

Plots created using the 'r4ss' package in R

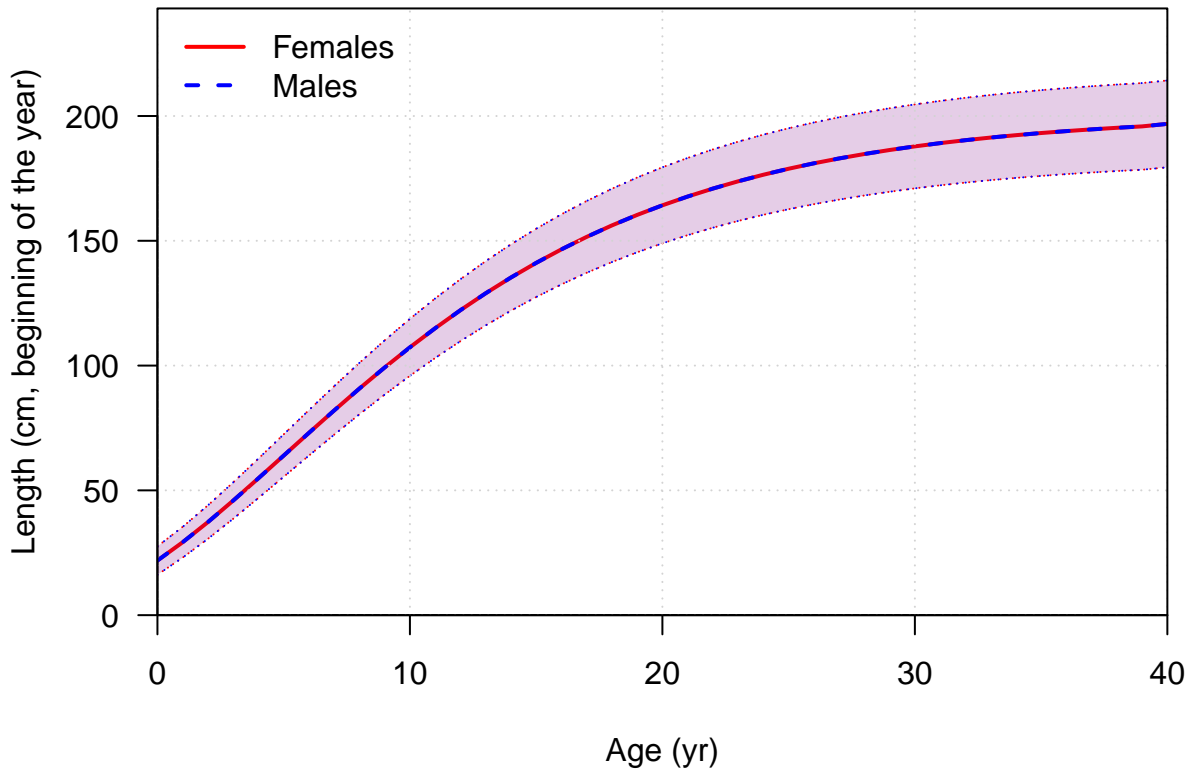
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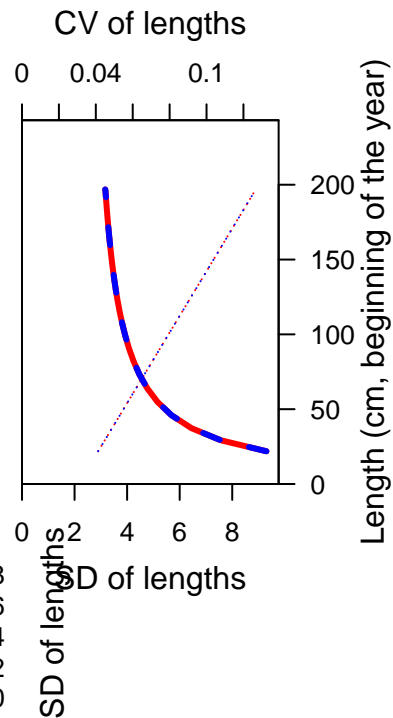
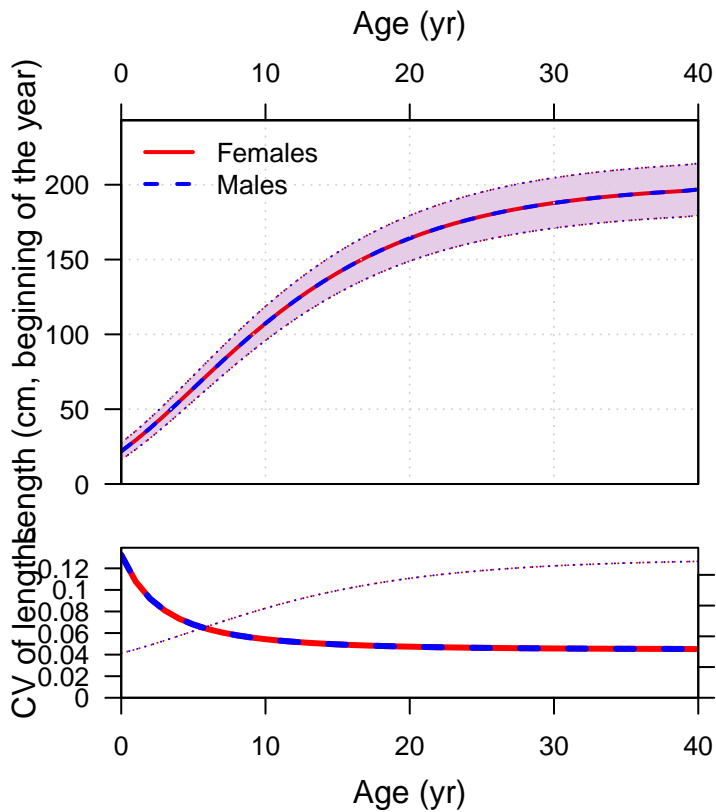
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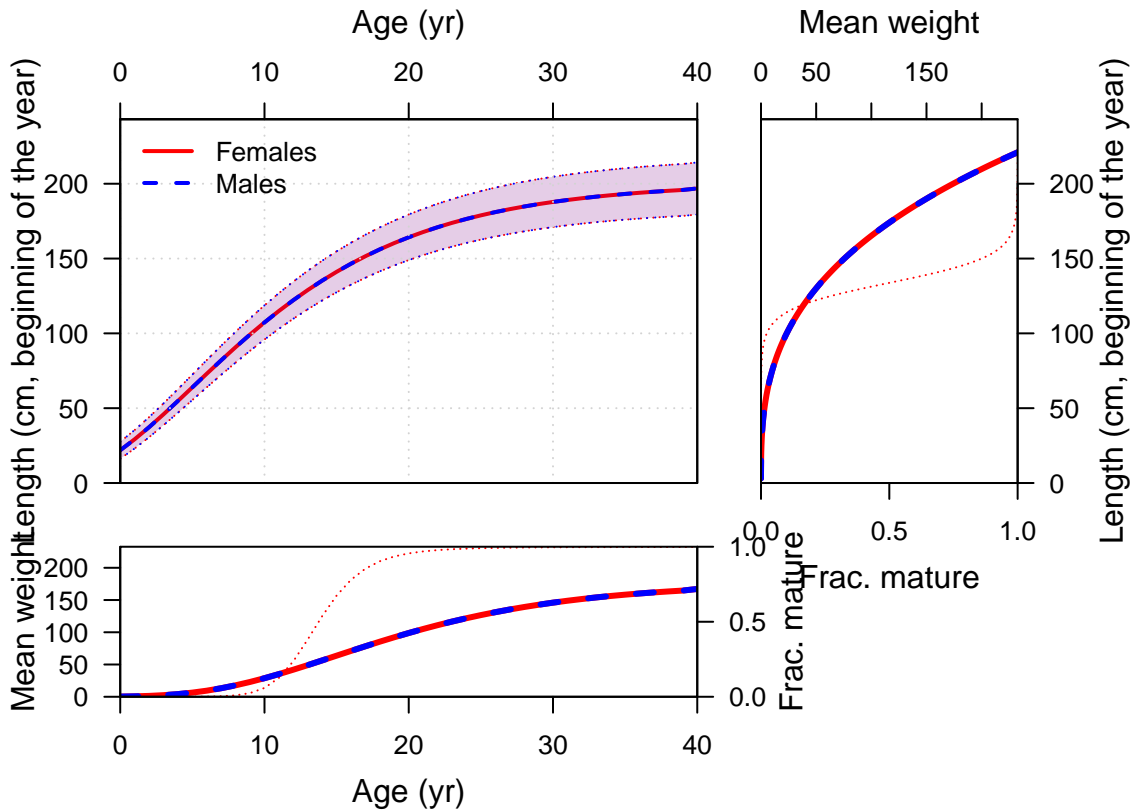
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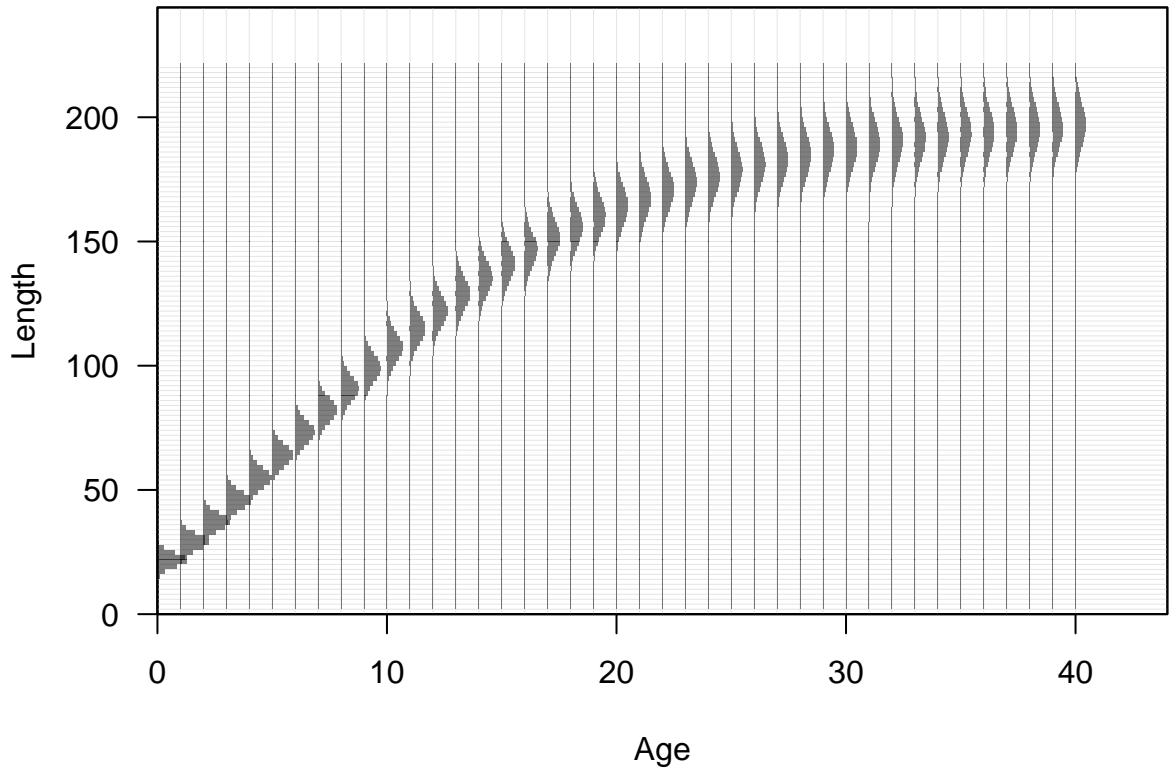
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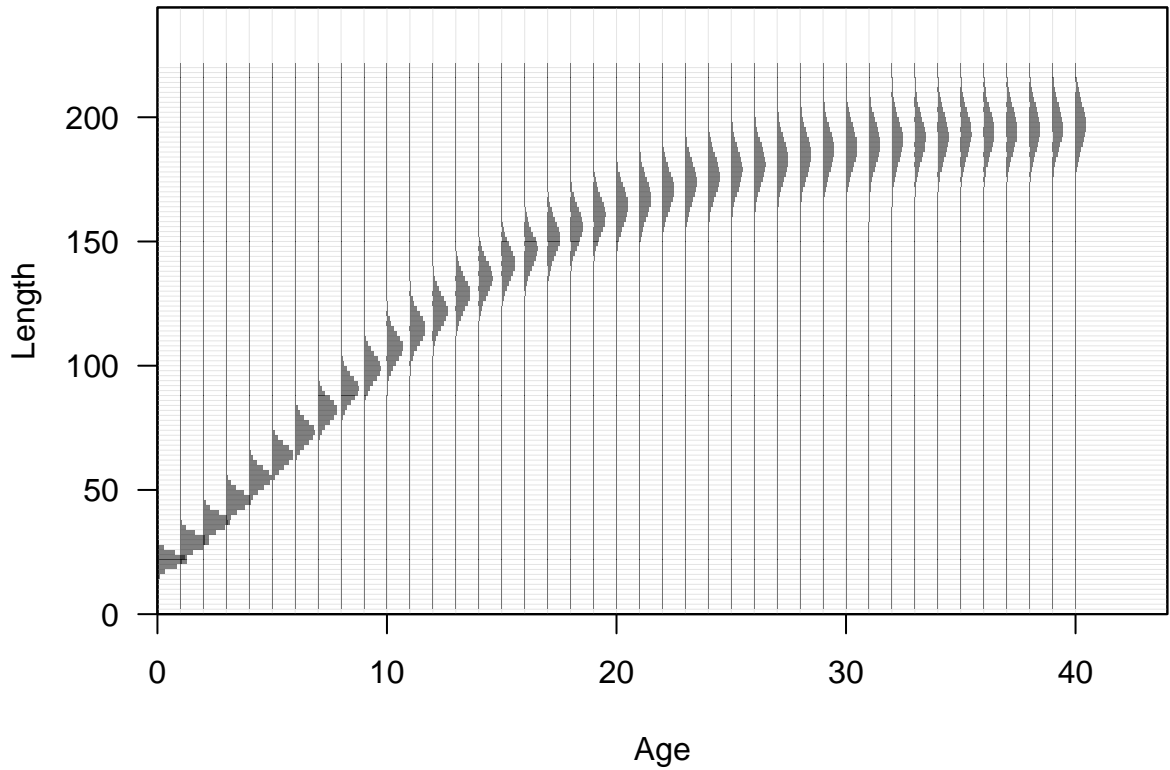
## Ending year expected growth (with 95% intervals)

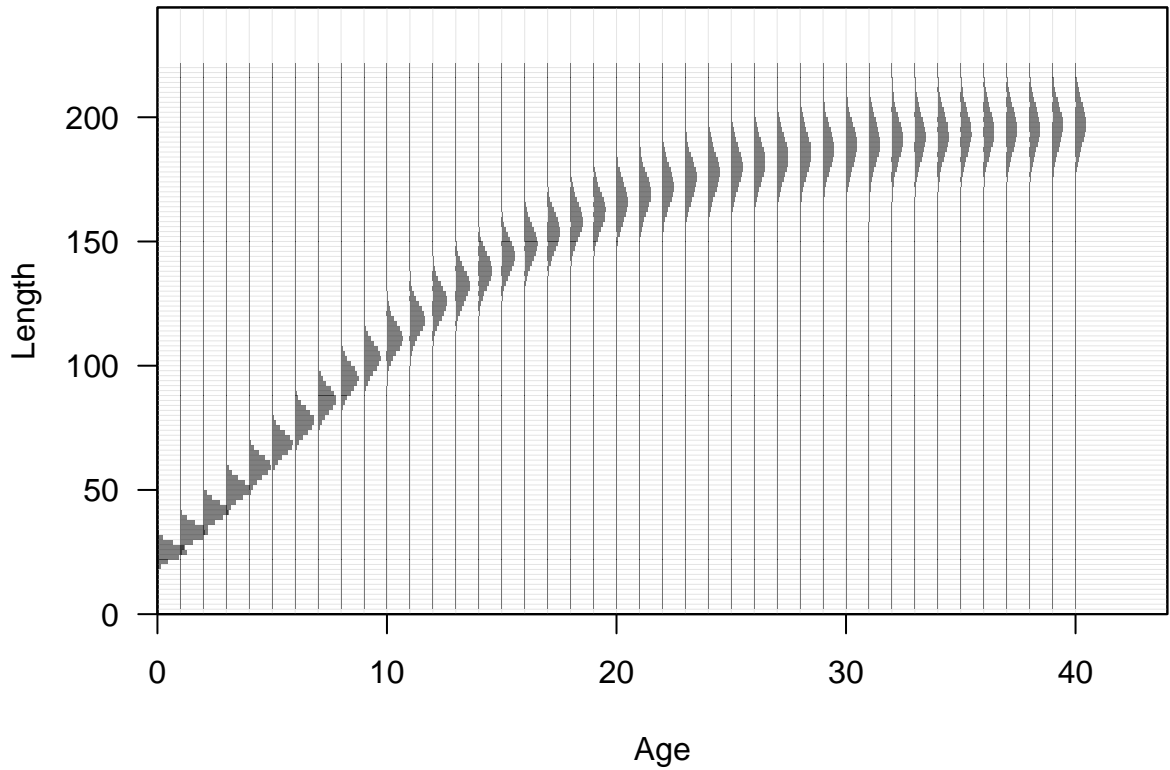


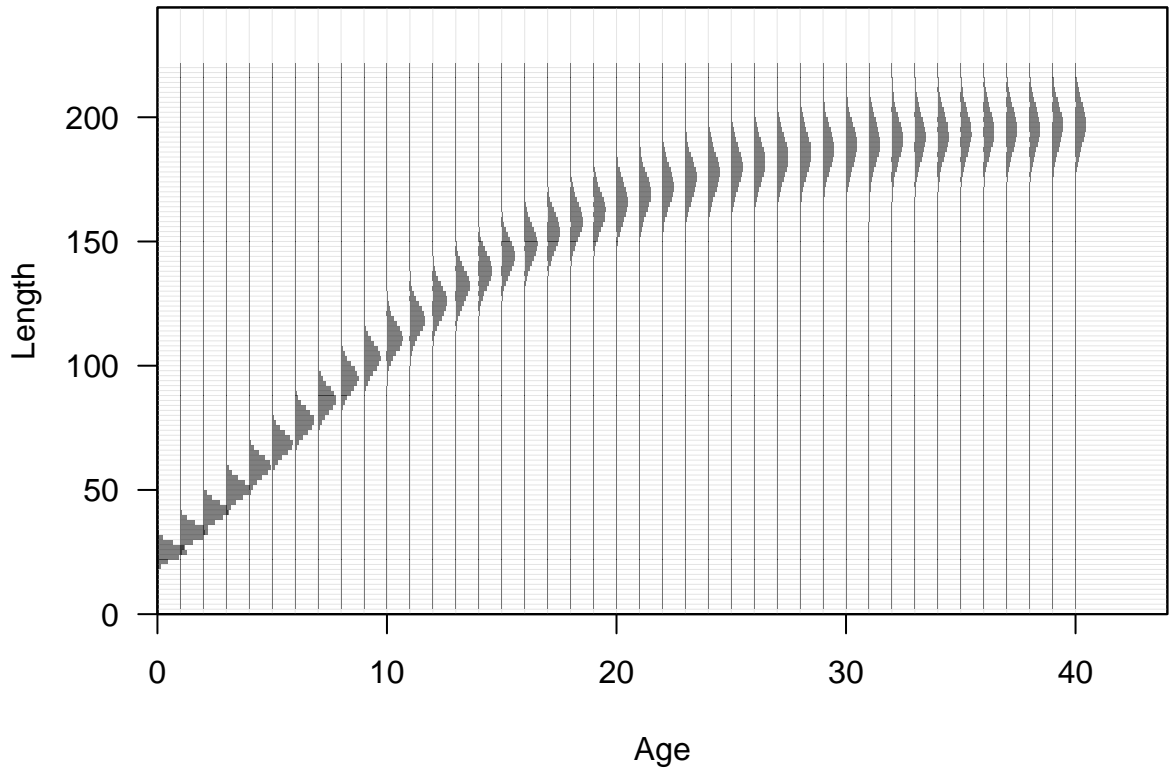




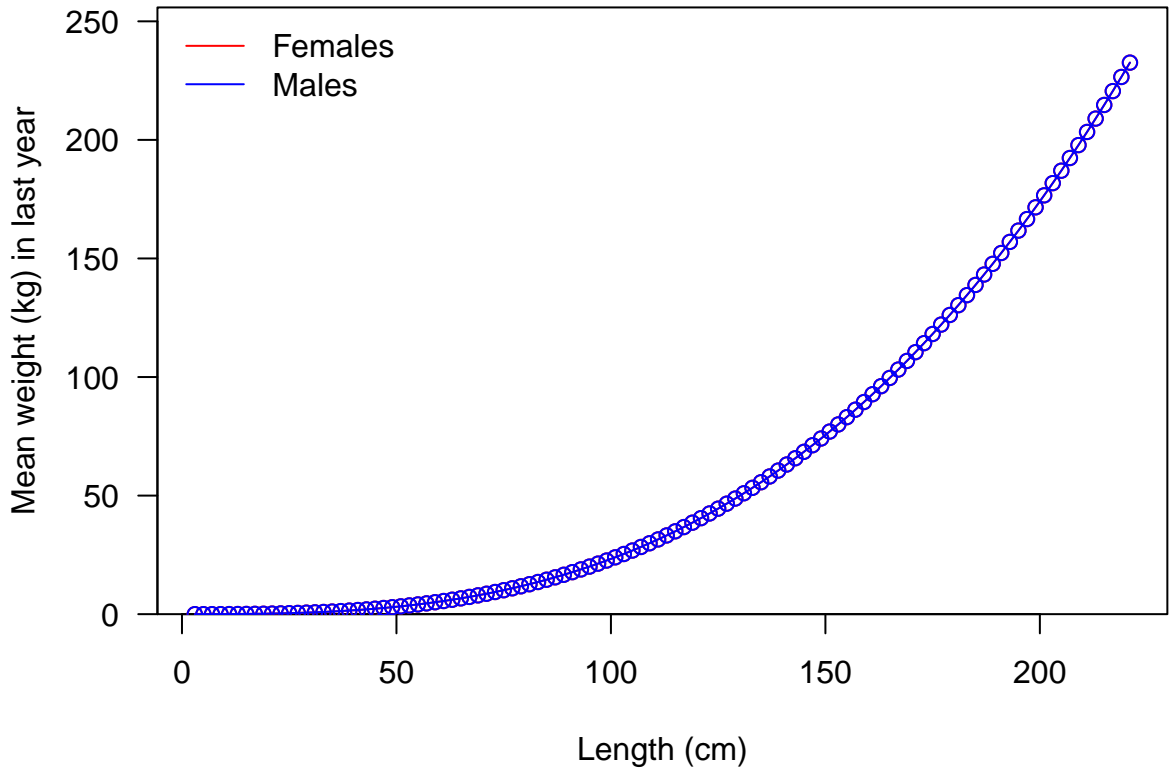


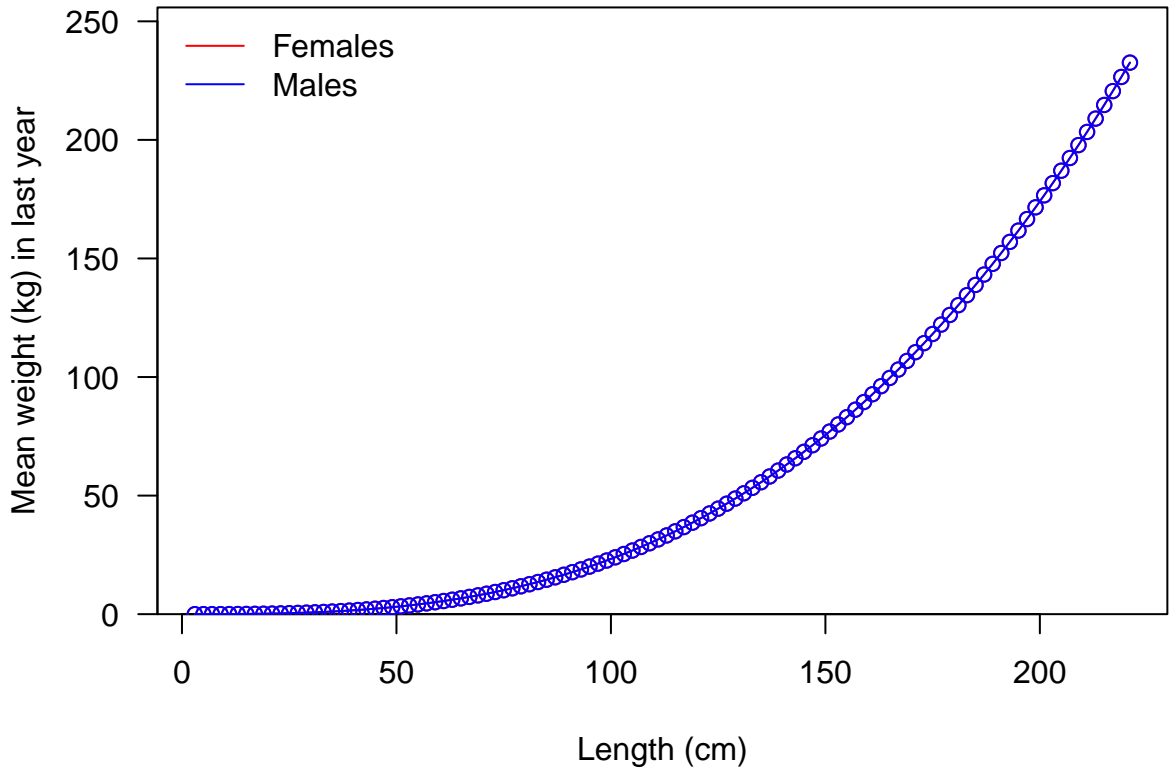


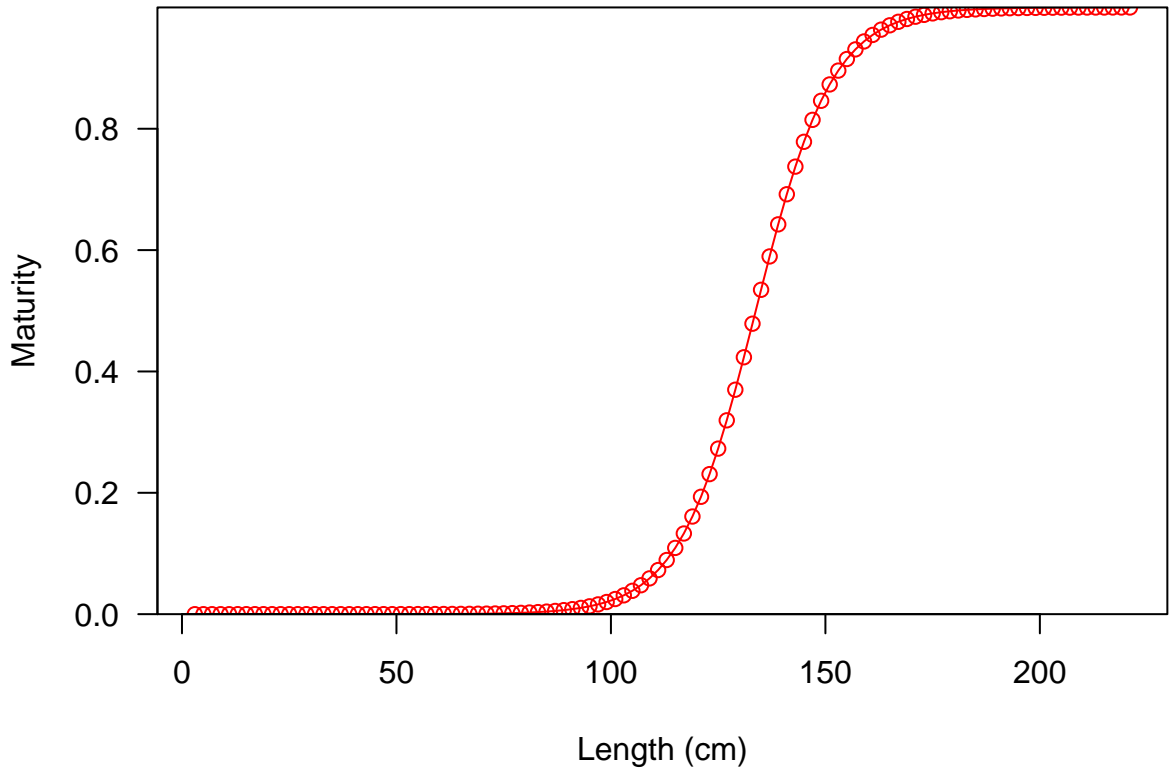


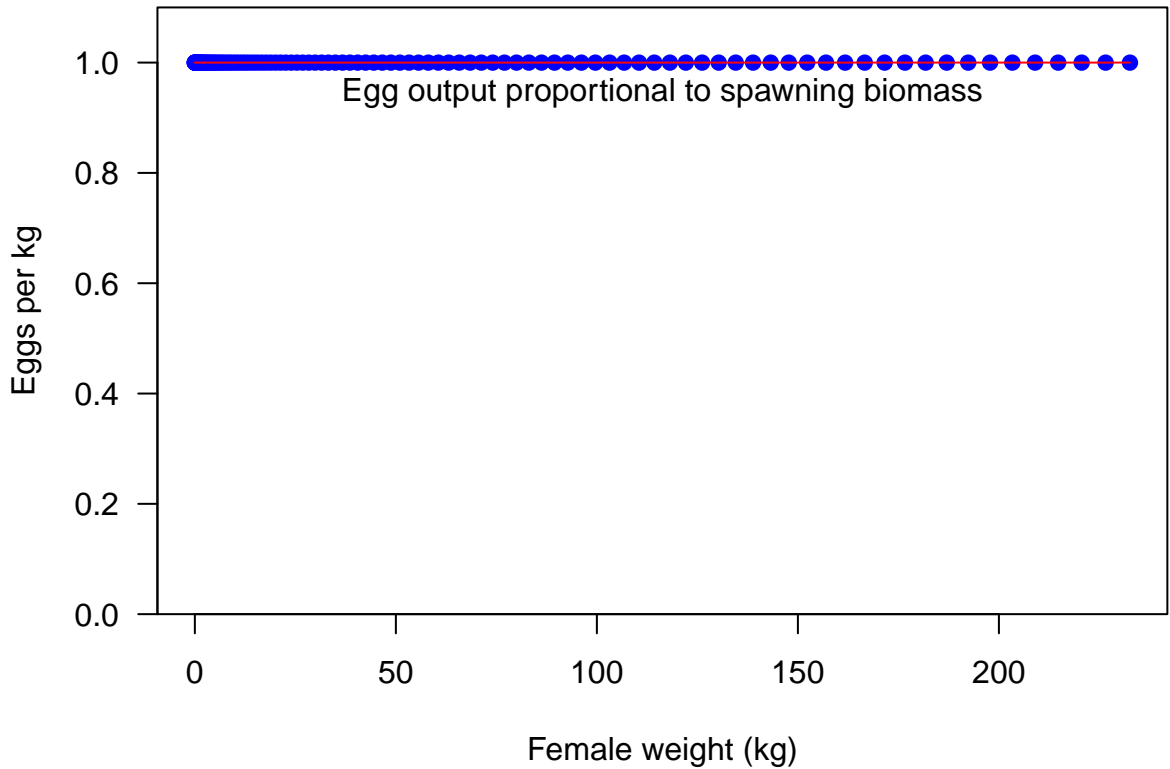


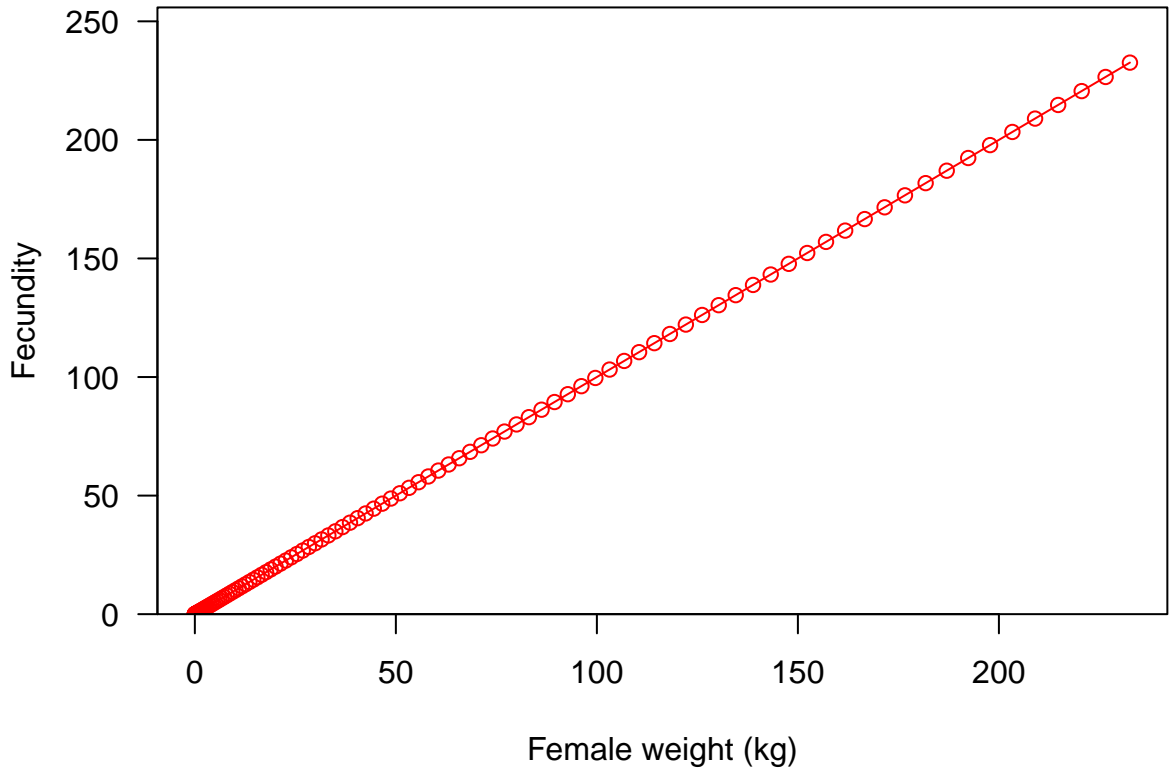


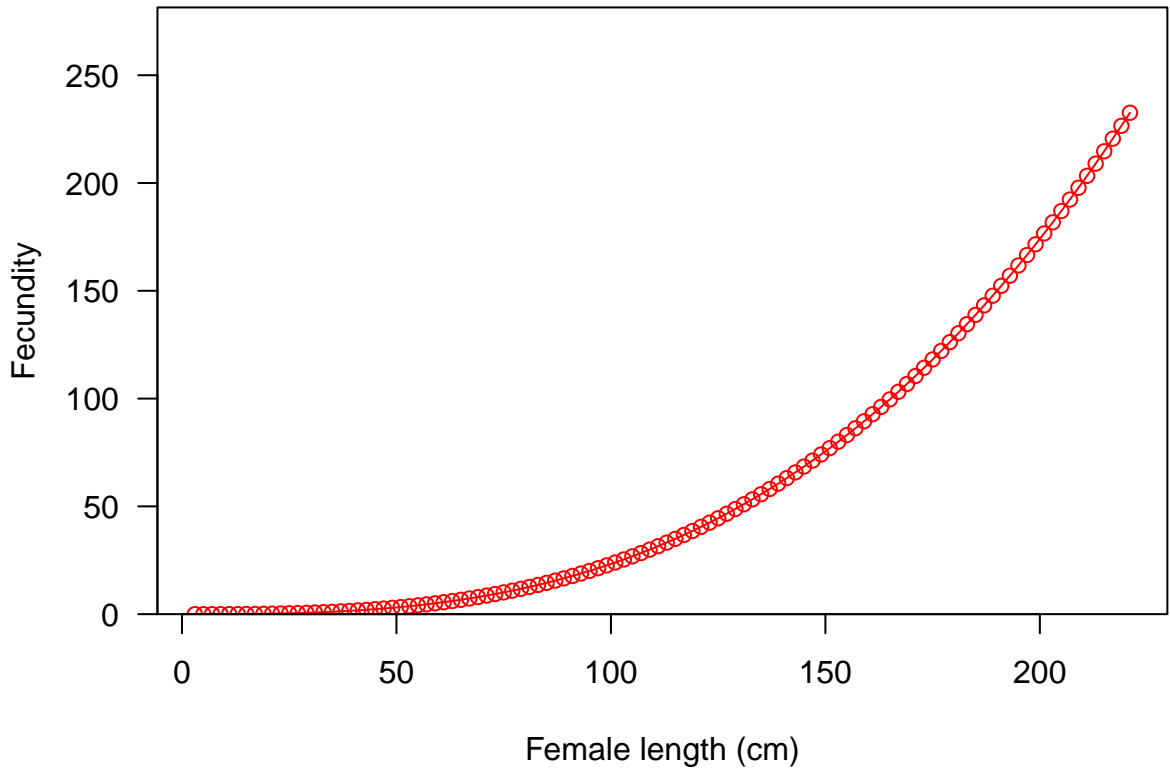


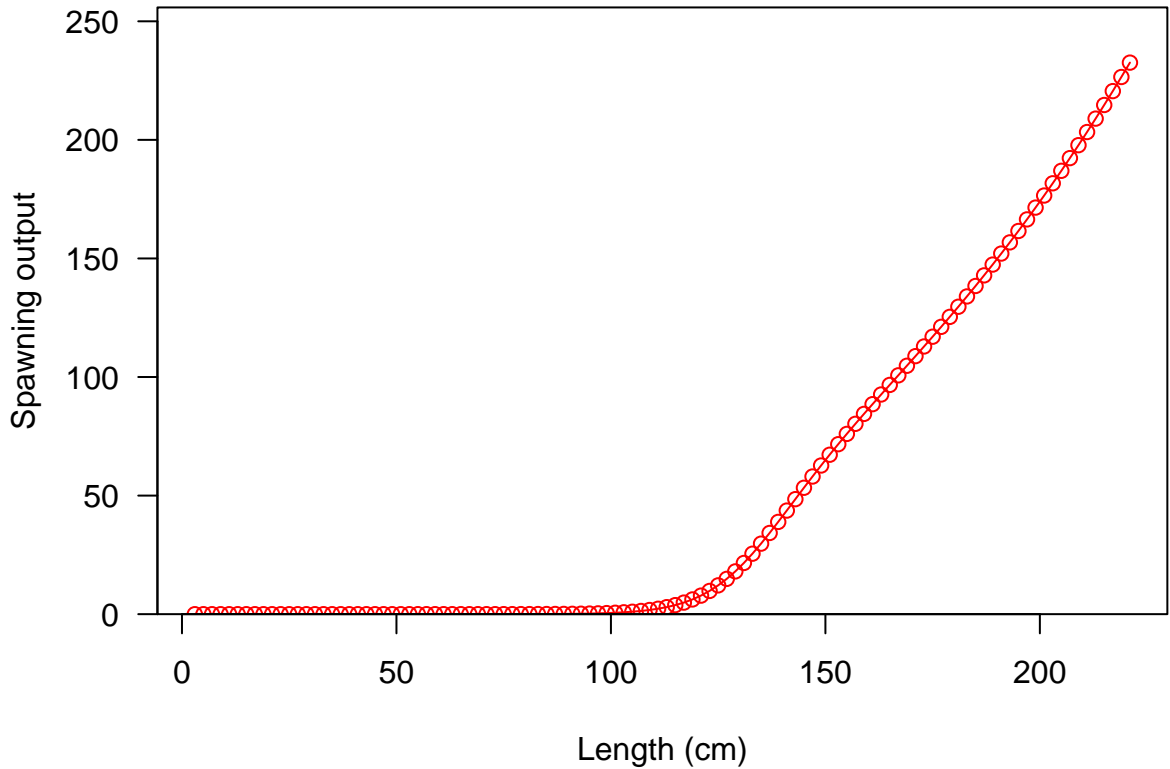


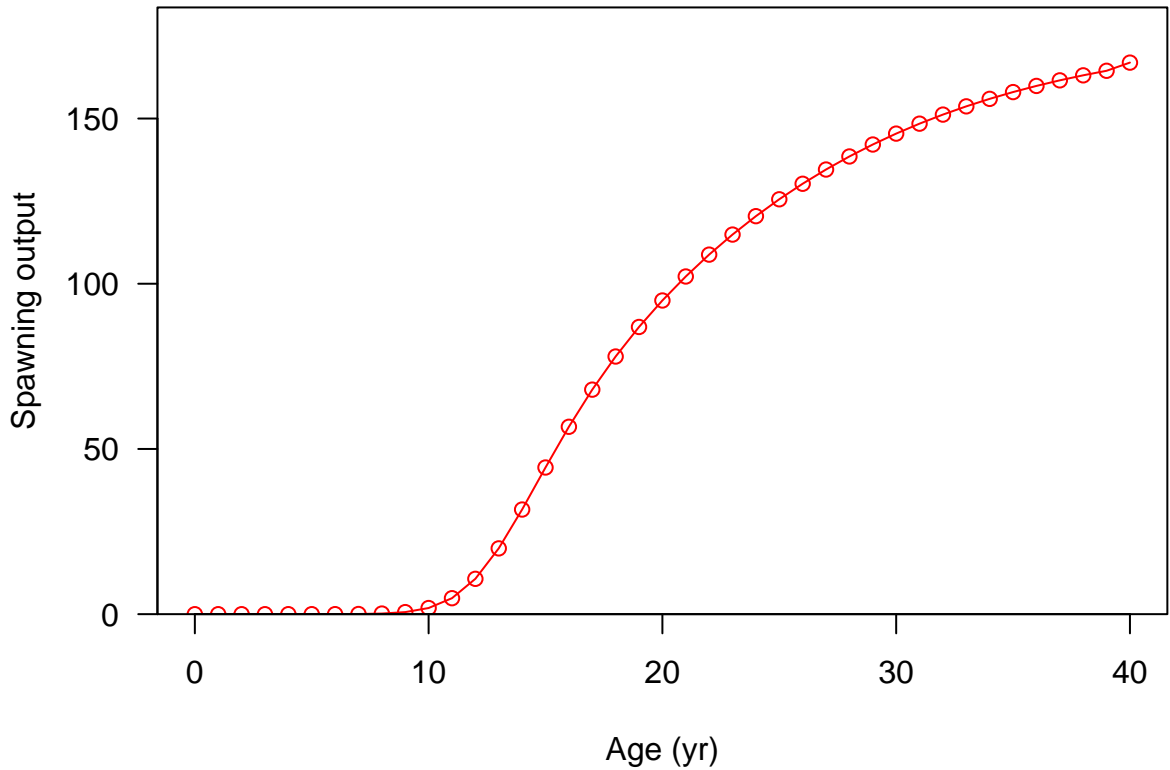










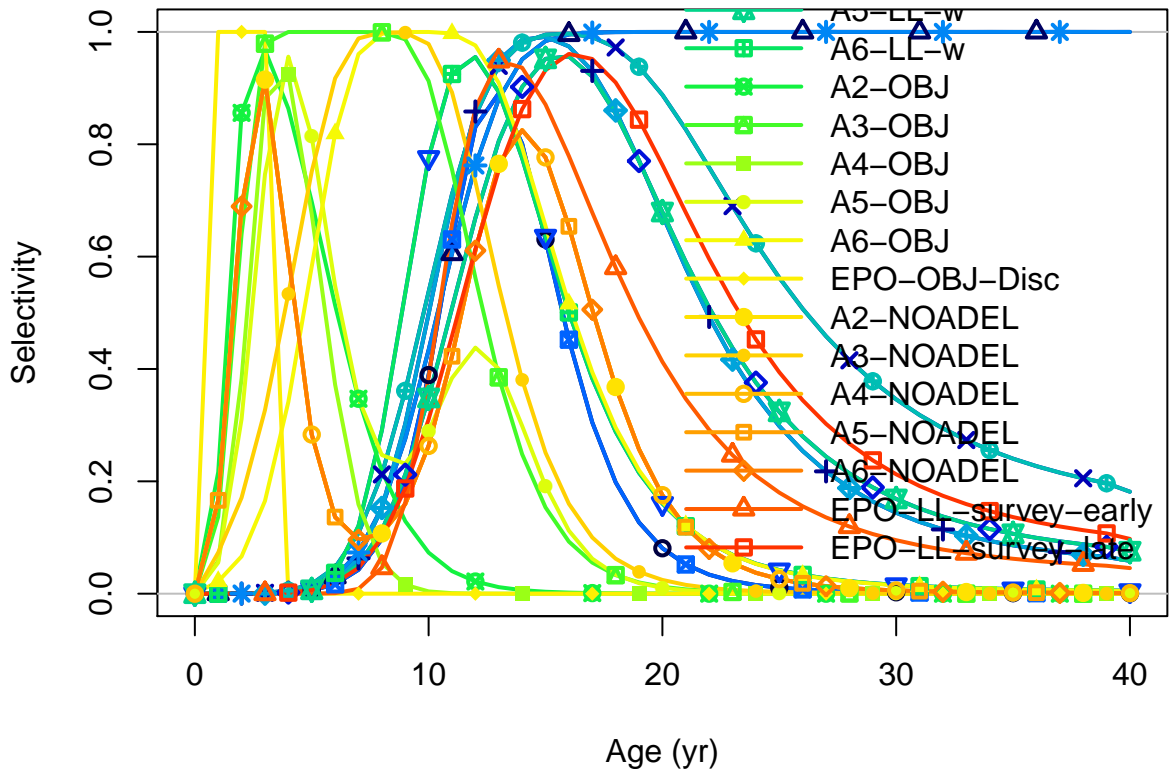




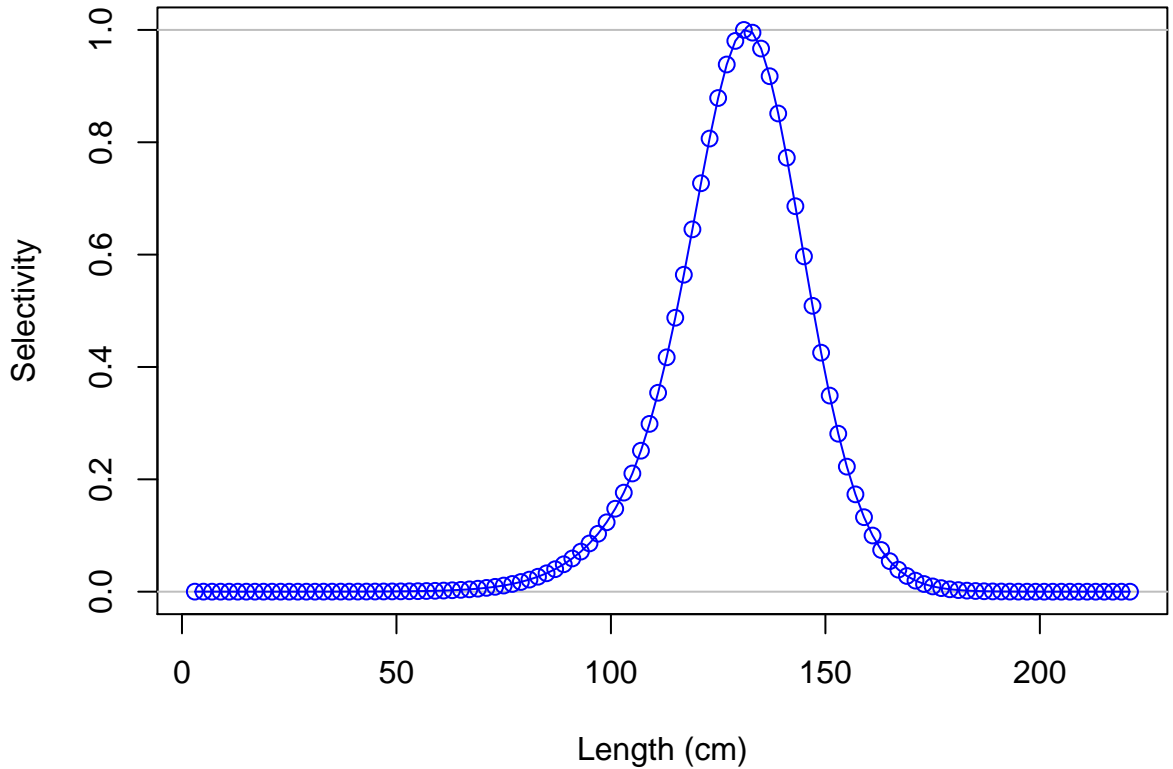




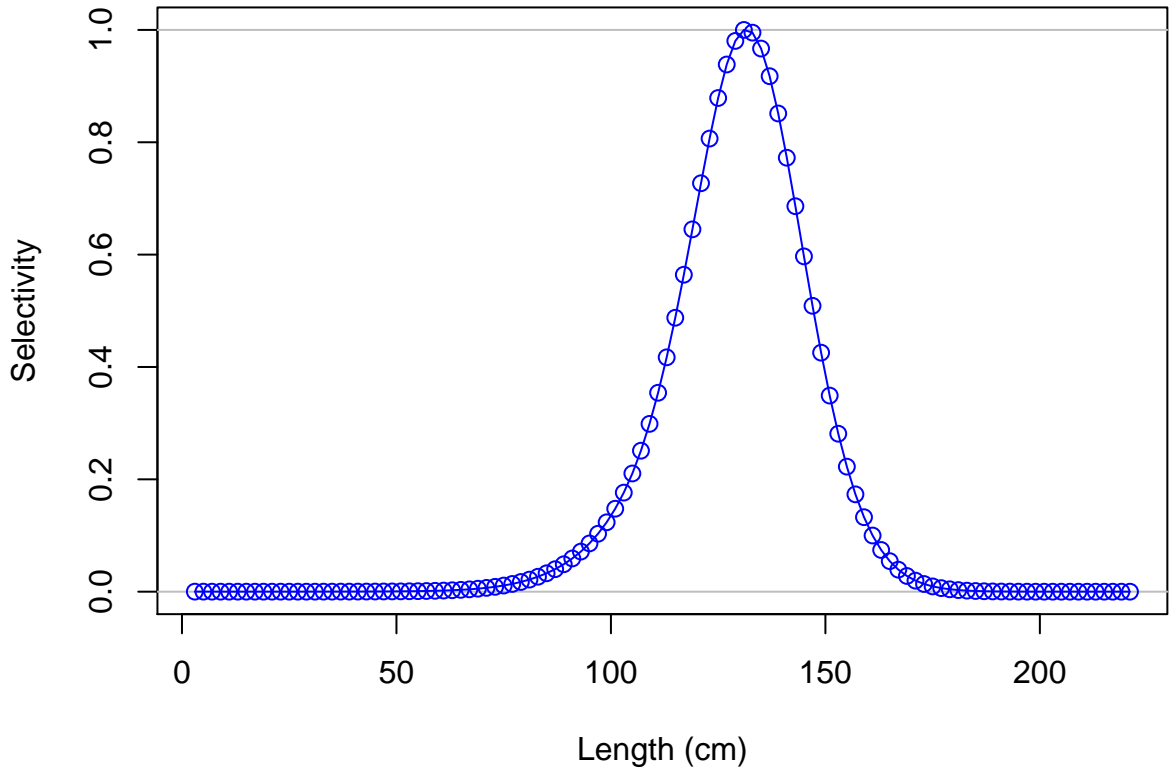
# Derived age-based from length-based selectivity by fleet in 180



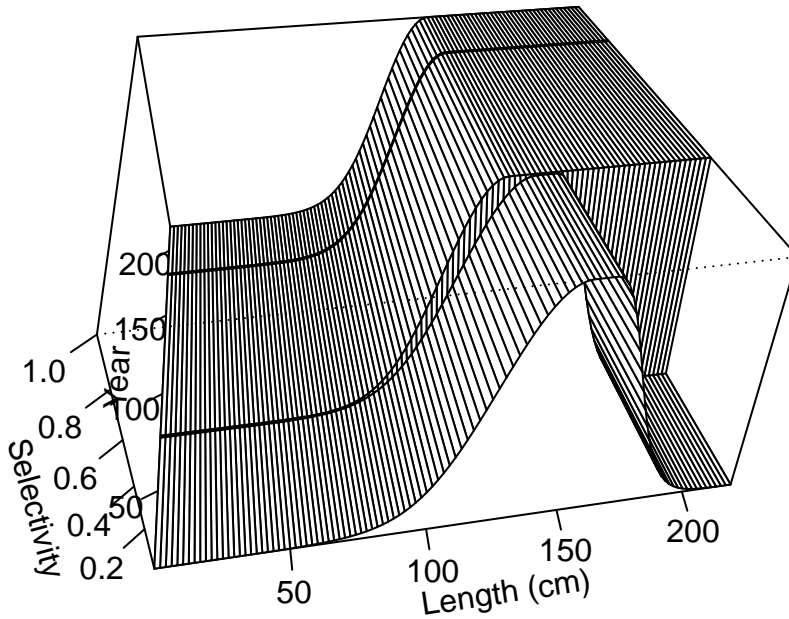
# Female ending year selectivity for A1-LL-n



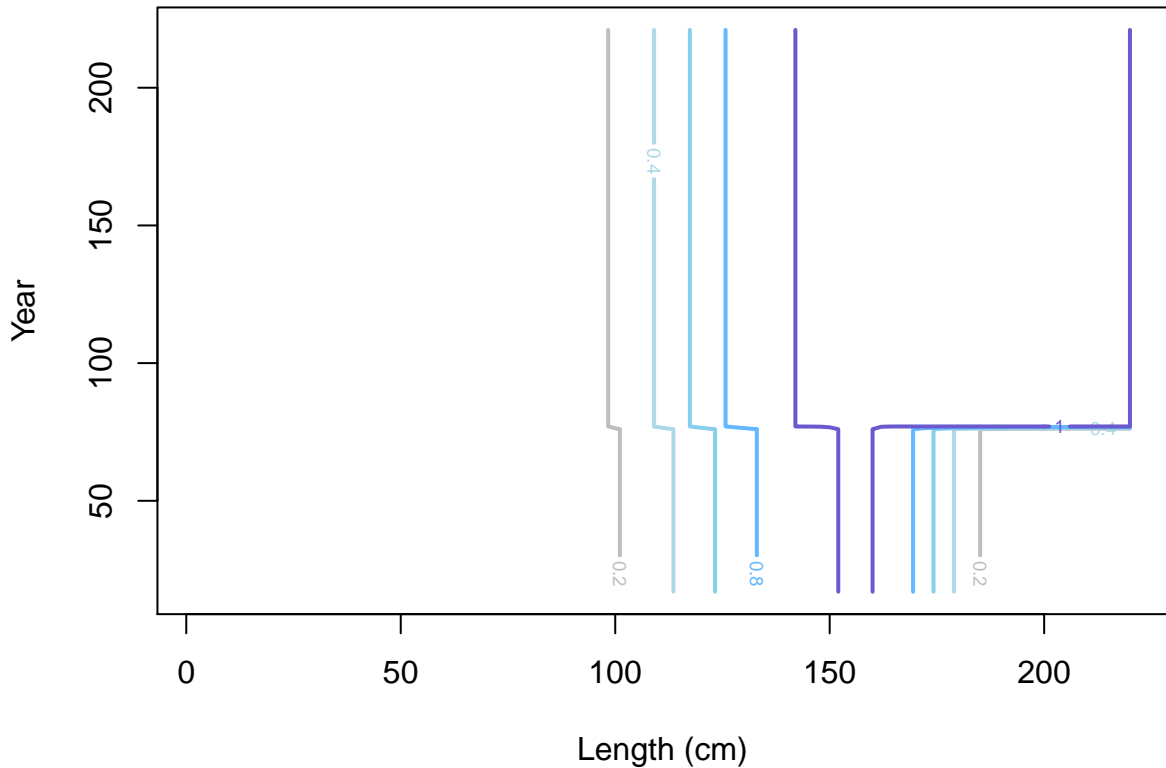
## Male ending year selectivity for A1-LL-n



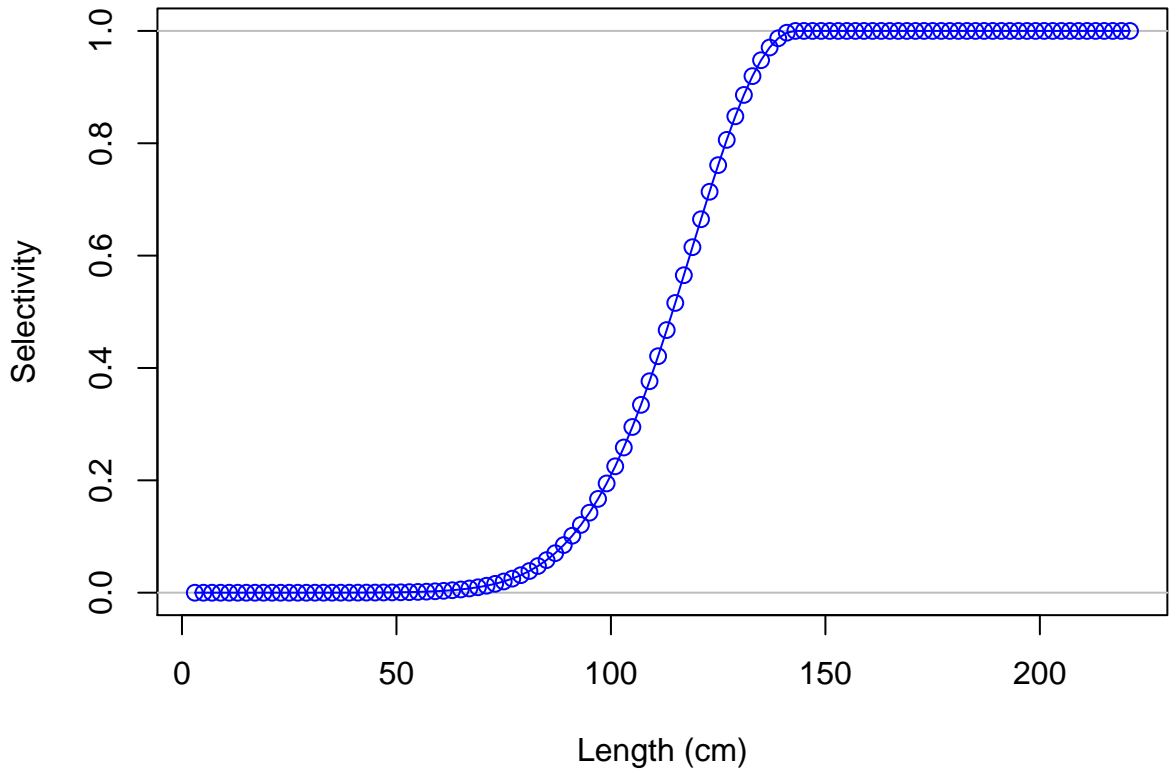
## Female time-varying selectivity for A2-LL-n



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

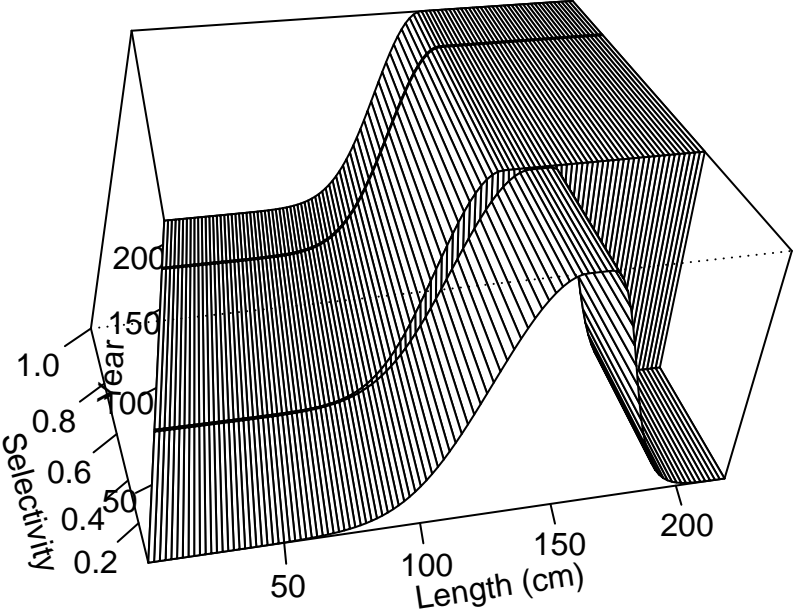


## Female ending year selectivity for A2-LL-n

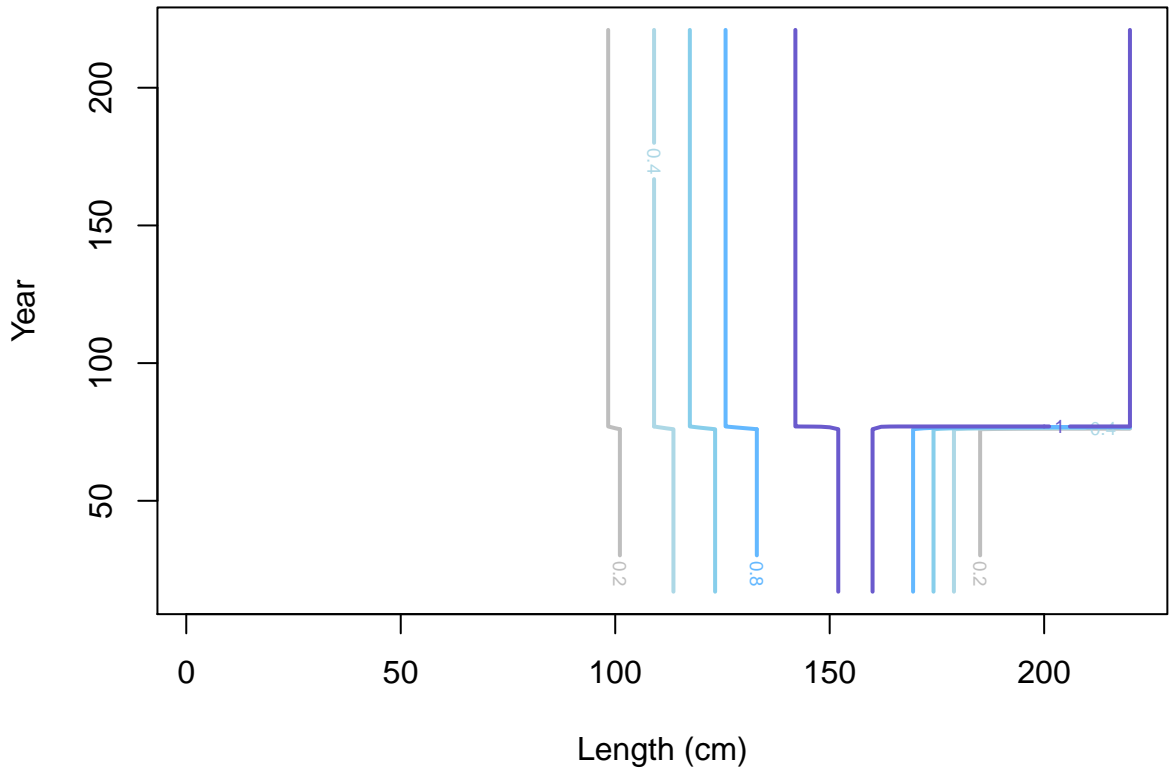




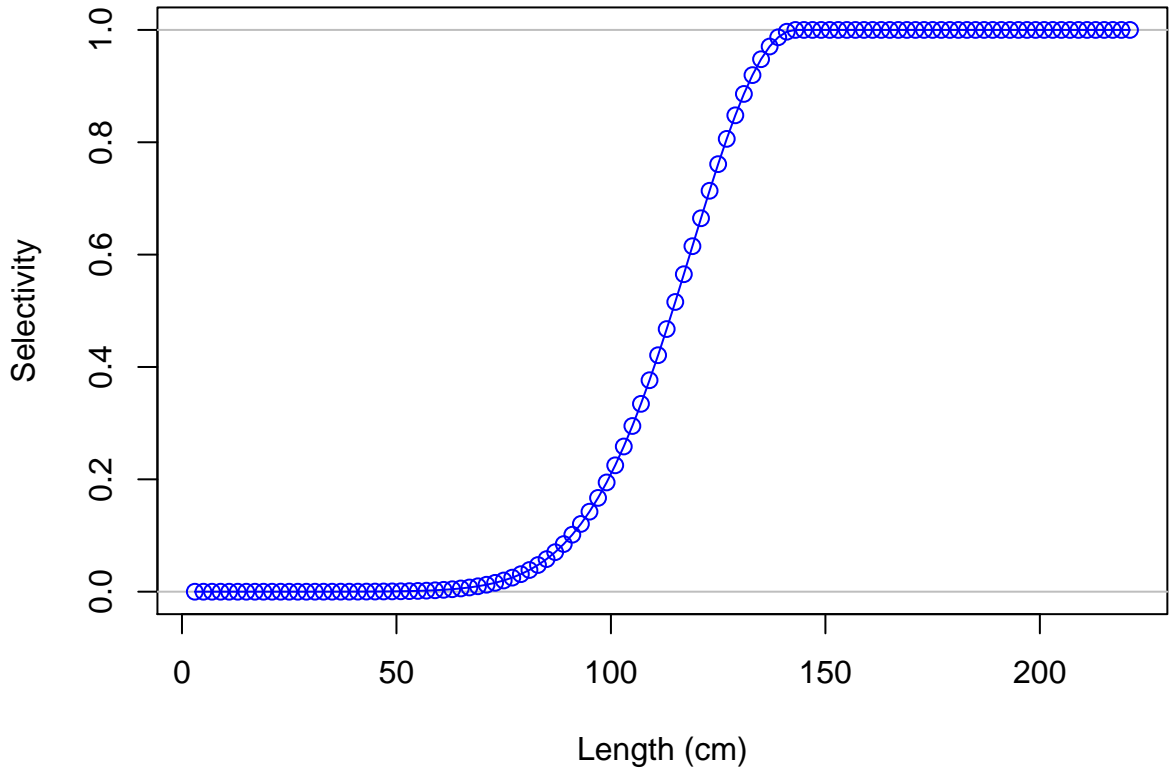
# Male time-varying selectivity for A2-LL-n



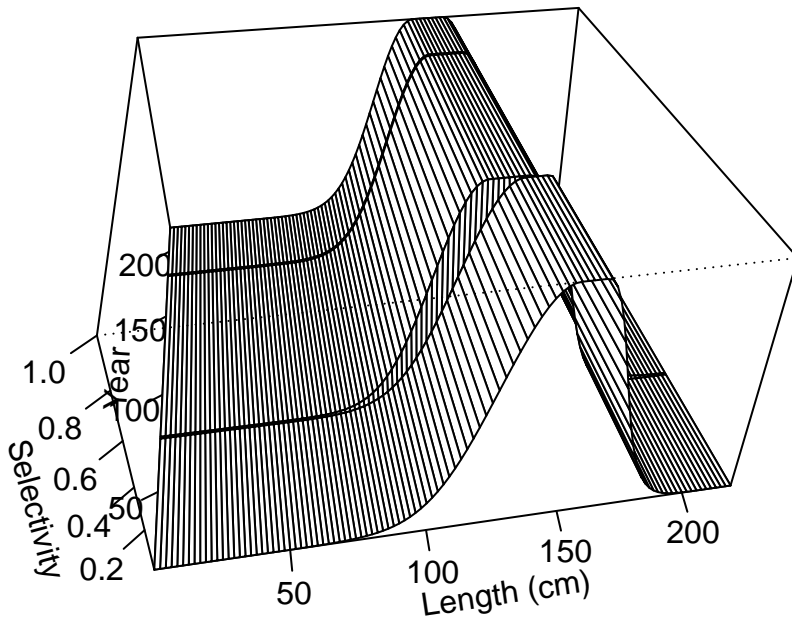
# Male time-varying selectivity for A2-LL-n



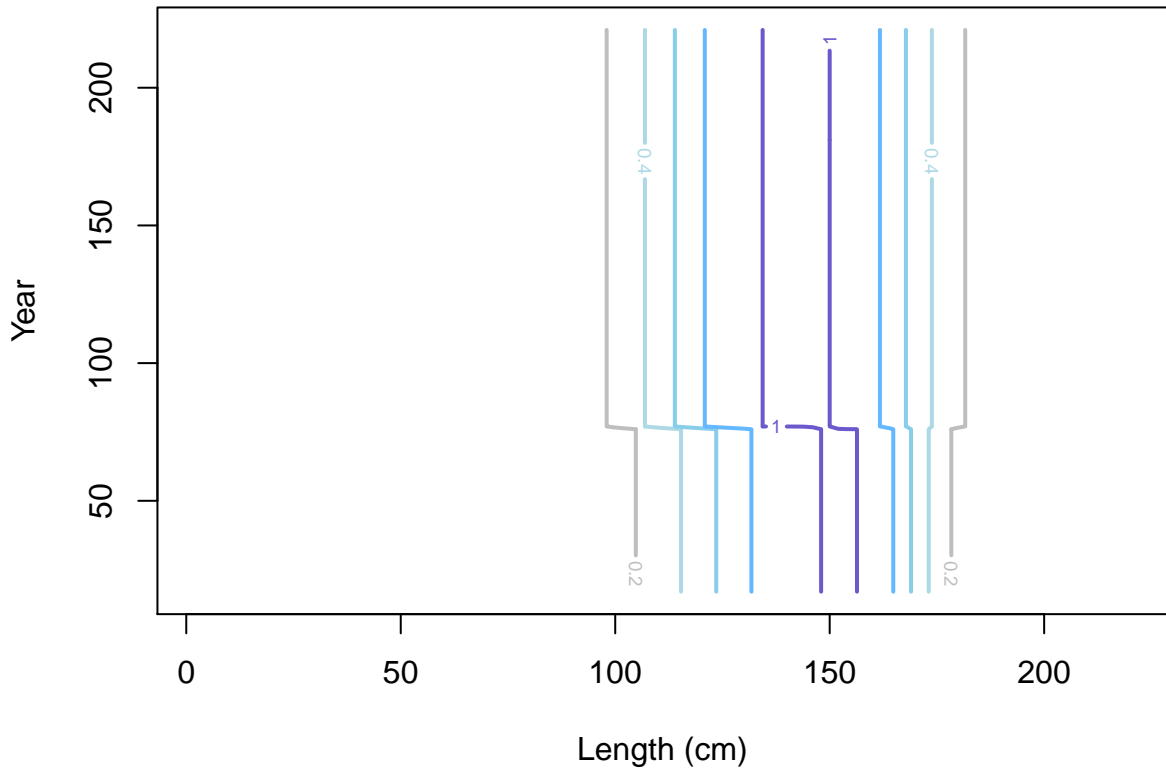
## Male ending year selectivity for A2-LL-n



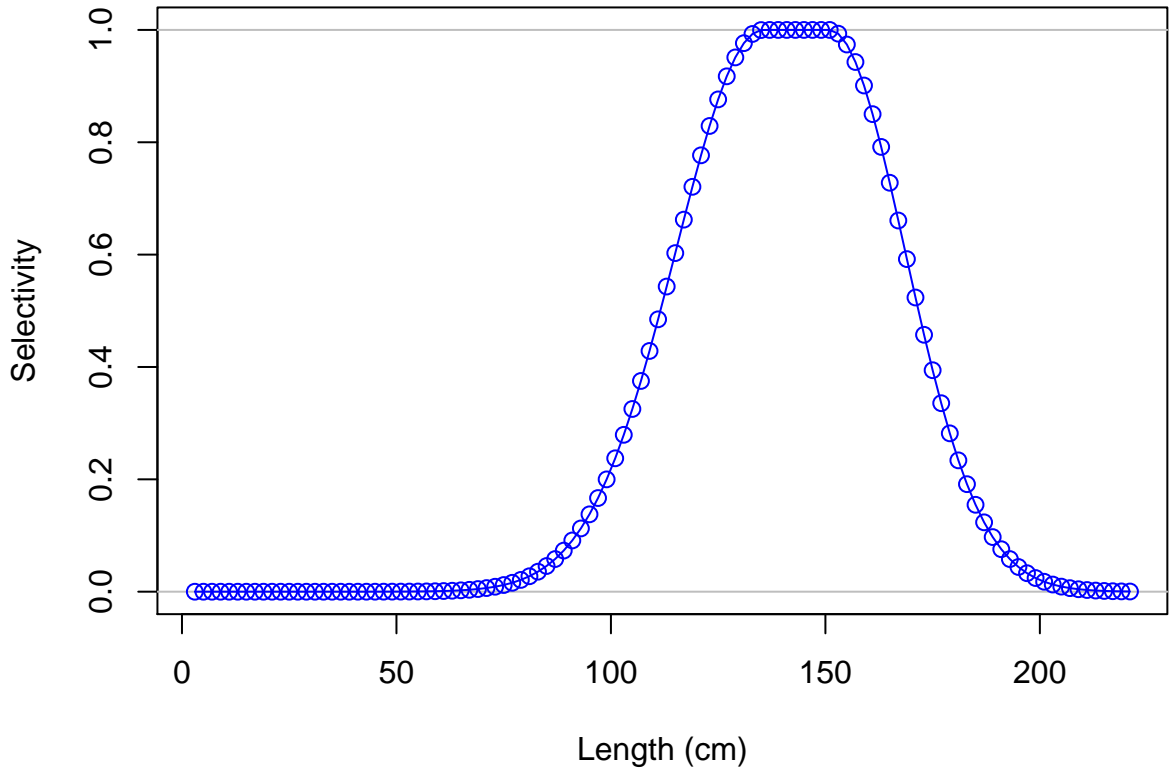
## Female time-varying selectivity for A3-LL-n



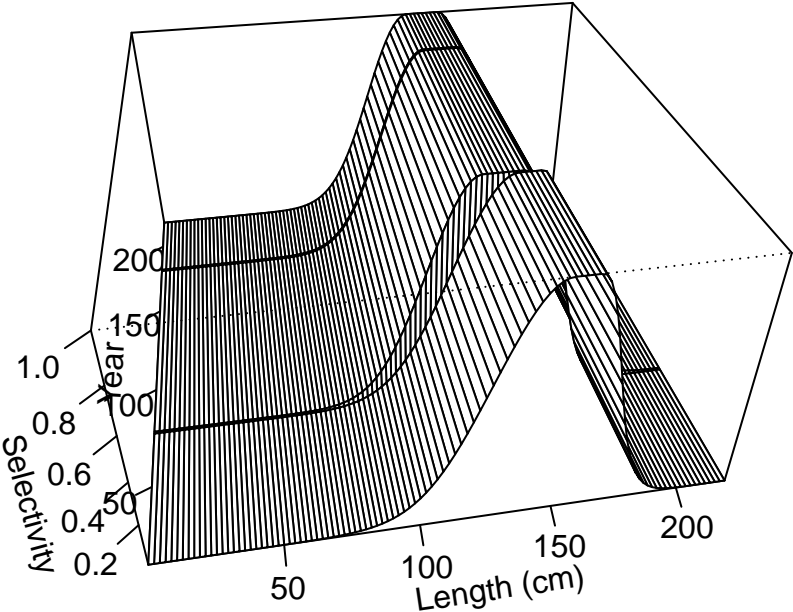
# Female time-varying selectivity for A3-LL-n



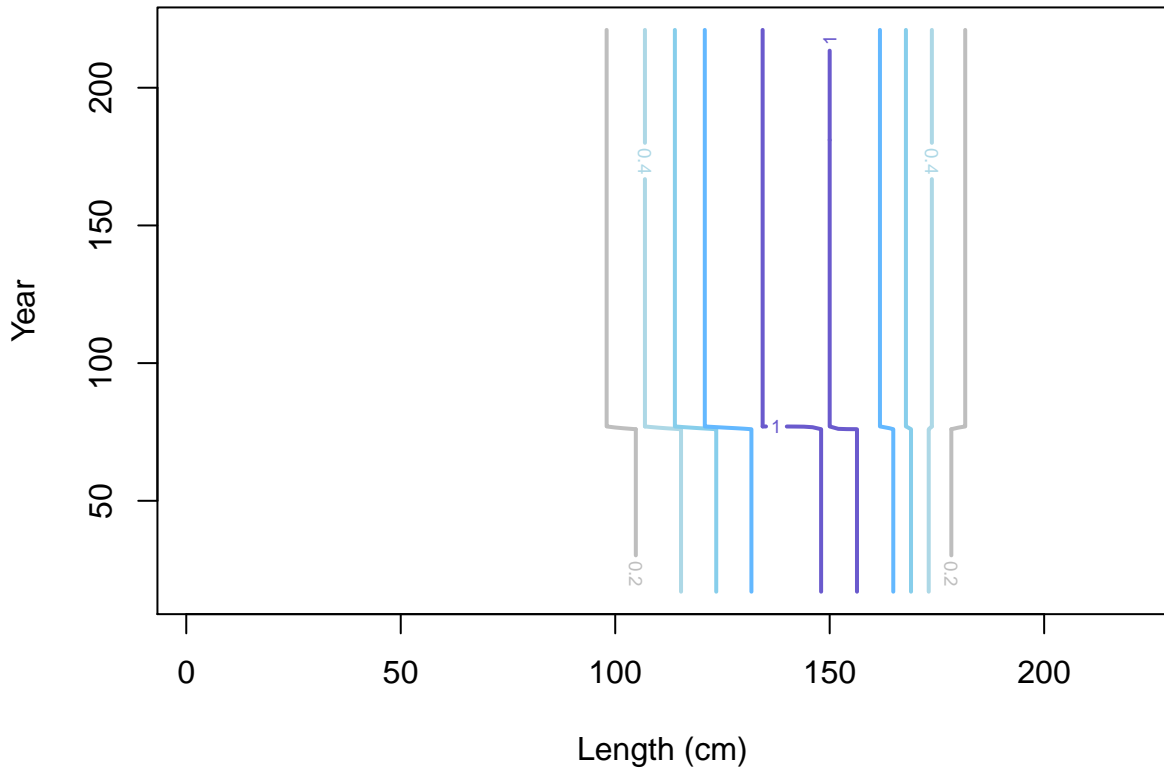
## Female ending year selectivity for A3-LL-n



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

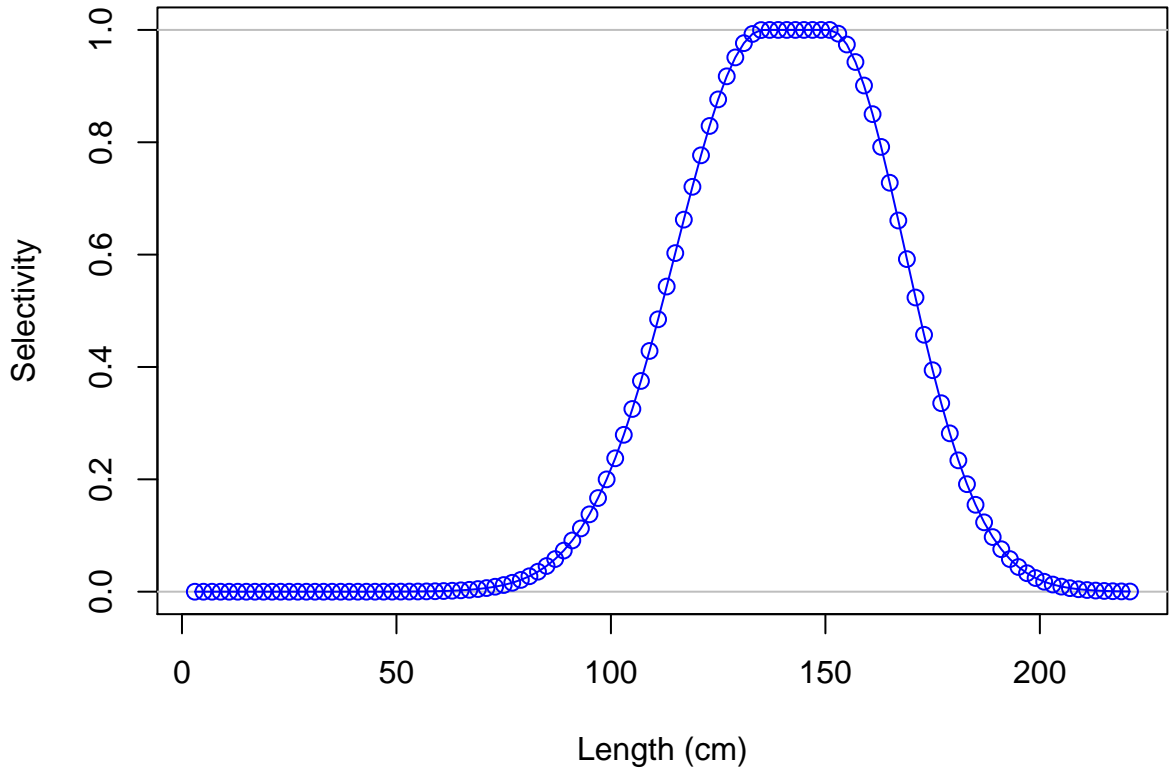


# Male time-varying selectivity for A3-LL-n

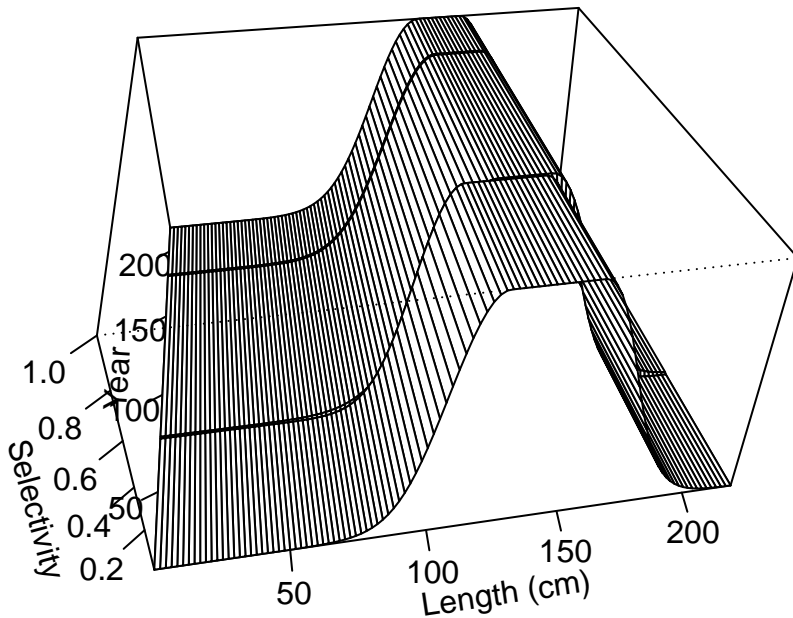




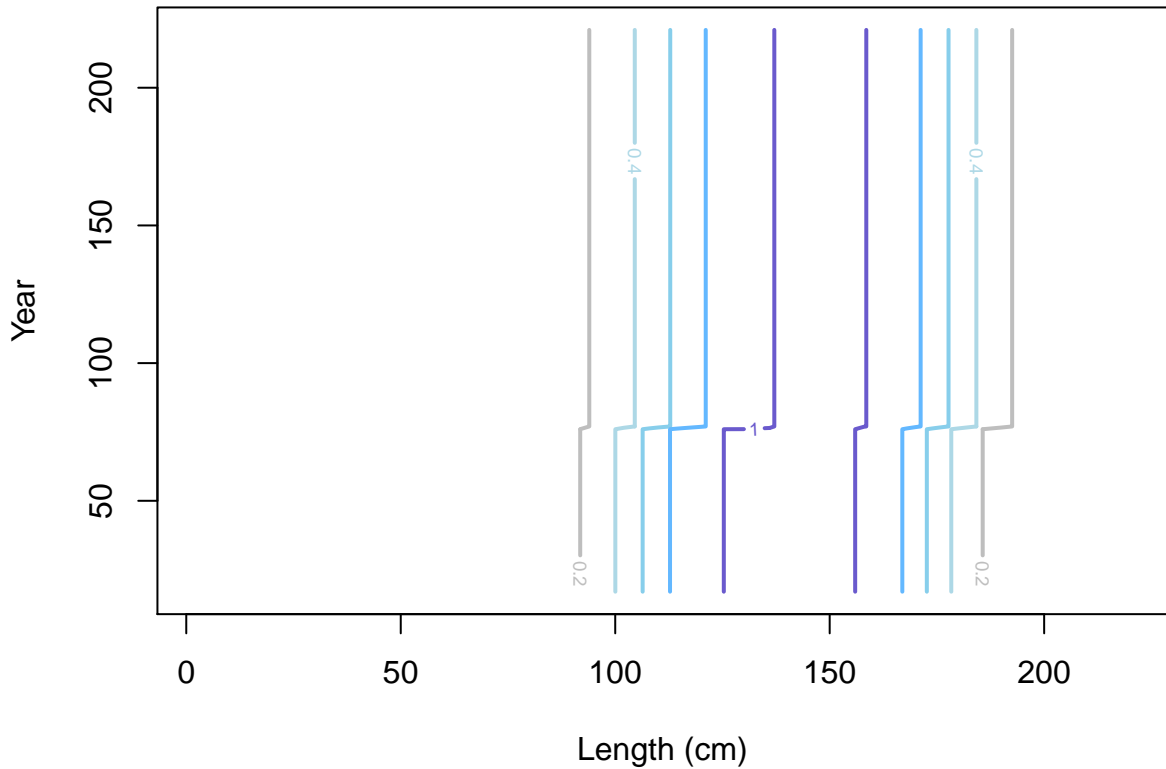
## Male ending year selectivity for A3-LL-n



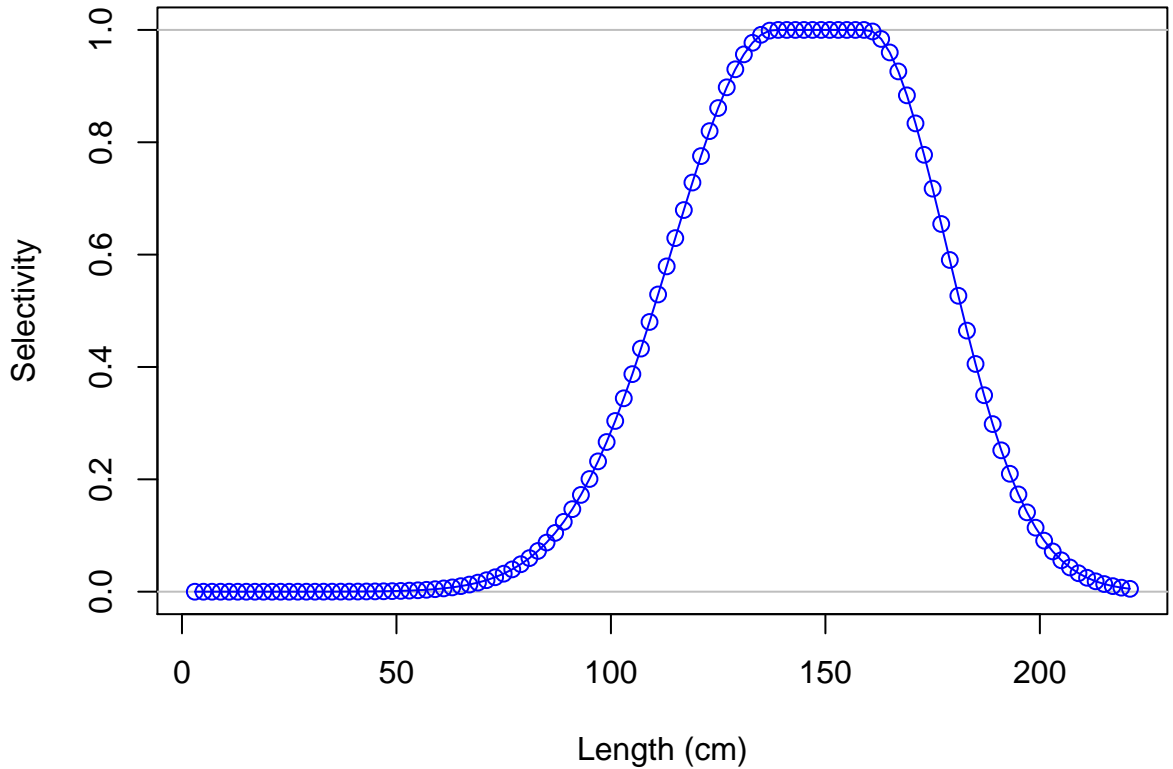
## Female time-varying selectivity for A4-LL-n



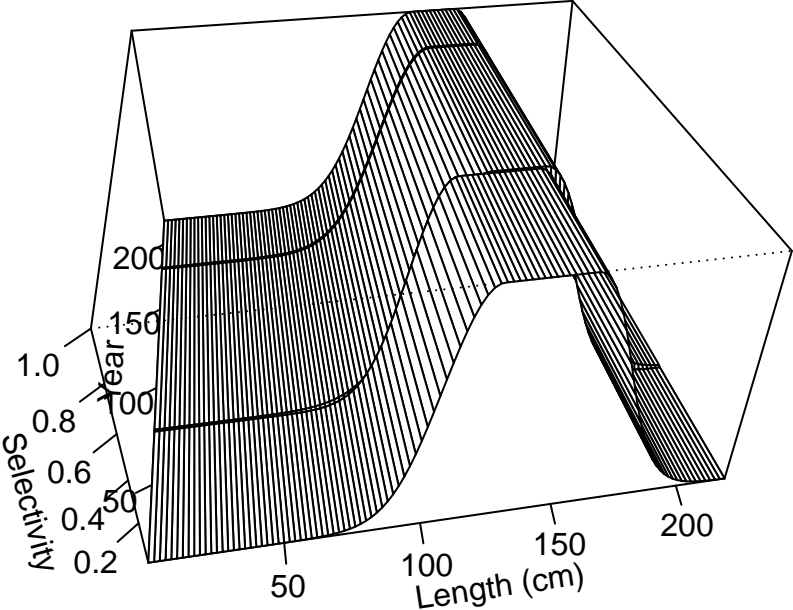
# Female time-varying selectivity for A4-LL-n



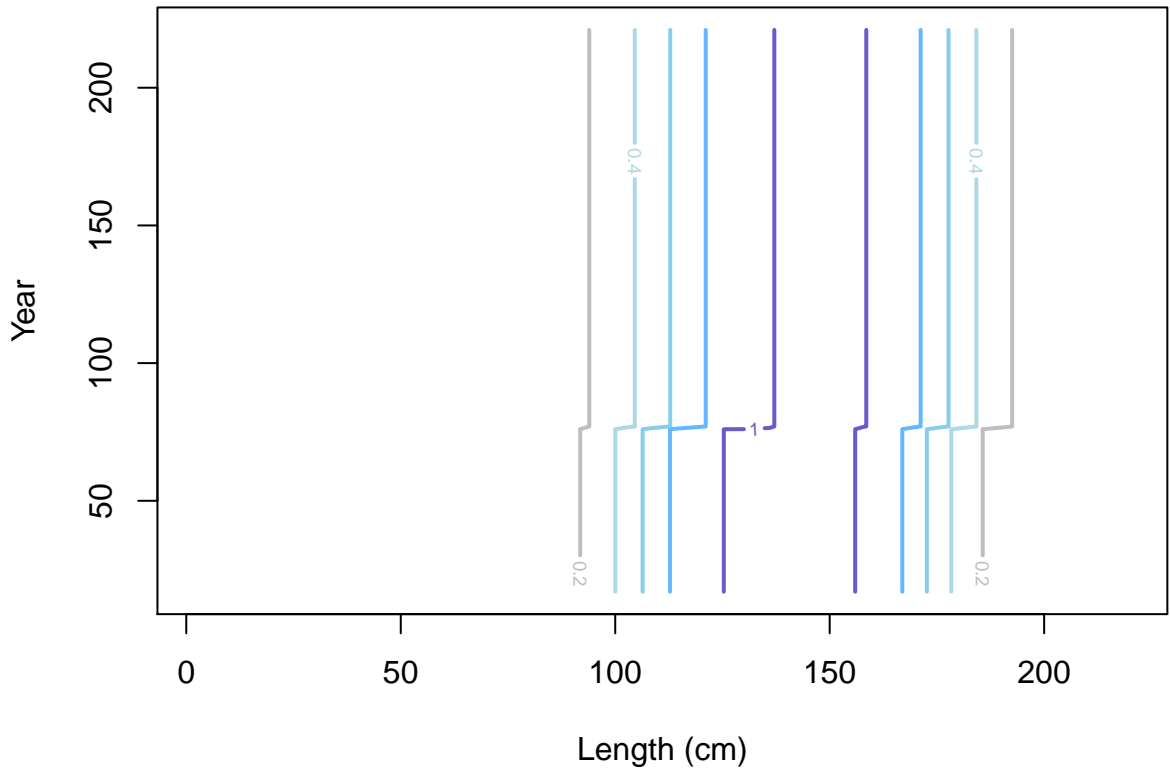
## Female ending year selectivity for A4-LL-n



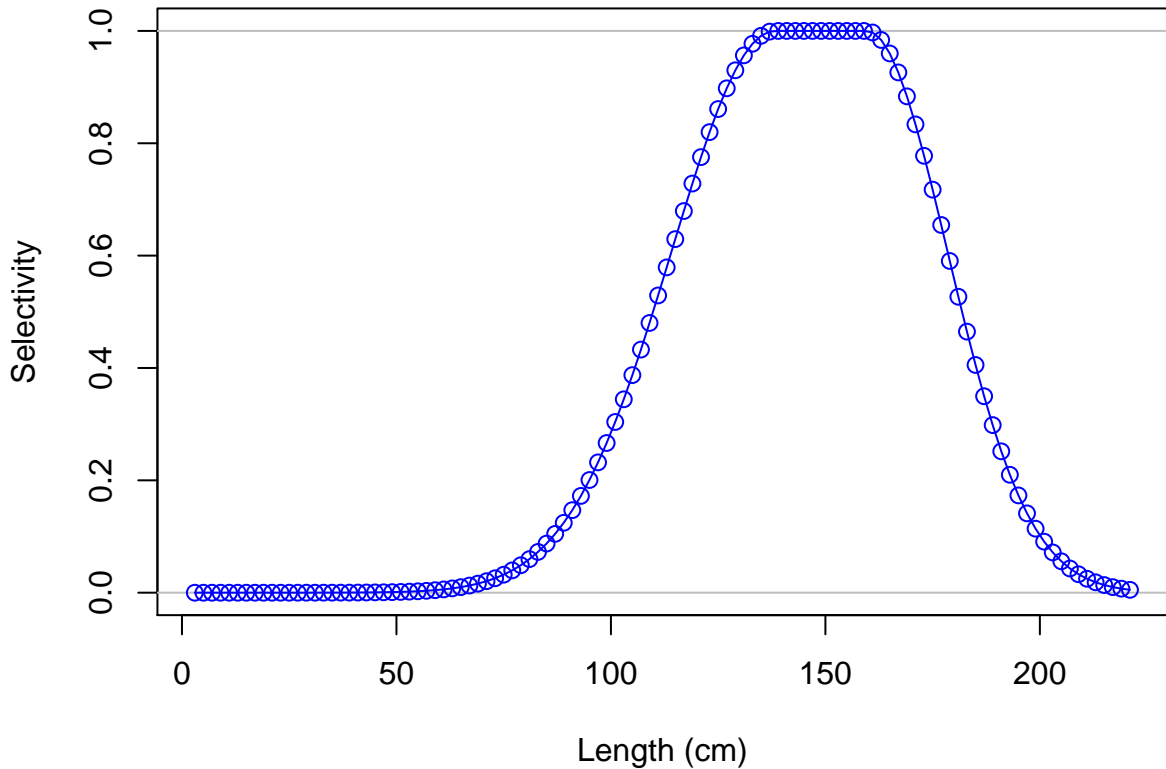
# Male time-varying selectivity for A4-LL-n



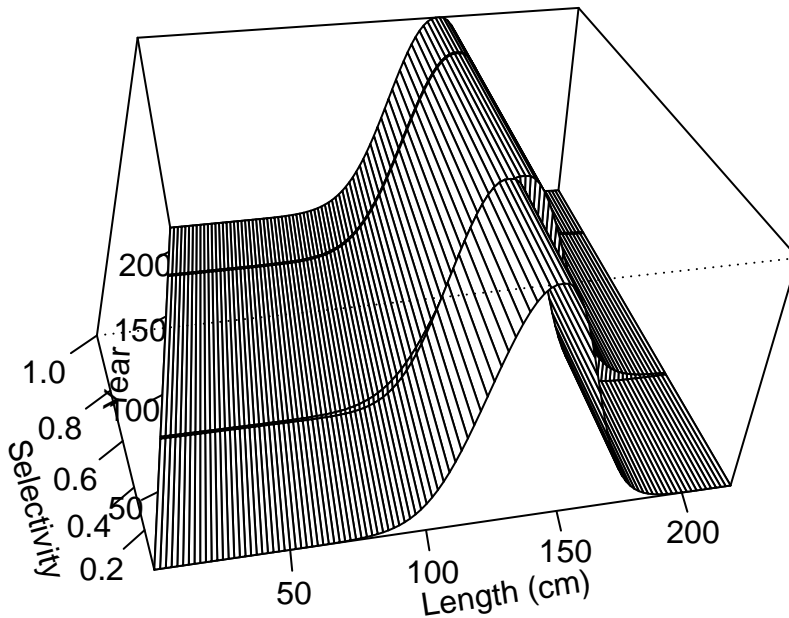
# Male time-varying selectivity for A4-LL-n



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

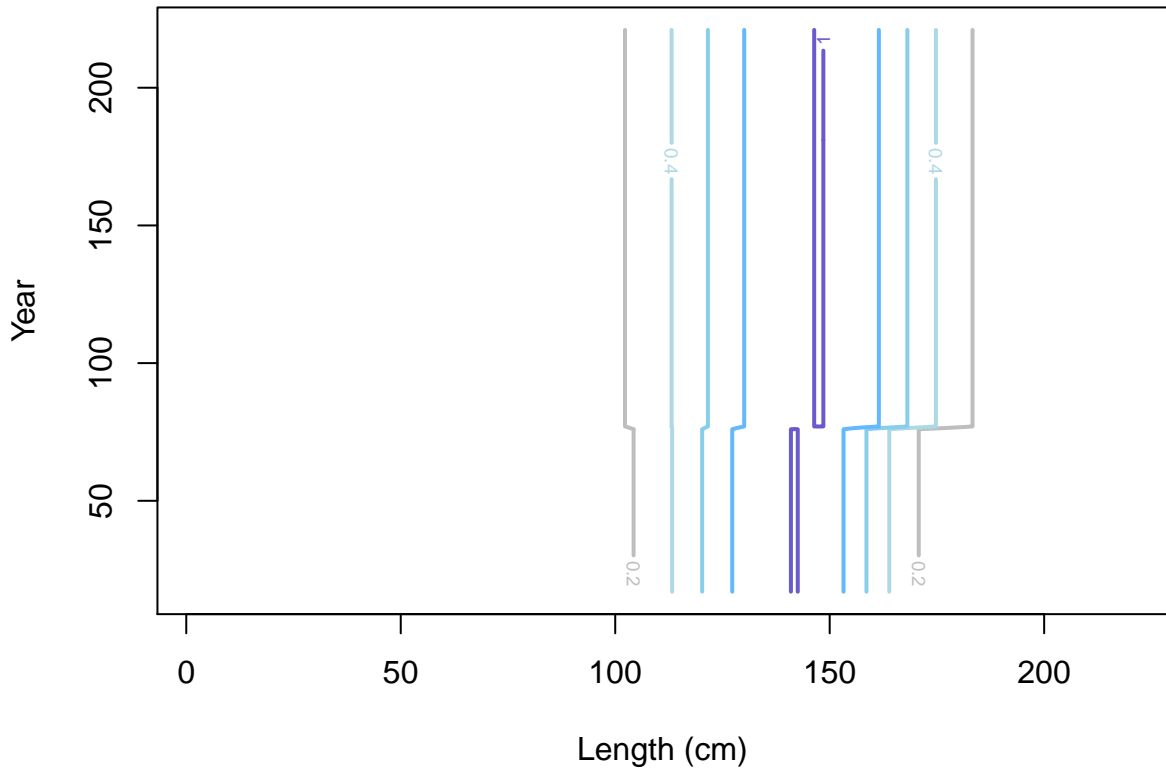


## Female time-varying selectivity for A5-LL-n

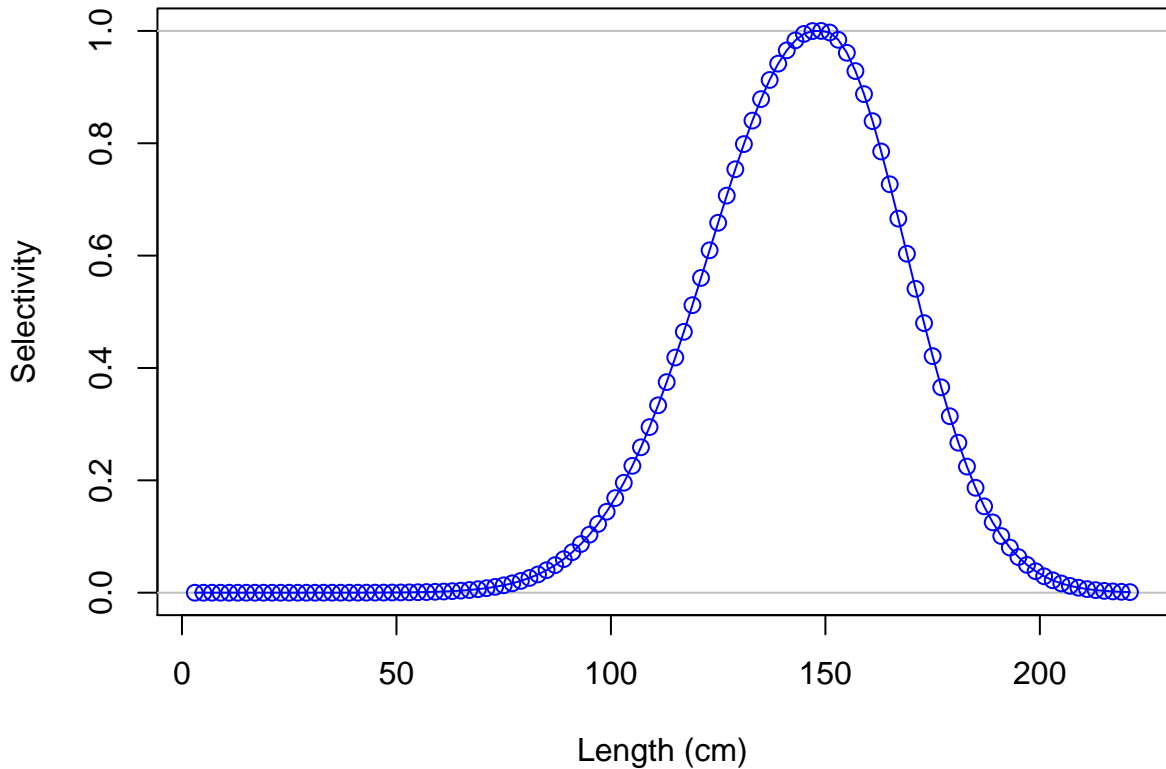




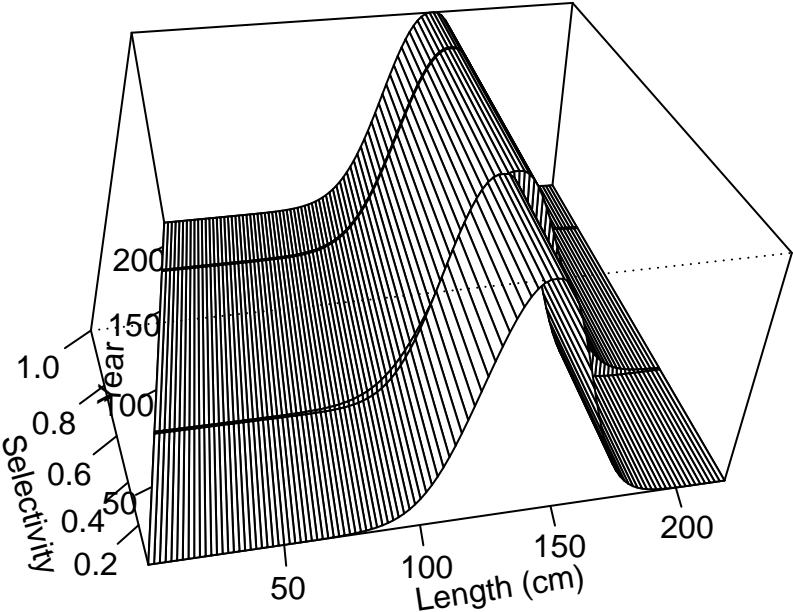
# Female time-varying selectivity for A5-LL-n



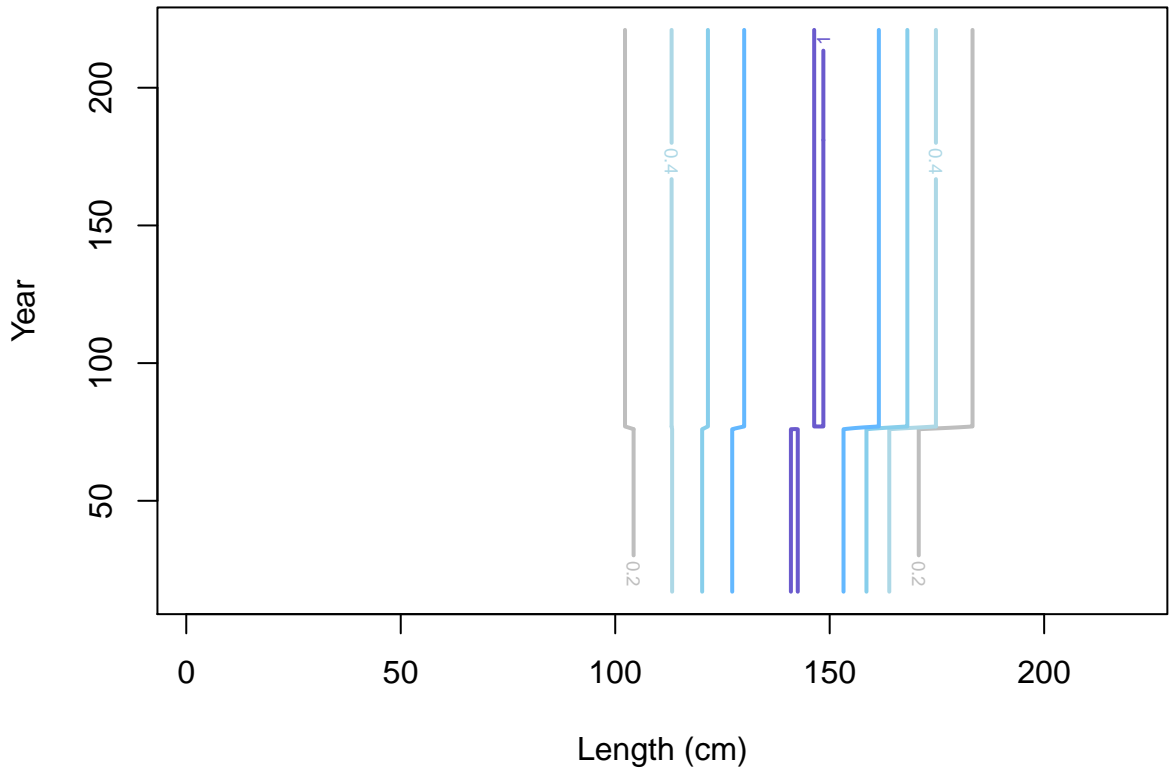
## Female ending year selectivity for A5-LL-n



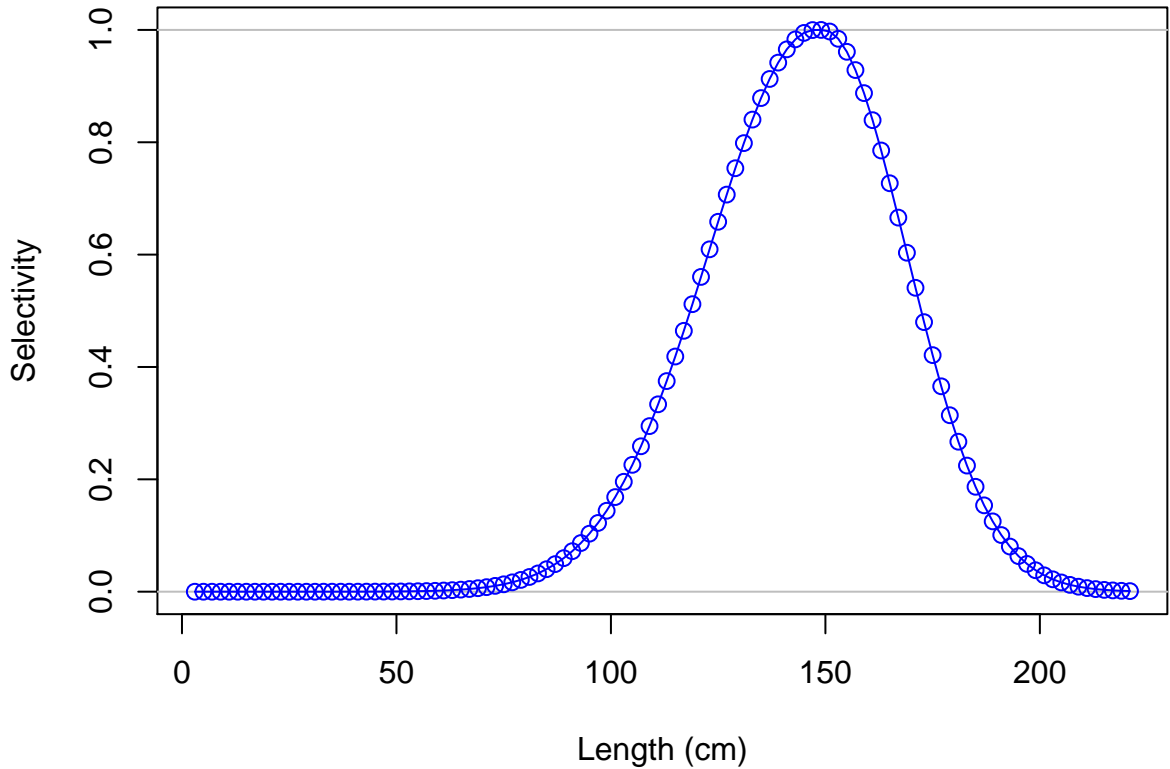
# Male time-varying selectivity for A5-LL-n



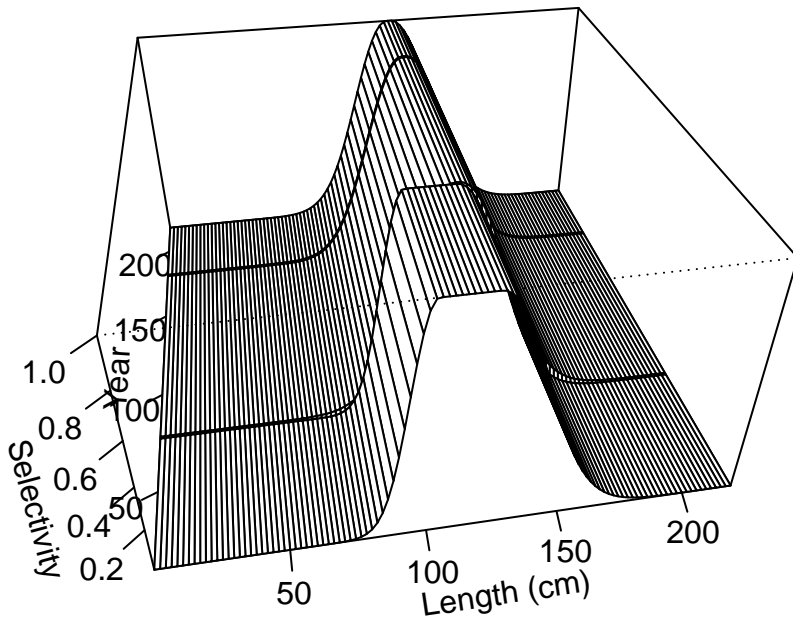
# Male time-varying selectivity for A5-LL-n



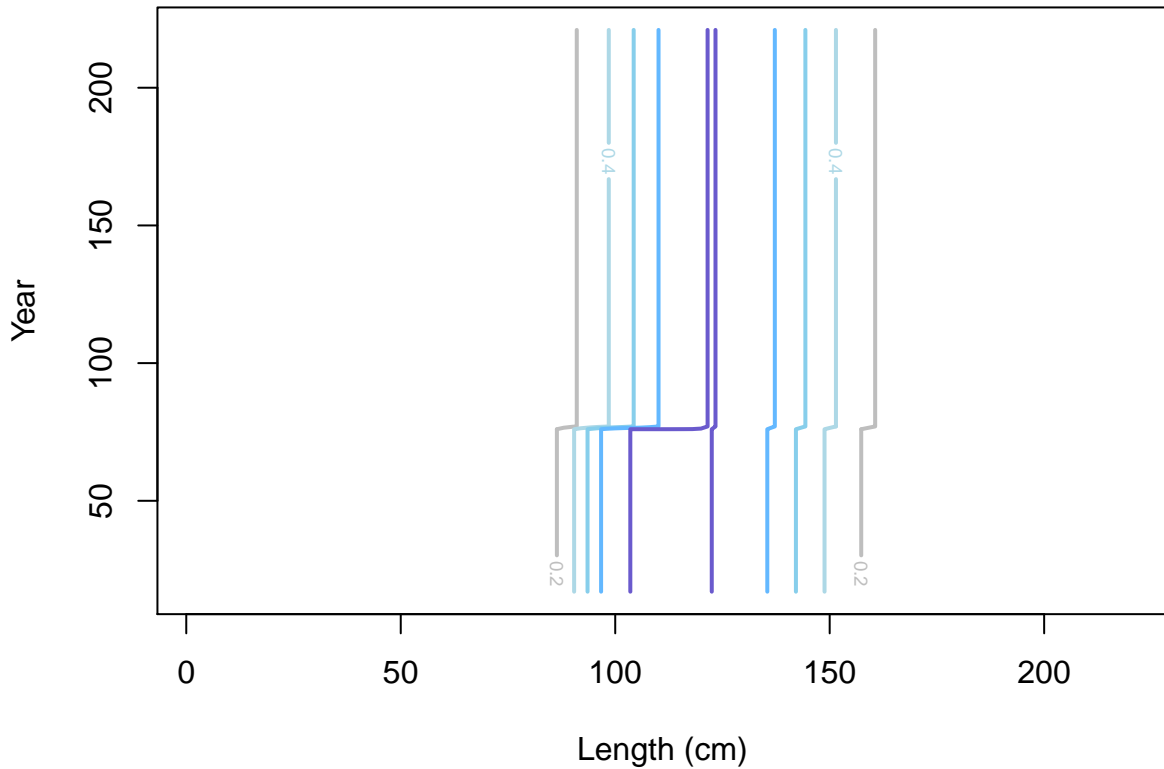
## Male ending year selectivity for A5-LL-n



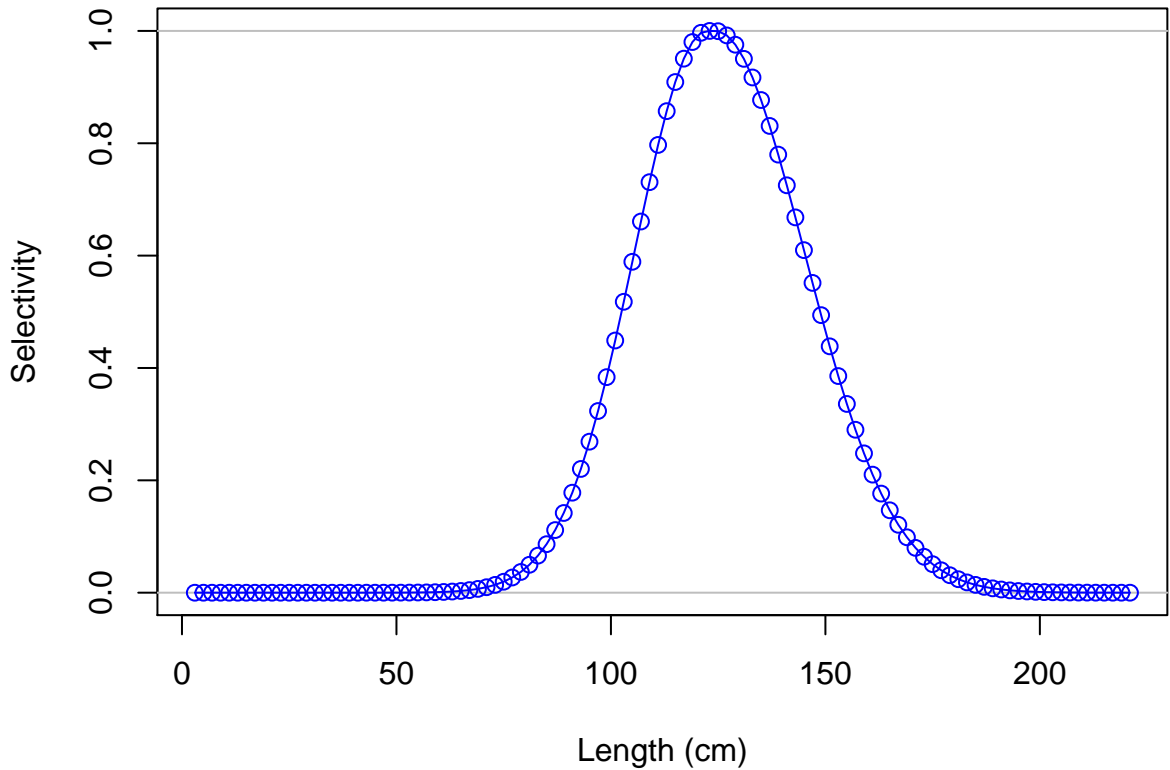
## Female time-varying selectivity for A6-LL-n



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

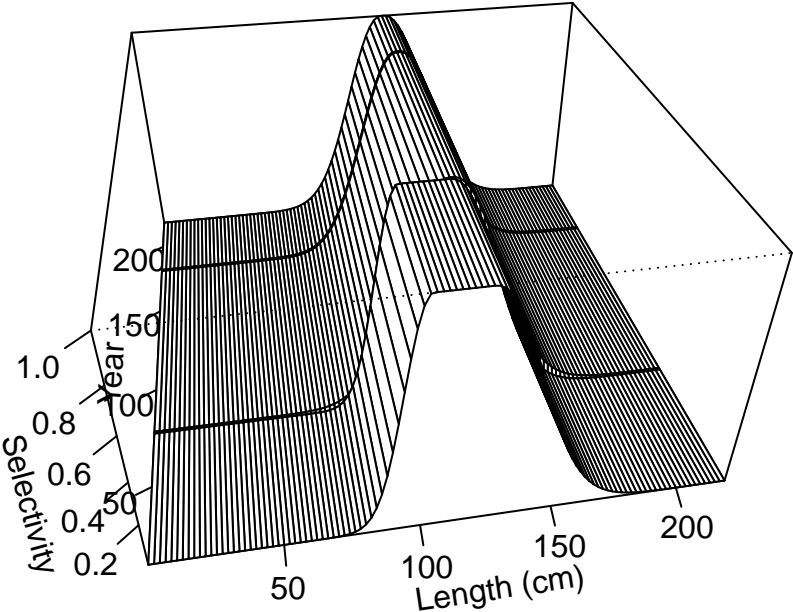


## Female ending year selectivity for A6-LL-n

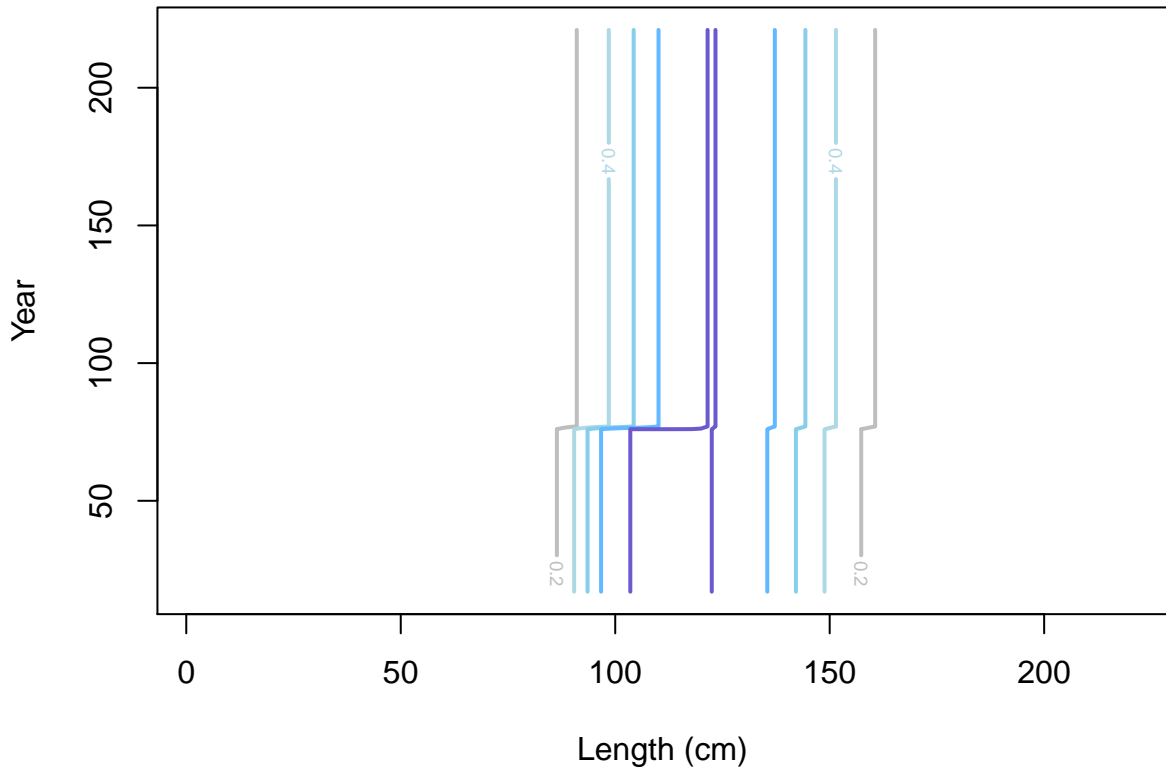




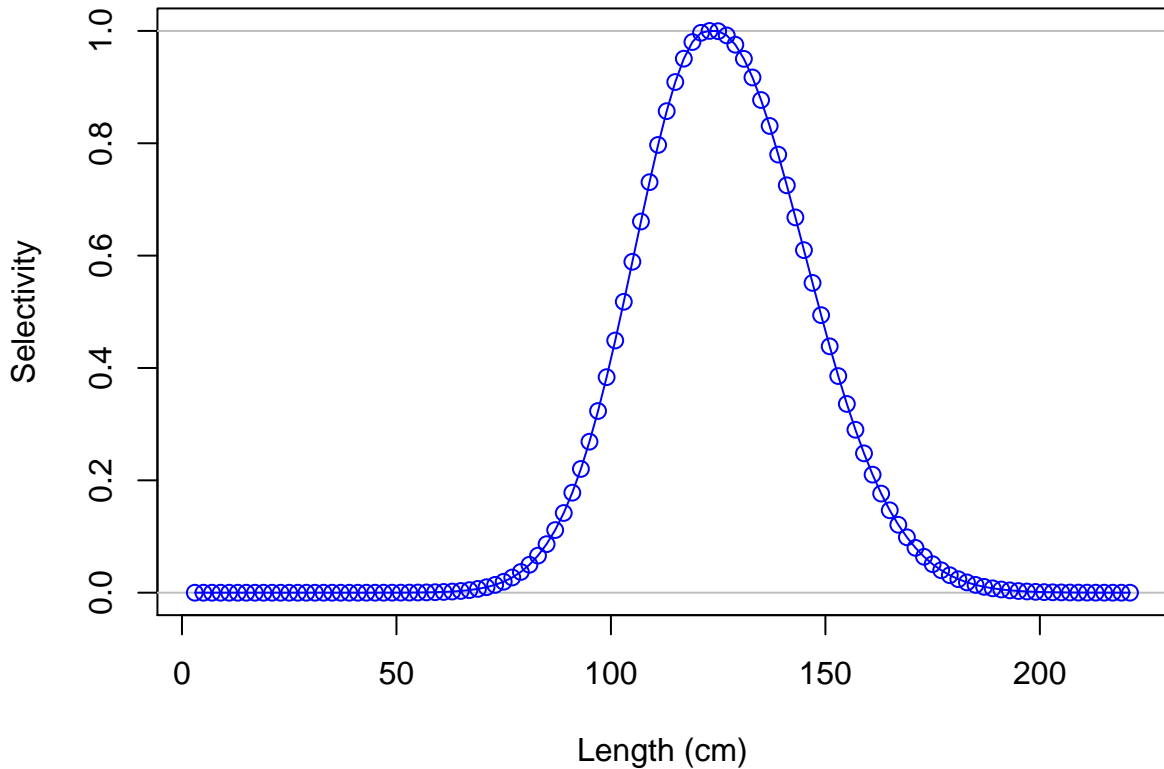
# Male time-varying selectivity for A6-LL-n



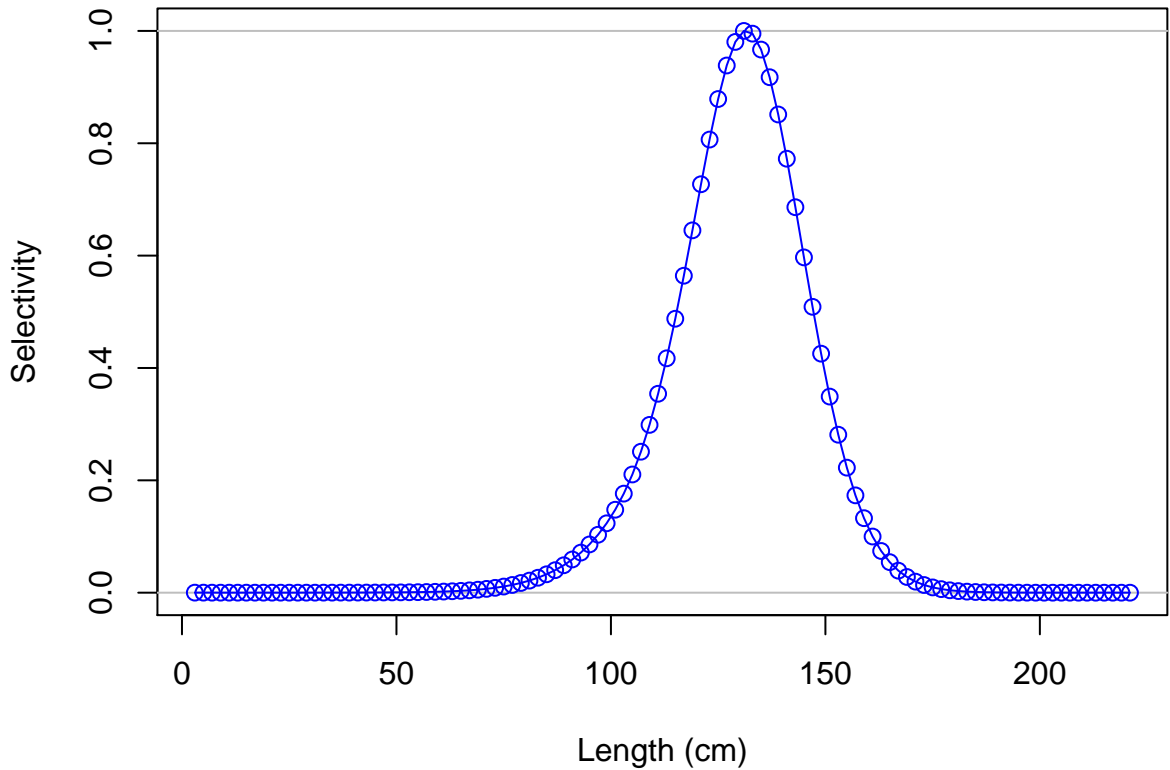
# Male time-varying selectivity for A6-LL-n



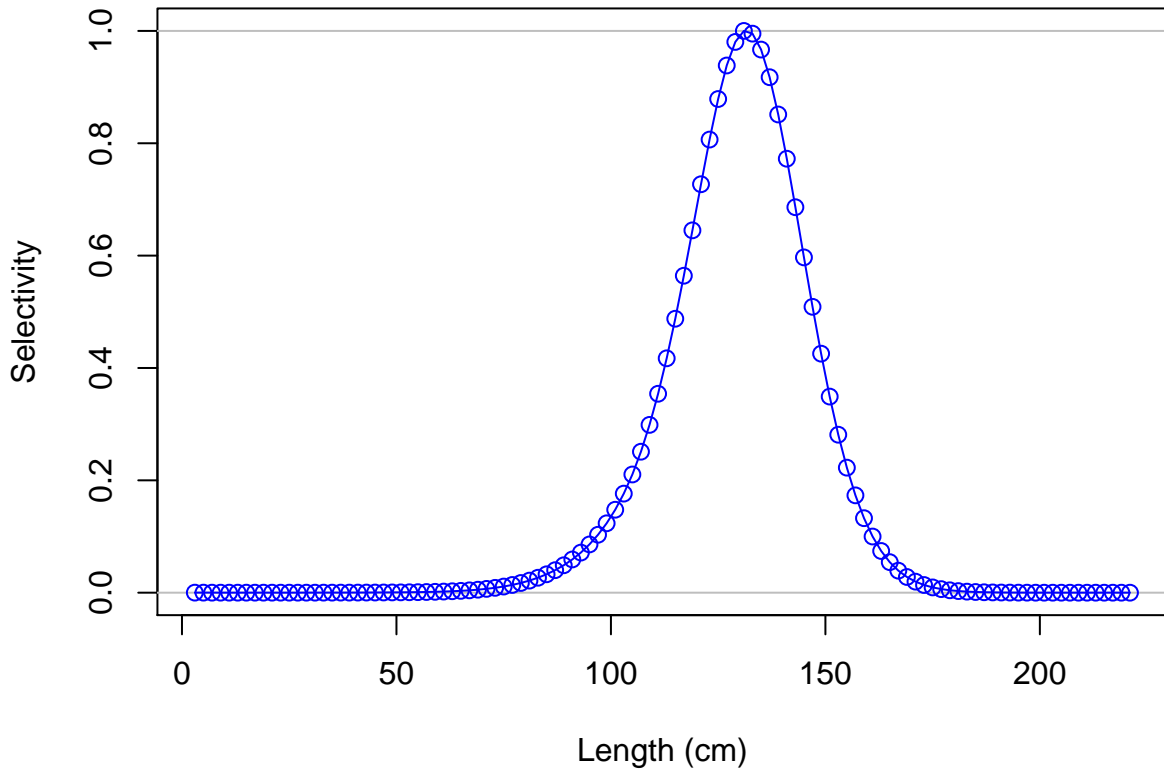
## Male ending year selectivity for A6-LL-n



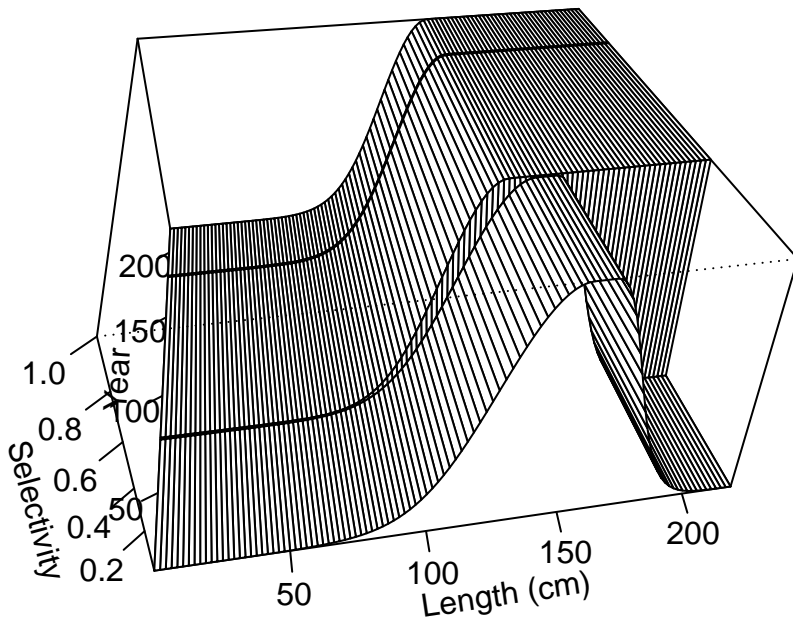
## Female ending year selectivity for A1-LL-w



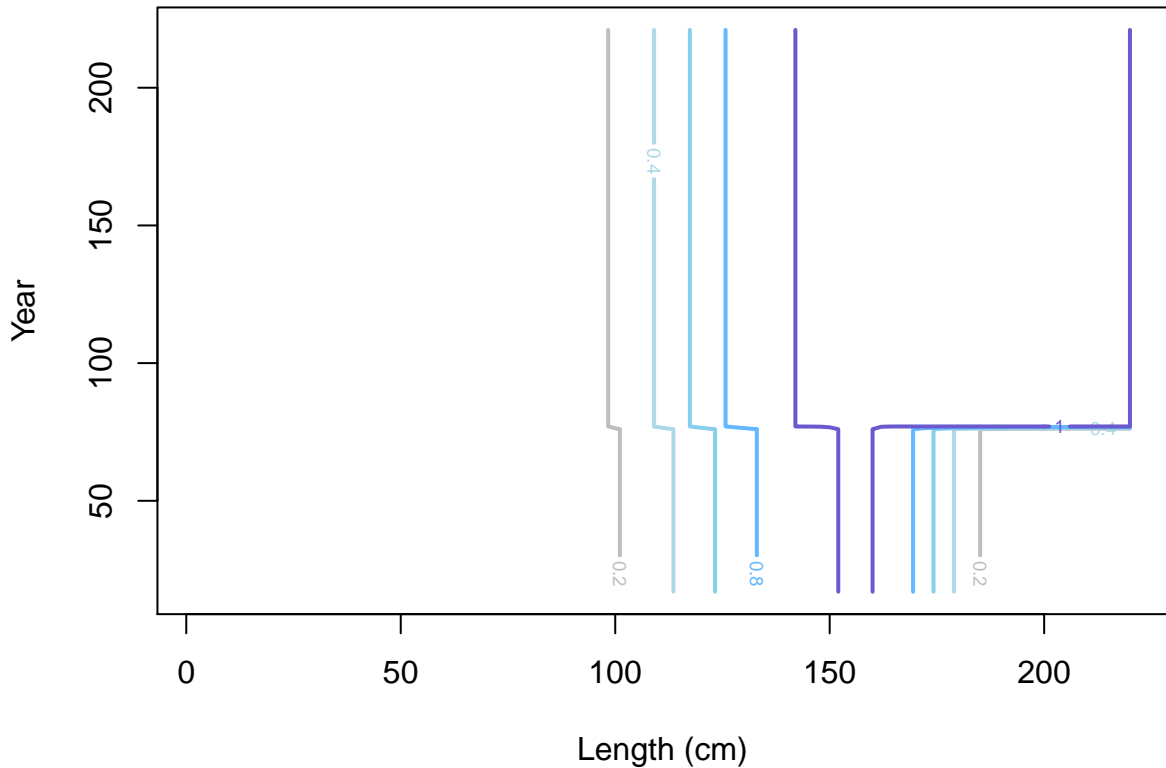
# Male ending year selectivity for A1-LL-w



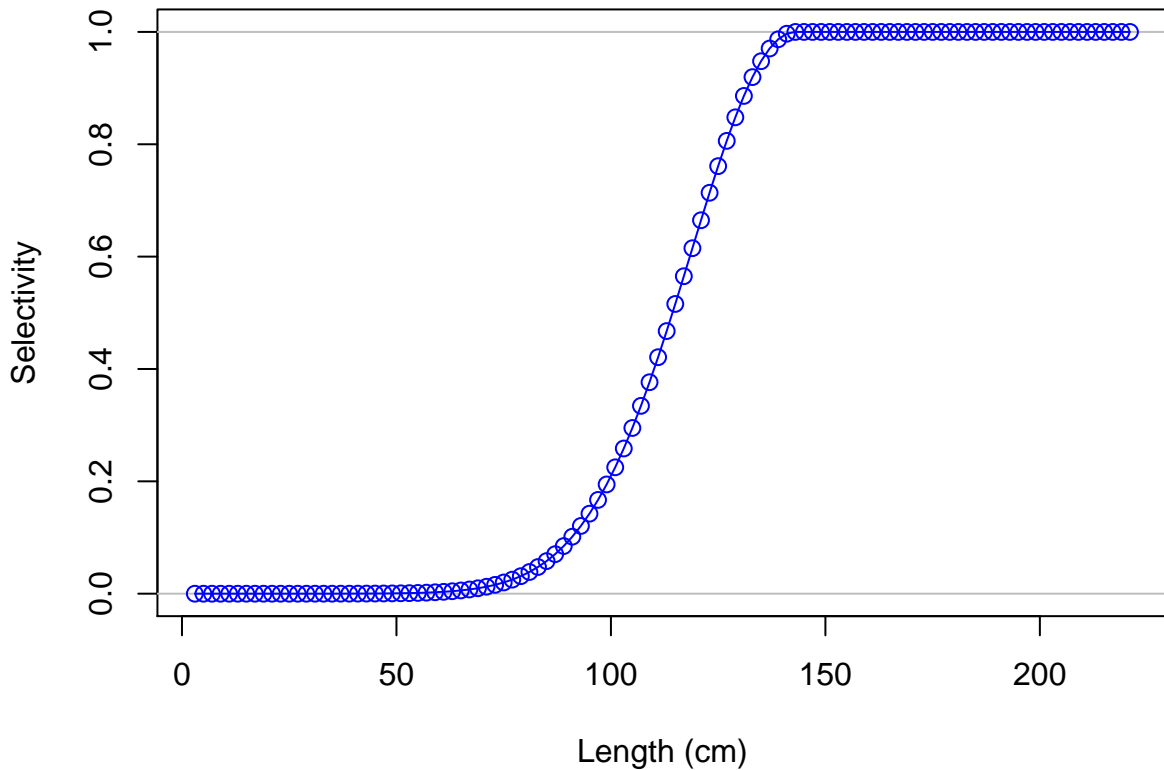
## Female time-varying selectivity for A2-LL-w



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

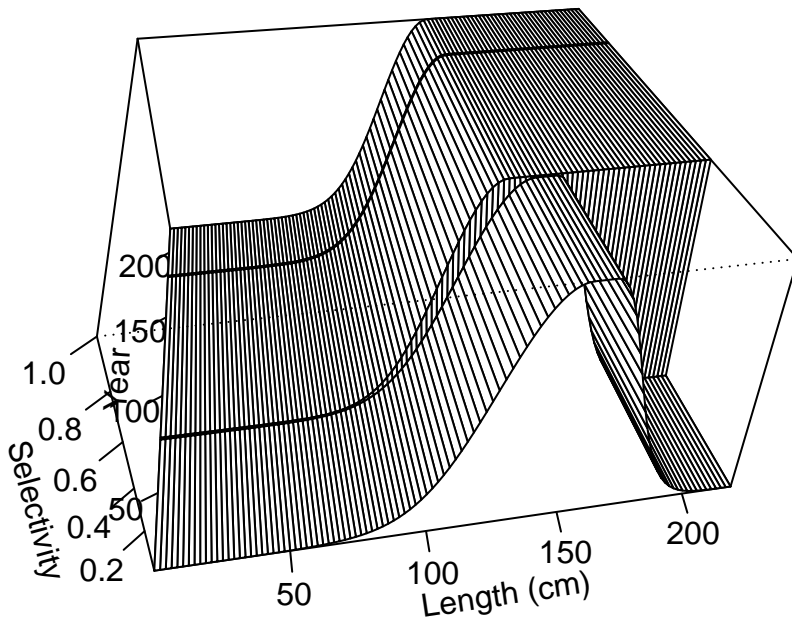


## Female ending year selectivity for A2-LL-w

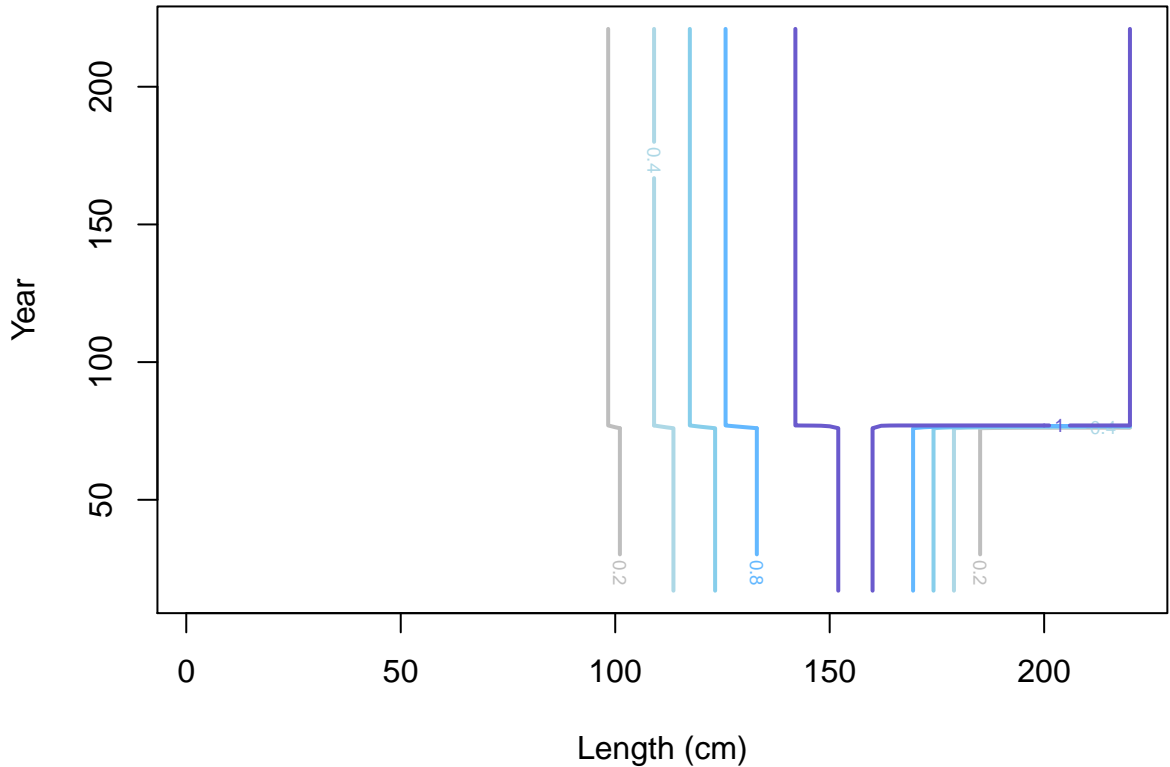




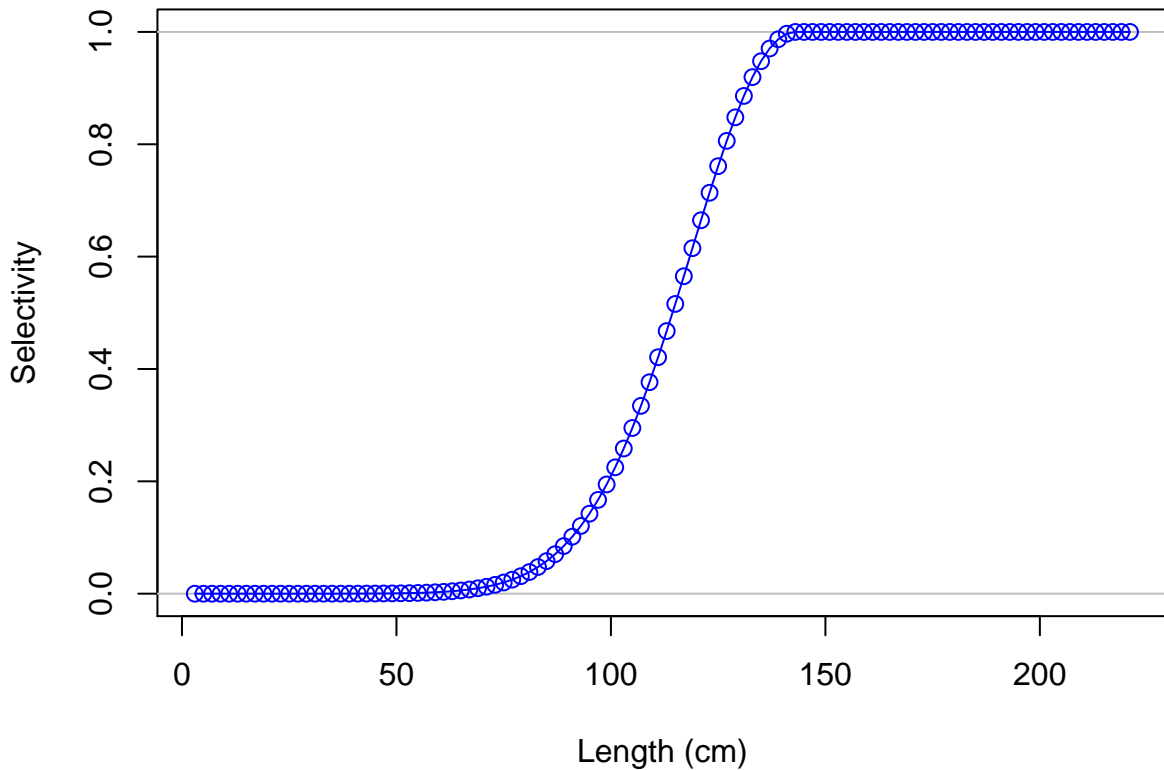
## Male time-varying selectivity for A2-LL-w



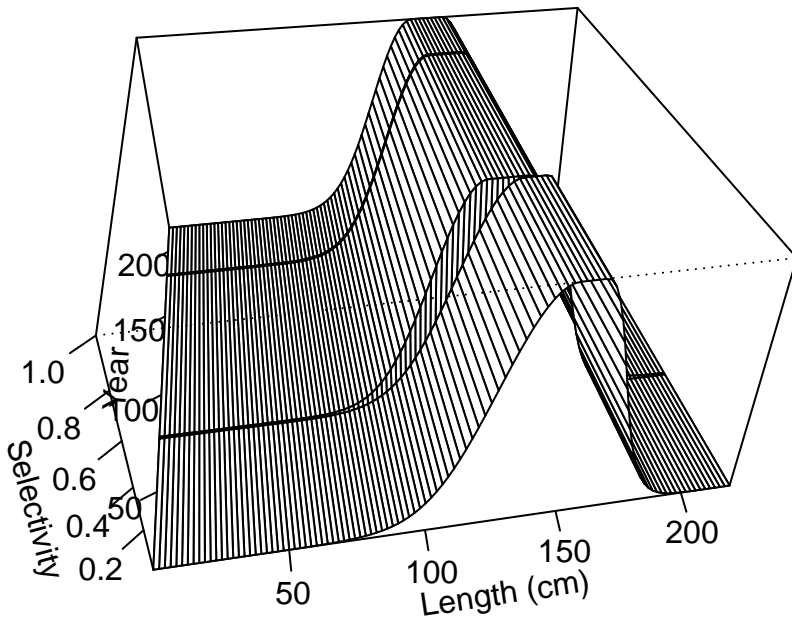
# Male time-varying selectivity for A2-LL-w



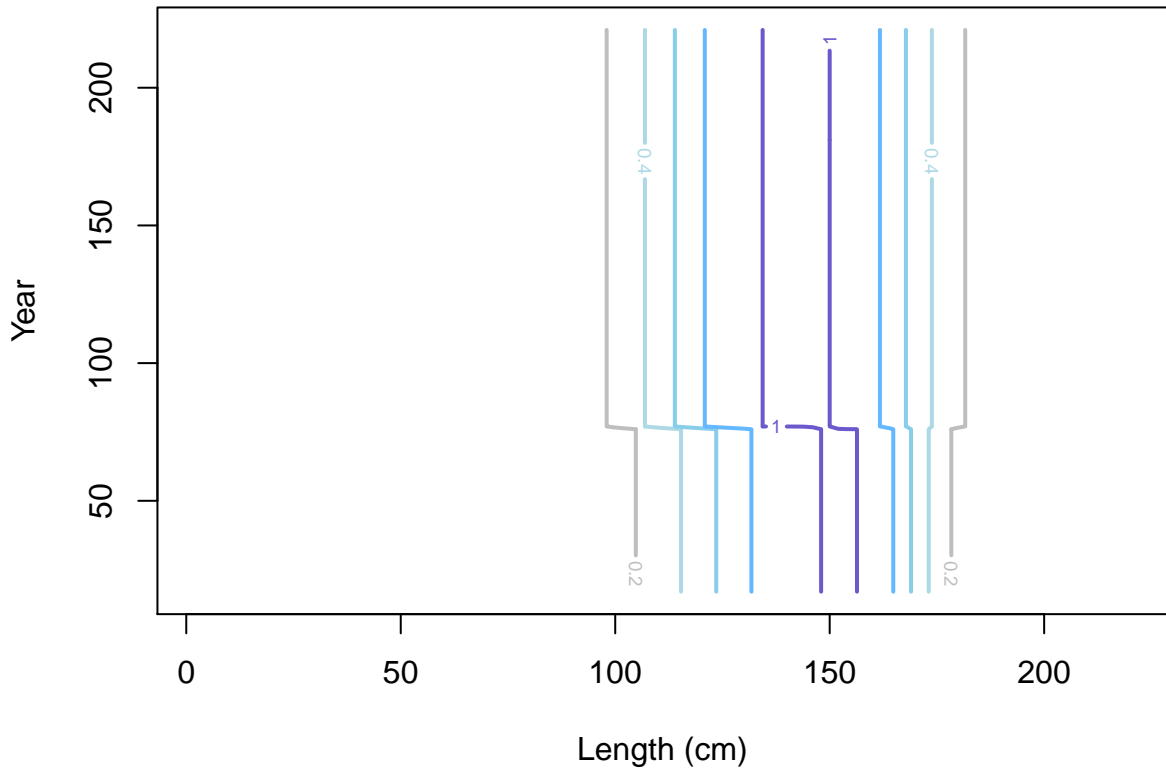
## Male ending year selectivity for A2-LL-w



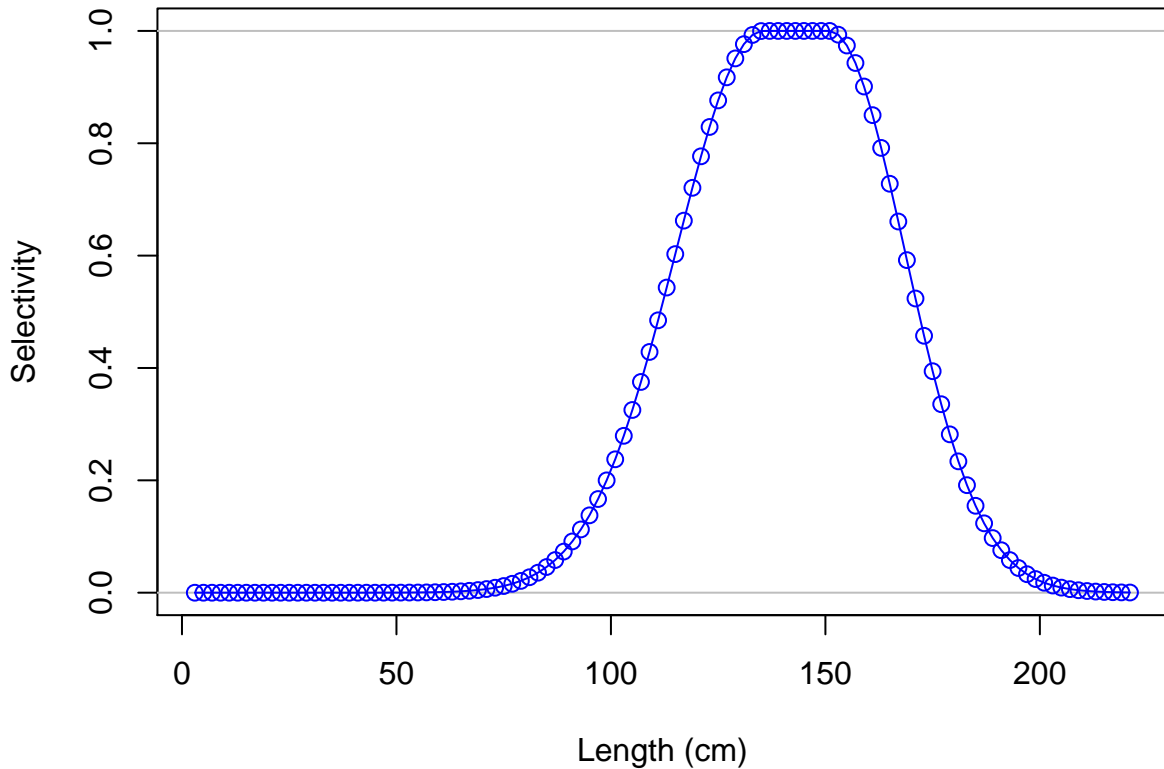
## Female time-varying selectivity for A3-LL-w



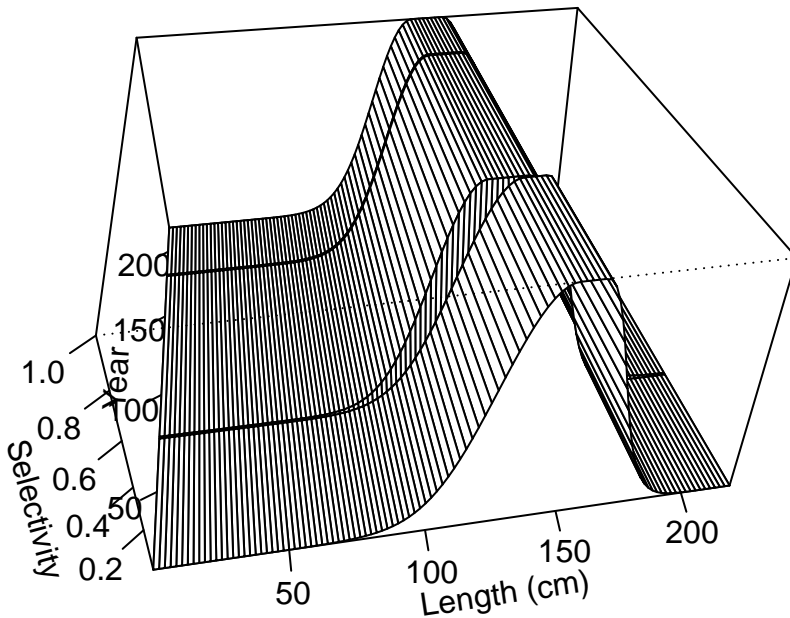
# Female time-varying selectivity for A3-LL-w



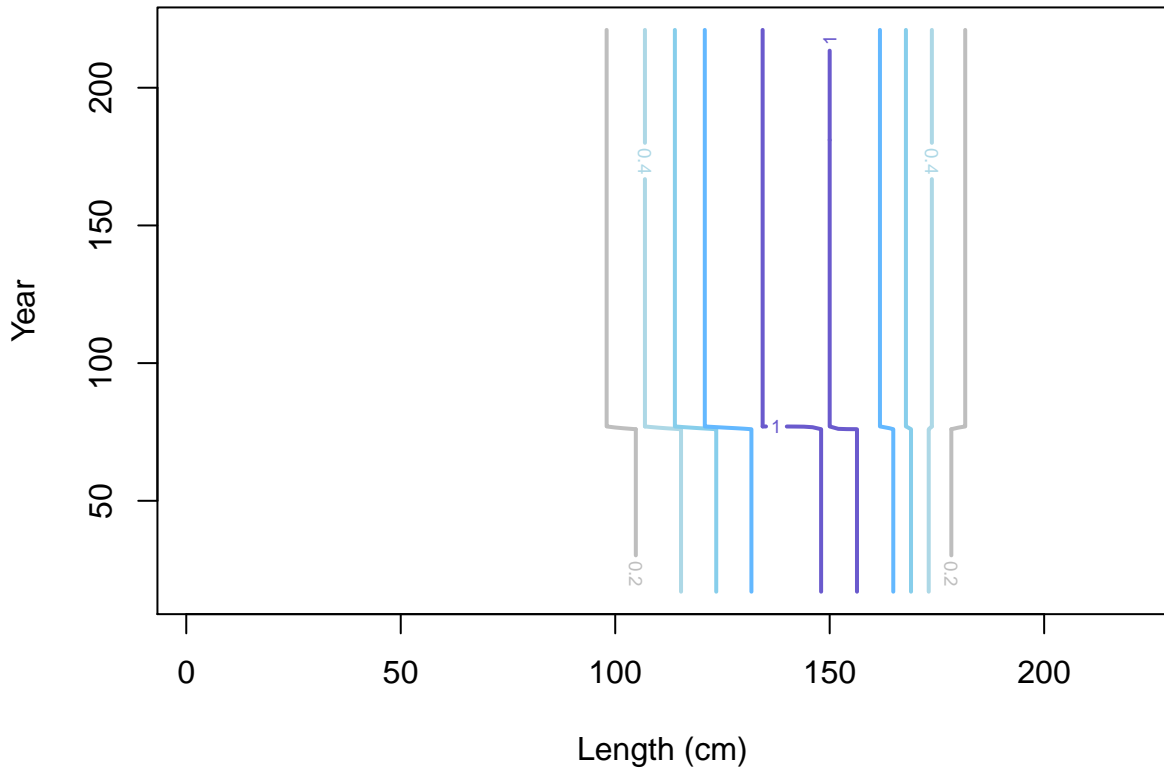
## Female ending year selectivity for A3-LL-w



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

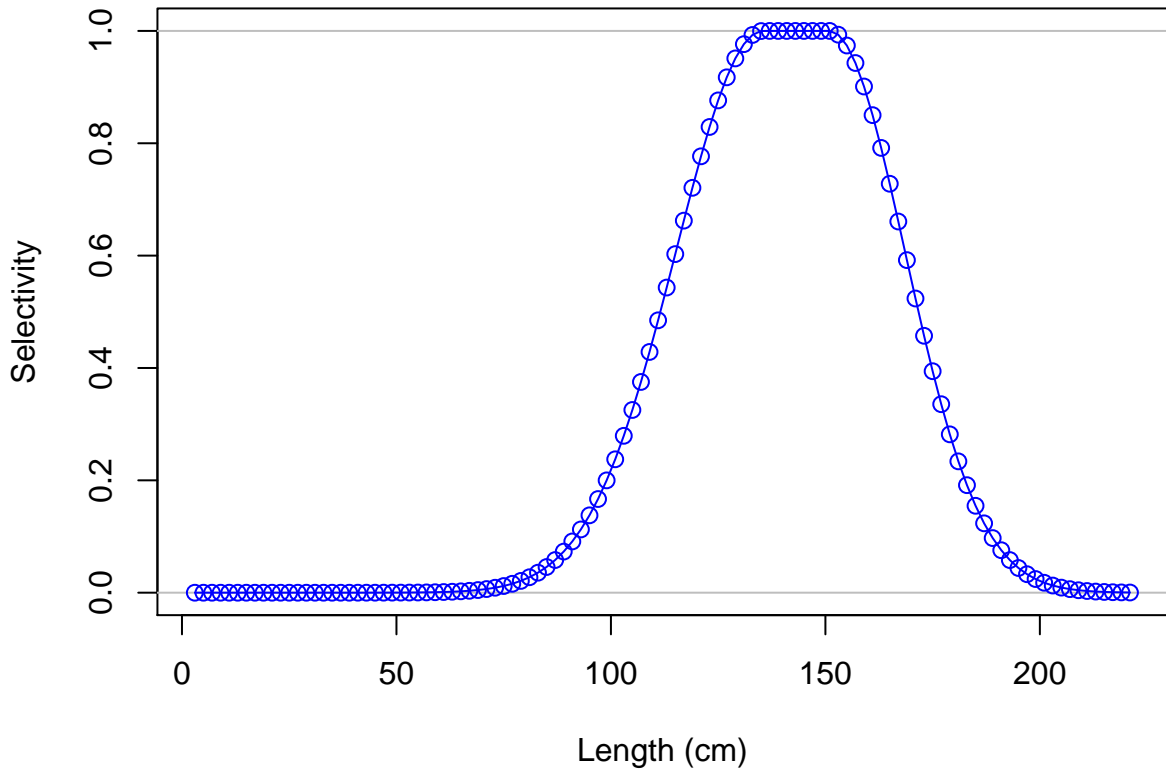


# Male time-varying selectivity for A3-LL-w

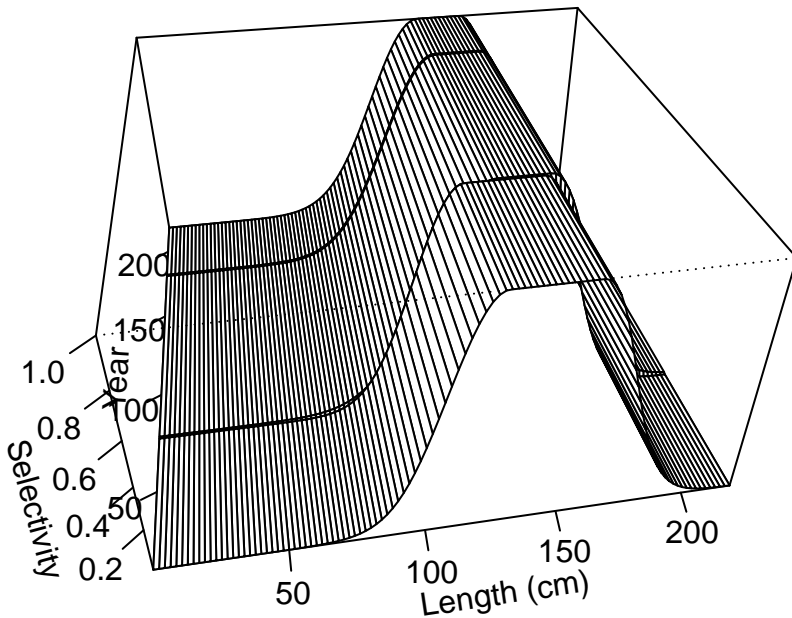




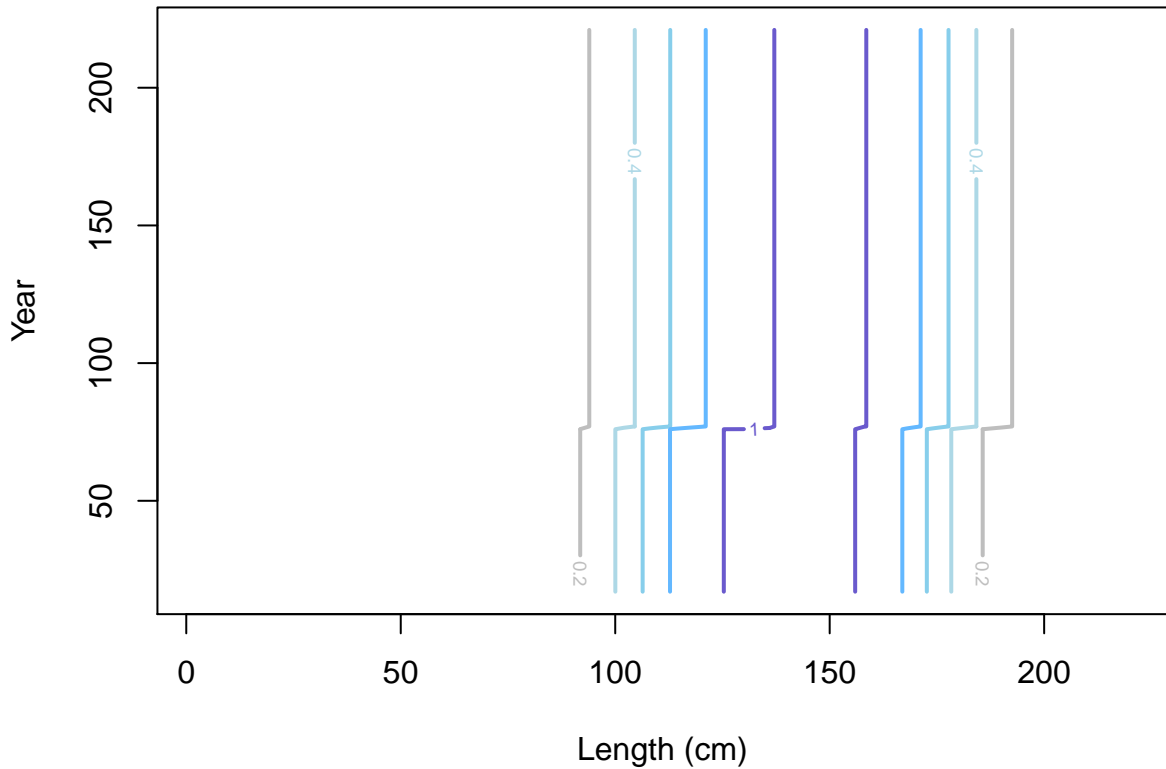
### Male ending year selectivity for A3-LL-w



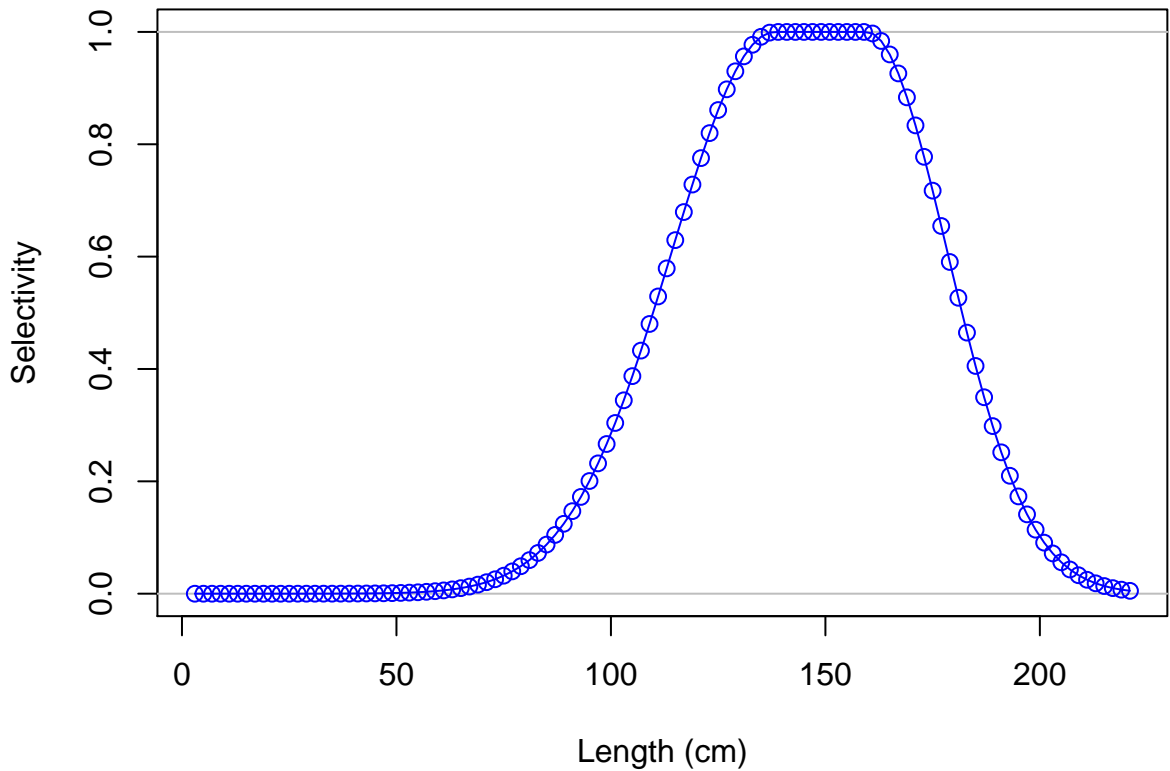
## Female time-varying selectivity for A4-LL-w



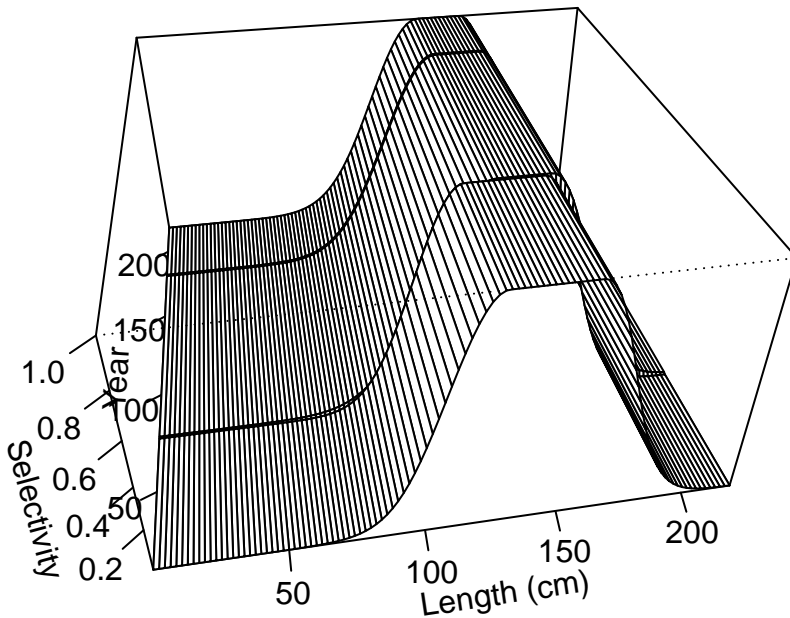
# Female time-varying selectivity for A4-LL-w



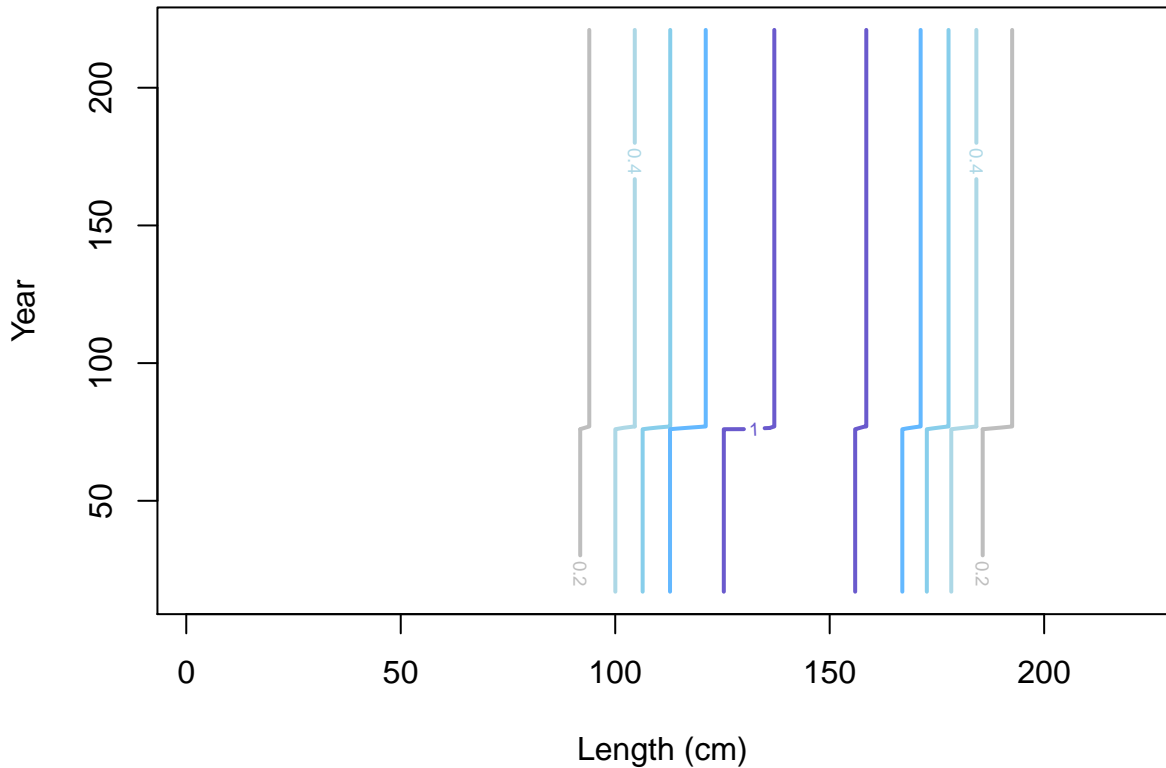
## Female ending year selectivity for A4-LL-w



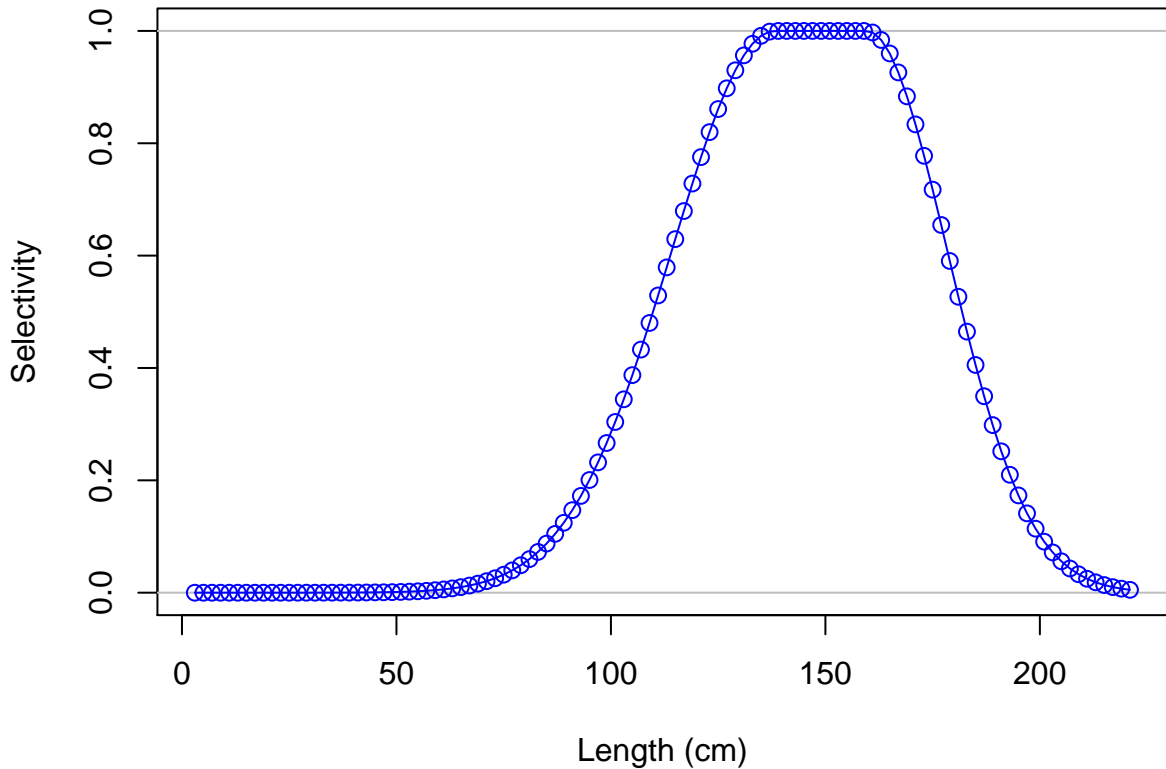
# Male time-varying selectivity for A4-LL-w



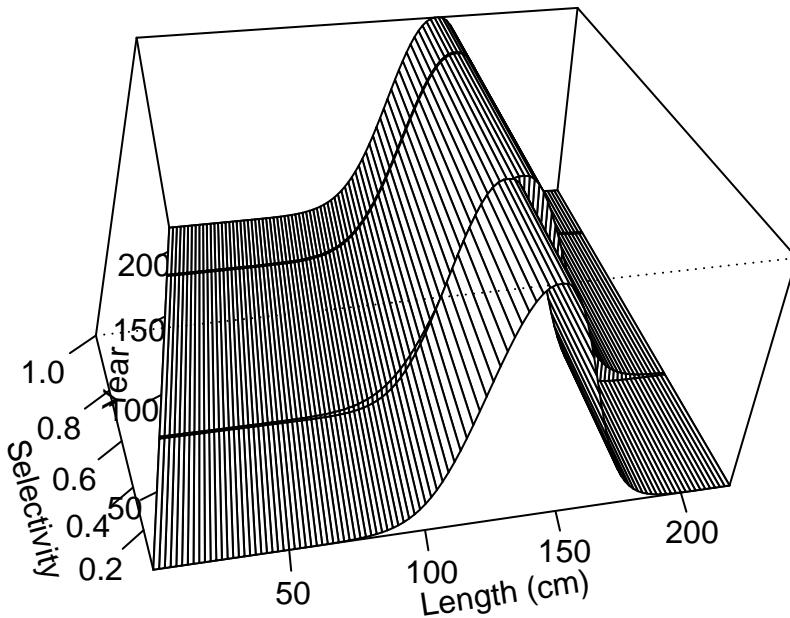
# Male time-varying selectivity for A4-LL-w



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

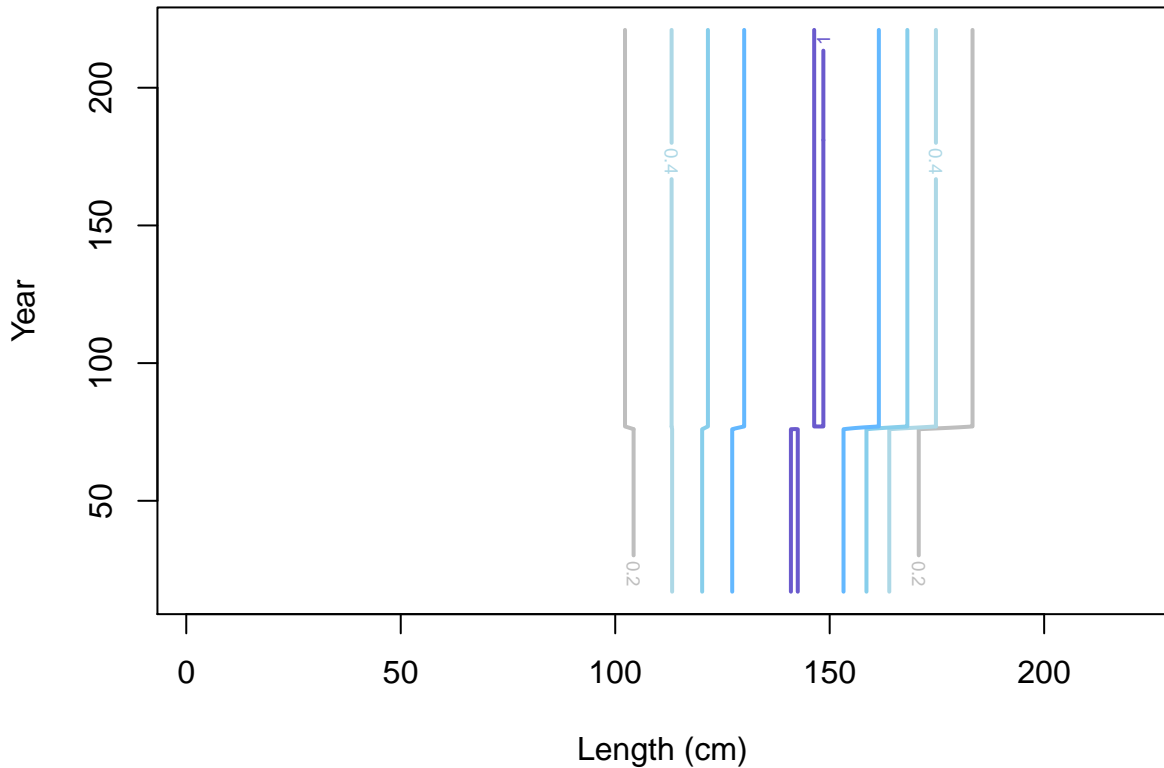


## Female time-varying selectivity for A5-LL-w

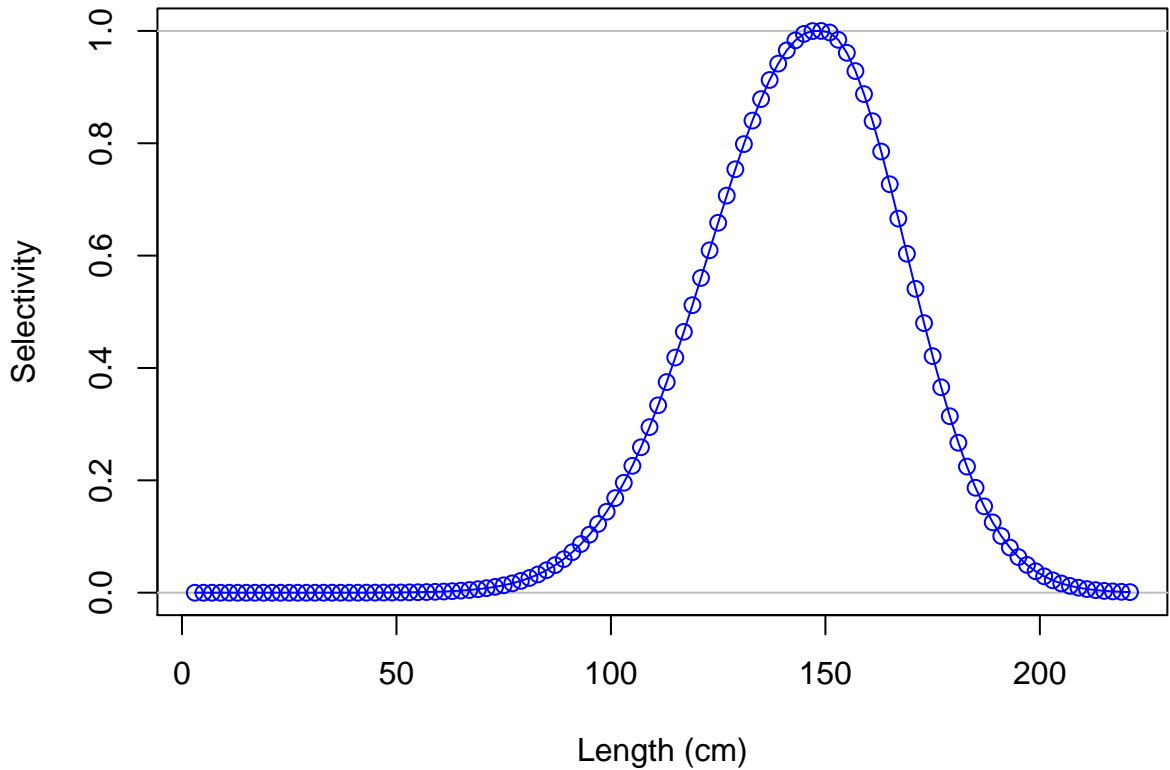




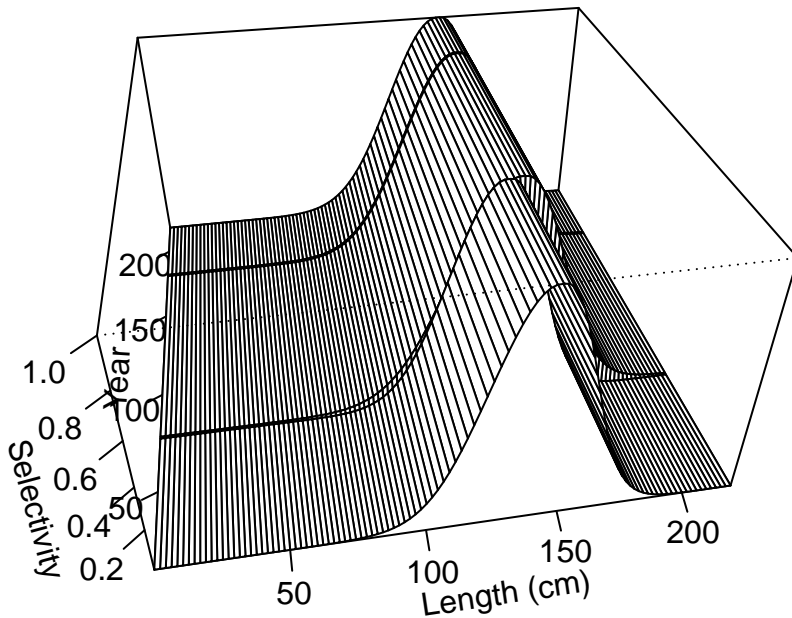
## Female time-varying selectivity for A5-LL-w



