

Plots created using the 'r4ss' package in R

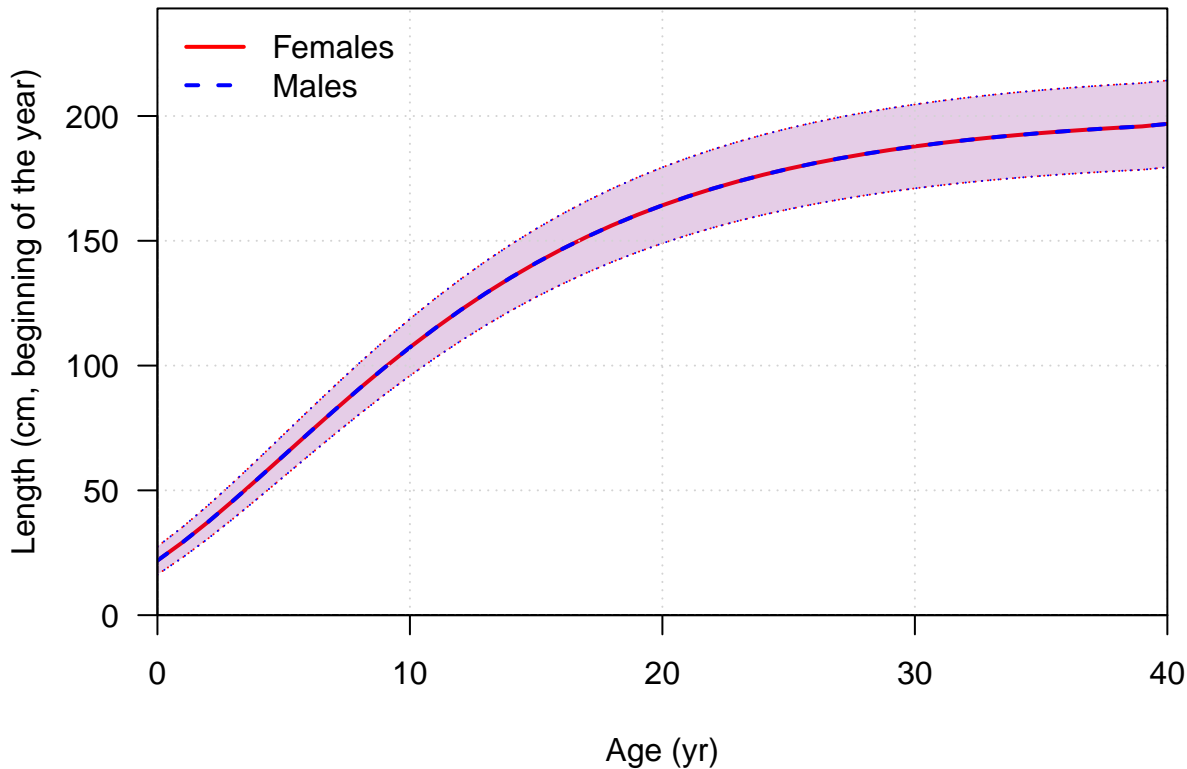
