

Plots created using the 'r4ss' package in R

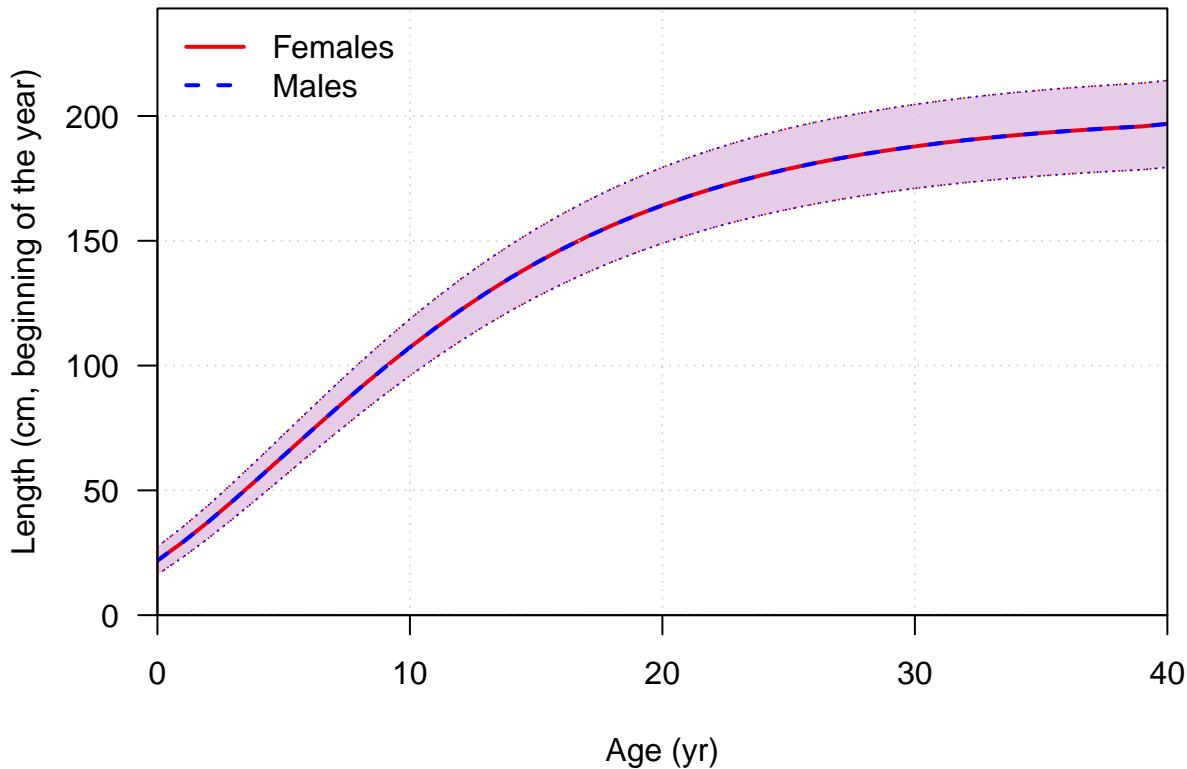
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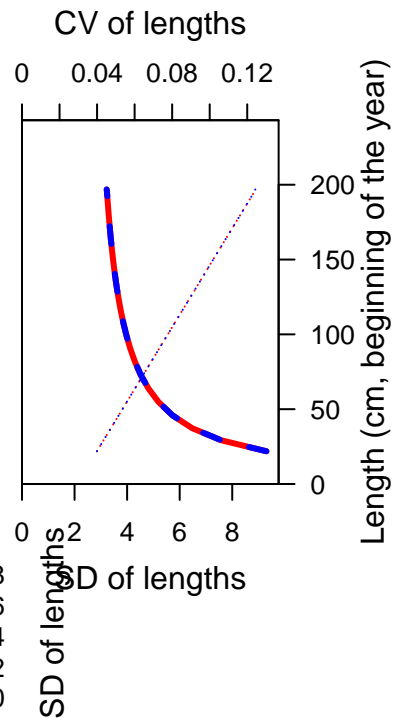
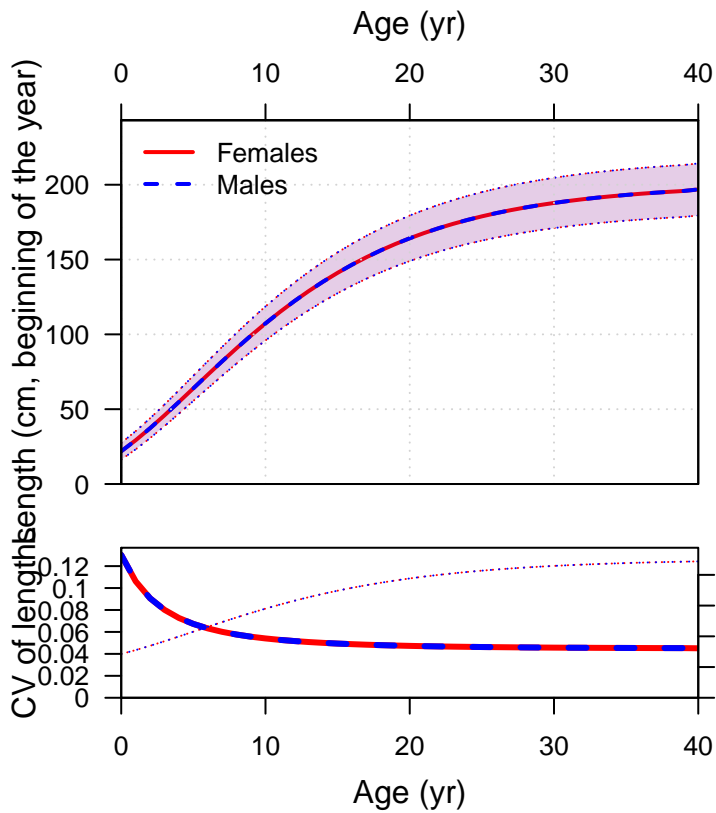
StartTime: Tue Apr 07 18:06:02 2020

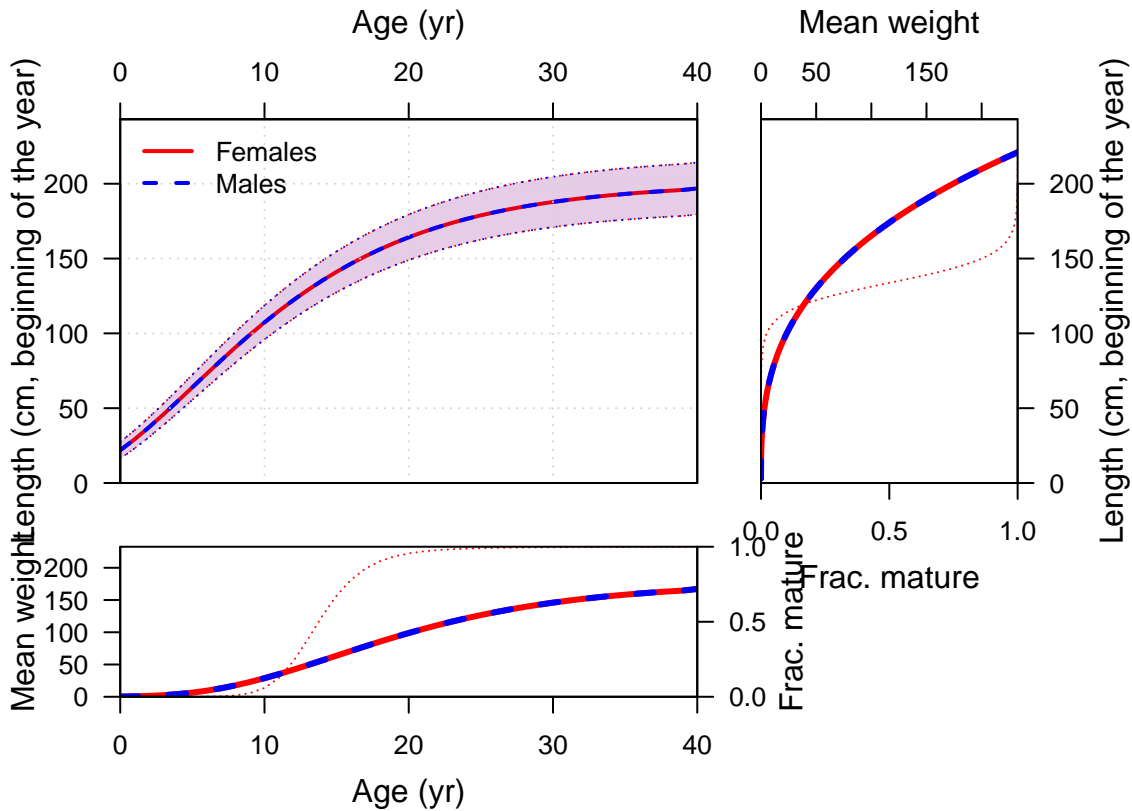
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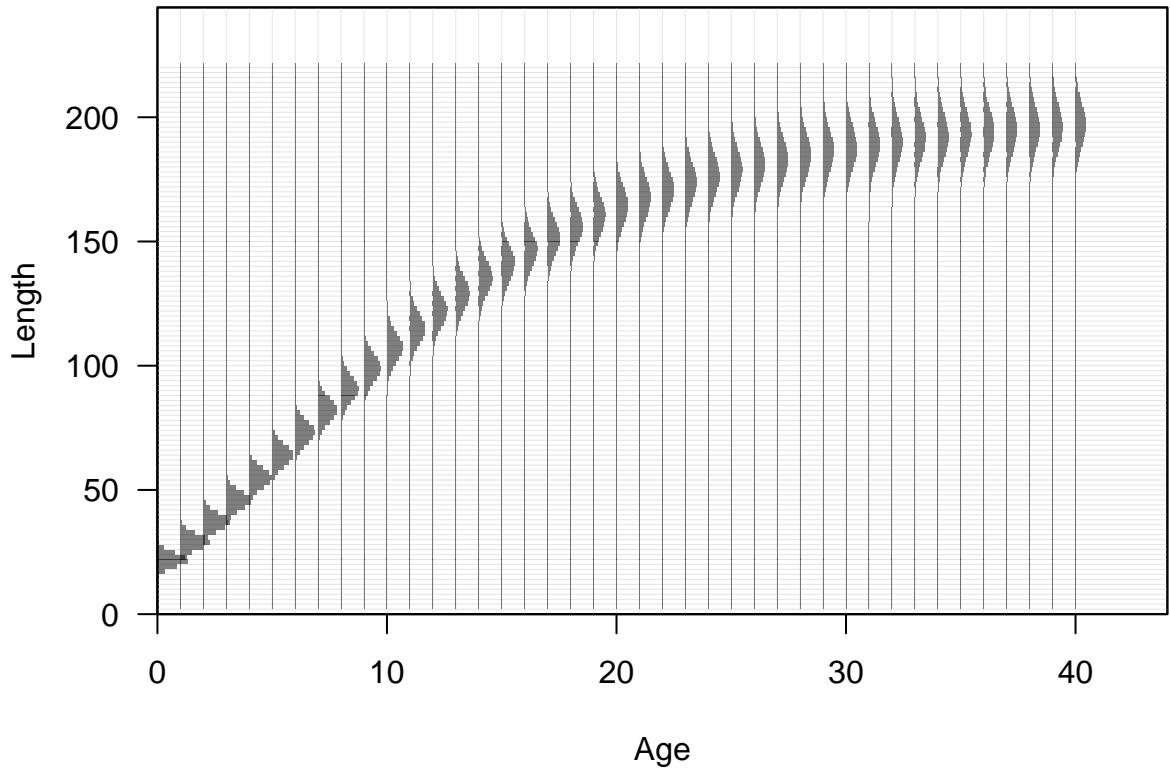
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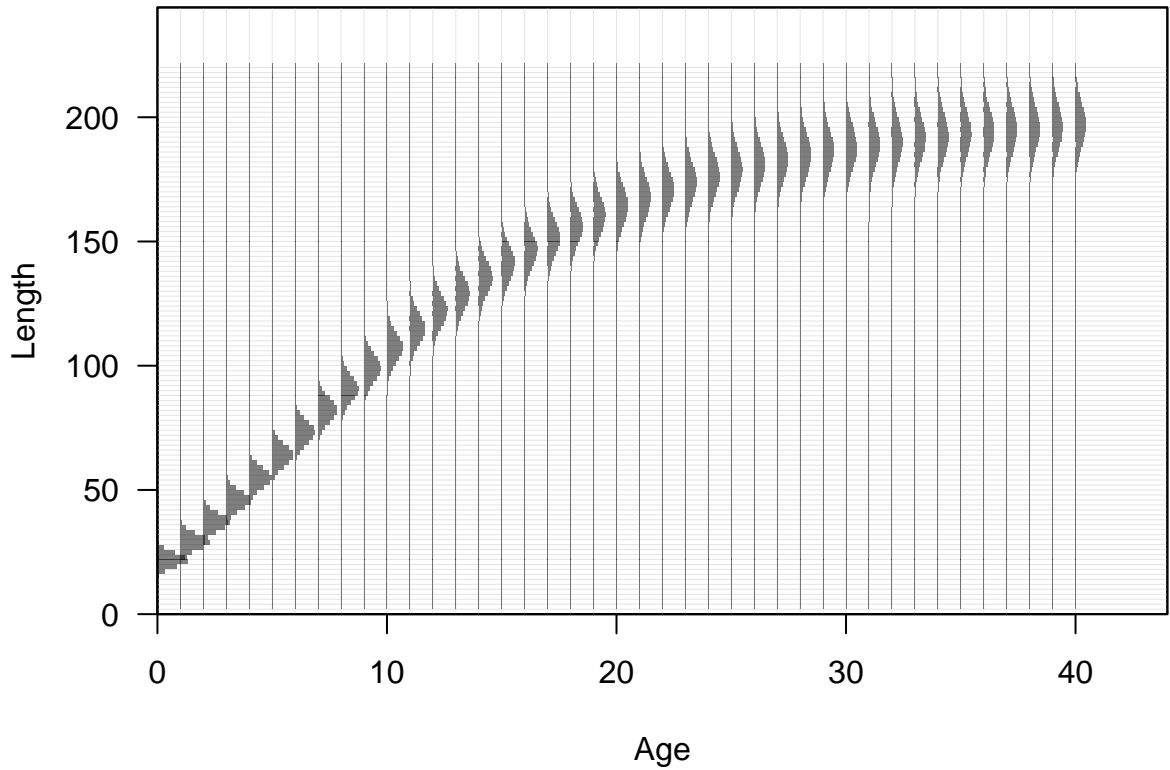
Ending year expected growth (with 95% intervals)

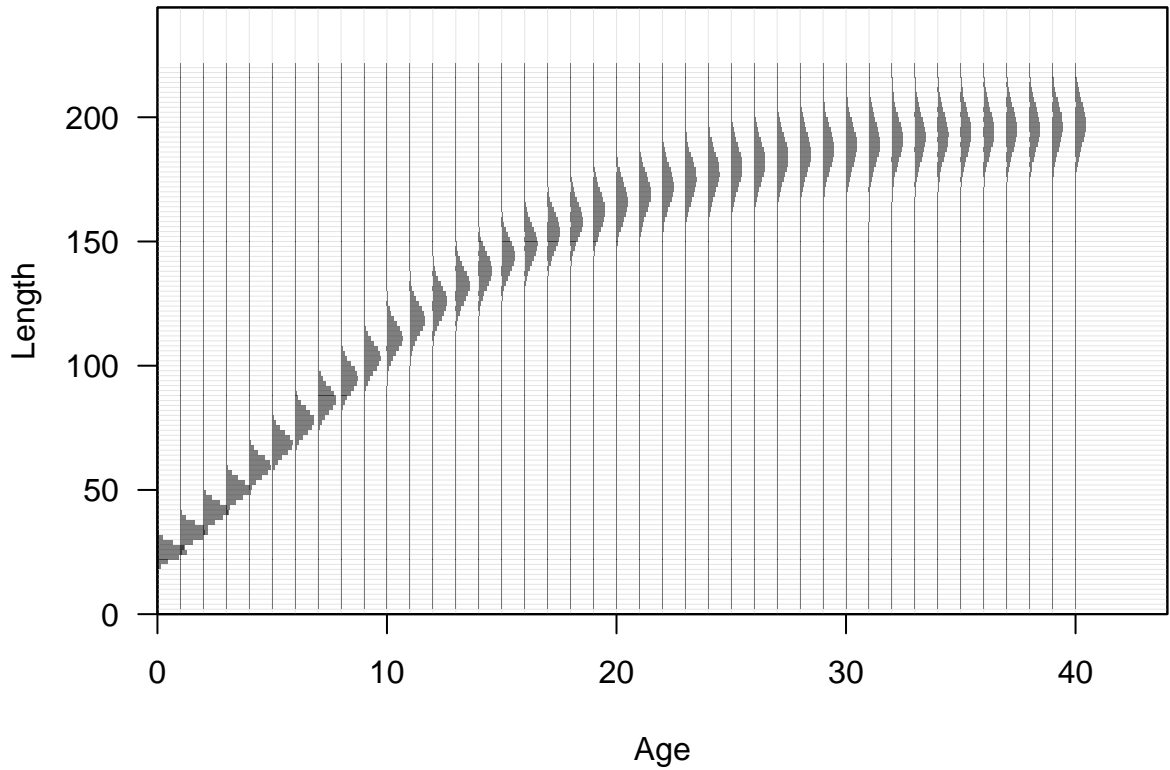


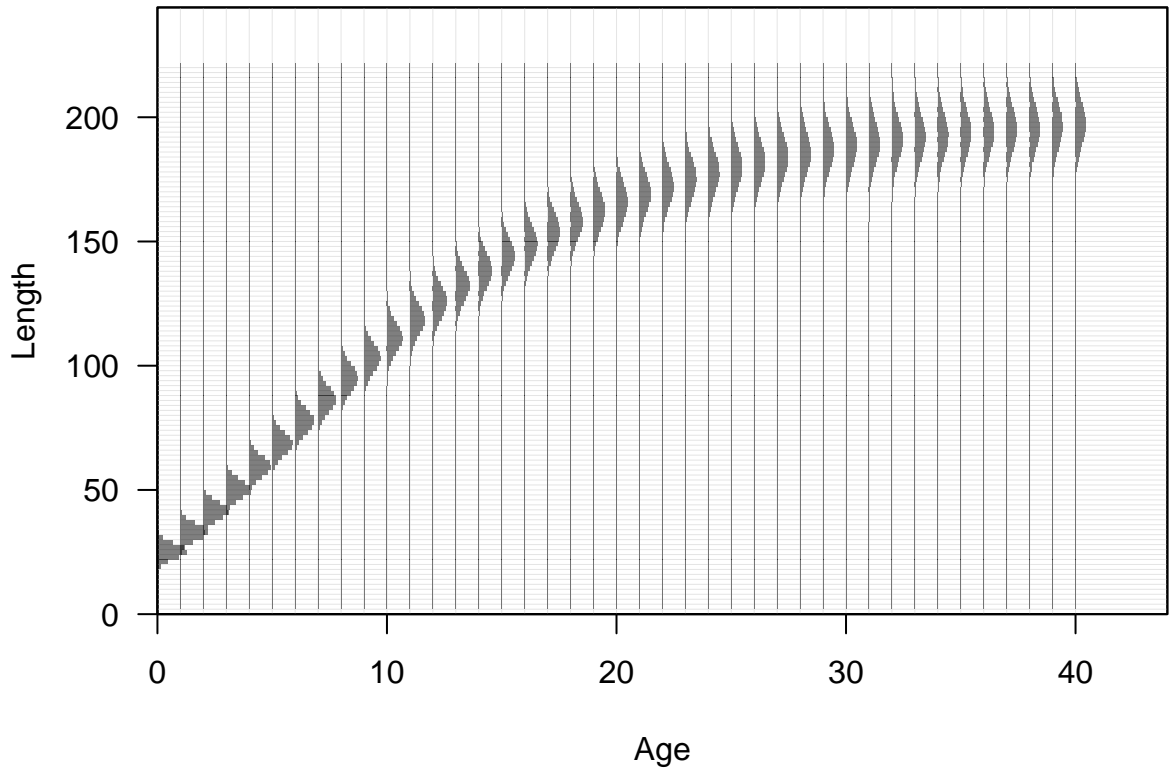


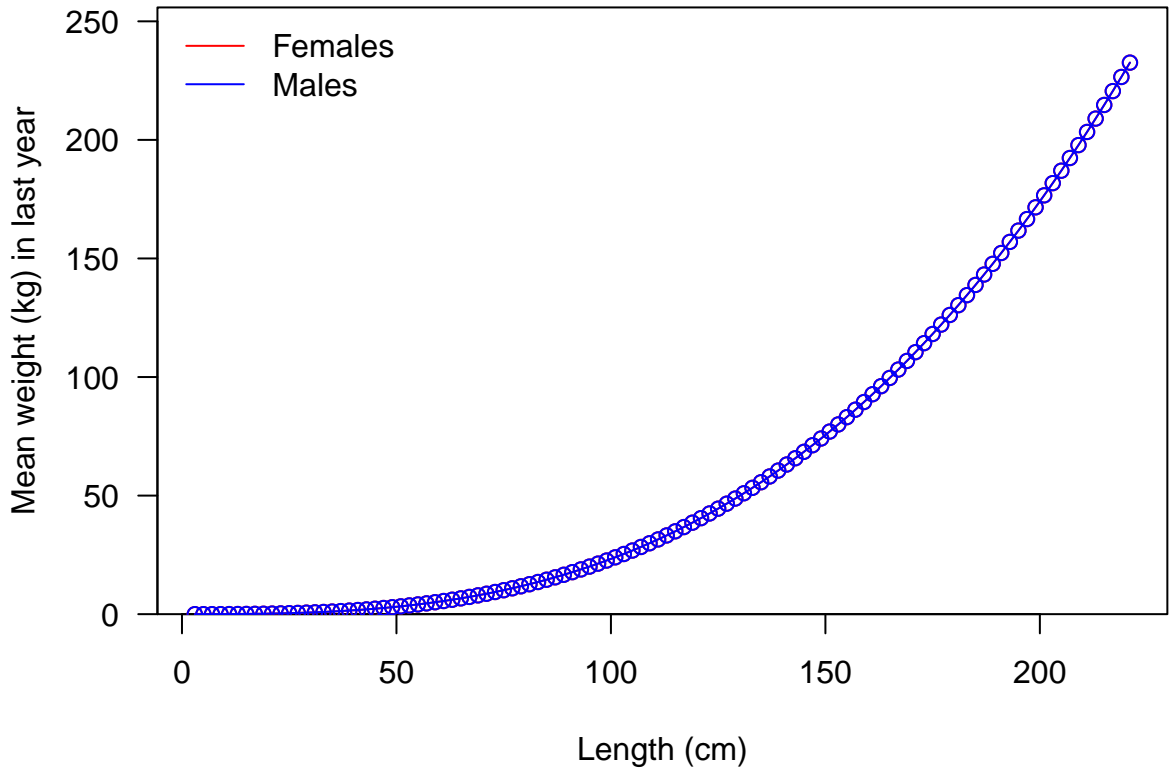


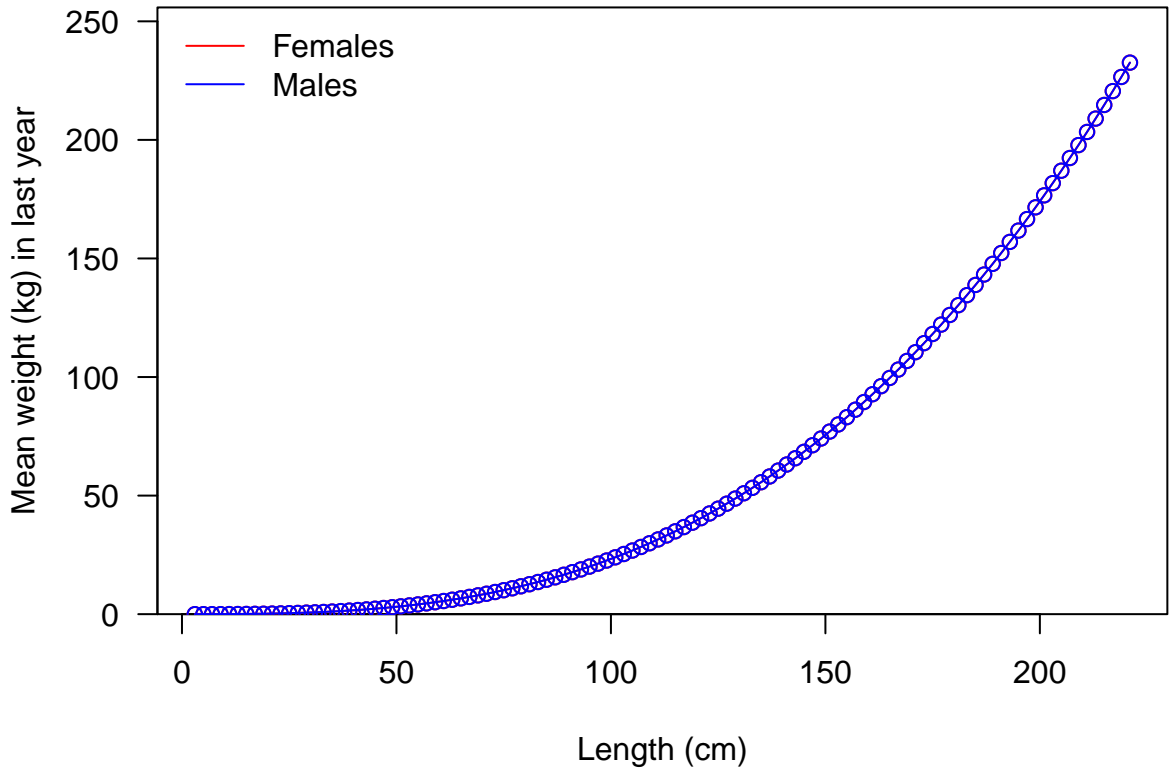


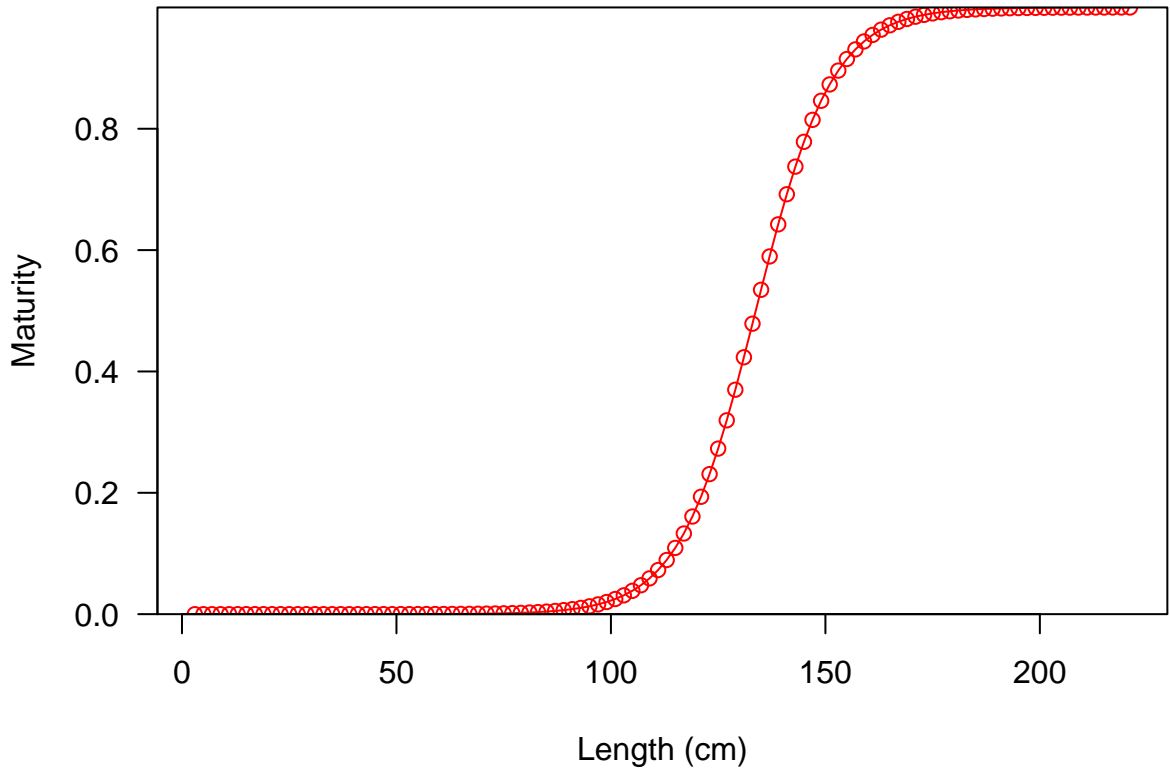


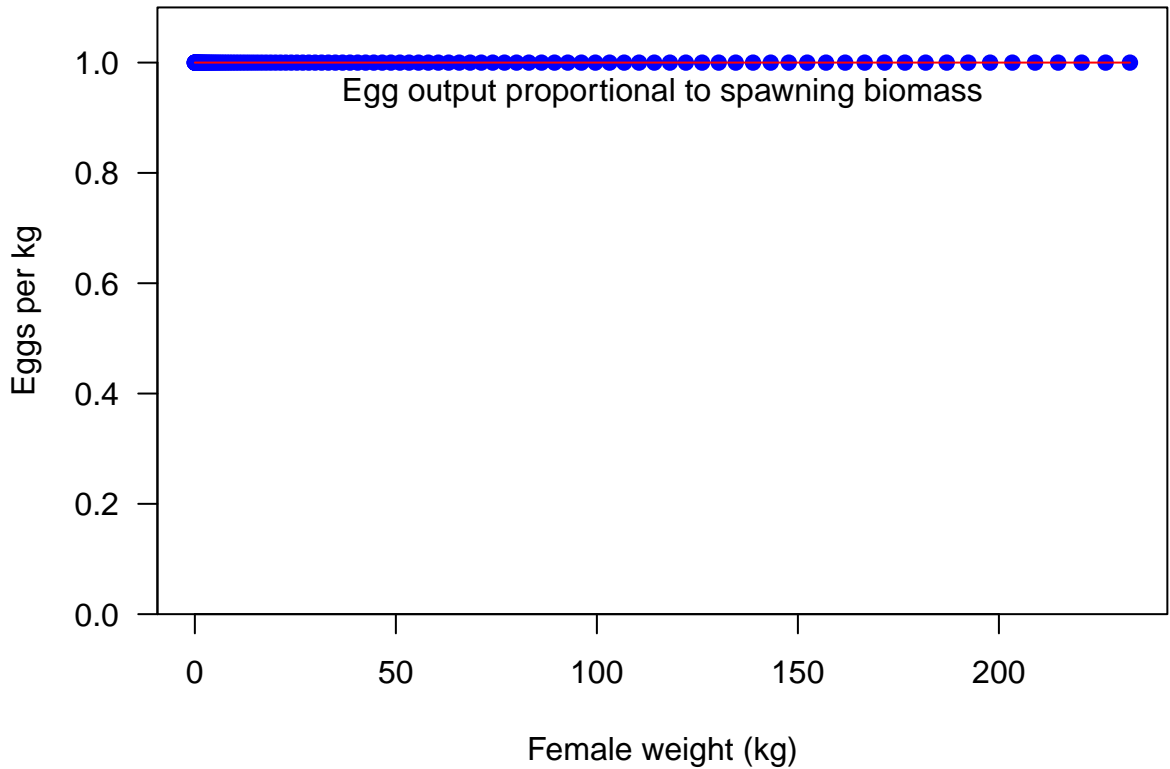


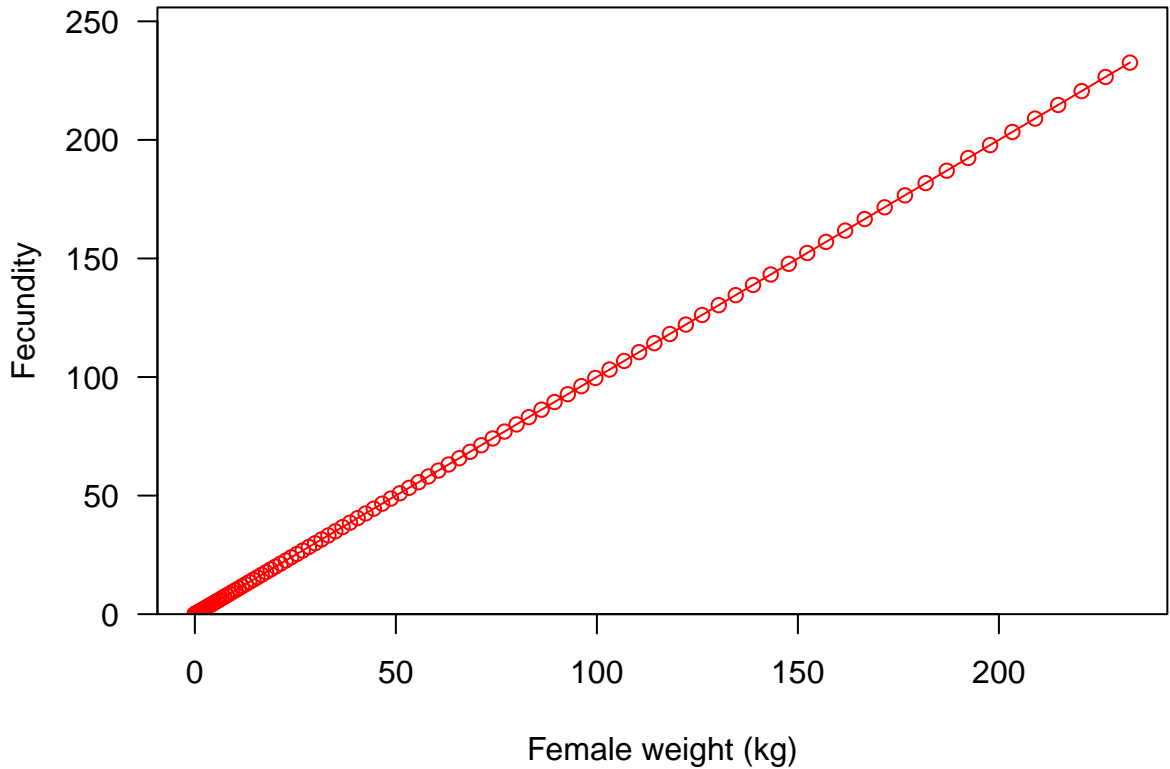


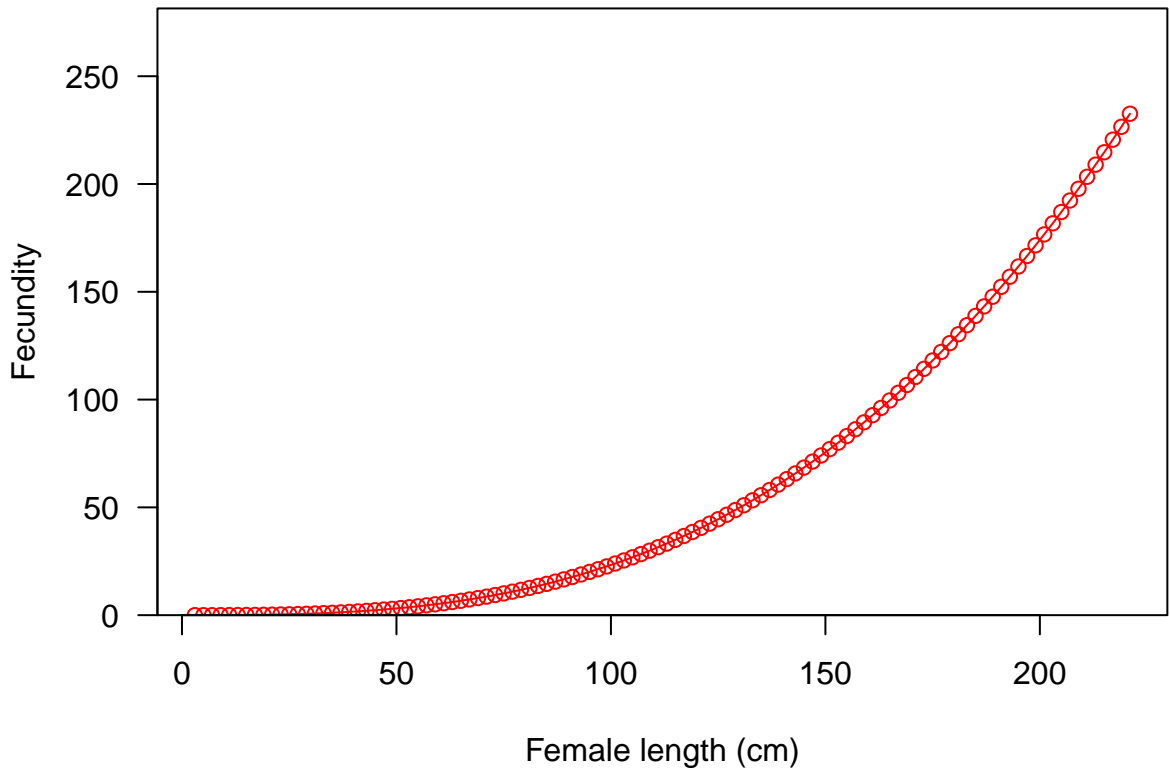


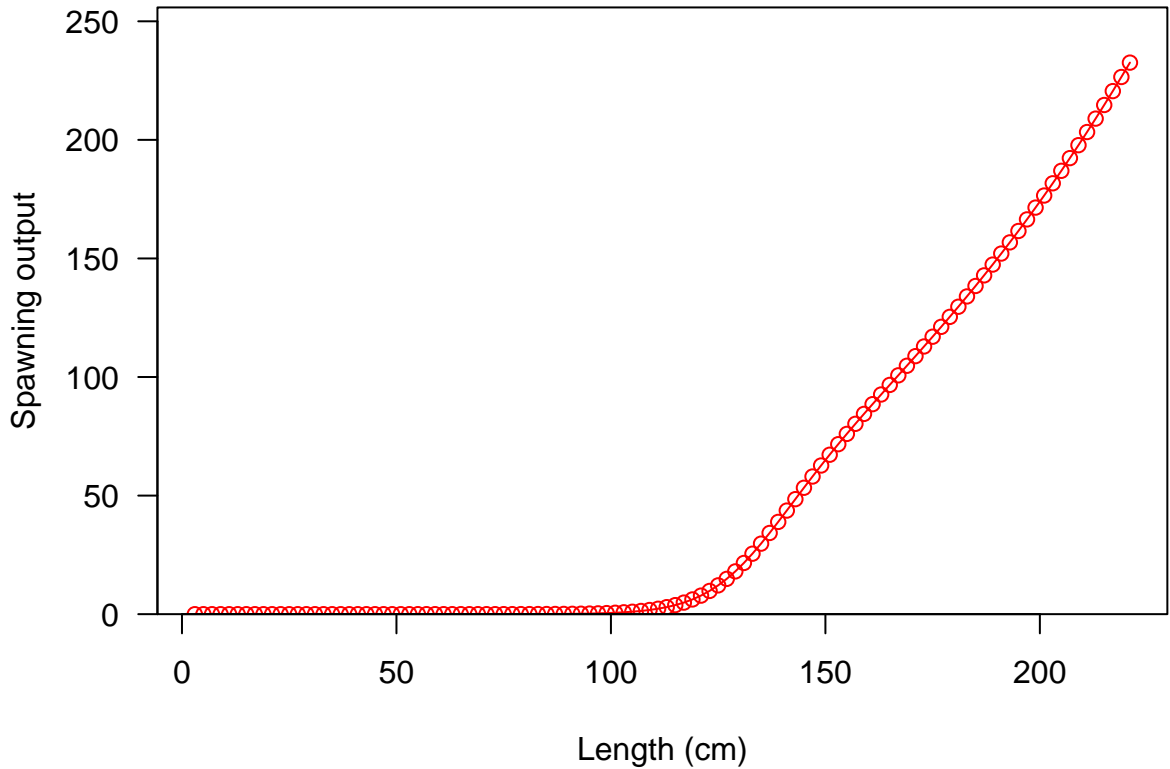


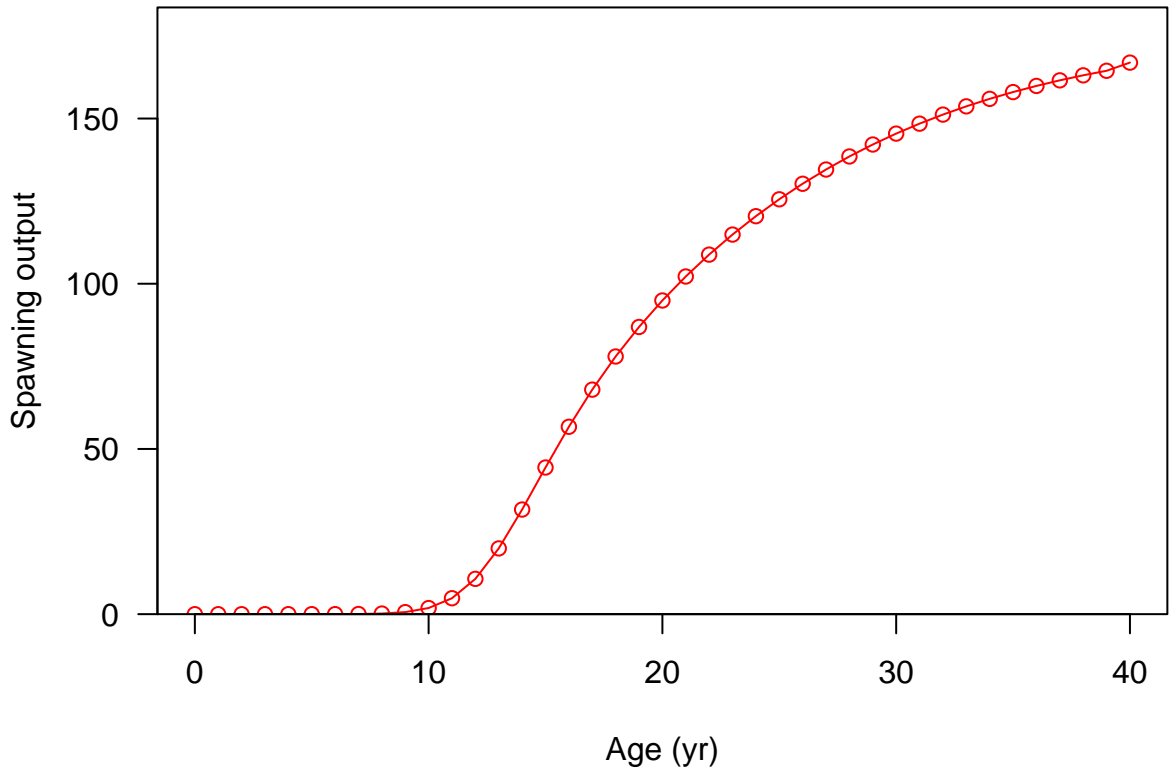


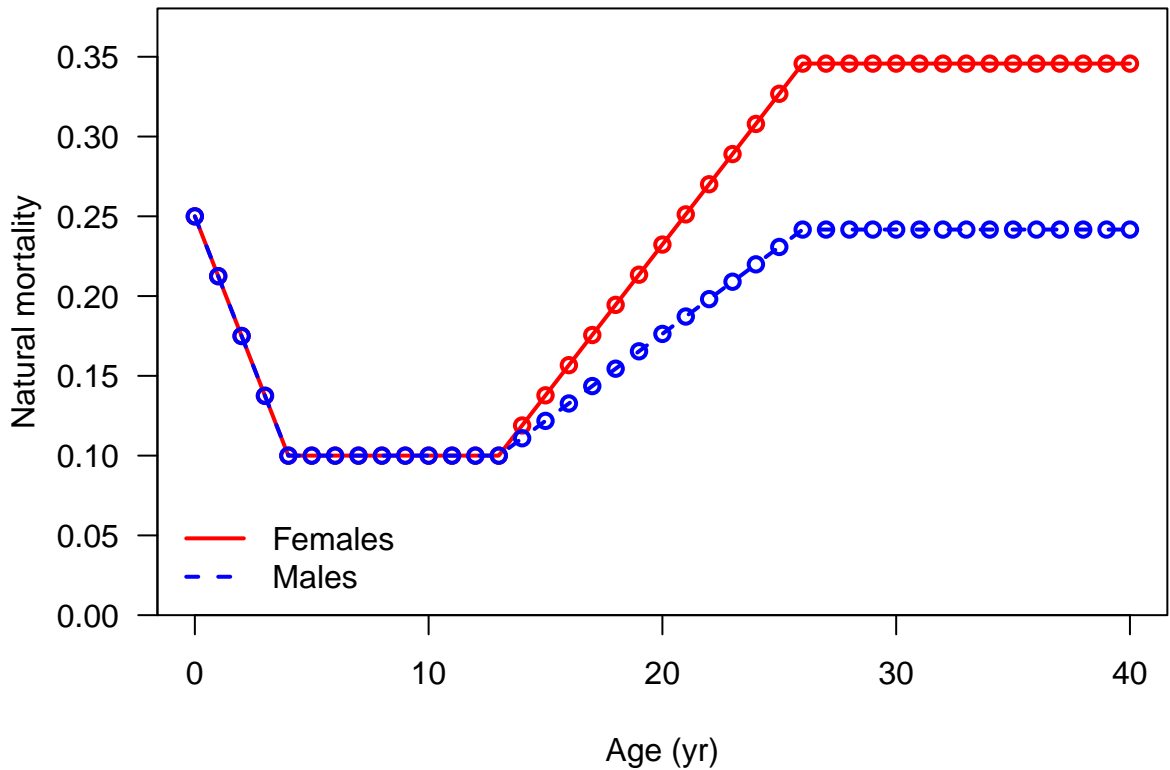




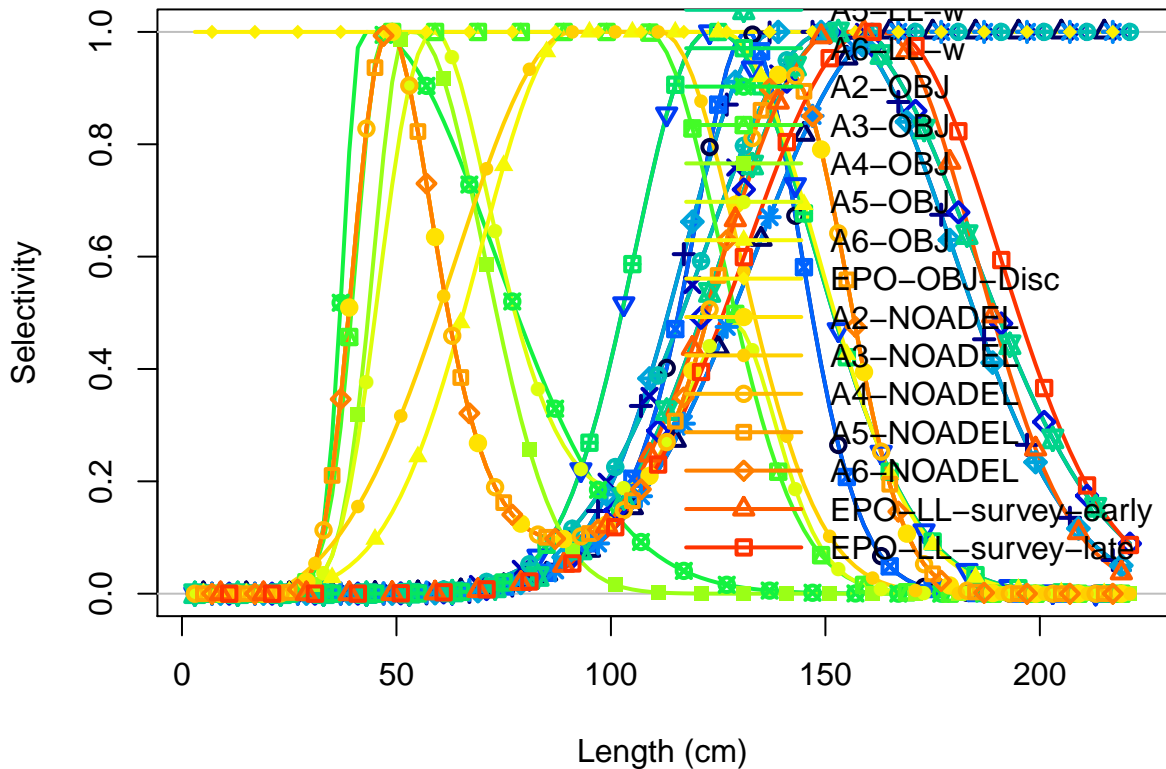




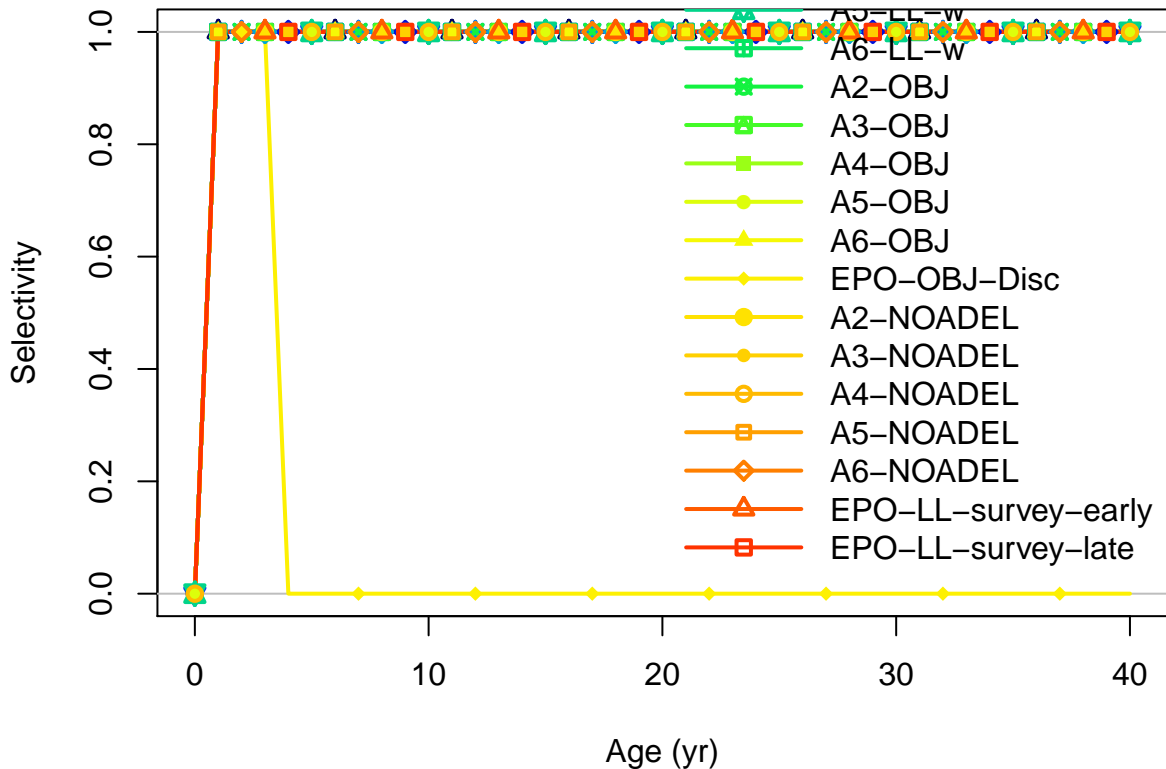




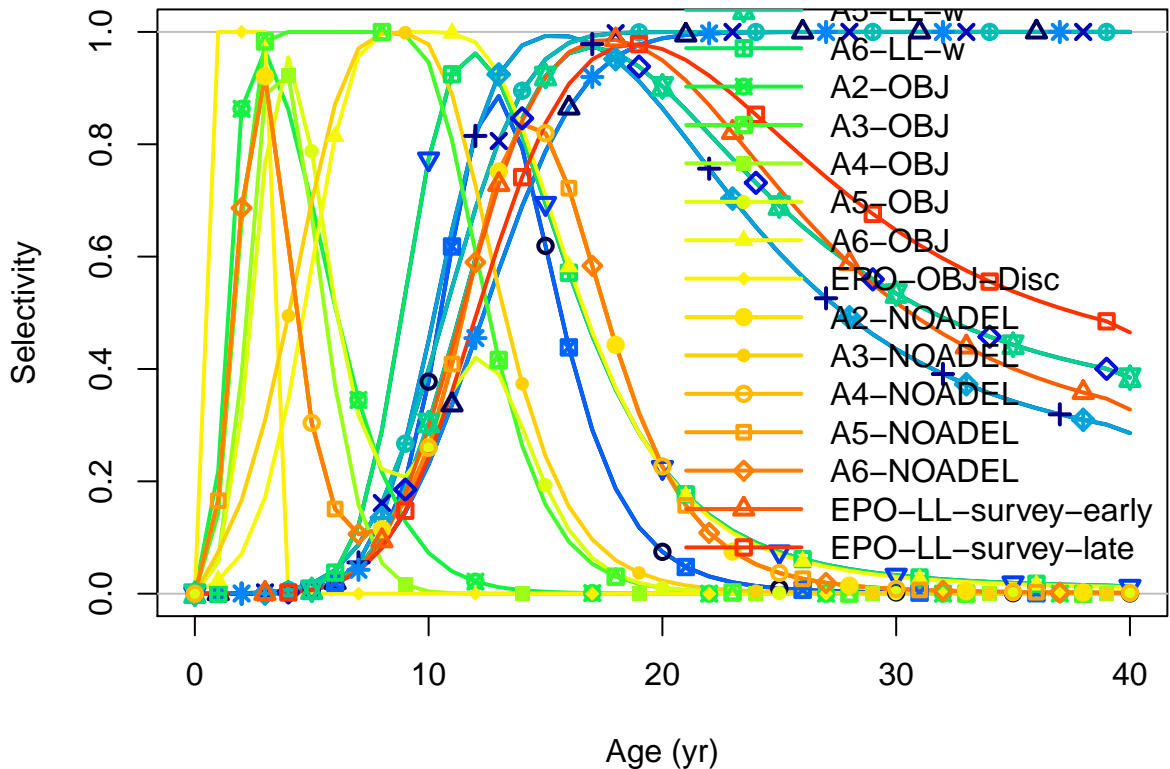
Length-based selectivity by fleet in 180



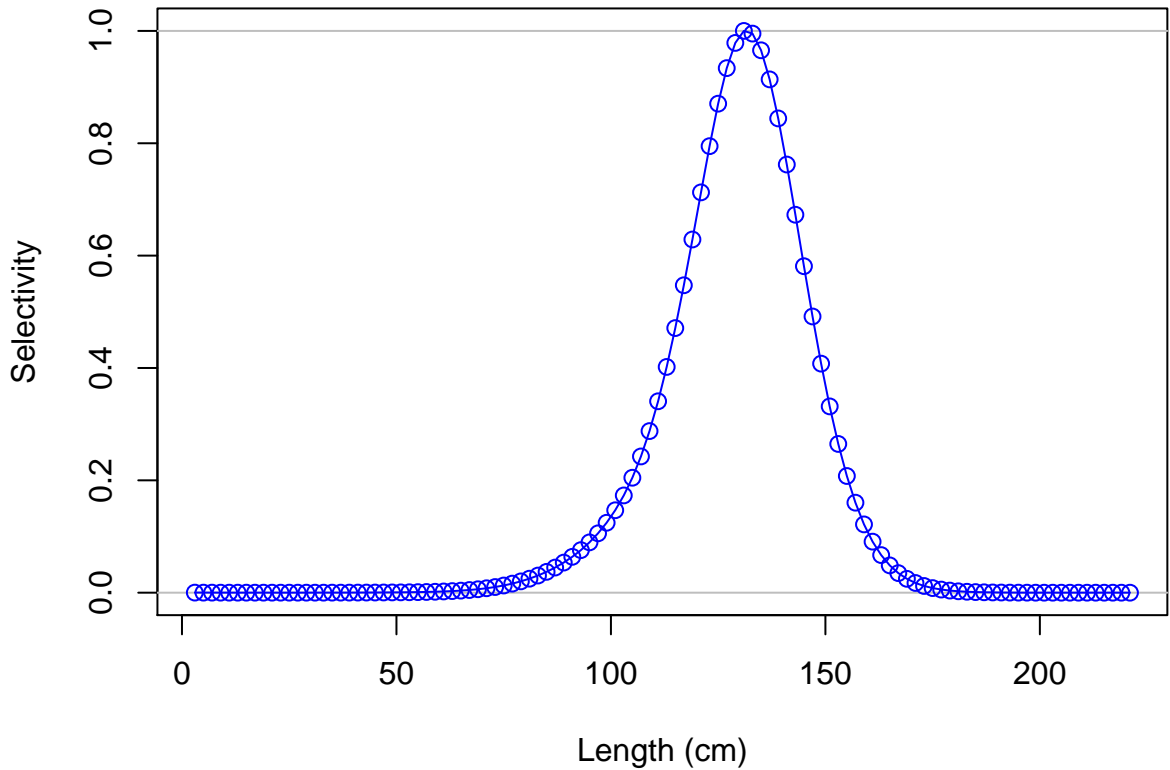
Age-based selectivity by fleet in 180



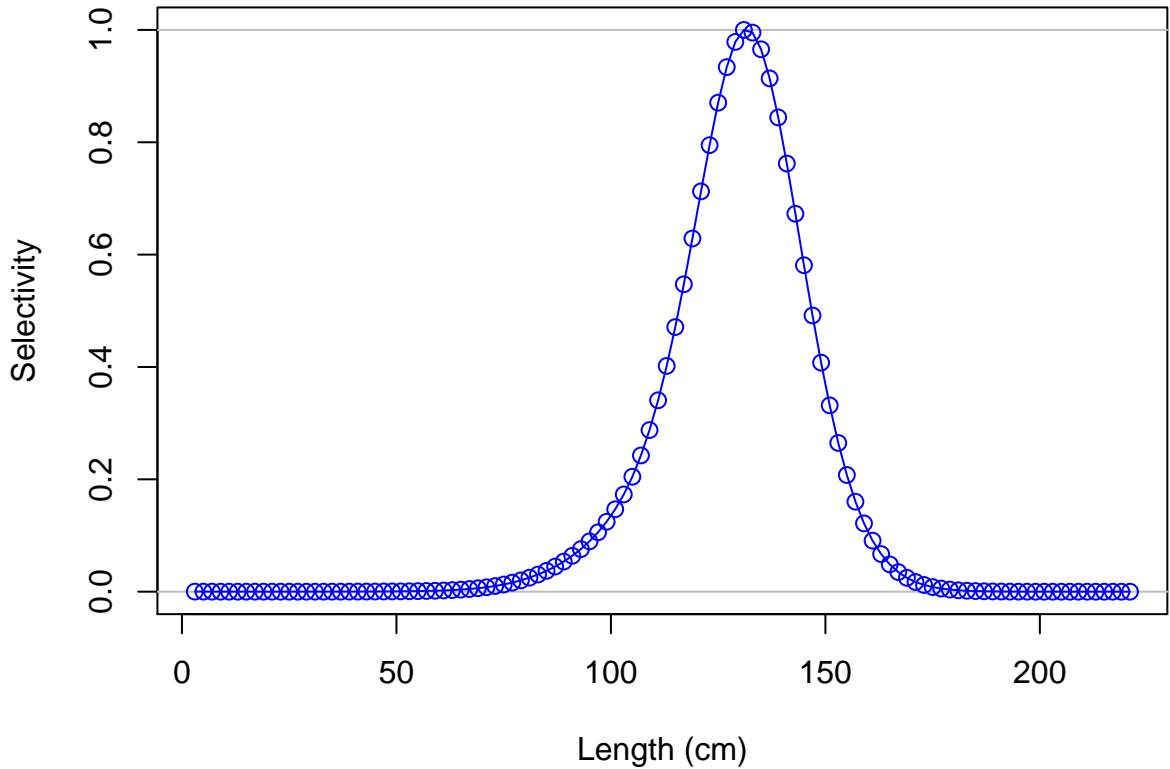
Derived age-based from length-based selectivity by fleet in 180



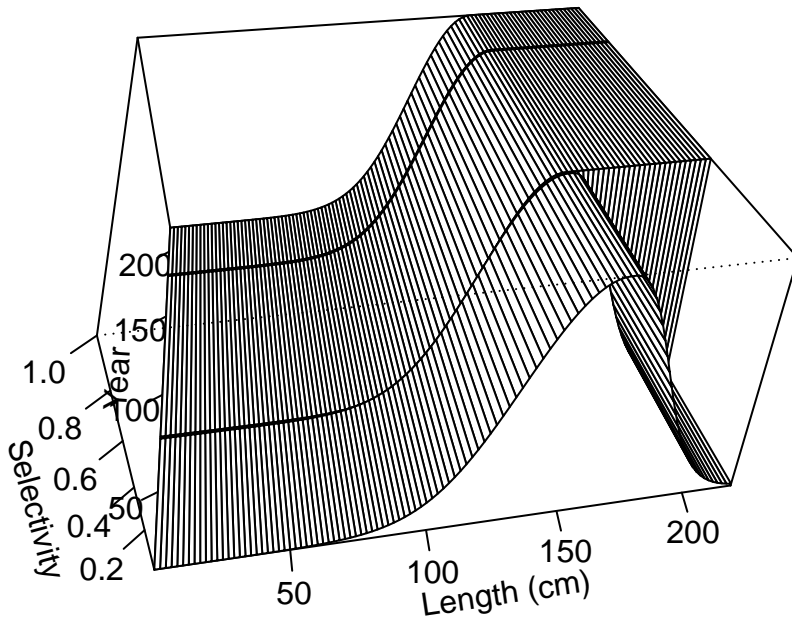
Female ending year selectivity for A1-LL-n



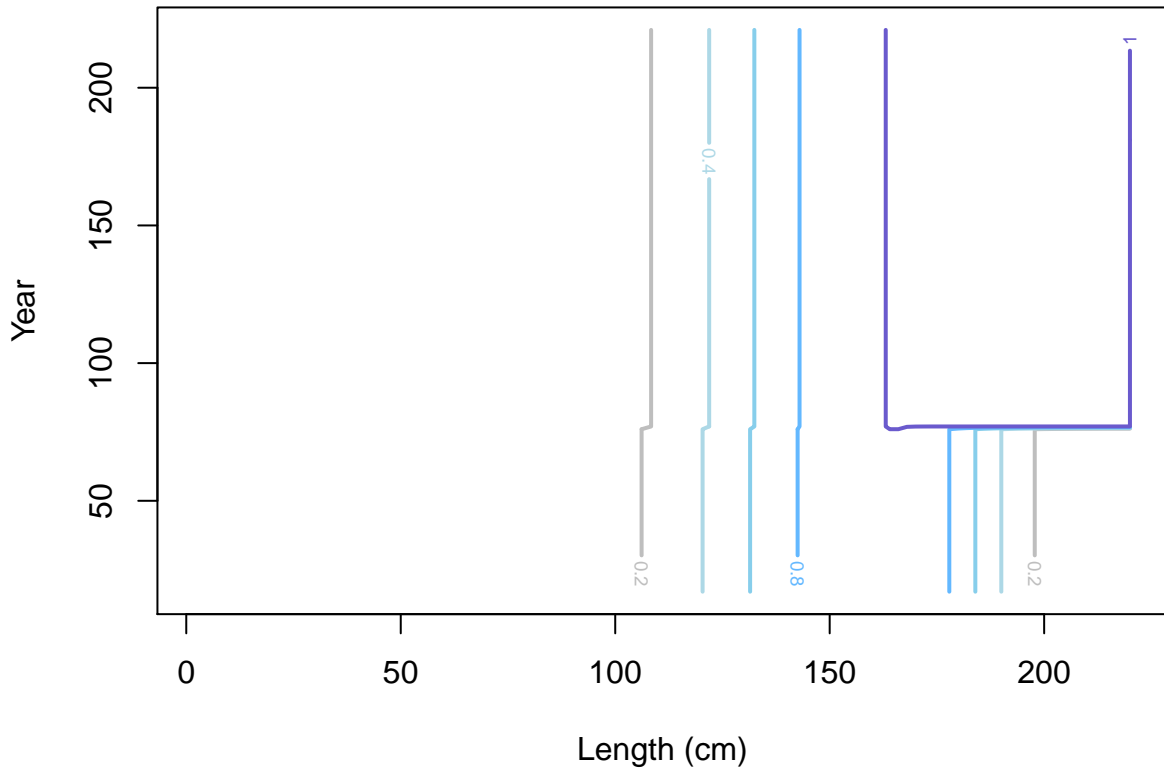
Male ending year selectivity for A1-LL-n



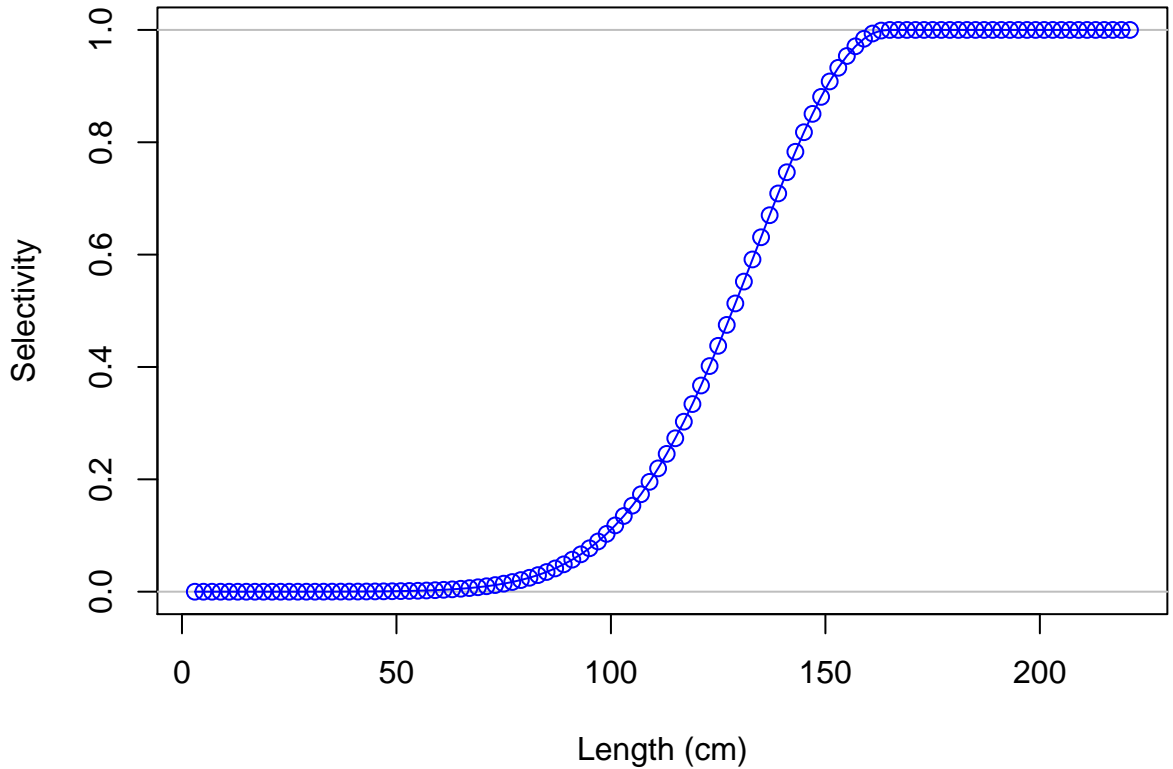
Female time-varying selectivity for A2-LL-n



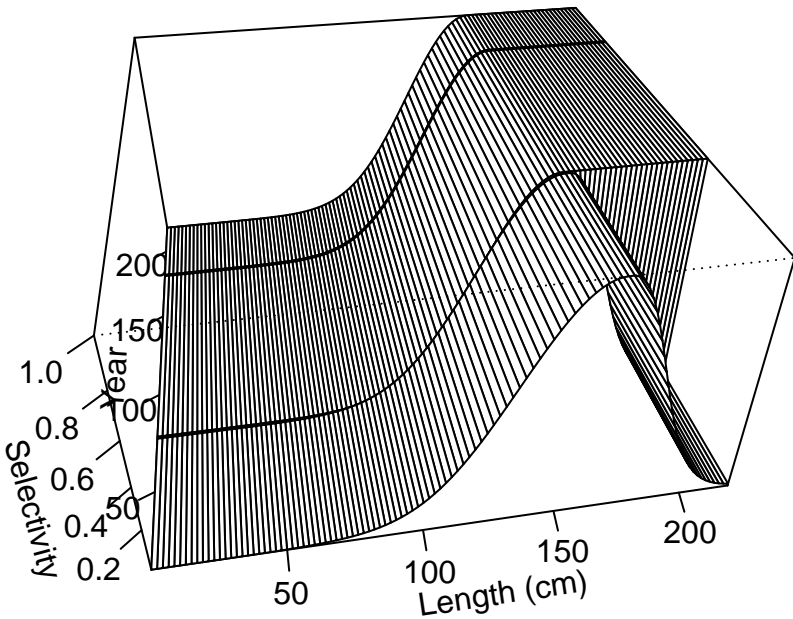
Female time-varying selectivity for A2-LL-n



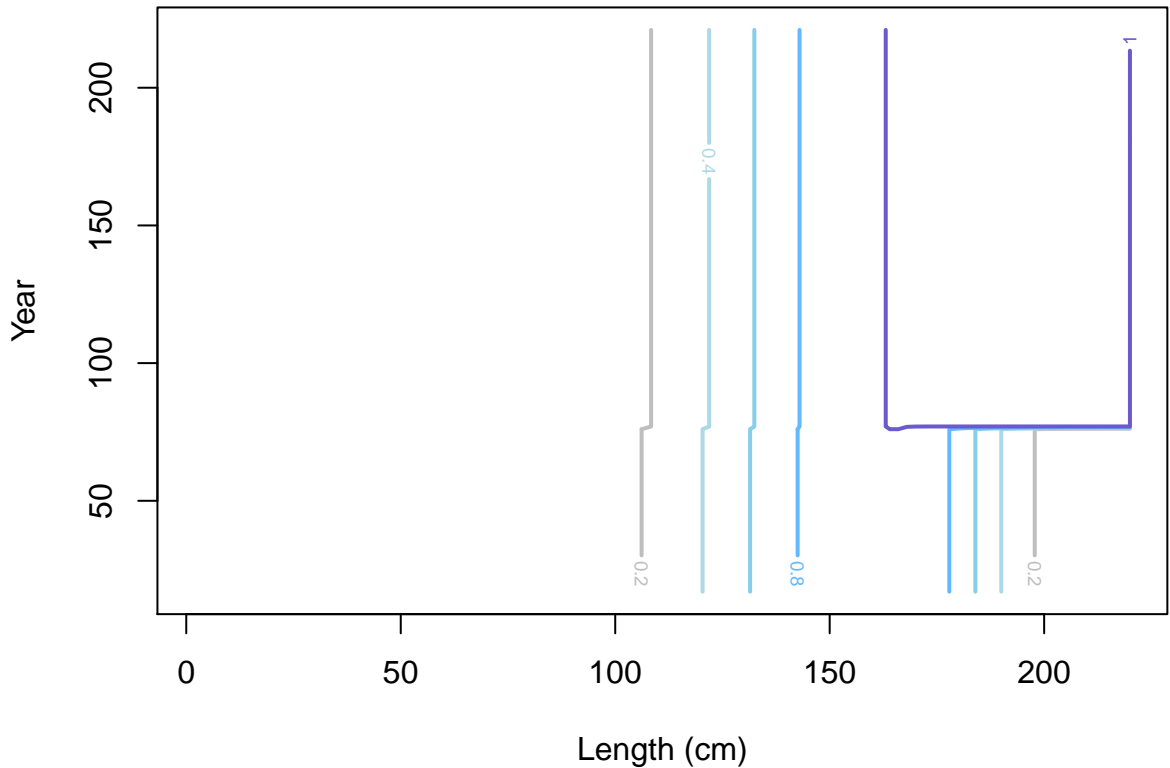
Female ending year selectivity for A2-LL-n



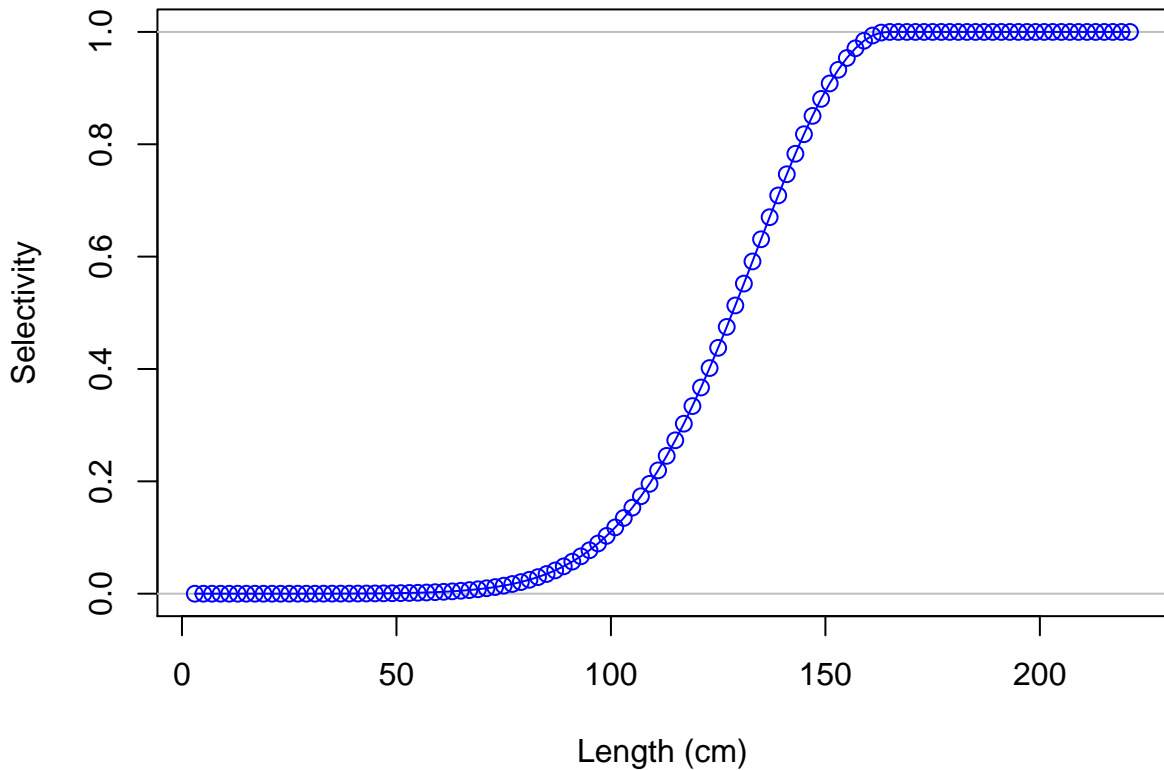
Male time-varying selectivity for A2-LL-n



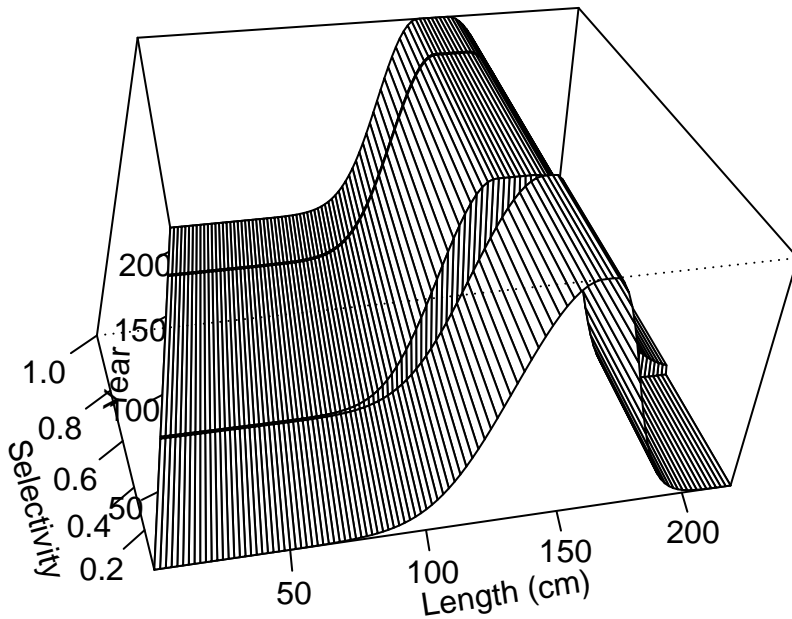
Male time-varying selectivity for A2-LL-n



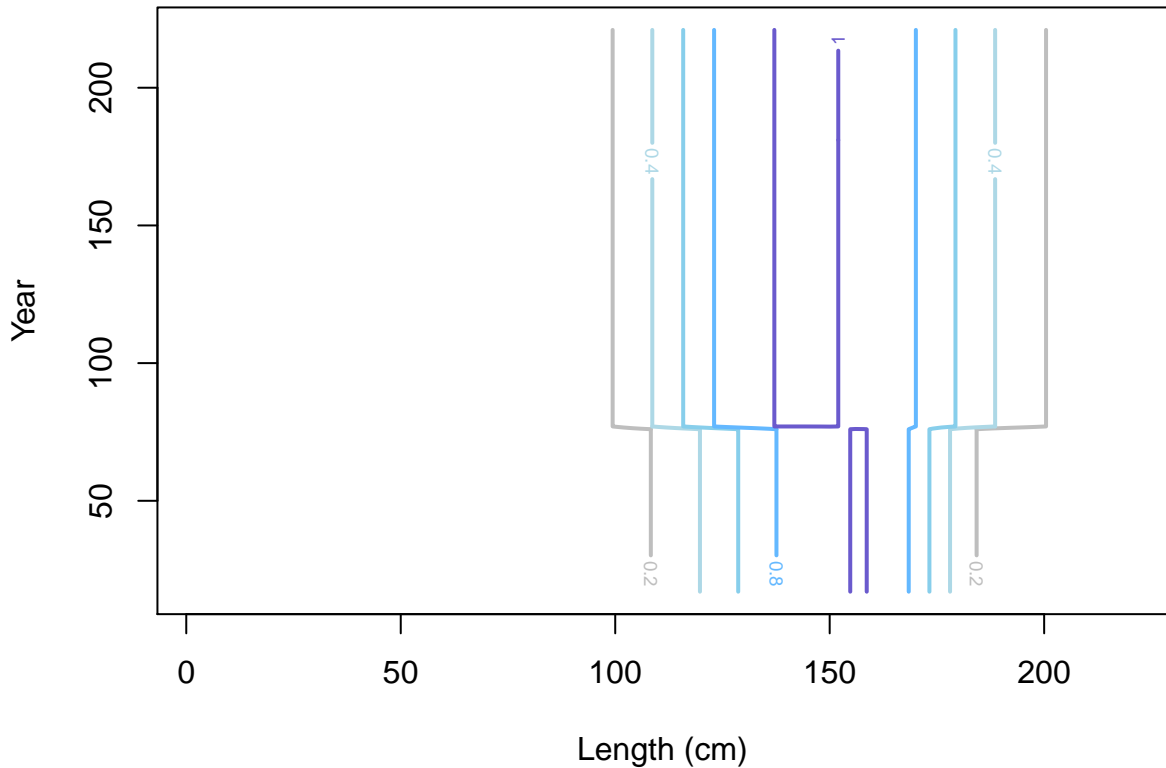
Male ending year selectivity for A2-LL-n



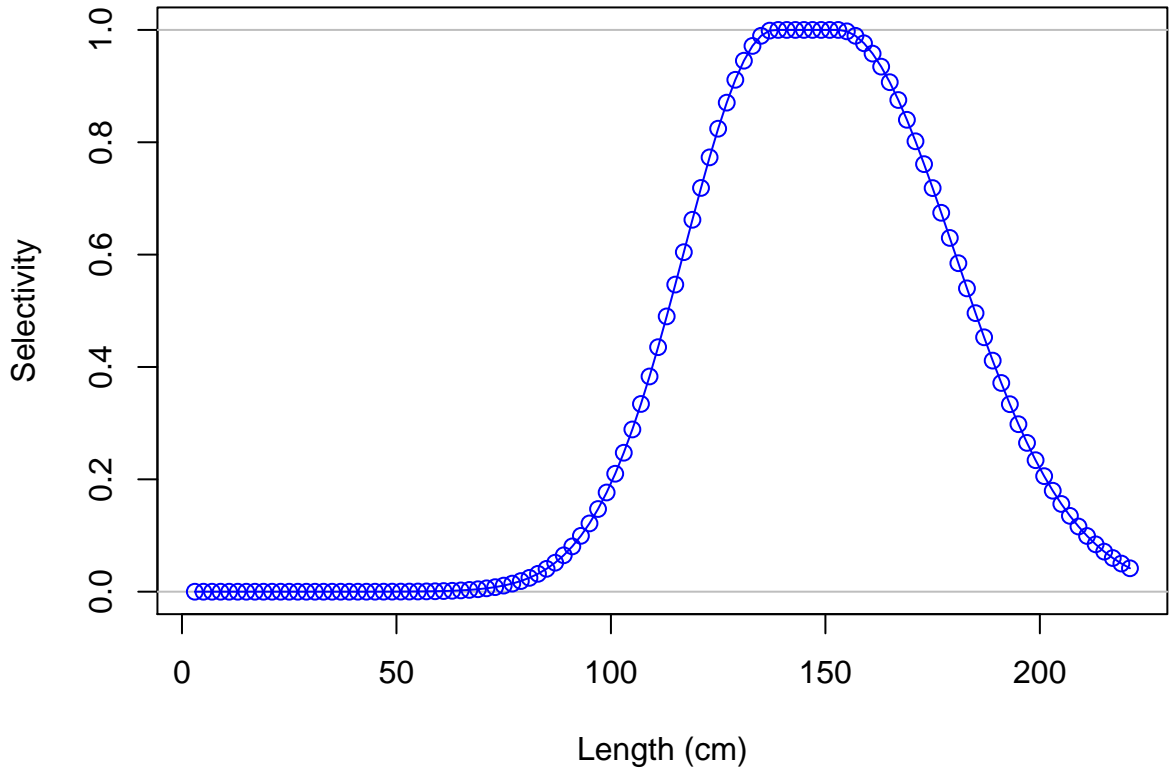
Female time-varying selectivity for A3-LL-n



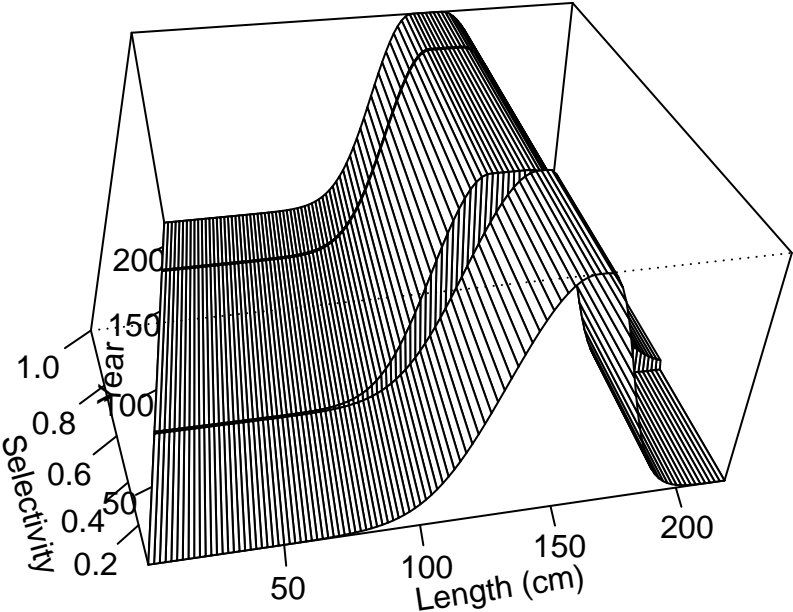
Female time-varying selectivity for A3-LL-n



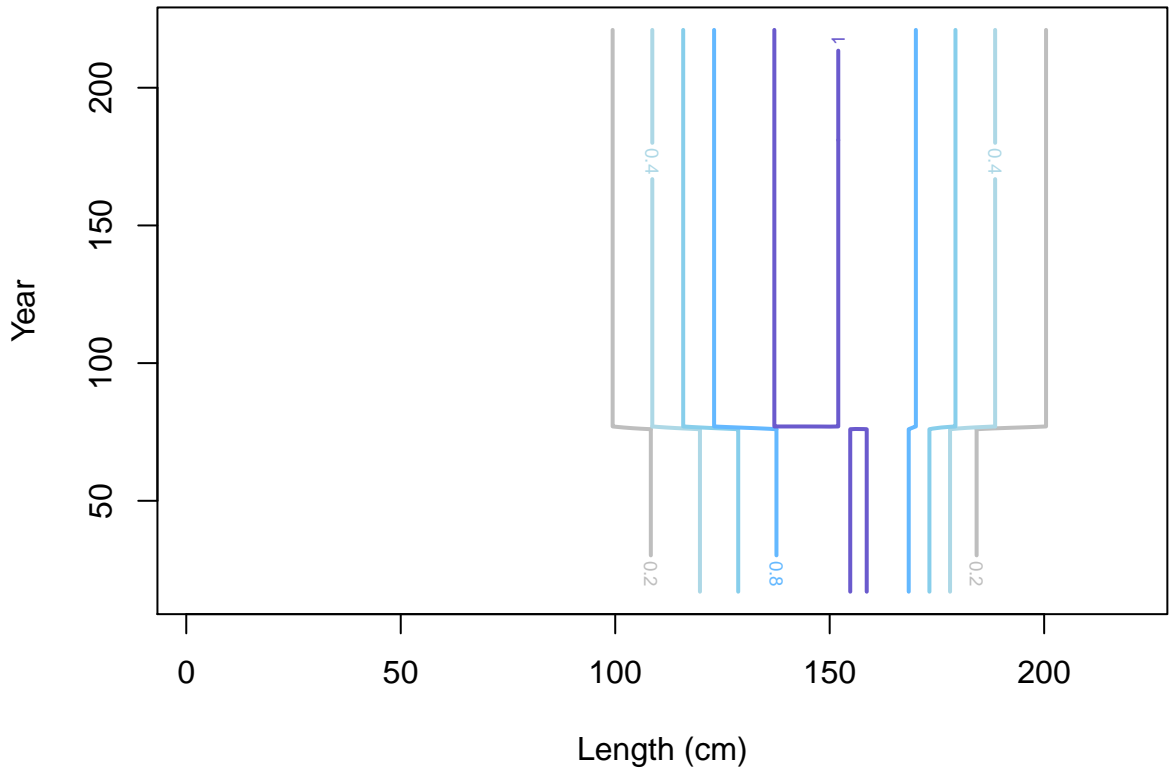
Female ending year selectivity for A3-LL-n



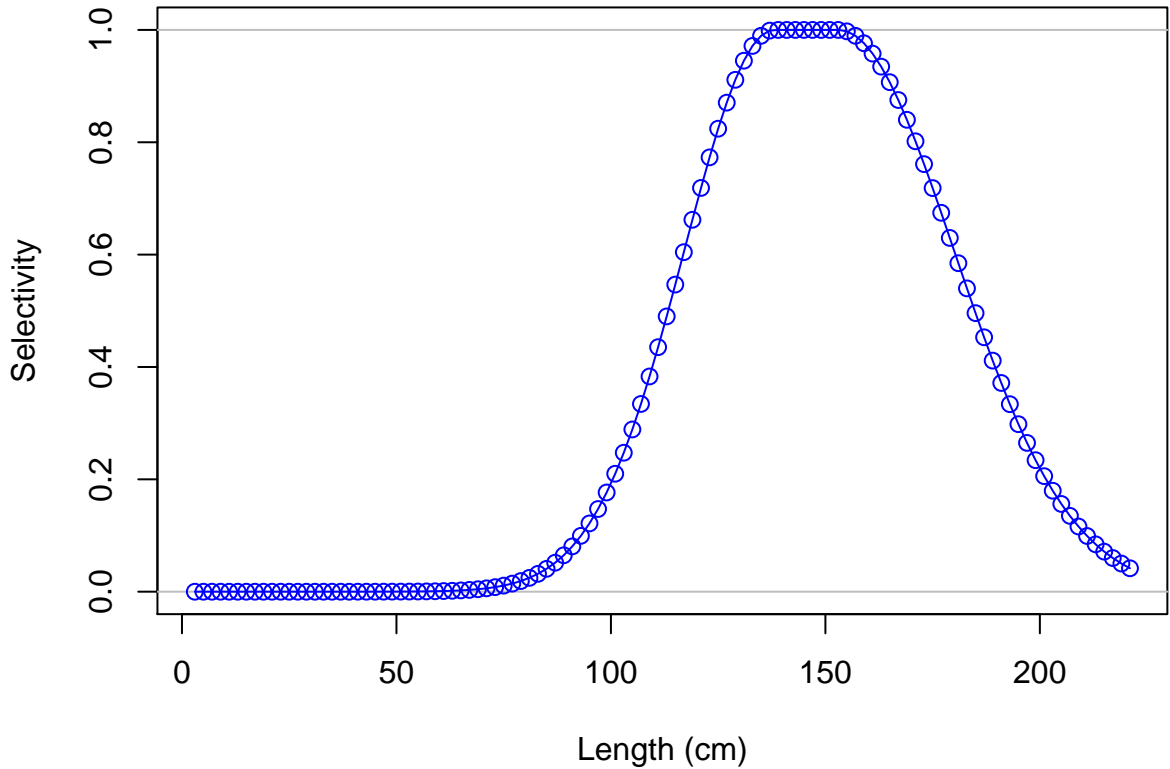
Male time-varying selectivity for A3-LL-n



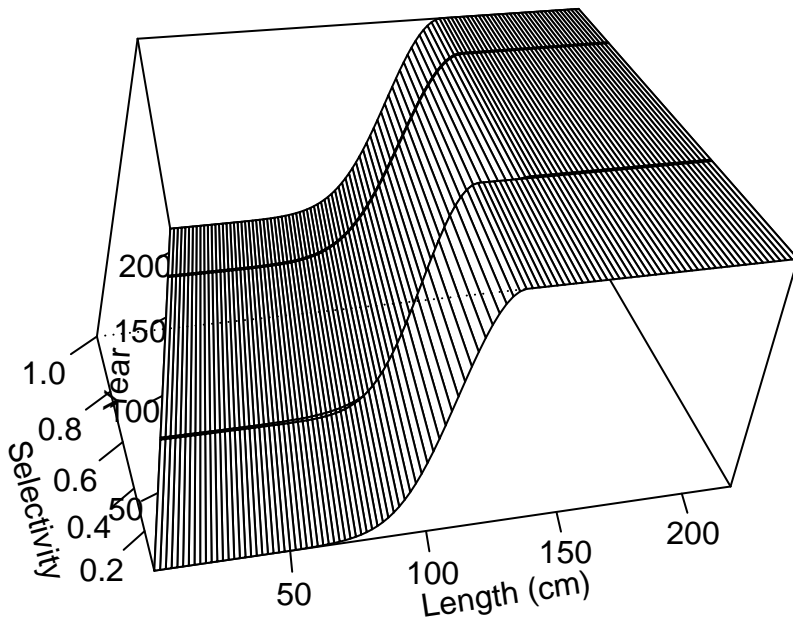
Male time-varying selectivity for A3-LL-n



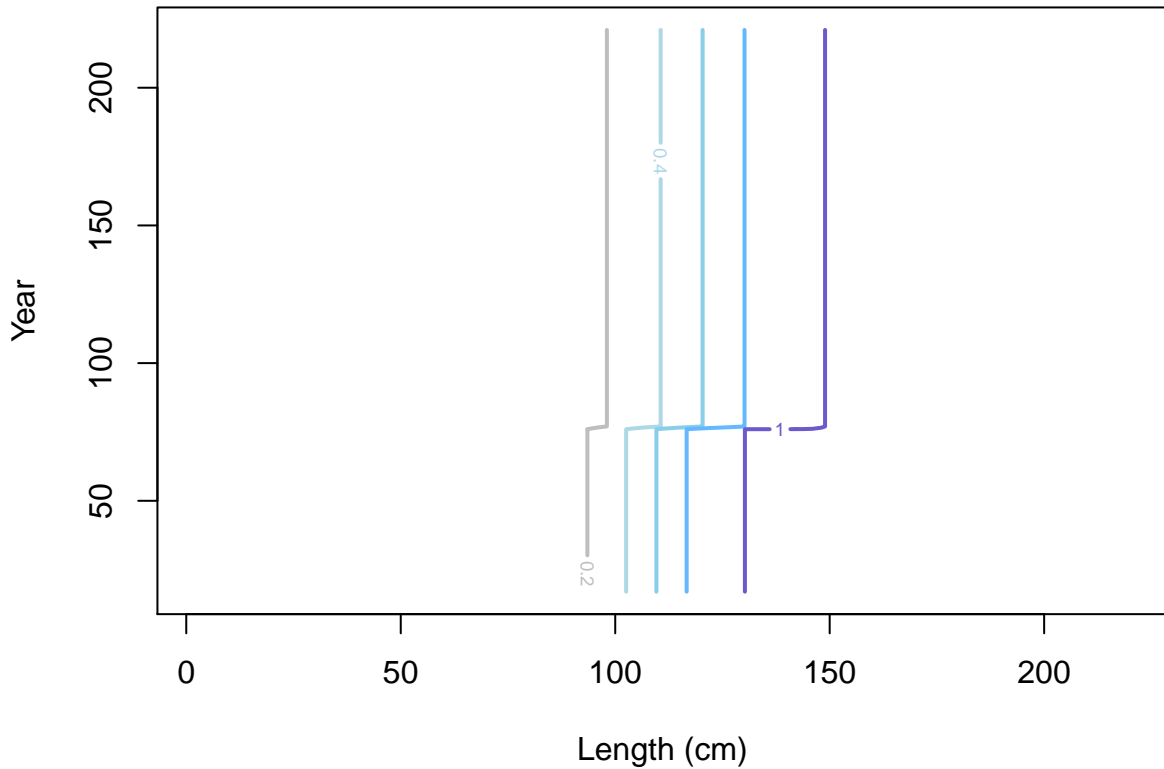
Male ending year selectivity for A3-LL-n



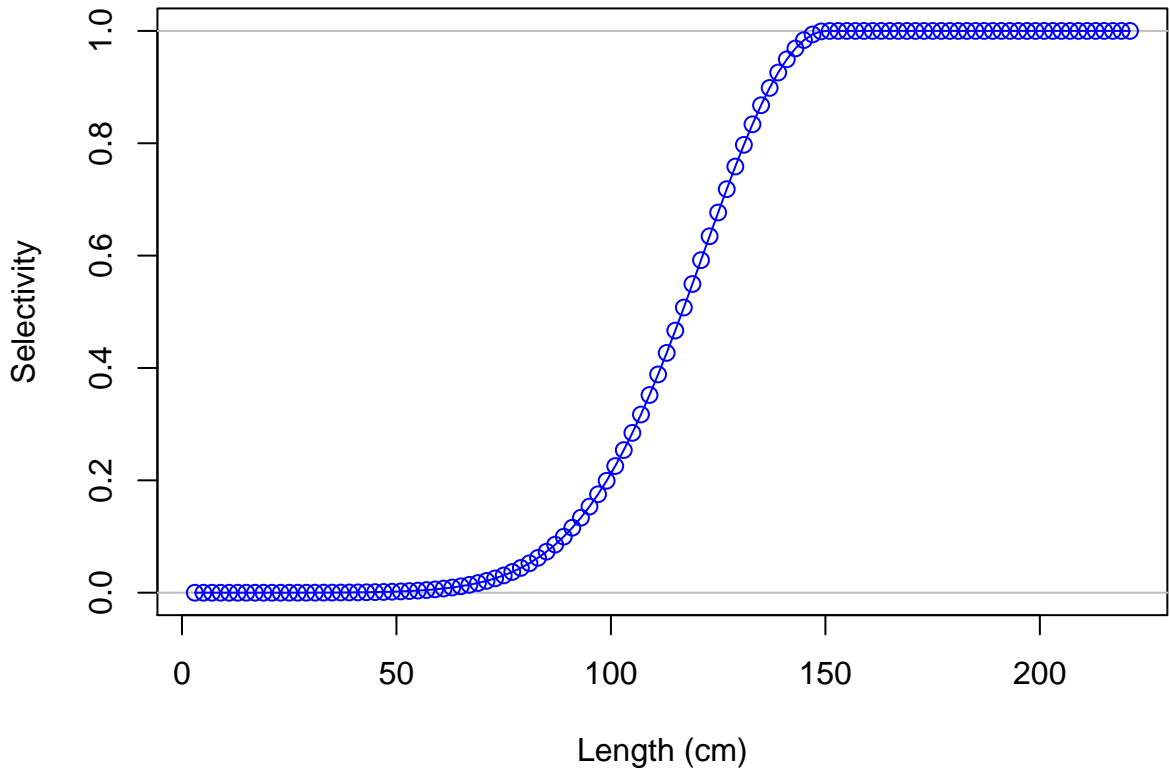
Female time-varying selectivity for A4-LL-n



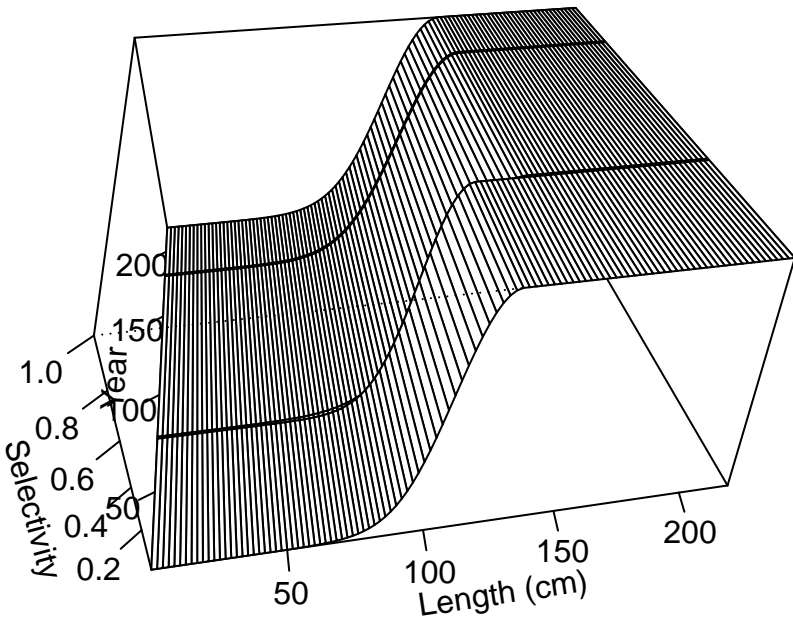
Female time-varying selectivity for A4-LL-n



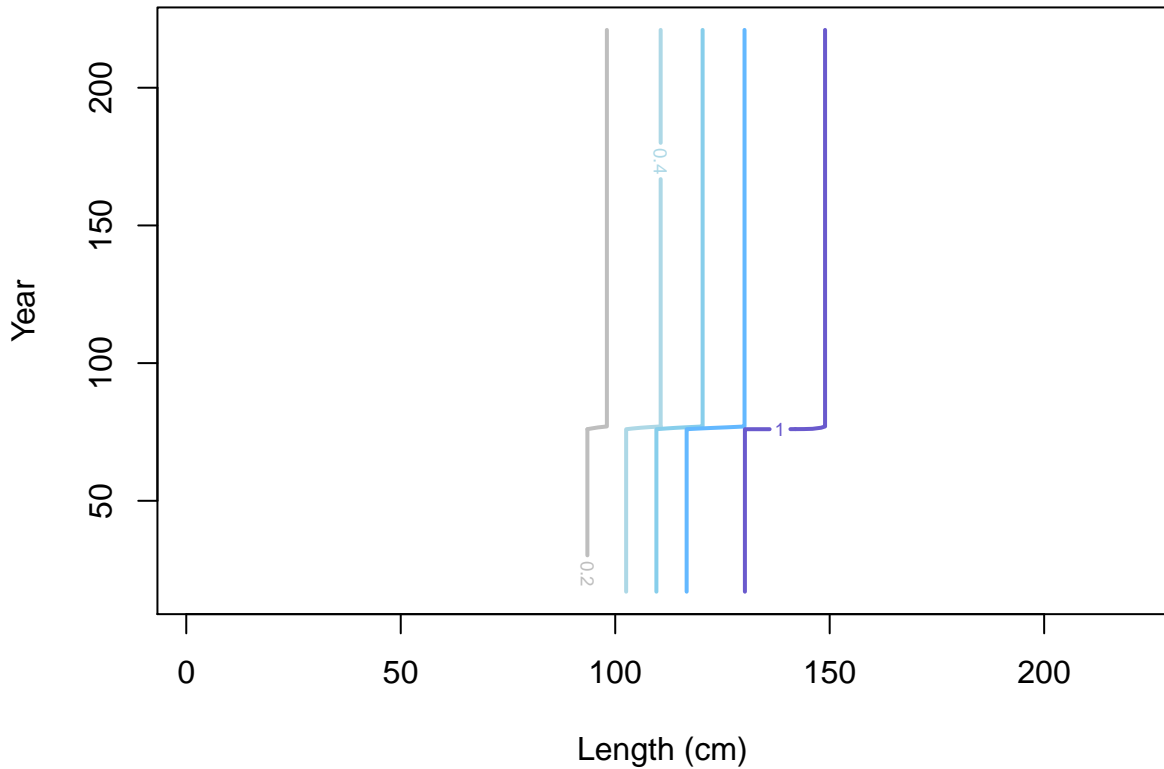
Female ending year selectivity for A4-LL-n



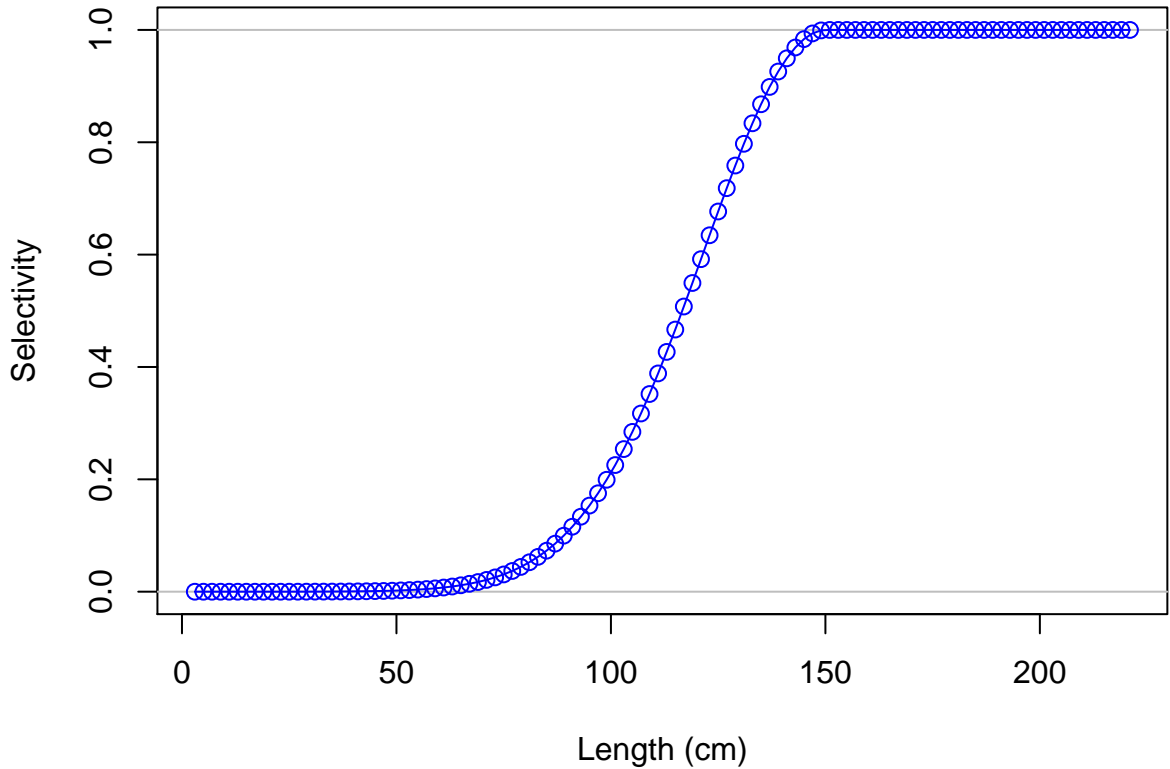
Male time-varying selectivity for A4-LL-n



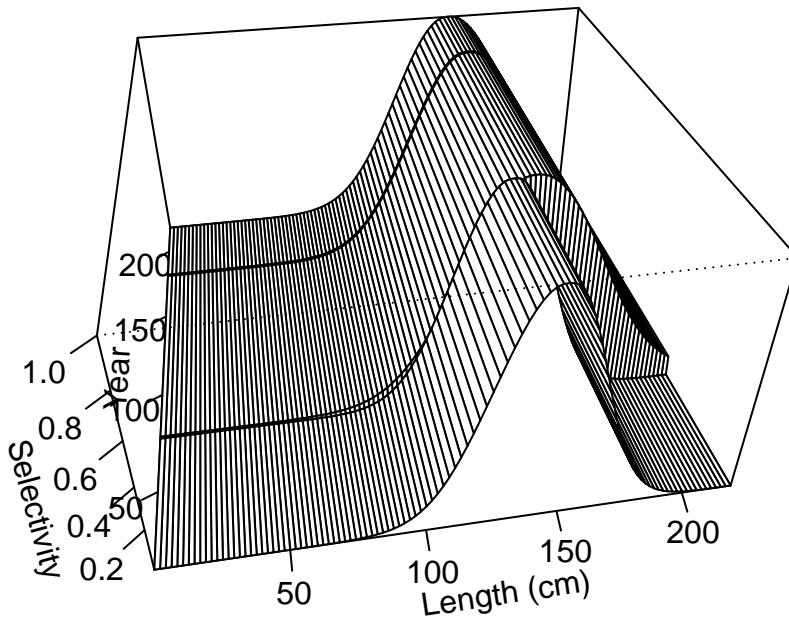
Male time-varying selectivity for A4-LL-n



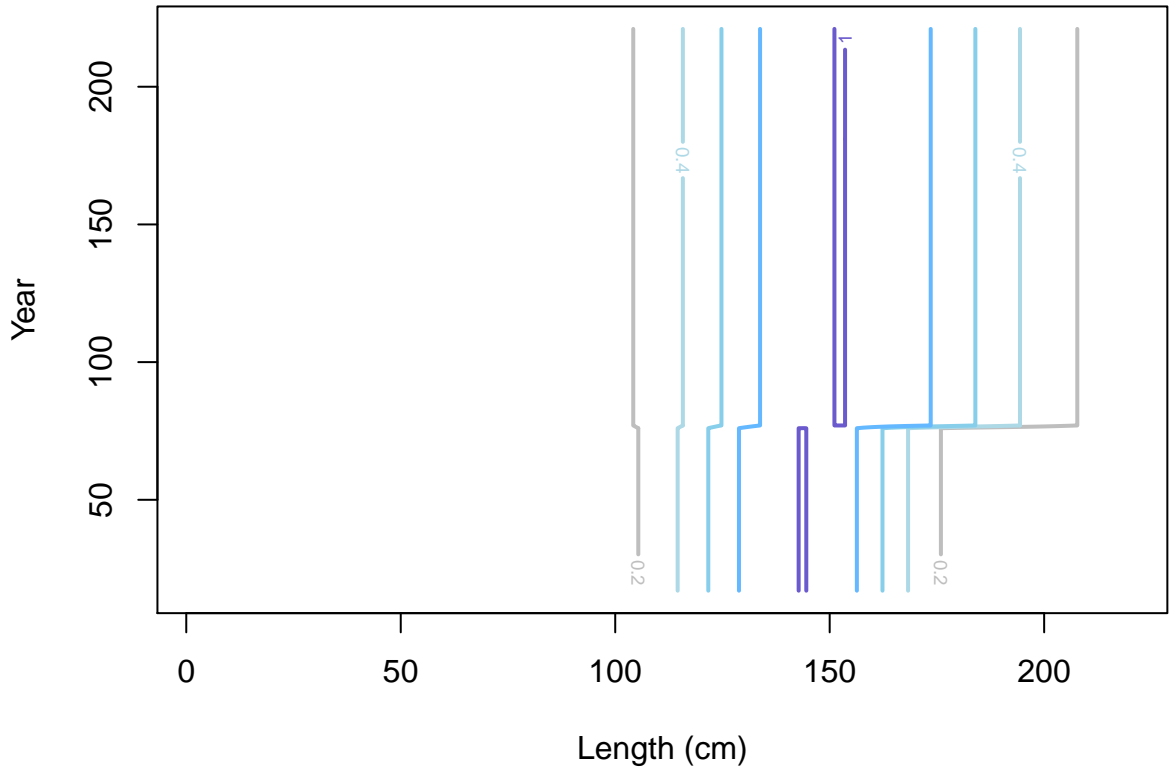
Male ending year selectivity for A4-LL-n



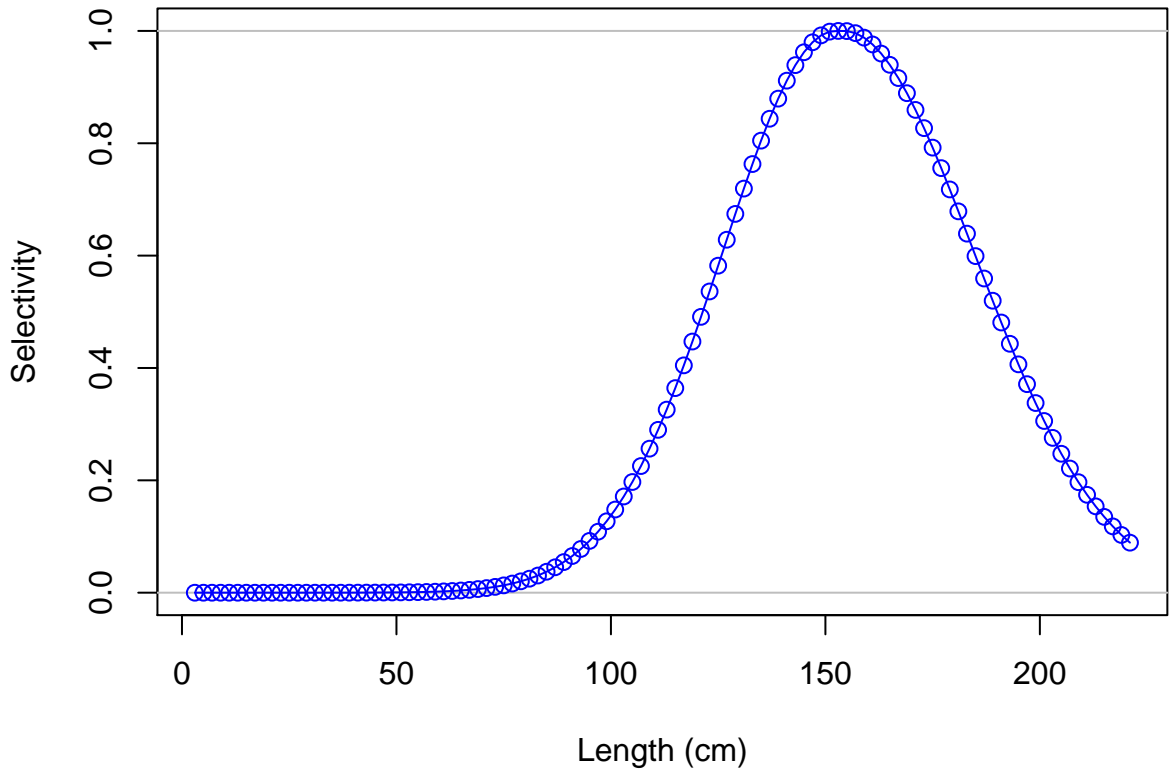
Female time-varying selectivity for A5-LL-n



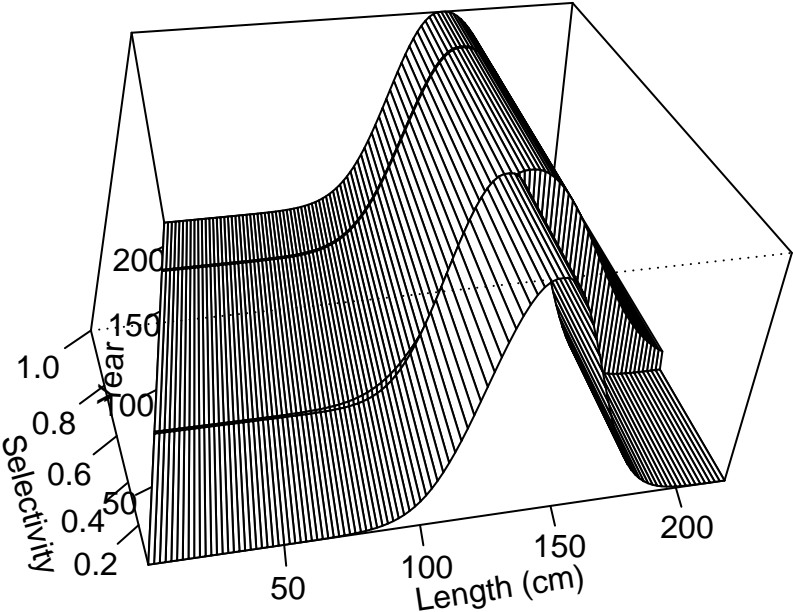
Female time-varying selectivity for A5-LL-n



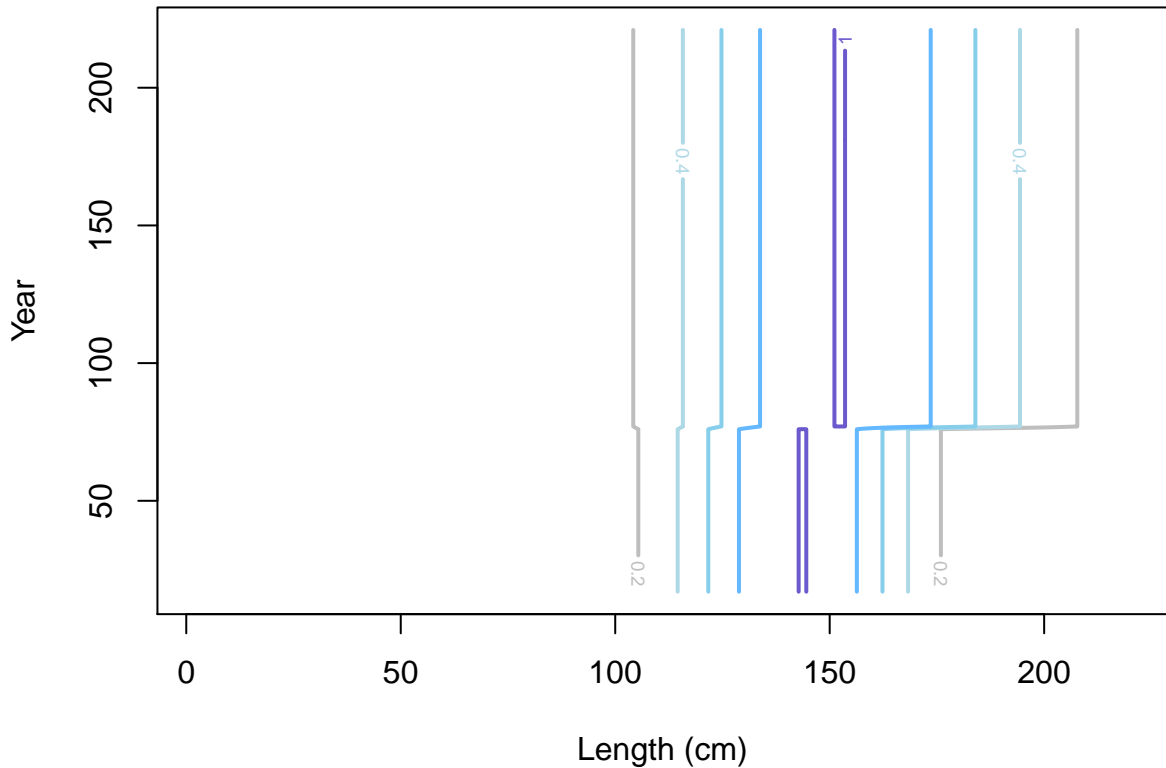
Female ending year selectivity for A5-LL-n



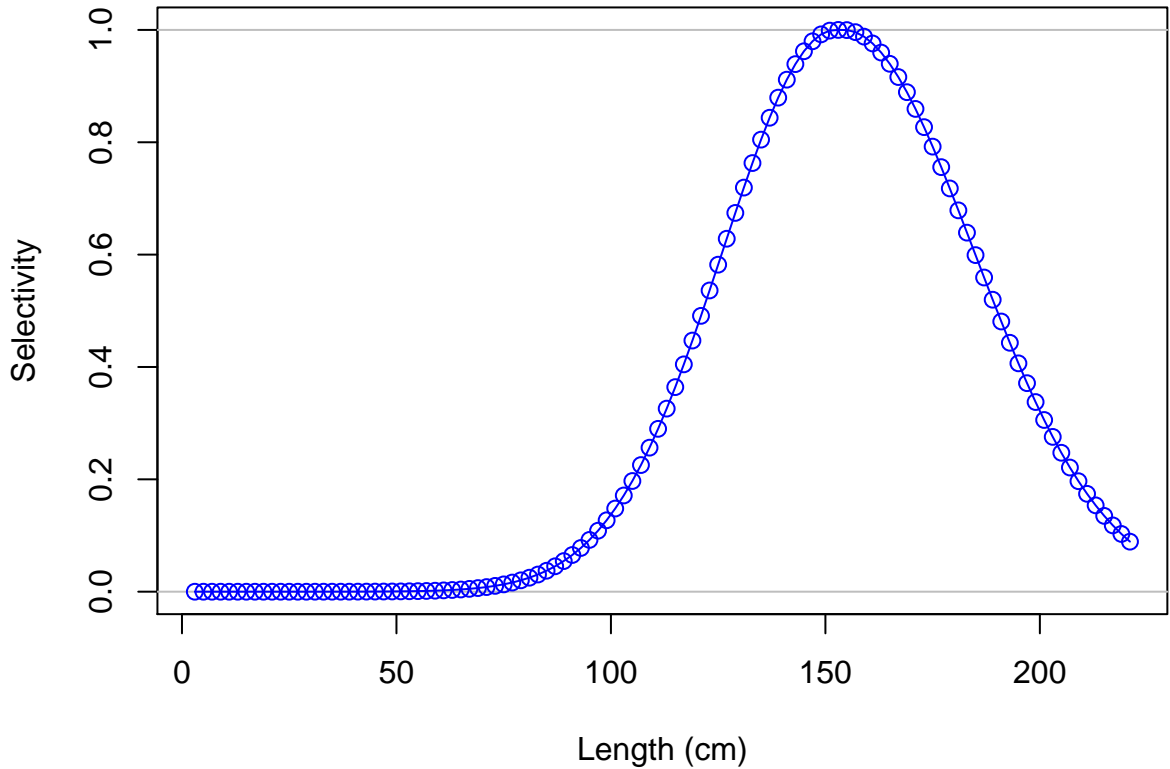
Male time-varying selectivity for A5-LL-n



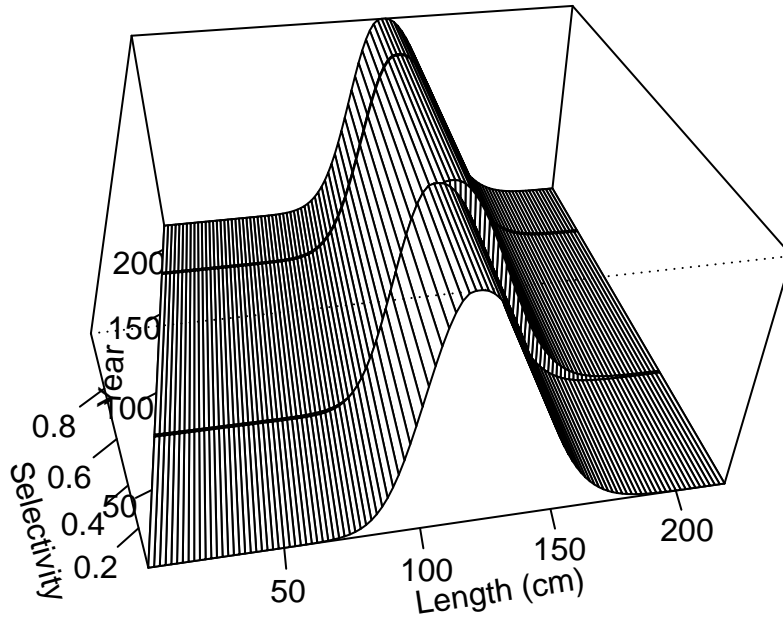
Male time-varying selectivity for A5-LL-n



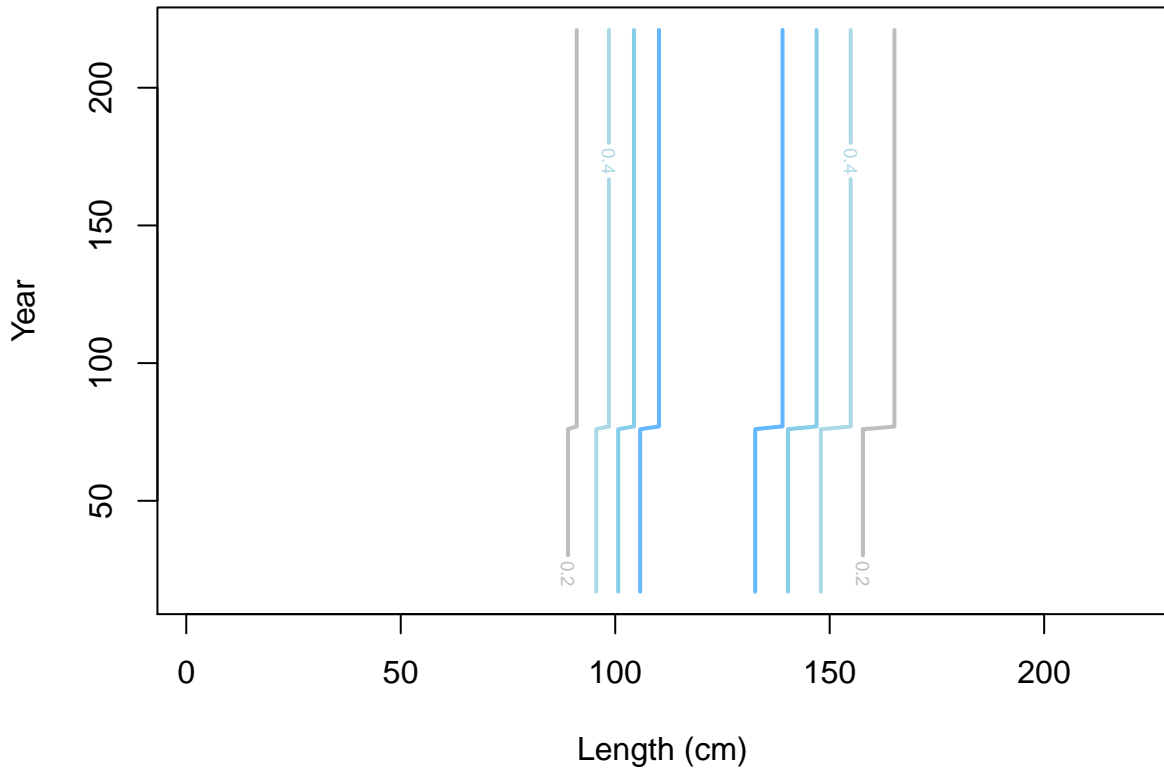
Male ending year selectivity for A5-LL-n



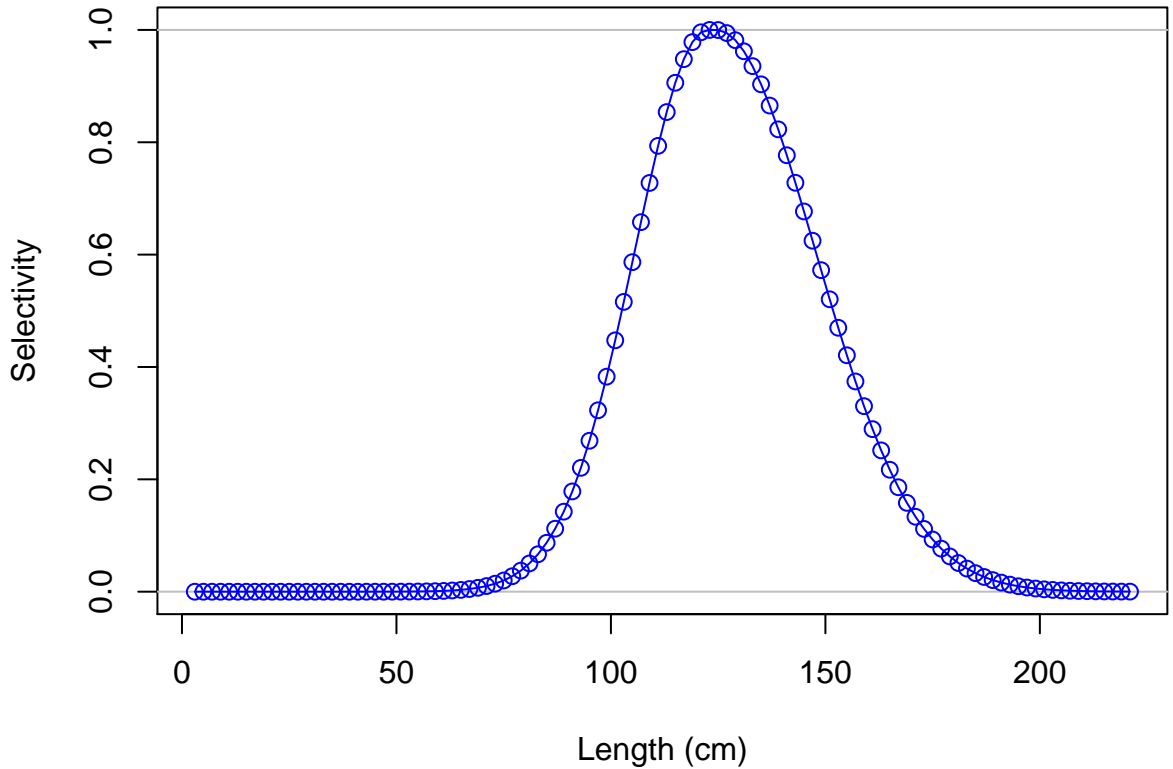
Female time-varying selectivity for A6-LL-n



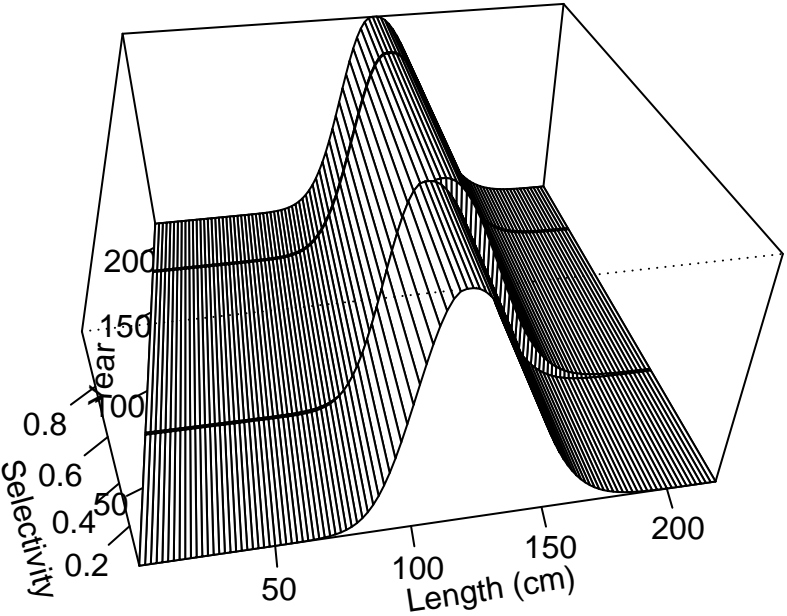
Female time-varying selectivity for A6-LL-n



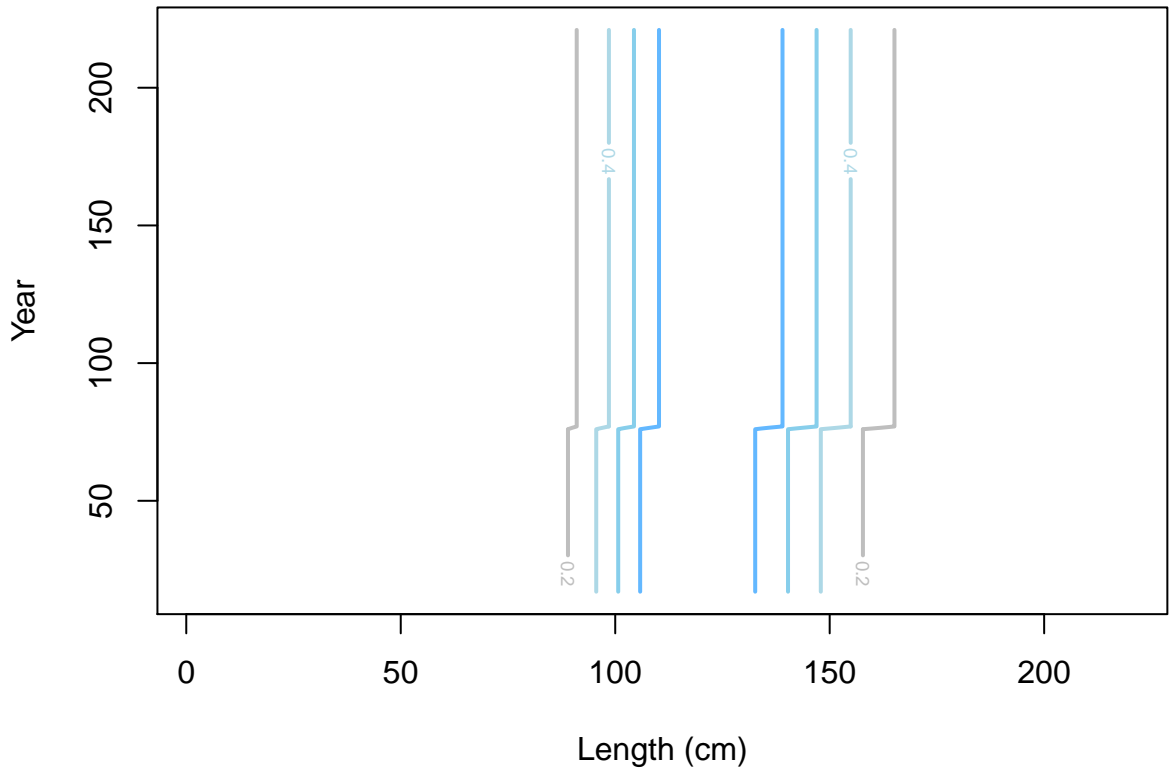
Female ending year selectivity for A6-LL-n



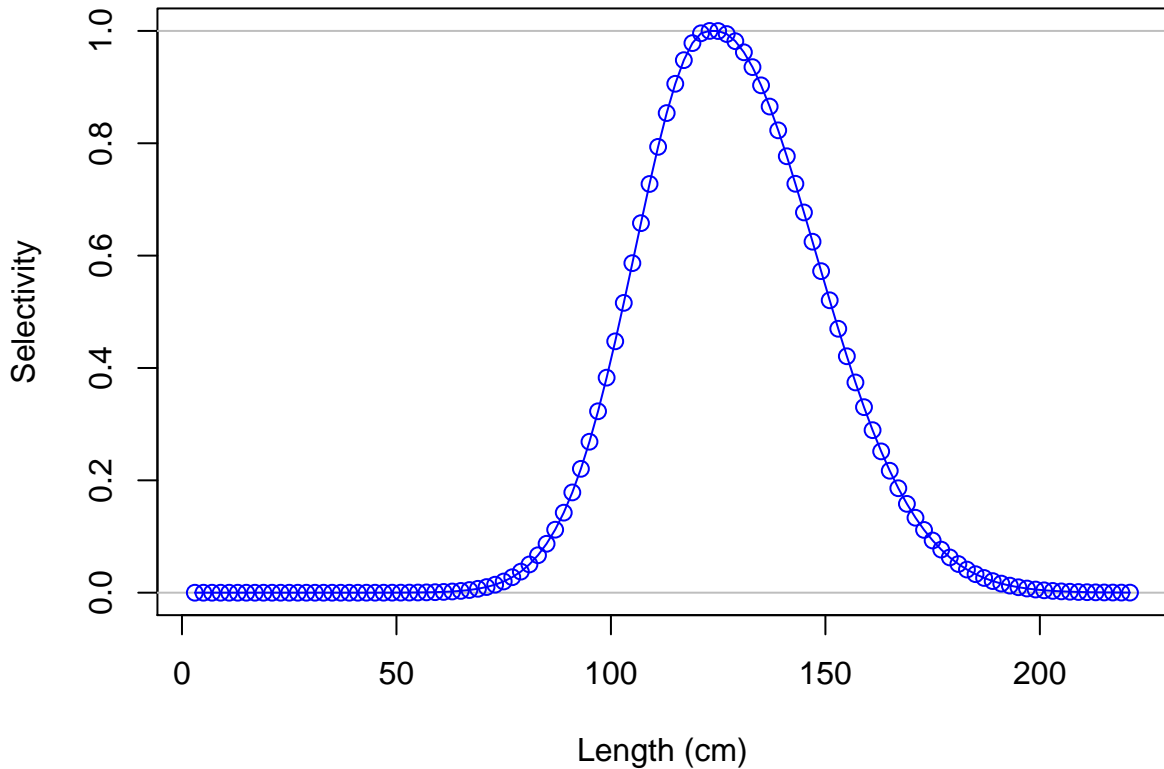
Male time-varying selectivity for A6-LL-n



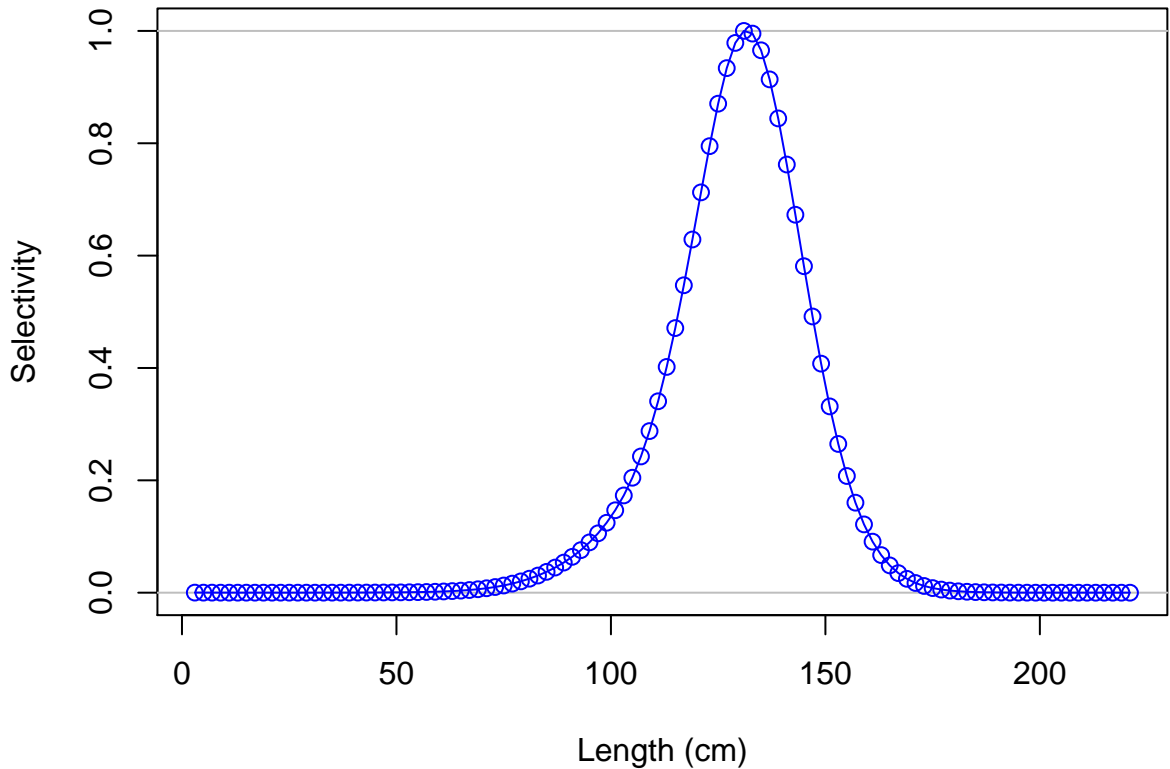
Male time-varying selectivity for A6-LL-n



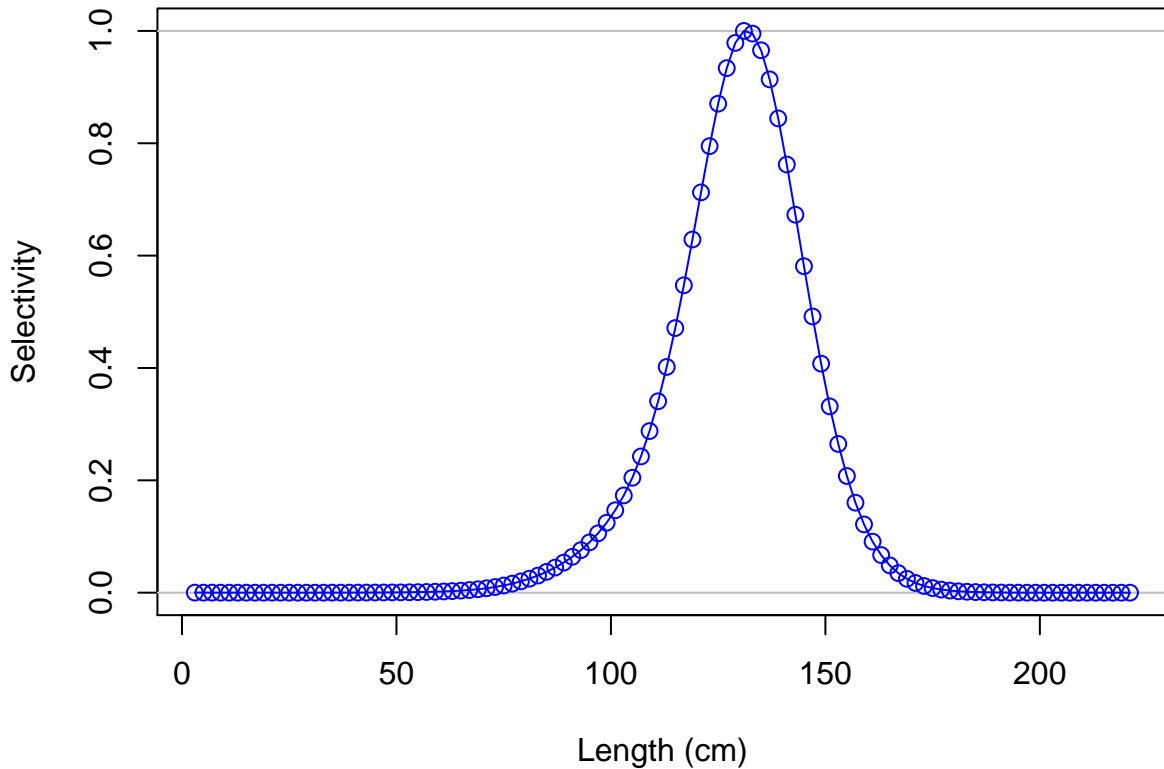
Male ending year selectivity for A6-LL-n



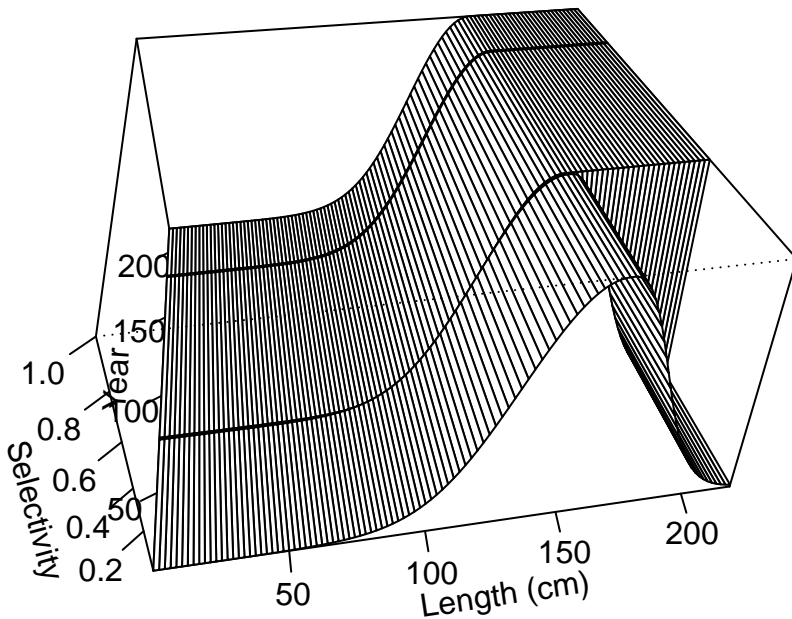
Female ending year selectivity for A1-LL-w



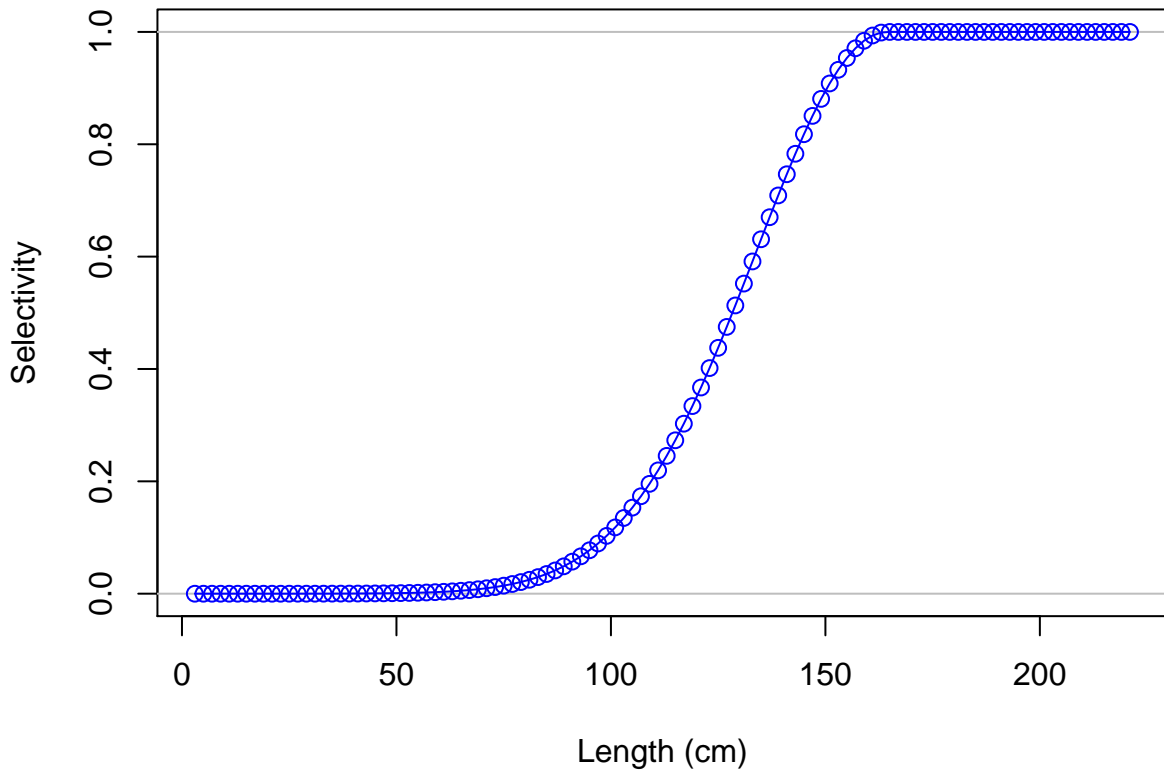
Male ending year selectivity for A1-LL-w



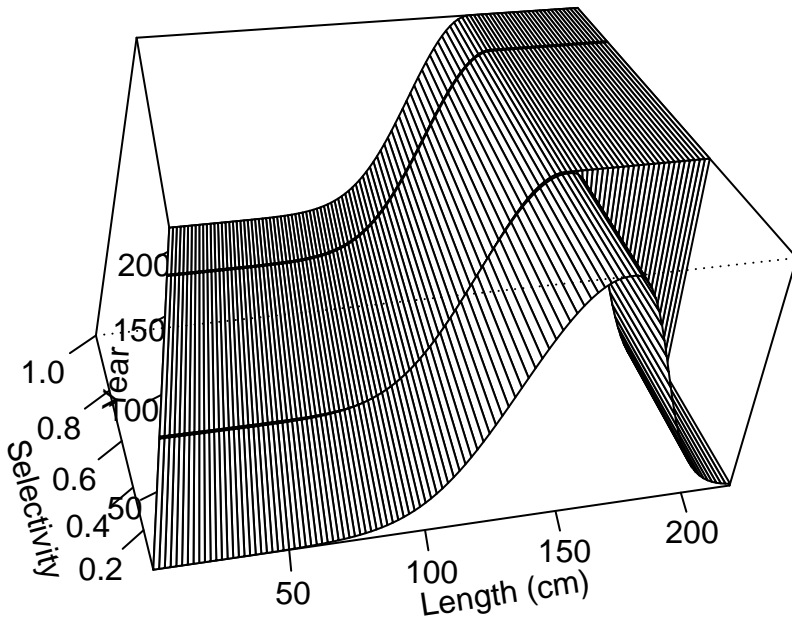
Female time-varying selectivity for A2-LL-w



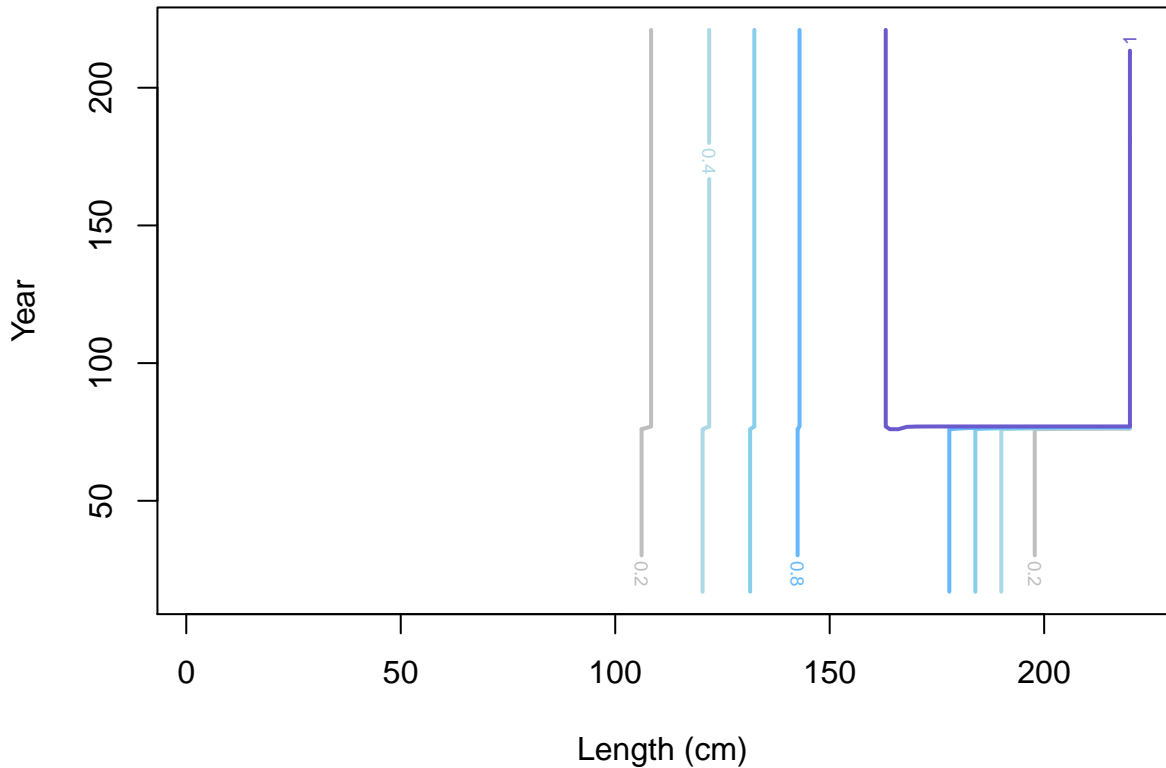
Female ending year selectivity for A2-LL-w



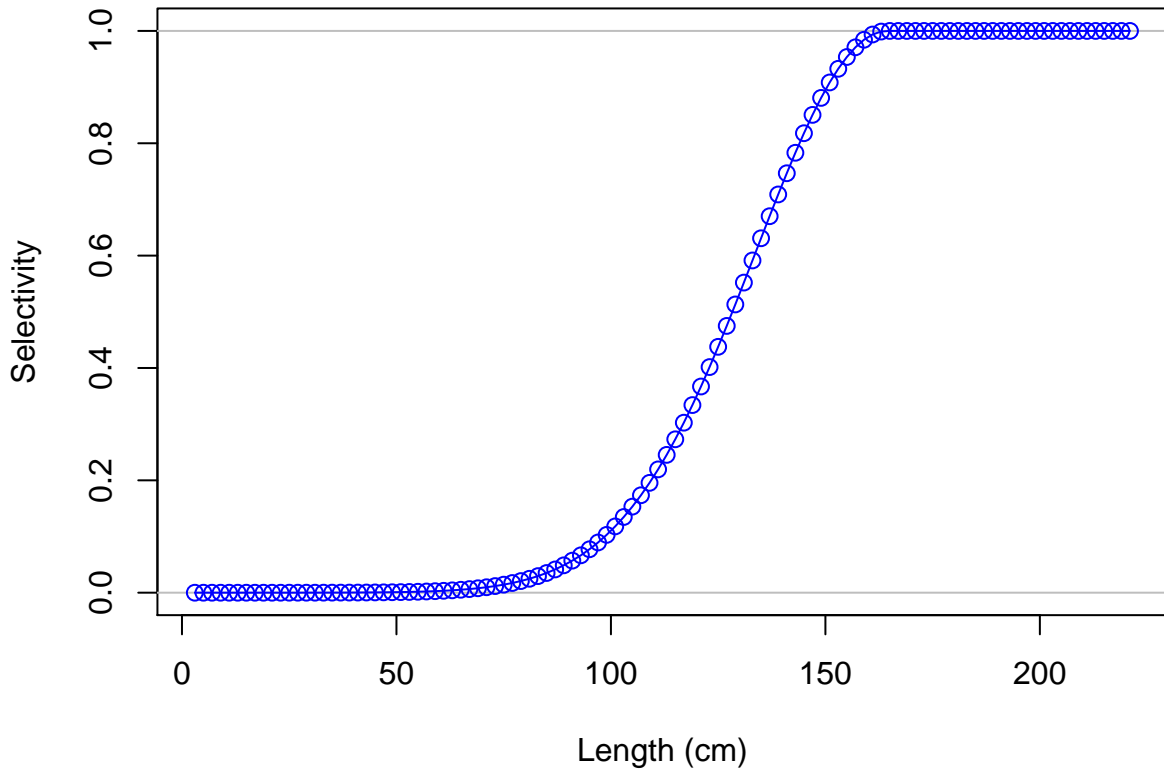
Male time-varying selectivity for A2-LL-w



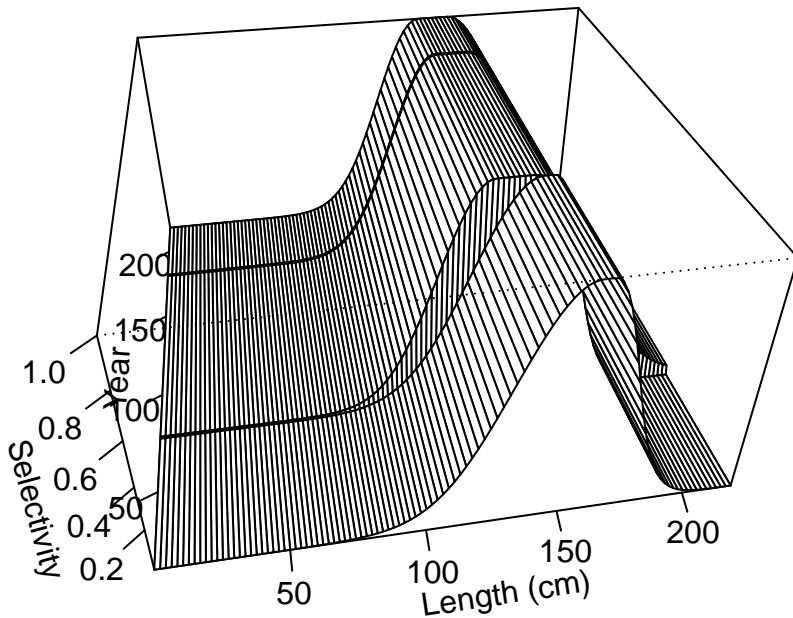
Male time-varying selectivity for A2-LL-w



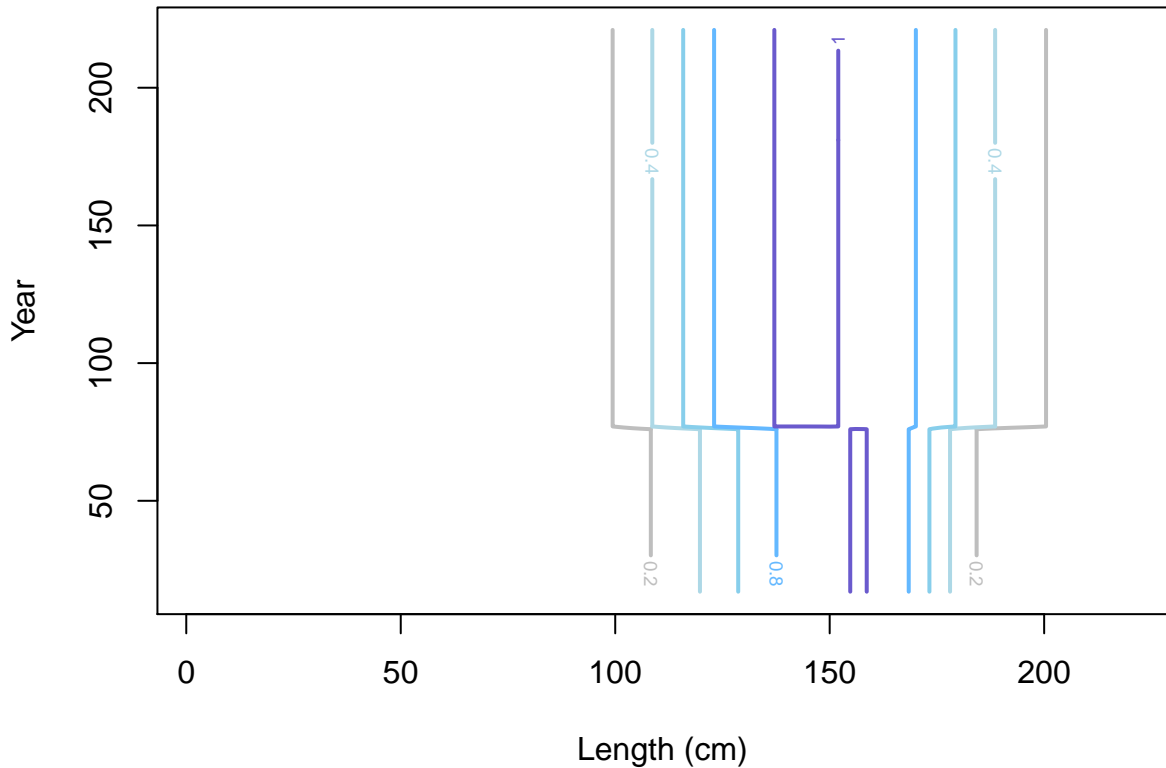
Male ending year selectivity for A2-LL-w



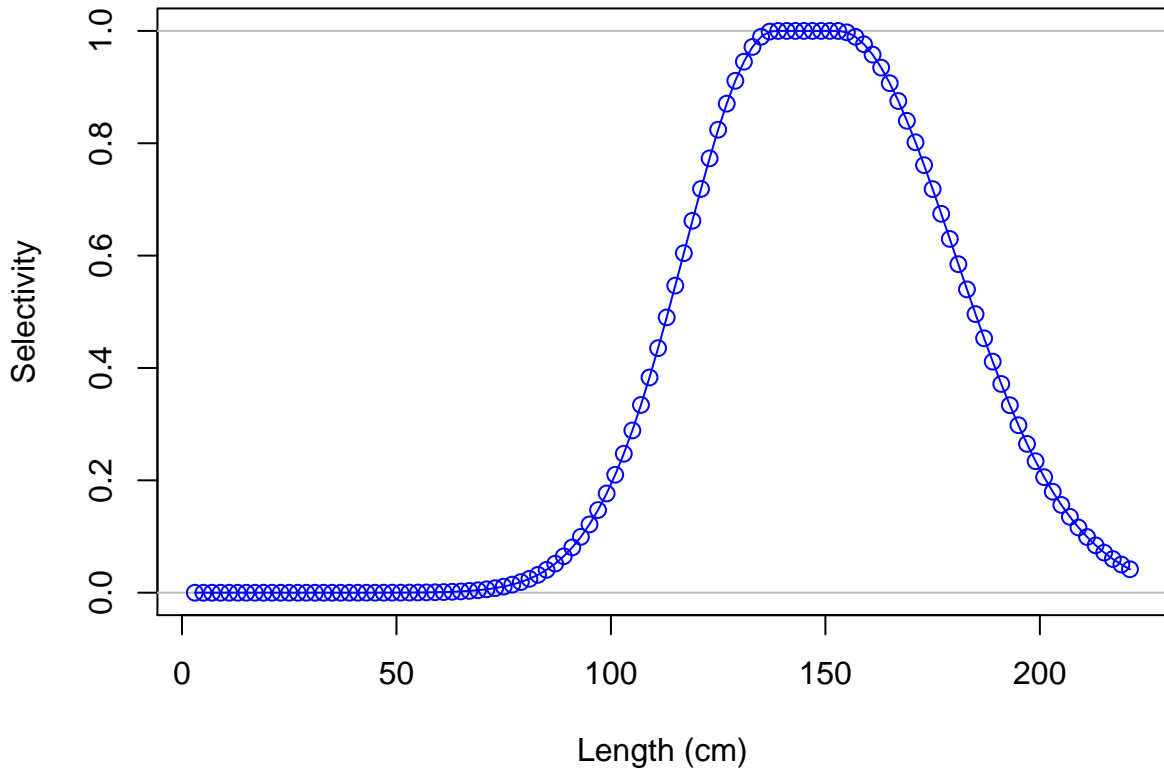
Female time-varying selectivity for A3-LL-w



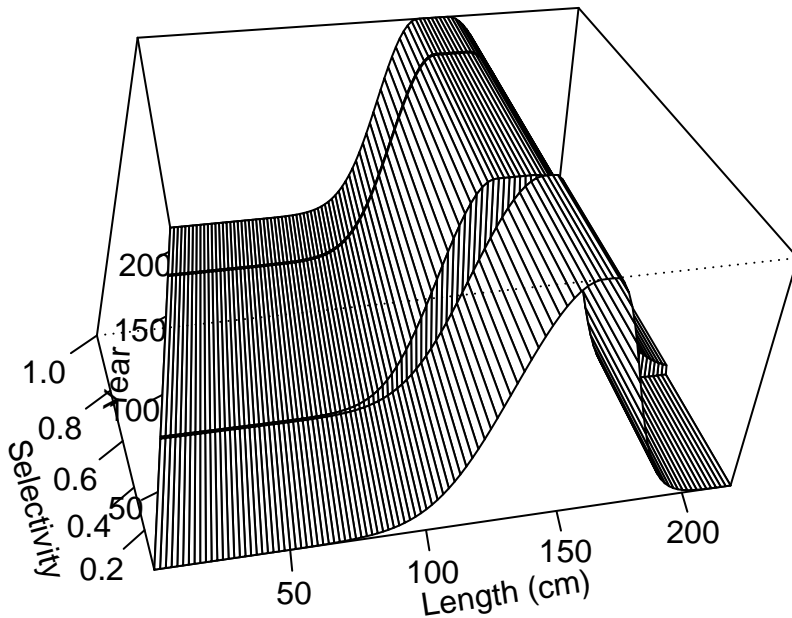
Female time-varying selectivity for A3-LL-w



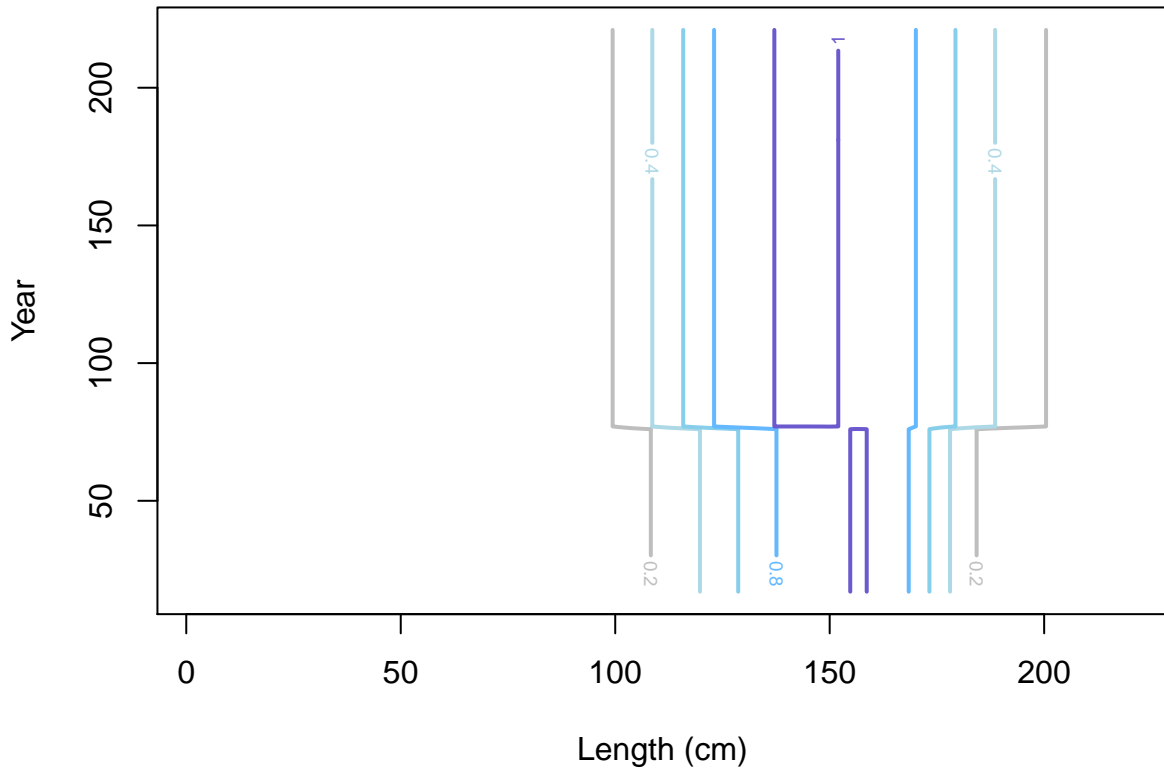
Female ending year selectivity for A3-LL-w



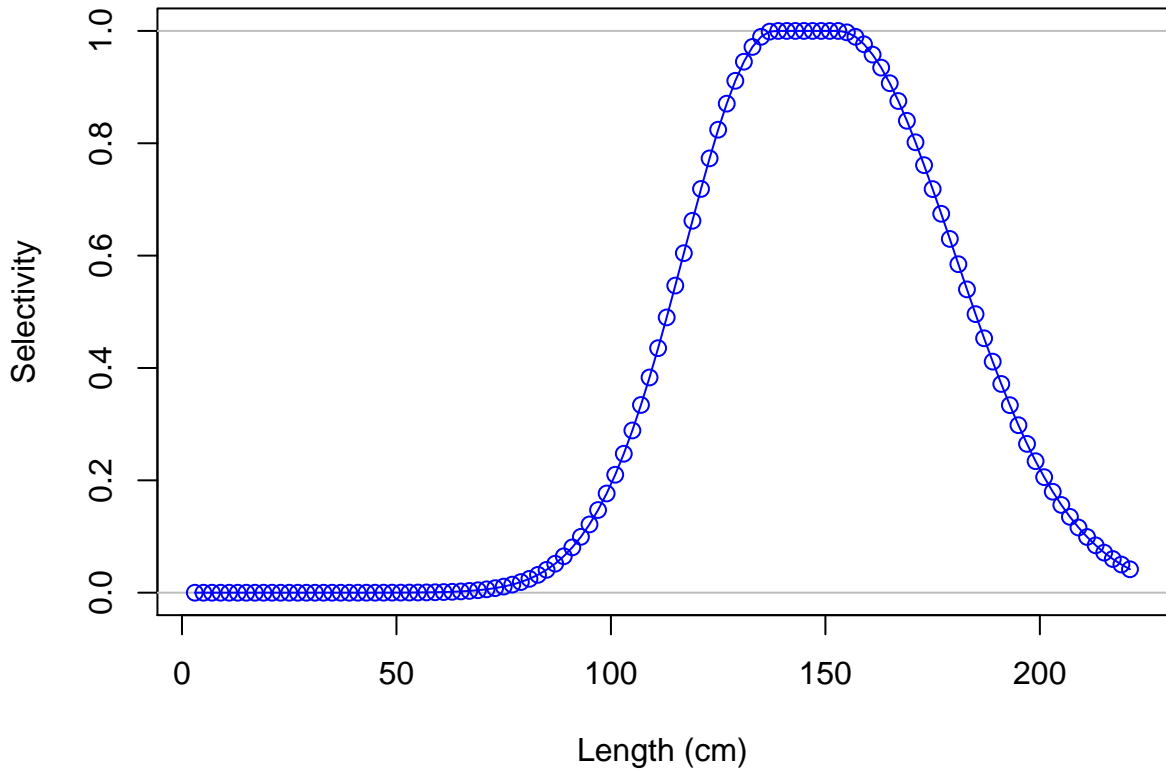
Male time-varying selectivity for A3-LL-w



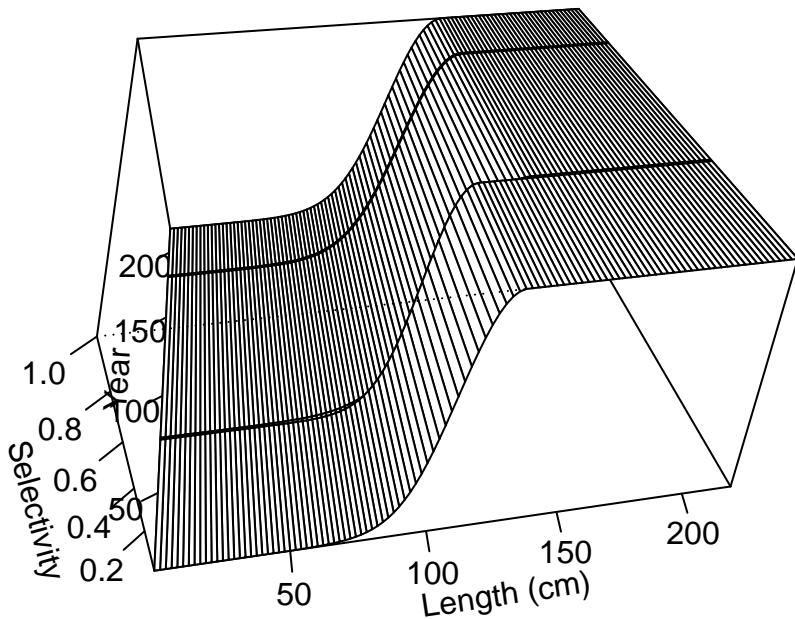
Male time-varying selectivity for A3-LL-w



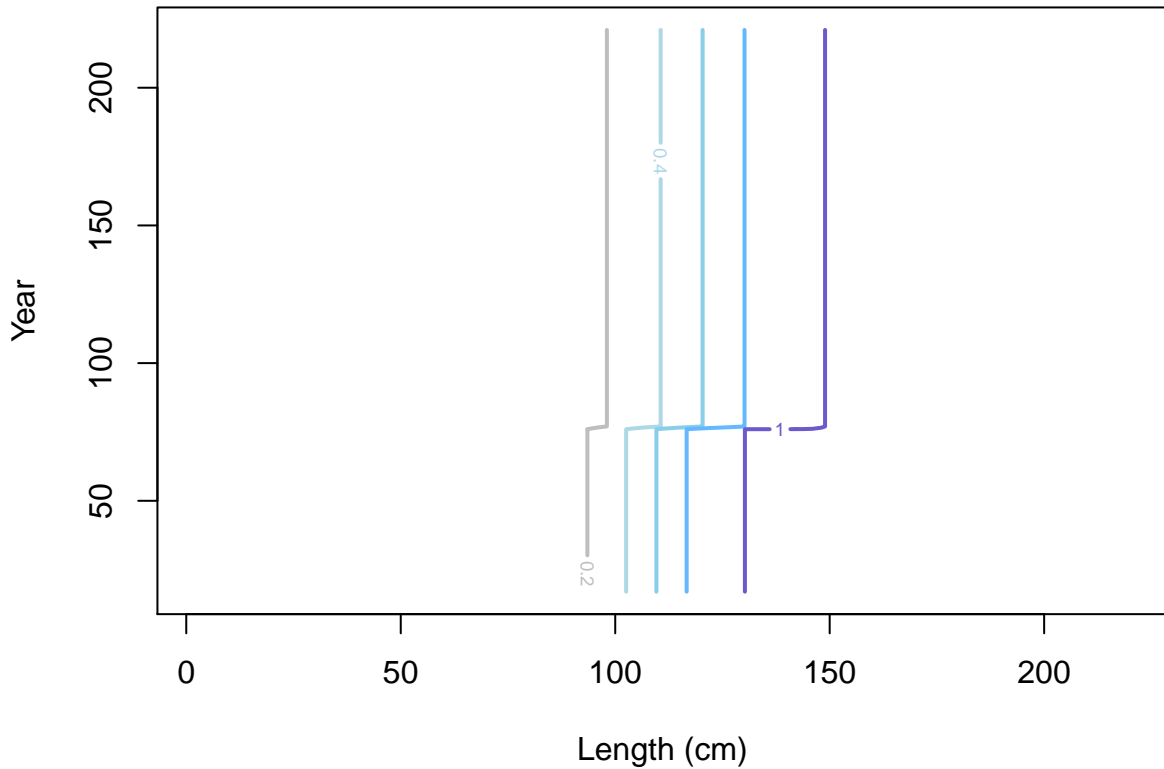
Male ending year selectivity for A3-LL-w



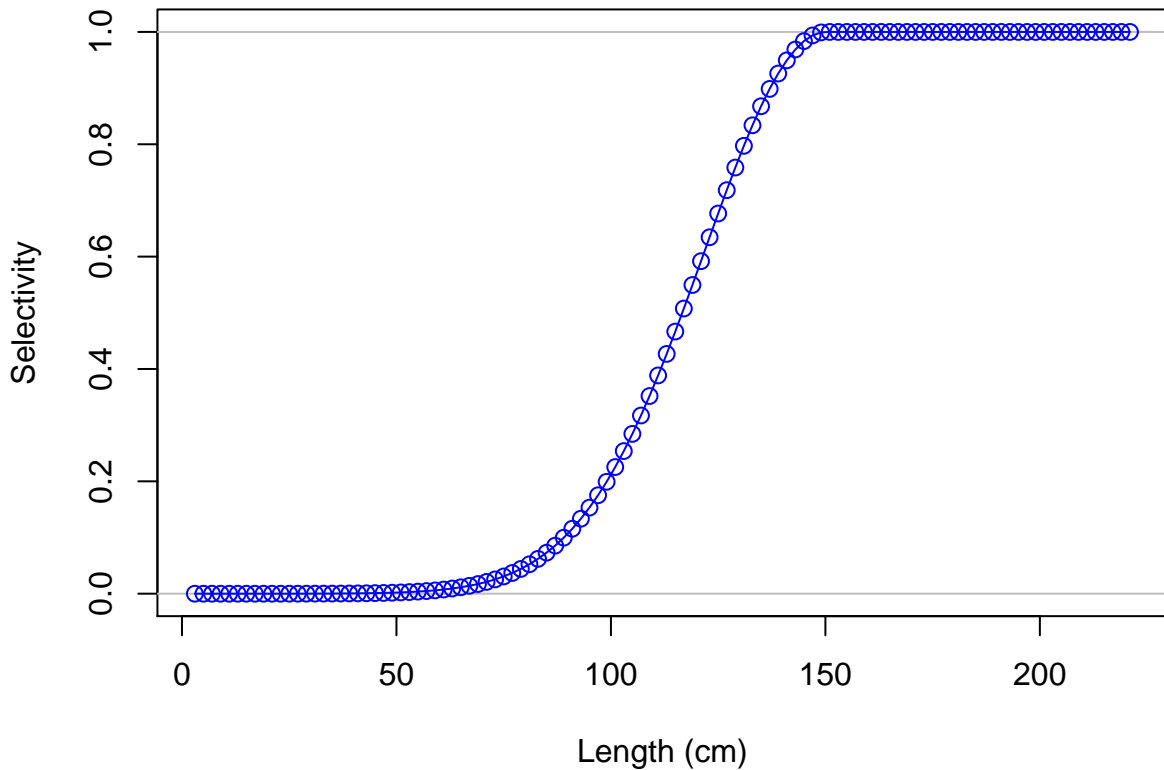
Female time-varying selectivity for A4-LL-w



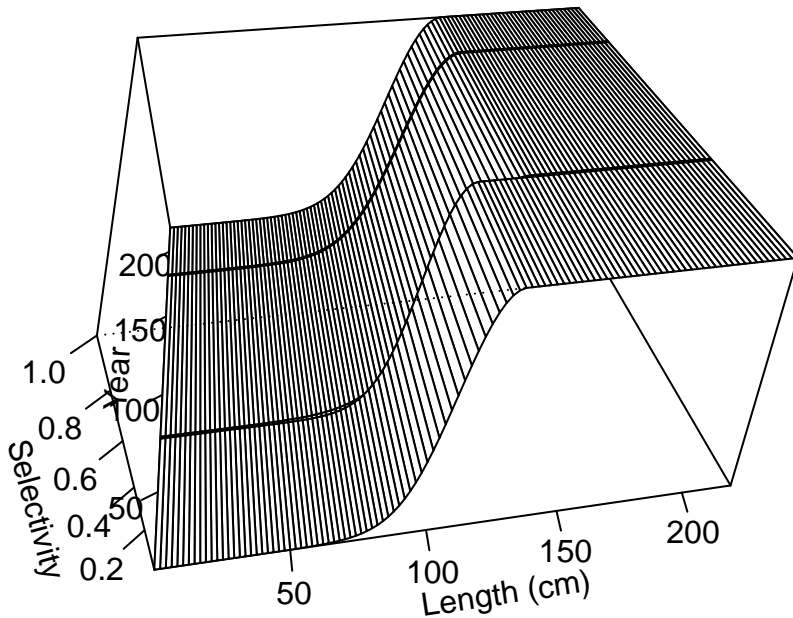
Female time-varying selectivity for A4-LL-w



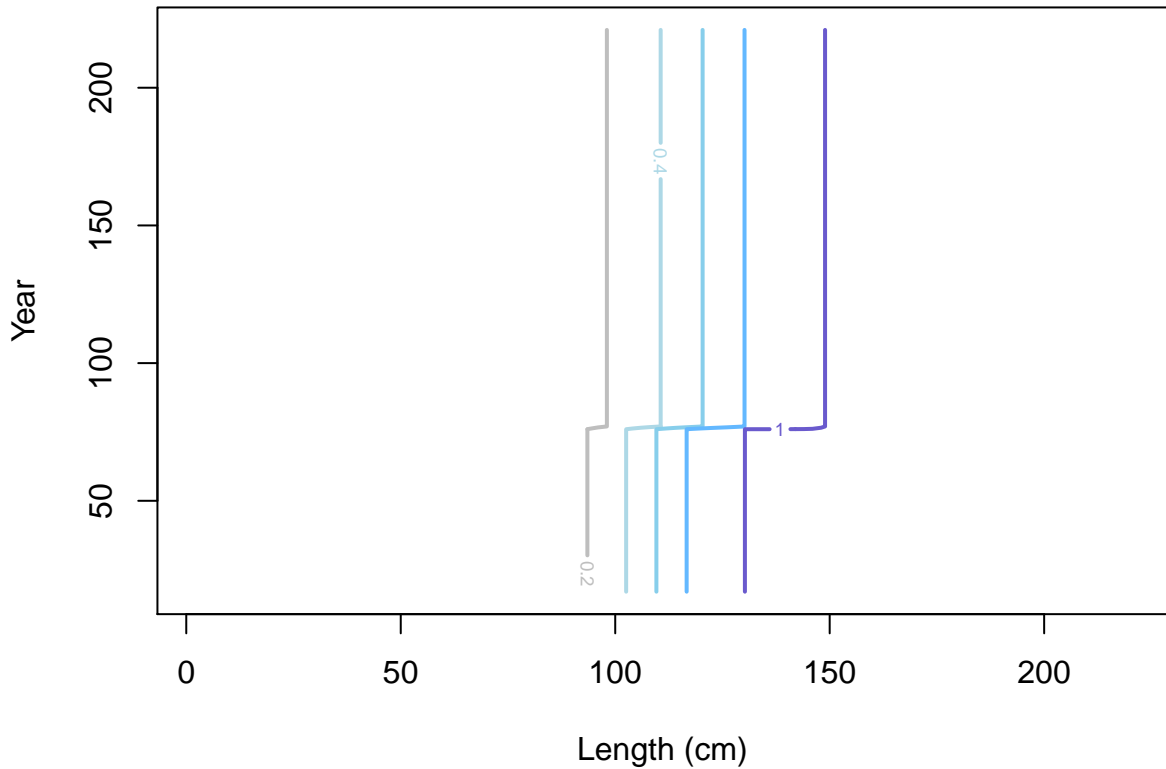
Female ending year selectivity for A4-LL-w



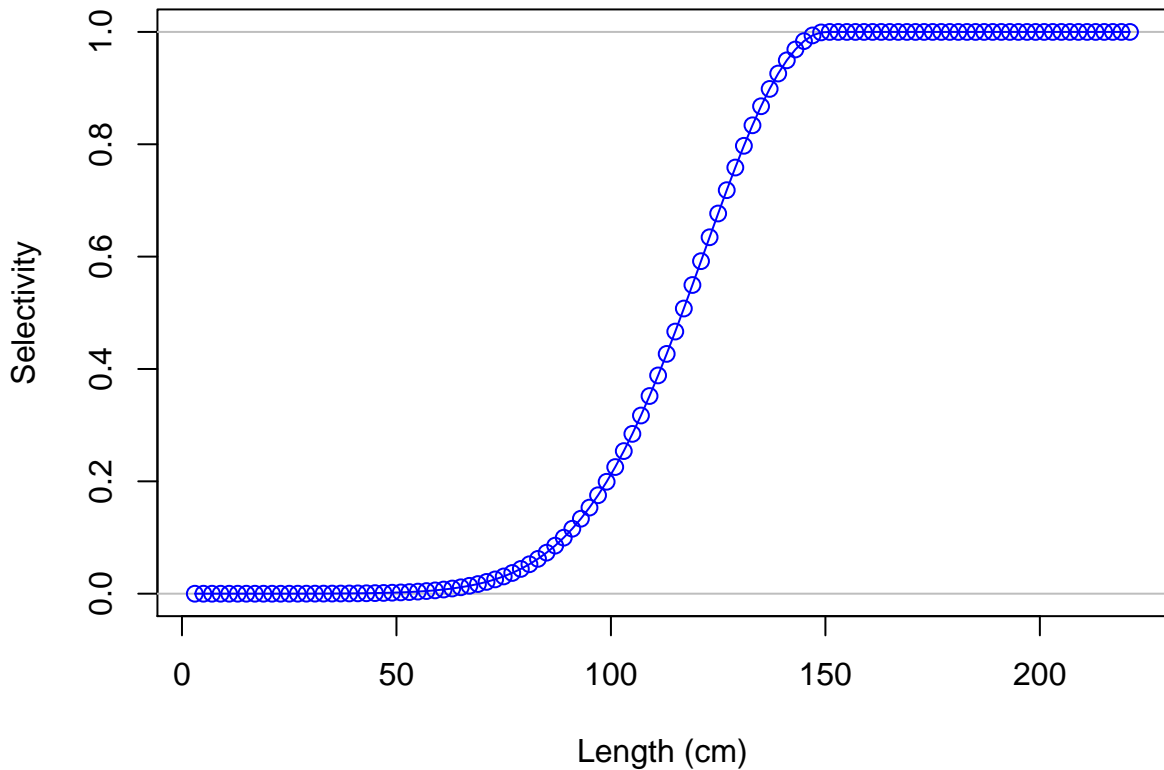
Male time-varying selectivity for A4-LL-w