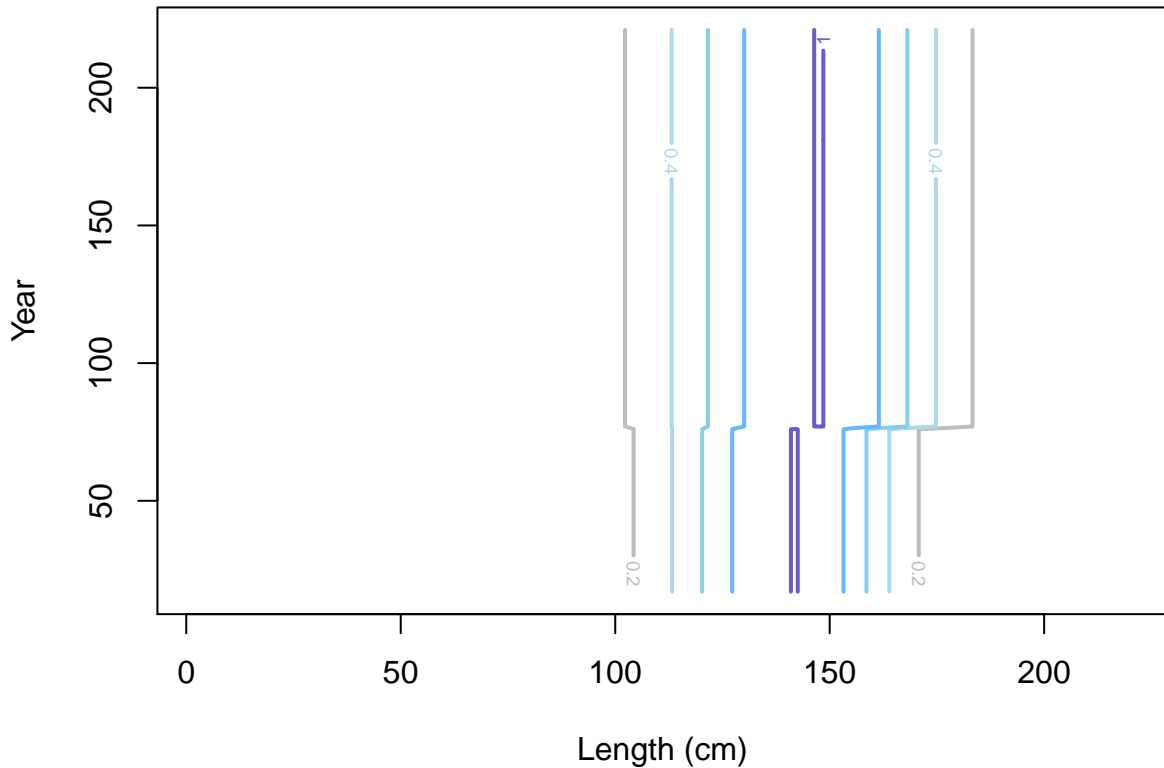
## Female ending year selectivity for A5-LL-w



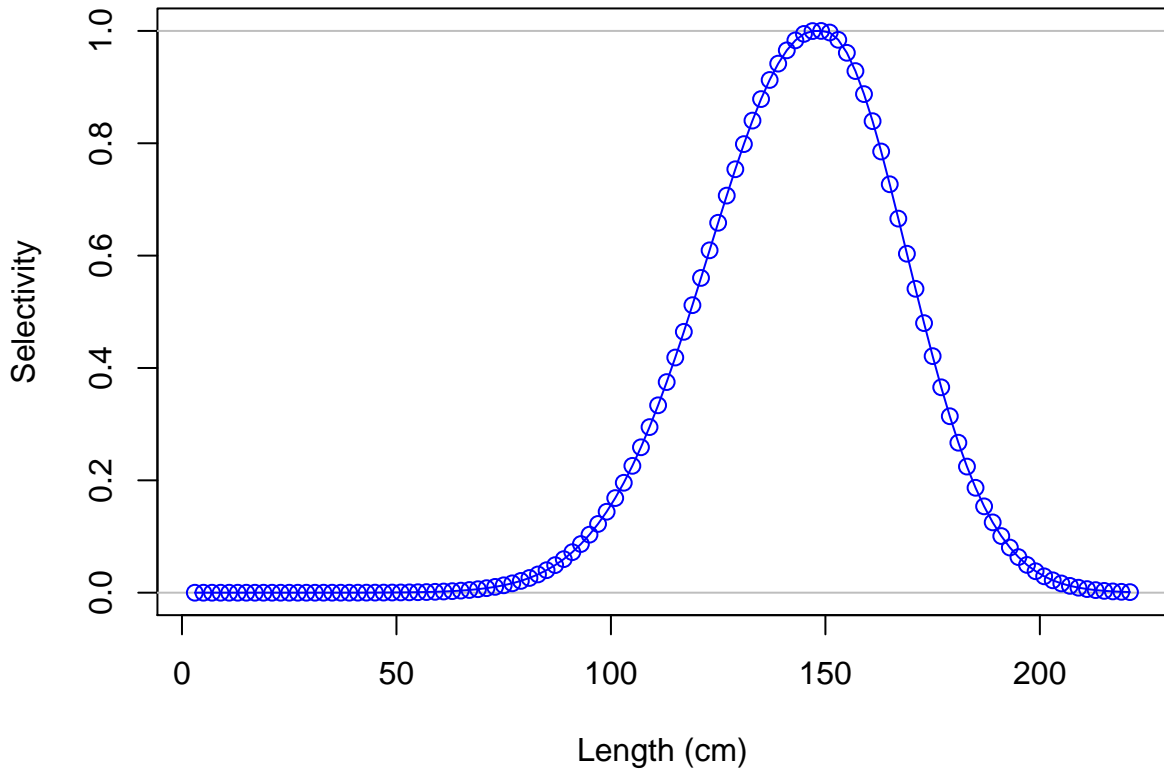
## Male time-varying selectivity for A5-LL-w



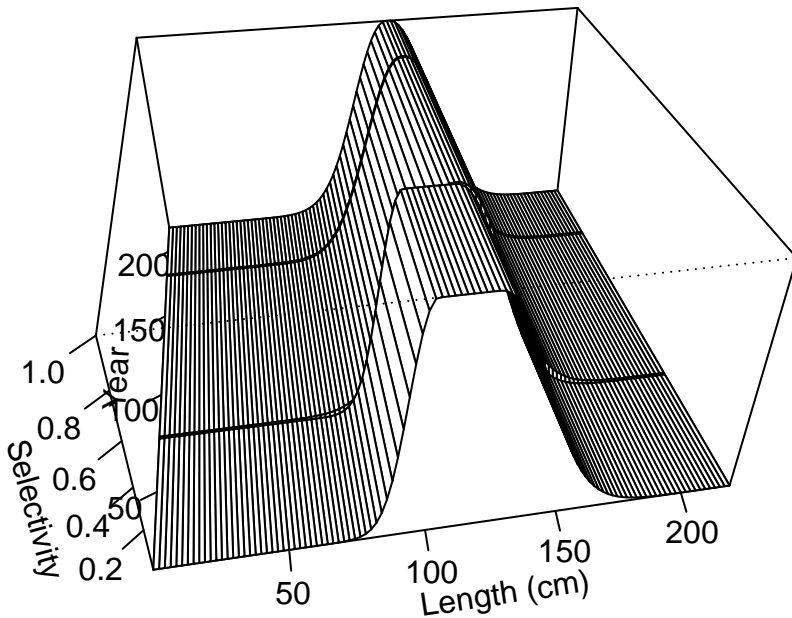
# Male time-varying selectivity for A5-LL-w



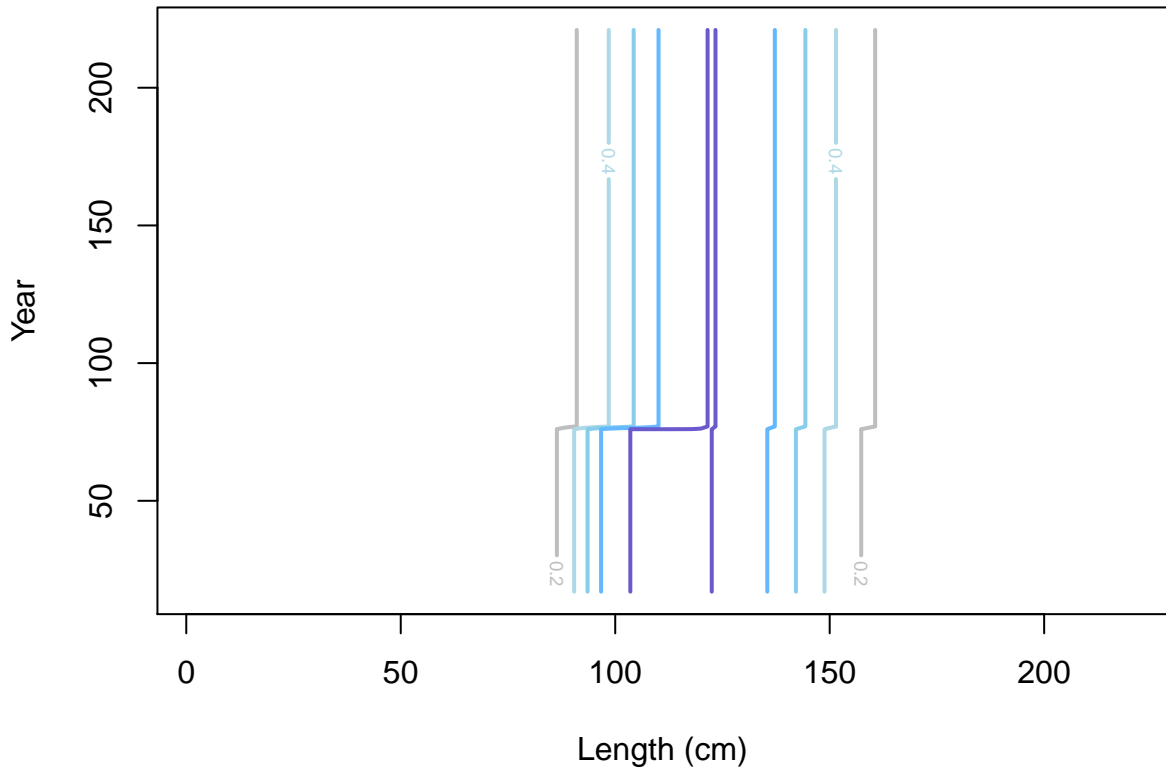
### Male ending year selectivity for A5-LL-w



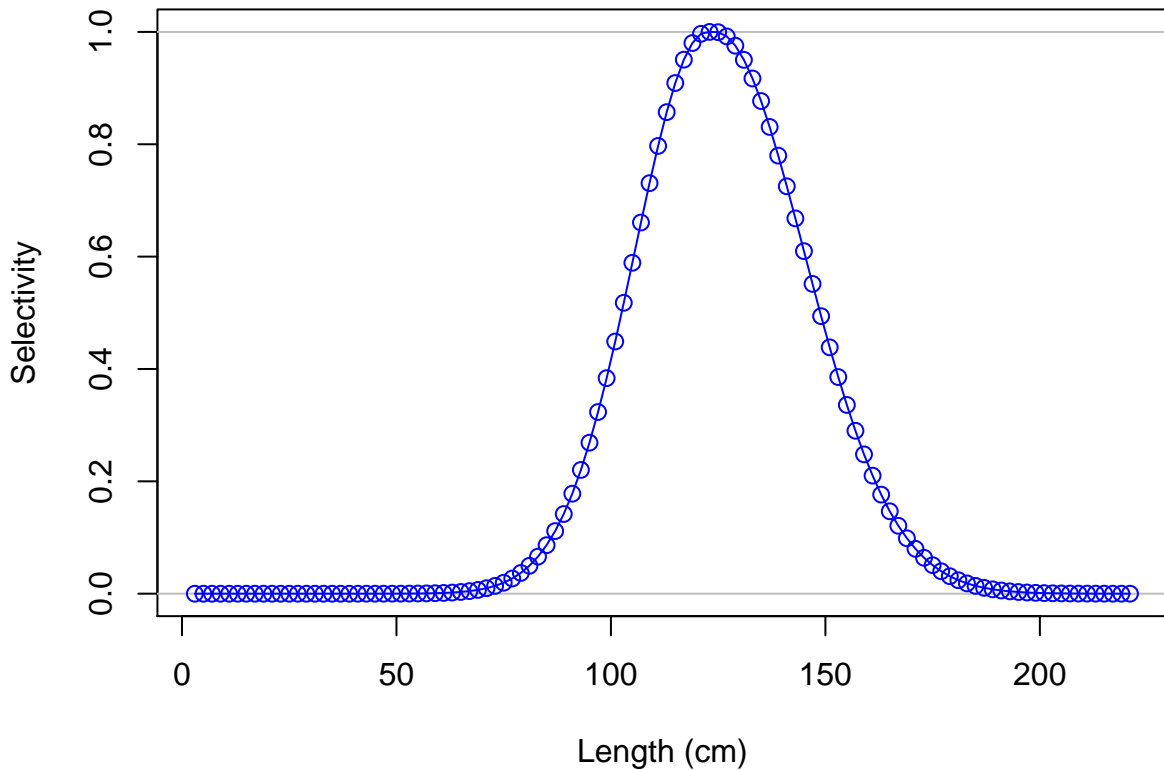
## Female time-varying selectivity for A6-LL-w



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

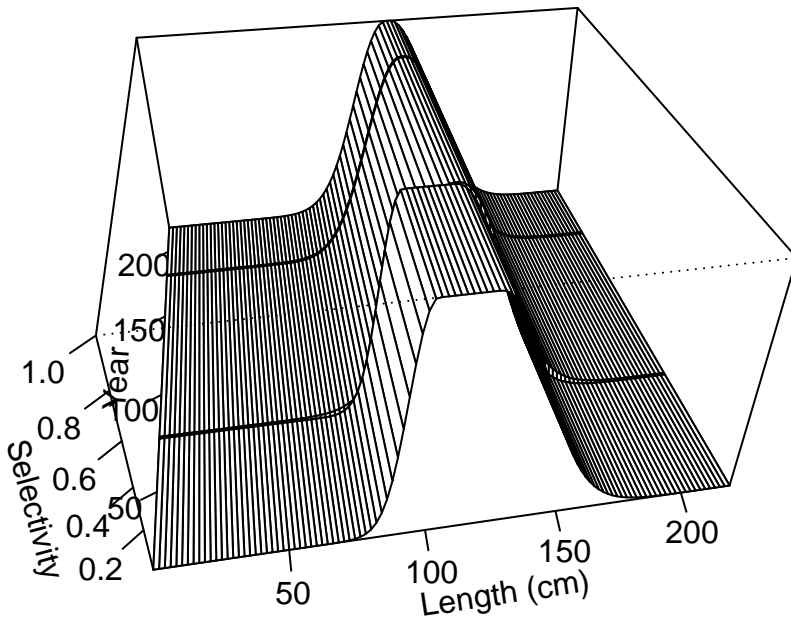


## Female ending year selectivity for A6-LL-w

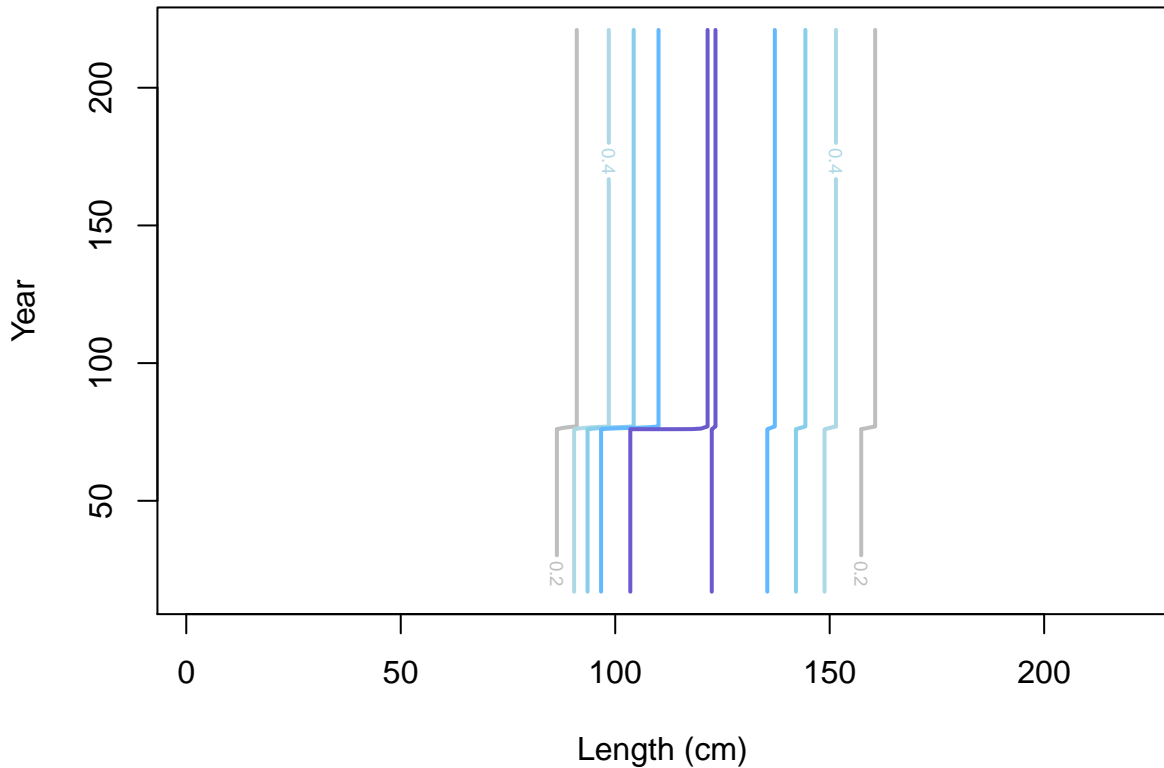




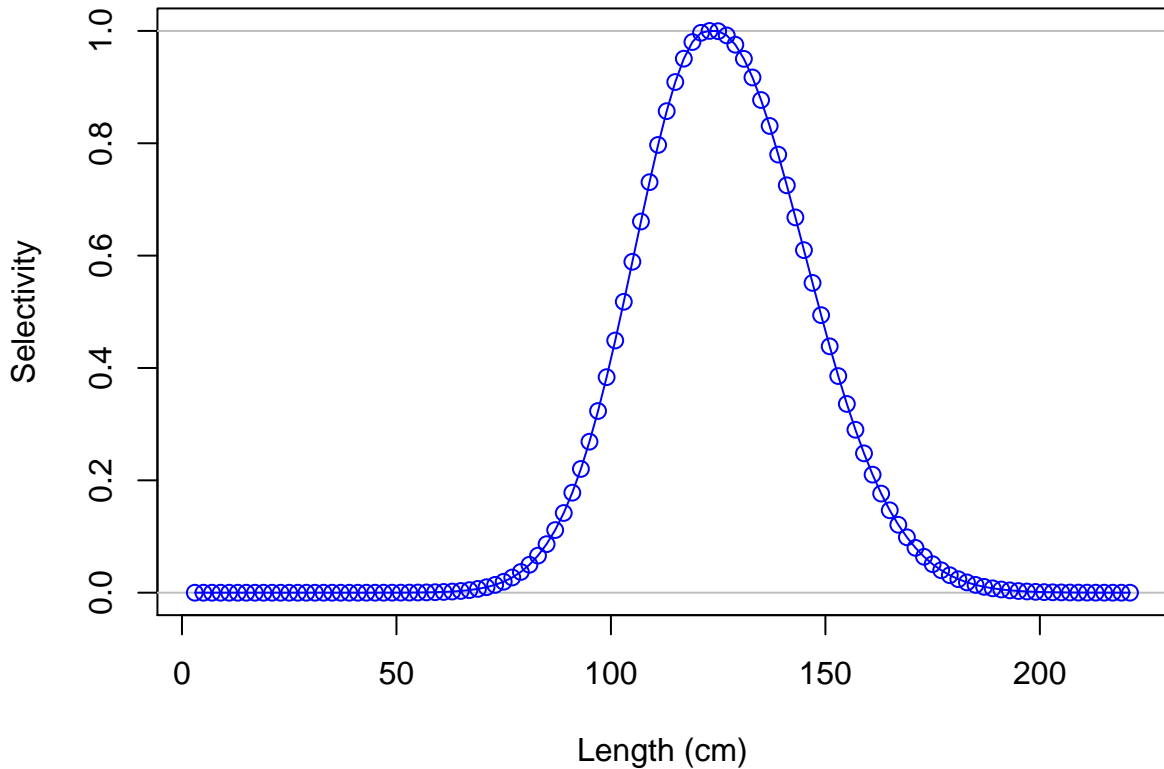
## Male time-varying selectivity for A6-LL-w



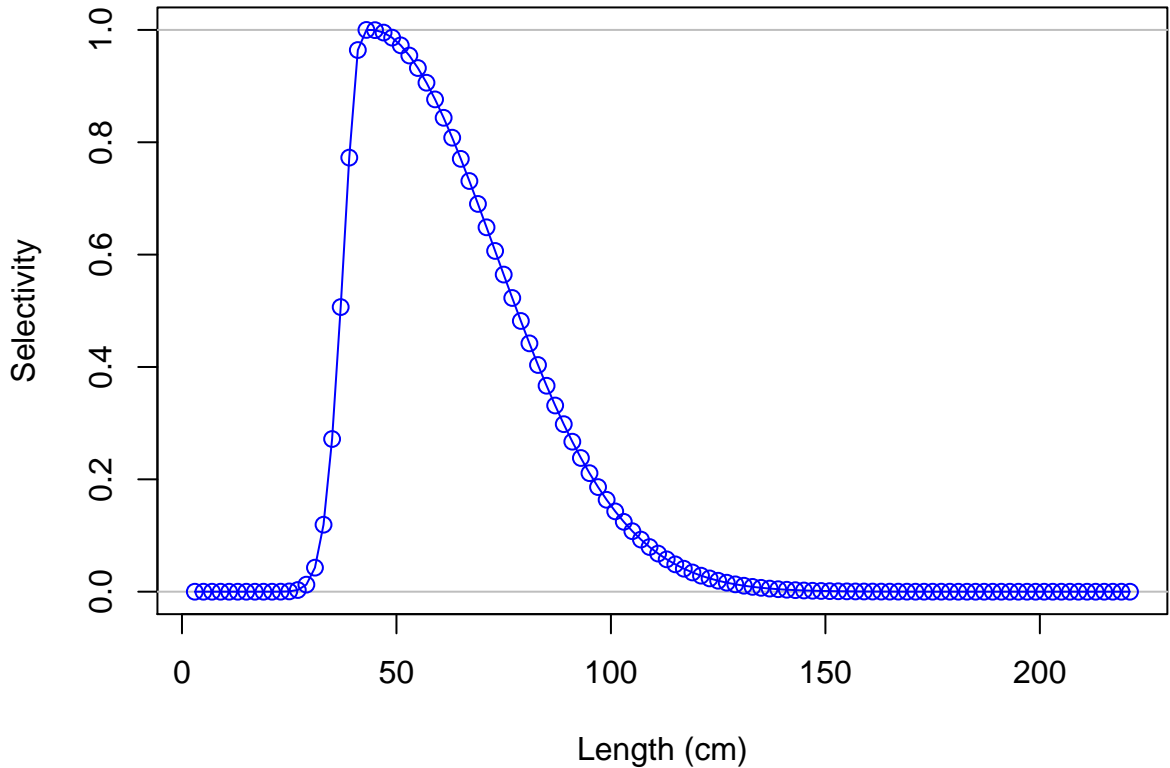
# Male time-varying selectivity for A6-LL-w



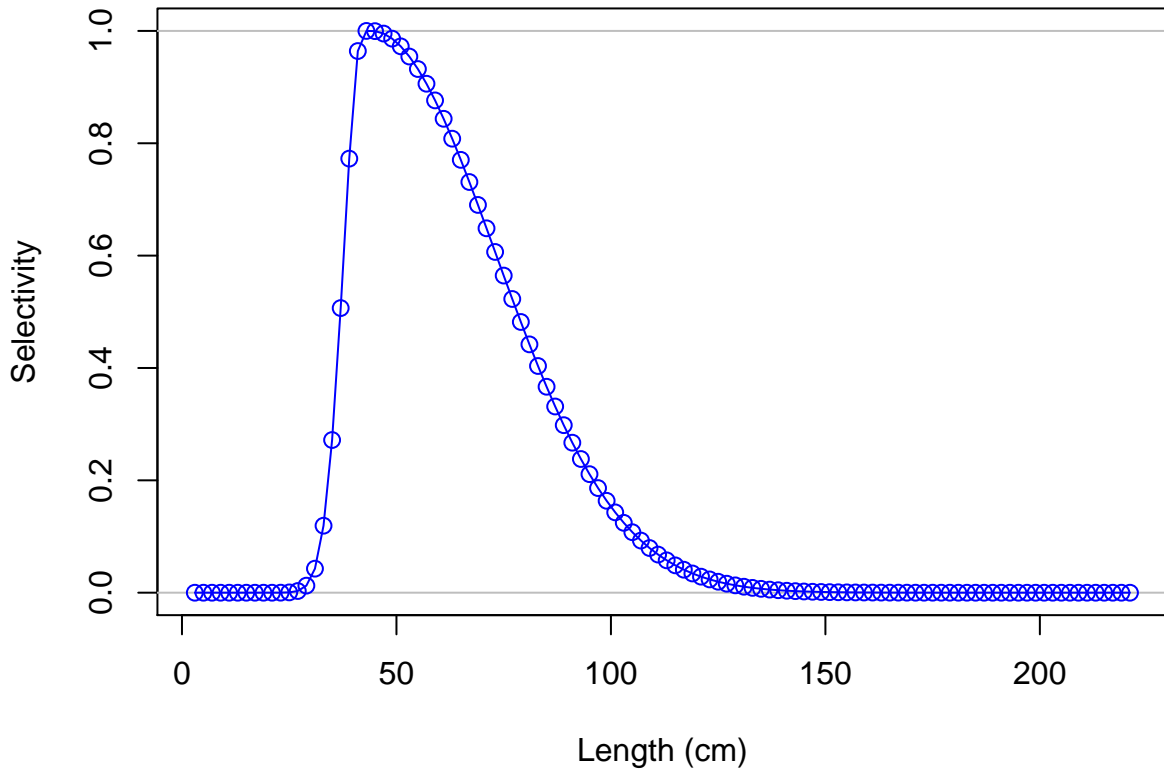
## Male ending year selectivity for A6-LL-w



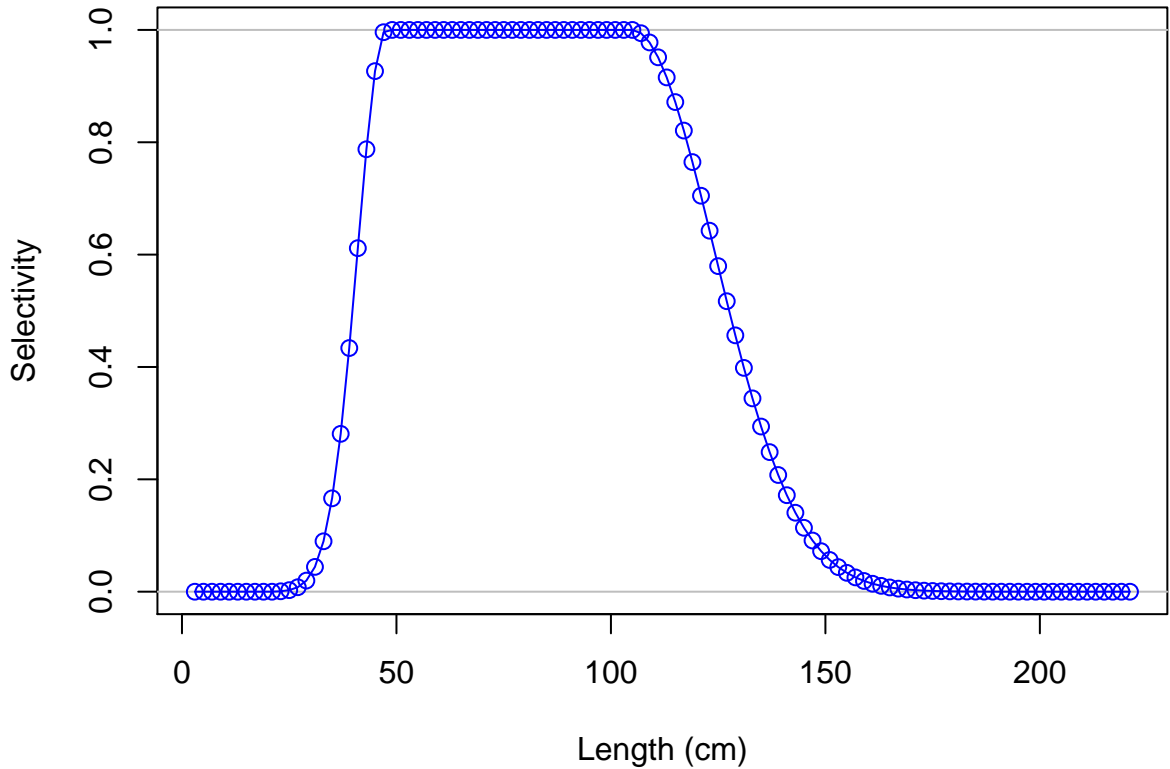
## Female ending year selectivity for A2-OBJ



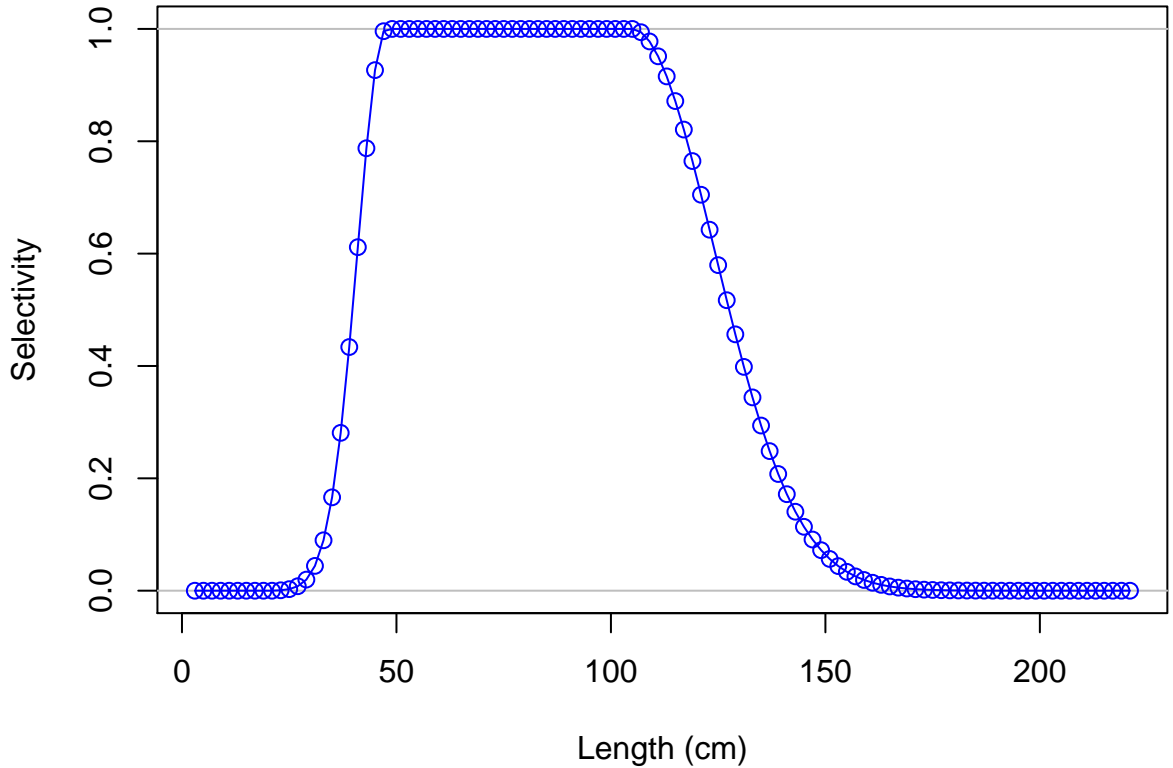
# Male ending year selectivity for A2-OBJ



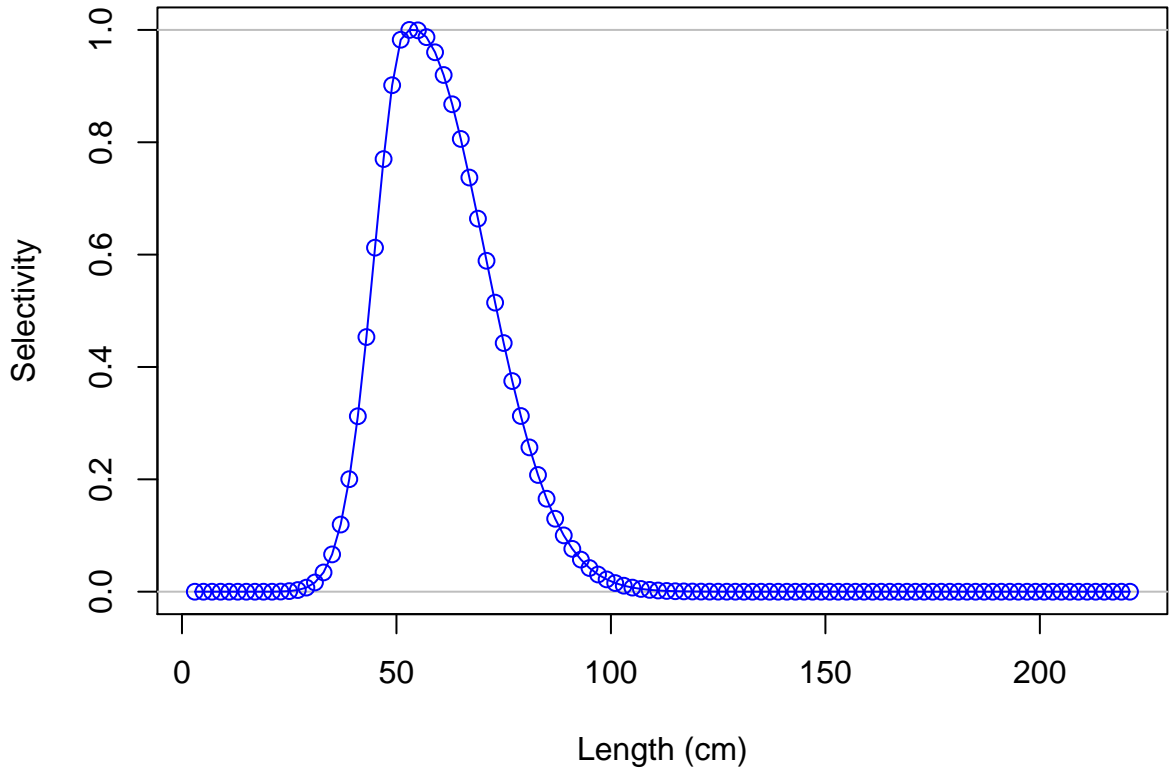
## Female ending year selectivity for A3-OBJ



### Male ending year selectivity for A3-OBJ

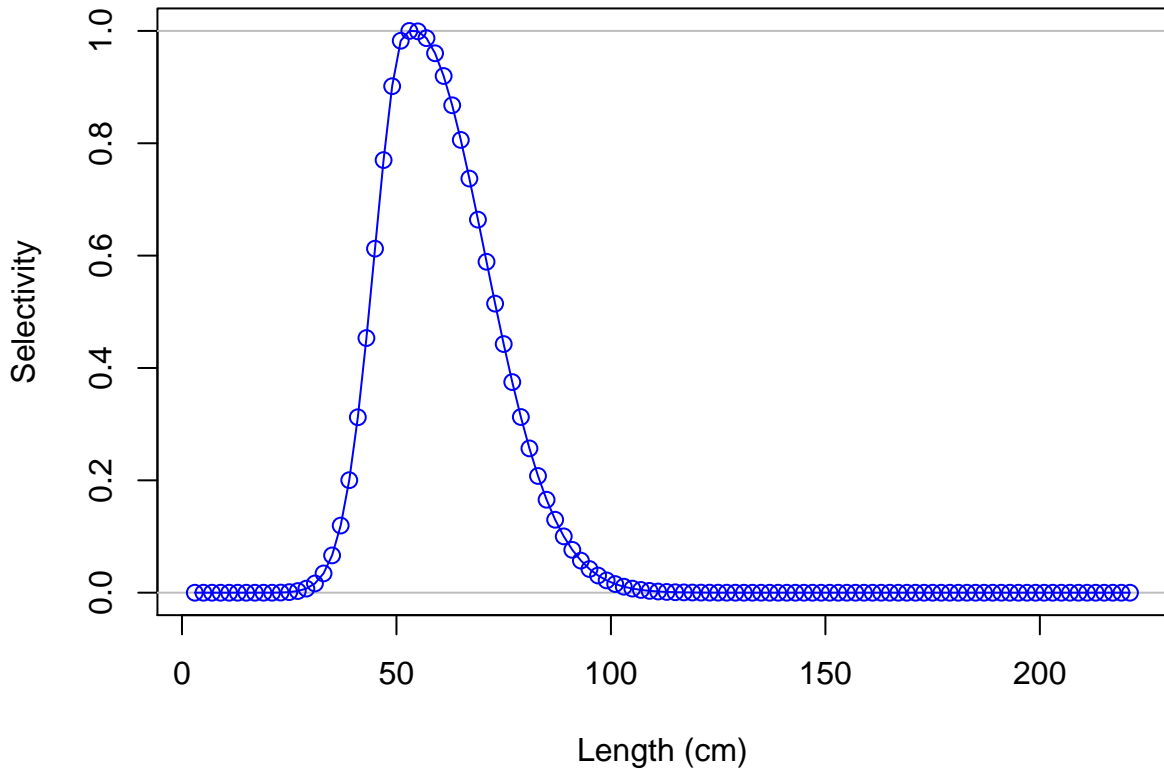


## Female ending year selectivity for A4-Obj

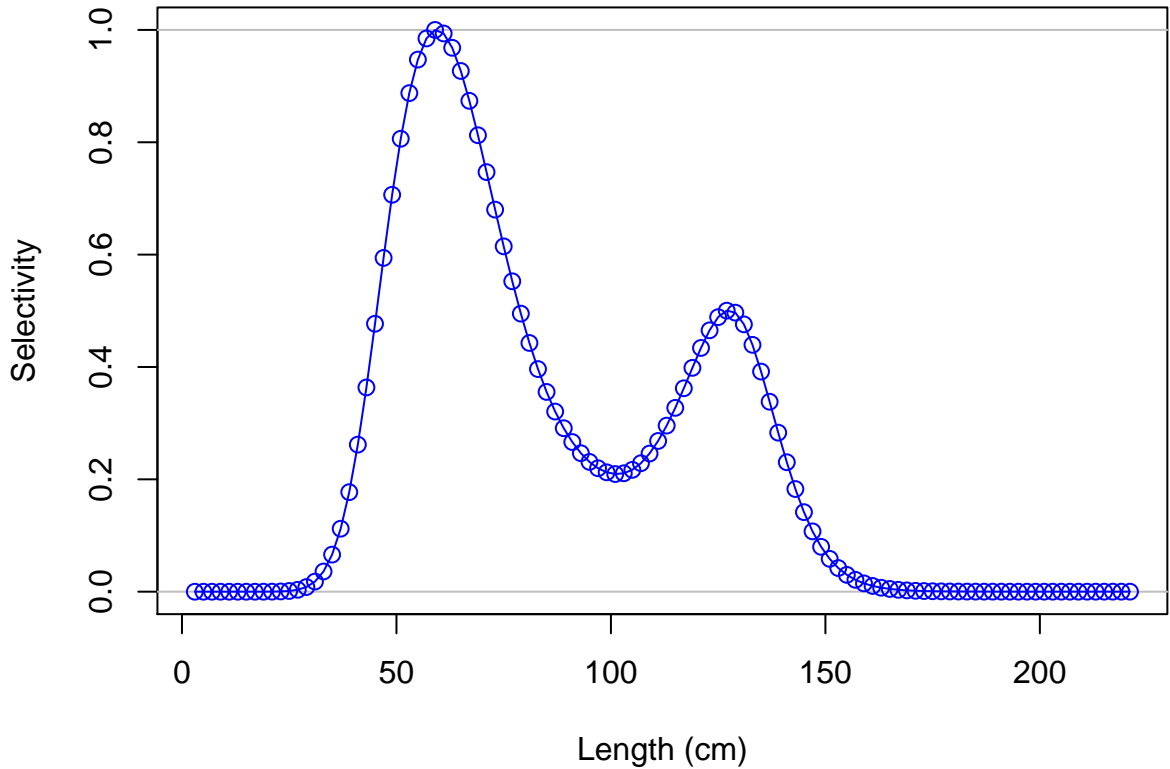




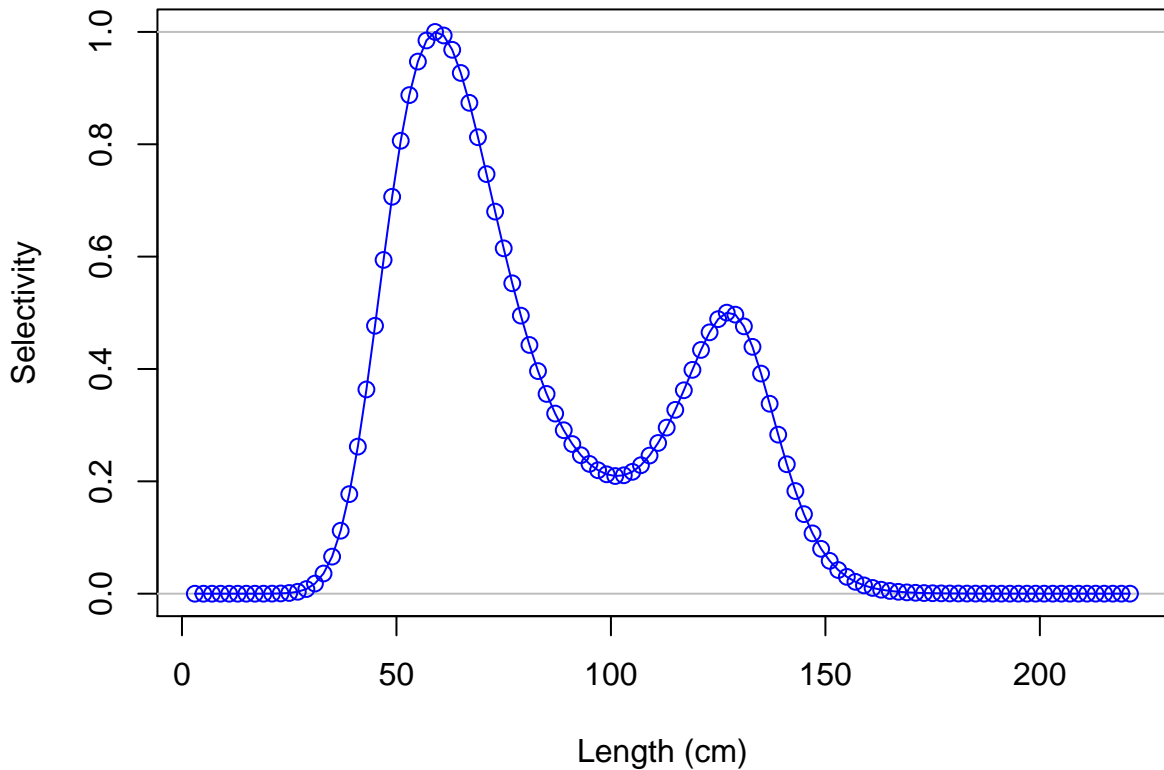
## Male ending year selectivity for A4-OBJ



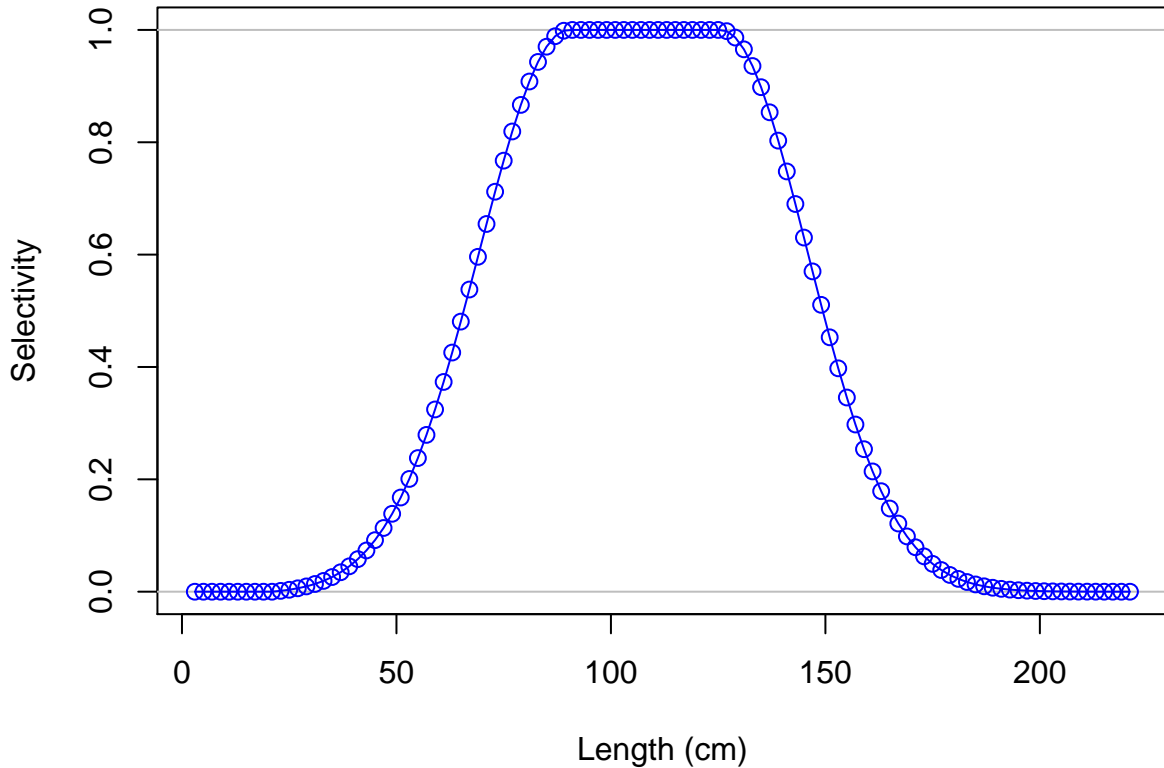
## Female ending year selectivity for A5-OBJ



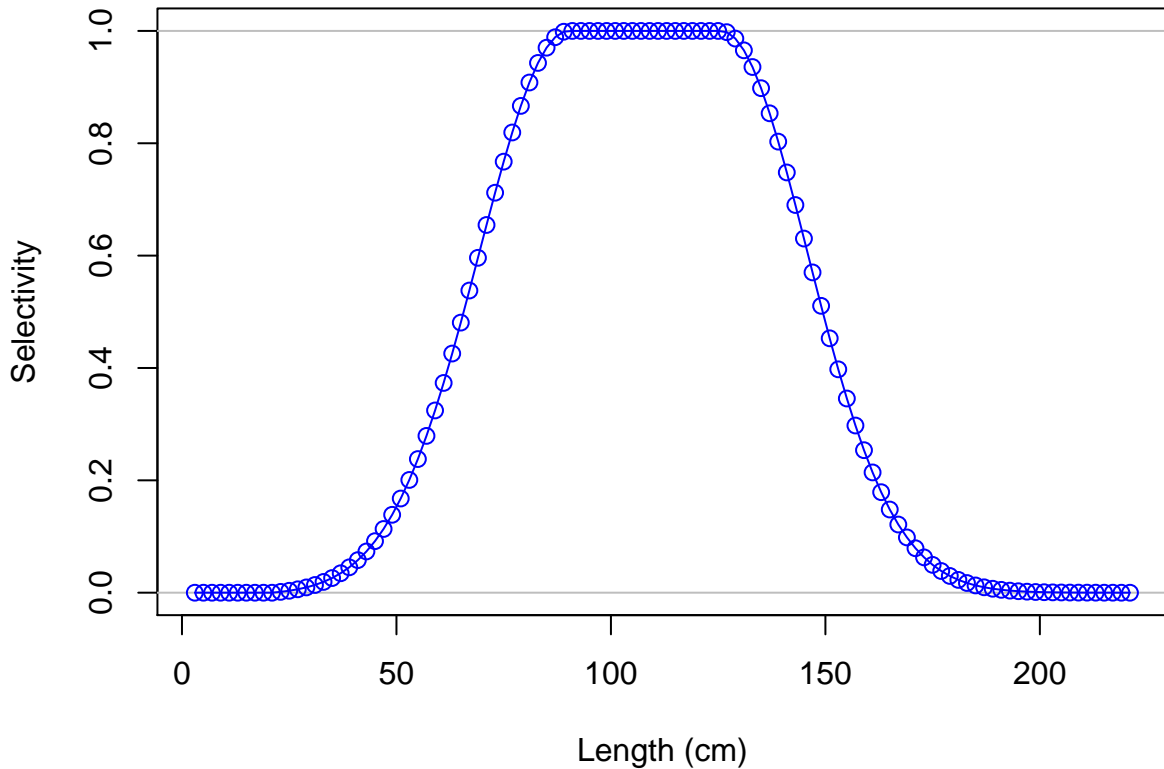
## Male ending year selectivity for A5-OBJ



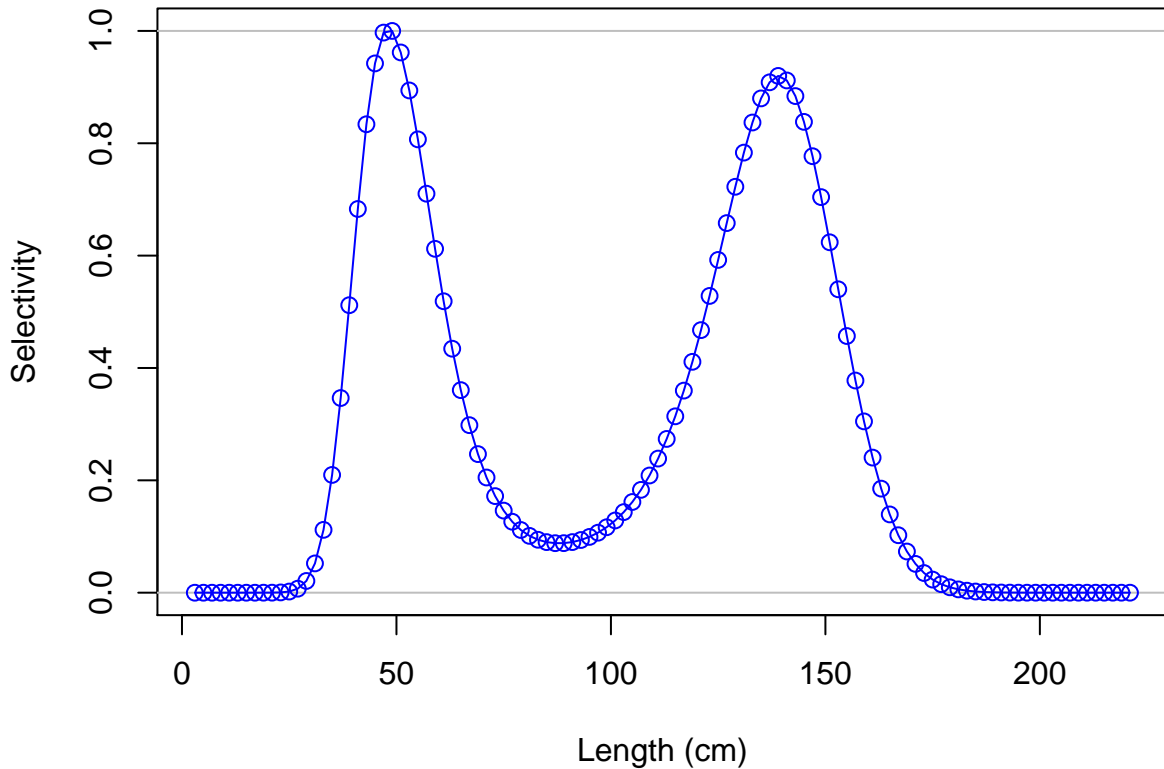
## Female ending year selectivity for A6-OBJ



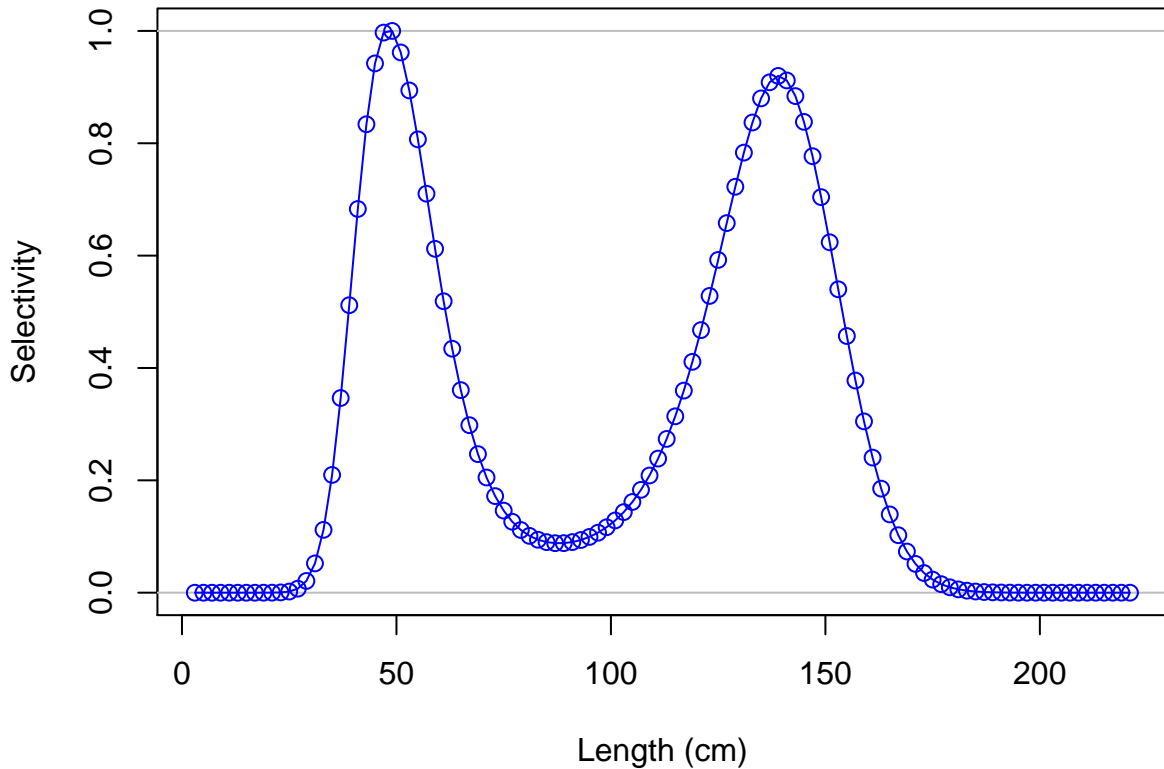
## Male ending year selectivity for A6-OBJ



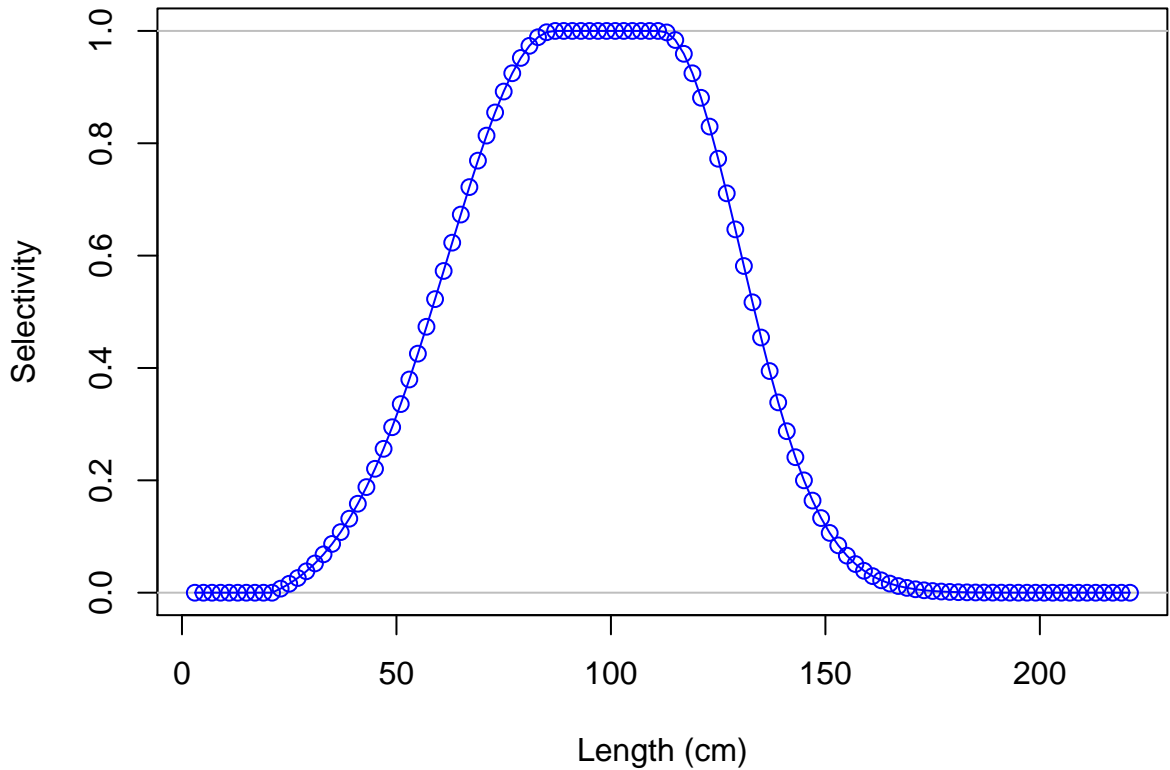
## Female ending year selectivity for A2-NOADEL



## Male ending year selectivity for A2-NOADEL

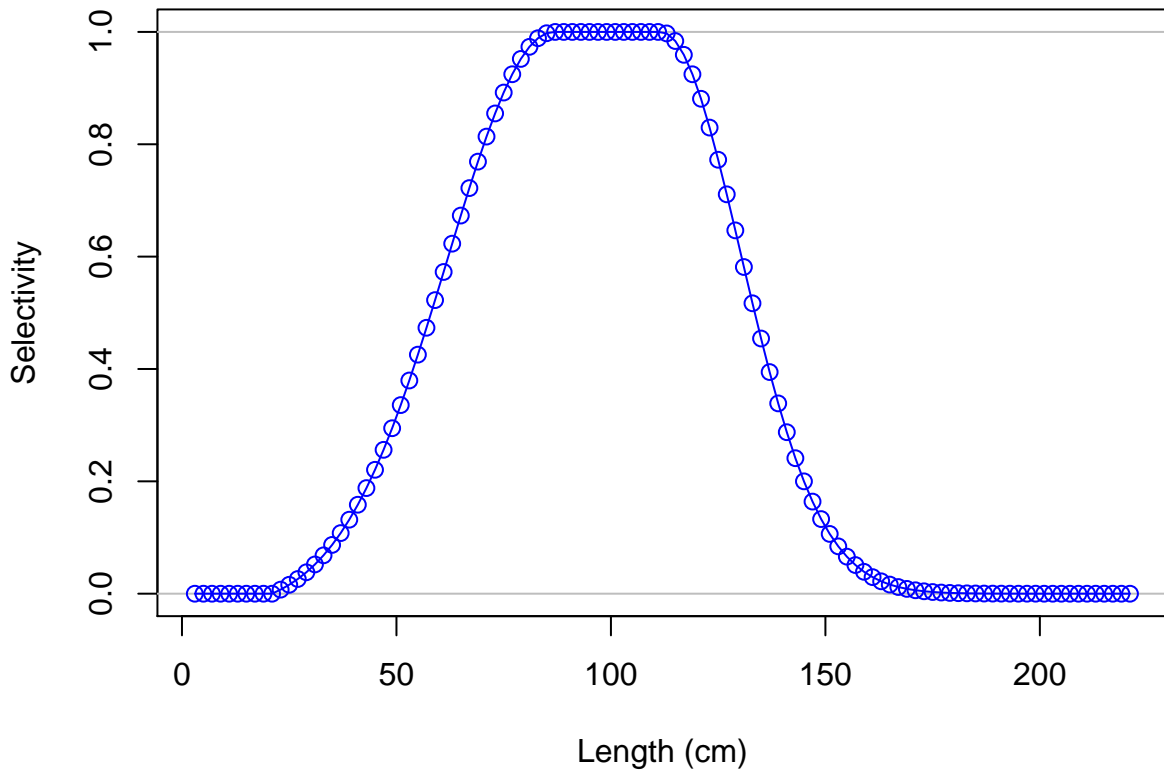


## Female ending year selectivity for A3-NOADEL

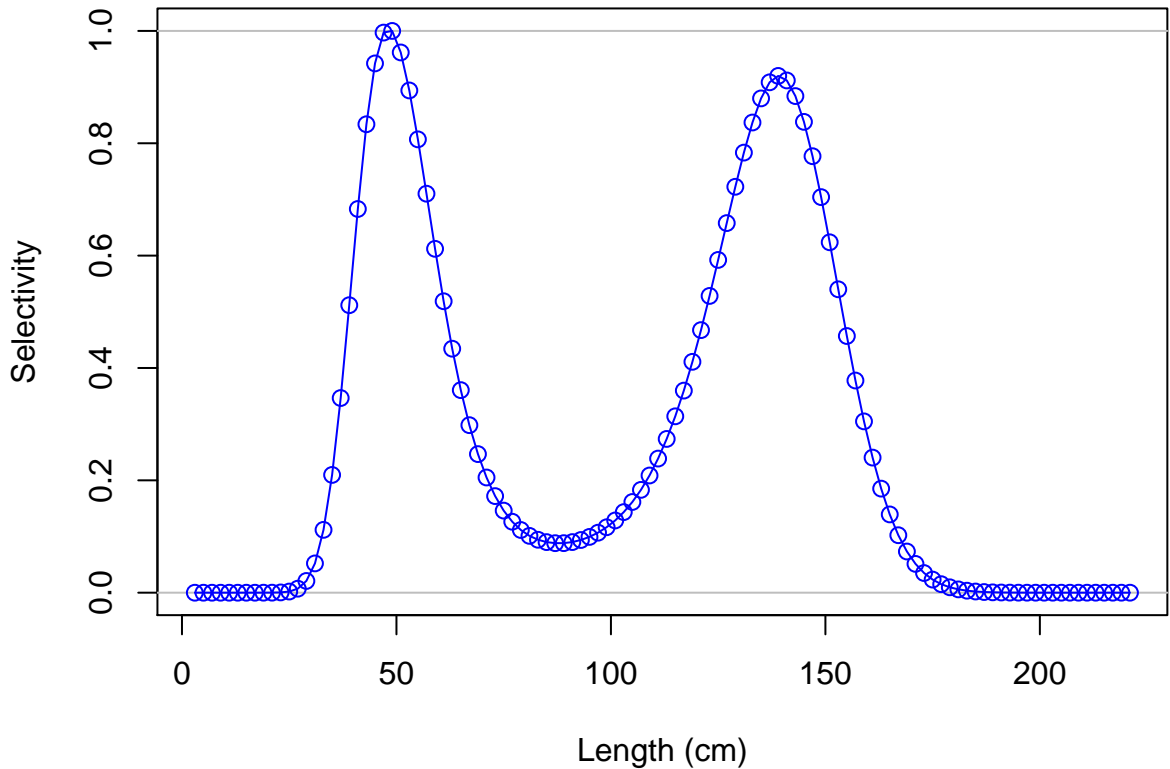




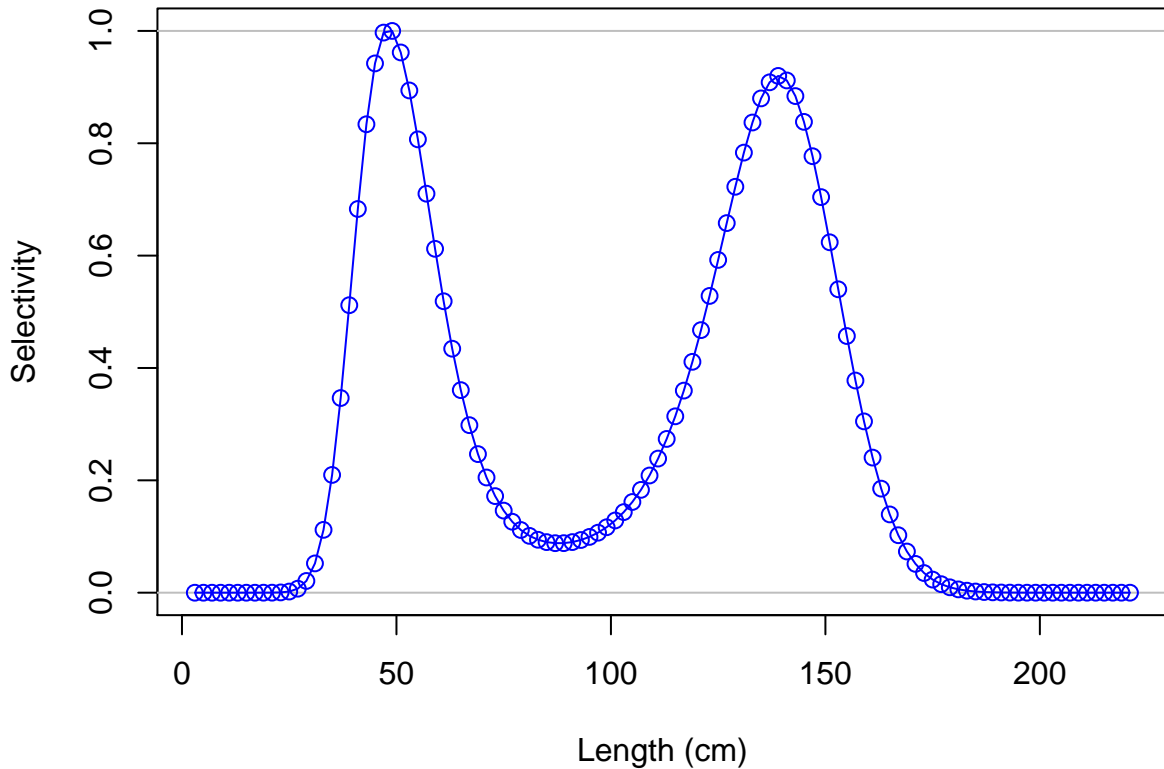
## Male ending year selectivity for A3-NOADEL



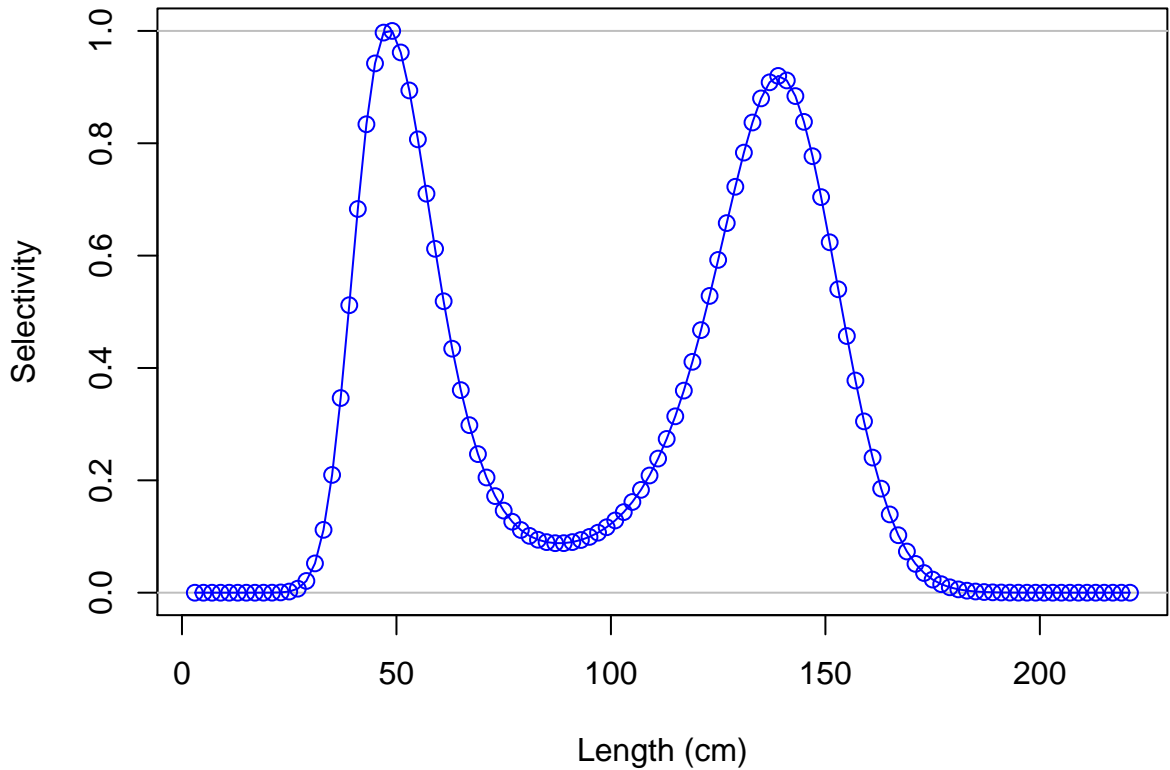
## Female ending year selectivity for A4-NOADEL



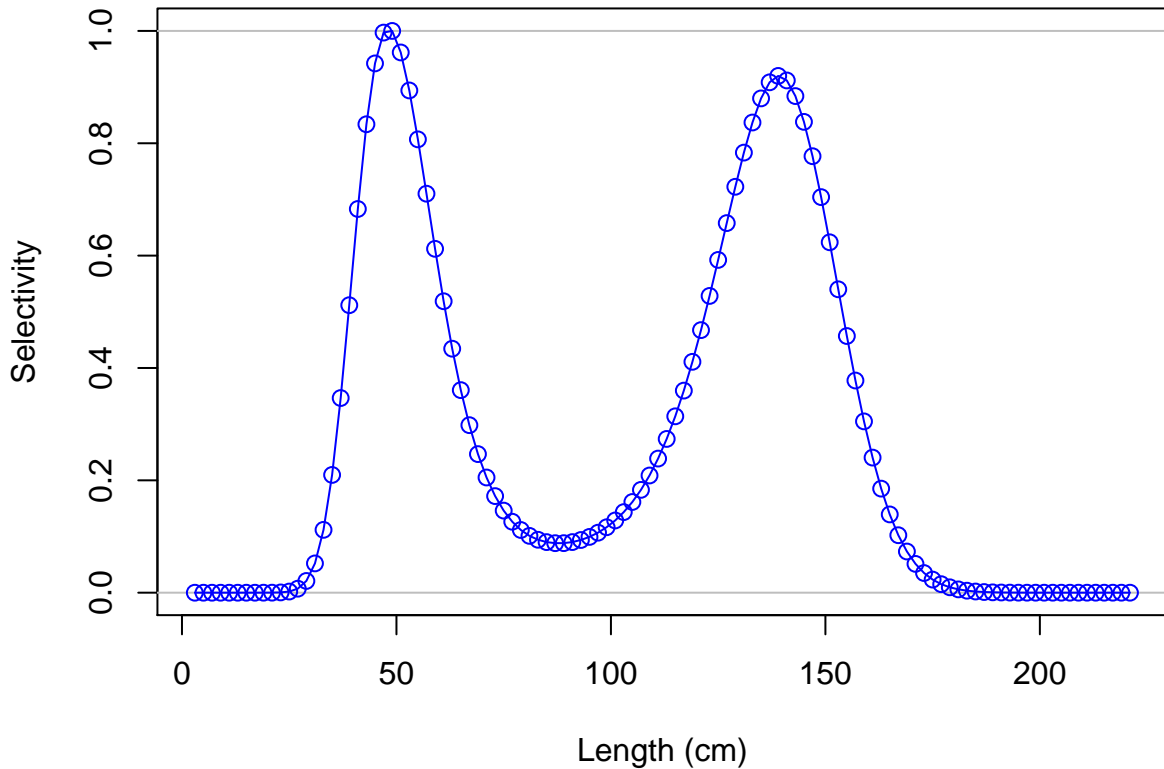
## Male ending year selectivity for A4-NOADEL



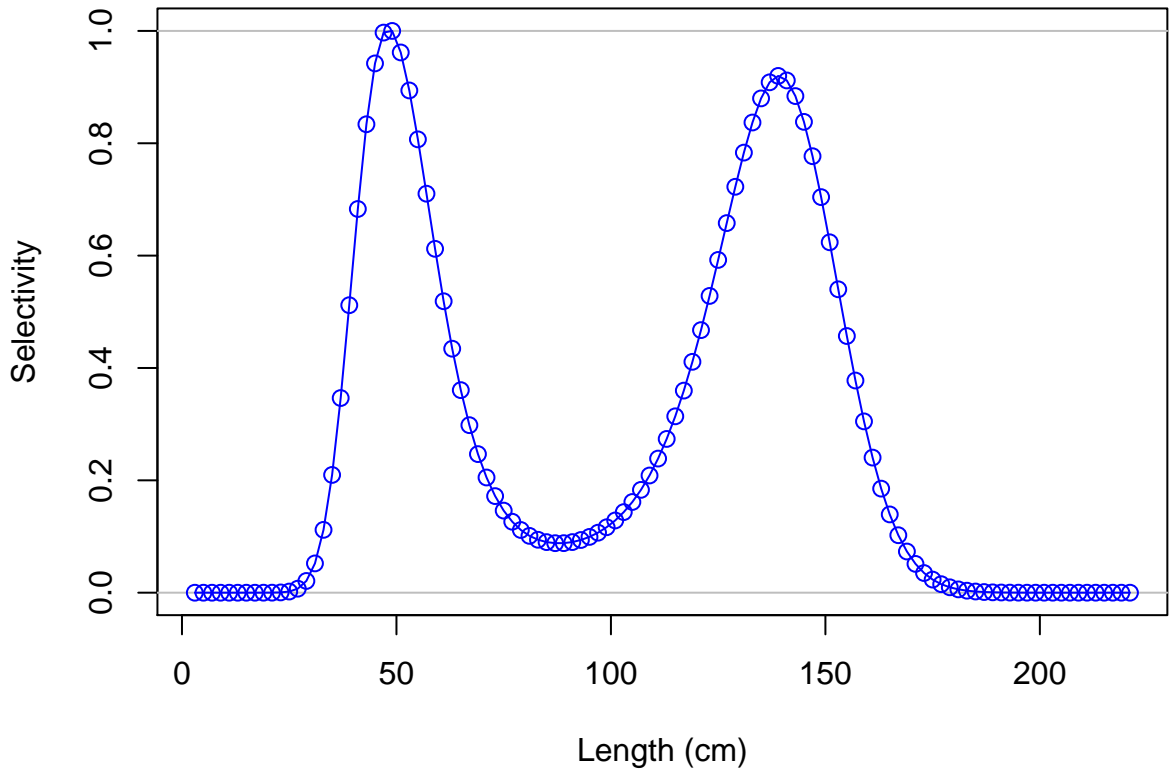
## Female ending year selectivity for A5-NOADEL



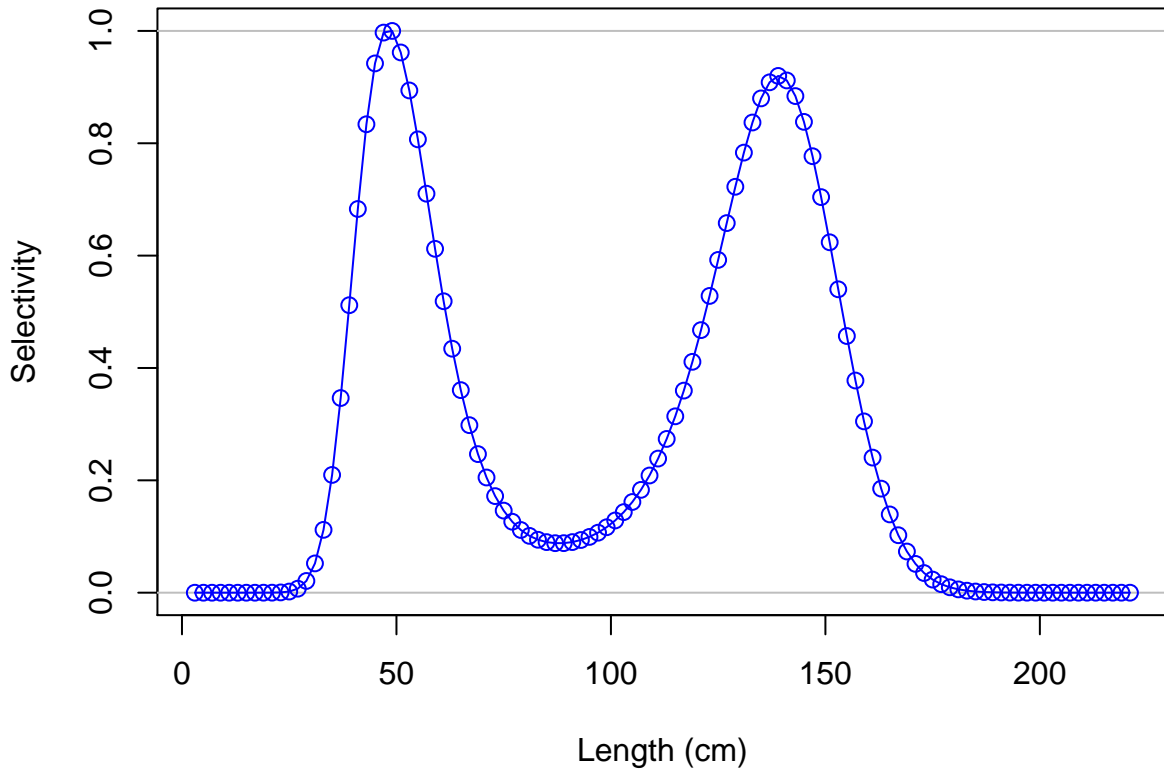
## Male ending year selectivity for A5-NOADEL



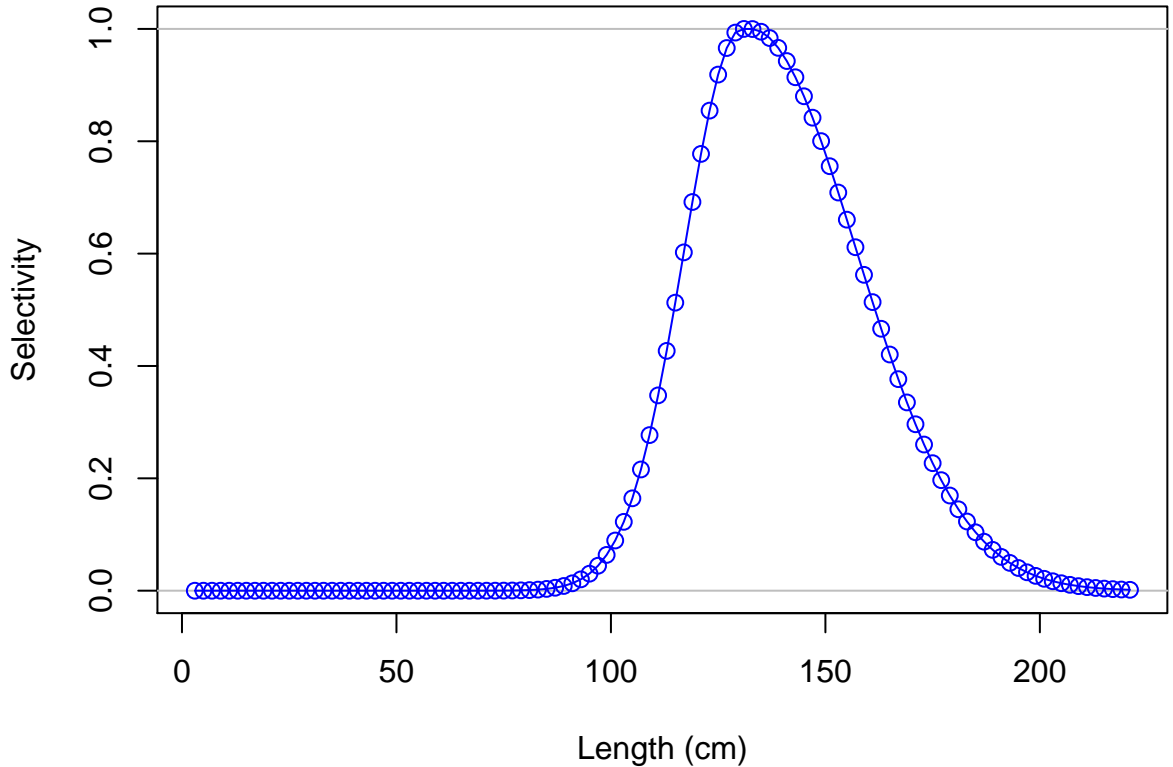
## Female ending year selectivity for A6-NOADEL



## Male ending year selectivity for A6-NOADEL

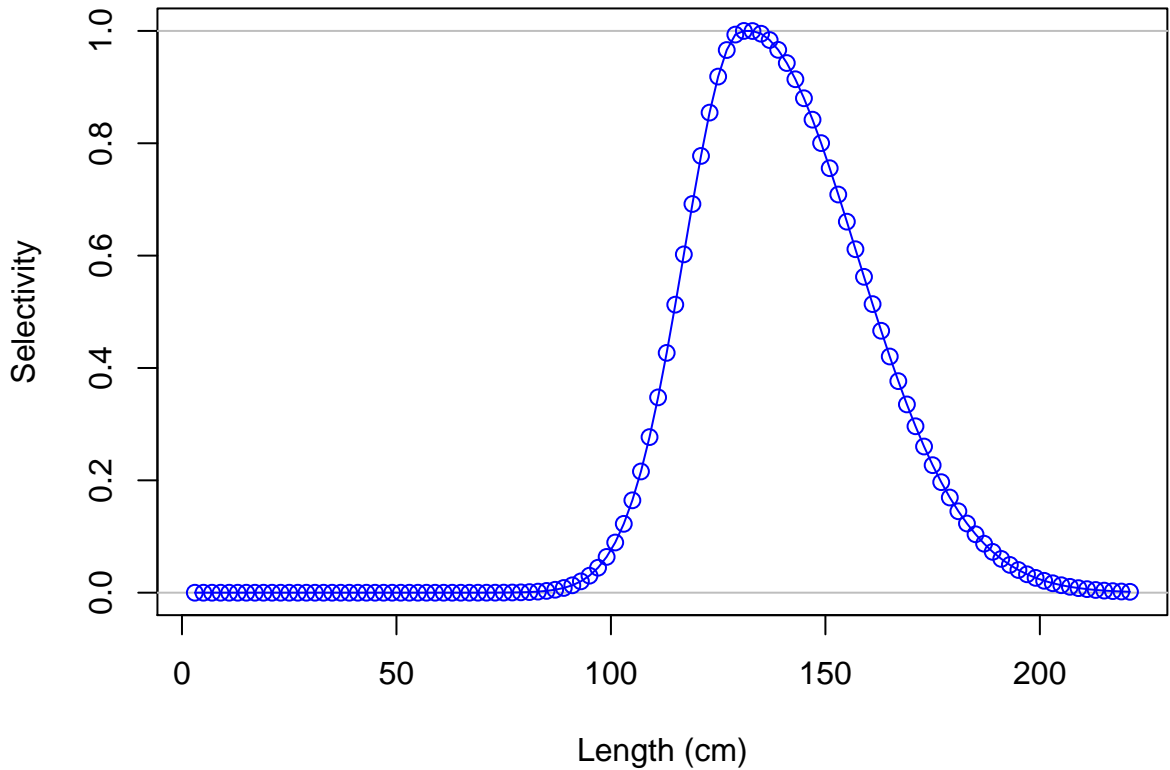


# Female ending year selectivity for EPO-LL-survey-early

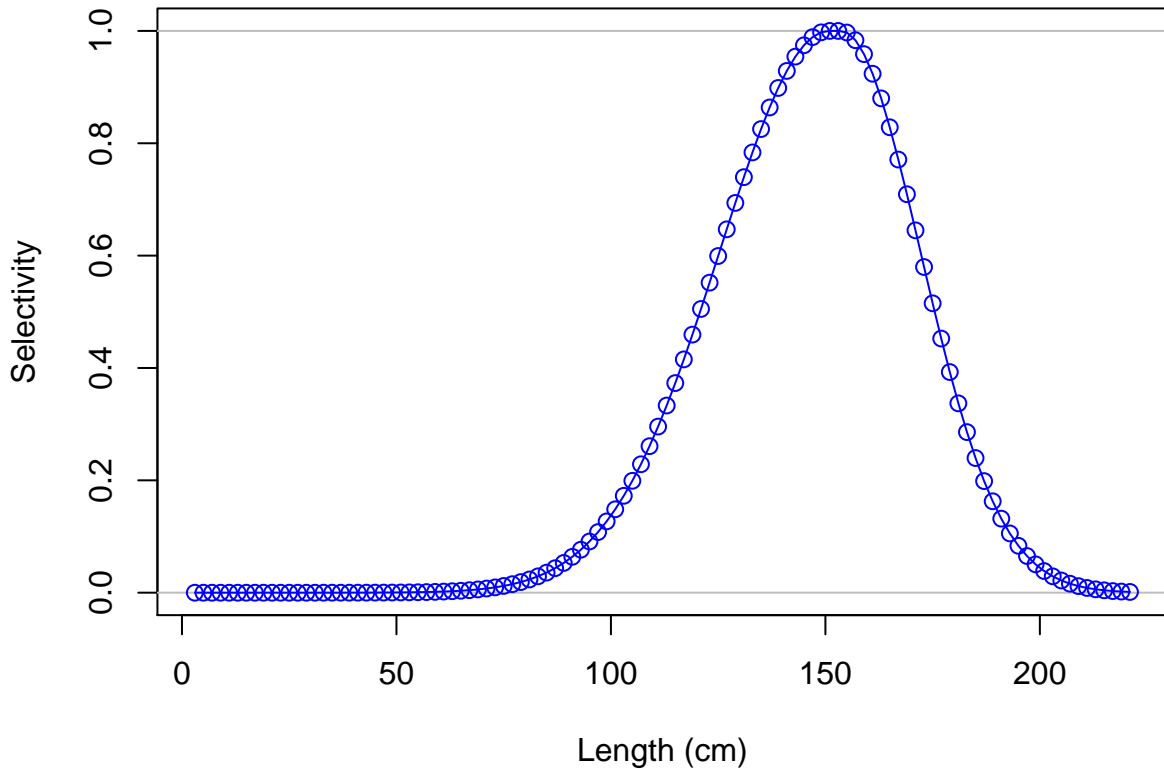




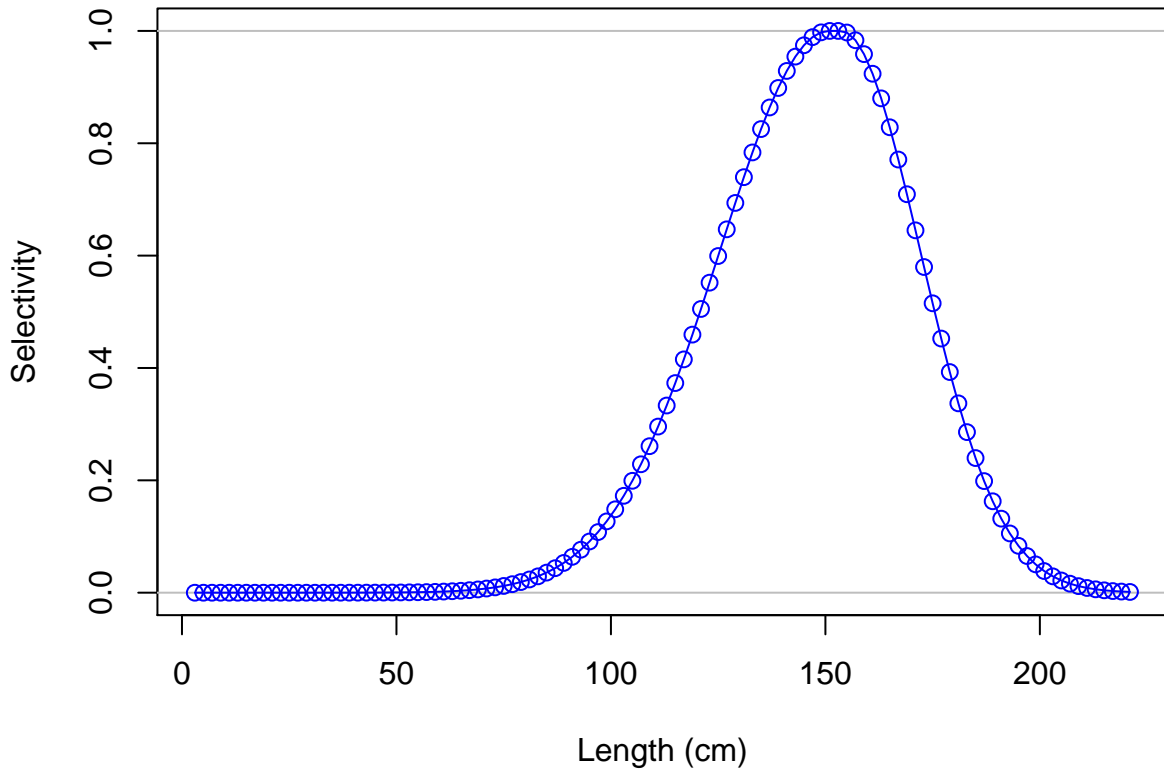
# Male ending year selectivity for EPO-LL-survey-early



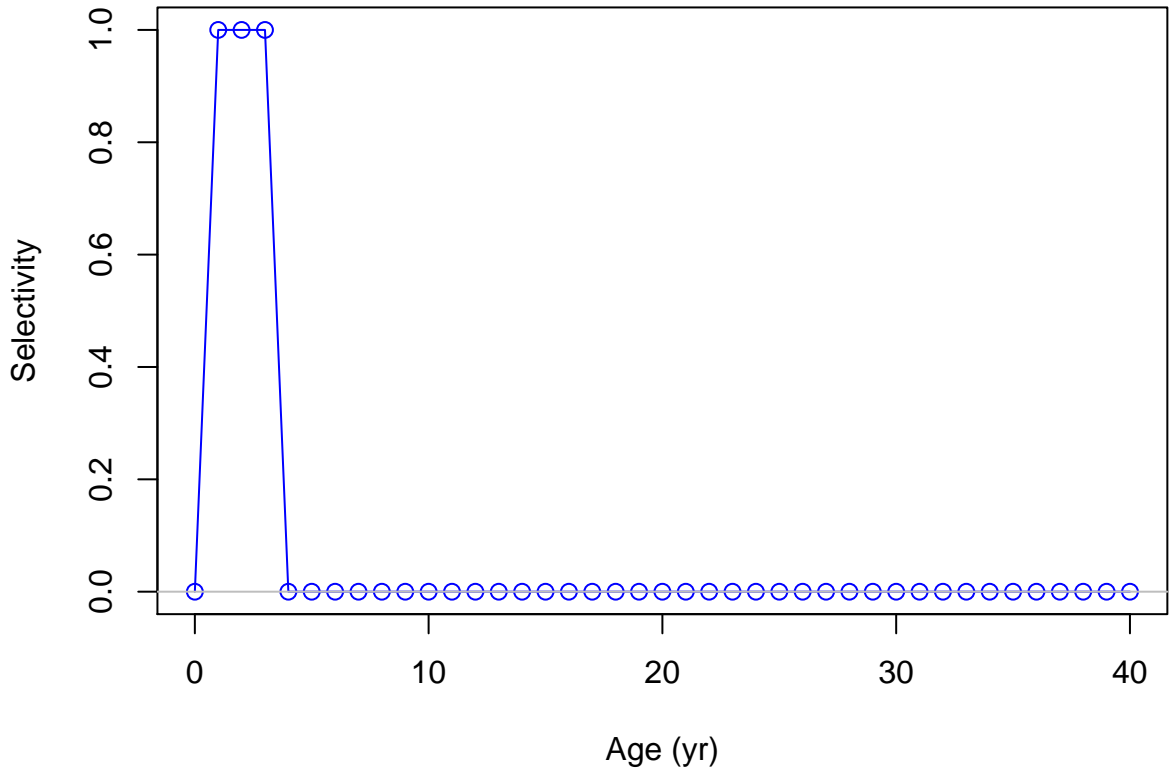
# Female ending year selectivity for EPO-LL-survey-late



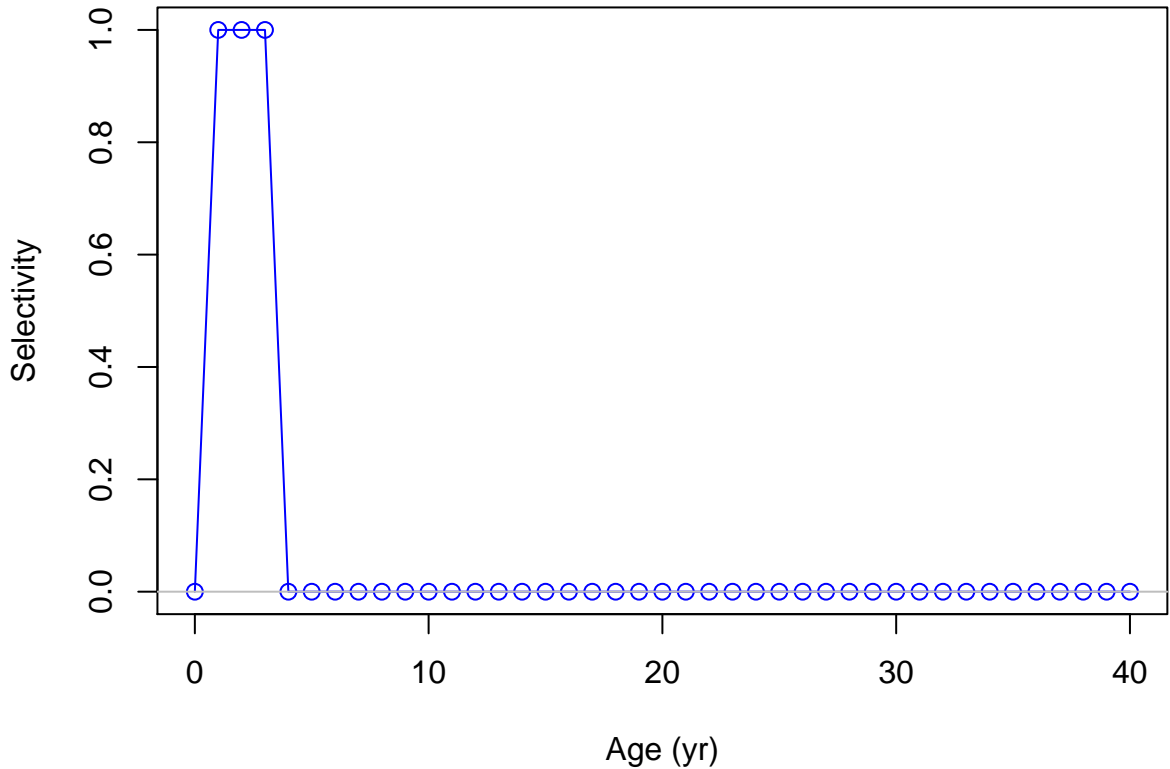
# Male ending year selectivity for EPO-LL-survey-late



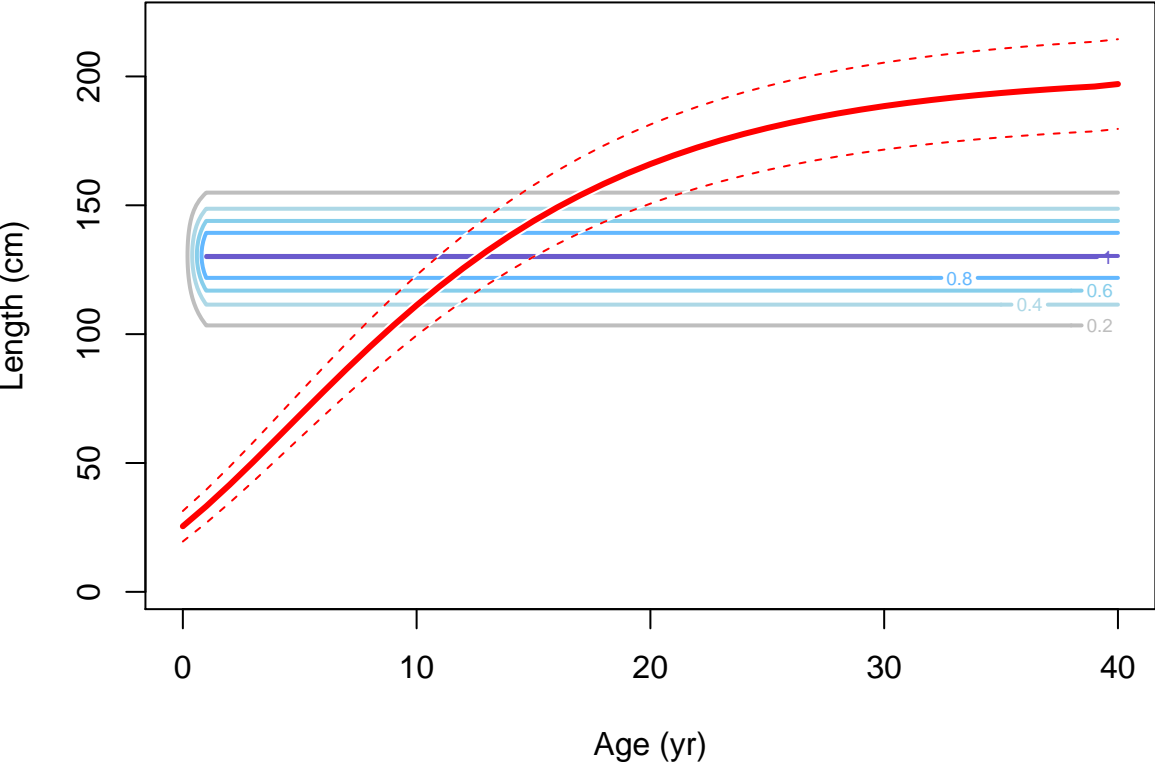
## Female ending year selectivity for EPO-OBJ-Disc



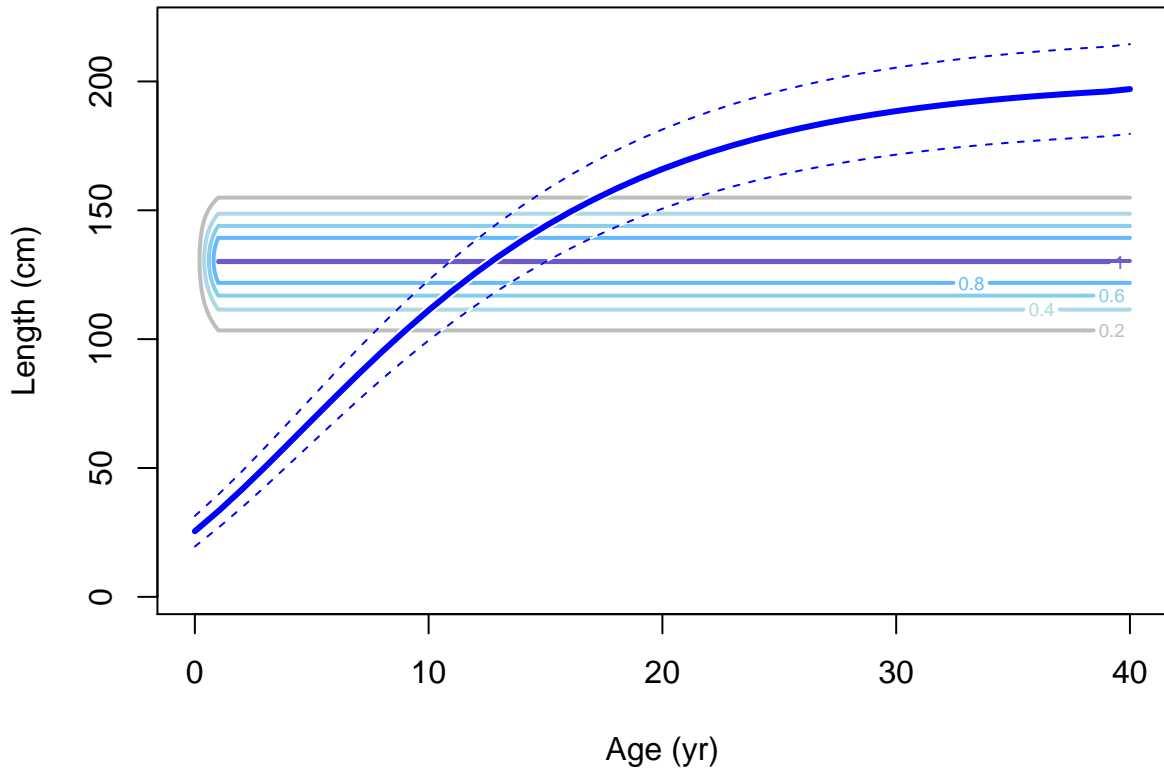
# Male ending year selectivity for EPO-OBJ-Disc



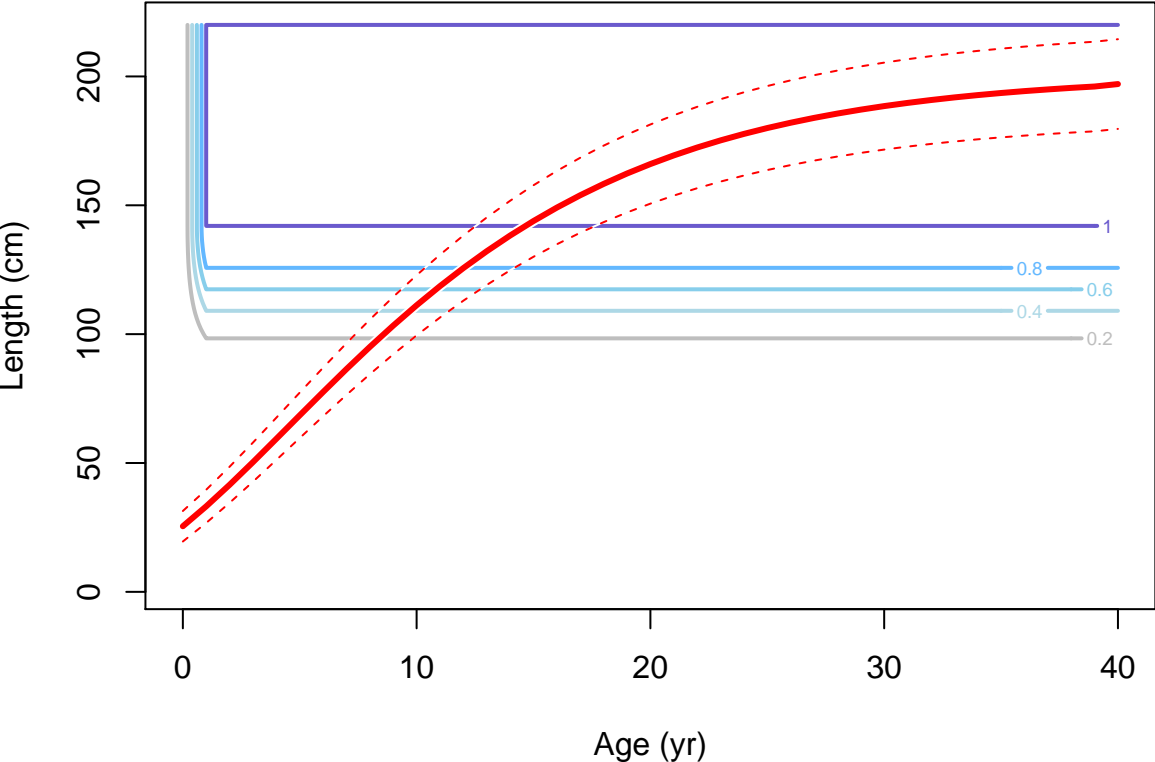
# Female ending year selectivity and growth for A1-LL-n



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

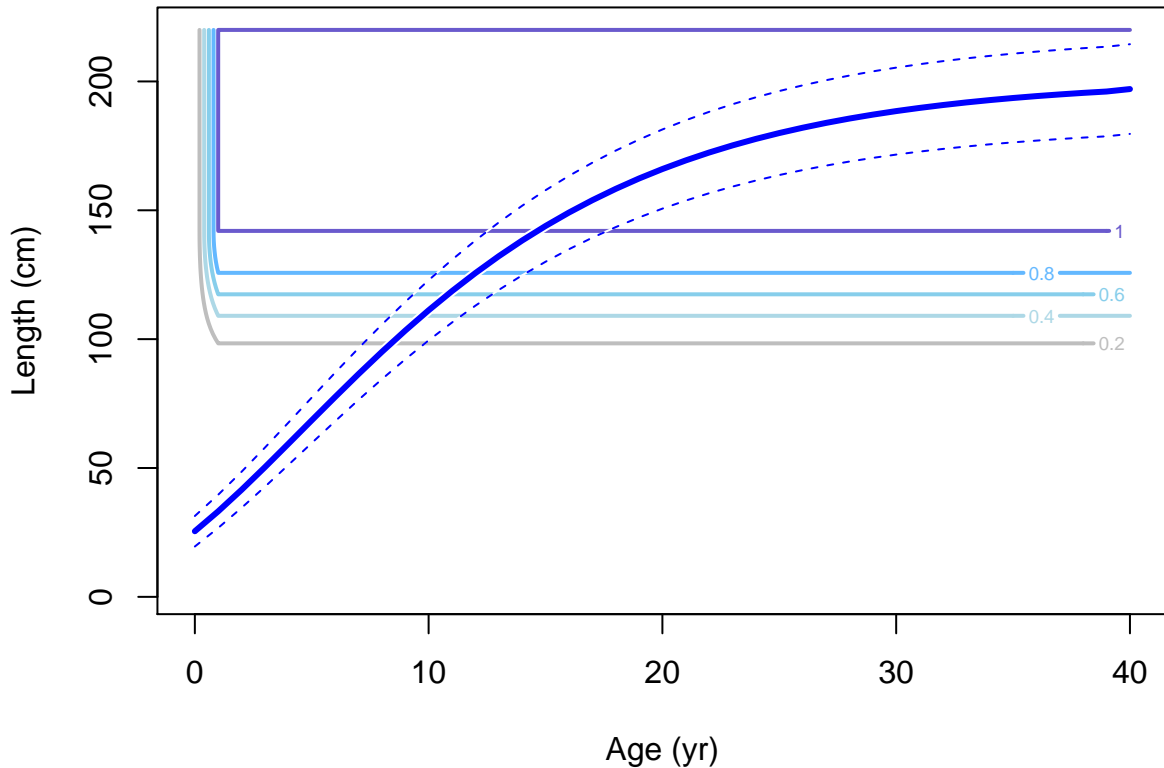


Female ending year selectivity and growth for A2-LL-n

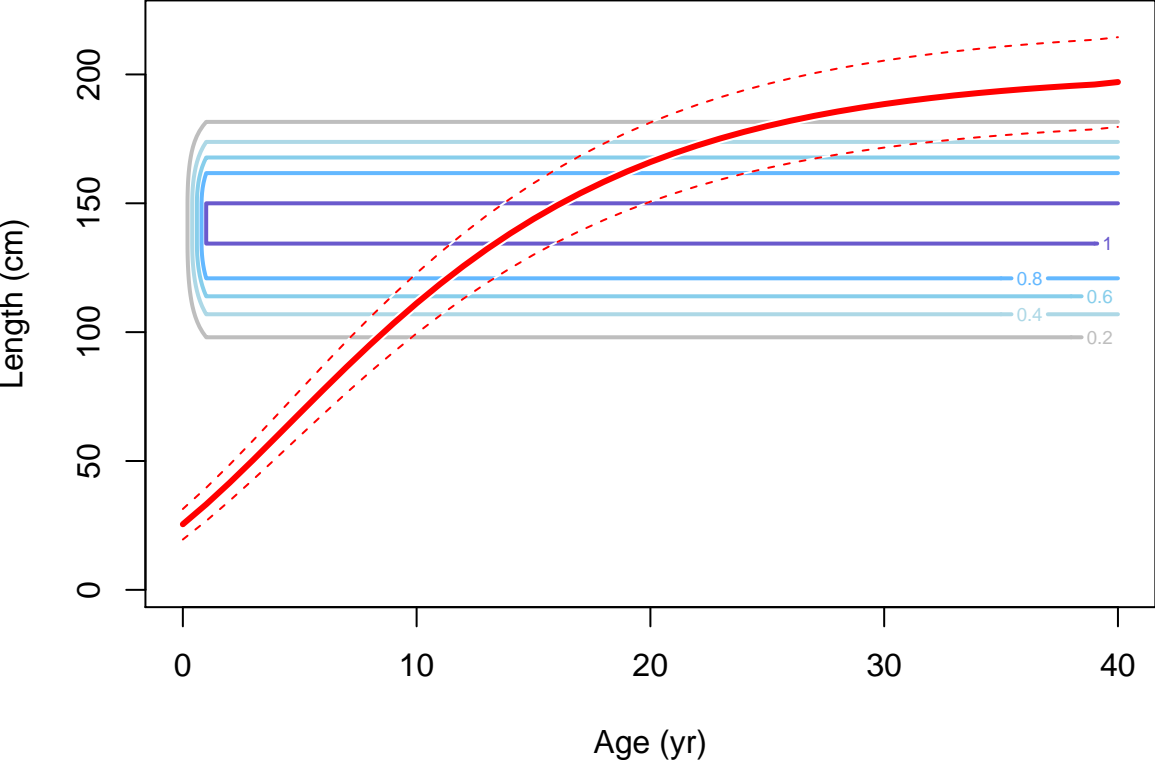




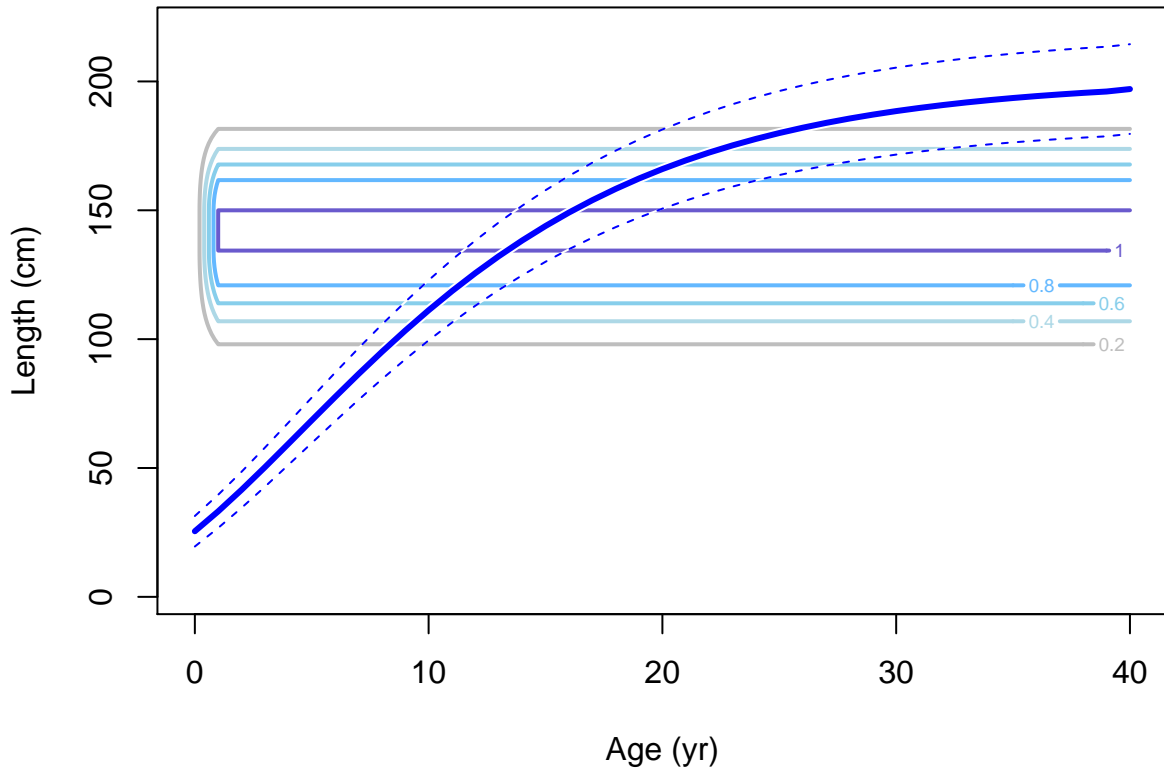
# Male ending year selectivity and growth for A2-LL-n



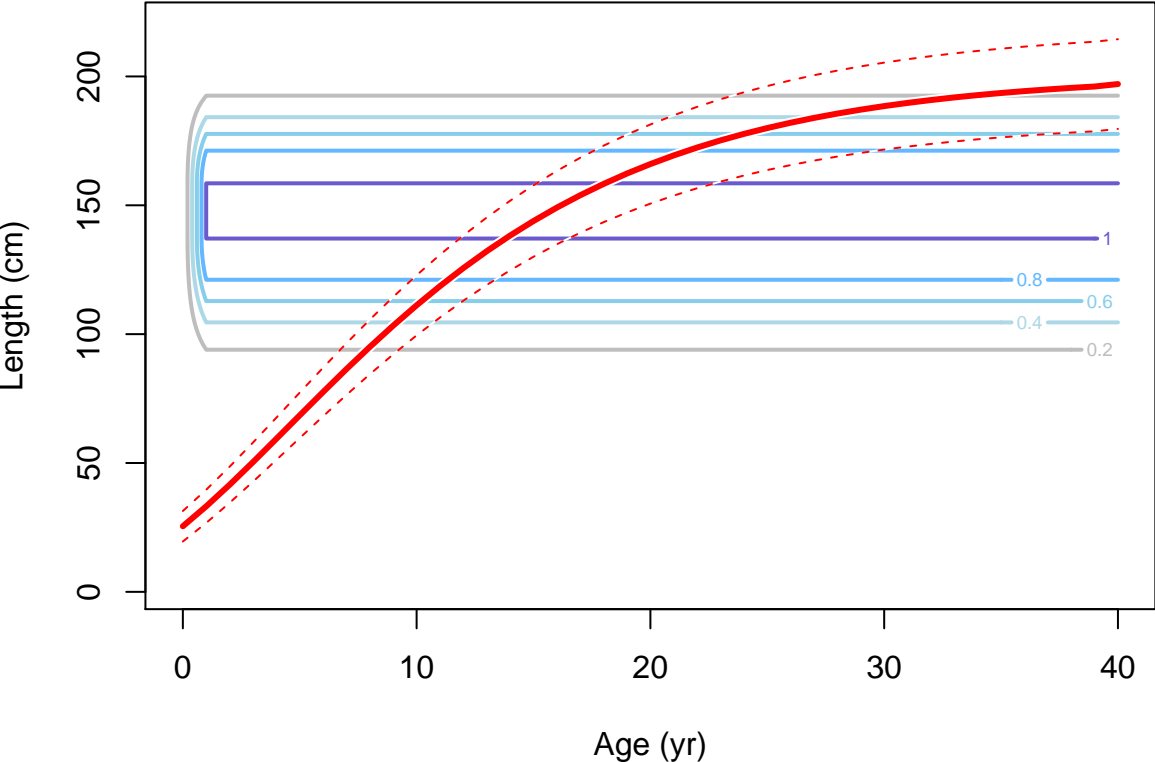
Female ending year selectivity and growth for A3-LL-n



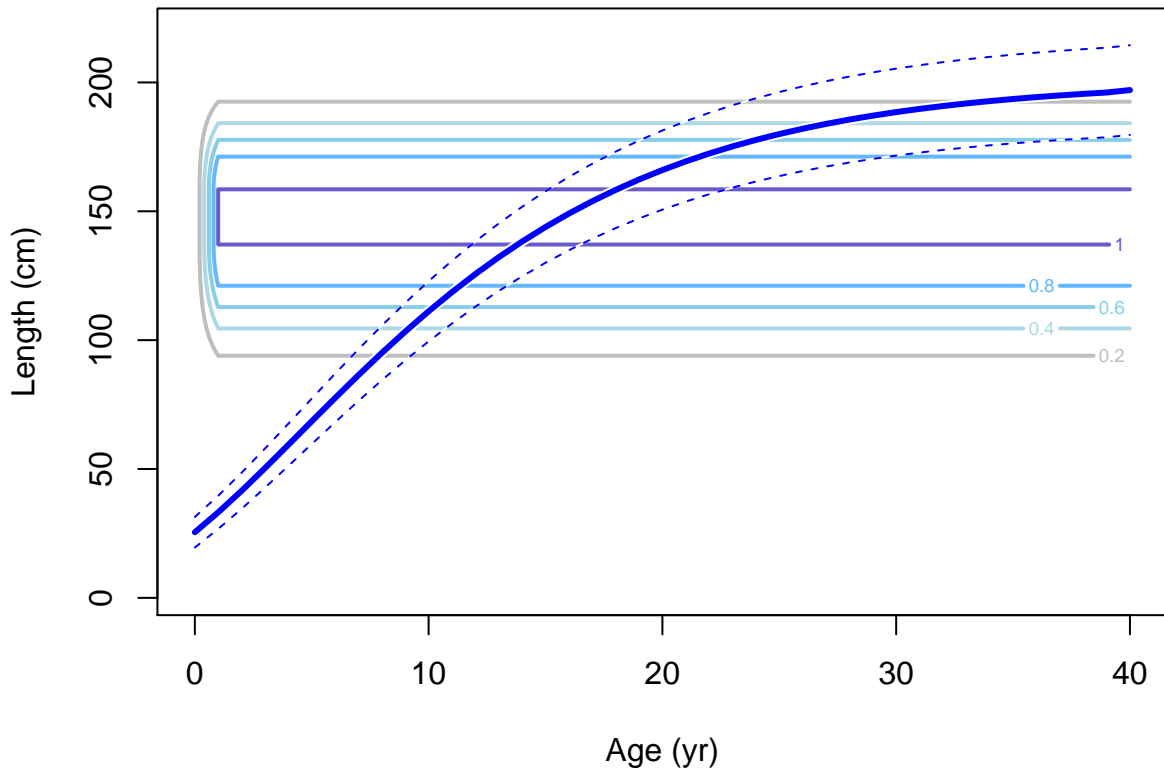
# Male ending year selectivity and growth for A3-LL-n



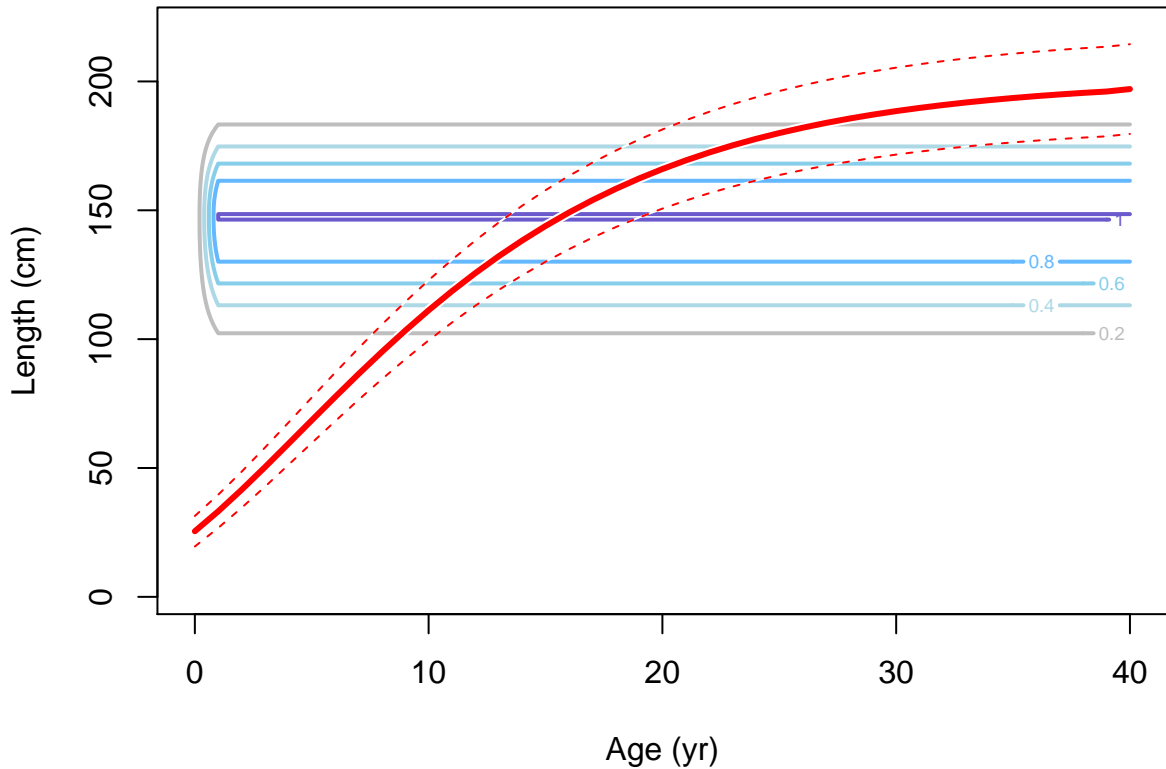
Female ending year selectivity and growth for A4-LL-n



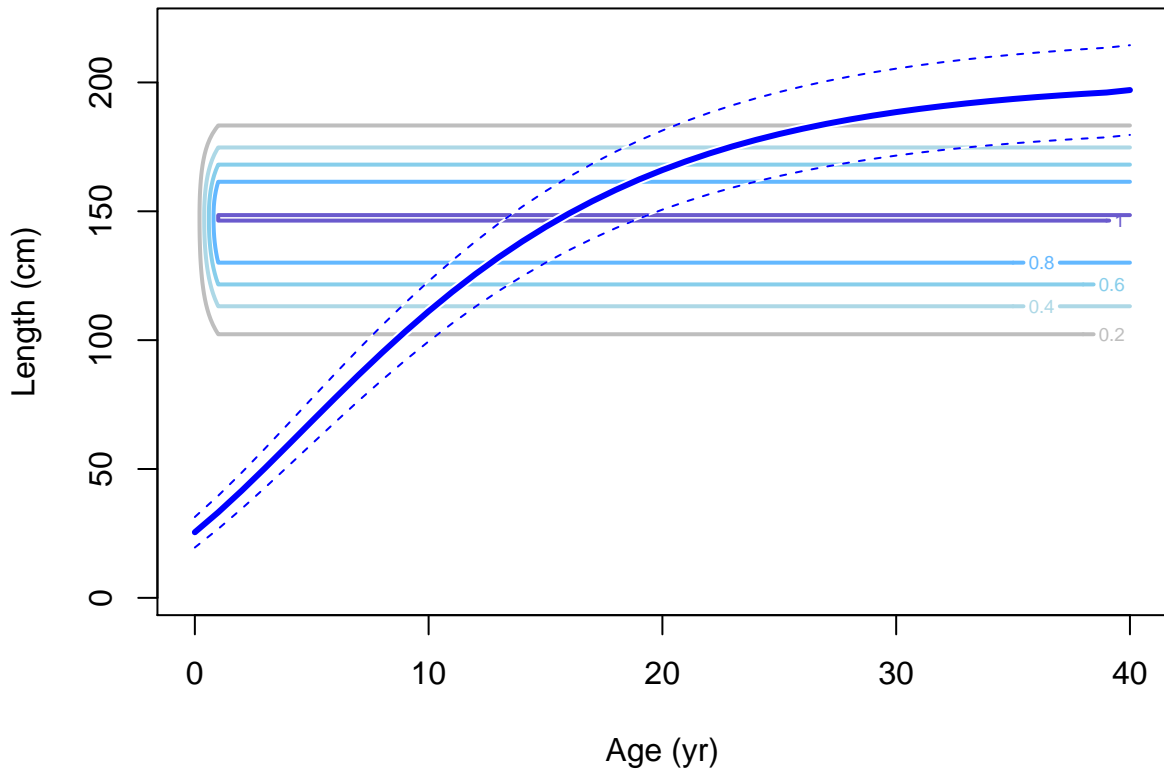
# Male ending year selectivity and growth for A4-LL-n



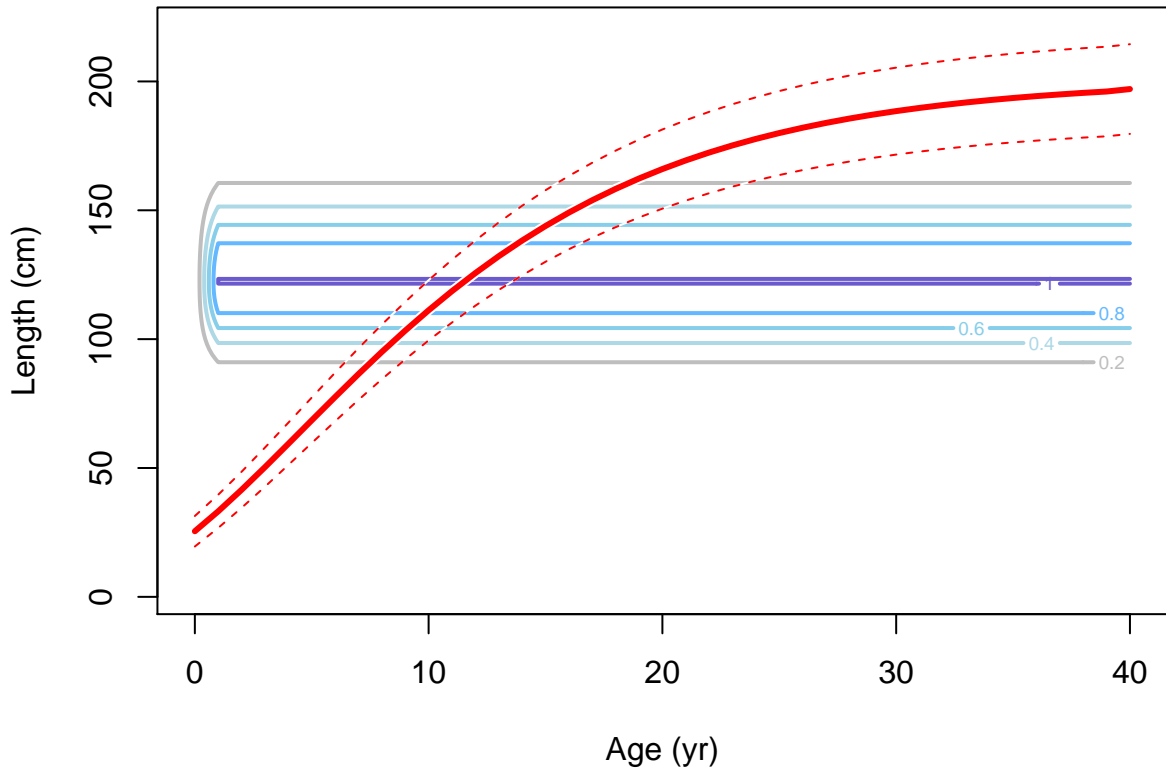
## Female ending year selectivity and growth for A5-LL-n



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

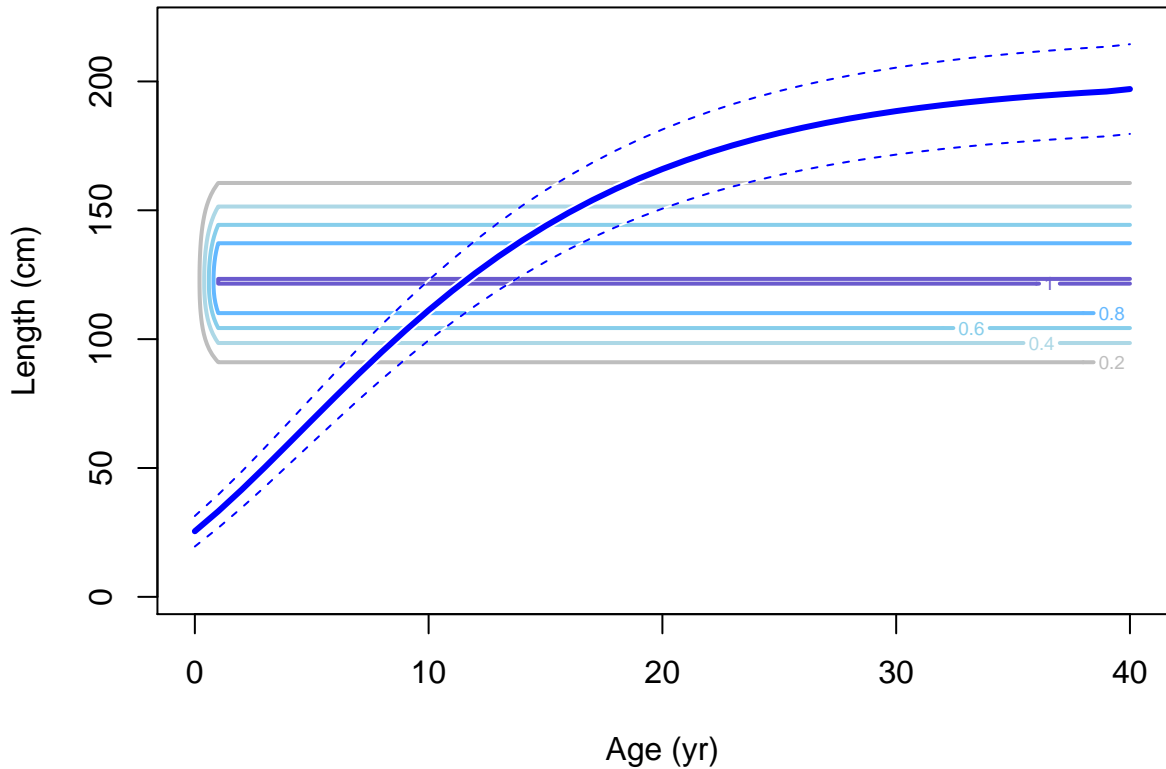


## Female ending year selectivity and growth for A6-LL-n

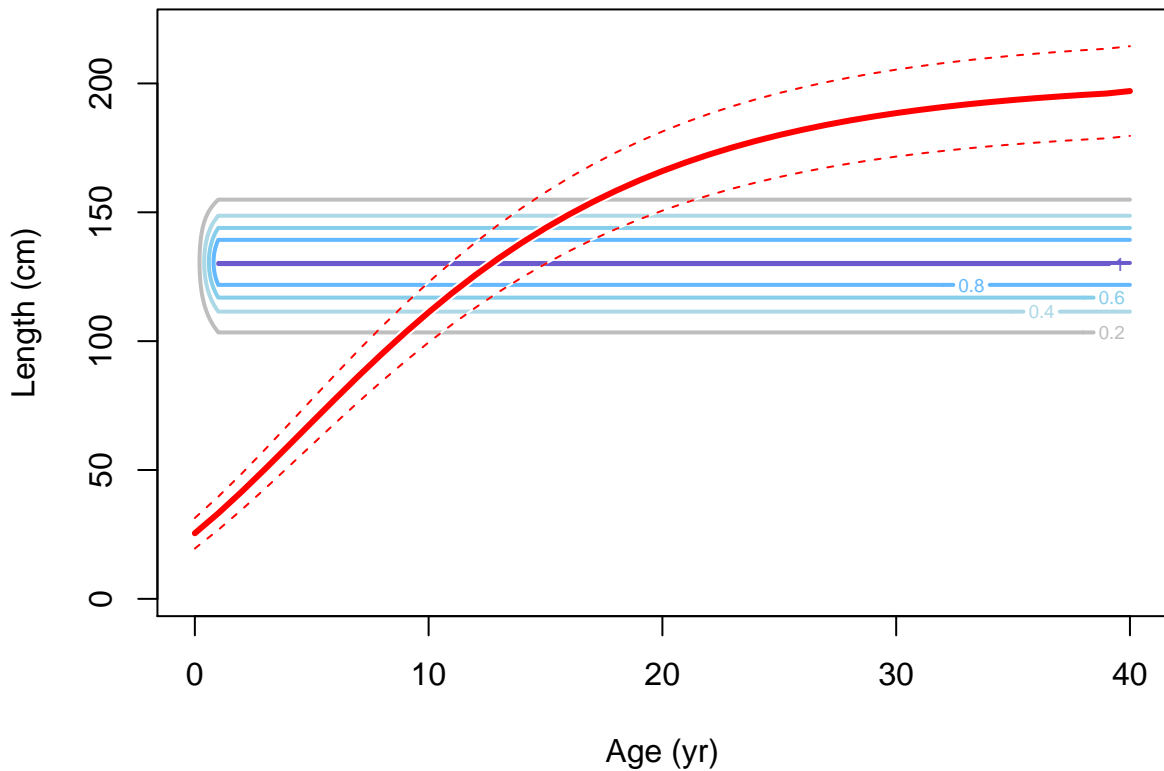




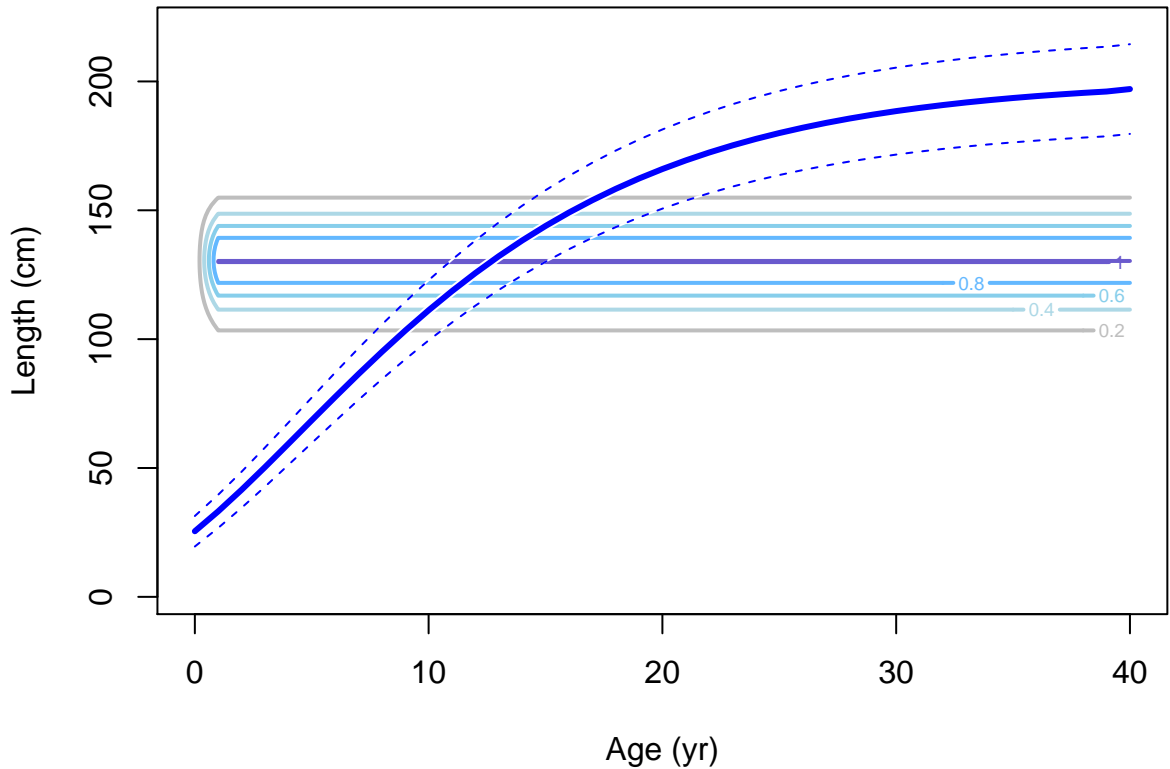
# Male ending year selectivity and growth for A6-LL-n



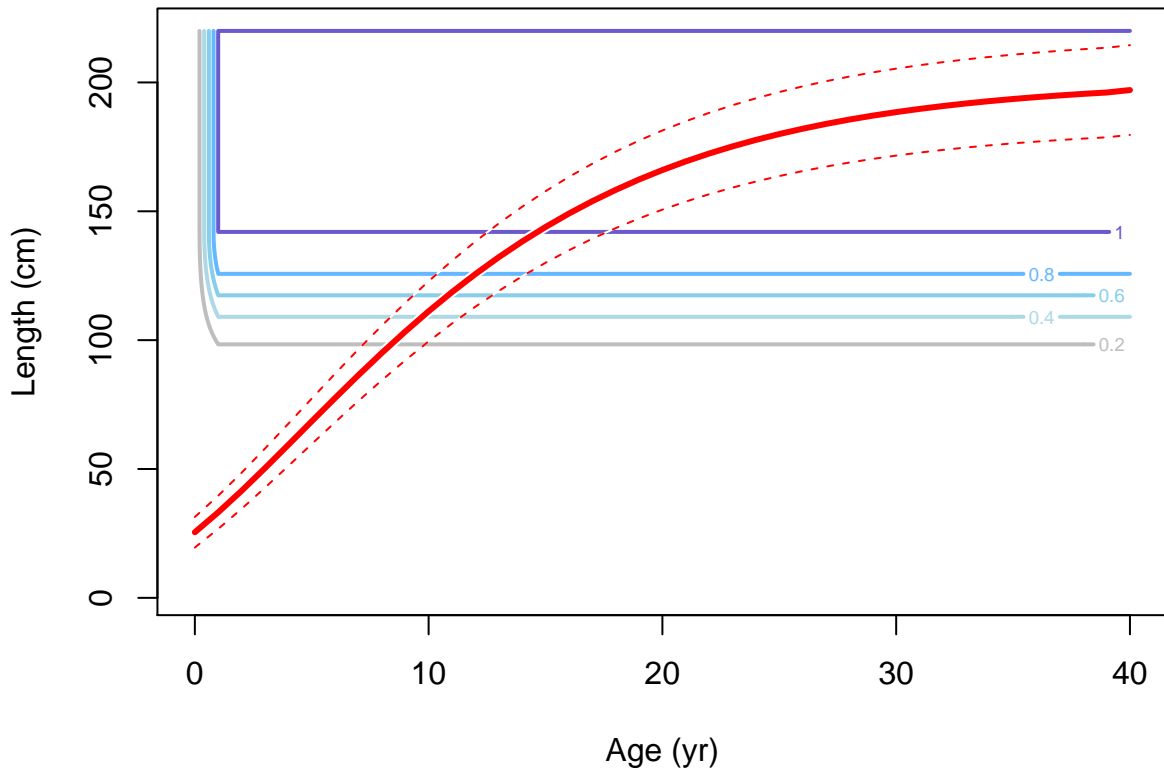
## Female ending year selectivity and growth for A1-LL-w



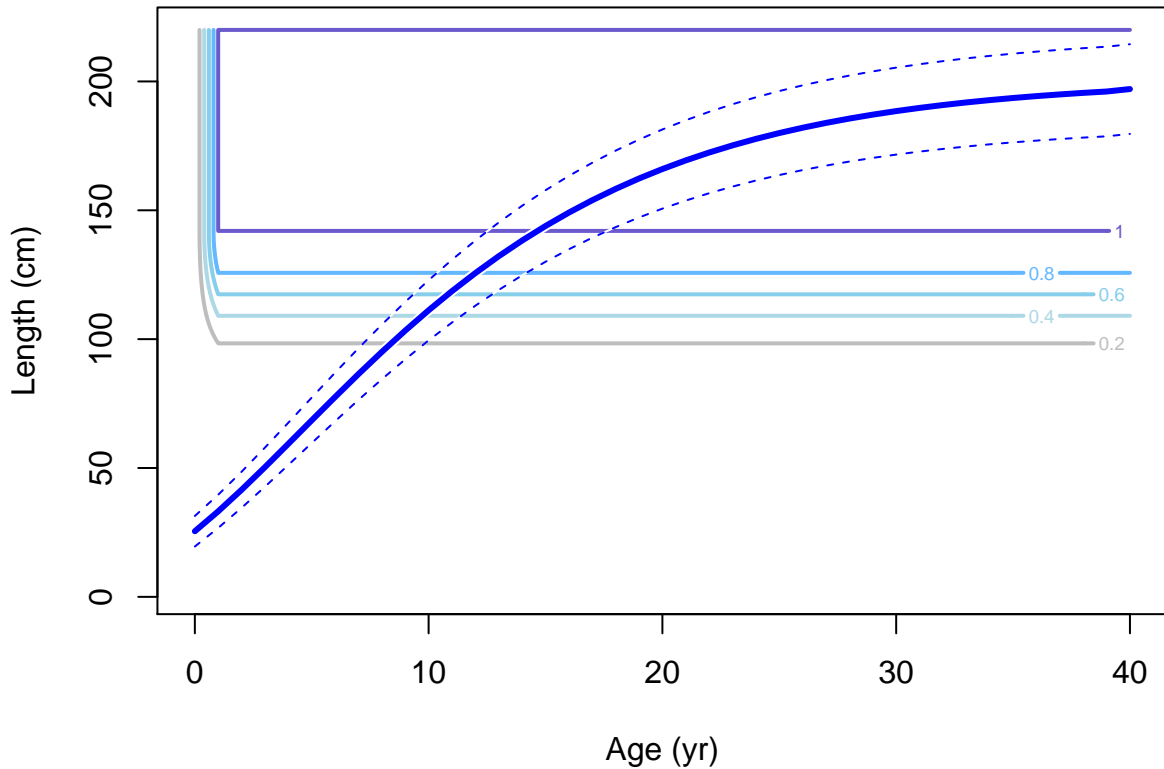
# Male ending year selectivity and growth for A1-LL-w



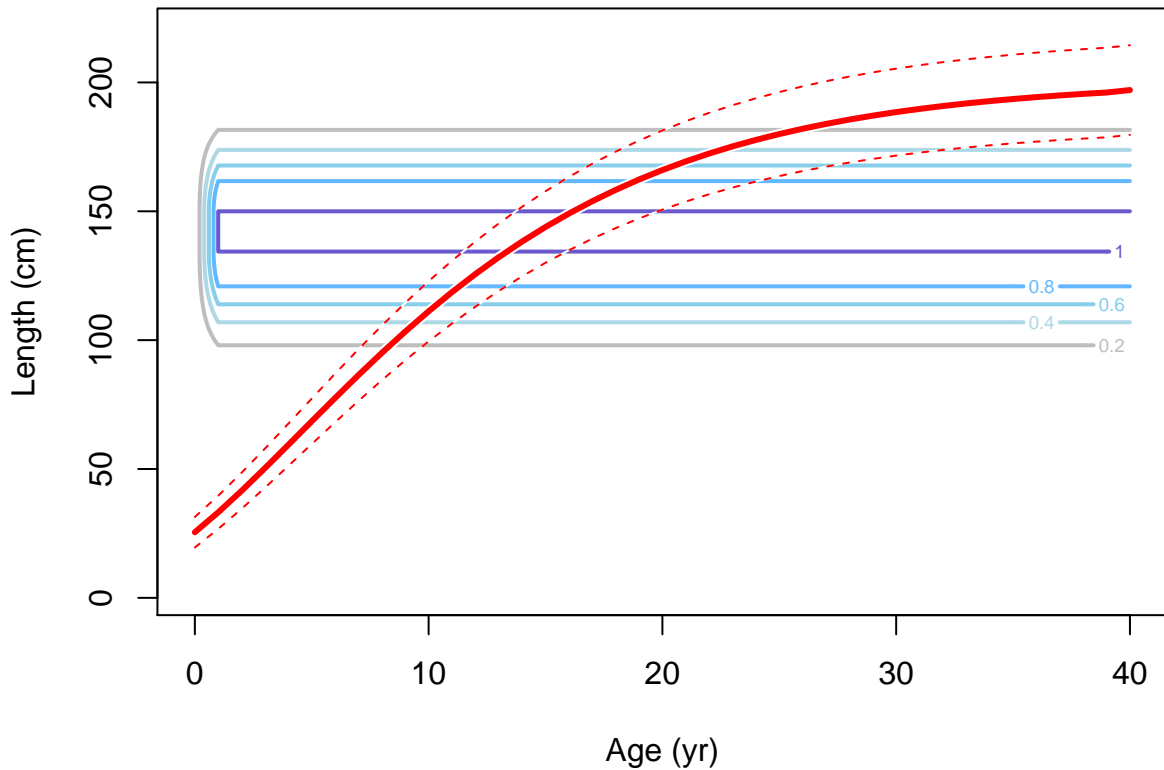
## Female ending year selectivity and growth for A2-LL-w



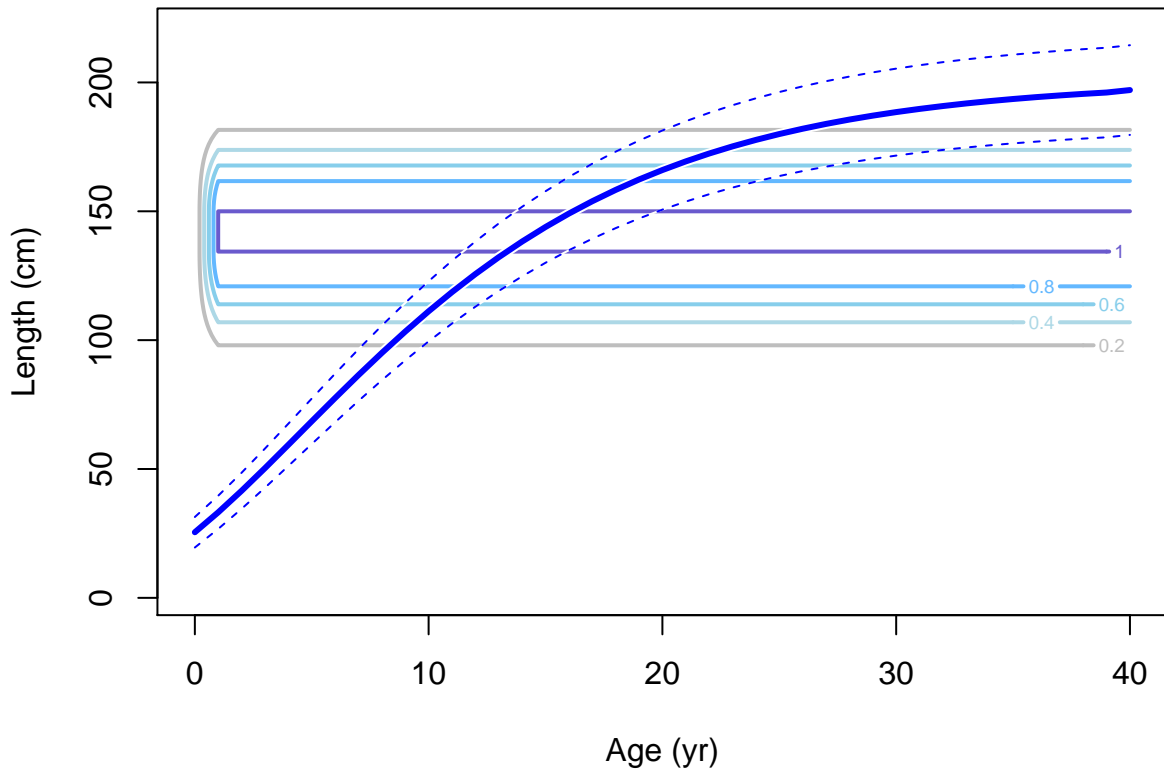
# Male ending year selectivity and growth for A2-LL-w



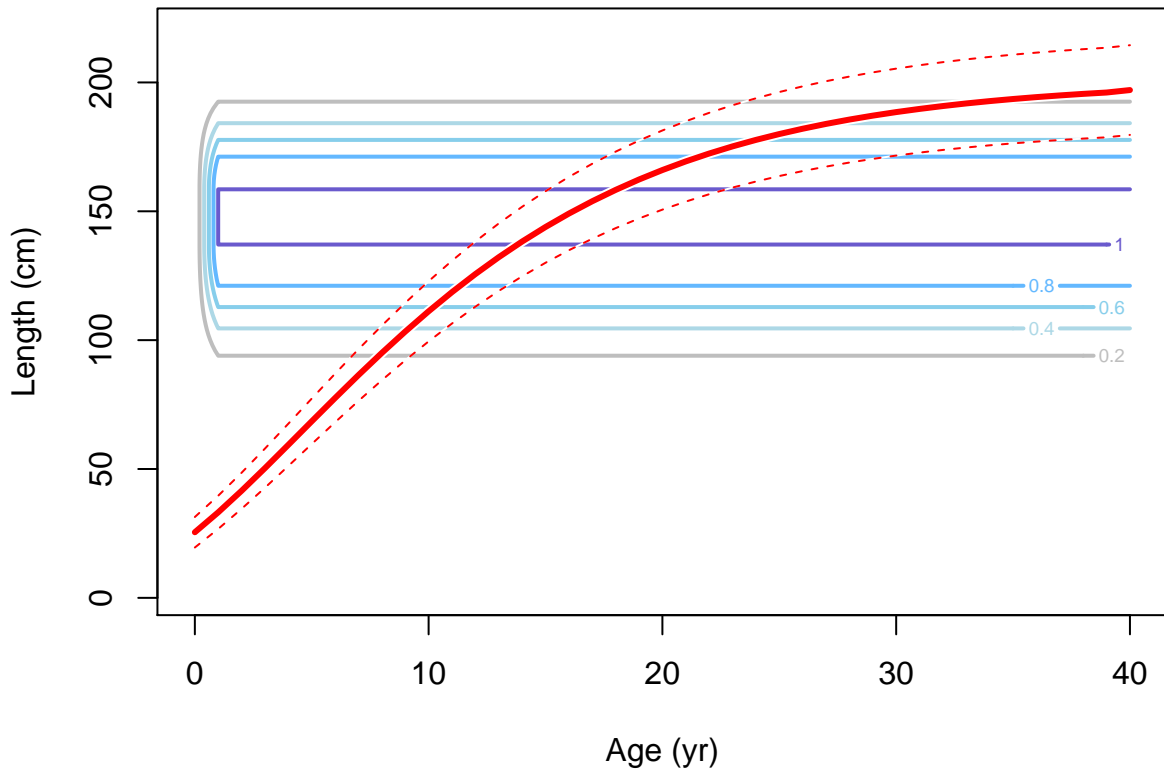
## Female ending year selectivity and growth for A3-LL-w



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

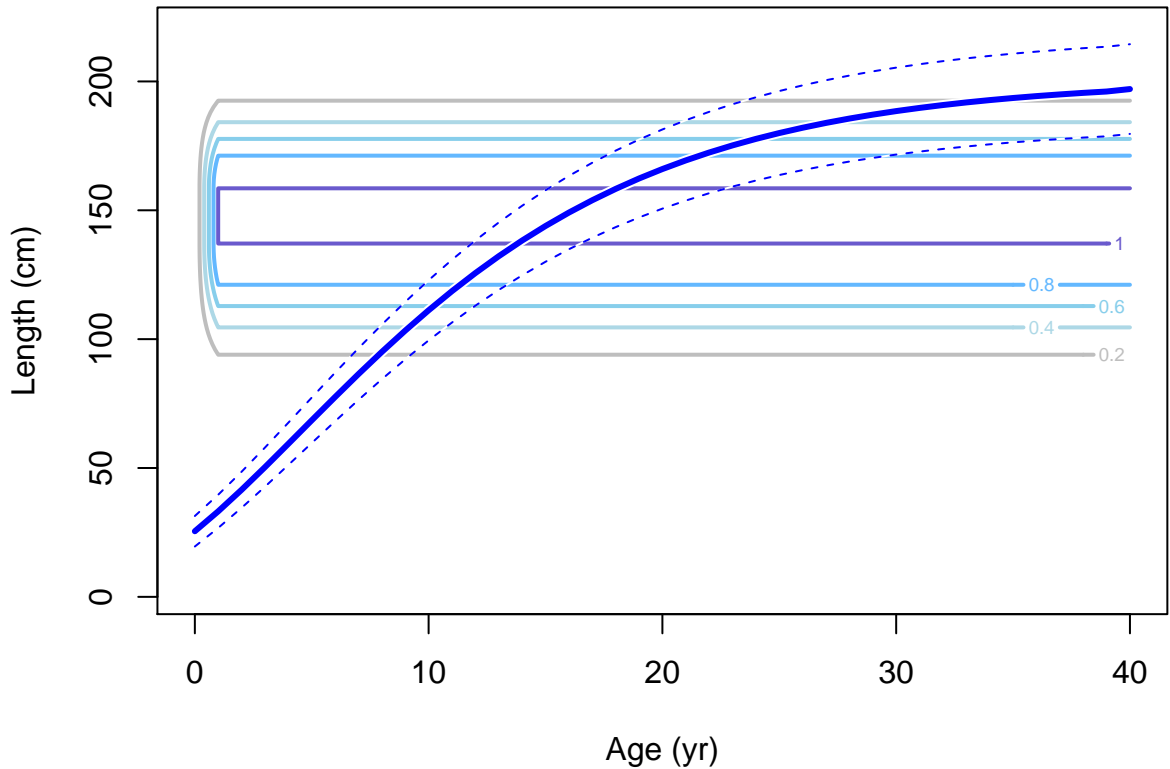


## Female ending year selectivity and growth for A4-LL-w

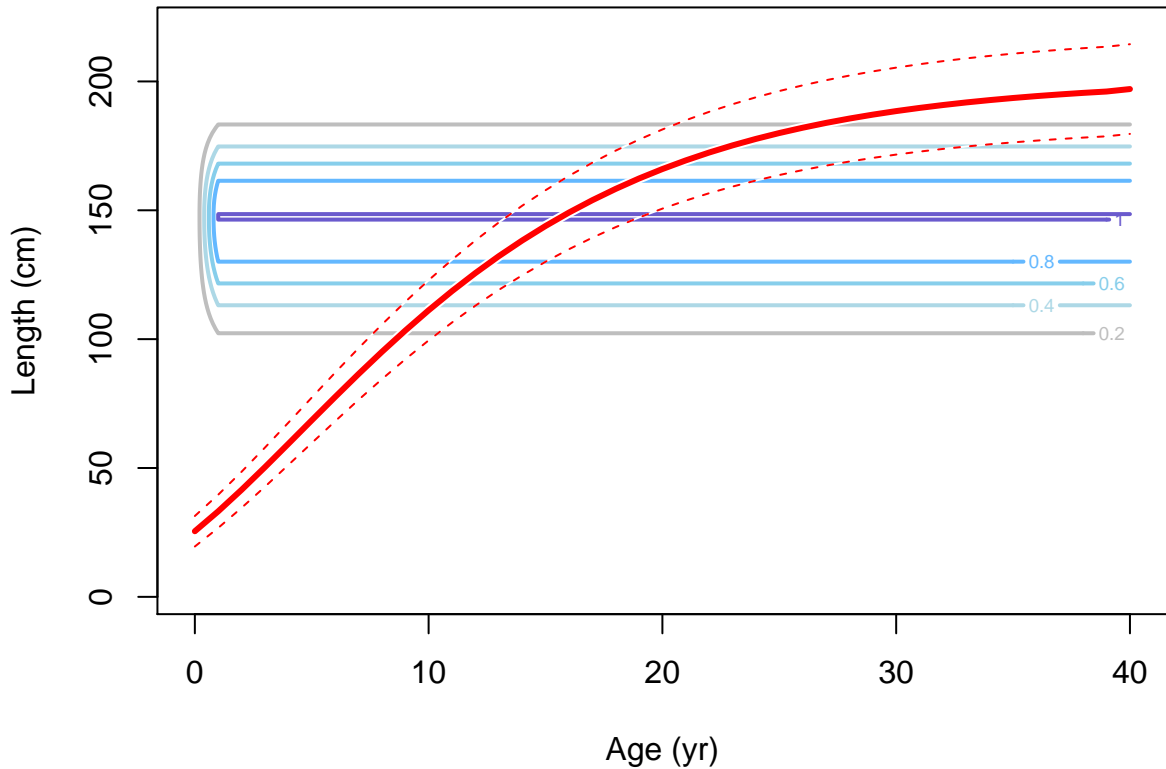




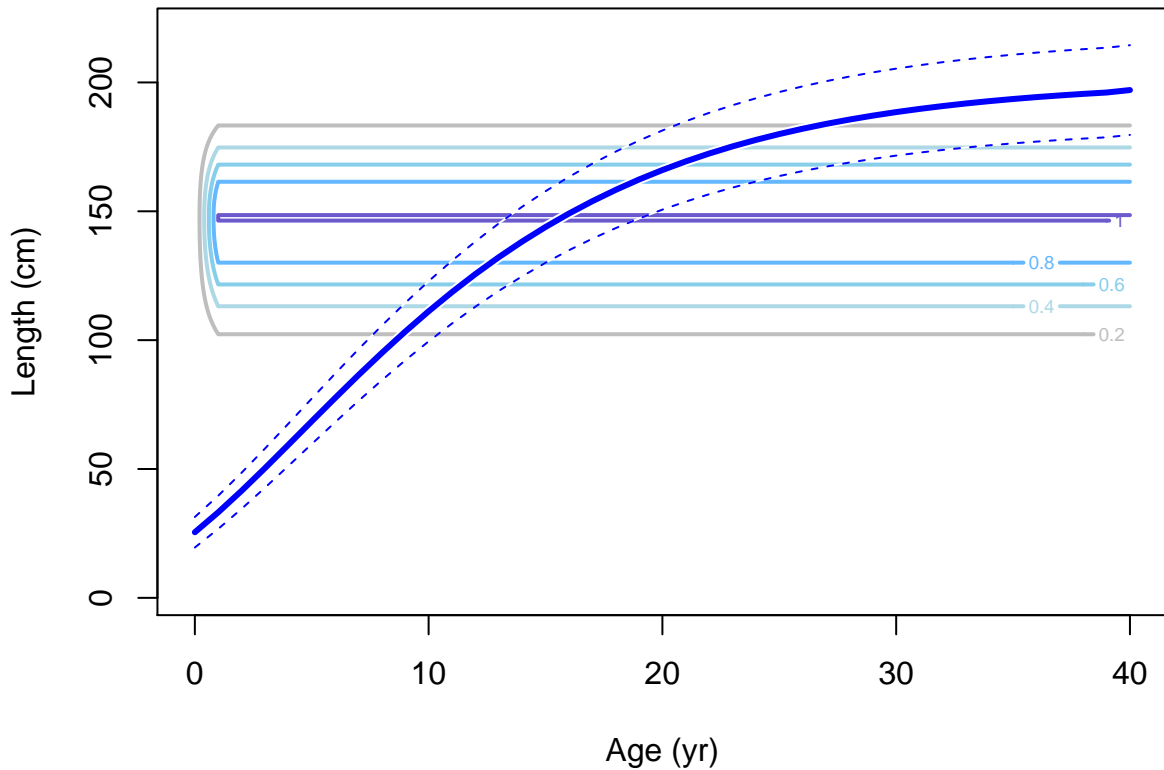
# Male ending year selectivity and growth for A4-LL-w



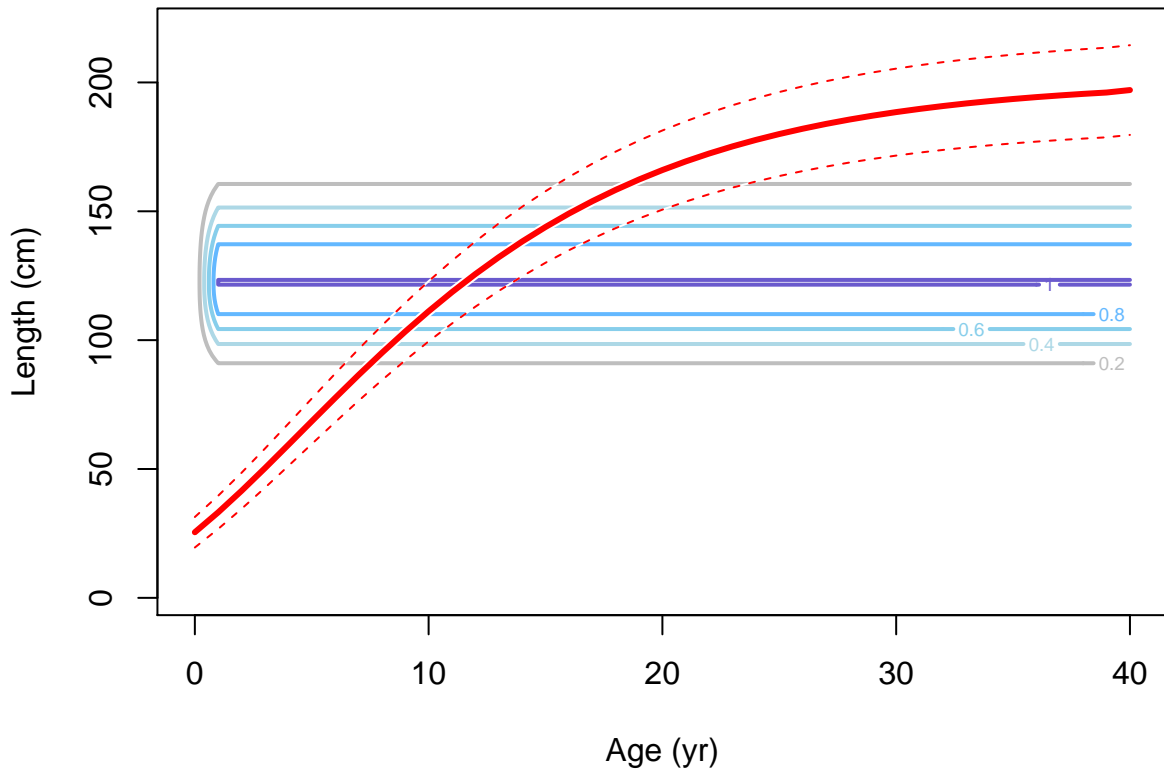
## Female ending year selectivity and growth for A5-LL-w



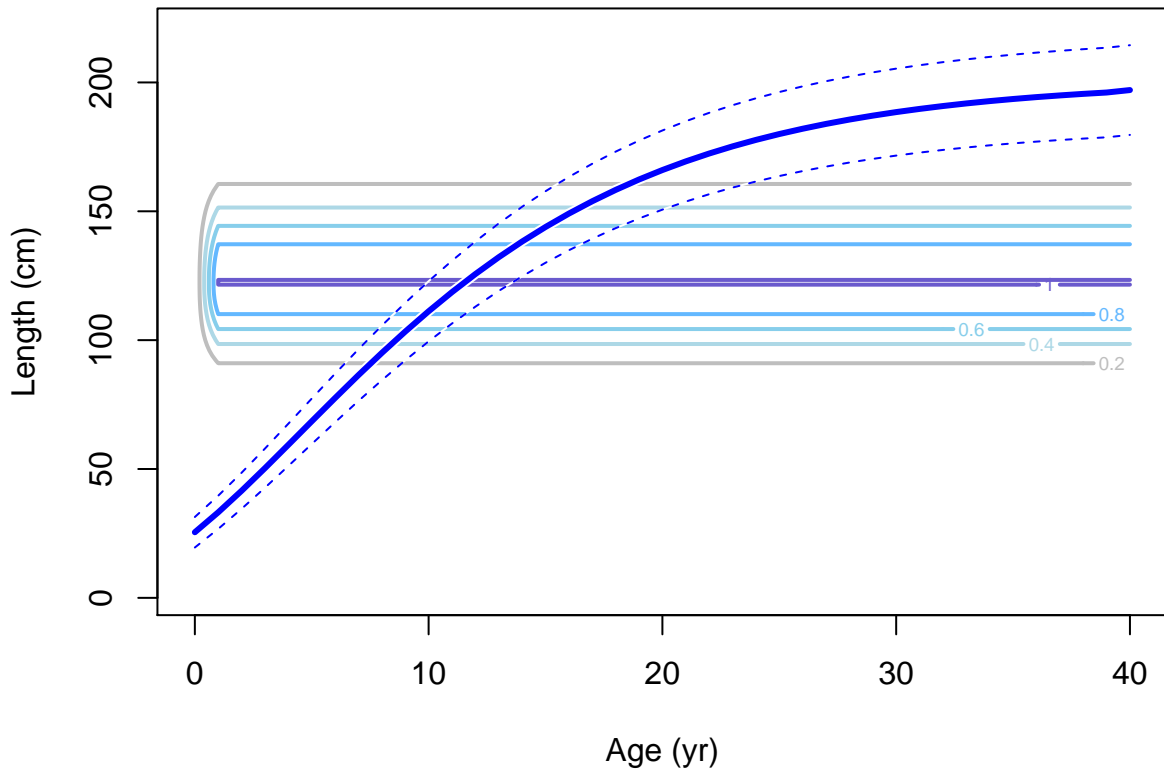
## Male ending year selectivity and growth for A5-LL-w



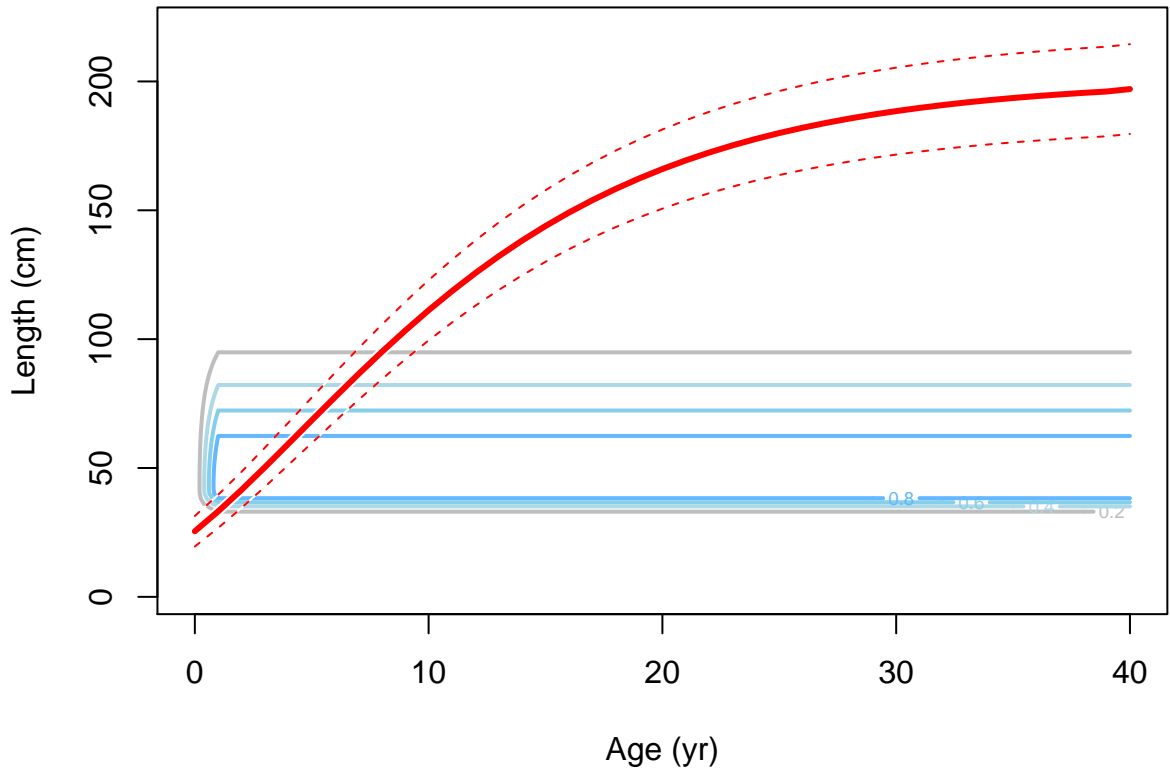
# Female ending year selectivity and growth for A6-LL-w



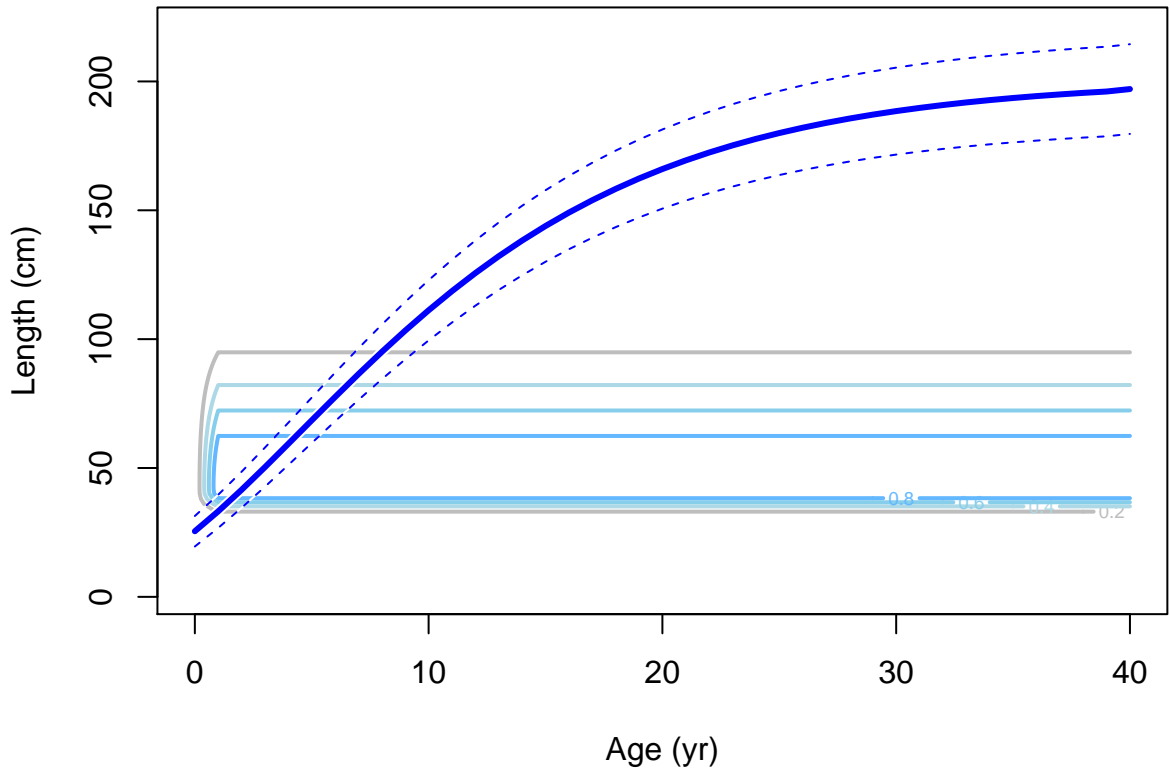
# Male ending year selectivity and growth for A6-LL-w



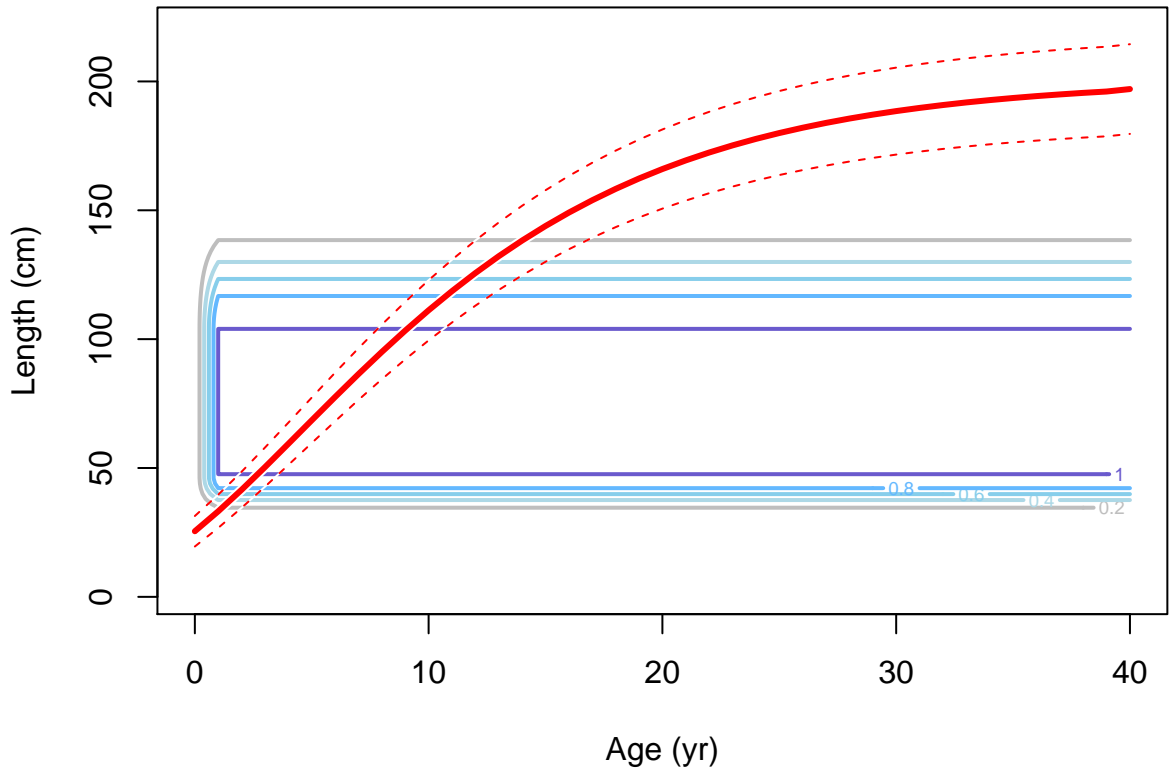
## Female ending year selectivity and growth for A2-OBJ



# Male ending year selectivity and growth for A2-OBJ

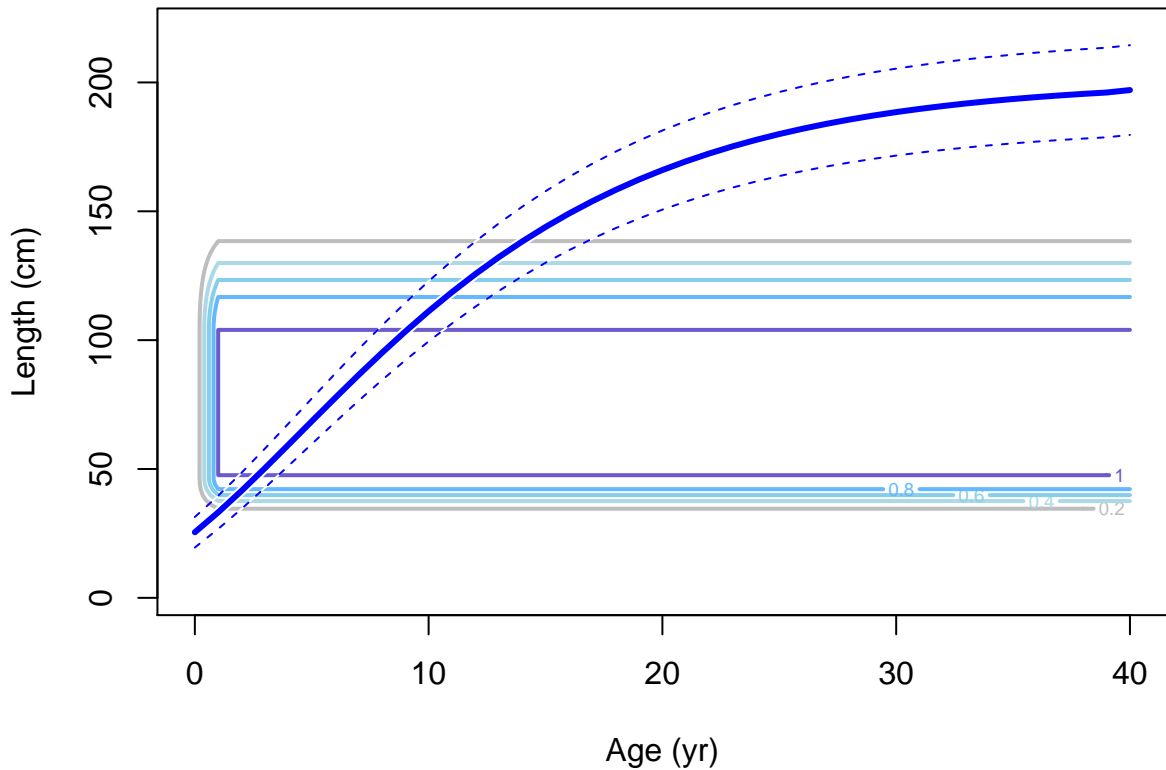


## Female ending year selectivity and growth for A3-OBJ

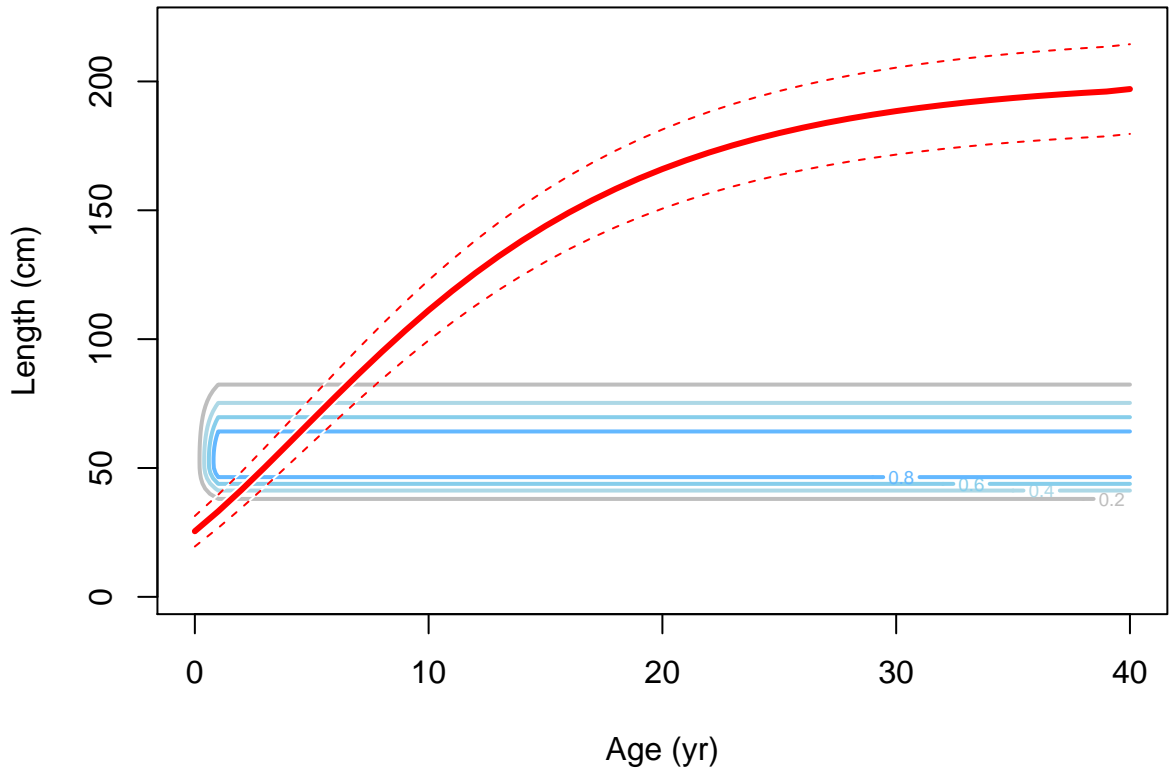




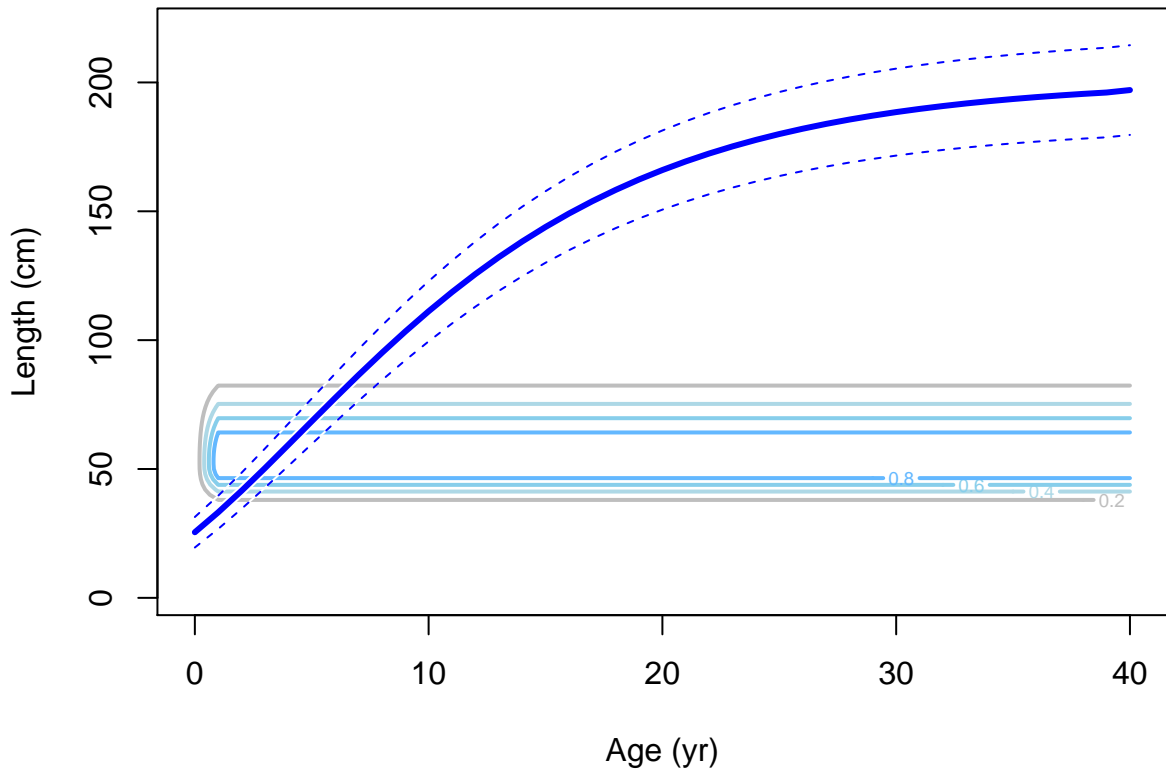
### Male ending year selectivity and growth for A3-OBJ



