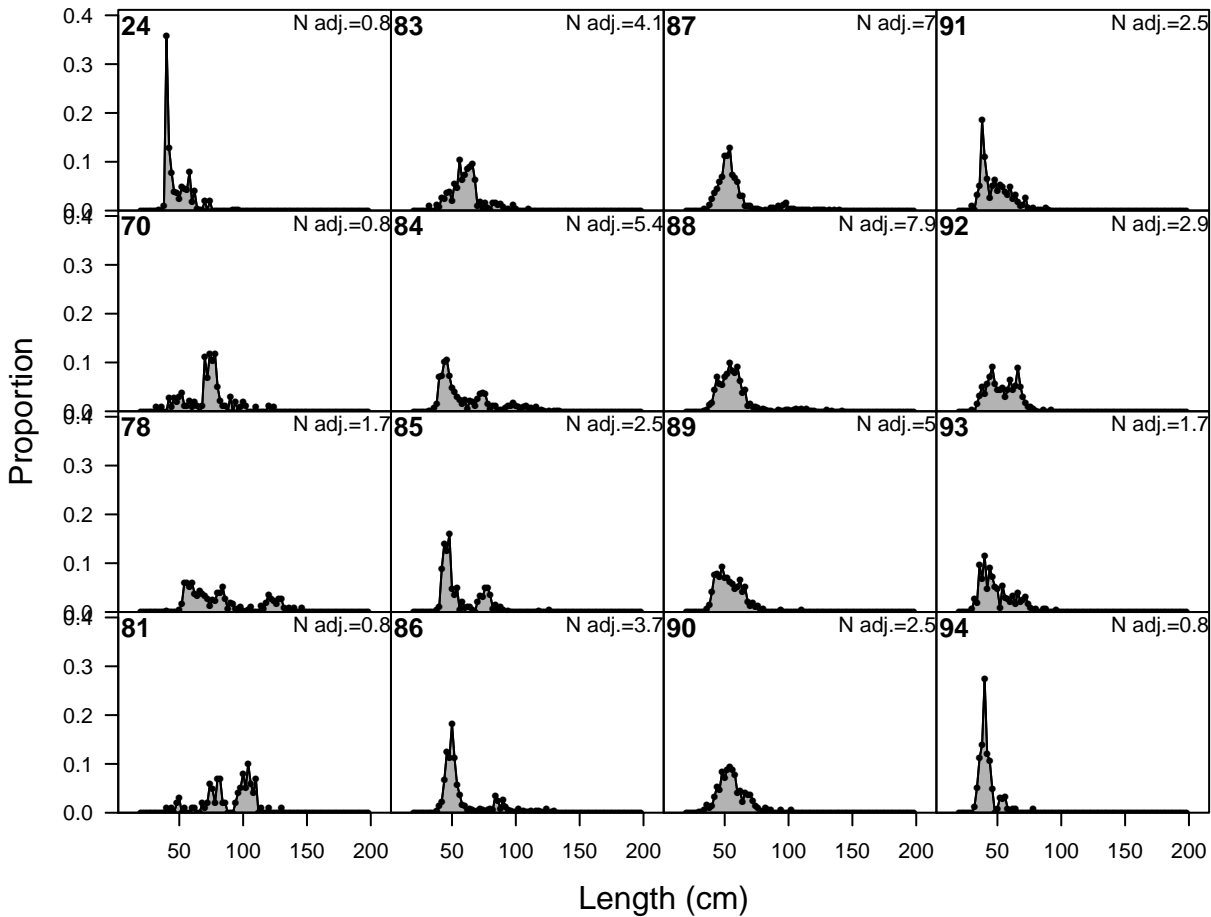




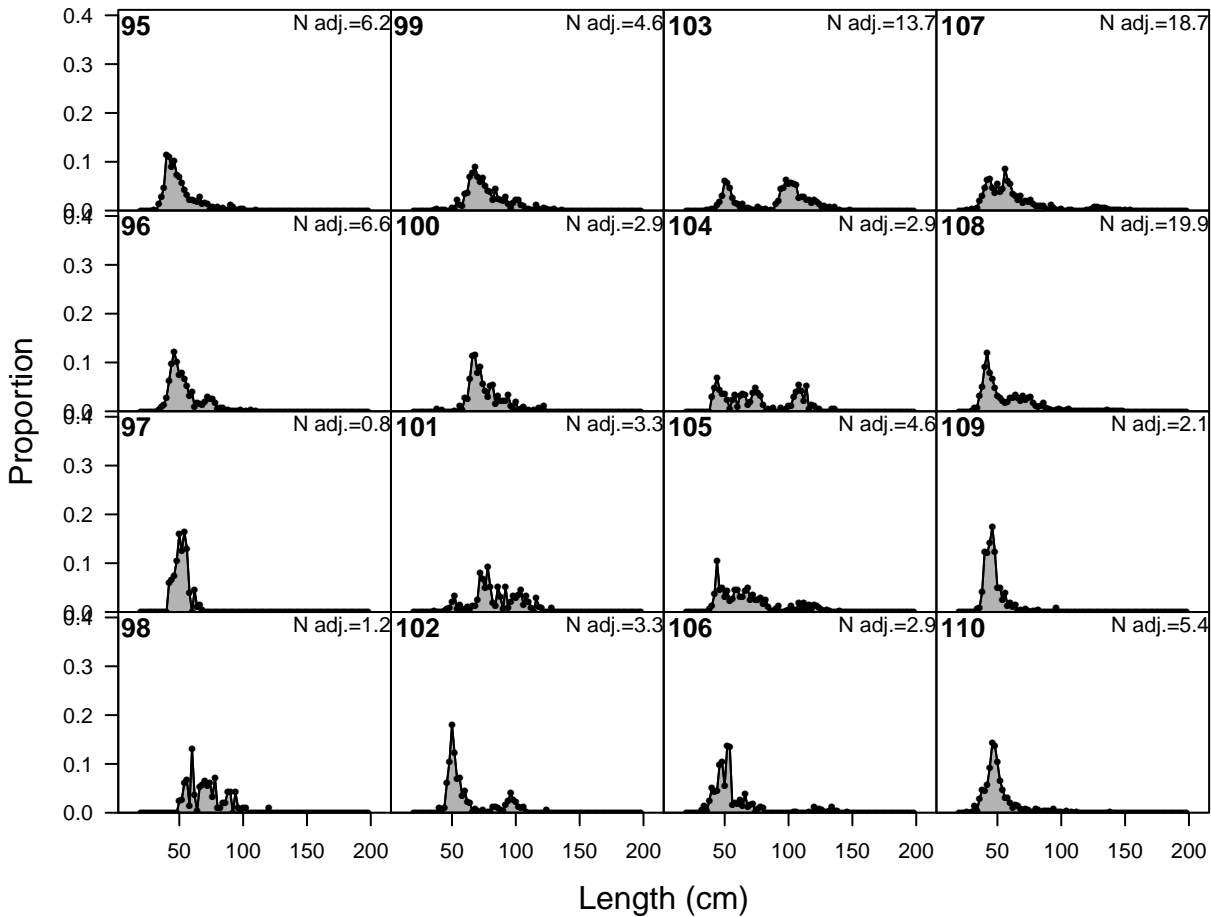


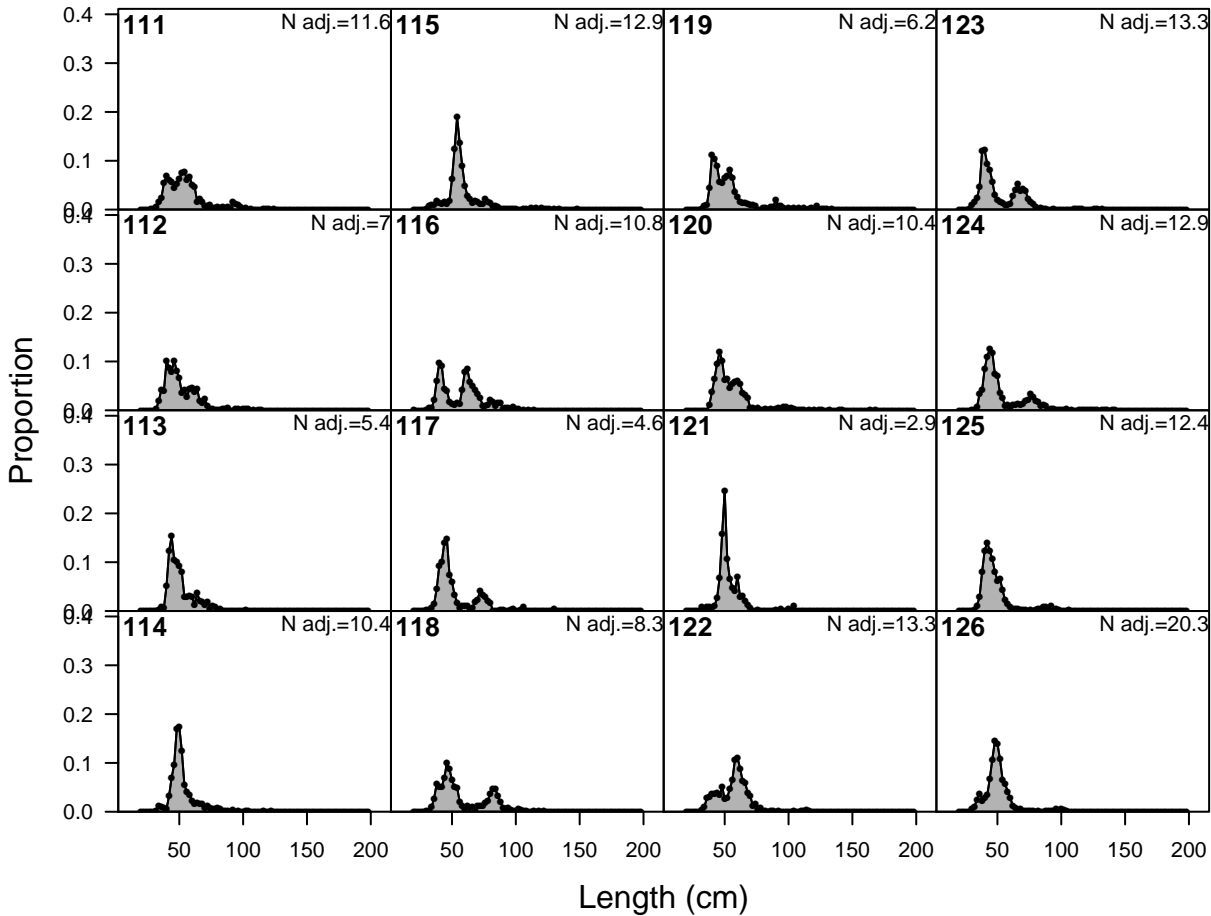
A6-LL-n (whole catch)

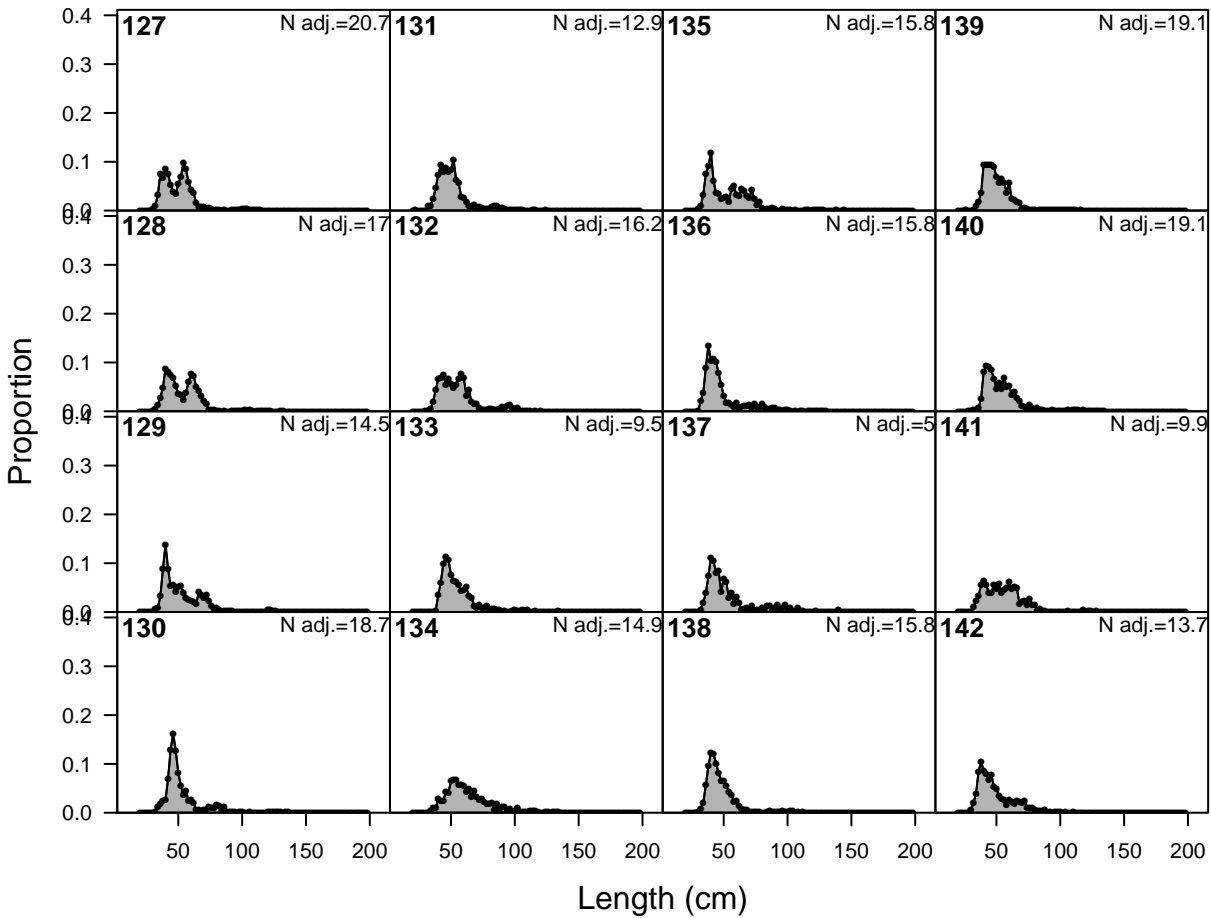


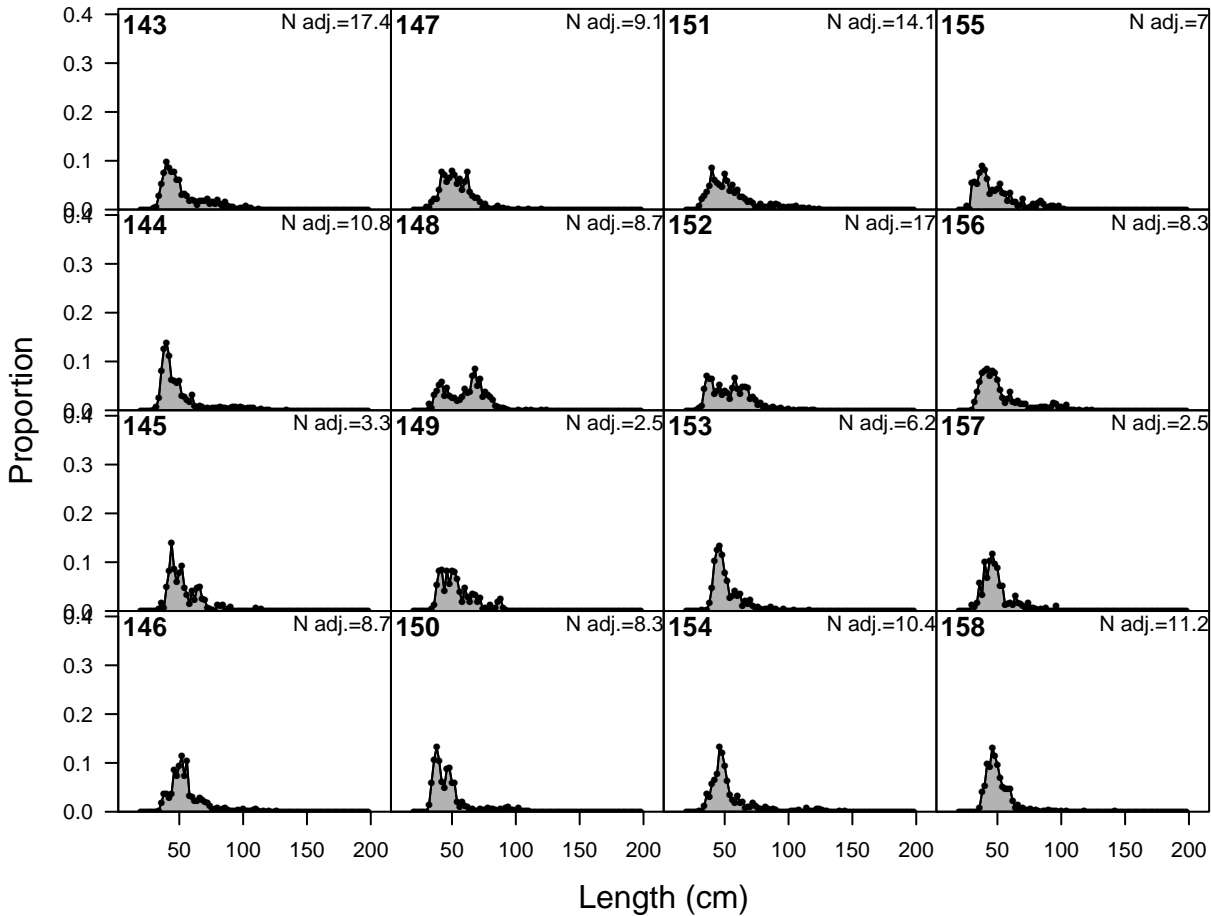


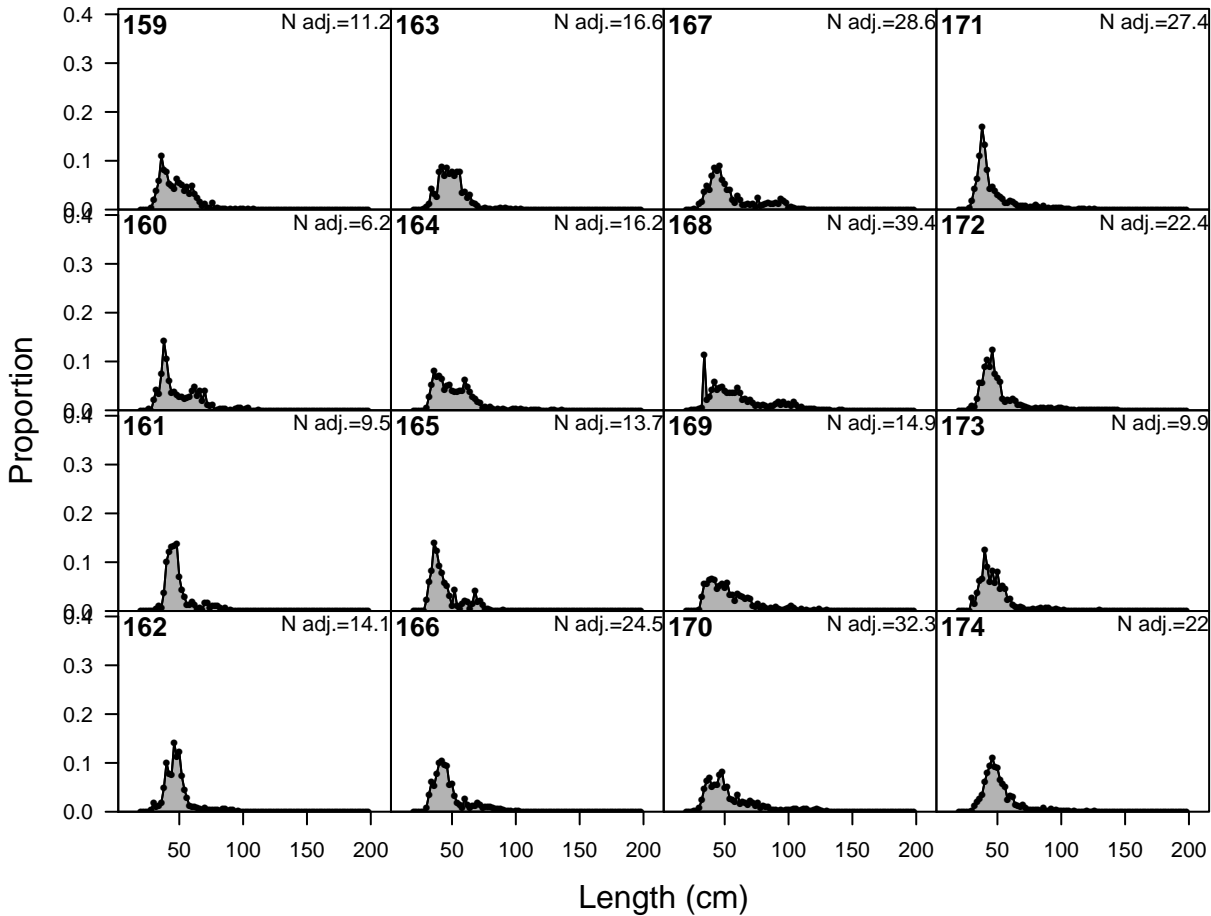


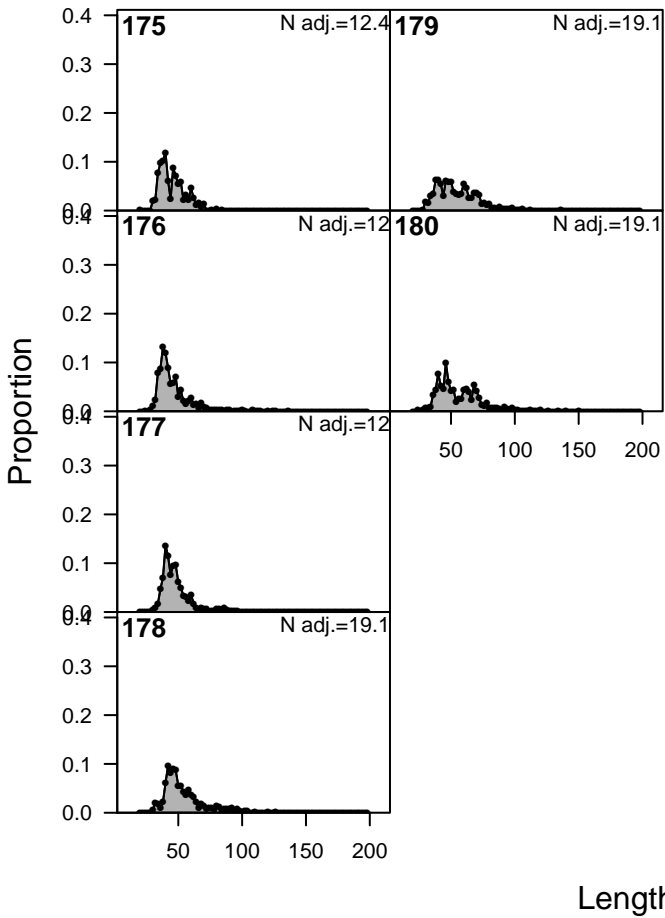


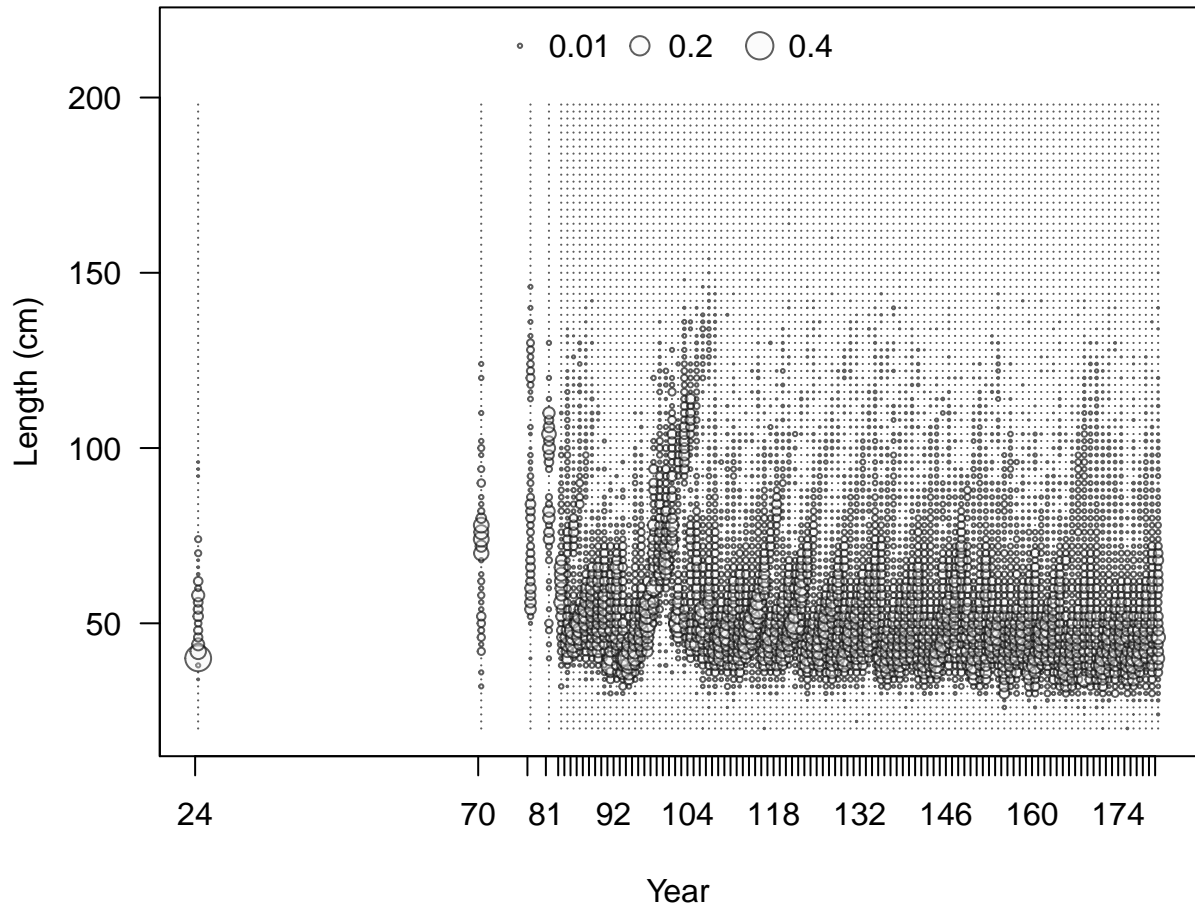




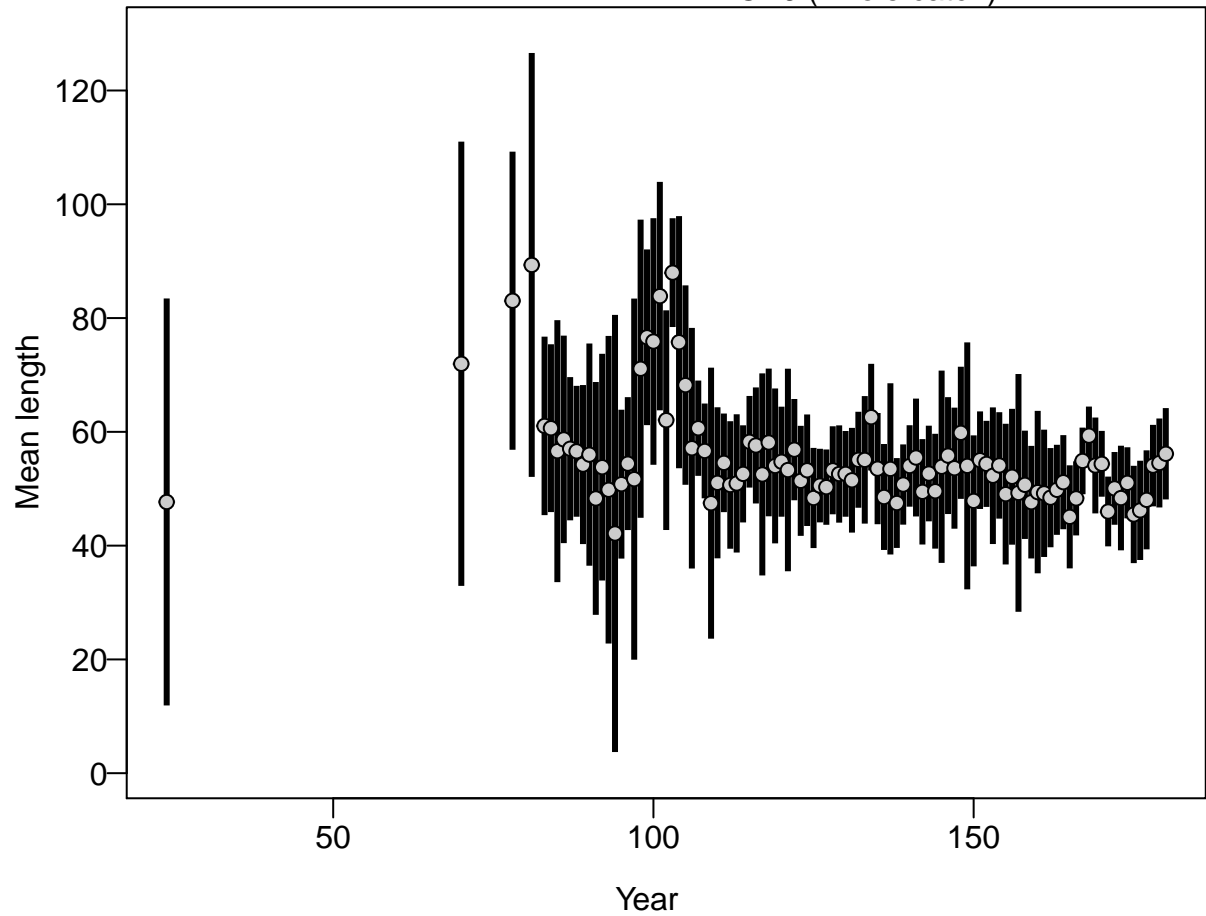




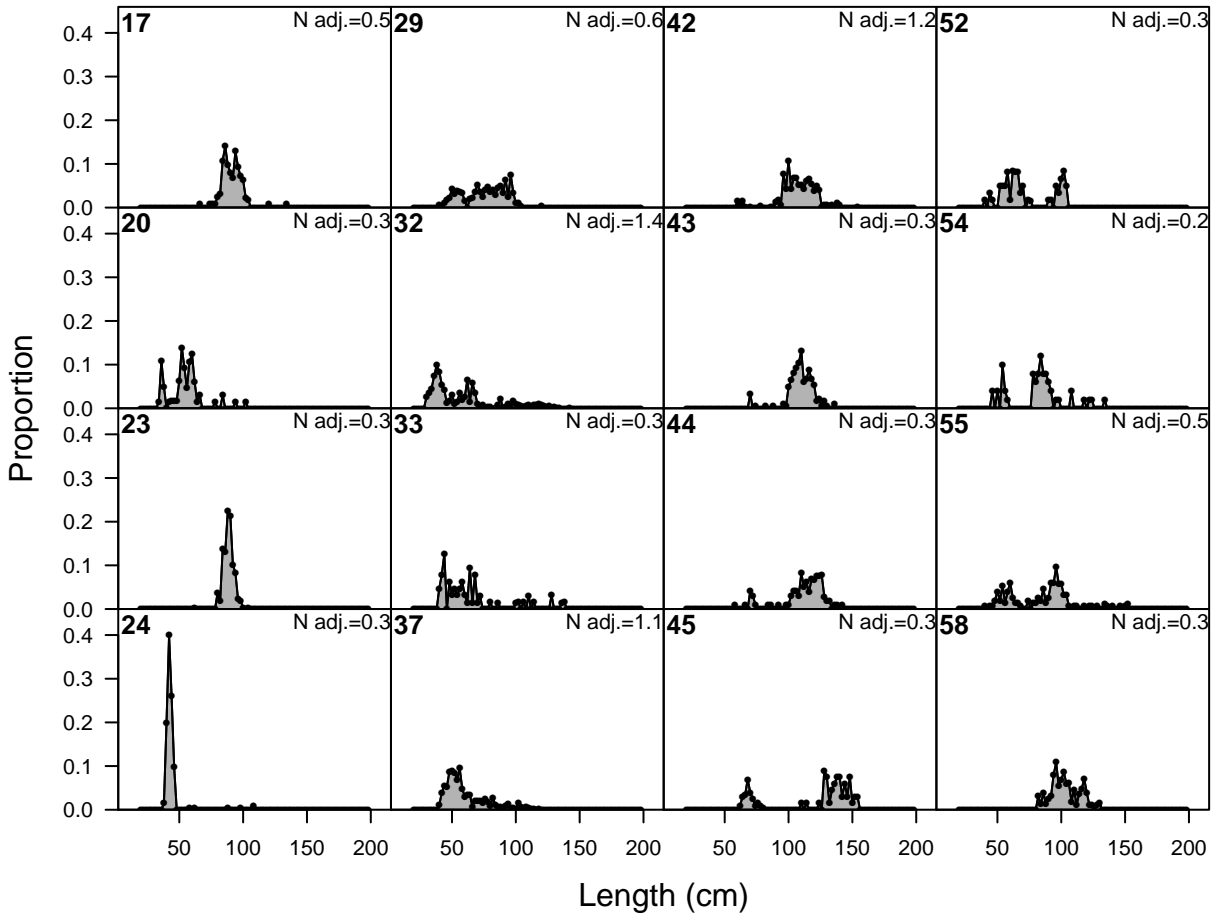


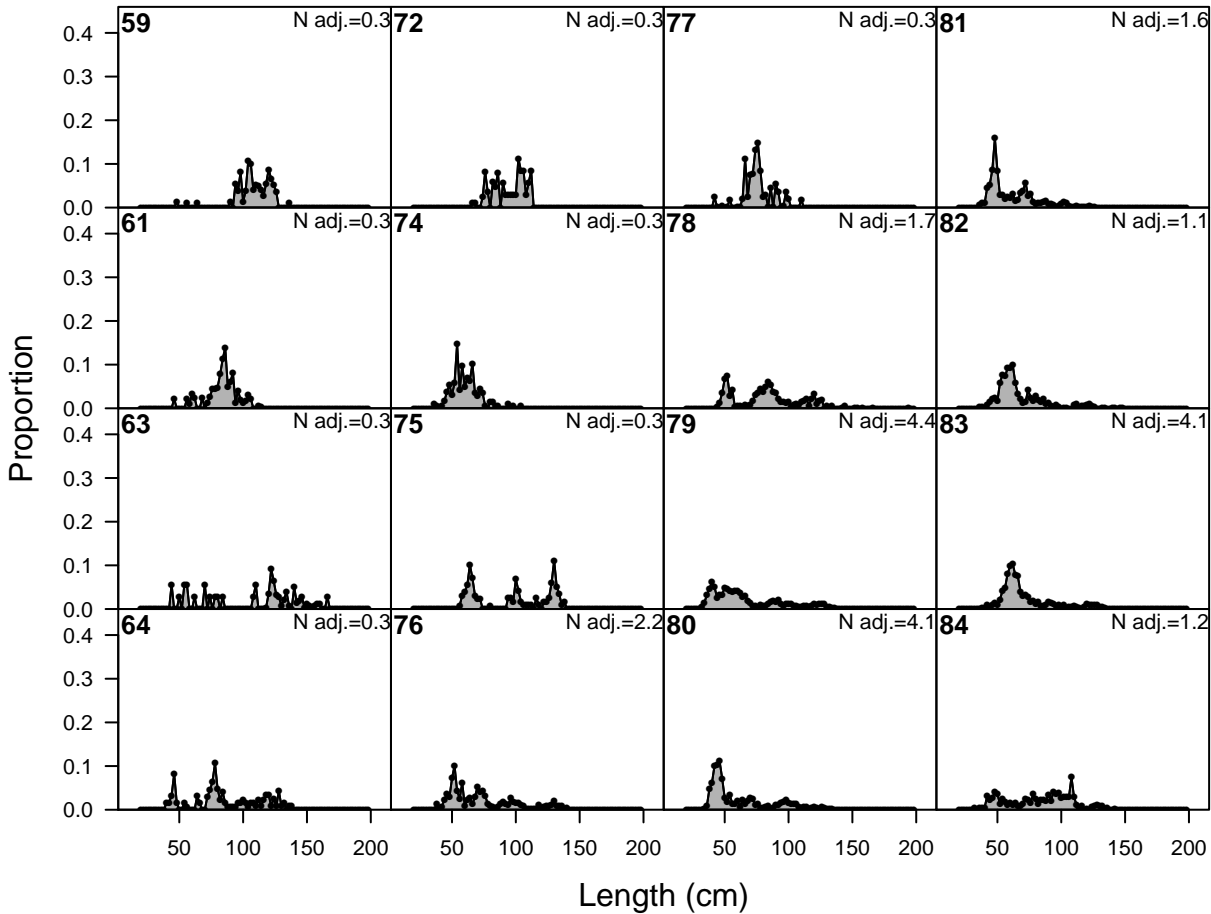


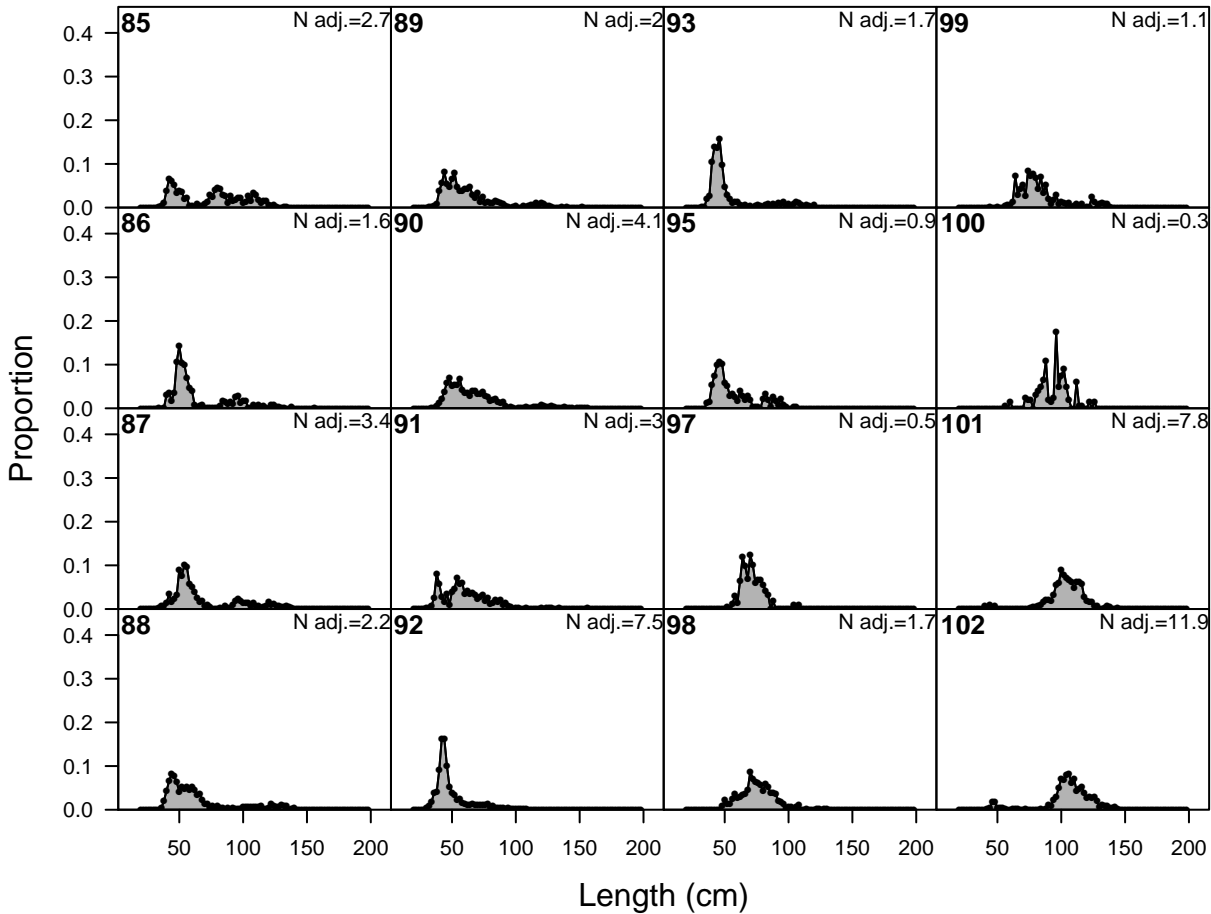
A2-OBJ (whole catch)

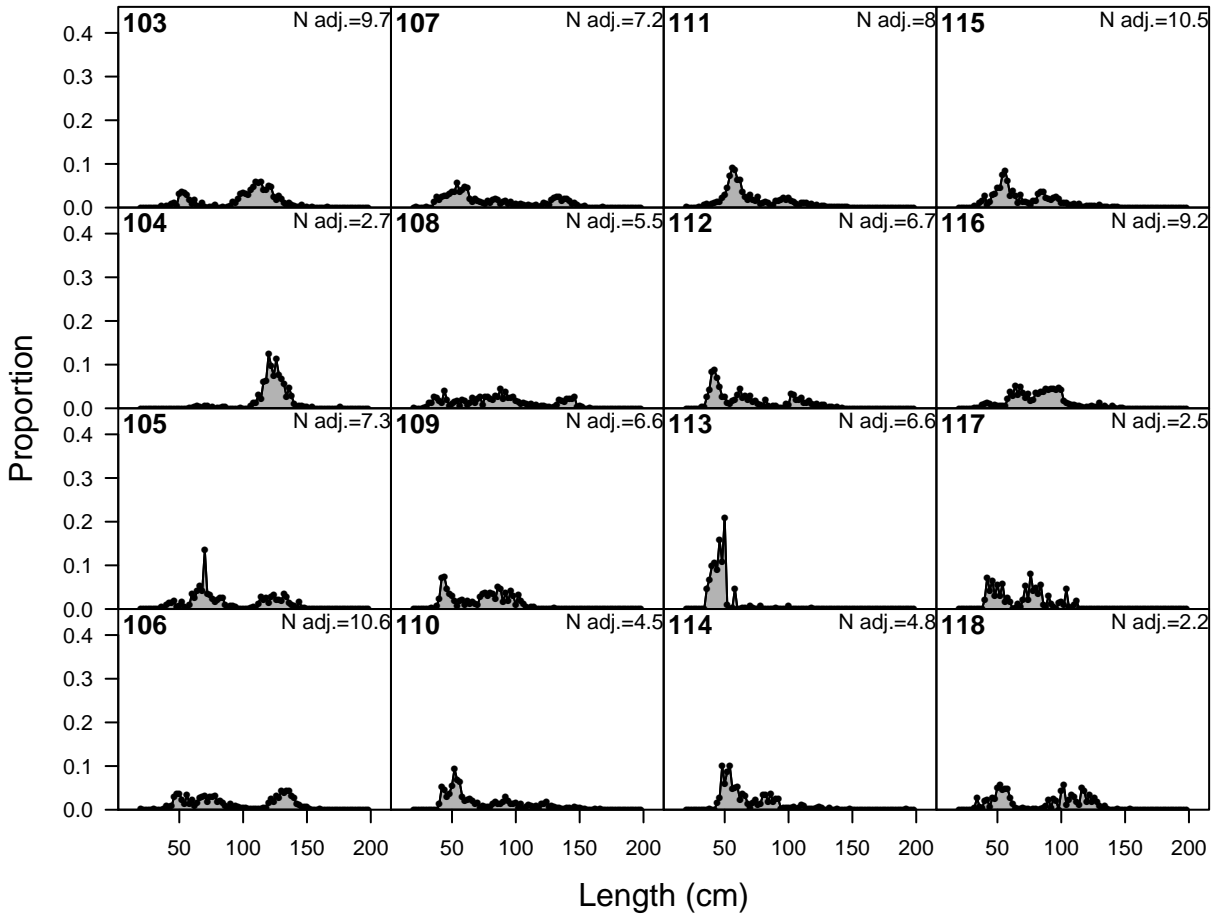


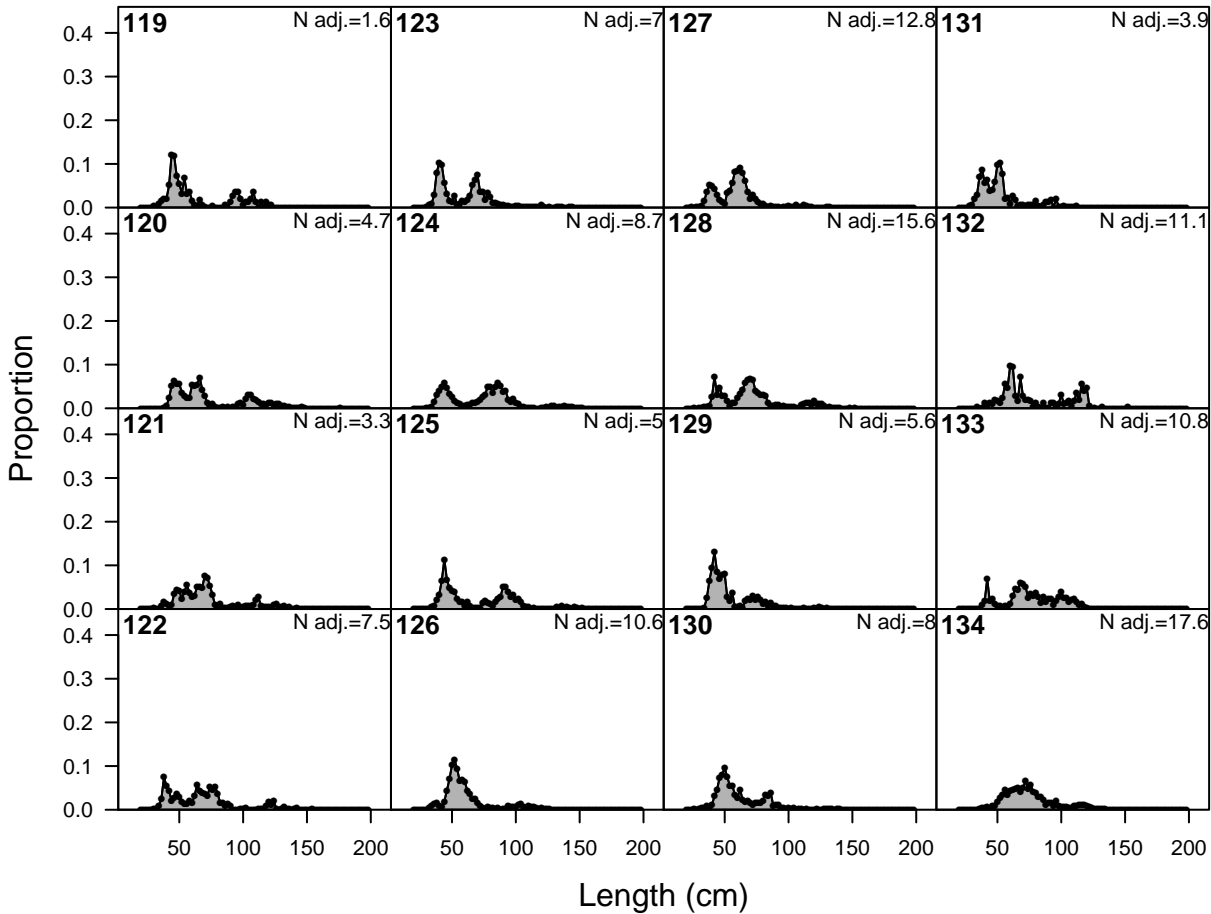




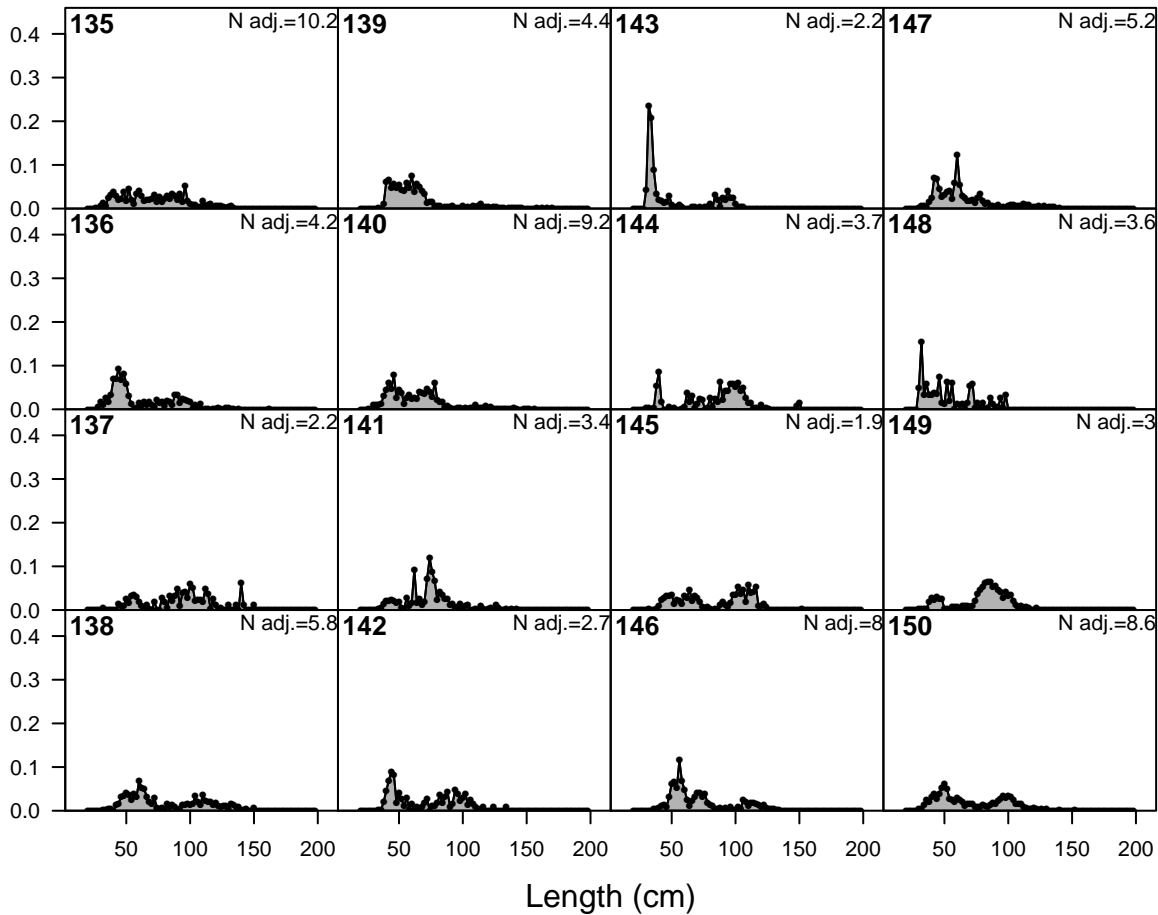


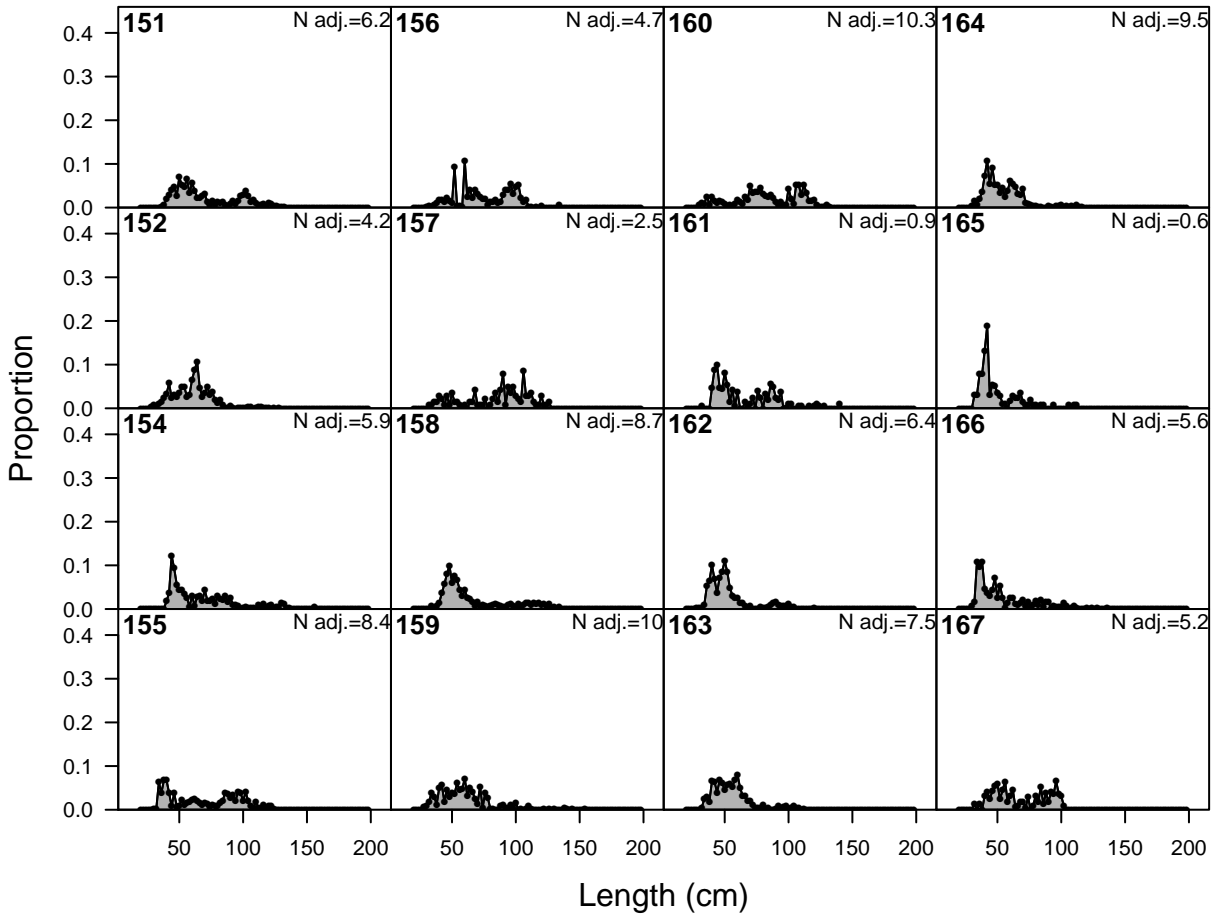


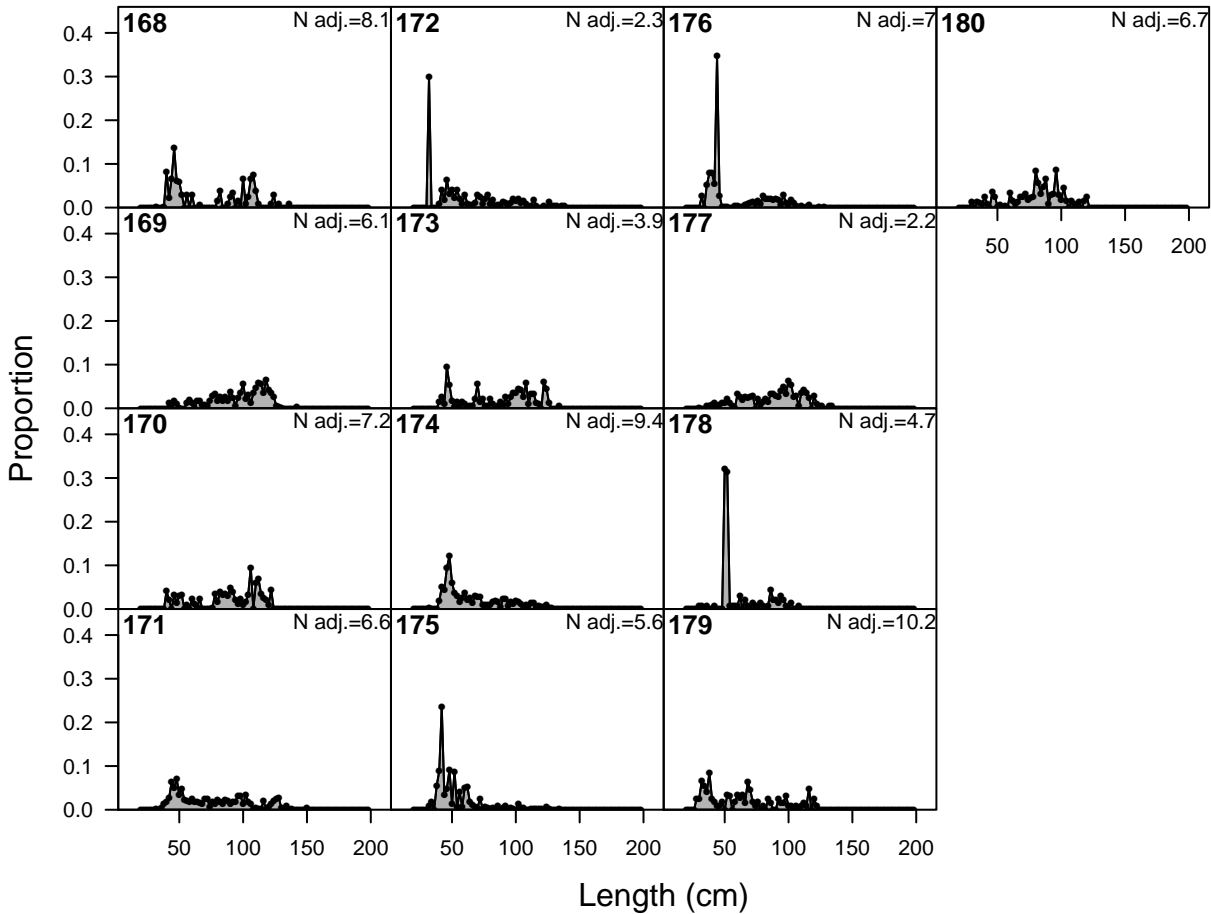




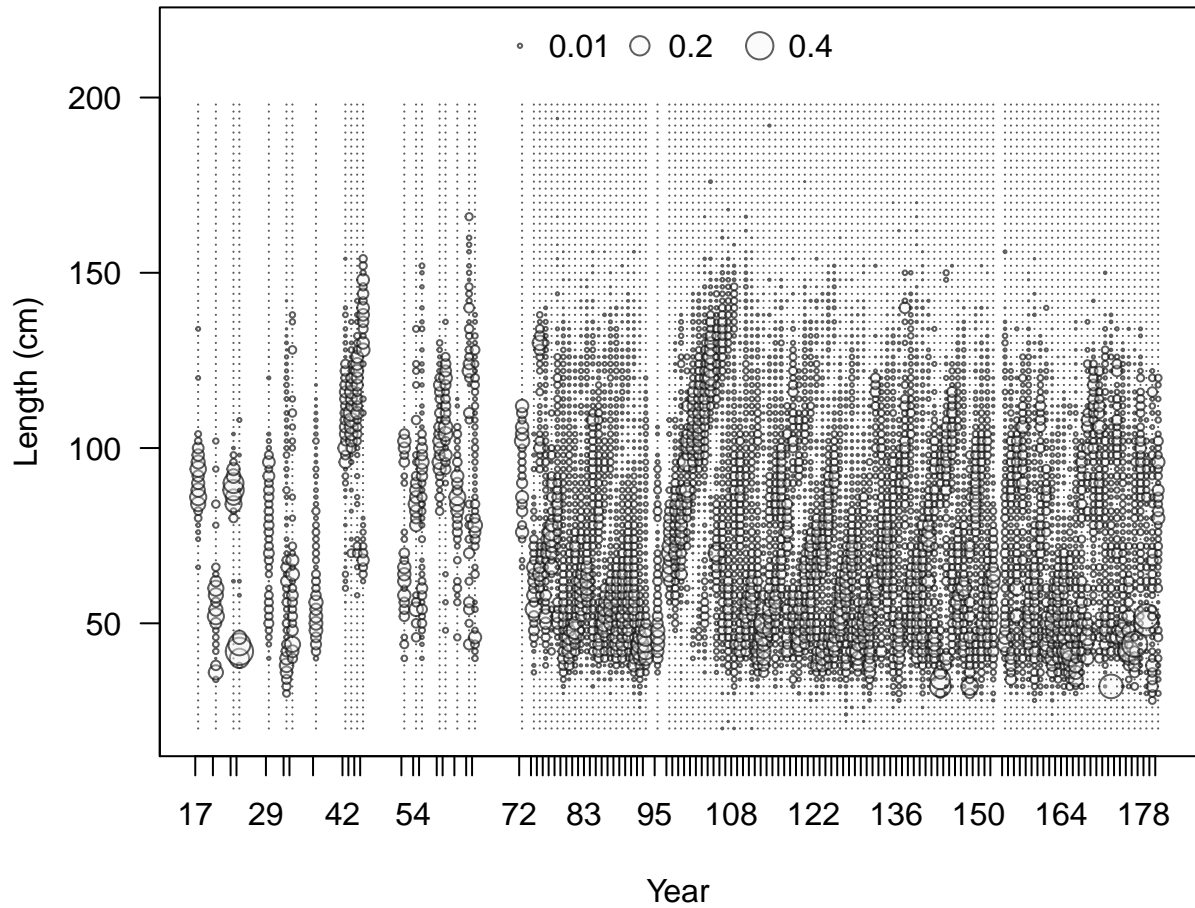
Proportion



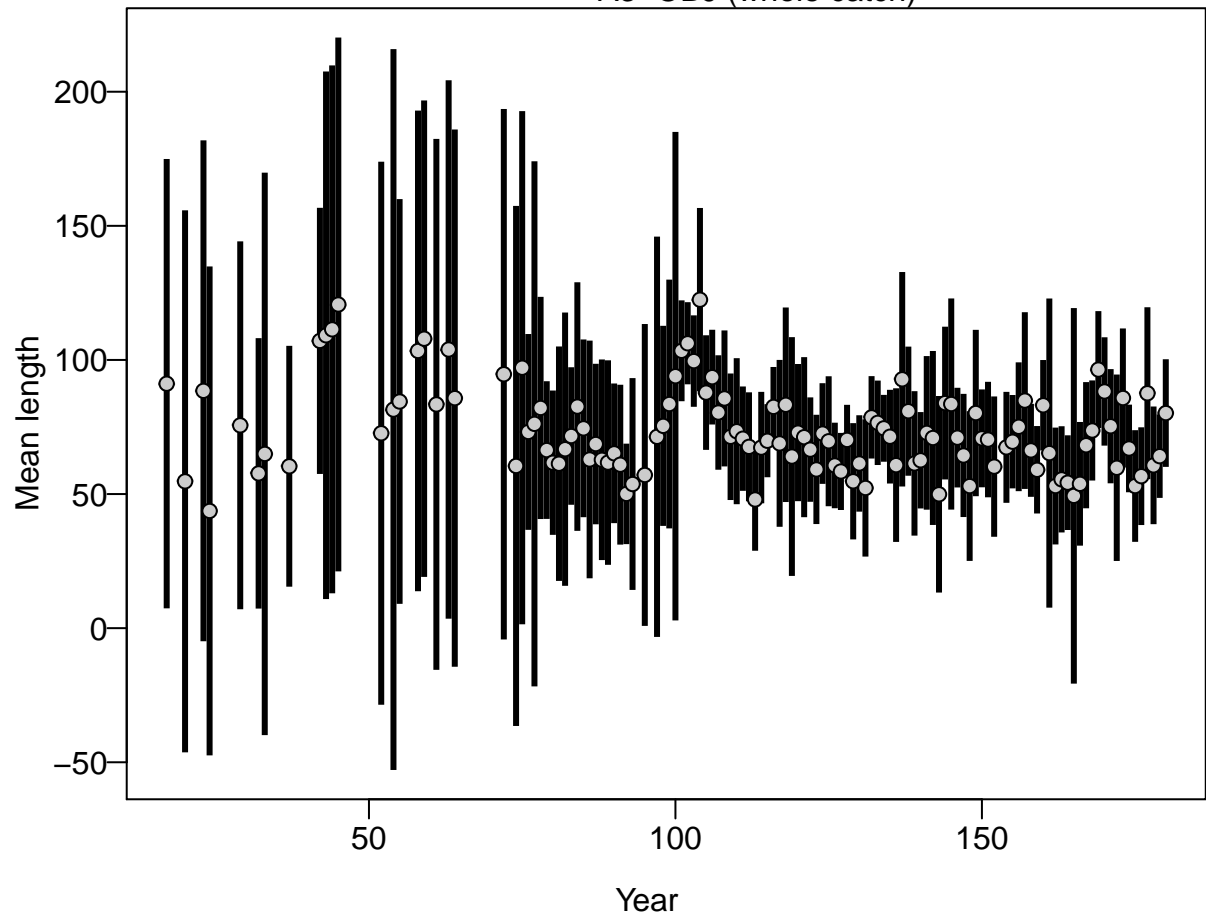




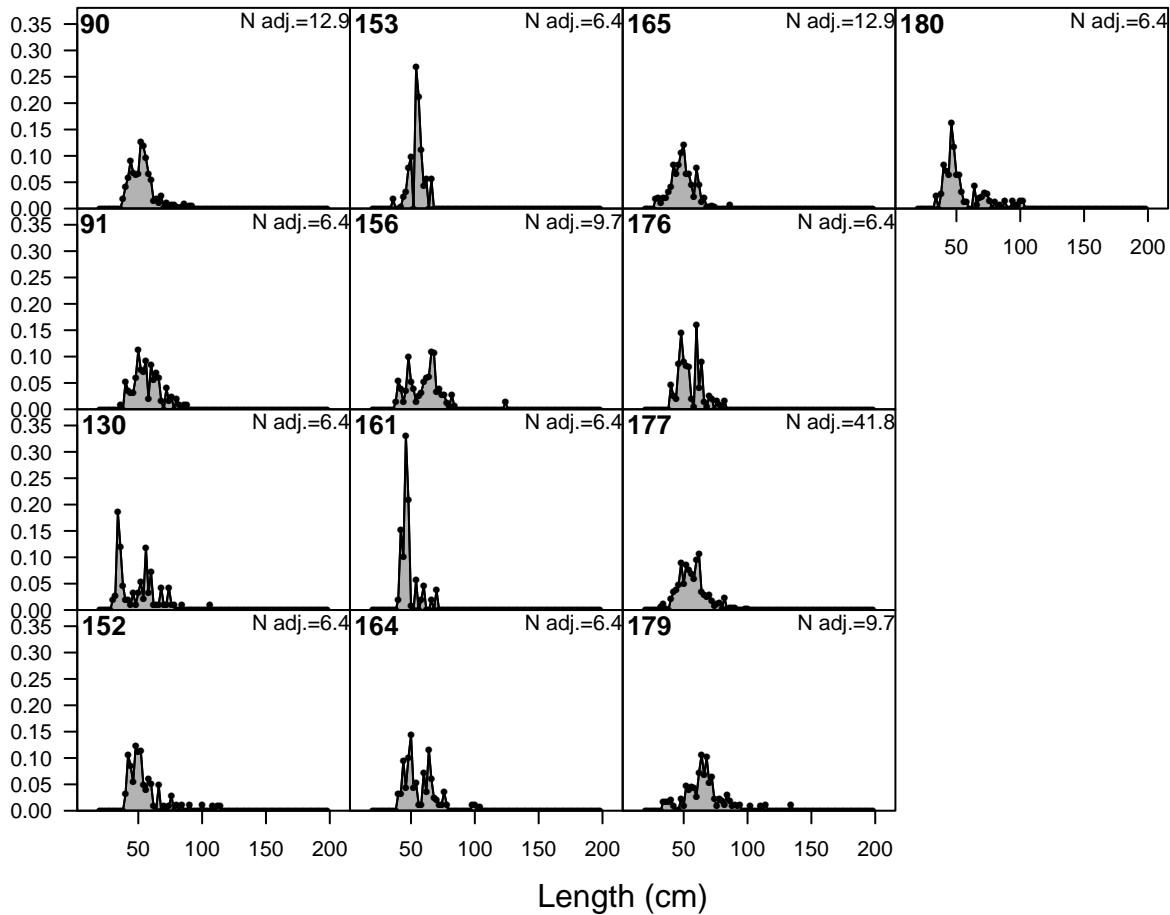


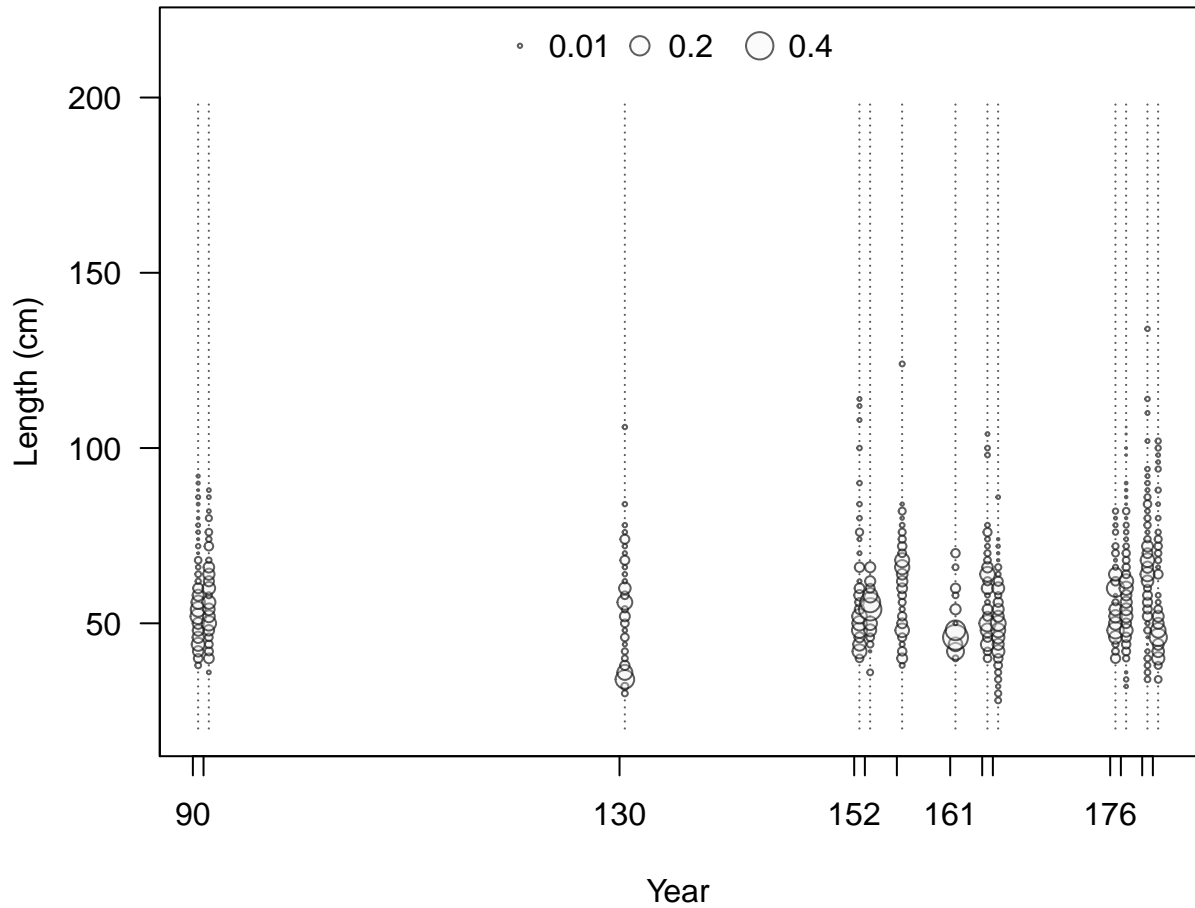


## A3-OBJ (whole catch)

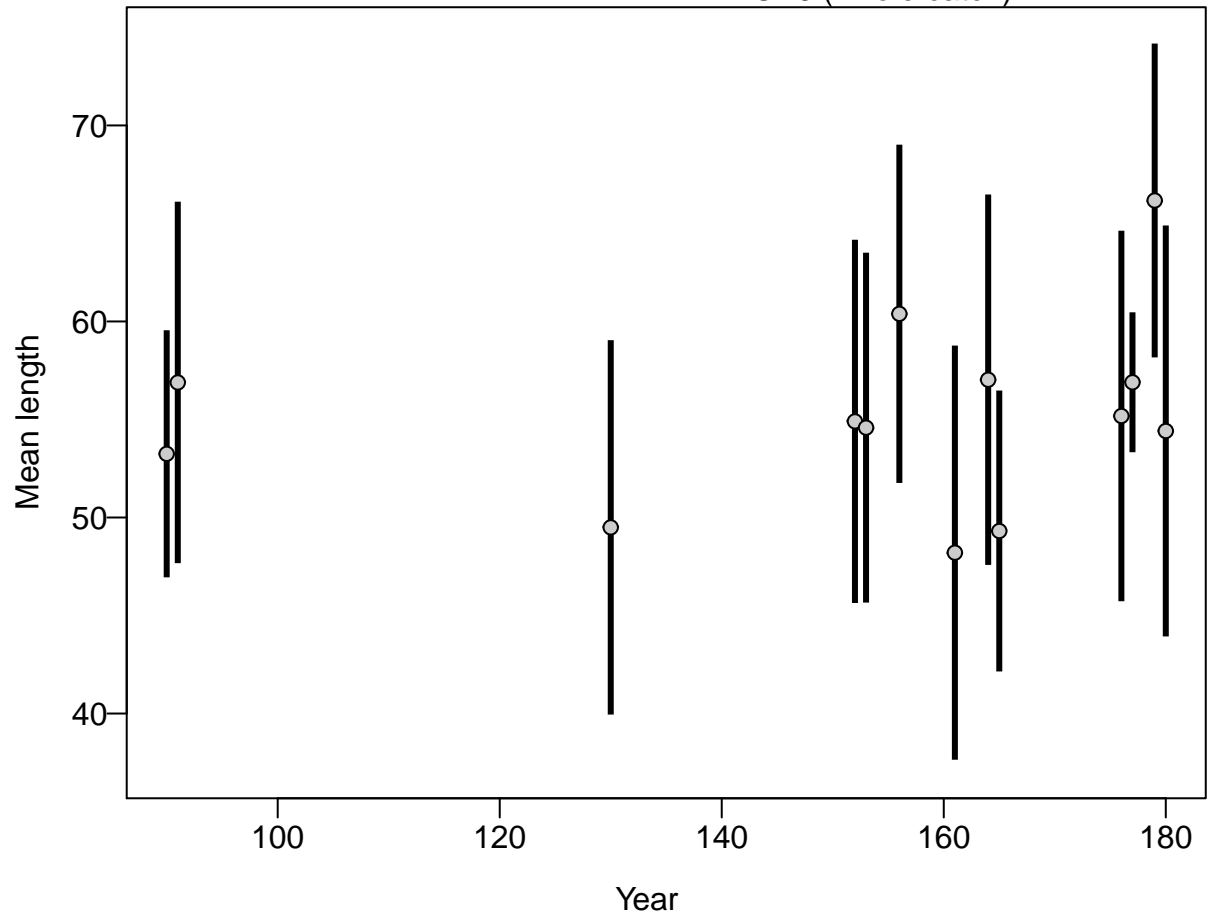


Proportion

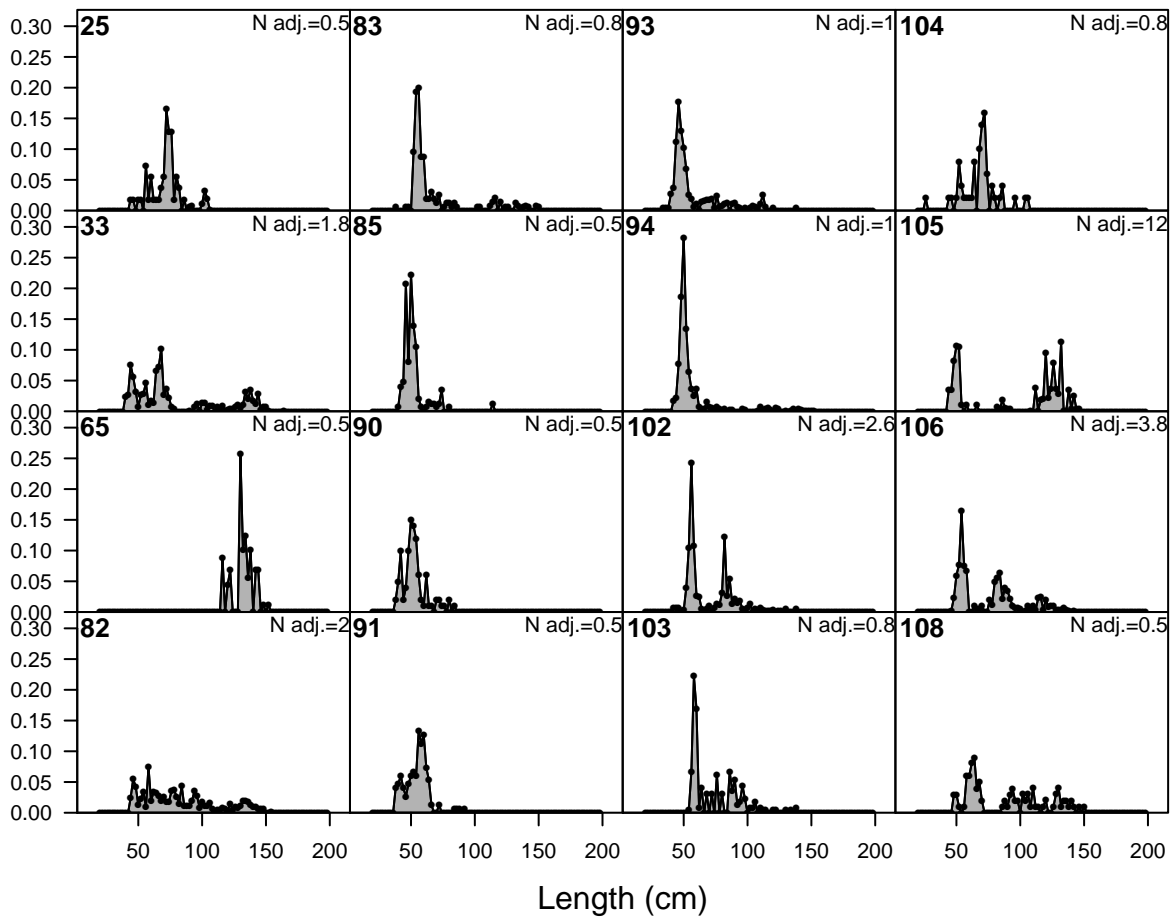




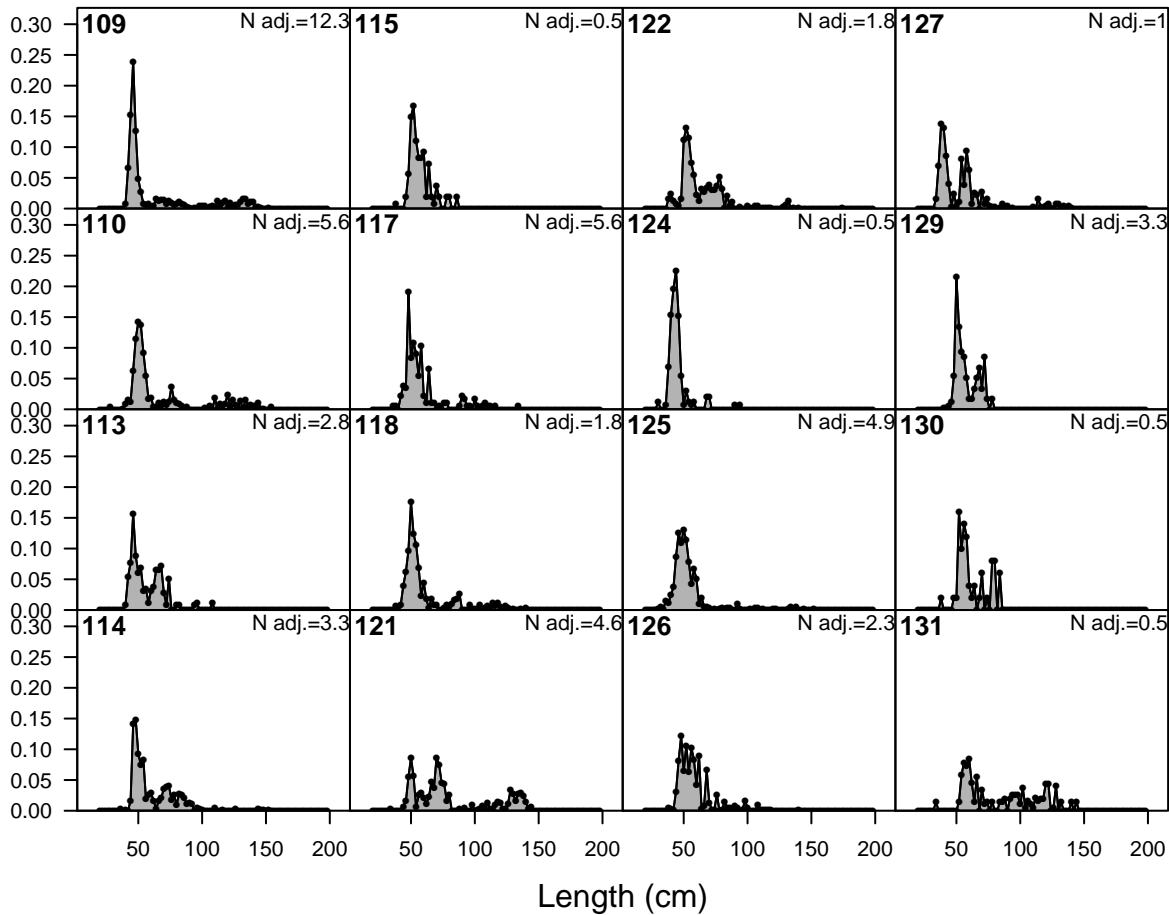
## A4-OBJ (whole catch)