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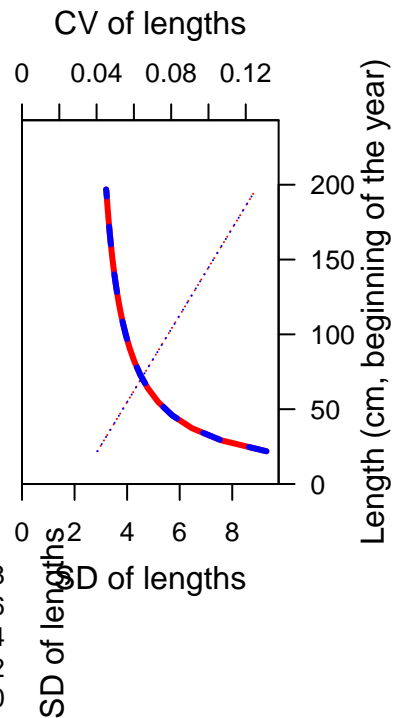
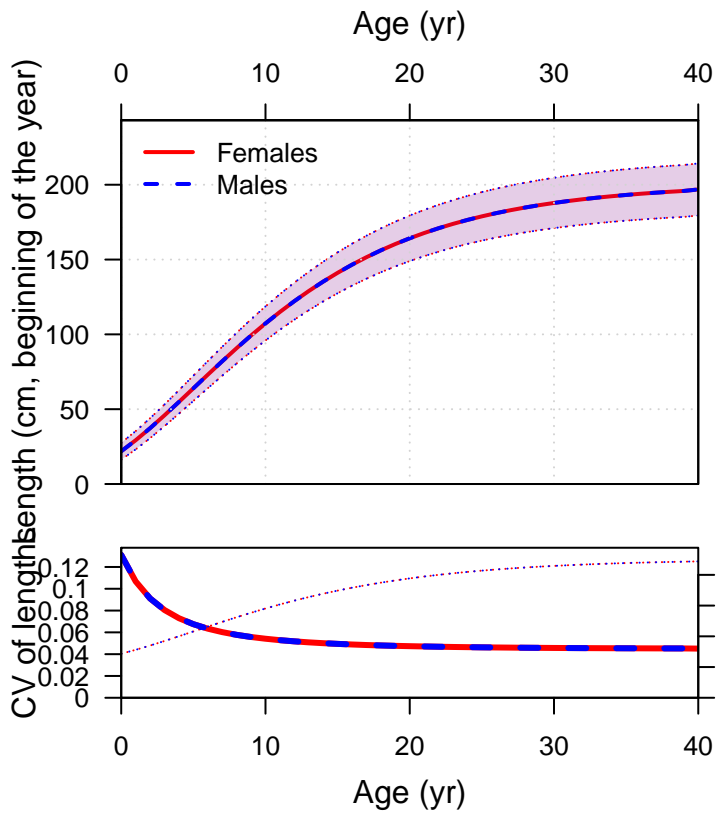