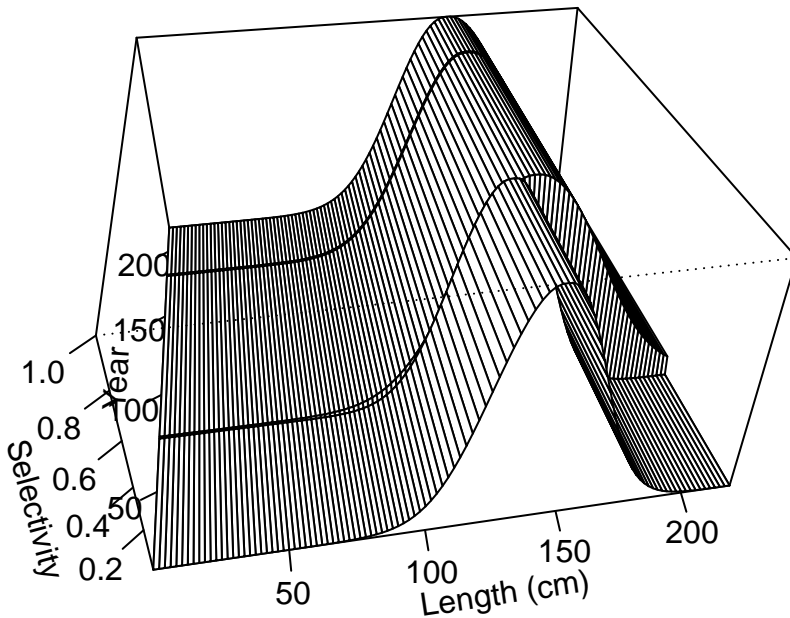
Male time-varying selectivity for A4-LL-w



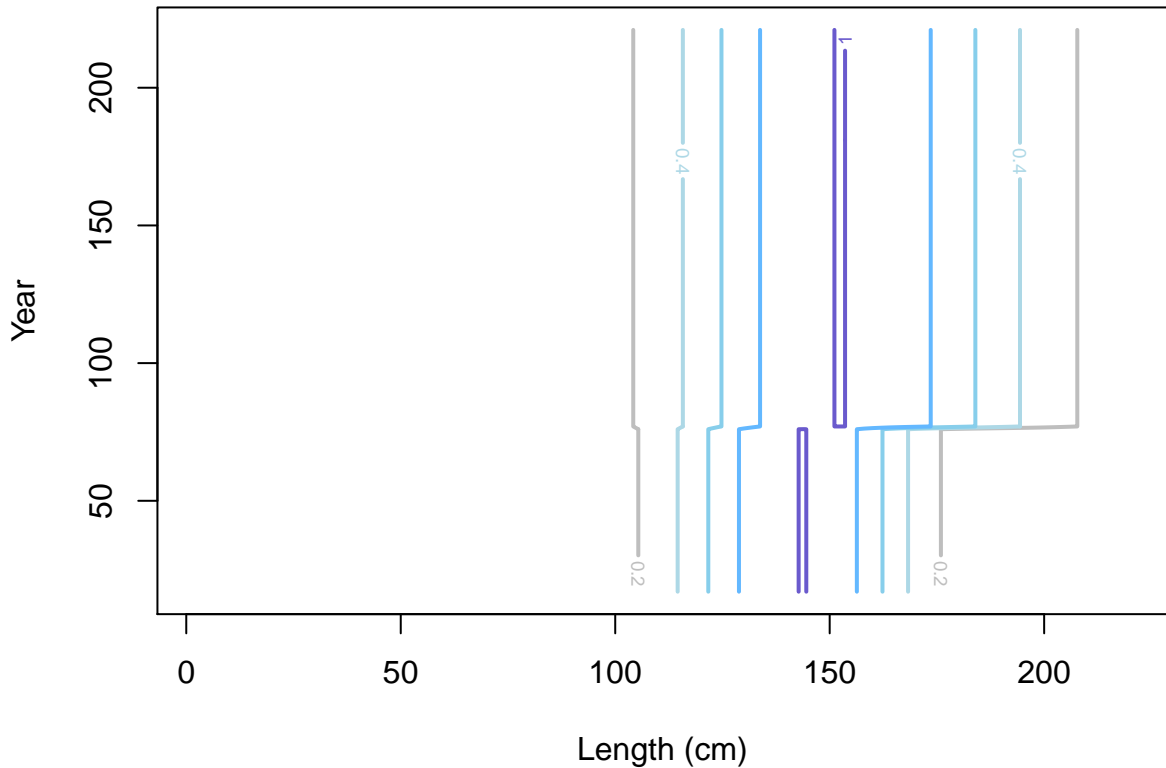
Male ending year selectivity for A4-LL-w



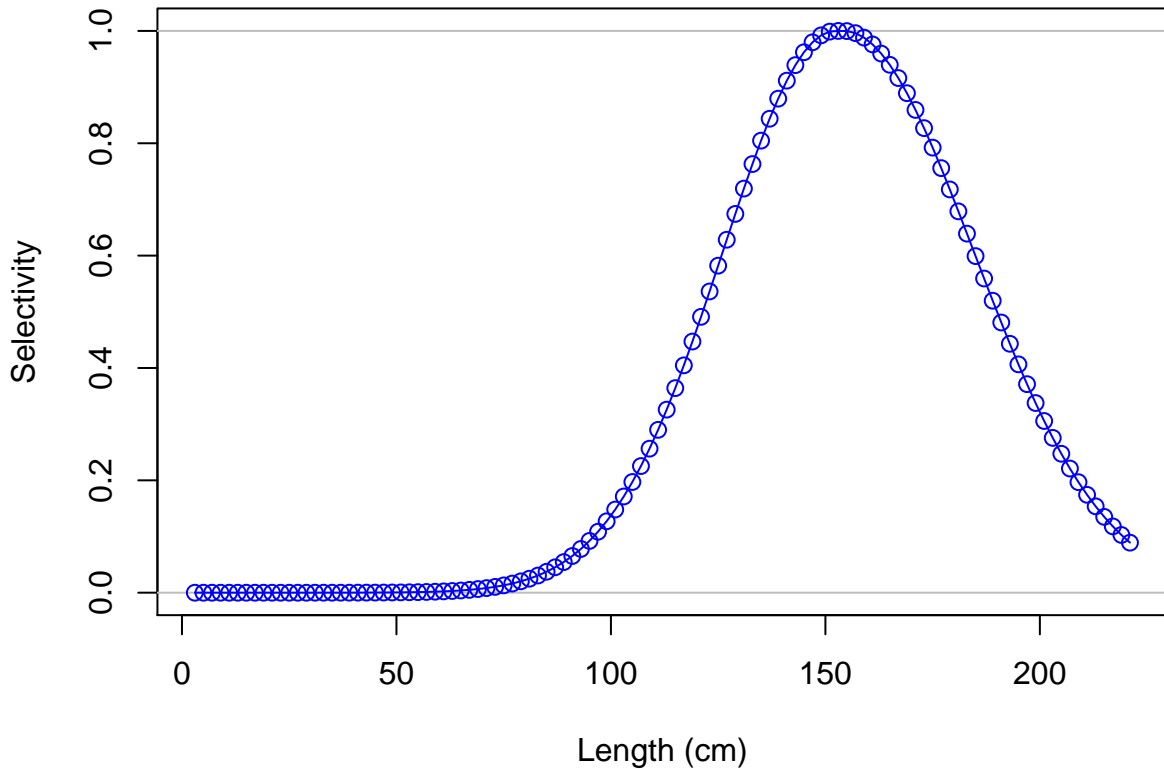
Female time-varying selectivity for A5-LL-w



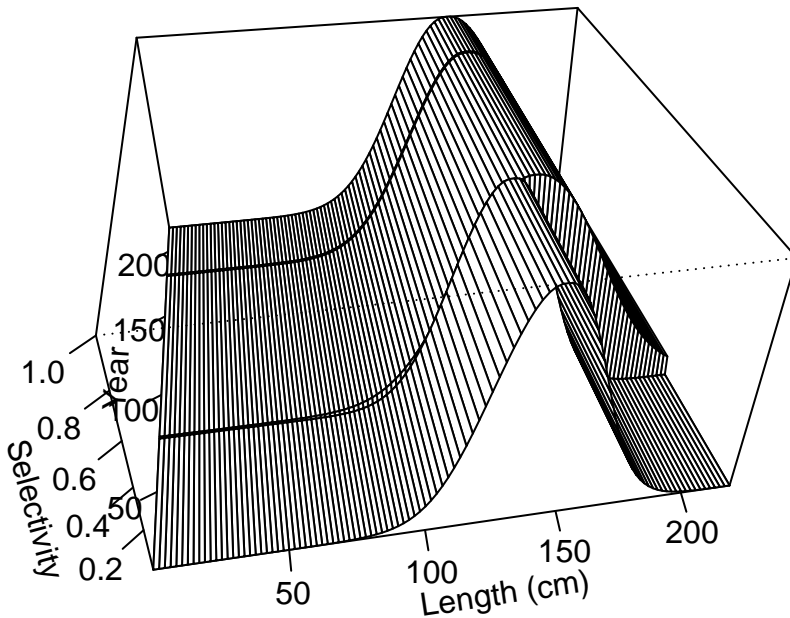
Female time-varying selectivity for A5-LL-w



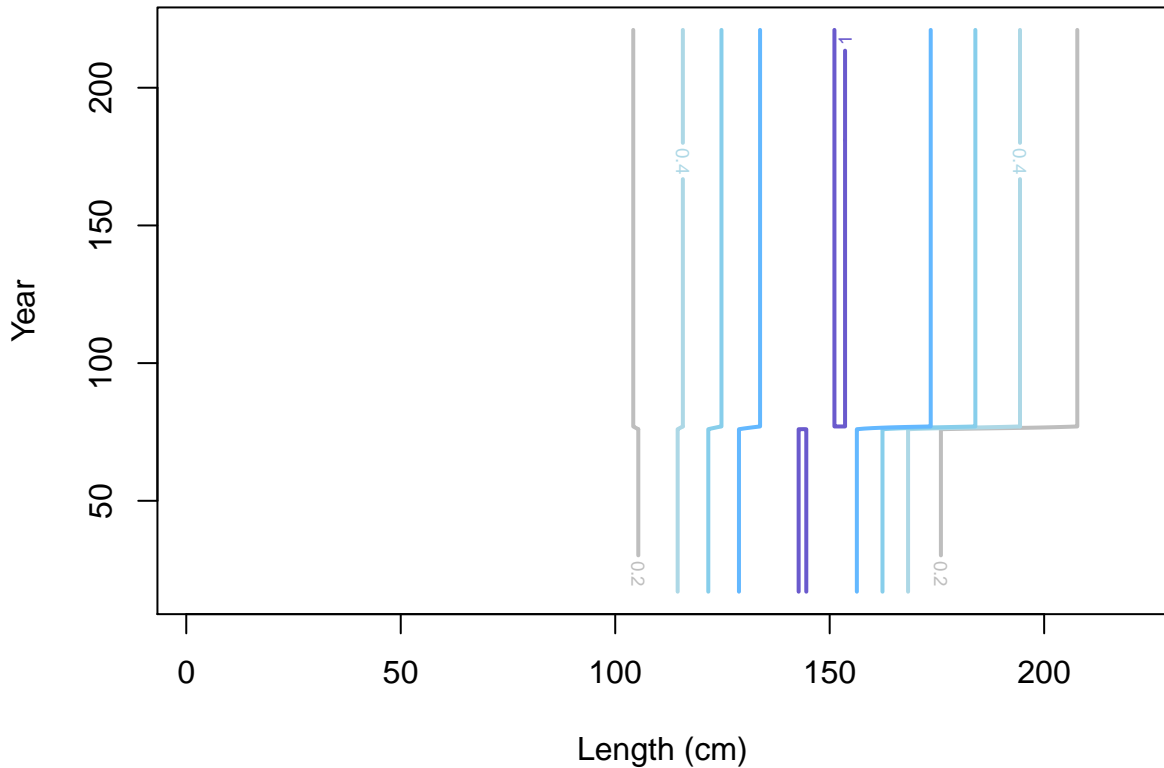
Female ending year selectivity for A5-LL-w



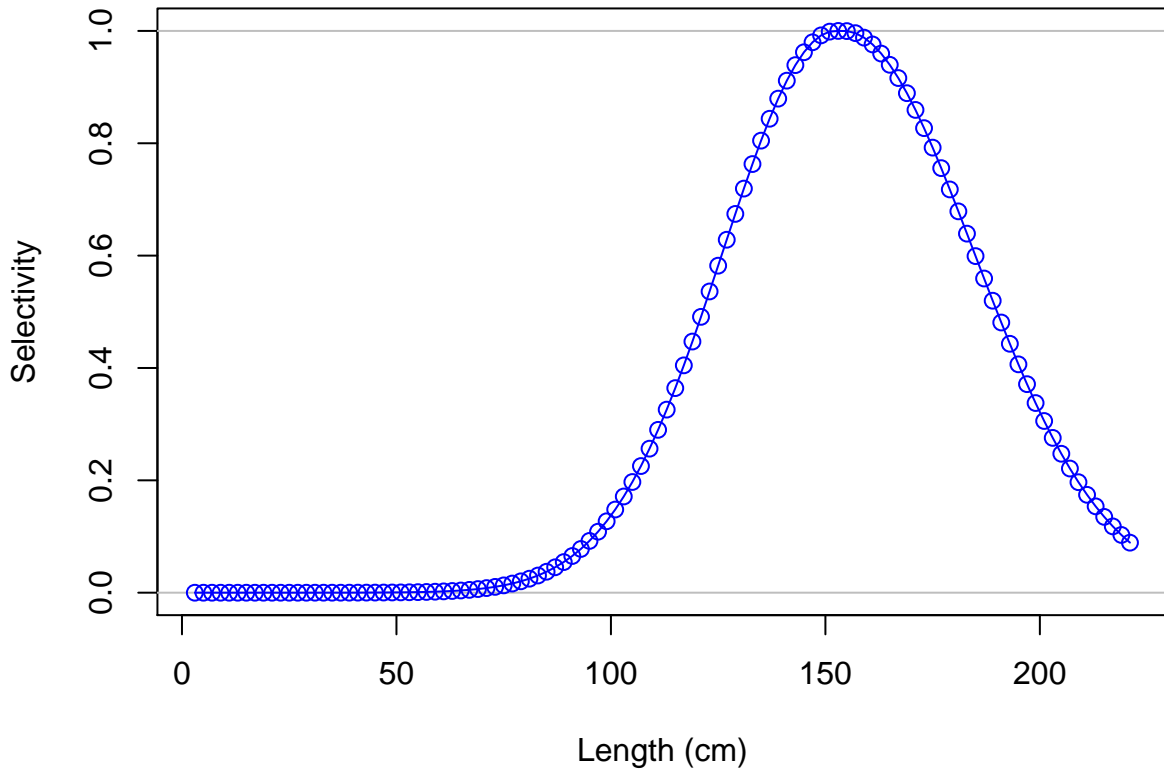
Male time-varying selectivity for A5-LL-w



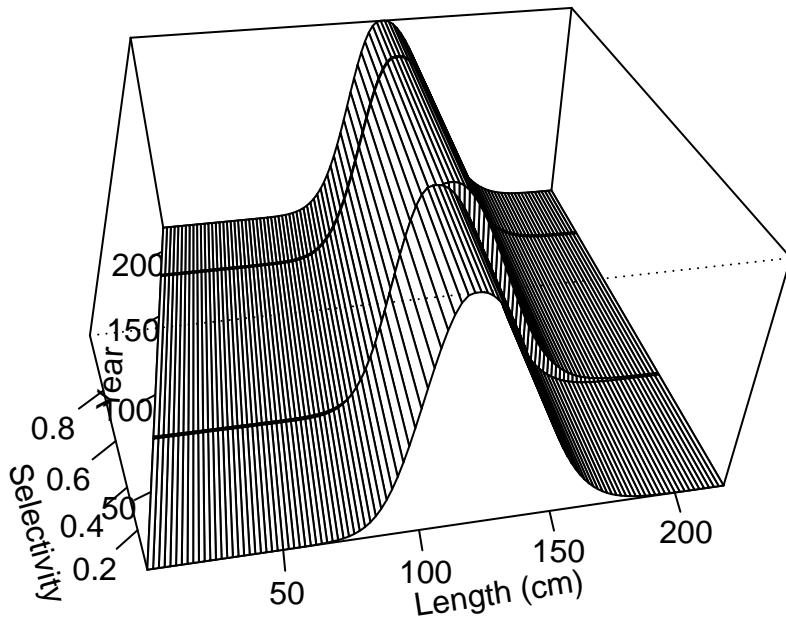
Male time-varying selectivity for A5-LL-w



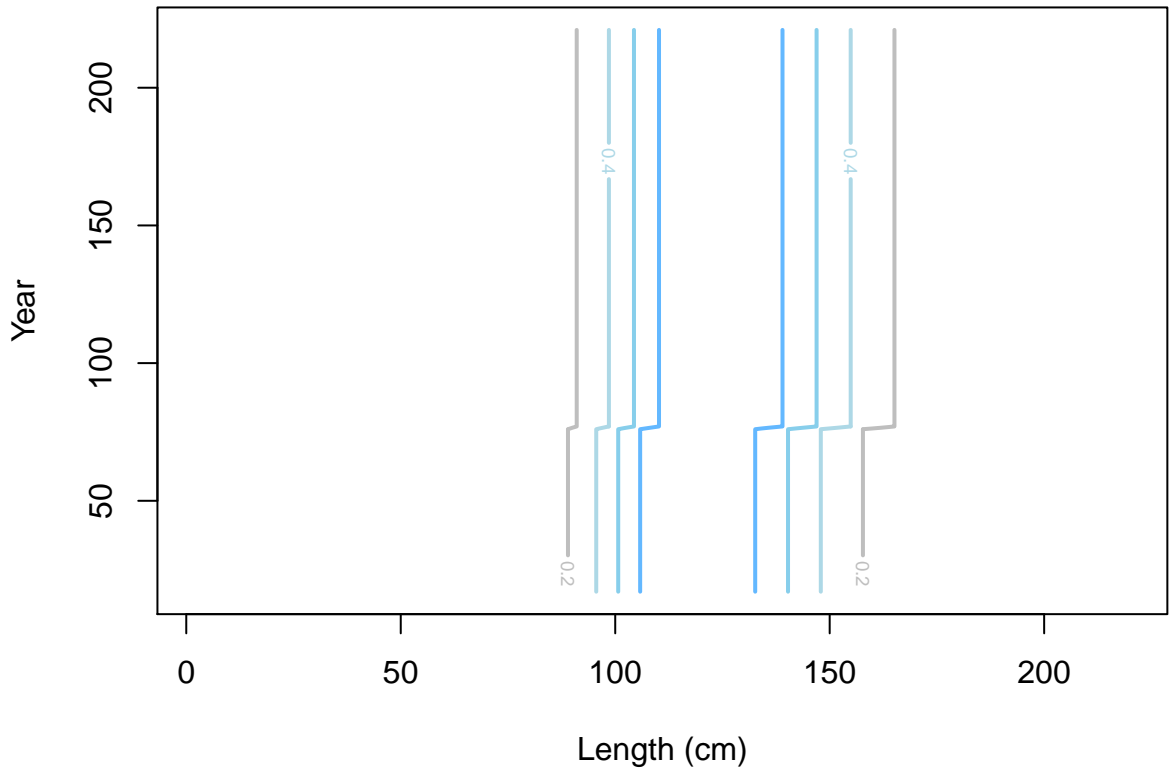
Male ending year selectivity for A5-LL-w



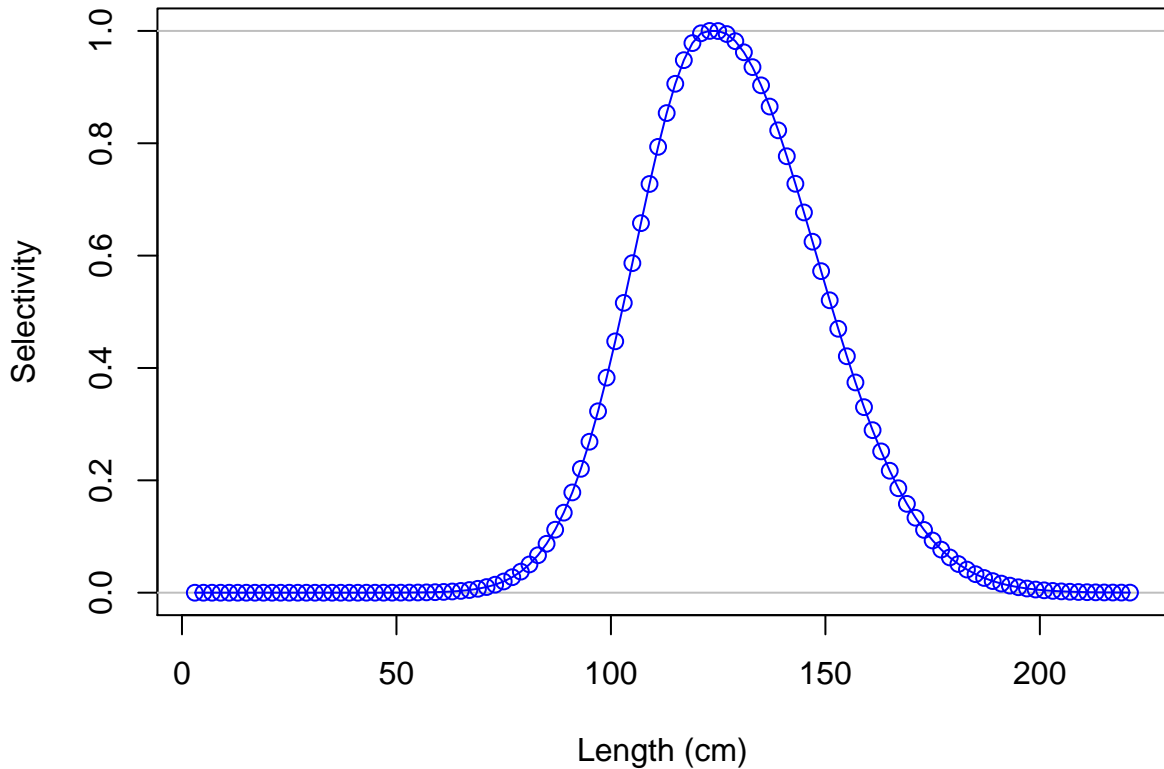
Female time-varying selectivity for A6-LL-w



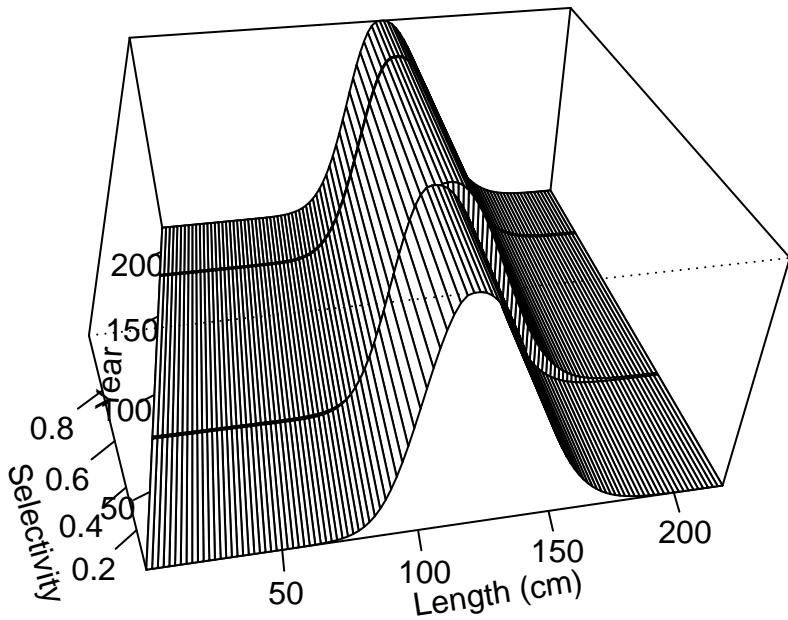
Female time-varying selectivity for A6-LL-w



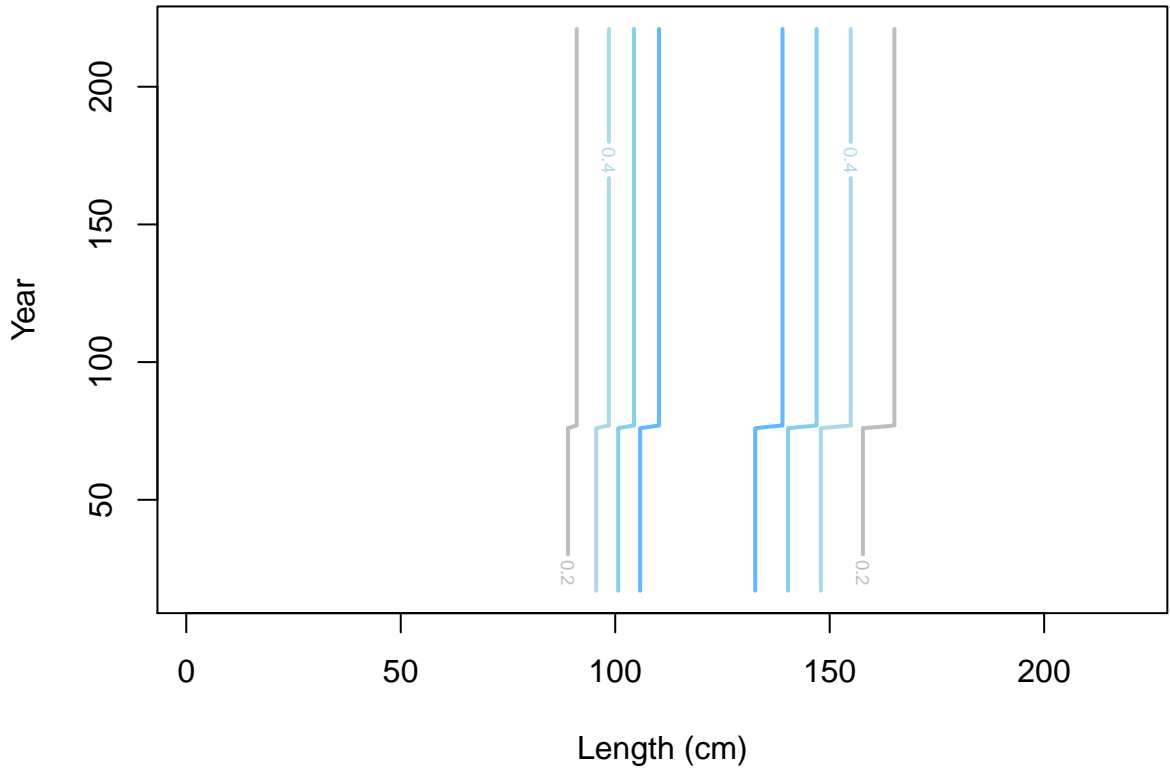
Female ending year selectivity for A6-LL-w



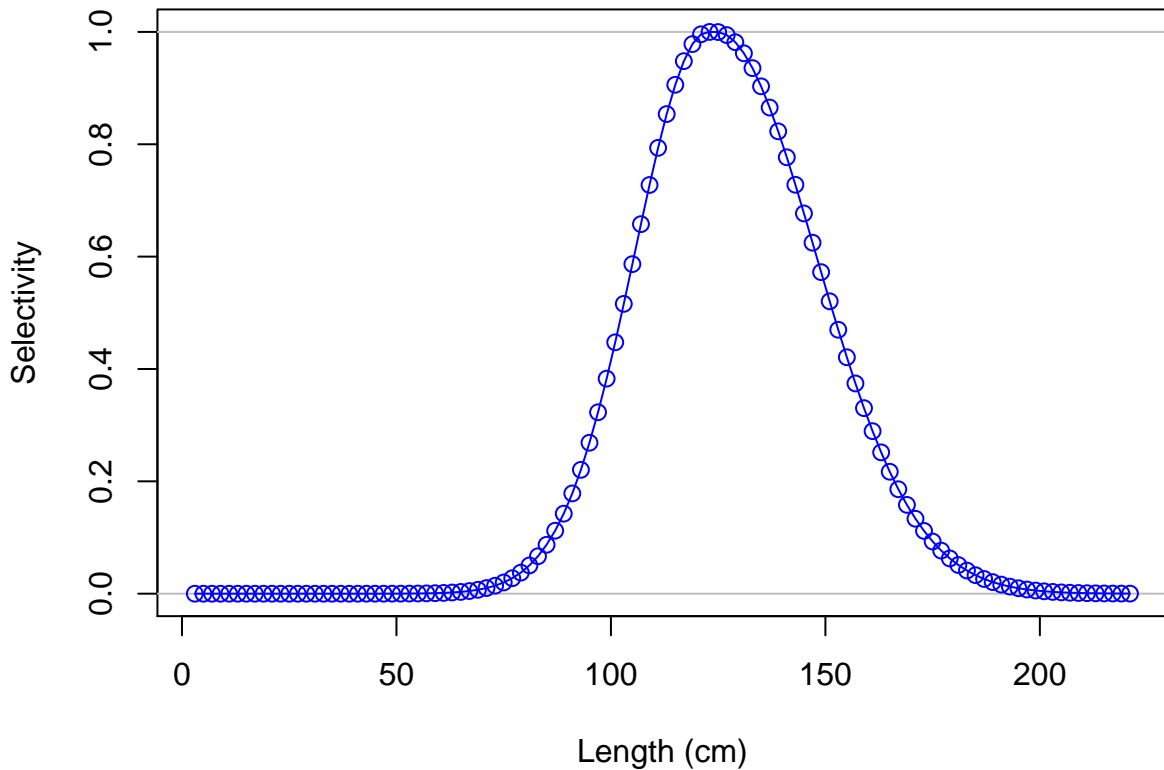
Male time-varying selectivity for A6-LL-w



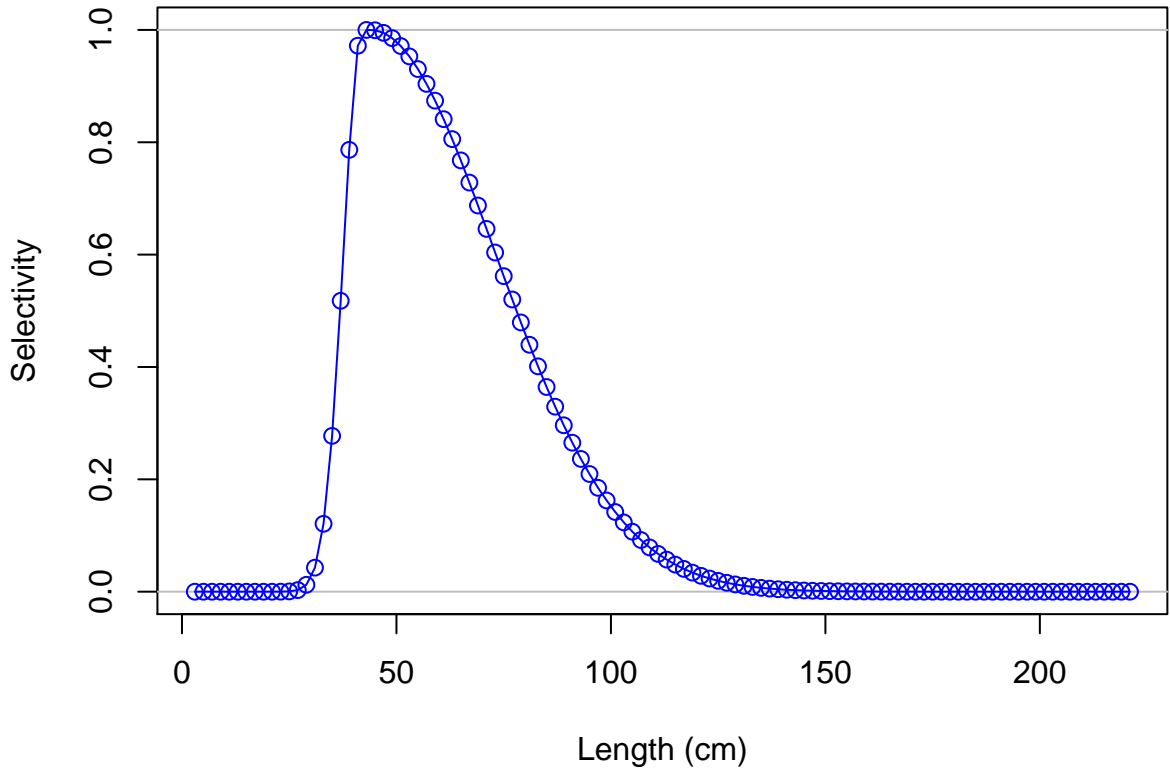
Male time-varying selectivity for A6-LL-w



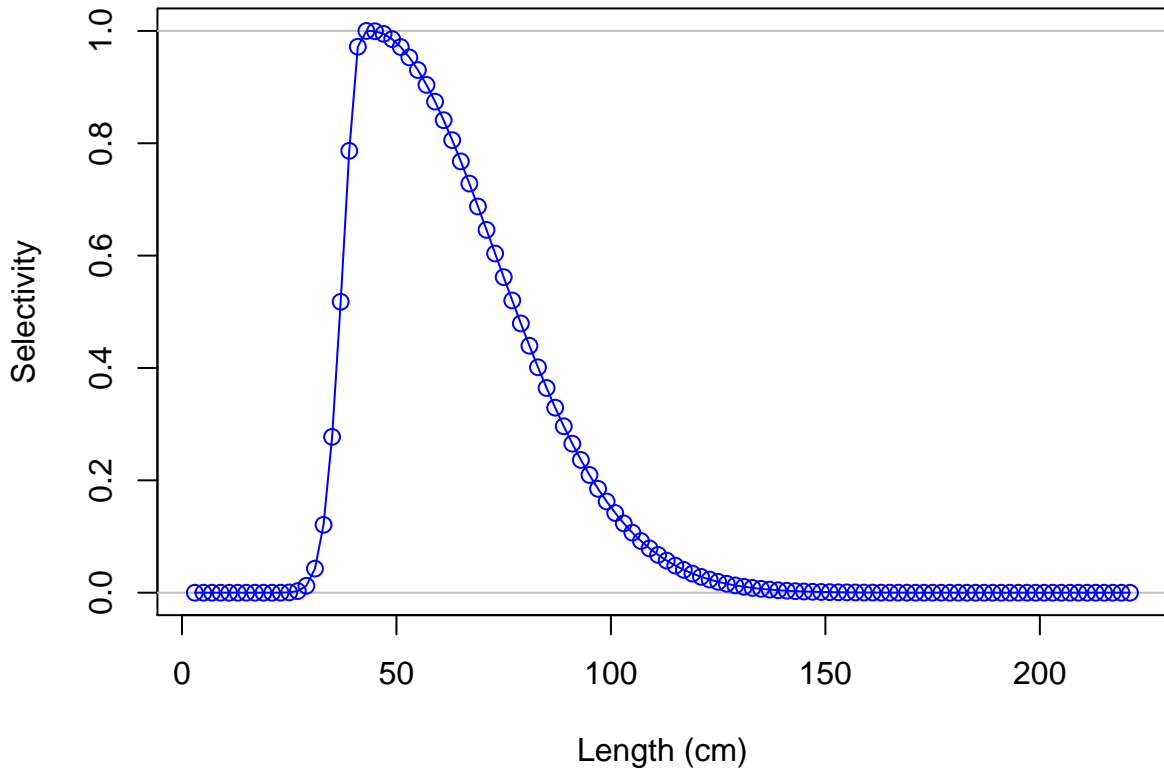
Male ending year selectivity for A6-LL-w



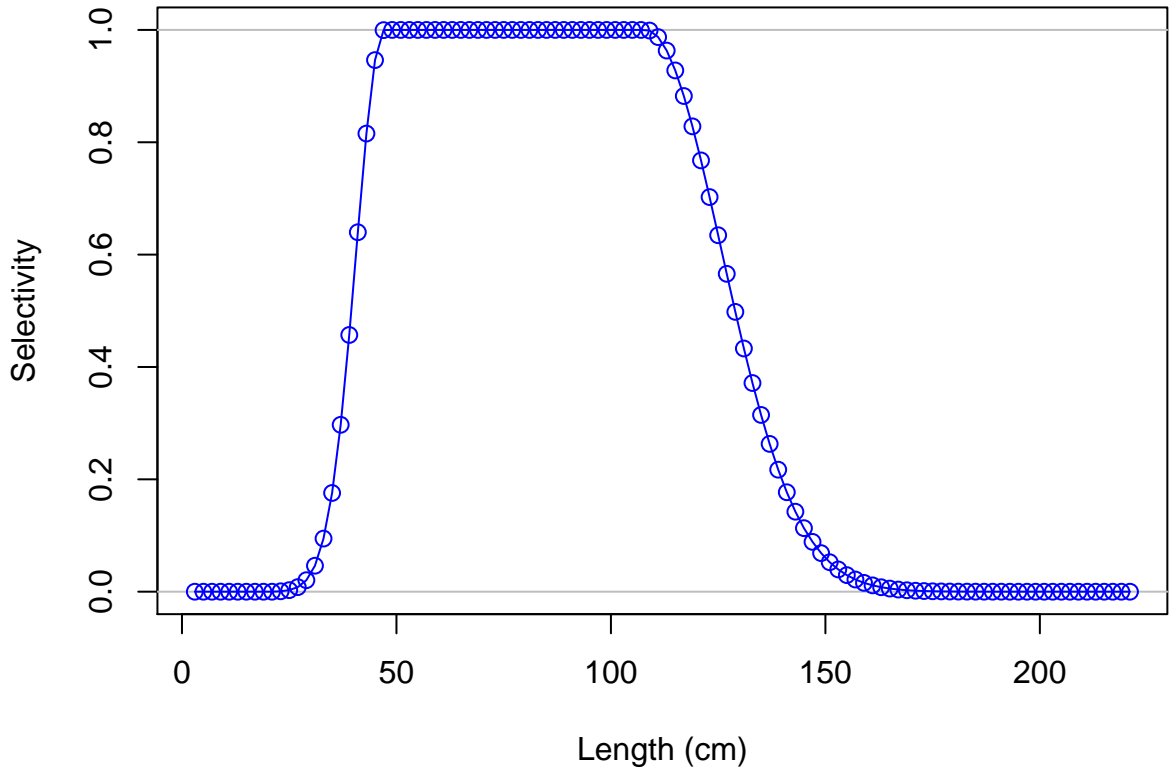
Female ending year selectivity for A2-OBJ



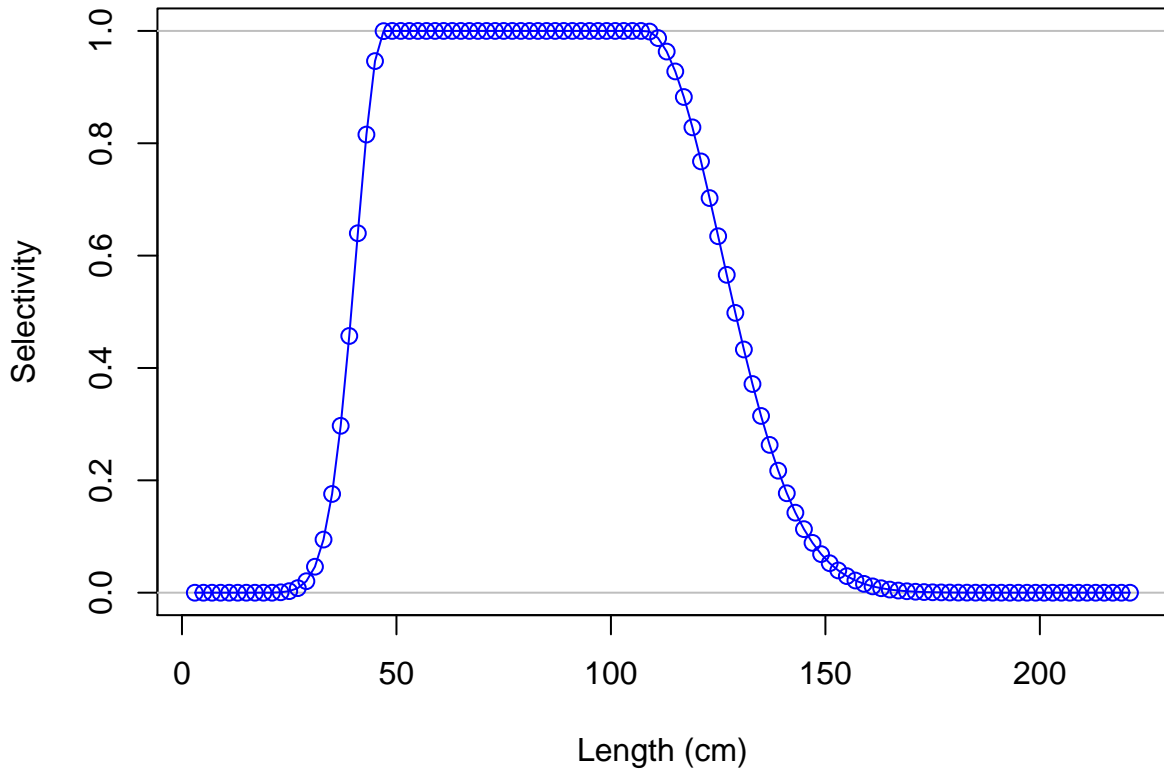
Male ending year selectivity for A2-OBJ



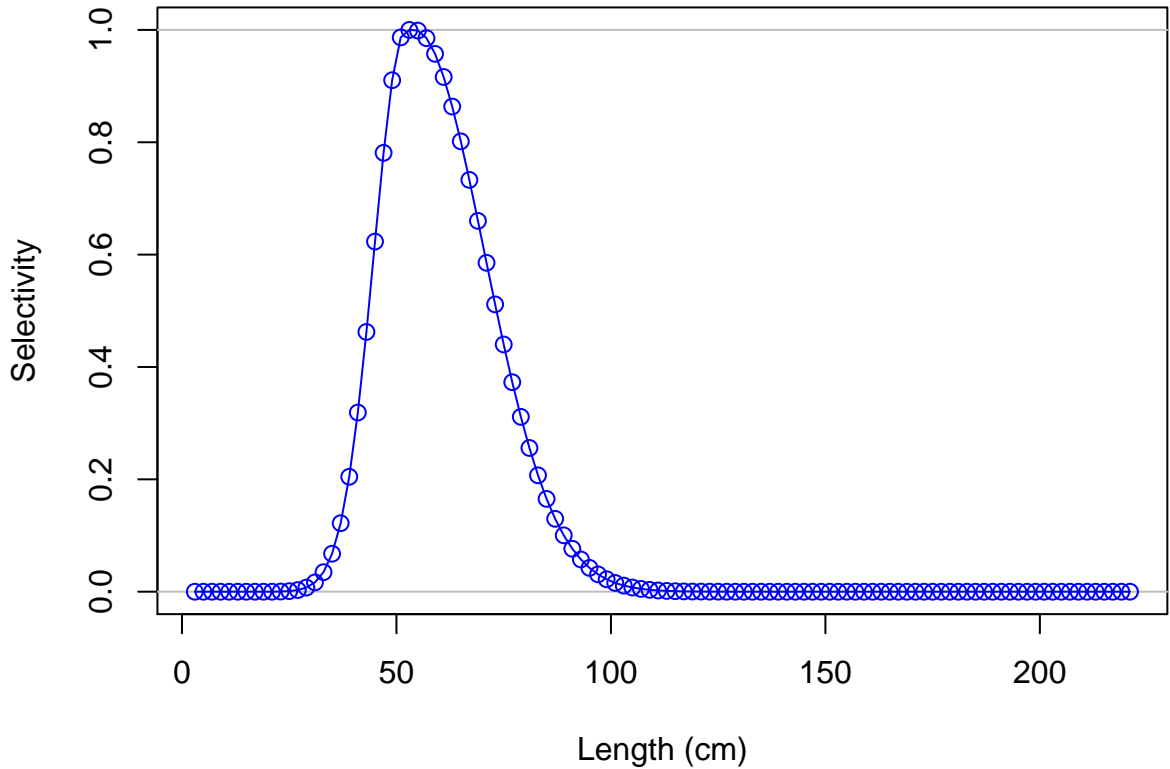
Female ending year selectivity for A3-OBJ



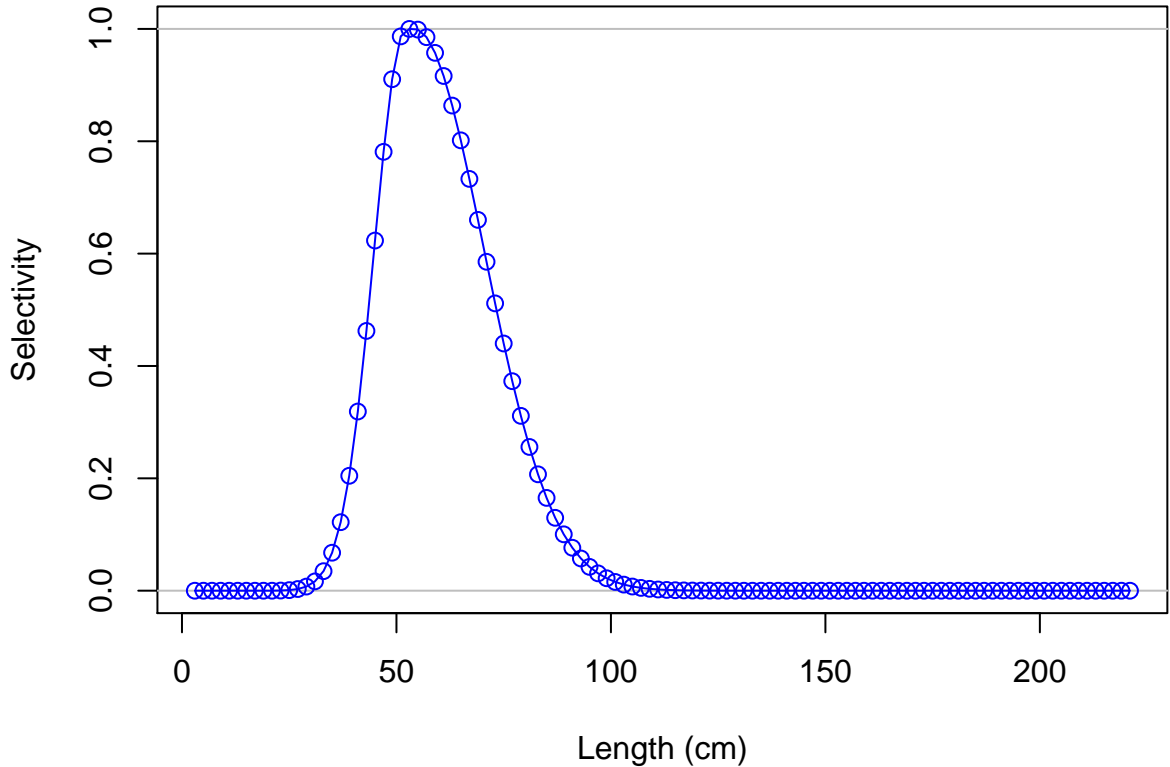
Male ending year selectivity for A3-OBJ



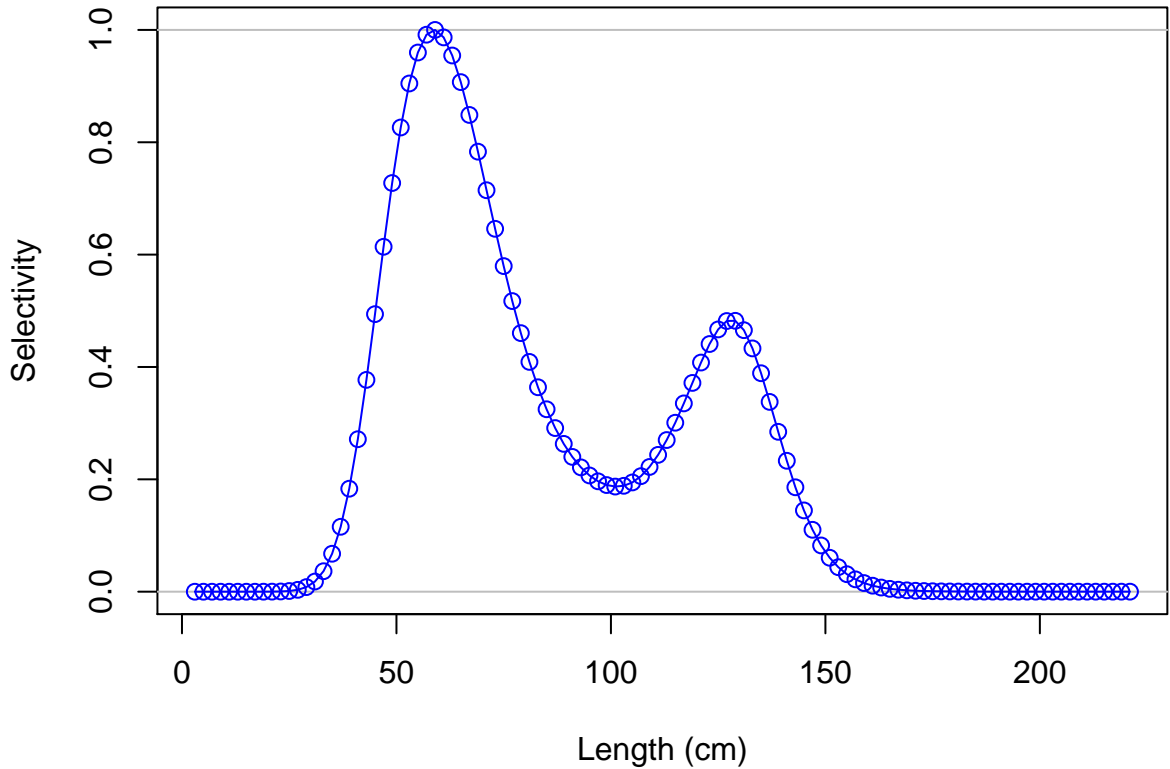
Female ending year selectivity for A4-Obj



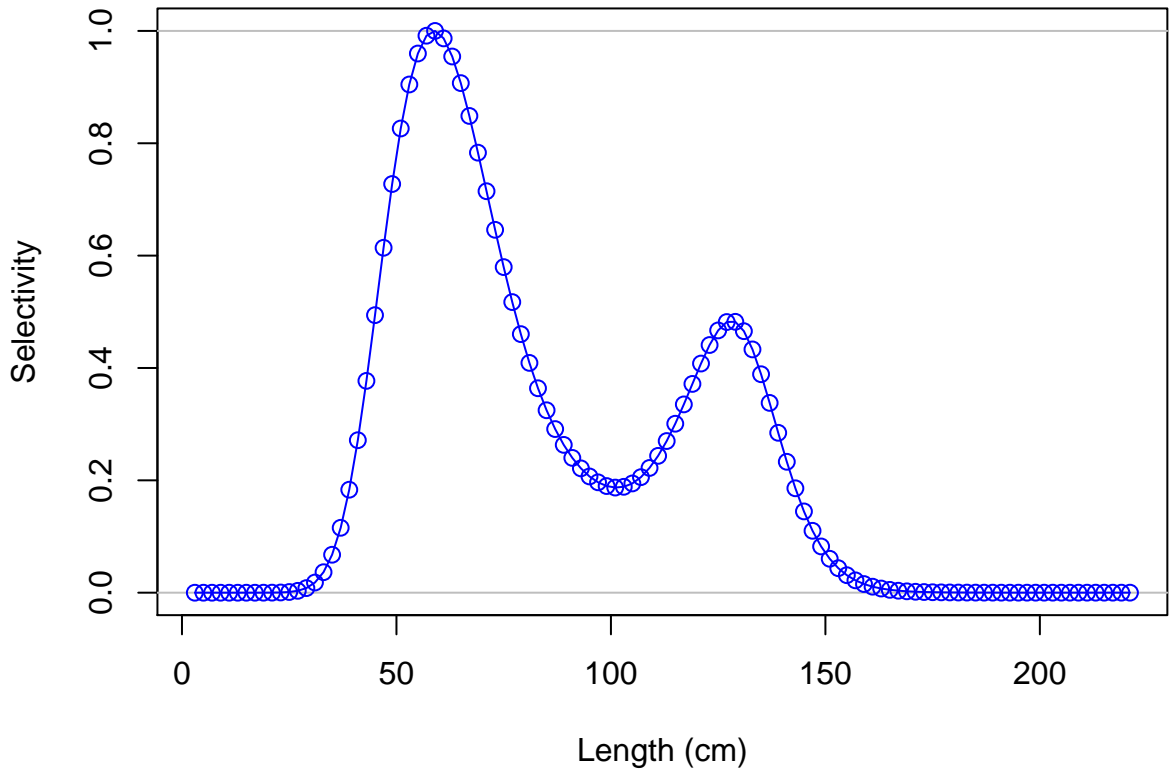
Male ending year selectivity for A4-OBJ



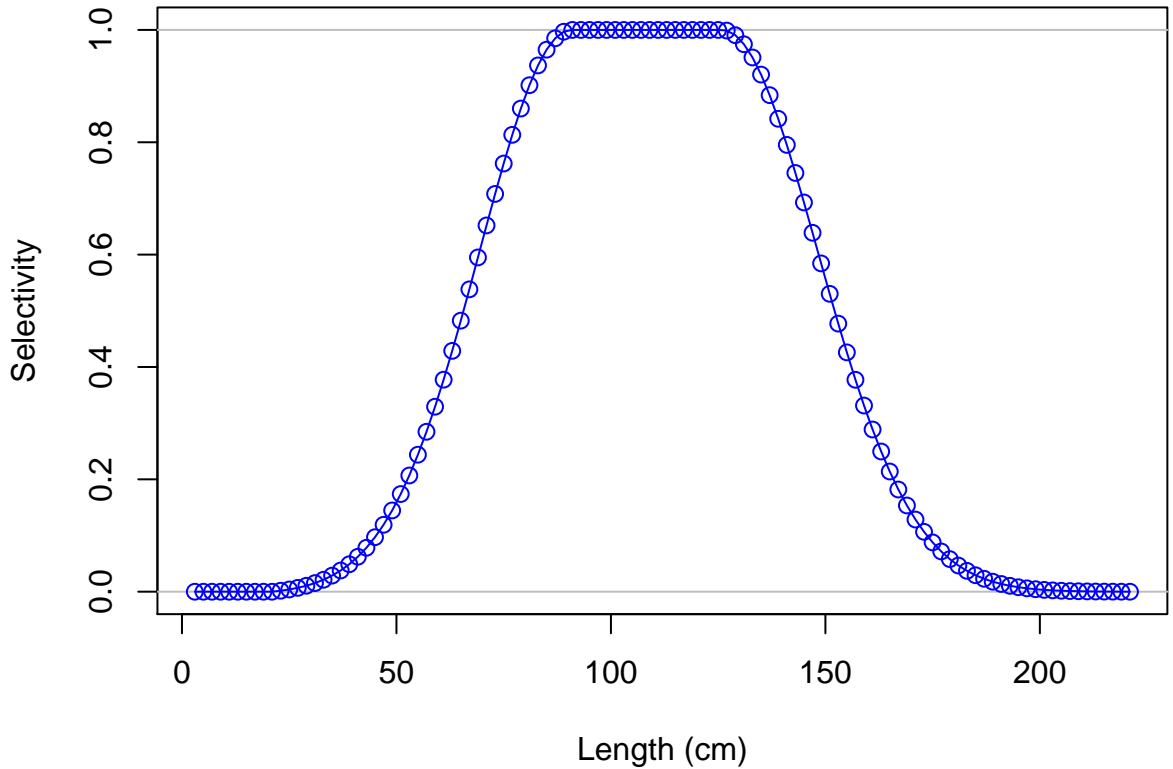
Female ending year selectivity for A5-OBJ



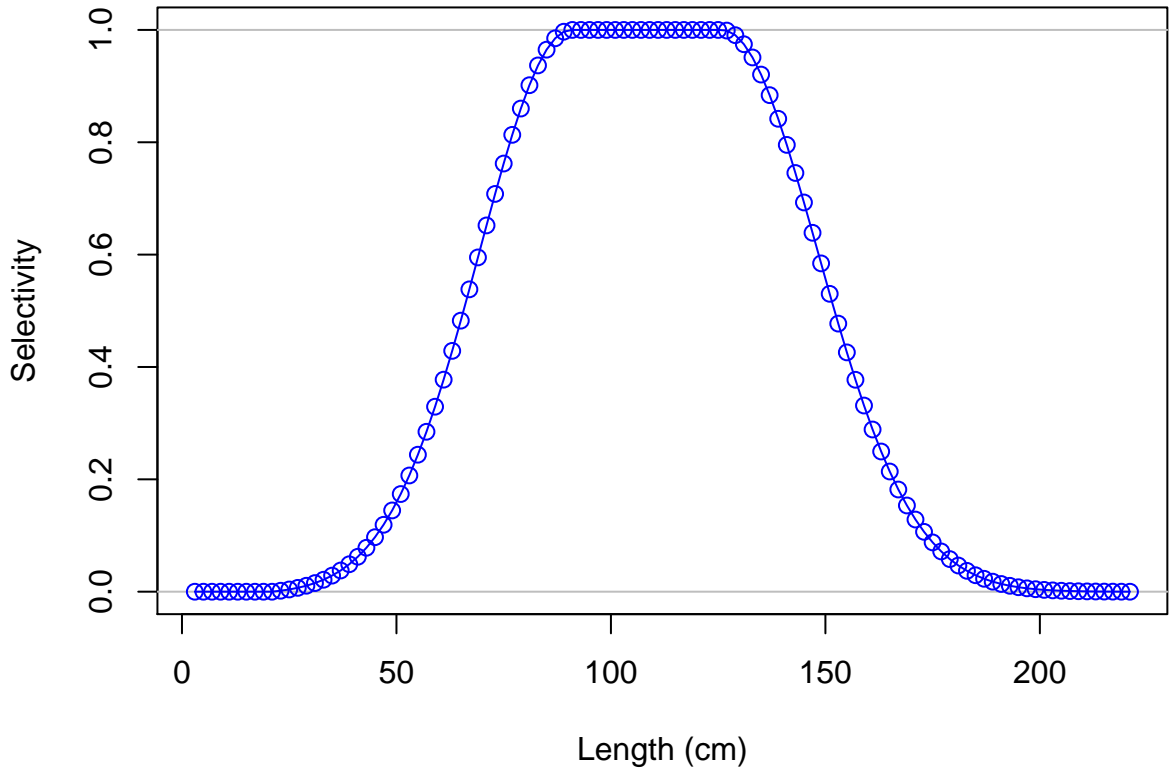
Male ending year selectivity for A5-OBJ



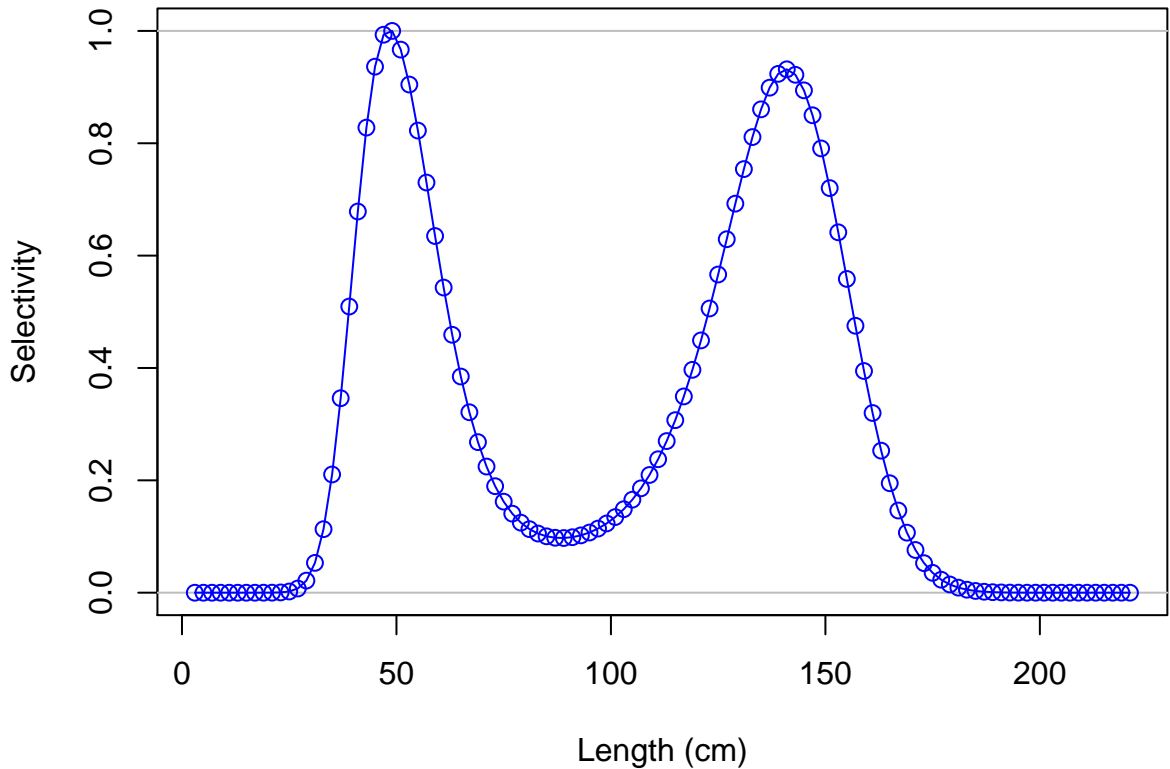
Female ending year selectivity for A6-OBJ



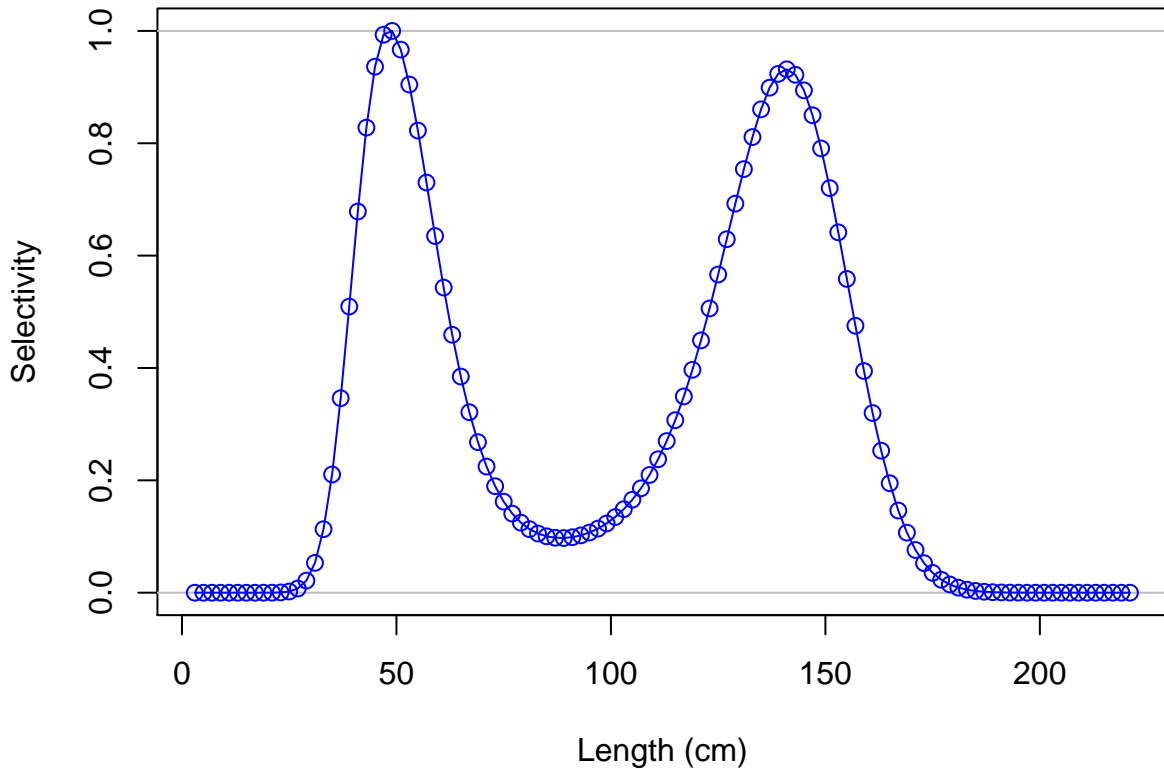
Male ending year selectivity for A6-OBJ



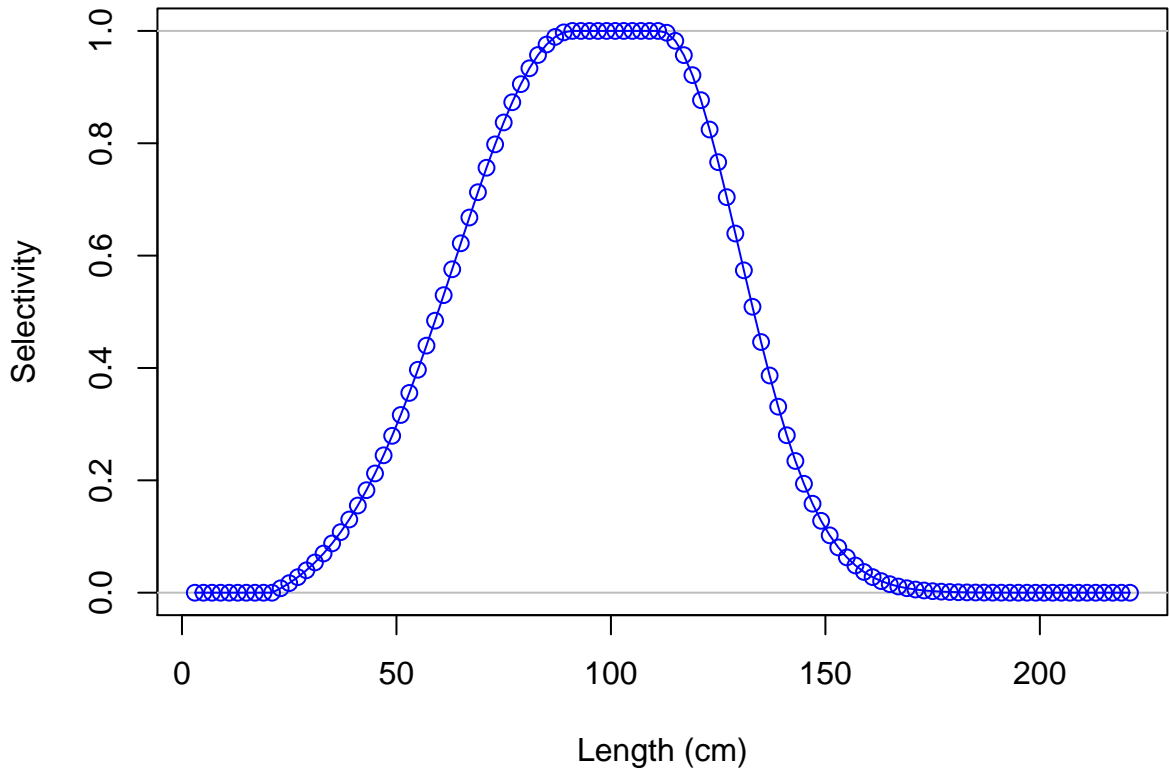
Female ending year selectivity for A2-NOADEL



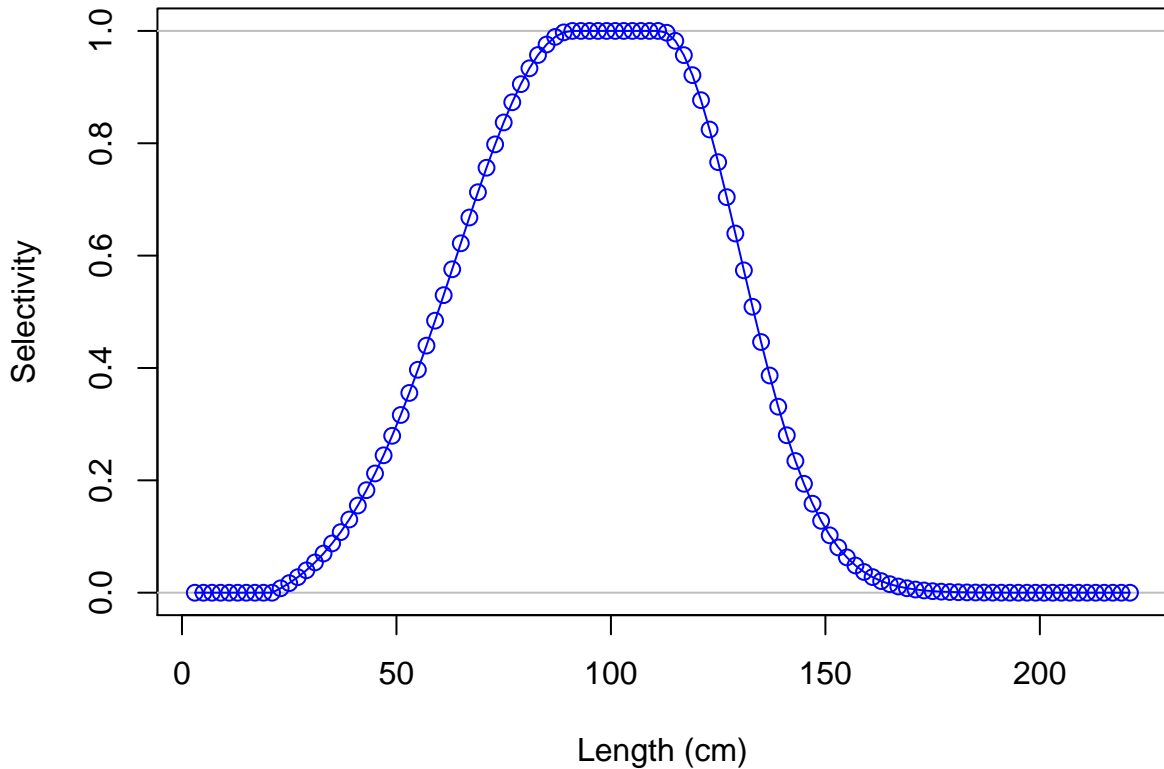
Male ending year selectivity for A2-NOADEL



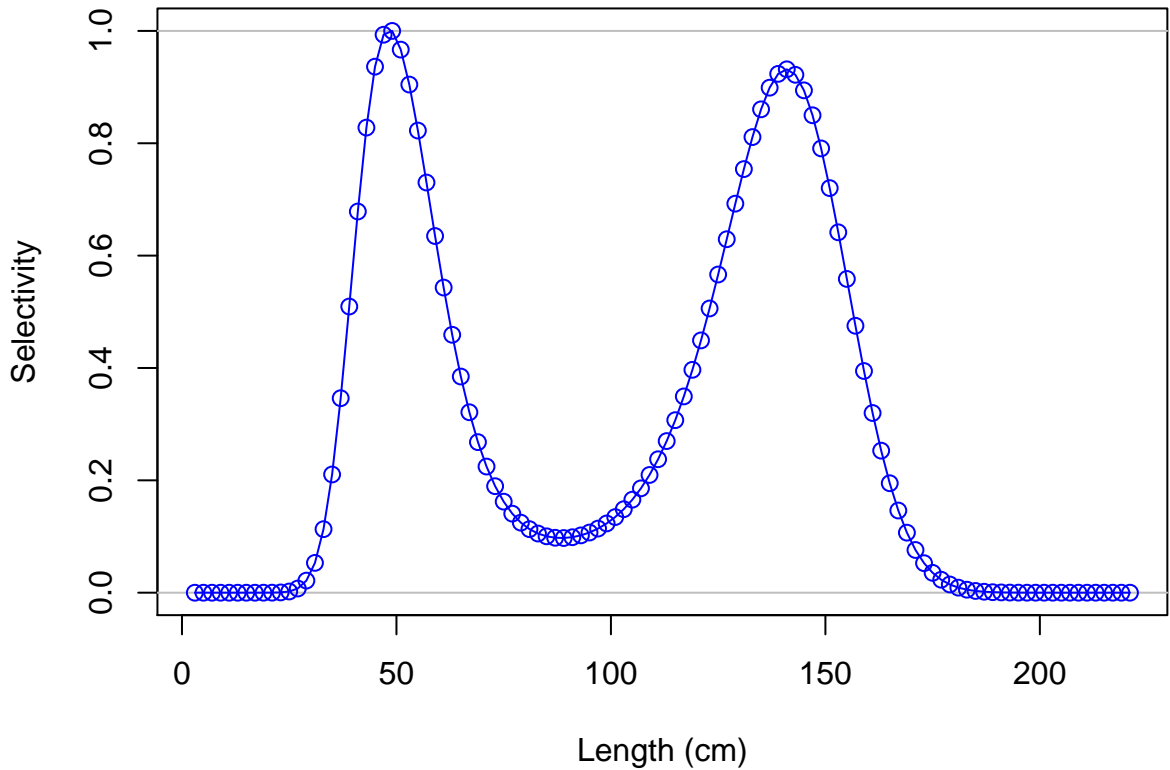
Female ending year selectivity for A3-NOADEL



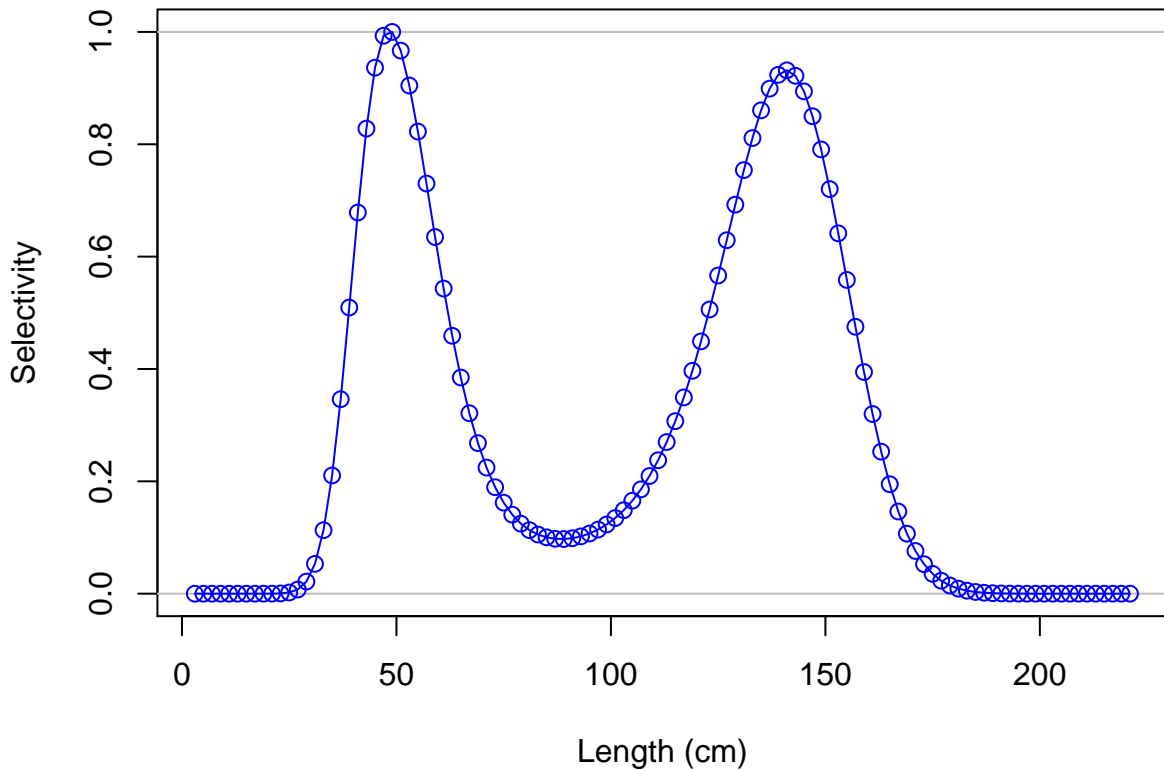
Male ending year selectivity for A3-NOADEL



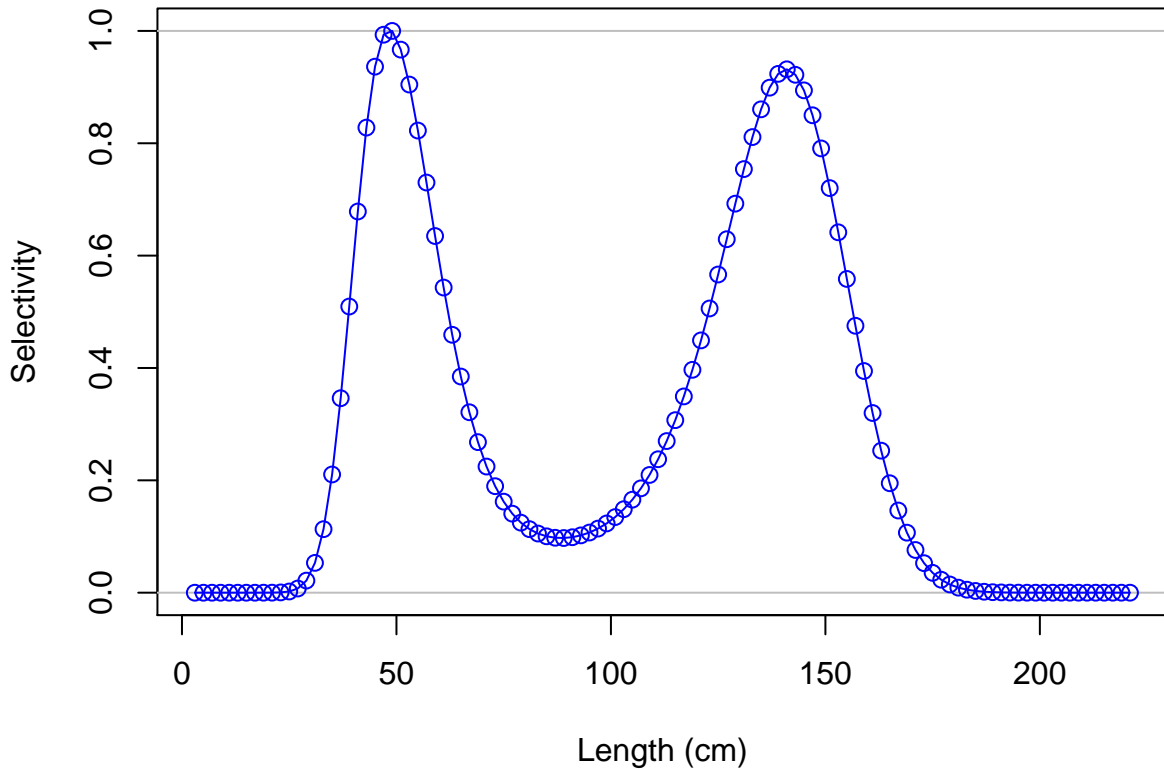
Female ending year selectivity for A4-NOADEL



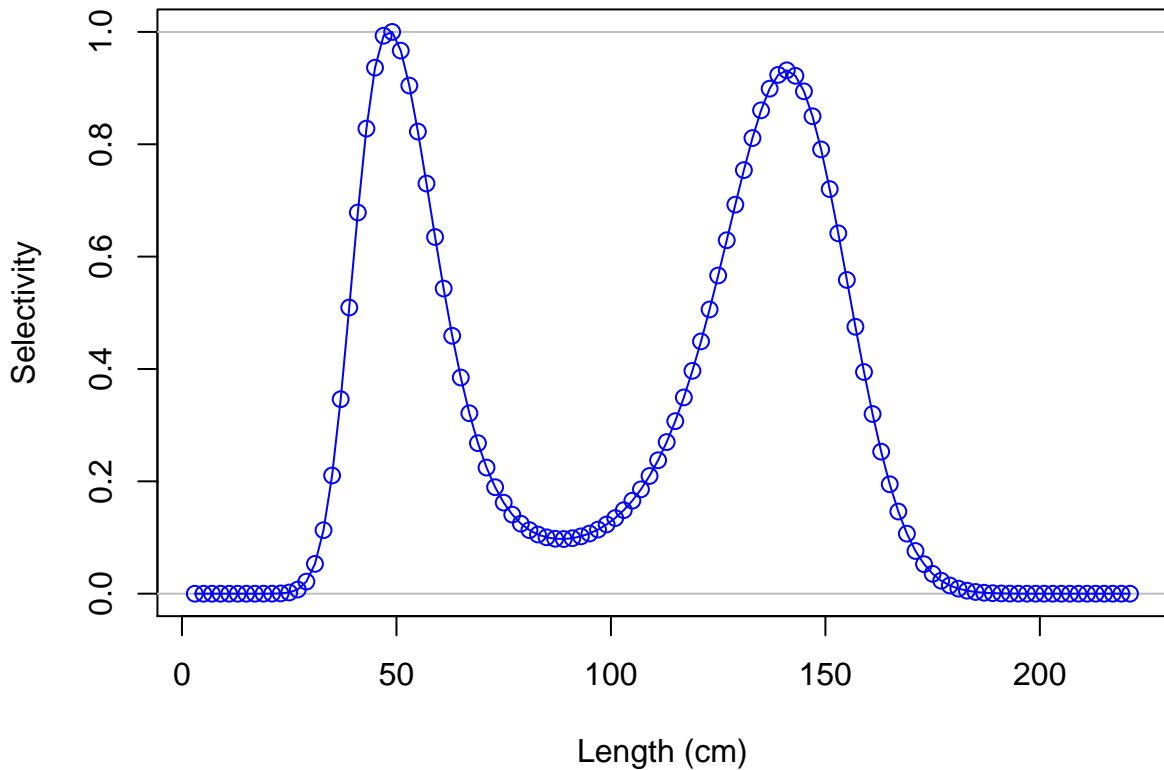
Male ending year selectivity for A4-NOADEL



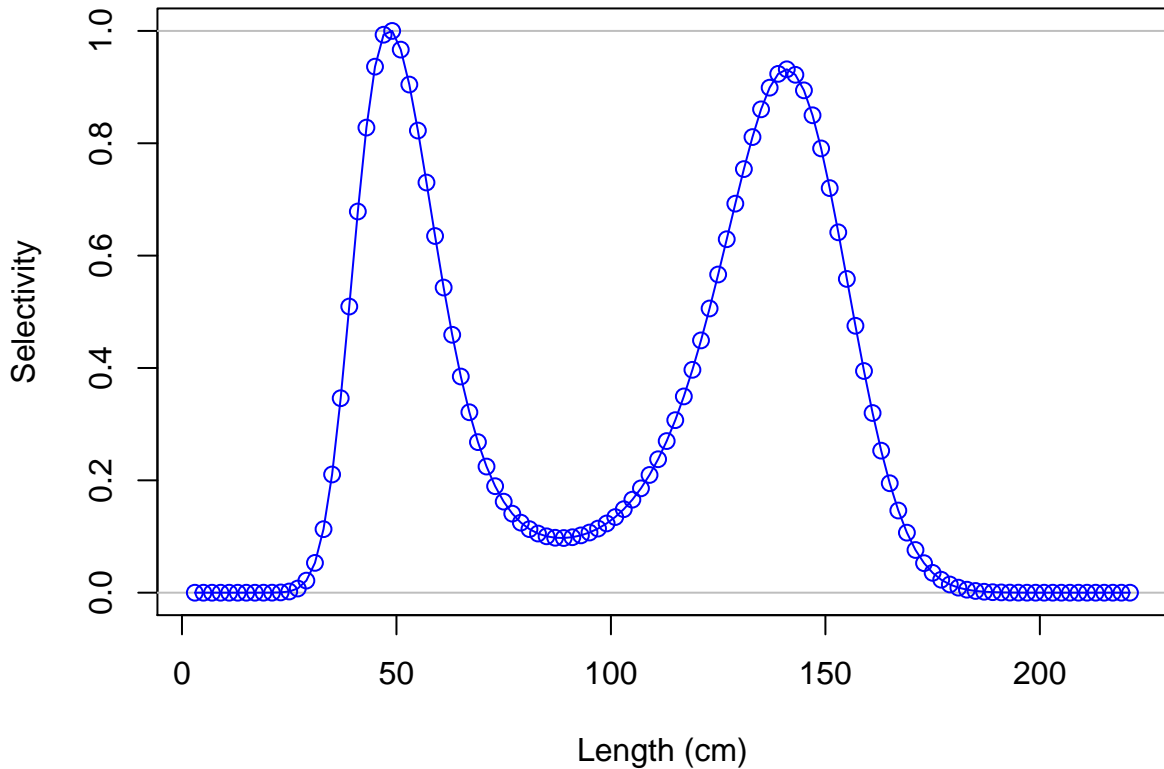
Female ending year selectivity for A5-NOADEL



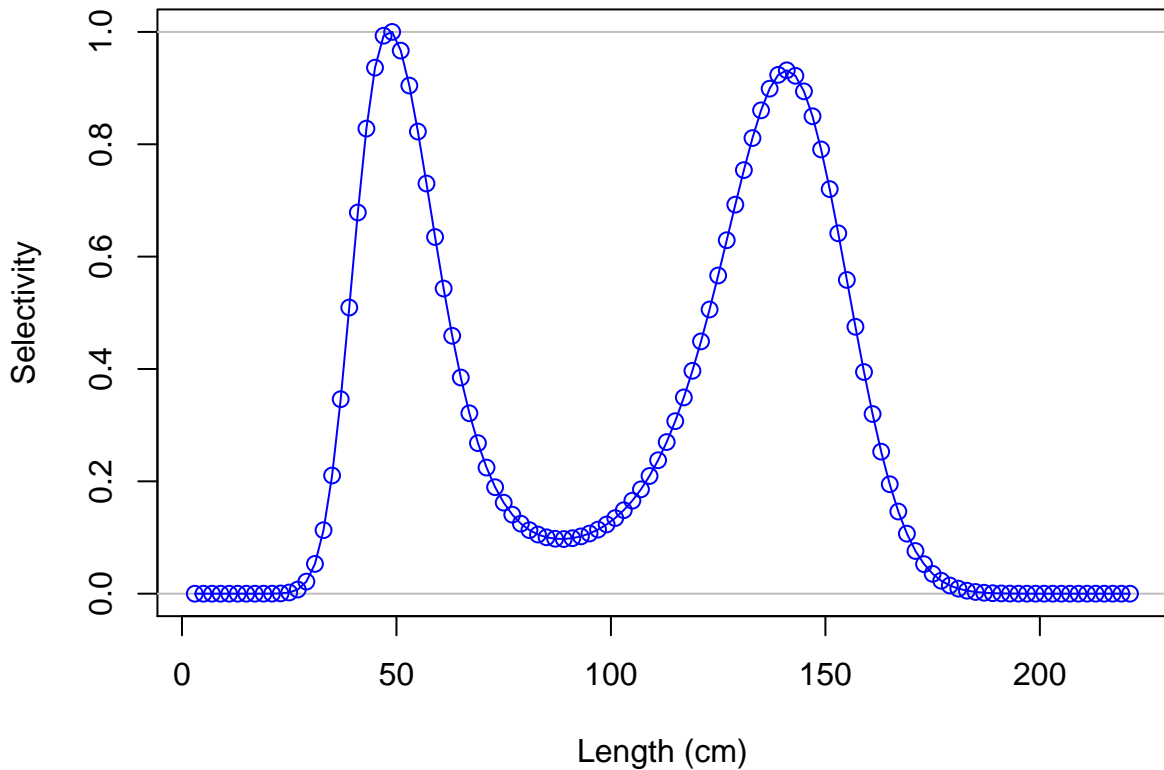
Male ending year selectivity for A5-NOADEL



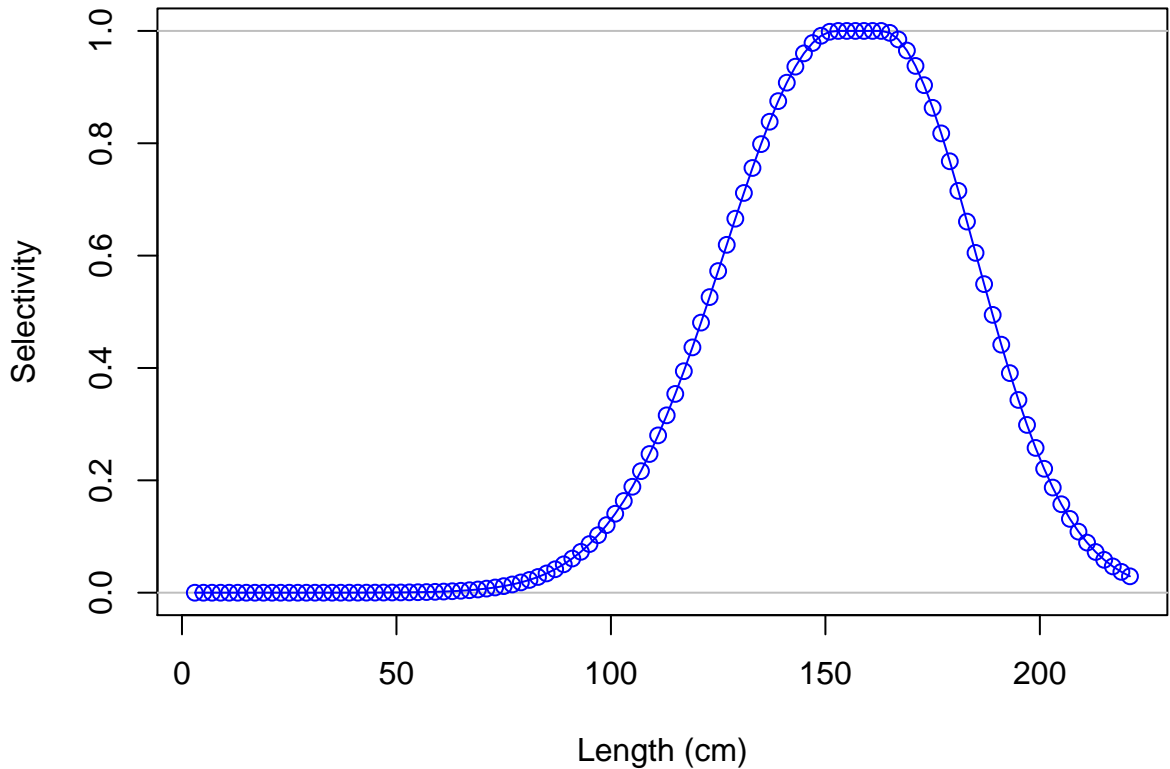
Female ending year selectivity for A6-NOADEL



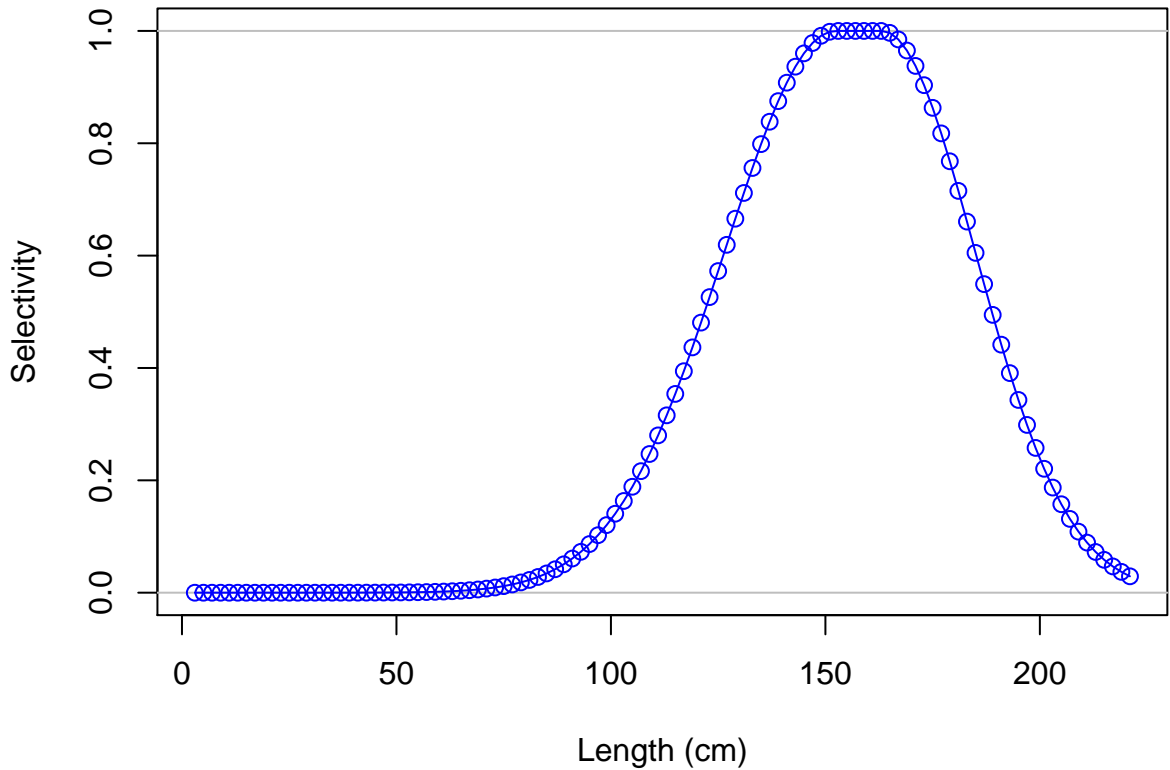
Male ending year selectivity for A6-NOADEL



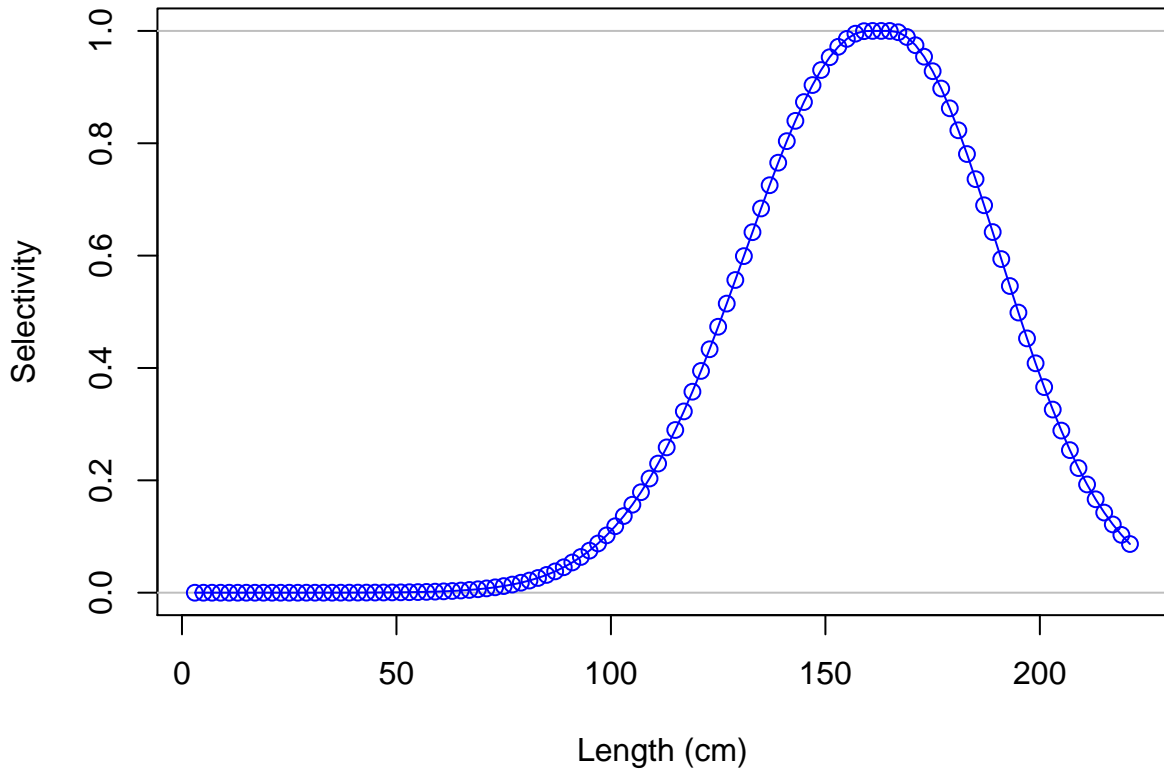
Female ending year selectivity for EPO-LL-survey-early



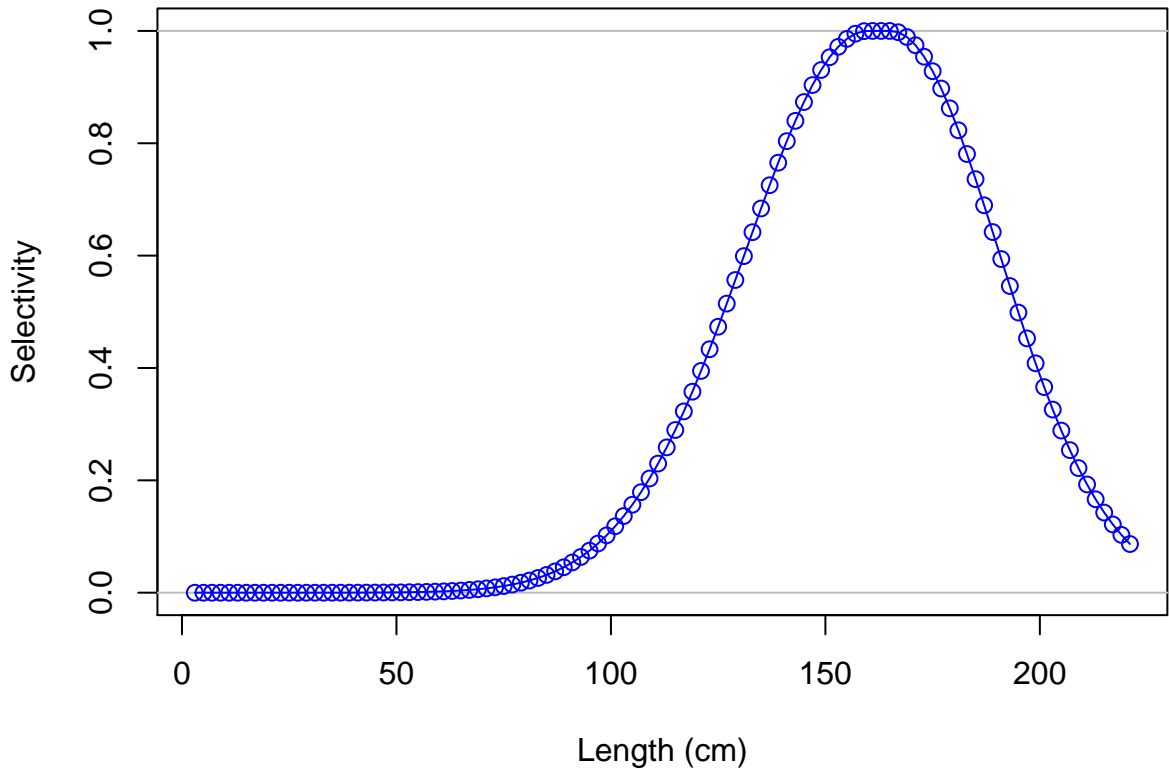
Male ending year selectivity for EPO-LL-survey-early



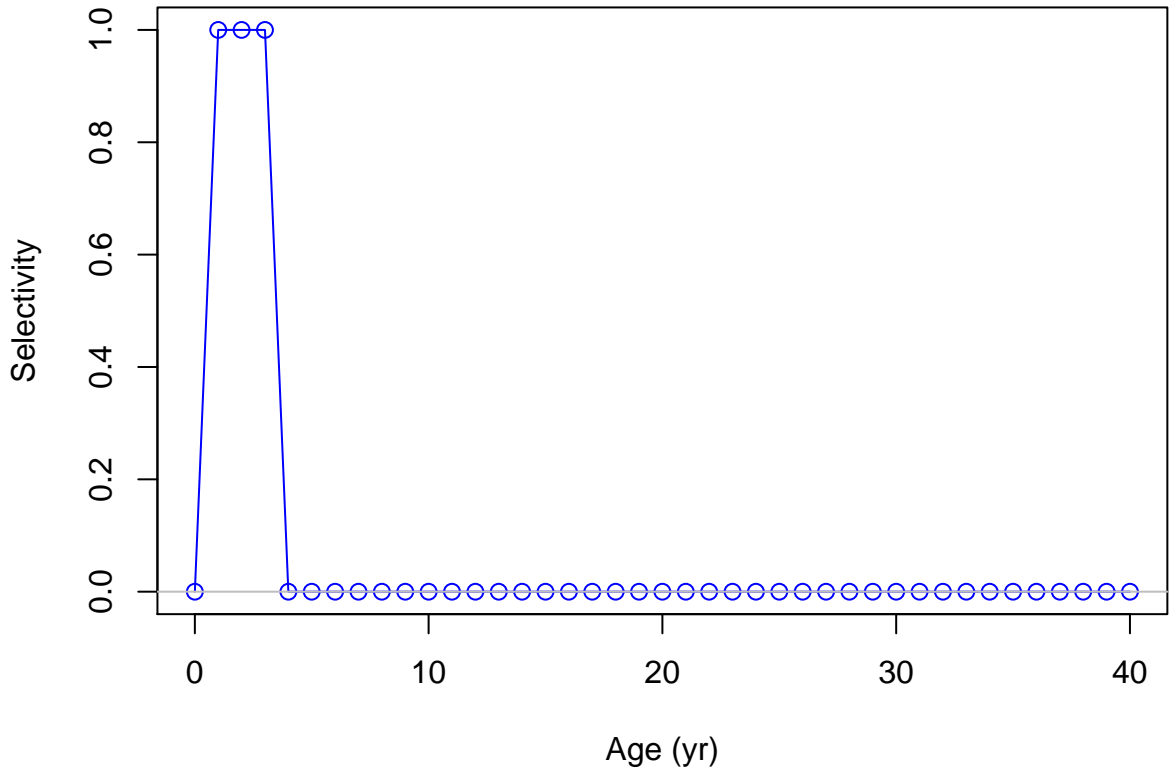
Female ending year selectivity for EPO-LL-survey-late



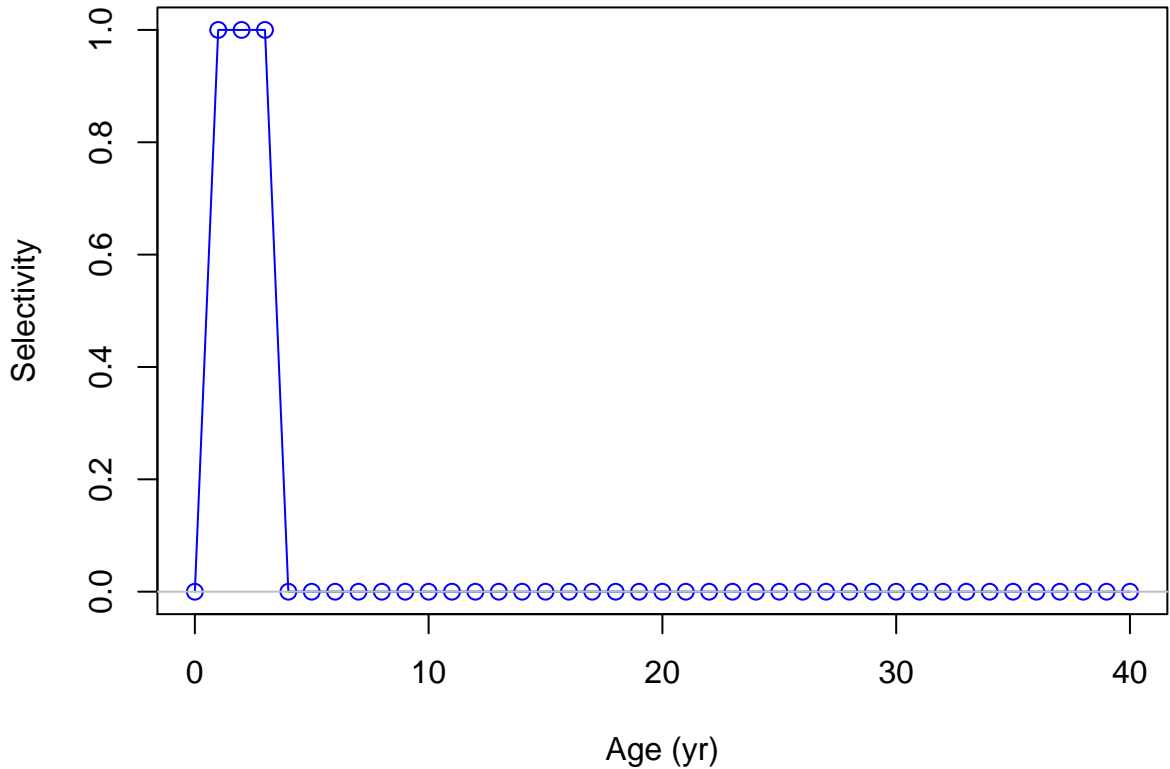
Male ending year selectivity for EPO-LL-survey-late



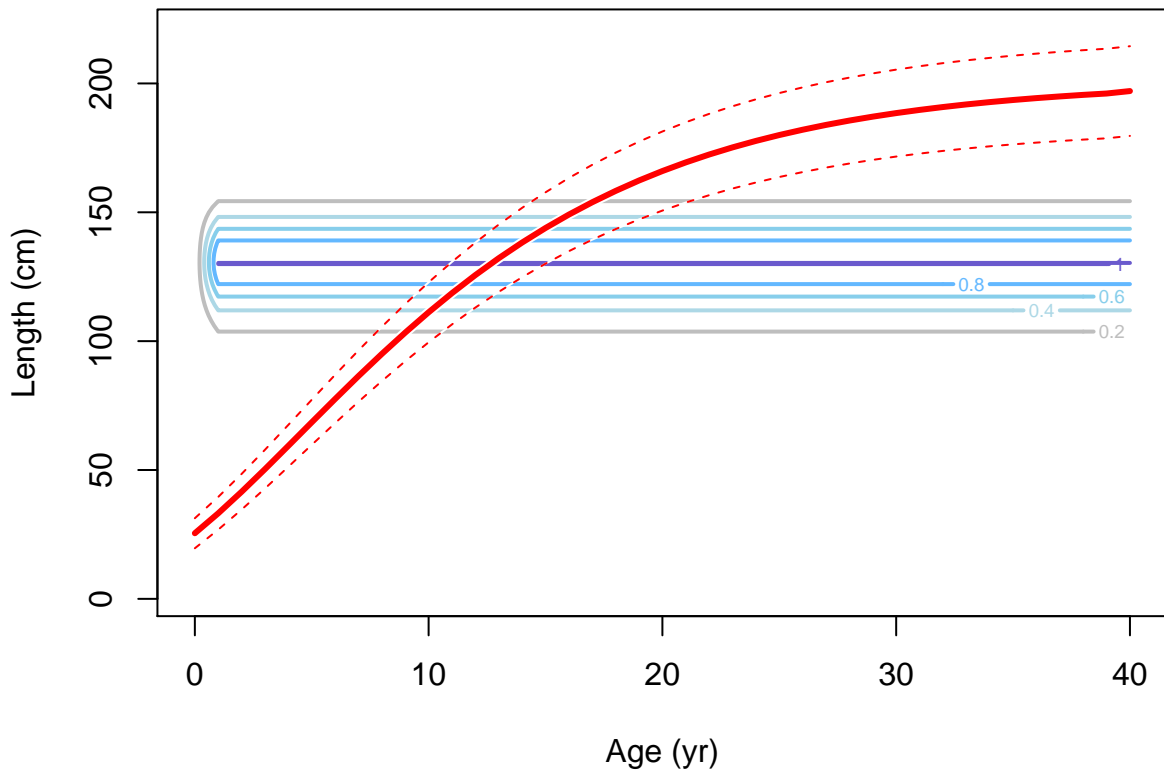
Female ending year selectivity for EPO-OBJ-Disc



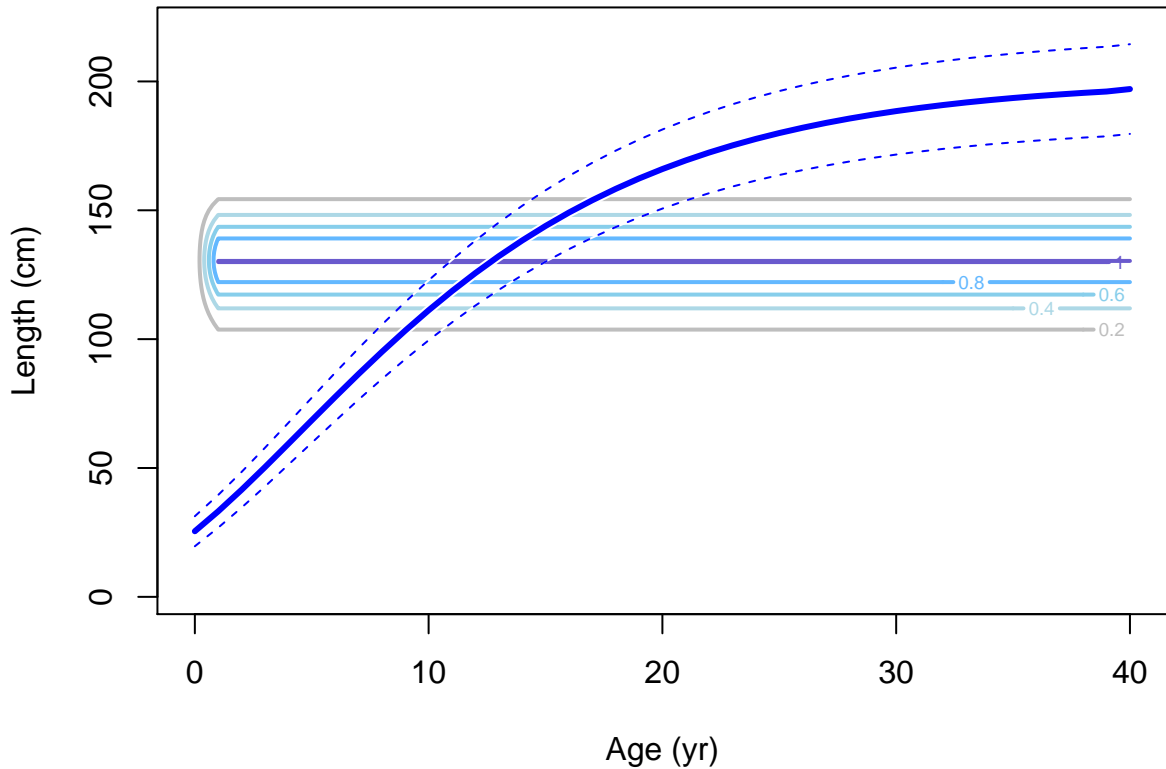
Male ending year selectivity for EPO-Obj-Disc



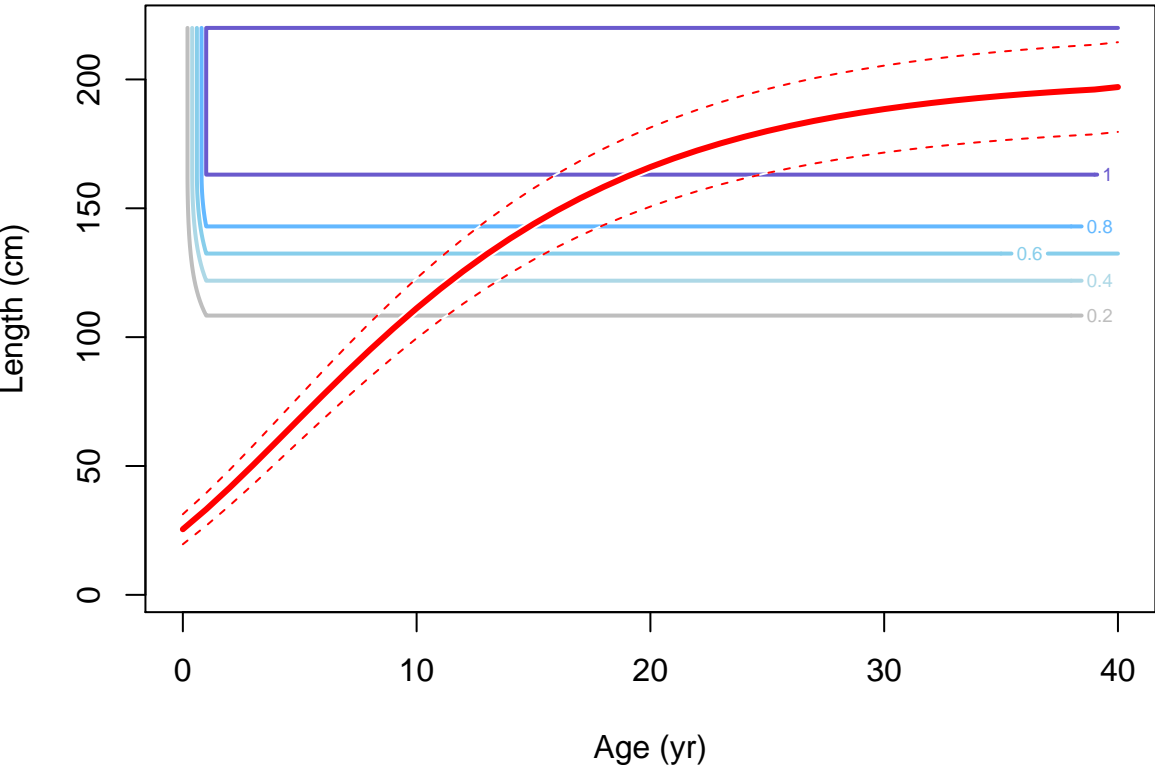
Female ending year selectivity and growth for A1-LL-n



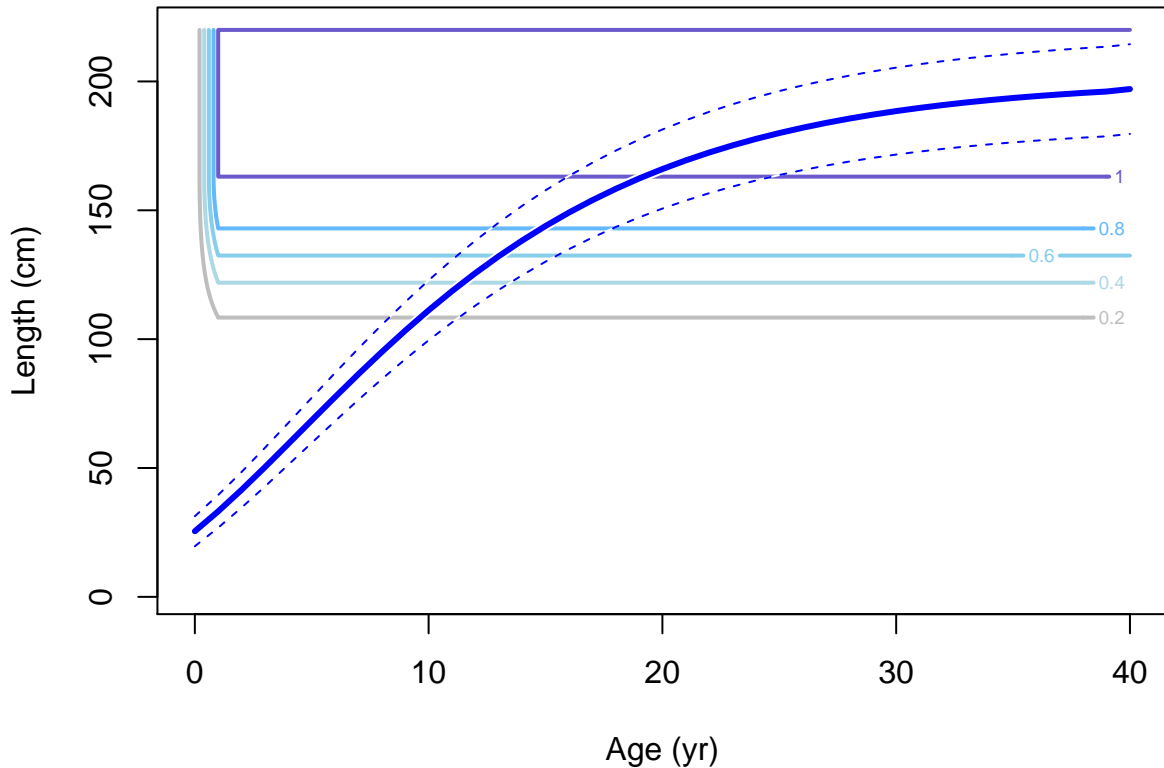
Male ending year selectivity and growth for A1-LL-n



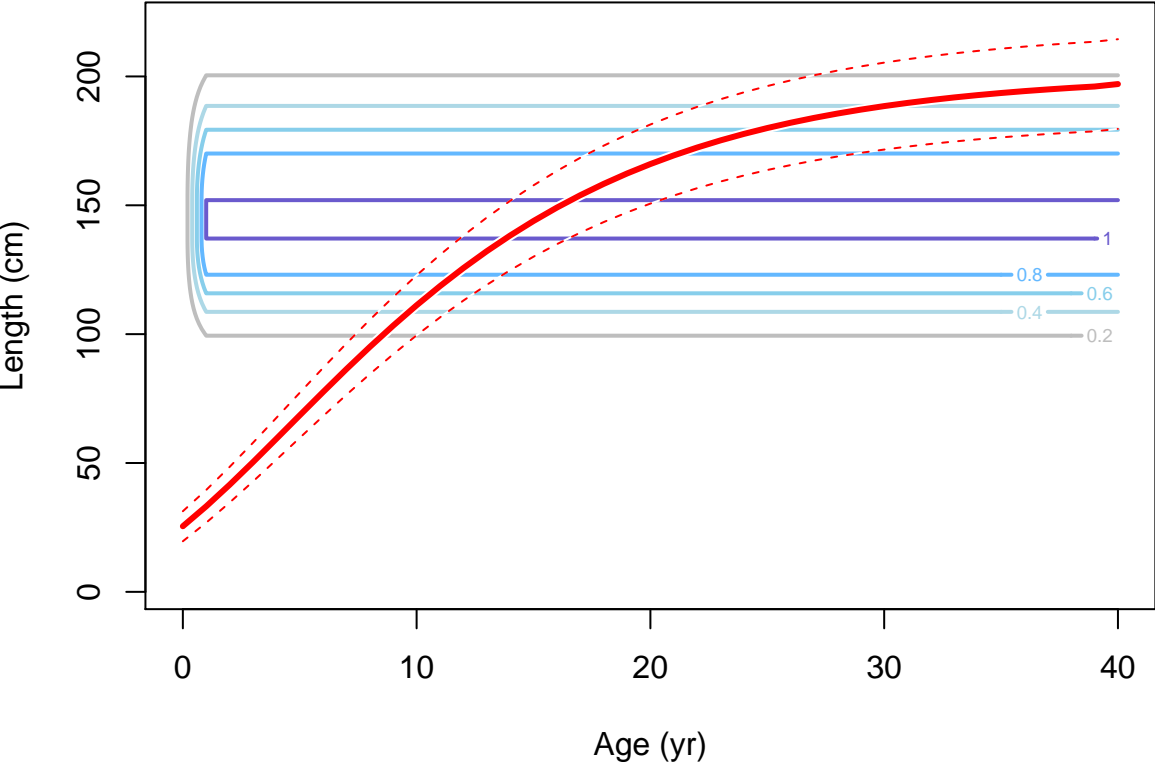
Female ending year selectivity and growth for A2-LL-n



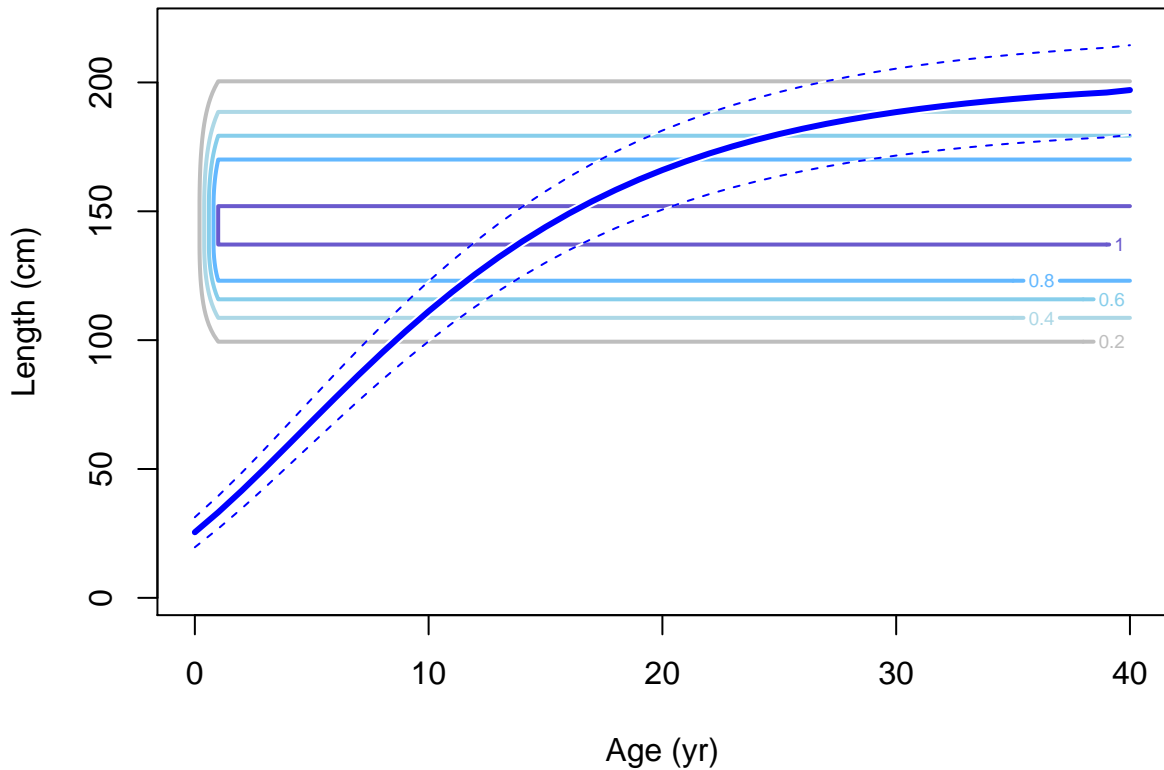
Male ending year selectivity and growth for A2-LL-n



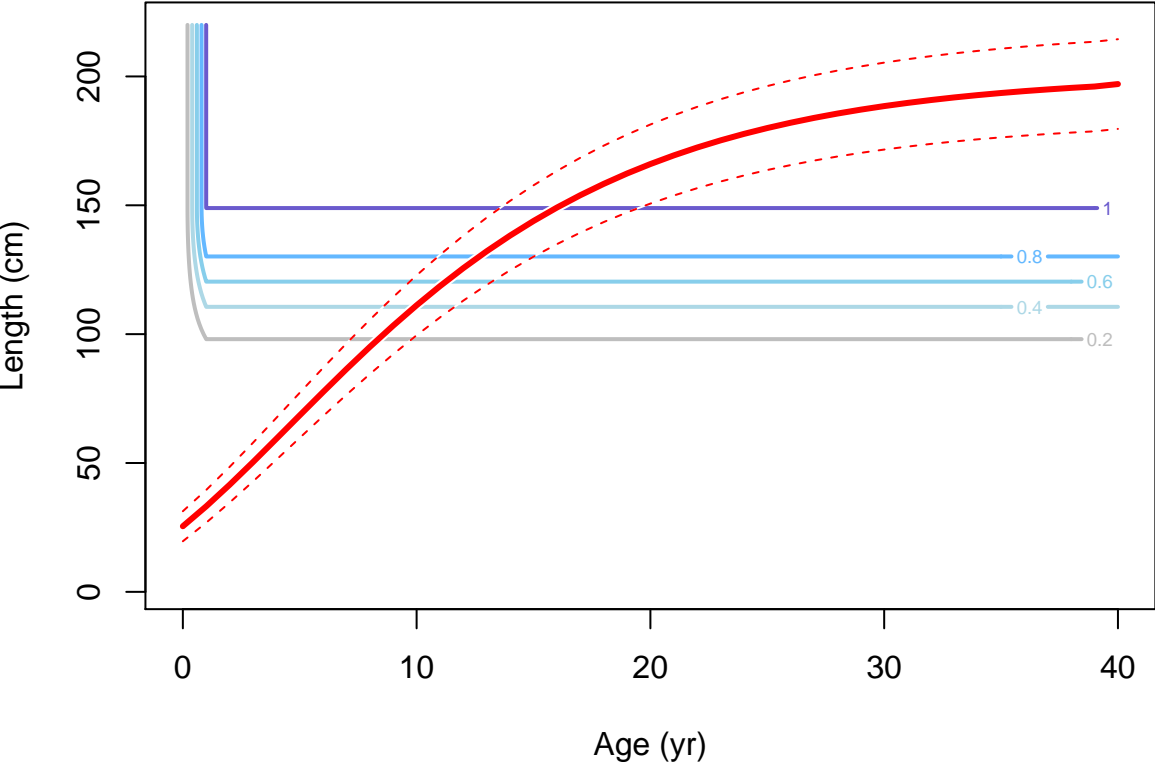
Female ending year selectivity and growth for A3-LL-n



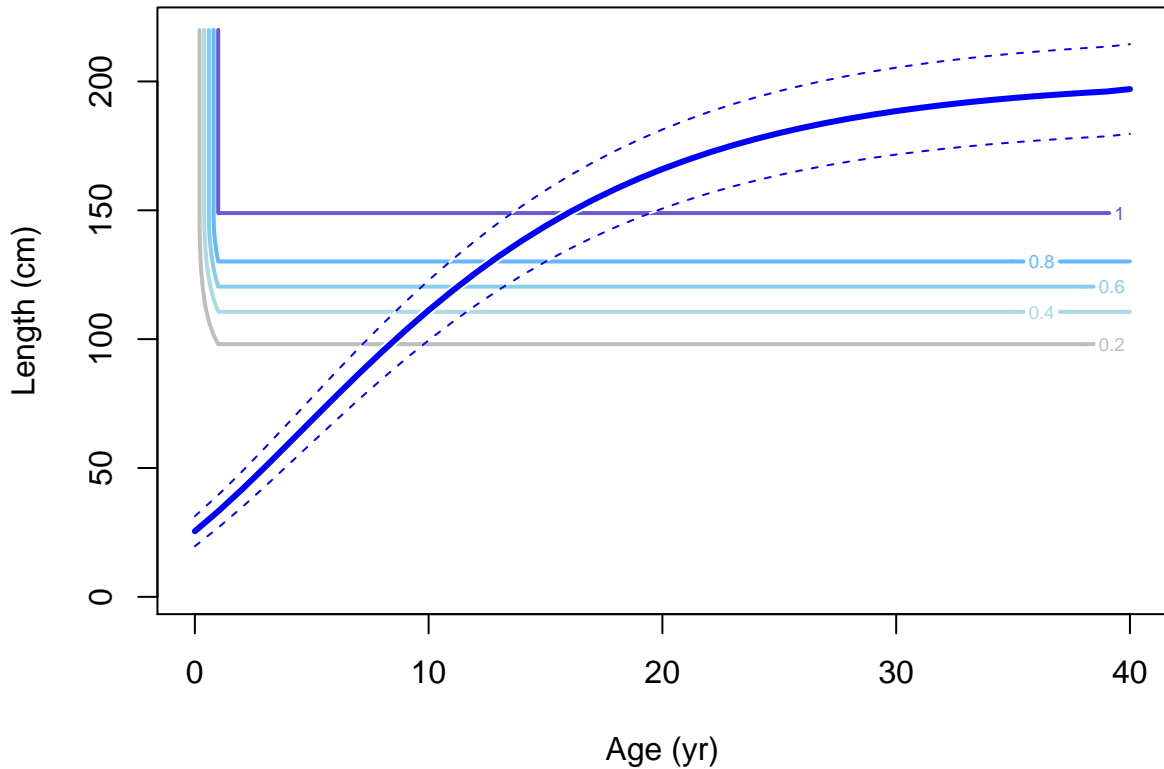
Male ending year selectivity and growth for A3-LL-n



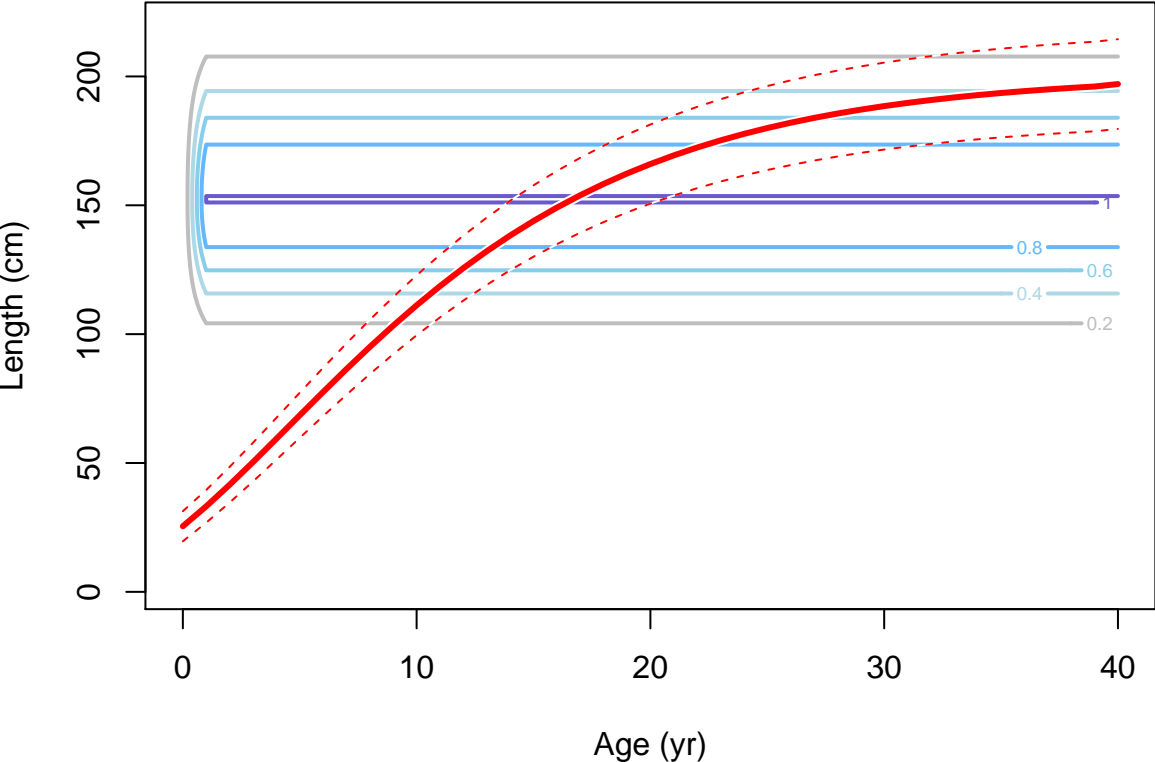
Female ending year selectivity and growth for A4-LL-n



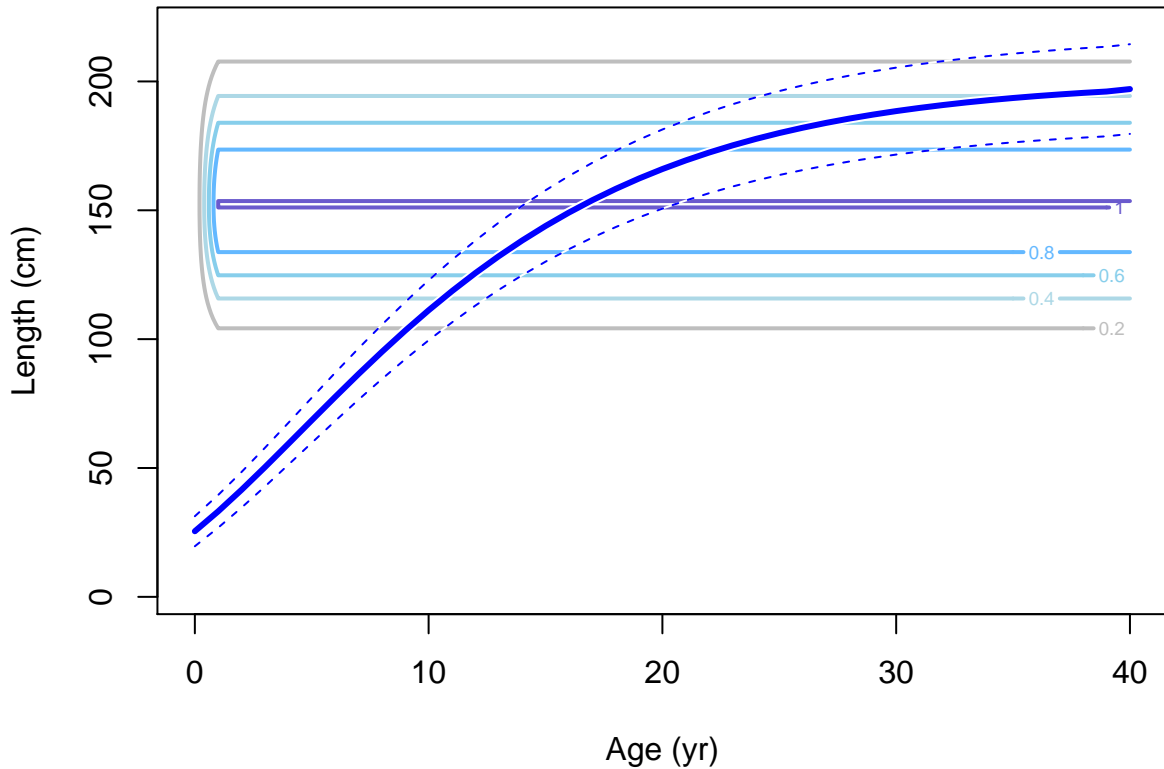
Male ending year selectivity and growth for A4-LL-n



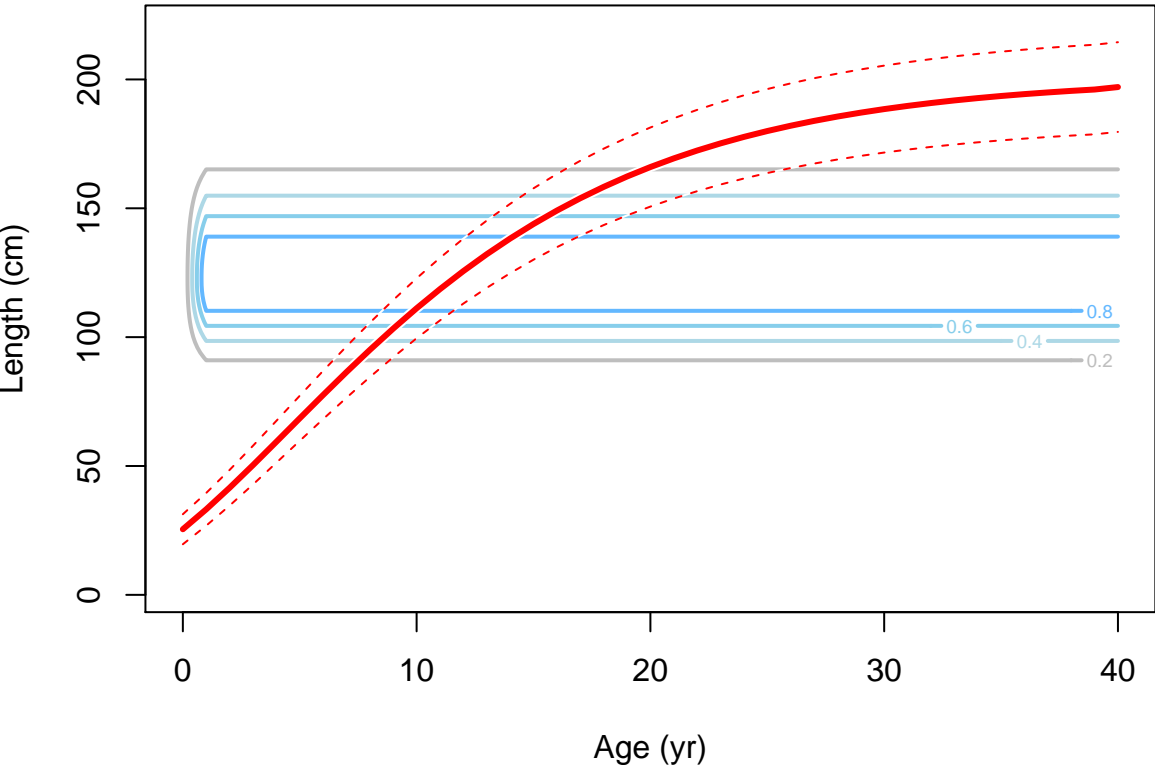
Female ending year selectivity and growth for A5-LL-n



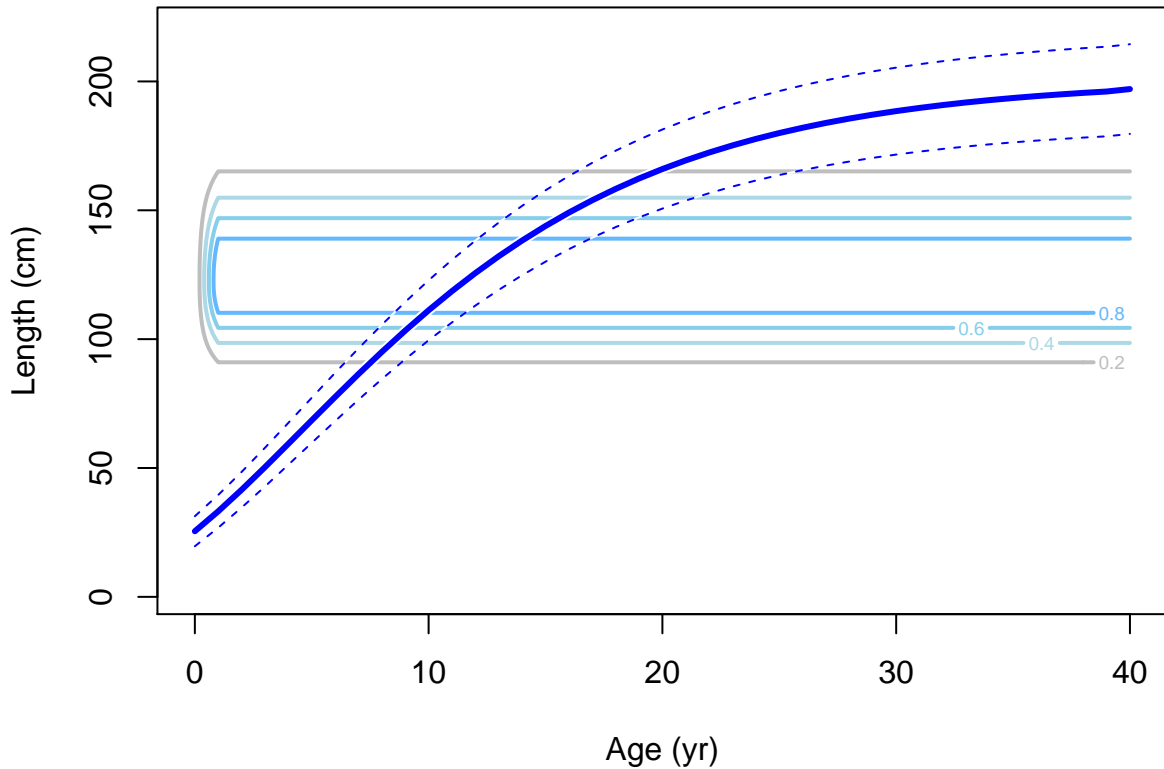
Male ending year selectivity and growth for A5-LL-n



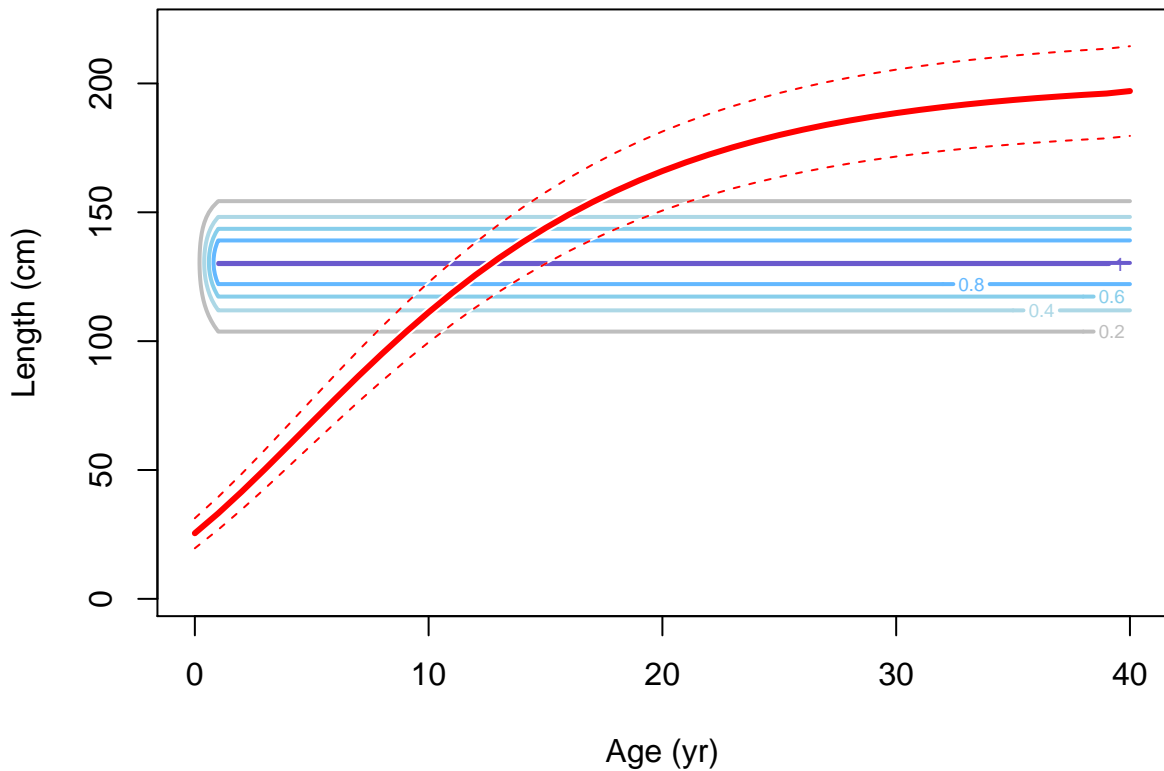
Female ending year selectivity and growth for A6-LL-n



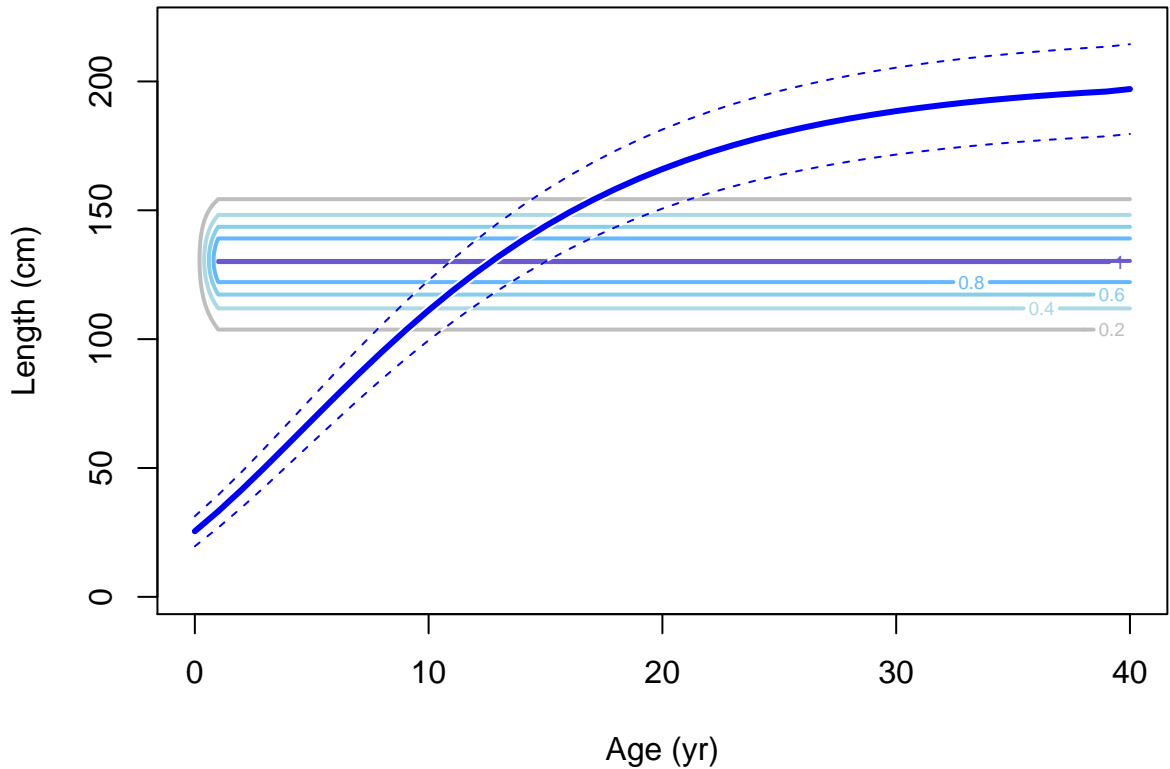
Male ending year selectivity and growth for A6-LL-n



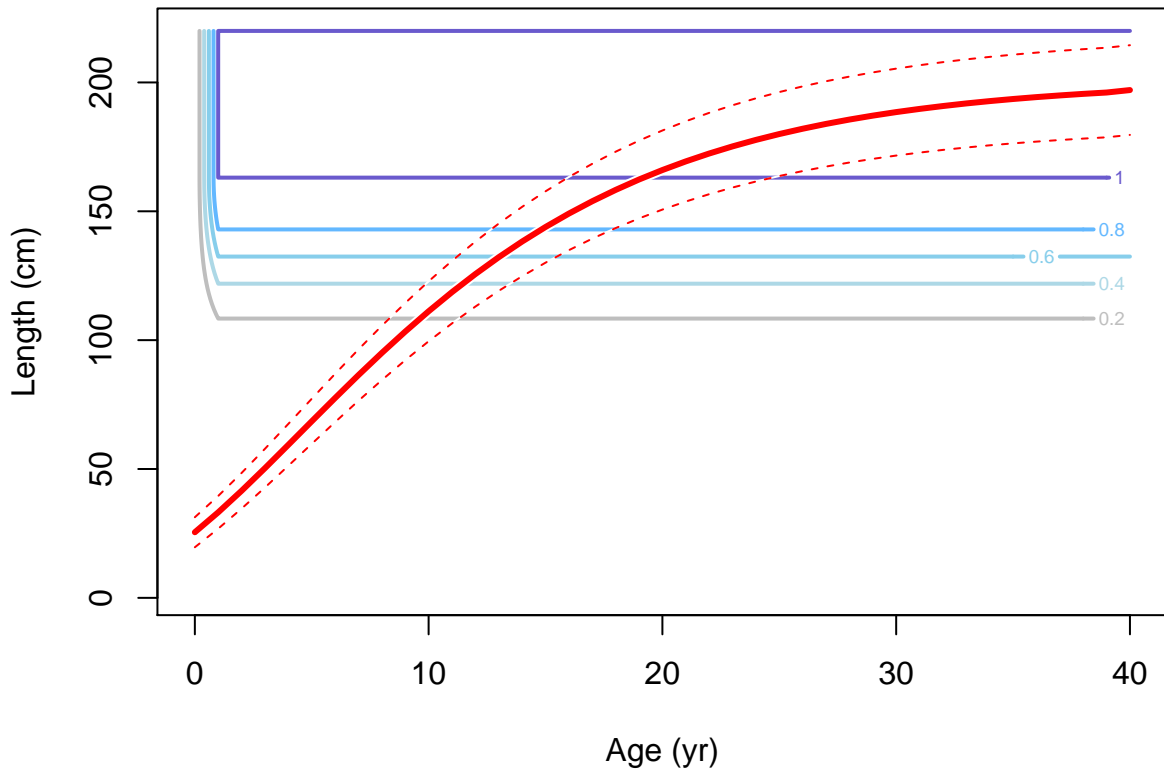
Female ending year selectivity and growth for A1-LL-w



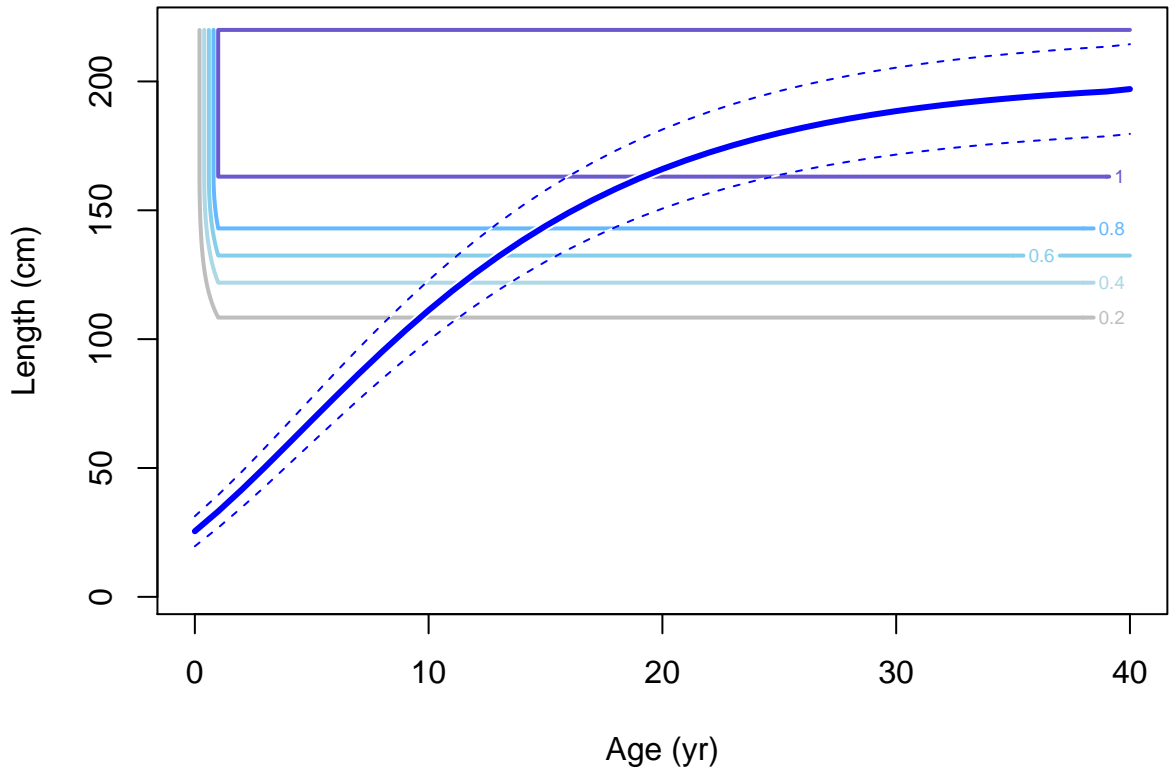
Male ending year selectivity and growth for A1-LL-w



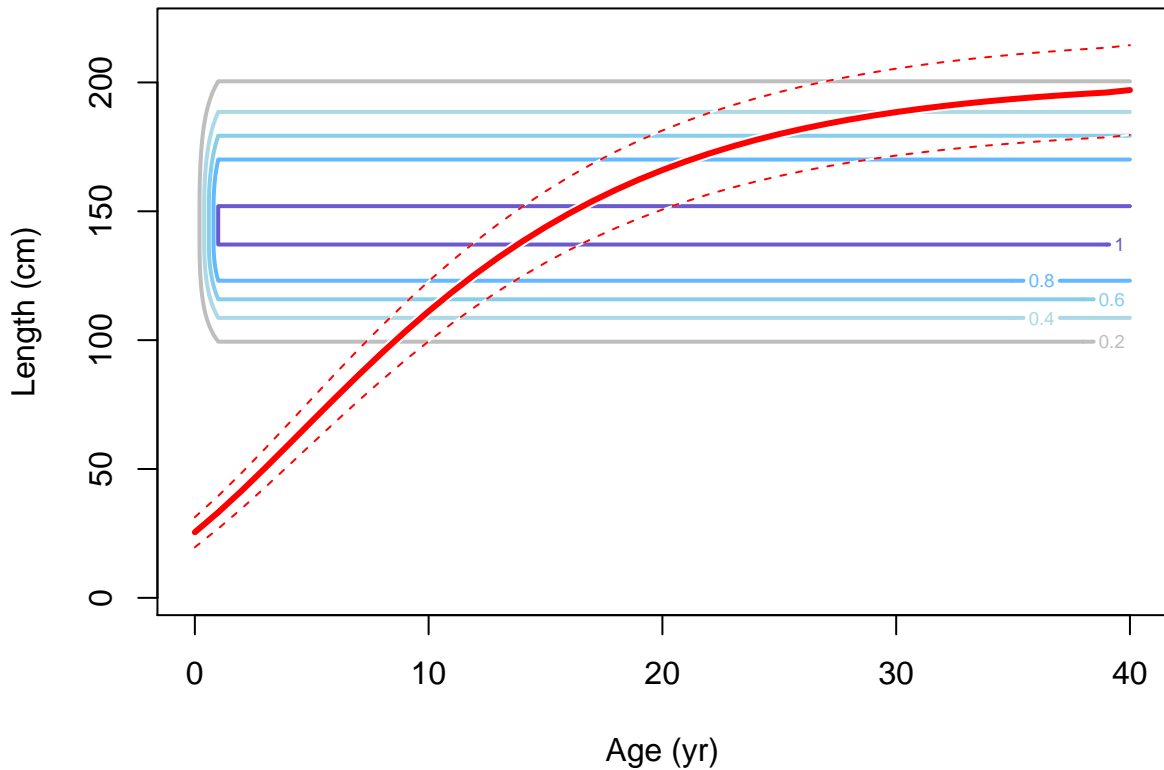
Female ending year selectivity and growth for A2-LL-w



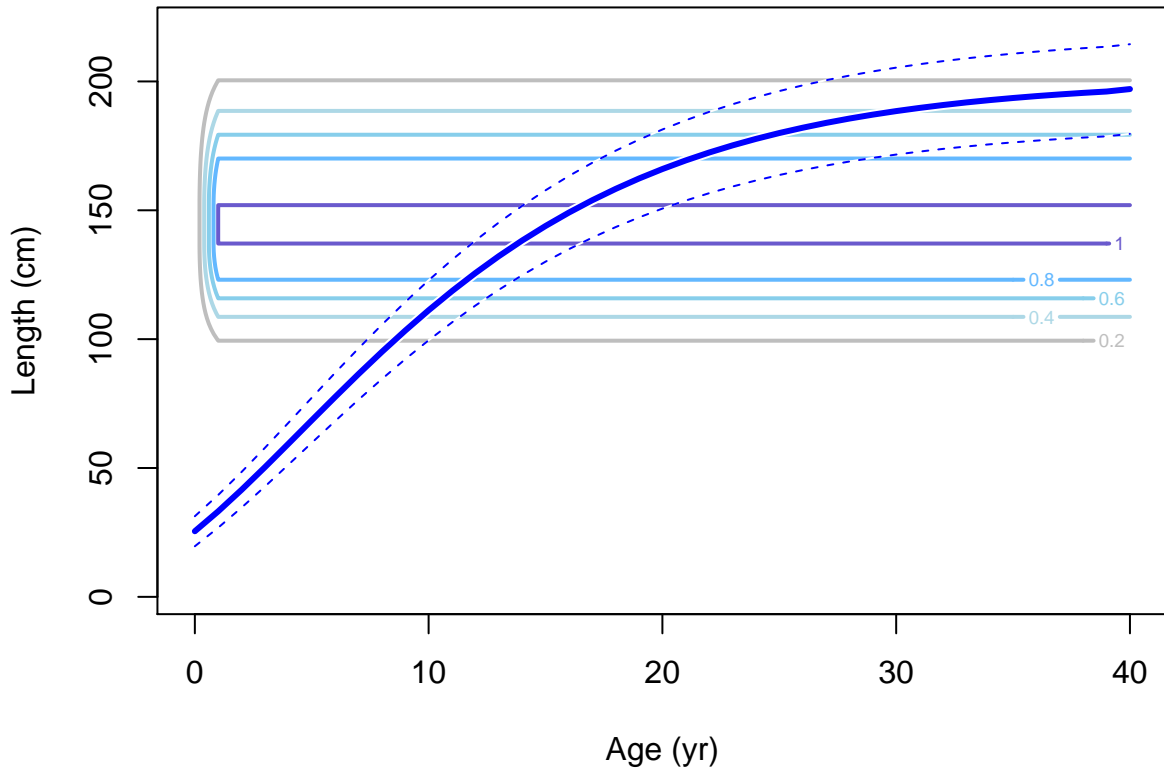
Male ending year selectivity and growth for A2-LL-w



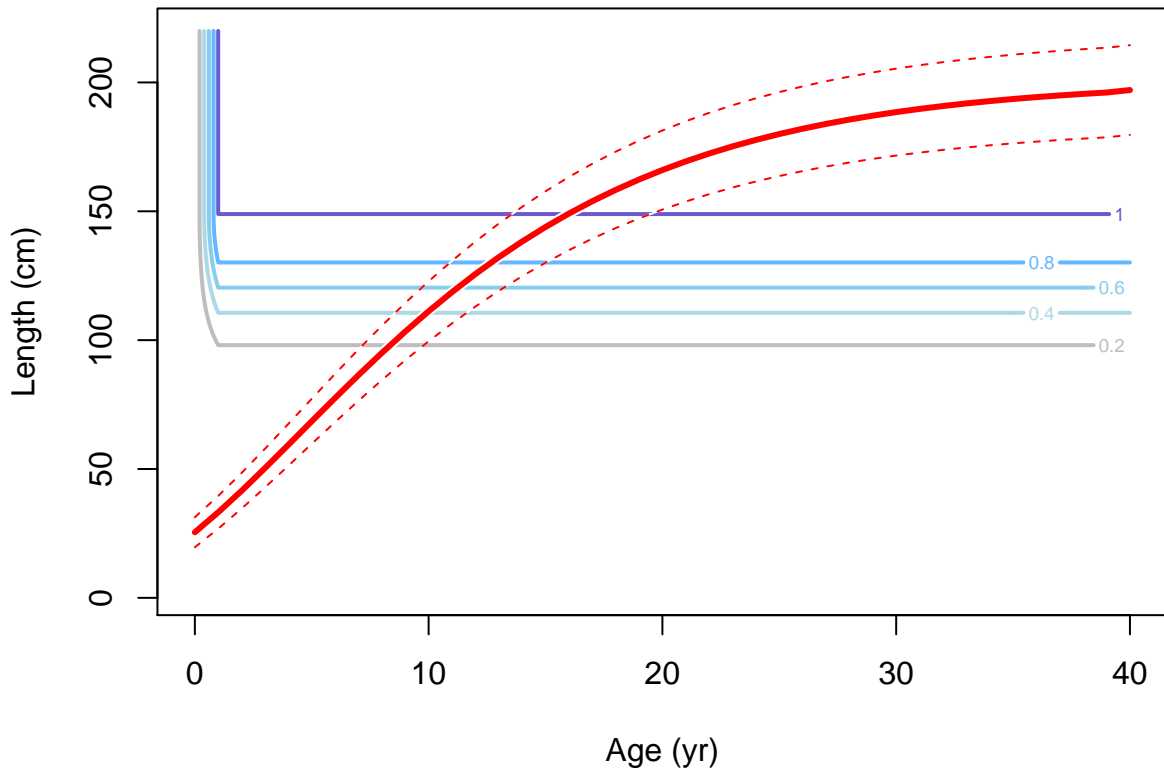
Female ending year selectivity and growth for A3-LL-w



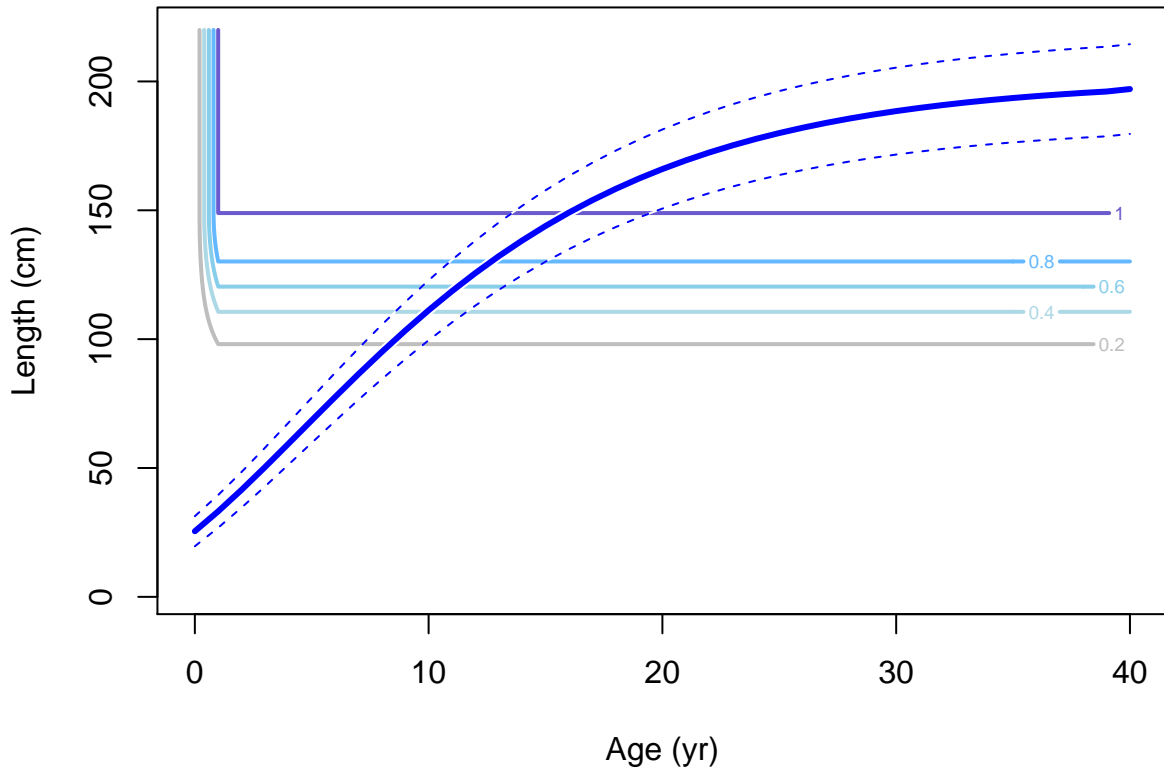
Male ending year selectivity and growth for A3-LL-w



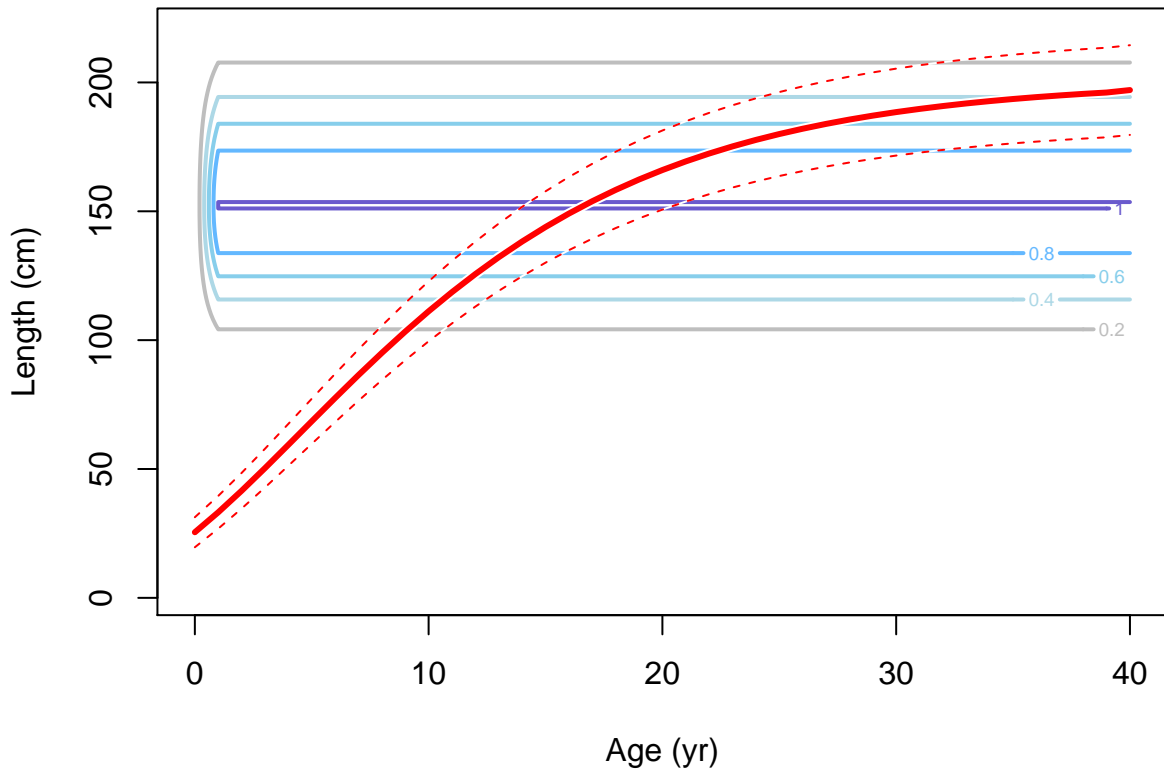
Female ending year selectivity and growth for A4-LL-w



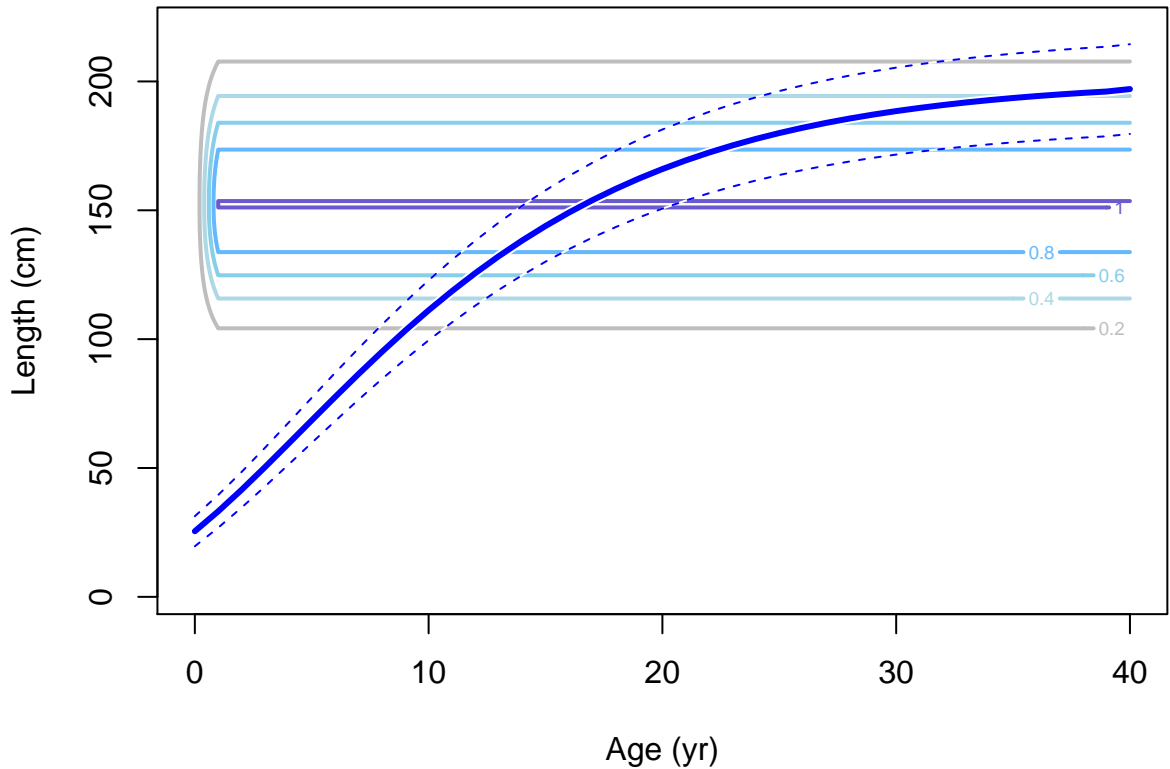
Male ending year selectivity and growth for A4-LL-w



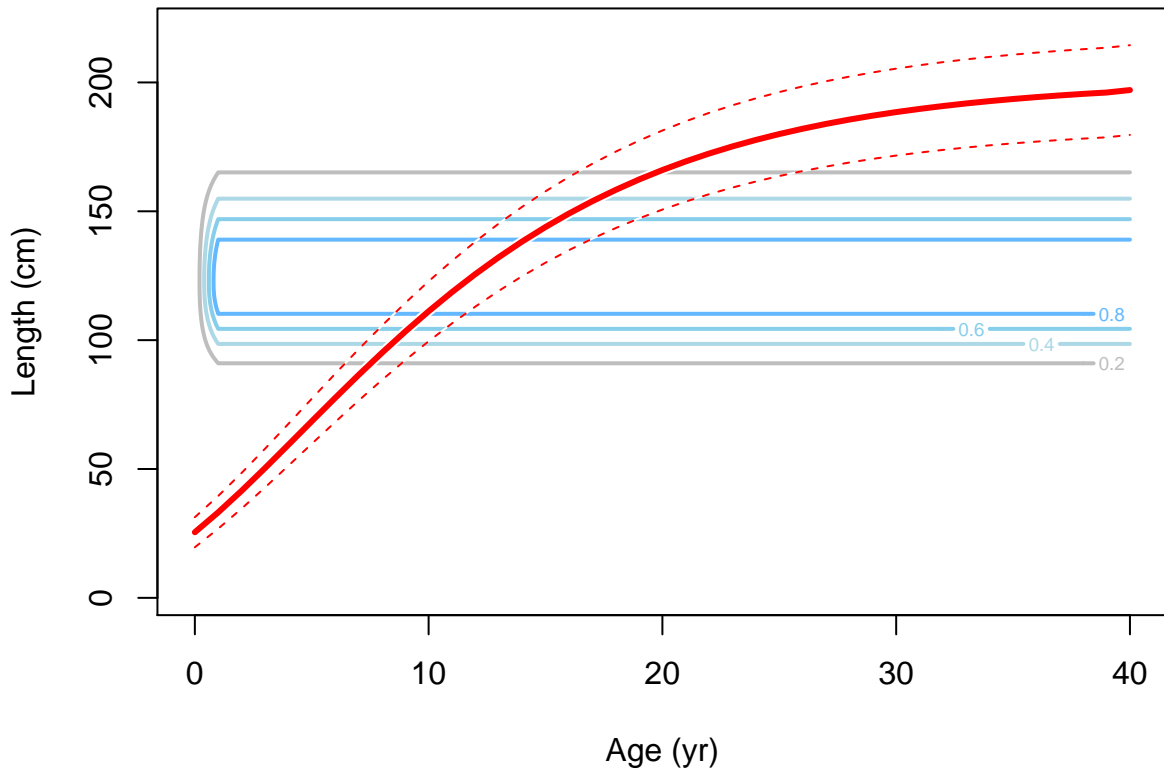
Female ending year selectivity and growth for A5-LL-w



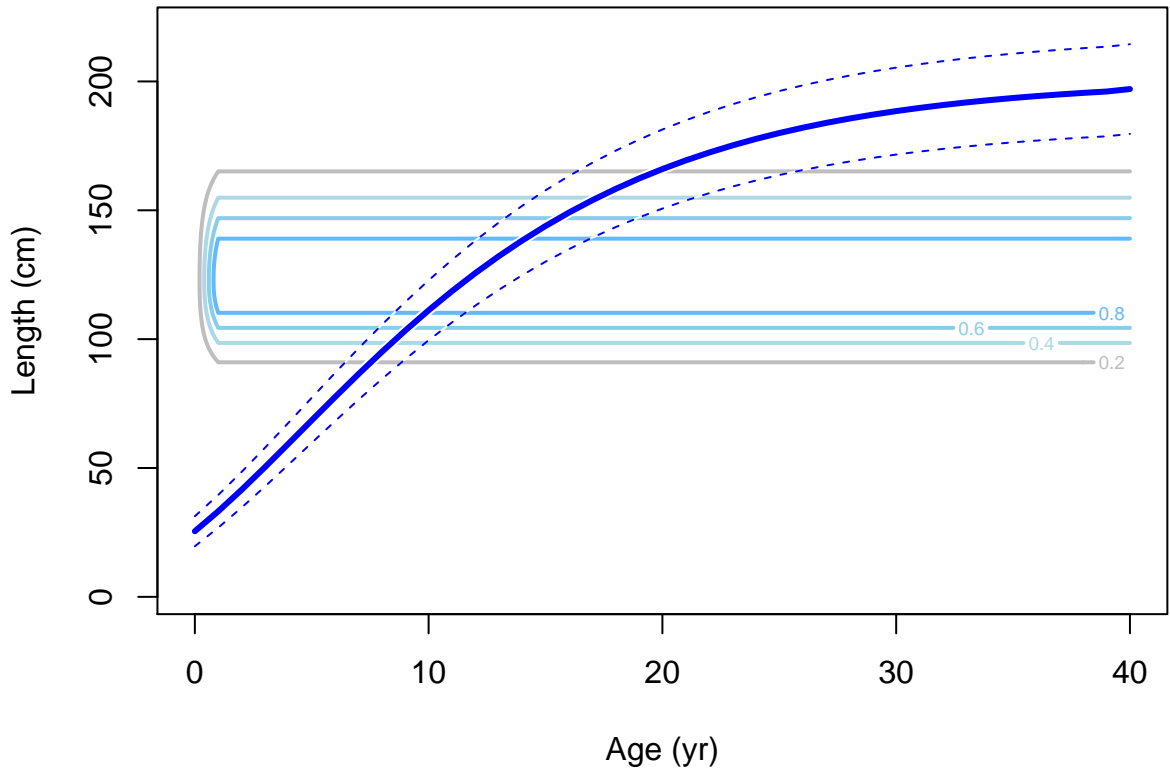
Male ending year selectivity and growth for A5-LL-w



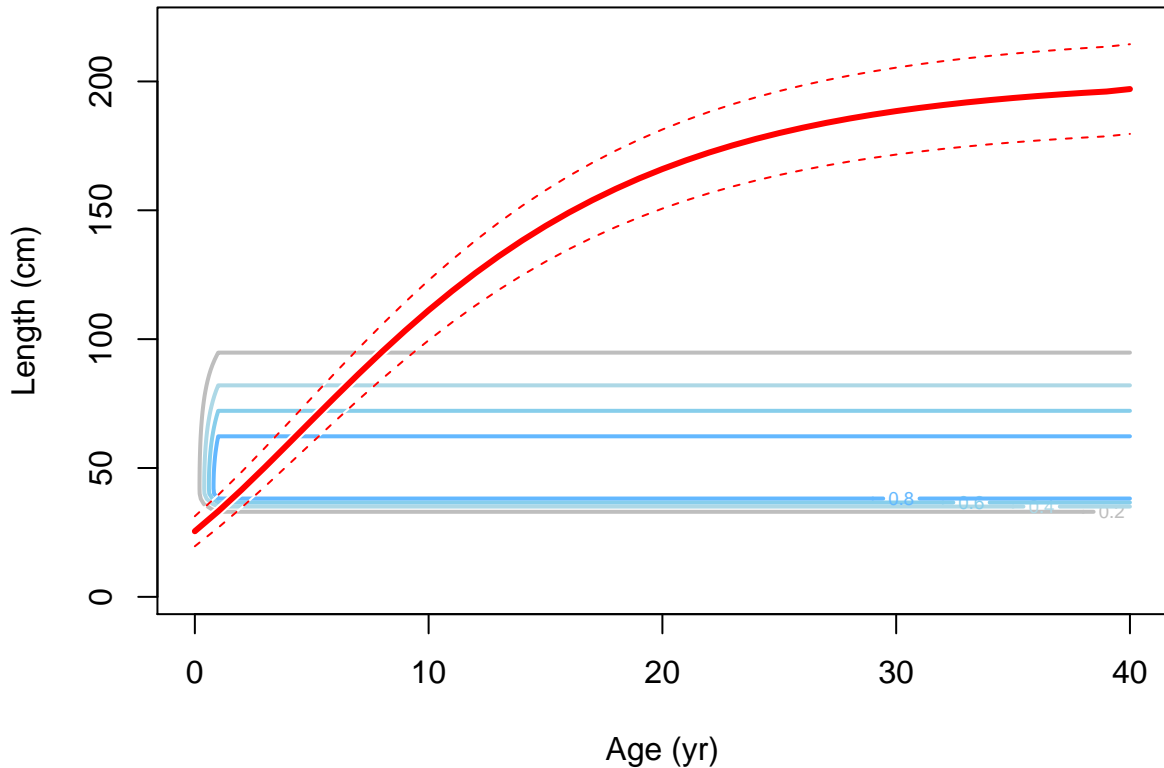
Female ending year selectivity and growth for A6-LL-w



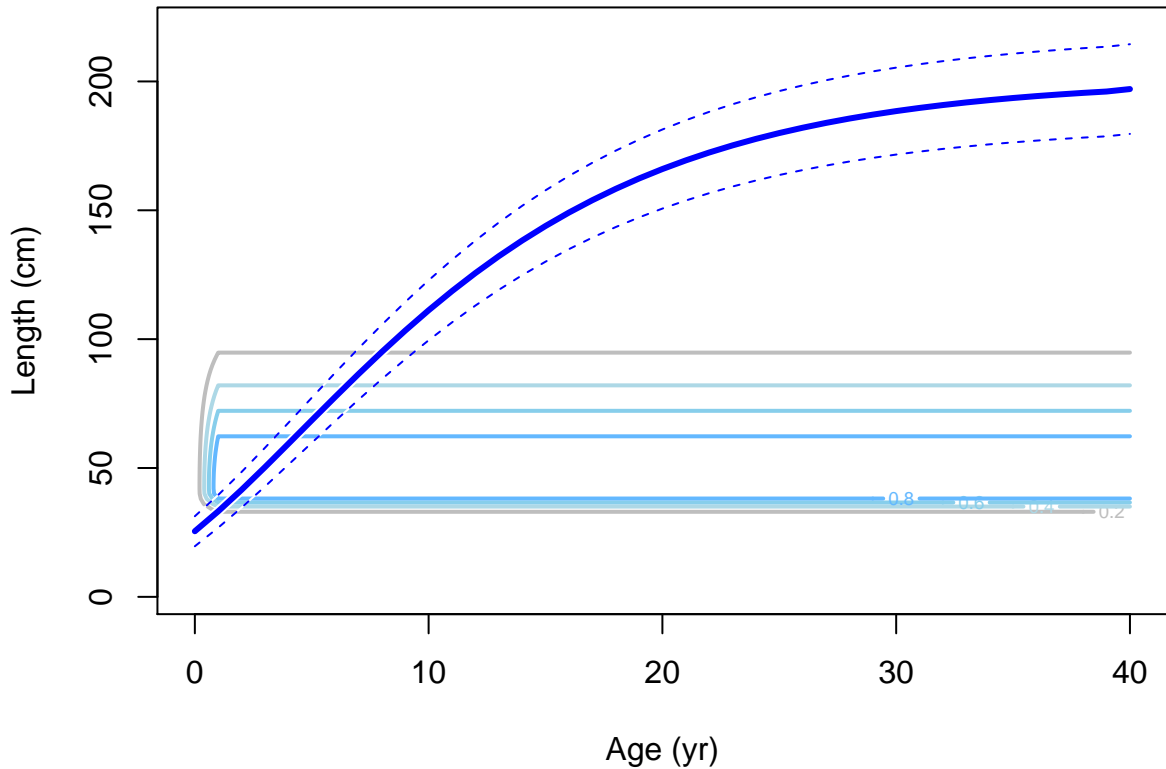
Male ending year selectivity and growth for A6-LL-w



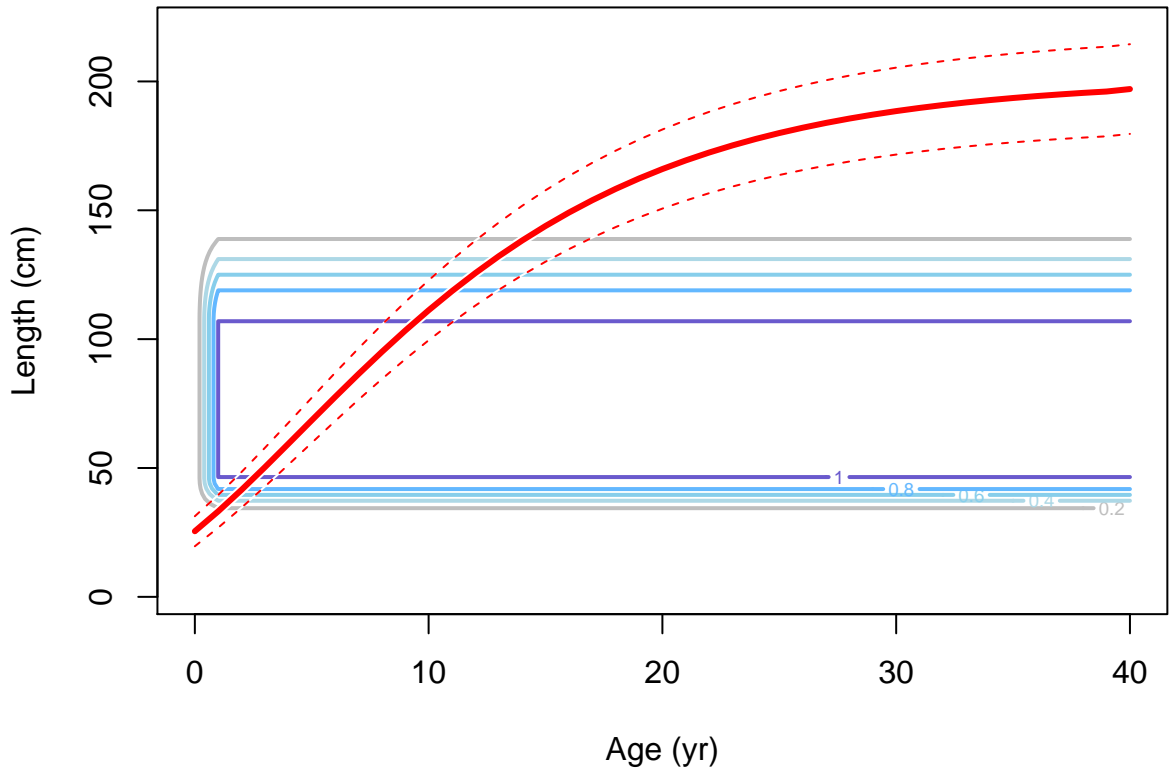
Female ending year selectivity and growth for A2-OBJ