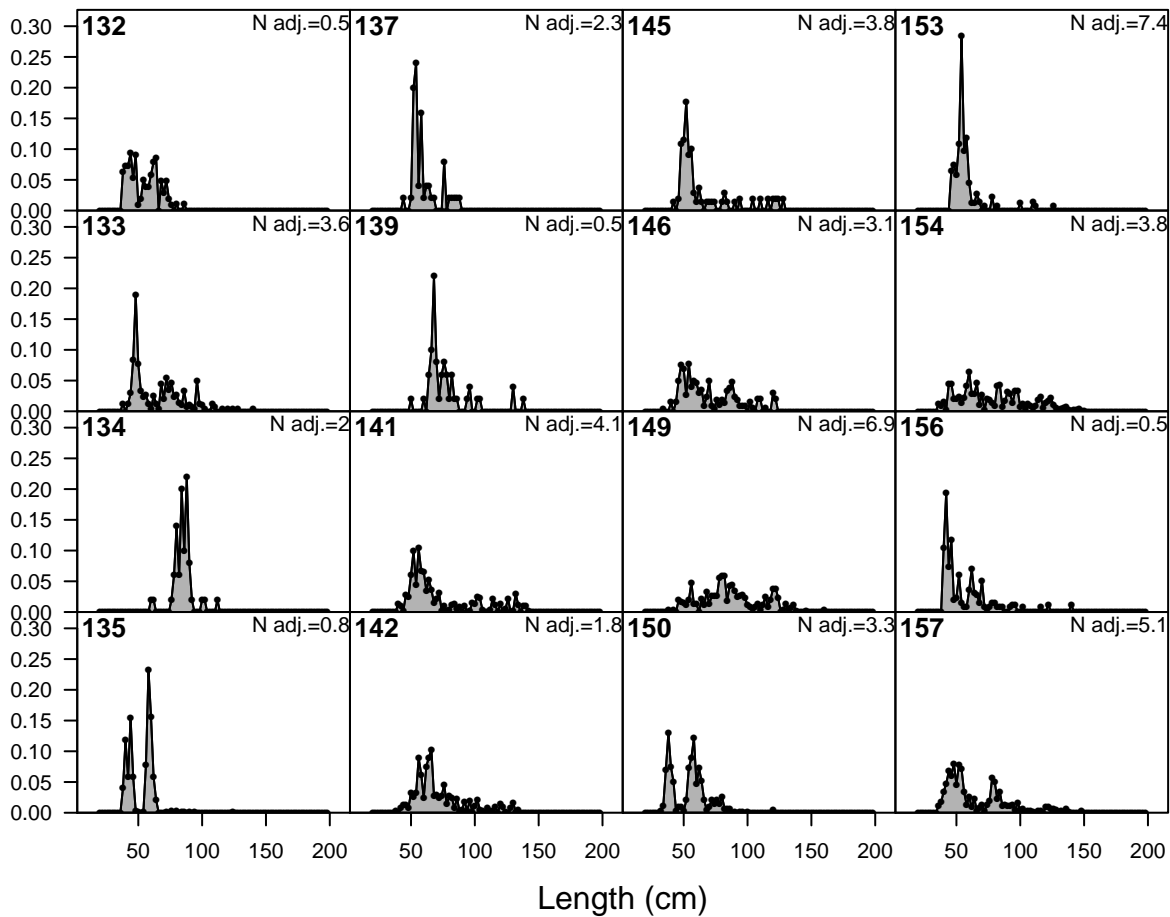
Proportion



Proportion

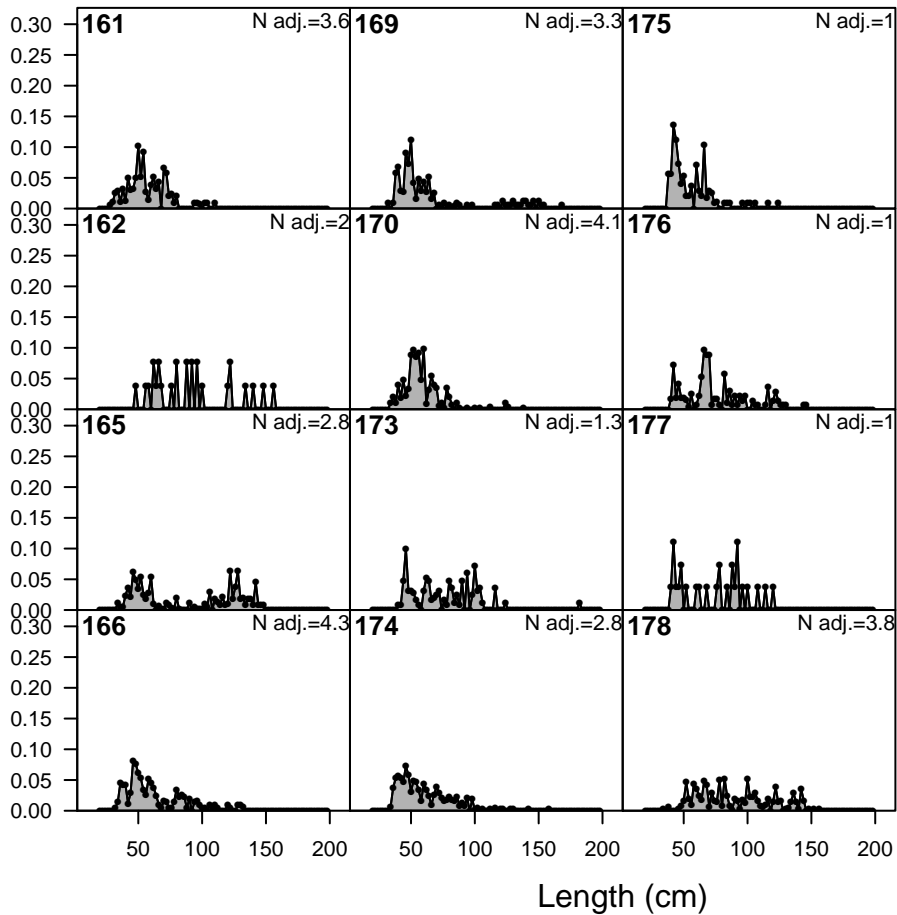


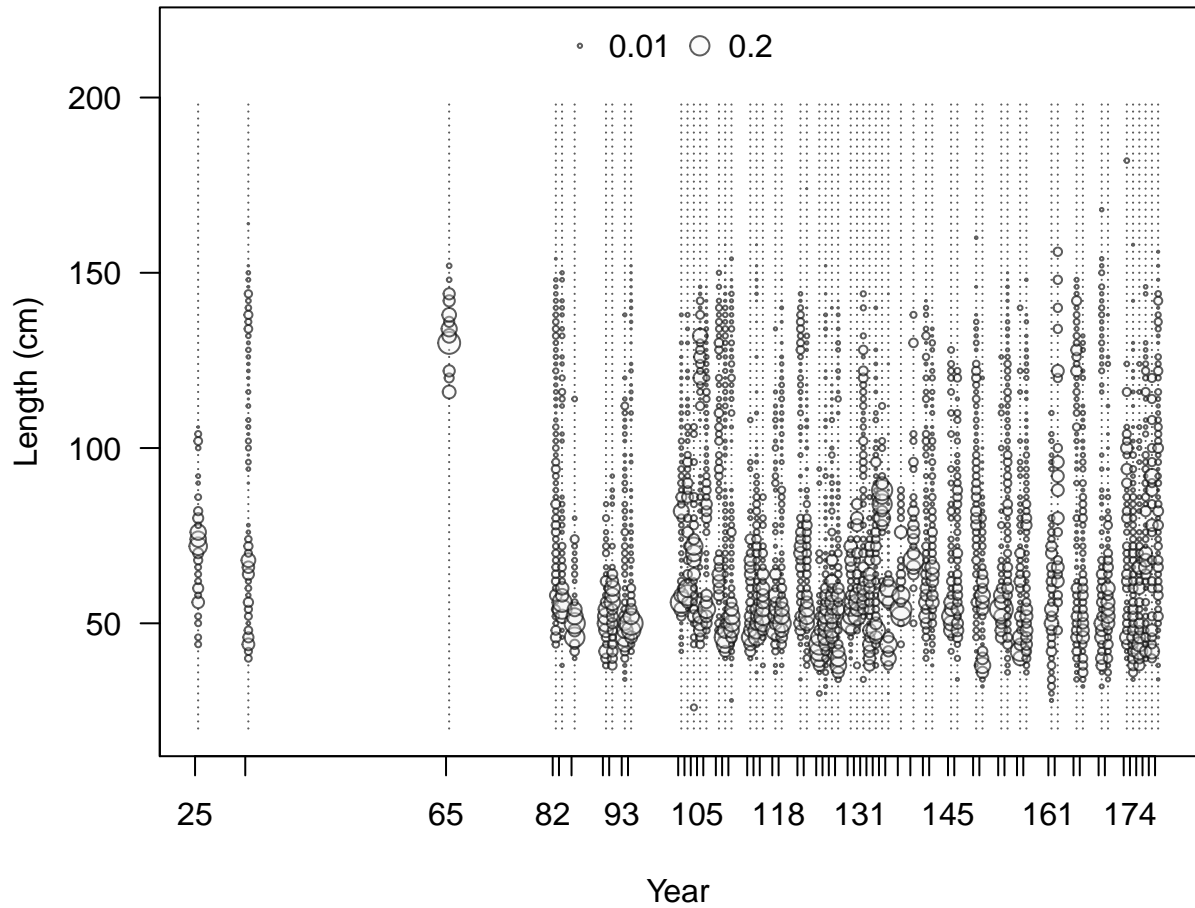
Proportion



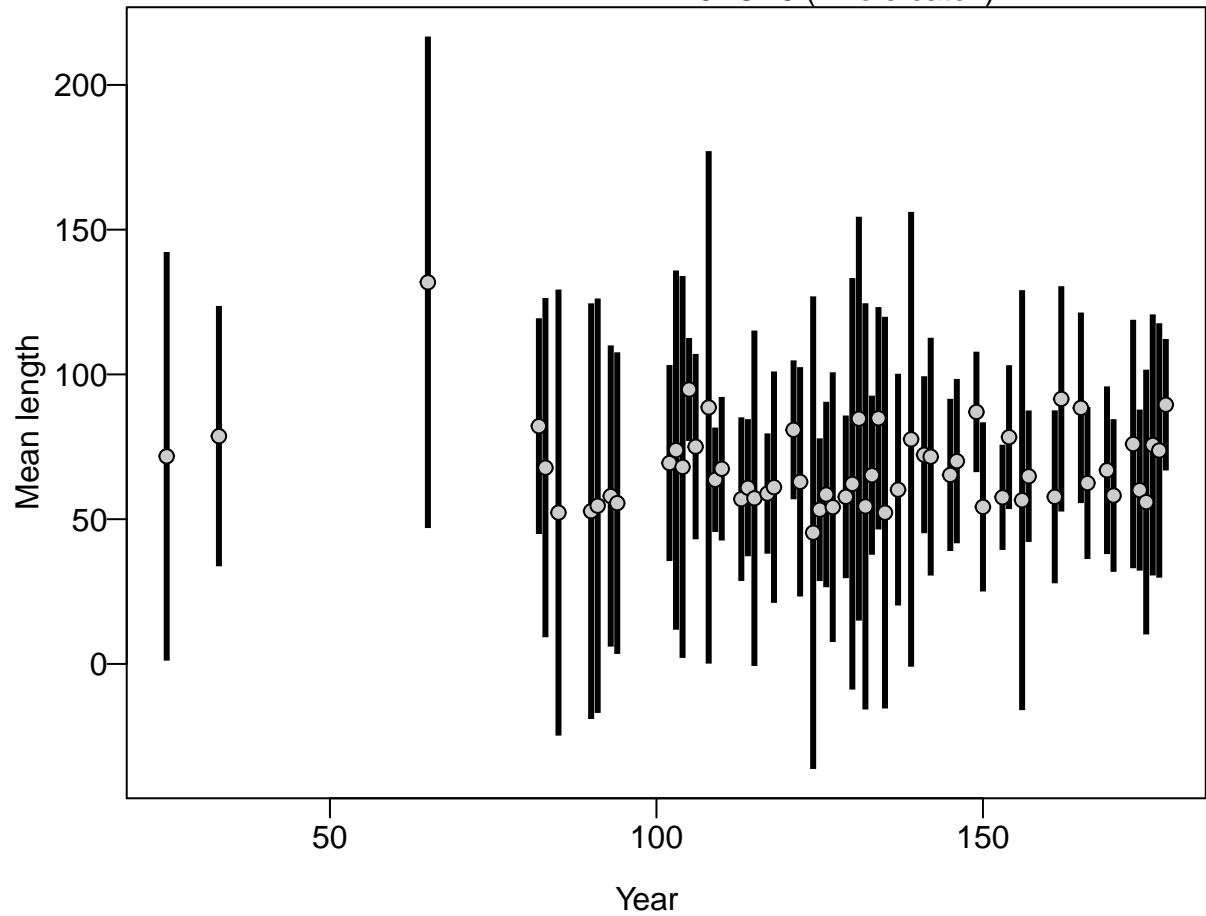


Proportion

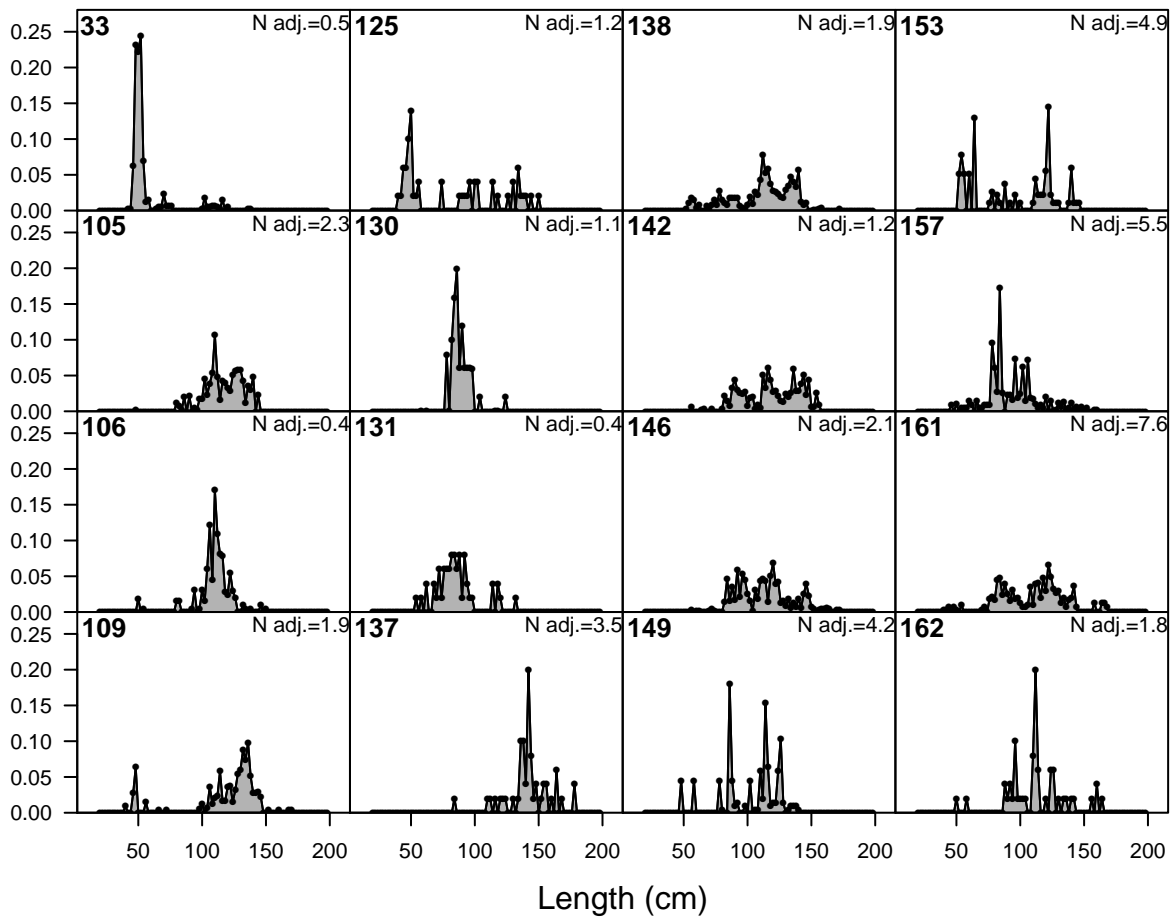


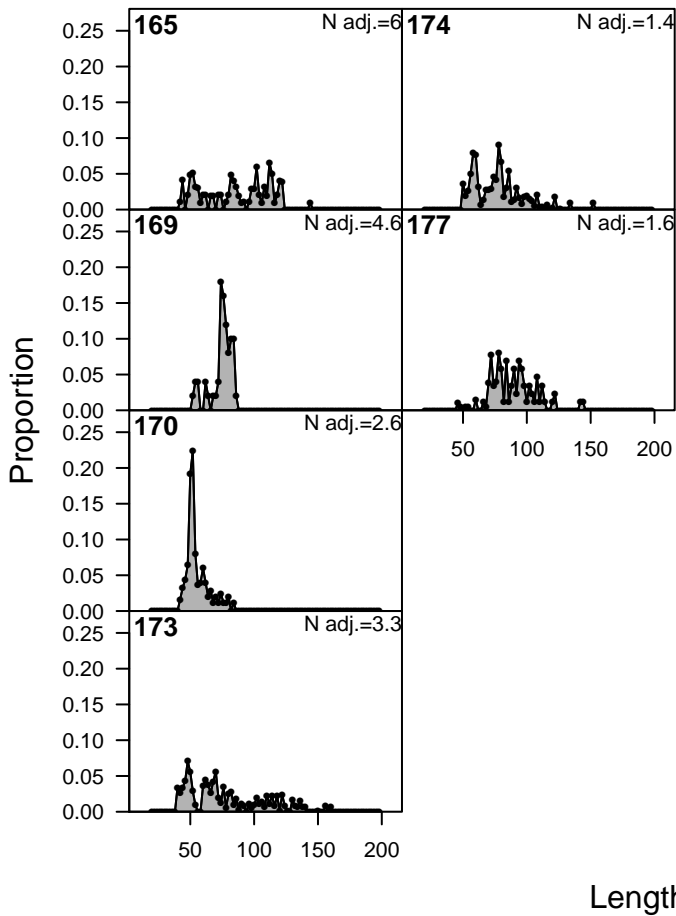


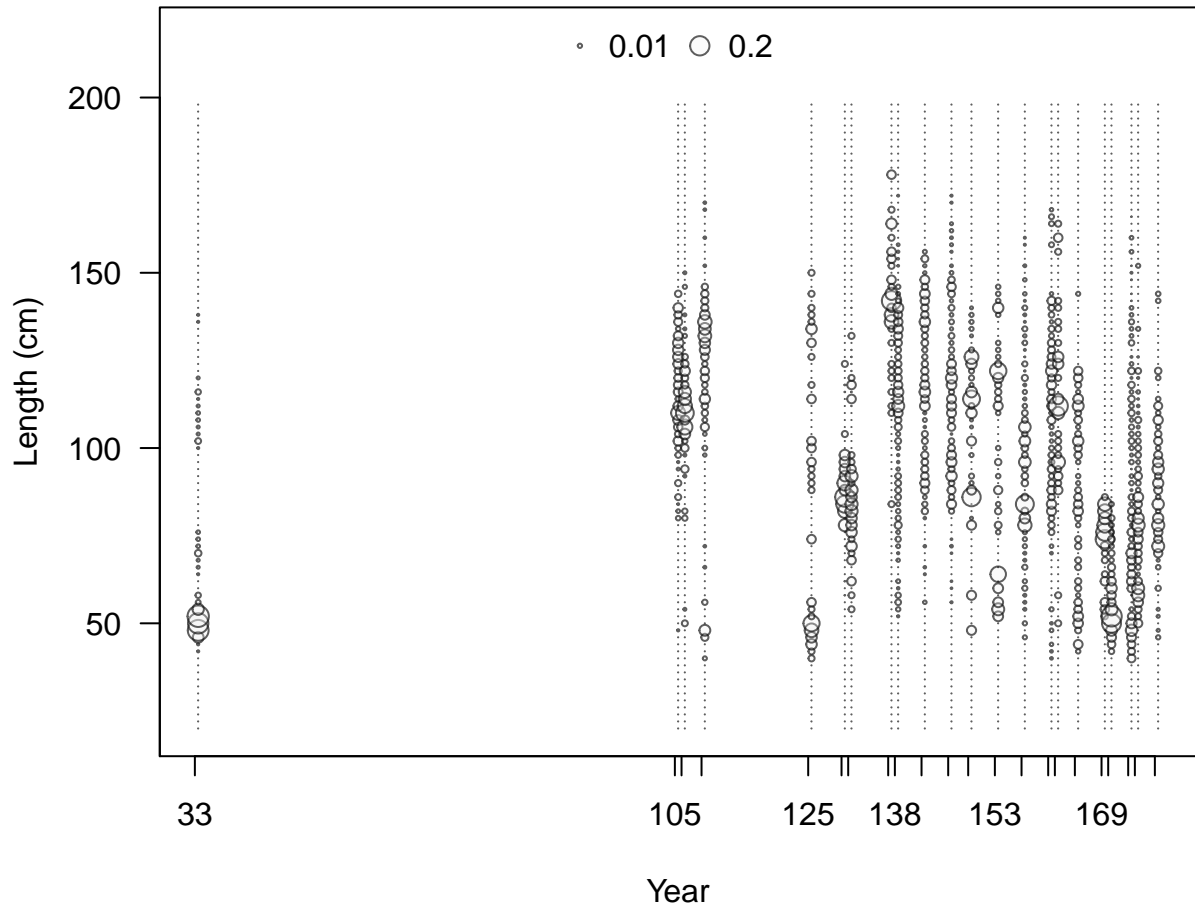
## A5-OBJ (whole catch)



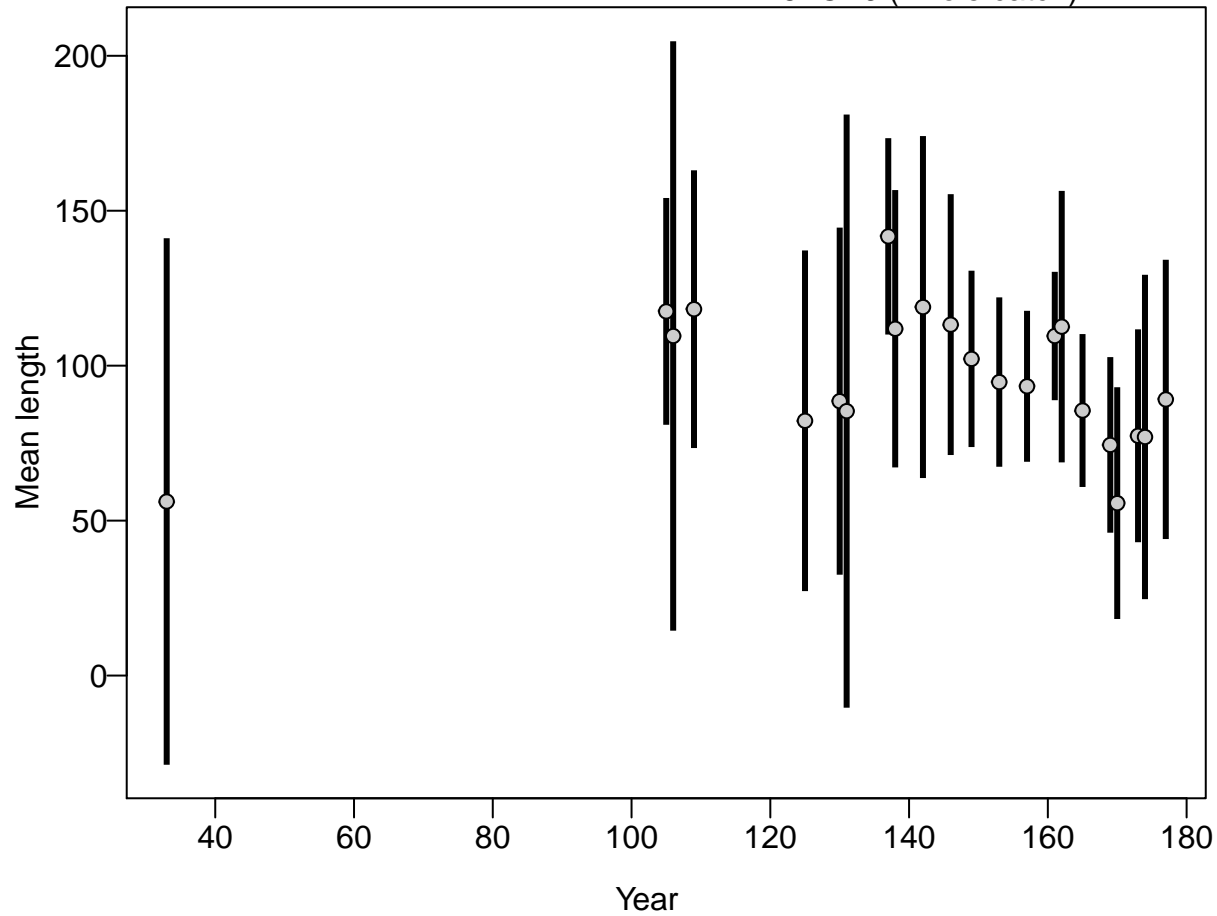
Proportion

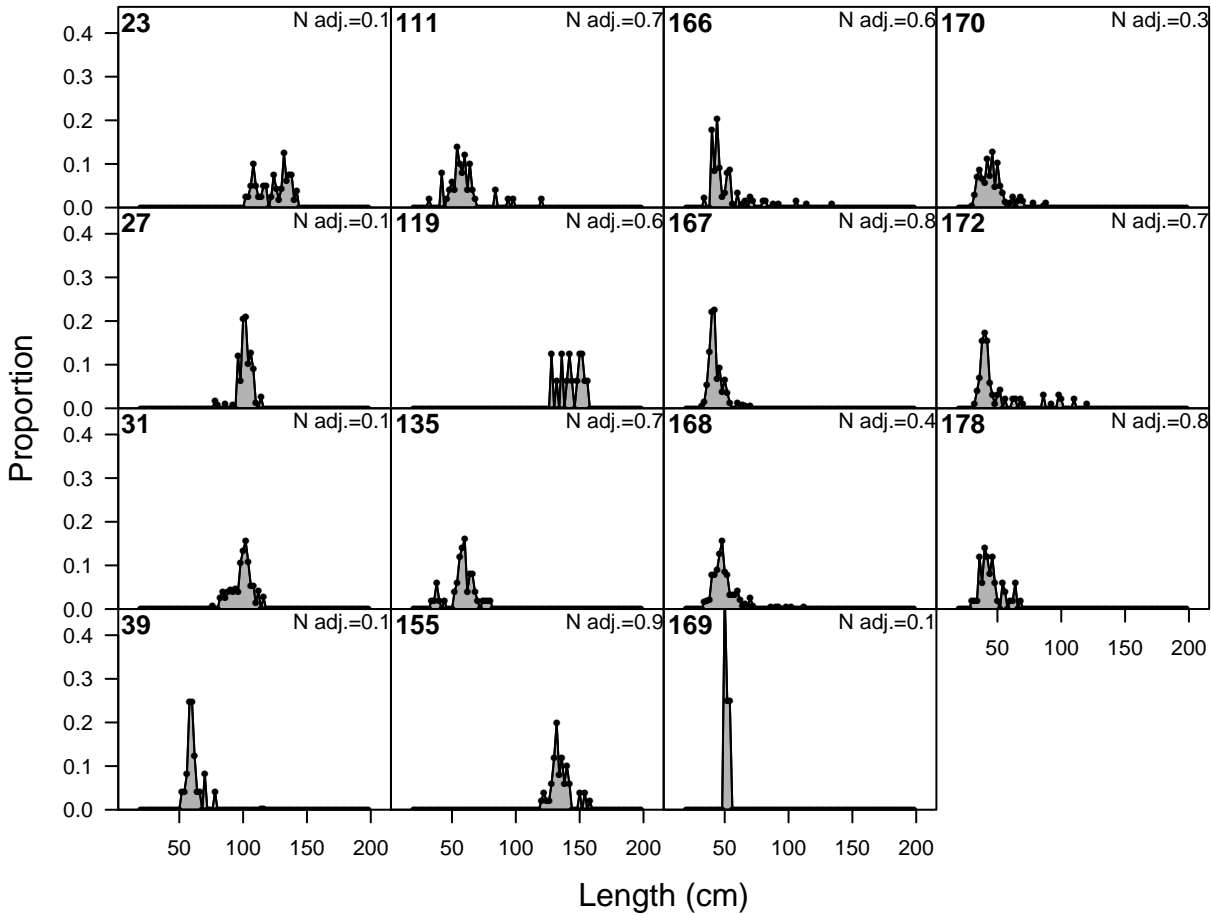




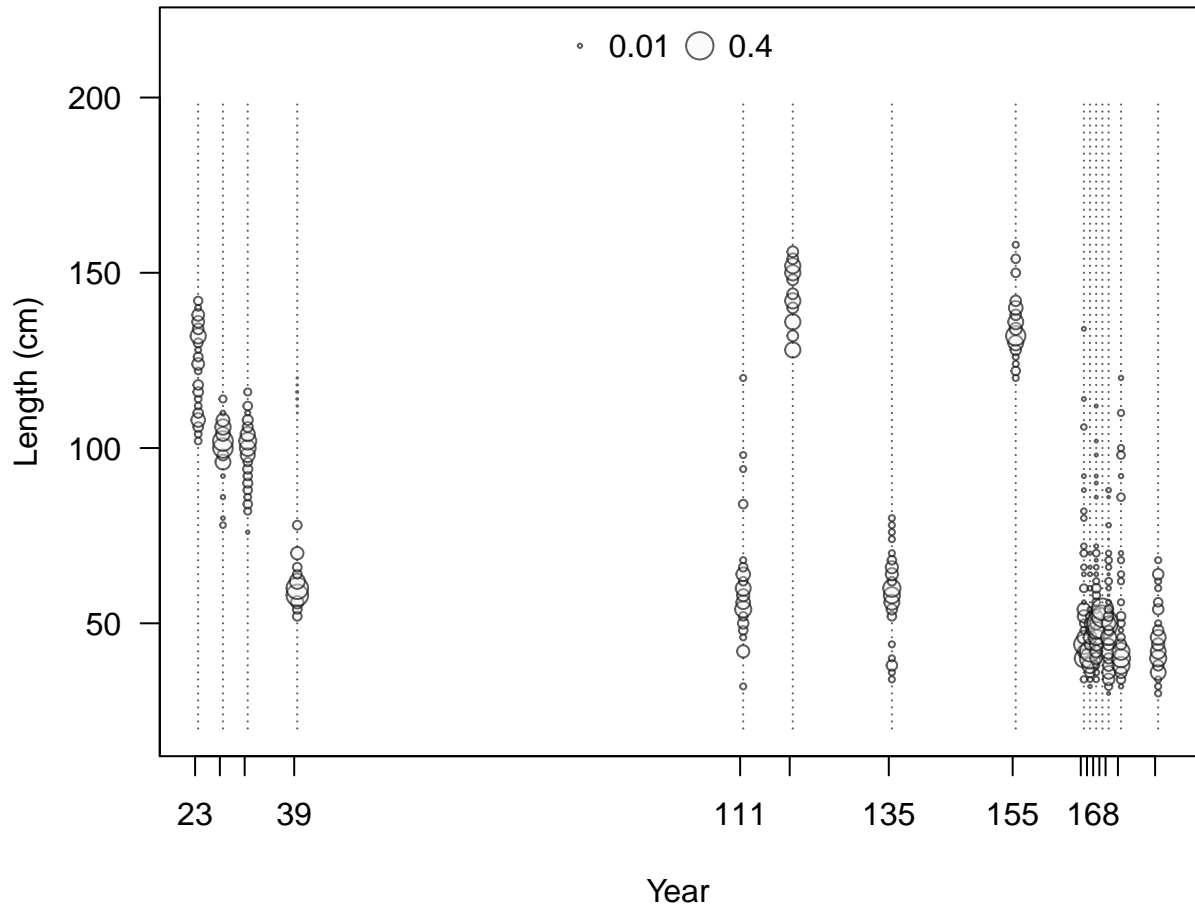


## A6-OBJ (whole catch)

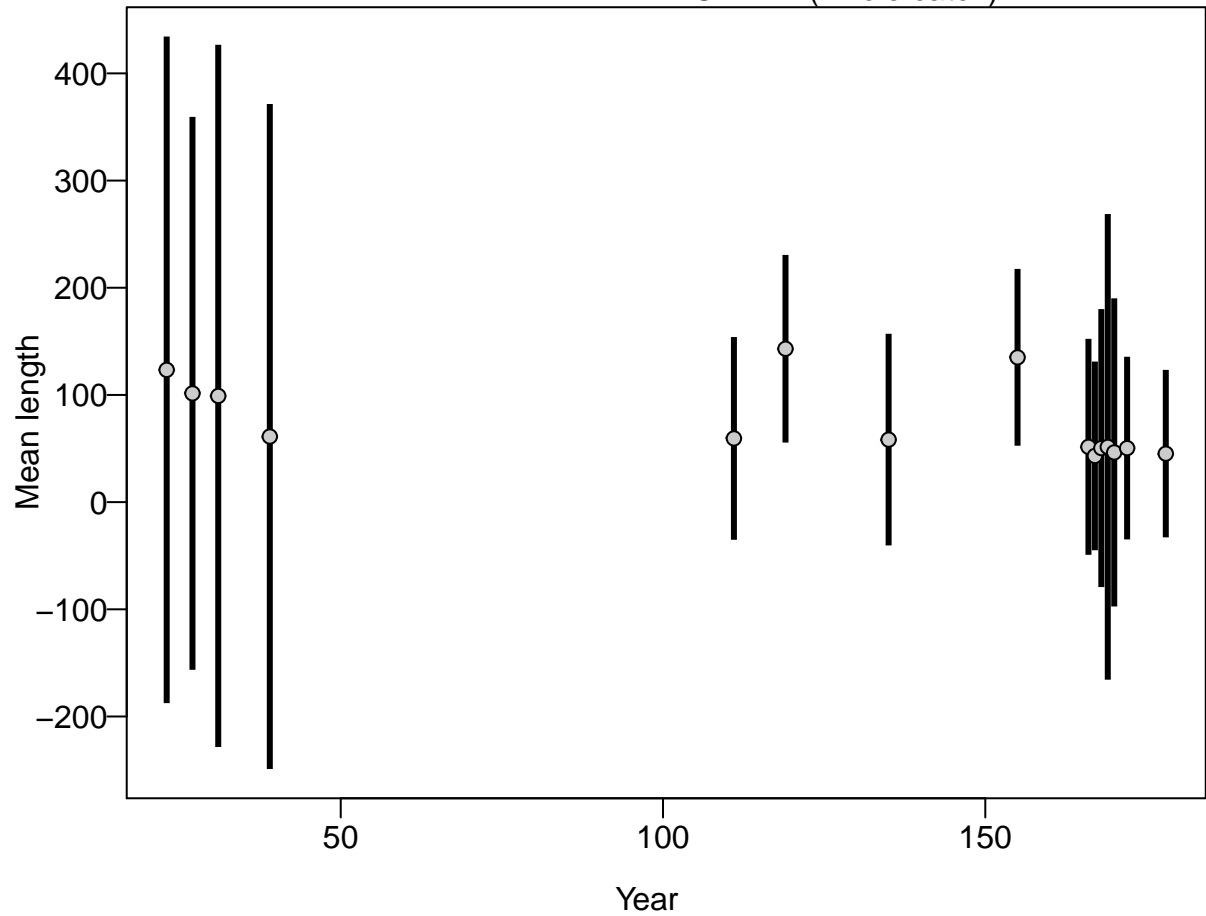


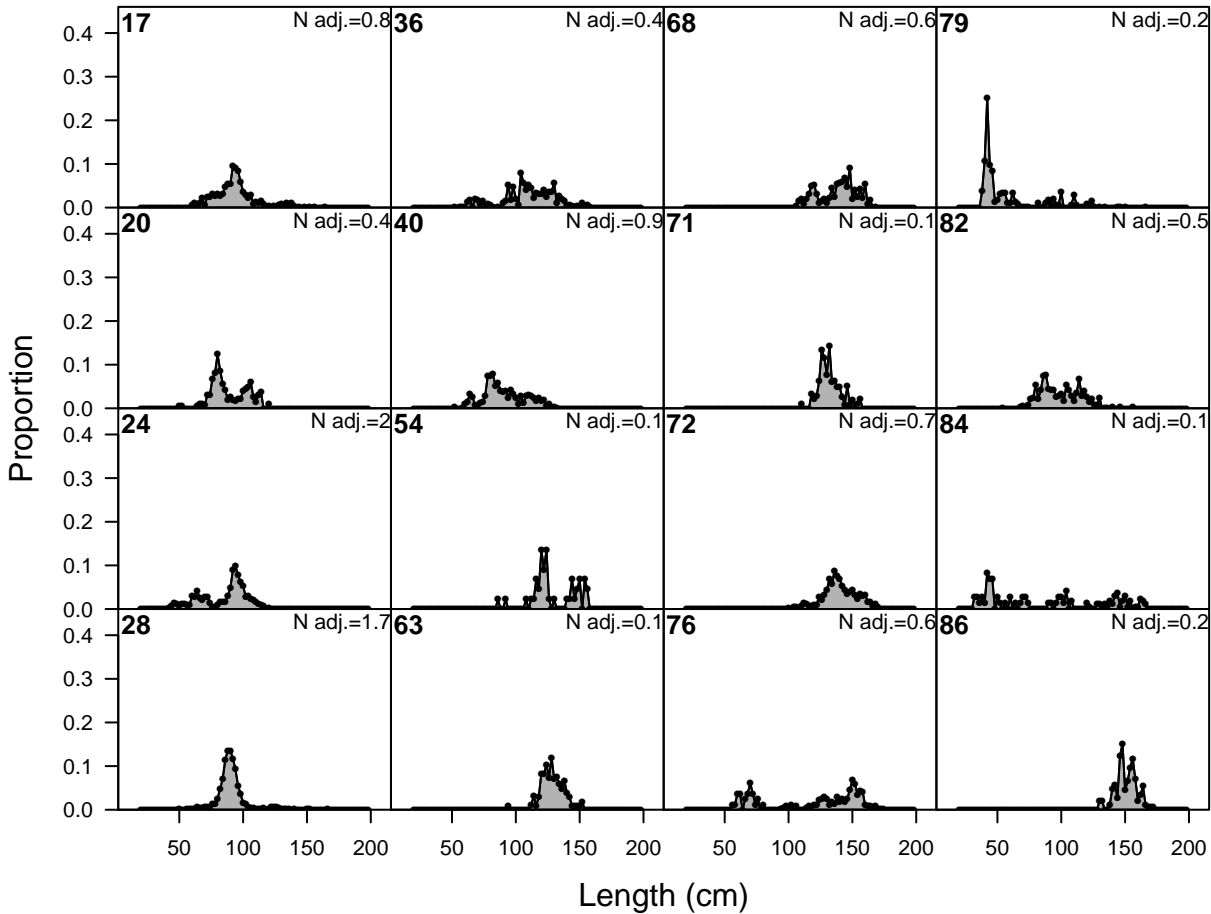


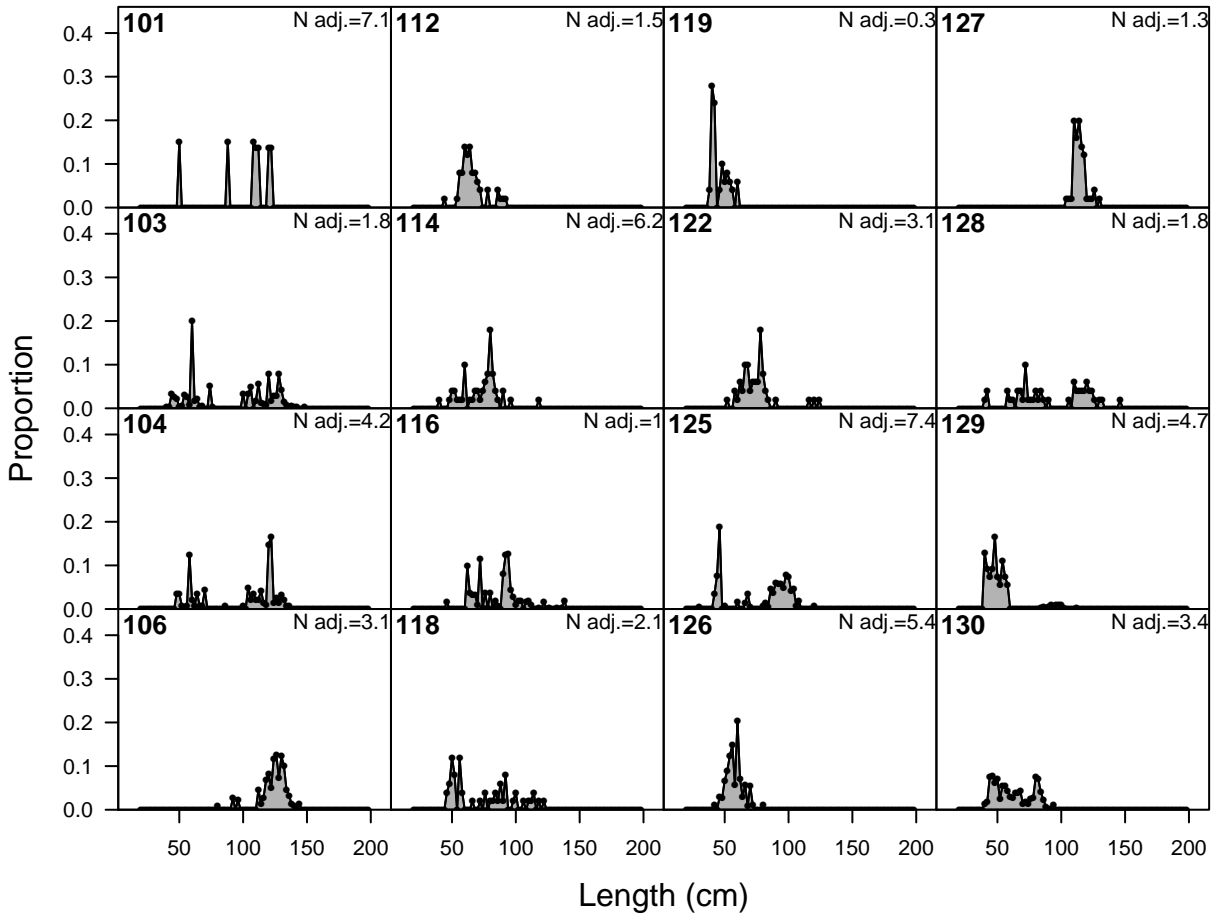


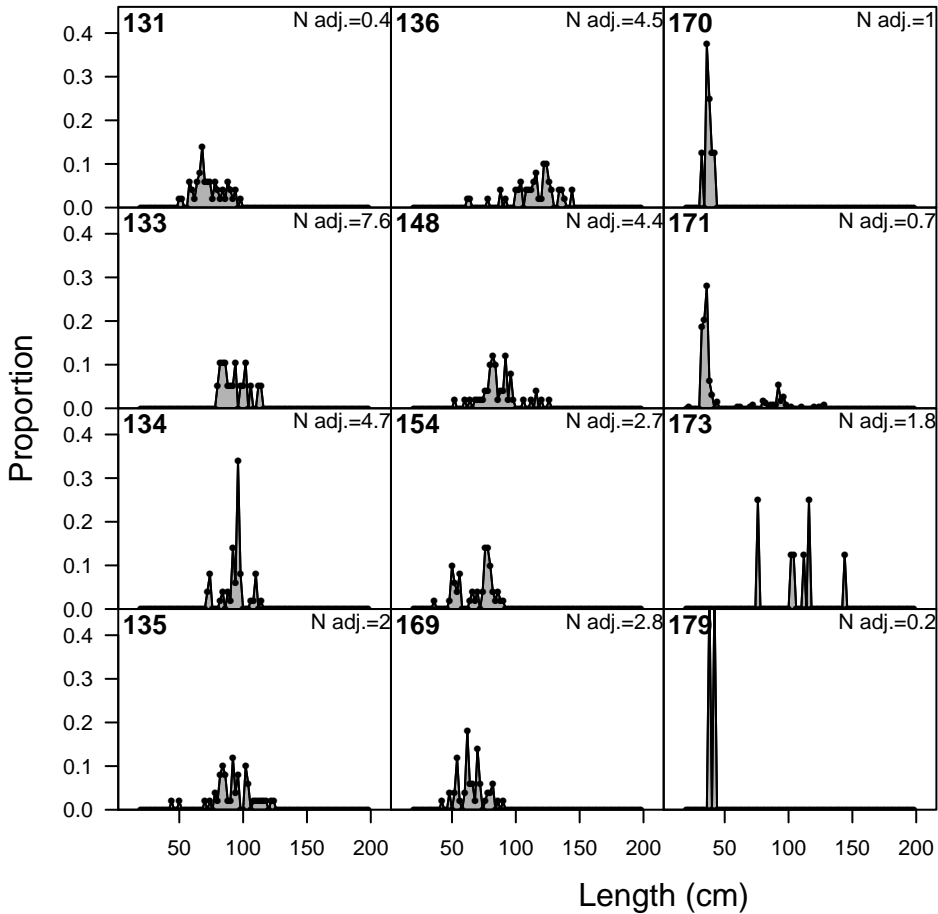


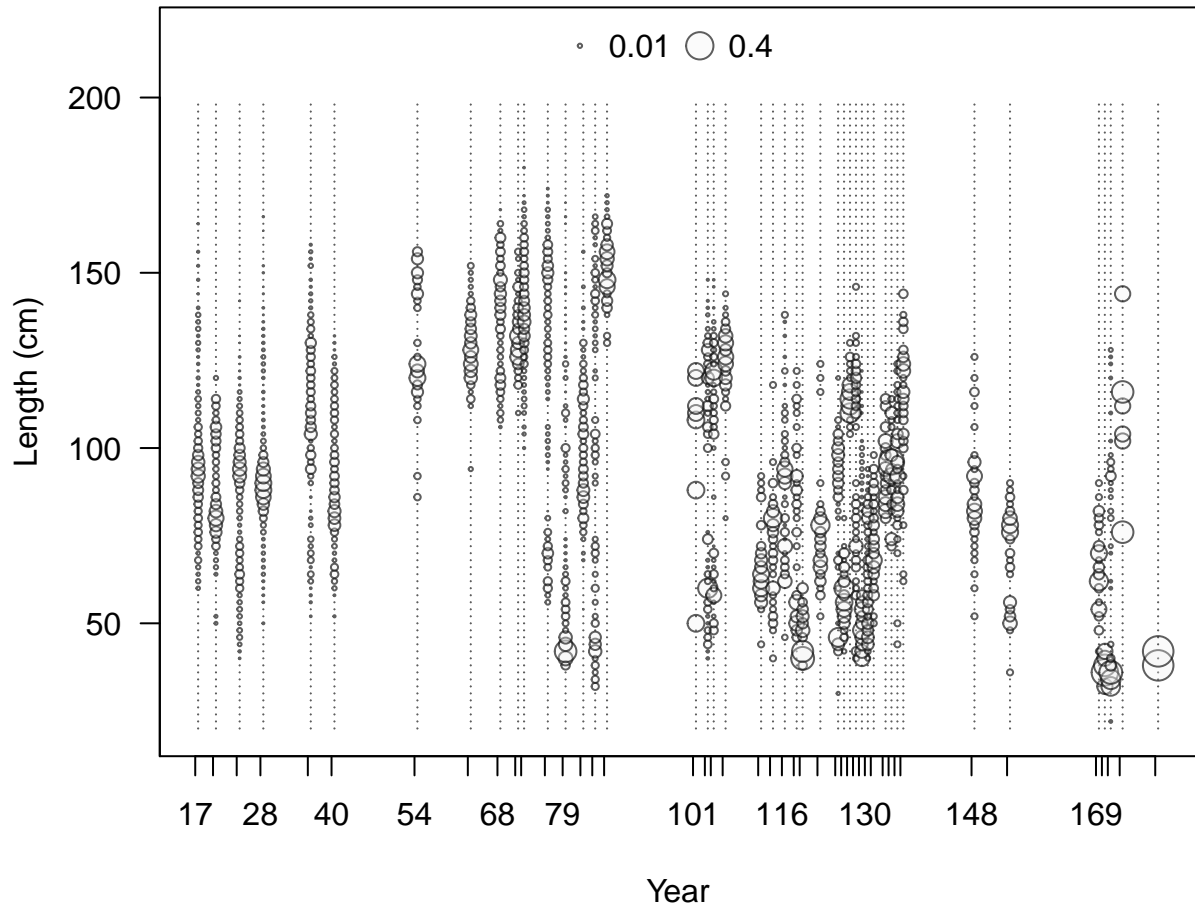
## A2-NOADEL (whole catch)



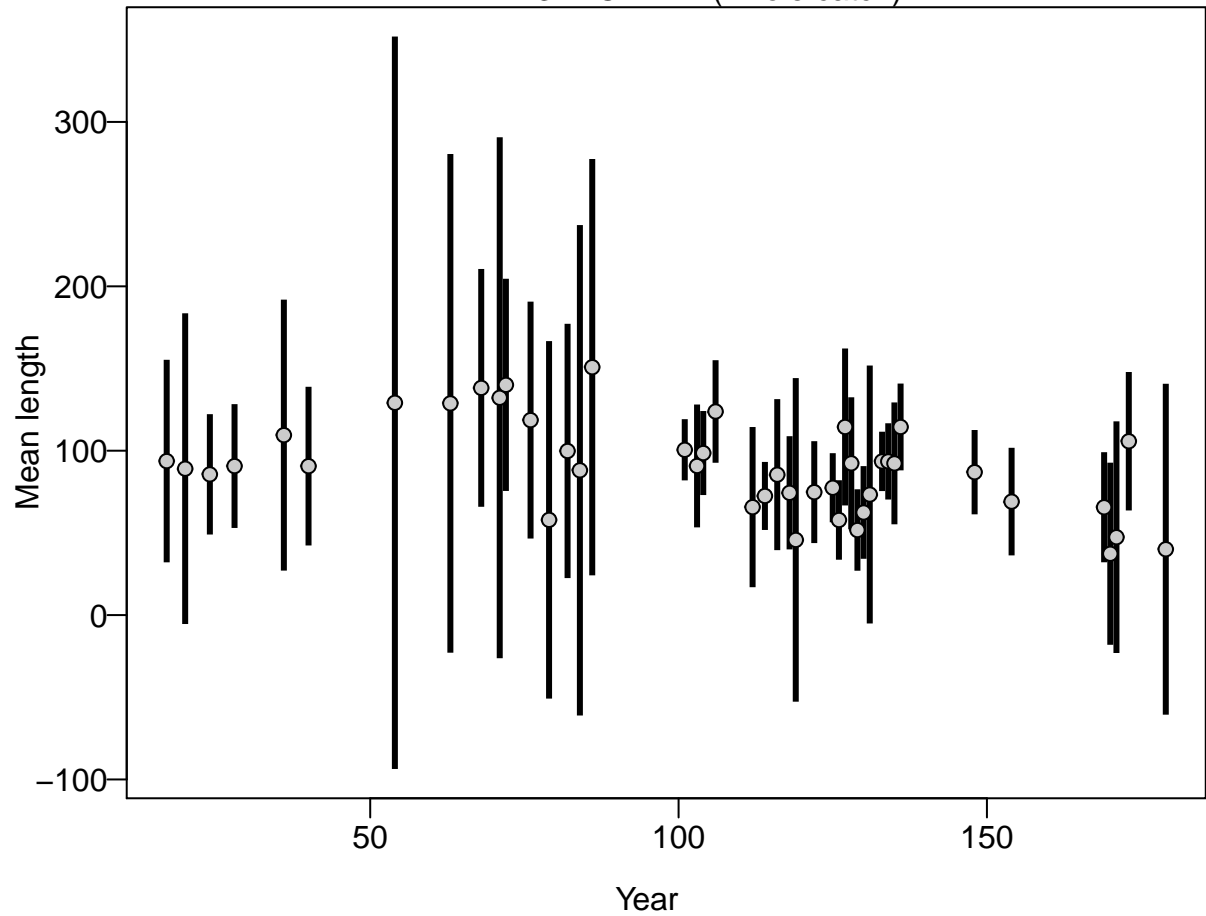


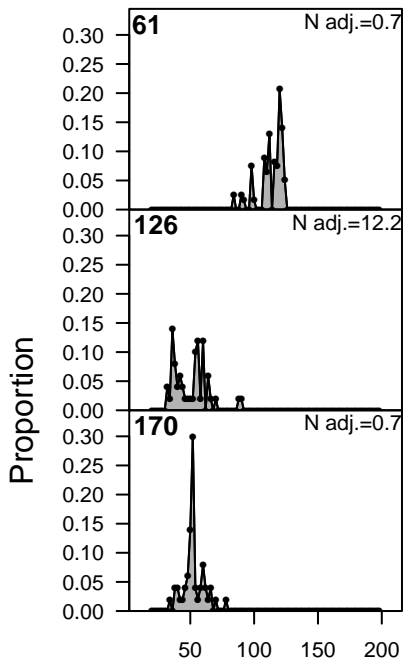






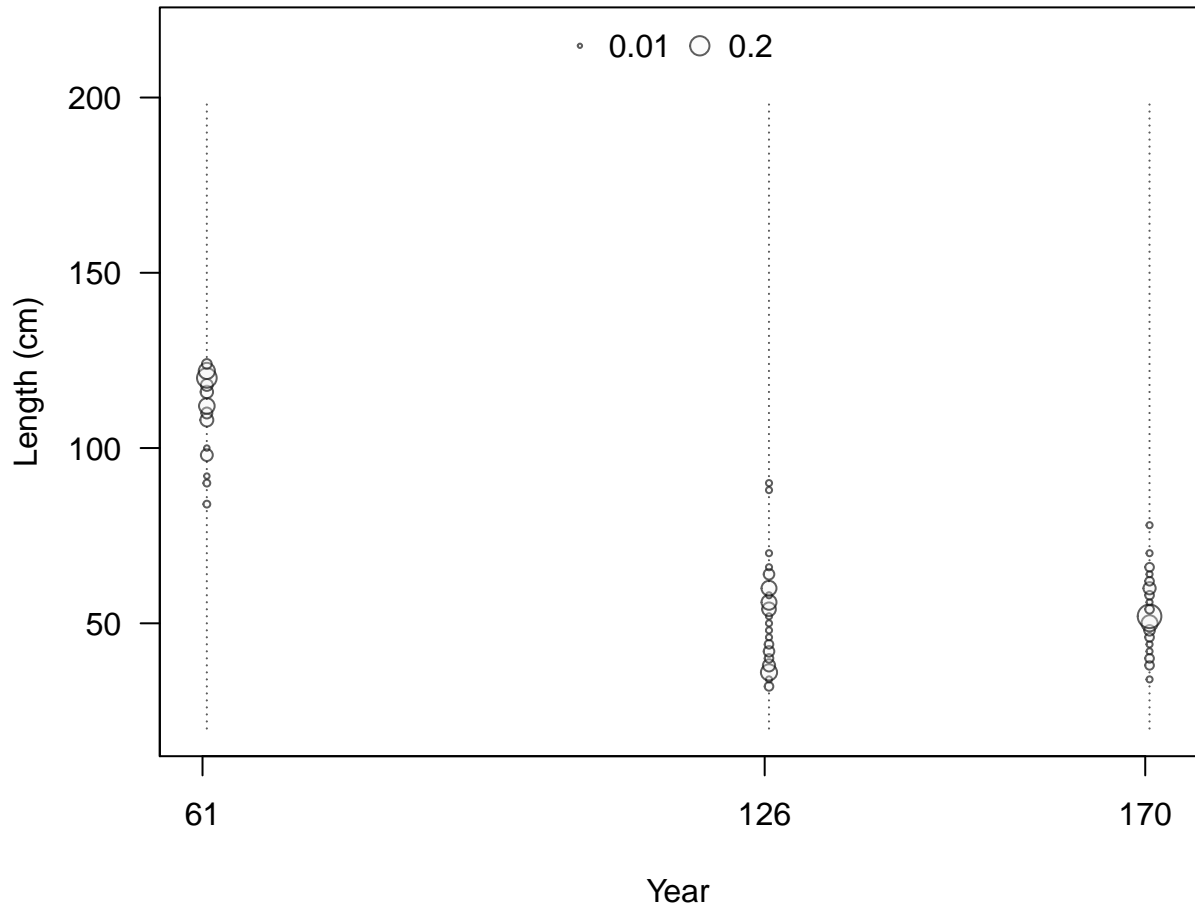
A3-NOADEL (whole catch)



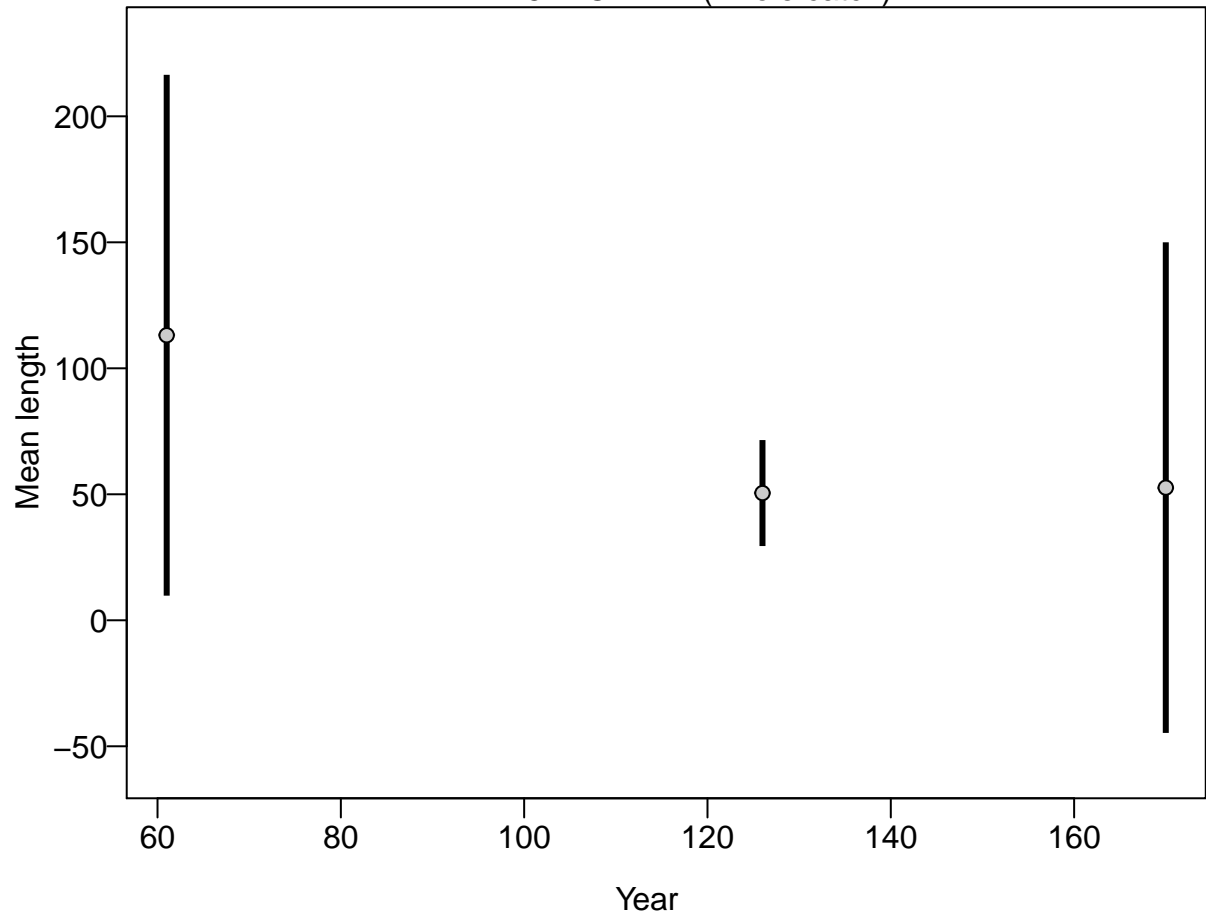


Length (cm)

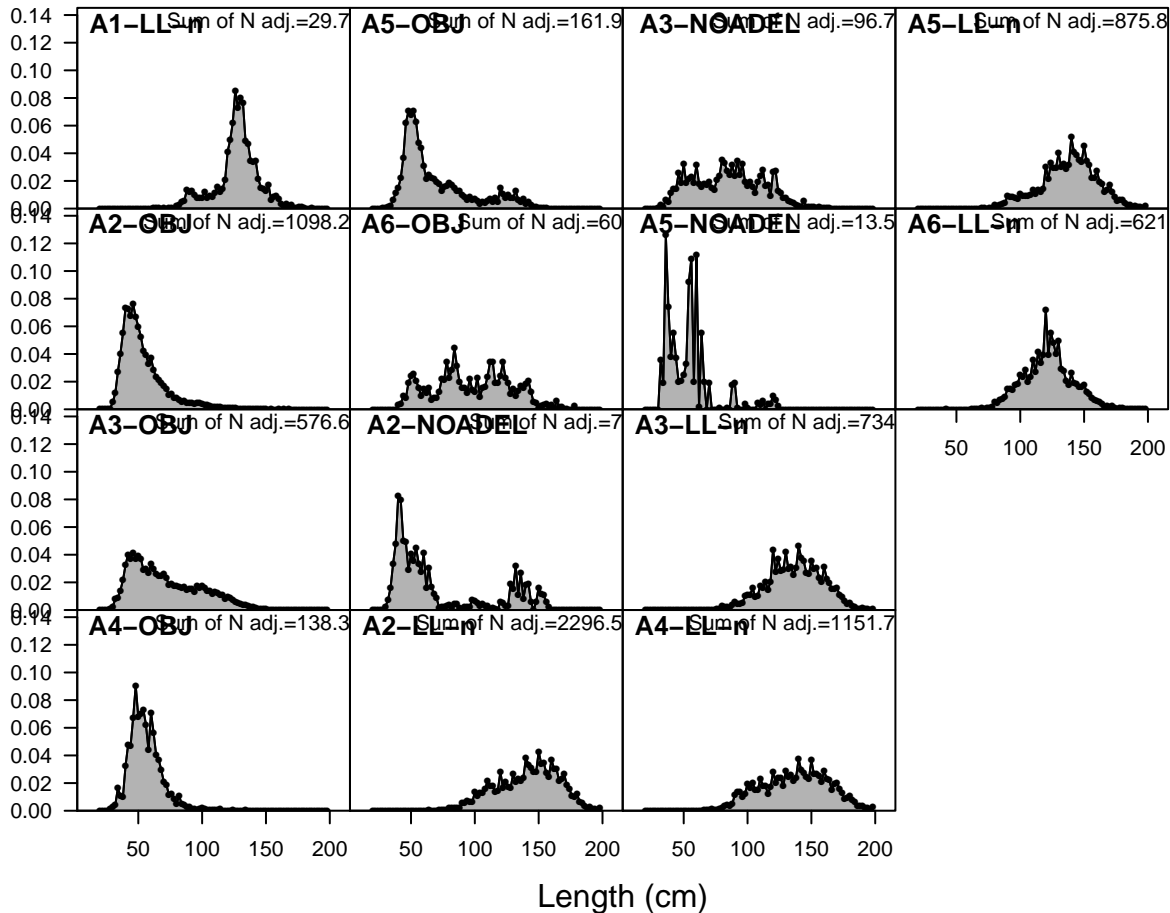


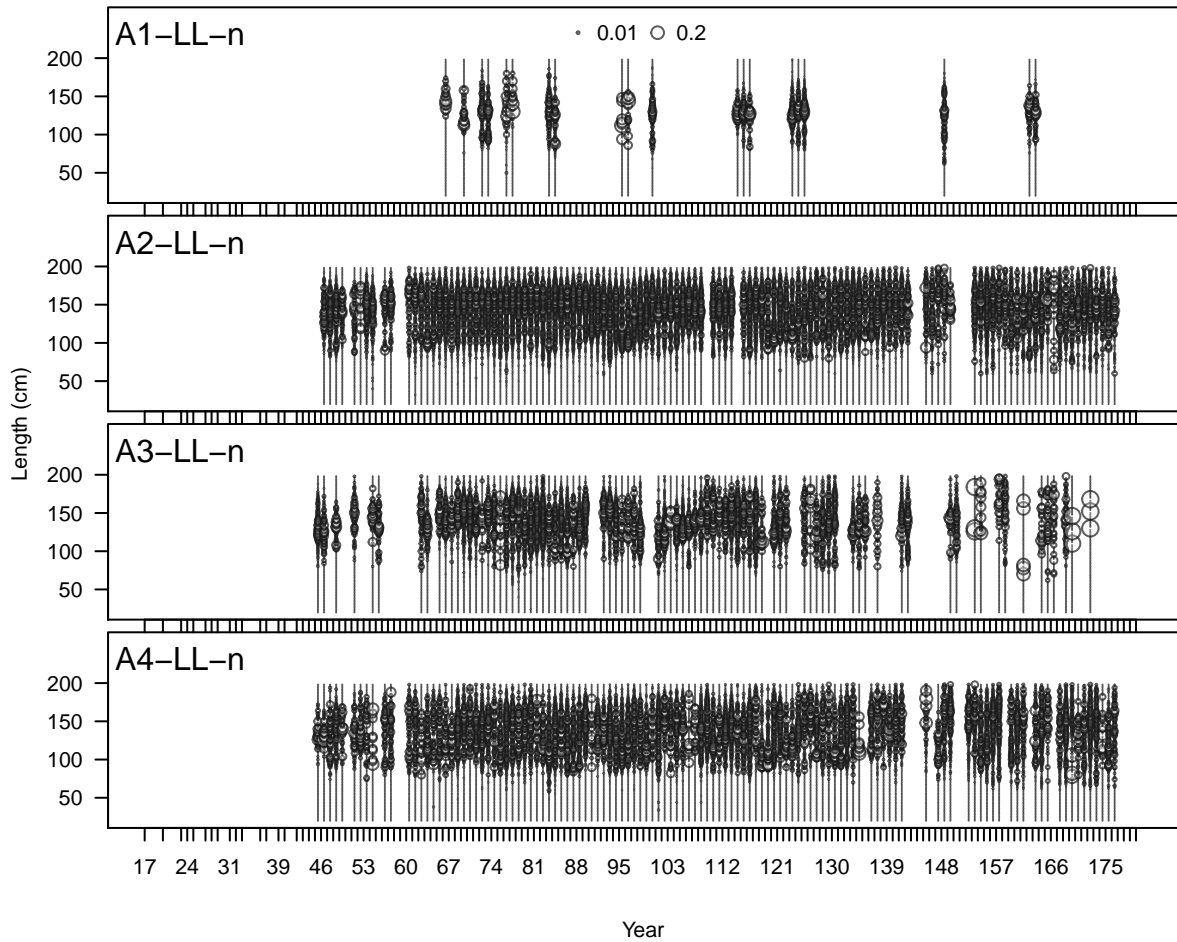


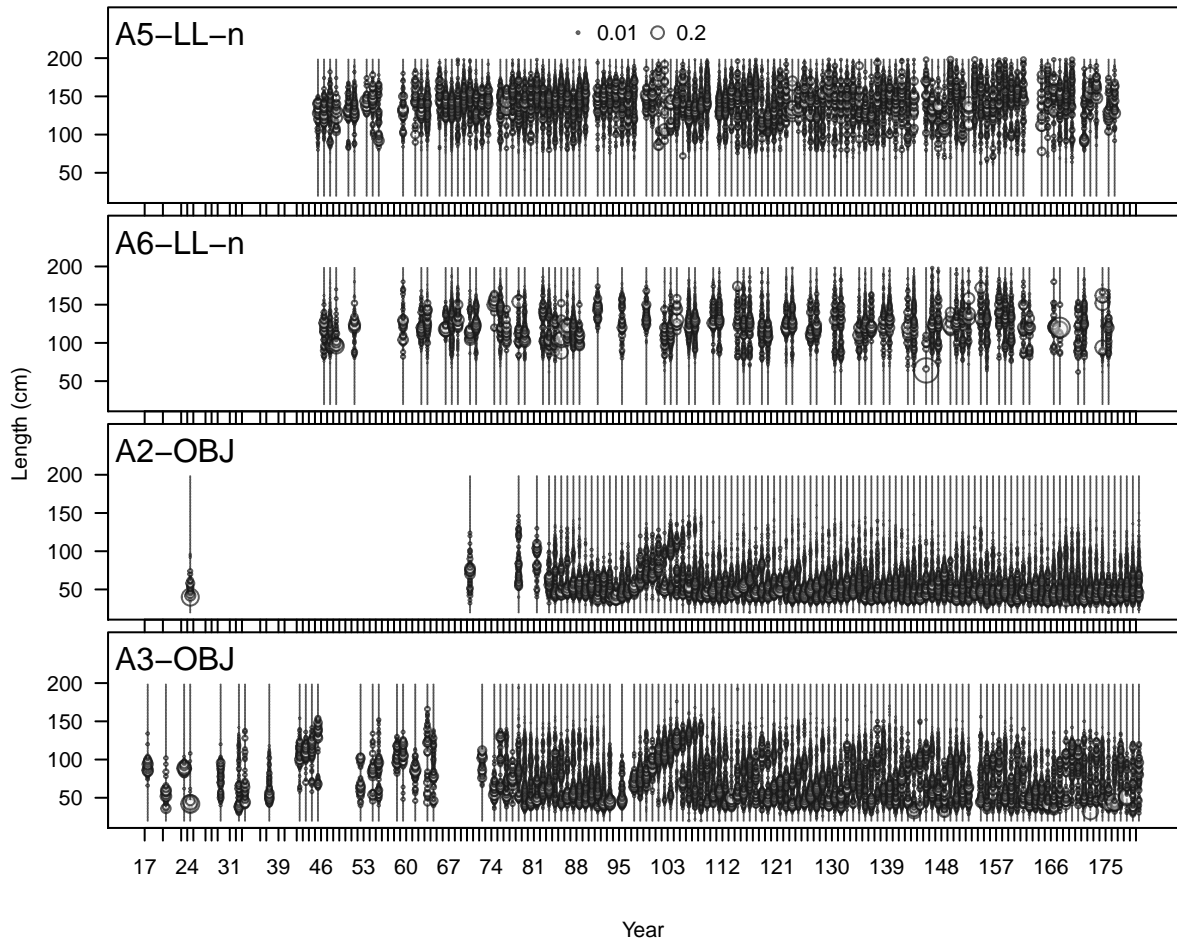
A5-NOADEL (whole catch)