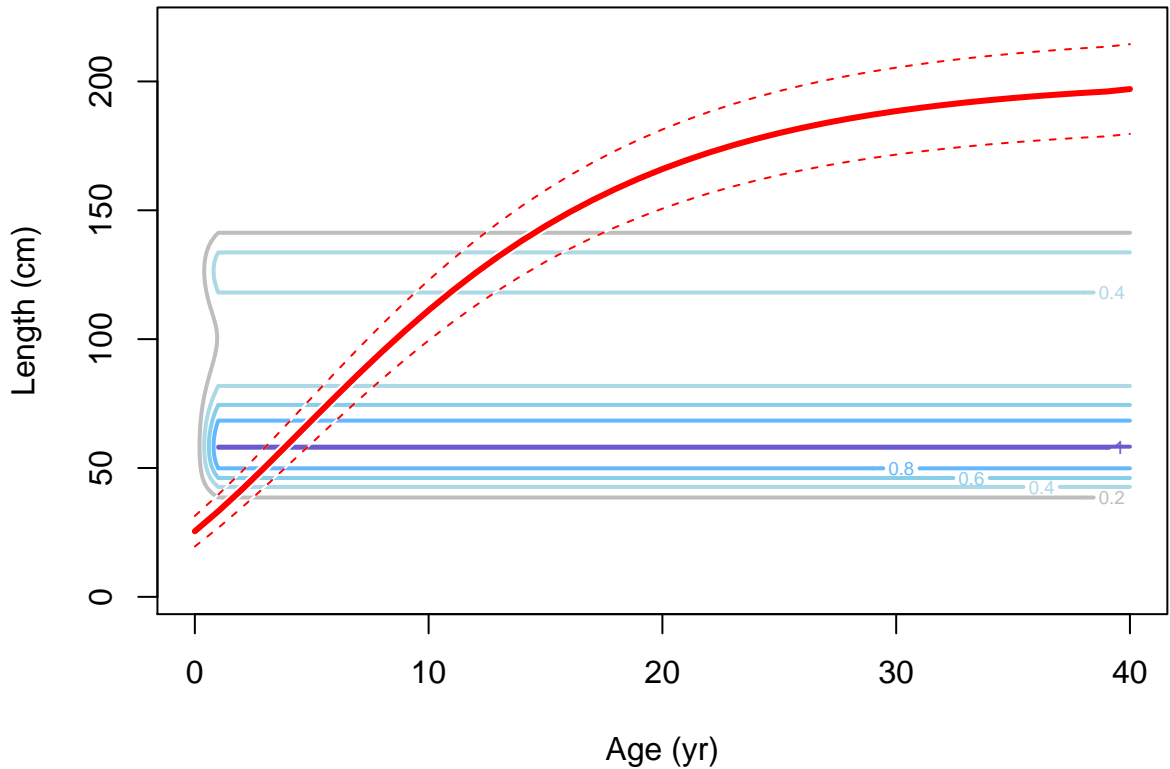
## Female ending year selectivity and growth for A4-OBJ



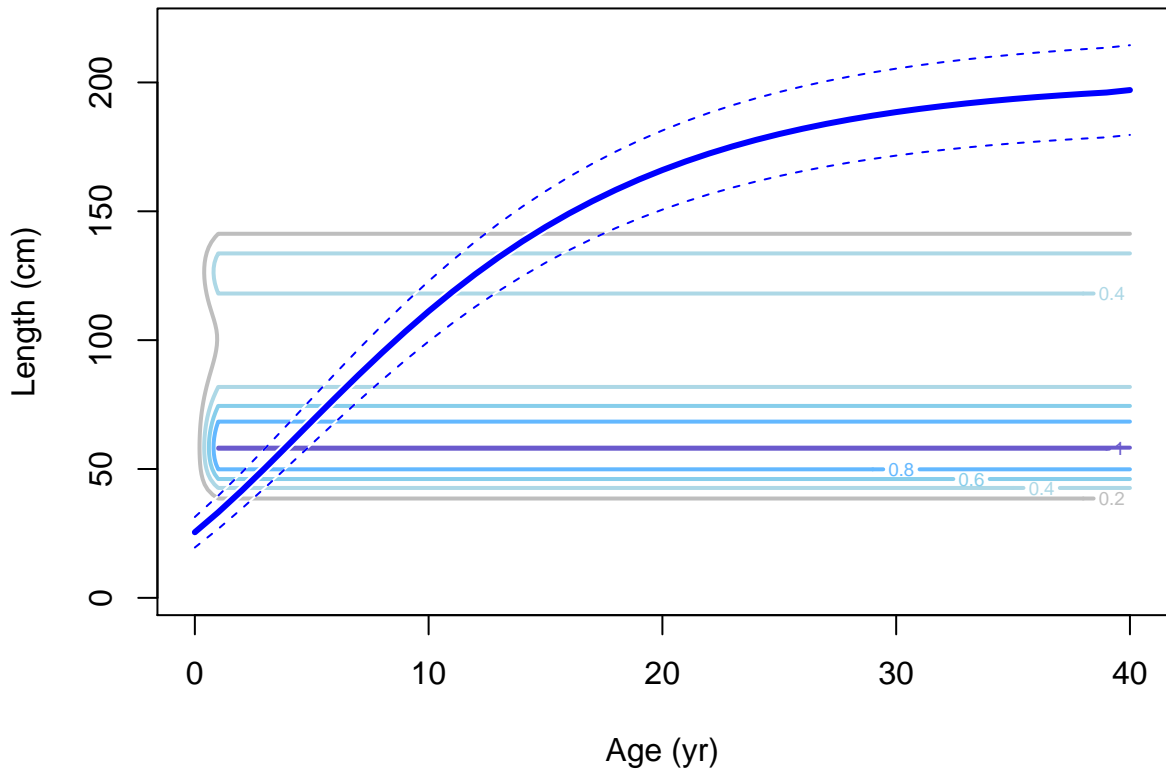
## Male ending year selectivity and growth for A4-OBJ



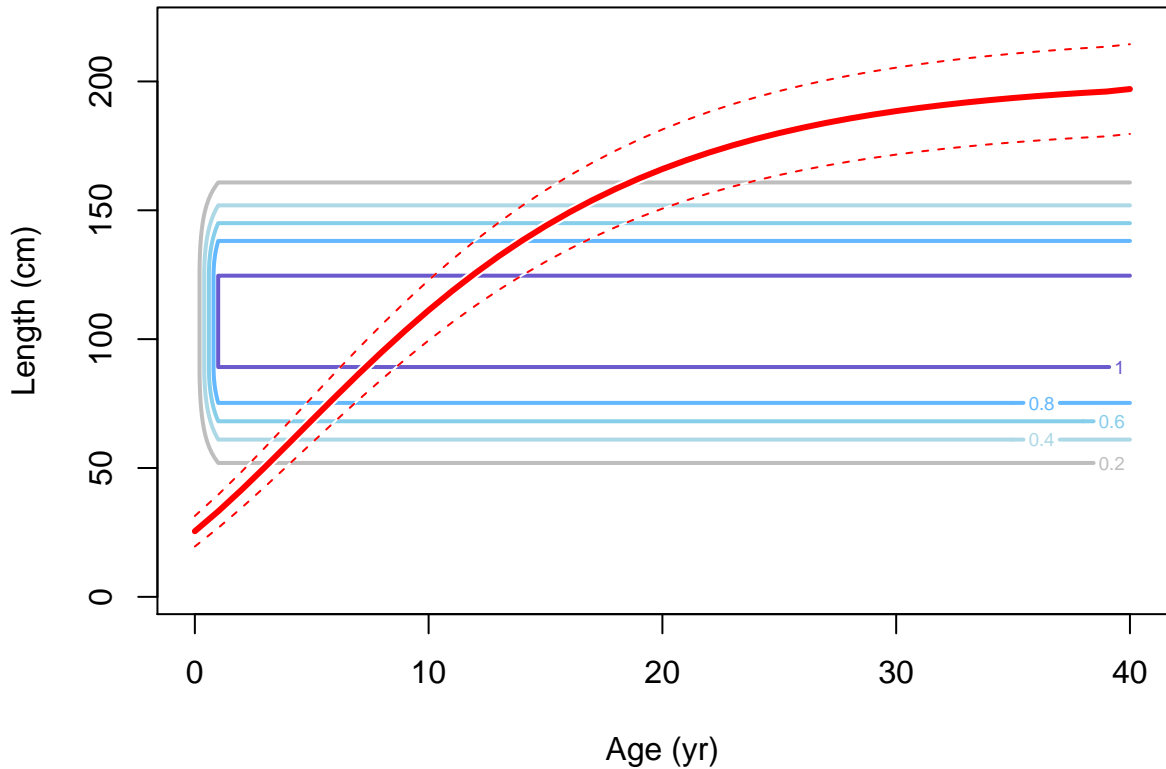
## Female ending year selectivity and growth for A5-OBJ



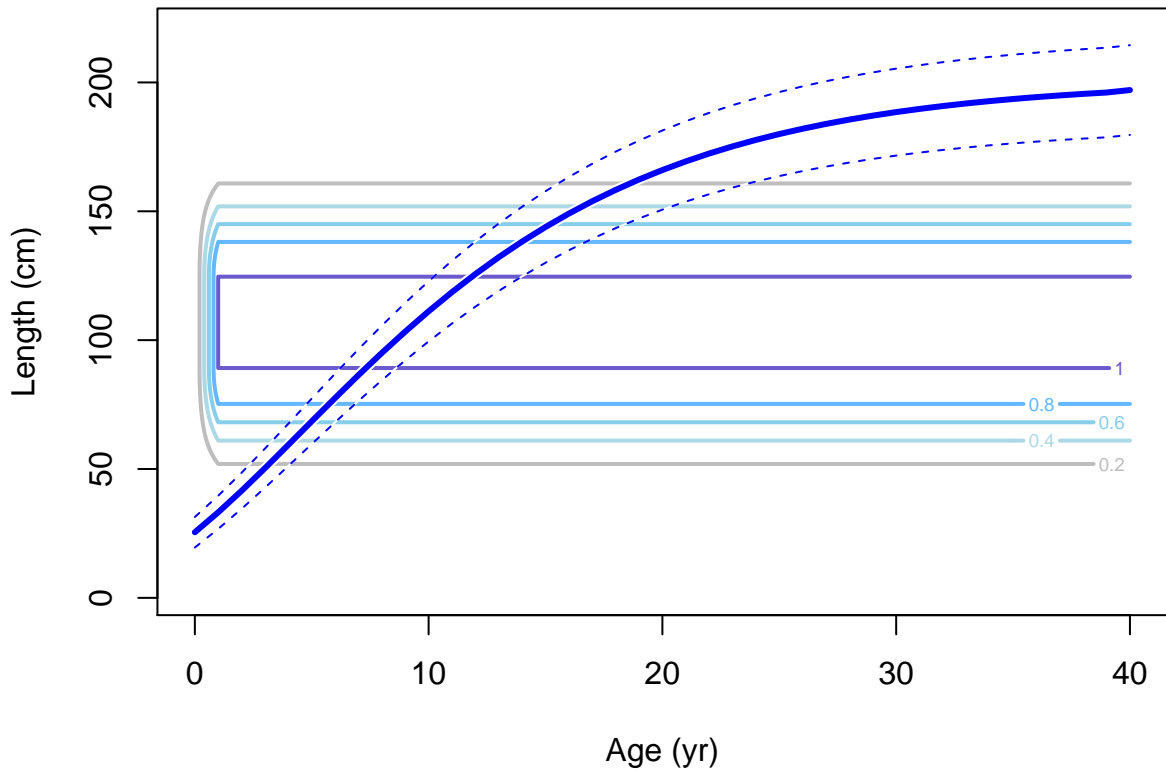
# Male ending year selectivity and growth for A5-OBJ



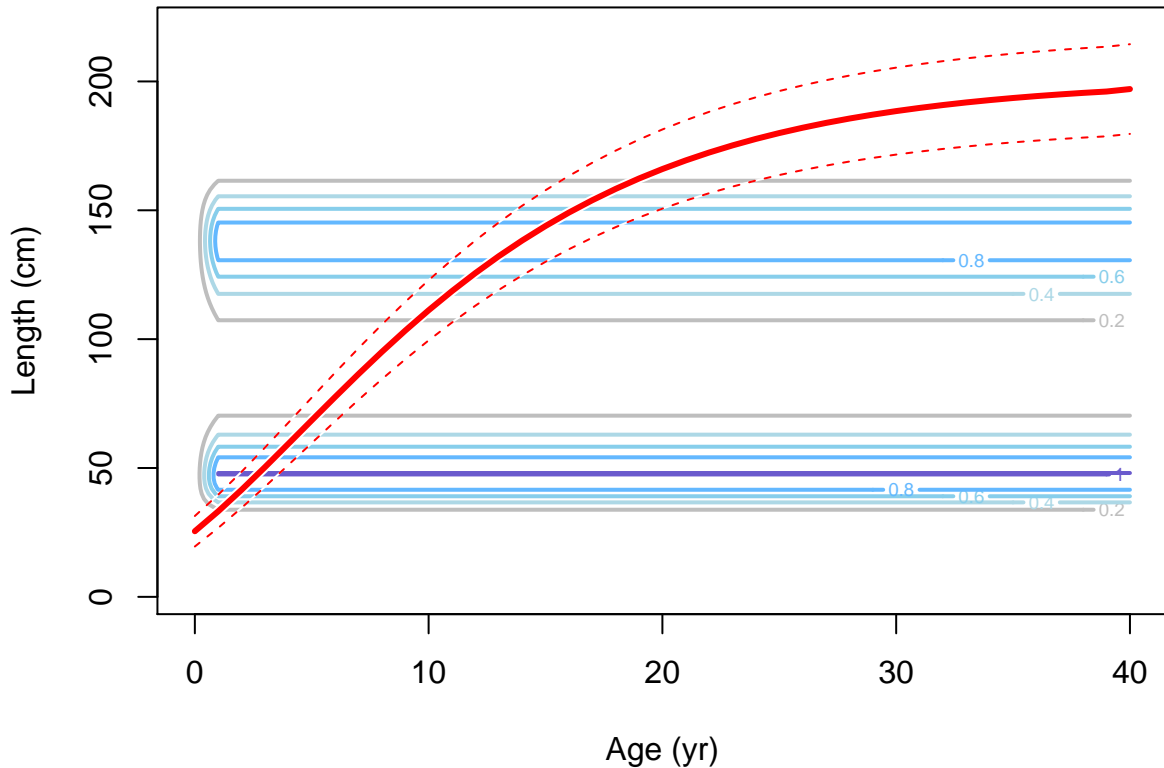
## Female ending year selectivity and growth for A6-OBJ



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

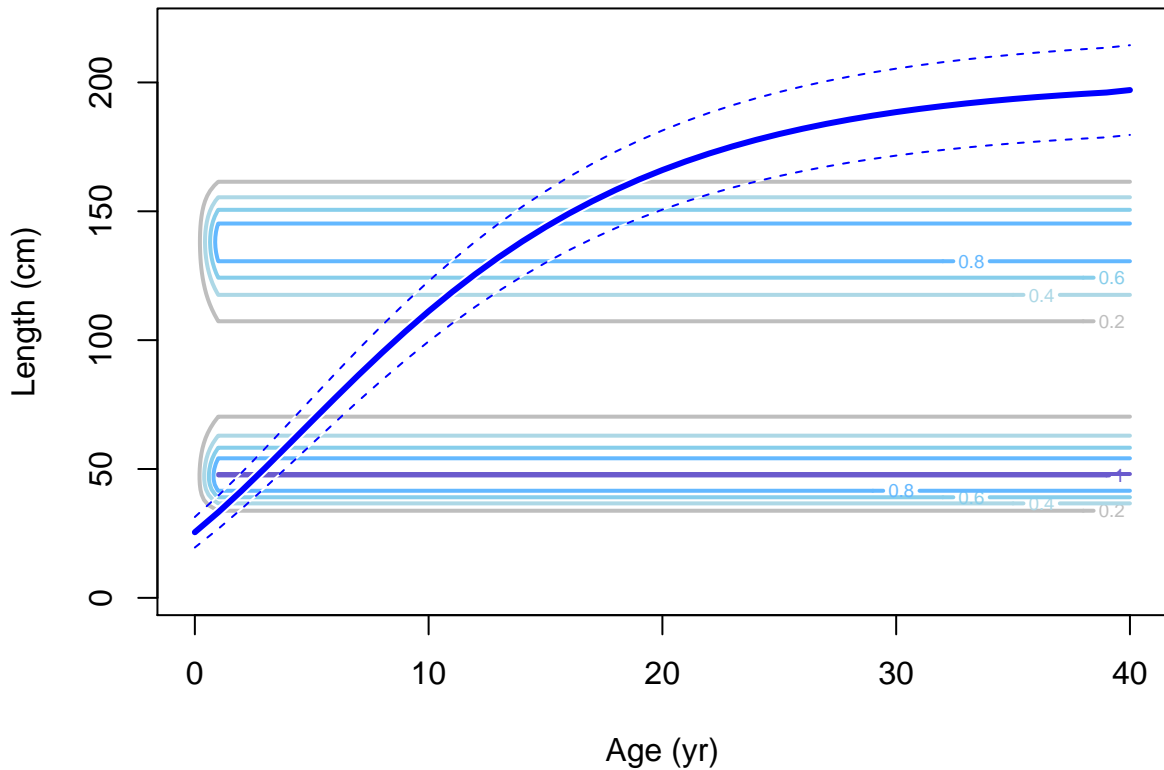


## Female ending year selectivity and growth for A2-NOADEL

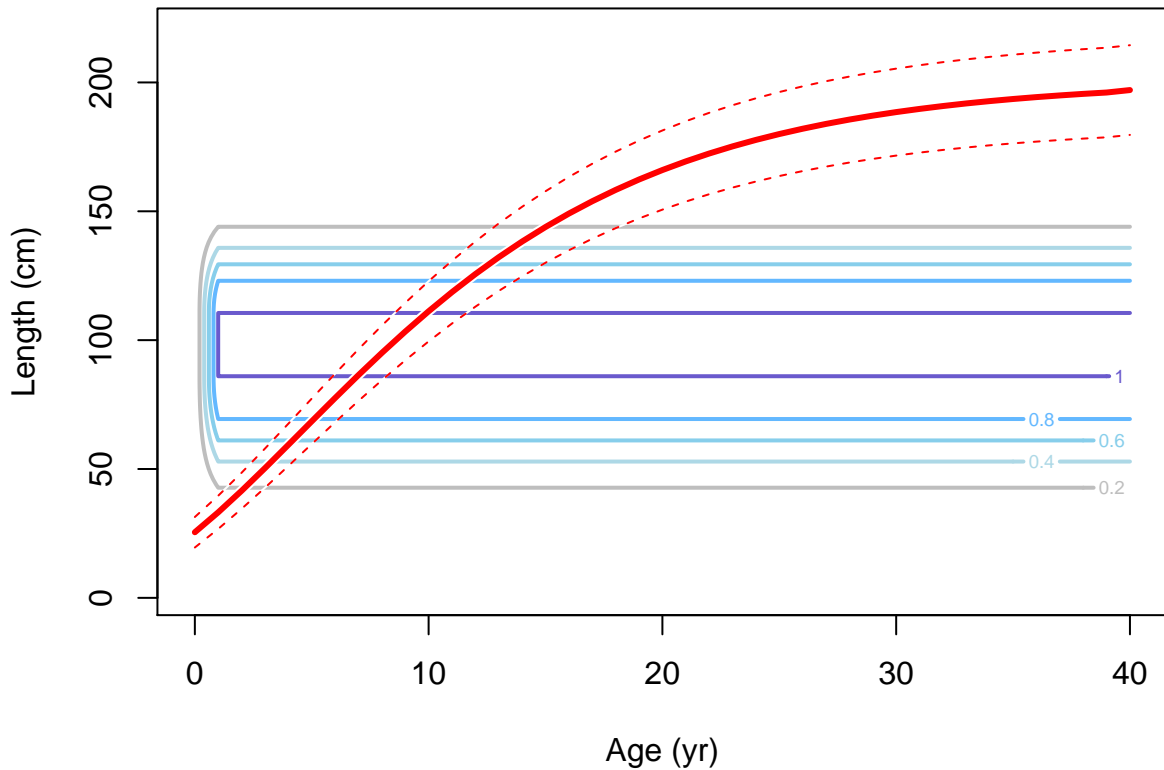




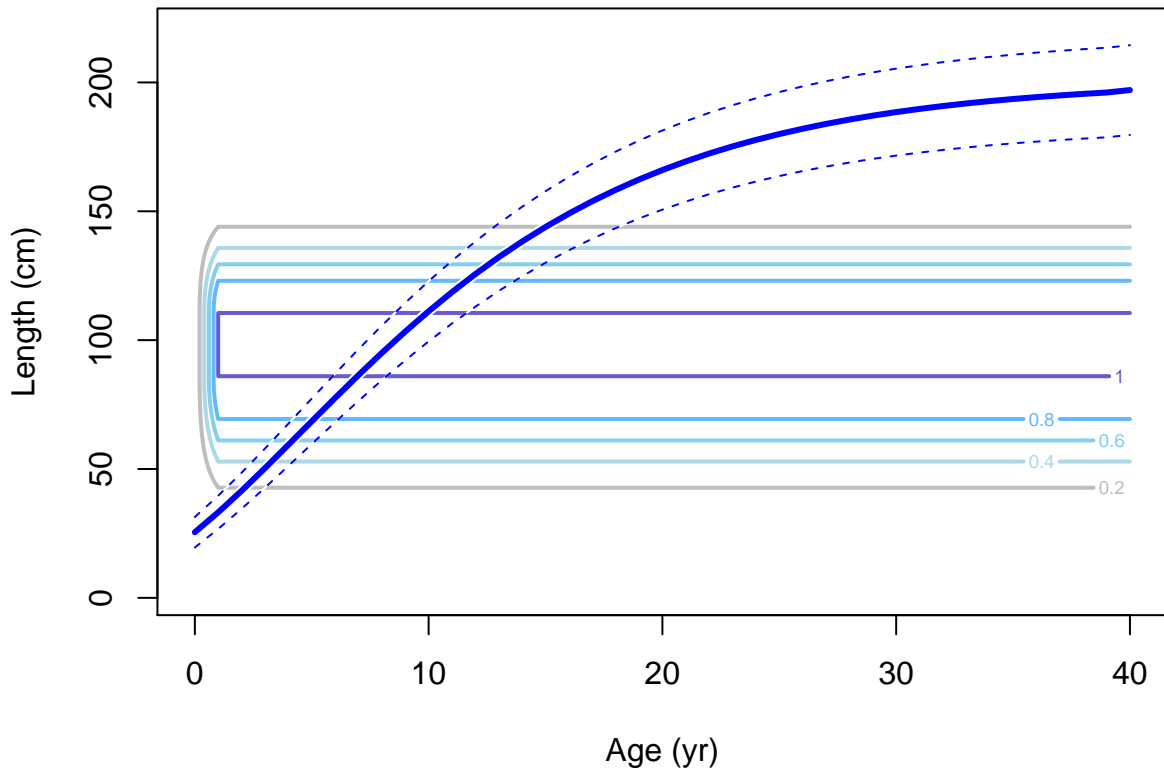
# Male ending year selectivity and growth for A2-NOADEL



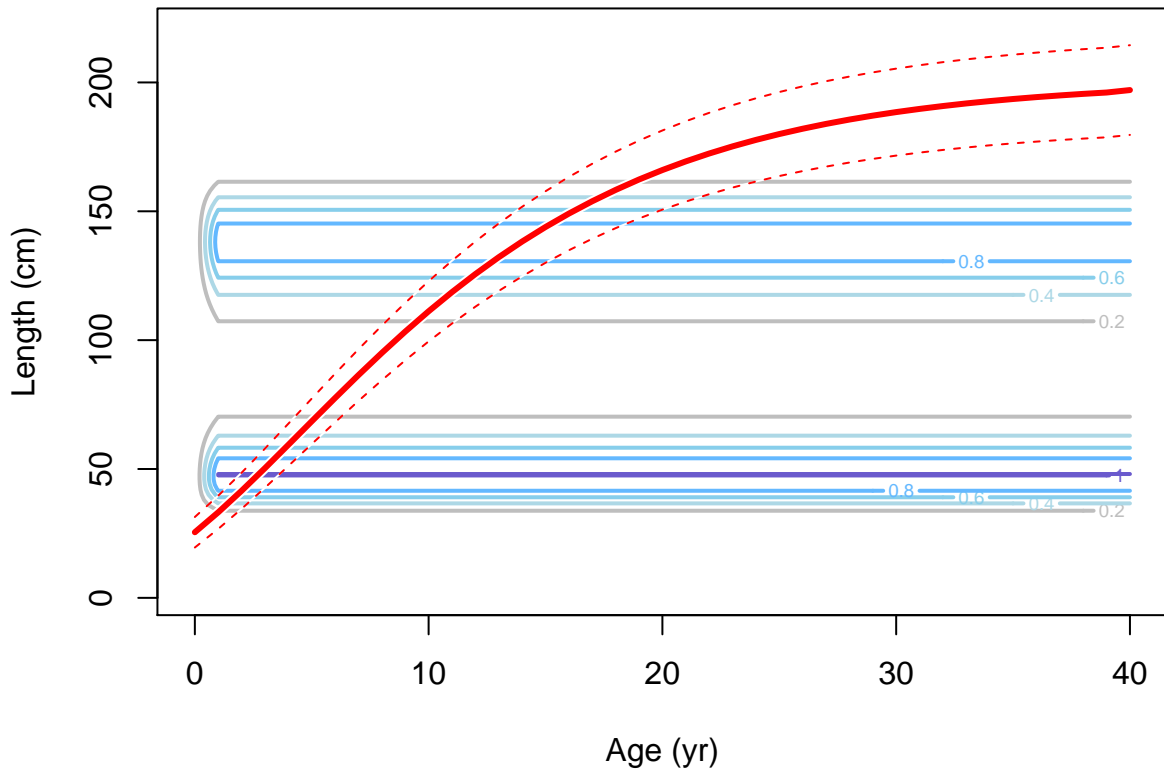
## Female ending year selectivity and growth for A3-NOADEL



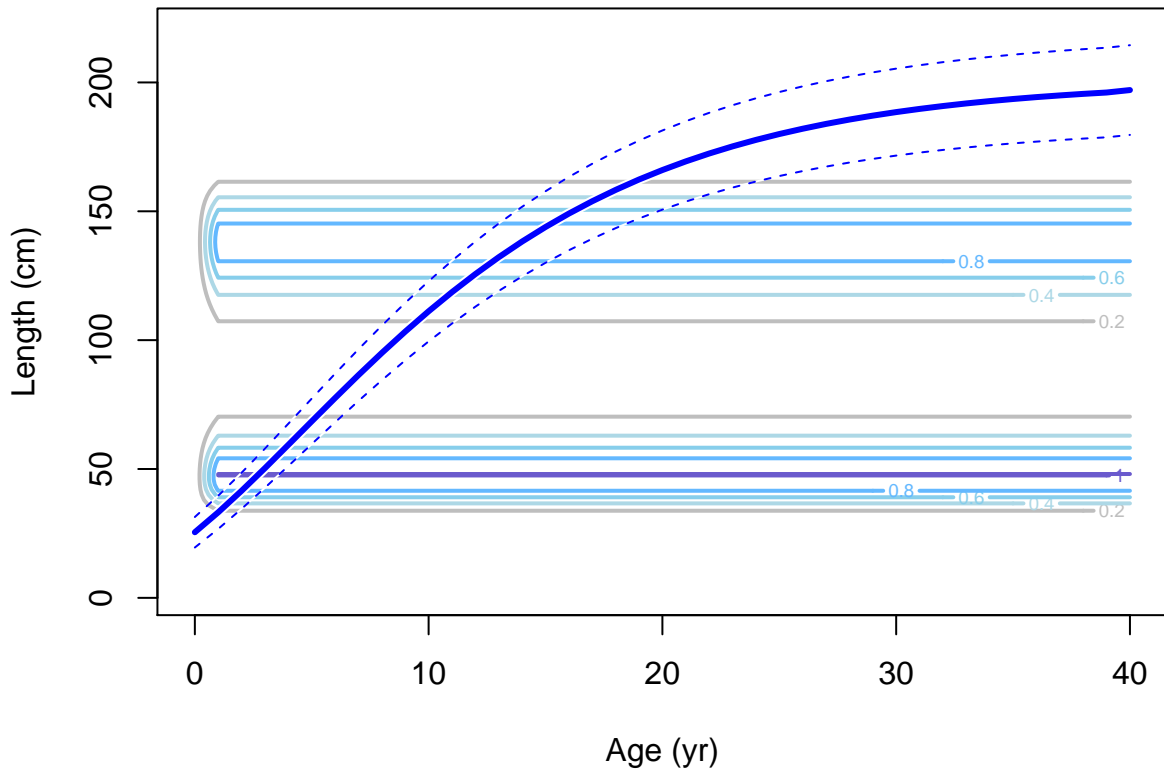
# Male ending year selectivity and growth for A3-NOADEL



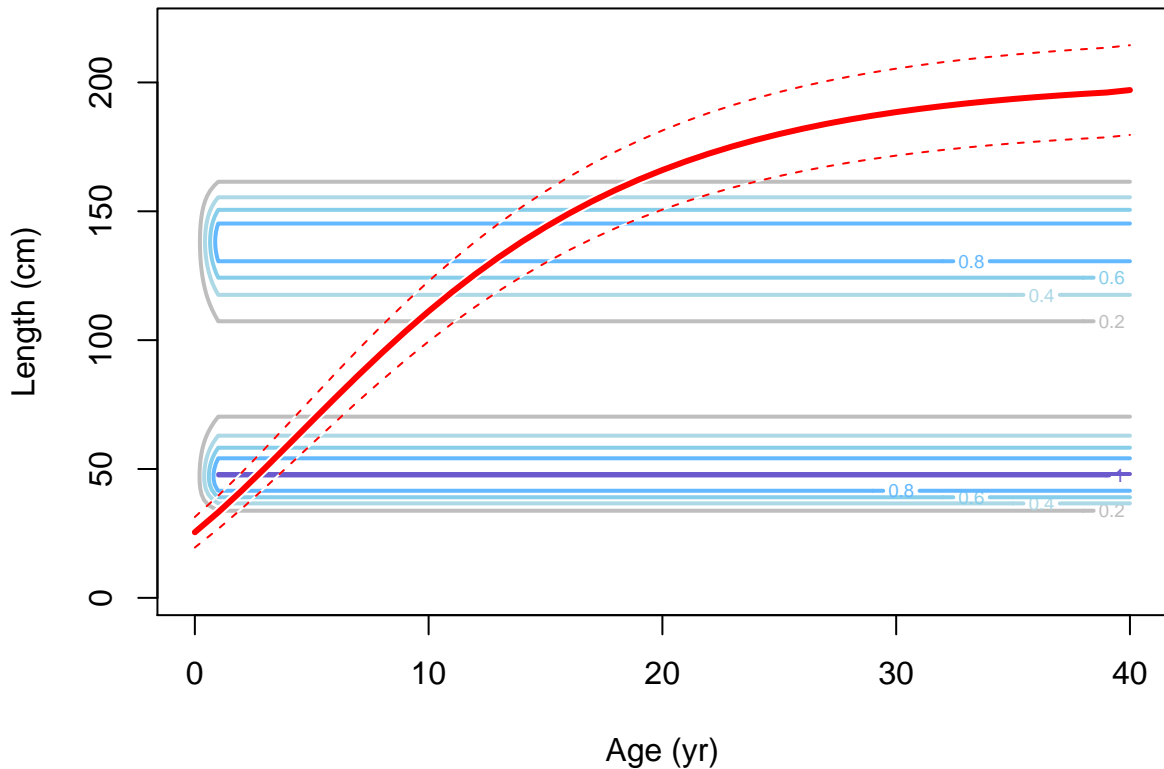
## Female ending year selectivity and growth for A4-NOADEL



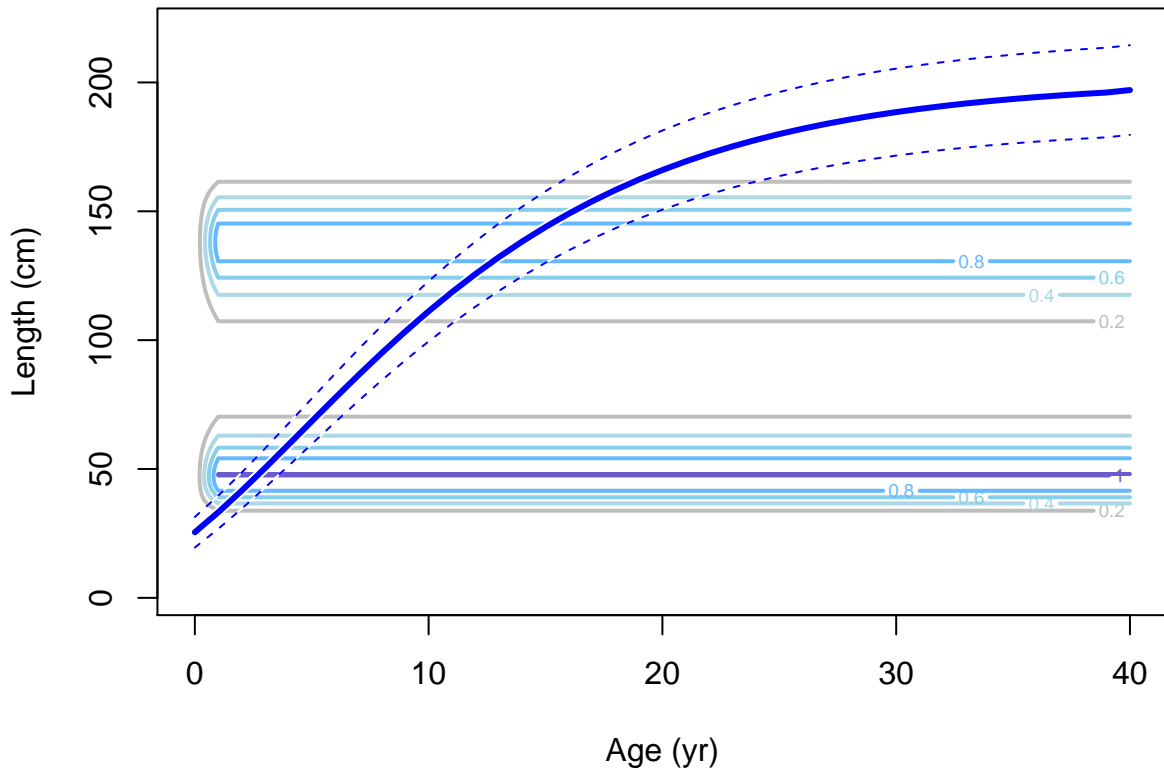
# Male ending year selectivity and growth for A4-NOADEL



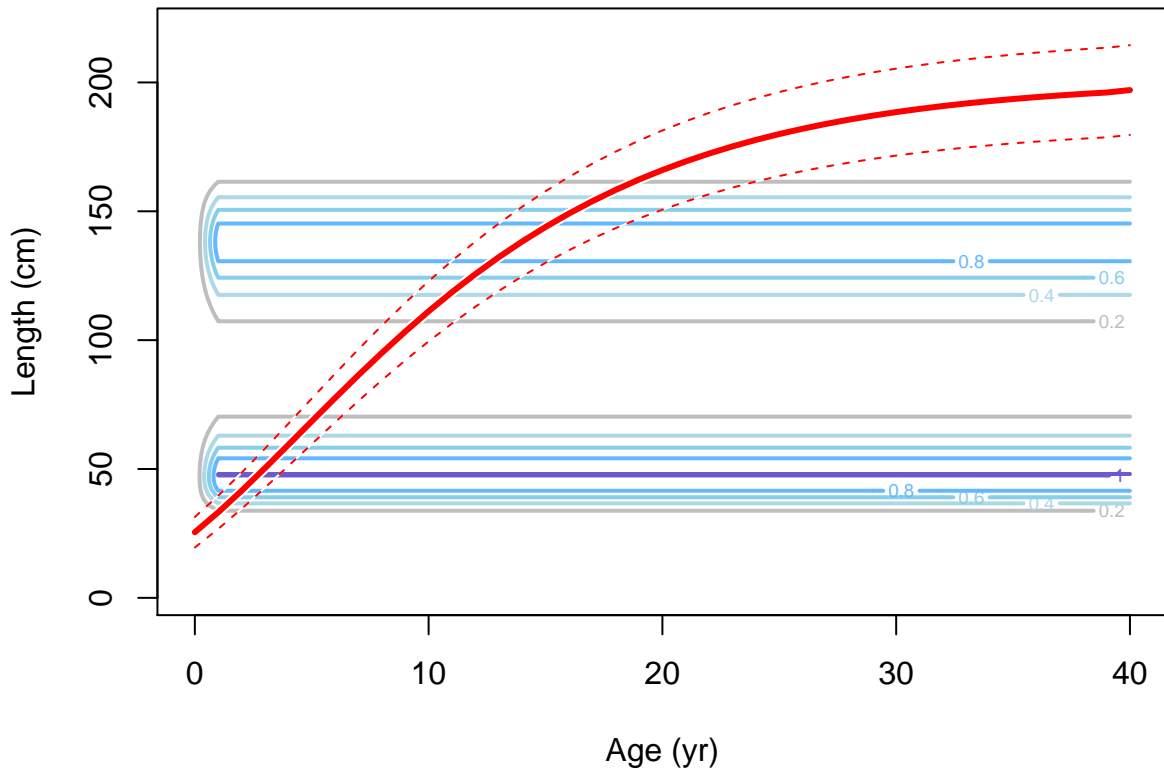
# Female ending year selectivity and growth for A5-NOADEL



# Male ending year selectivity and growth for A5-NOADEL

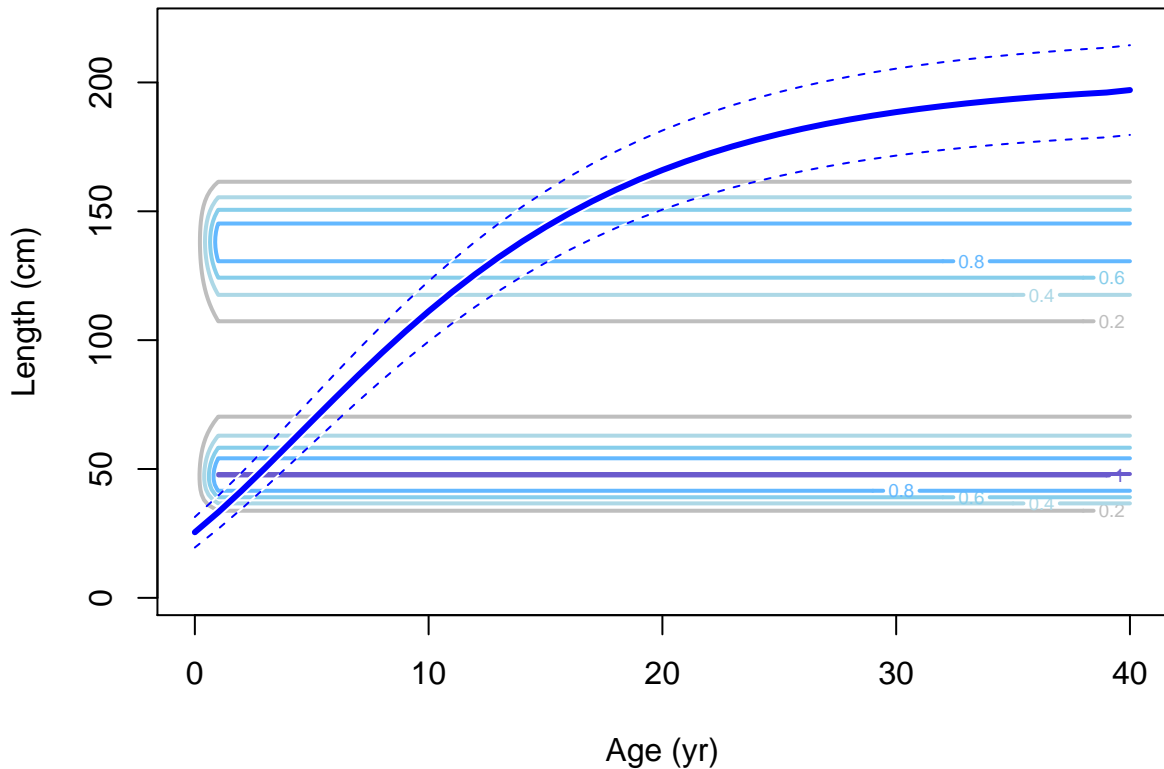


# Female ending year selectivity and growth for A6-NOADEL

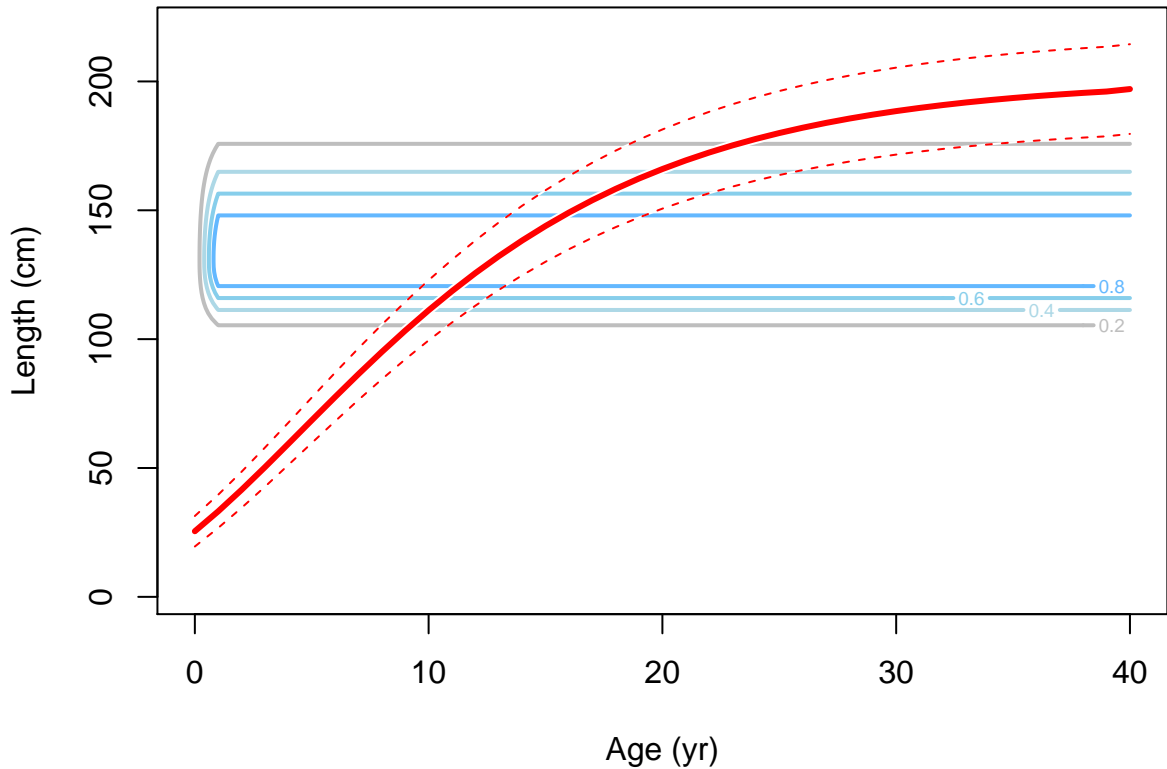




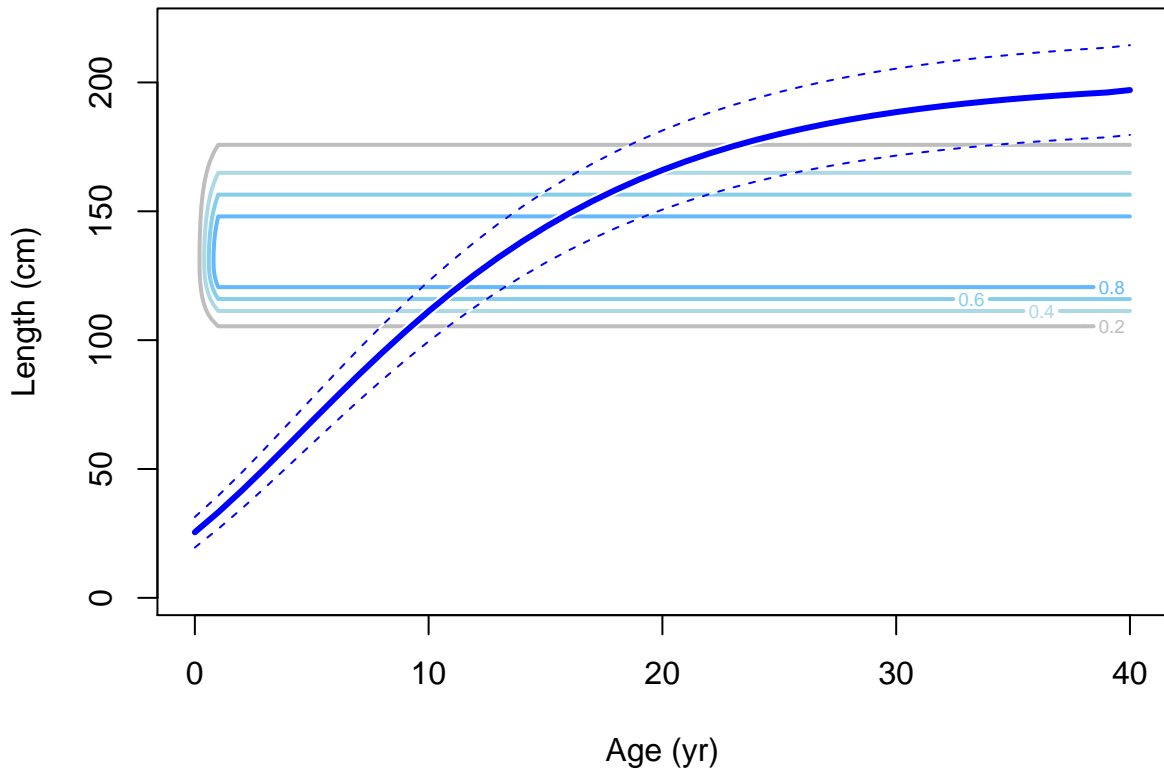
# Male ending year selectivity and growth for A6-NOADEL



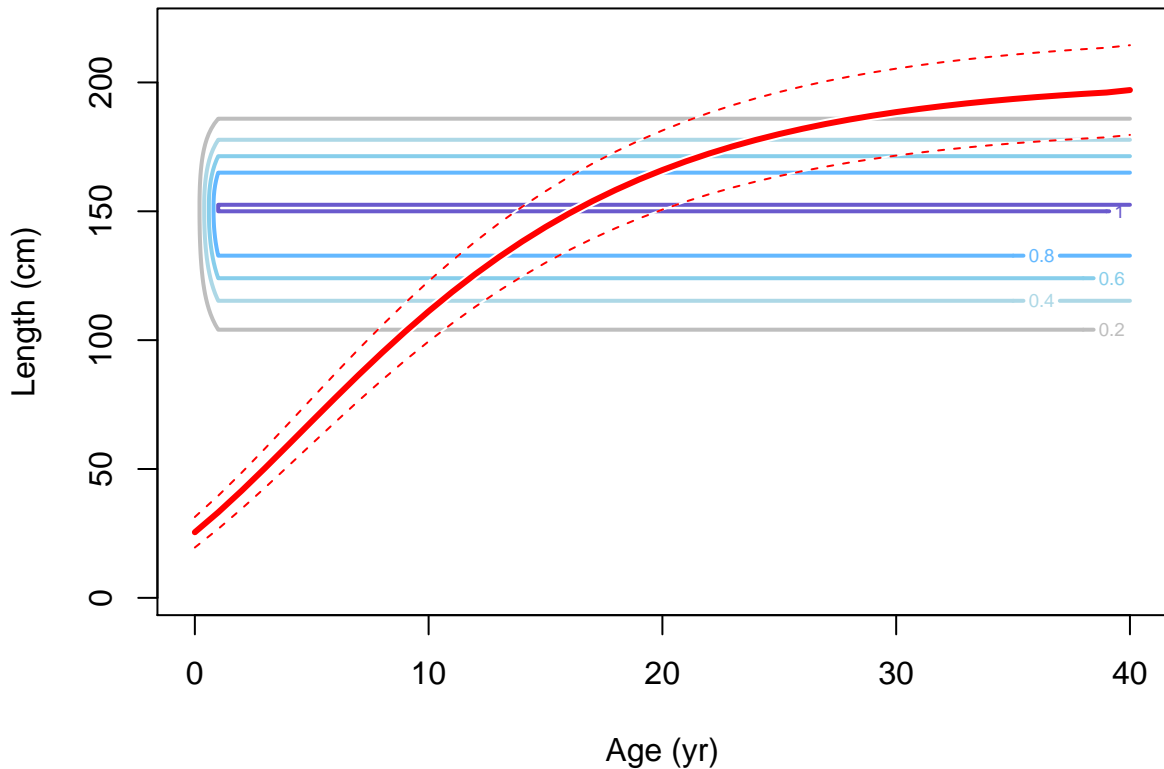
# Female ending year selectivity and growth for EPO-LL-survey-early



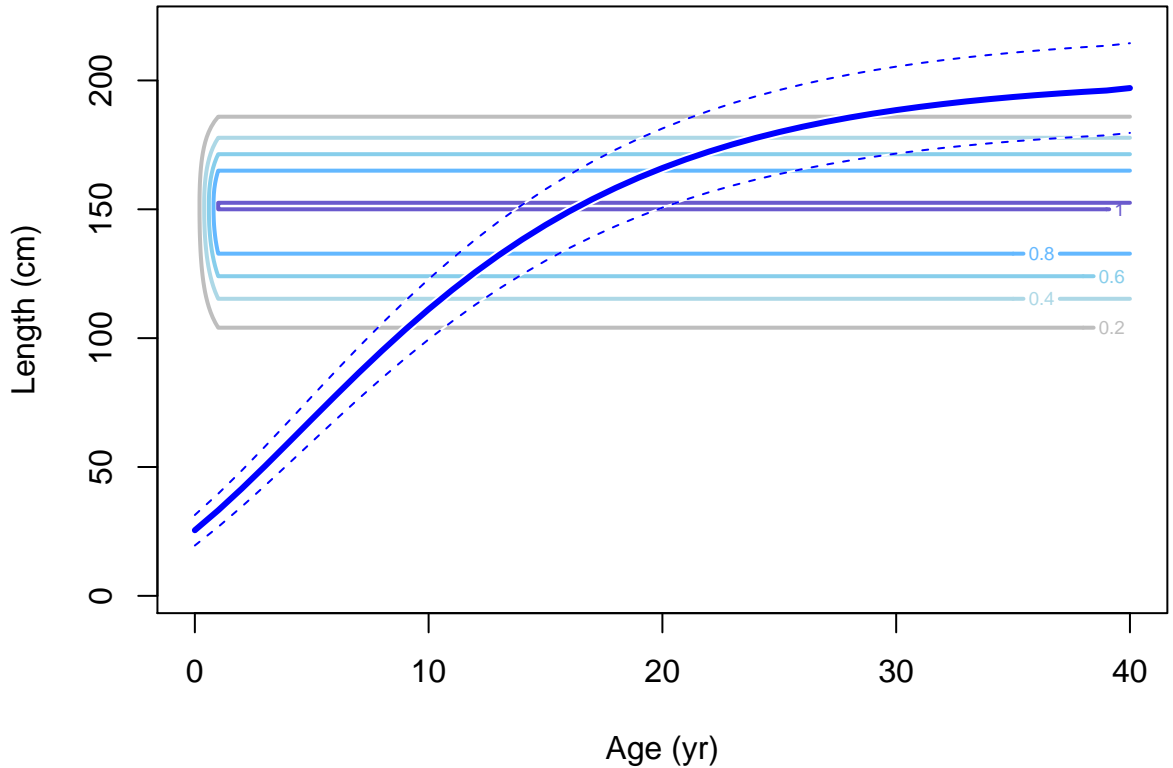
# Male ending year selectivity and growth for EPO-LL-survey-early



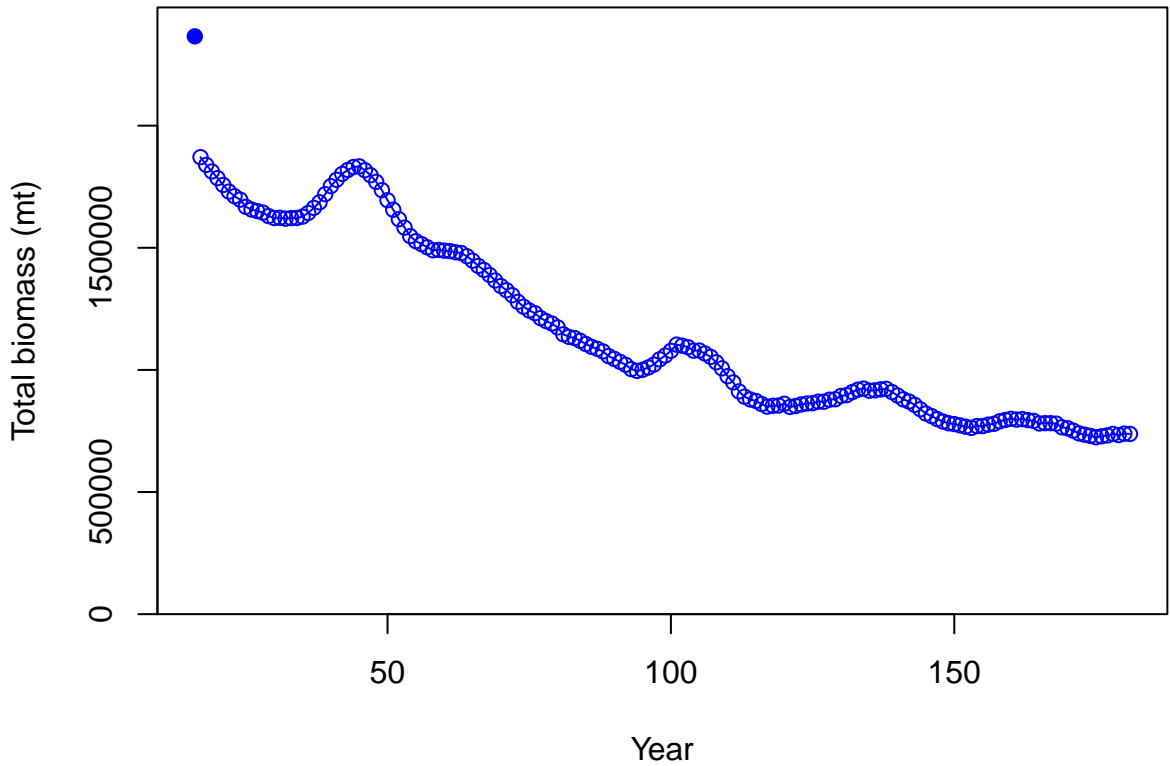
# Female ending year selectivity and growth for EPO-LL-survey-late



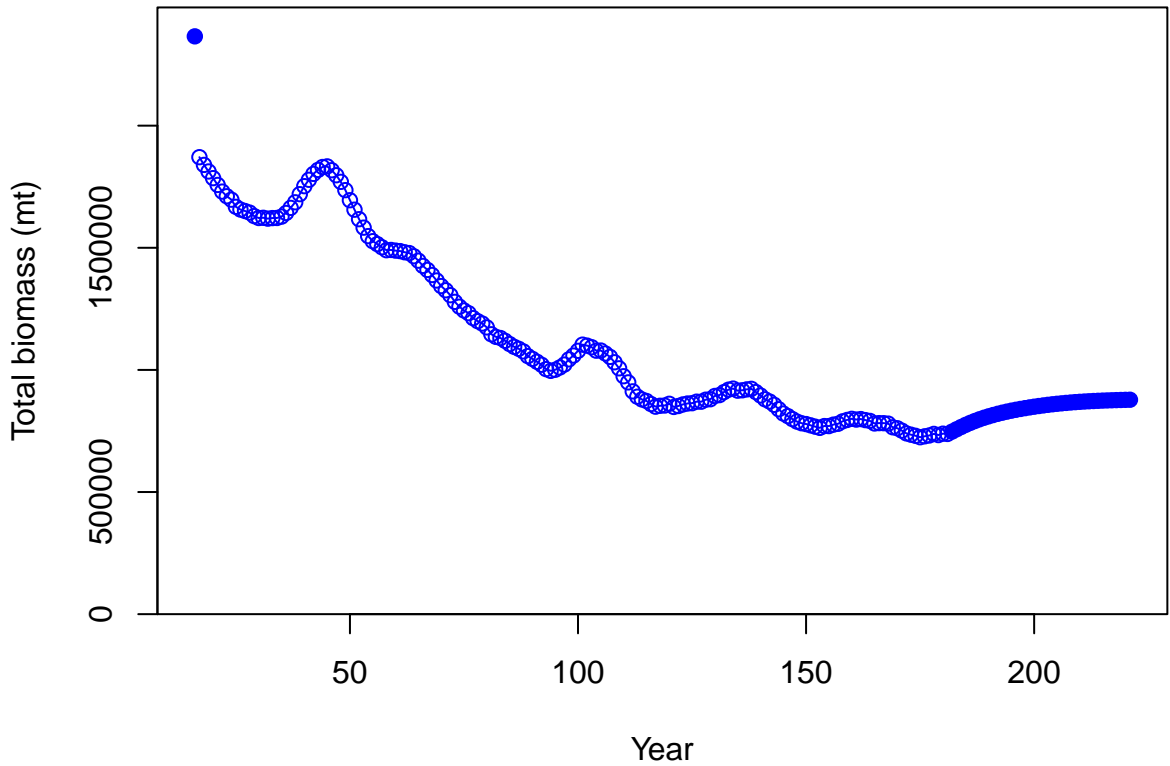
# Male ending year selectivity and growth for EPO-LL-survey-late



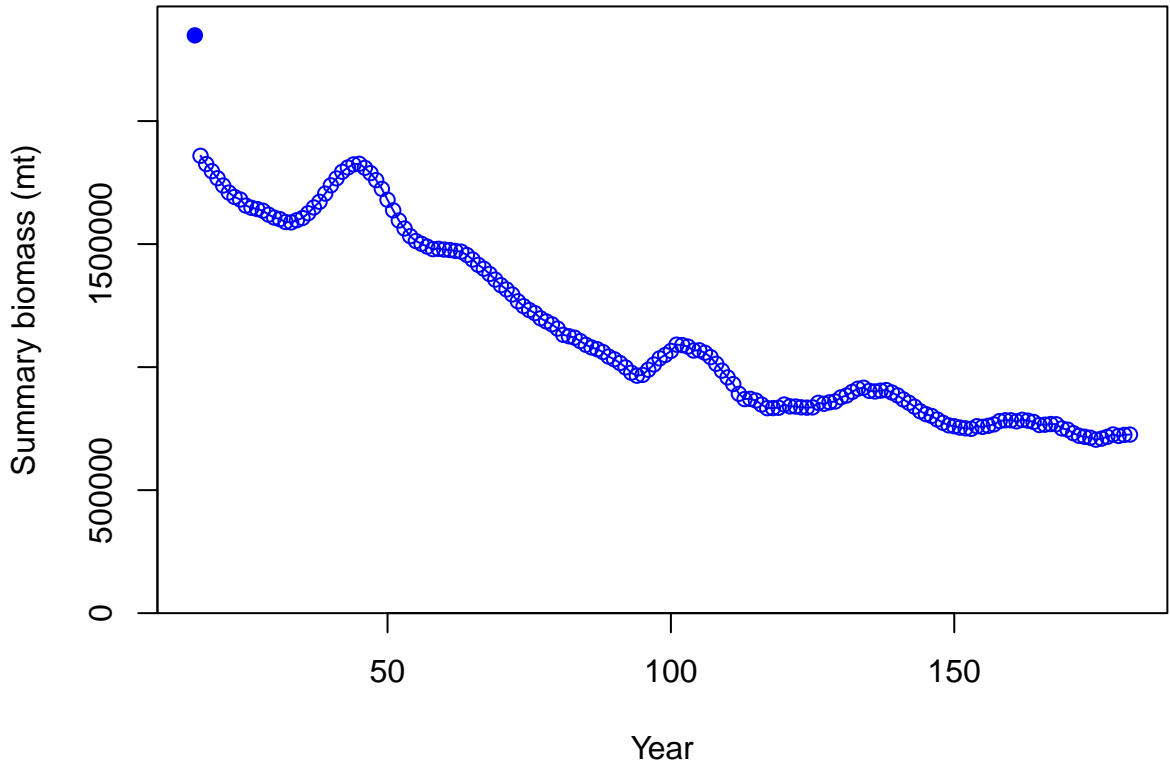
# Total biomass (mt)



Total biomass (mt) with forecast

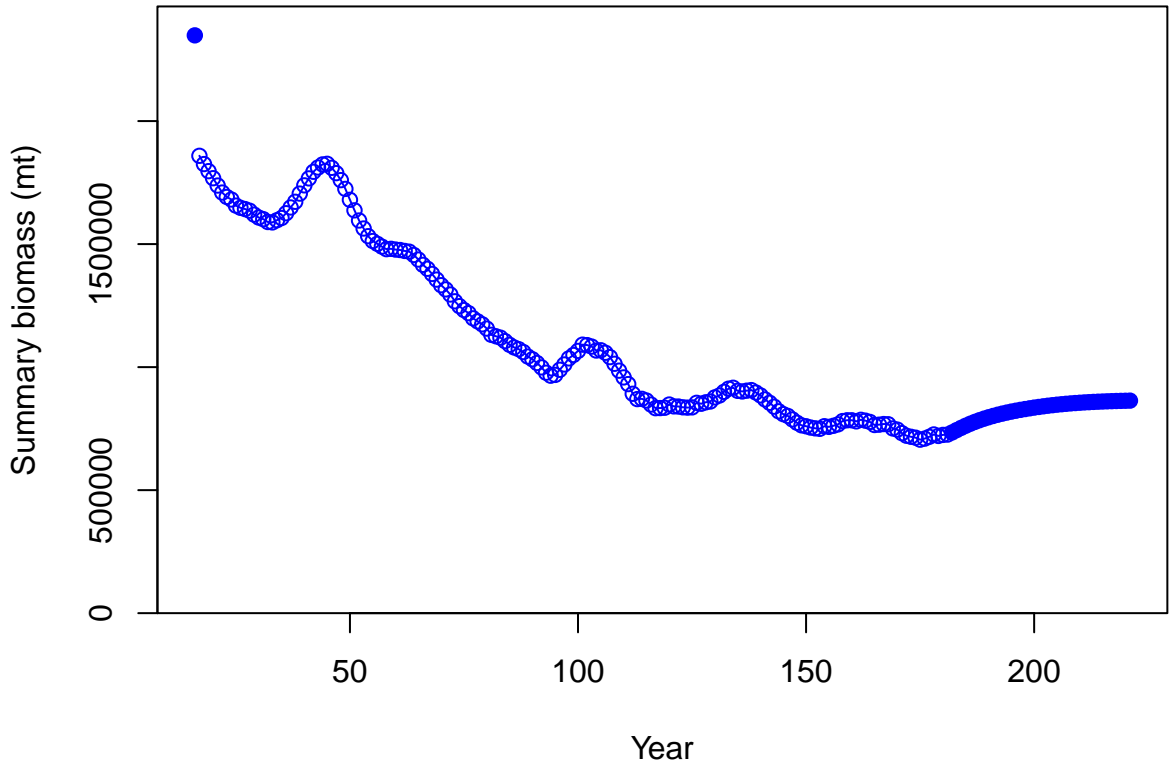


# Summary biomass (mt)

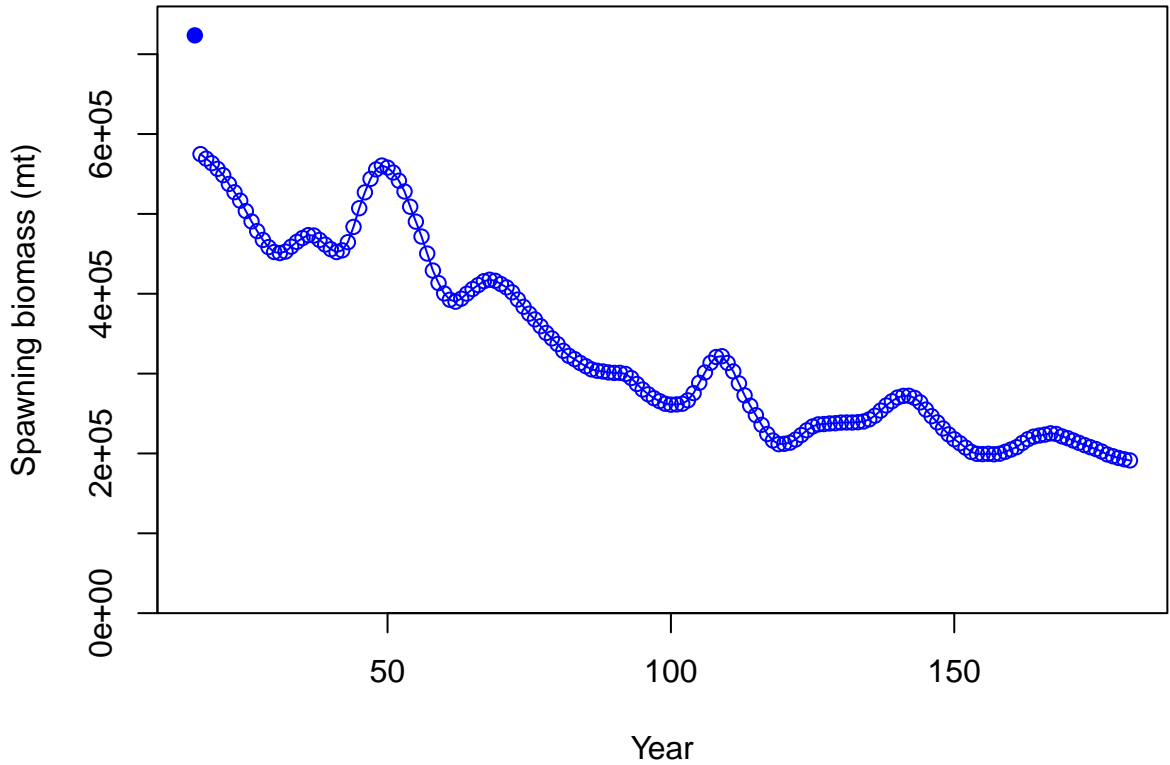




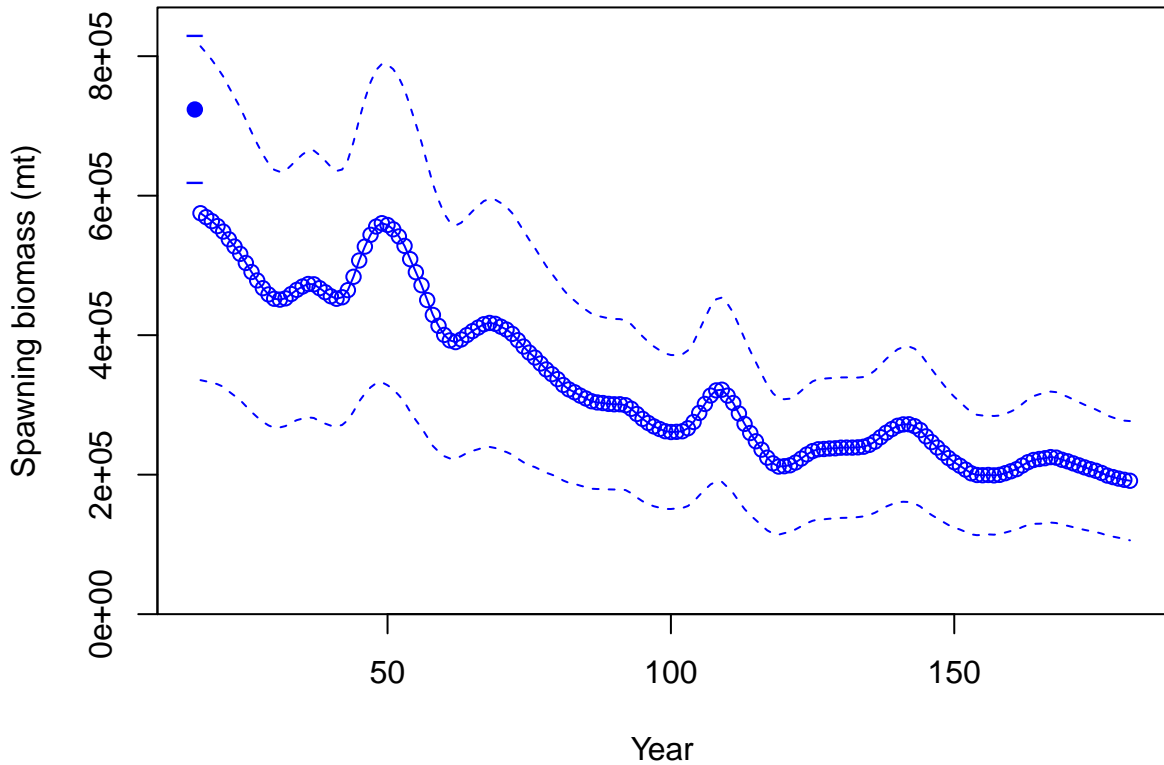
Summary biomass (mt) with forecast



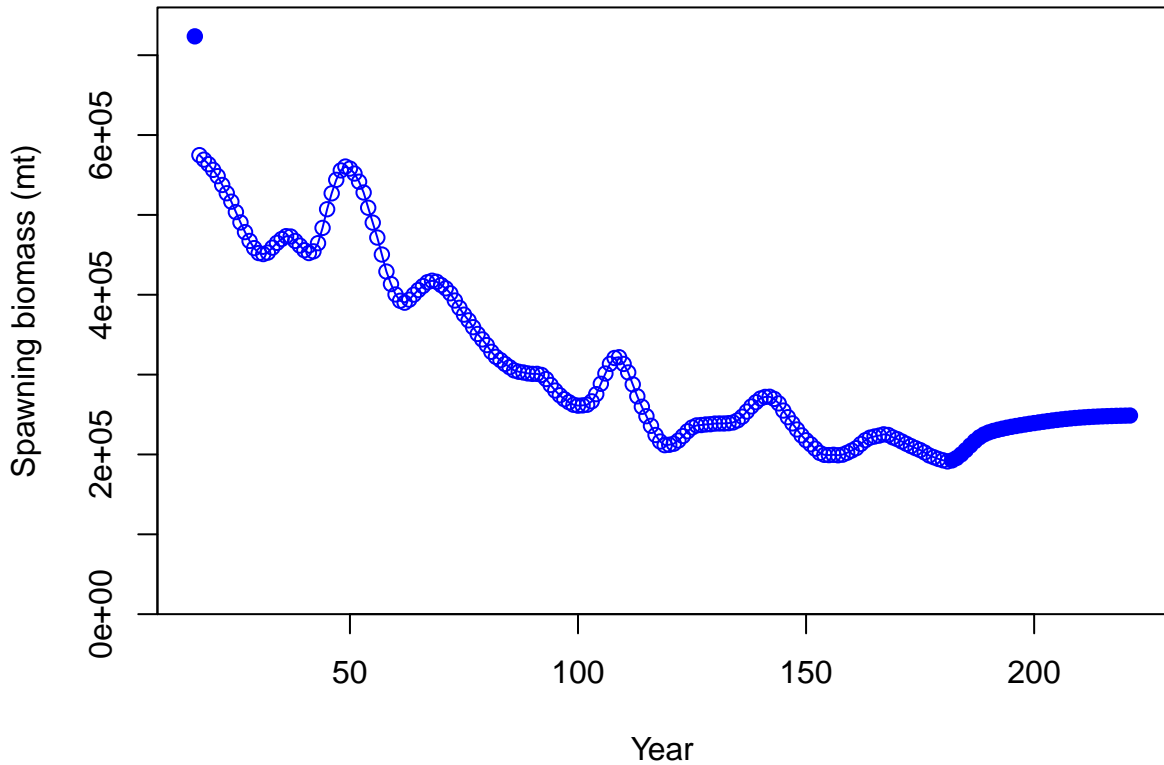
# Spawning biomass (mt)



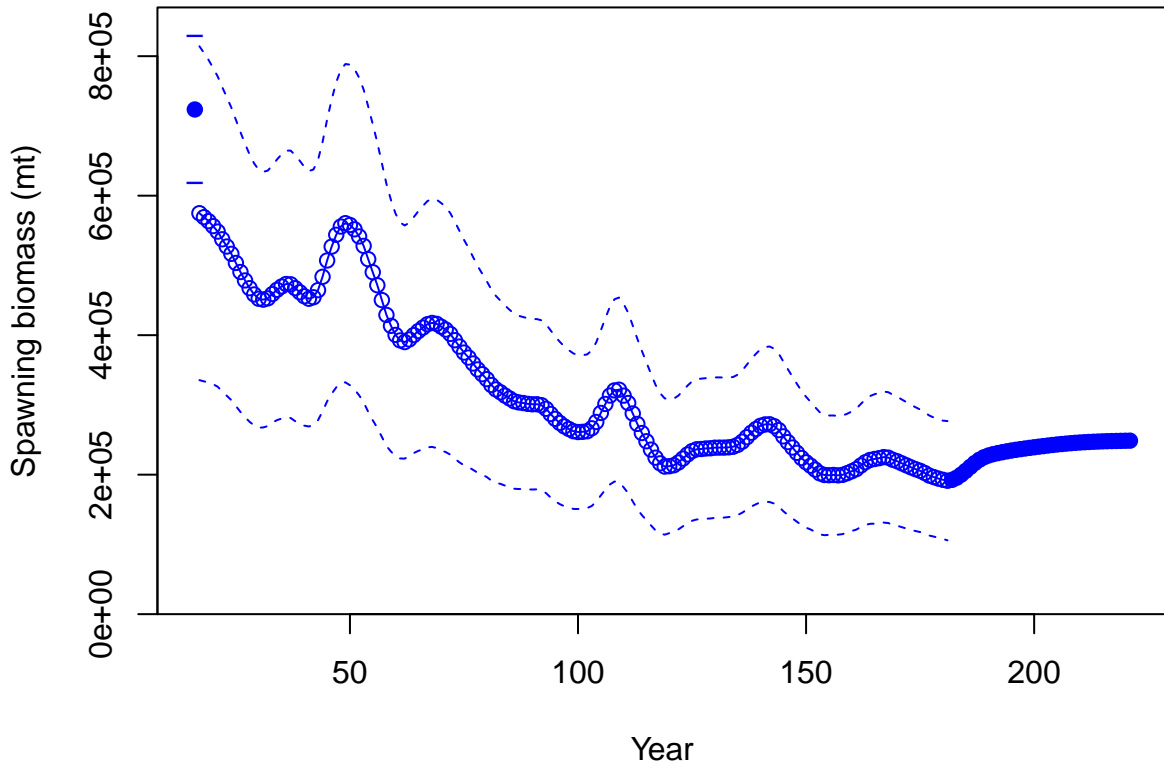
# Spawning biomass (mt) with ~95% asymptotic intervals



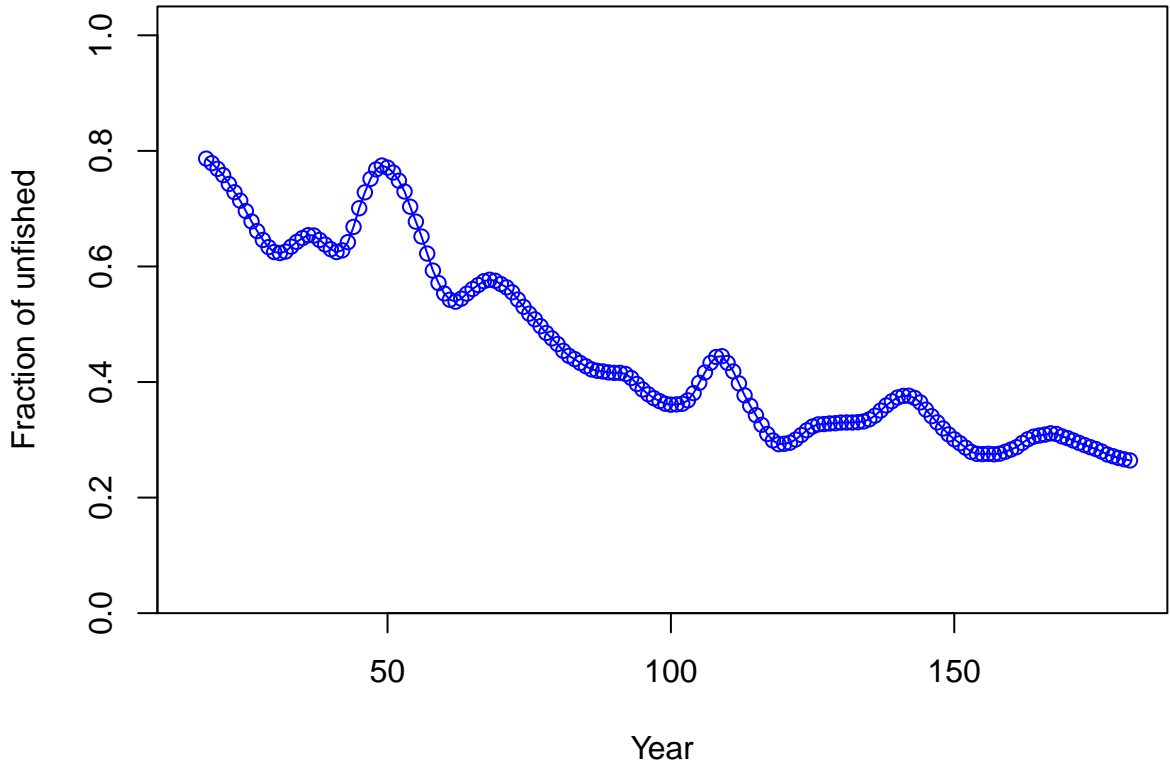
## Spawning biomass (mt) with forecast



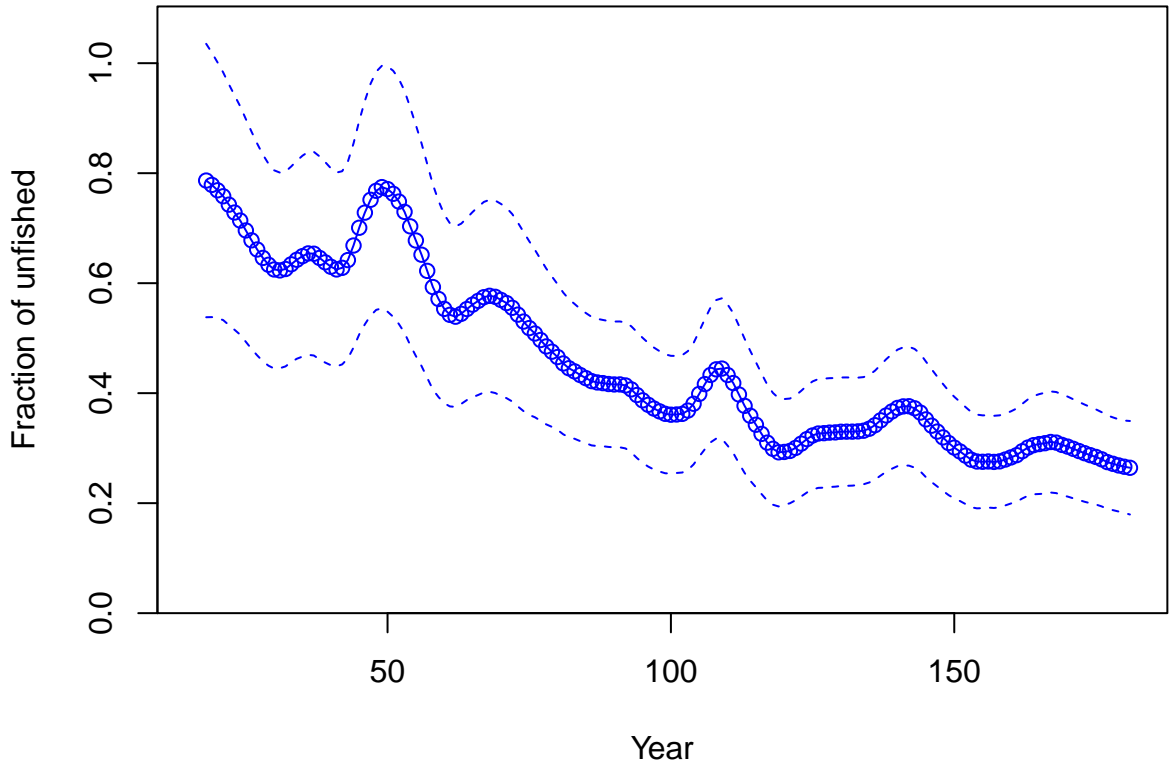
# Spawning biomass (mt) with forecast with ~95% asymptotic intervals



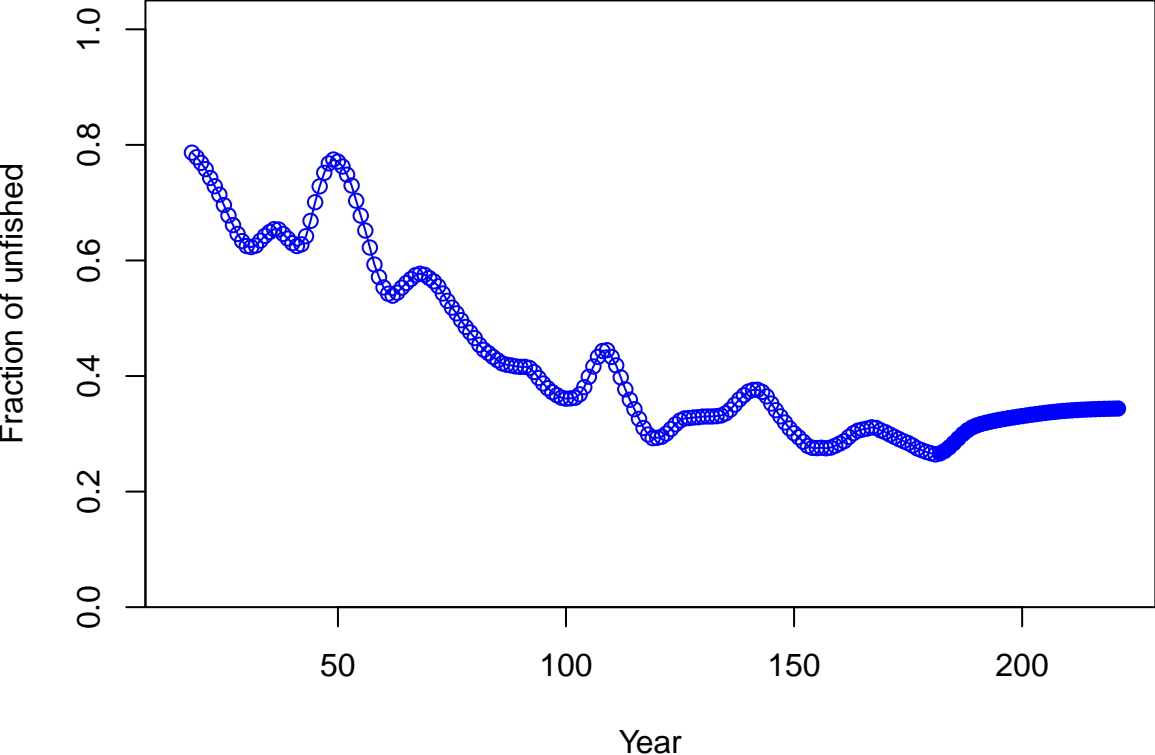
# Fraction of unfished



**Fraction of unfished with ~95% asymptotic intervals**

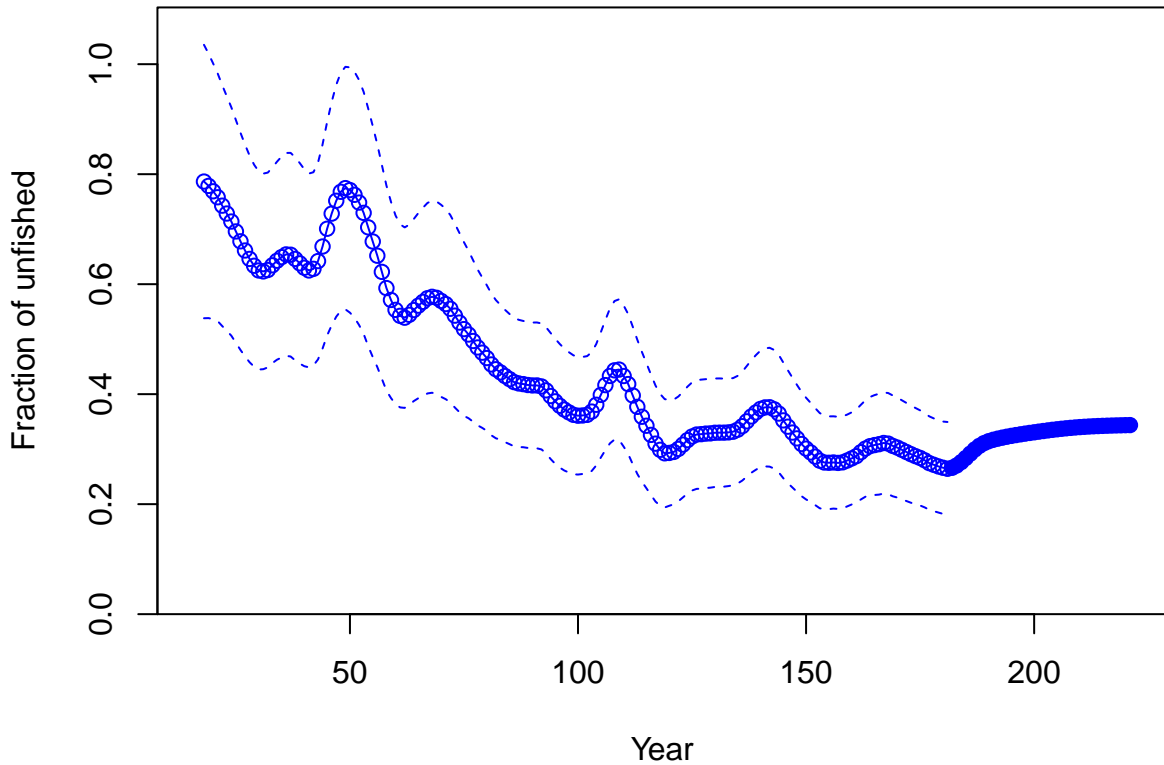


**Fraction of unfished with forecast**

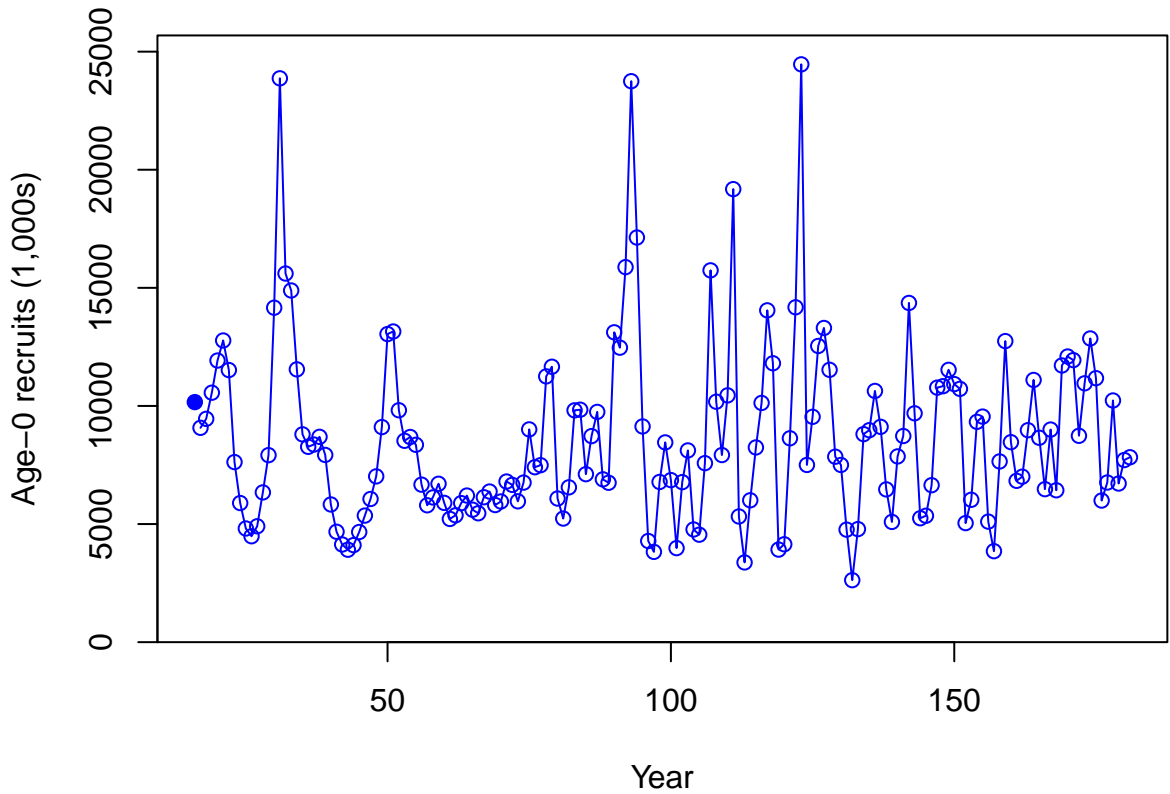




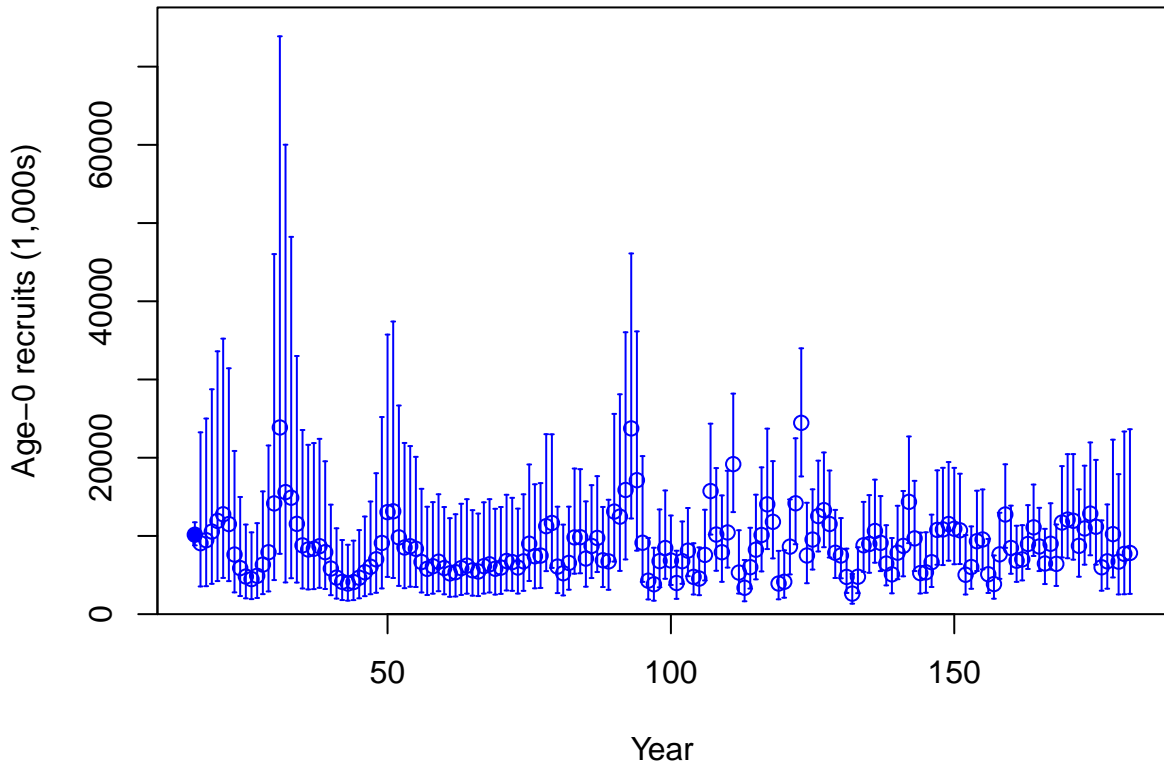
**Fraction of unfished with forecast with ~95% asymptotic intervals**



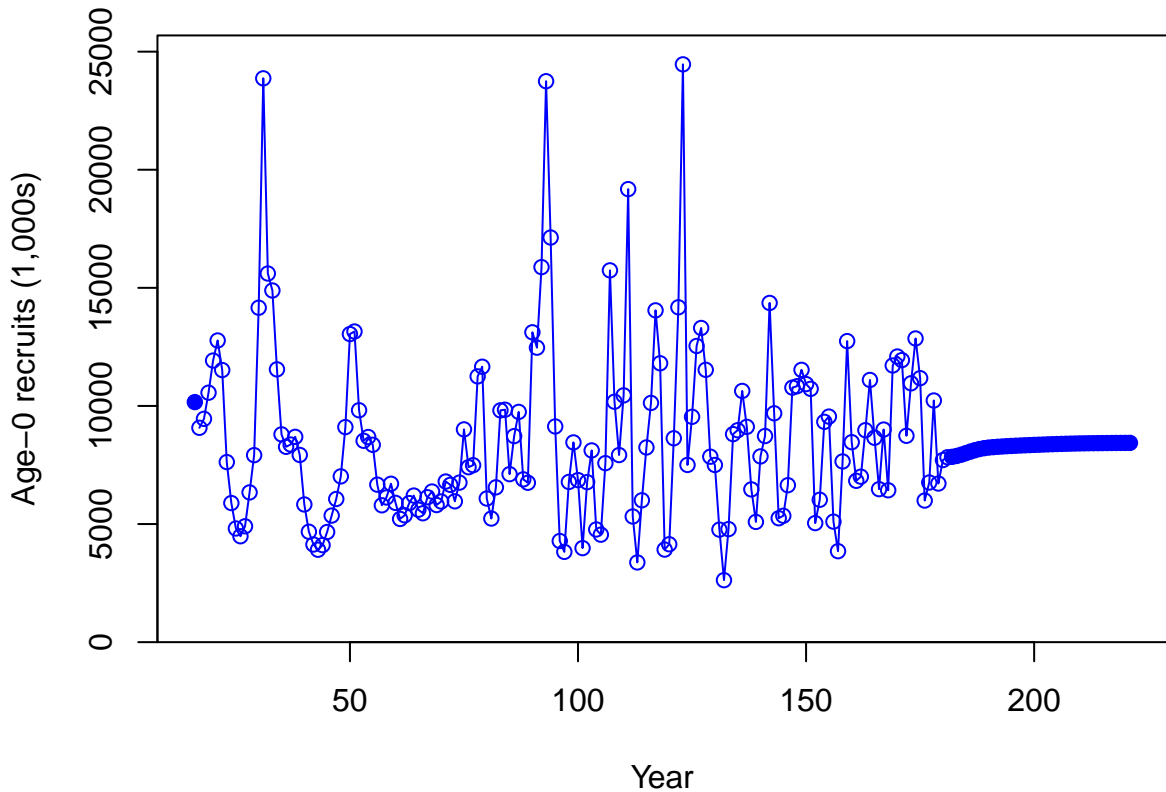
### Age-0 recruits (1,000s)



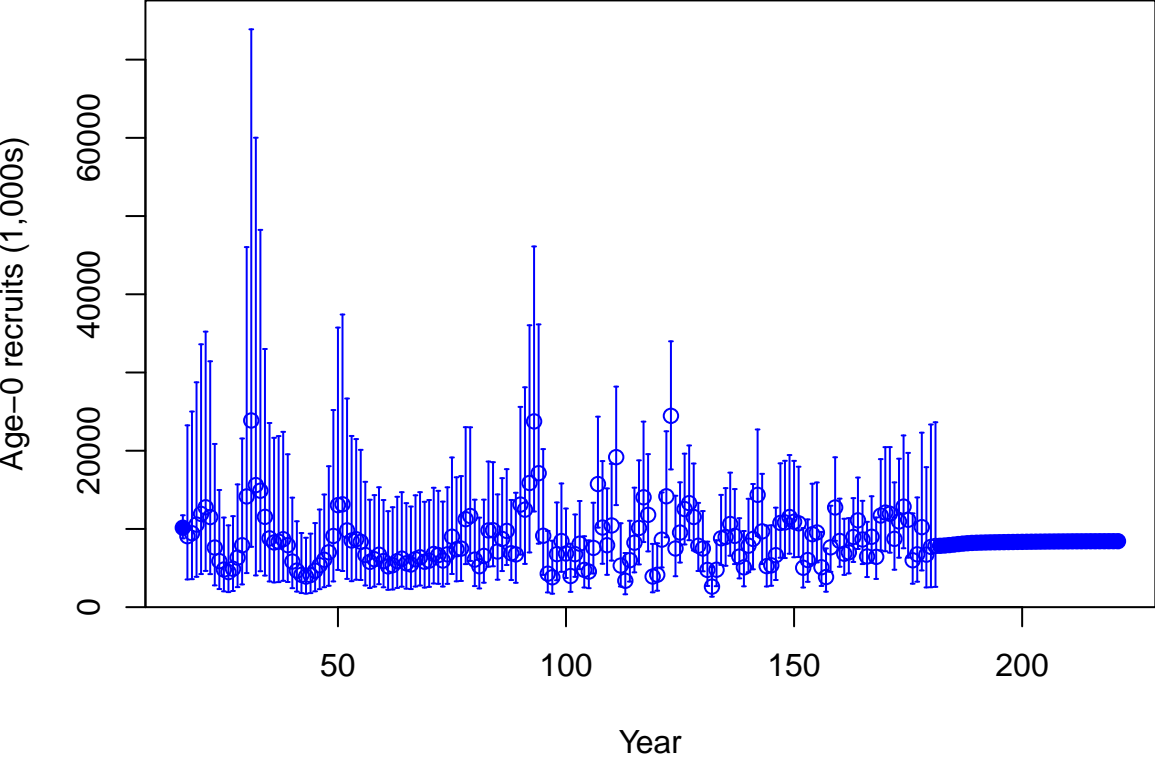
# Age-0 recruits (1,000s) with ~95% asymptotic intervals



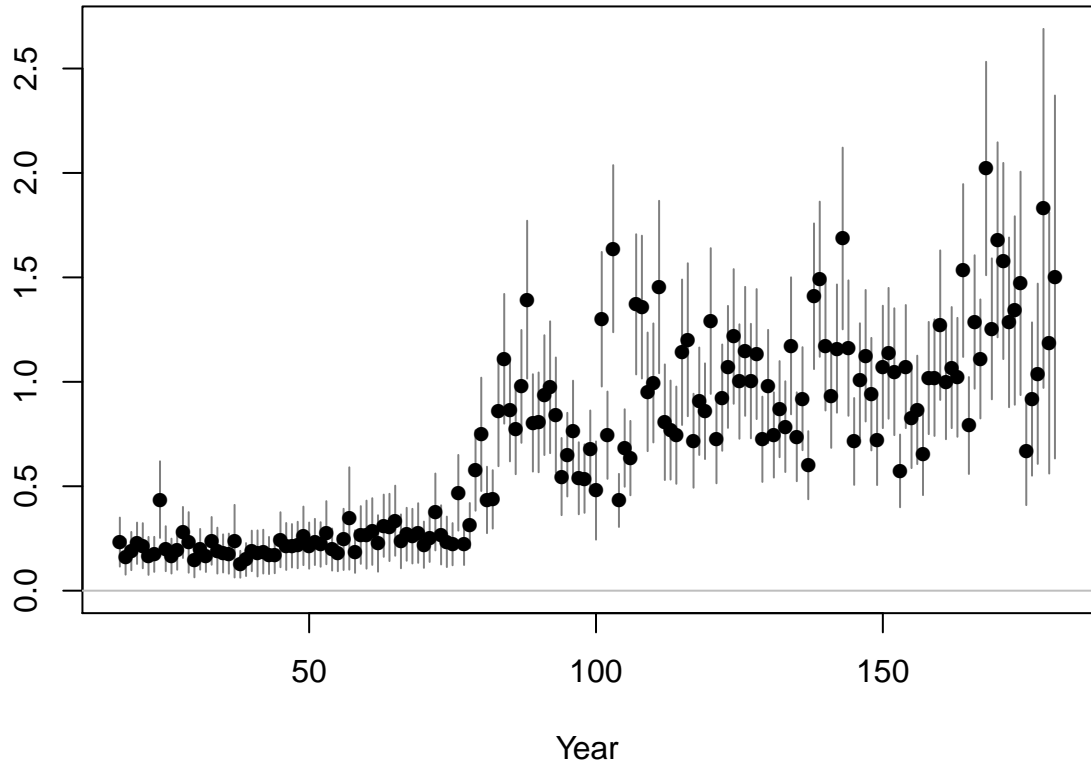
**Age-0 recruits (1,000s) with forecast**

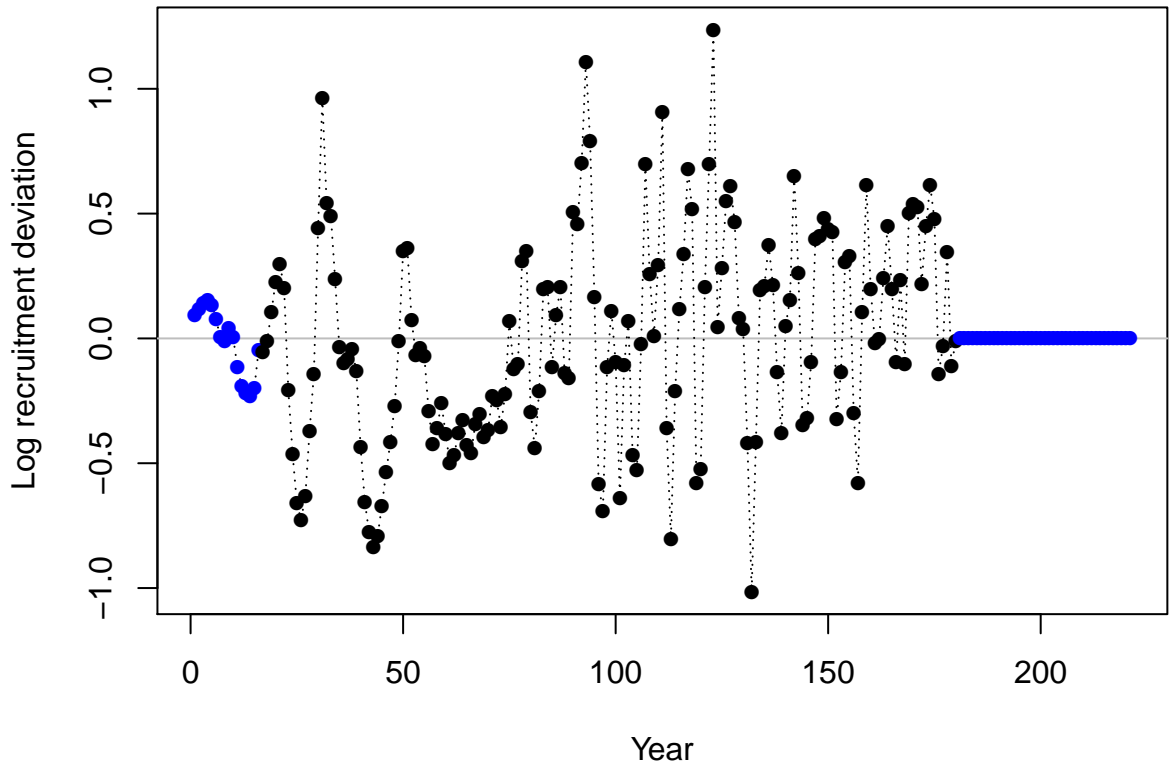


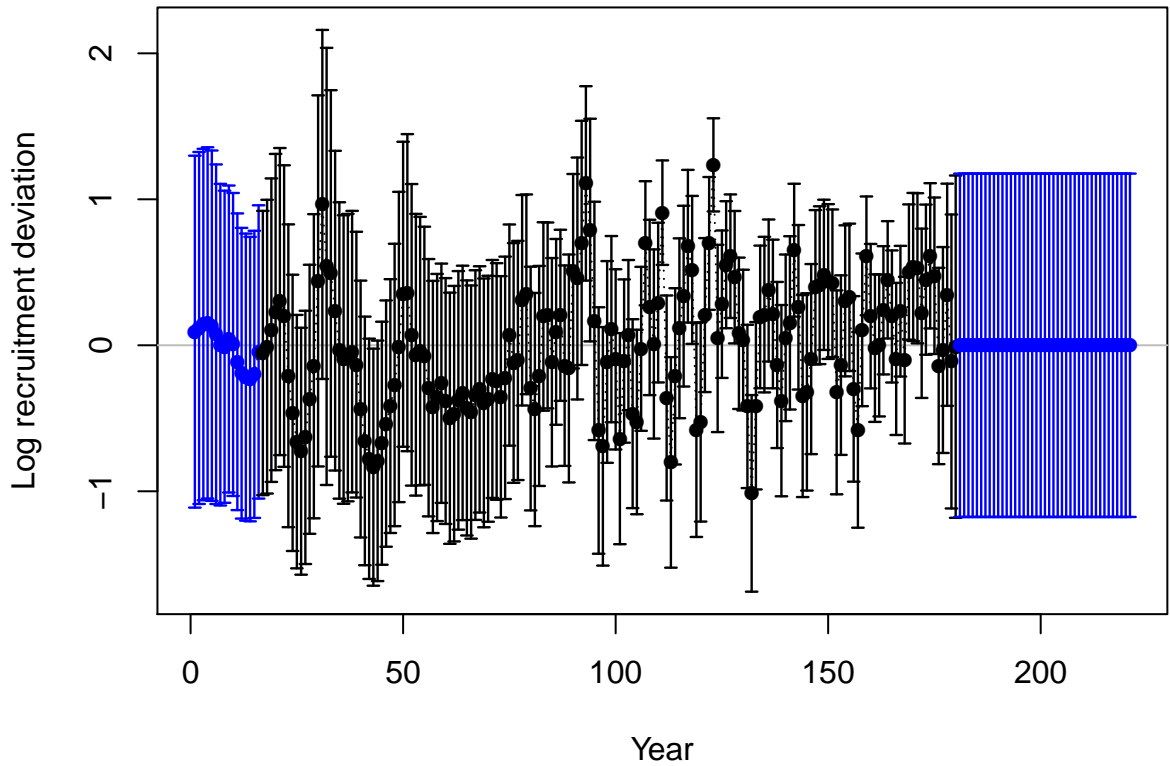
Age-0 recruits (1,000s) with forecast with ~95% asymptotic intervals



Summary Fishing Mortality

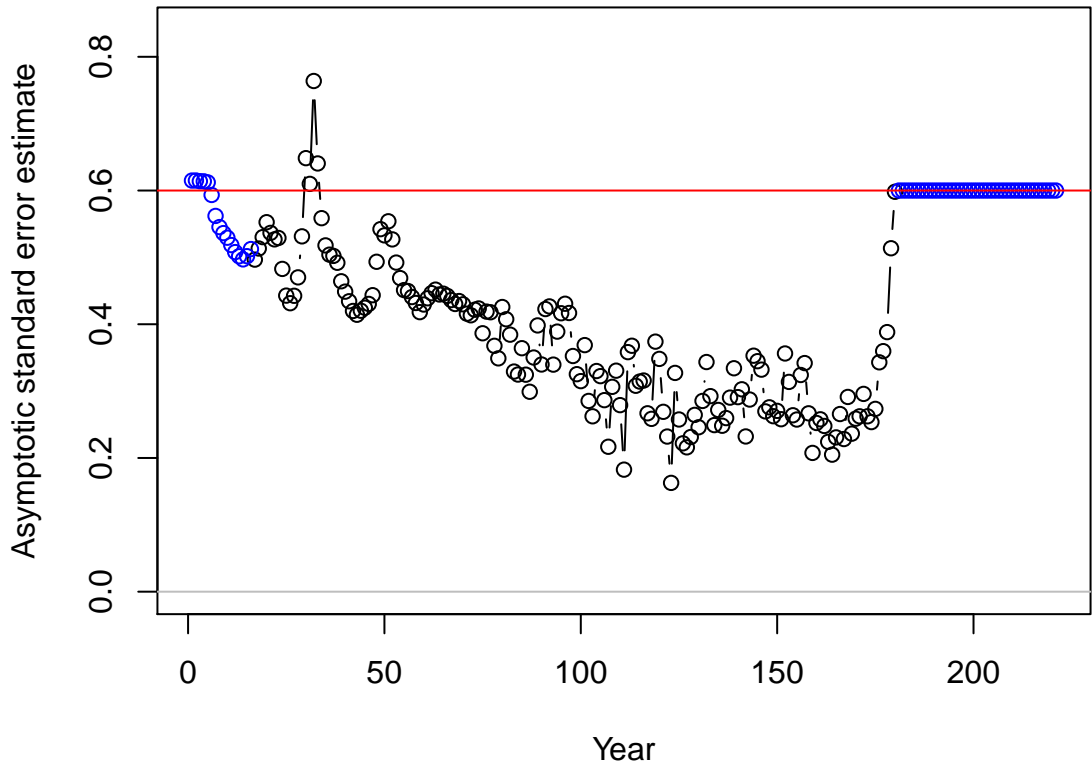


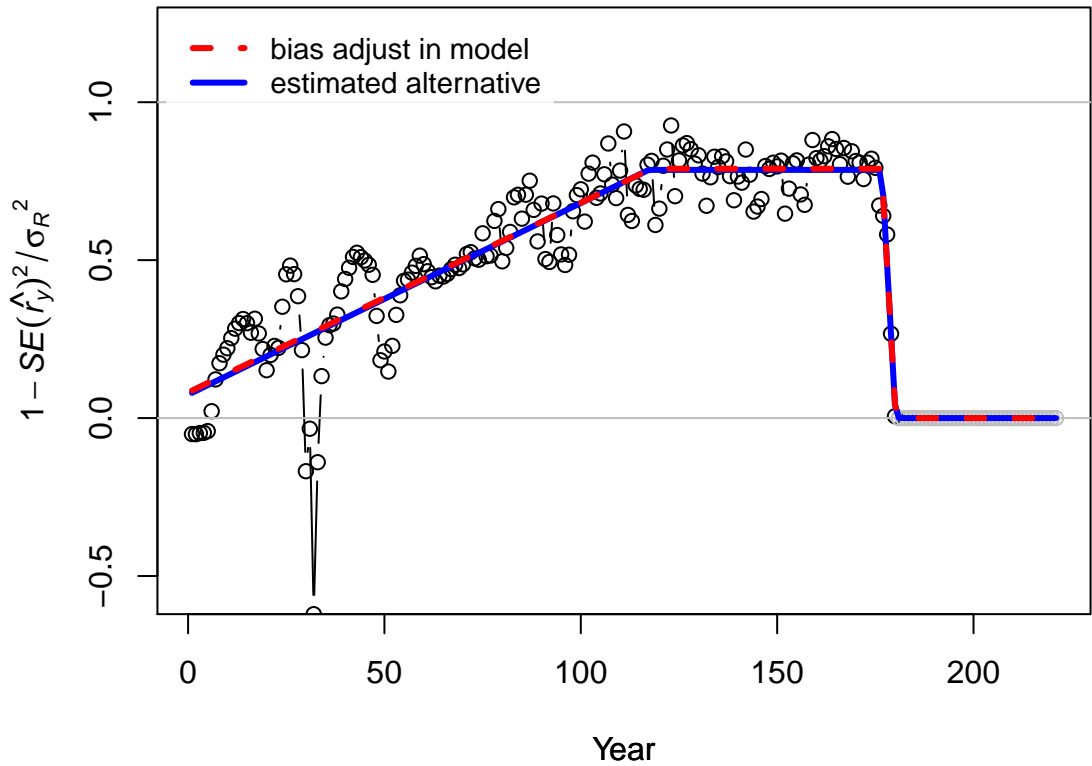


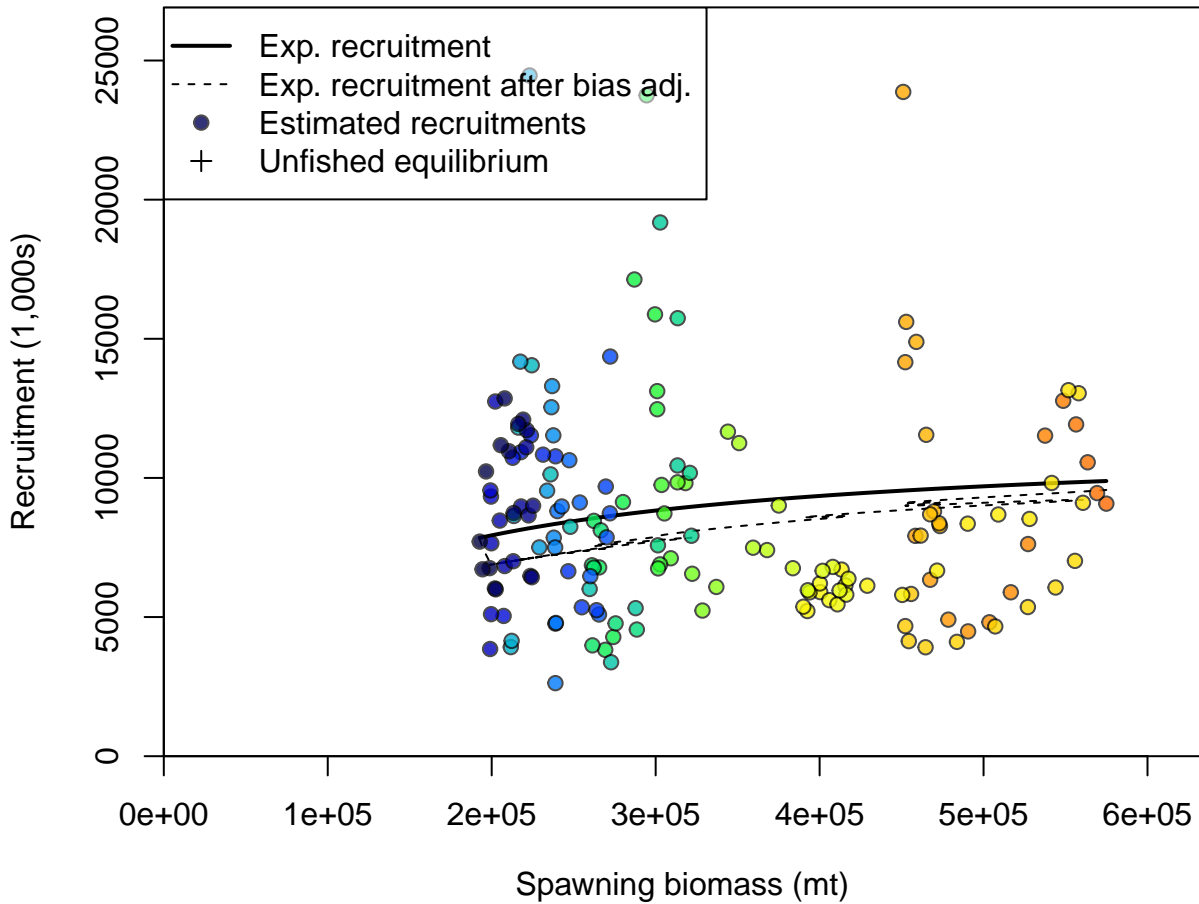


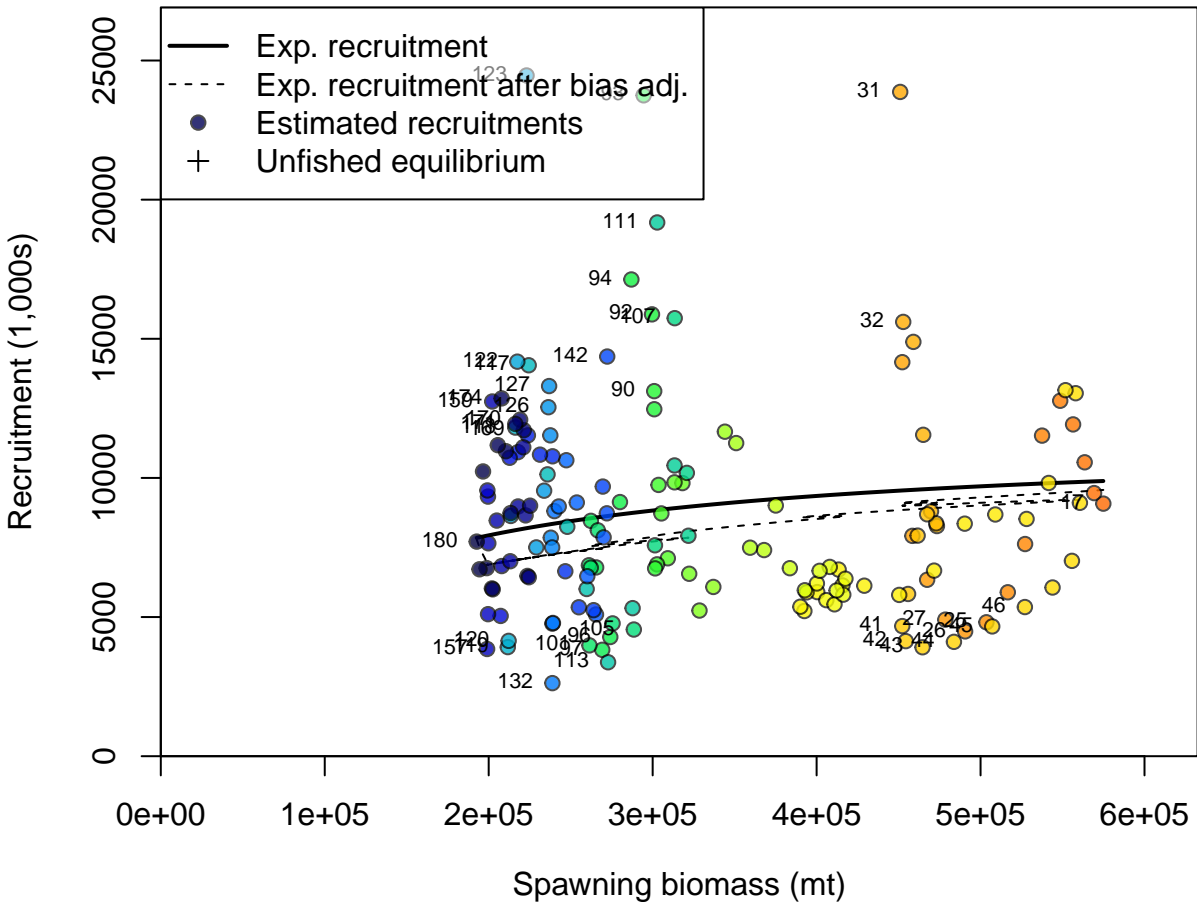


# Recruitment deviation variance

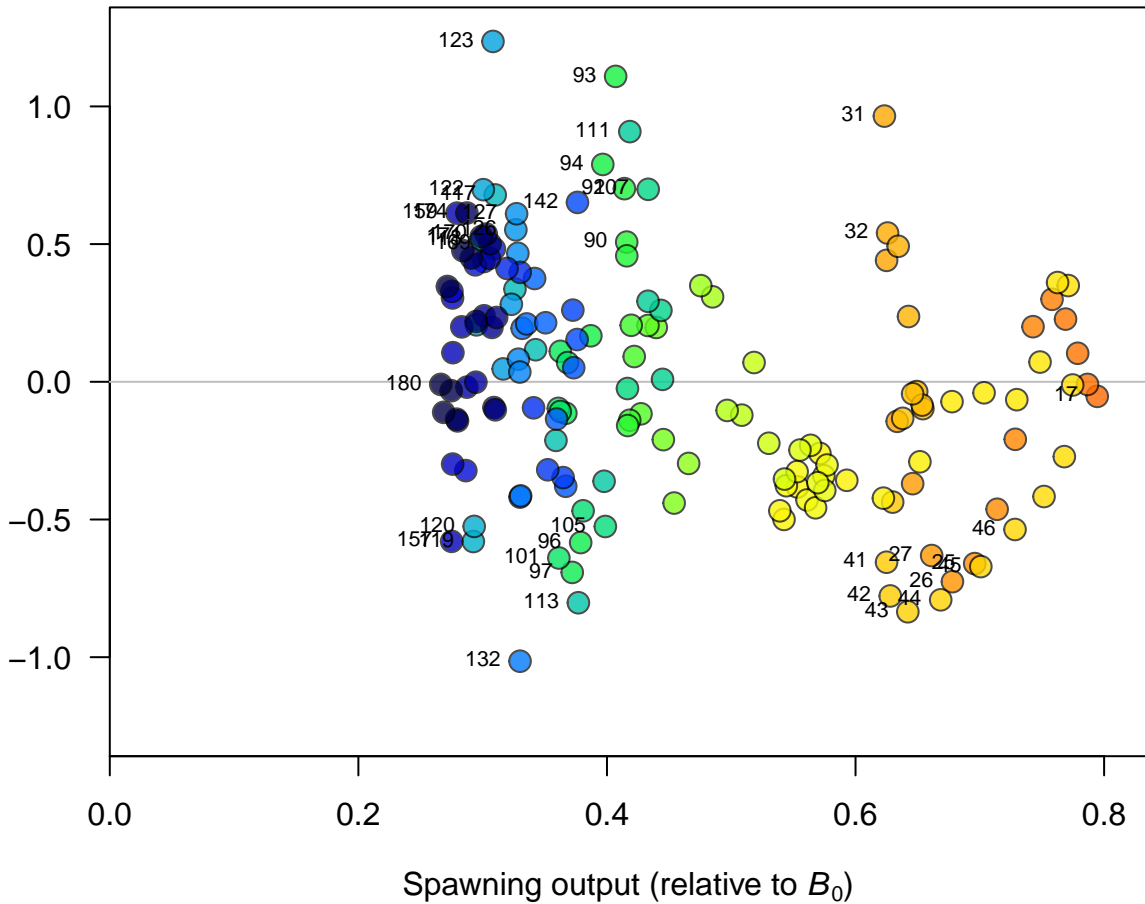


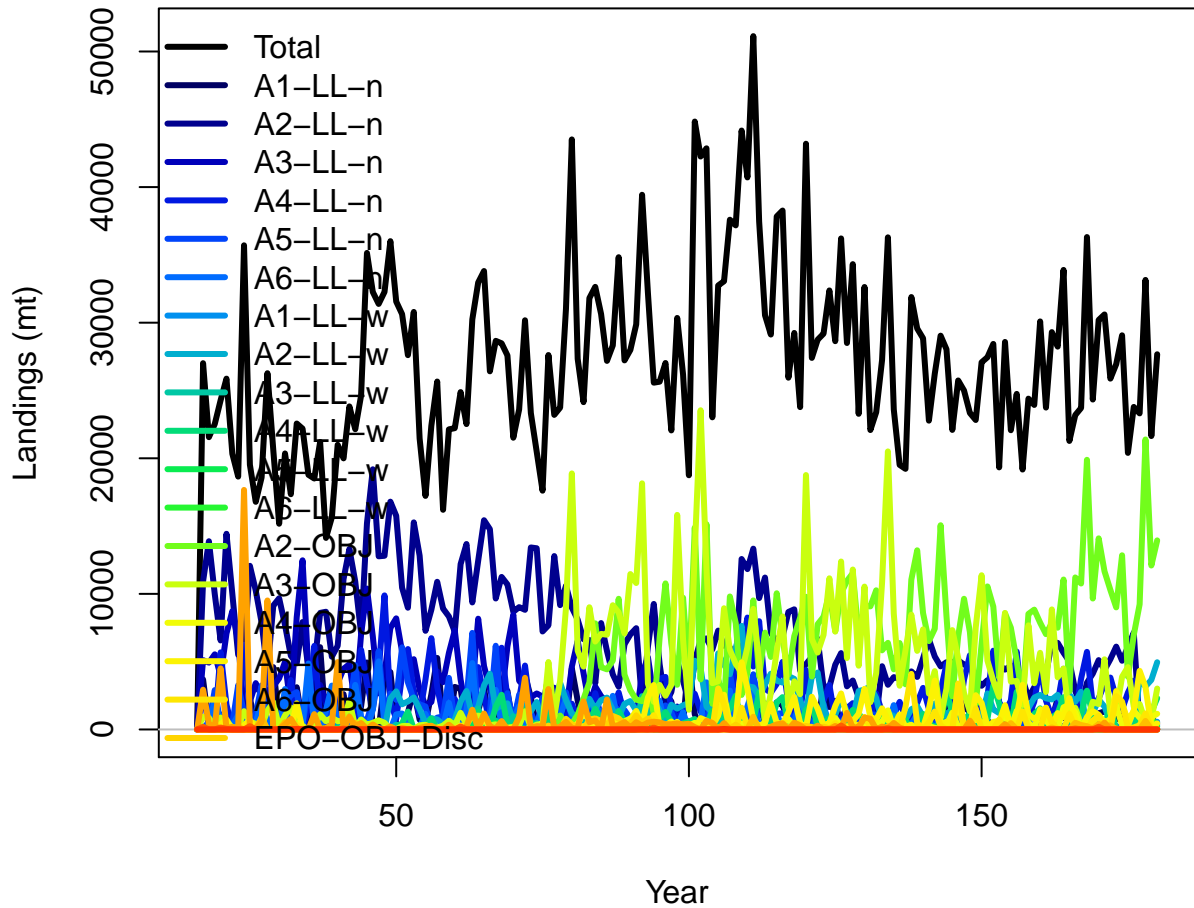


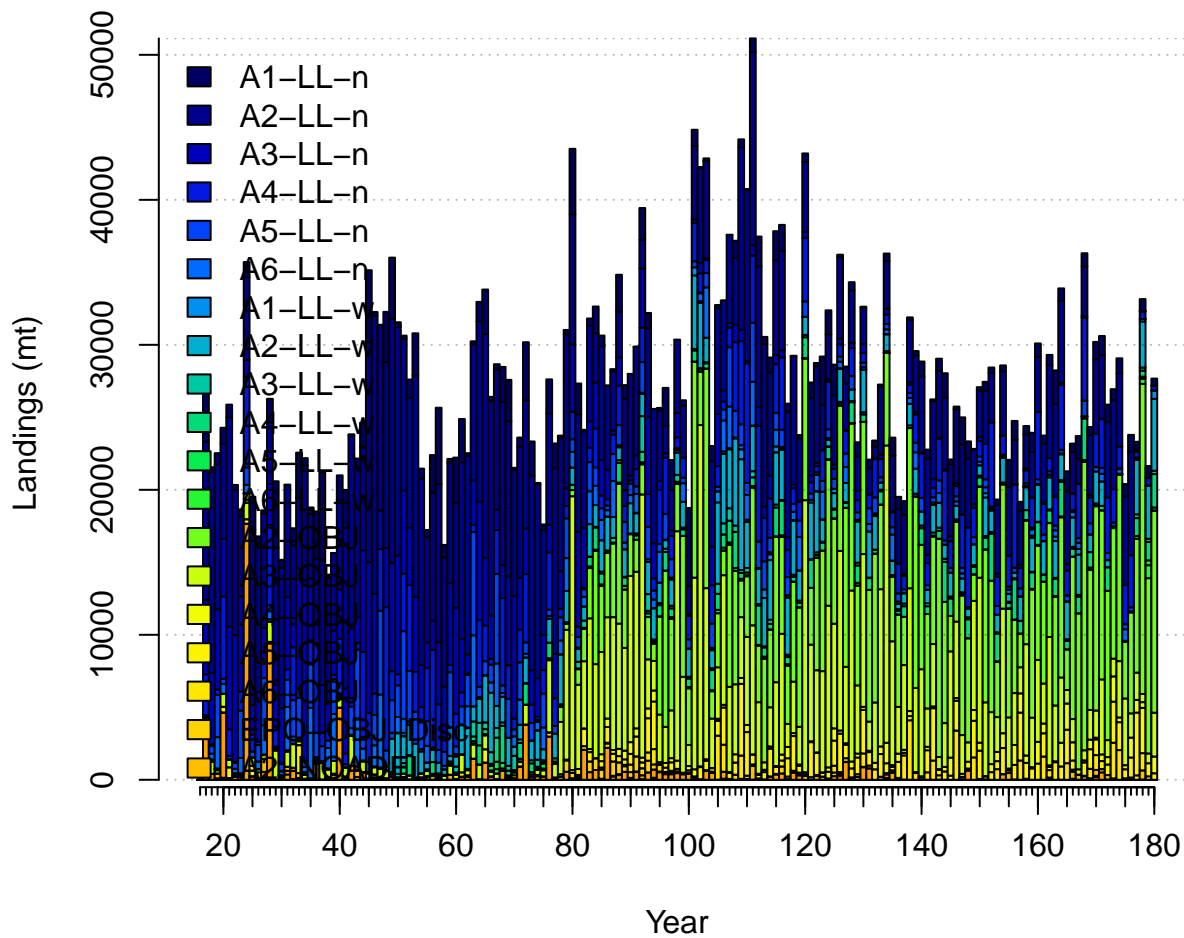




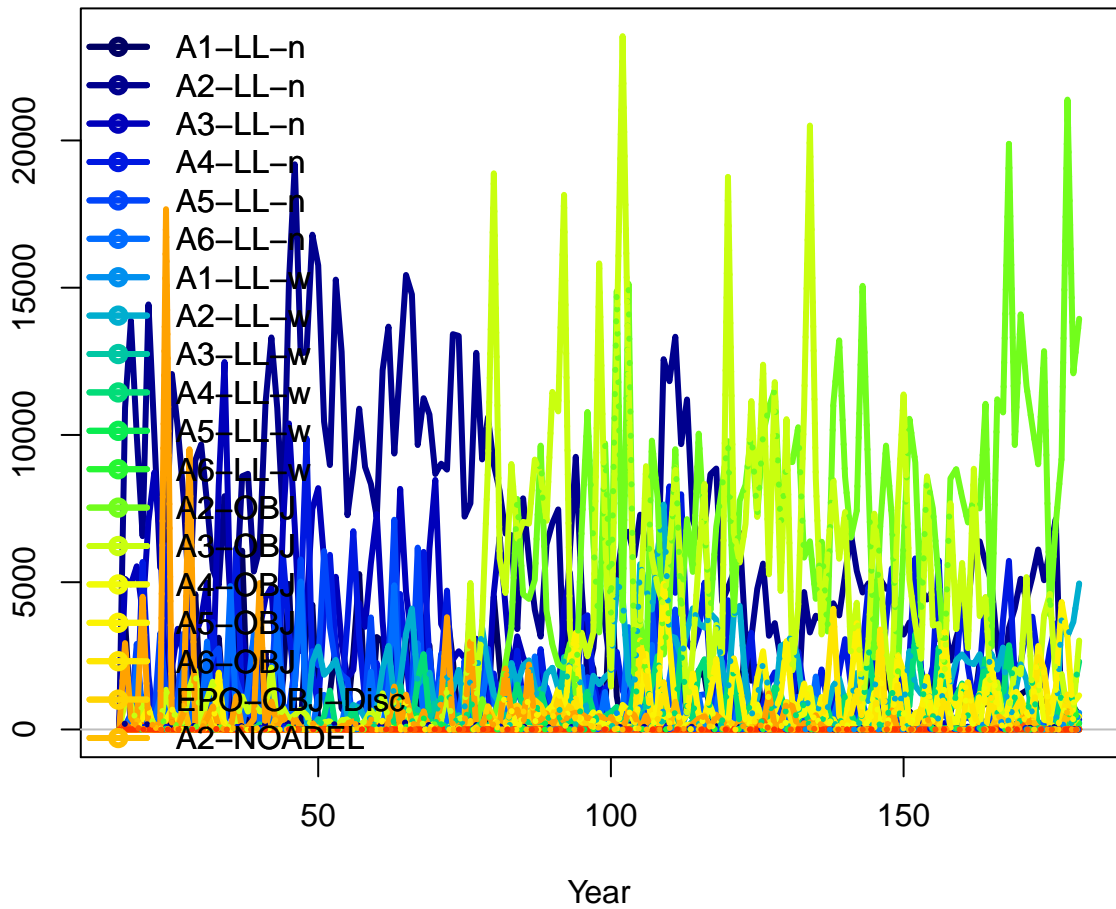
Log recruitment deviation





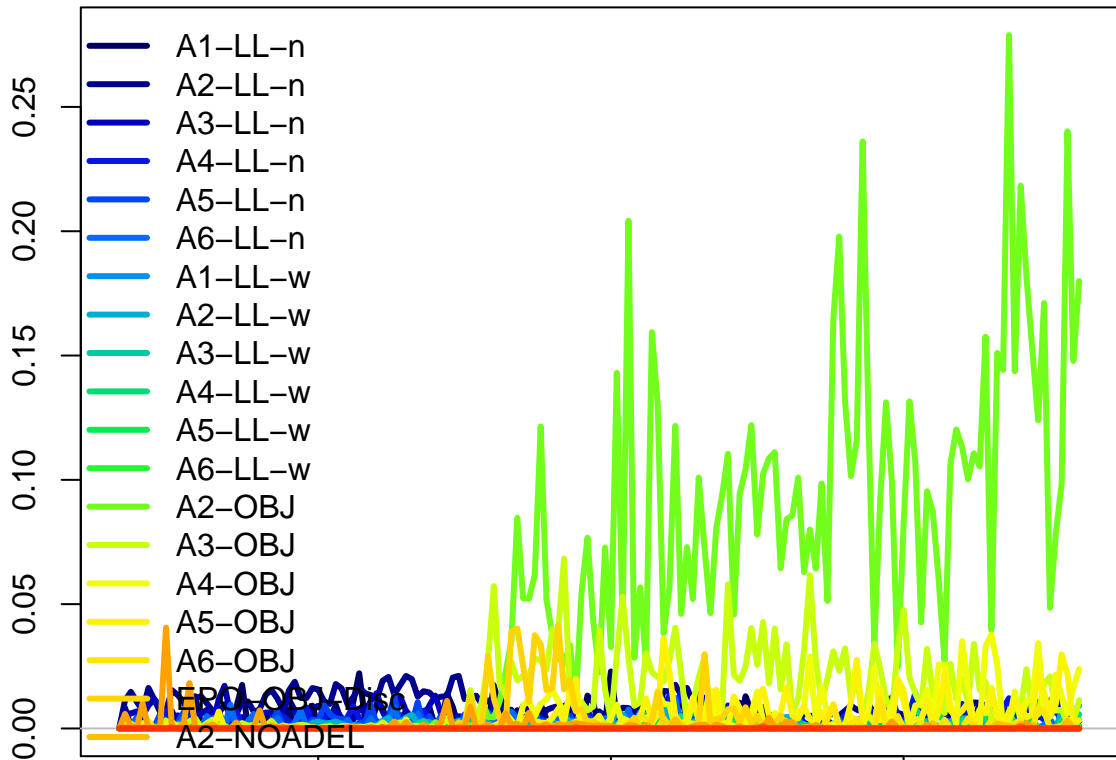


Observed and expected Landings (mt)