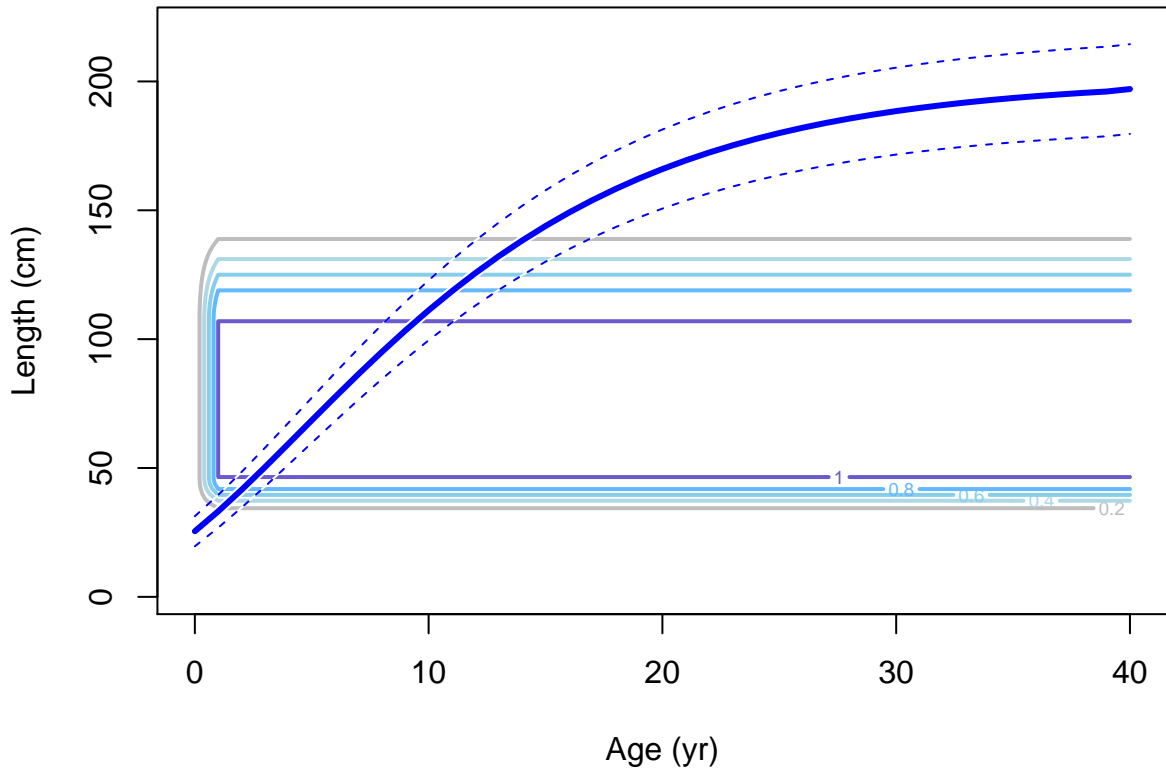
Male ending year selectivity and growth for A2-OBJ



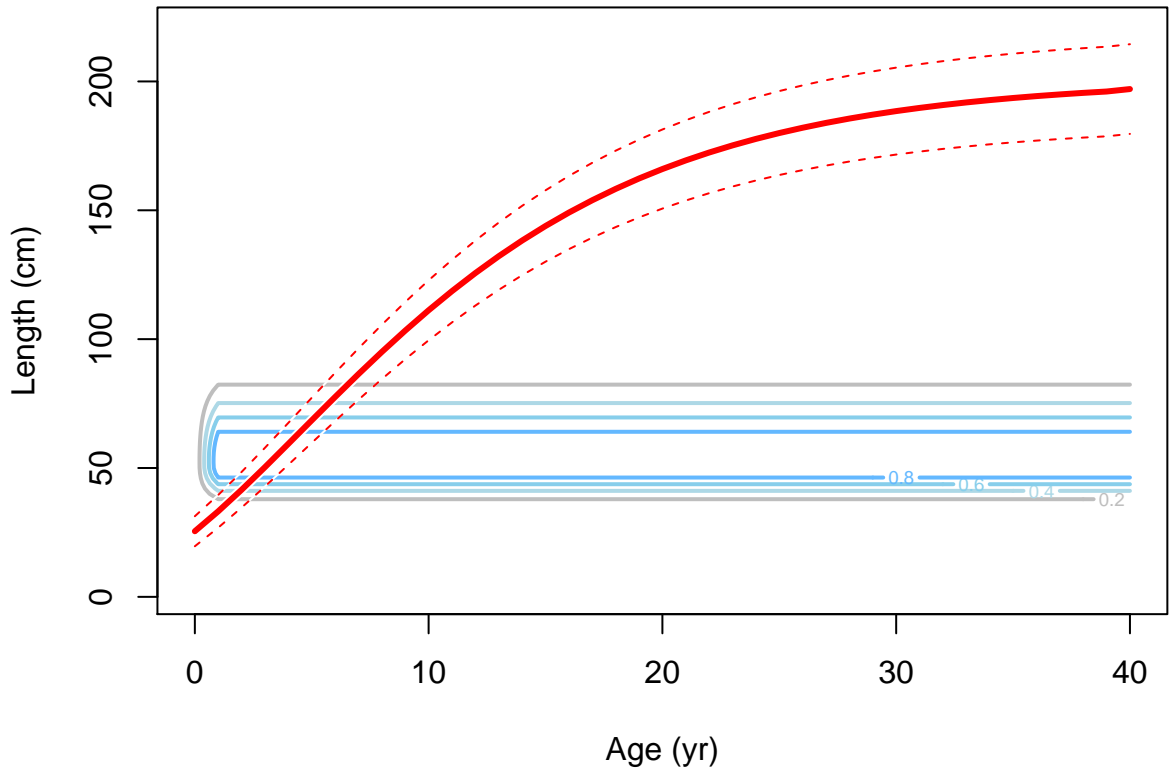
Female ending year selectivity and growth for A3-OBJ



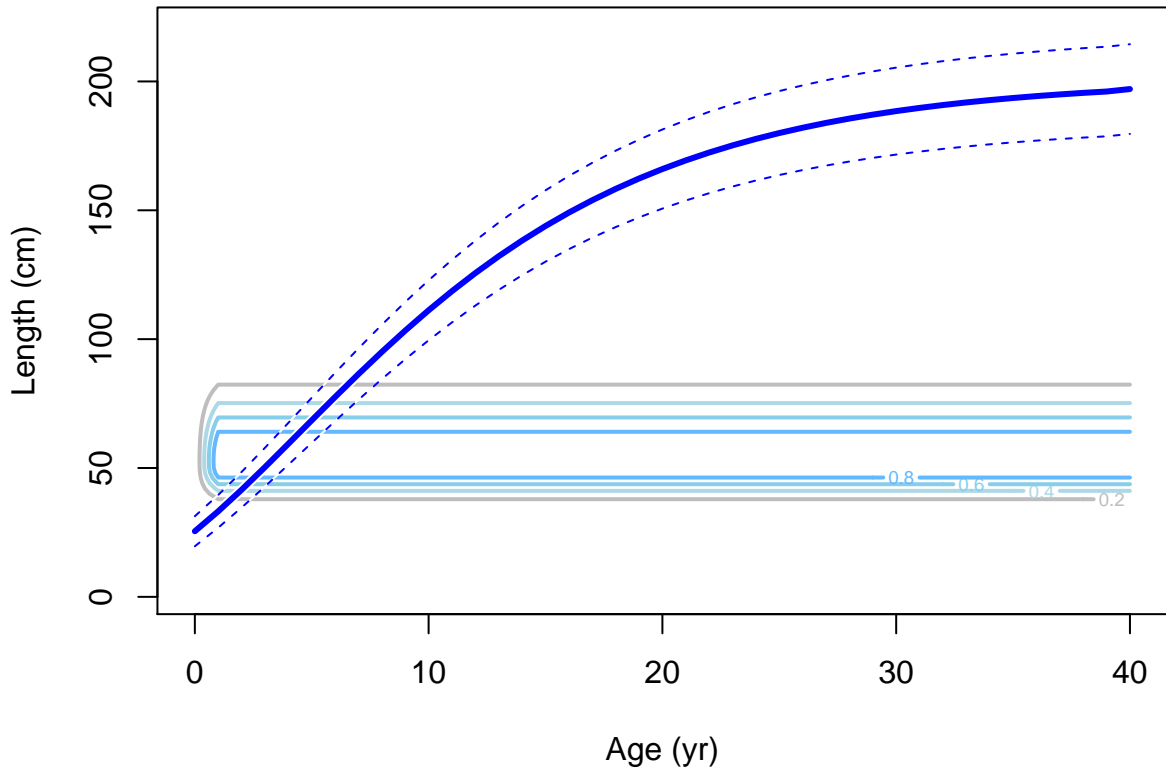
Male ending year selectivity and growth for A3-OBJ



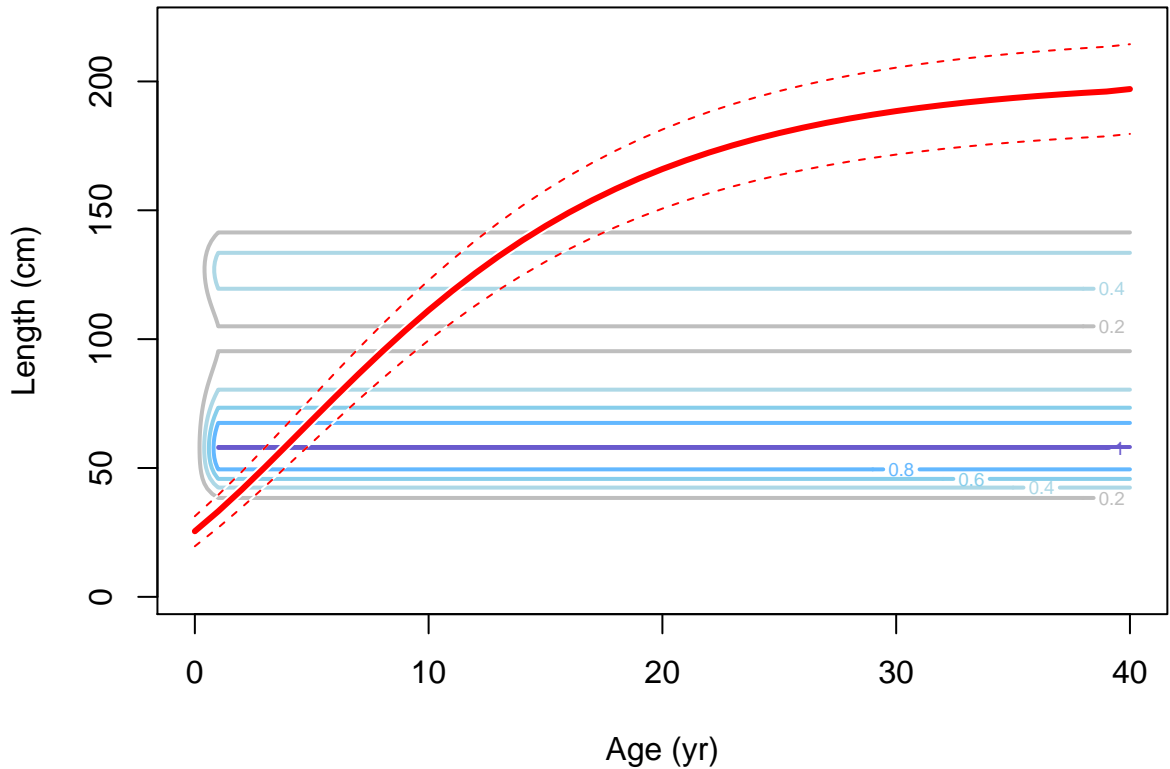
Female ending year selectivity and growth for A4-OBJ



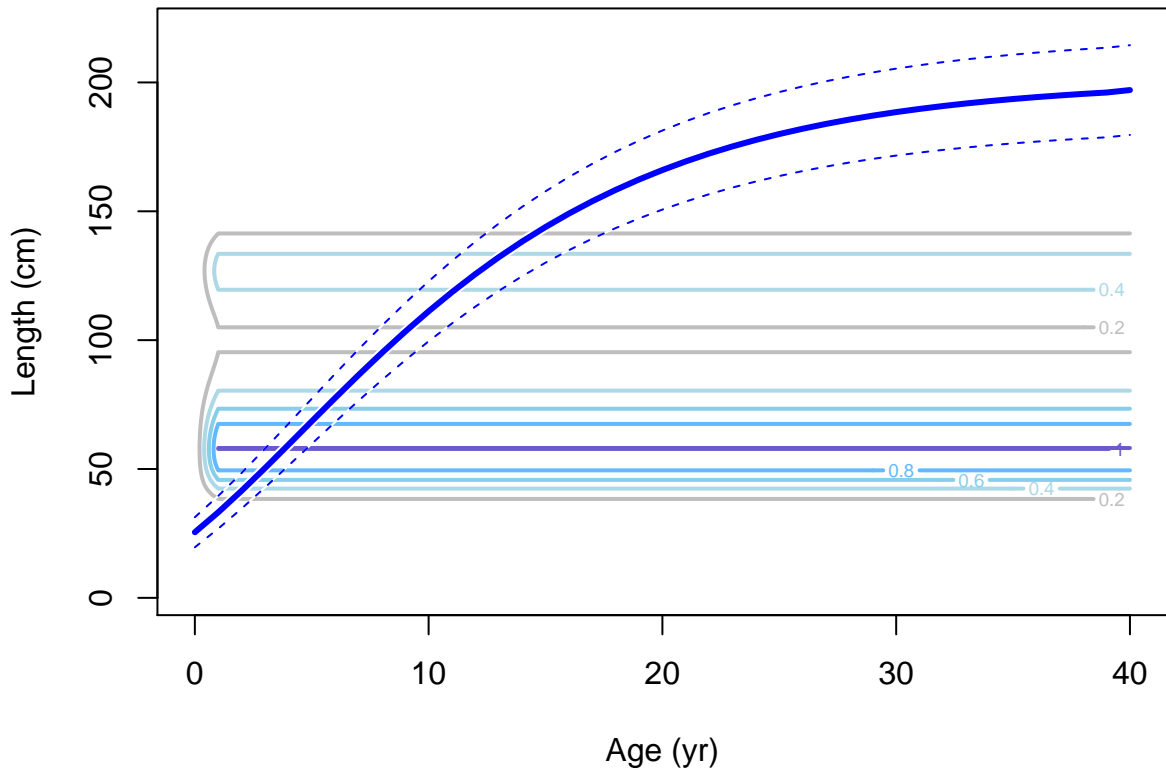
Male ending year selectivity and growth for A4-OBJ



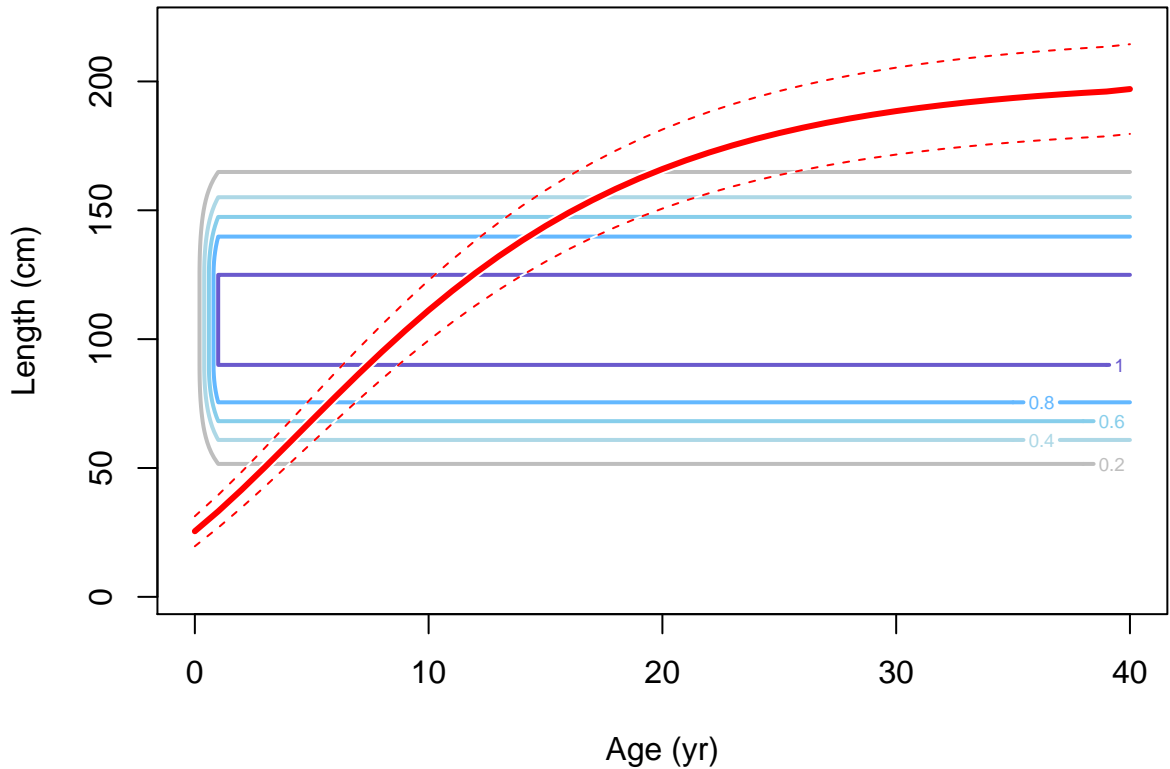
Female ending year selectivity and growth for A5-OBJ



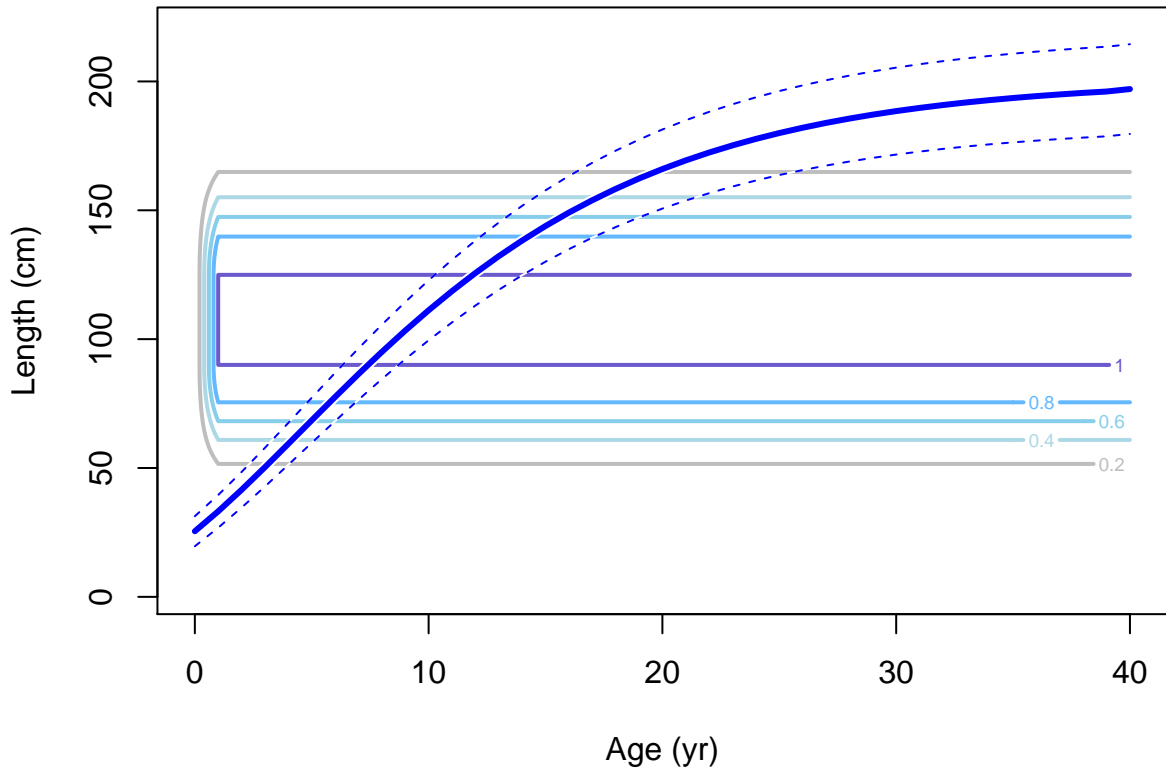
Male ending year selectivity and growth for A5-OBJ



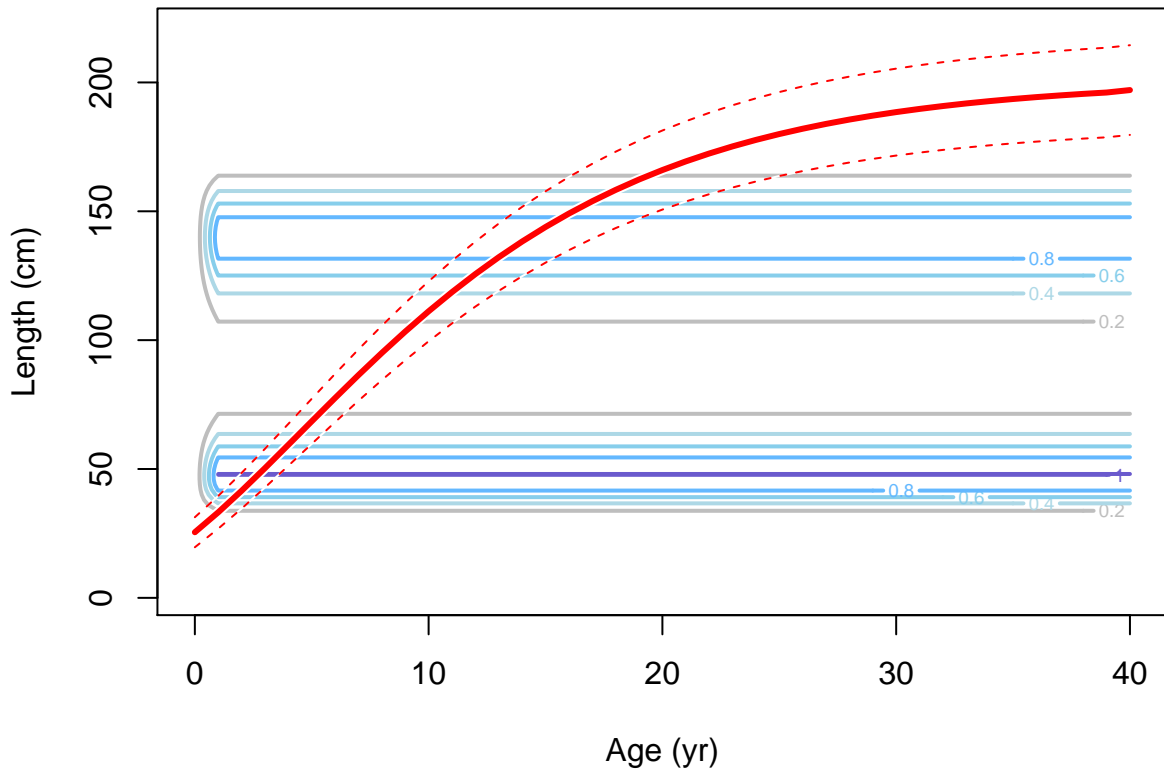
Female ending year selectivity and growth for A6-OBJ



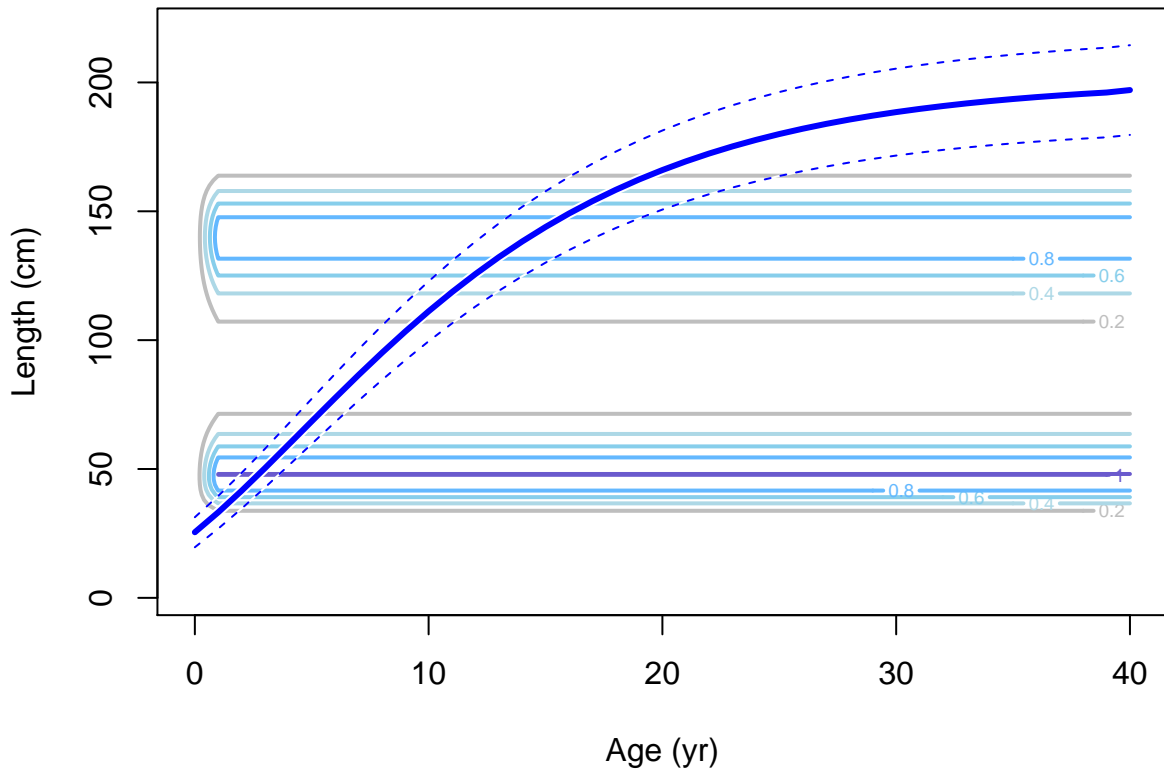
Male ending year selectivity and growth for A6-OBJ



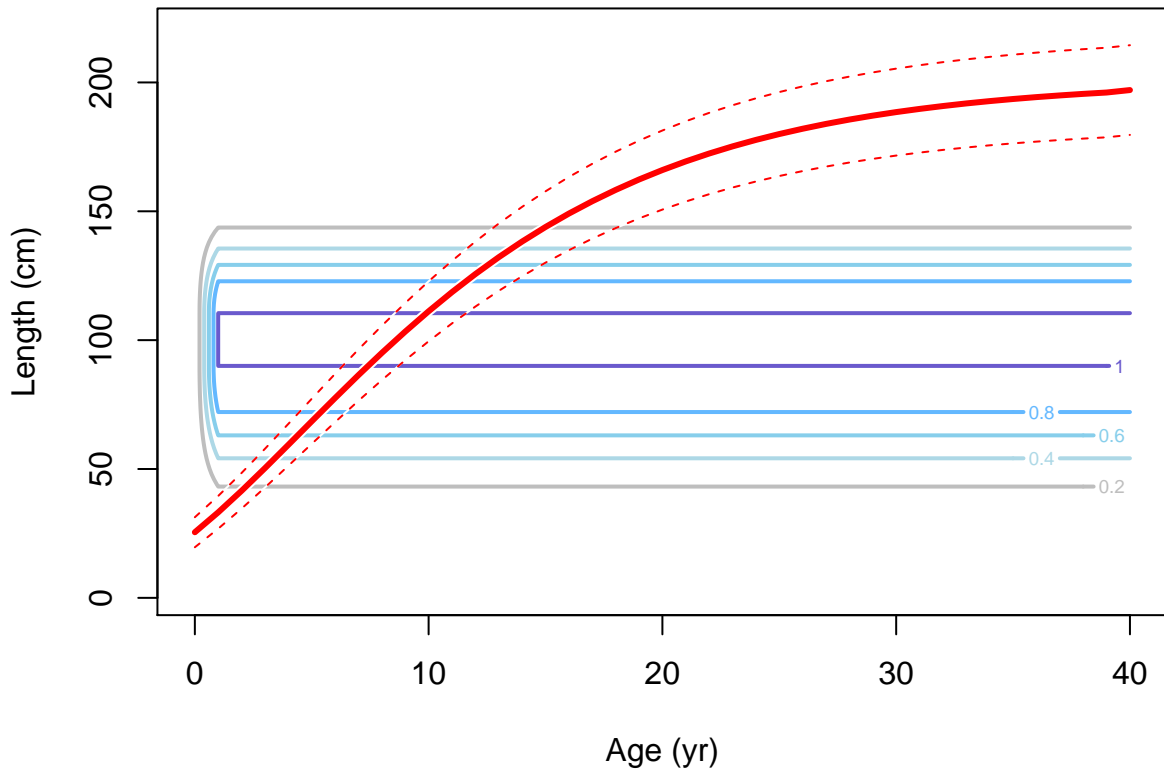
Female ending year selectivity and growth for A2-NOADEL



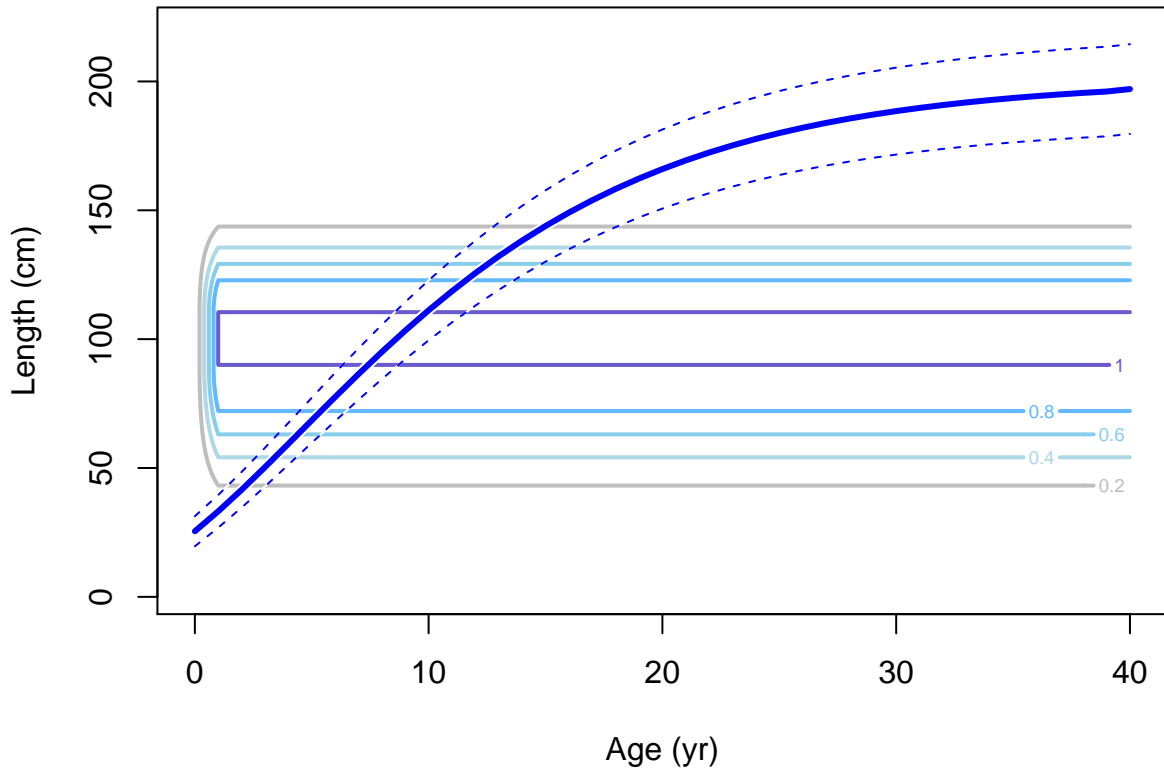
Male ending year selectivity and growth for A2-NOADEL



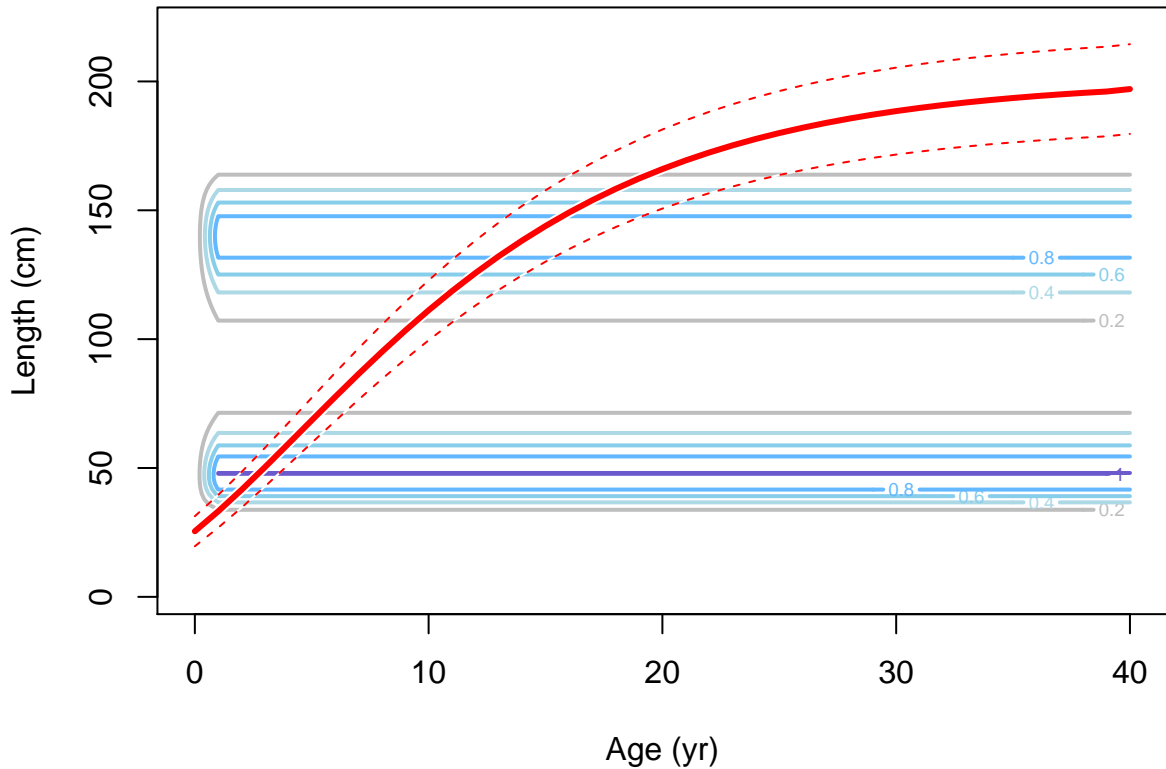
Female ending year selectivity and growth for A3-NOADEL



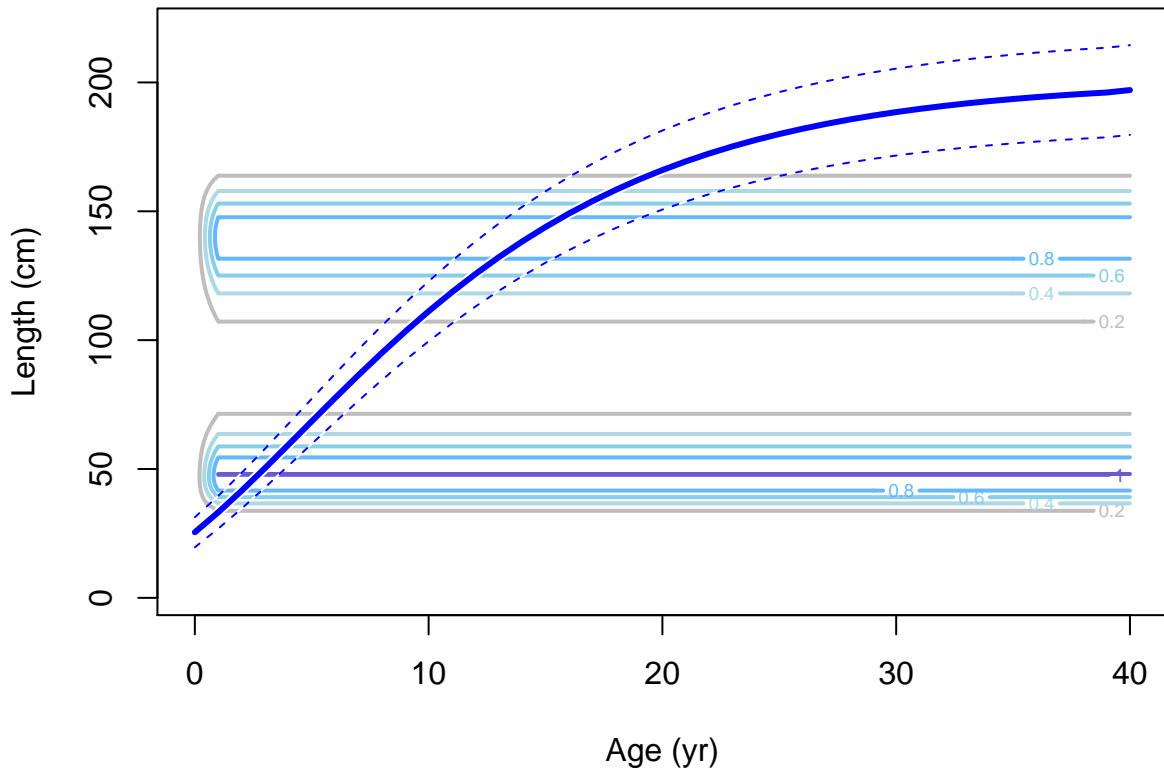
Male ending year selectivity and growth for A3-NOADEL



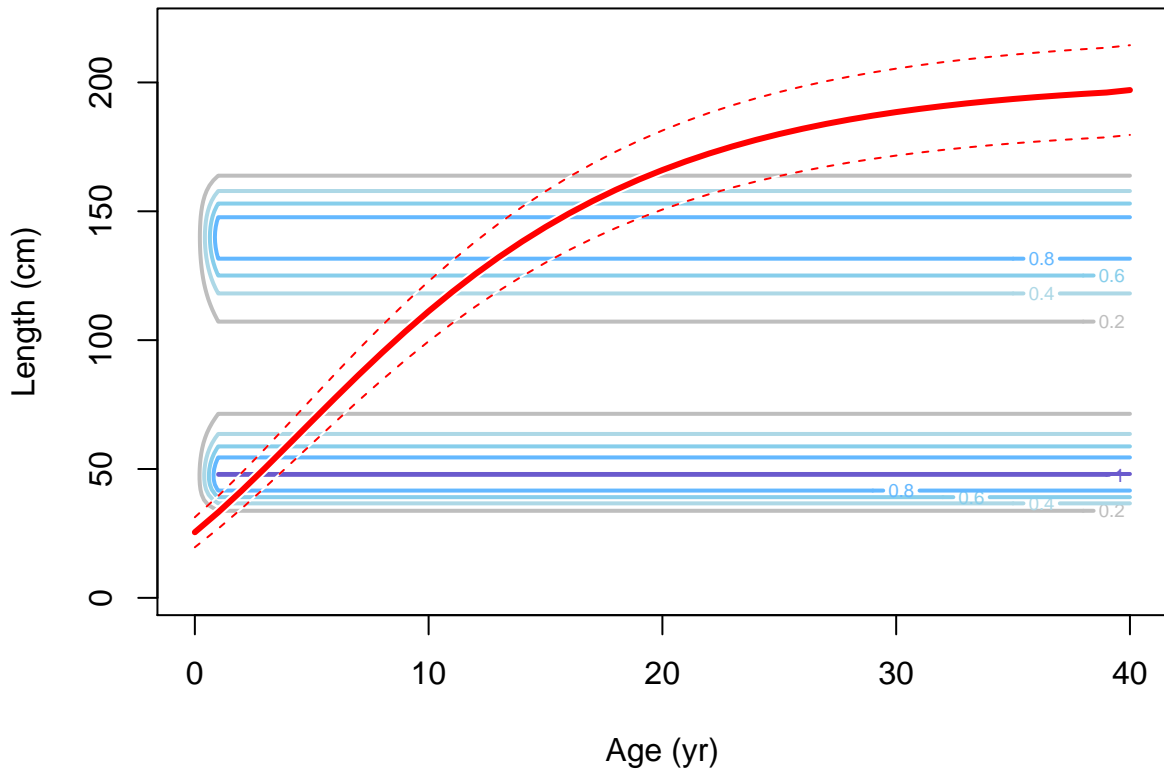
Female ending year selectivity and growth for A4-NOADEL



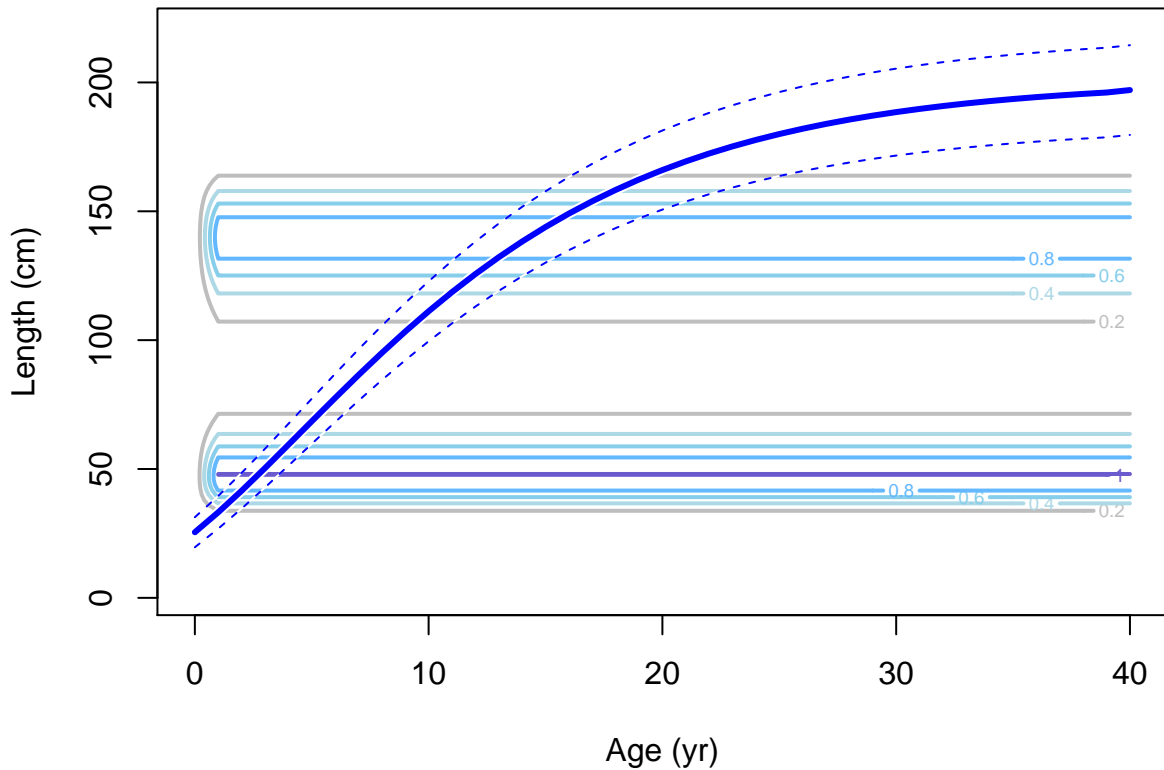
Male ending year selectivity and growth for A4-NOADEL



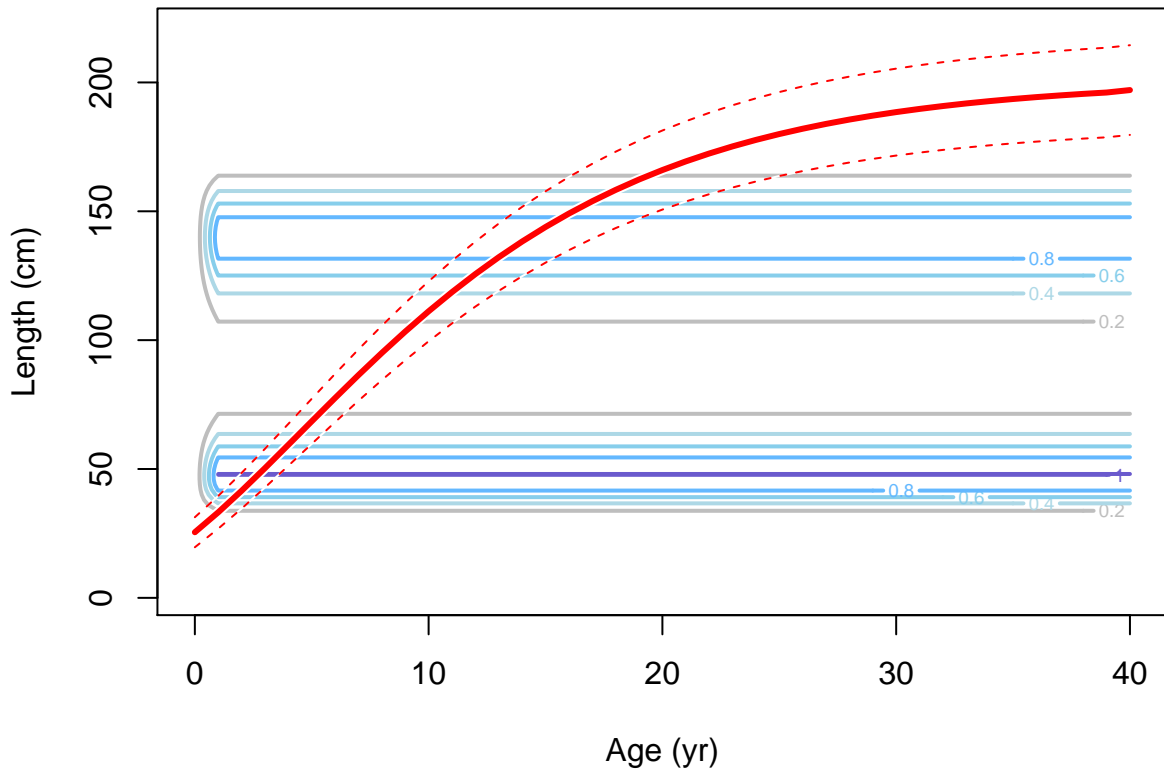
Female ending year selectivity and growth for A5-NOADEL



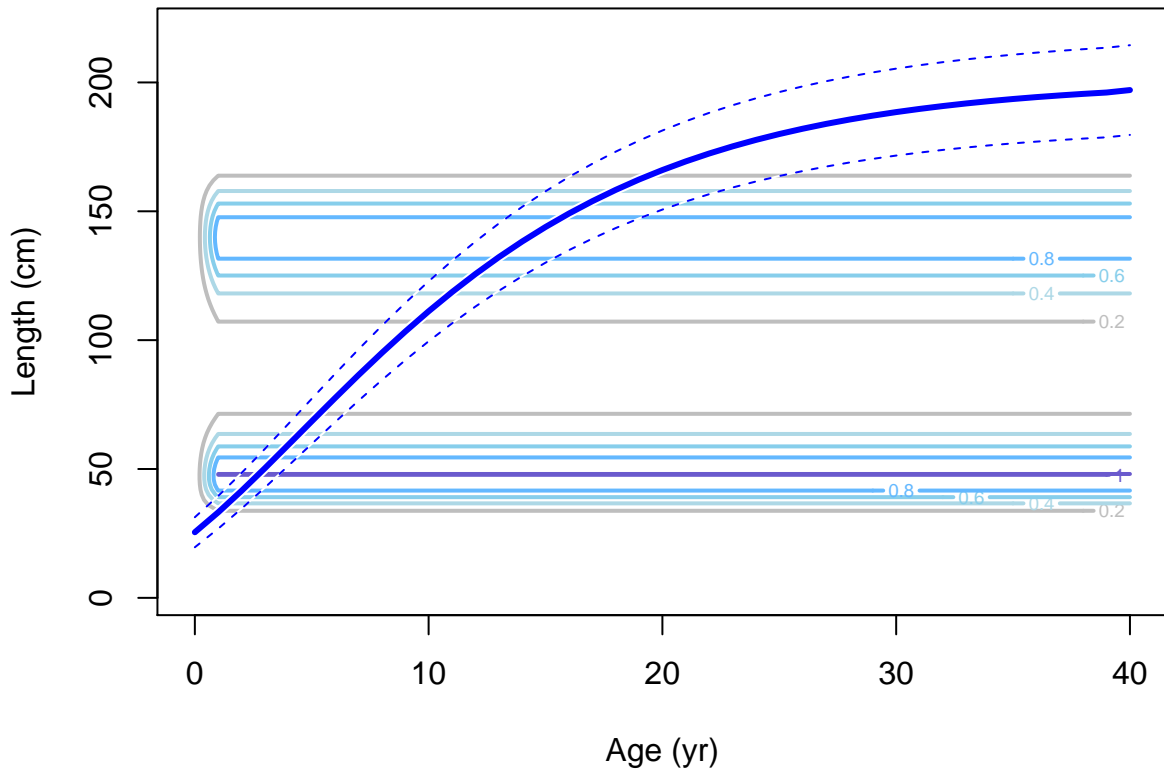
Male ending year selectivity and growth for A5-NOADEL



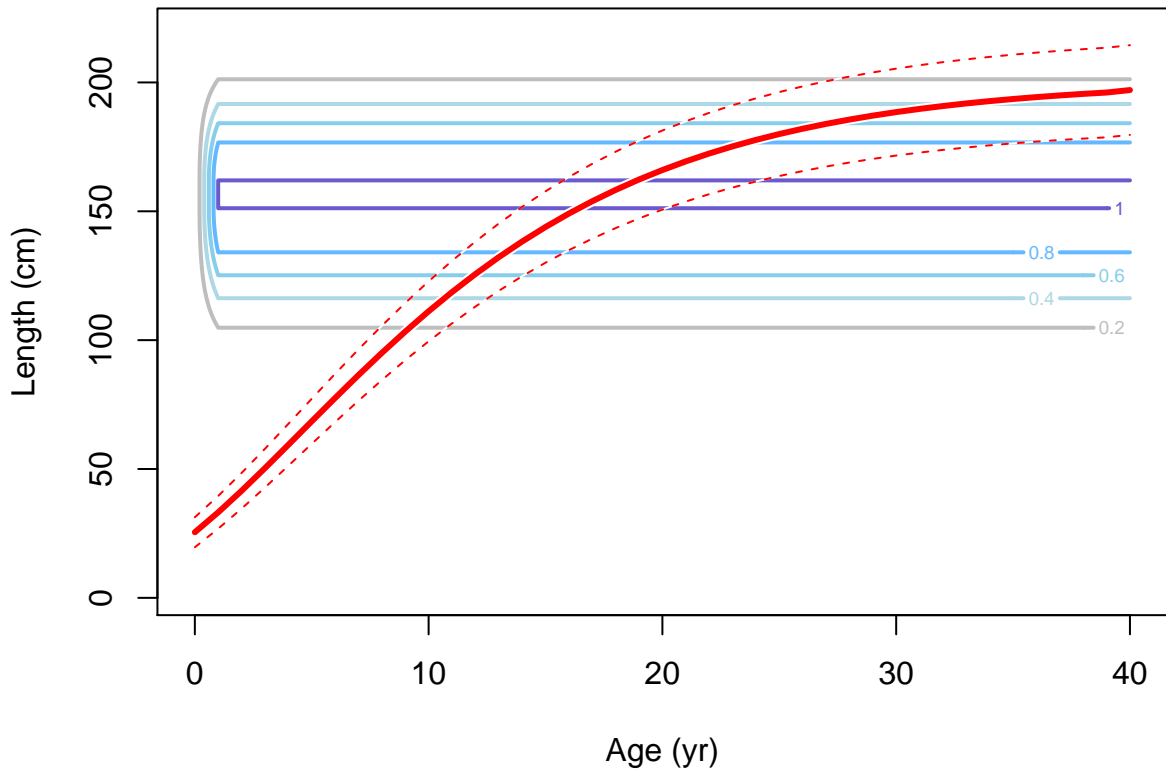
Female ending year selectivity and growth for A6-NOADEL



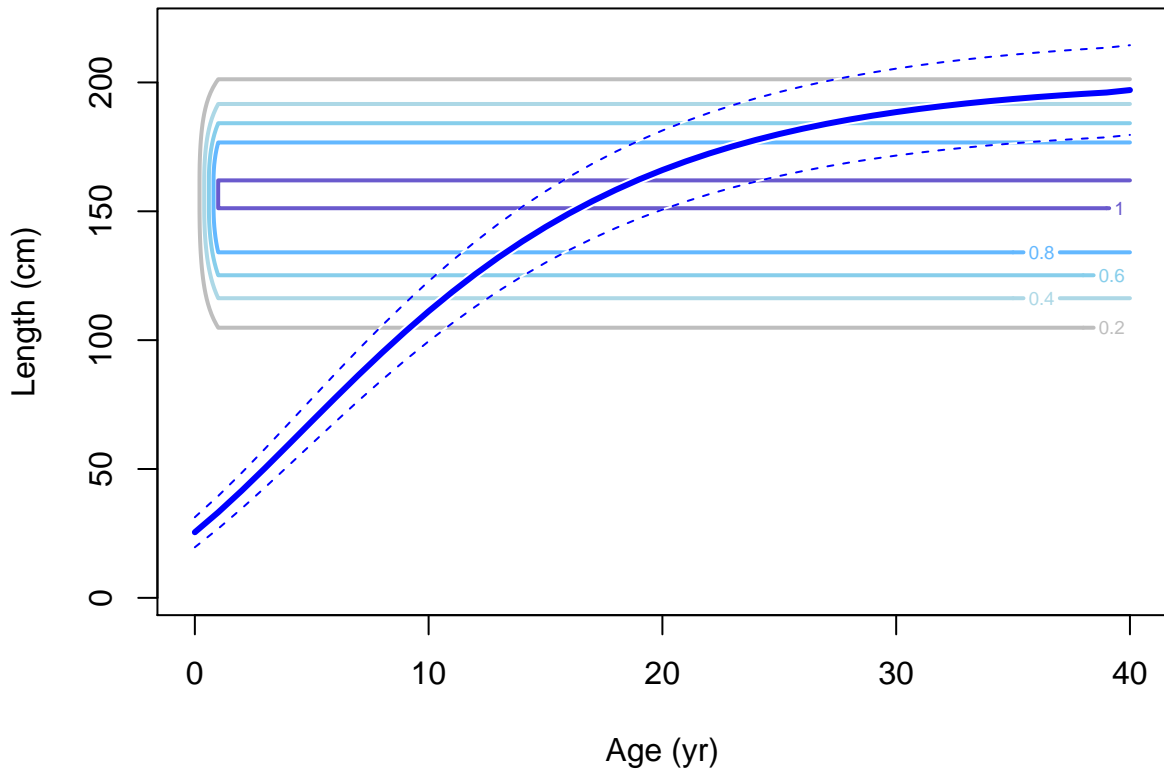
Male ending year selectivity and growth for A6-NOADEL



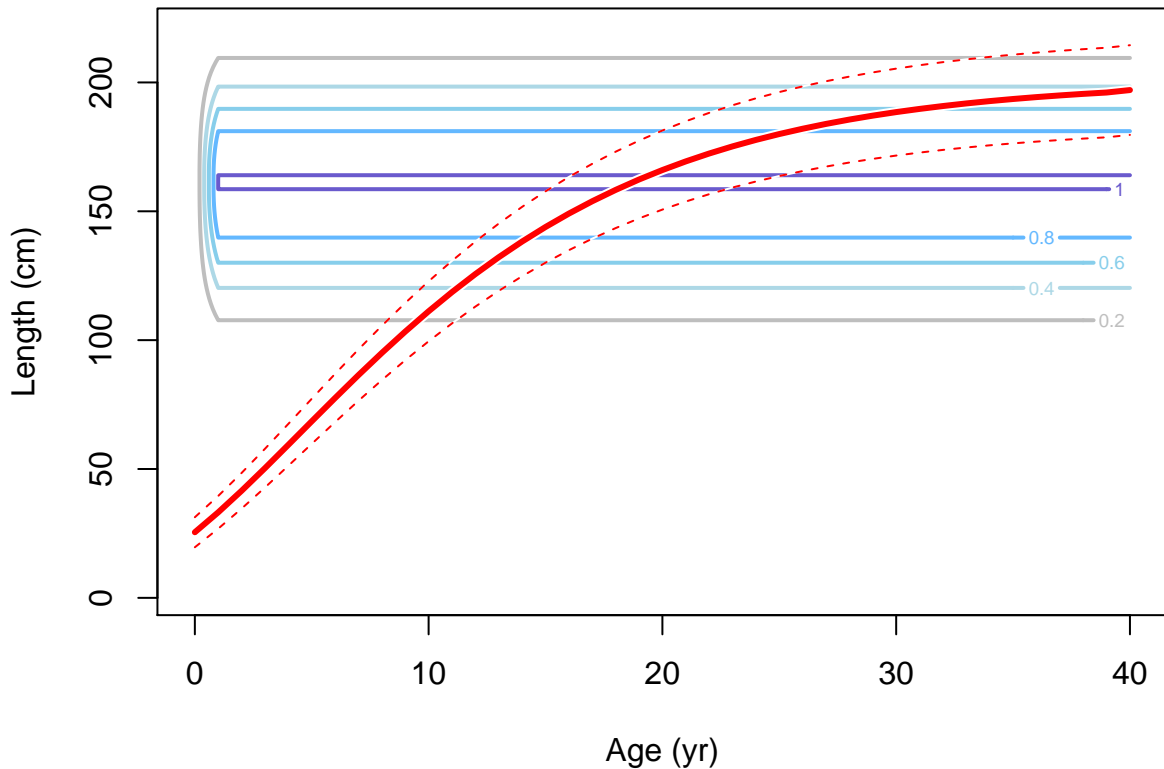
Female ending year selectivity and growth for EPO-LL-survey-early



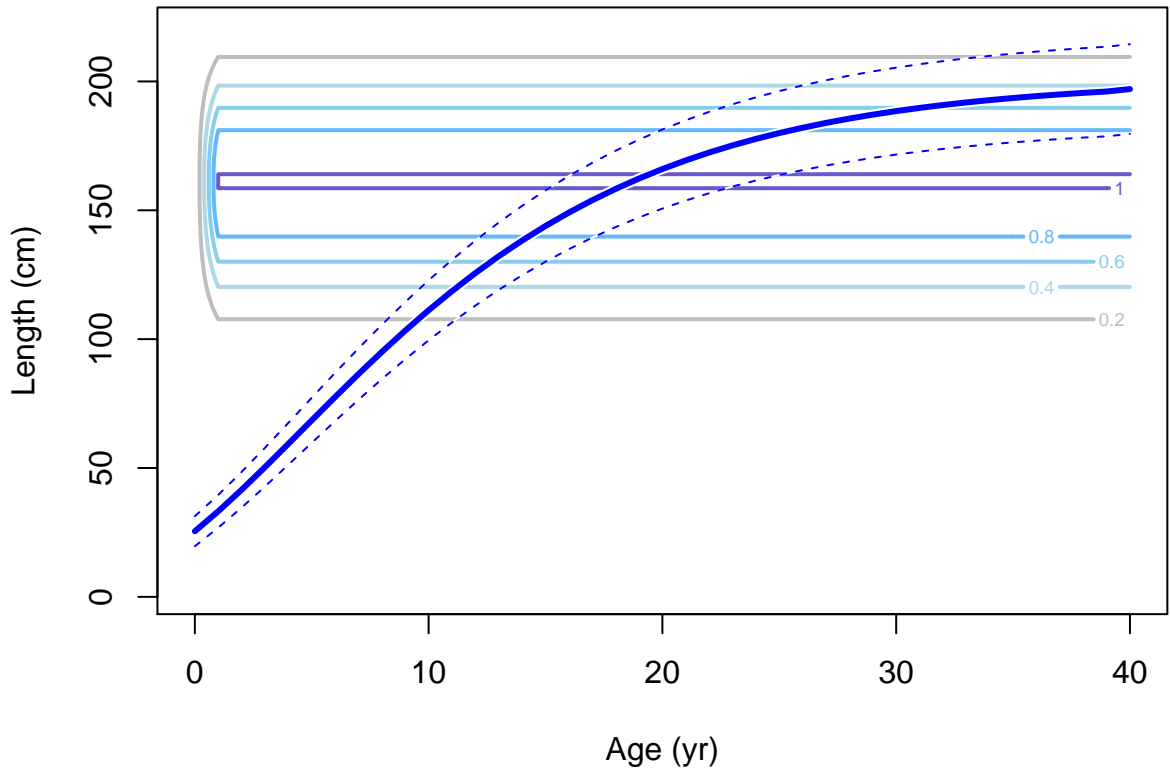
Male ending year selectivity and growth for EPO-LL-survey-early



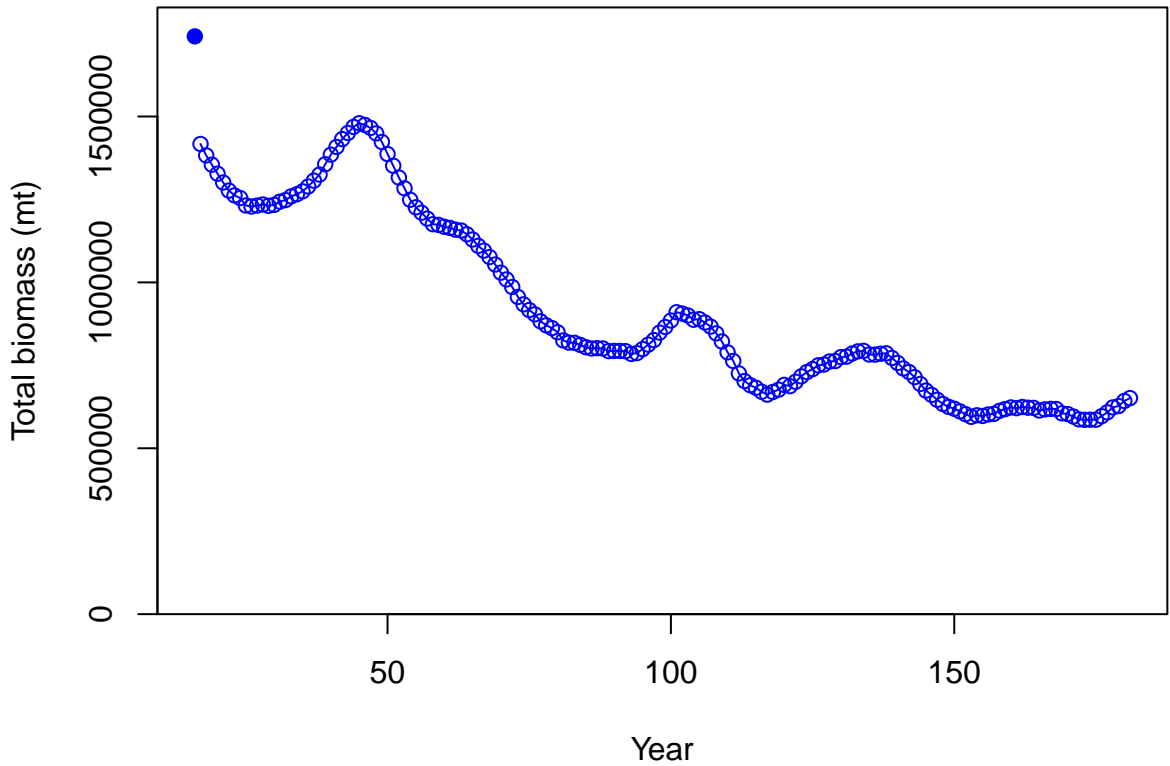
Female ending year selectivity and growth for EPO-LL-survey-late



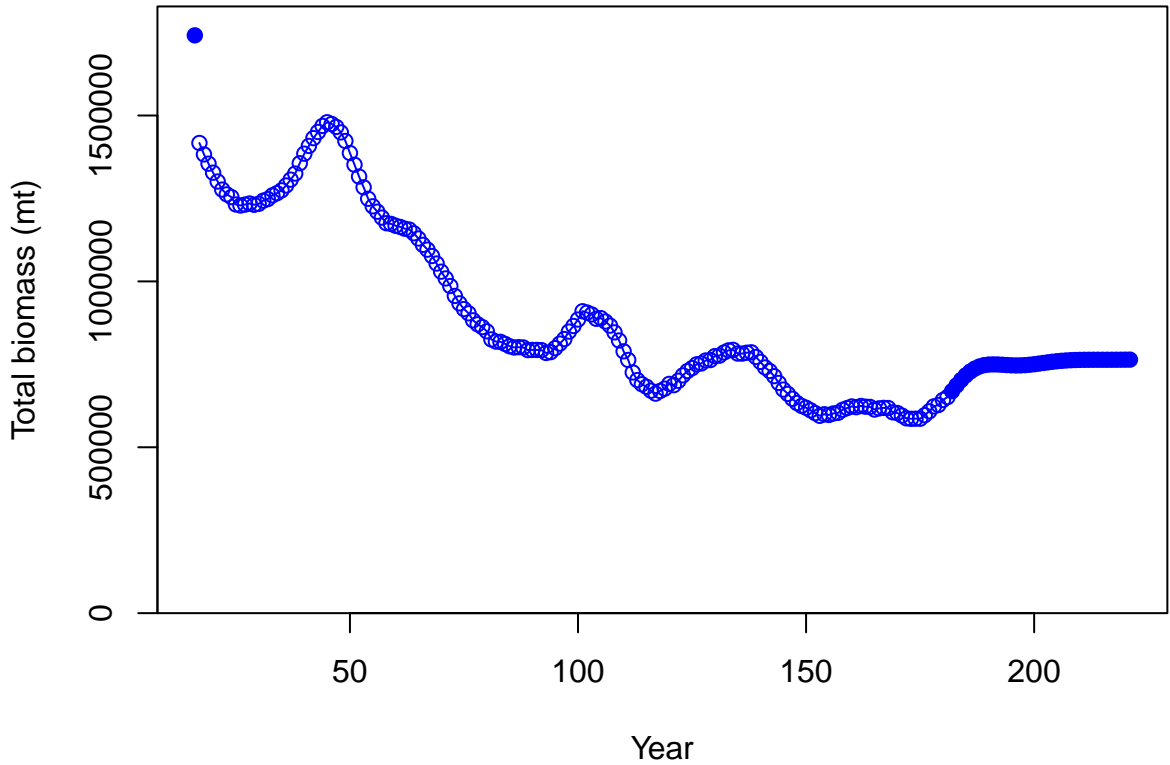
Male ending year selectivity and growth for EPO-LL-survey-late



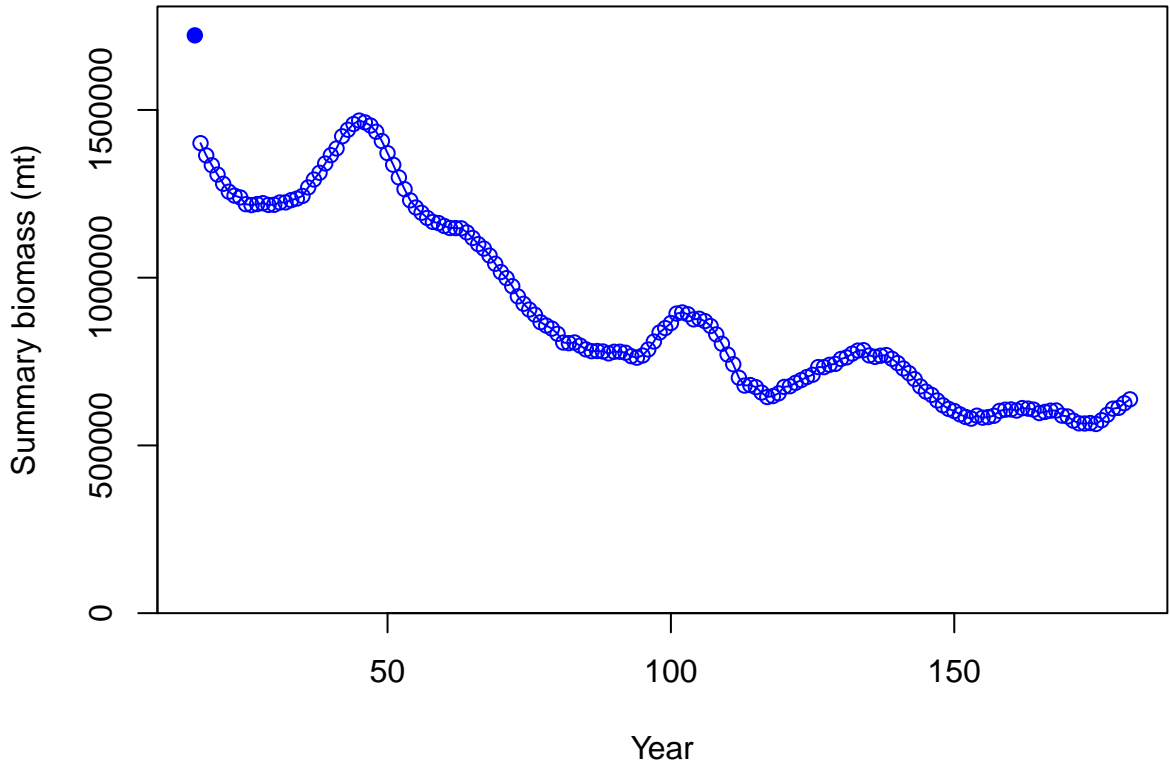
Total biomass (mt)



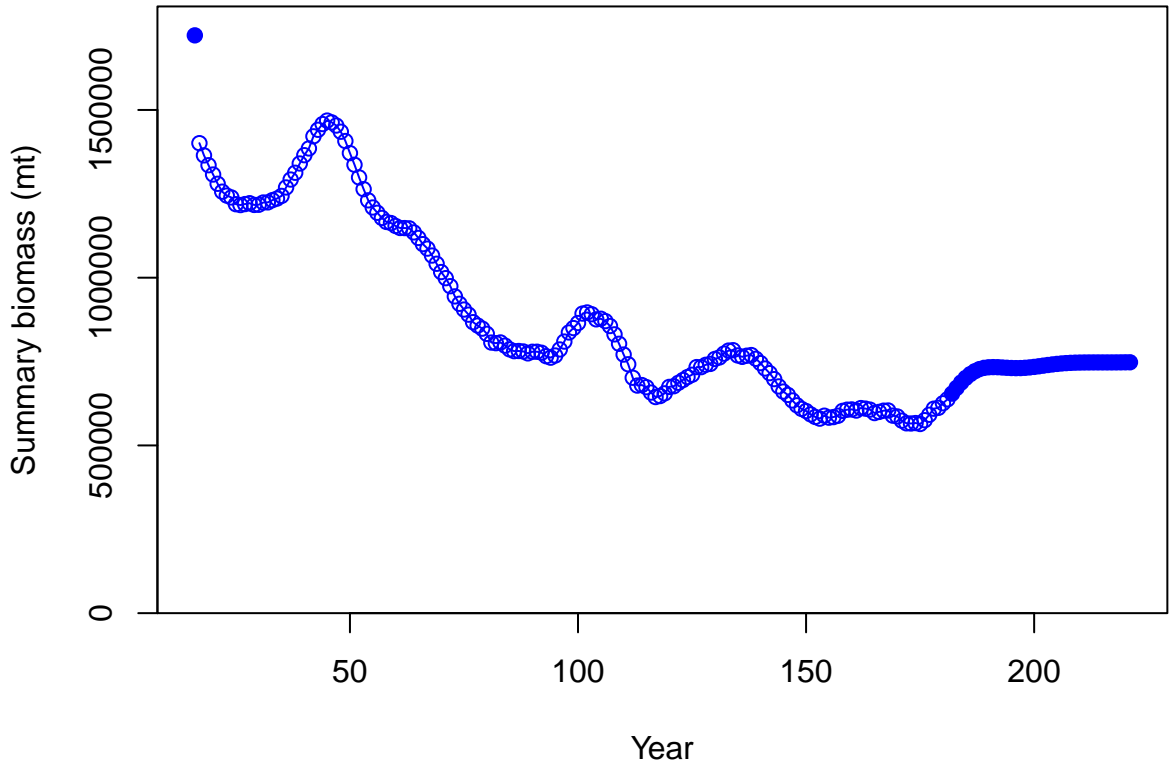
Total biomass (mt) with forecast



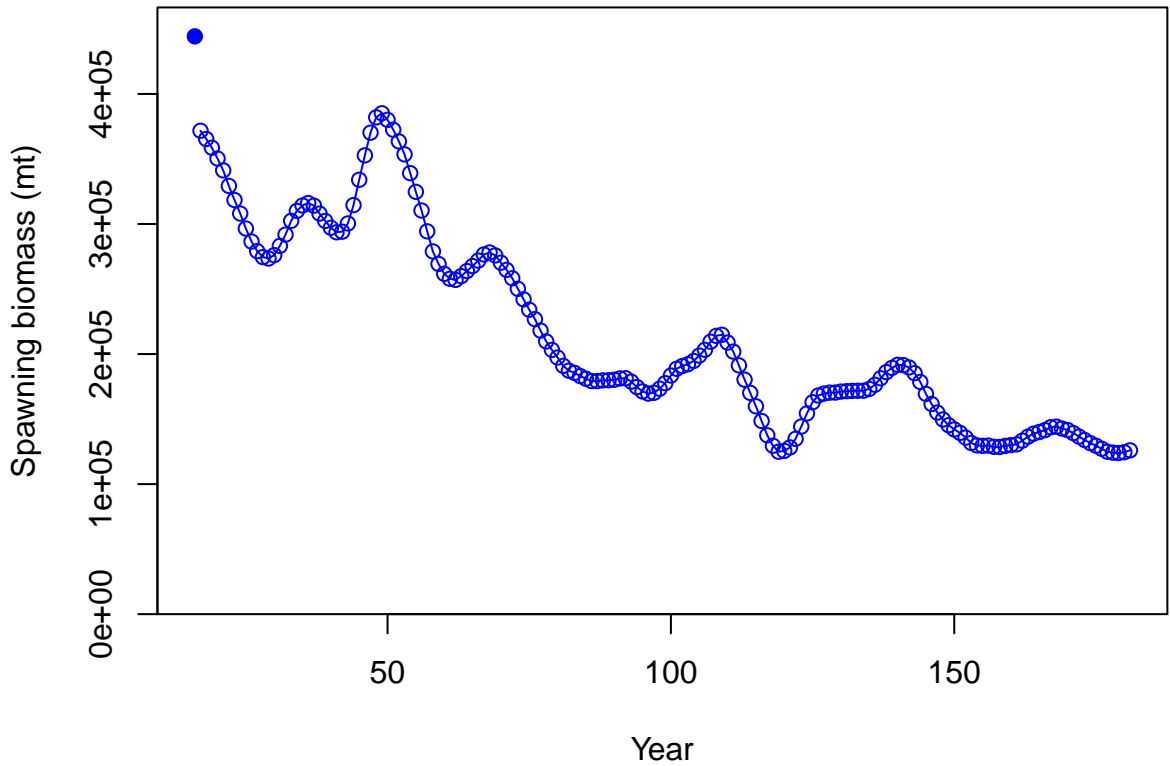
Summary biomass (mt)



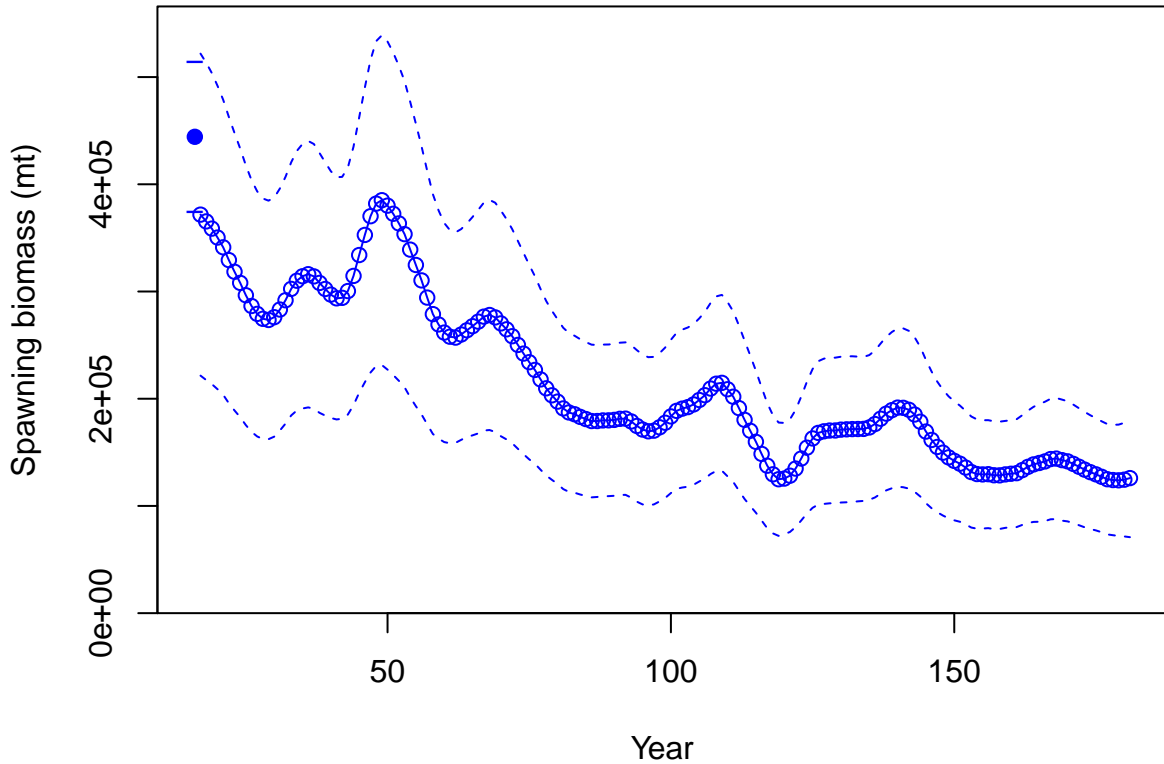
Summary biomass (mt) with forecast



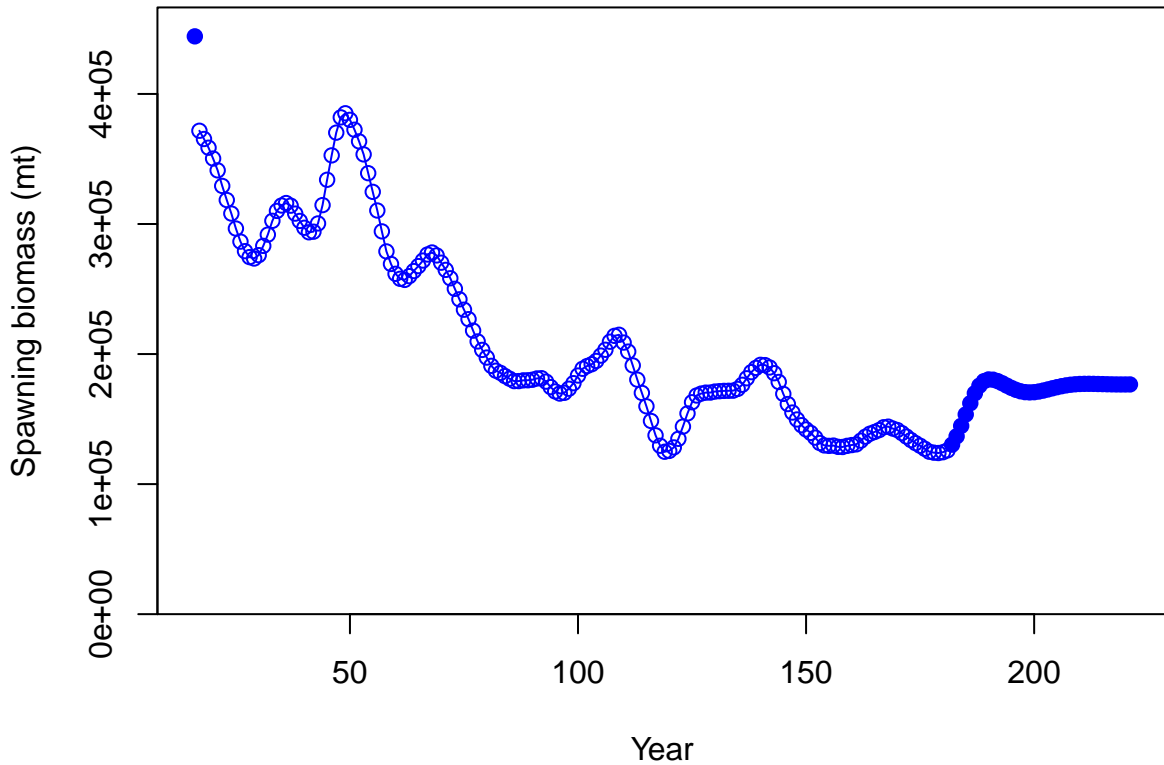
Spawning biomass (mt)



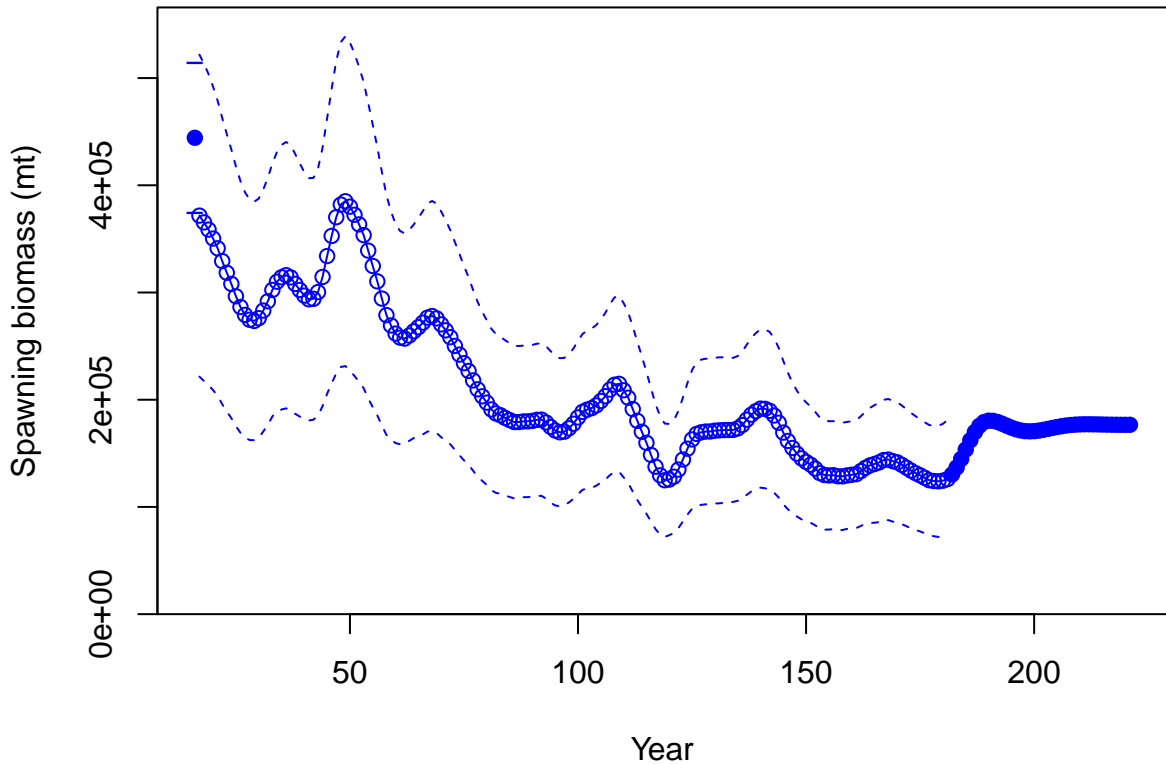
Spawning biomass (mt) with ~95% asymptotic intervals



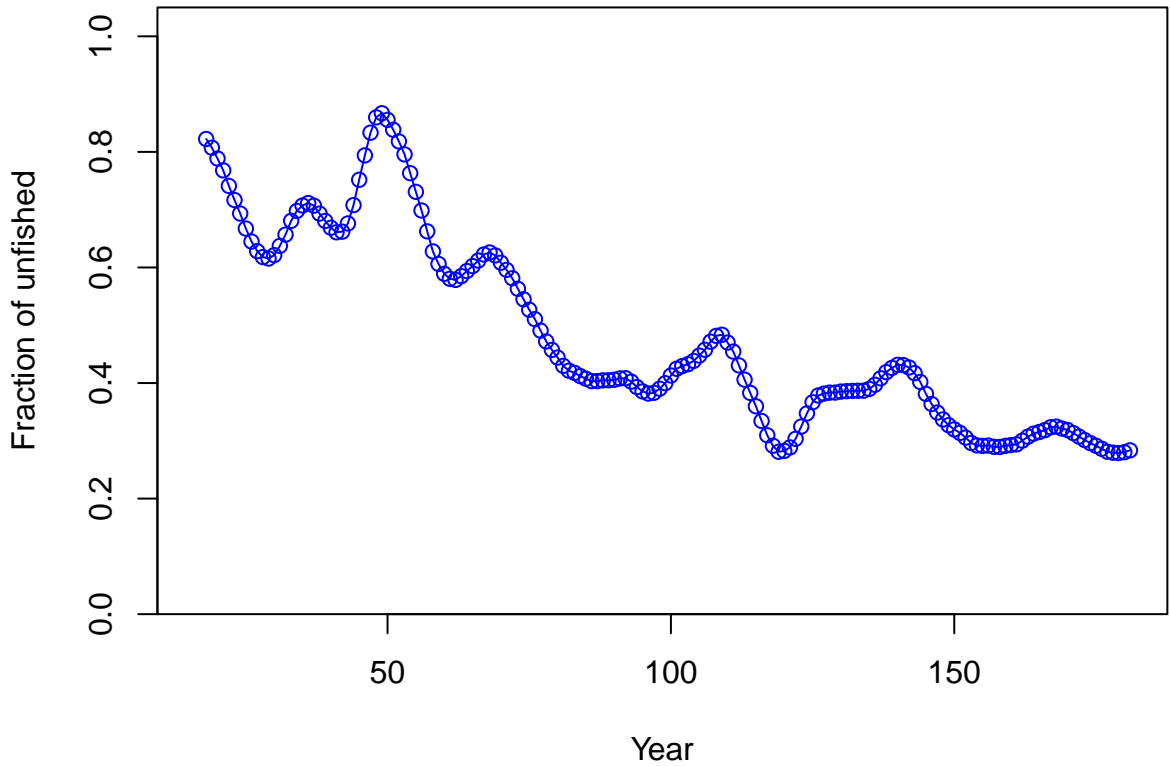
Spawning biomass (mt) with forecast



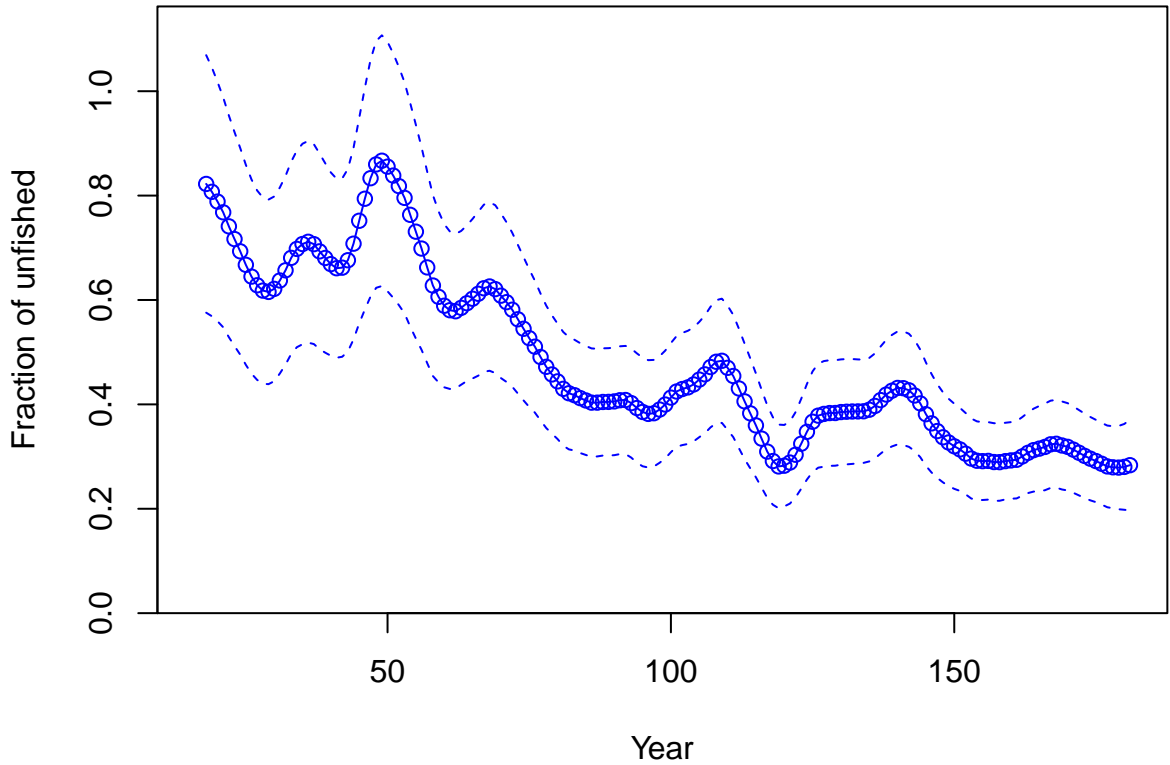
Spawning biomass (mt) with forecast with ~95% asymptotic intervals



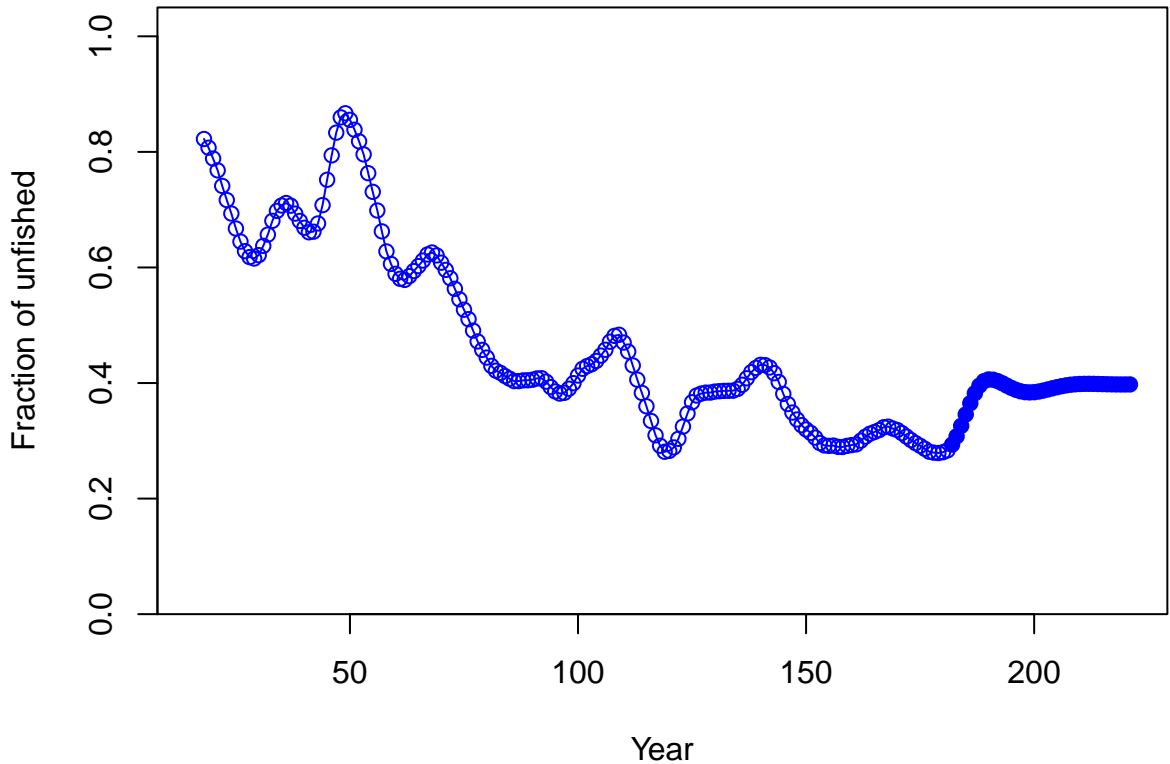
Fraction of unfished



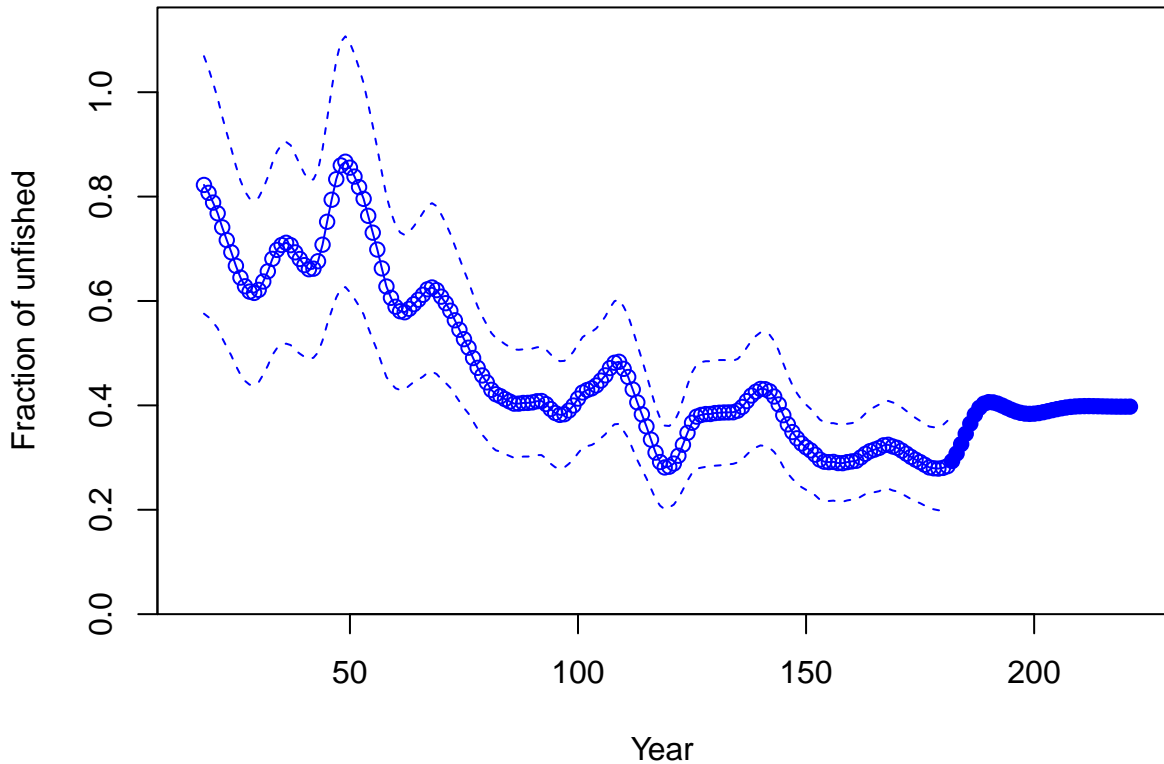
Fraction of unfished with ~95% asymptotic intervals



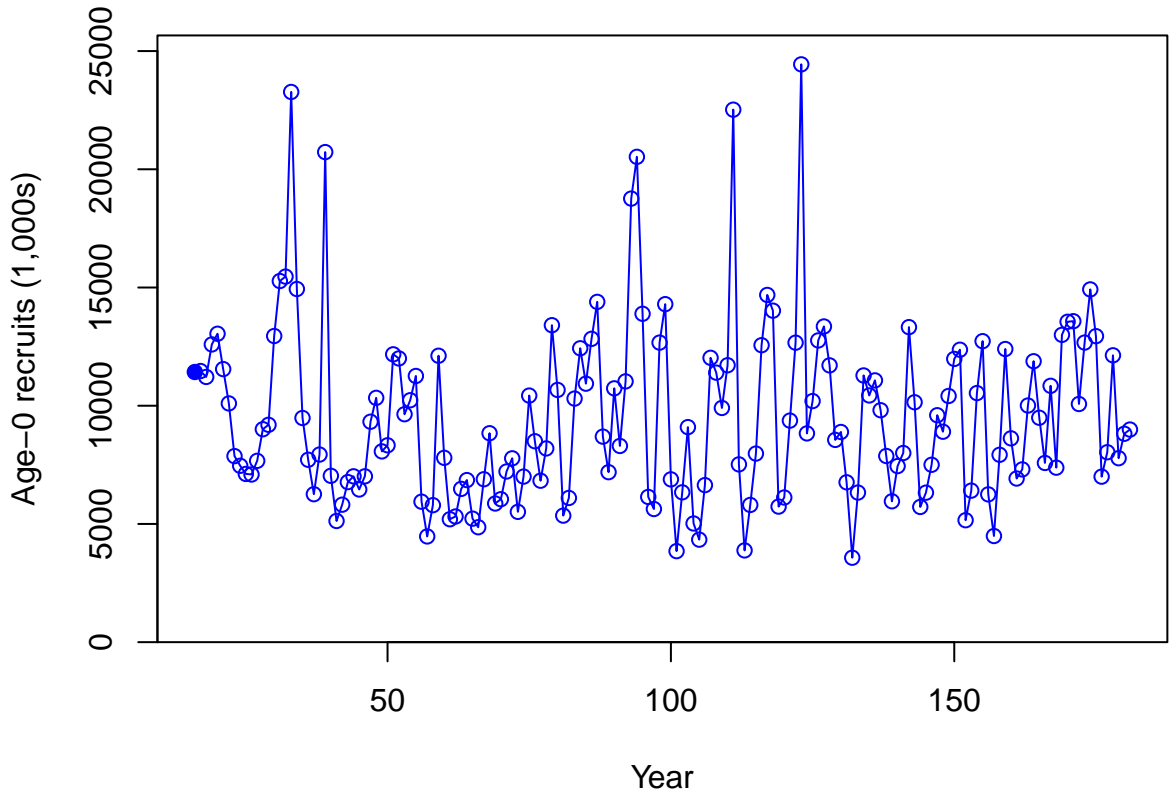
Fraction of unfished with forecast



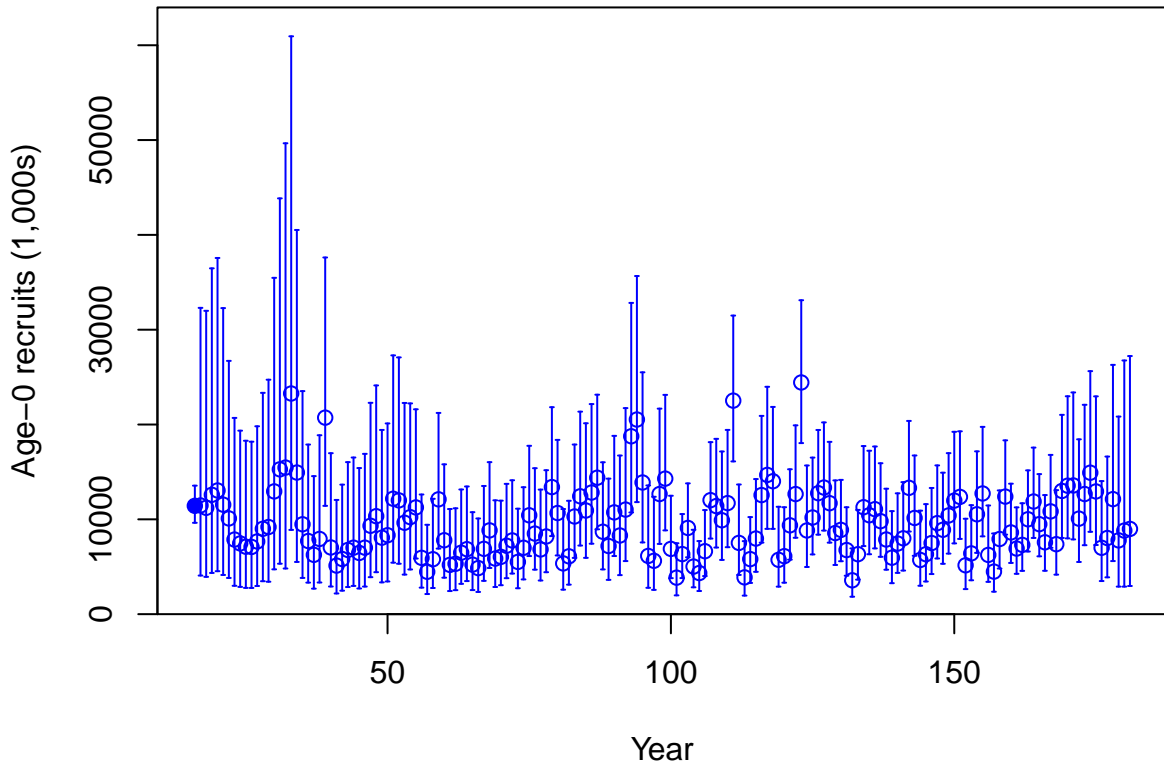
Fraction of unfished with forecast with ~95% asymptotic intervals



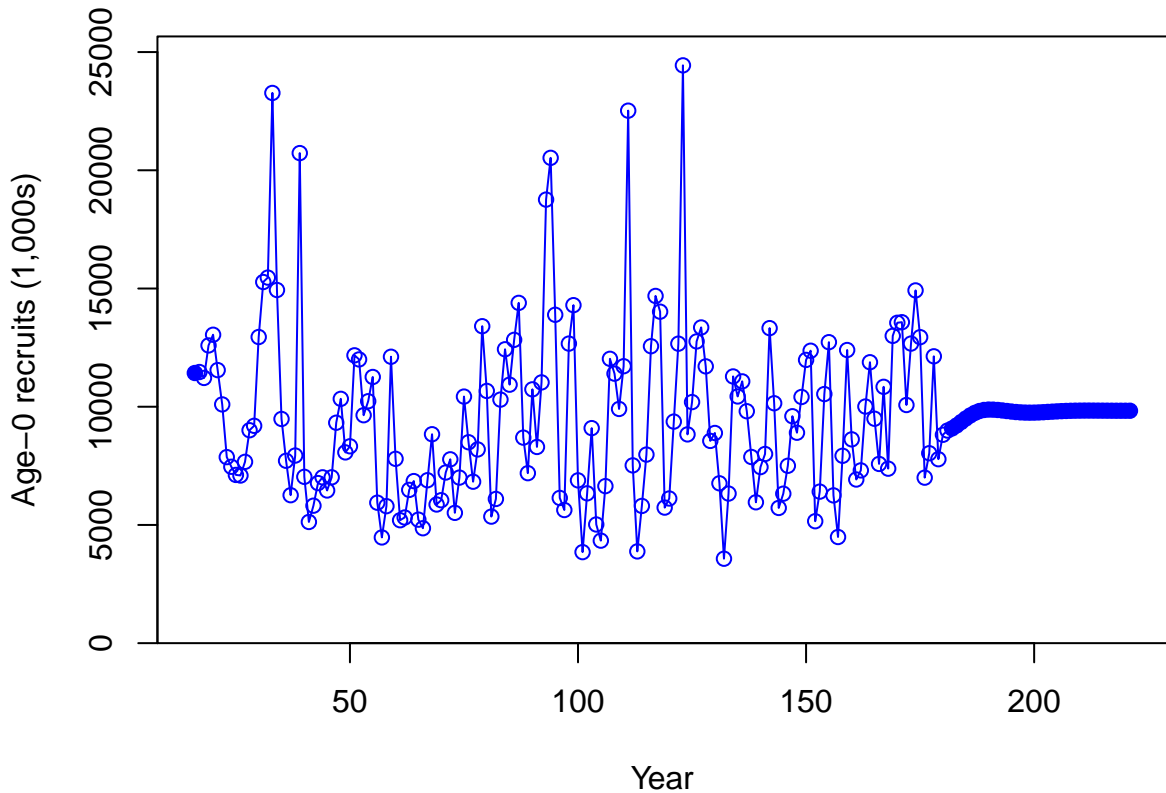
Age-0 recruits (1,000s)



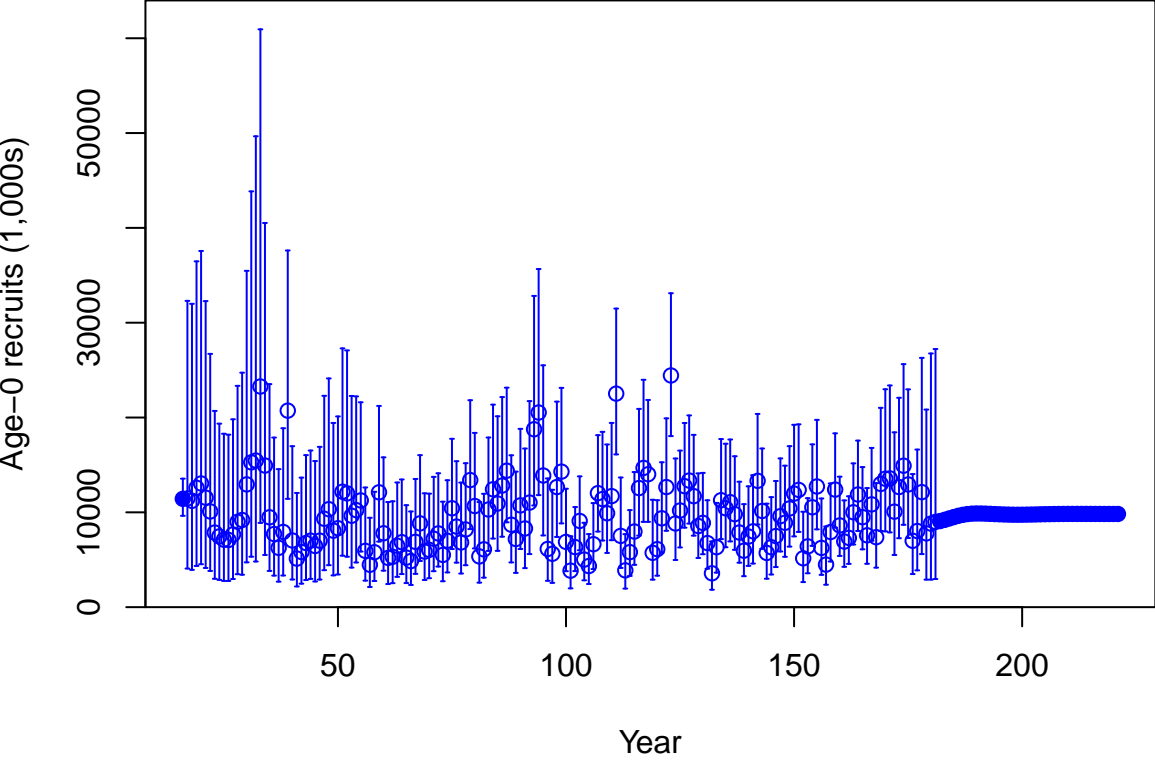
Age-0 recruits (1,000s) with ~95% asymptotic intervals



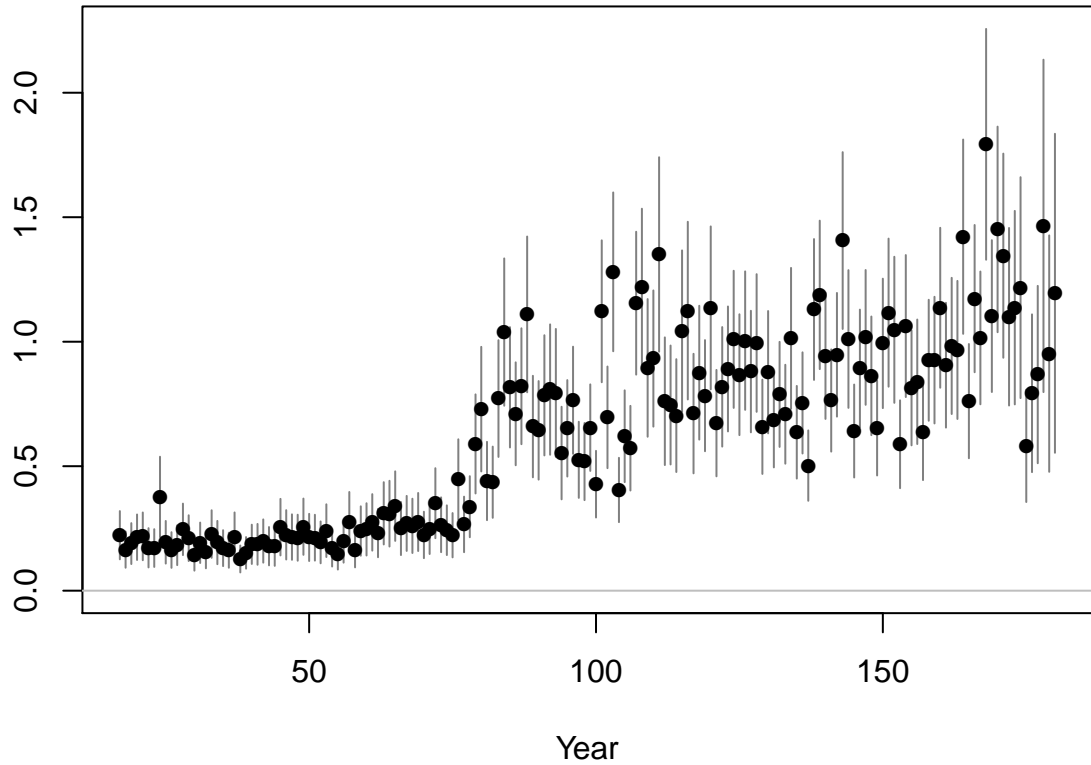
Age-0 recruits (1,000s) with forecast

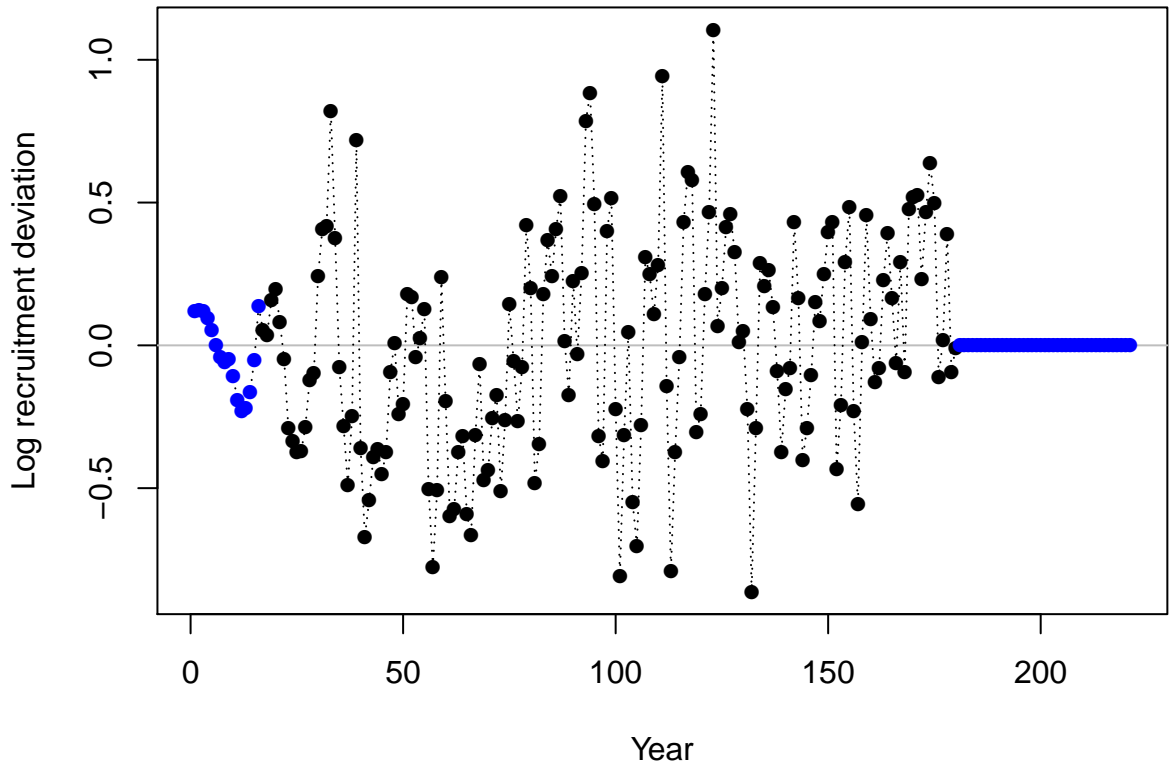


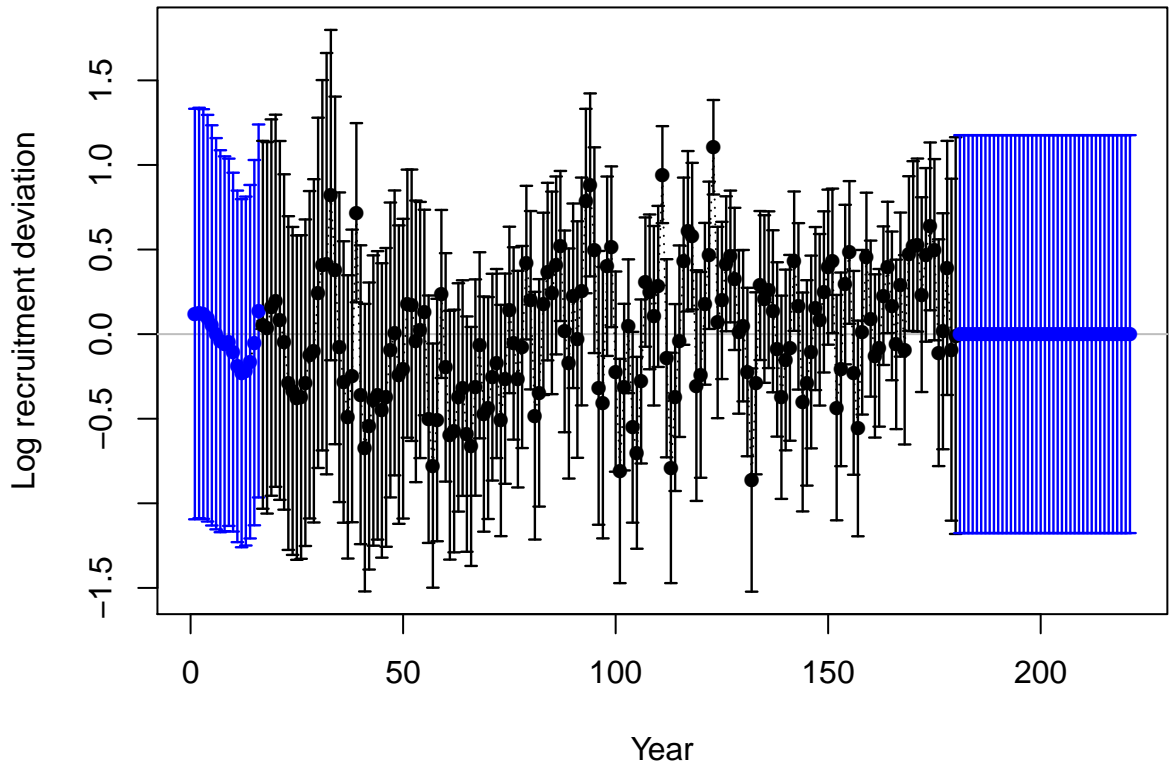
Age-0 recruits (1,000s) with forecast with ~95% asymptotic intervals



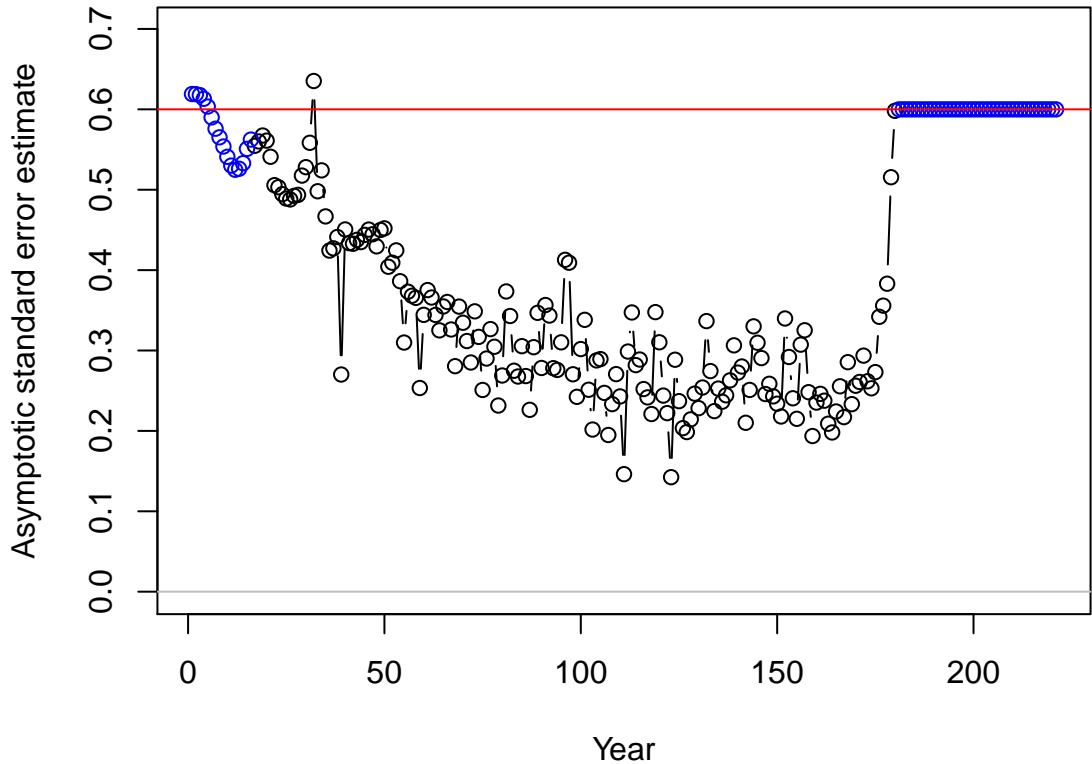
Summary Fishing Mortality

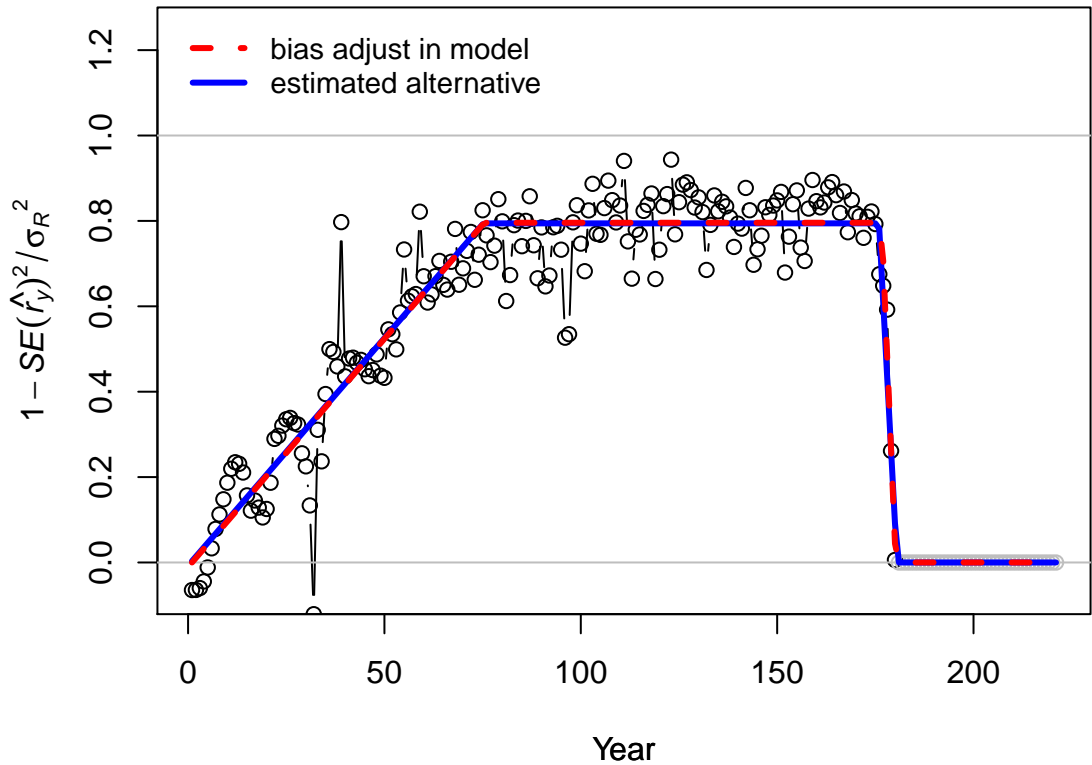


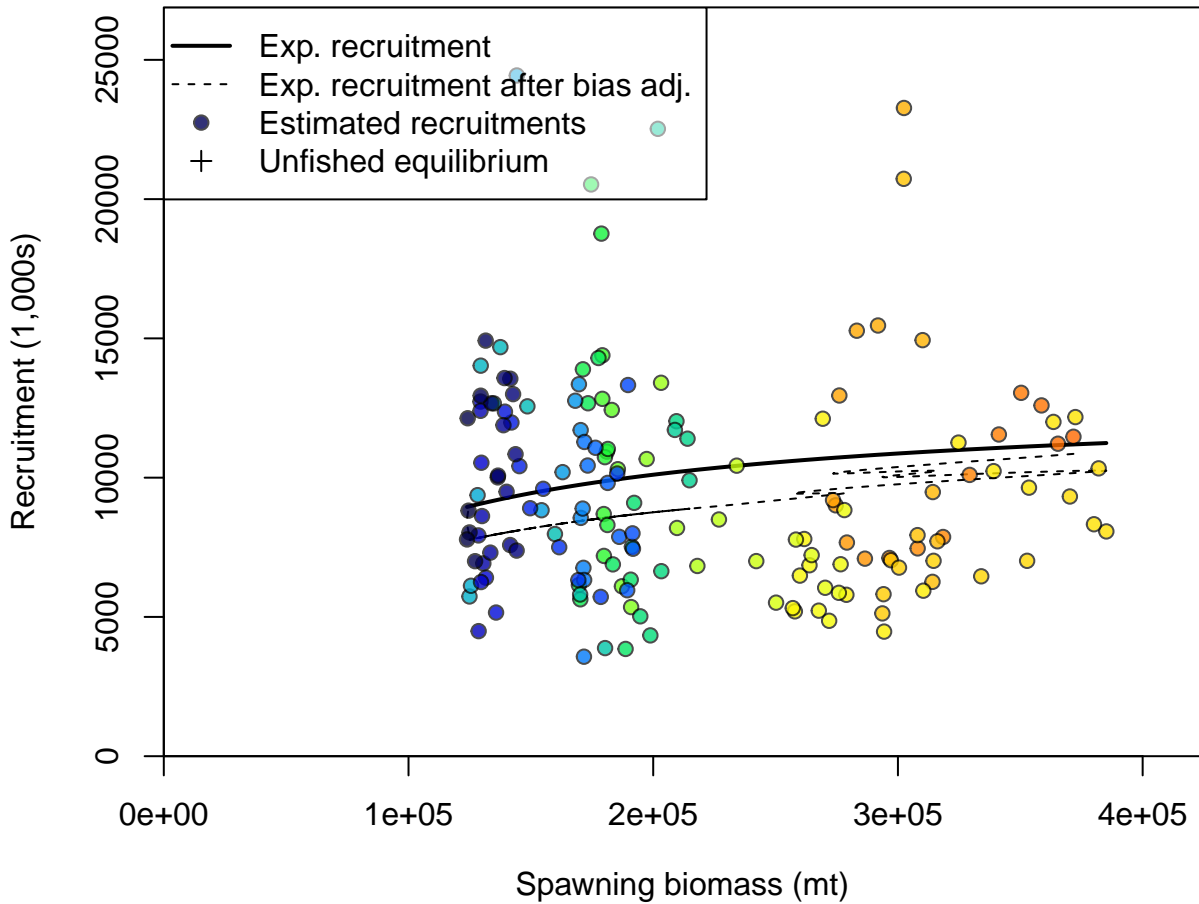


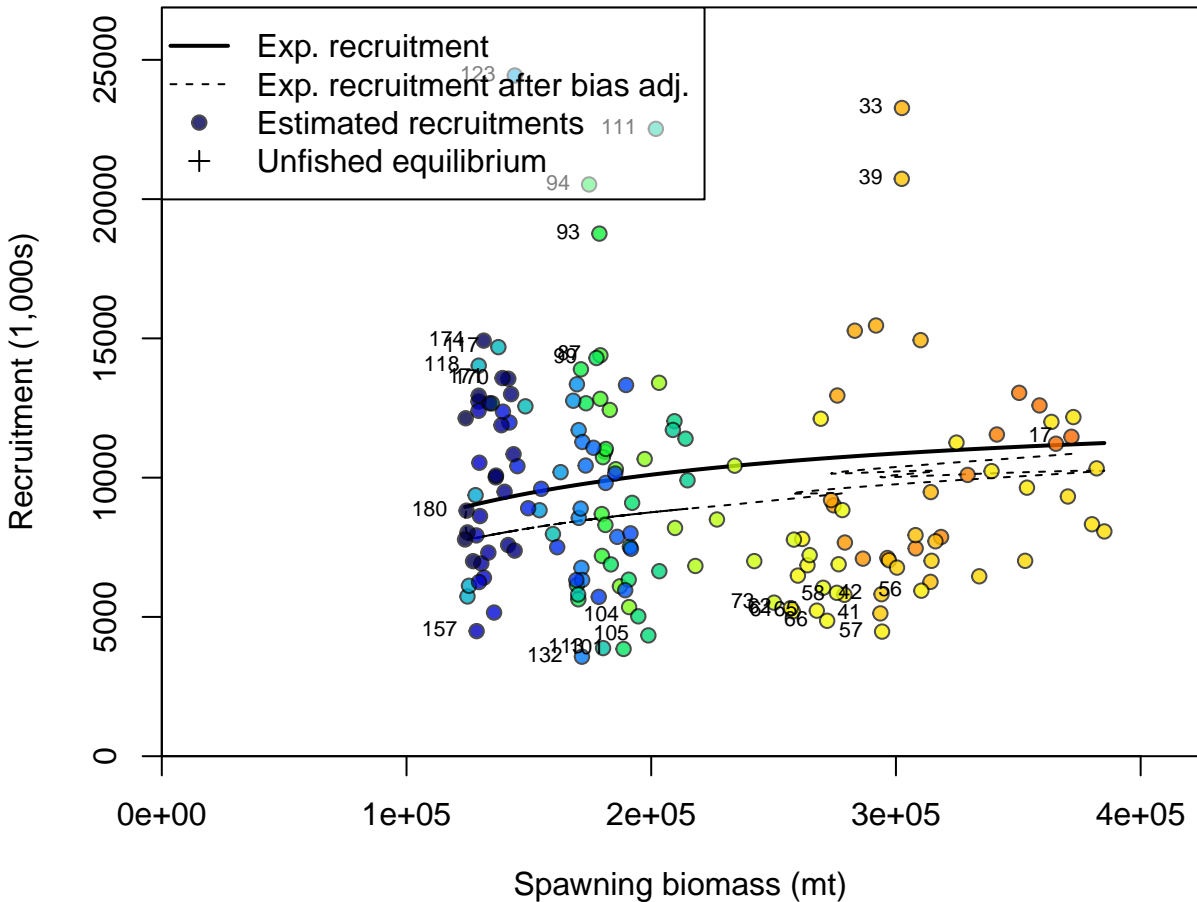


Recruitment deviation variance

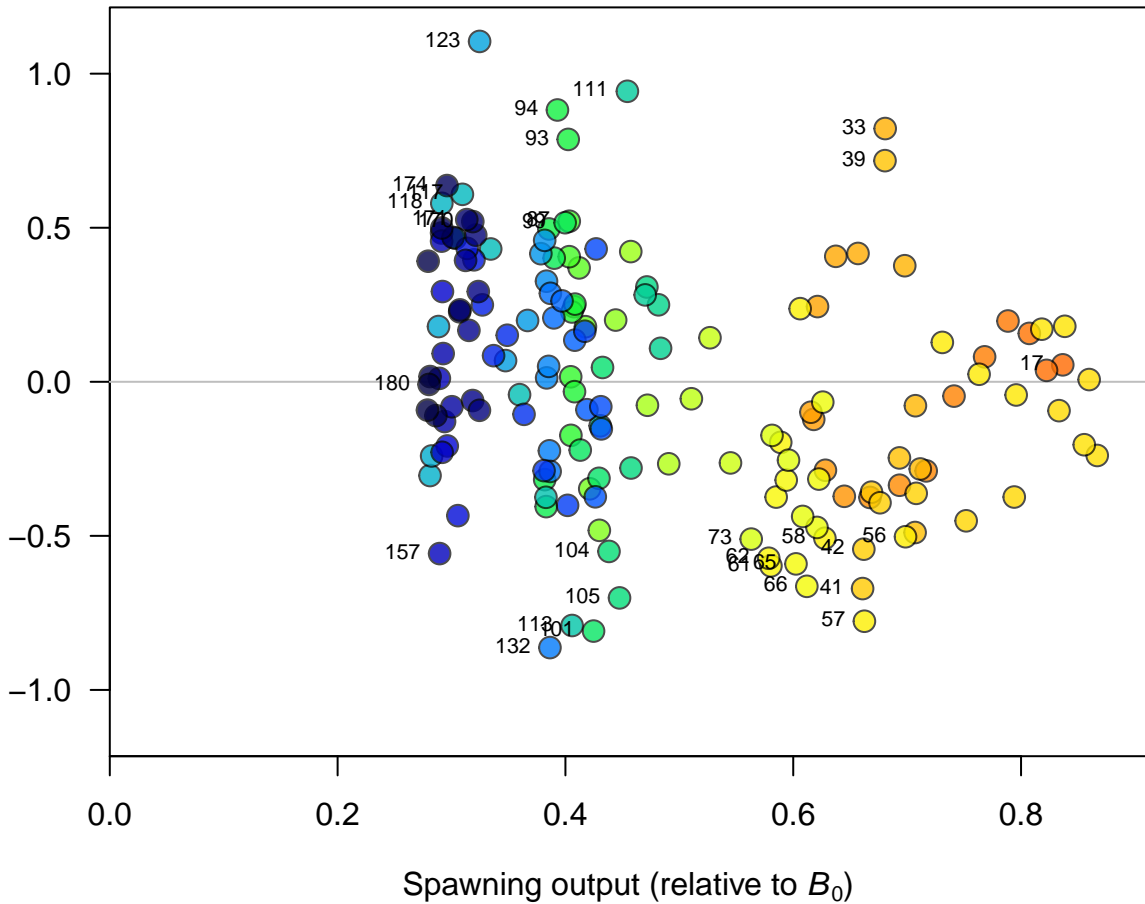


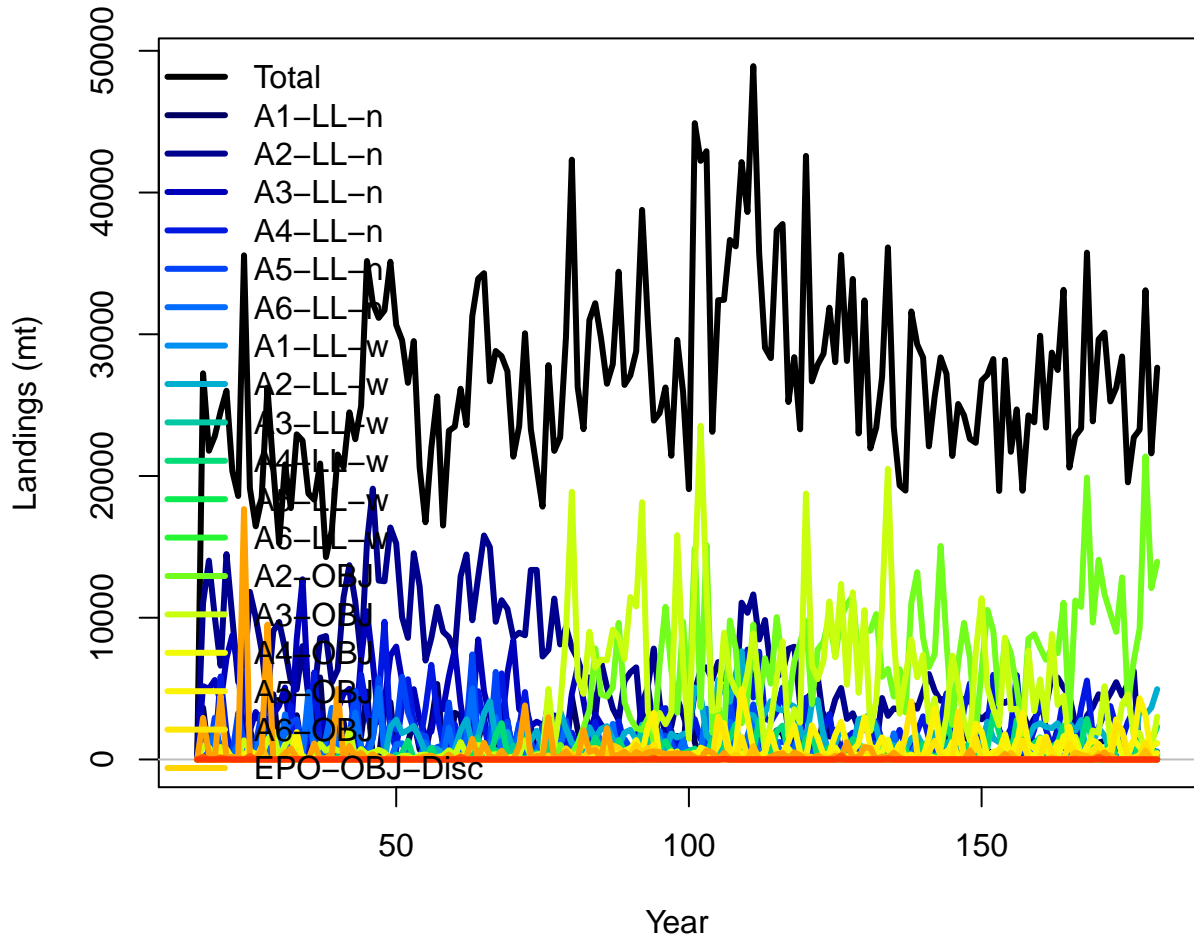






Log recruitment deviation





Landings (mt)

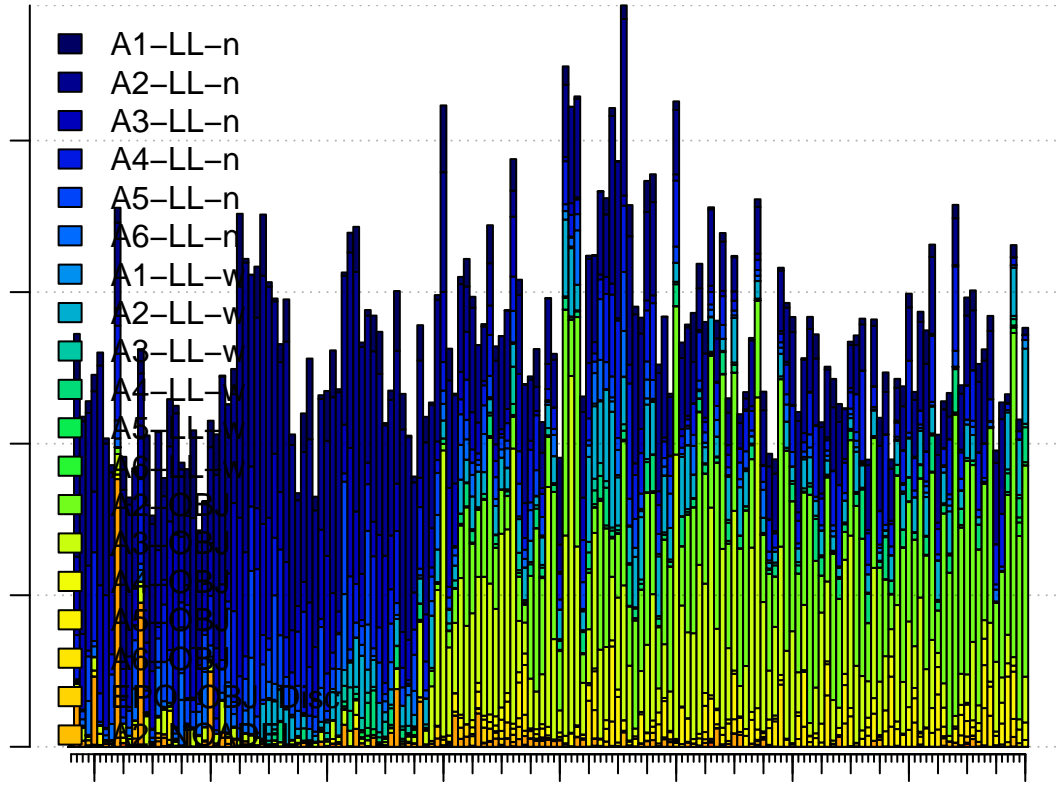
40000
30000
20000
10000
0

- A1-LL-n
- A2-LL-n
- A3-LL-n
- A4-LL-n
- A5-LL-n
- A6-LL-n
- A1-LL-w
- A2-LL-w
- A3-LL-w
- A4-LL-w
- A5-LL-w
- A6-LL-w
- A1-OB
- A2-OB
- A3-OB
- A4-OB
- A5-OB
- A6-OB
- EPQ-OB
- AD-OB
- AO-OB

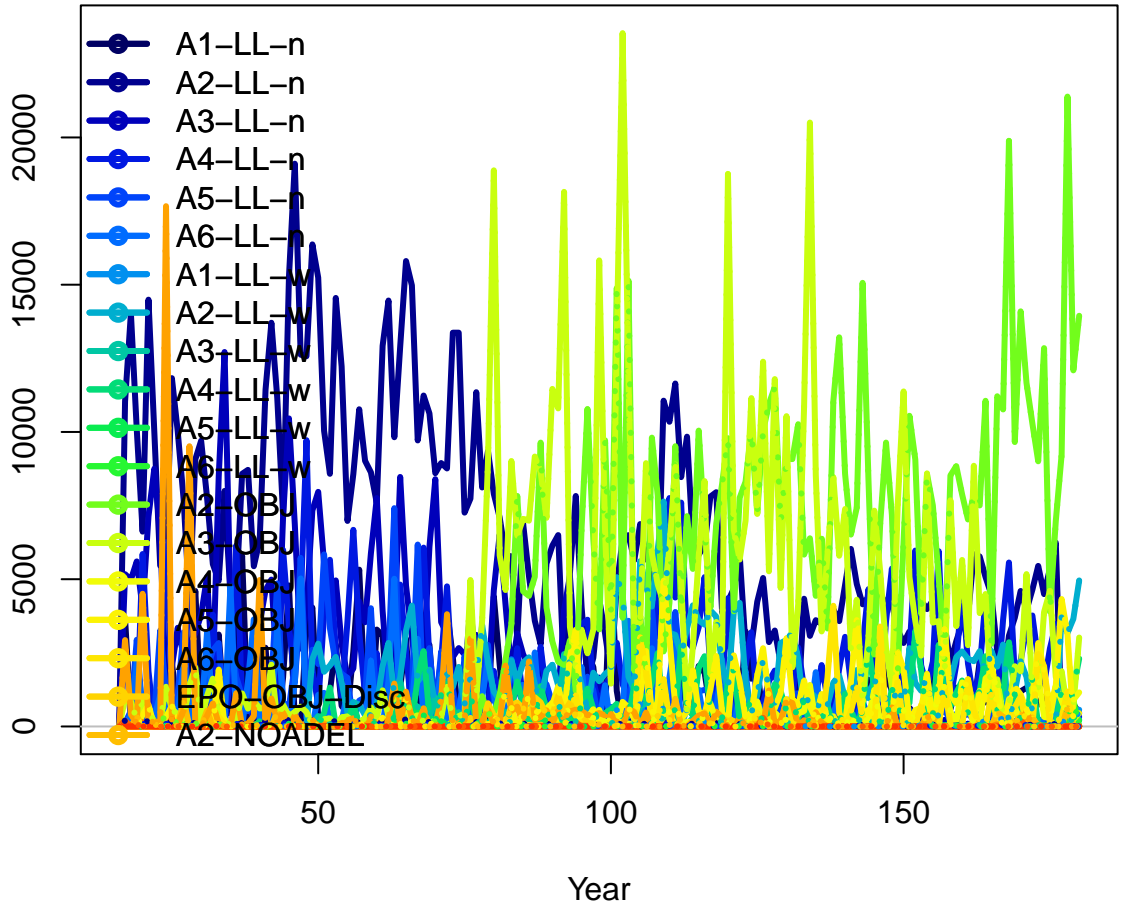
Disc

Year

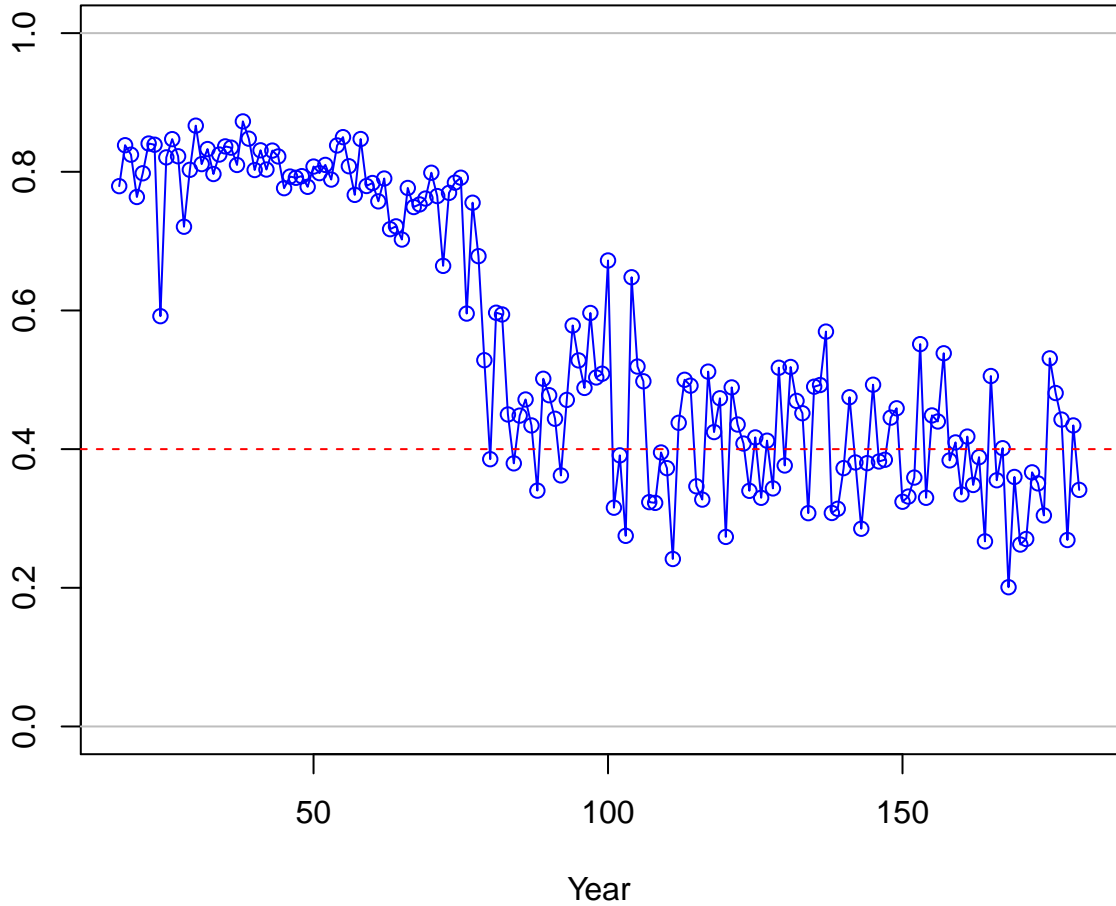
20 40 60 80 100 120 140 160 180



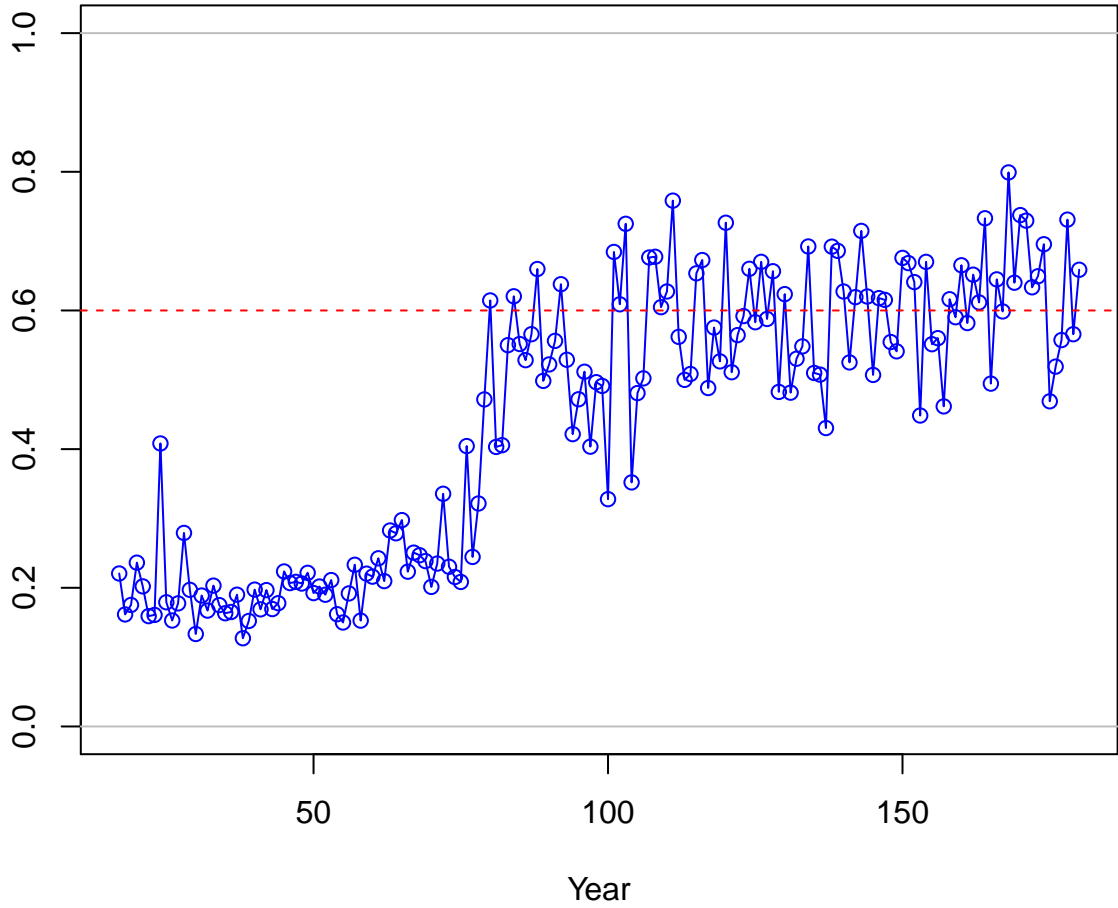
Observed and expected Landings (mt)



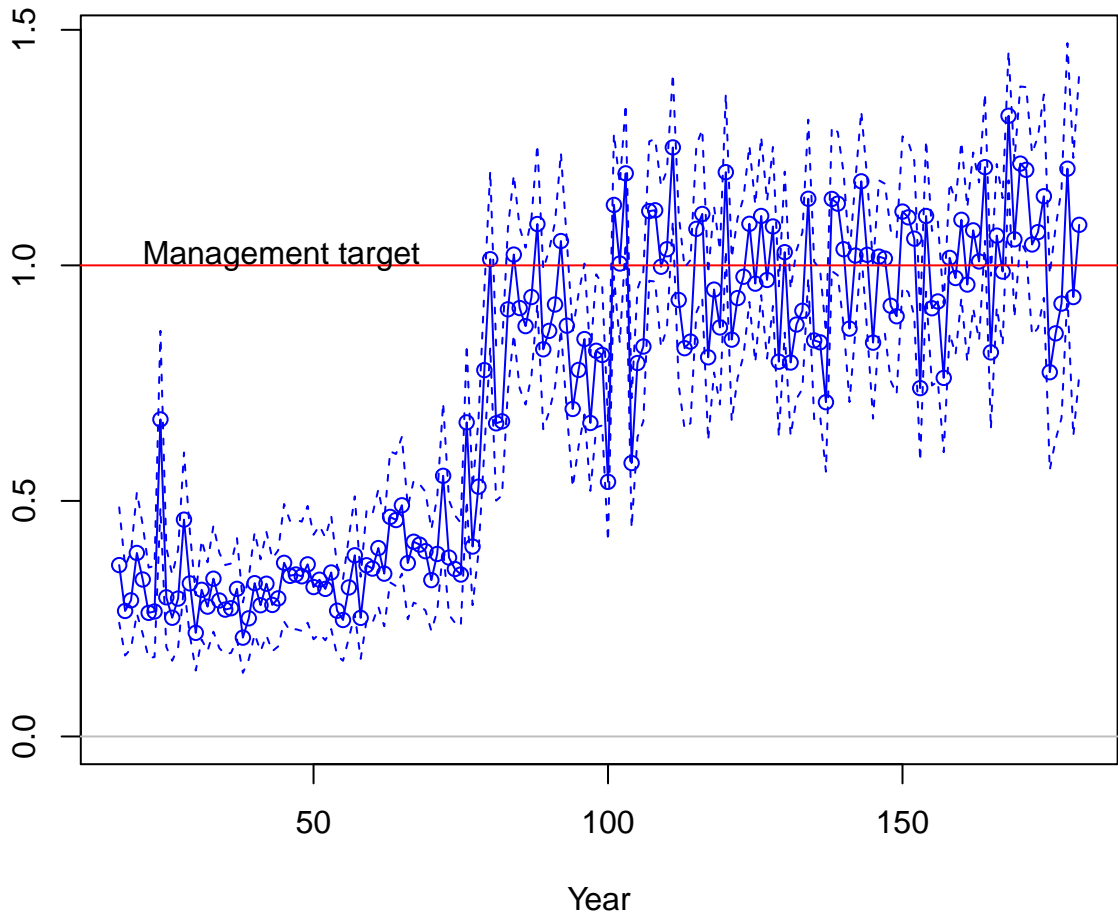
SPR



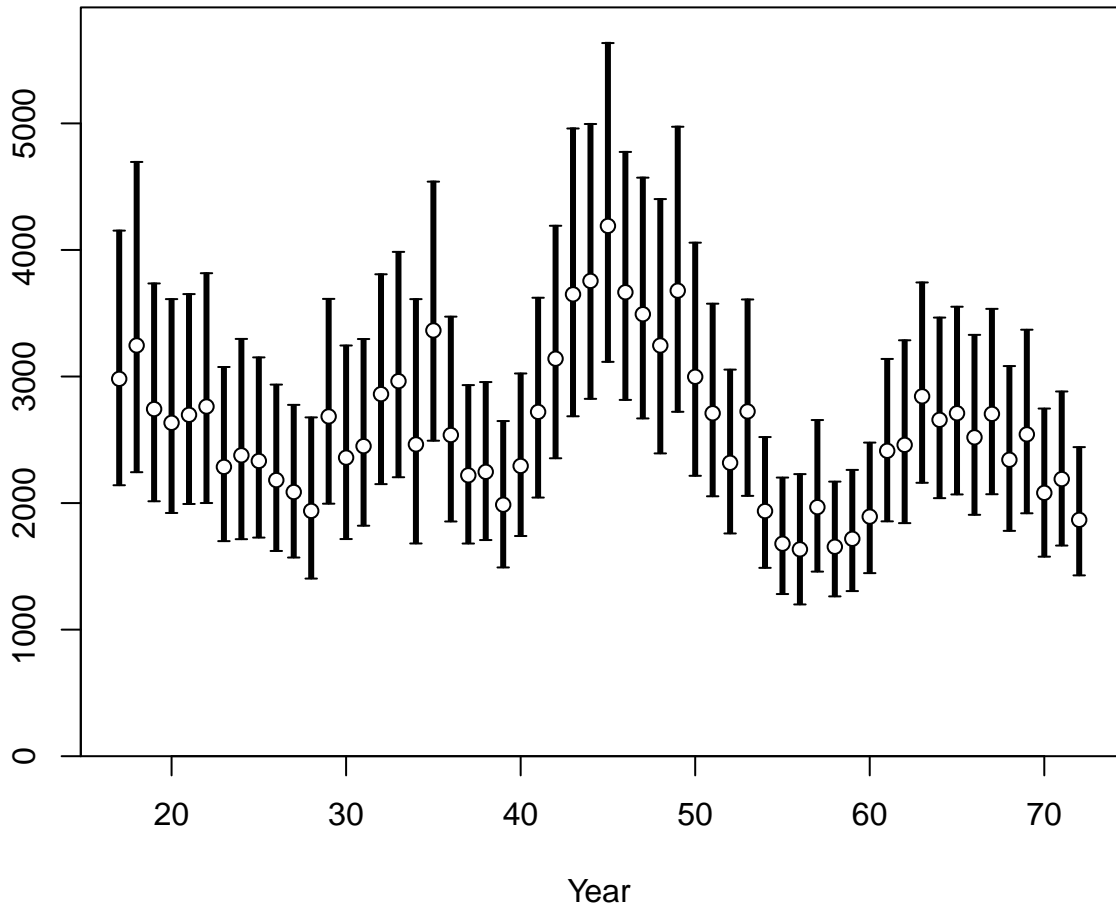
1-SPR



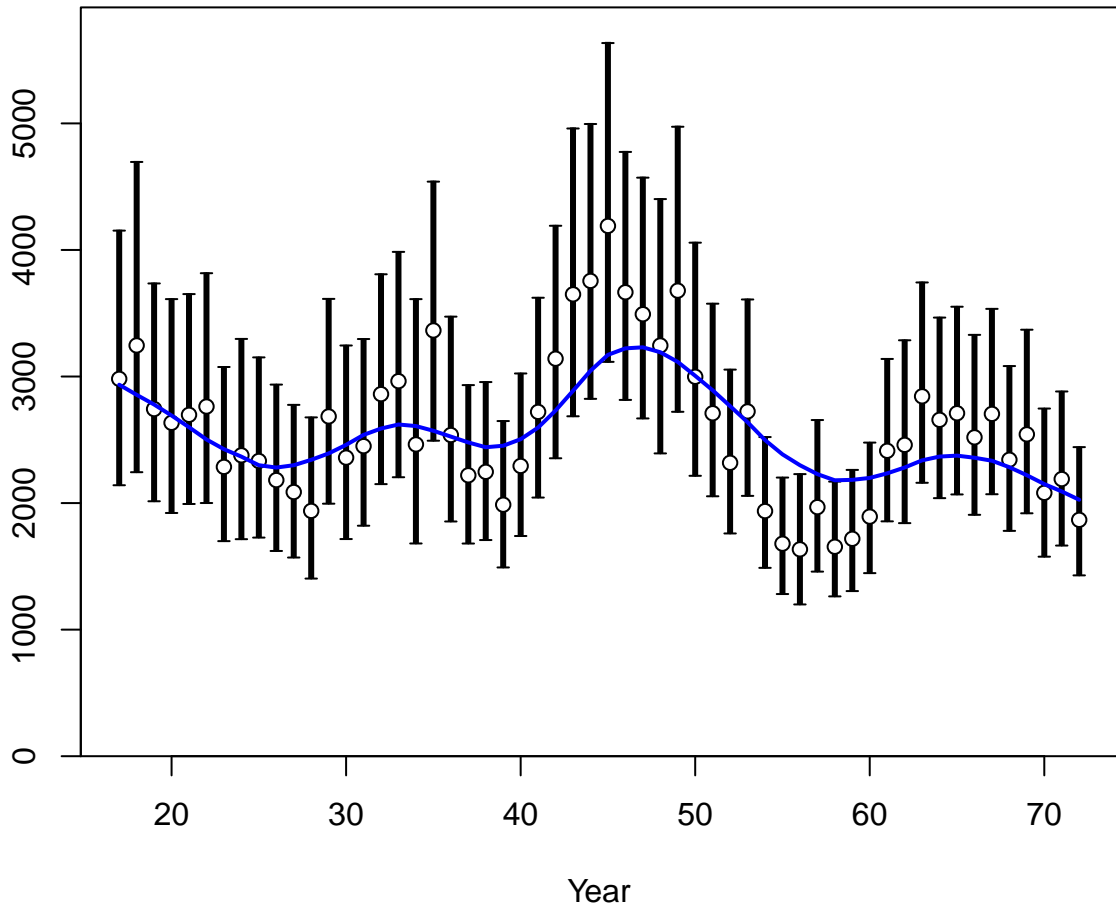
$(1-SPR)/(1-SPR_{MSY})$



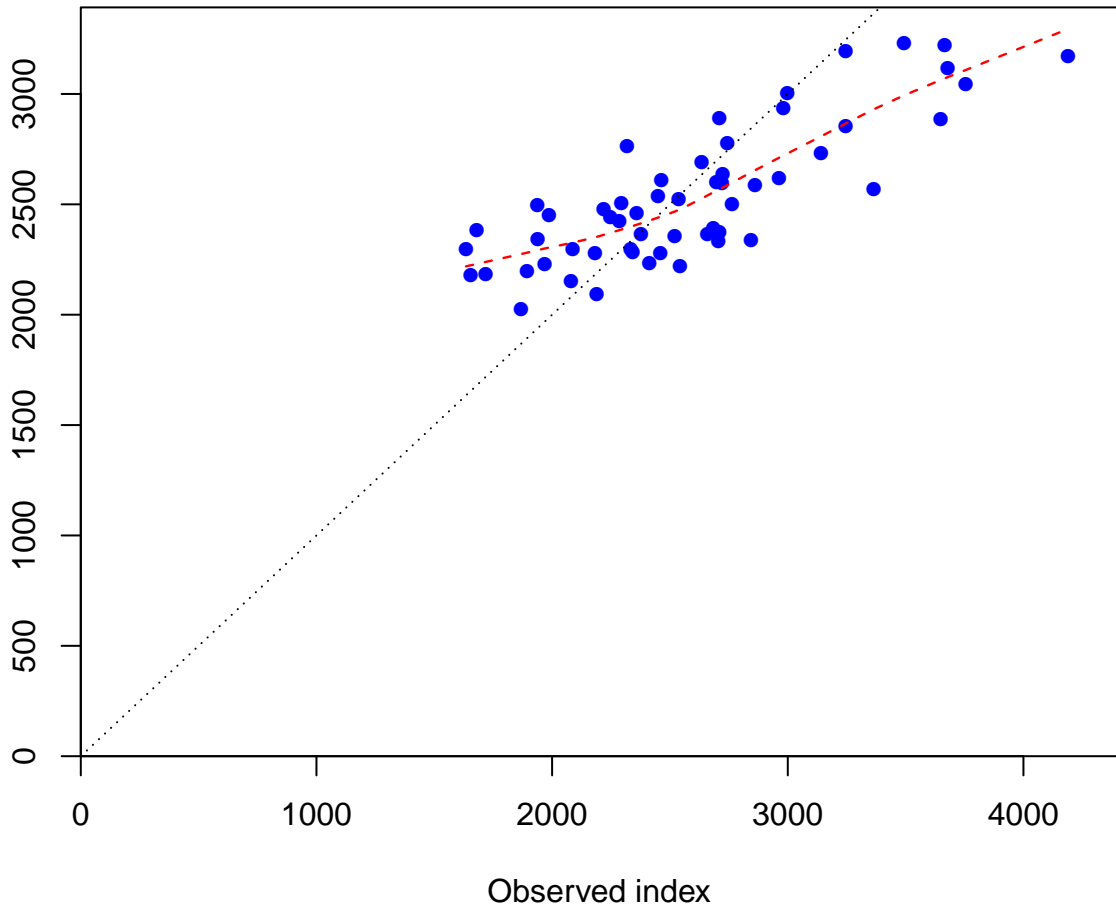
Index



Index



Expected index



Log index

8.5

8.0

7.5

20

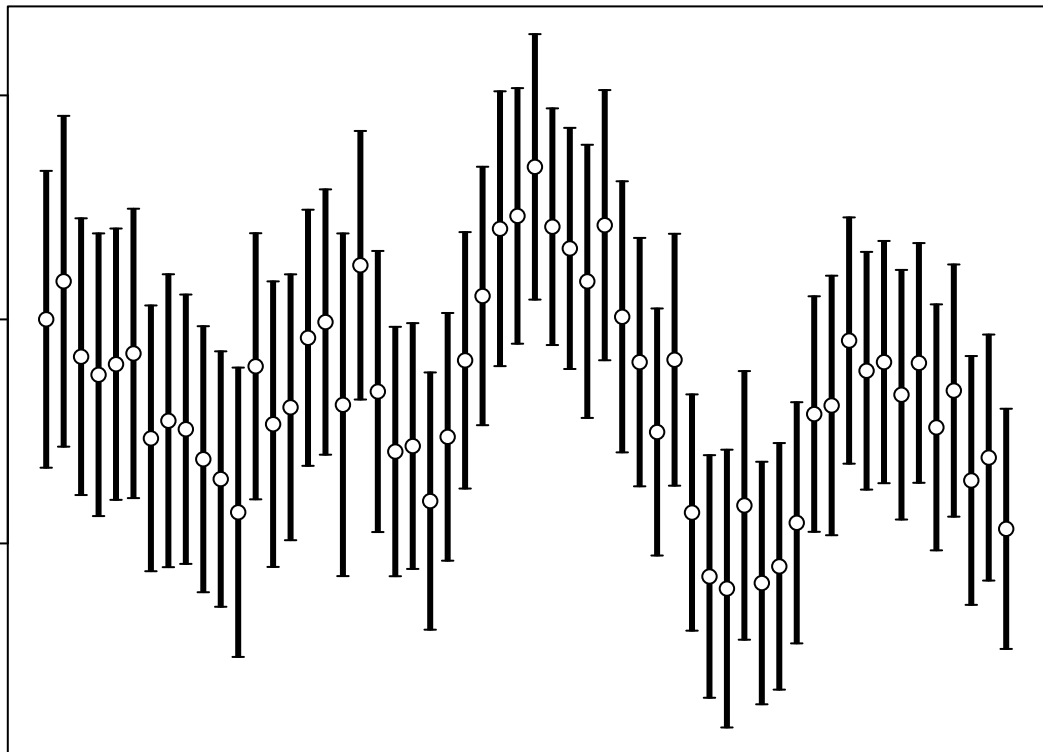
30

40

60

70

Year



Log index

8.5

8.0

7.5

20

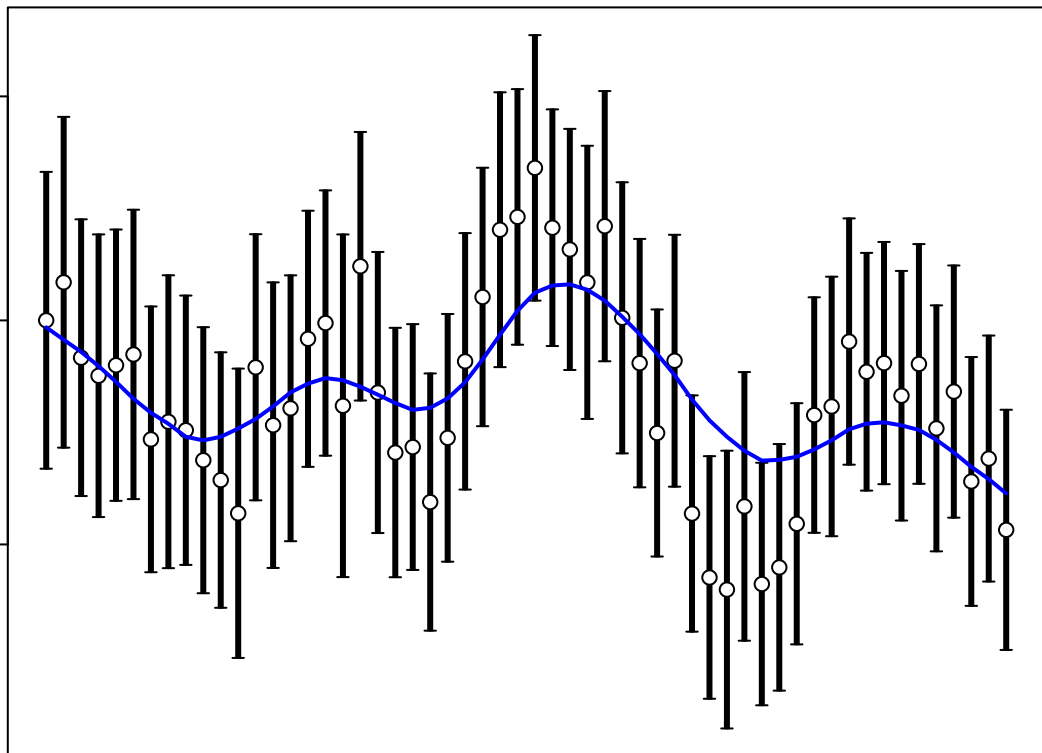
30

40

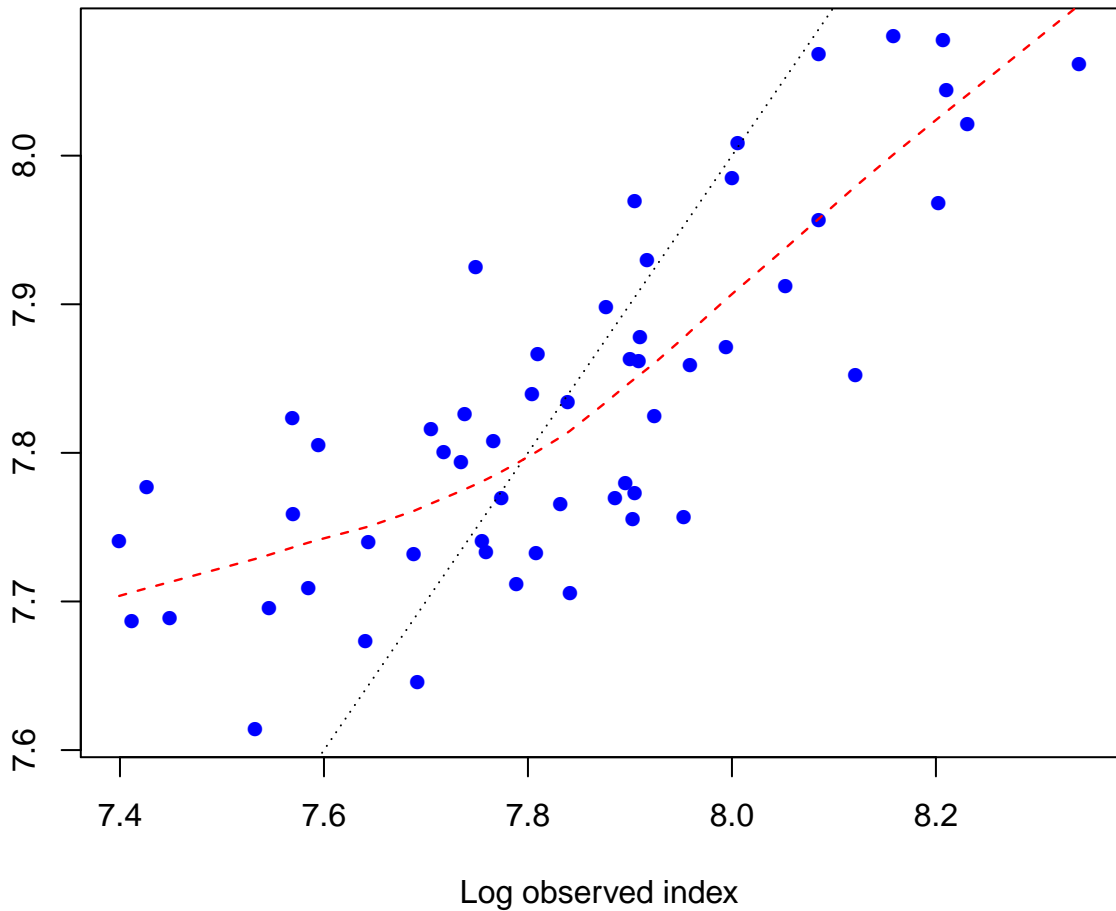
60

70

Year



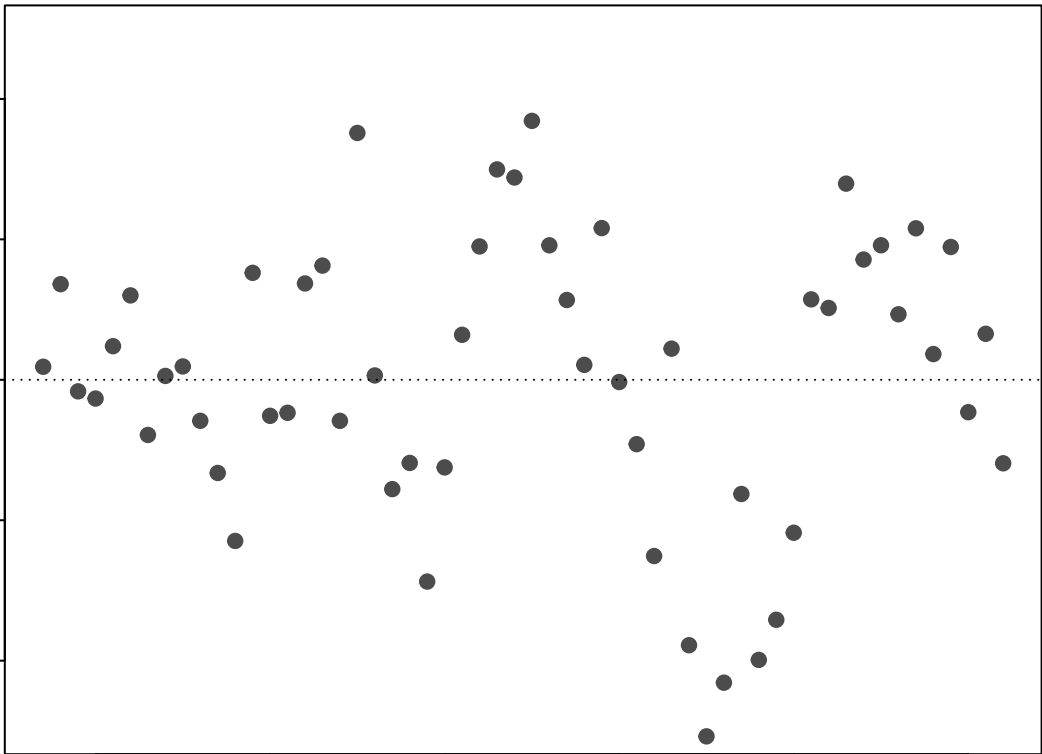
Log expected index



Log observed index

Residual

2
1
0
-1
-2



Year

20

30

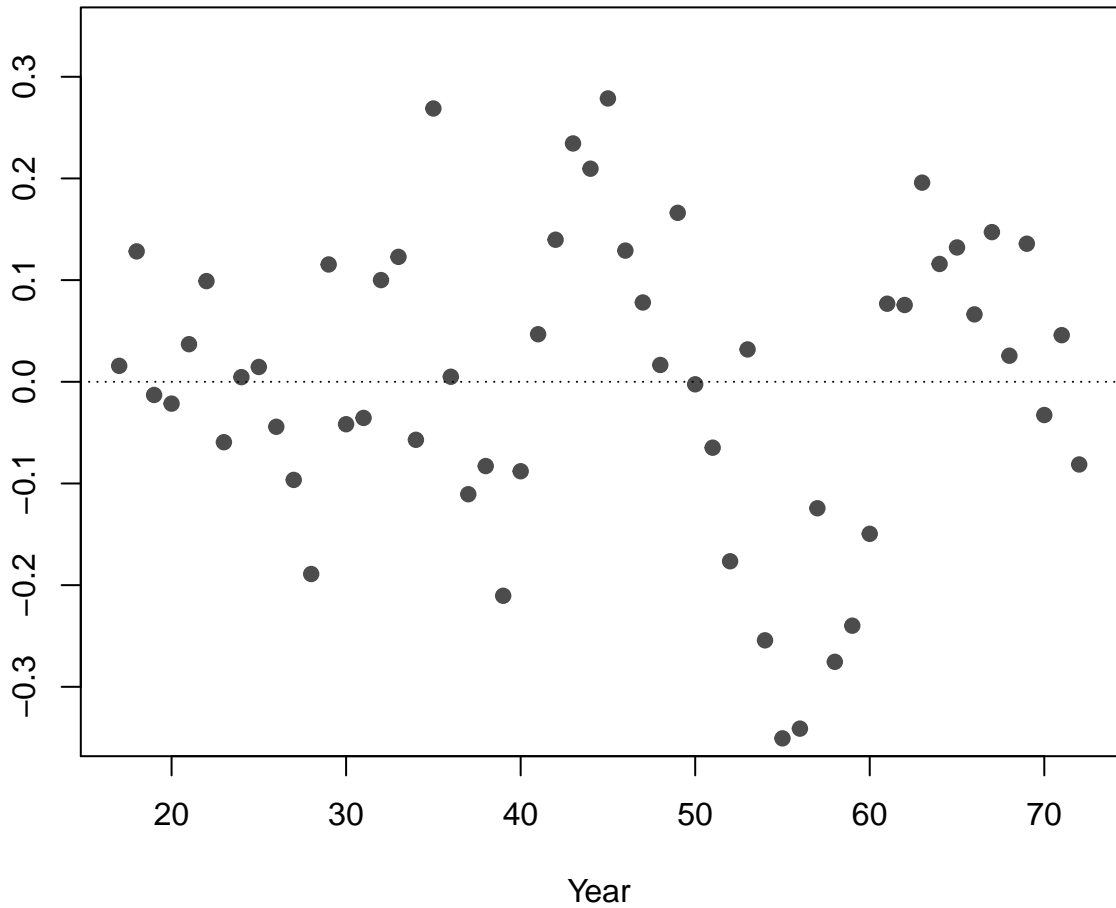
40

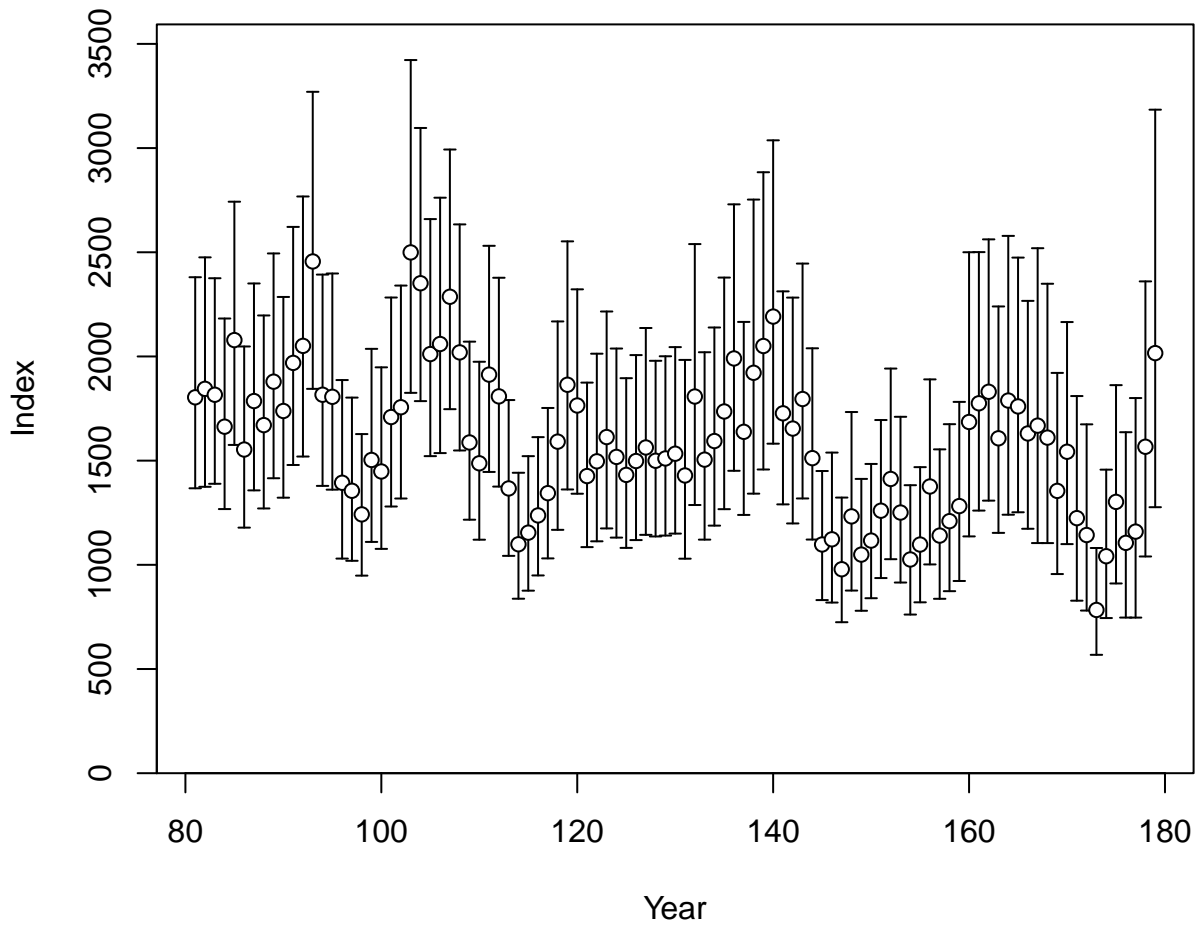
50

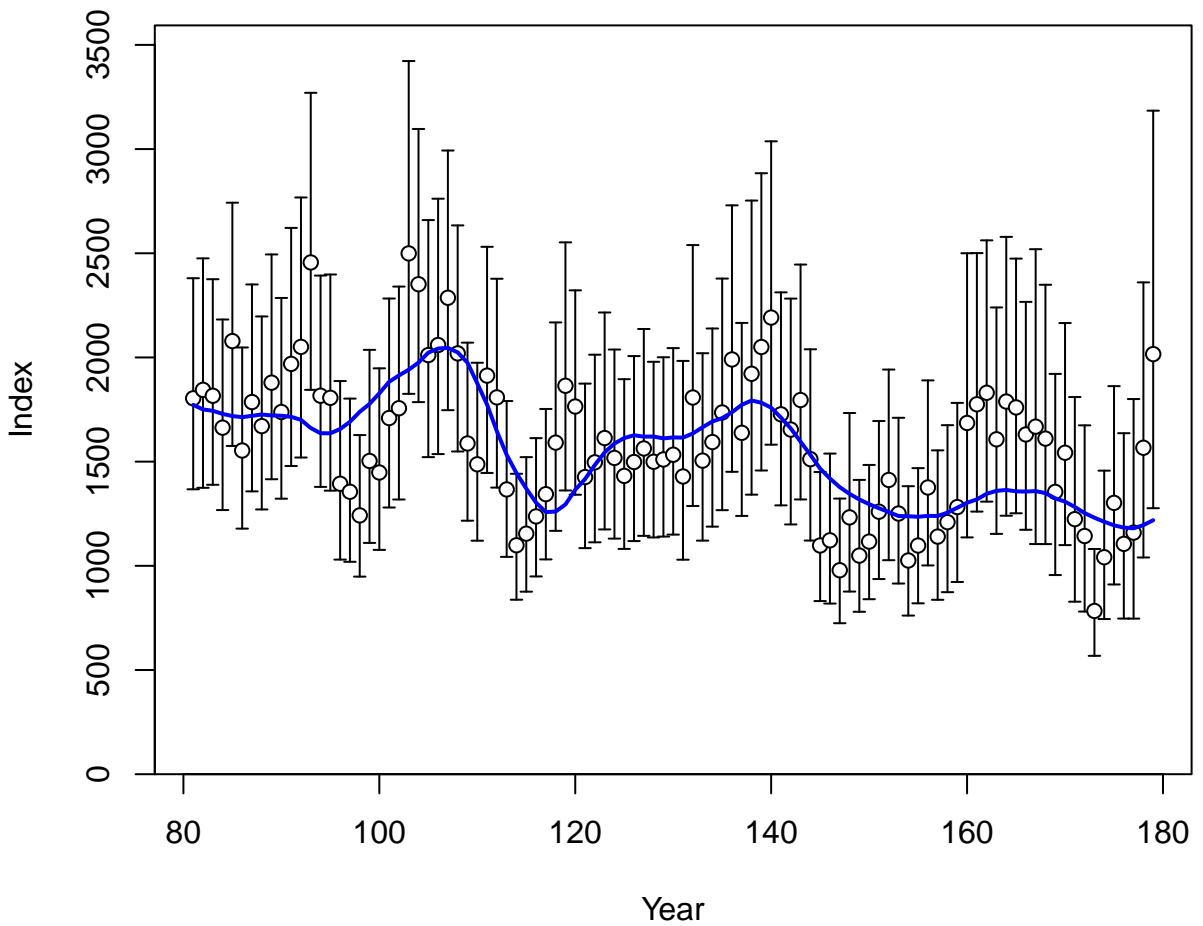
60

70

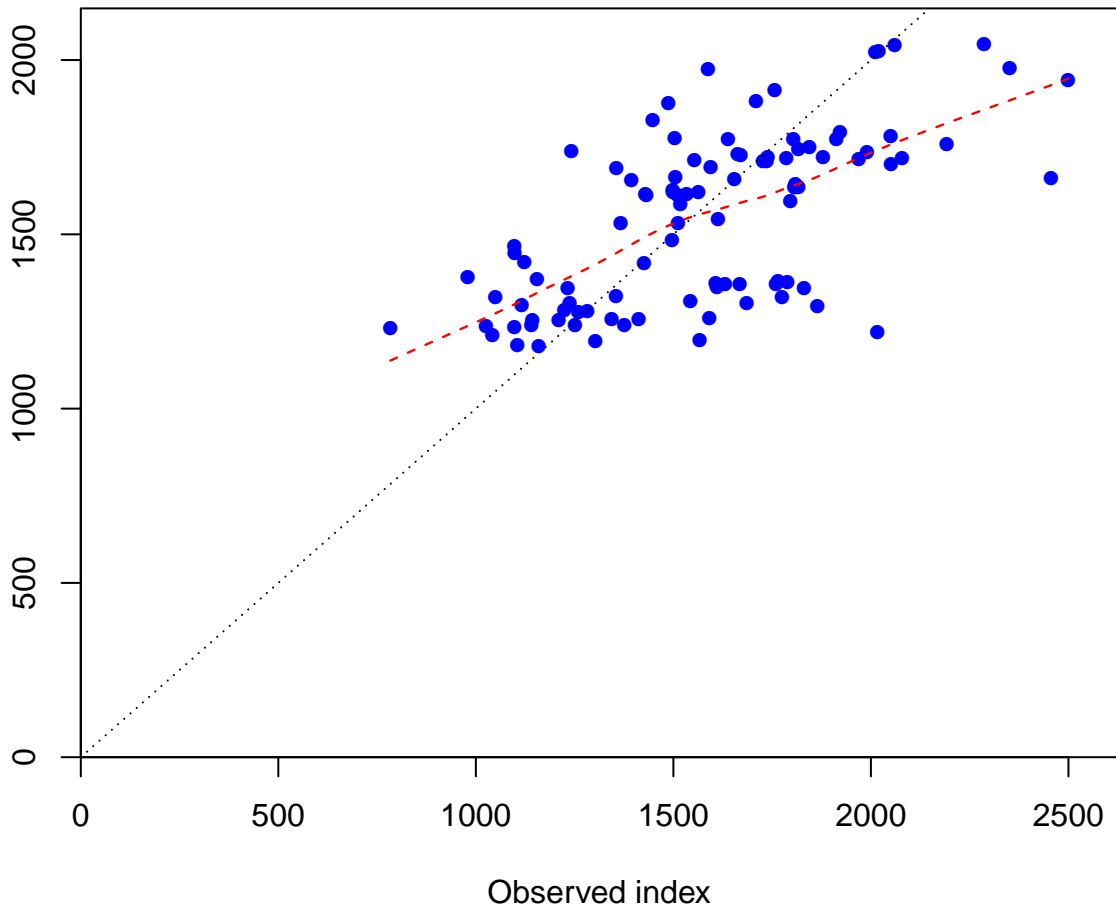
Deviation







Expected index



Log index

8.0
7.5
7.0
6.5

80

100

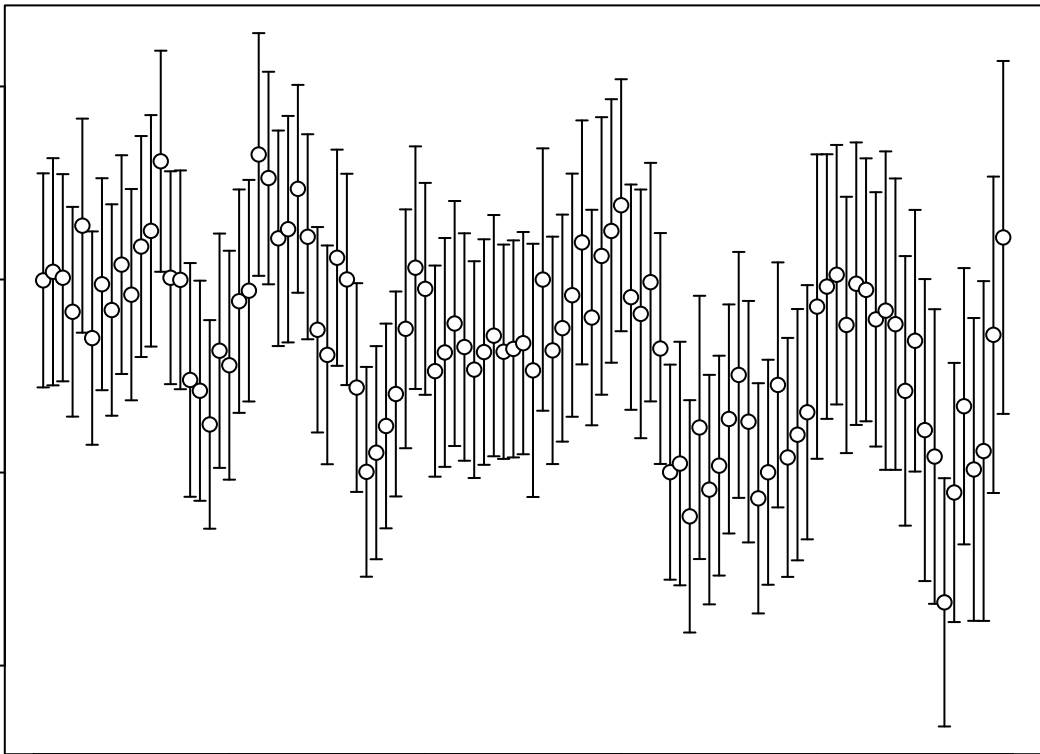
120

140

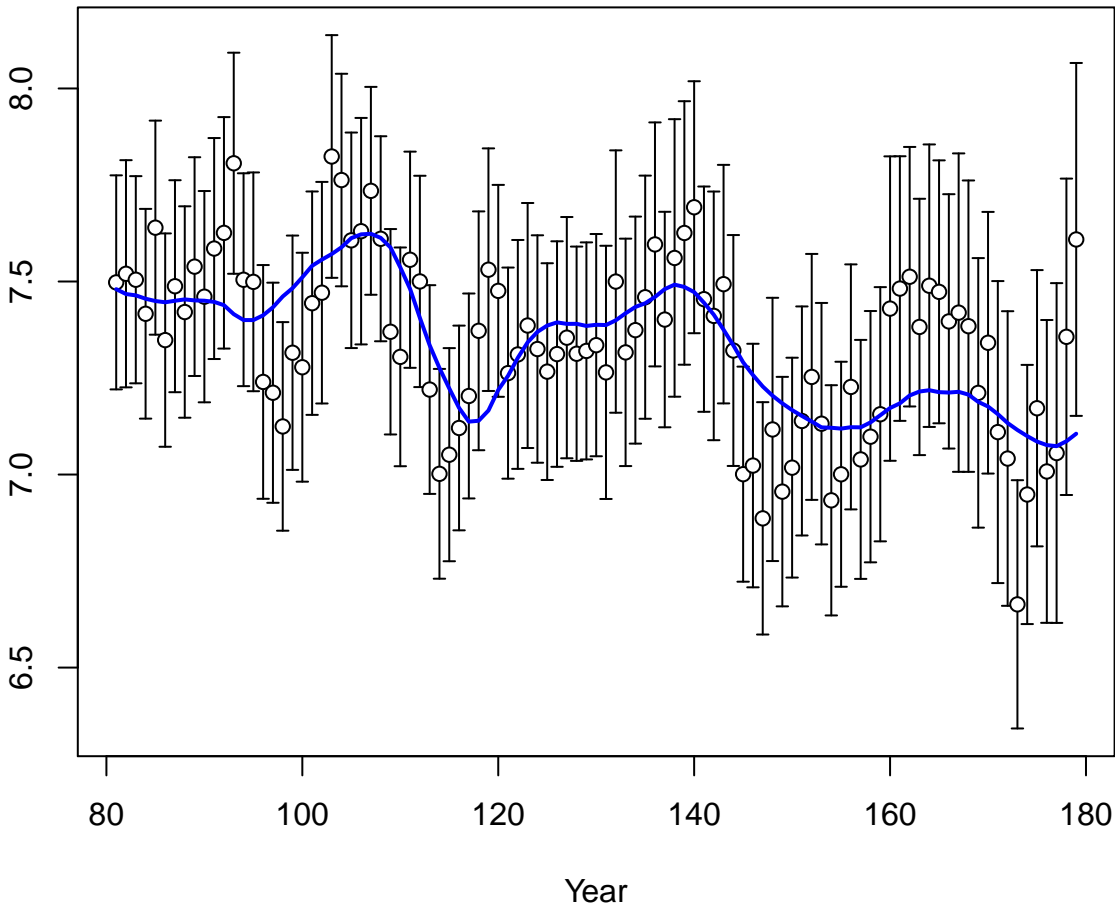
160

180

Year

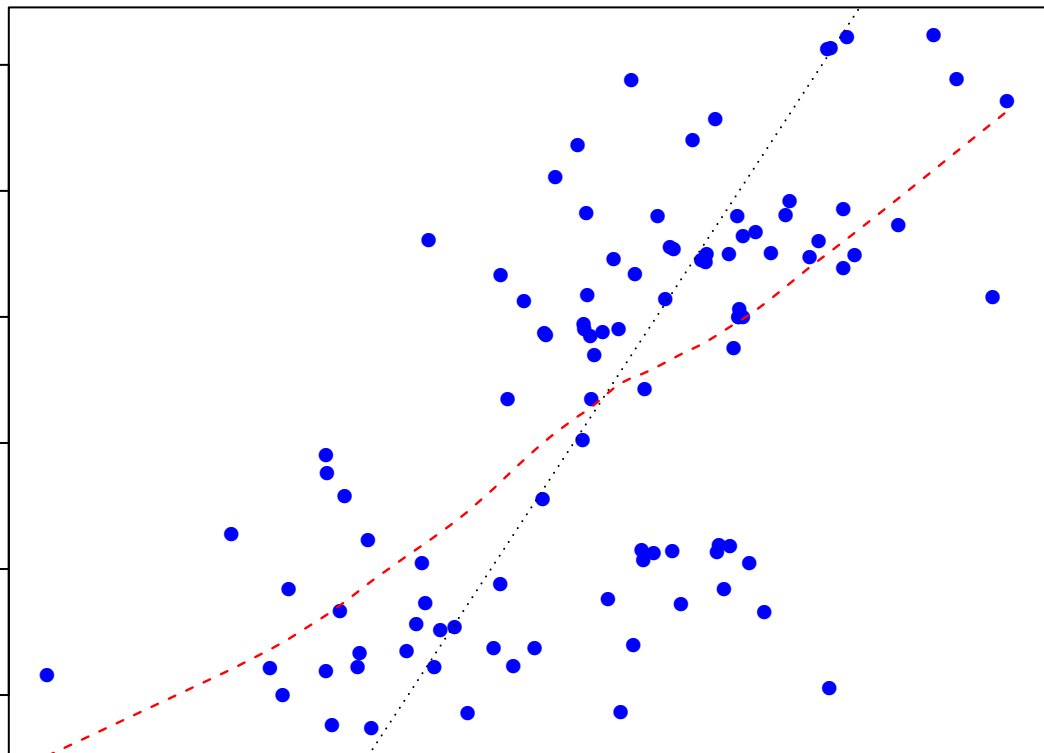


Log index



Log expected index

7.6
7.5
7.4
7.3
7.2
7.1



6.8

7.0

7.2

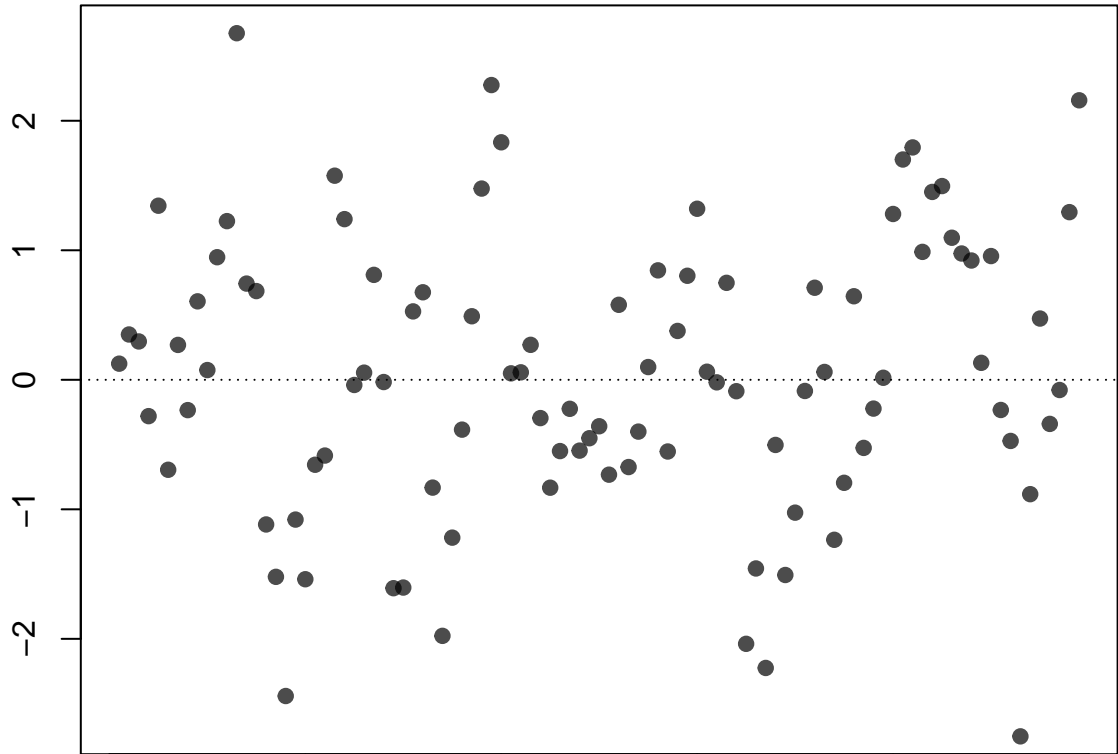
7.4

7.6

7.8

Log observed index

Residual



Year

Deviation

0.4
0.2
0.0
-0.2
-0.4

80

100

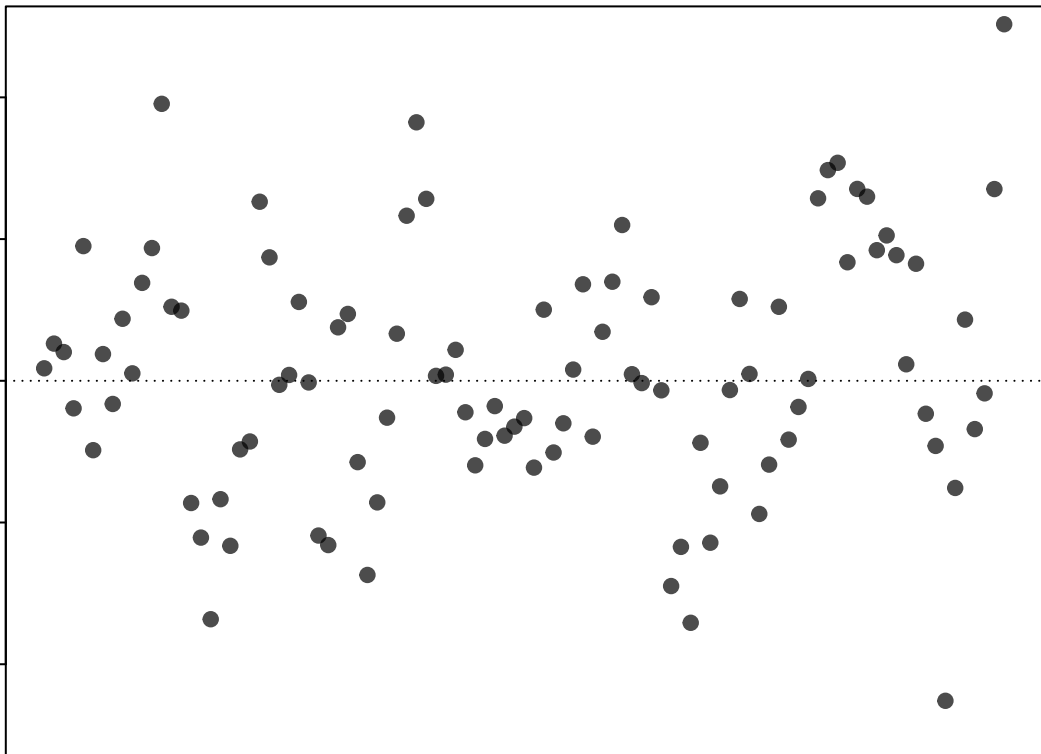
120

140

160

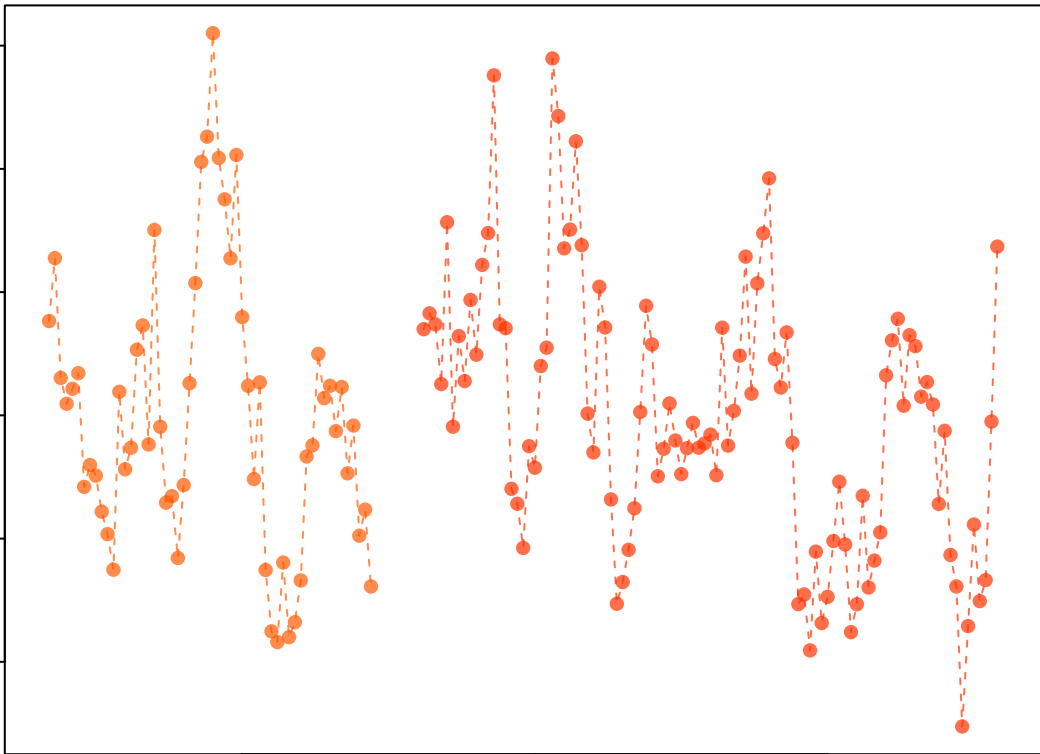
180

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

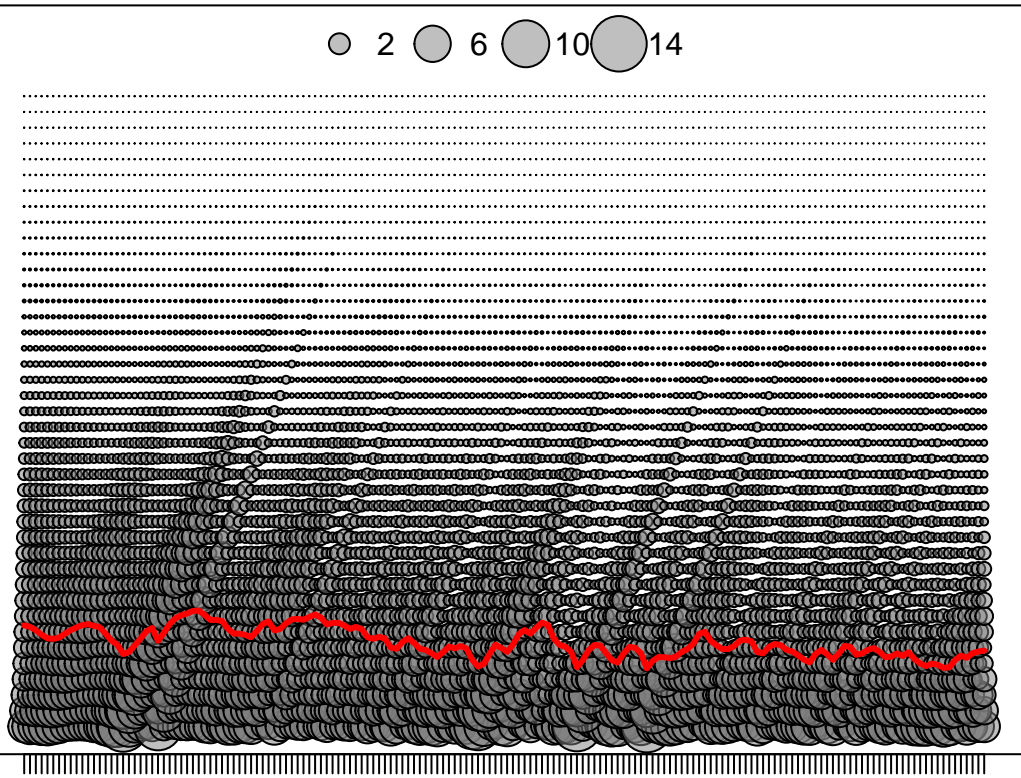
134

148

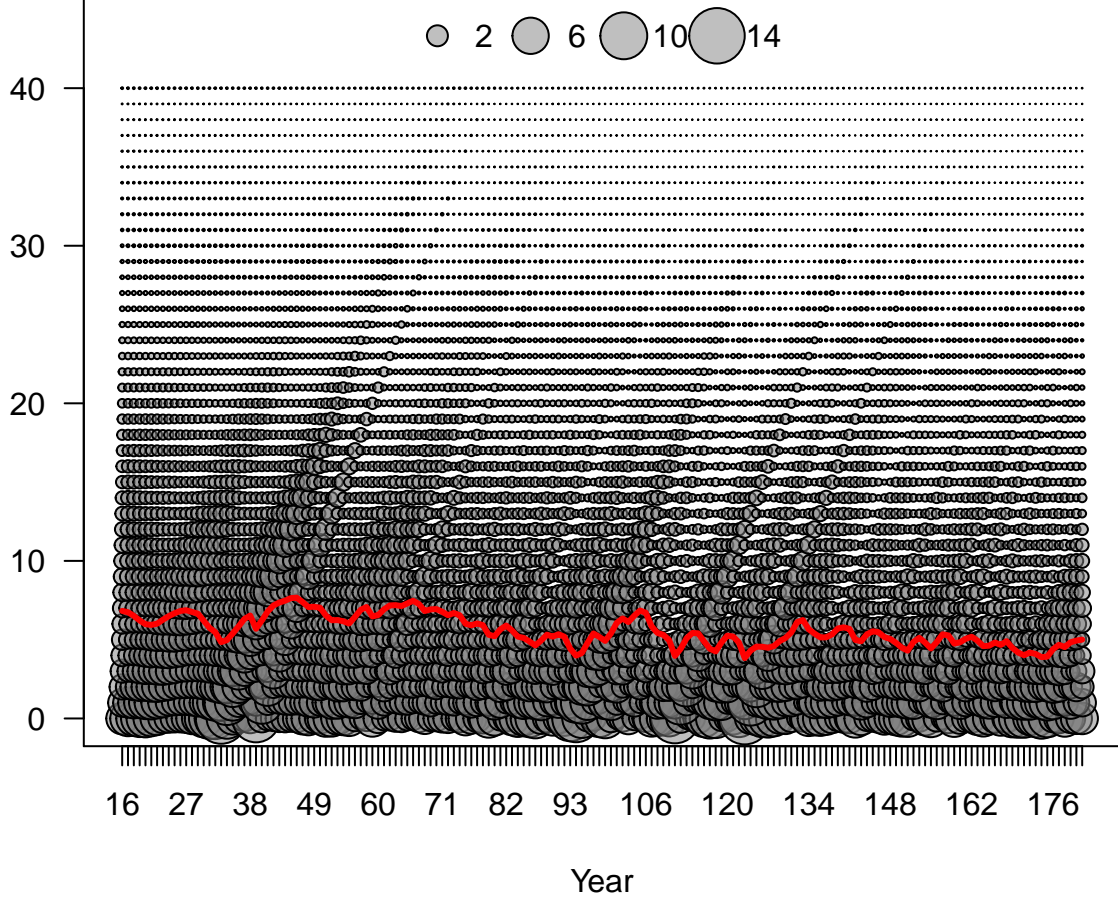
162

176

Year



Age



Mean age (yr)