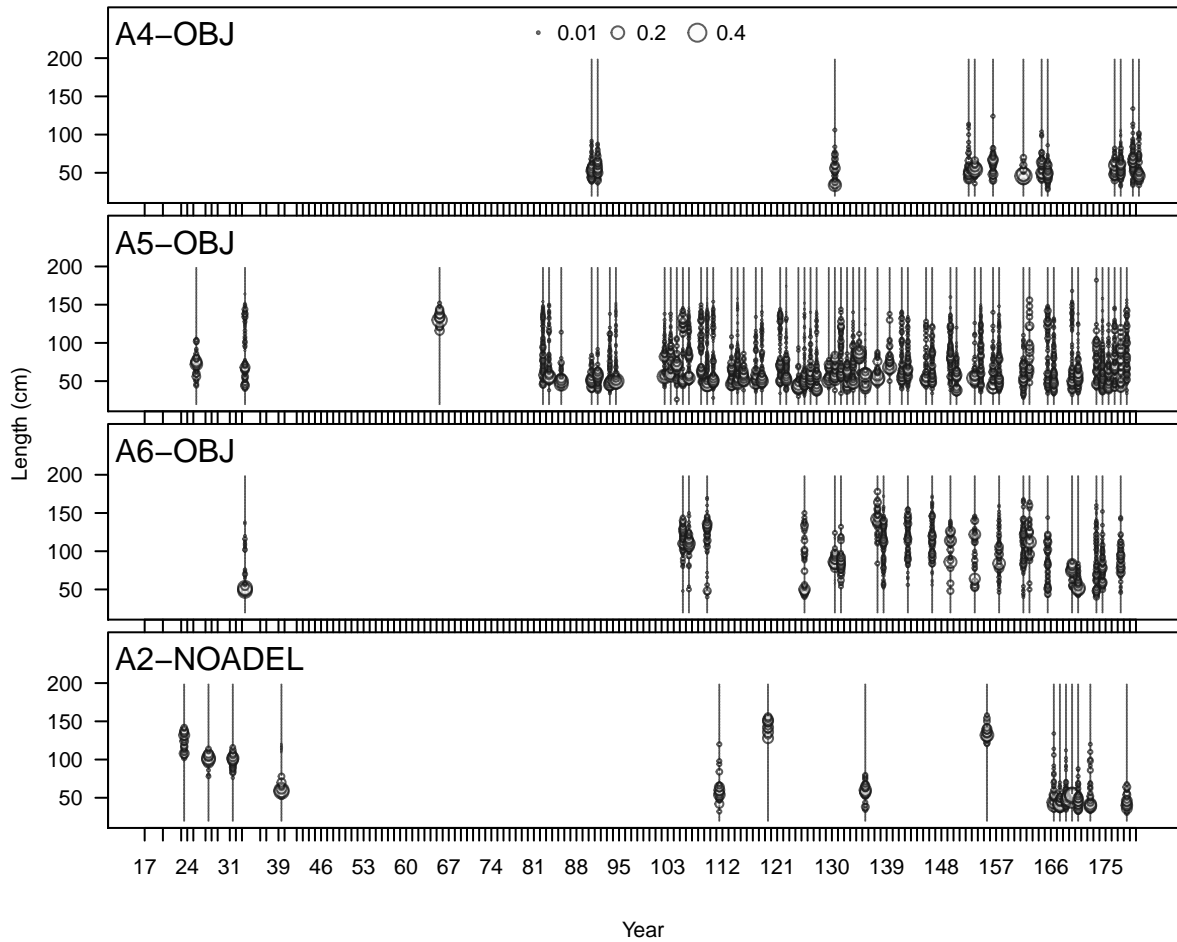


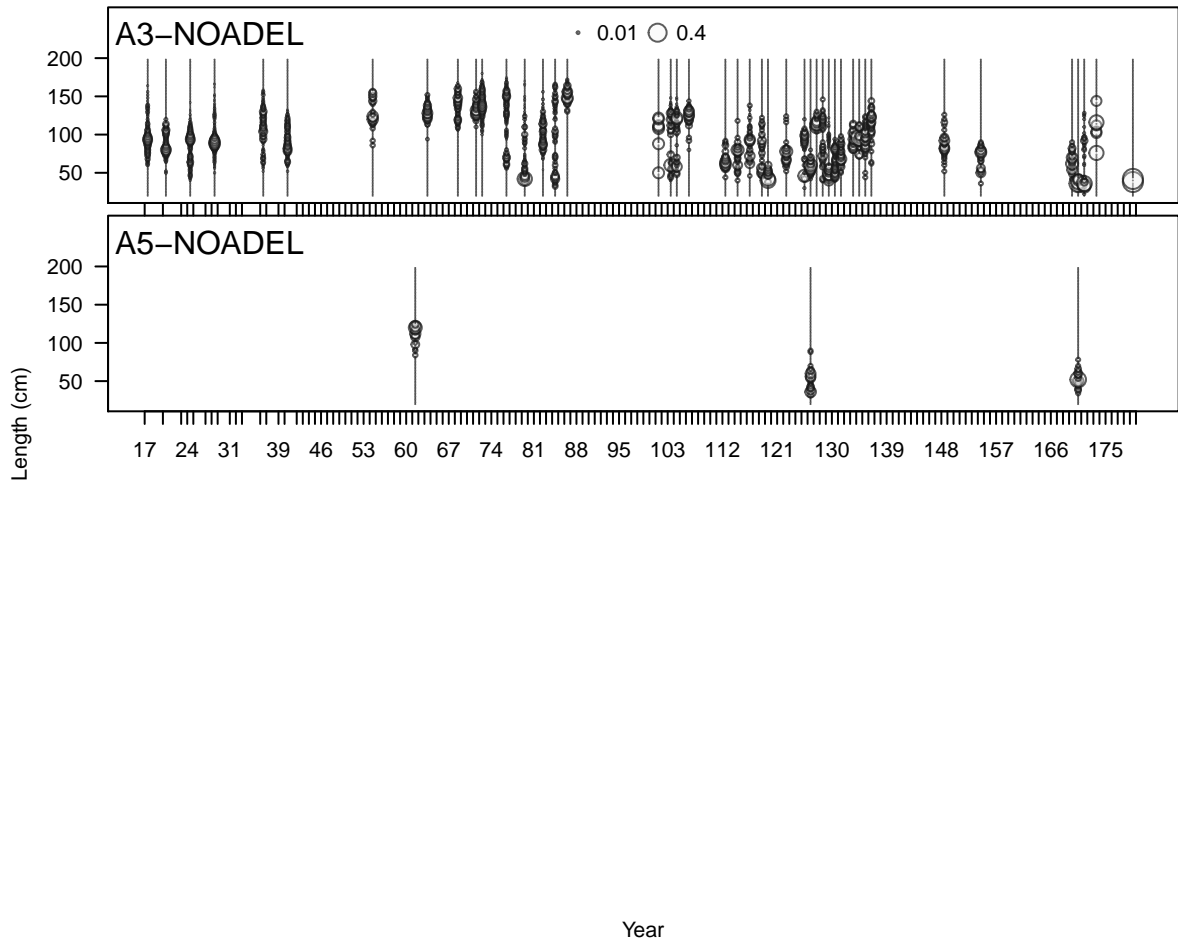
Proportion



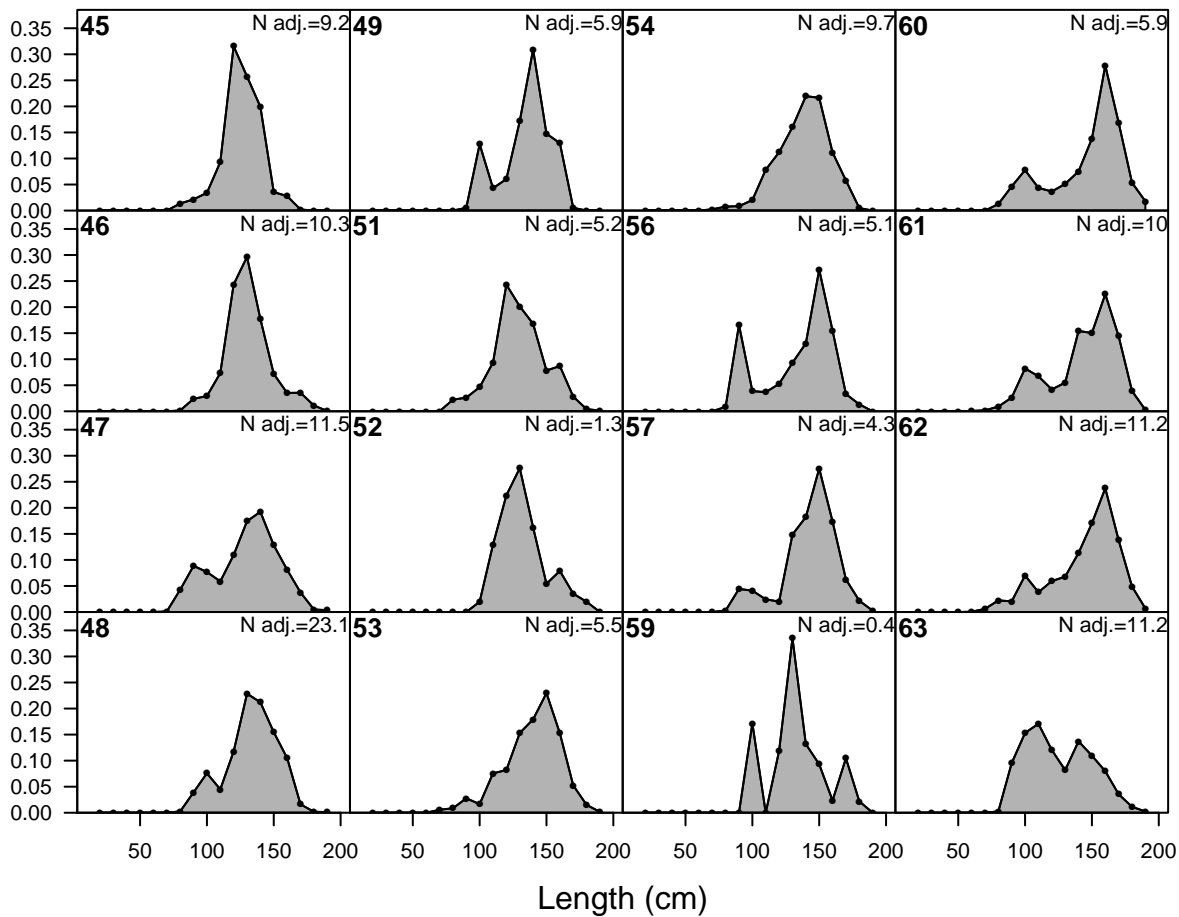






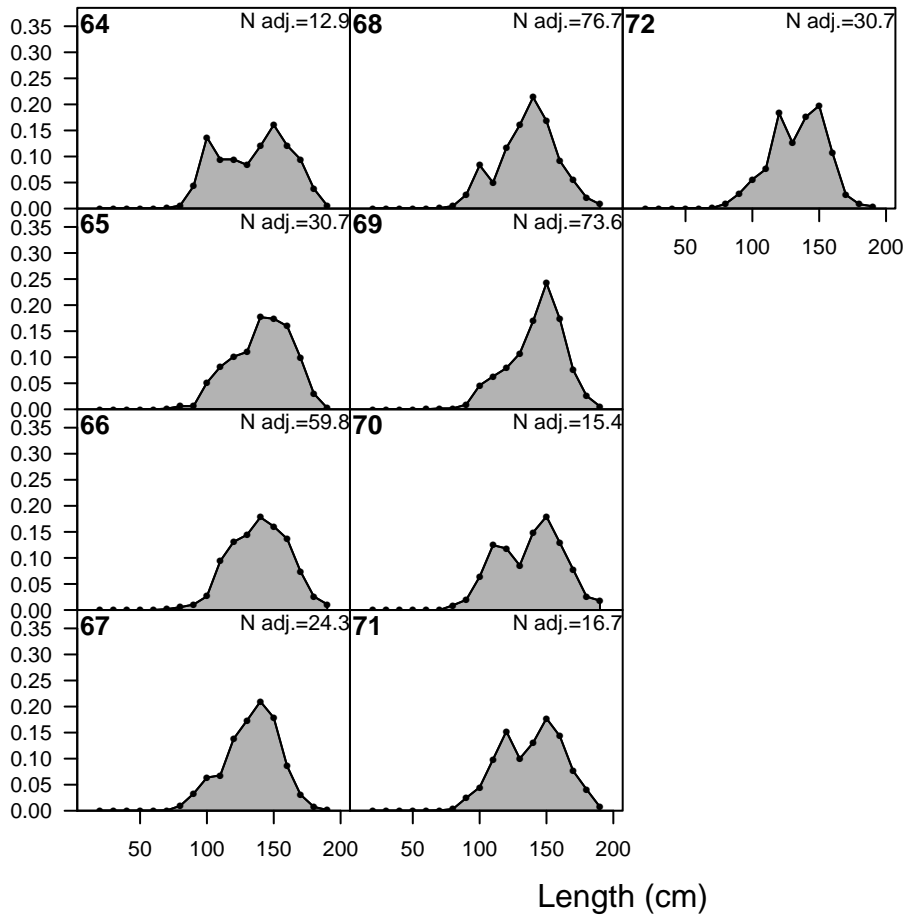


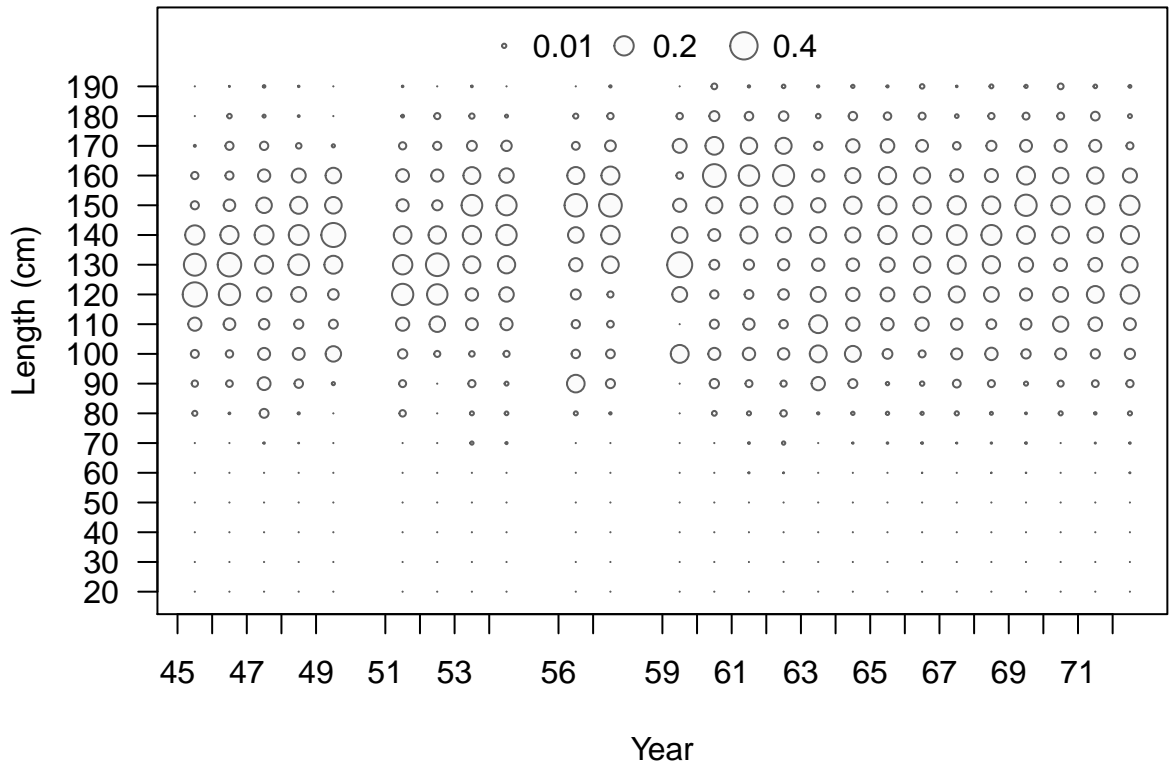
Proportion



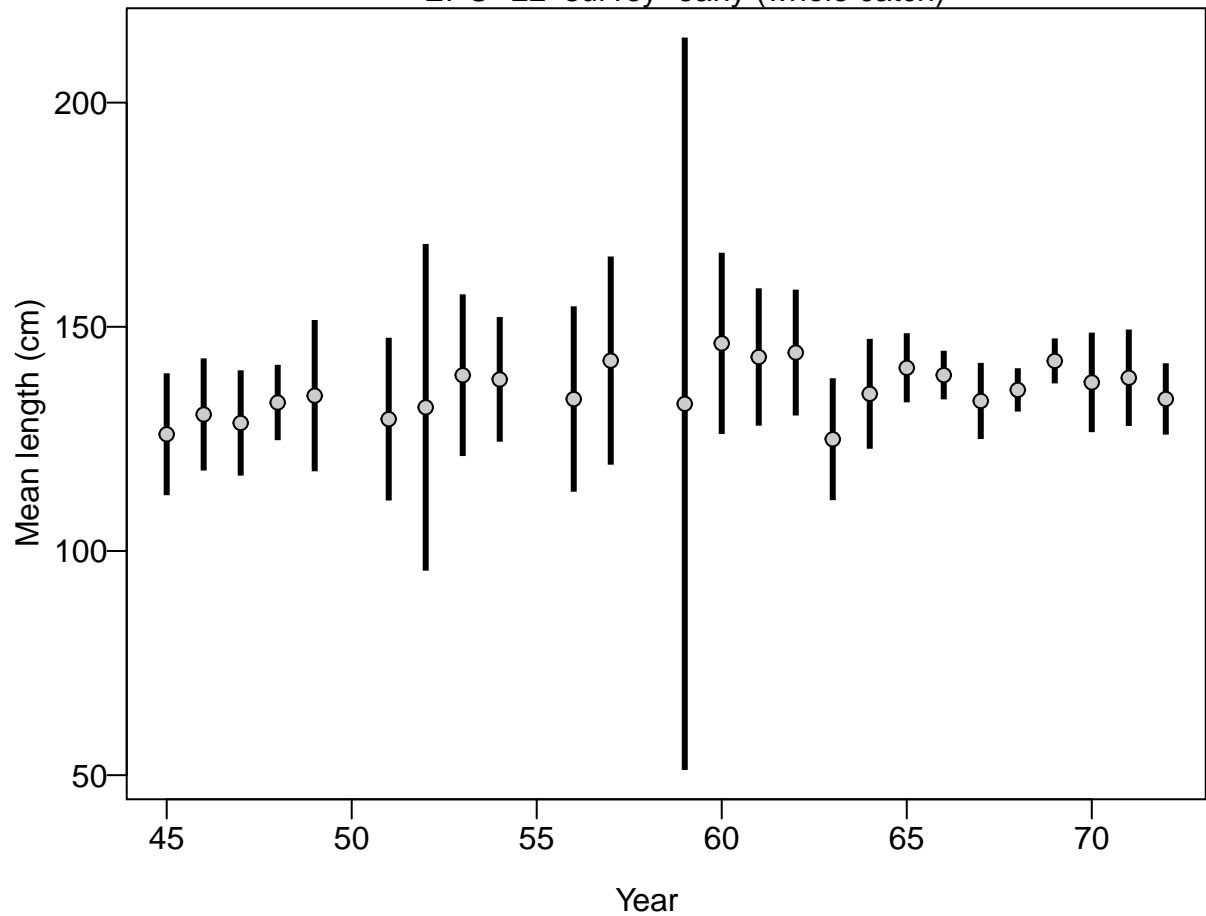


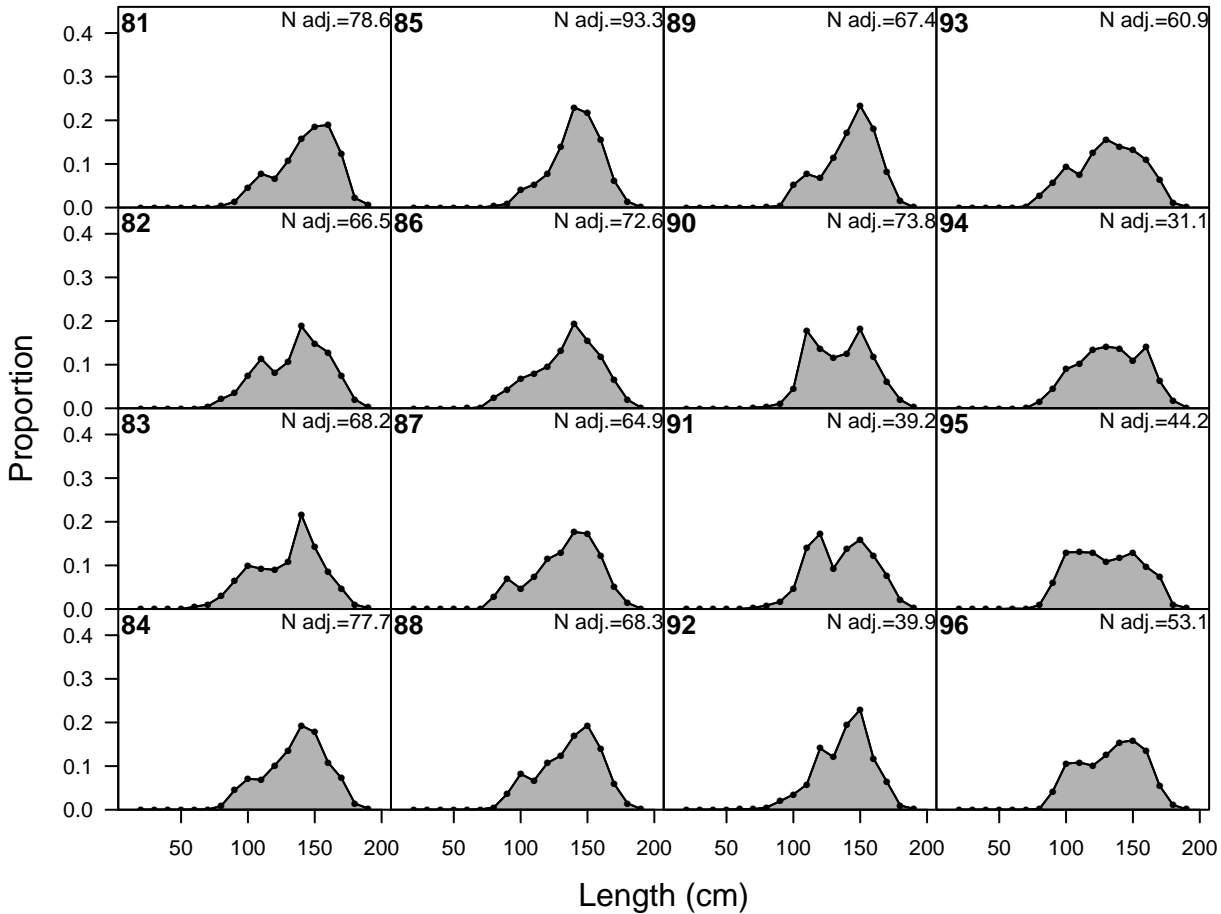
Proportion

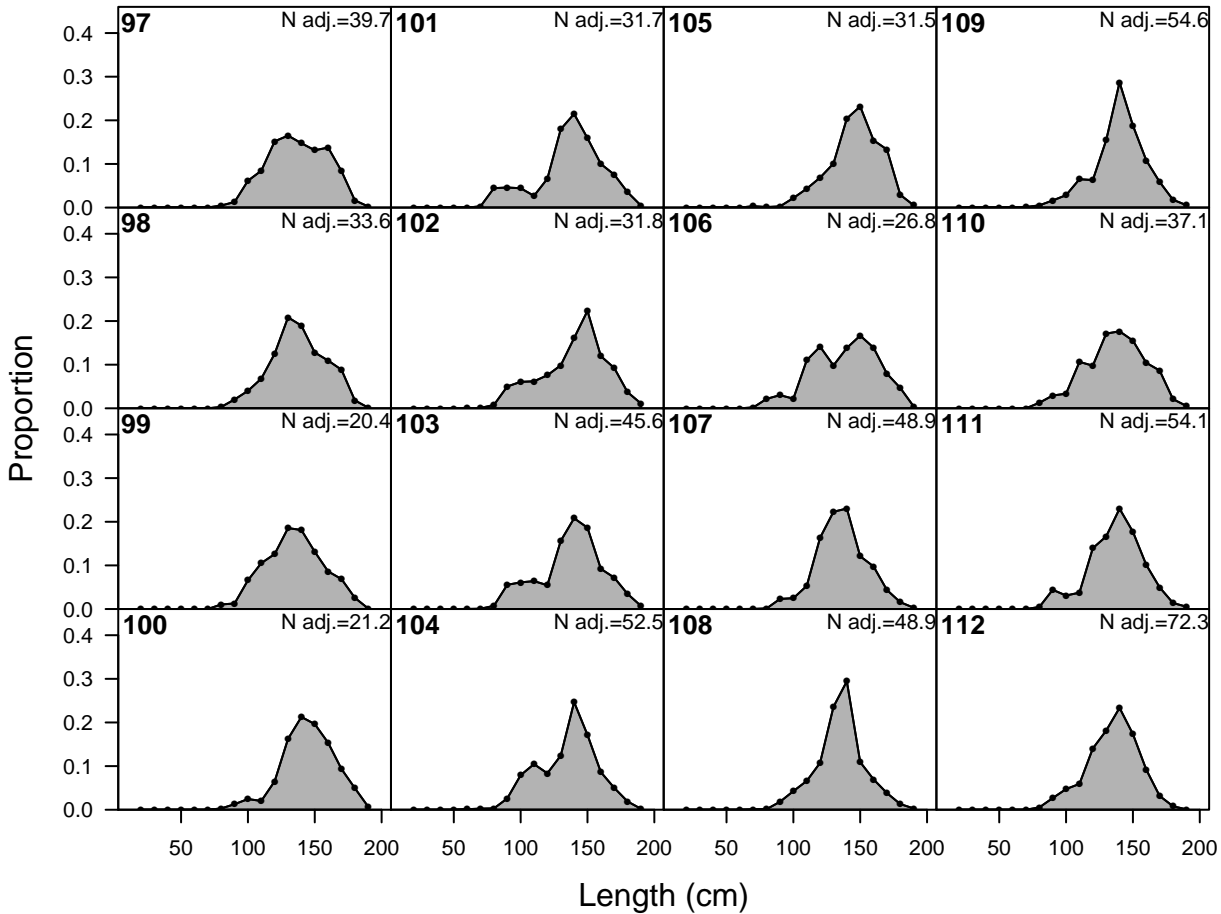


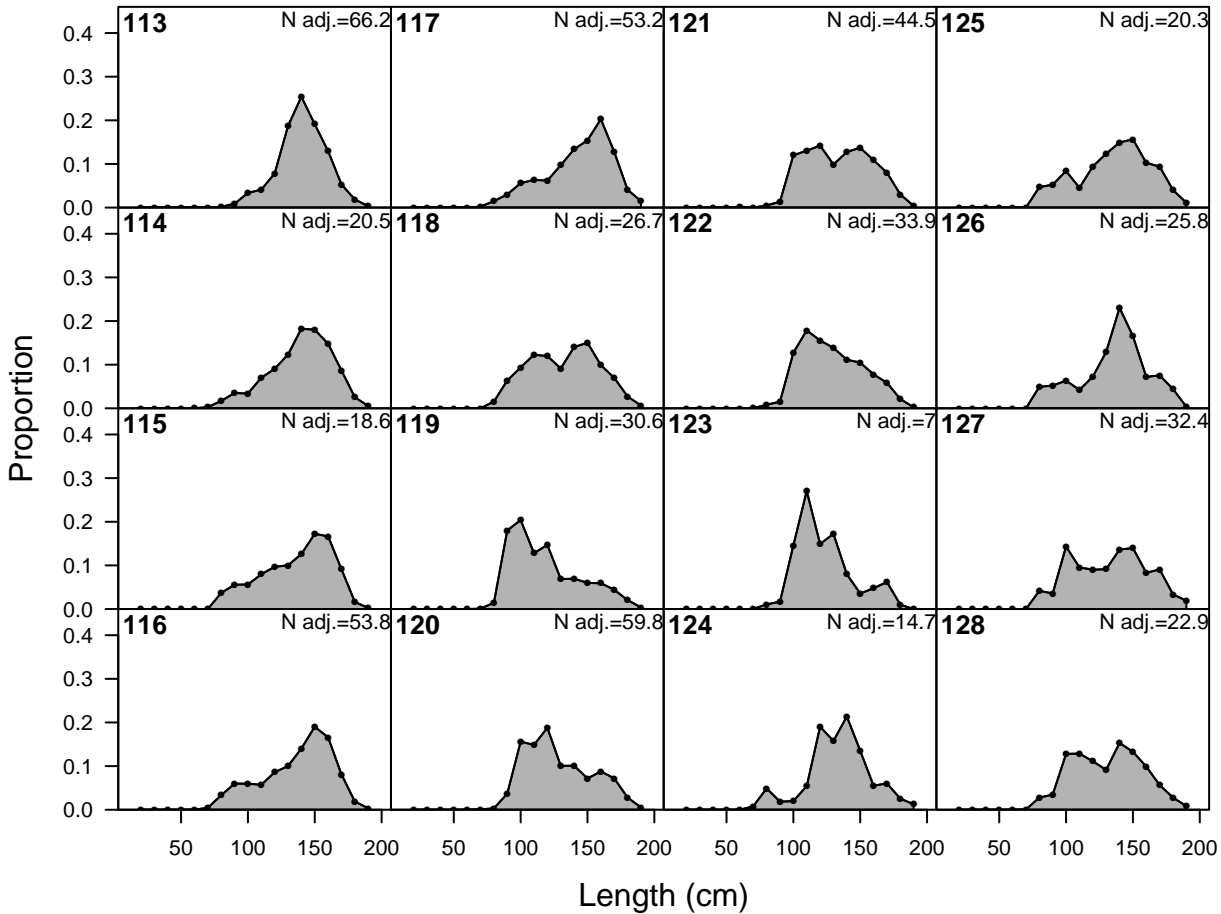


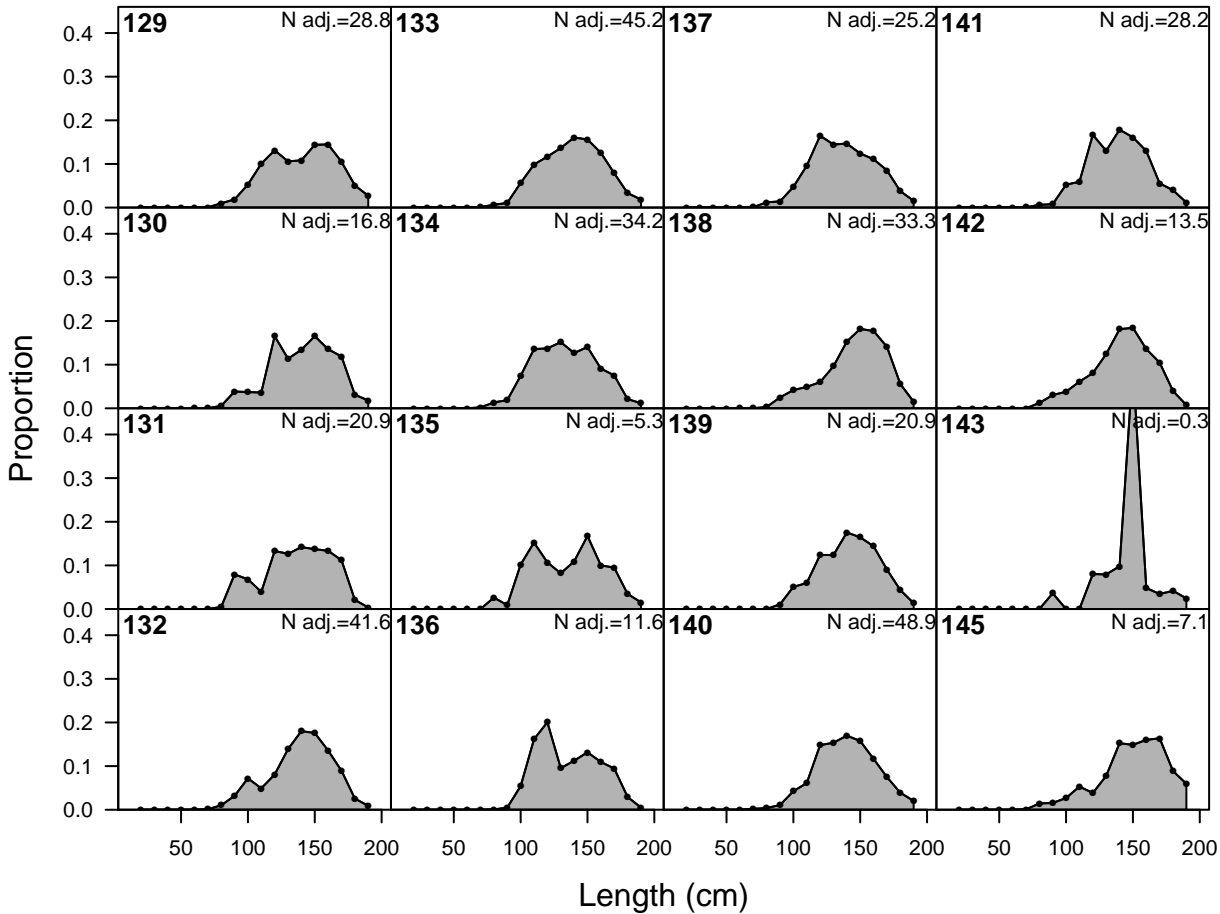
EPO-LL-survey-early (whole catch)

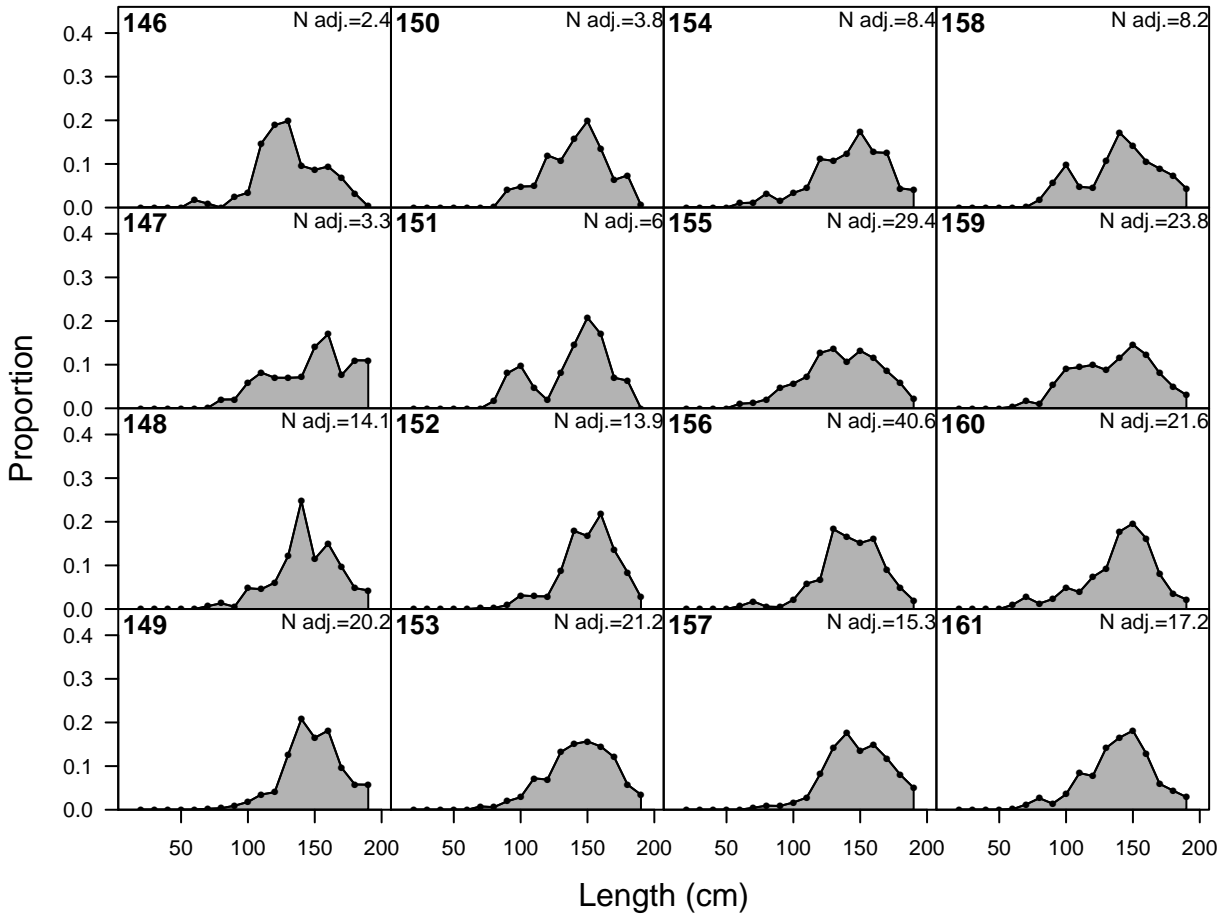




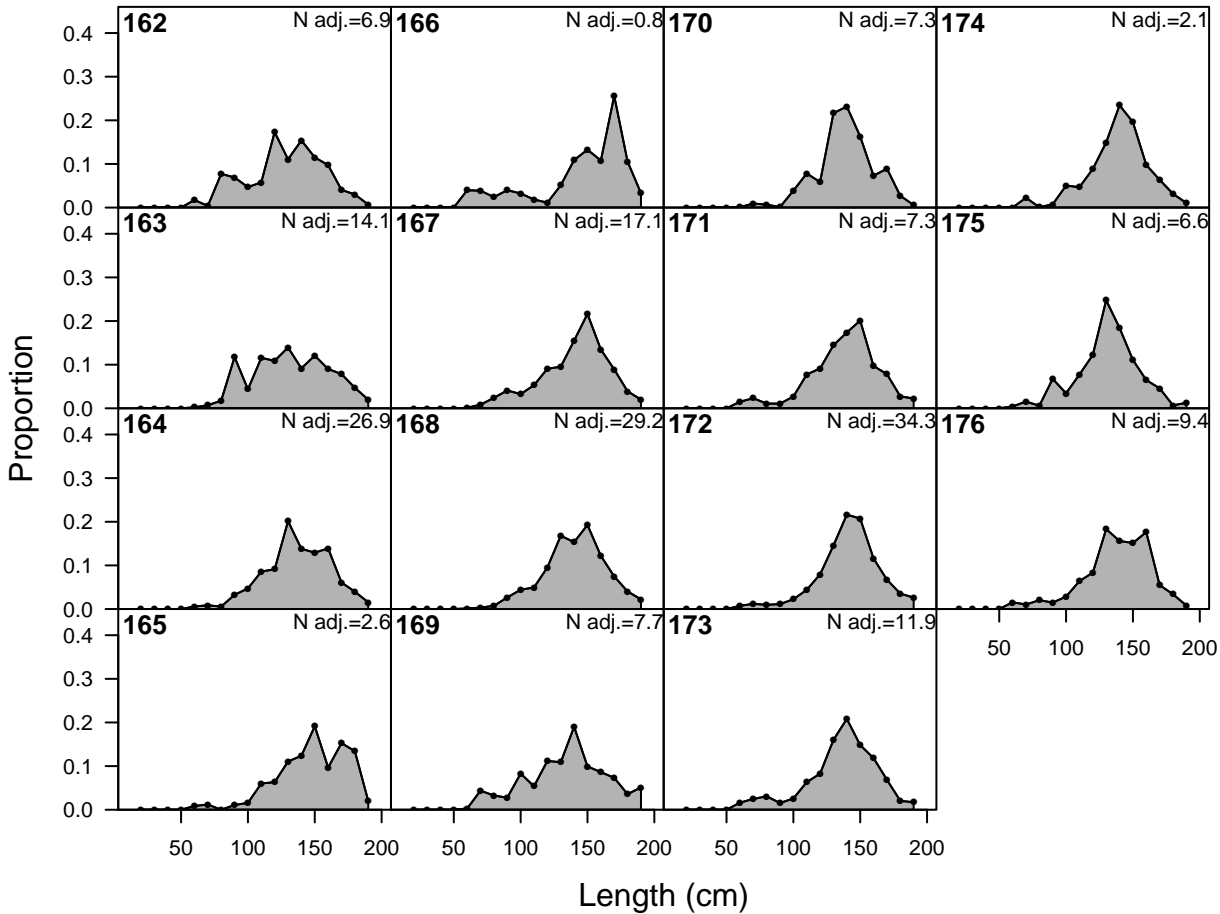


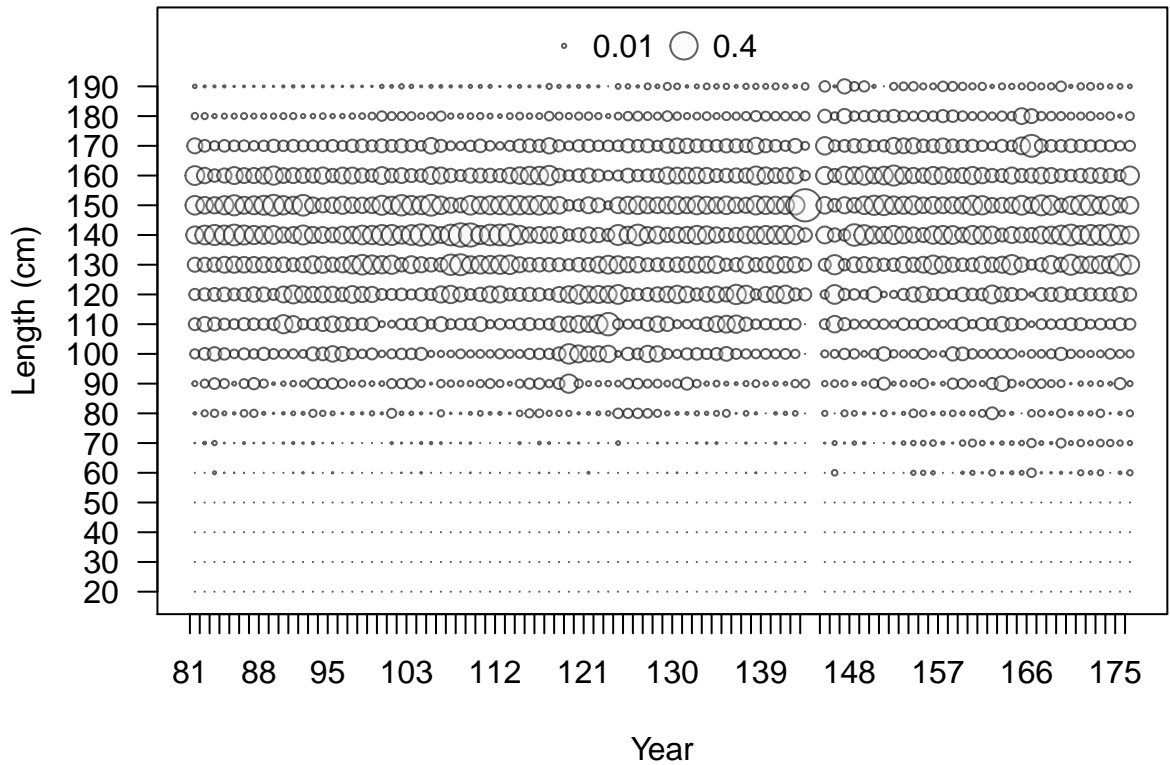




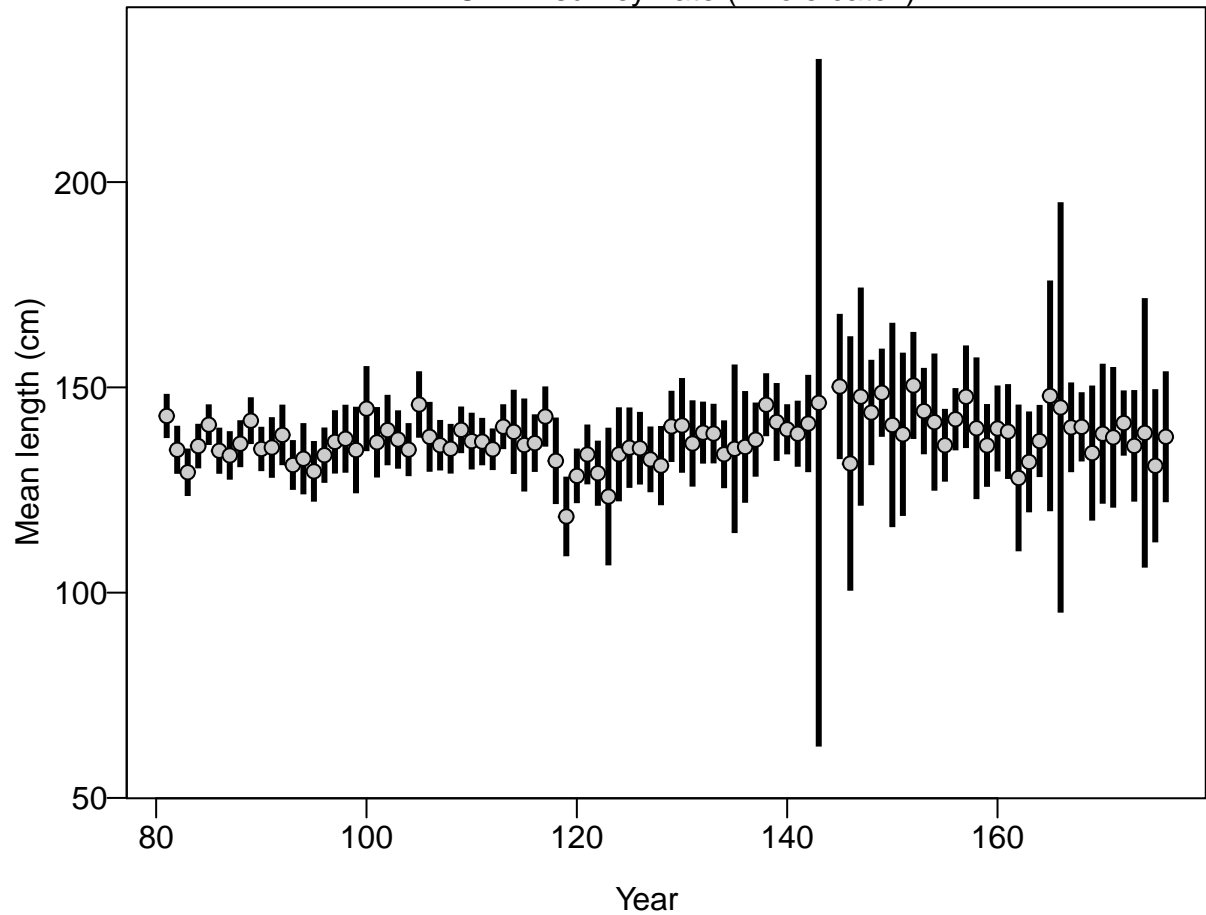




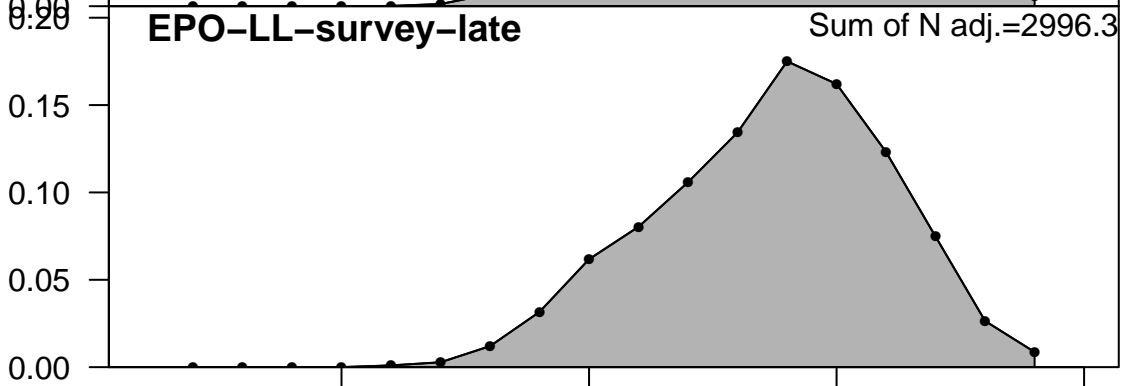
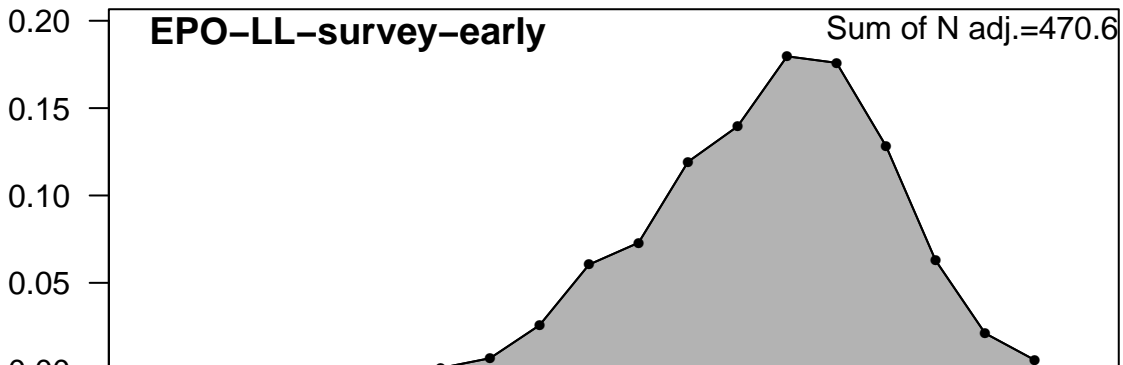




EPO-LL-survey-late (whole catch)

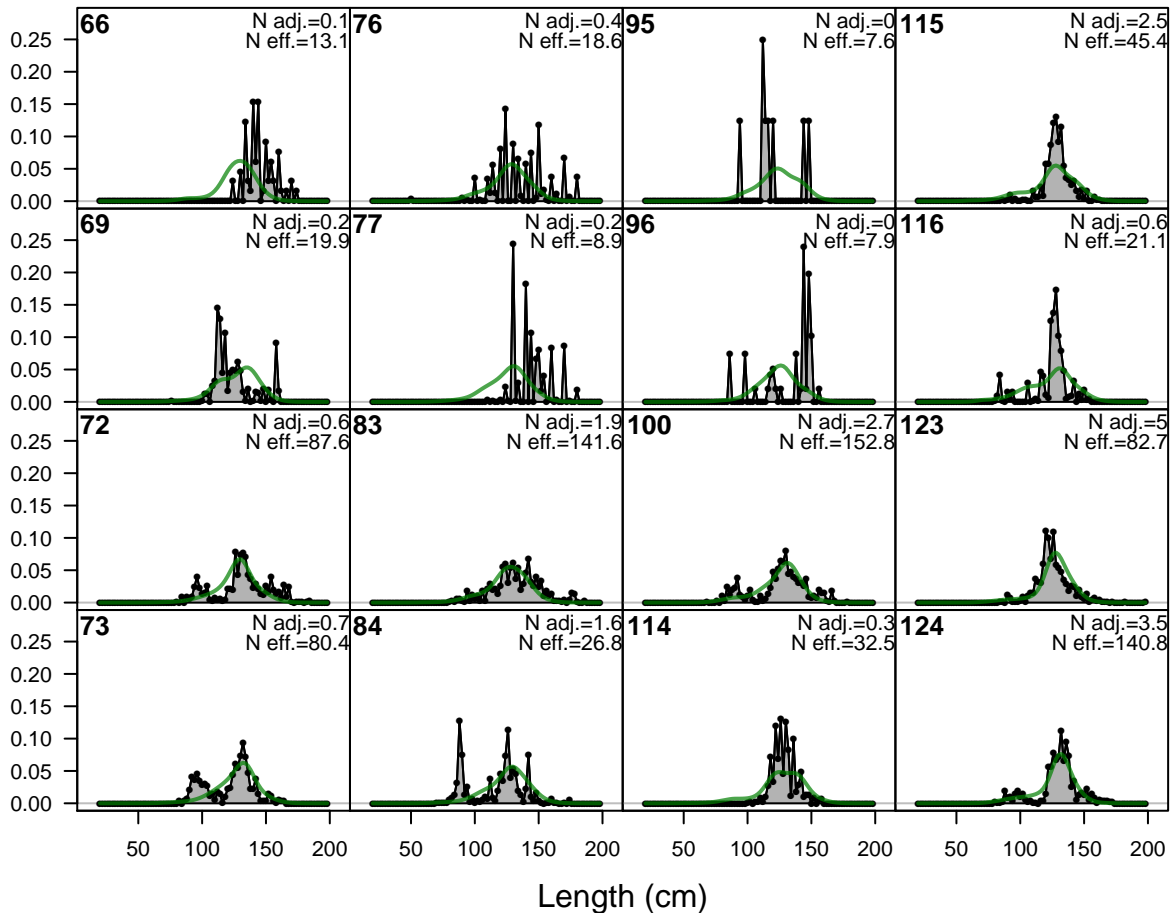


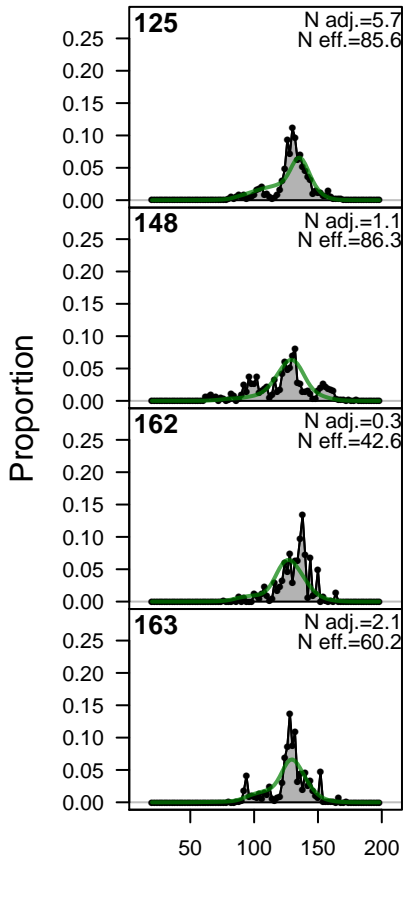
Proportion



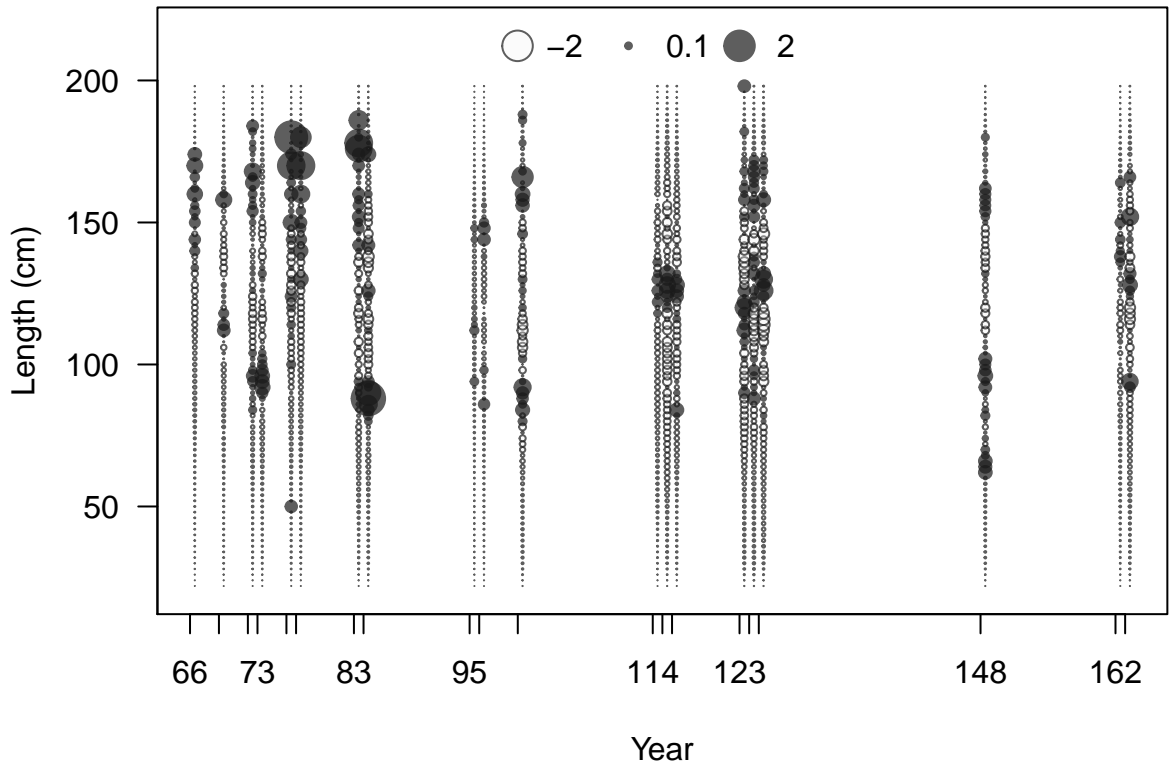
Length (cm)

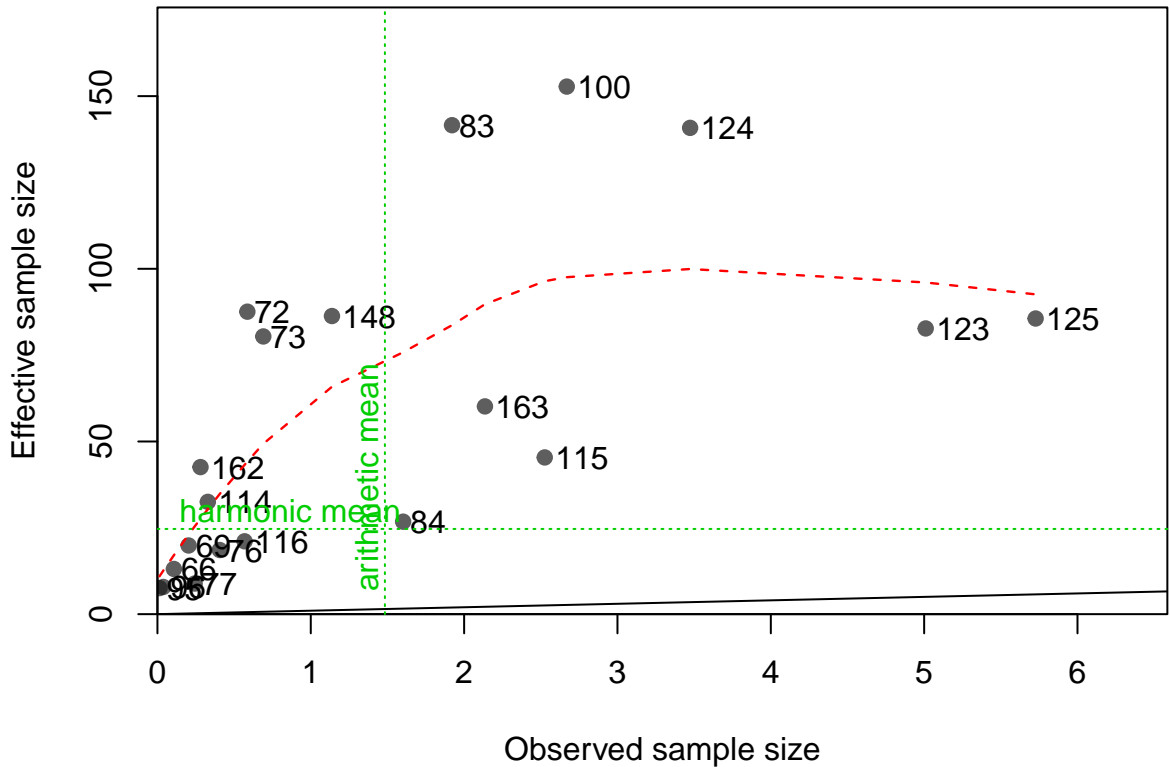
Proportion





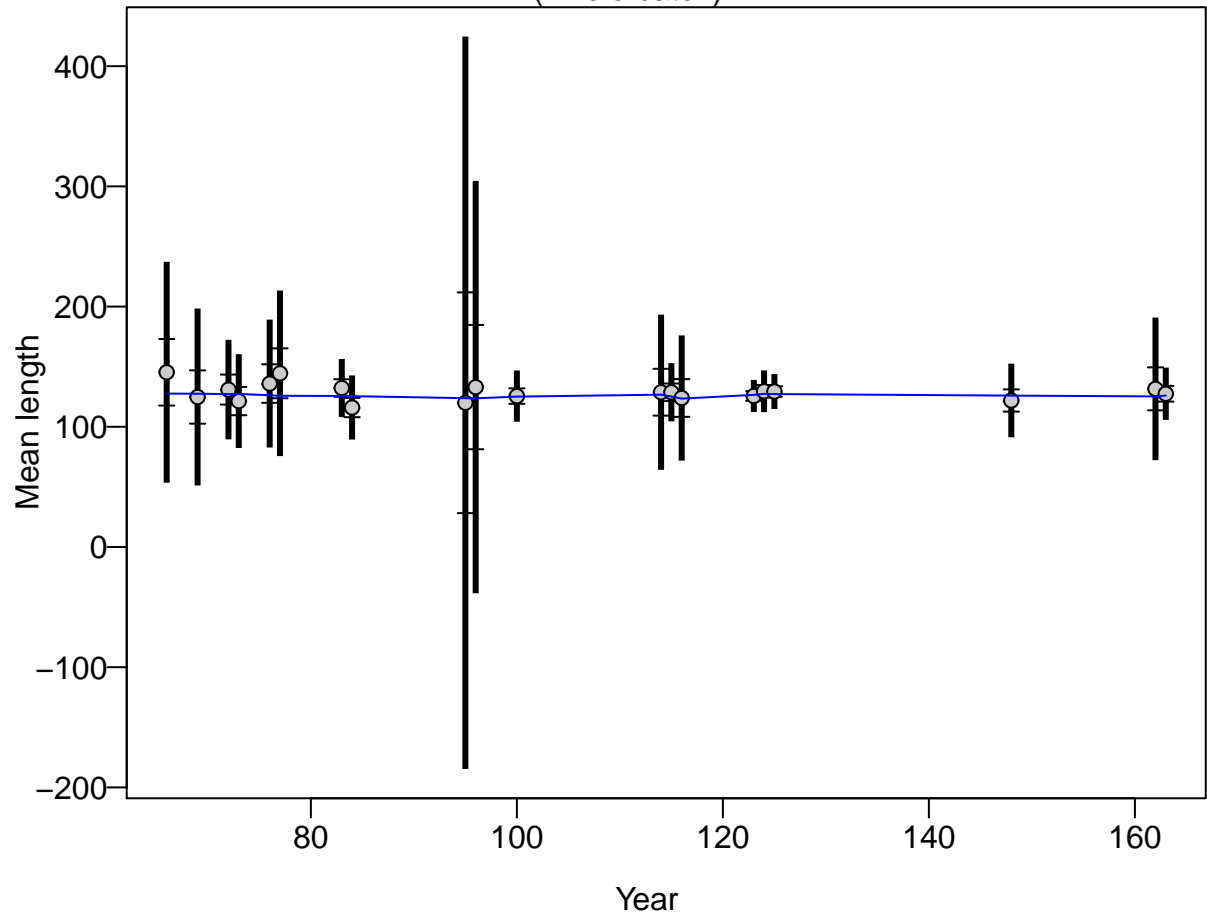
Length (cm)



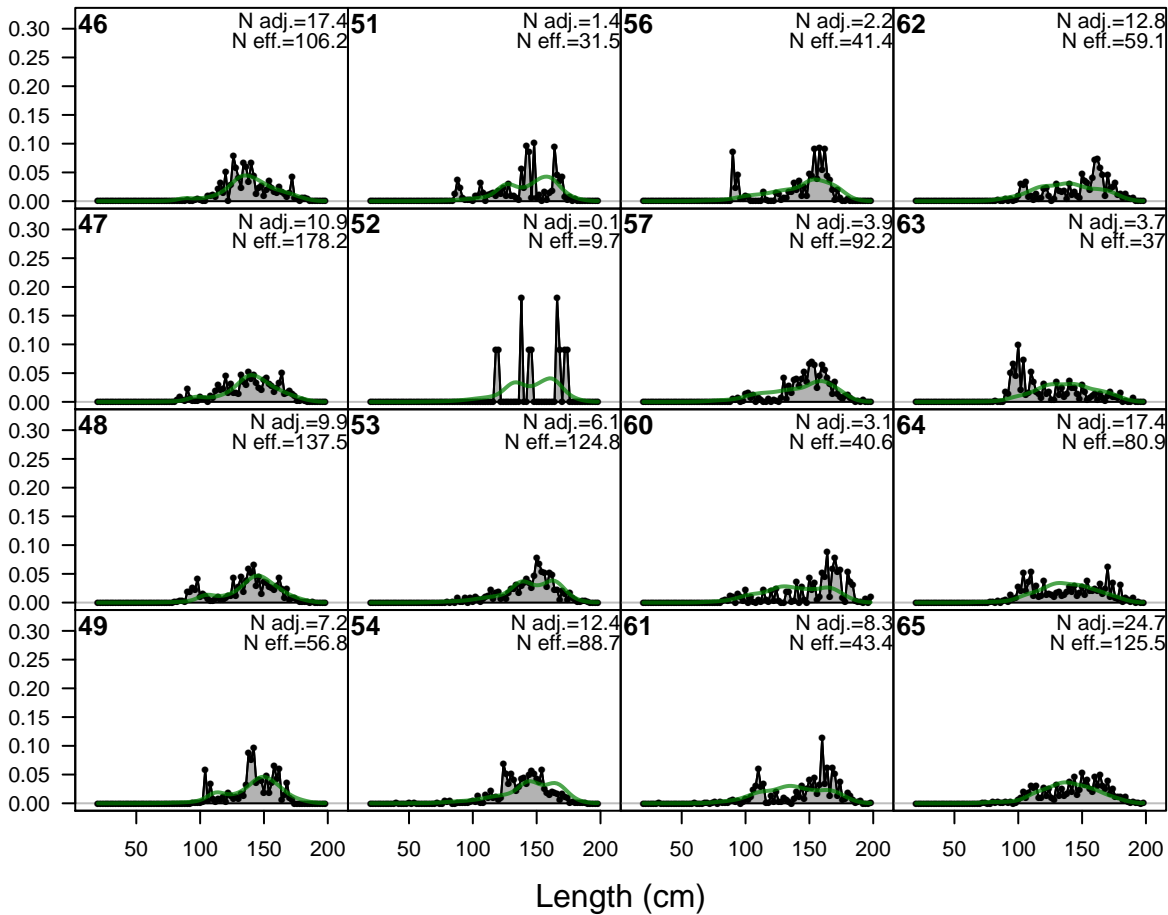




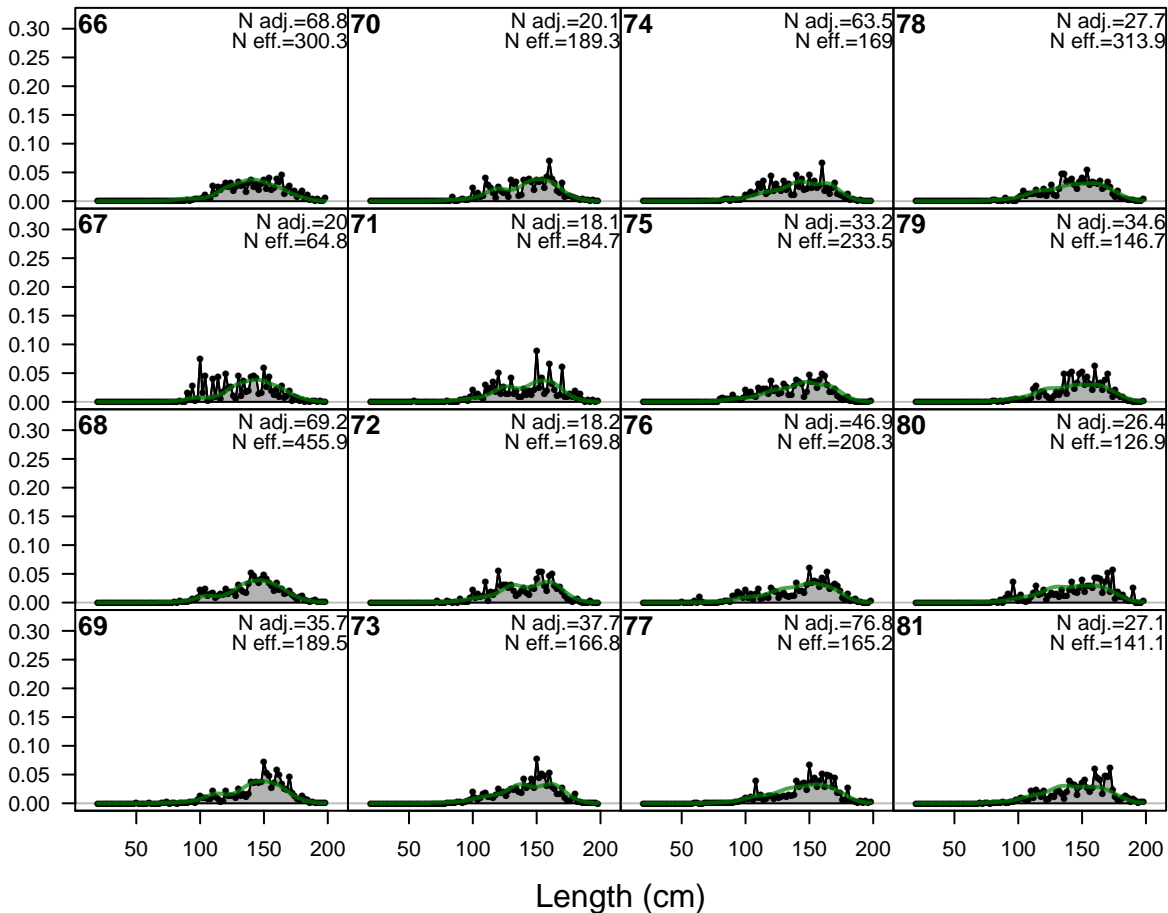
A1-LL-n (whole catch)



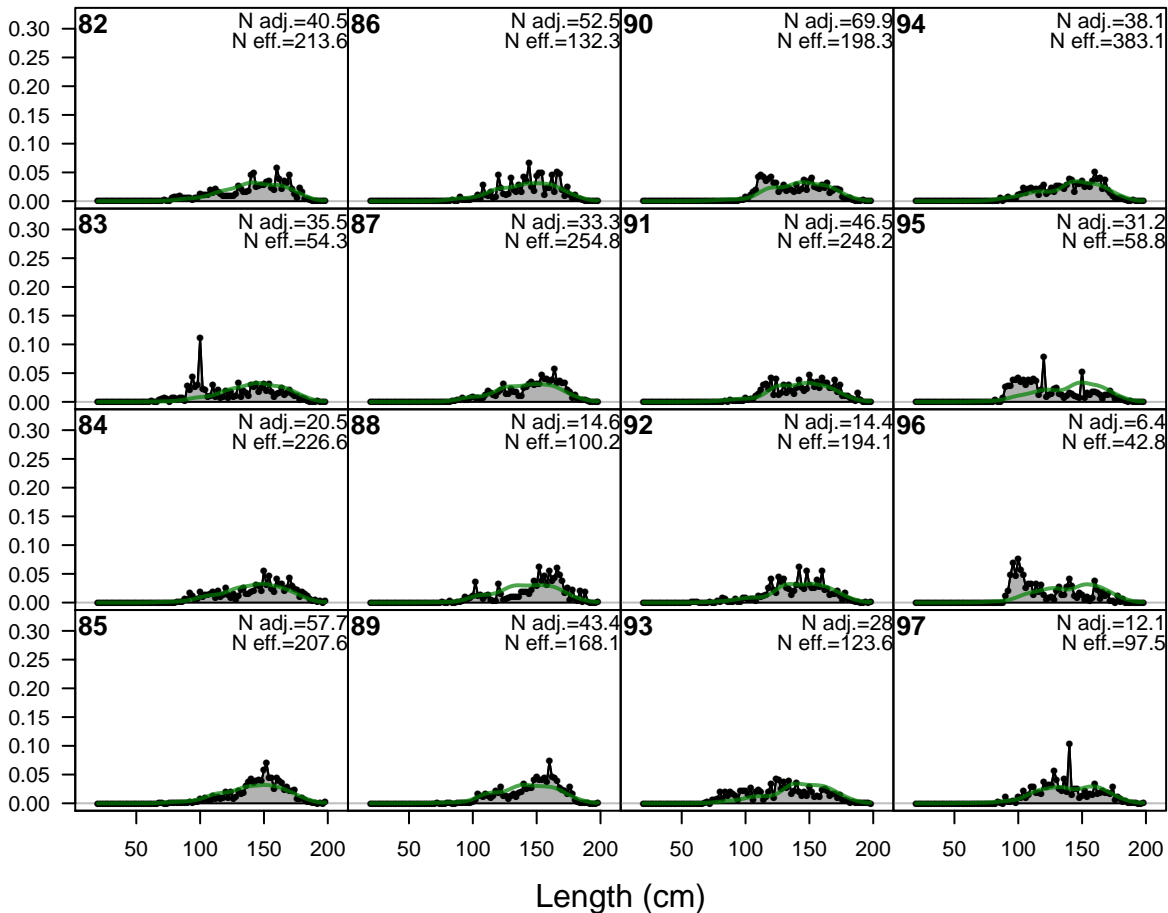
Proportion



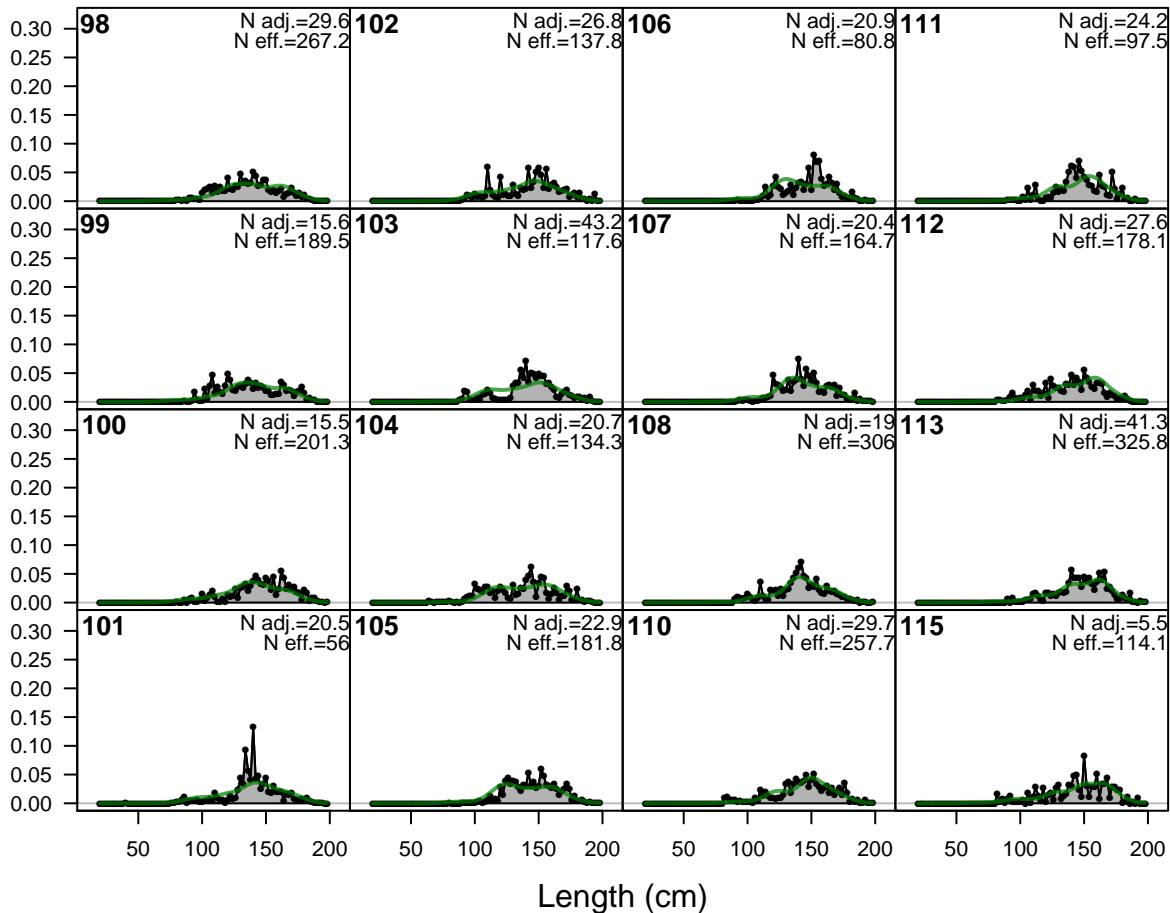
Proportion



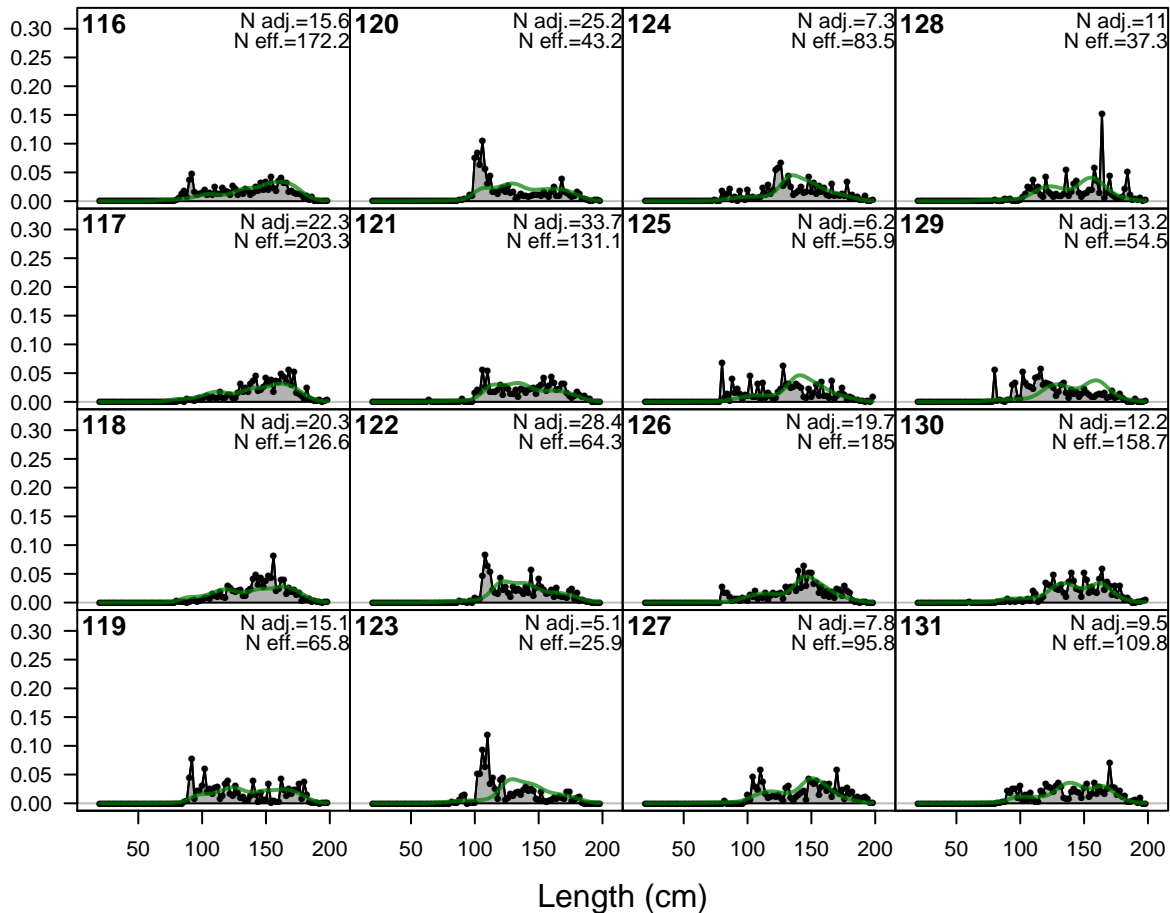
Proportion



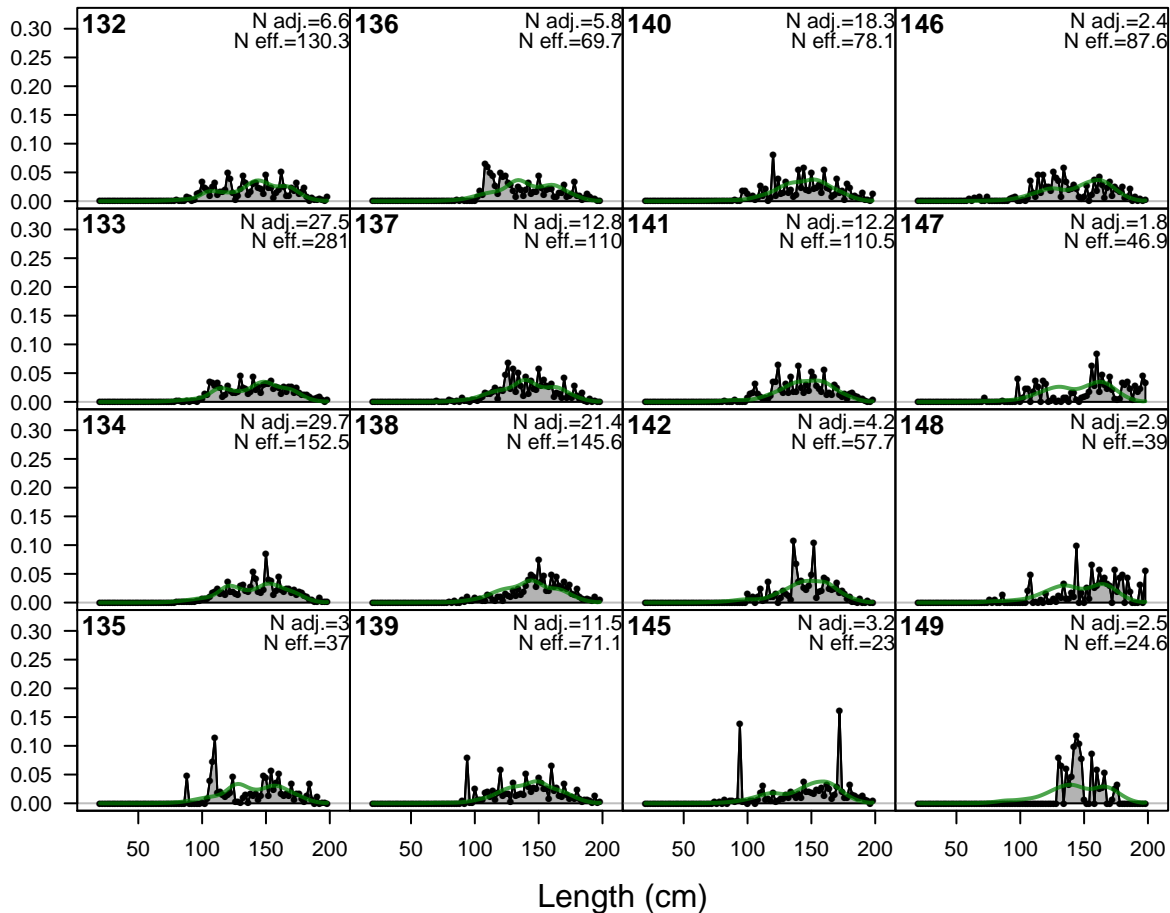
Proportion



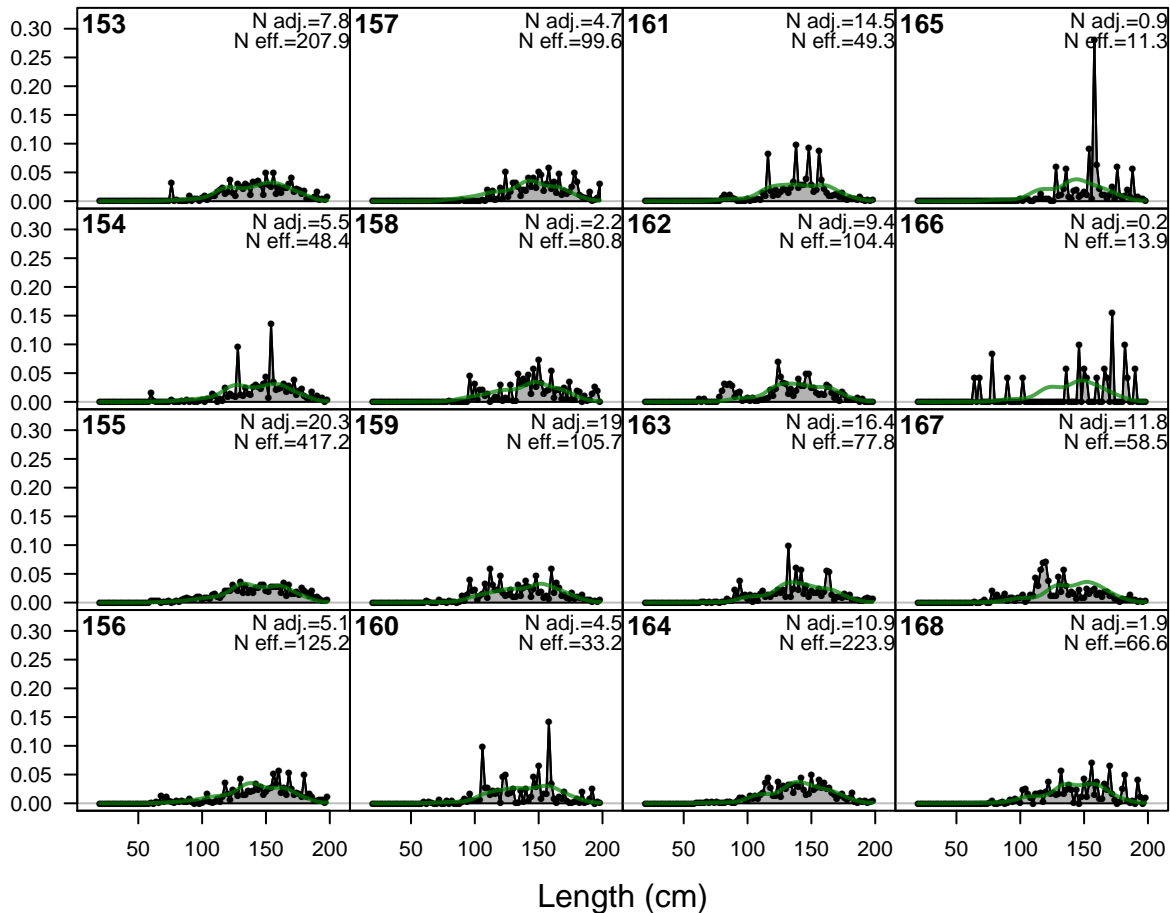
Proportion



Proportion

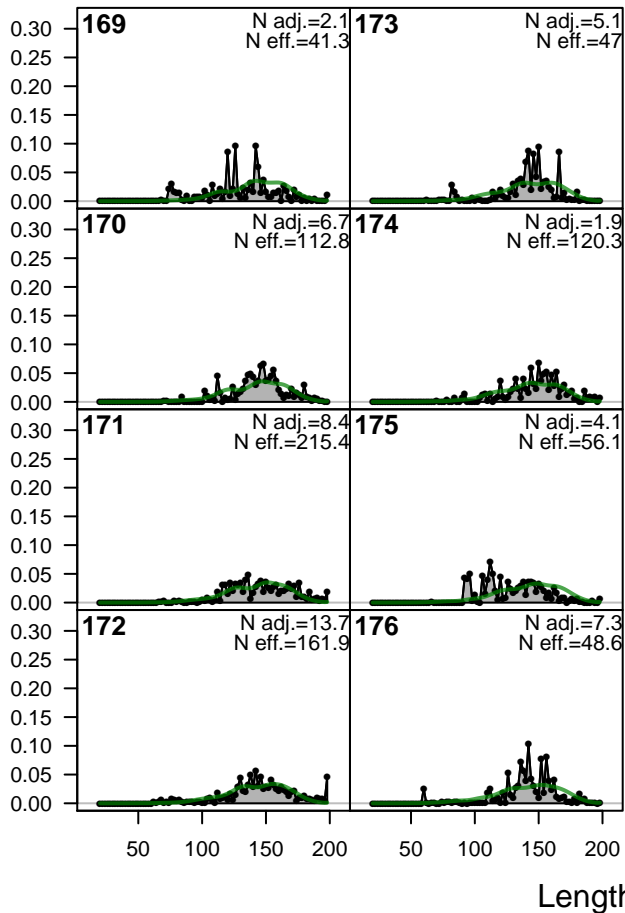


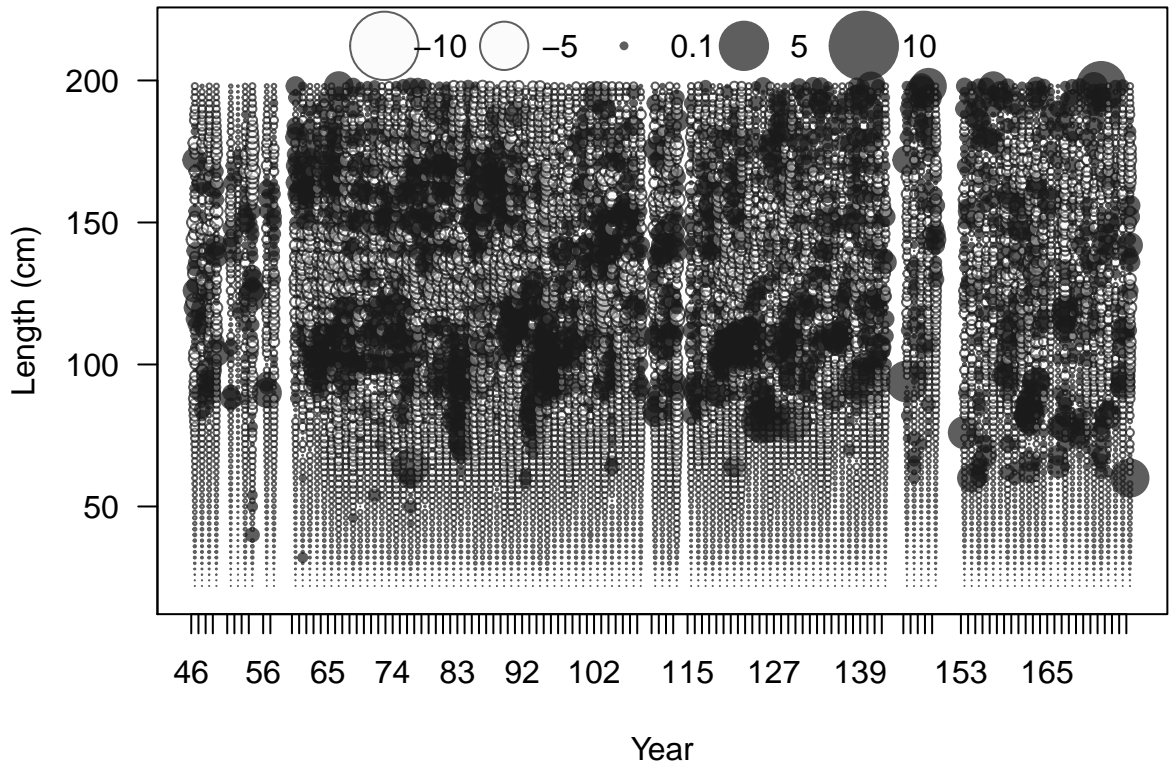
Proportion

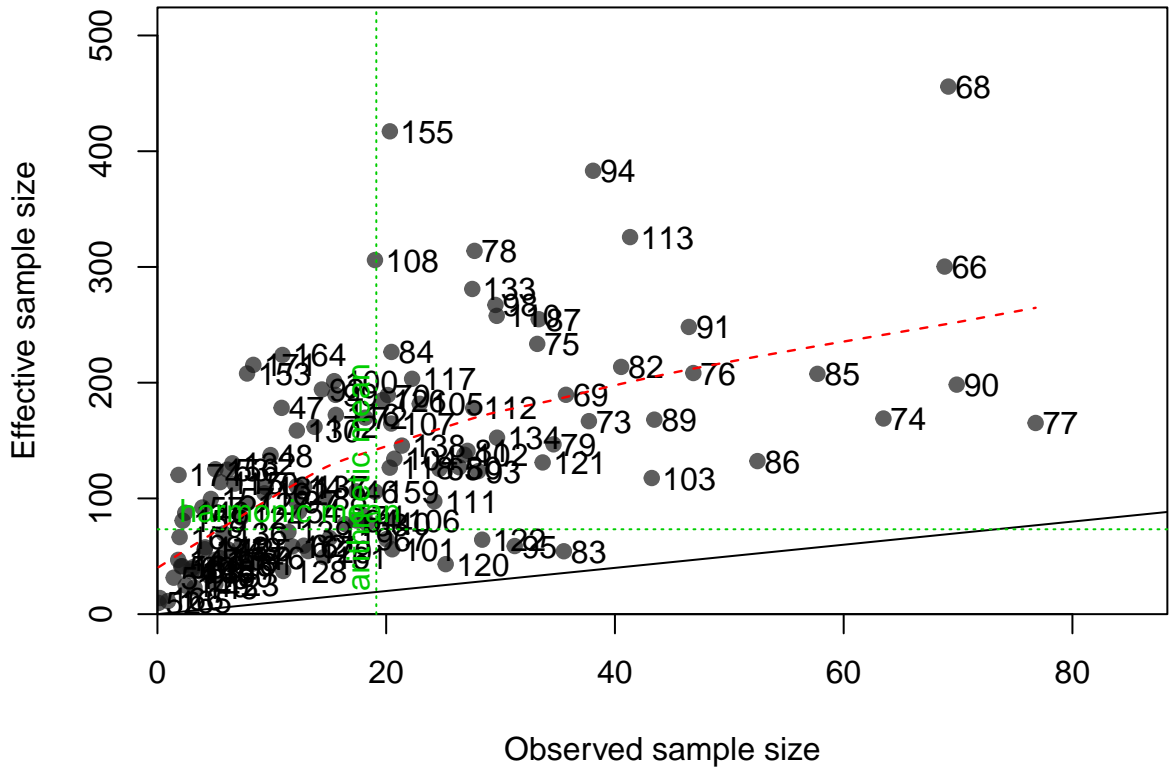




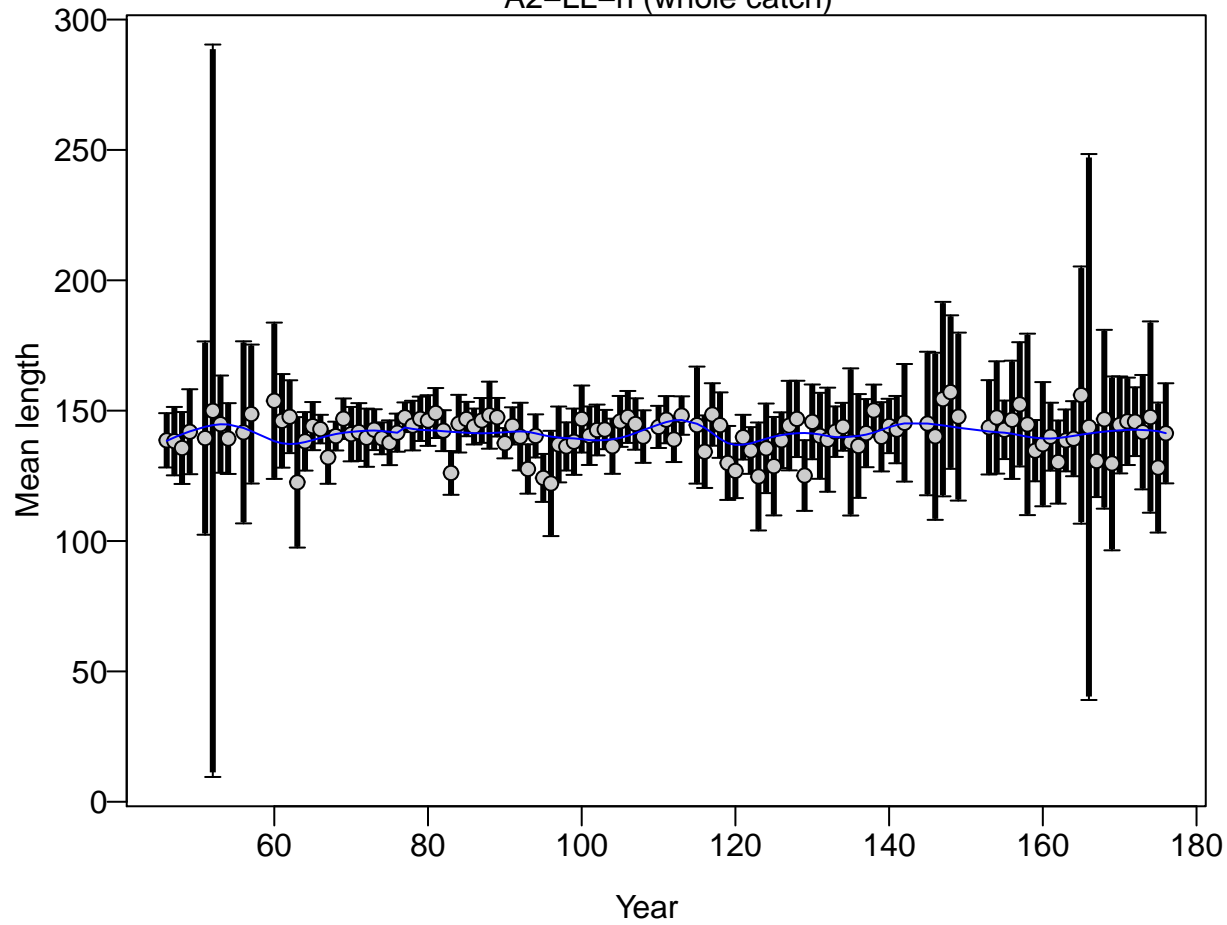
Proportion



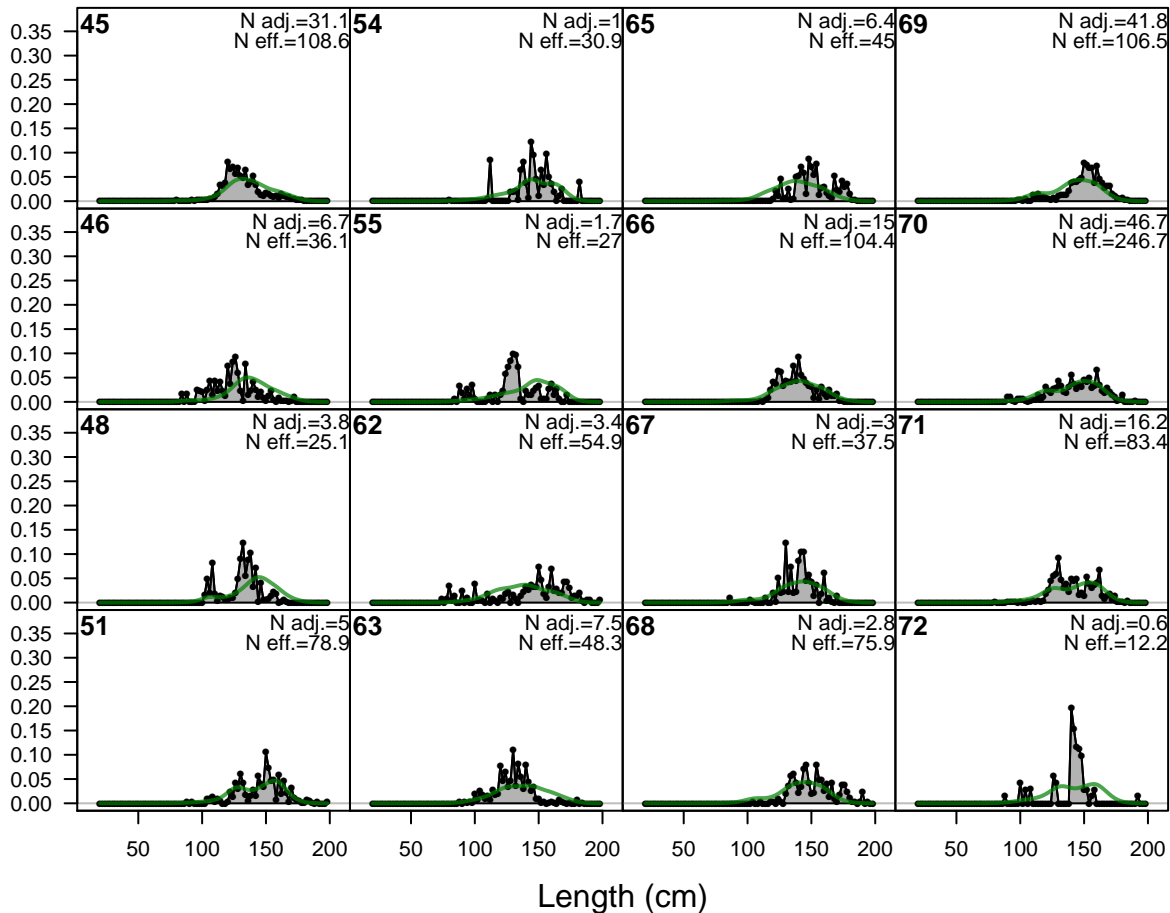




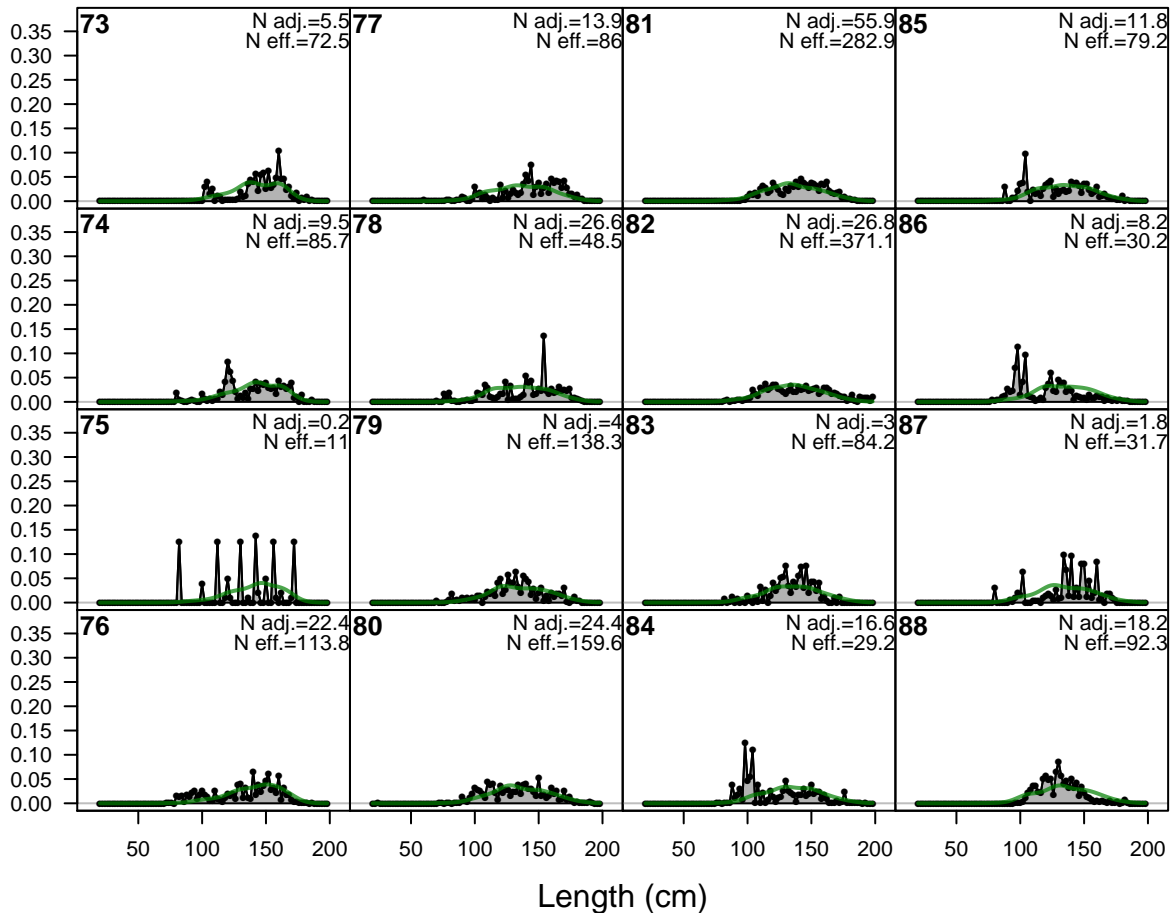
A2-LL-n (whole catch)