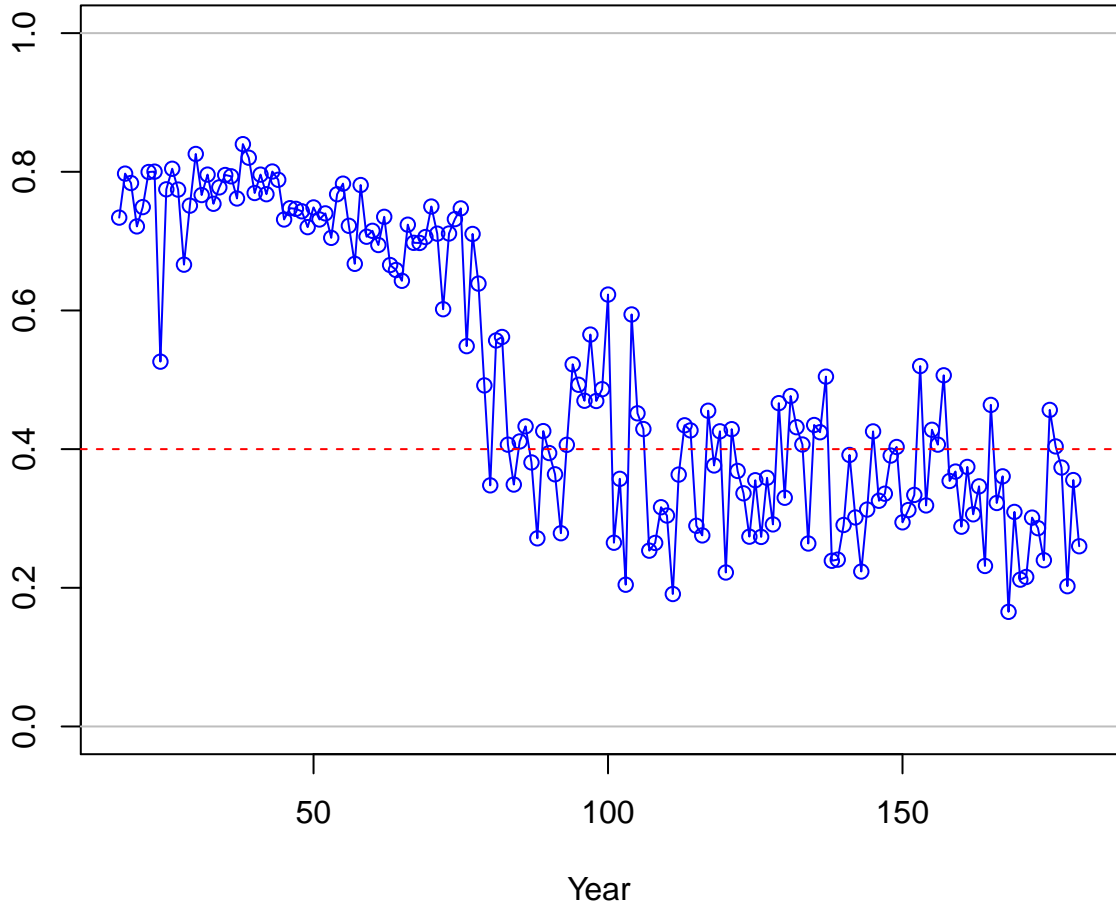


Continuous F



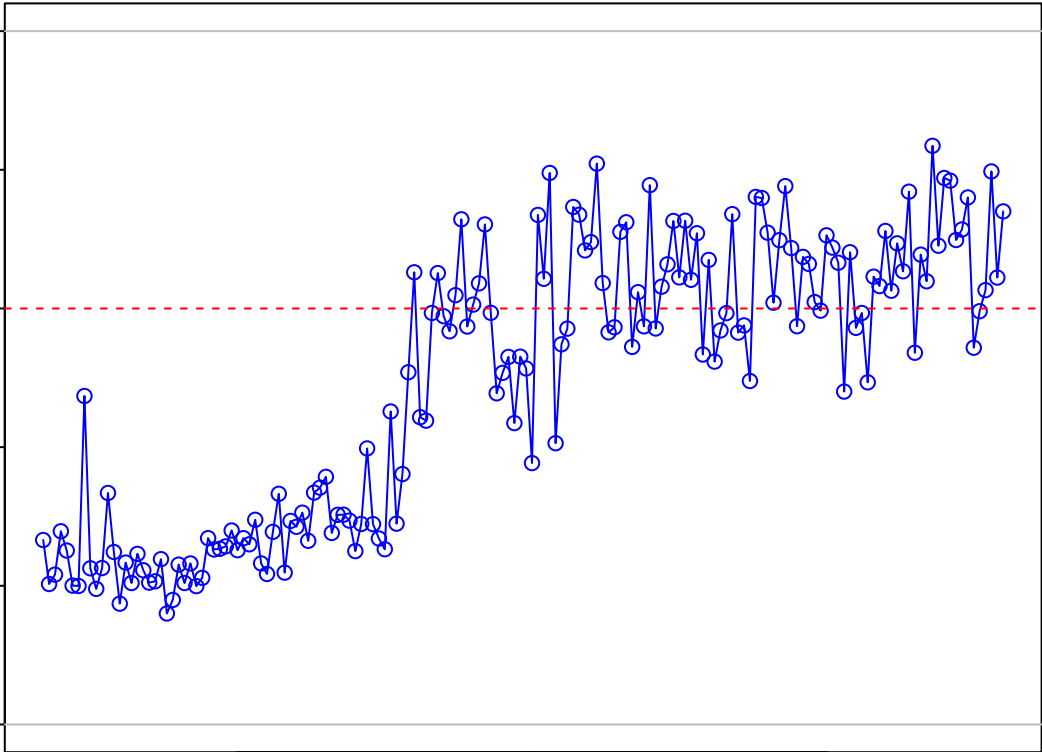
Year

SPR

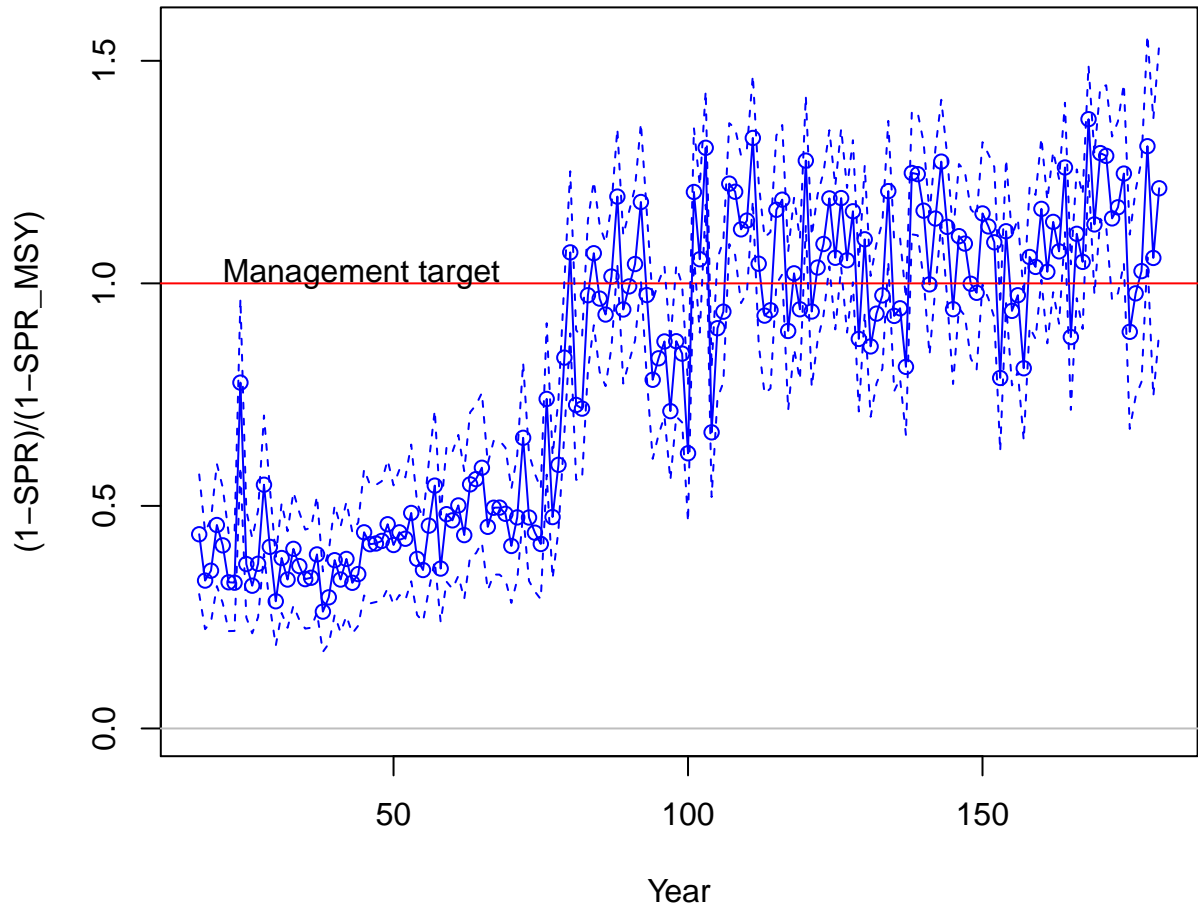


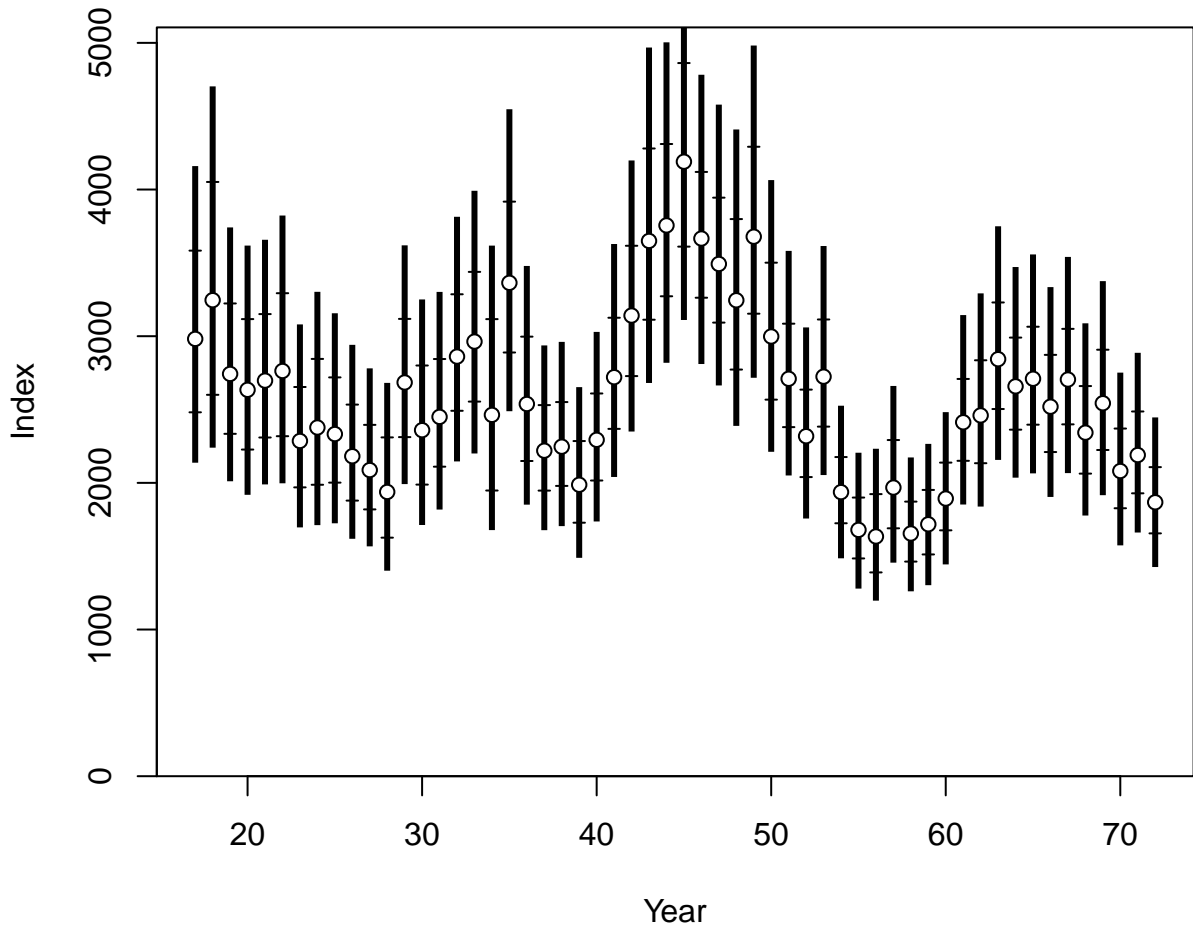
1-SPR

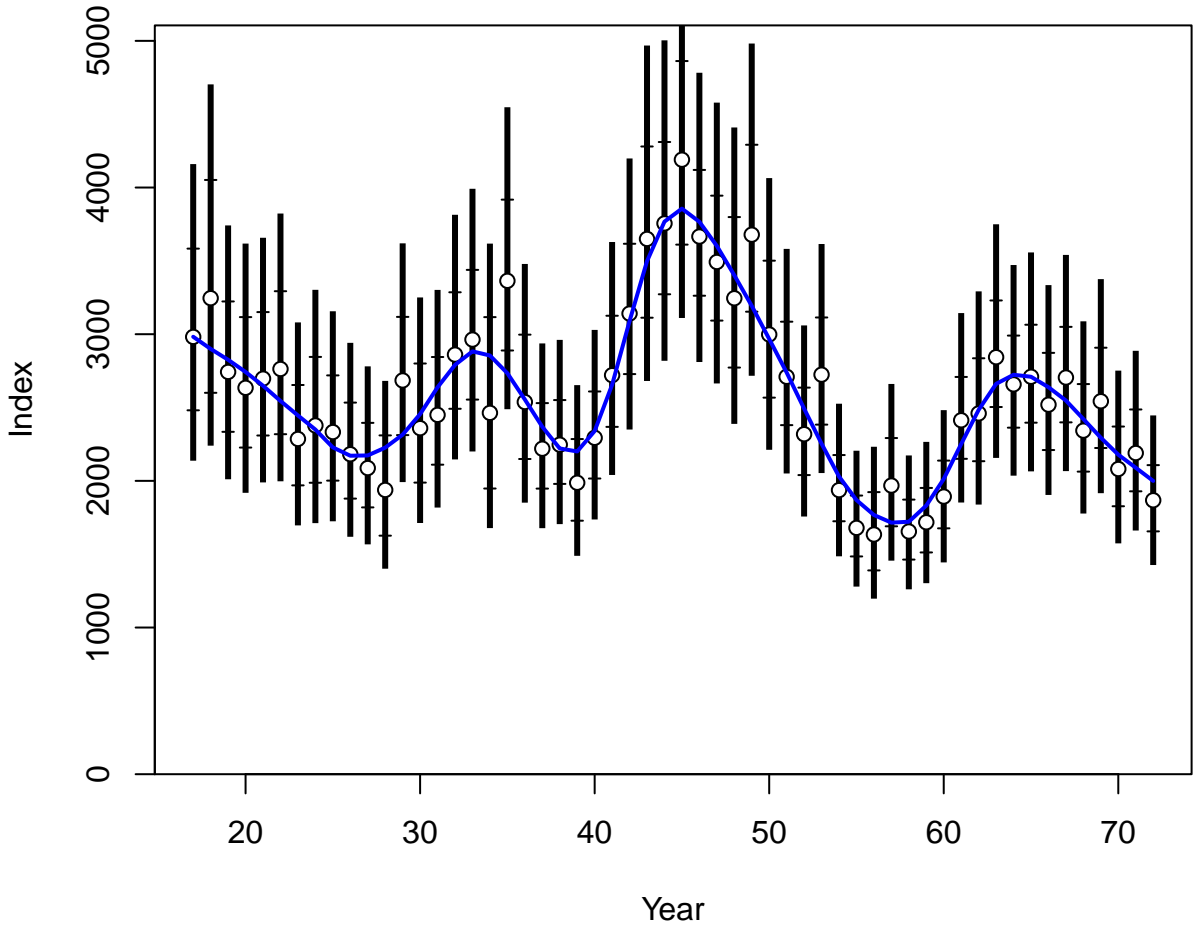
1.0  
0.8  
0.6  
0.4  
0.2  
0.0

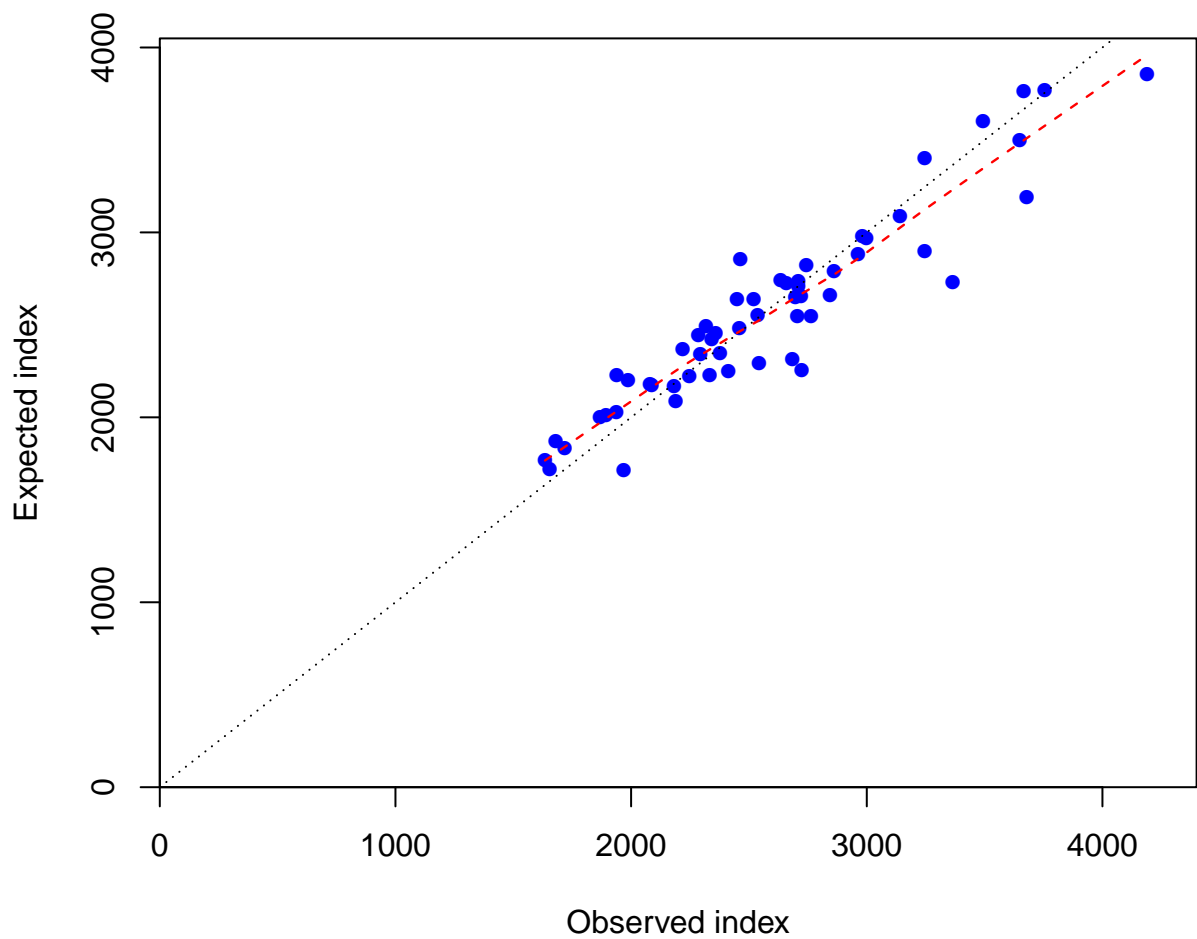


Year

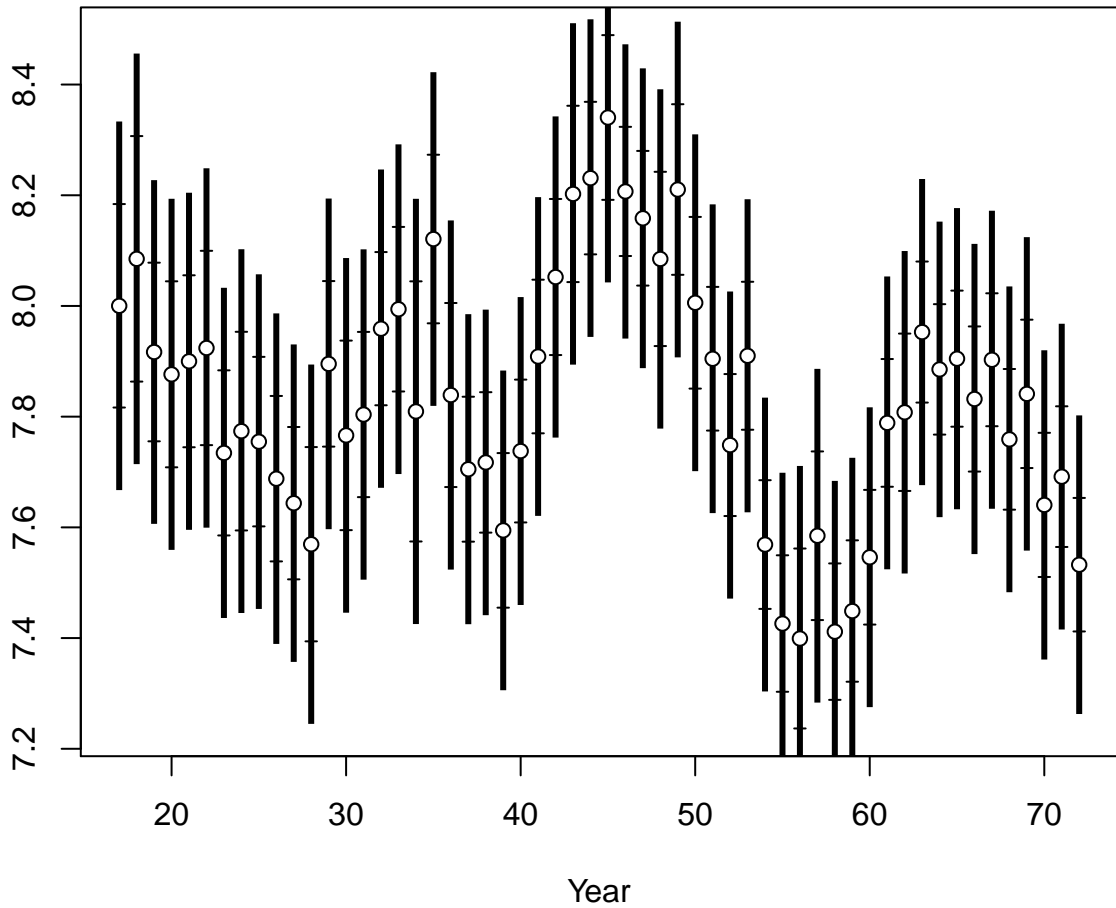




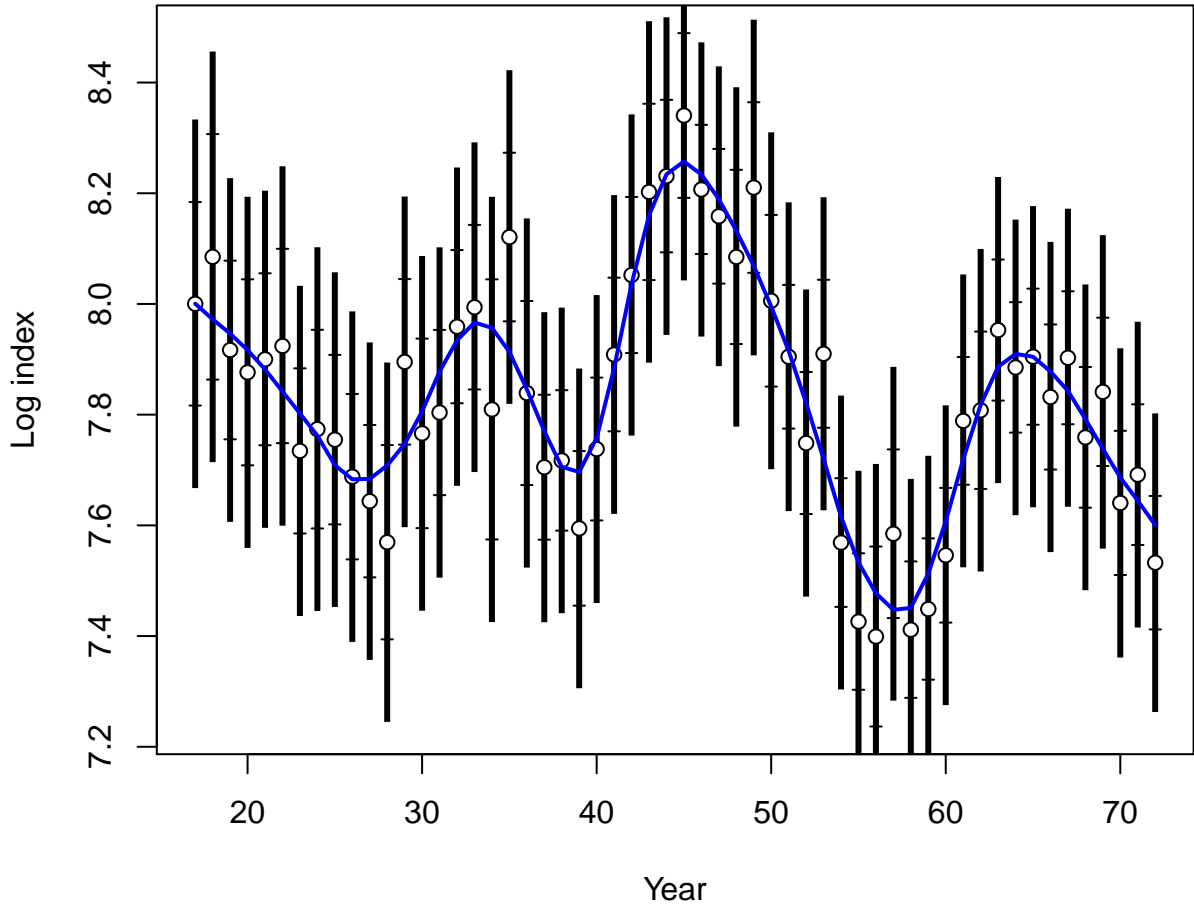




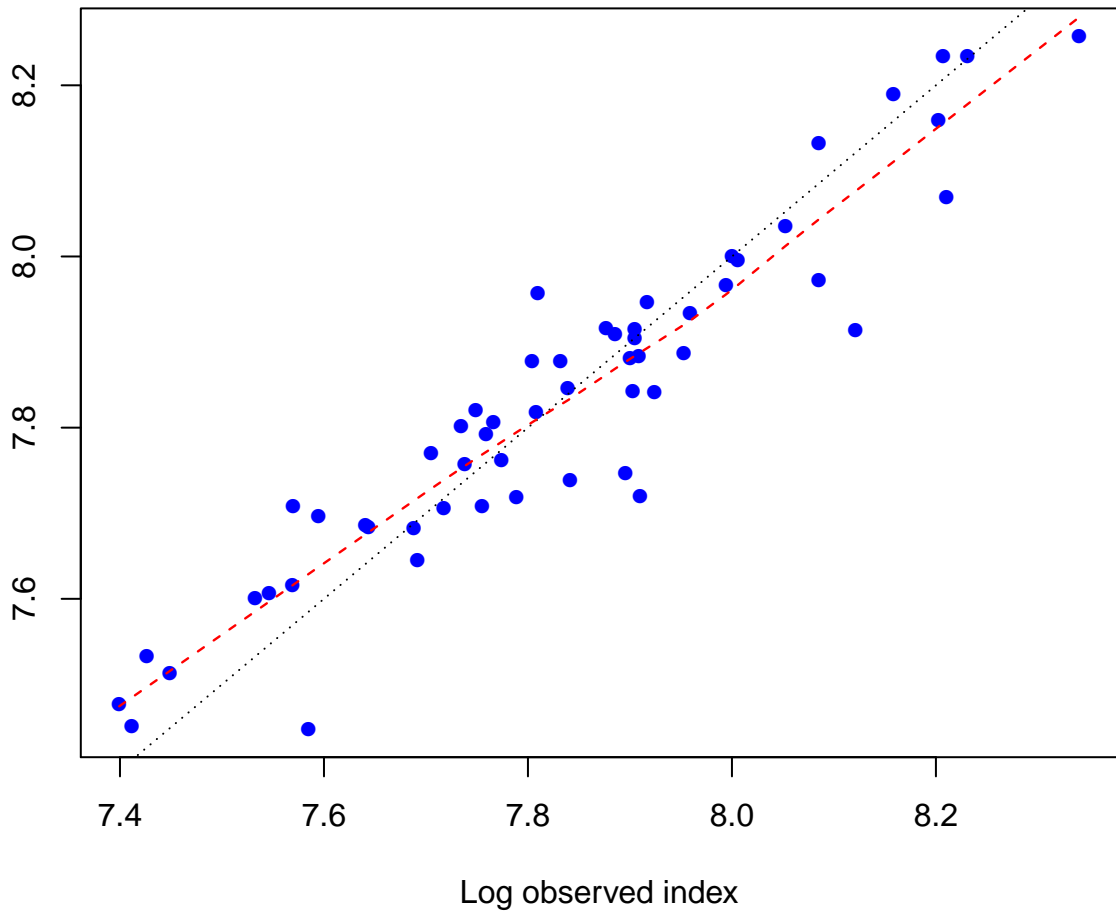
Log index







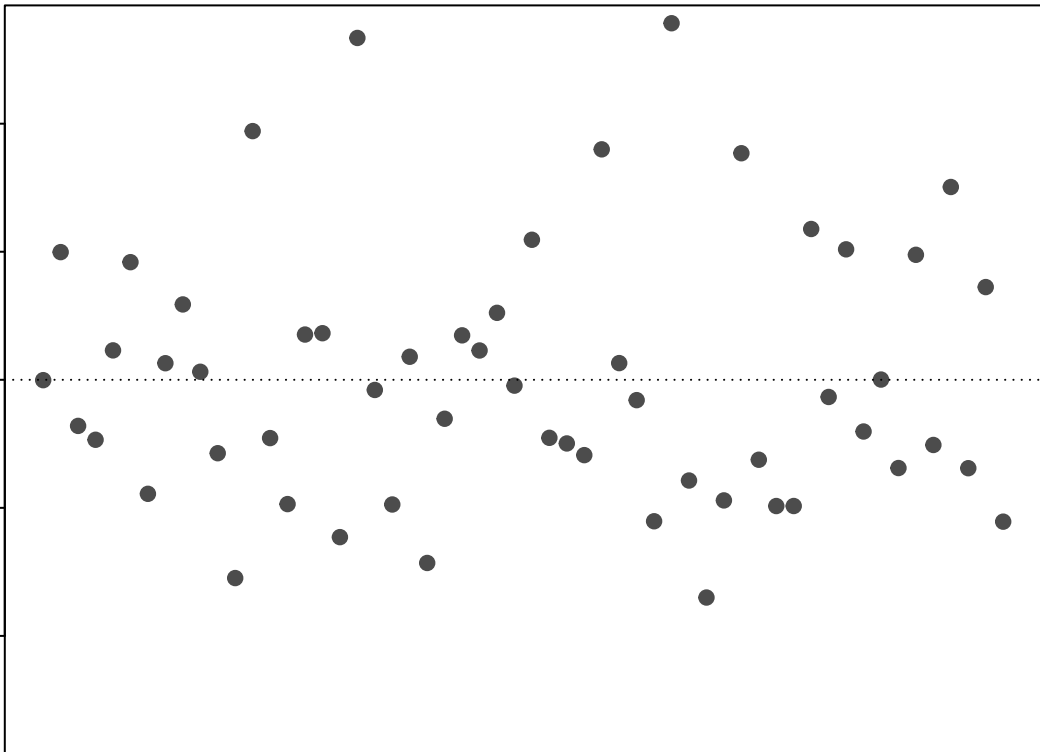
Log expected index



Log observed index

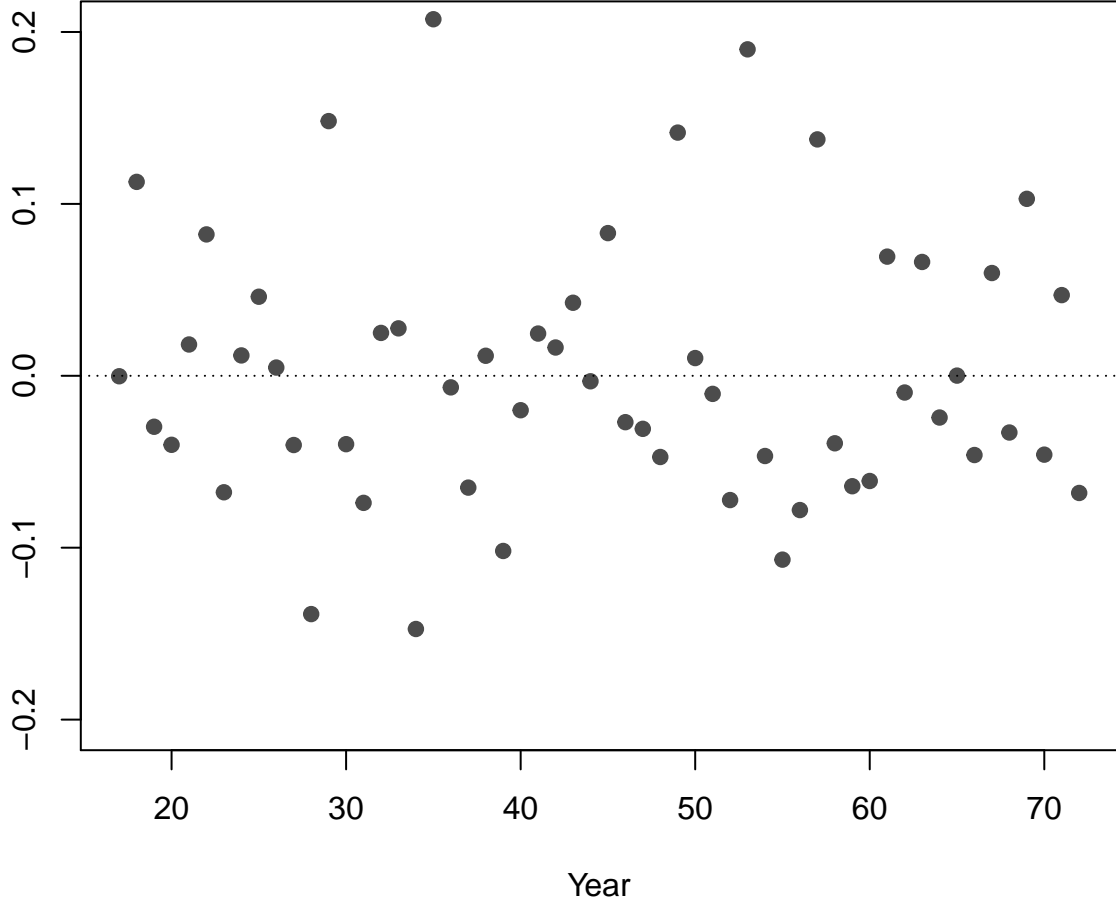
Residual

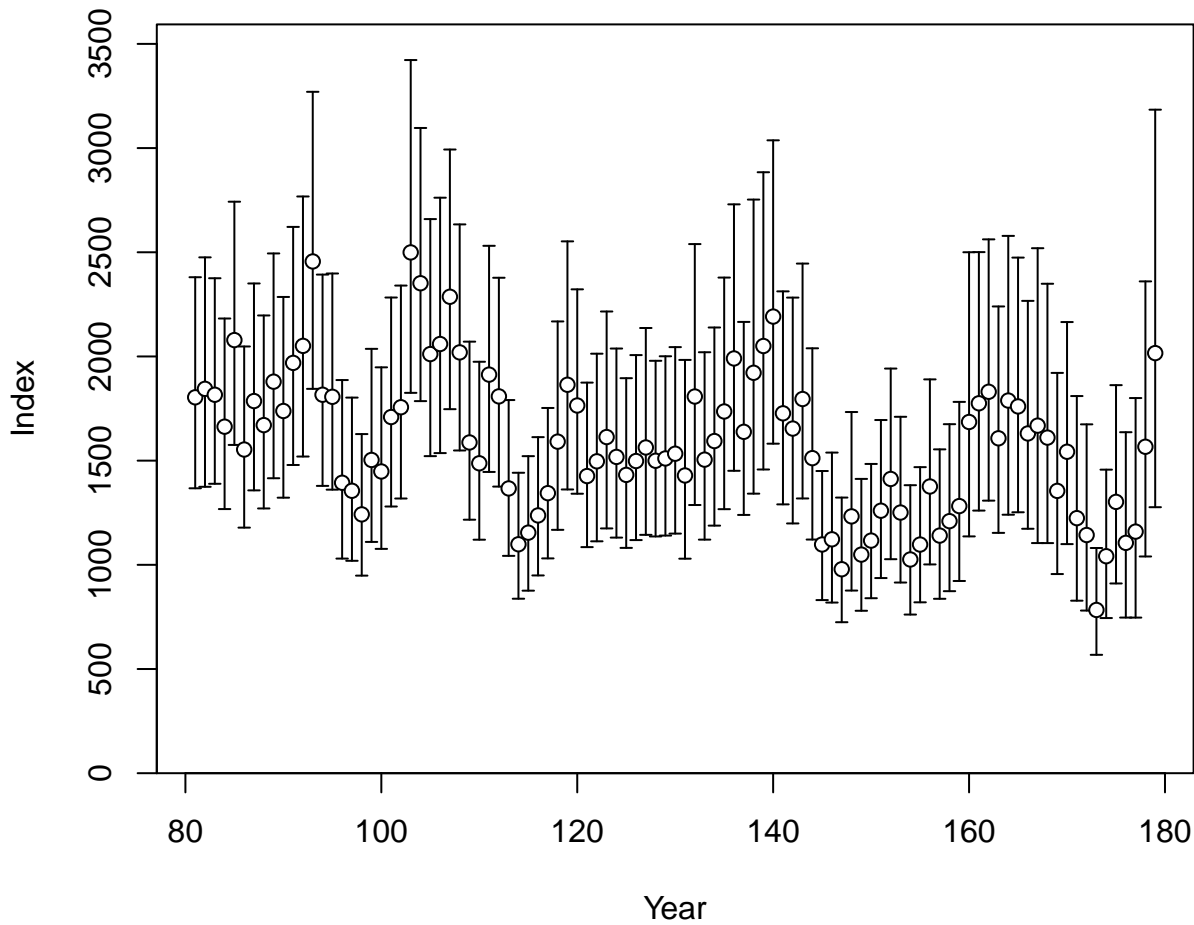
2  
1  
0  
-1  
-2

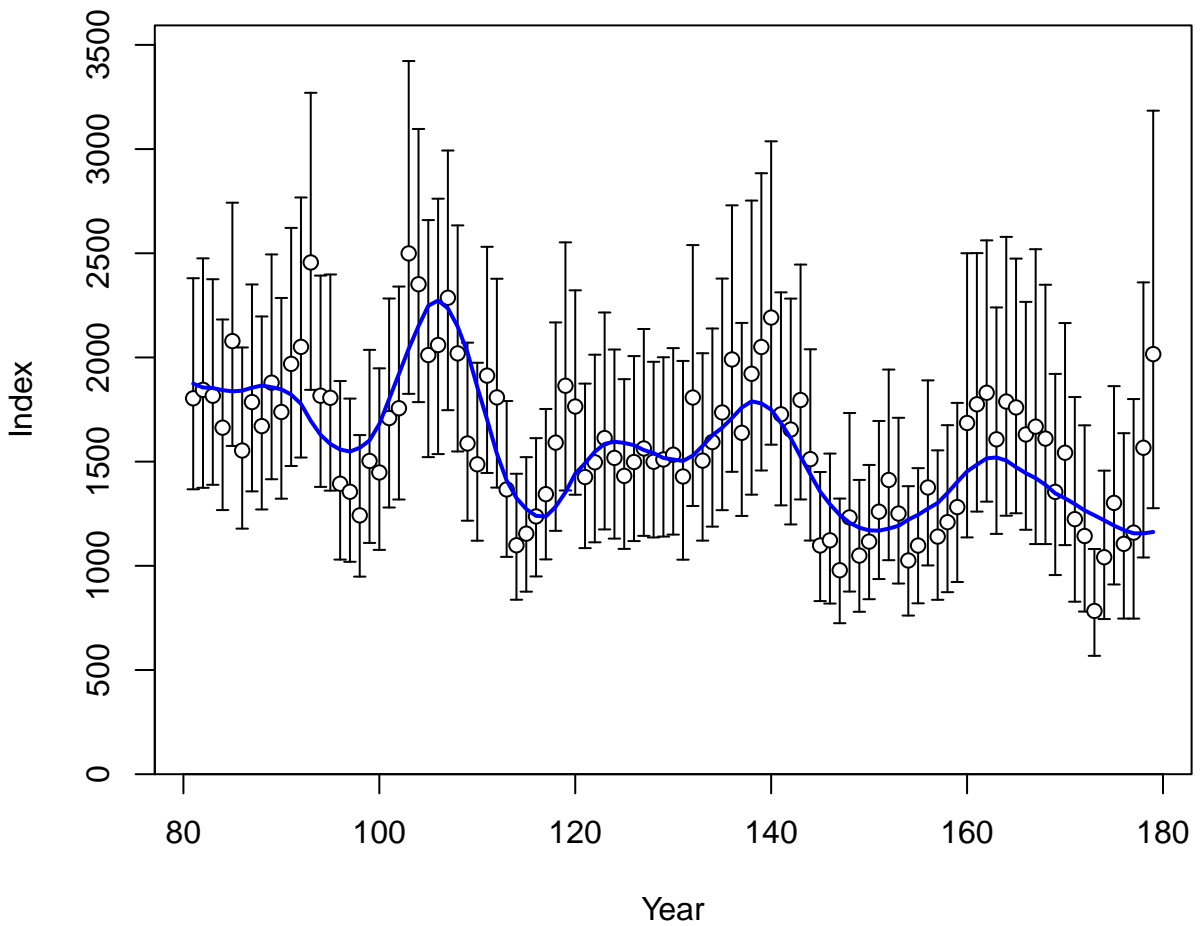


Year

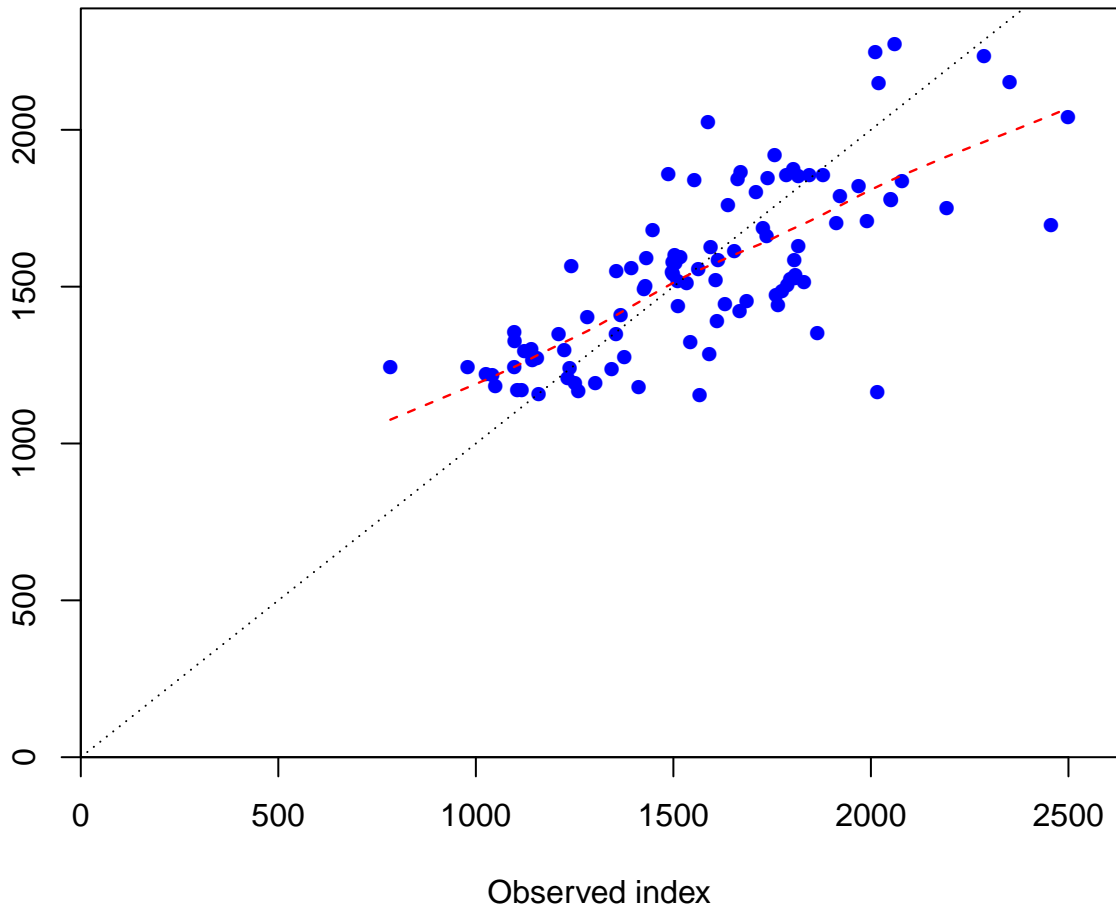
Deviation







Expected index



Log index

8.0  
7.5  
7.0  
6.5

80

100

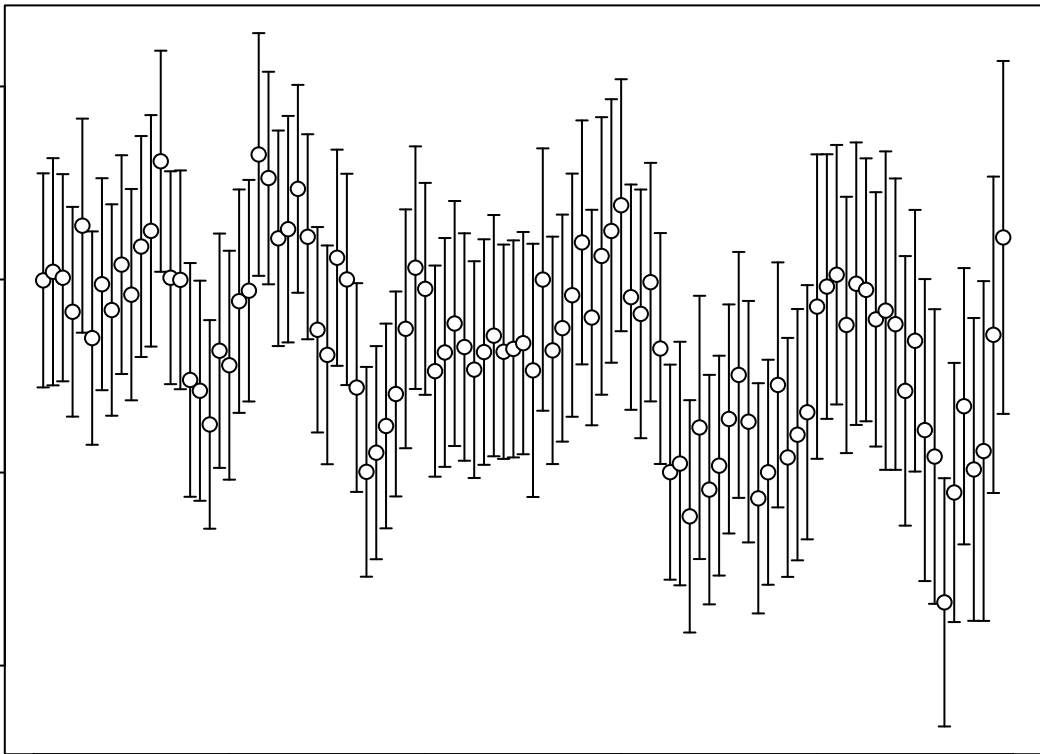
120

140

160

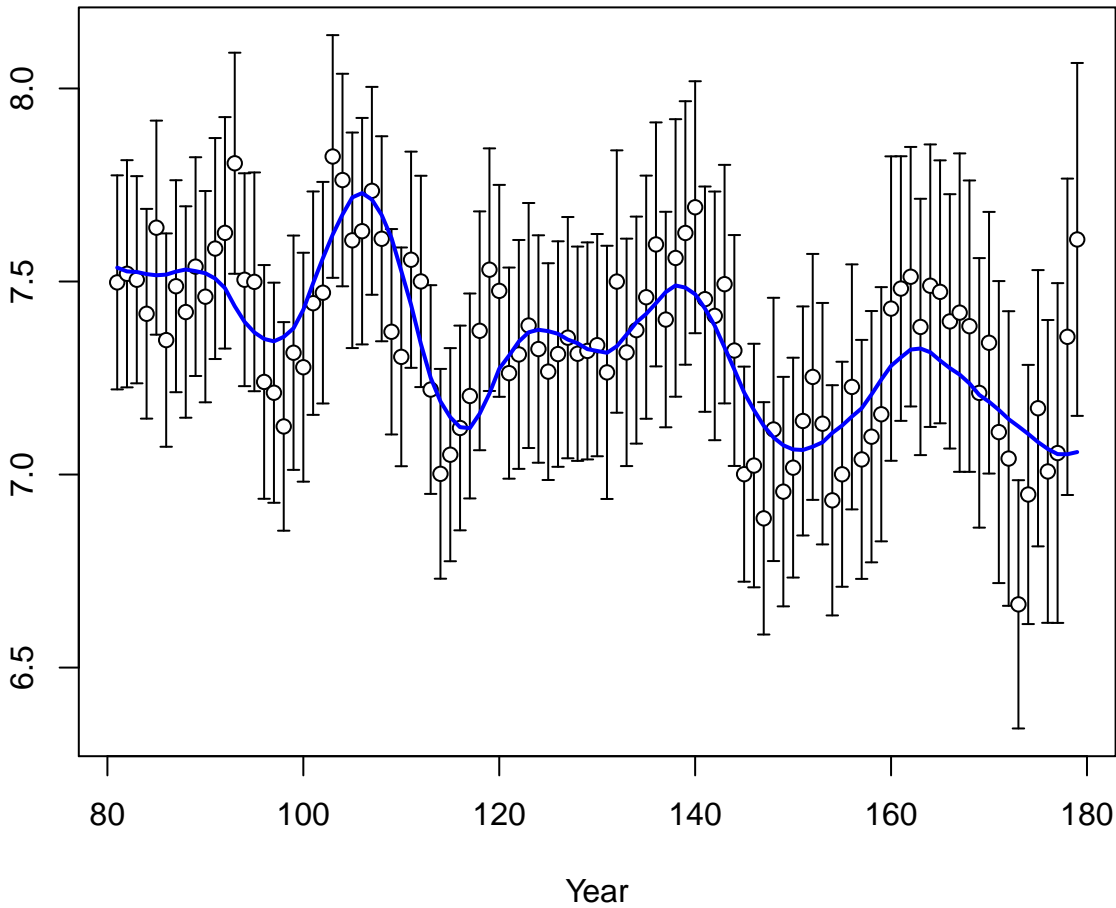
180

Year



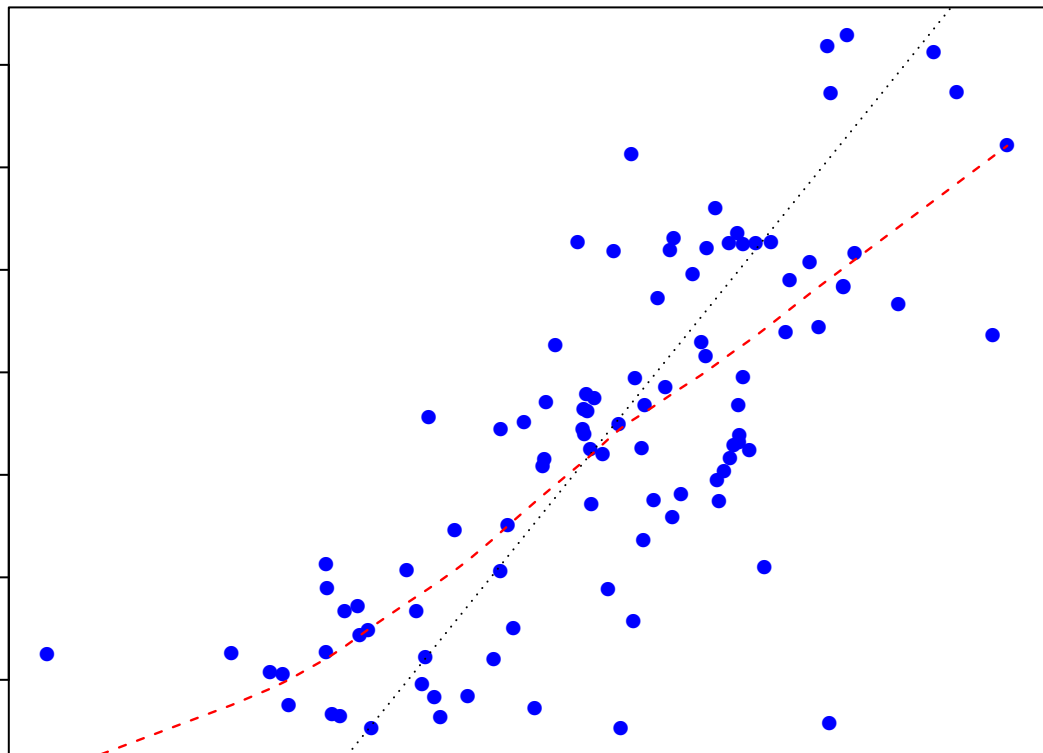


Log index



Log expected index

7.7  
7.6  
7.5  
7.4  
7.3  
7.2  
7.1



6.8

7.0

7.2

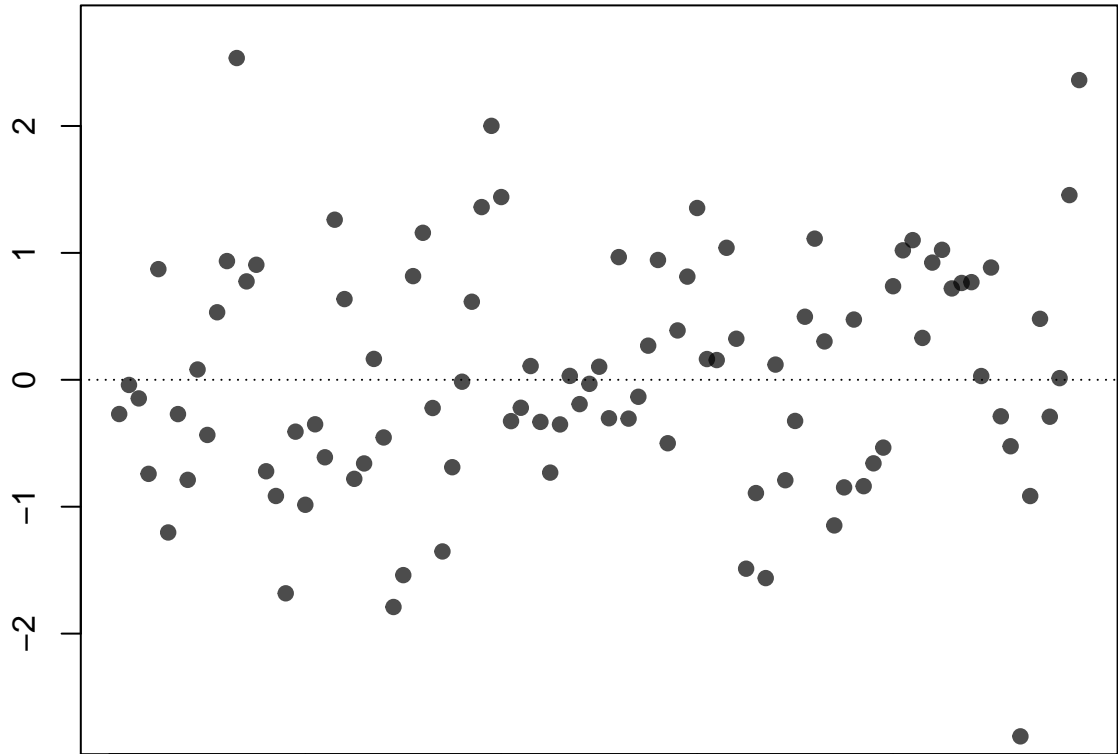
7.4

7.6

7.8

Log observed index

Residual



2  
1  
0  
-1  
-2

80 100 120 140 160 180

Year

Deviation

0.4  
0.2  
0.0  
-0.2  
-0.4

80

100

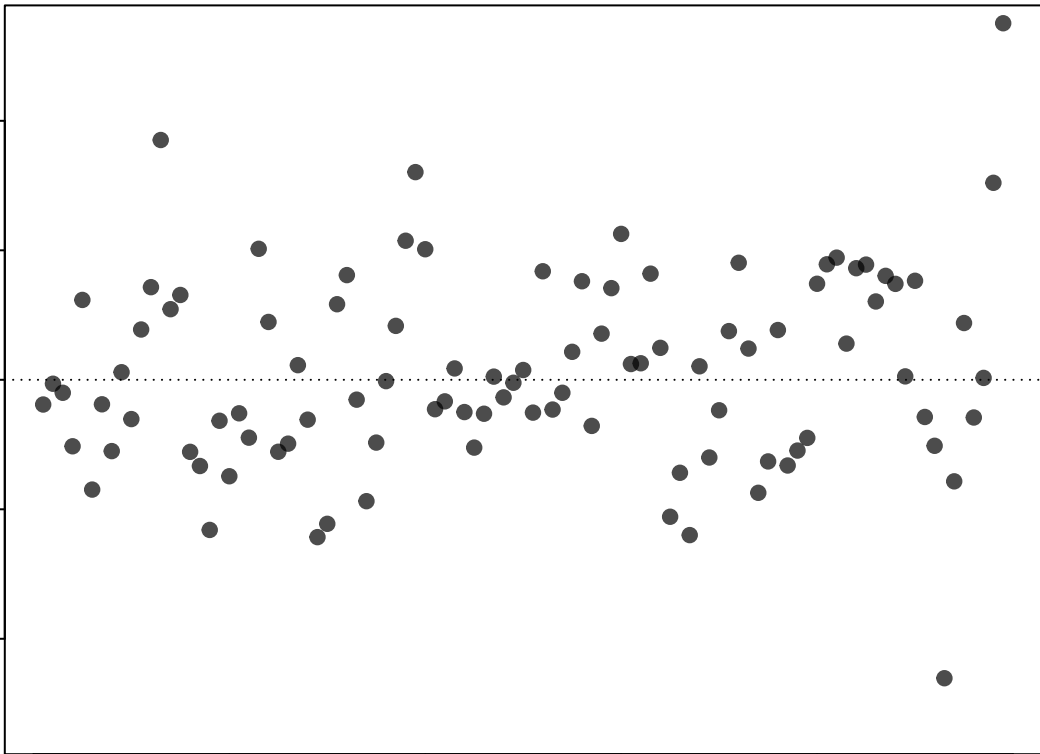
120

140

160

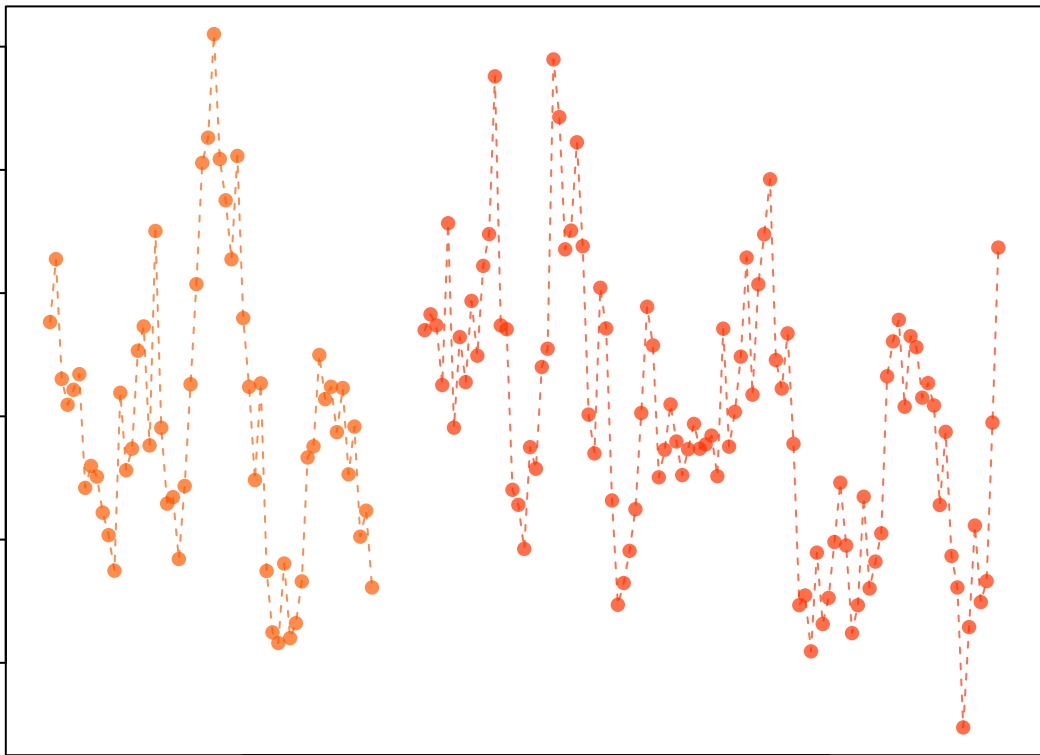
180

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



14

16

27

38

49

60

71

82

93

106

120

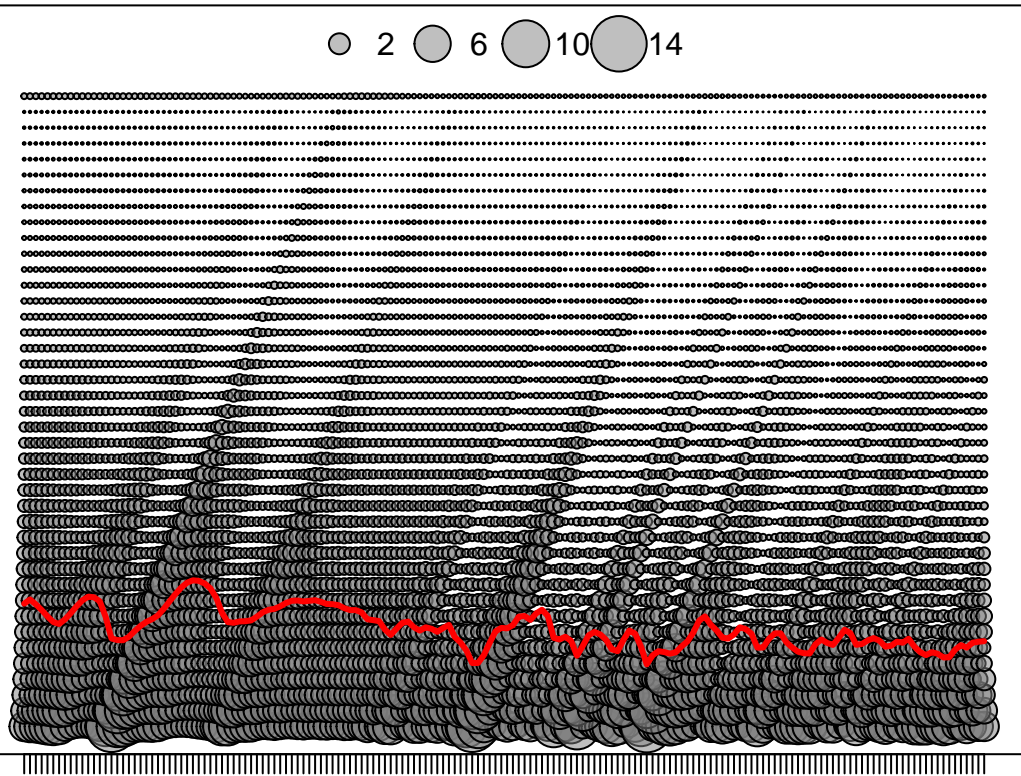
134

148

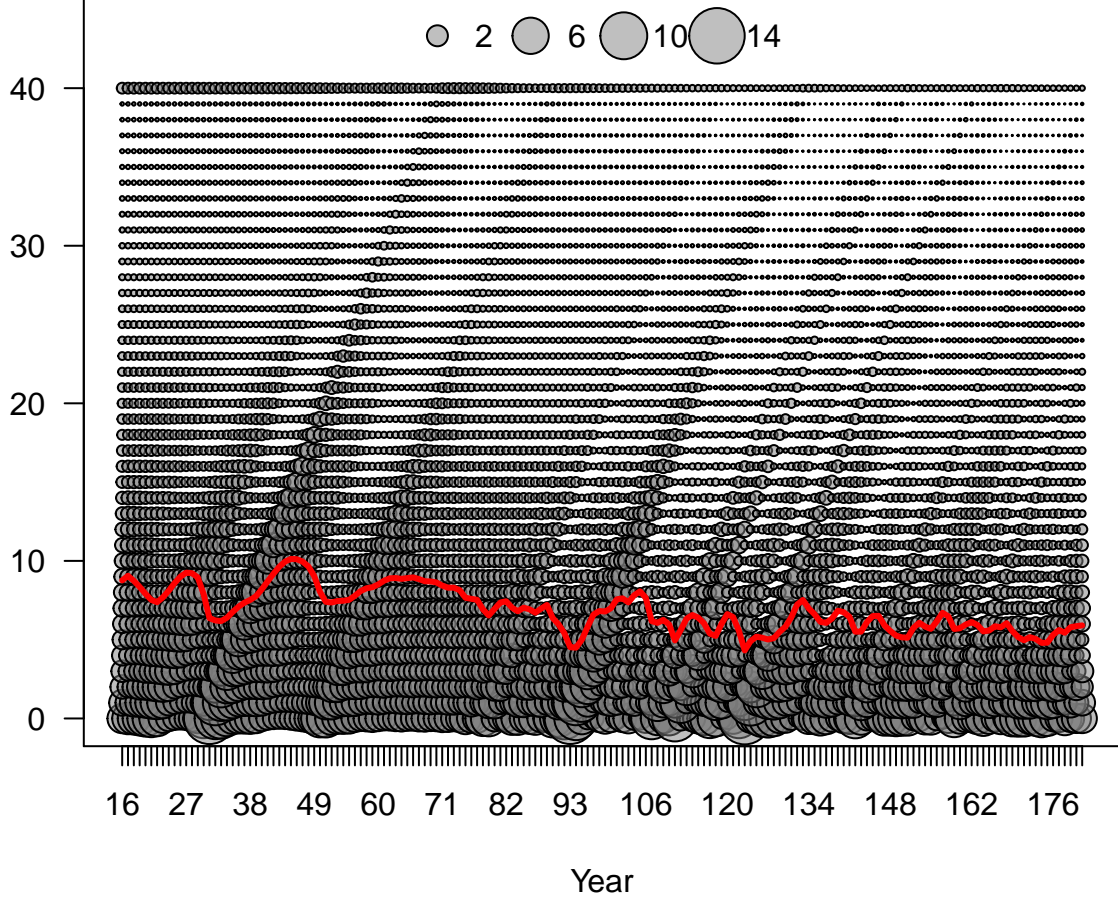
162

176

Year

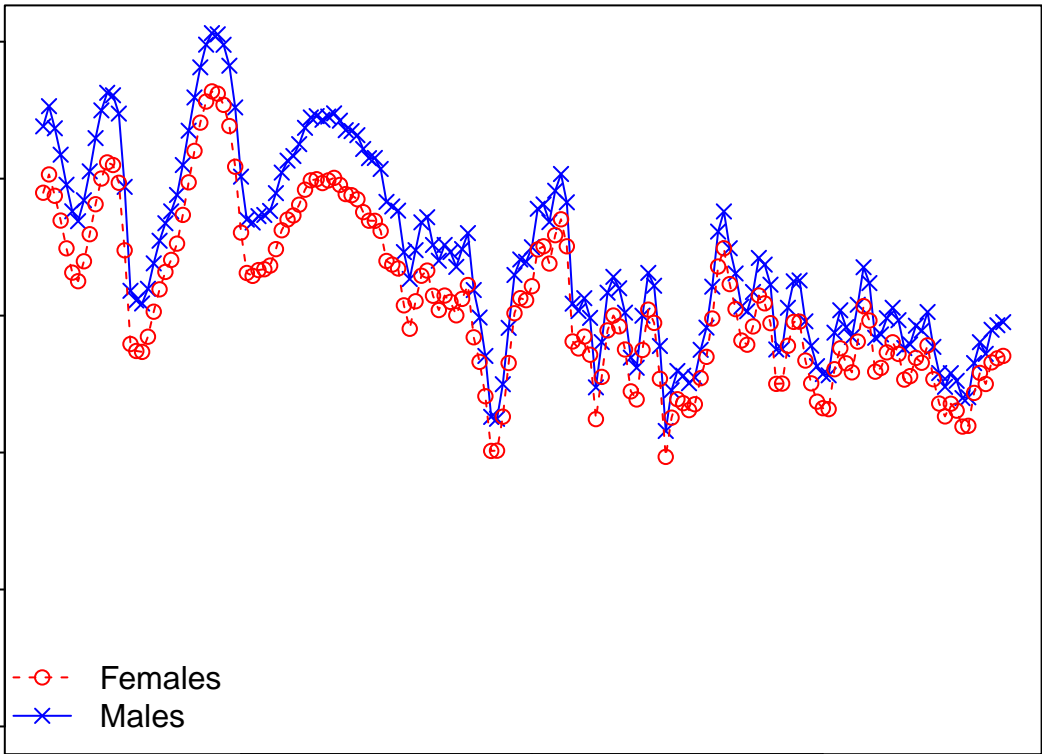


Age



Mean age (yr)

10  
8  
6  
4  
2  
0



-o- Females  
x Males

Year

50

100

150



Age

40

30

20

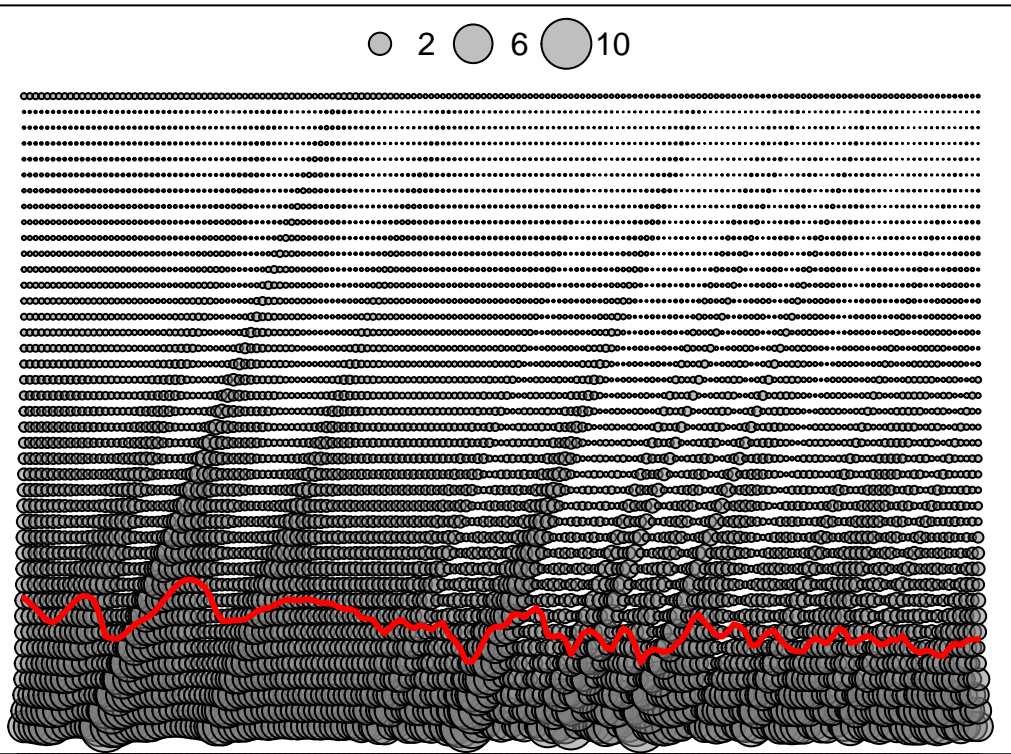
10

0

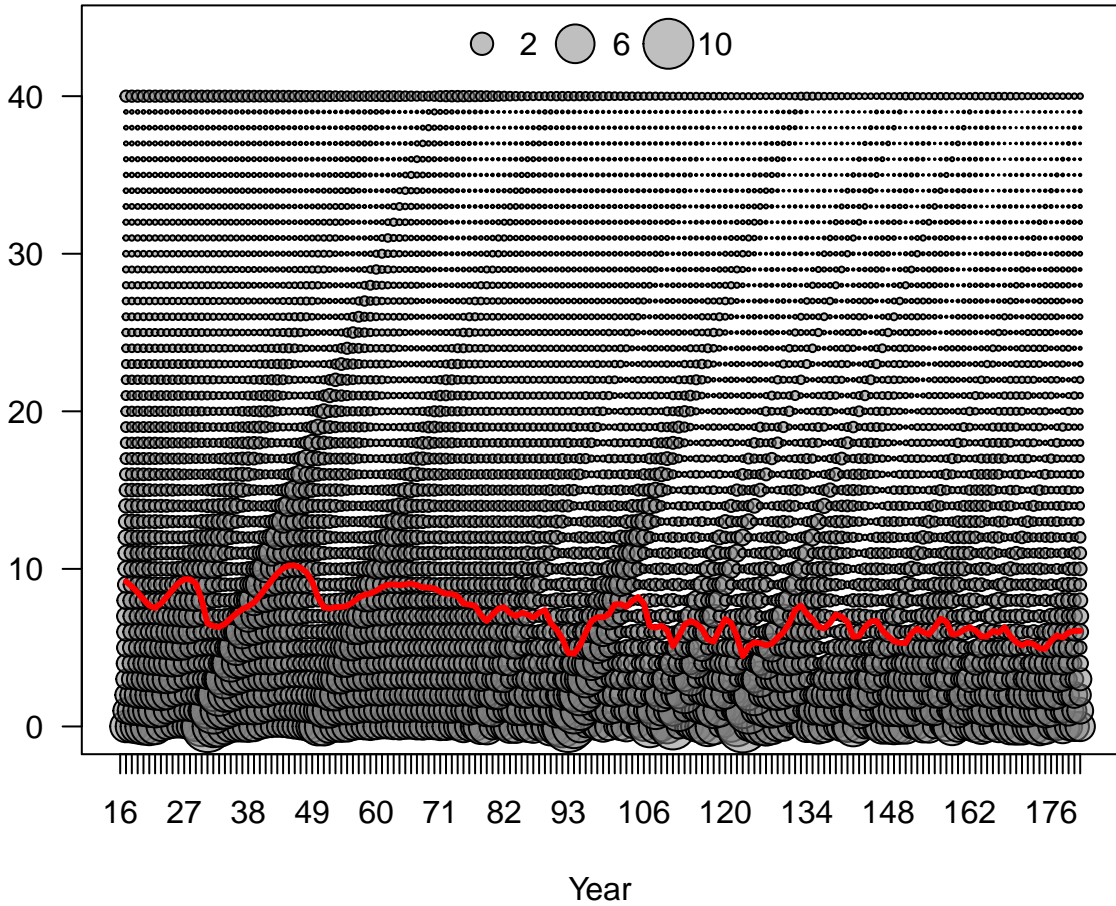
○ 2 ○ 6 ○ 10

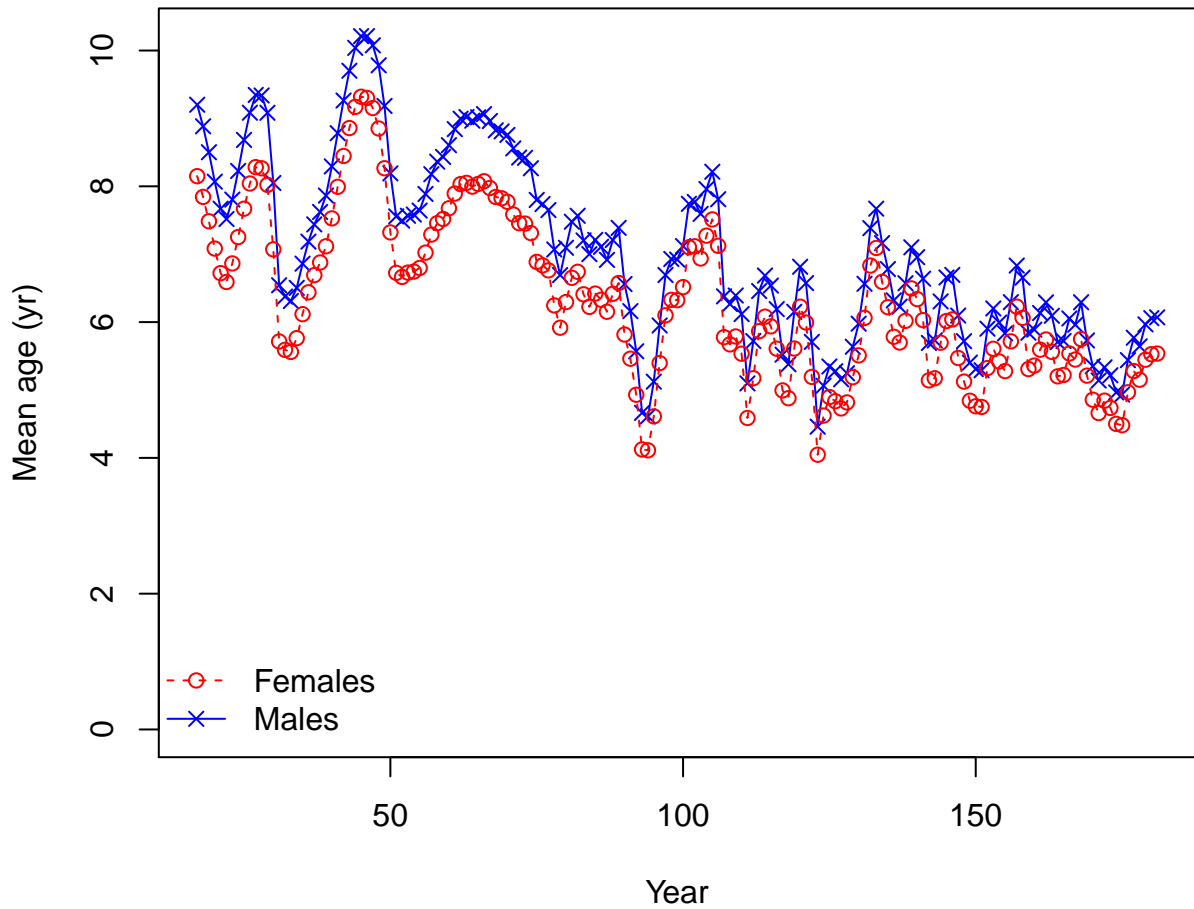
16 27 38 49 60 71 82 93 106 120 134 148 162 176

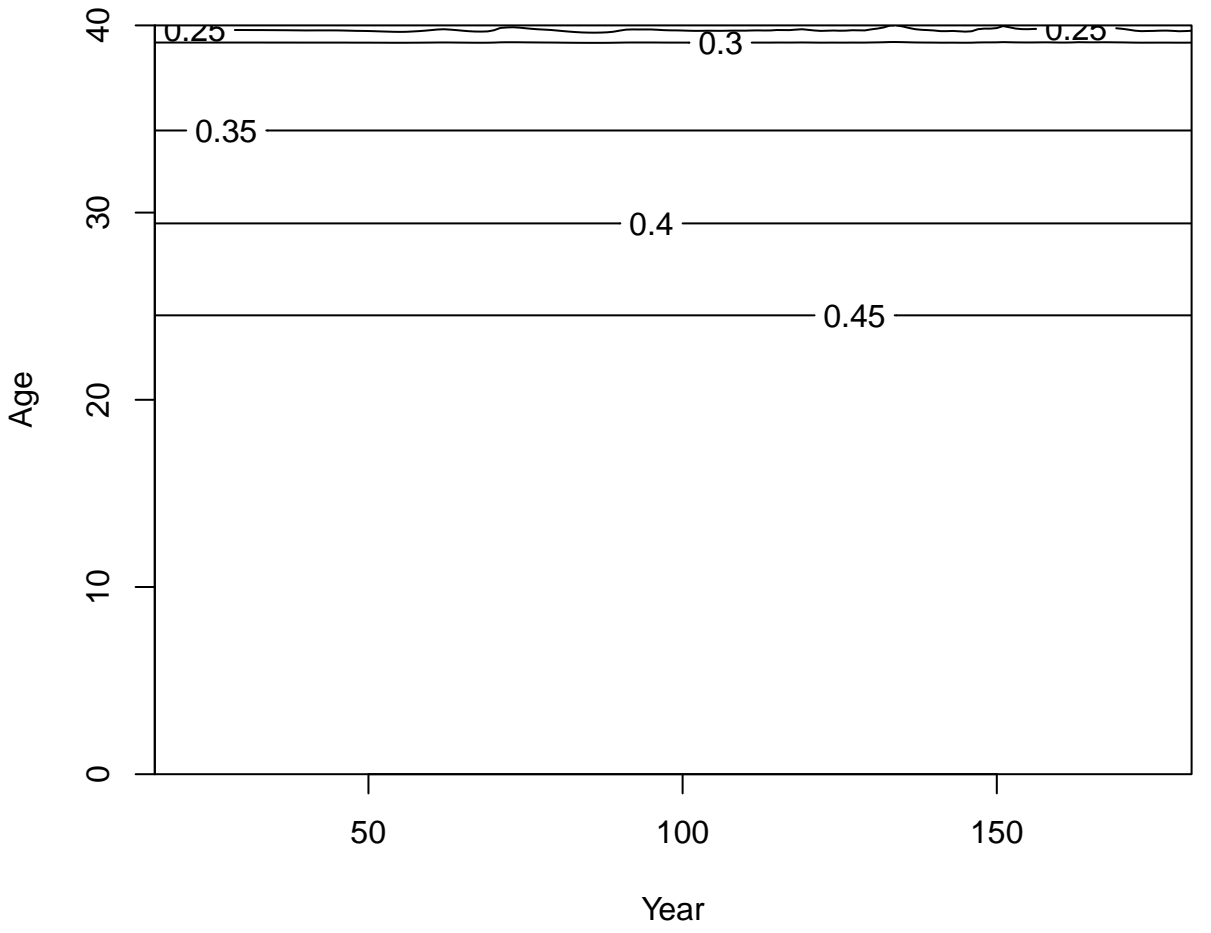
Year

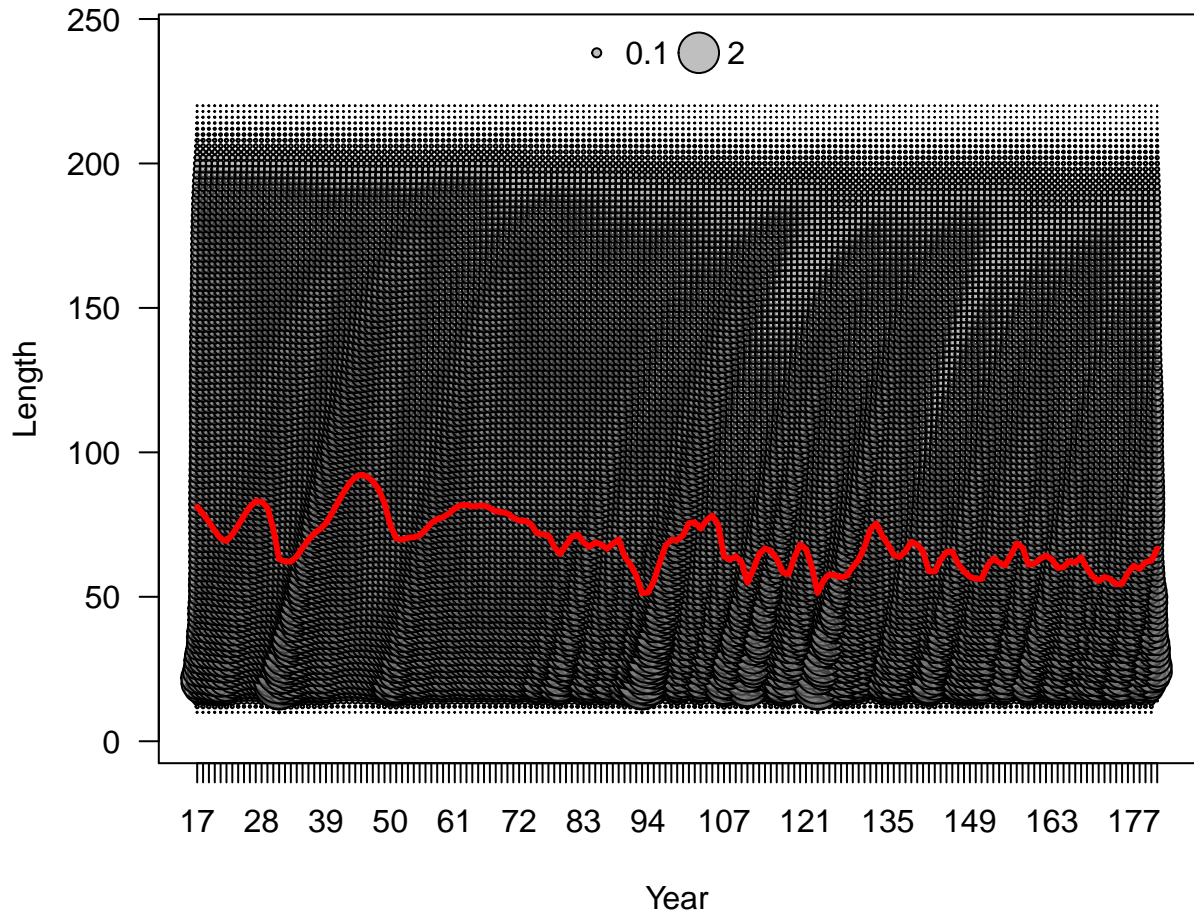


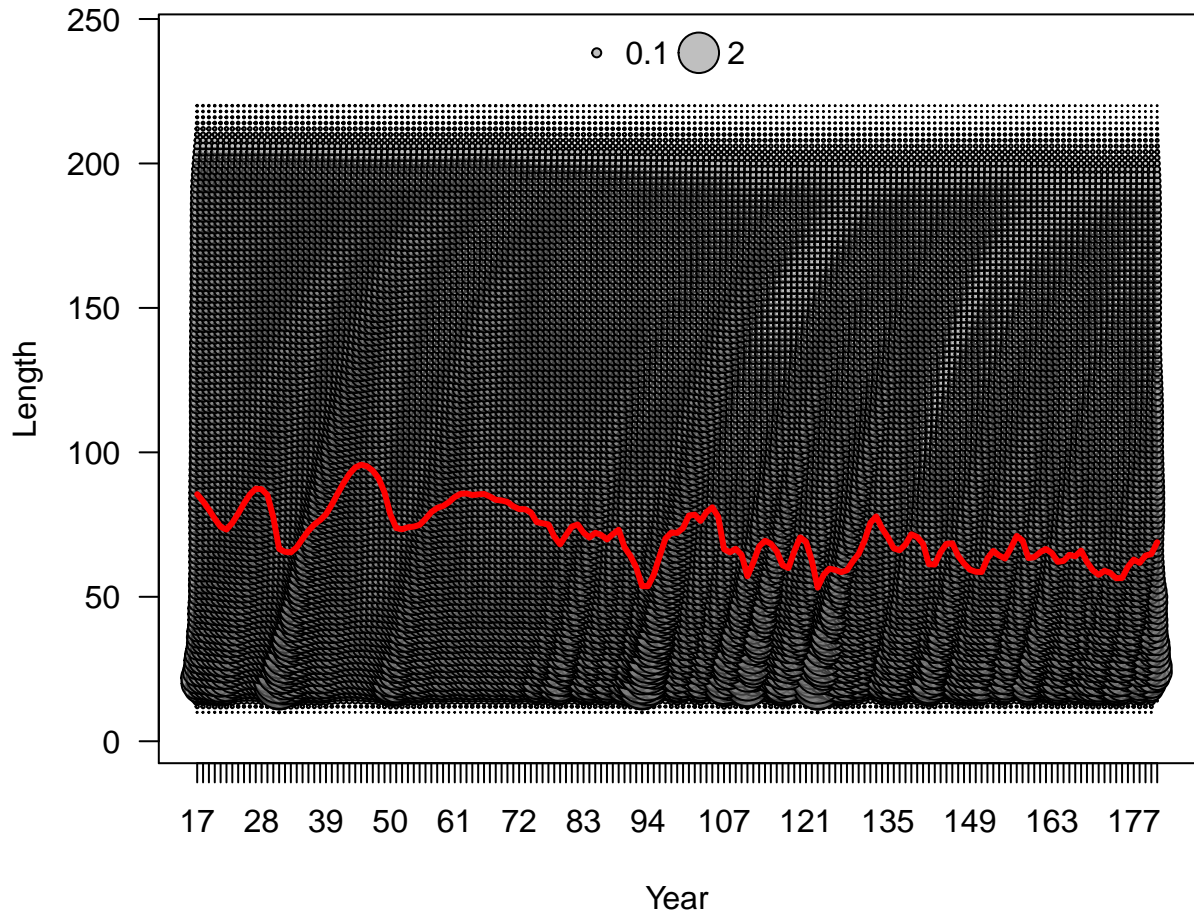
Age

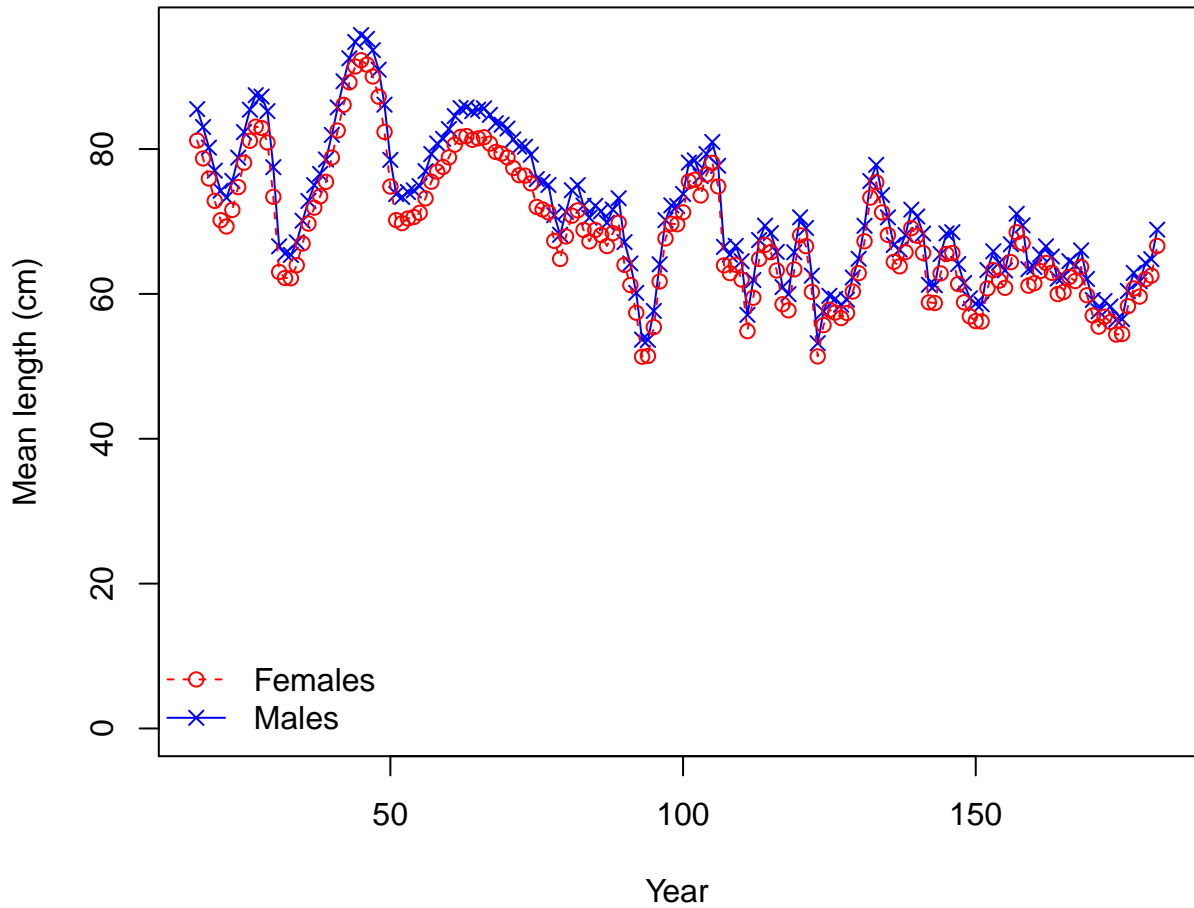


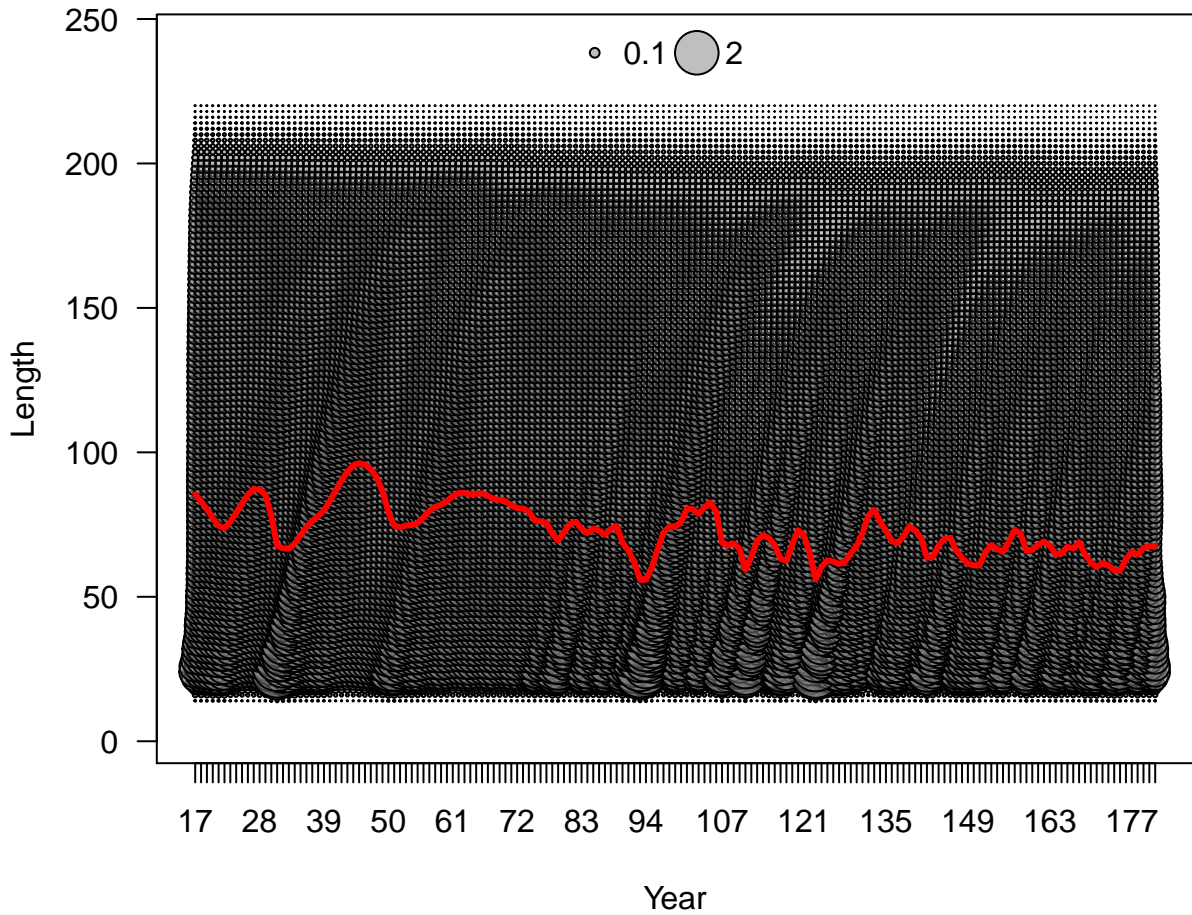




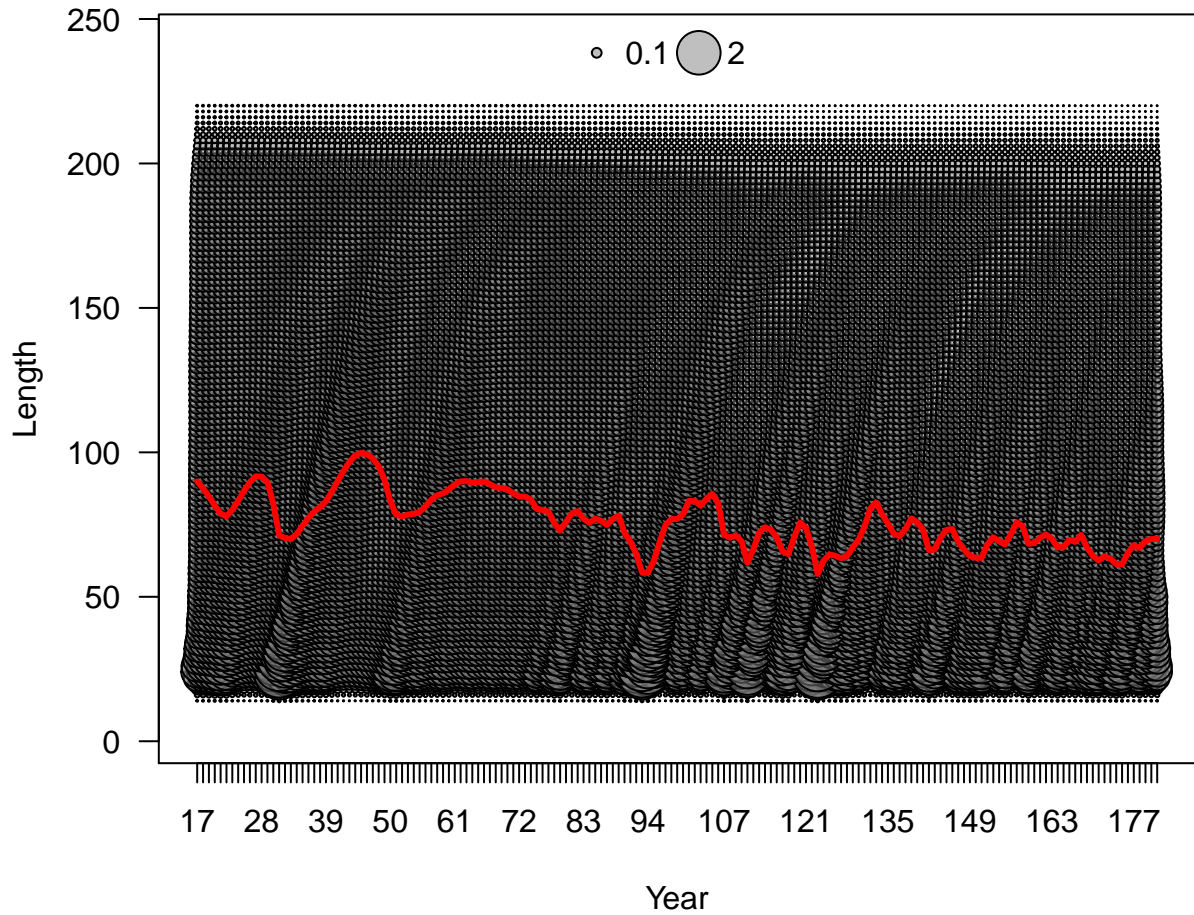


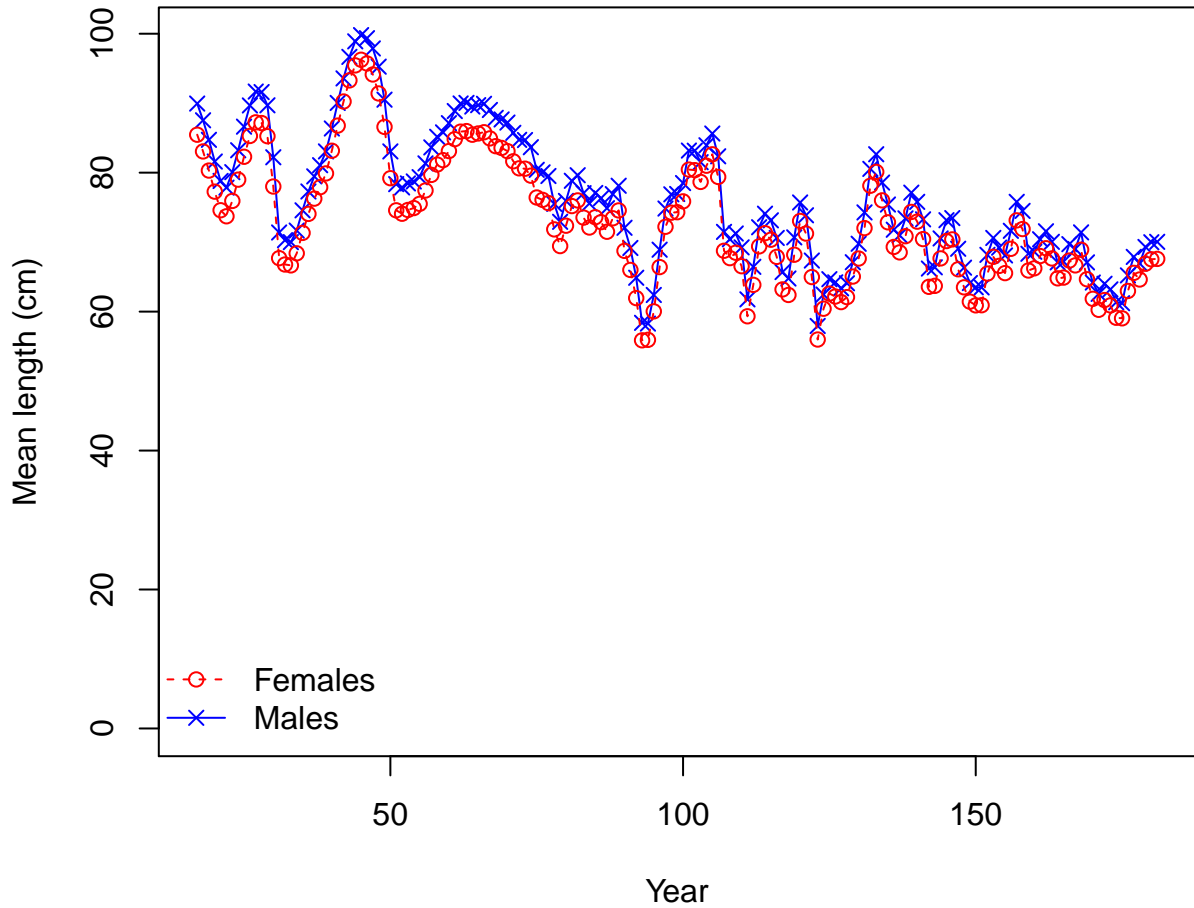




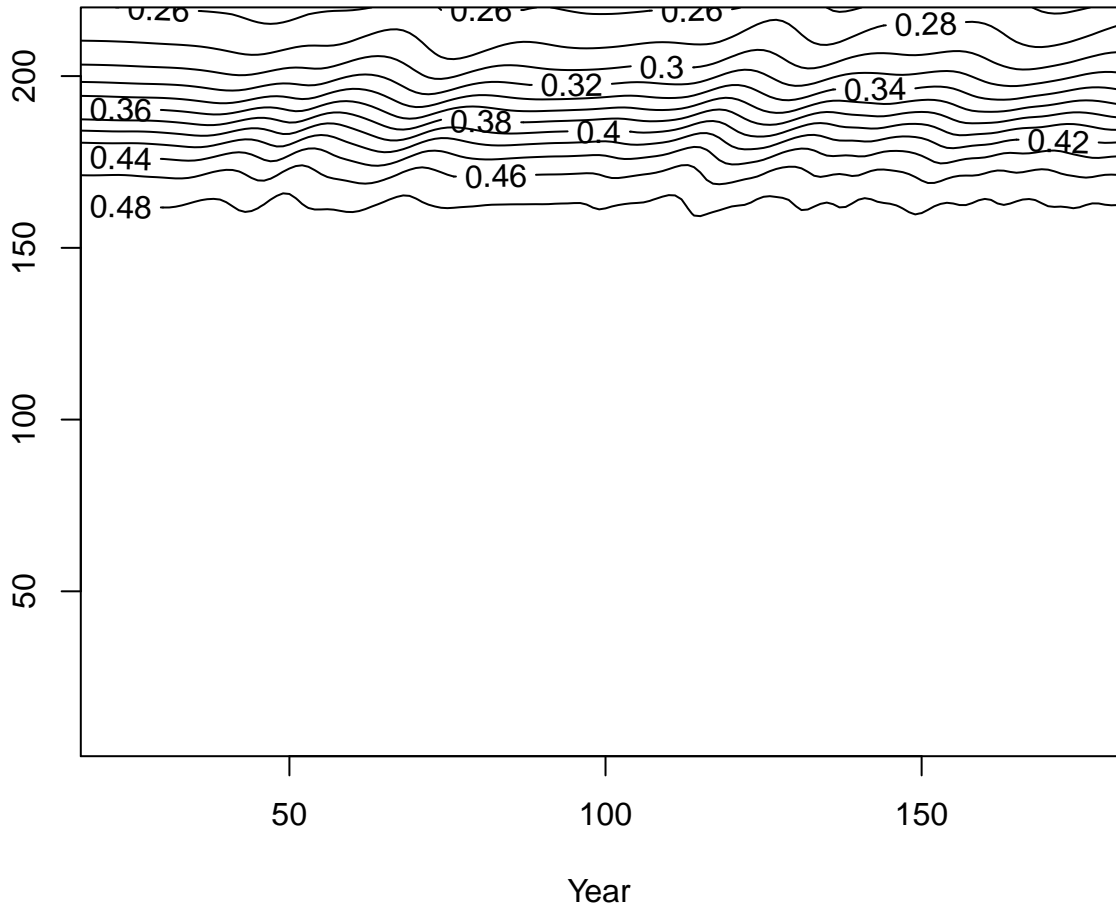


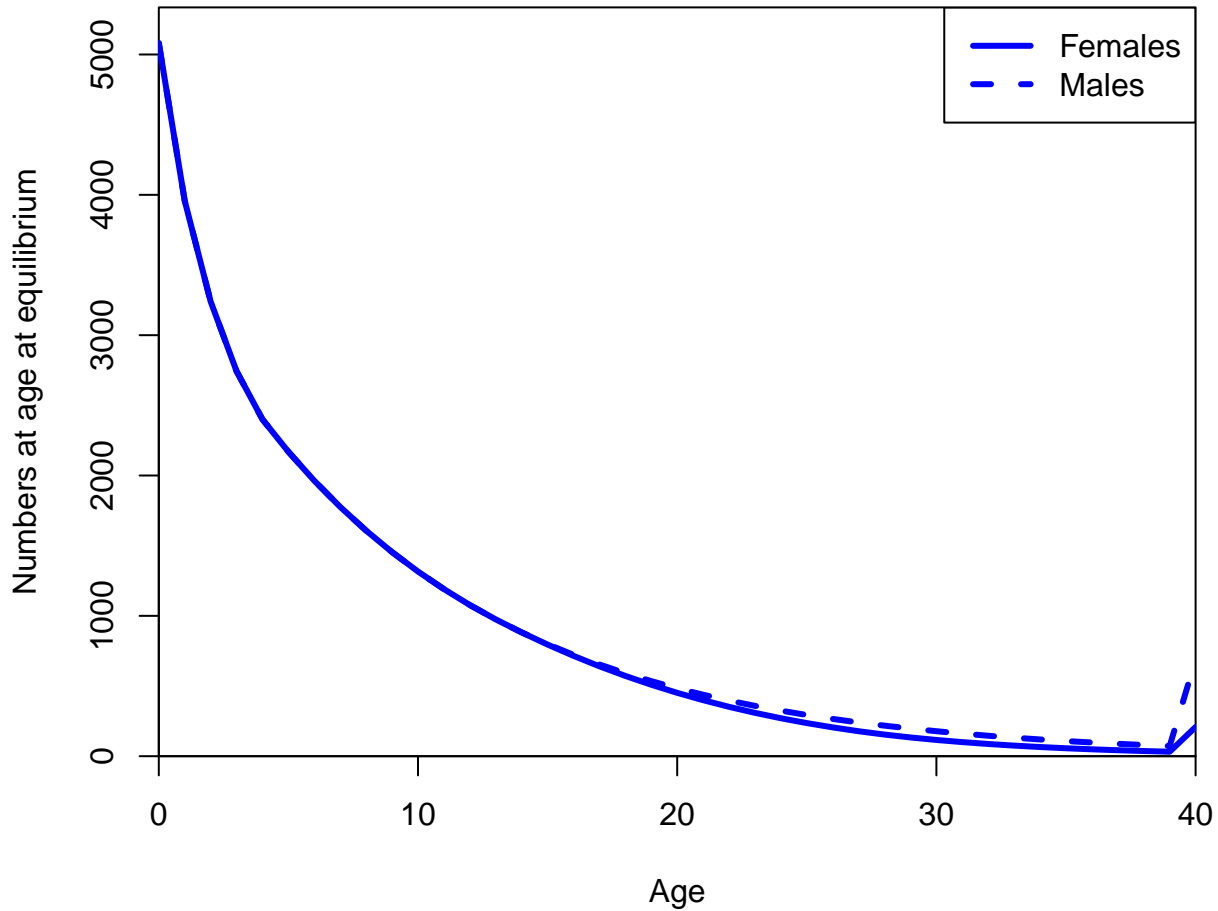


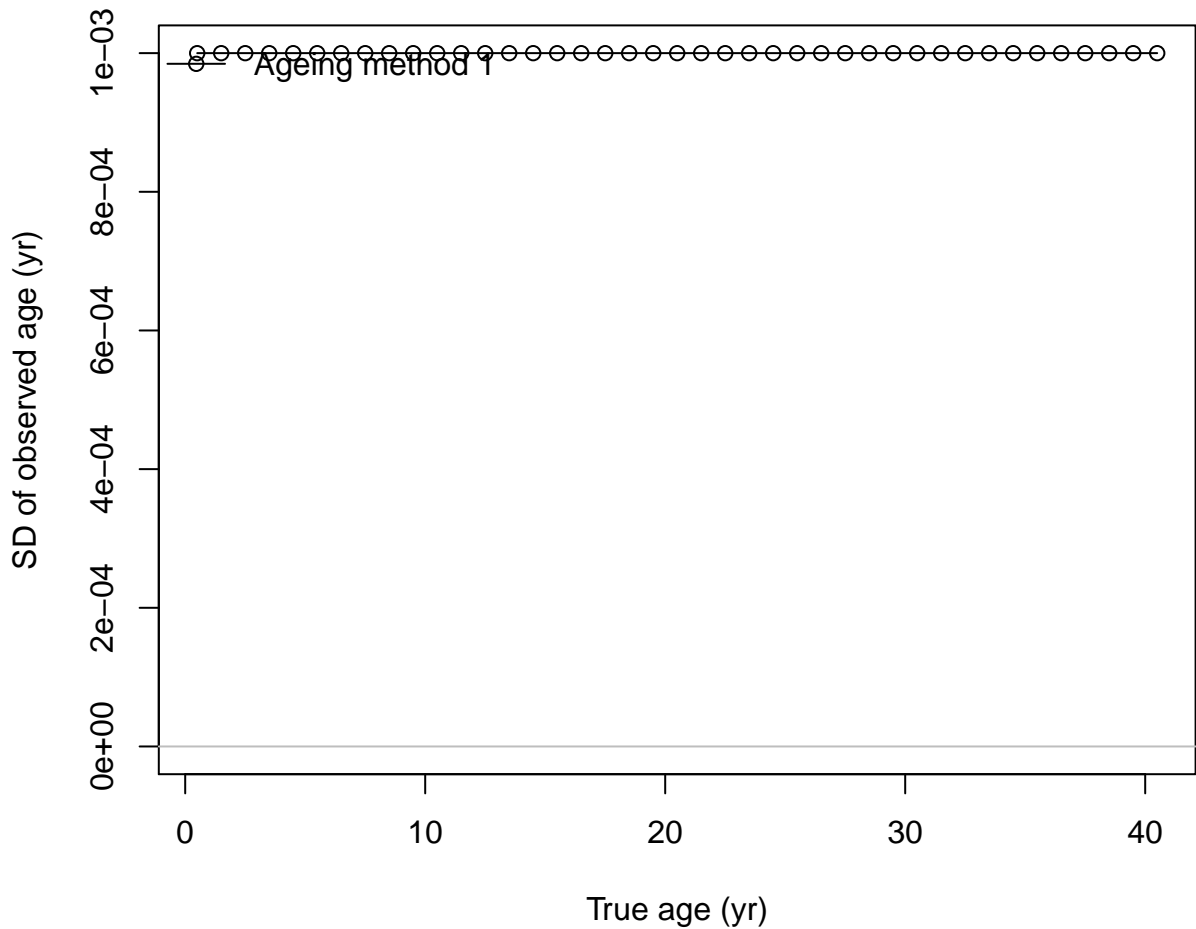




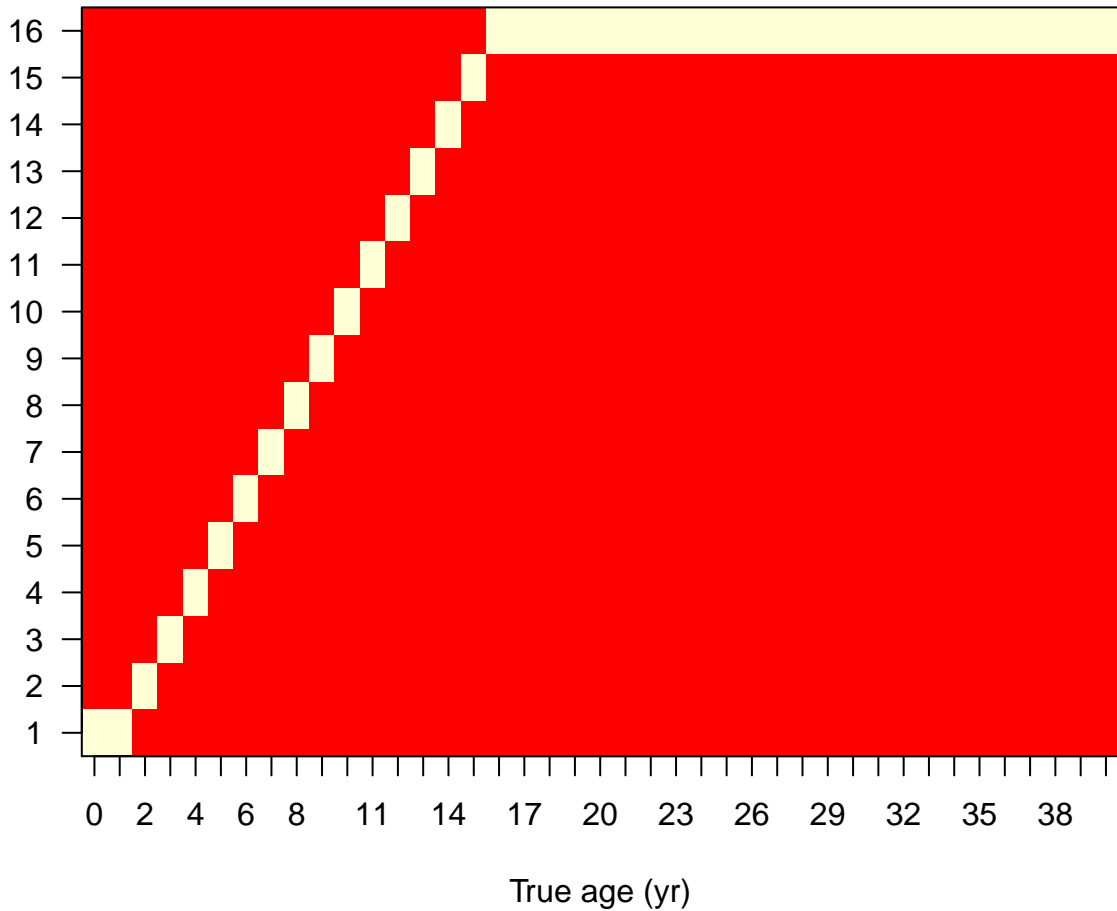
Length



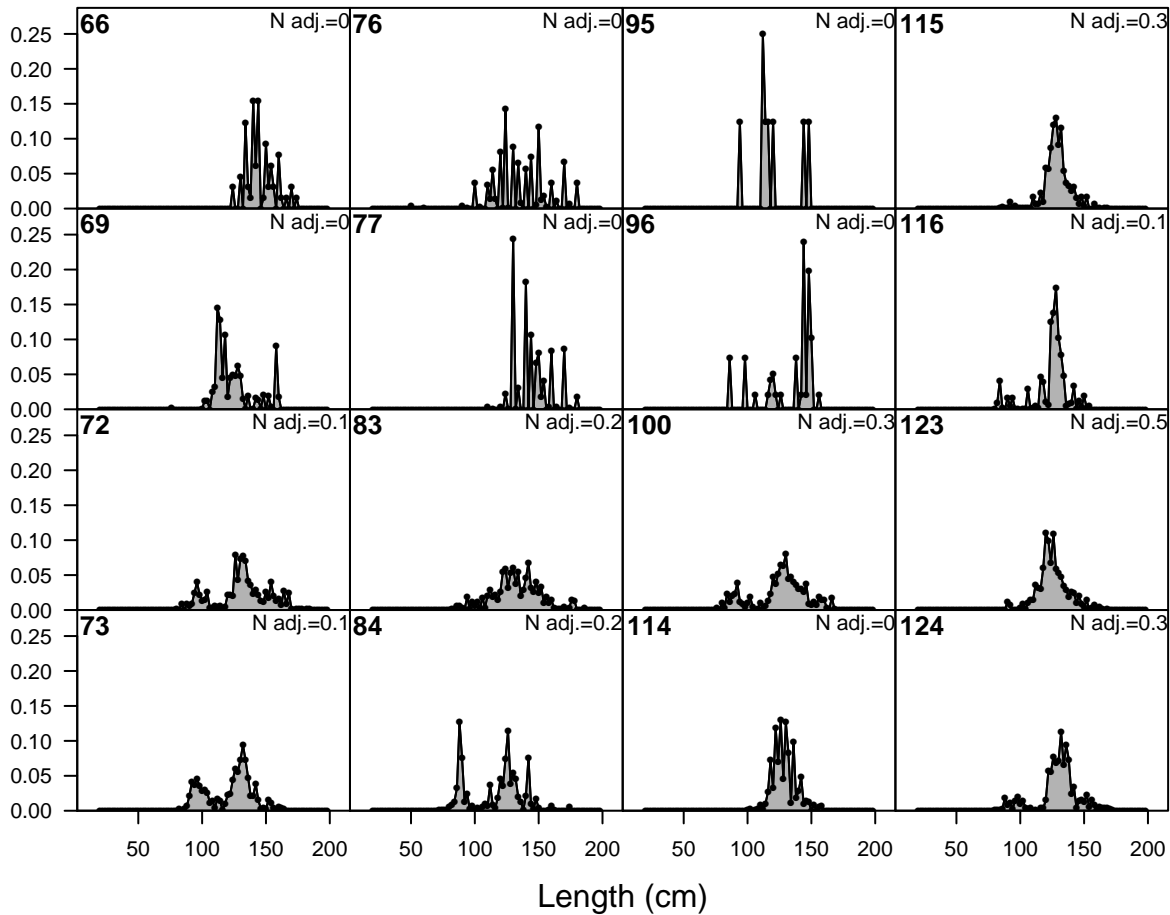


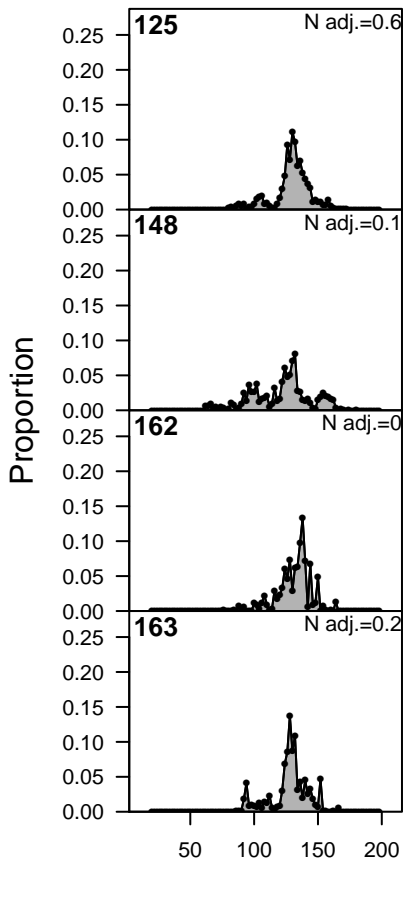


Observed age (yr)

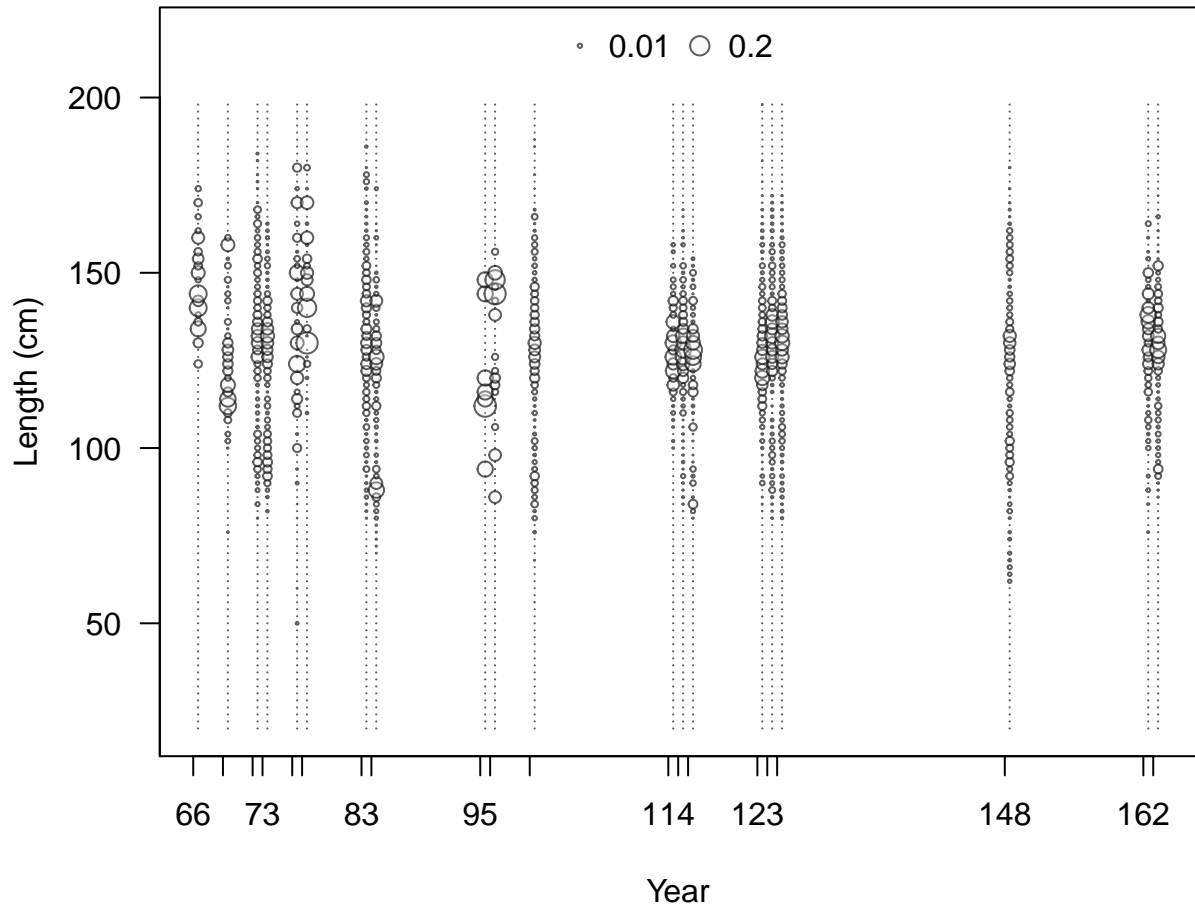


Proportion

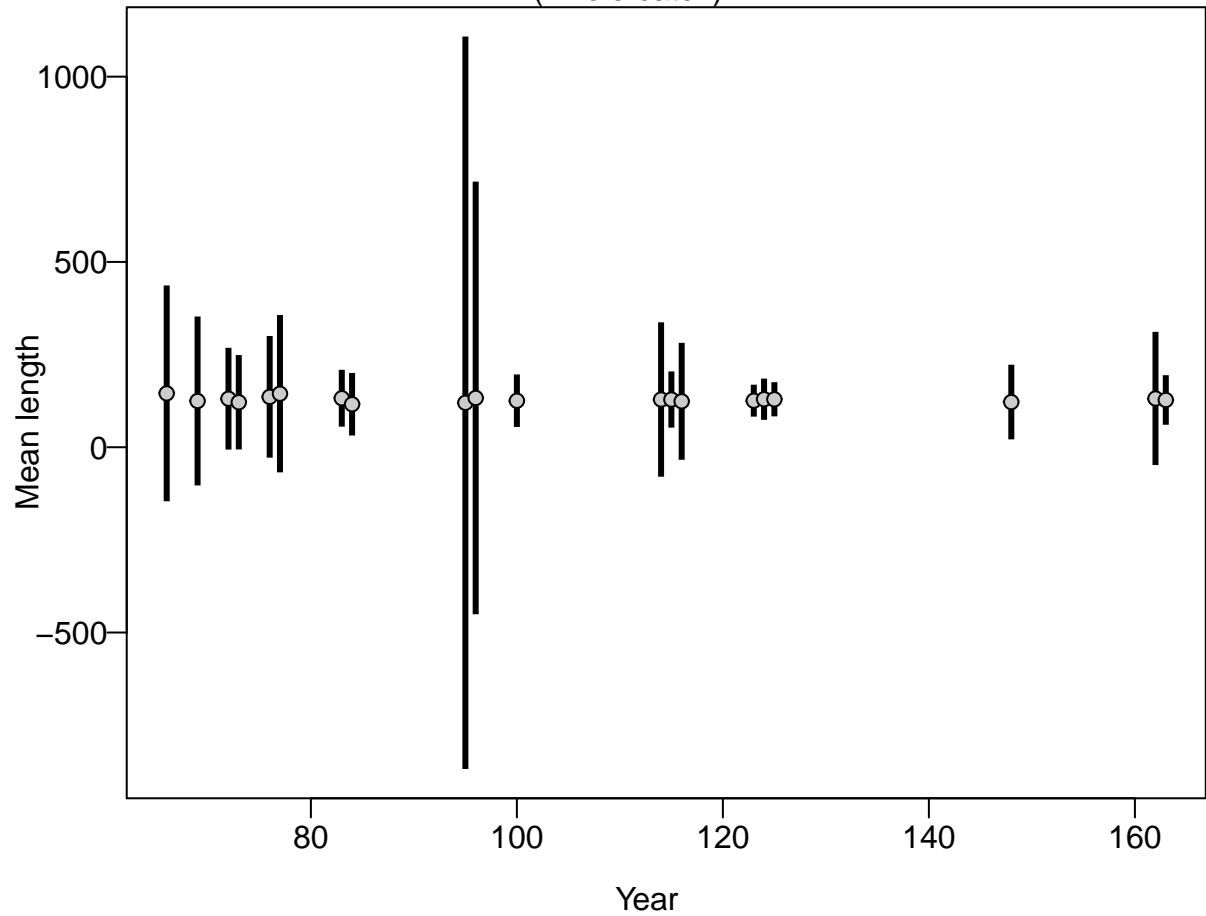




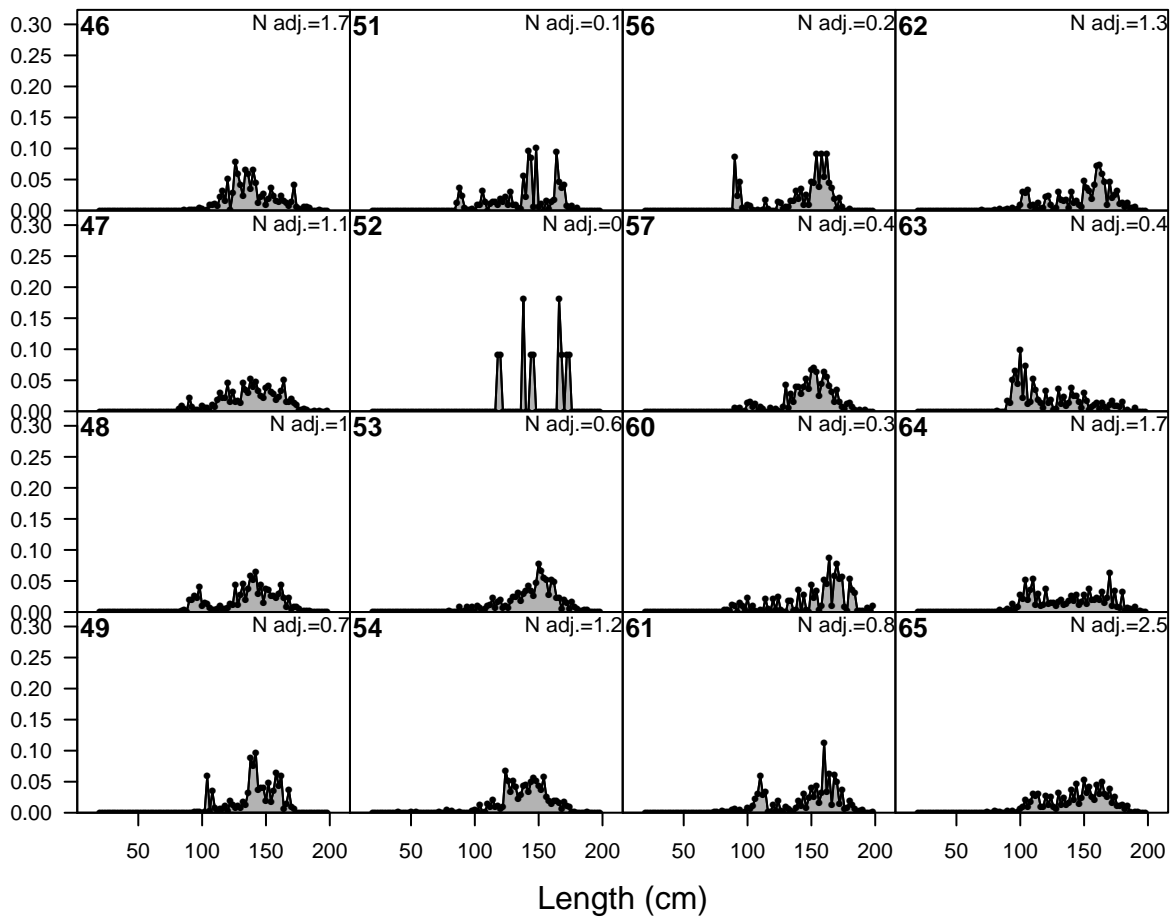




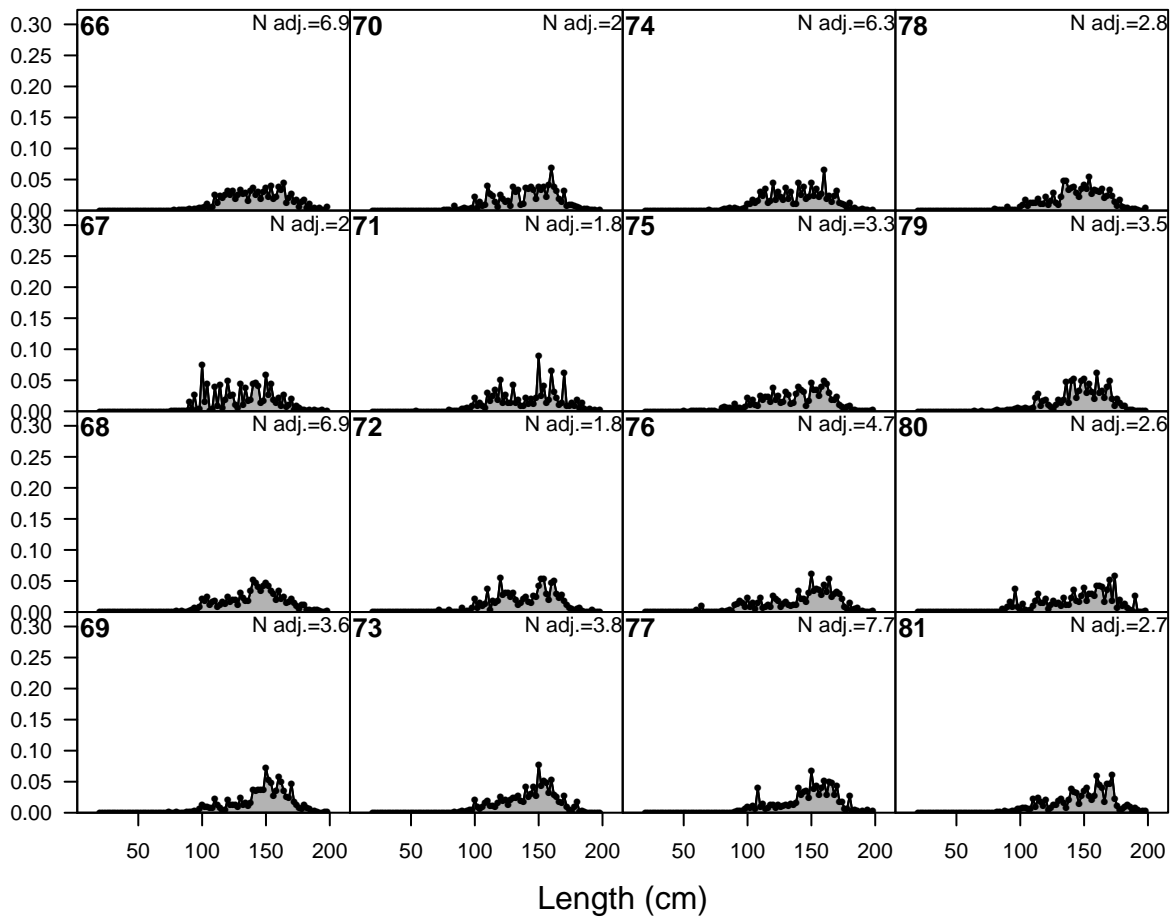
A1-LL-n (whole catch)



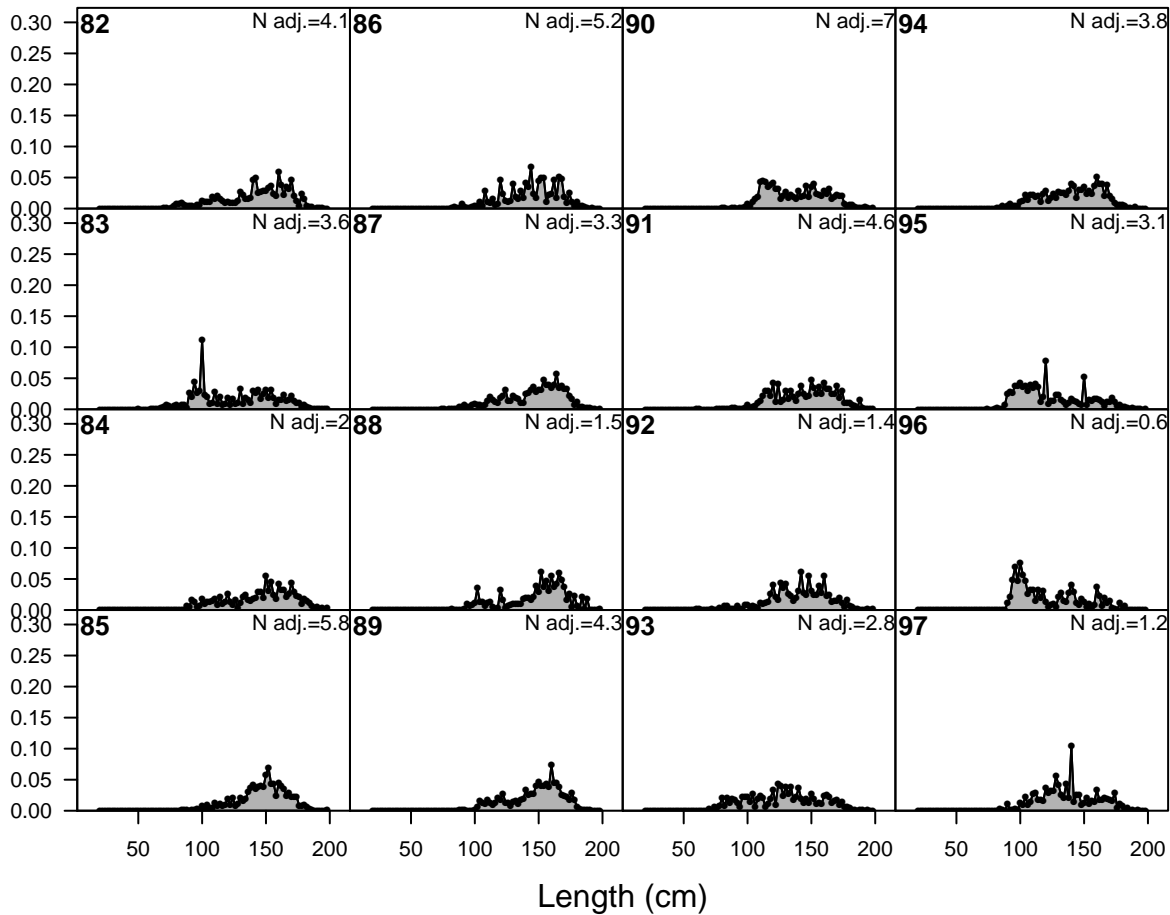
Proportion



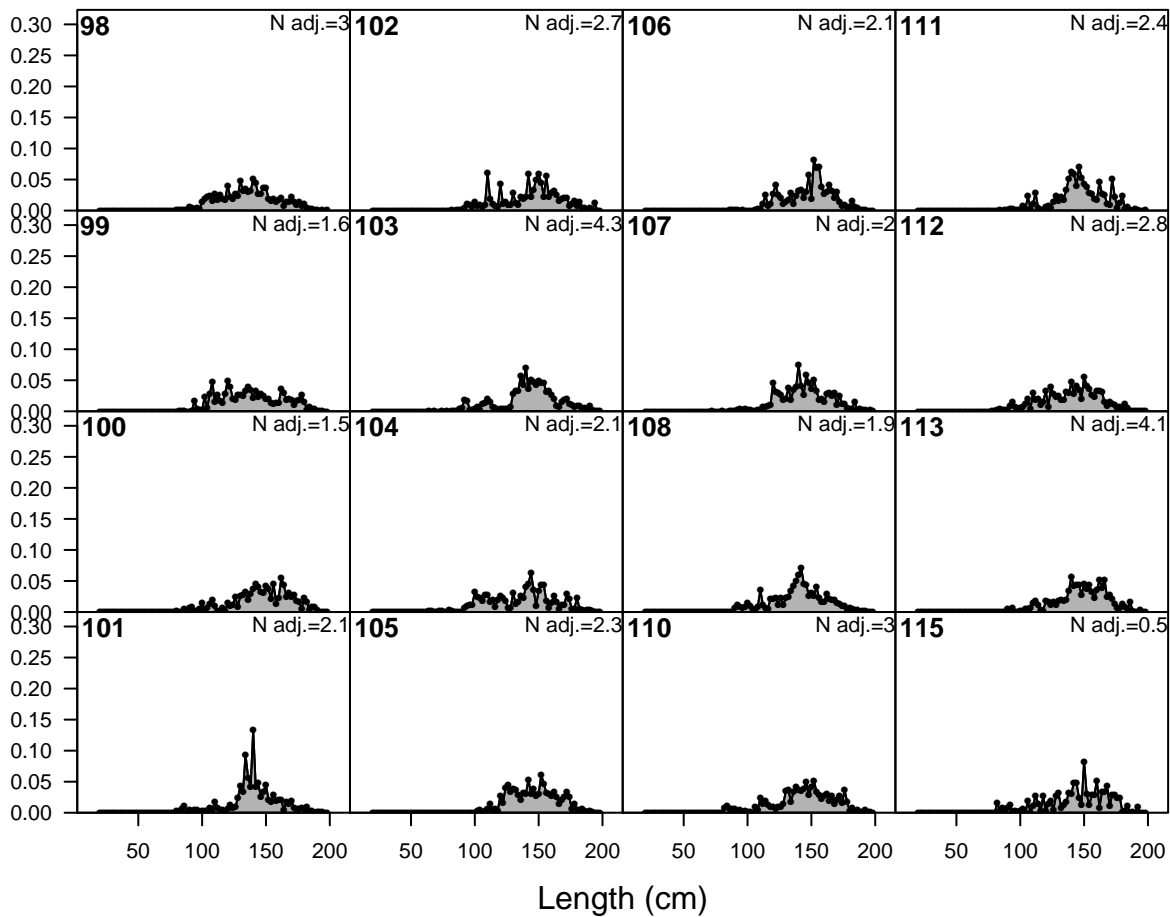
Proportion



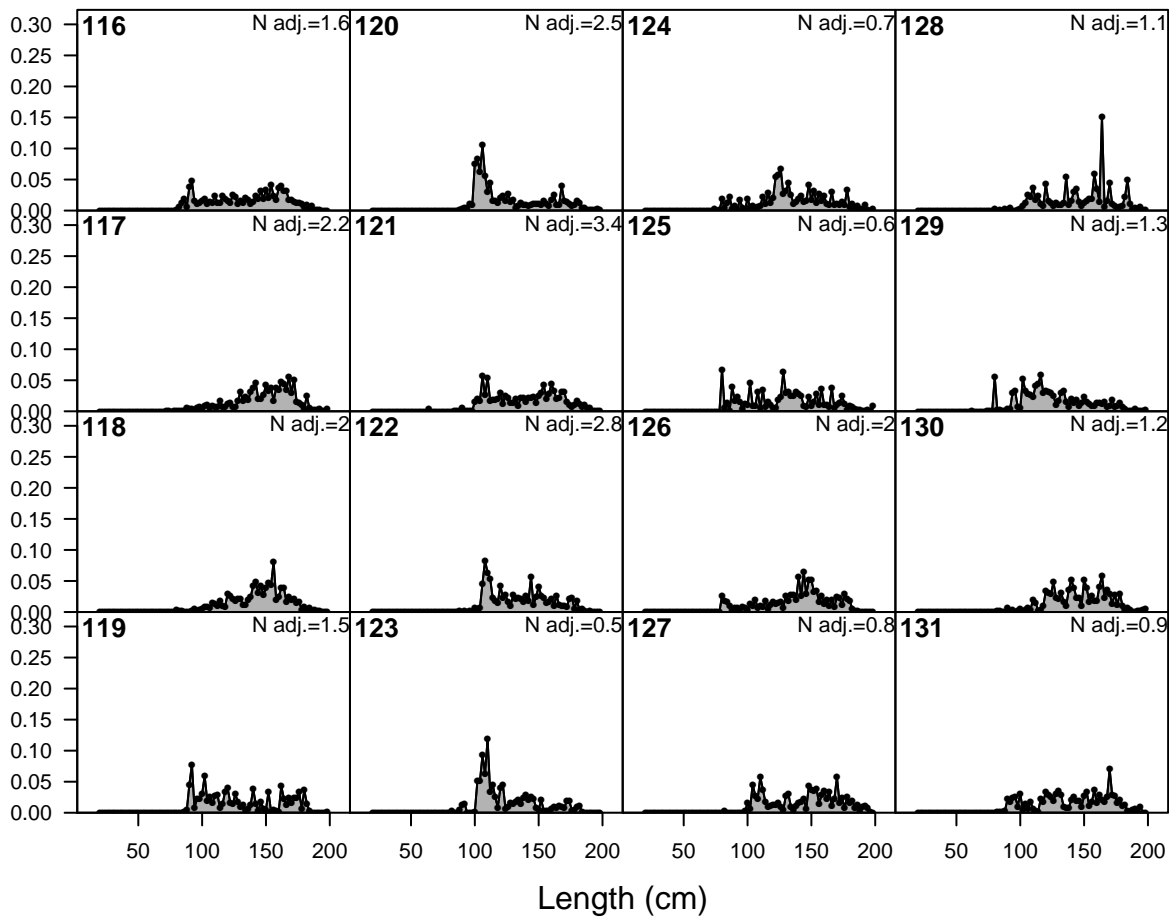
Proportion



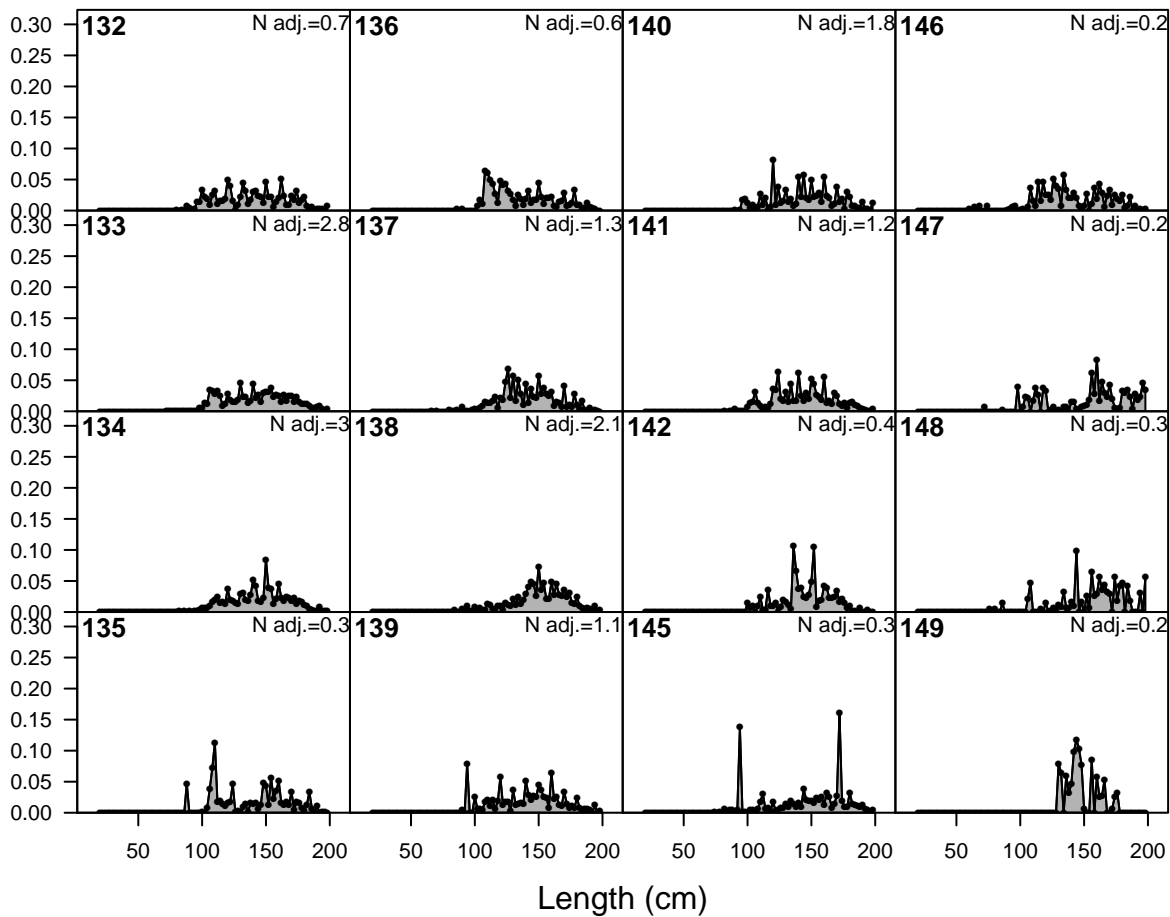
Proportion



Proportion

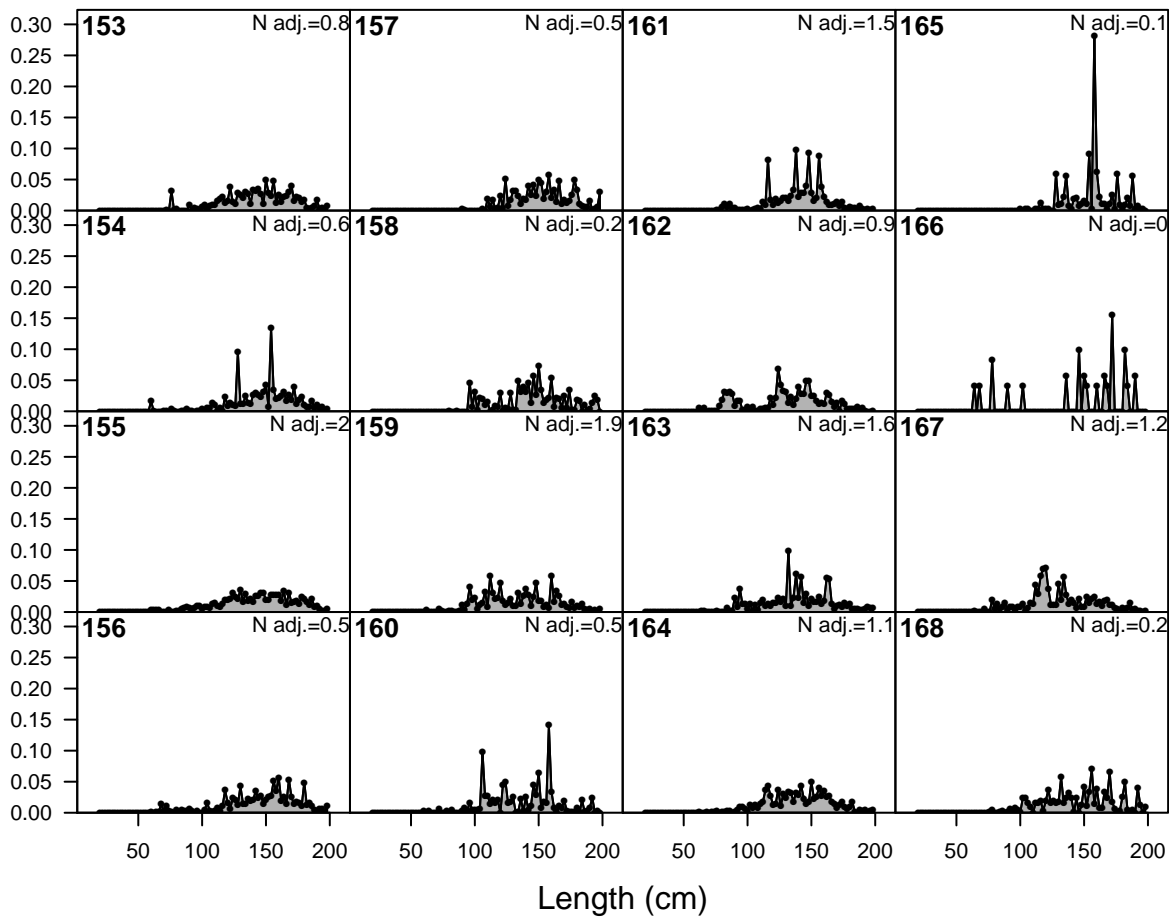


Proportion

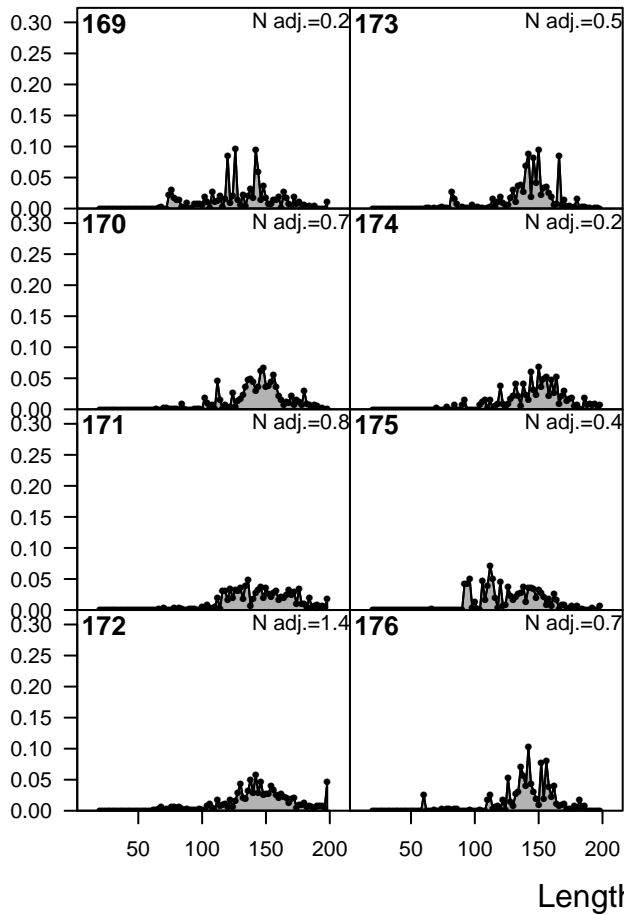


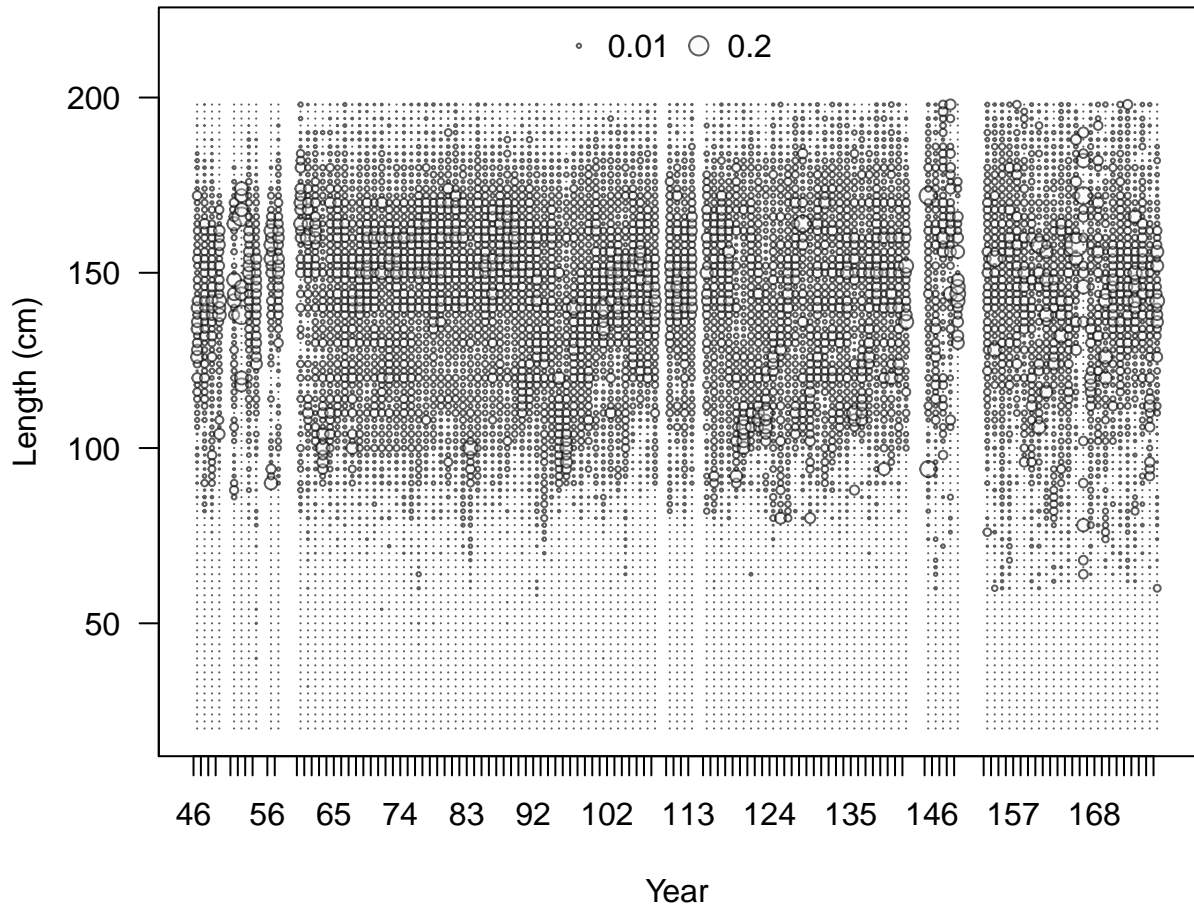


Proportion

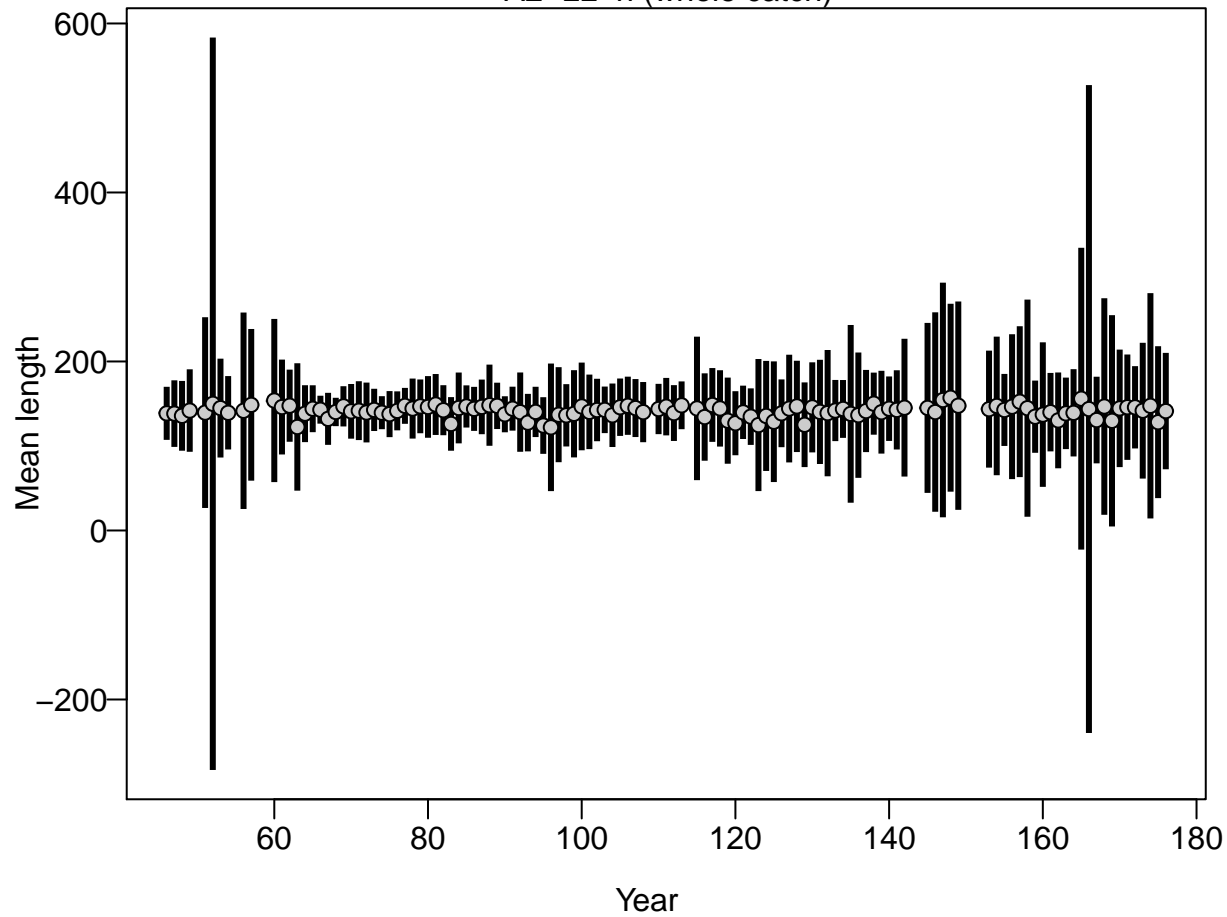


Proportion

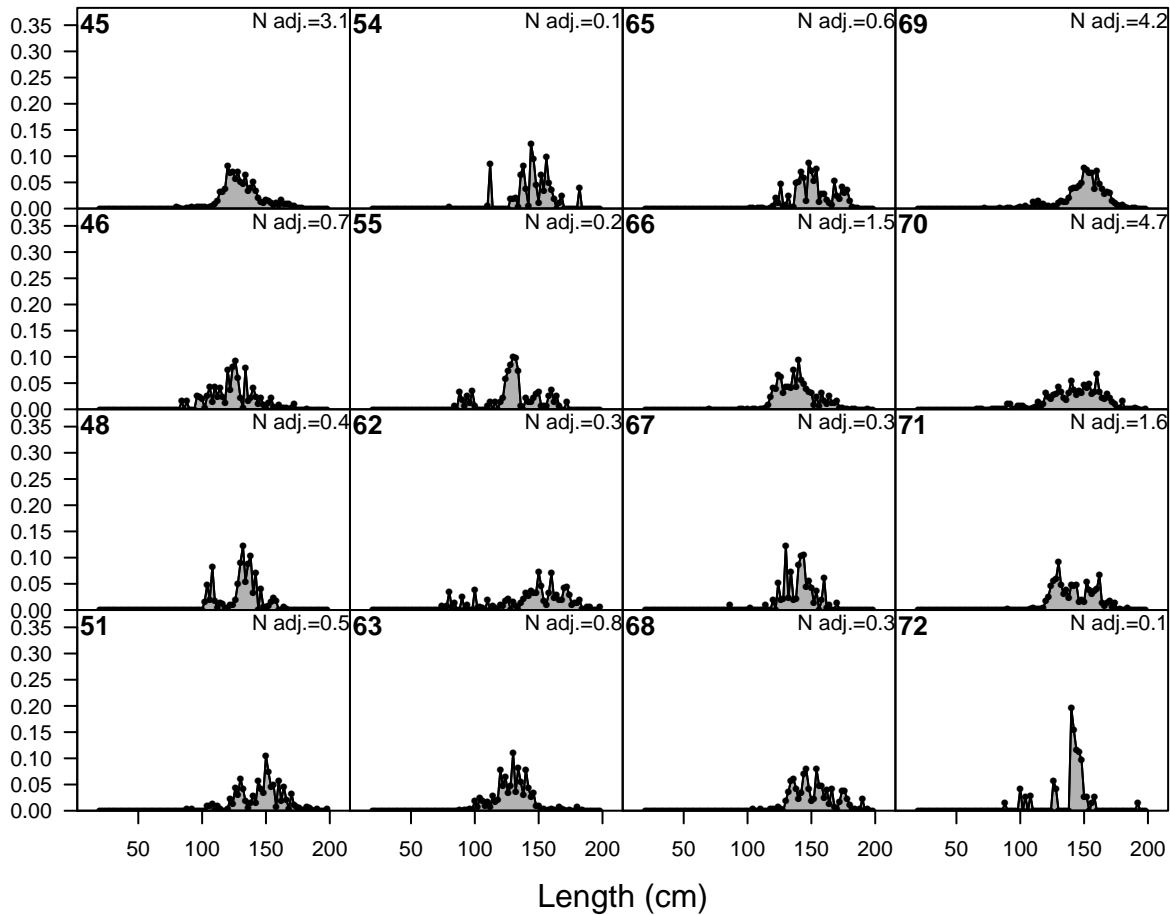




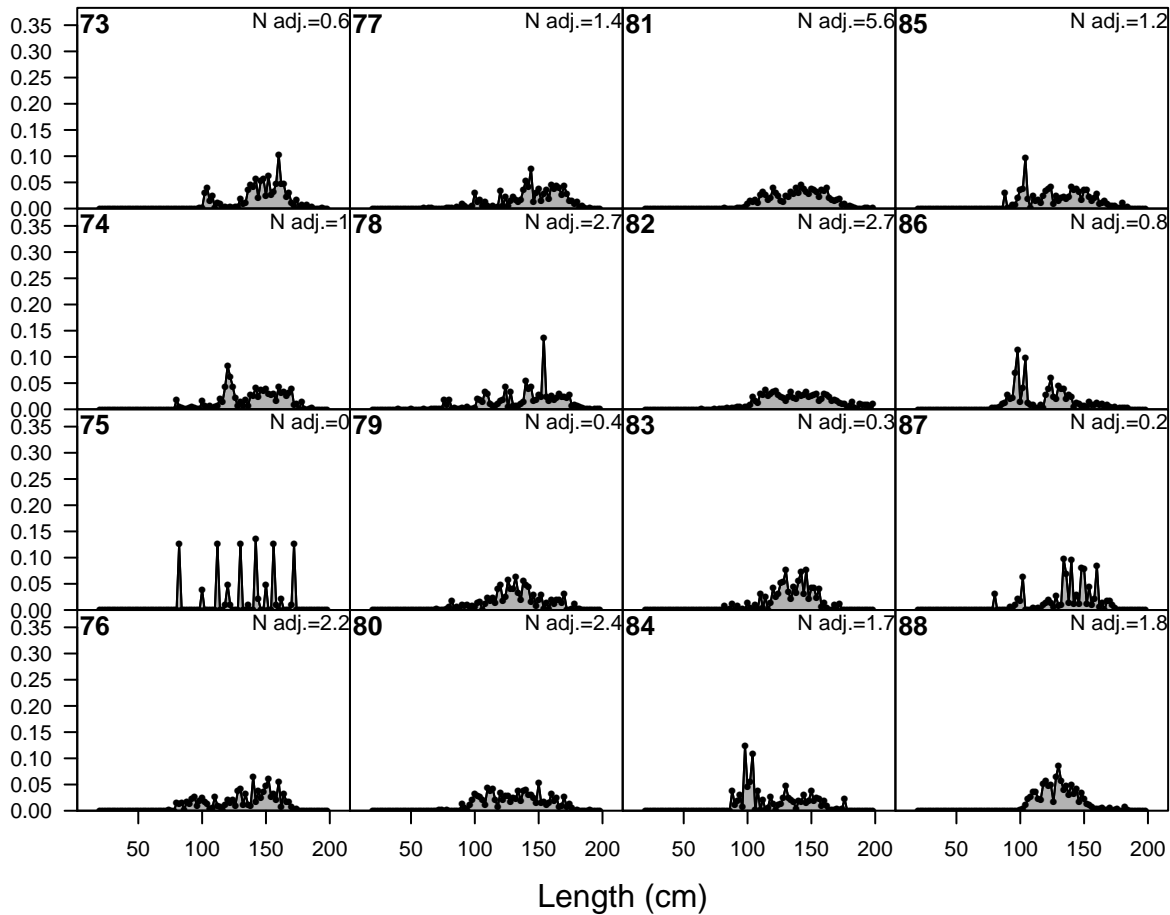
A2-LL-n (whole catch)



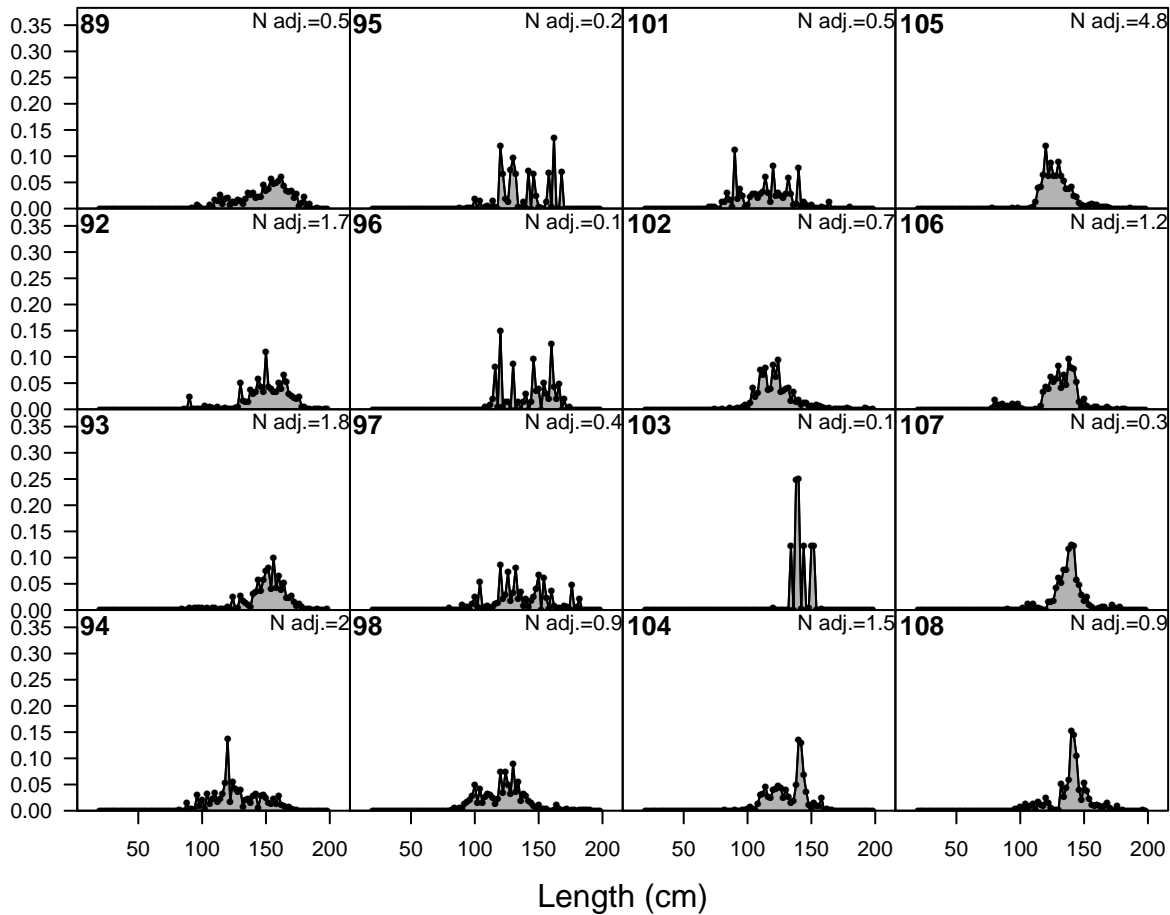
Proportion



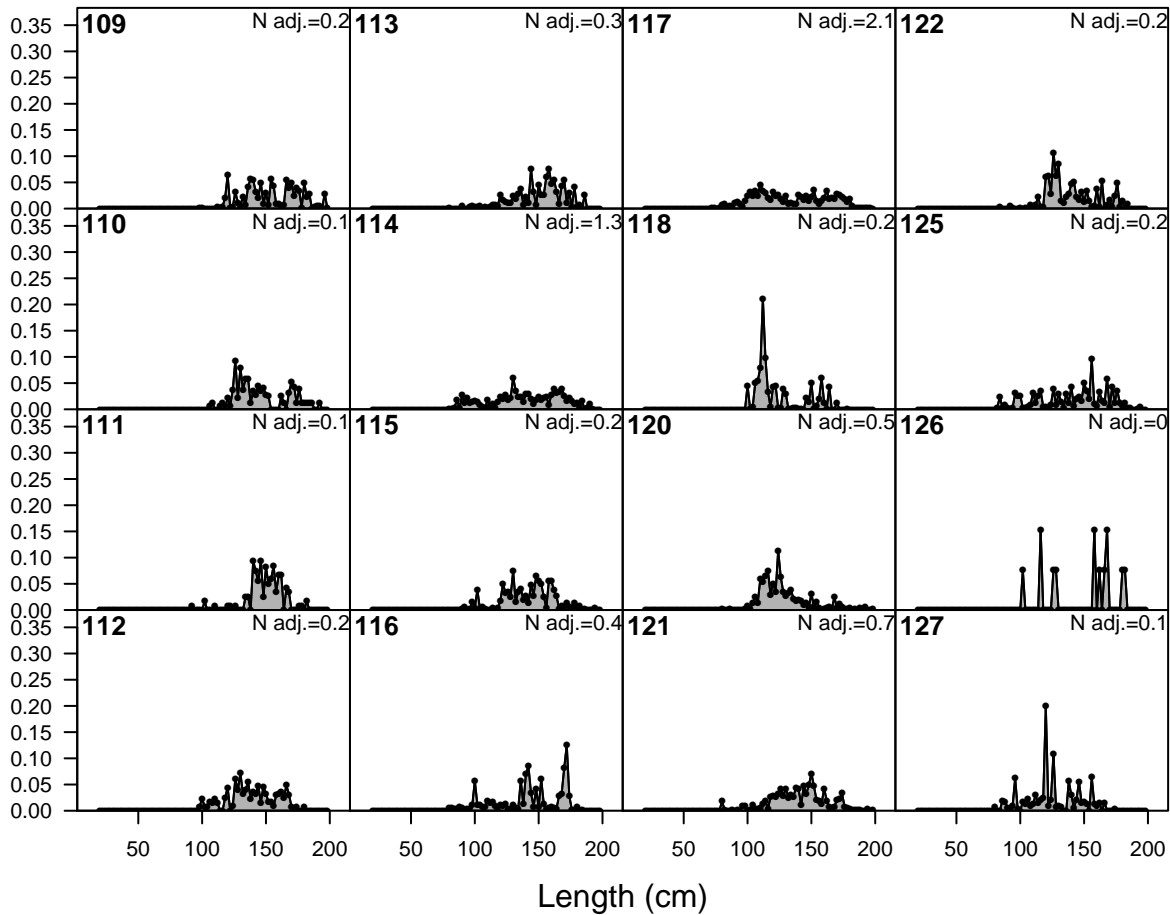
Proportion



Proportion

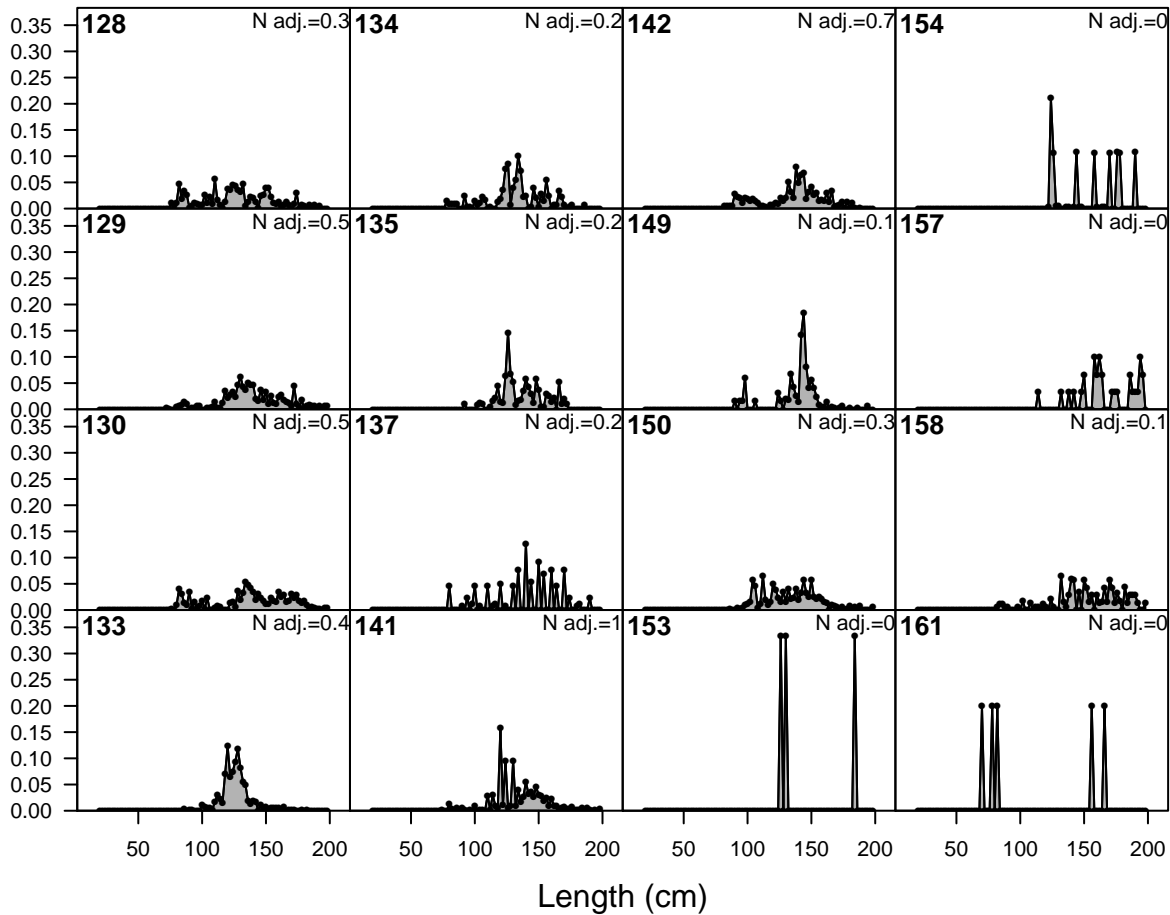


Proportion

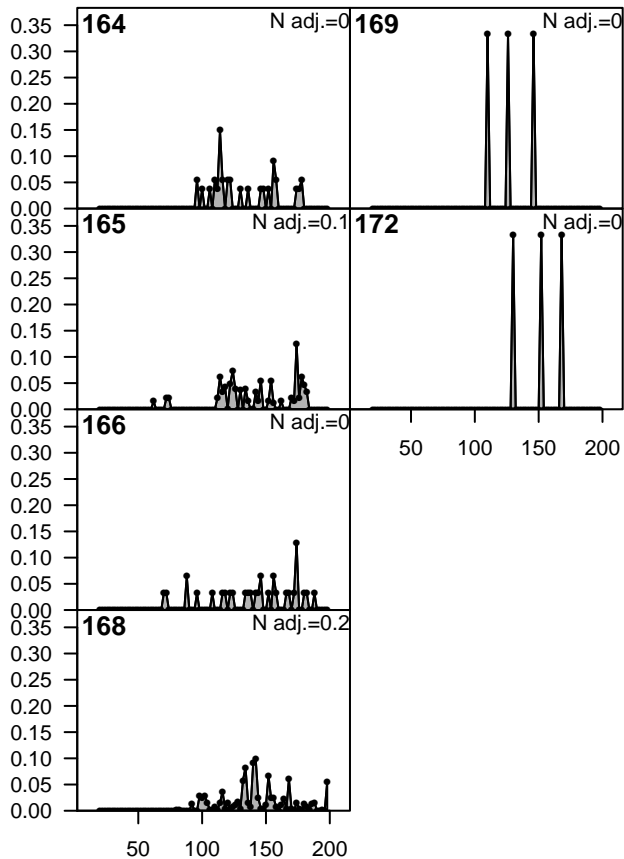




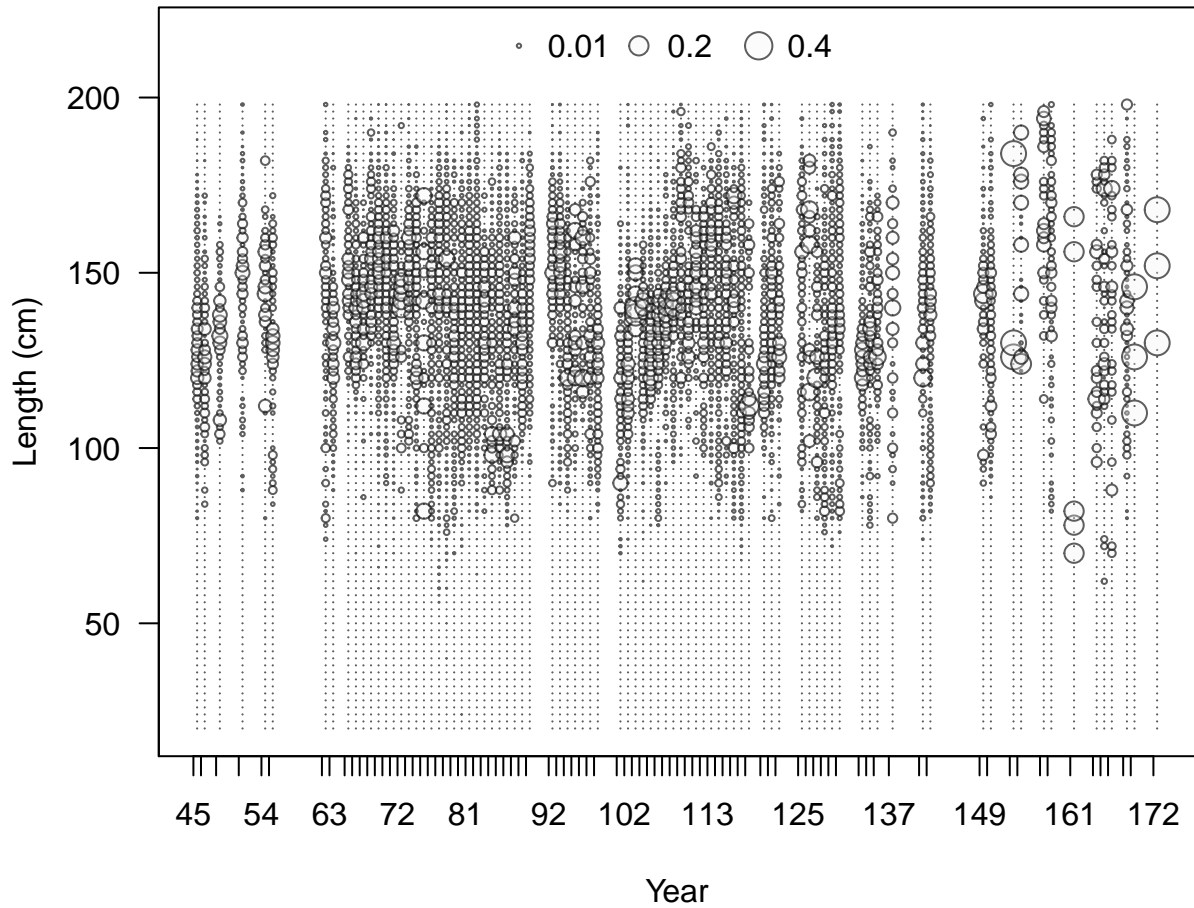
Proportion



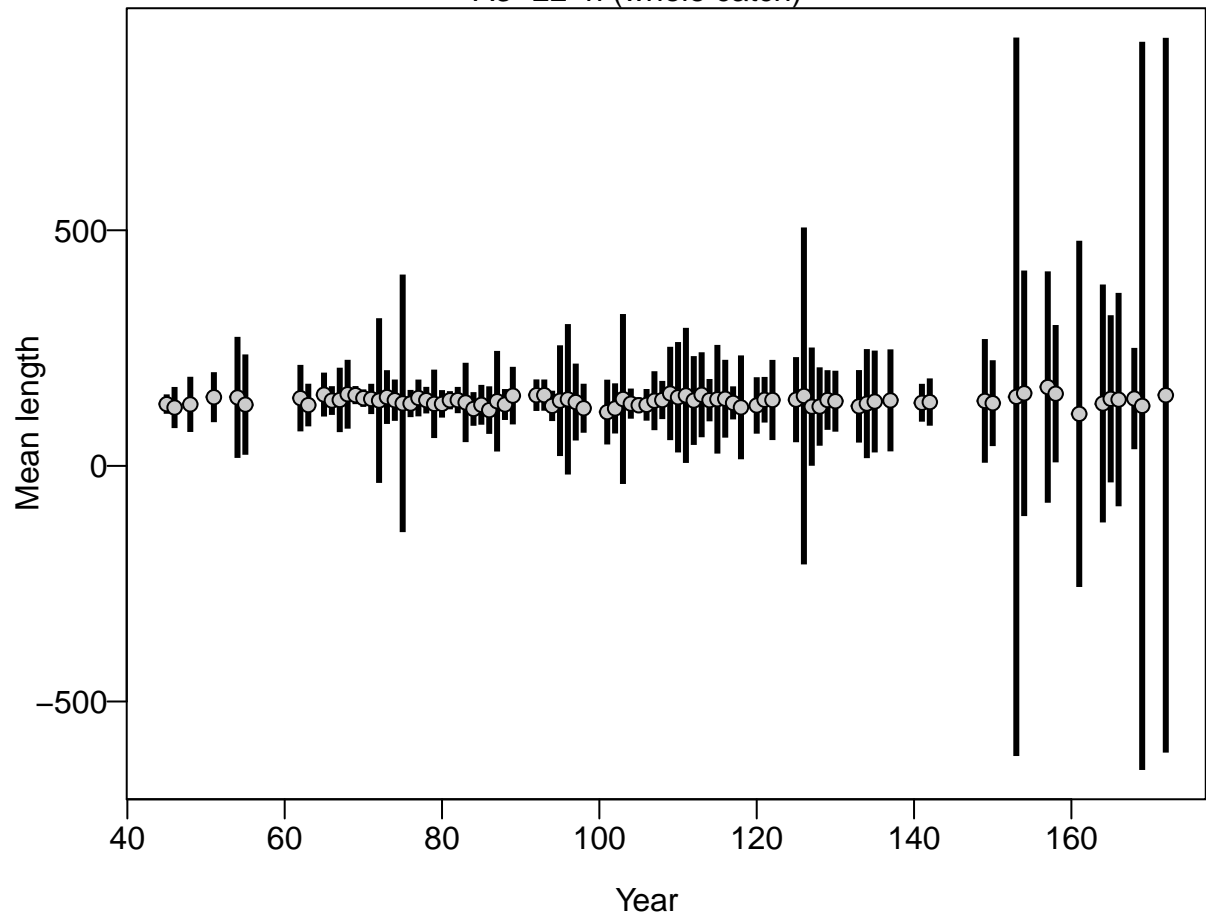
Proportion



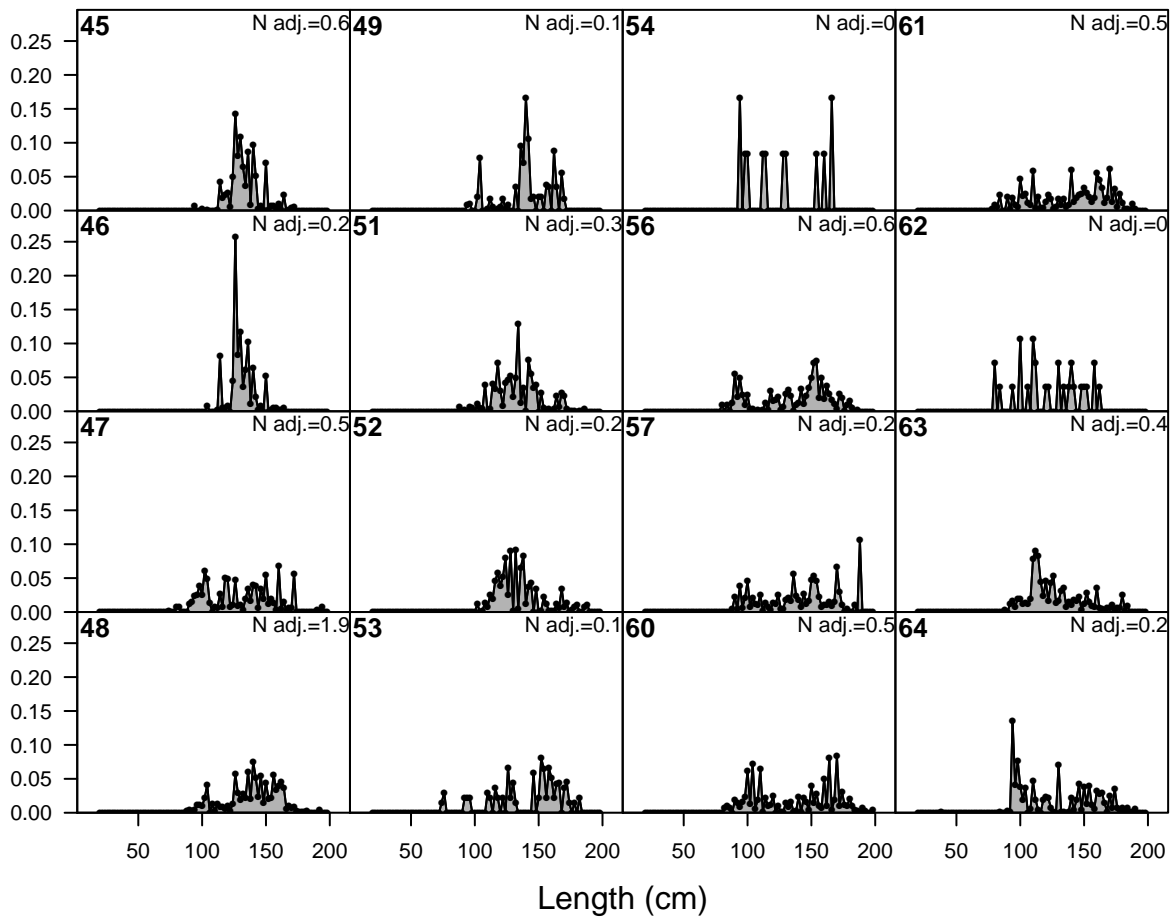
Length (cm)



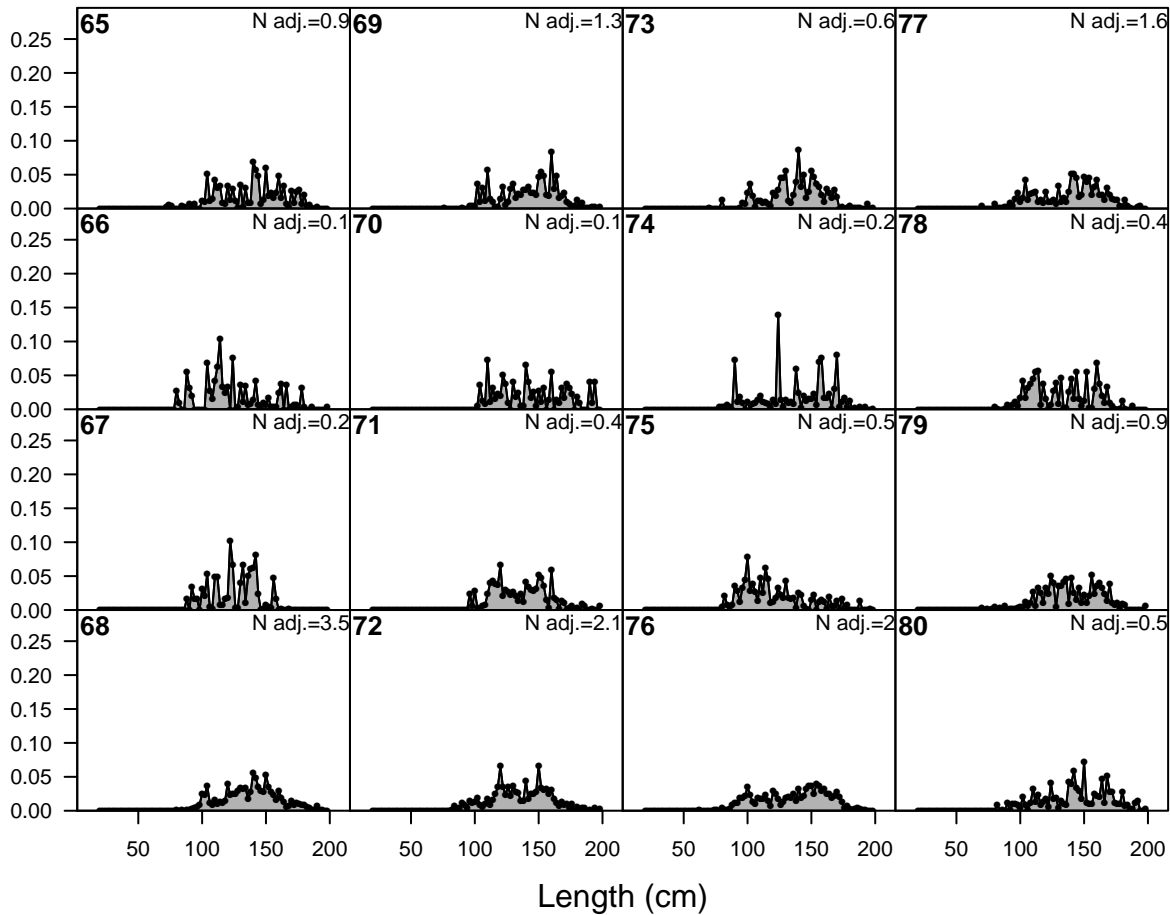
## A3-LL-n (whole catch)



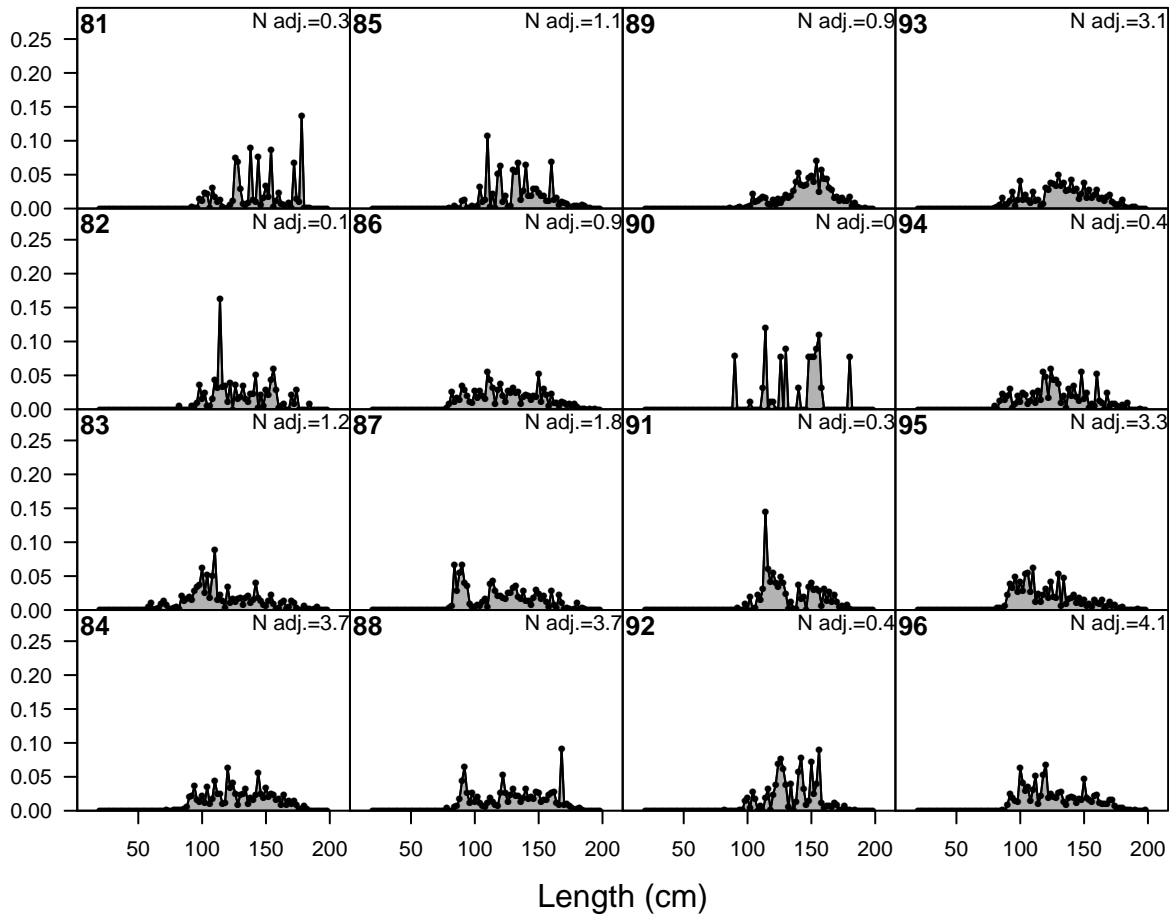
Proportion



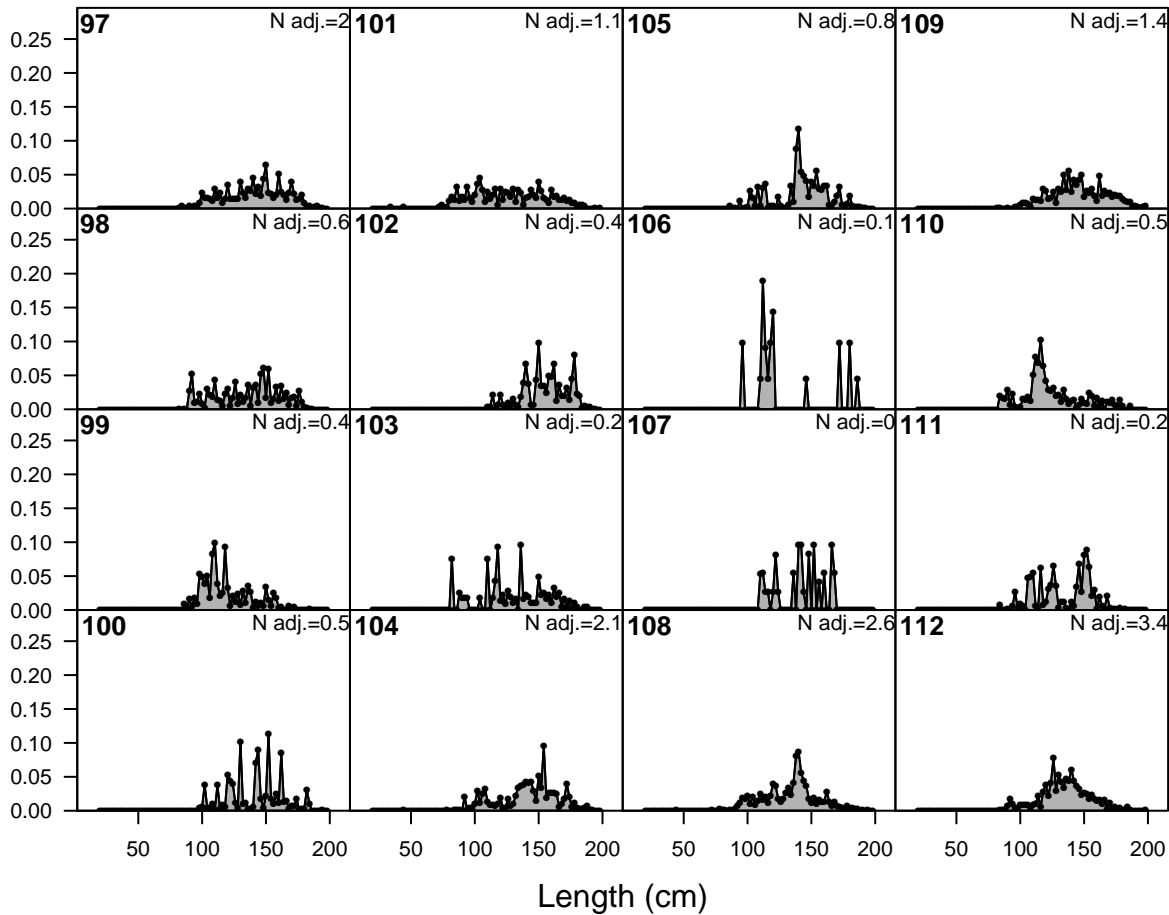
Proportion



Proportion

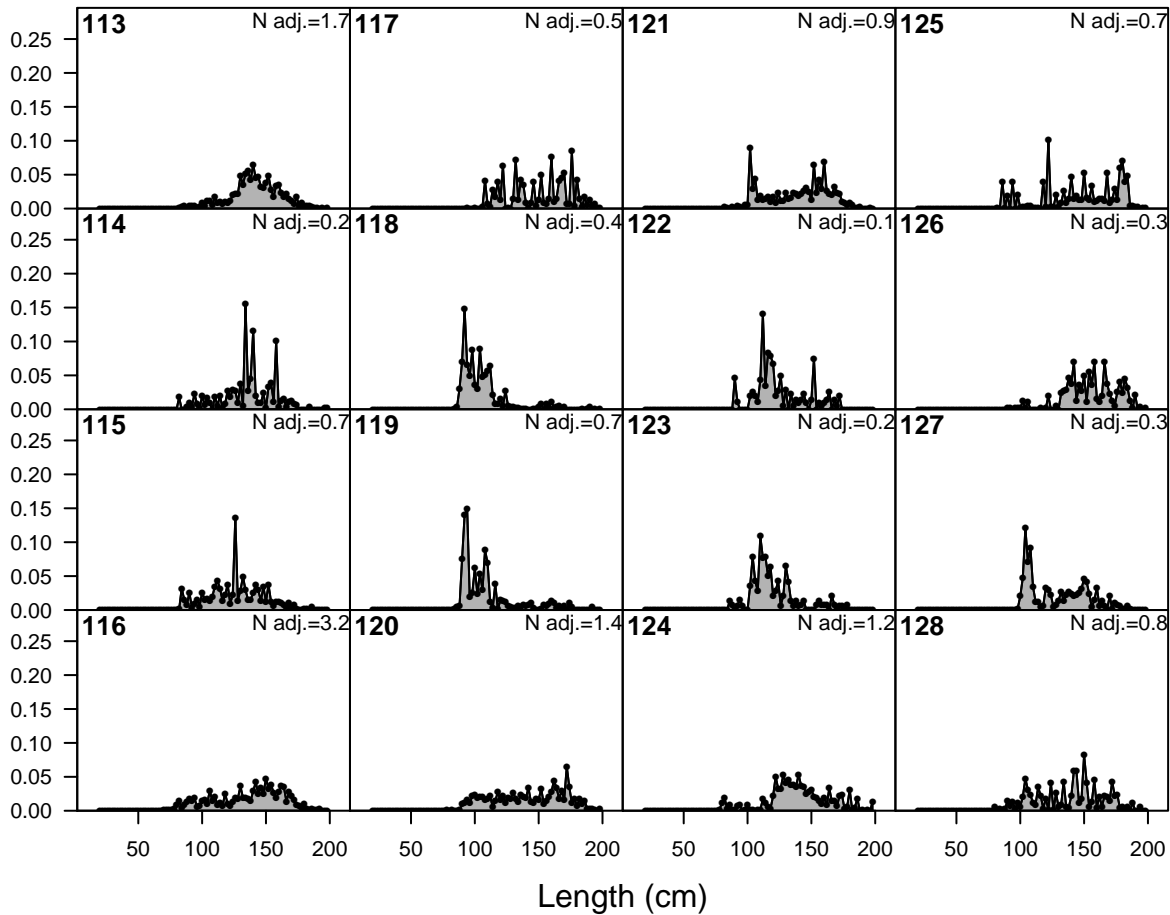


Proportion

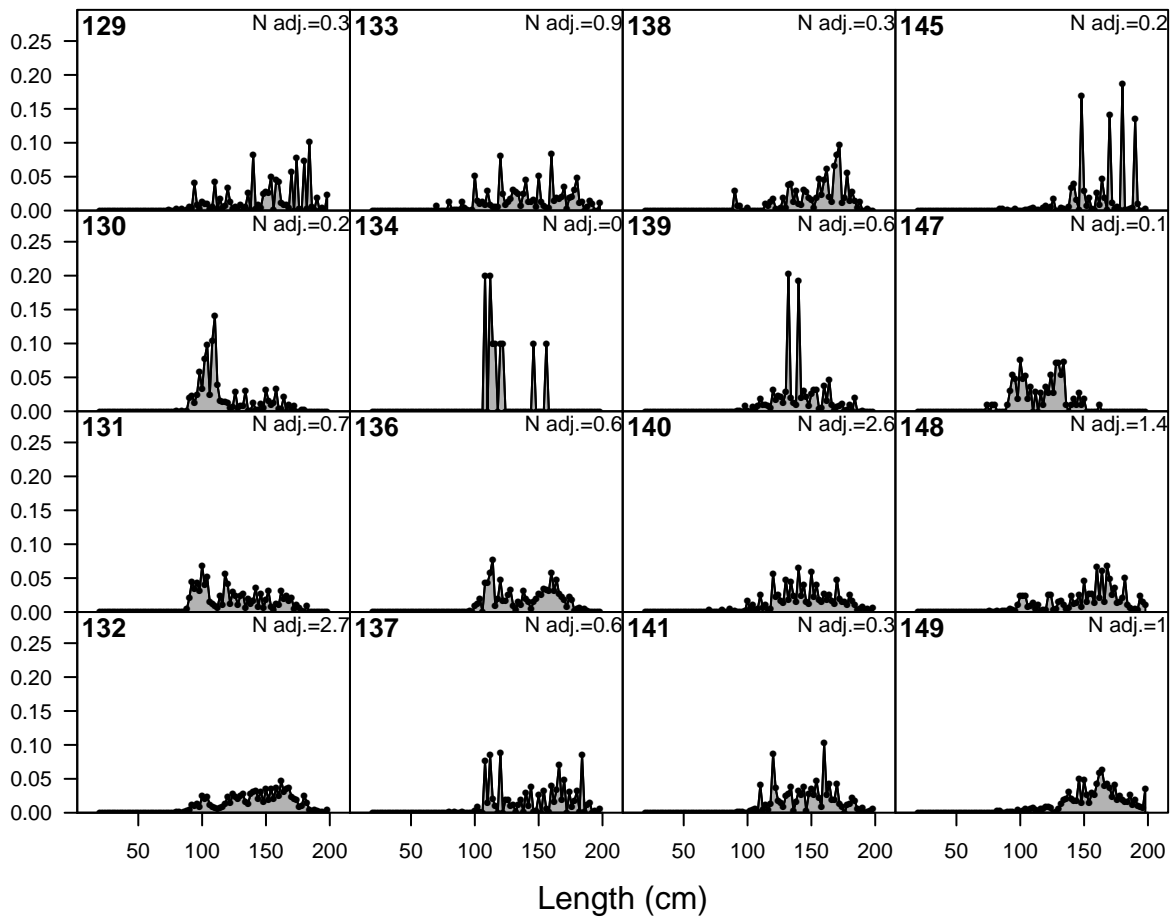




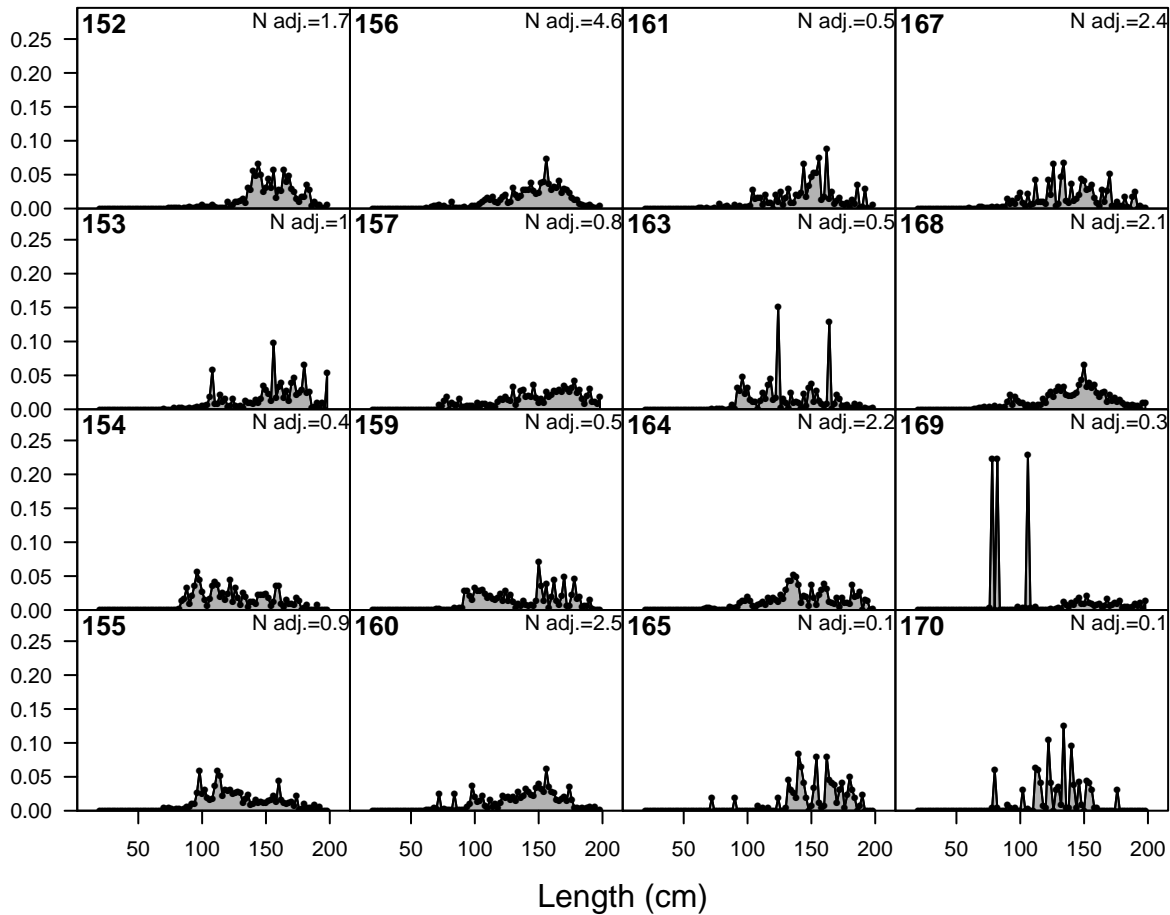
Proportion



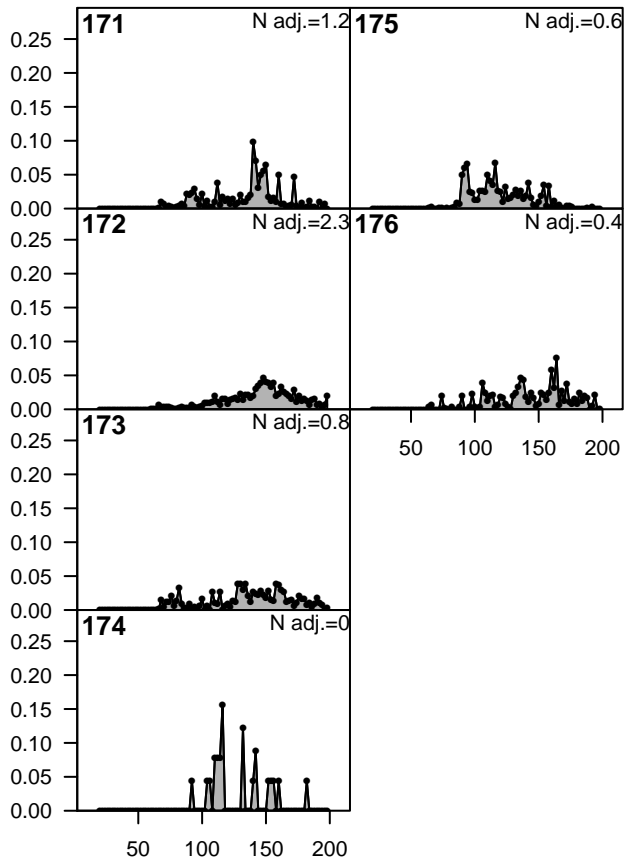
Proportion



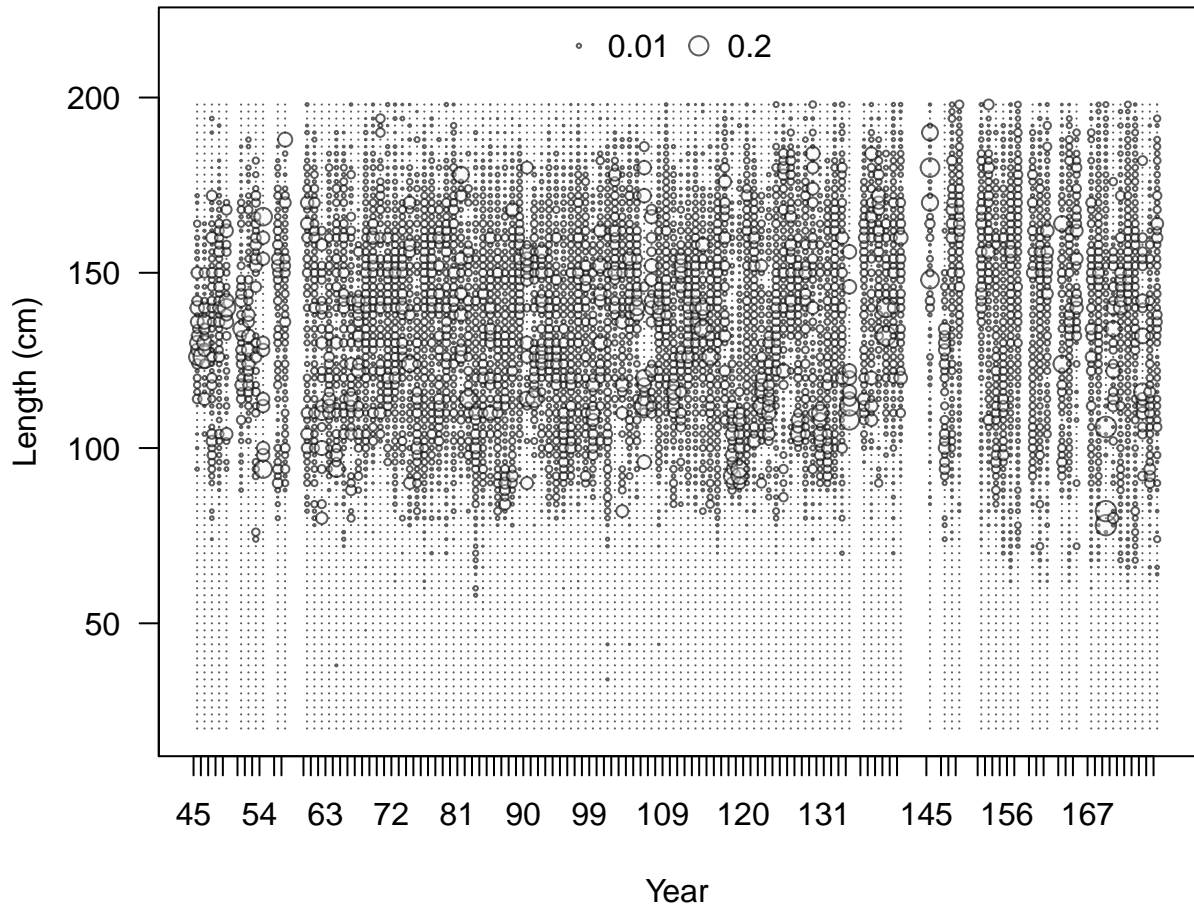
Proportion



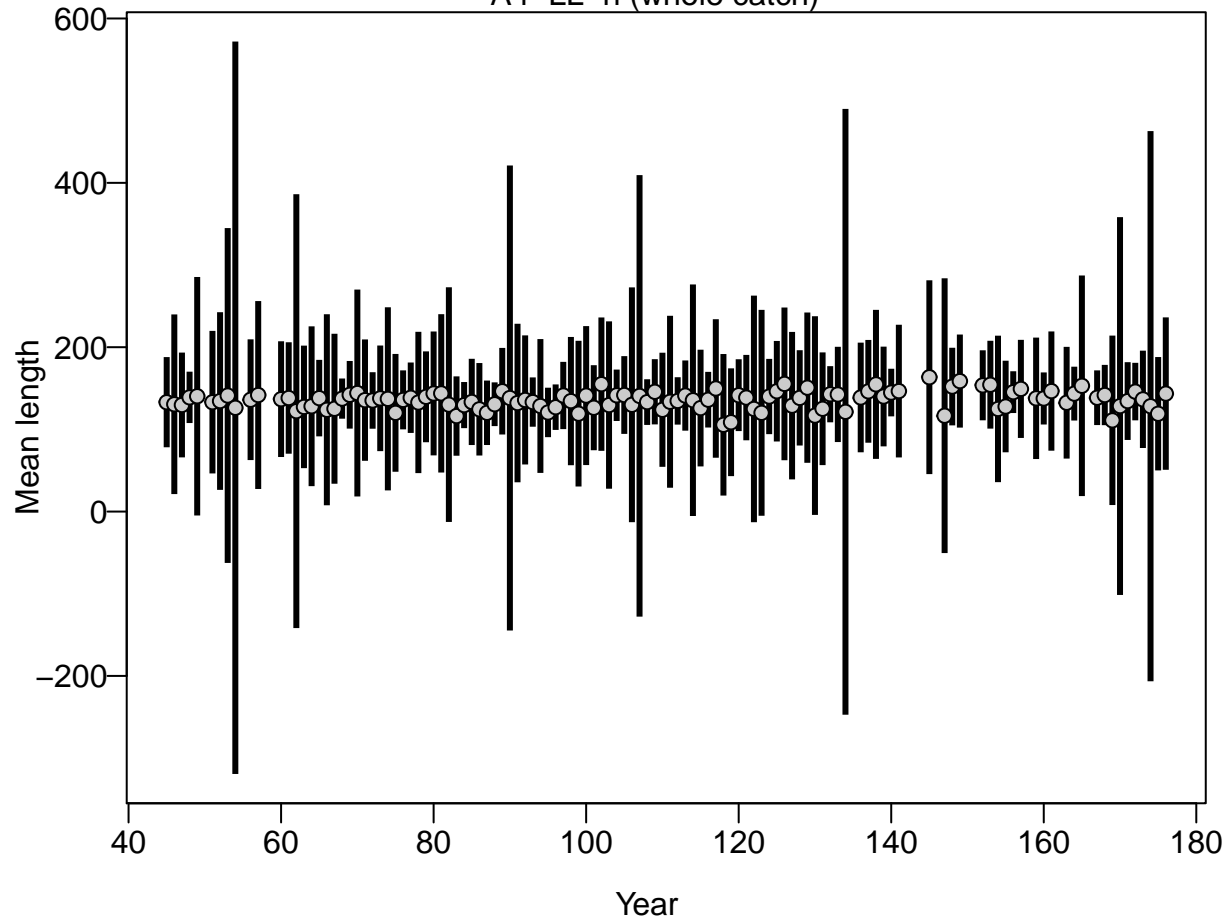
Proportion



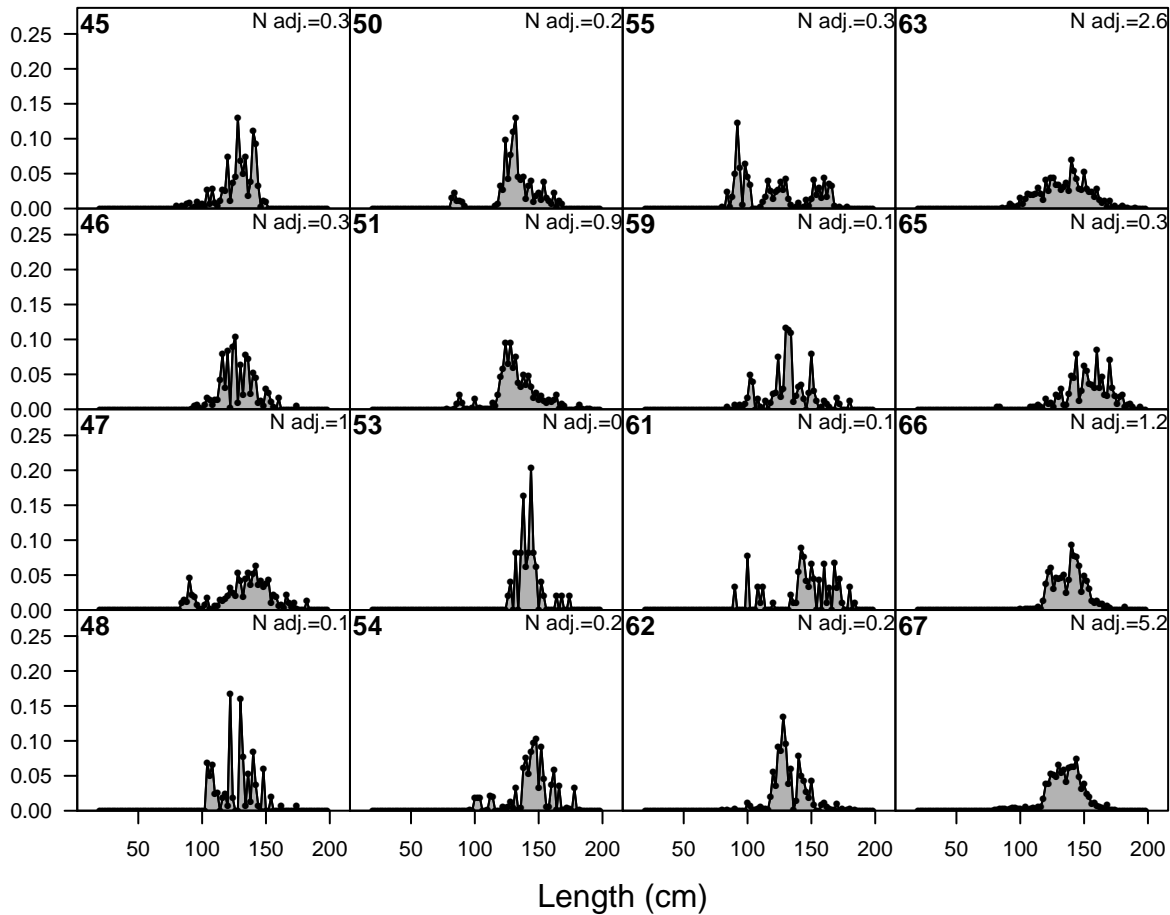
Length (cm)



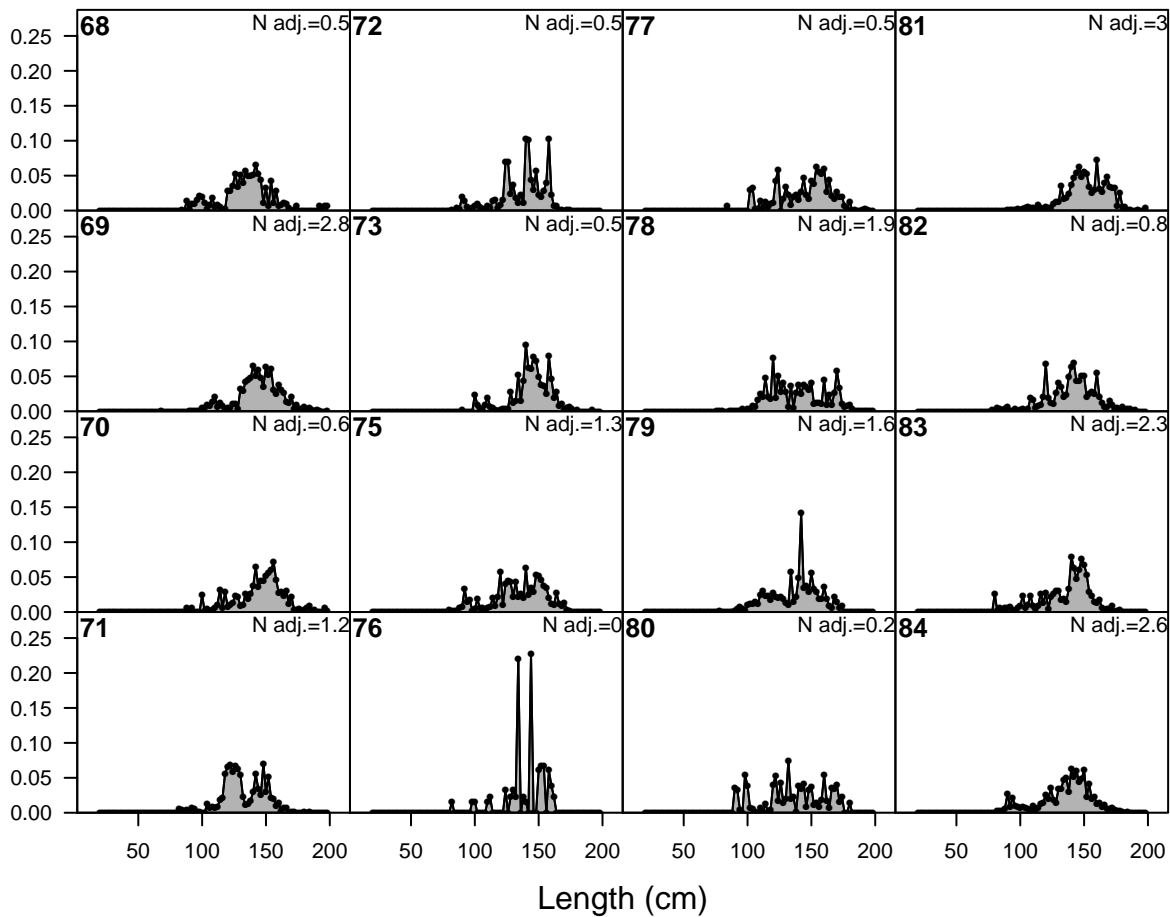
A4-LL-n (whole catch)