StartTime: Mon May 11 17:17:17 2020

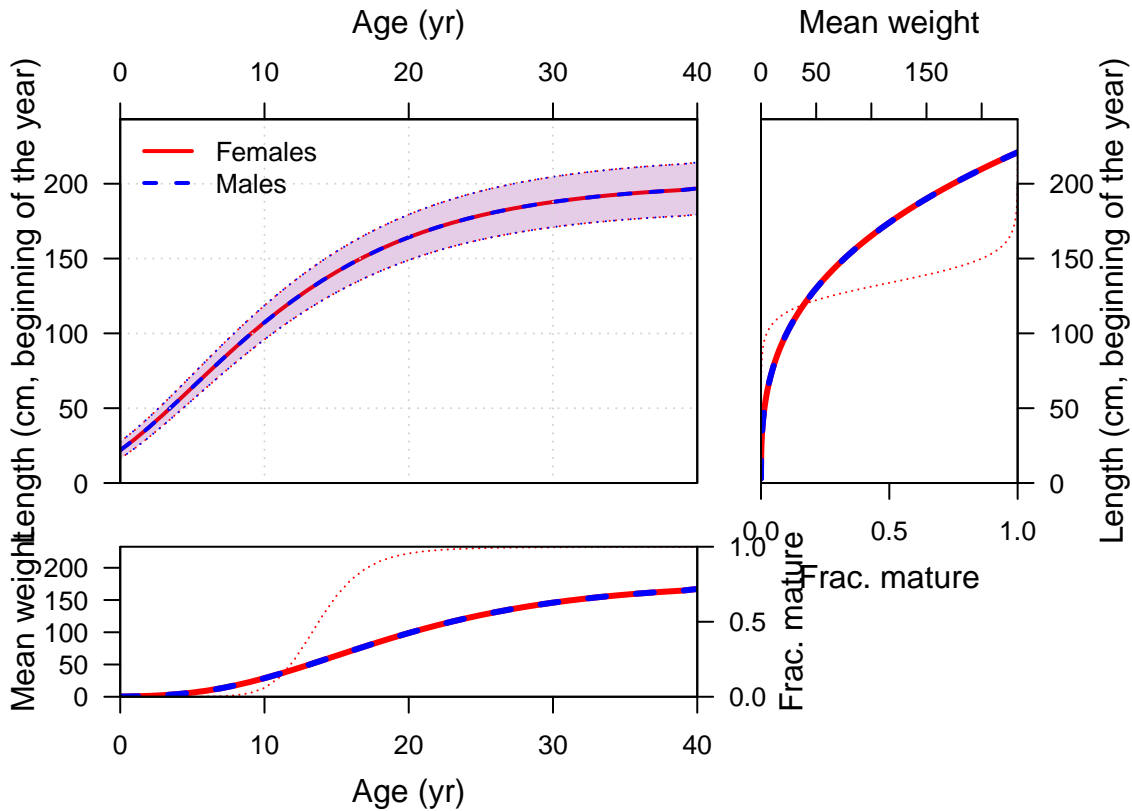