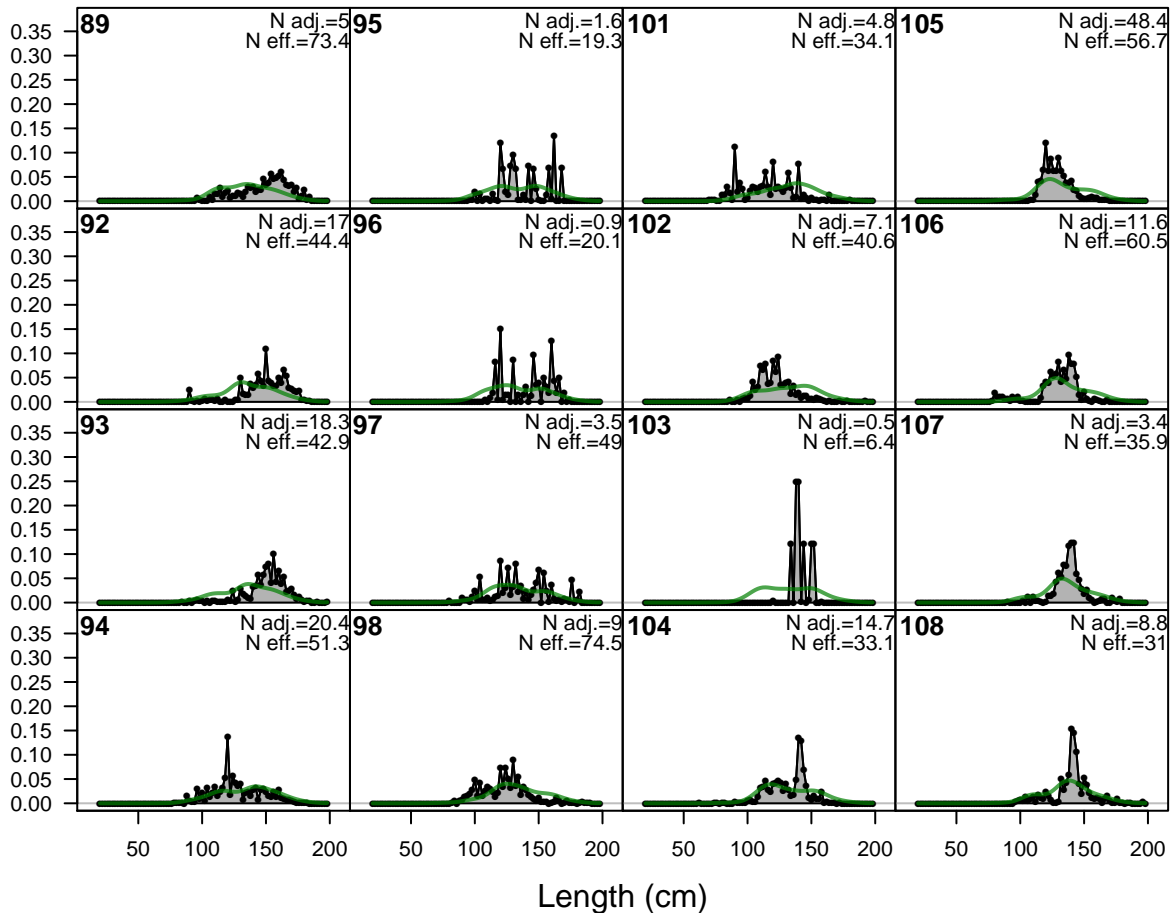
Proportion



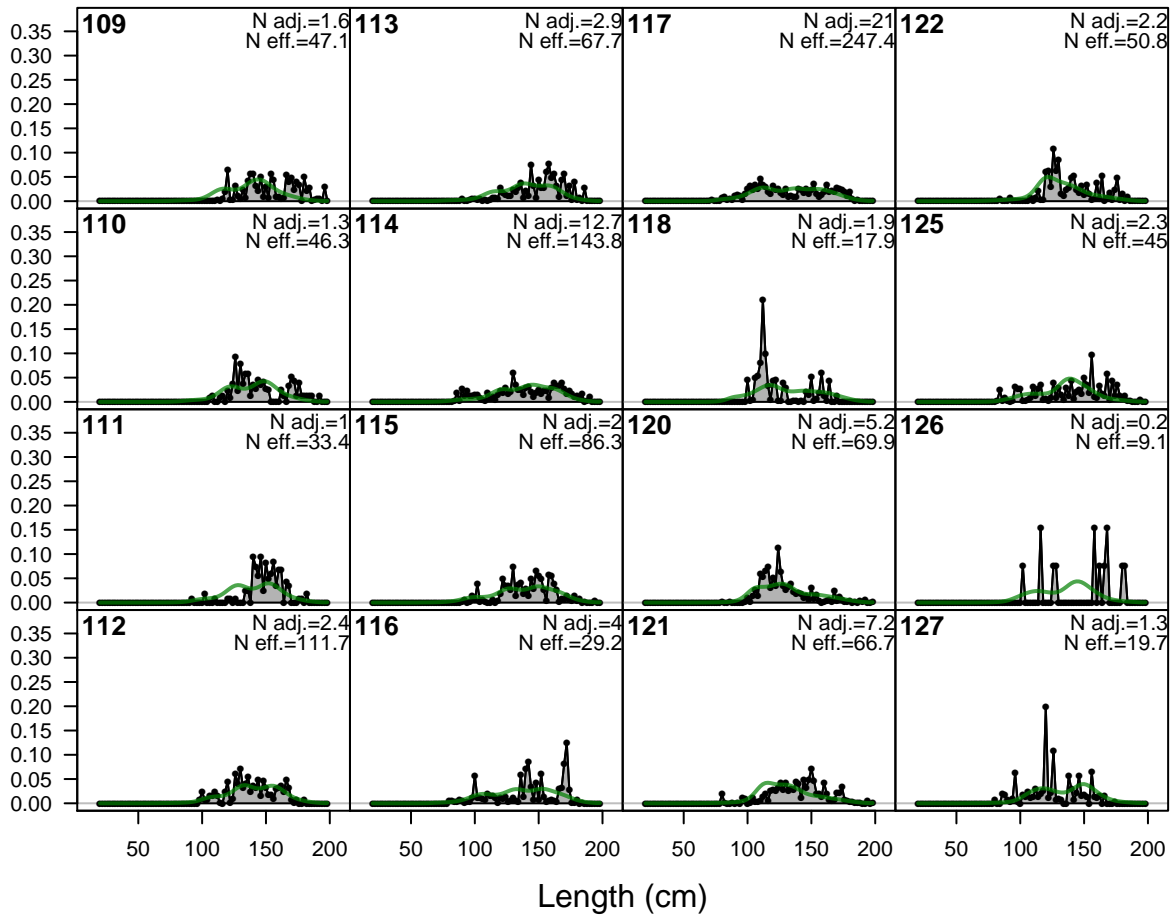
Proportion



Proportion

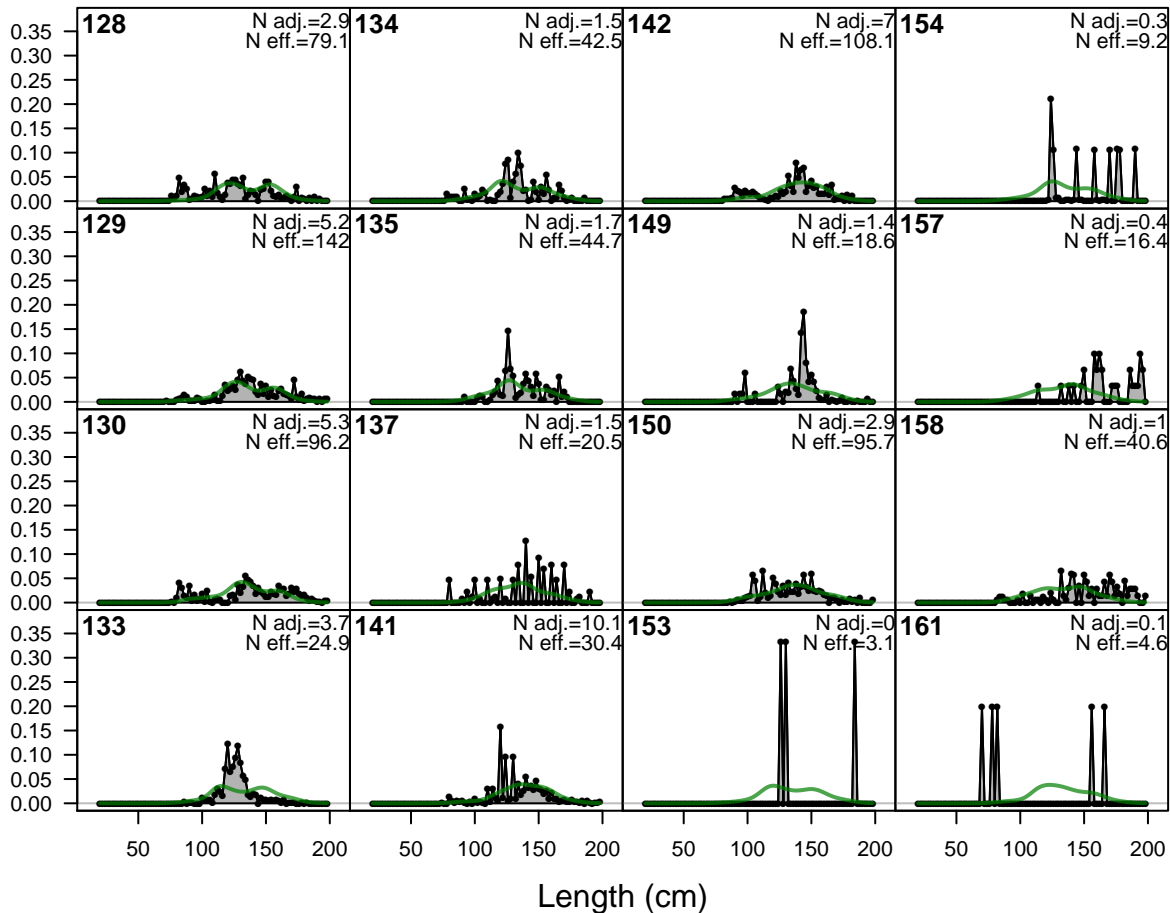


Proportion

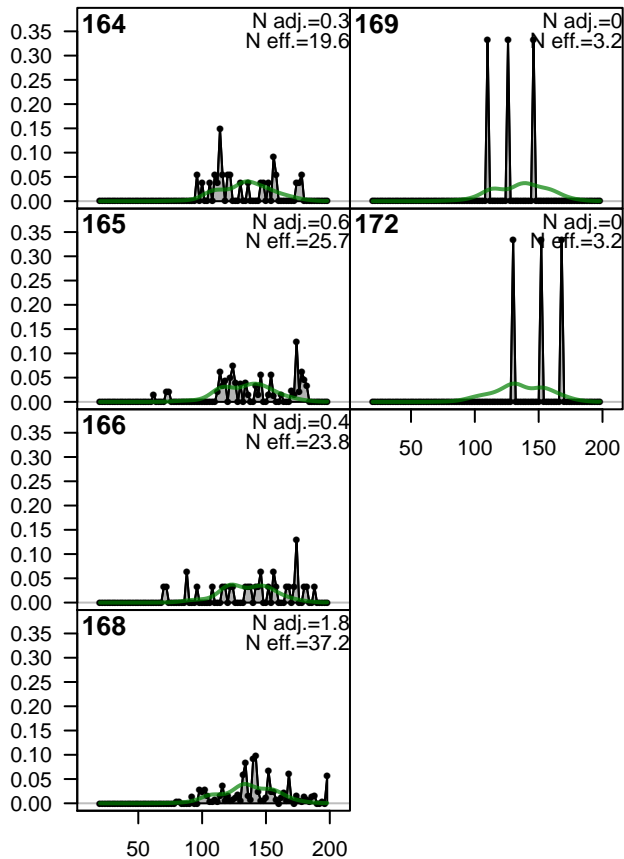




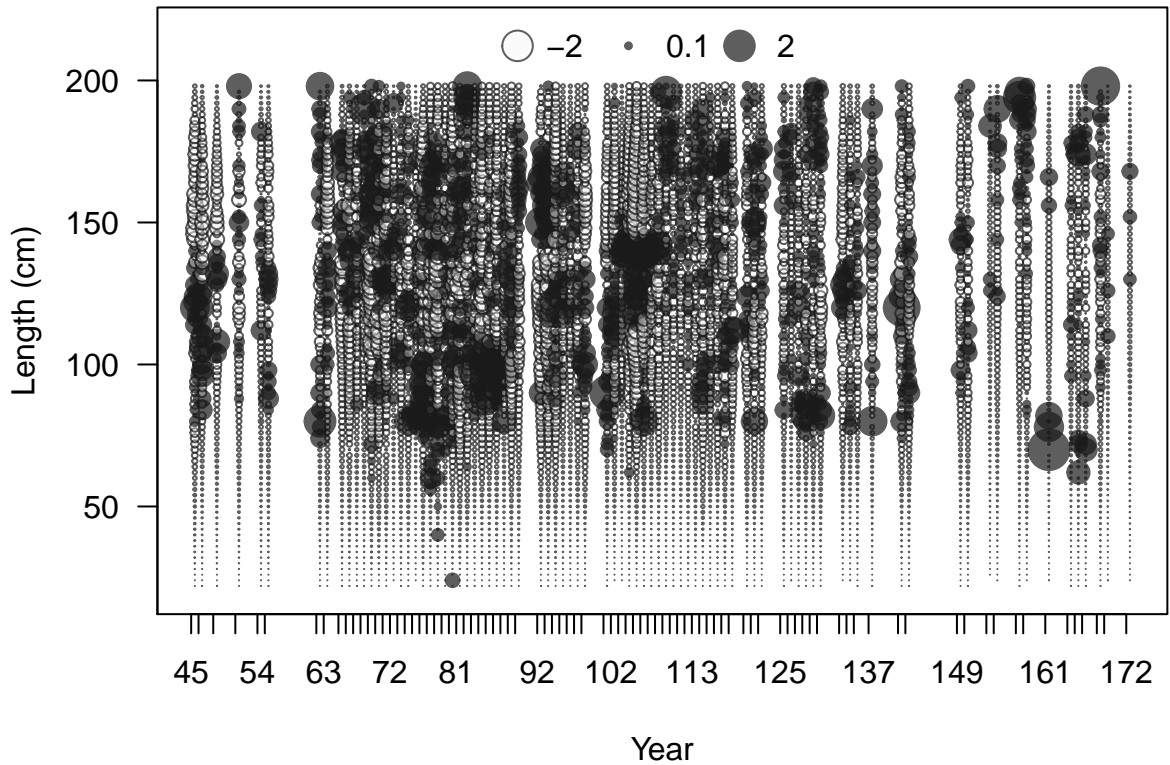
Proportion

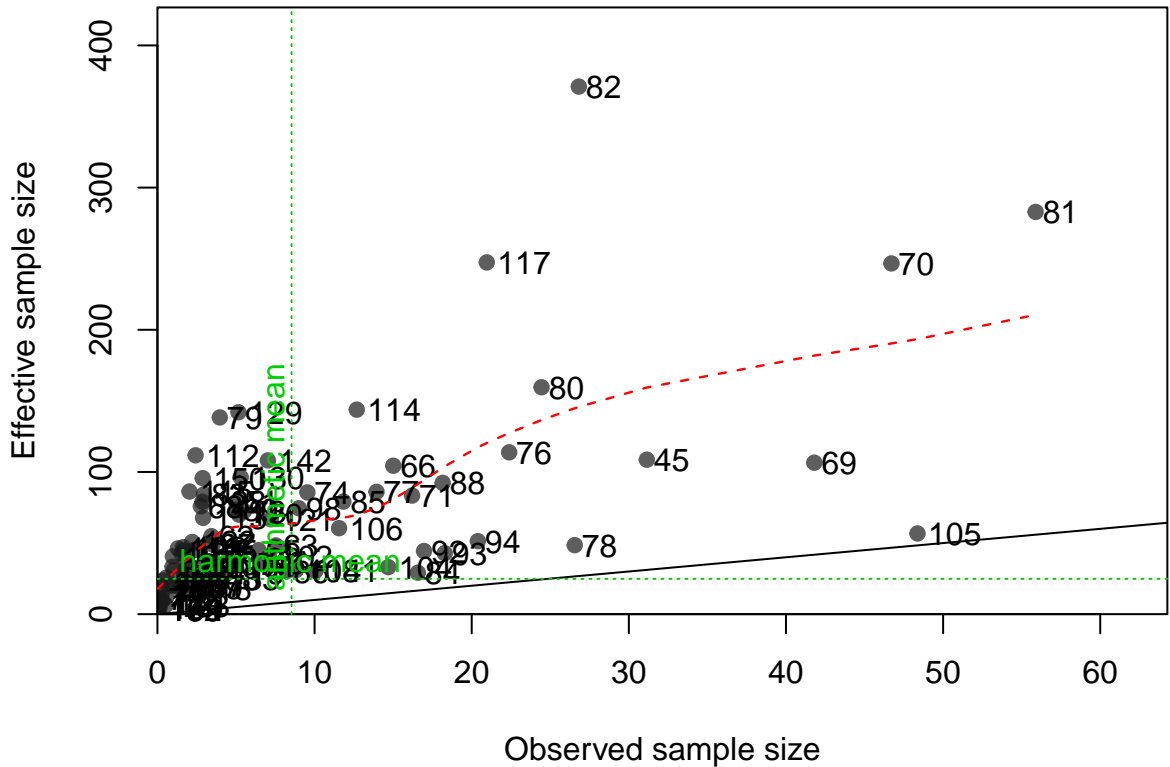


Proportion

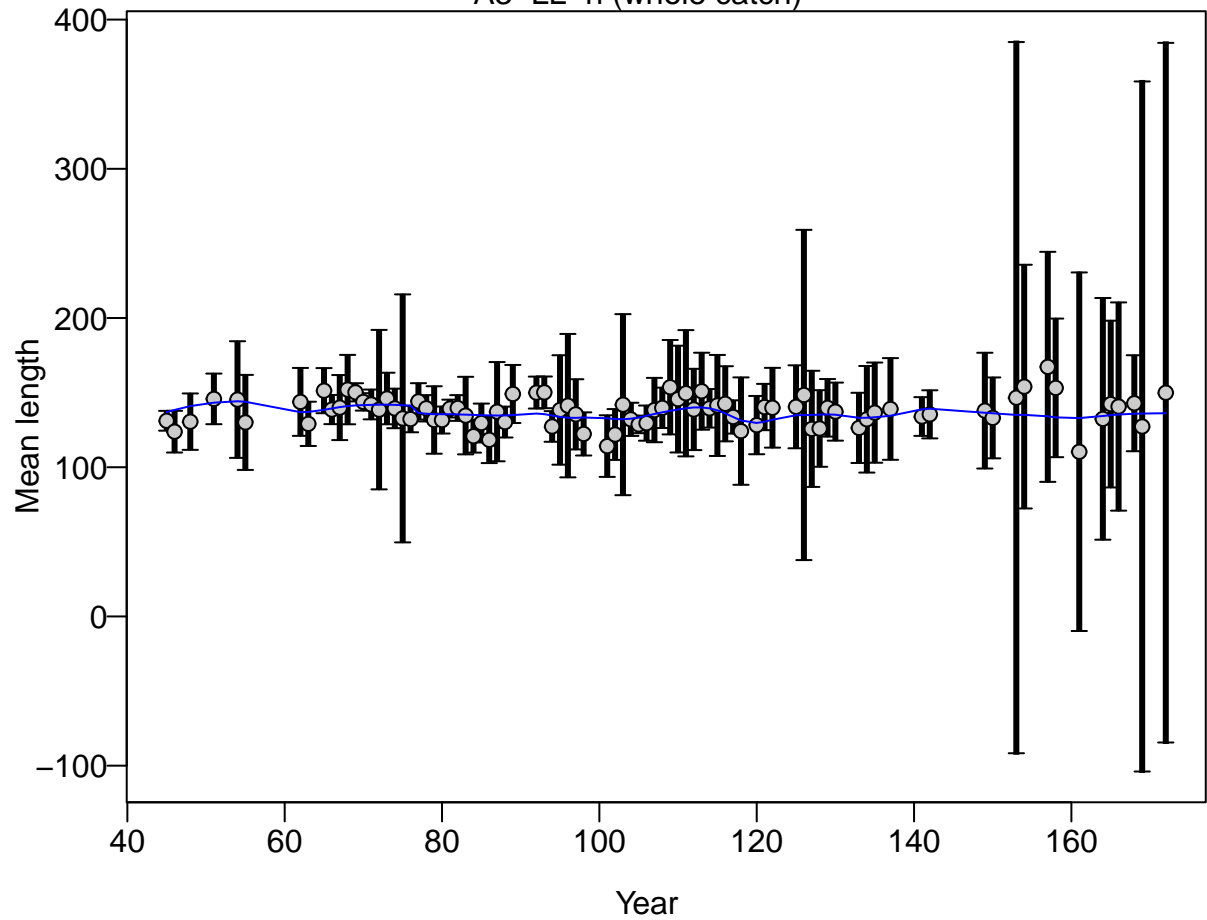


Length (cm)

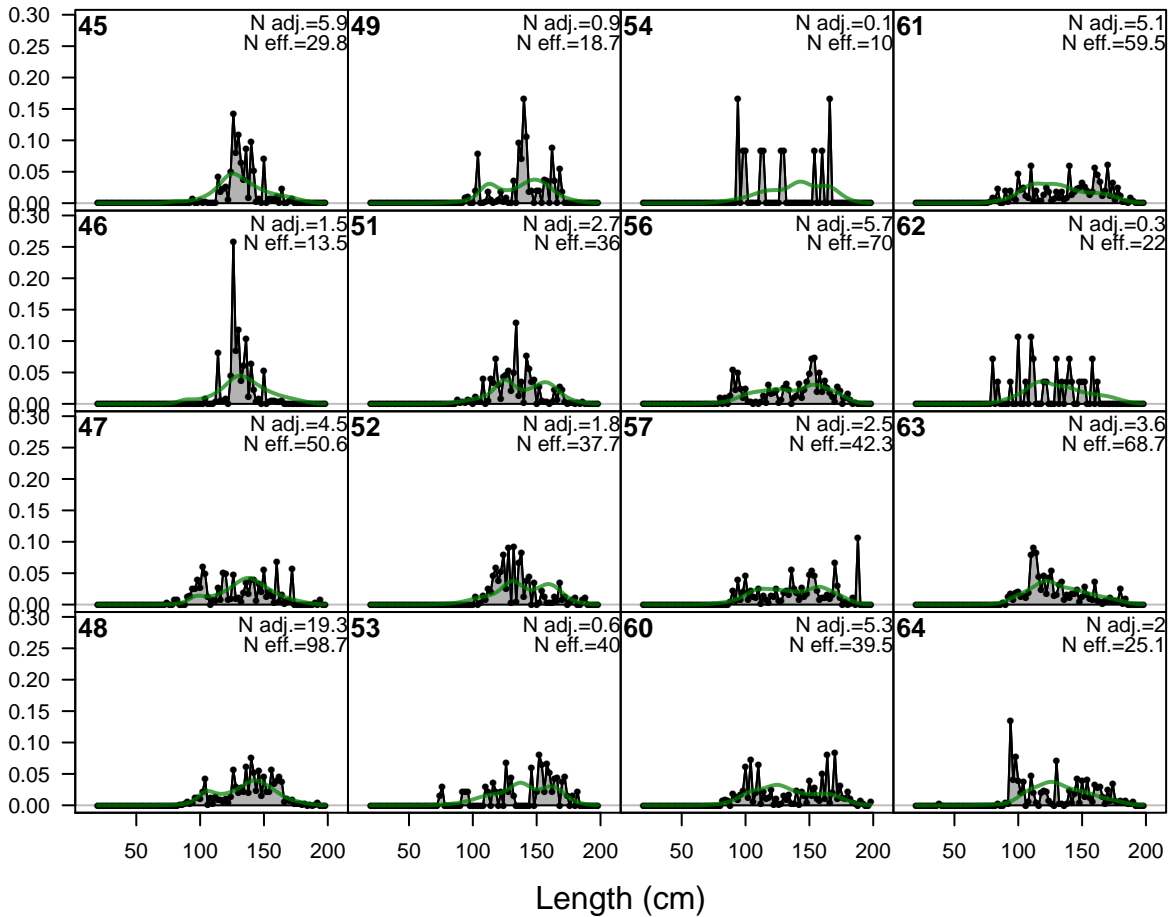




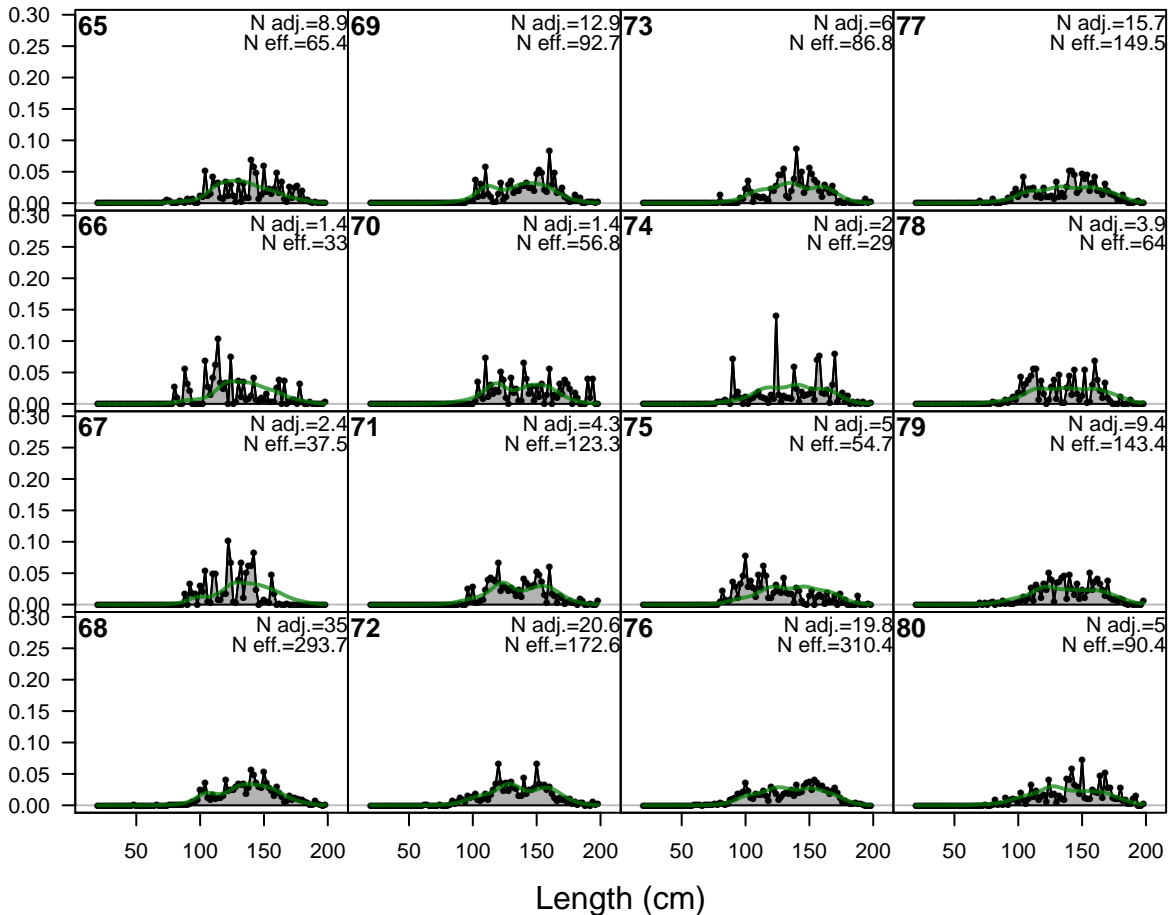
A3-LL-n (whole catch)



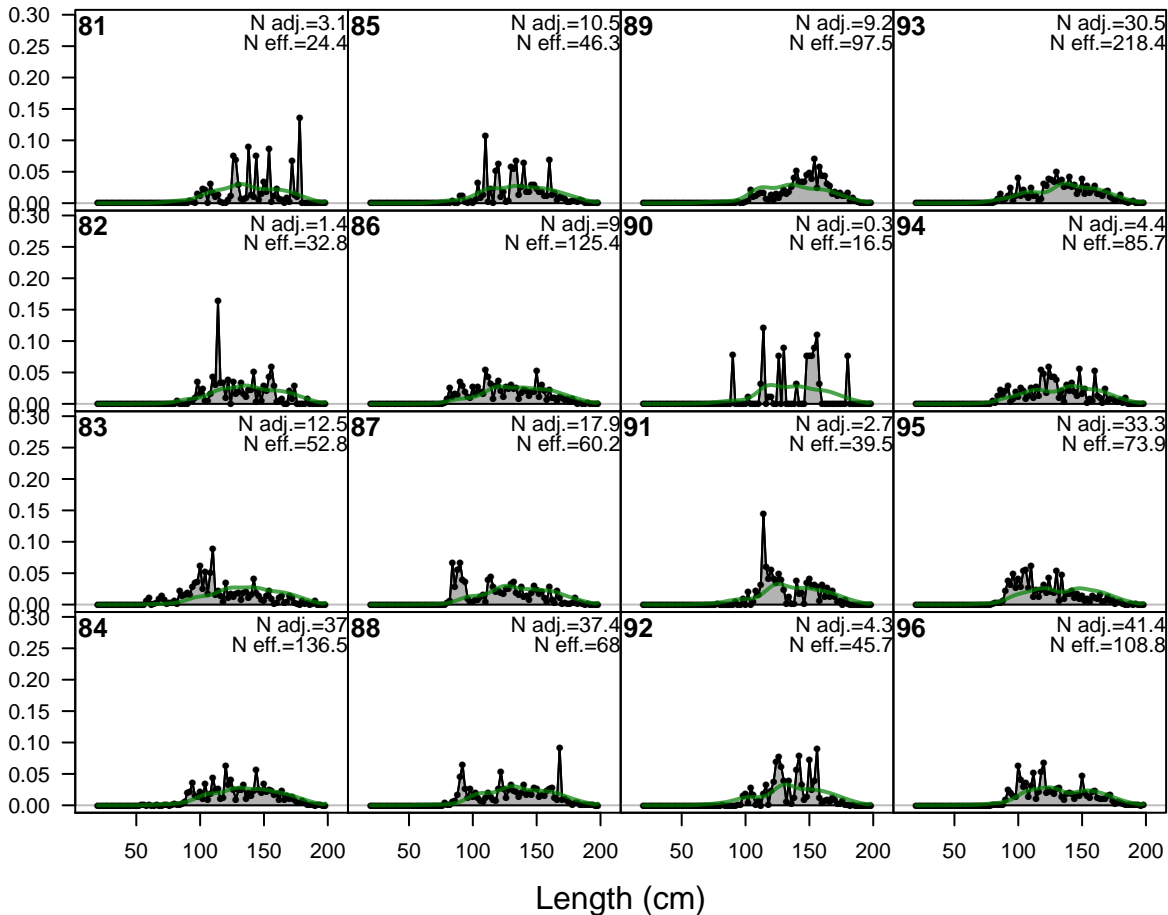
Proportion



Proportion

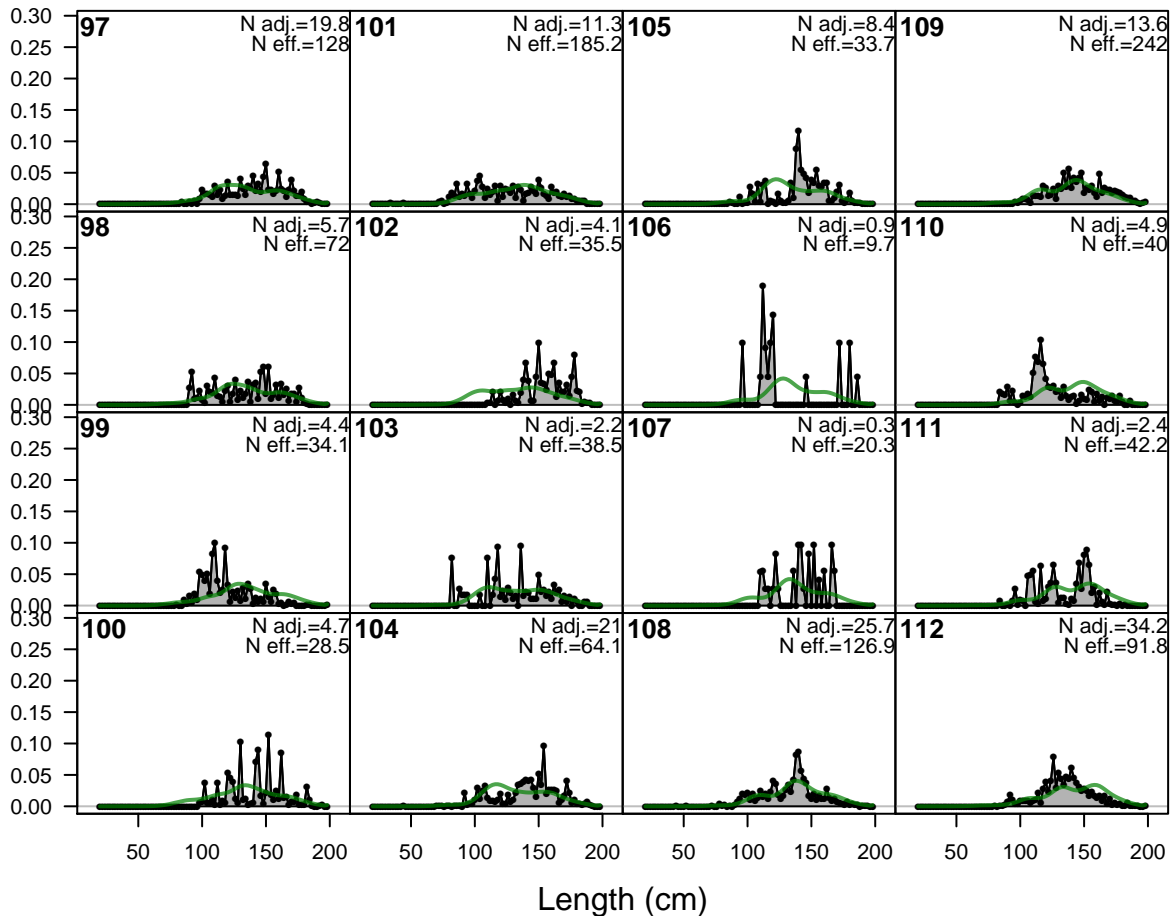


Proportion

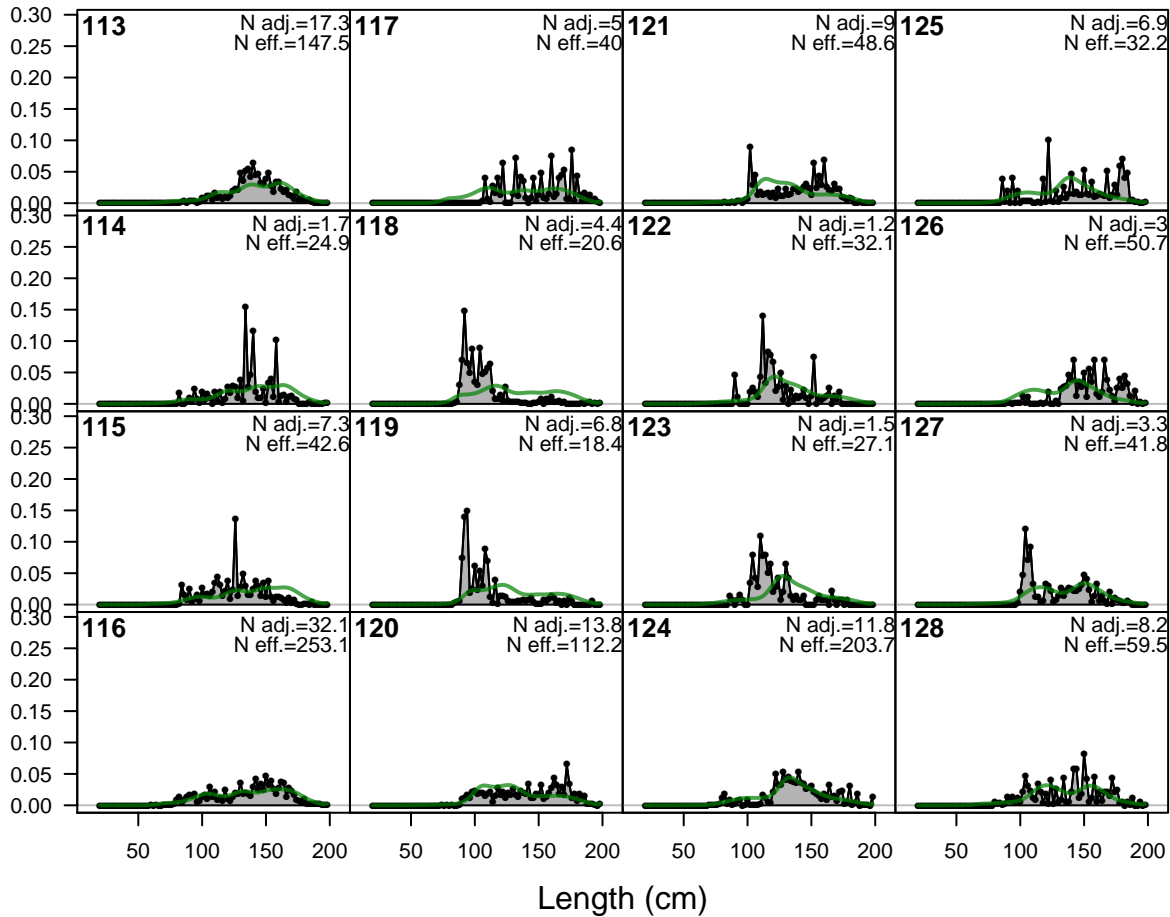




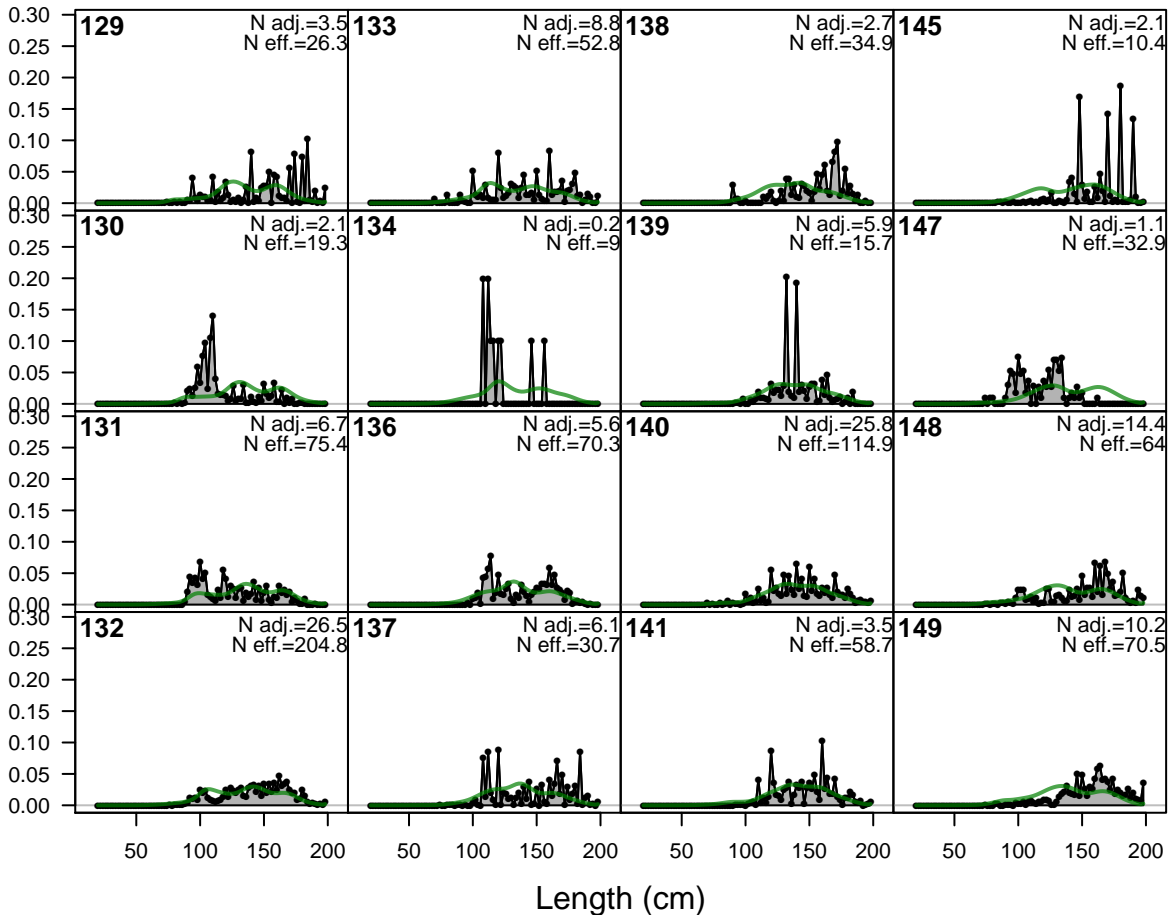
Proportion



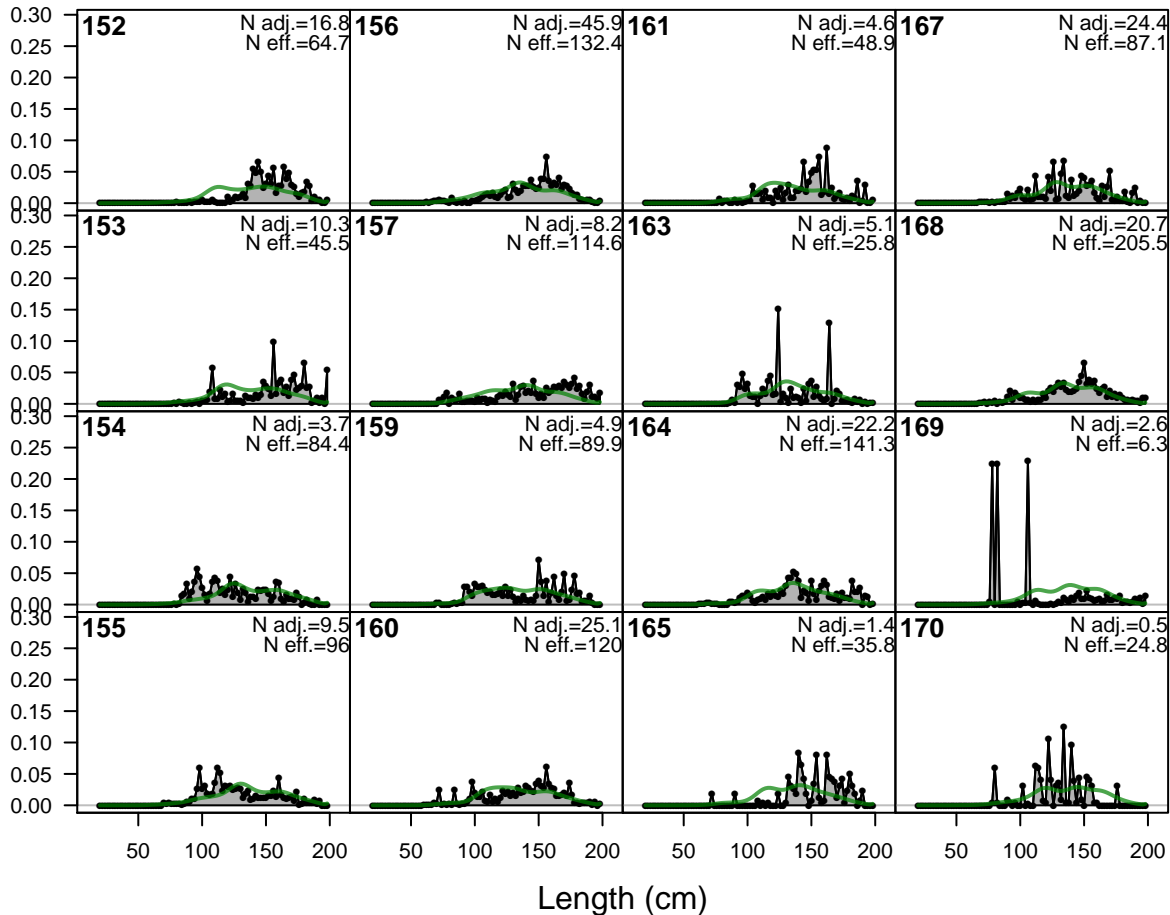
Proportion



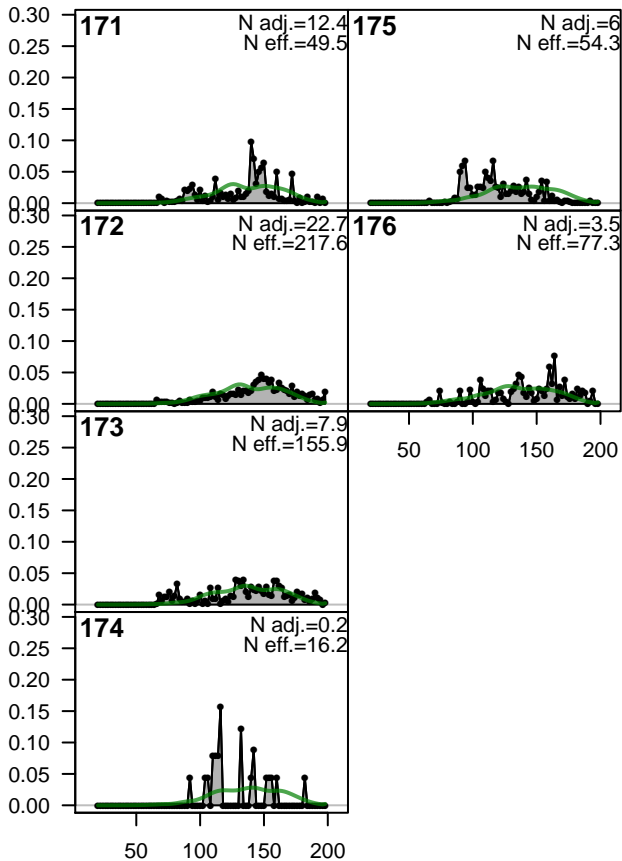
Proportion



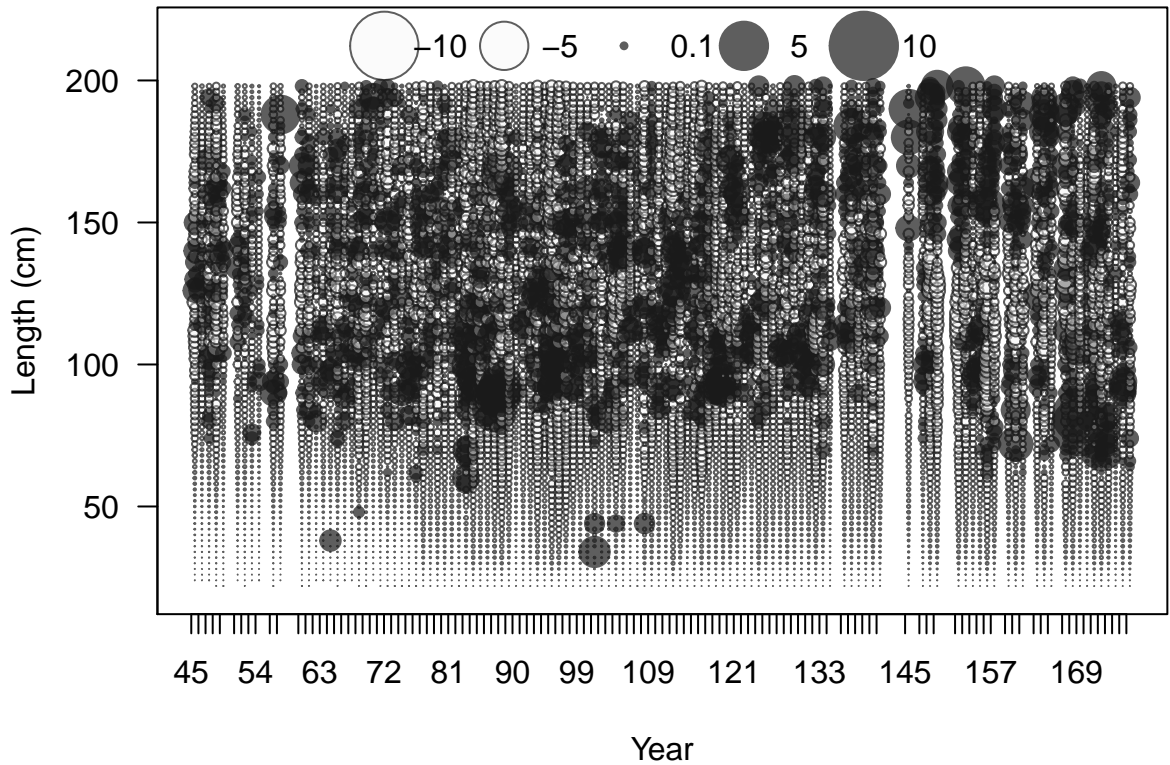
Proportion

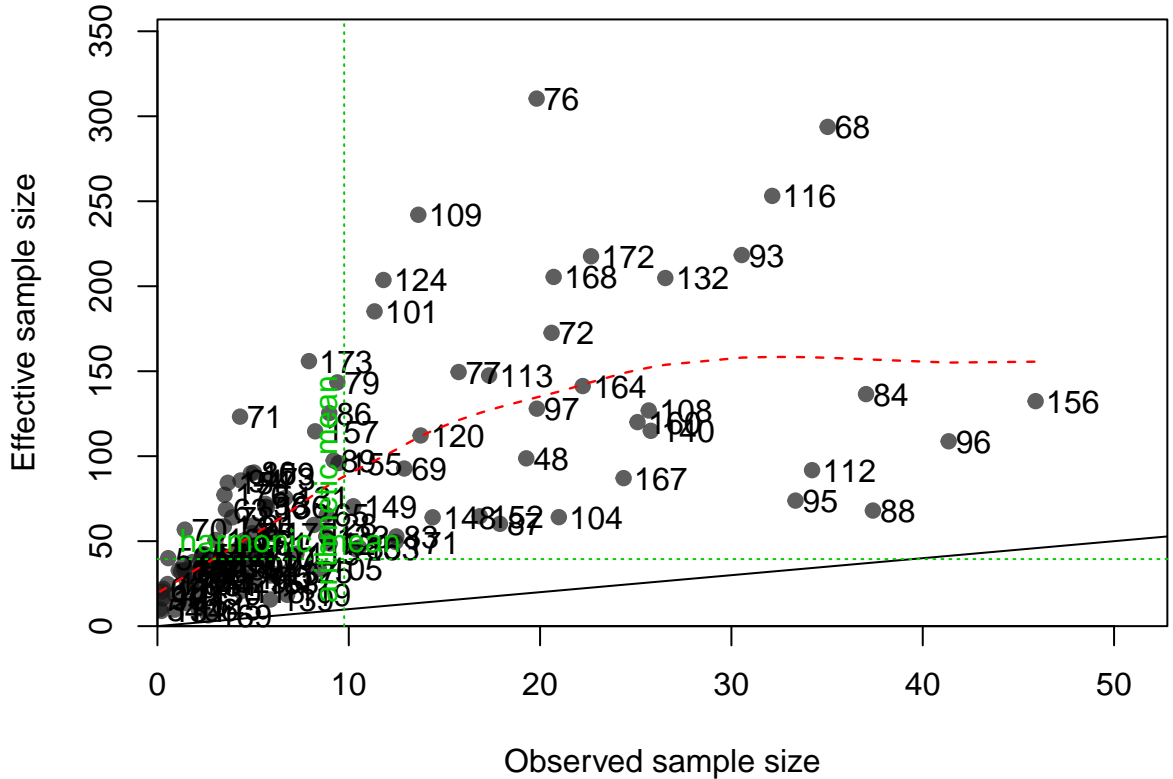


Proportion

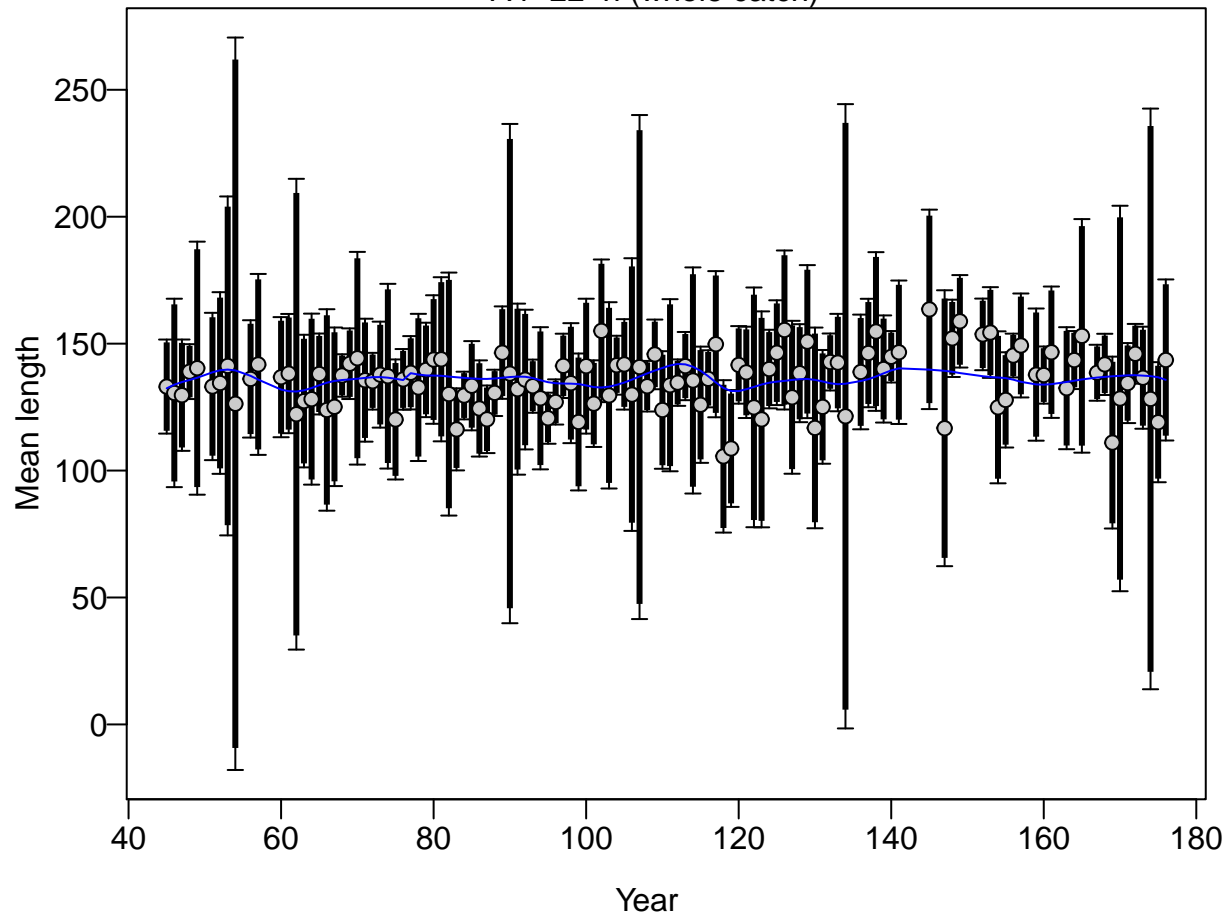


Length (cm)



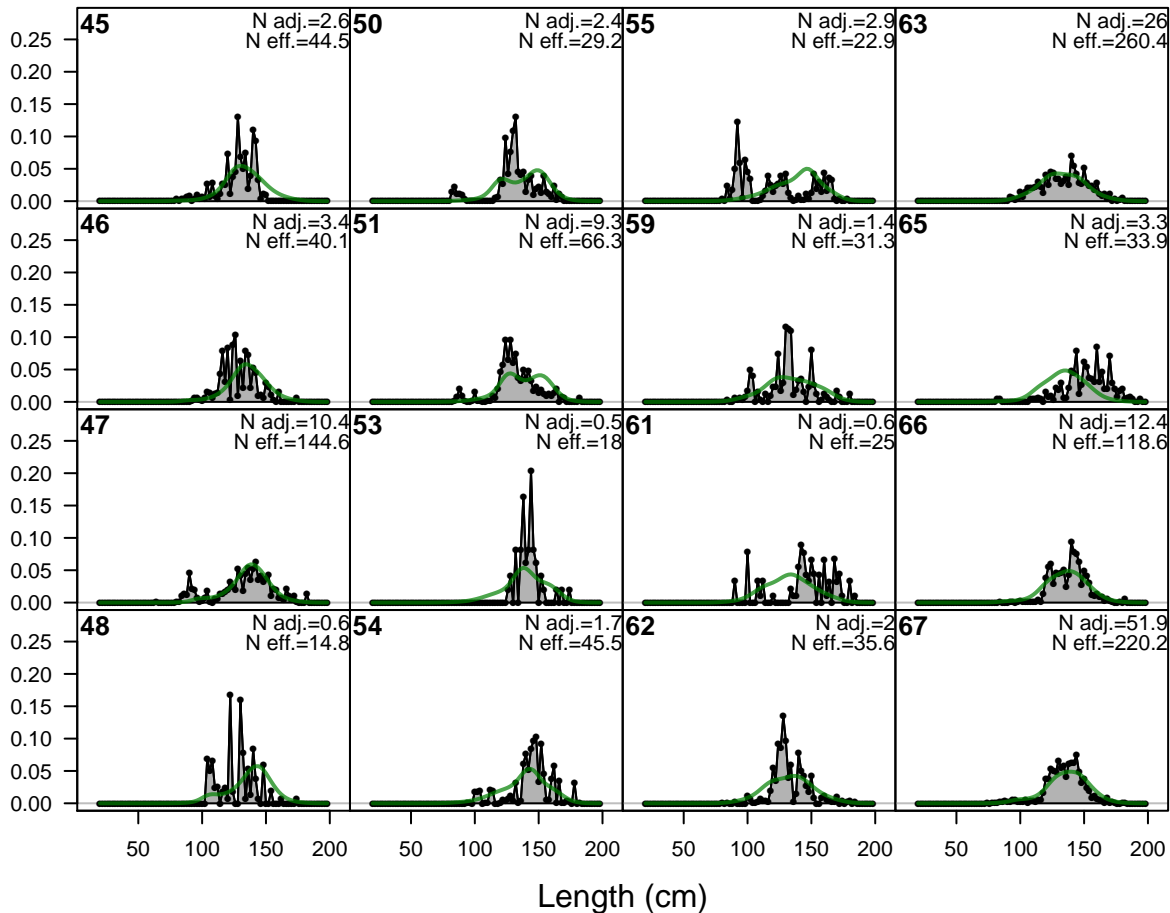


A4-LL-n (whole catch)

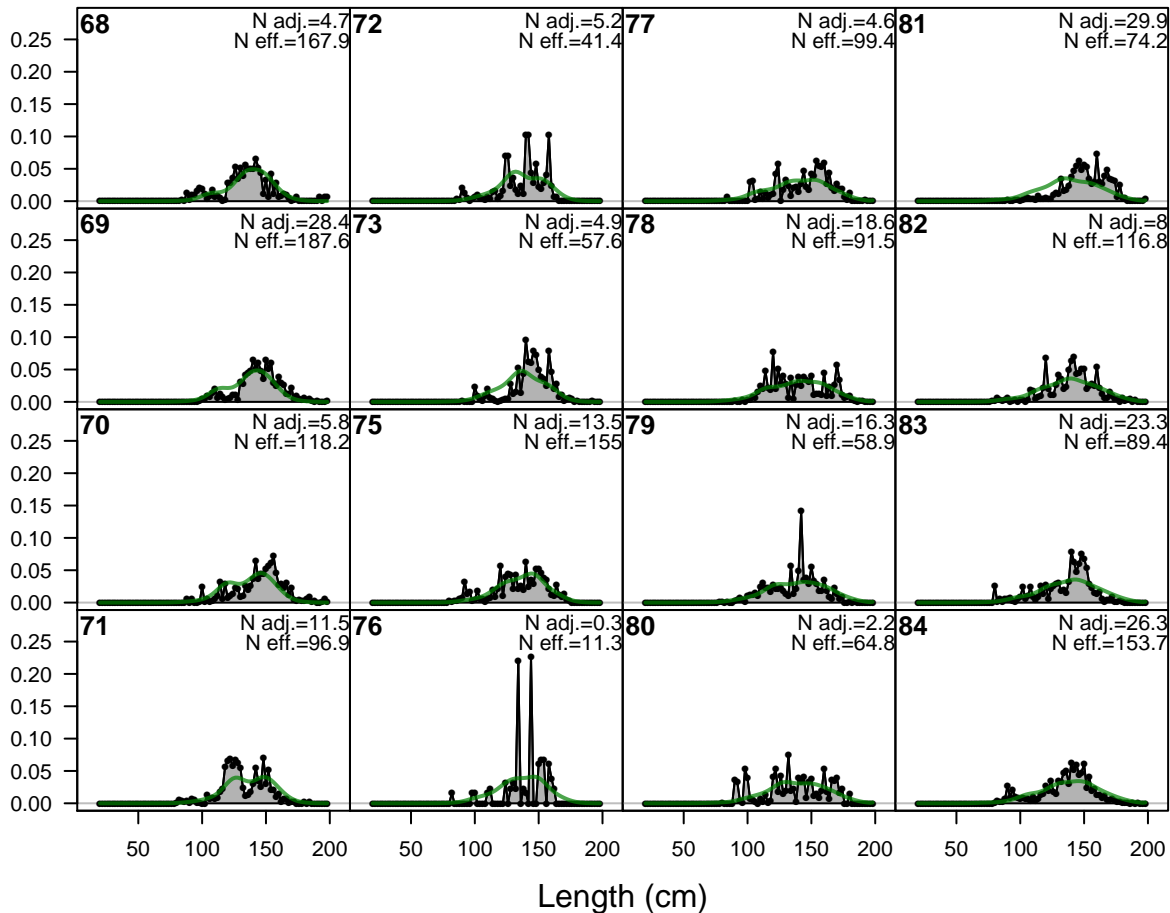




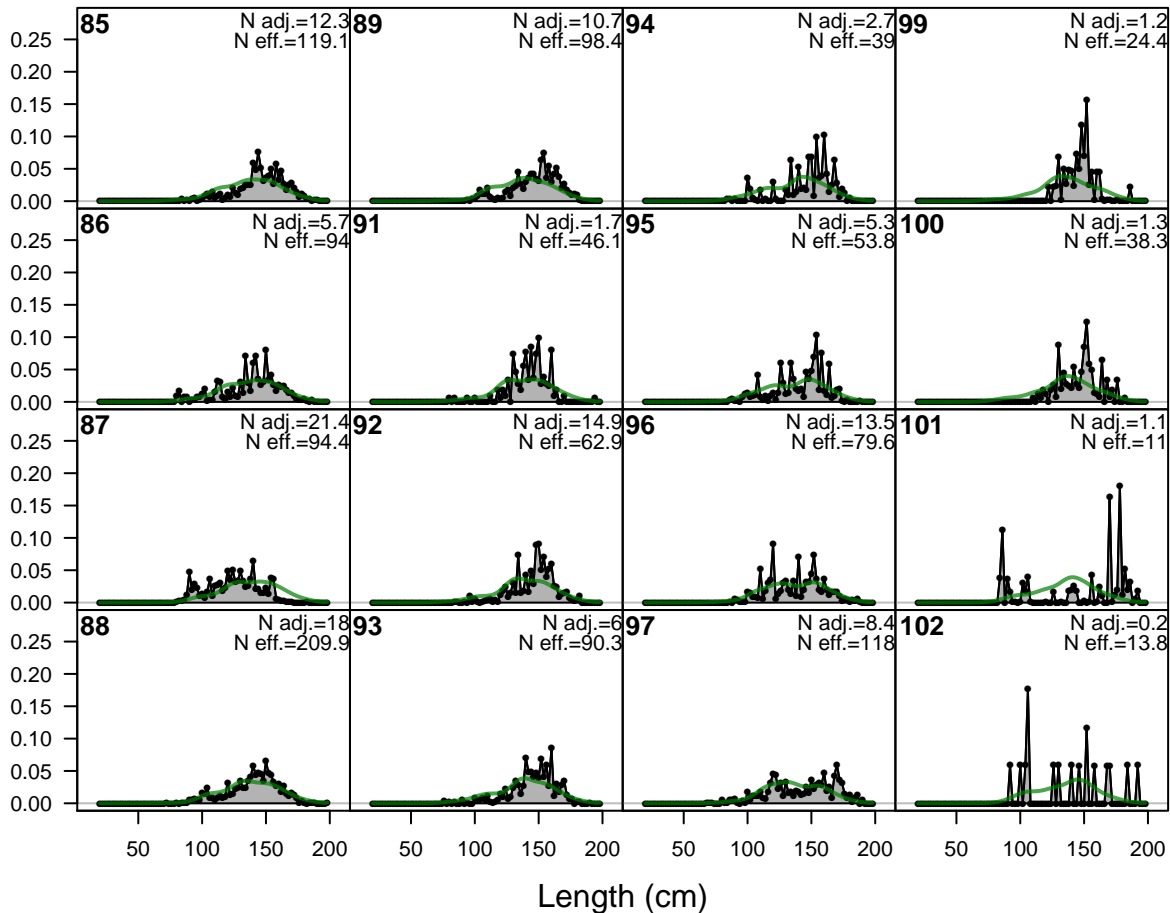
Proportion



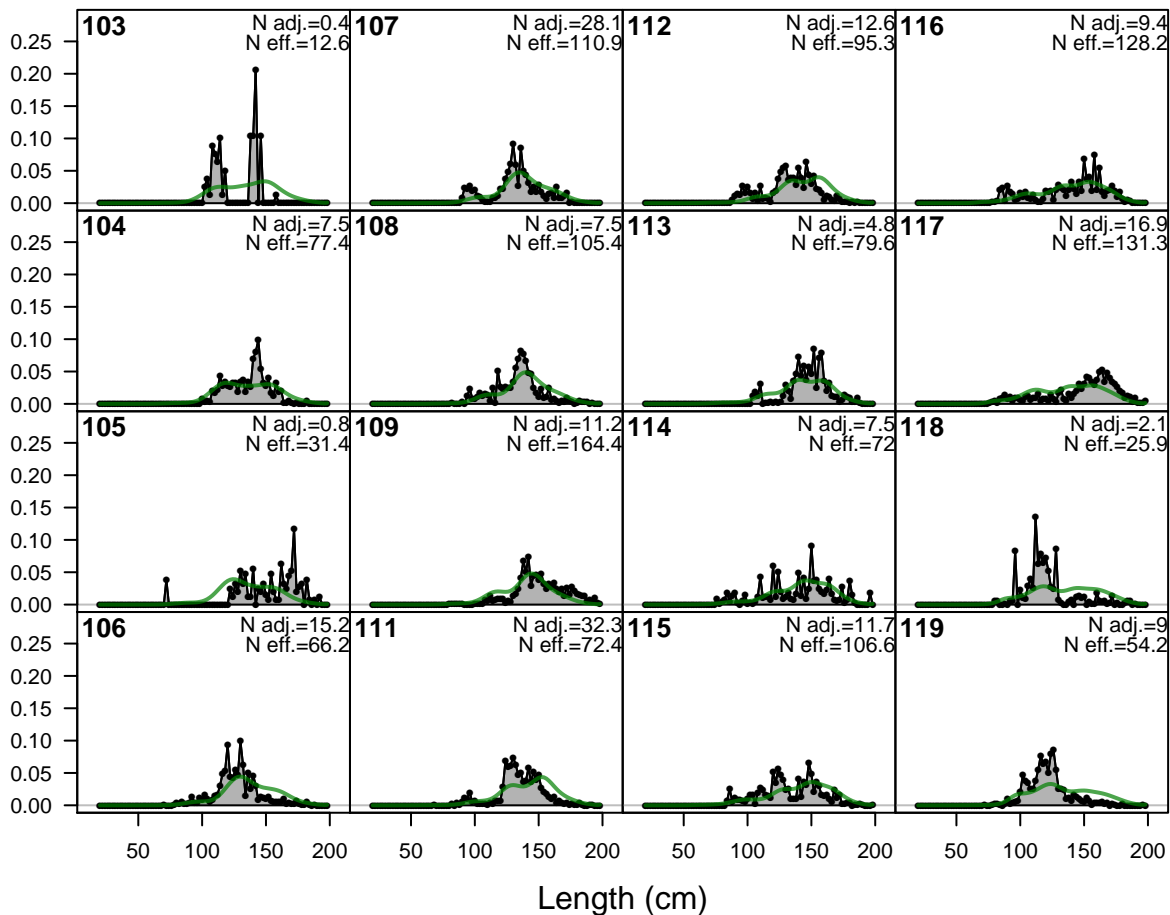
Proportion



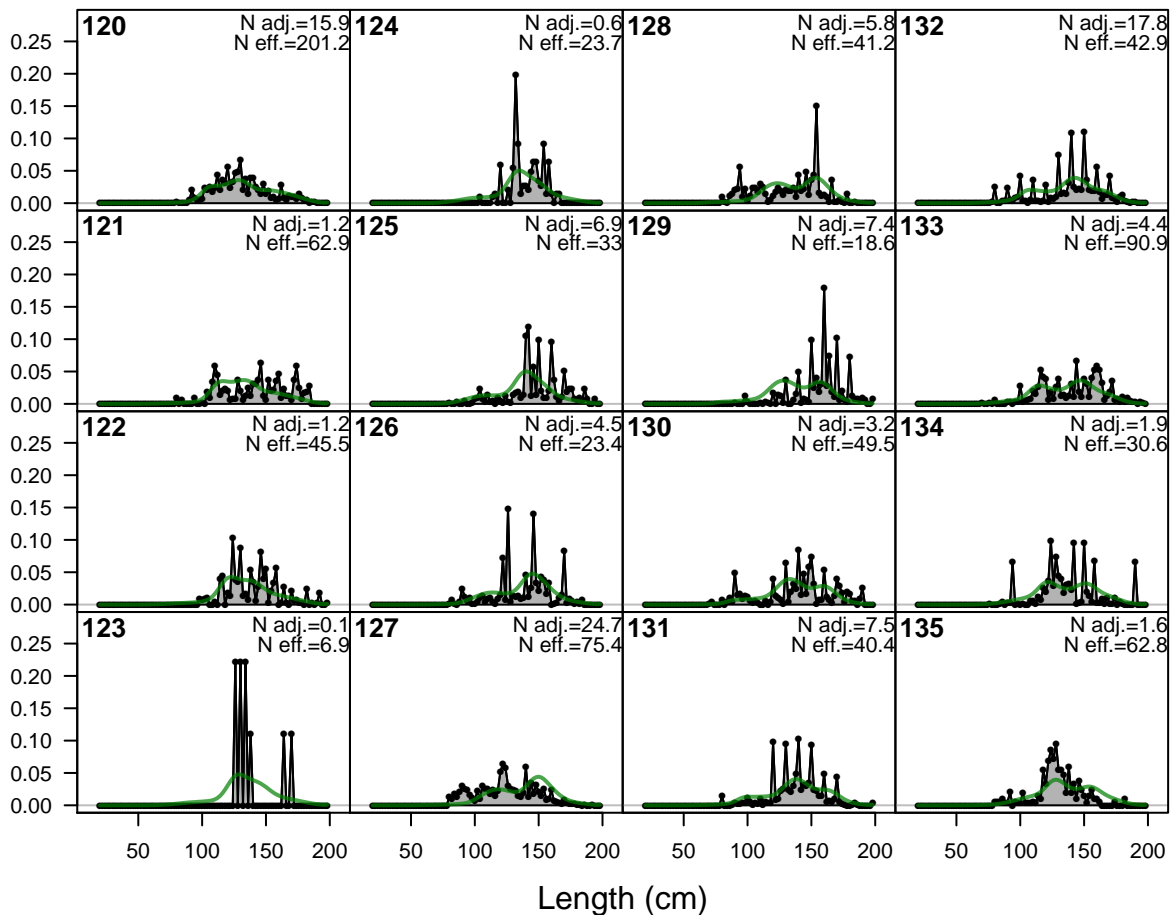
Proportion



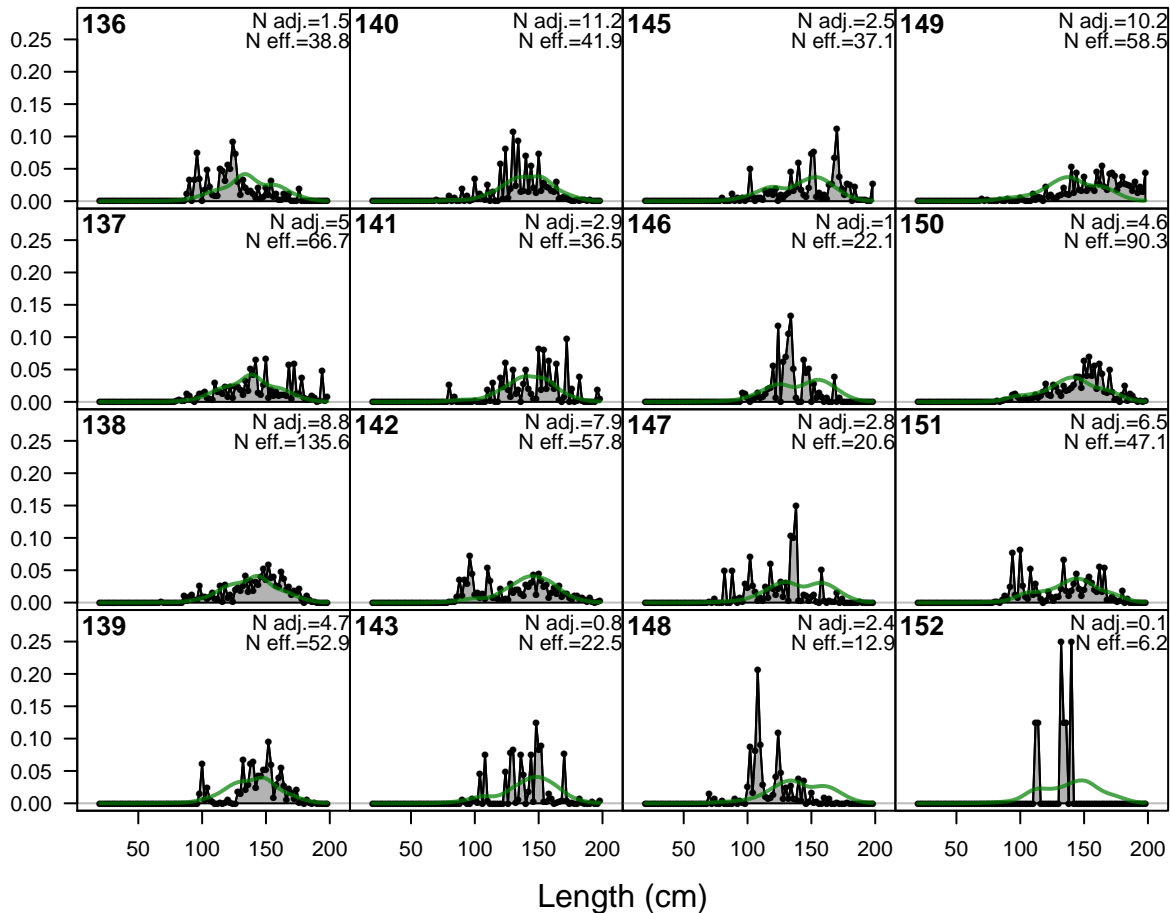
Proportion



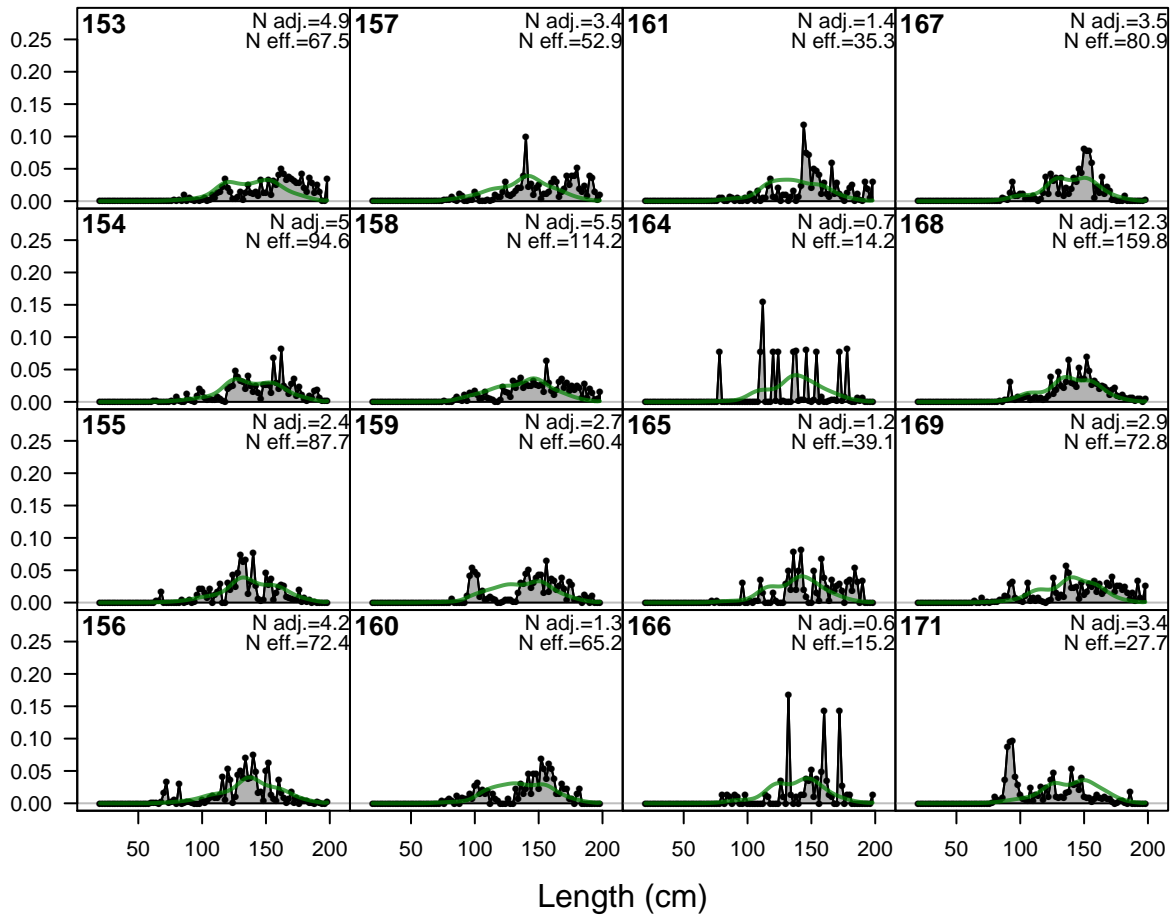
Proportion



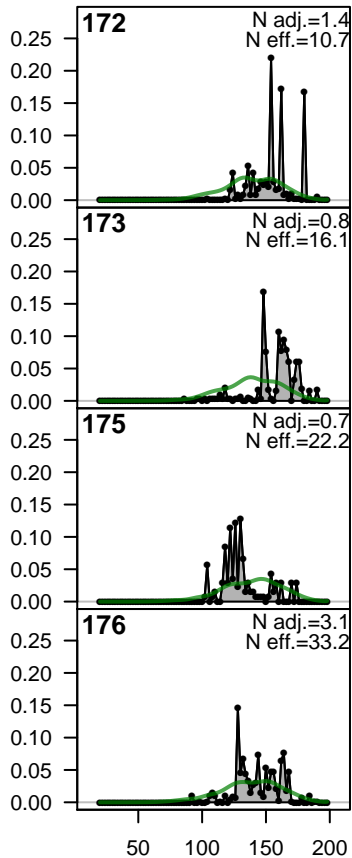
Proportion



Proportion

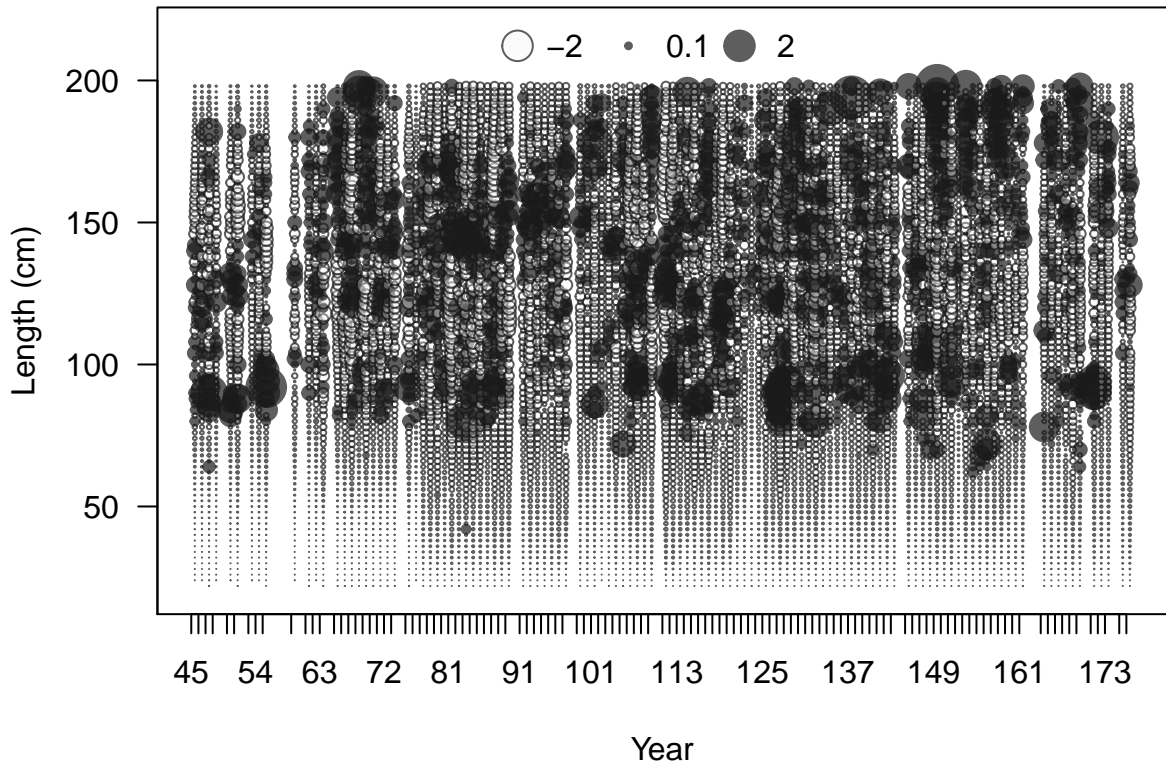


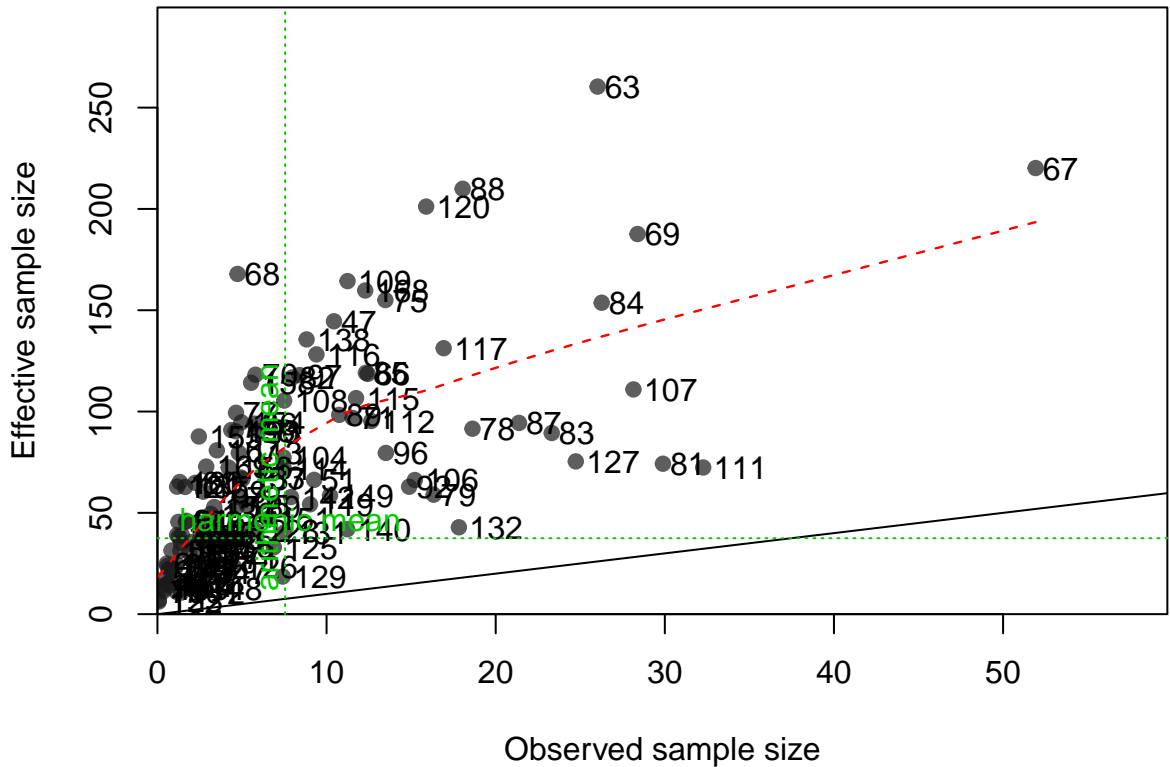
Proportion



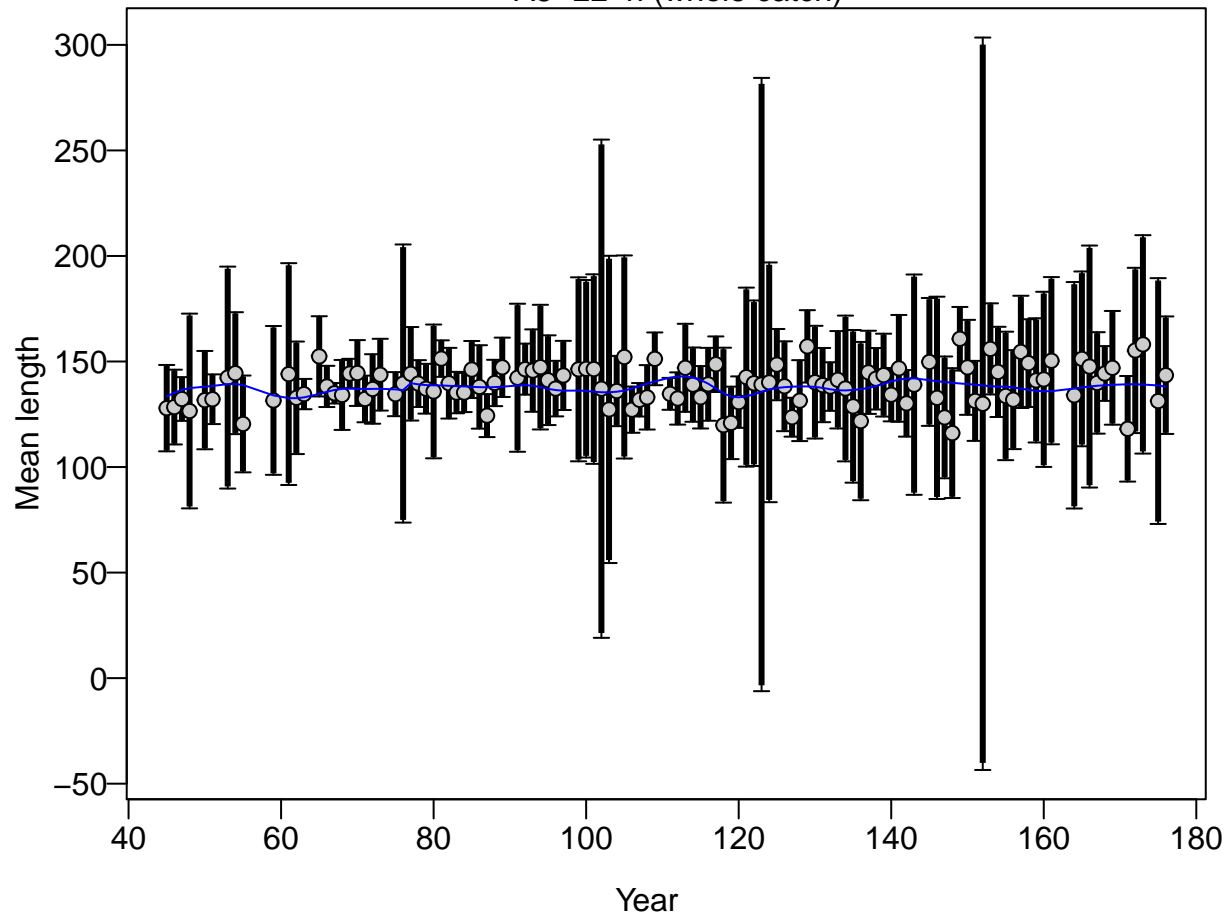
Length (cm)