Proportion

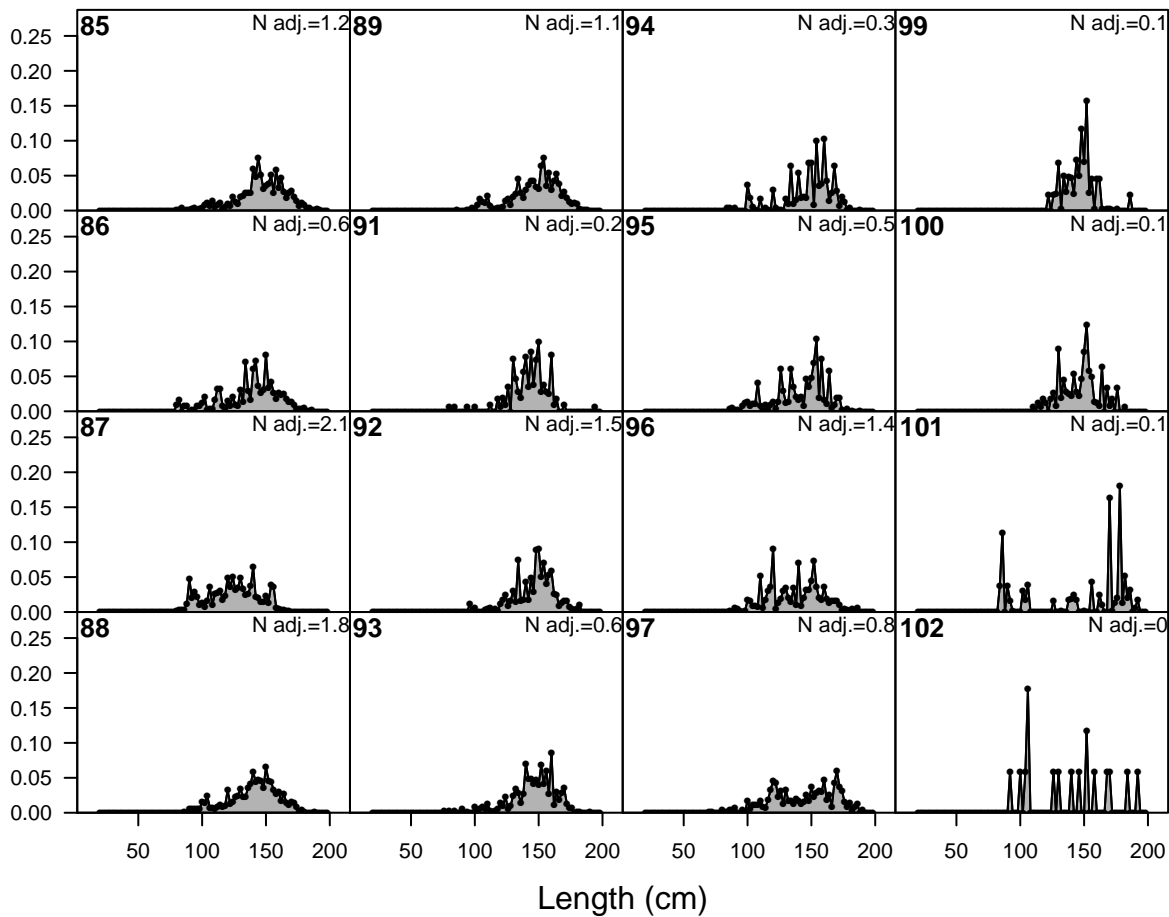


Proportion

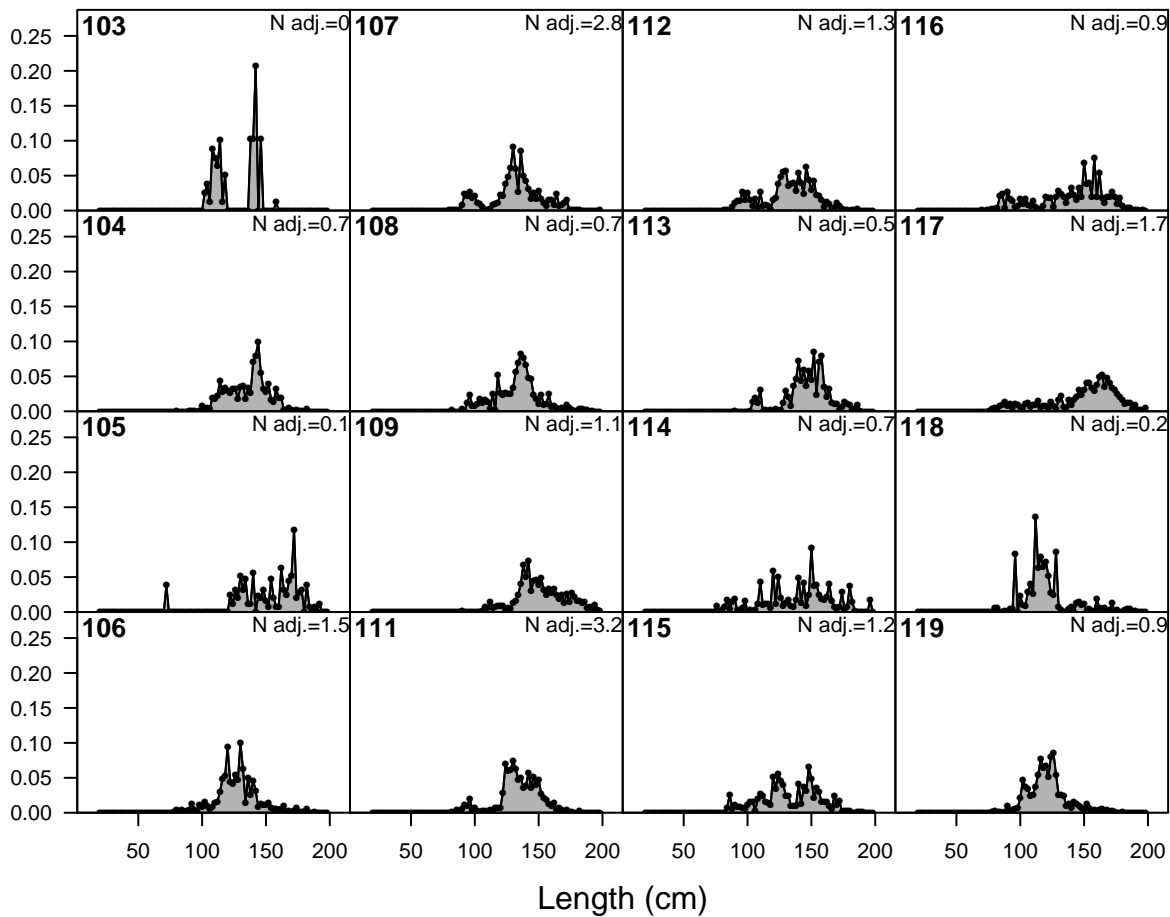




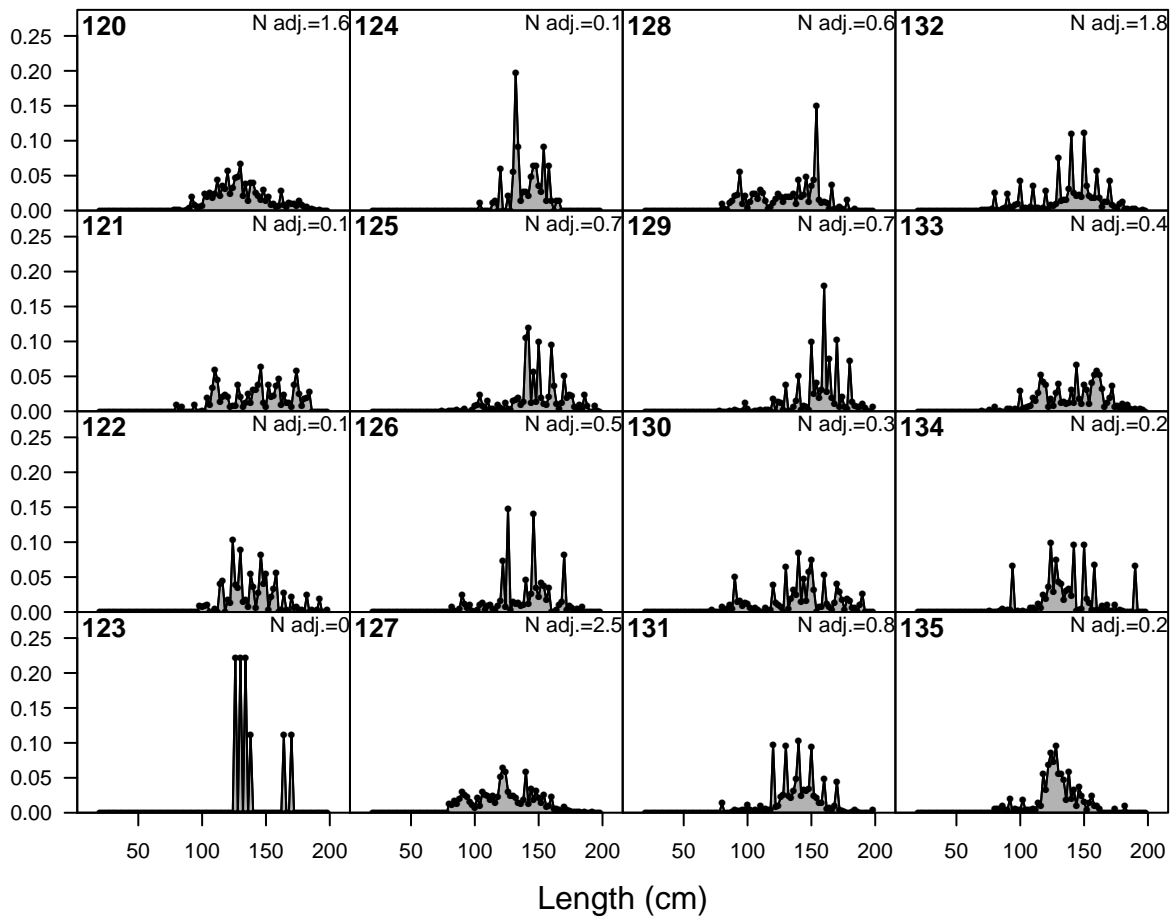
Proportion



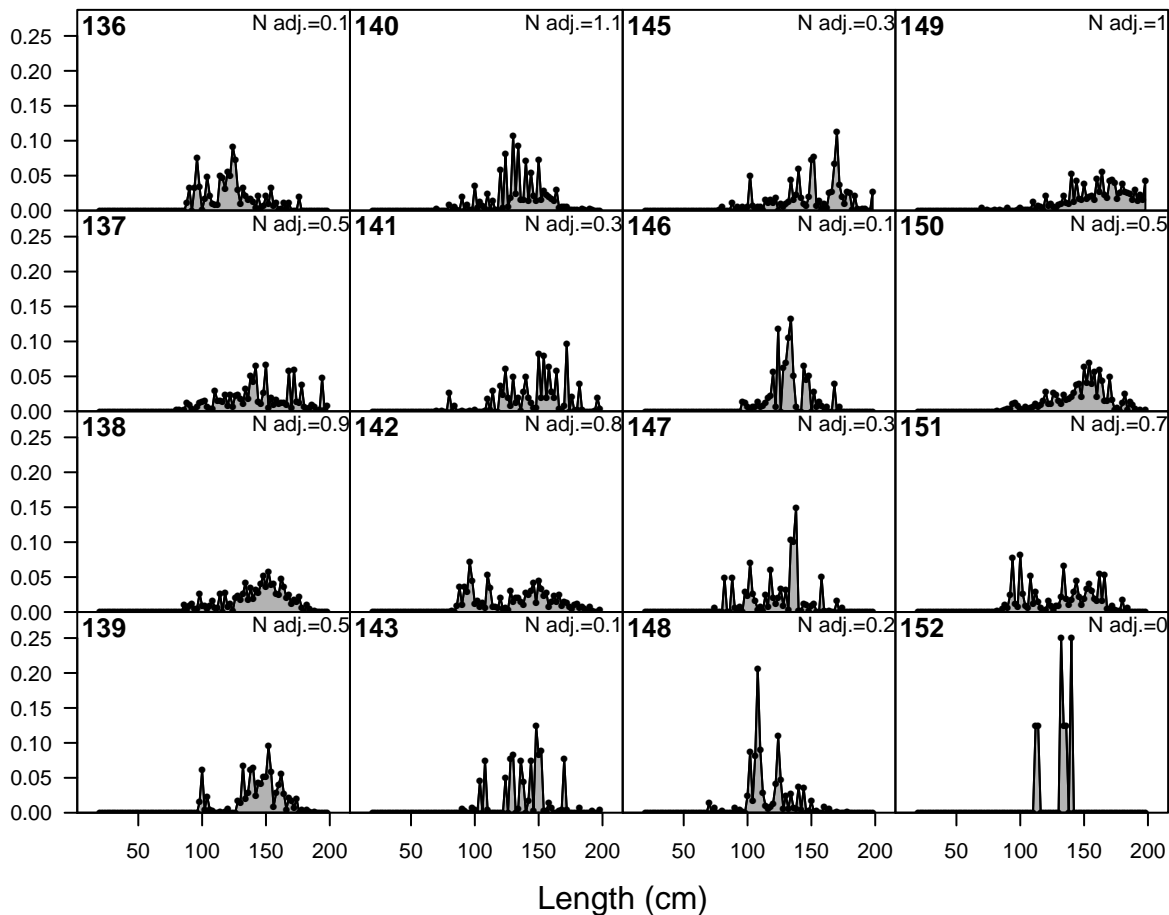
Proportion



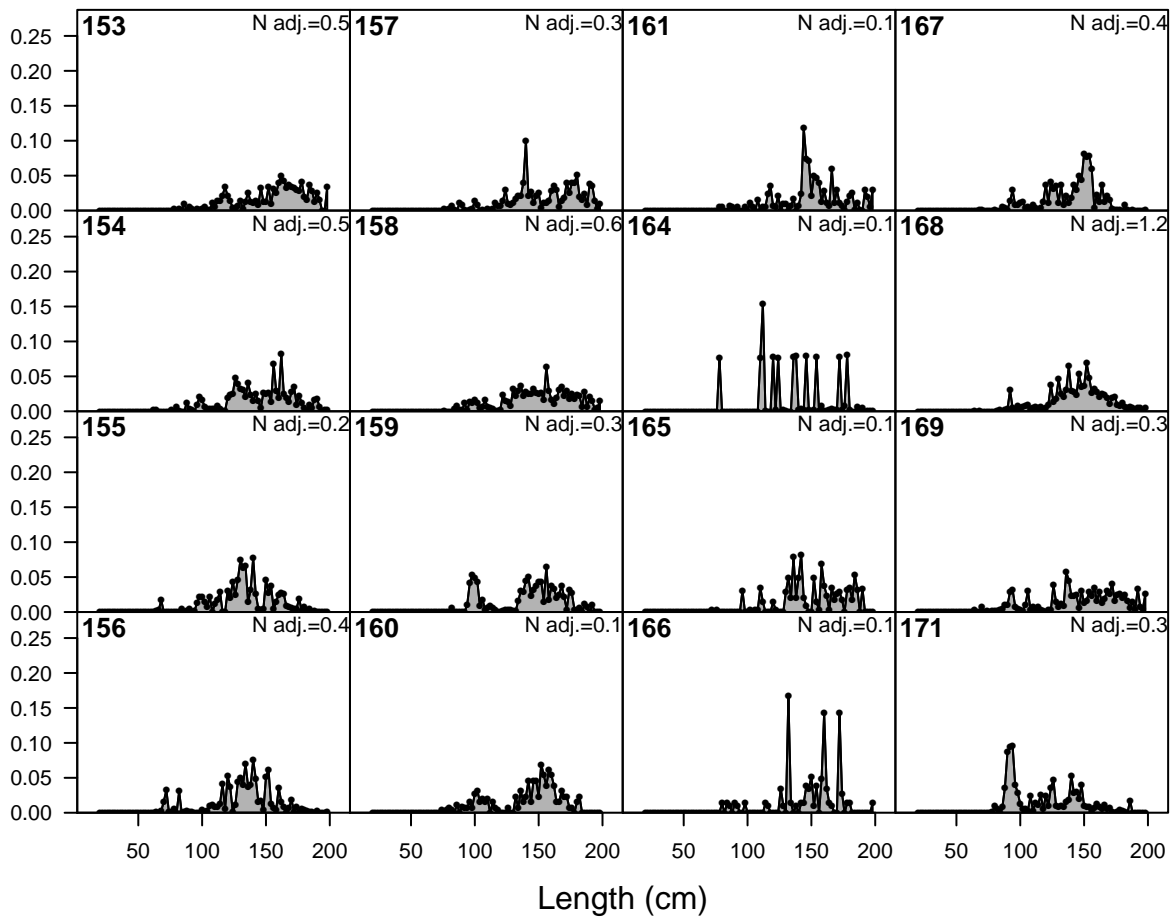
Proportion

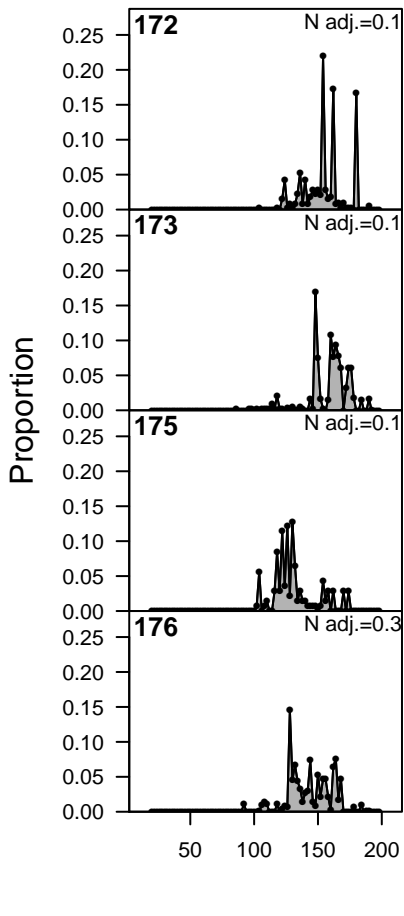


Proportion

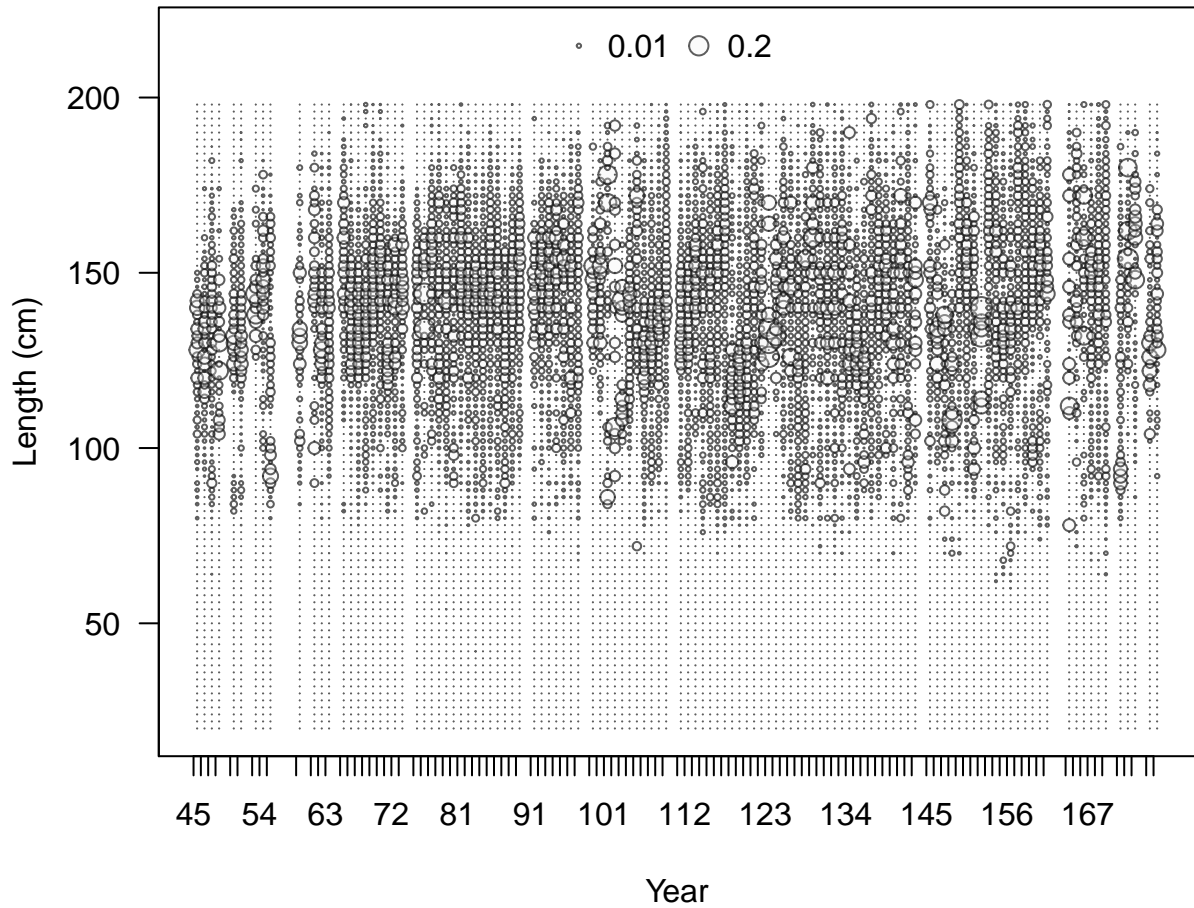


Proportion

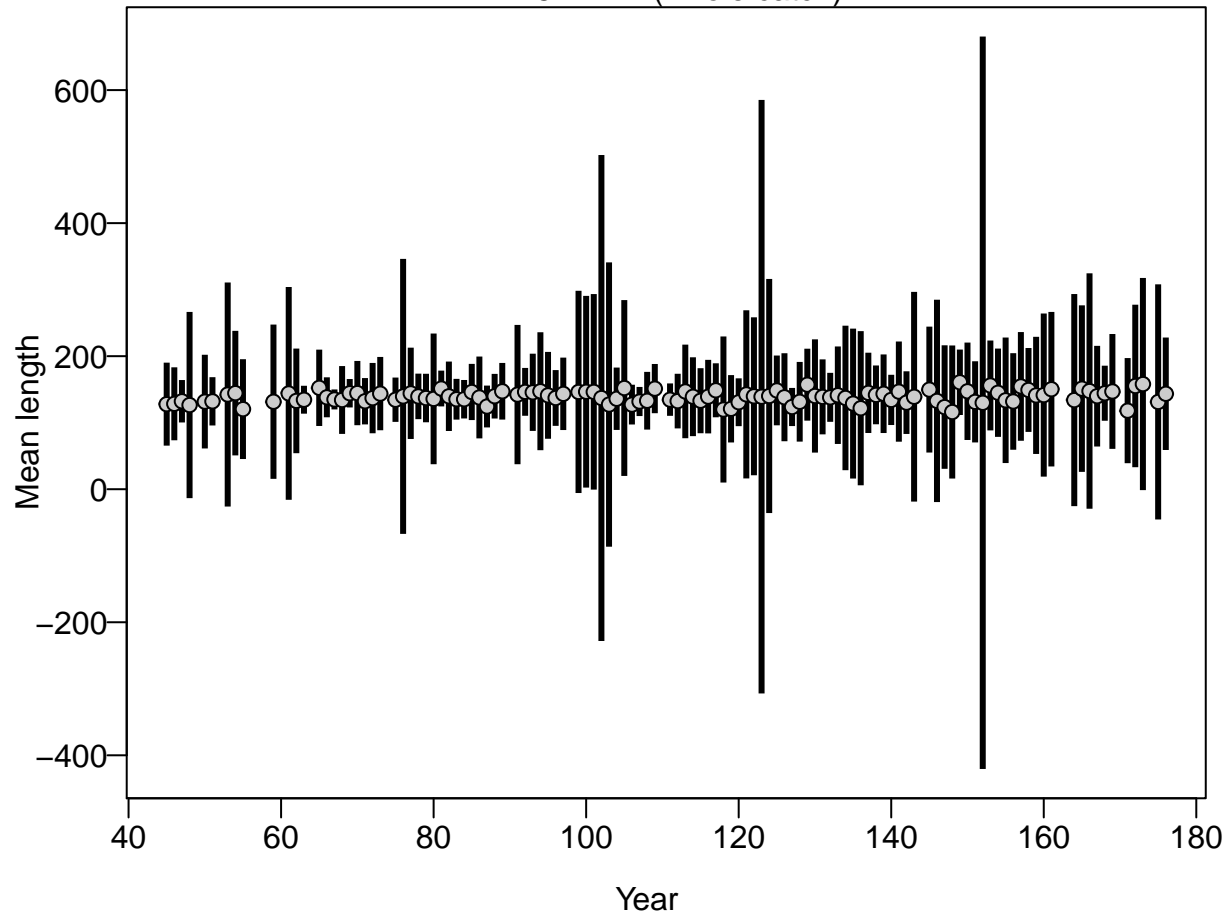




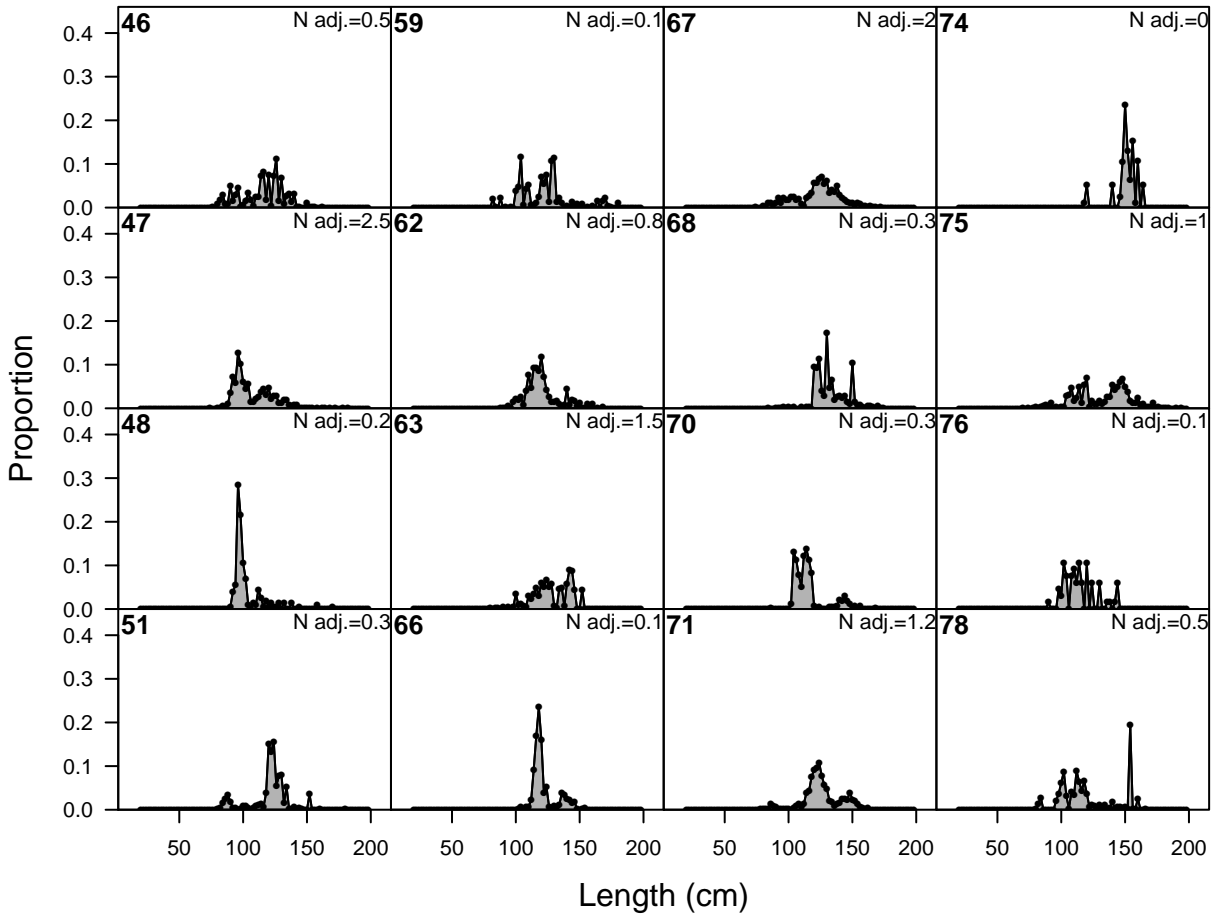
Length (cm)

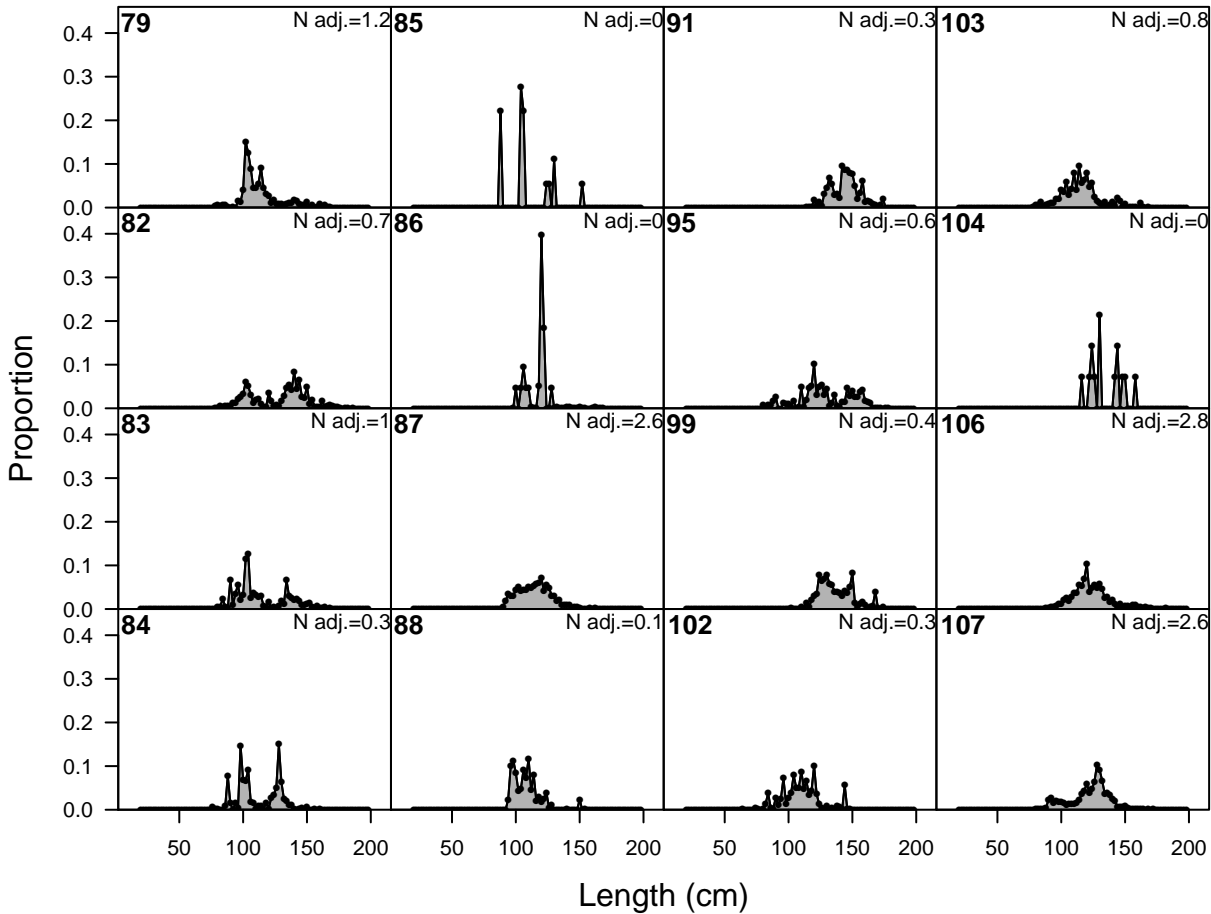


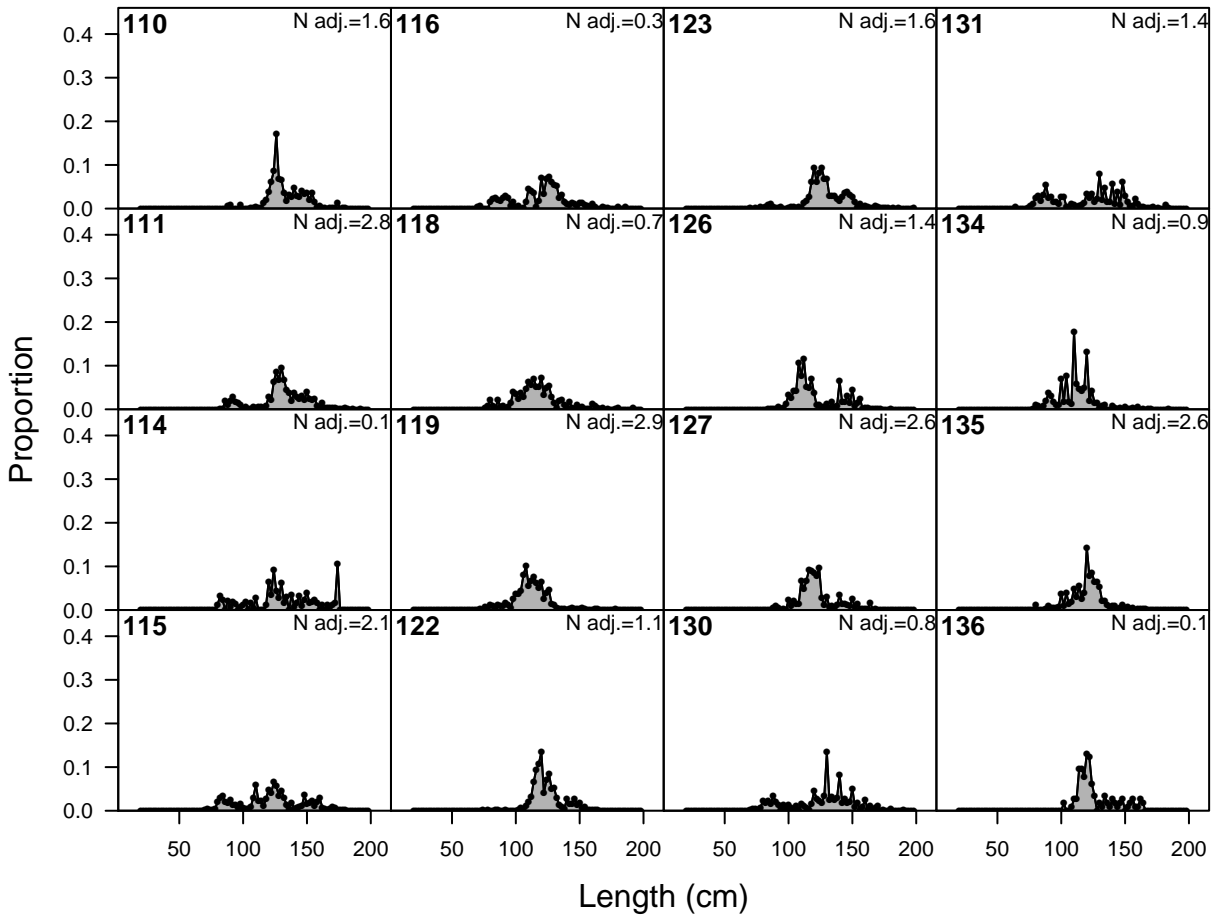
A5-LL-n (whole catch)

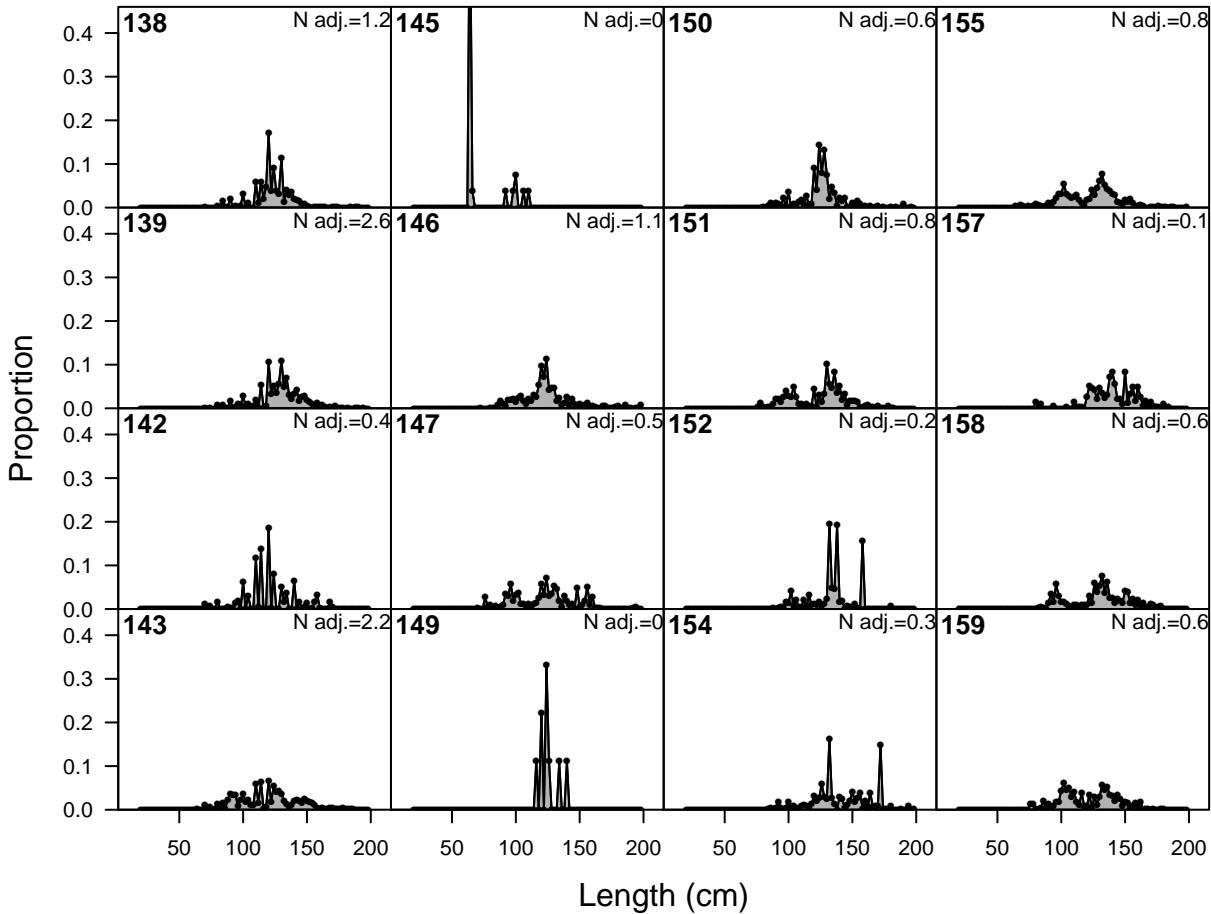


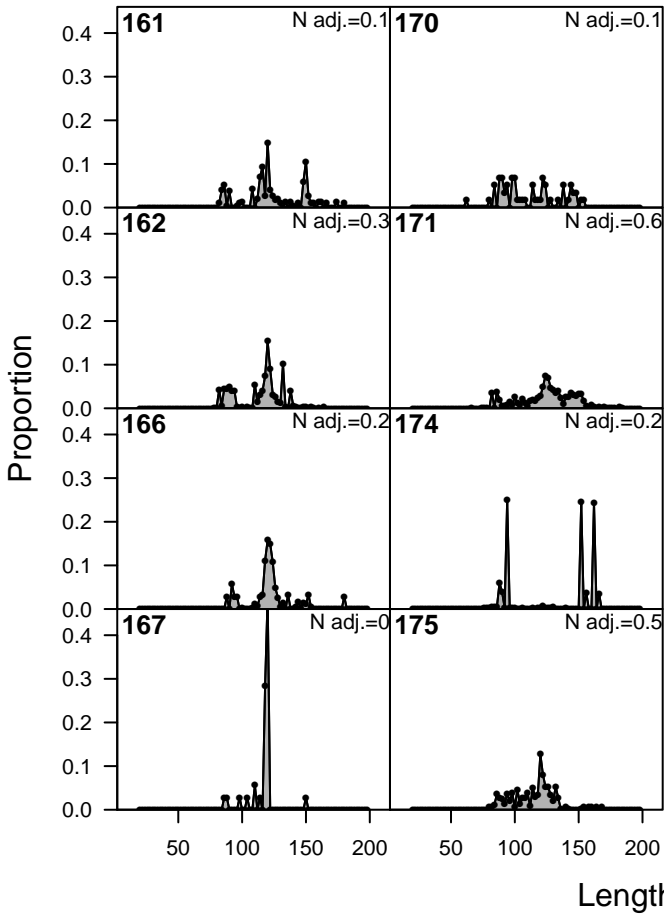


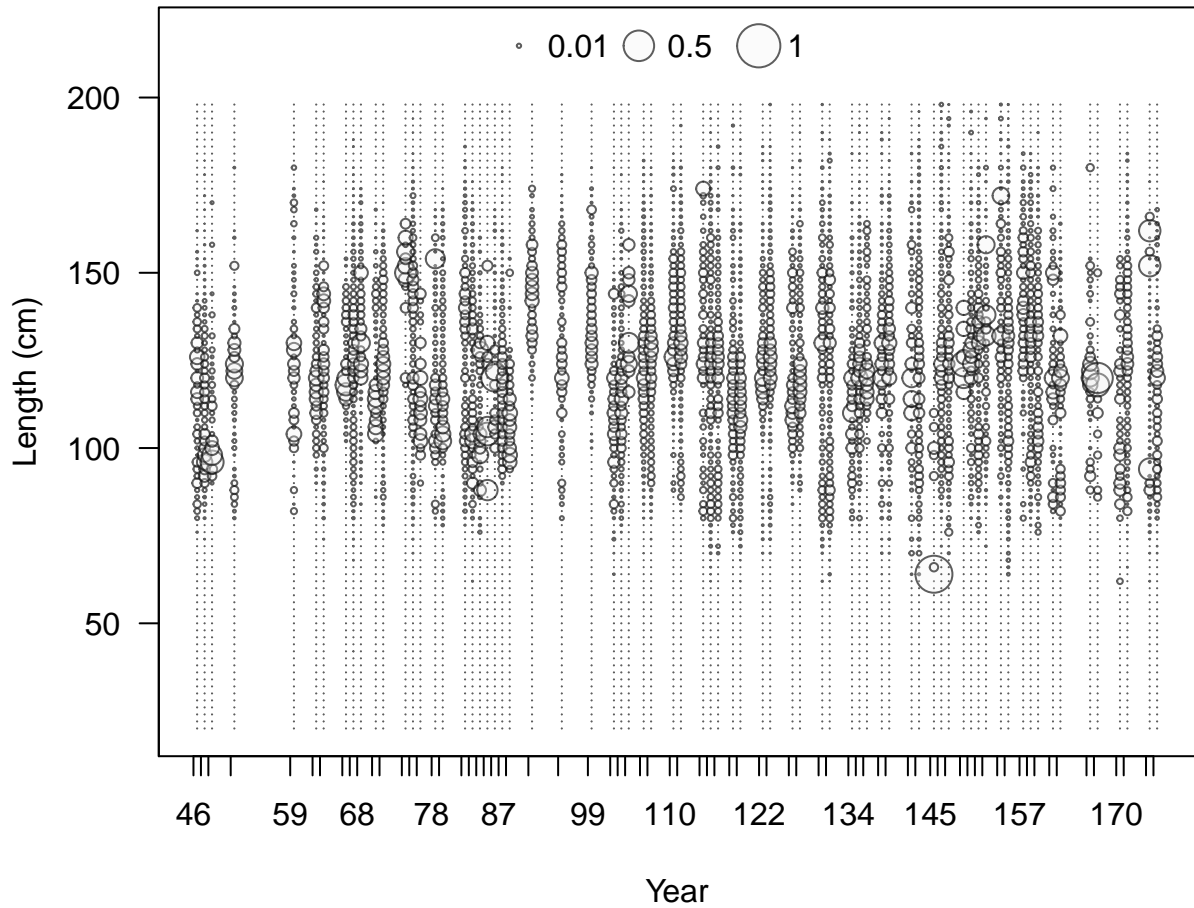




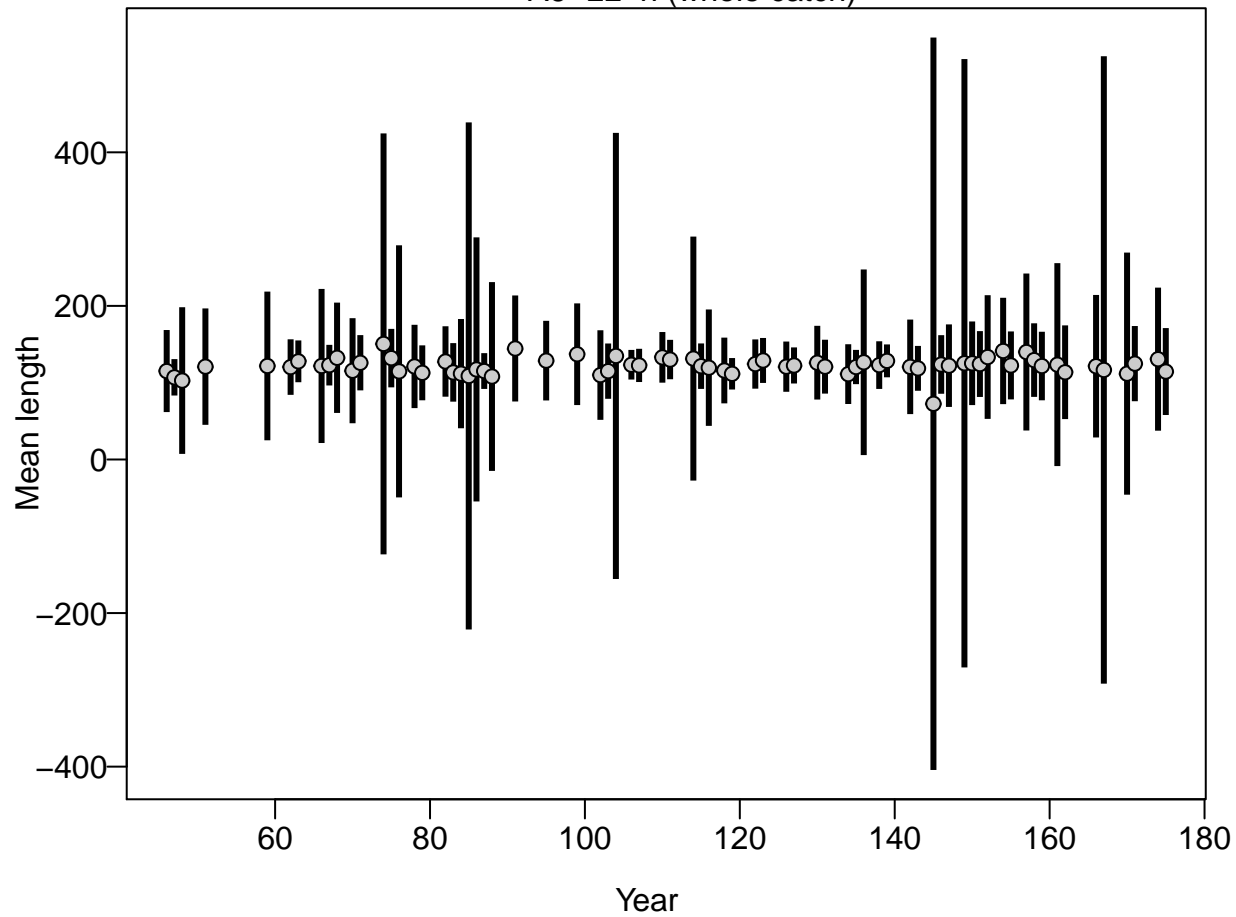


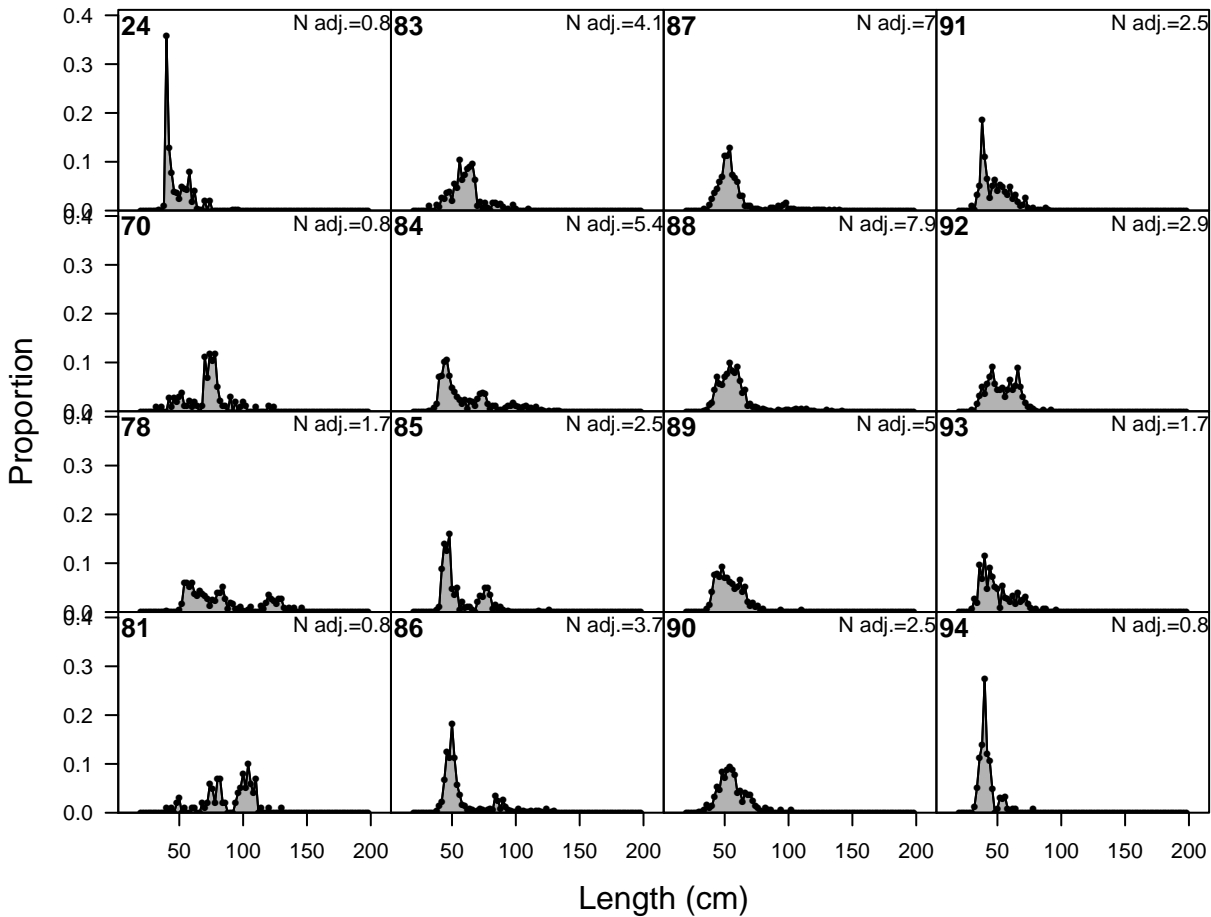




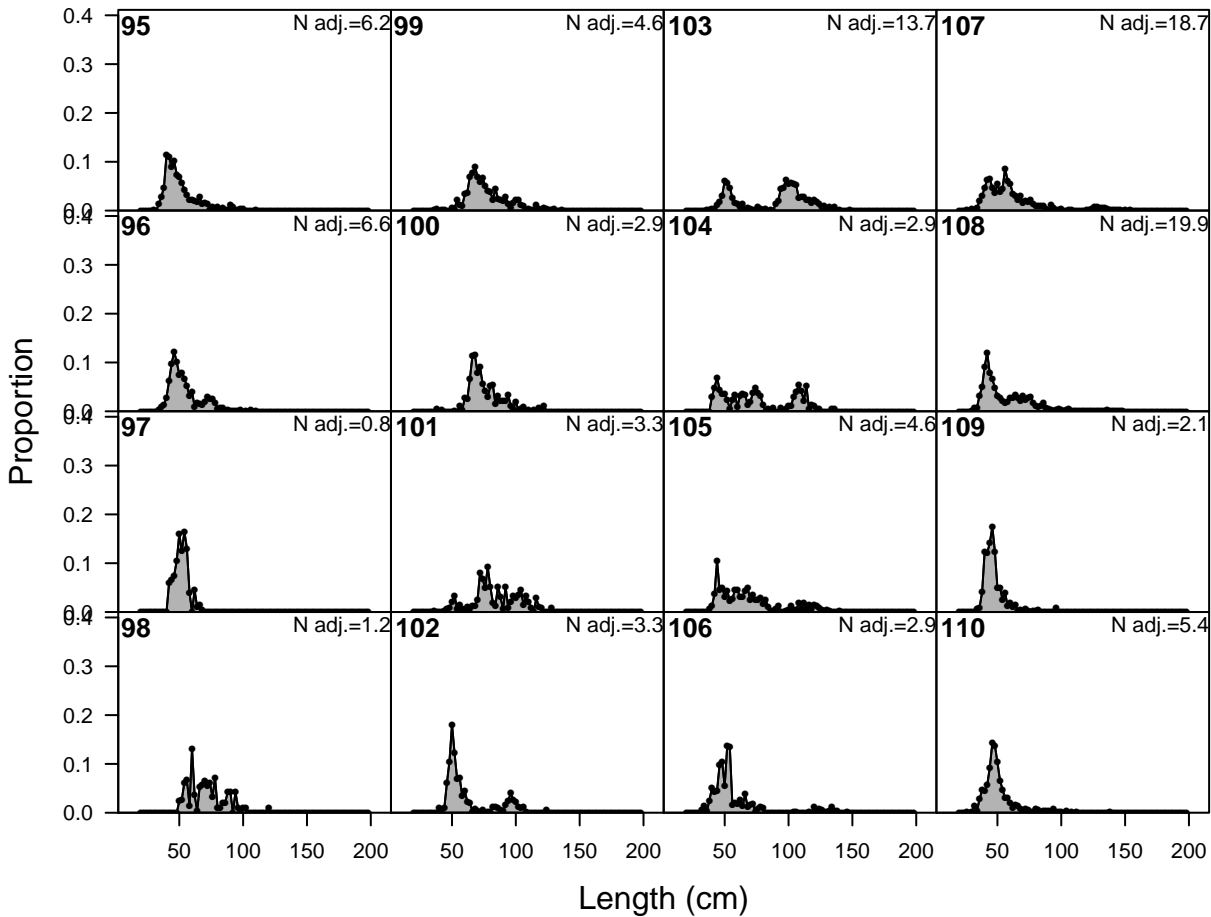


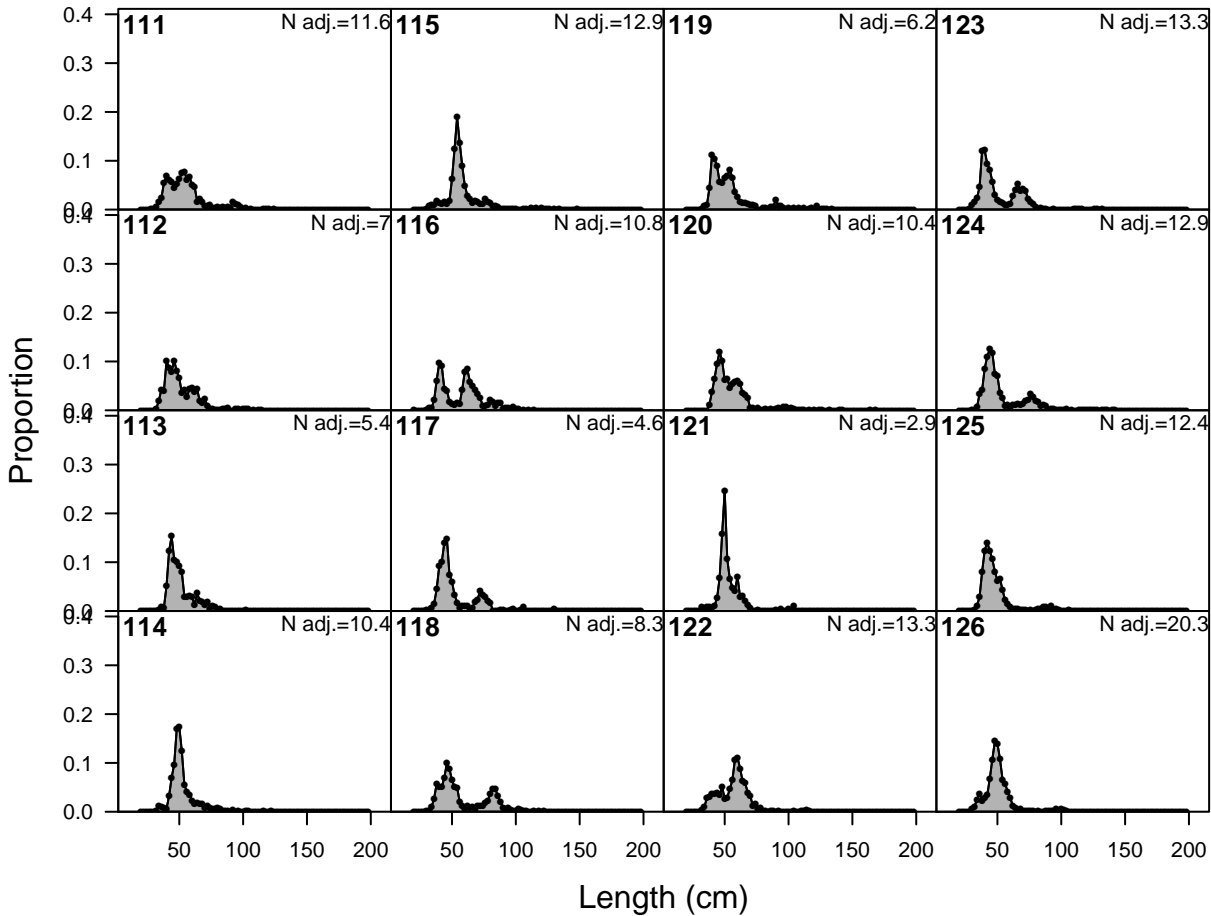
A6-LL-n (whole catch)

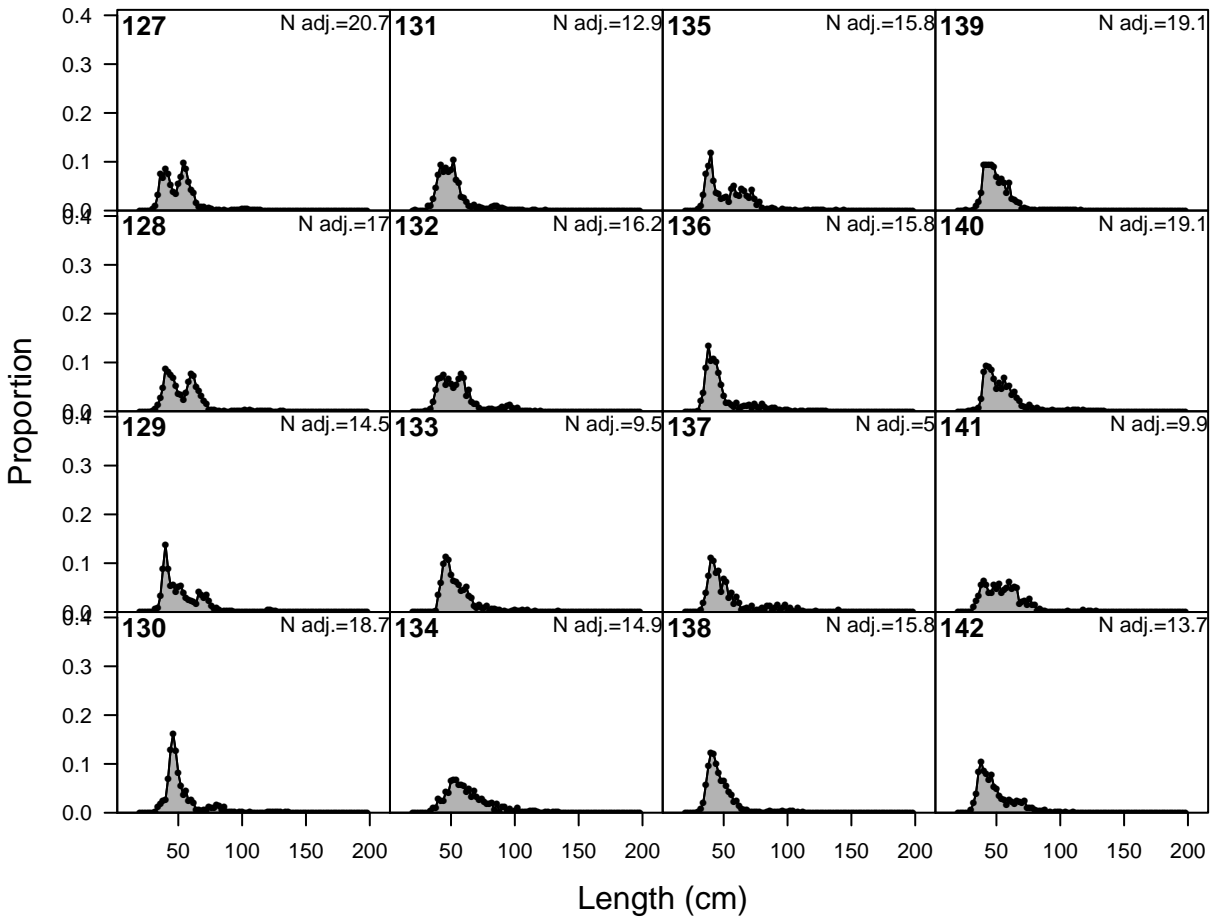


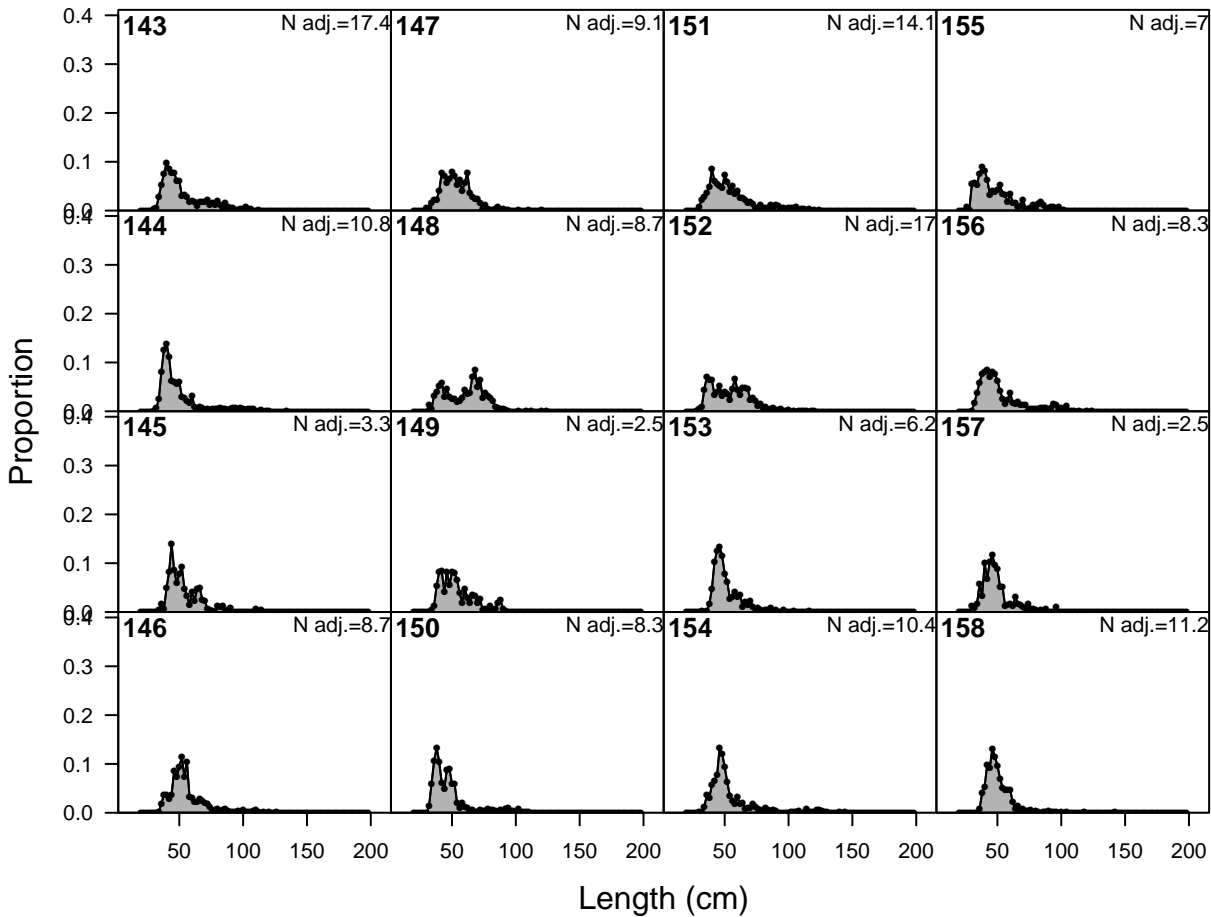


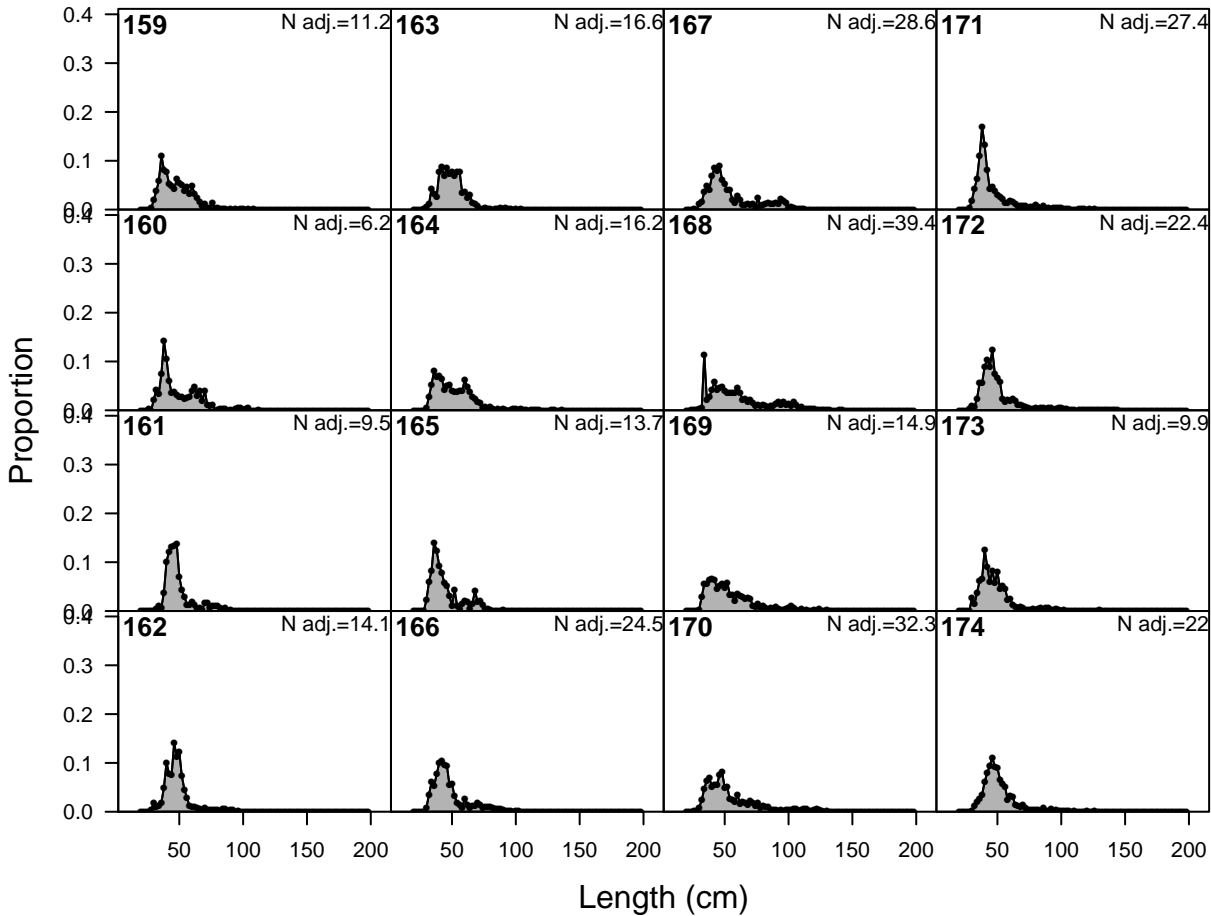


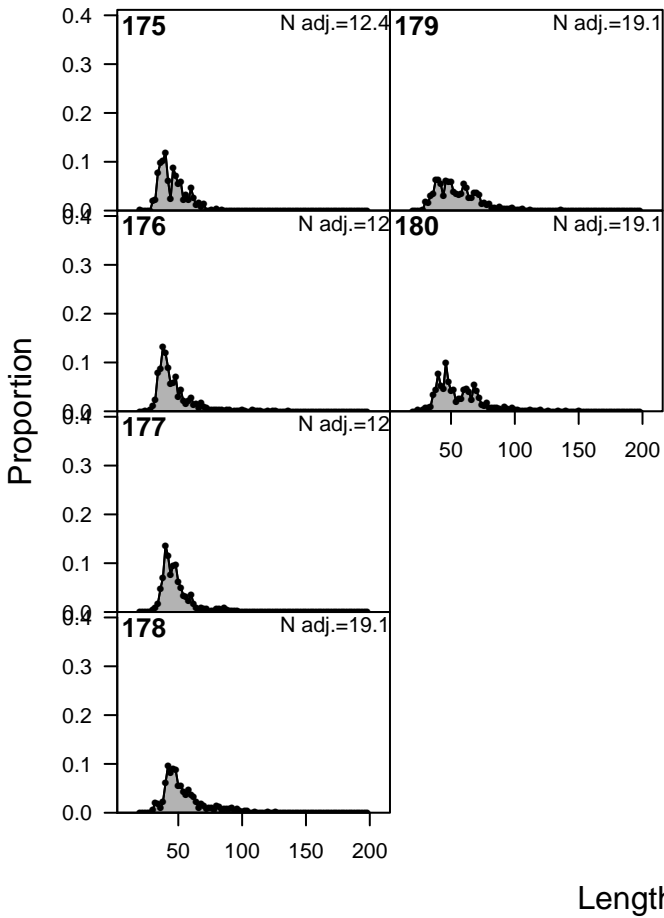


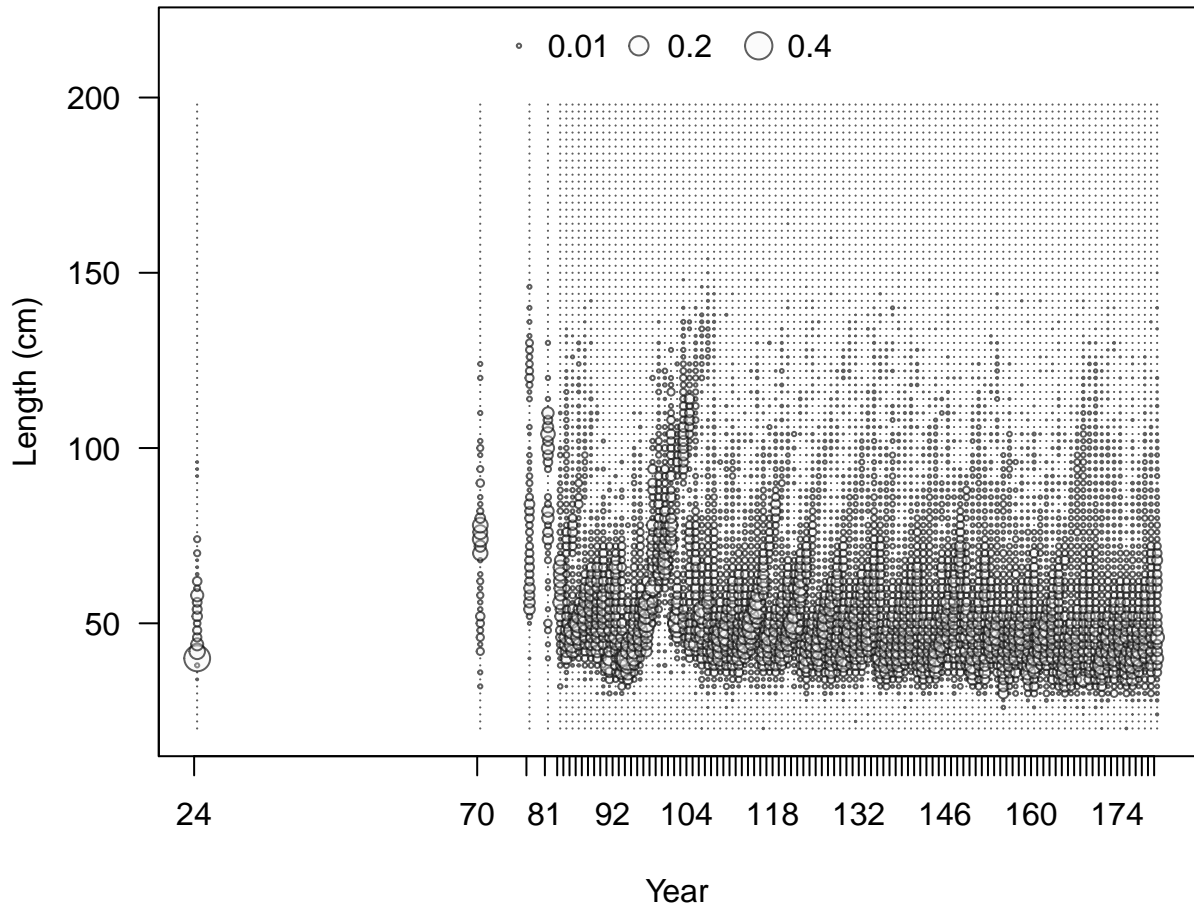




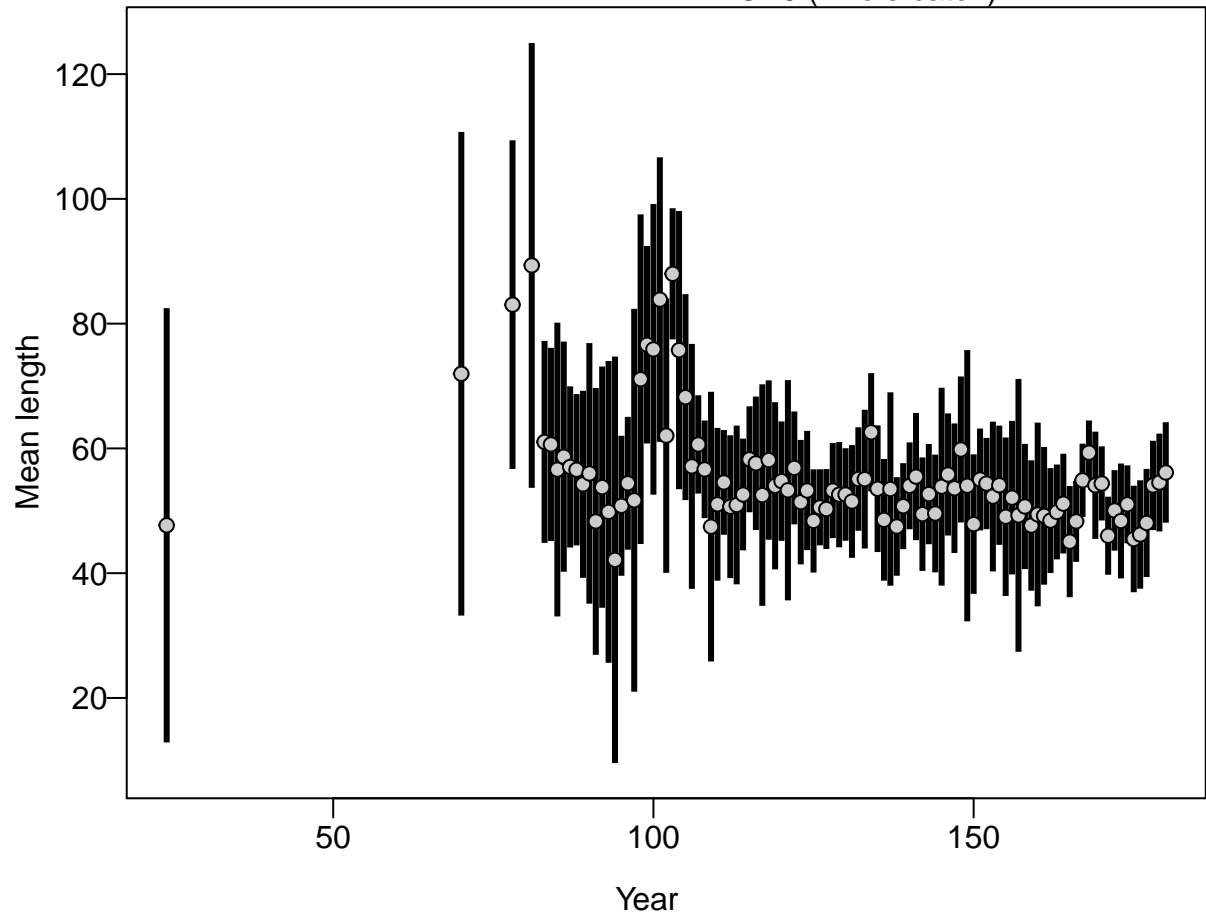




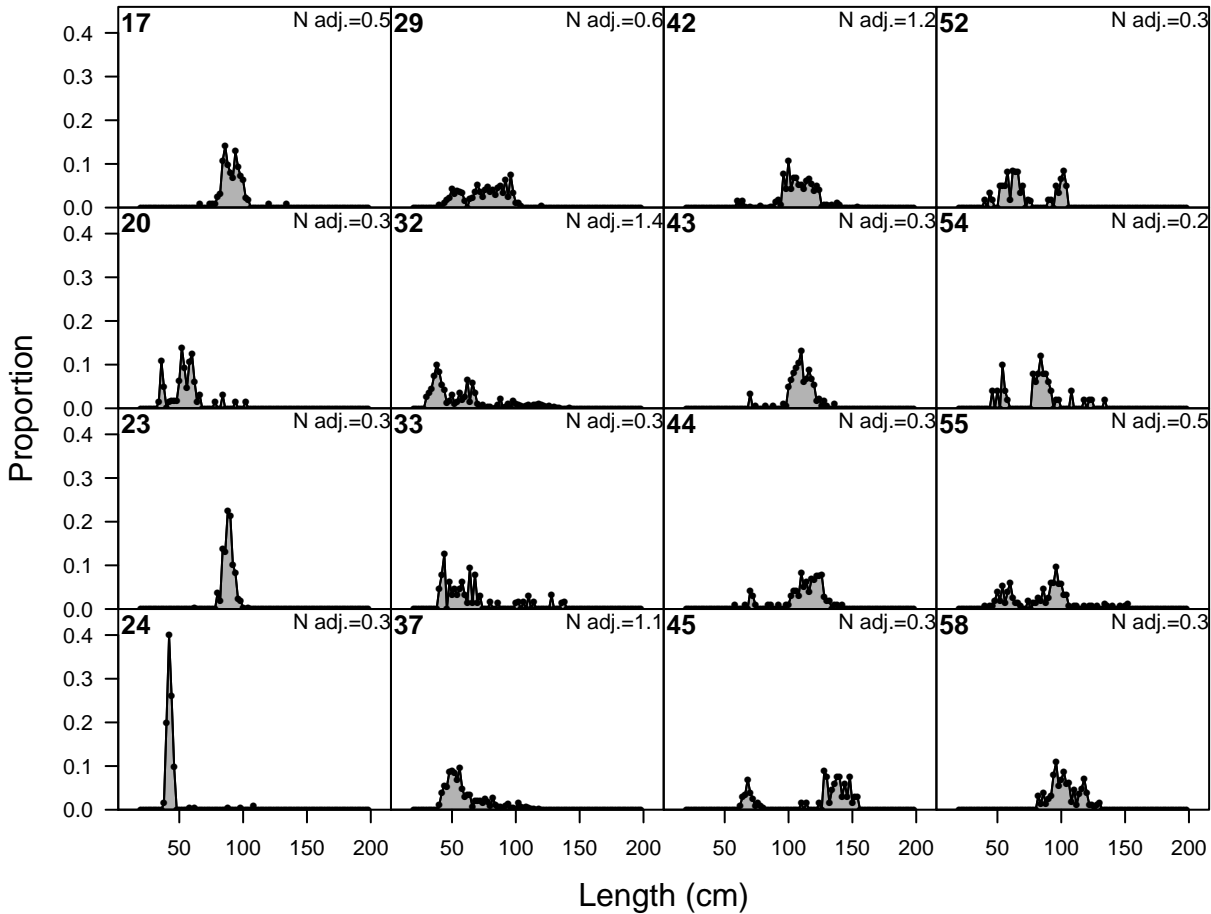


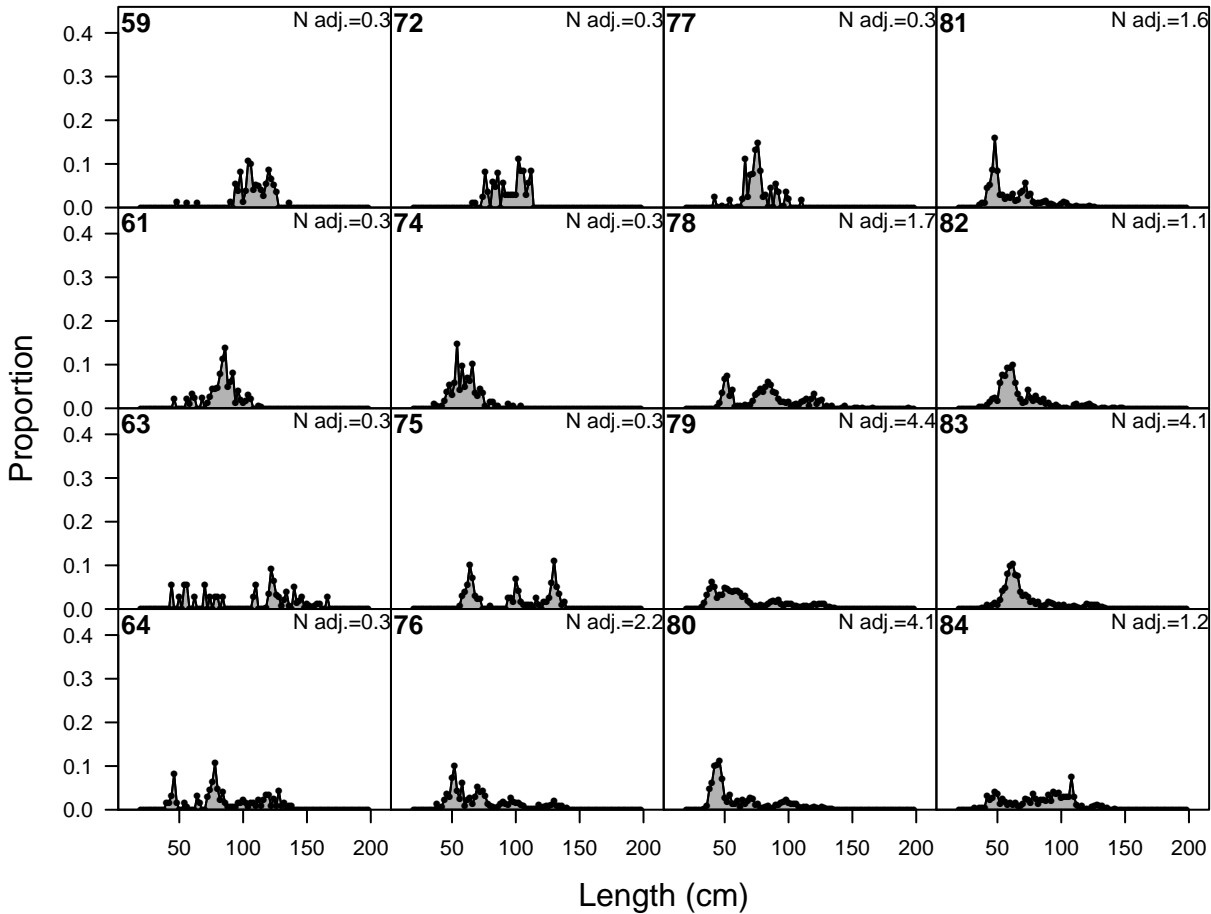


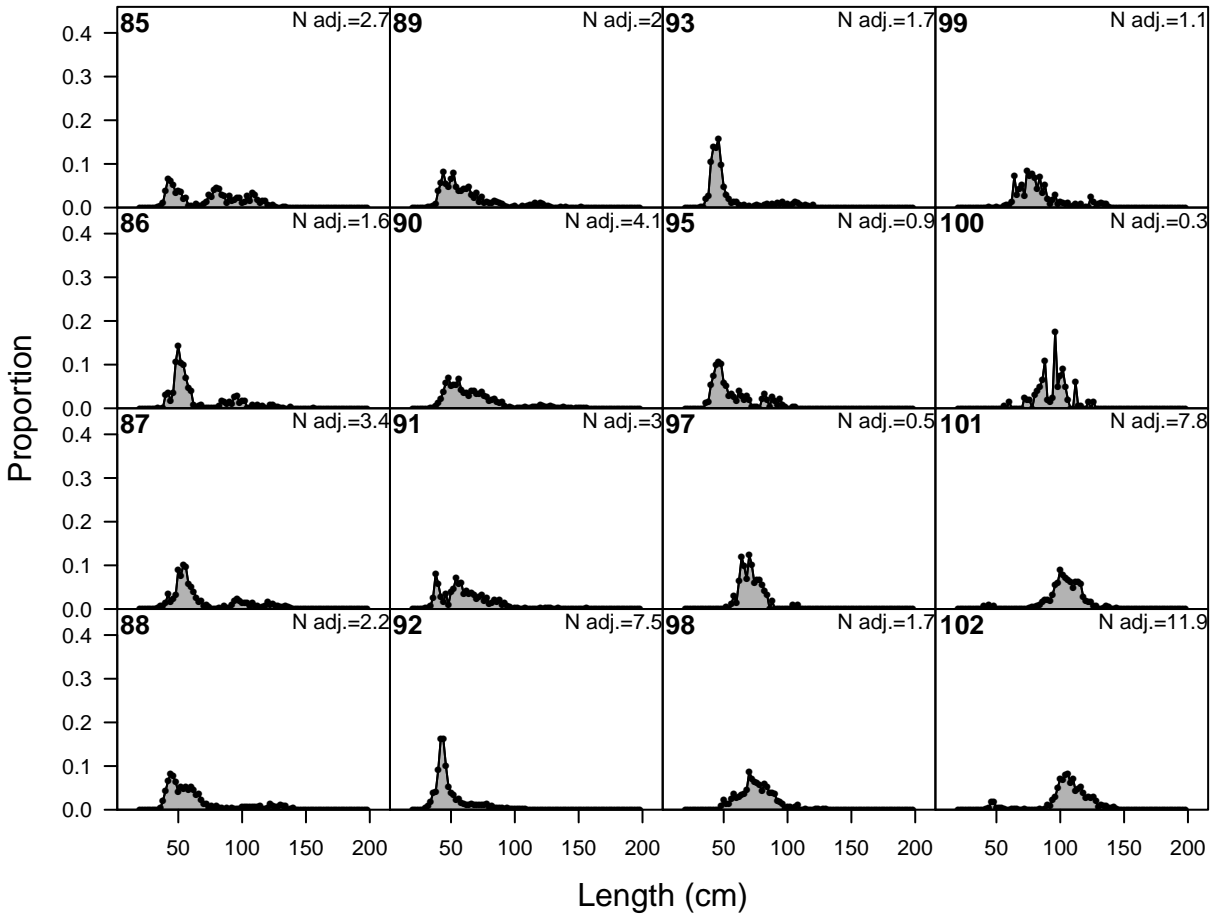
## A2-OBJ (whole catch)

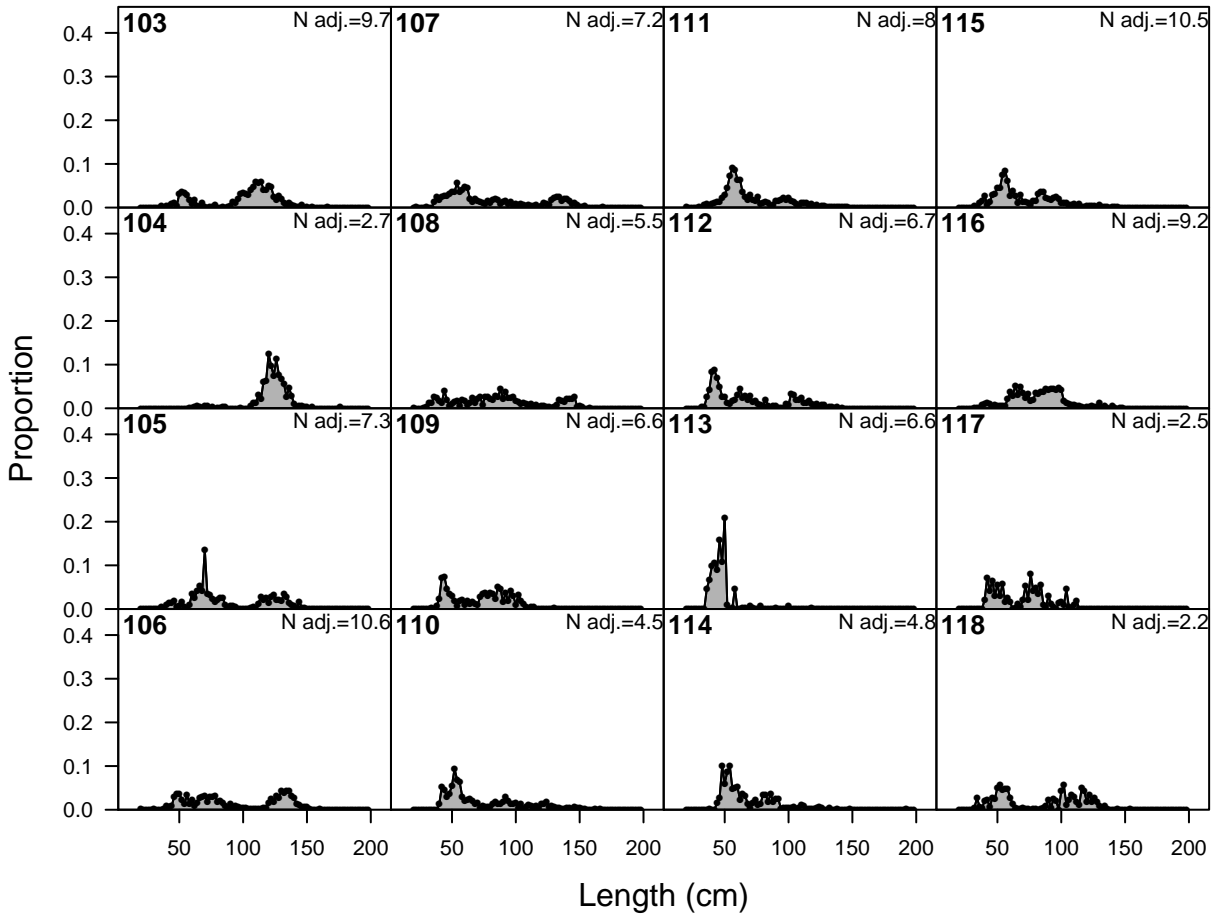


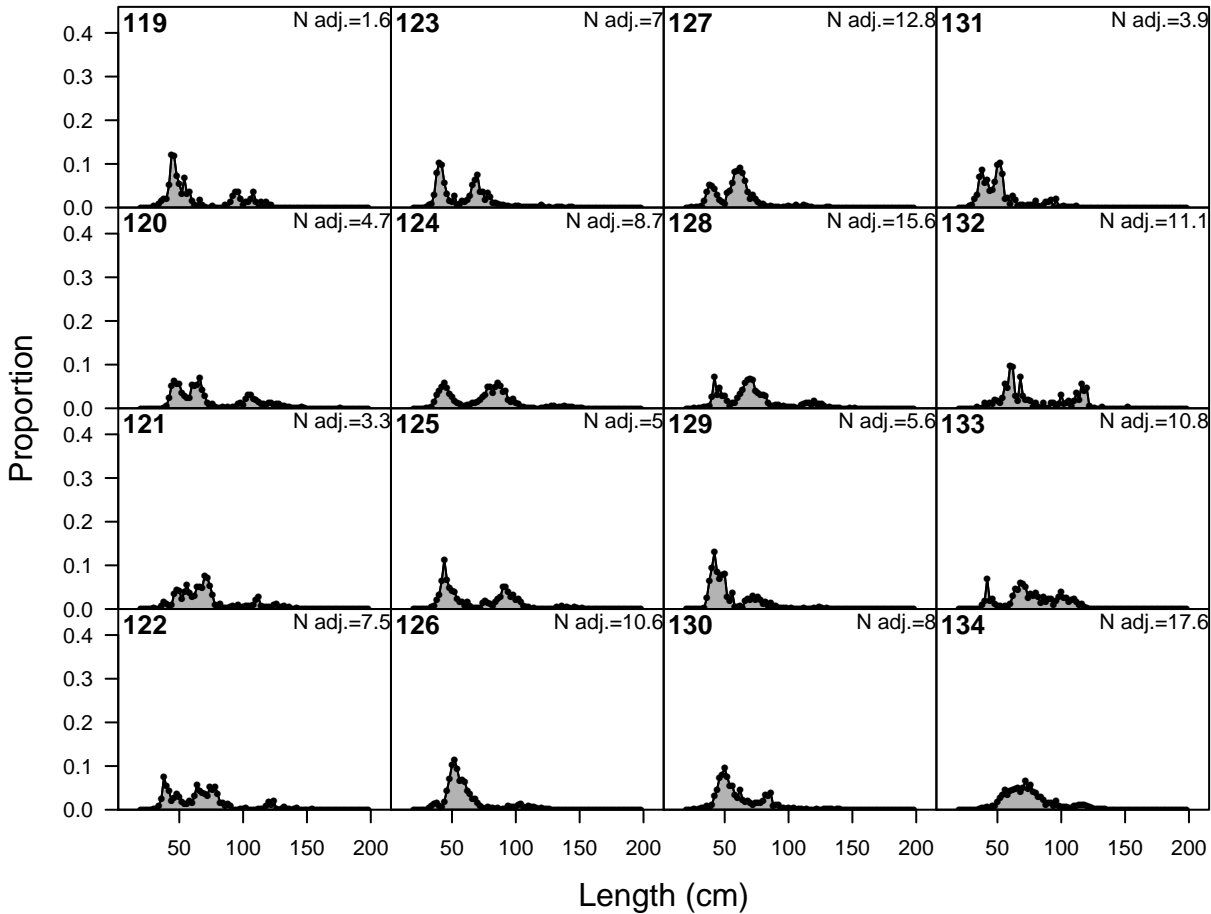


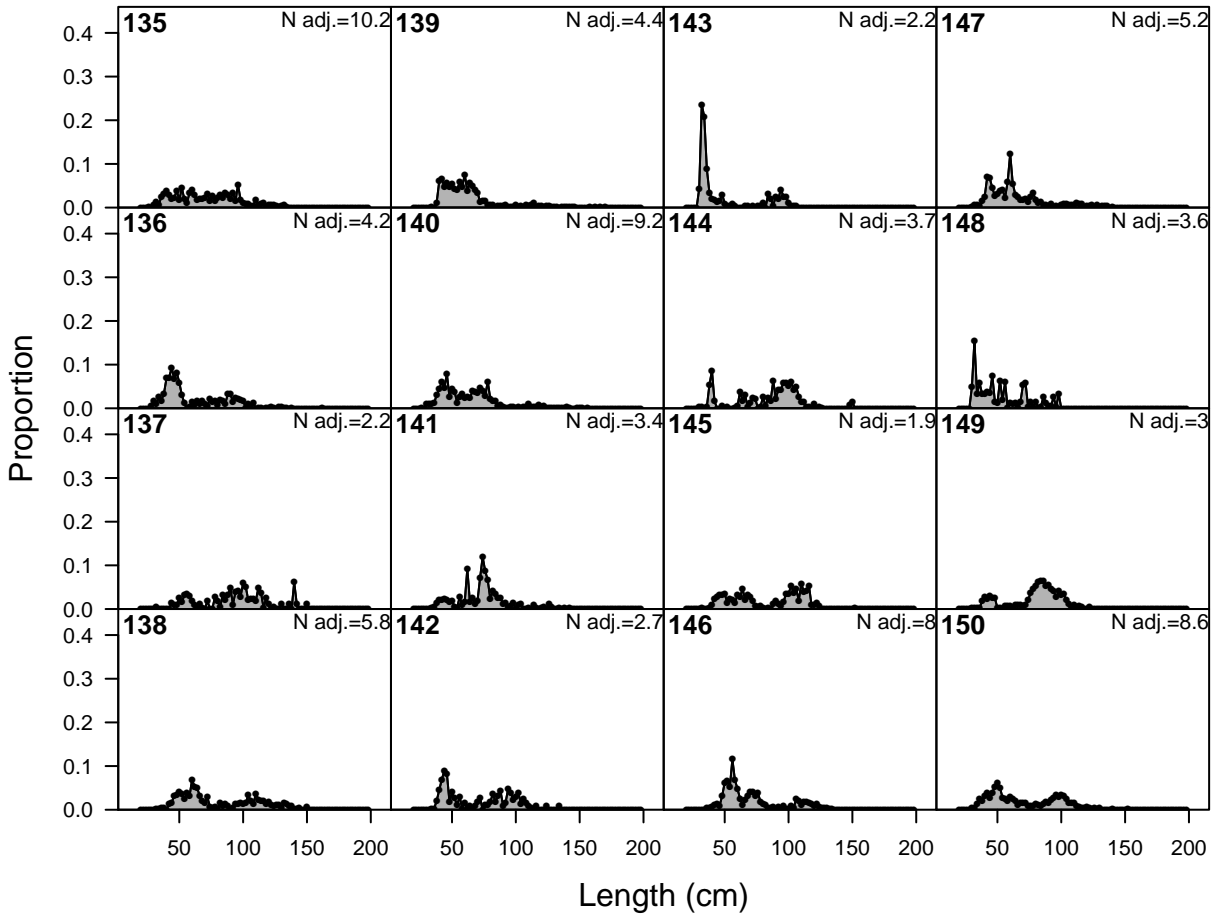


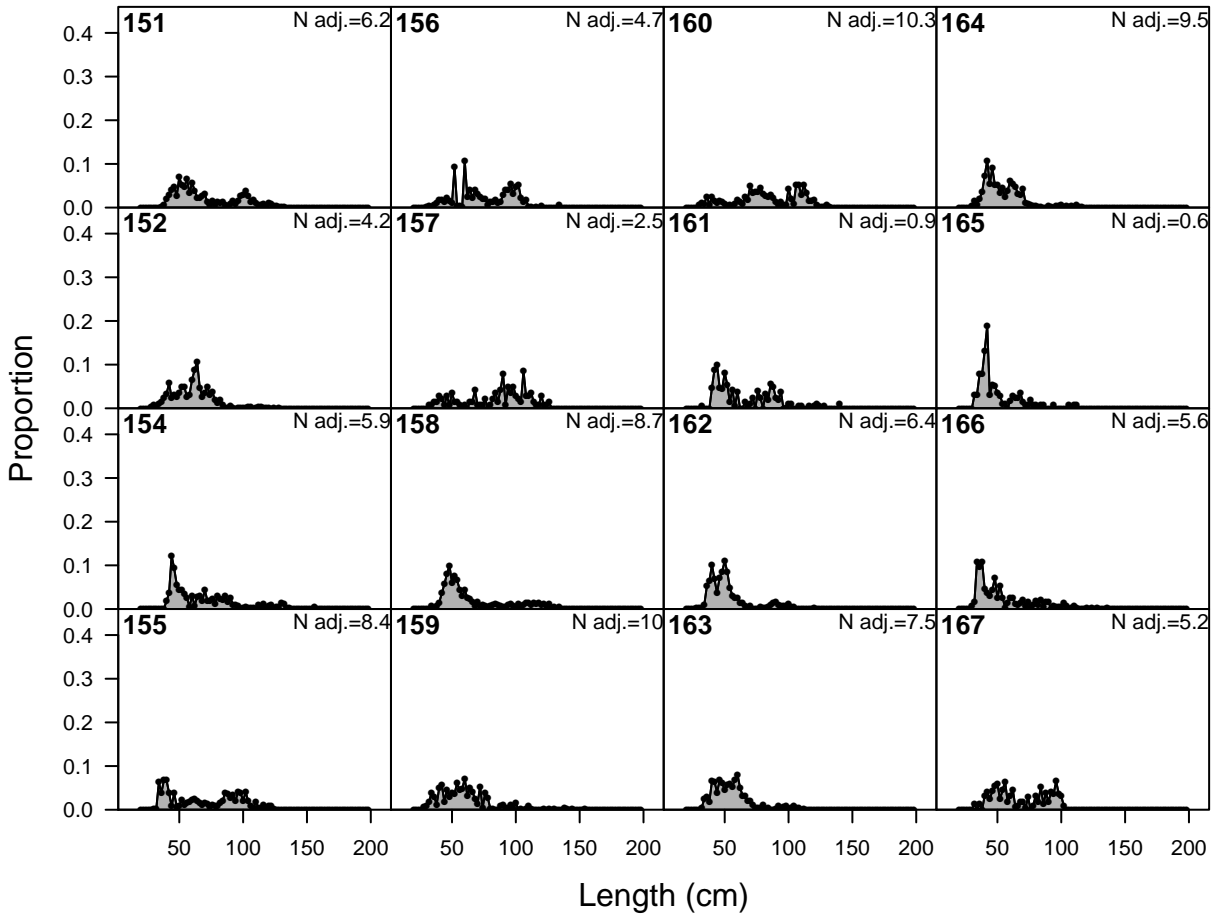


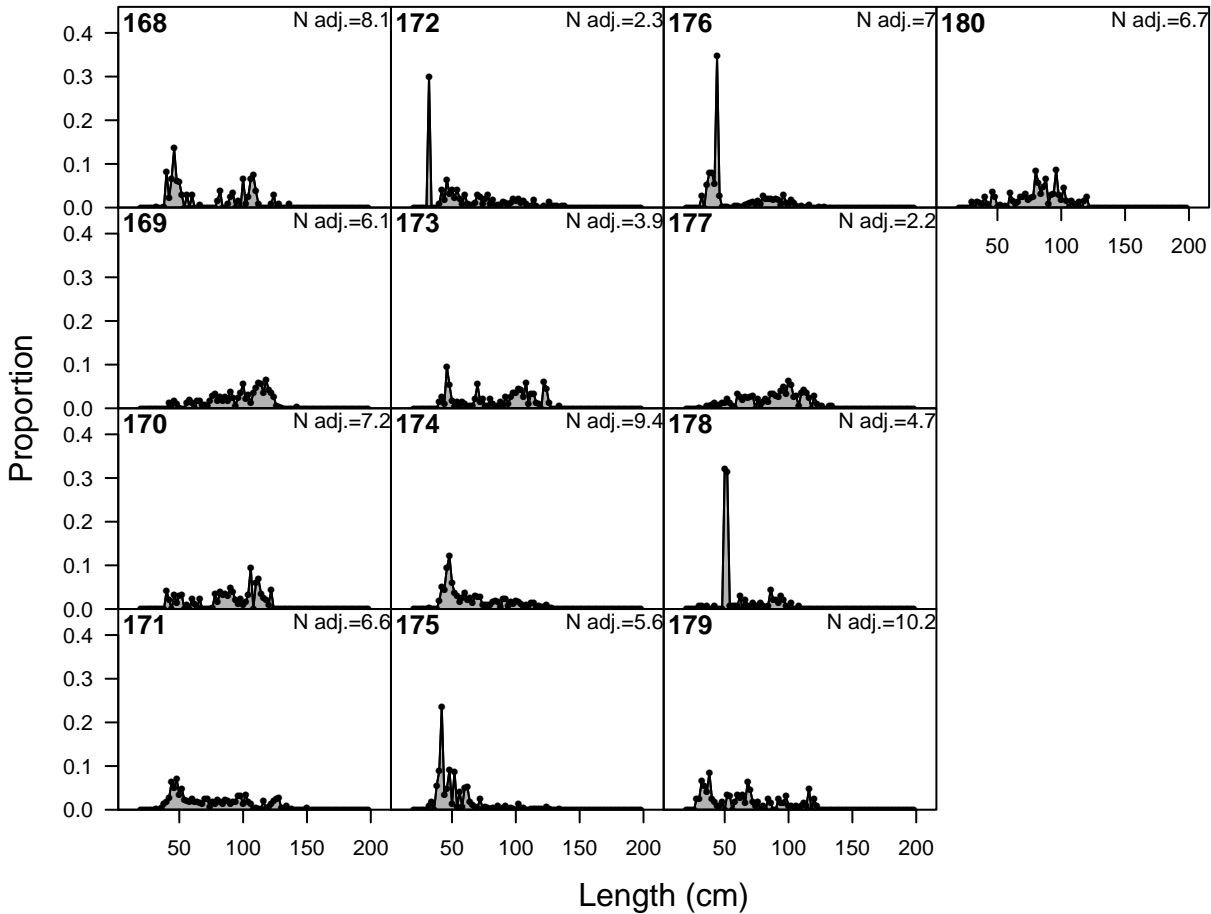




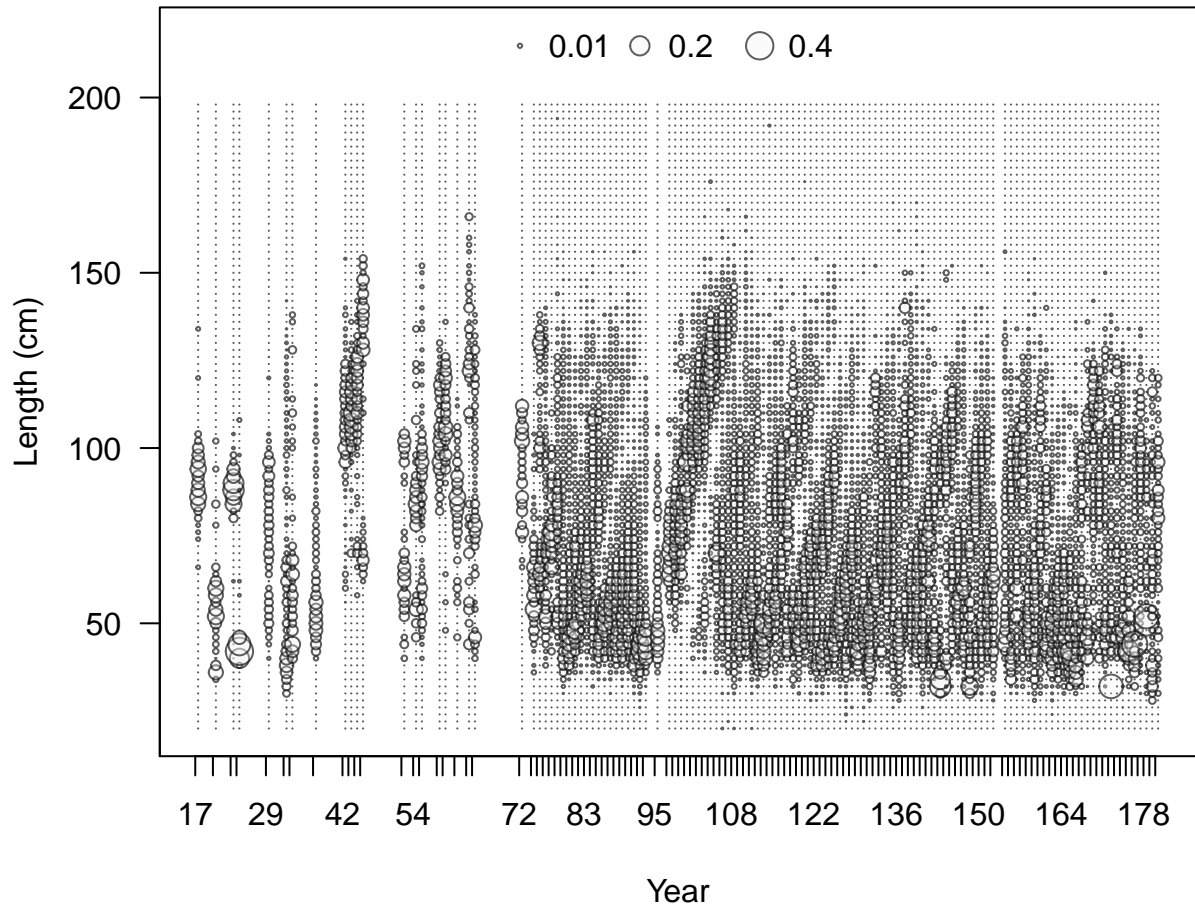




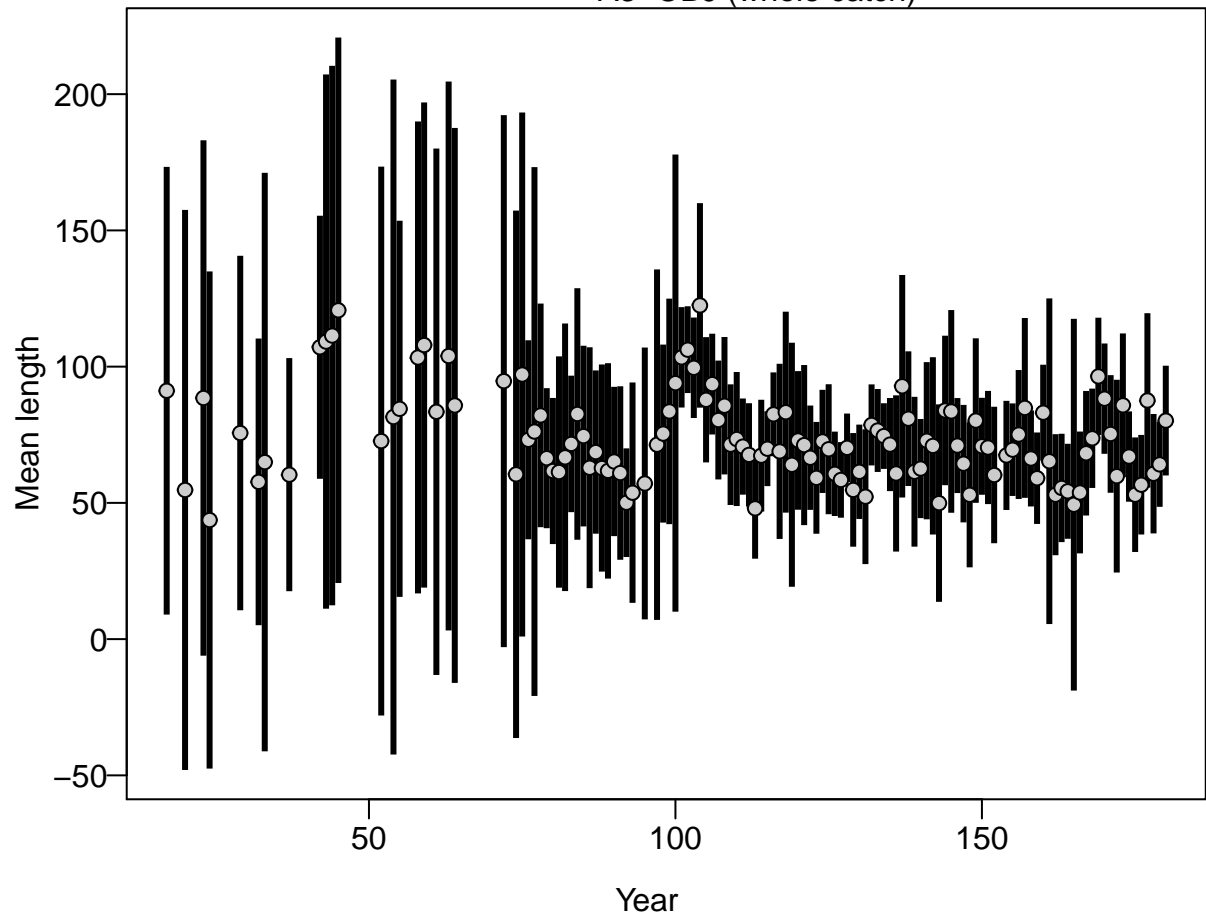




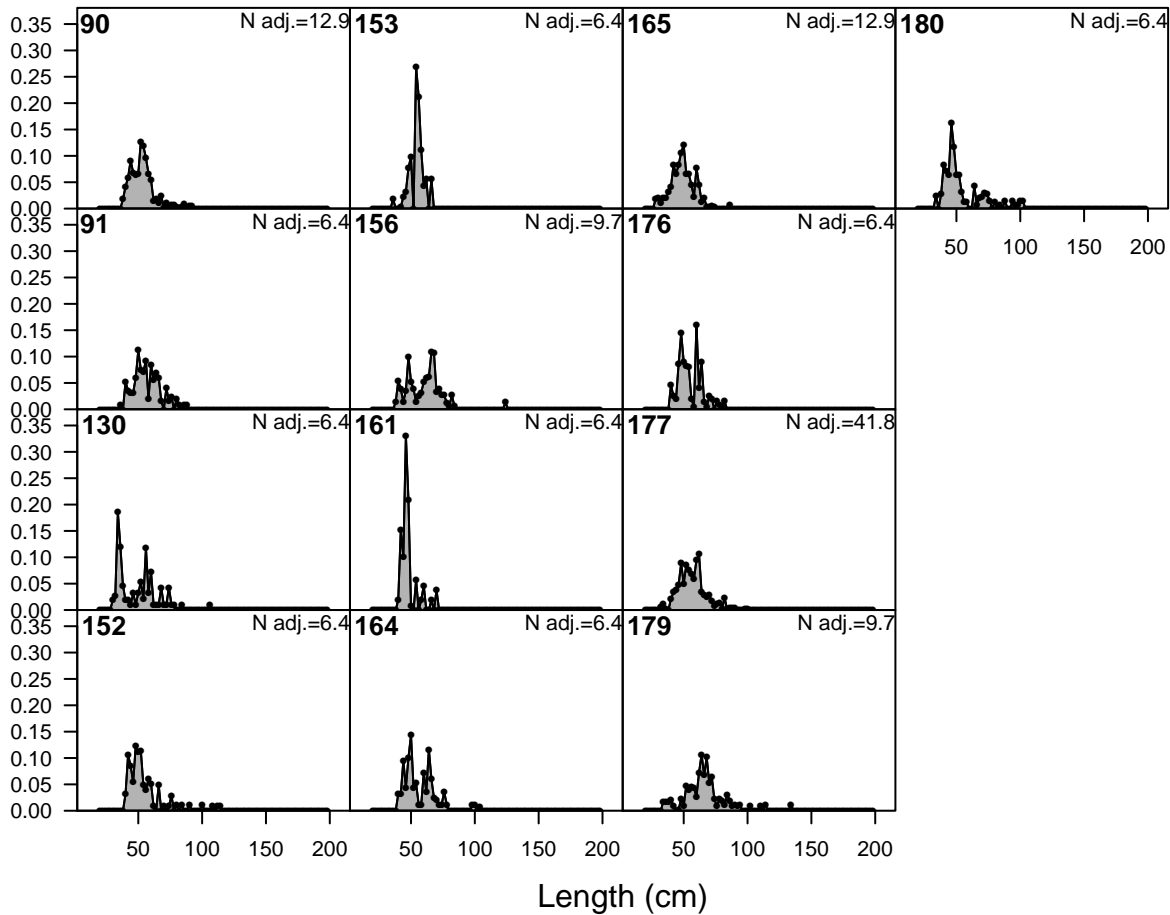


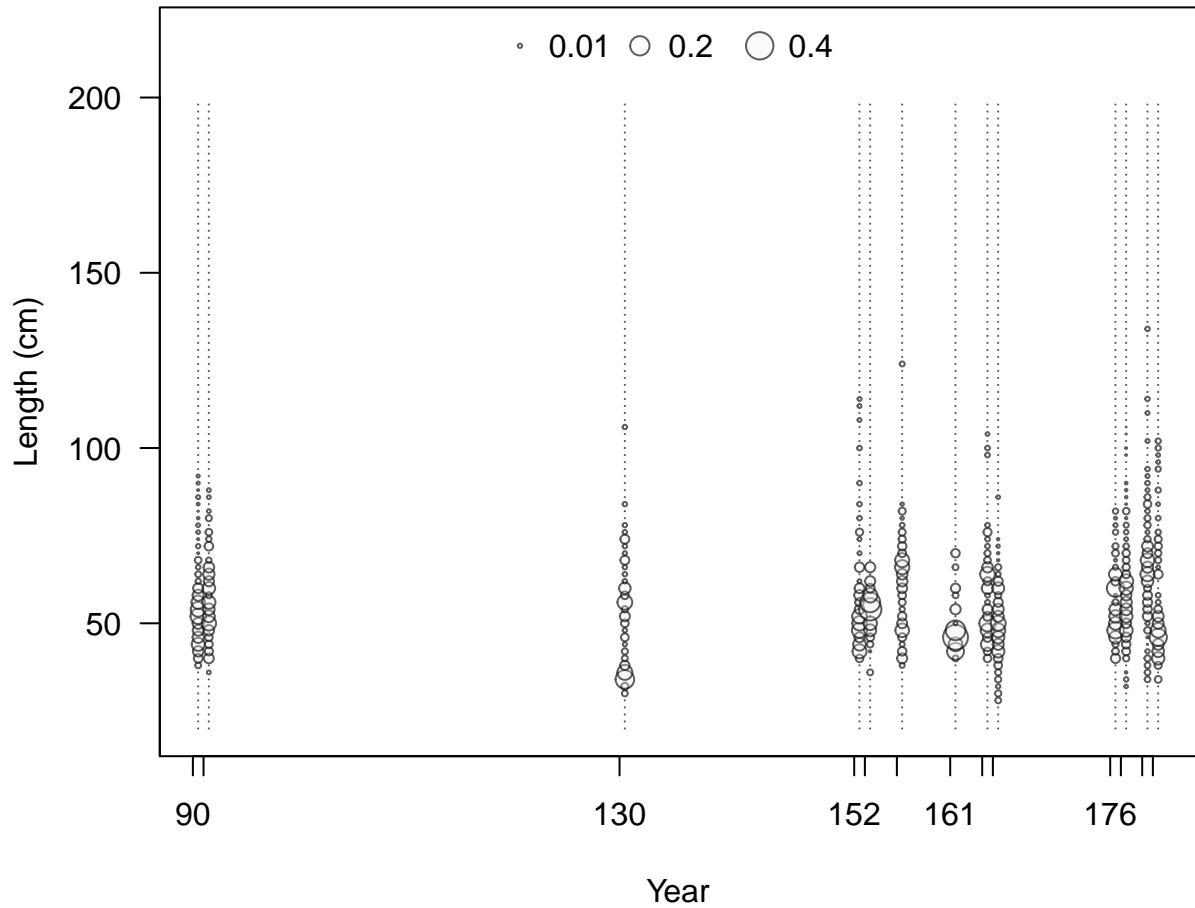


## A3-OBJ (whole catch)

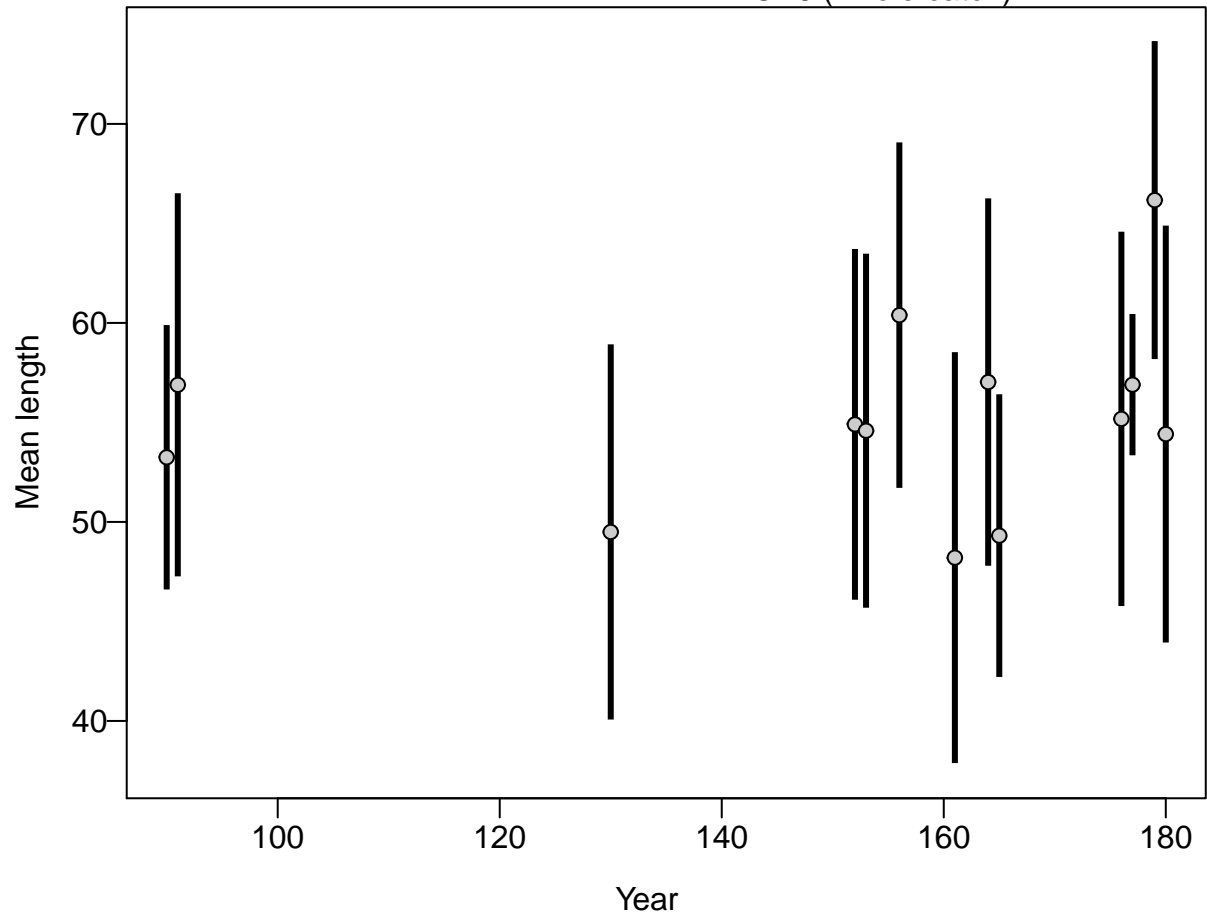


Proportion

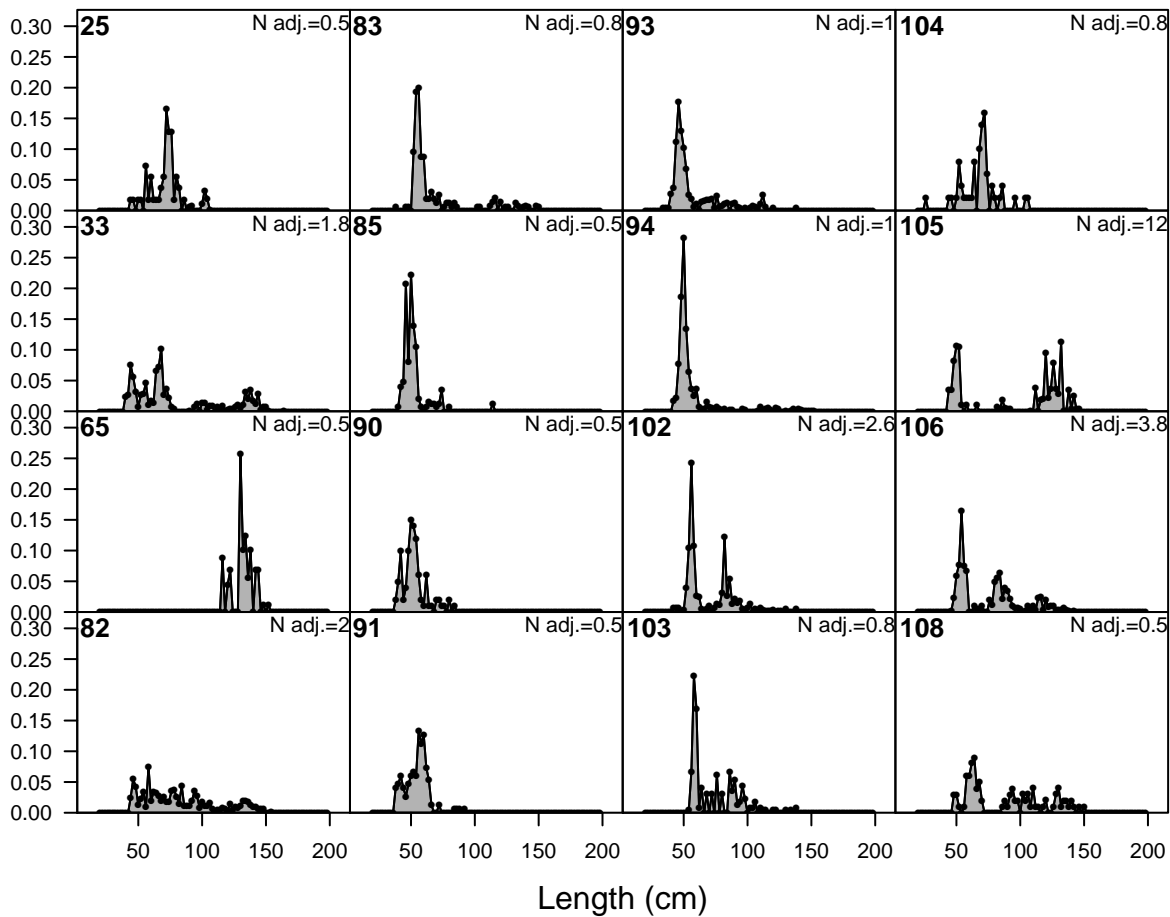




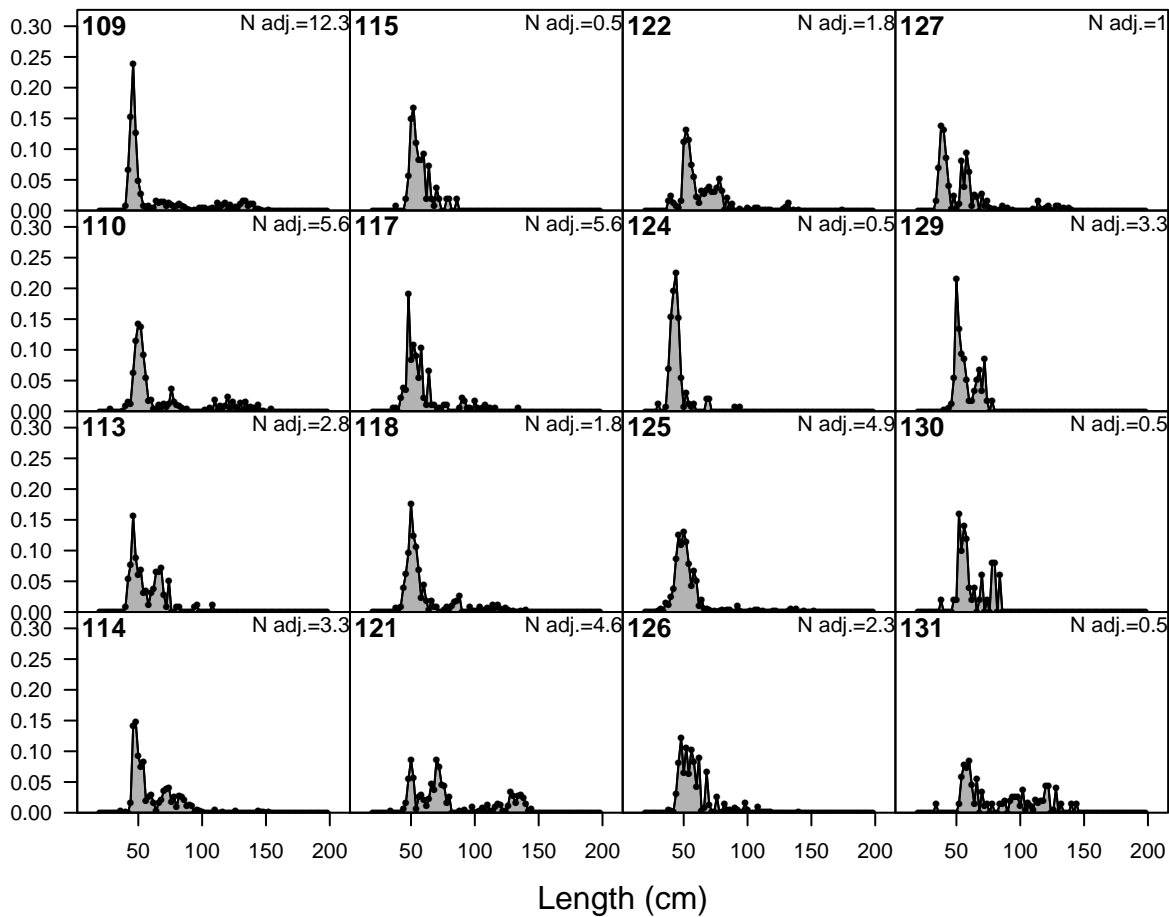
## A4-OBJ (whole catch)



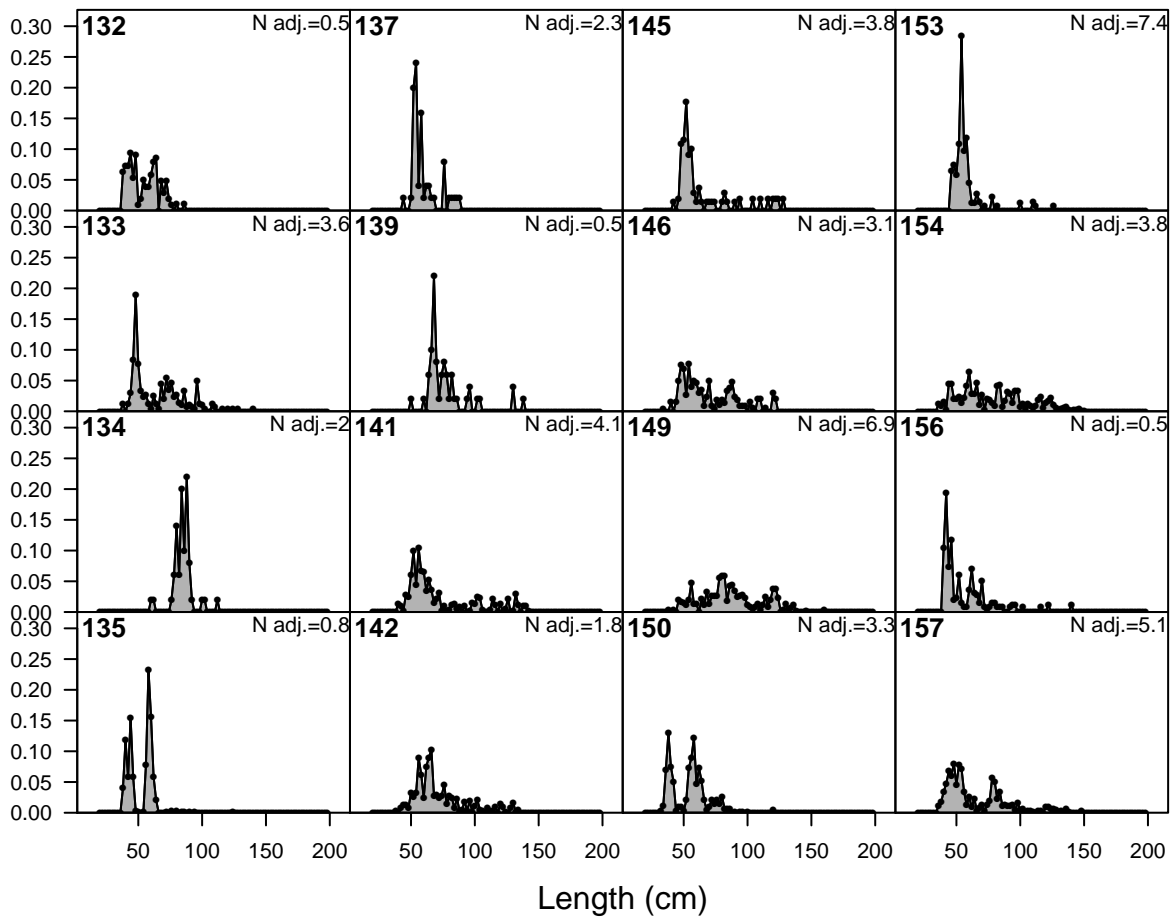
Proportion



Proportion

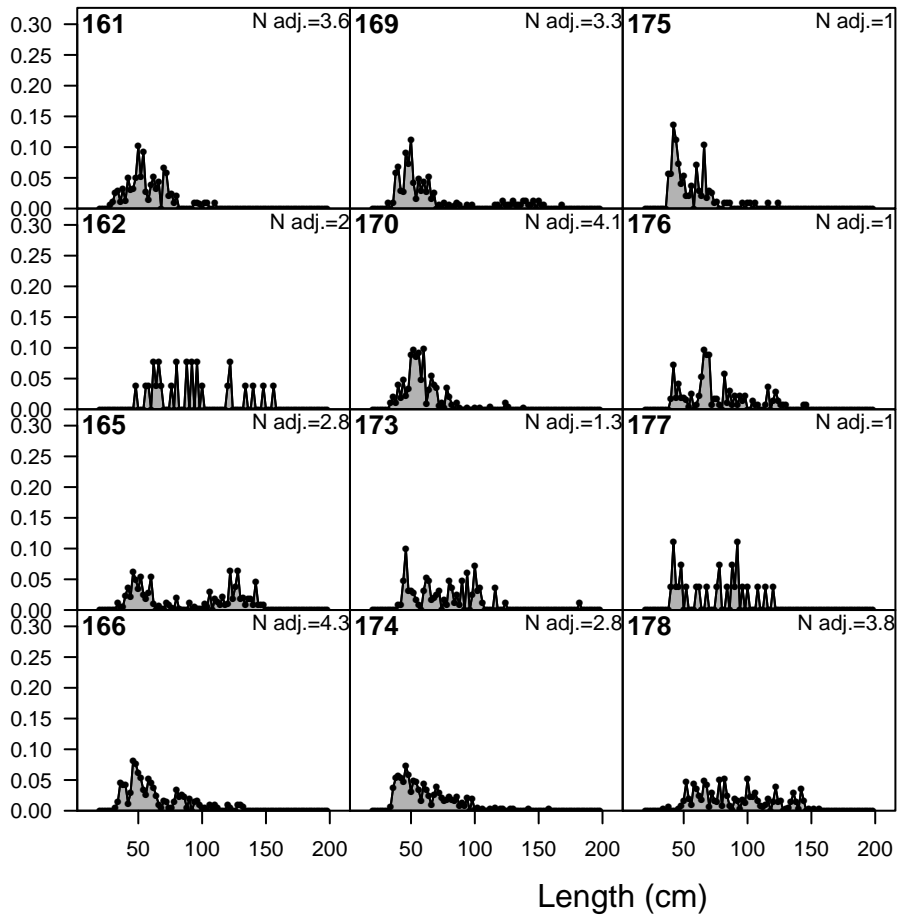


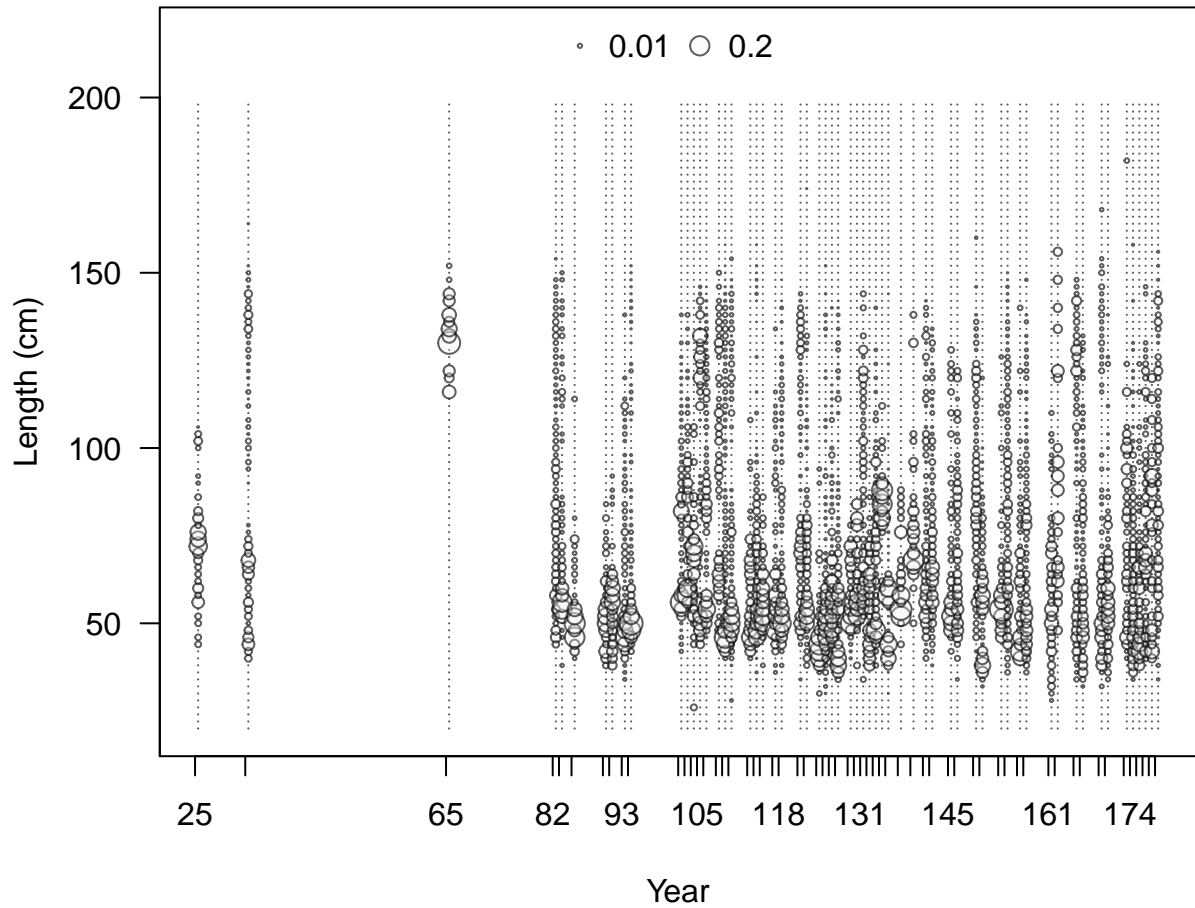
Proportion



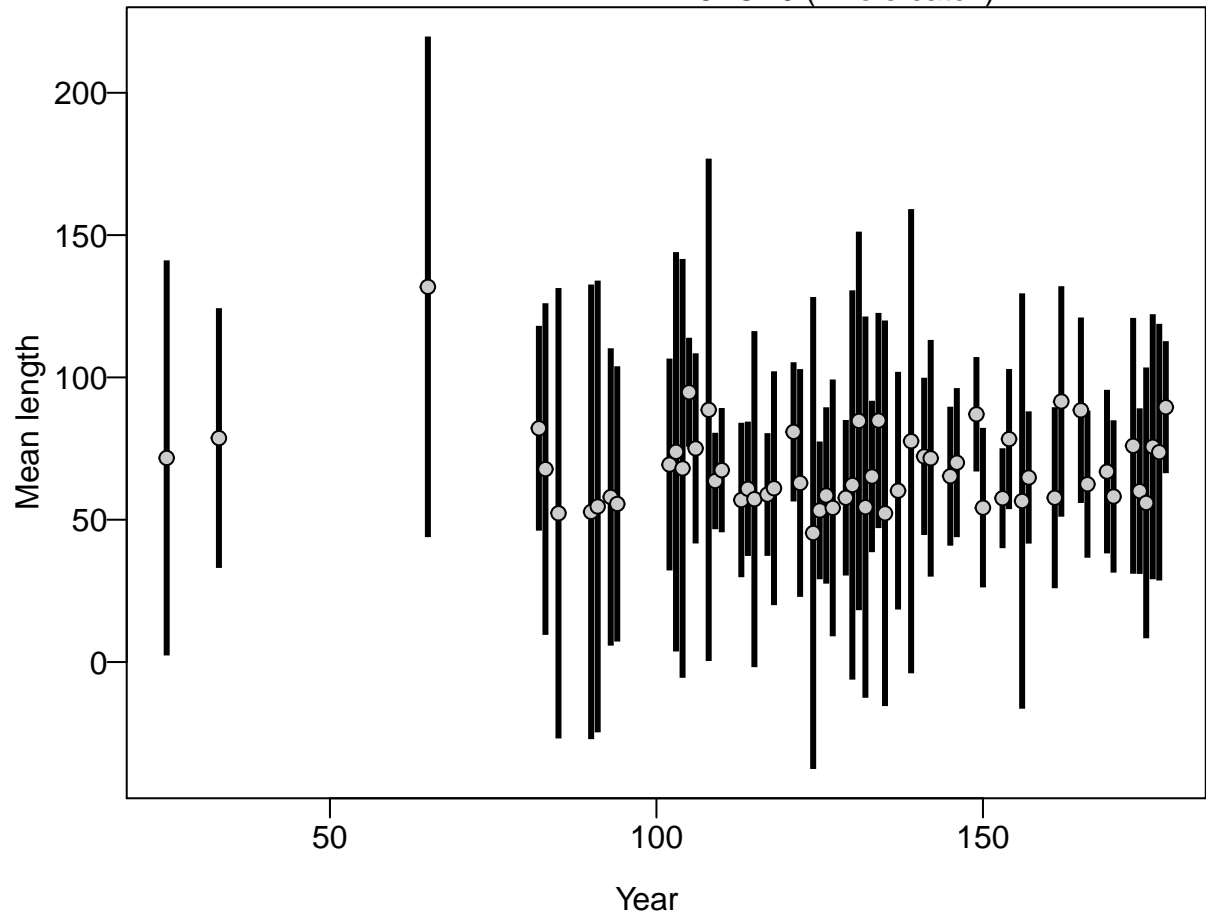


Proportion

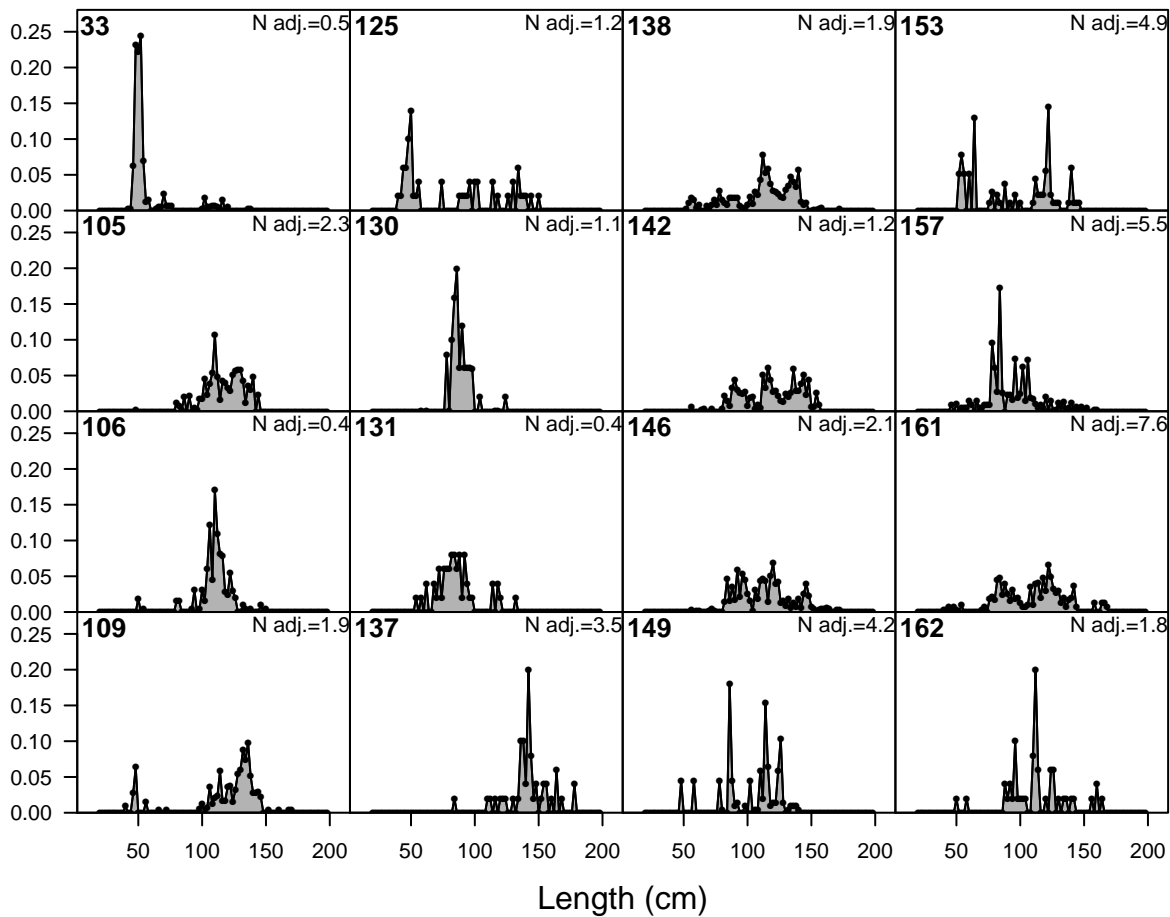


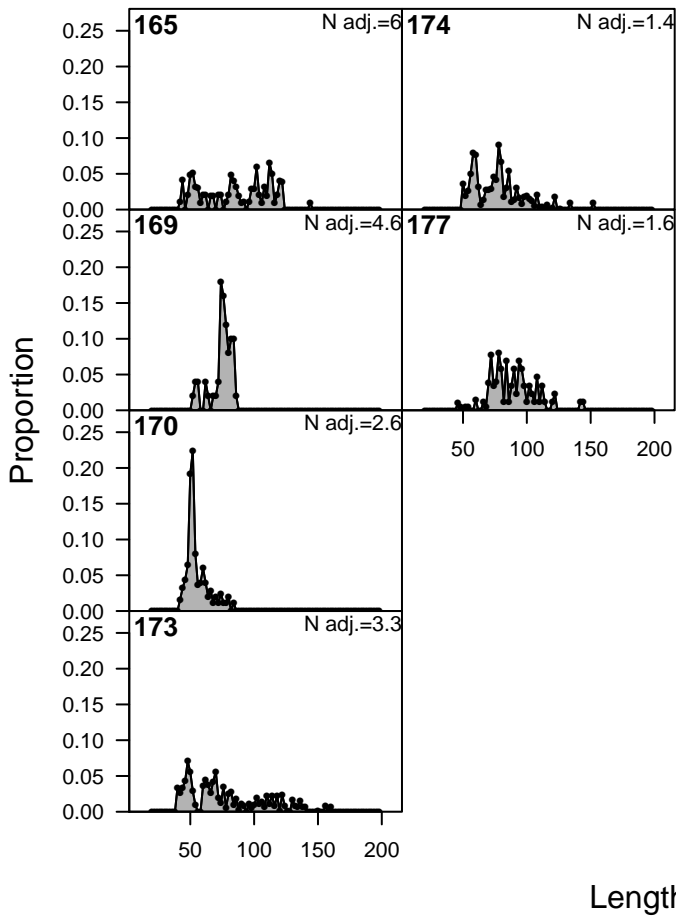


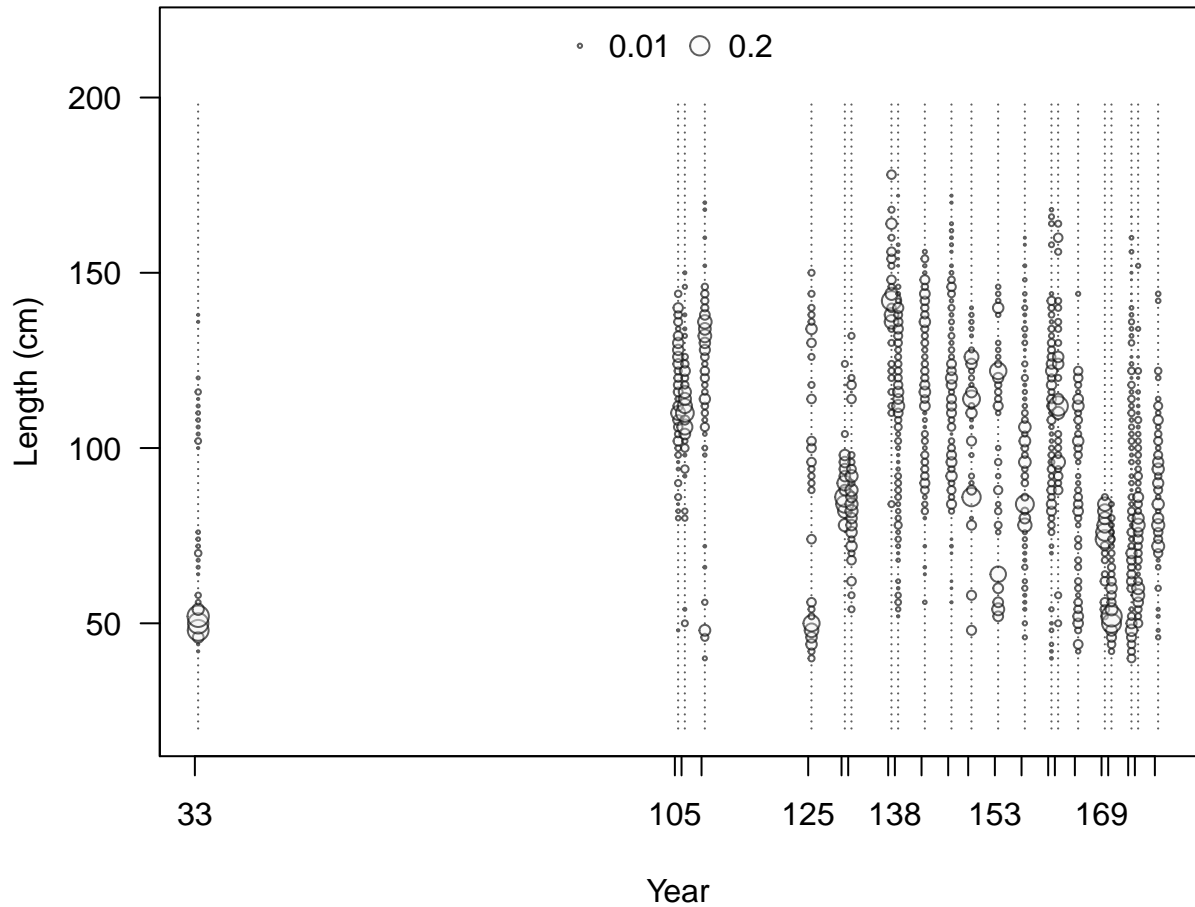
## A5-OBJ (whole catch)



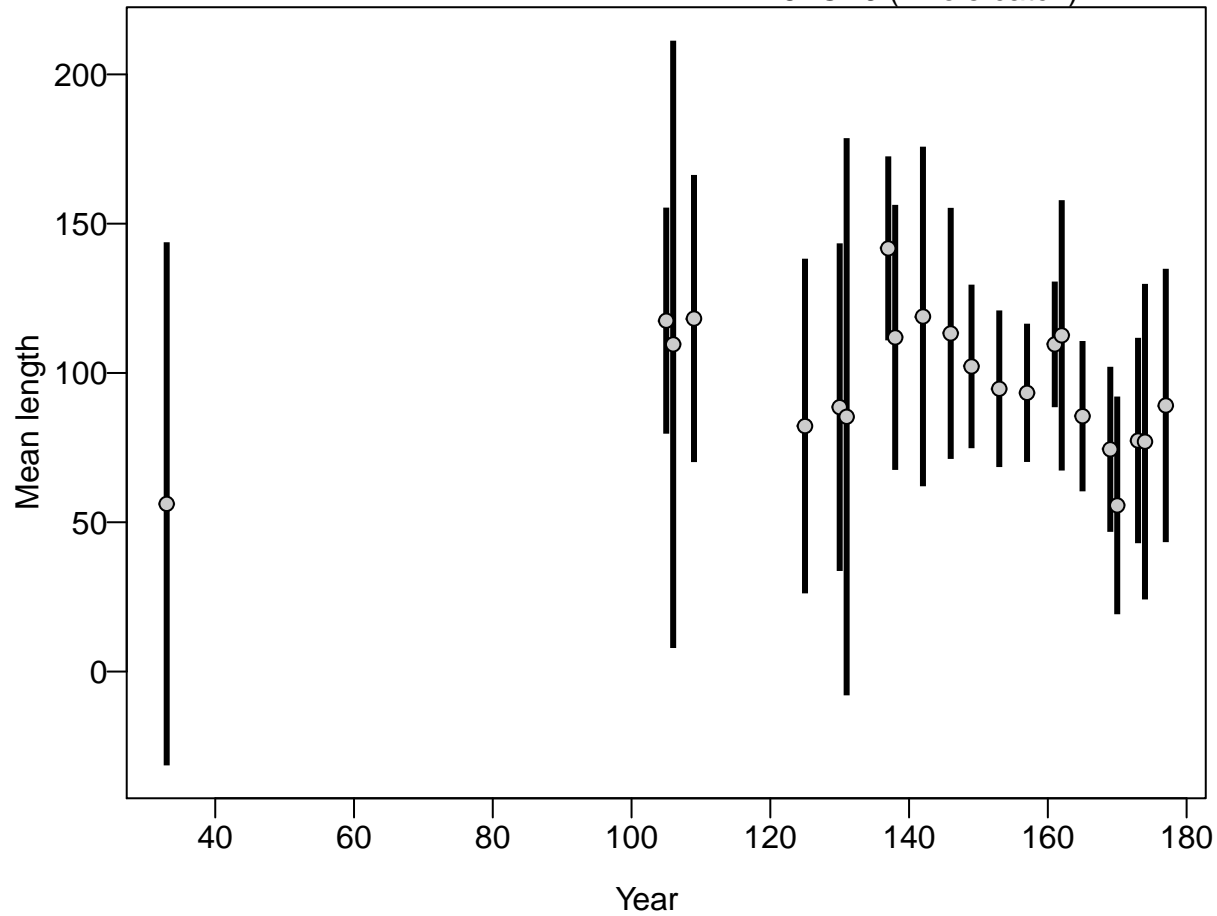
Proportion

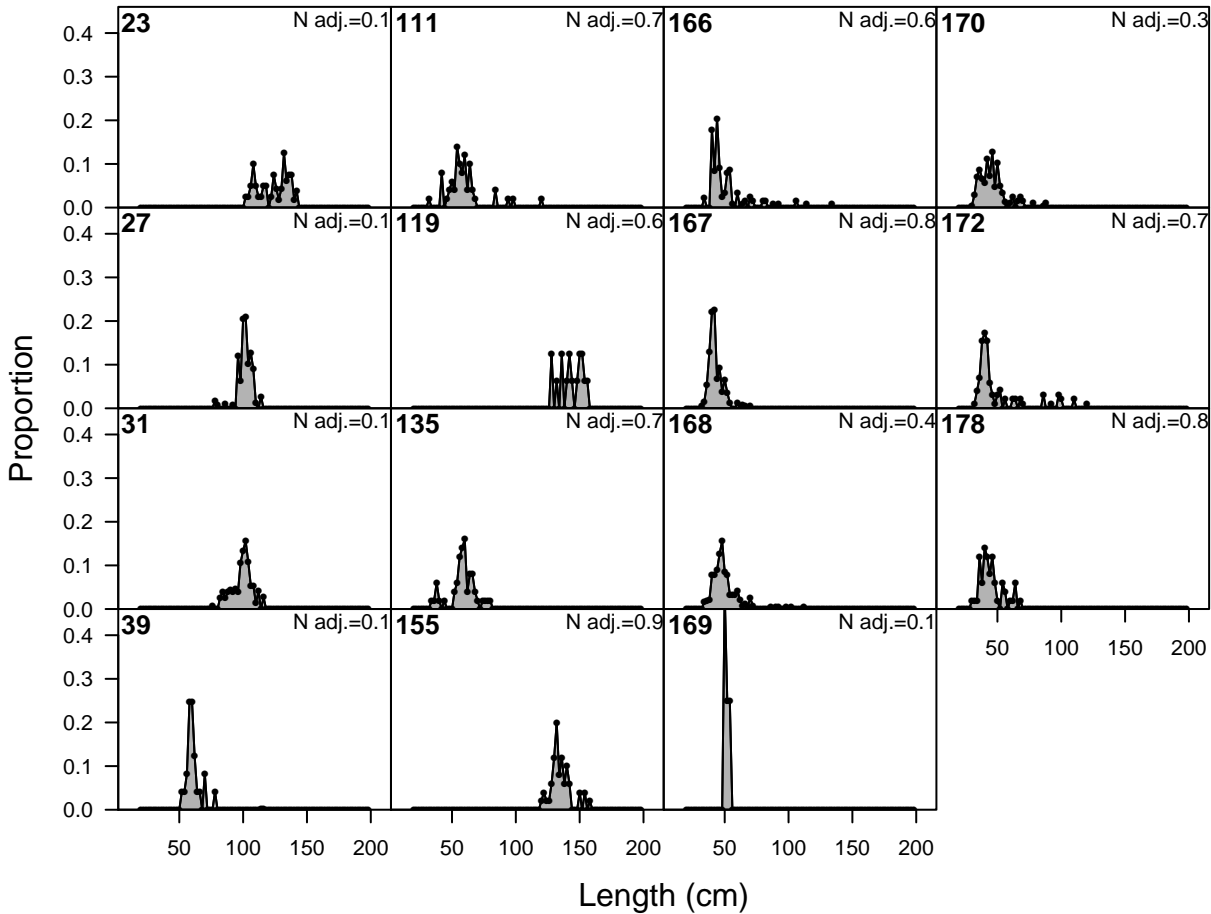




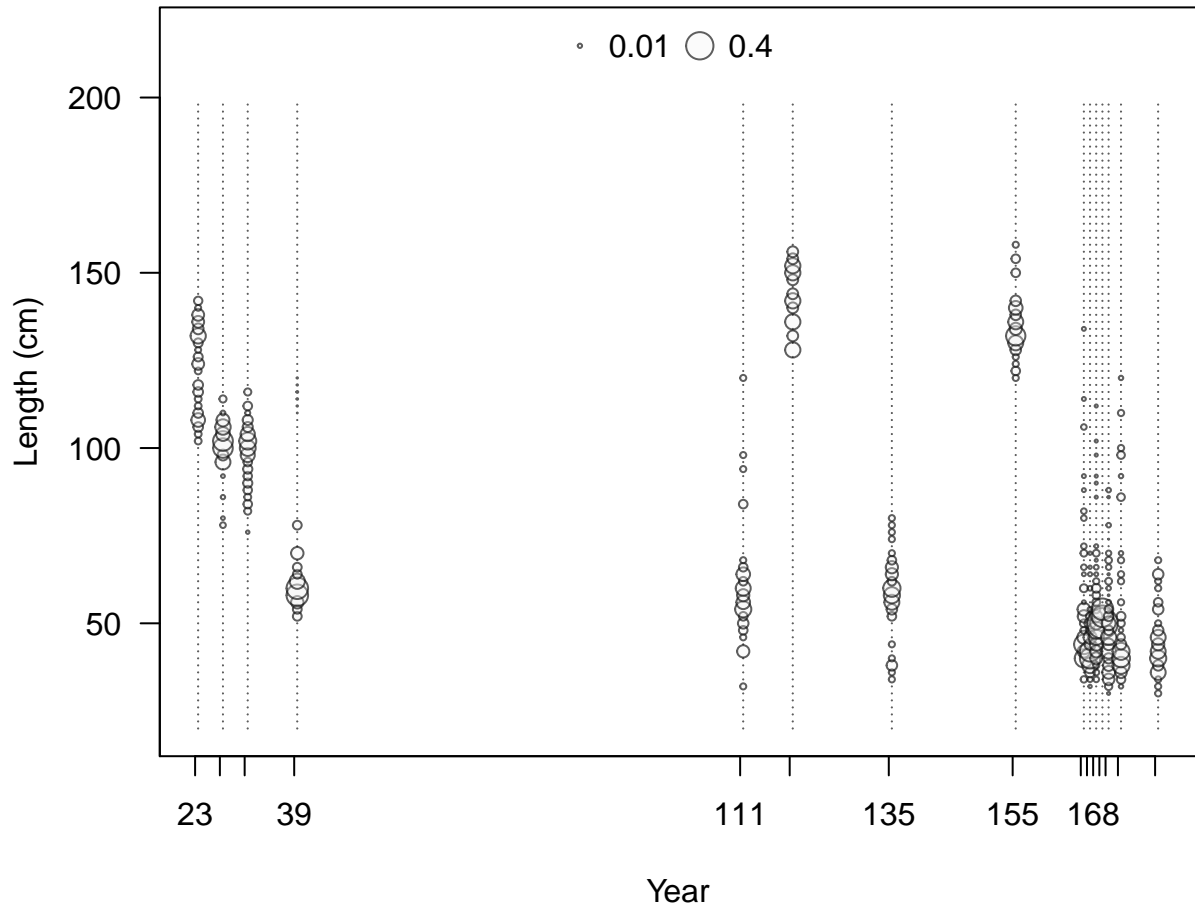


## A6-OBJ (whole catch)

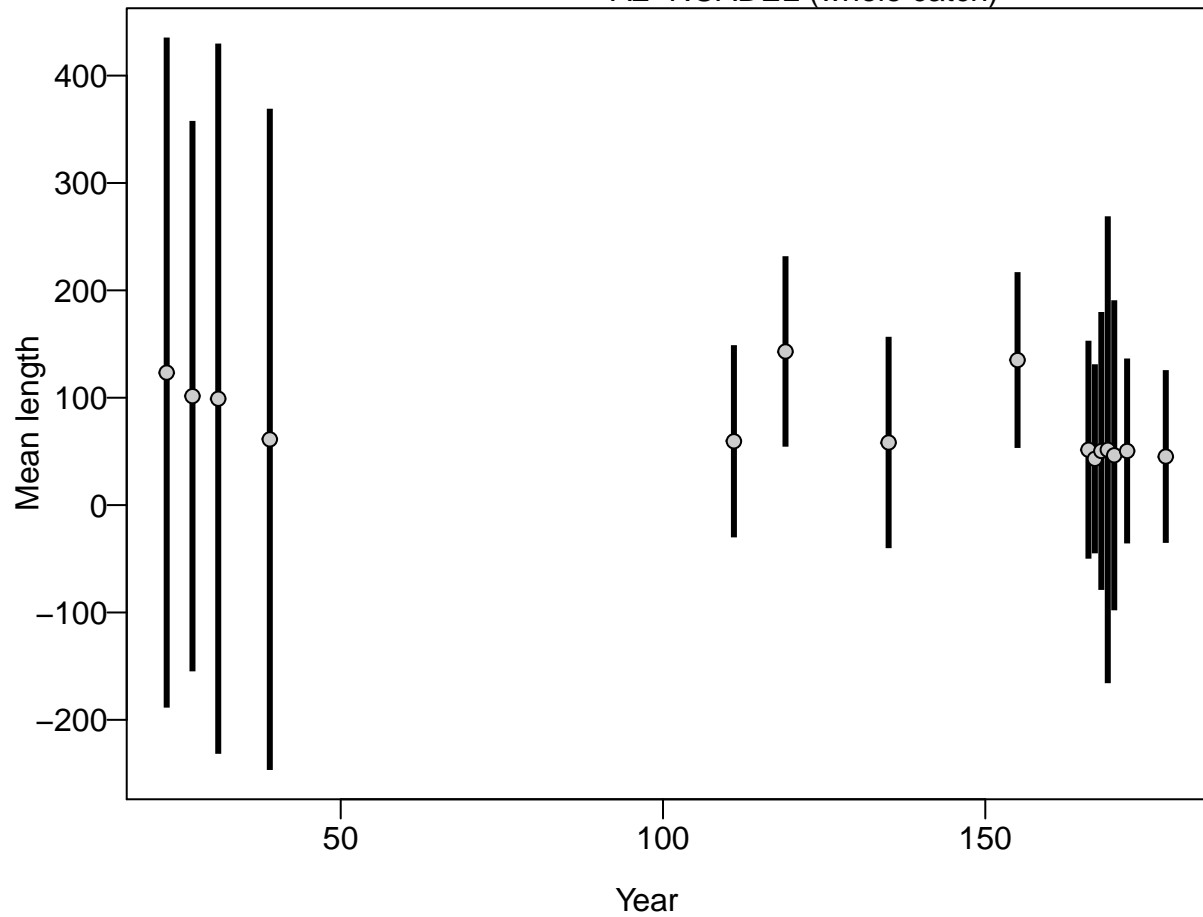


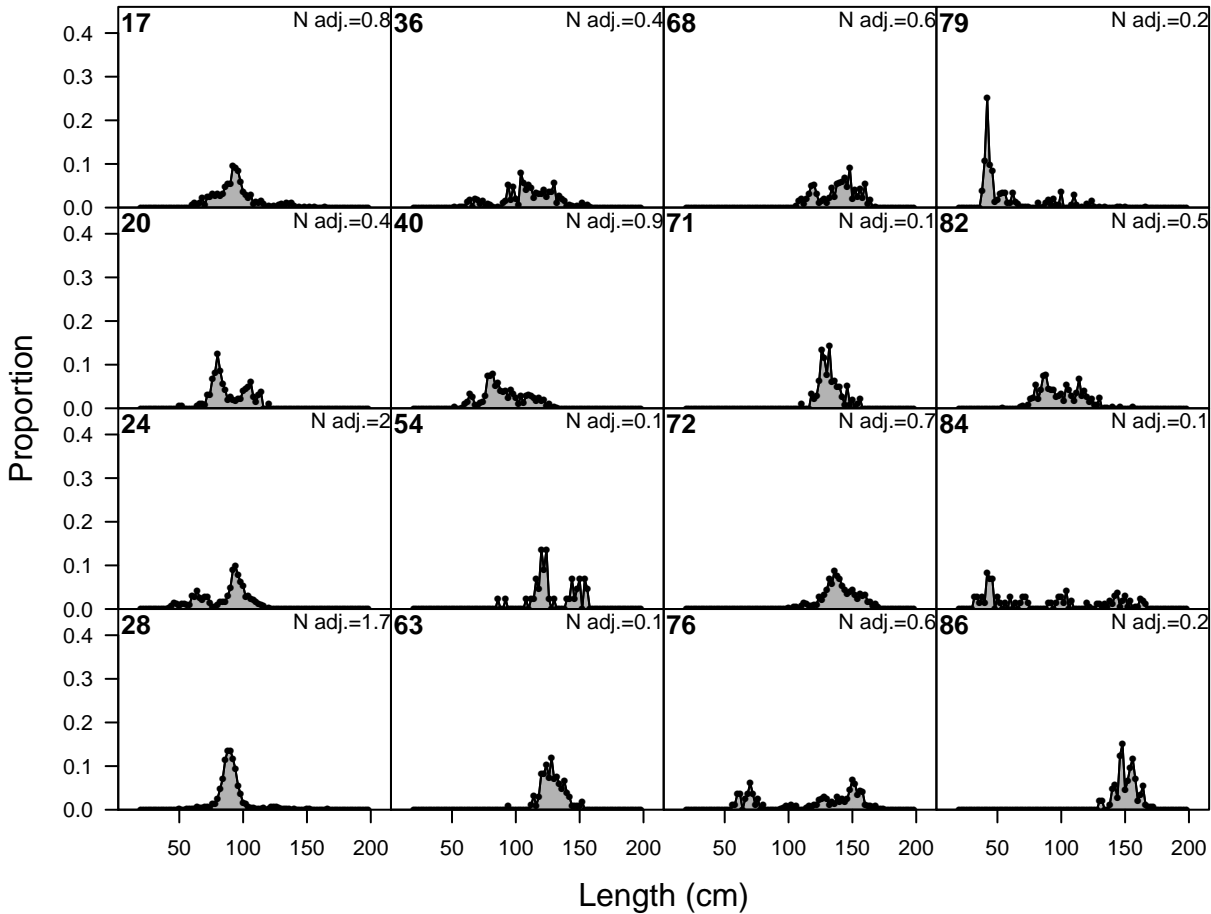


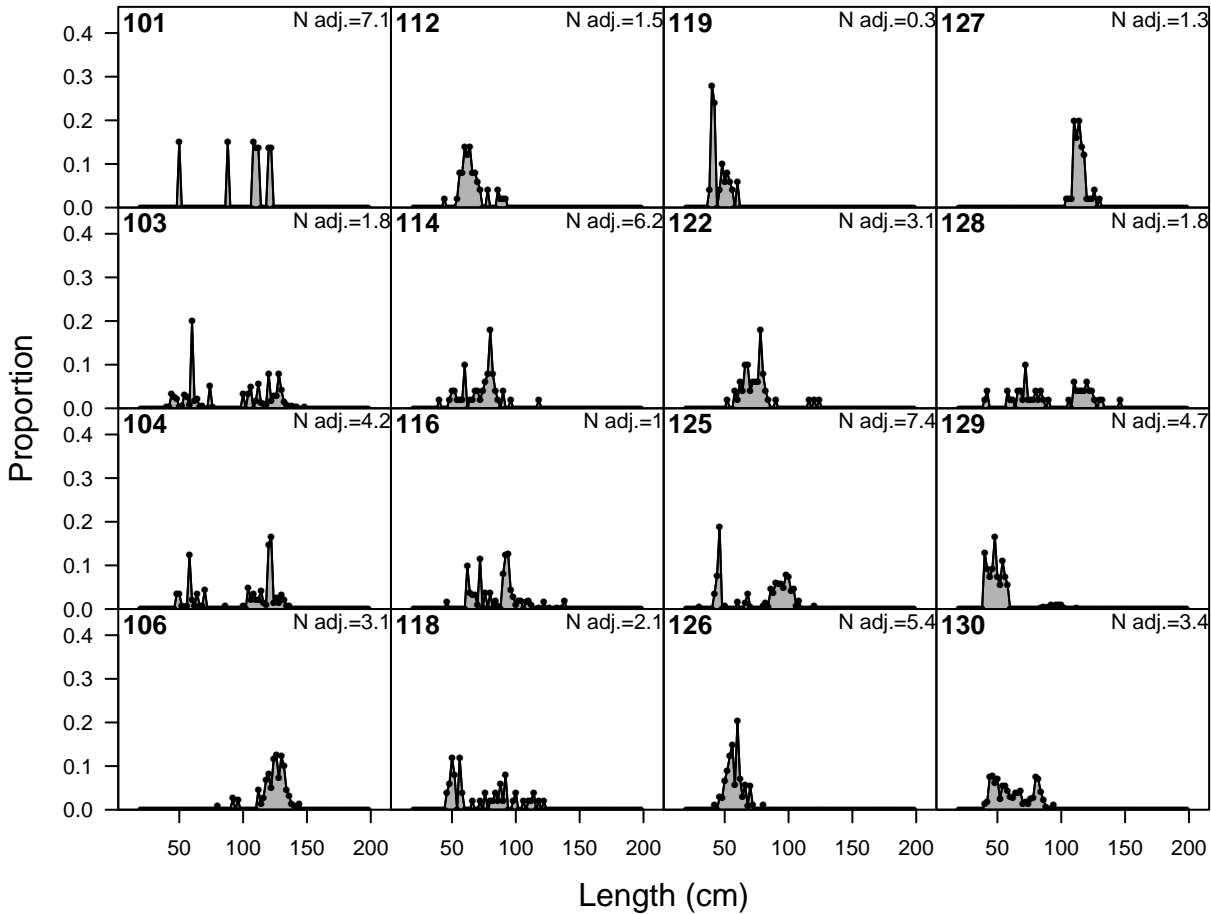


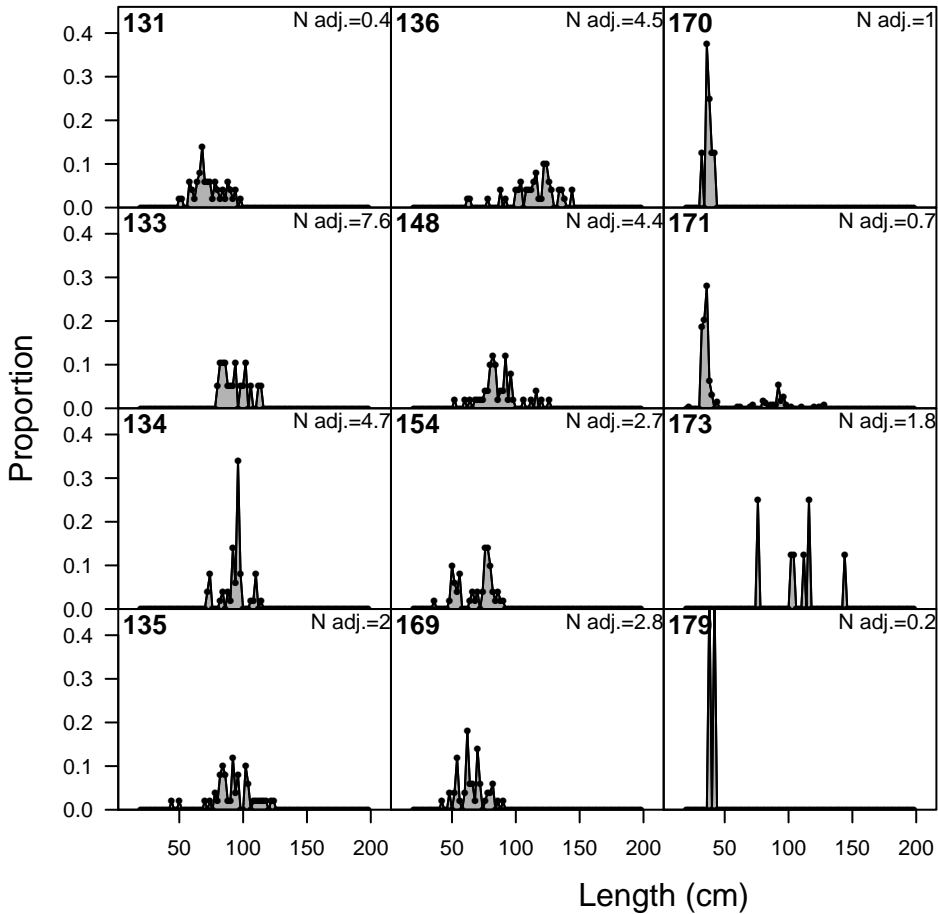


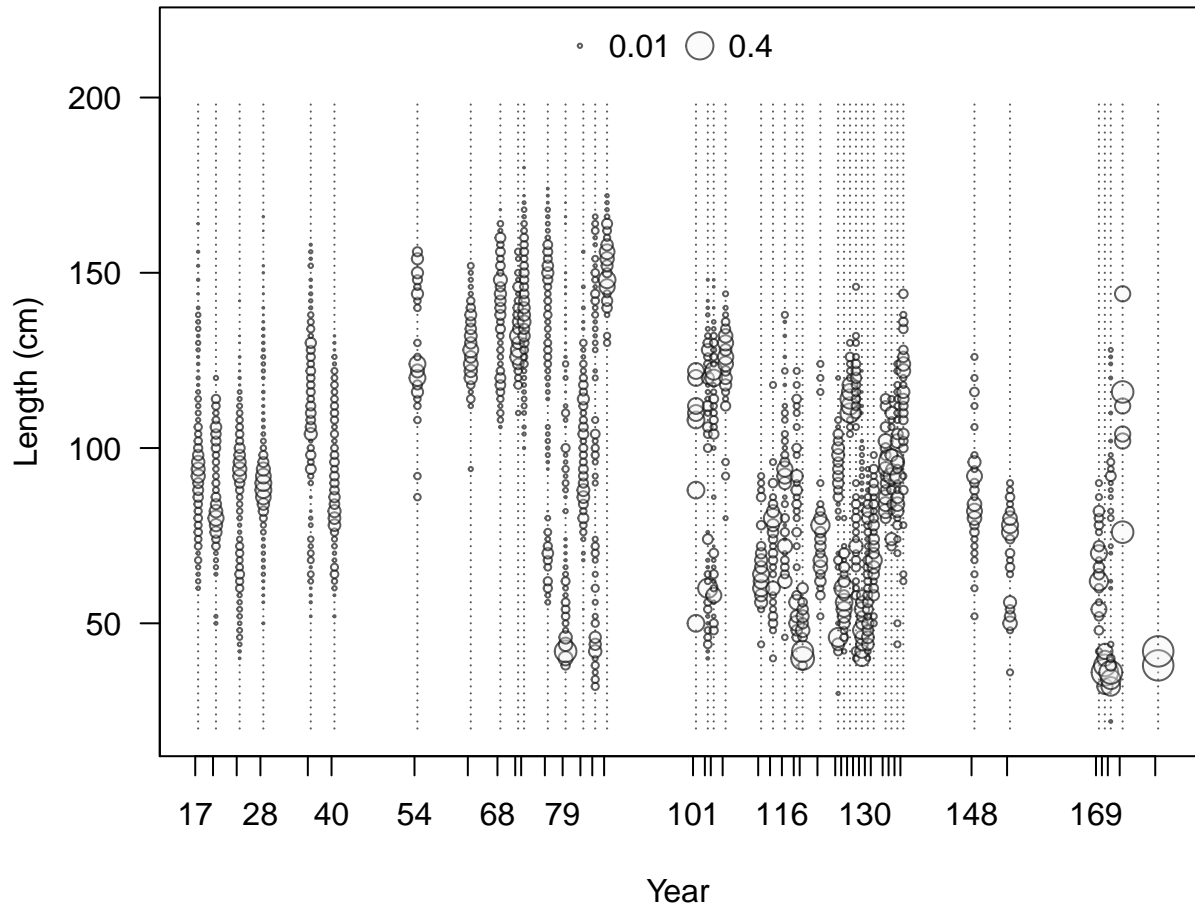
## A2-NOADEL (whole catch)