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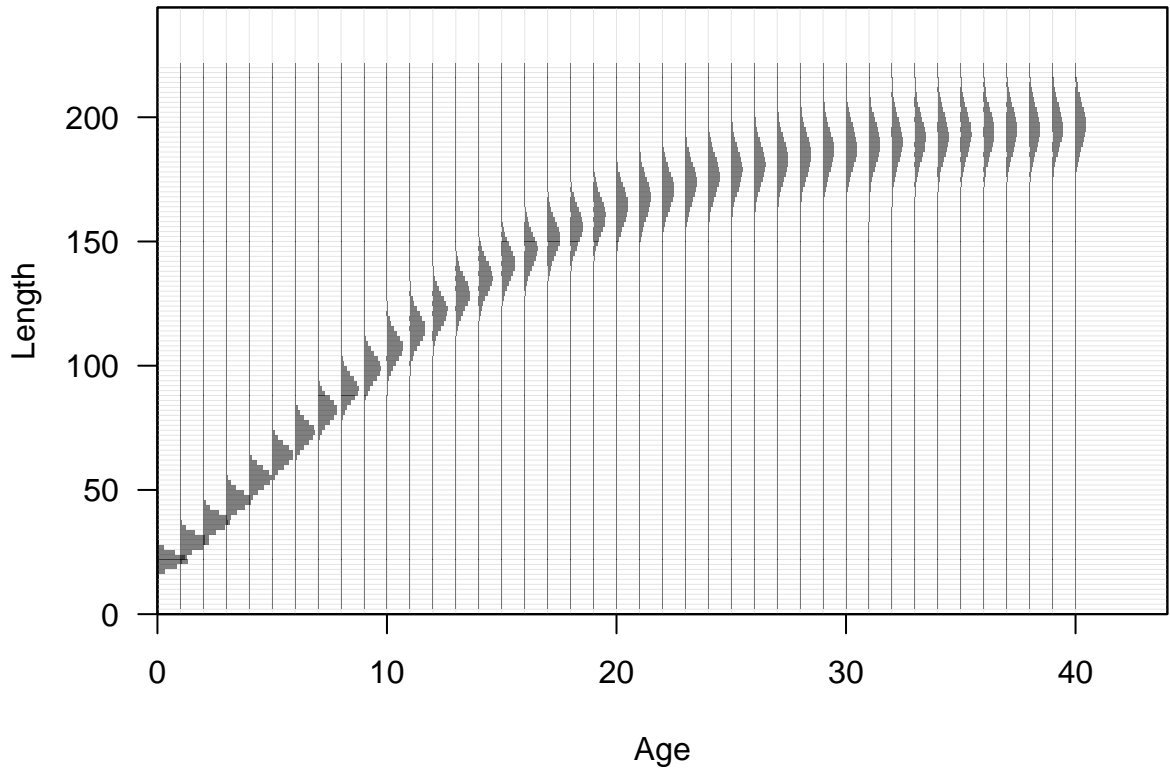