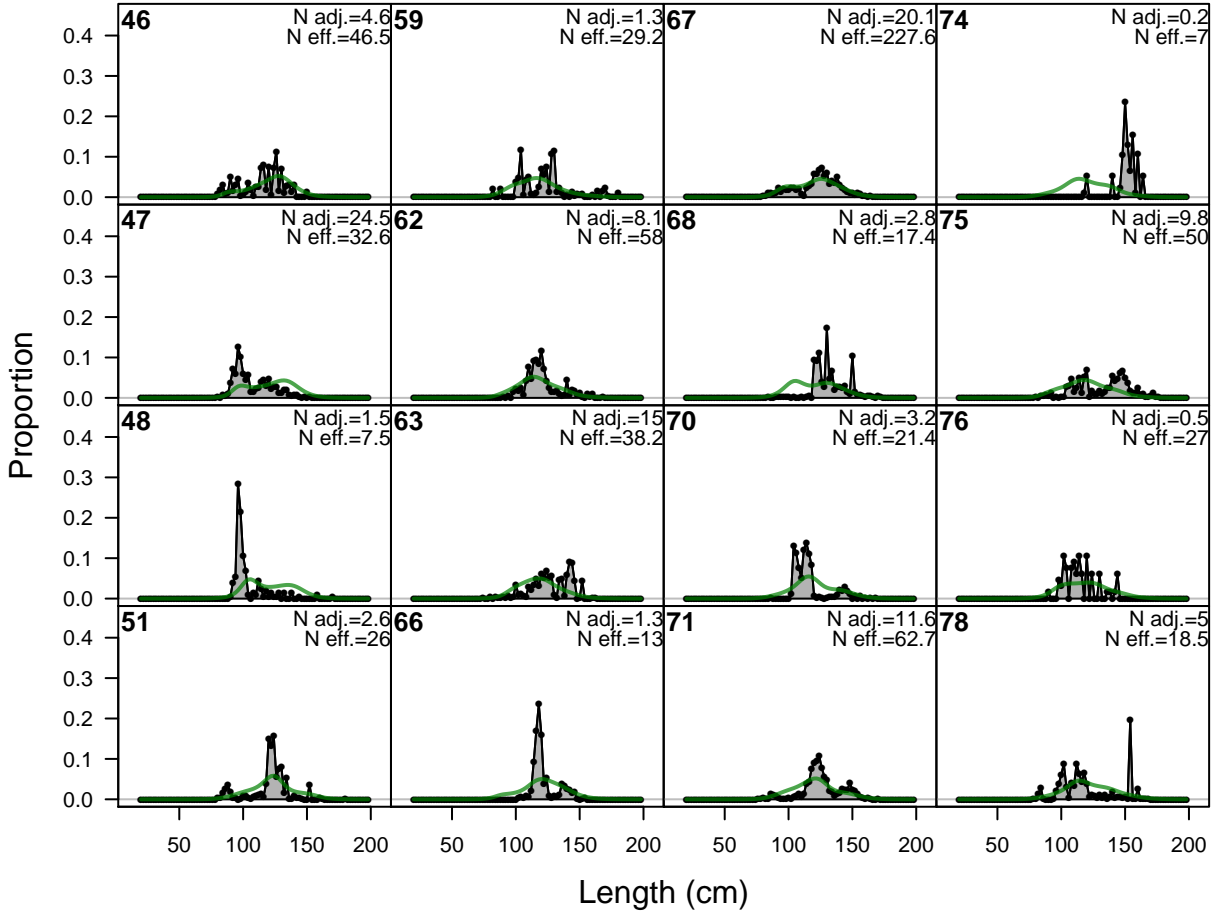




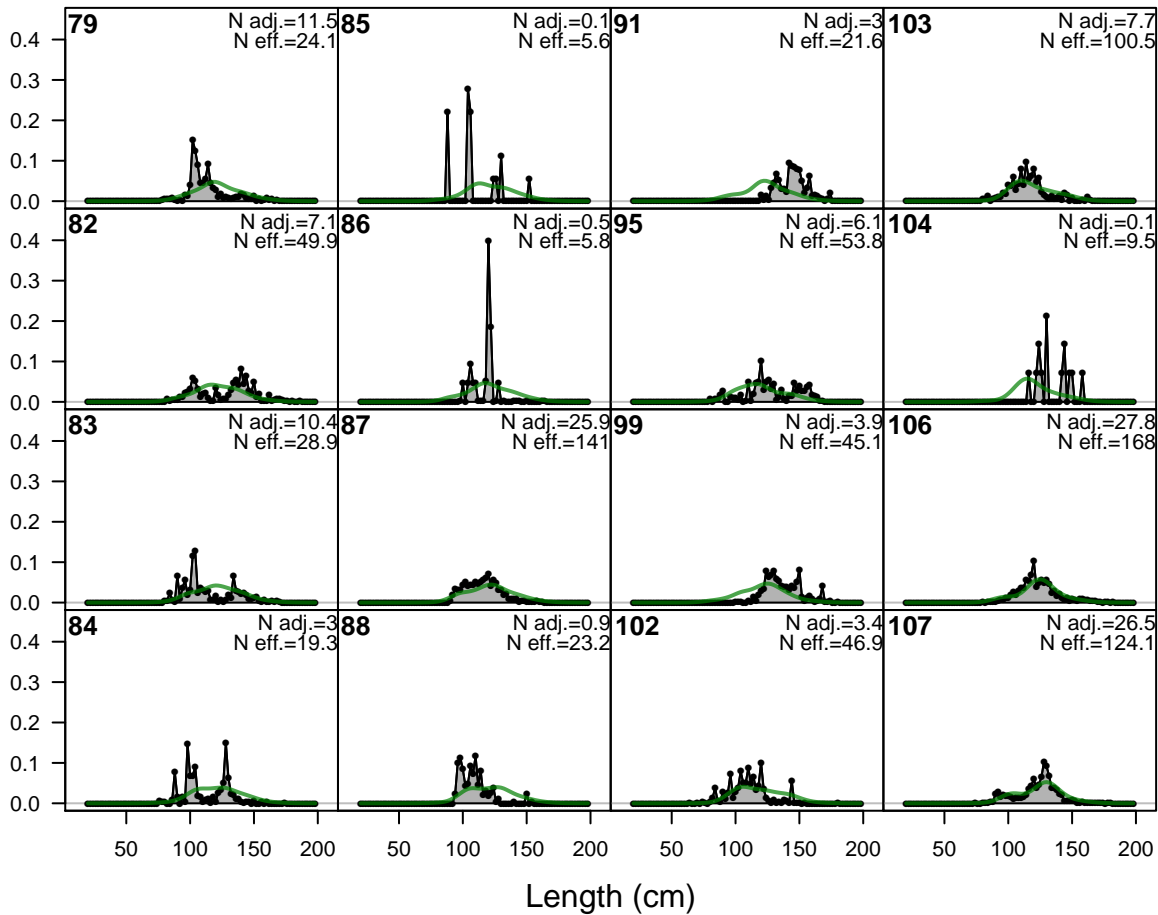


A5-LL-n (whole catch)

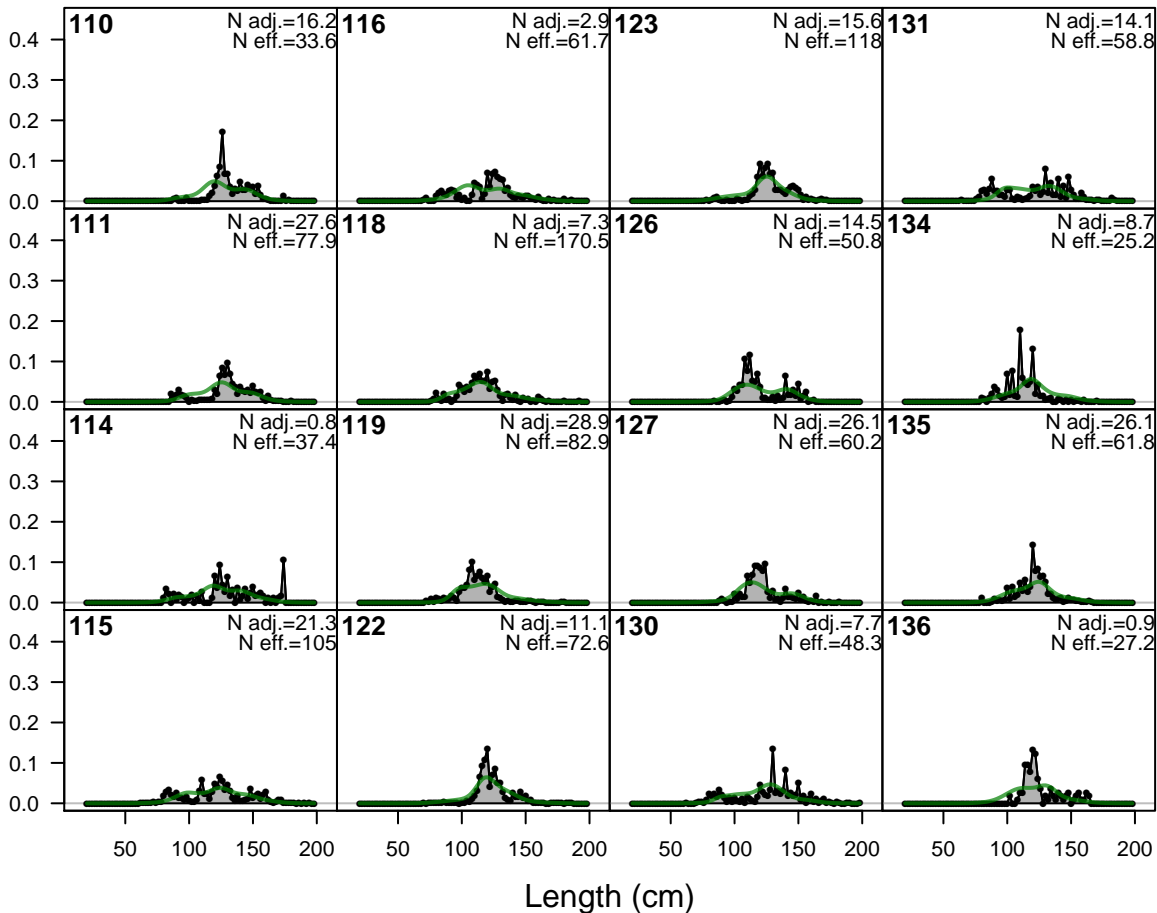




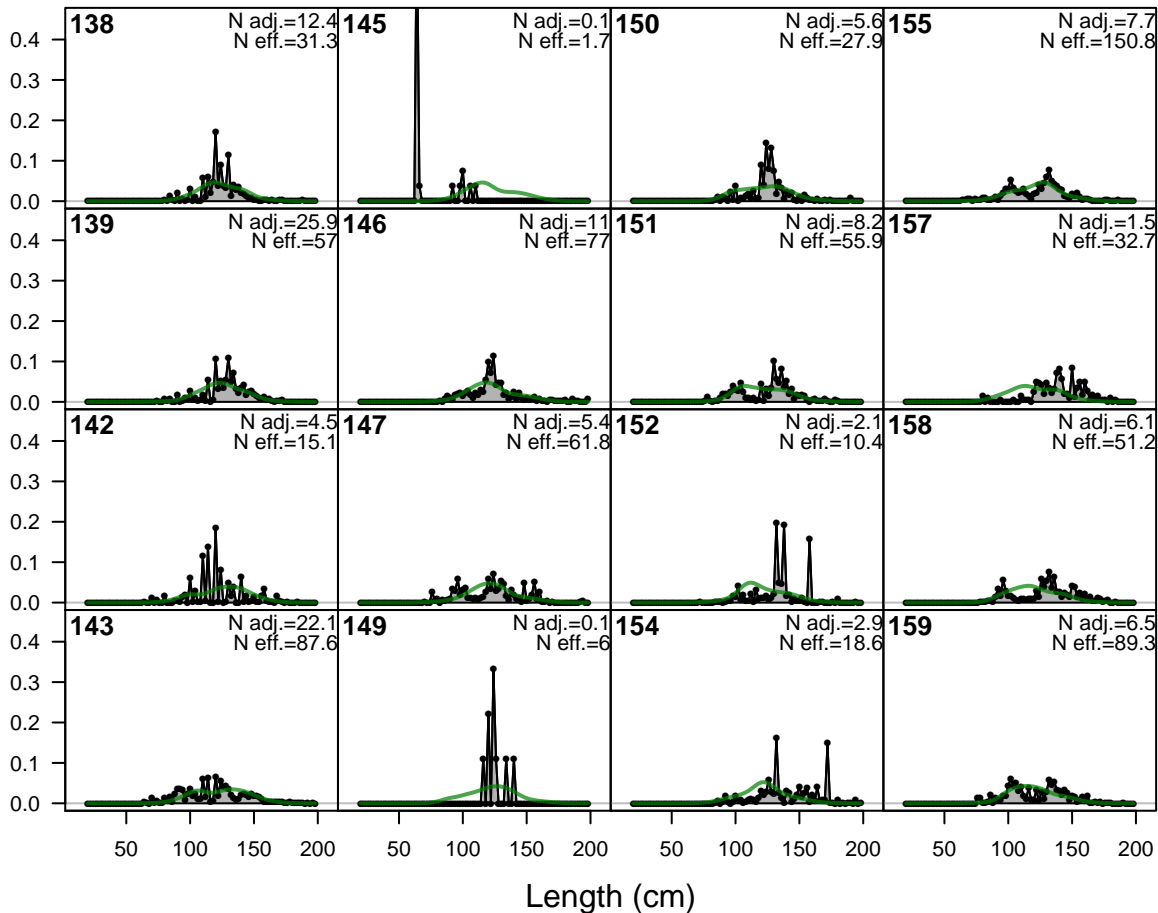
Proportion



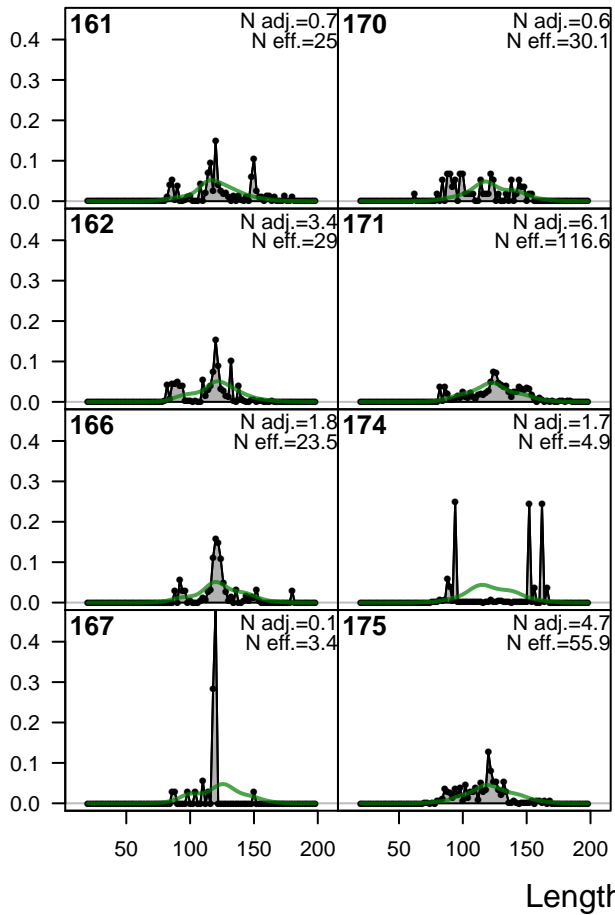
Proportion



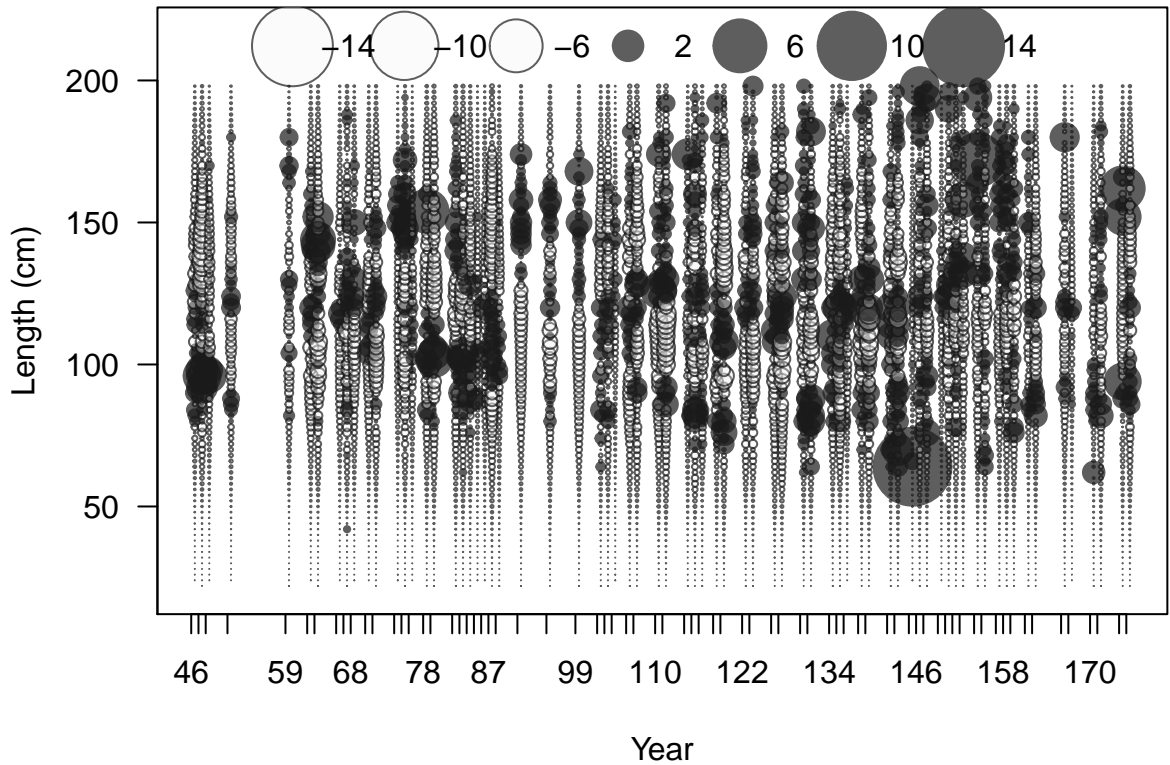
Proportion

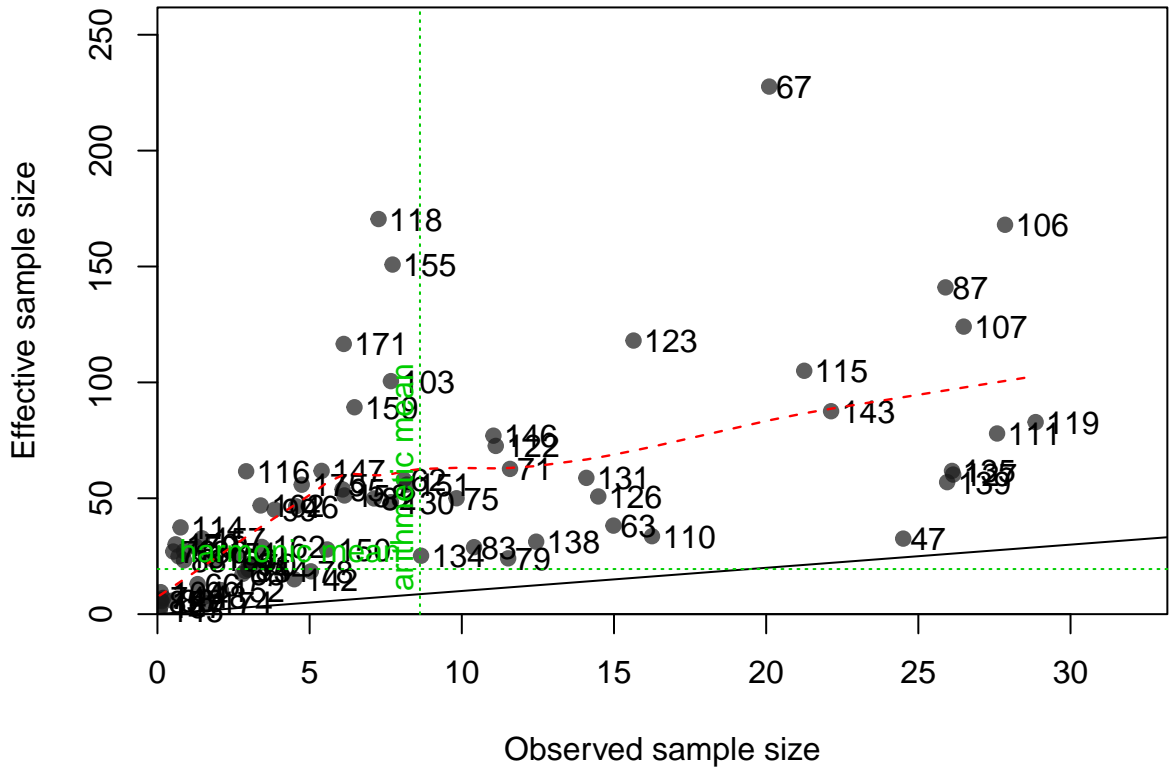


Proportion

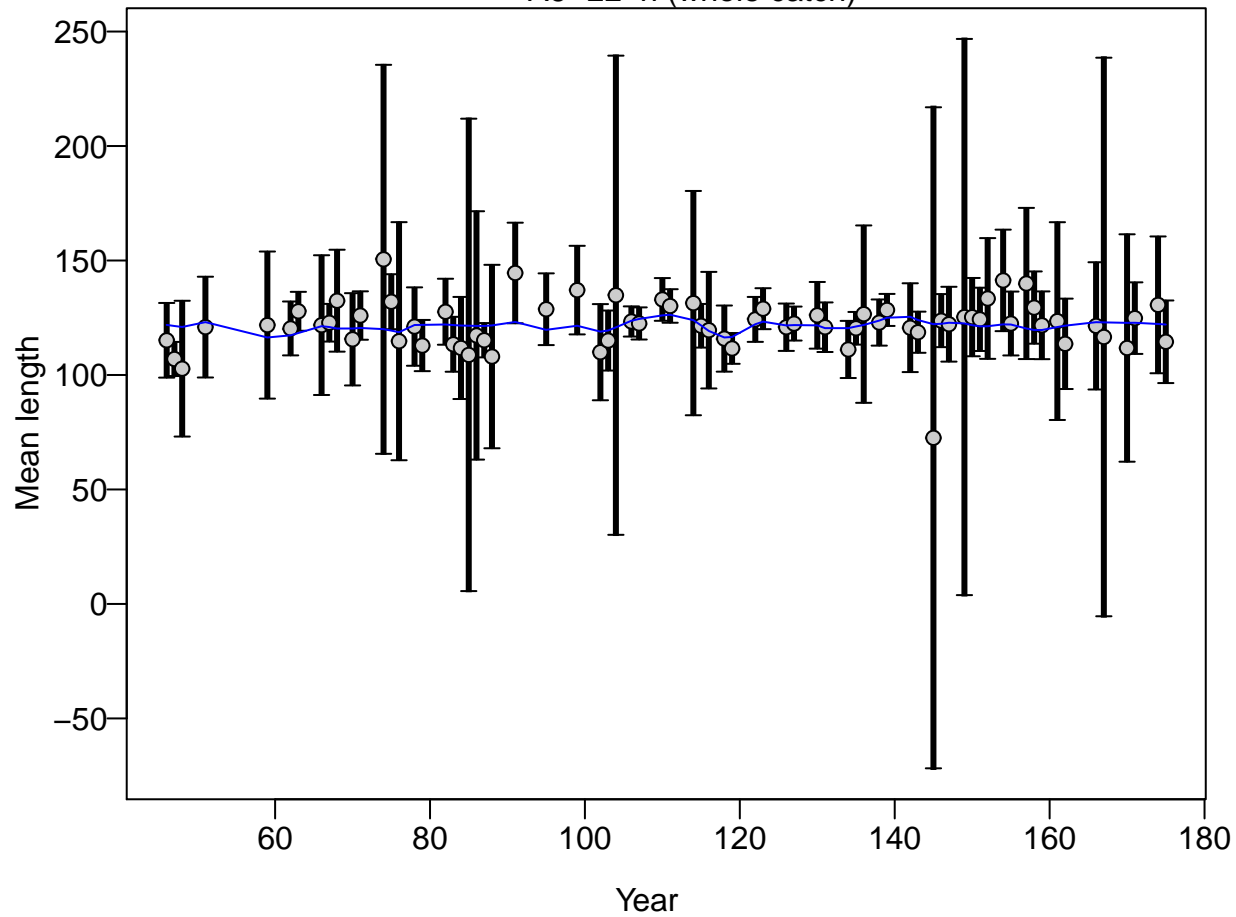


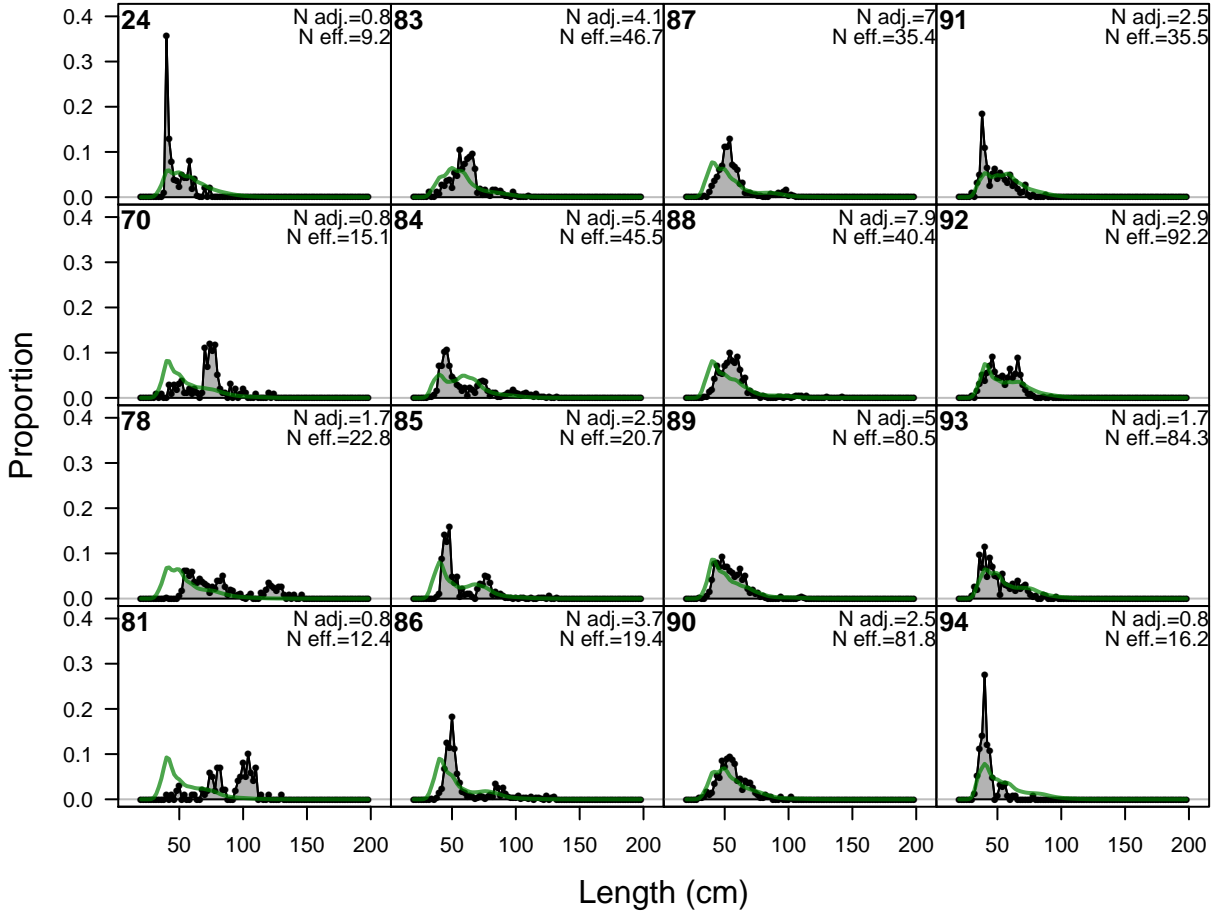


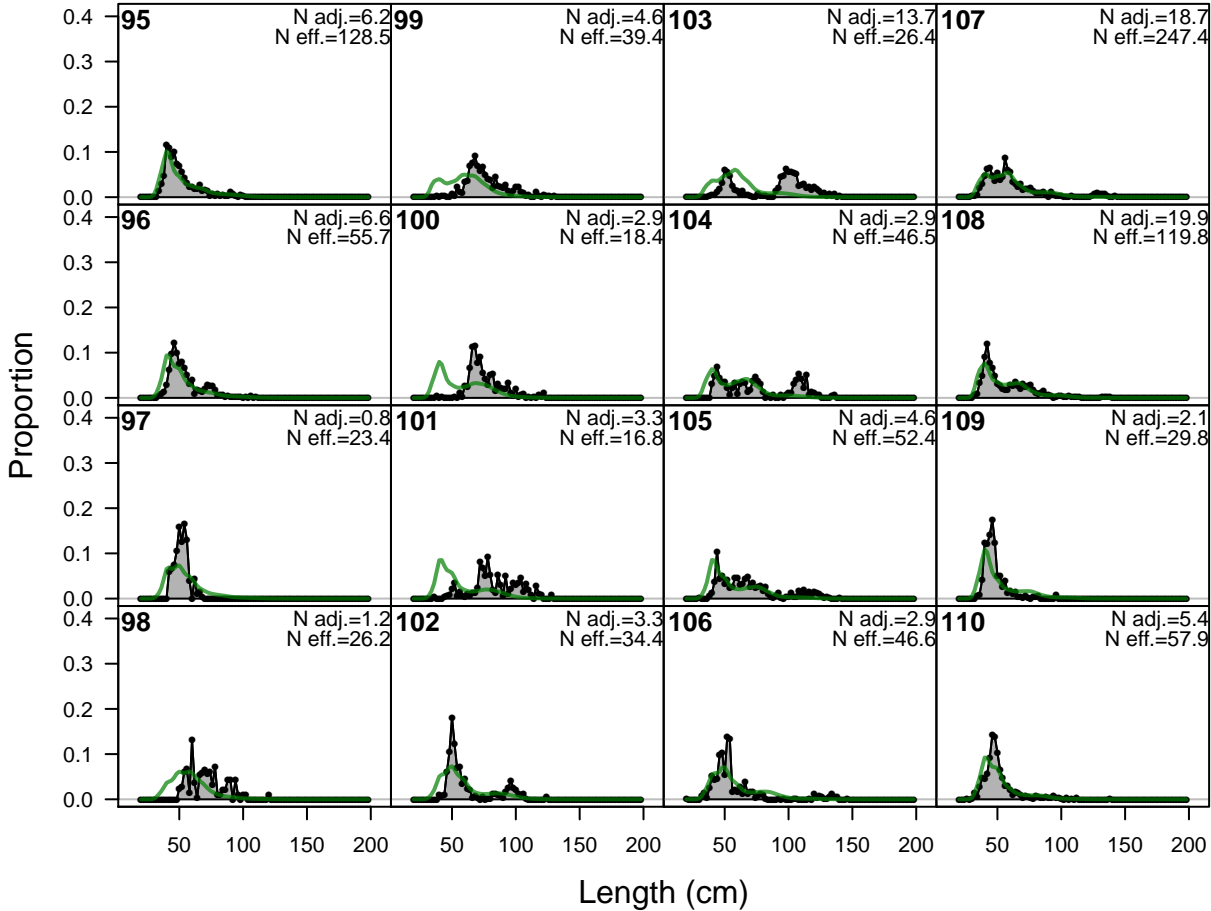




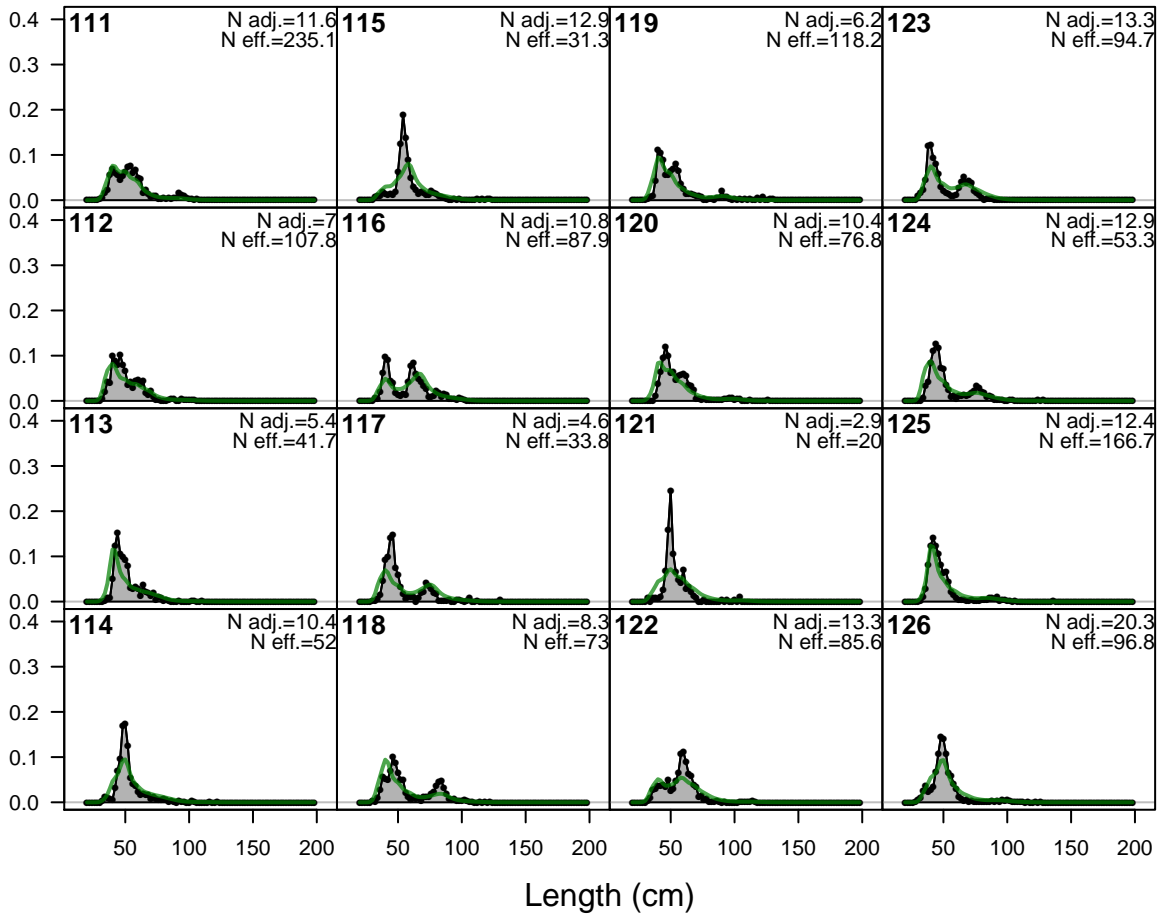
A6-LL-n (whole catch)



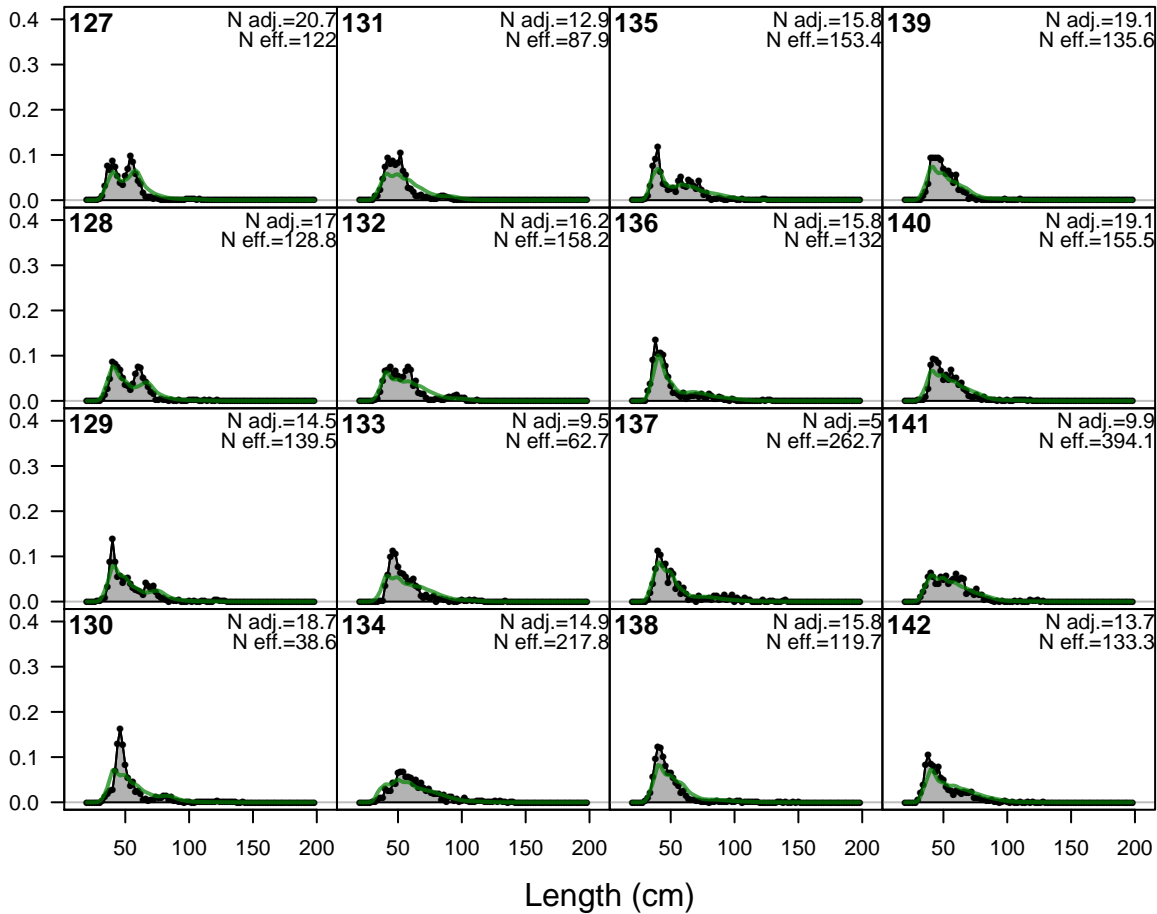




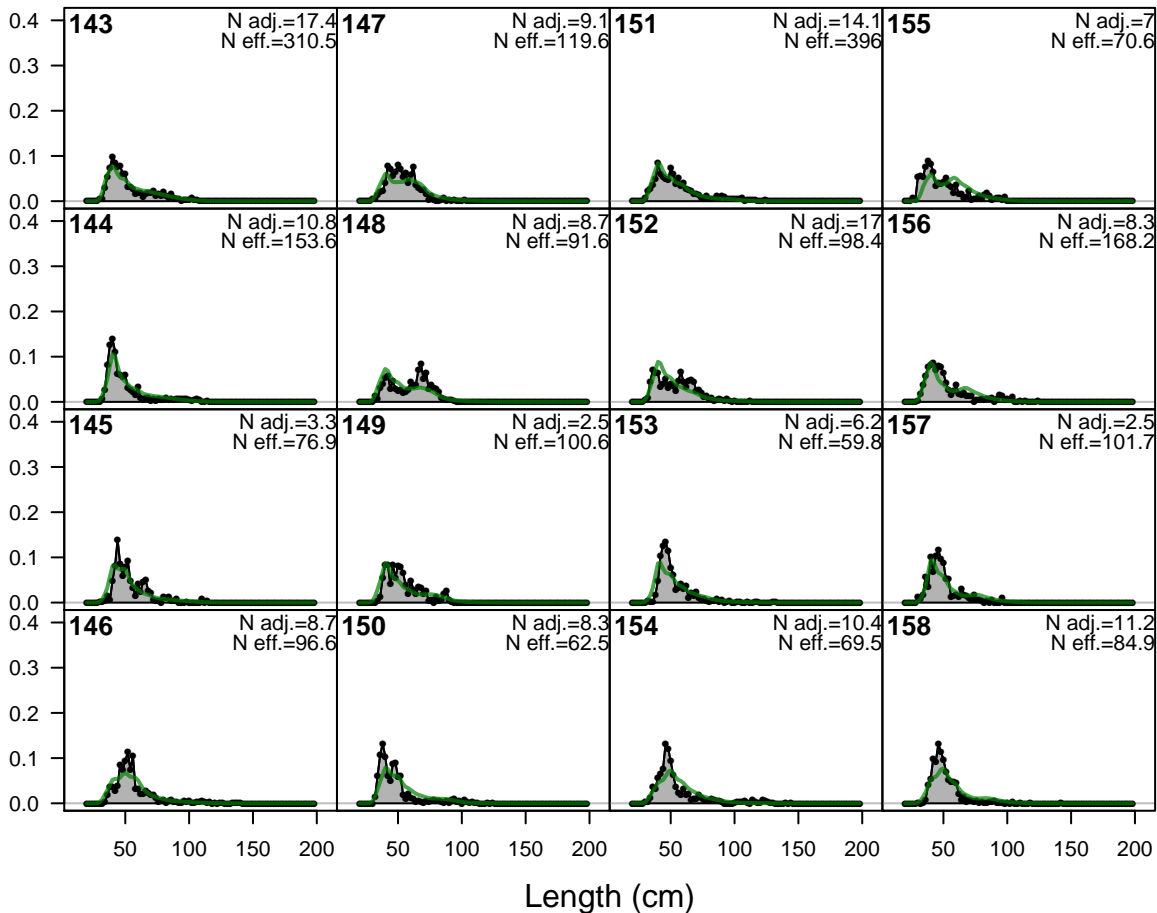
Proportion



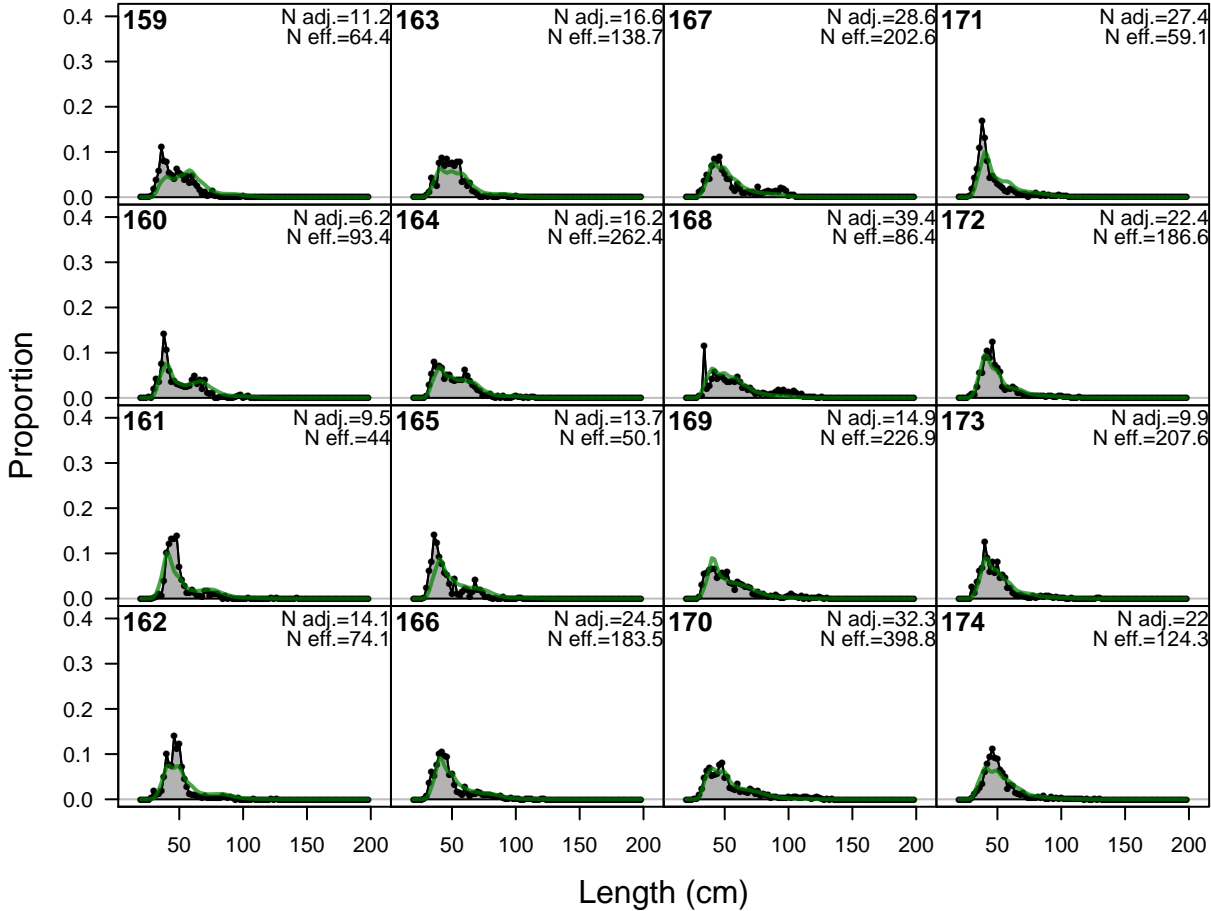
Proportion

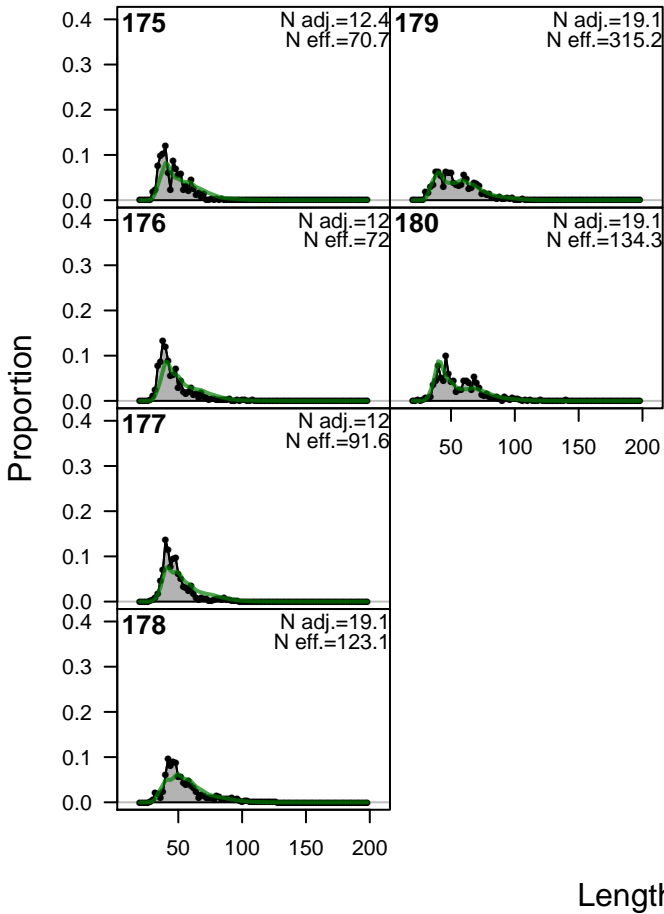


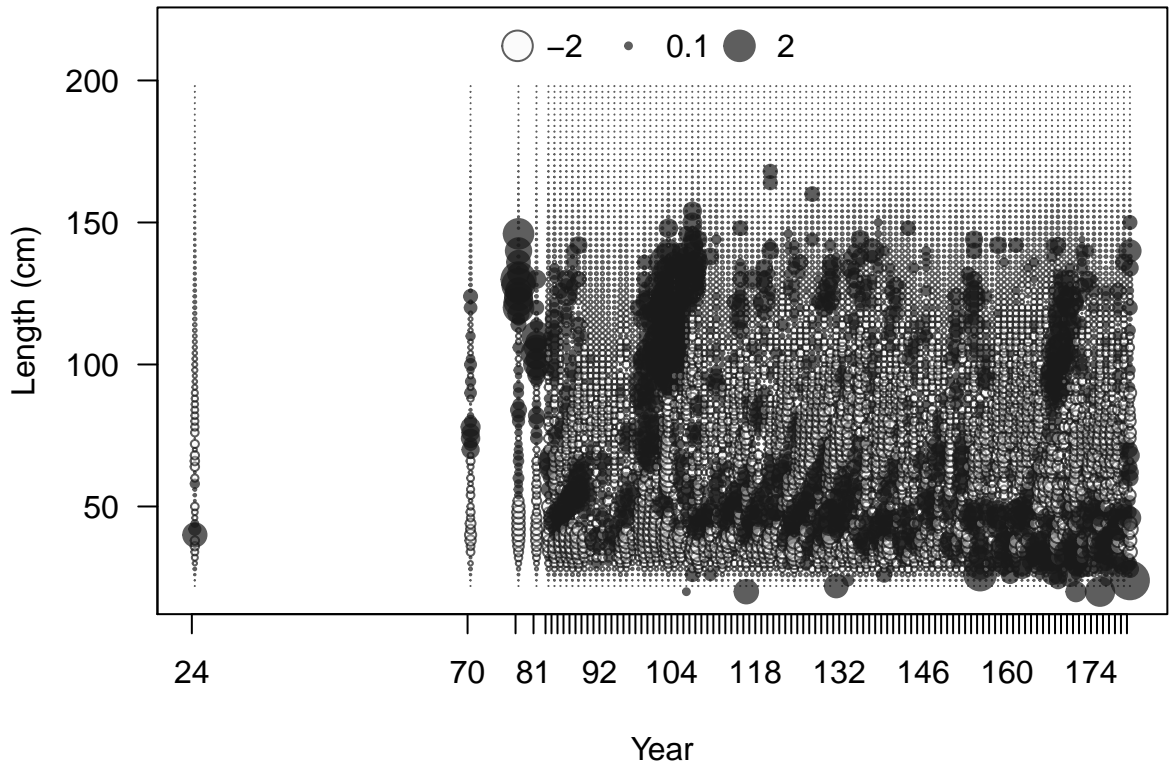
Proportion



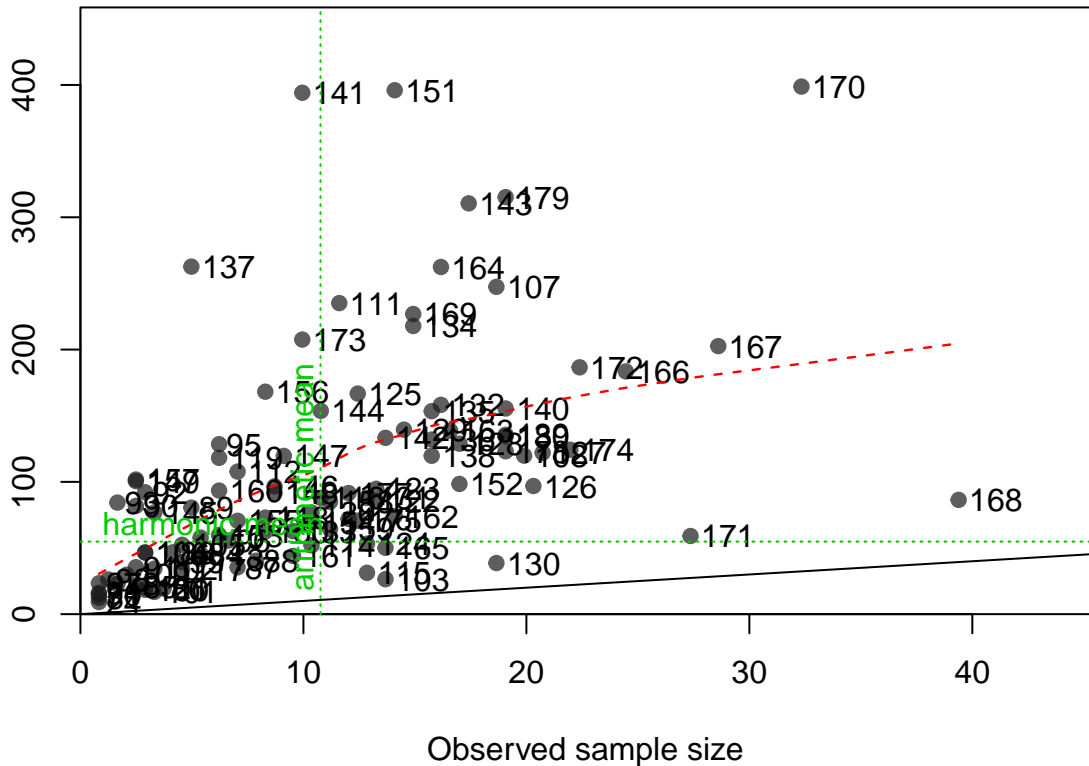




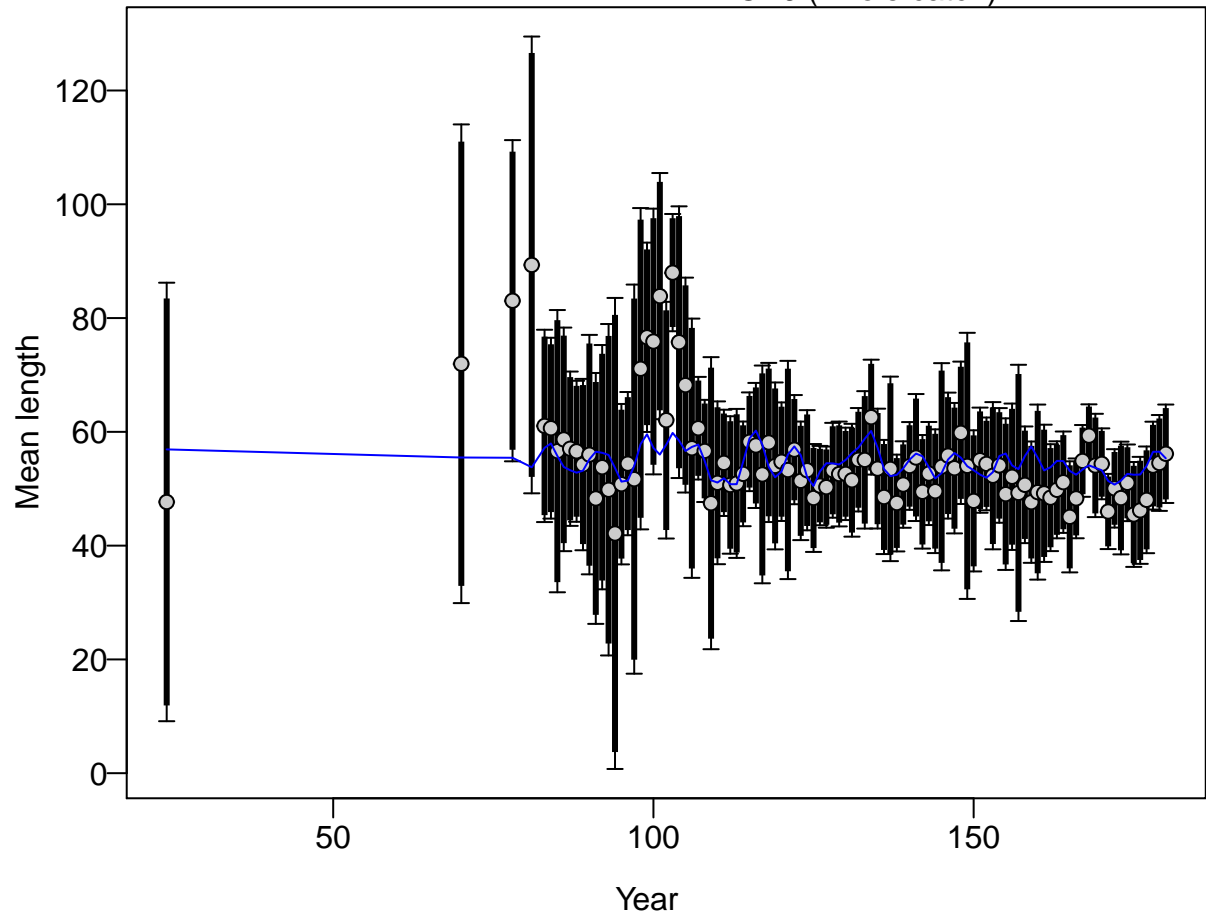




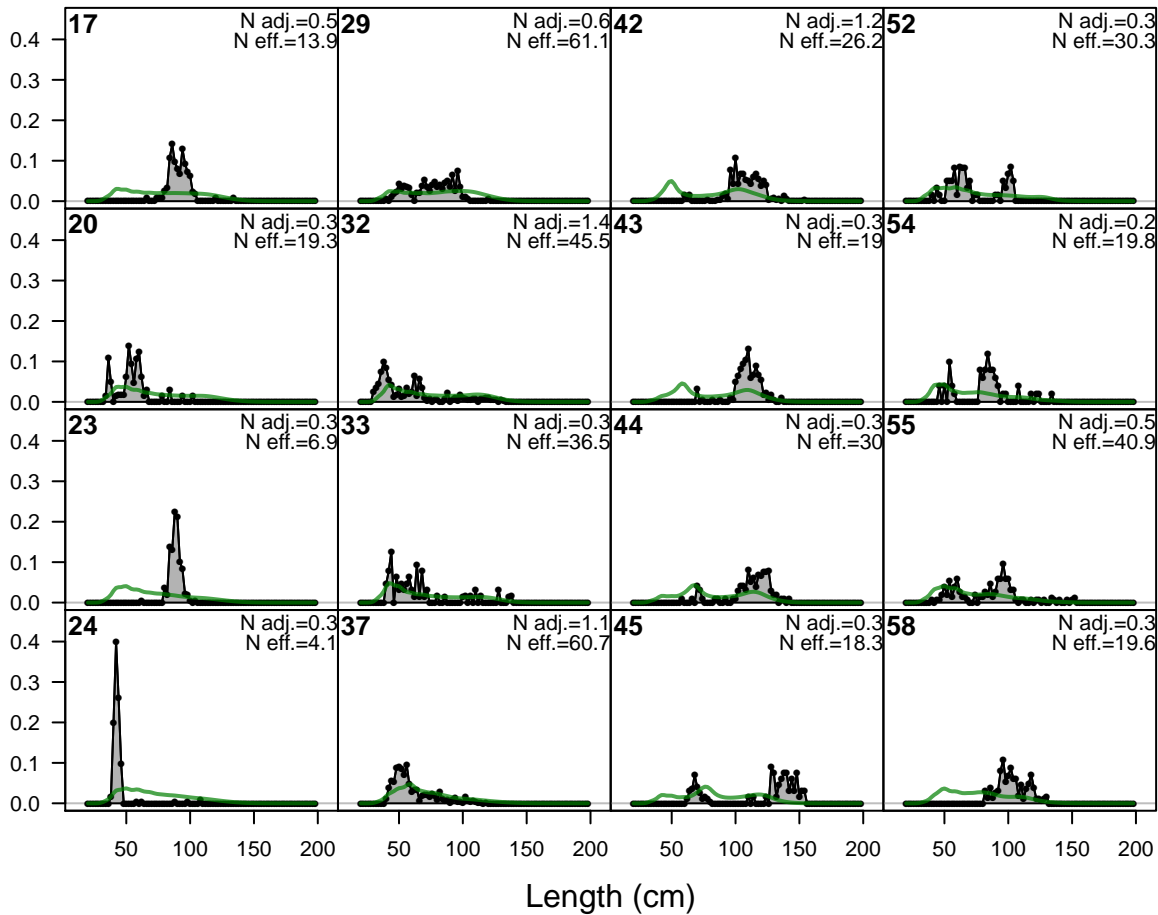
Effective sample size



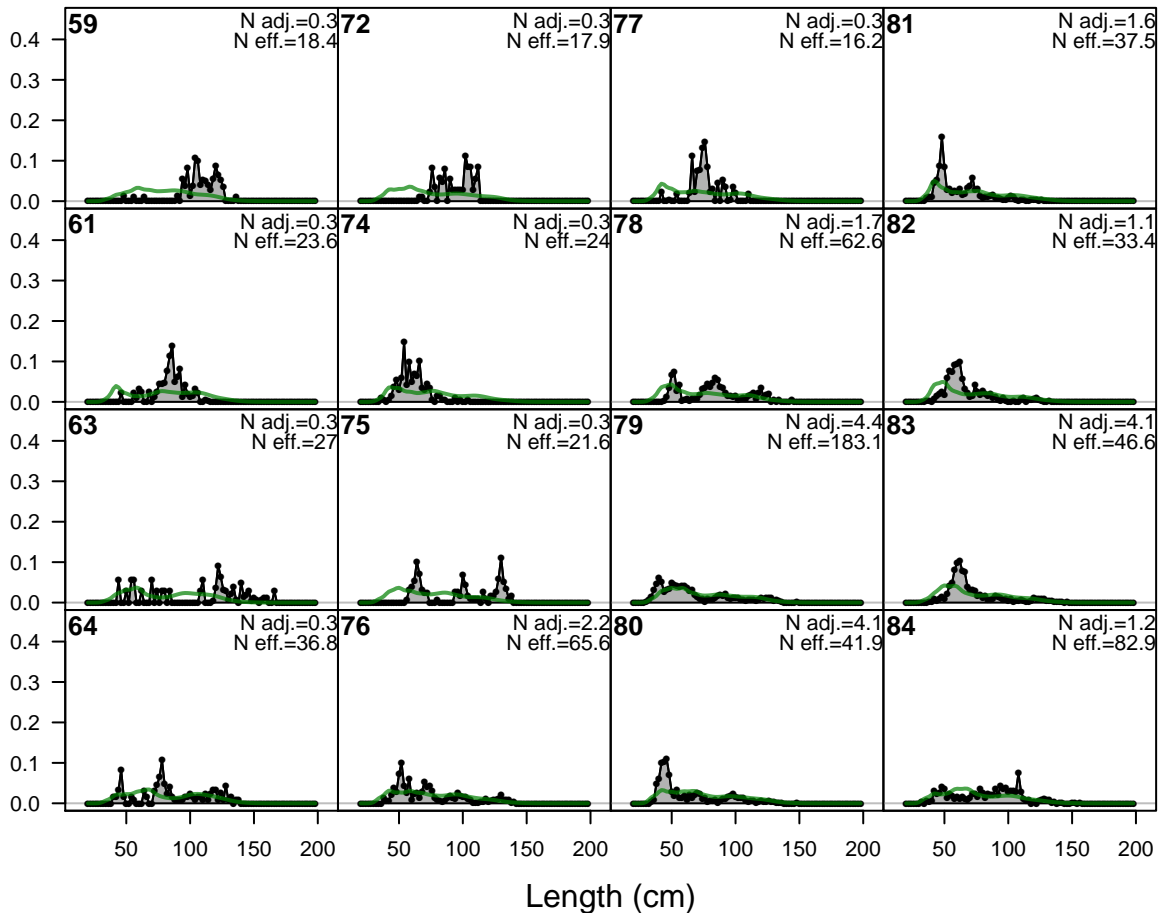
## A2-OBJ (whole catch)