6

4

2

0

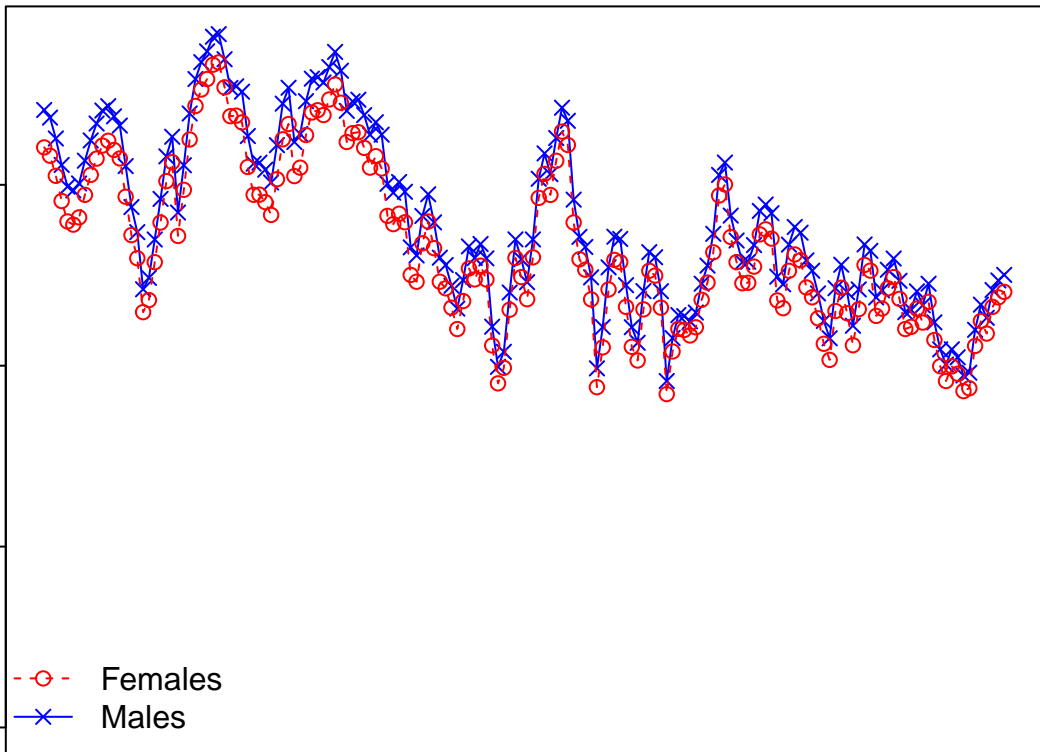
-o- Females
-x- Males

50

100

150

Year



Age

40

30

20

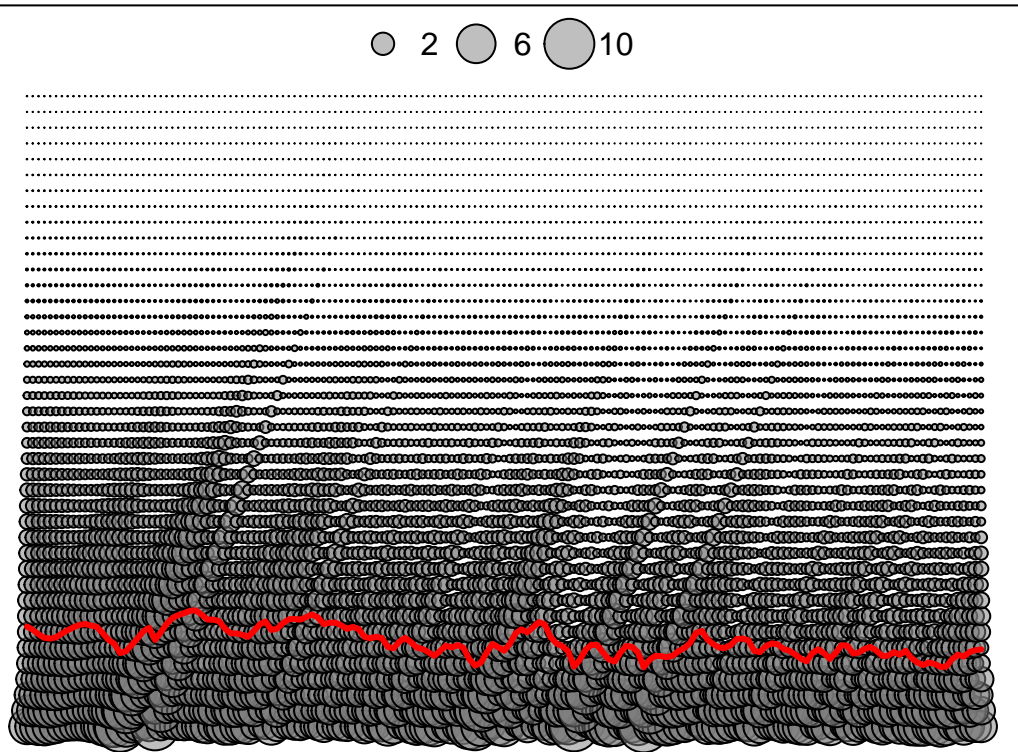
10

0

○ 2 ○ 6 ○ 10

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

Year



Age

40

30

20

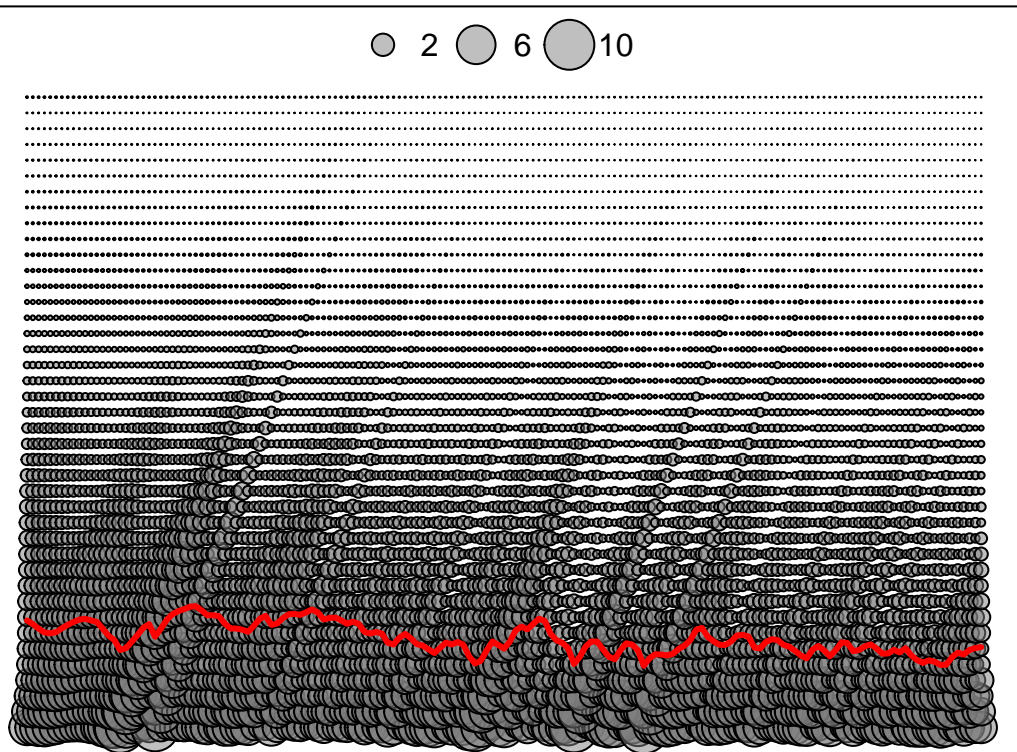
10

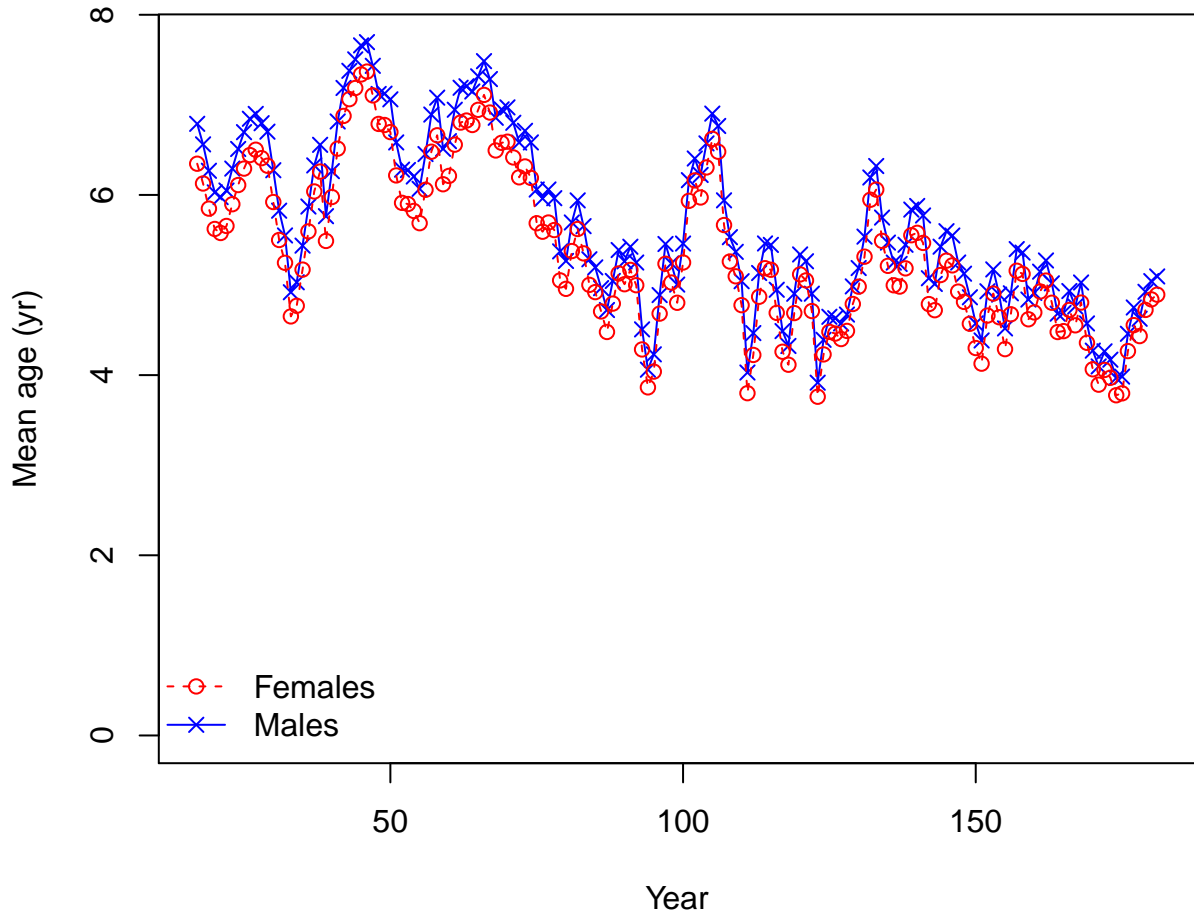
0

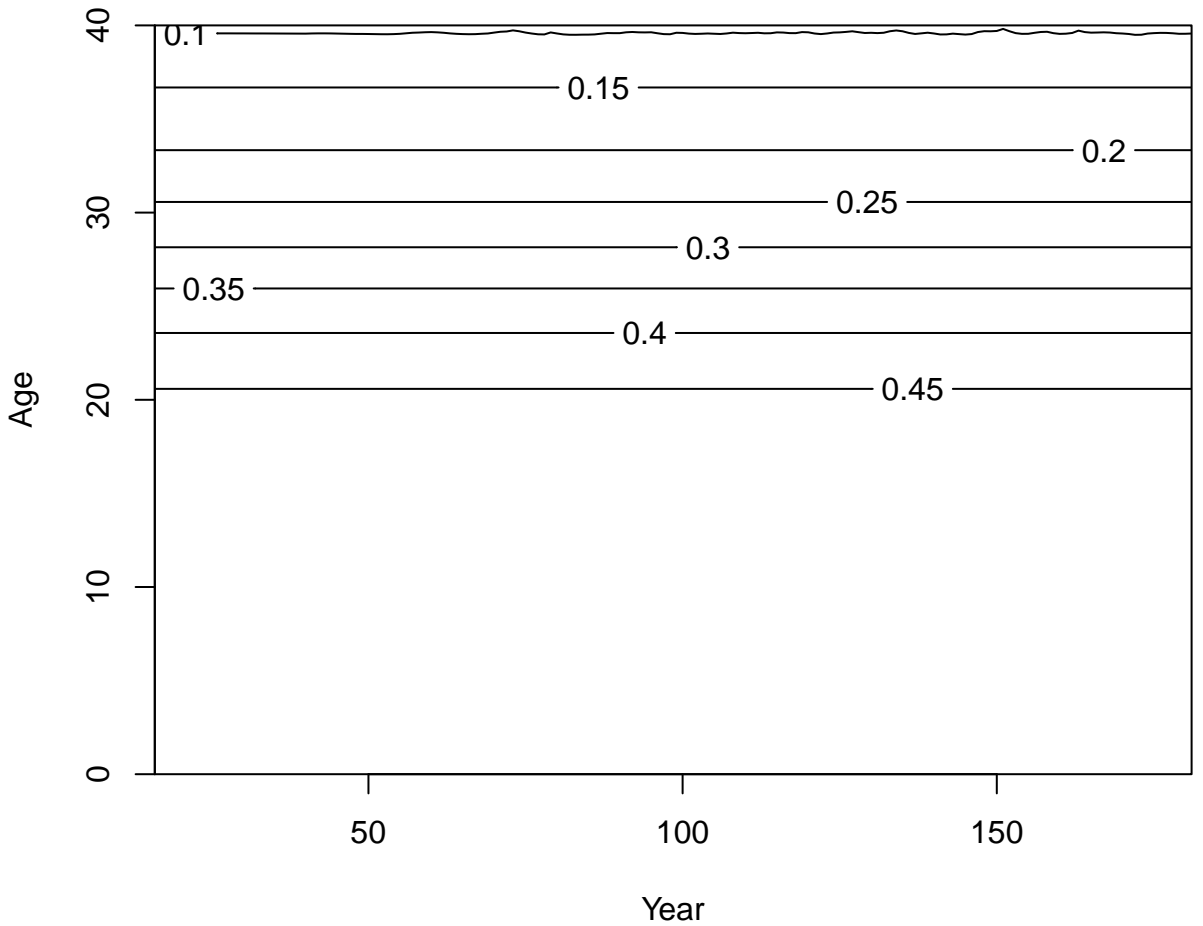
○ 2 ○ 6 ○ 10

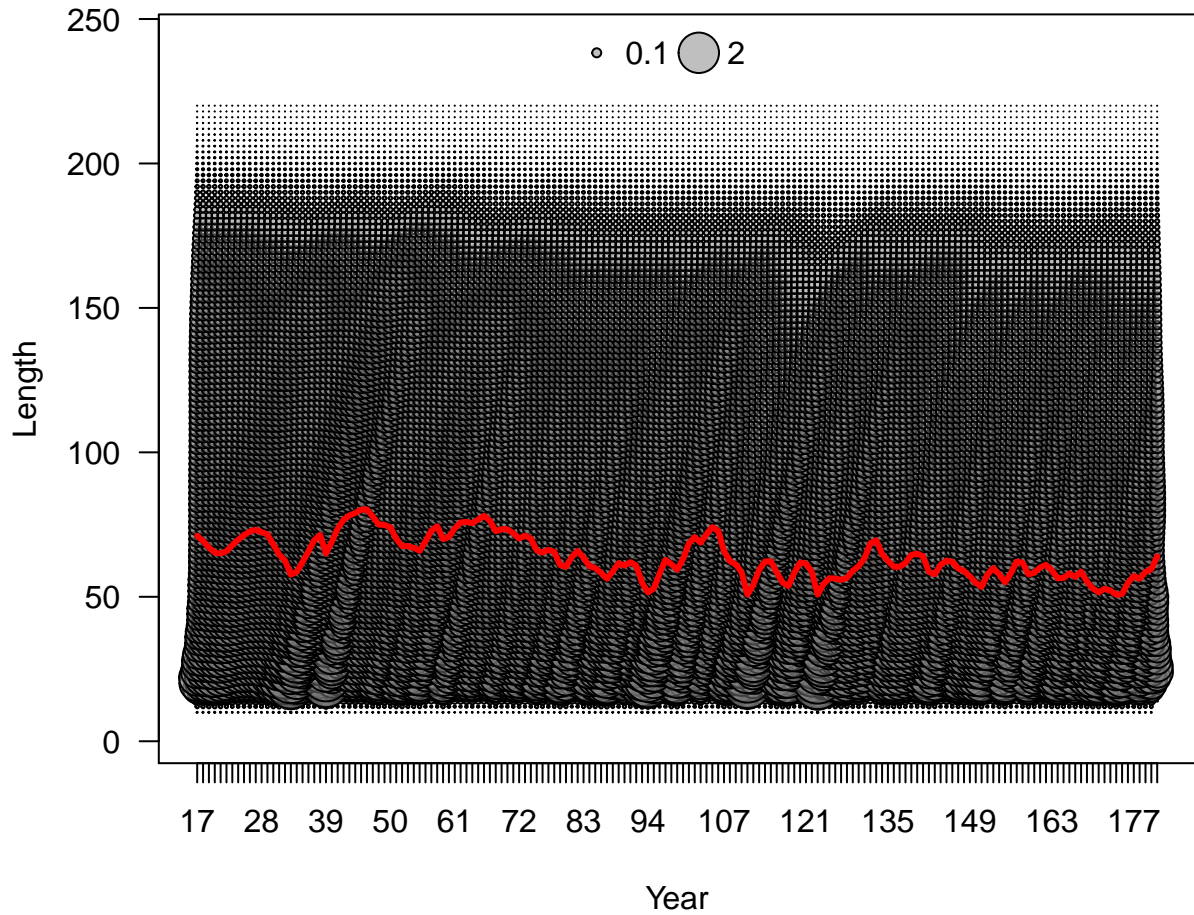
16 27 38 49 60 71 82 93 106 120 134 148 162 176

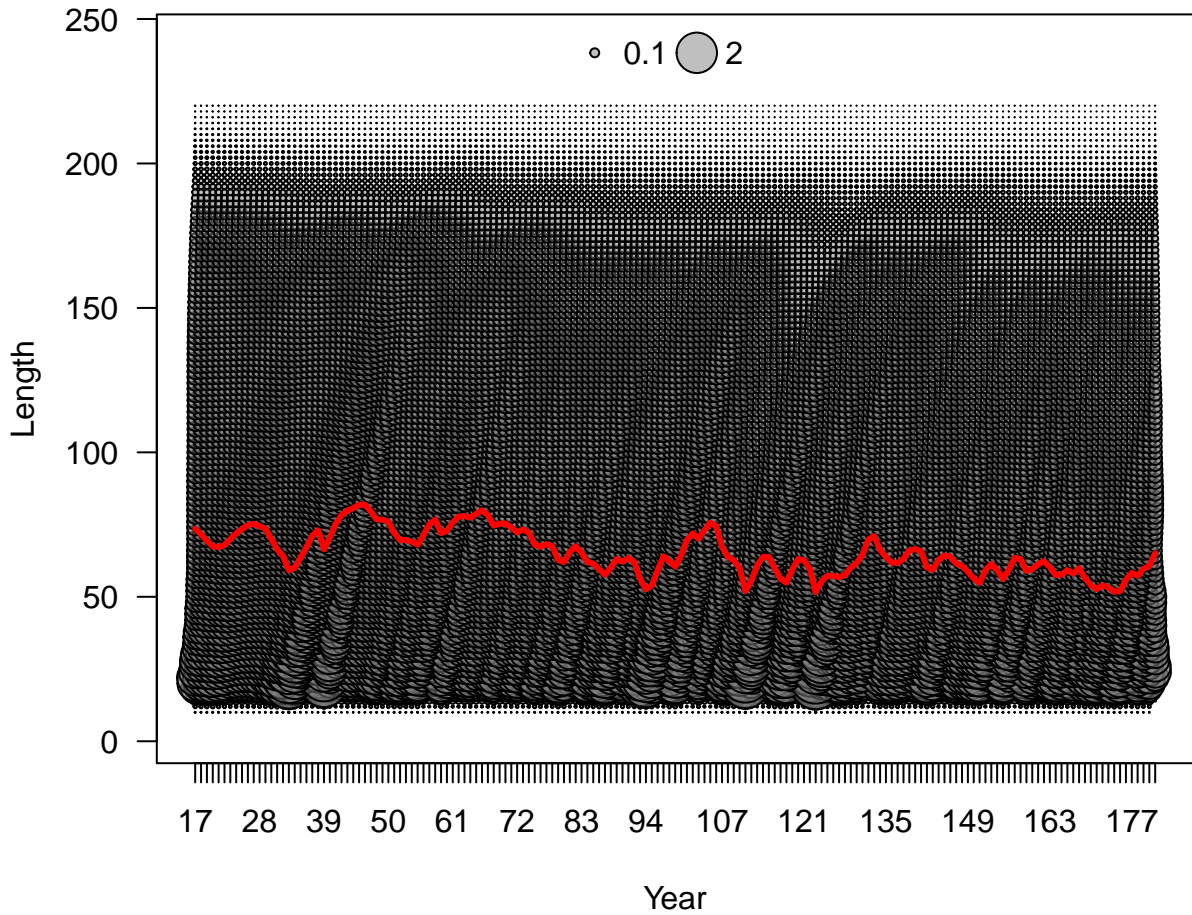
Year

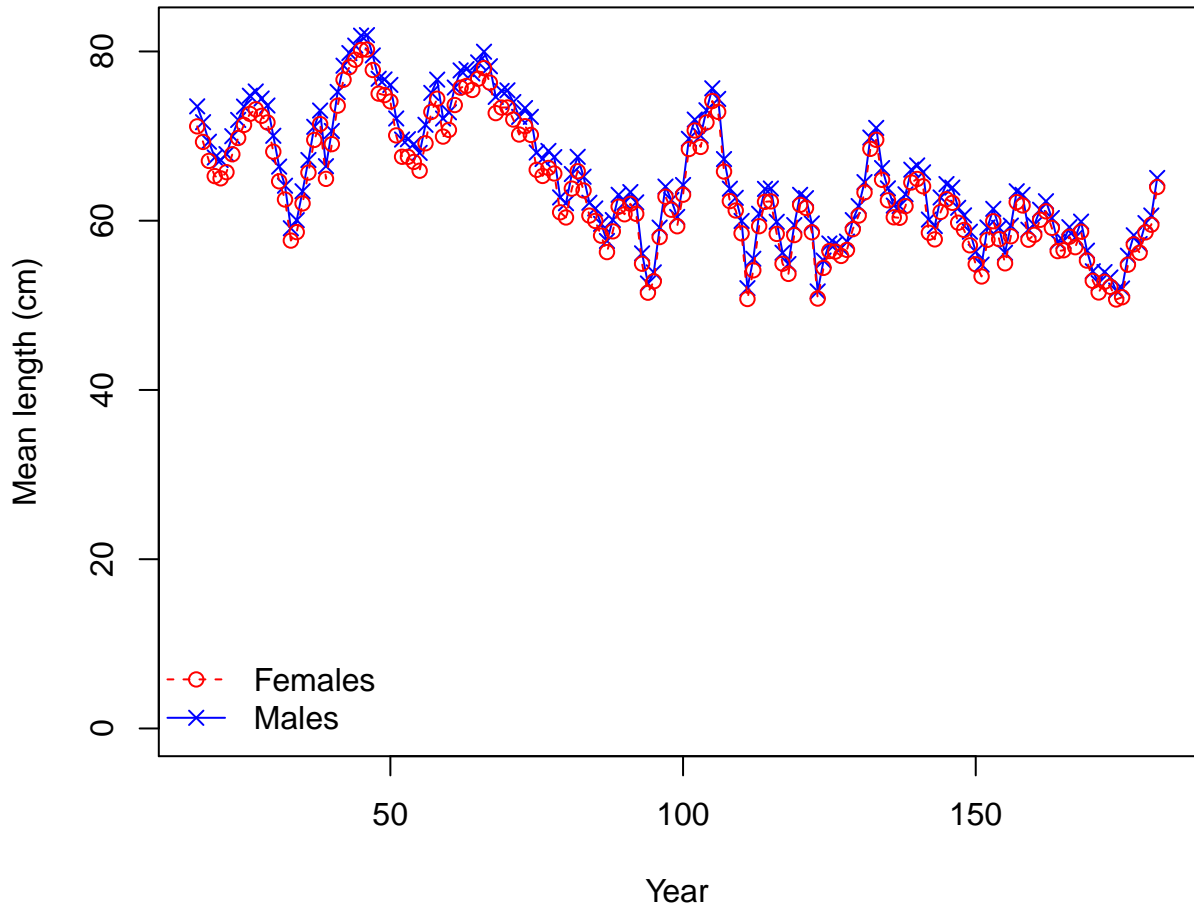


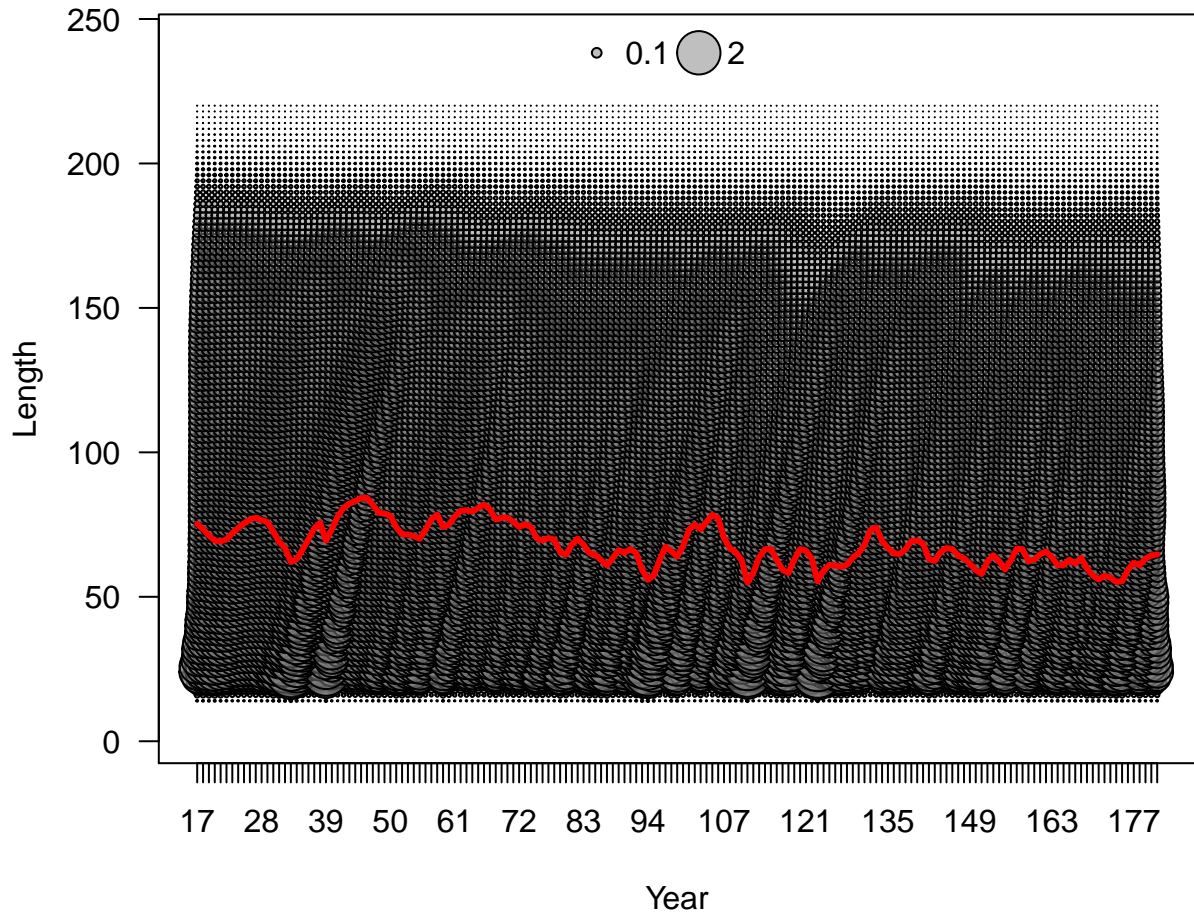


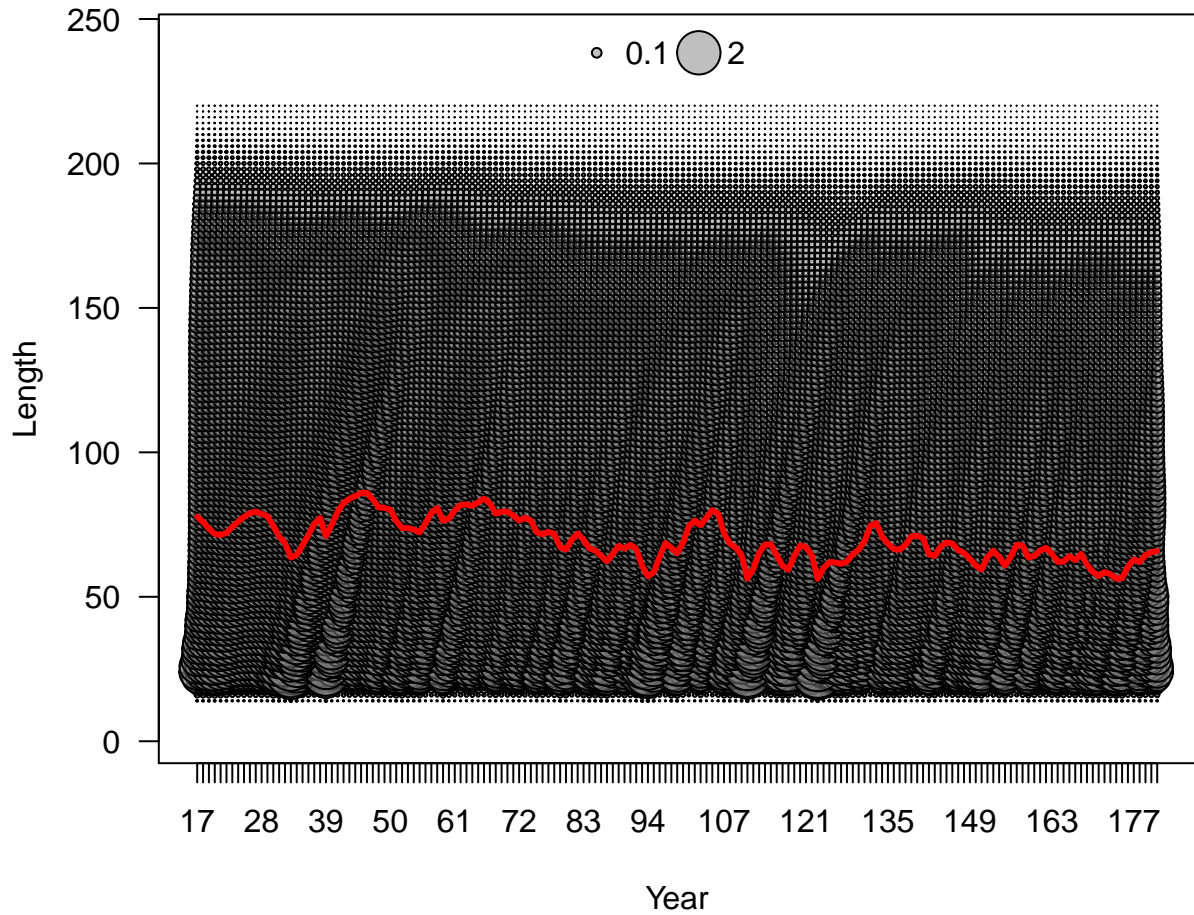


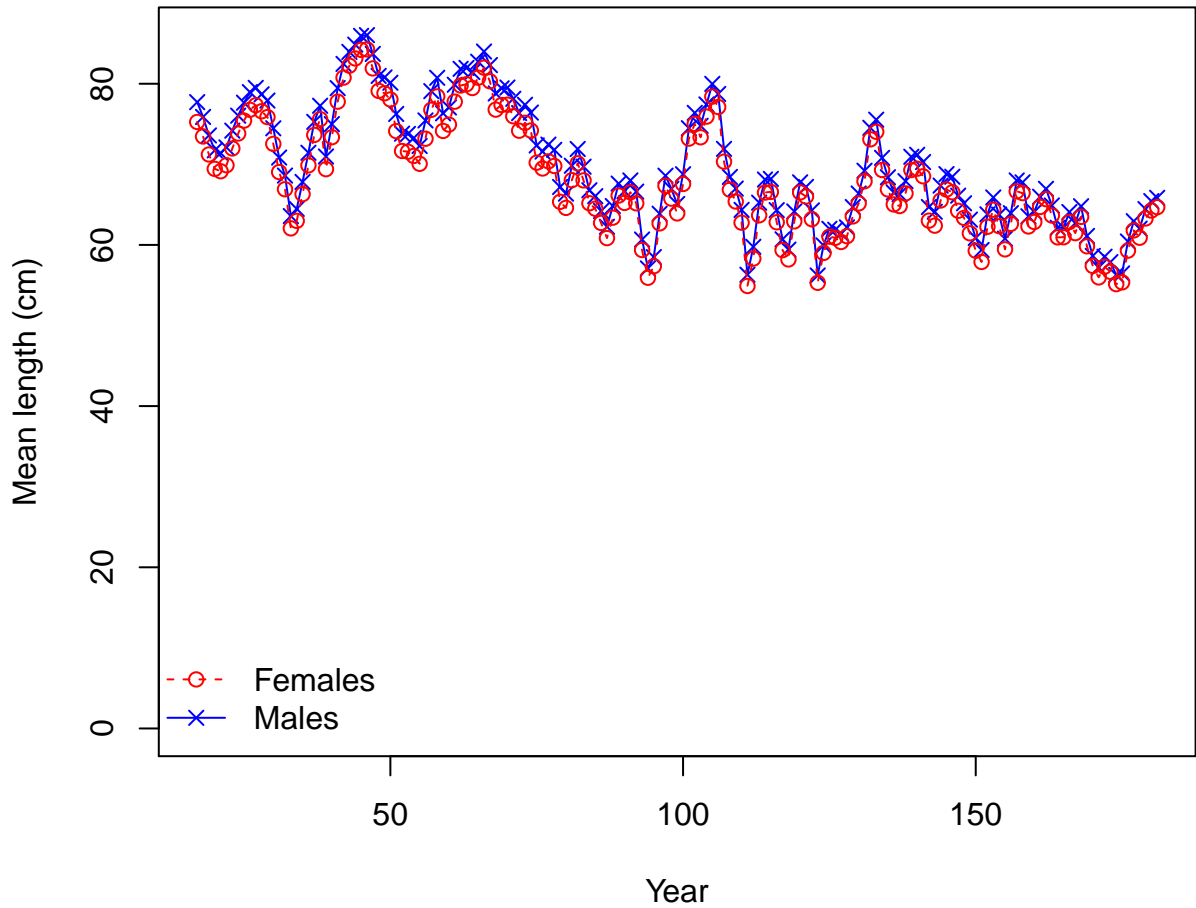




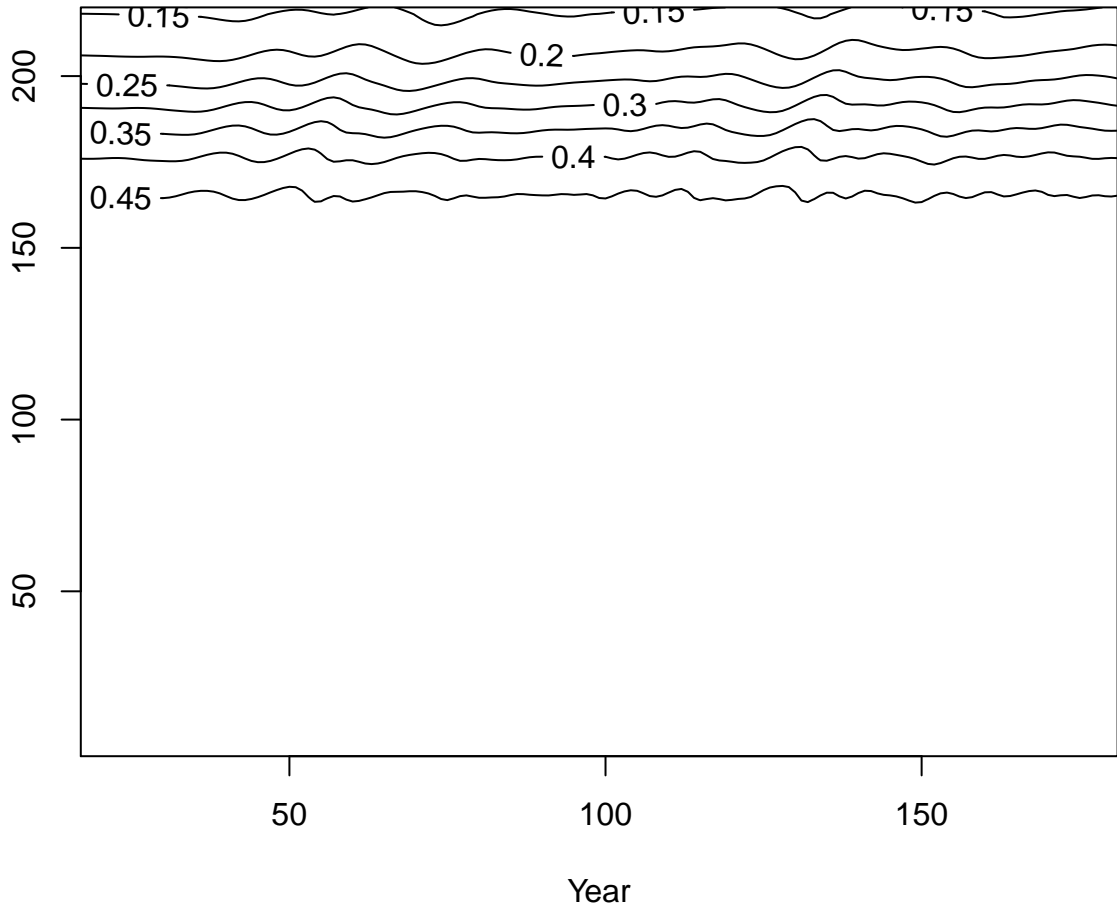


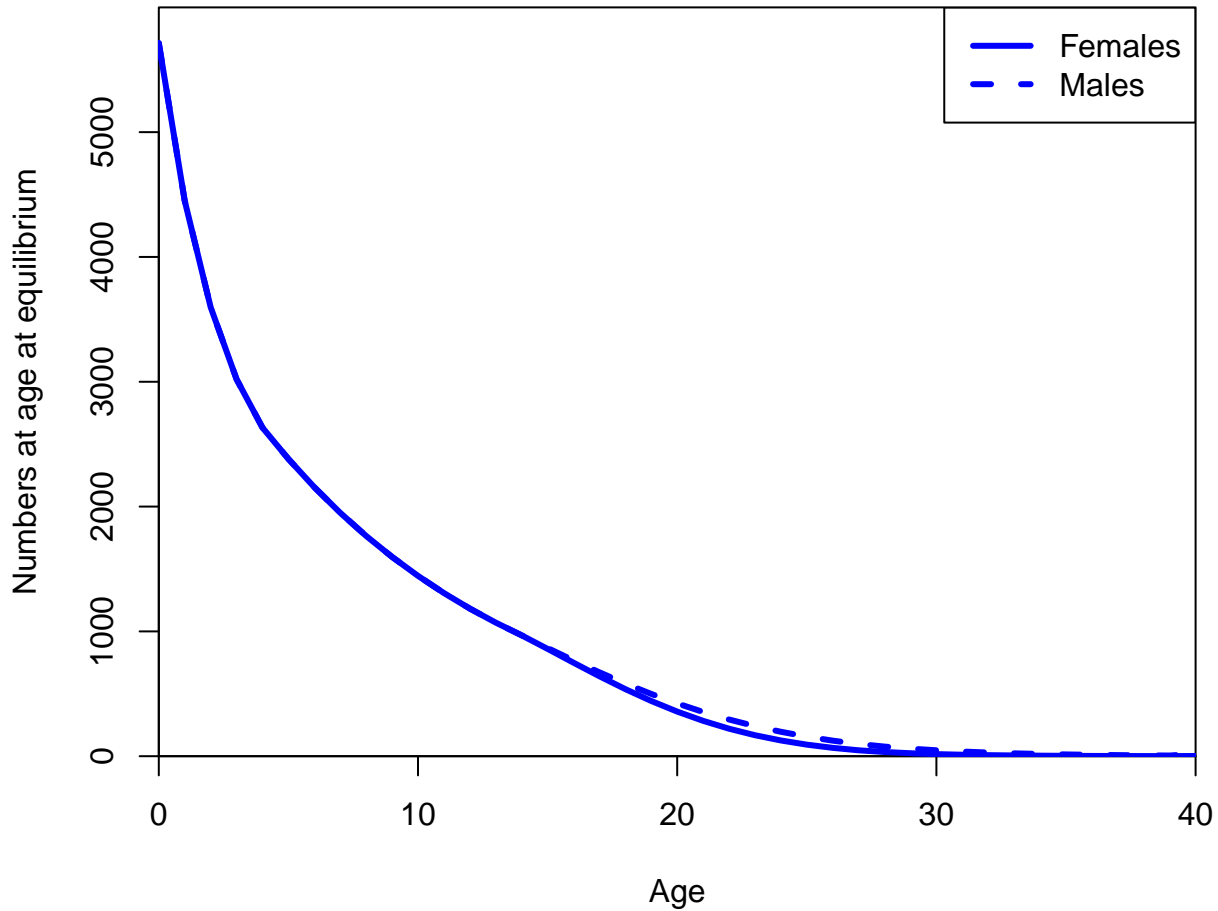


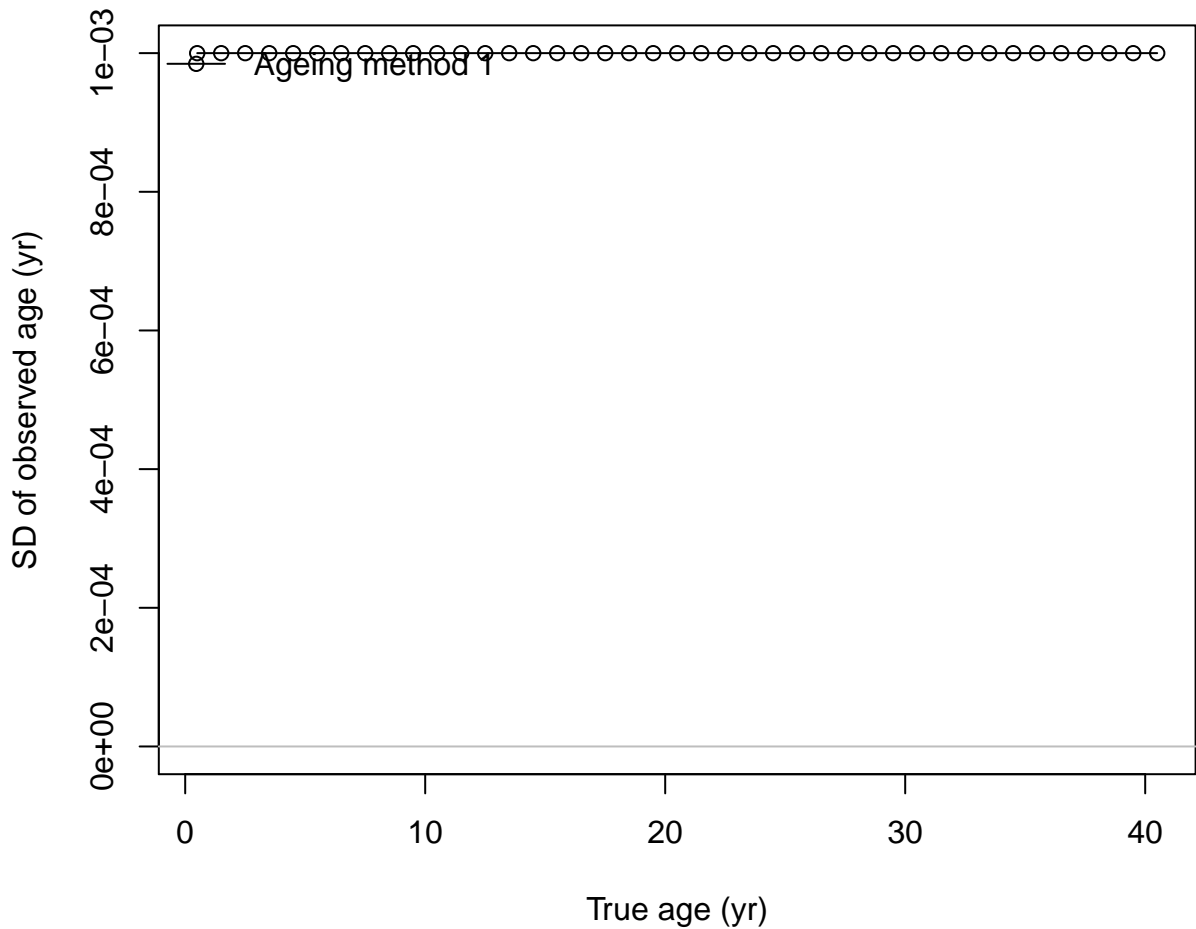




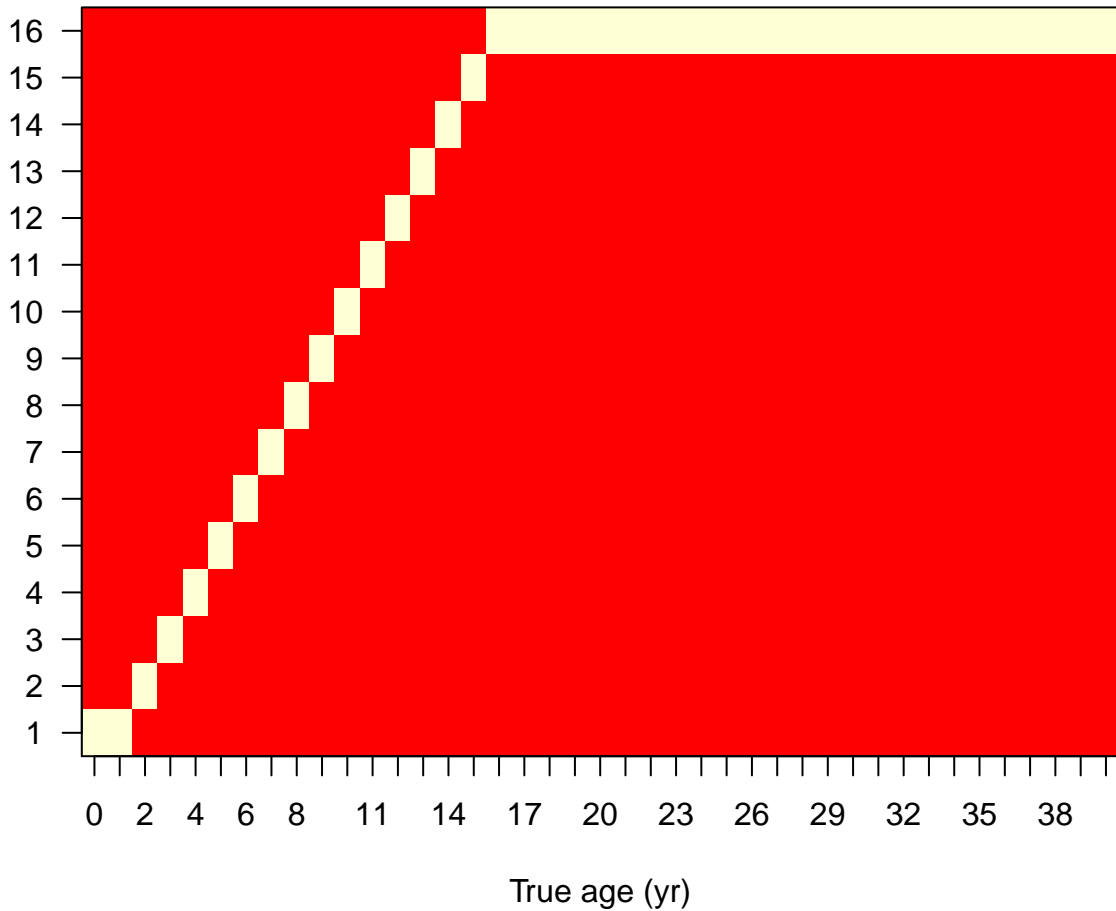
Length



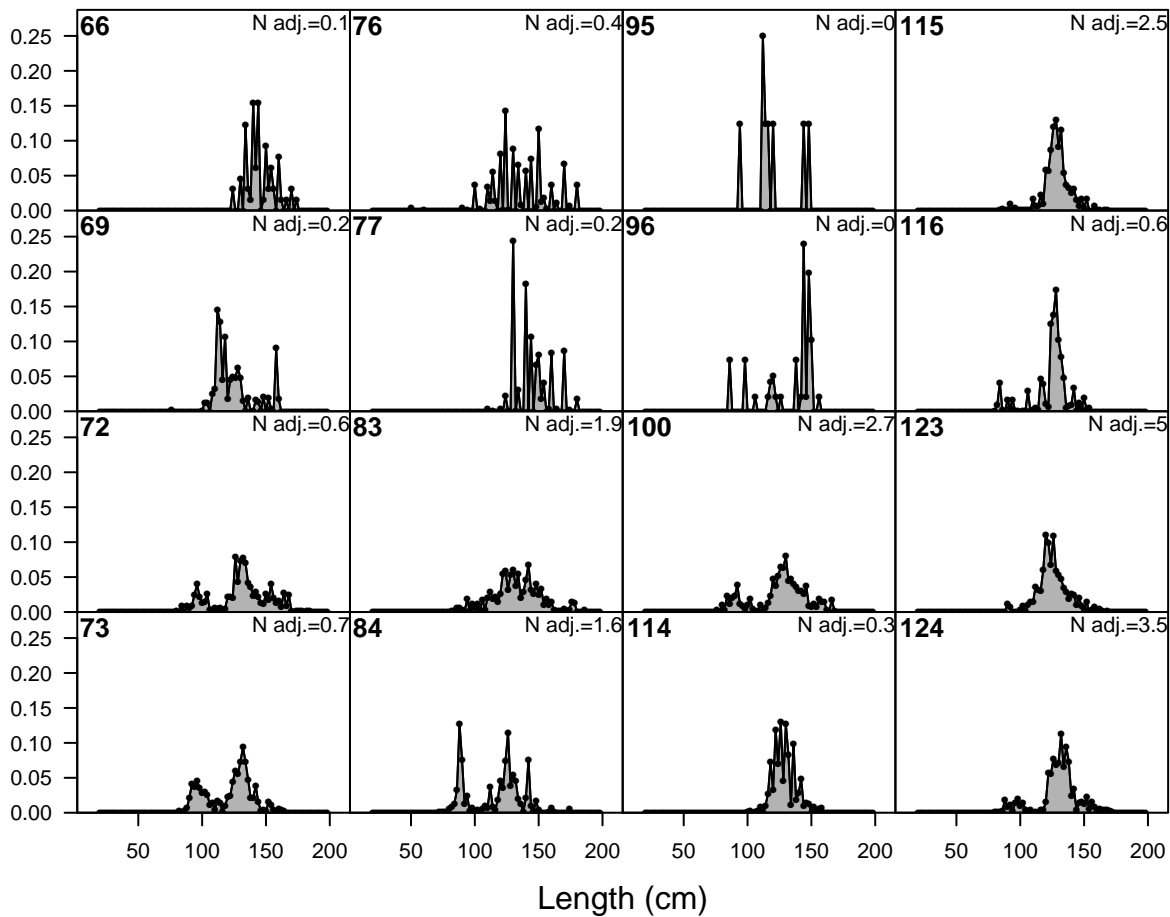


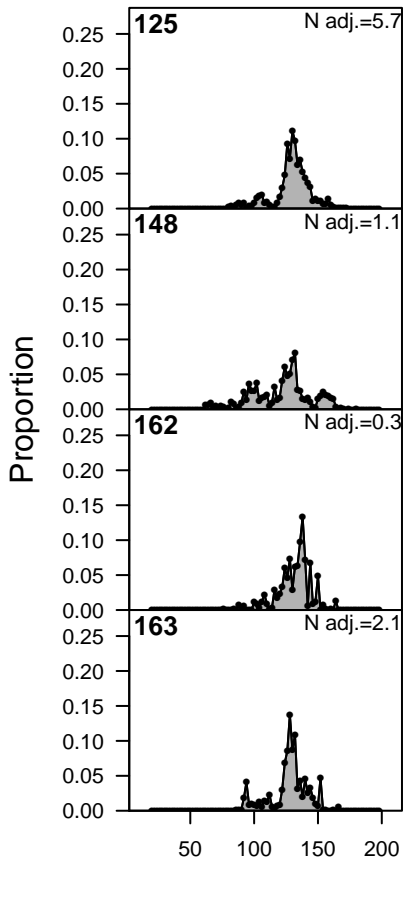


Observed age (yr)

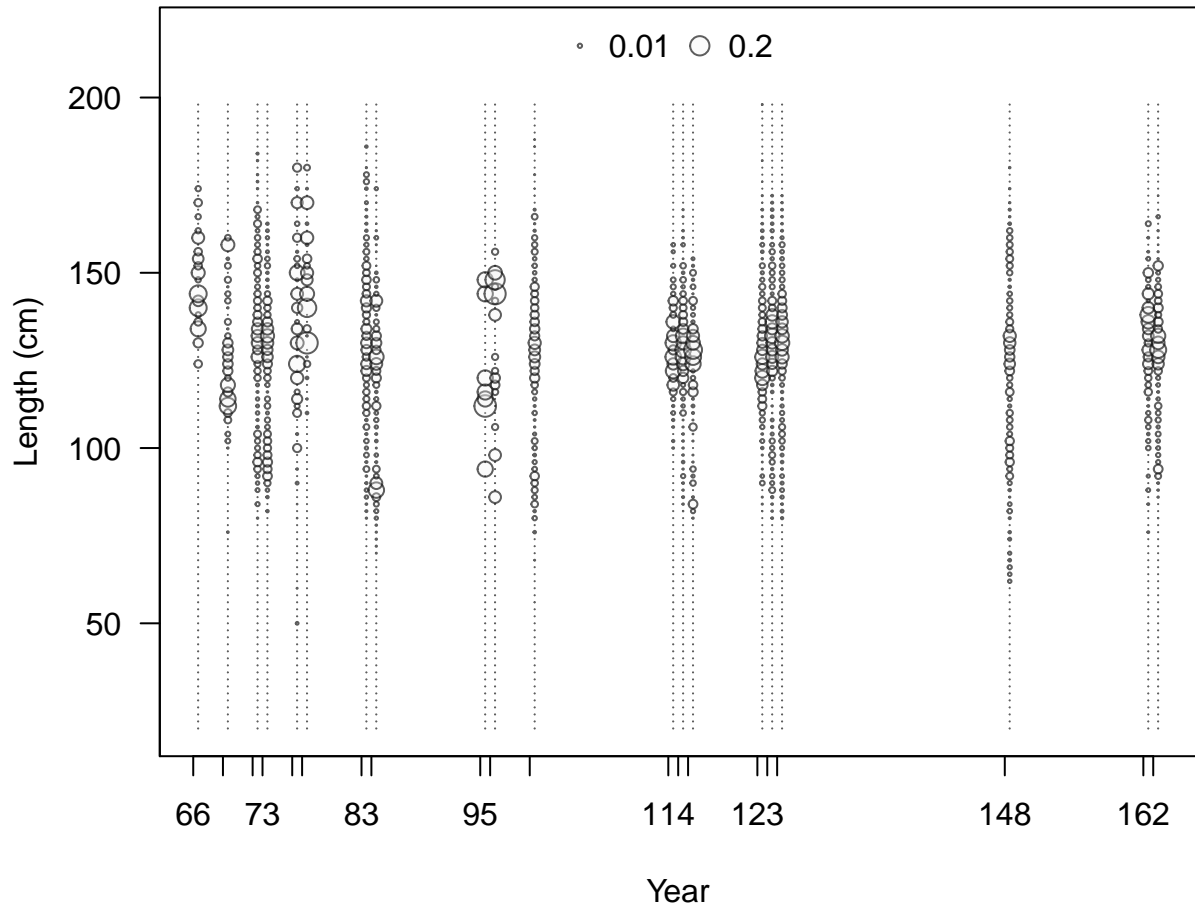


Proportion

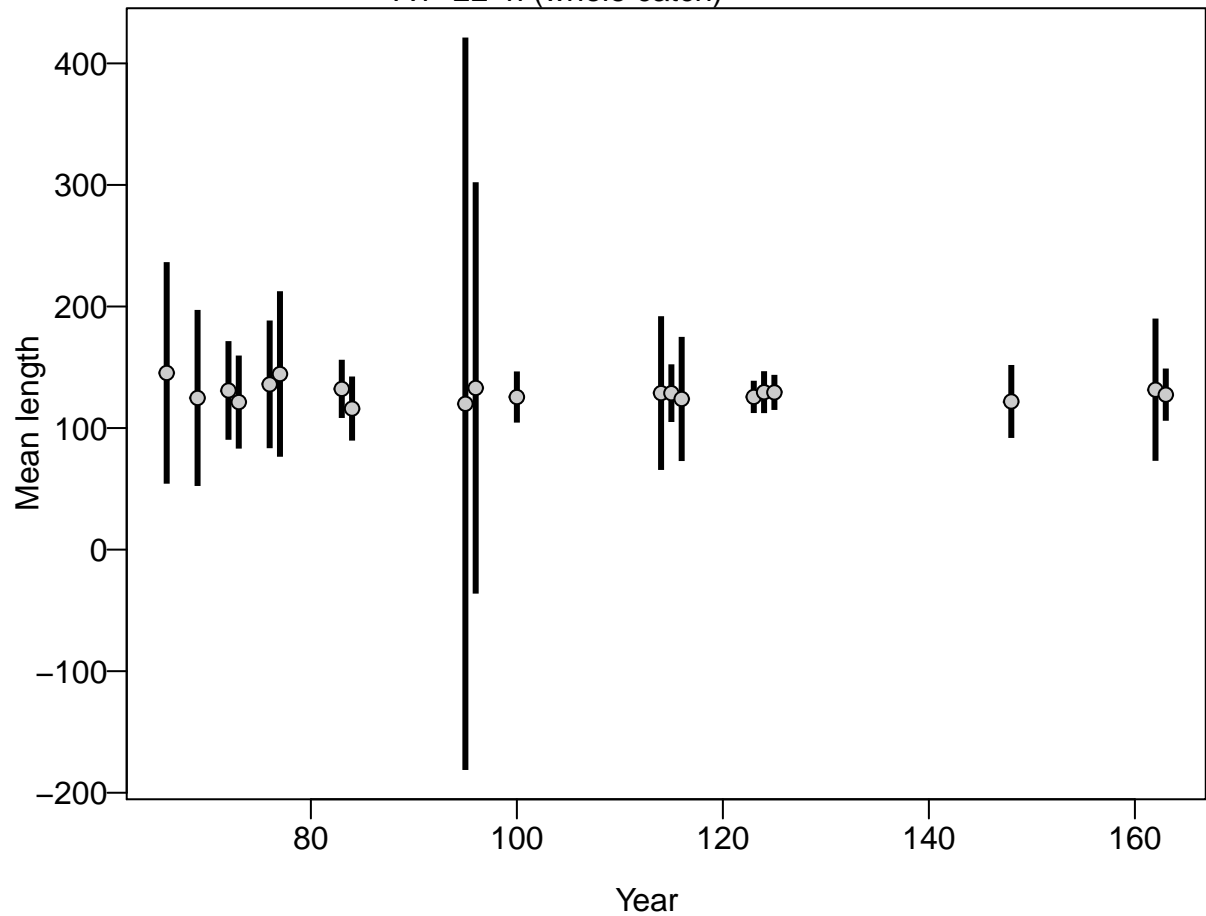




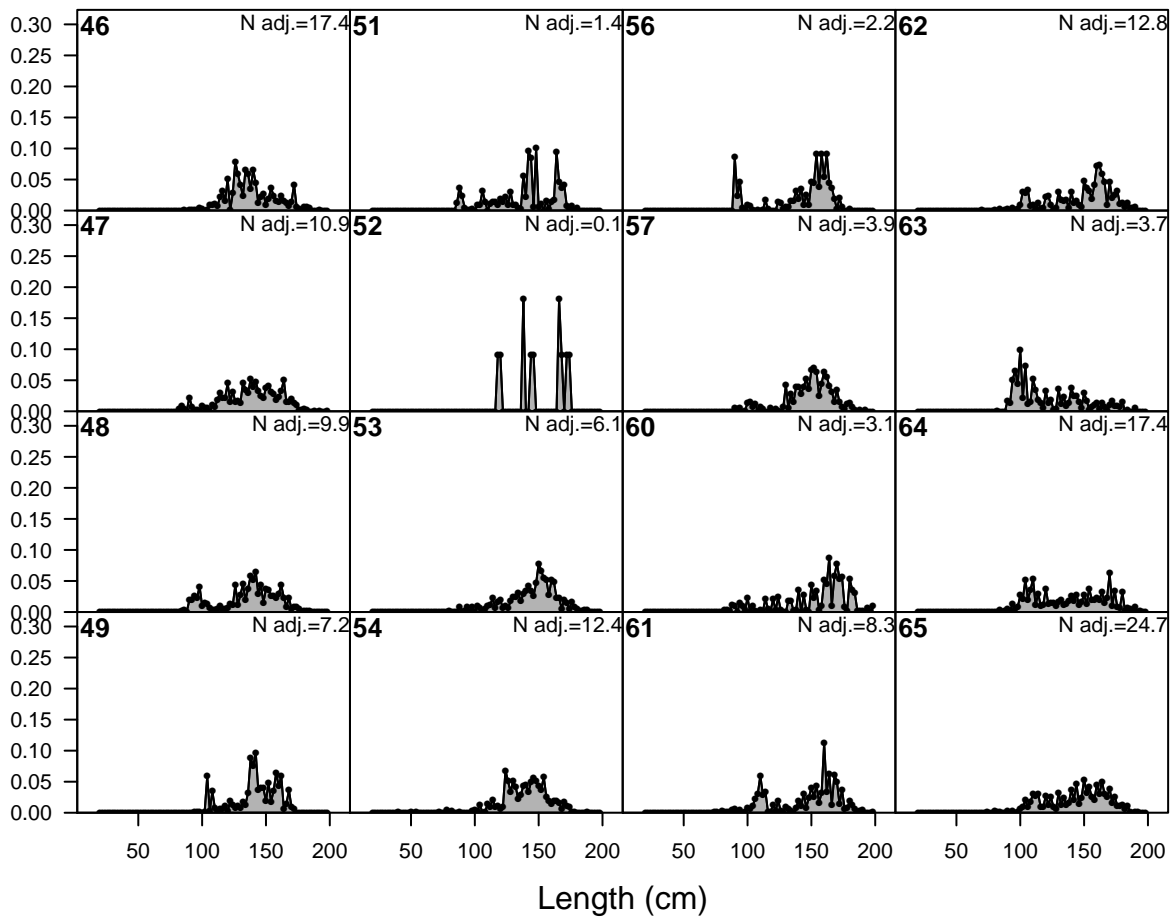
Length (cm)



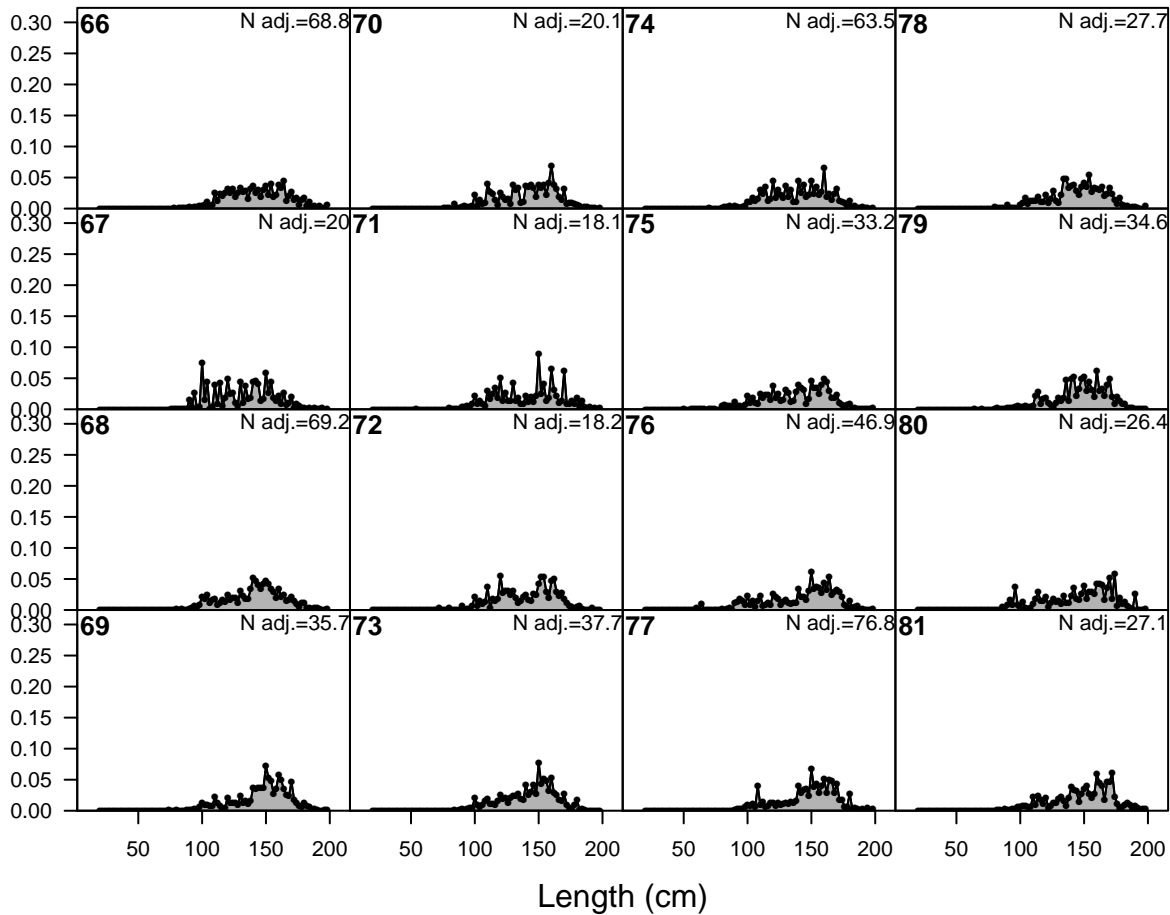
A1-LL-n (whole catch)



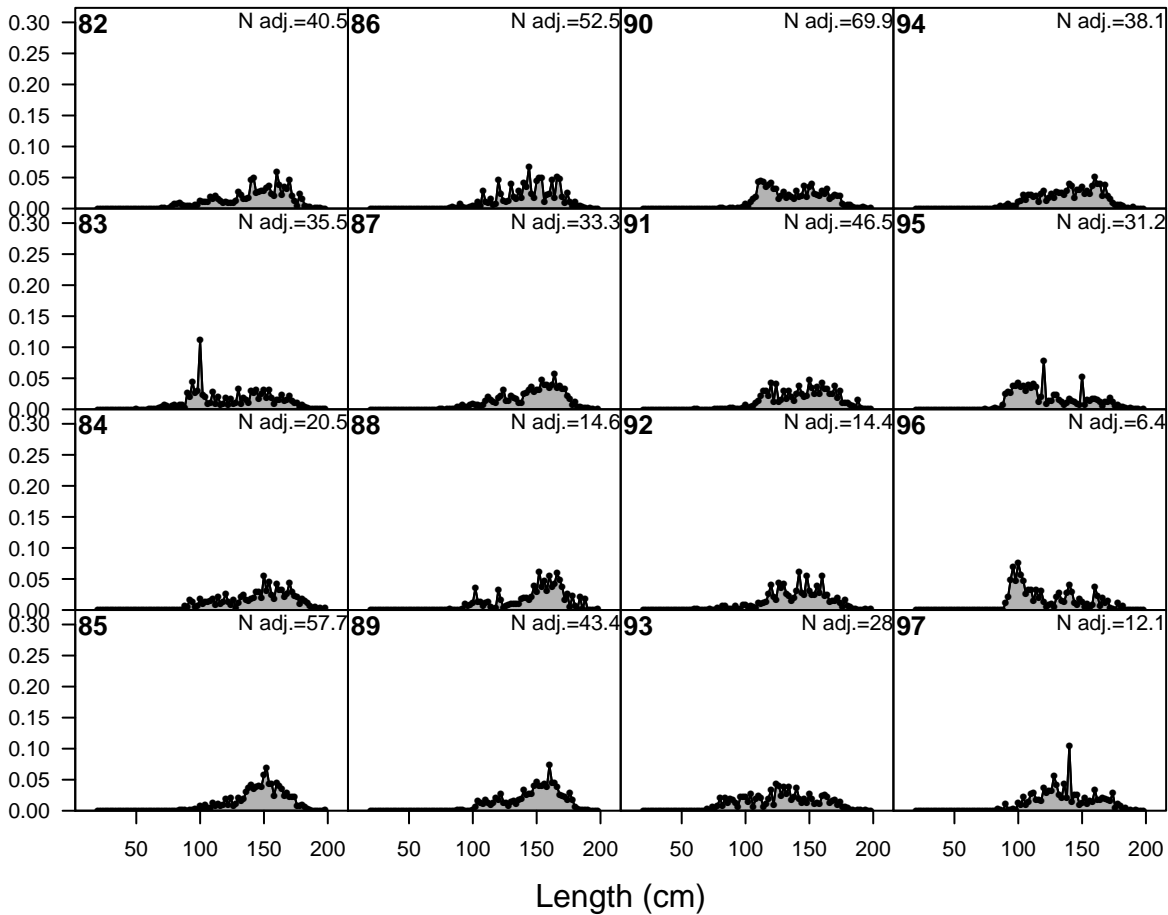
Proportion



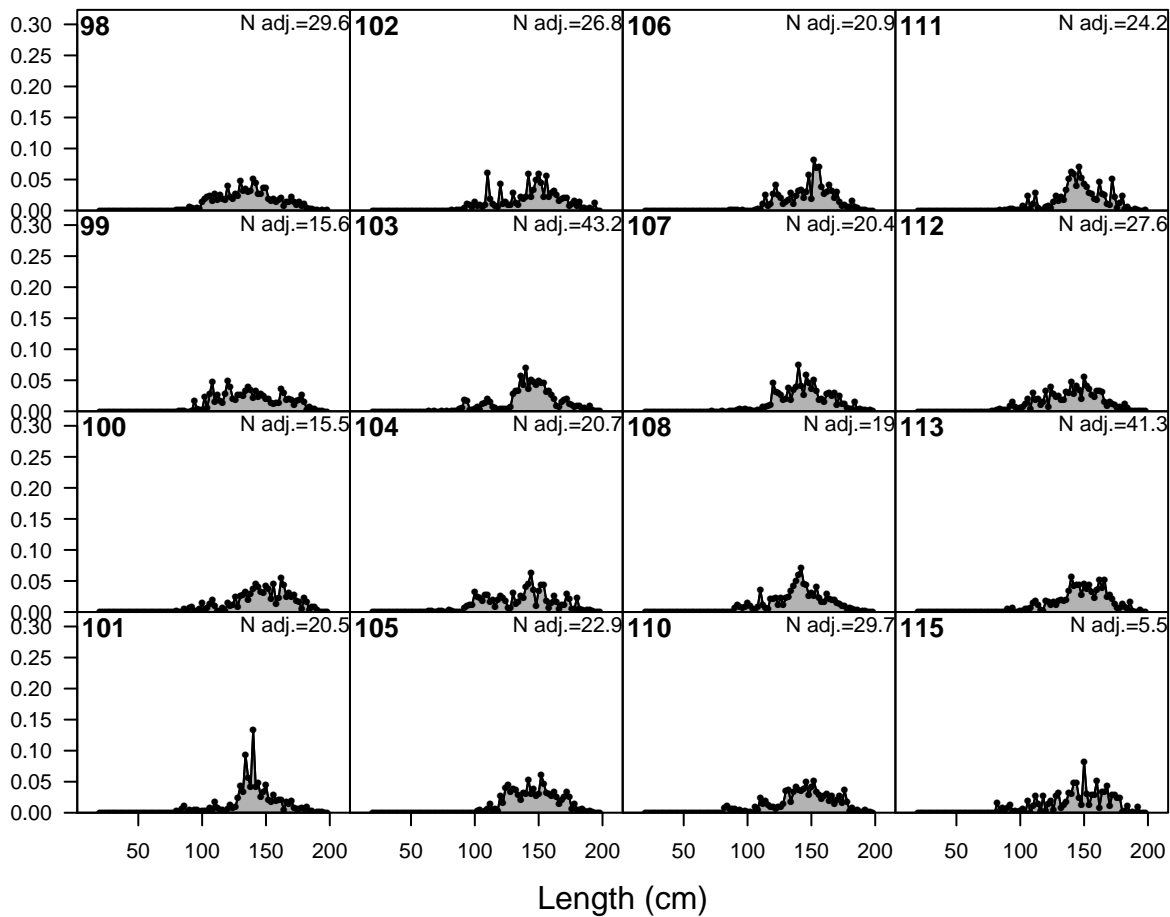
Proportion



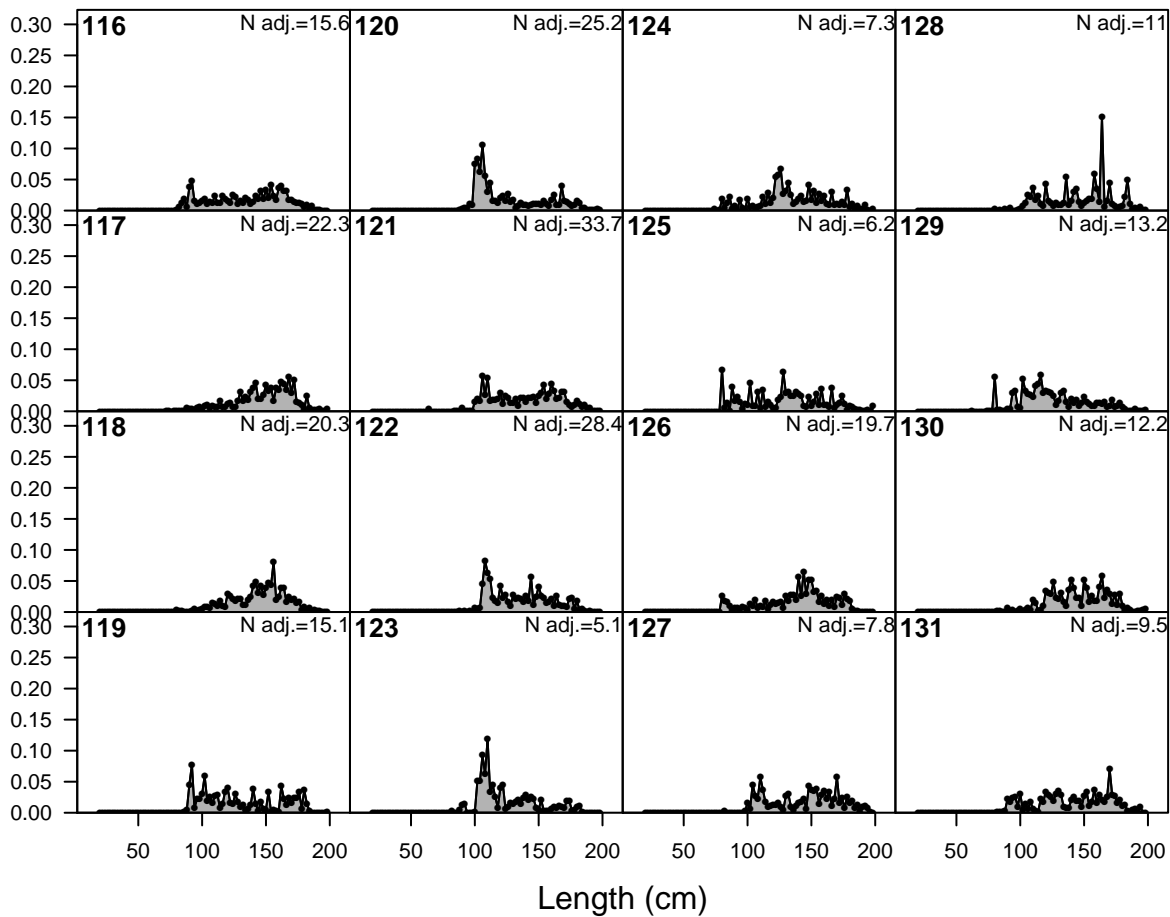
Proportion



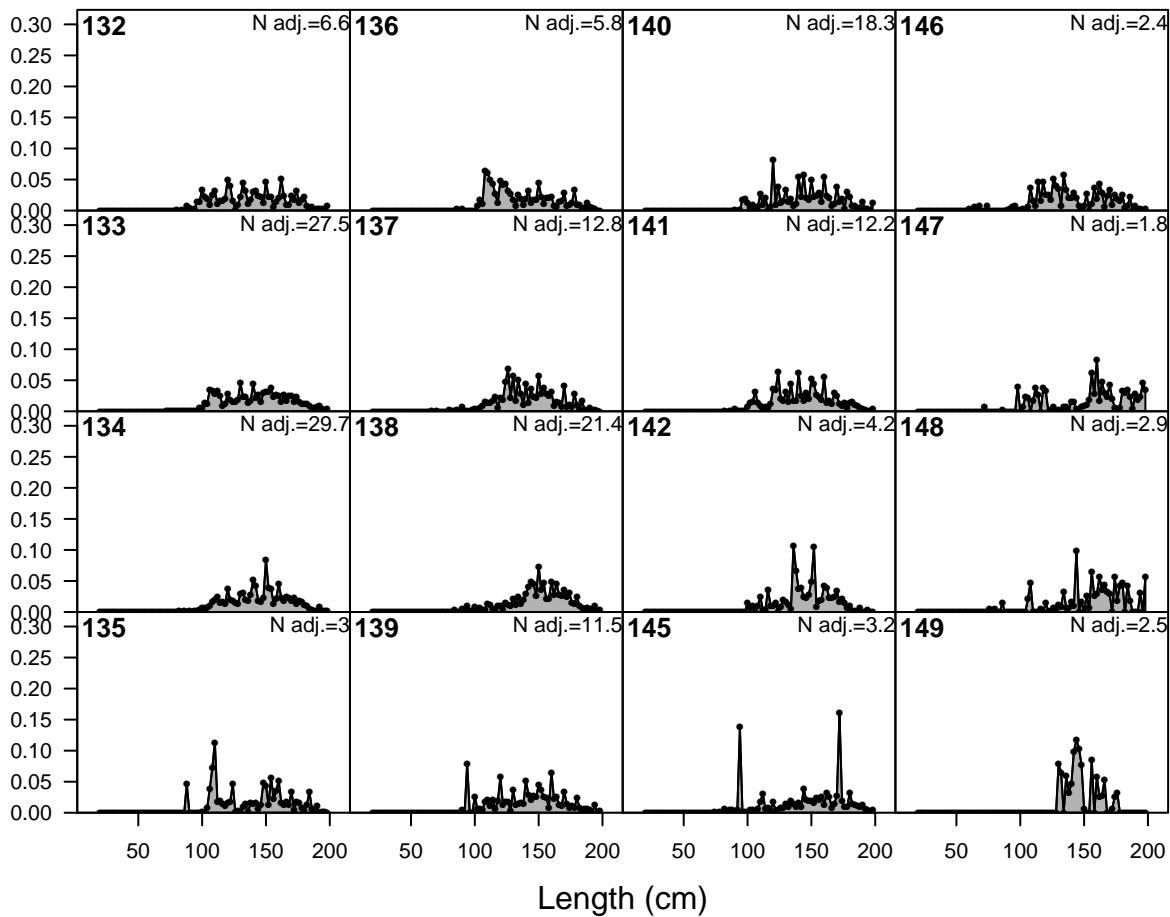
Proportion



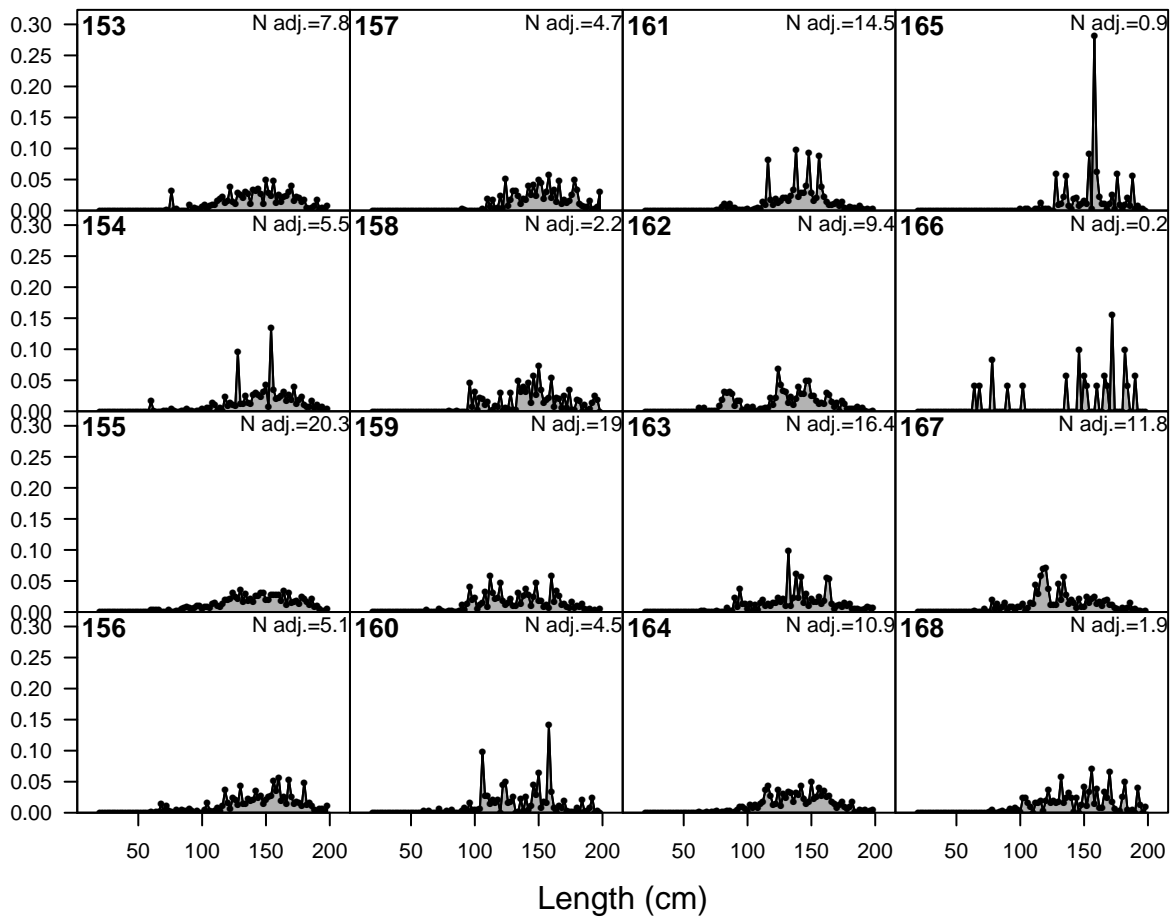
Proportion



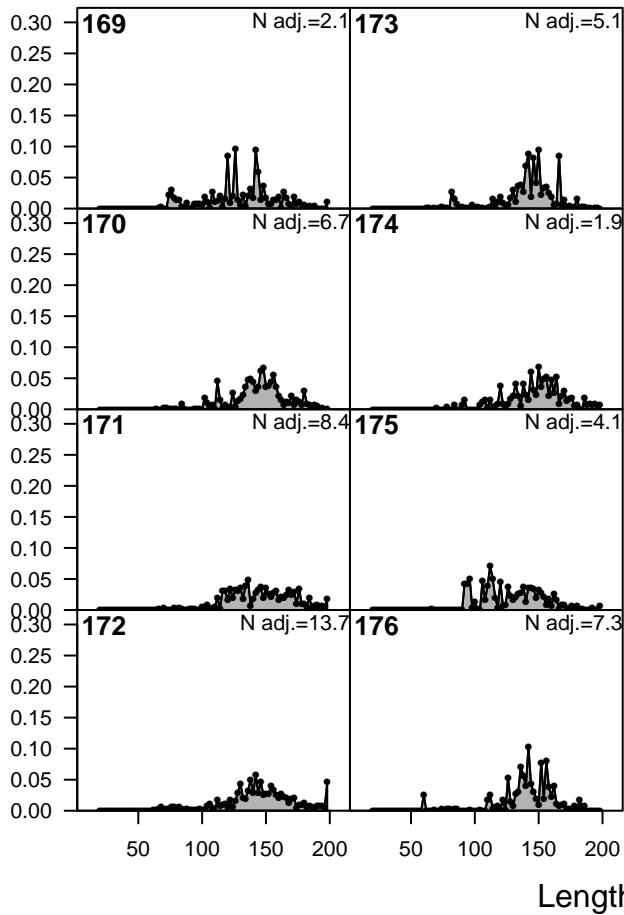
Proportion

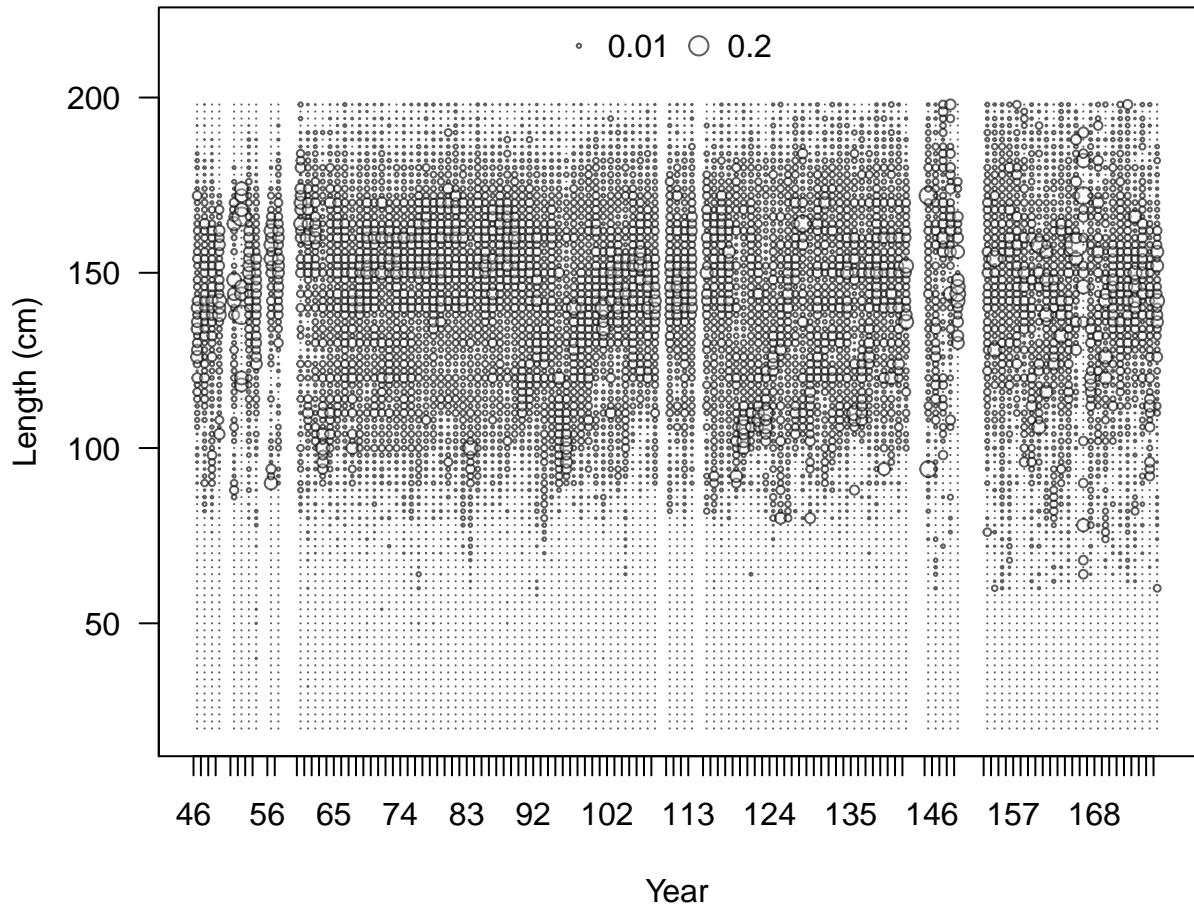


Proportion

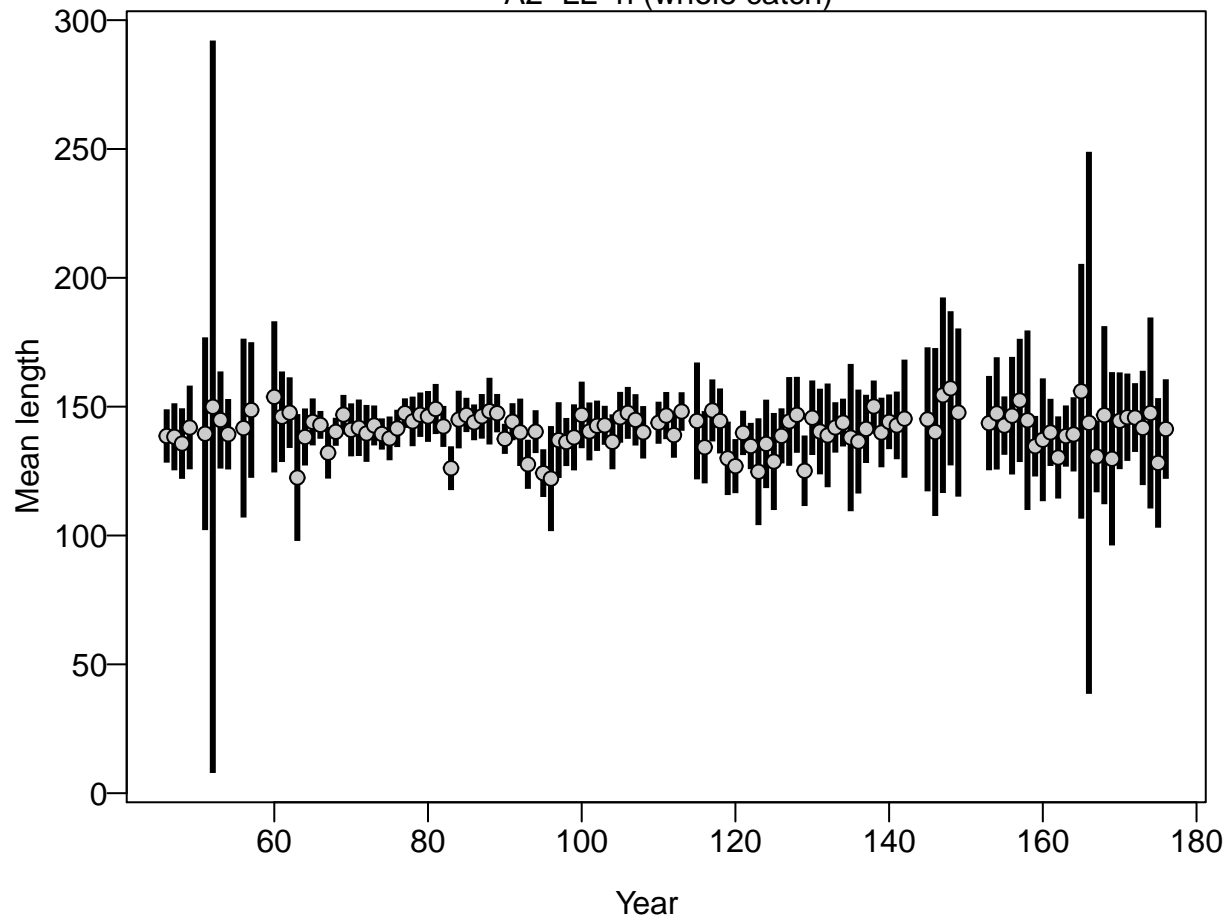


Proportion

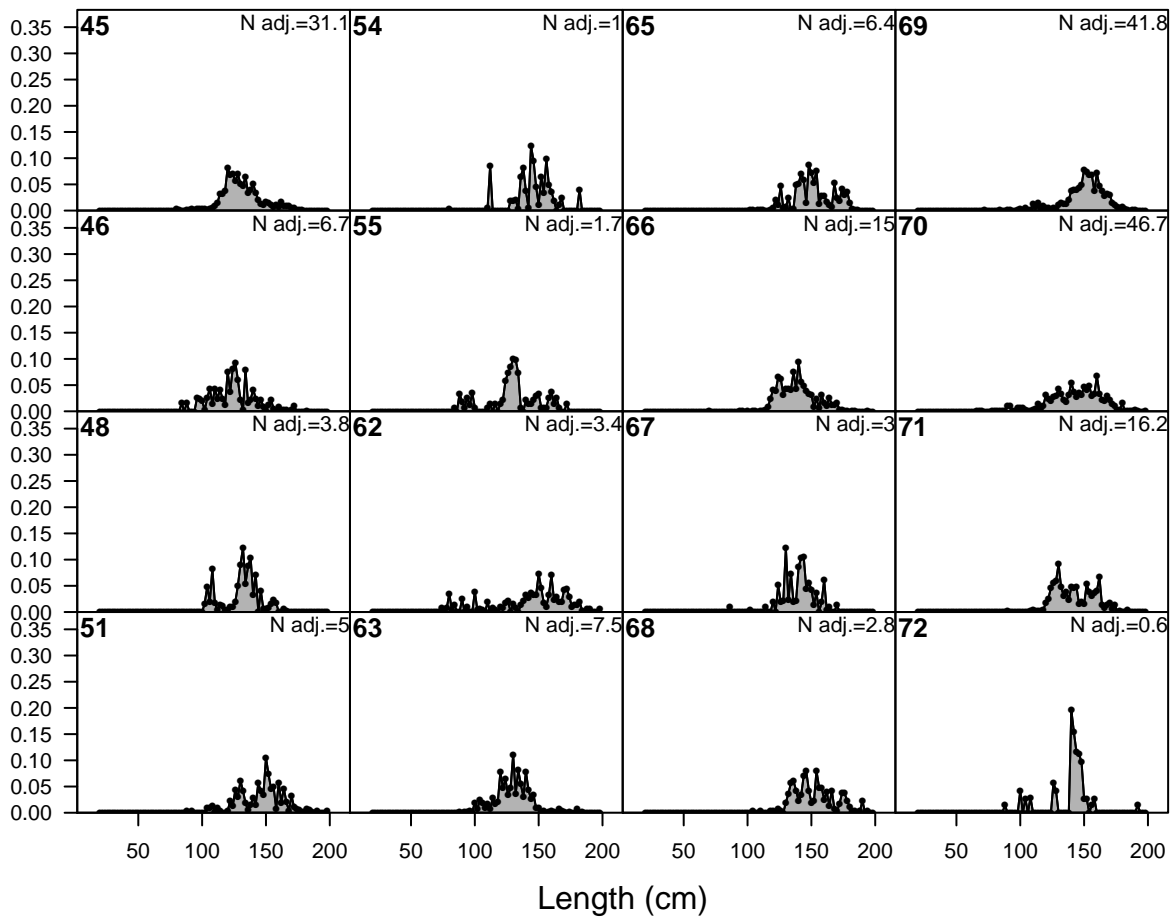




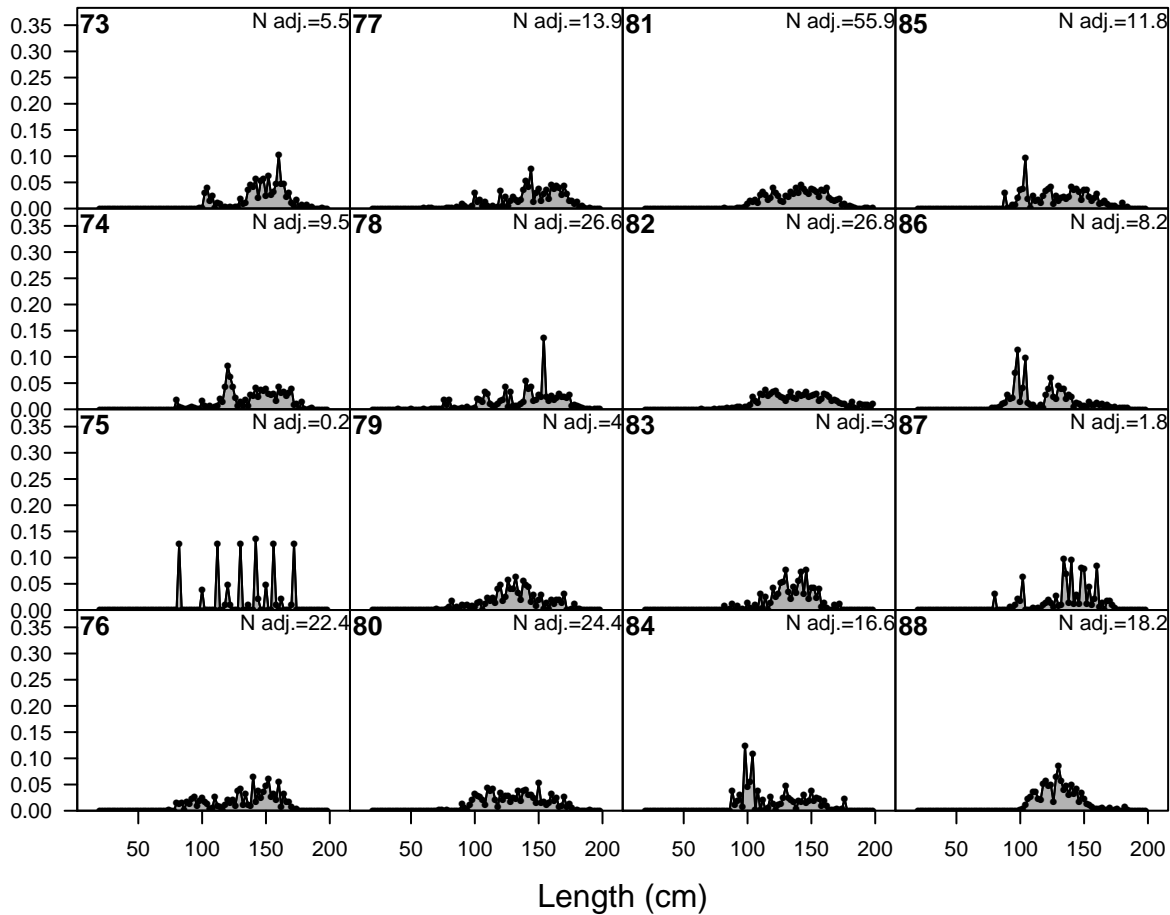
A2-LL-n (whole catch)



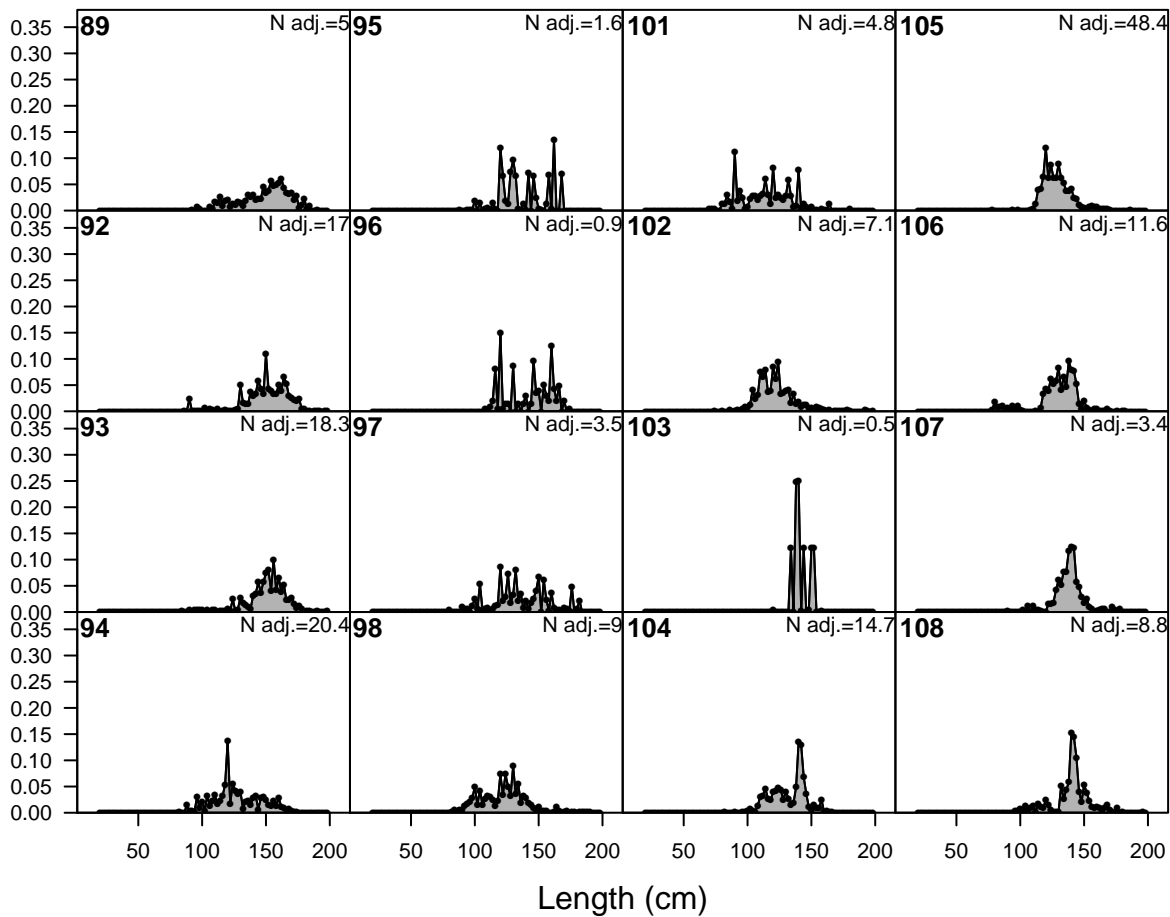
Proportion



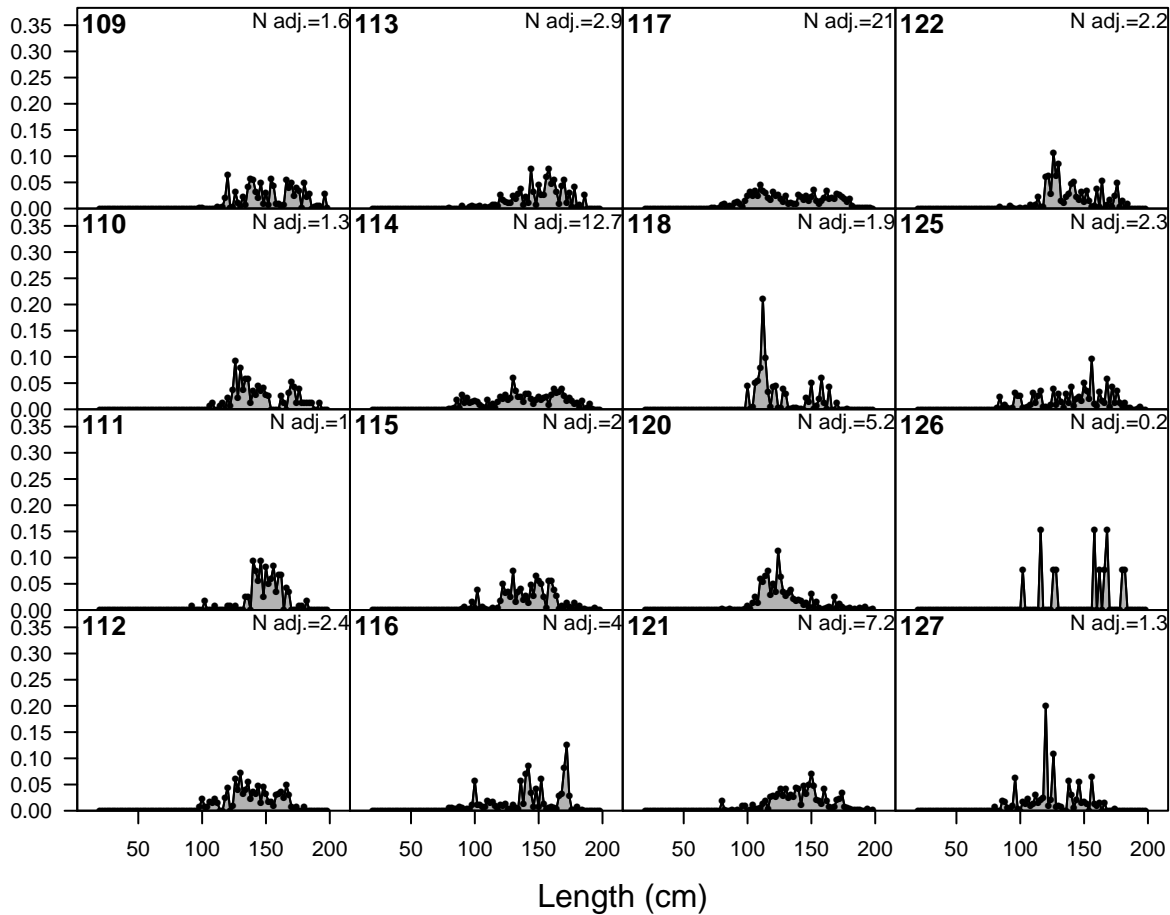
Proportion



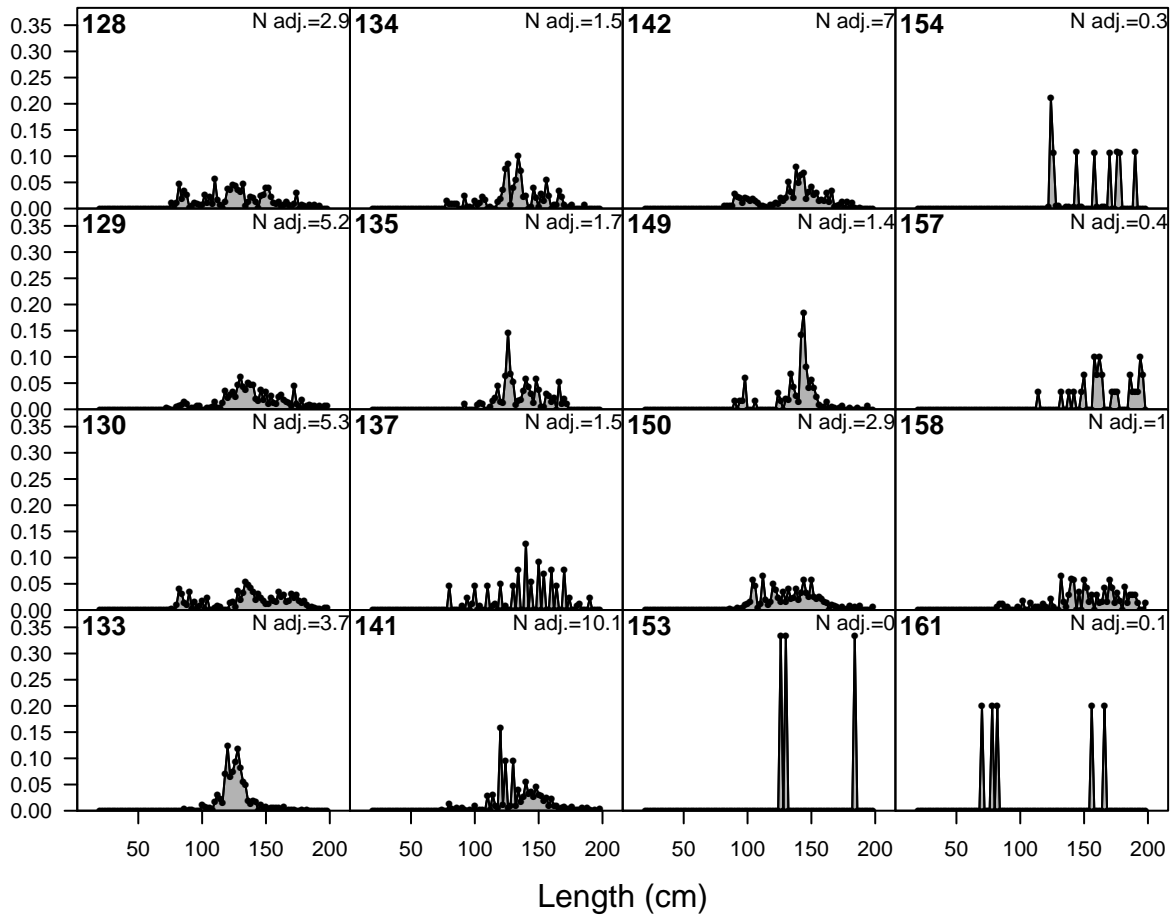
Proportion



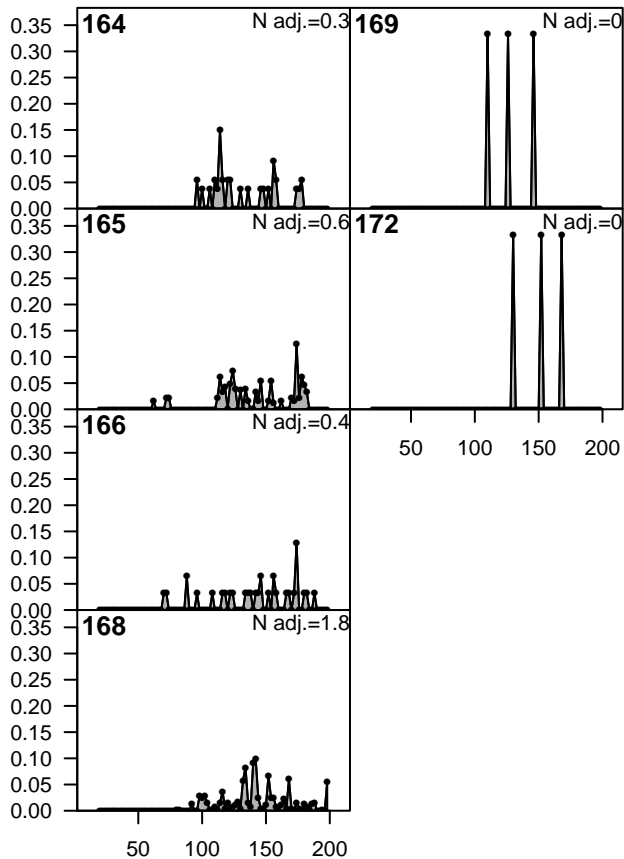
Proportion



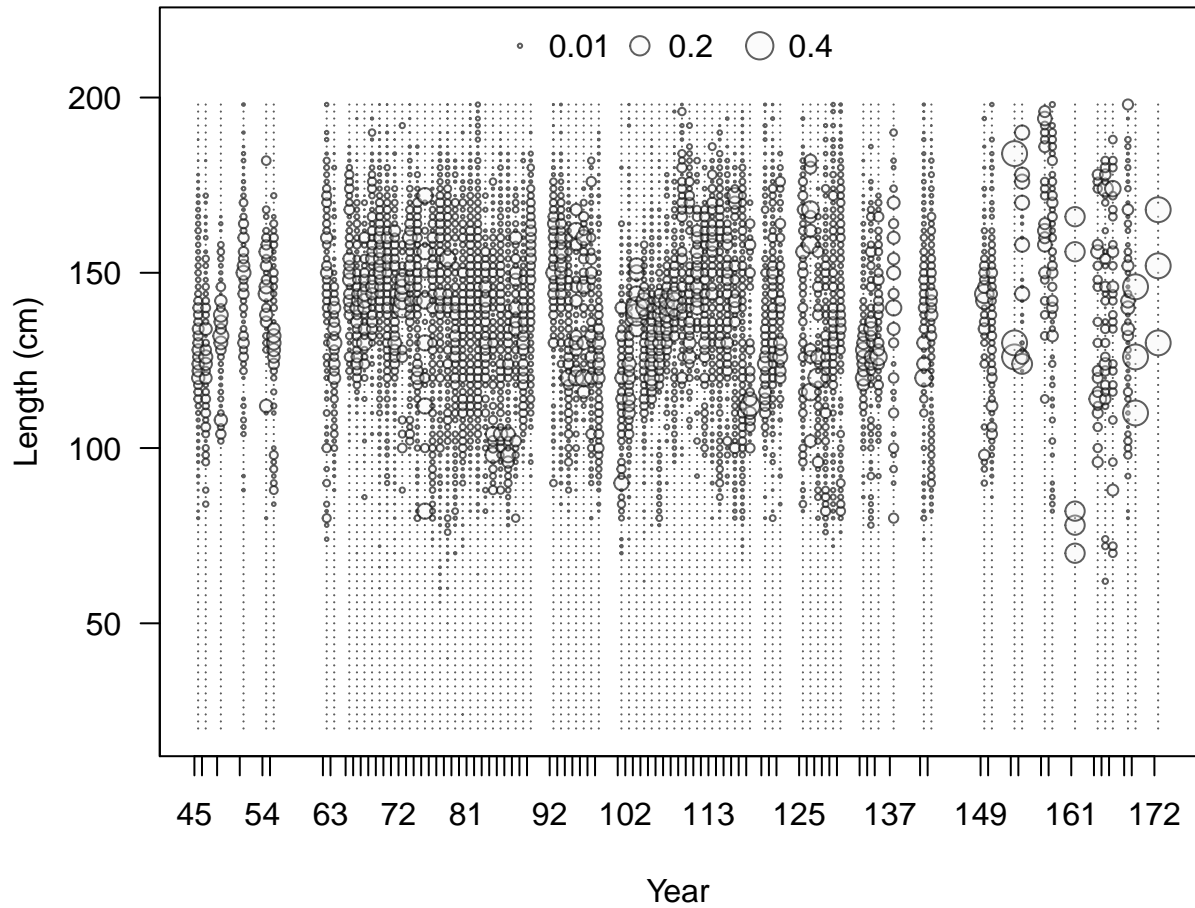
Proportion



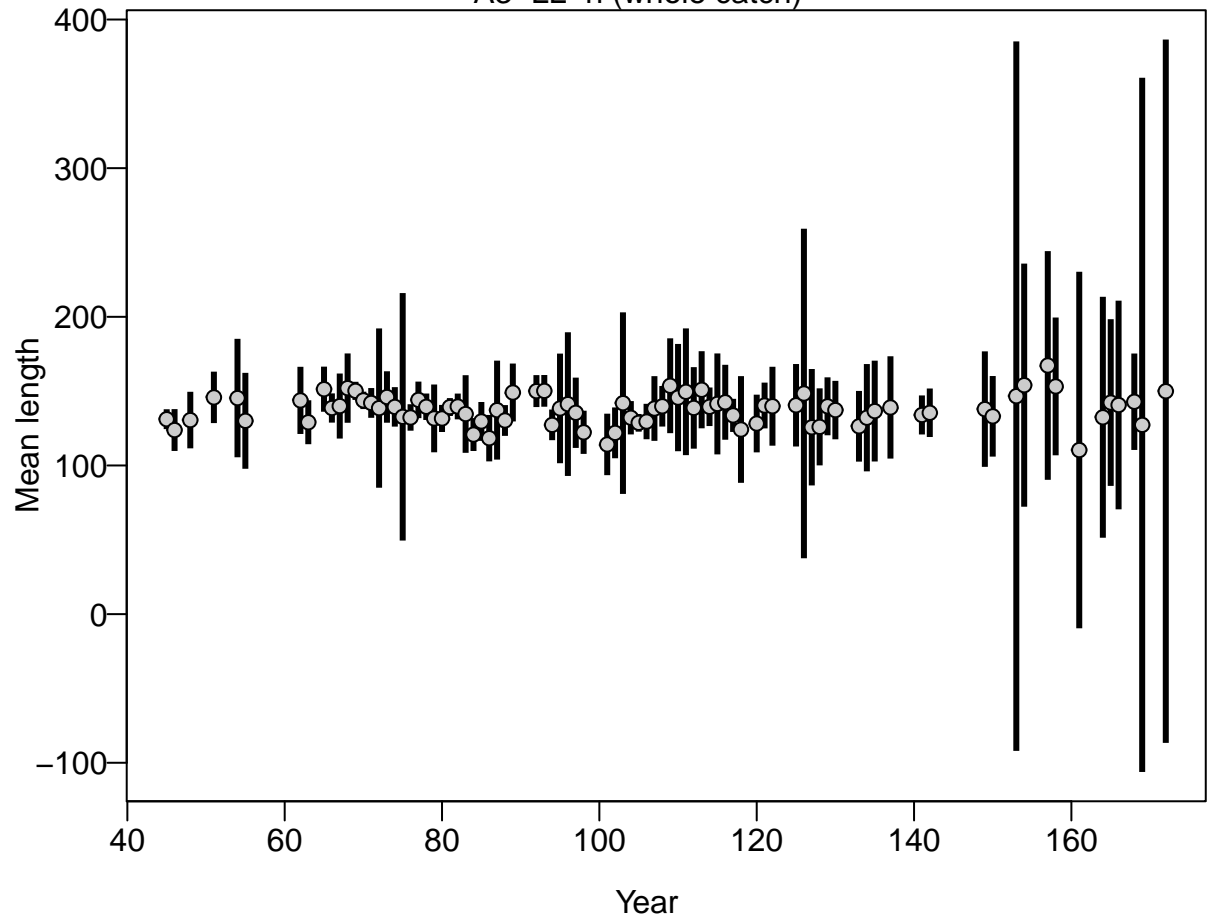
Proportion



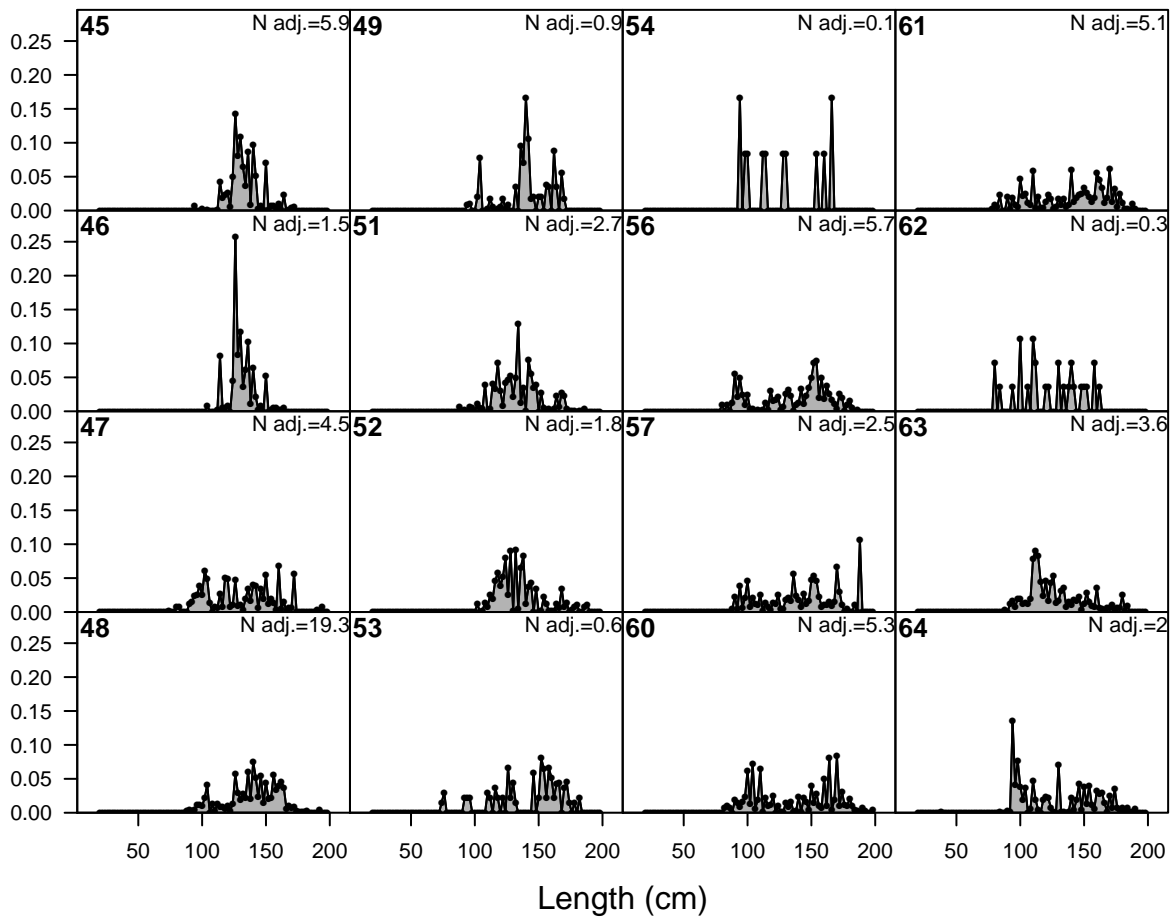
Length (cm)

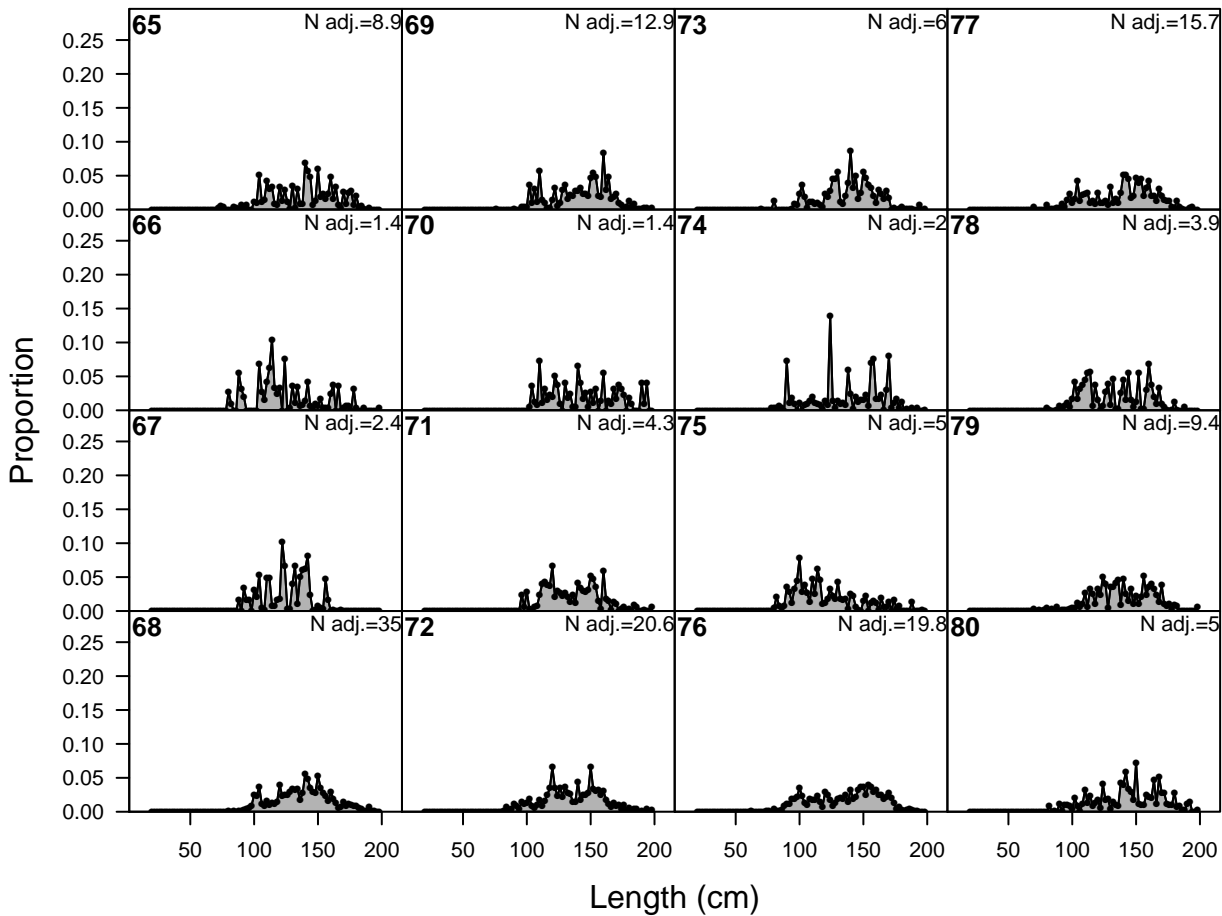


A3-LL-n (whole catch)

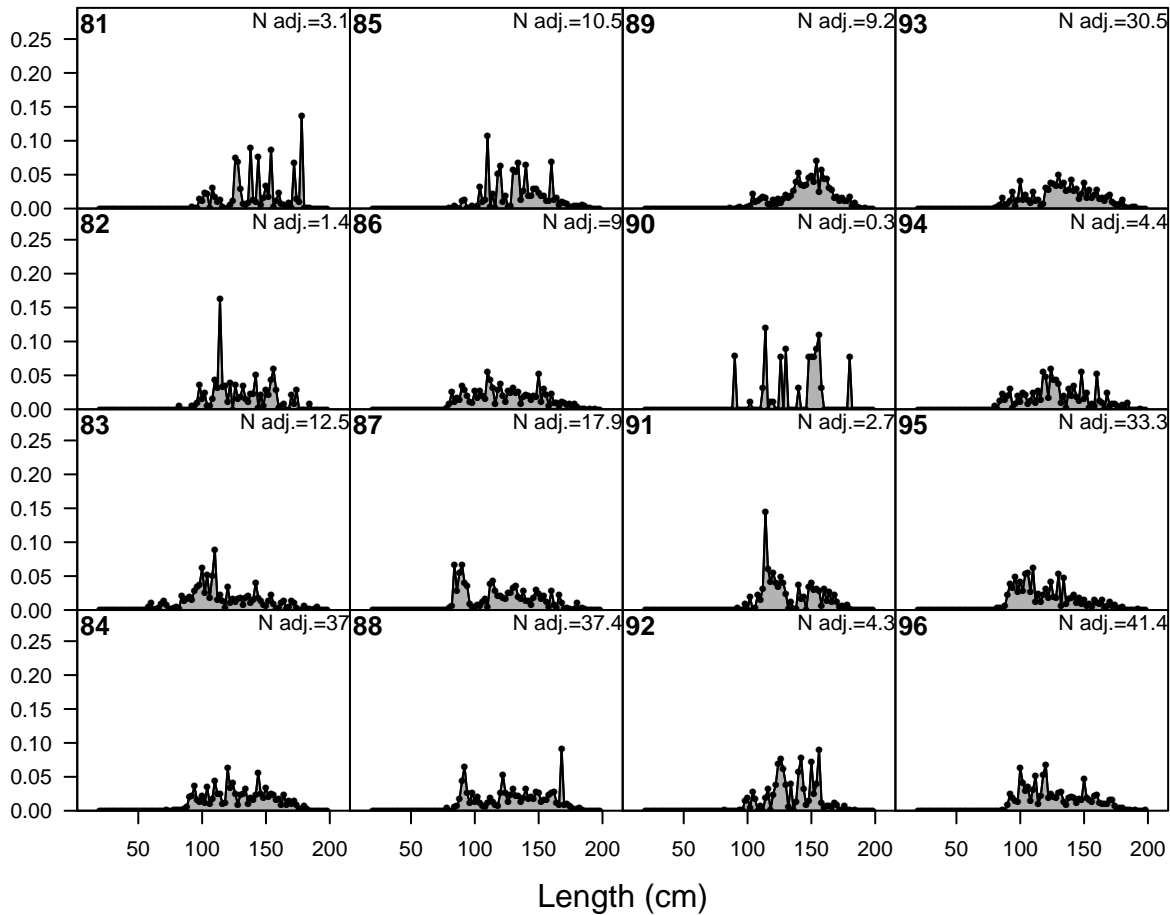


Proportion

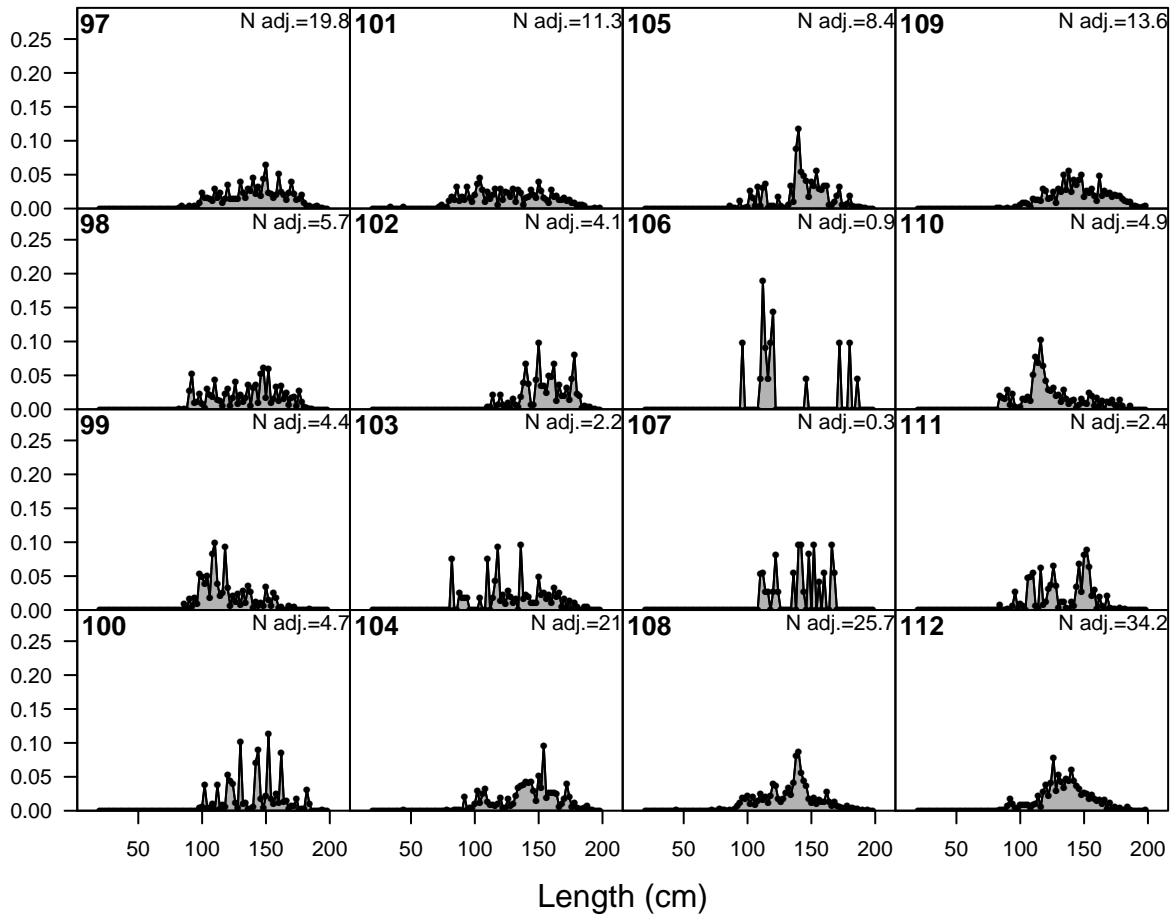




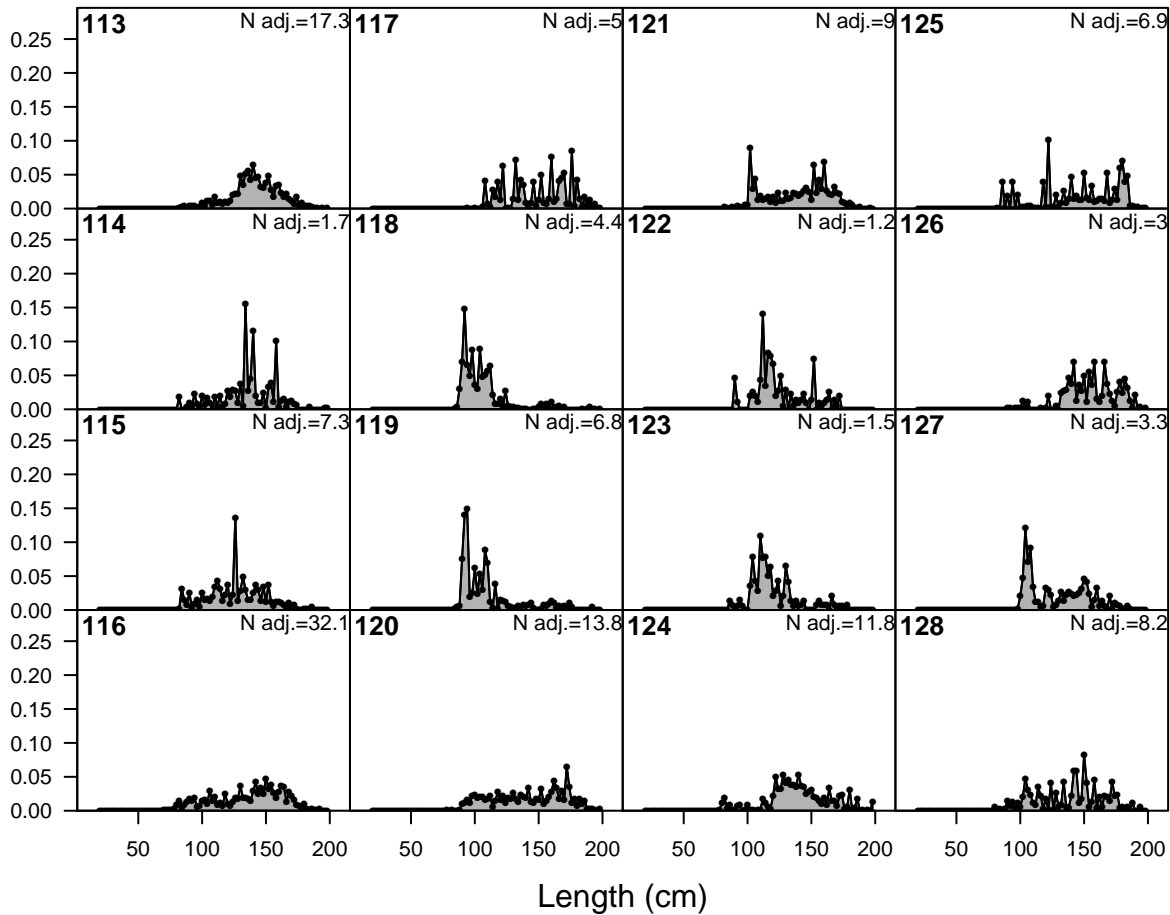
Proportion



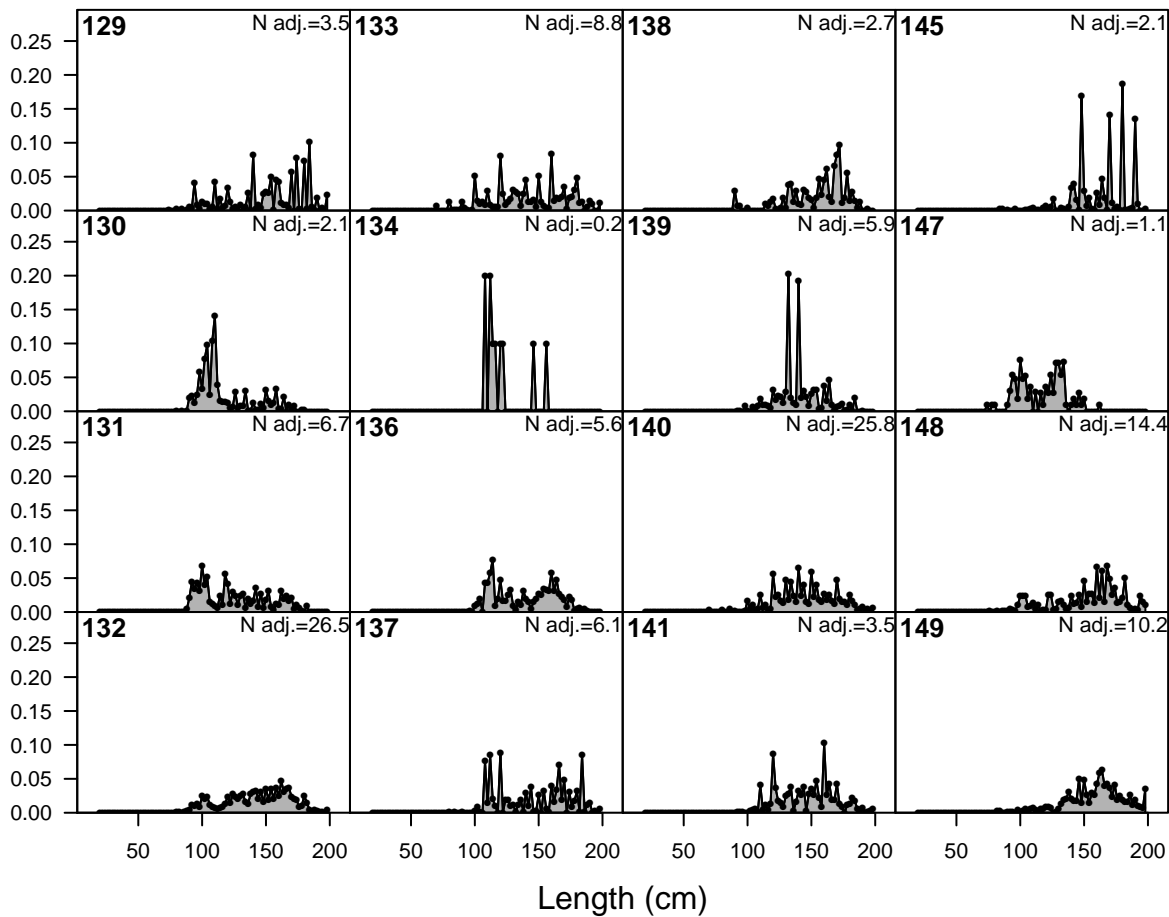
Proportion



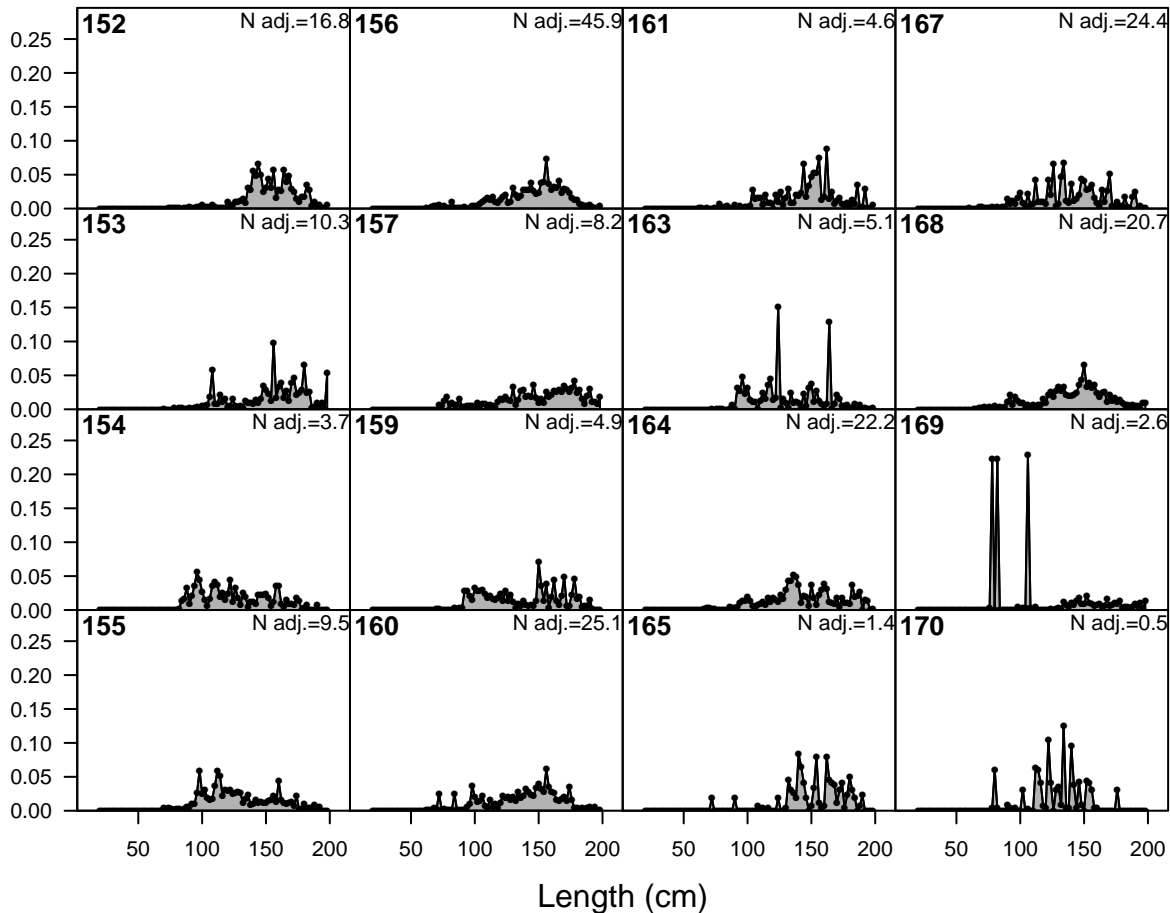
Proportion



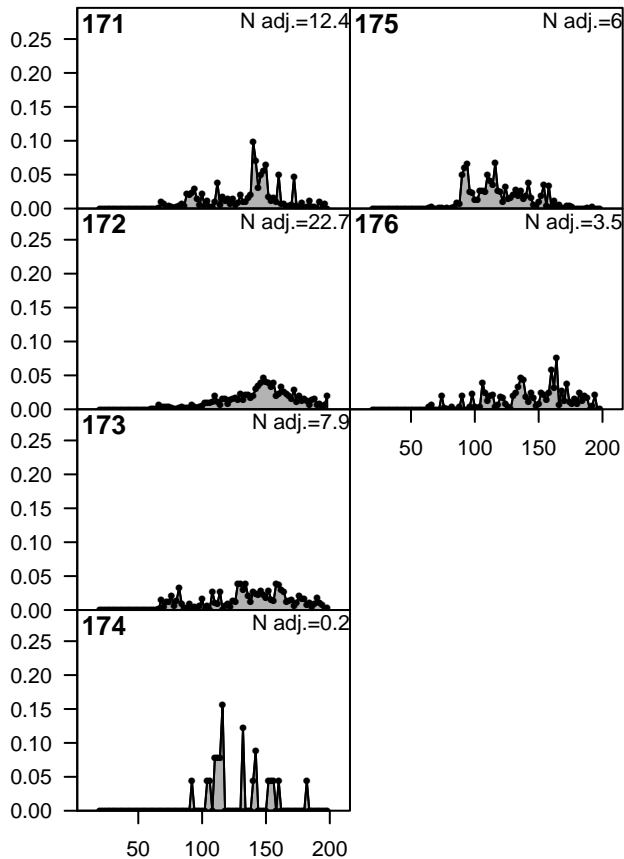
Proportion



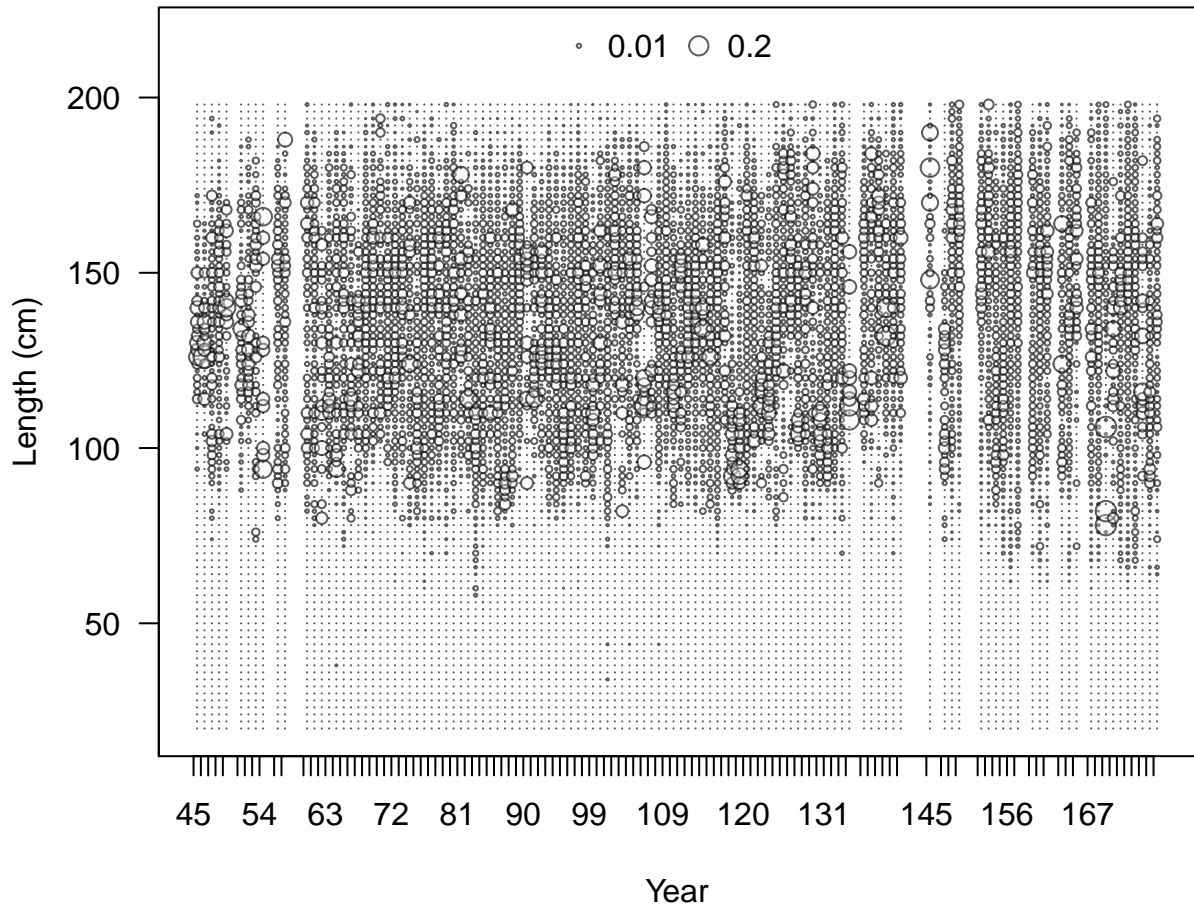
Proportion



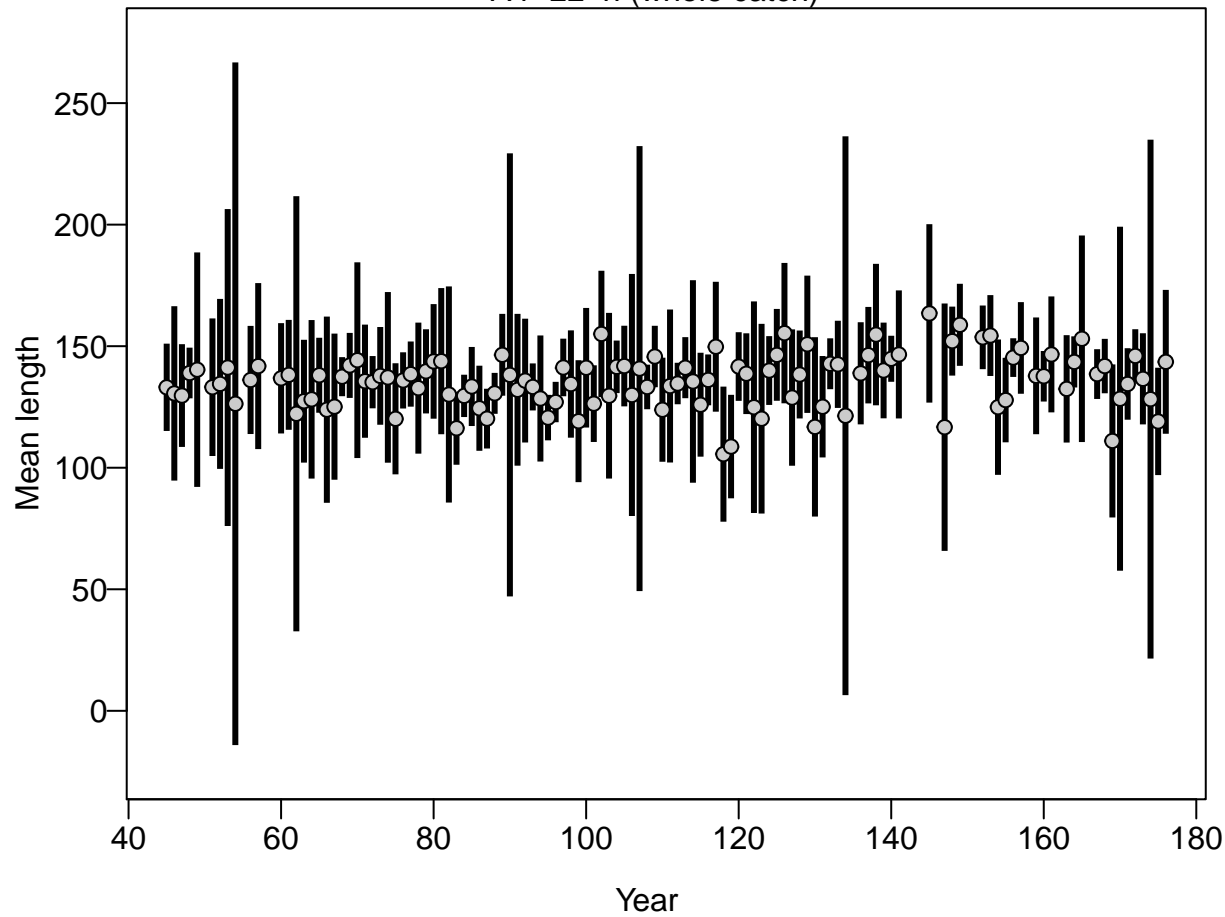
Proportion



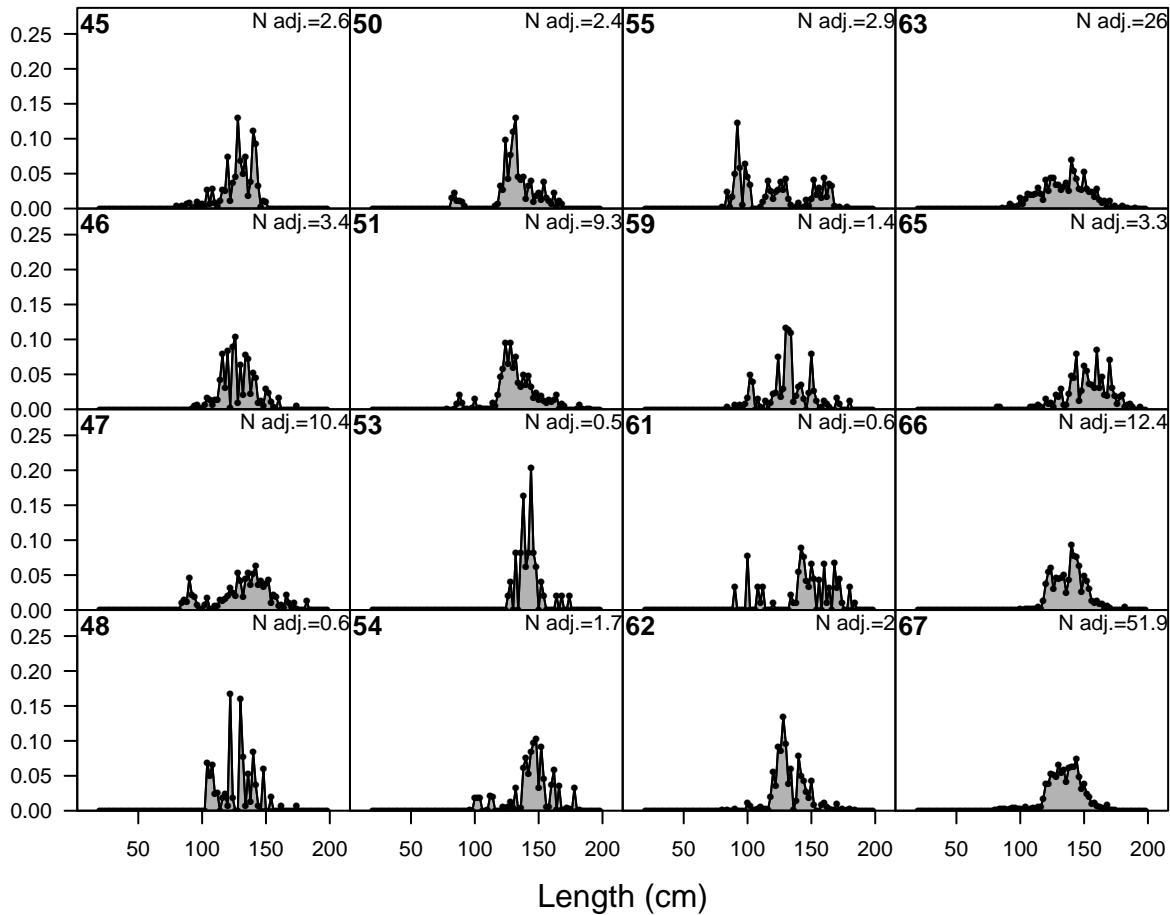
Length (cm)



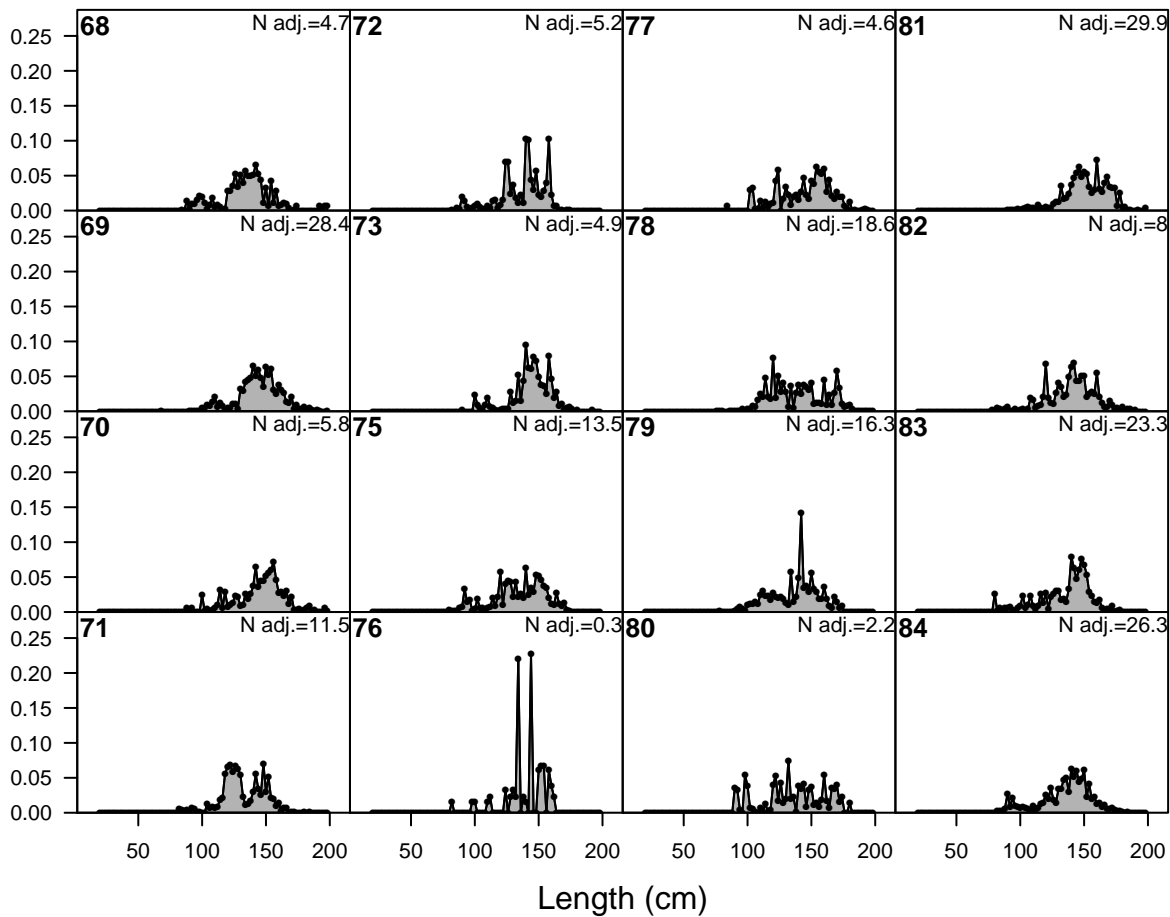
A4-LL-n (whole catch)