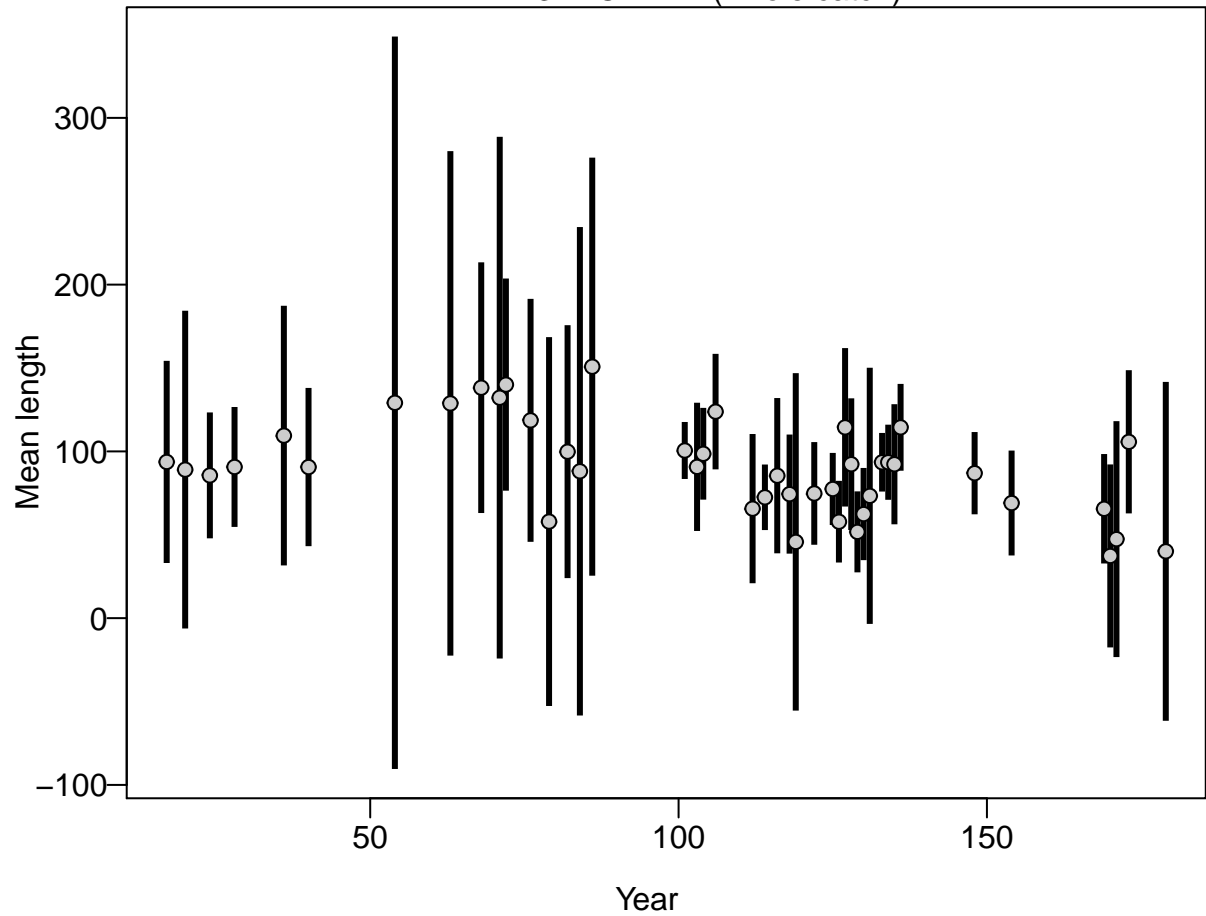


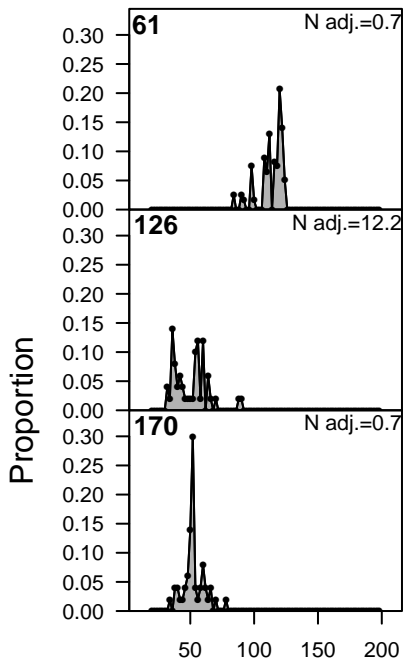






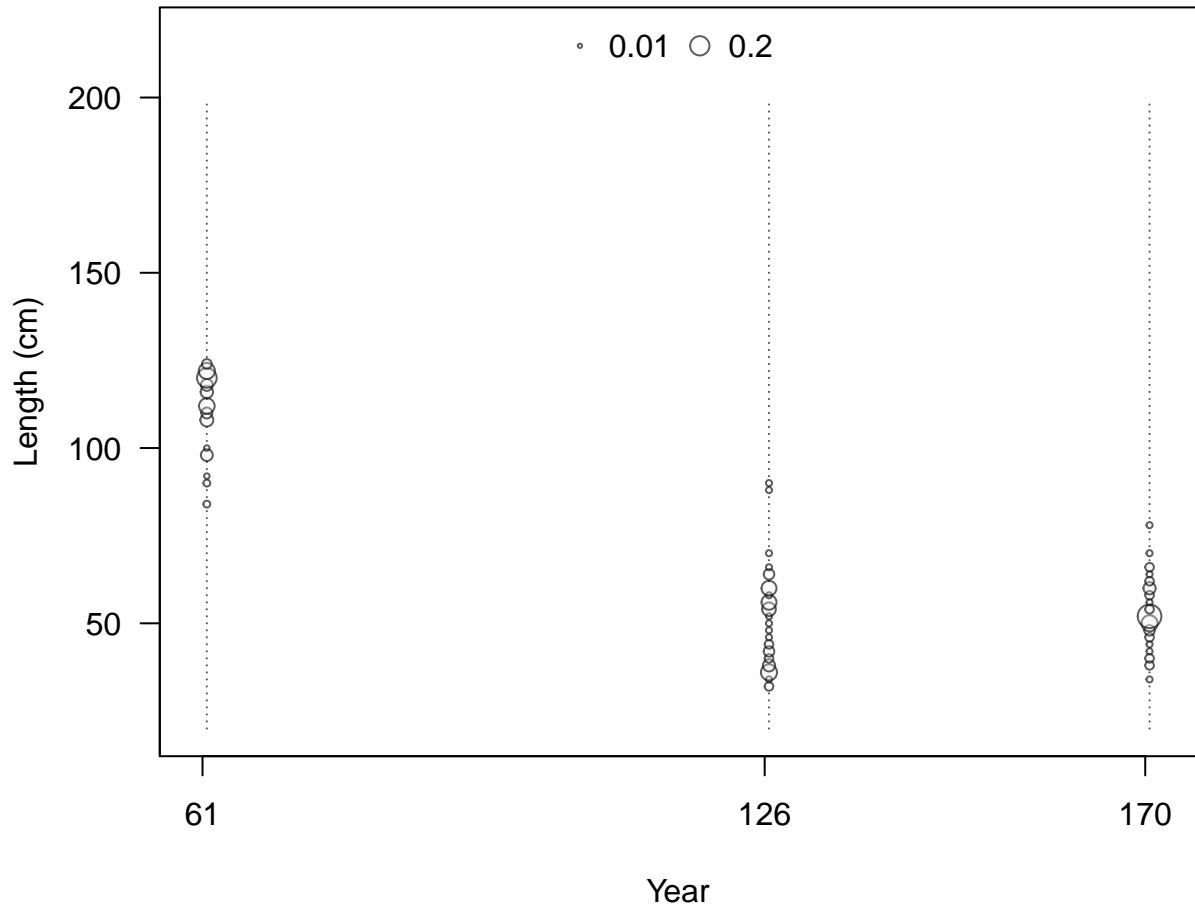
A3-NOADEL (whole catch)



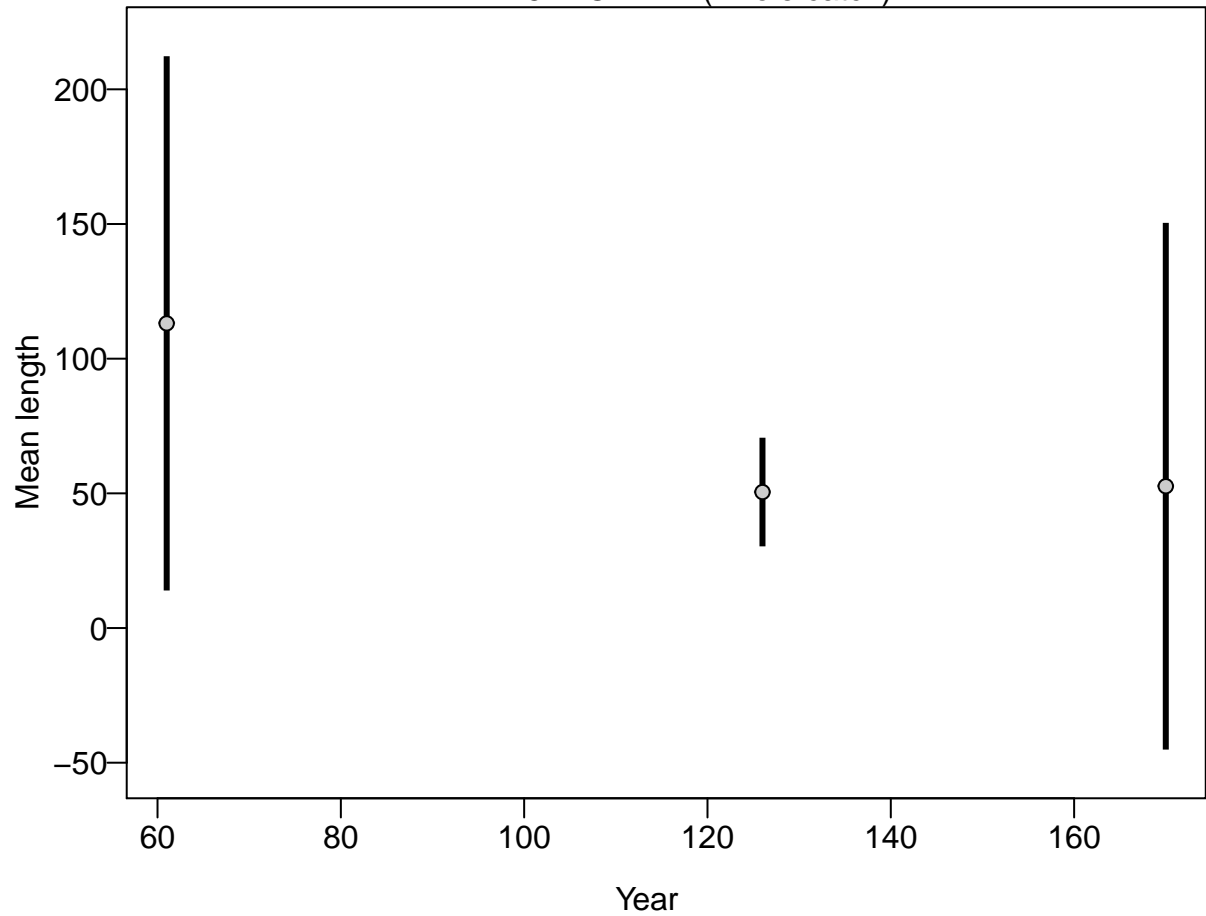


Length (cm)

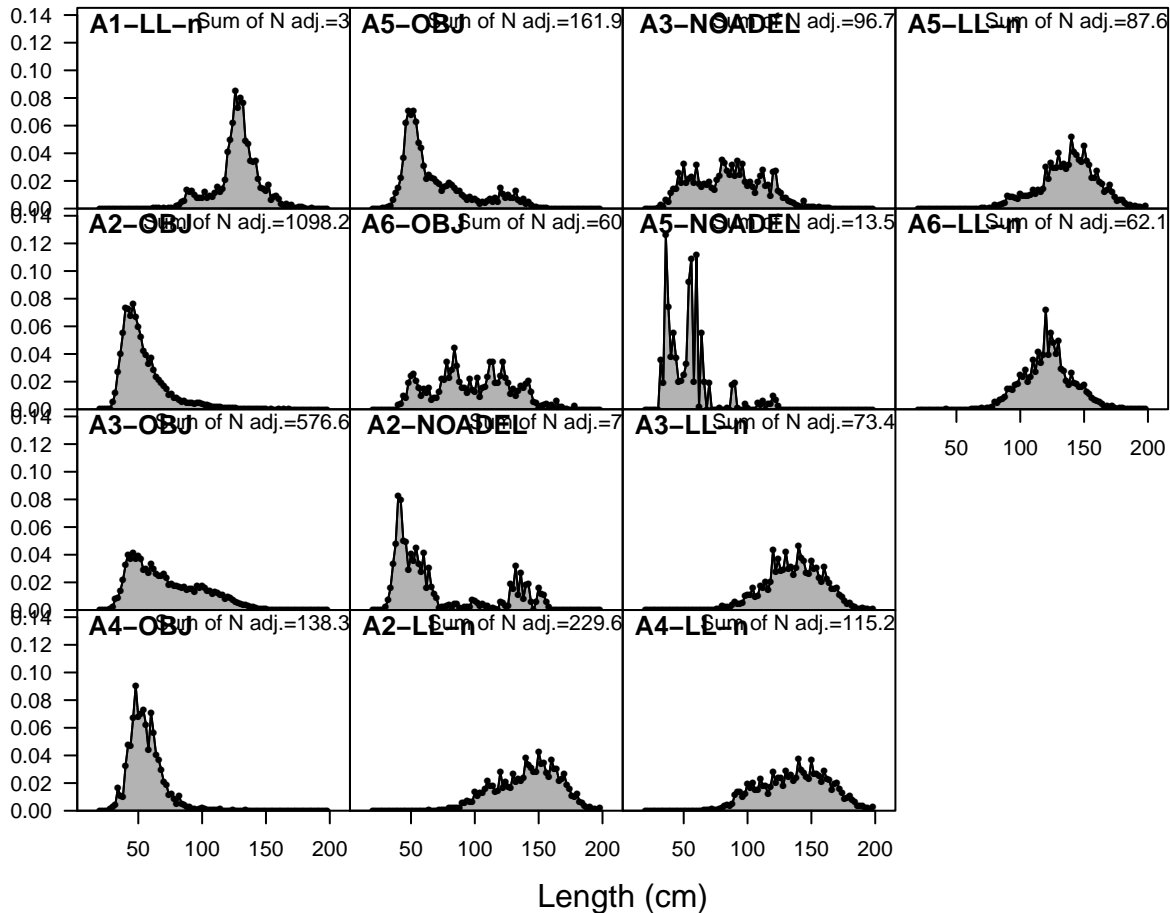


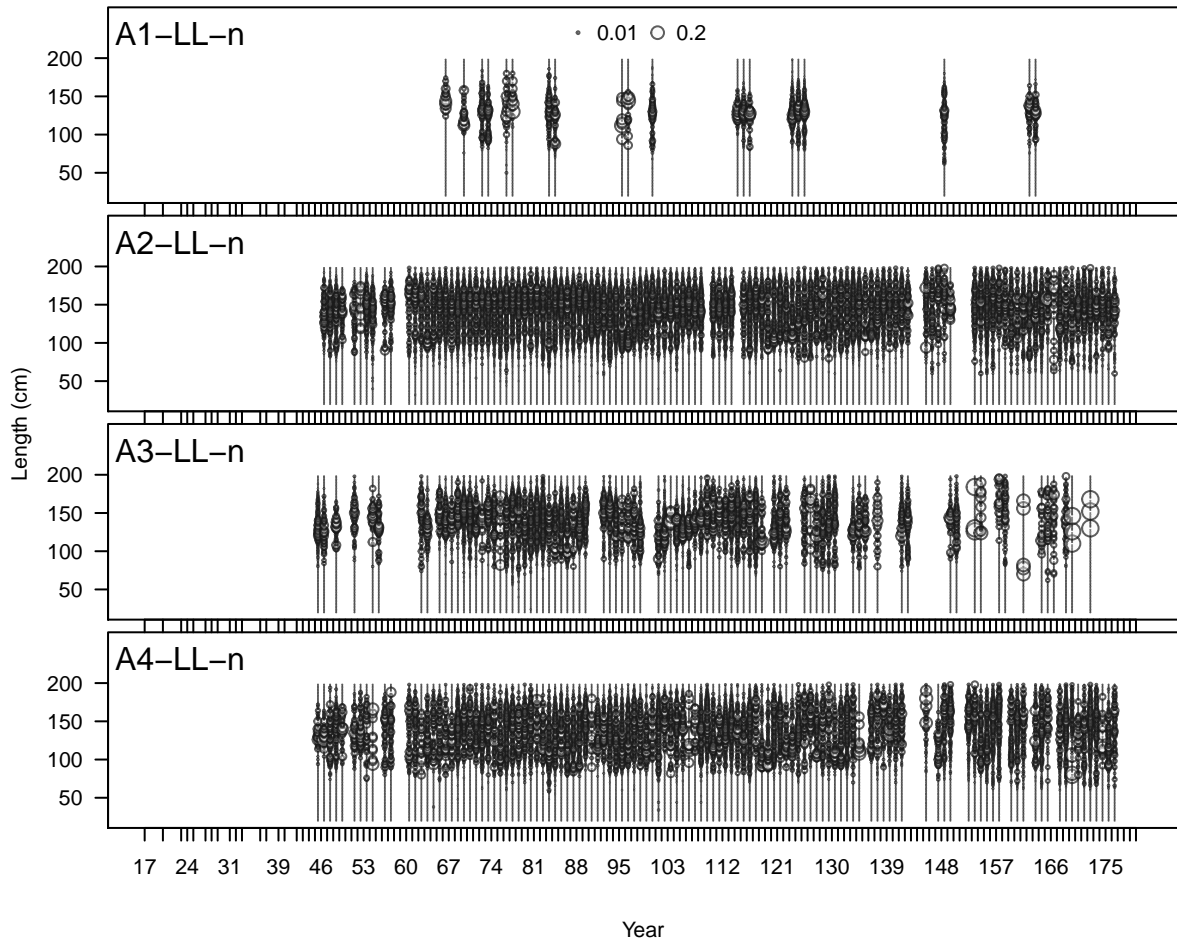


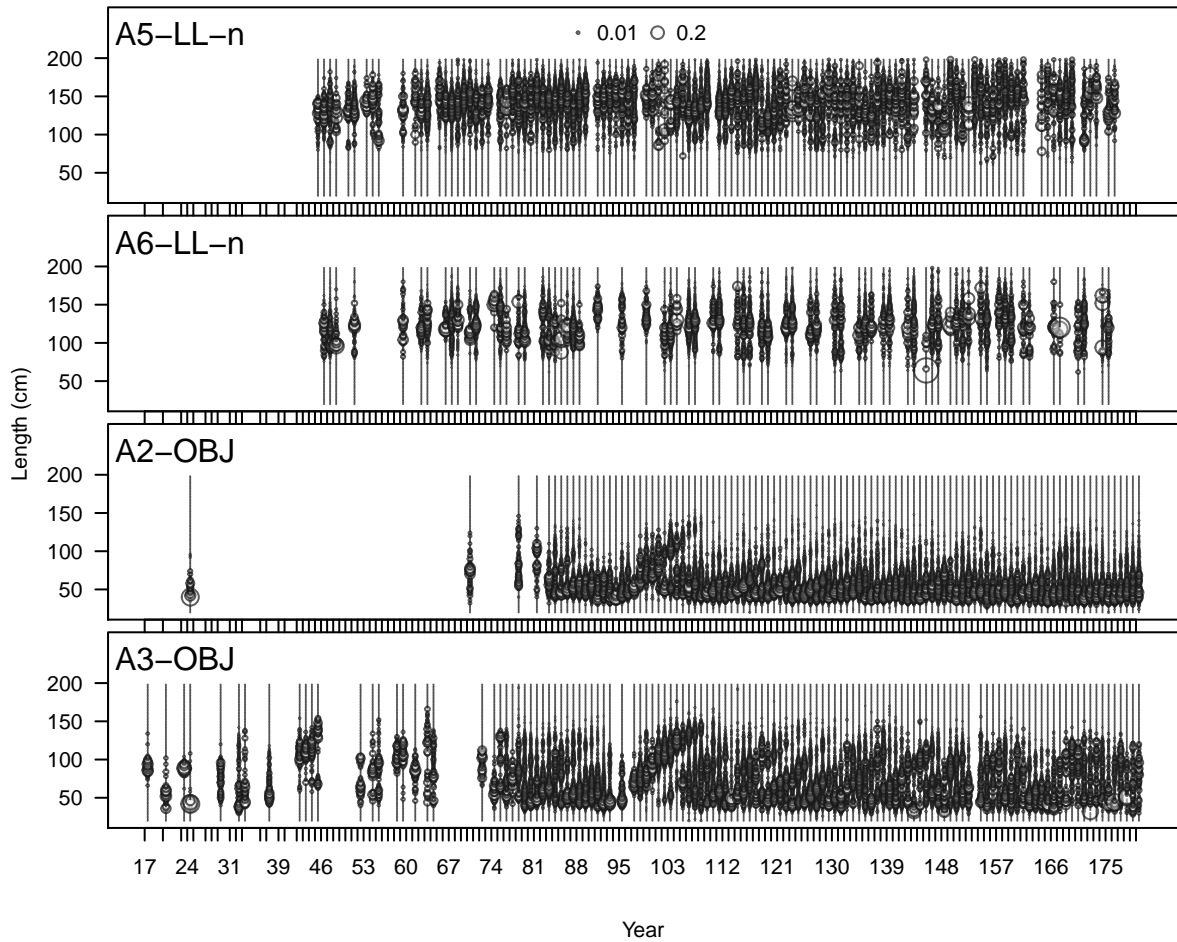
A5-NOADEL (whole catch)

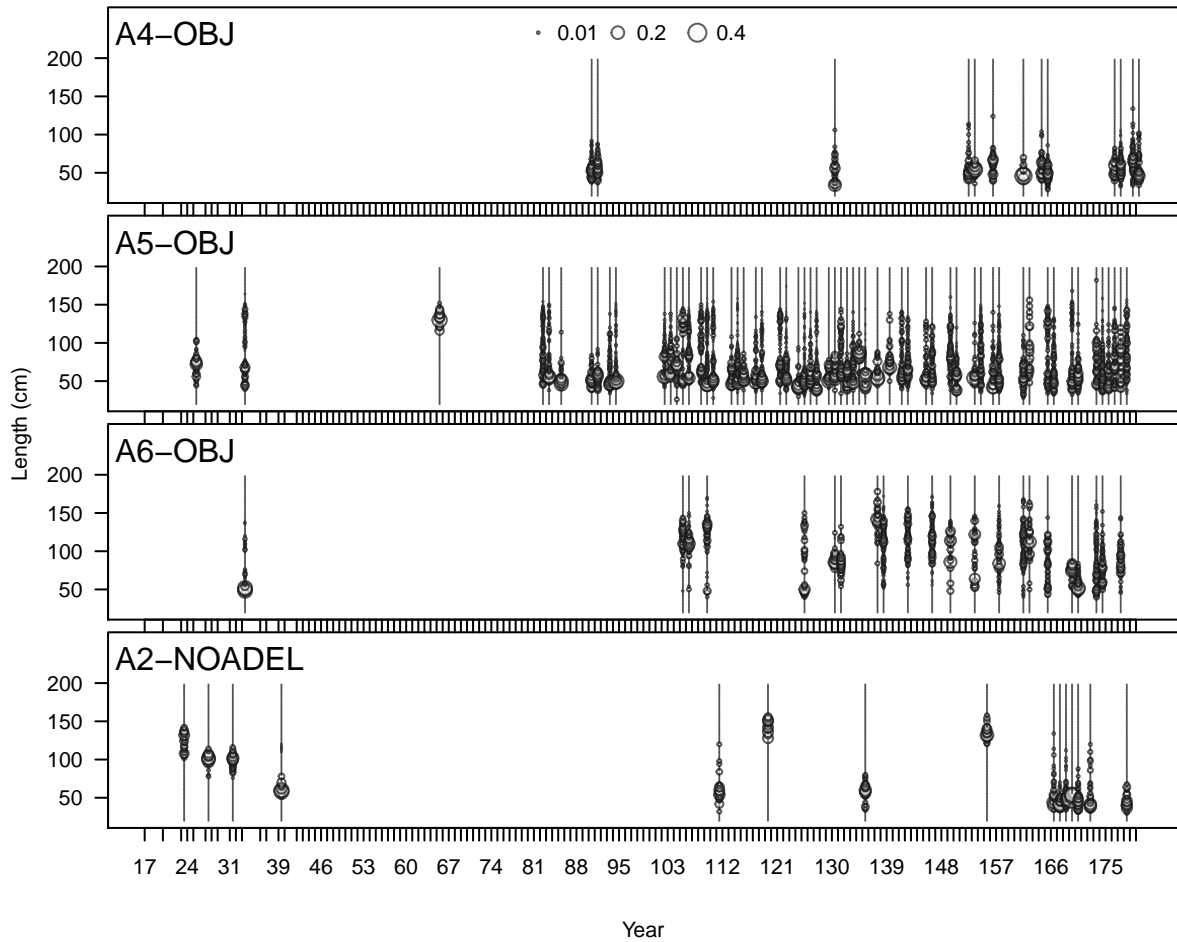


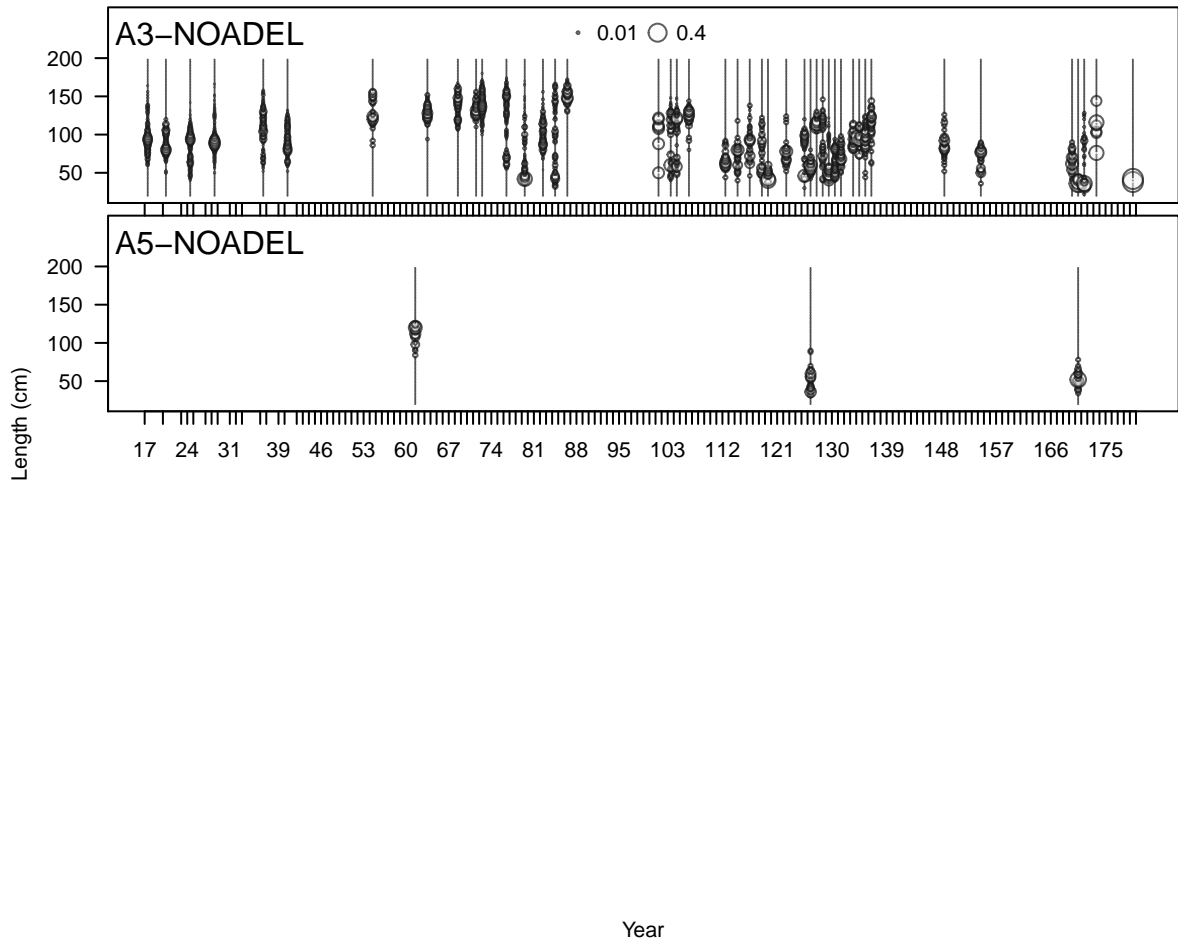
Proportion



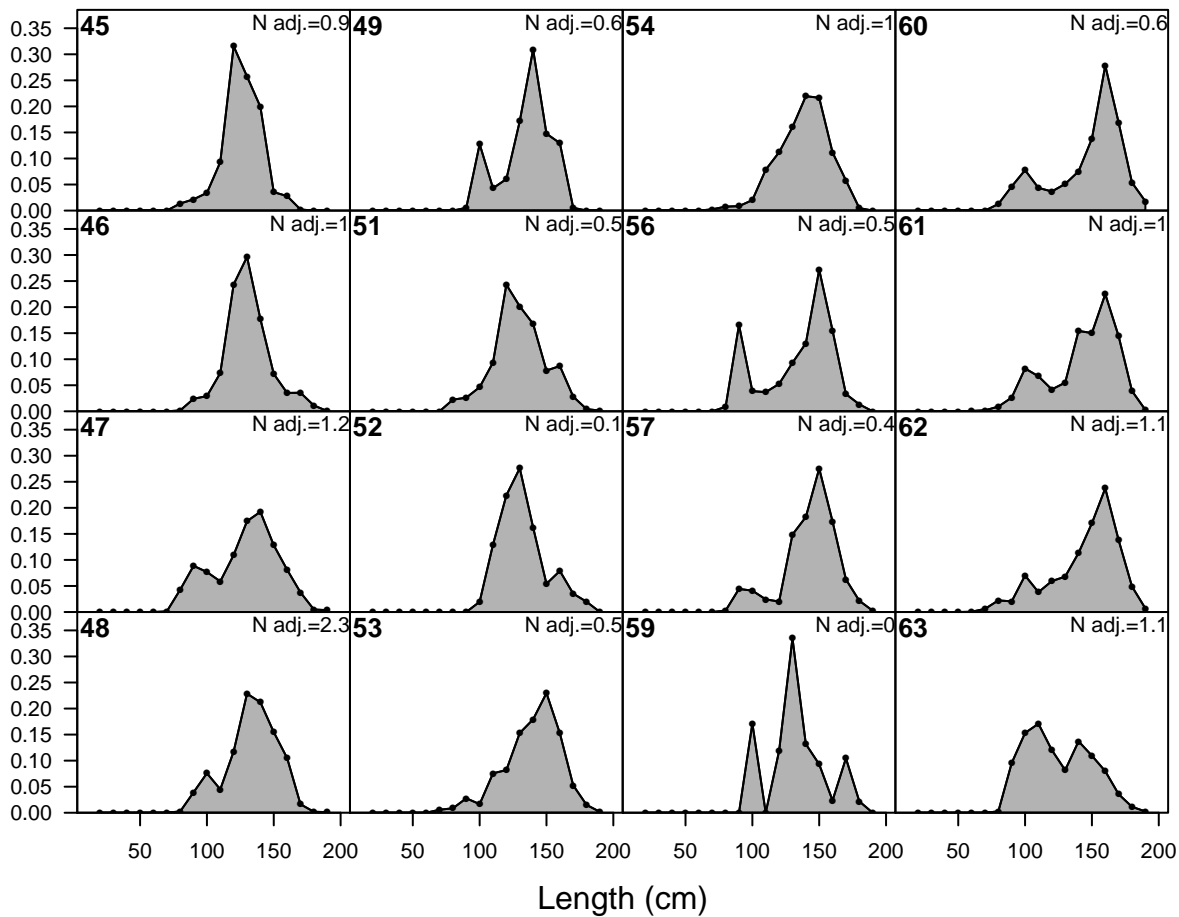






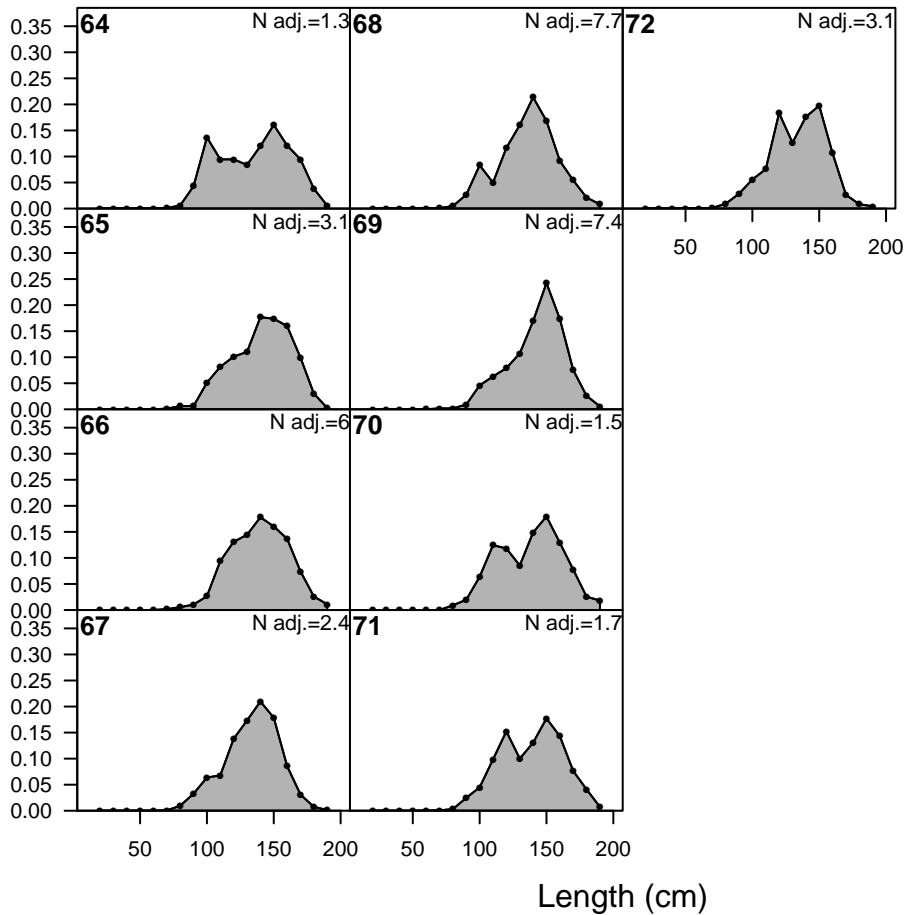


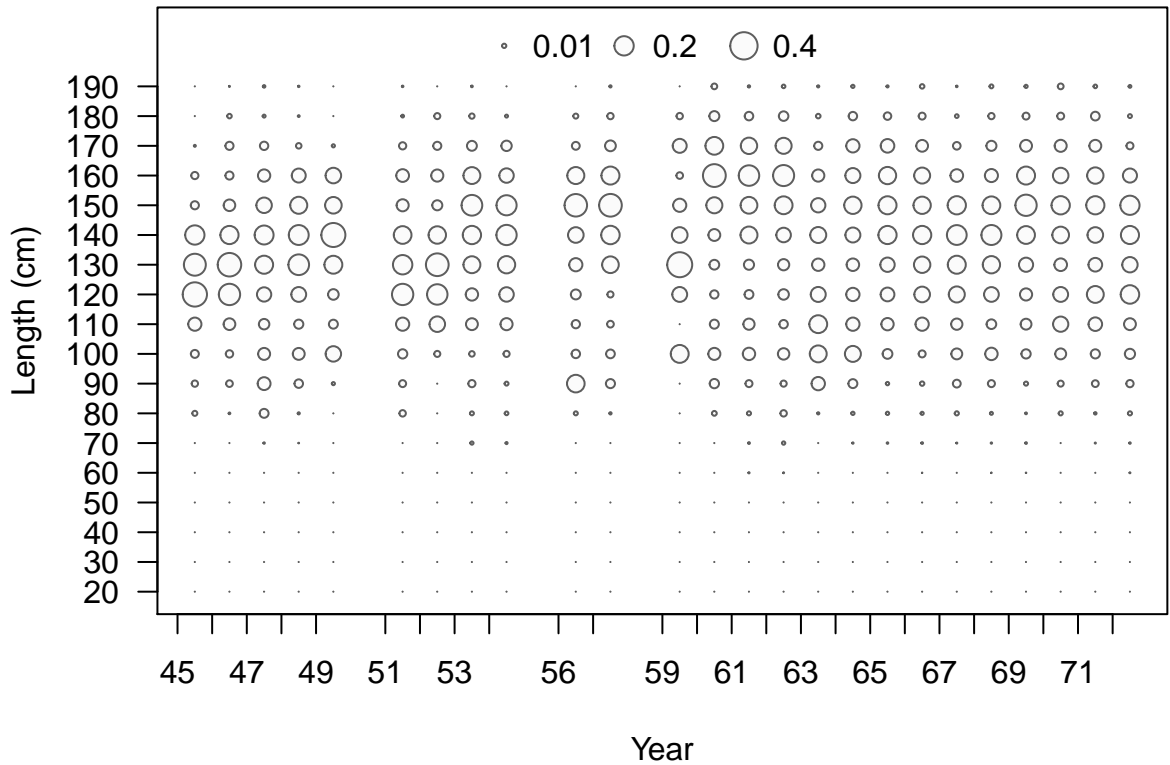
Proportion



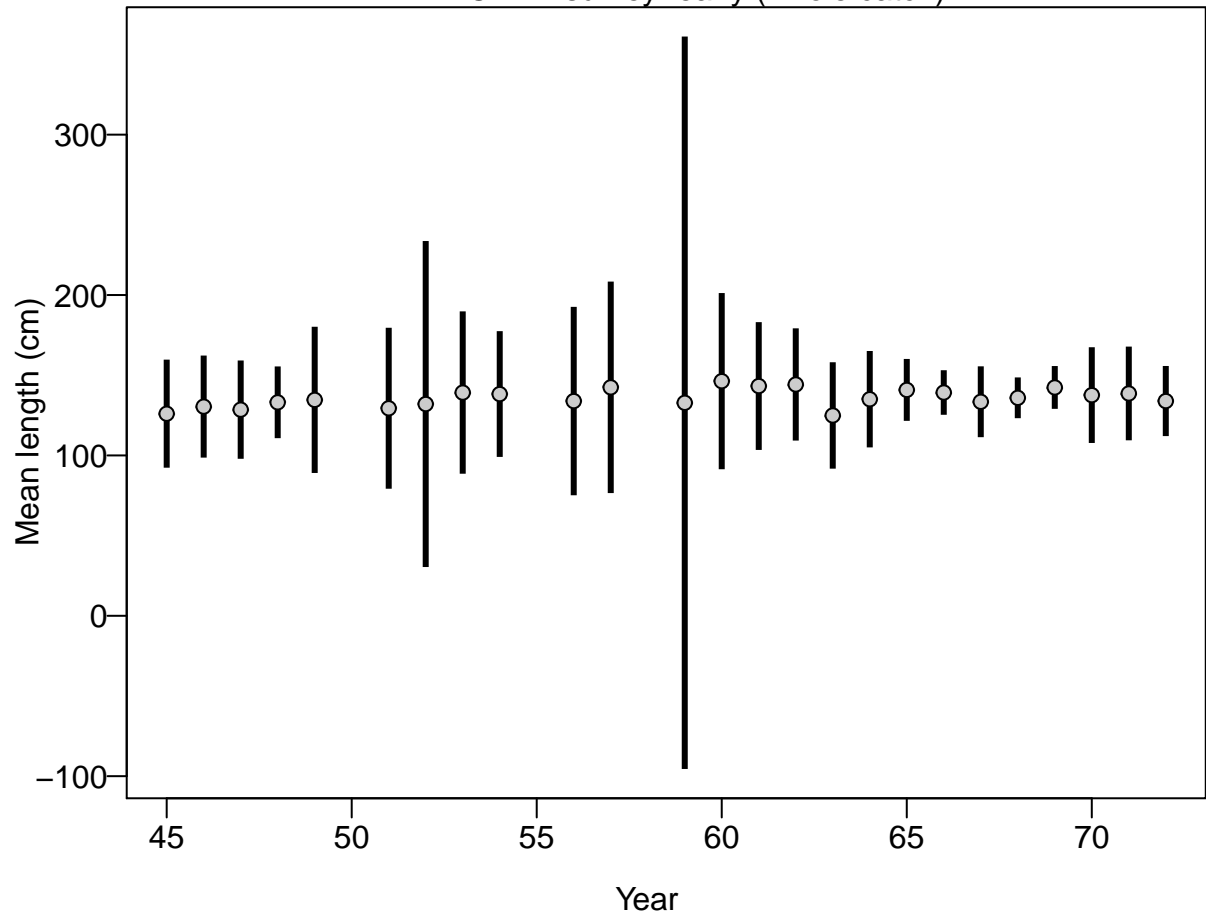


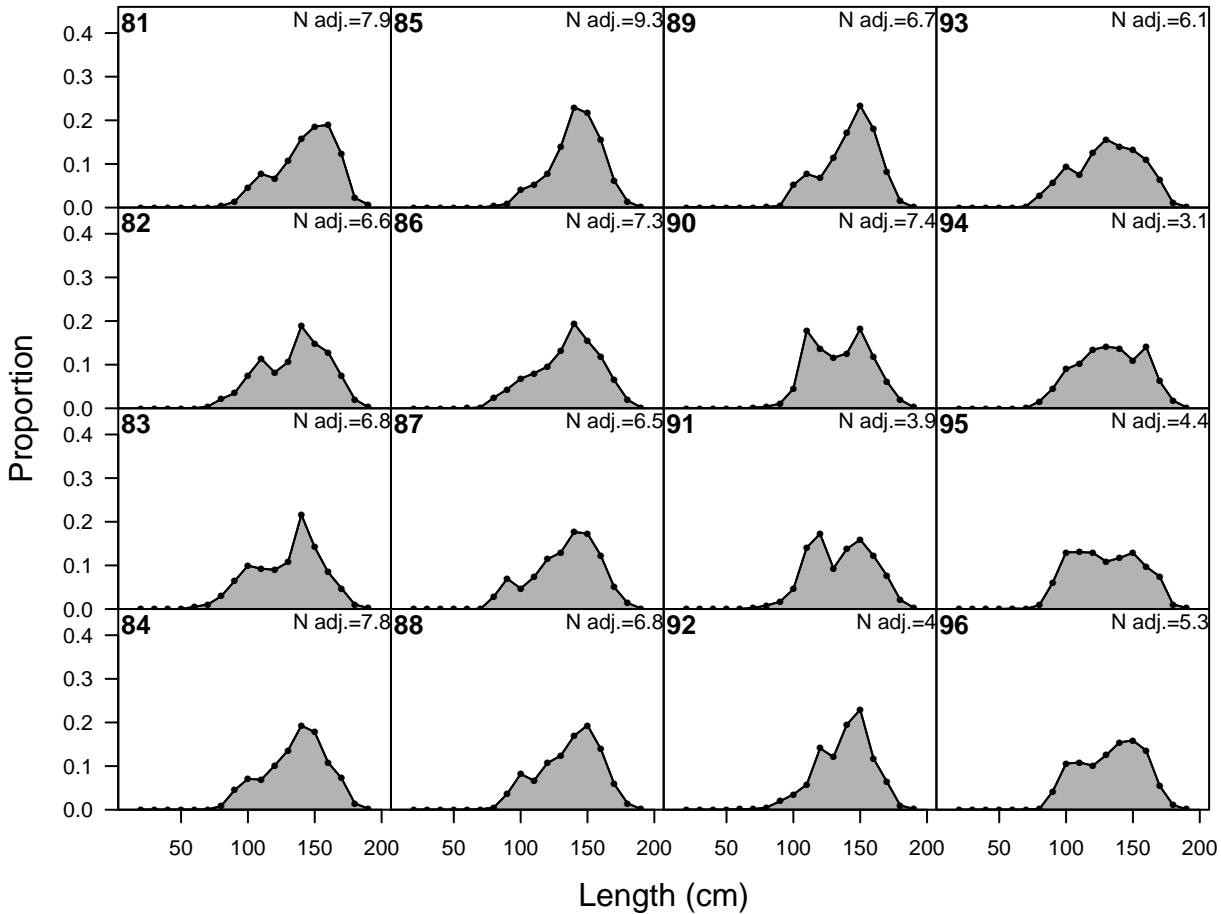
Proportion

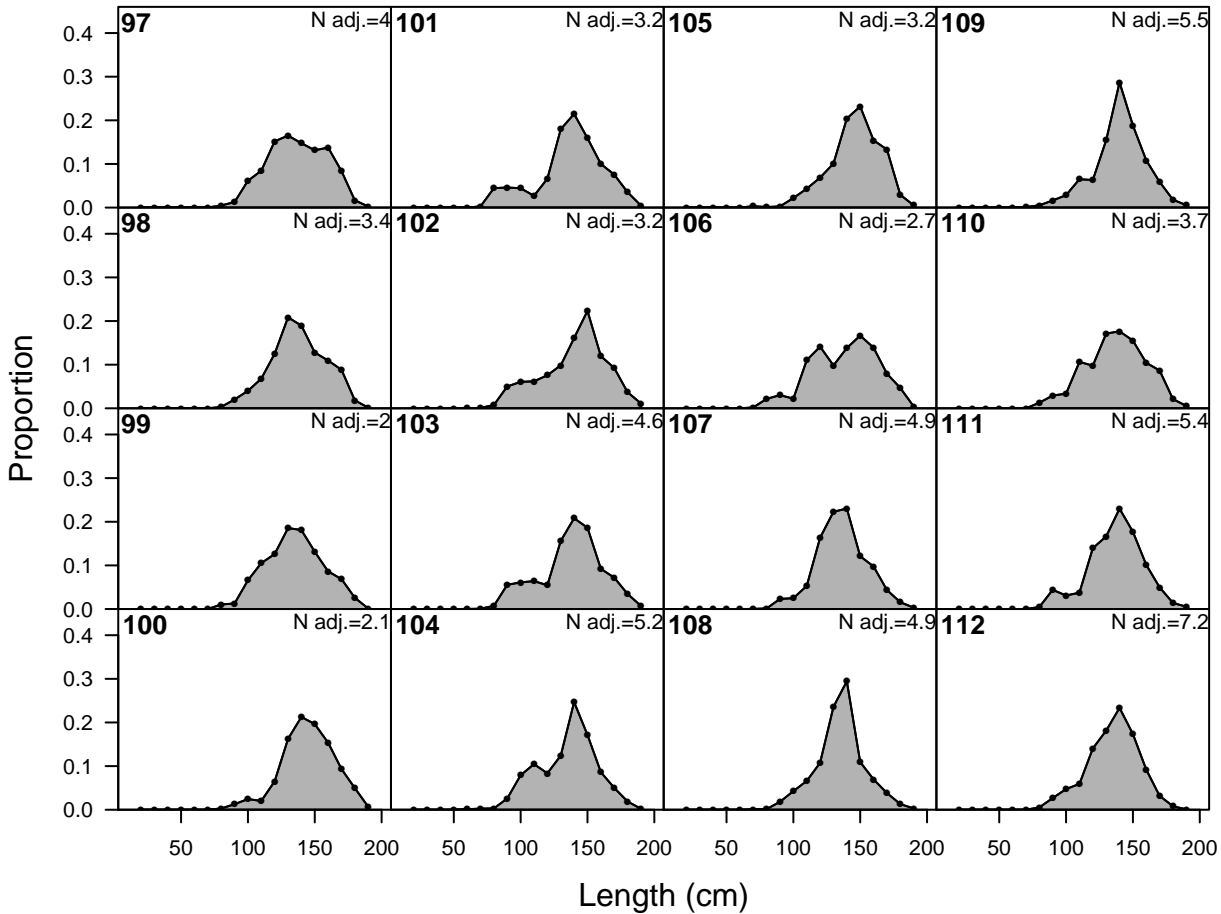


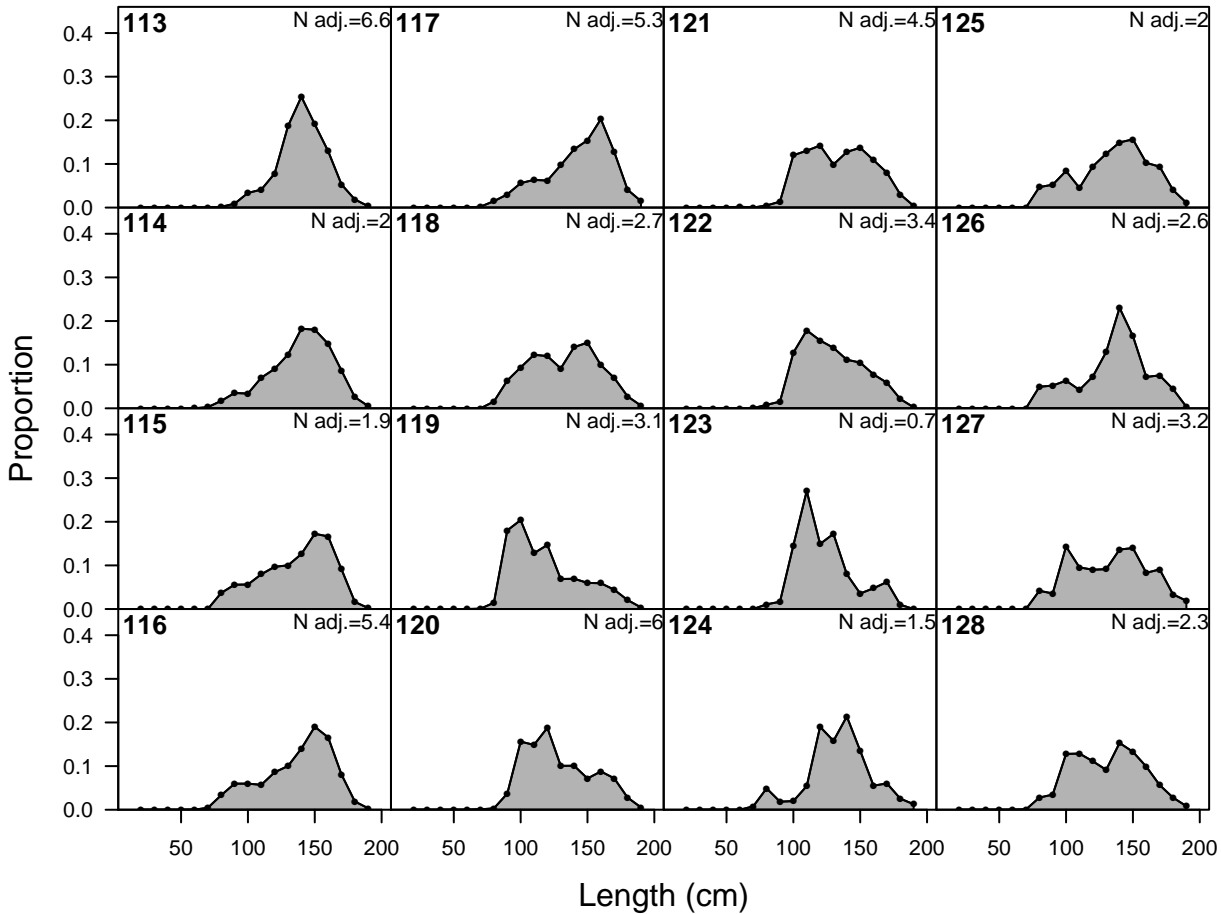


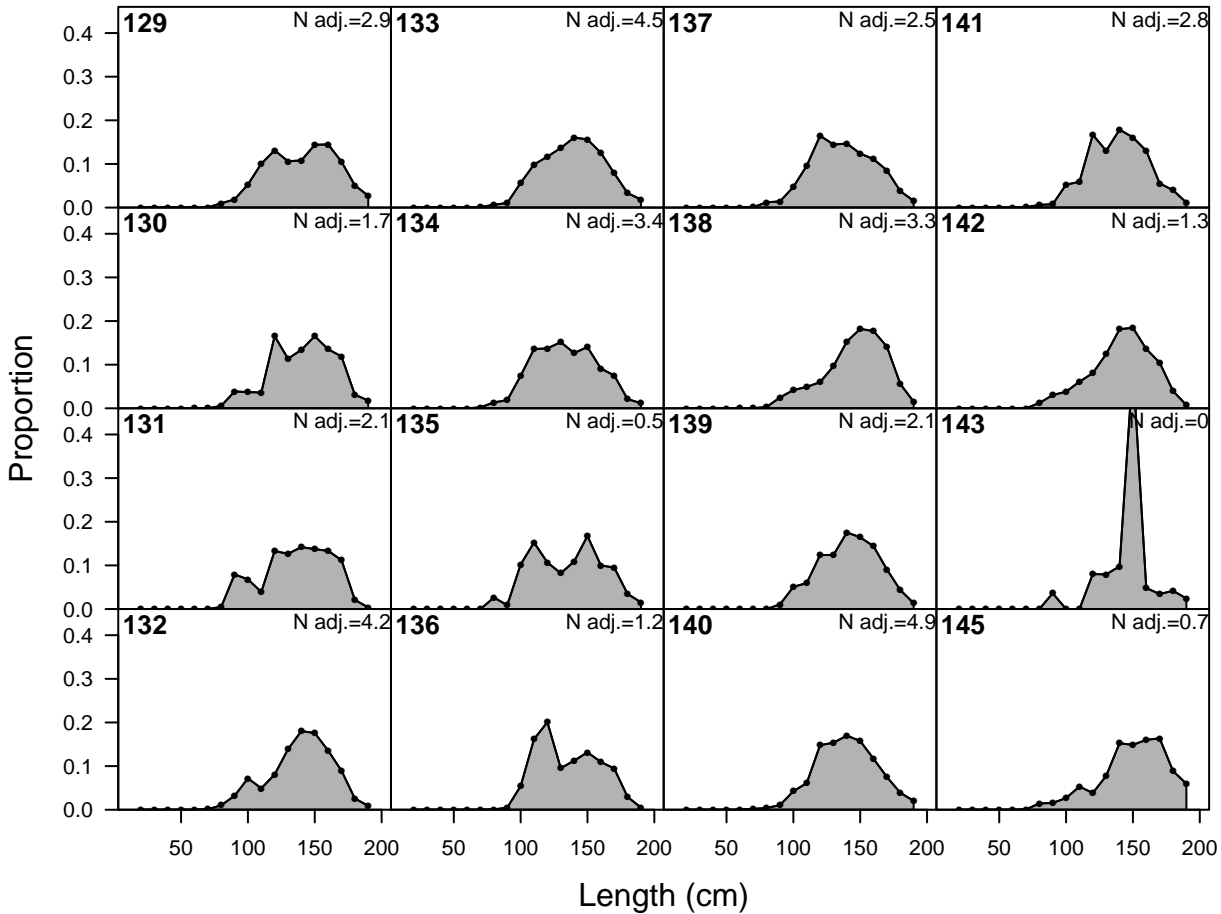
EPO-LL-survey-early (whole catch)

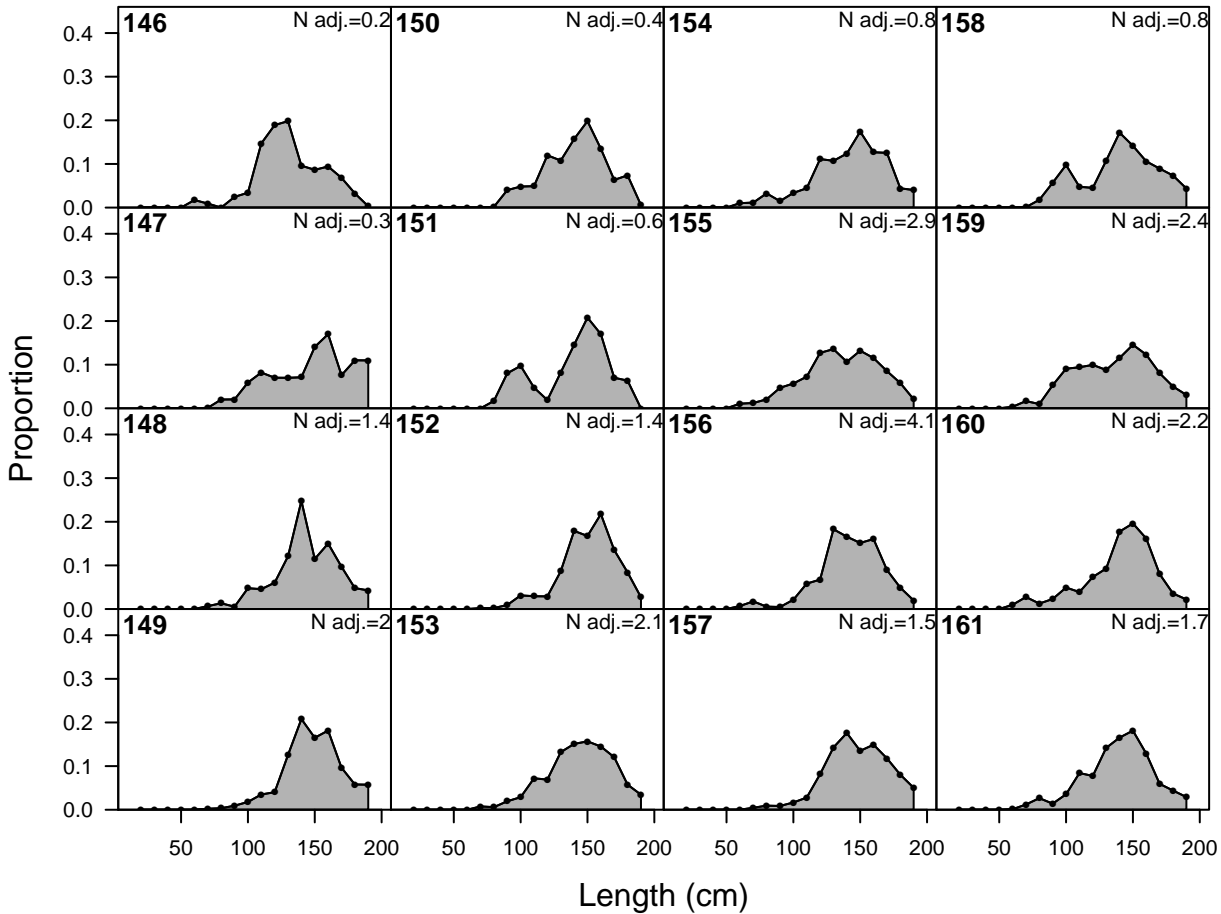




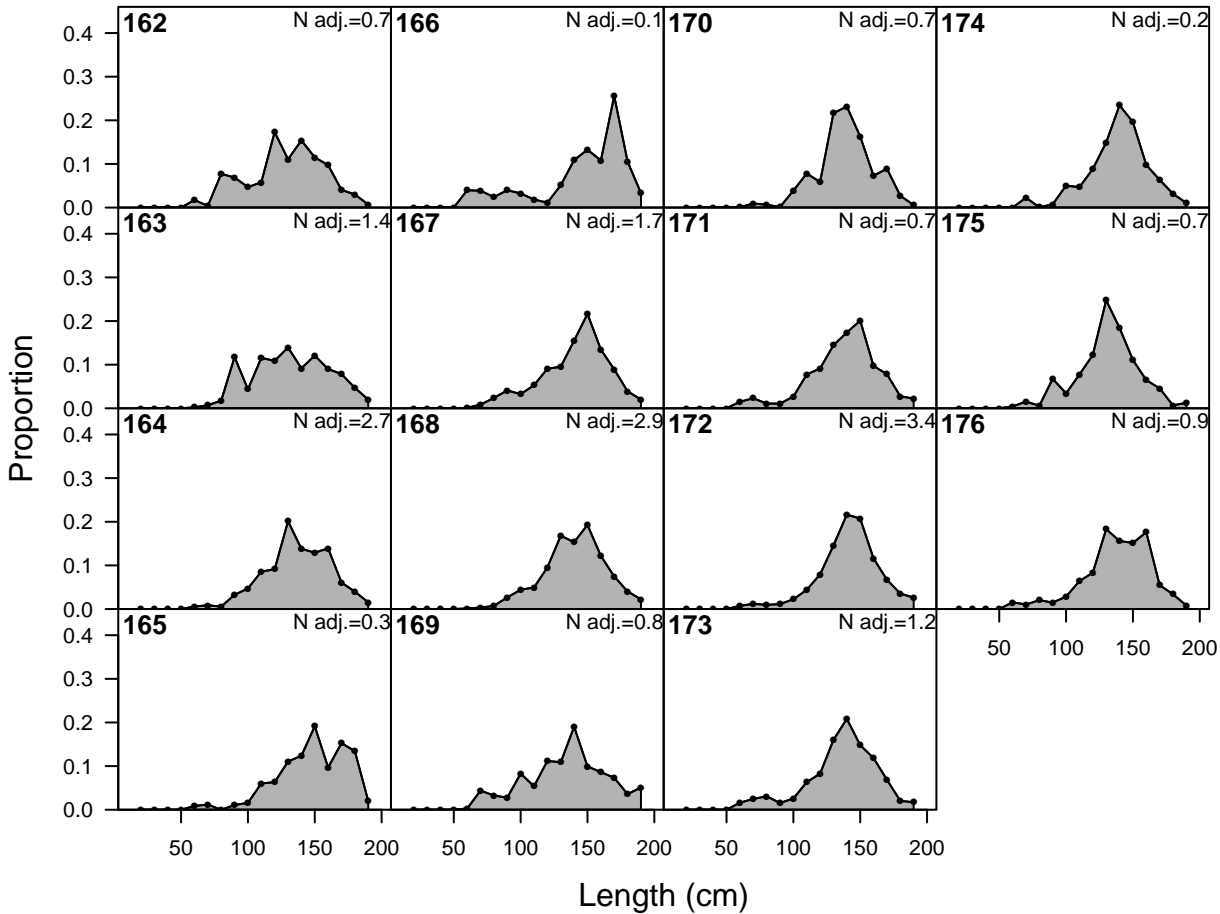


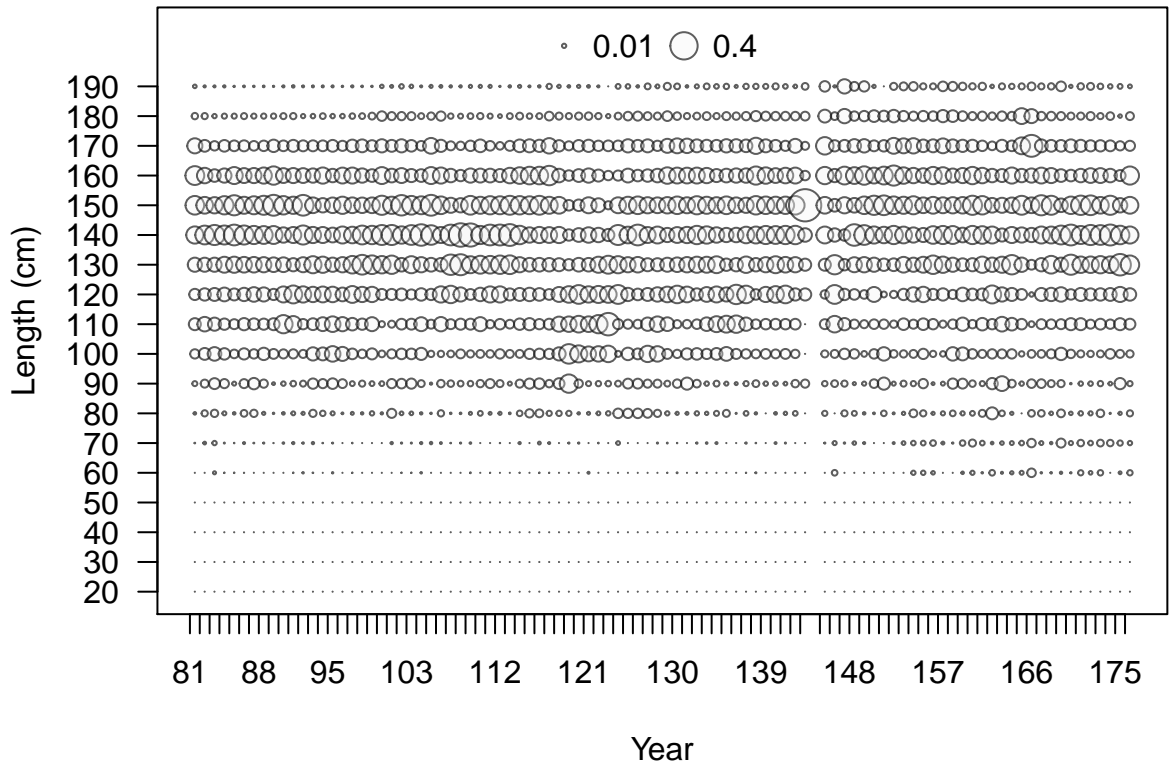




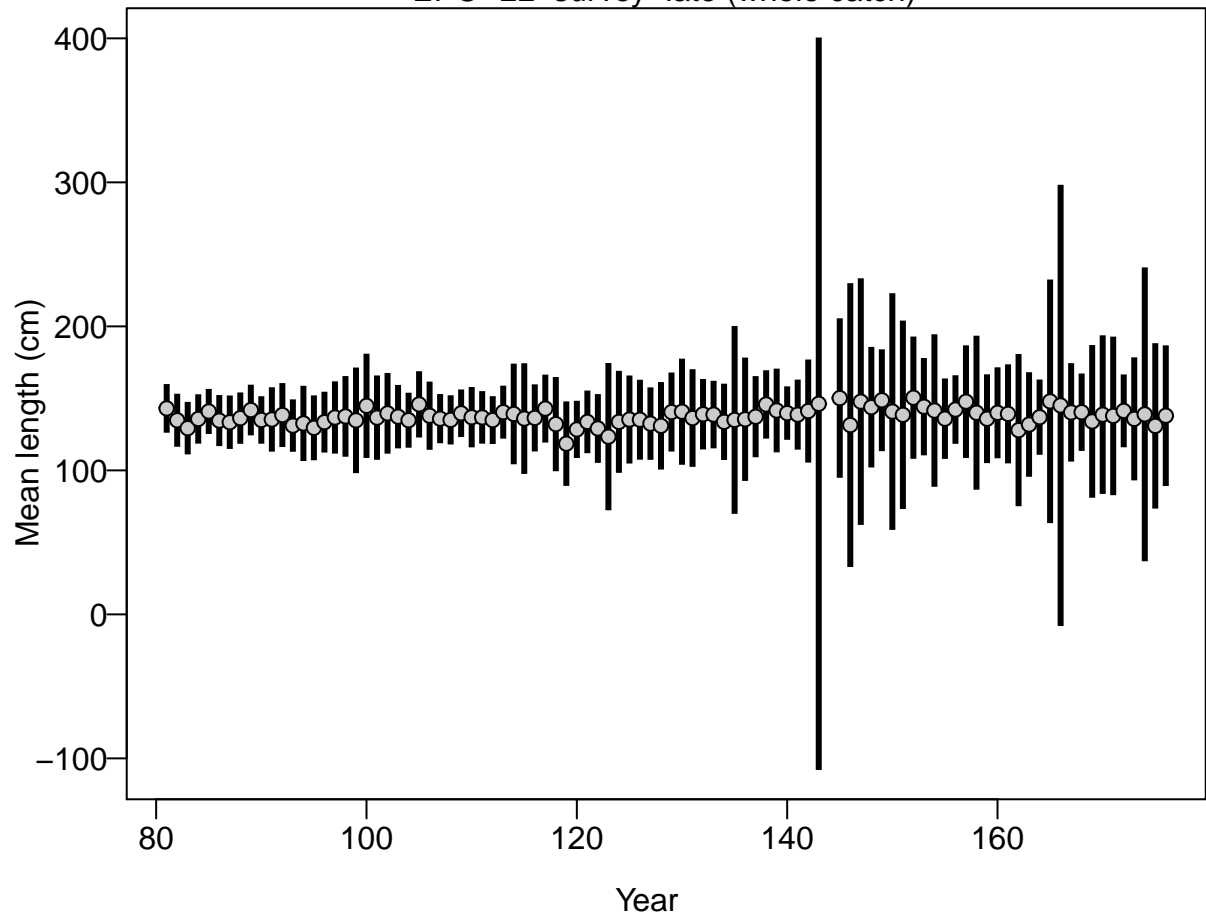








EPO-LL-survey-late (whole catch)



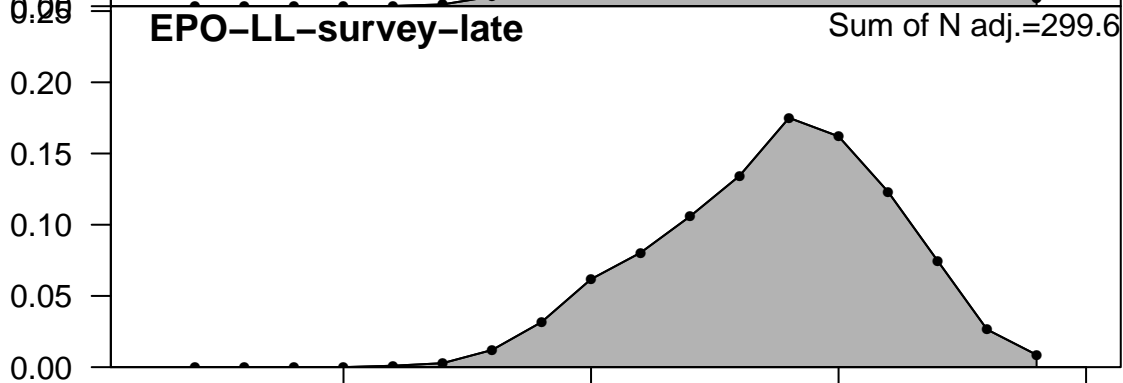
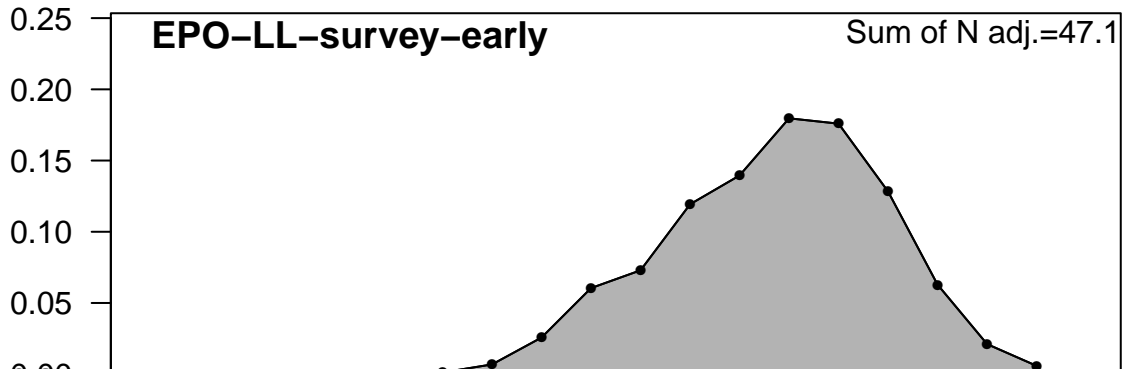
**EPO-LL-survey-early**

Sum of N adj.=47.1

**EPO-LL-survey-late**

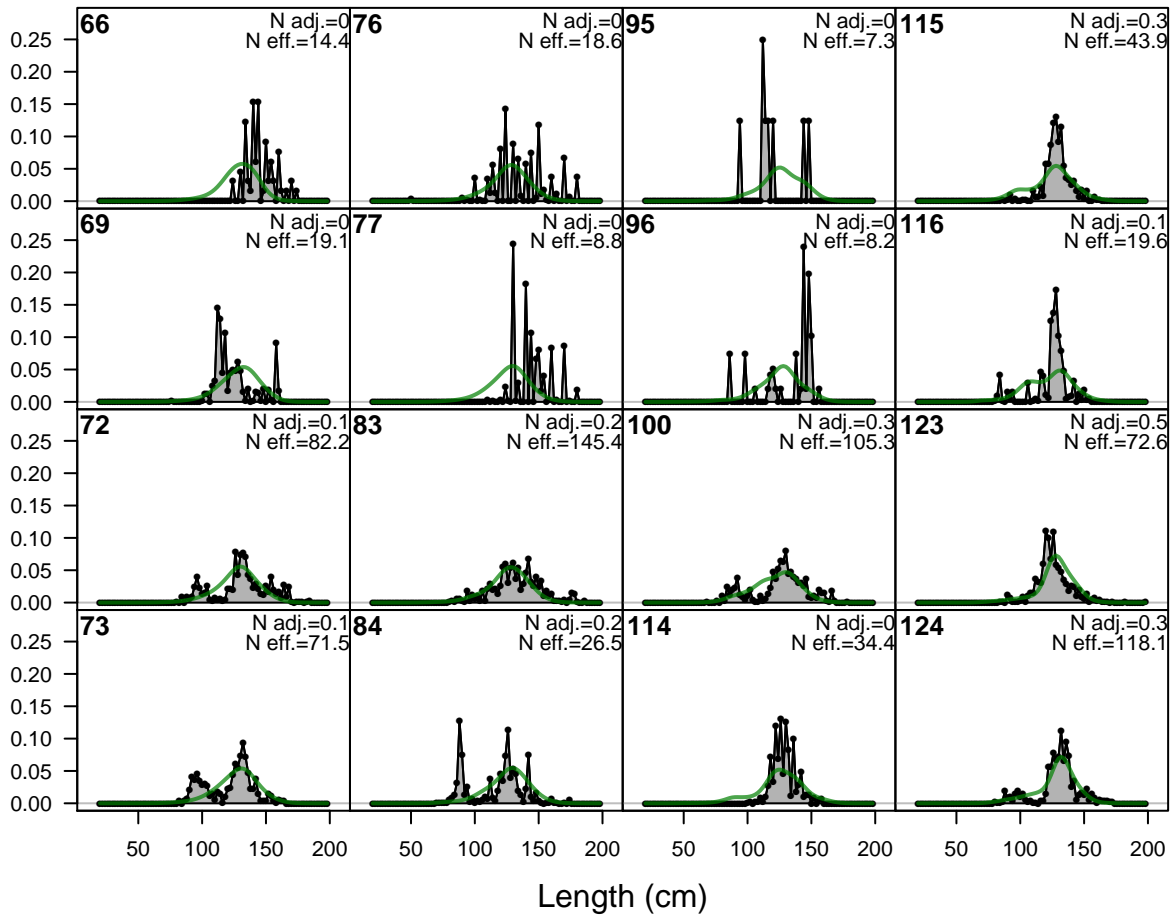
Sum of N adj.=299.6

Proportion

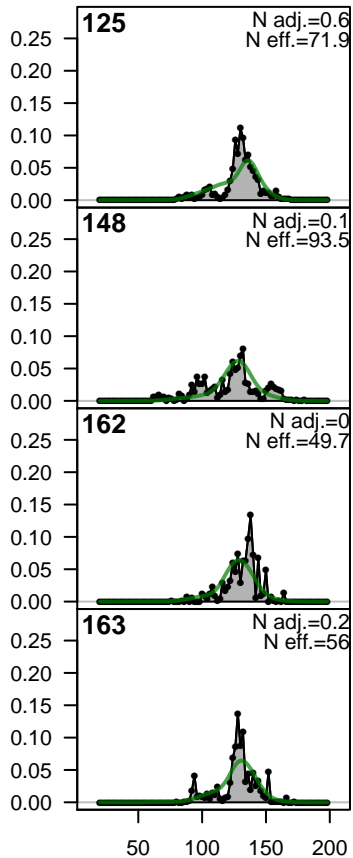


Length (cm)

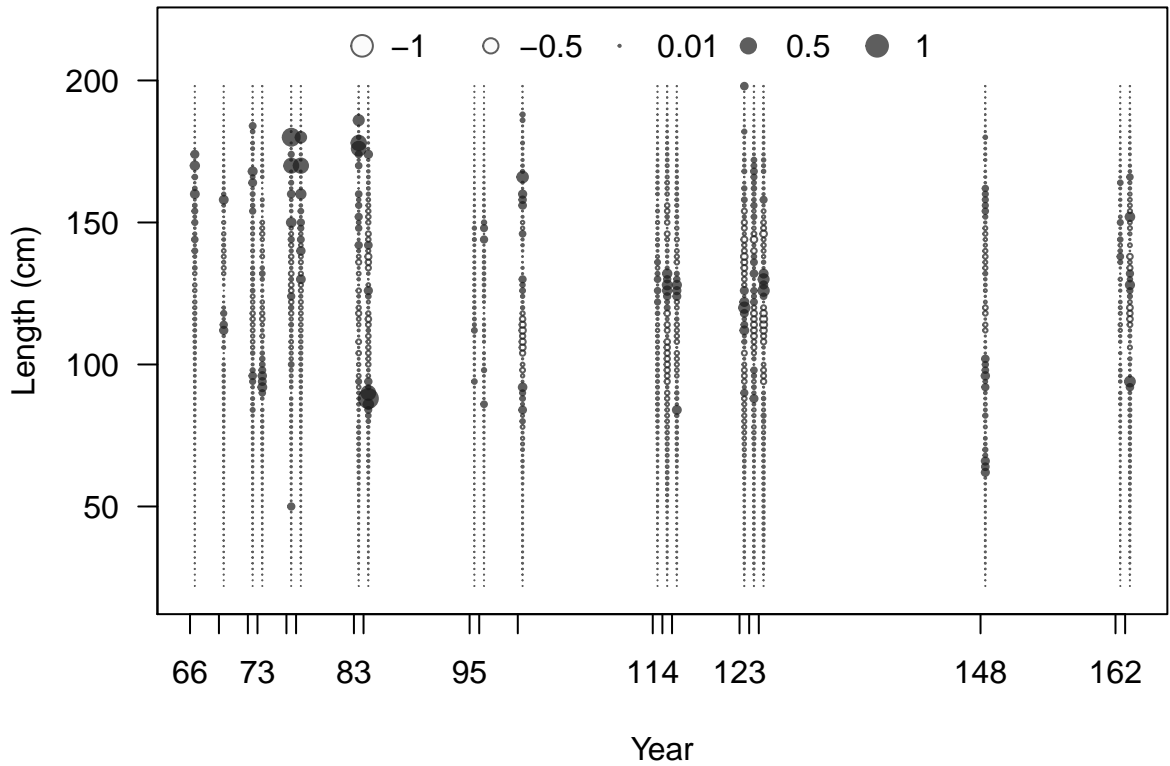
Proportion

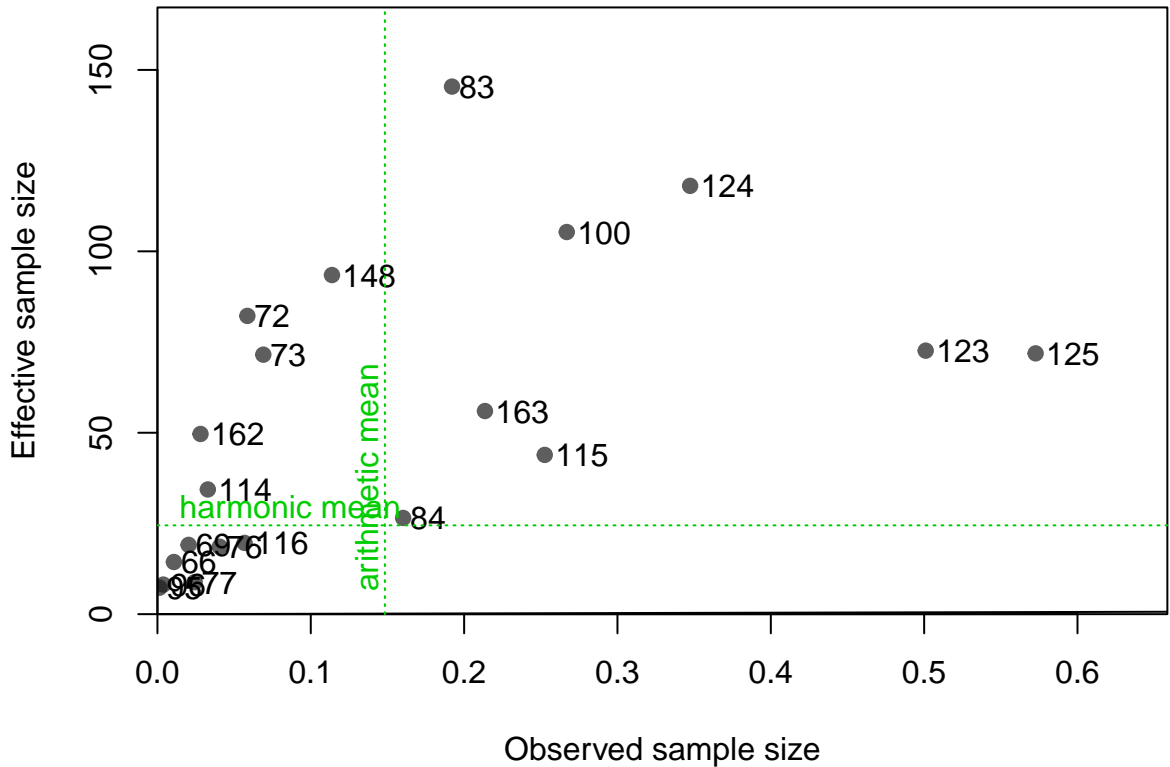


Proportion



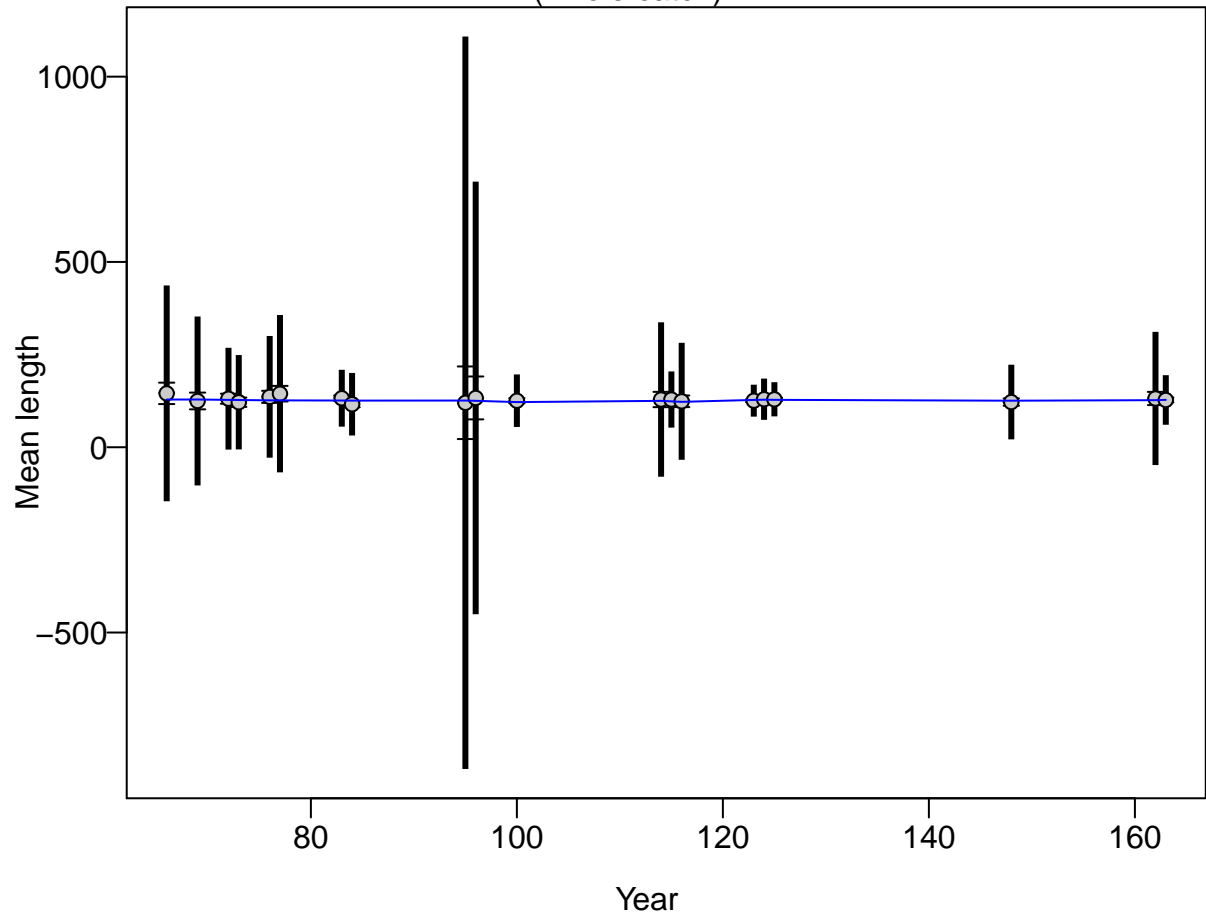
Length (cm)



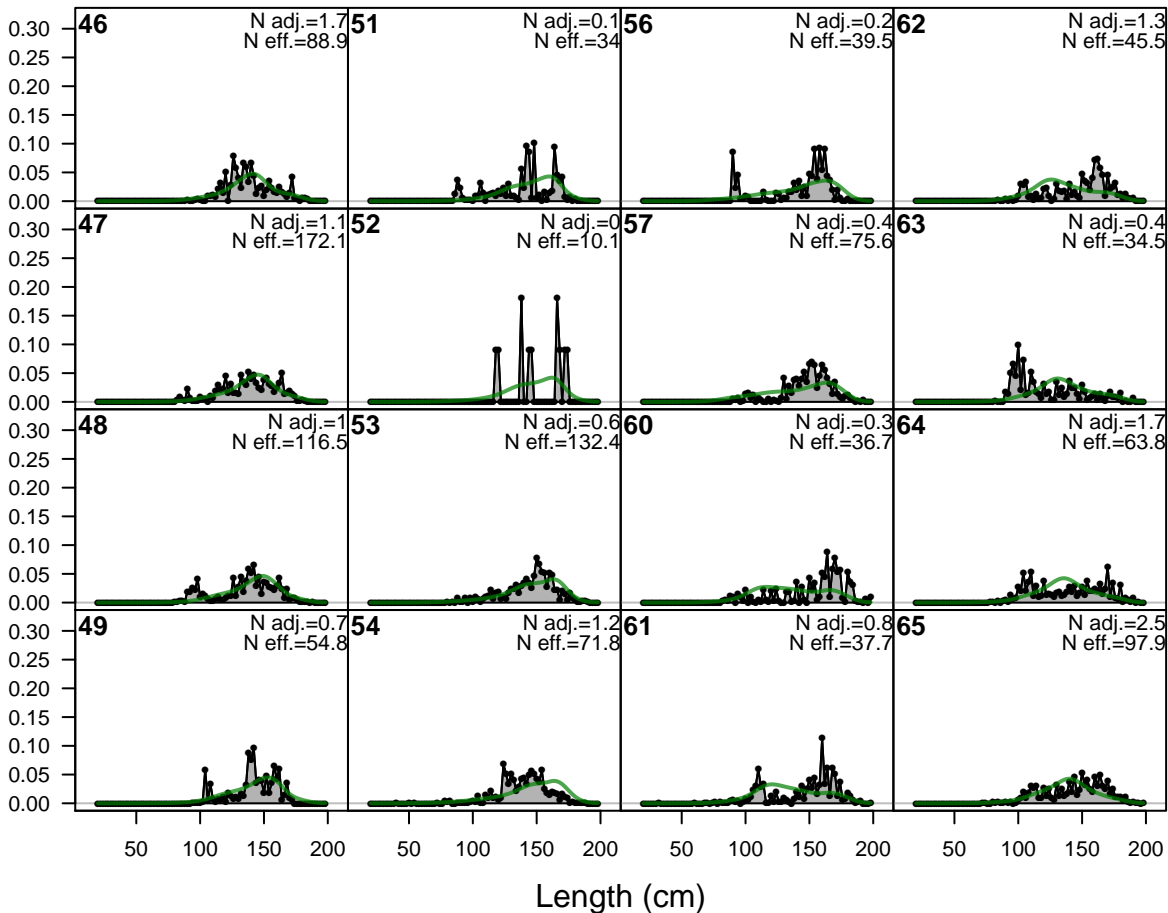




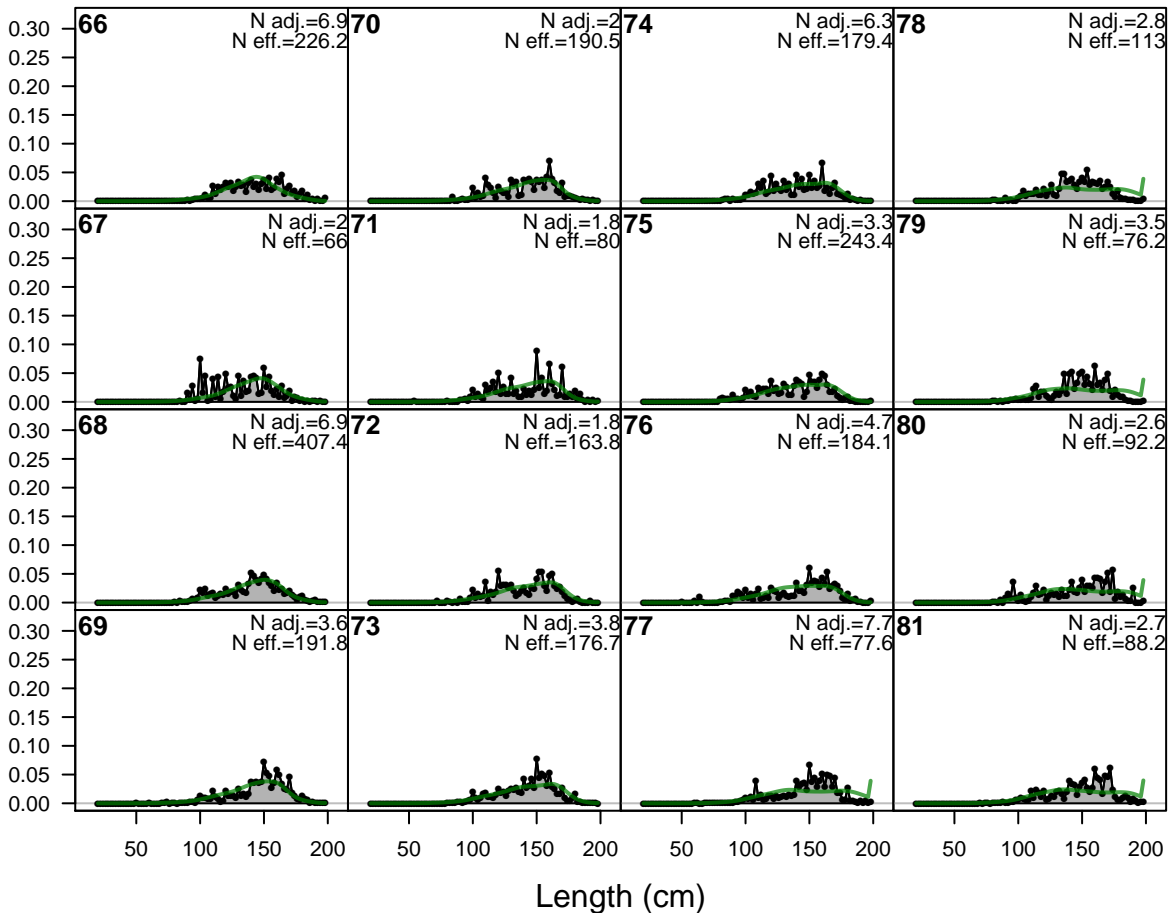
A1-LL-n (whole catch)



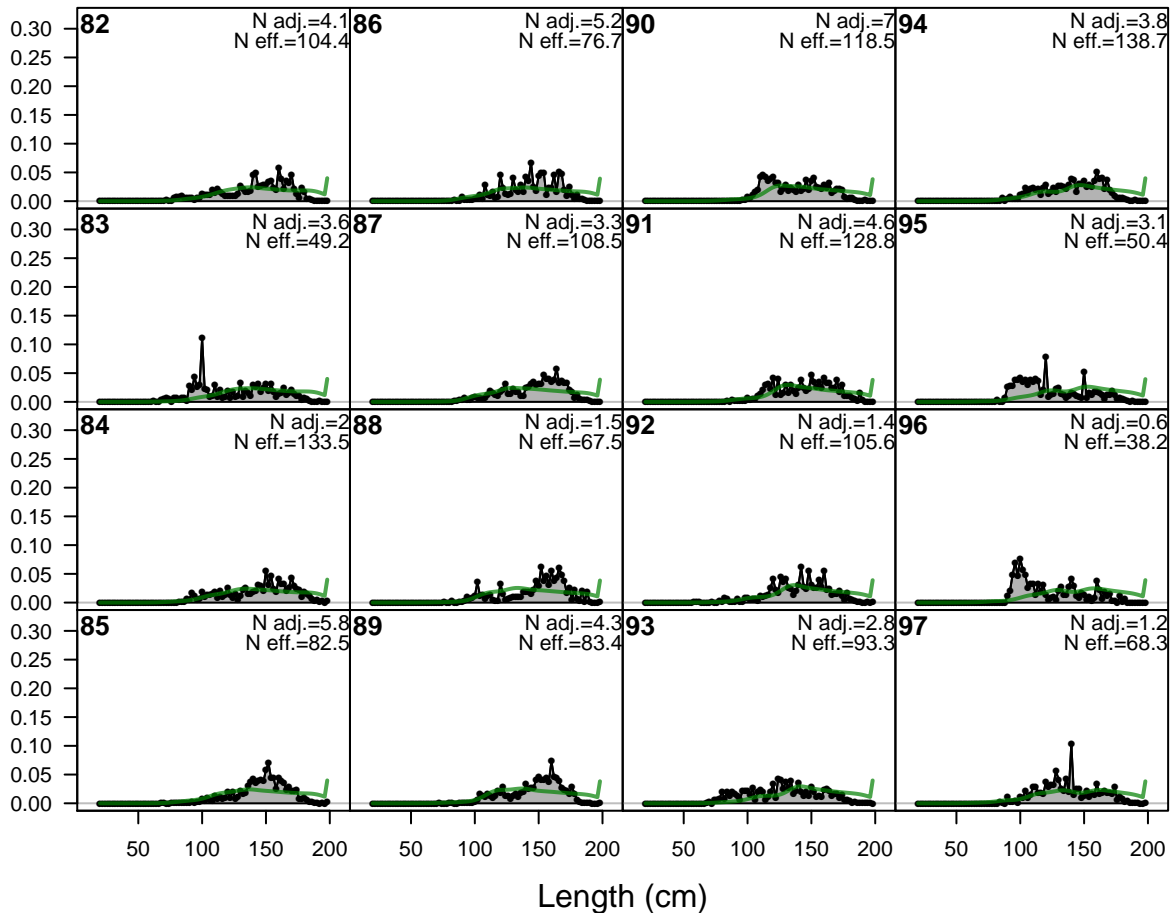
Proportion



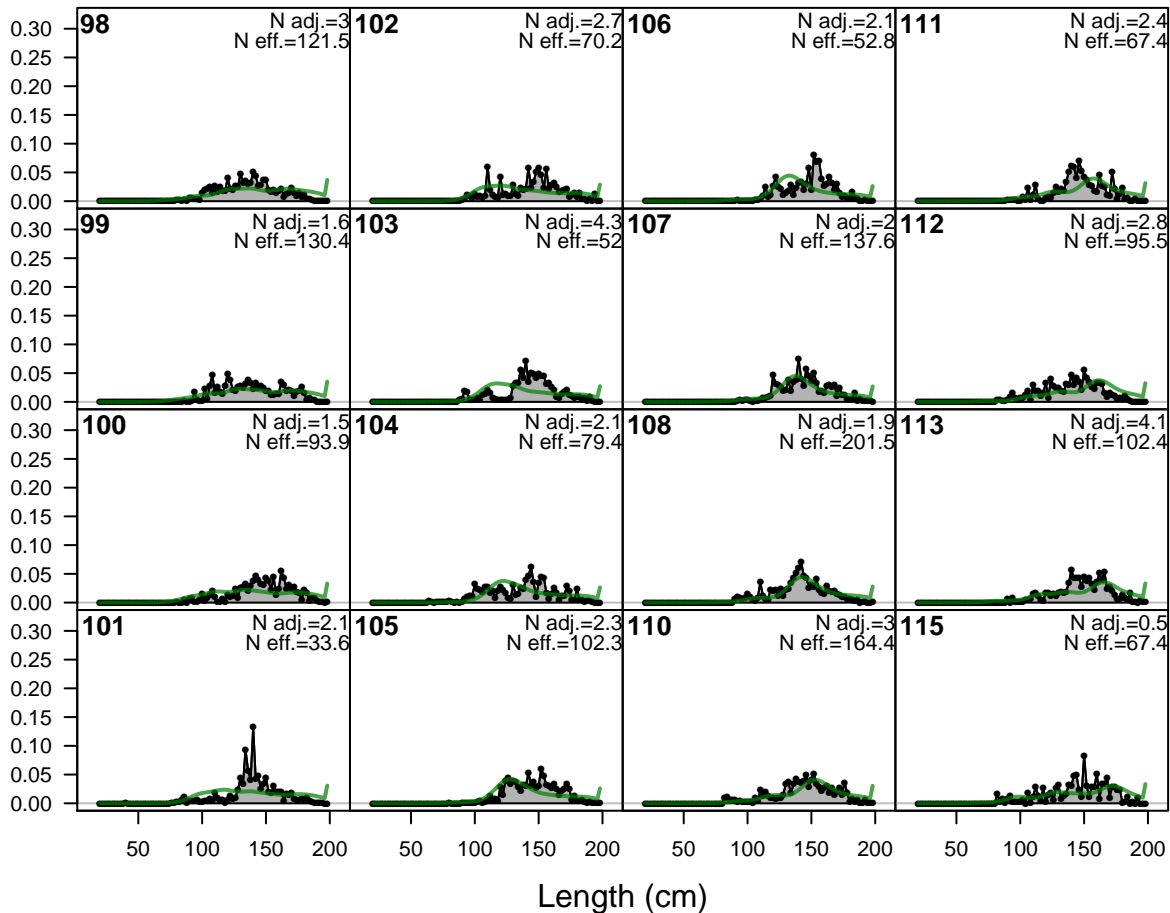
Proportion



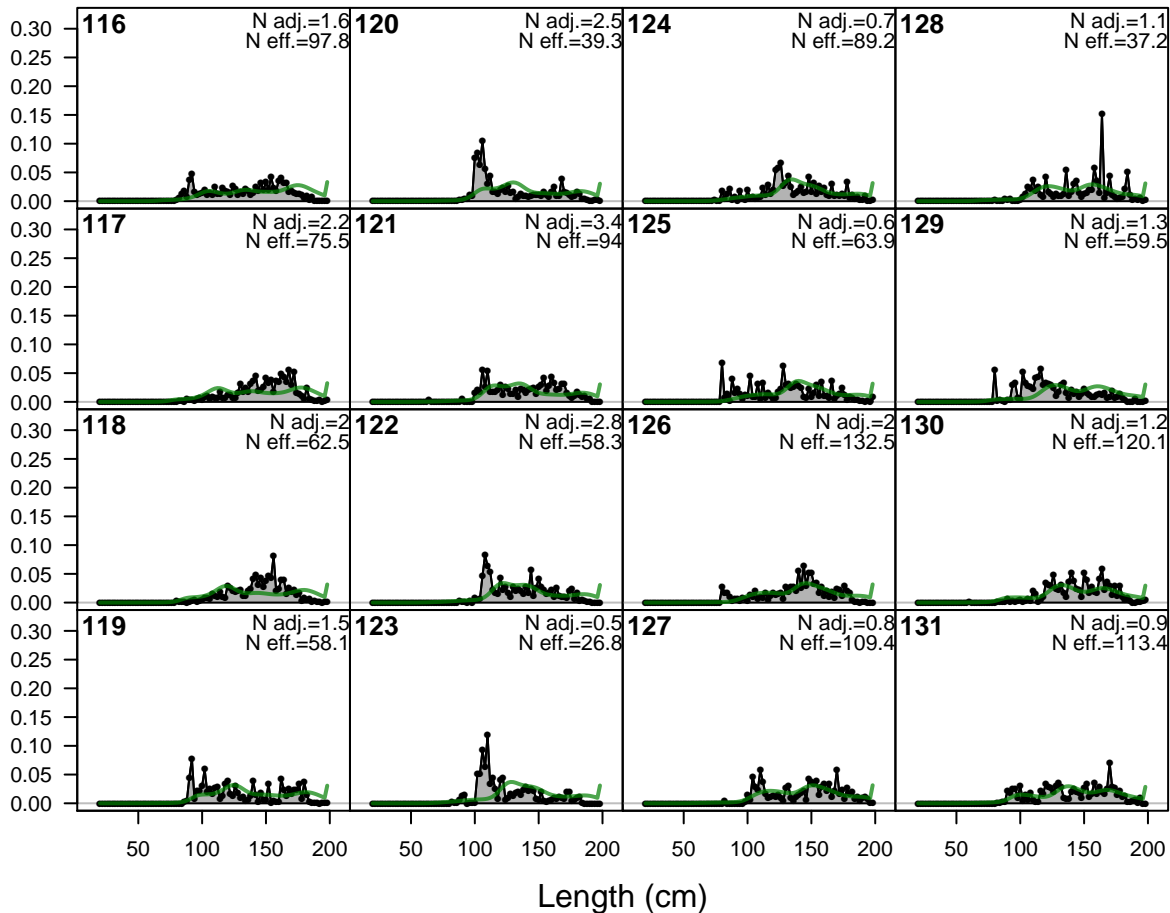
Proportion



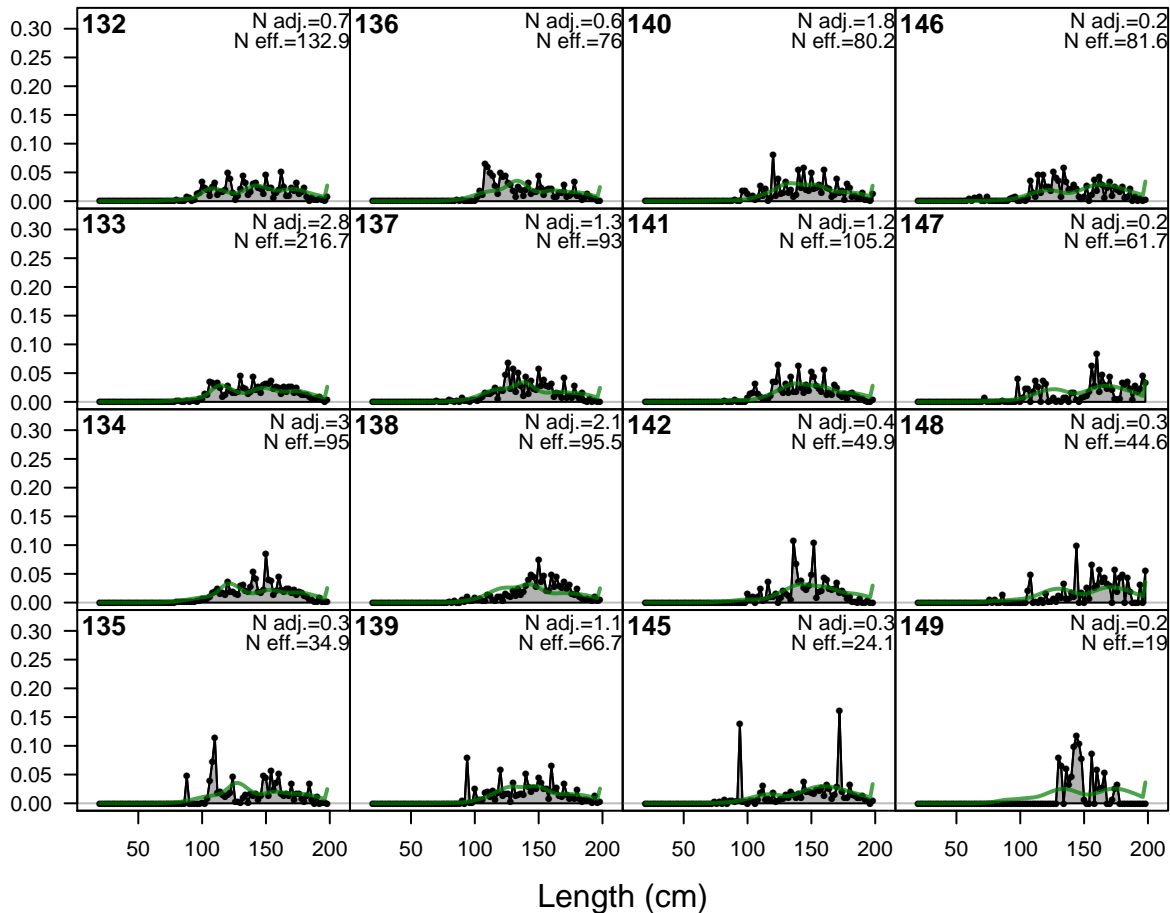
Proportion



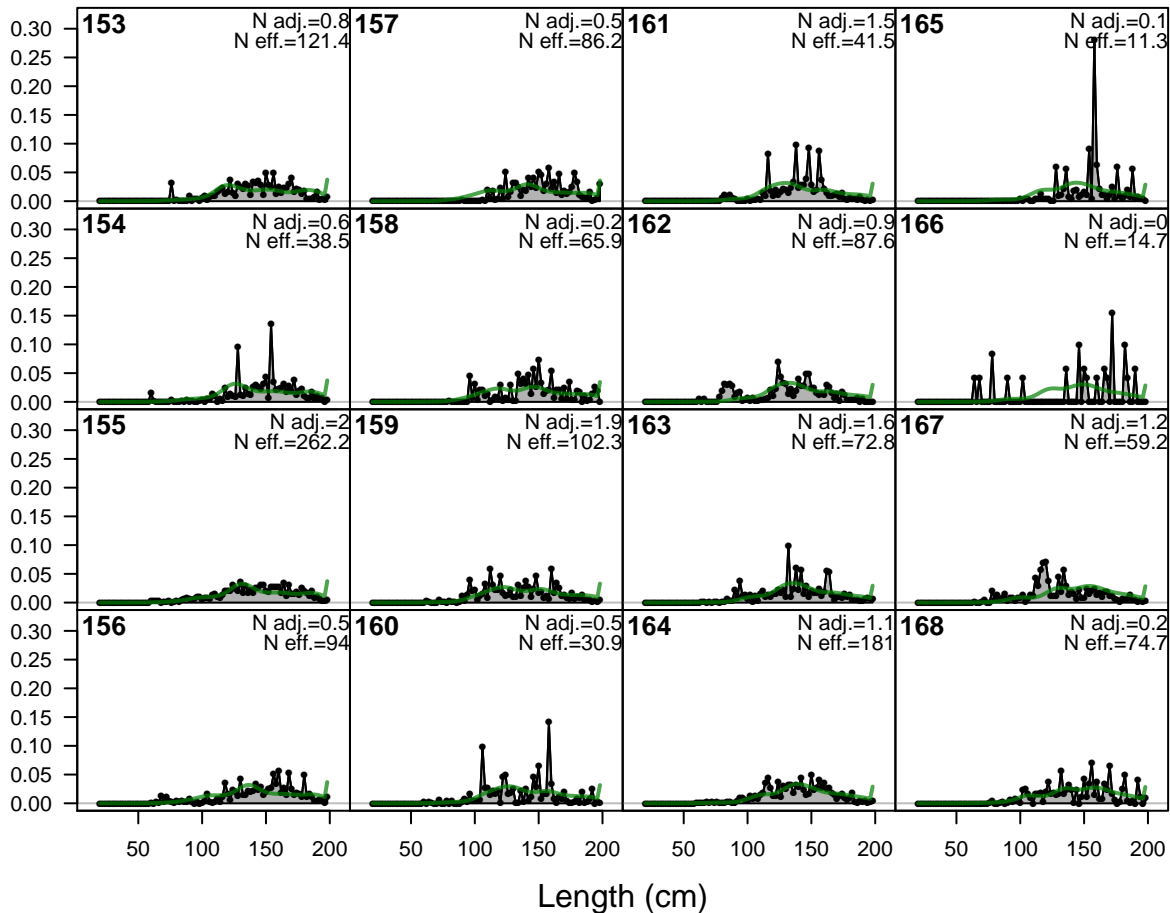
Proportion



Proportion

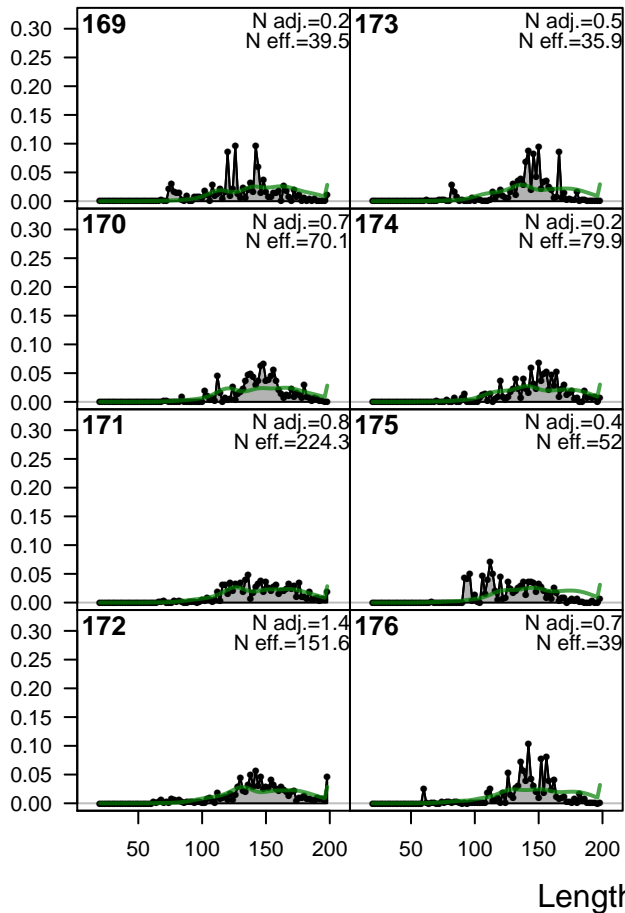


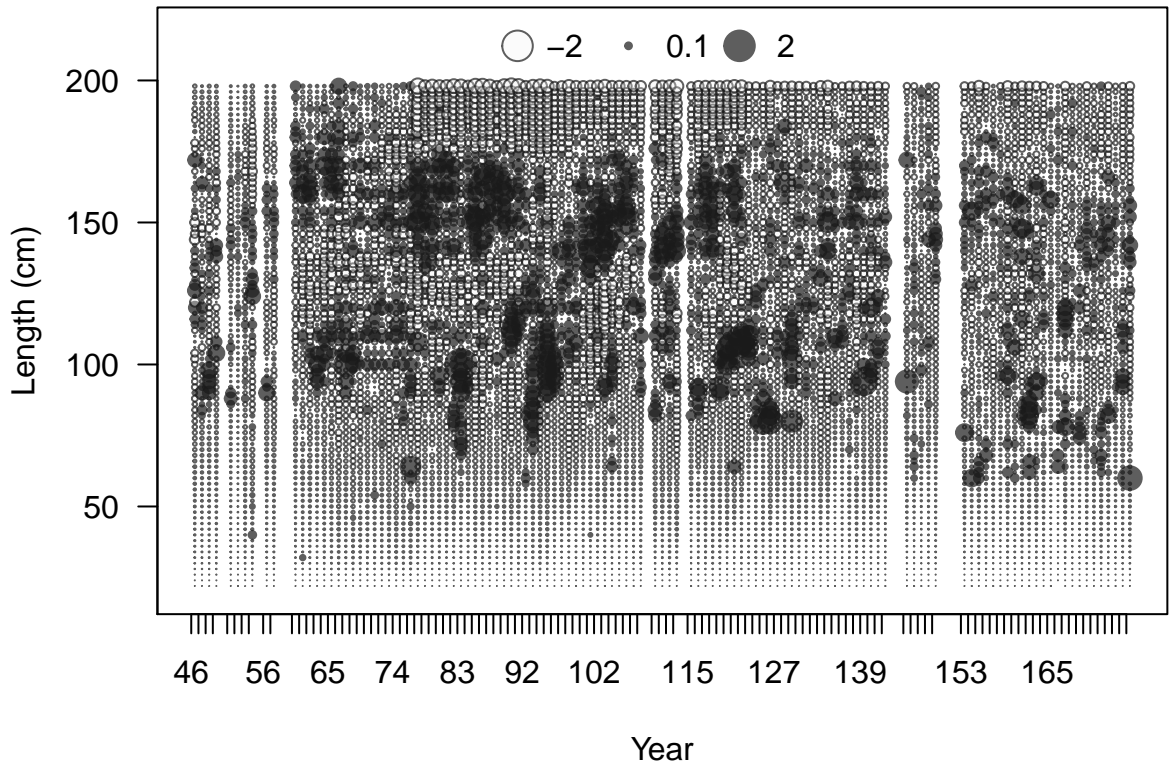
Proportion



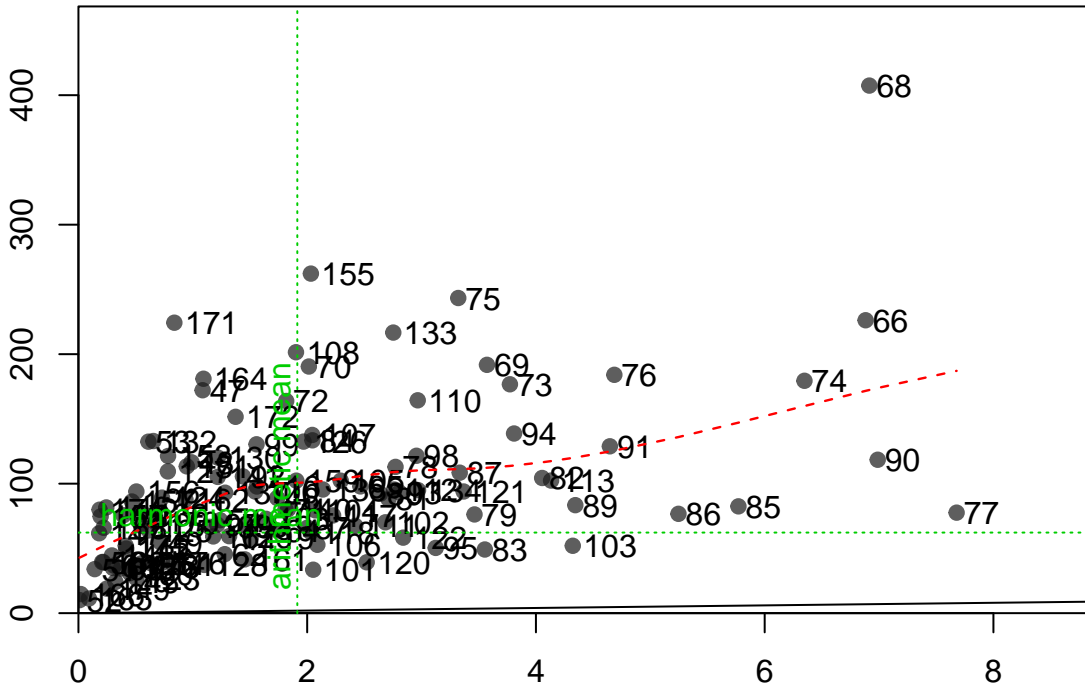


Proportion



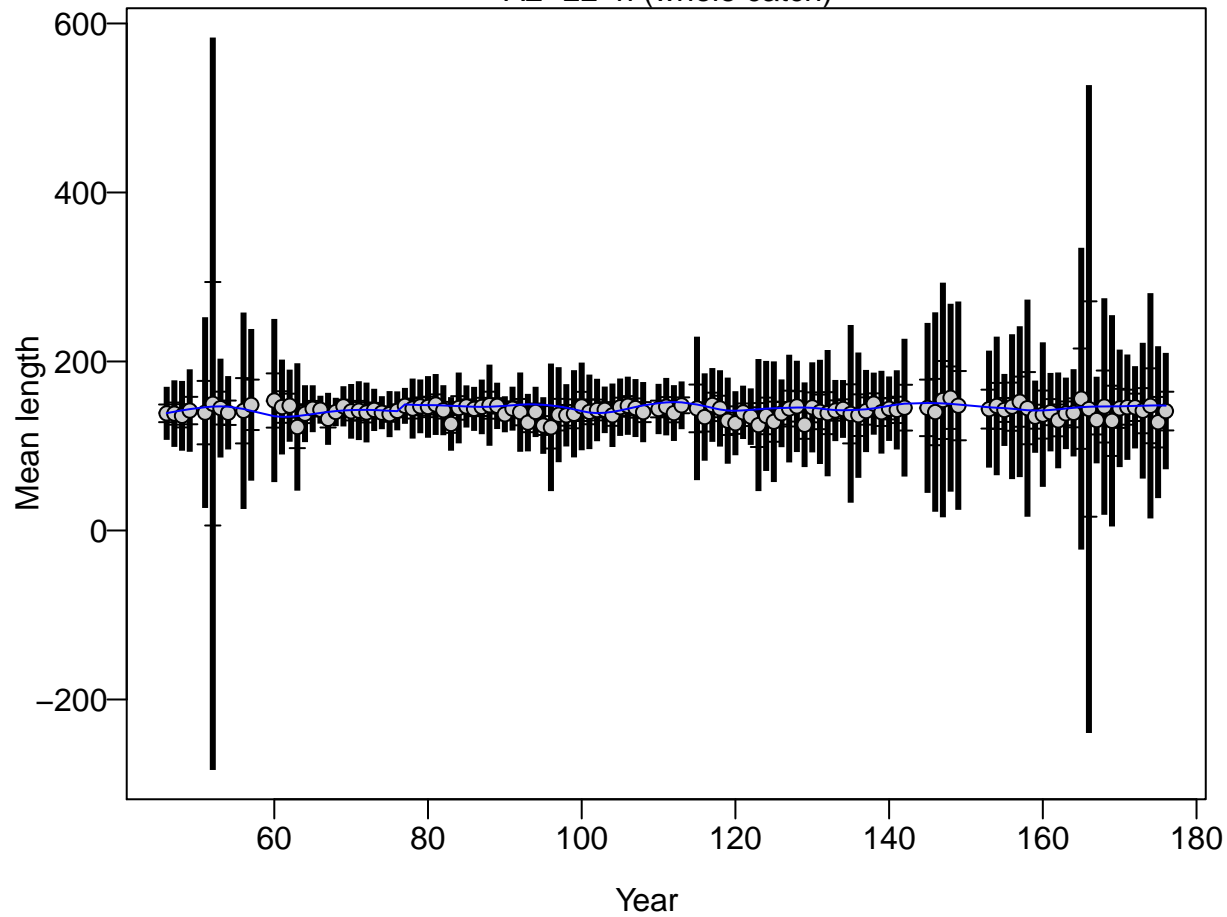


Effective sample size

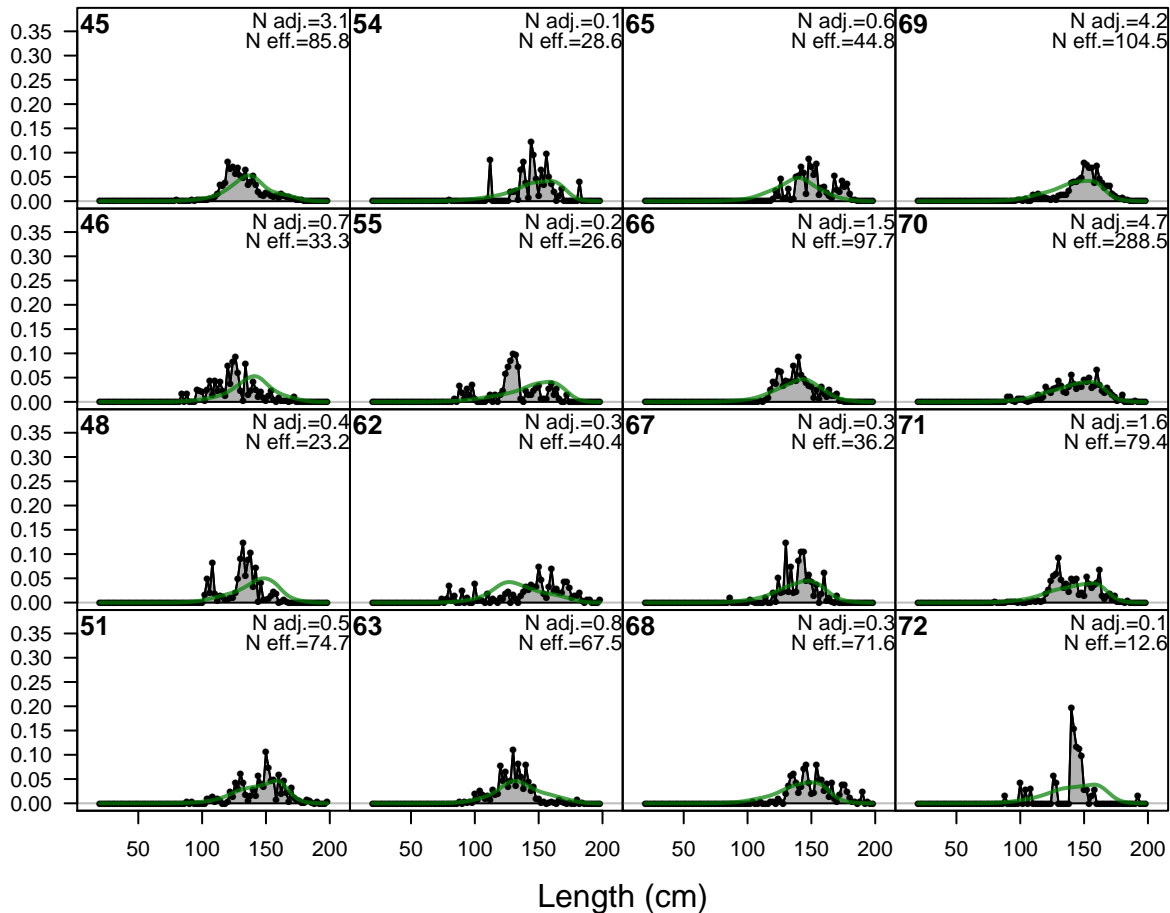


Observed sample size

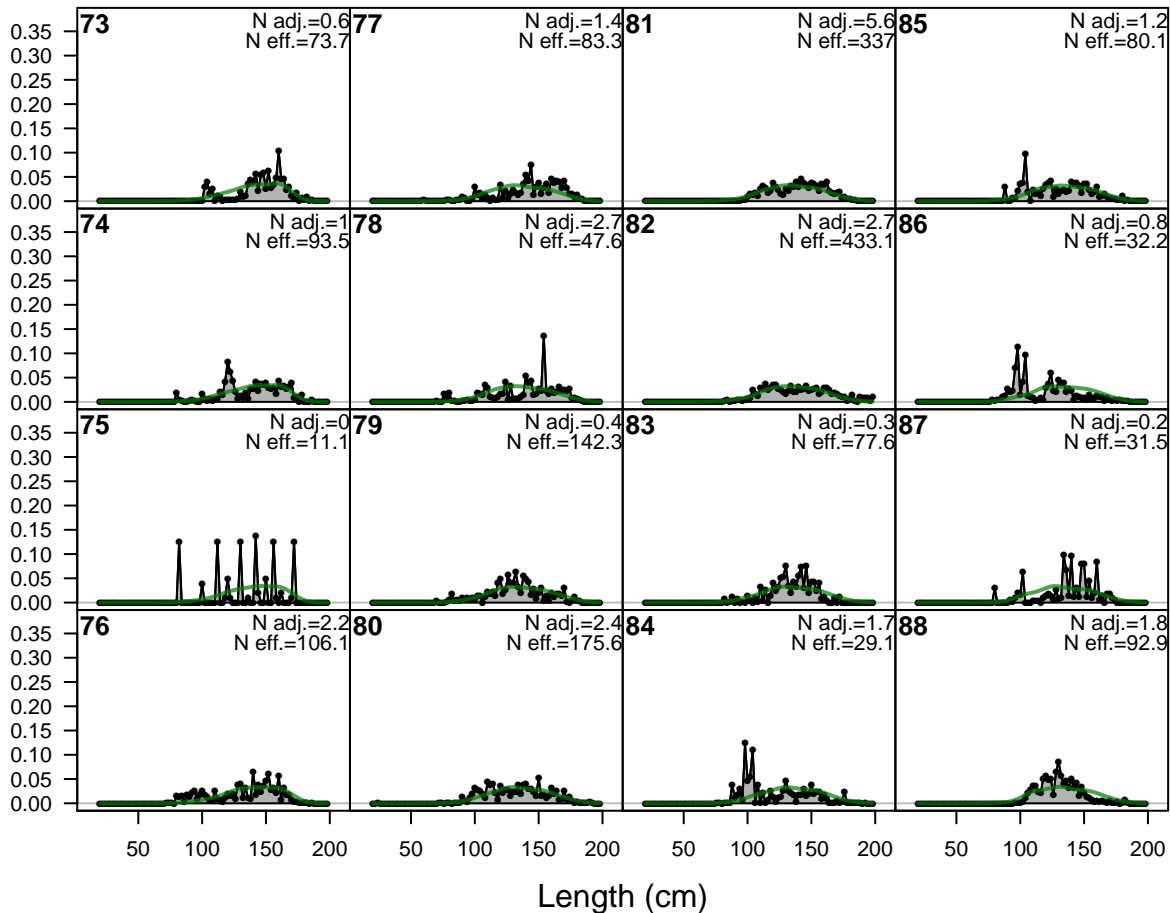
A2-LL-n (whole catch)



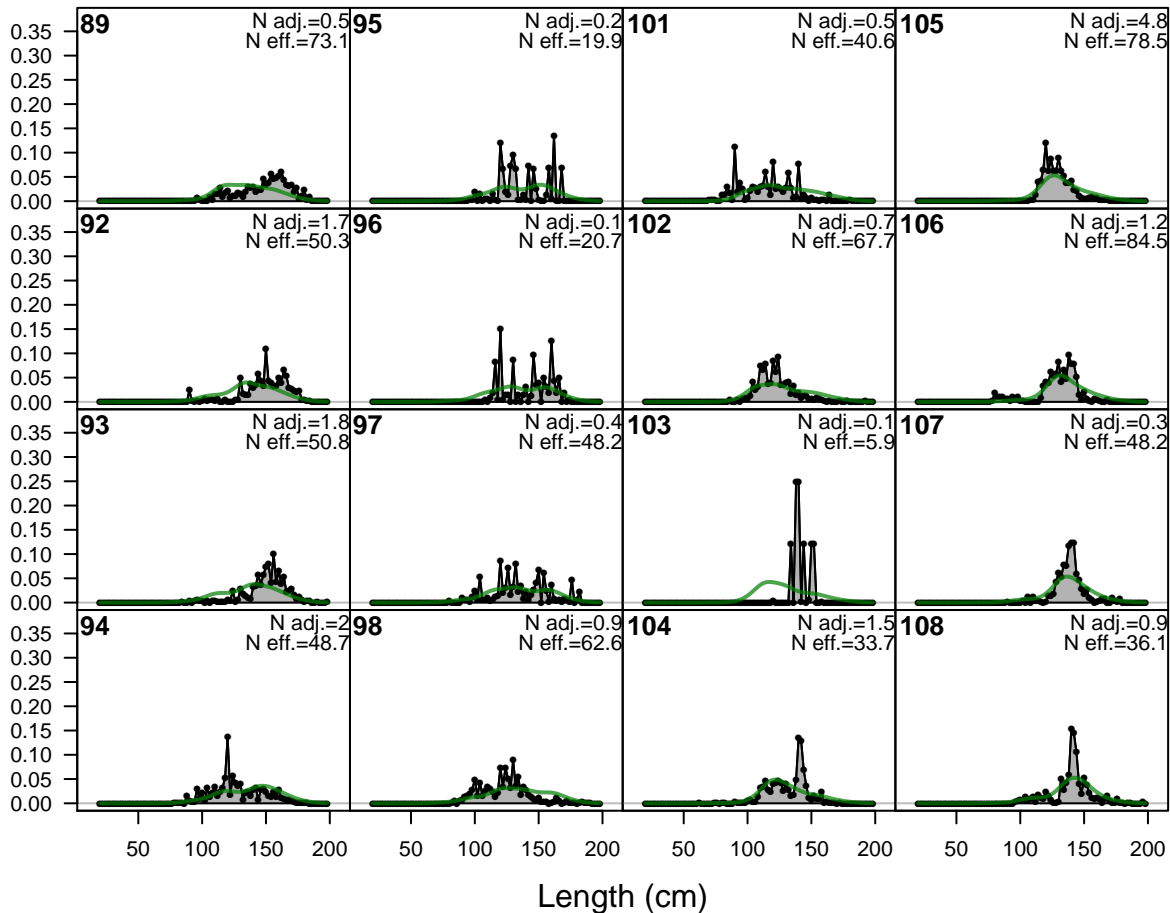
Proportion



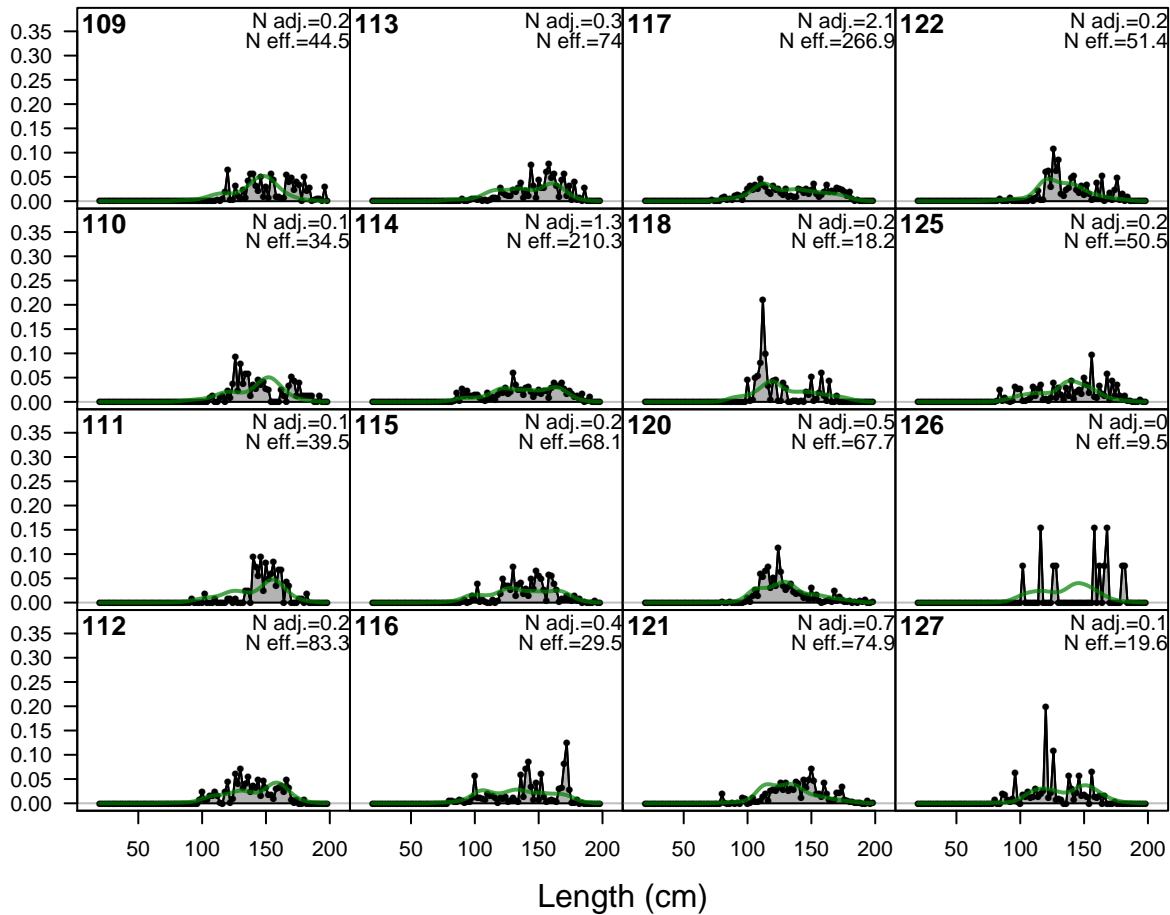
Proportion



Proportion

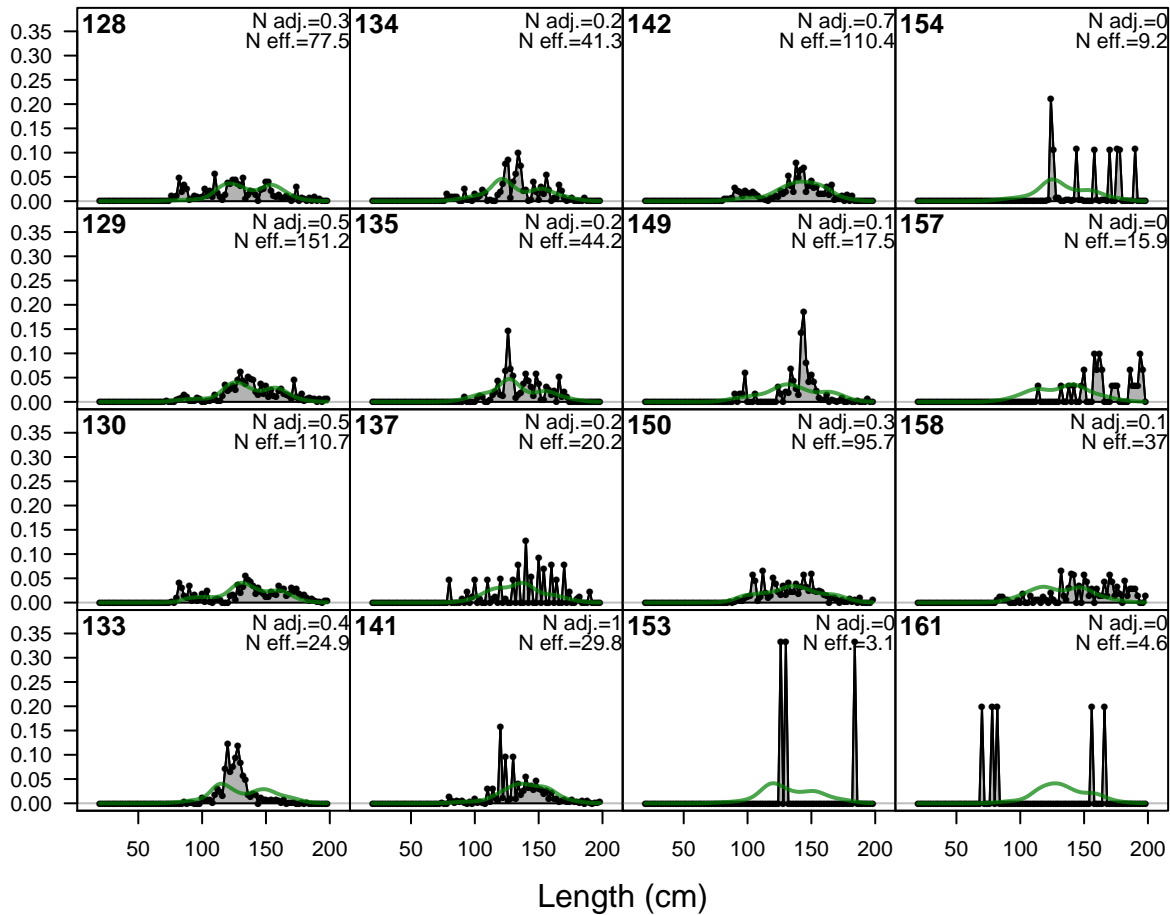


Proportion

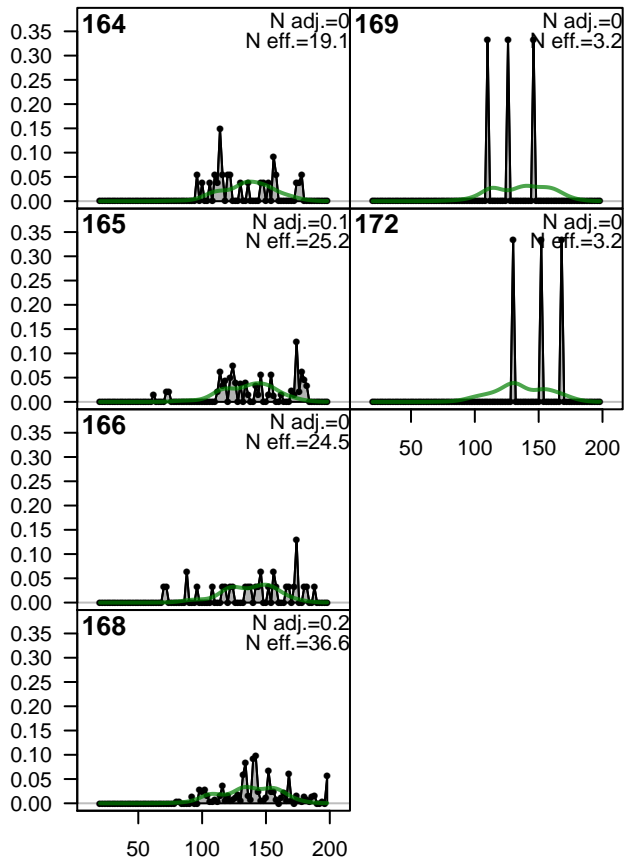




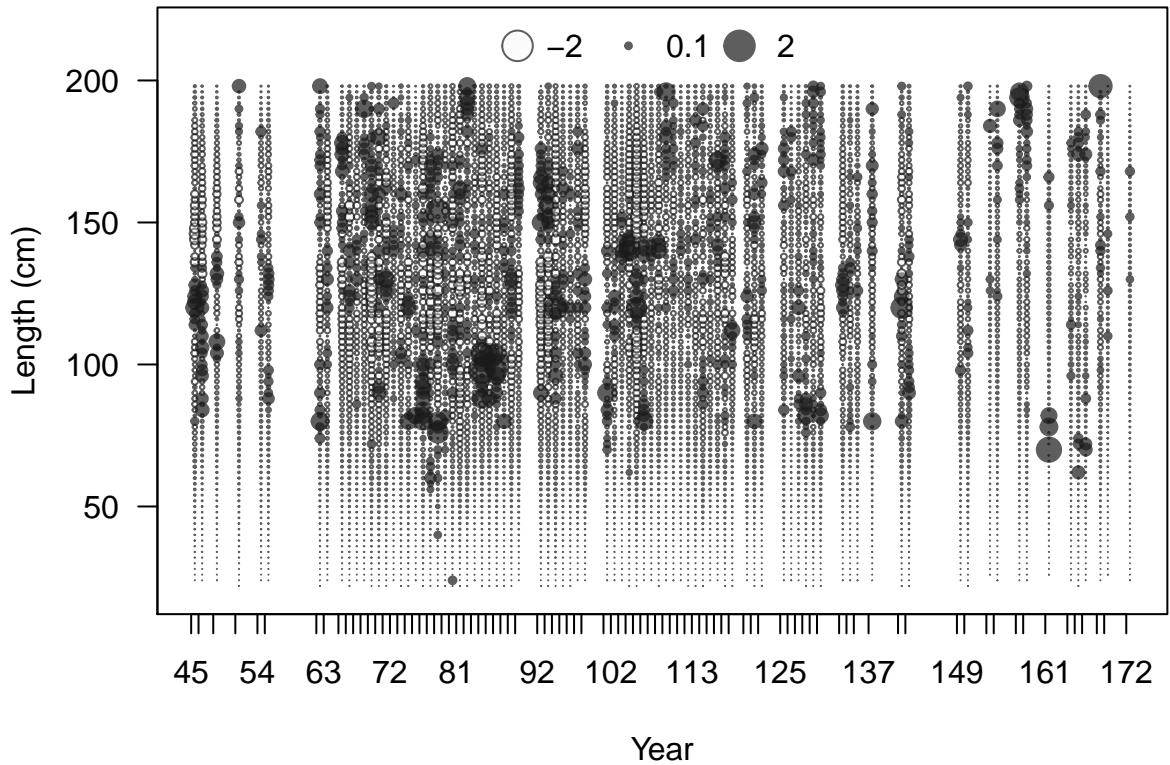
Proportion

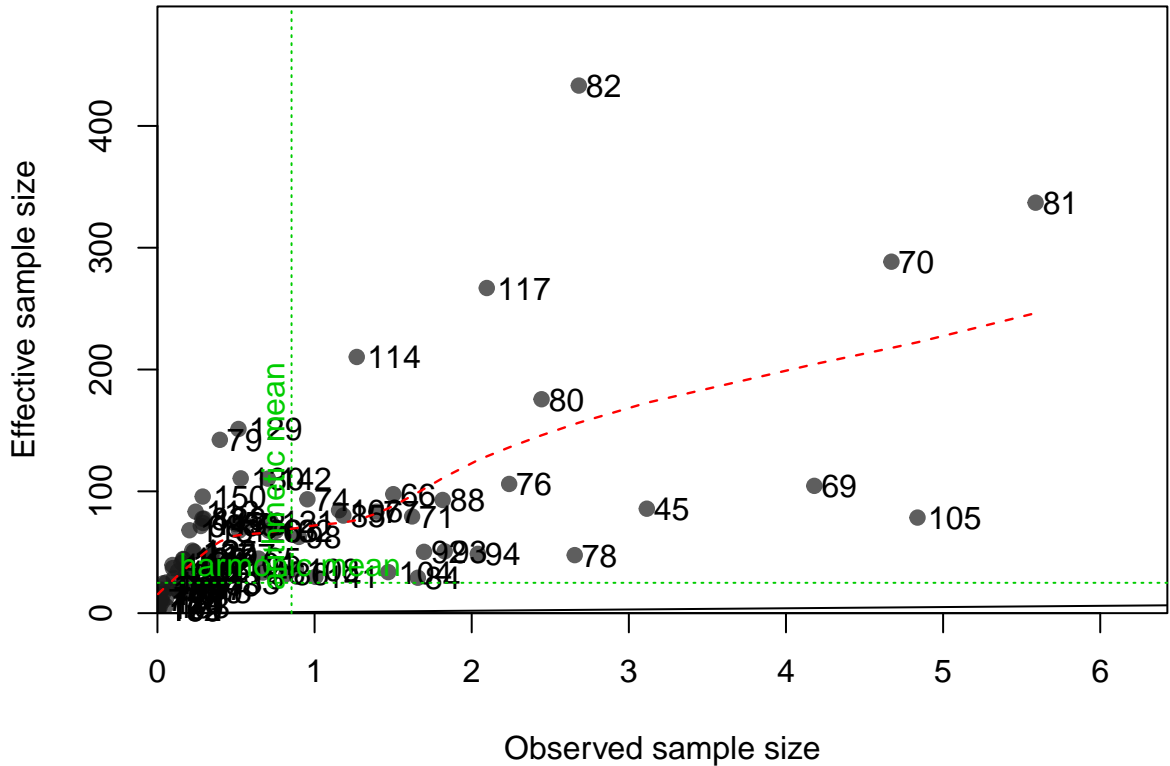


Proportion

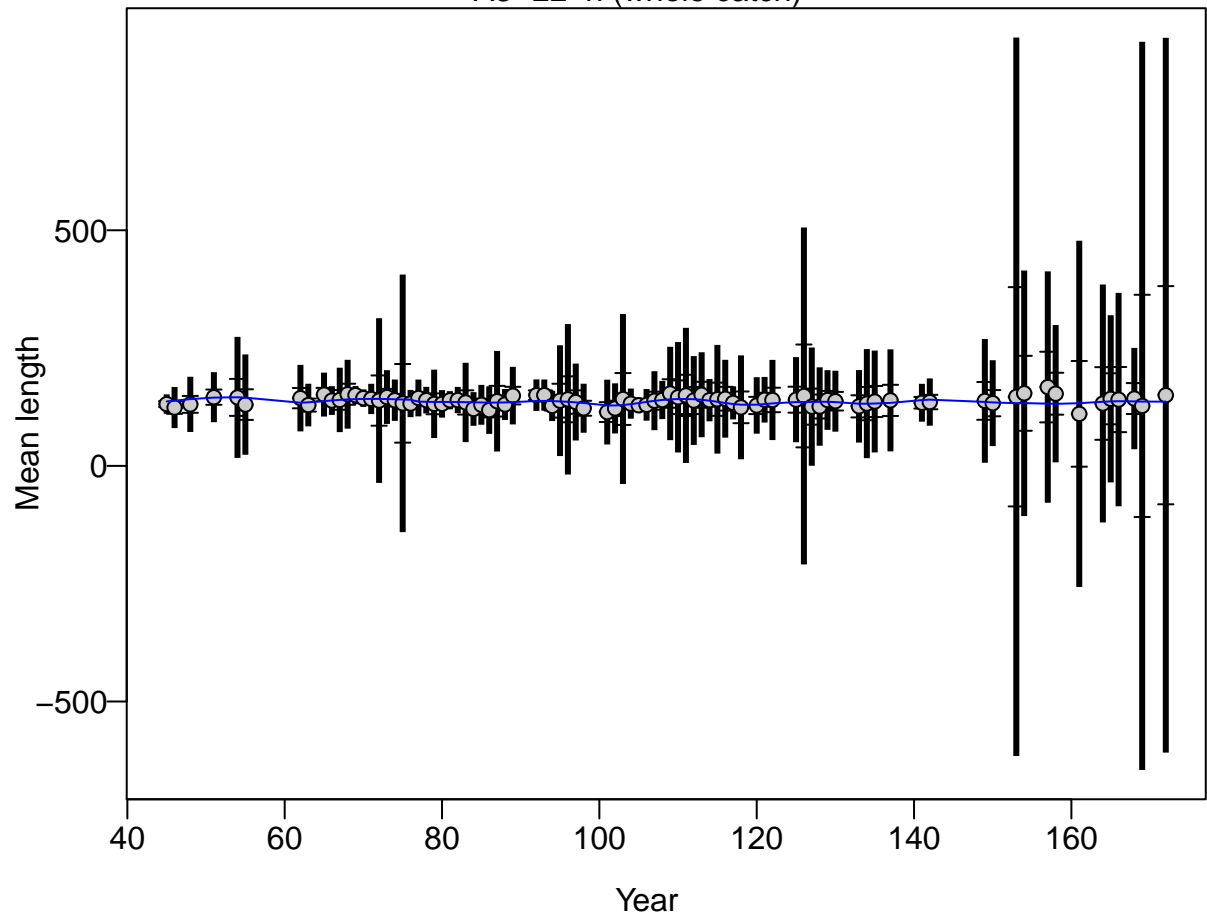


Length (cm)

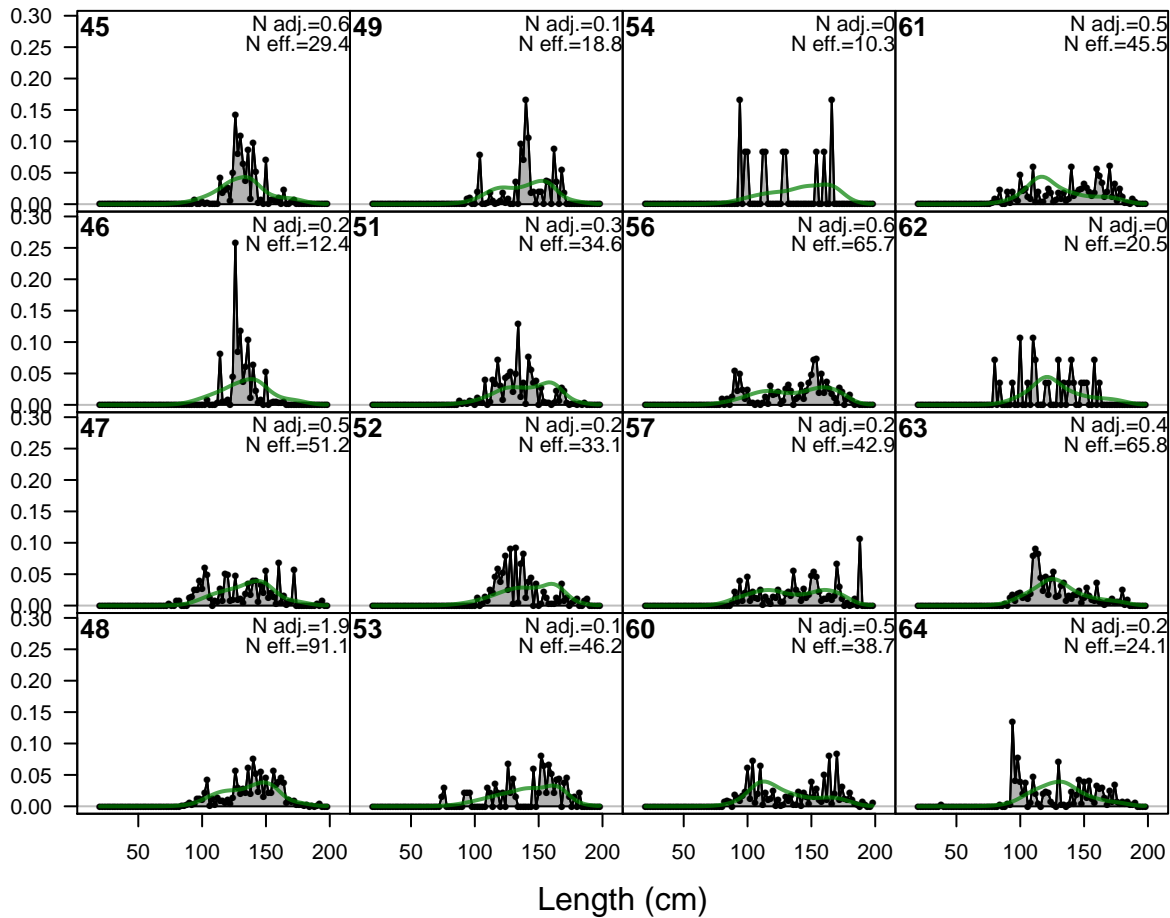




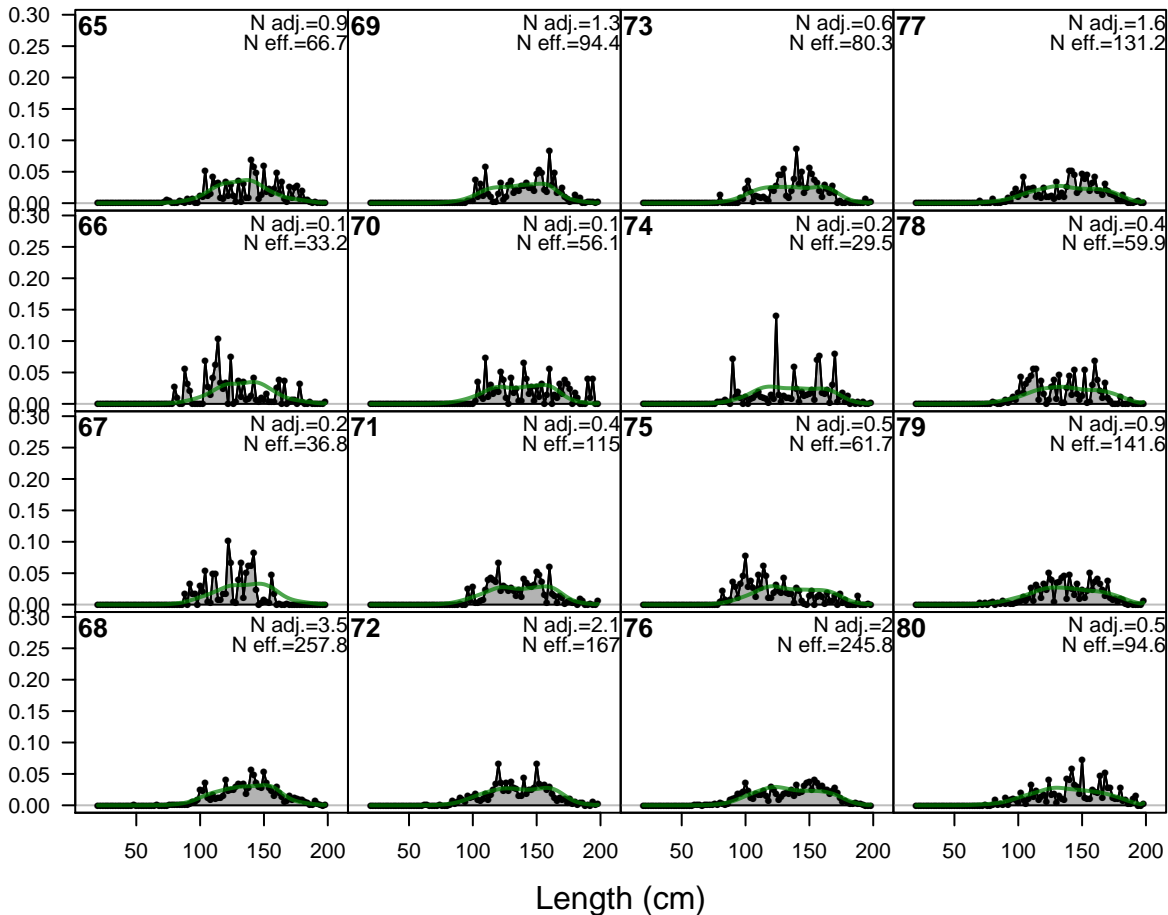
A3-LL-n (whole catch)



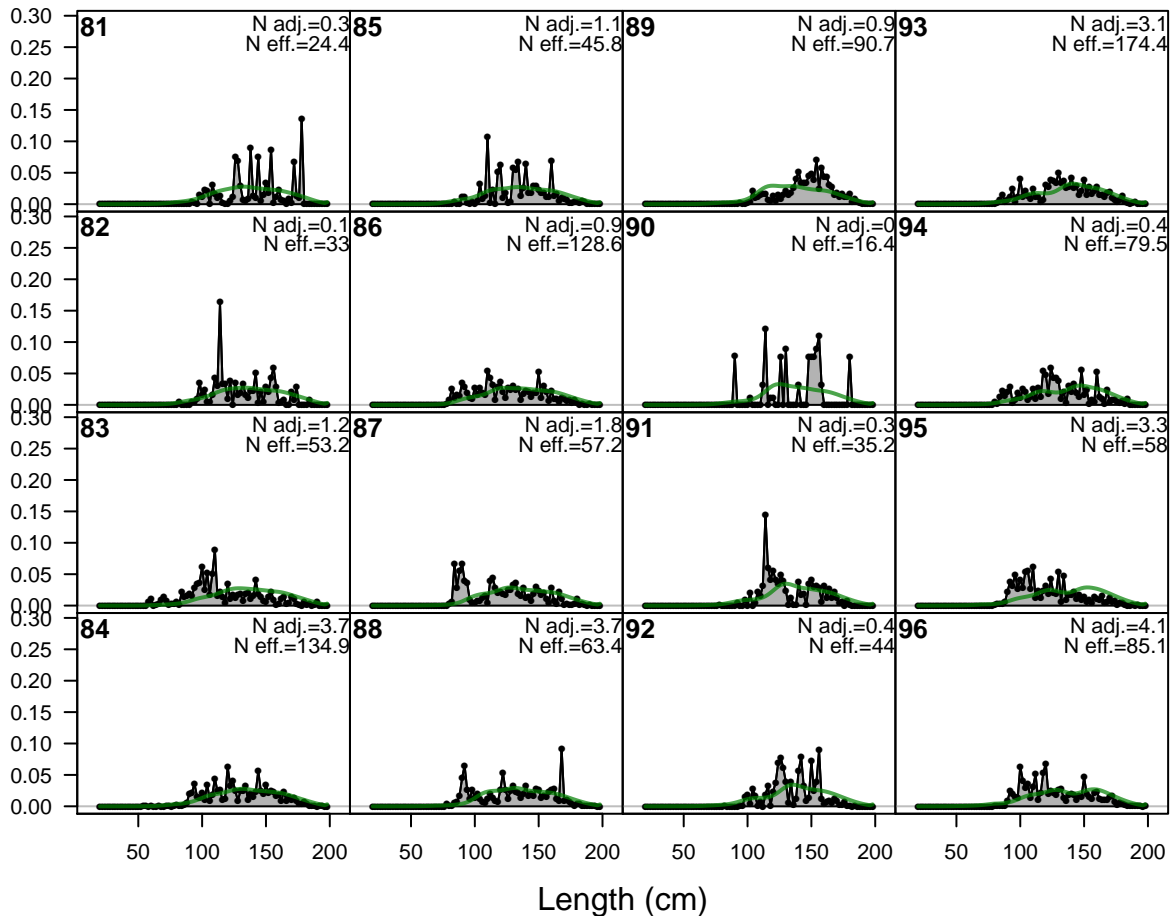
Proportion



Proportion

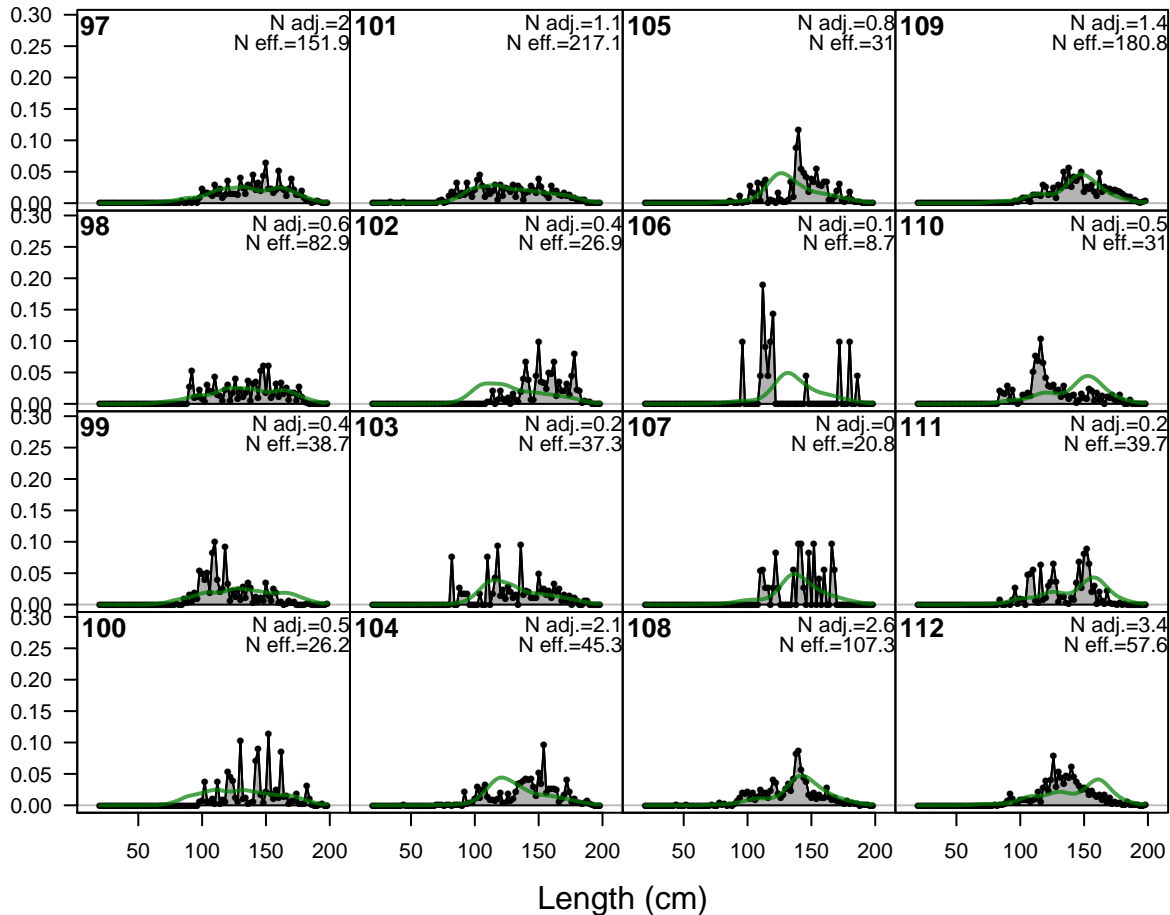


Proportion

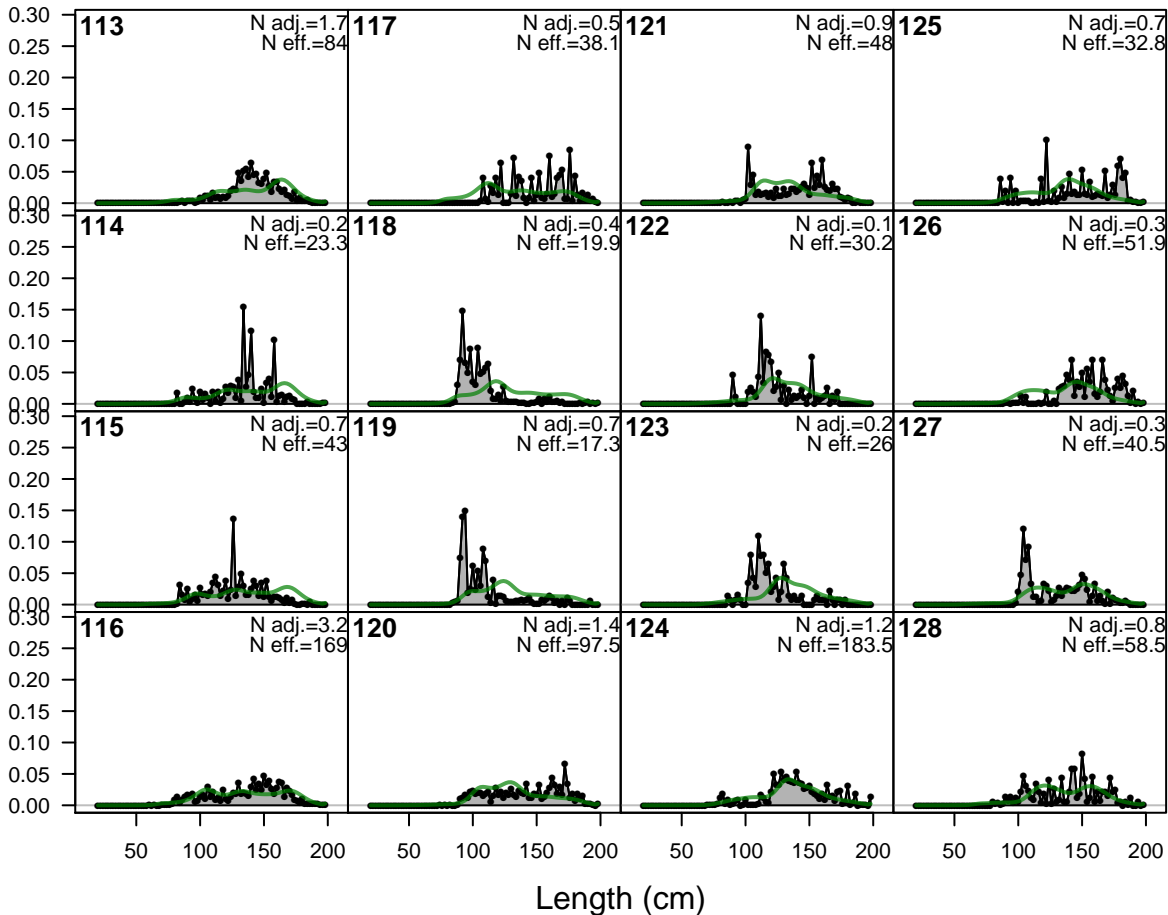




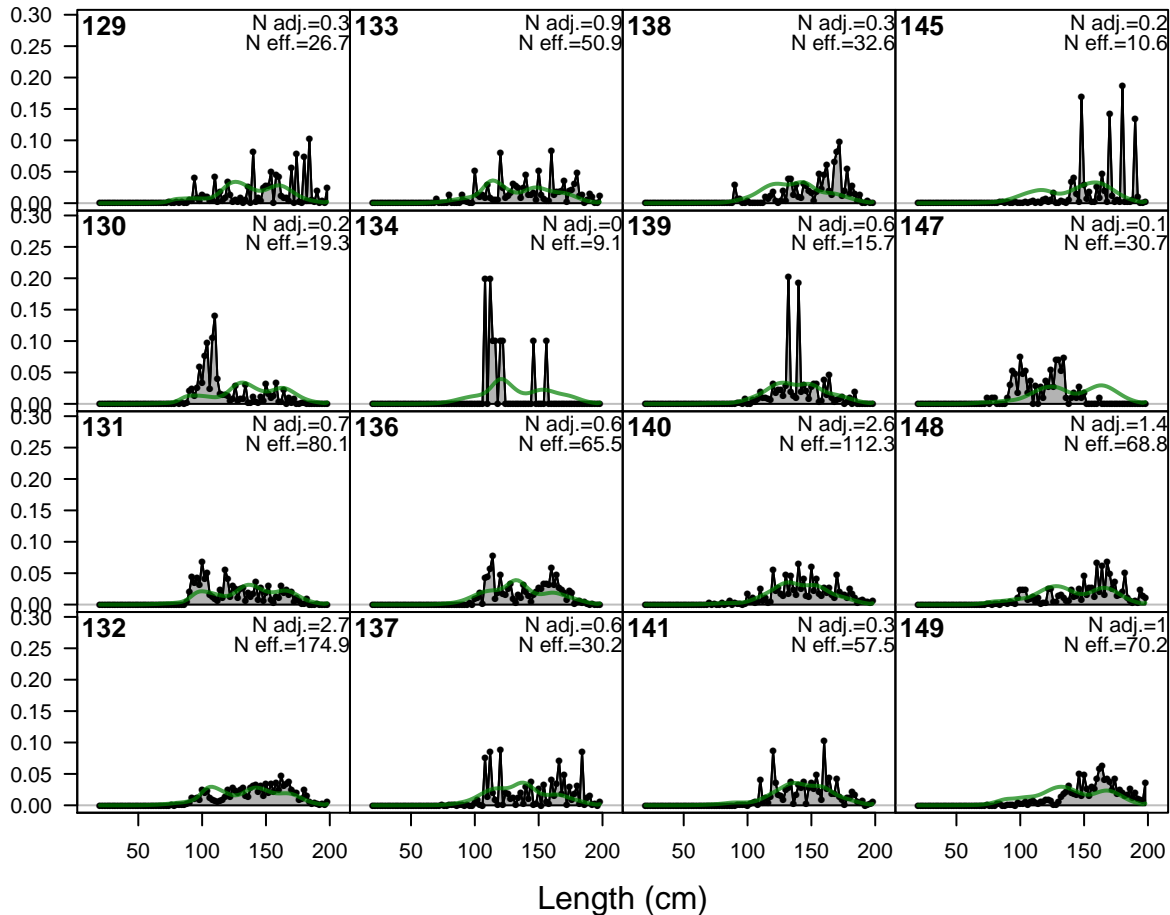
Proportion



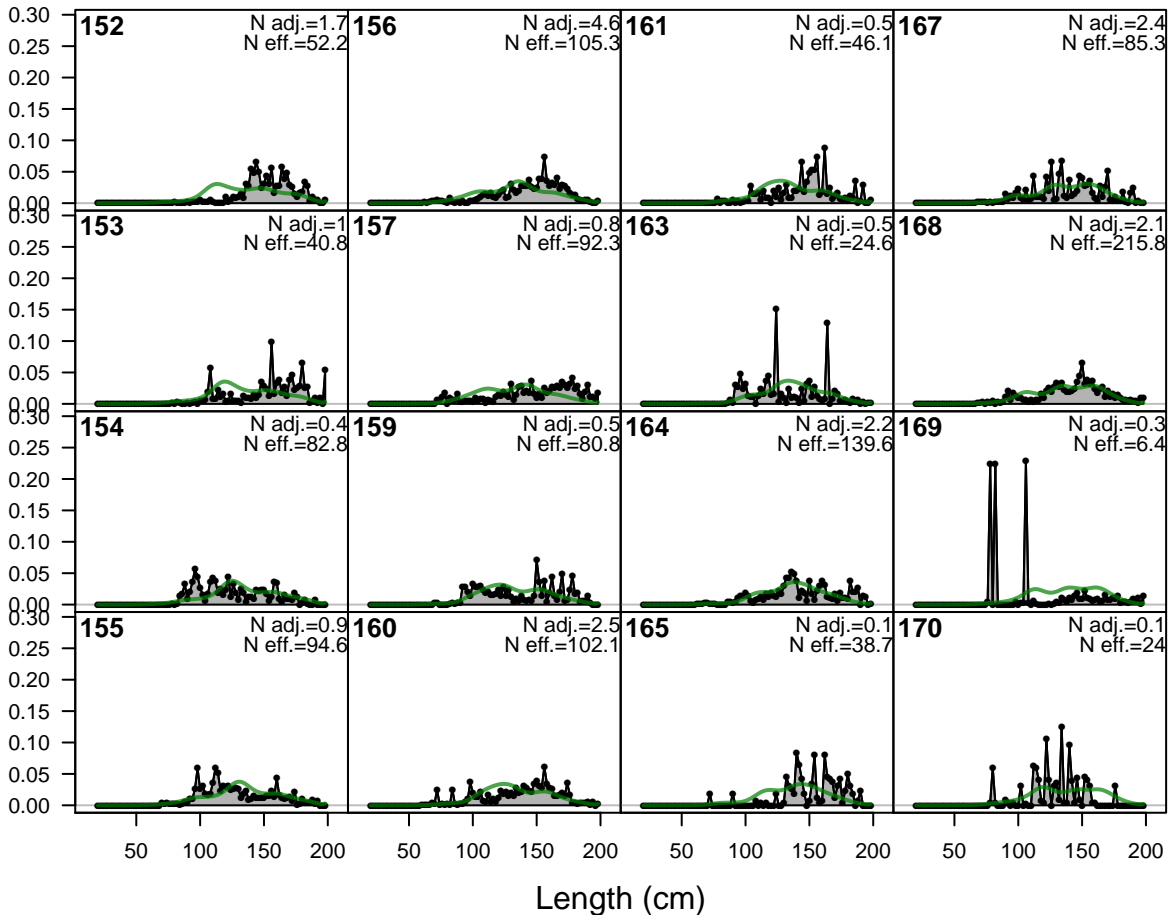
Proportion



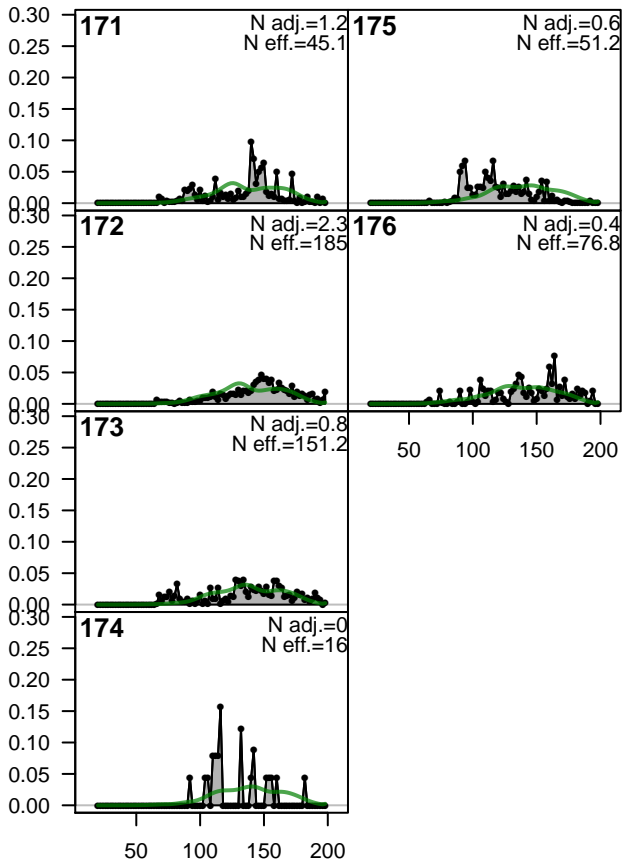
Proportion



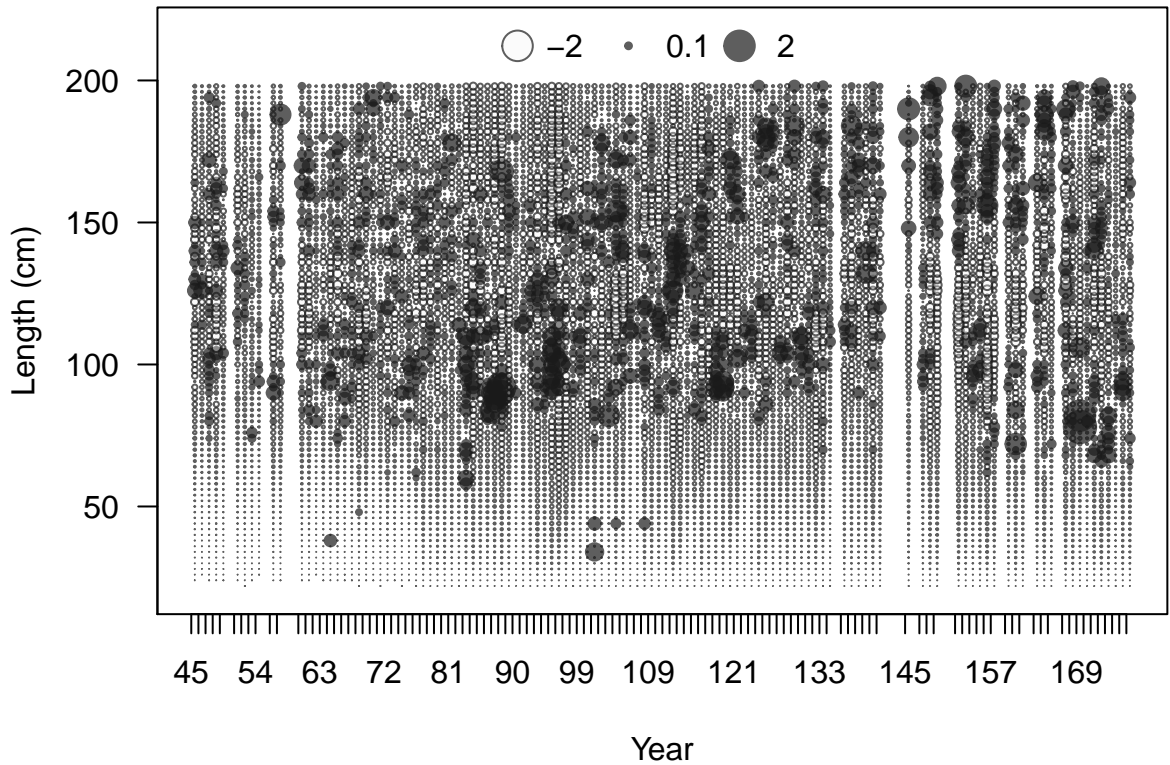
Proportion

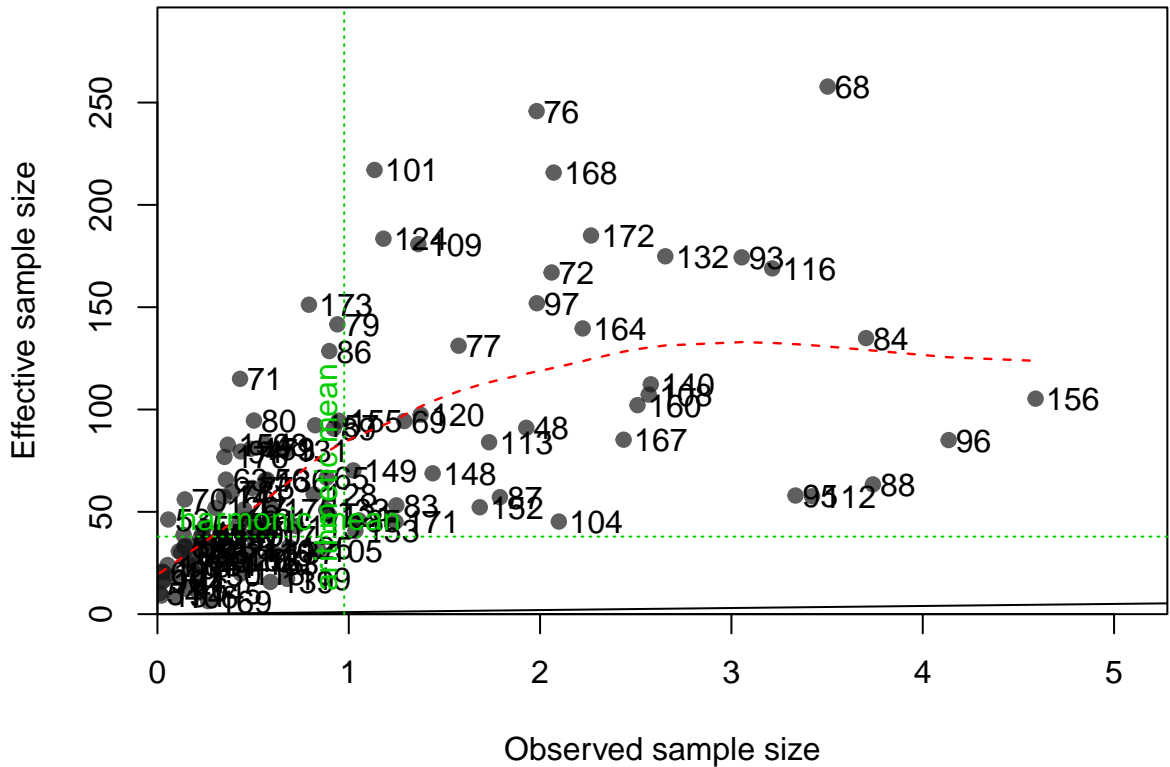


Proportion

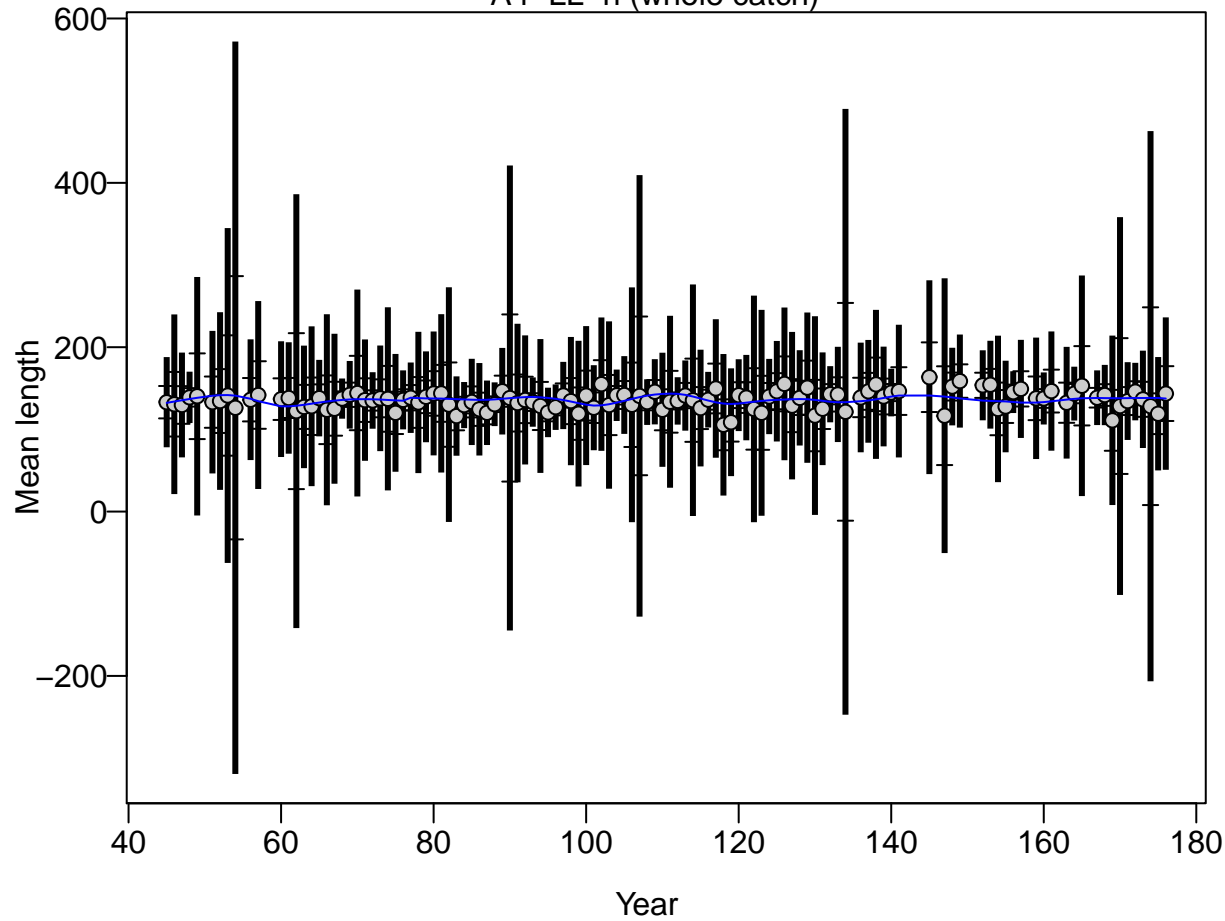


Length (cm)



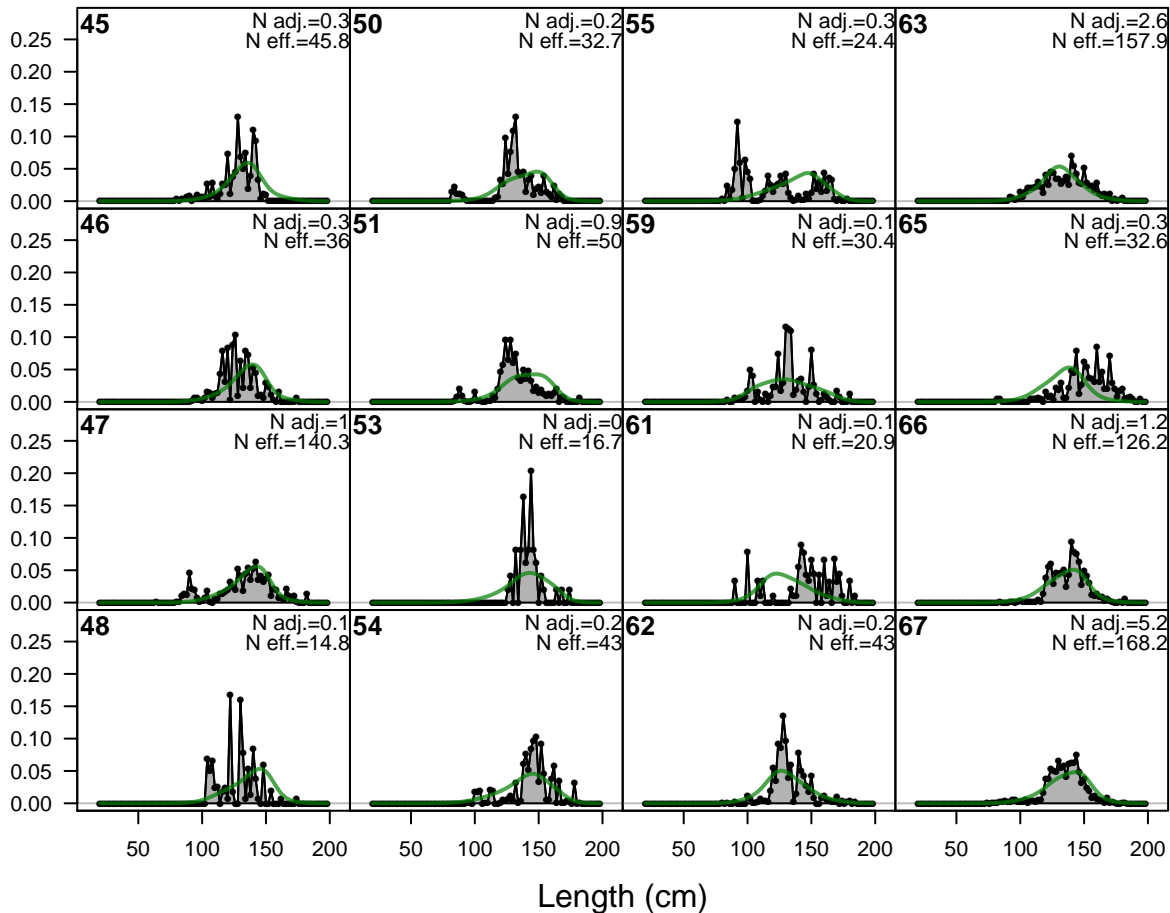


A4-LL-n (whole catch)