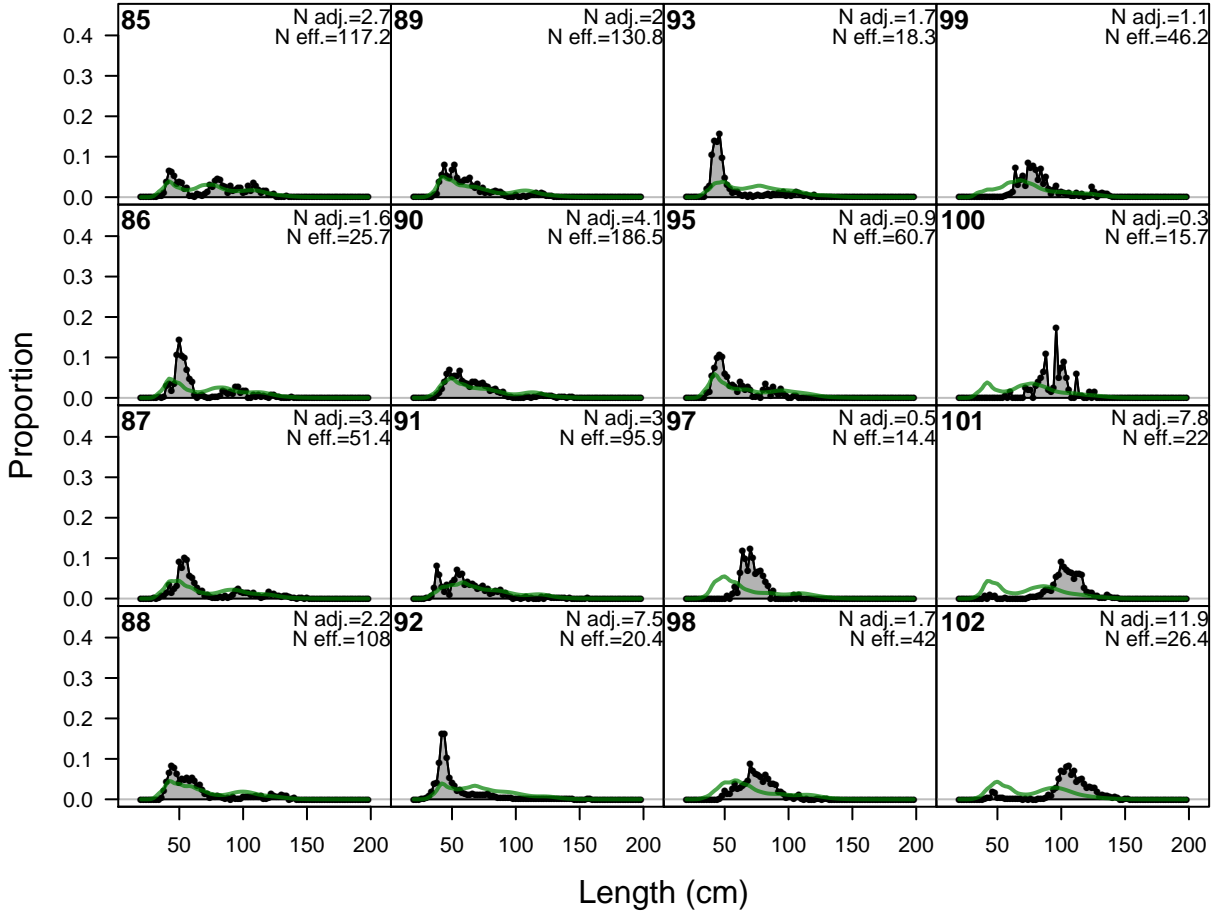


Proportion



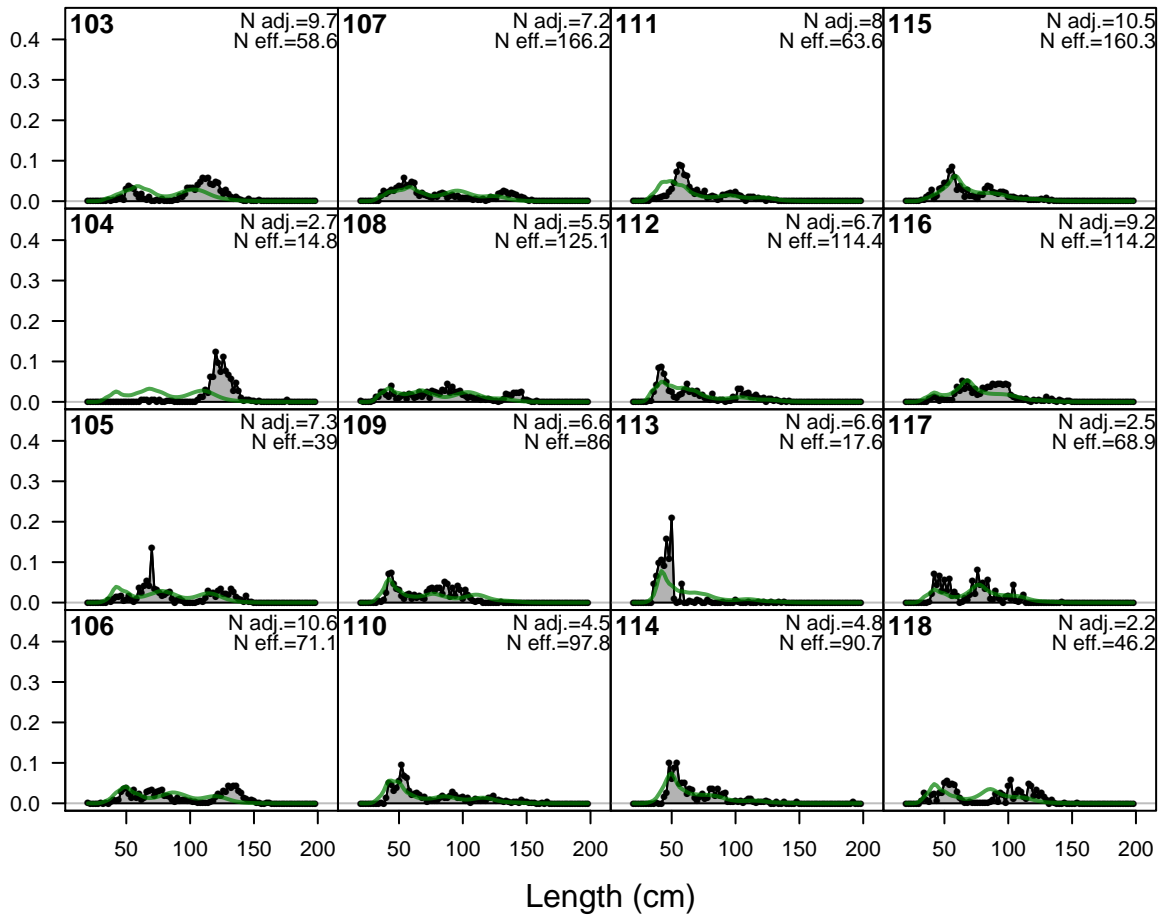
Proportion



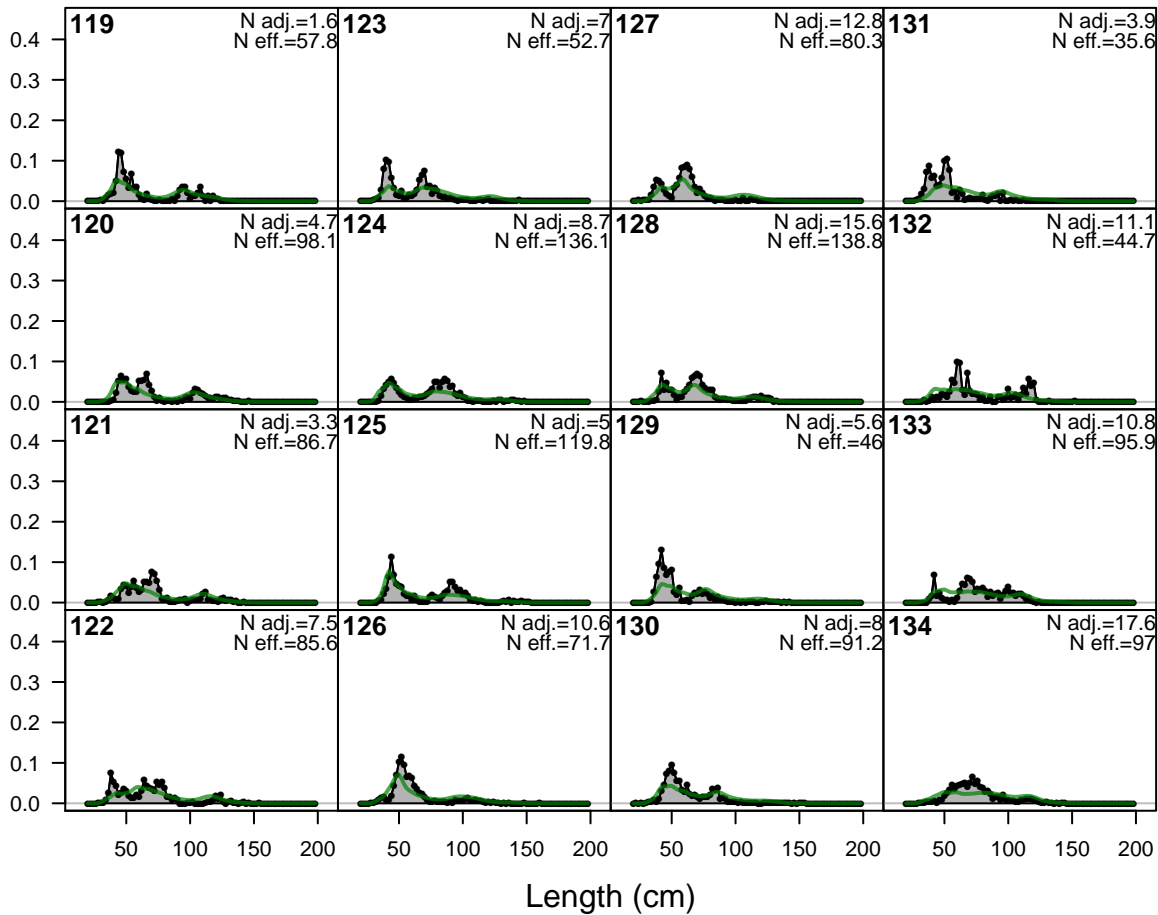




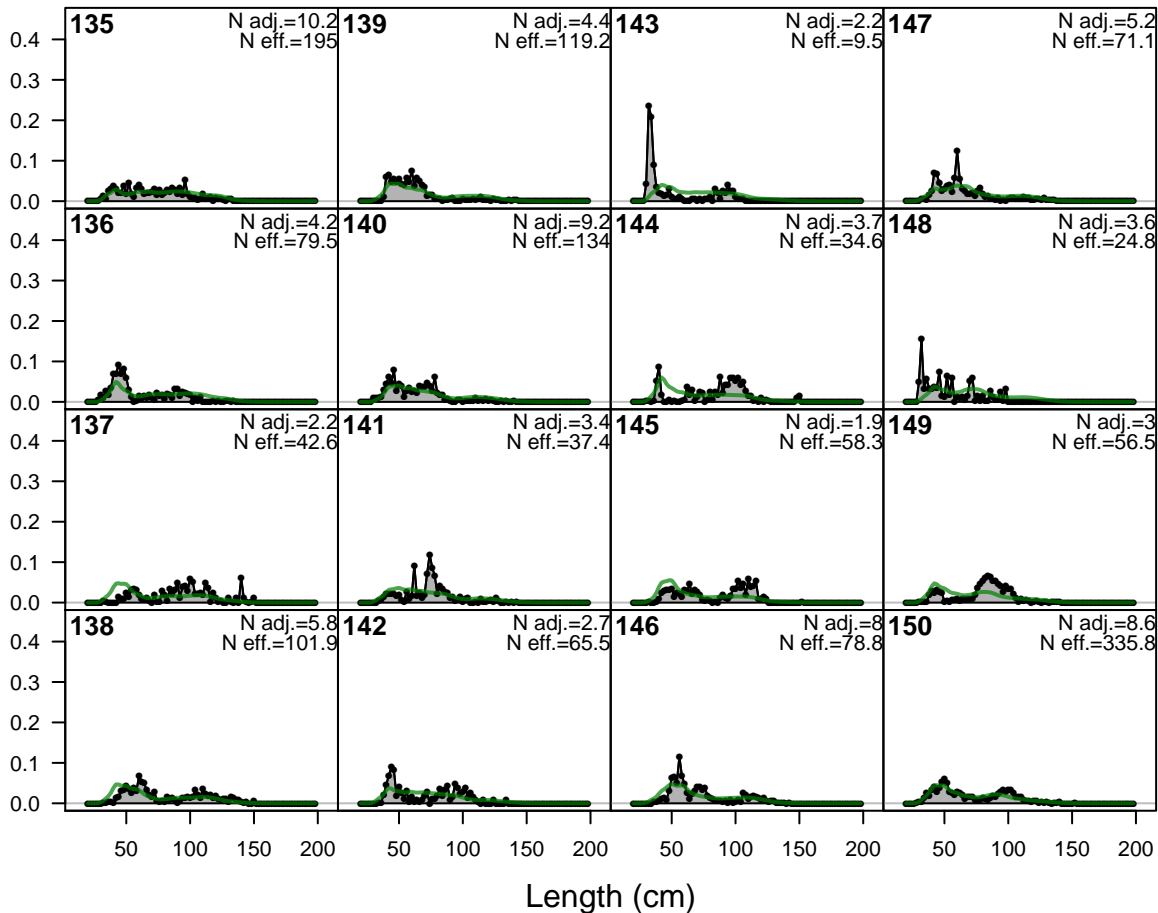
Proportion



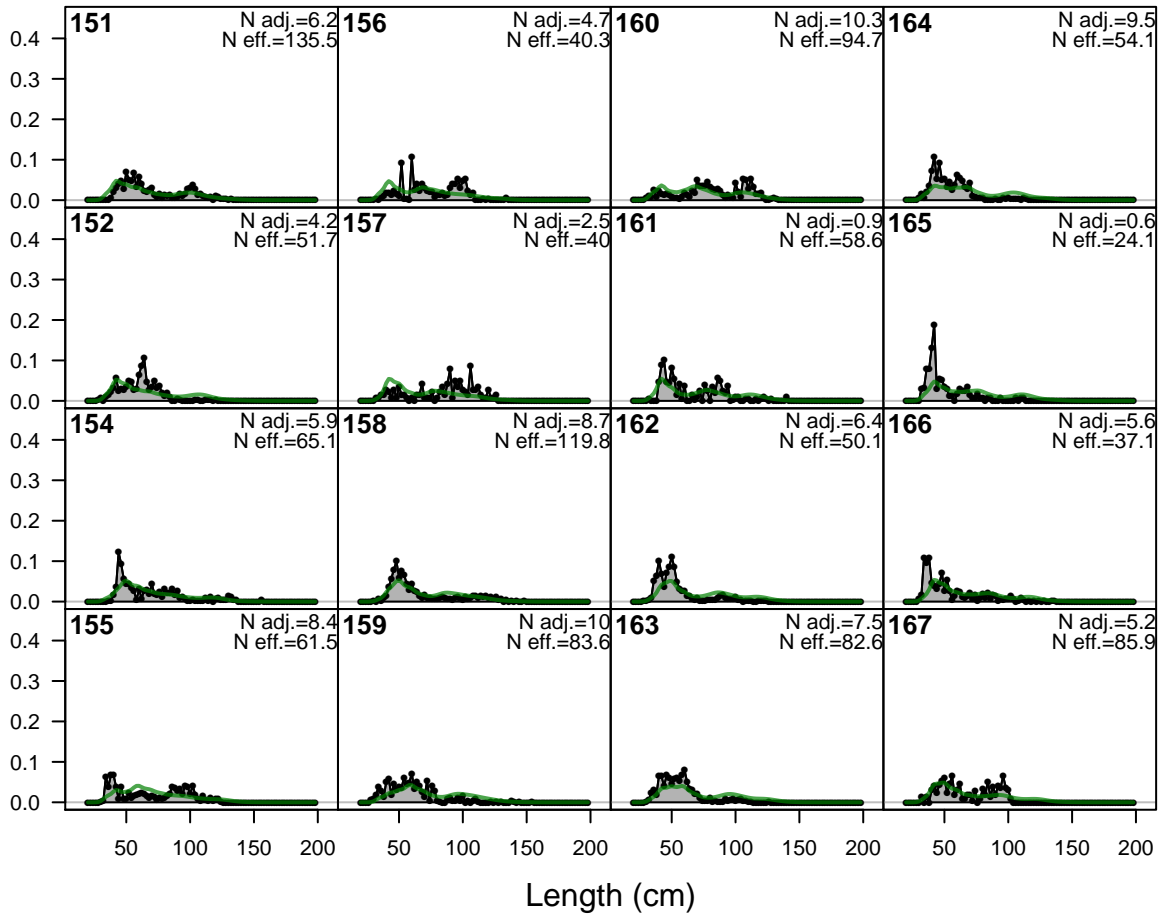
Proportion



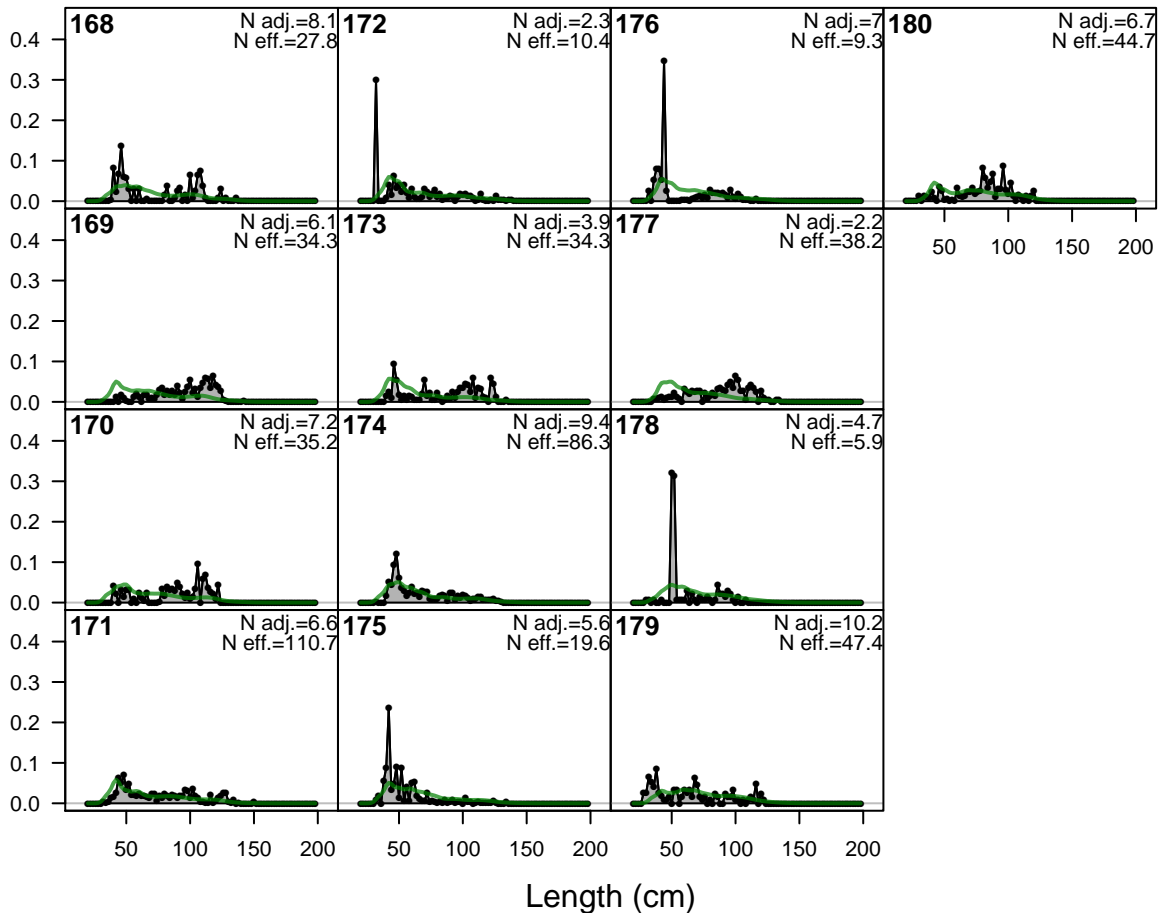
Proportion

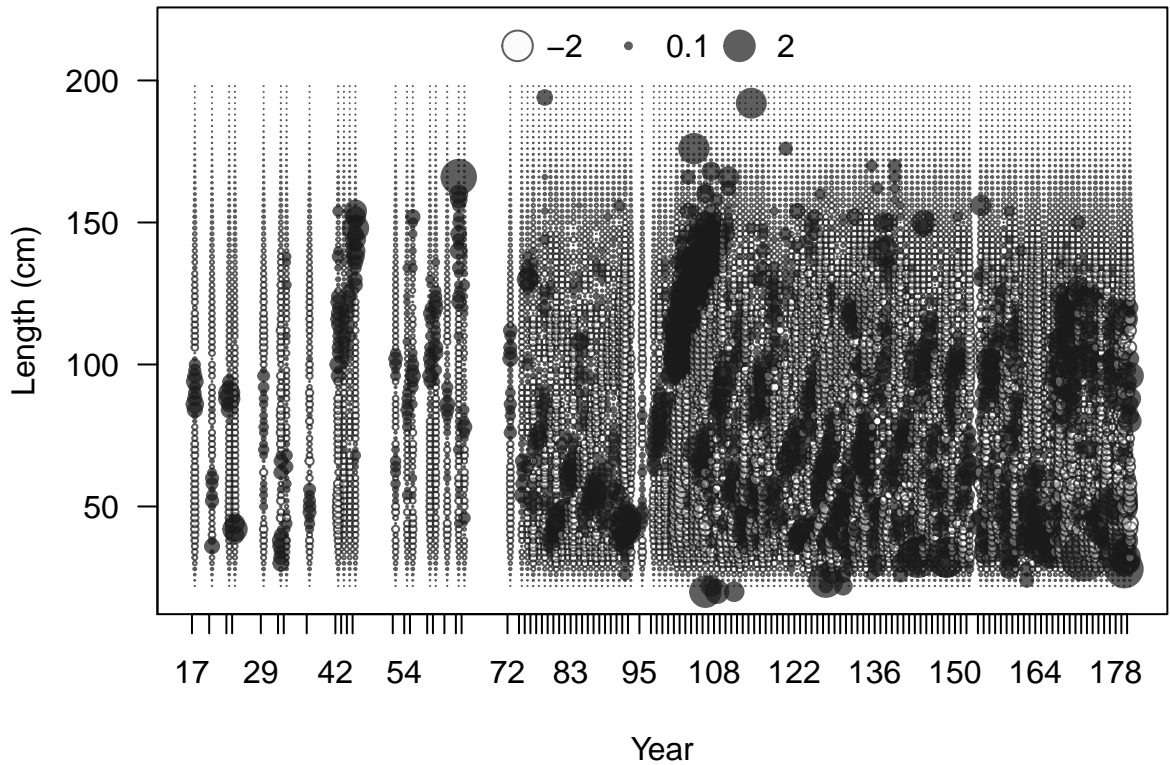


Proportion



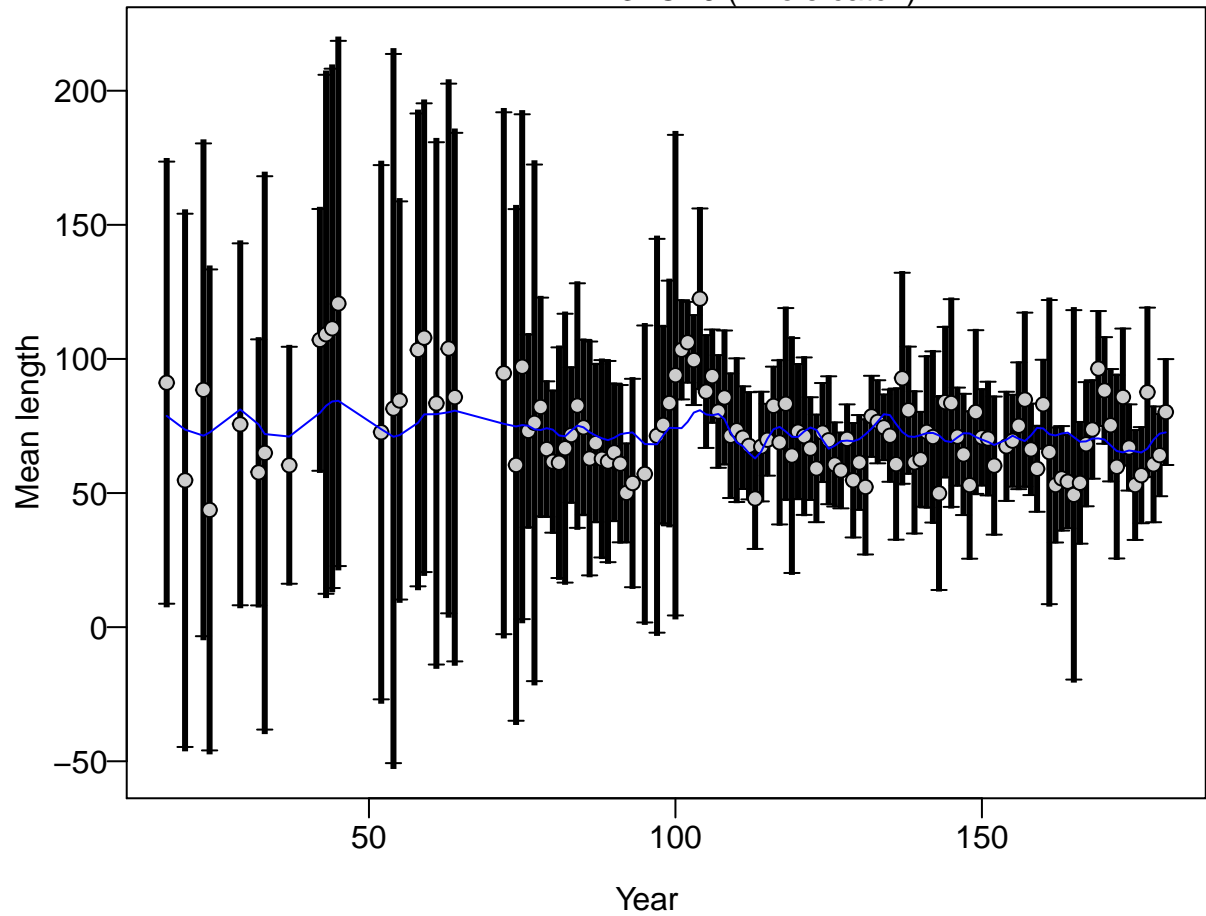
Proportion





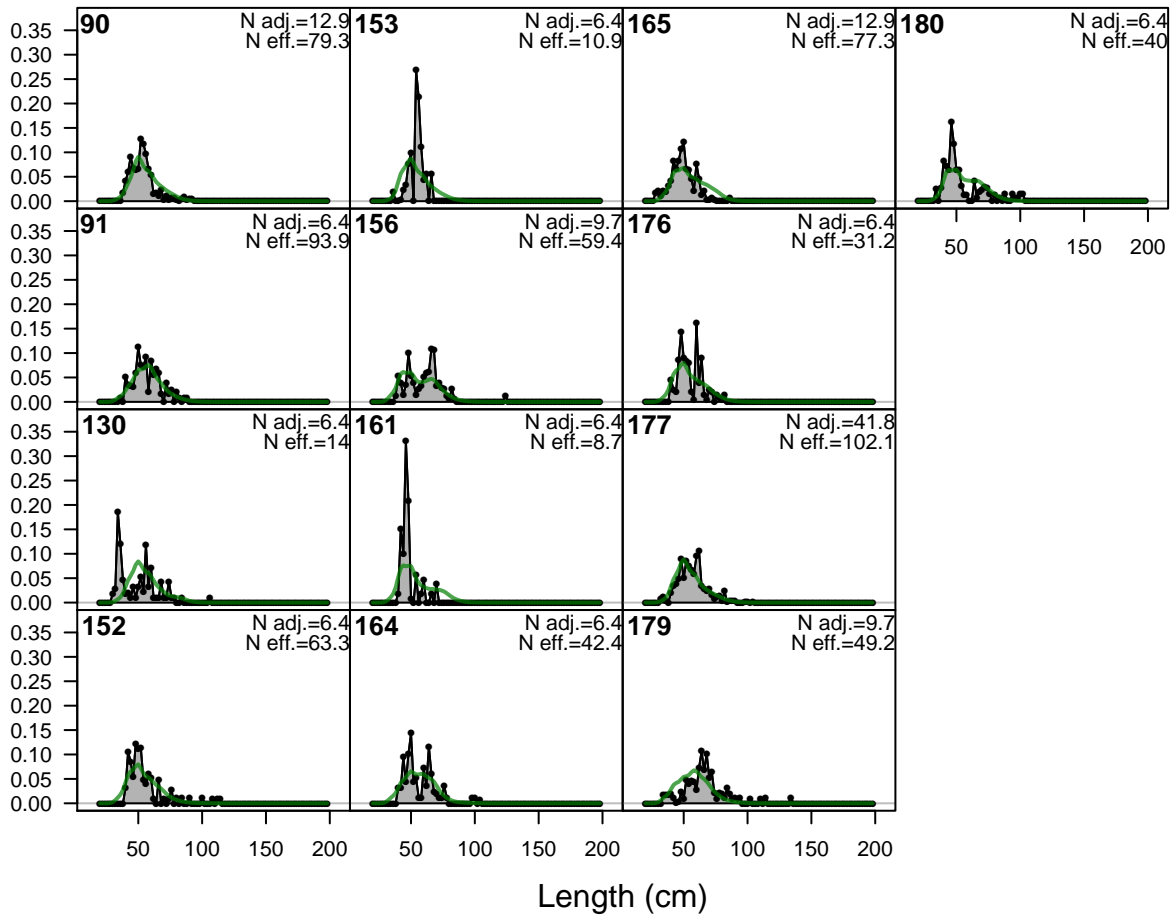


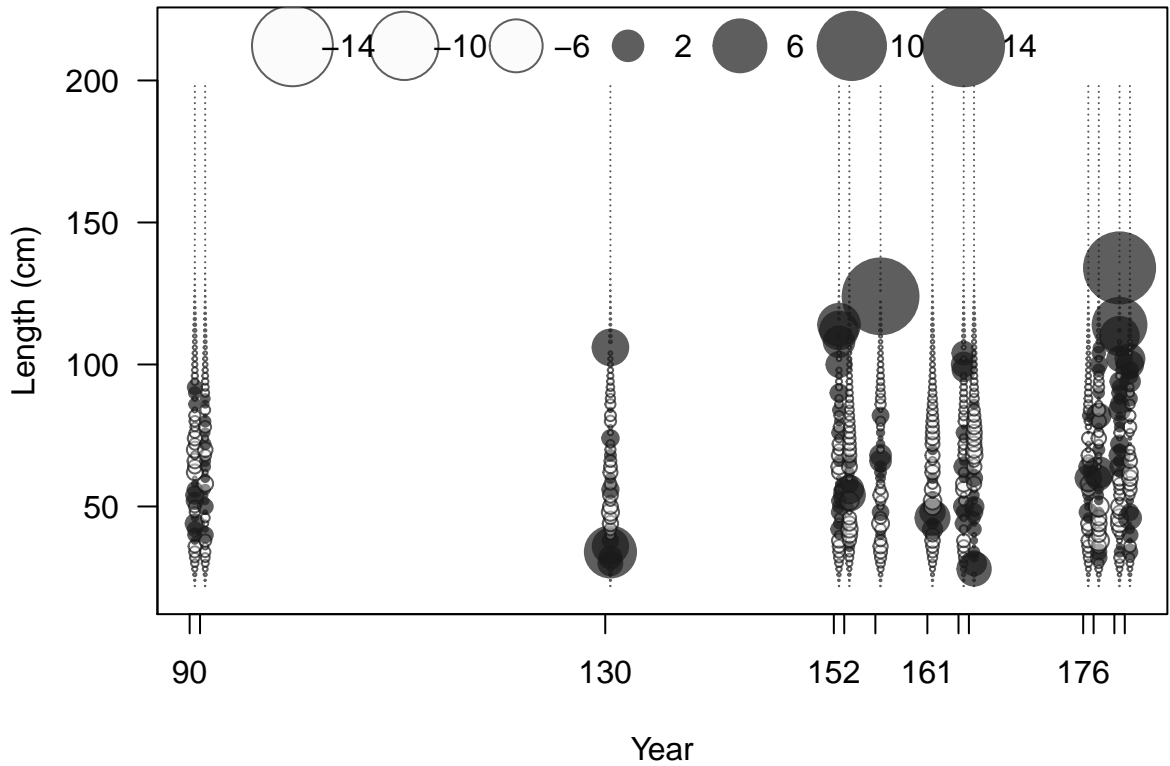
## A3-Obj (whole catch)

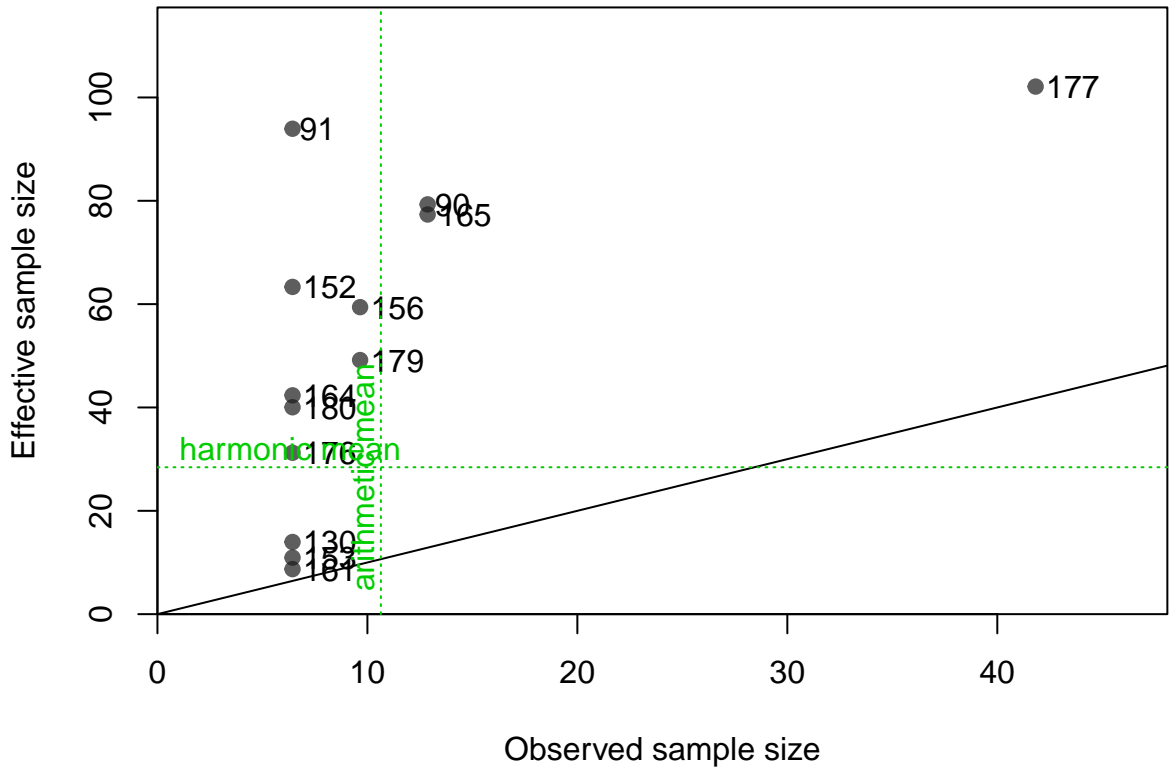




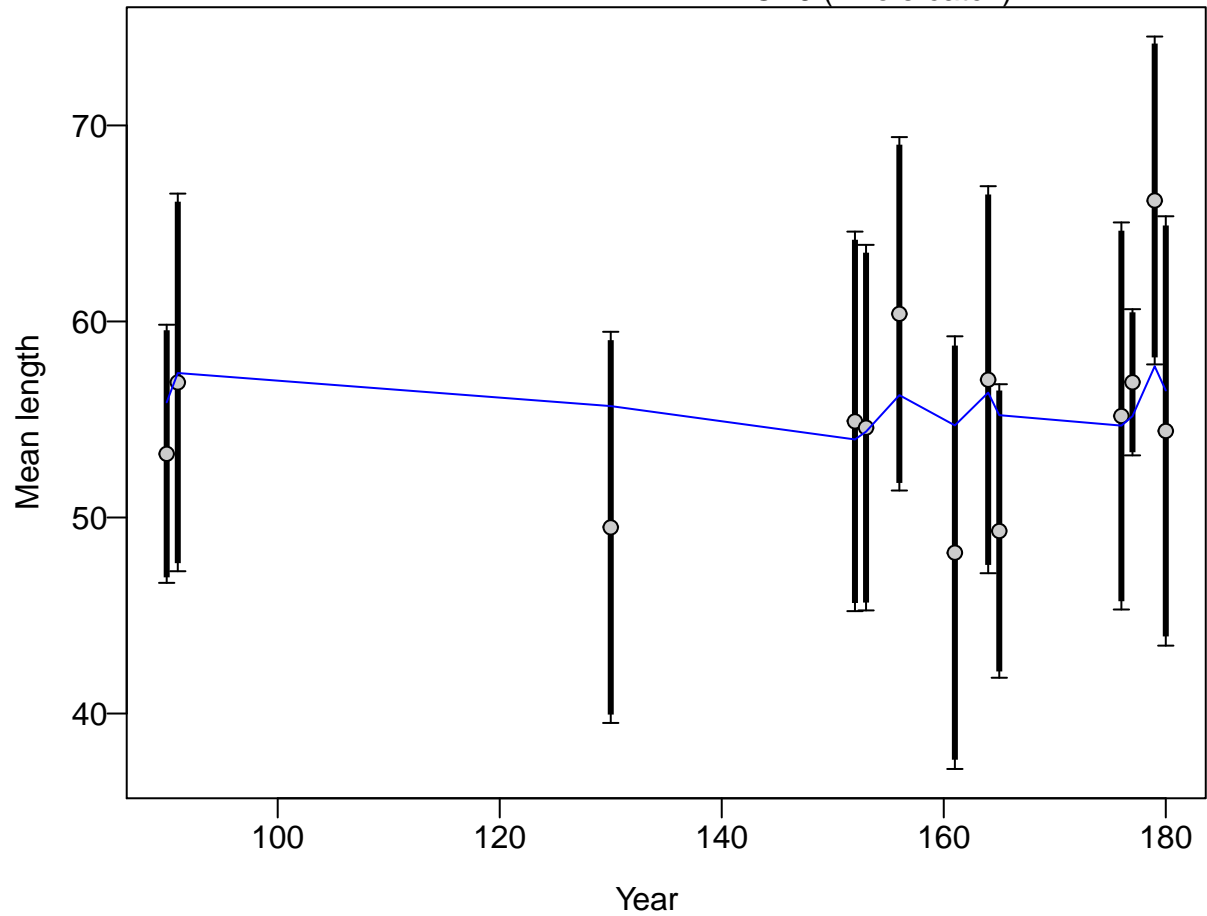
Proportion



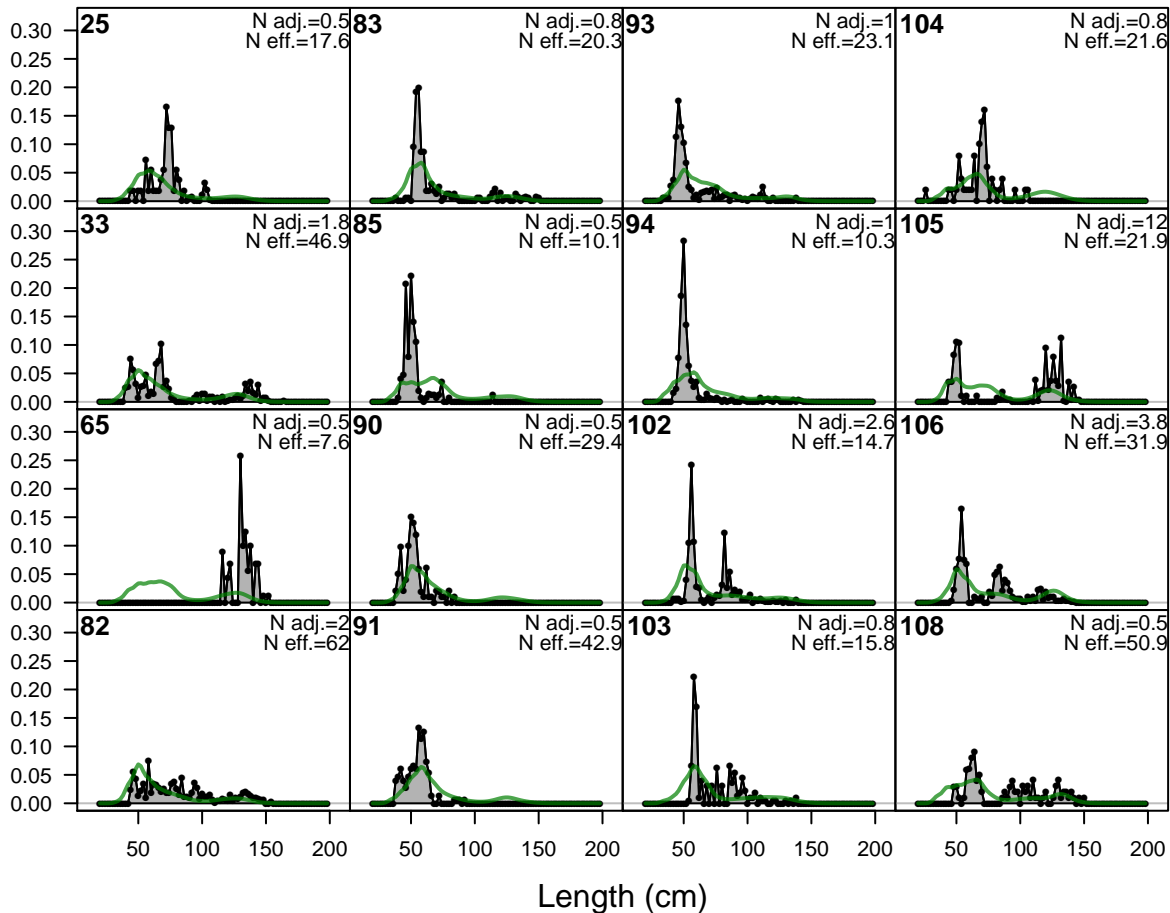




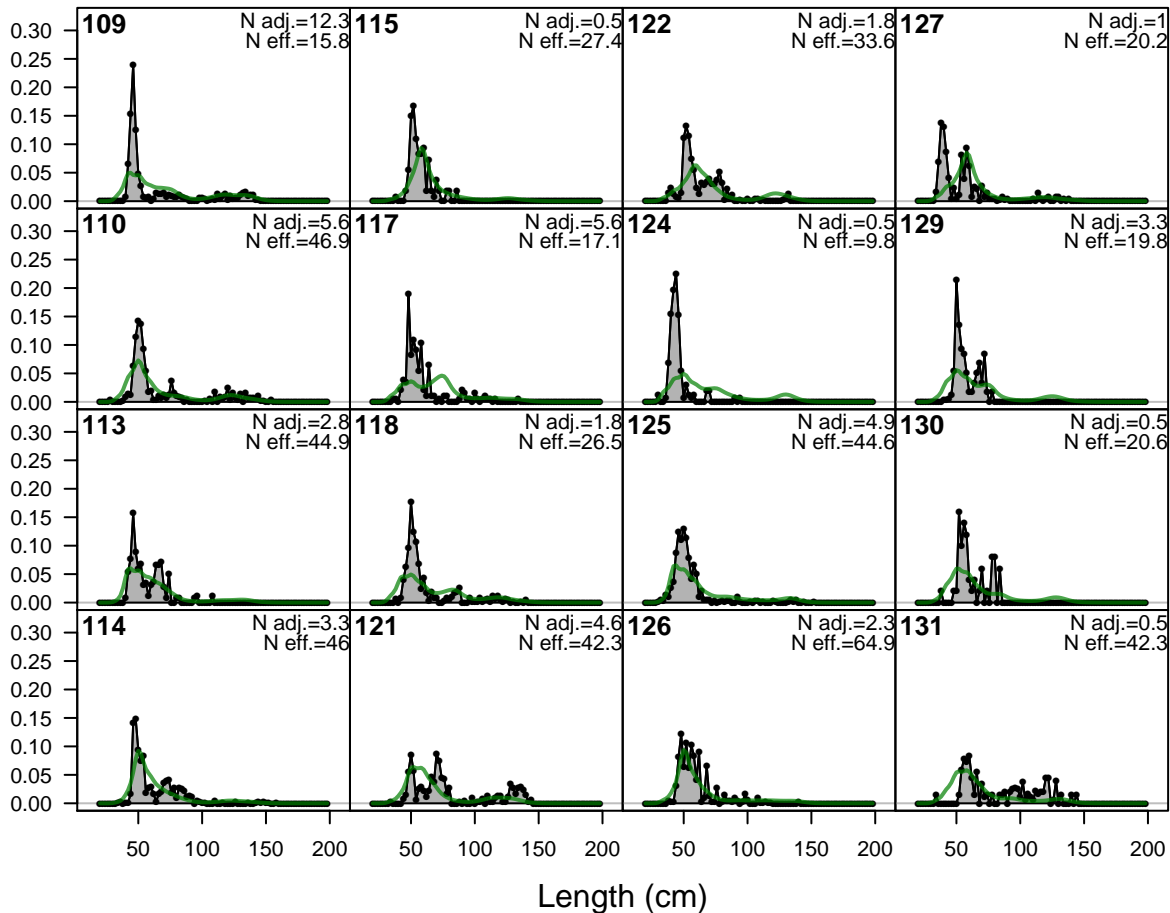
## A4-Obj (whole catch)



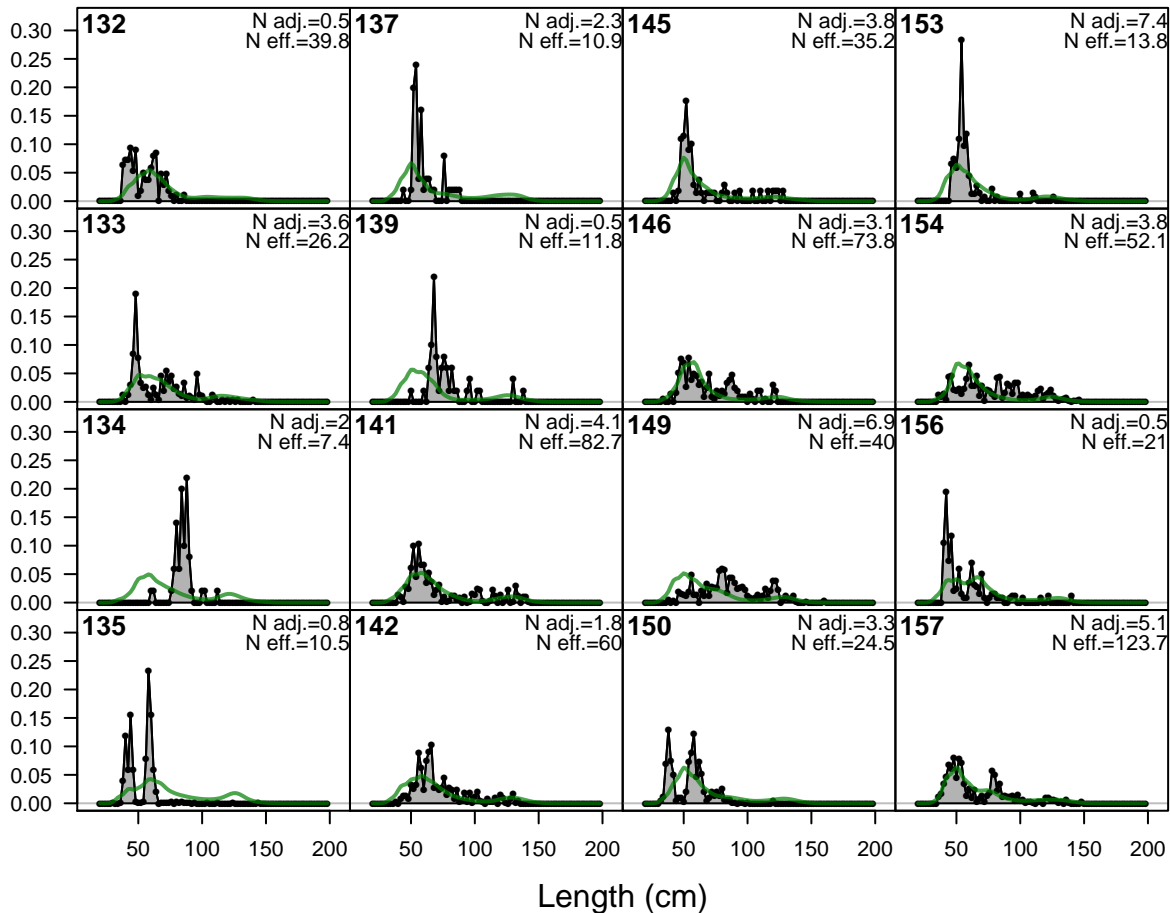
Proportion



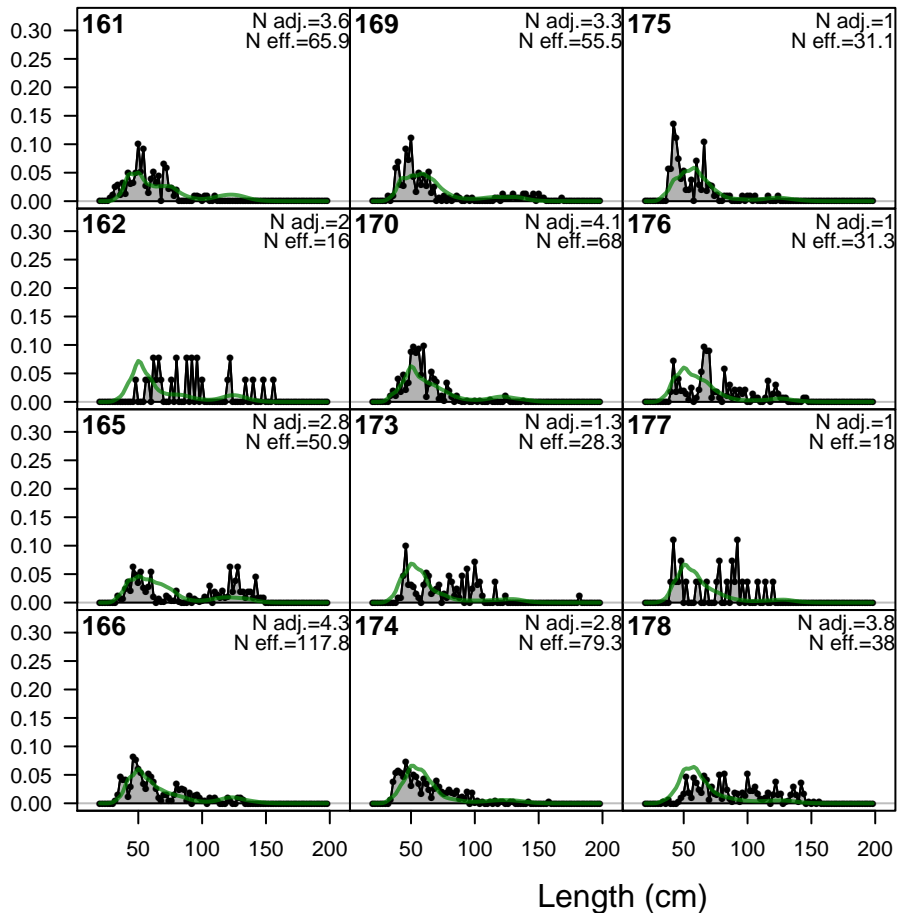
Proportion



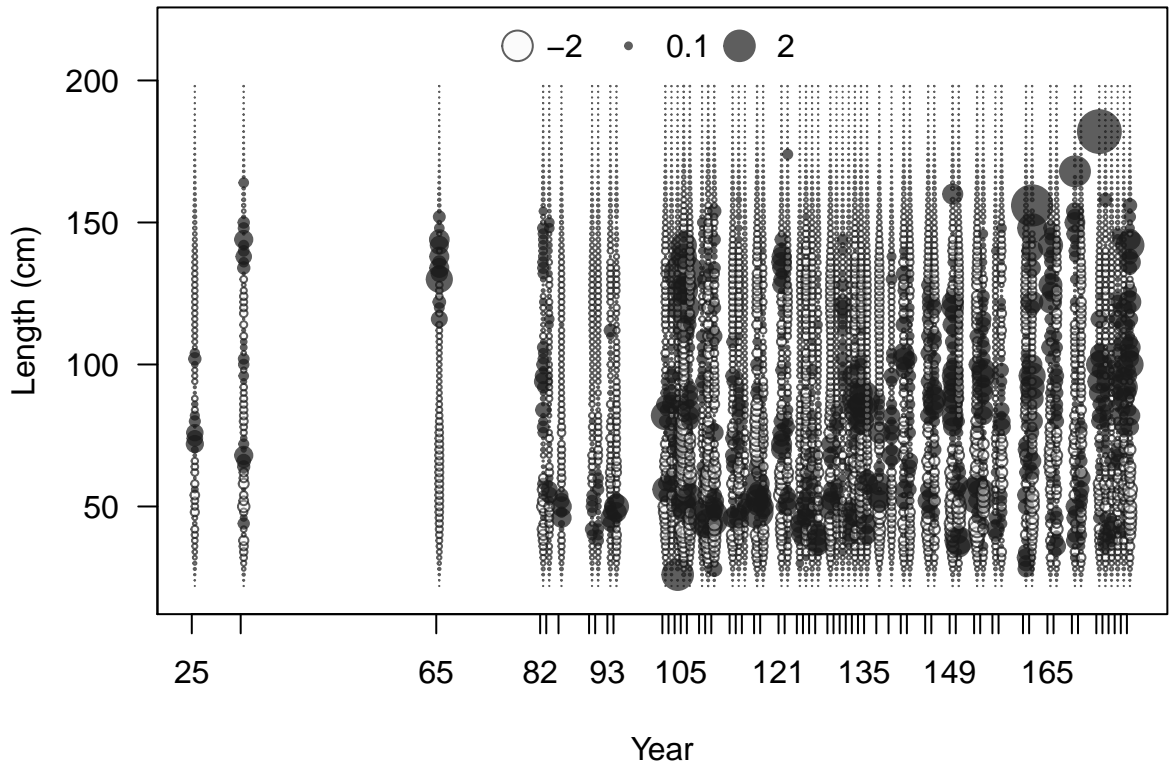
Proportion

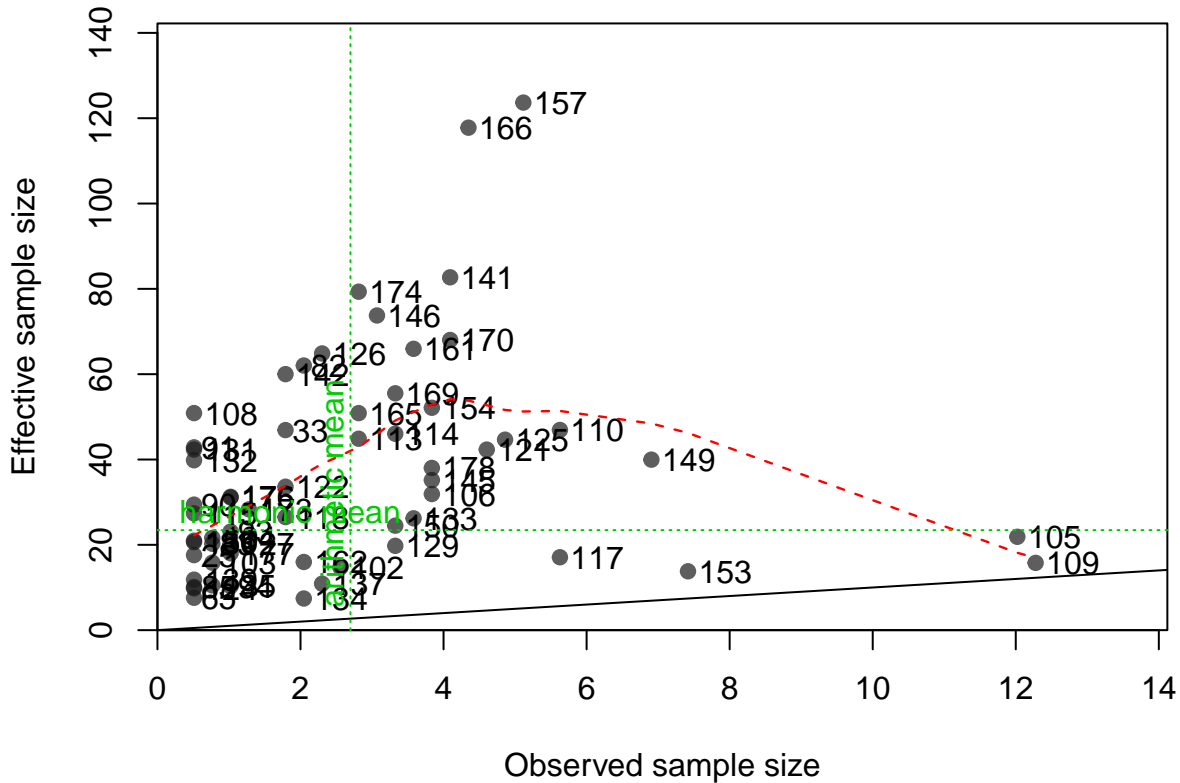


Proportion

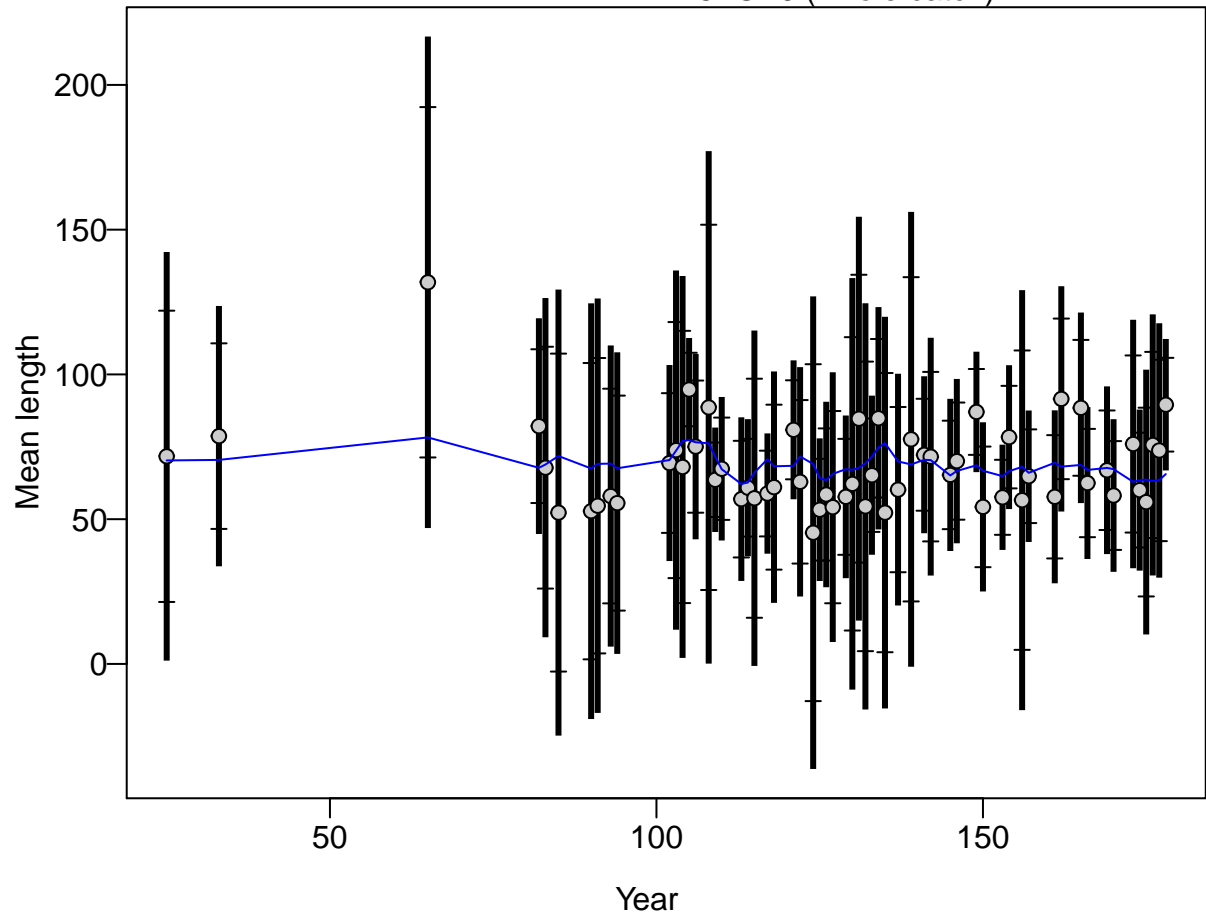




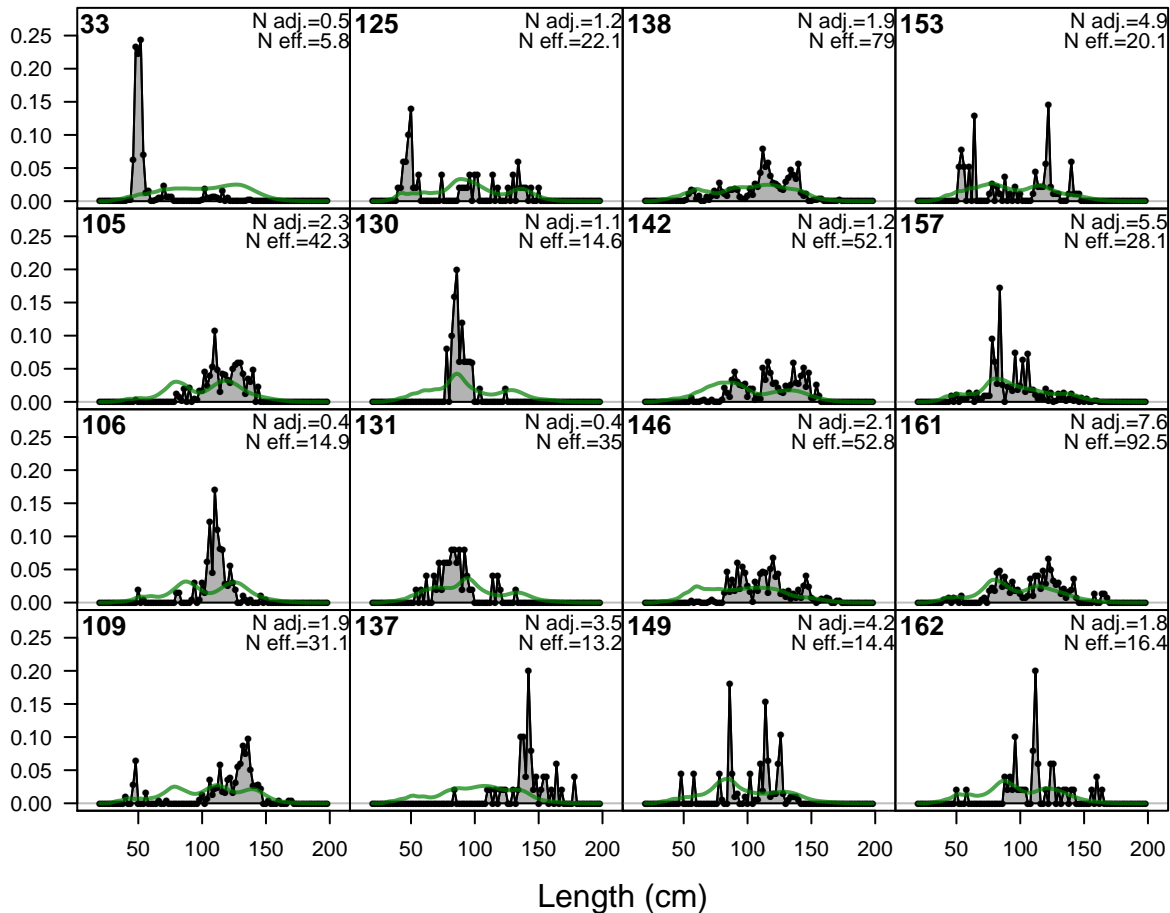




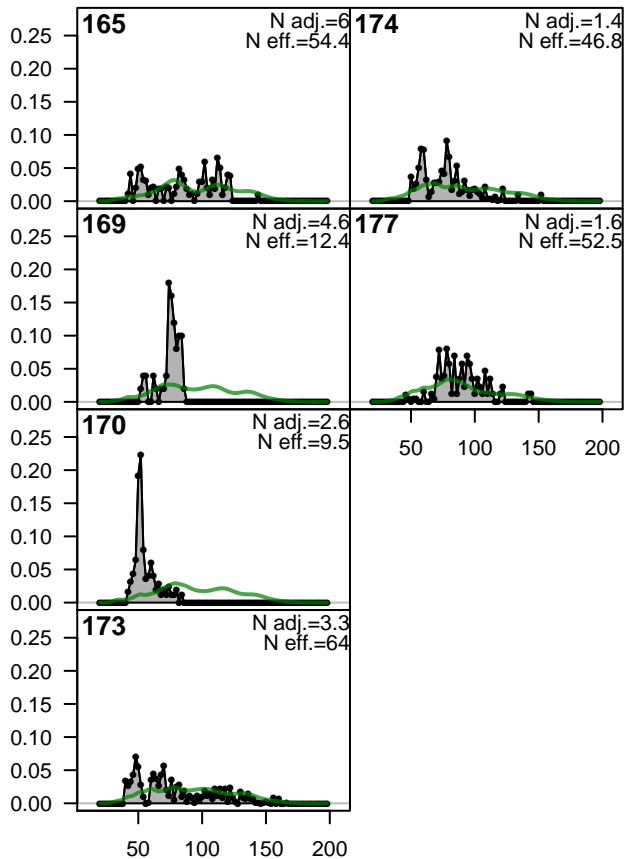
## A5-OBJ (whole catch)



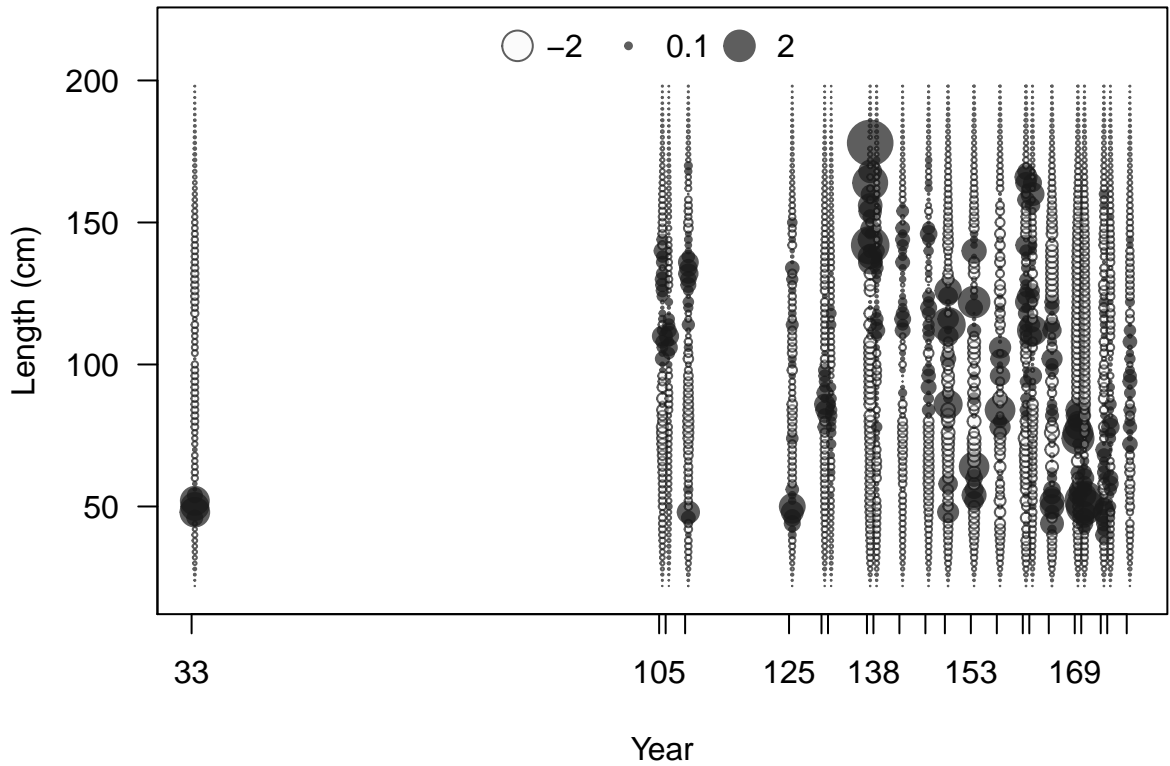
Proportion

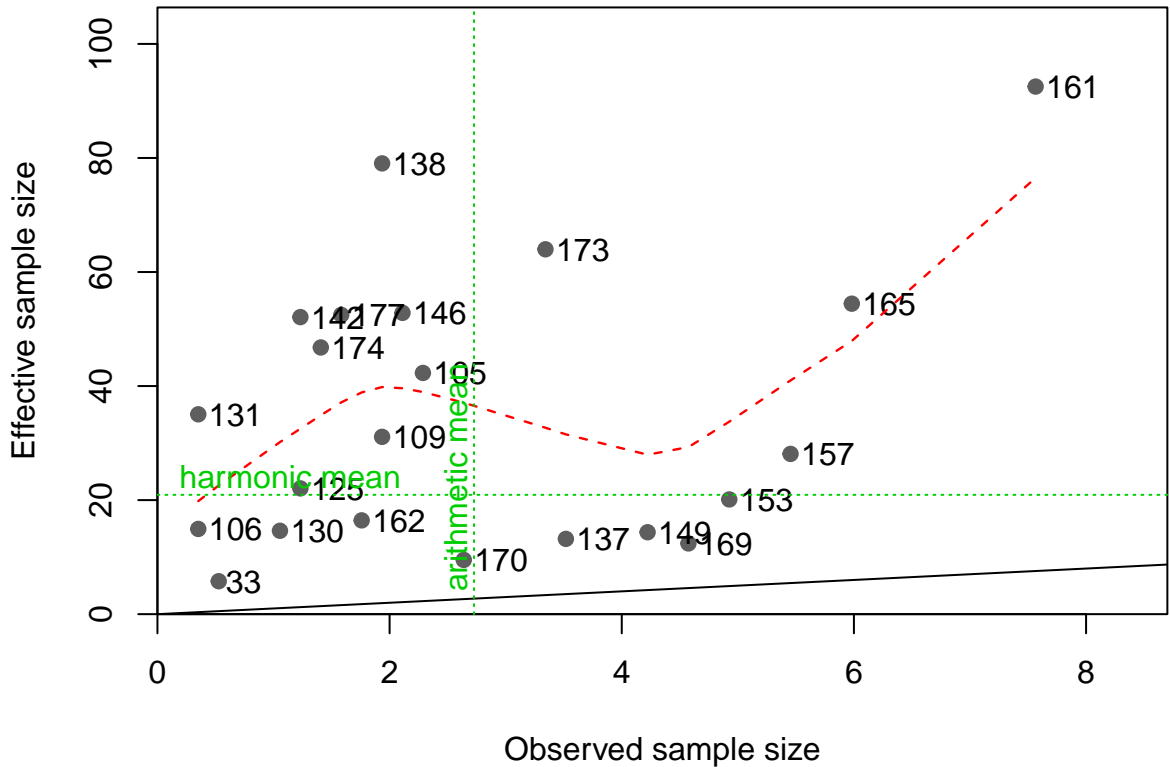


Proportion

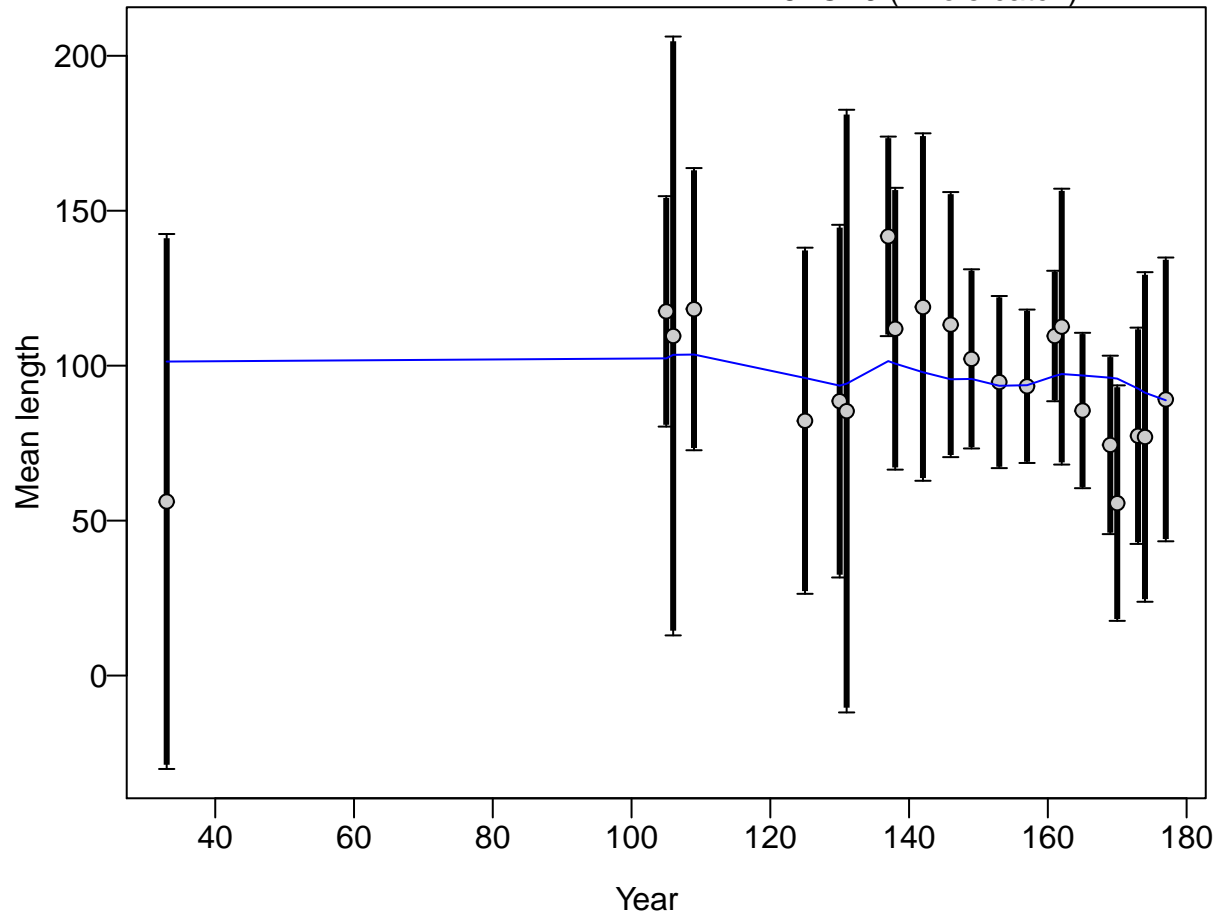


Length (cm)



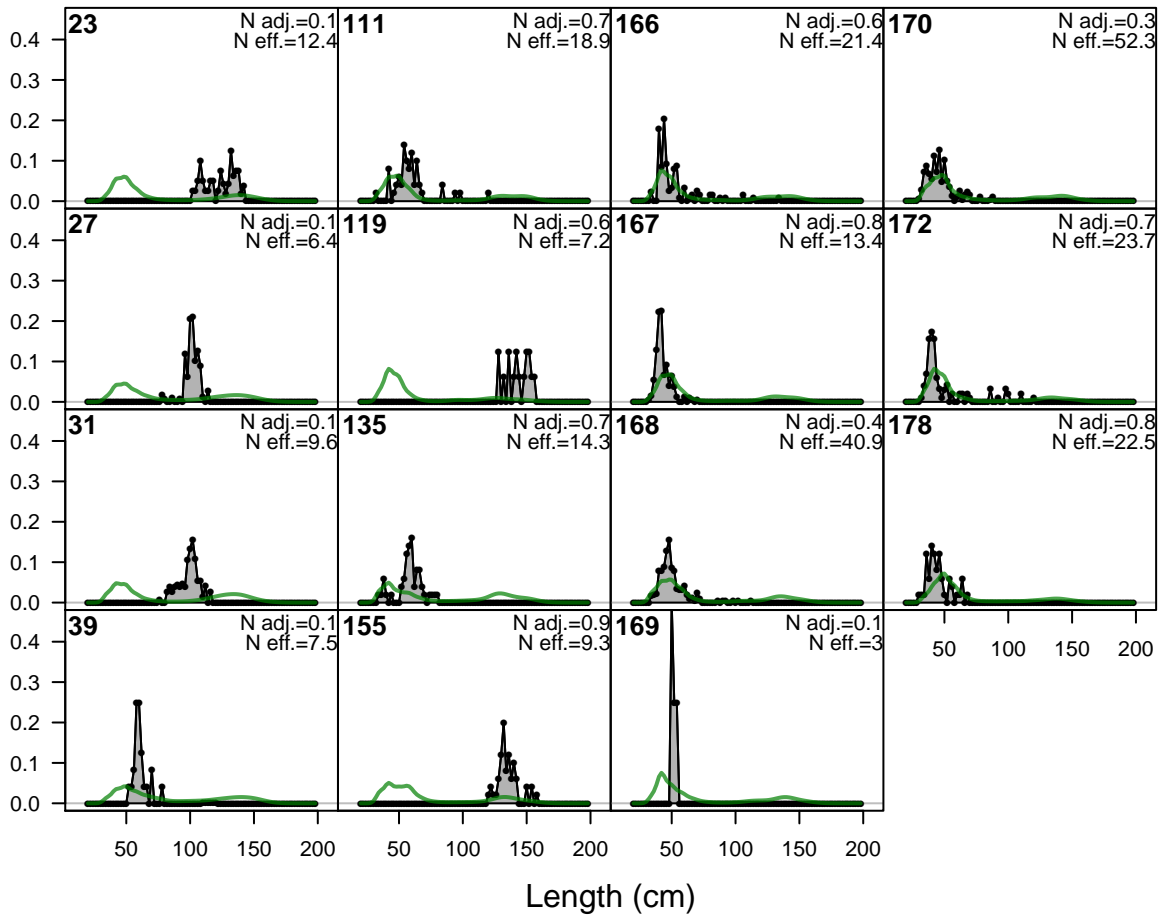


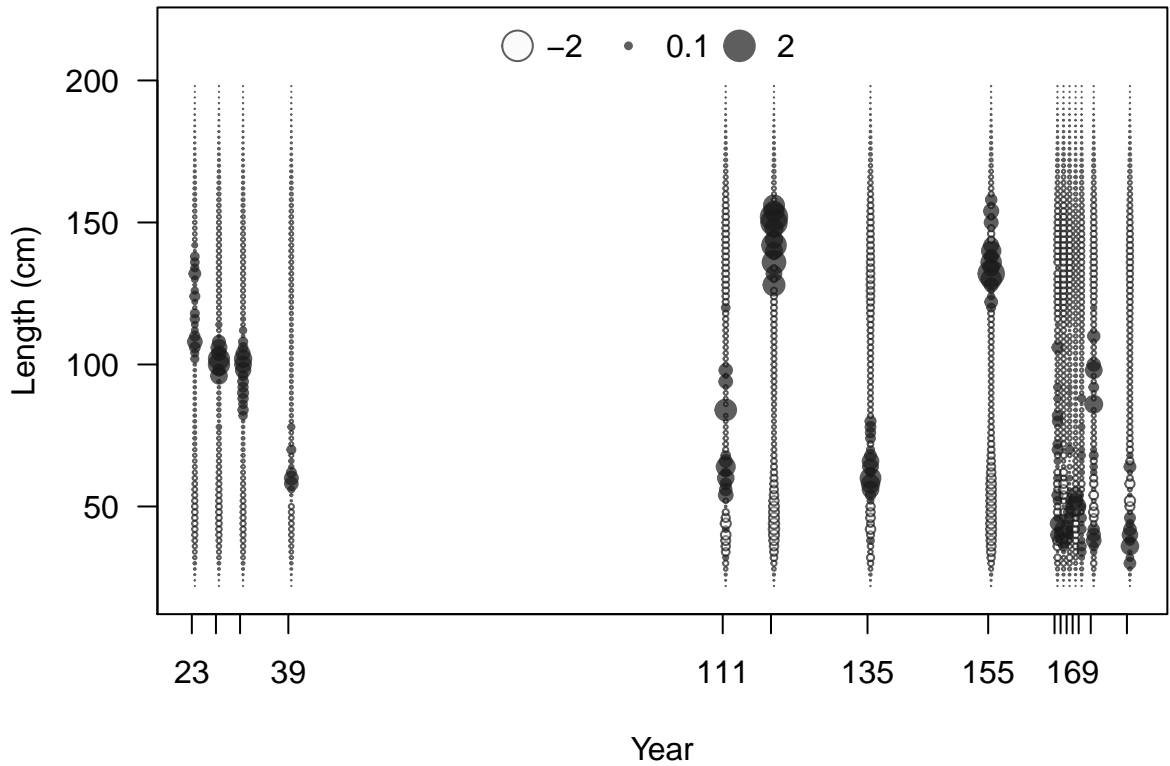
## A6-OBJ (whole catch)