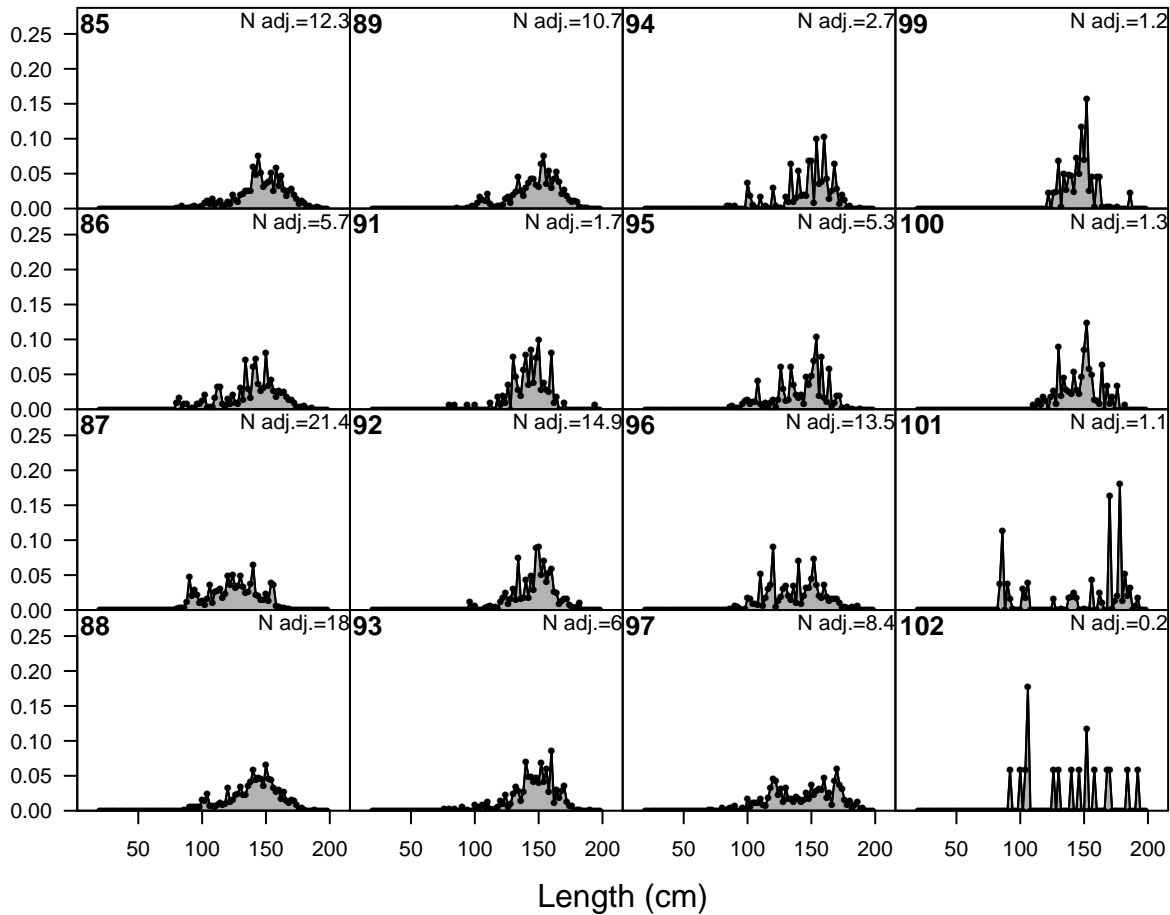
Proportion



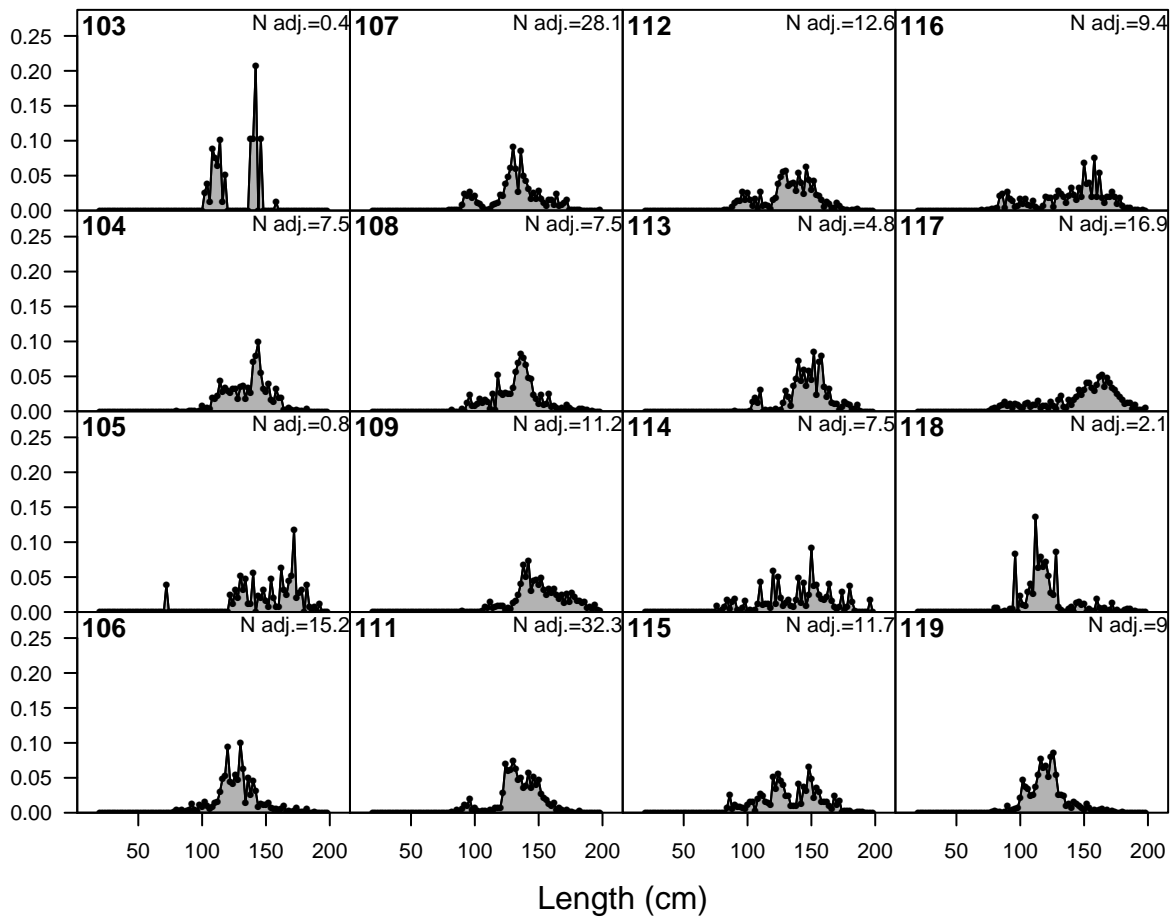
Proportion



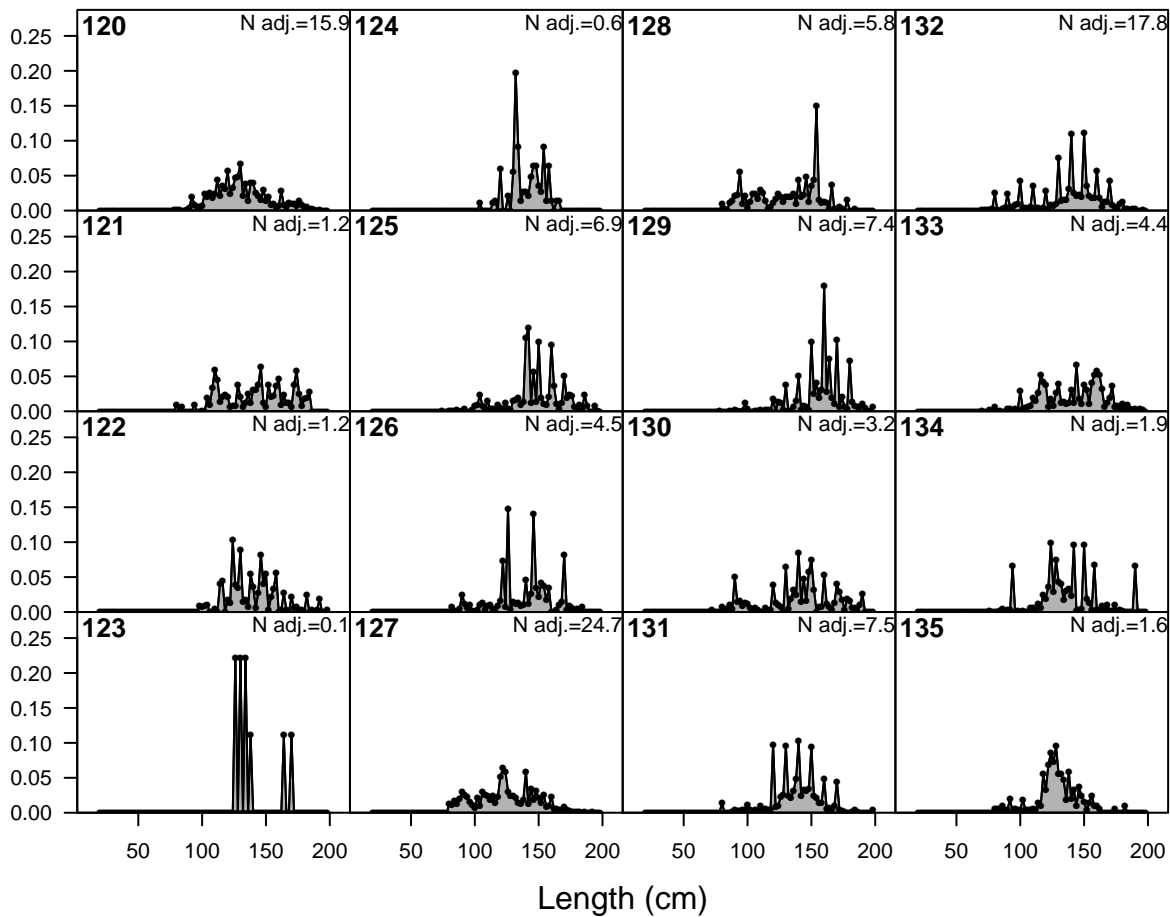
Proportion



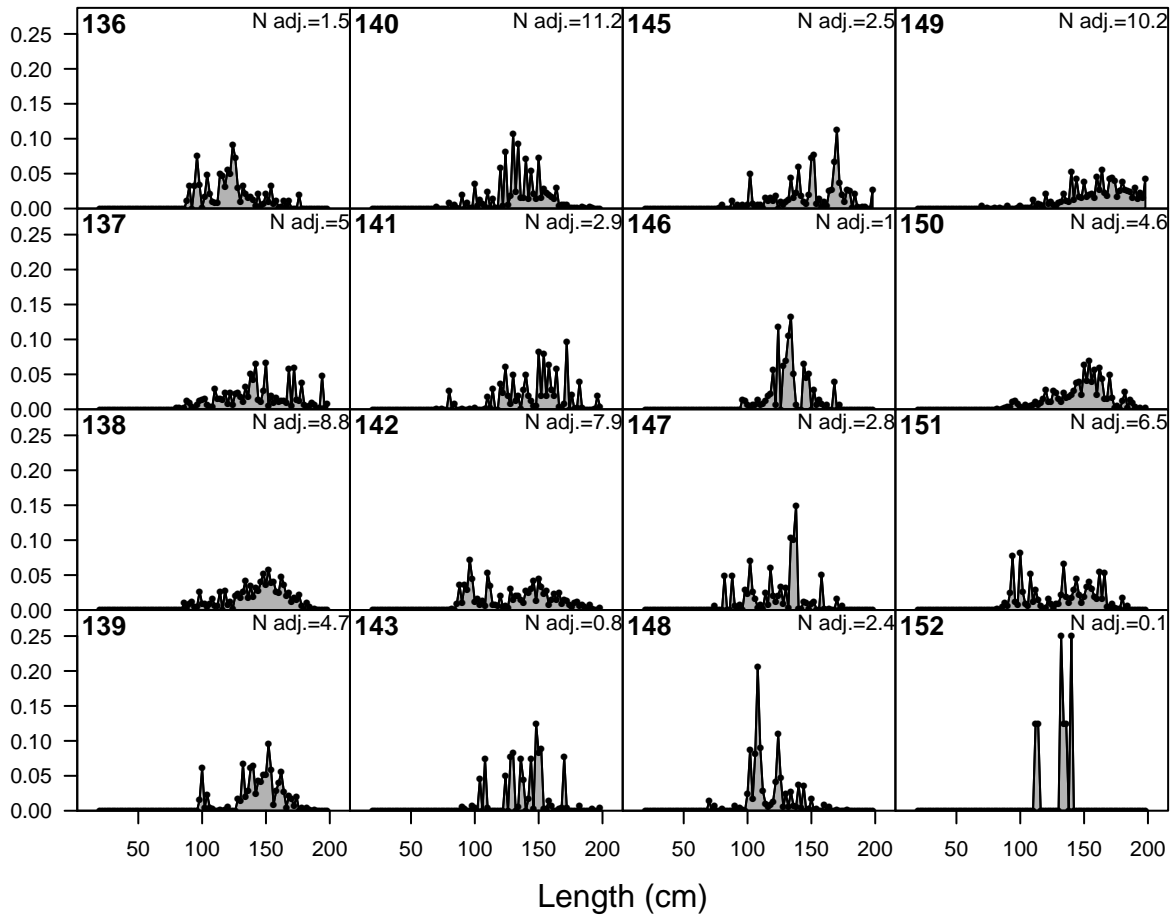
Proportion



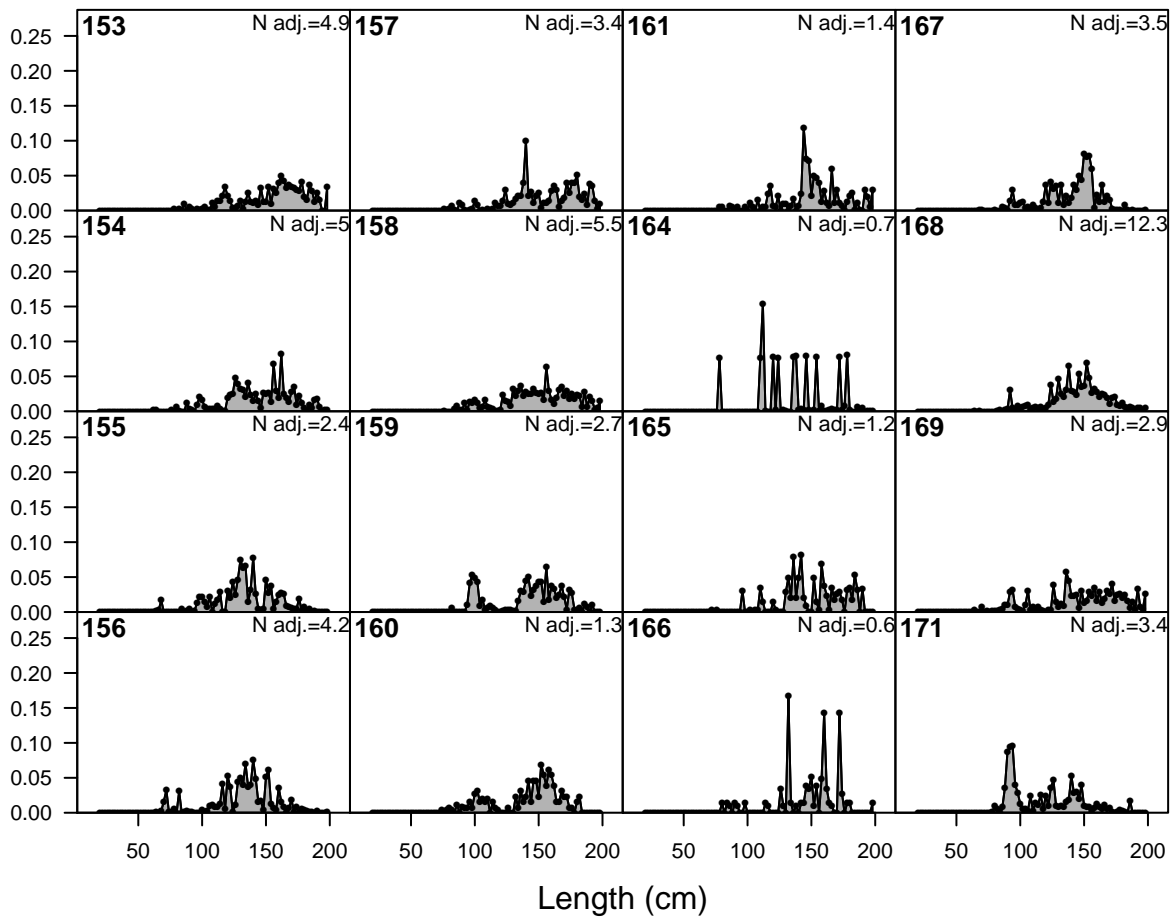
Proportion

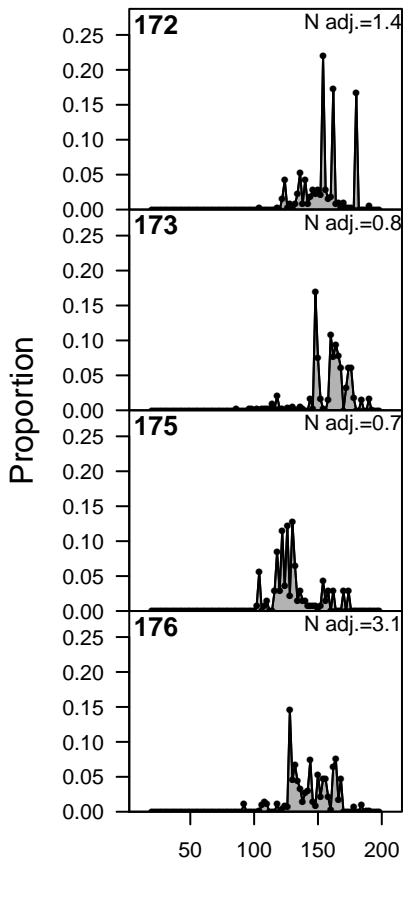


Proportion

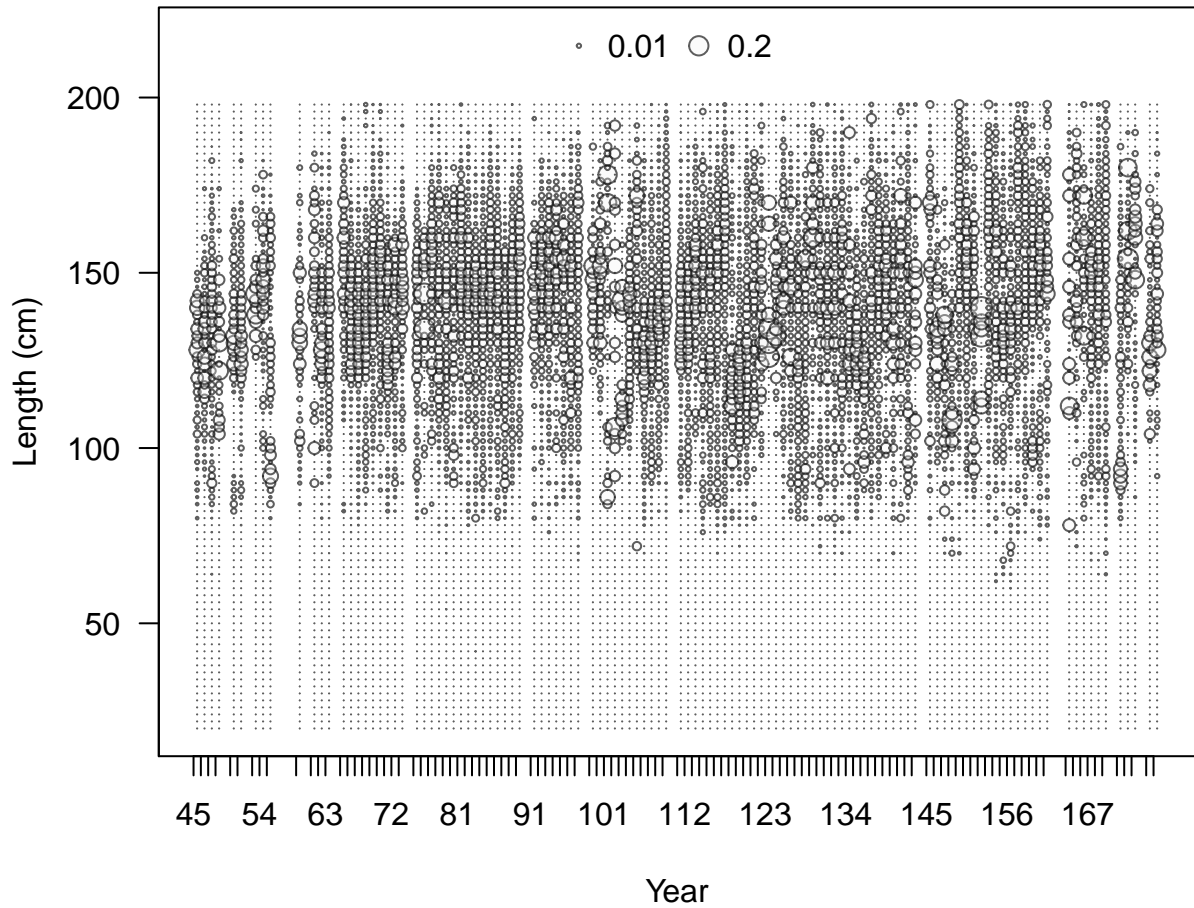


Proportion

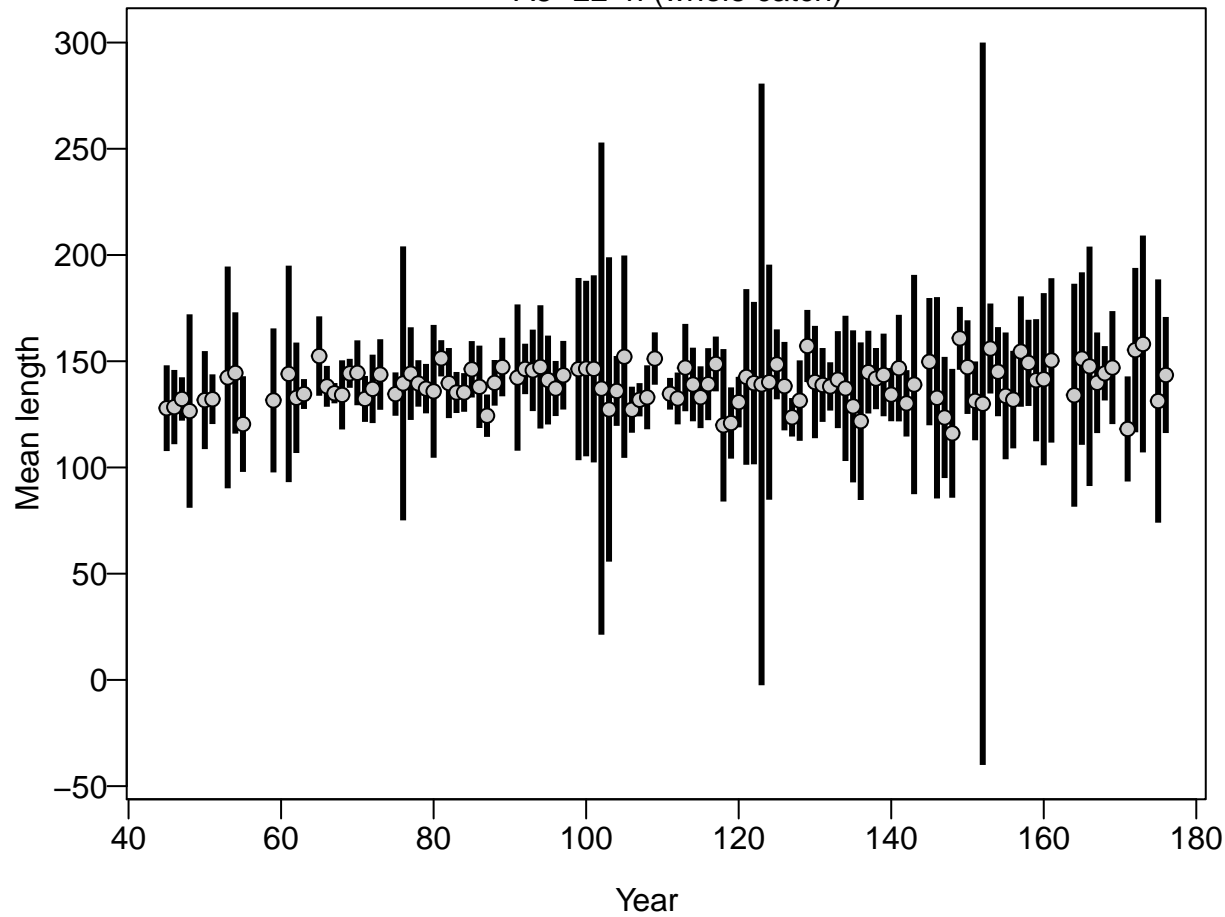


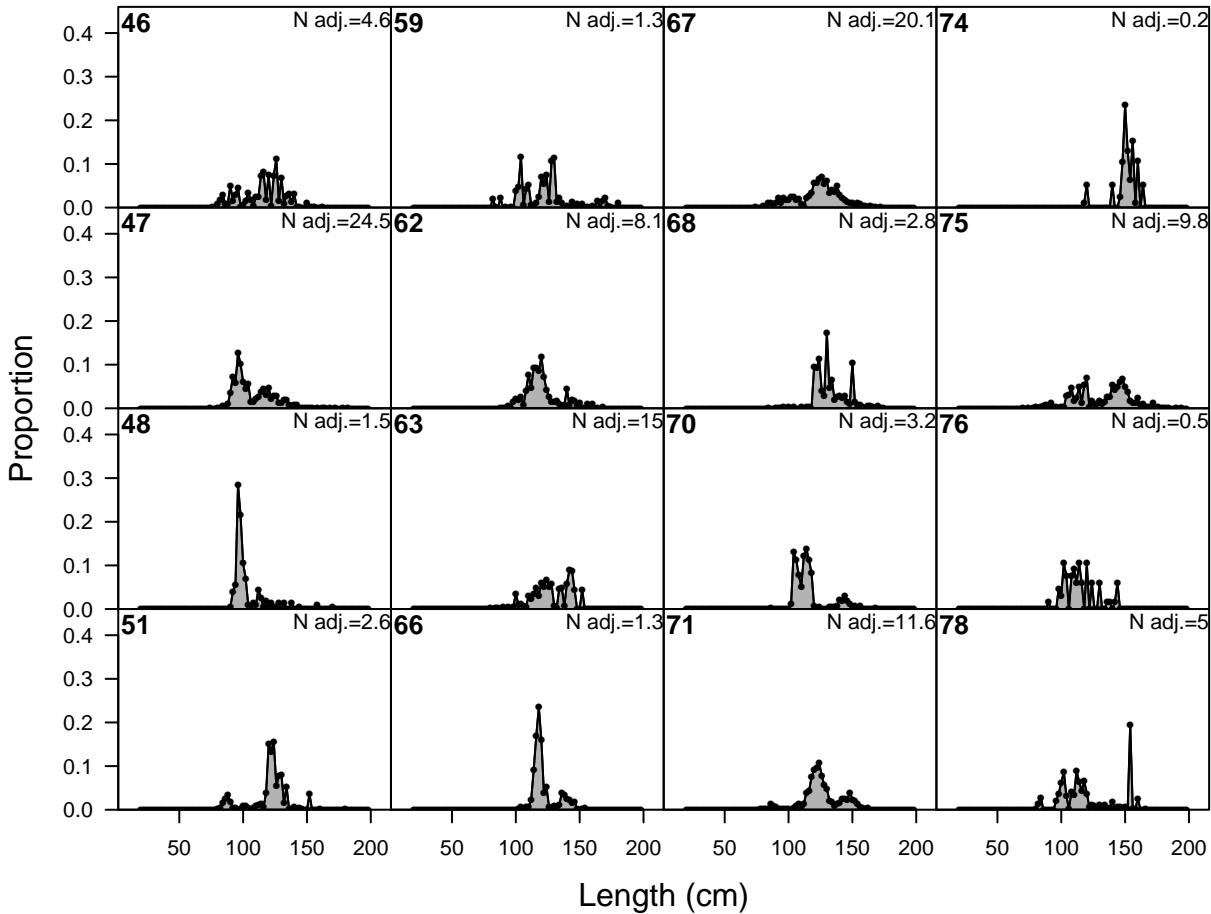


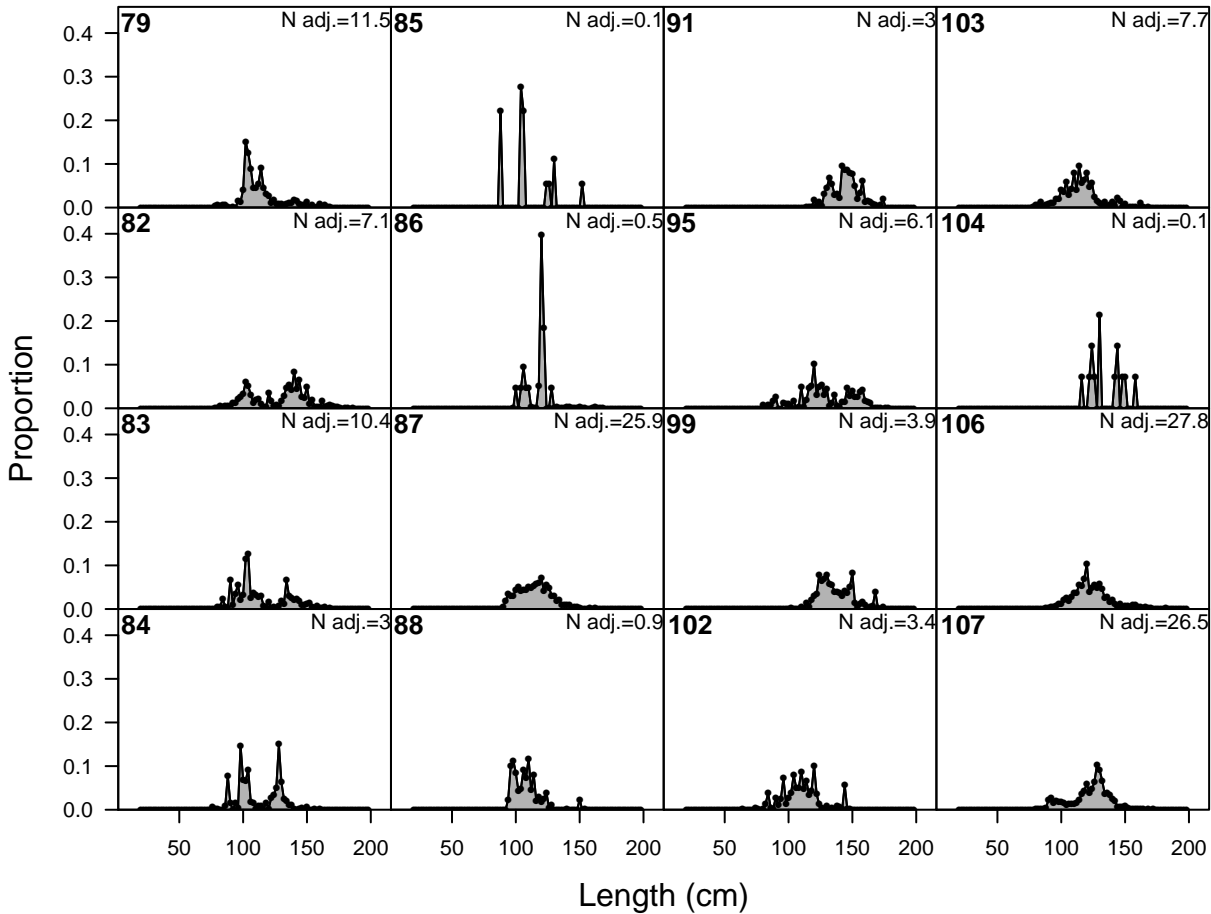
Length (cm)

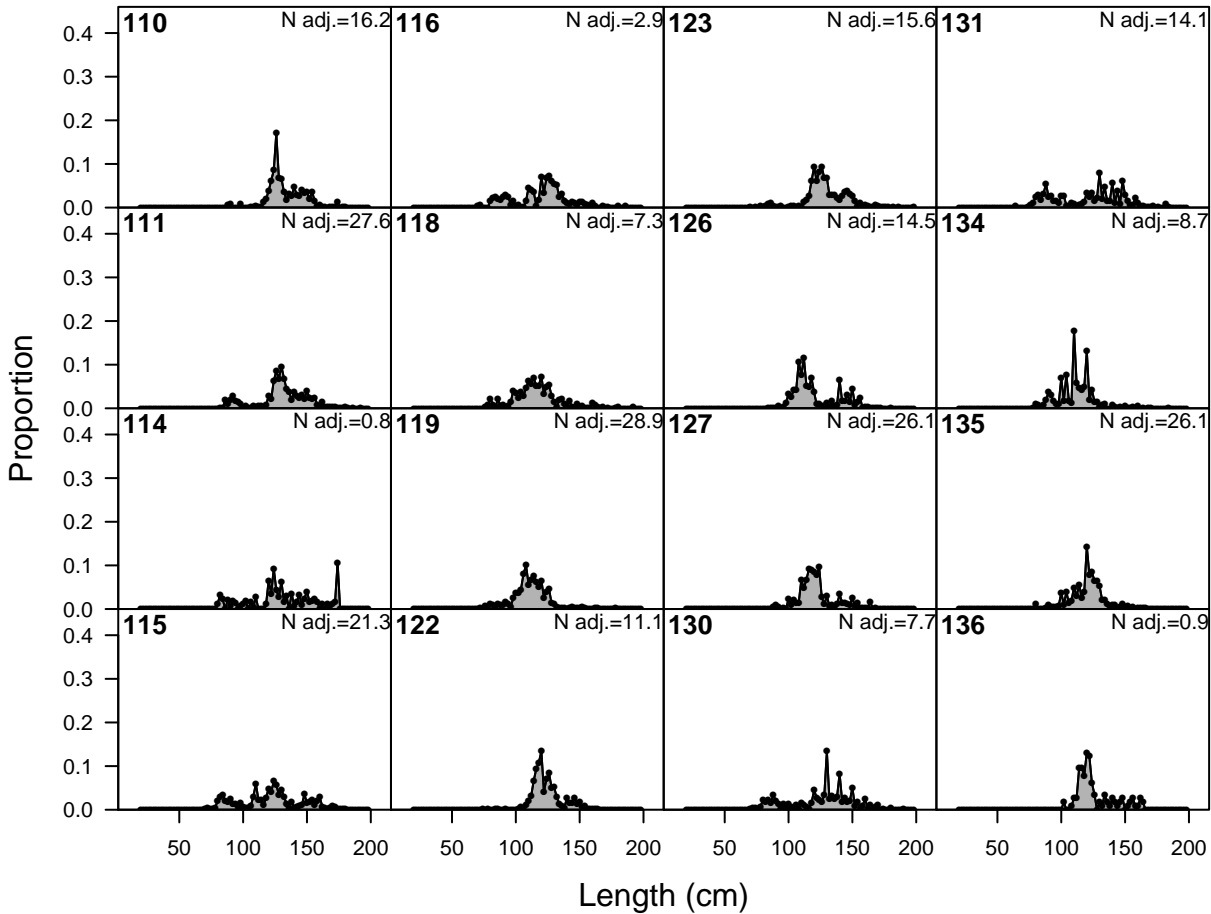


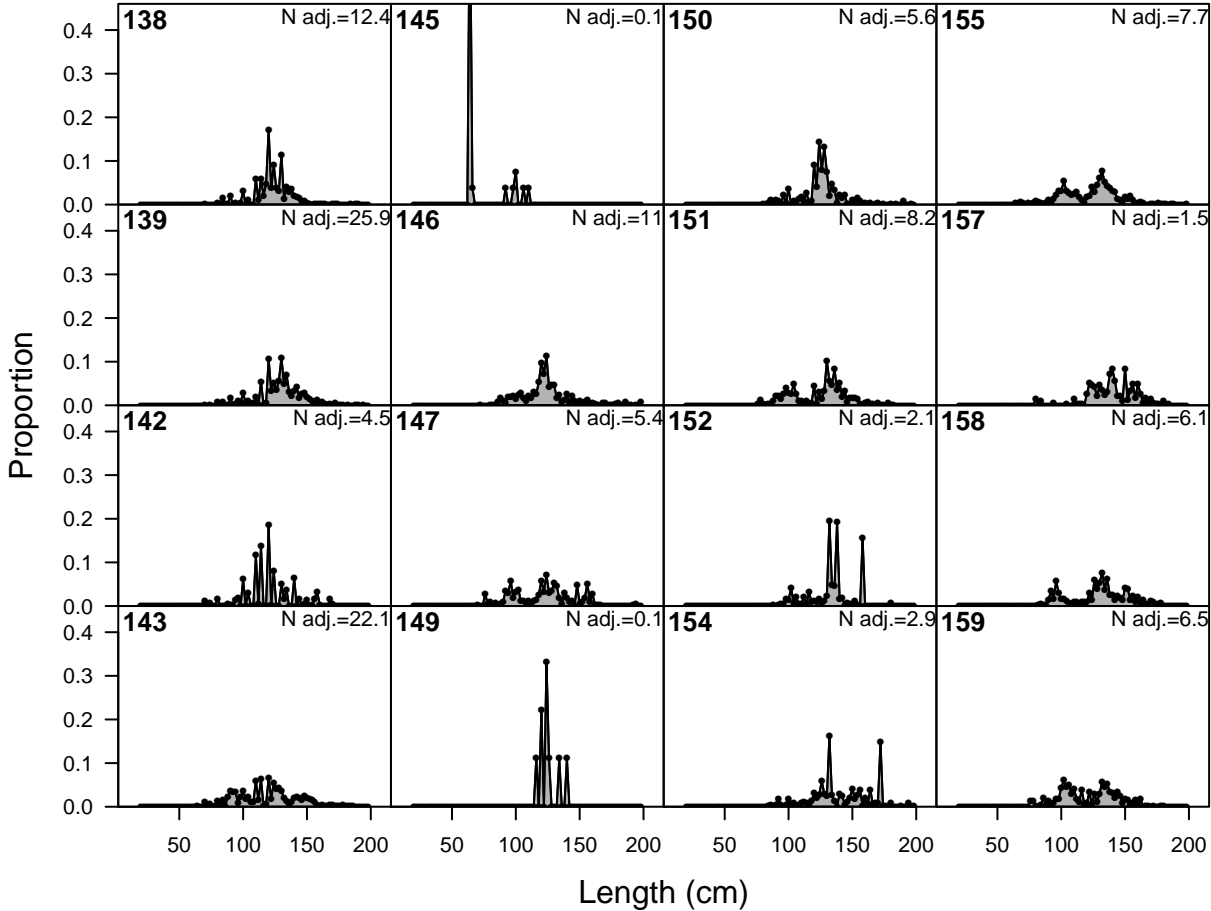
A5-LL-n (whole catch)

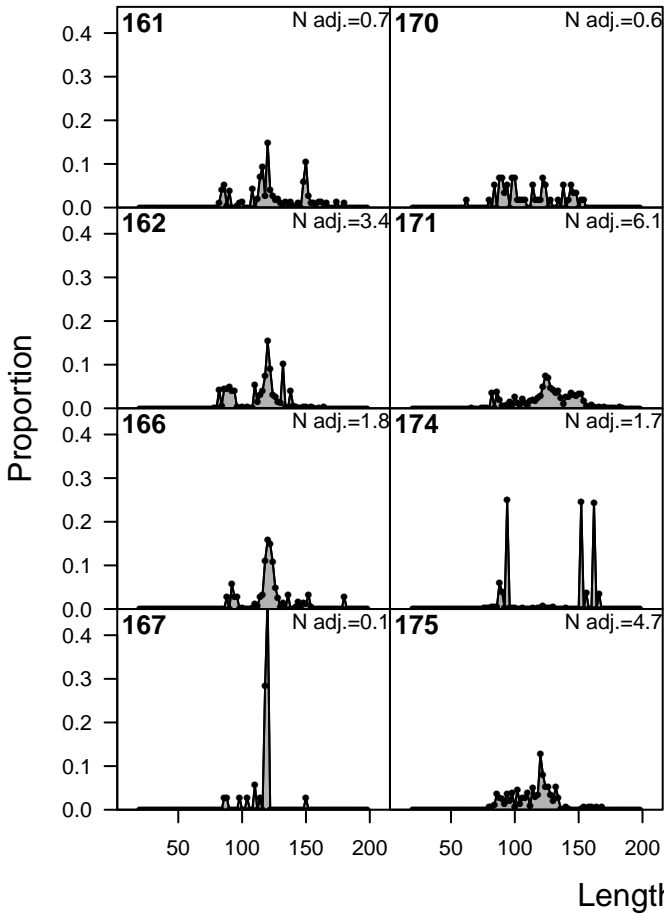


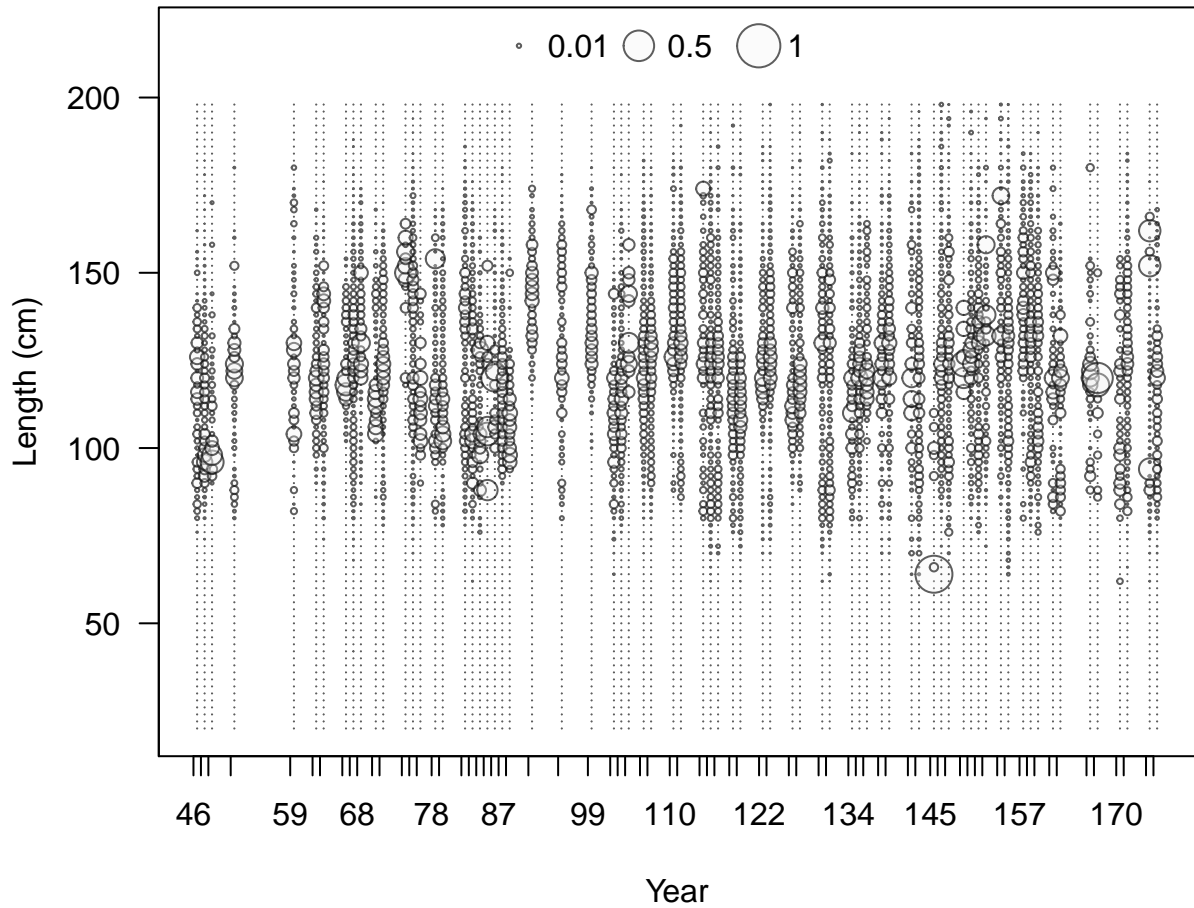




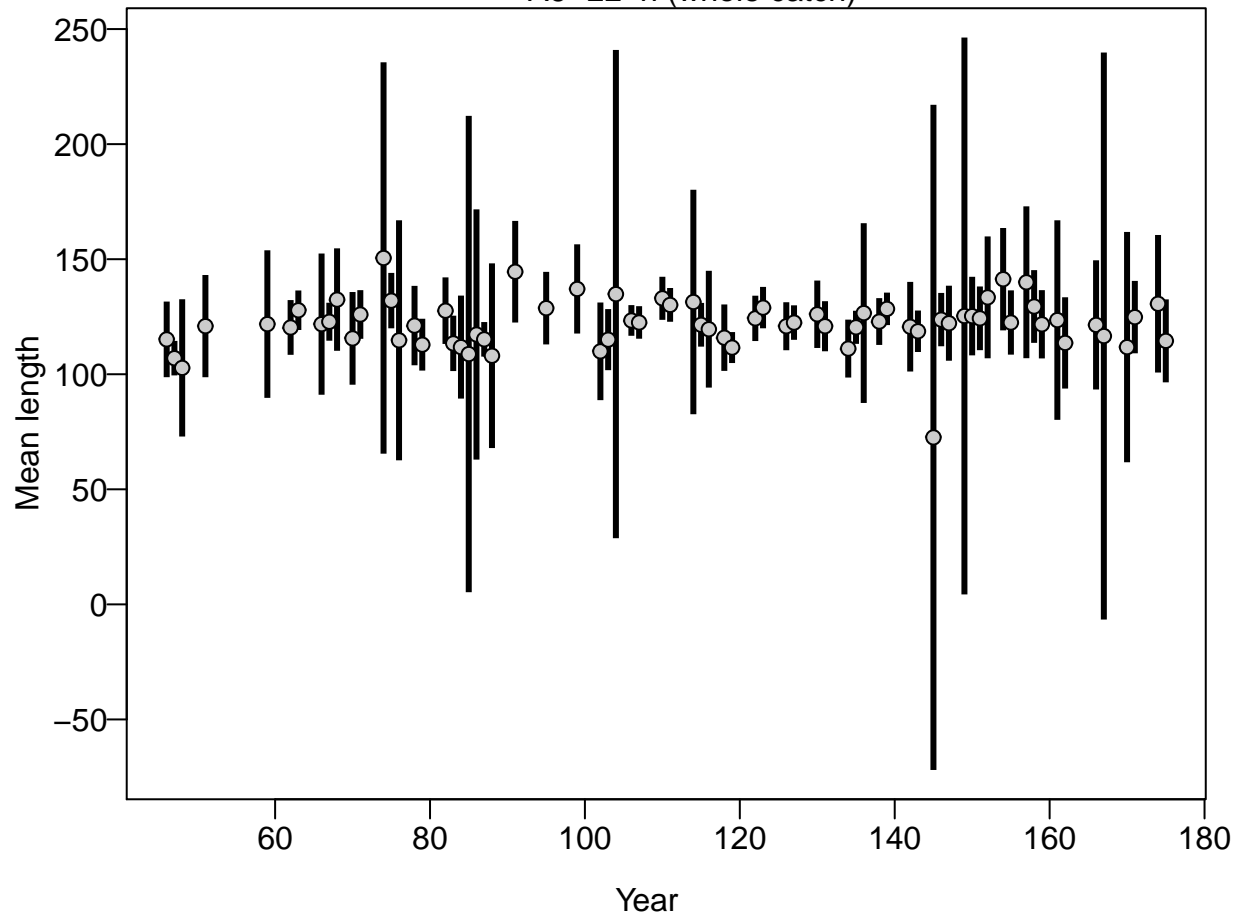


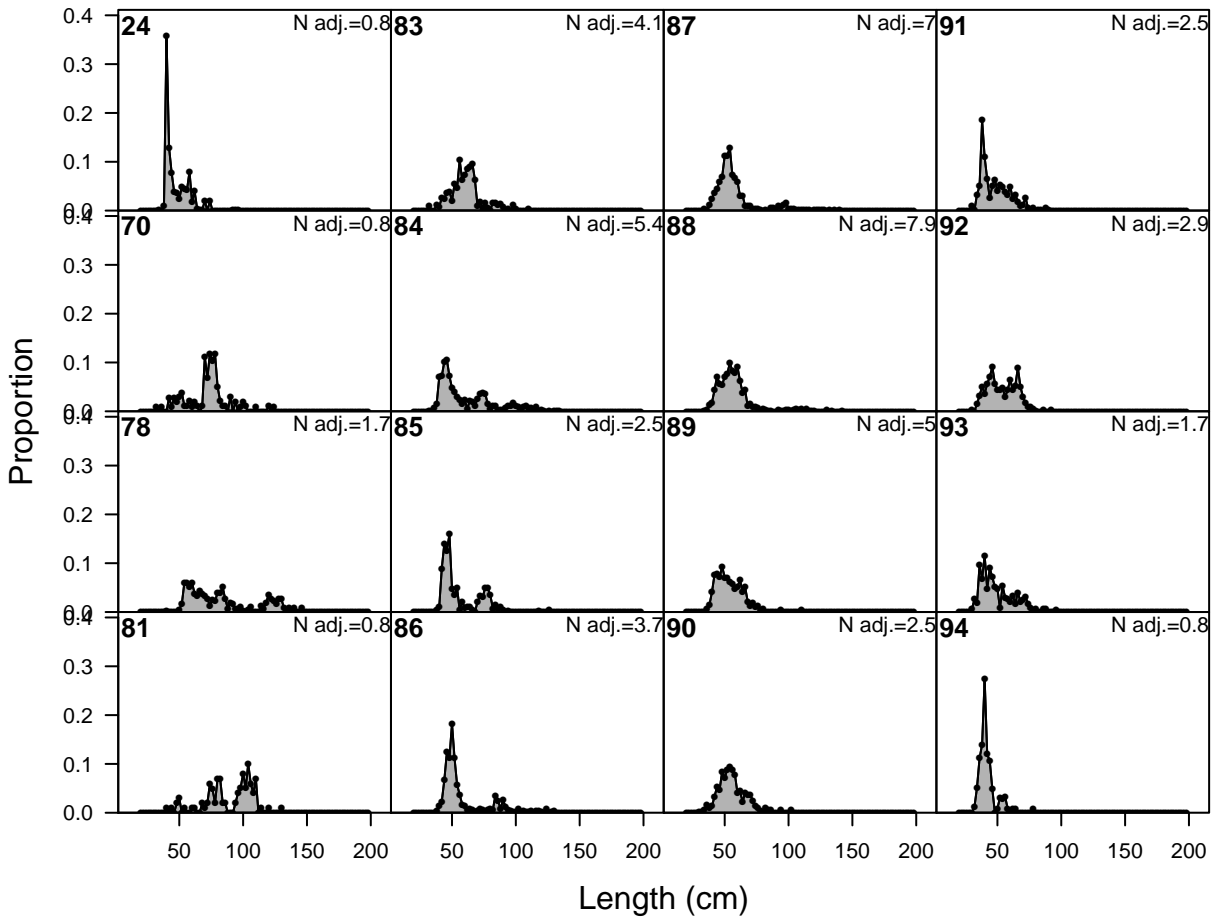


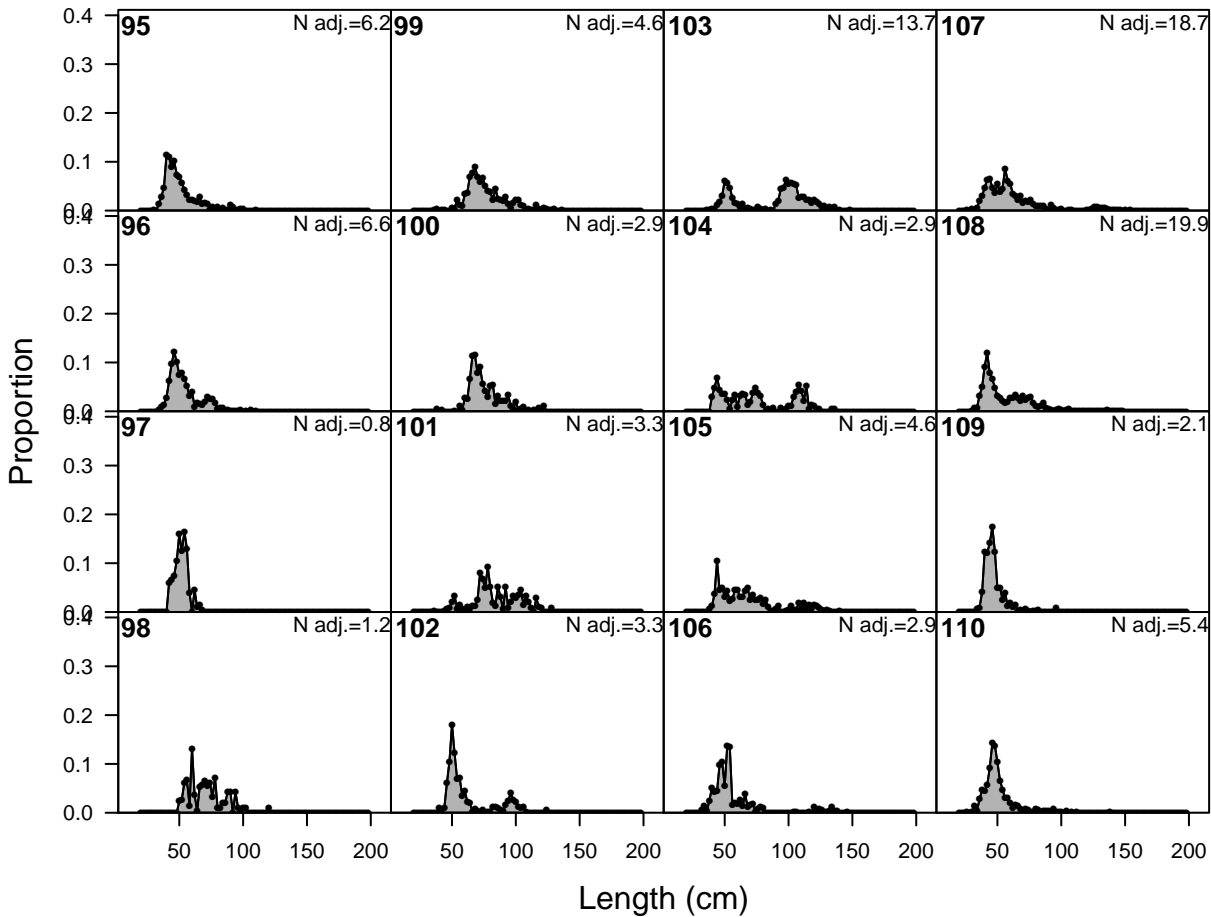


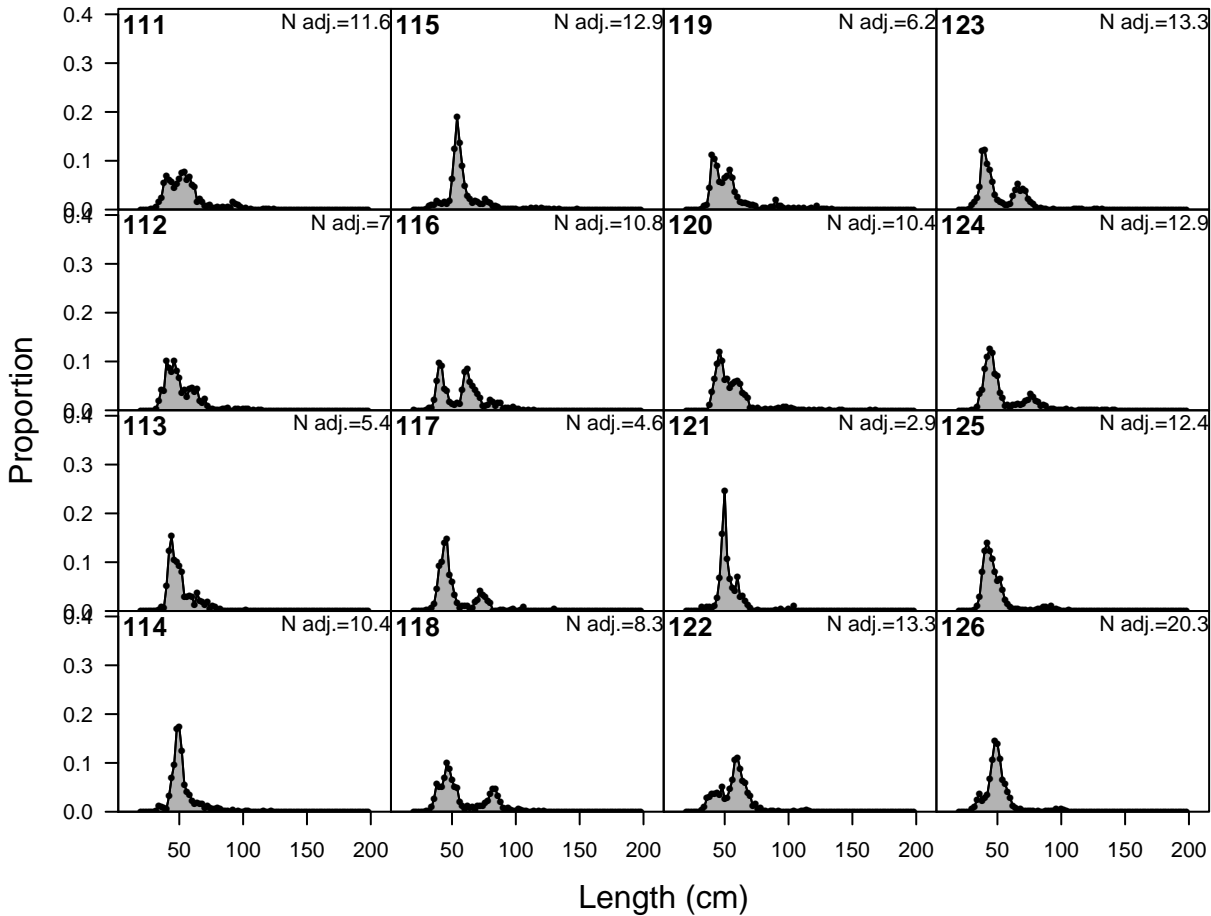


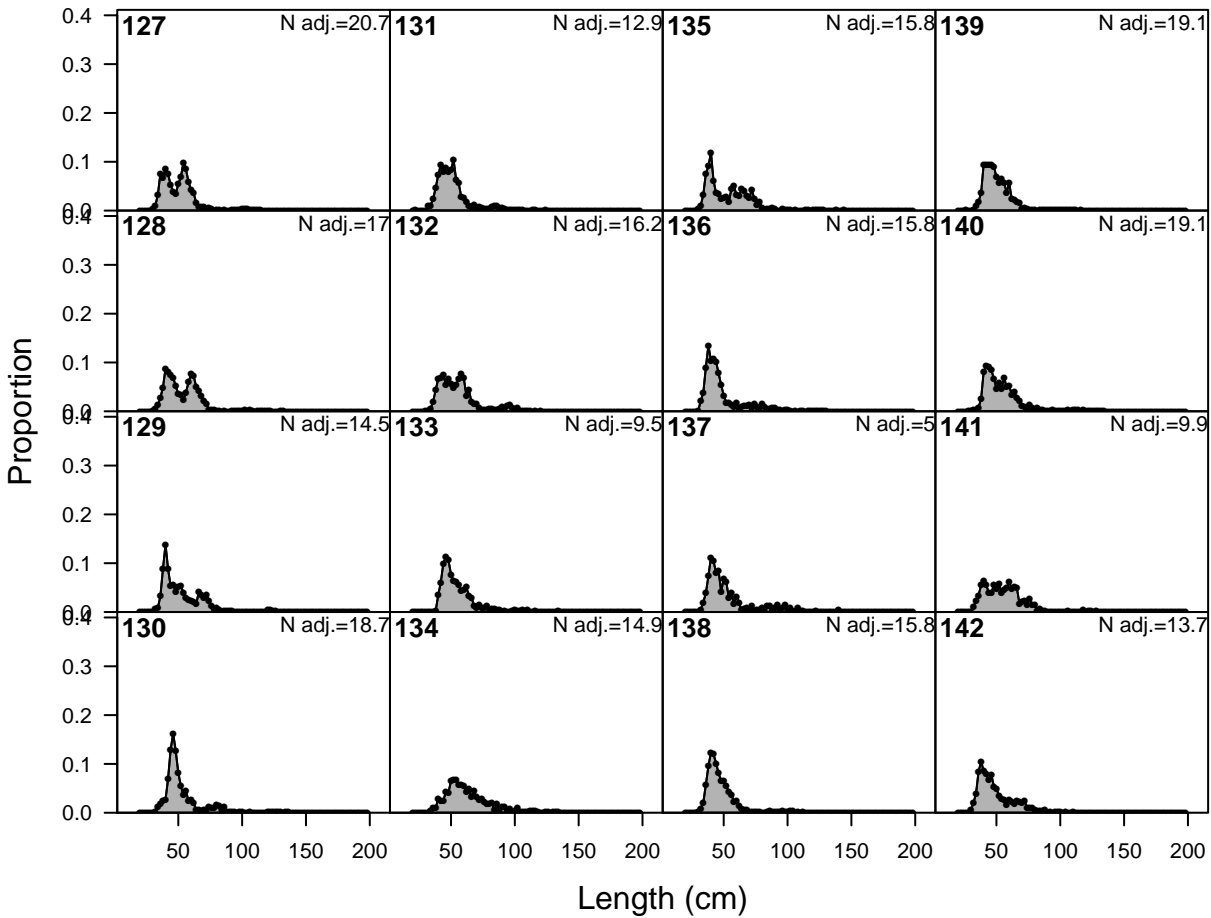
A6-LL-n (whole catch)

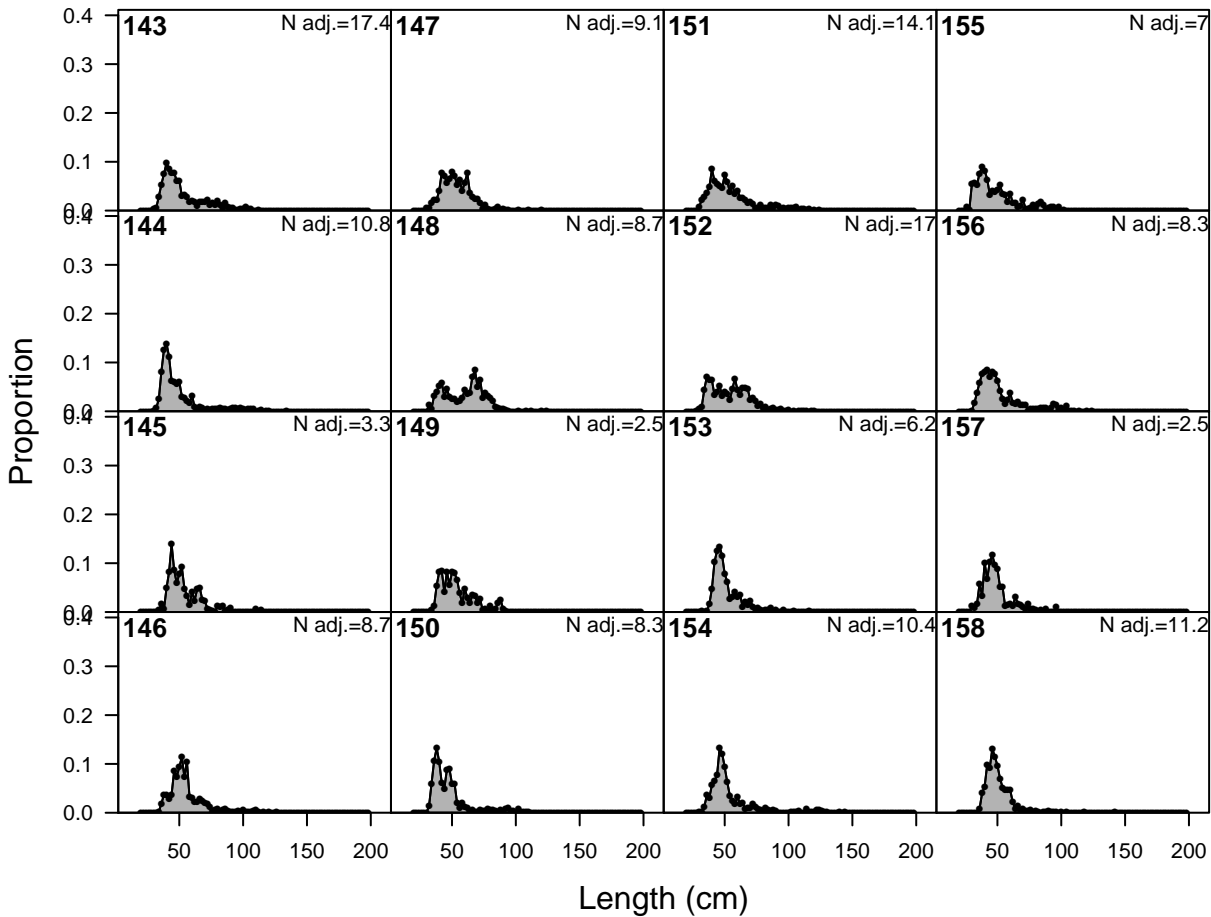


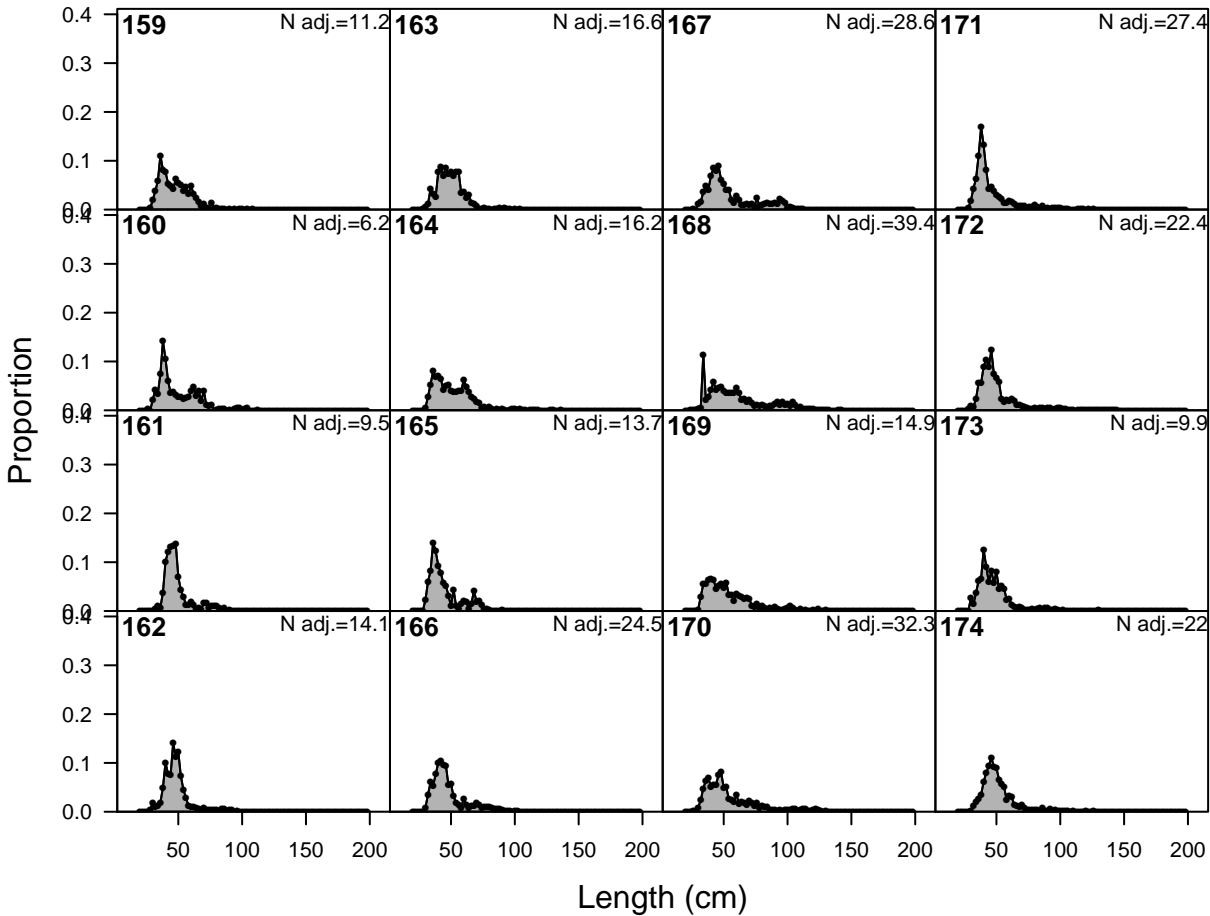


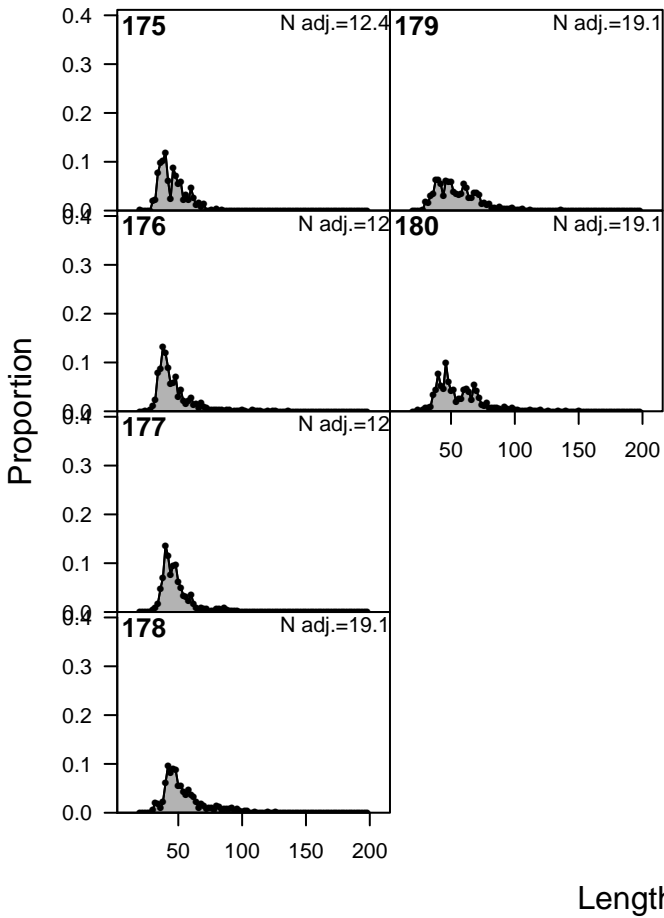


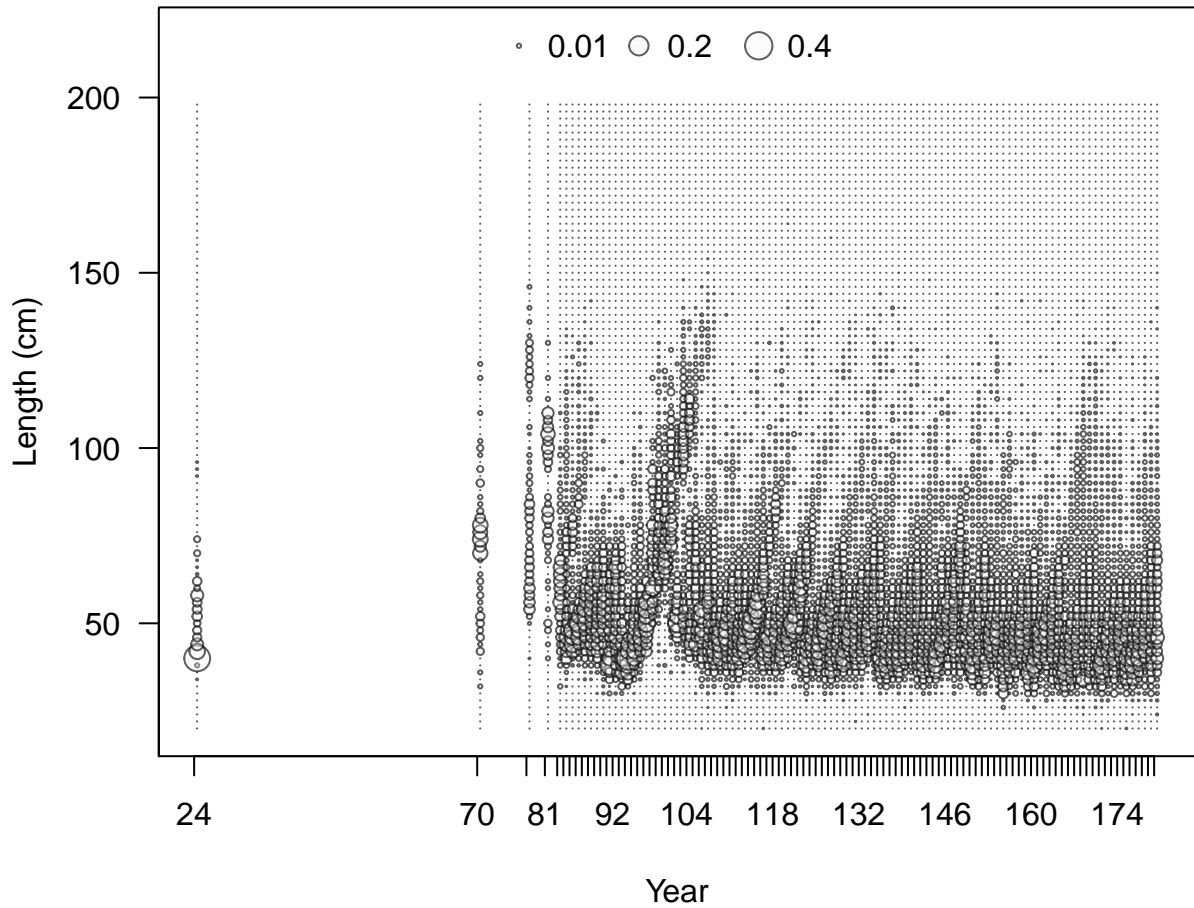




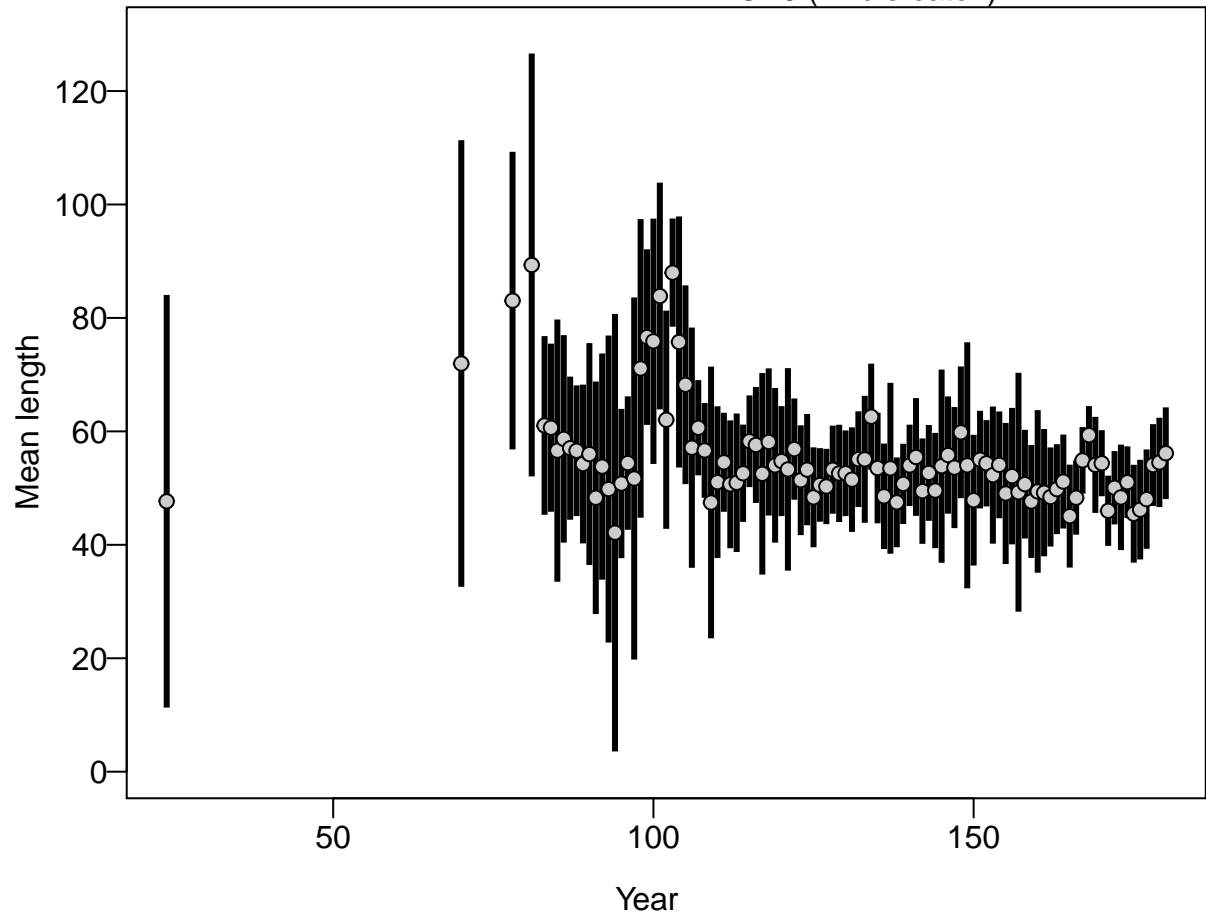


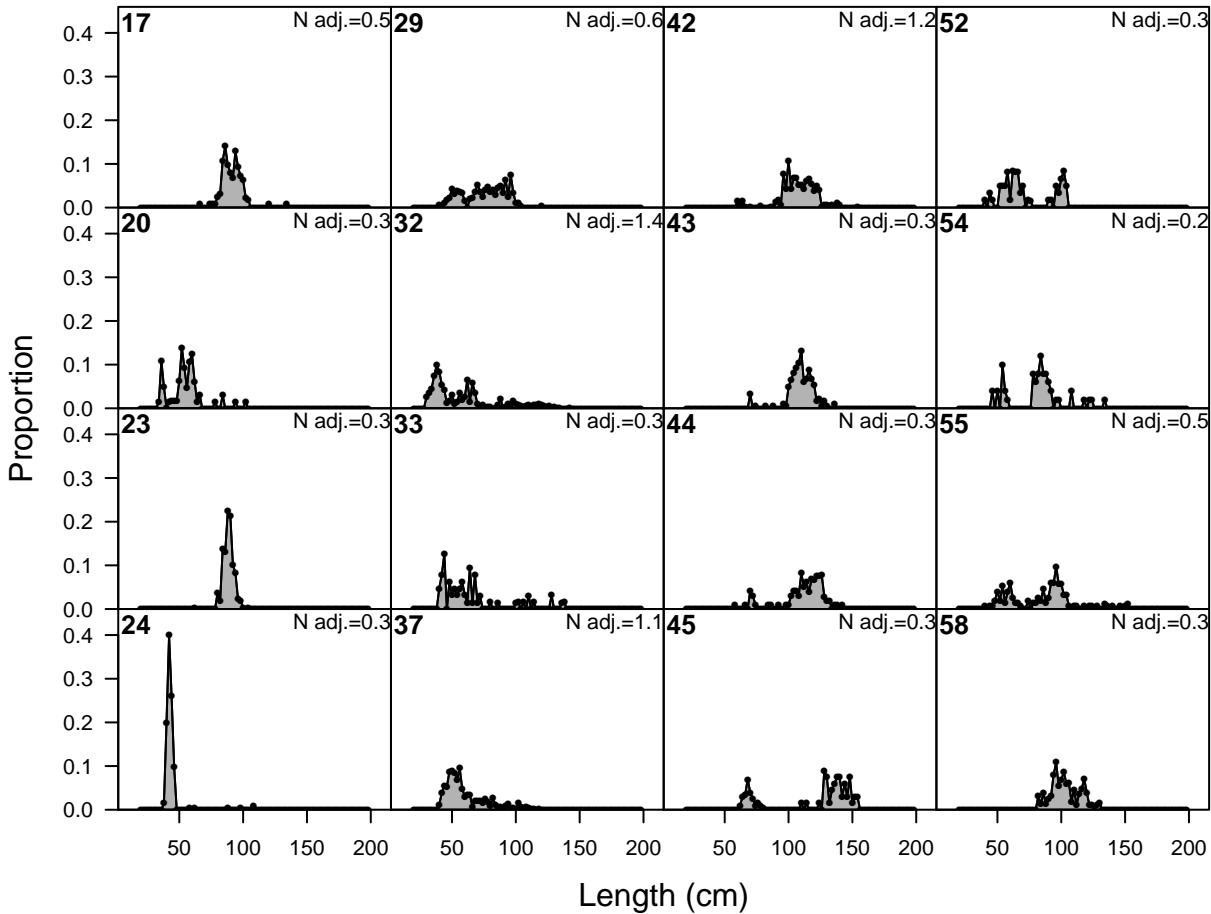


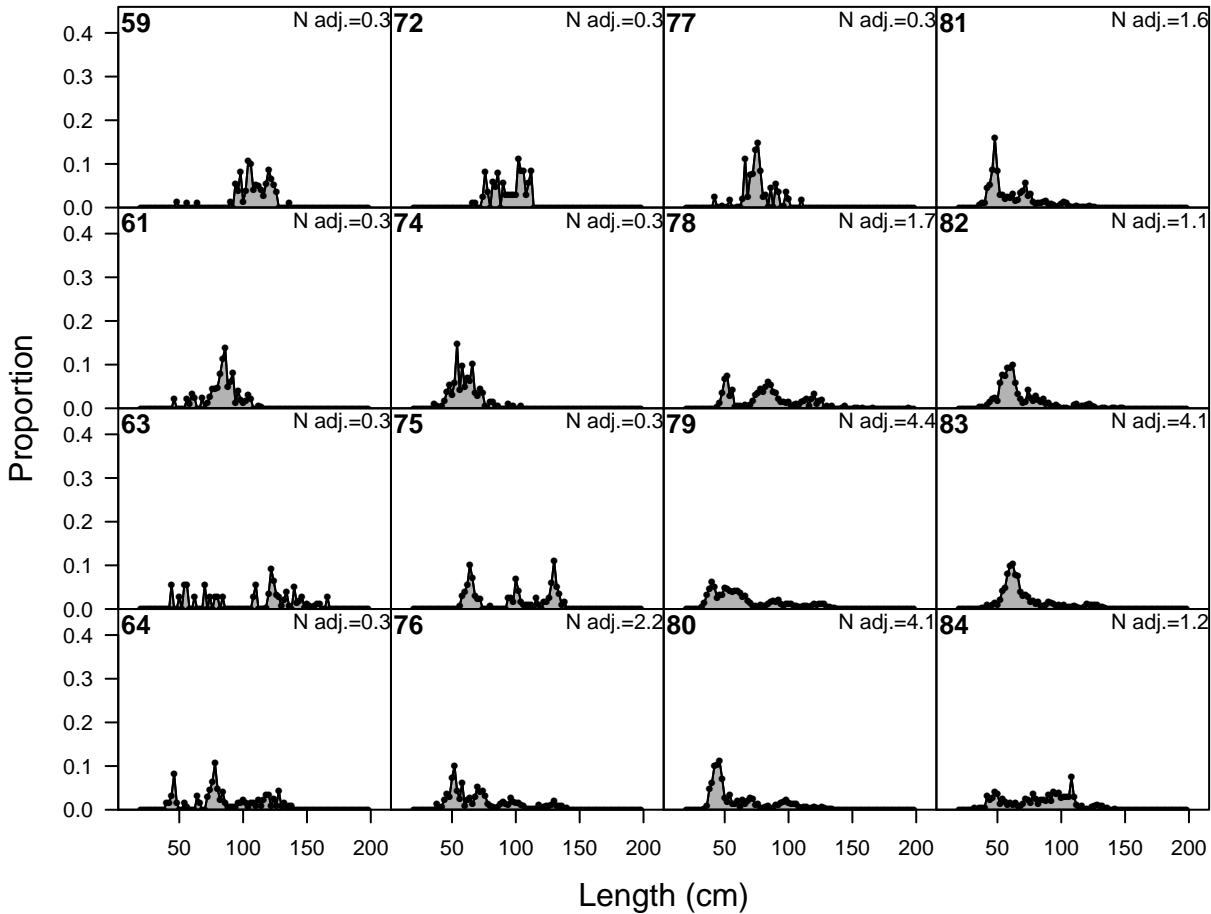


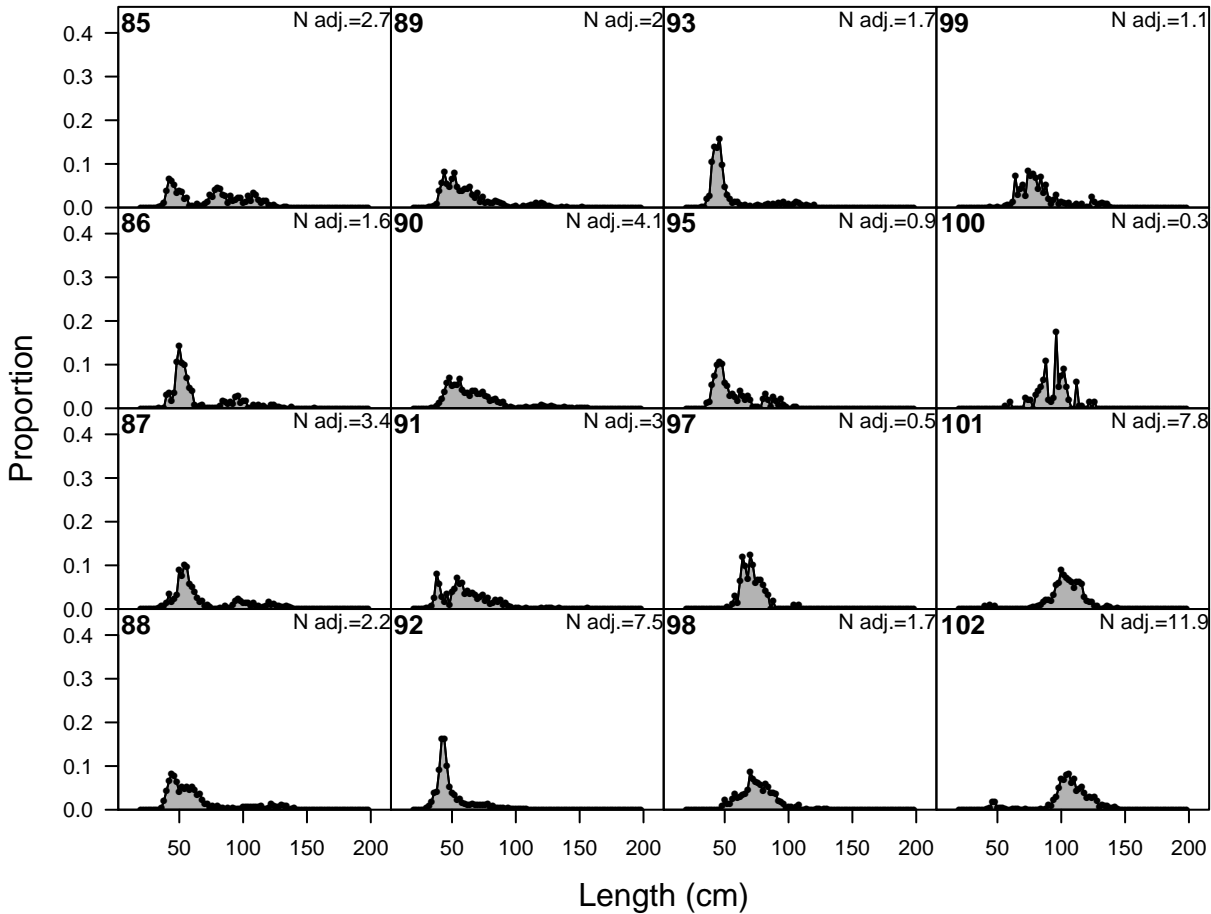


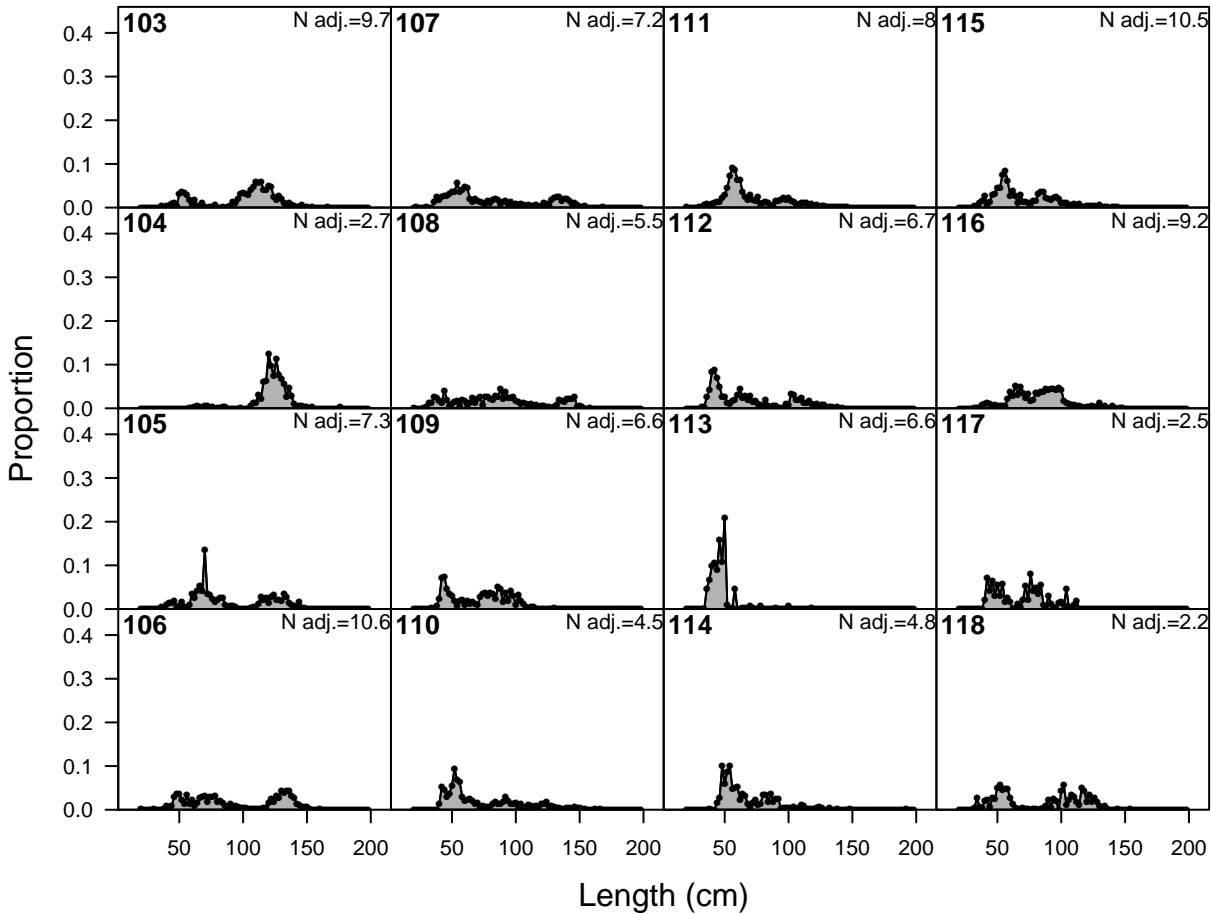
A2-OBJ (whole catch)

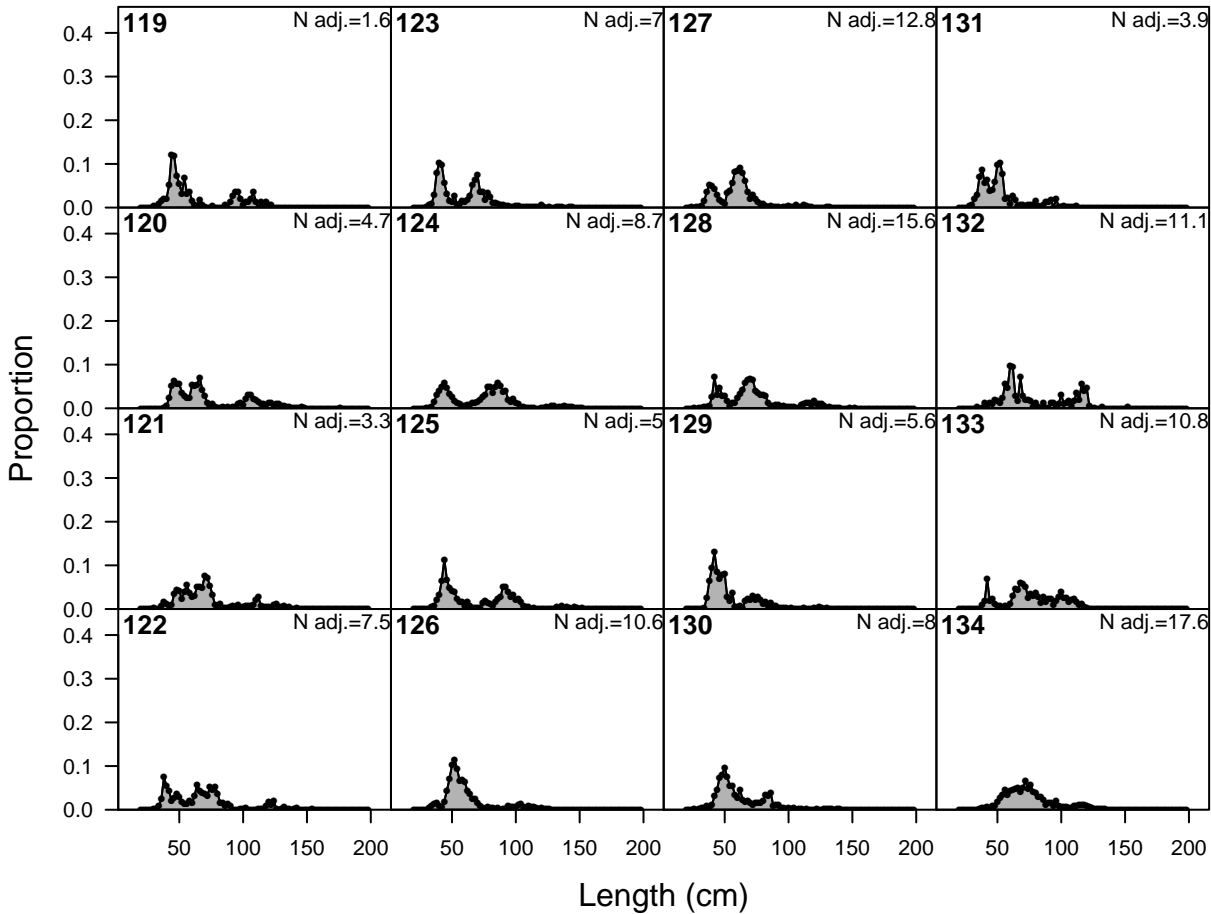


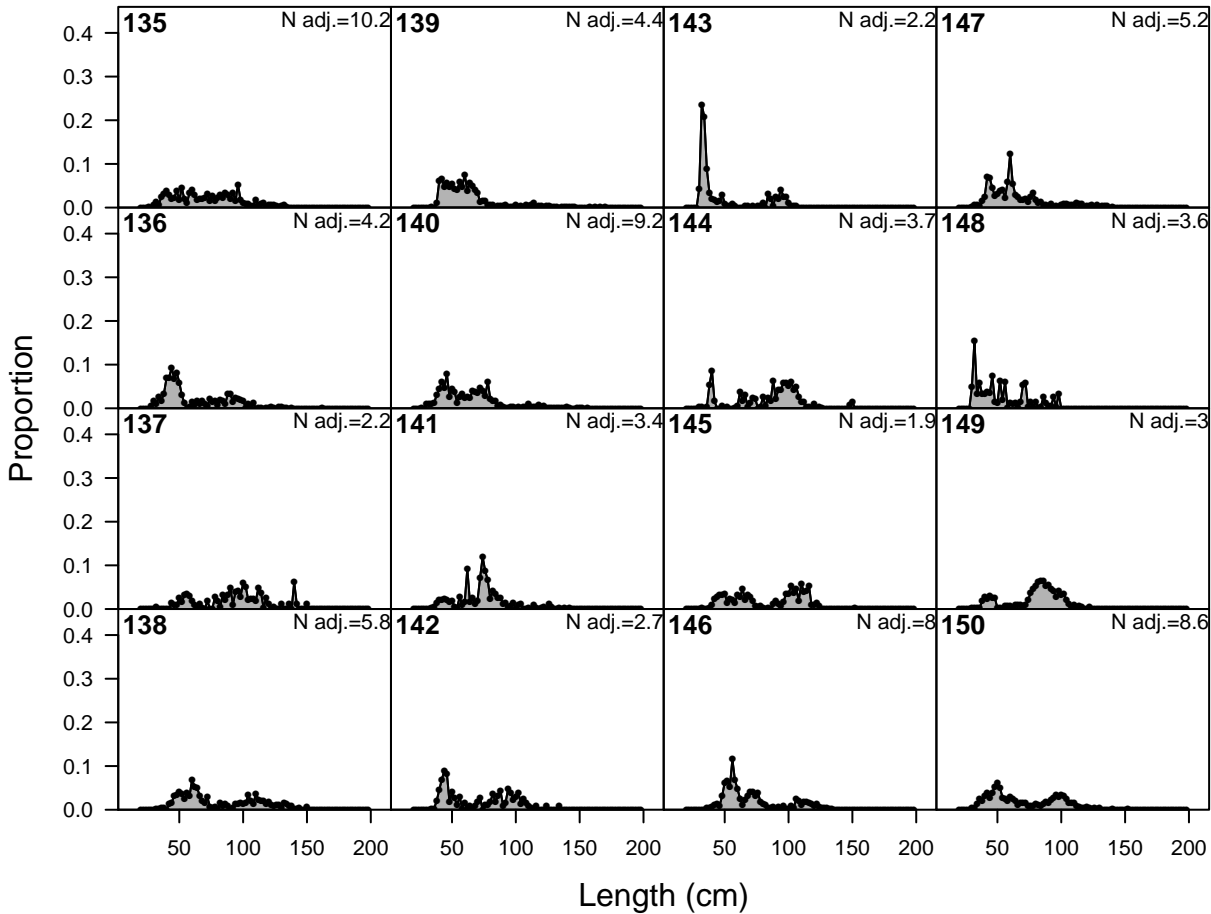


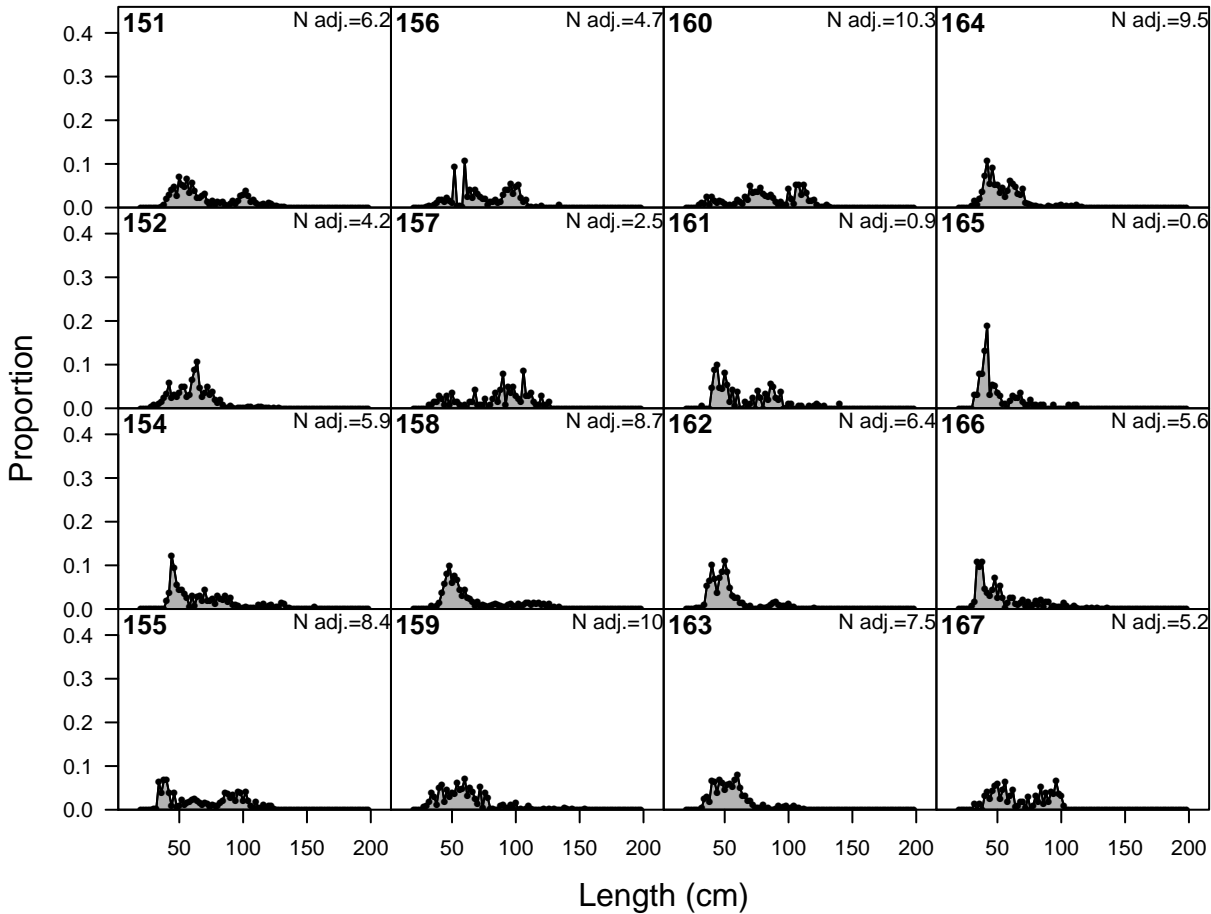


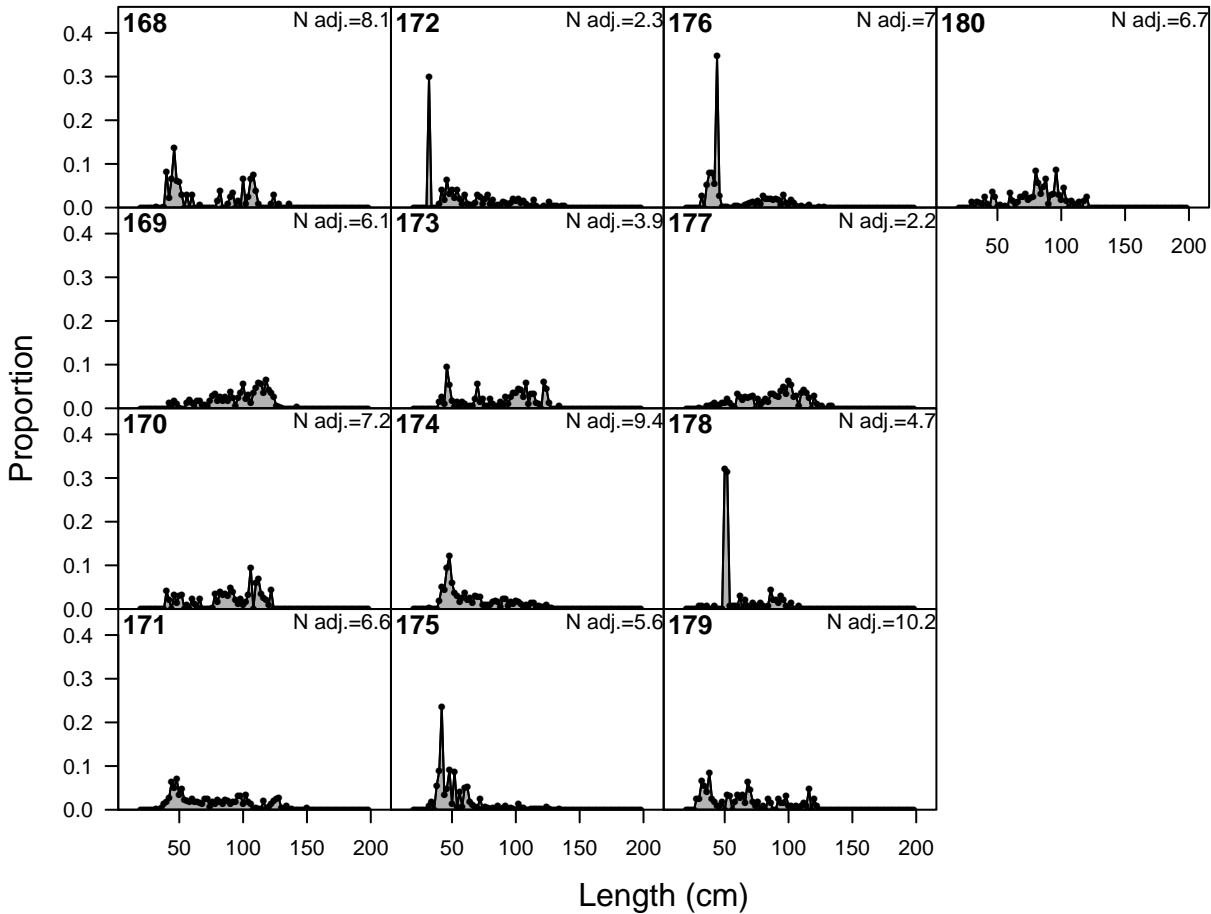


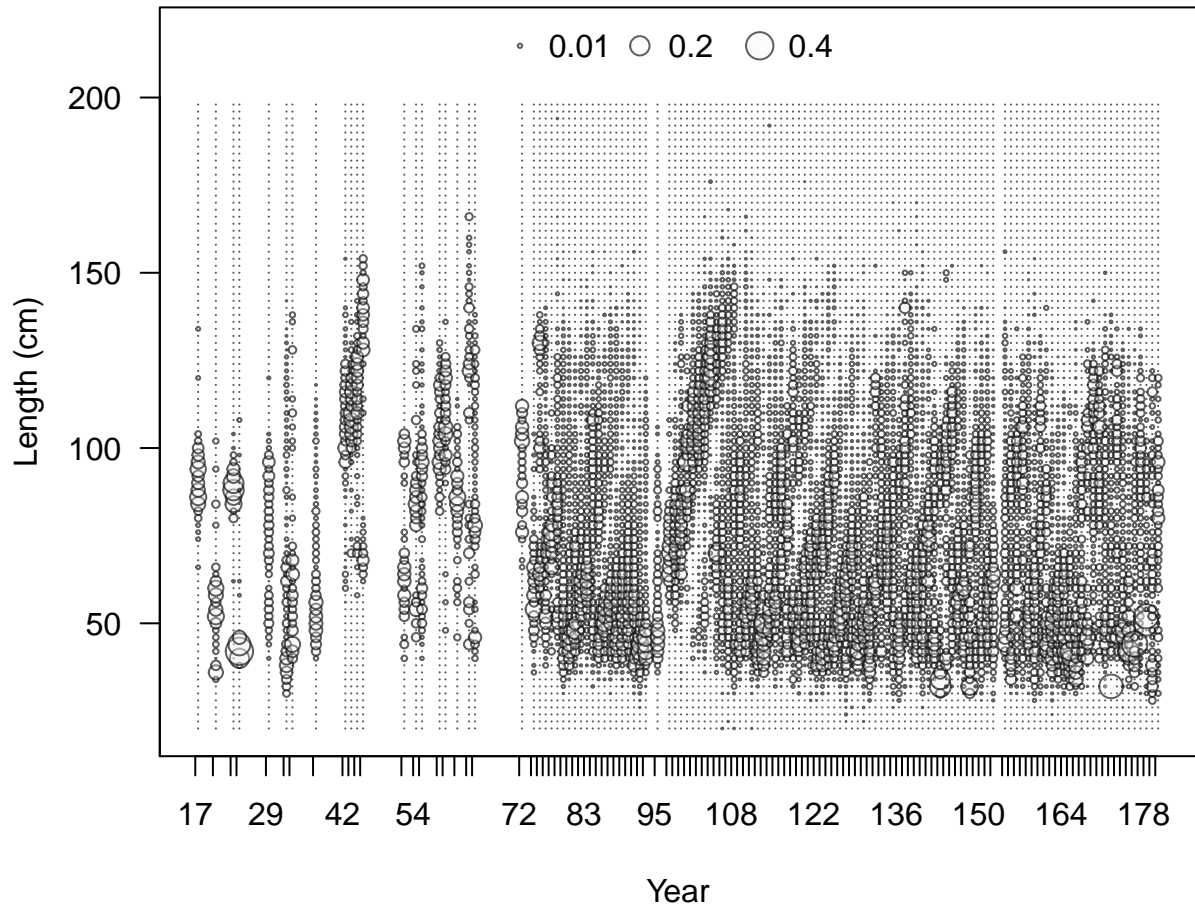




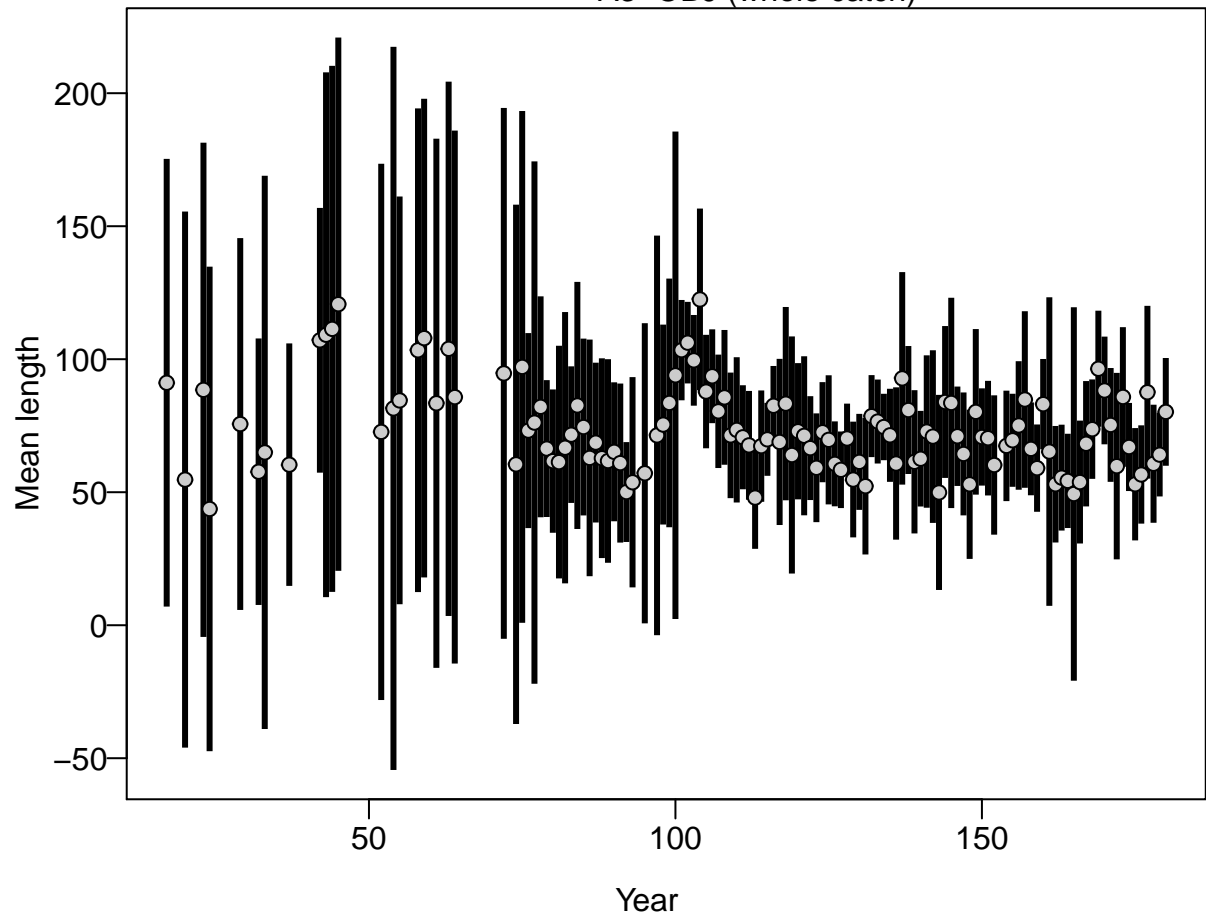




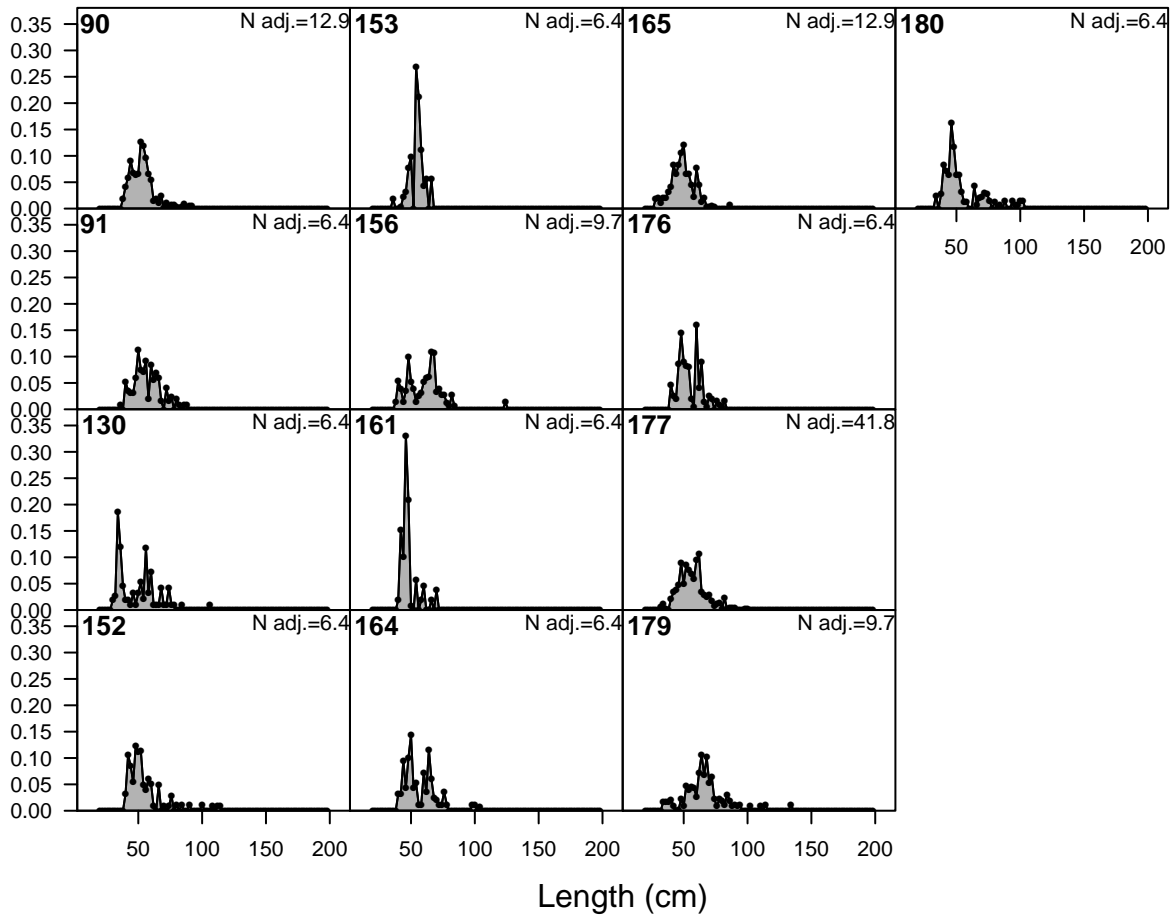


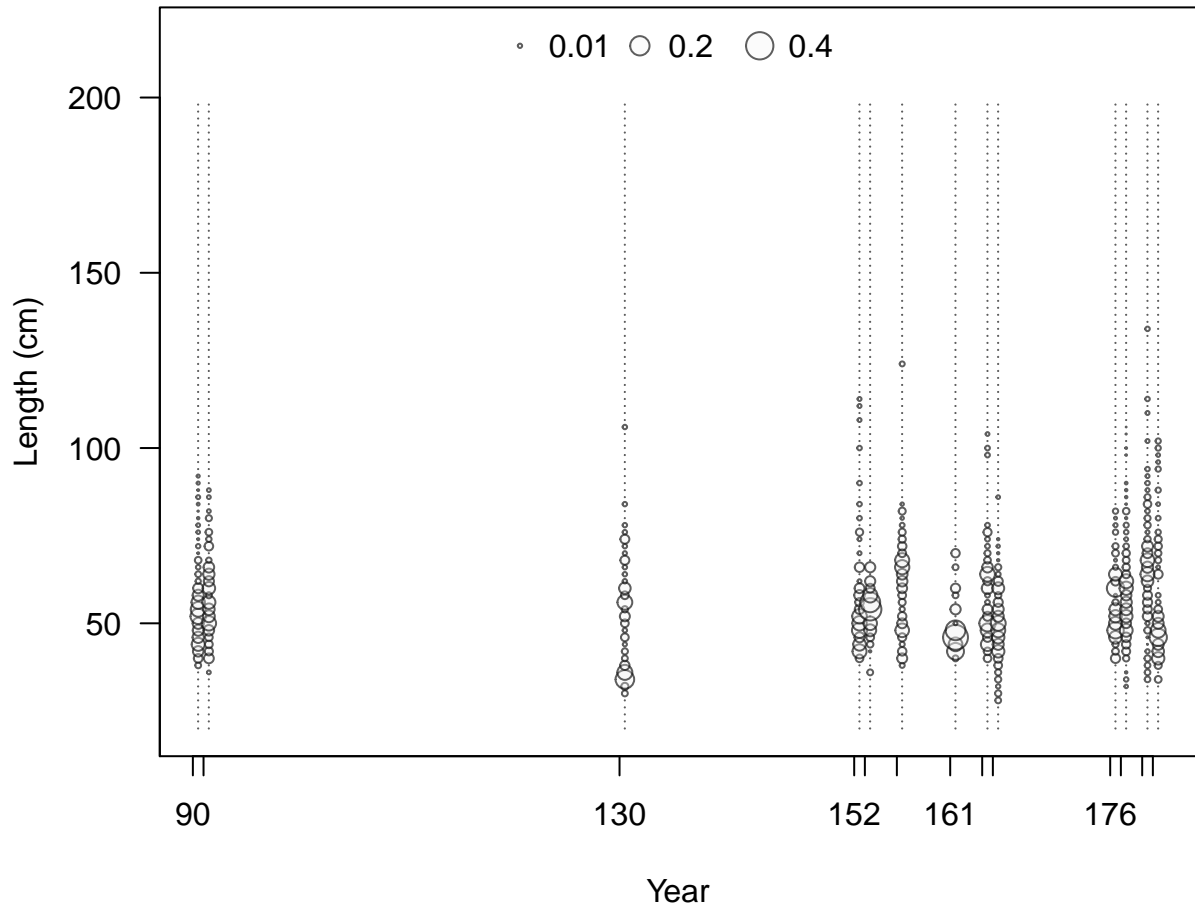


A3-OBJ (whole catch)

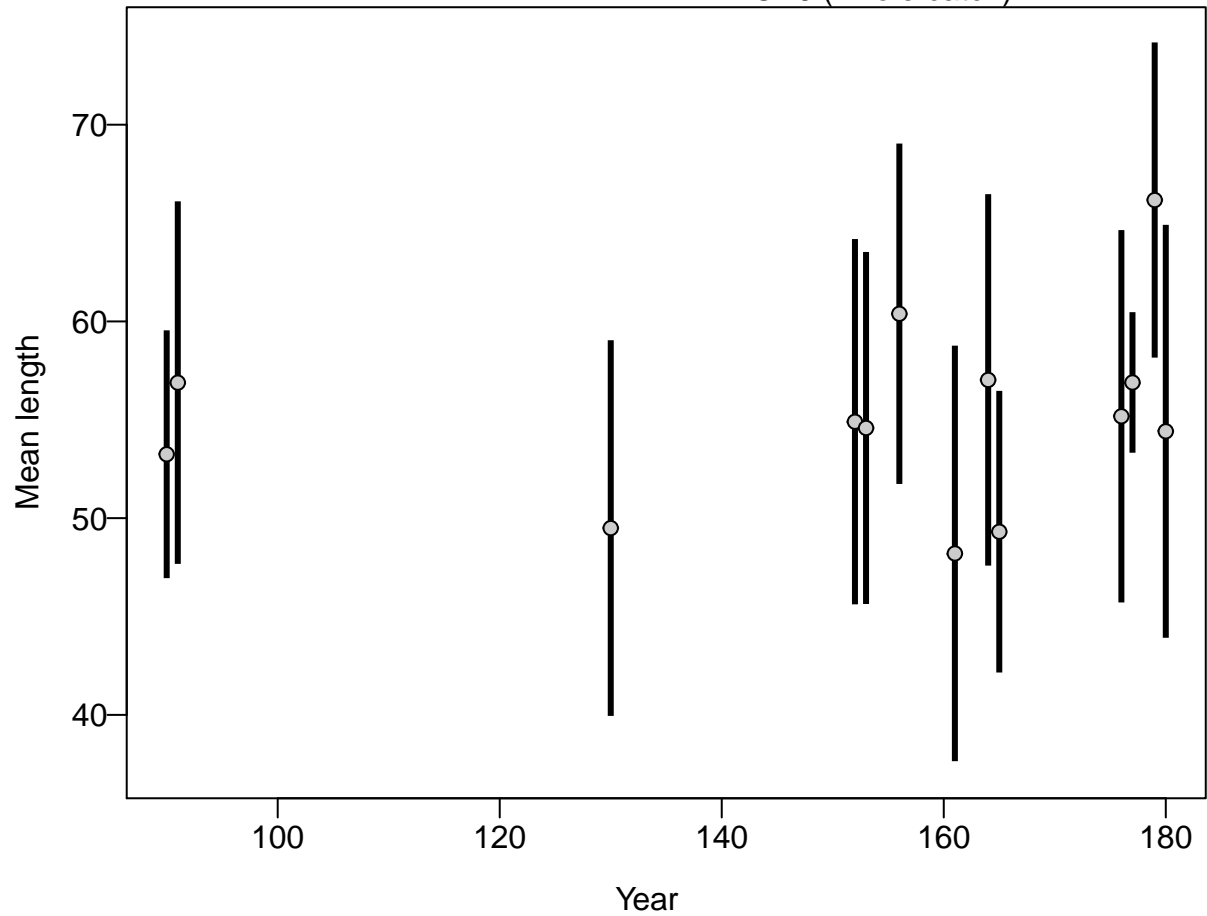


Proportion

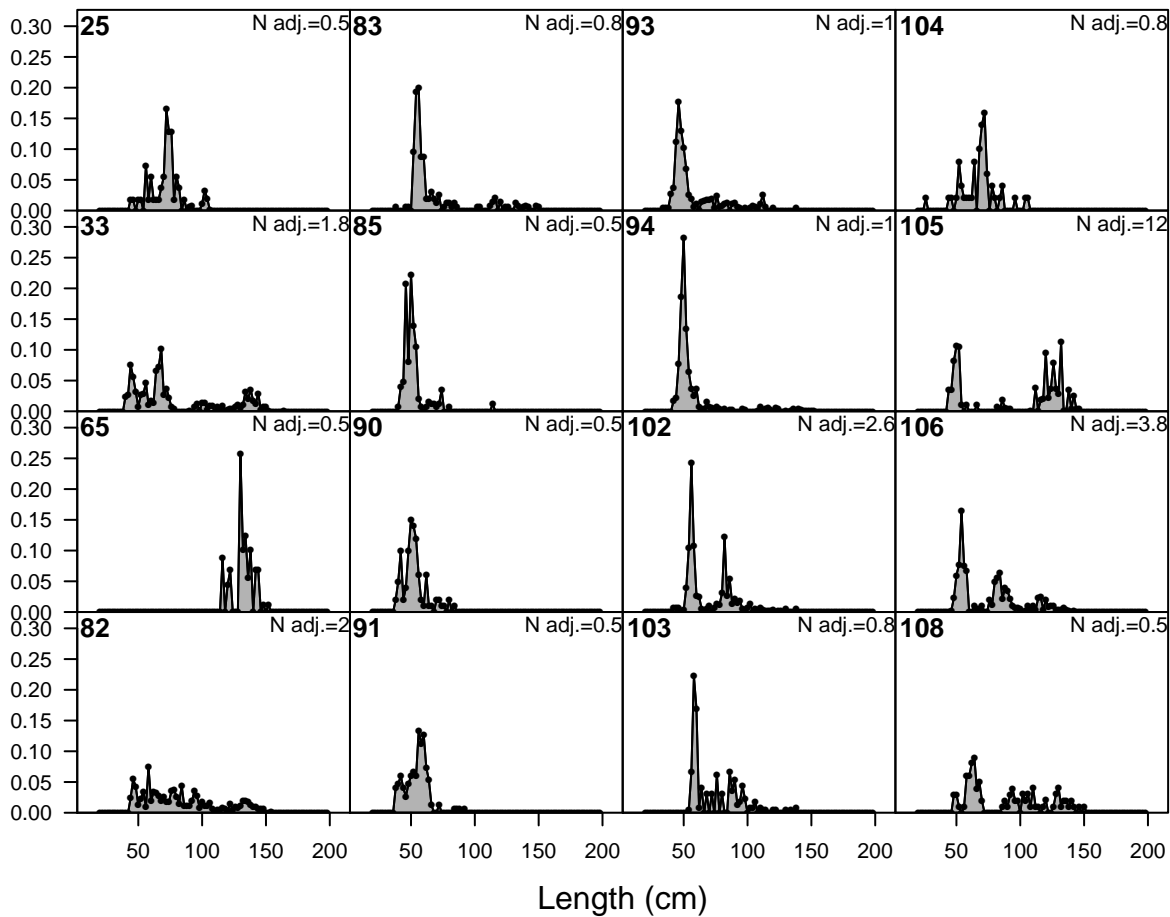




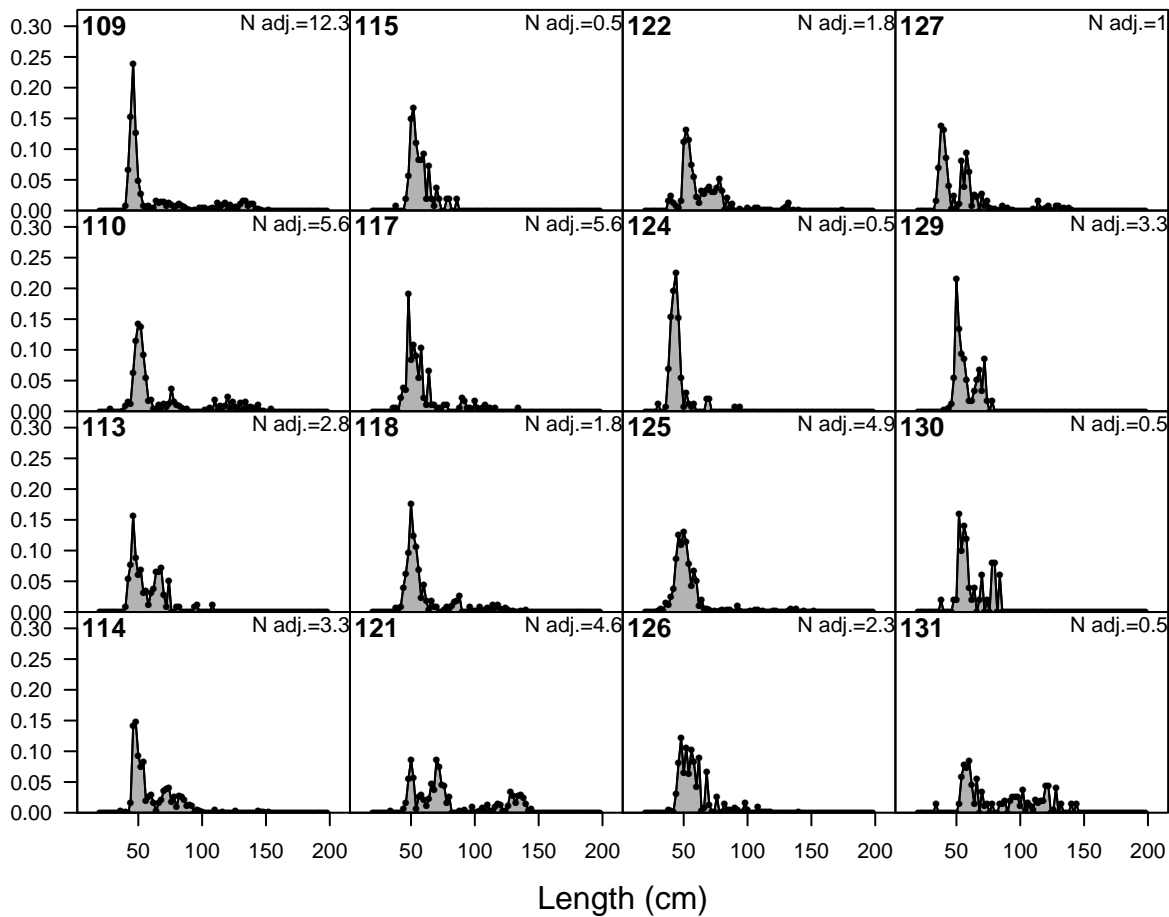
A4-OBJ (whole catch)



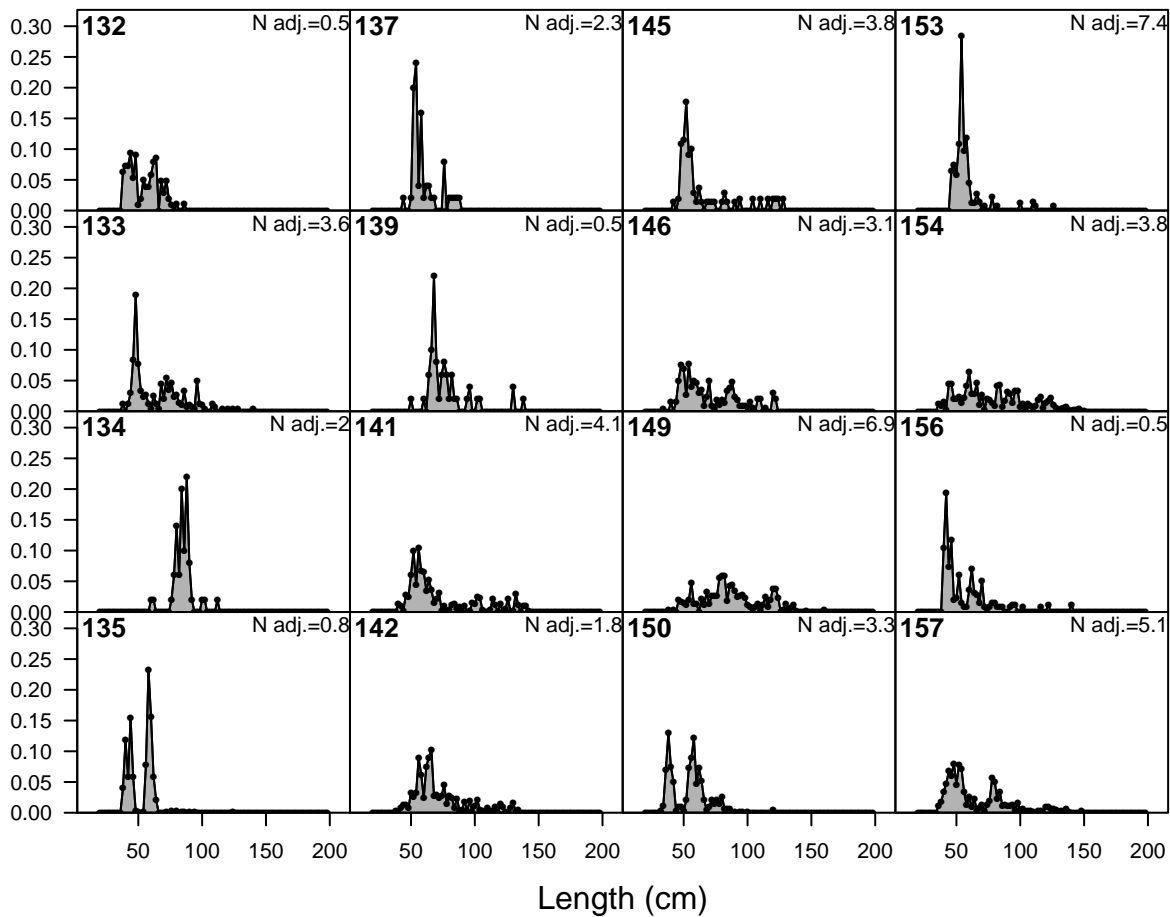
Proportion



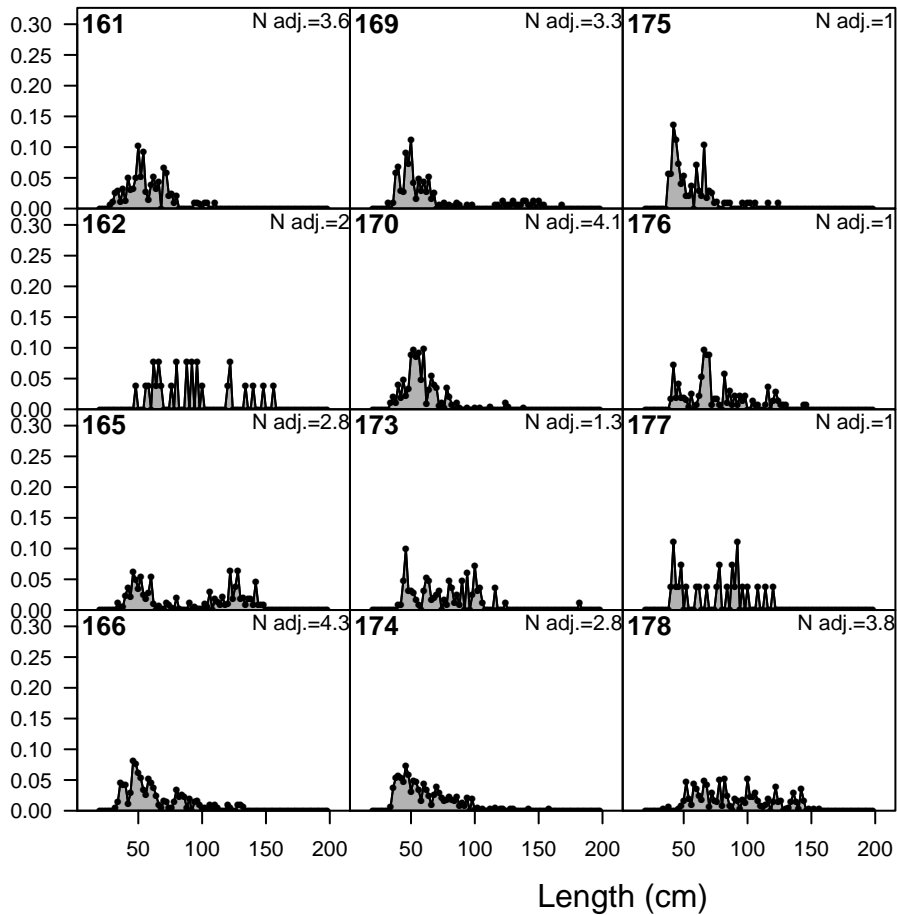
Proportion

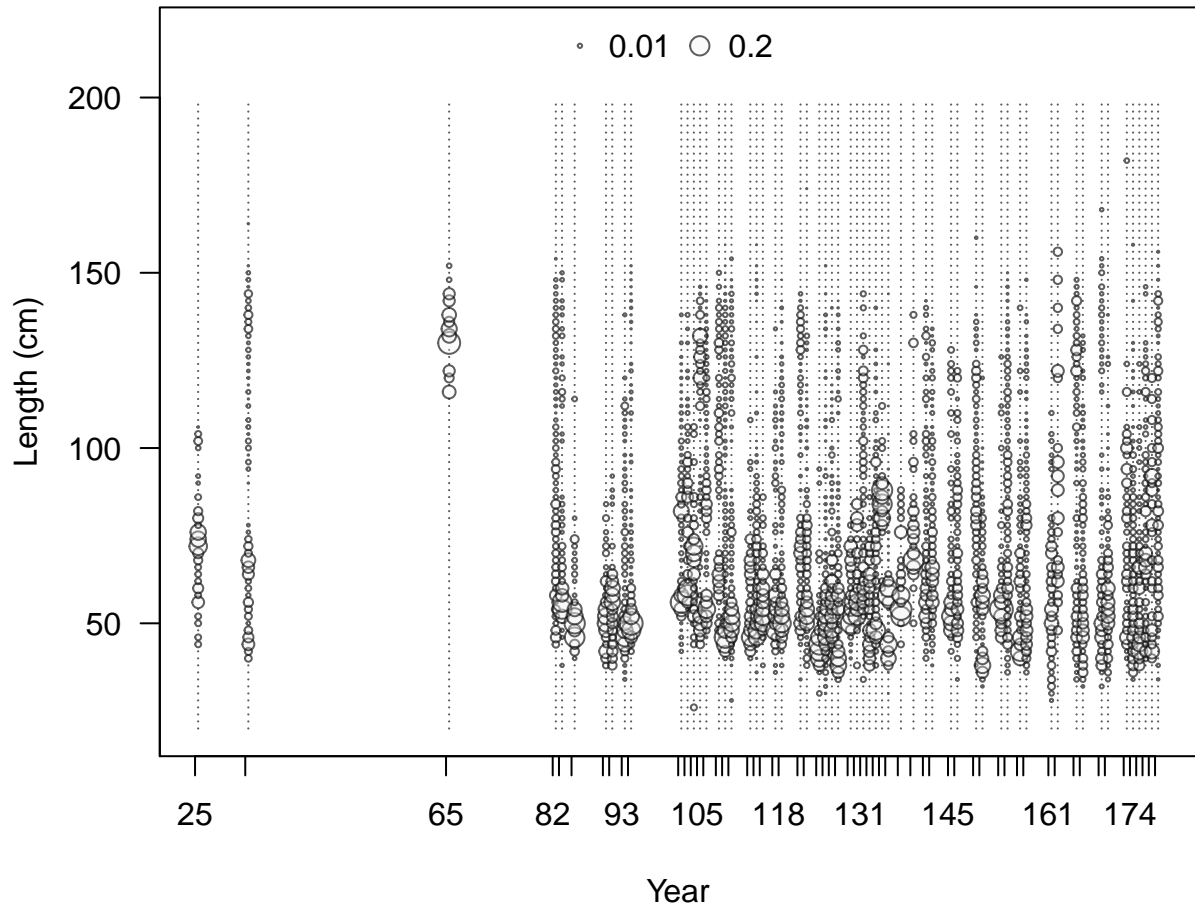


Proportion

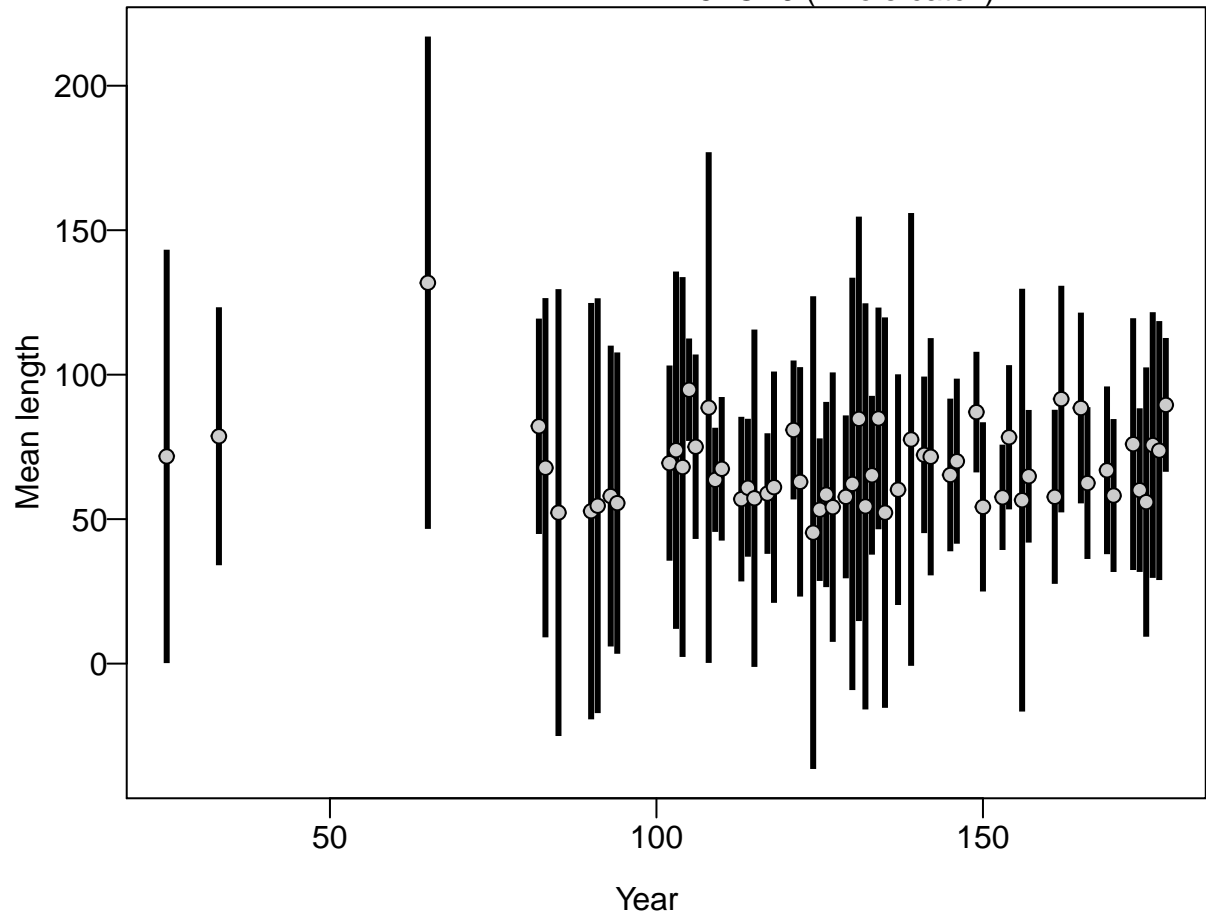


Proportion

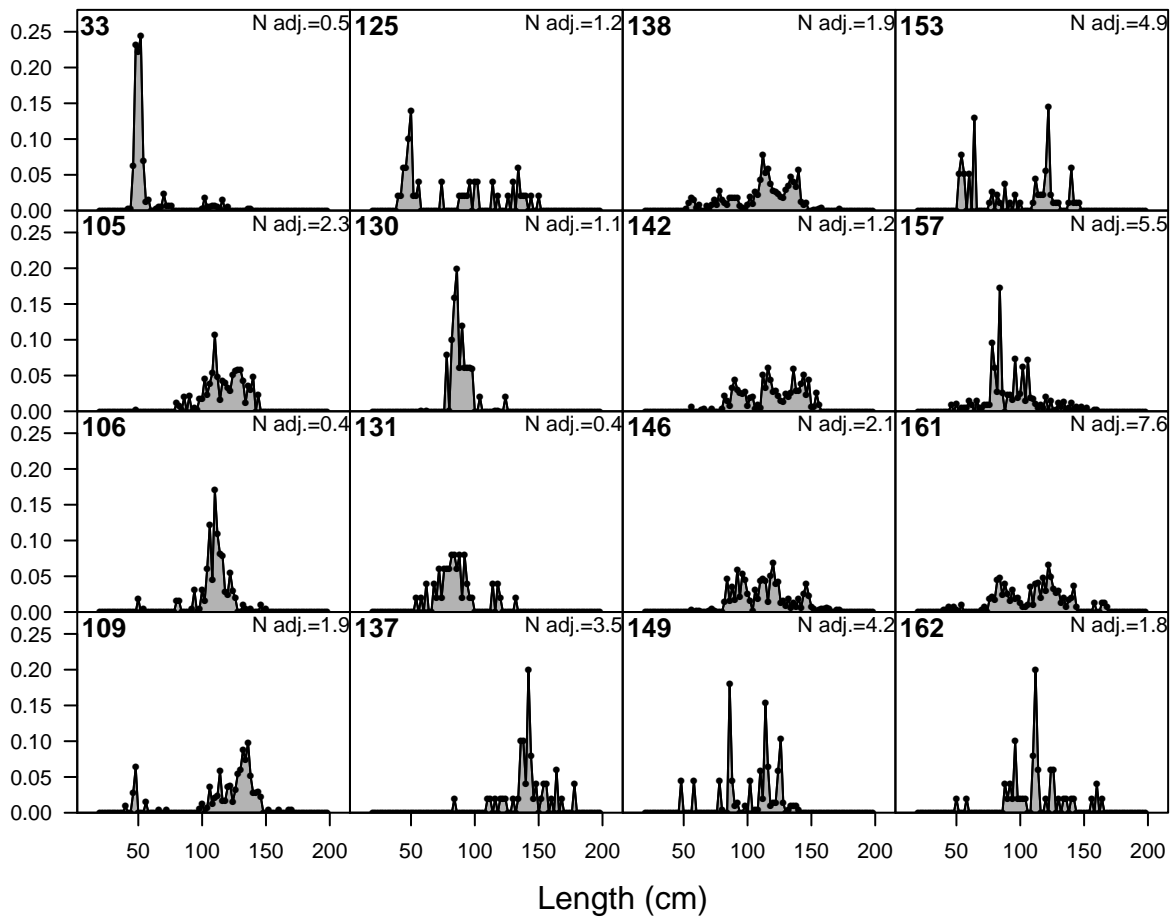




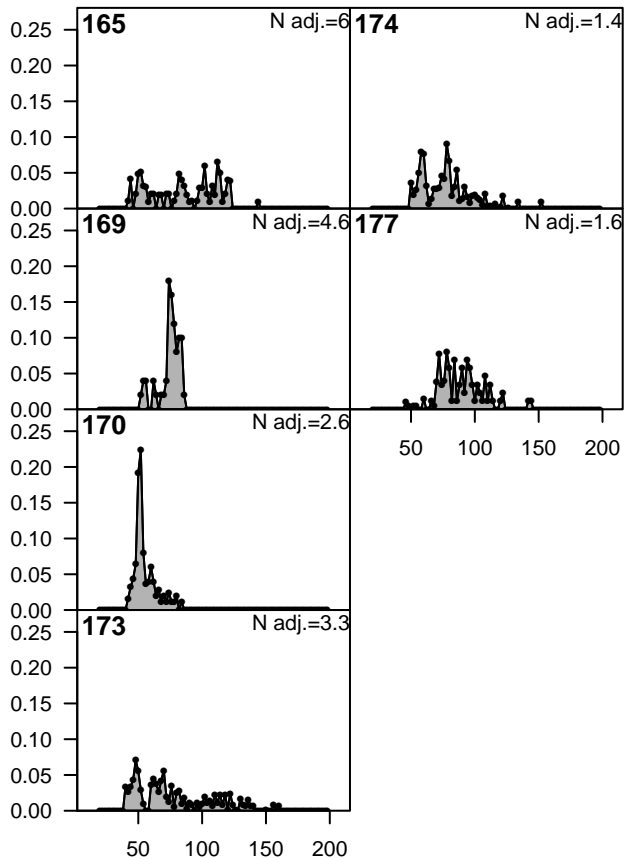
A5-OBJ (whole catch)



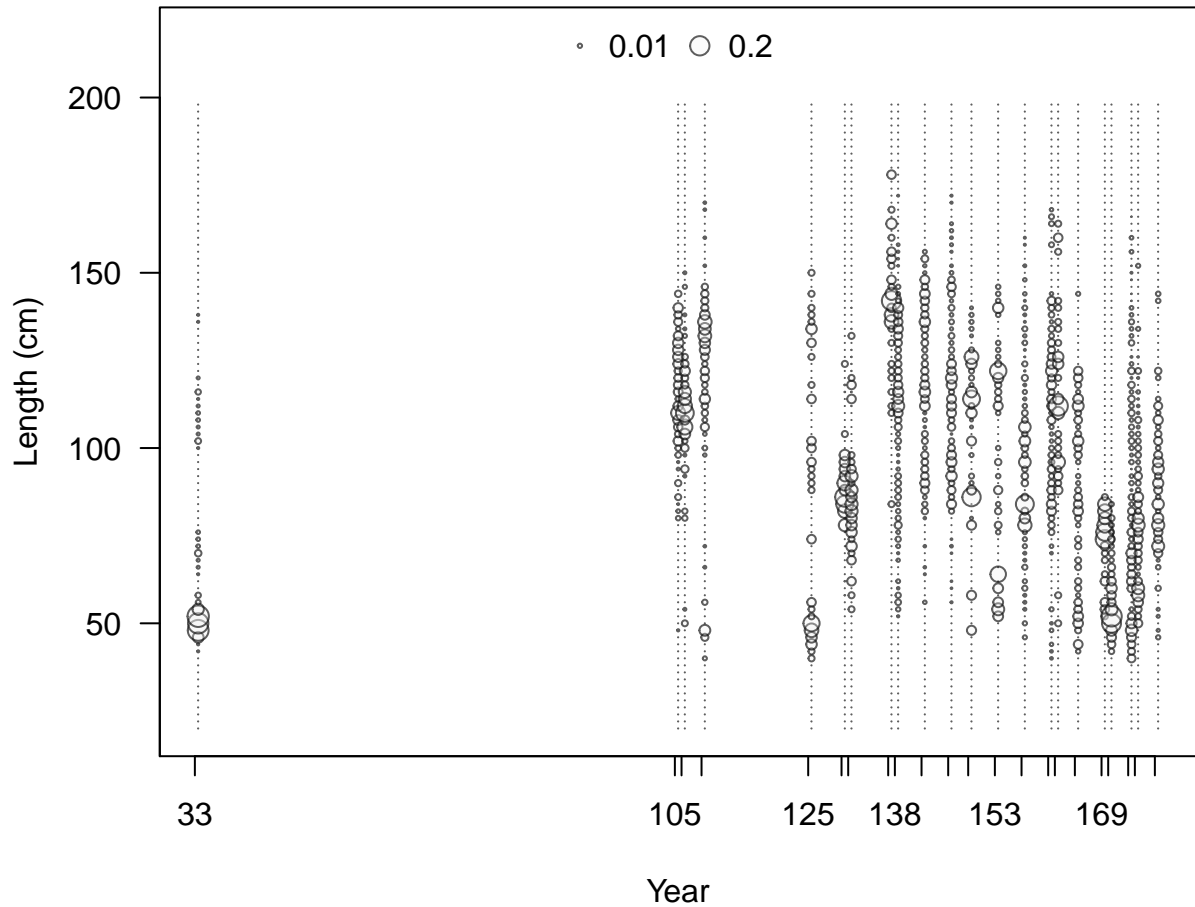
Proportion



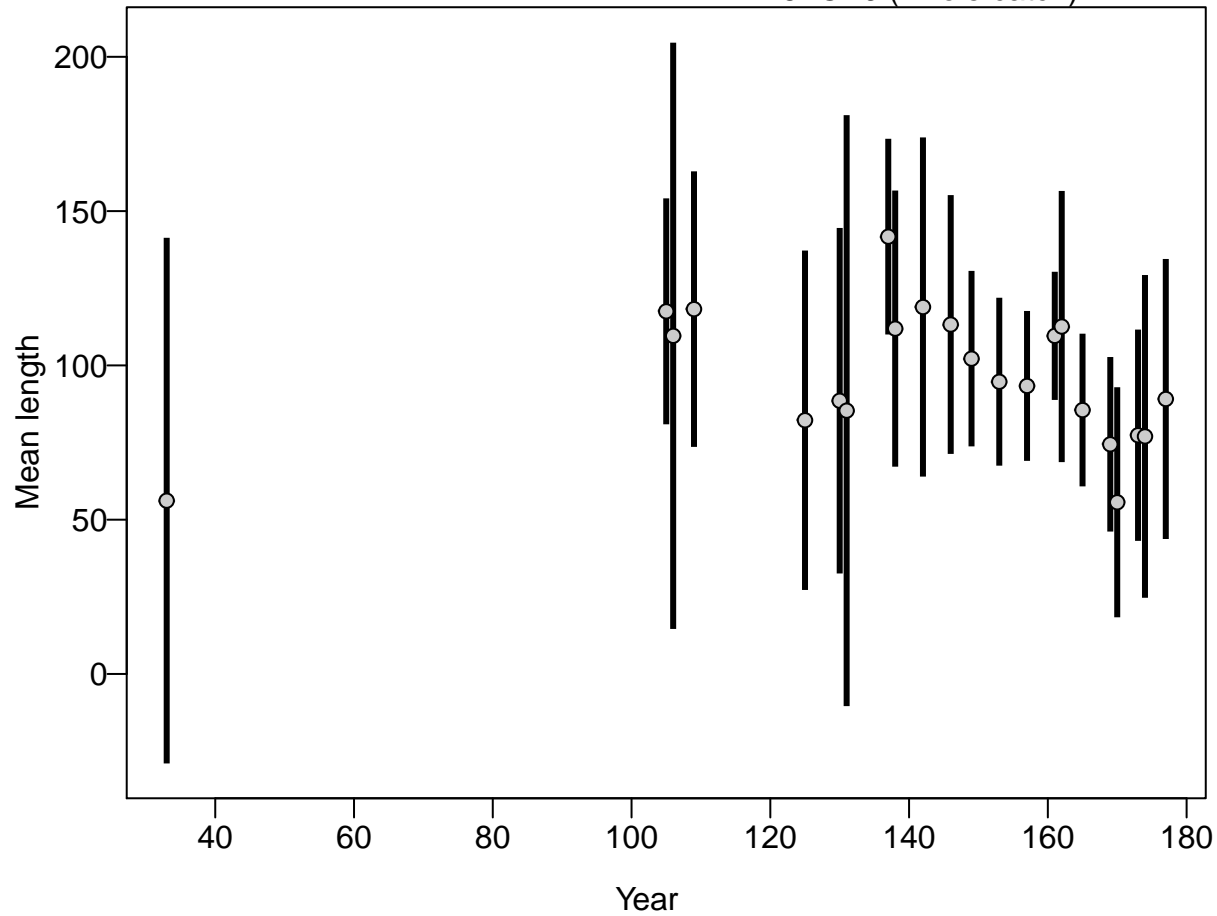
Proportion

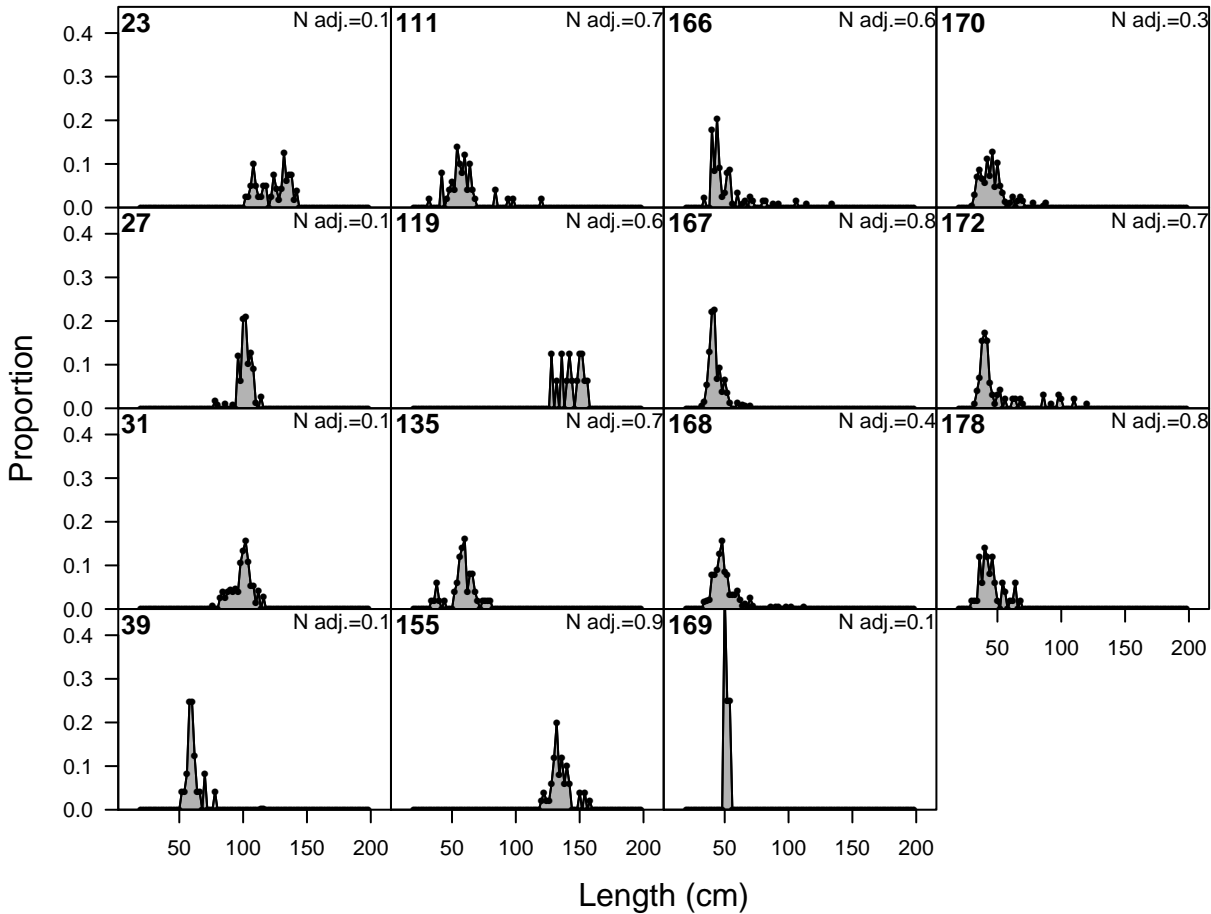


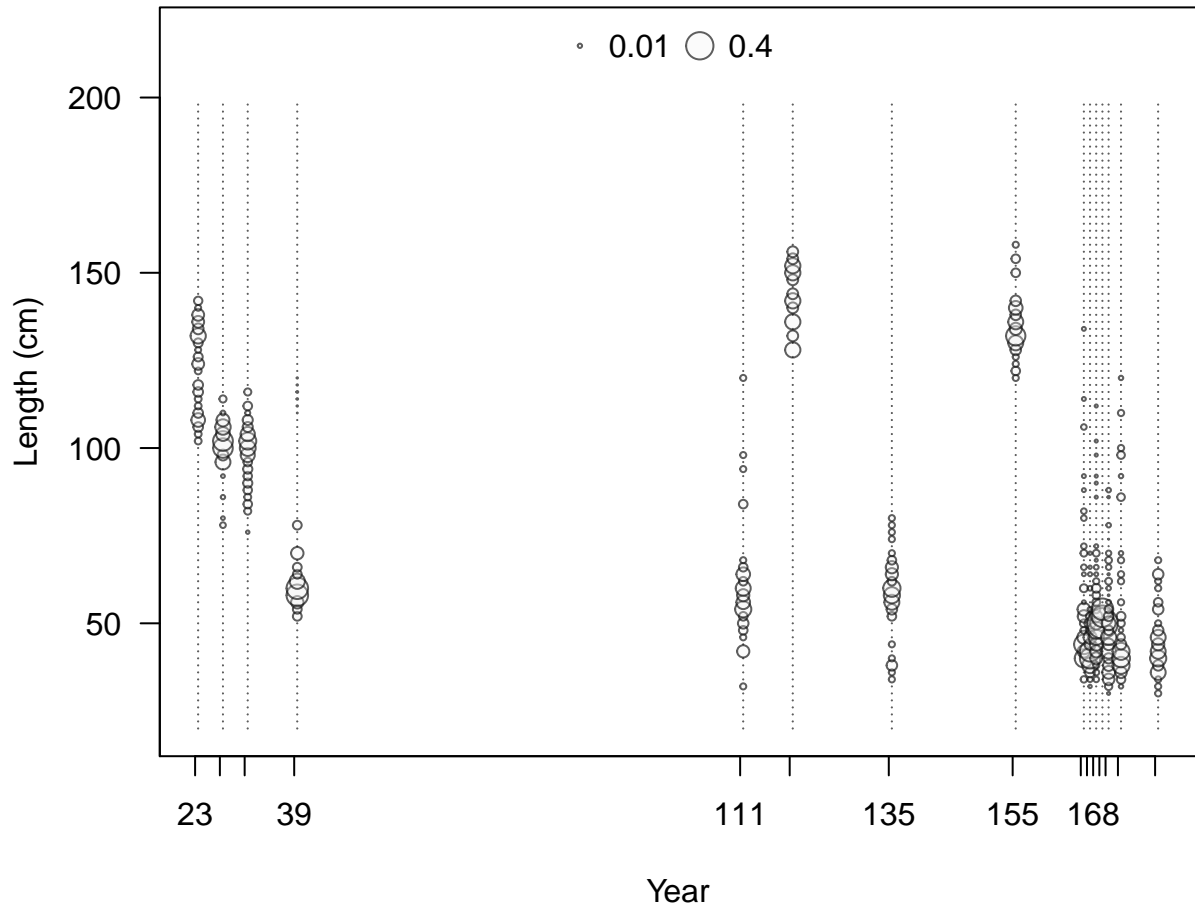
Length (cm)



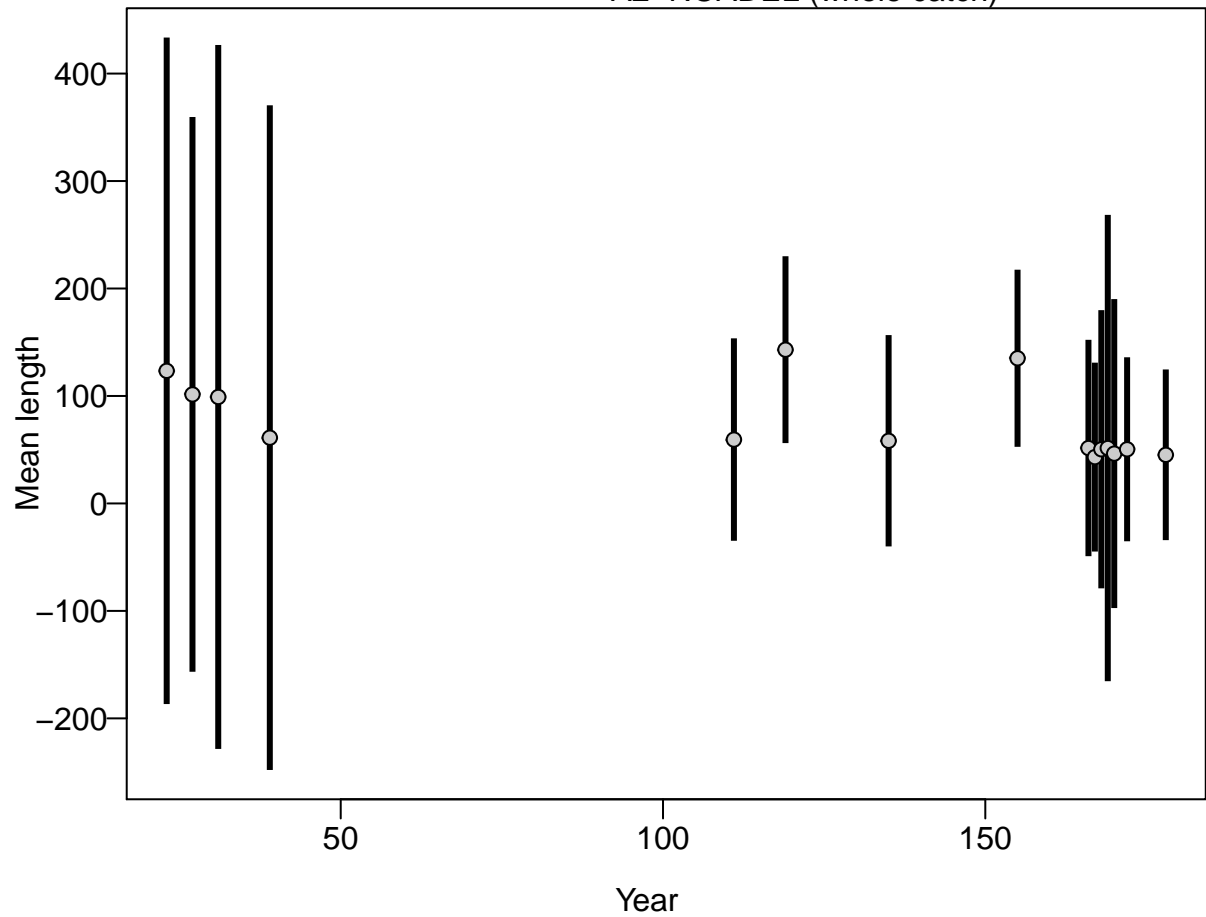
A6-OBJ (whole catch)

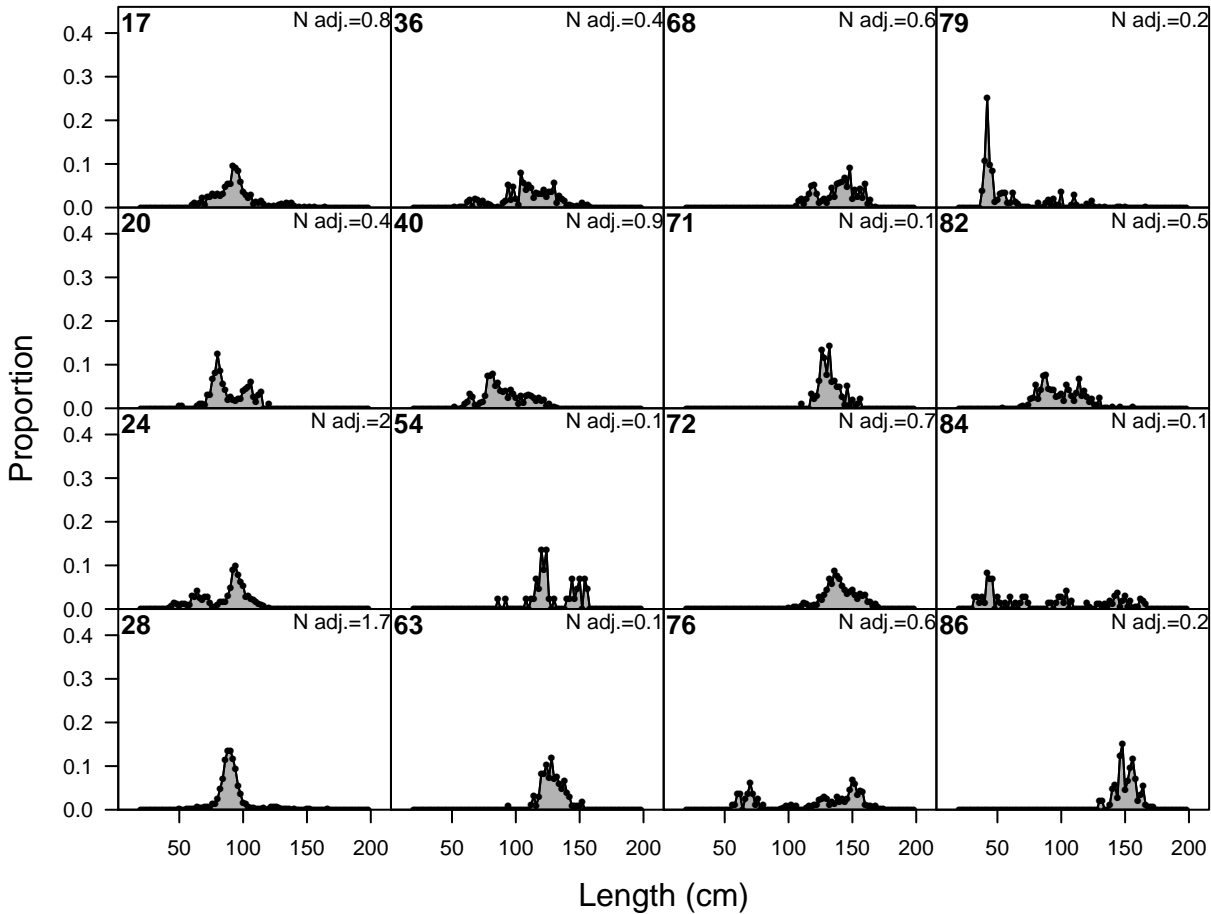


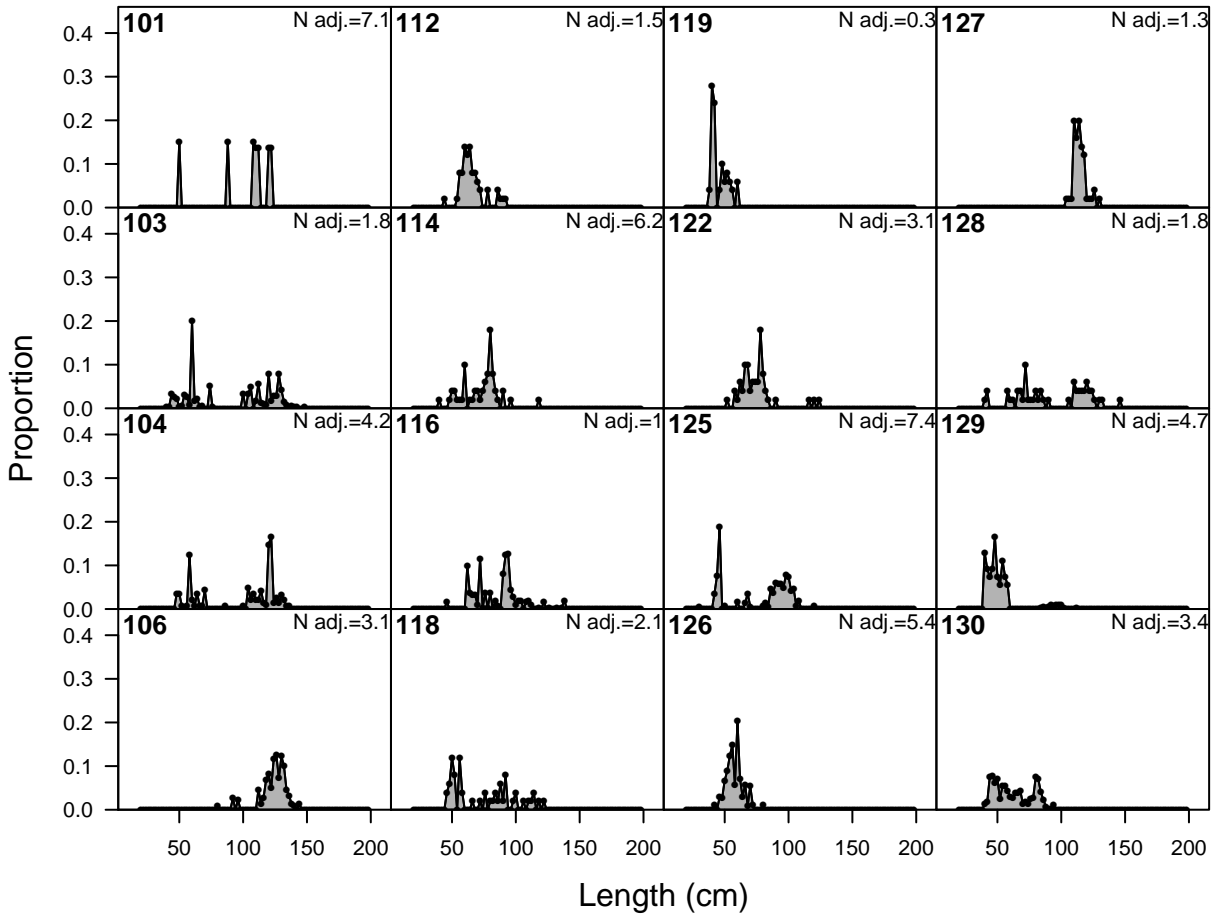




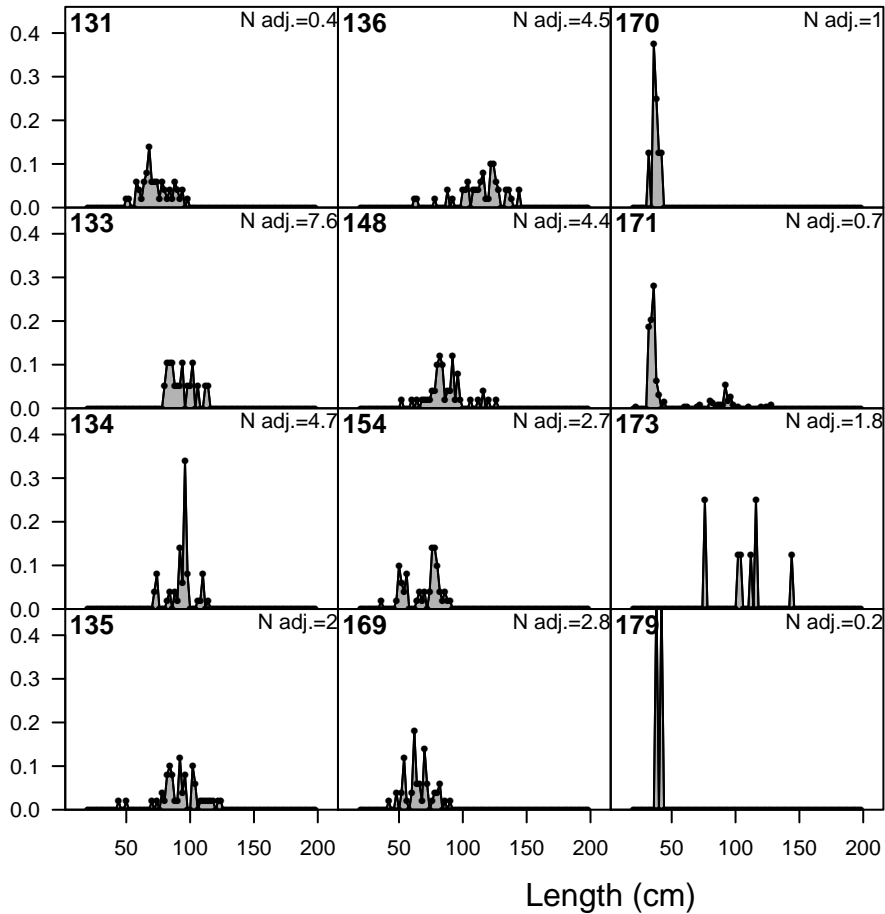
A2-NOADEL (whole catch)