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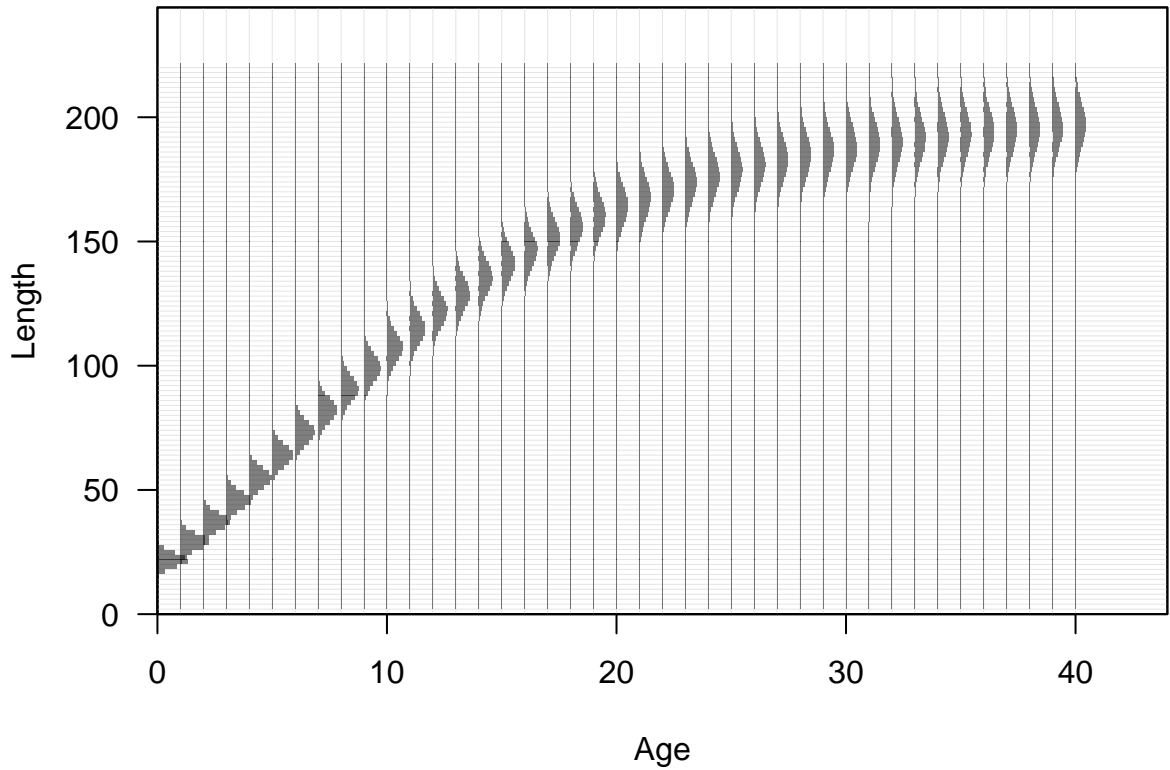
Ending year expected growth (with 95% intervals)