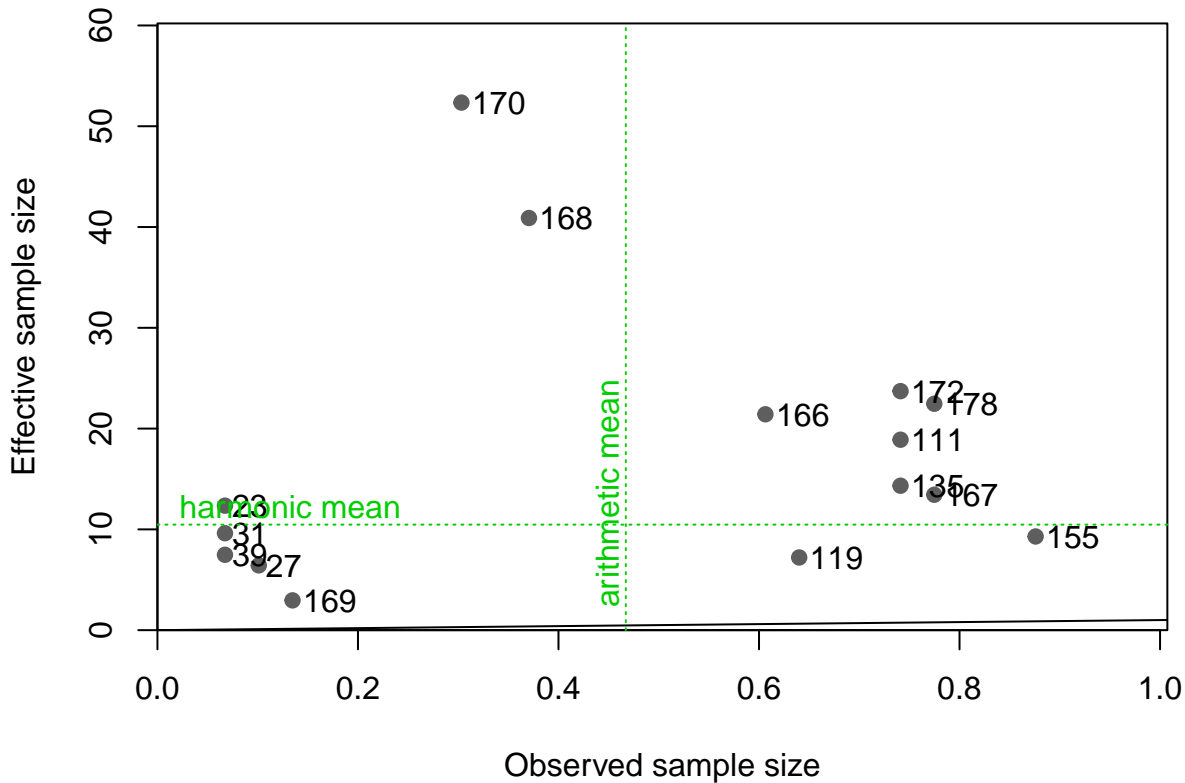




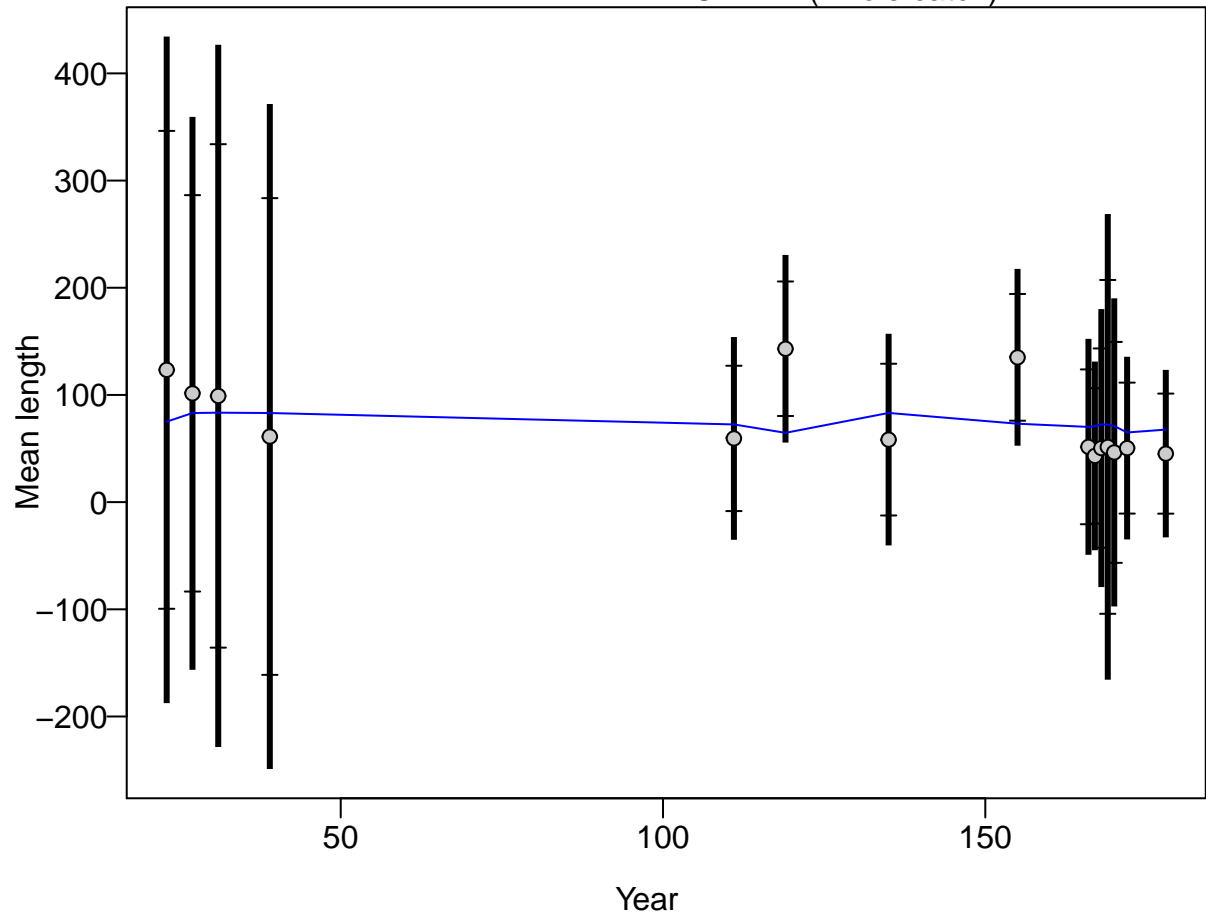
Proportion

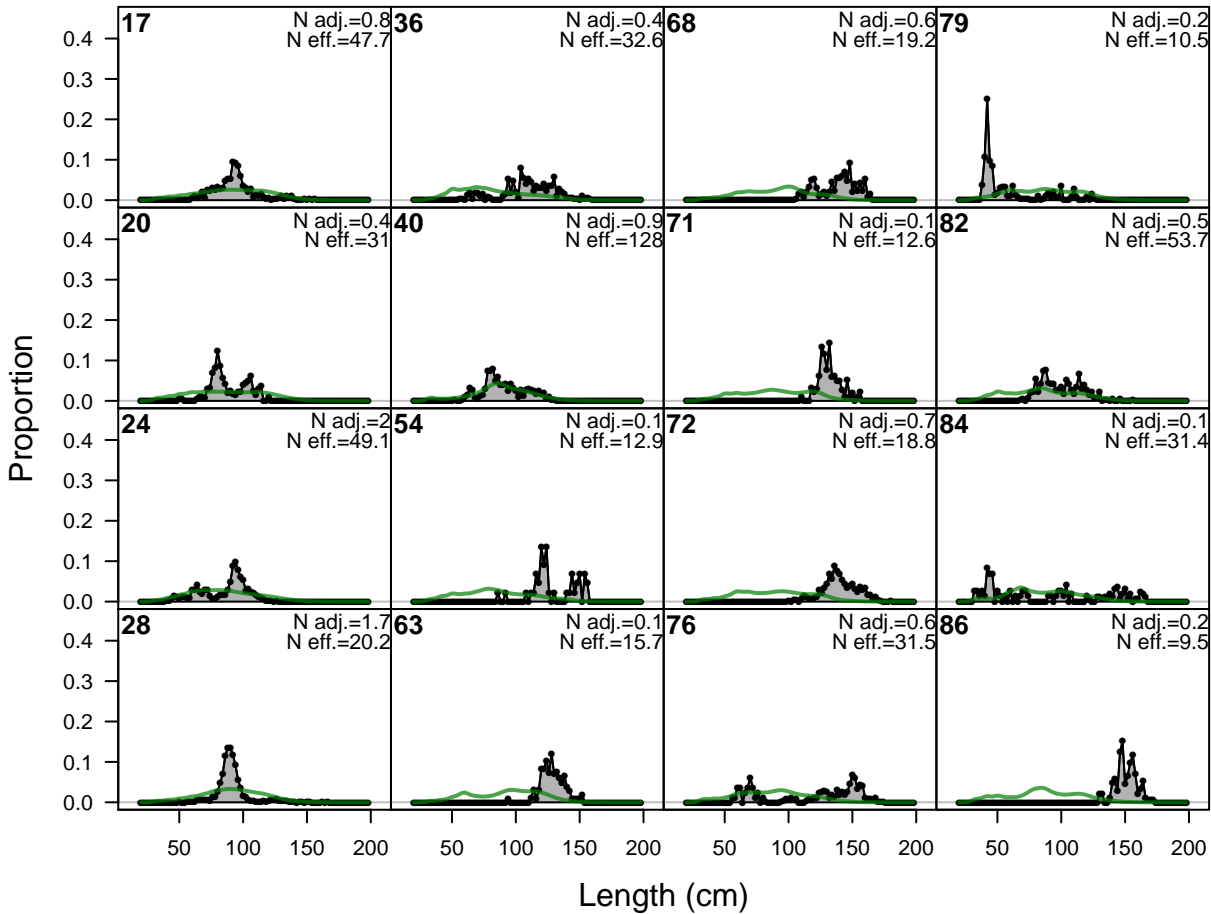




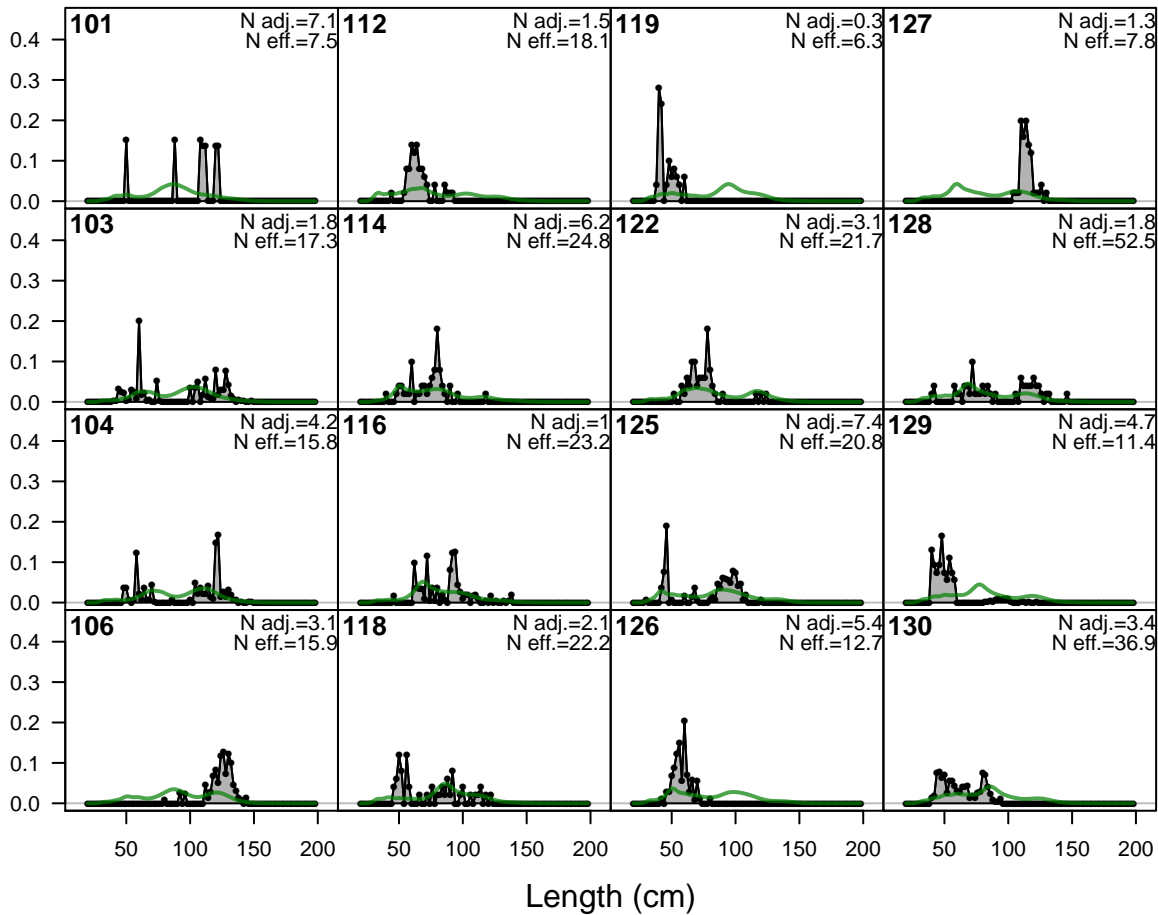


## A2-NOADEL (whole catch)

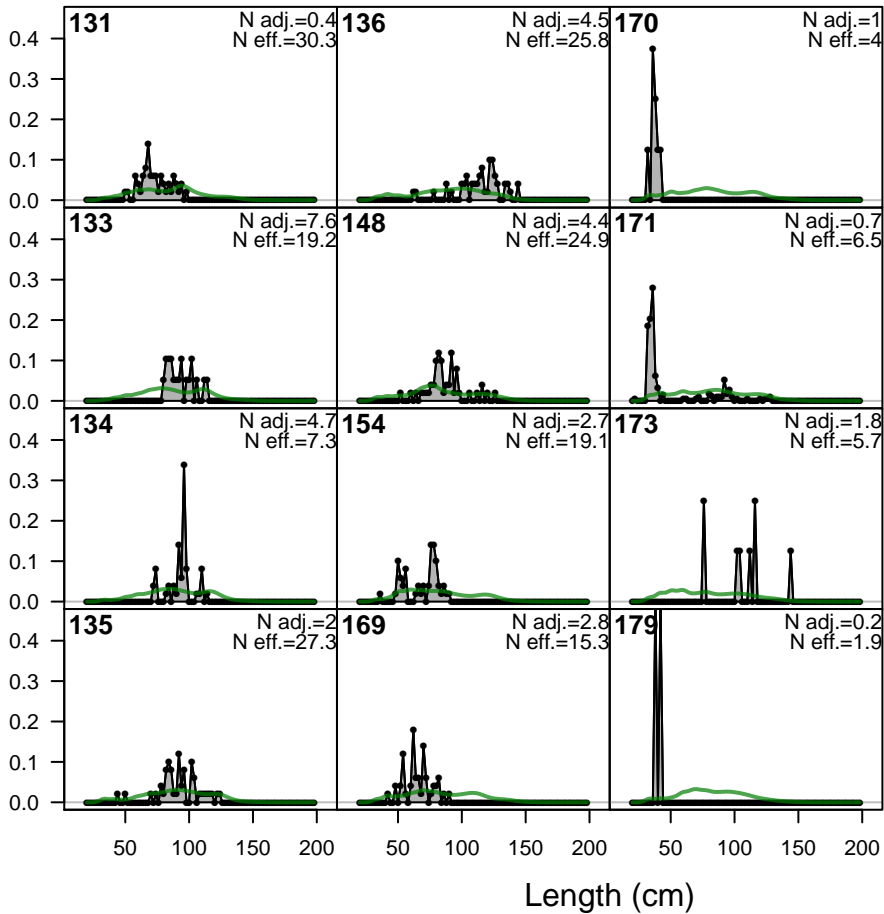


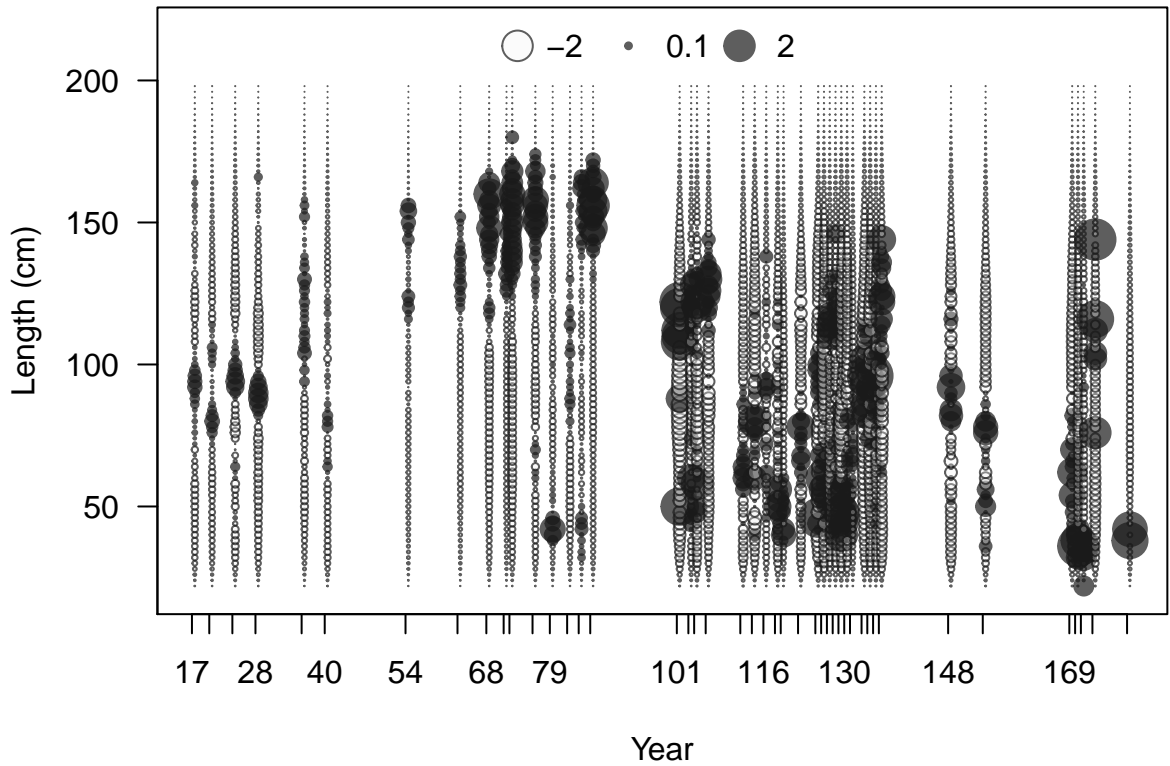


Proportion



Proportion

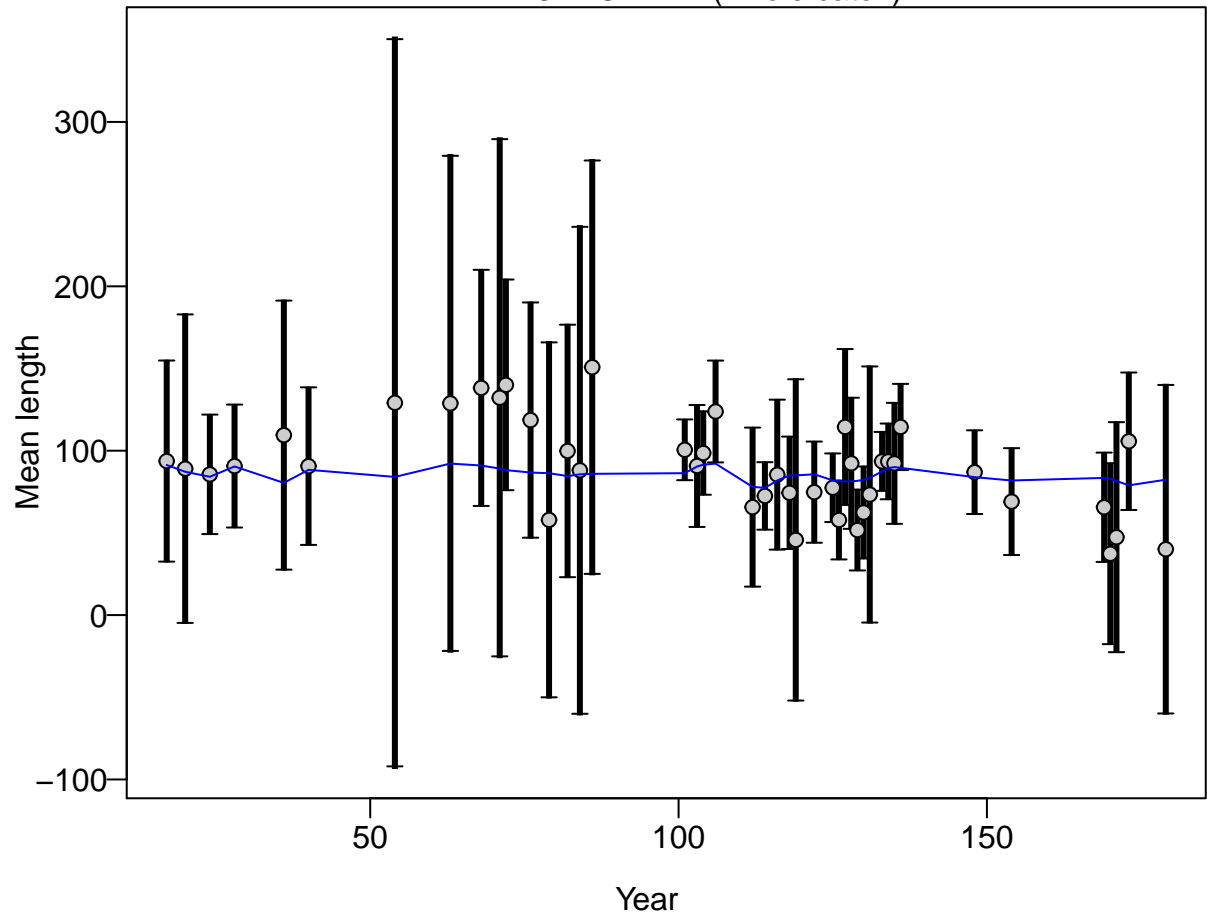


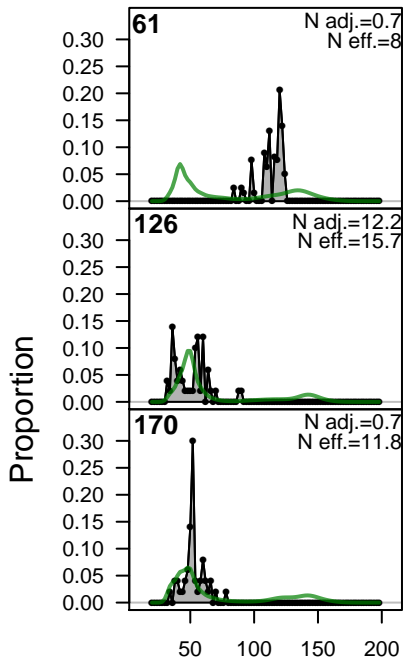




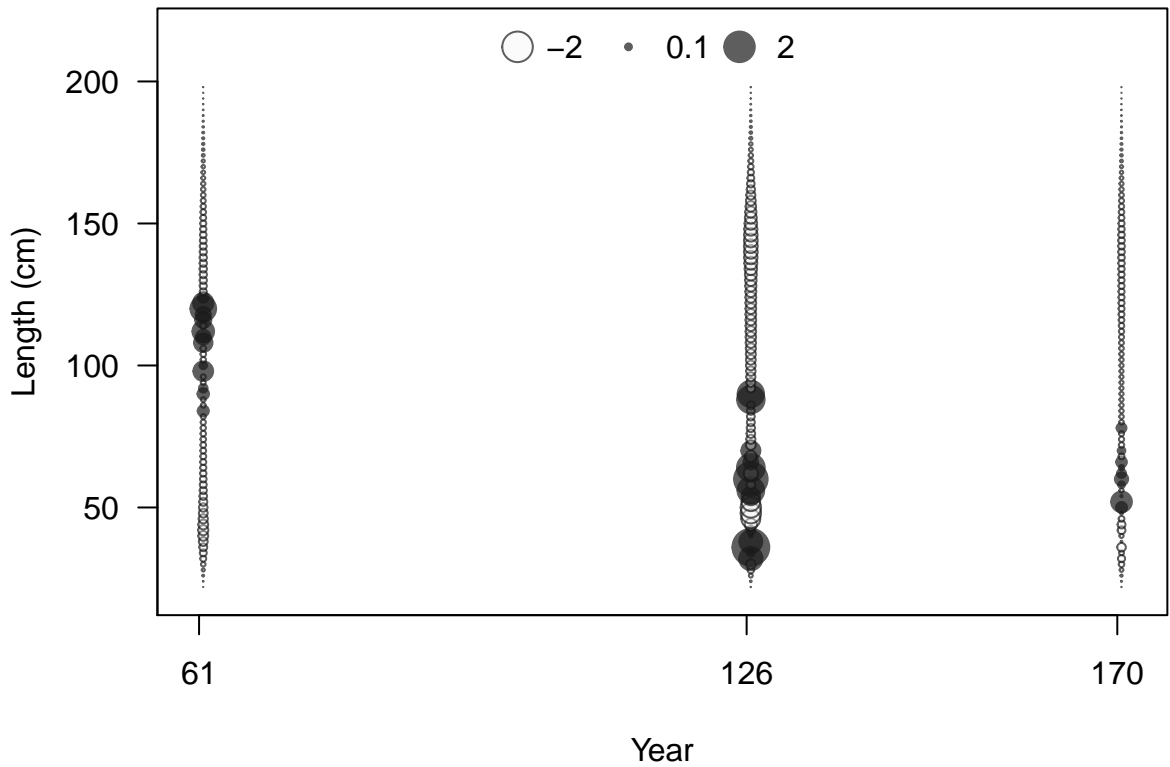


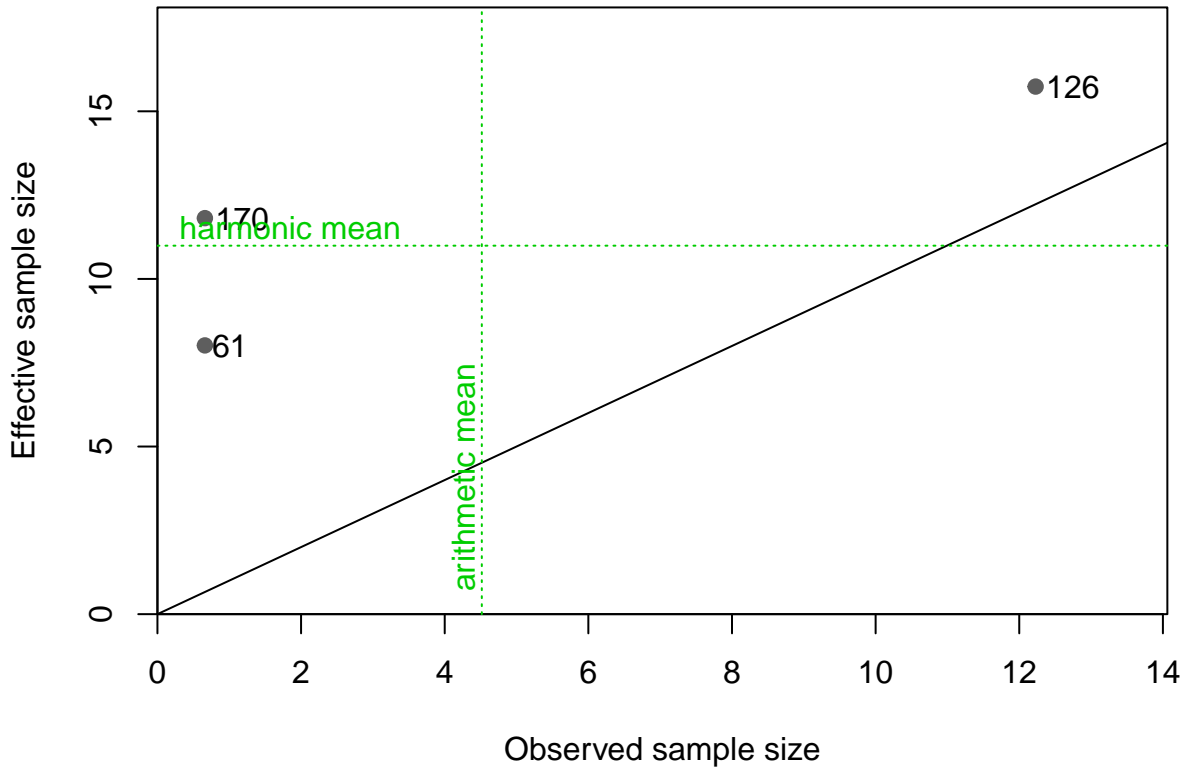
A3-NOADEL (whole catch)



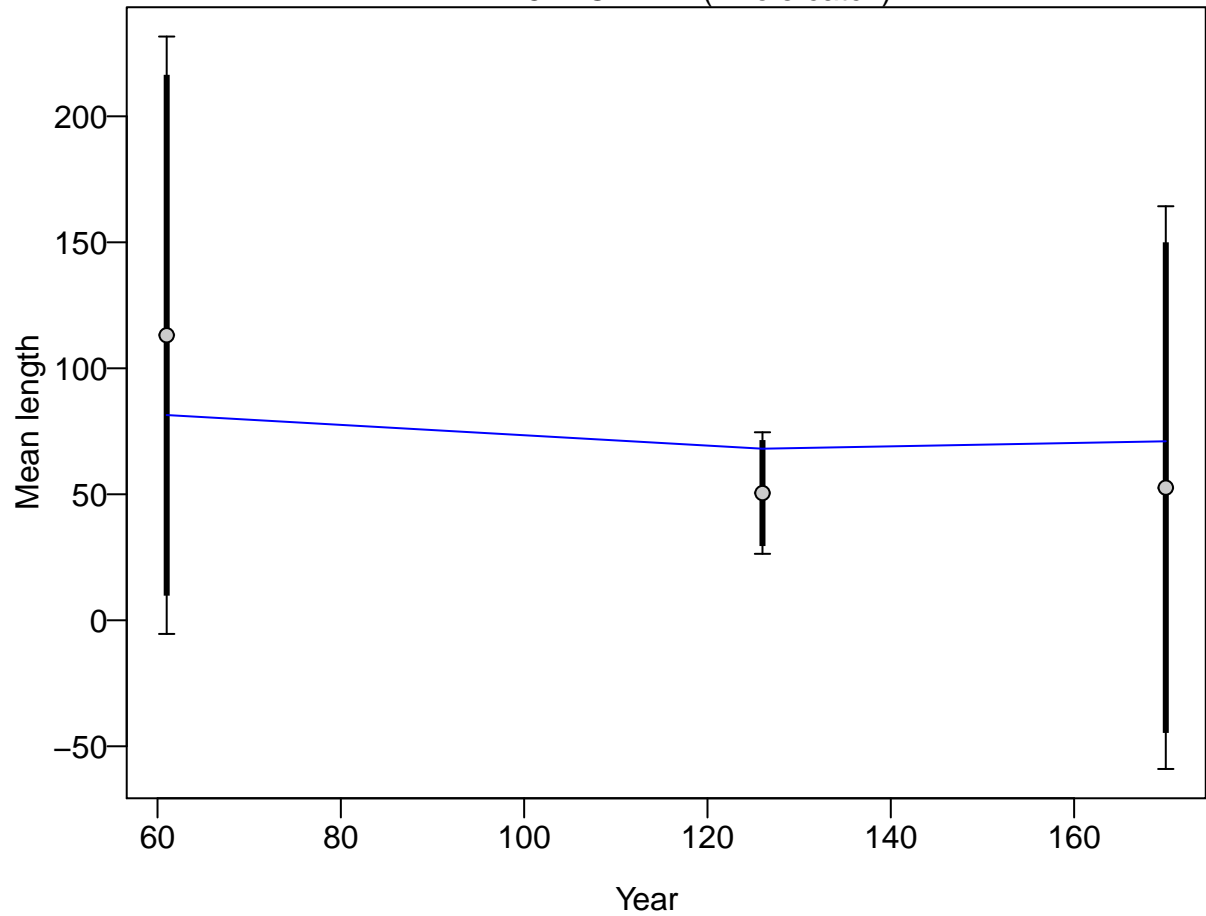


Length (cm)

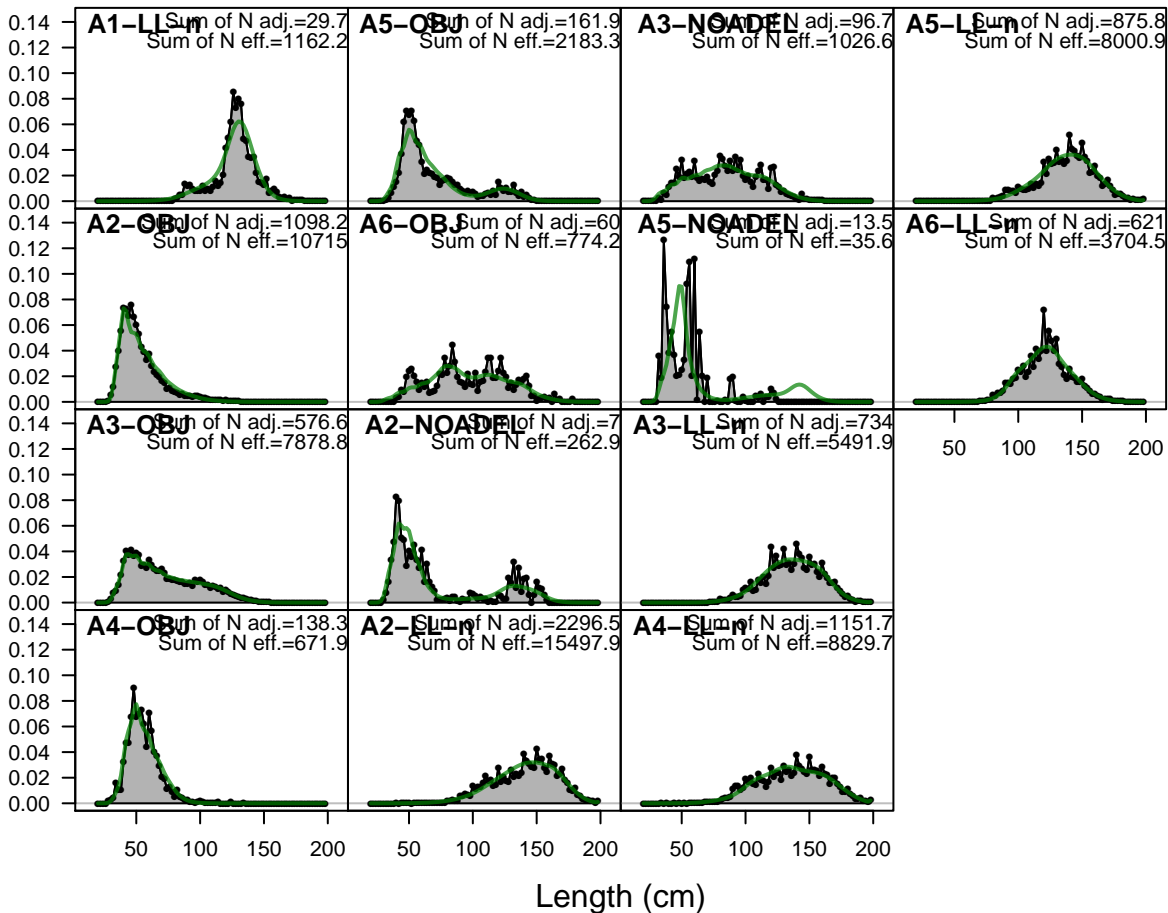




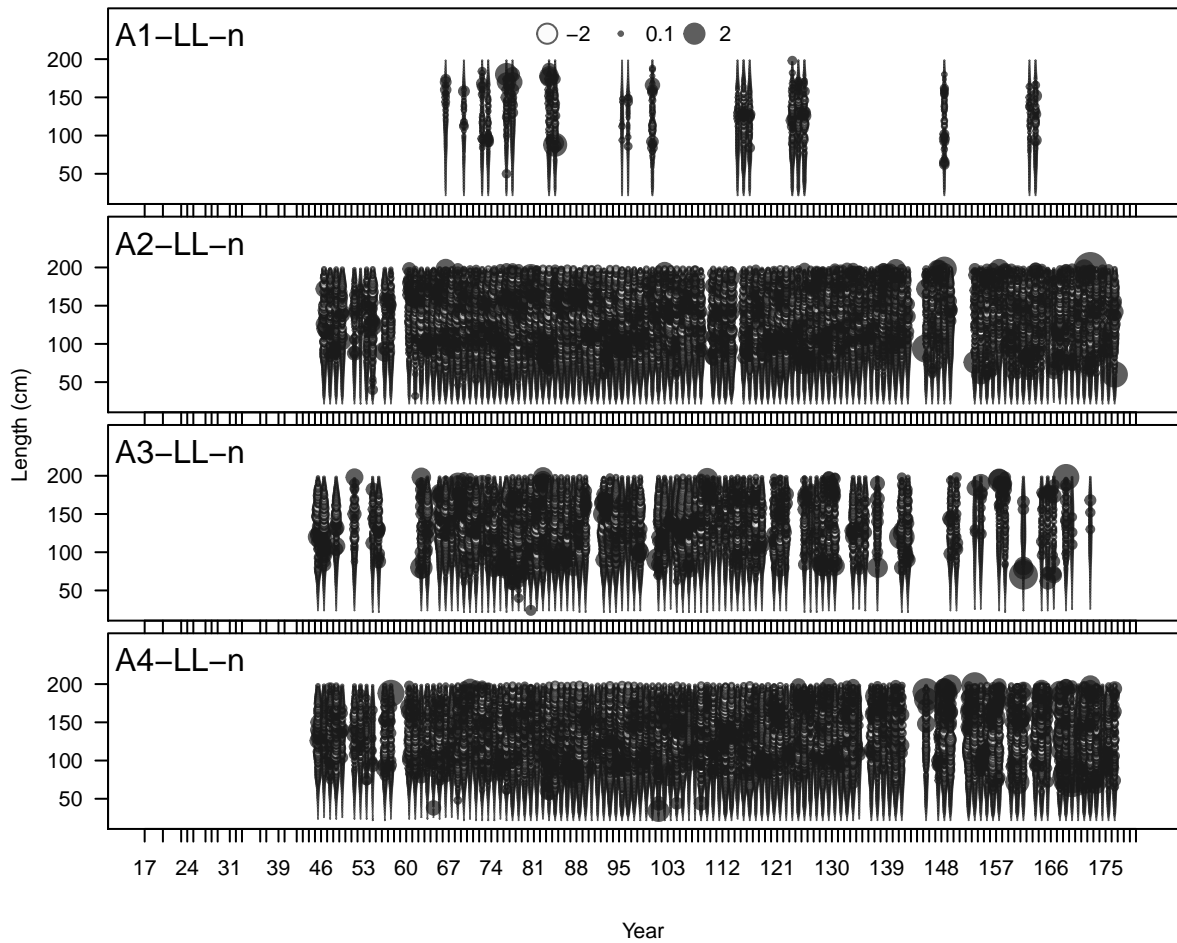
A5-NOADEL (whole catch)



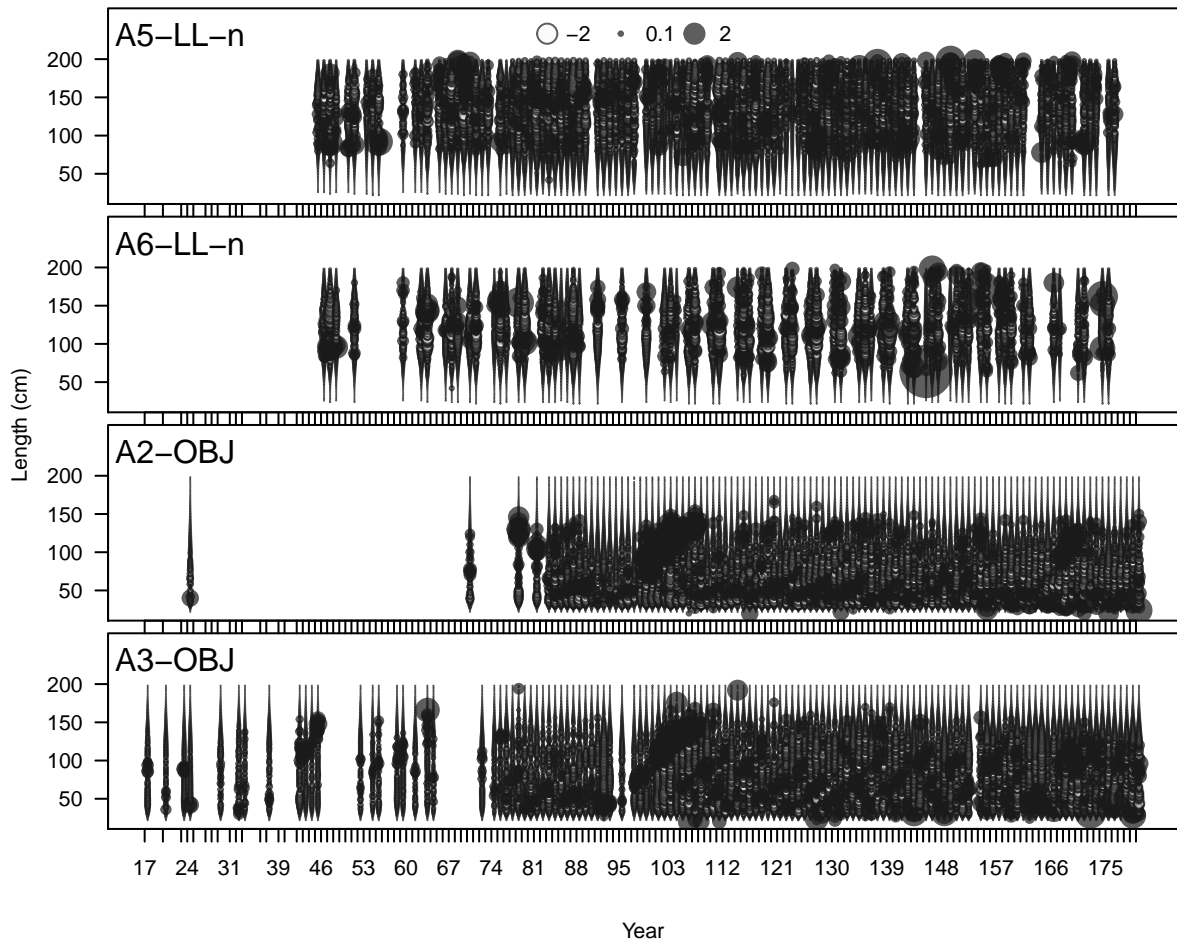
Proportion

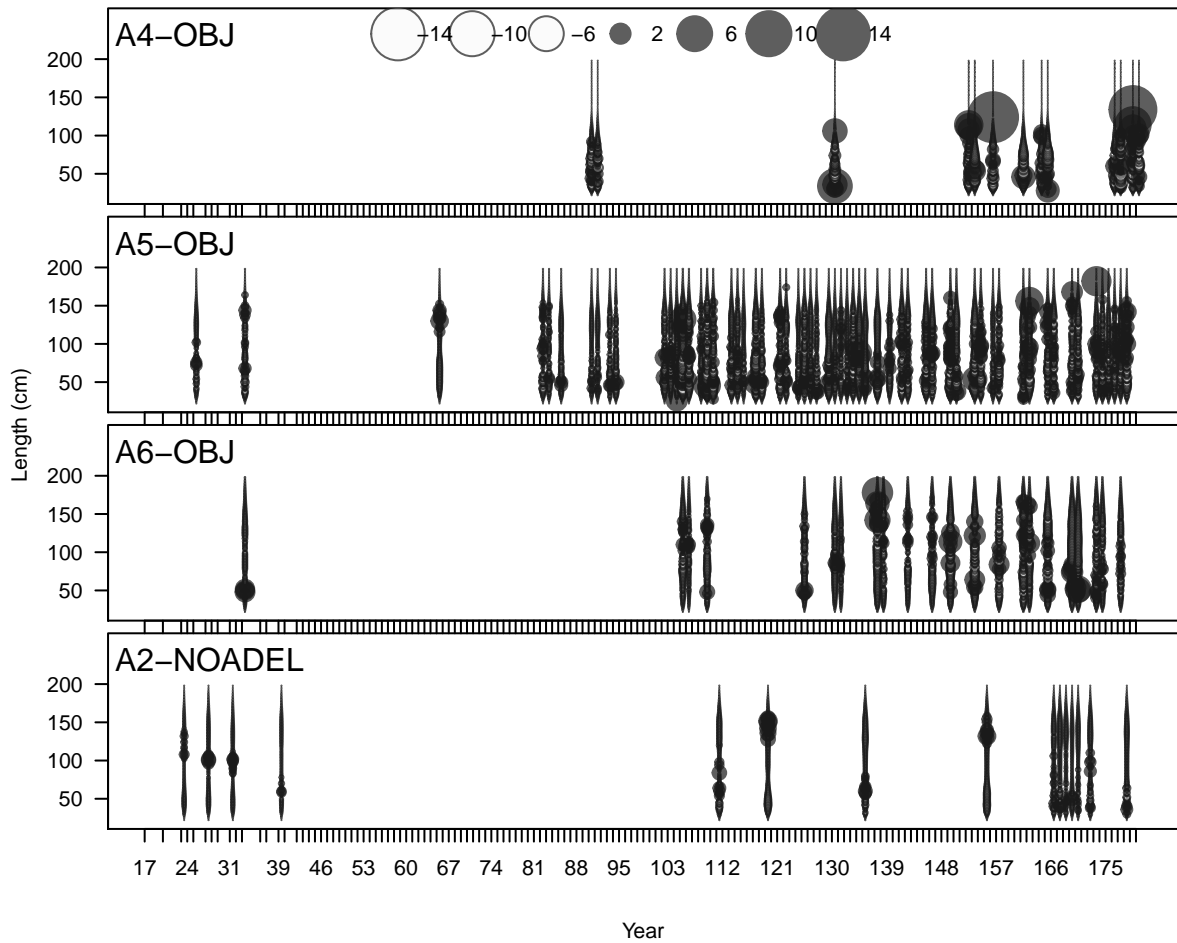


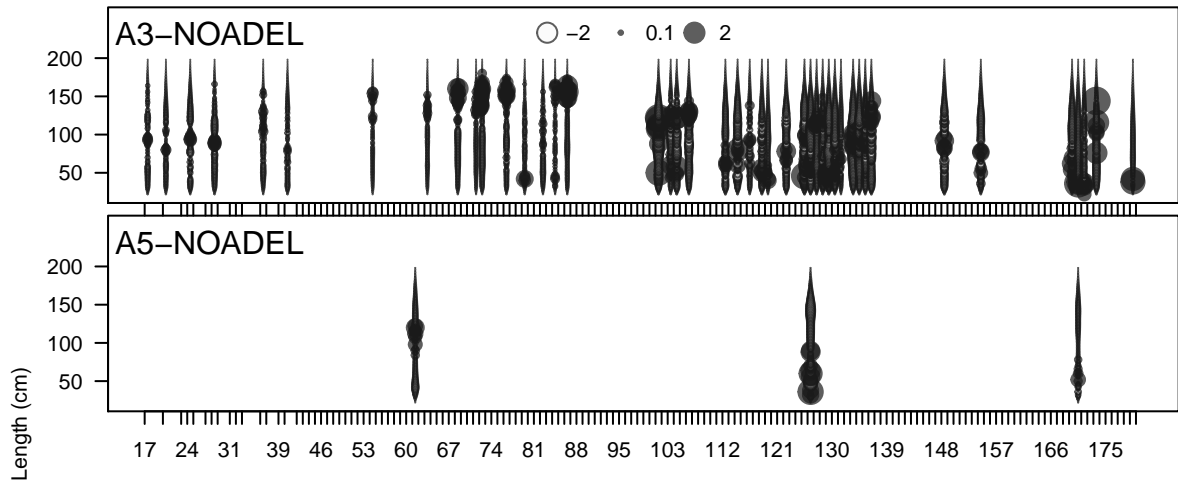
Length (cm)





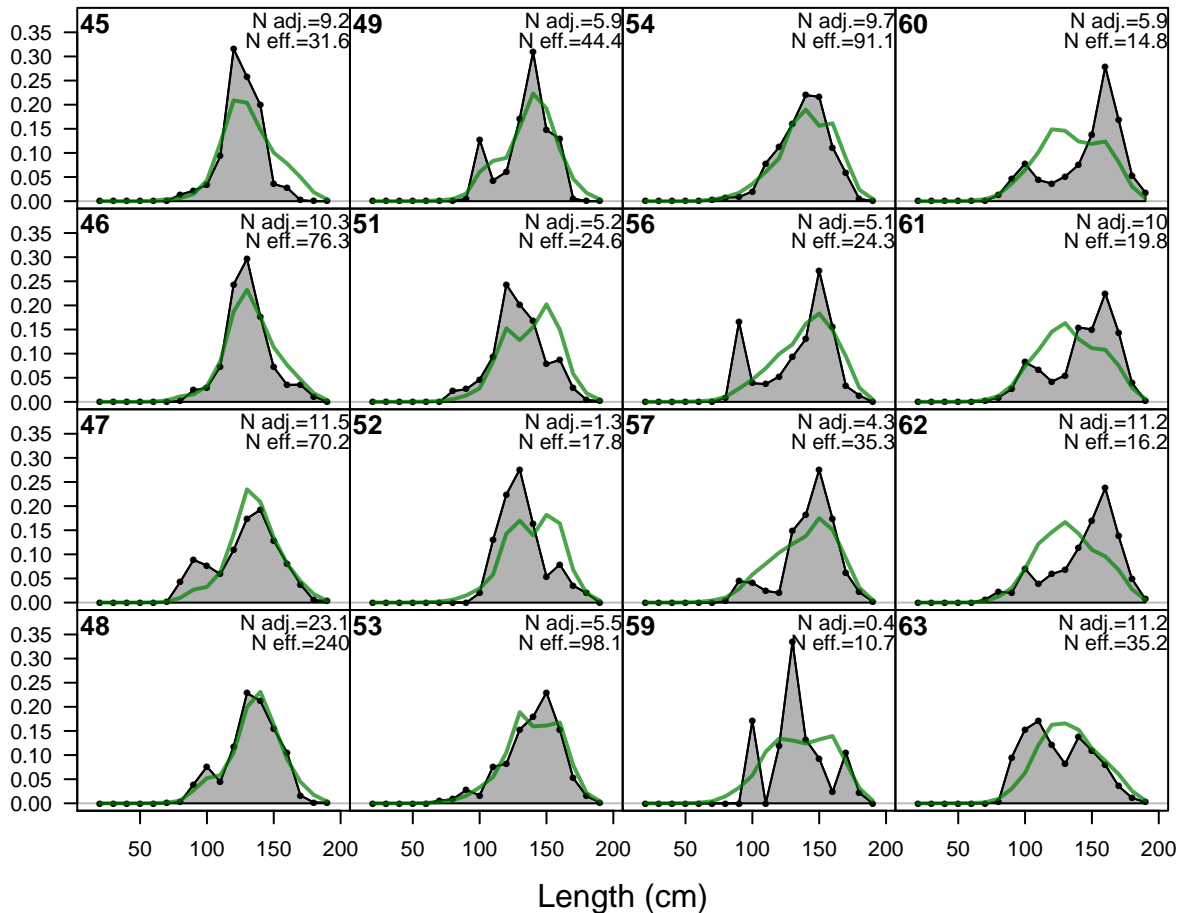




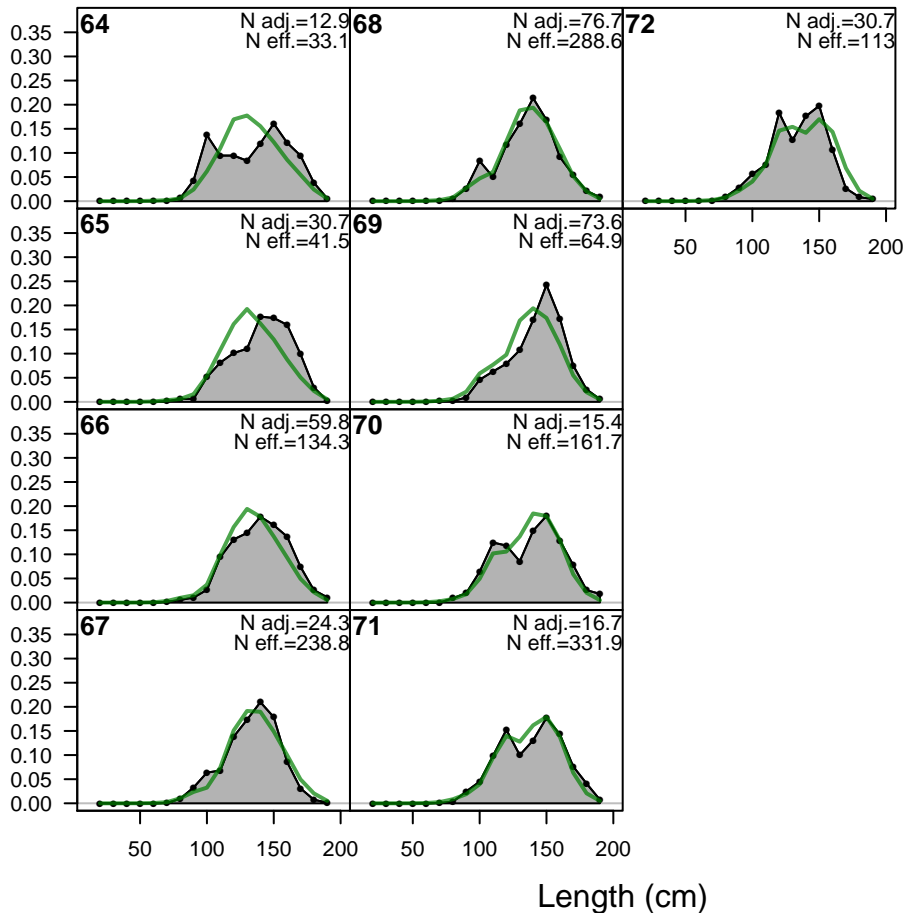


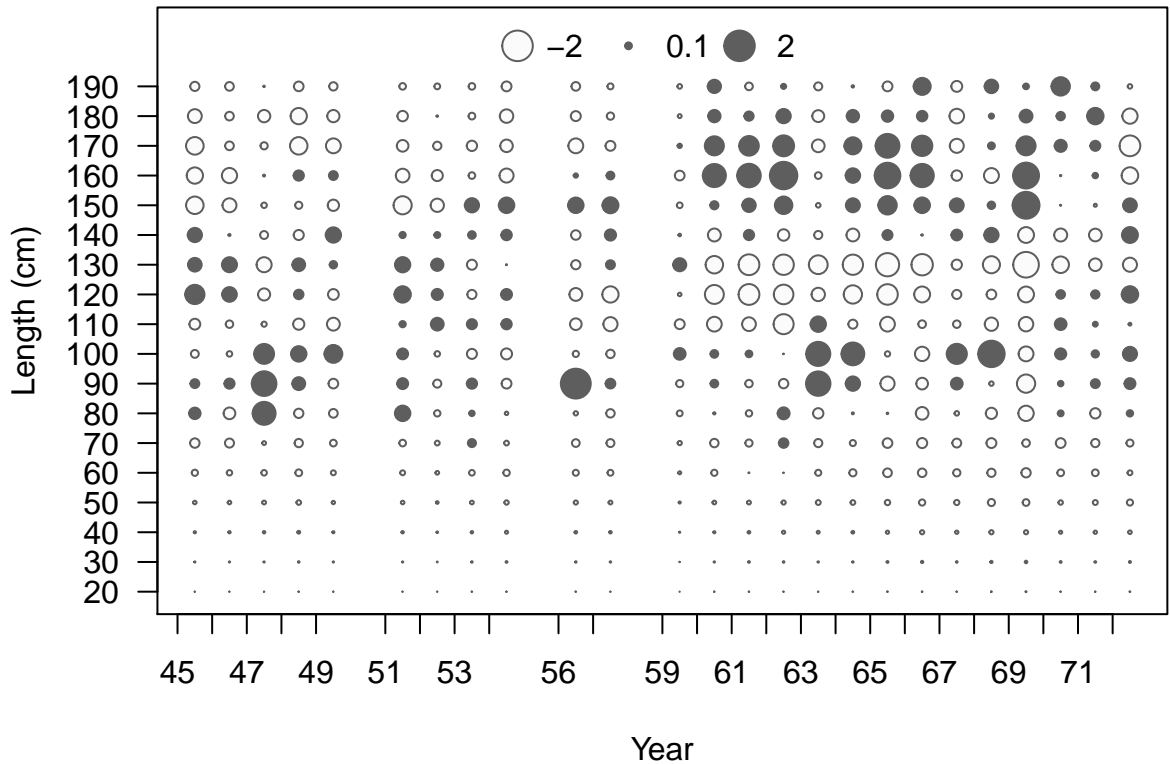
Year

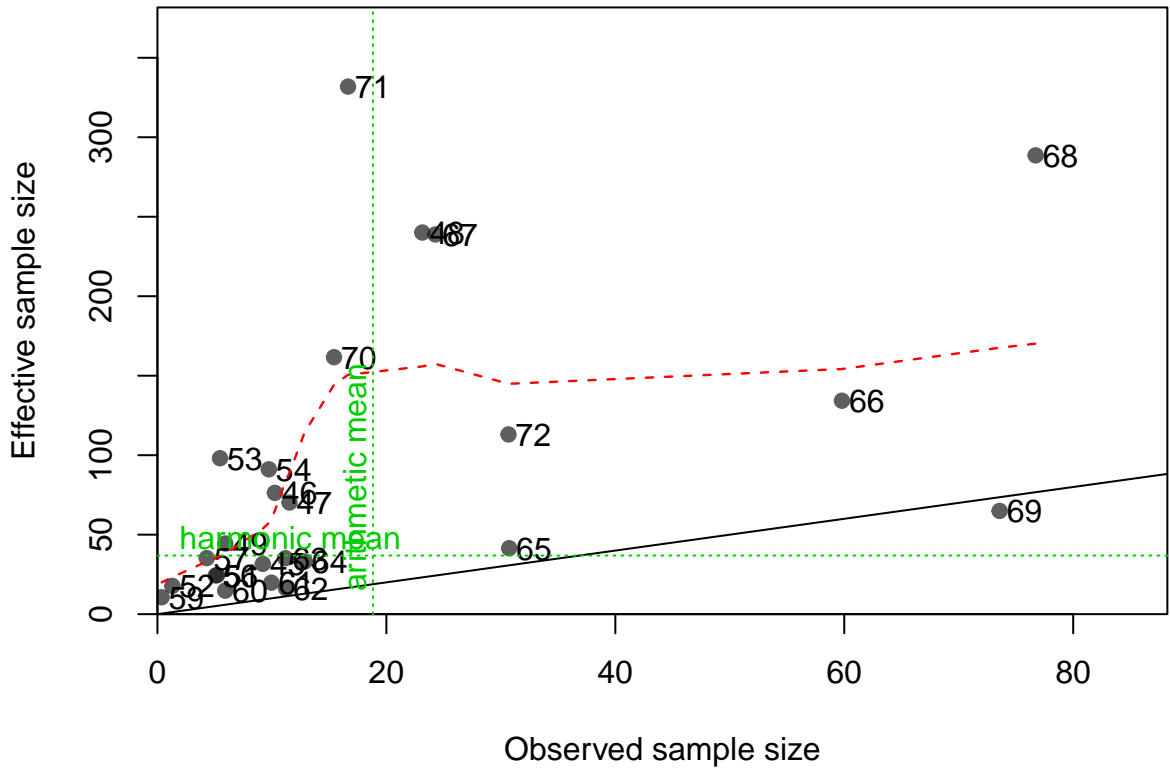
Proportion



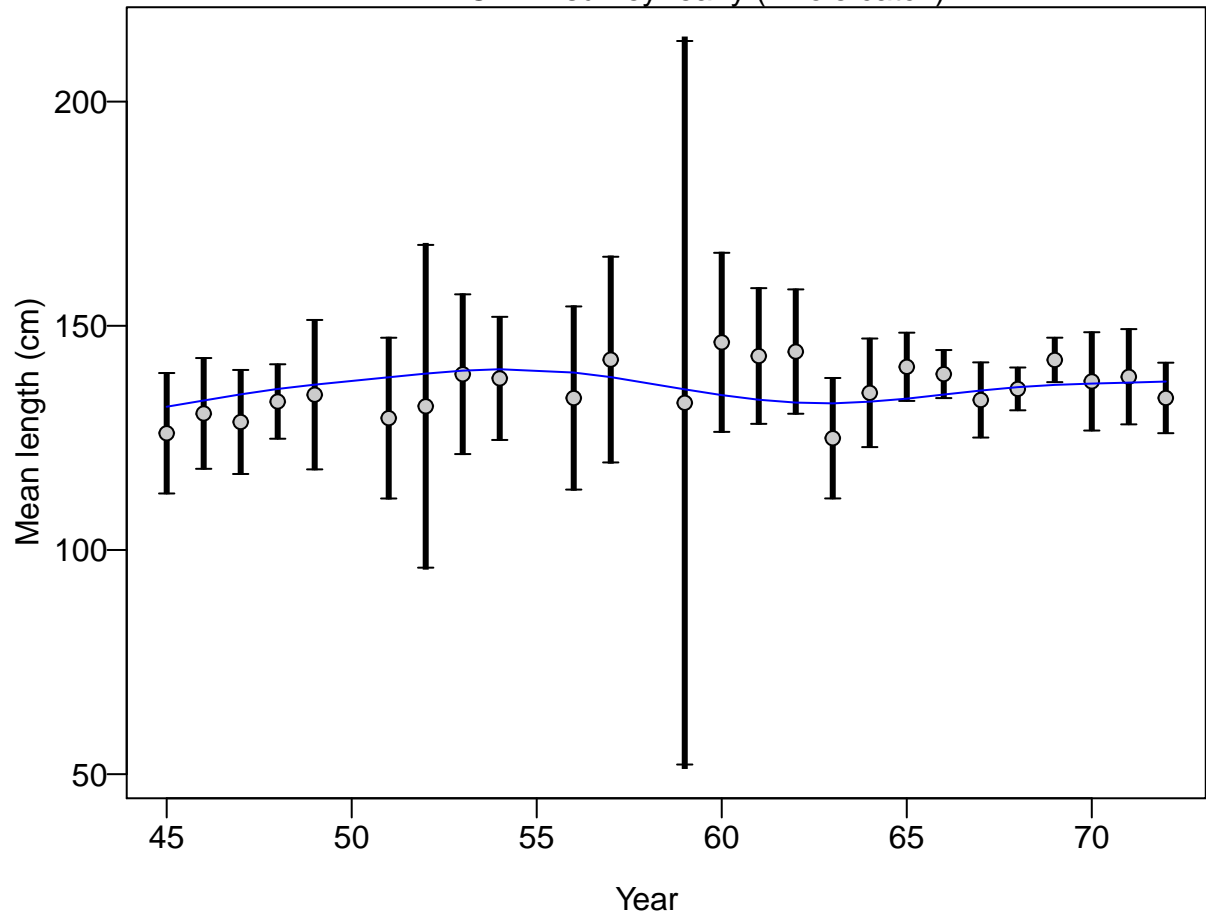
Proportion





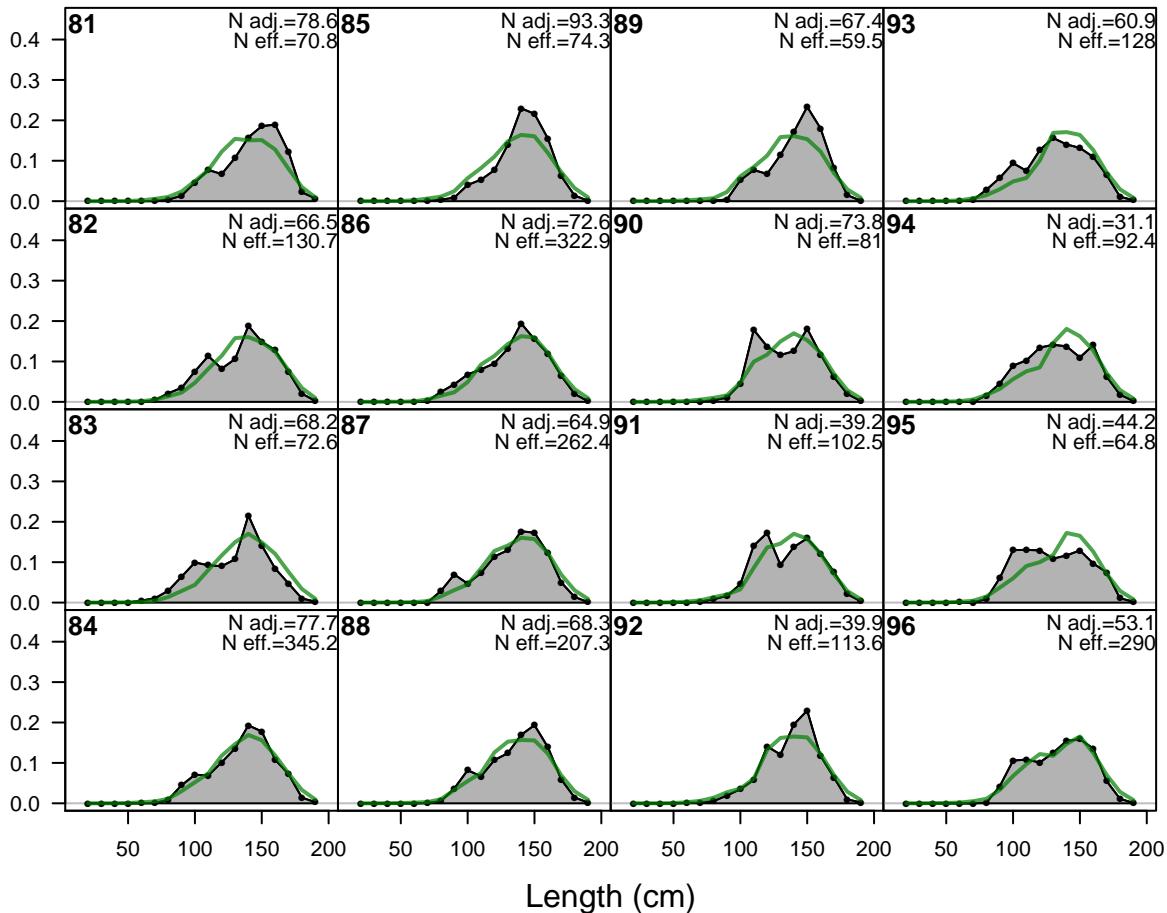


EPO-LL-survey-early (whole catch)

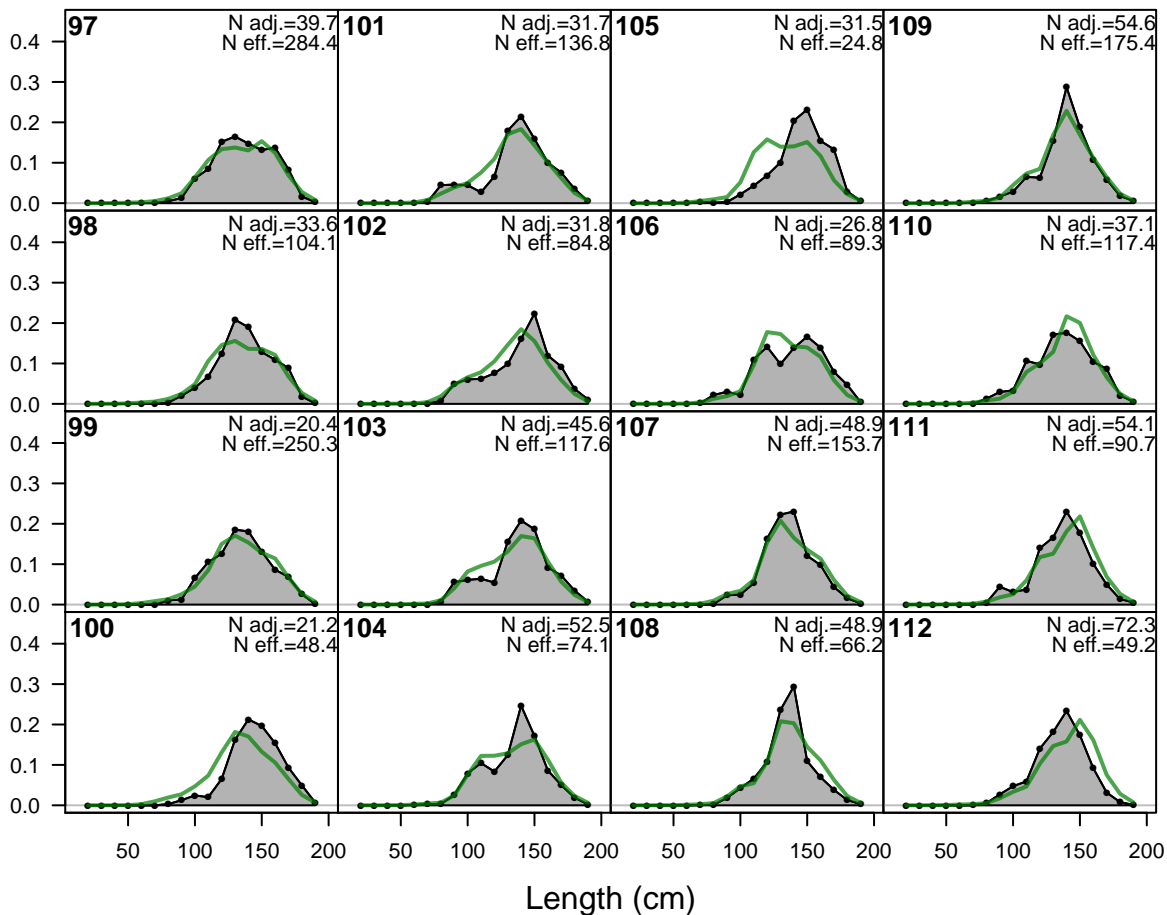




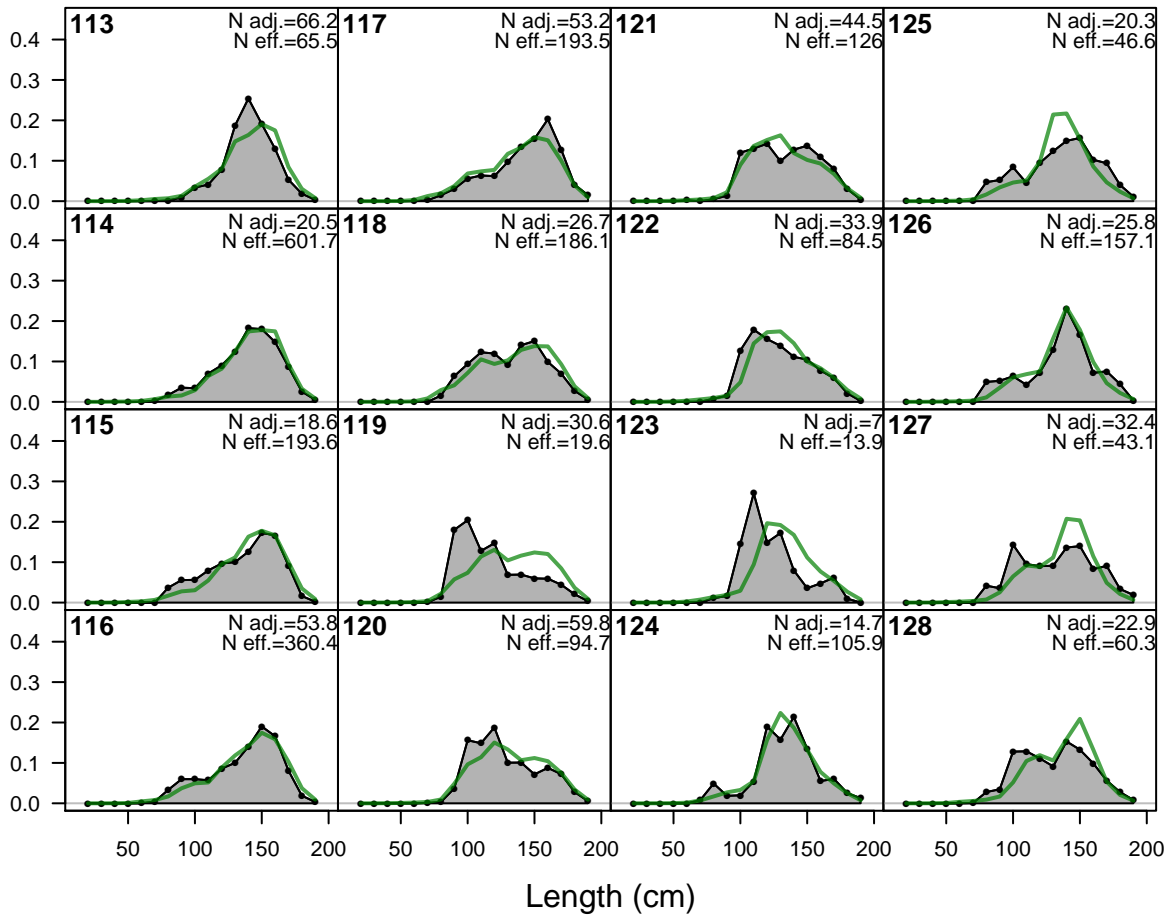
Proportion



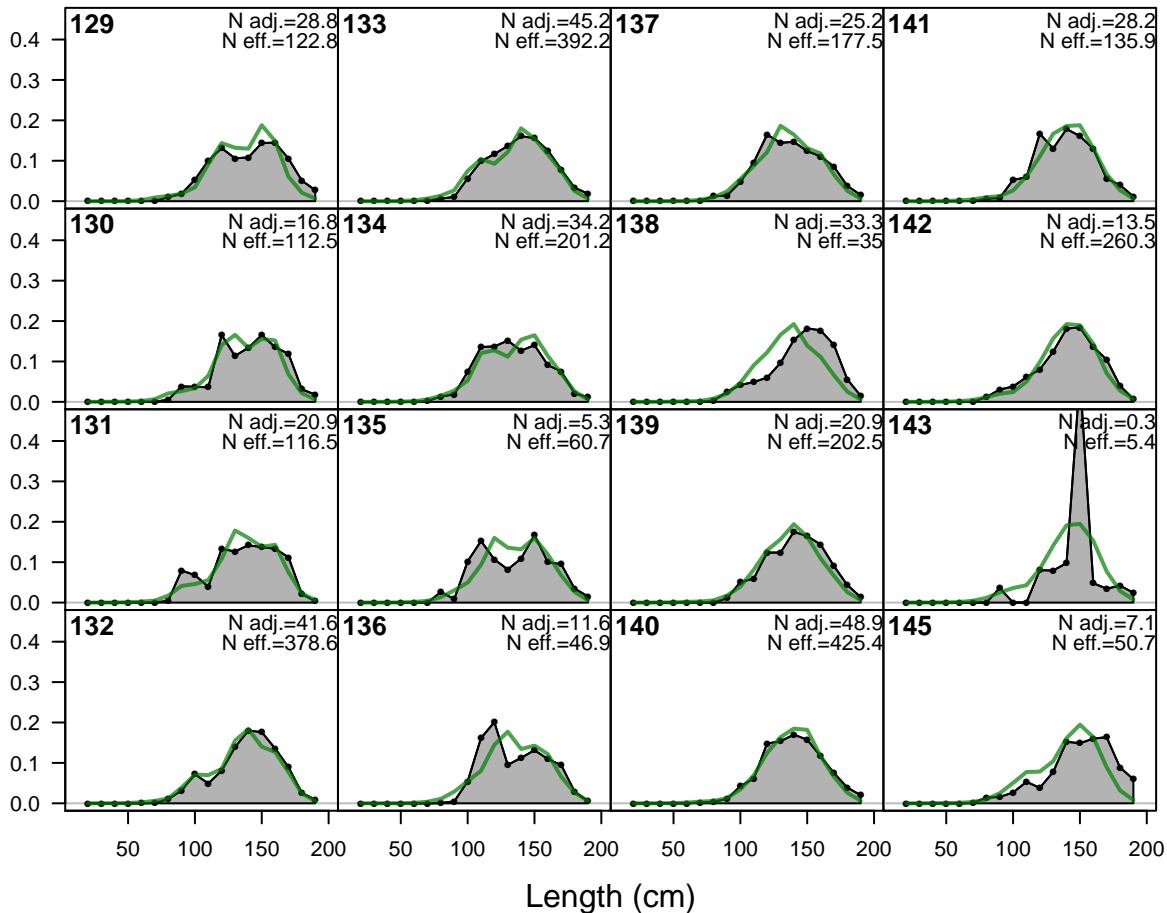
Proportion



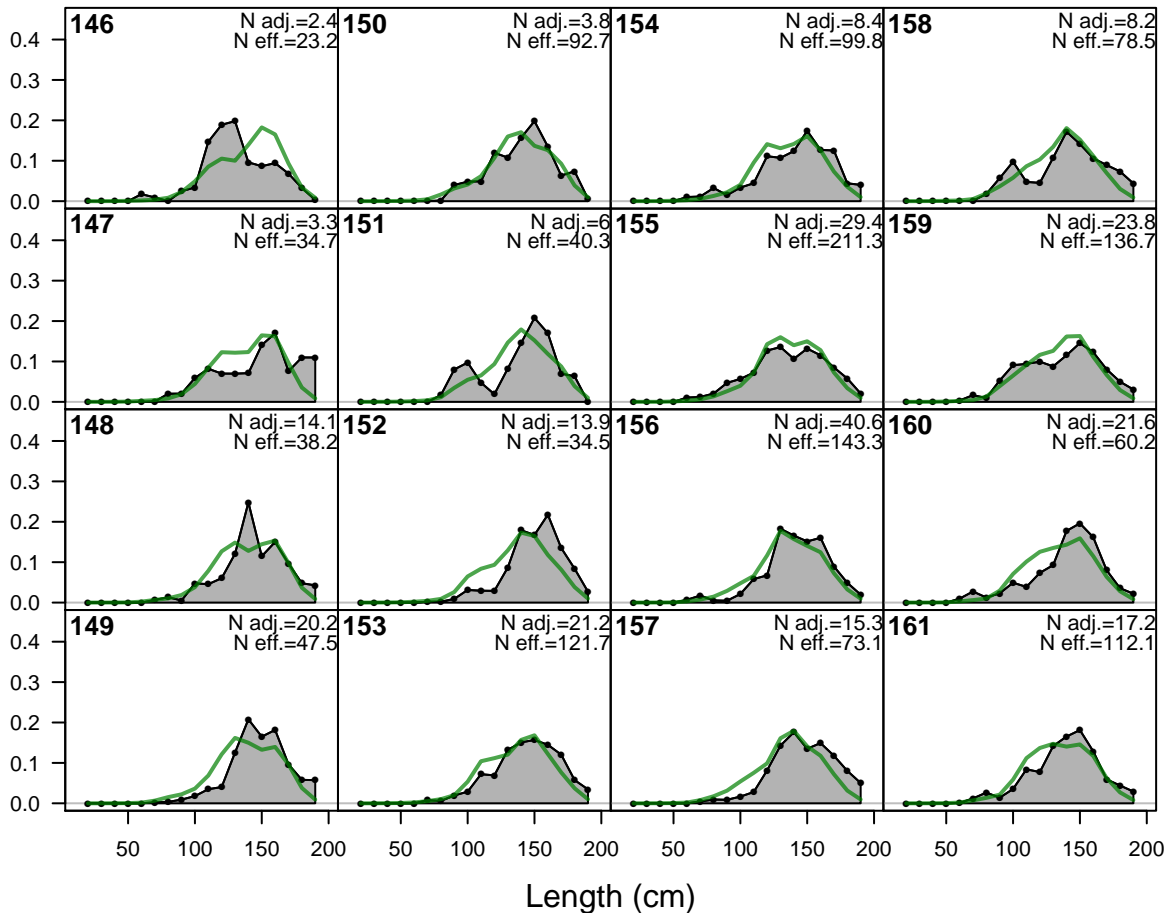
Proportion

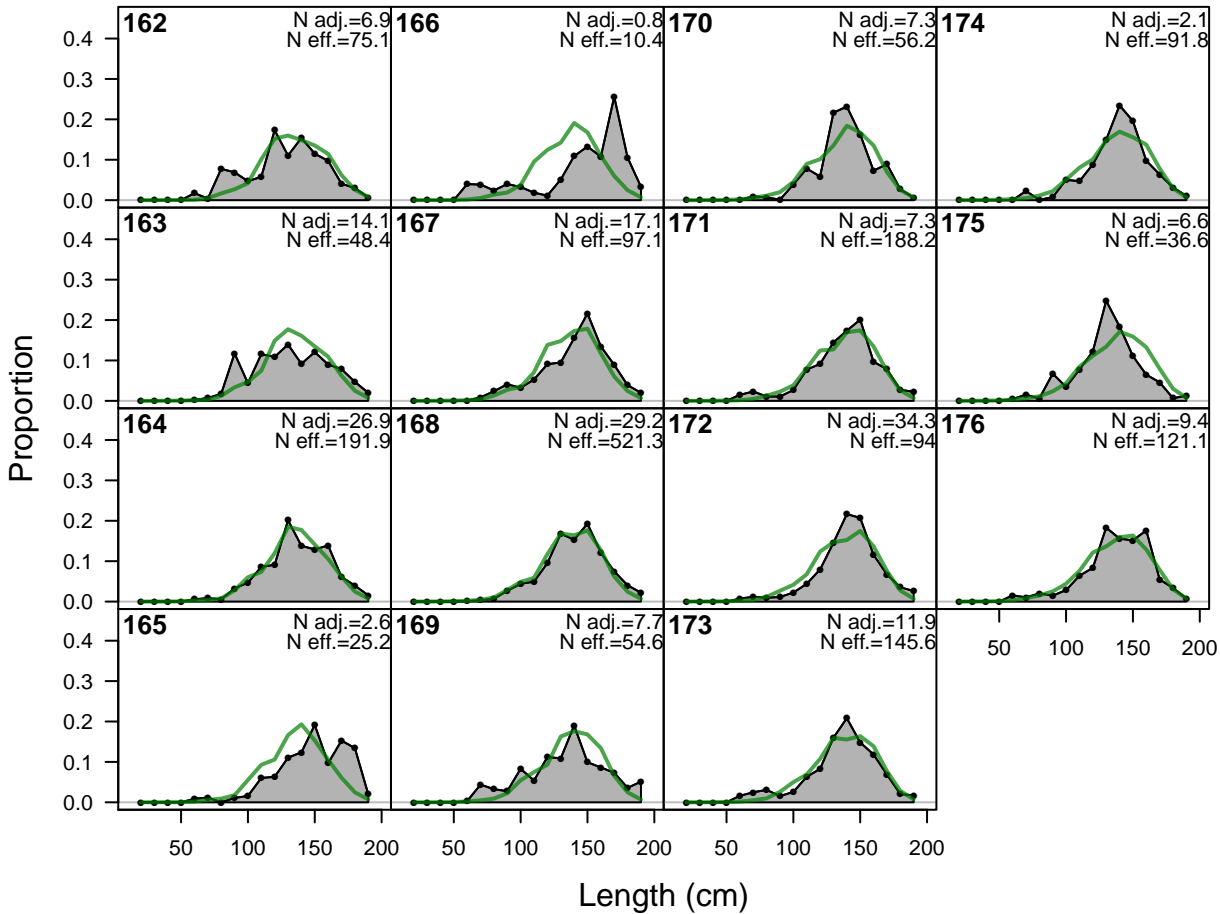


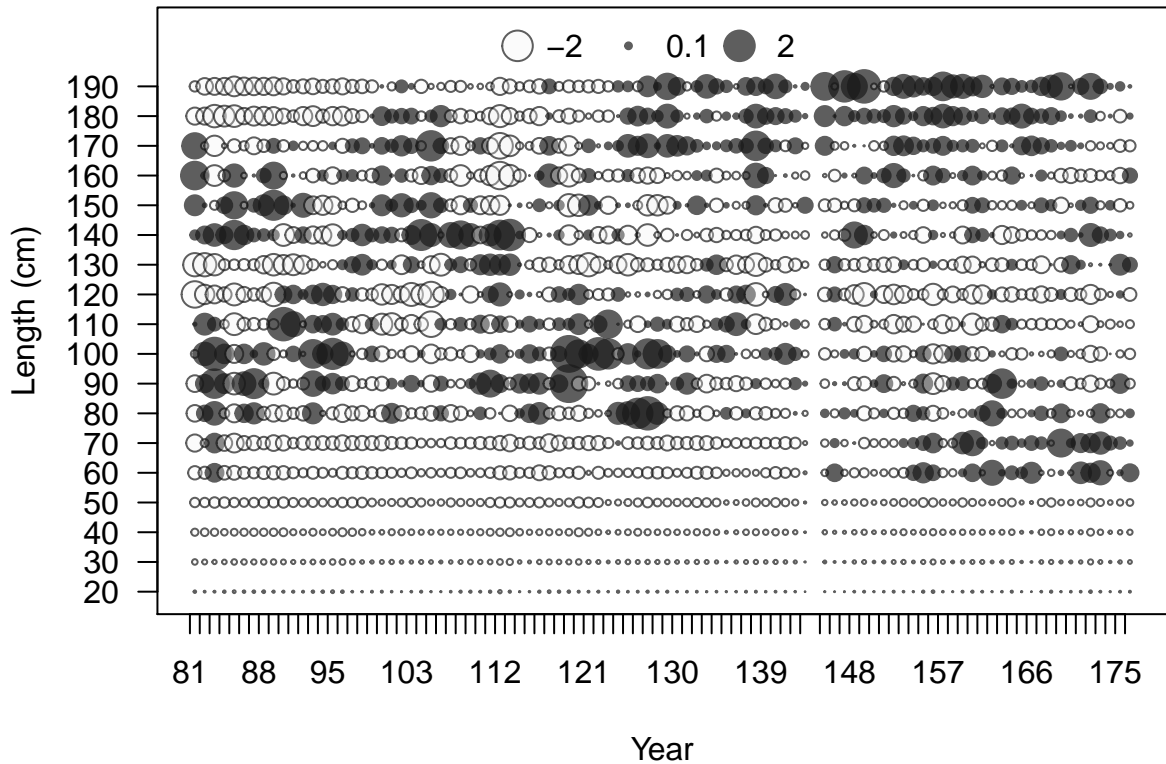
Proportion

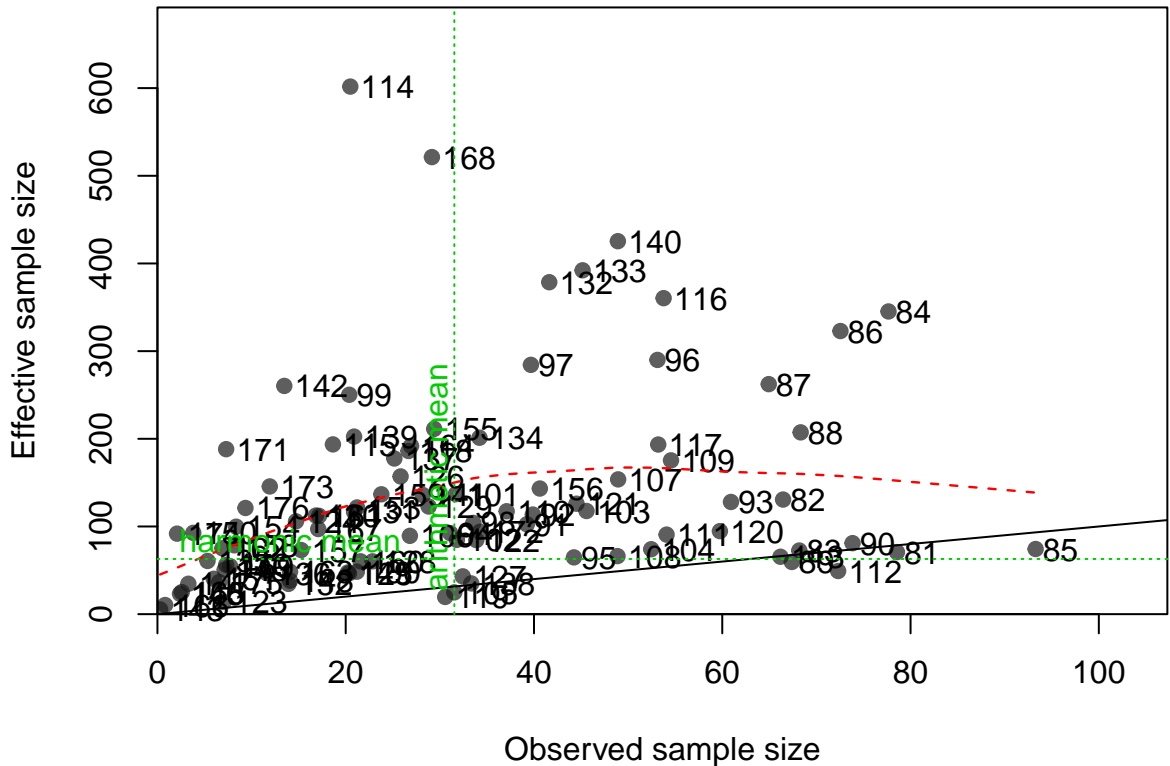


Proportion



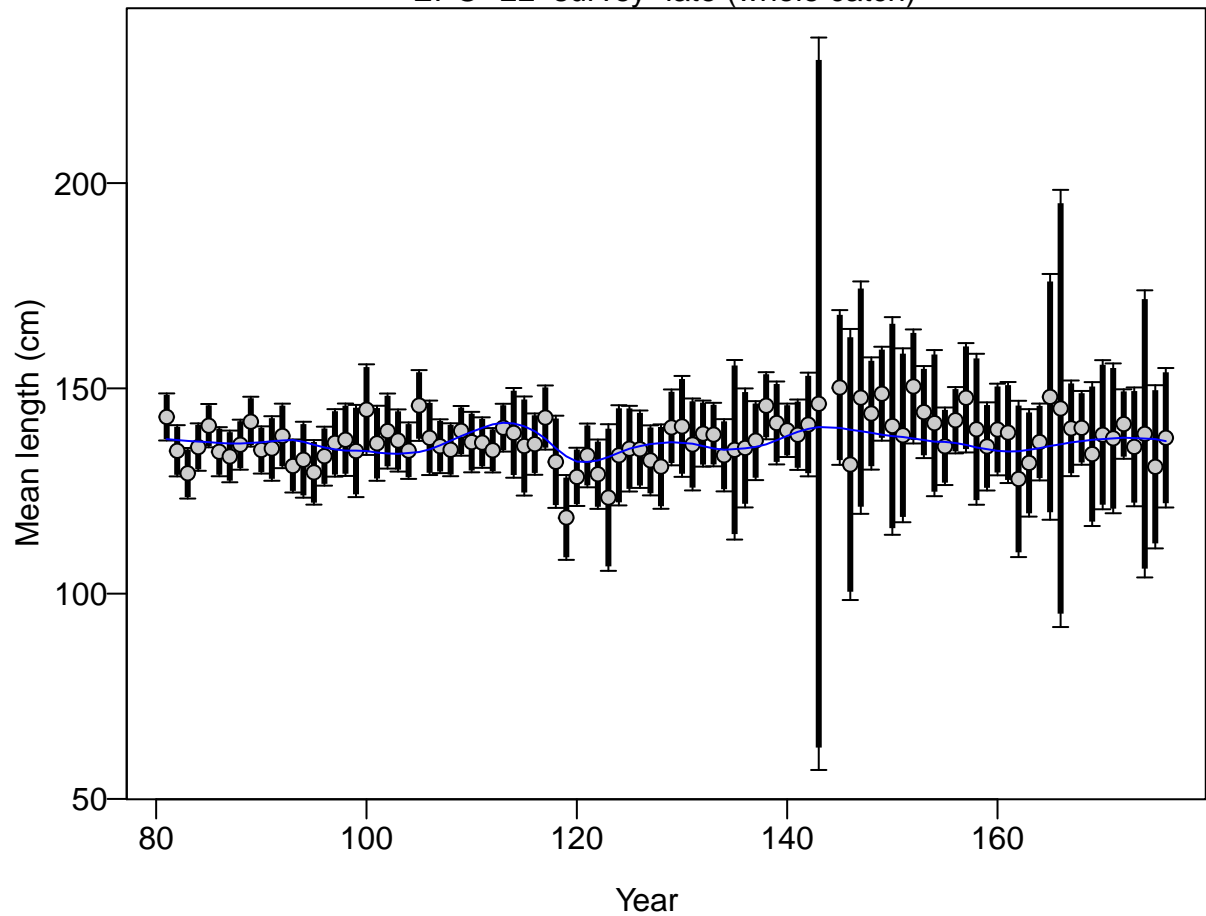




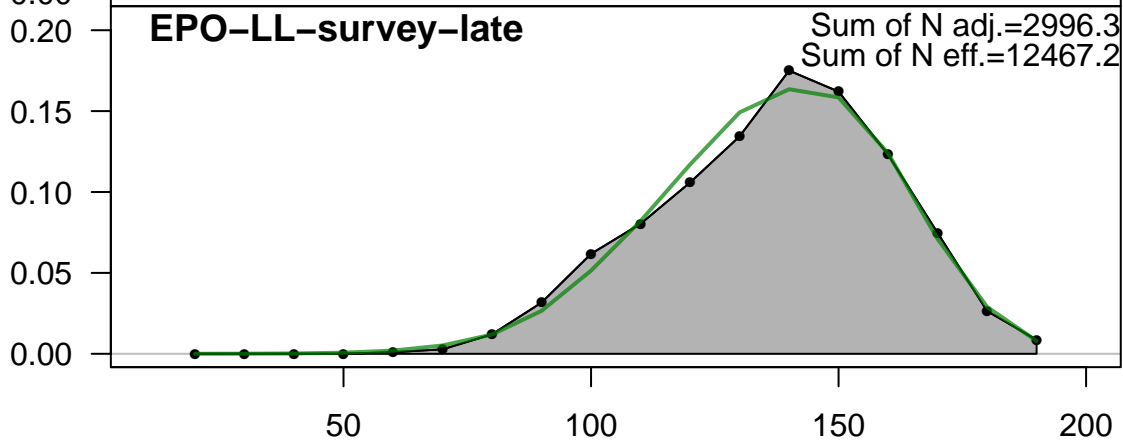
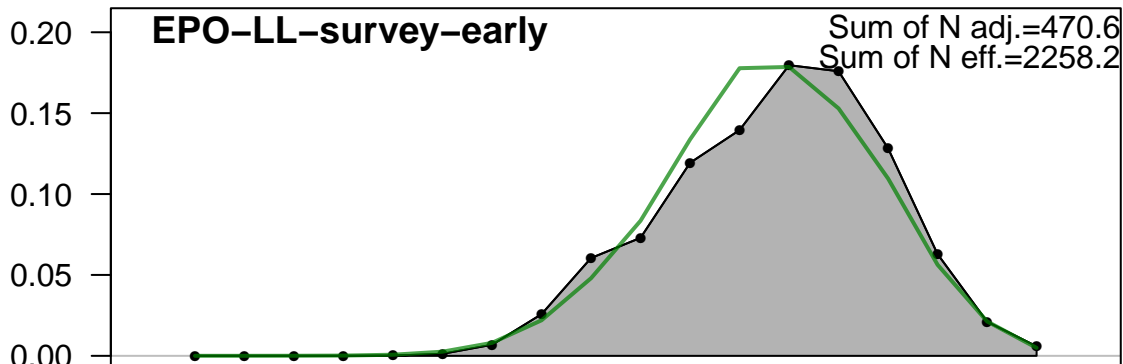