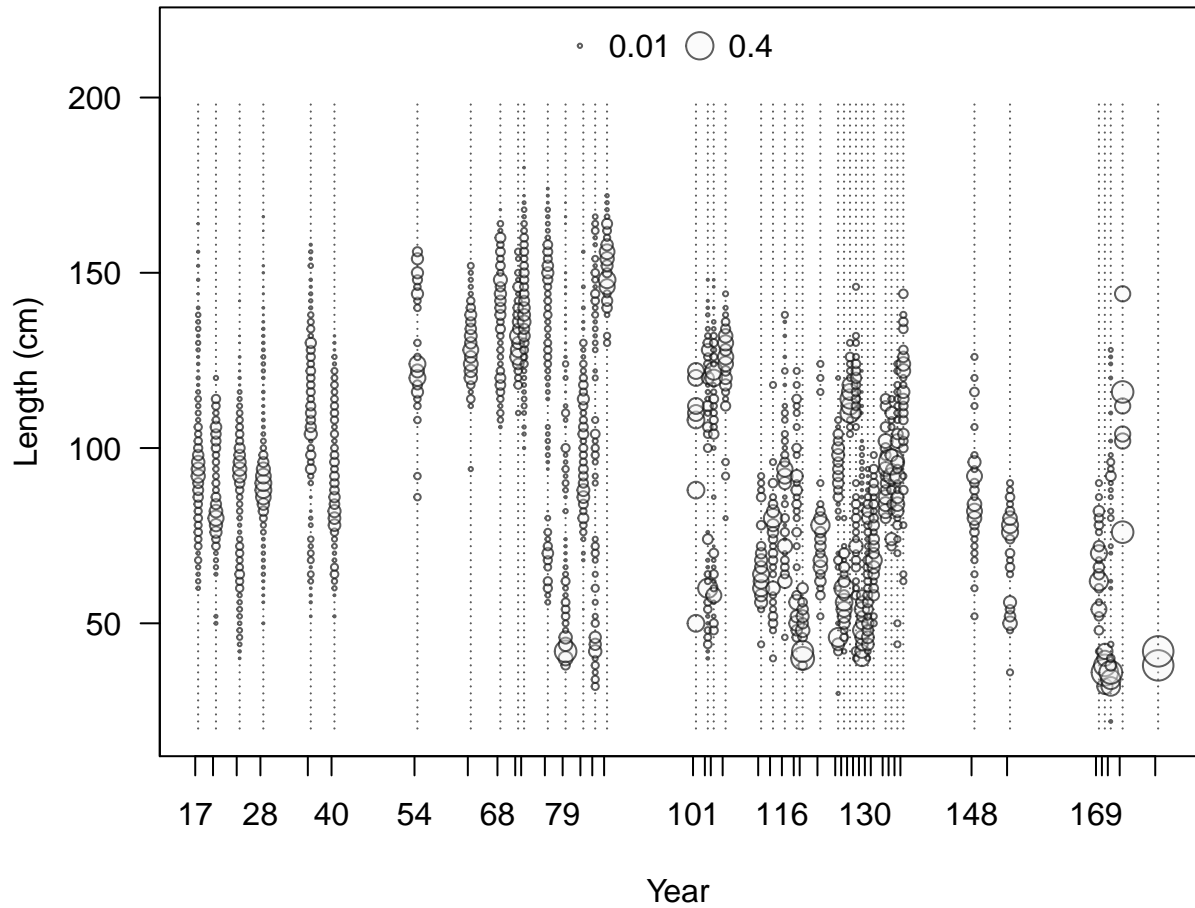




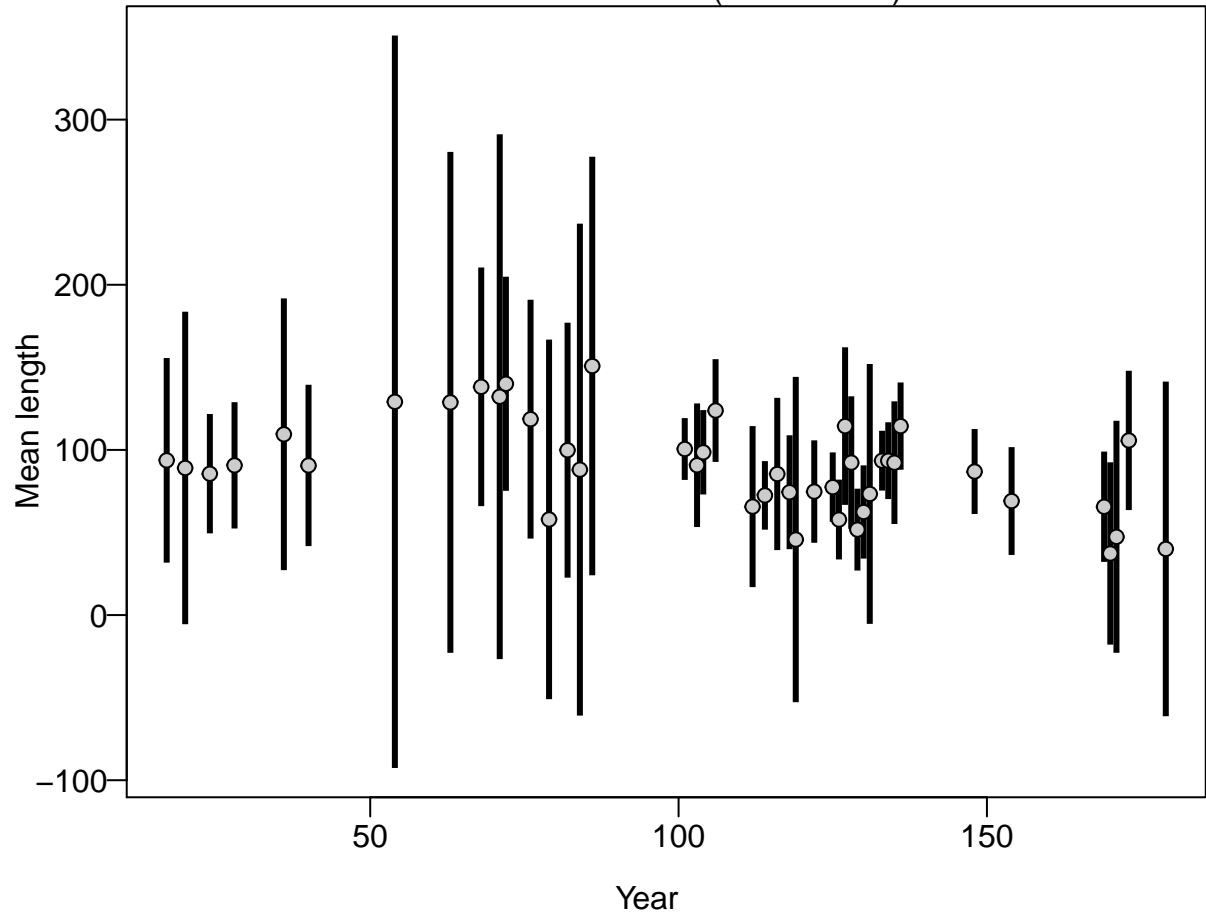


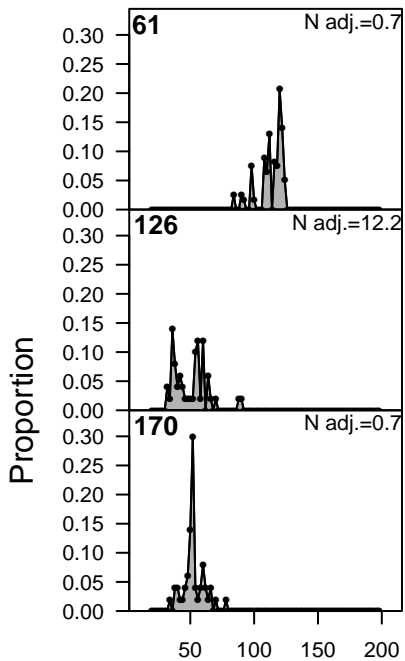
Proportion



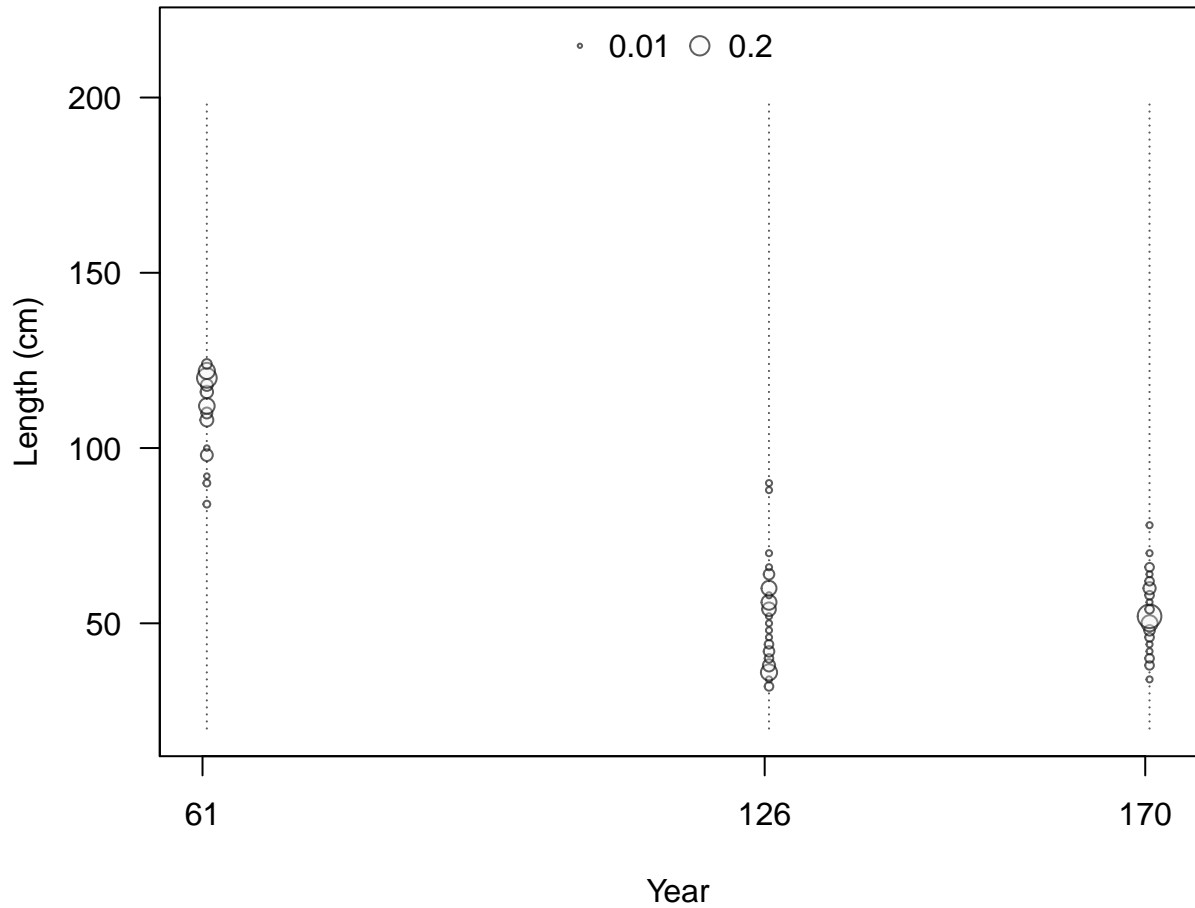


A3-NOADEL (whole catch)

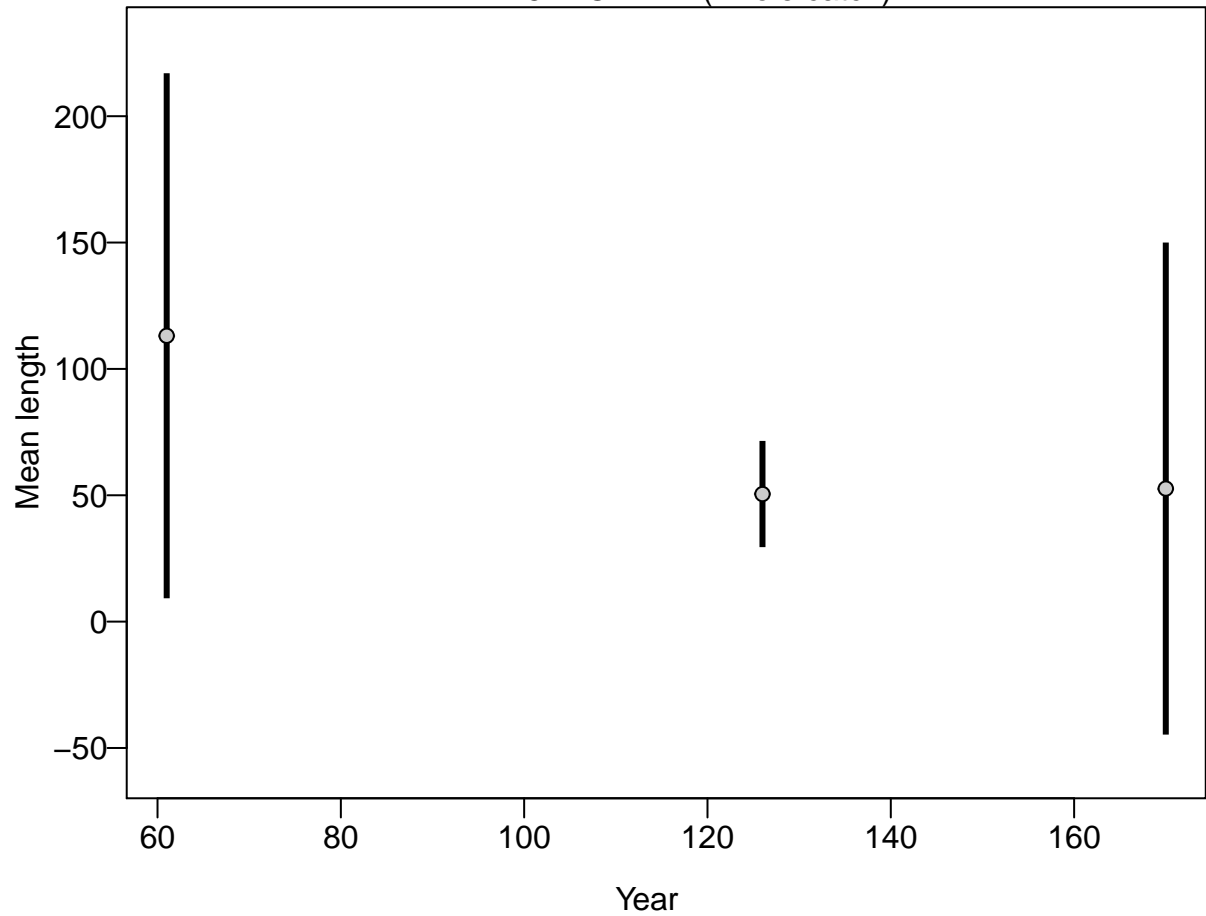




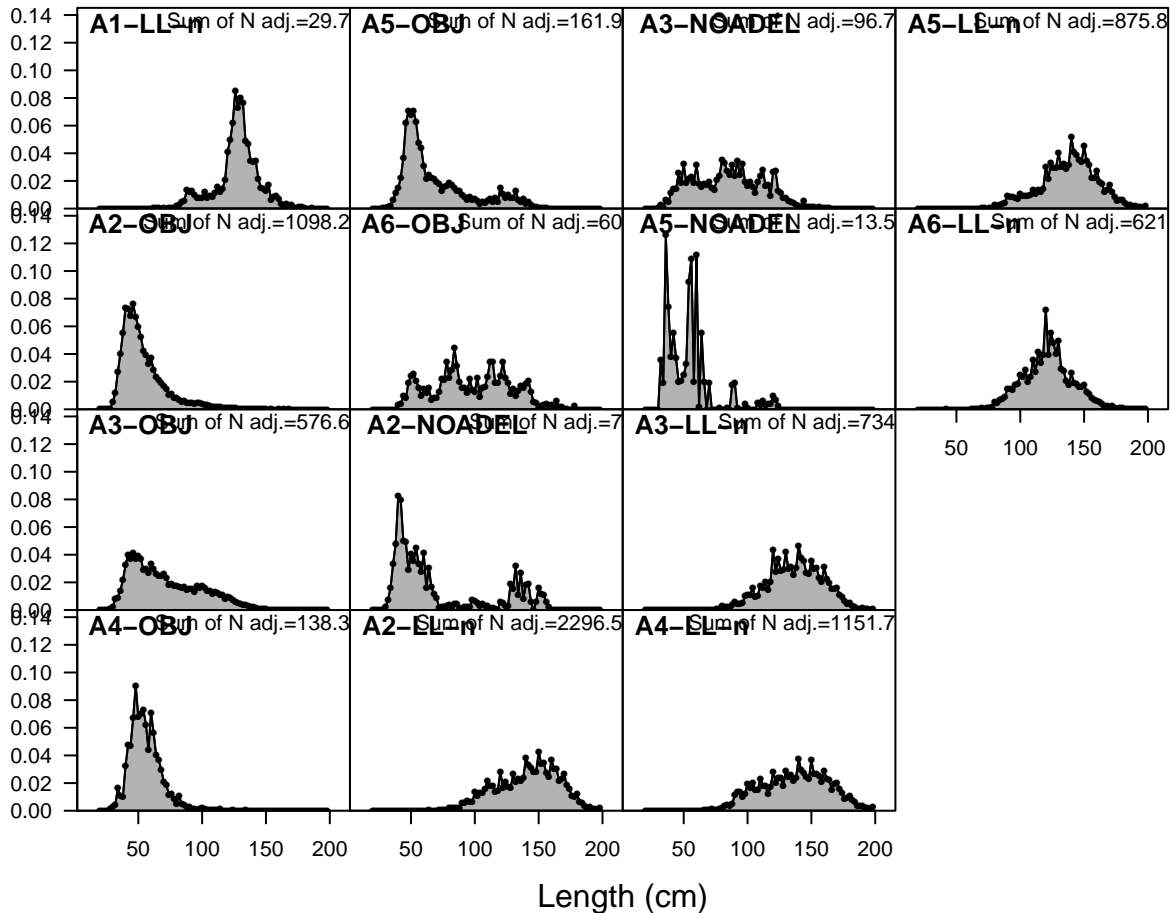
Length (cm)

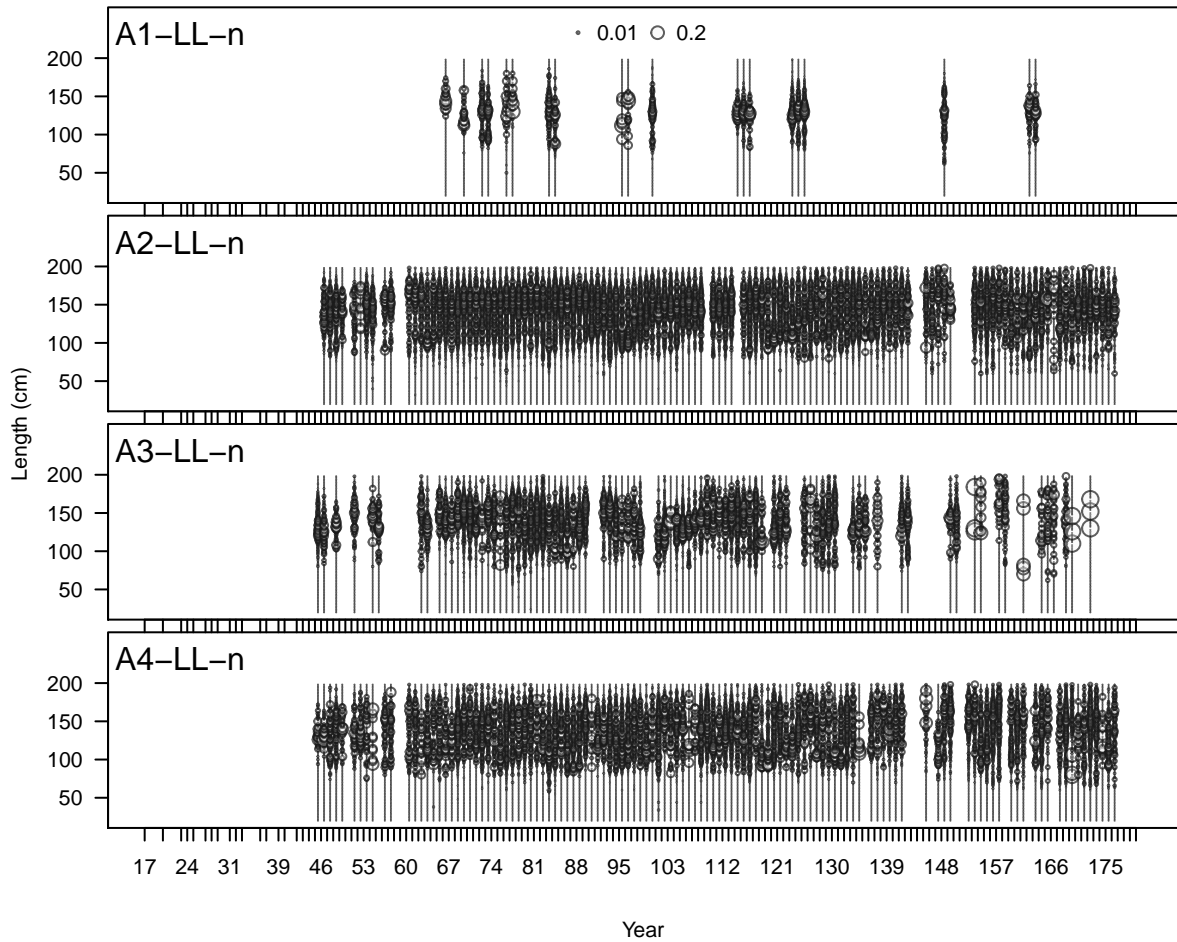


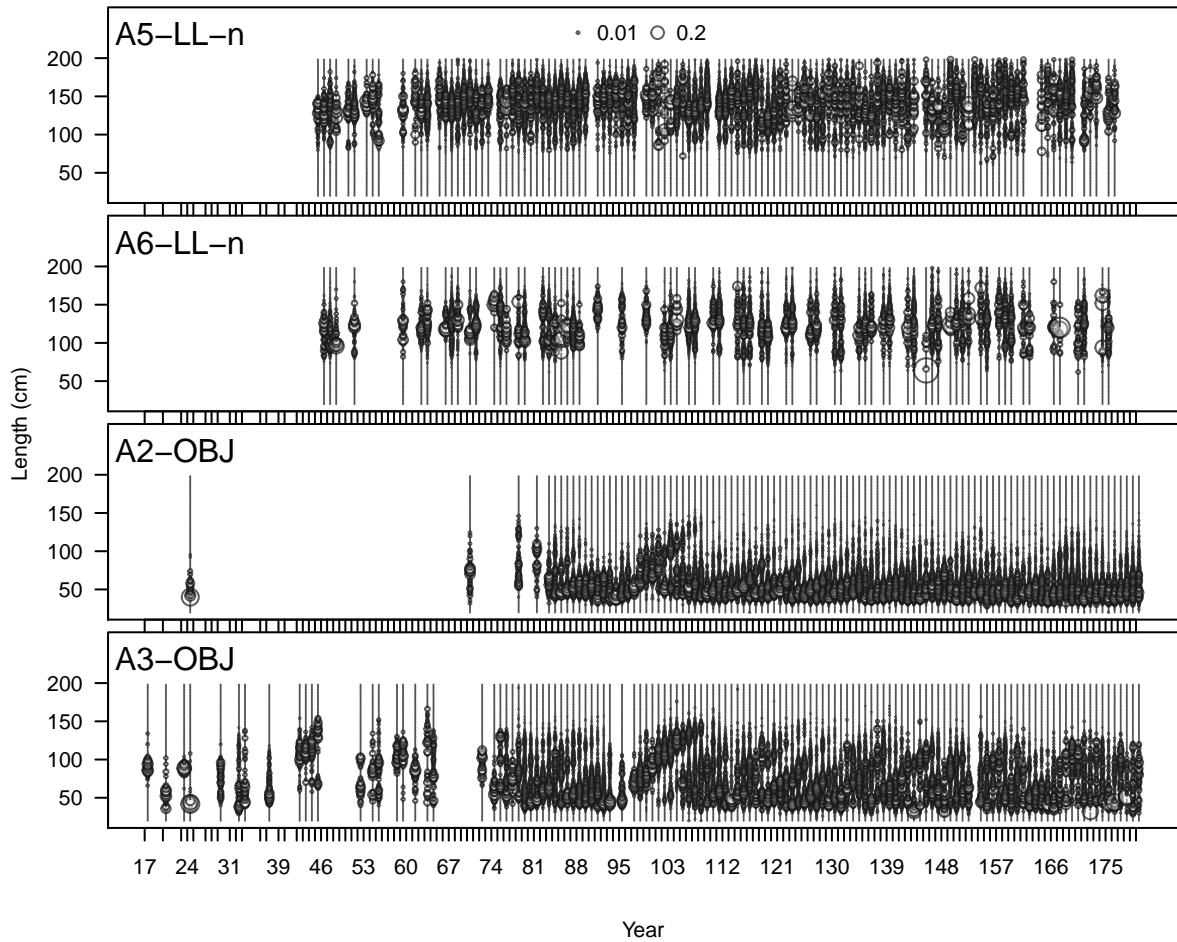
A5-NOADEL (whole catch)

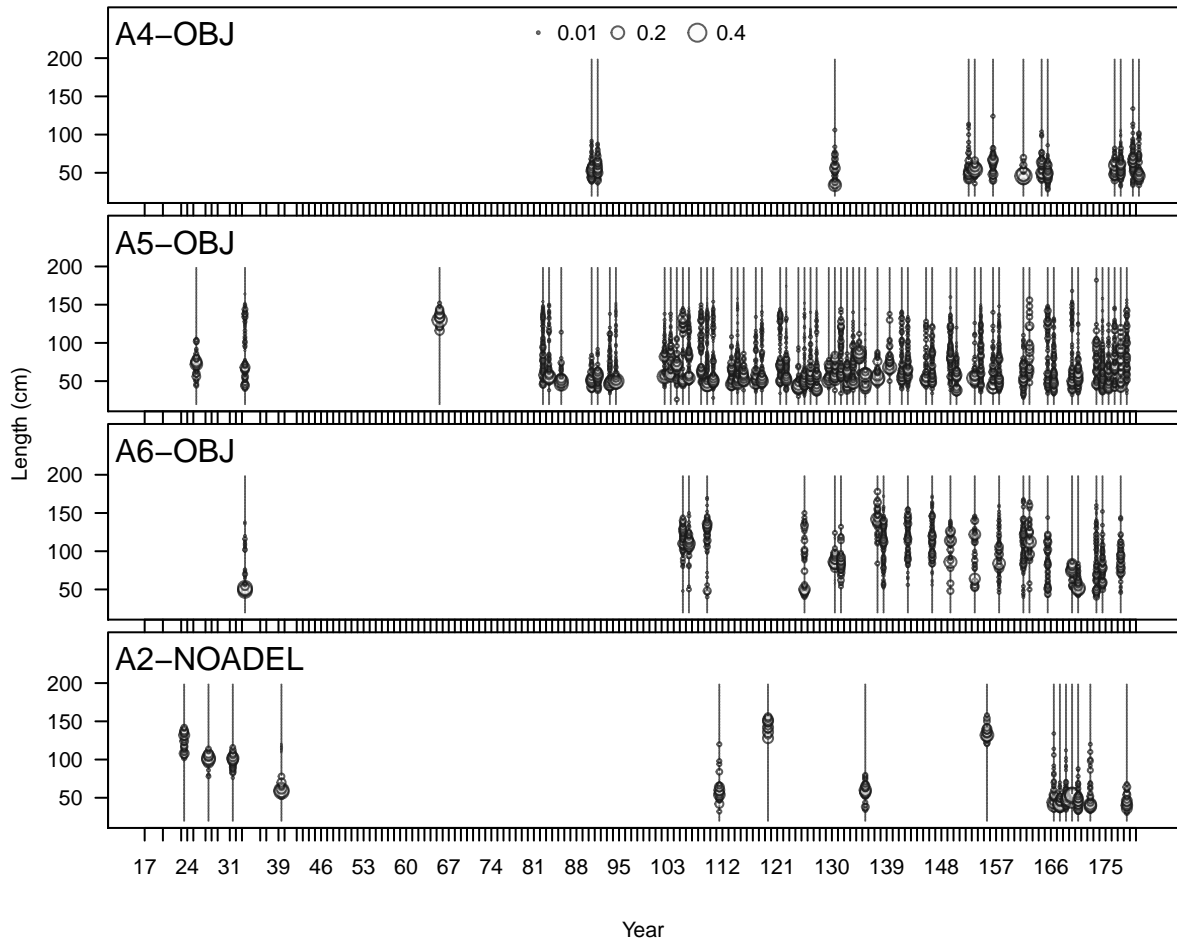


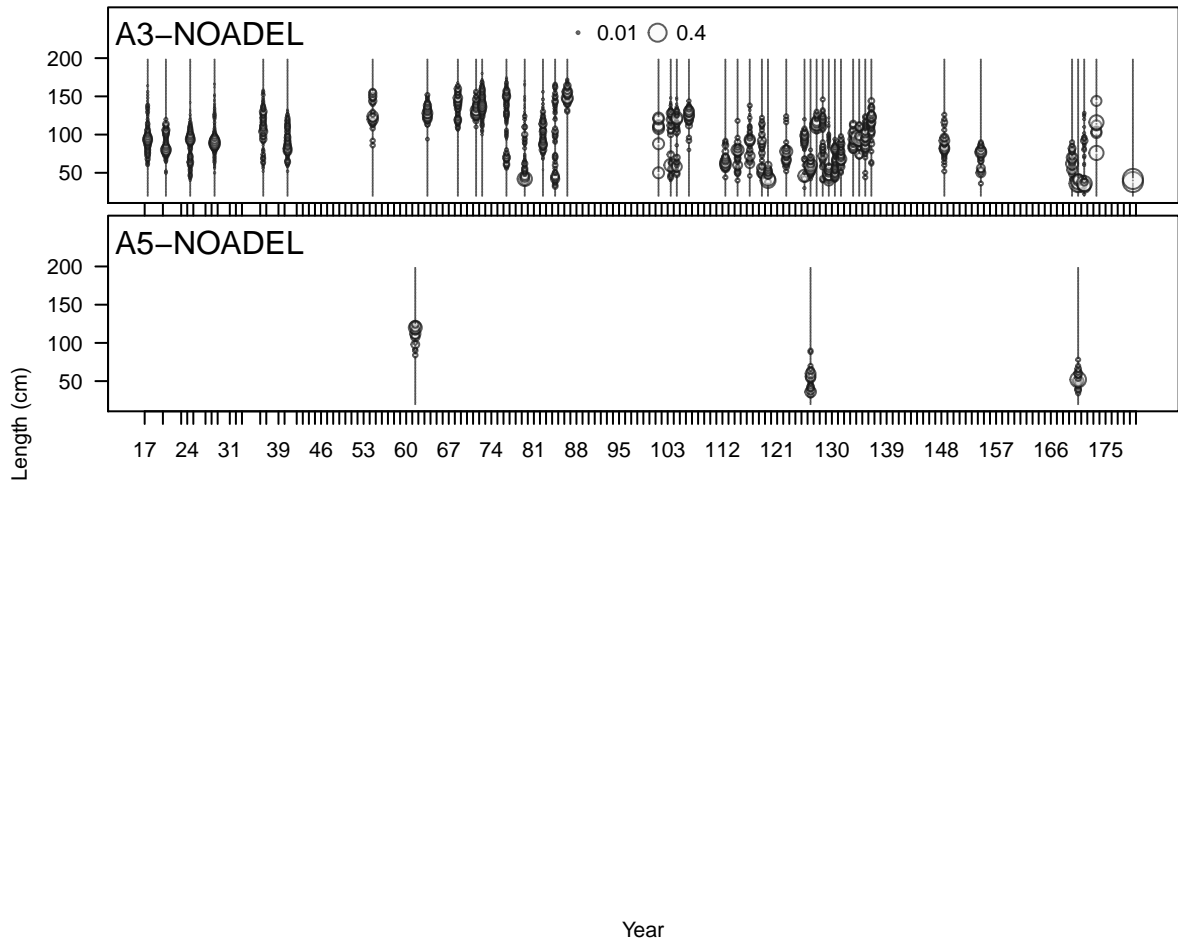
Proportion



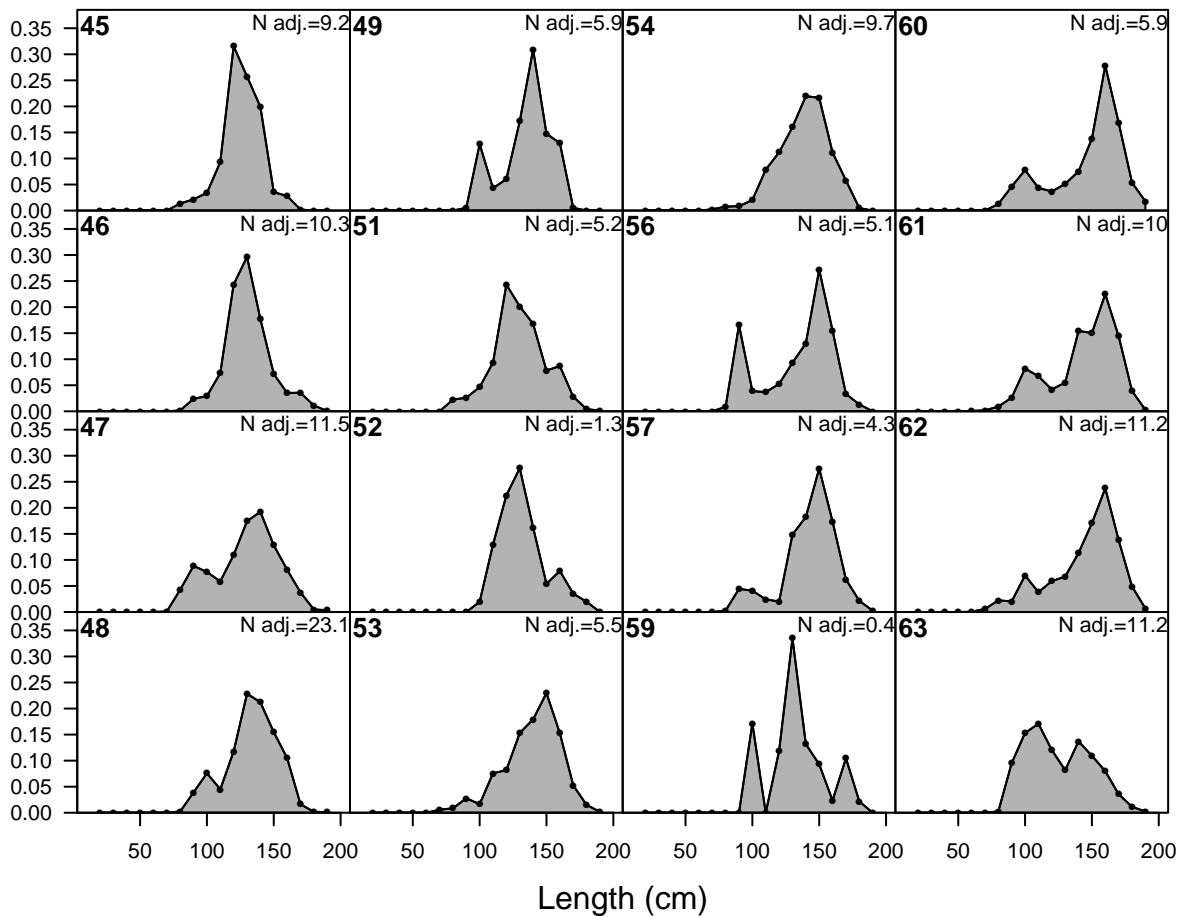




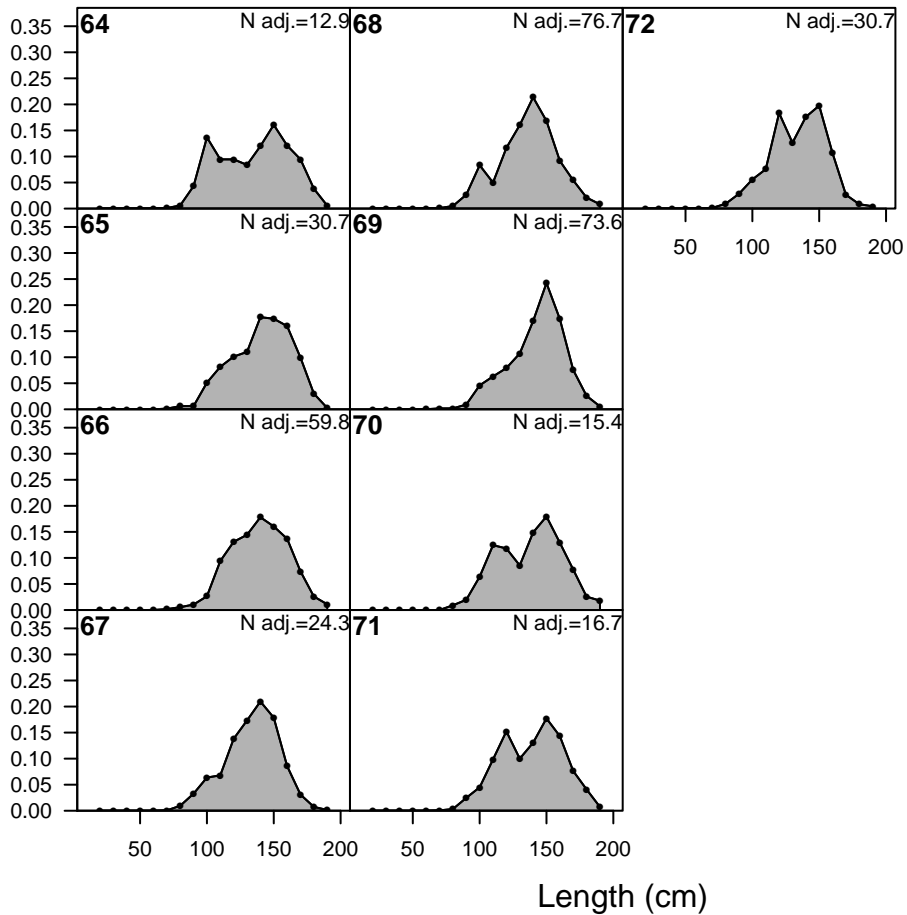


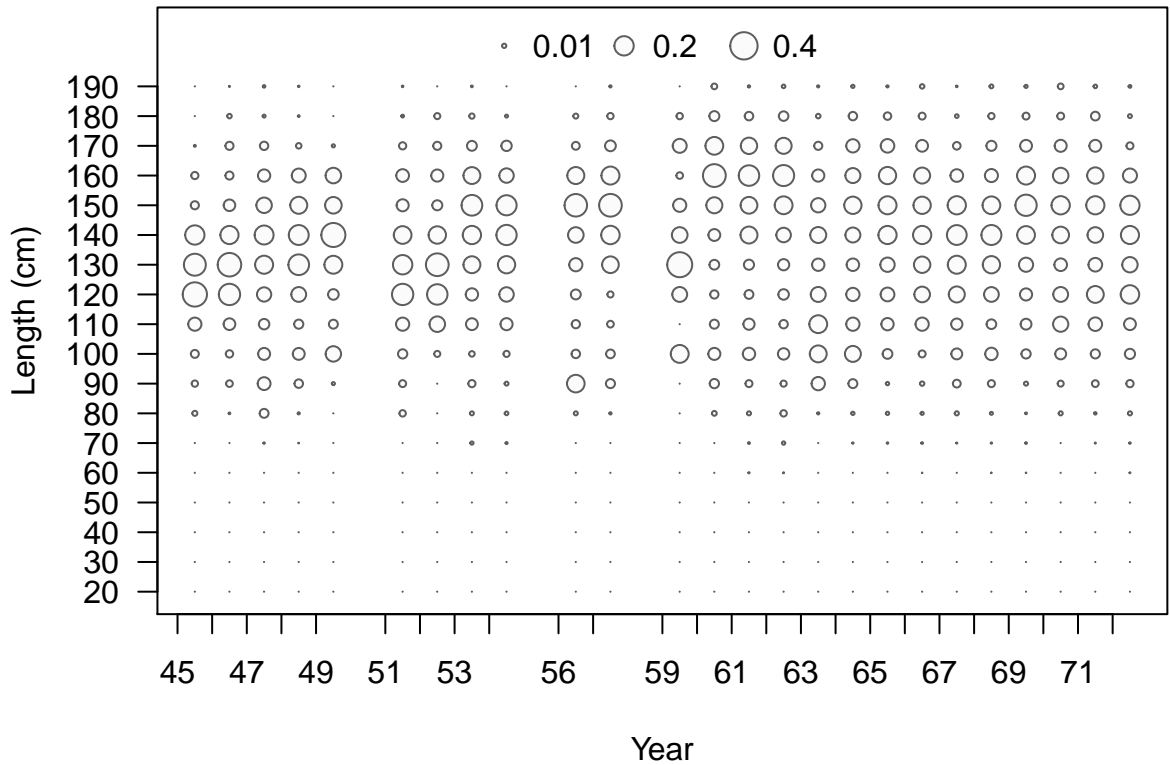


Proportion

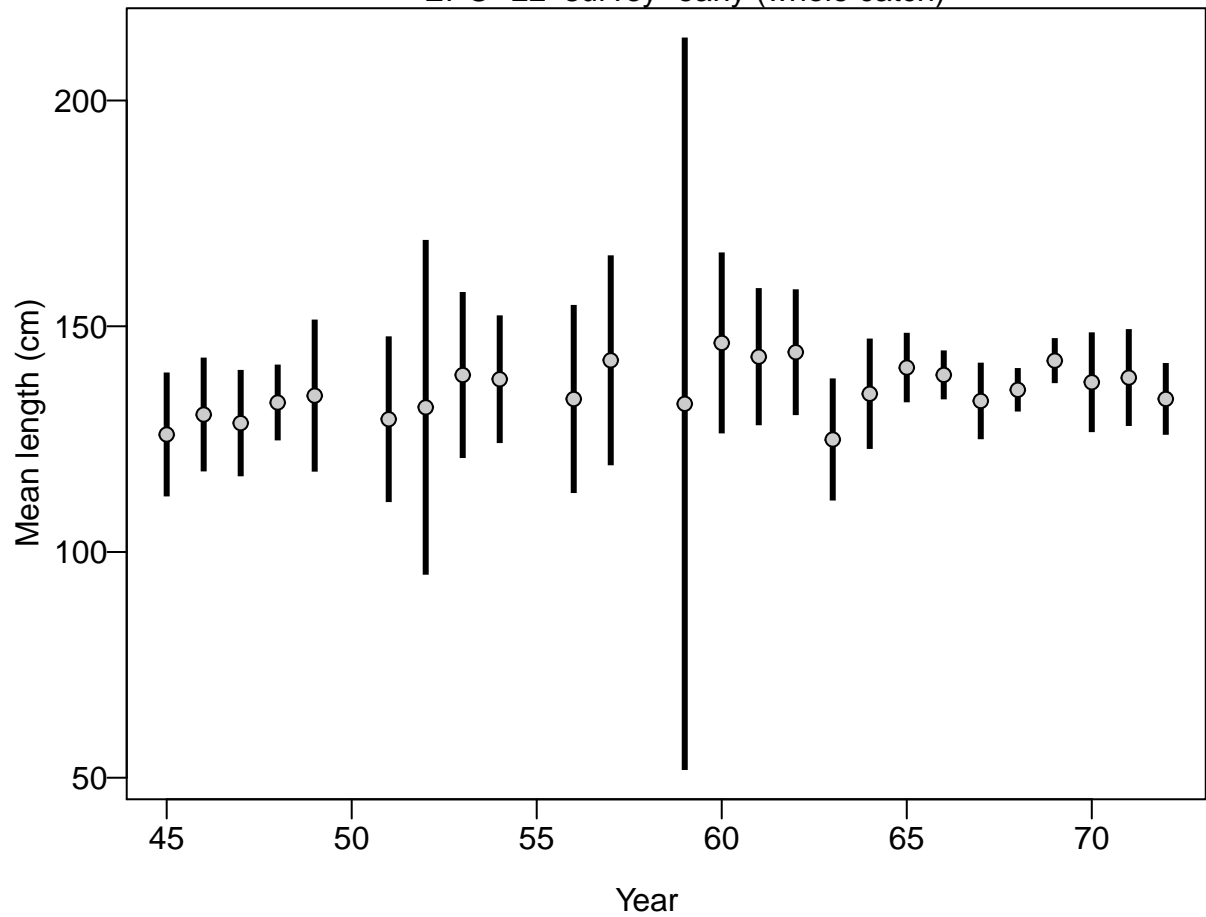


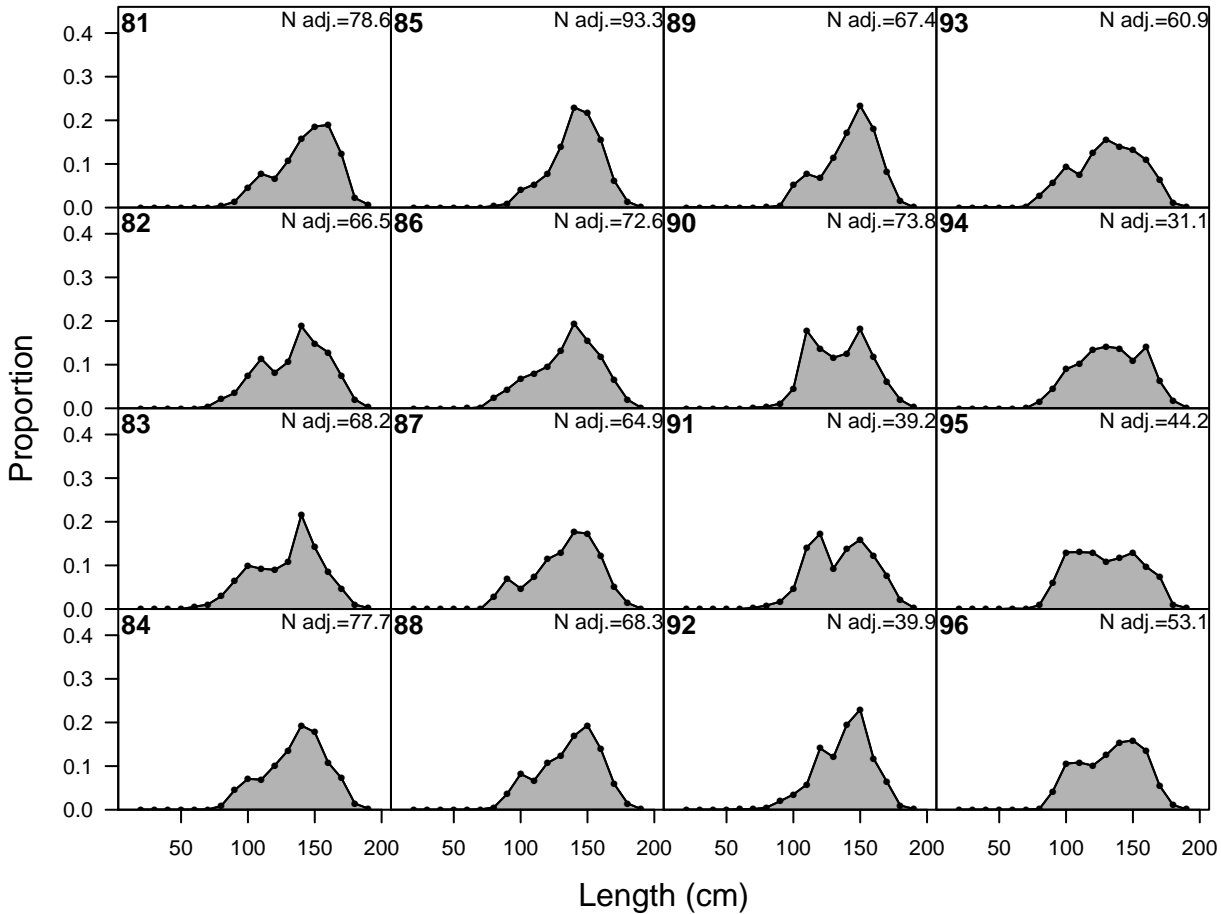
Proportion

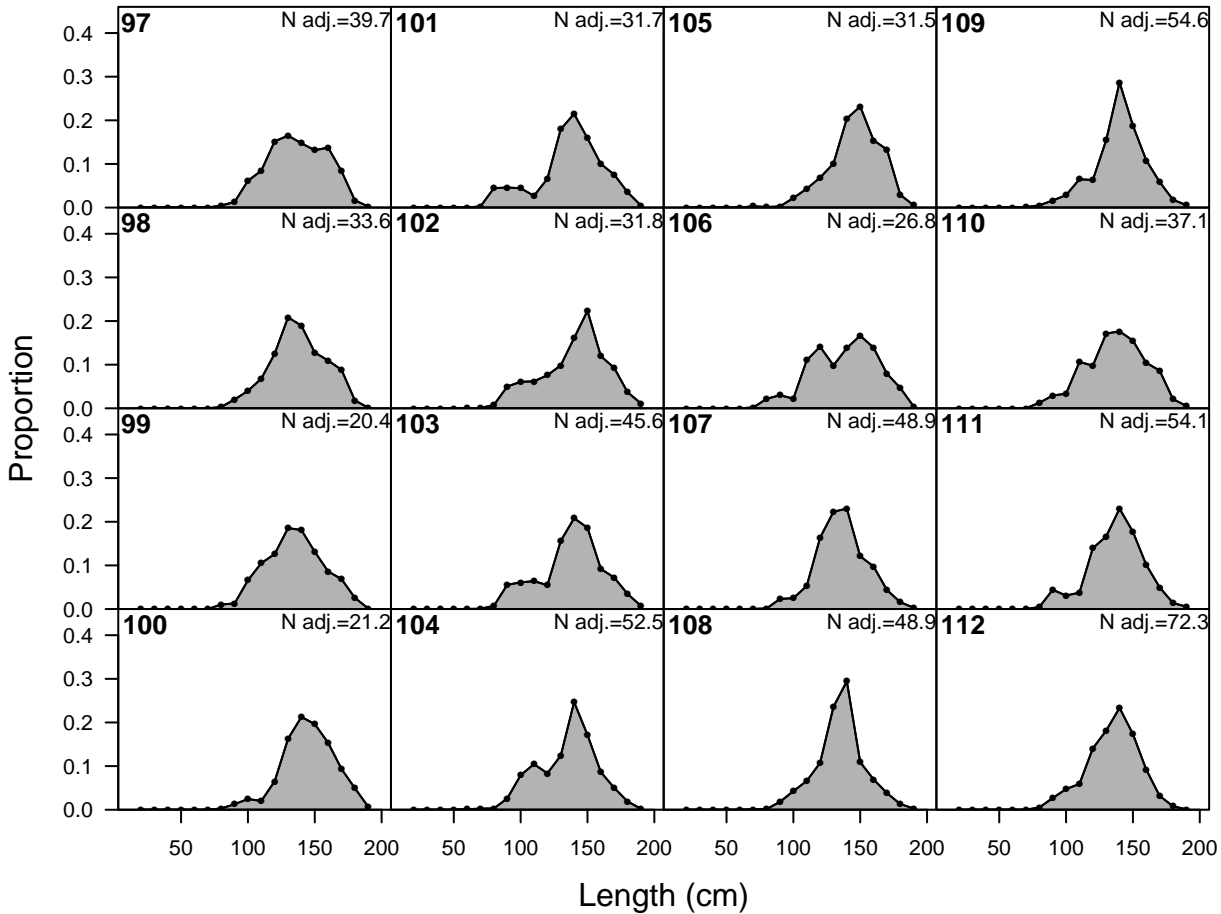


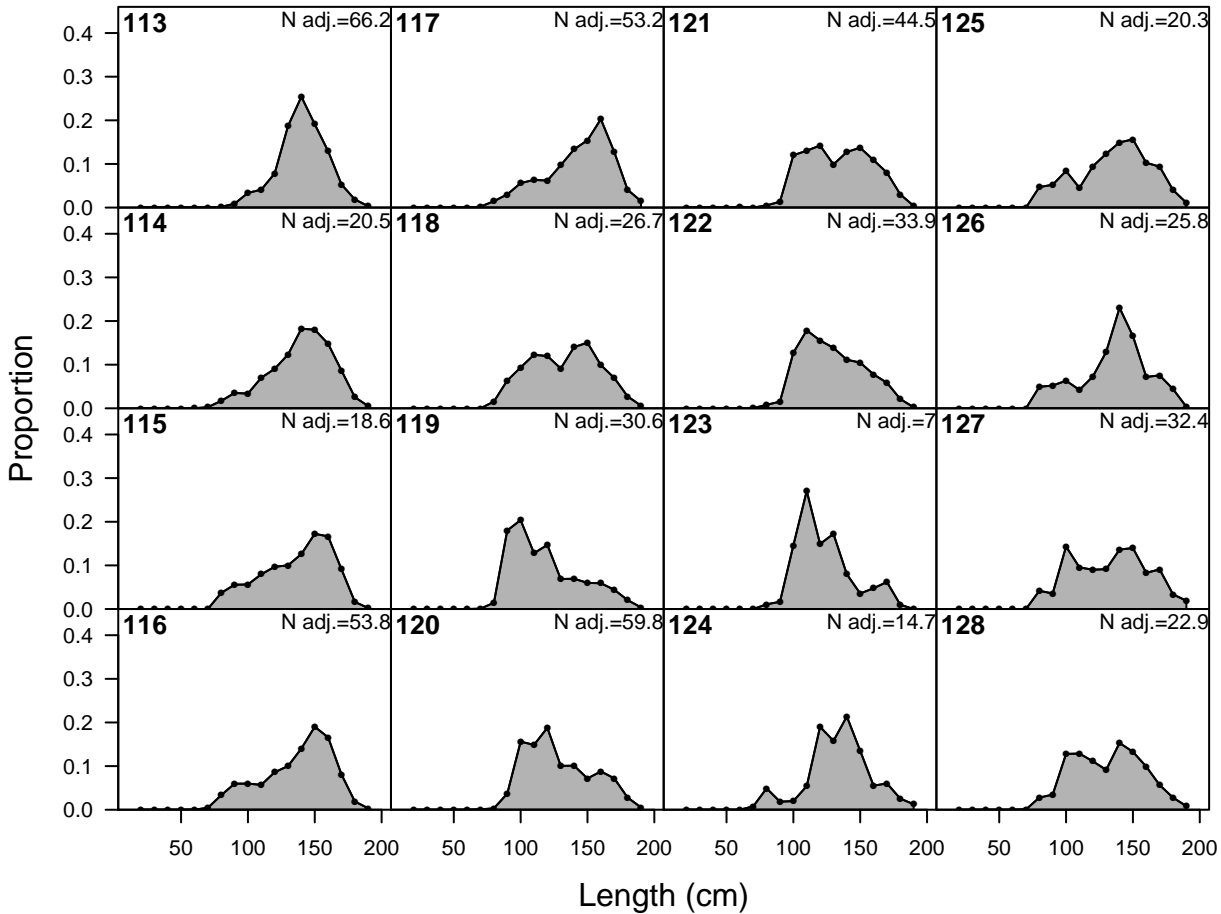


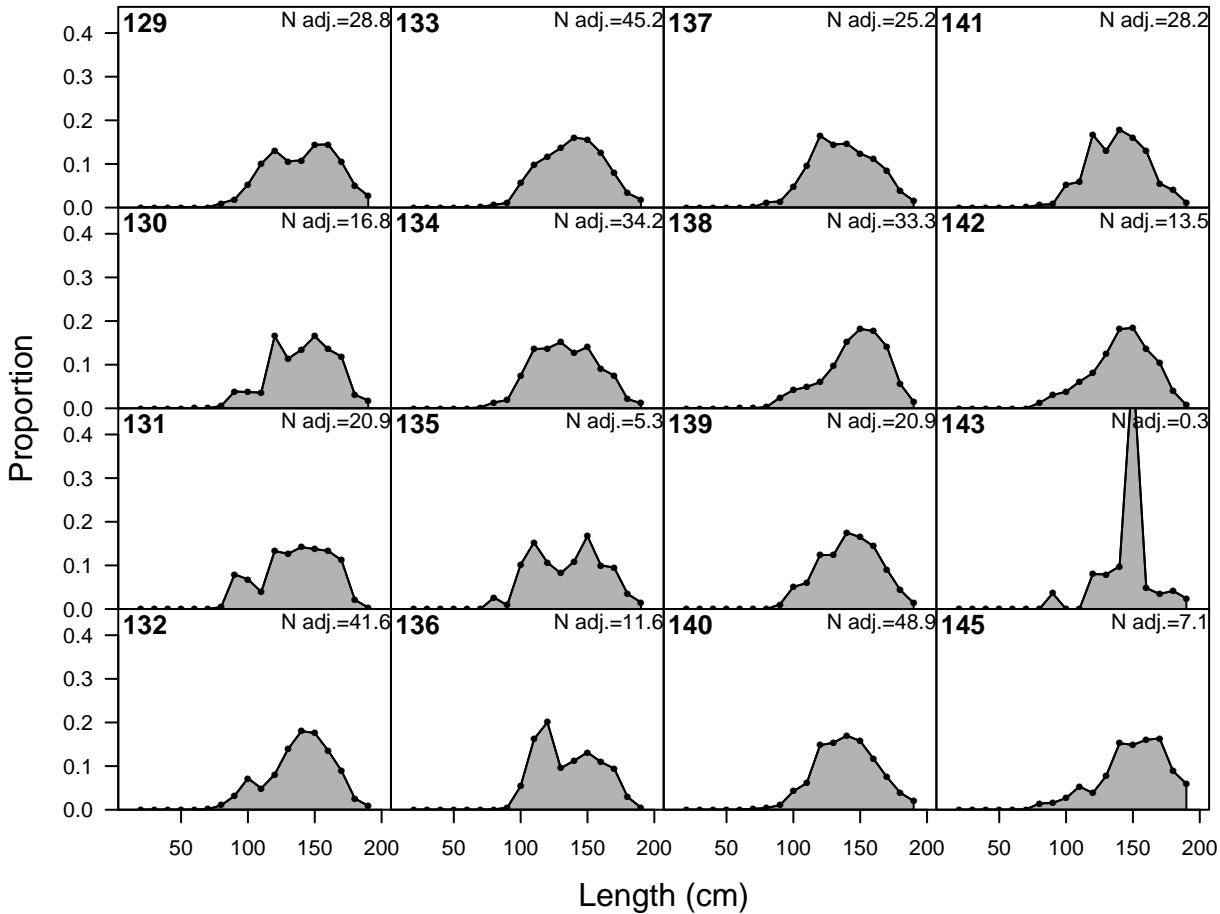
EPO-LL-survey-early (whole catch)

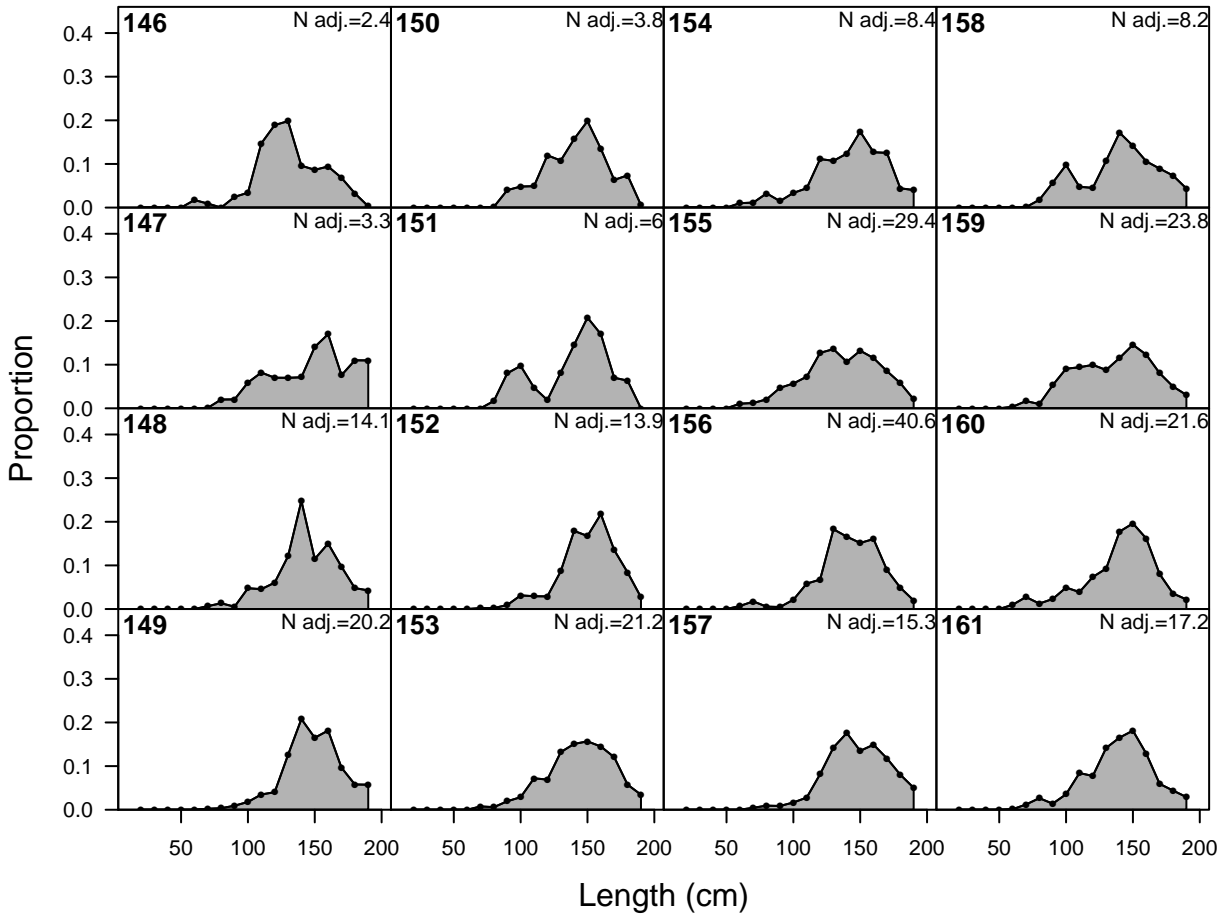


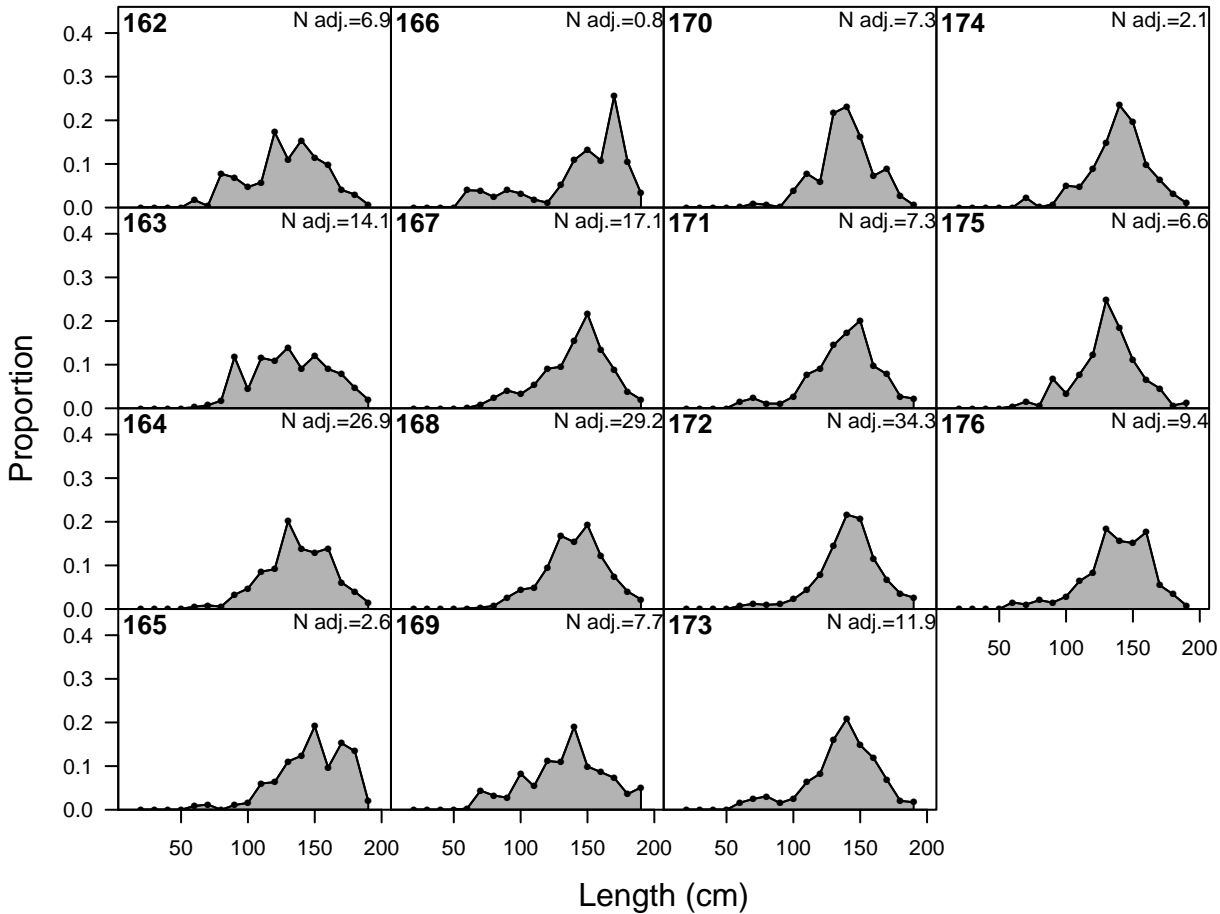


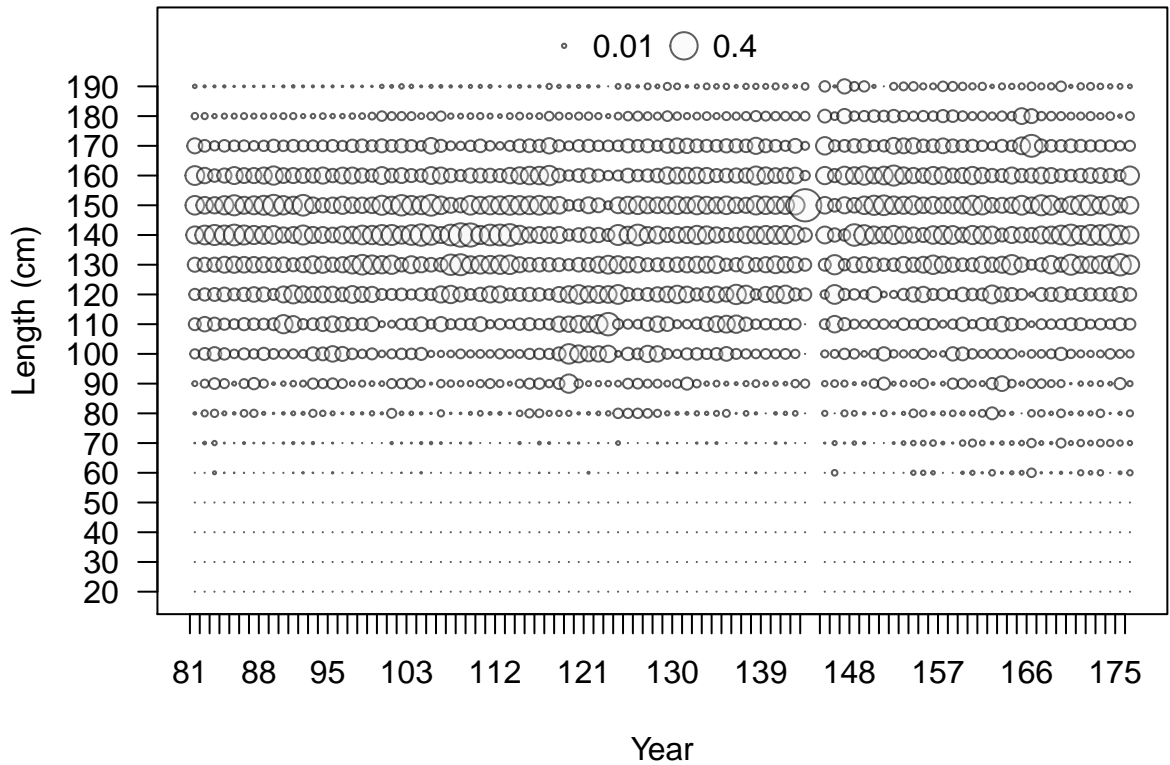




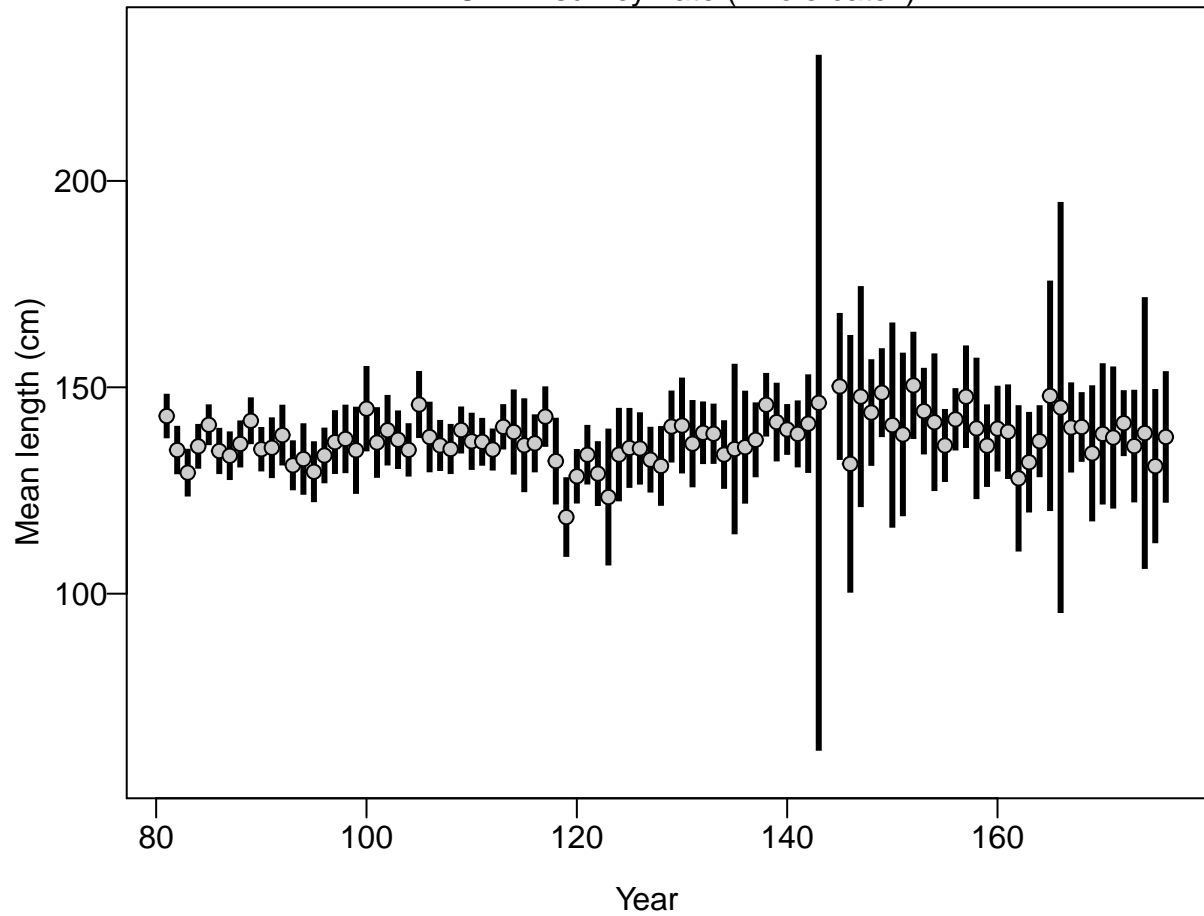








EPO-LL-survey-late (whole catch)



EPO-LL-survey-early

Sum of N adj.=470.6

0.20

0.15

0.10

0.05

0.00

Proportion

EPO-LL-survey-late

Sum of N adj.=2996.3

0.20

0.15

0.10

0.05

0.00

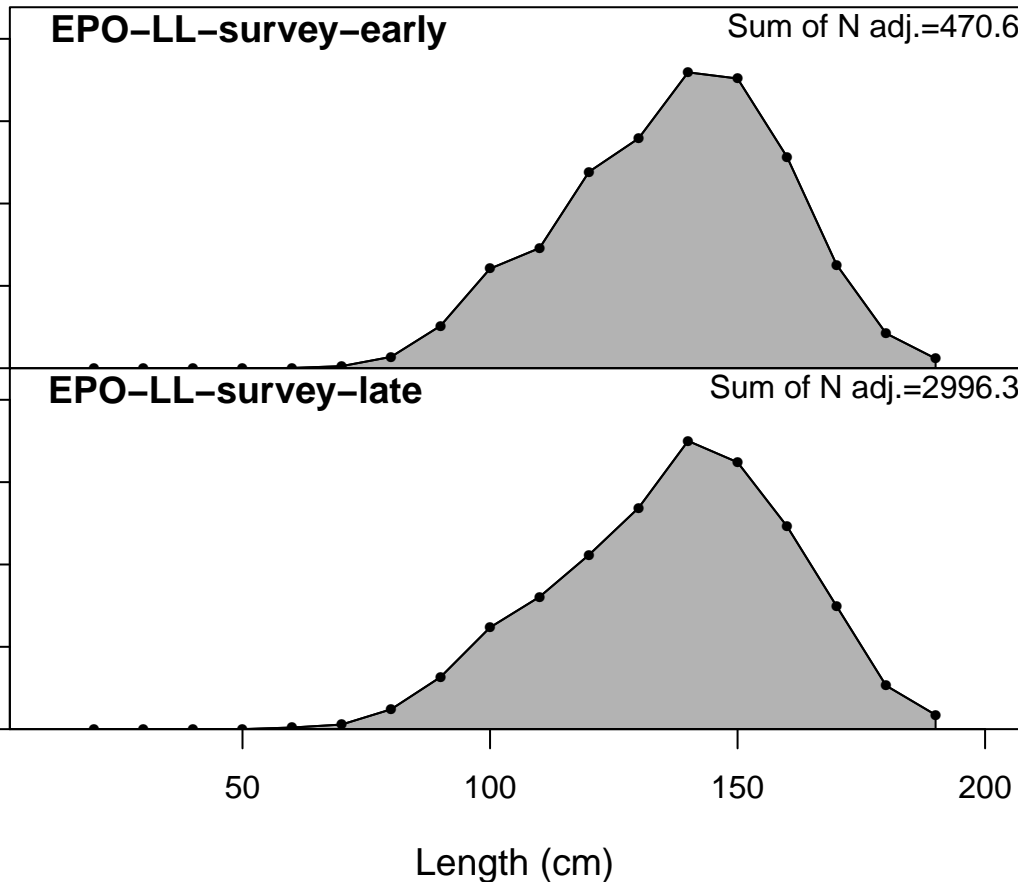
50

100

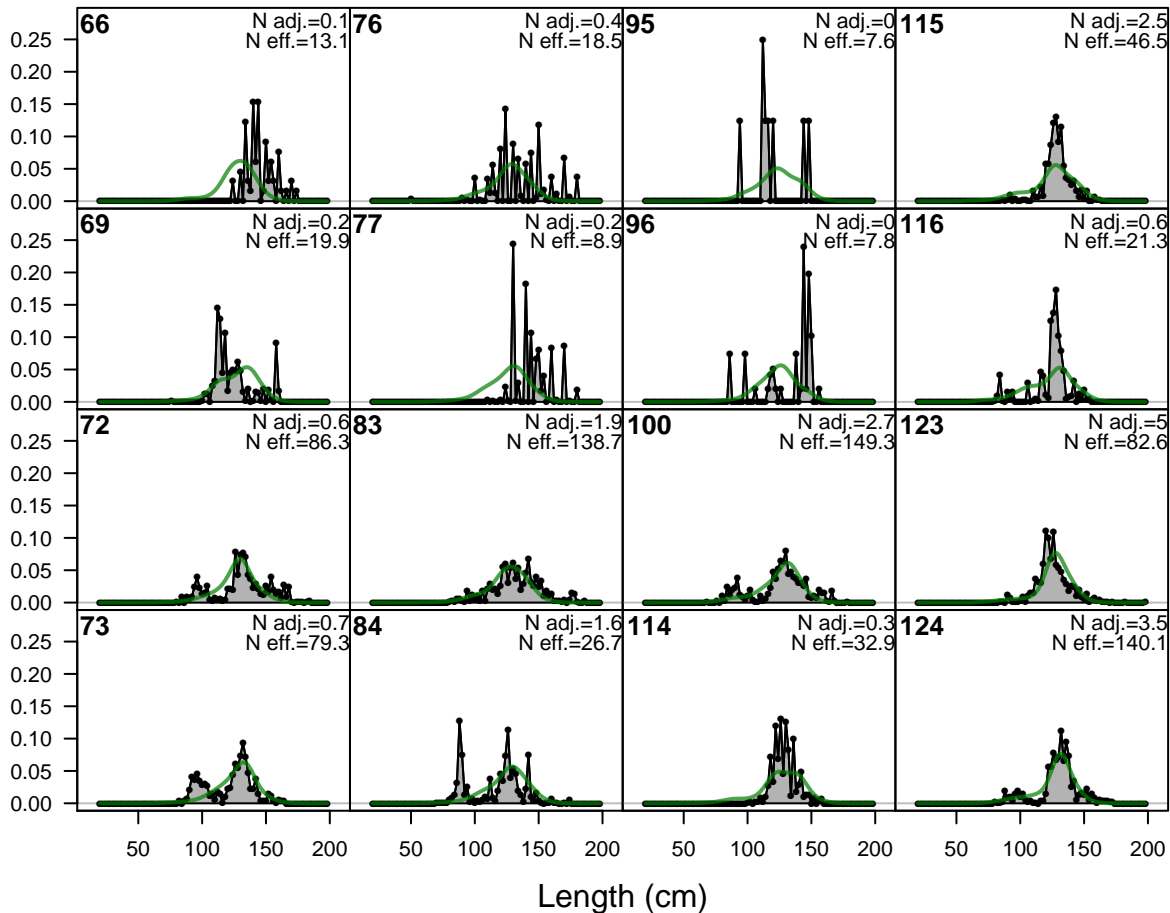
150

200

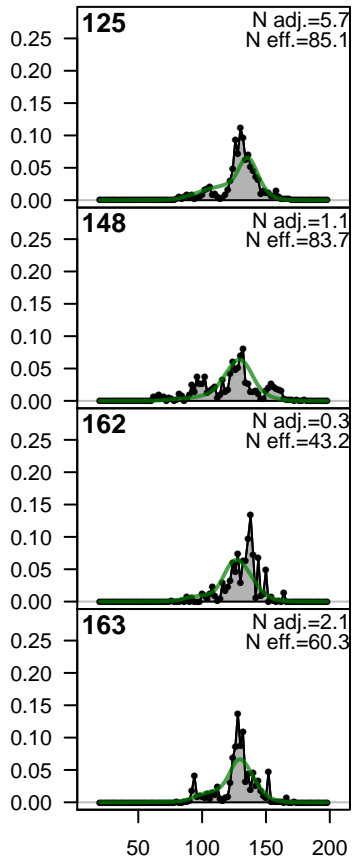
Length (cm)



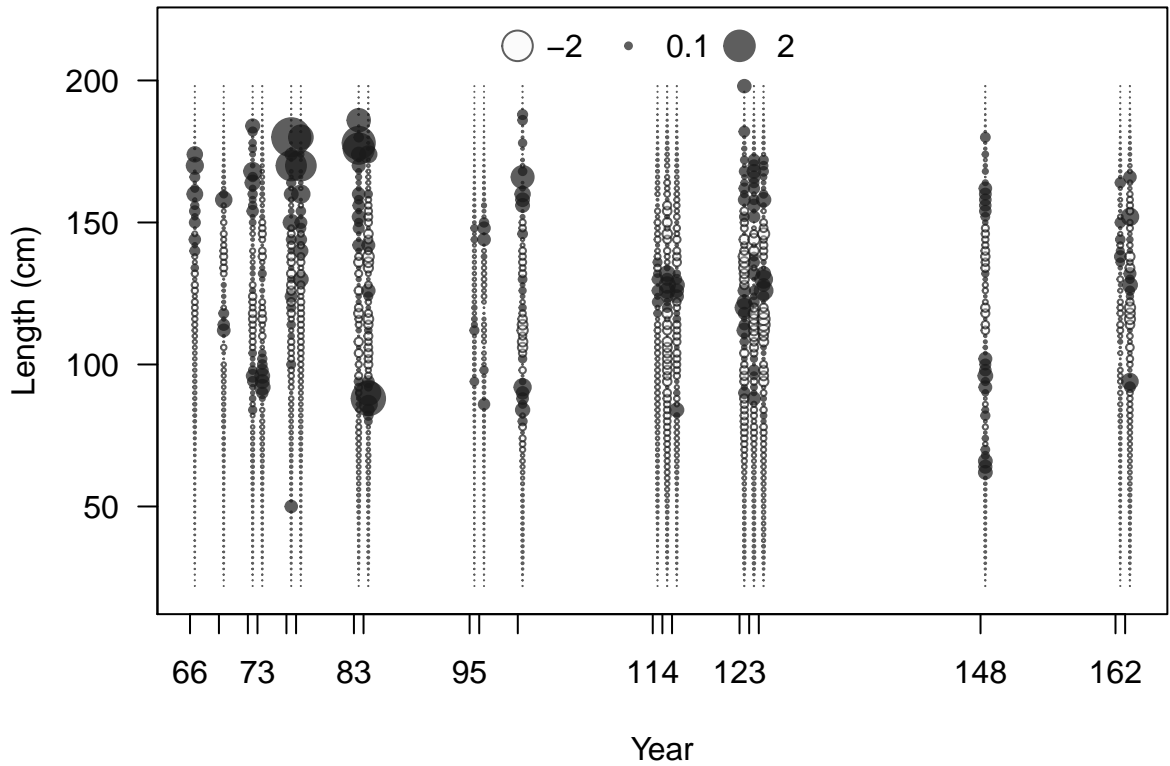
Proportion

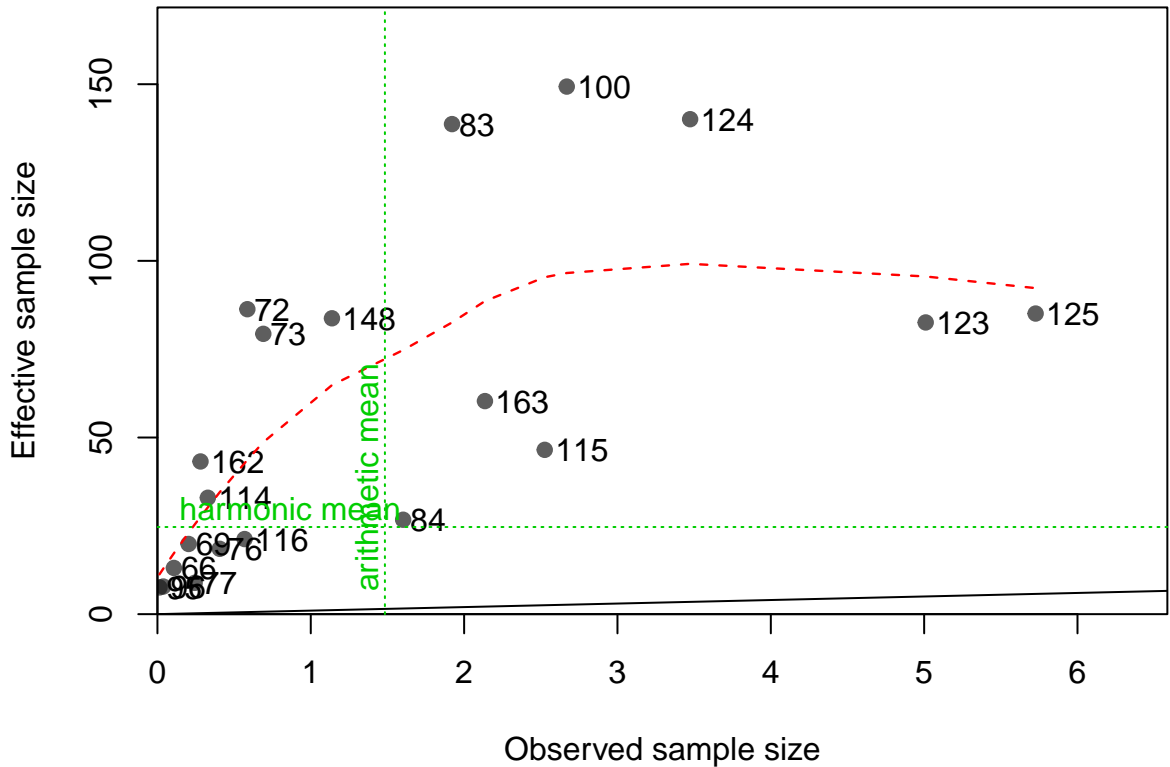


Proportion

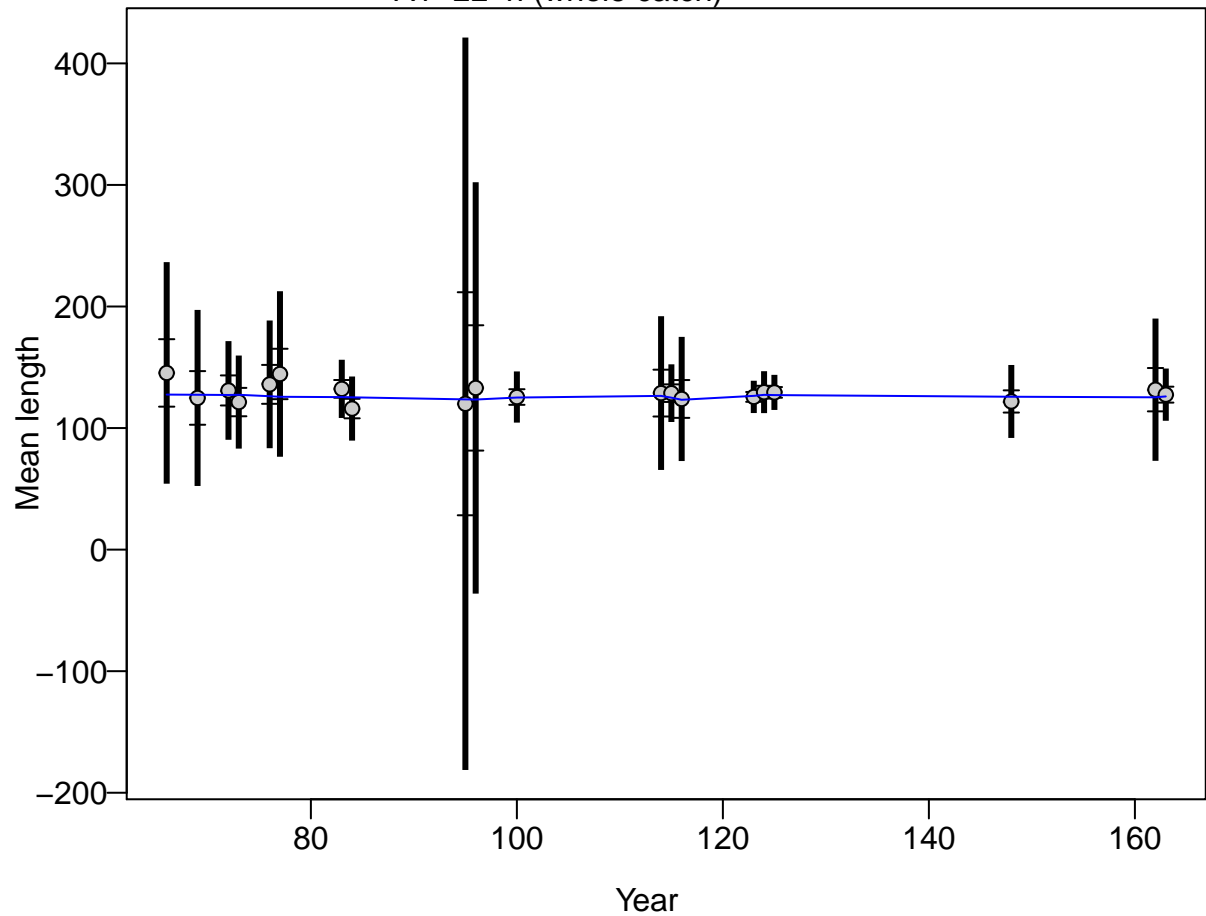


Length (cm)

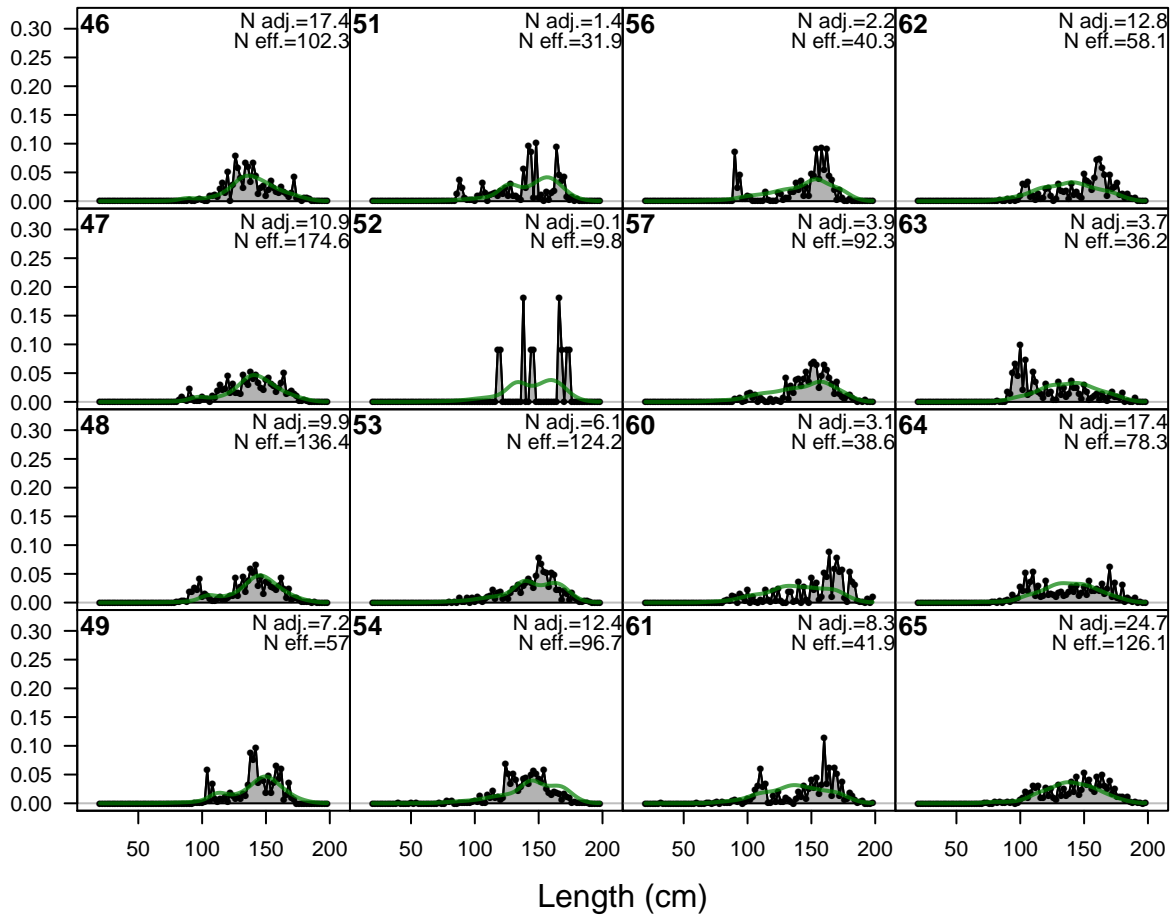




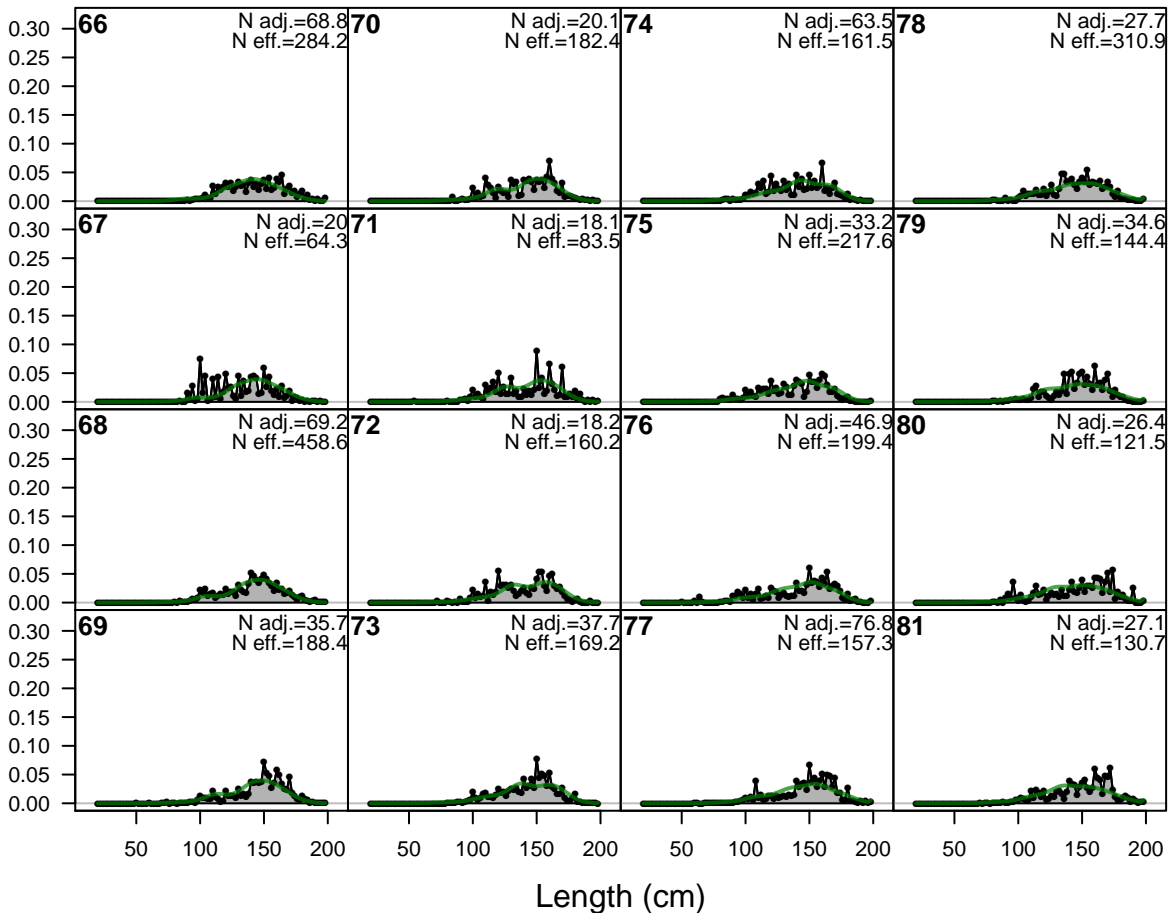
A1-LL-n (whole catch)



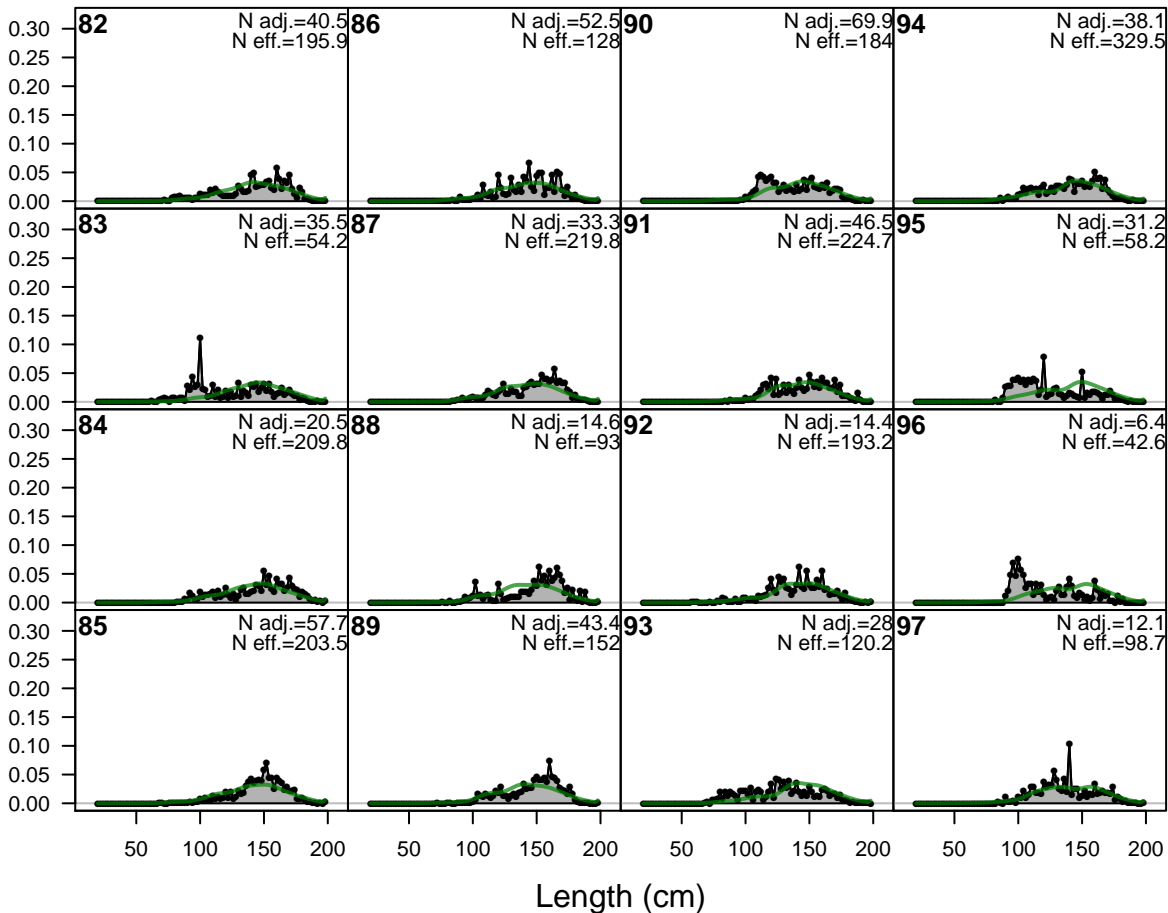
Proportion



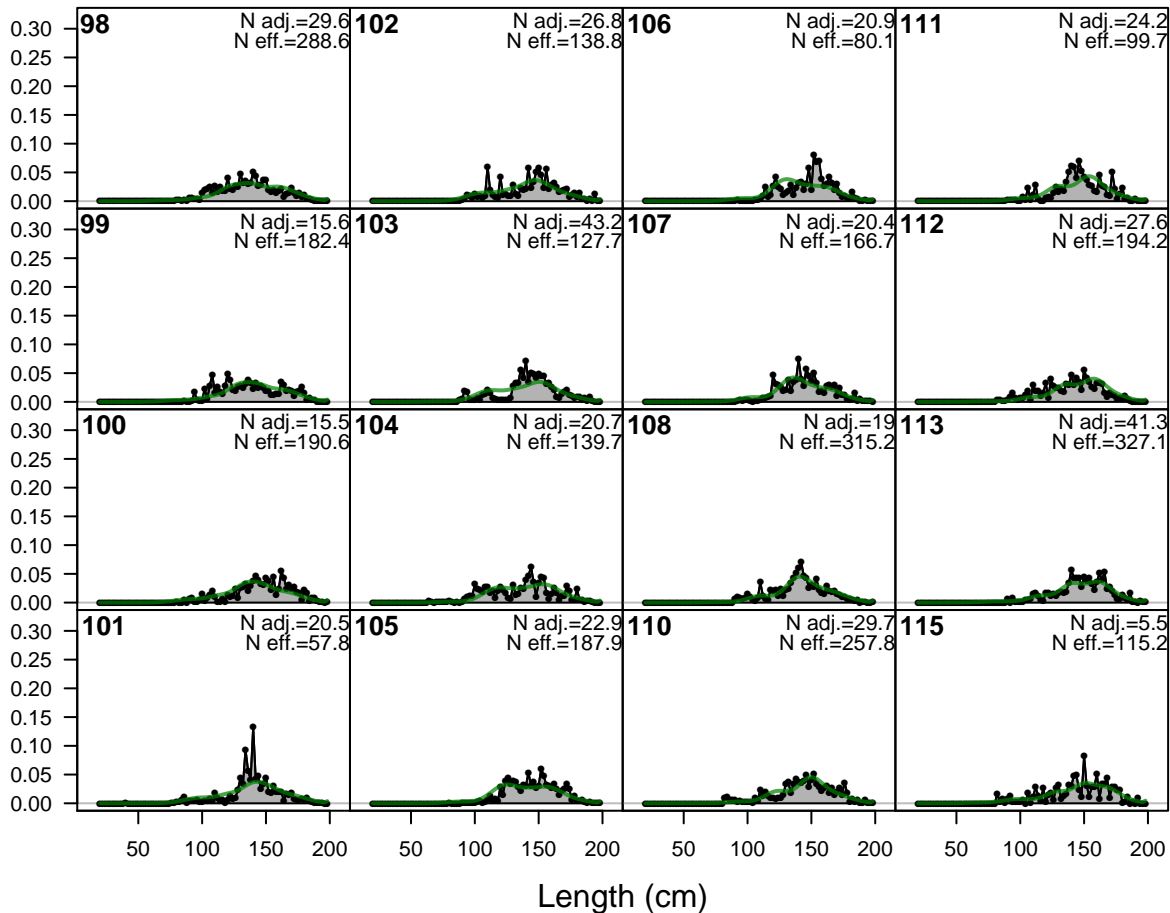
Proportion



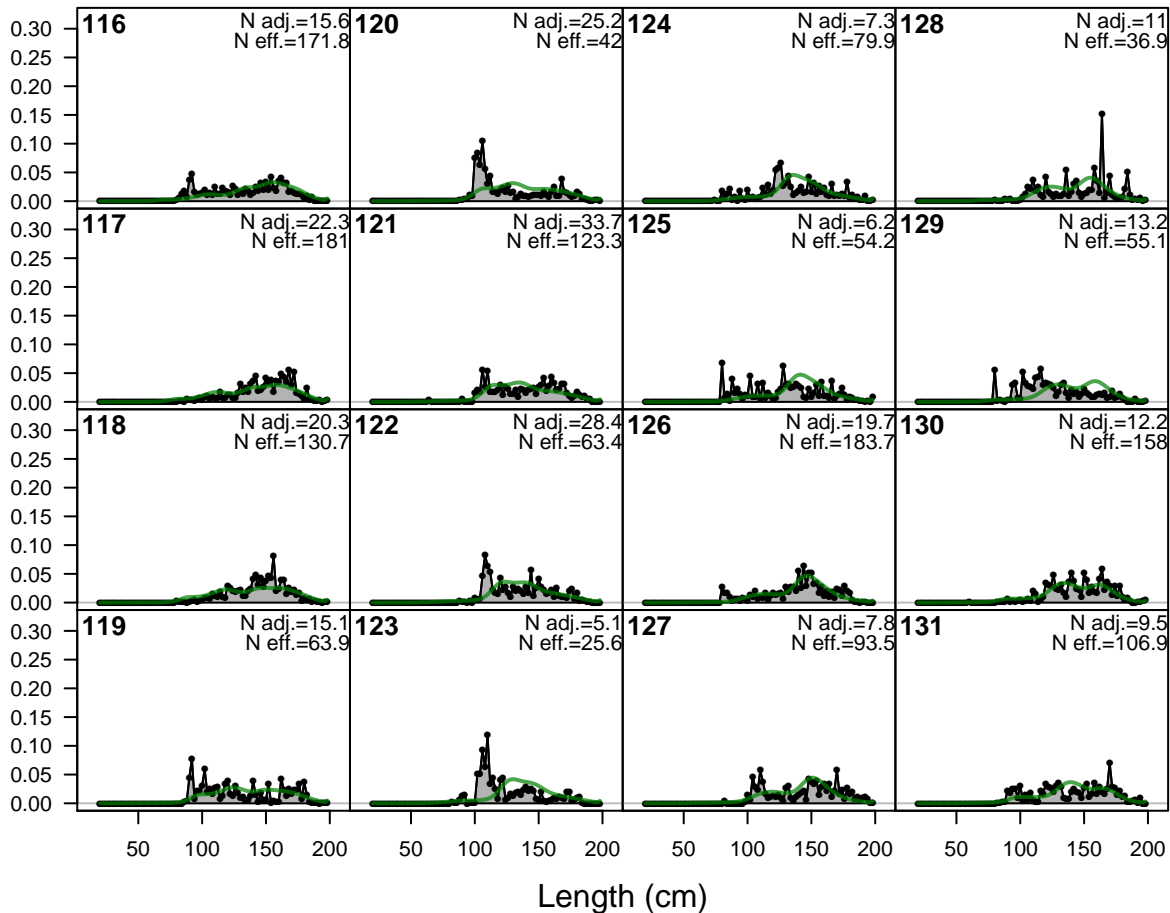
Proportion



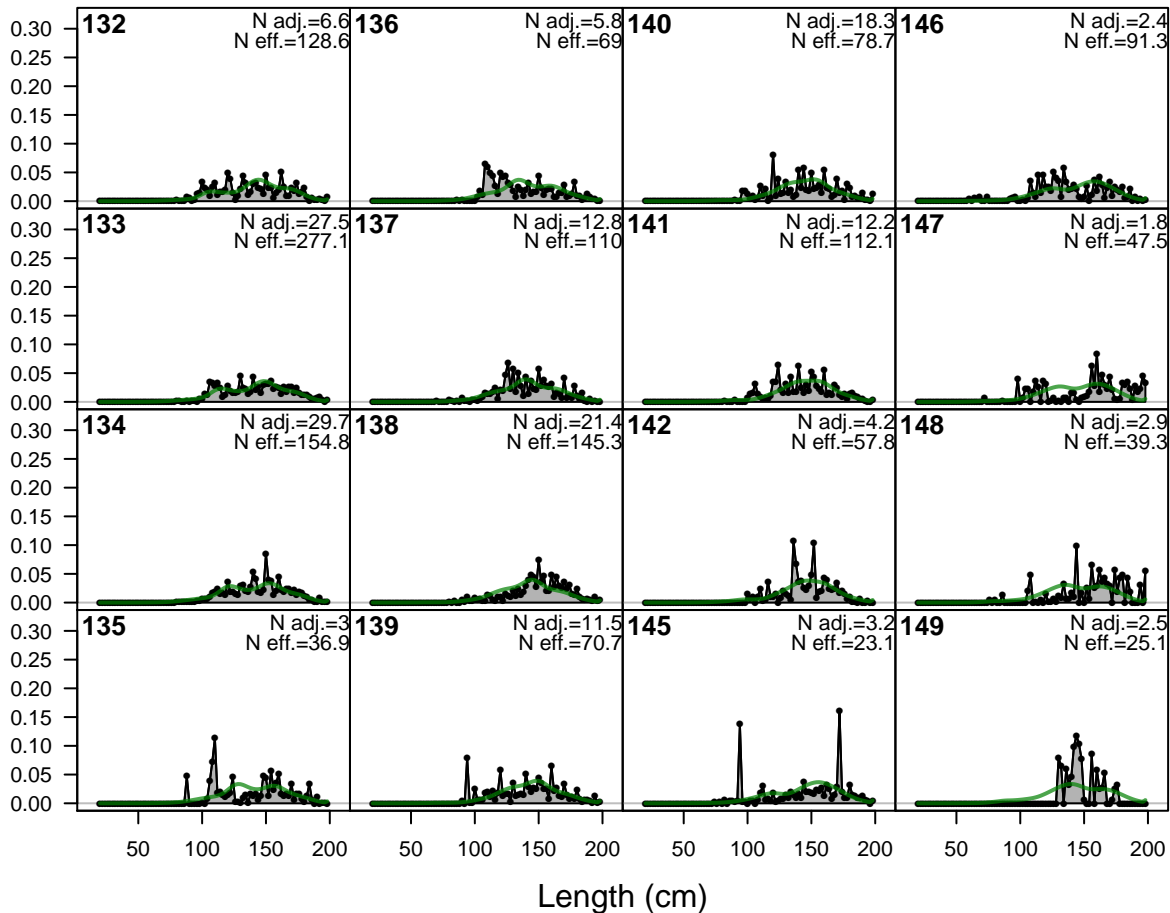
Proportion



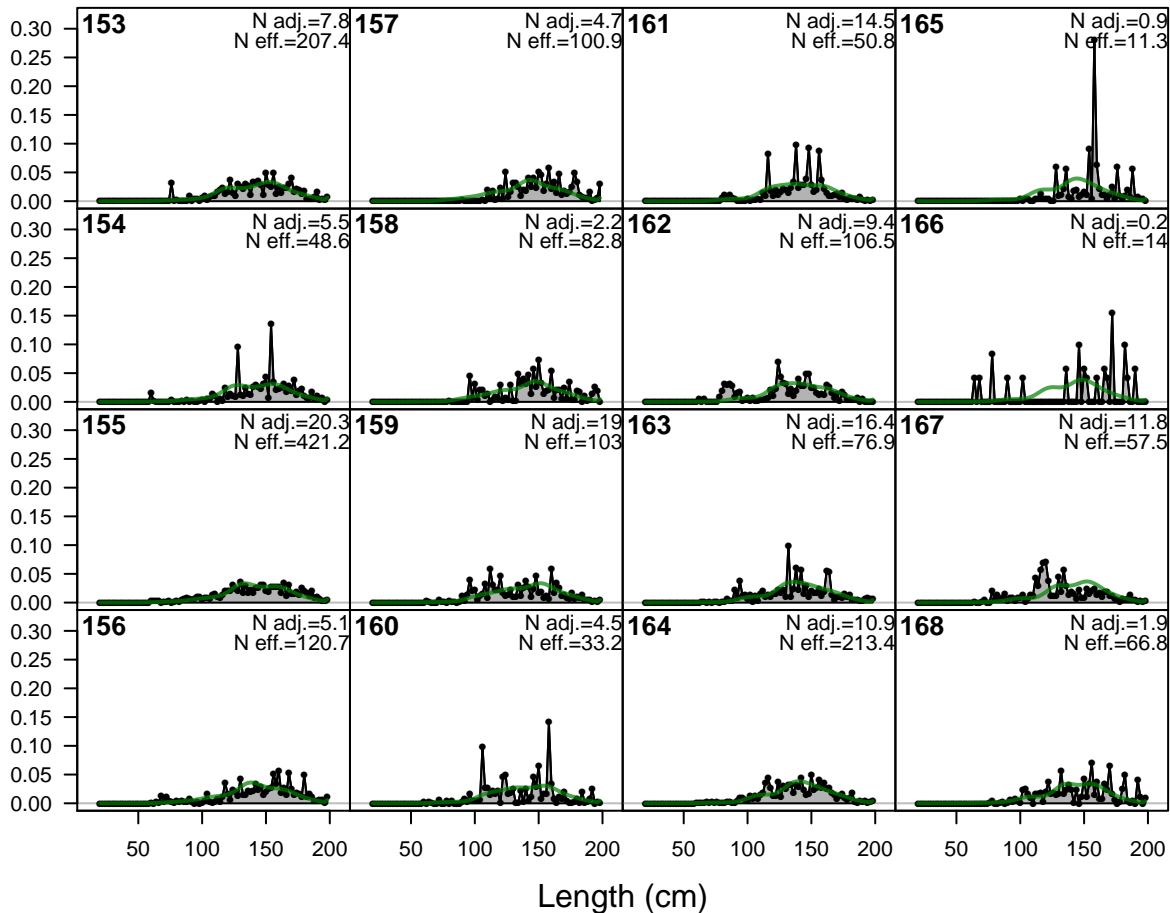
Proportion



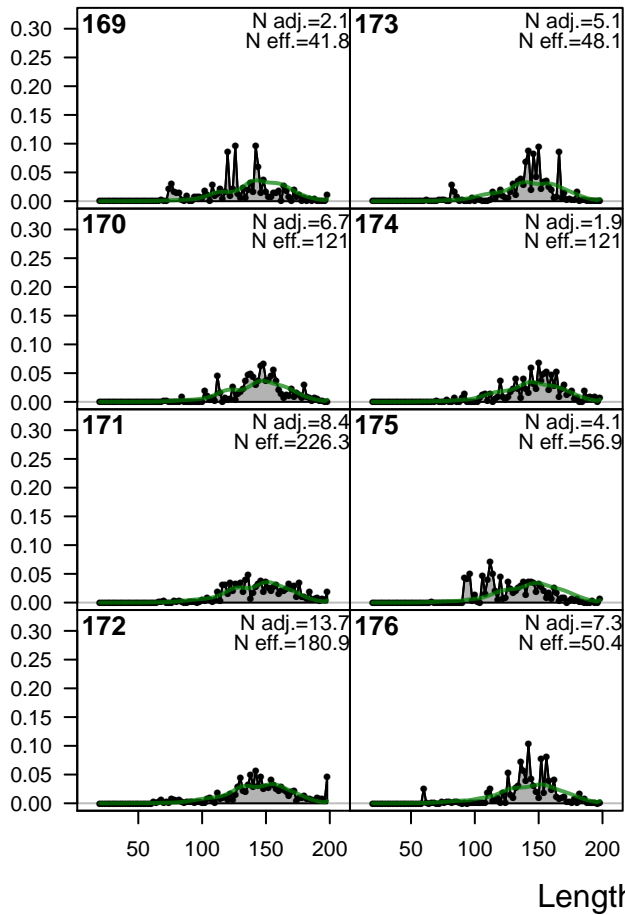
Proportion

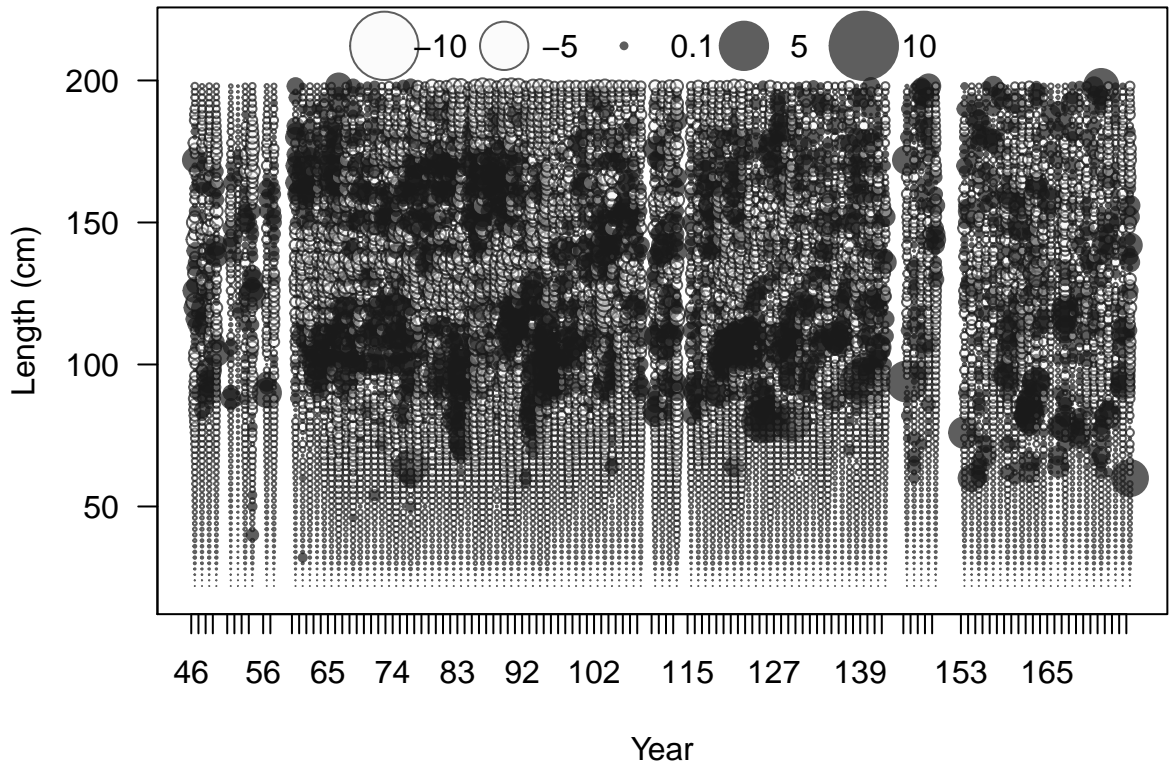


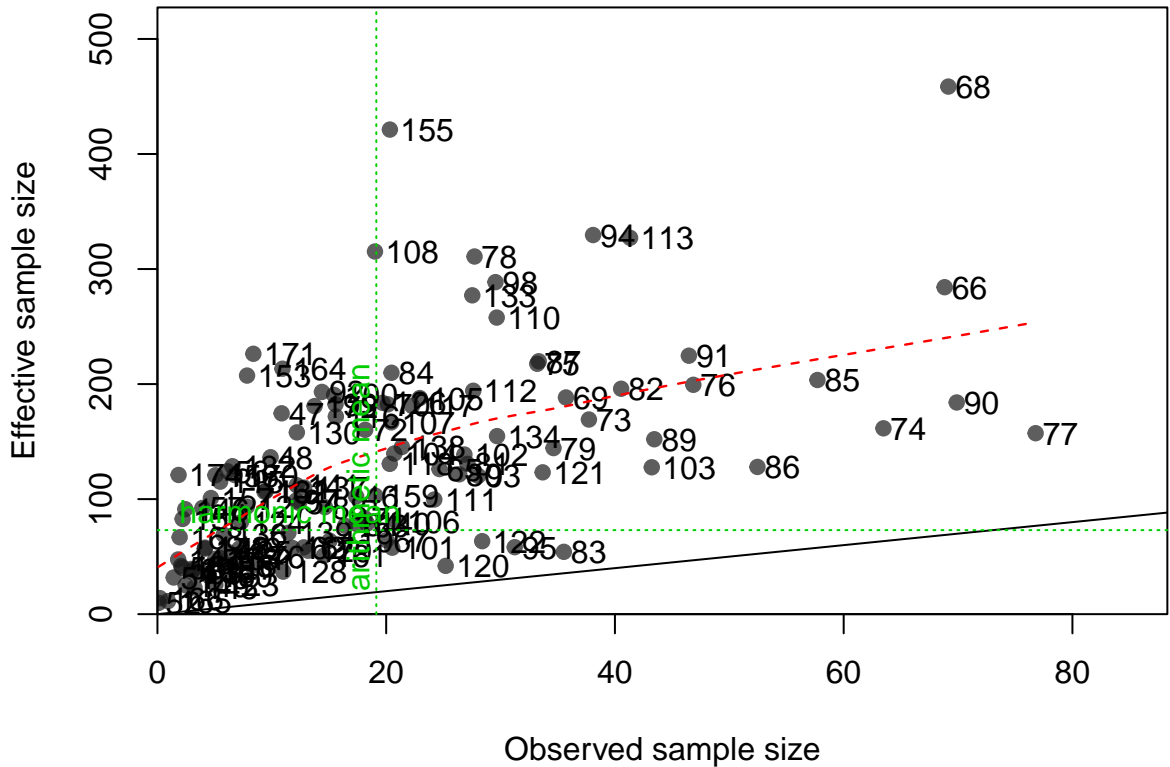
Proportion



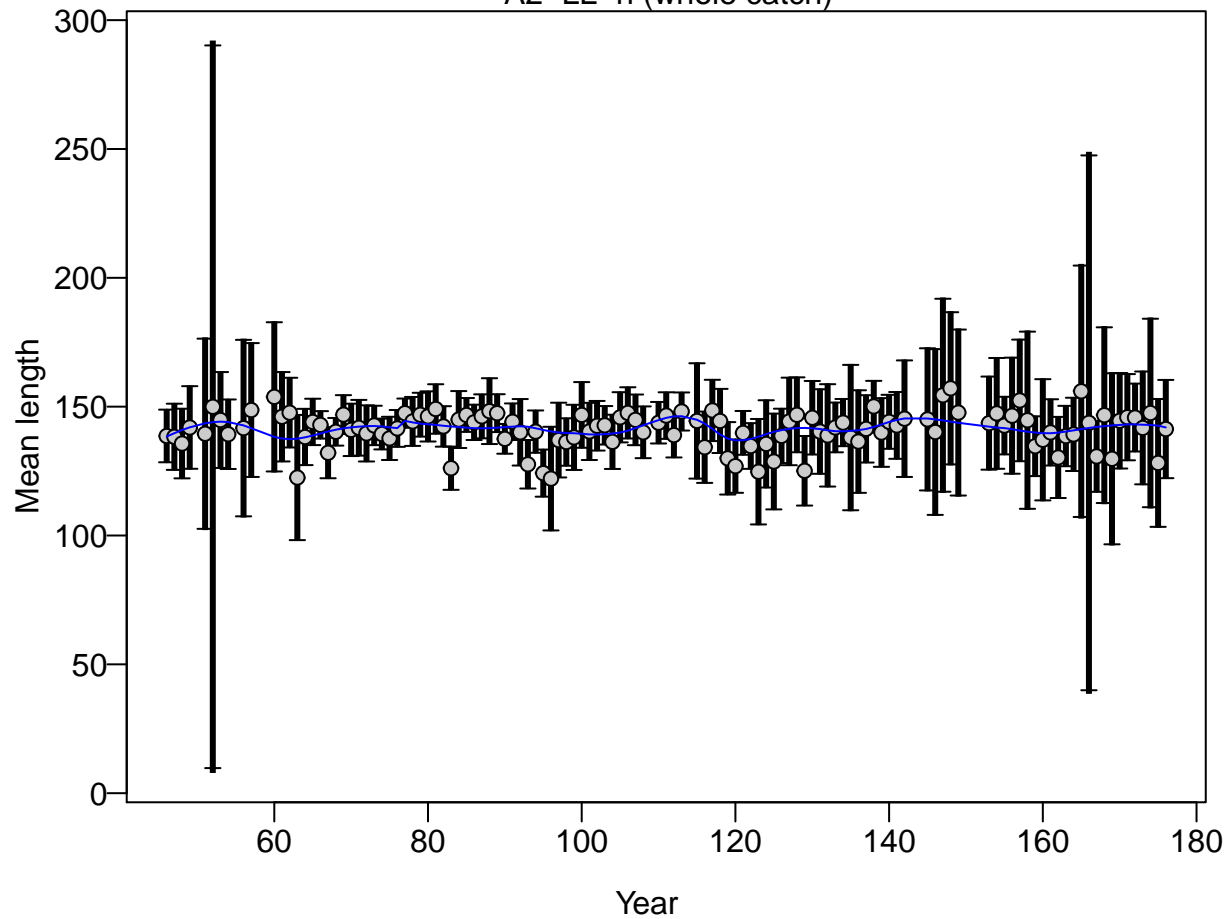
Proportion



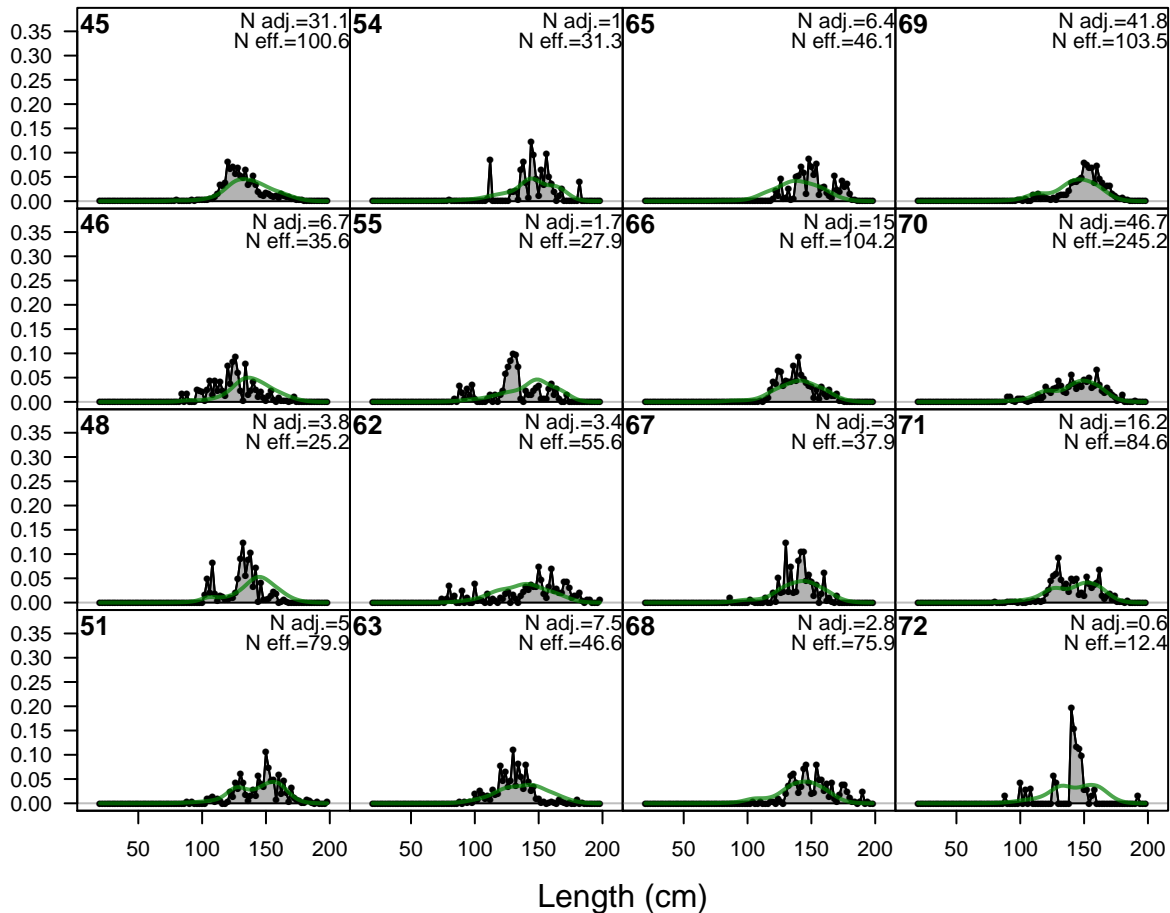




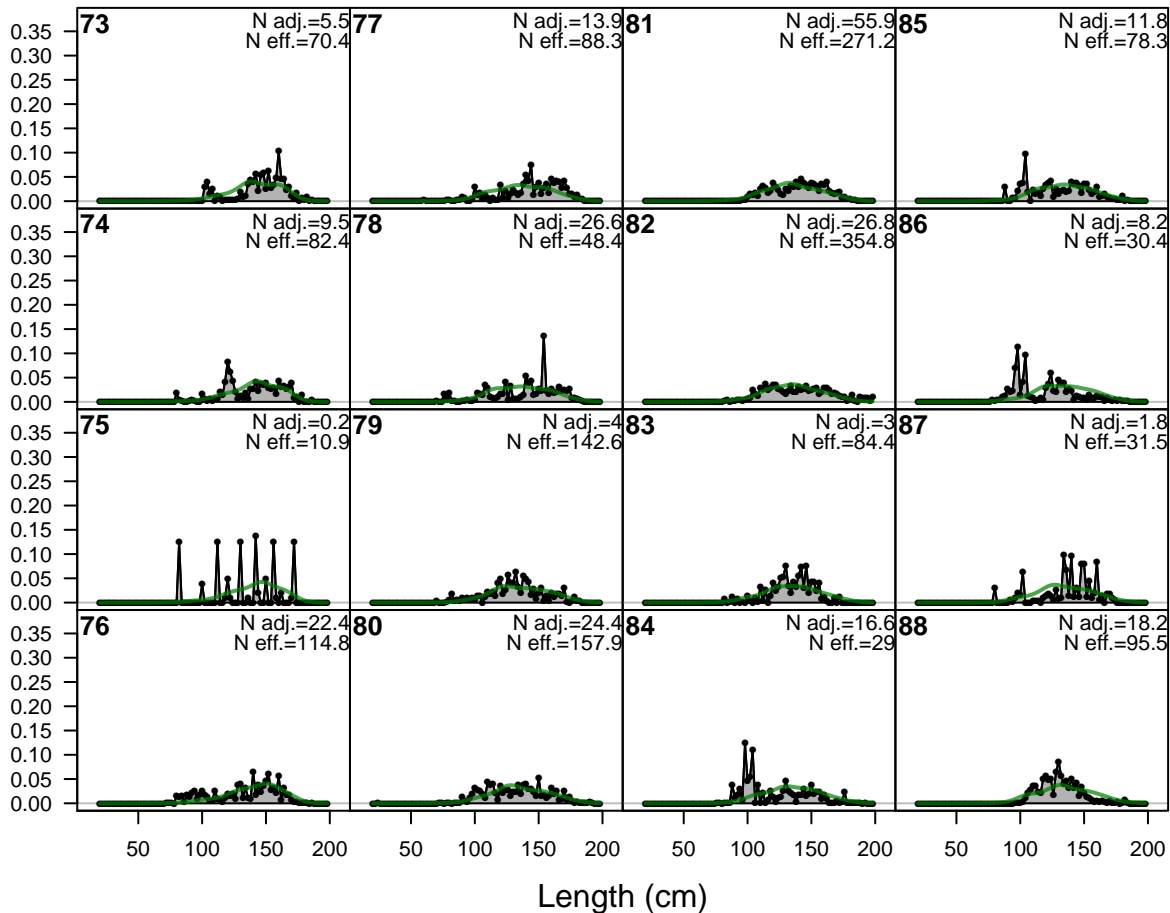
A2-LL-n (whole catch)



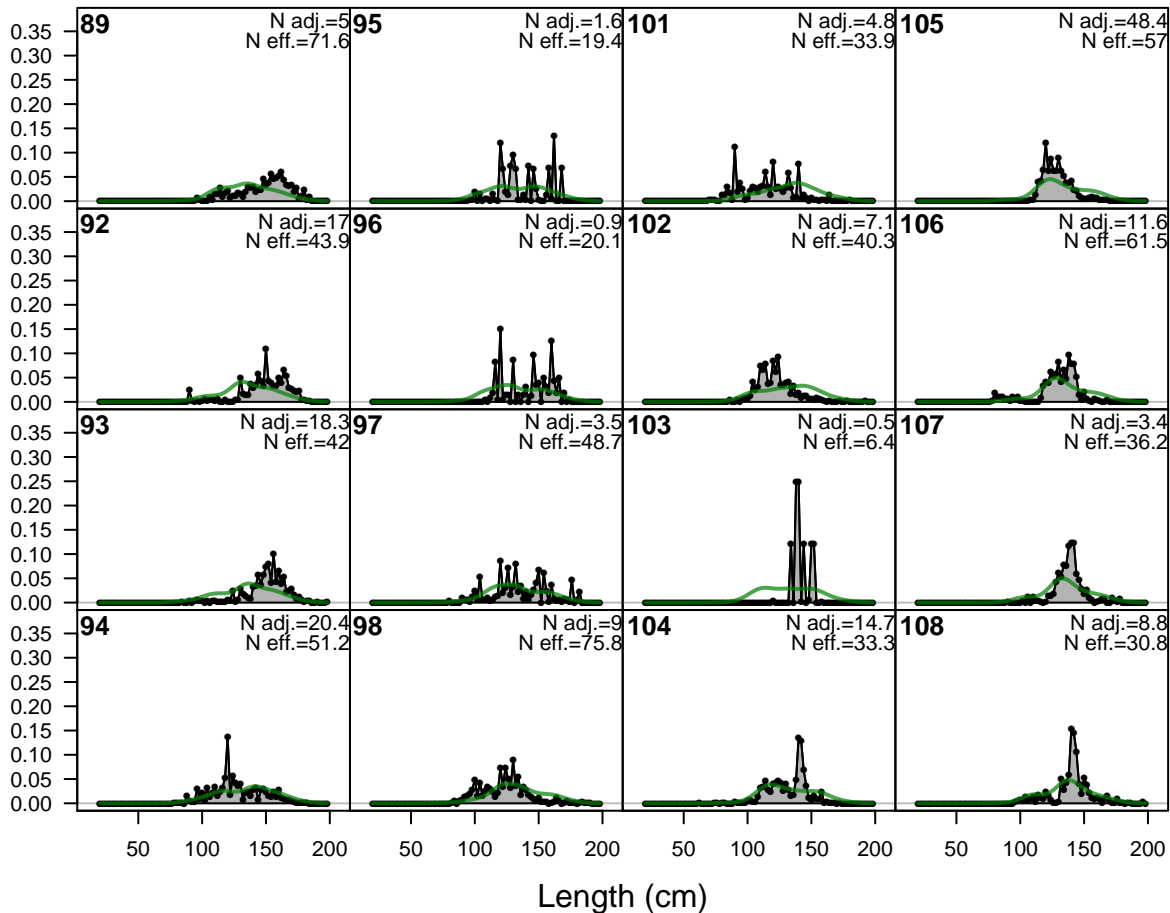
Proportion



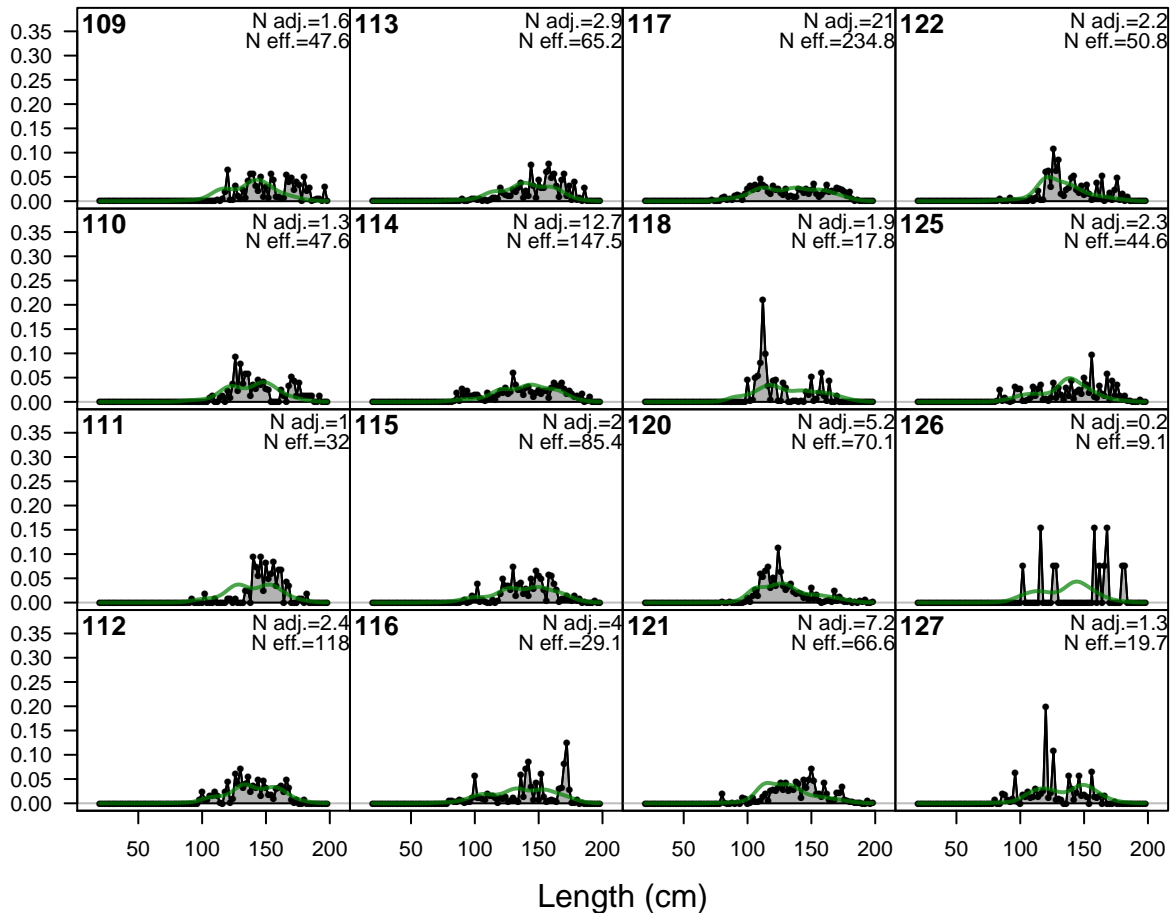
Proportion



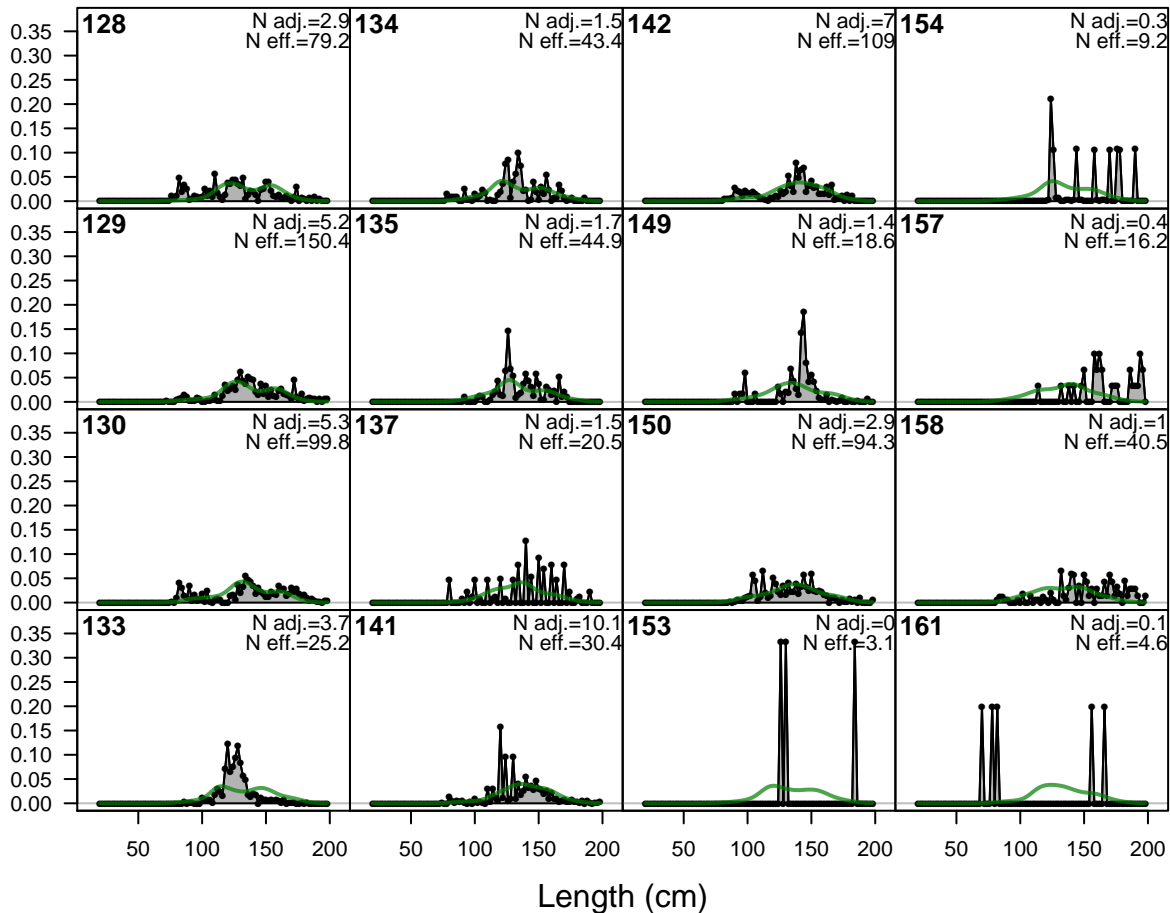
Proportion



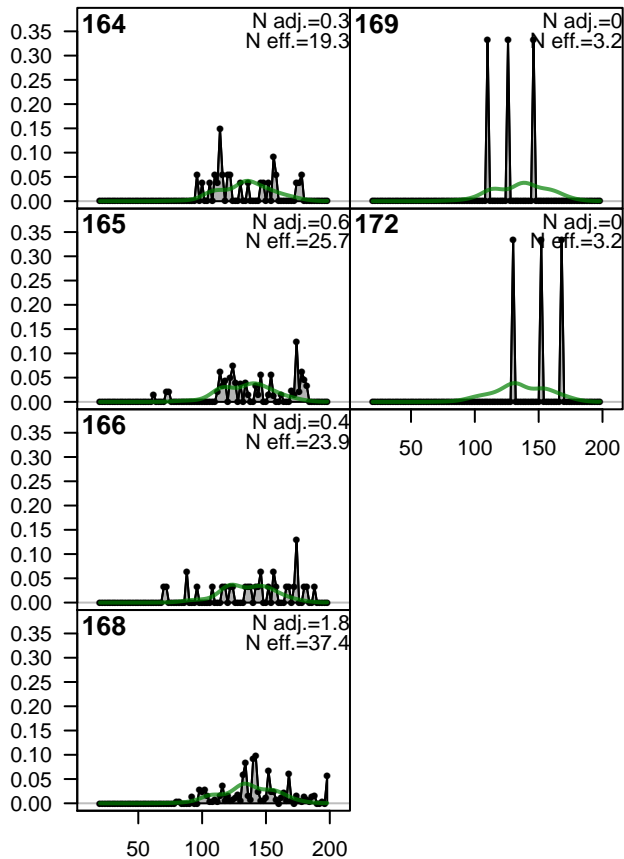
Proportion



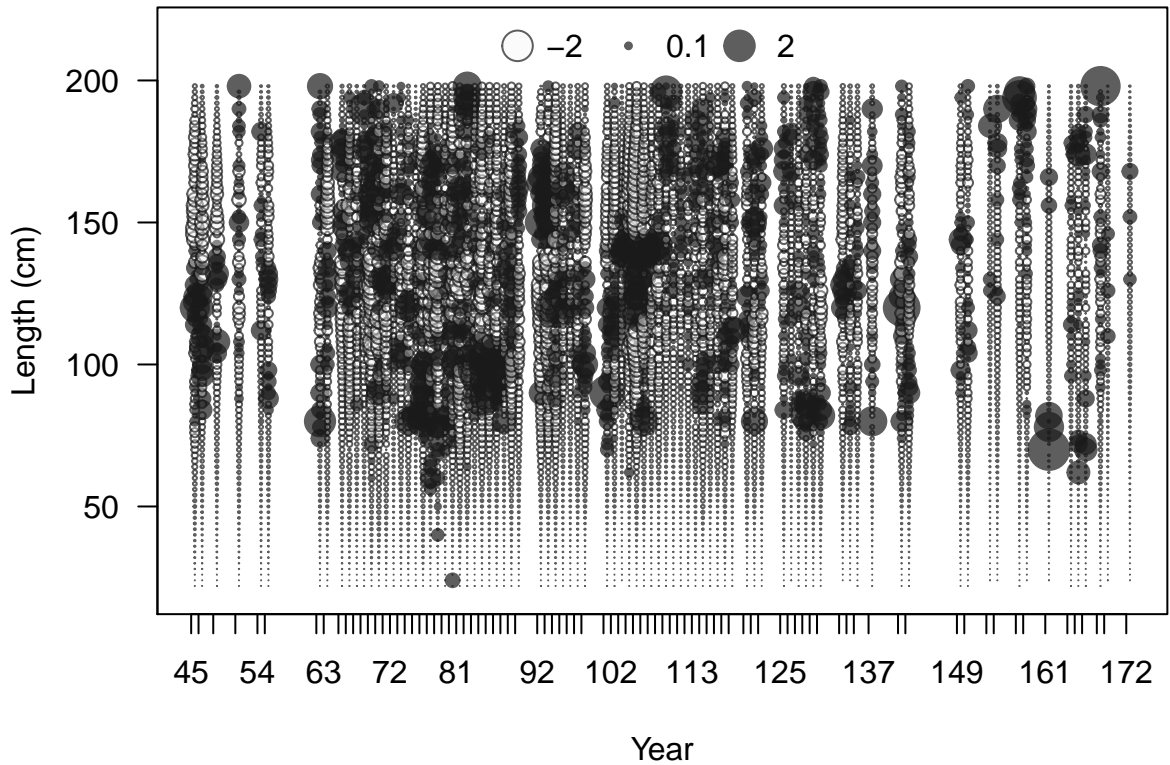
Proportion

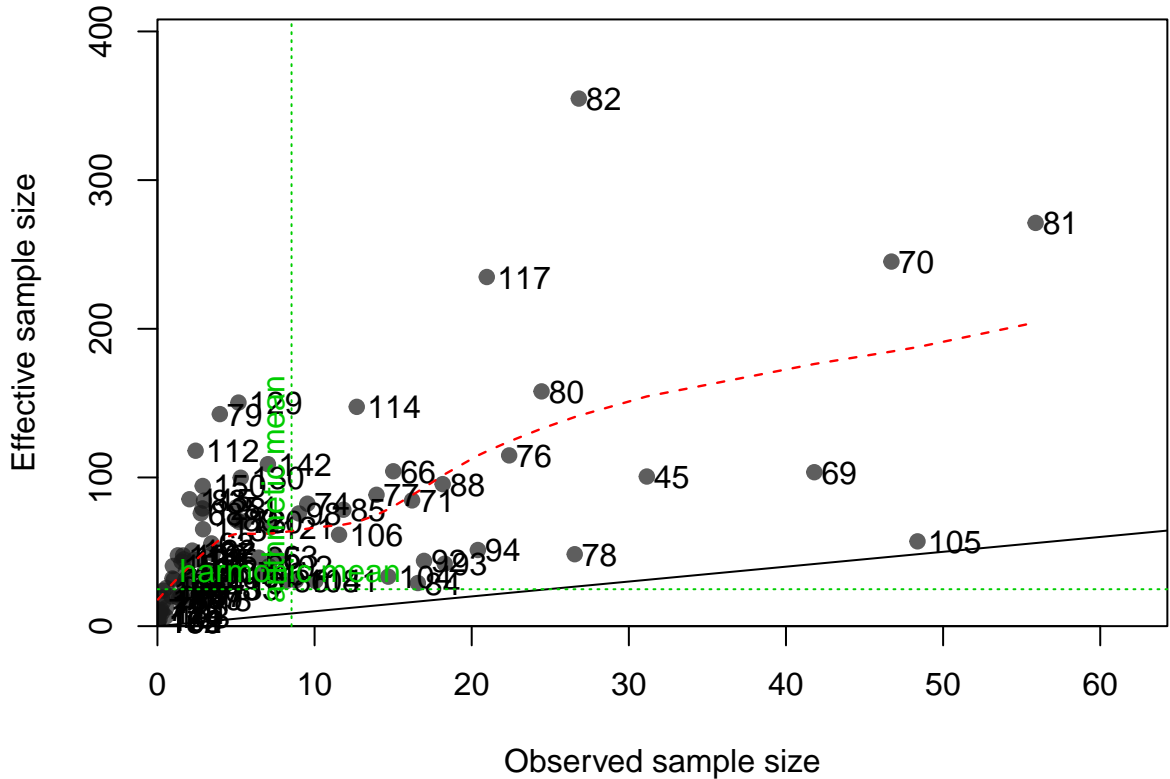


Proportion

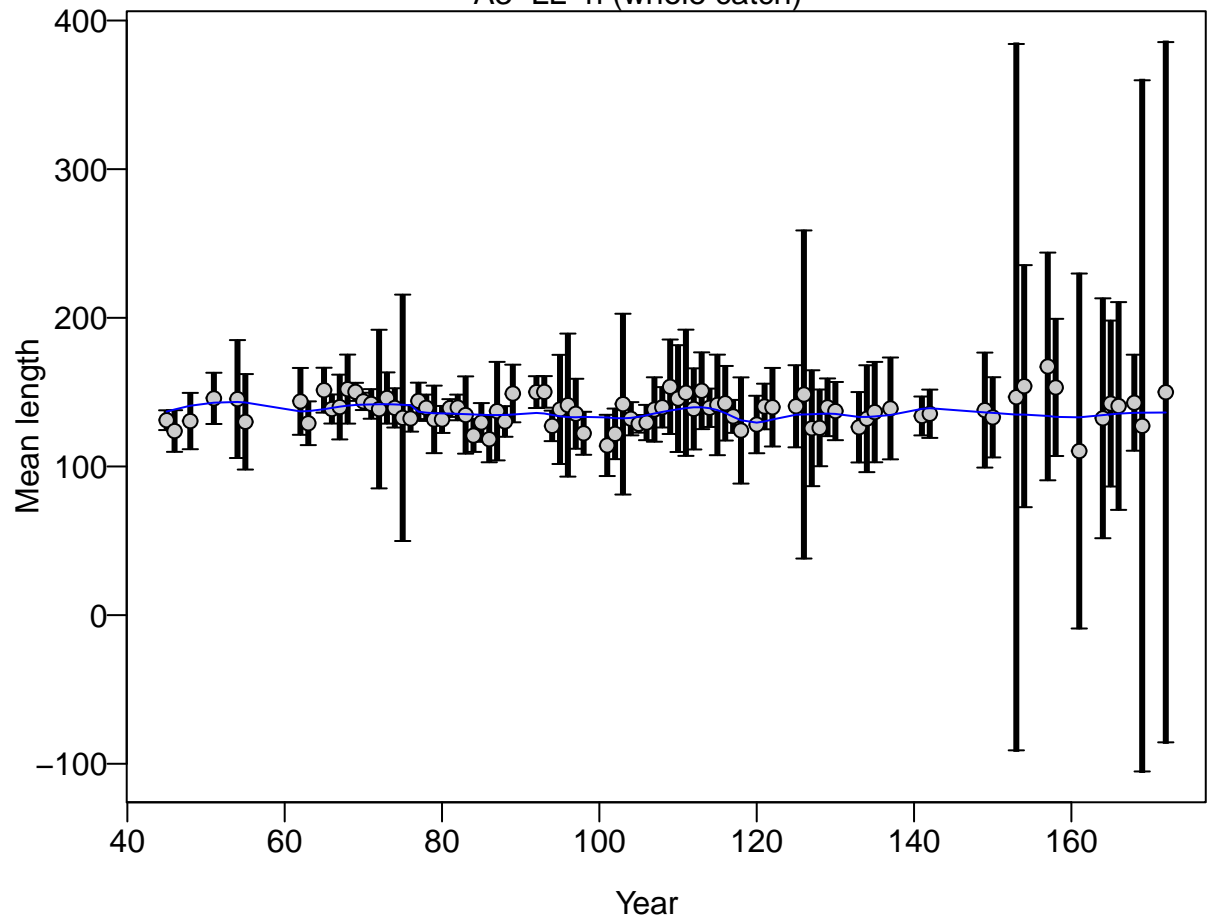


Length (cm)

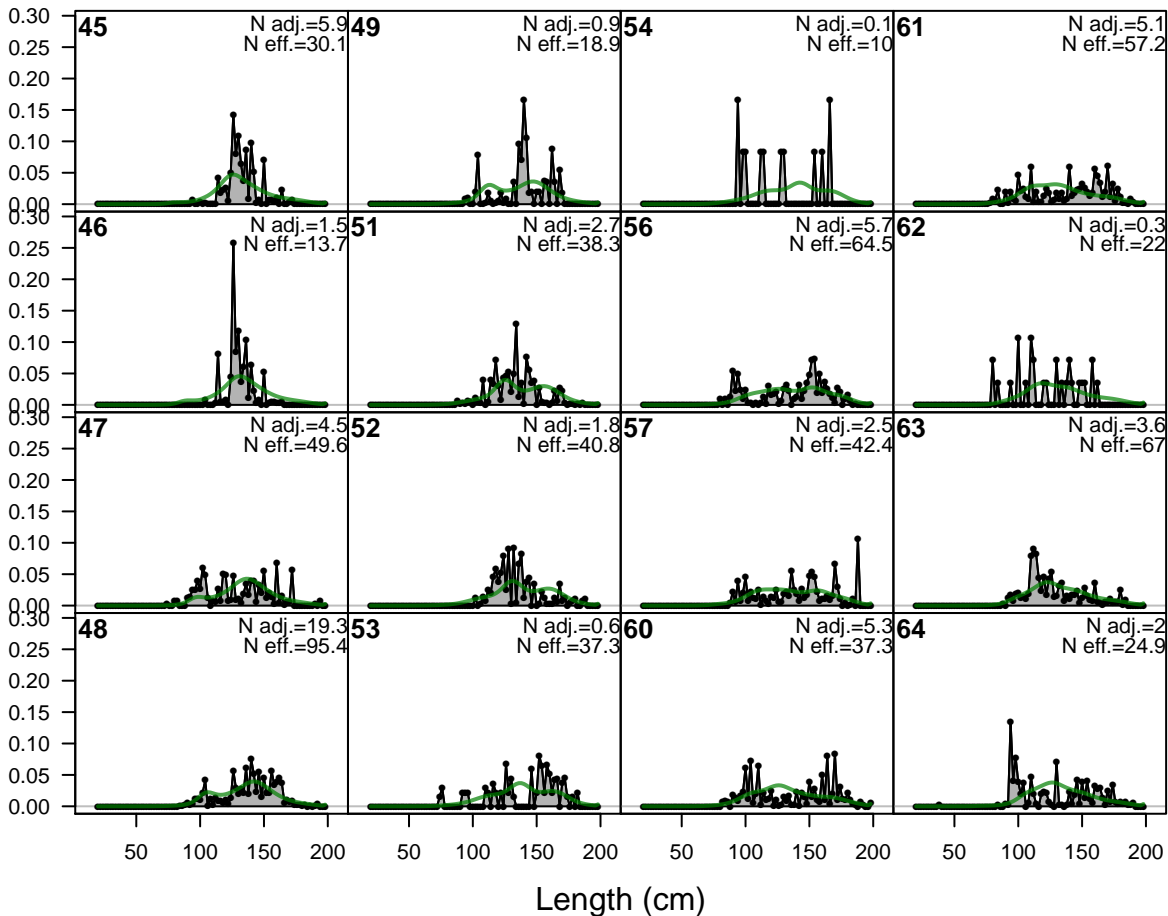




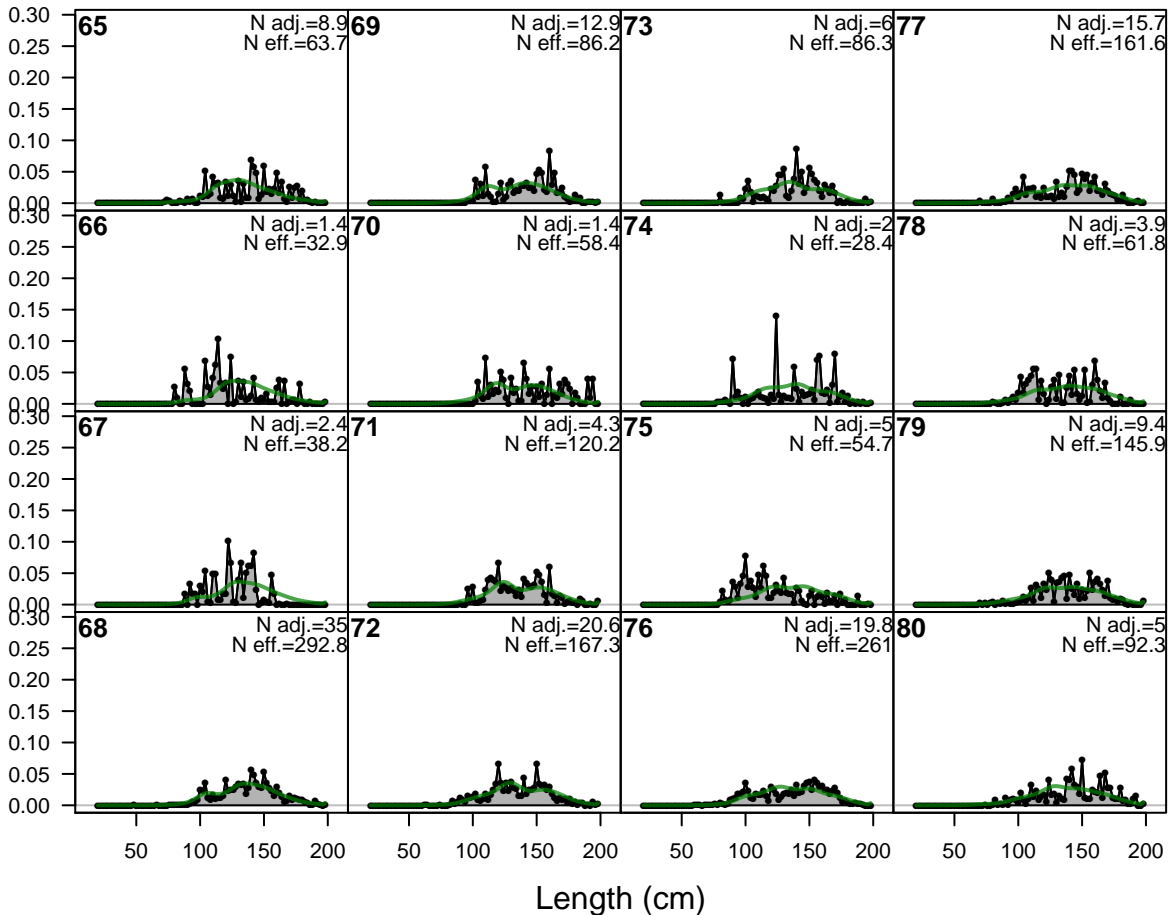
A3-LL-n (whole catch)



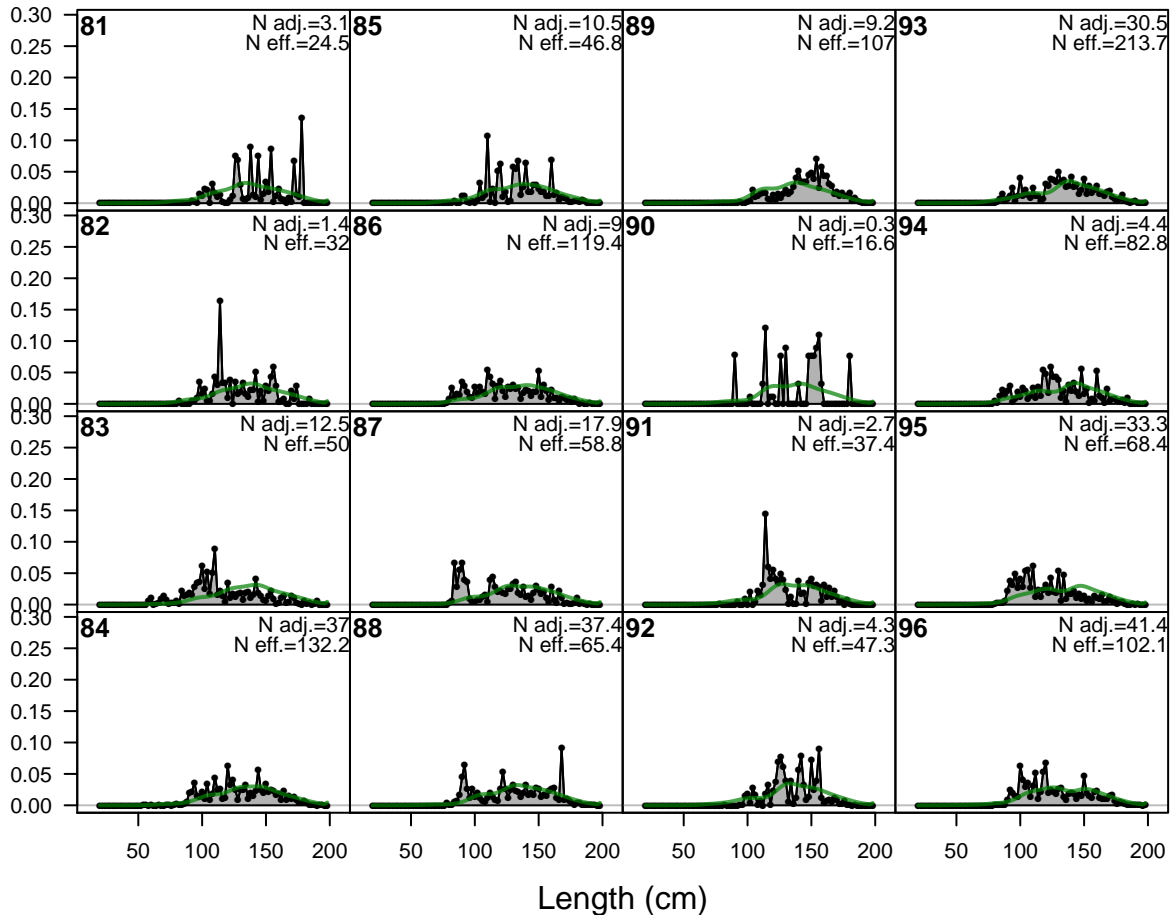
Proportion



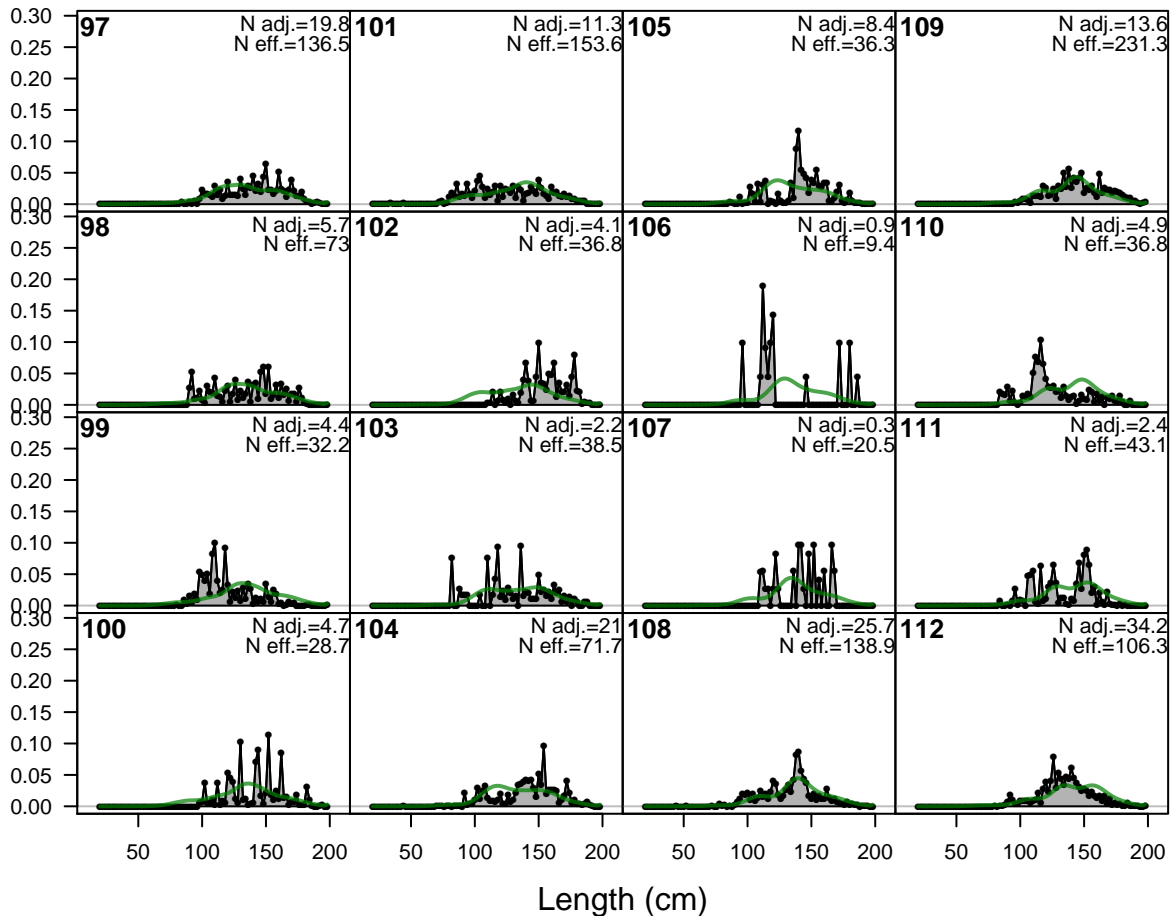
Proportion



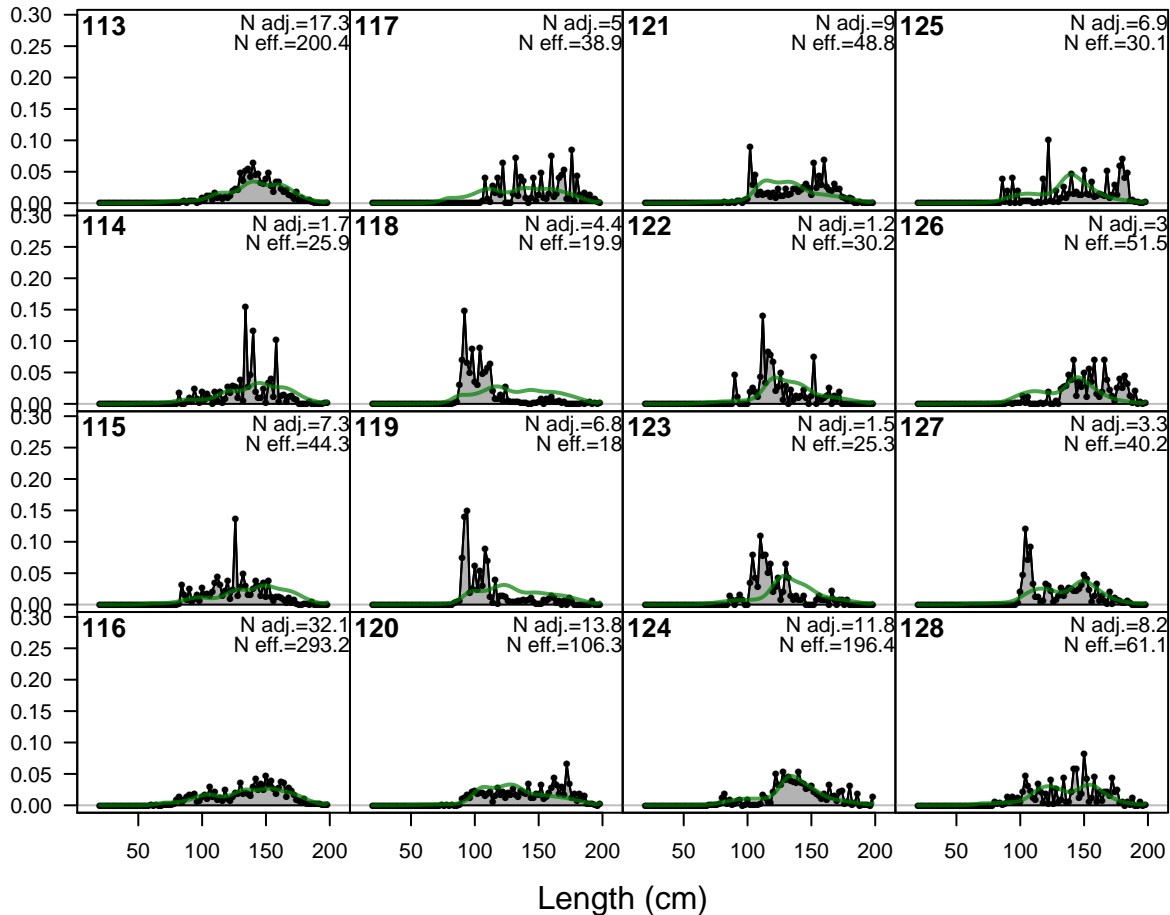
Proportion



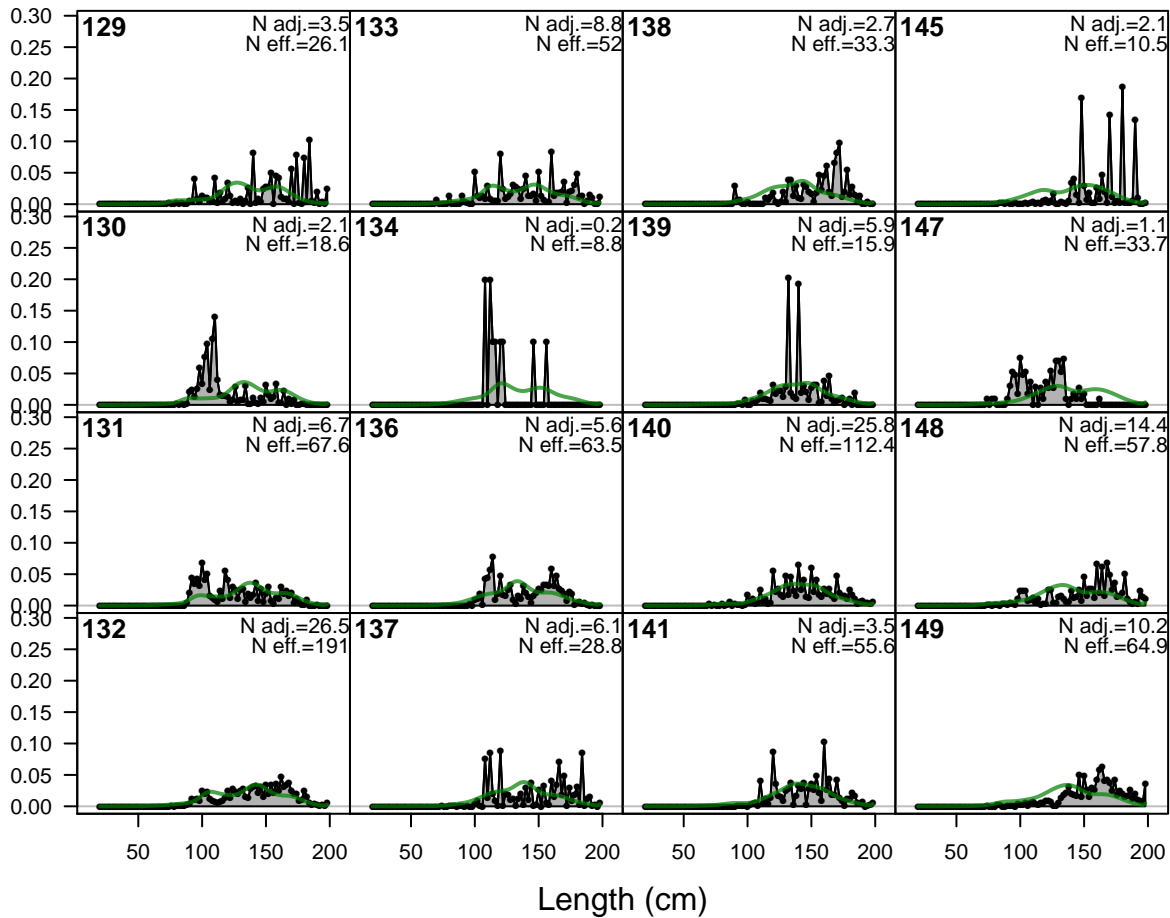
Proportion



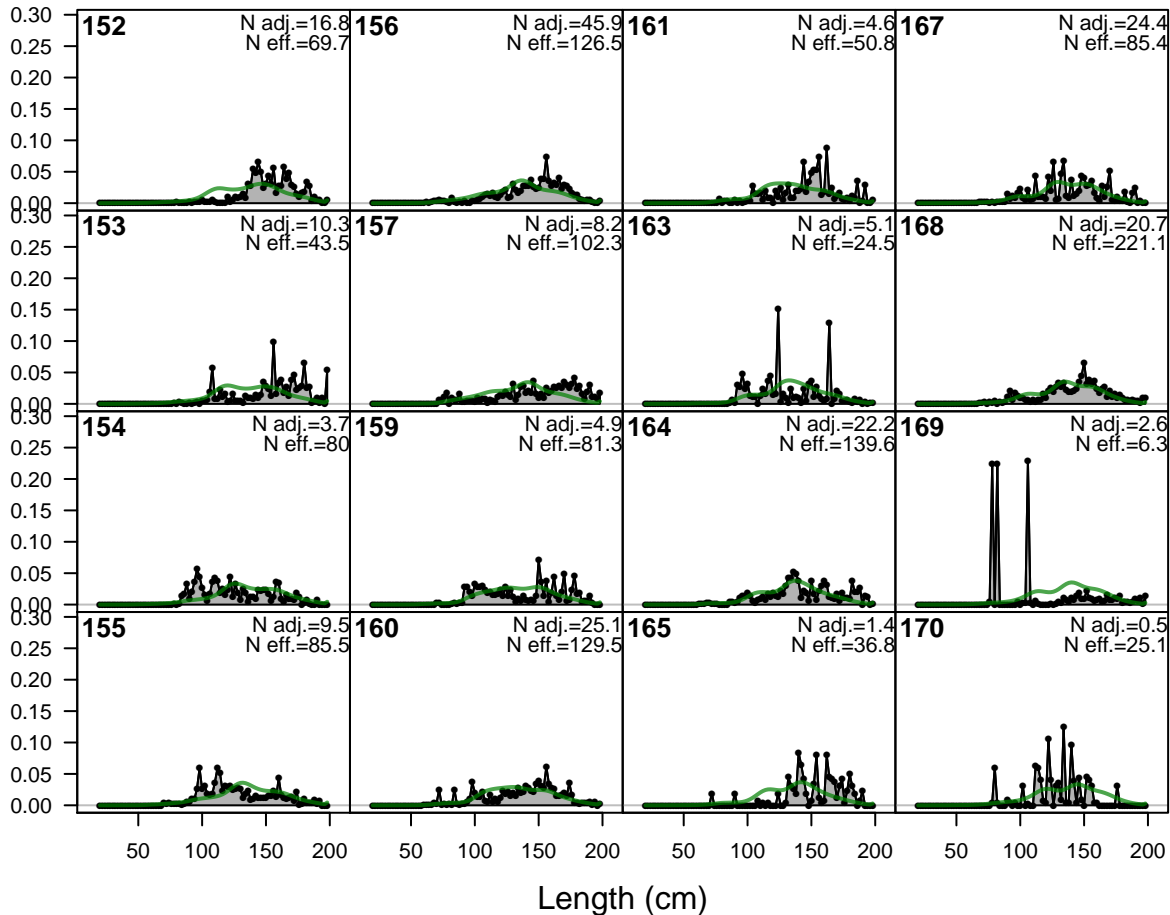
Proportion



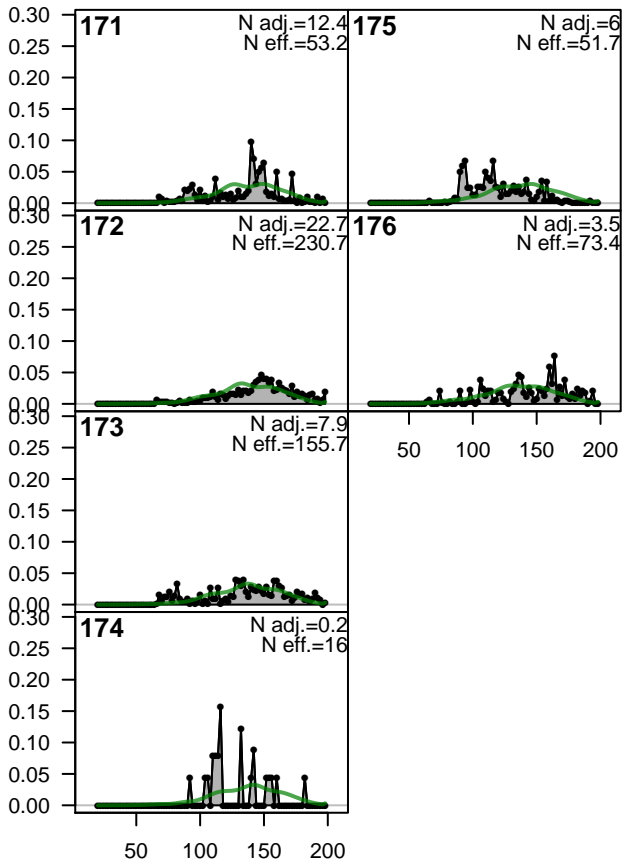
Proportion



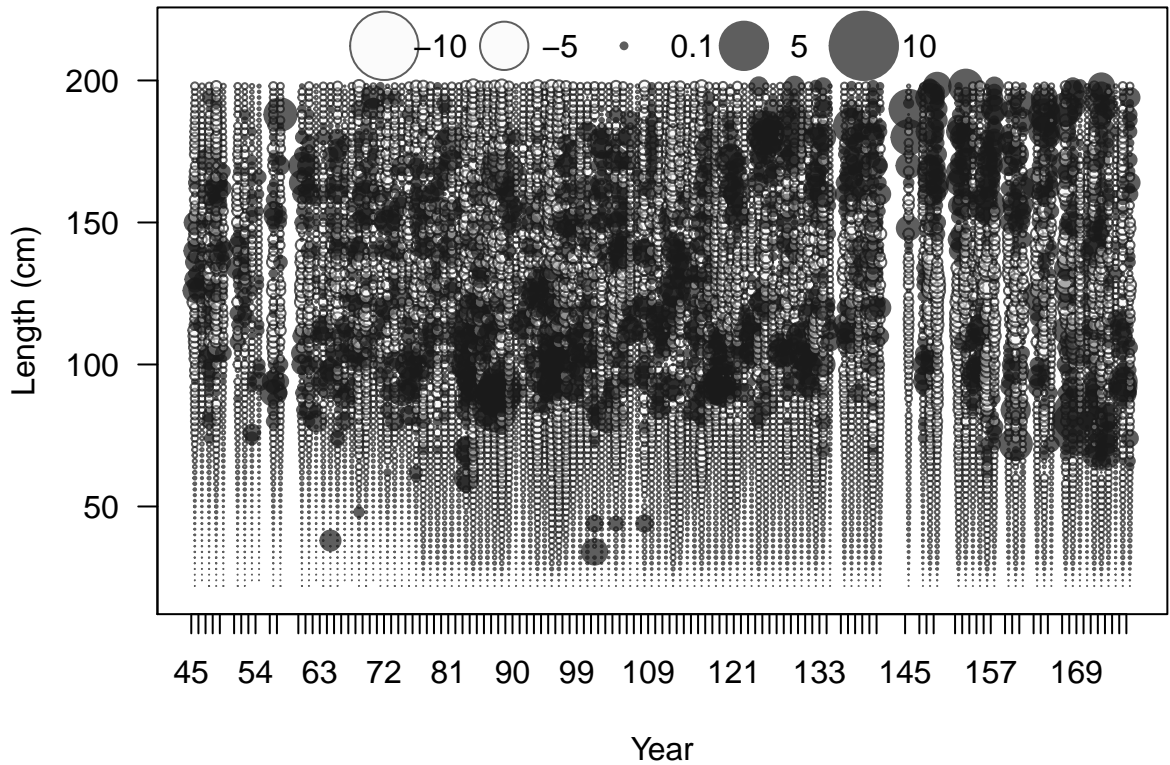
Proportion

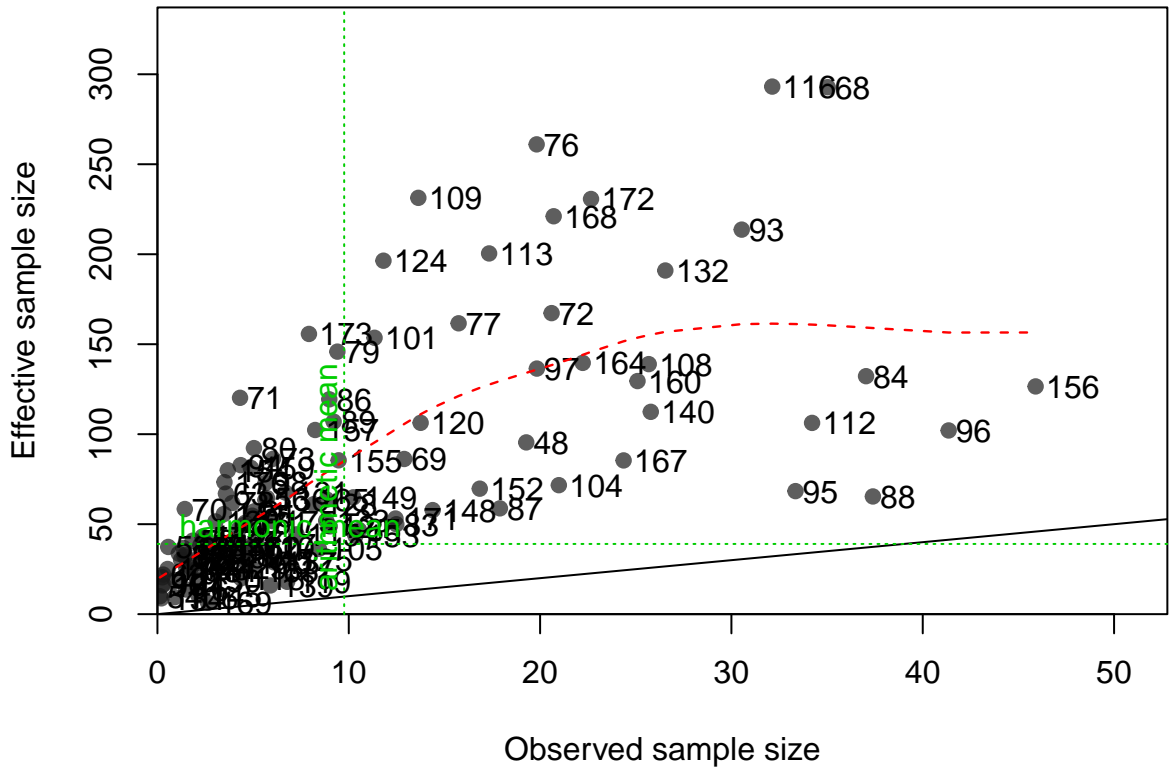


Proportion

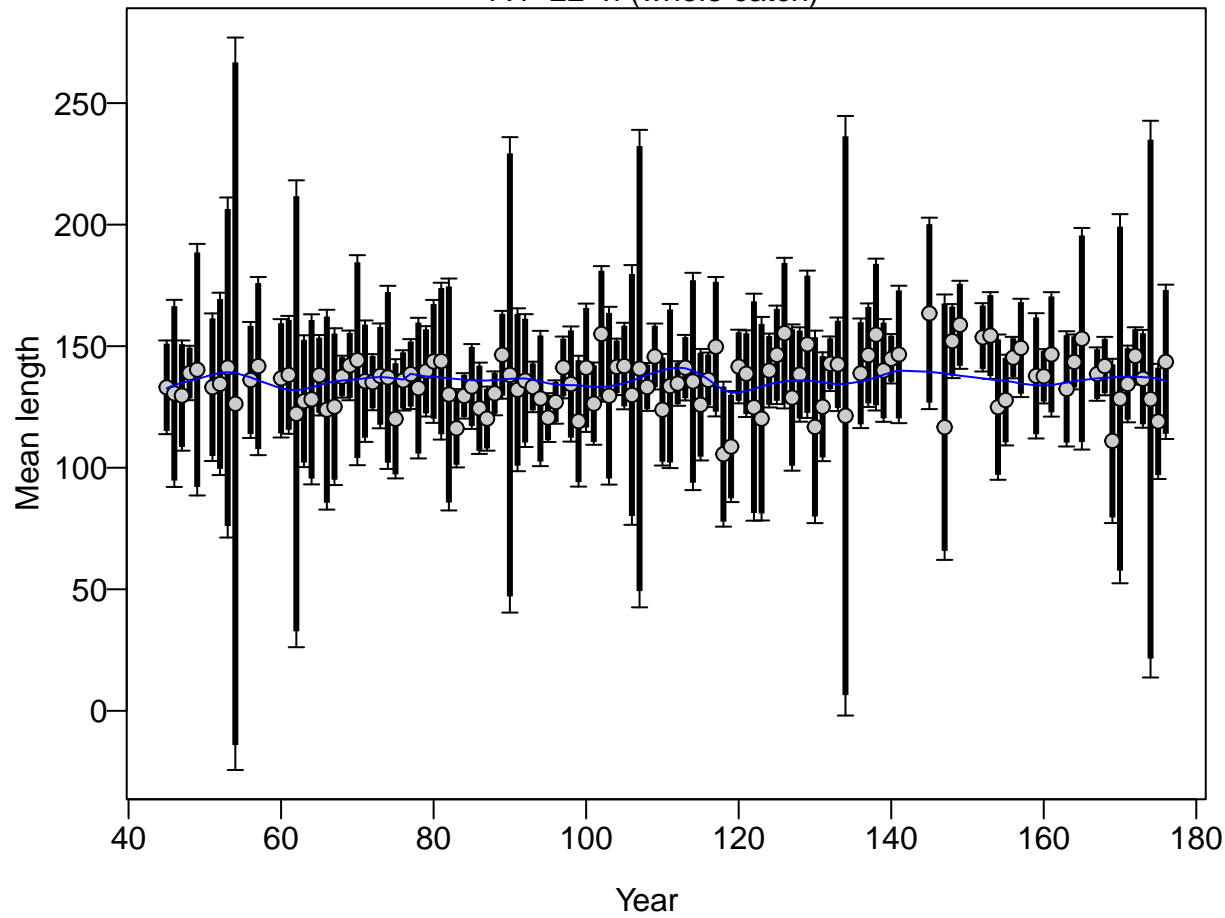


Length (cm)