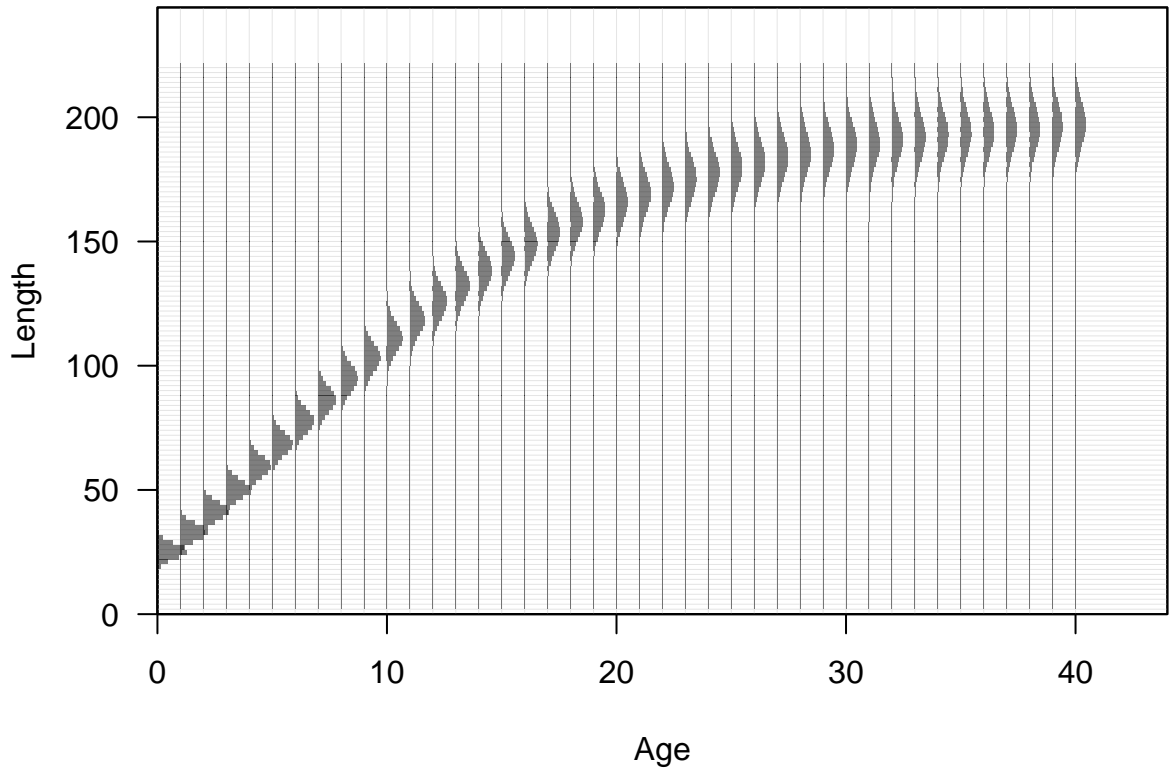


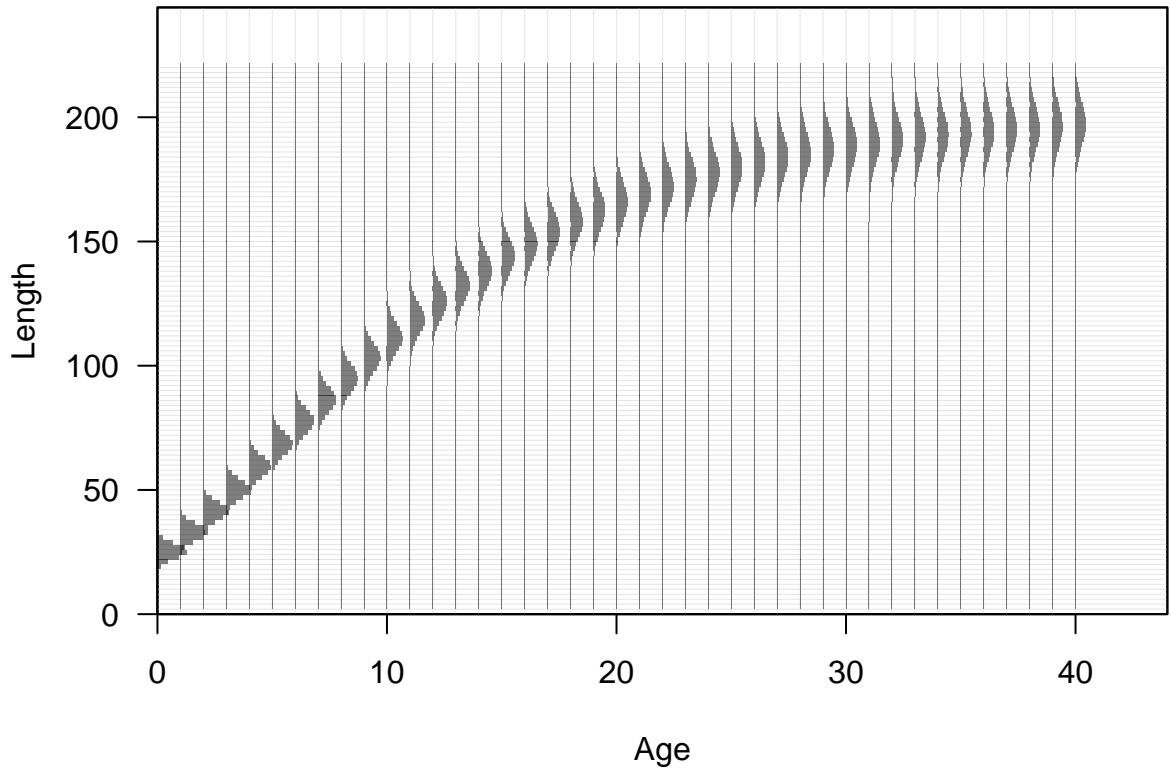