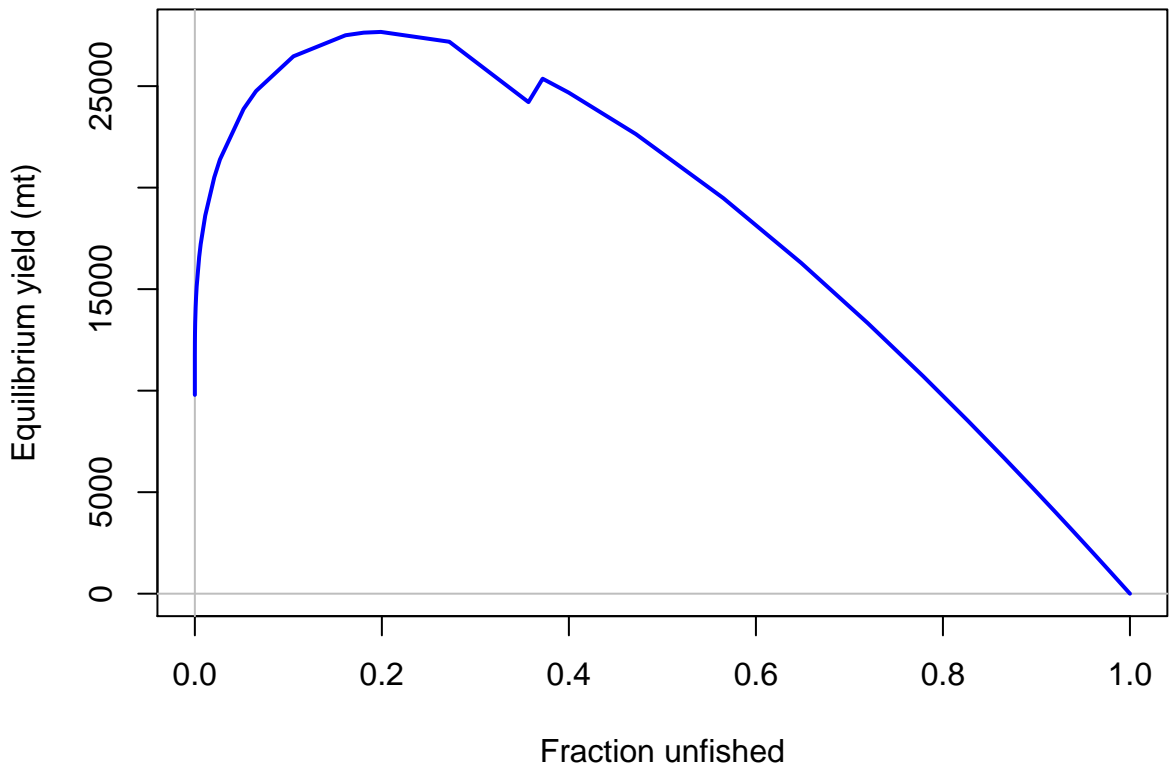
EPO-LL-survey-late (whole catch)

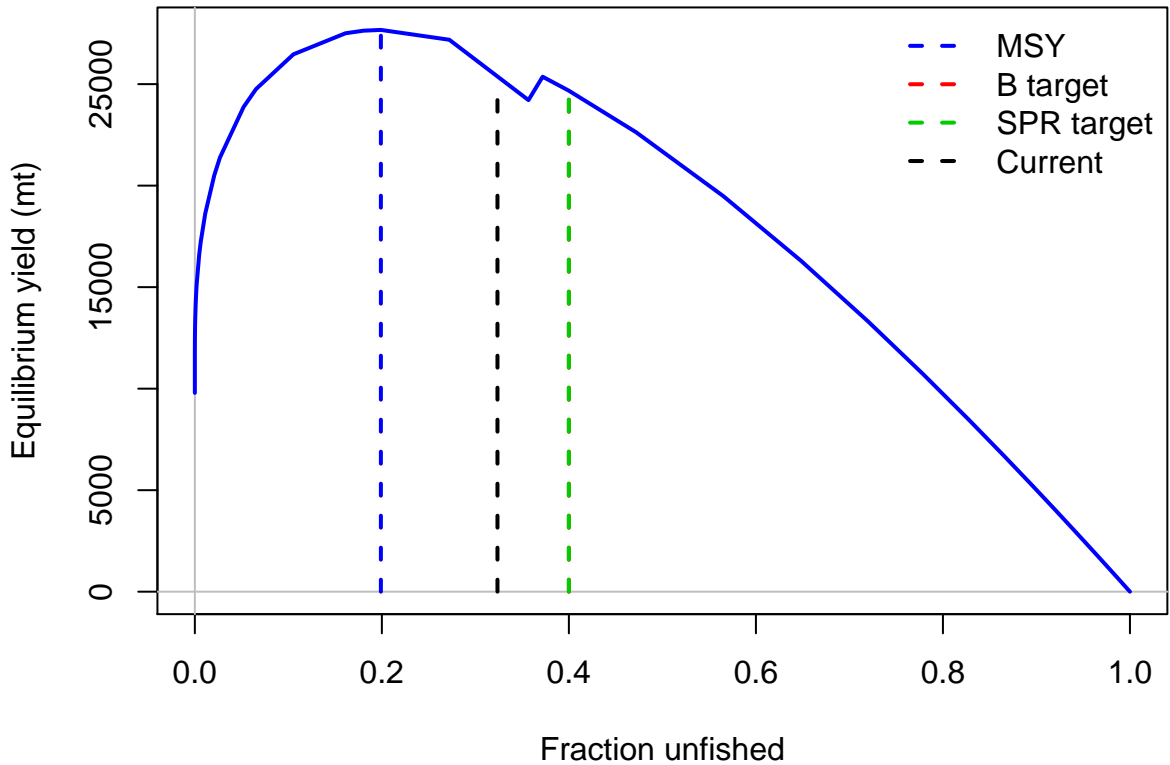


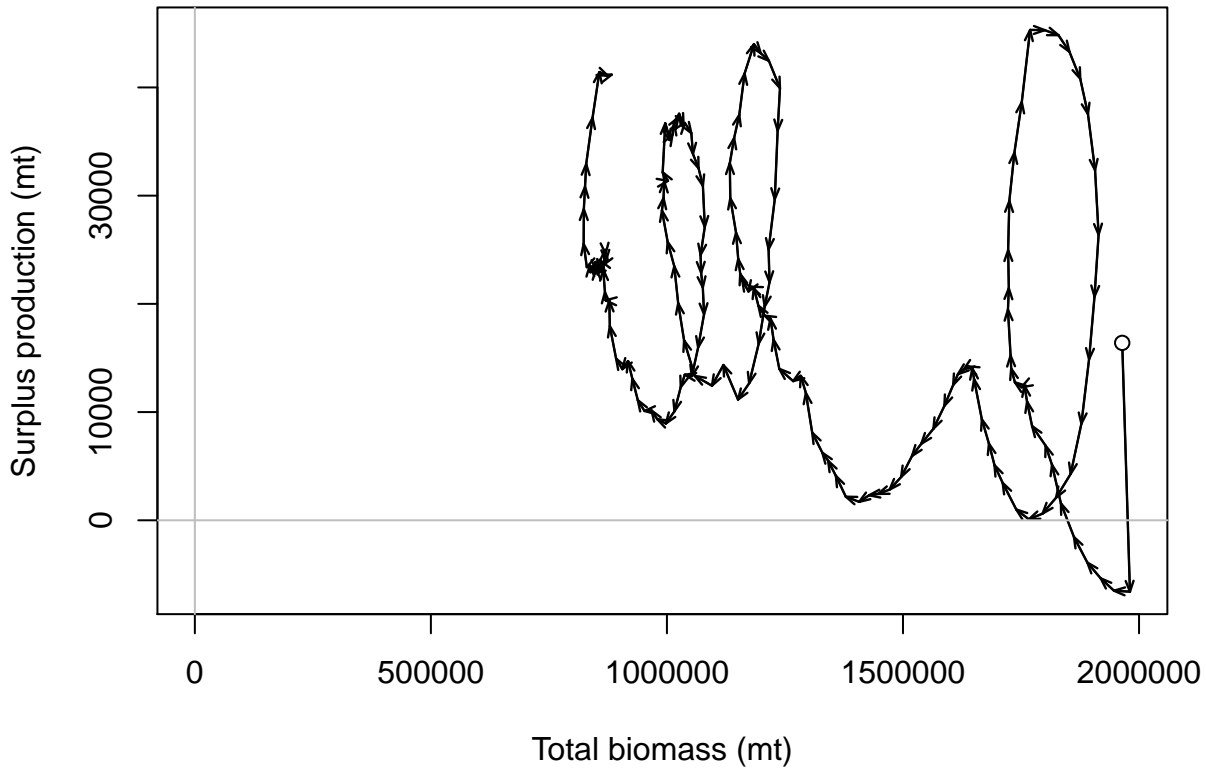
Proportion

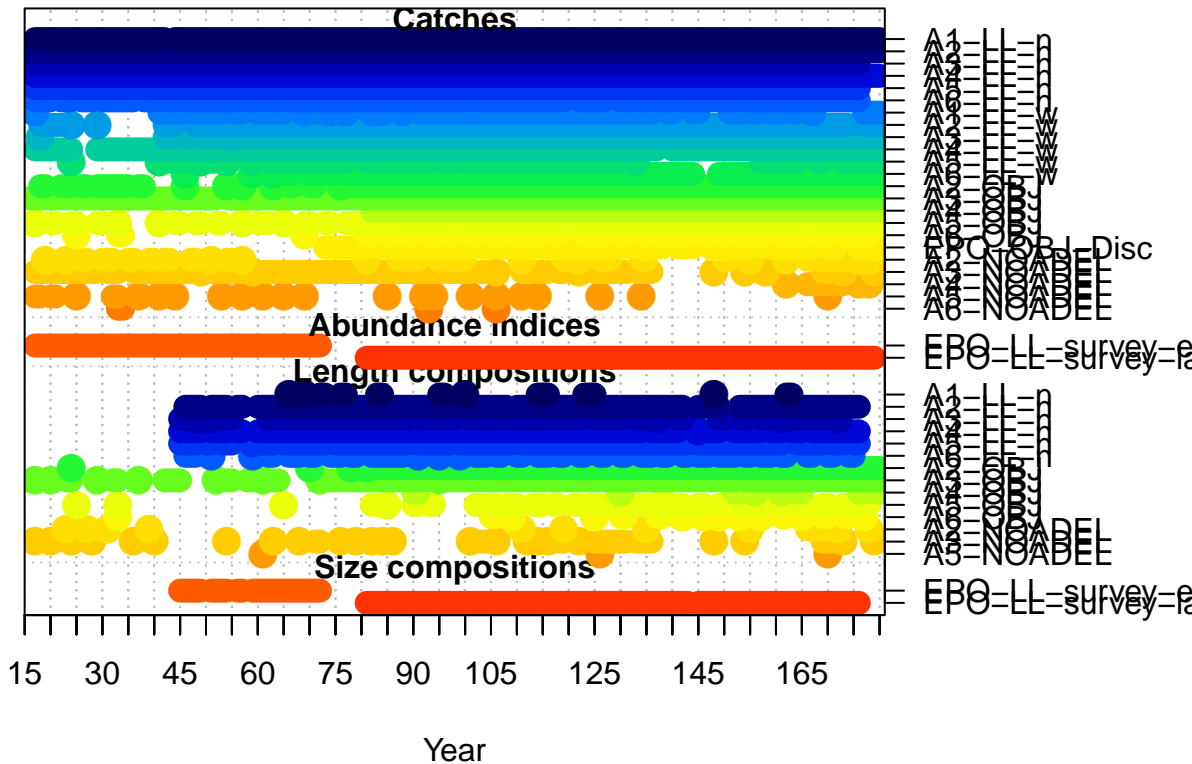


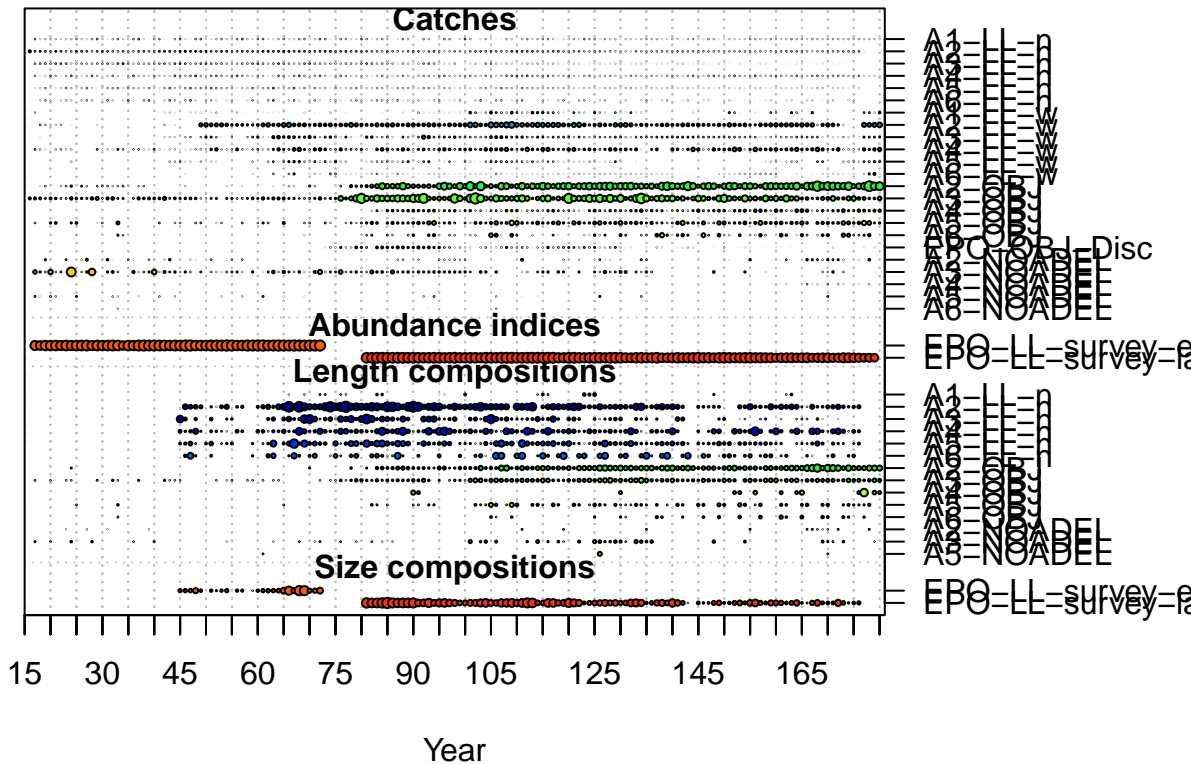
Length (cm)



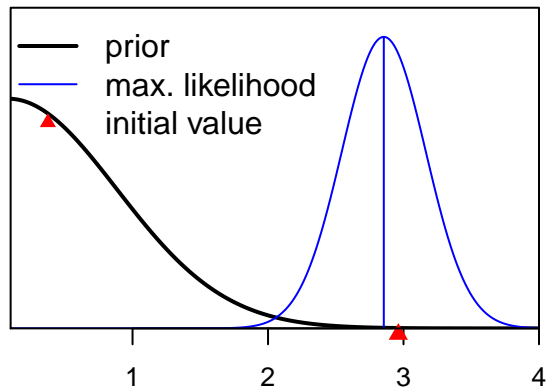




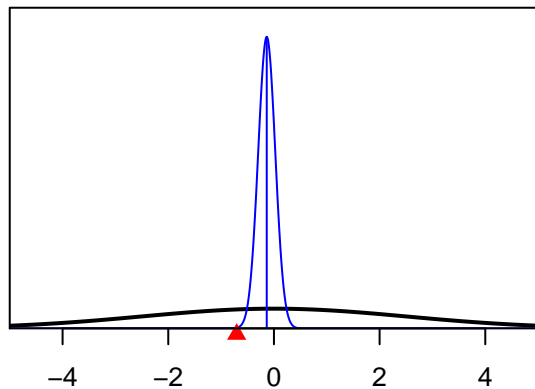




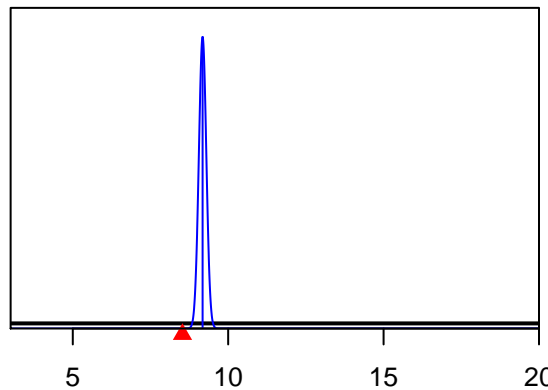
SD\_young\_Fem\_GP\_1



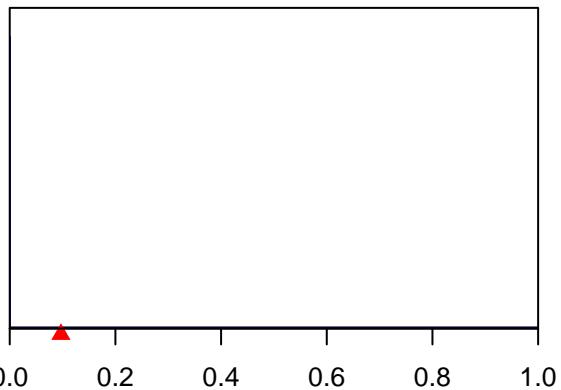
SR\_regime\_BLK1add\_16



SR\_LN(R0)

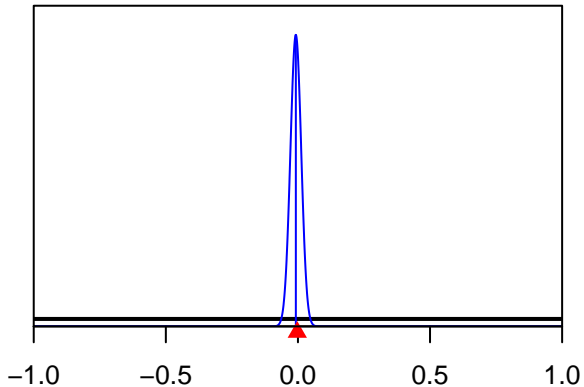
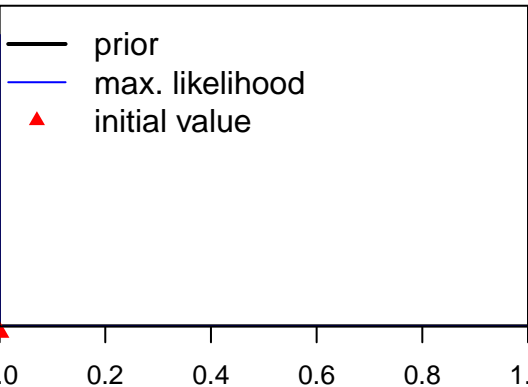
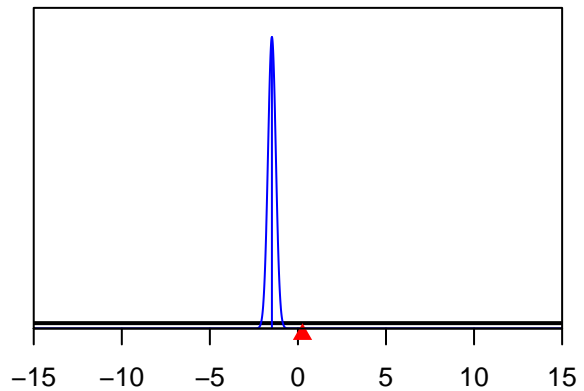
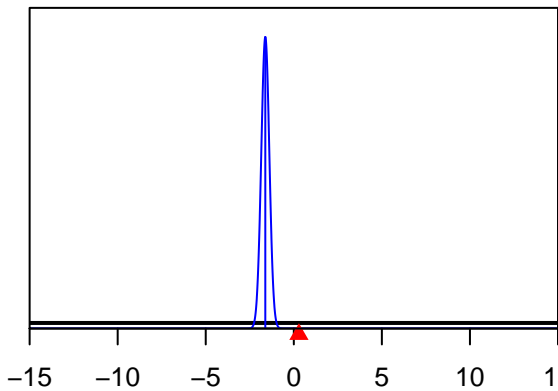


InitF\_seas\_1\_fit\_2A2-LL-n



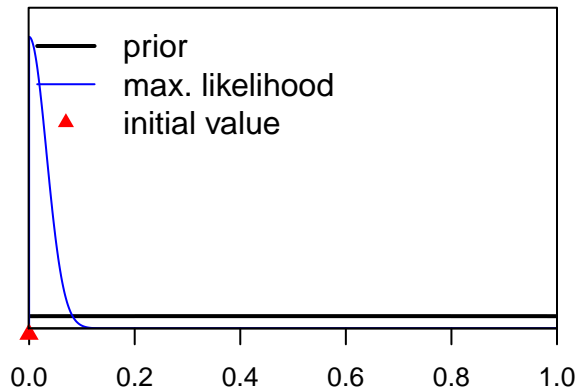
Parameter value



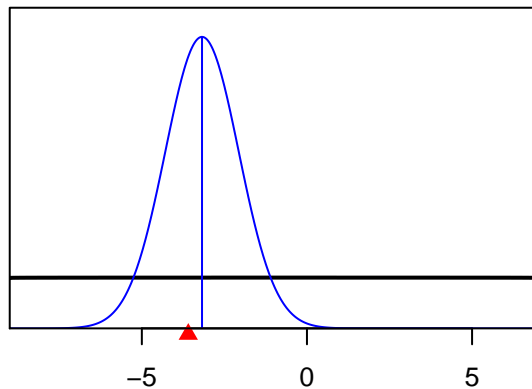
**InitF\_seas\_1\_flt\_14A3-OBJ****Q\_extraSD\_EPO-LL-survey-early(24)****LnQ\_base\_EPO-LL-survey-early(24)****LnQ\_base\_EPO-LL-survey-late(25)**

Parameter value

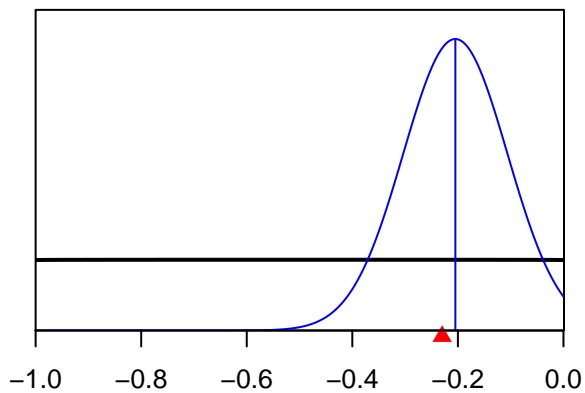
SizeSpline\_GradLo\_A1-LL-n(1)



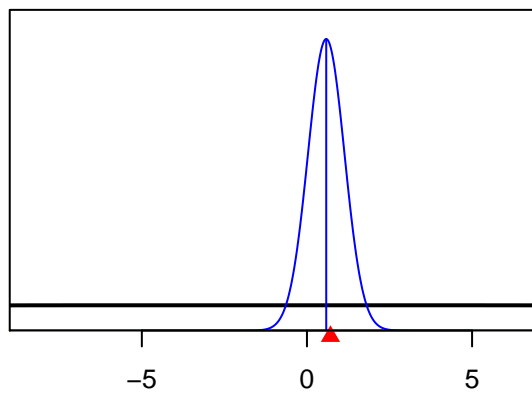
SizeSpline\_Val\_2\_A1-LL-n(1)



SizeSpline\_GradHi\_A1-LL-n(1)

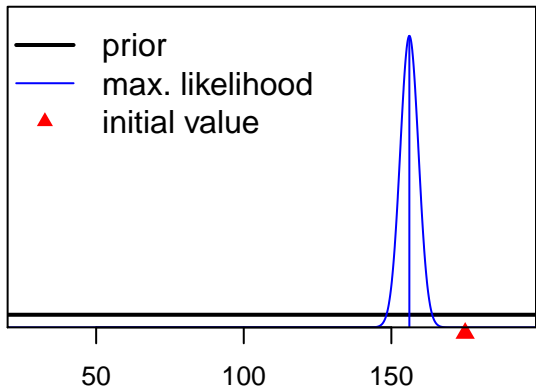


SizeSpline\_Val\_4\_A1-LL-n(1)

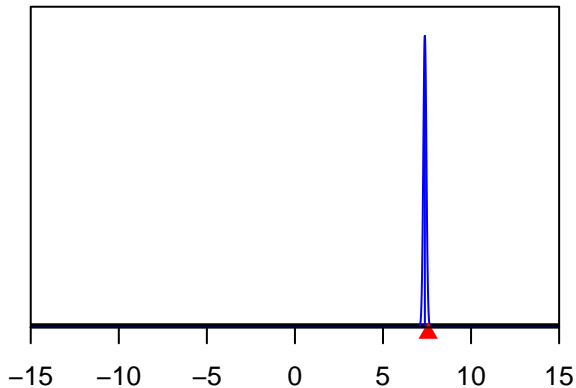


Parameter value

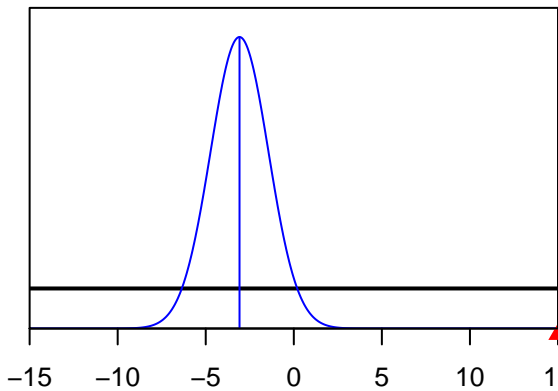
Size\_DbIN\_peak\_A2-LL-n(2)



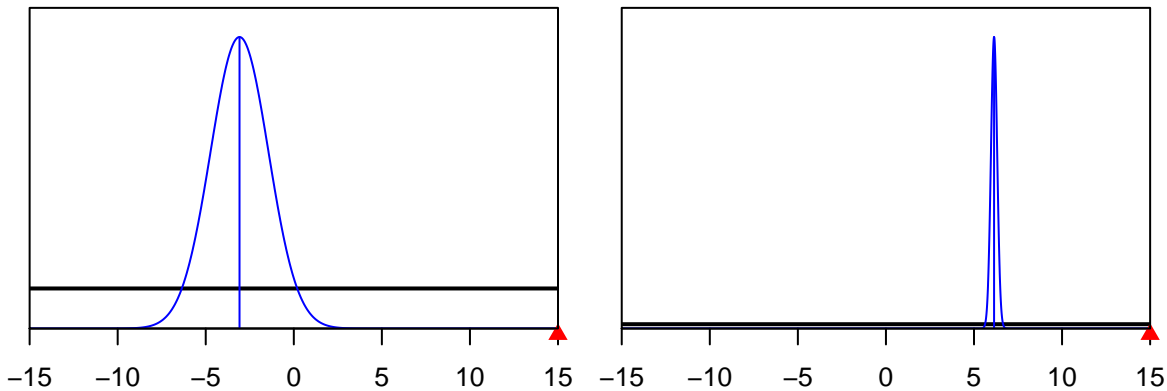
Size\_DbIN\_ascend\_se\_A2-LL-n(2)



Size\_DbIN\_top\_logit\_A2-LL-n(2)

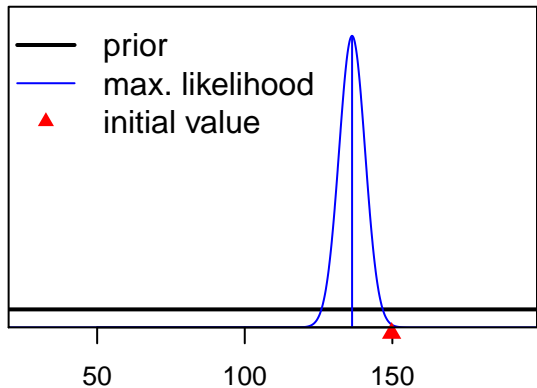


Size\_DbIN\_descend\_se\_A2-LL-n(2)

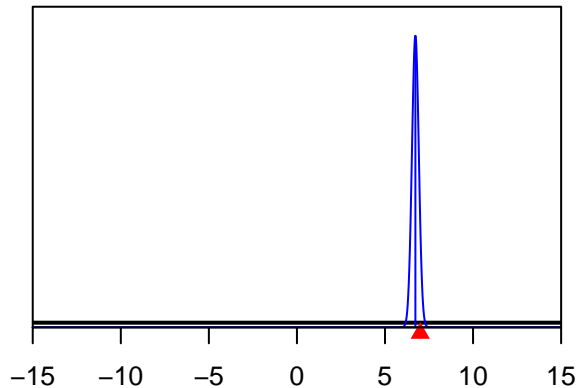


Parameter value

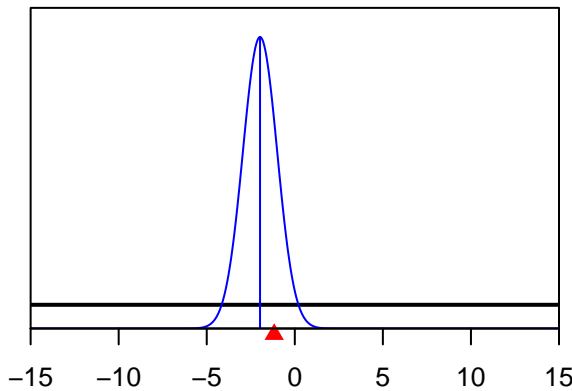
Size\_DbIN\_peak\_A3-LL-n(3)



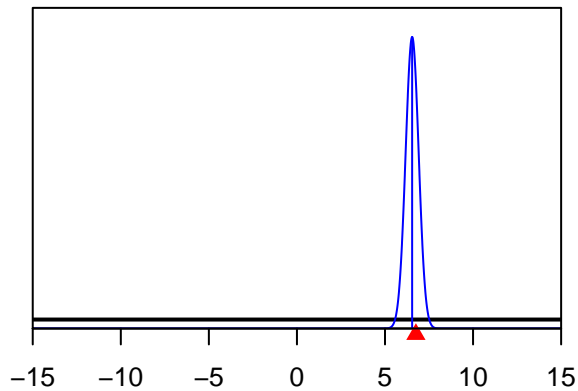
Size\_DbIN\_ascend\_se\_A3-LL-n(3)



Size\_DbIN\_top\_logit\_A3-LL-n(3)



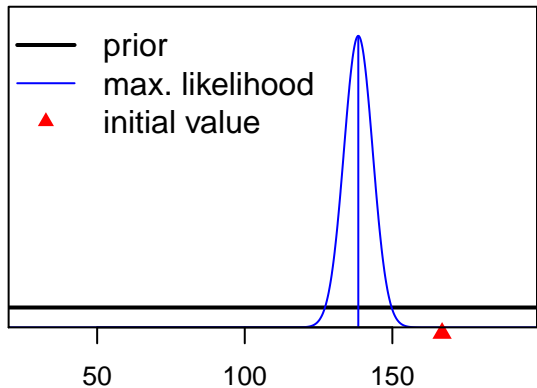
Size\_DbIN\_descend\_se\_A3-LL-n(3)



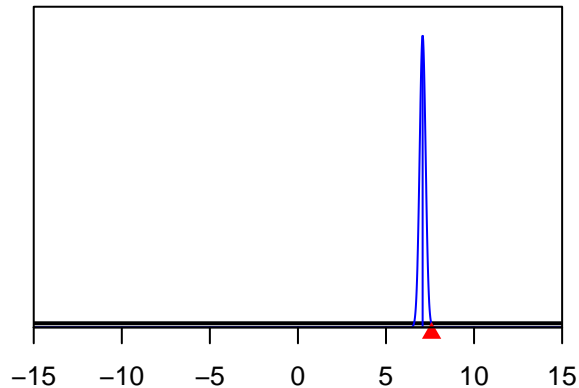
Parameter value

Density

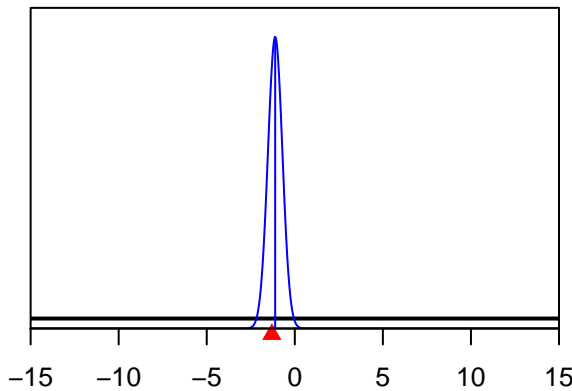
Size\_DbIN\_peak\_A4-LL-n(4)



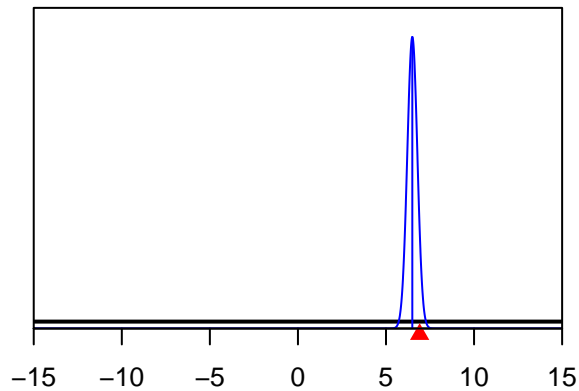
Size\_DbIN\_ascend\_se\_A4-LL-n(4)



Size\_DbIN\_top\_logit\_A4-LL-n(4)

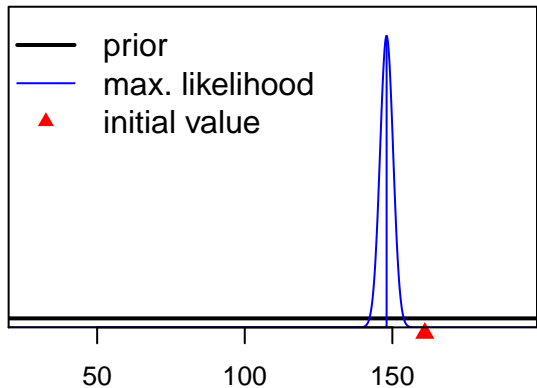


Size\_DbIN\_descend\_se\_A4-LL-n(4)

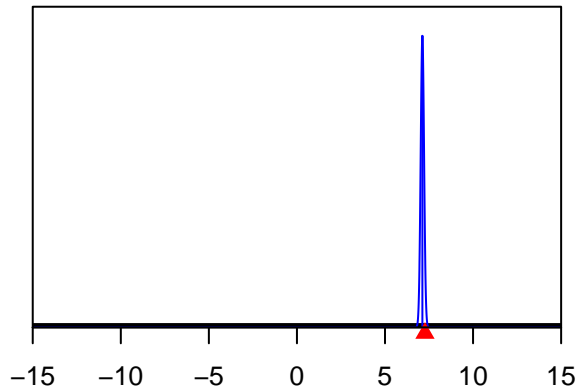


Parameter value

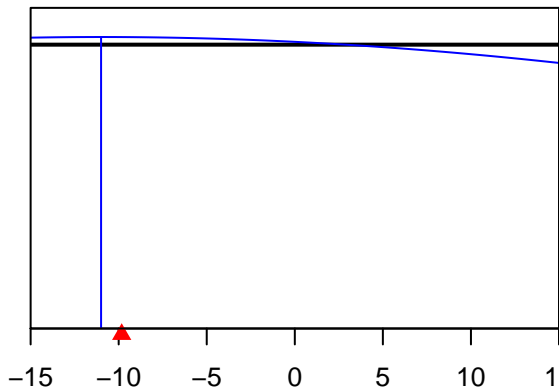
Size\_DbIN\_peak\_A5-LL-n(5)



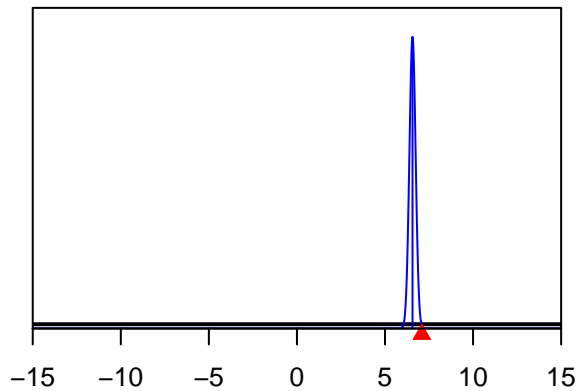
Size\_DbIN\_ascend\_se\_A5-LL-n(5)



Size\_DbIN\_top\_logit\_A5-LL-n(5)

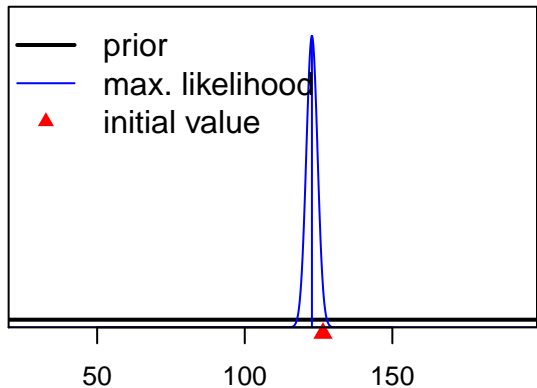


Size\_DbIN\_descend\_se\_A5-LL-n(5)

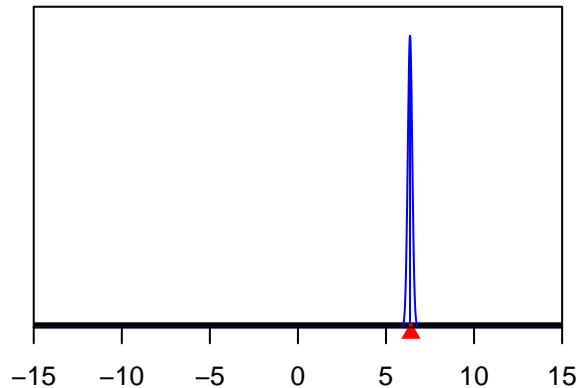


Parameter value

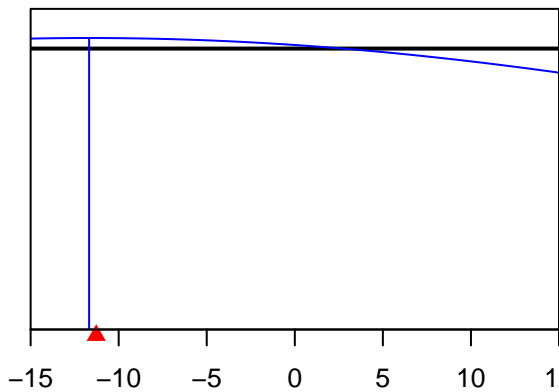
Size\_DbIN\_peak\_A6-LL-n(6)



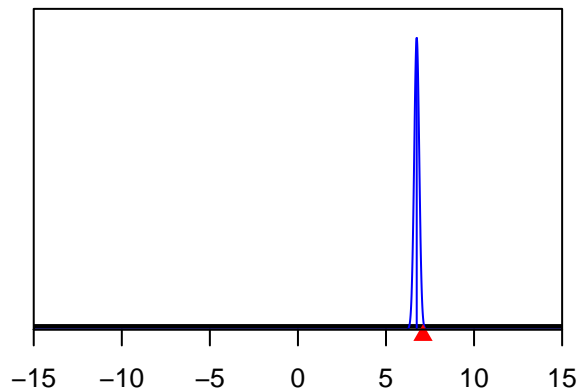
Size\_DbIN\_ascend\_se\_A6-LL-n(6)



Size\_DbIN\_top\_logit\_A6-LL-n(6)

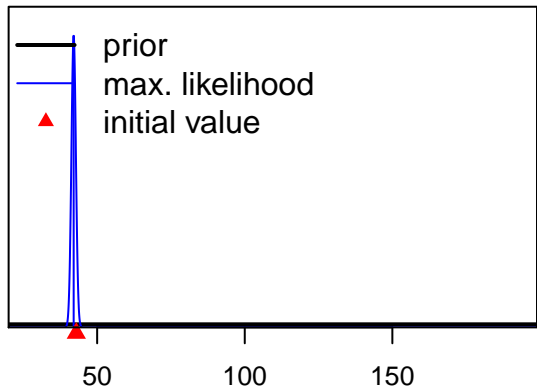


Size\_DbIN\_descend\_se\_A6-LL-n(6)

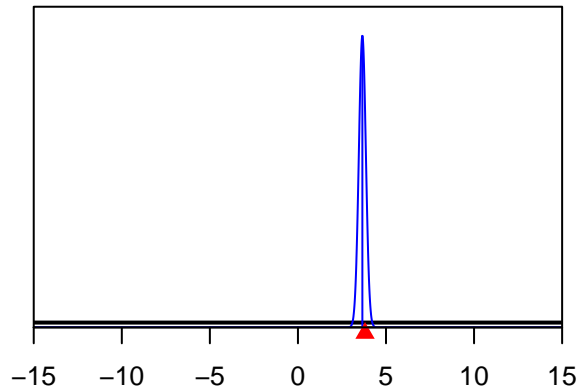


Parameter value

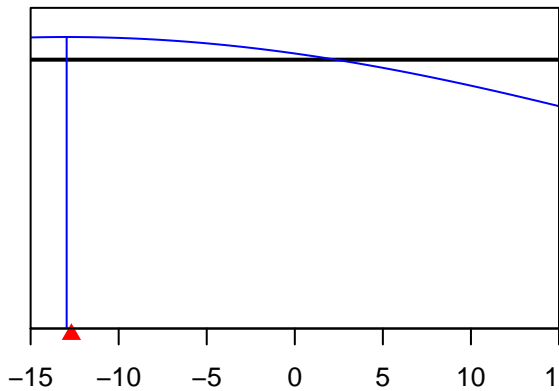
Size\_DbIN\_peak\_A2-OBJ(13)



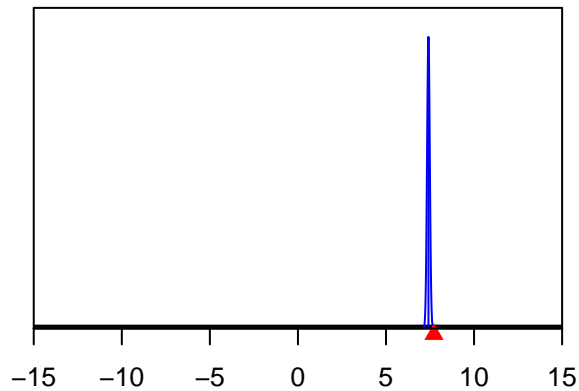
Size\_DbIN\_ascend\_se\_A2-OBJ(13)



Size\_DbIN\_top\_logit\_A2-OBJ(13)



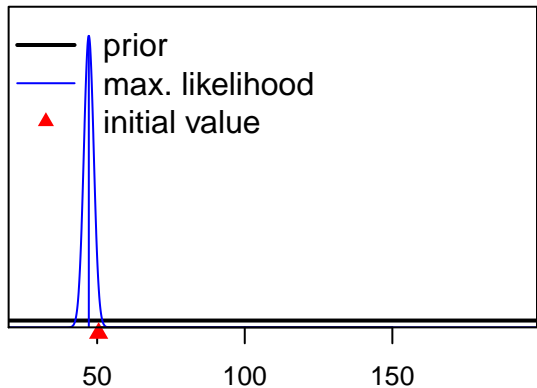
Size\_DbIN\_descend\_se\_A2-OBJ(13)



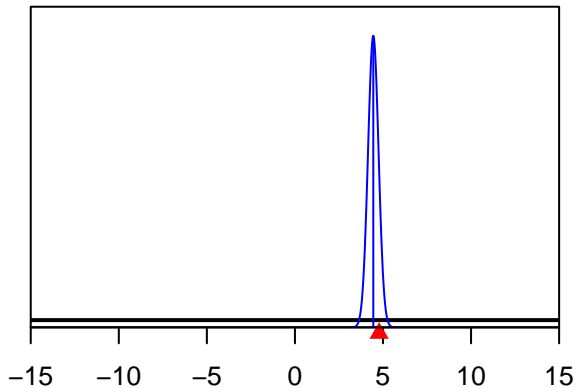
Parameter value



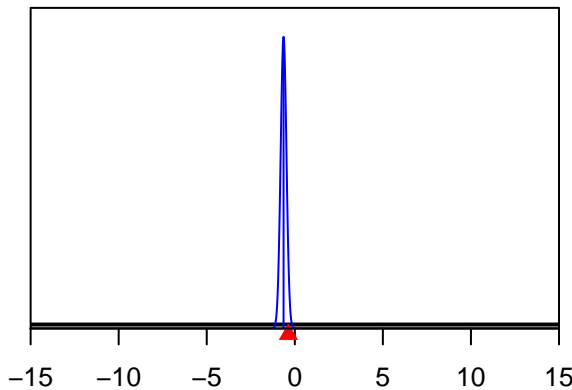
Size\_DbIN\_peak\_A3-OBJ(14)



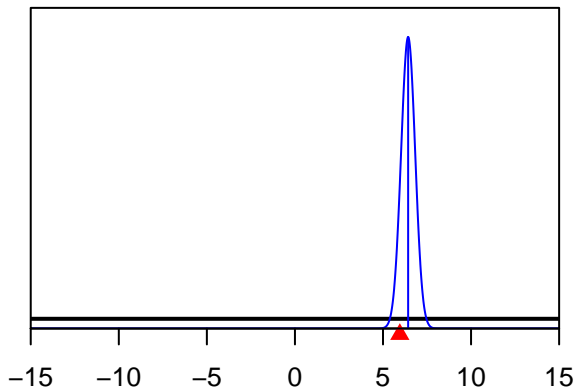
Size\_DbIN\_ascend\_se\_A3-OBJ(14)



Size\_DbIN\_top\_logit\_A3-OBJ(14)

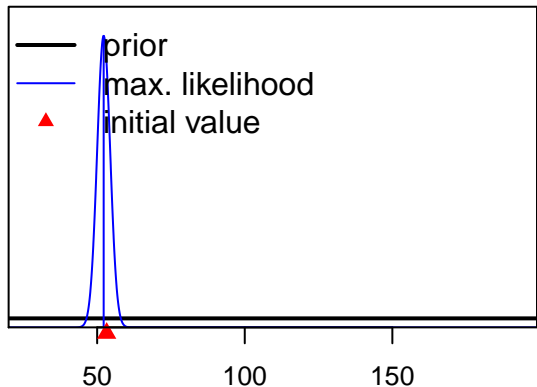


Size\_DbIN\_descend\_se\_A3-OBJ(14)

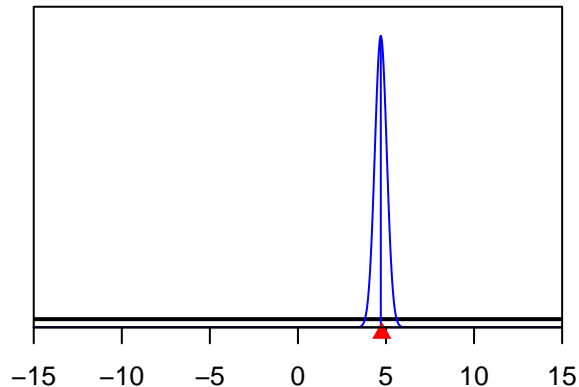


Parameter value

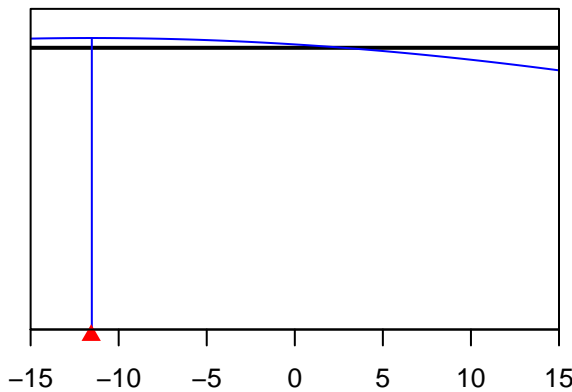
Size\_DbIN\_peak\_A4-Obj(15)



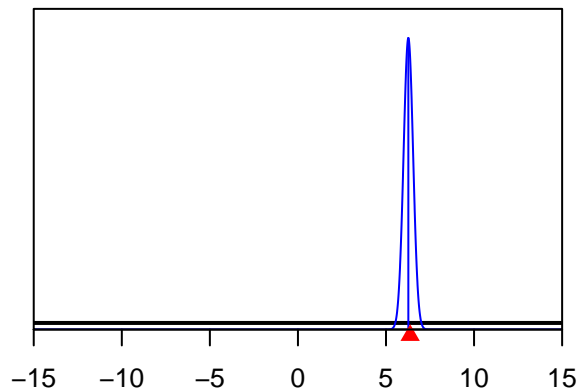
Size\_DbIN\_ascend\_se\_A4-Obj(15)



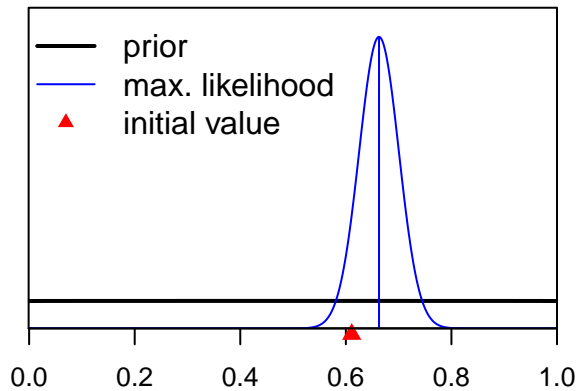
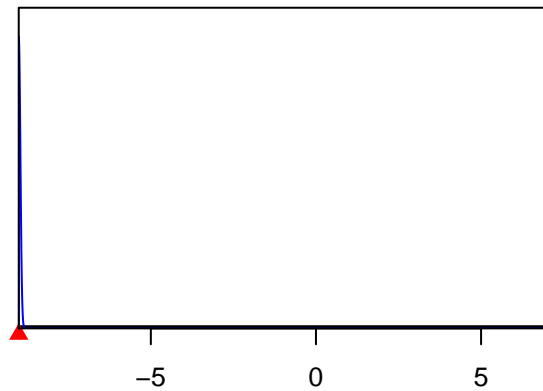
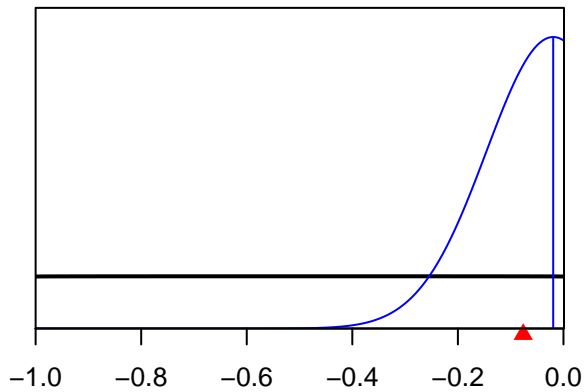
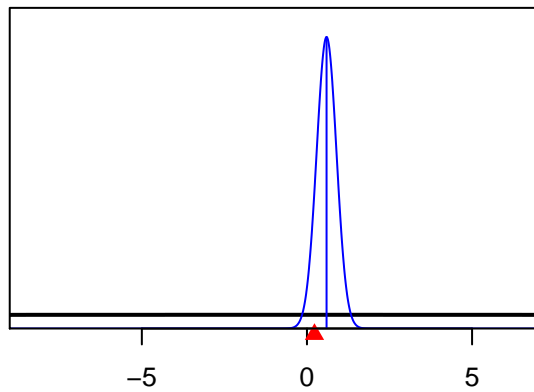
Size\_DbIN\_top\_logit\_A4-Obj(15)



Size\_DbIN\_descend\_se\_A4-Obj(15)

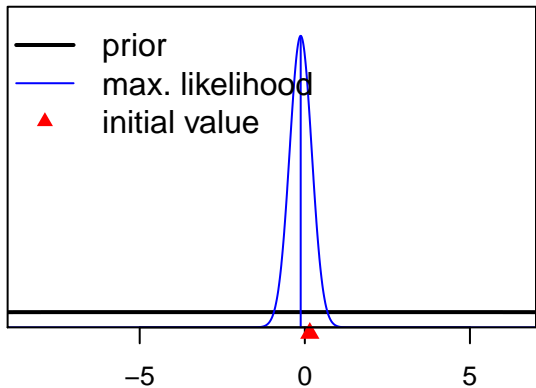


Parameter value

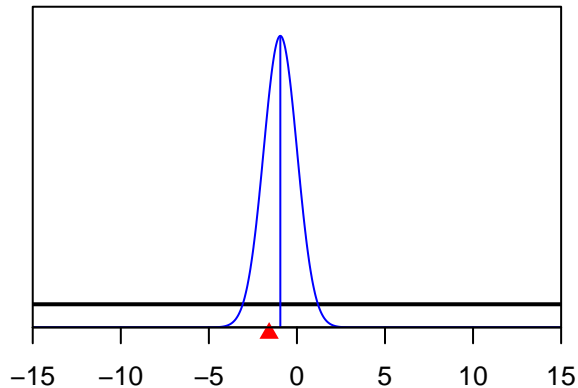
**SizeSpline\_GradLo\_A5-Obj(16)****SizeSpline\_Val\_1\_A5-Obj(16)****SizeSpline\_GradHi\_A5-Obj(16)****SizeSpline\_Val\_2\_A5-Obj(16)**

Parameter value

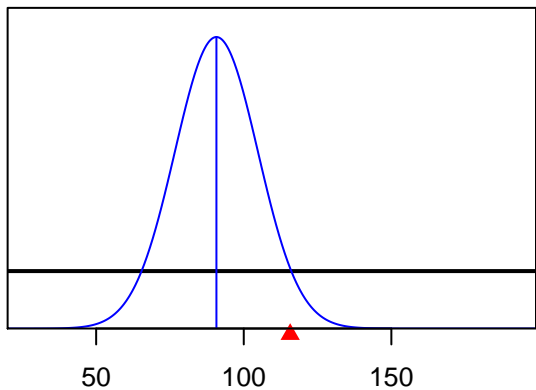
SizeSpline\_Val\_4\_A5-OBJ(16)



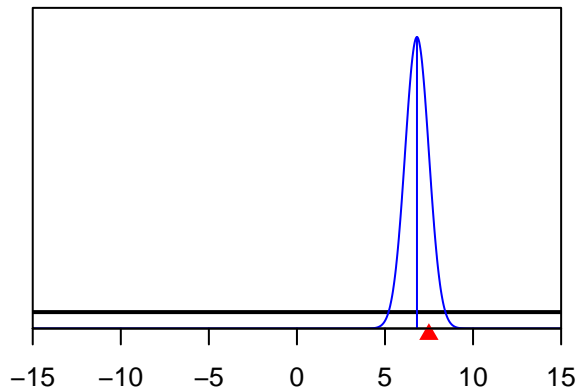
Size\_DbIN\_top\_logit\_A6-OBJ(17)



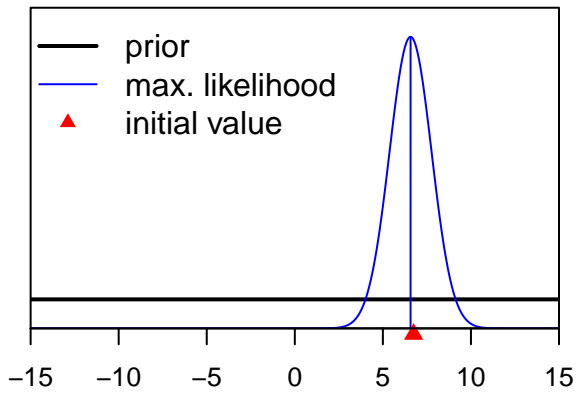
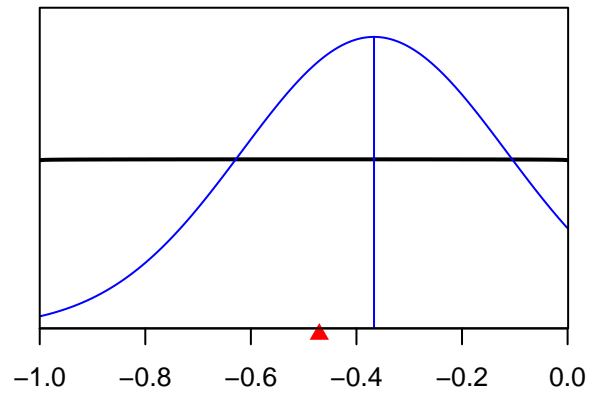
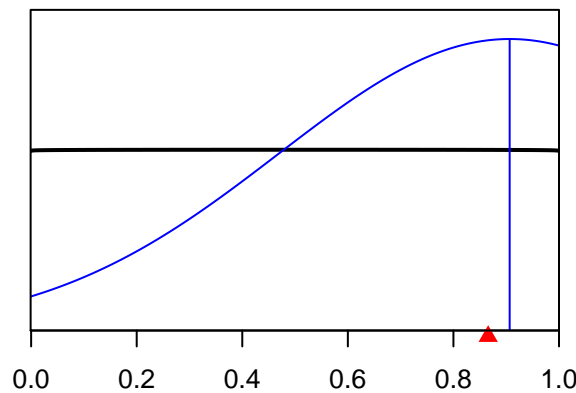
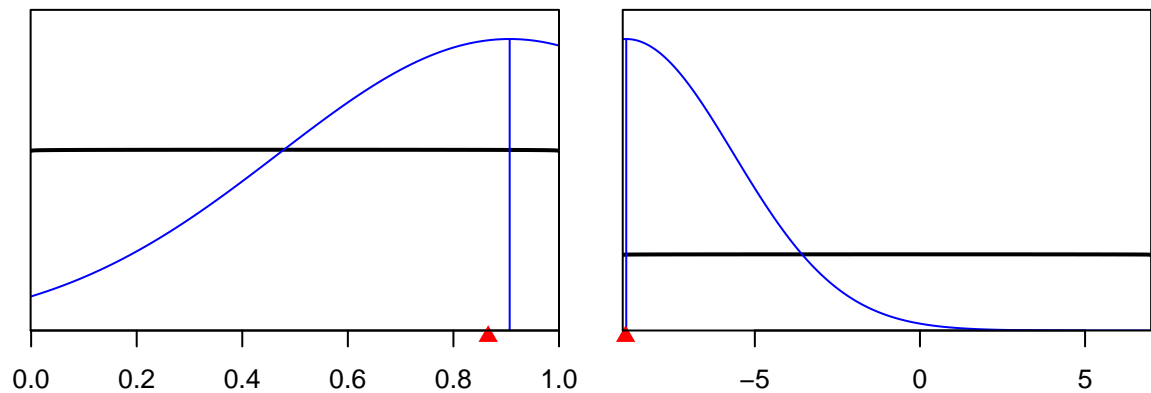
Size\_DbIN\_peak\_A6-OBJ(17)



Size\_DbIN\_ascend\_se\_A6-OBJ(17)

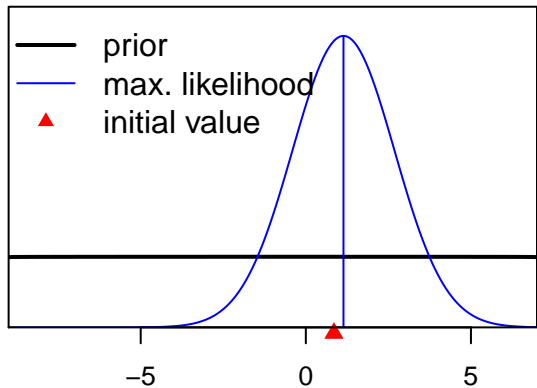


Parameter value

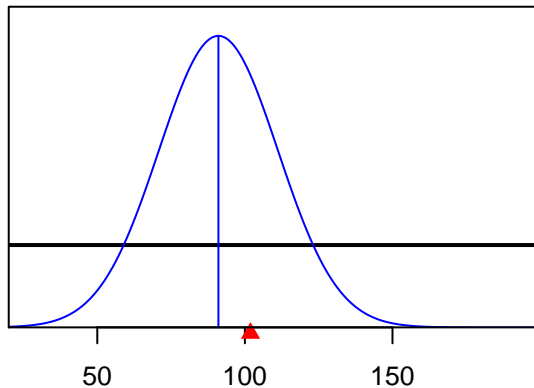
**Size\_DblN\_descend\_se\_A6-Obj(17)****SizeSpline\_GradHi\_A2-NOADEL(19)****SizeSpline\_GradLo\_A2-NOADEL(19)****SizeSpline\_Val\_1\_A2-NOADEL(19)**

Parameter value

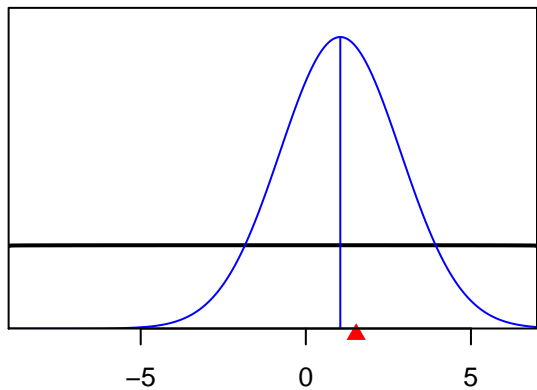
SizeSpline\_Val\_2\_A2-NOADEL(19)



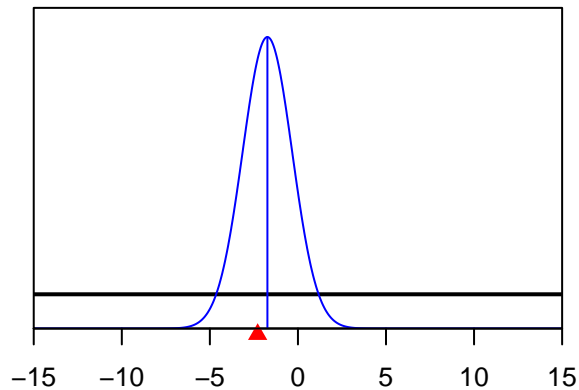
Size\_DbIN\_peak\_A3-NOADEL(20)



SizeSpline\_Val\_4\_A2-NOADEL(19)



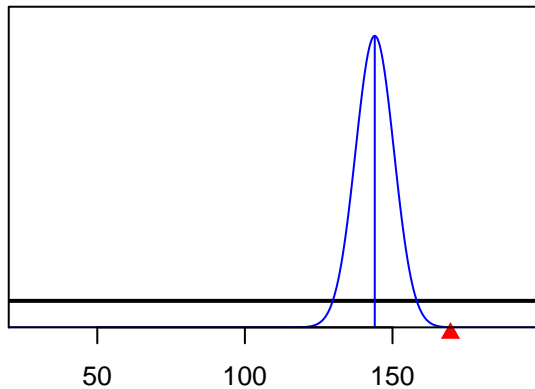
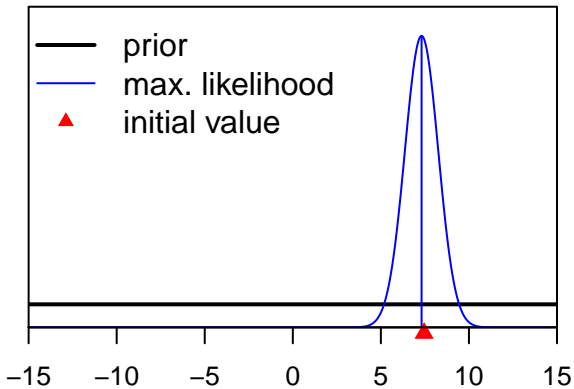
Size\_DbIN\_top\_logit\_A3-NOADEL(20)



Parameter value

Size\_DbIN\_ascend\_se\_A3-NOADEL(20)

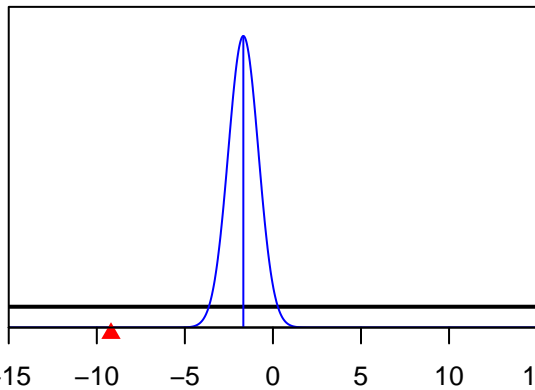
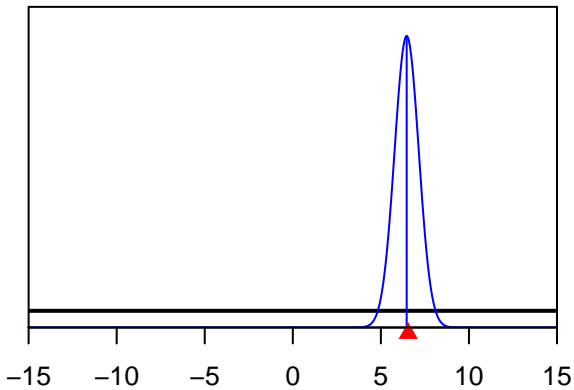
Size\_DbIN\_peak\_EPO-LL-survey-early(24)



Density

Size\_DbIN\_descend\_se\_A3-NOADEL(20)

Size\_DbIN\_top\_logit\_EPO-LL-survey-early(24)

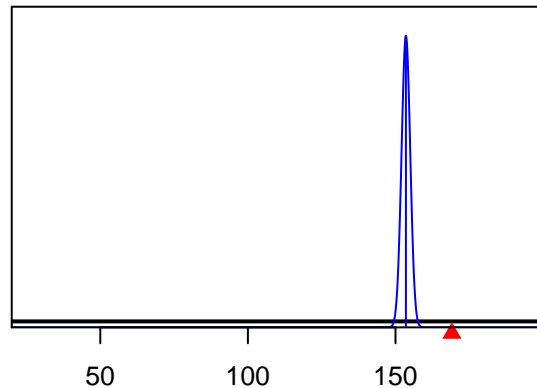
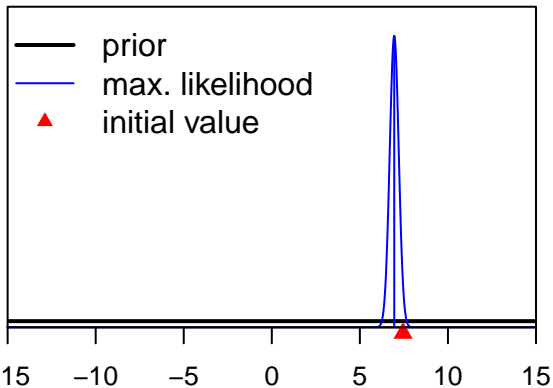


Parameter value

ize\_DbIN\_ascend\_se\_EPO-LL-survey-early(25)

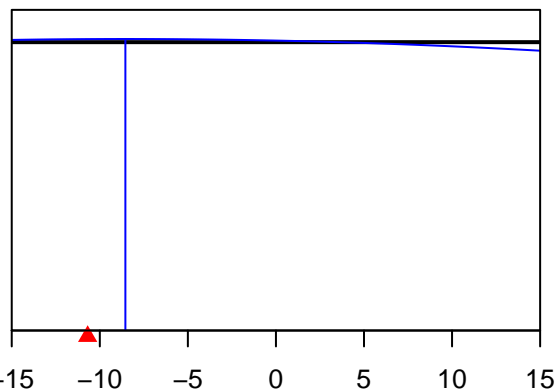
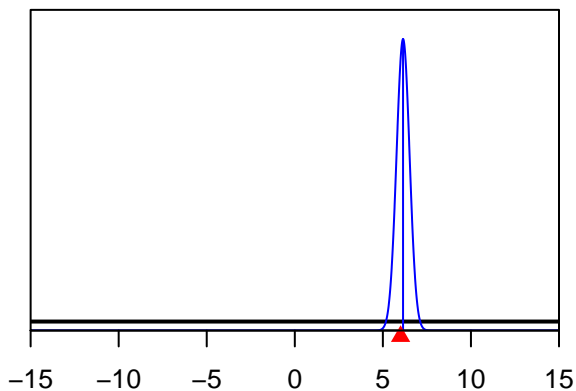
Size\_DbIN\_peak\_EPO-LL-survey-late(25)

Density



ze\_DbIN\_descend\_se\_EPO-LL-survey-early(25)

Size\_DbIN\_top\_logit\_EPO-LL-survey-late(25)

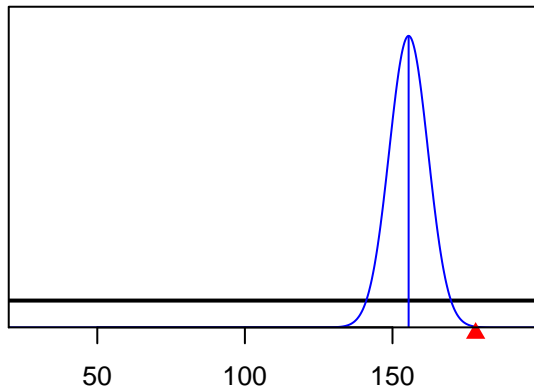
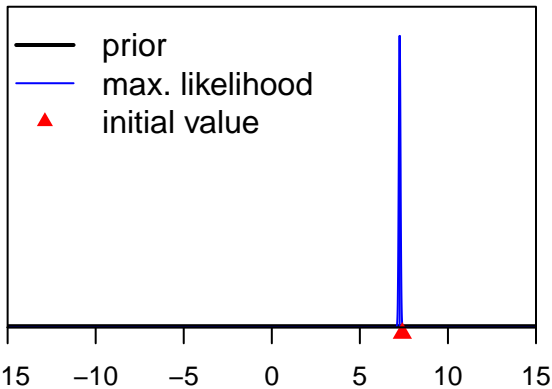


Parameter value



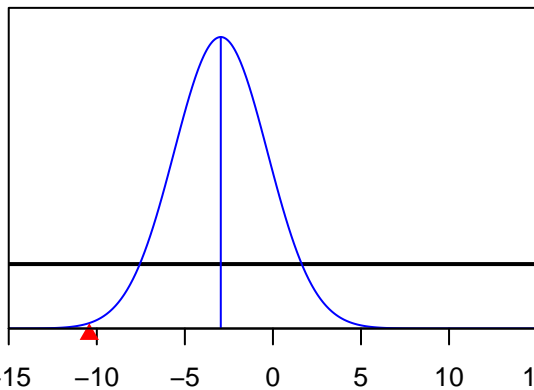
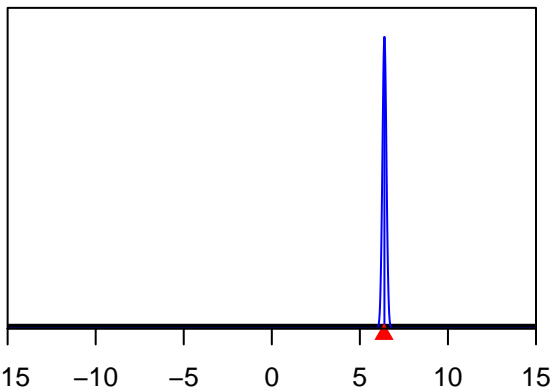
size\_DblN\_ascend\_se\_EPO-LL-survey-late(25

Size\_DblN\_peak\_A2-LL-n(2)\_BLK2repl\_17



ize\_DblN\_descend\_se\_EPO-LL-survey-late(25

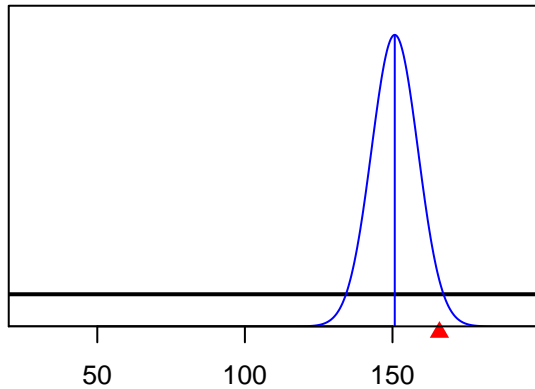
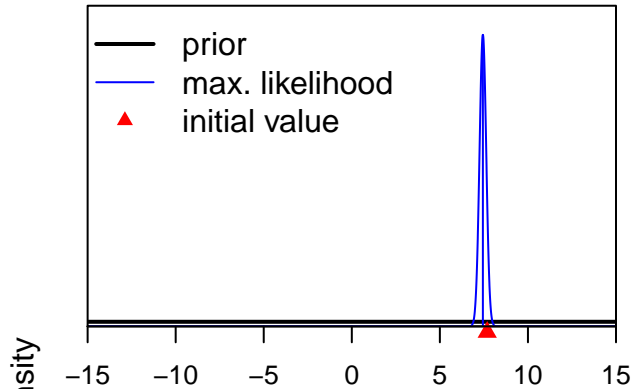
Size\_DblN\_top\_logit\_A2-LL-n(2)\_BLK2repl\_17



Parameter value

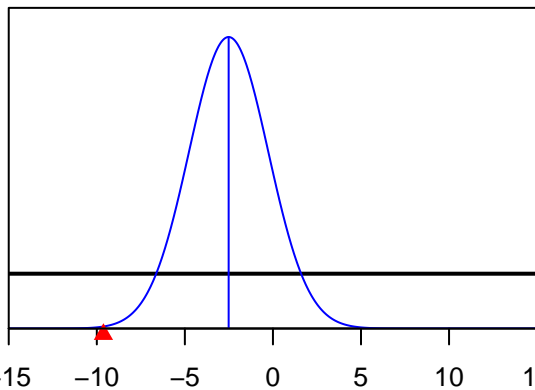
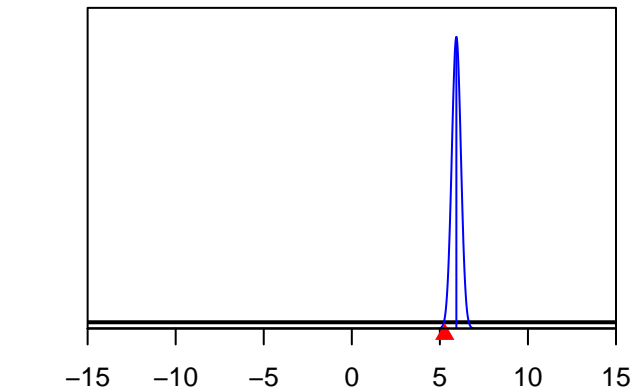
ize\_DbIN\_ascend\_se\_A2-LL-n(2)\_BLK2repl\_1

Size\_DbIN\_peak\_A3-LL-n(3)\_BLK2repl\_17



ize\_DbIN\_descend\_se\_A2-LL-n(2)\_BLK2repl\_1

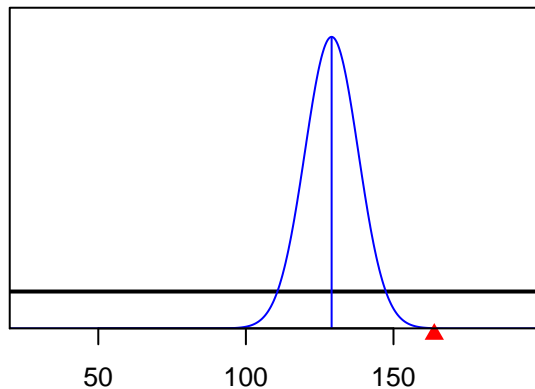
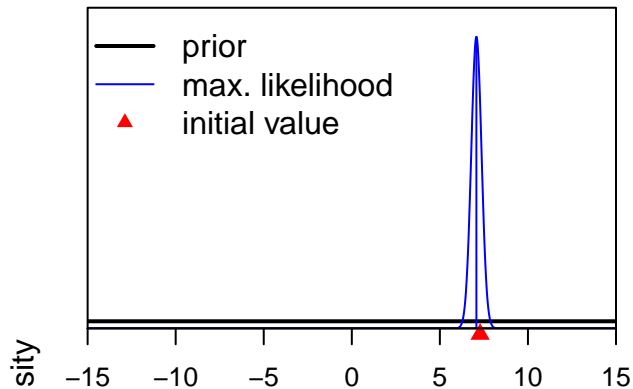
Size\_DbIN\_top\_logit\_A3-LL-n(3)\_BLK2repl\_17



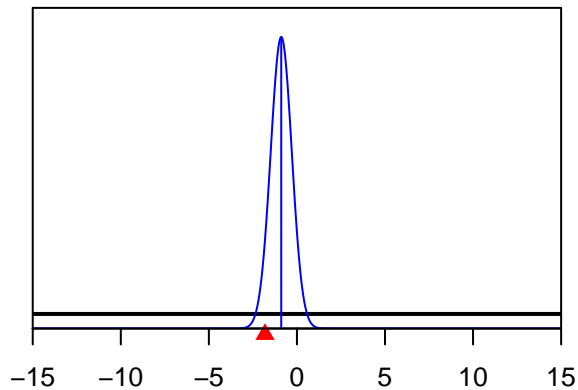
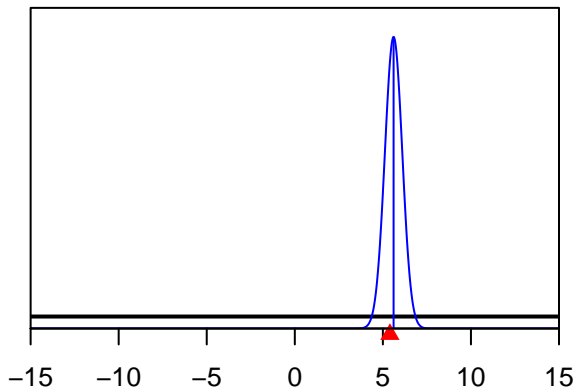
Parameter value

ize\_DbIN\_ascend\_se\_A3-LL-n(3)\_BLK2repl\_1

Size\_DbIN\_peak\_A4-LL-n(4)\_BLK2repl\_17



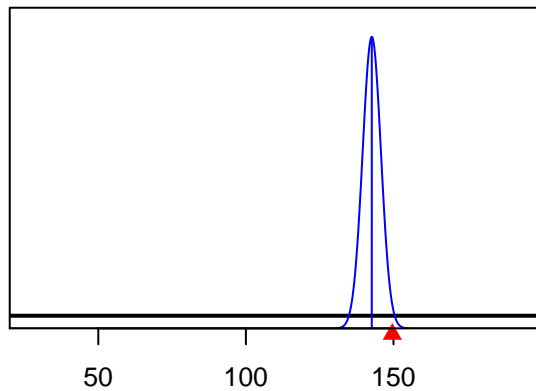
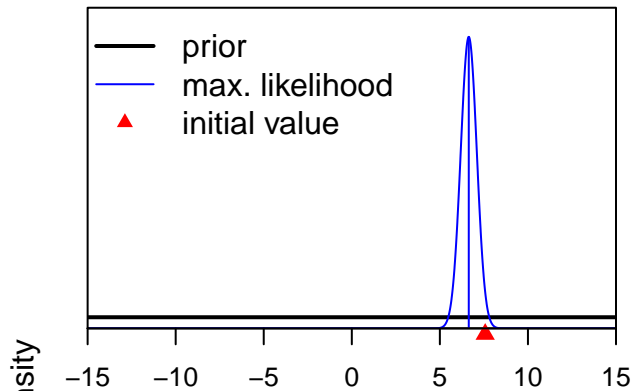
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Parameter value

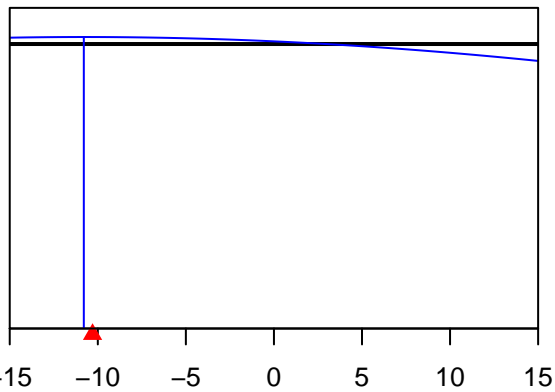
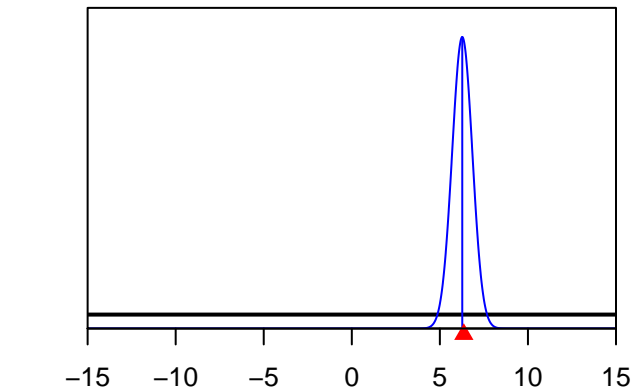
ize\_DbIN\_ascend\_se\_A4-LL-n(4)\_BLK2repl\_1

Size\_DbIN\_peak\_A5-LL-n(5)\_BLK2repl\_17



ize\_DbIN\_descend\_se\_A4-LL-n(4)\_BLK2repl\_1

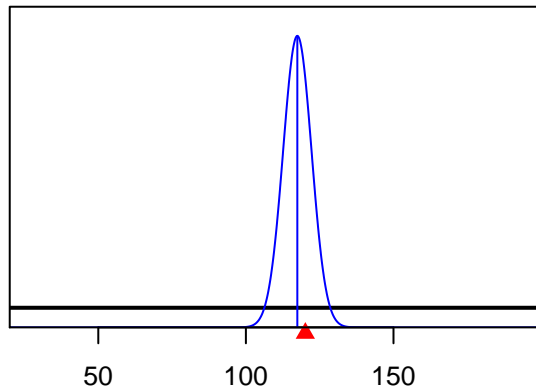
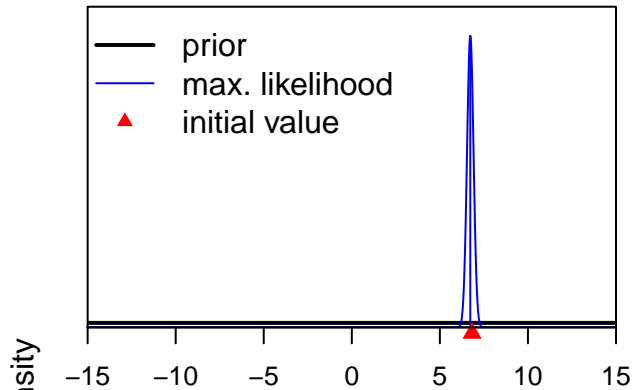
Size\_DbIN\_top\_logit\_A5-LL-n(5)\_BLK2repl\_17



Parameter value

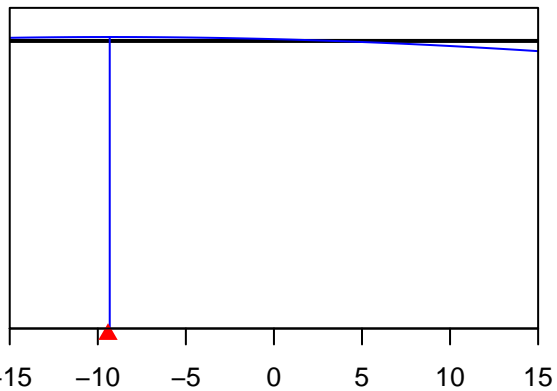
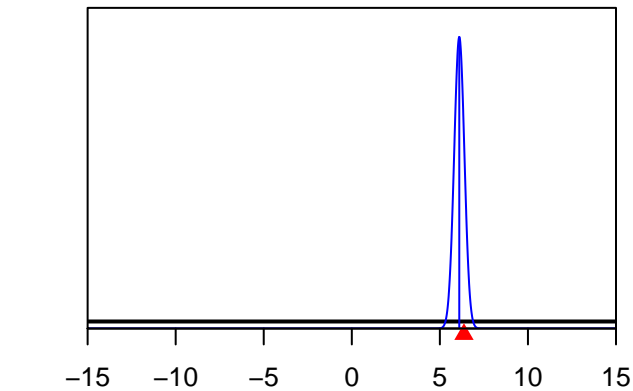
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Size\_DbIN\_peak\_A6-LL-n(6)\_BLK2repl\_17



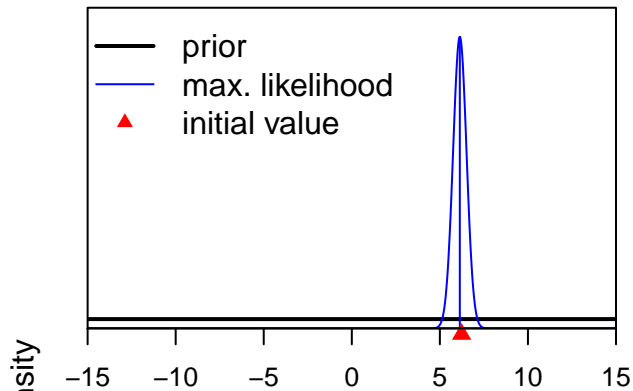
ize\_DbIN\_descend\_se\_A5-LL-n(5)\_BLK2repl\_1

Size\_DbIN\_top\_logit\_A6-LL-n(6)\_BLK2repl\_17



Parameter value

ize\_DbIN\_ascend\_se\_A6-LL-n(6)\_BLK2repl\_1



ize\_DbIN\_descend\_se\_A6-LL-n(6)\_BLK2repl\_1