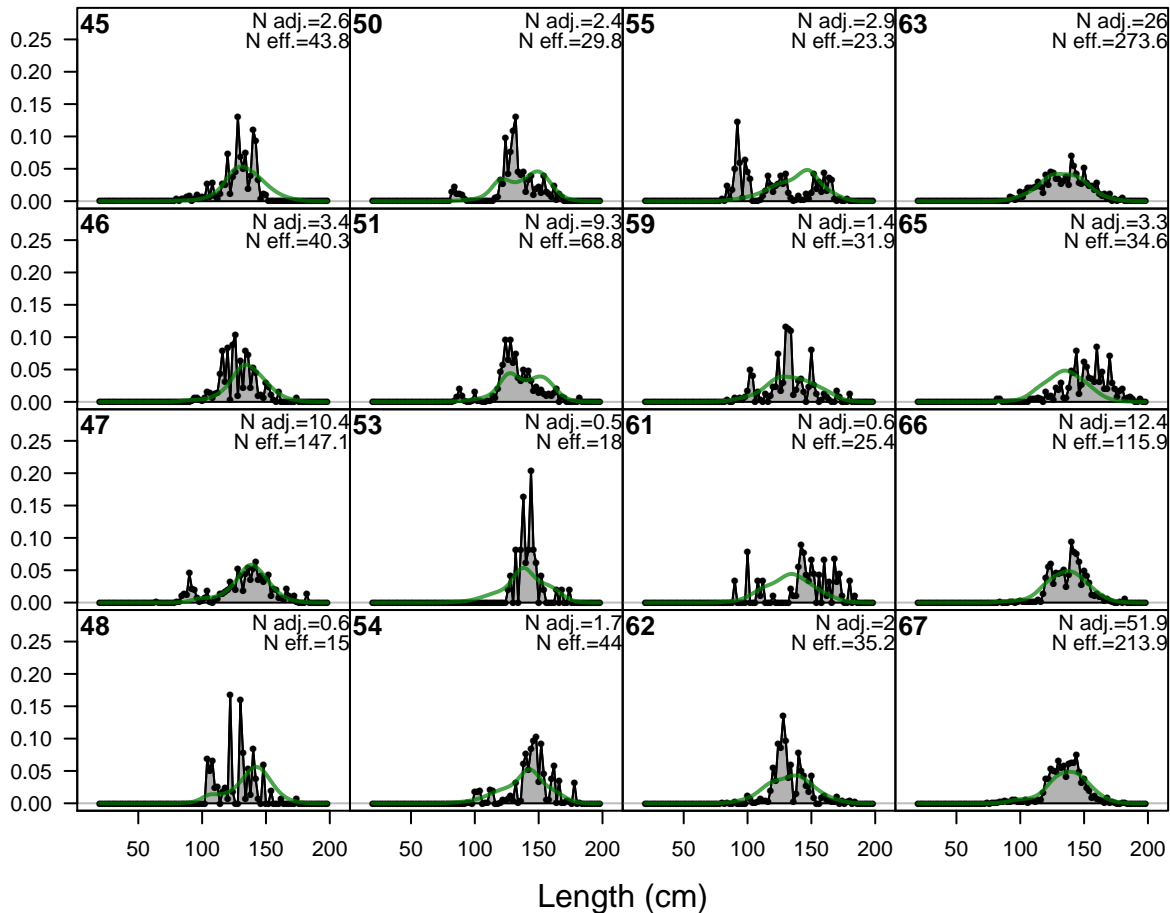




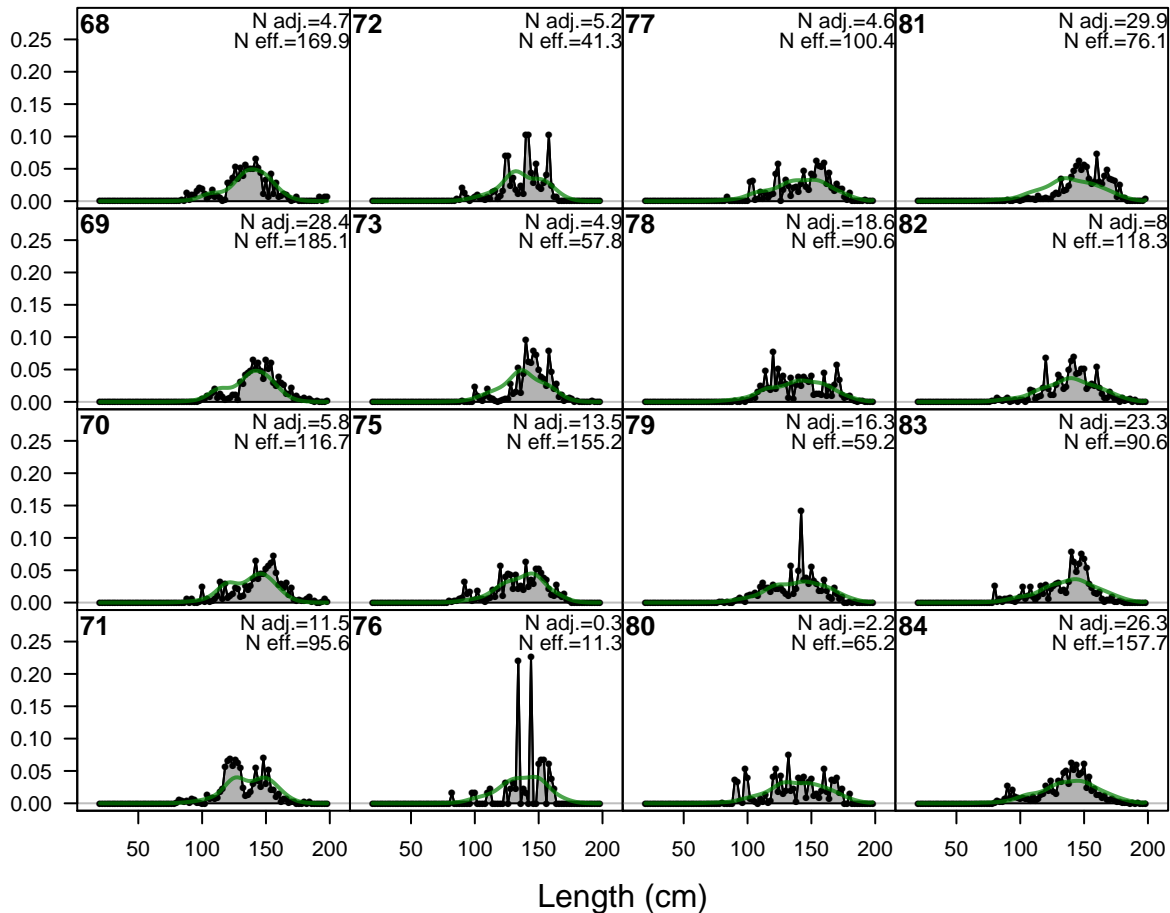
A4-LL-n (whole catch)



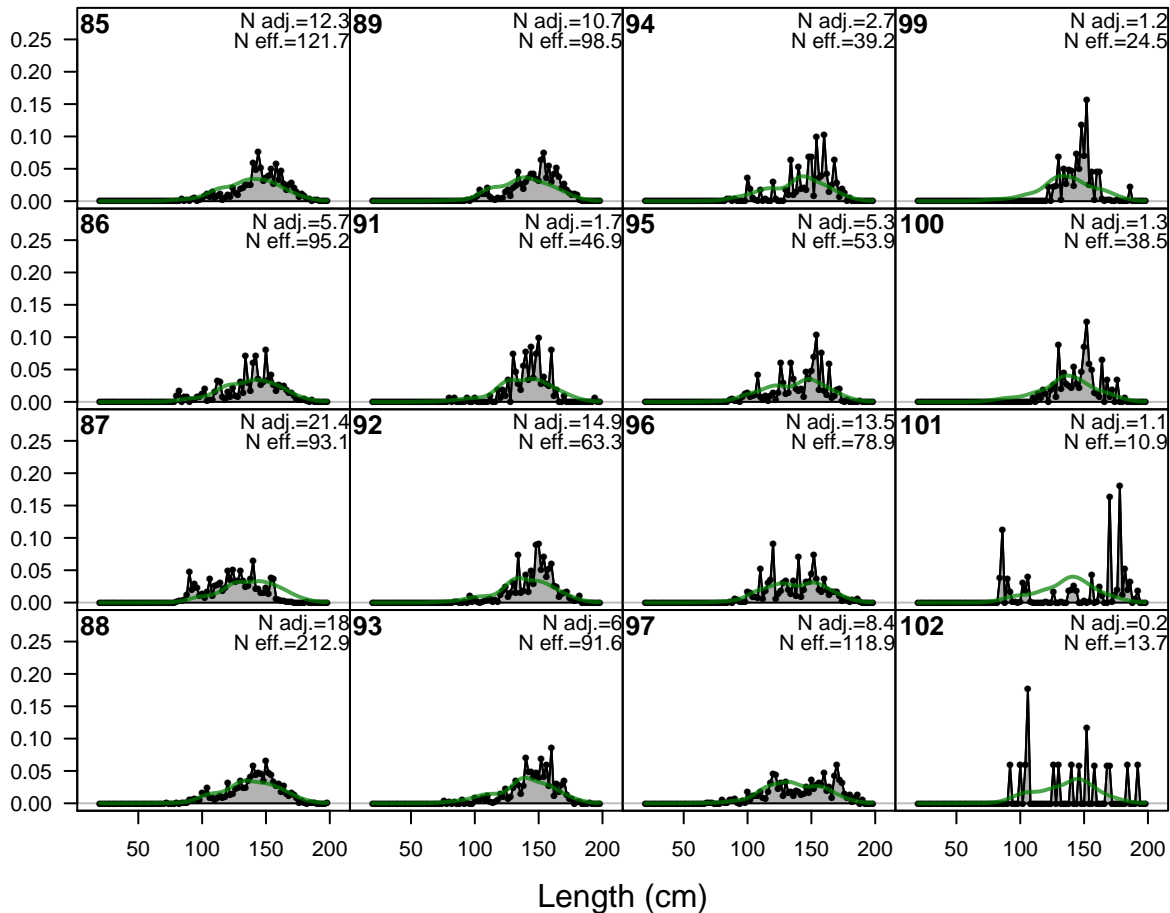
Proportion



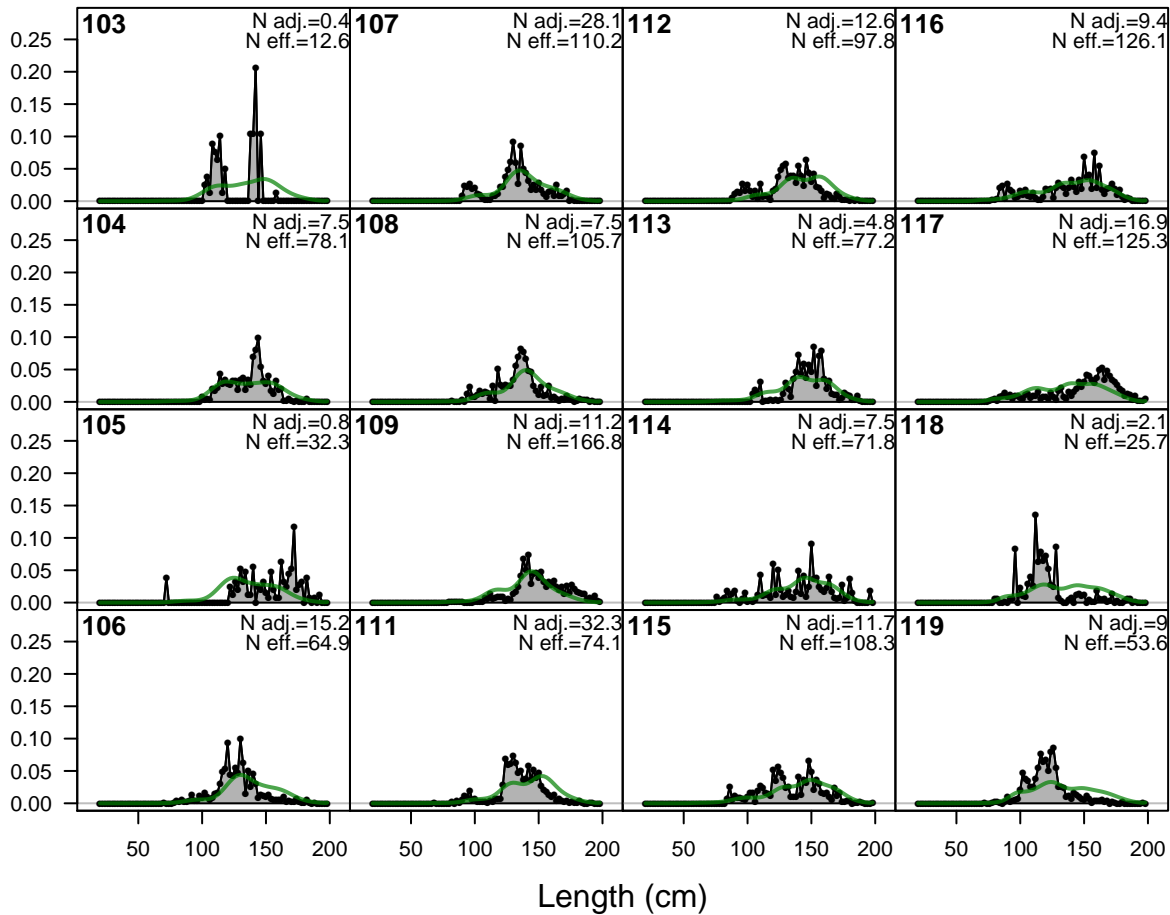
Proportion



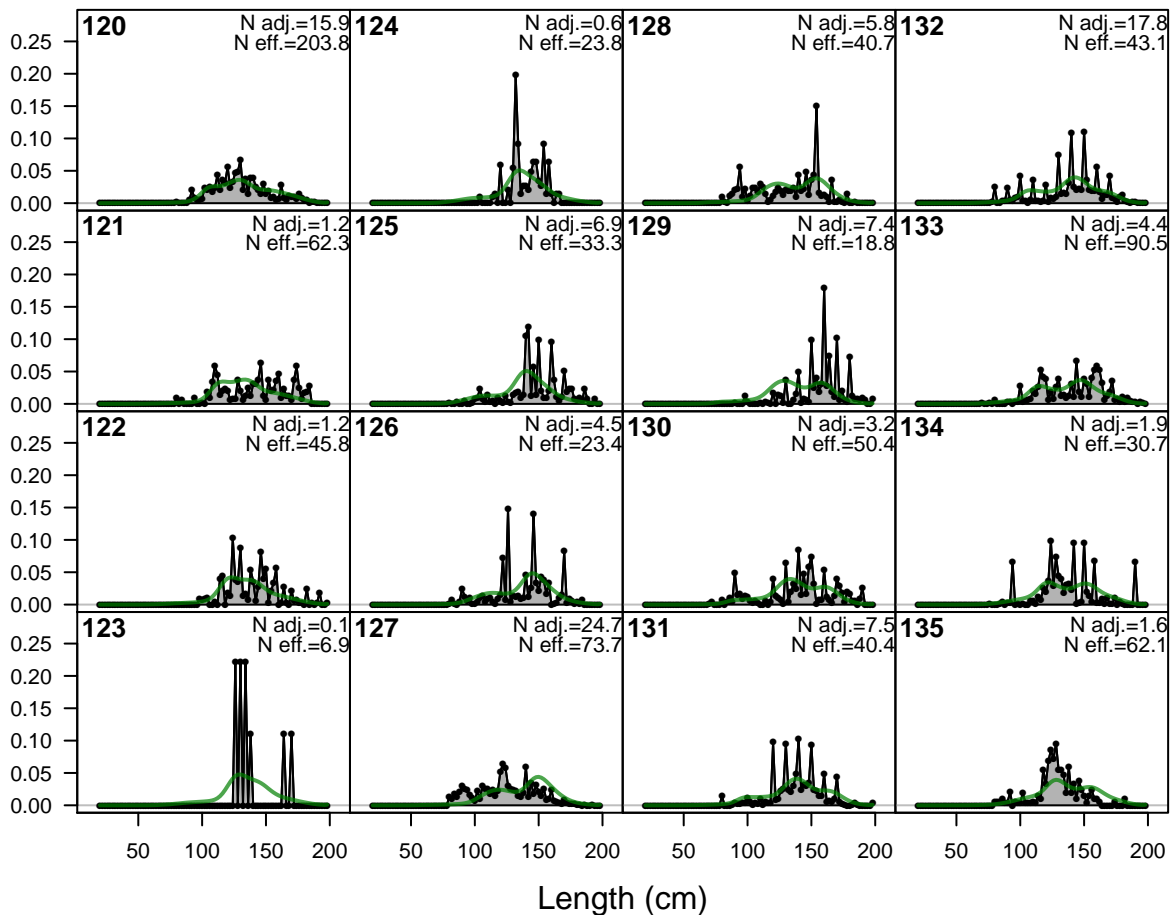
Proportion



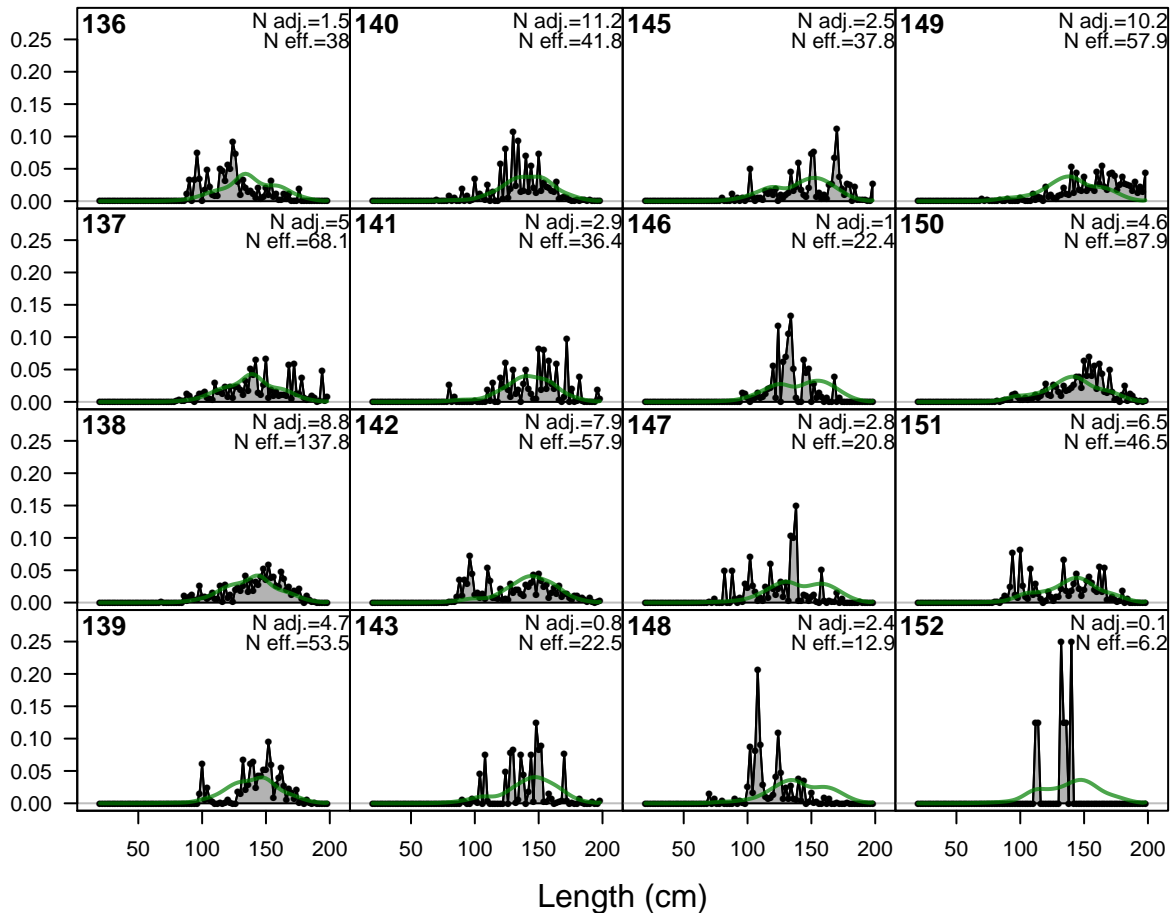
Proportion



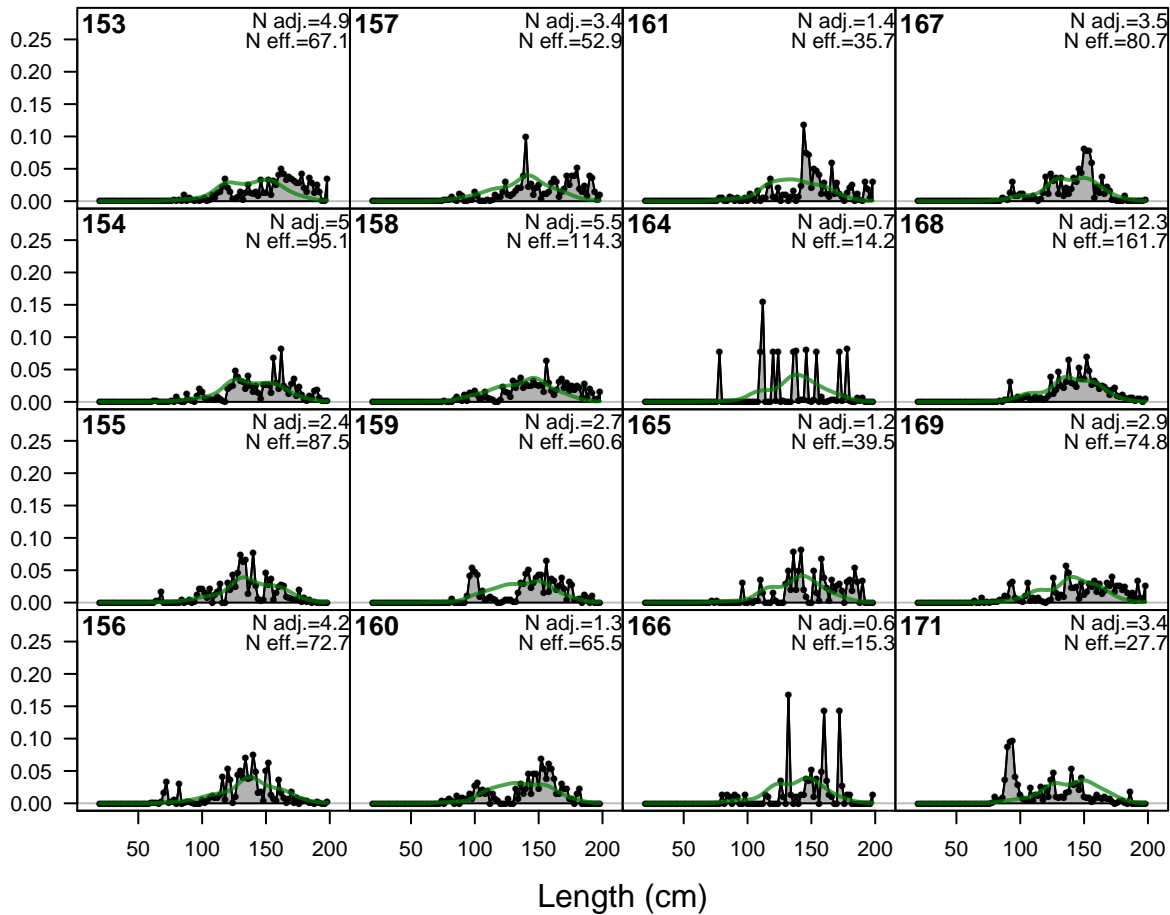
Proportion



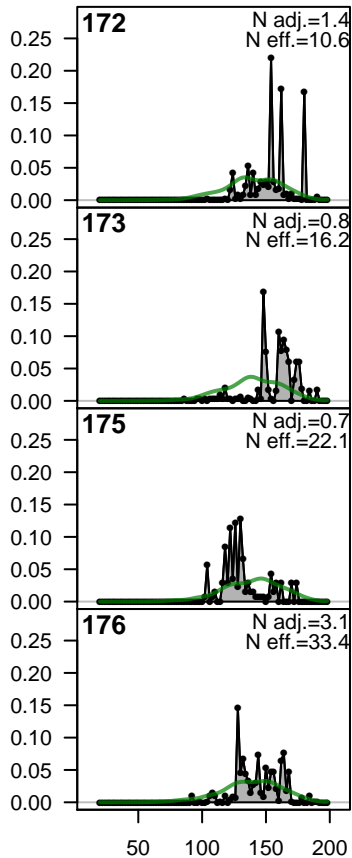
Proportion



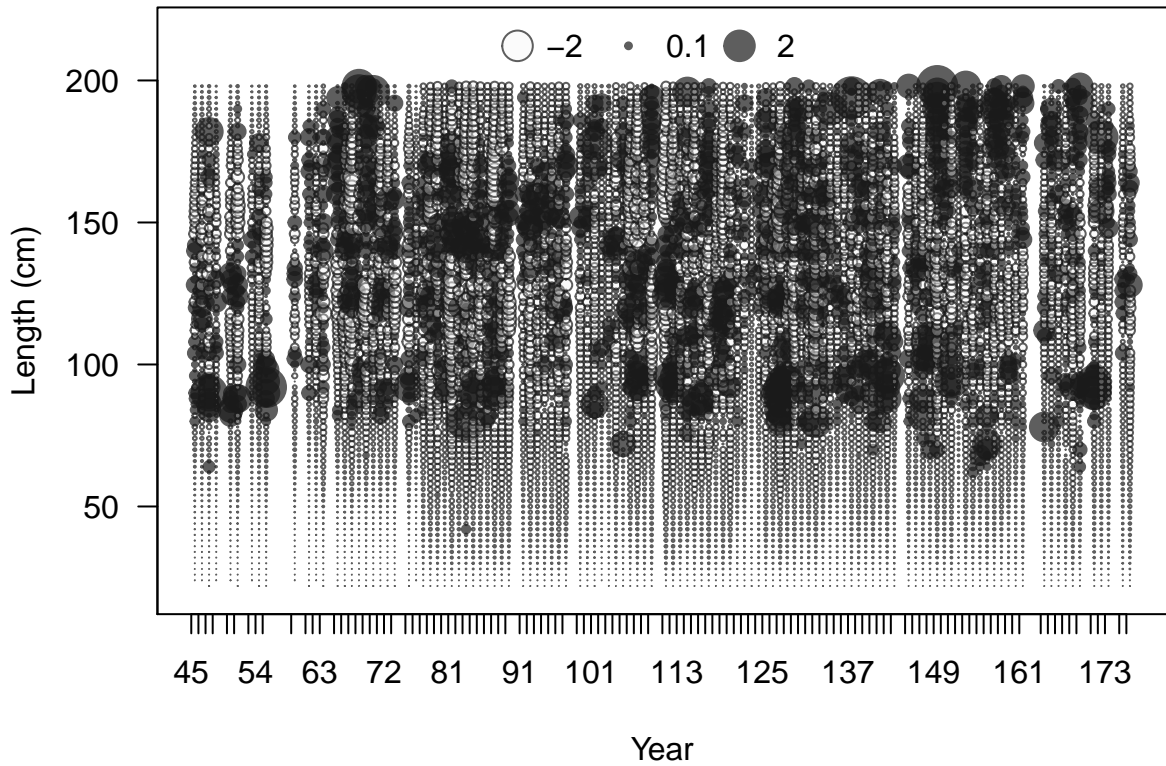
Proportion

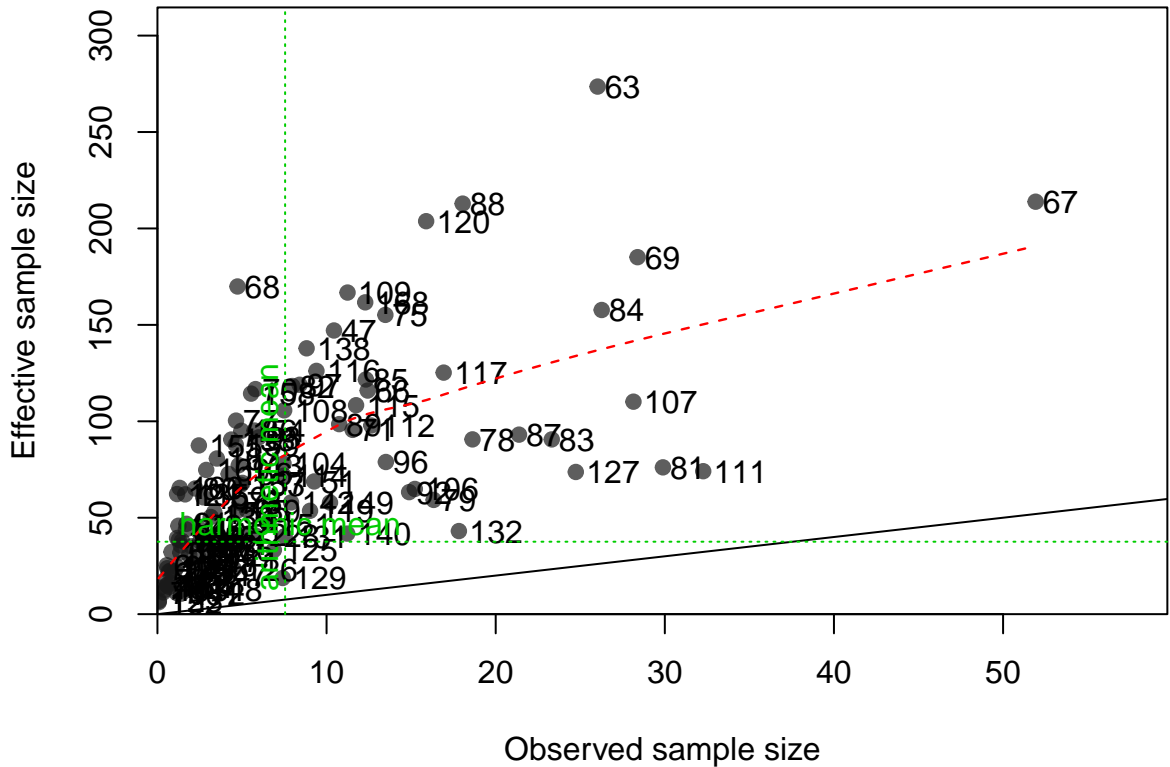


Proportion

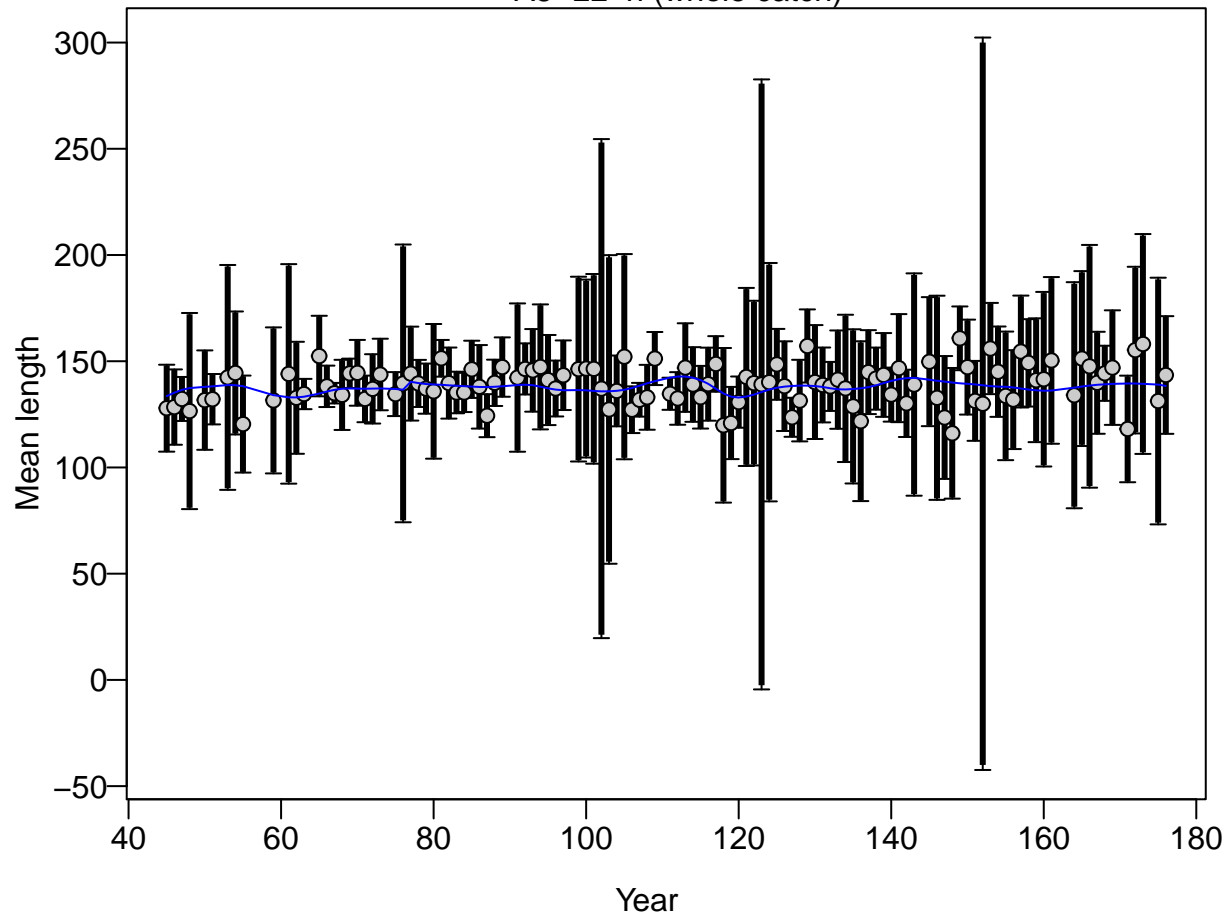


Length (cm)

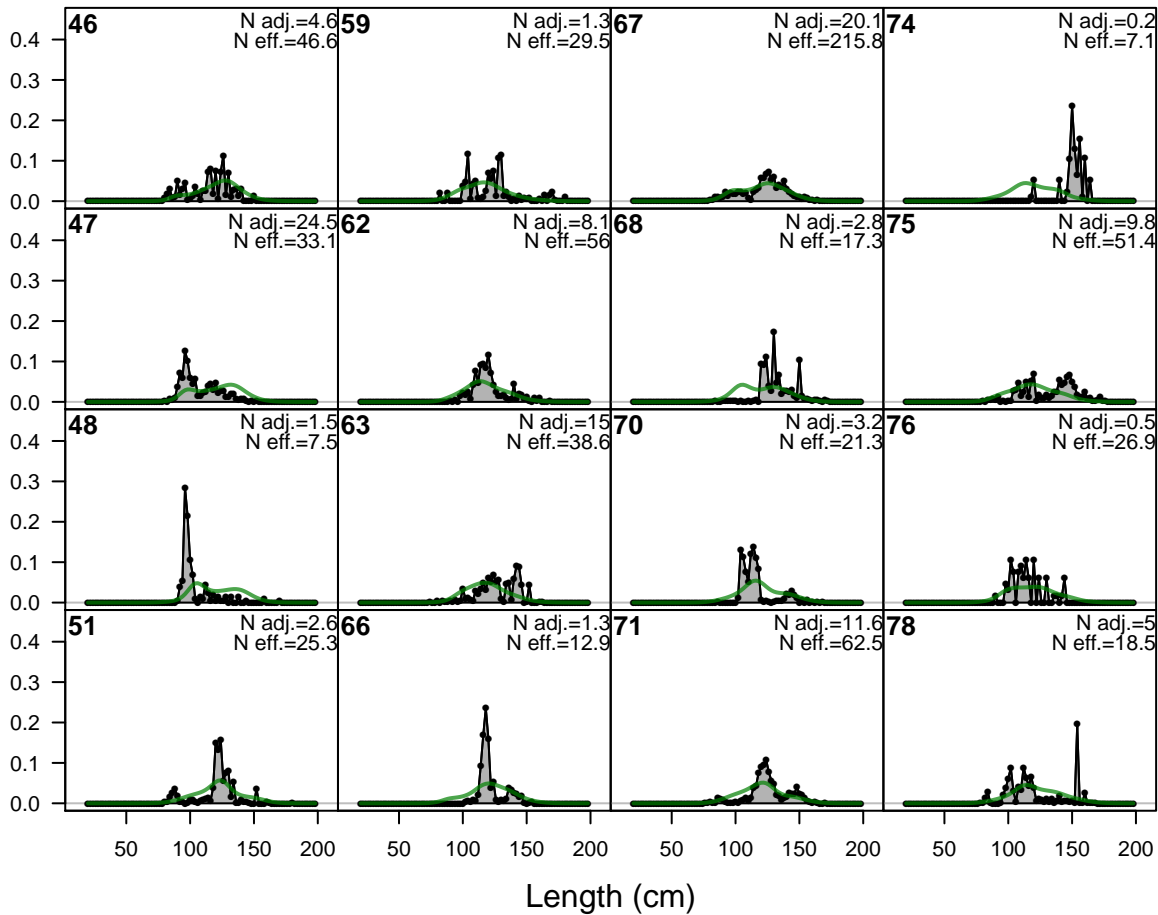




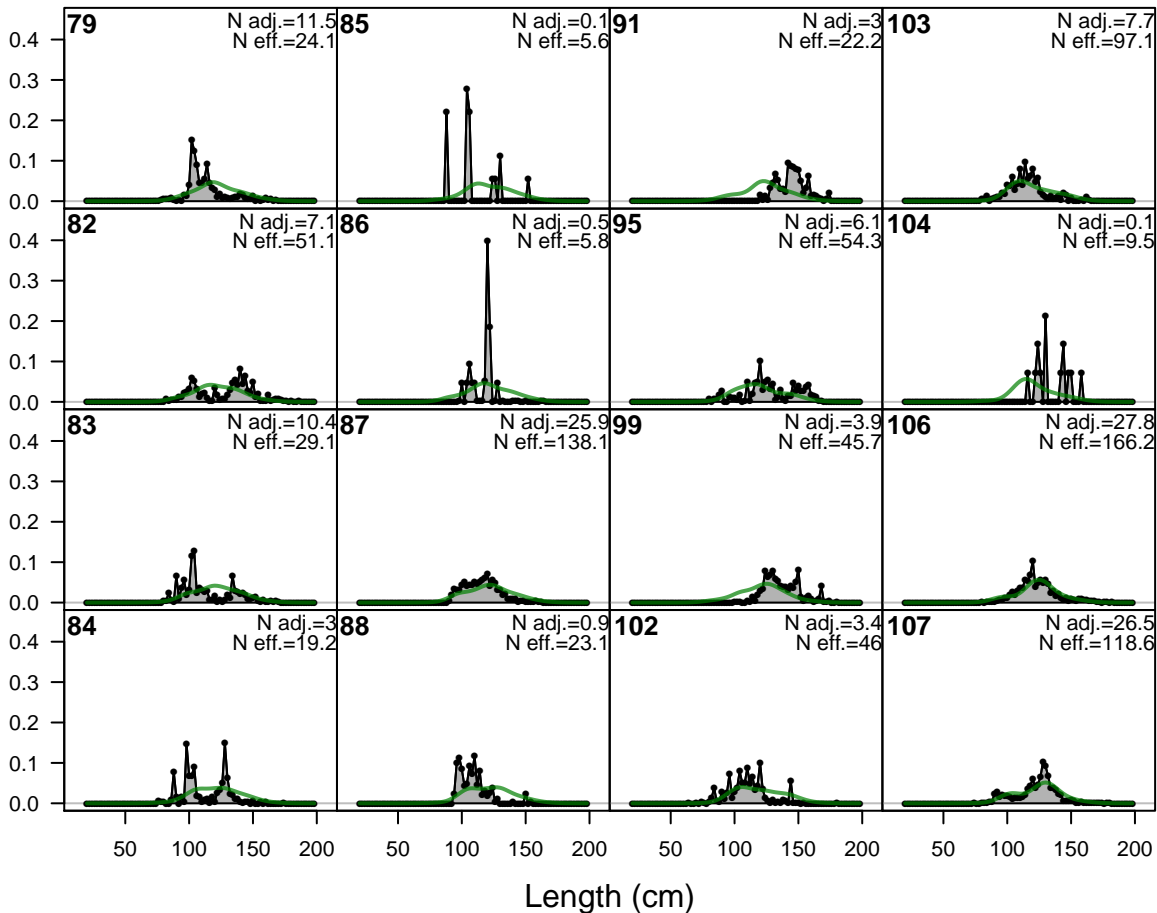
A5-LL-n (whole catch)



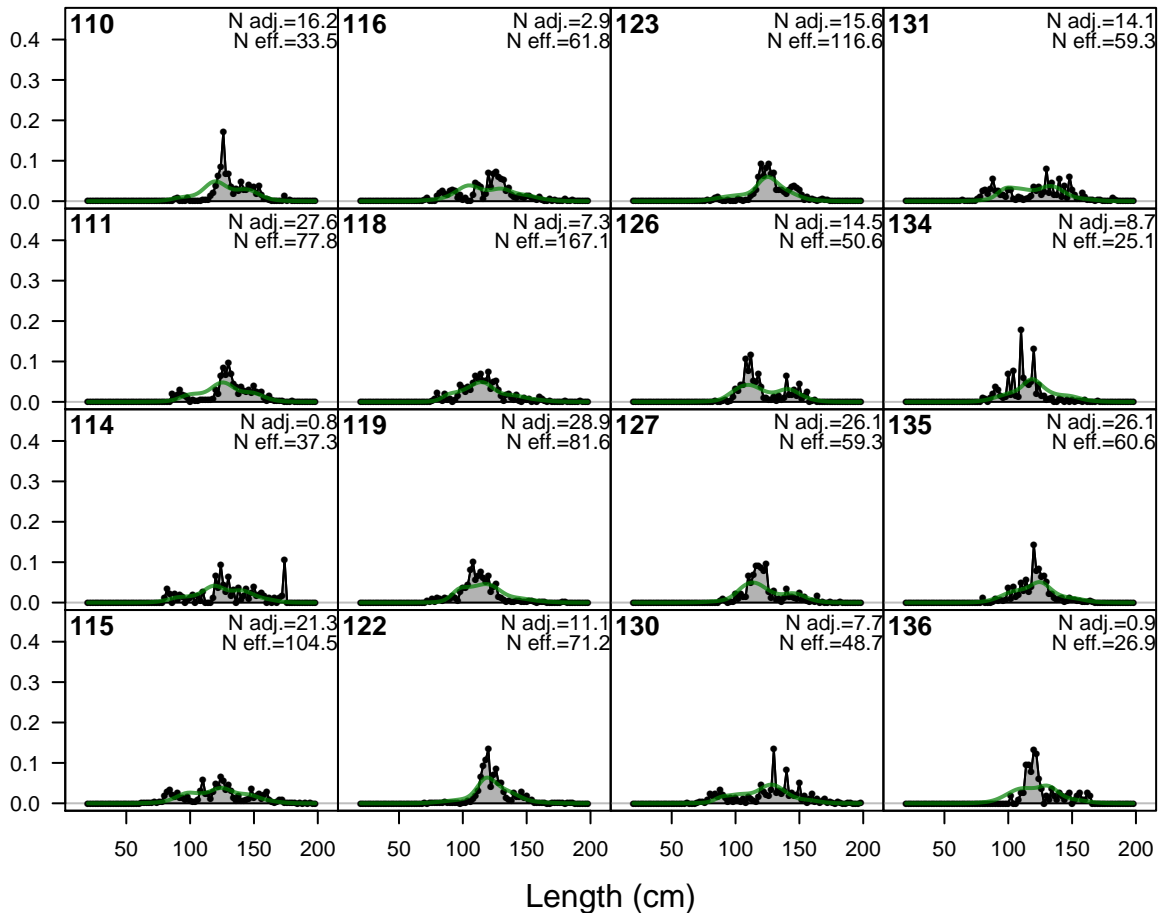
Proportion



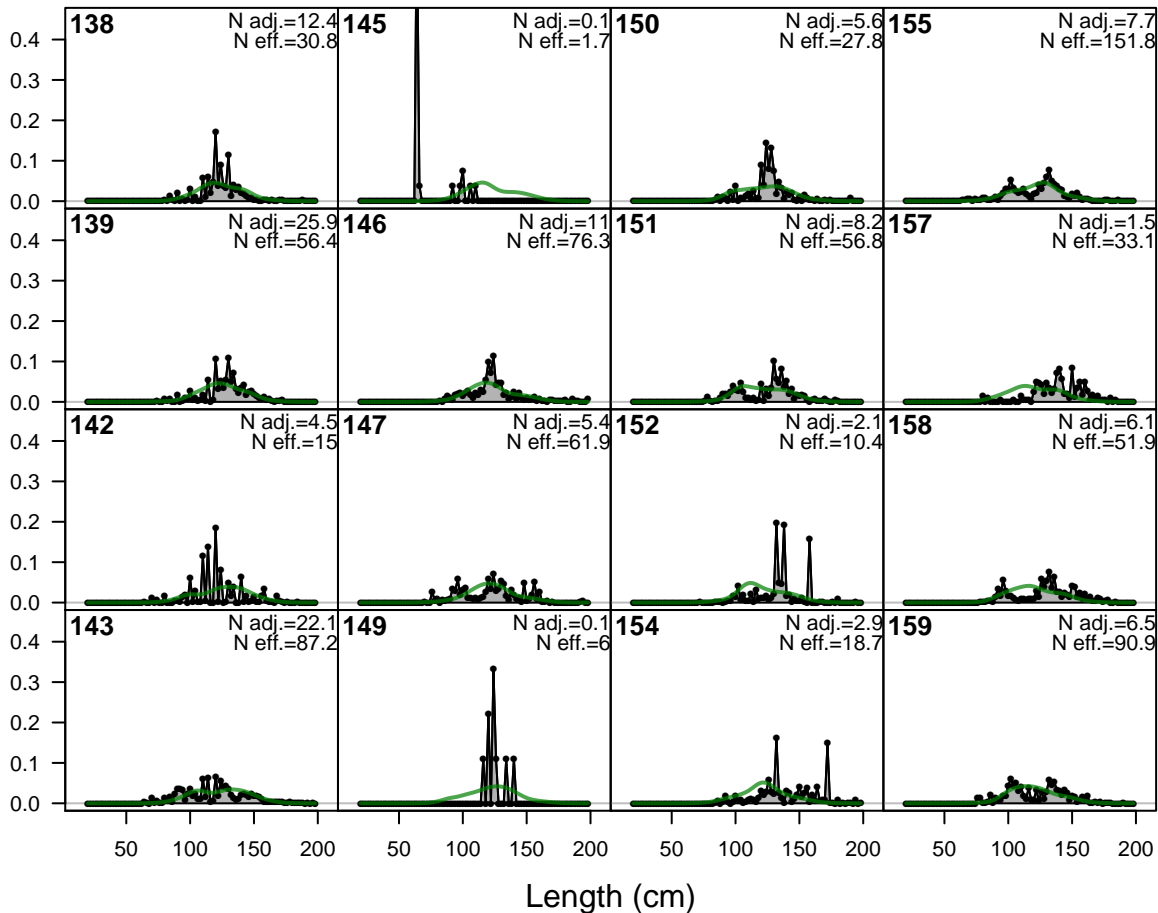
Proportion



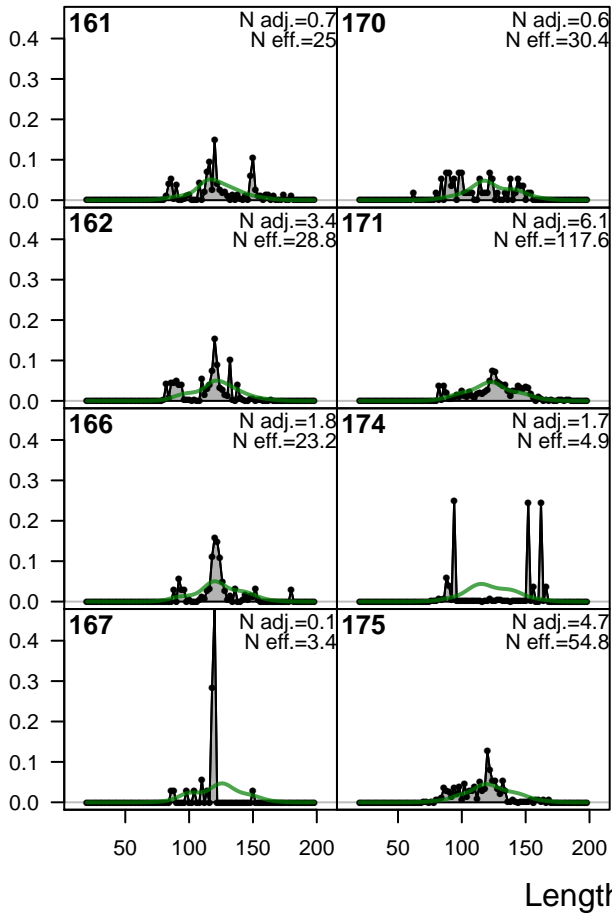
Proportion

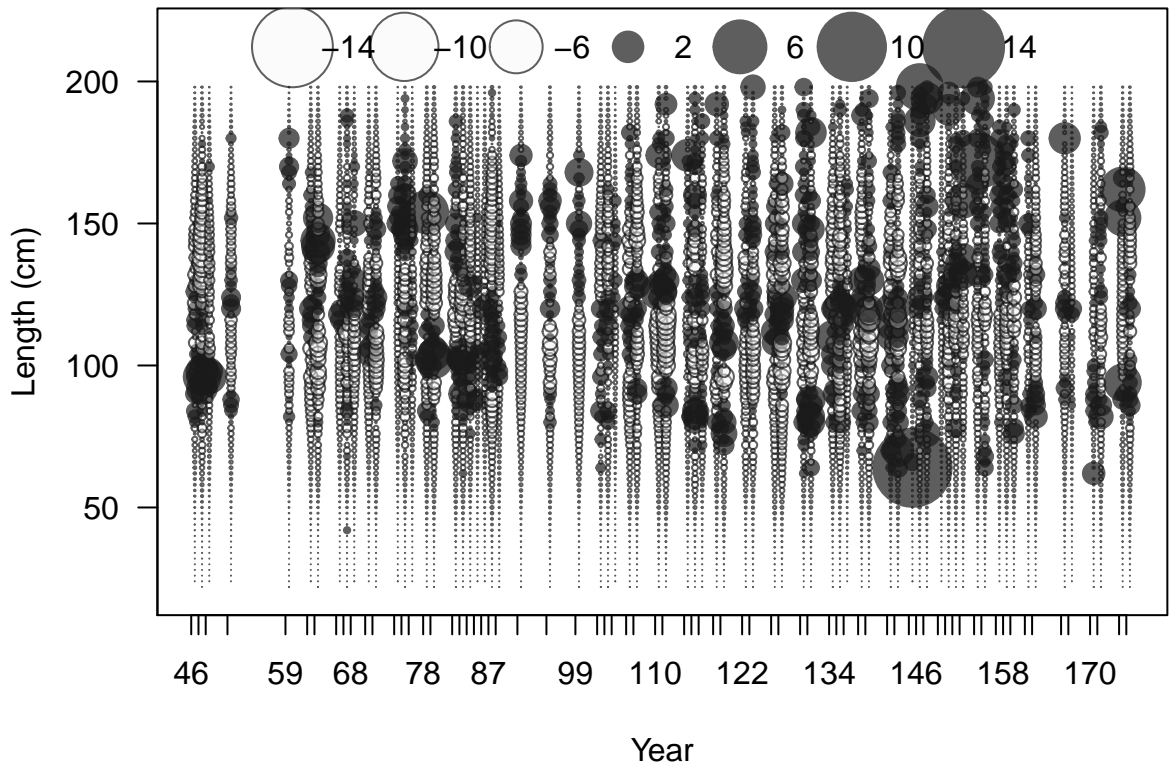


Proportion

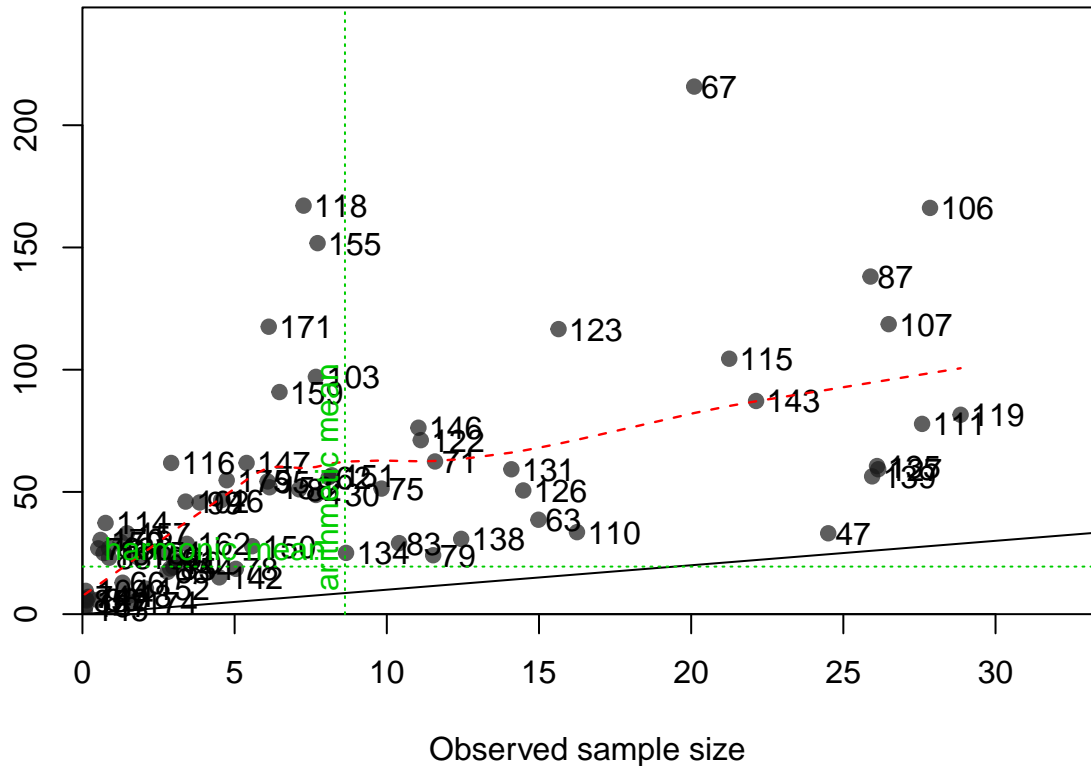


Proportion

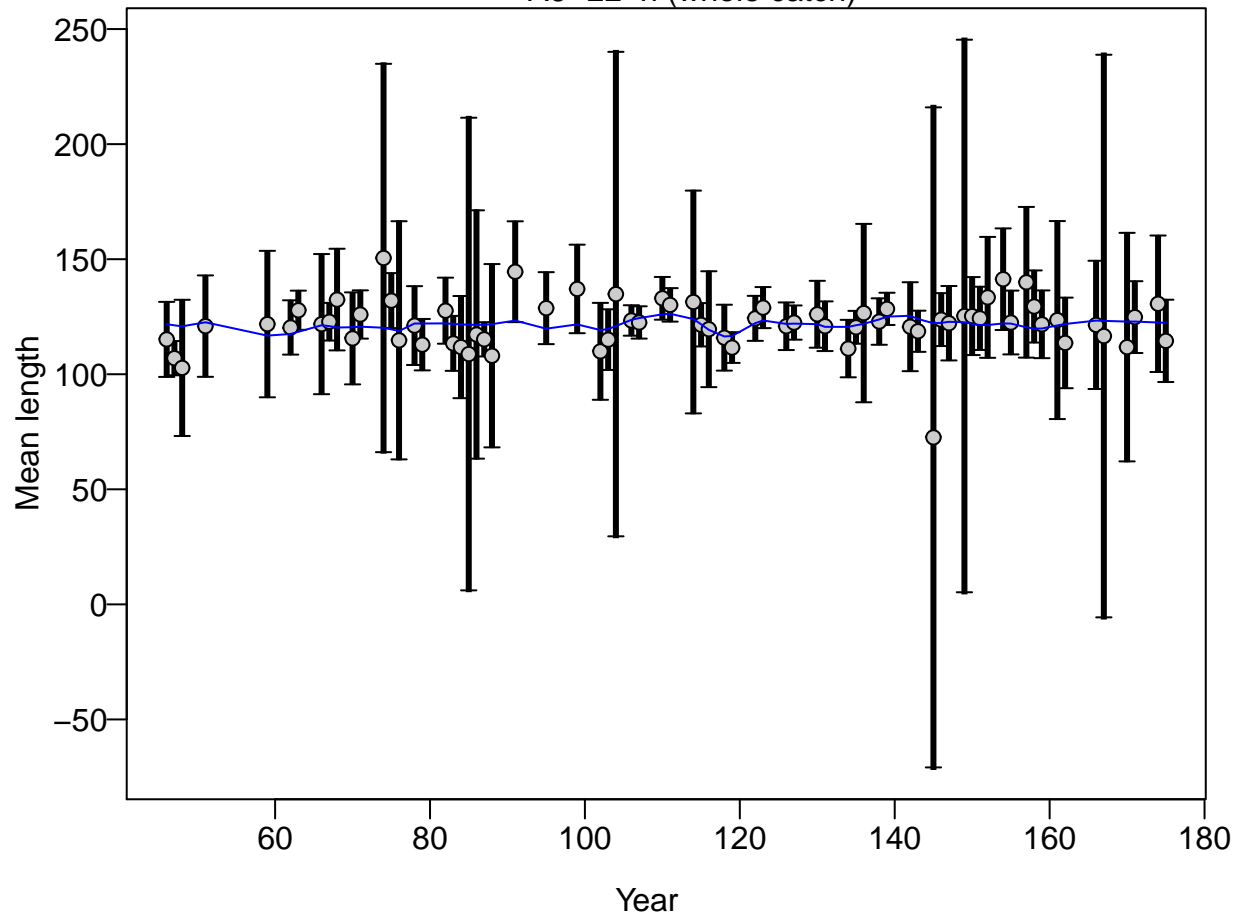


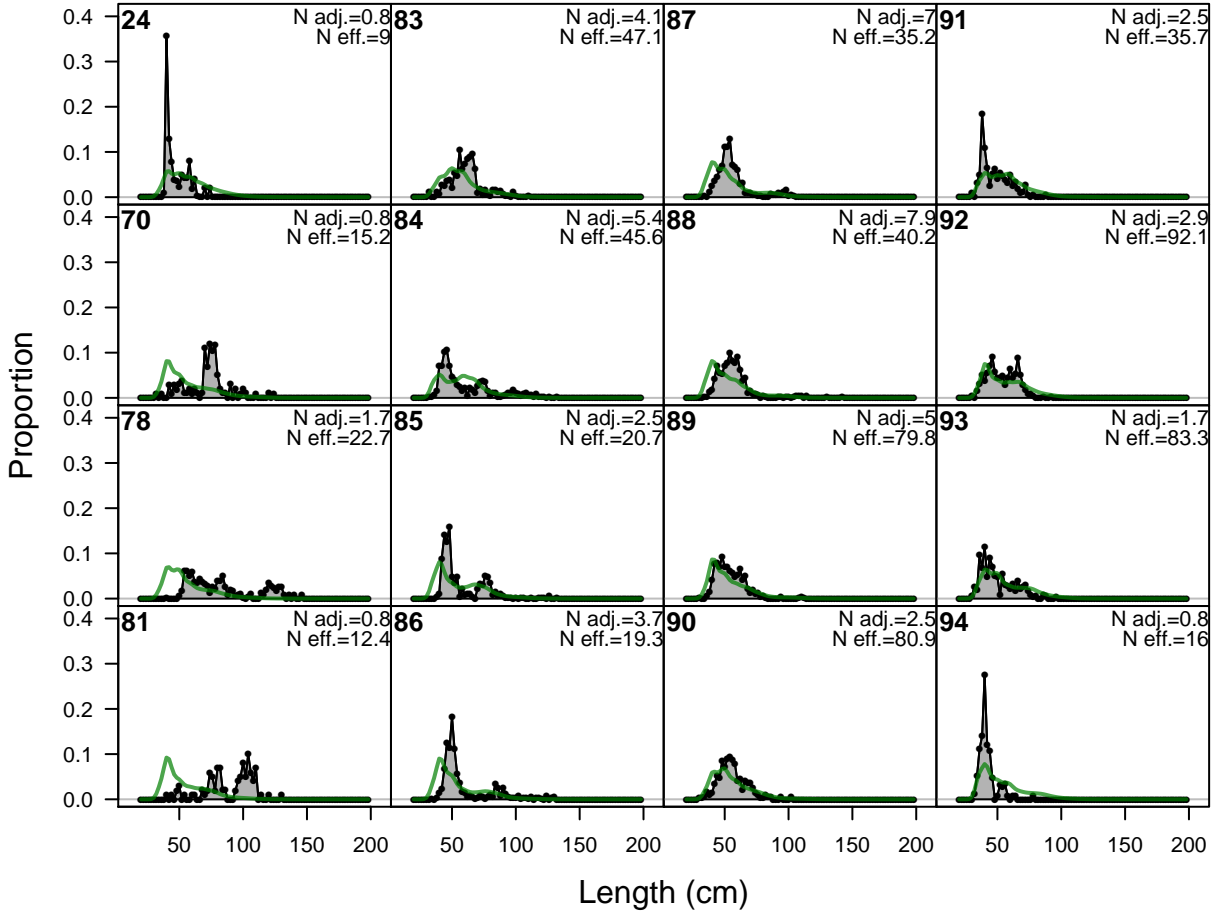


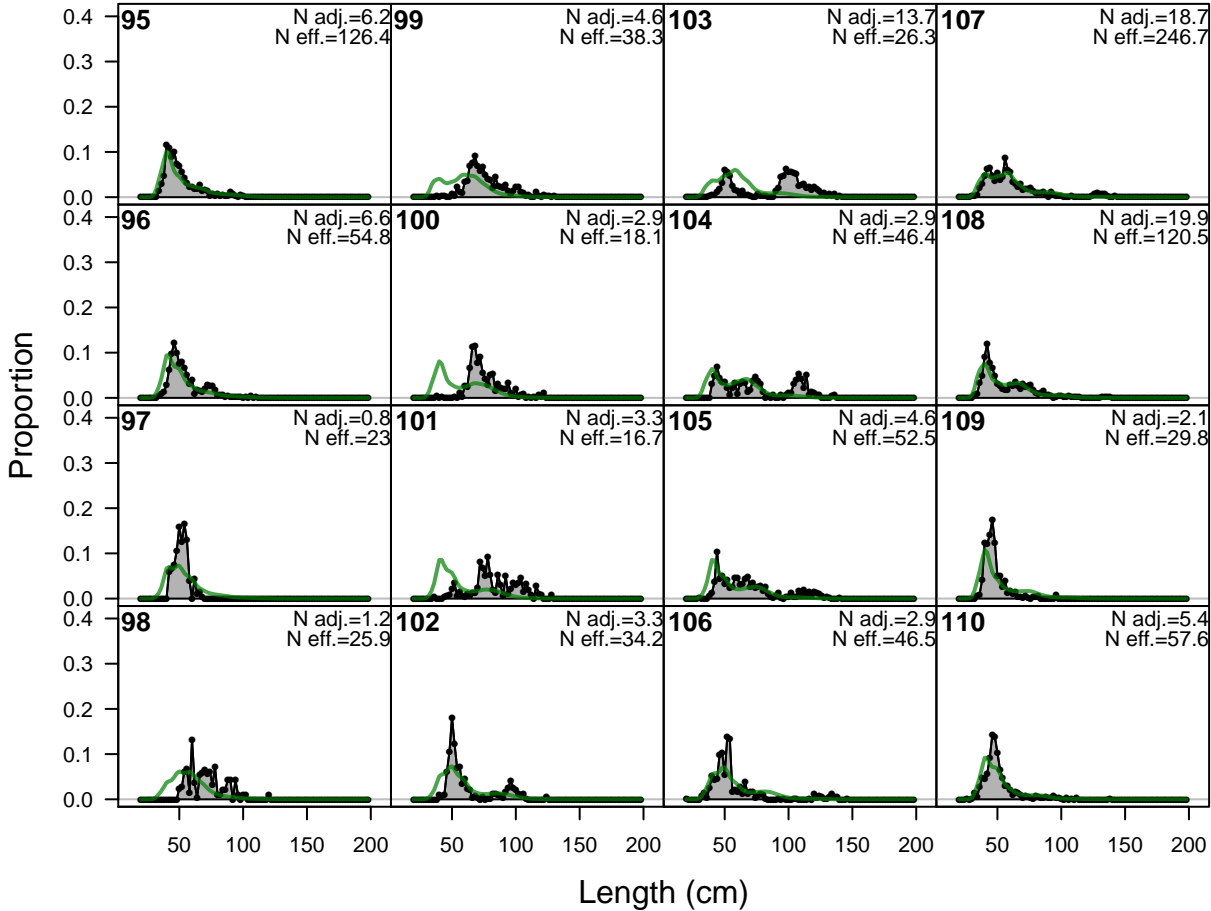
Effective sample size



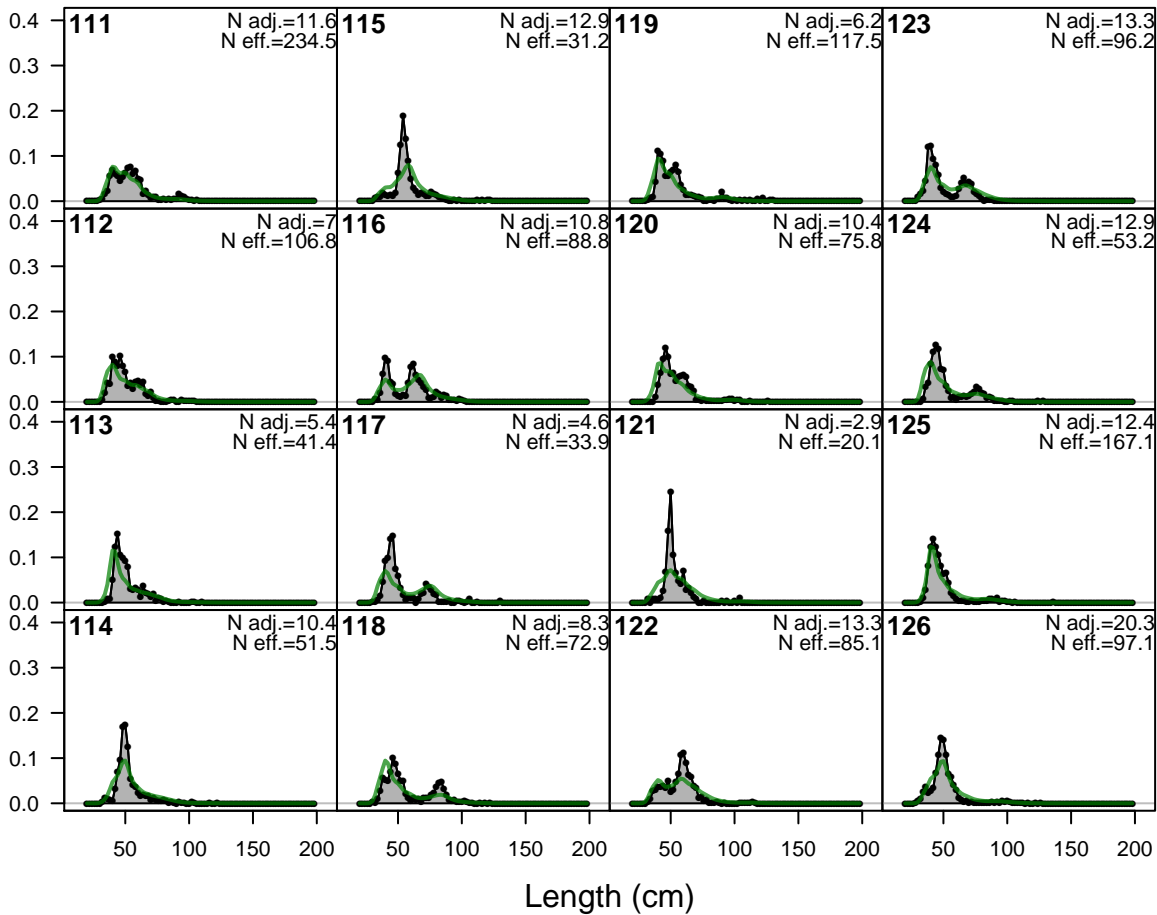
A6-LL-n (whole catch)



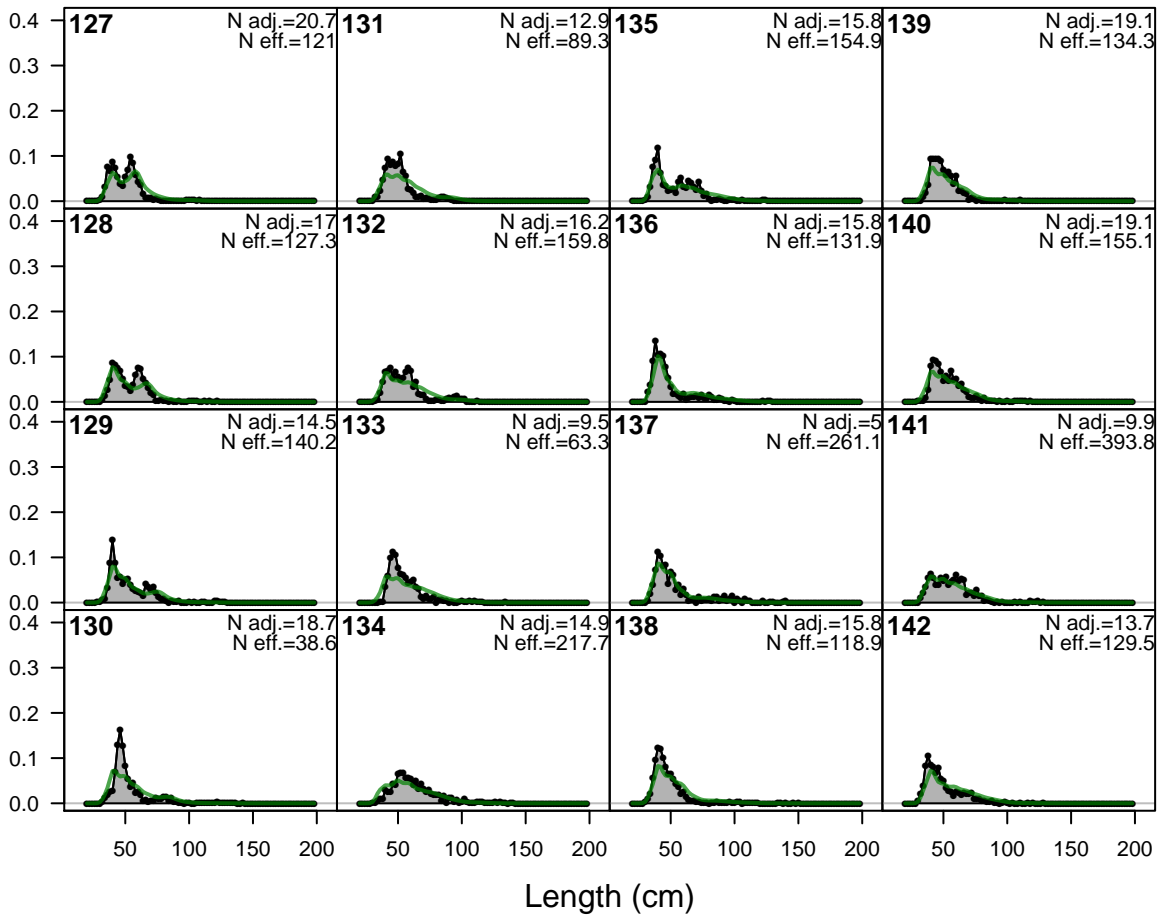




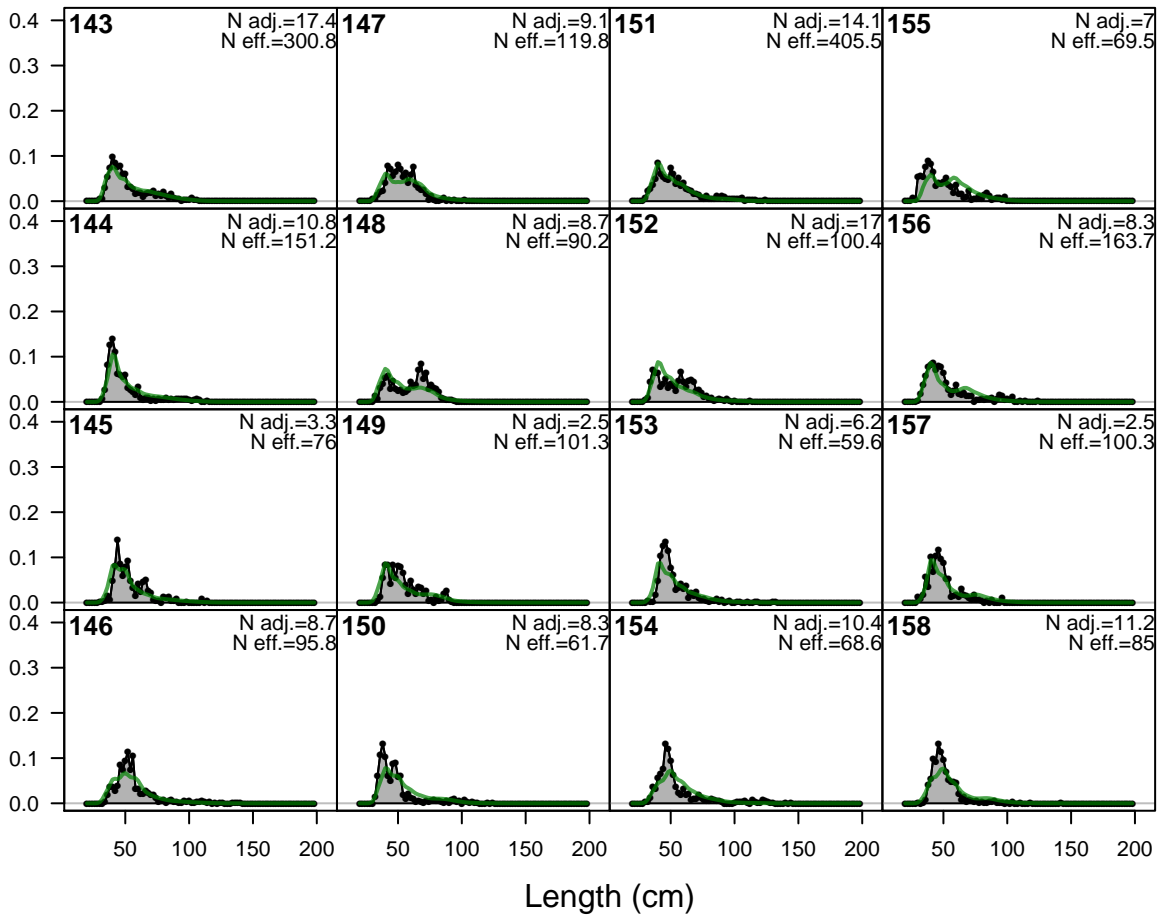
Proportion

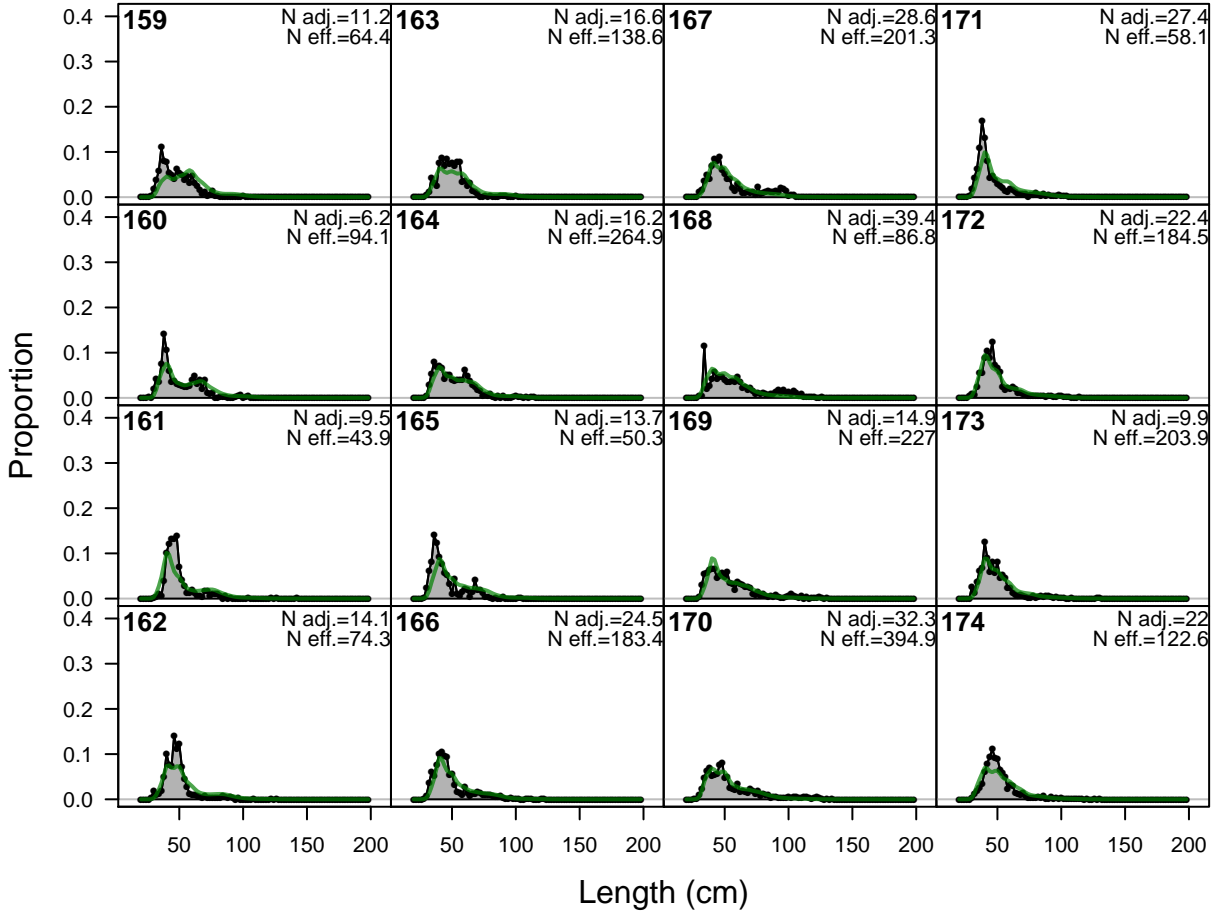


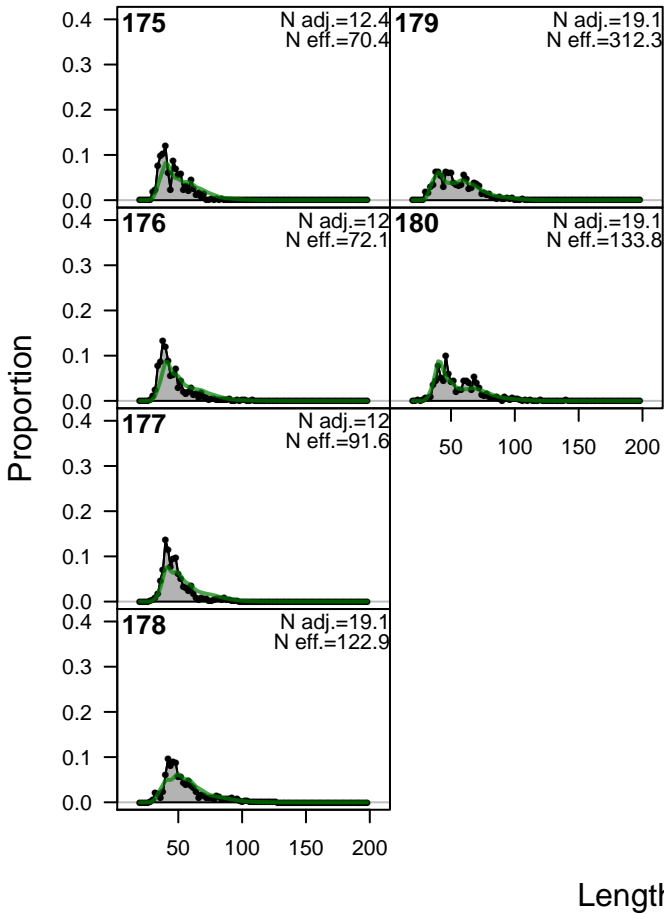
Proportion

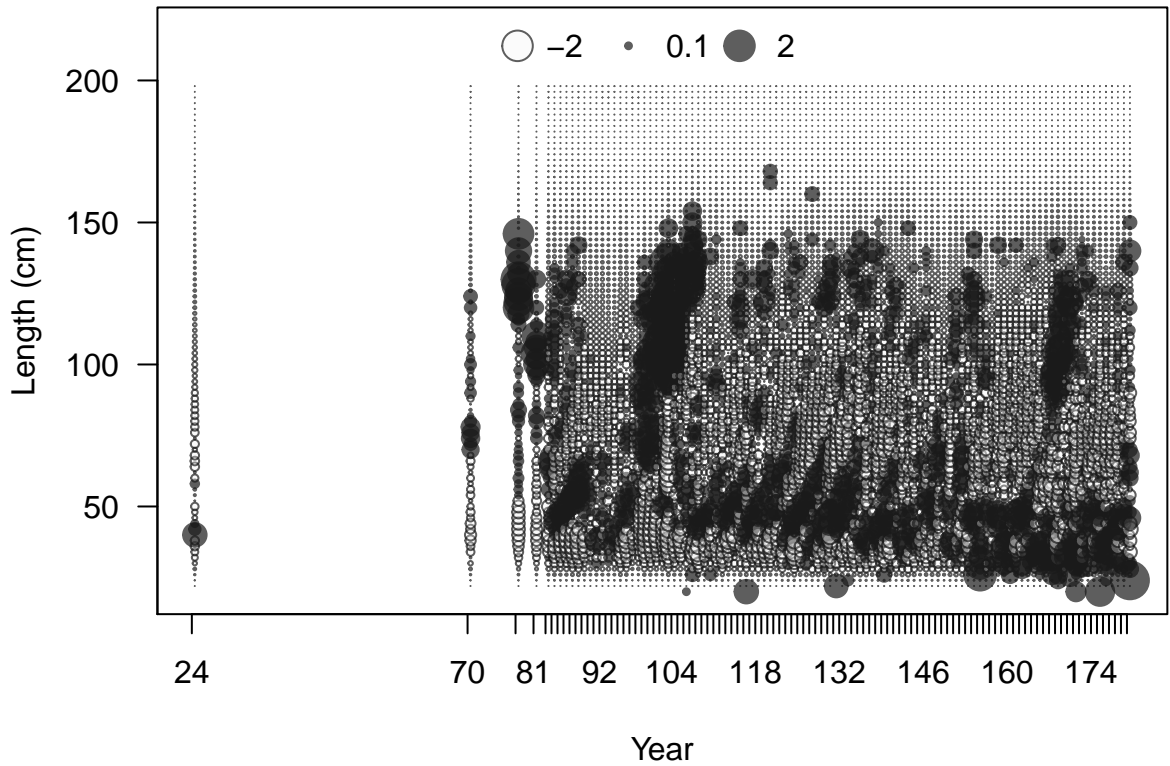


Proportion

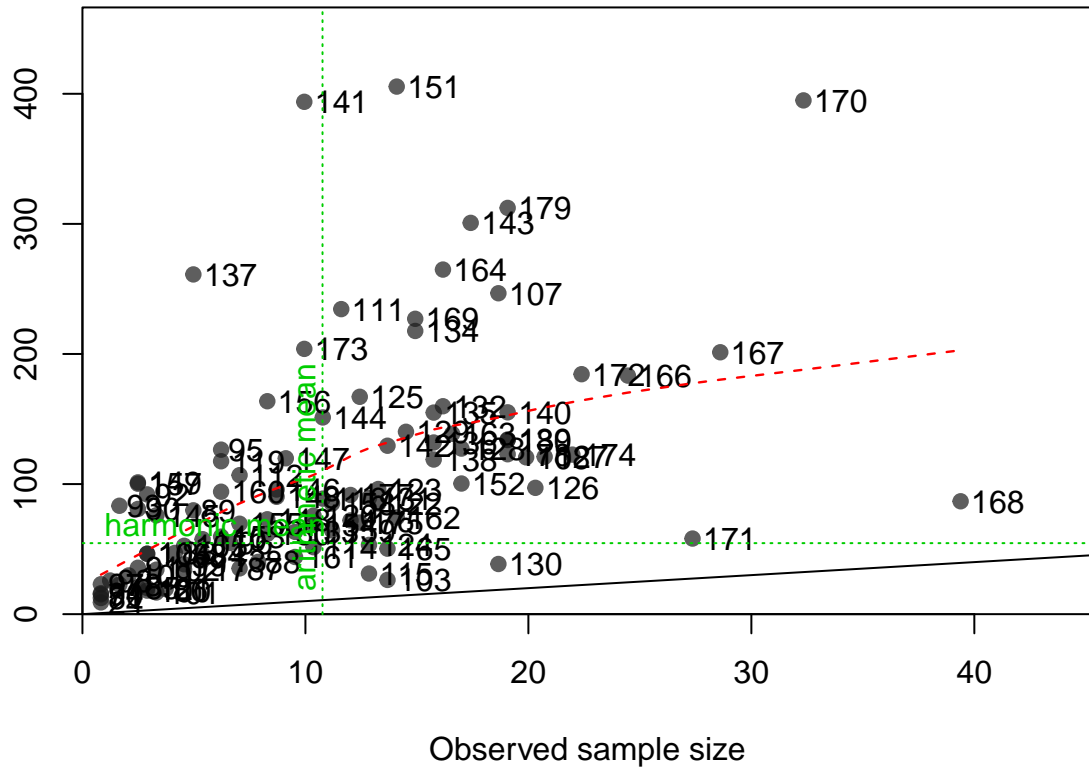




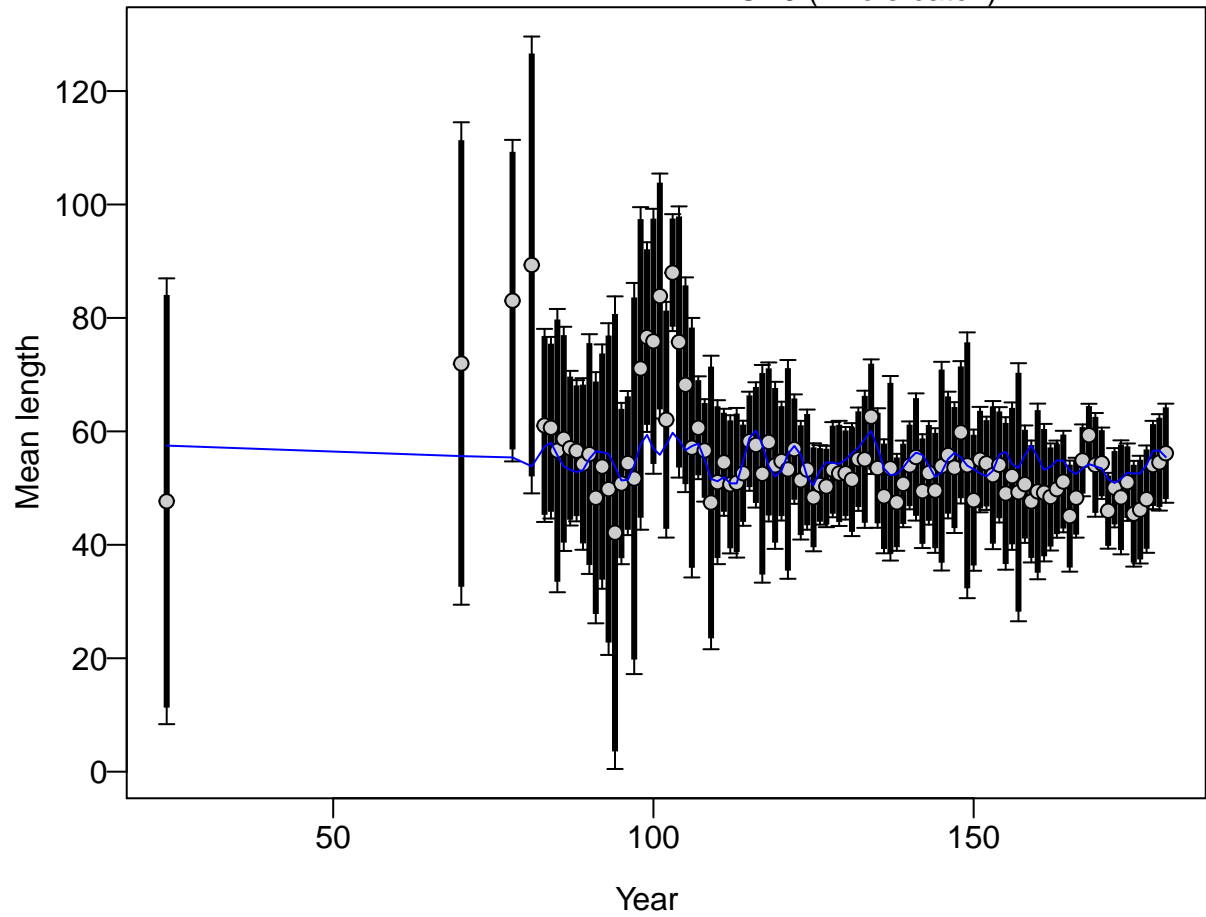




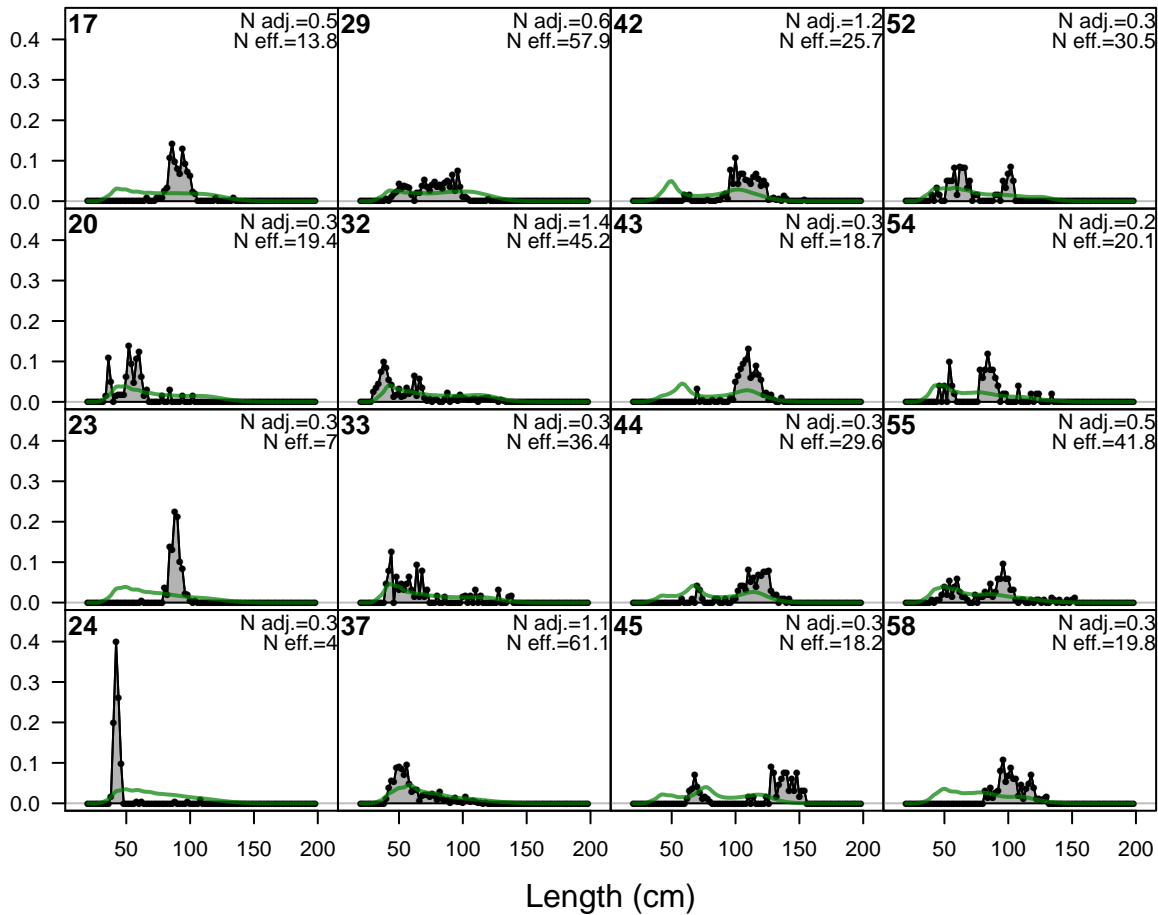
Effective sample size



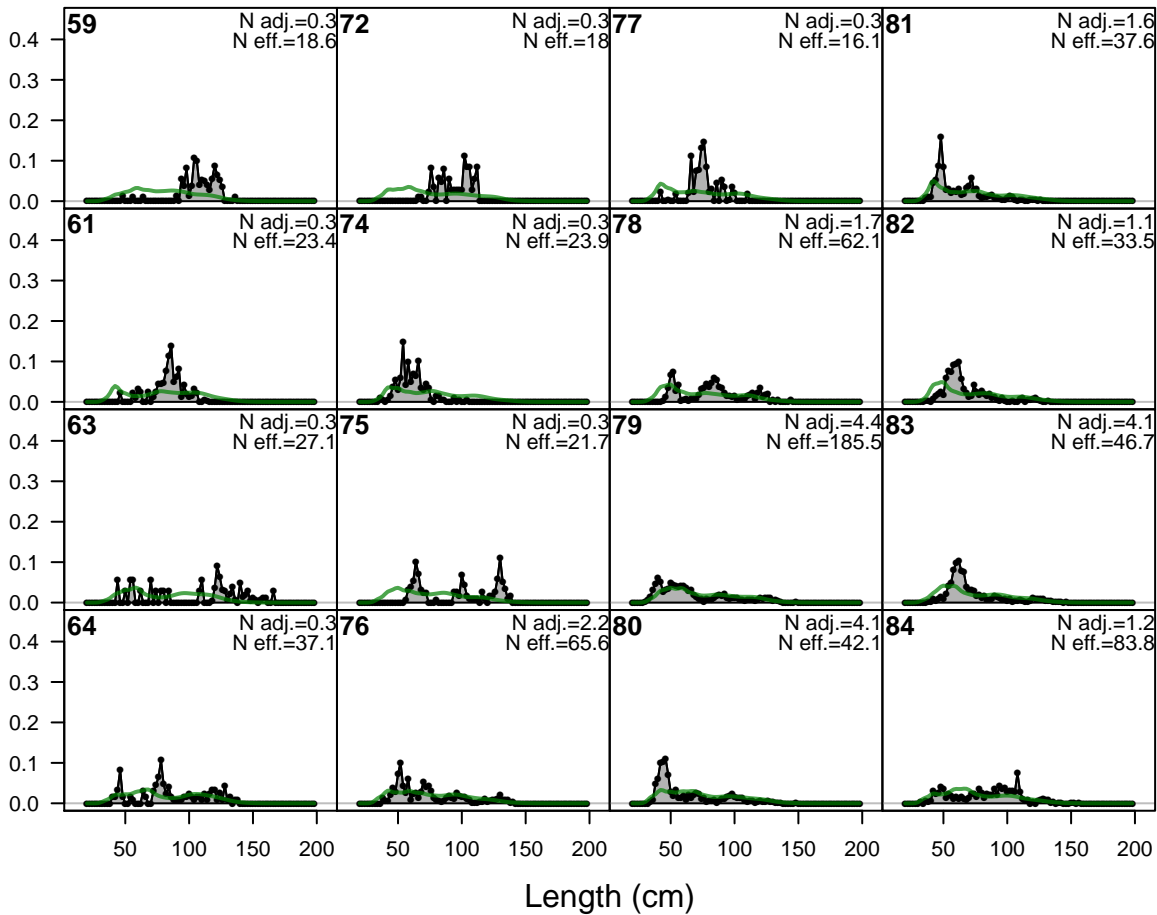
A2-OBJ (whole catch)



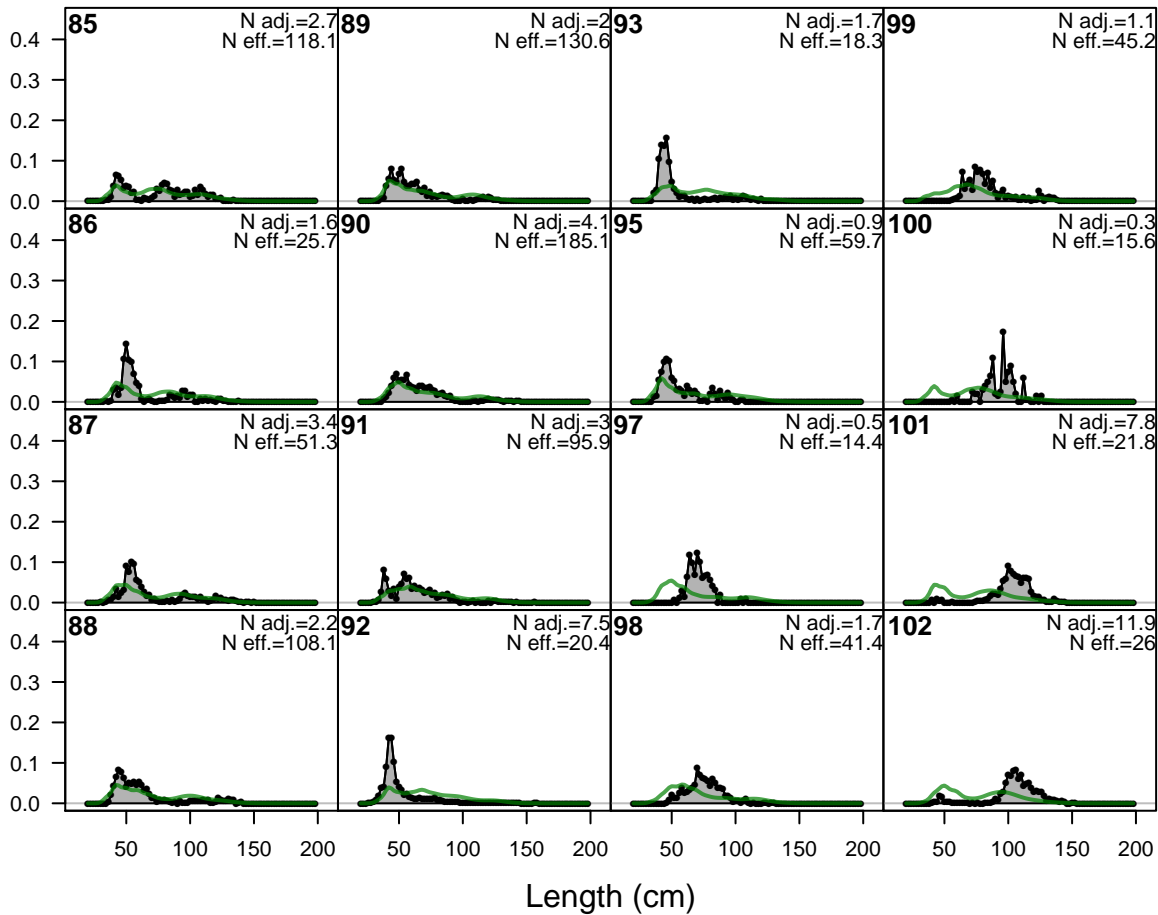
Proportion



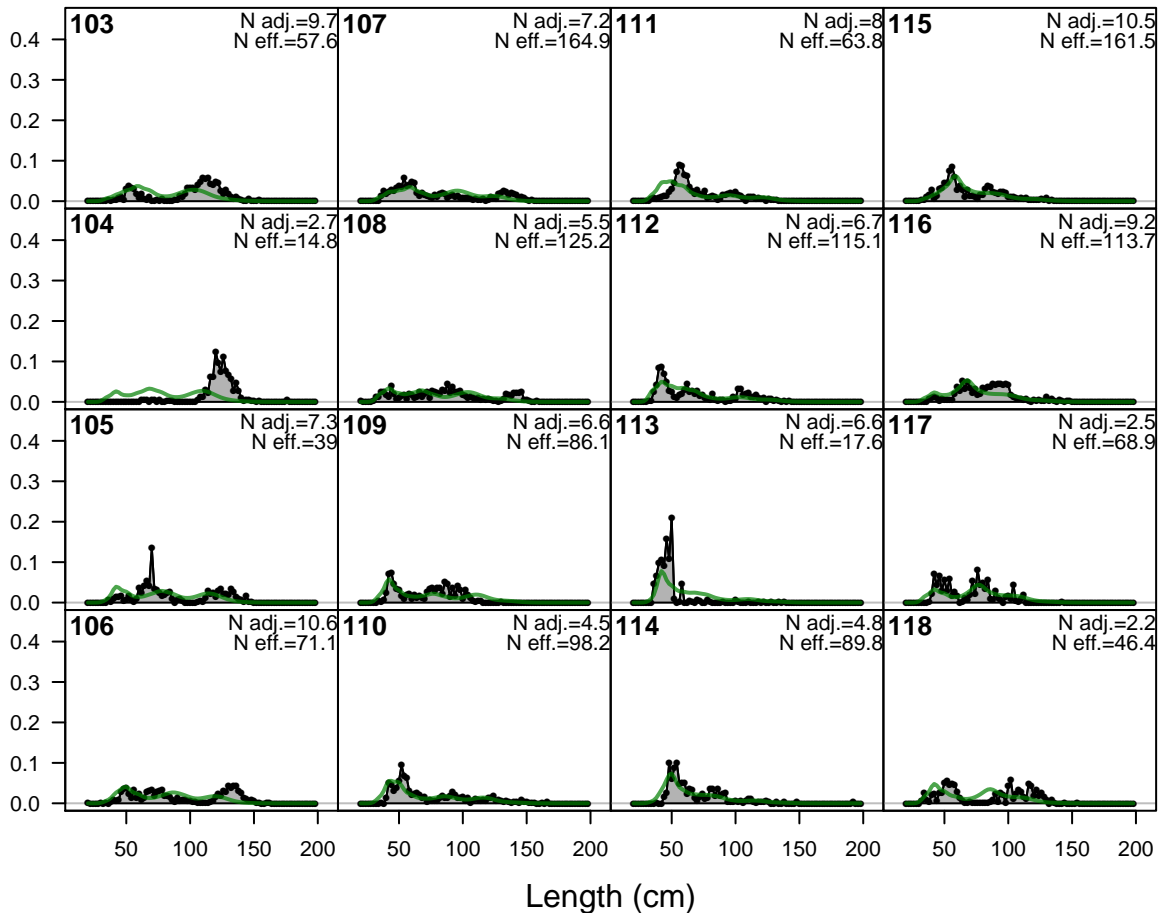
Proportion



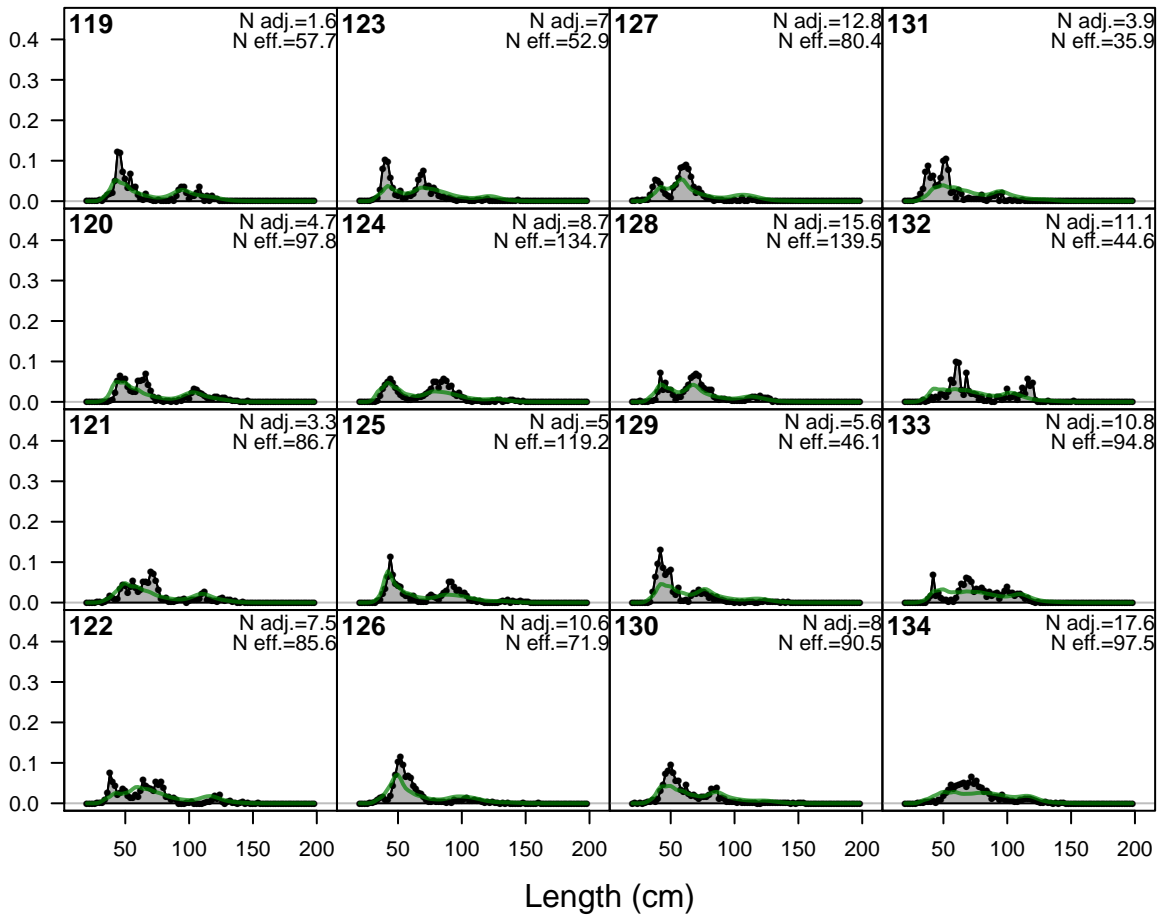
Proportion



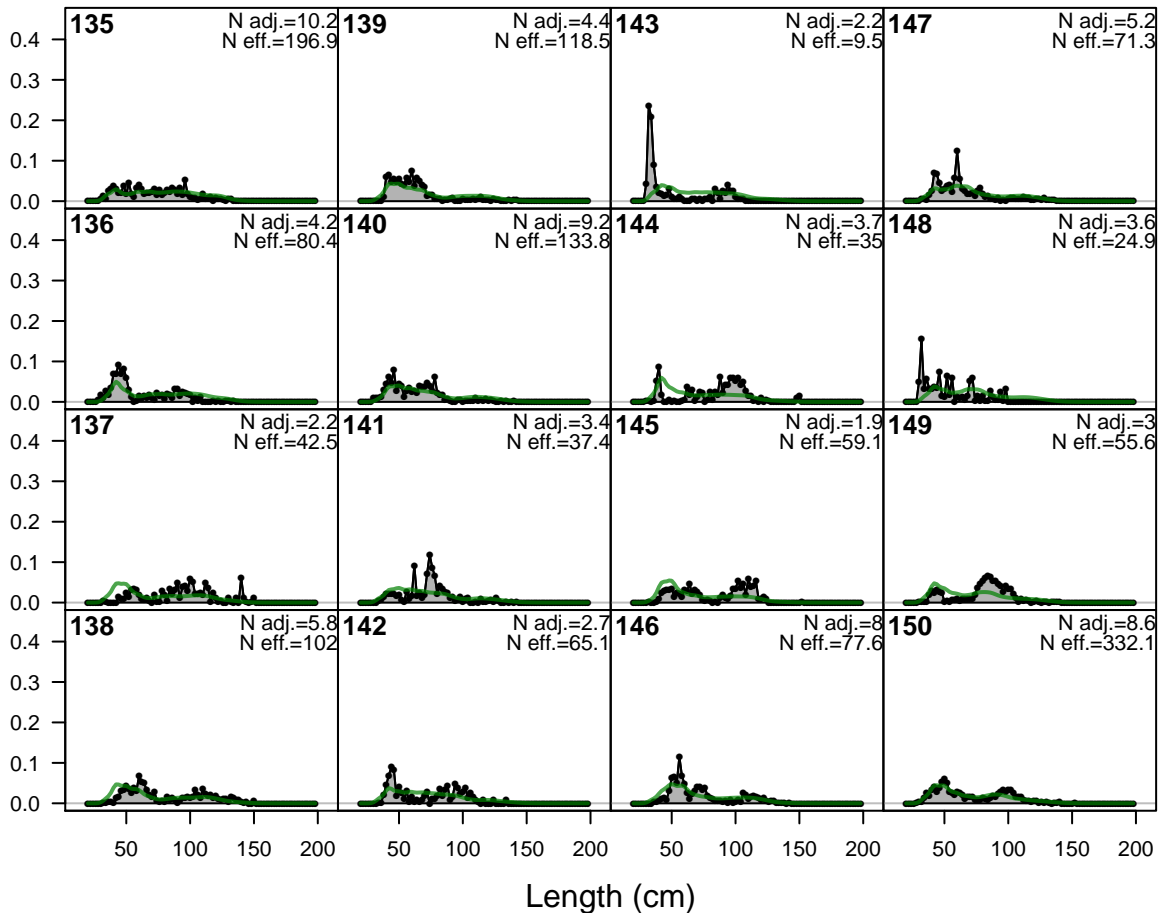
Proportion



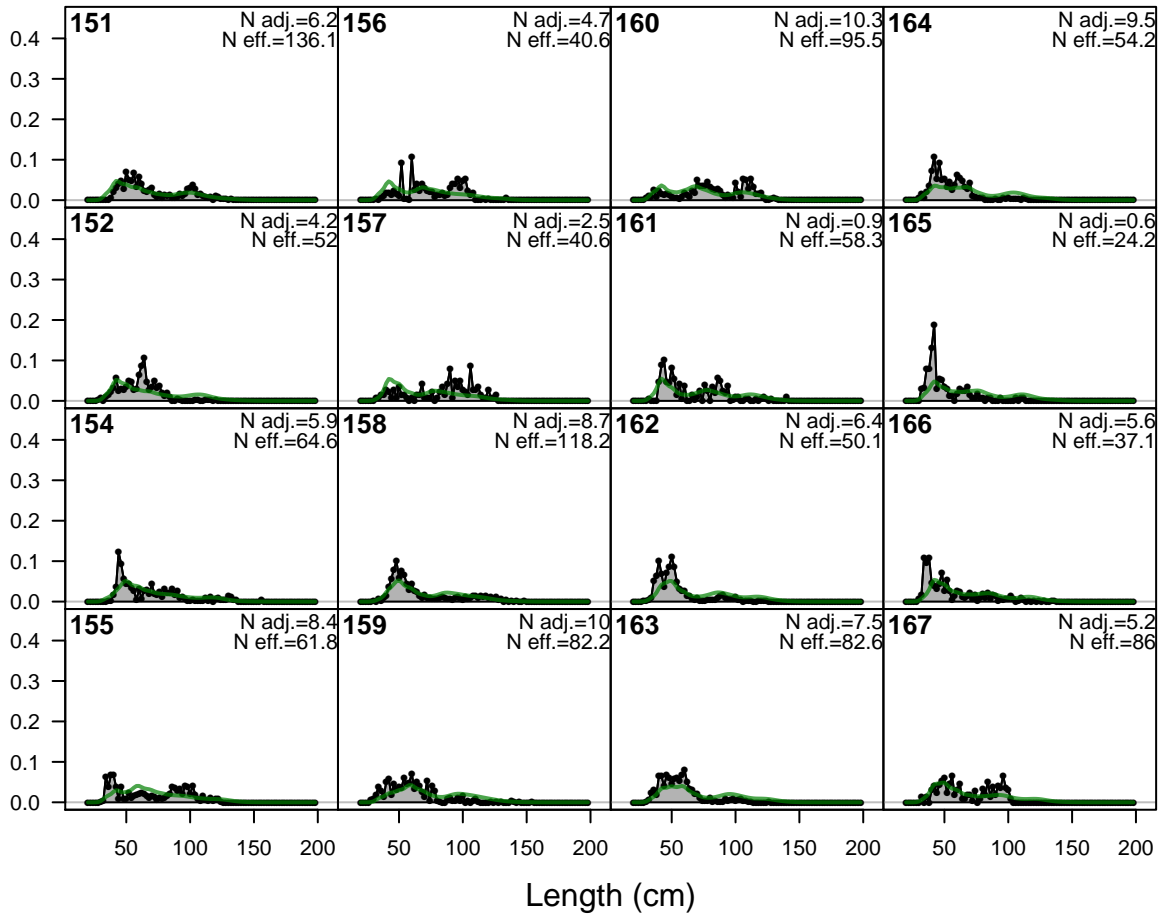
Proportion

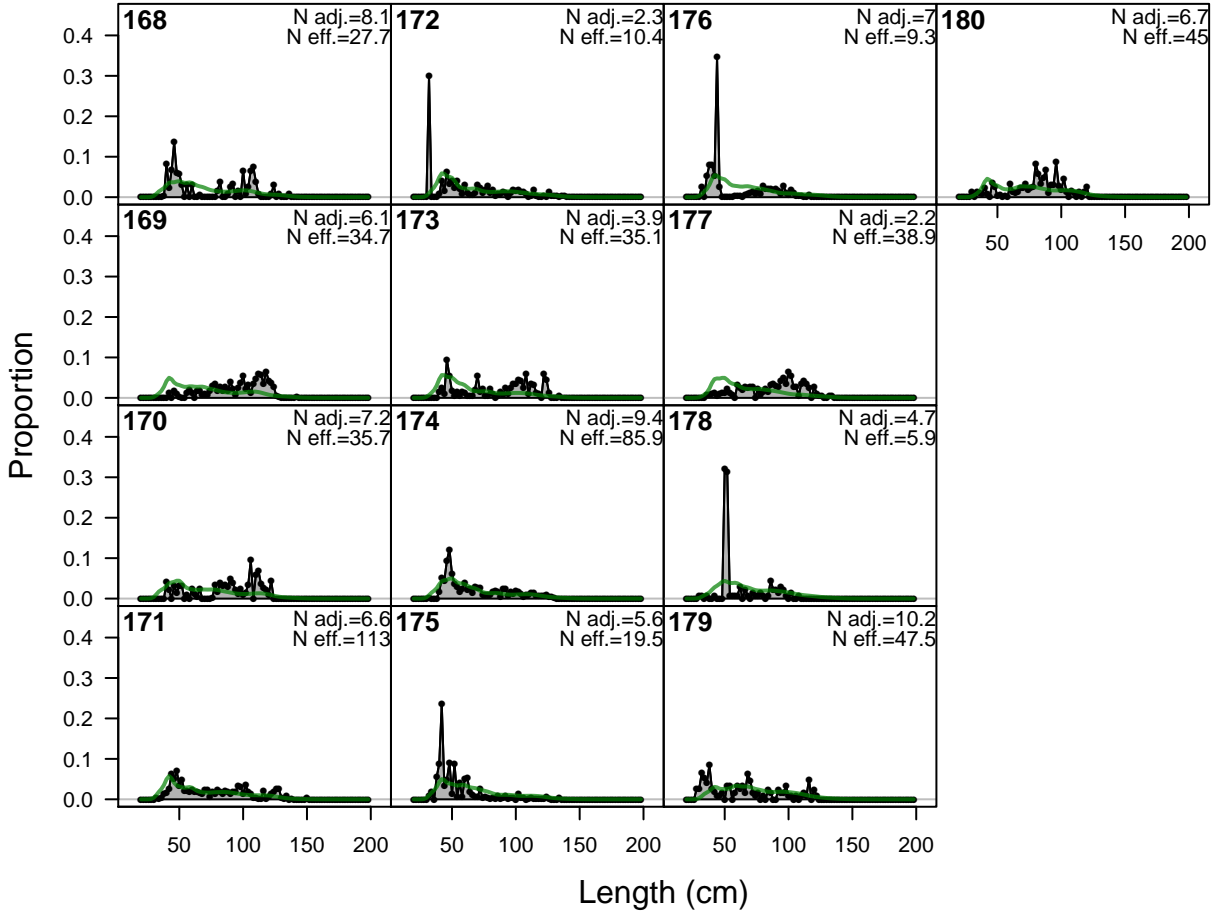


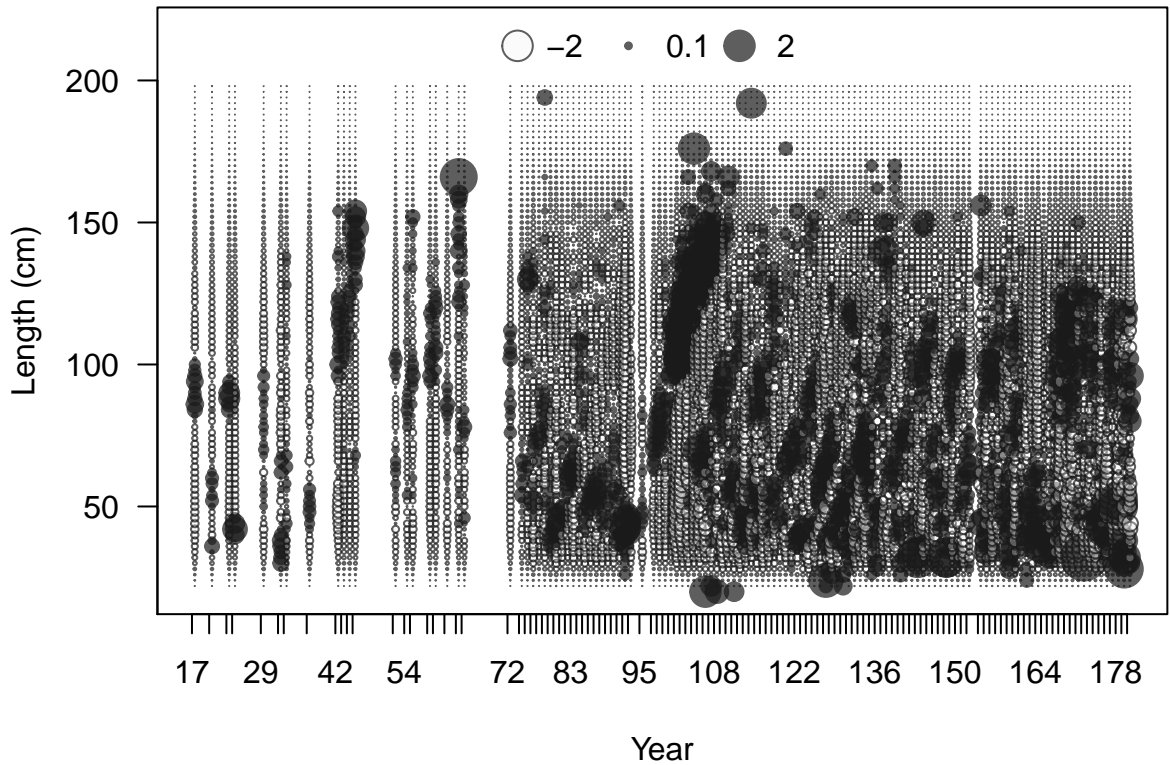
Proportion

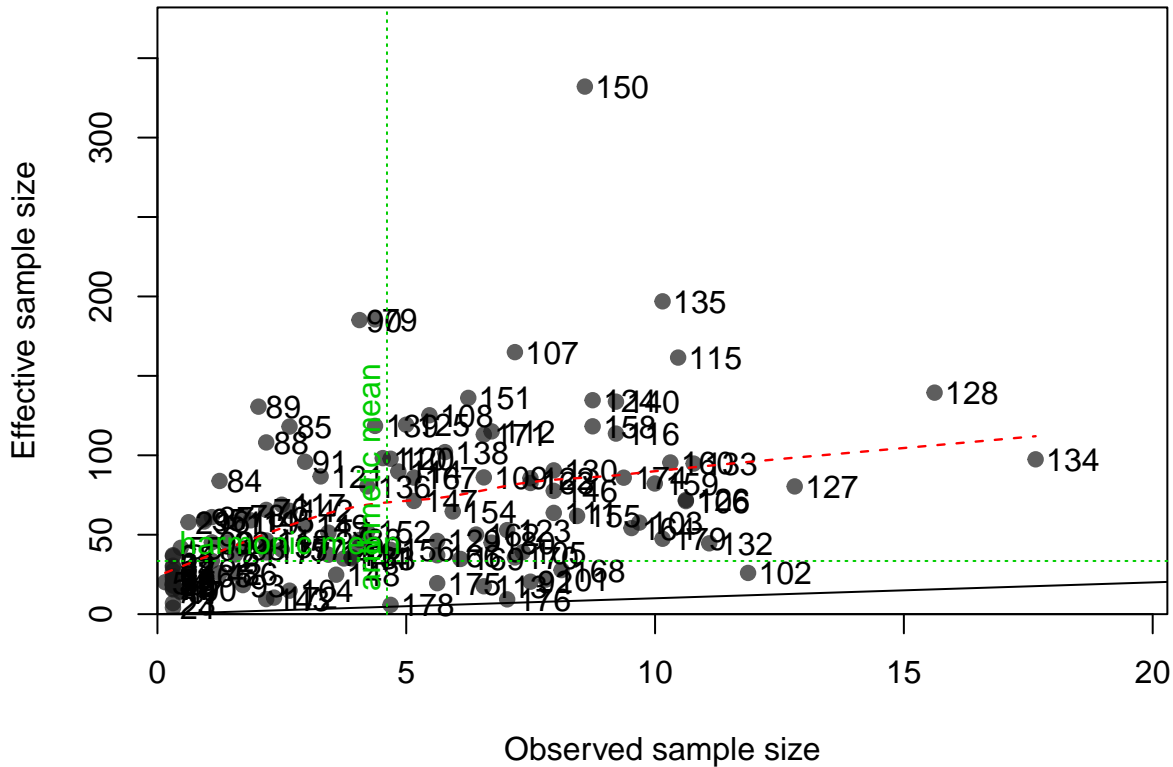


Proportion

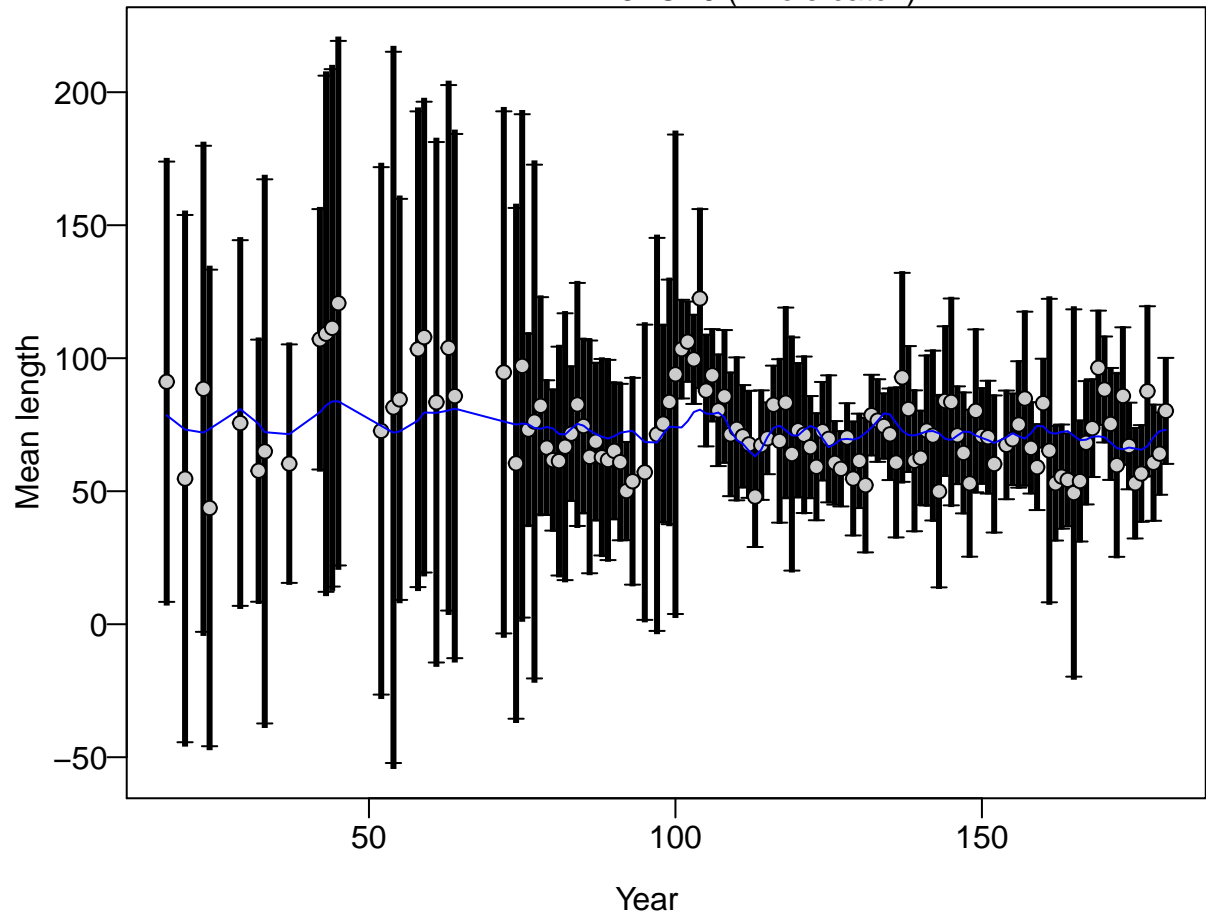




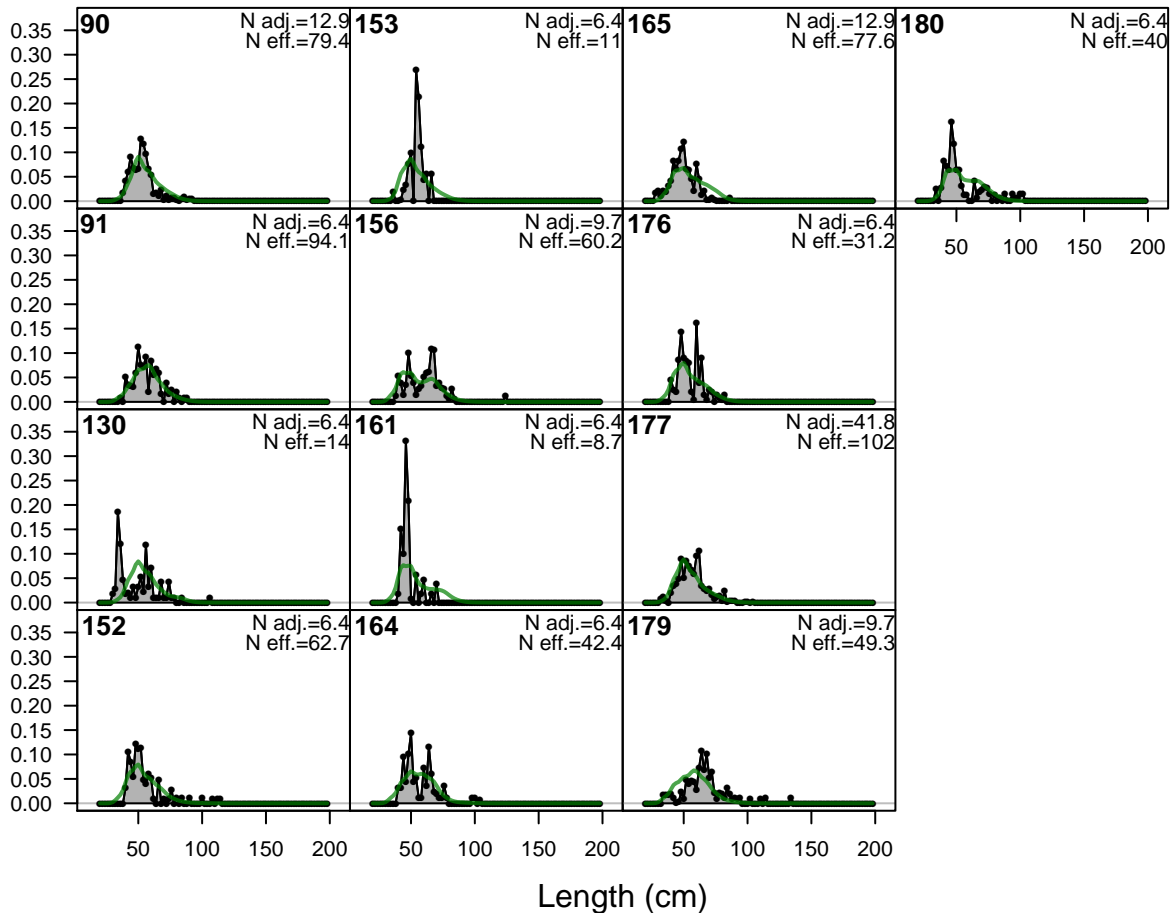


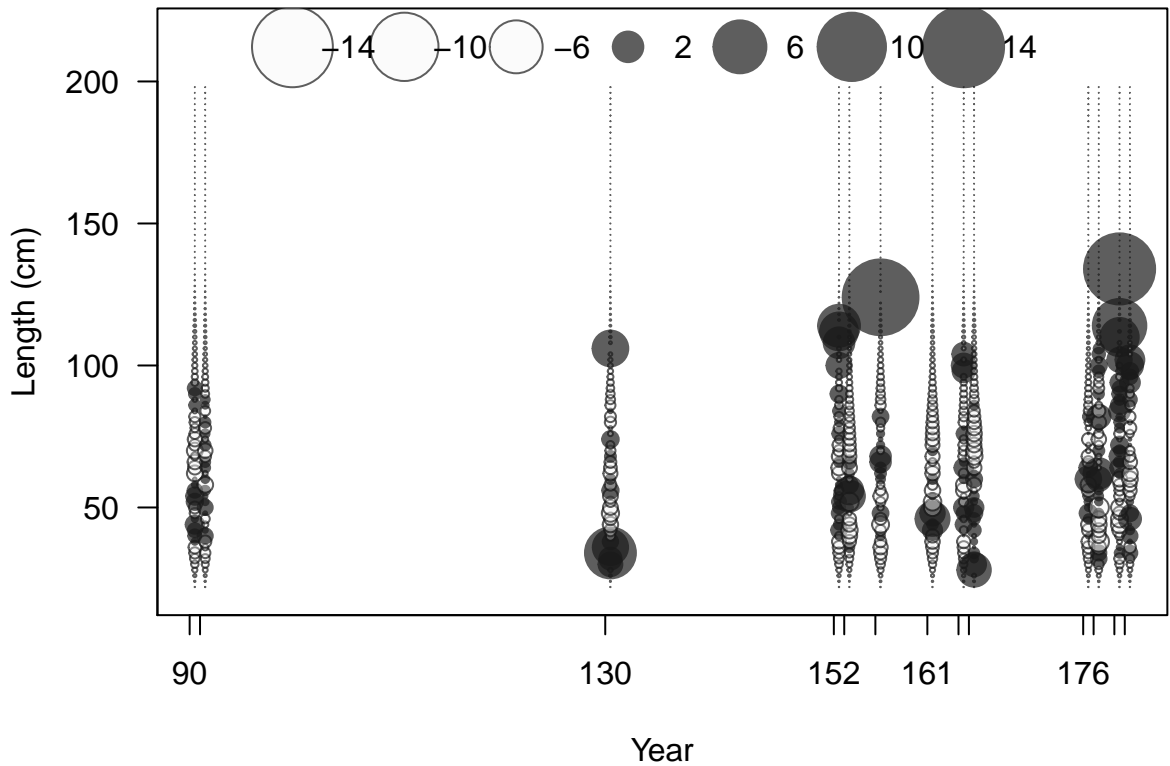


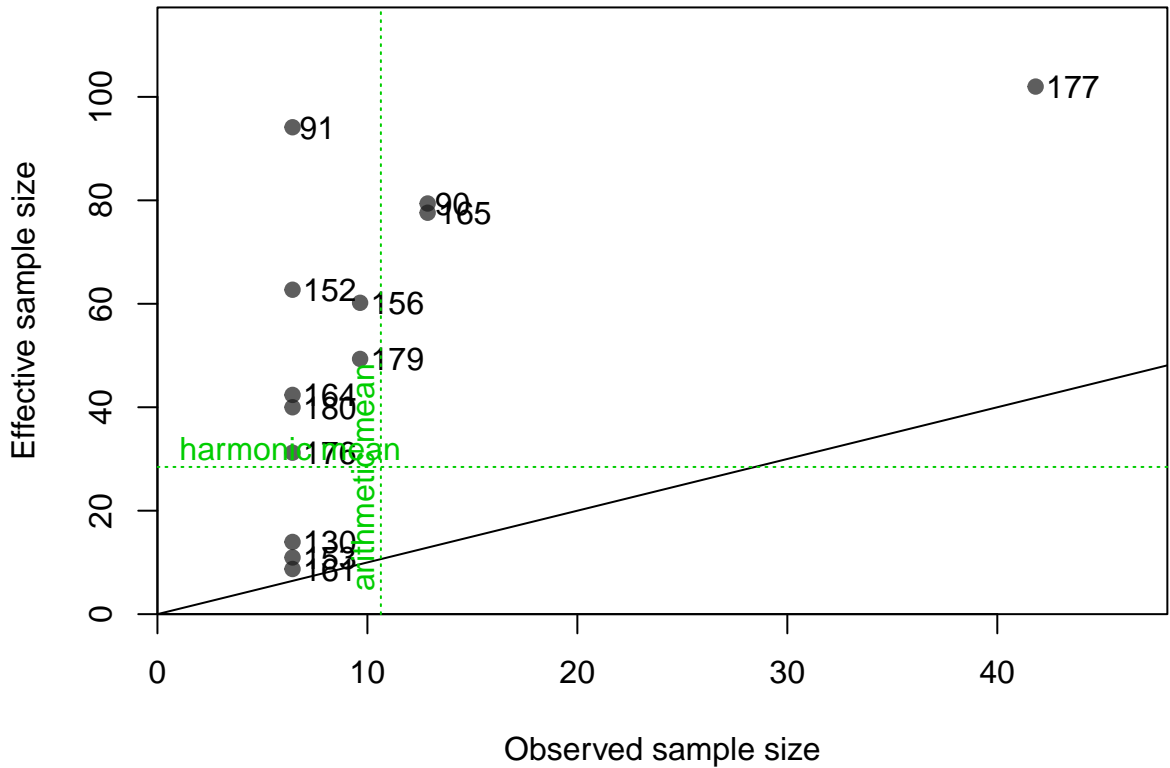
A3-OBJ (whole catch)



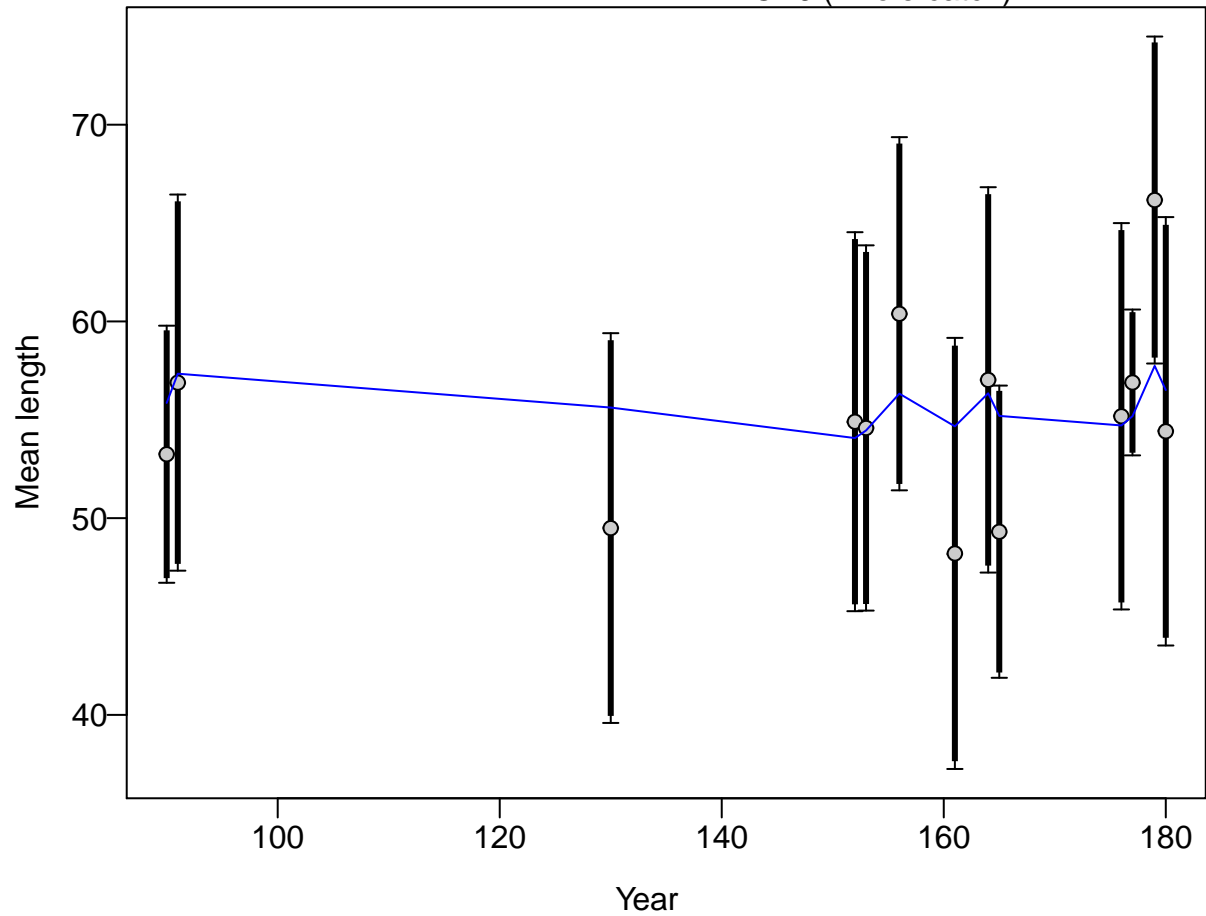
Proportion



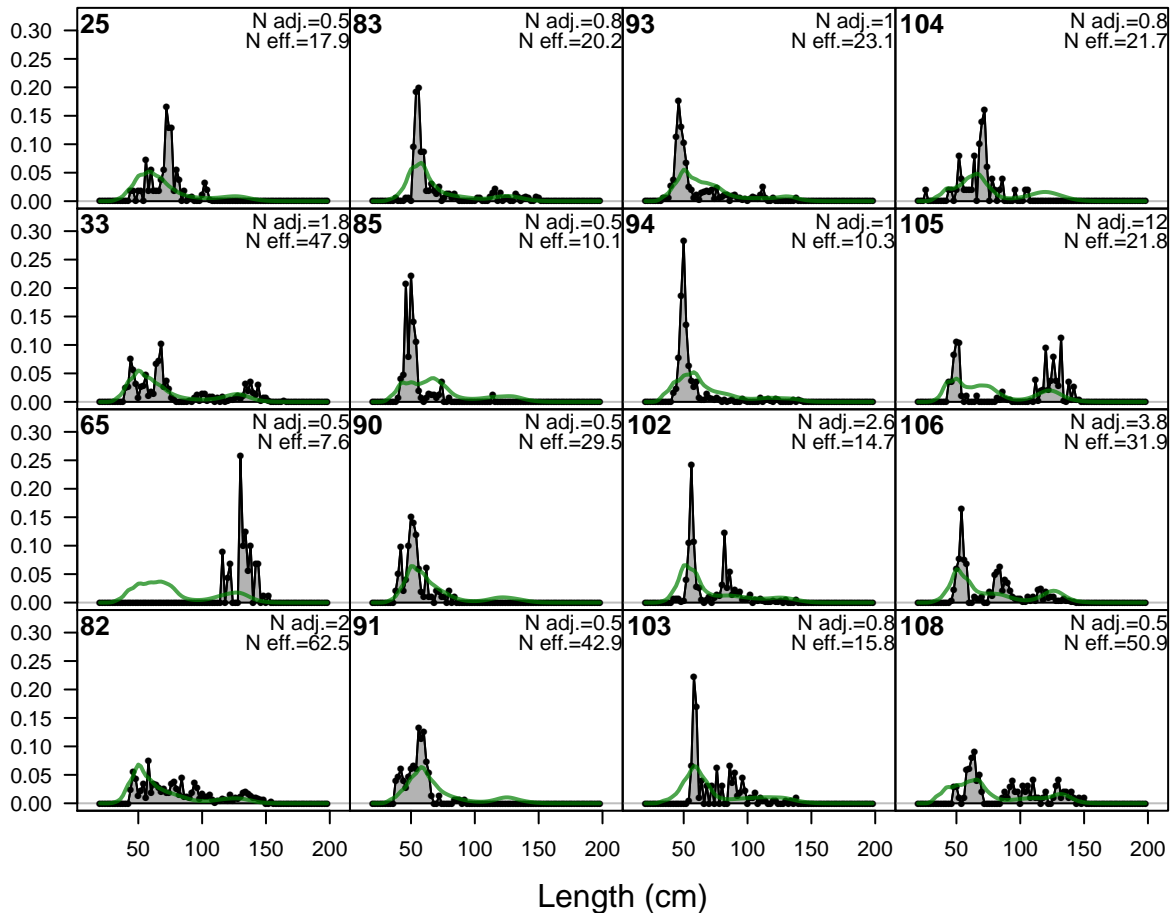




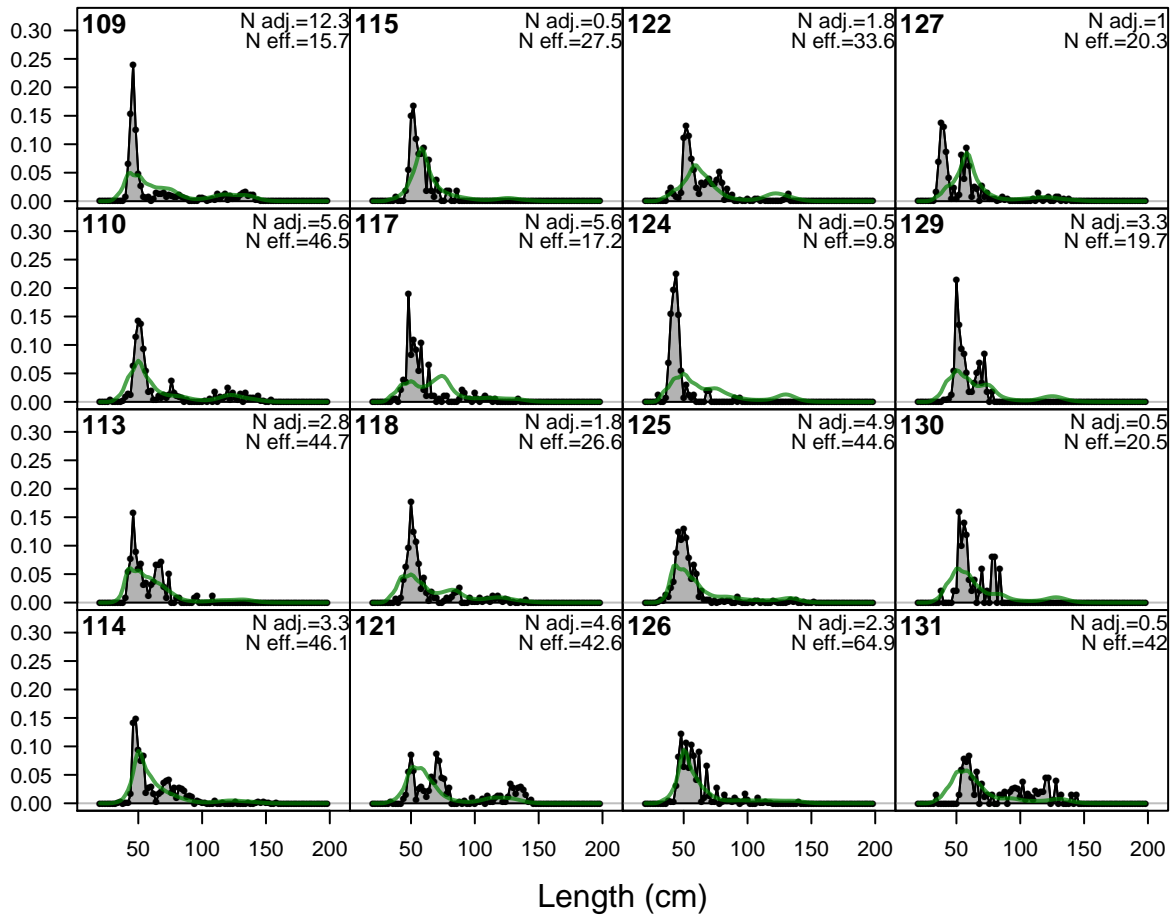
A4-OBJ (whole catch)



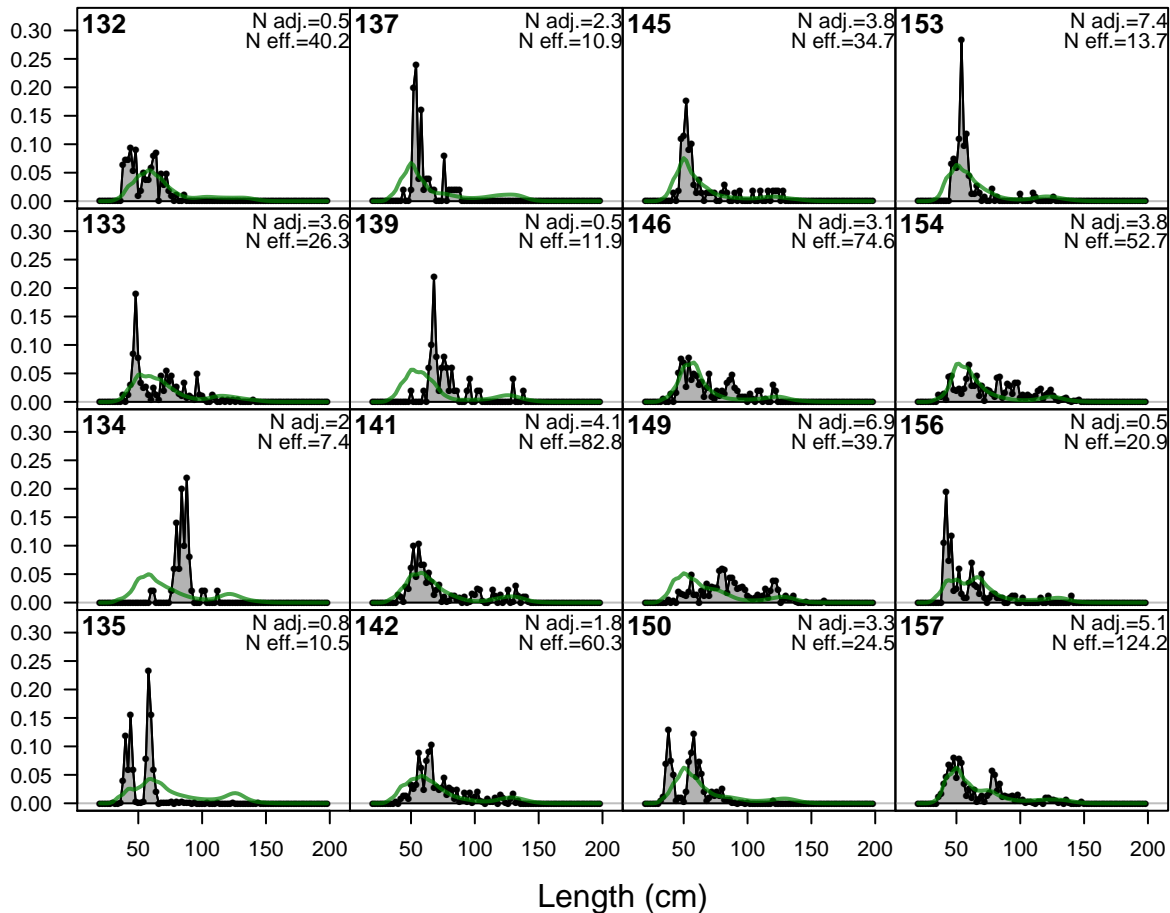
Proportion



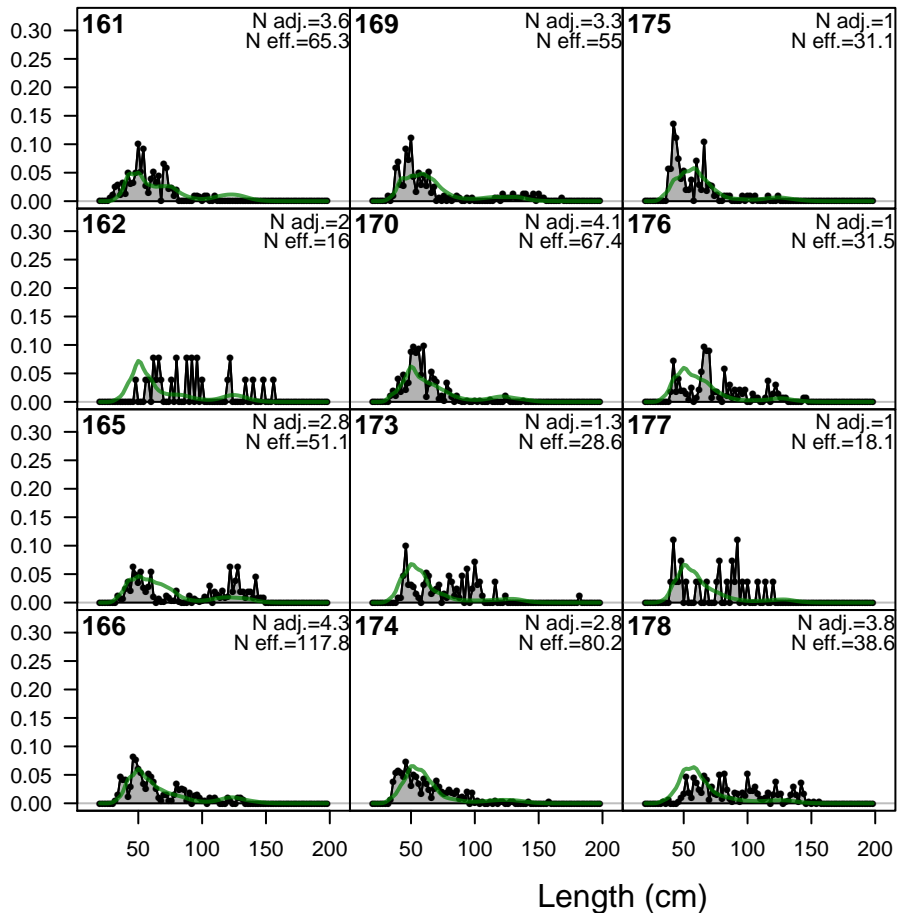
Proportion

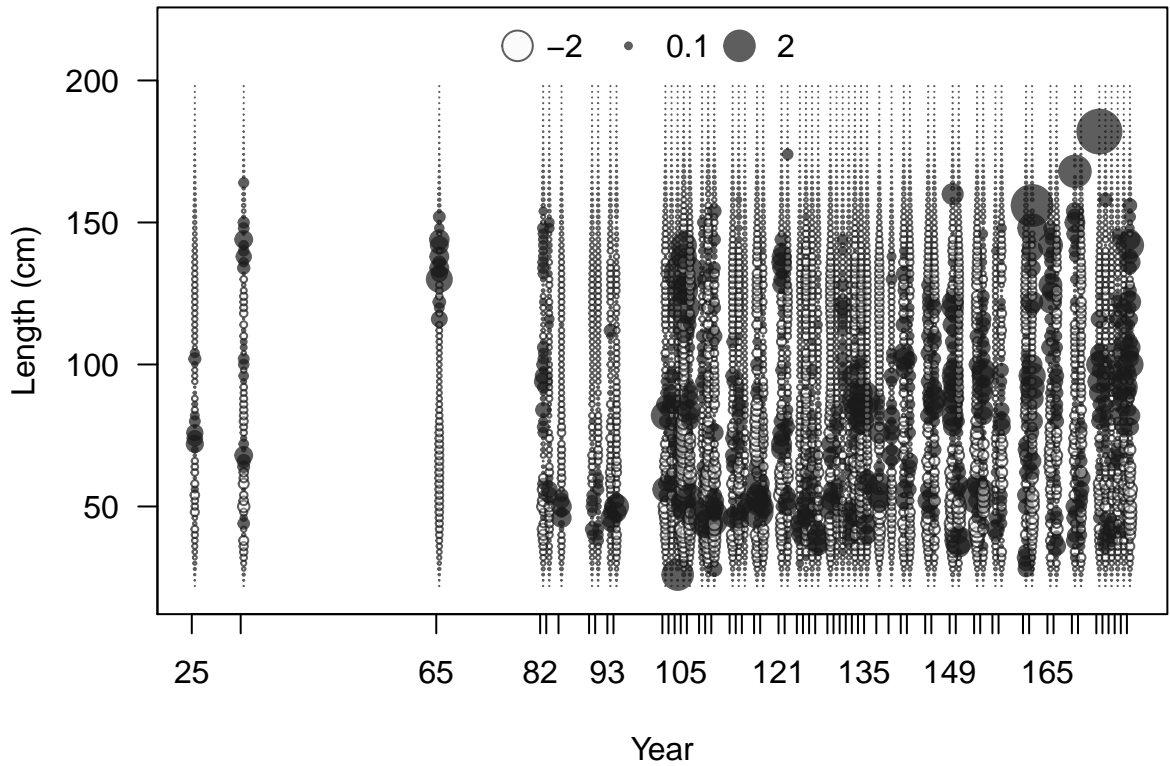


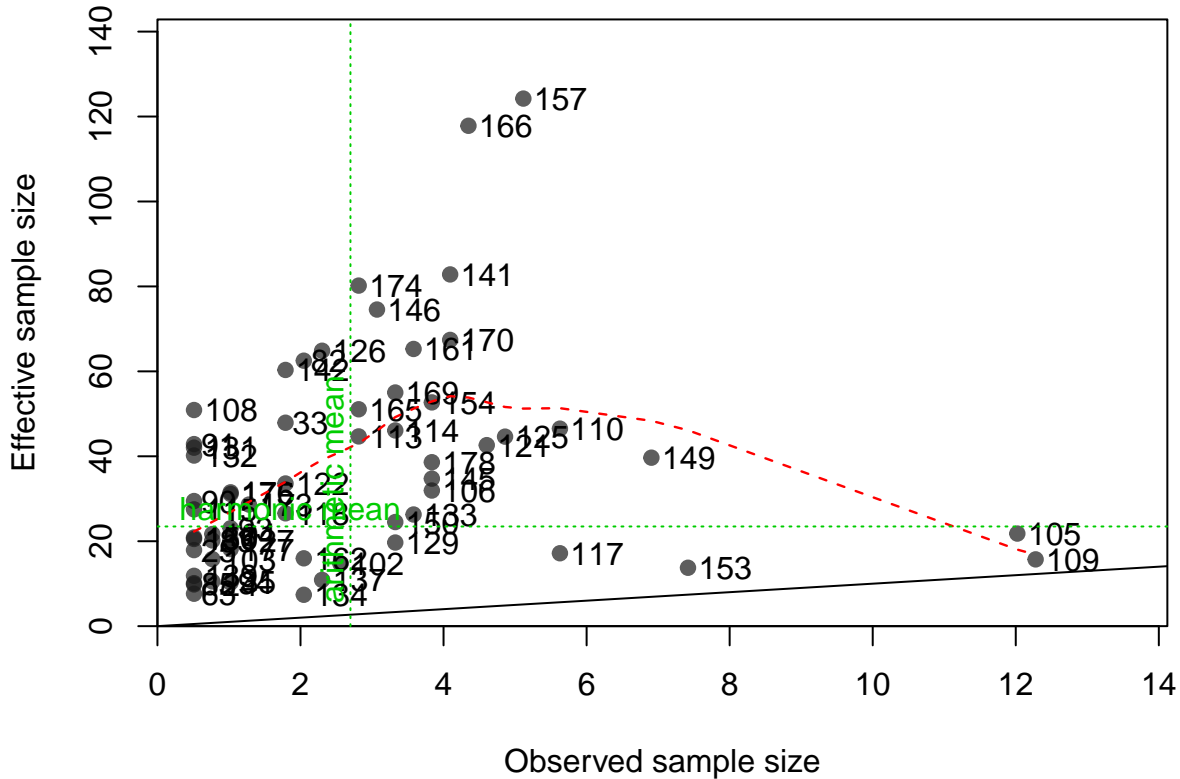
Proportion



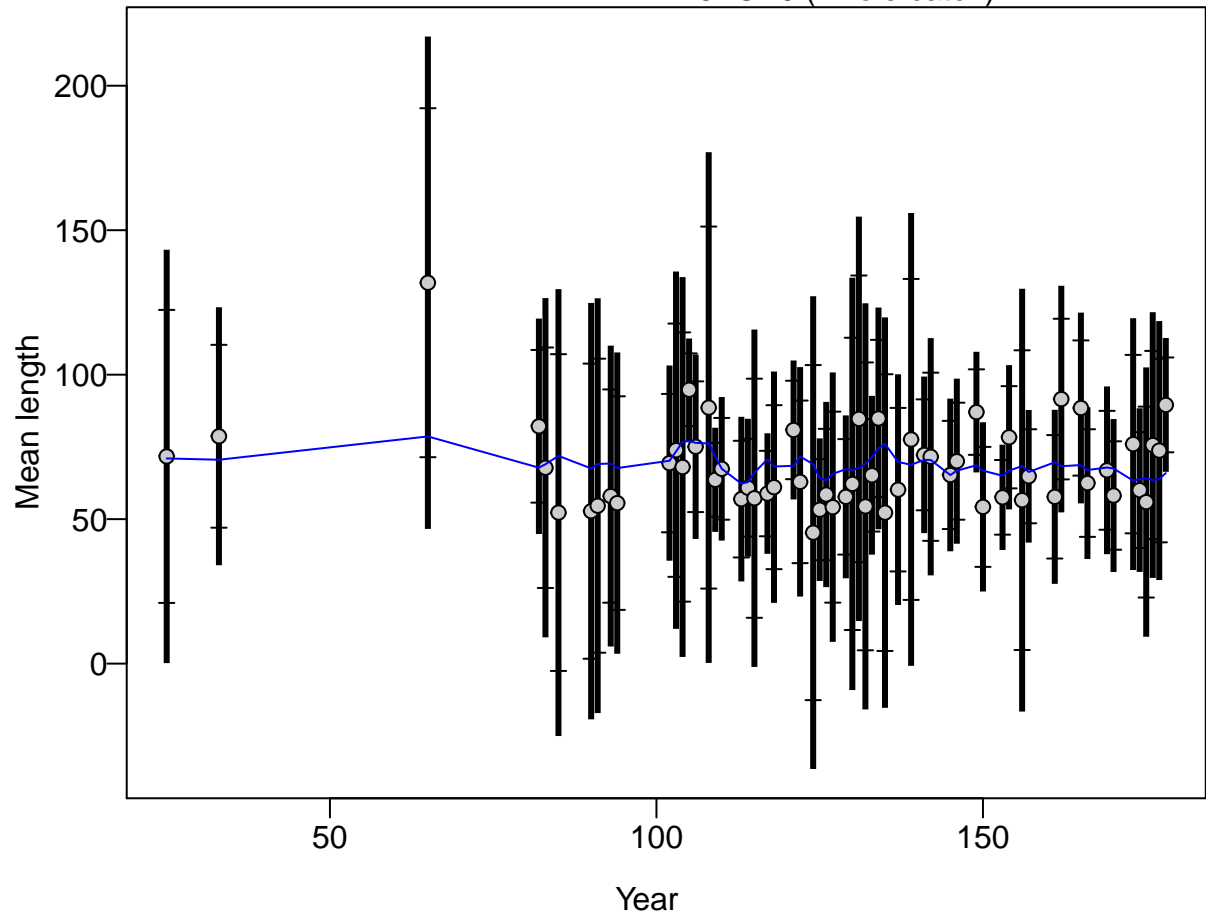
Proportion



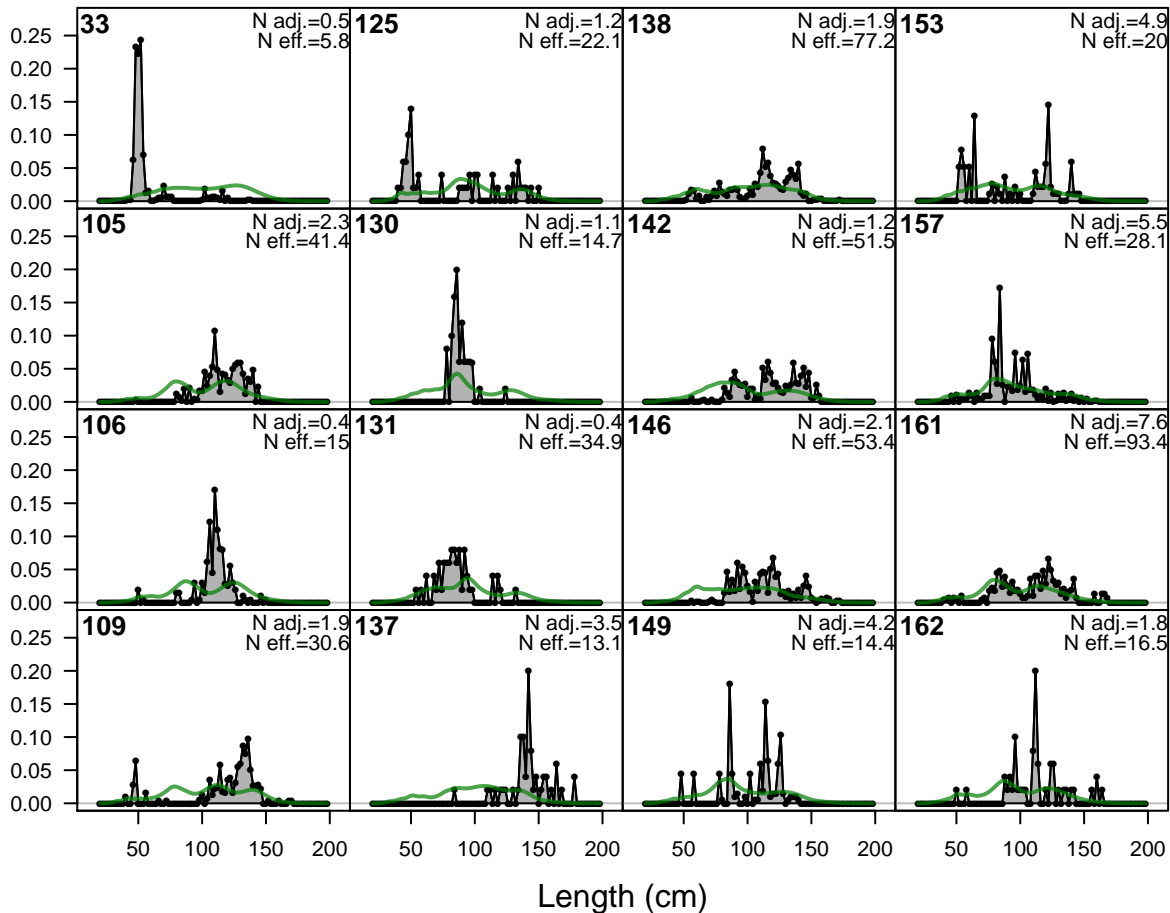




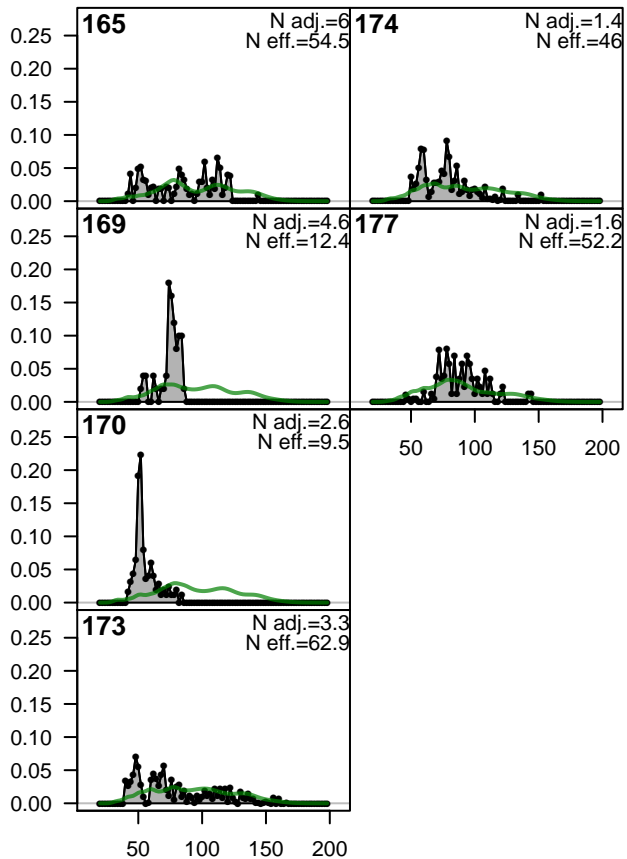
A5-OBJ (whole catch)



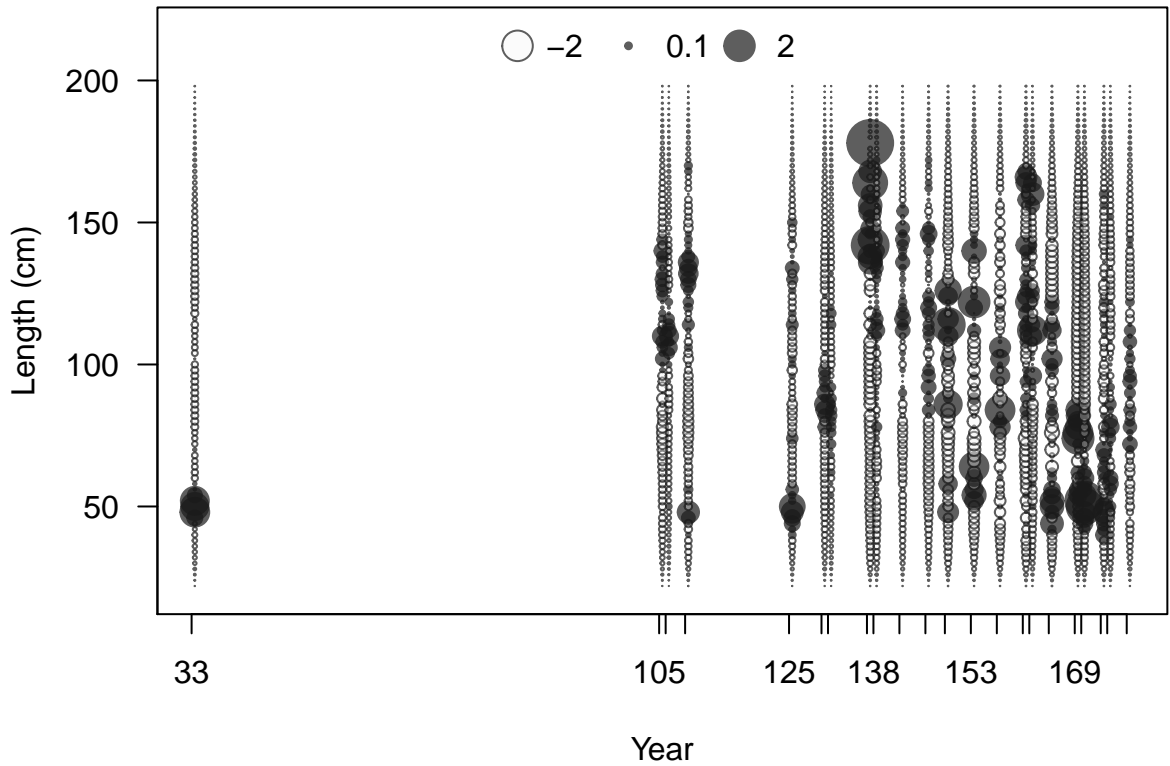
Proportion

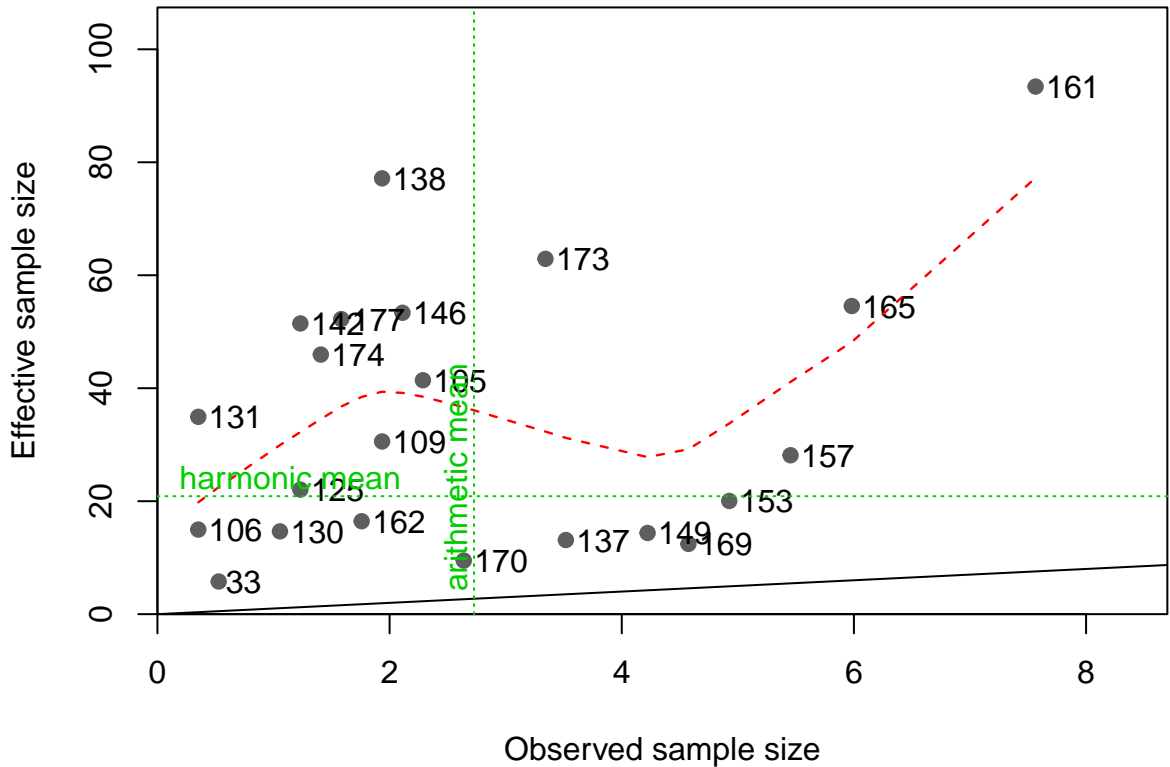


Proportion

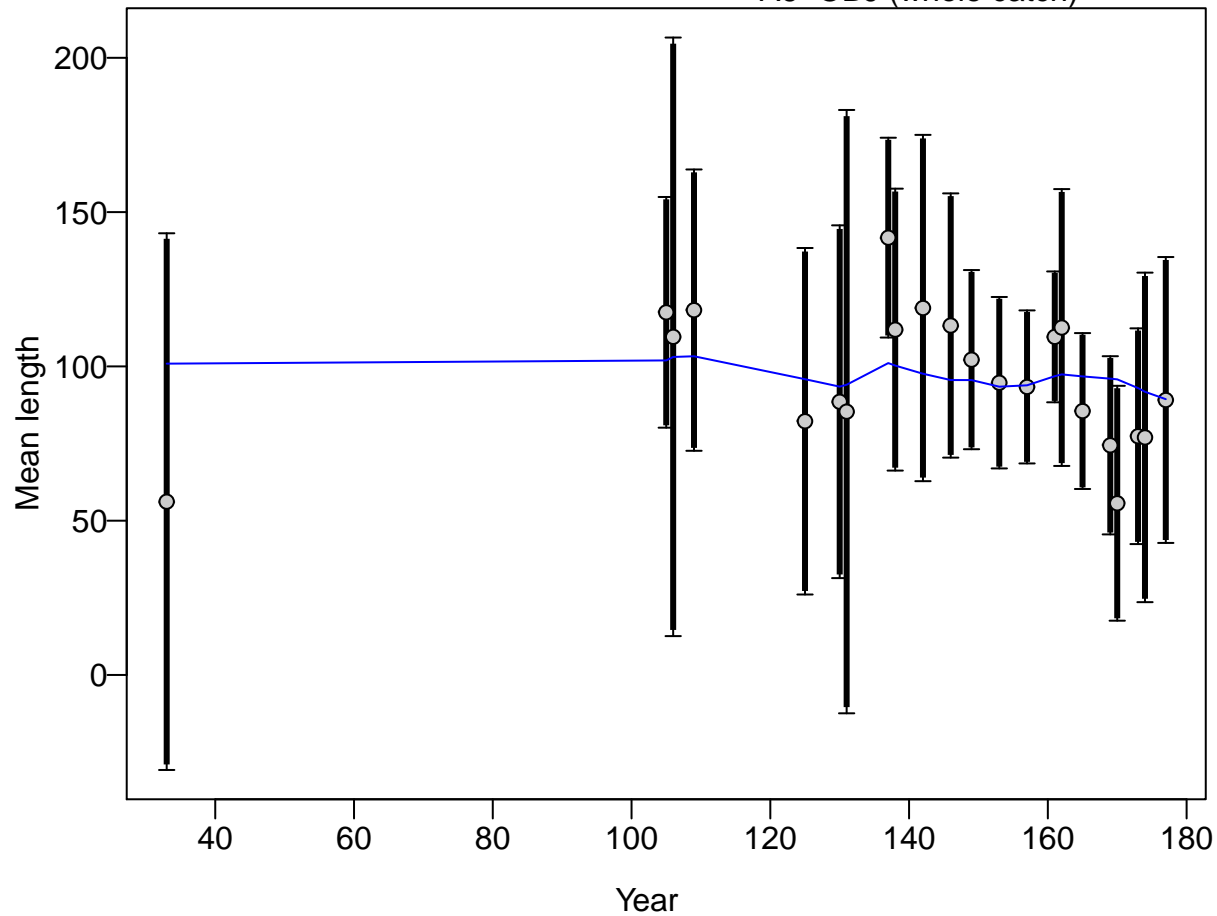


Length (cm)

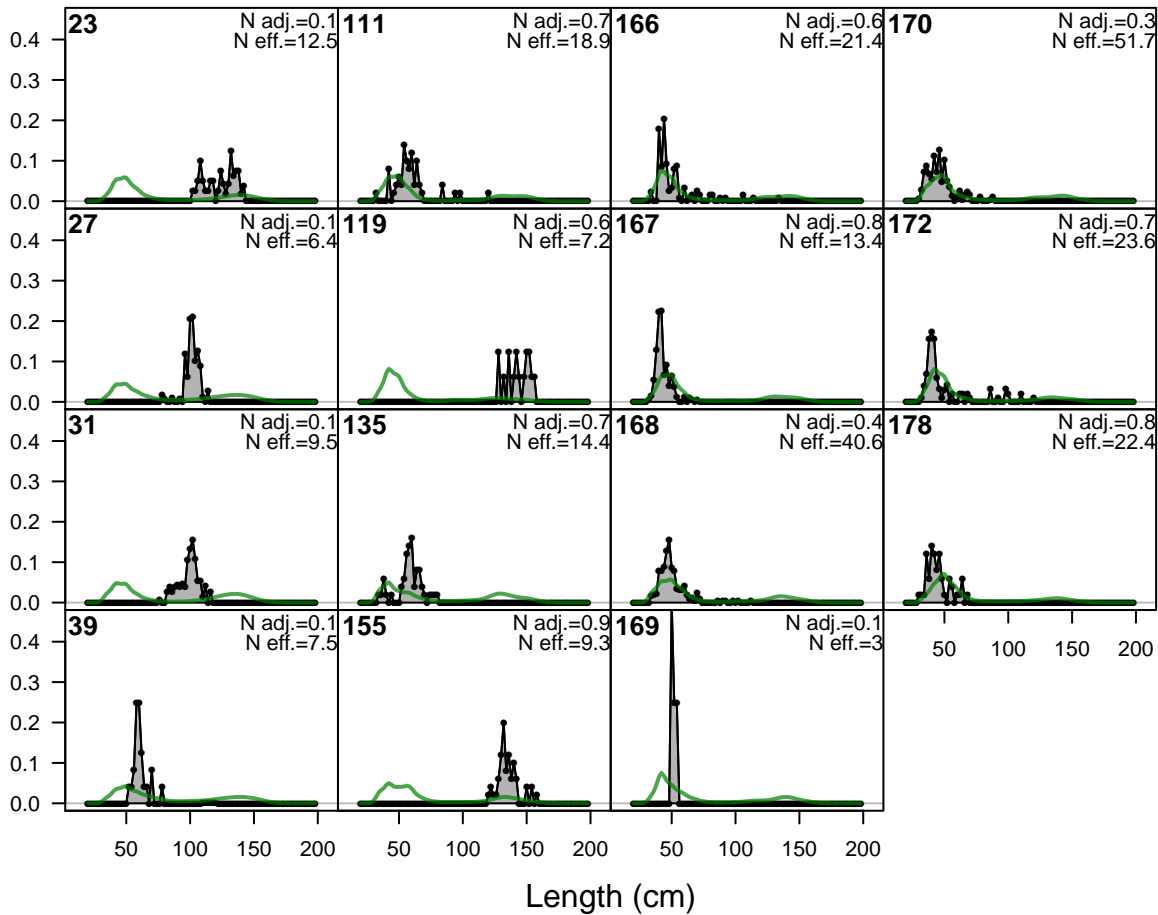


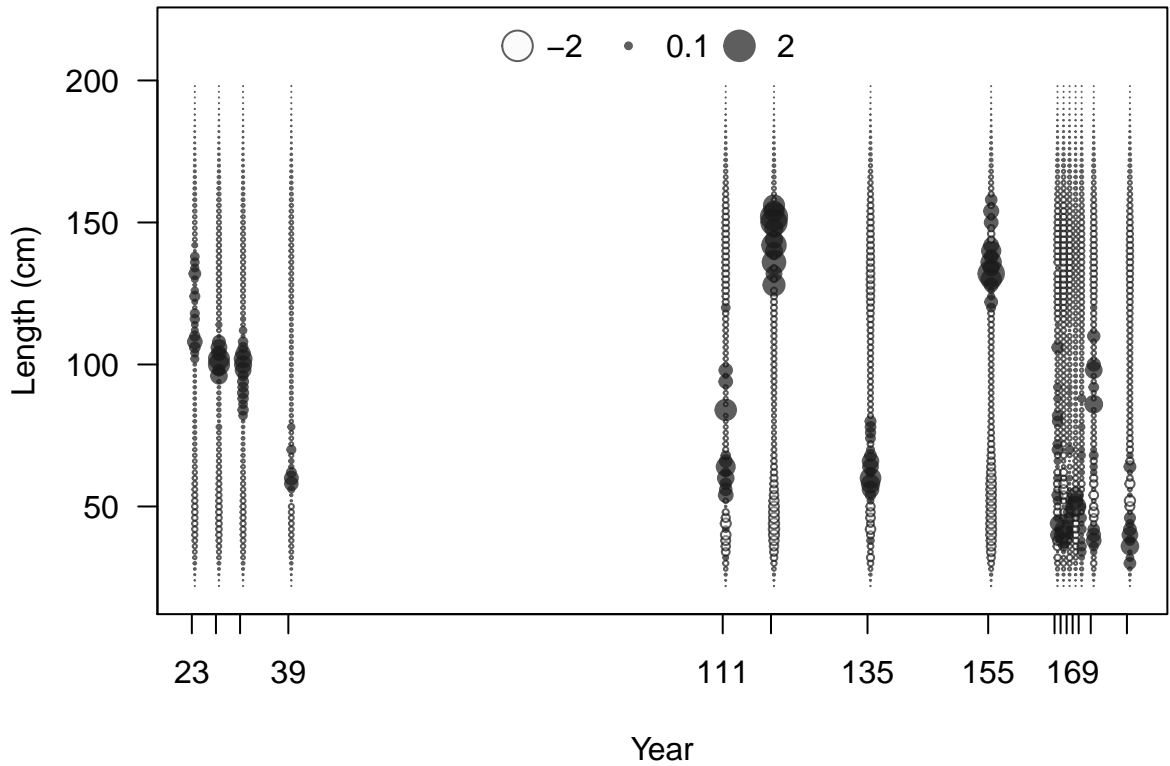


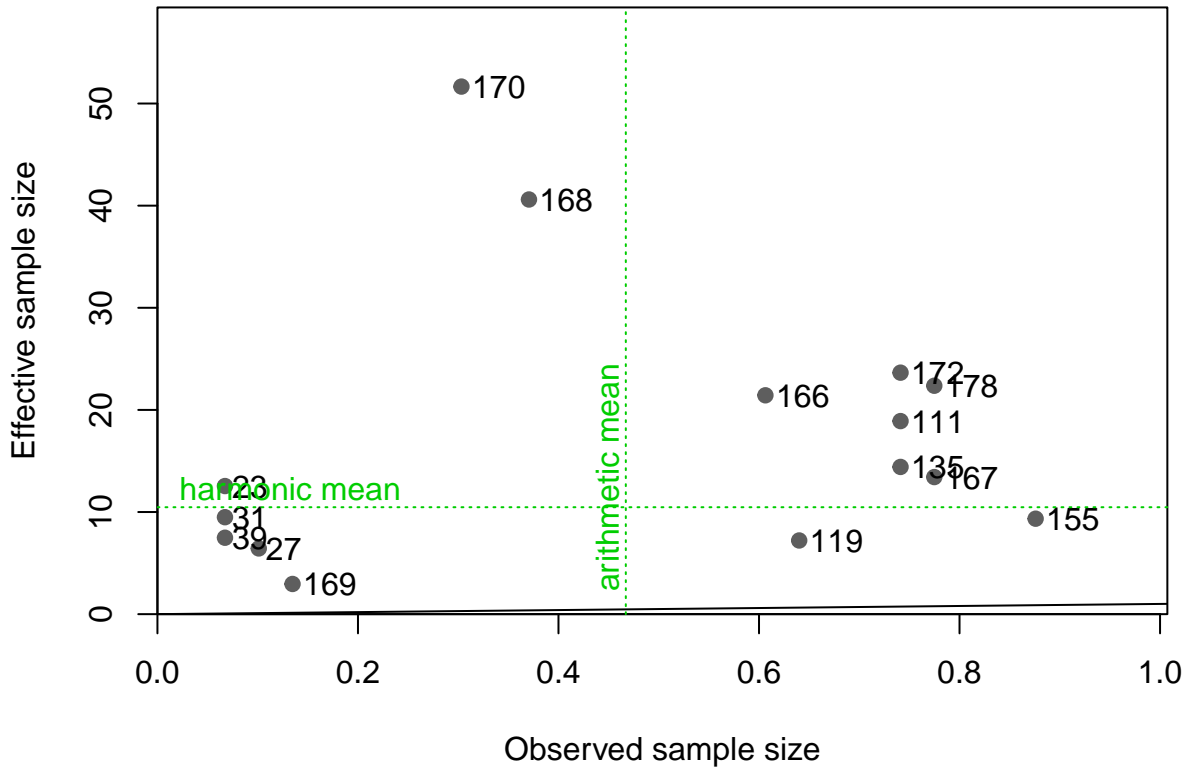
A6-OBJ (whole catch)