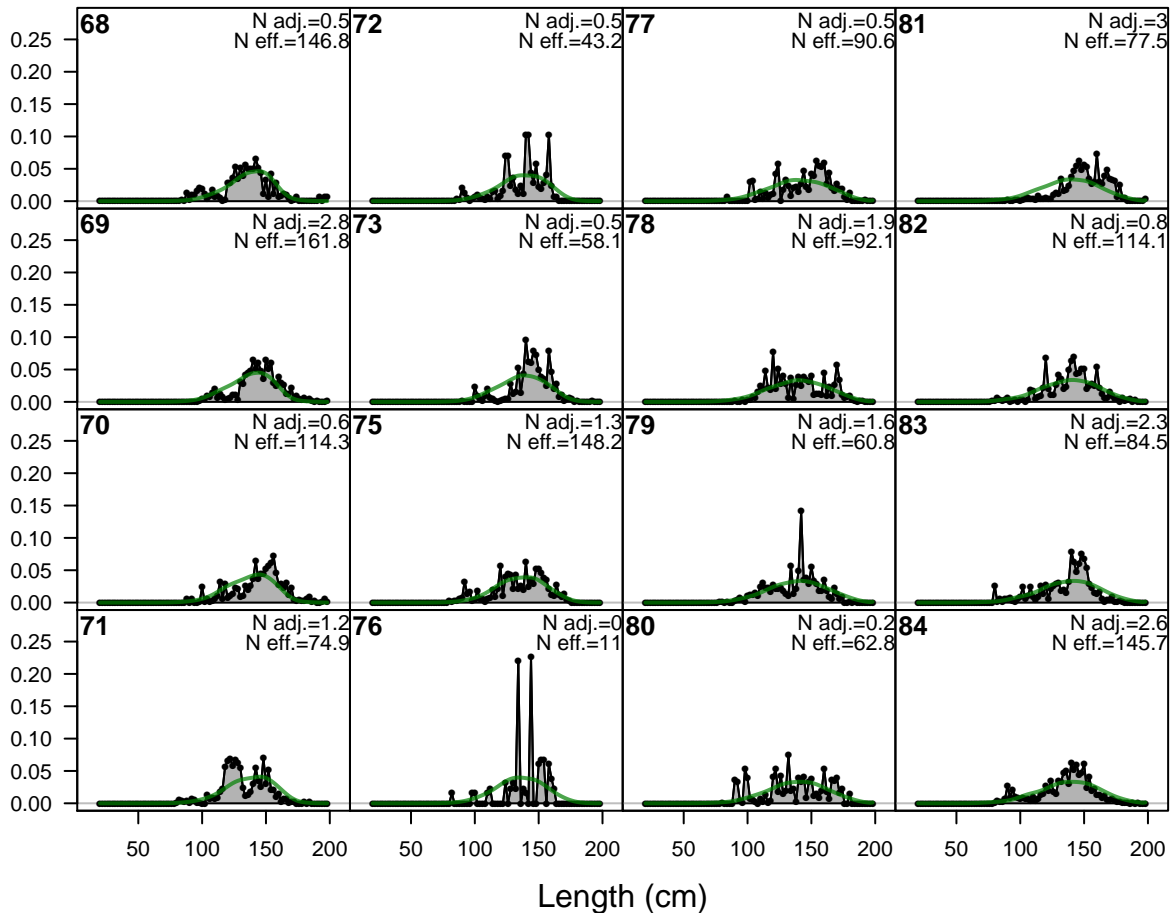




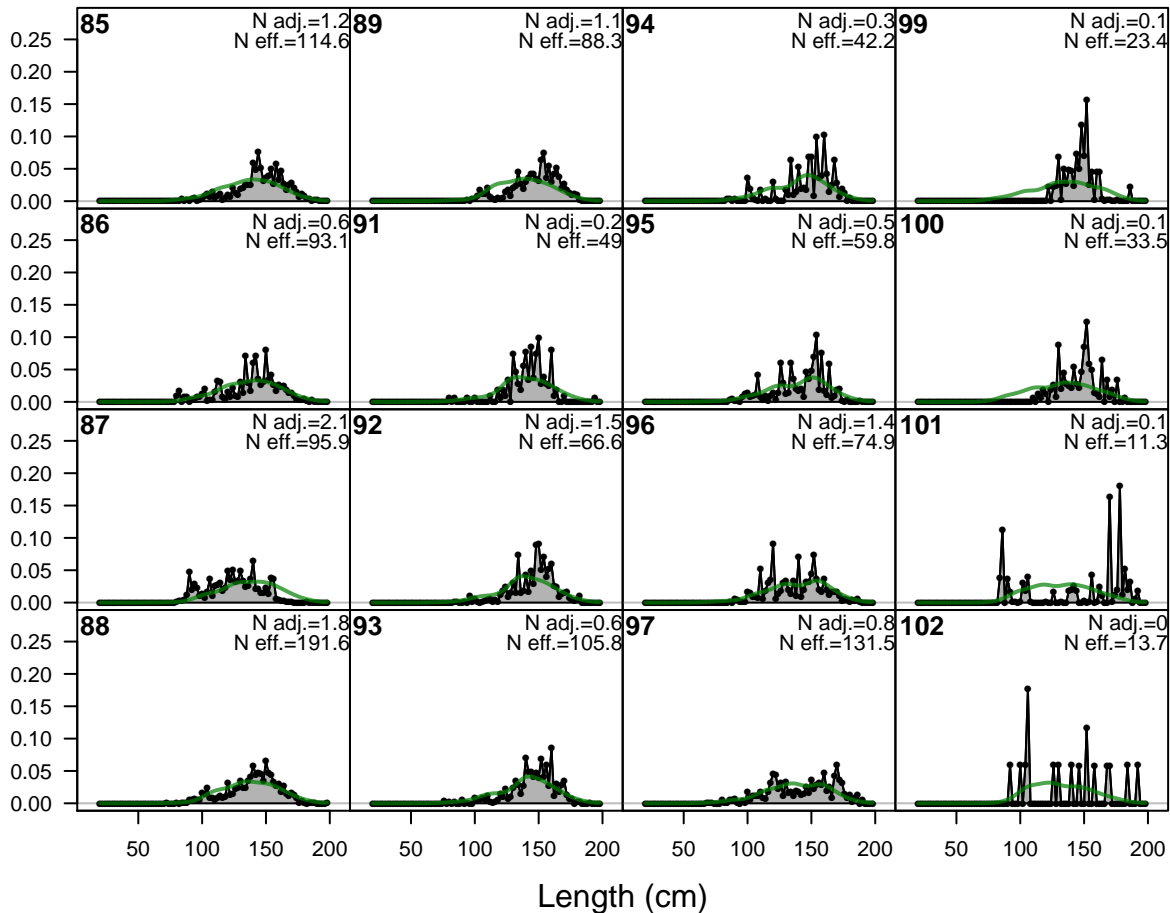
Proportion



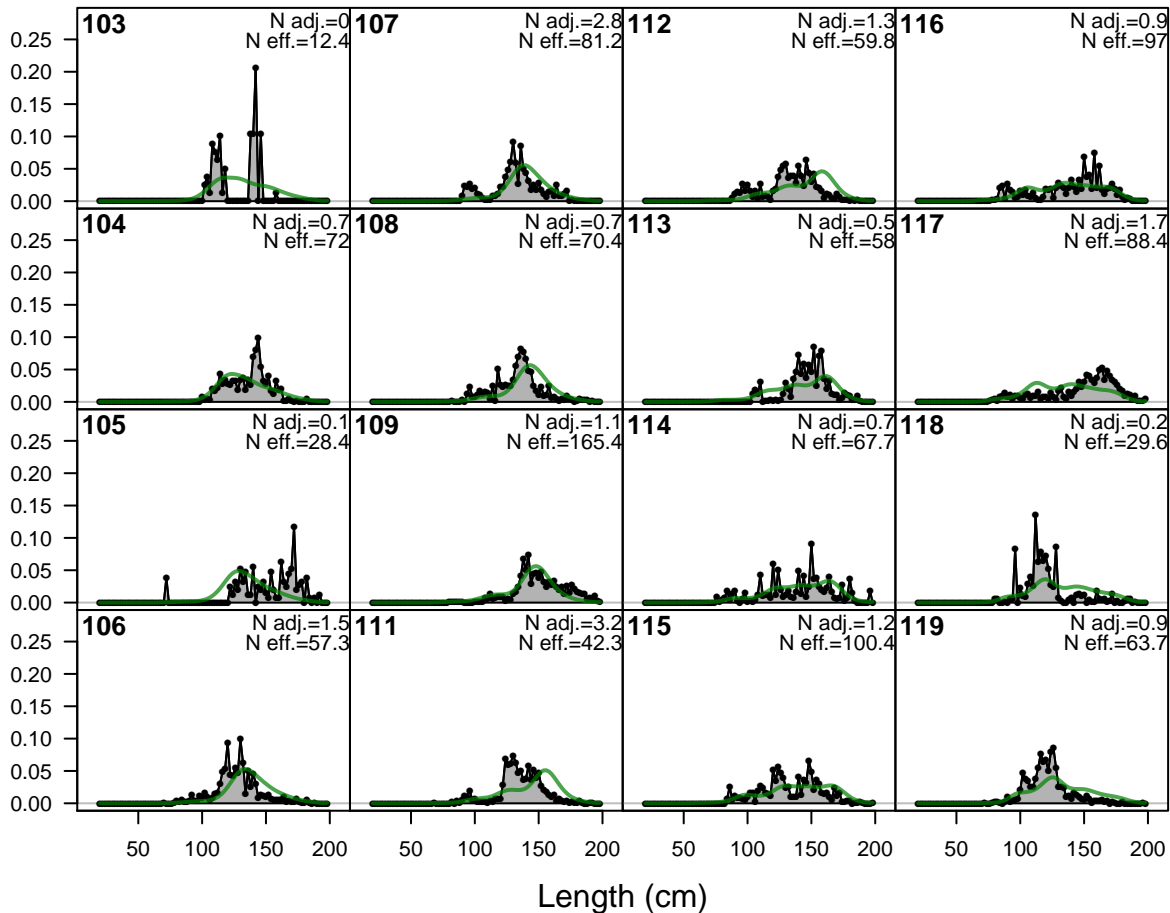
Proportion



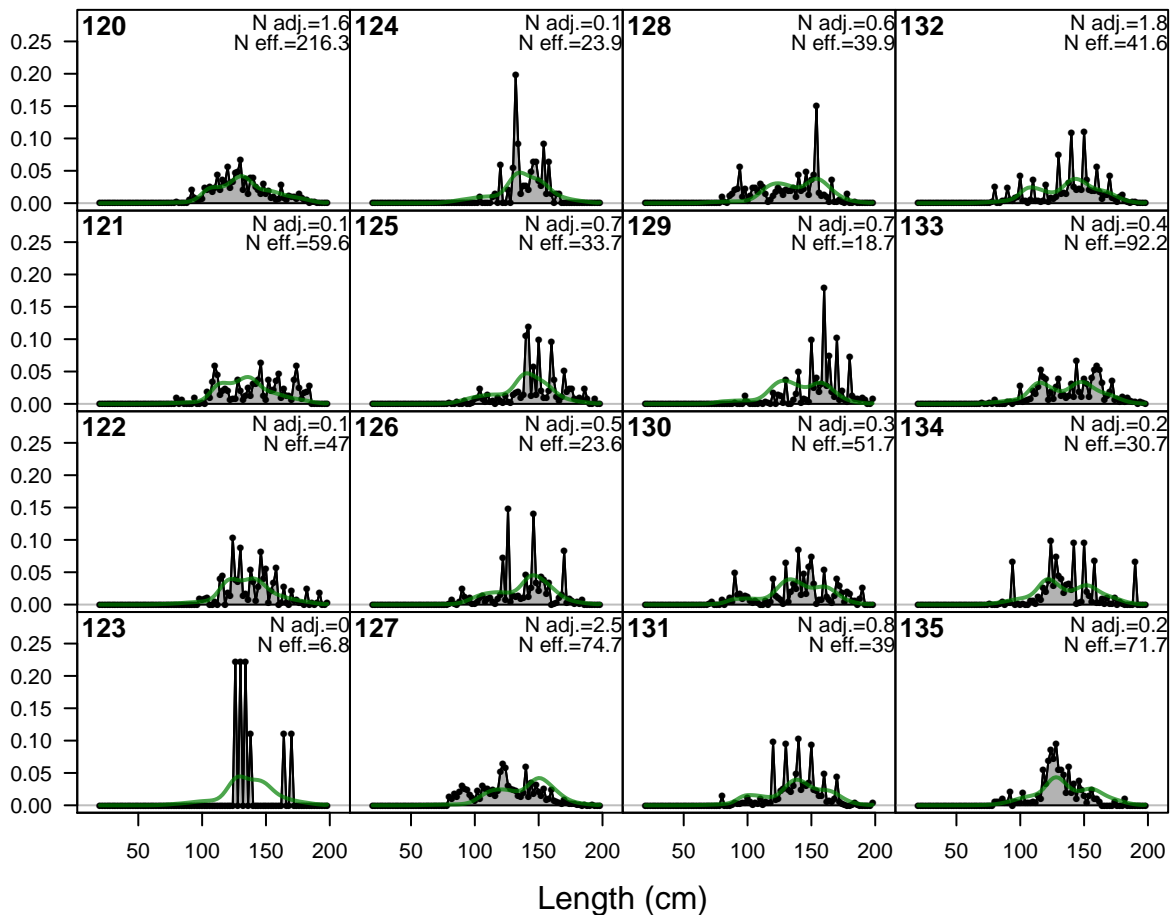
Proportion



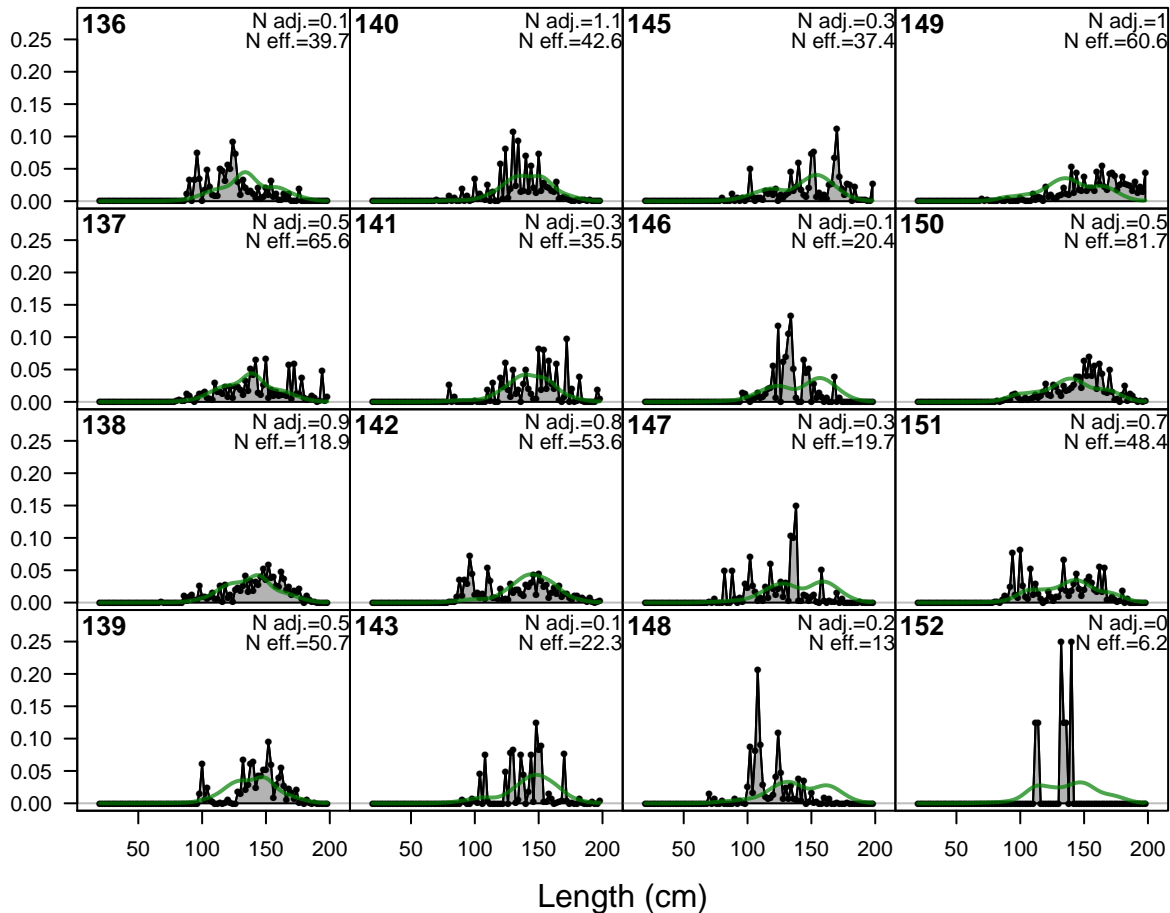
Proportion



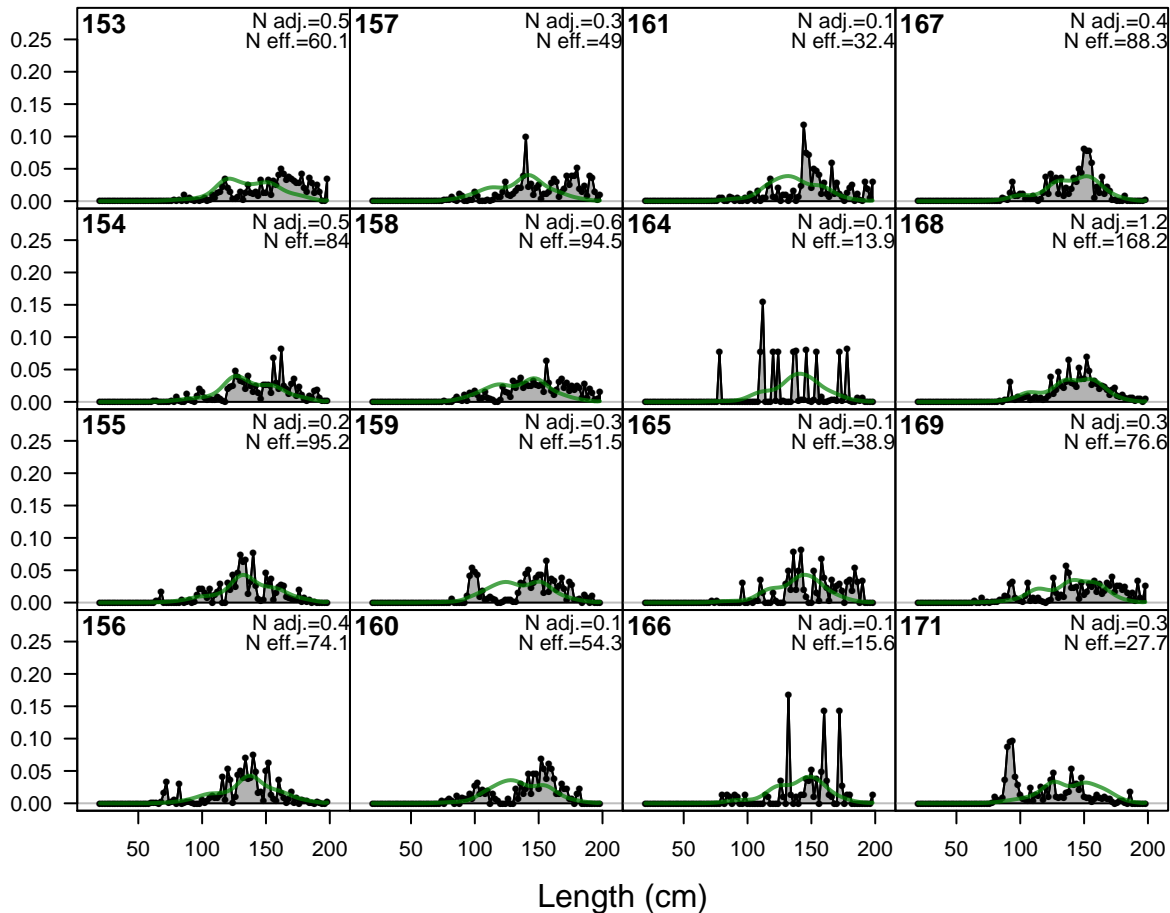
Proportion



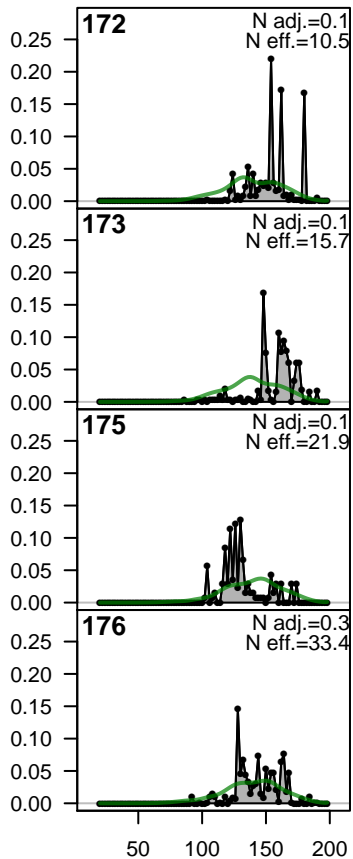
Proportion



Proportion

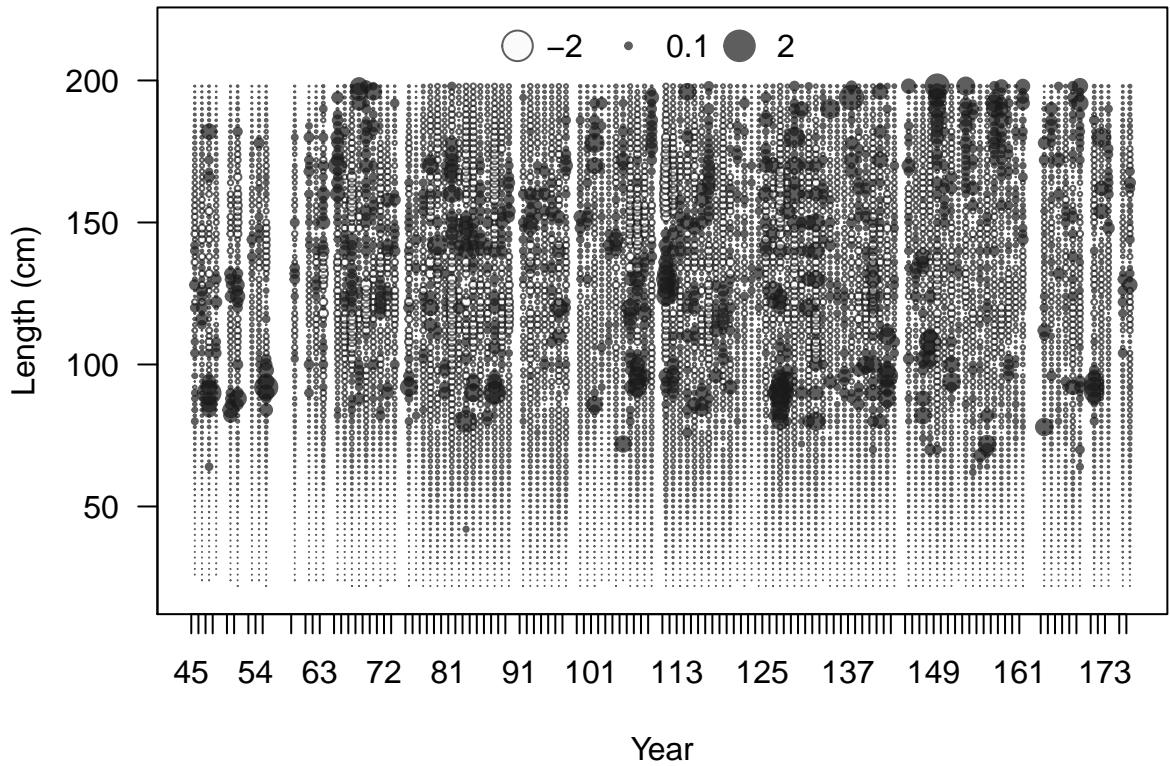


Proportion

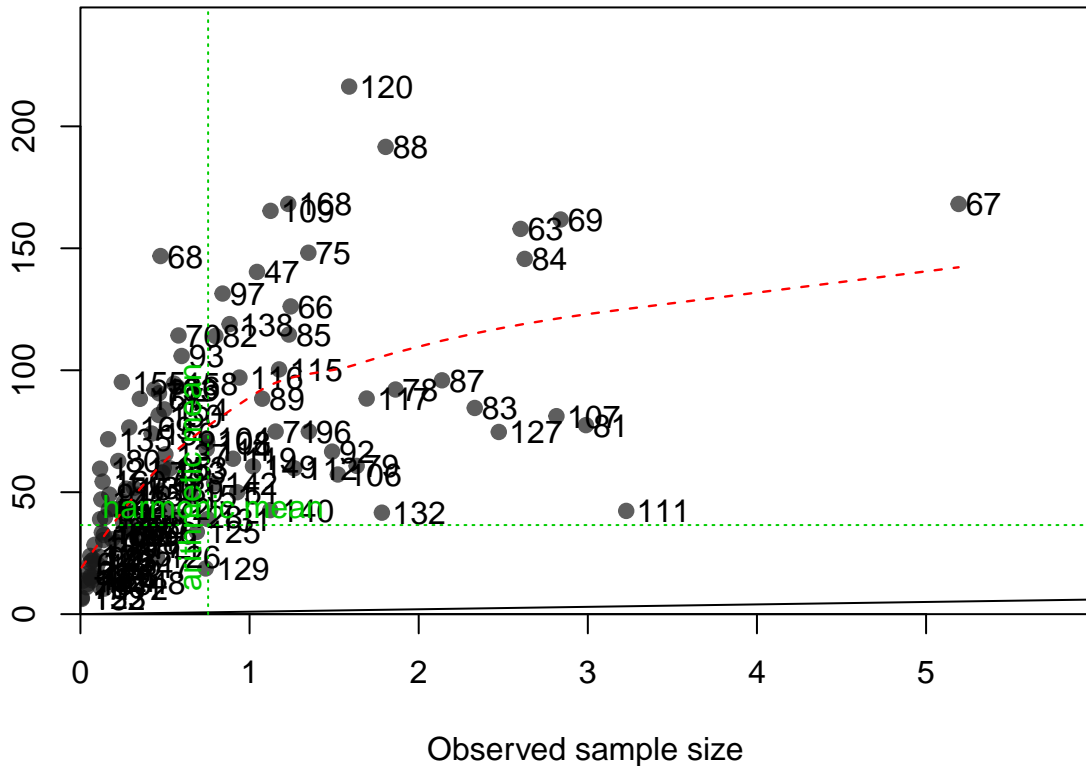


Length (cm)

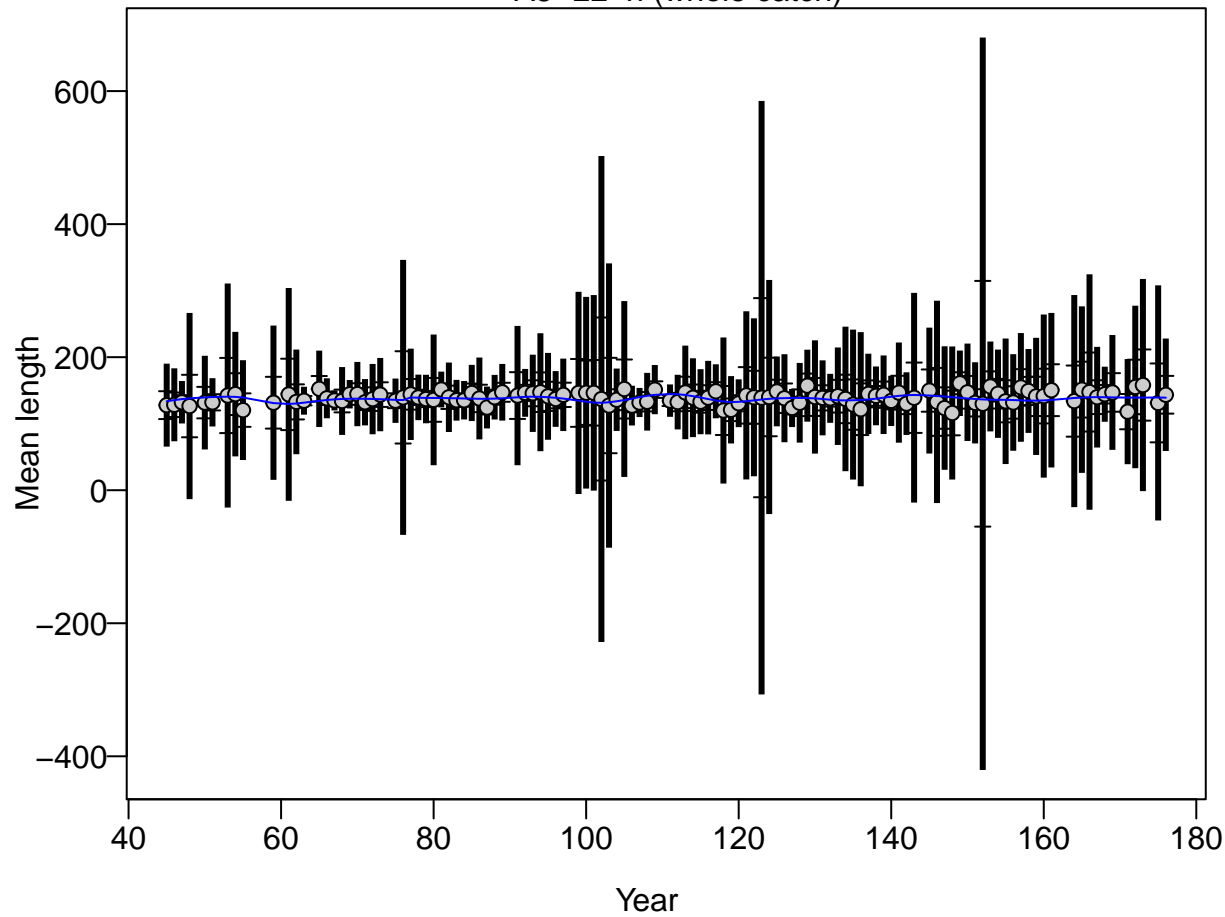




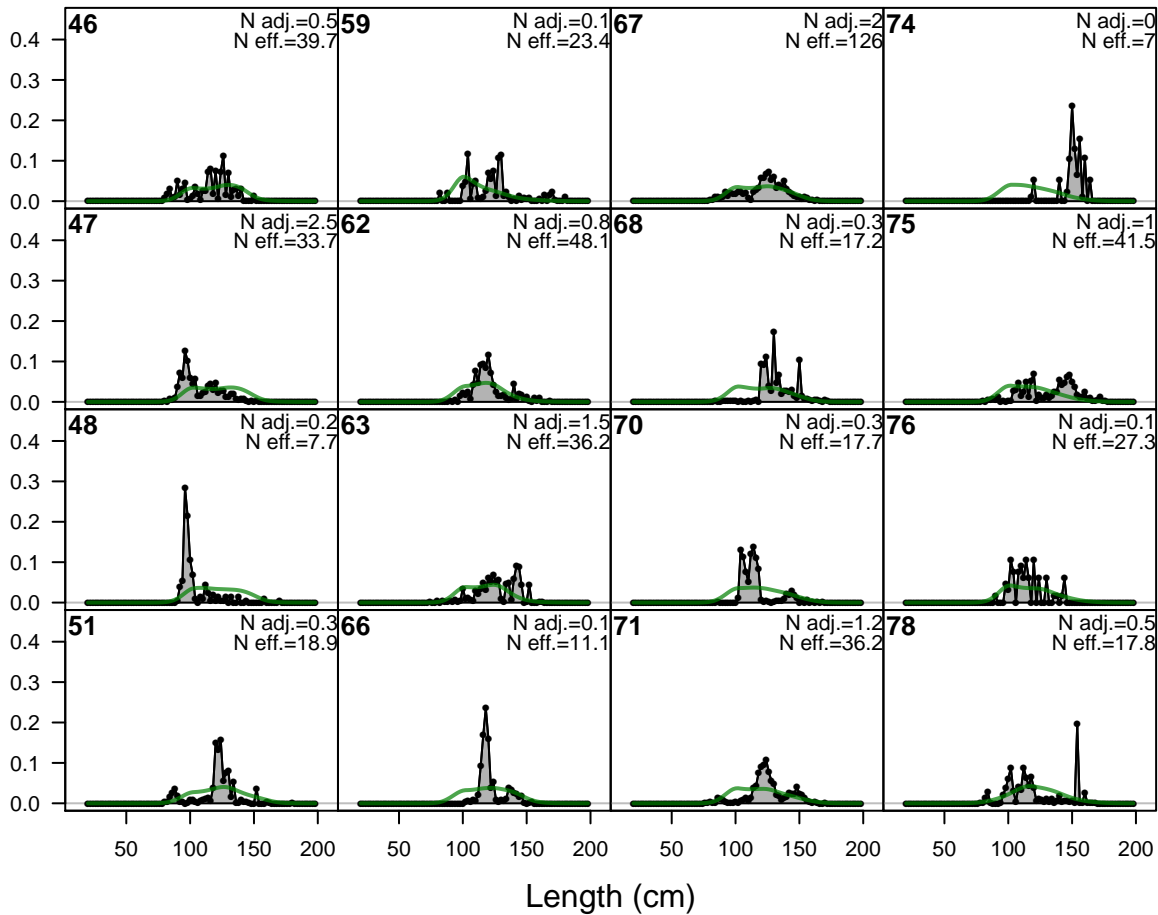
Effective sample size



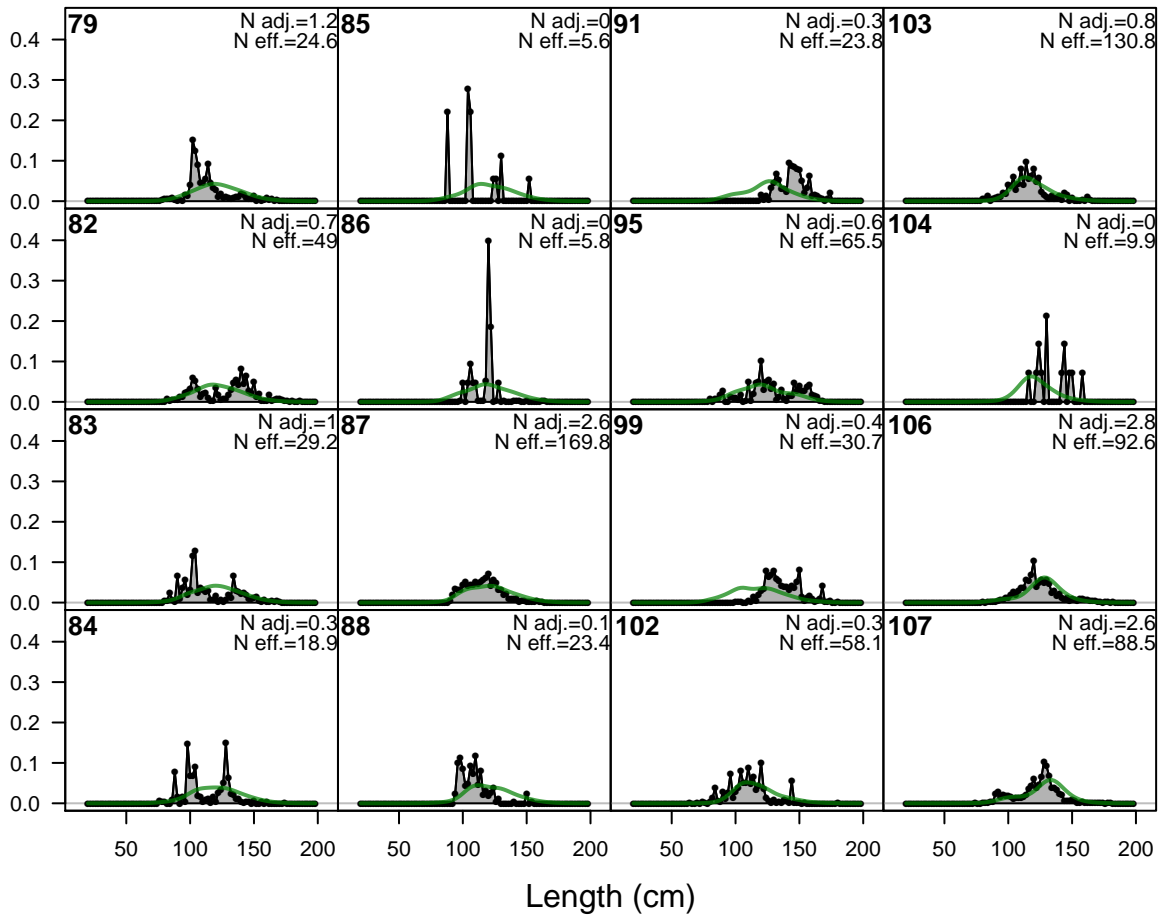
A5-LL-n (whole catch)



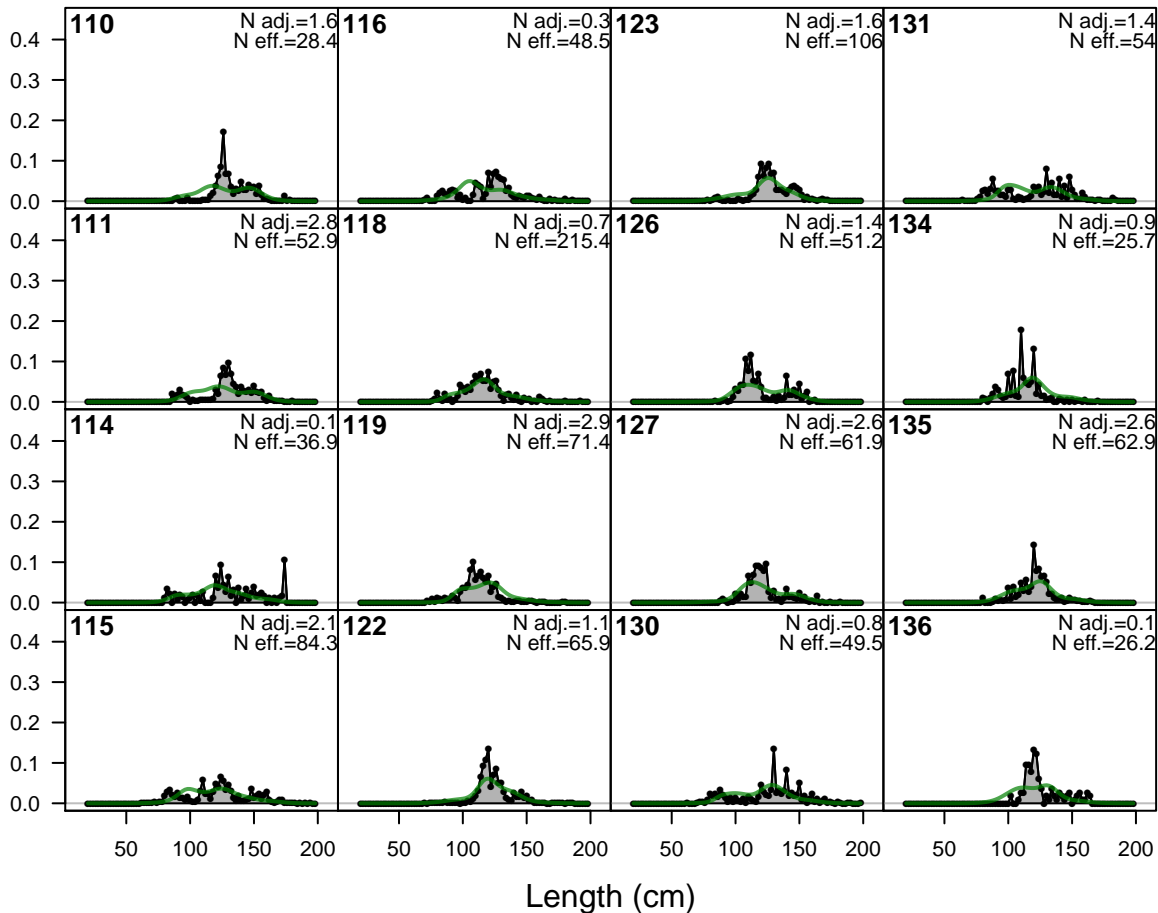
Proportion



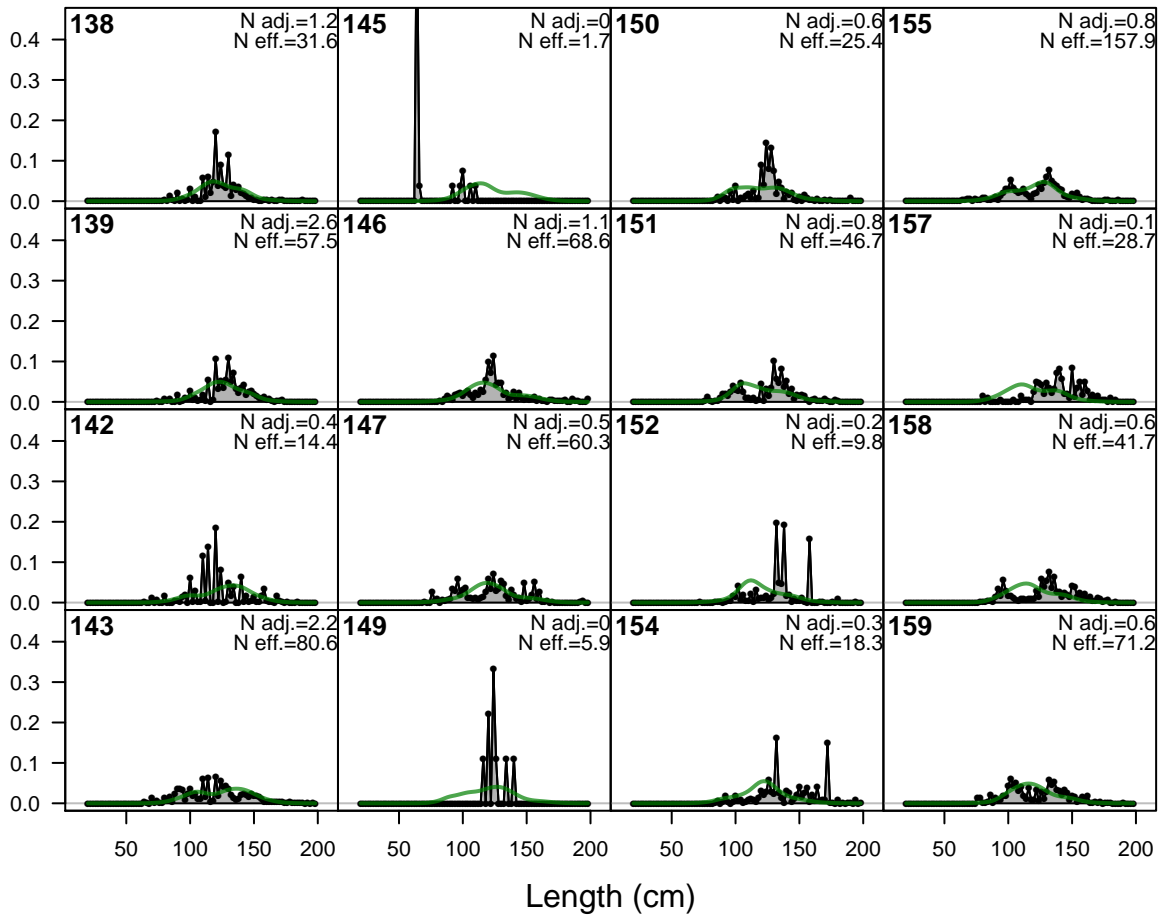
Proportion



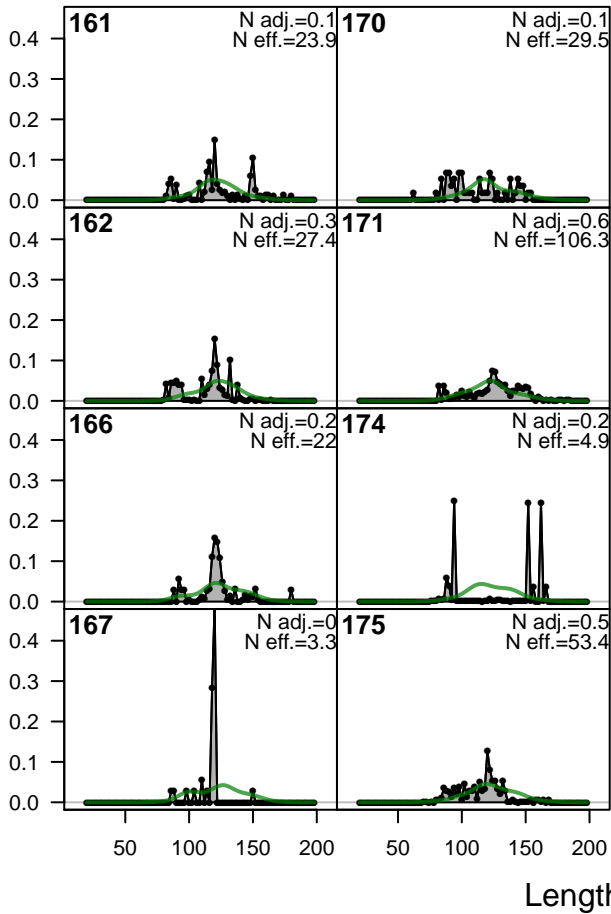
Proportion



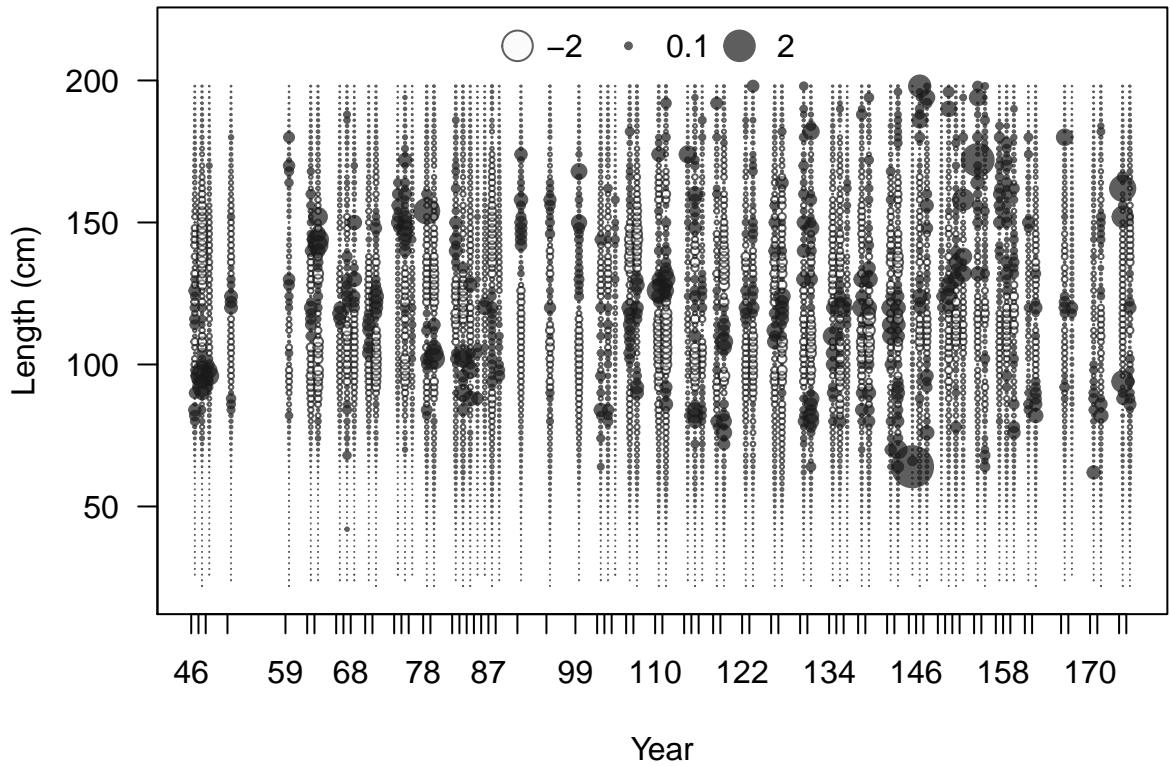
Proportion



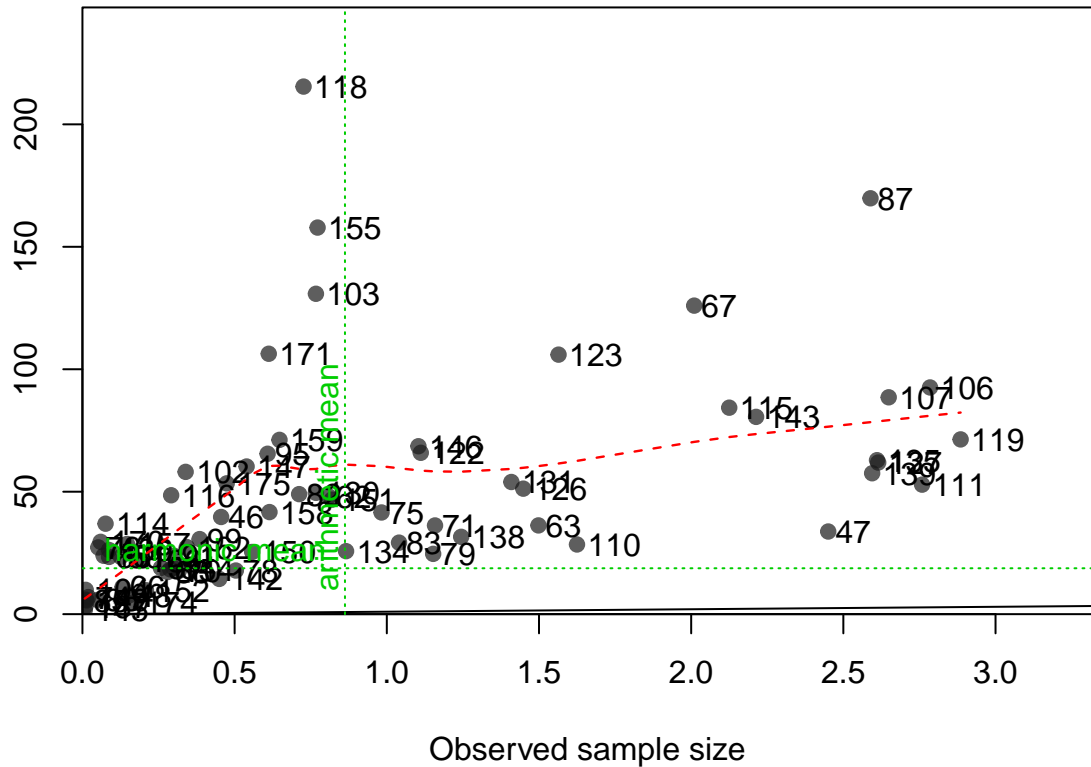
Proportion



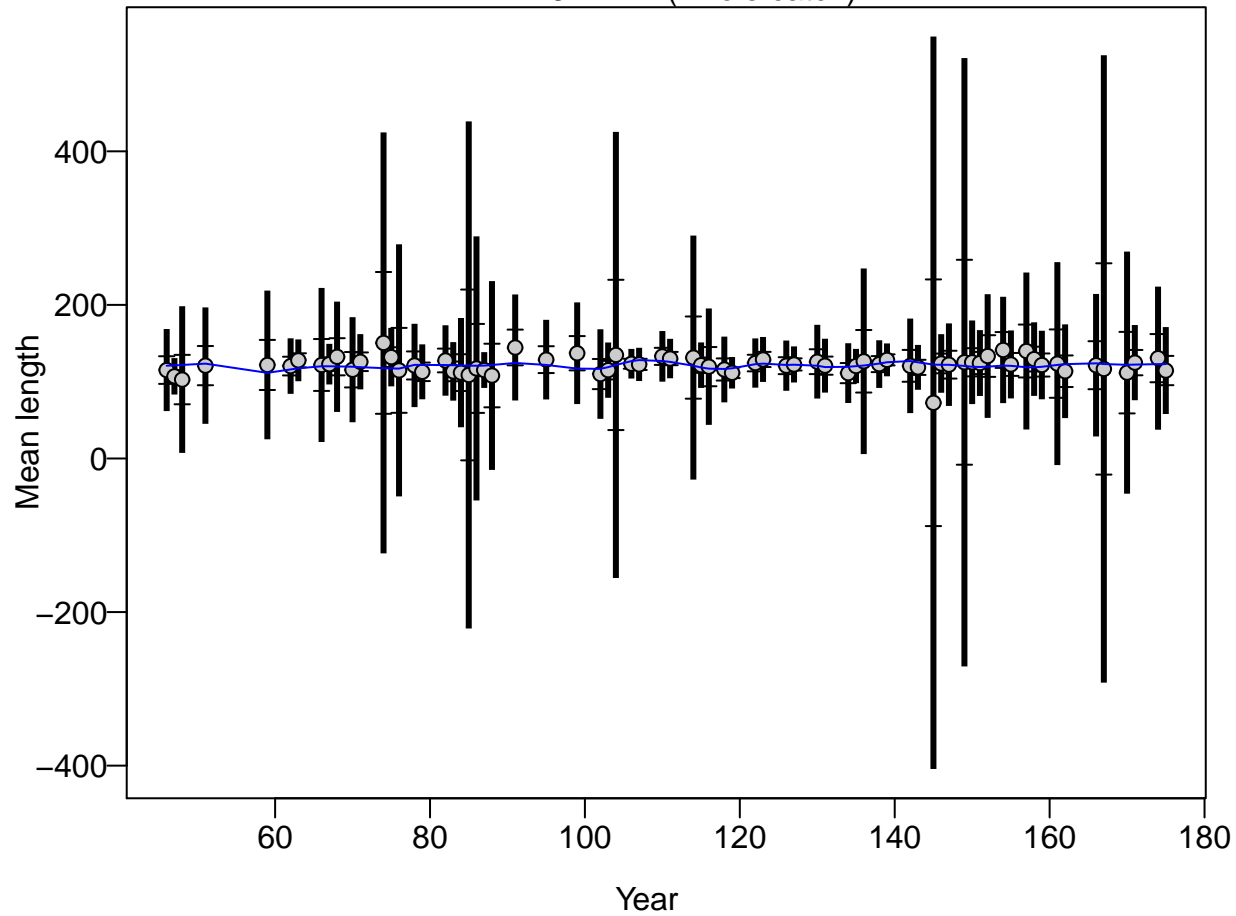




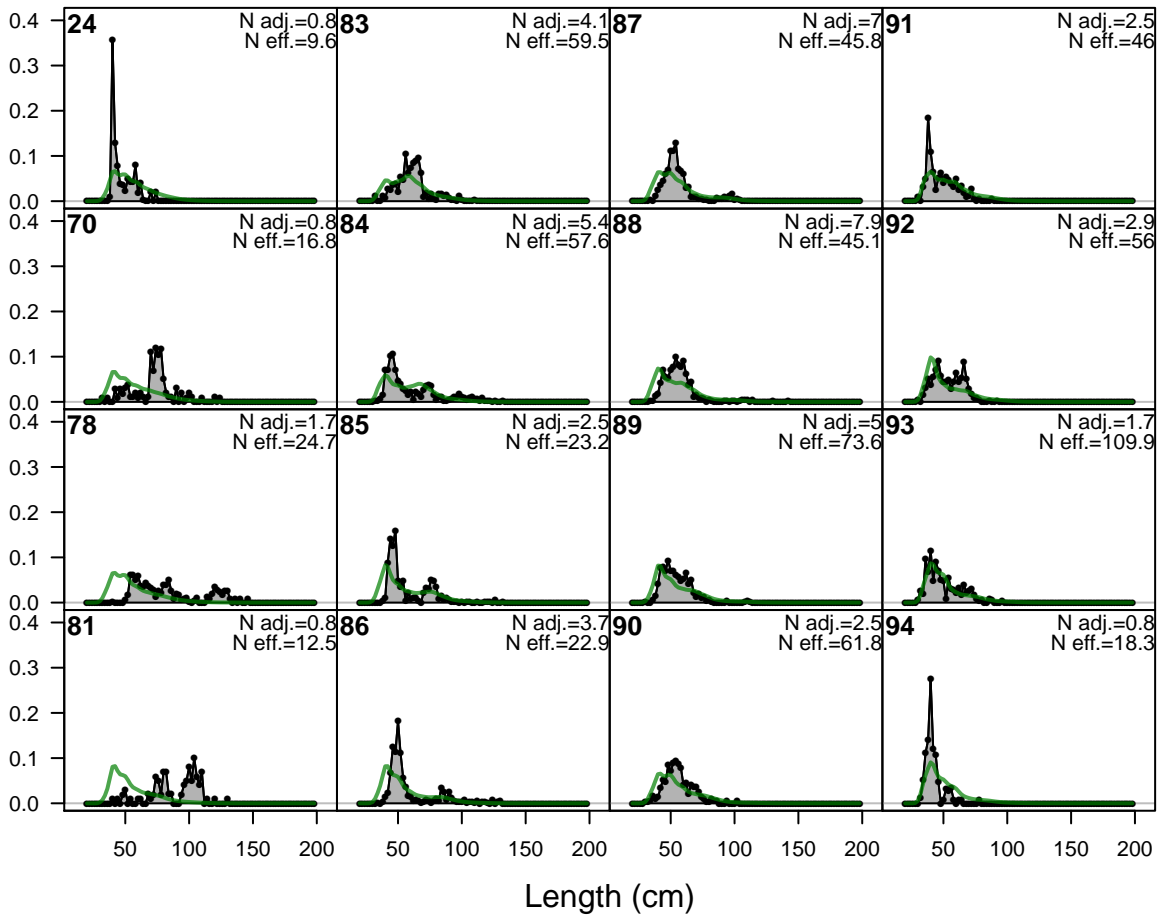
Effective sample size

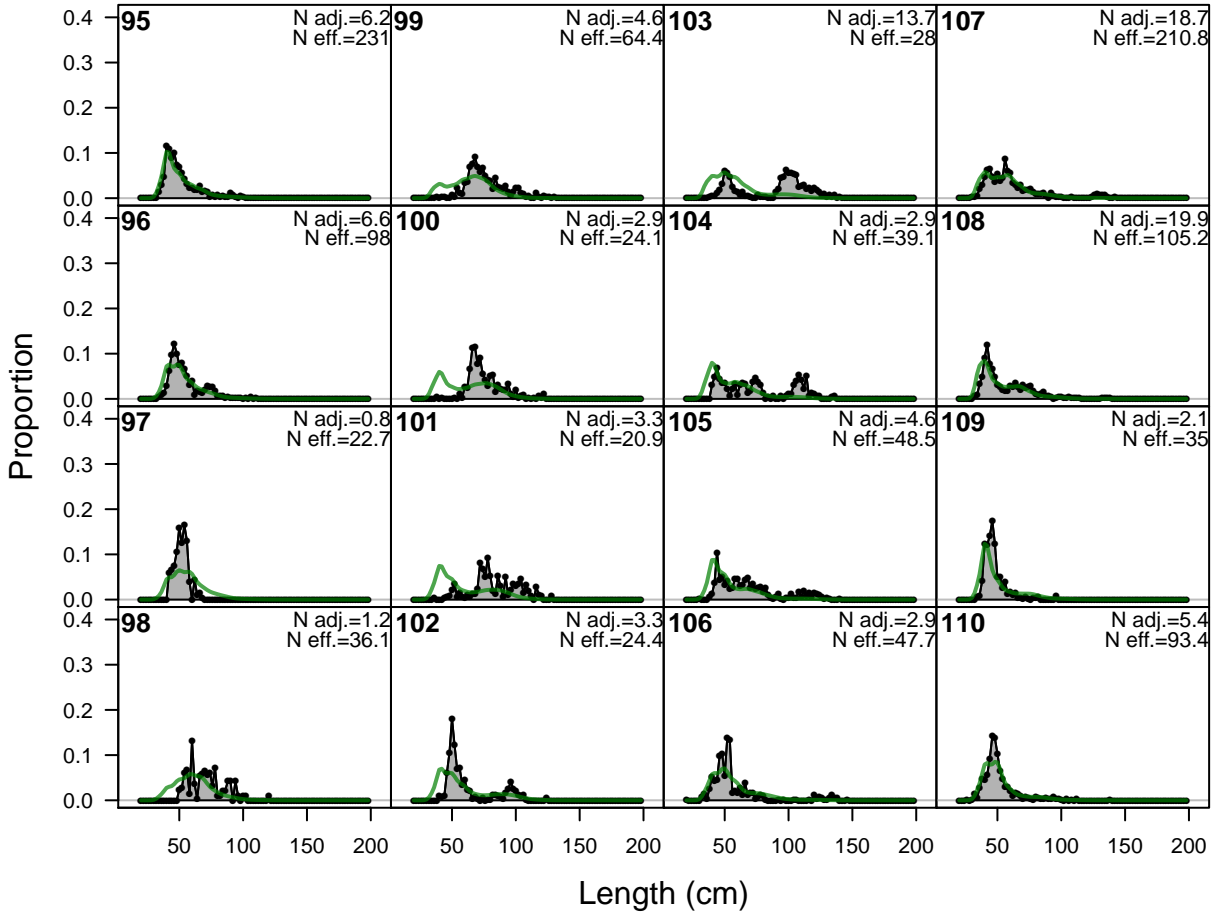


A6-LL-n (whole catch)

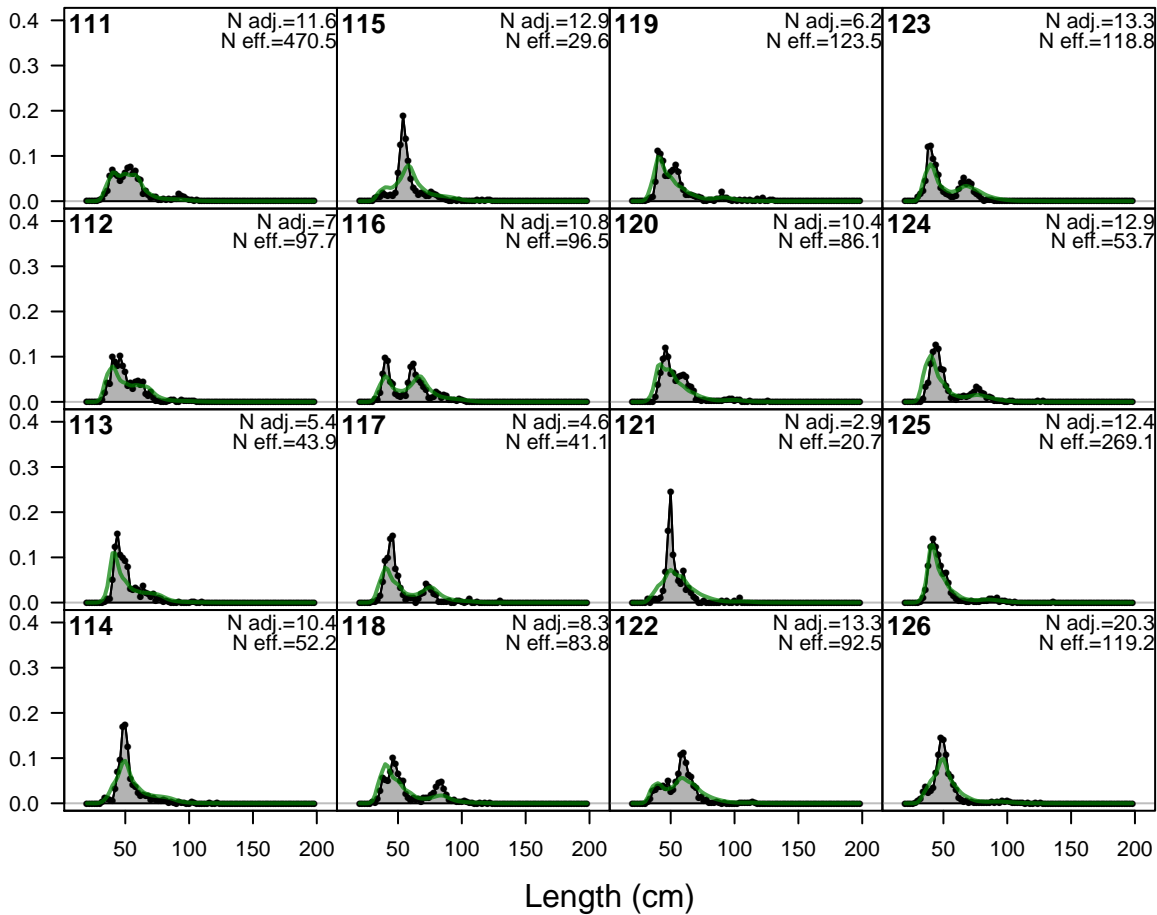


Proportion

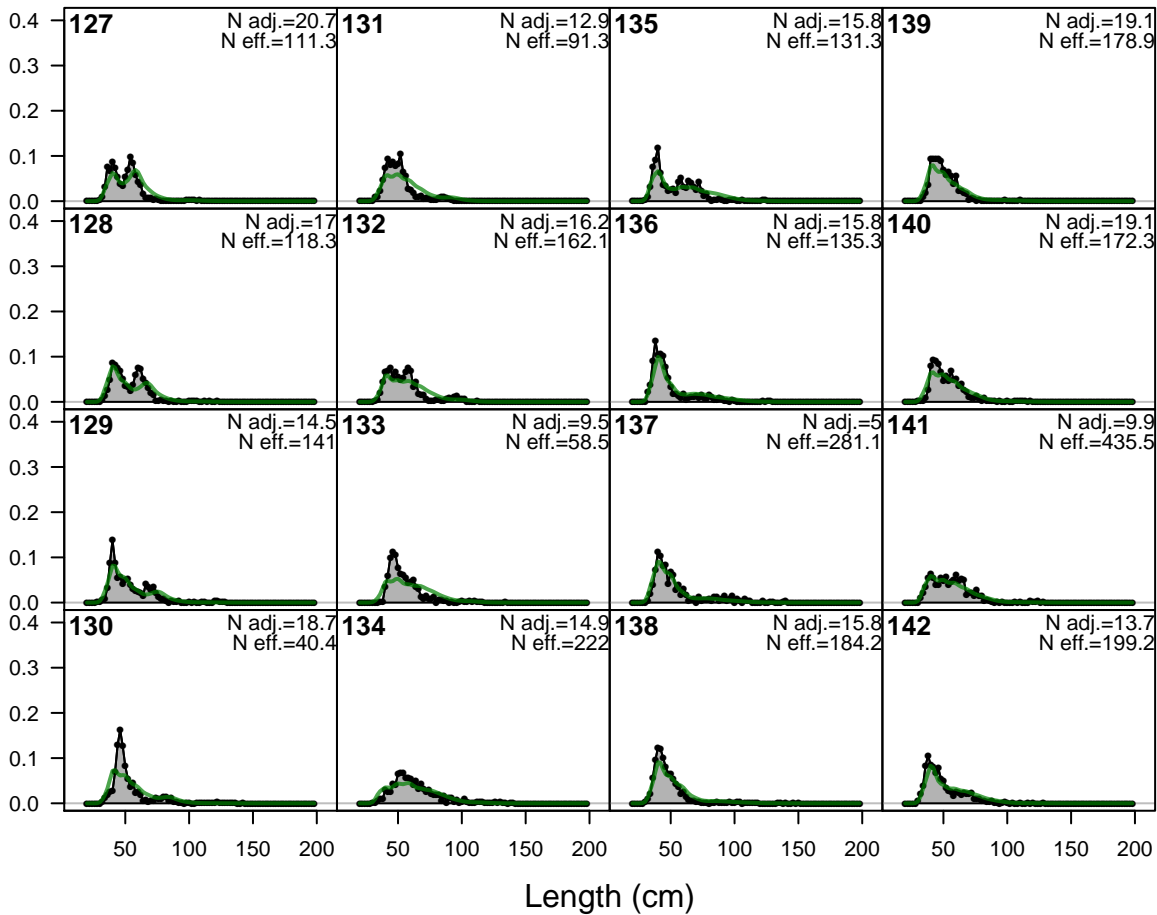




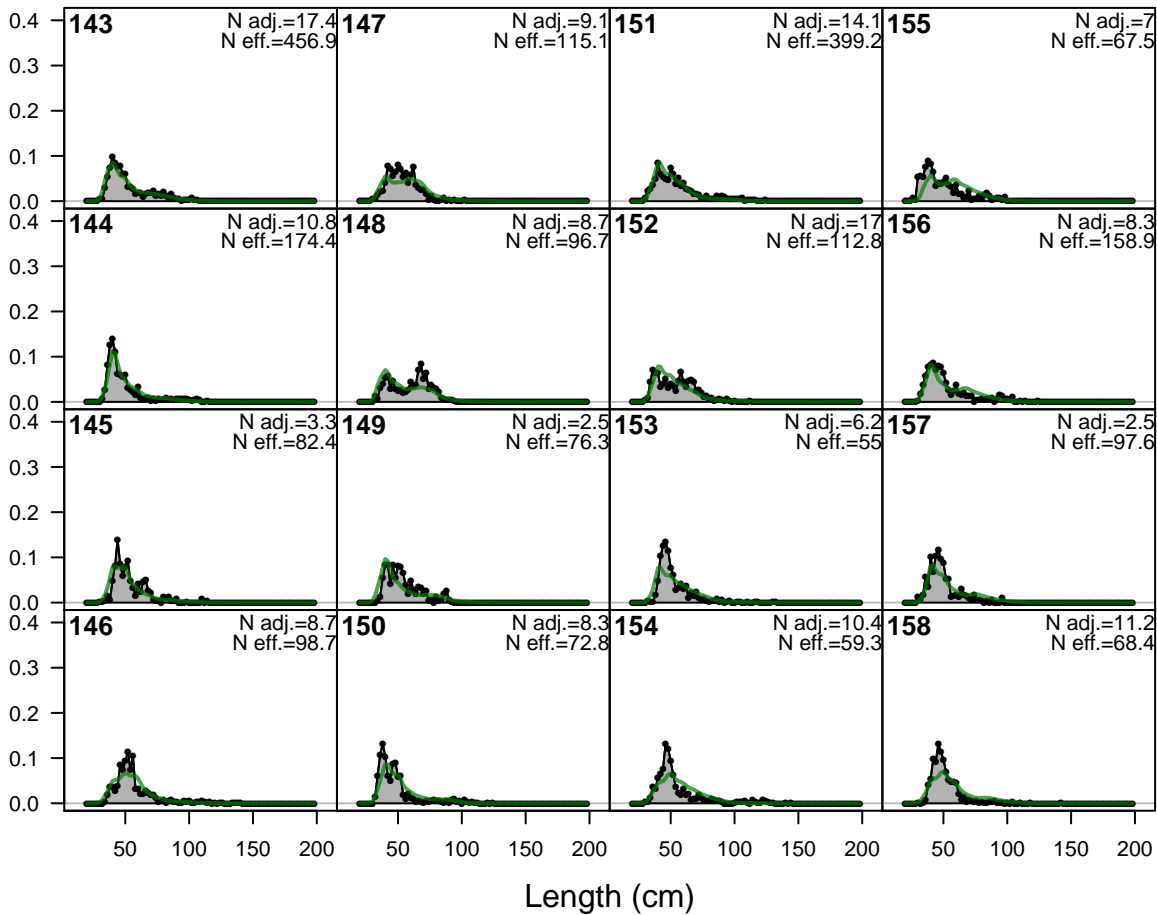
Proportion



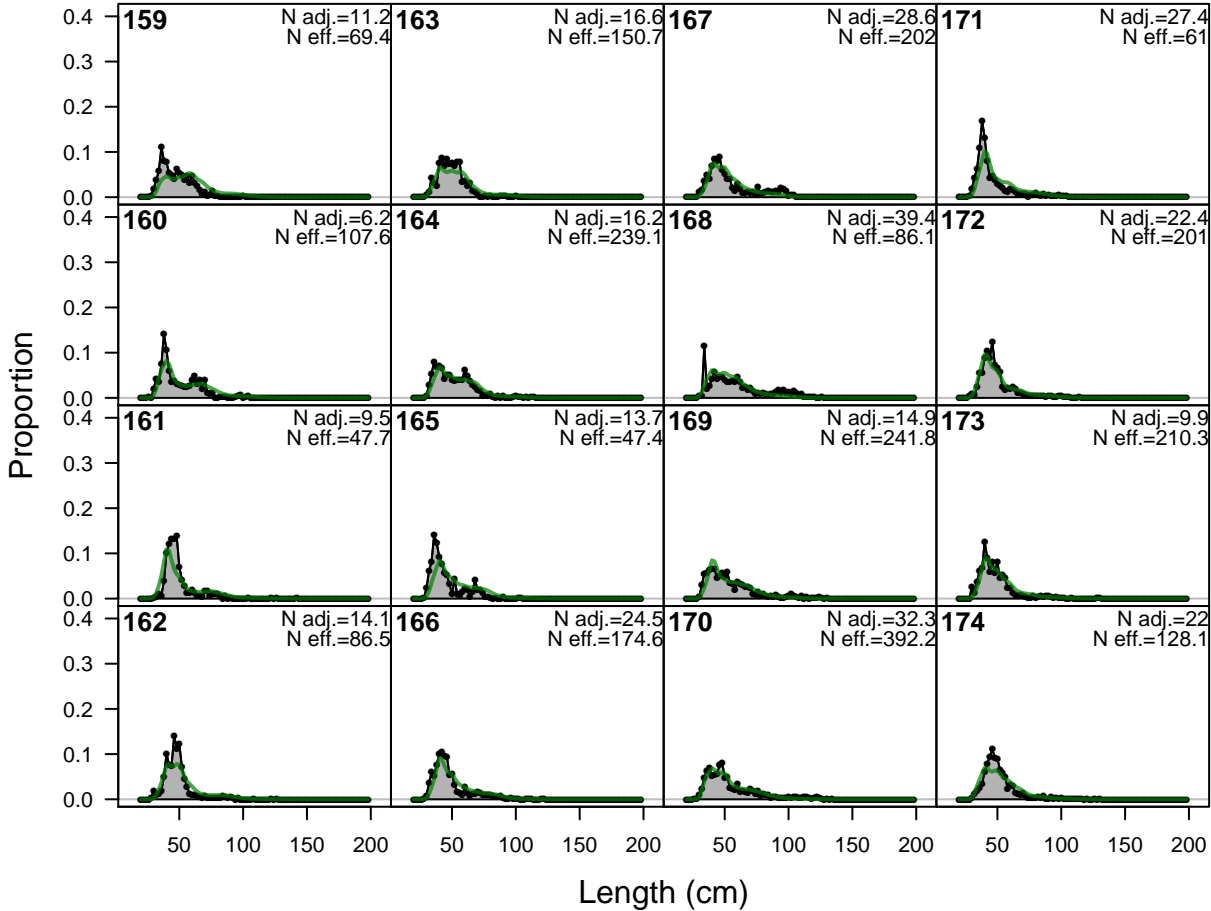
Proportion

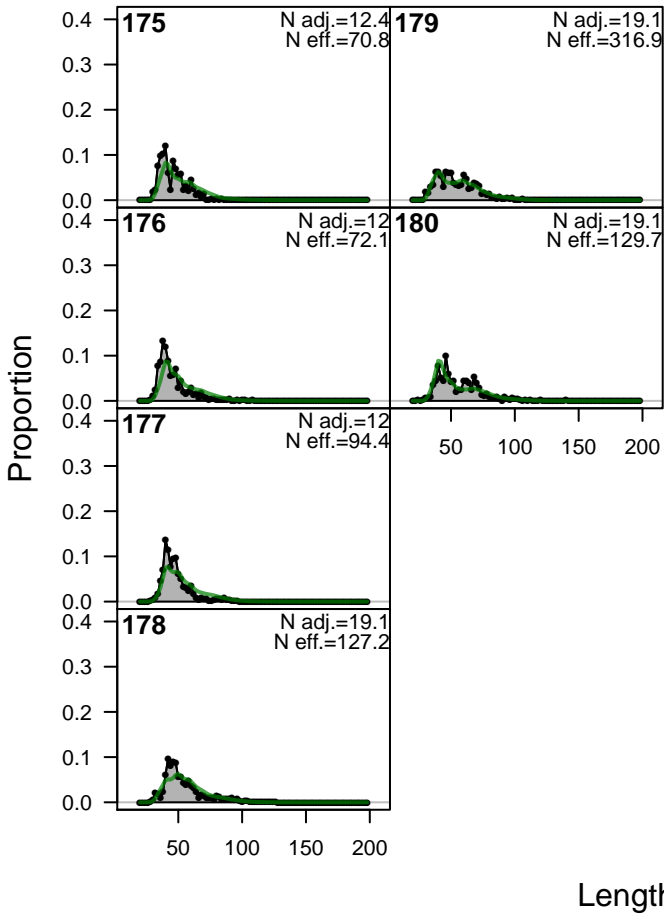


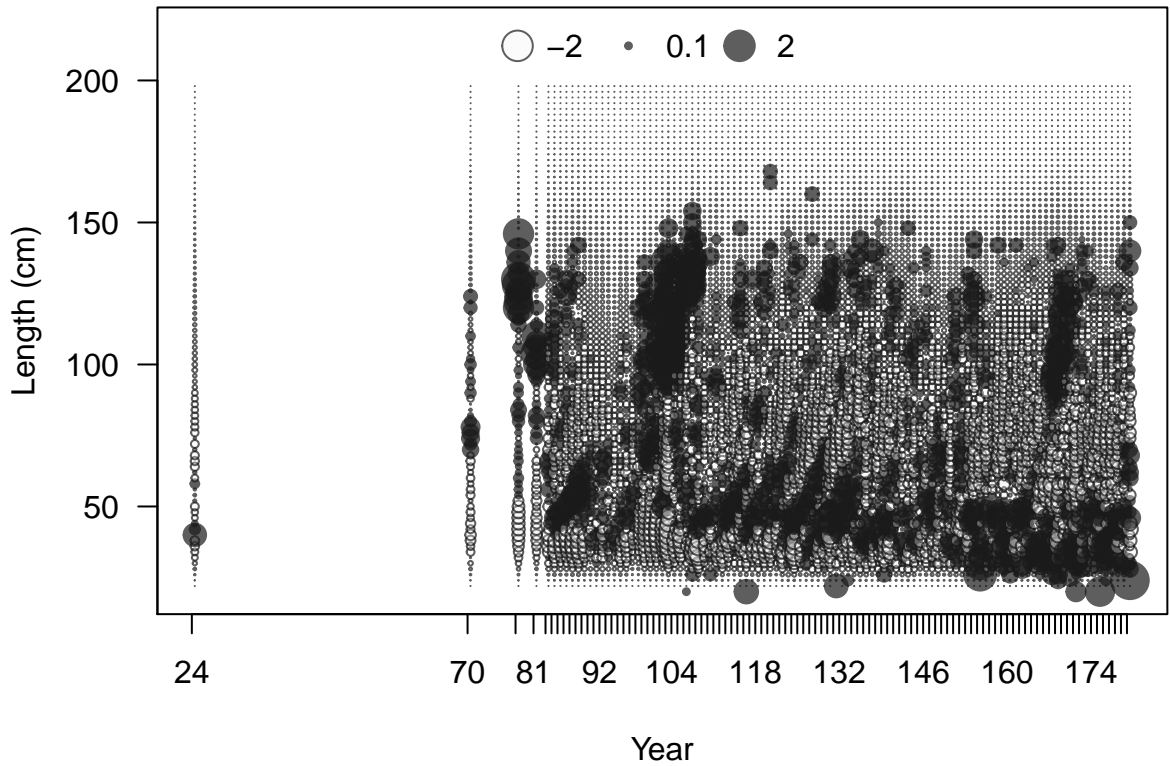
Proportion

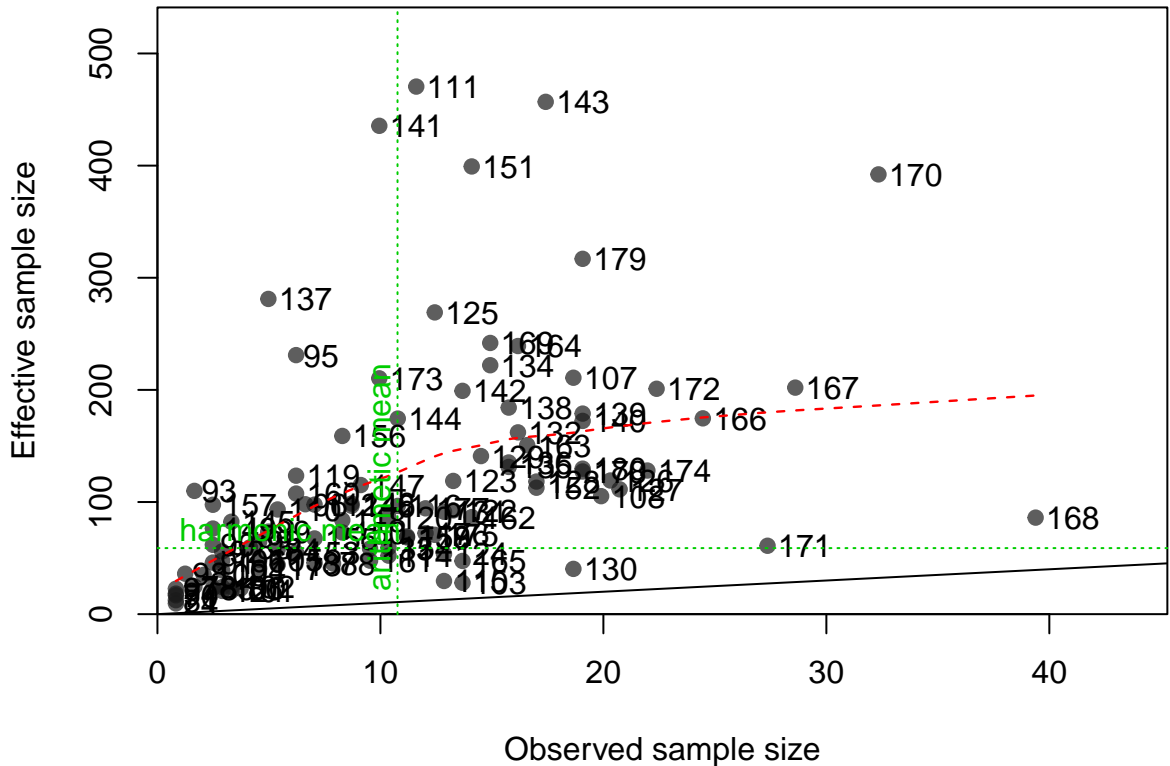




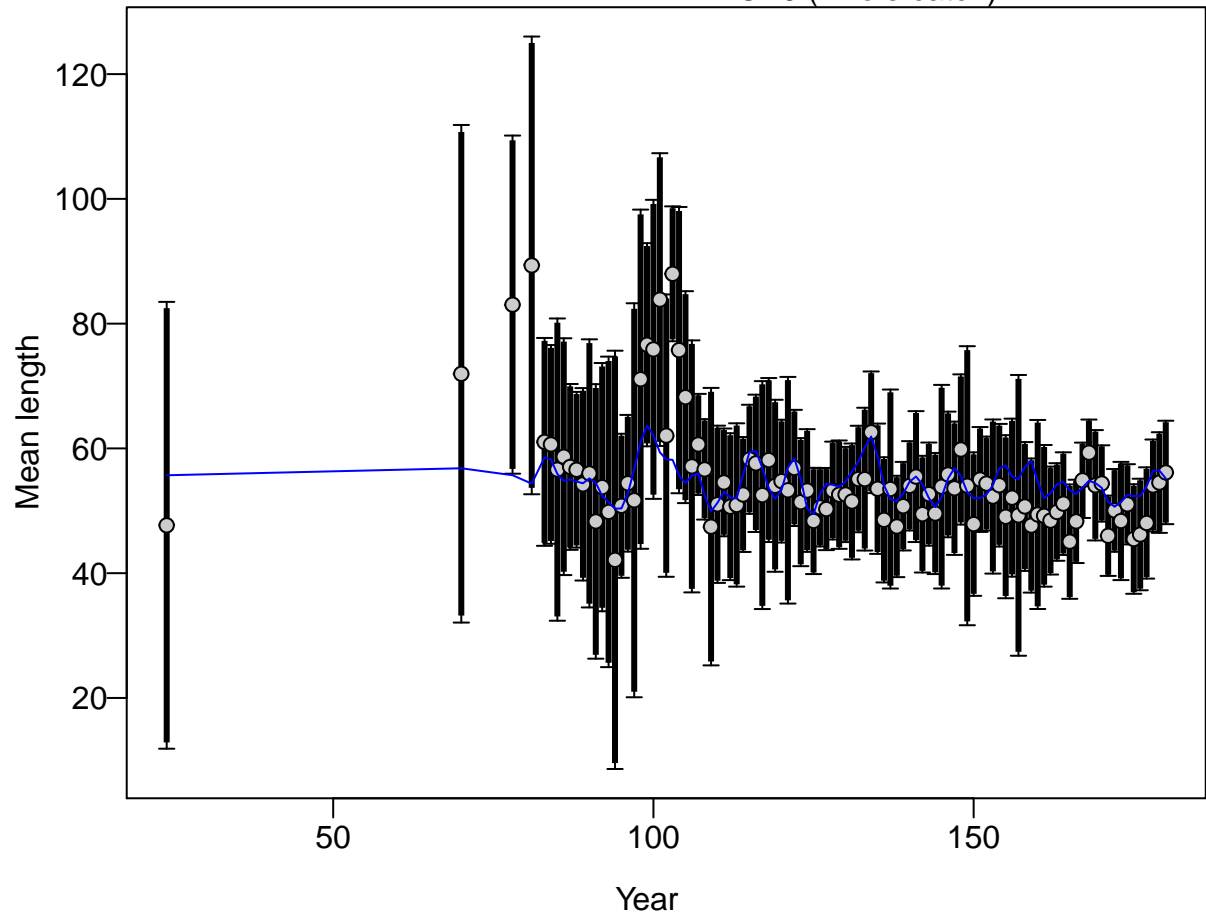




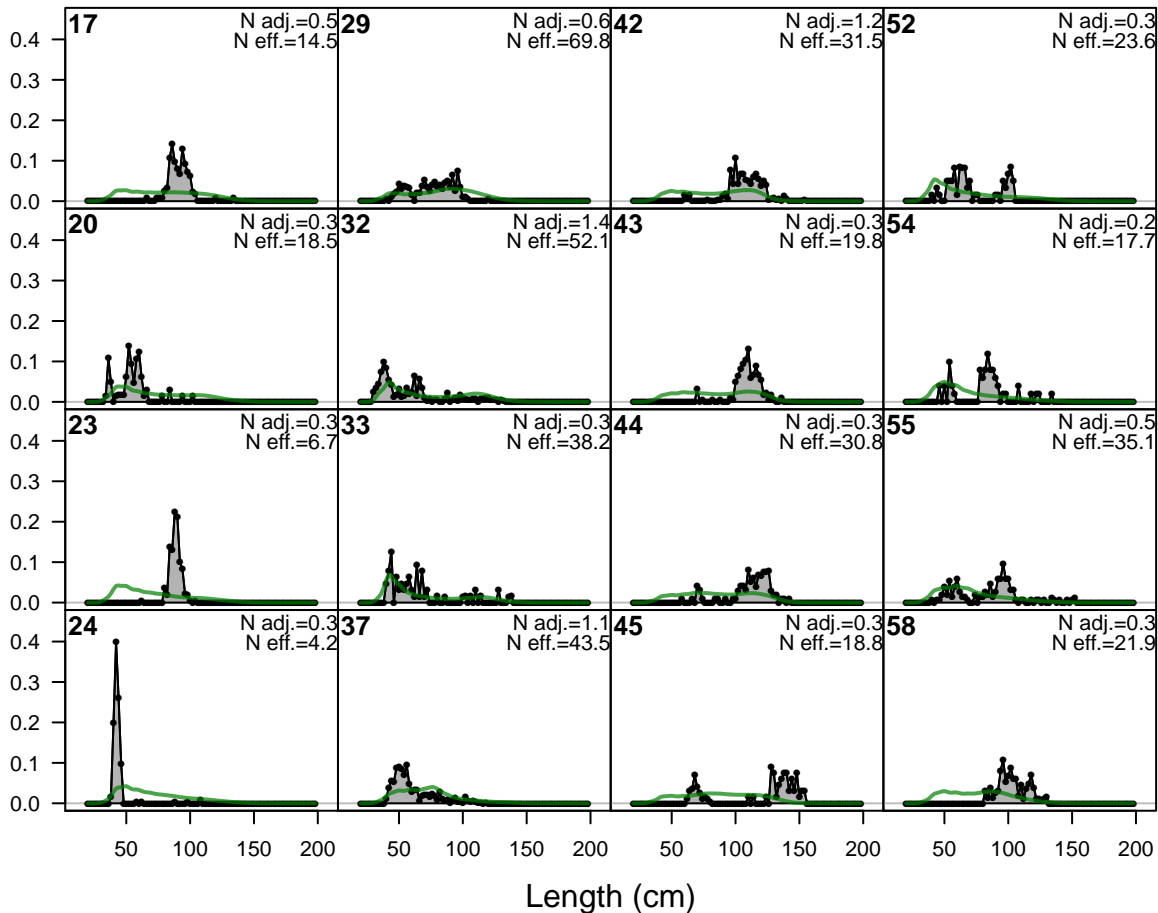




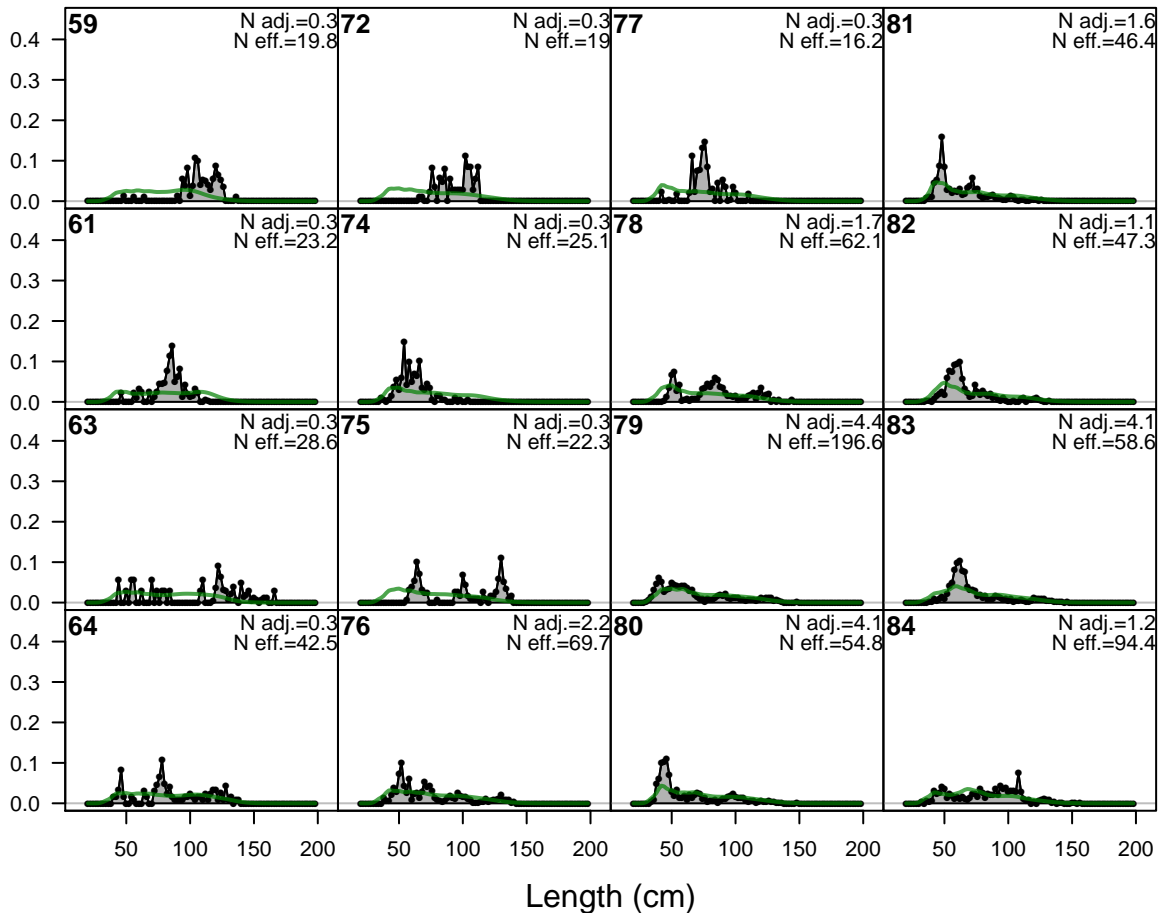
## A2-OBJ (whole catch)



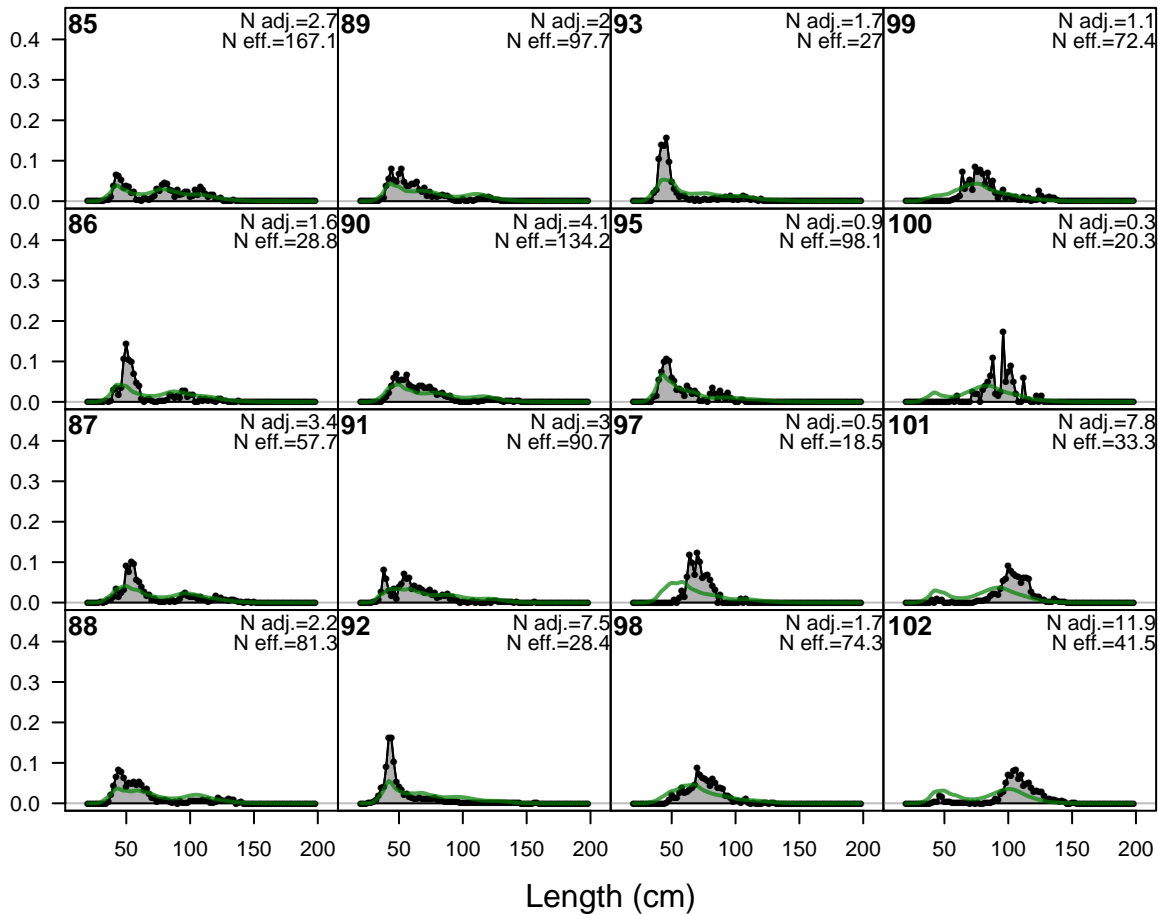
Proportion



Proportion

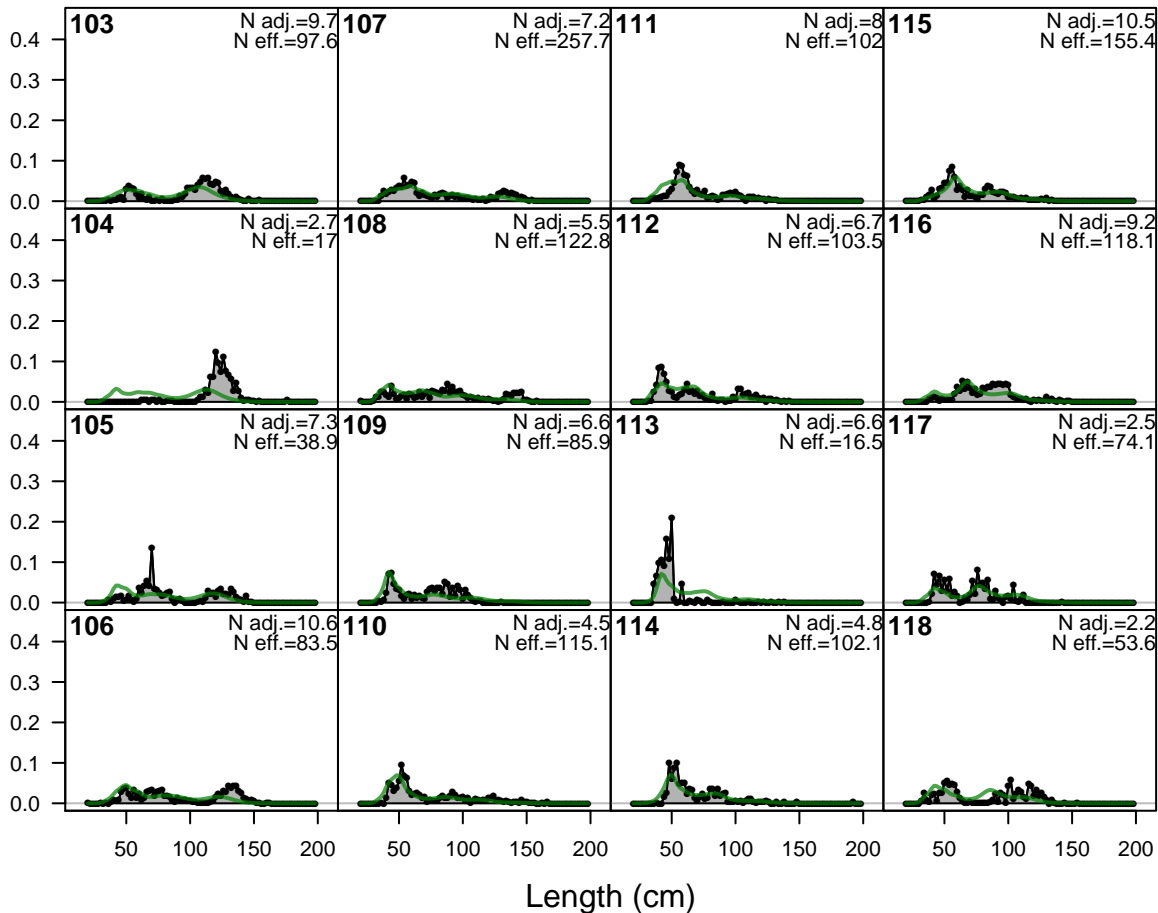


Proportion

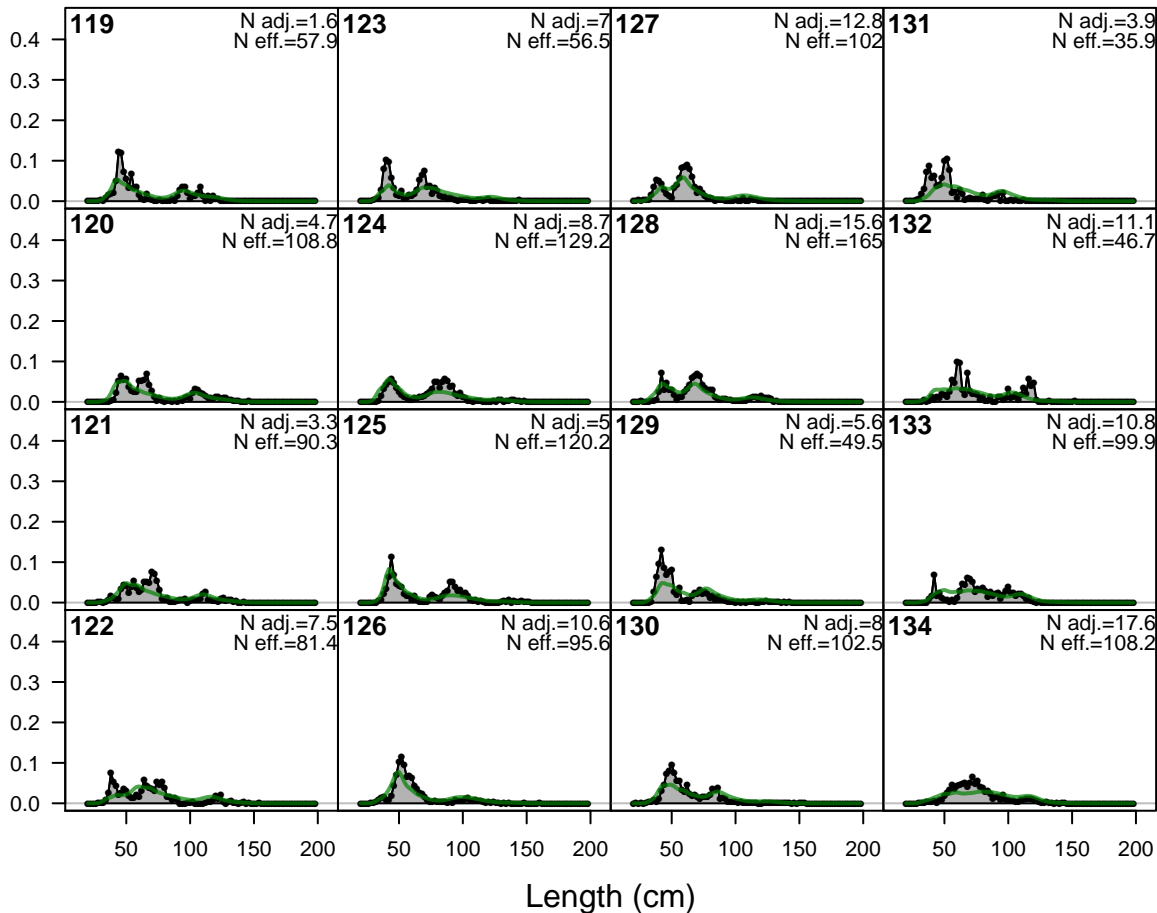




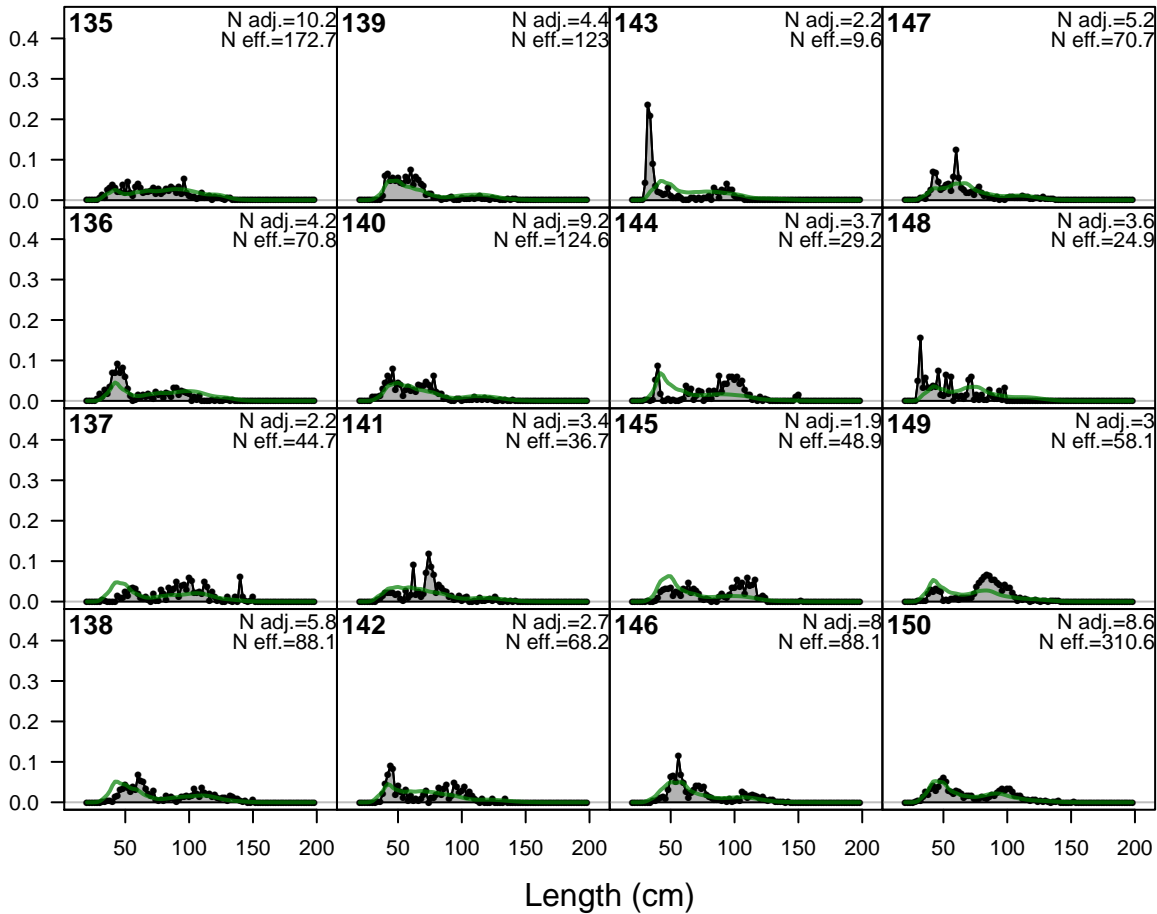
Proportion



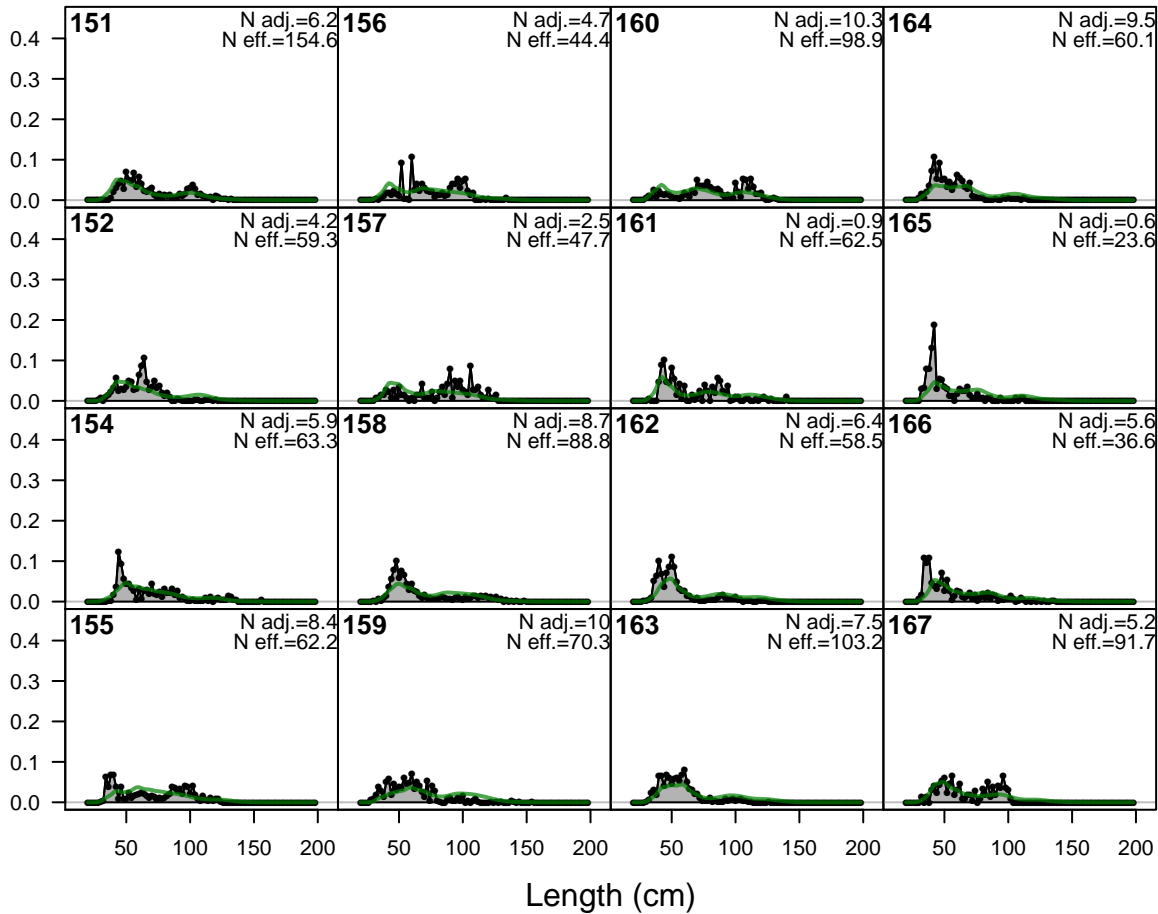
Proportion

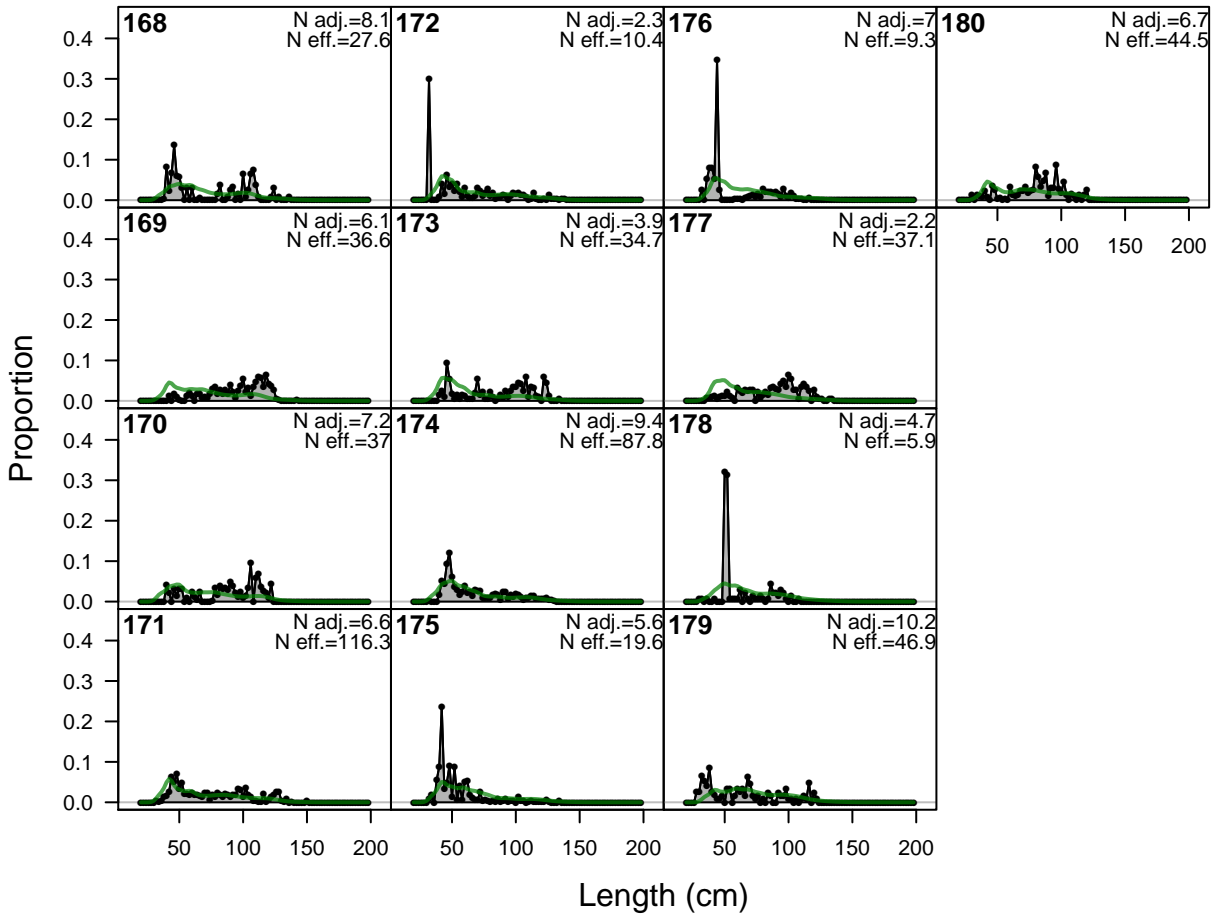


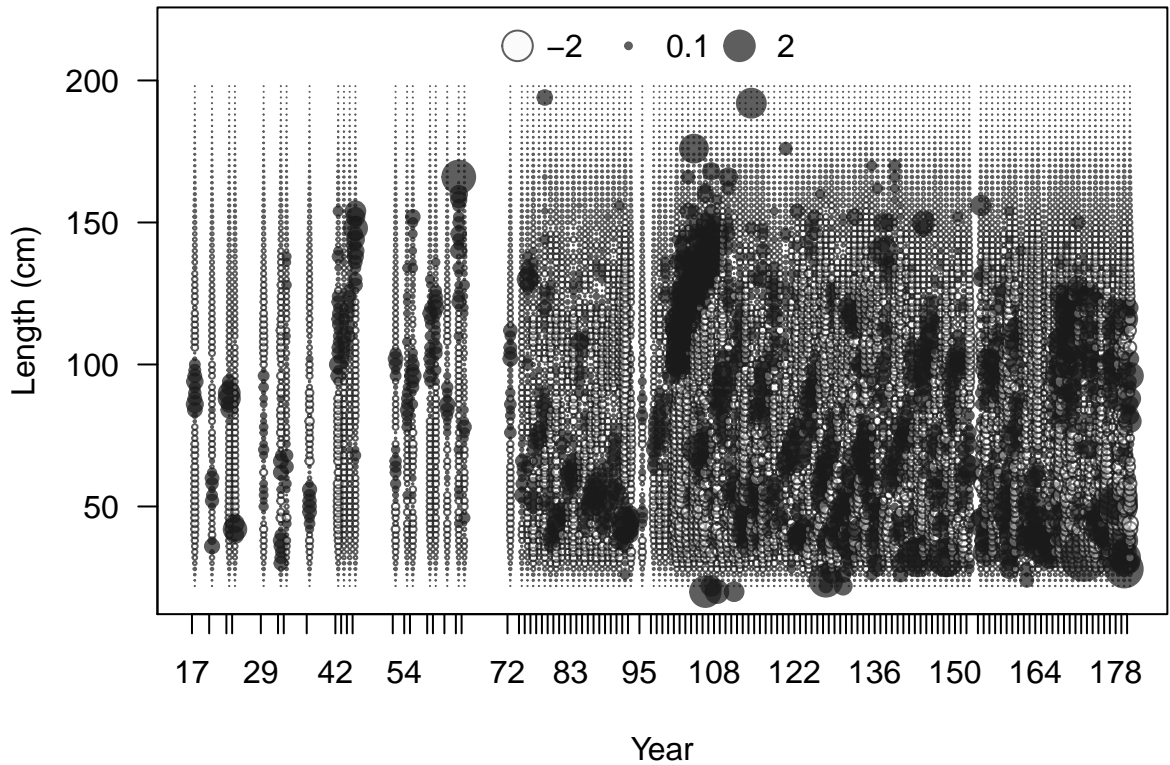
Proportion

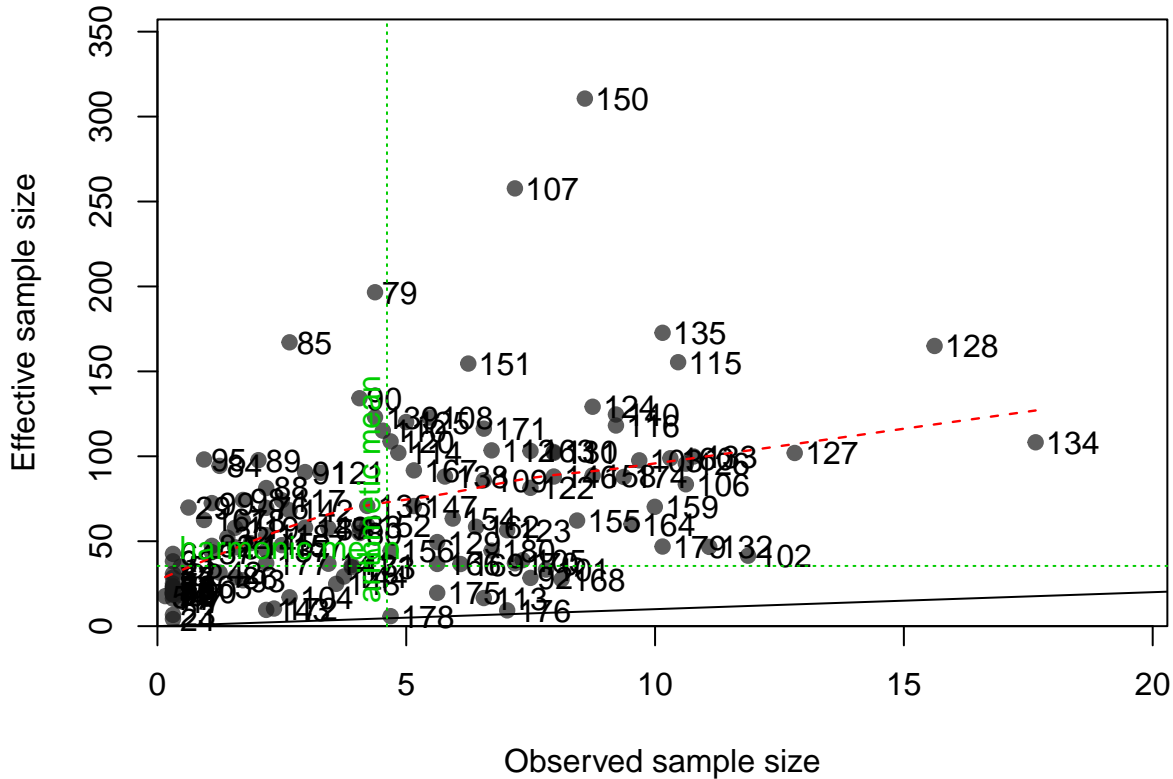


Proportion

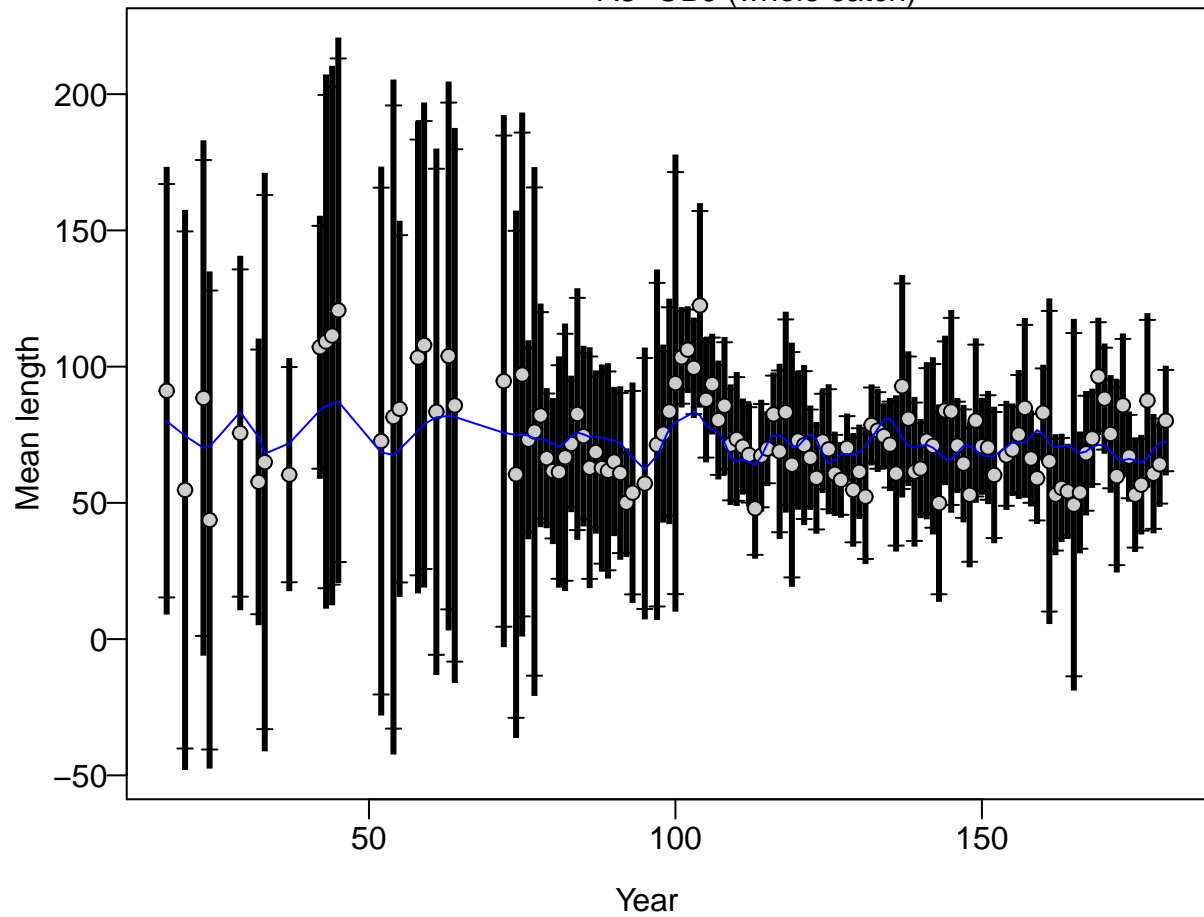






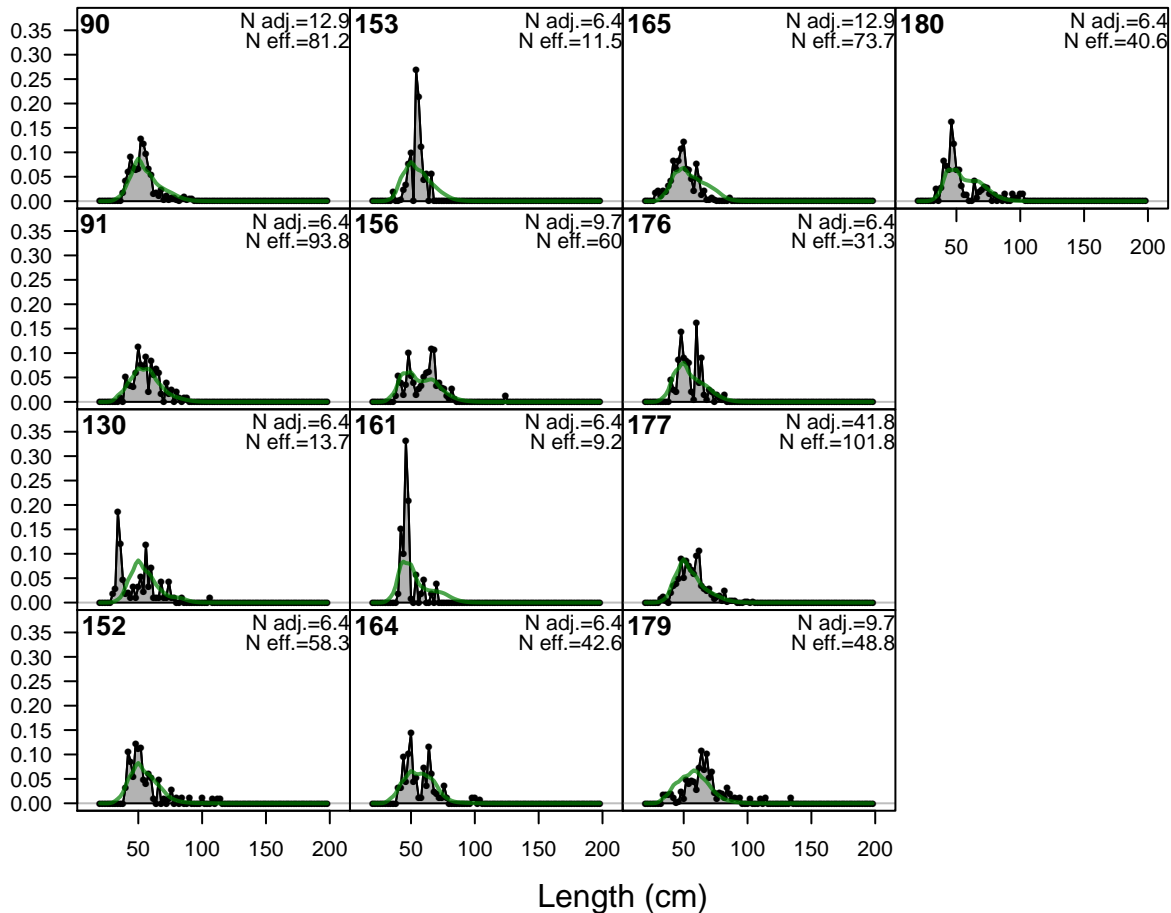


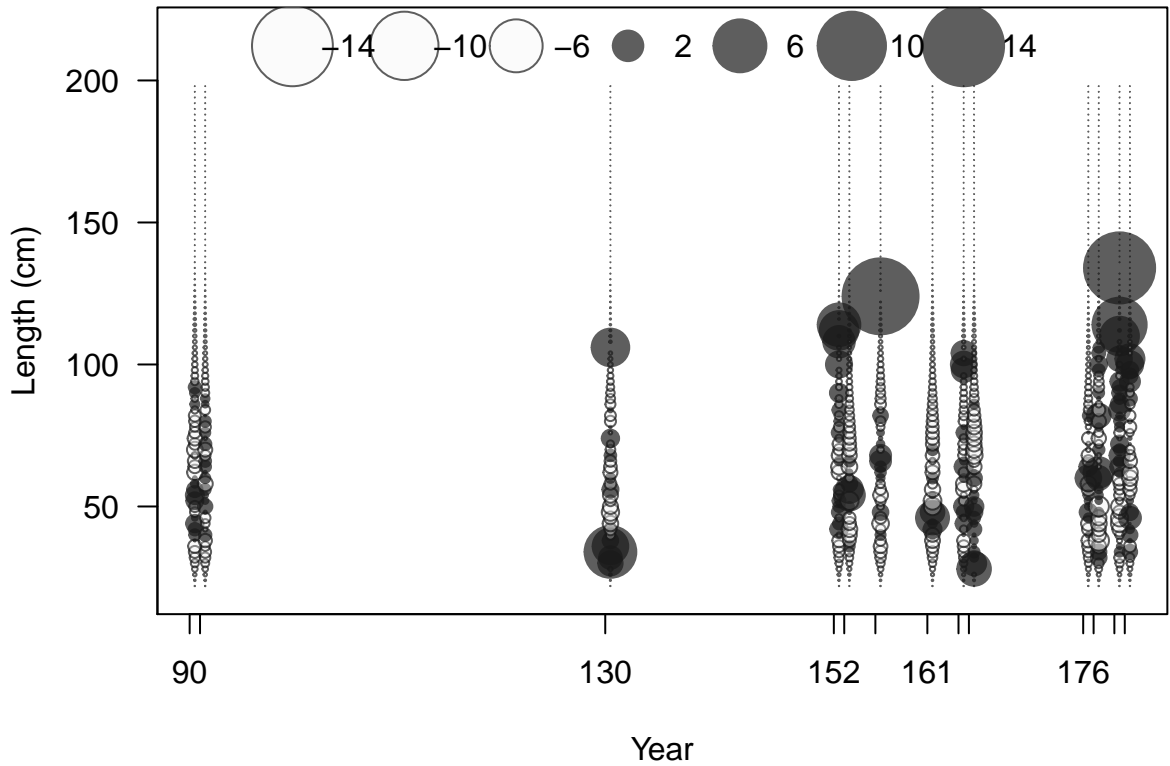
## A3-OBJ (whole catch)

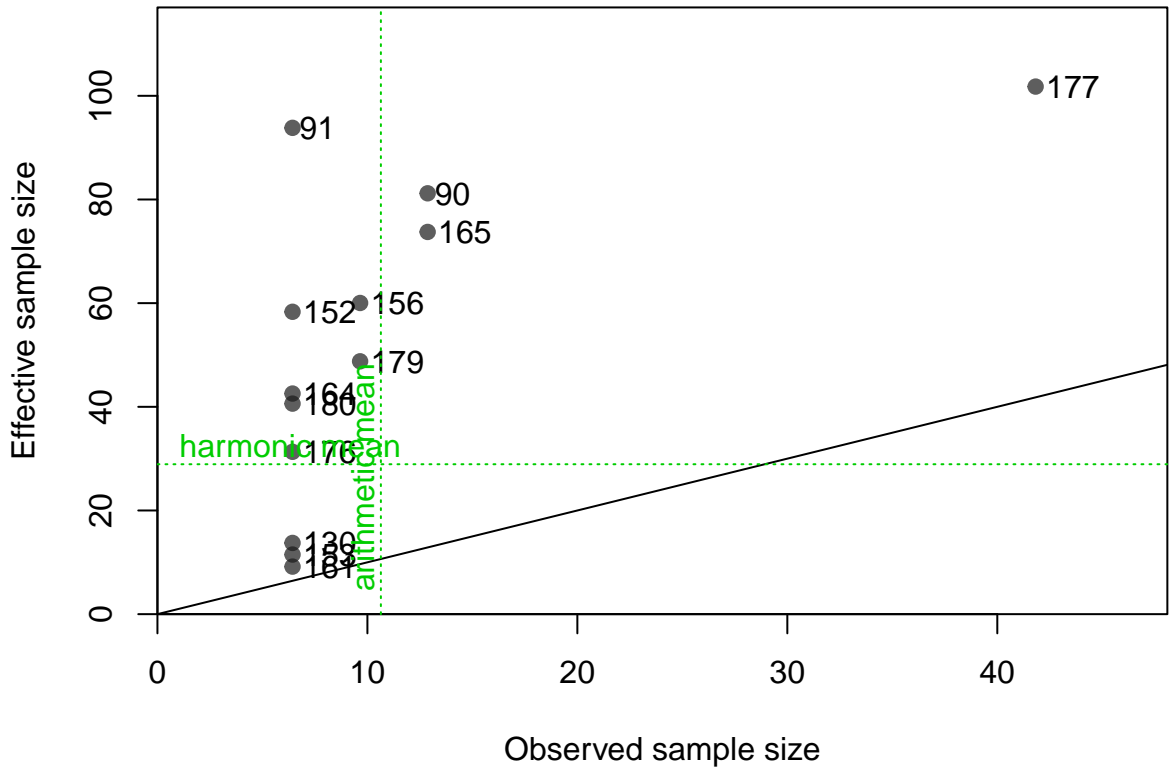




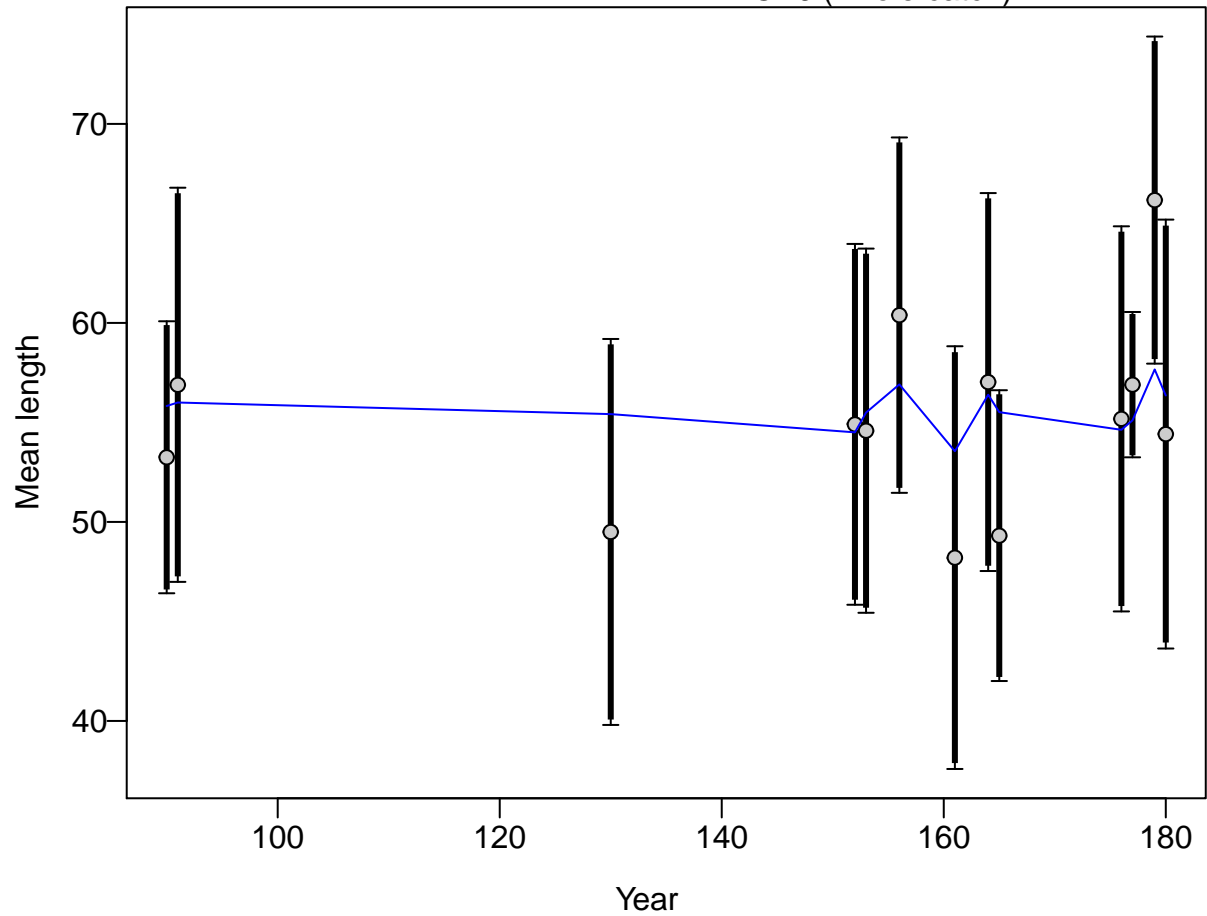
Proportion



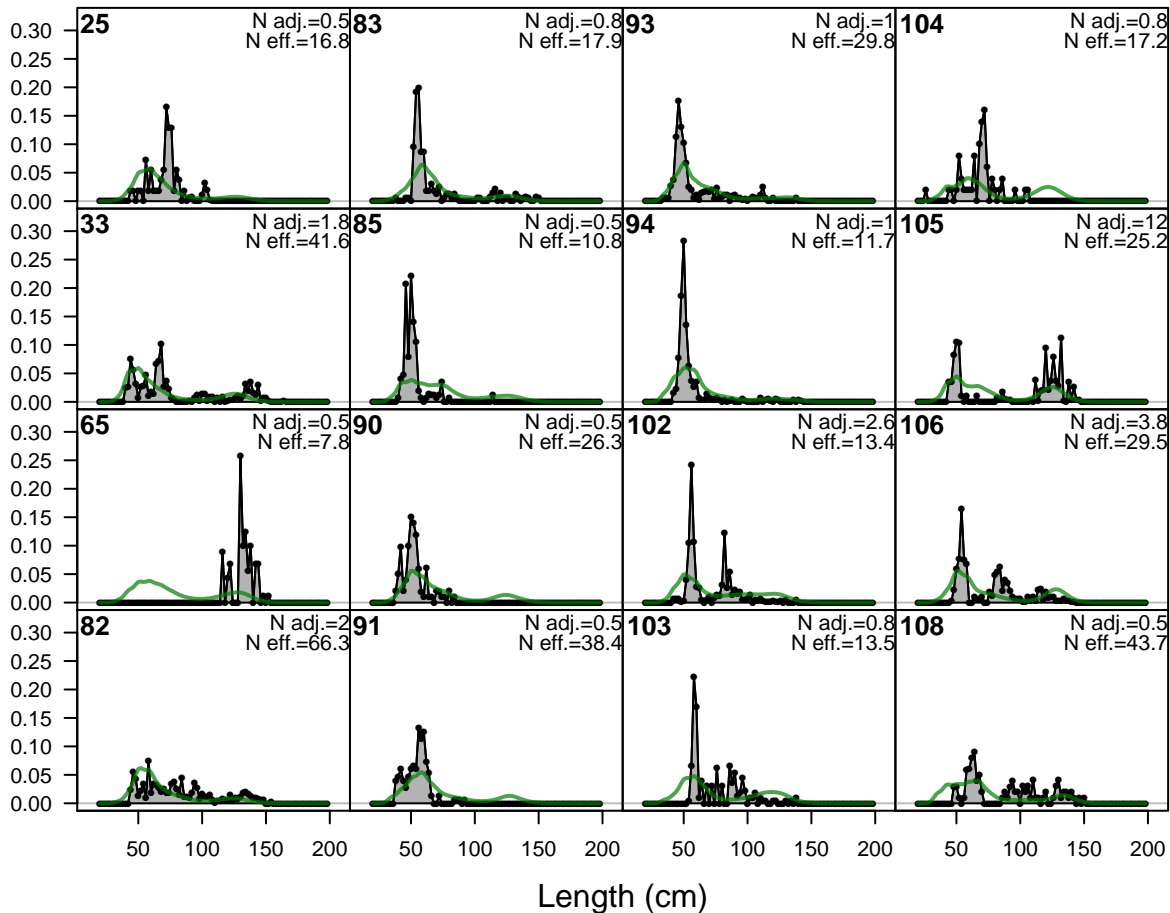




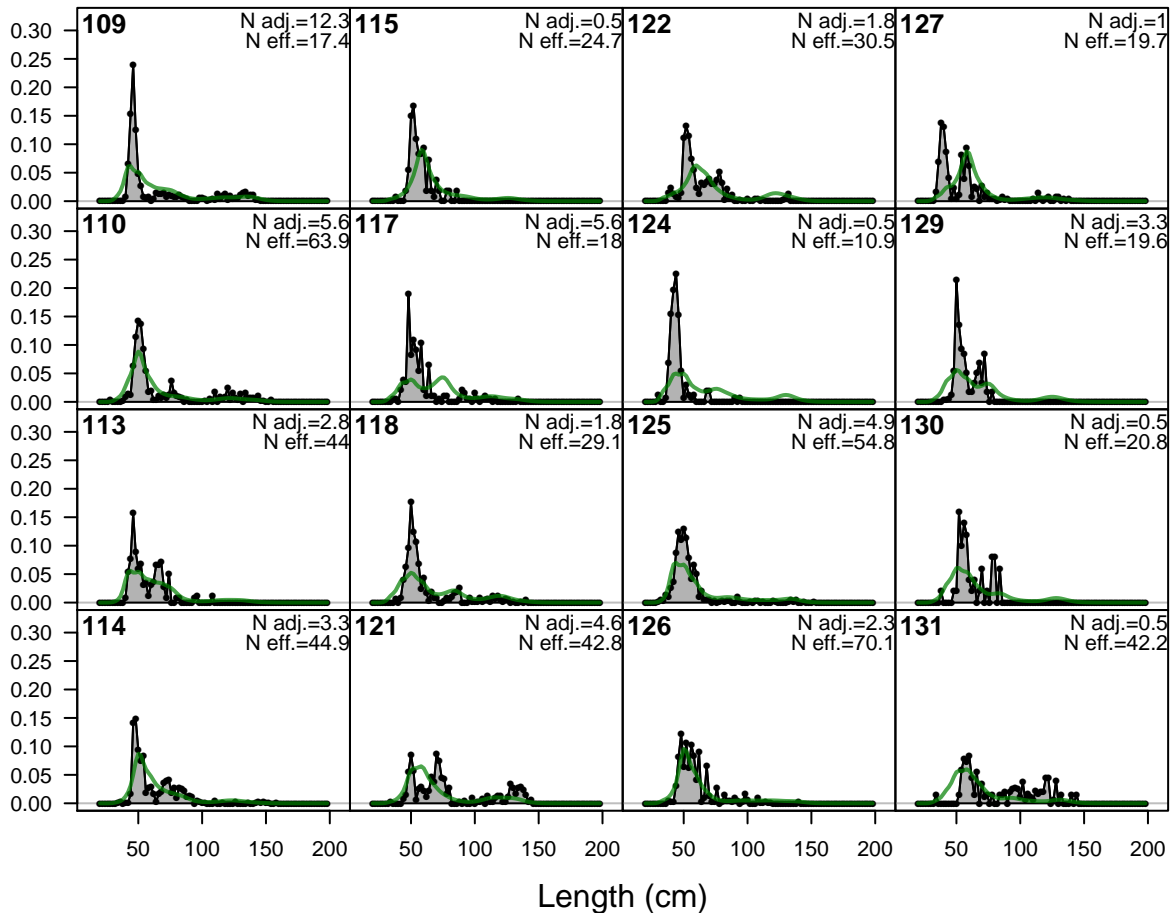
## A4-OBJ (whole catch)



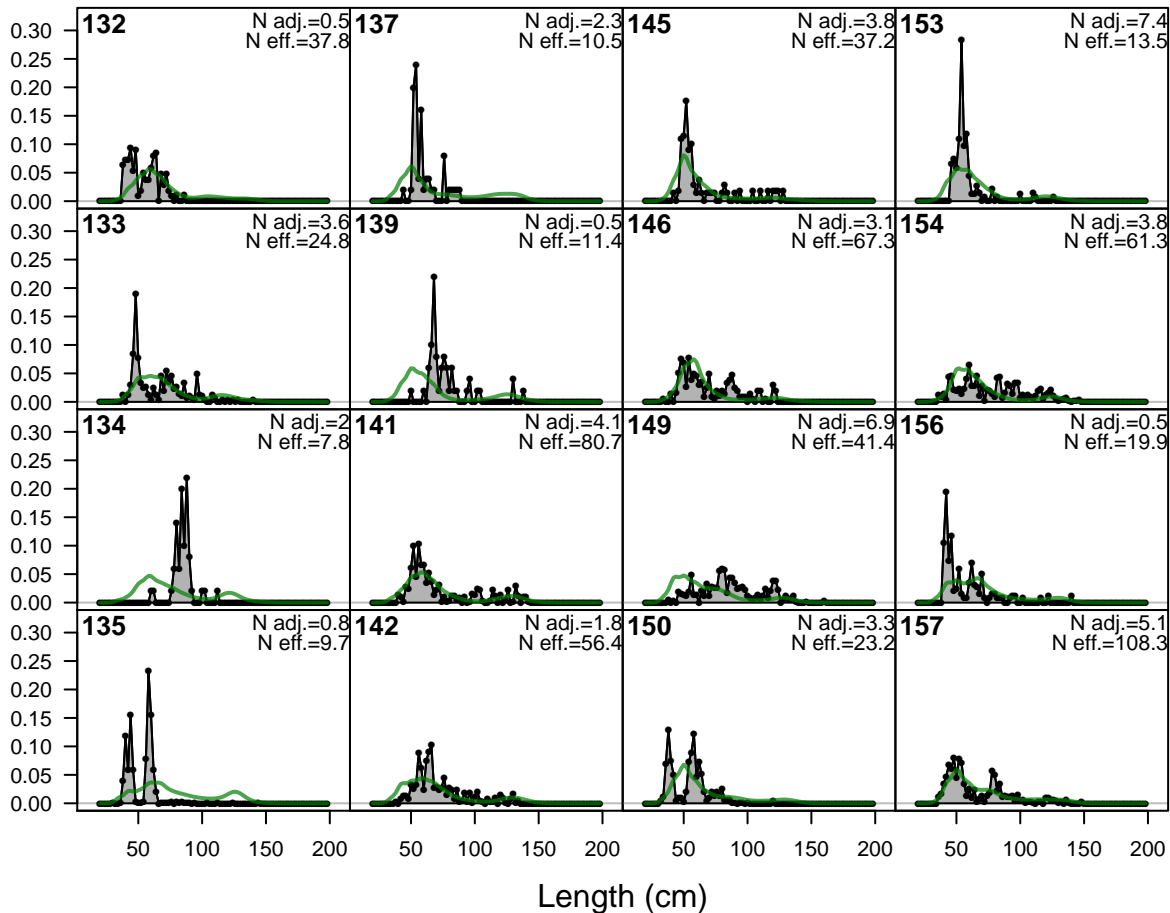
Proportion



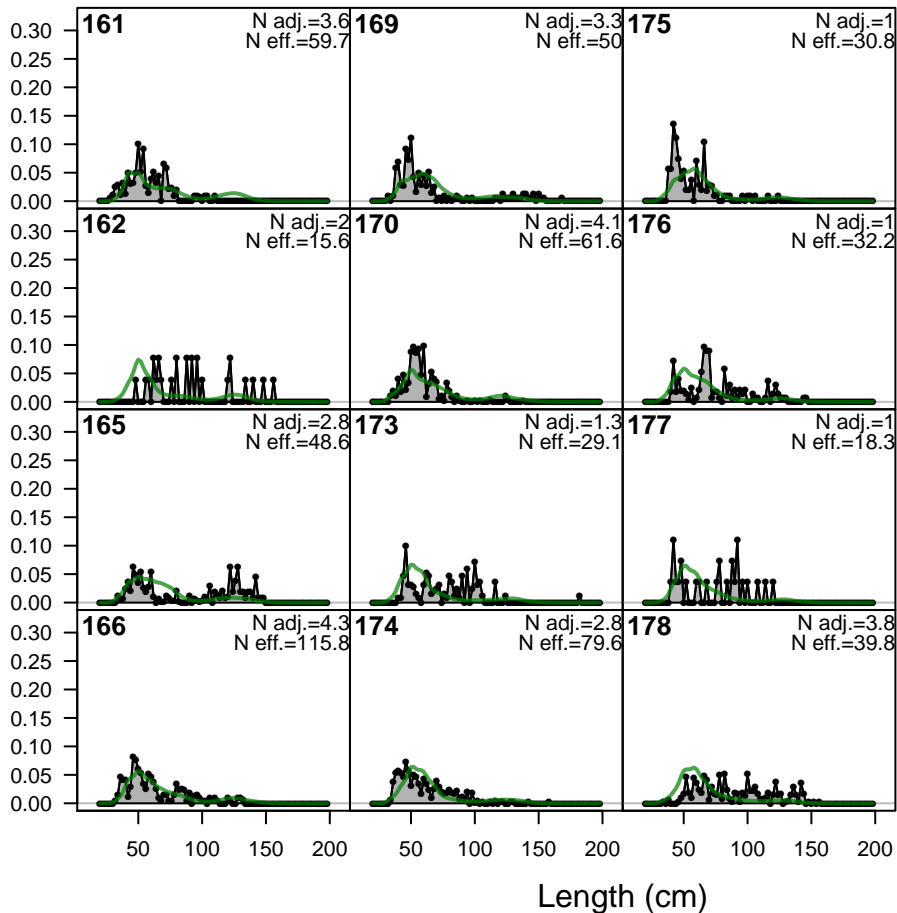
Proportion



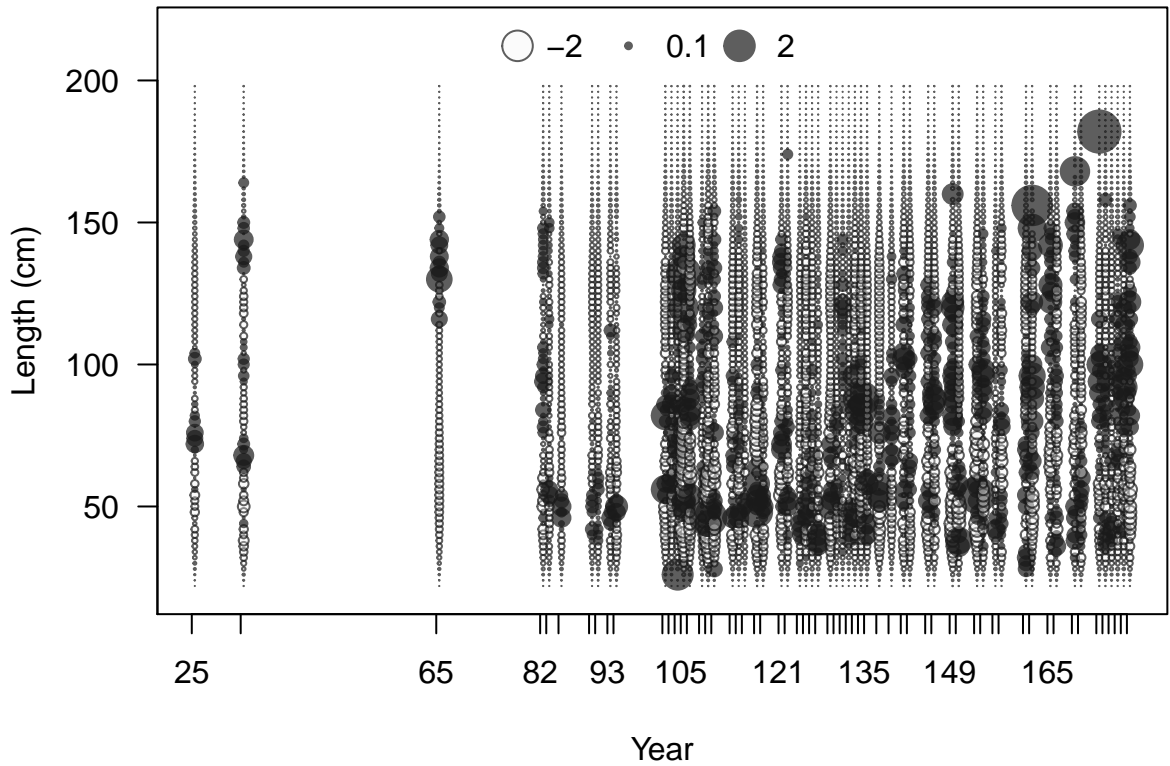
Proportion

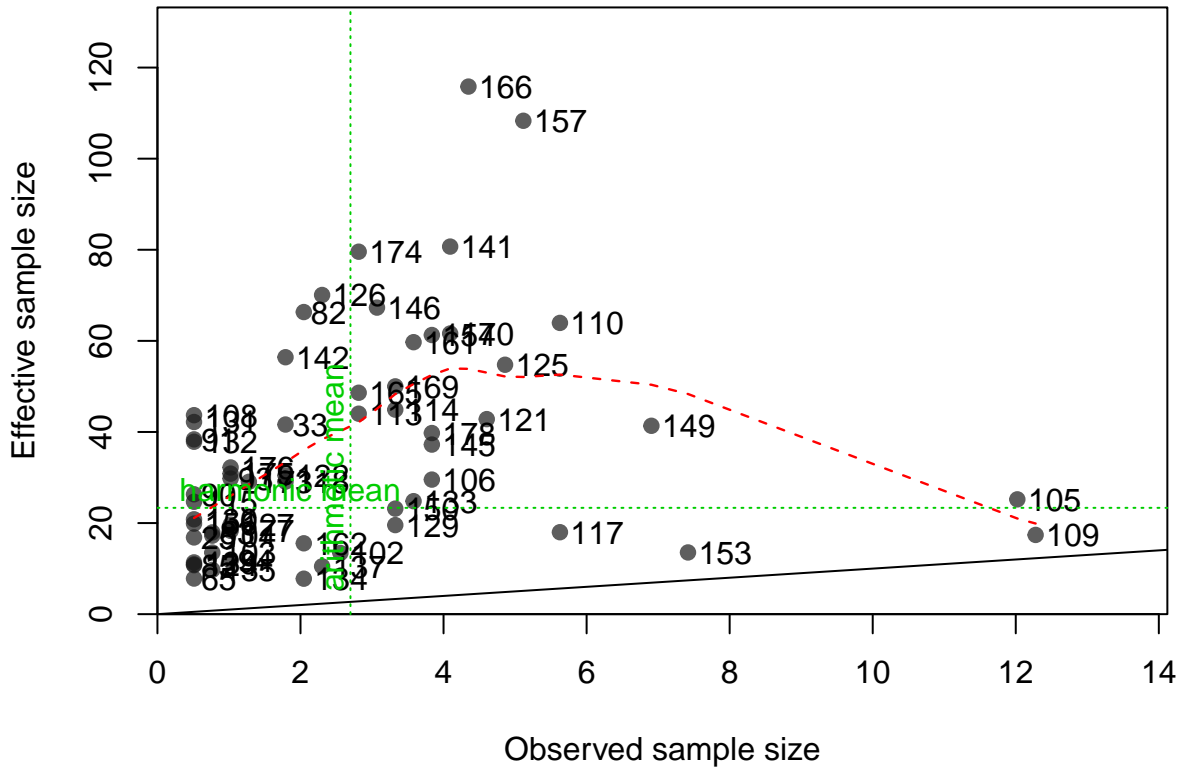


Proportion

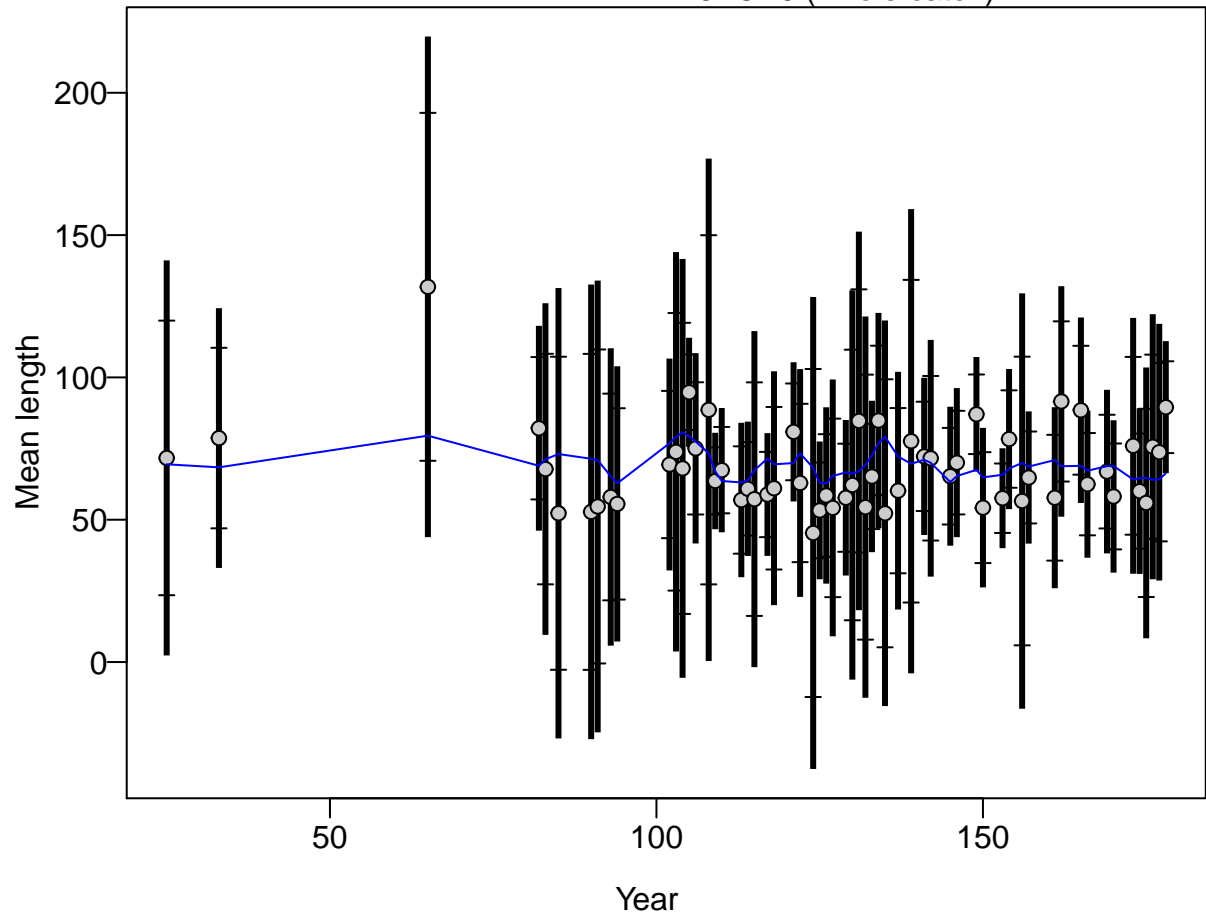




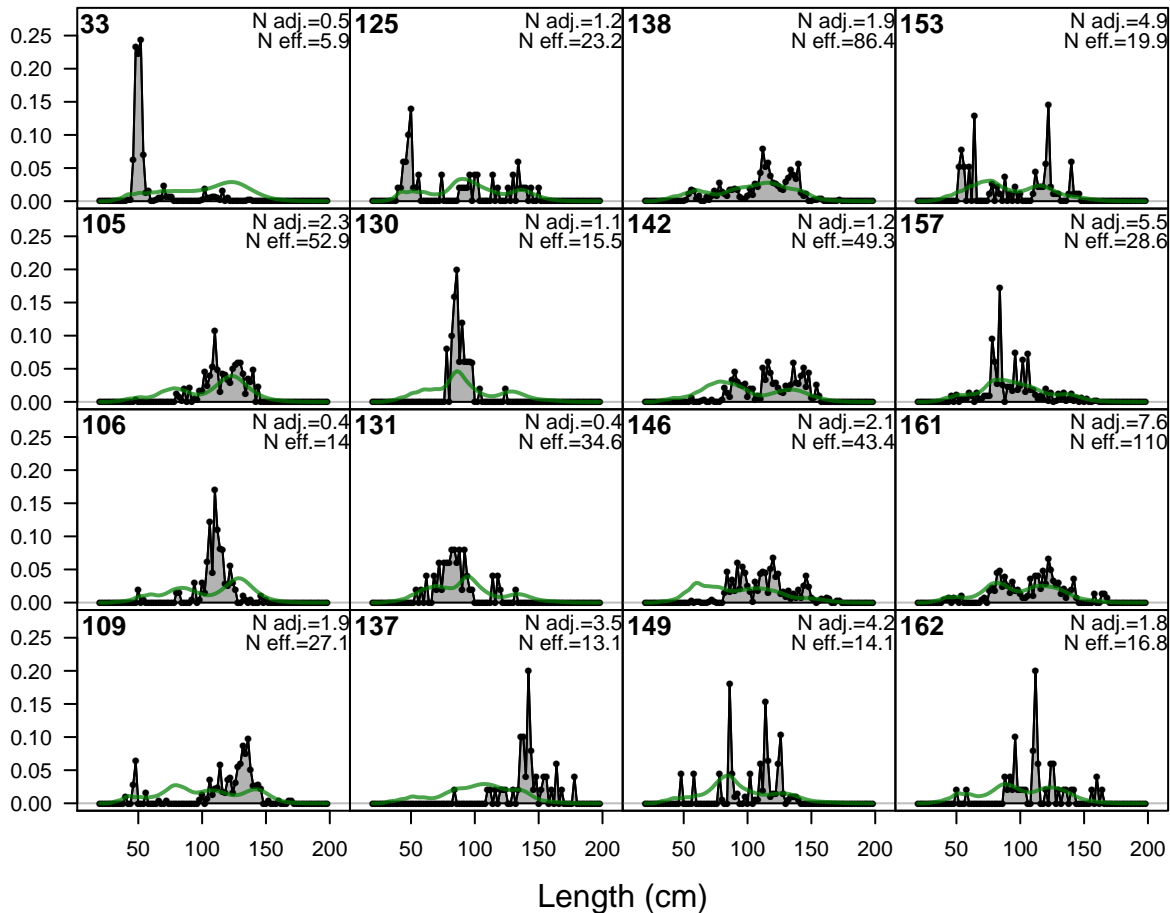




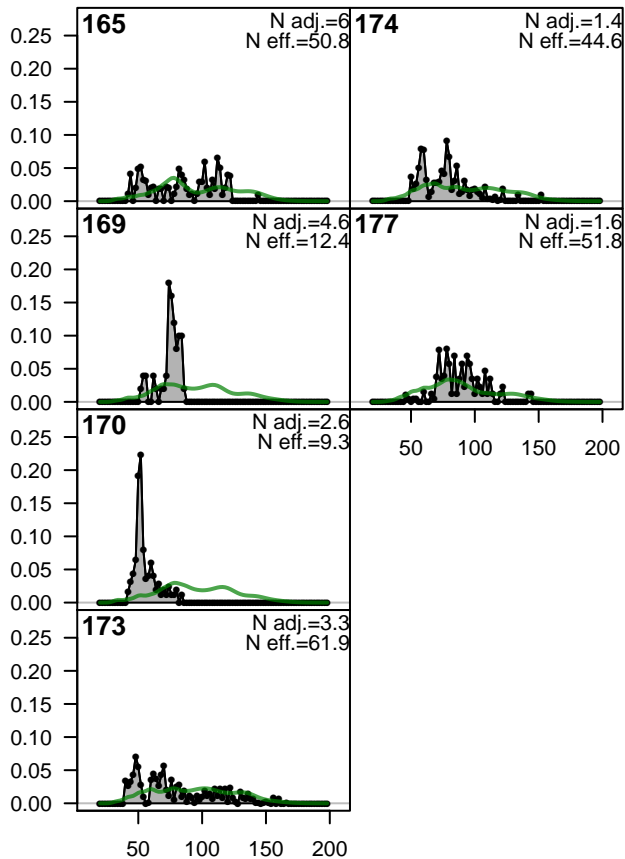
A5-OBJ (whole catch)



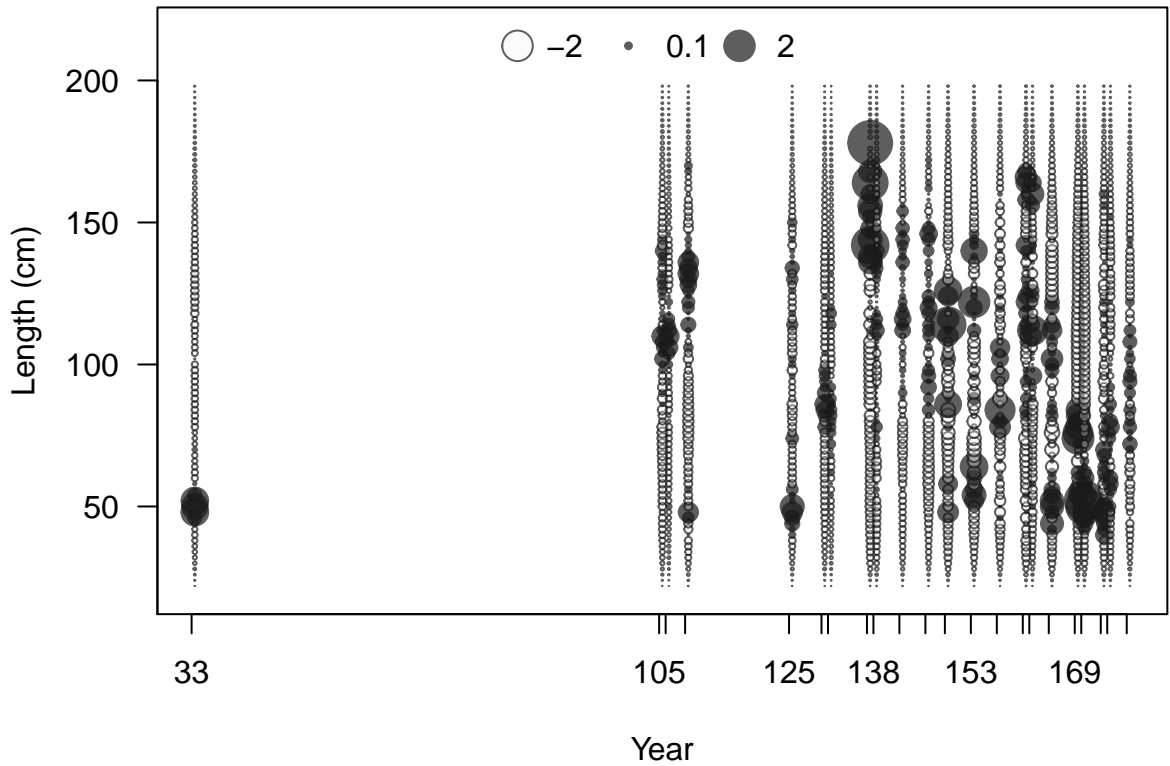
Proportion

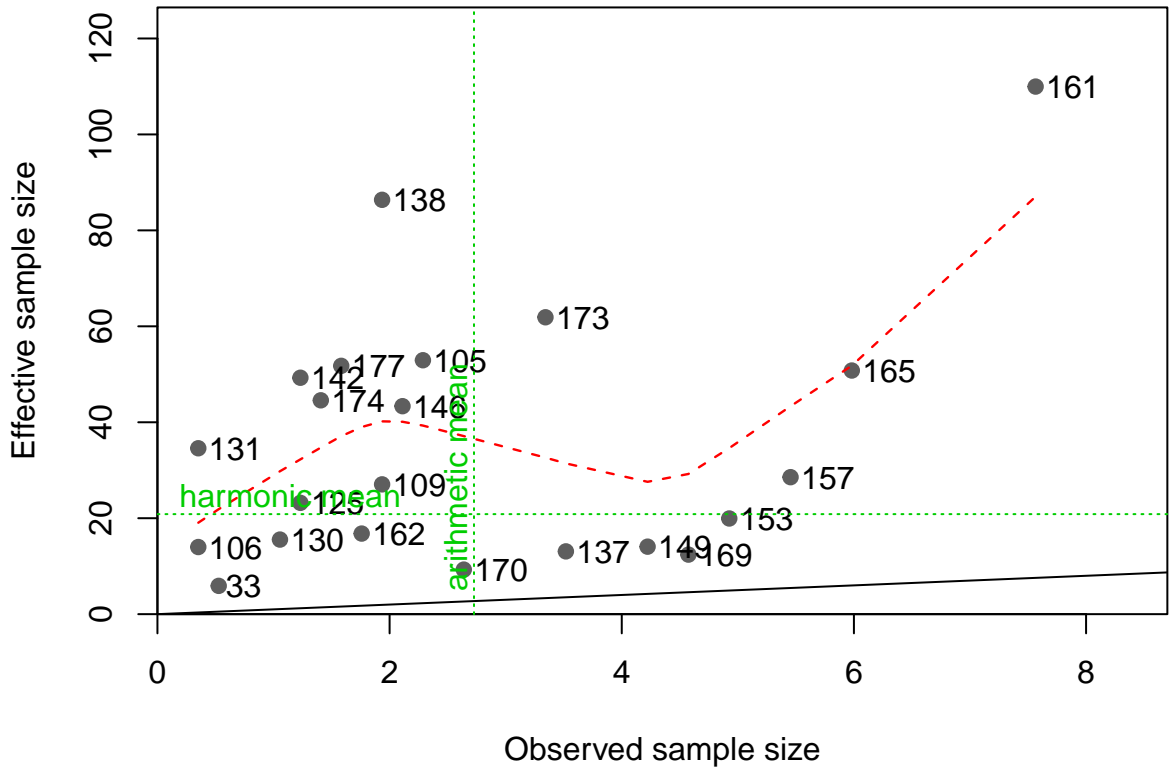


Proportion

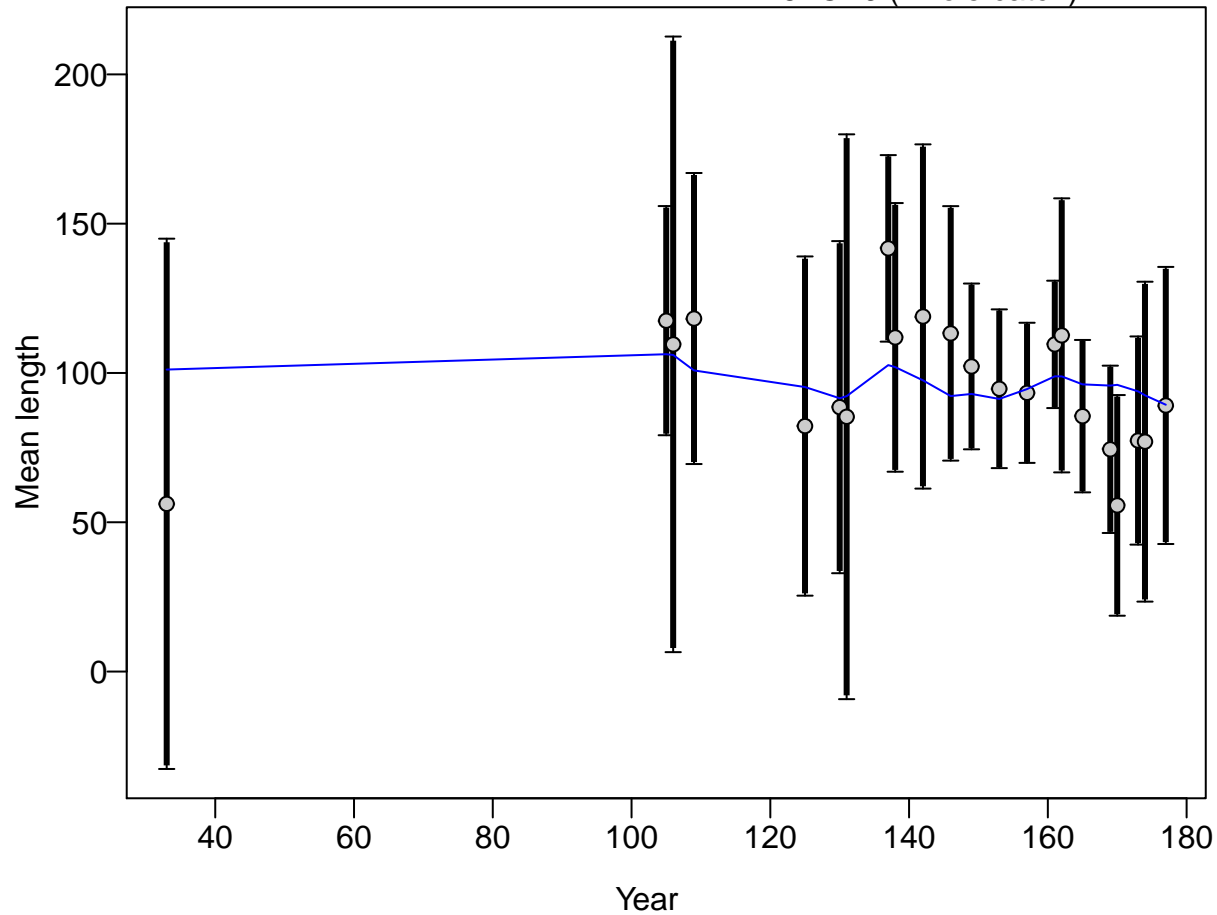


Length (cm)



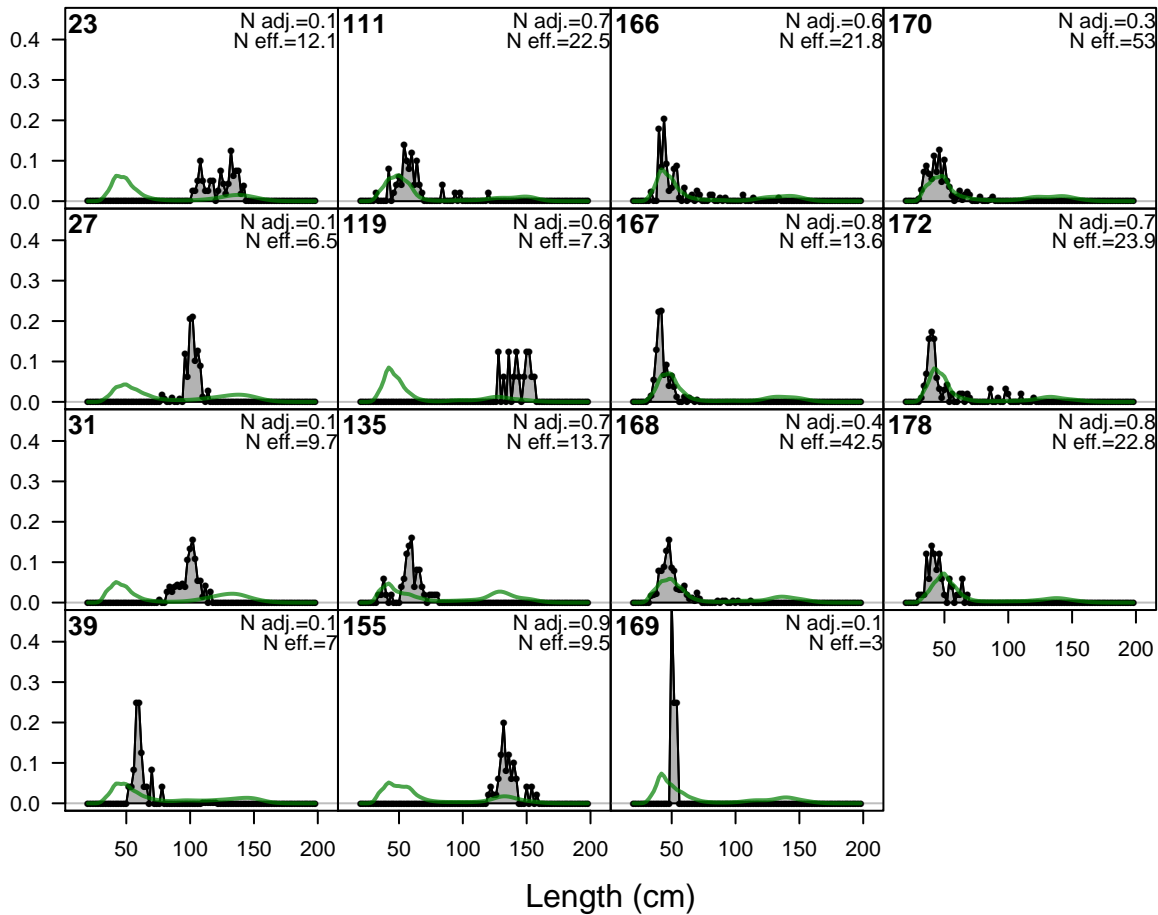


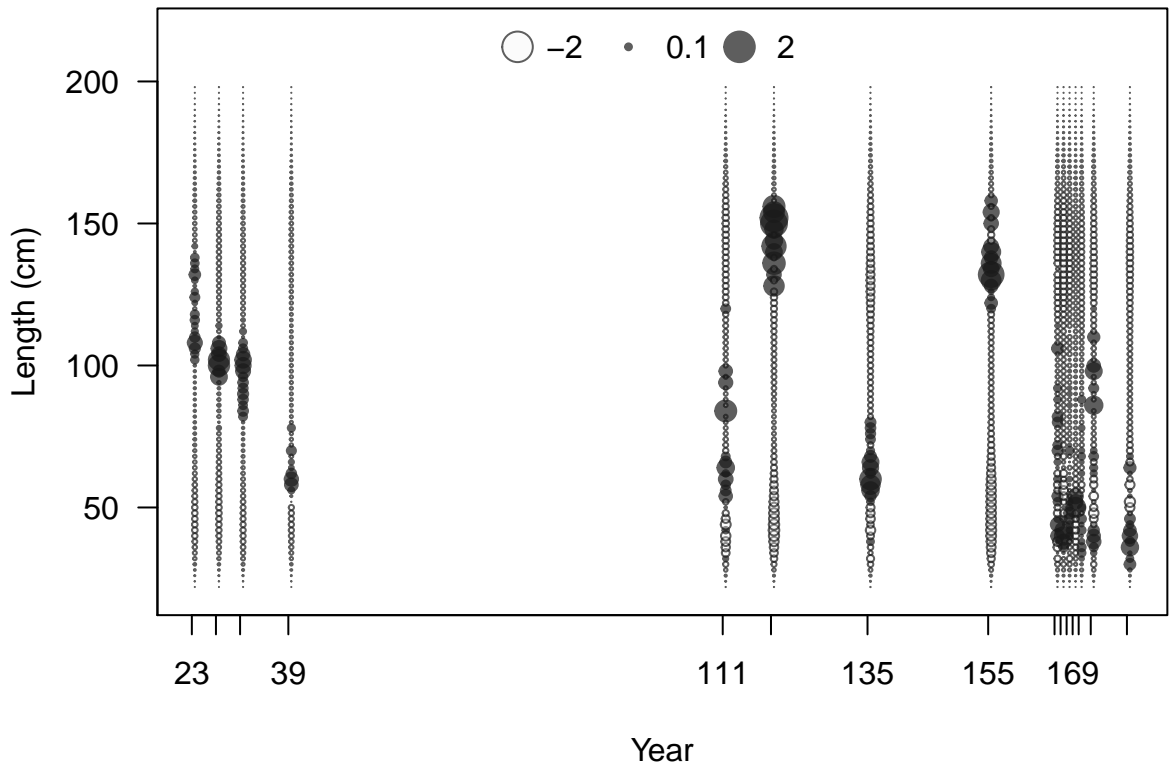
## A6-OBJ (whole catch)