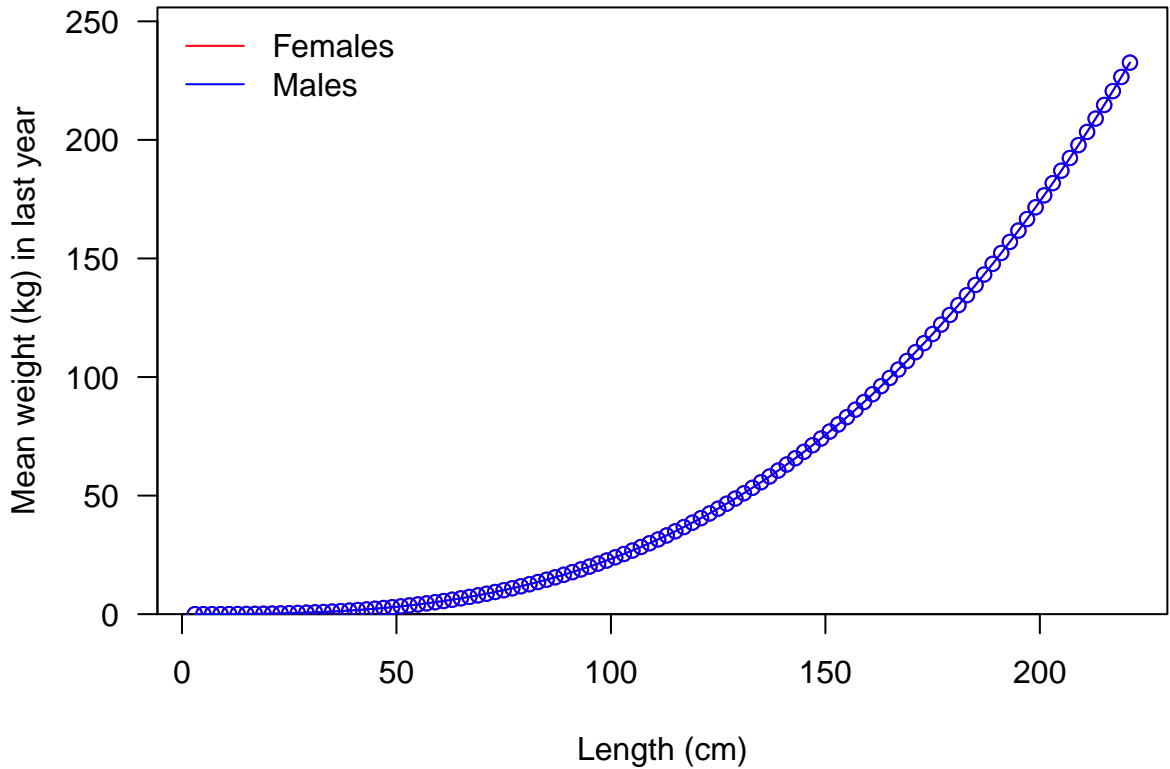


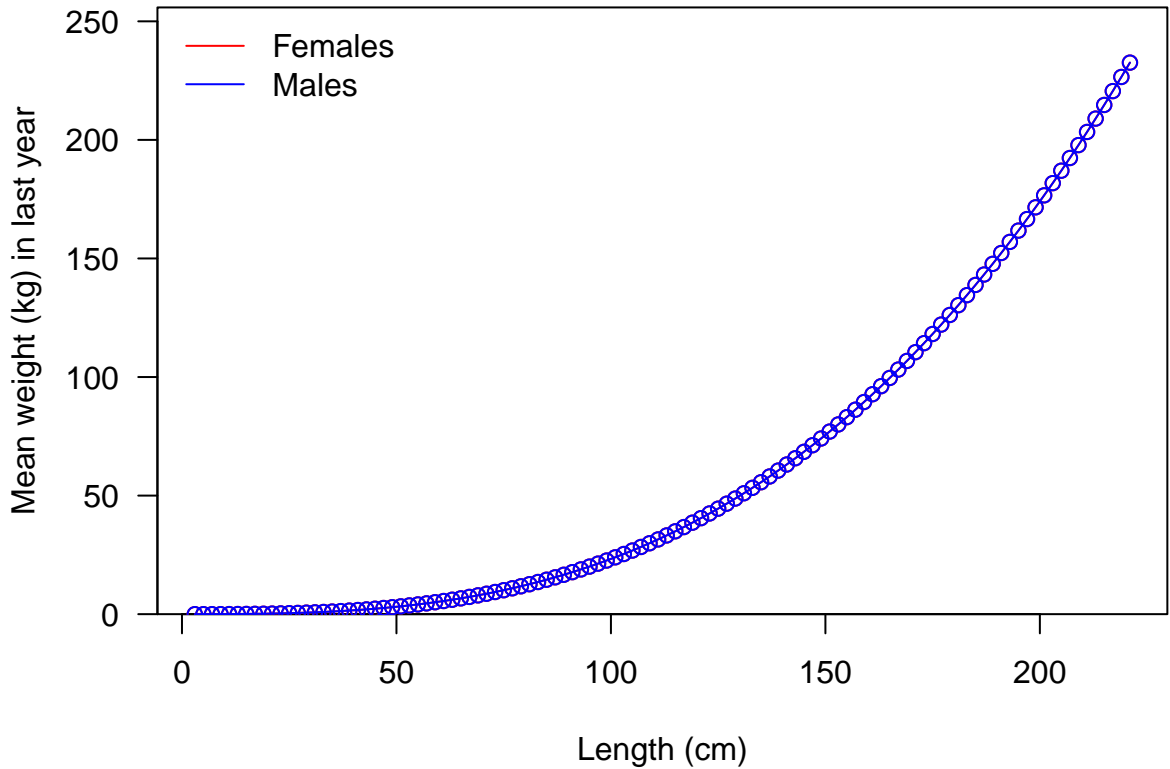


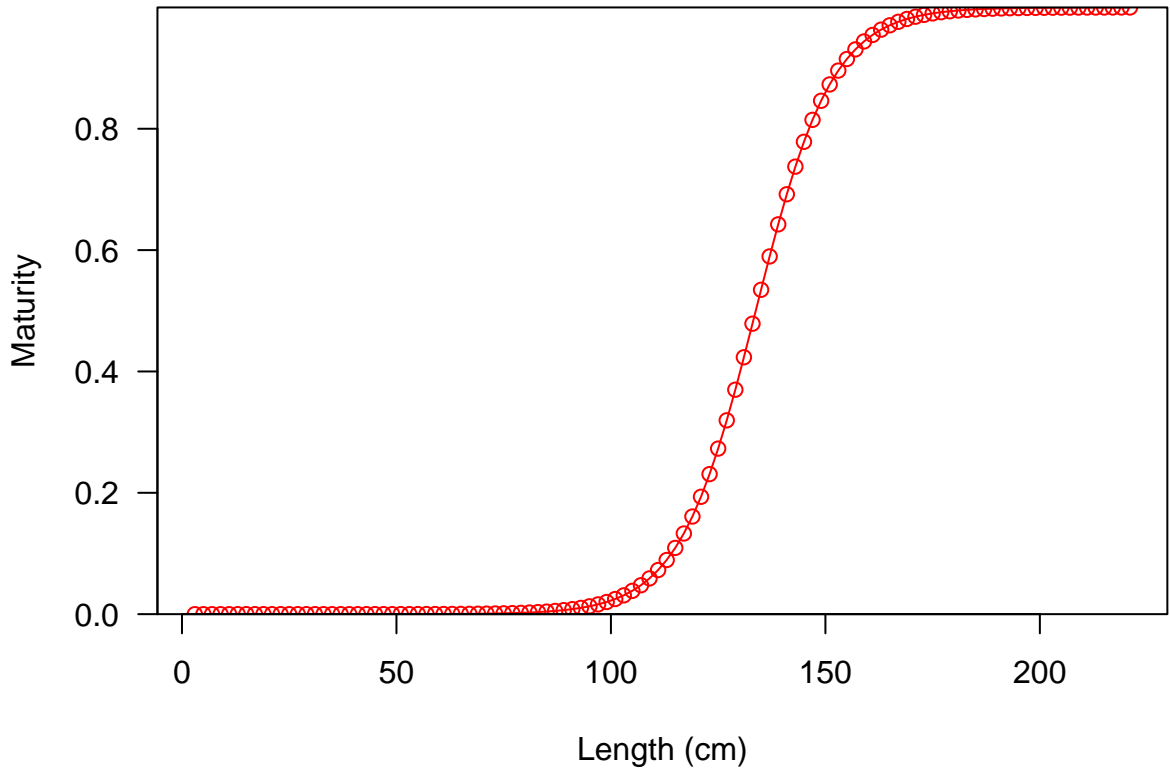