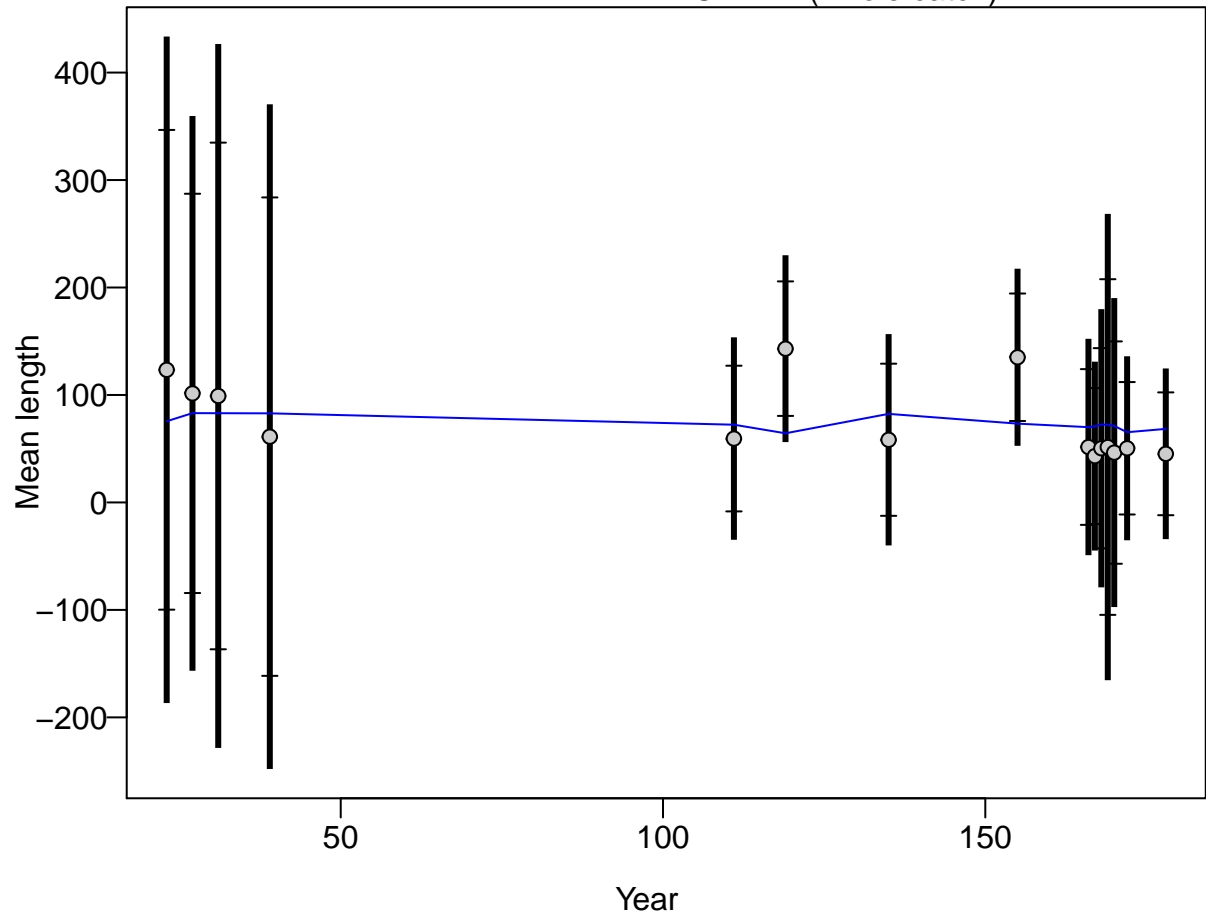
Proportion



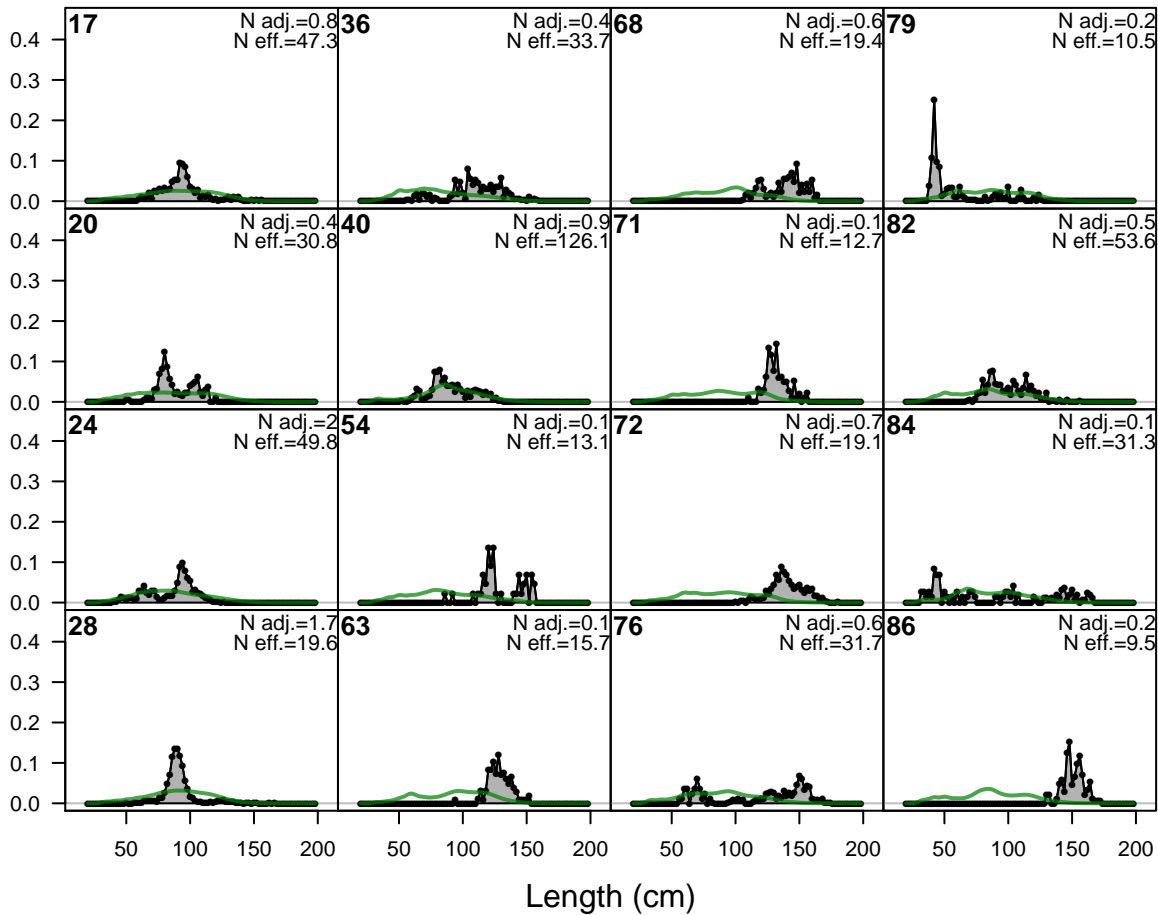




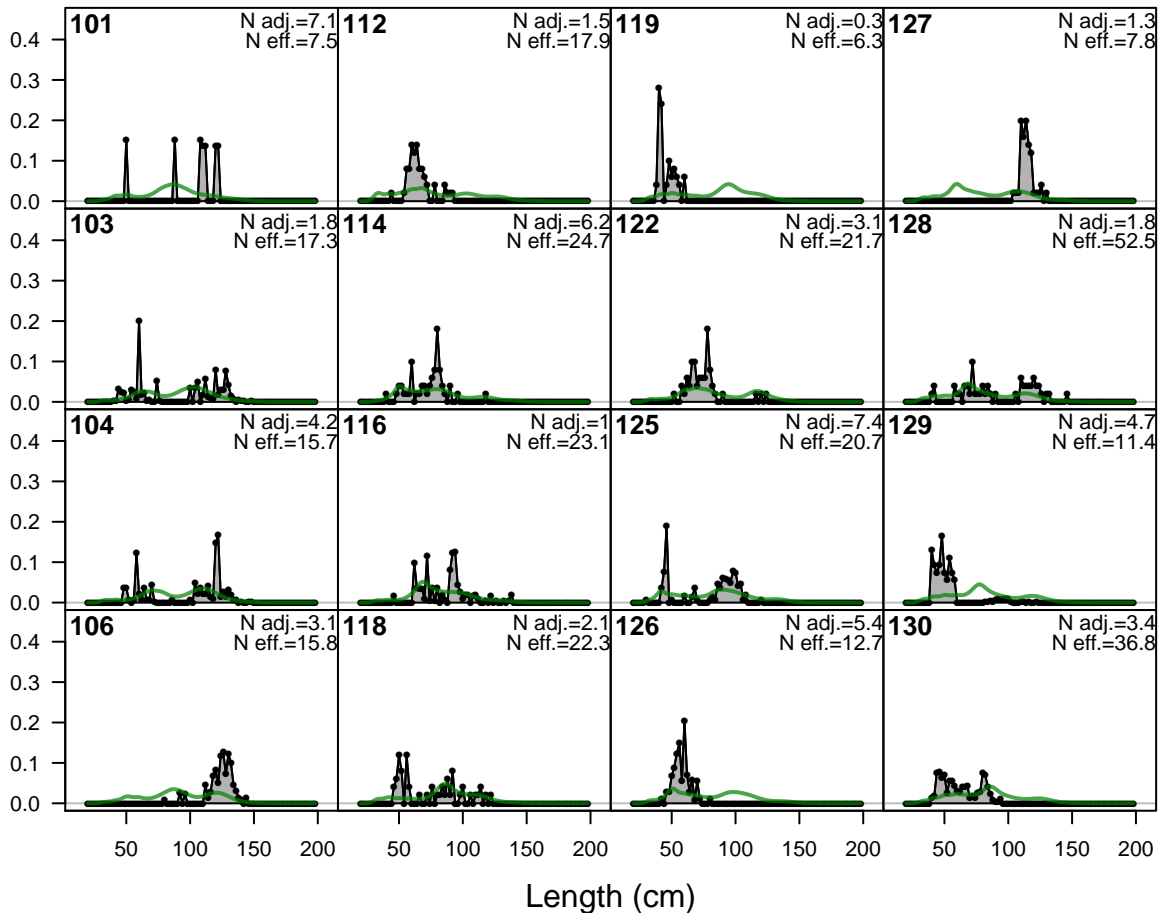
A2-NOADEL (whole catch)



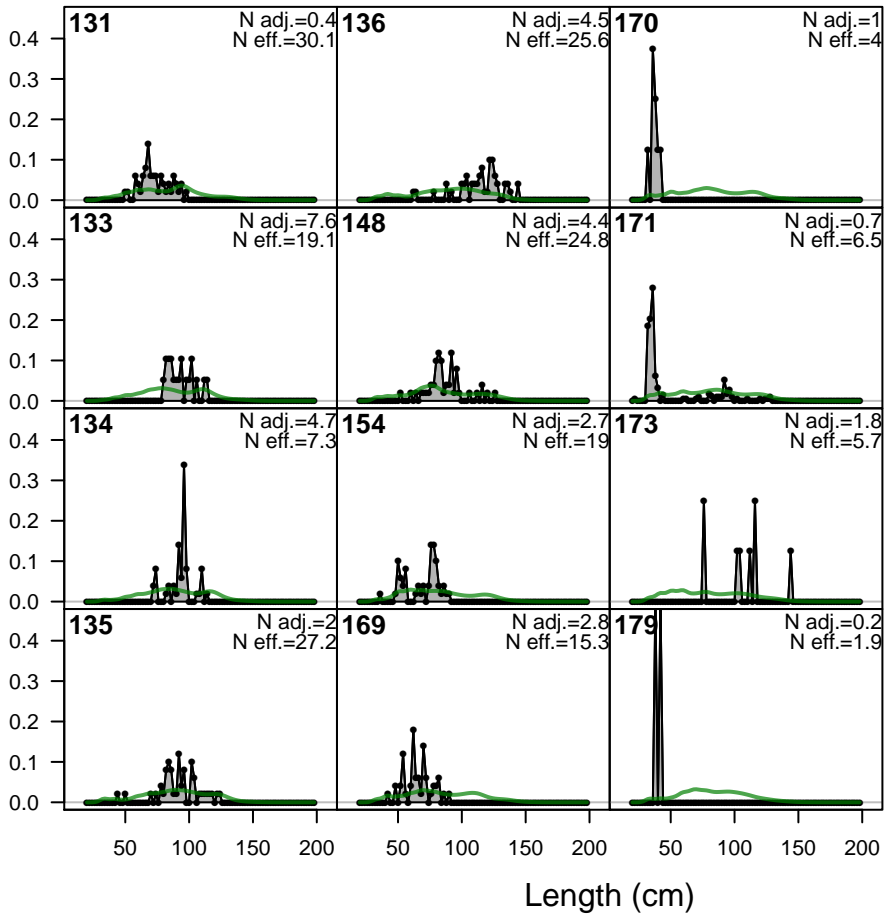
Proportion

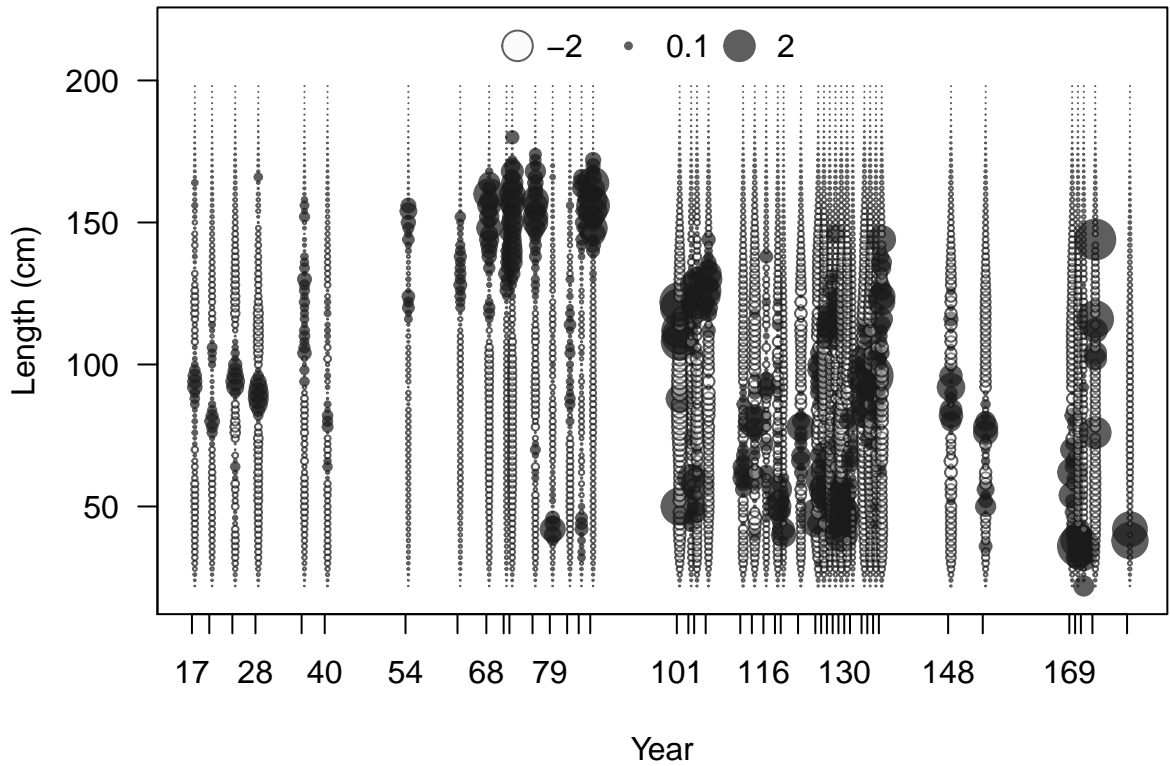


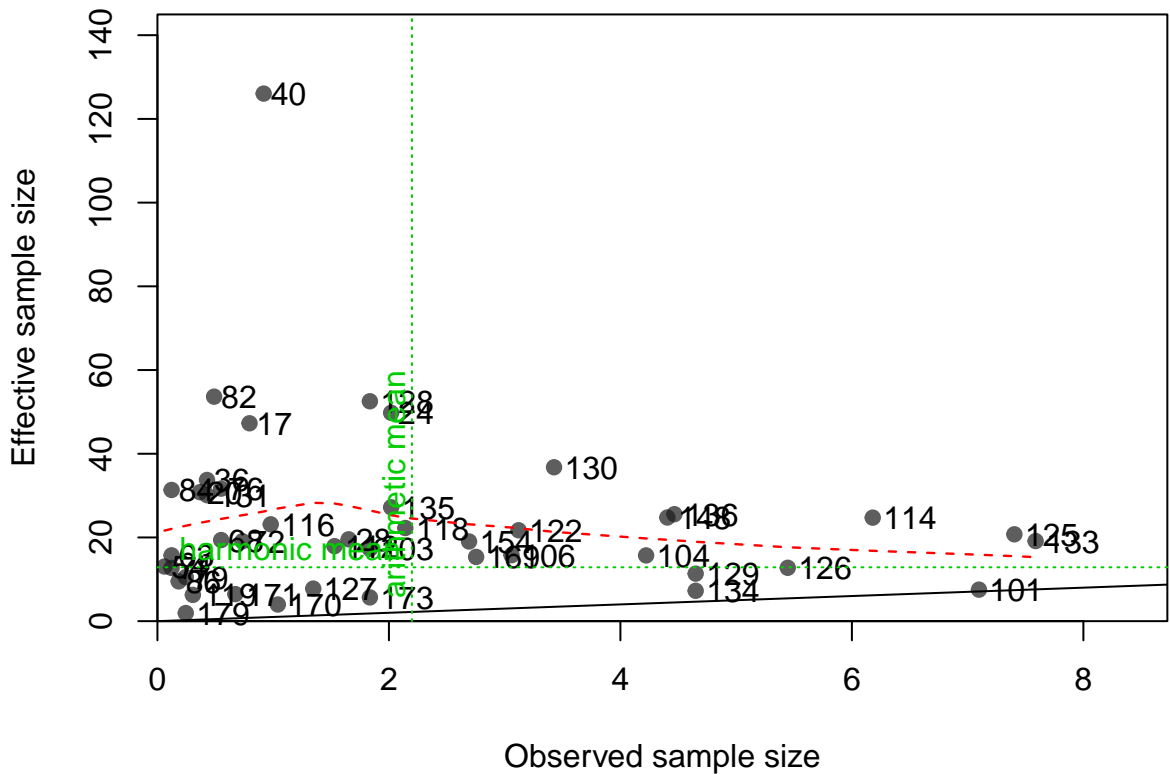
Proportion



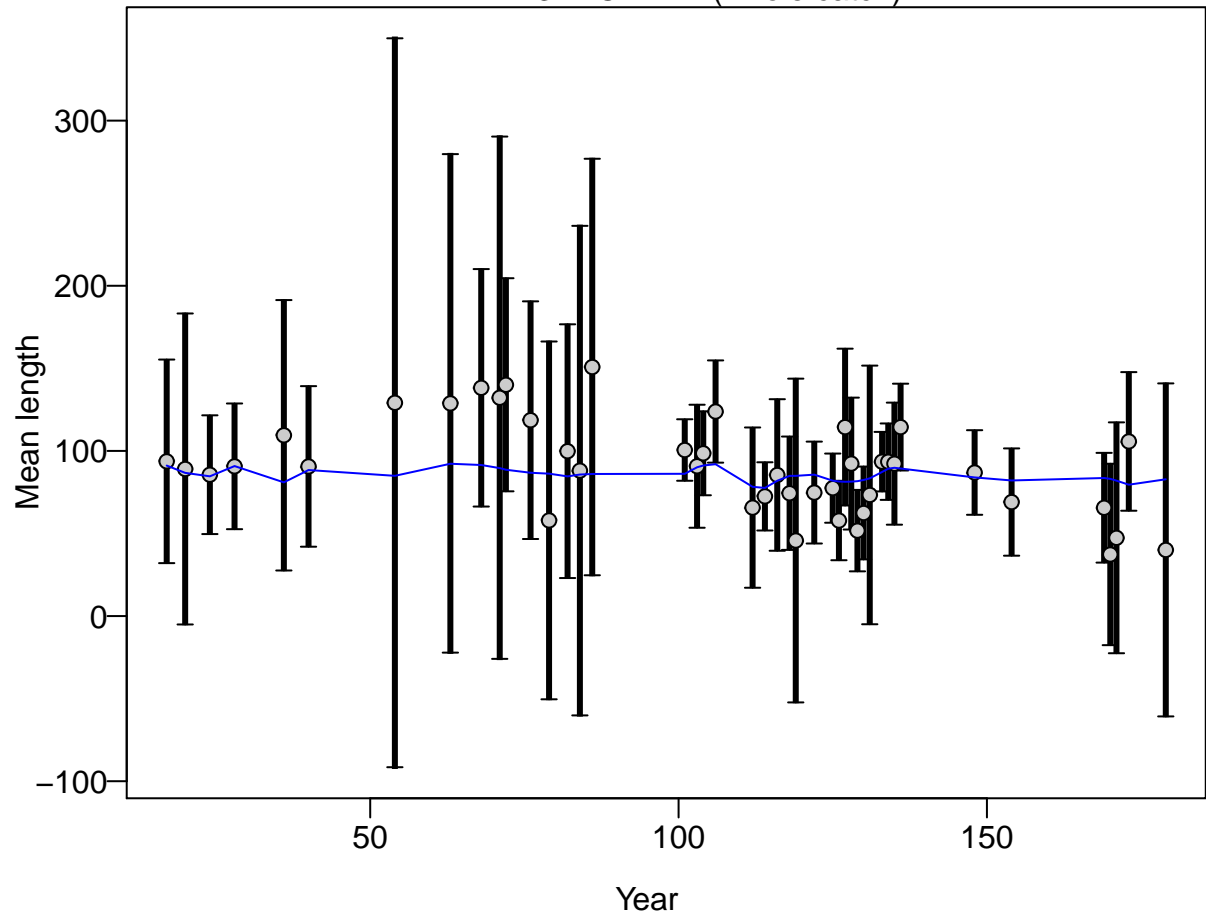
Proportion

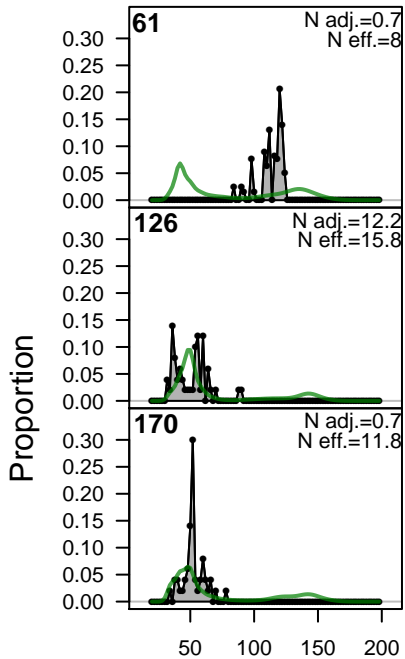




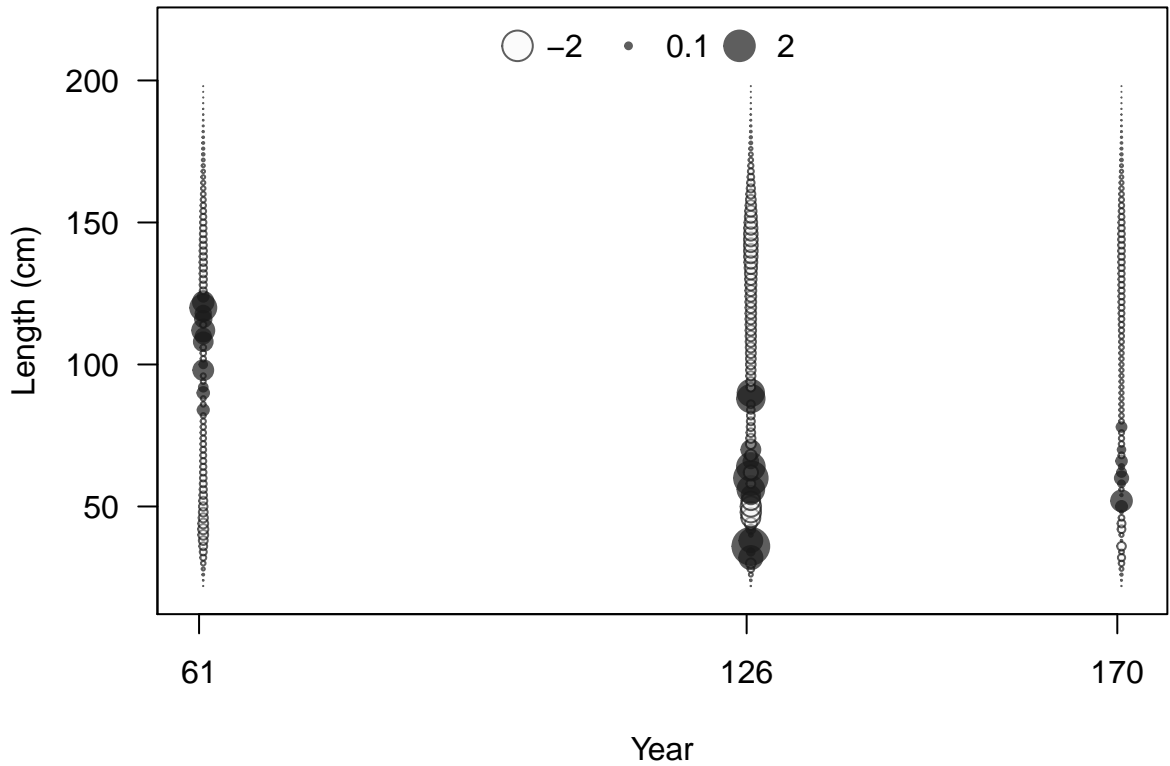


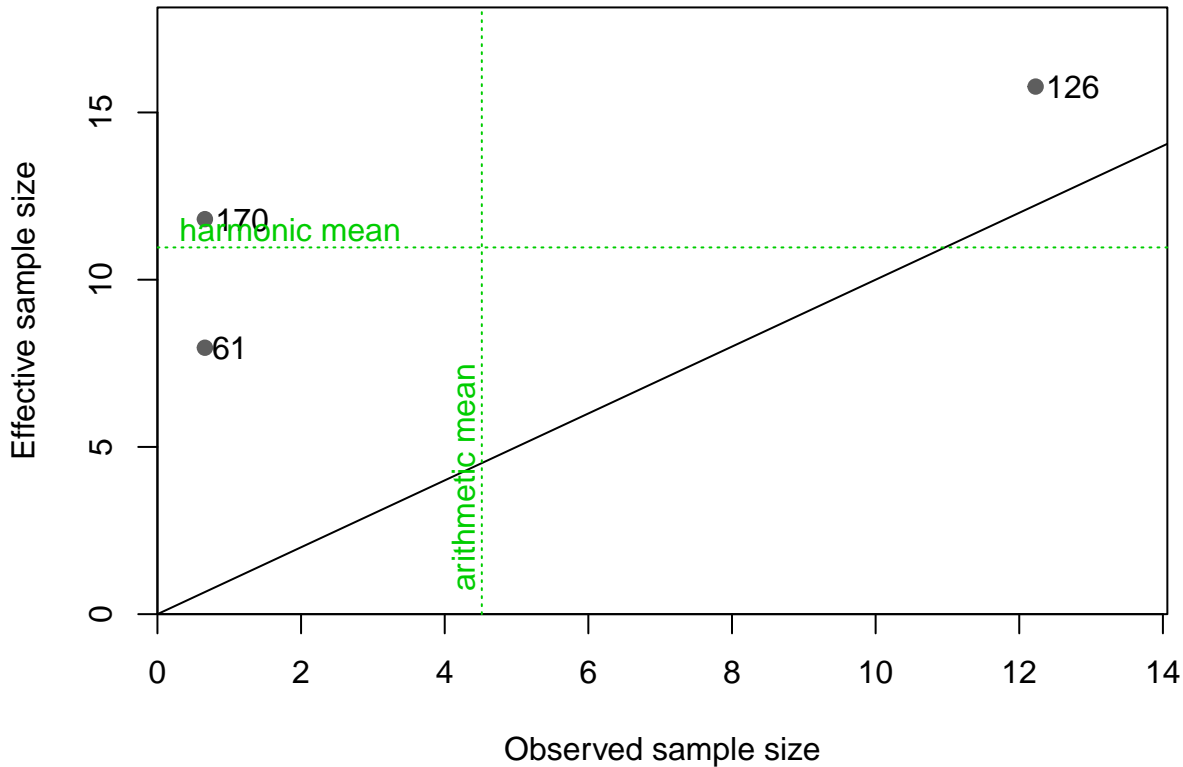
A3-NOADEL (whole catch)



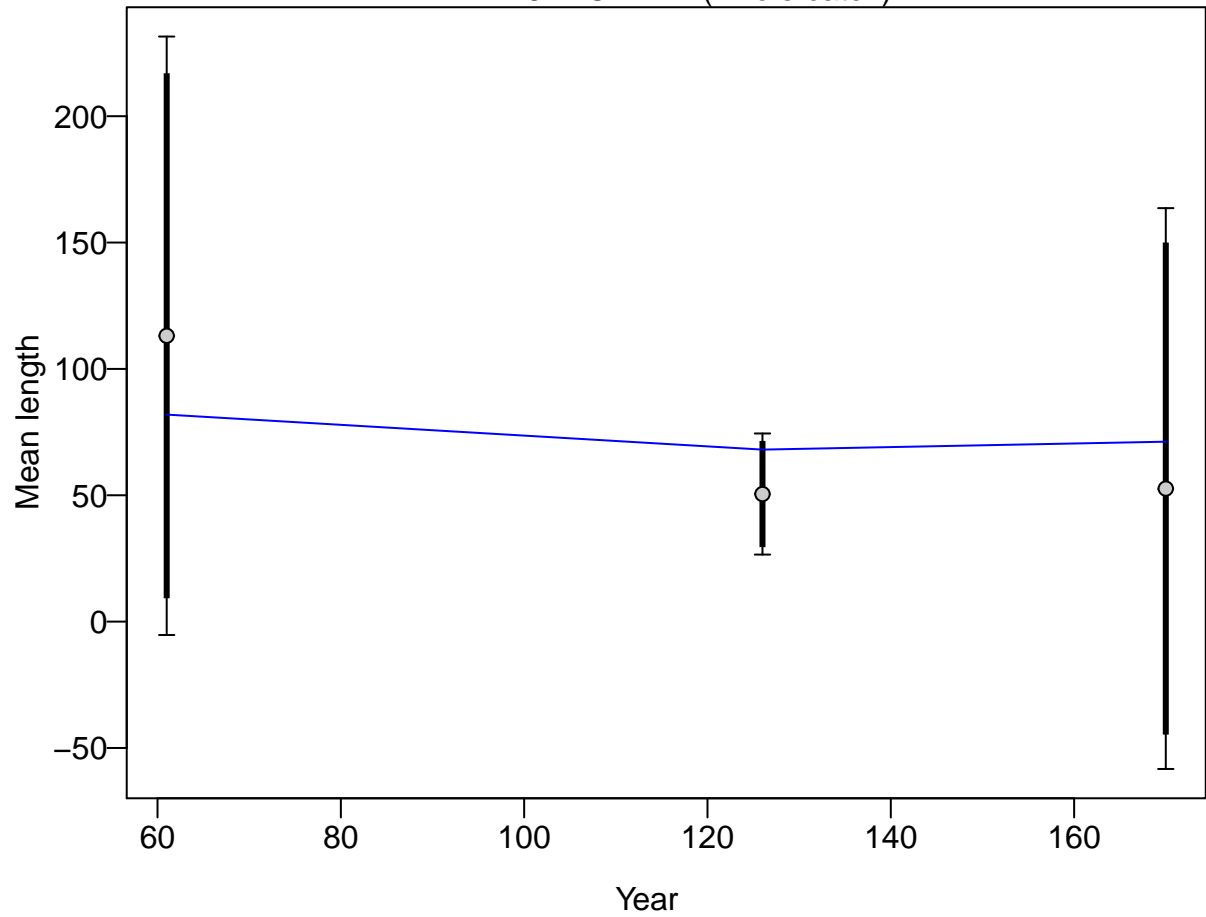


Length (cm)

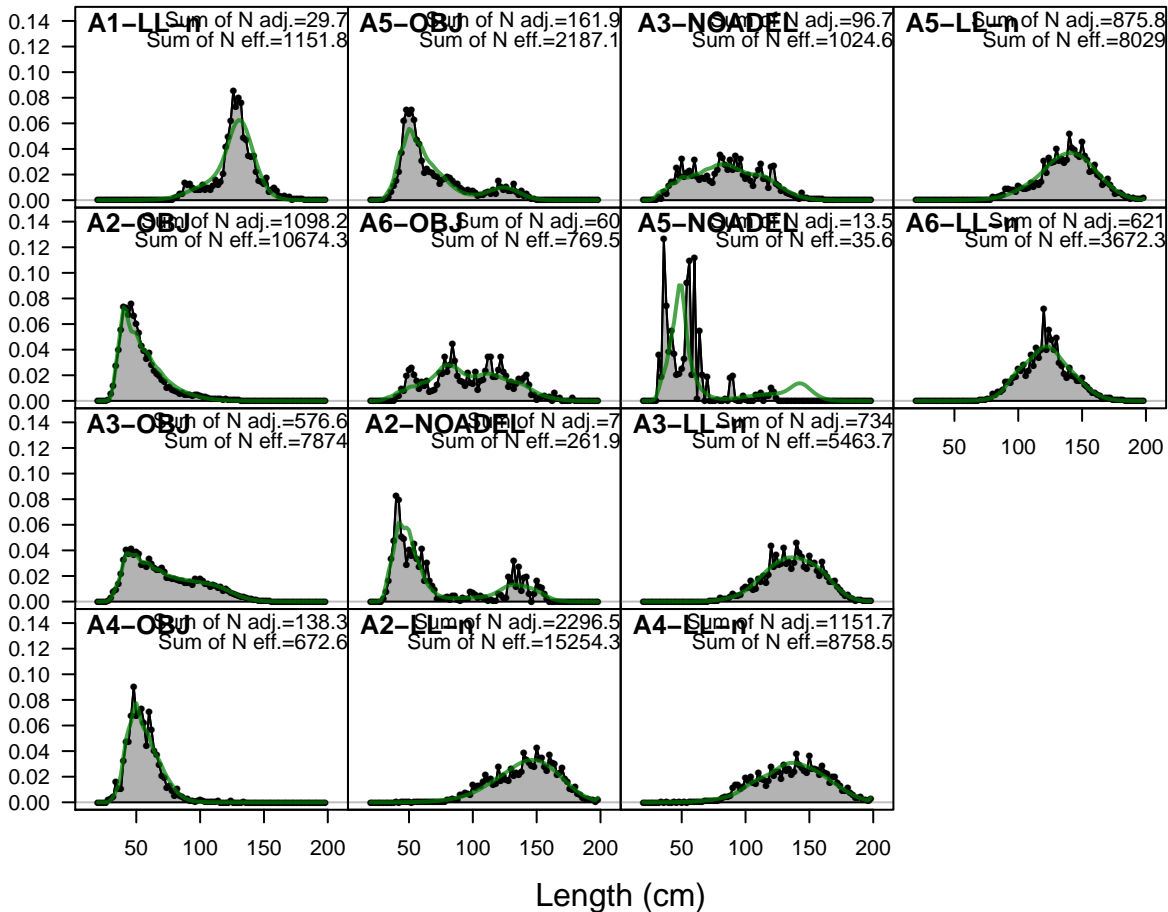




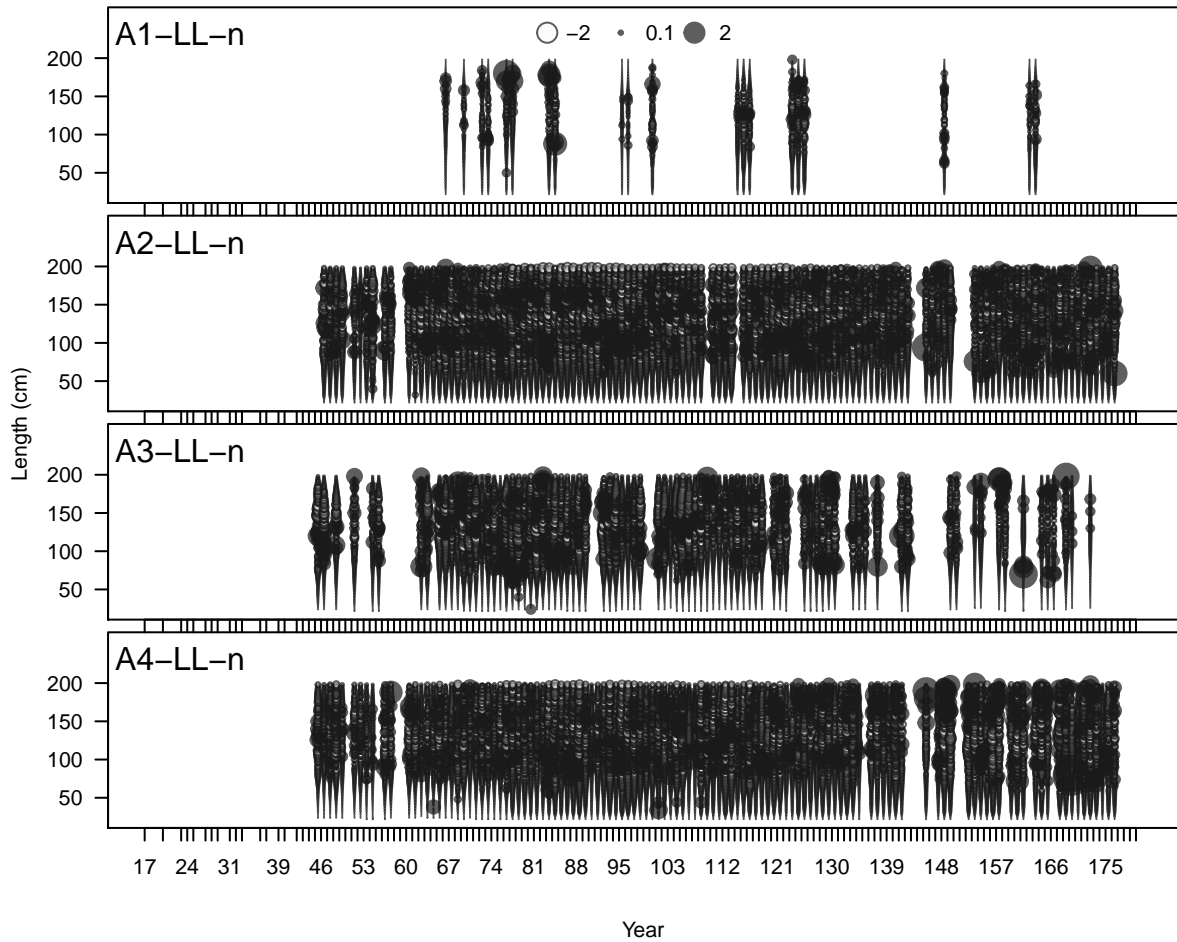
A5-NOADEL (whole catch)

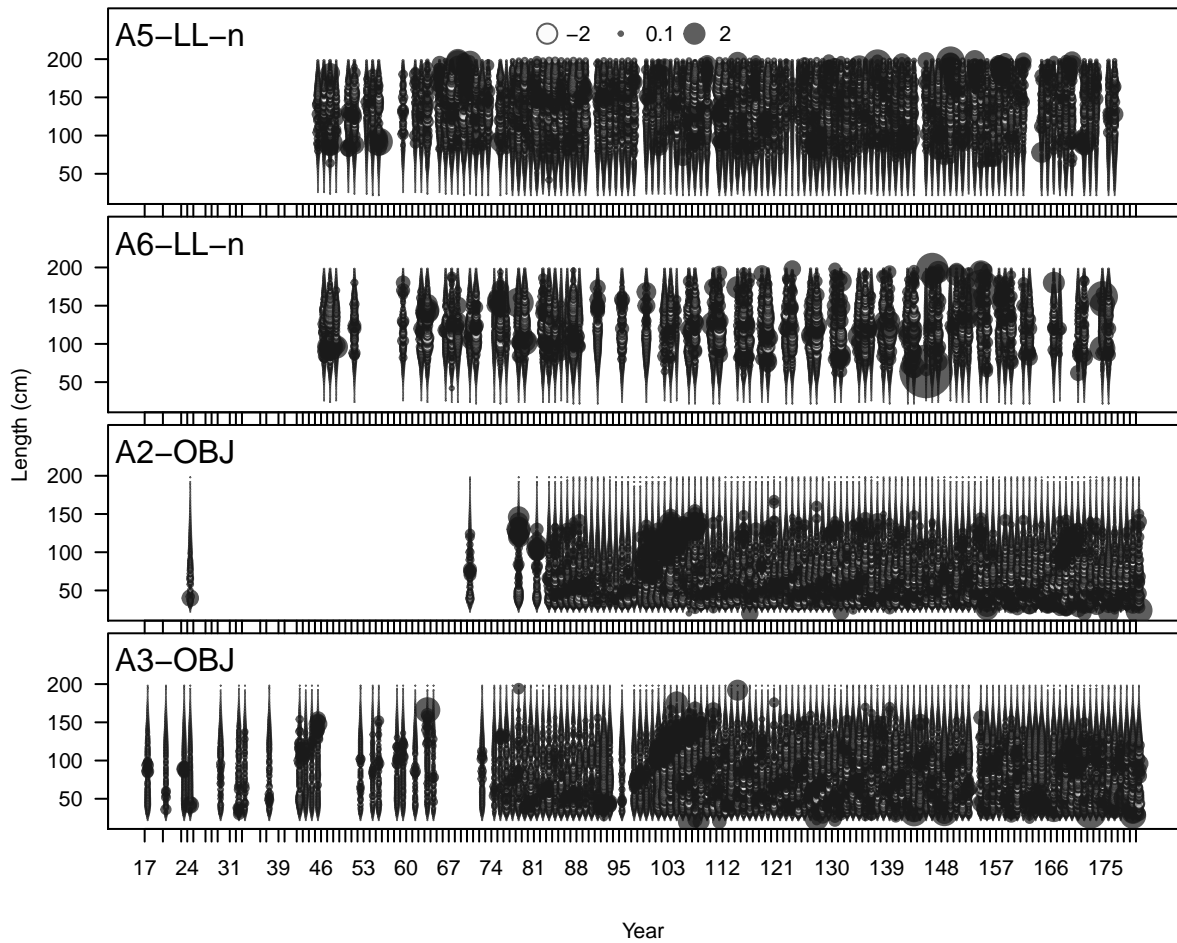


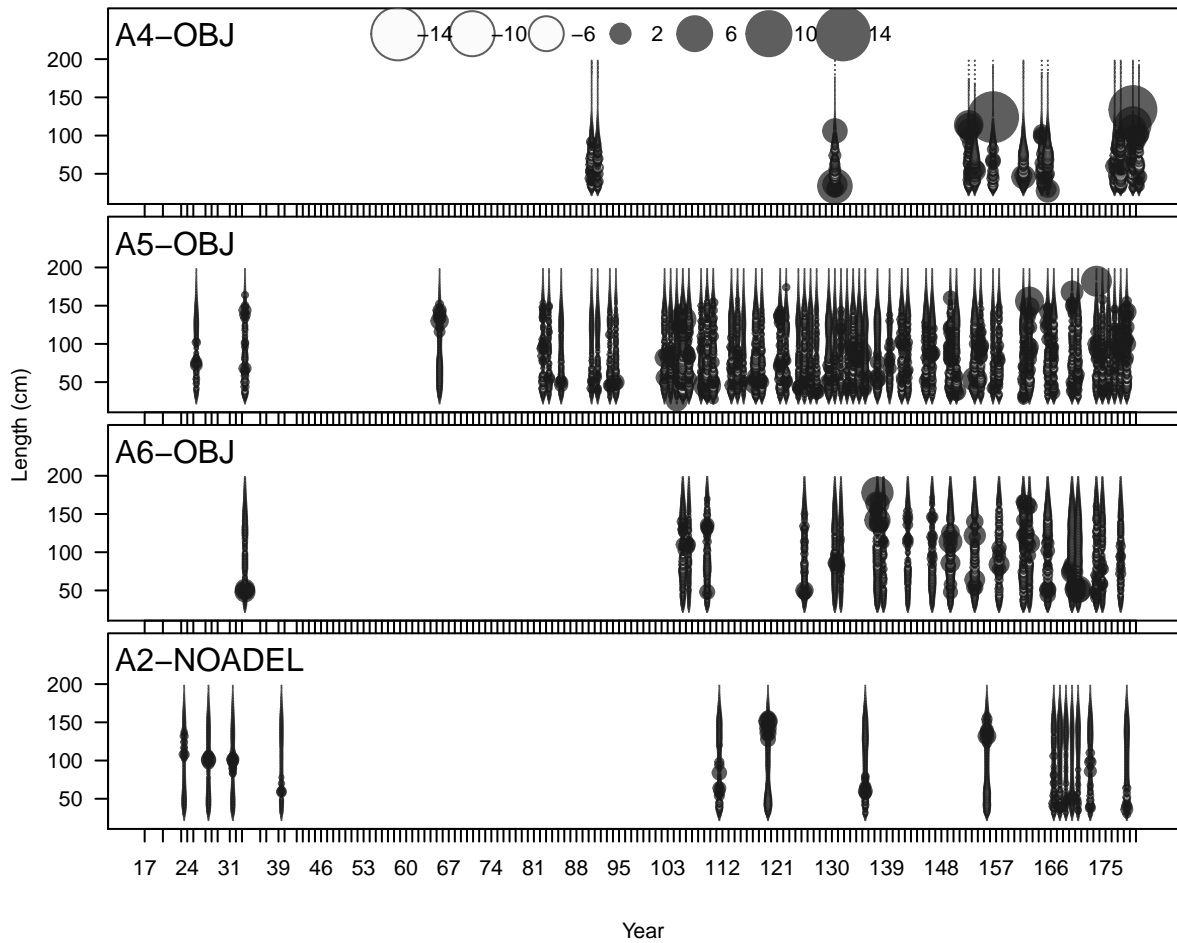
Proportion

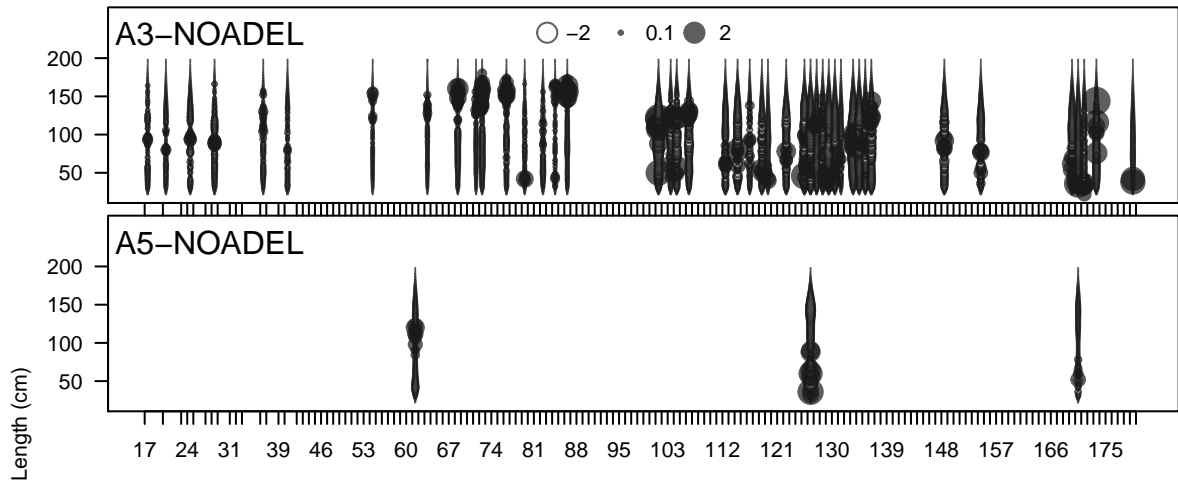


Length (cm)



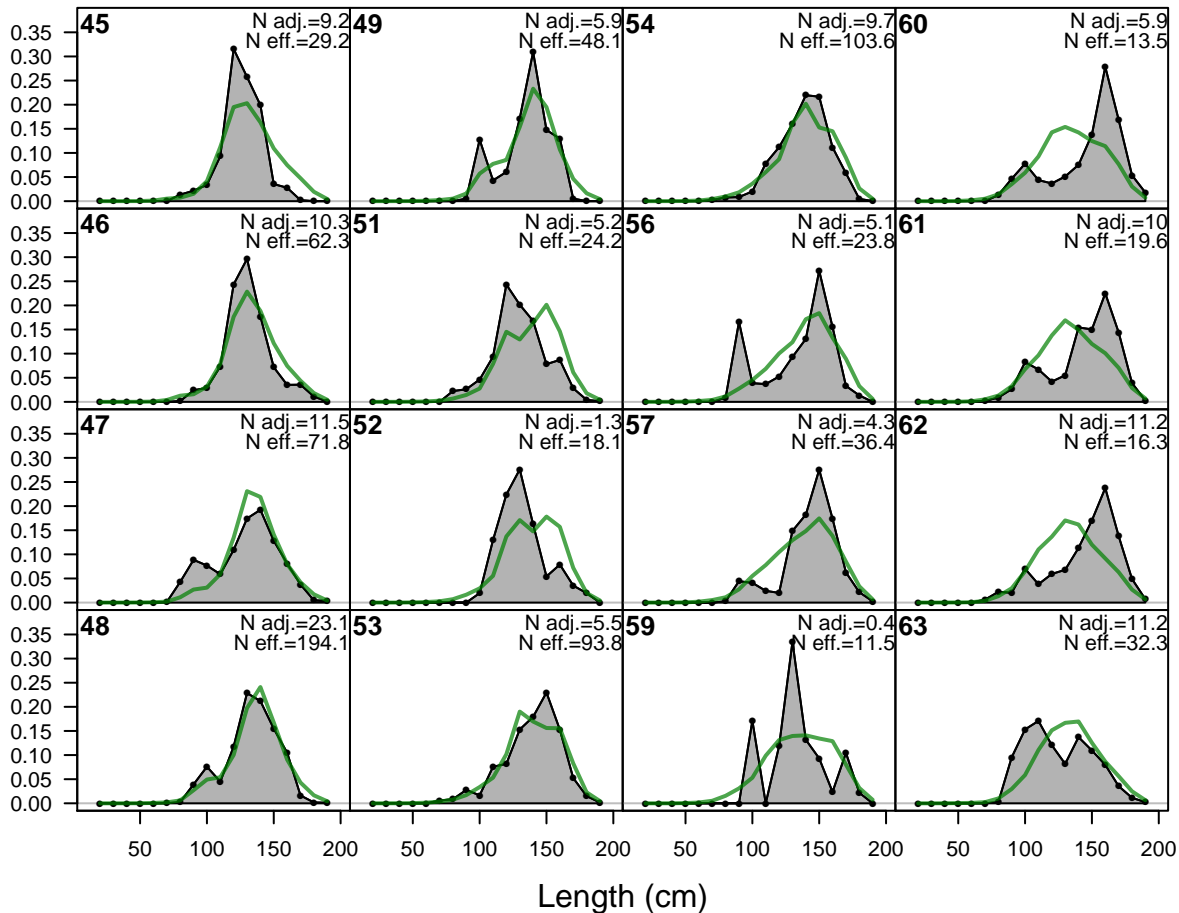




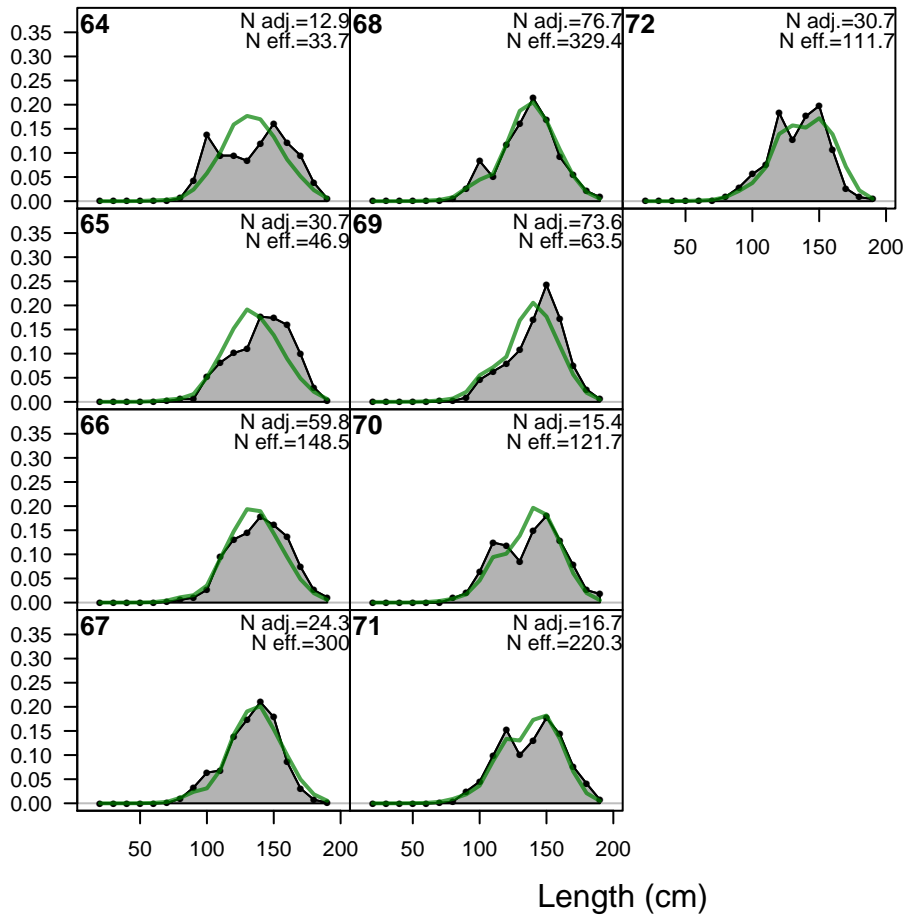


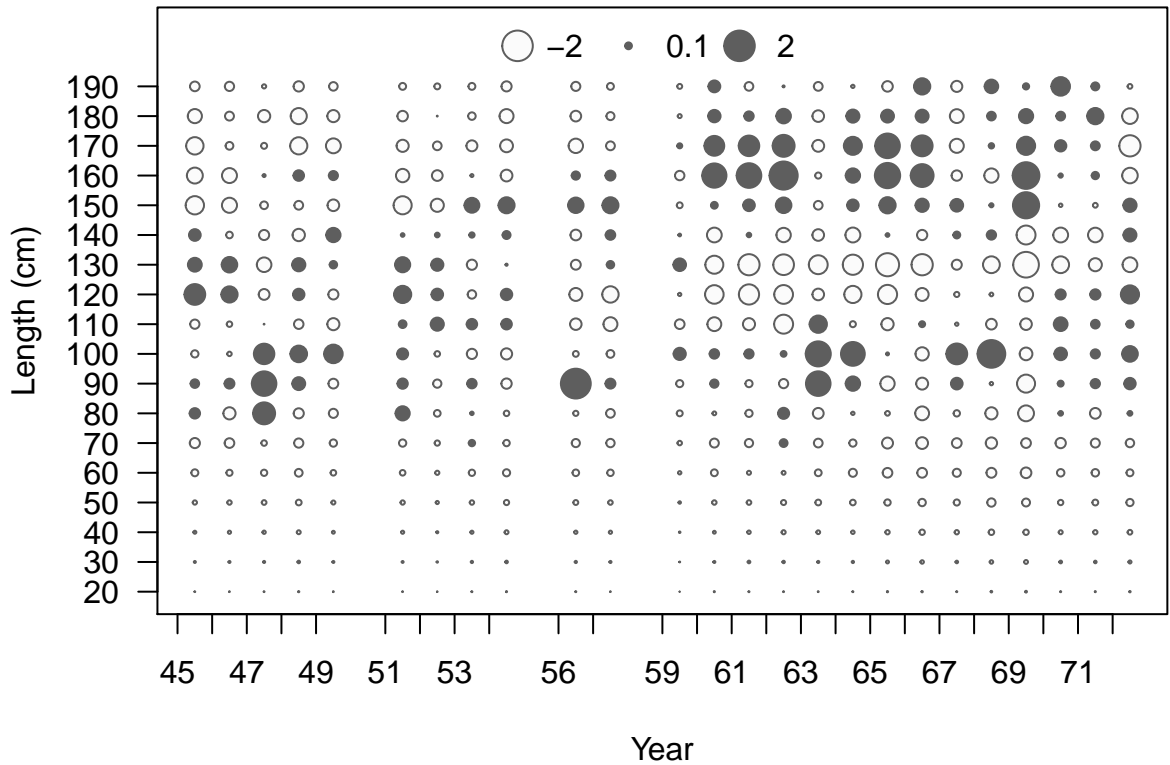
Year

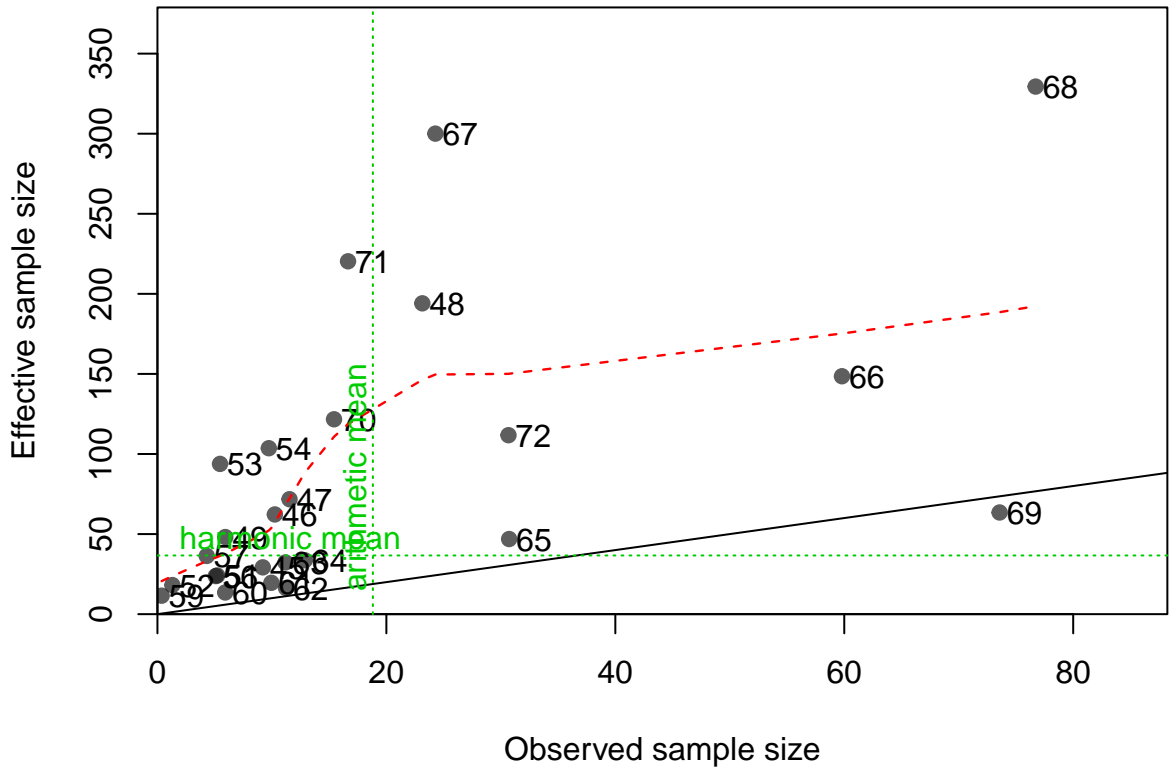
Proportion



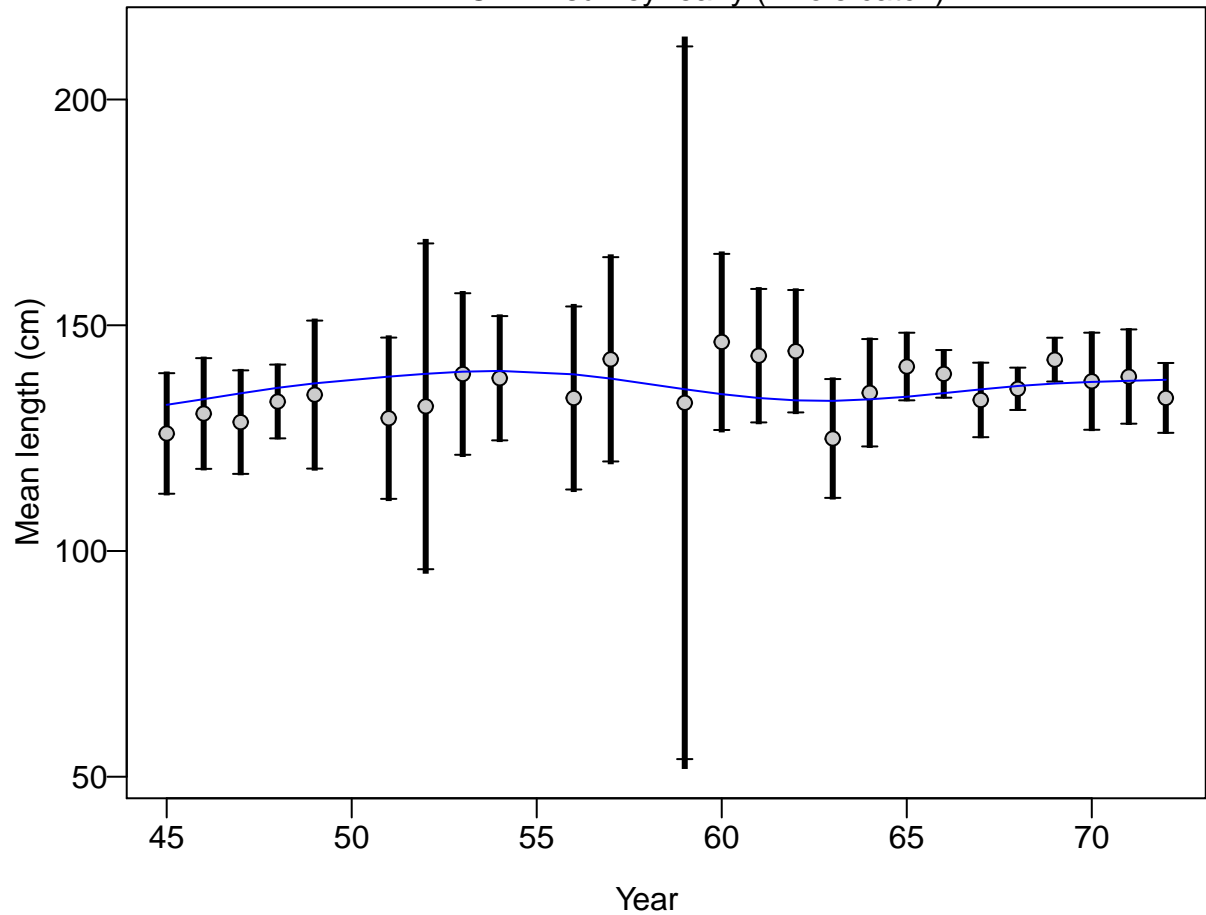
Proportion



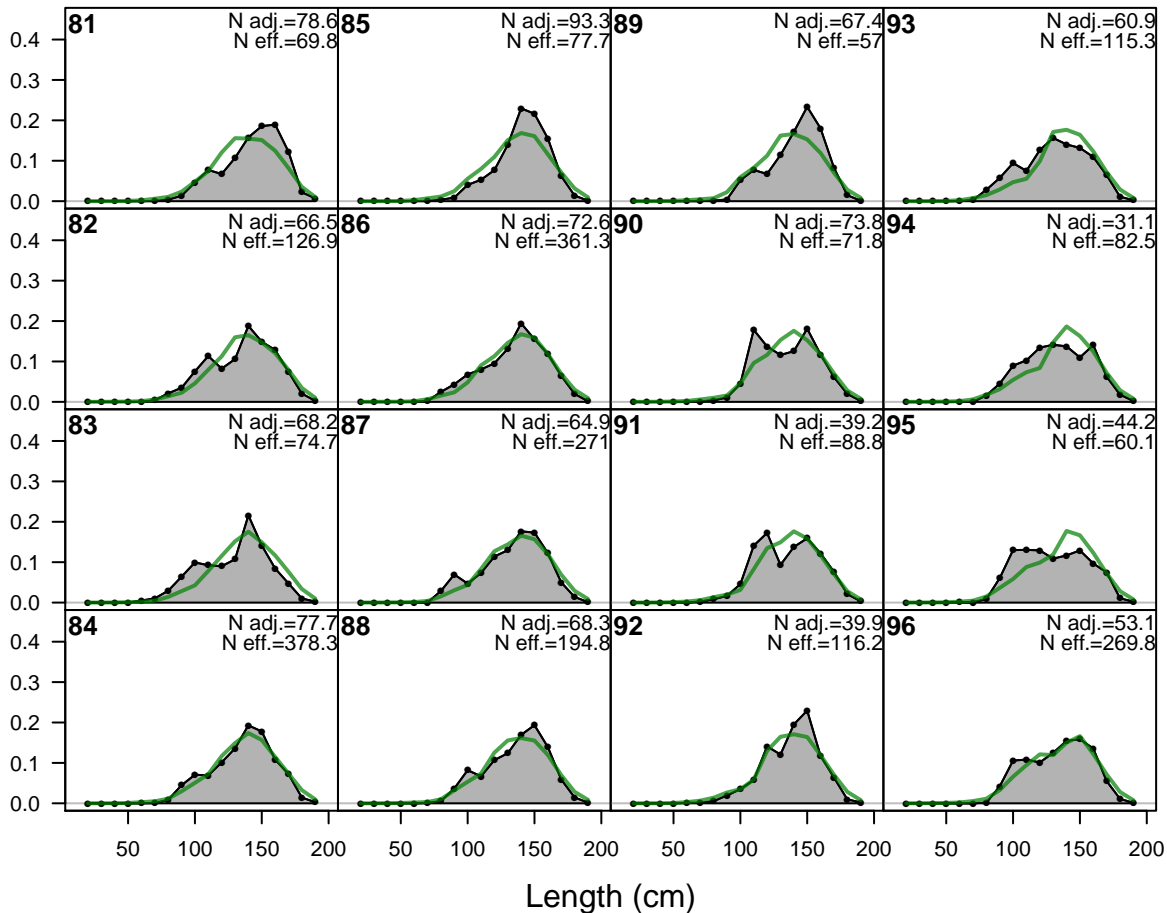




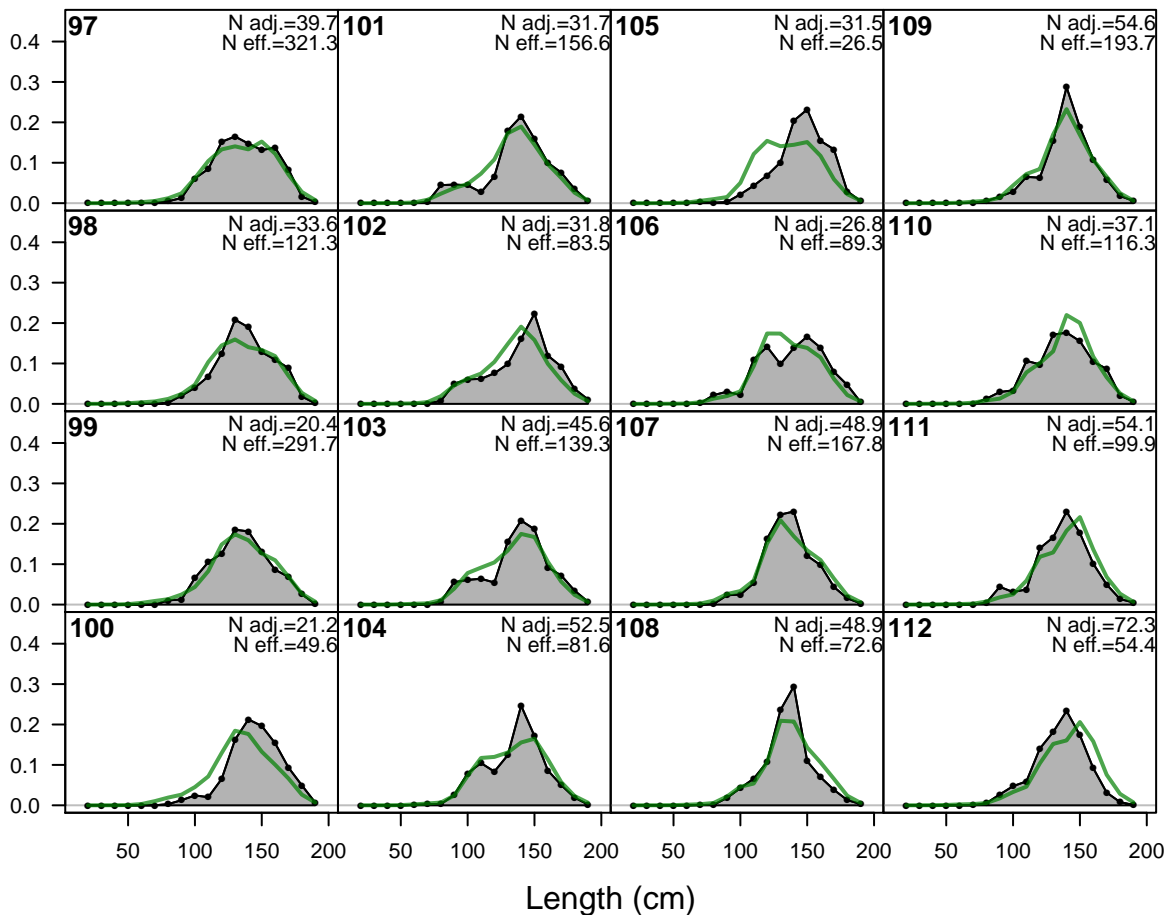
EPO-LL-survey-early (whole catch)



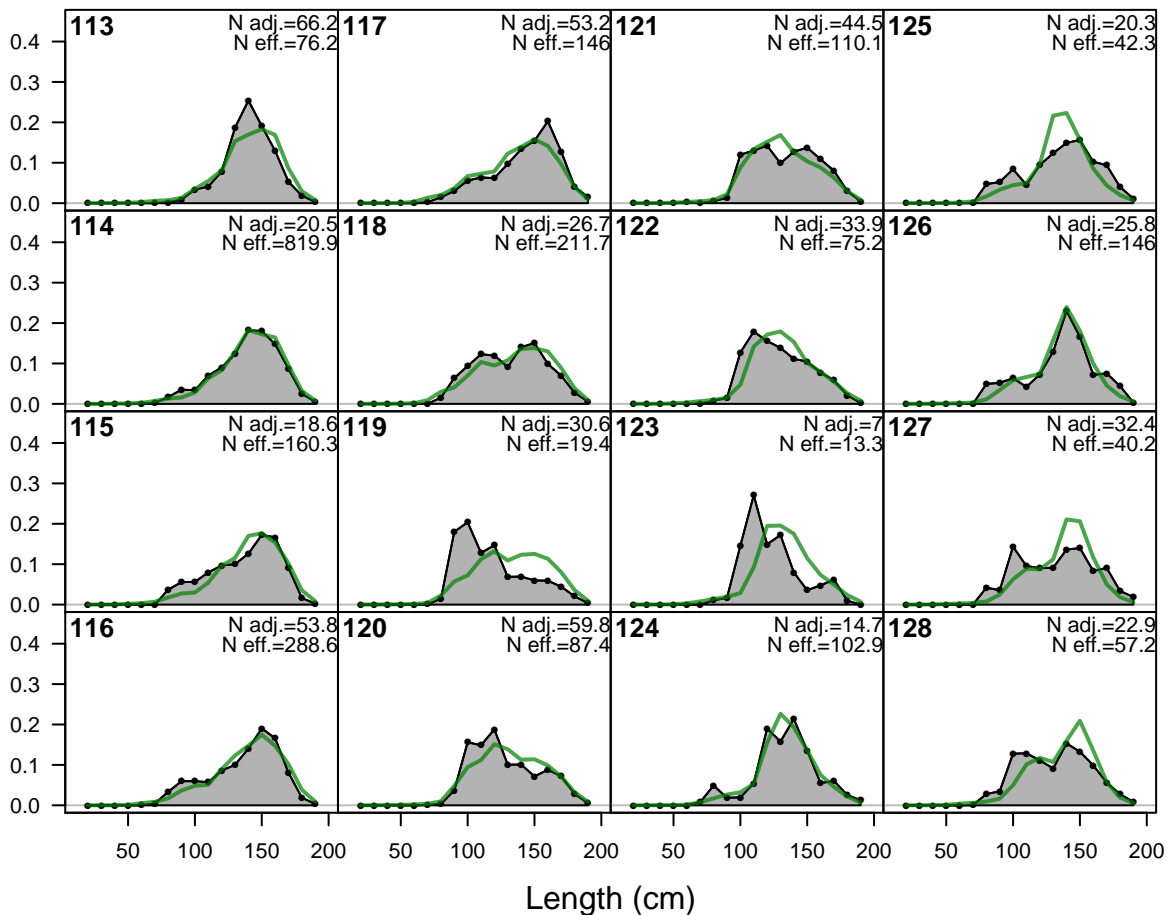
Proportion



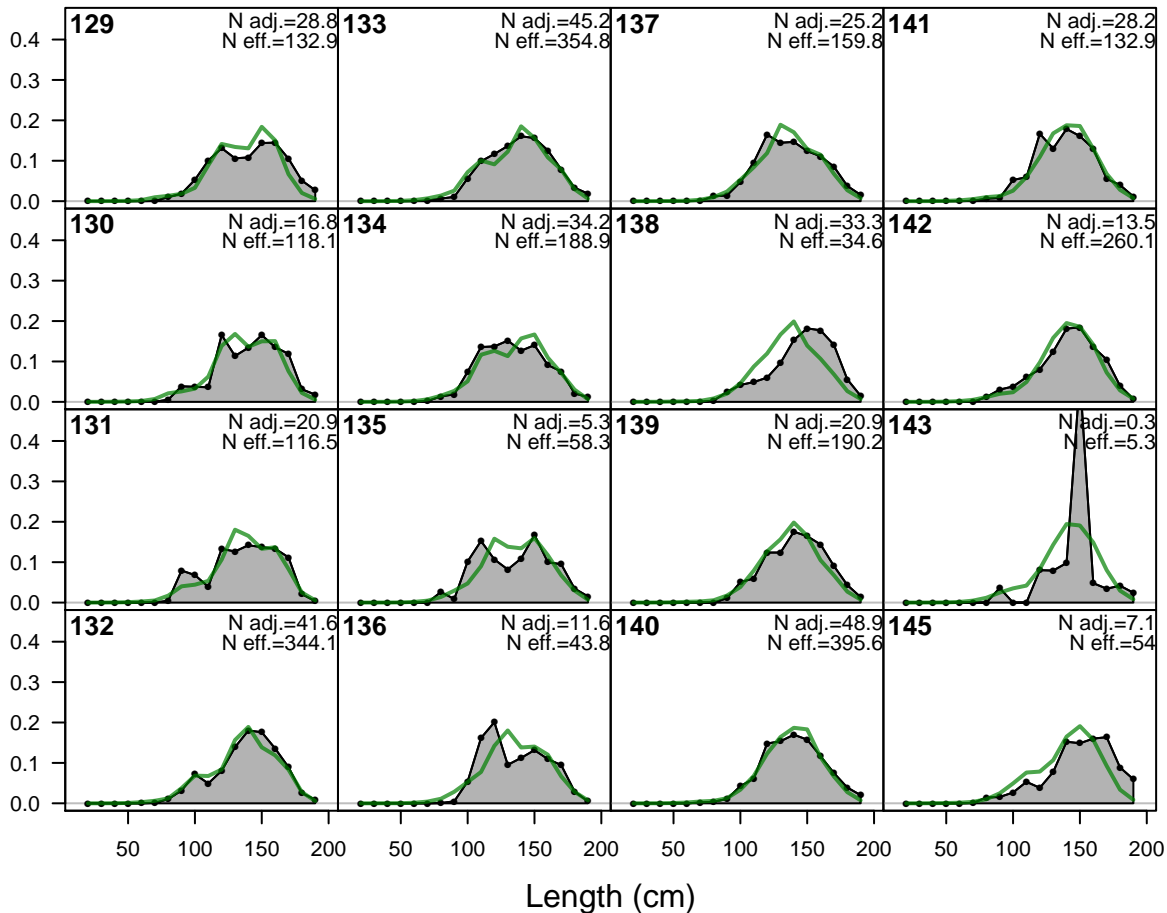
Proportion



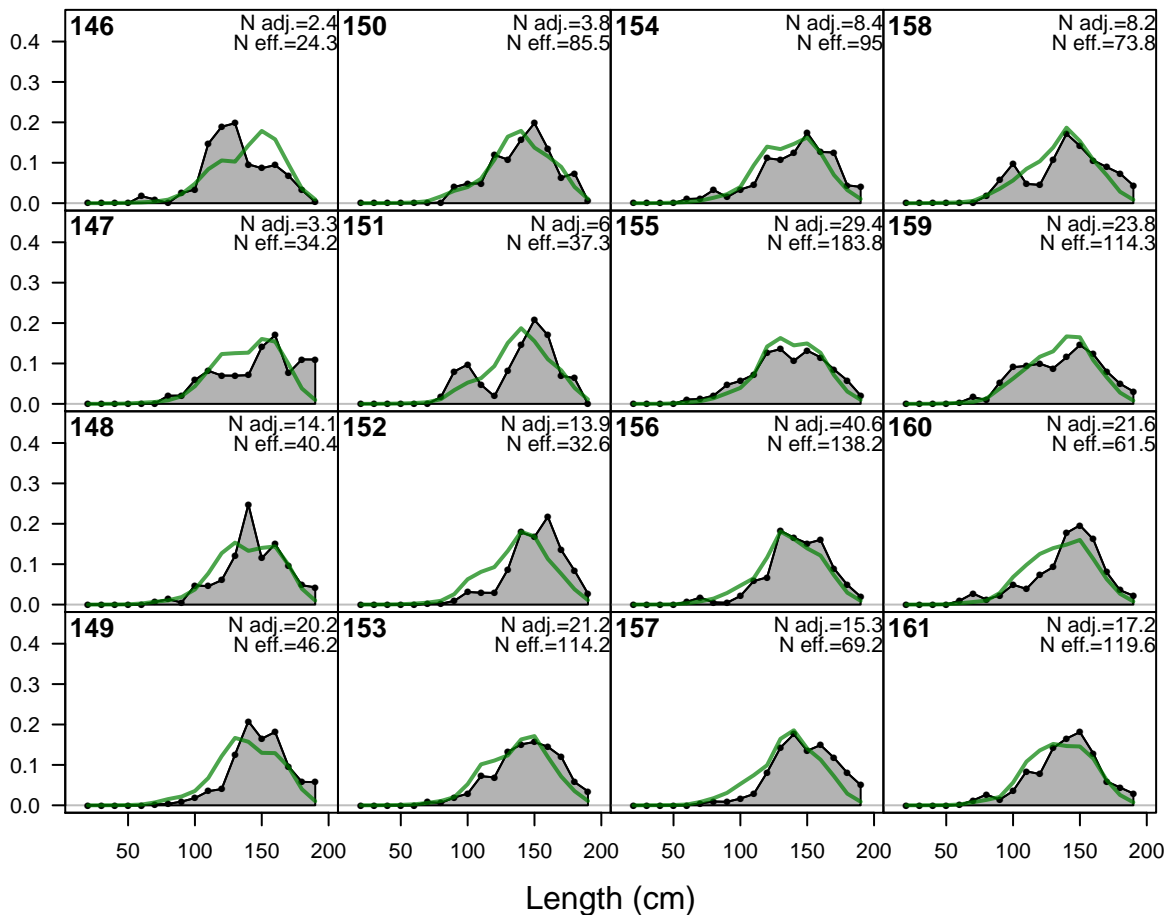
Proportion



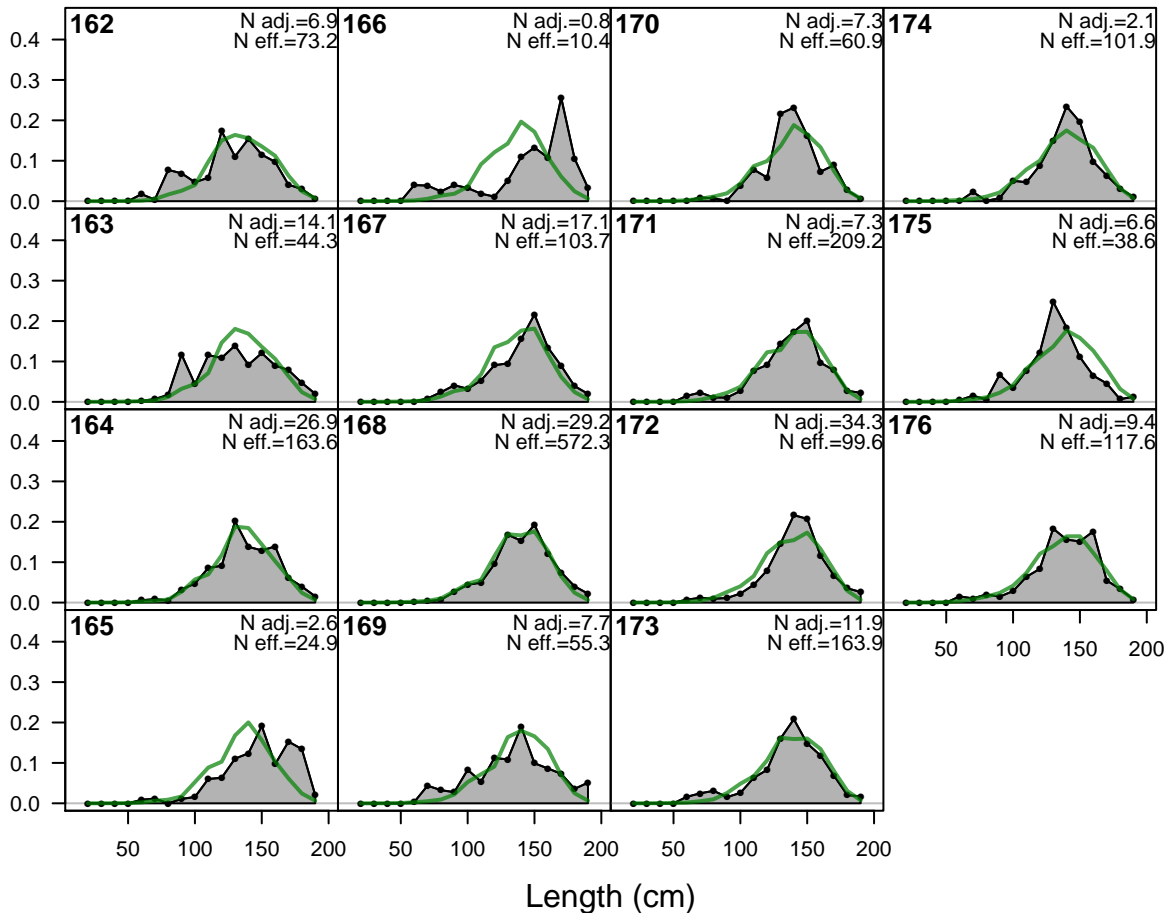
Proportion

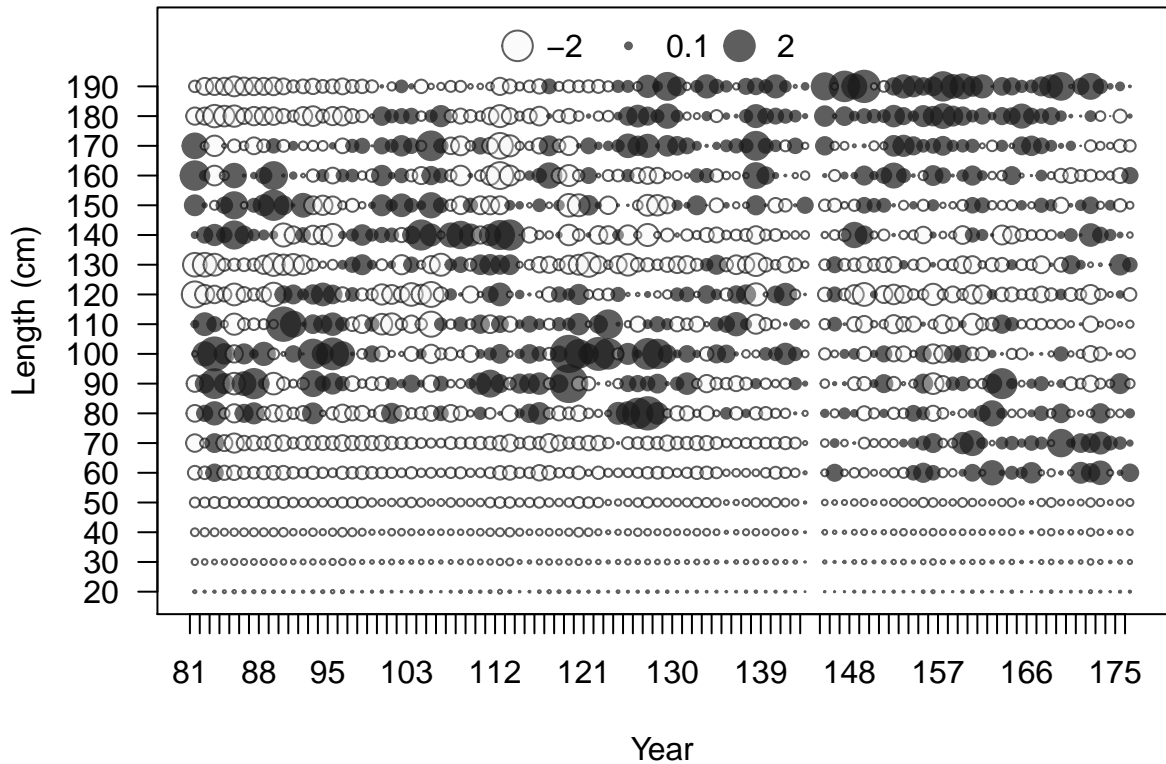


Proportion

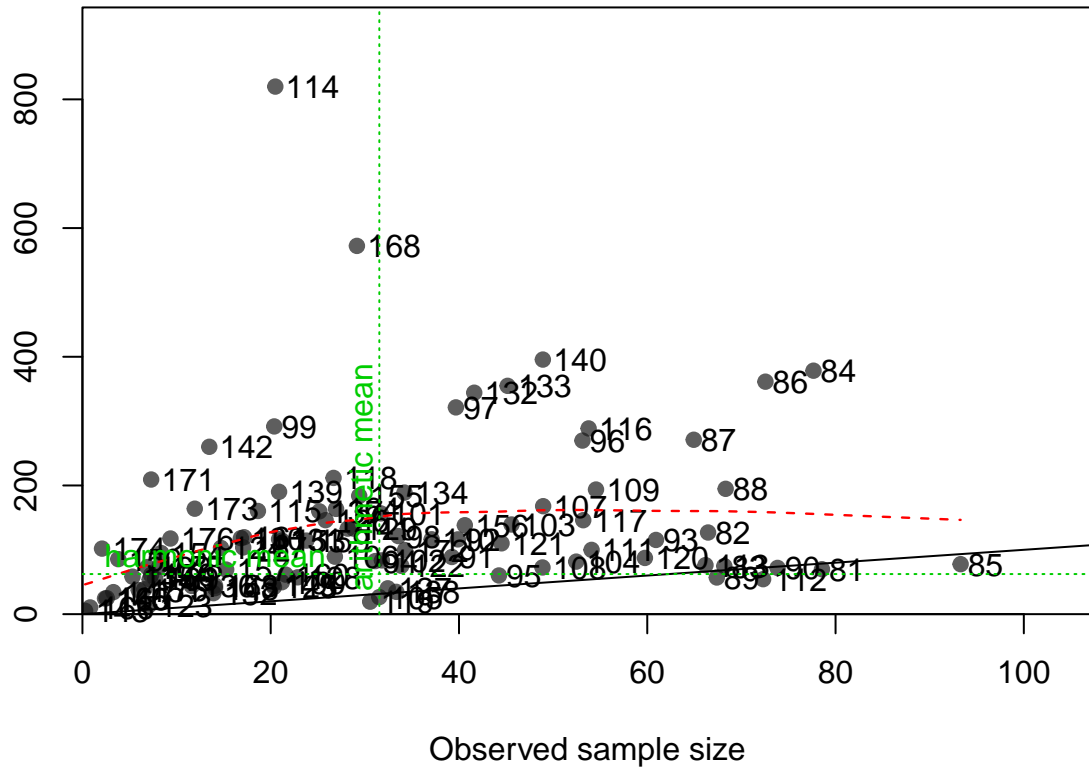


Proportion

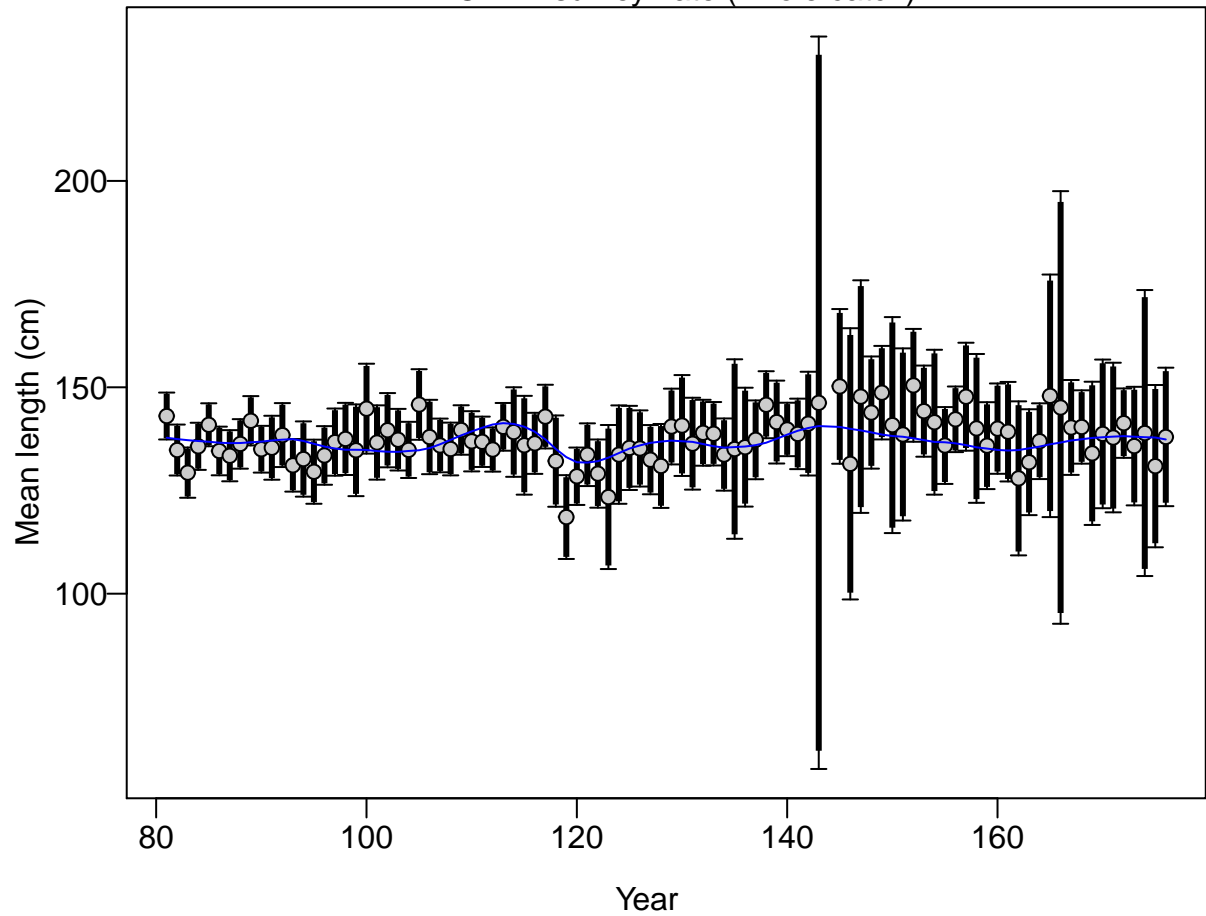




Effective sample size



EPO-LL-survey-late (whole catch)

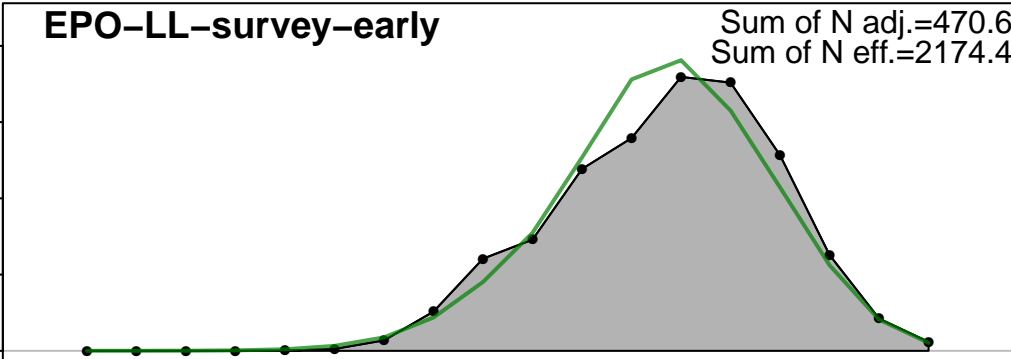


EPO-LL-survey-early

Sum of N adj.=470.6
Sum of N eff.=2174.4

Proportion

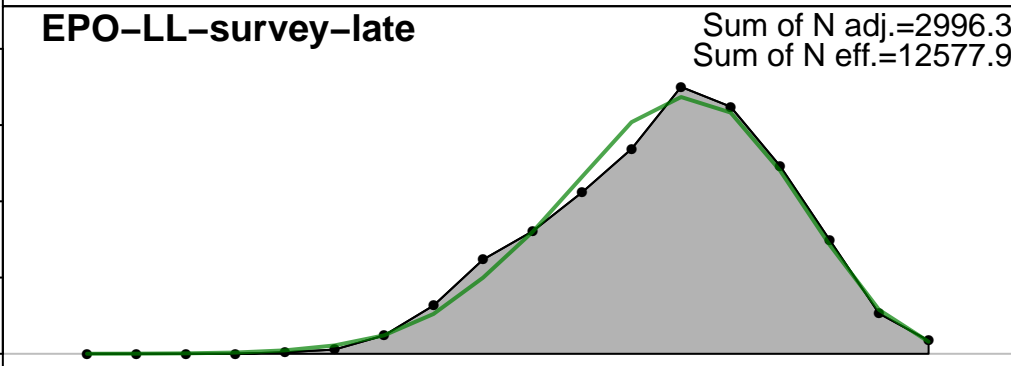
0.20
0.15
0.10
0.05
0.00



EPO-LL-survey-late

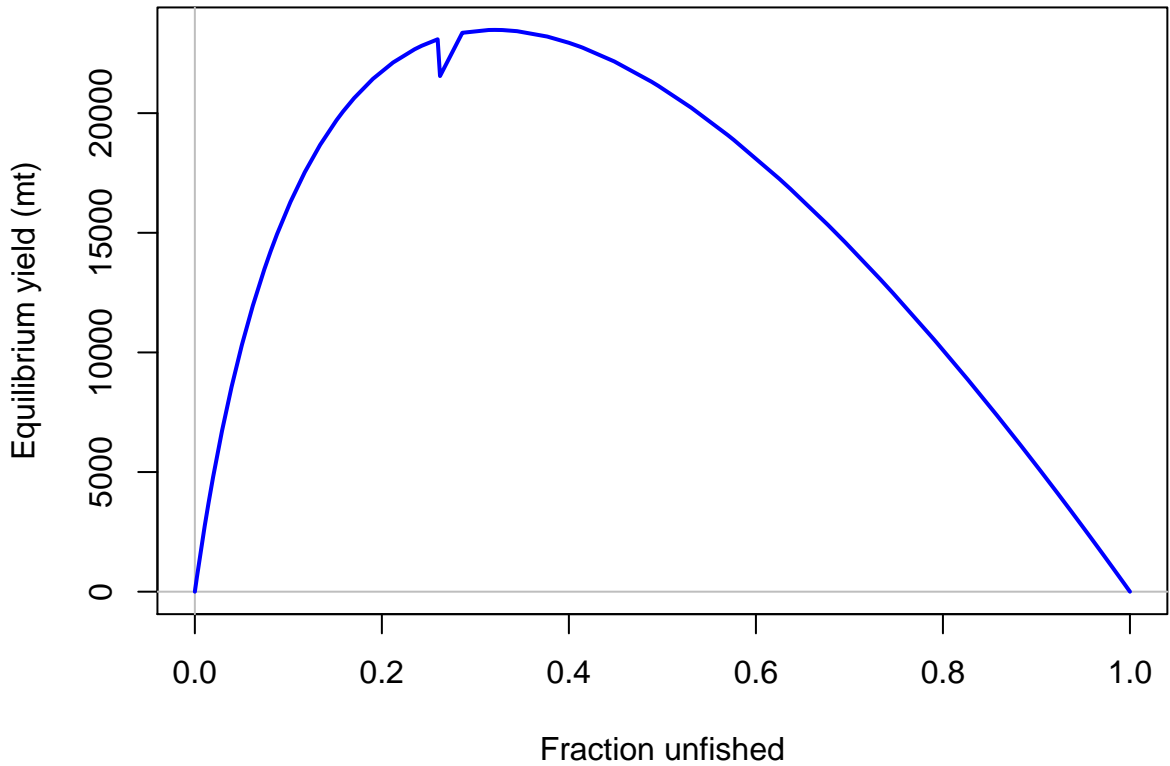
Sum of N adj.=2996.3
Sum of N eff.=12577.9

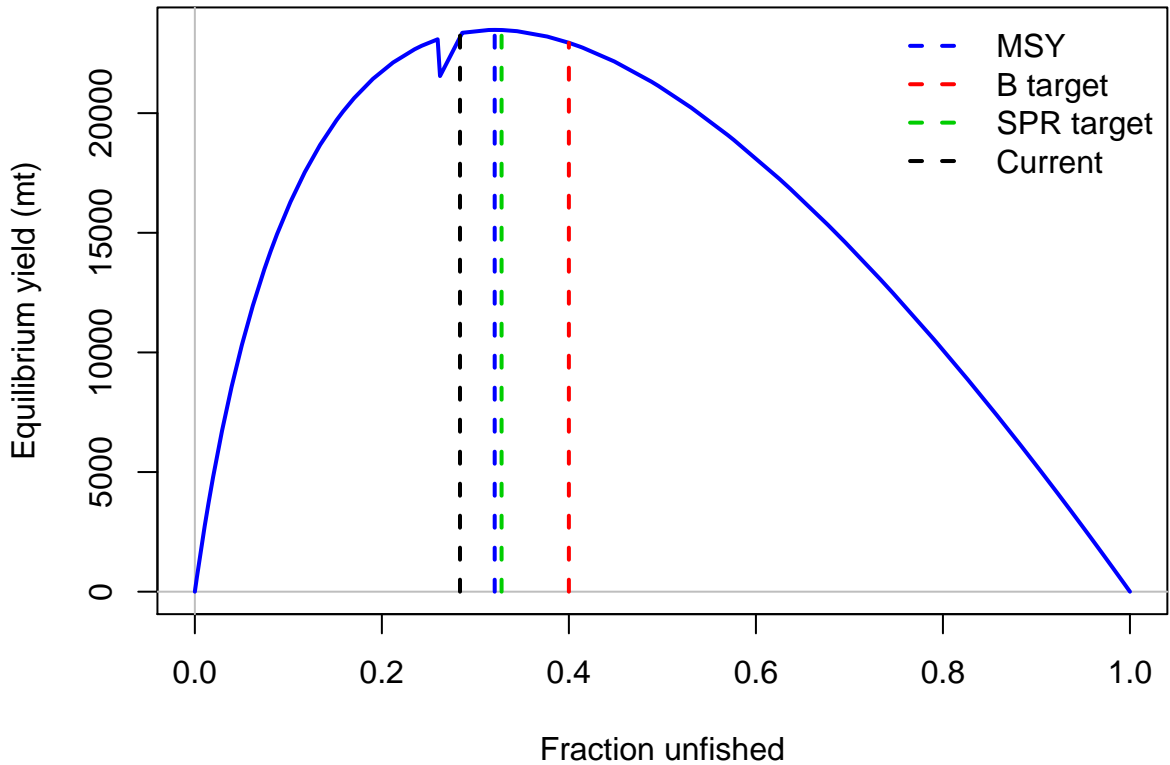
0.20
0.15
0.10
0.05
0.00

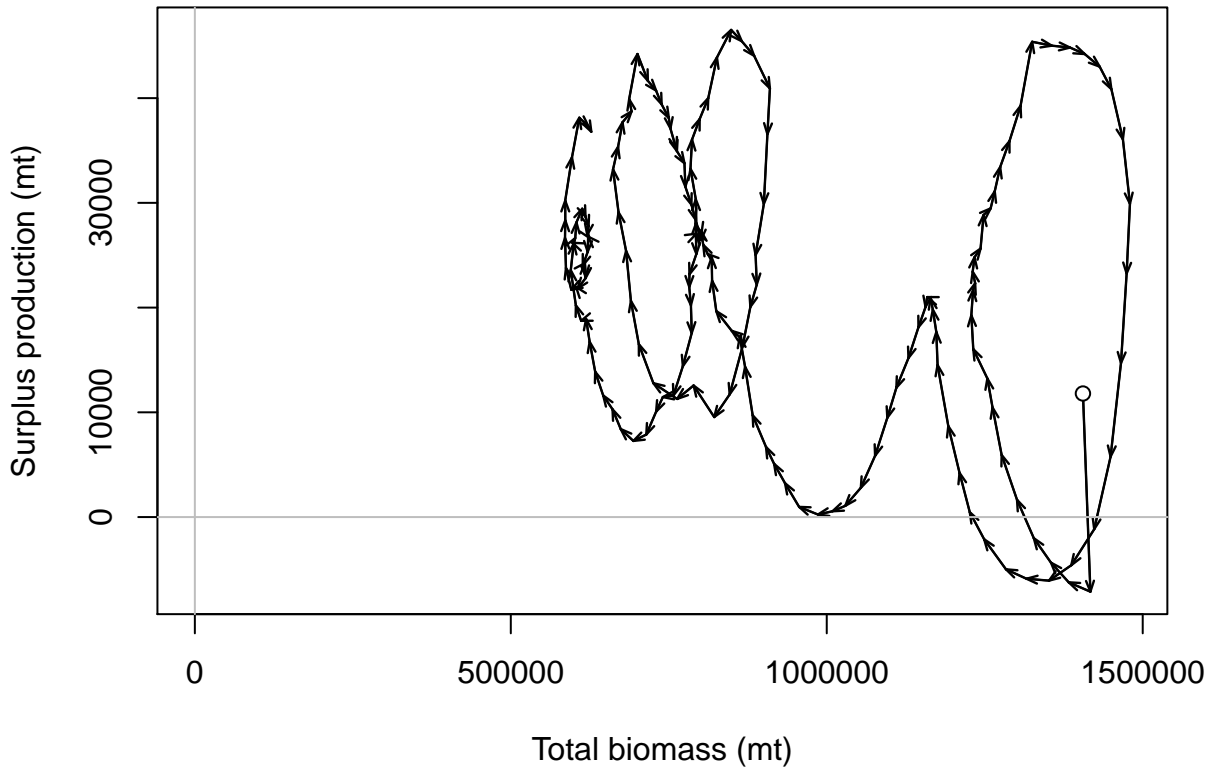


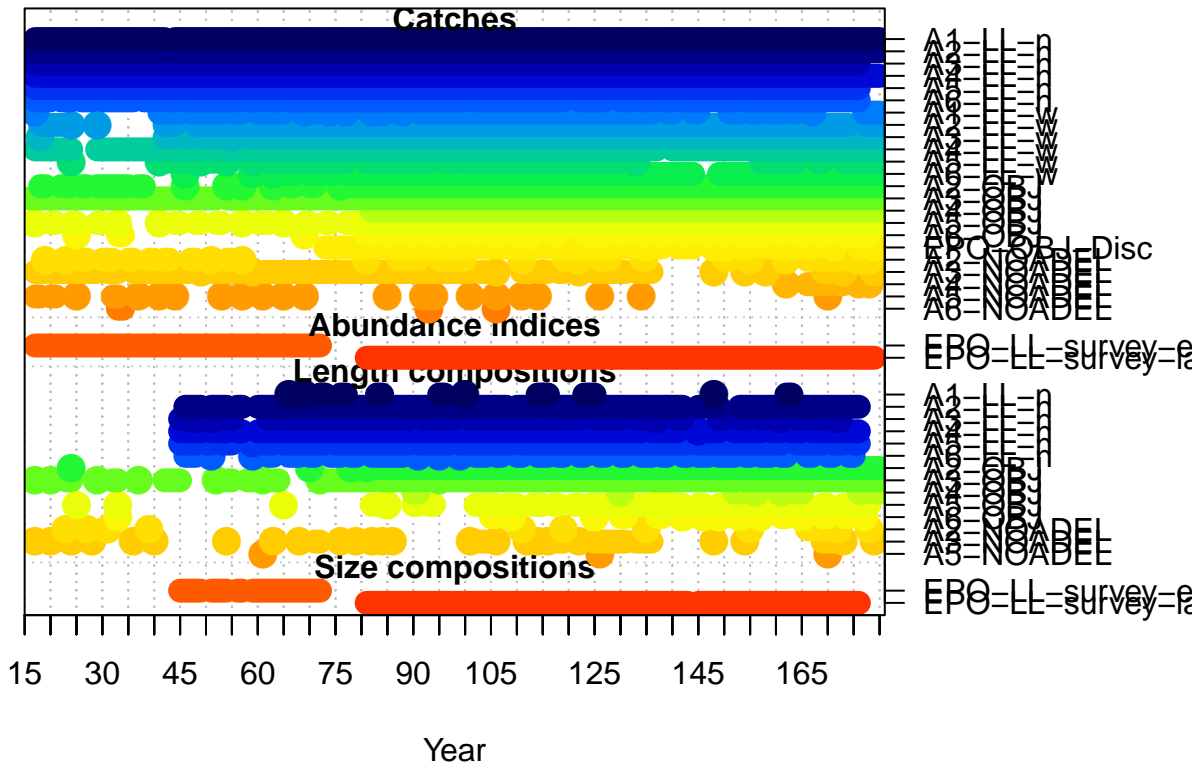
Length (cm)

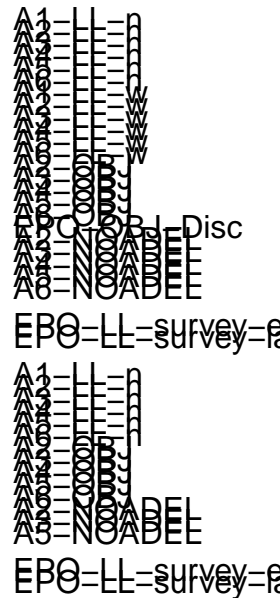
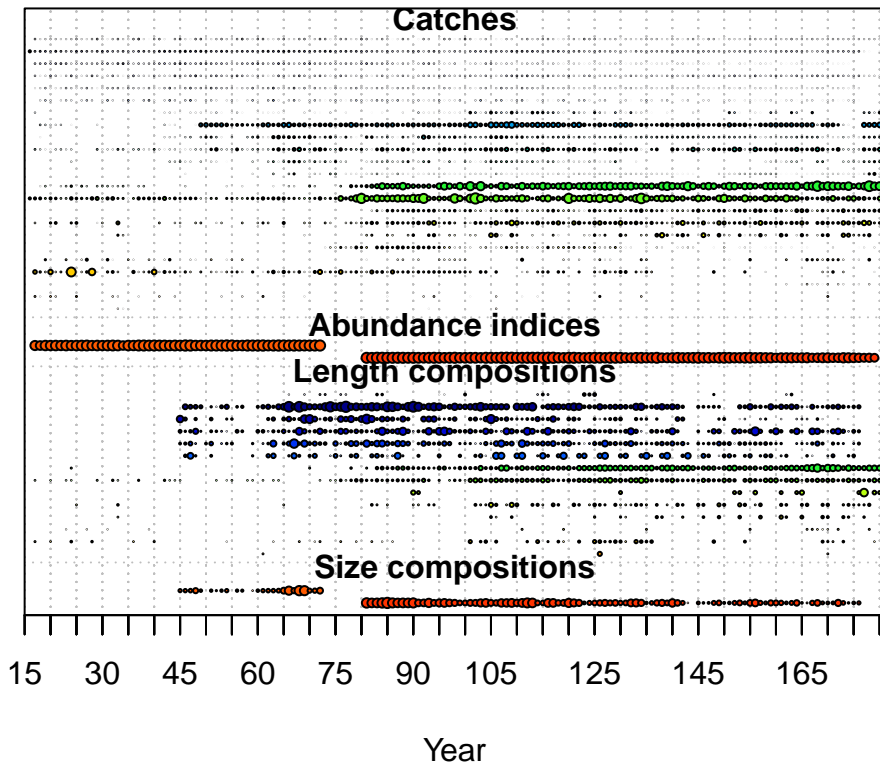
50 100 150 200



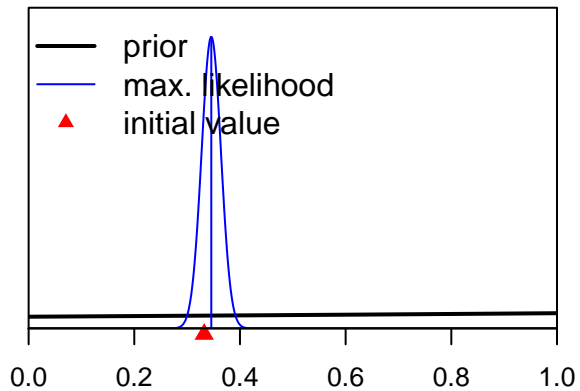




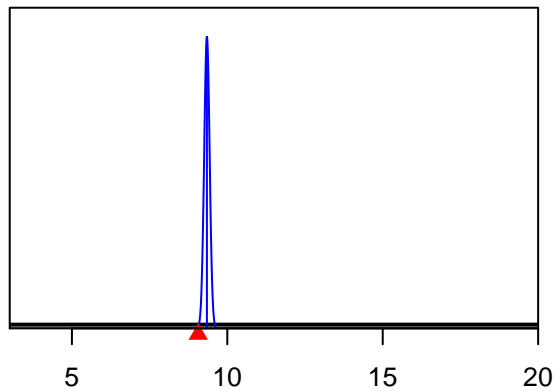




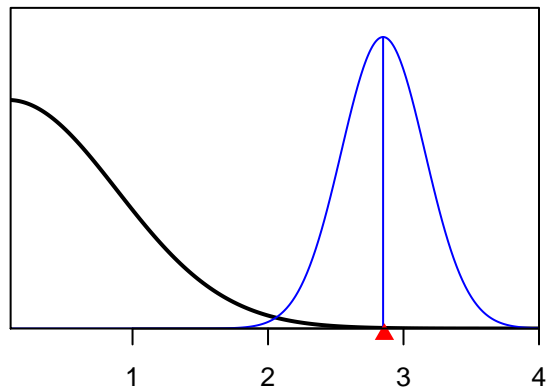
NatM_p_4_Fem_GP_1



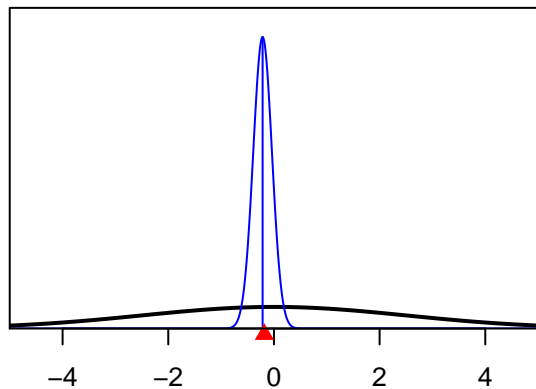
SR_LN(R0)



SD_young_Fem_GP_1

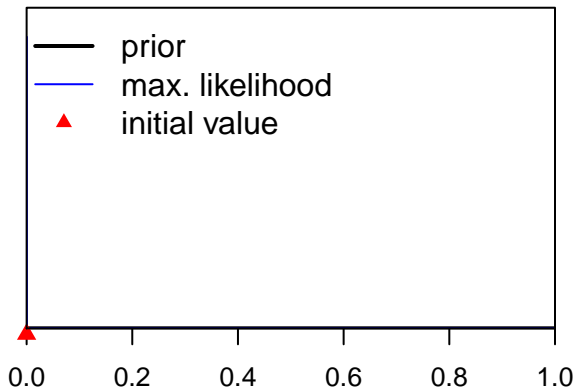


SR_regime_BLK1add_16

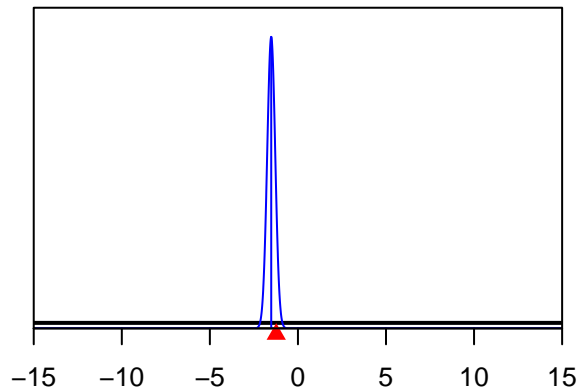


Parameter value

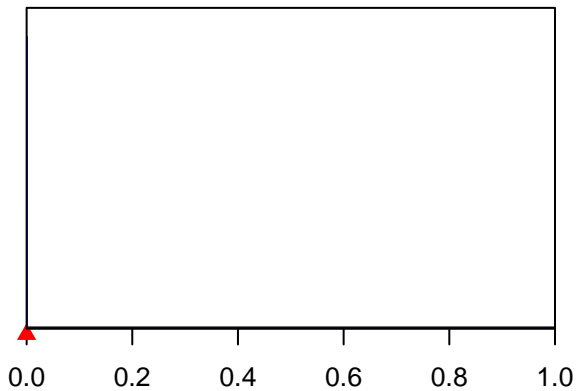
InitF_seas_1_flt_2A2-LL-n



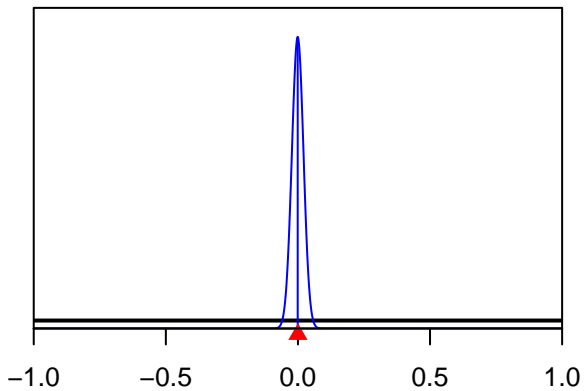
LnQ_base_EPO-LL-survey-early(24)



InitF_seas_1_flt_14A3-OBJ

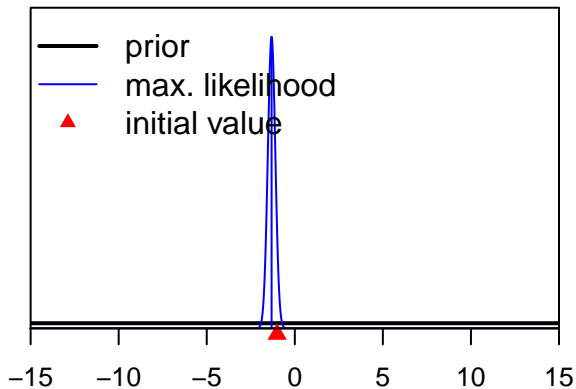


Q_extraSD_EPO-LL-survey-early(24)

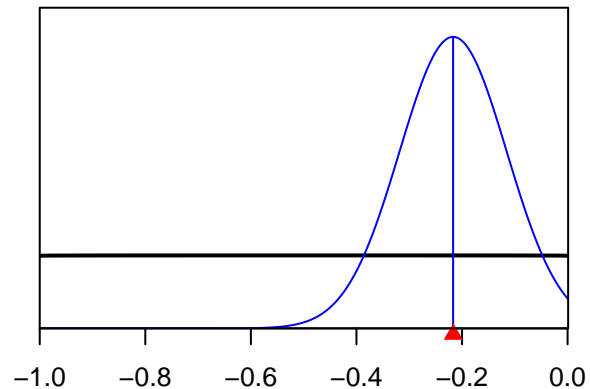


Parameter value

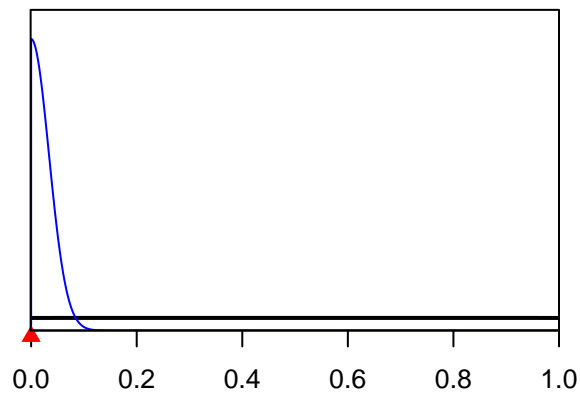
LnQ_base_EPO-LL-survey-late(25)



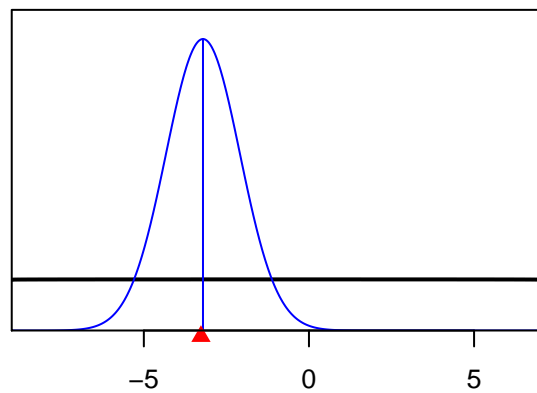
SizeSpline_GradHi_A1-LL-n(1)



SizeSpline_GradLo_A1-LL-n(1)

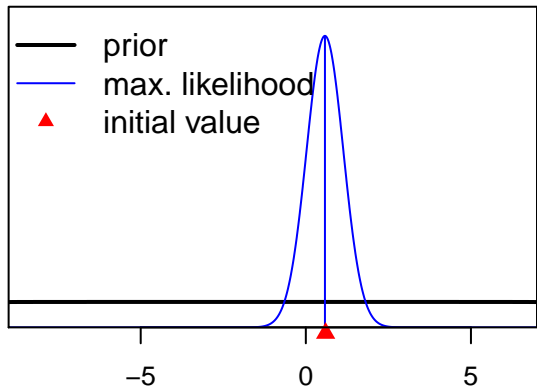


SizeSpline_Val 2_A1-LL-n(1)

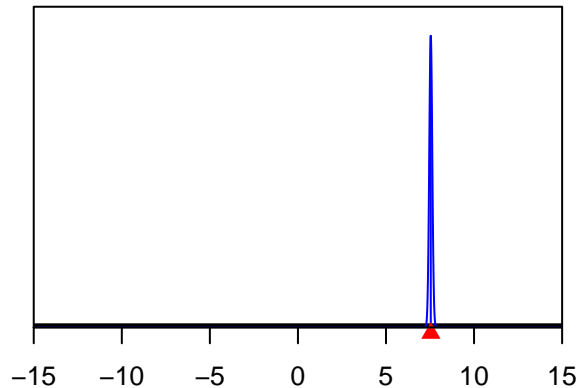


Parameter value

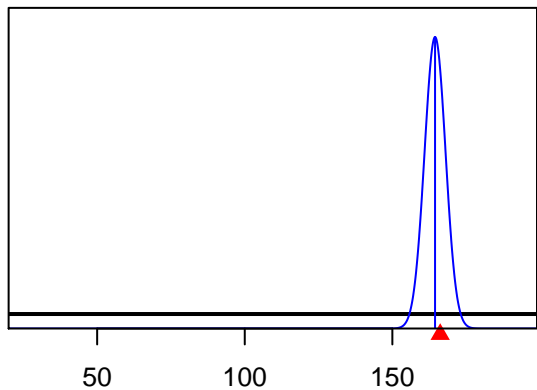
SizeSpline_Val_4_A1-LL-n(1)



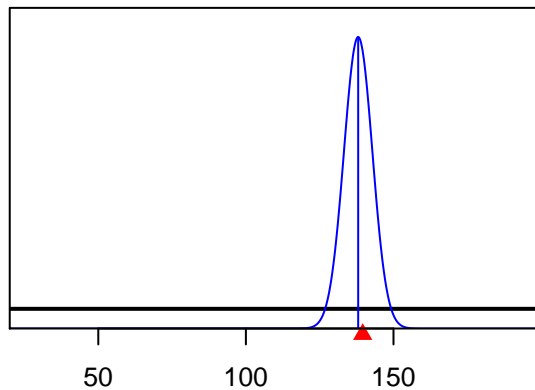
Size_DbIN_ascend_se_A2-LL-n(2)



Size_DbIN_peak_A2-LL-n(2)



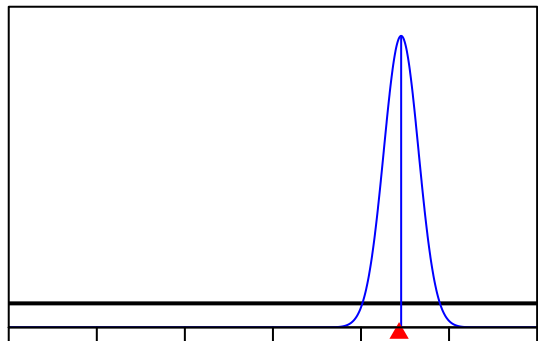
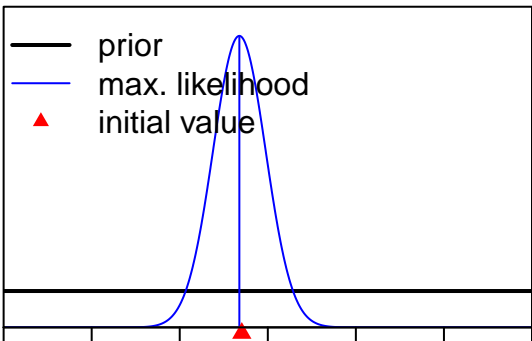
Size_DbIN_peak_A3-LL-n(3)



Parameter value

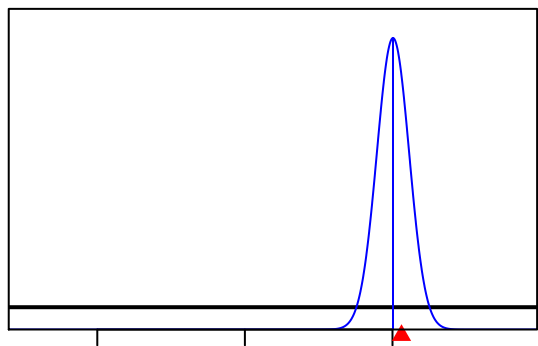
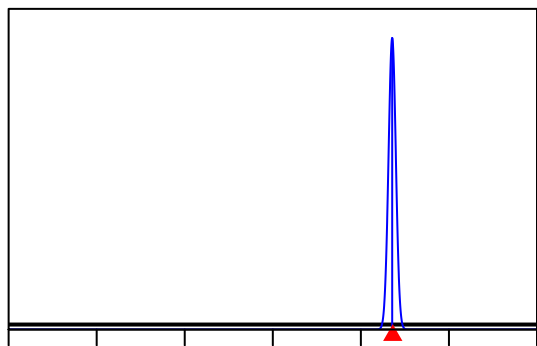
Size_DbIN_top_logit_A3-LL-n(3)

Size_DbIN_descend_se_A3-LL-n(3)



Size_DbIN_ascend_se_A3-LL-n(3)

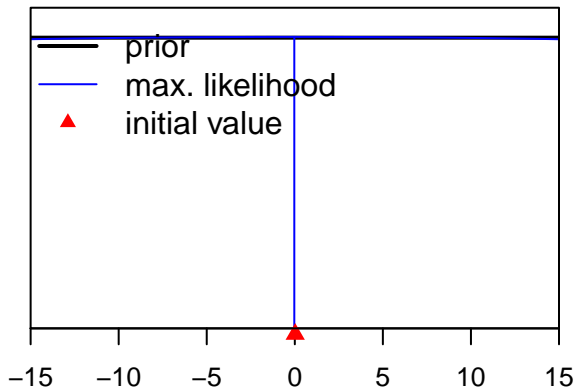
Size_DbIN_peak_A4-LL-n(4)



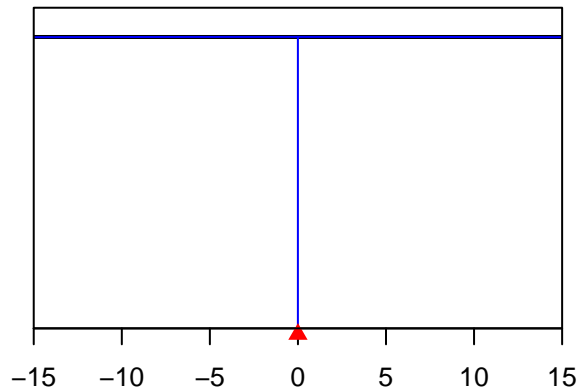
Density

Parameter value

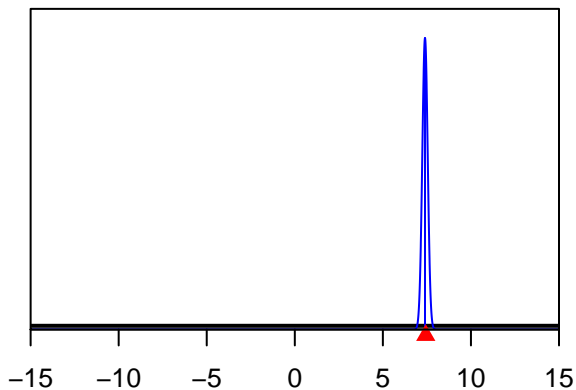
Size_DbIN_top_logit_A4-LL-n(4)



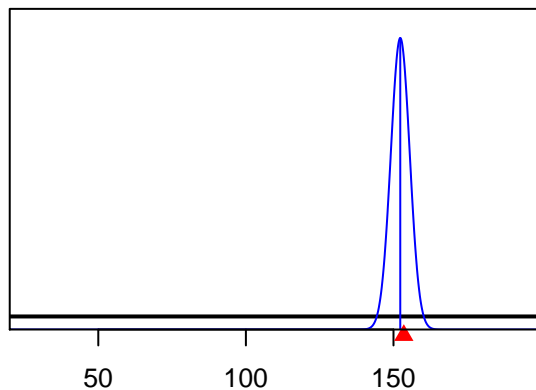
Size_DbIN_descend_se_A4-LL-n(4)



Size_DbIN_ascend_se_A4-LL-n(4)

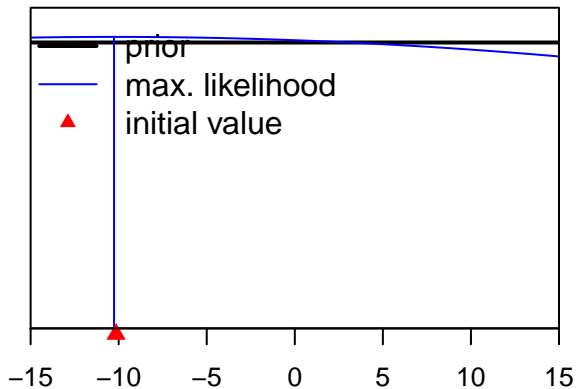


Size_DbIN_peak_A5-LL-n(5)

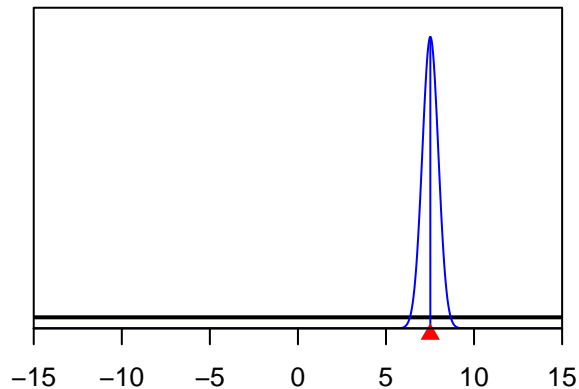


Parameter value

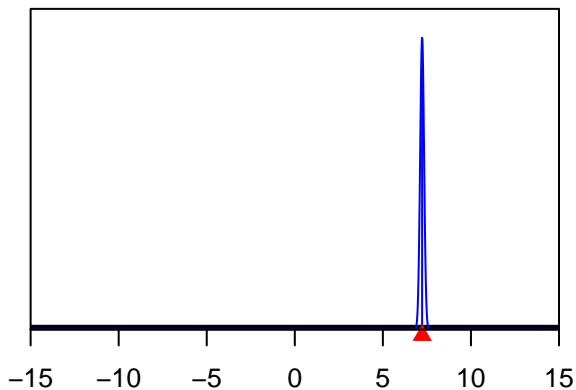
Size_DbIN_top_logit_A5-LL-n(5)



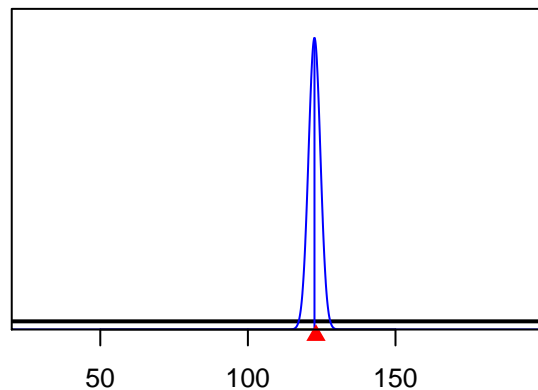
Size_DbIN_descend_se_A5-LL-n(5)



Size_DbIN_ascend_se_A5-LL-n(5)

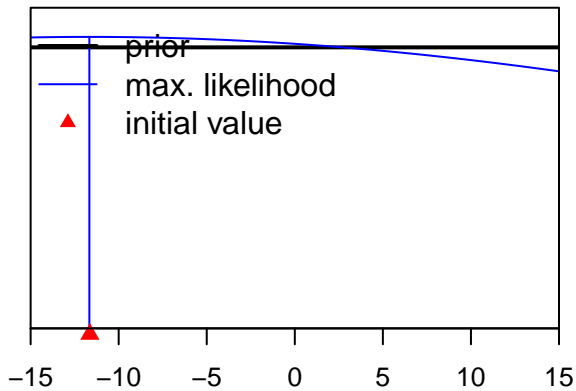


Size_DbIN_peak_A6-LL-n(6)

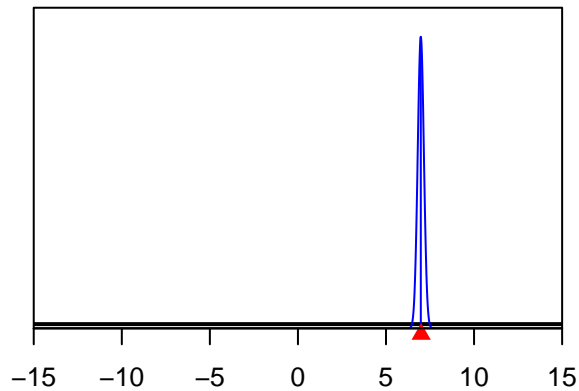


Parameter value

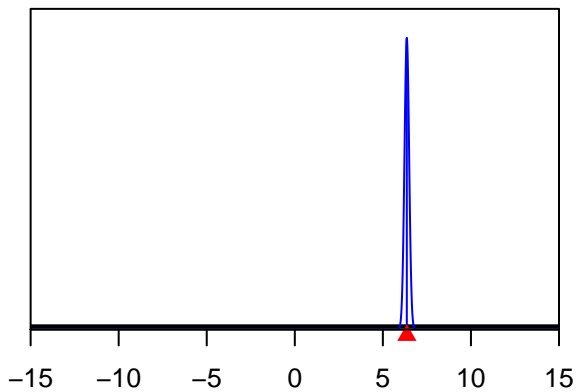
Size_DbIN_top_logit_A6-LL-n(6)



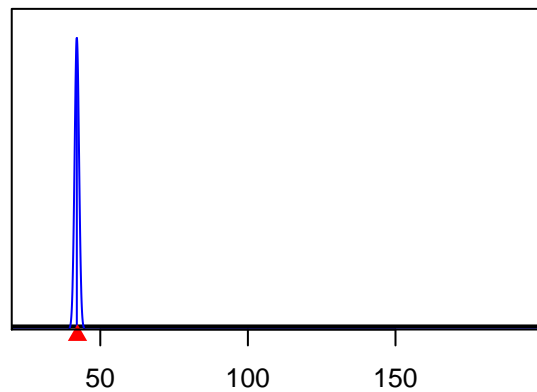
Size_DbIN_descend_se_A6-LL-n(6)



Size_DbIN_ascend_se_A6-LL-n(6)

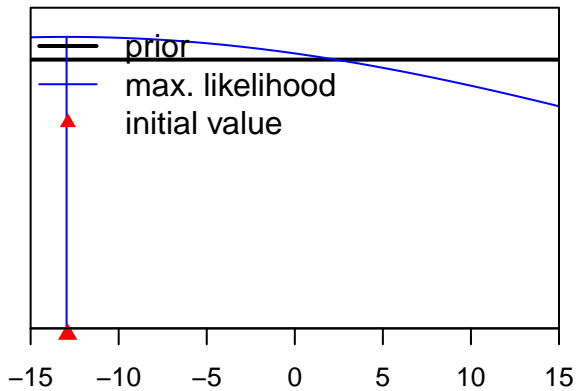


Size_DbIN_peak_A2-OBJ(13)

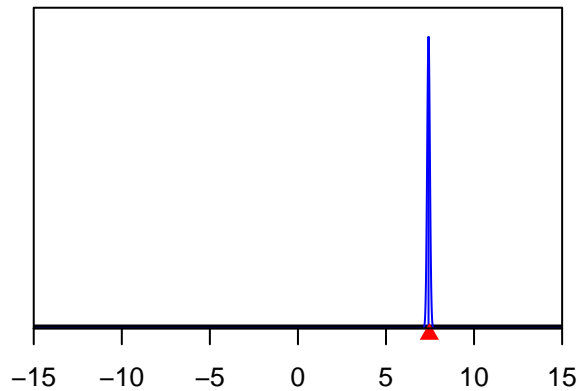


Parameter value

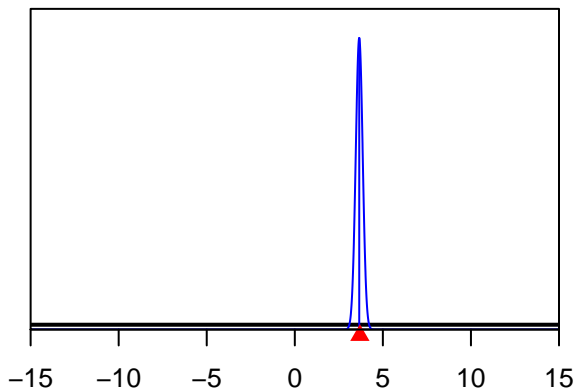
Size_DbIN_top_logit_A2-OBJ(13)



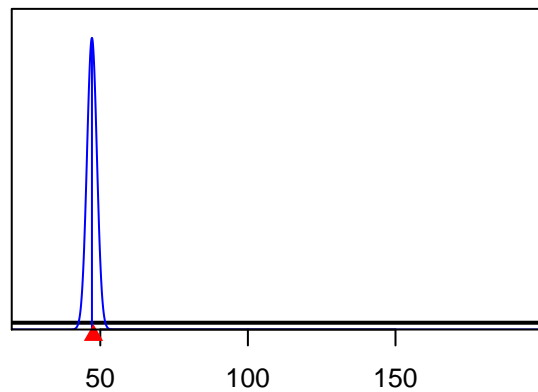
Size_DbIN_descend_se_A2-OBJ(13)



Size_DbIN_ascend_se_A2-OBJ(13)



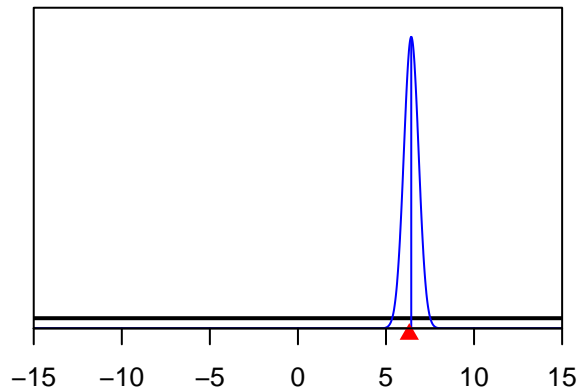
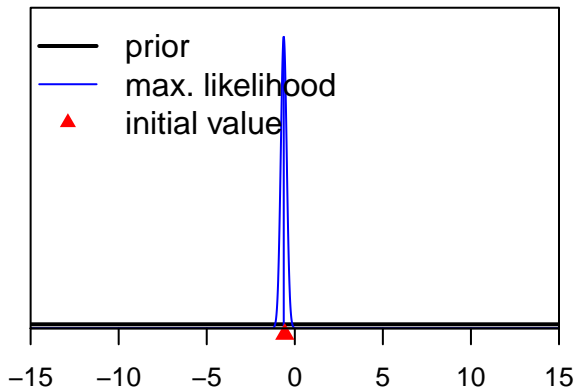
Size_DbIN_peak_A3-OBJ(14)



Parameter value

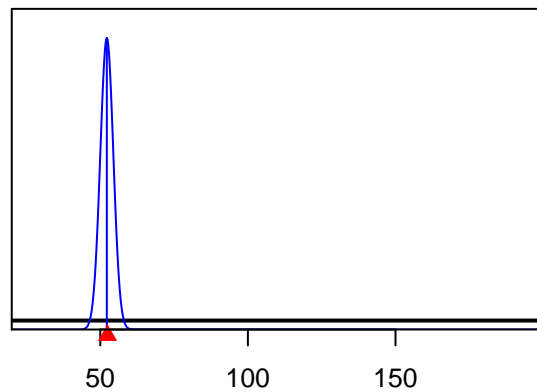
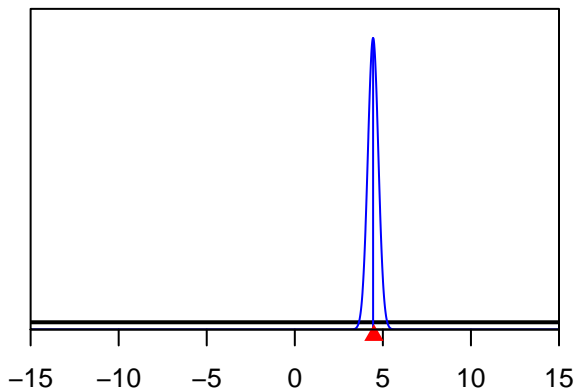
Size_DbIN_top_logit_A3-OBJ(14)

Size_DbIN_descend_se_A3-OBJ(14)

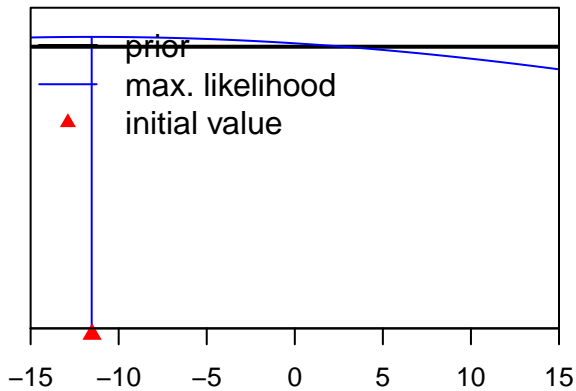
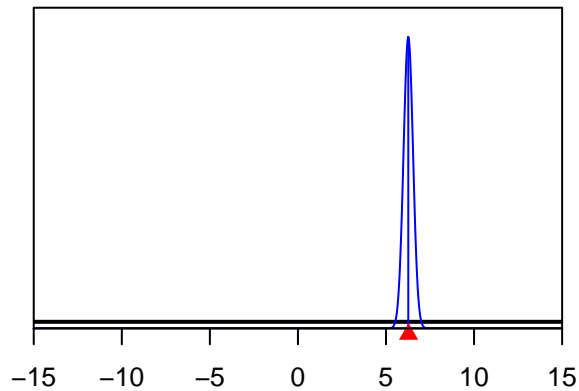
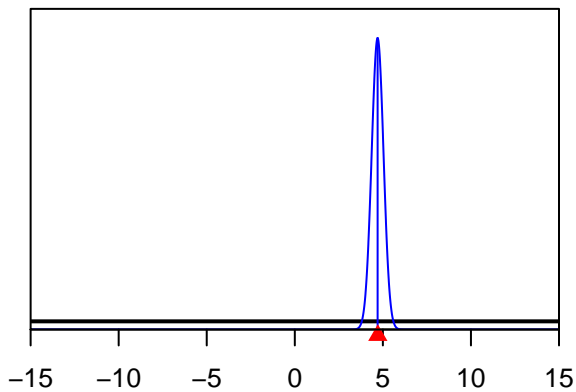
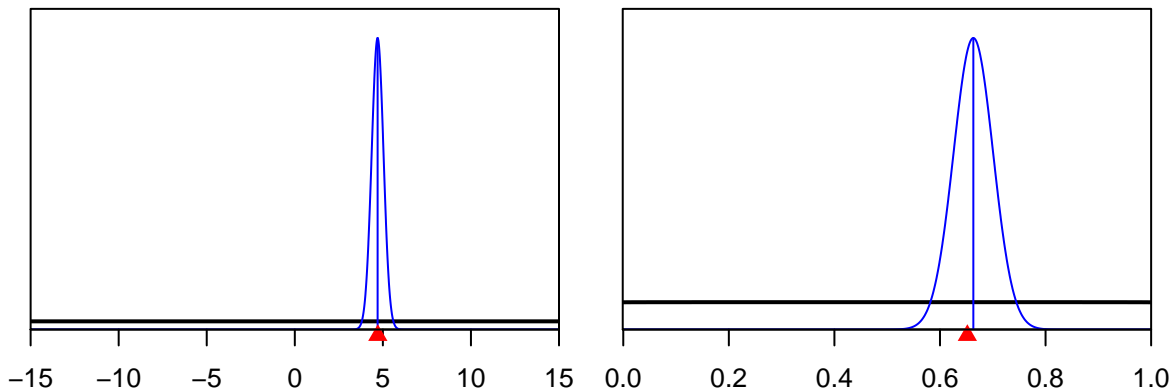


Size_DbIN_ascend_se_A3-OBJ(14)

Size_DbIN_peak_A4-OBJ(15)

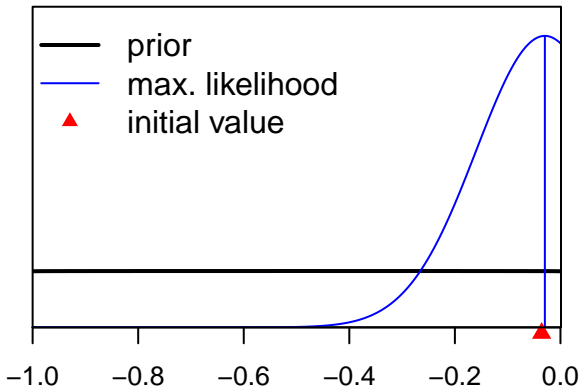


Parameter value

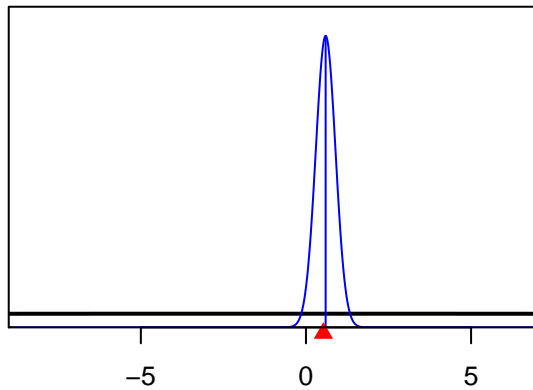
Size_DbIN_top_logit_A4-OBJ(15)**Size_DbIN_descend_se_A4-OBJ(15)****Size_DbIN_ascend_se_A4-OBJ(15)****SizeSpline_GradLo_A5-OBJ(16)**

Parameter value

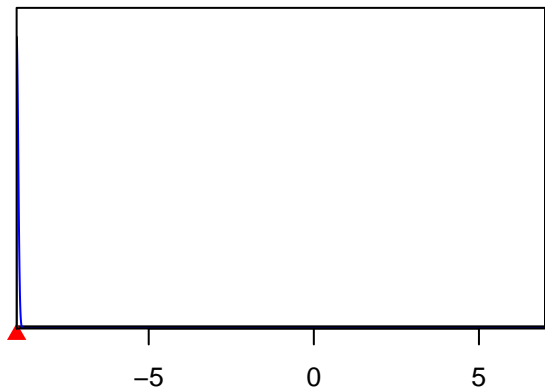
SizeSpline_GradHi_A5-Obj(16)



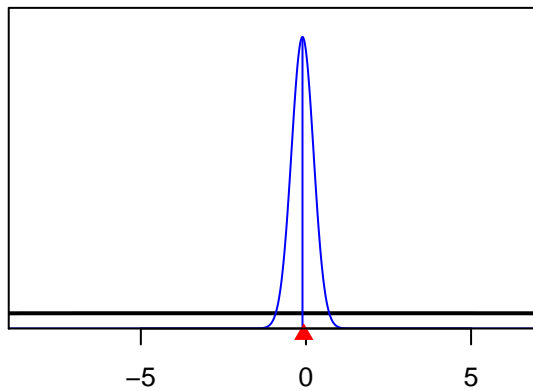
SizeSpline_Val_2_A5-Obj(16)



SizeSpline_Val_1_A5-Obj(16)

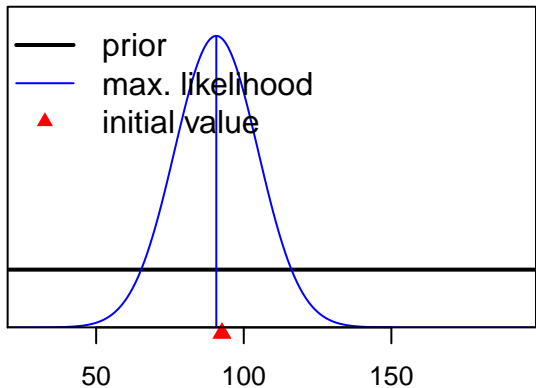


SizeSpline_Val_4_A5-Obj(16)

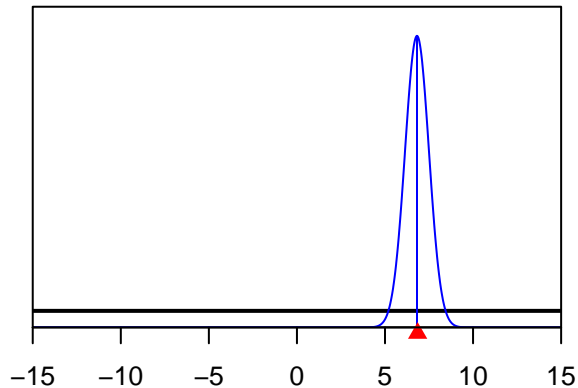


Parameter value

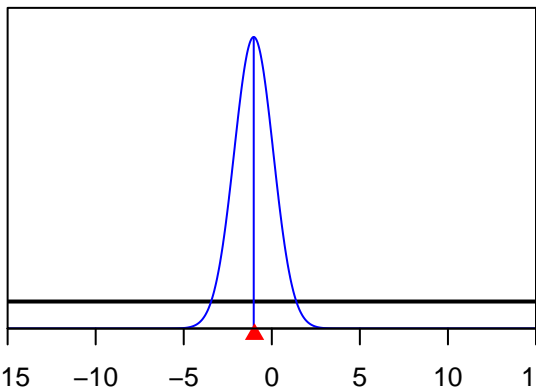
Size_DbIN_peak_A6-OBJ(17)



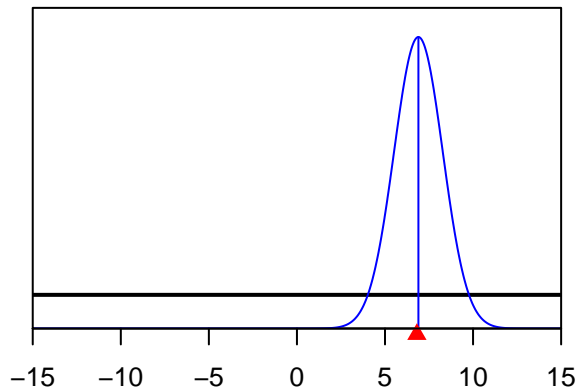
Size_DbIN_ascend_se_A6-OBJ(17)



Size_DbIN_top_logit_A6-OBJ(17)



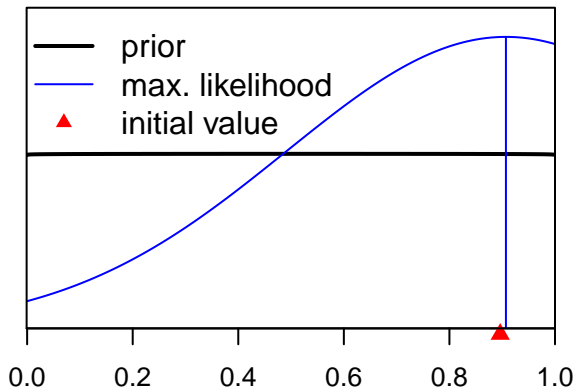
Size_DbIN_descend_se_A6-OBJ(17)



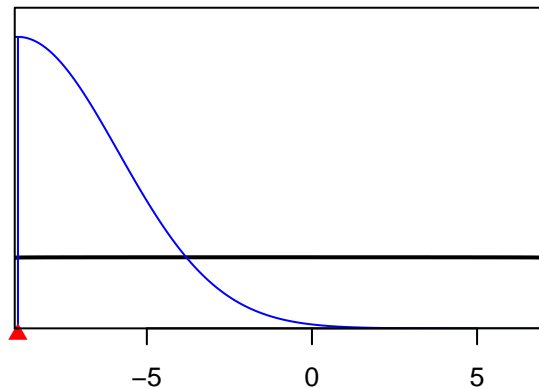
Parameter value

Density

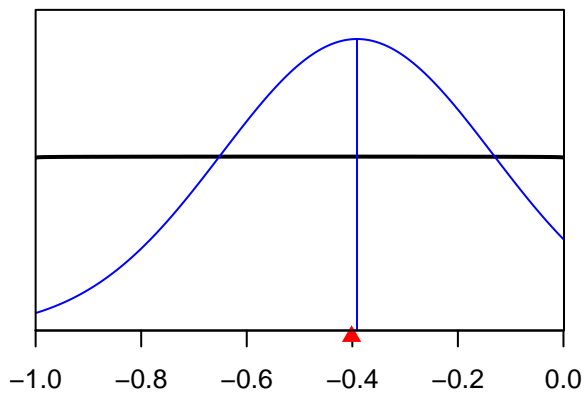
SizeSpline_GradLo_A2-NOADEL(19)



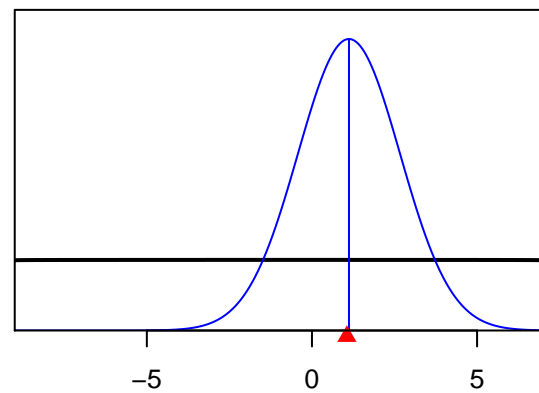
SizeSpline_Val_1_A2-NOADEL(19)



SizeSpline_GradHi_A2-NOADEL(19)

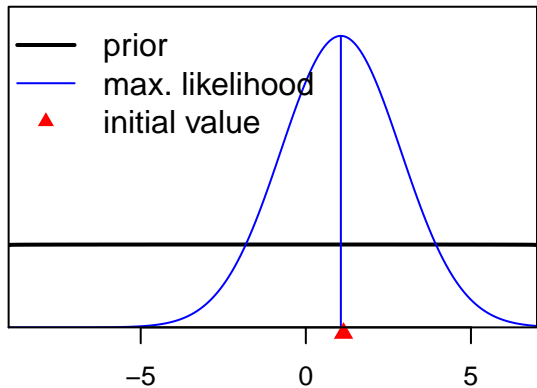


SizeSpline_Val_2_A2-NOADEL(19)

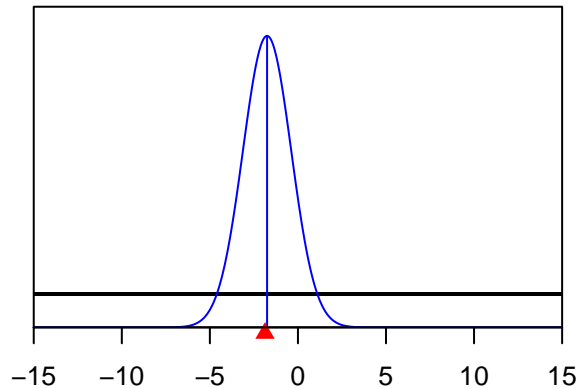


Parameter value

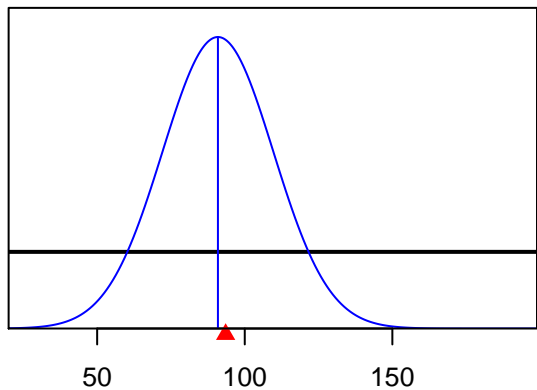
SizeSpline_Val_4_A2-NOADEL(19)



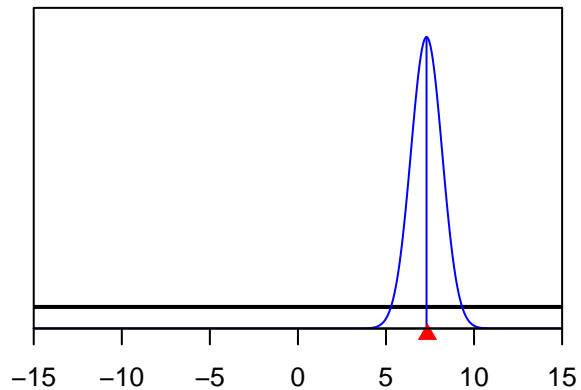
Size_DbIN_top_logit_A3-NOADEL(20)



Size_DbIN_peak_A3-NOADEL(20)



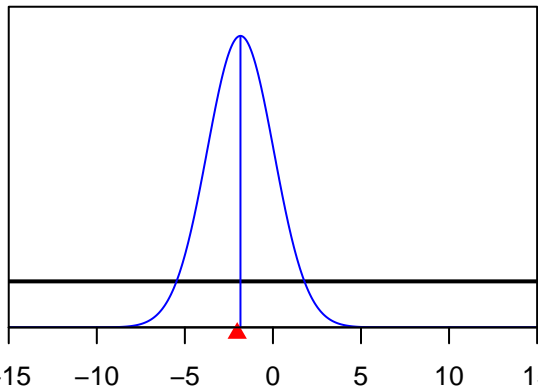
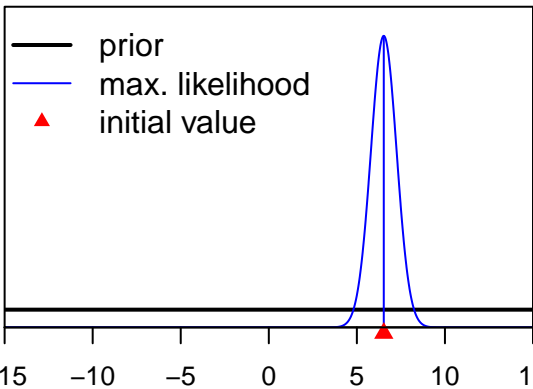
Size_DbIN_ascend_se_A3-NOADEL(20)



Parameter value

Size_DbIN_descend_se_A3-NOADEL(20)

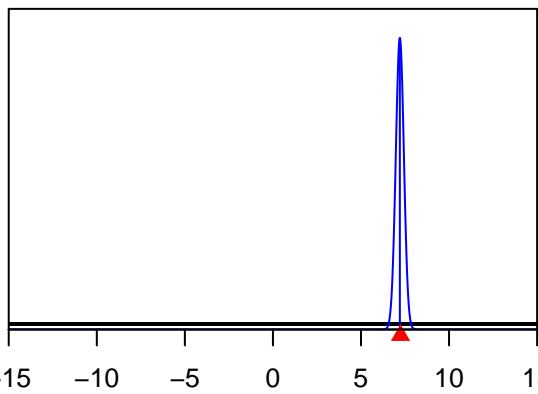
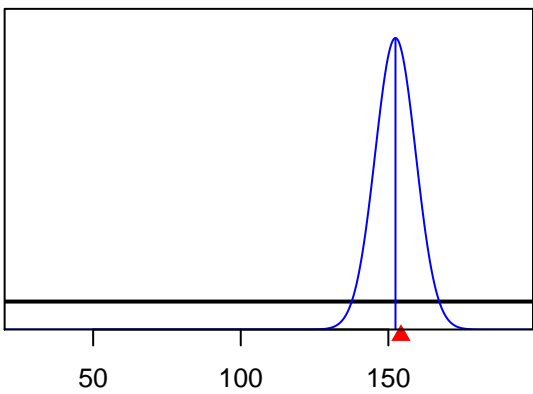
Size_DbIN_top_logit_EPO-LL-survey-early(24)



Density

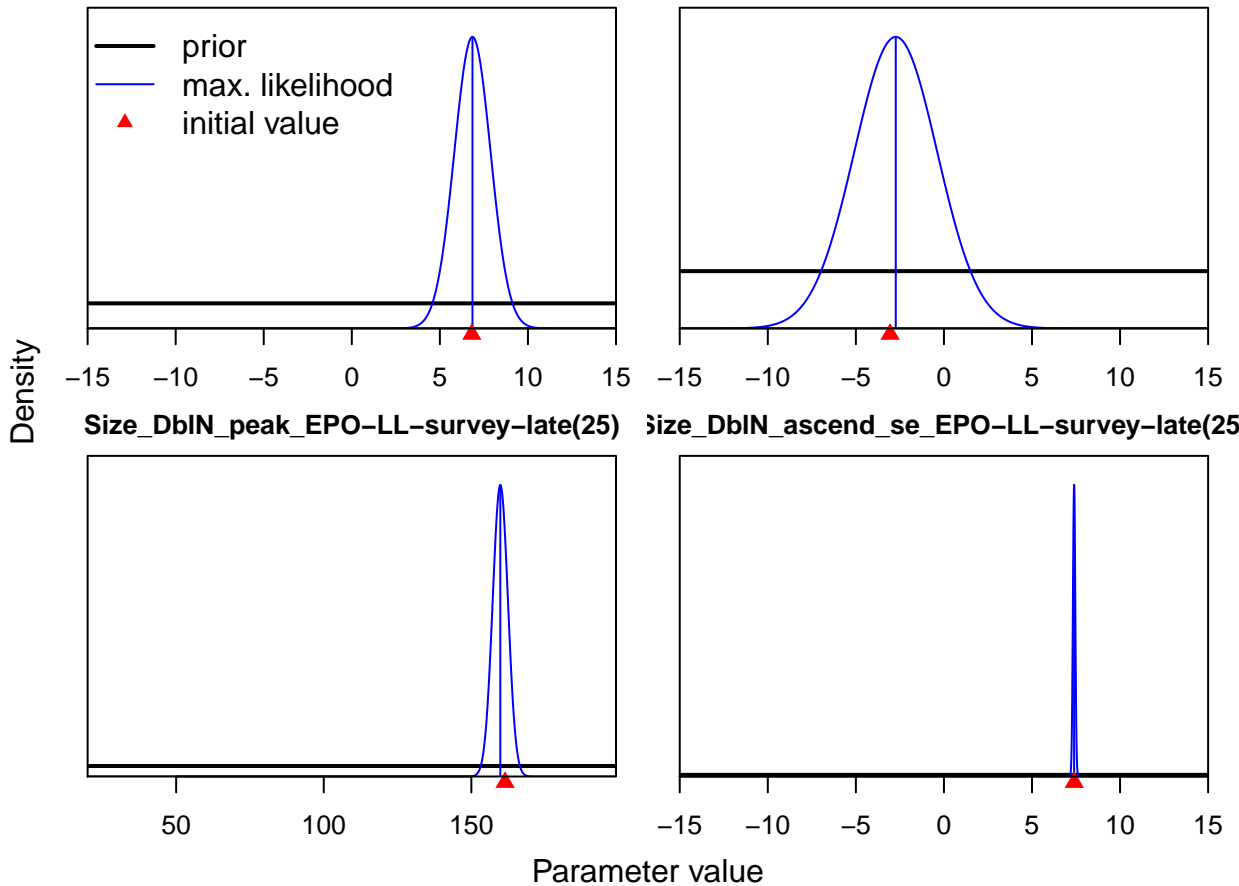
Size_DbIN_peak_EPO-LL-survey-early(24)

ize_DbIN_ascend_se_EPO-LL-survey-early(24)

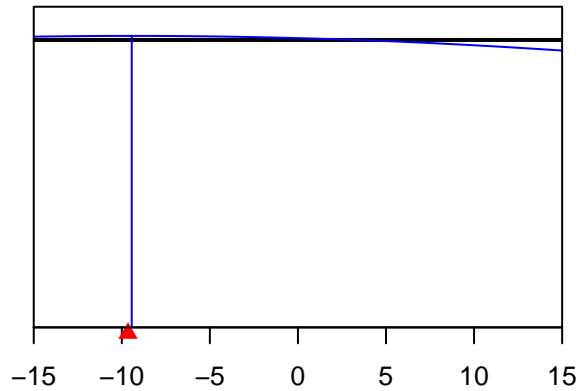
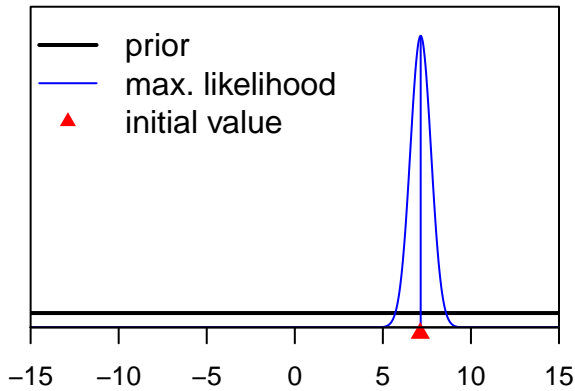


Parameter value

ze_DbIN_descend_se_EPO-LL-survey-early(2Size_DbIN_top_logit_EPO-LL-survey-late(25)

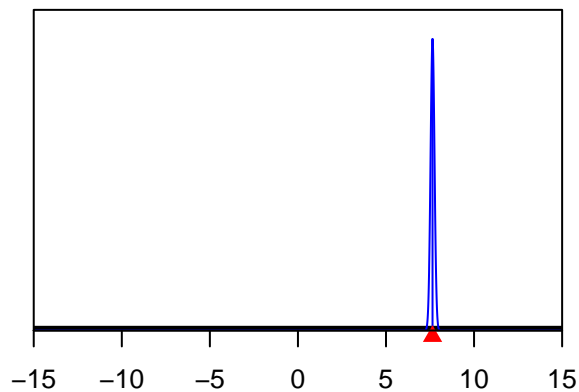
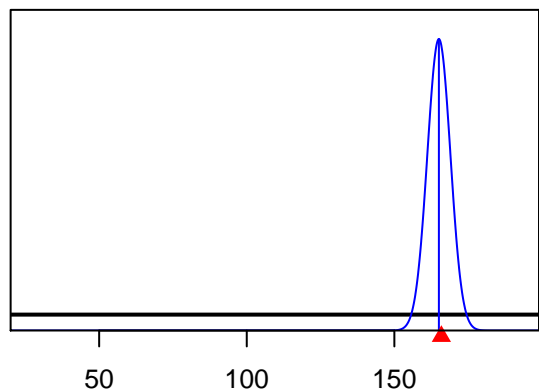


ize_DbIN_descend_se_EPO-LL-survey-late(2)Size_DbIN_top_logit_A2-LL-n(2)_BLK2repl_17



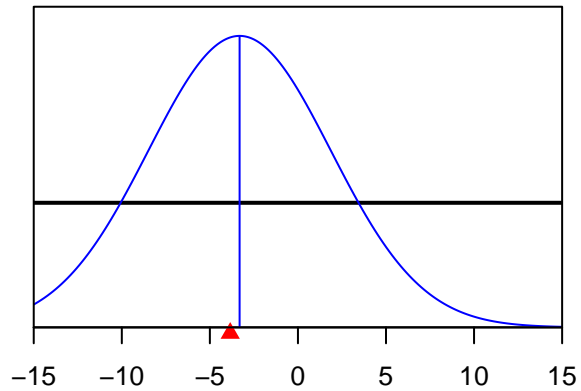
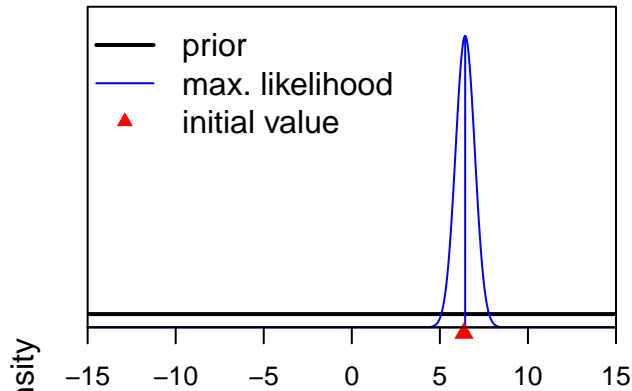
Size_DbIN_peak_A2-LL-n(2)_BLK2repl_17

ize_DbIN_descend_se_A2-LL-n(2)_BLK2repl_17



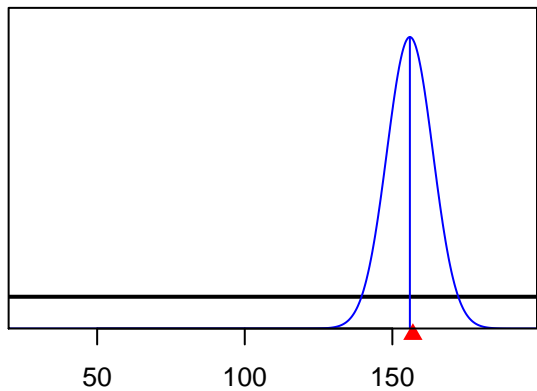
Parameter value

ize_DbIN_descend_se_A2-LL-n(2)_BLK2repl_Size_DbIN_top_logit_A3-LL-n(3)_BLK2repl_17

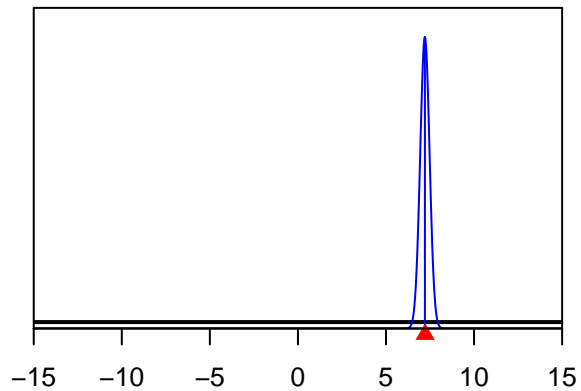


Size_DbIN_peak_A3-LL-n(3)_BLK2repl_17

Density

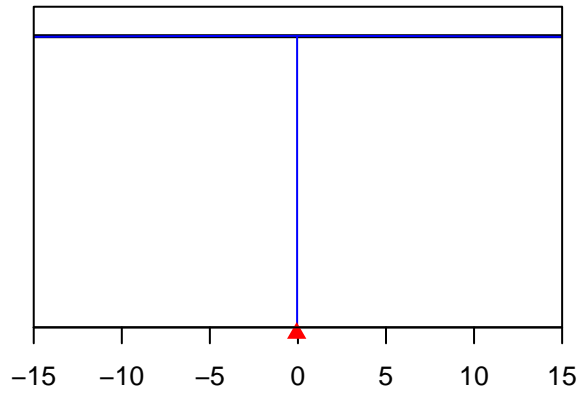
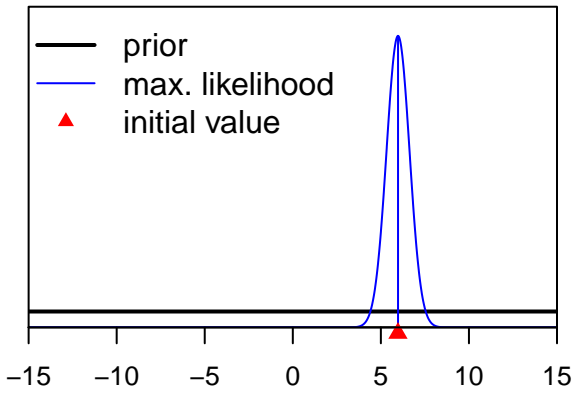


ize_DbIN_ascend_se_A3-LL-n(3)_BLK2repl_17



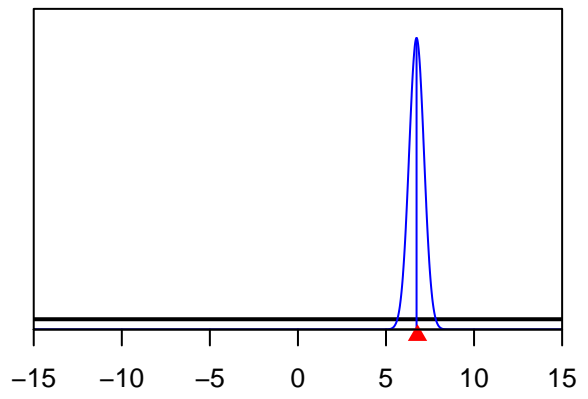
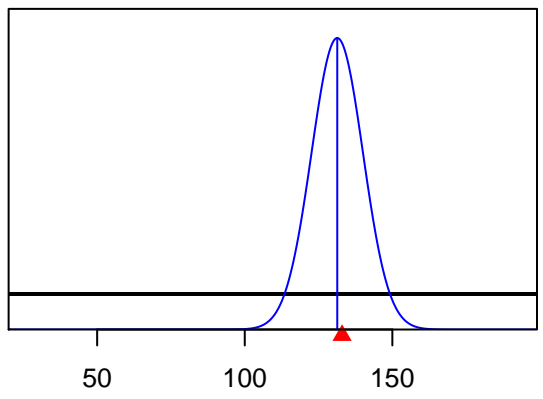
Parameter value

ize_DbIN_descend_se_A3-LL-n(3)_BLK2repl_Size_DbIN_top_logit_A4-LL-n(4)_BLK2repl_17



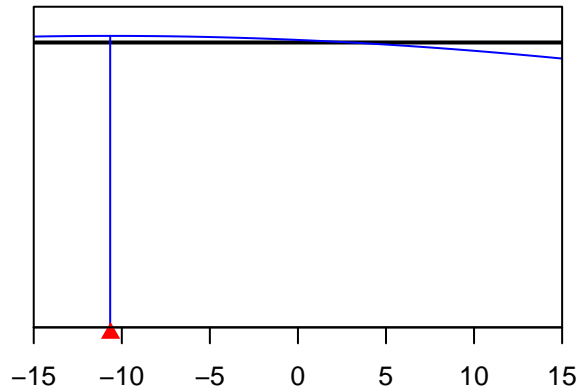
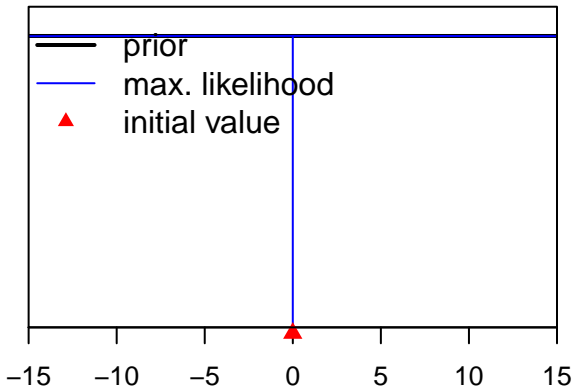
Size_DbIN_peak_A4-LL-n(4)_BLK2repl_17

ize_DbIN_ascend_se_A4-LL-n(4)_BLK2repl_17



Parameter value

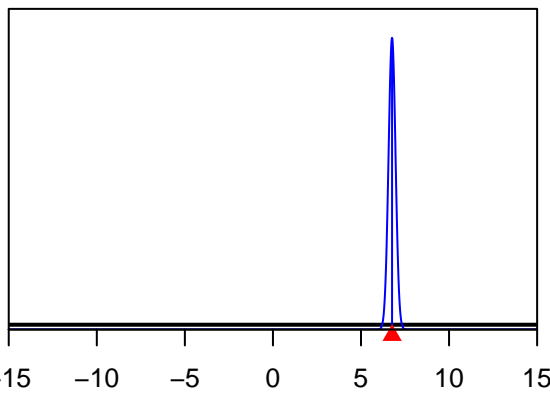
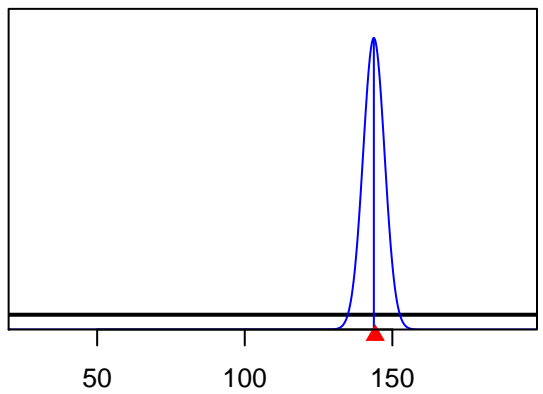
ize_DbIN_descend_se_A4-LL-n(4)_BLK2repl_Size_DbIN_top_logit_A5-LL-n(5)_BLK2repl_17



Density

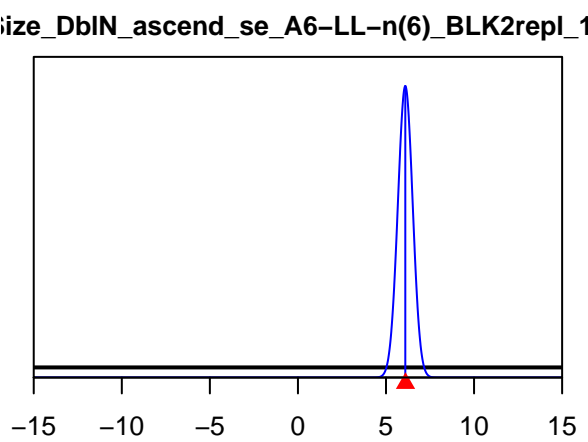
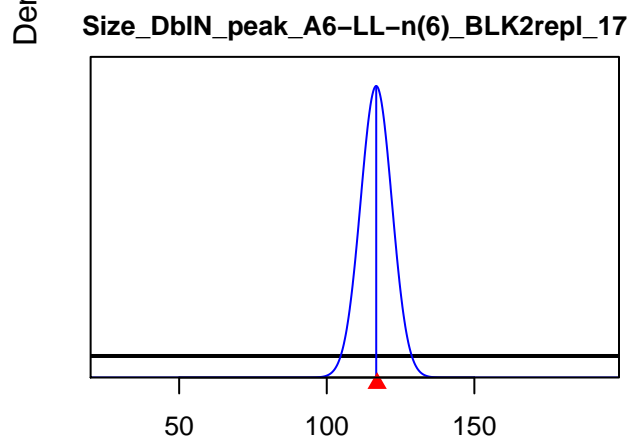
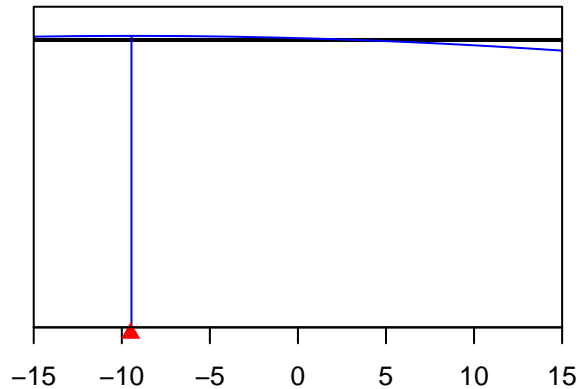
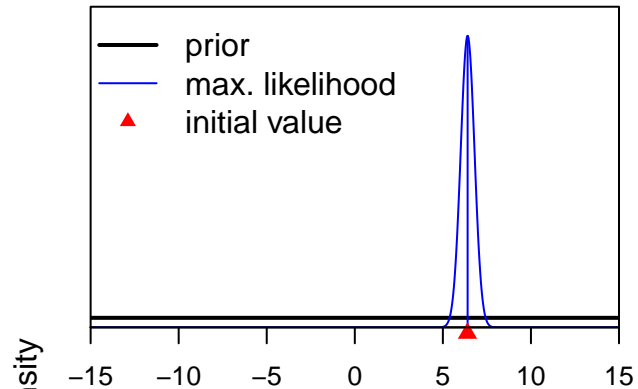
Size_DbIN_peak_A5-LL-n(5)_BLK2repl_17

ize_DbIN_ascend_se_A5-LL-n(5)_BLK2repl_17



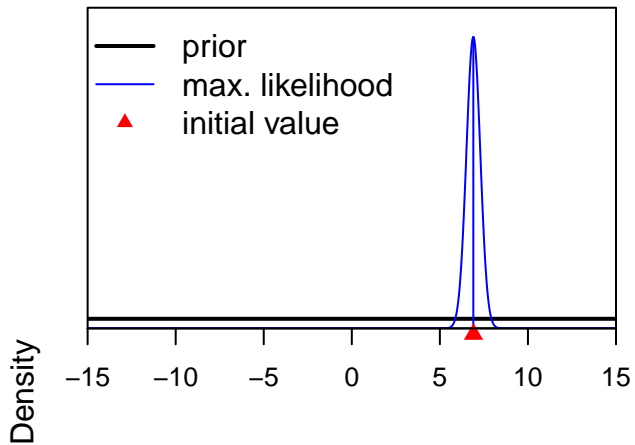
Parameter value

ize_DbIN_descend_se_A5-LL-n(5)_BLK2repl_Size_DbIN_top_logit_A6-LL-n(6)_BLK2repl_17



Parameter value

ize_DbIN_descend_se_A6-LL-n(6)_BLK2repl_1



Parameter value