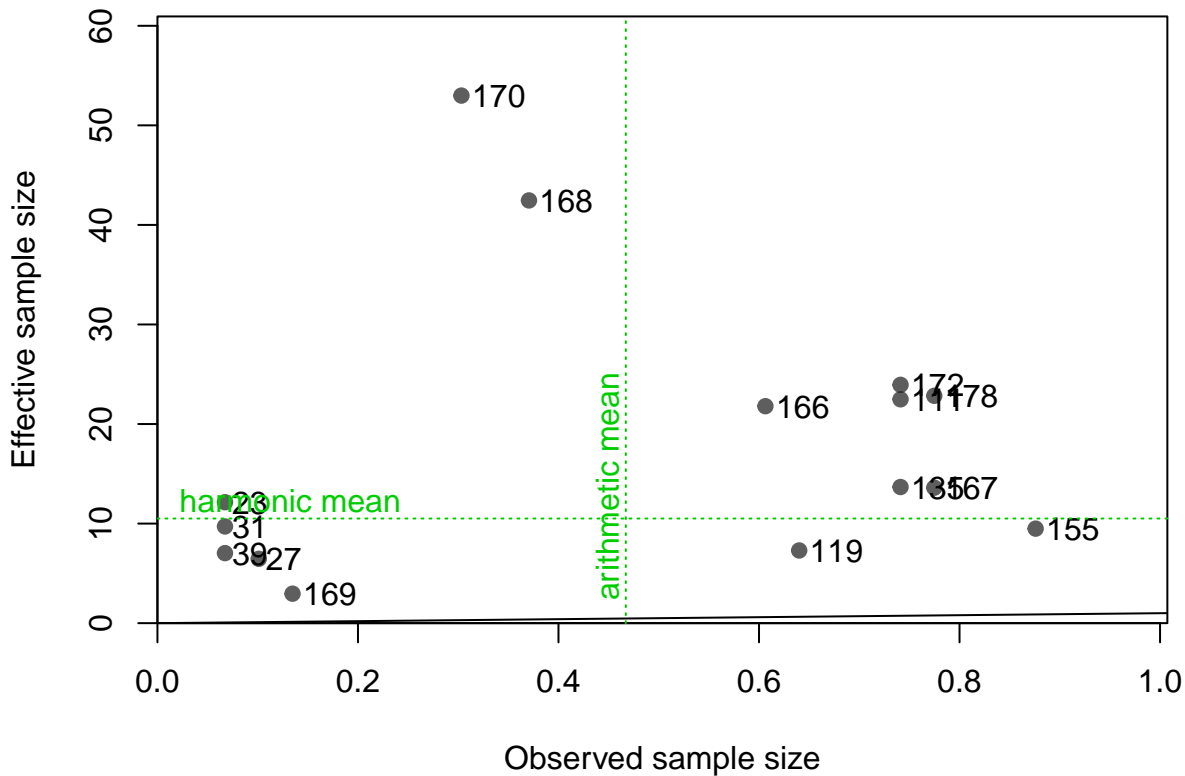




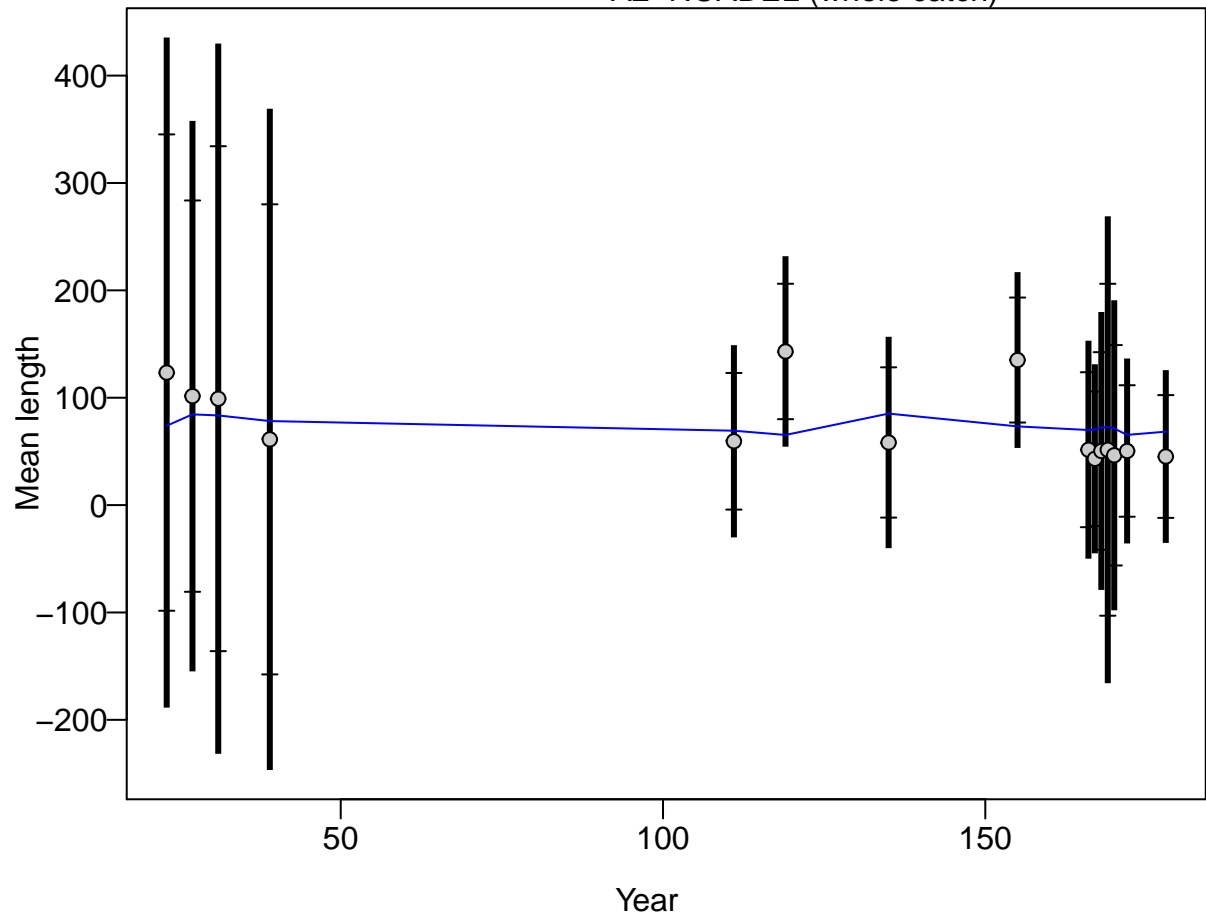
Proportion



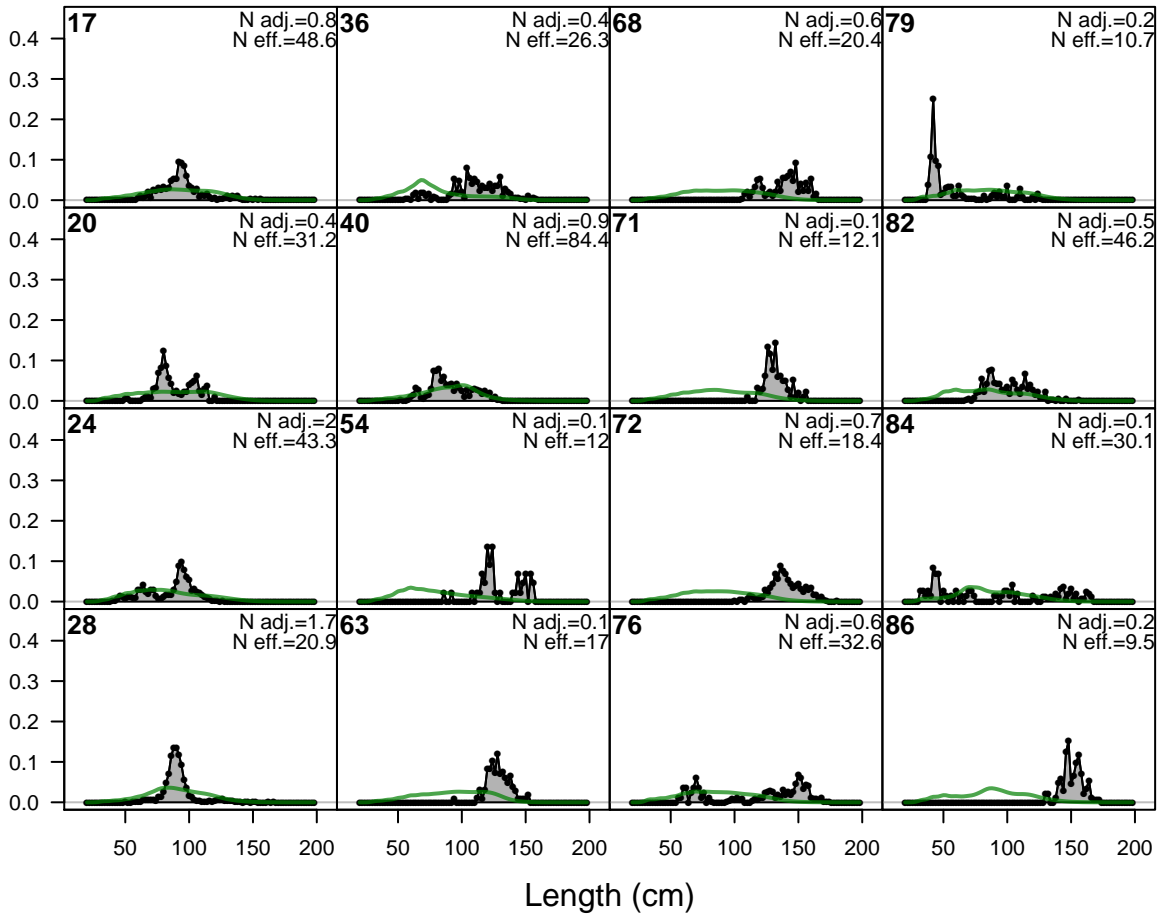




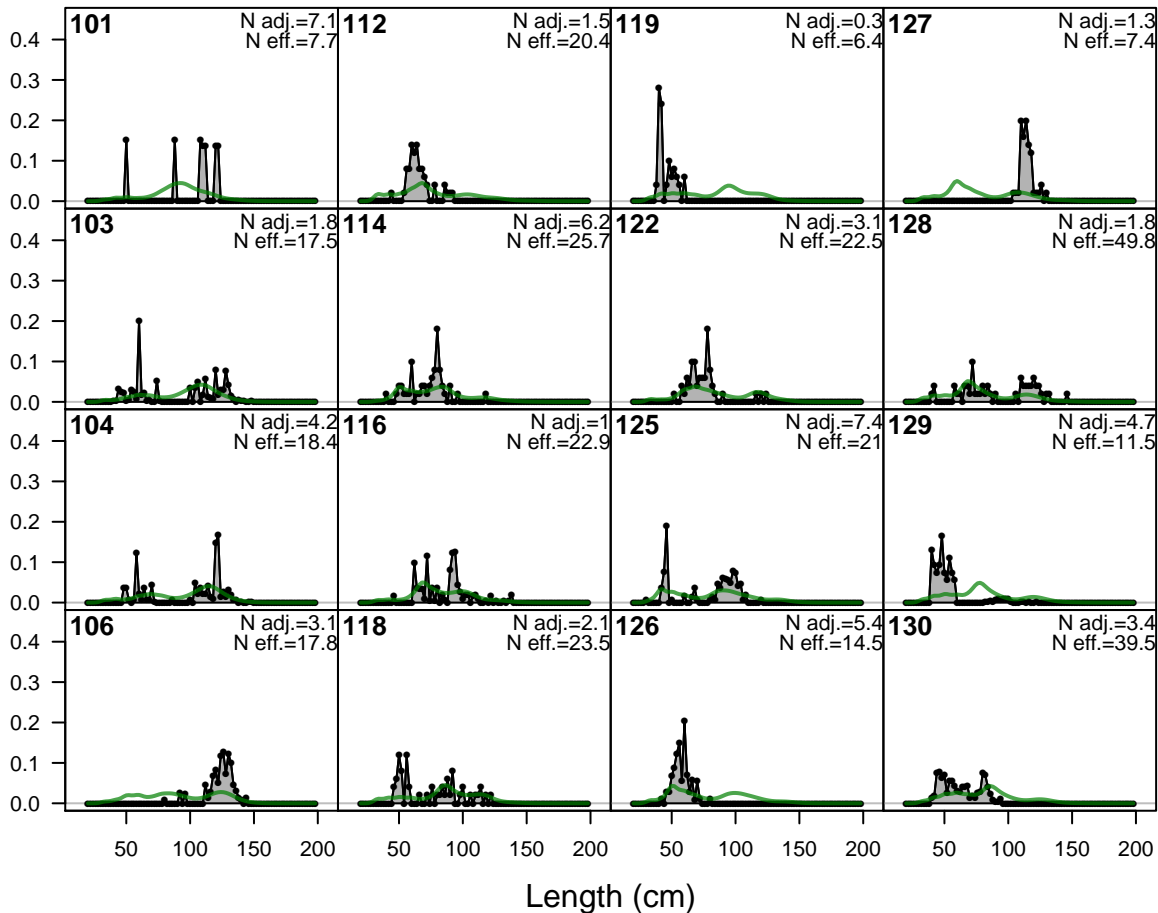
## A2-NOADEL (whole catch)



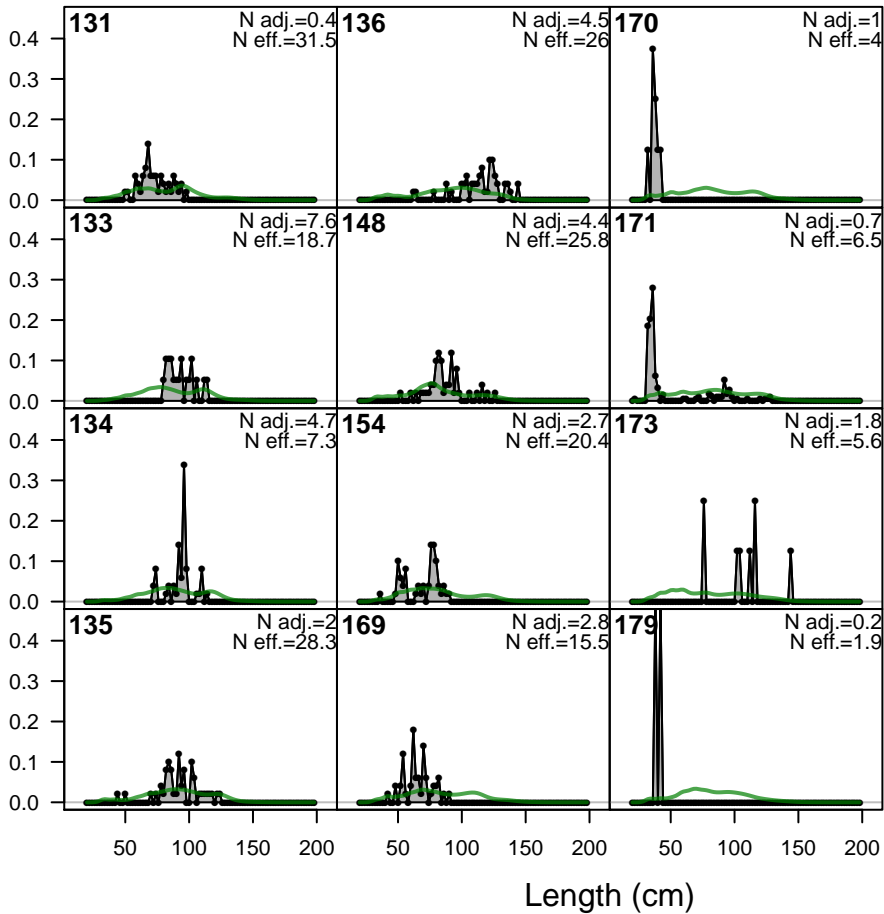
Proportion

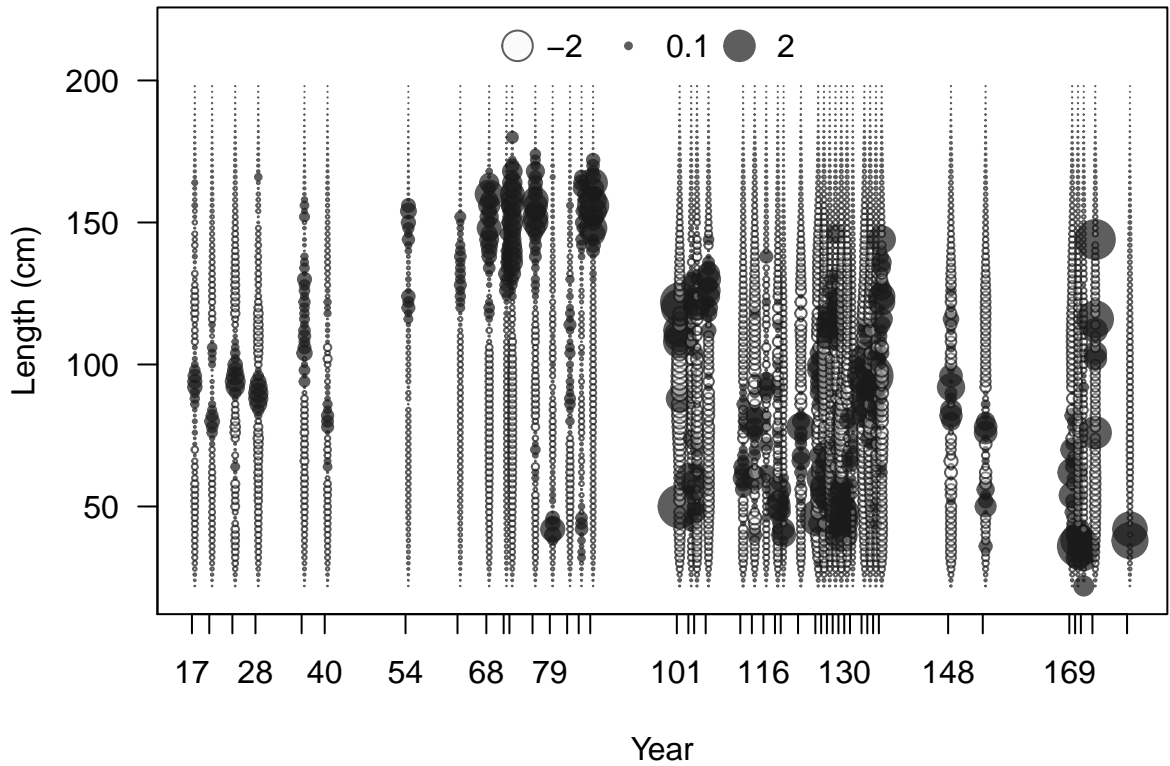


Proportion

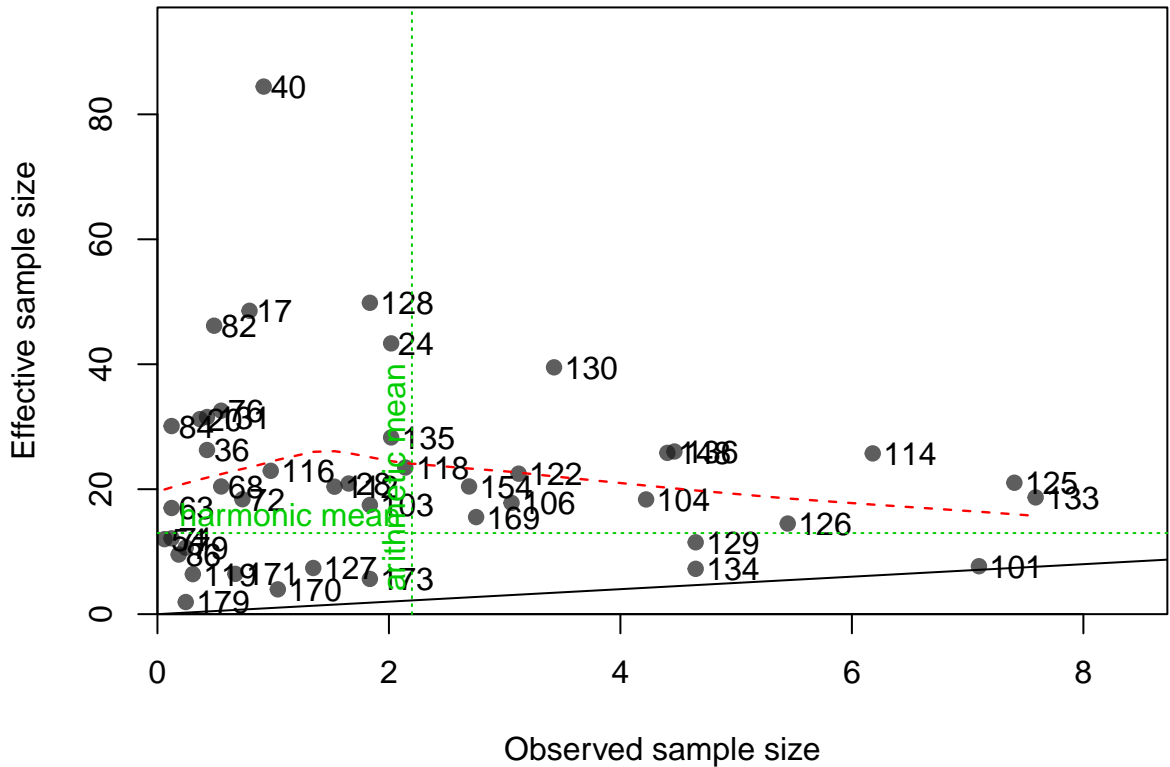


Proportion

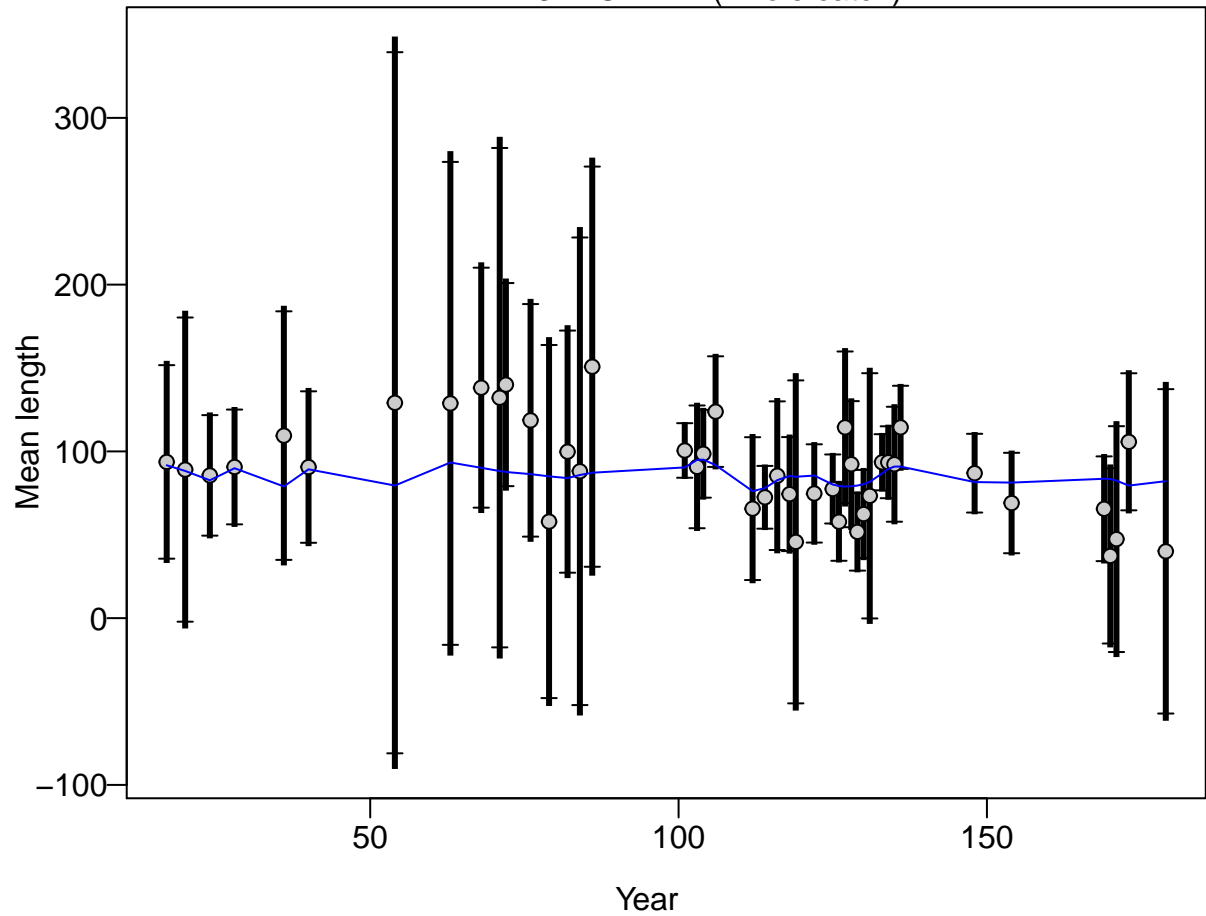




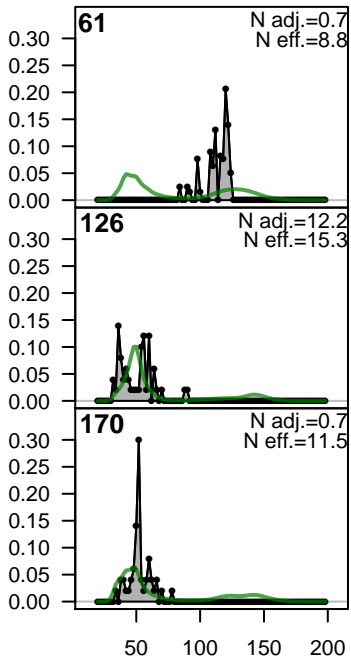




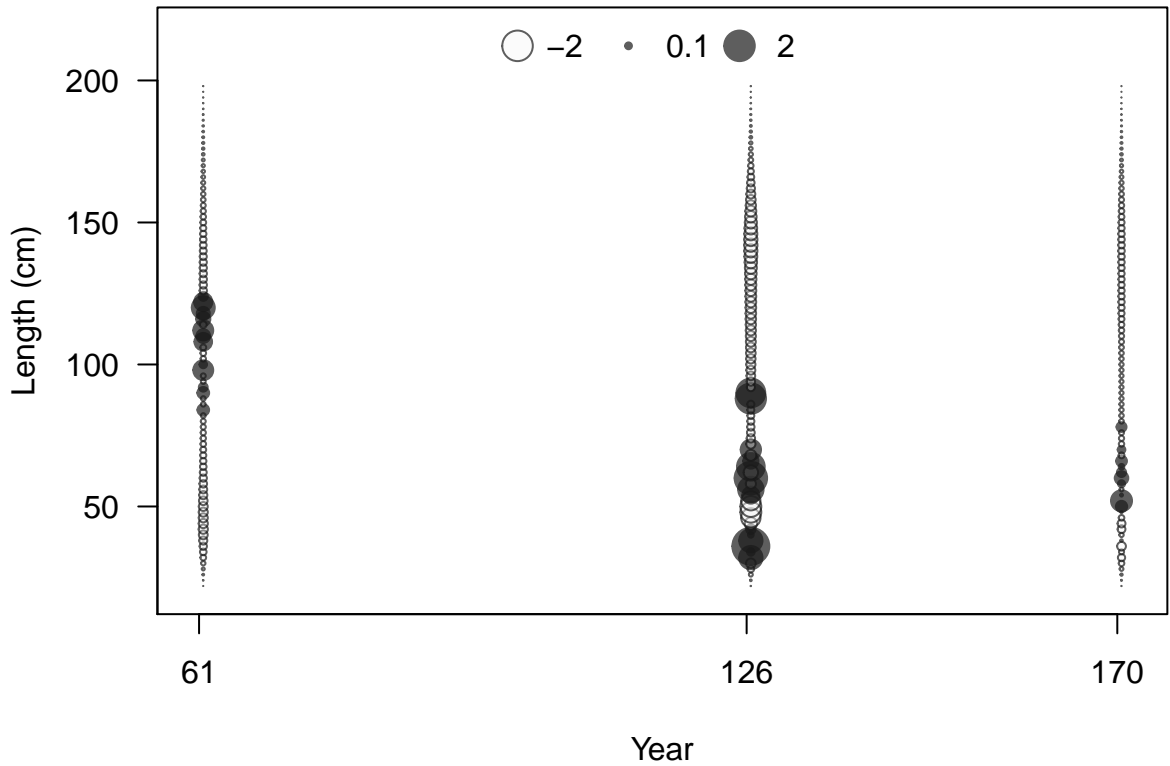
A3-NOADEL (whole catch)

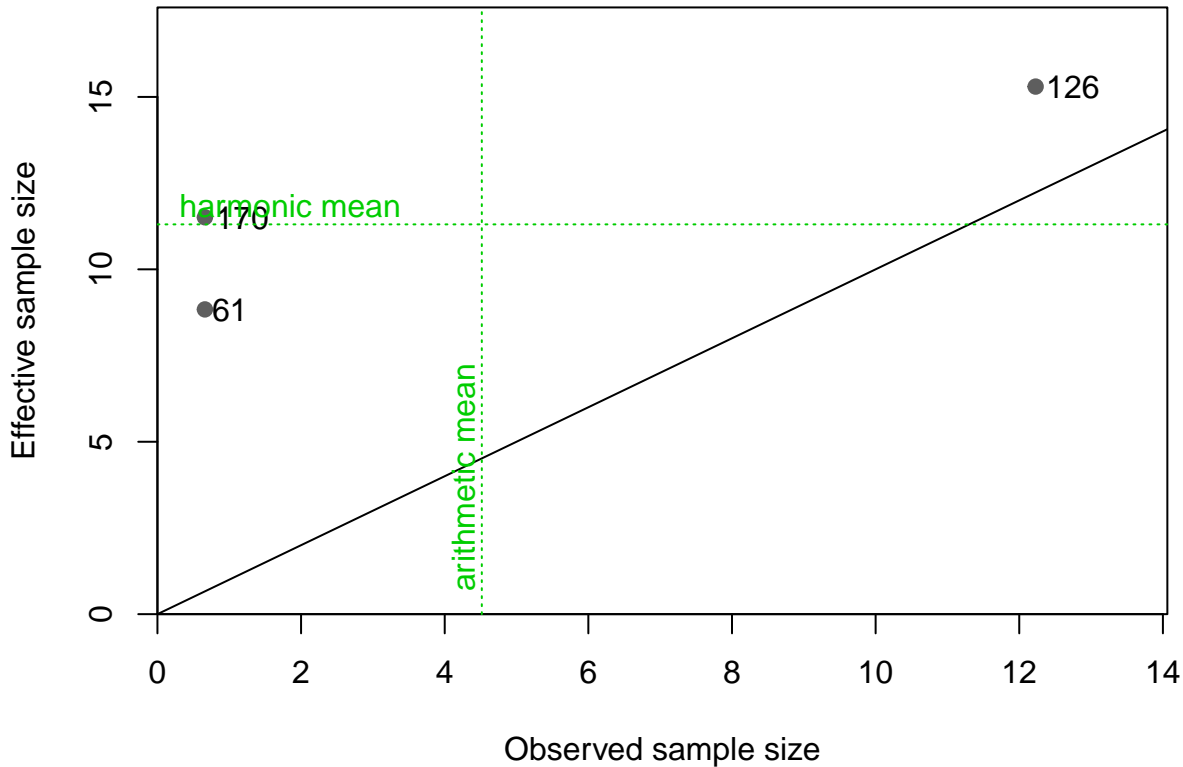


Proportion

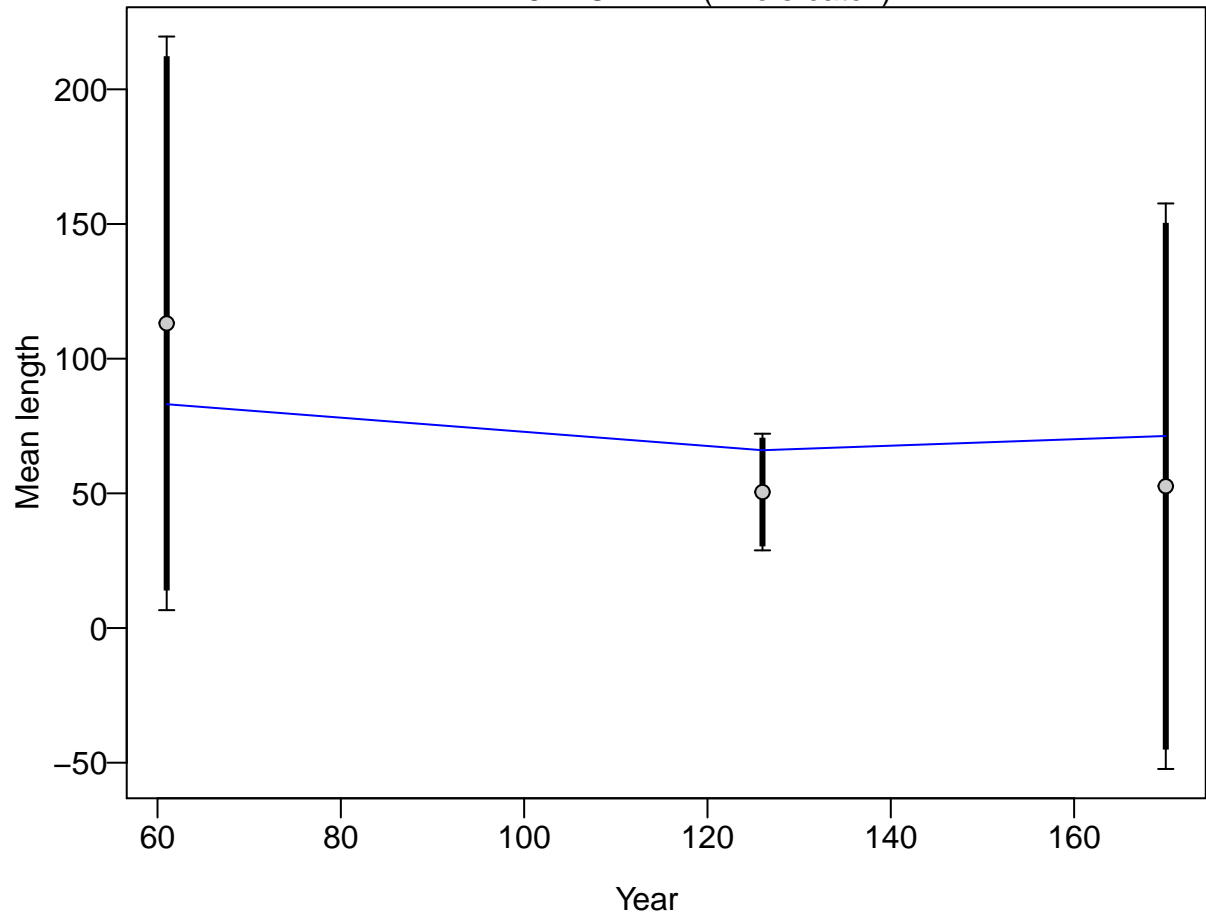


Length (cm)

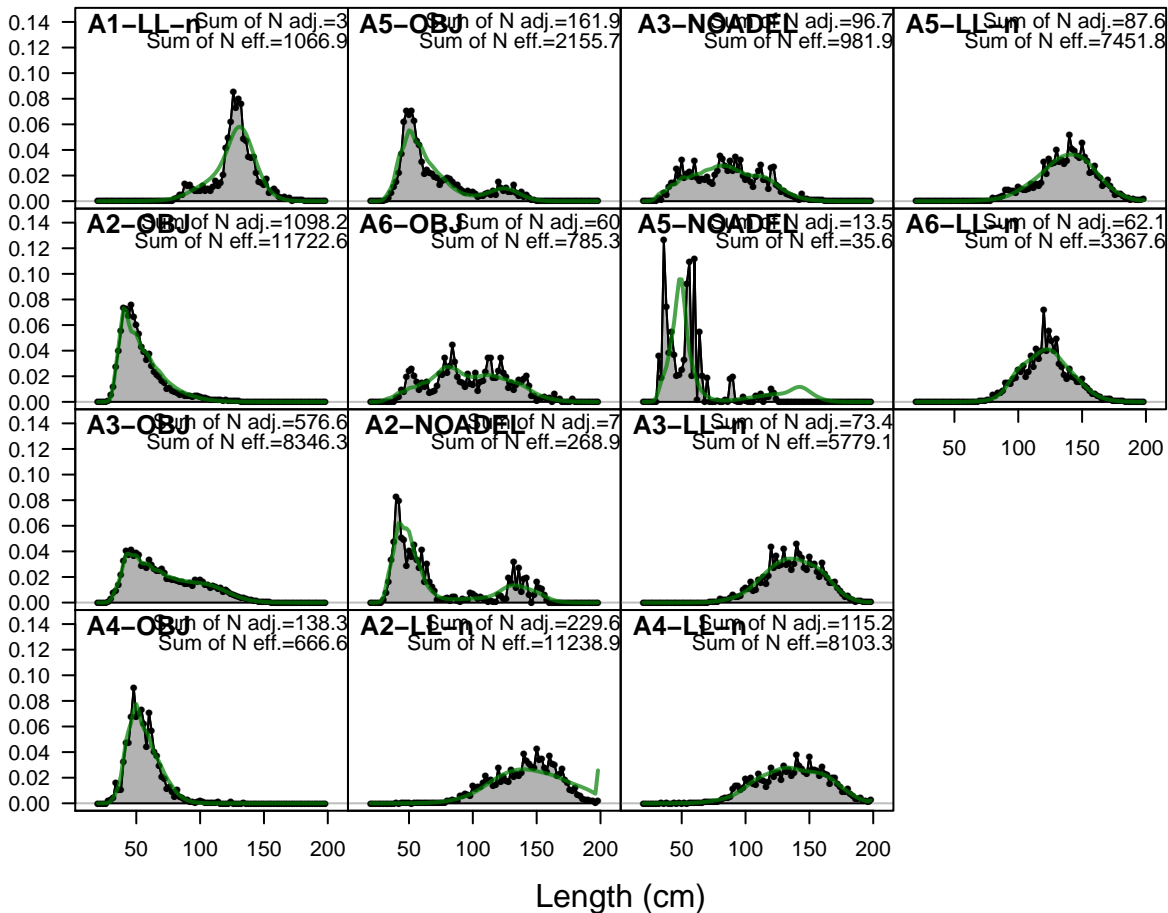


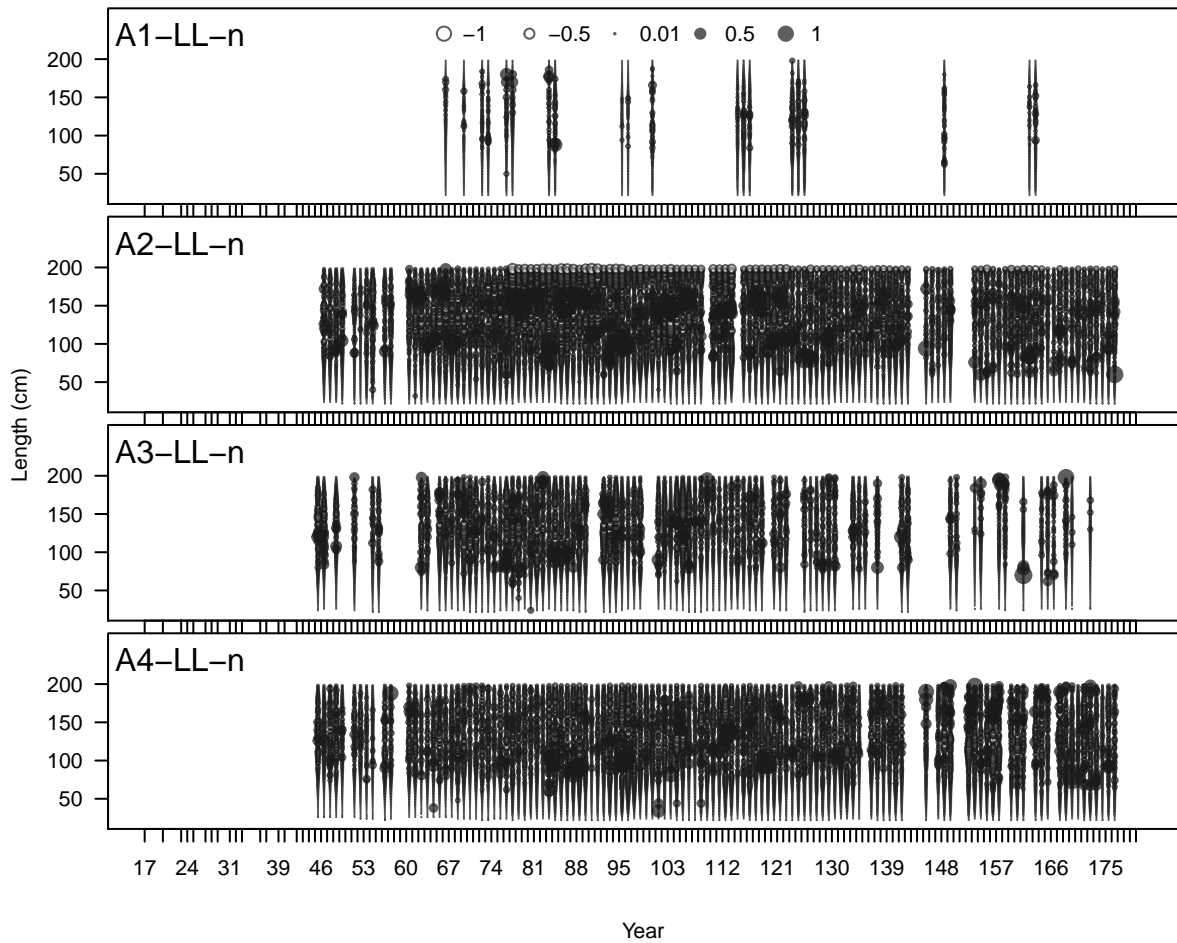


A5-NOADEL (whole catch)

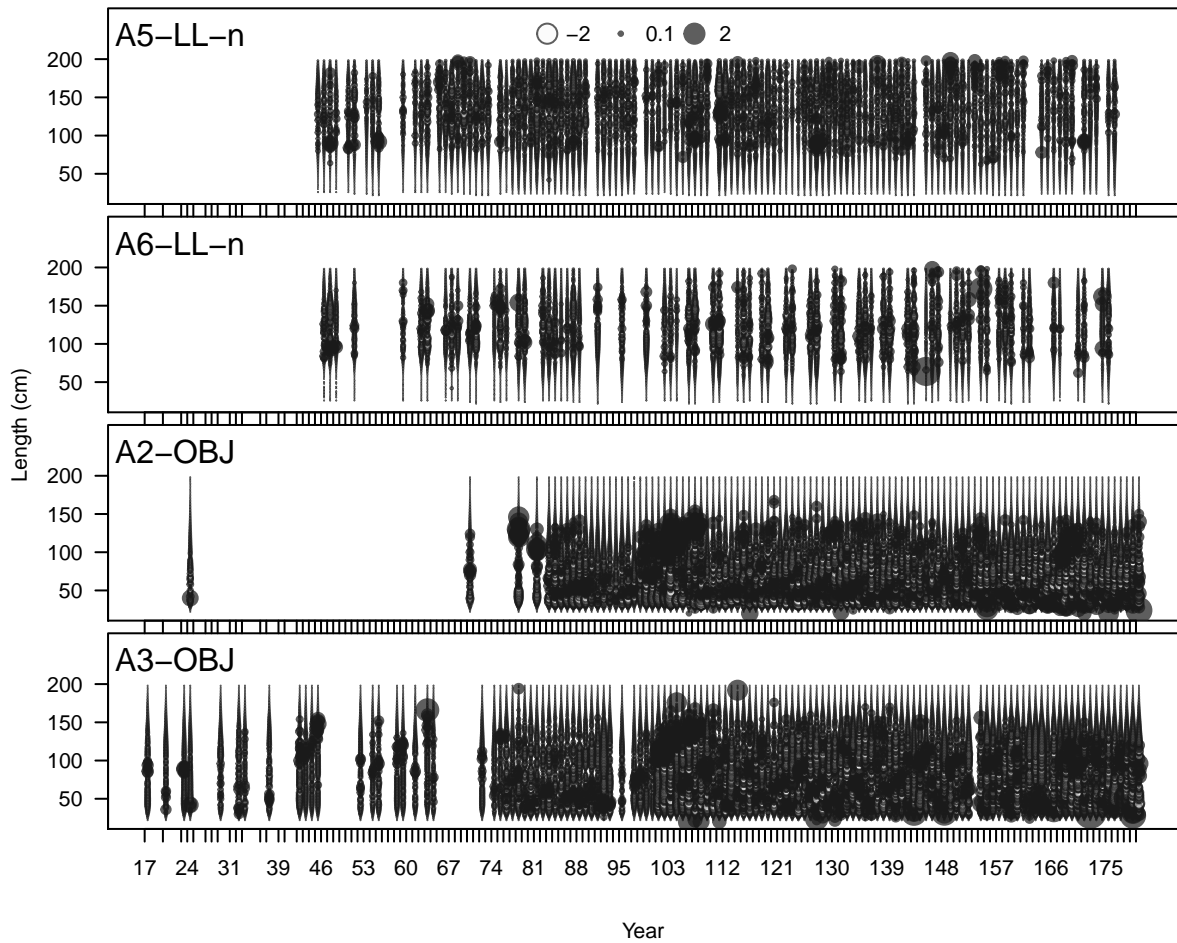


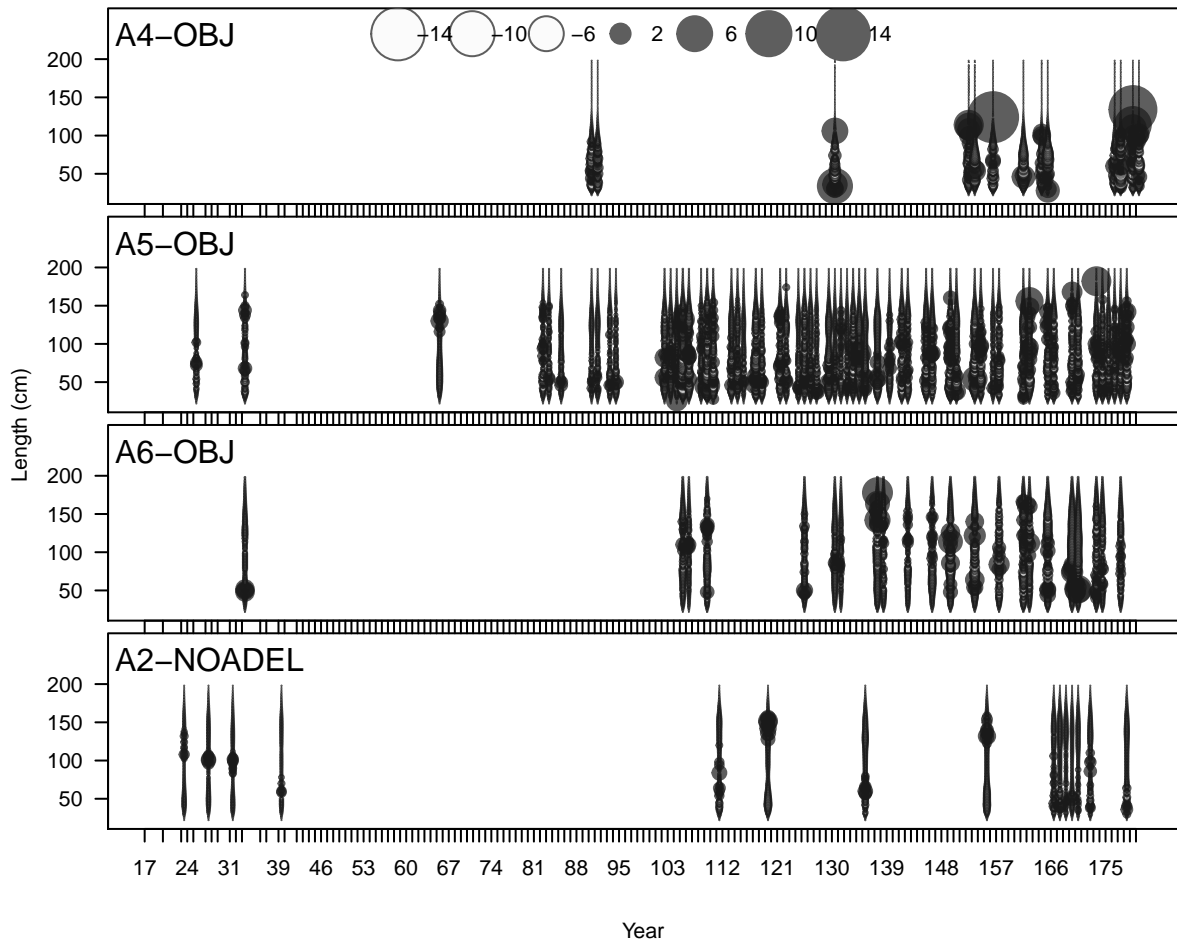
Proportion

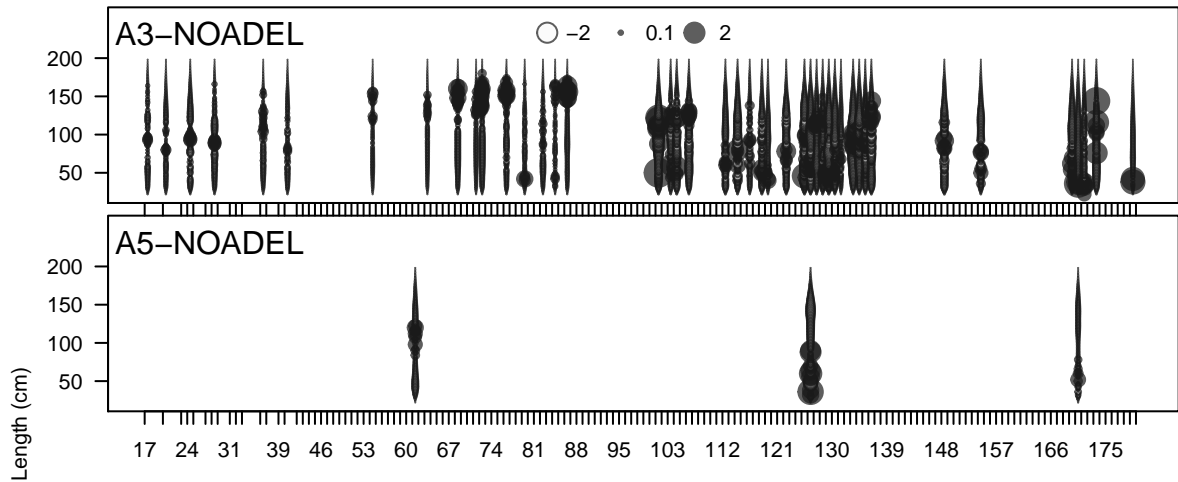






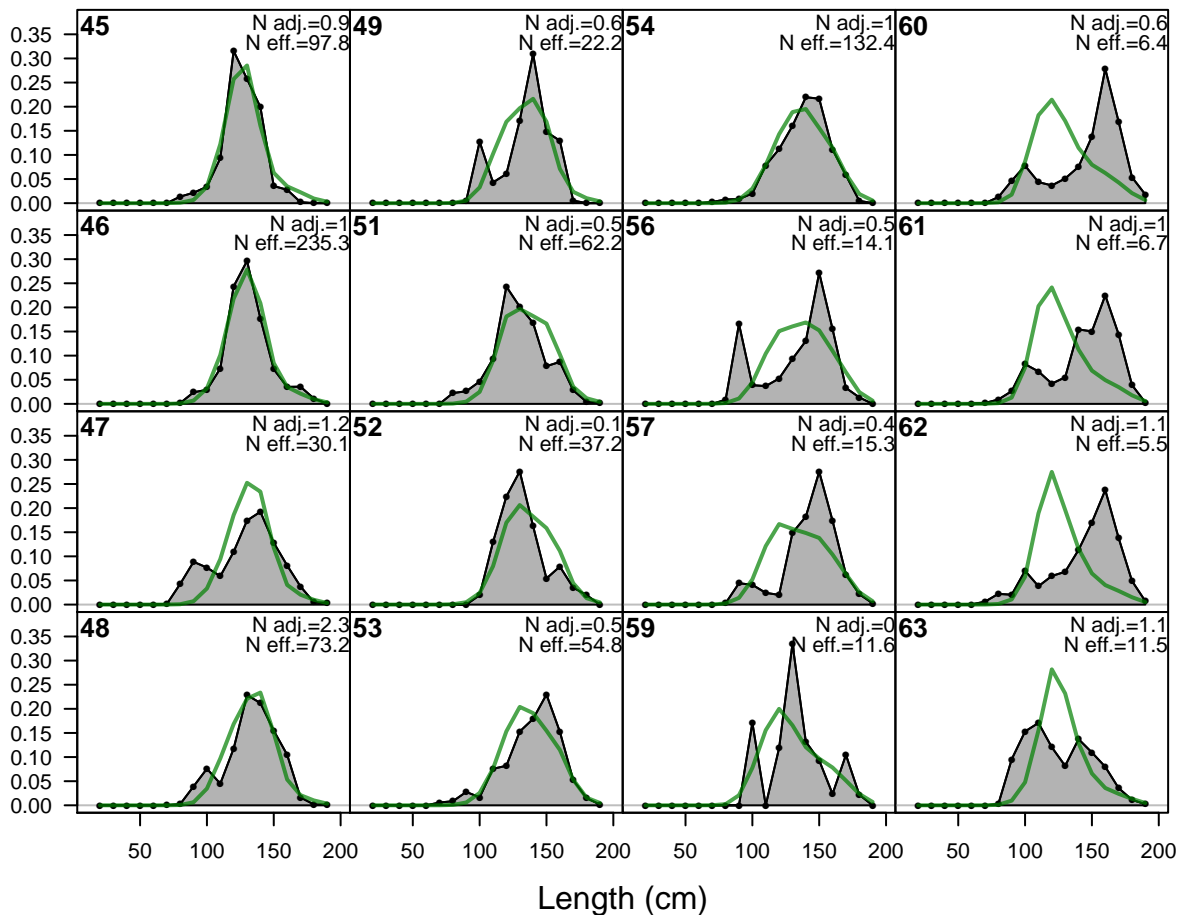




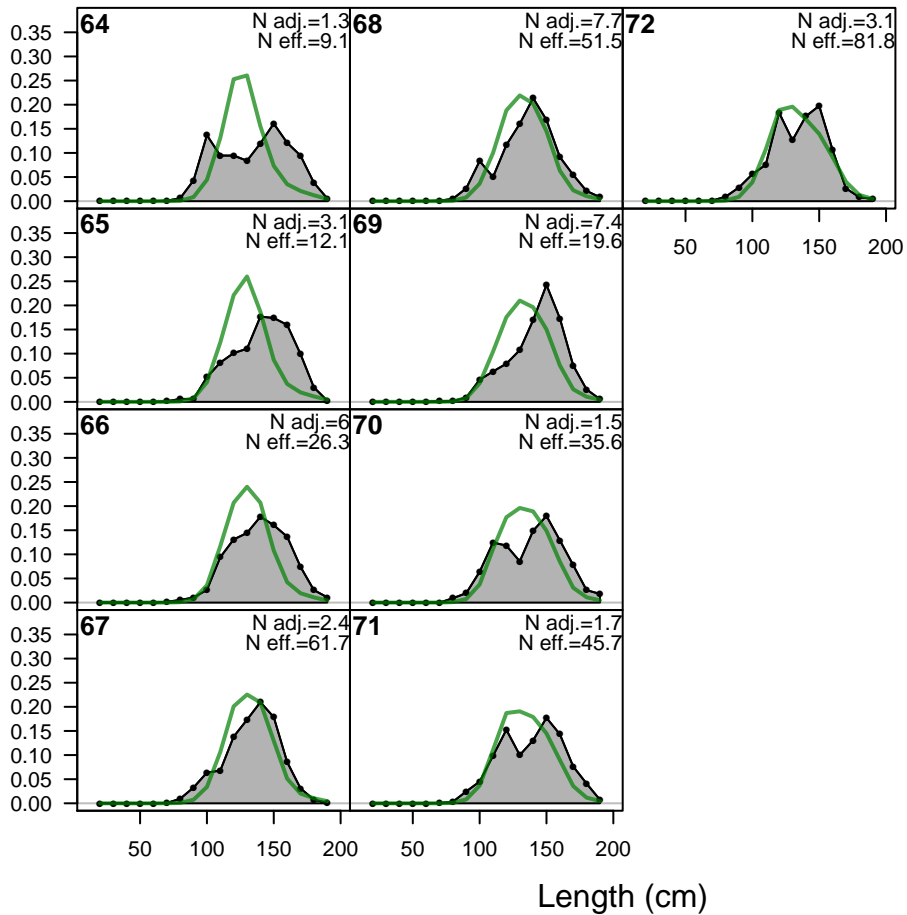


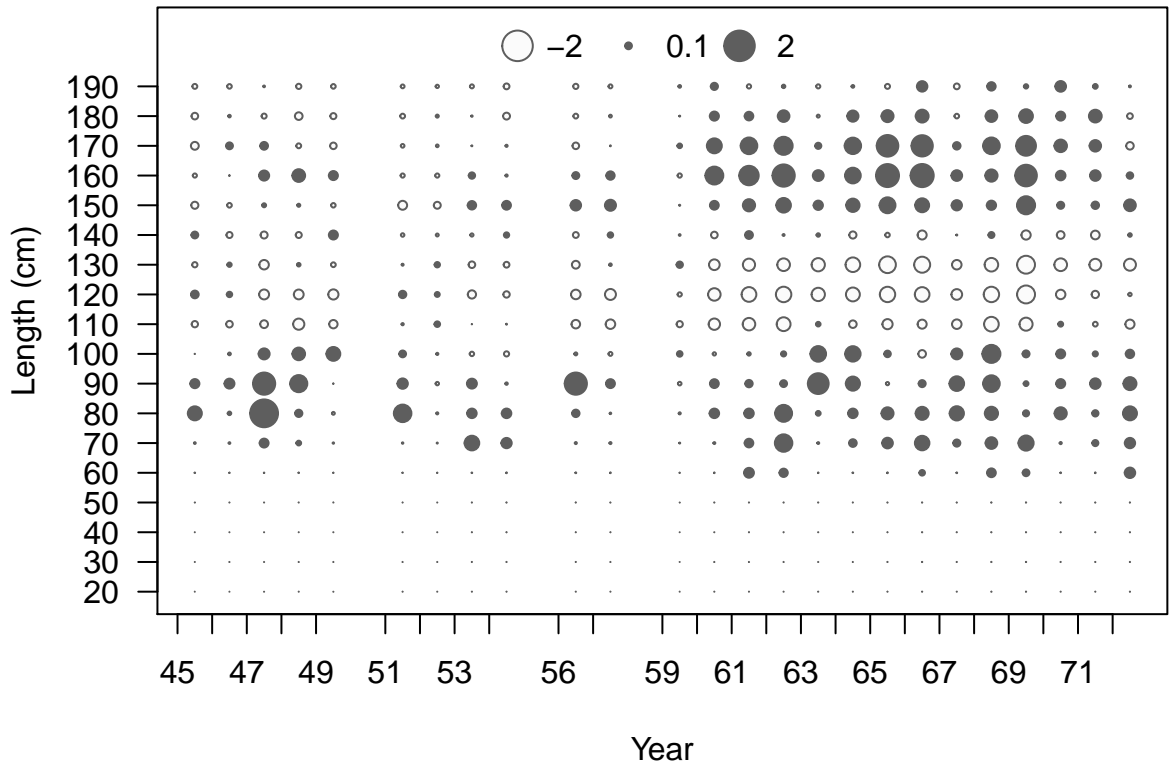
Year

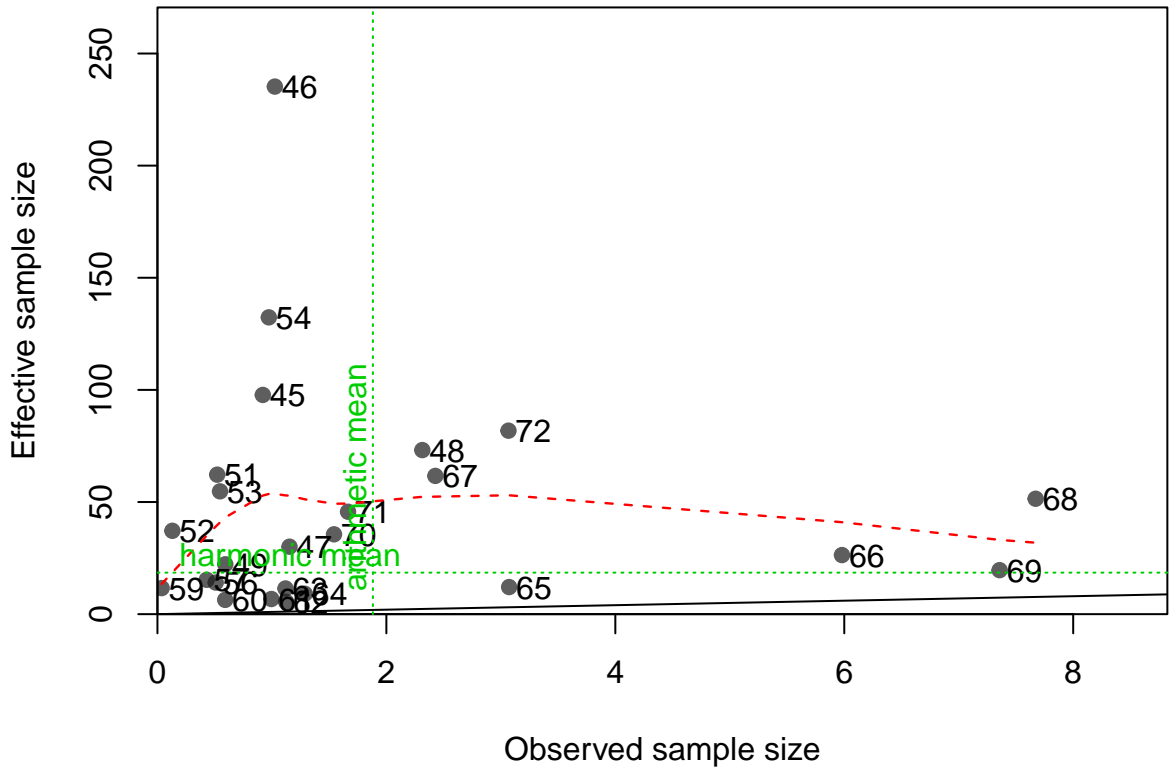
Proportion



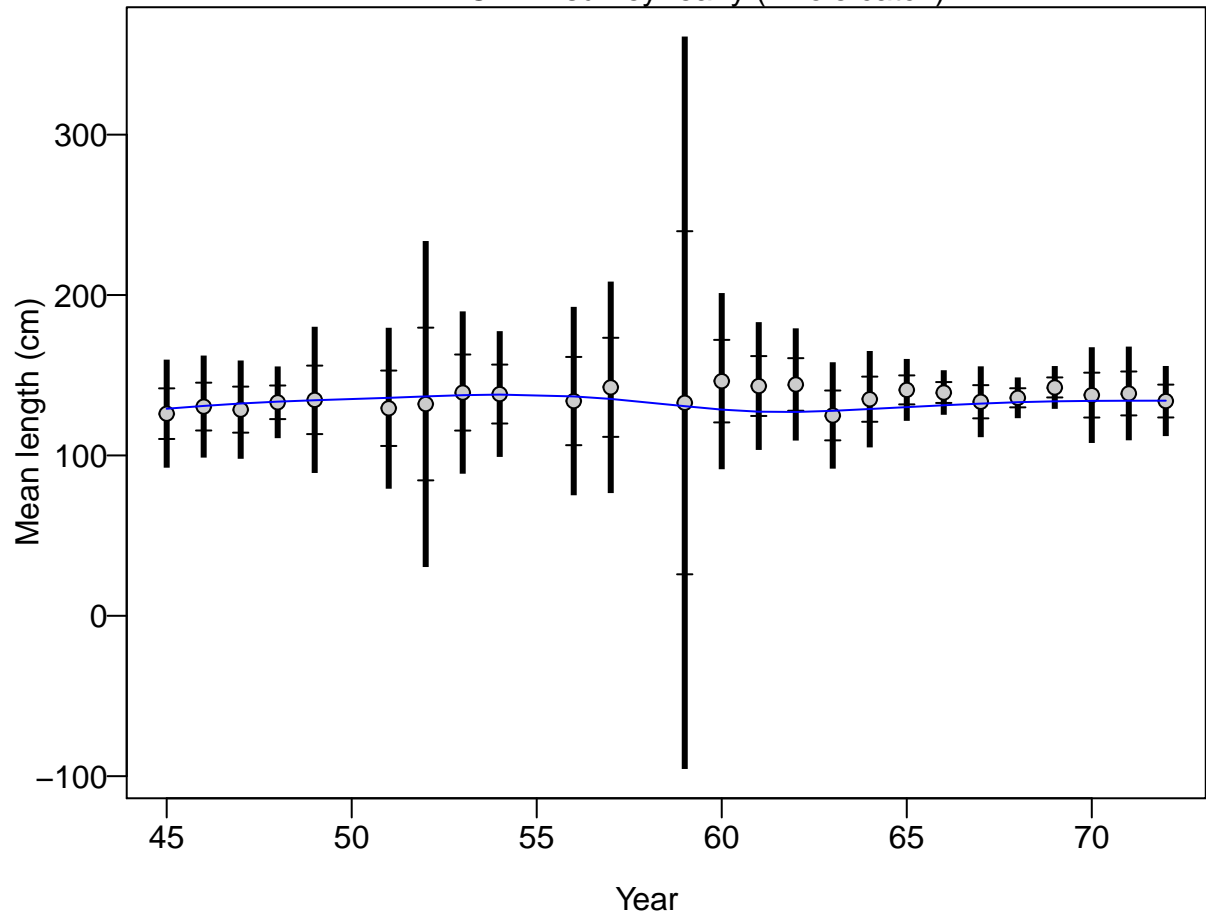
Proportion





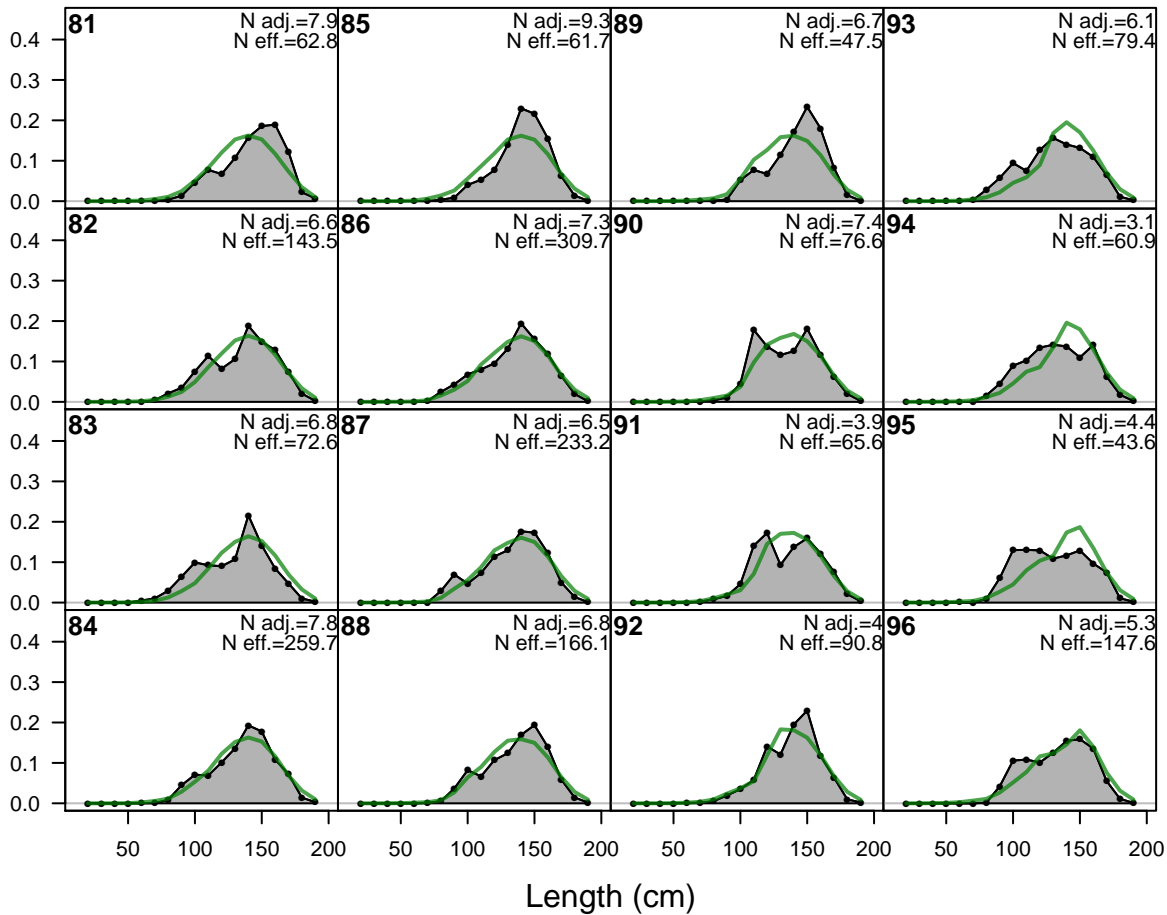


EPO-LL-survey-early (whole catch)

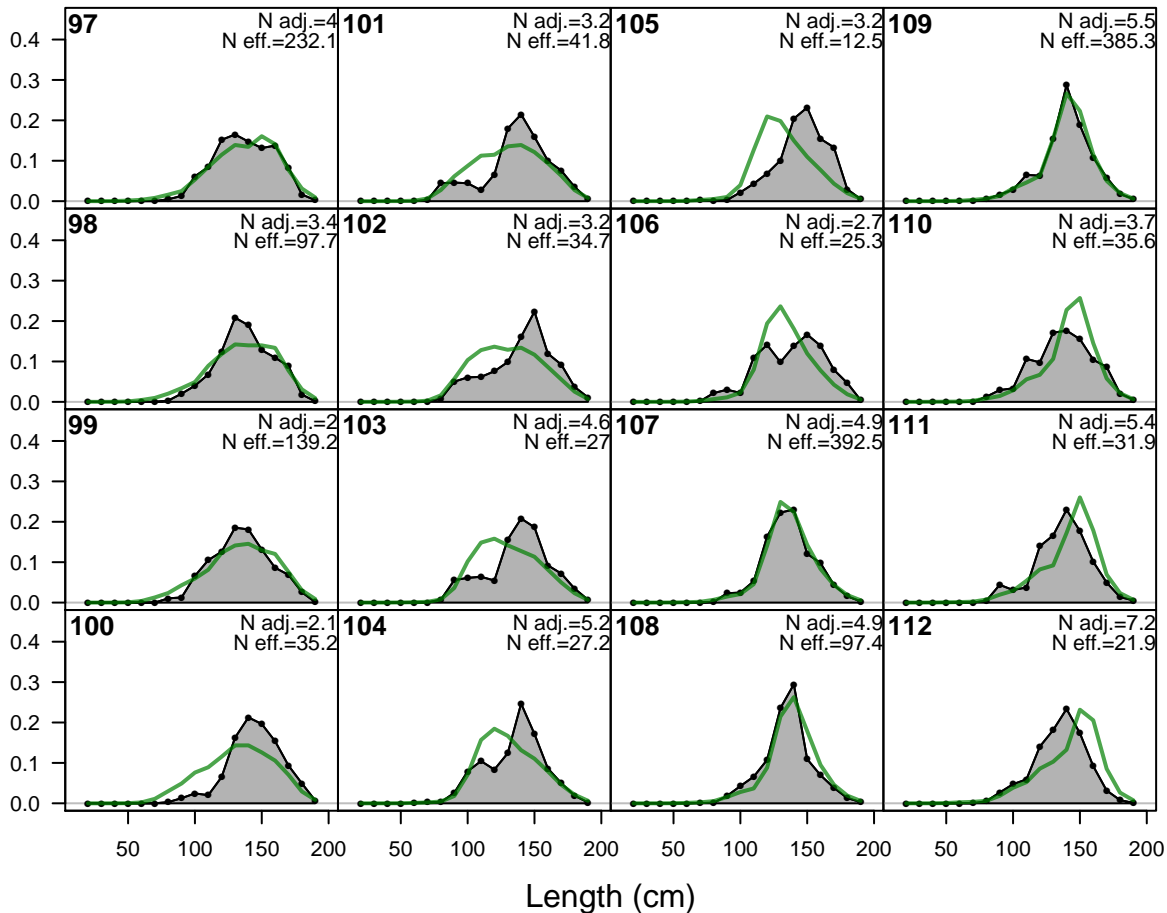




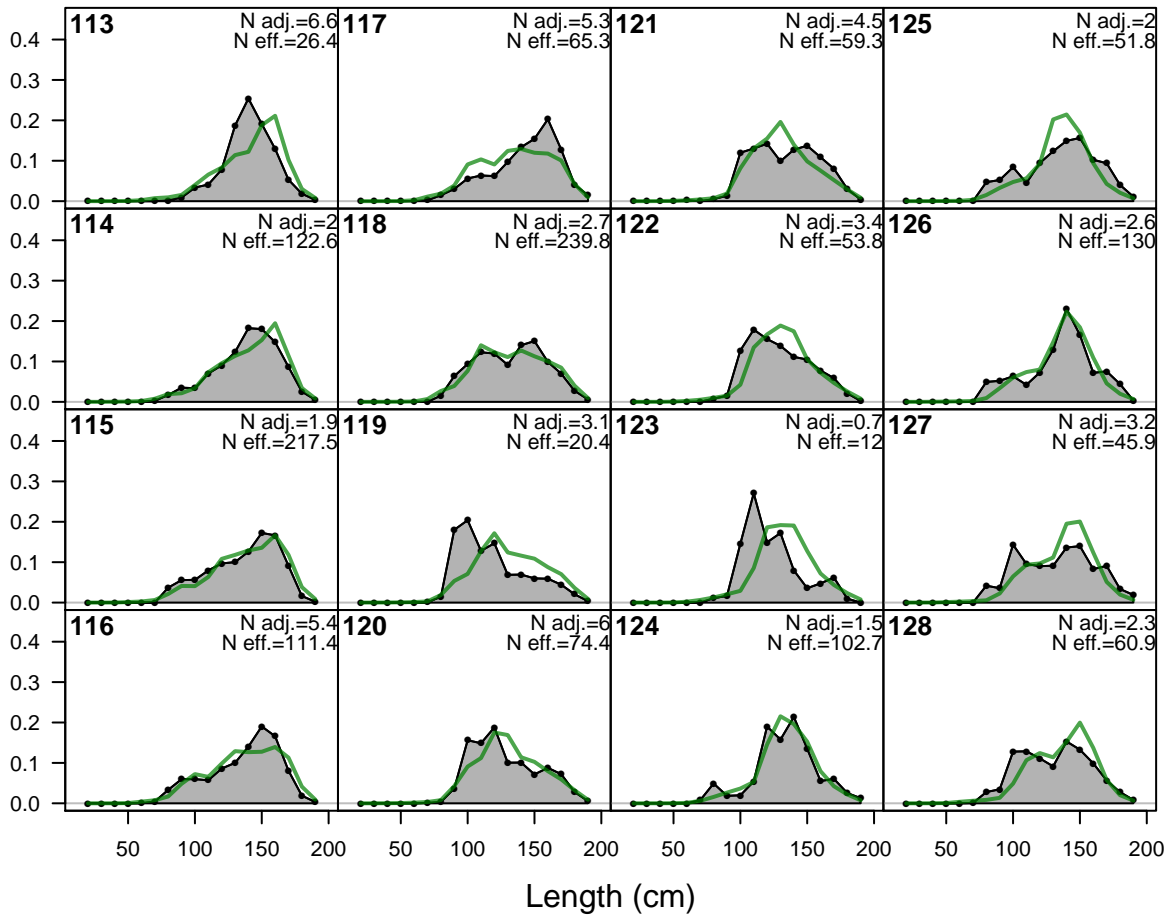
Proportion



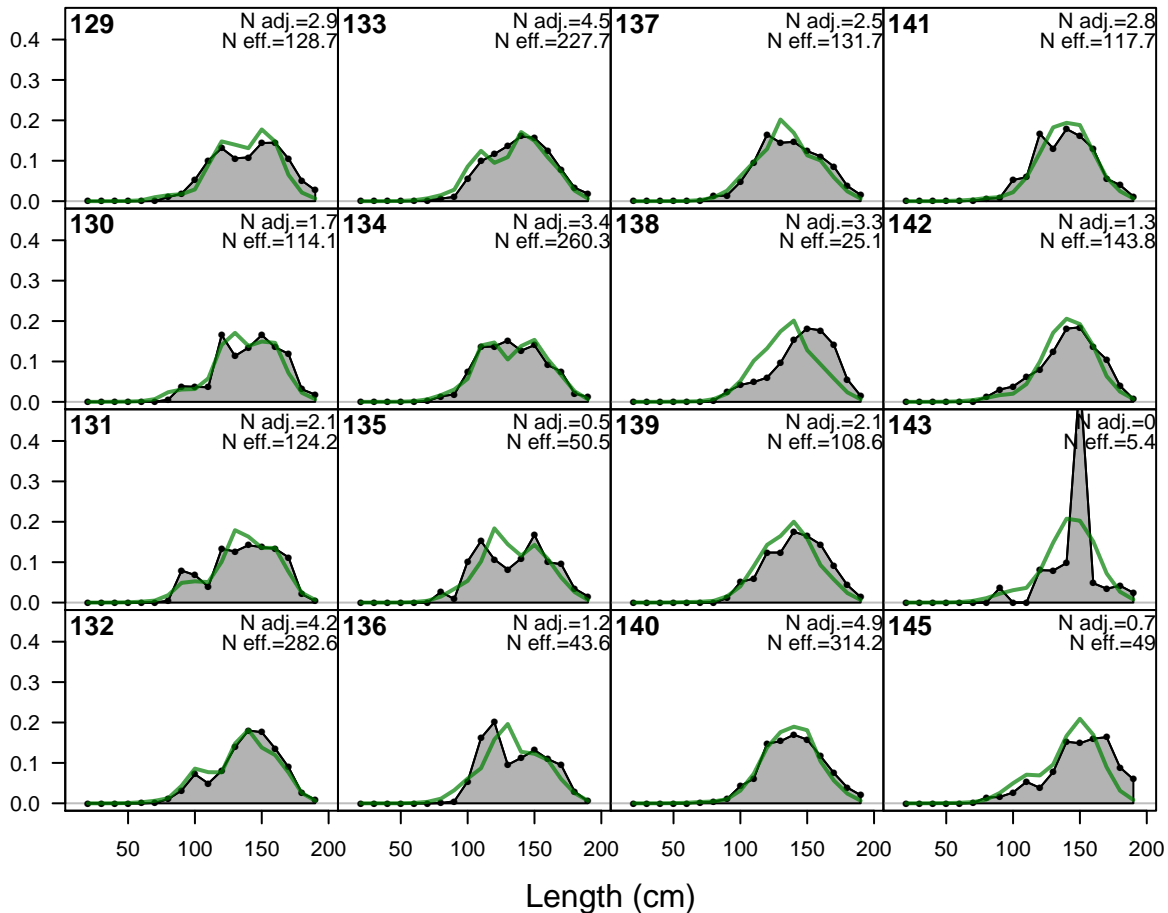
Proportion



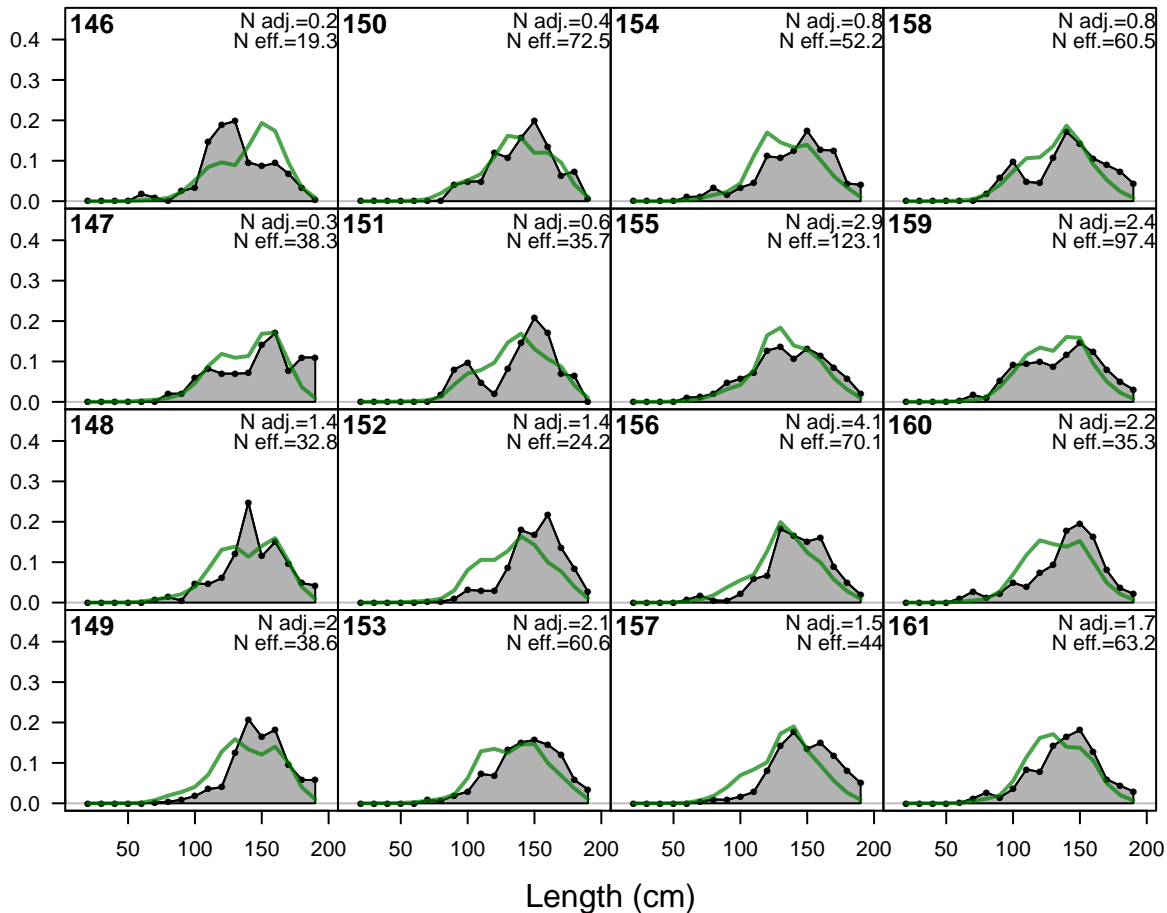
Proportion



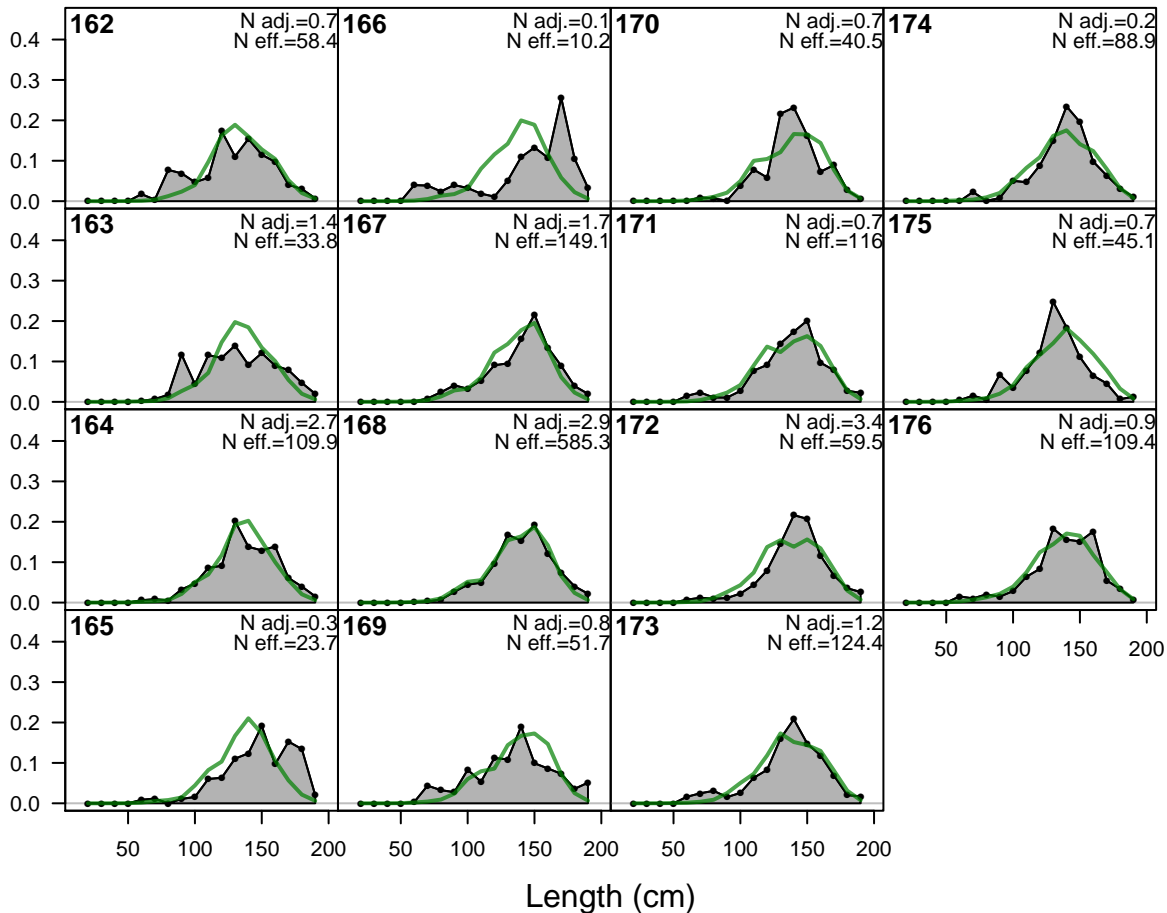
Proportion

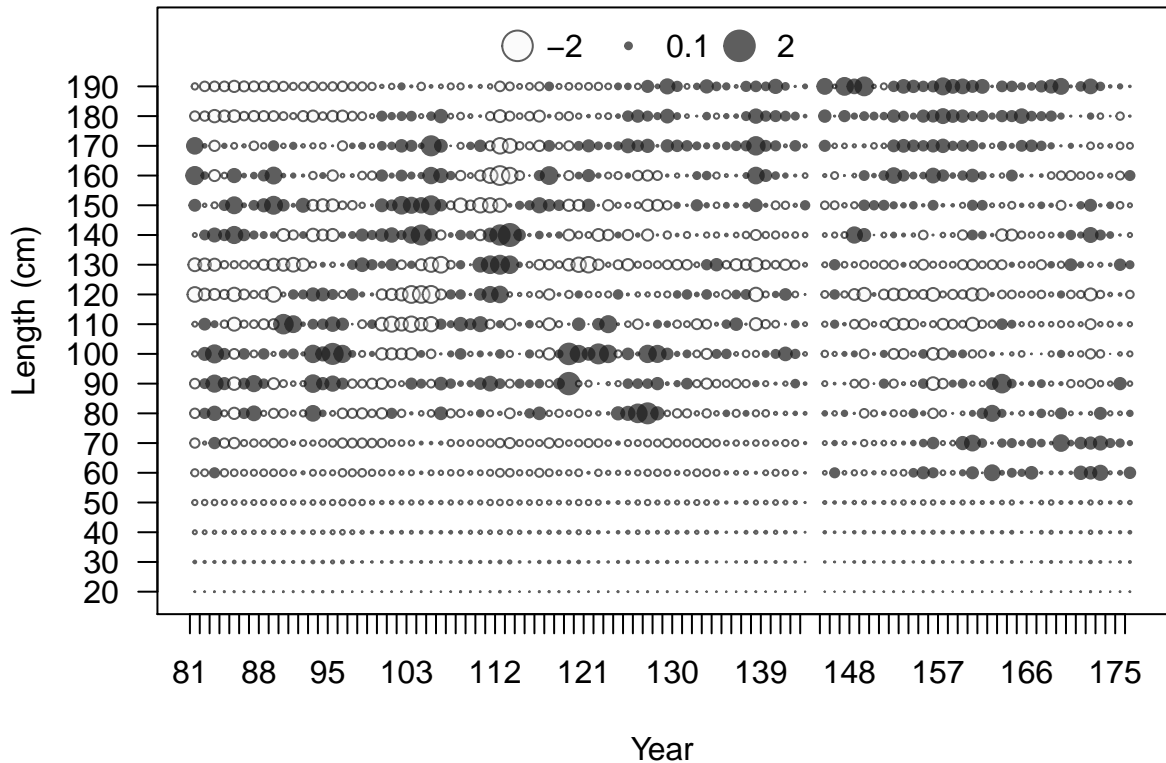


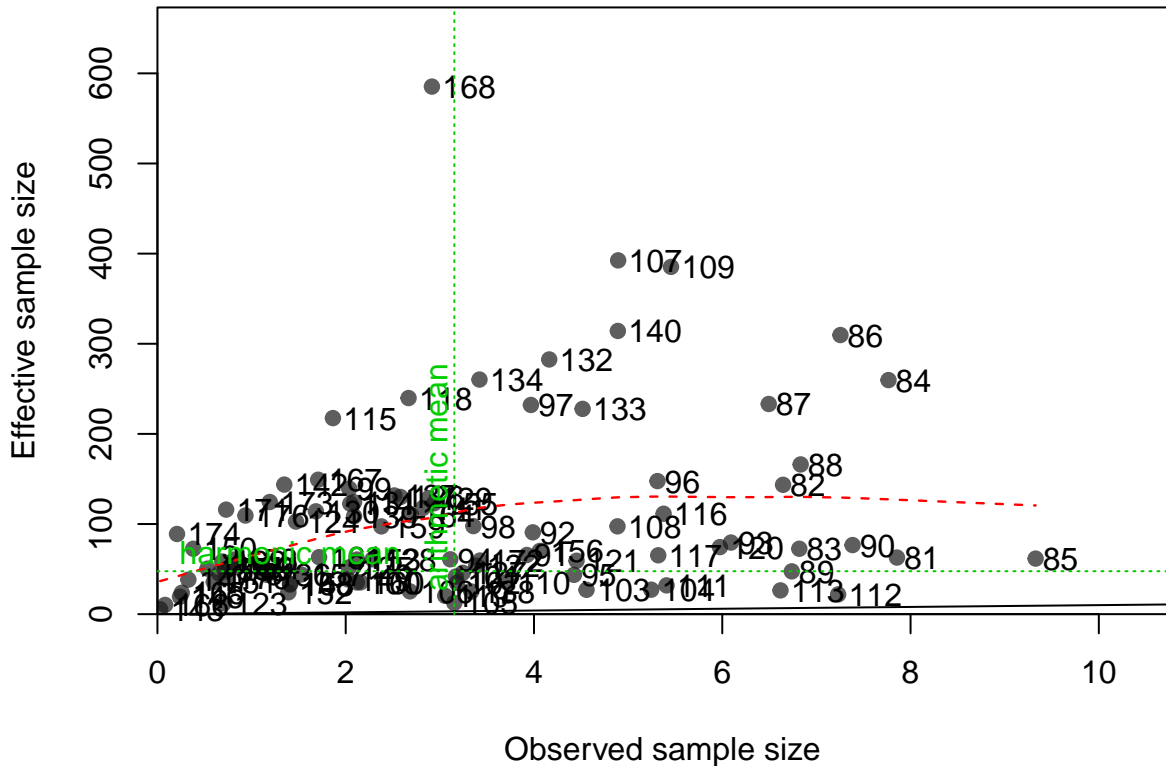
Proportion



Proportion

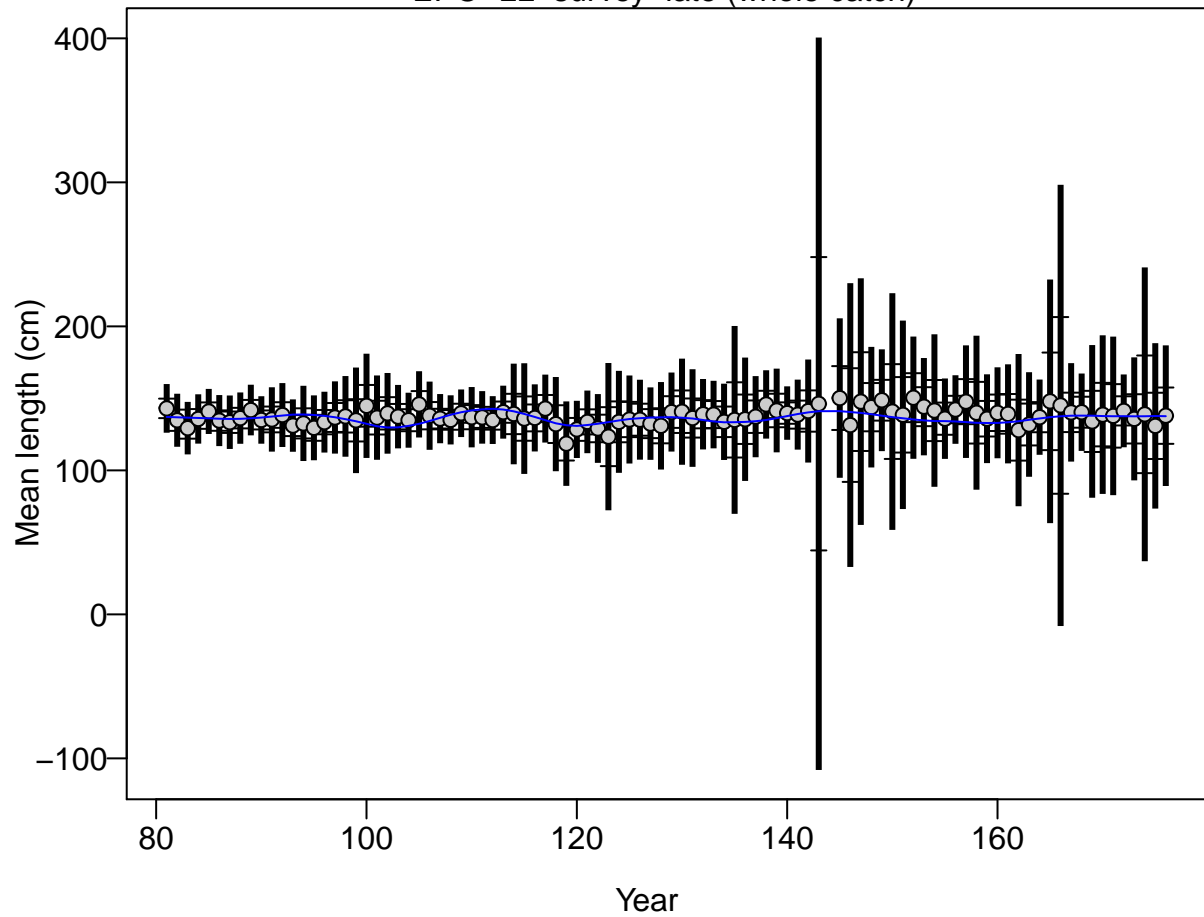




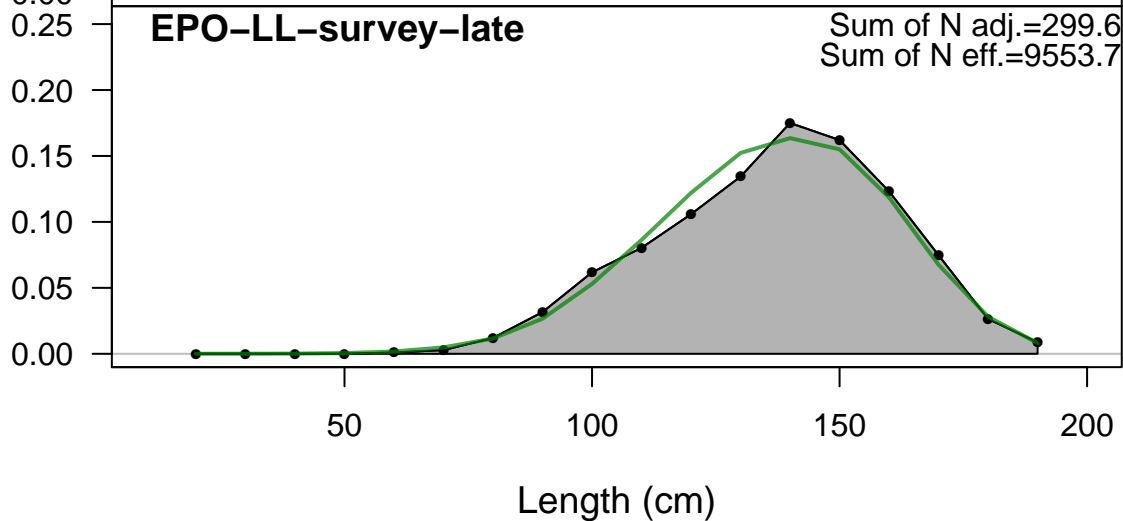
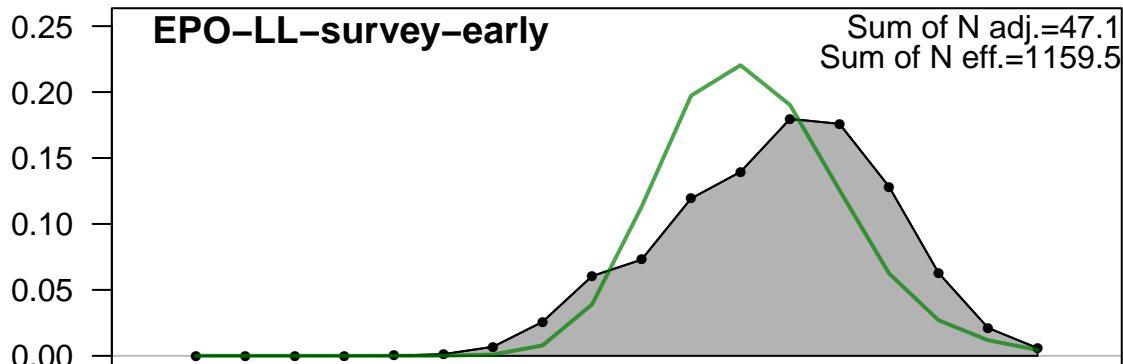




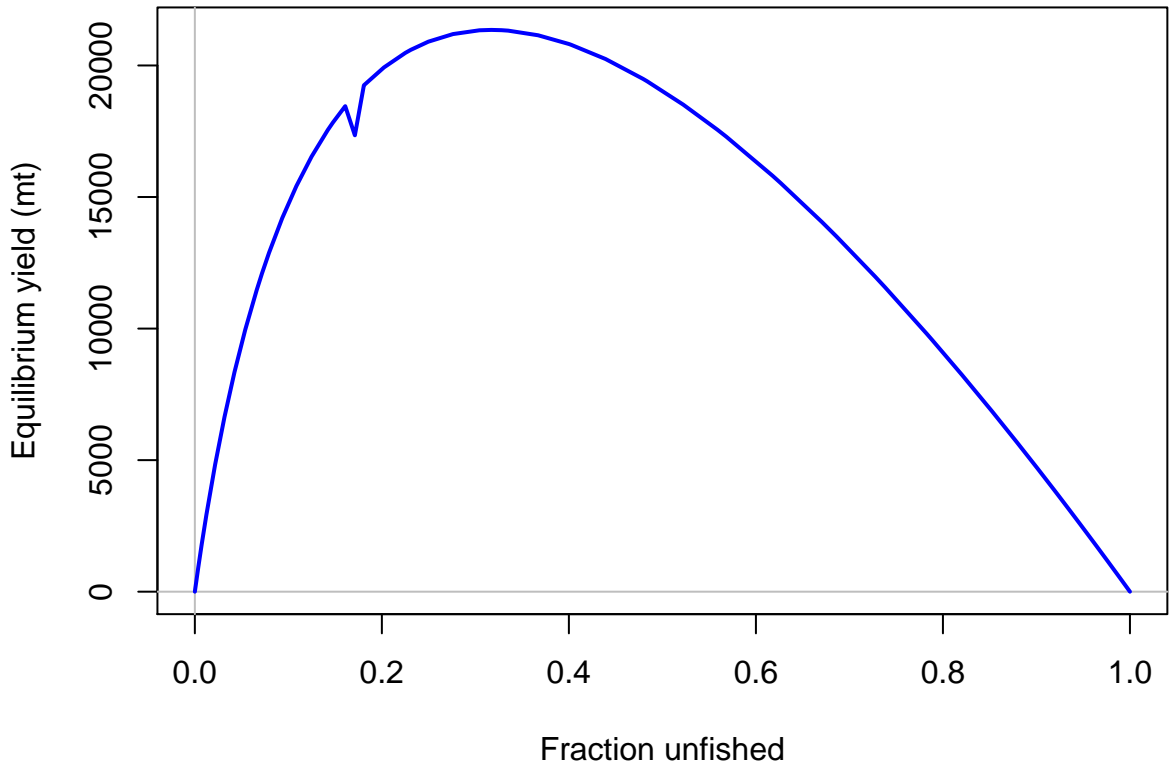
EPO-LL-survey-late (whole catch)

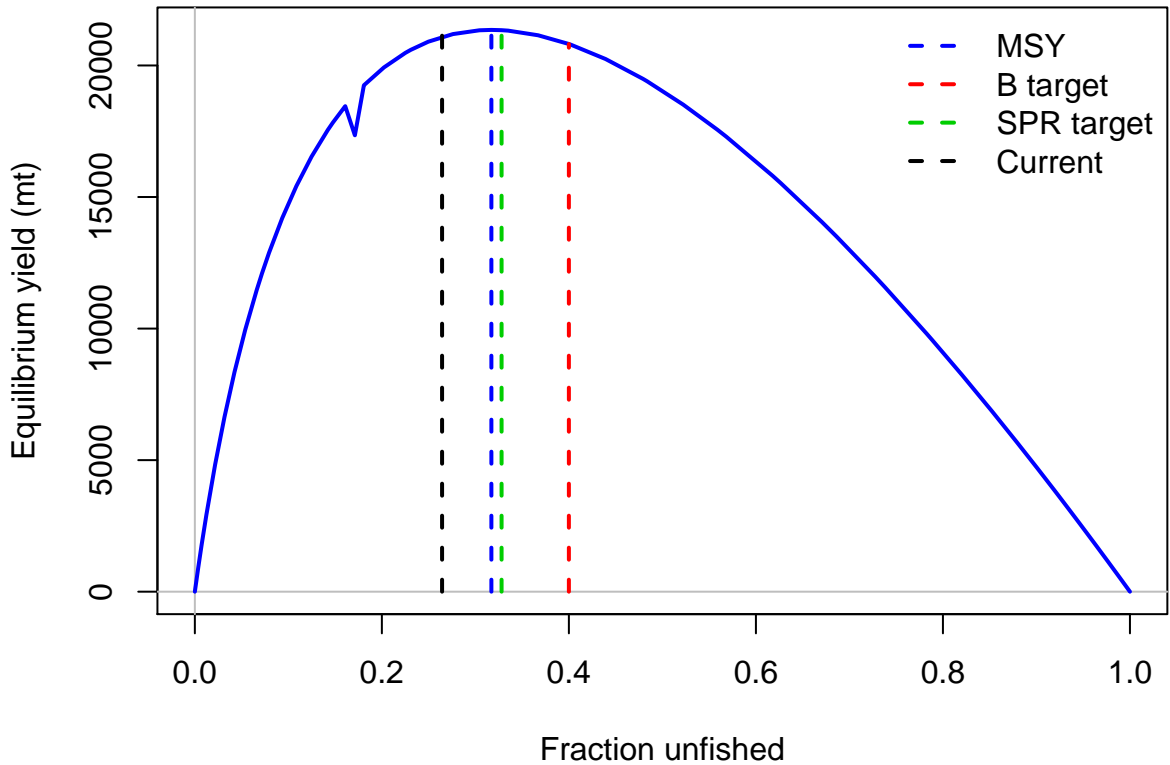


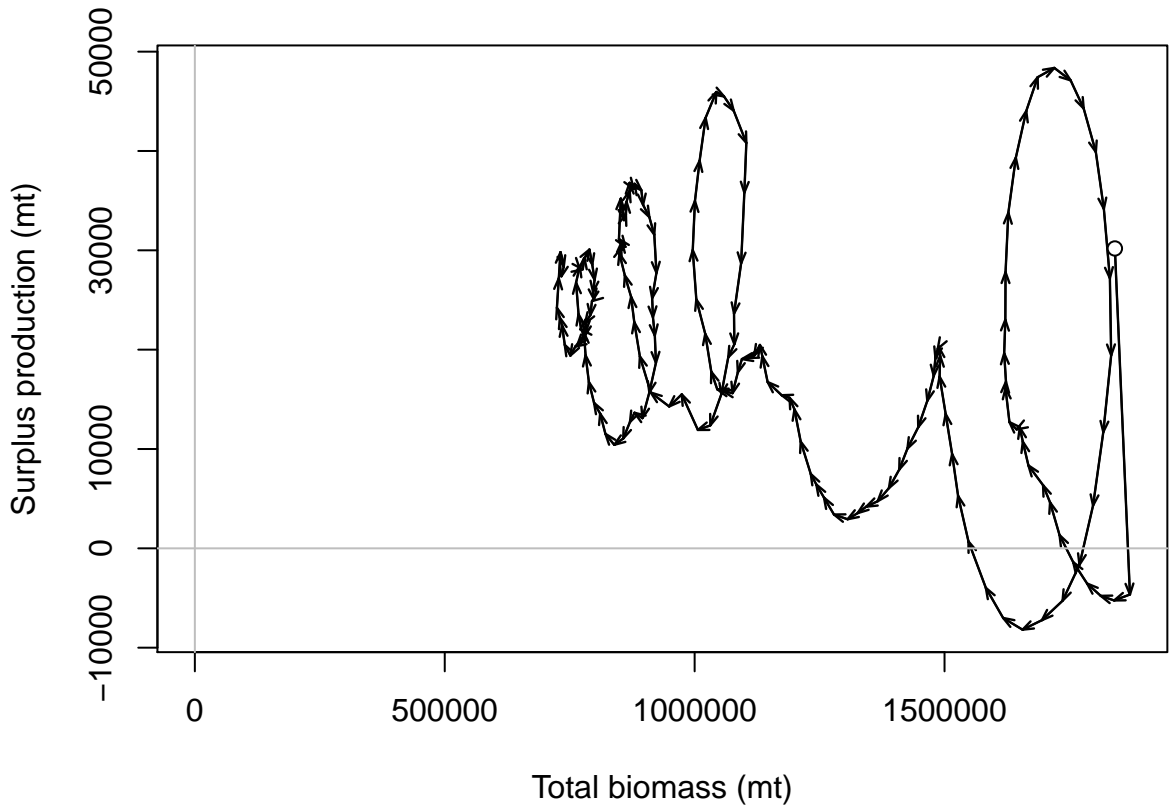
Proportion

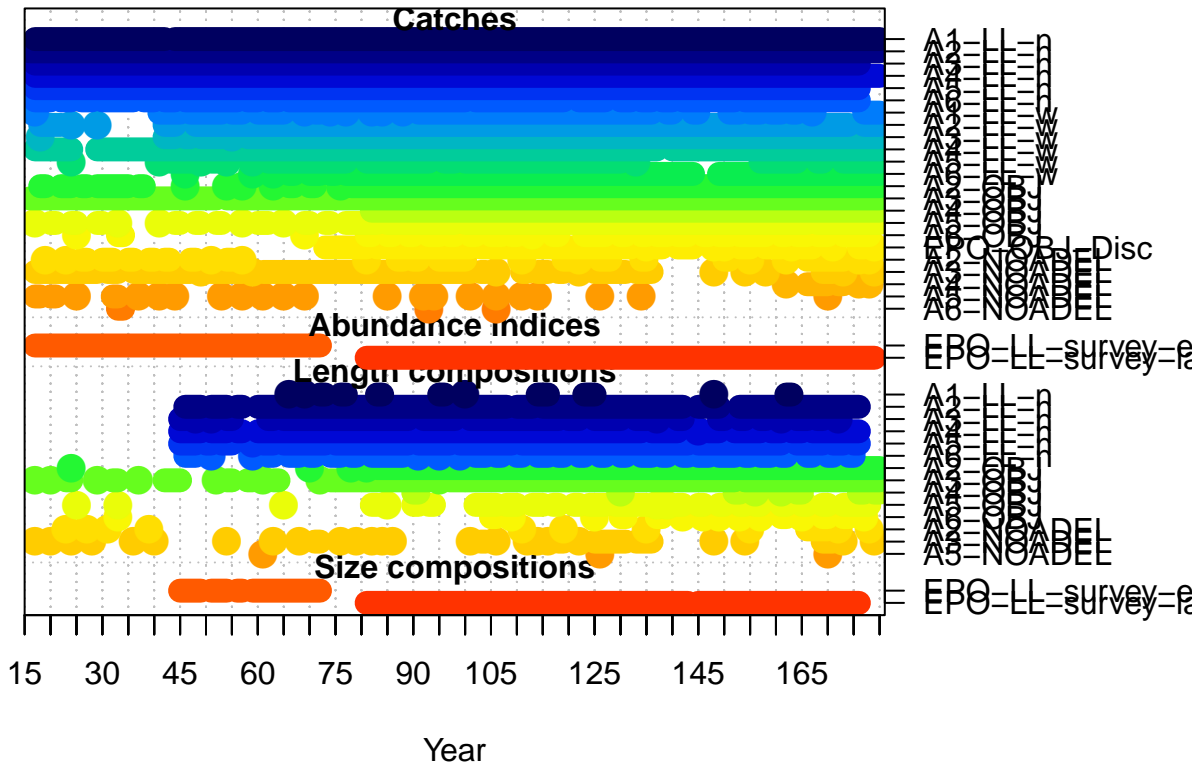


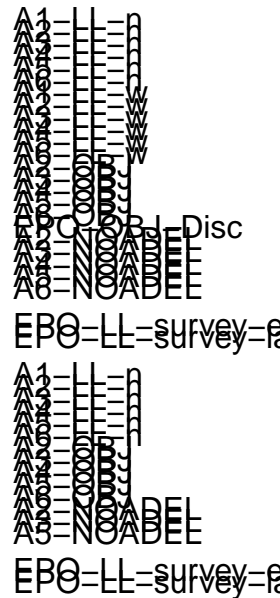
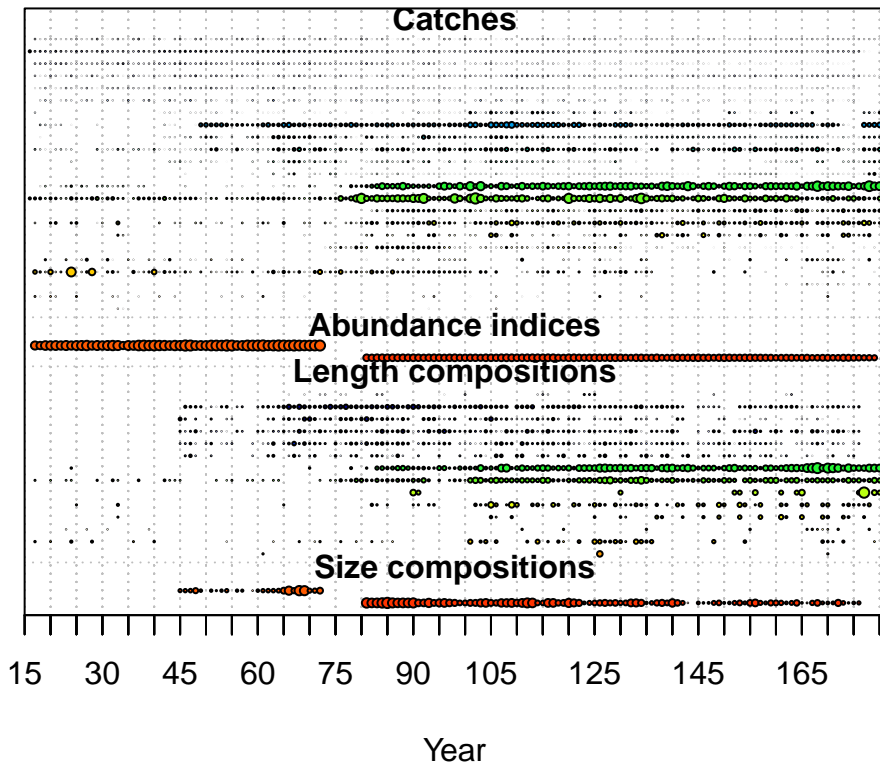
Length (cm)



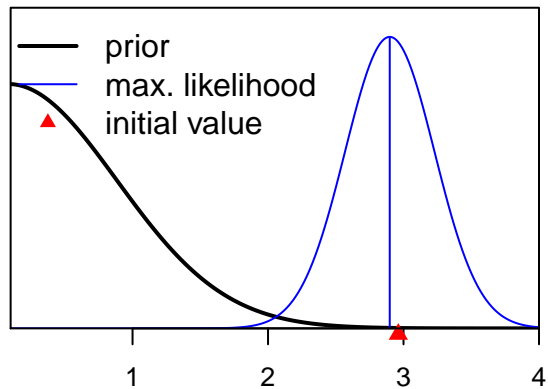




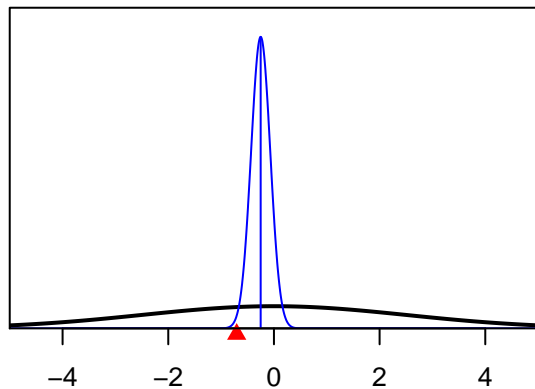




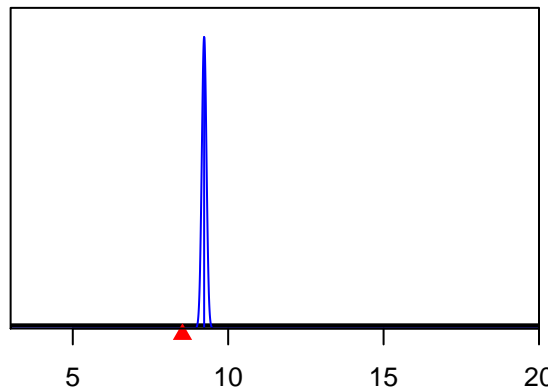
SD\_young\_Fem\_GP\_1



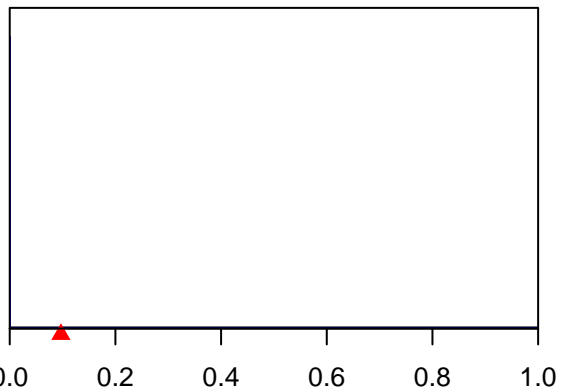
SR\_regime\_BLK1add\_16



SR\_LN(R0)

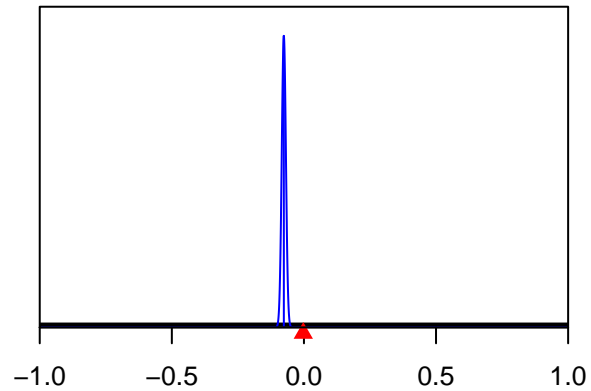
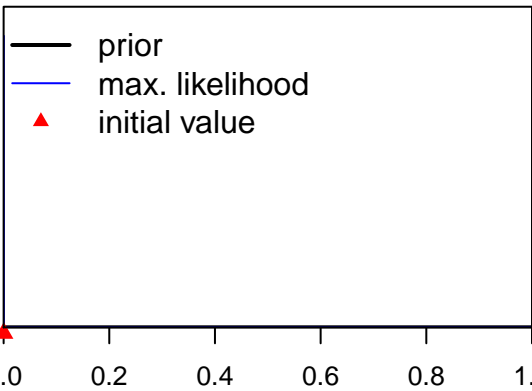


InitF\_seas\_1\_fit\_2A2-LL-n

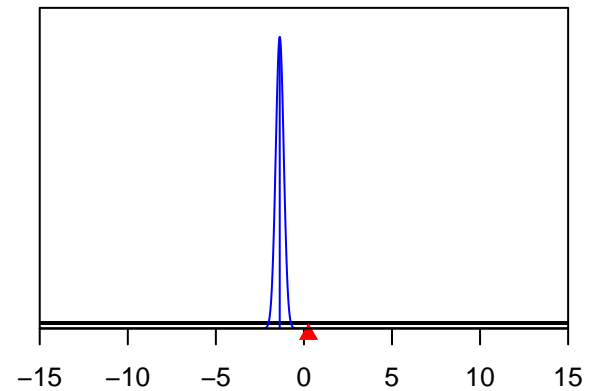
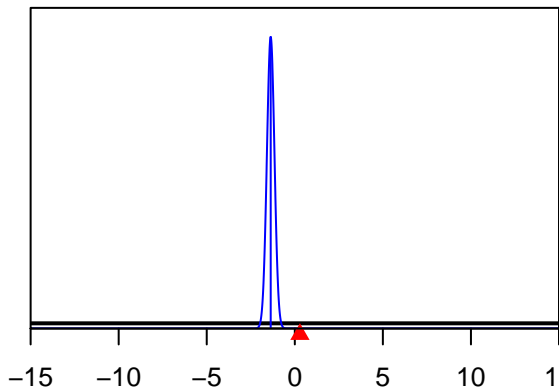


Parameter value

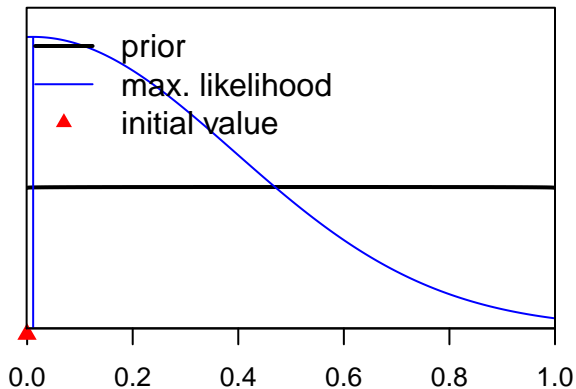
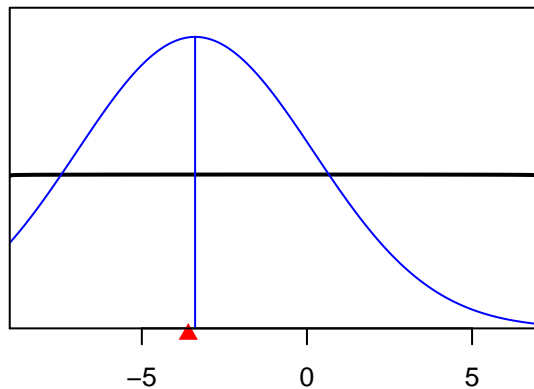
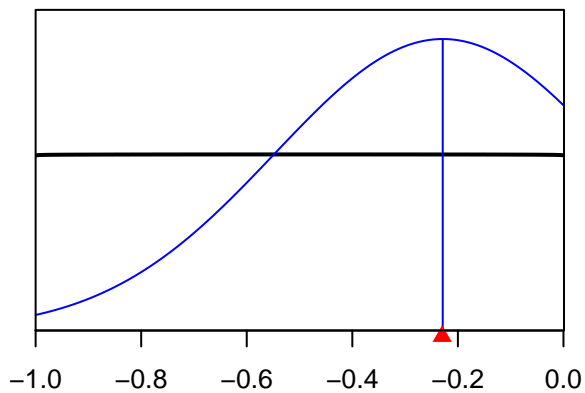
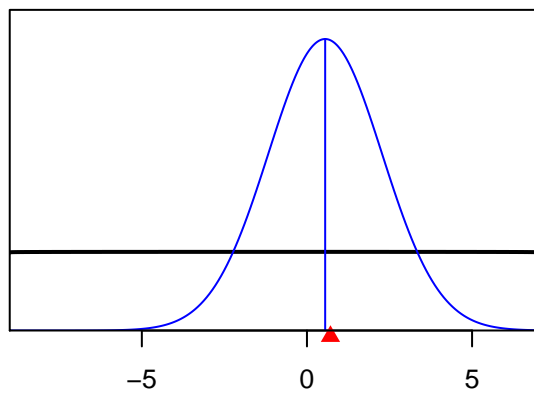


**InitF\_seas\_1\_flt\_14A3-OBJ****Q\_extraSD\_EPO-LL-survey-early(24)**

Density

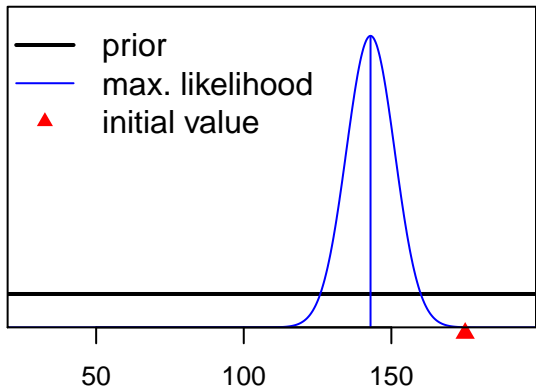
**LnQ\_base\_EPO-LL-survey-early(24)****LnQ\_base\_EPO-LL-survey-late(25)**

Parameter value

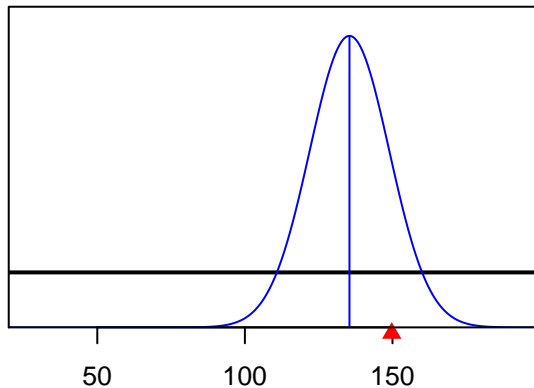
**SizeSpline\_GradLo\_A1-LL-n(1)****SizeSpline\_Val\_2\_A1-LL-n(1)****SizeSpline\_GradHi\_A1-LL-n(1)****SizeSpline\_Val\_4\_A1-LL-n(1)**

Parameter value

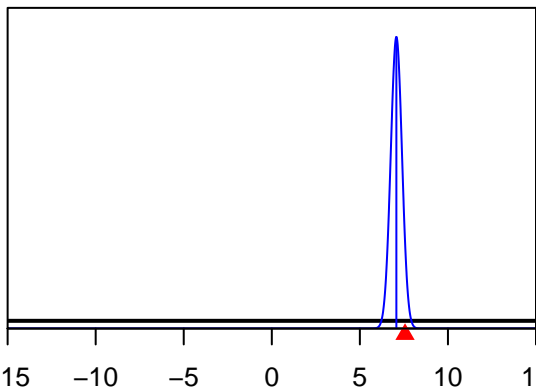
Size\_DbIN\_peak\_A2-LL-n(2)



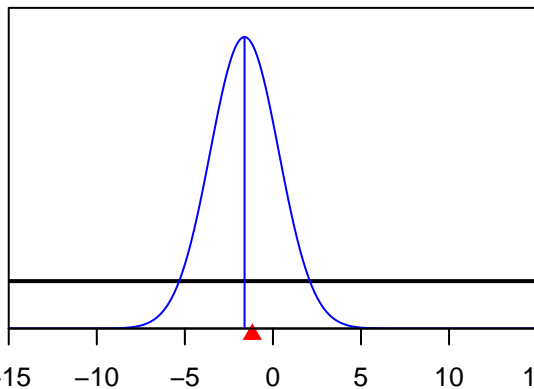
Size\_DbIN\_peak\_A3-LL-n(3)



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

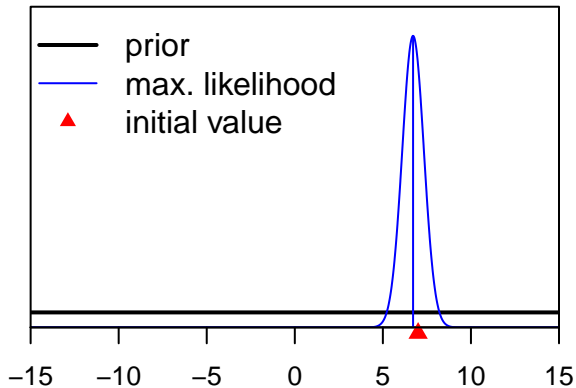


Size\_DbIN\_top\_logit\_A3-LL-n(3)

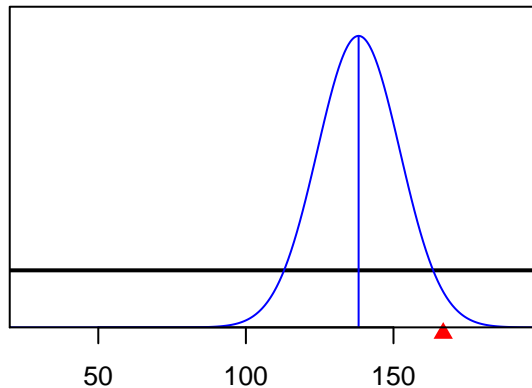


Parameter value

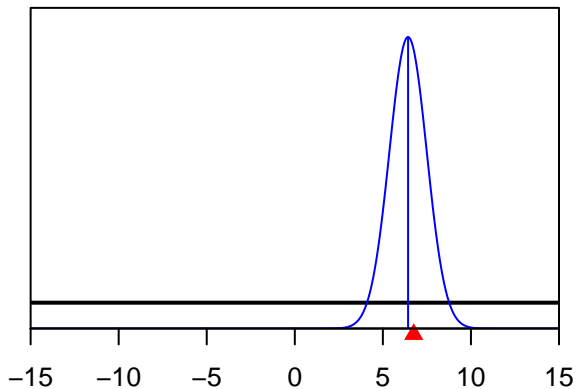
Size\_DbIN\_ascend\_se\_A3-LL-n(3)



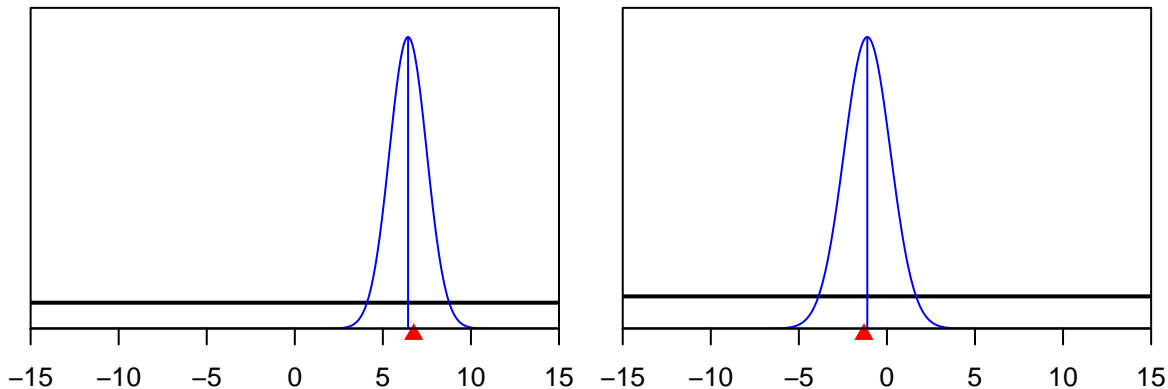
Size\_DbIN\_peak\_A4-LL-n(4)



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

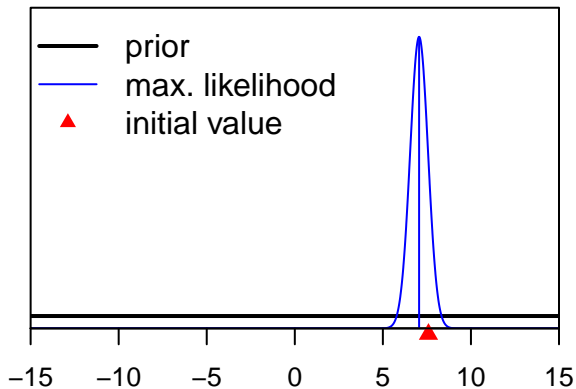


Size\_DbIN\_top\_logit\_A4-LL-n(4)

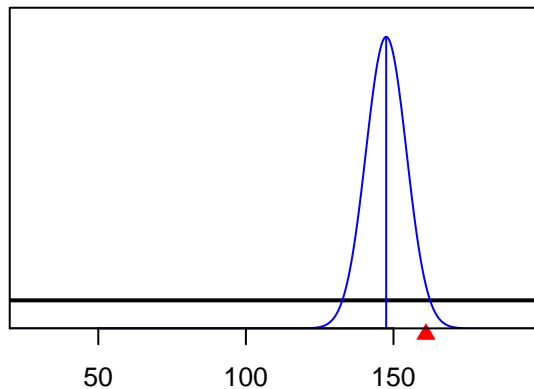


Parameter value

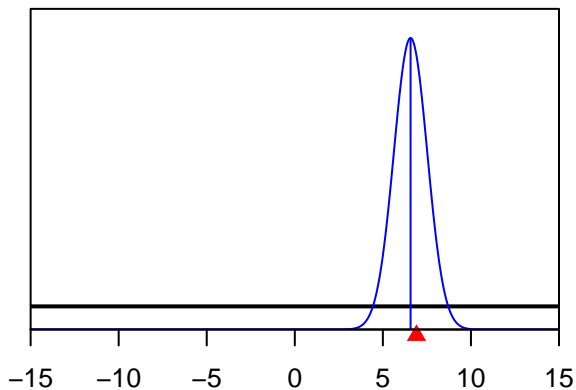
Size\_DbIN\_ascend\_se\_A4-LL-n(4)



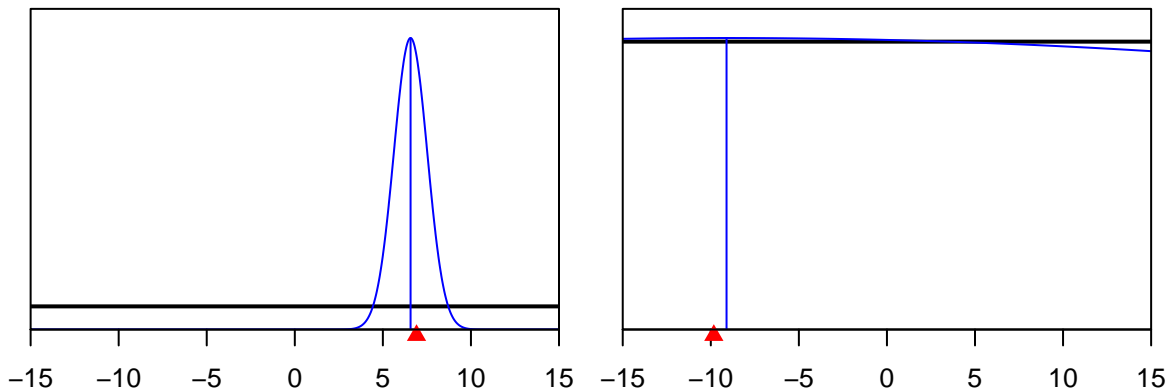
Size\_DbIN\_peak\_A5-LL-n(5)



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

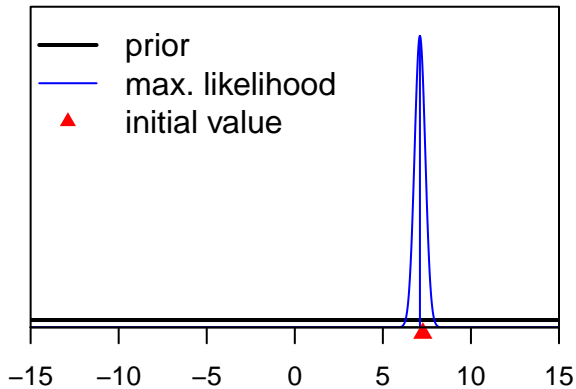


Size\_DbIN\_top\_logit\_A5-LL-n(5)

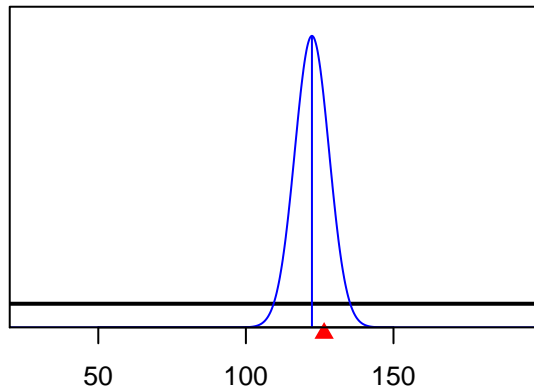


Parameter value

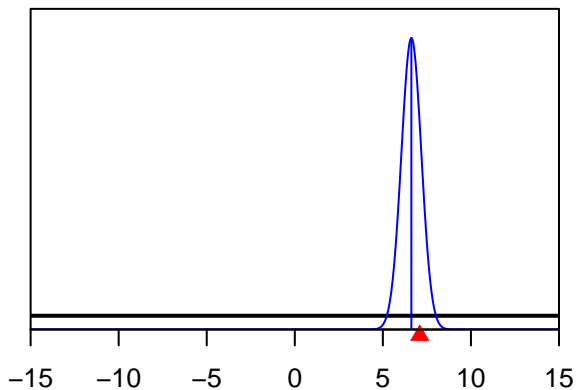
Size\_DbIN\_ascend\_se\_A5-LL-n(5)



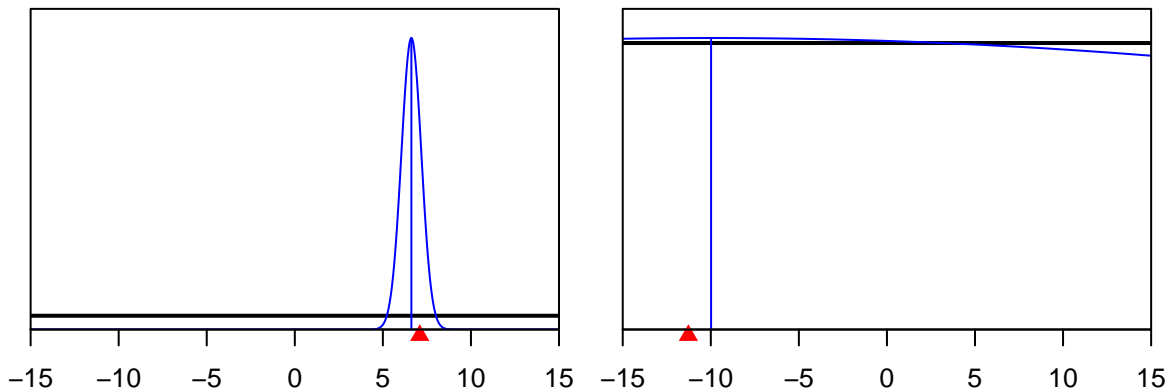
Size\_DbIN\_peak\_A6-LL-n(6)



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

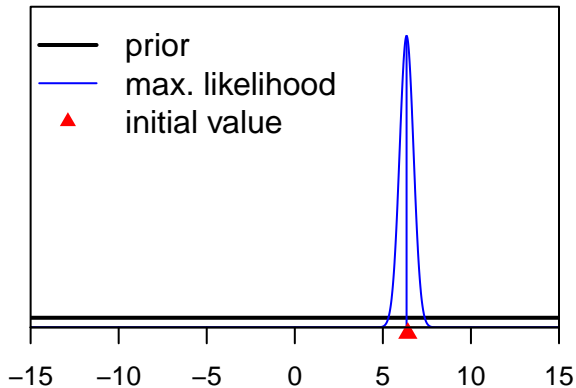


Size\_DbIN\_top\_logit\_A6-LL-n(6)

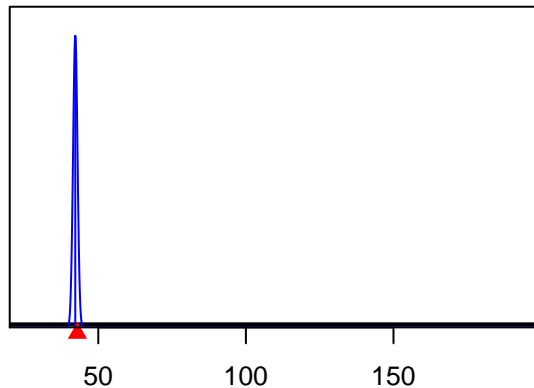


Parameter value

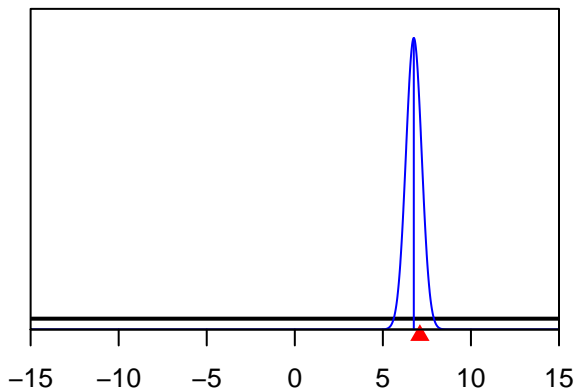
Size\_DbIN\_ascend\_se\_A6-LL-n(6)



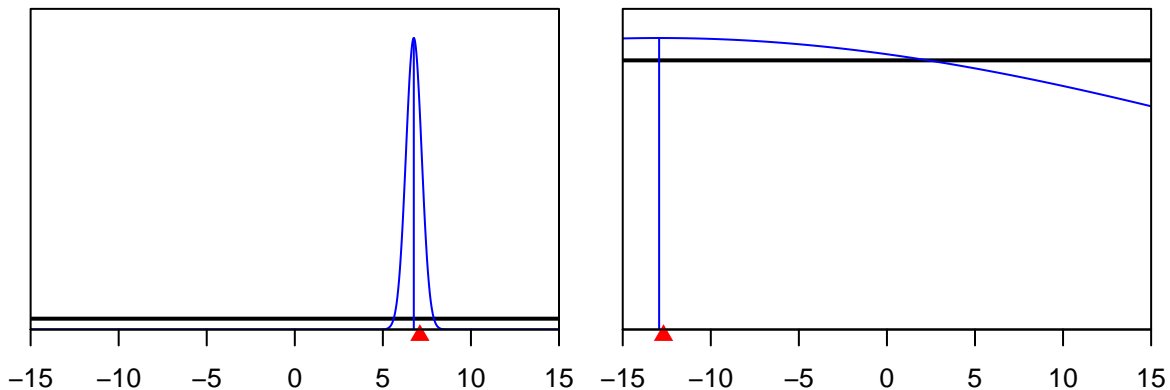
Size\_DbIN\_peak\_A2-OBJ(13)



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

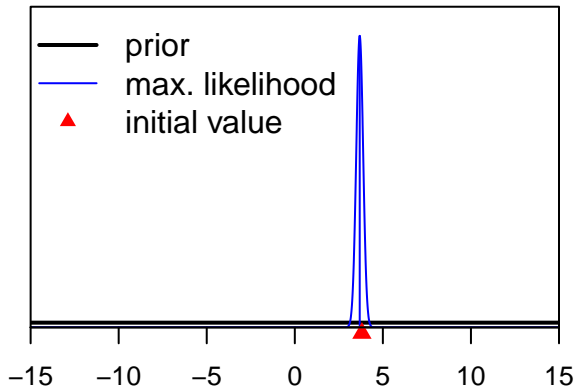


Size\_DbIN\_top\_logit\_A2-OBJ(13)

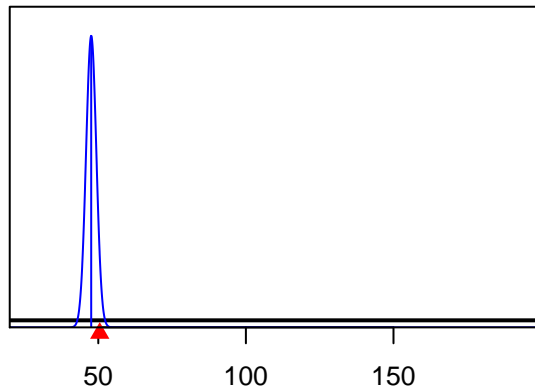


Parameter value

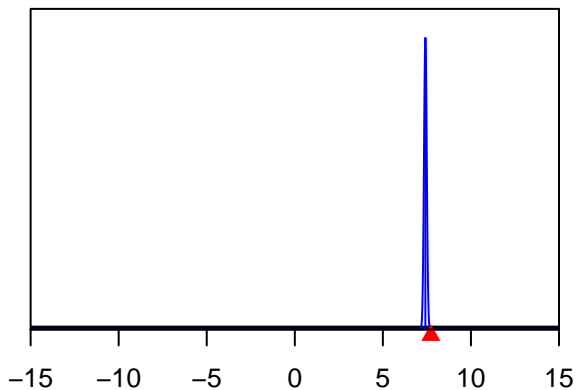
Size\_DbIN\_ascend\_se\_A2-OBJ(13)



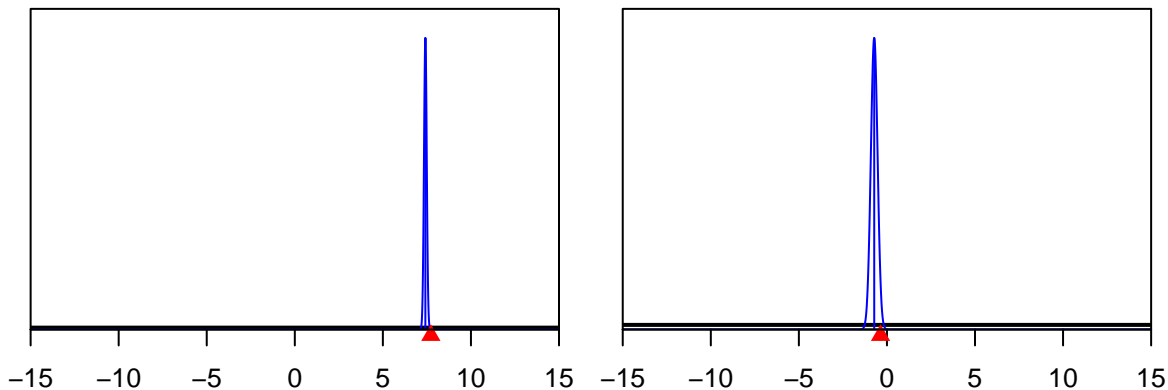
Size\_DbIN\_peak\_A3-OBJ(14)



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



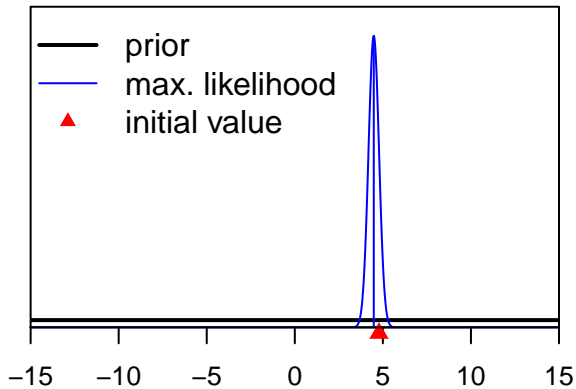
Size\_DbIN\_top\_logit\_A3-OBJ(14)



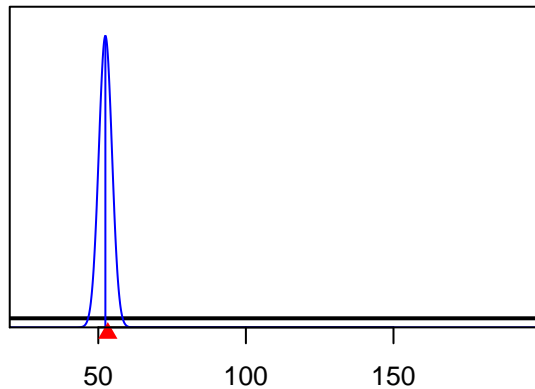
Parameter value



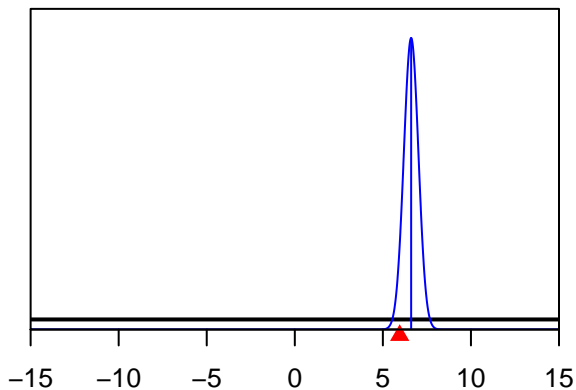
Size\_DbIN\_ascend\_se\_A3-OBJ(14)



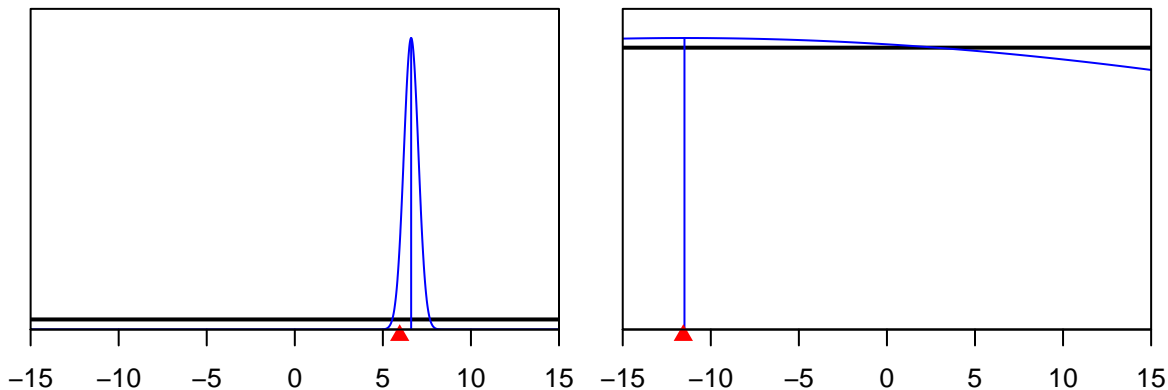
Size\_DbIN\_peak\_A4-OBJ(15)



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

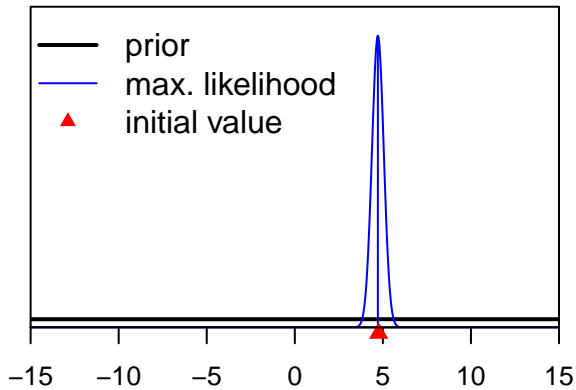


Size\_DbIN\_top\_logit\_A4-OBJ(15)

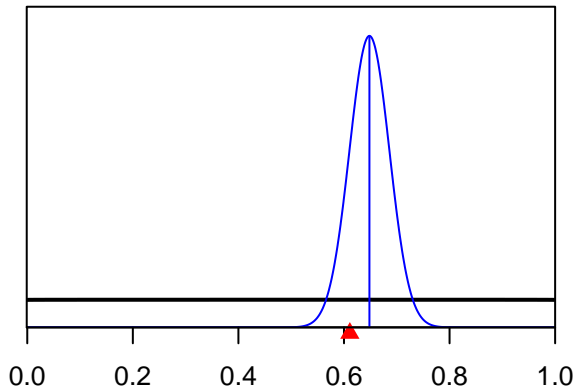


Parameter value

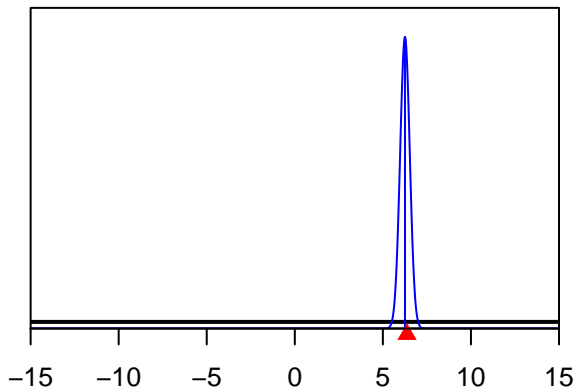
Size\_DbIN\_ascend\_se\_A4-OBJ(15)



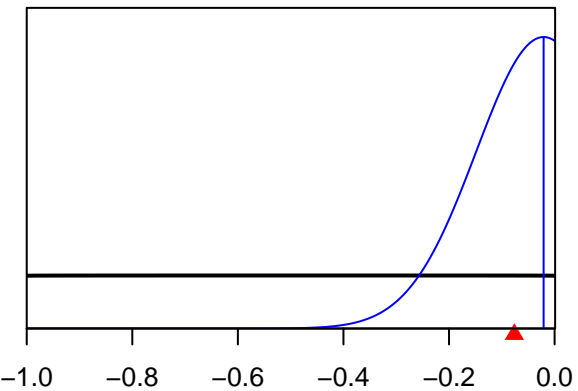
SizeSpline\_GradLo\_A5-OBJ(16)



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

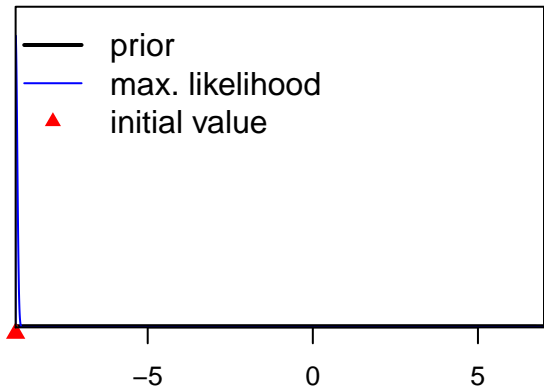


SizeSpline\_GradHi\_A5-OBJ(16)

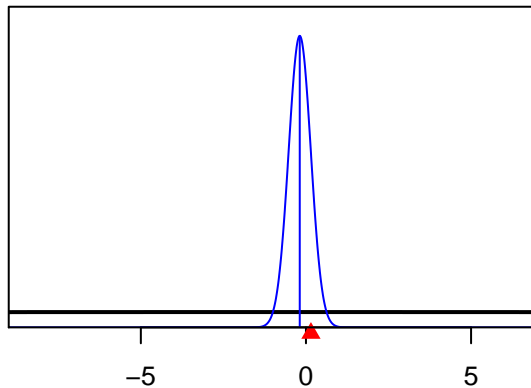


Parameter value

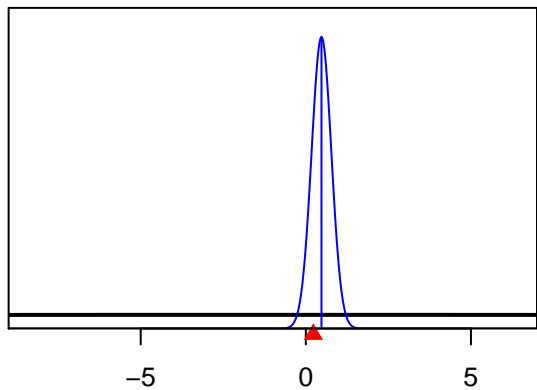
SizeSpline\_Val\_1\_A5-OBJ(16)



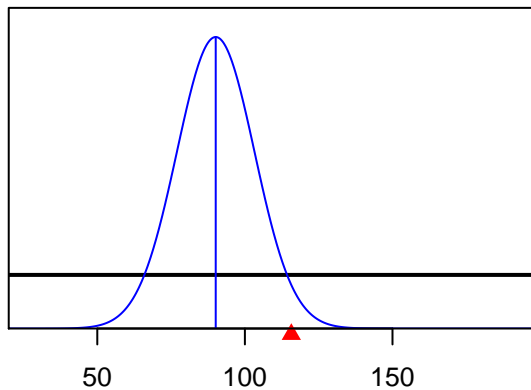
SizeSpline\_Val\_4\_A5-OBJ(16)



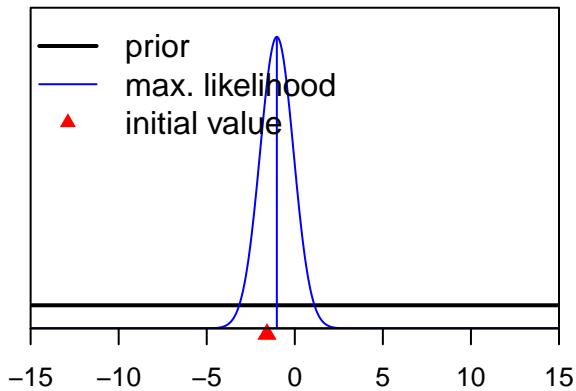
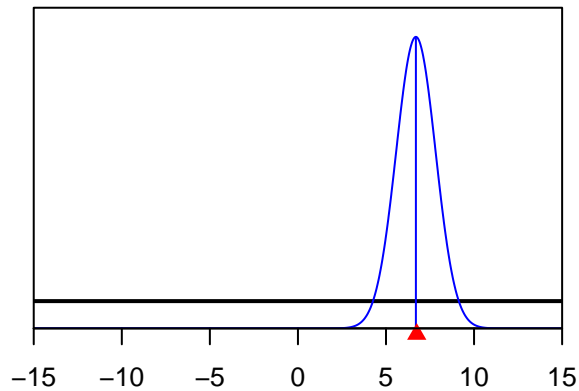
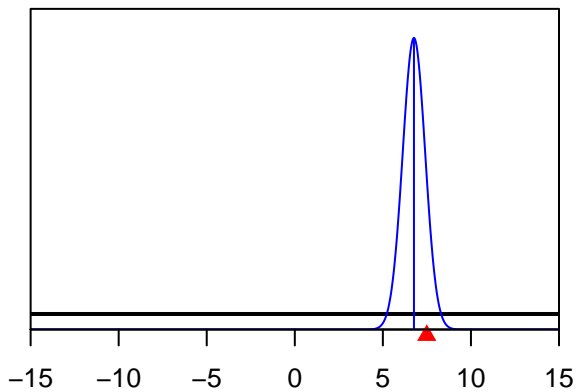
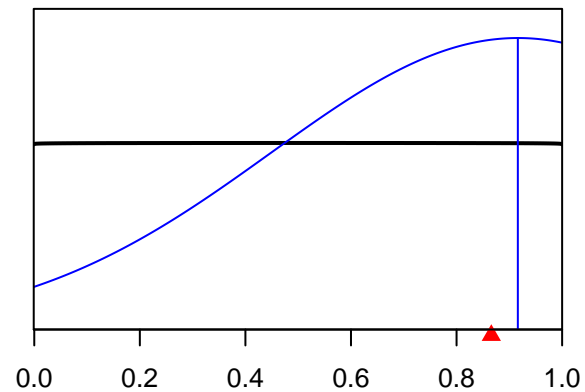
SizeSpline\_Val\_2\_A5-OBJ(16)



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

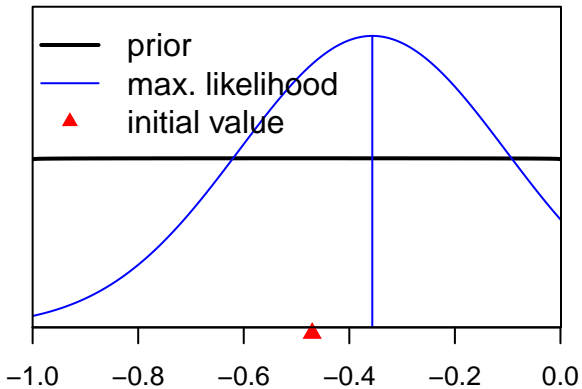


Parameter value

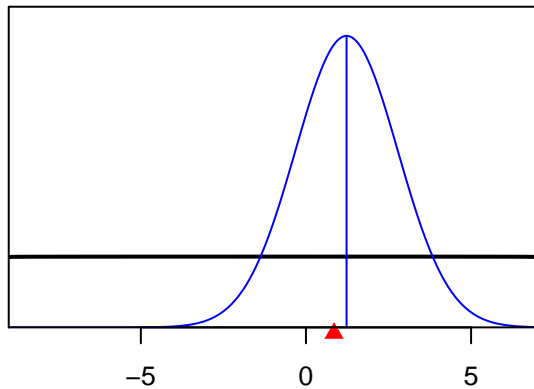
**Size\_DbIN\_top\_logit\_A6-OBJ(17)****Size\_DbIN\_descend\_se\_A6-OBJ(17)****Size\_DbIN\_ascend\_se\_A6-OBJ(17)****SizeSpline\_GradLo\_A2-NOADEL(19)**

Parameter value

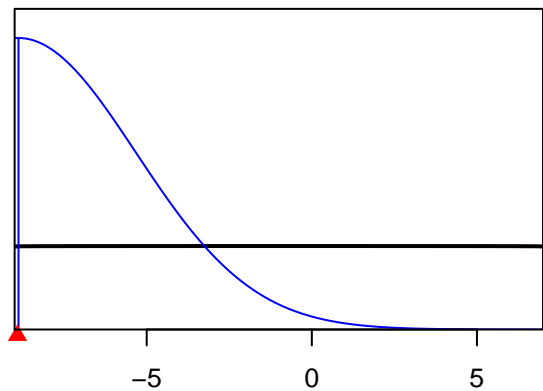
SizeSpline\_GradHi\_A2-NOADEL(19)



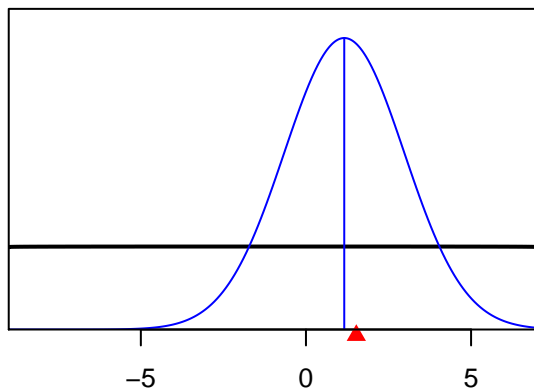
SizeSpline\_Val\_2\_A2-NOADEL(19)



SizeSpline\_Val\_1\_A2-NOADEL(19)

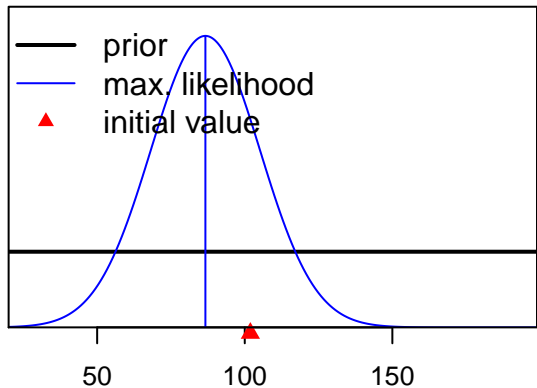


SizeSpline\_Val\_4\_A2-NOADEL(19)

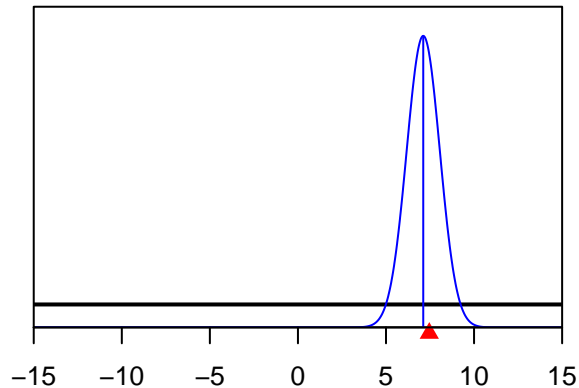


Parameter value

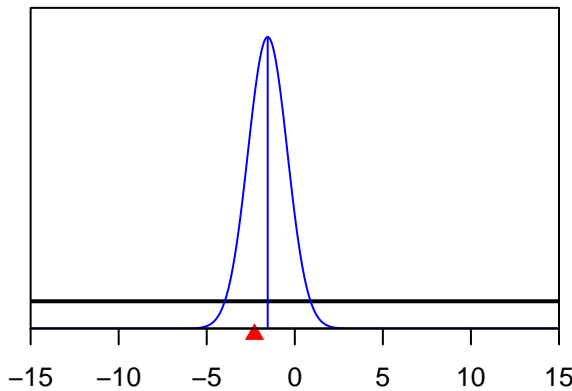
Size\_DbIN\_peak\_A3-NOADEL(20)



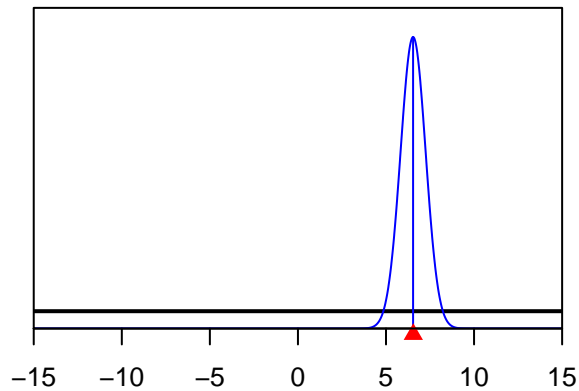
Size\_DbIN\_ascend\_se\_A3-NOADEL(20)



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



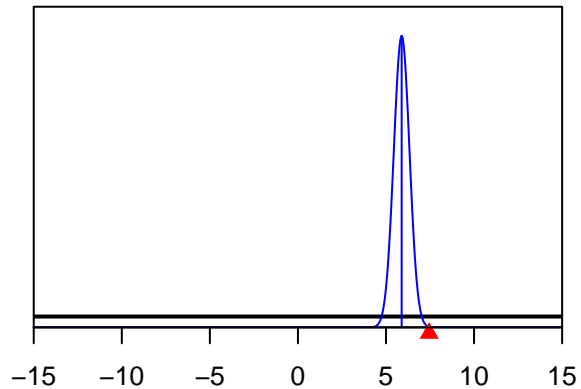
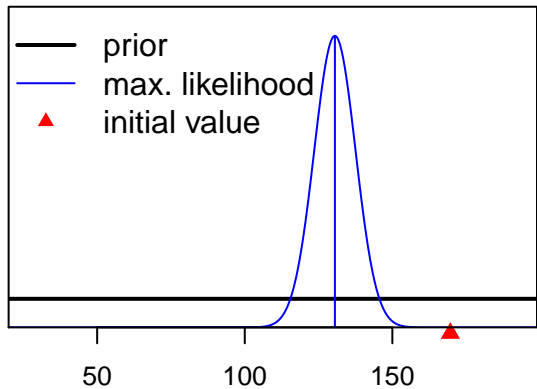
Size\_DbIN\_descend\_se\_A3-NOADEL(20)



Parameter value

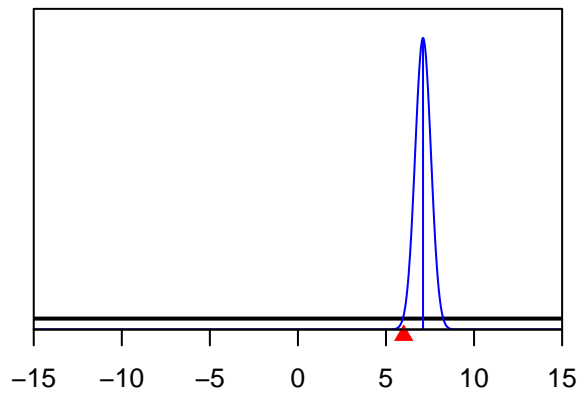
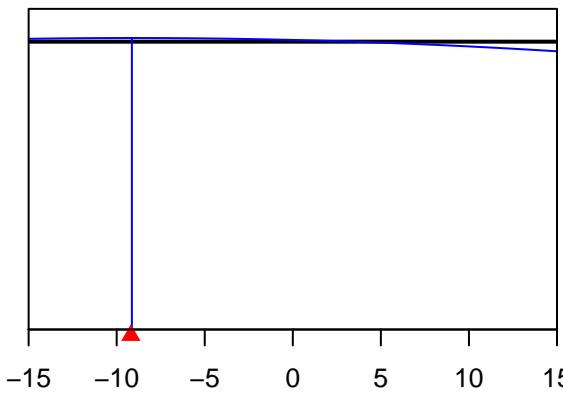
Density

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



Density

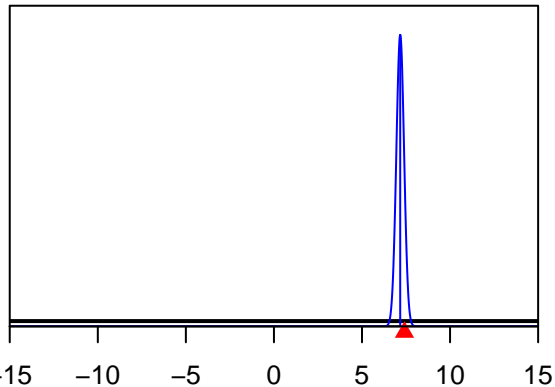
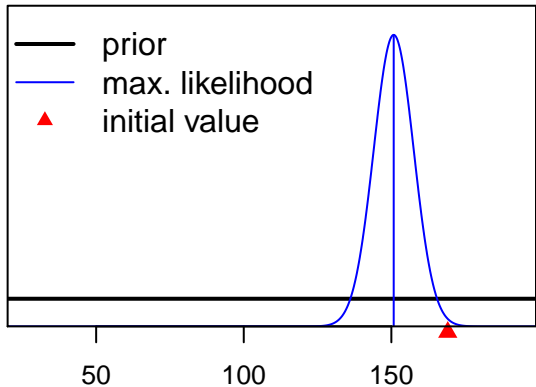
Size\_DbIN\_top\_logit\_EPO-LL-survey-early(24)    ze\_DbIN\_descend\_se\_EPO-LL-survey-early(24)



Parameter value

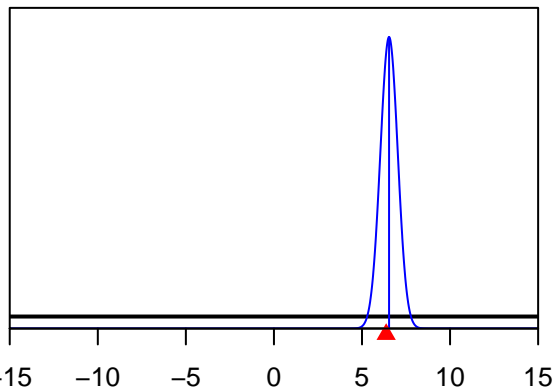
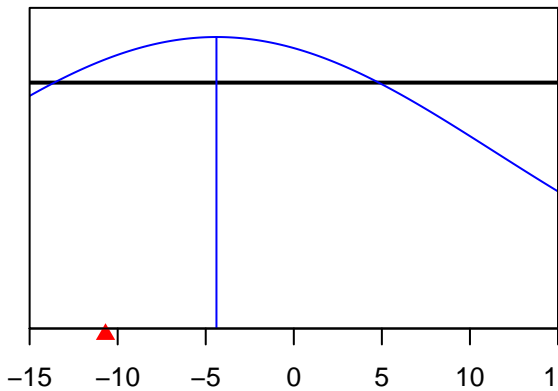
Size\_DbIN\_peak\_EPO-LL-survey-late(25)

size\_DbIN\_ascend\_se\_EPO-LL-survey-late(25)



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

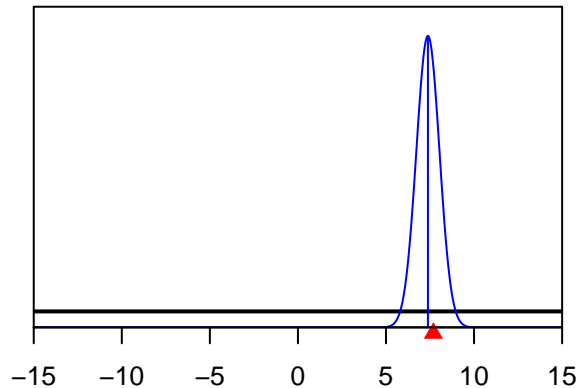
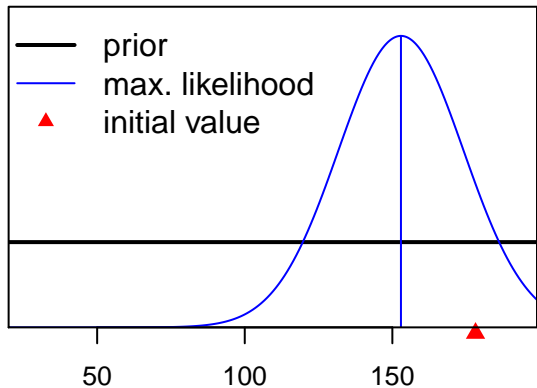
ize\_DbIN\_descend\_se\_EPO-LL-survey-late(25)



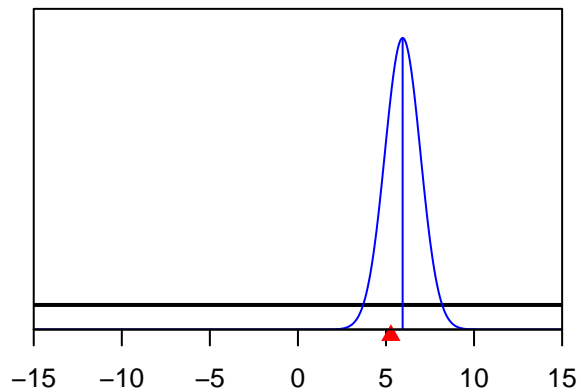
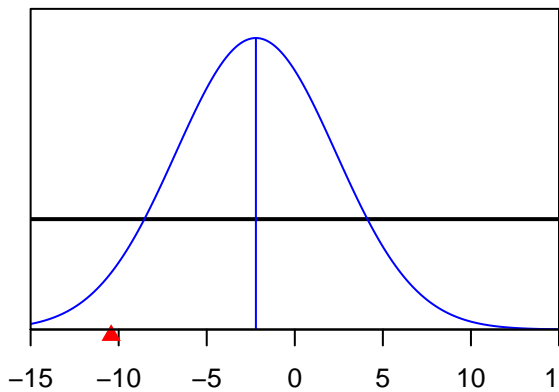
Parameter value



Size\_DbIN\_peak\_A2-LL-n(2)\_BLK2repl\_17 size\_DbIN\_ascend\_se\_A2-LL-n(2)\_BLK2repl\_1

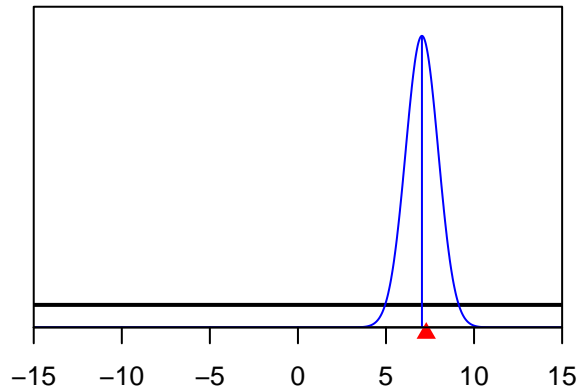
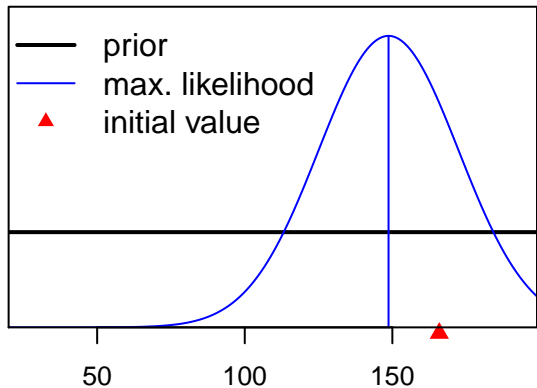


Size\_DbIN\_top\_logit\_A2-LL-n(2)\_BLK2repl\_17ze\_DbIN\_descend\_se\_A2-LL-n(2)\_BLK2repl\_1

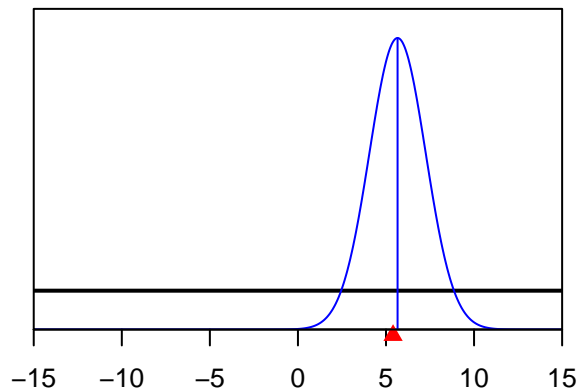
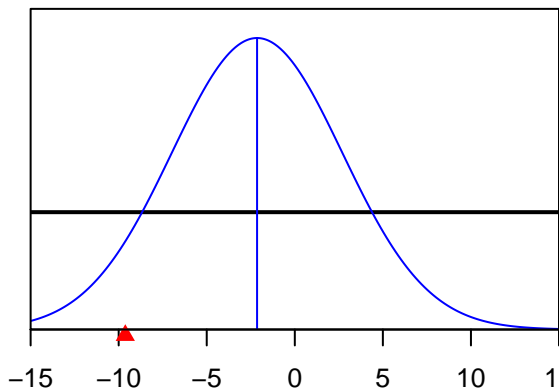


Parameter value

Size\_DbIN\_peak\_A3-LL-n(3)\_BLK2repl\_17    size\_DbIN\_ascend\_se\_A3-LL-n(3)\_BLK2repl\_1

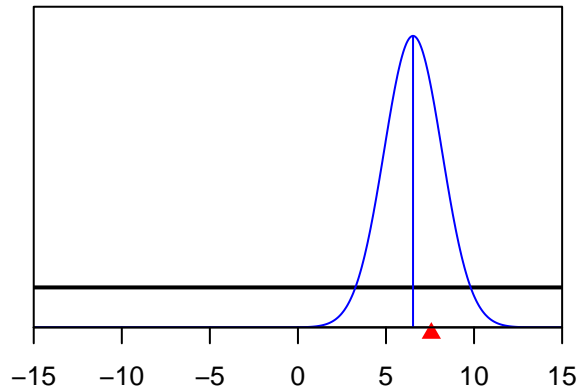
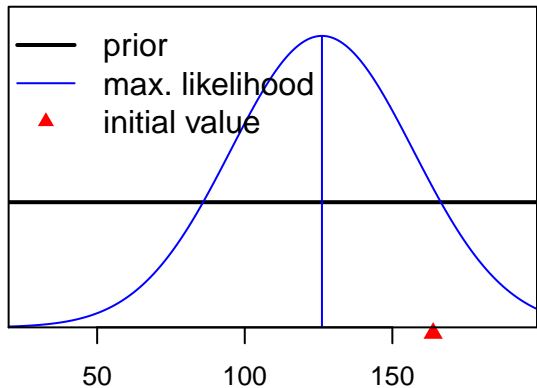


Size\_DbIN\_top\_logit\_A3-LL-n(3)\_BLK2repl\_17    ze\_DbIN\_descend\_se\_A3-LL-n(3)\_BLK2repl\_1

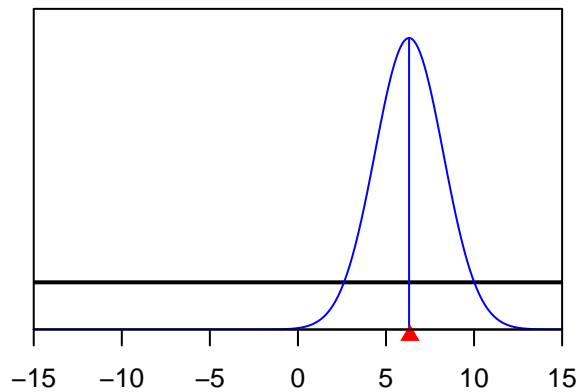
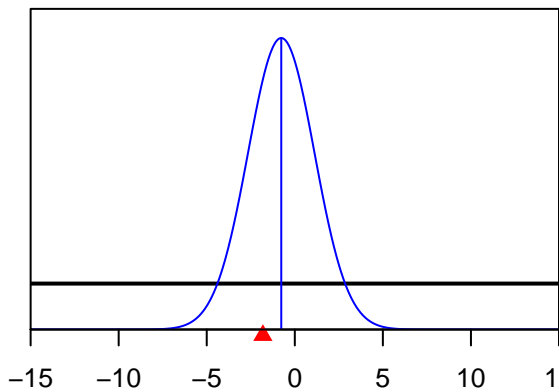


Parameter value

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

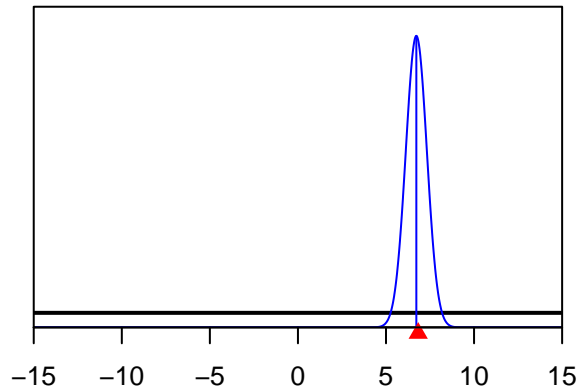
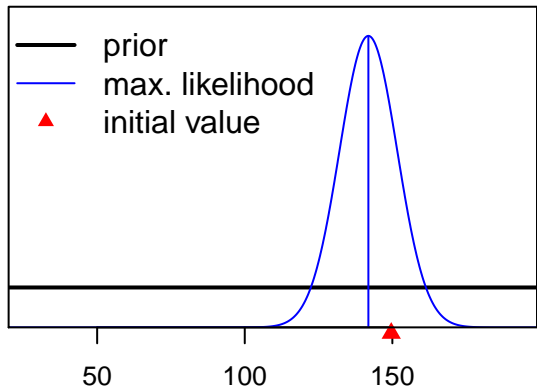


Size\_DbIN\_top\_logit\_A4-LL-n(4)\_BLK2repl\_17      size\_DbIN\_descend\_se\_A4-LL-n(4)\_BLK2repl\_17

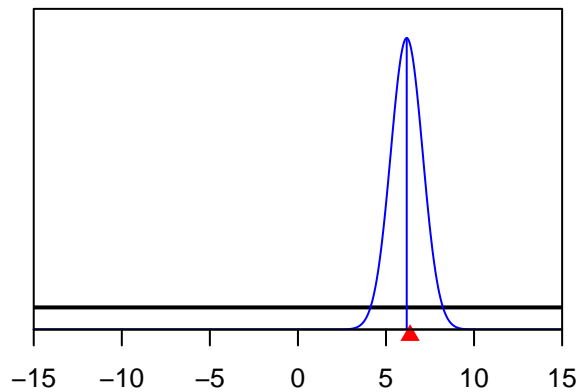
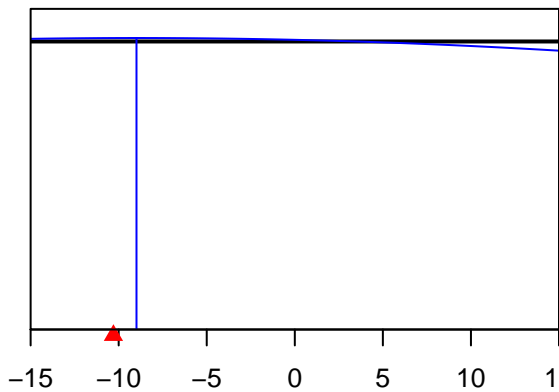


Parameter value

Size\_DbIN\_peak\_A5-LL-n(5)\_BLK2repl\_17 size\_DbIN\_ascend\_se\_A5-LL-n(5)\_BLK2repl\_1

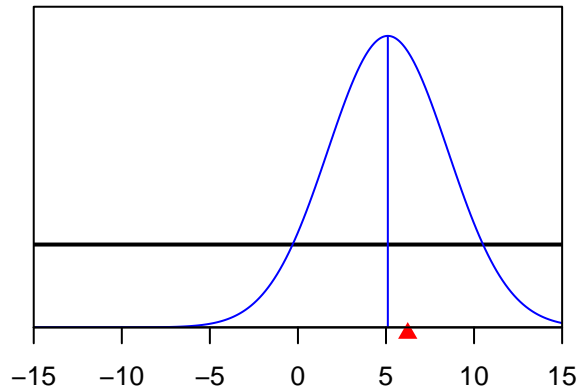
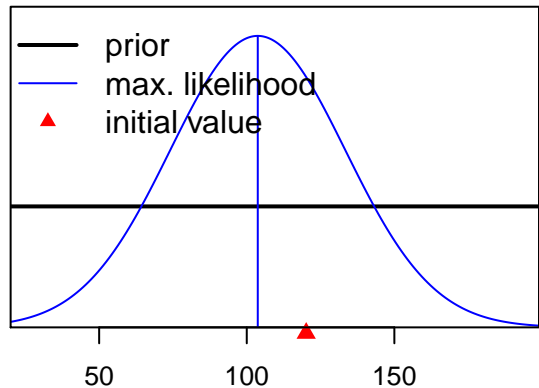


Size\_DbIN\_top\_logit\_A5-LL-n(5)\_BLK2repl\_17ze\_DbIN\_descend\_se\_A5-LL-n(5)\_BLK2repl\_1

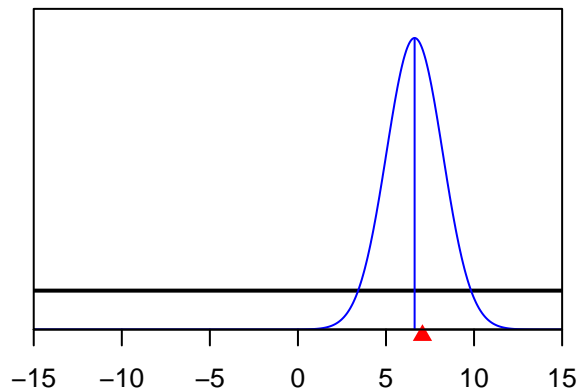
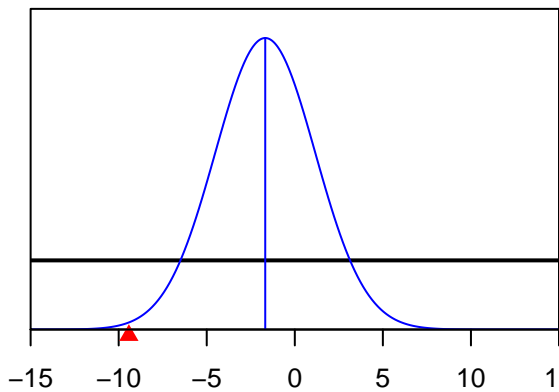


Parameter value

Size\_DbIN\_peak\_A6-LL-n(6)\_BLK2repl\_17    size\_DbIN\_ascend\_se\_A6-LL-n(6)\_BLK2repl\_1



Size\_DbIN\_top\_logit\_A6-LL-n(6)\_BLK2repl\_17    ze\_DbIN\_descend\_se\_A6-LL-n(6)\_BLK2repl\_1



Parameter value