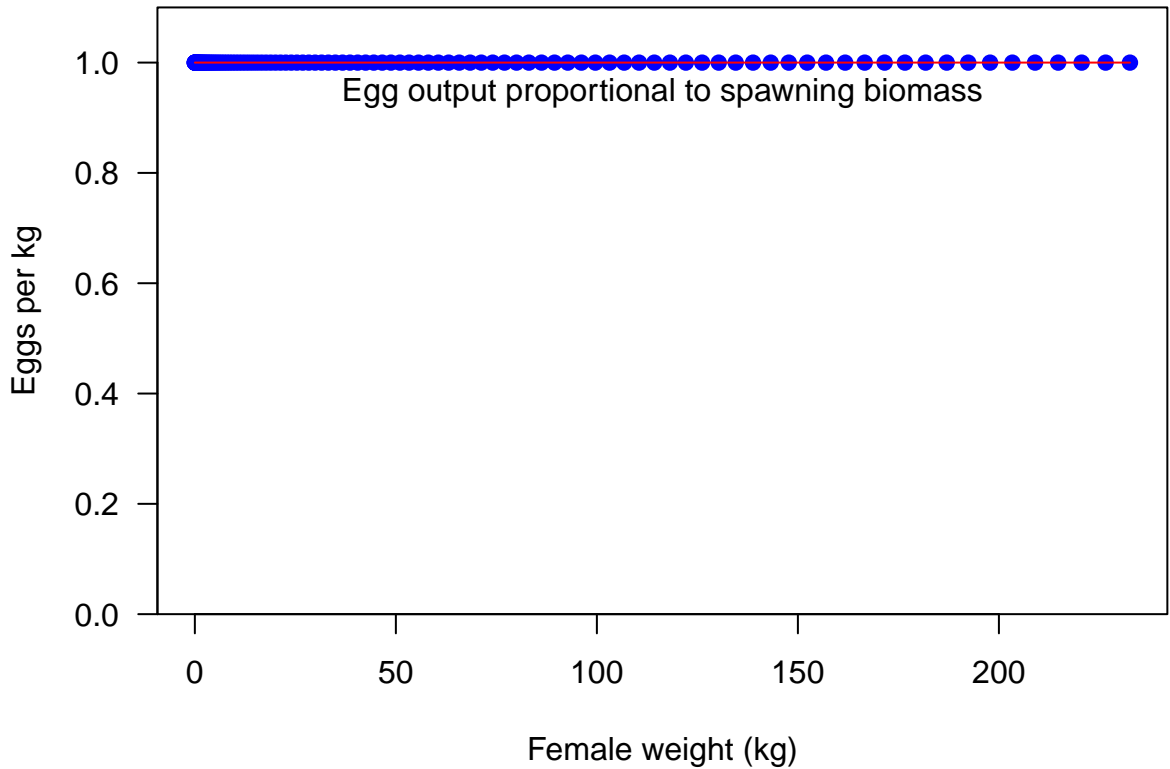


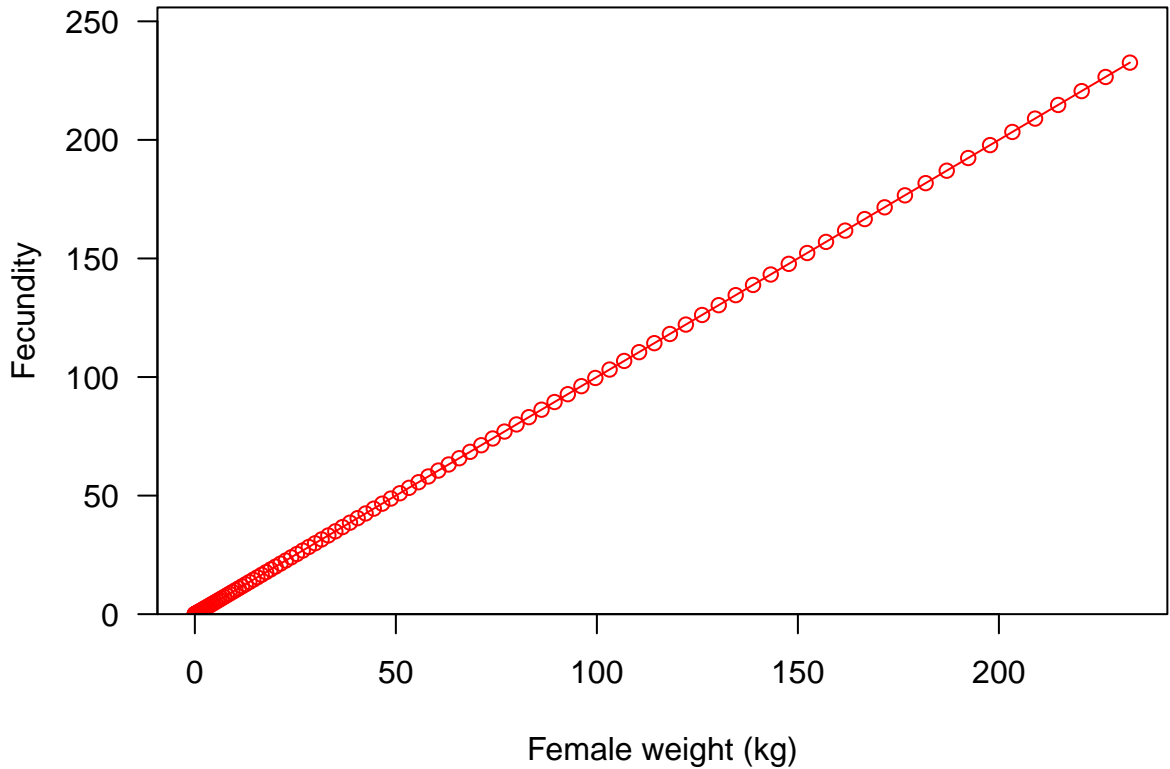


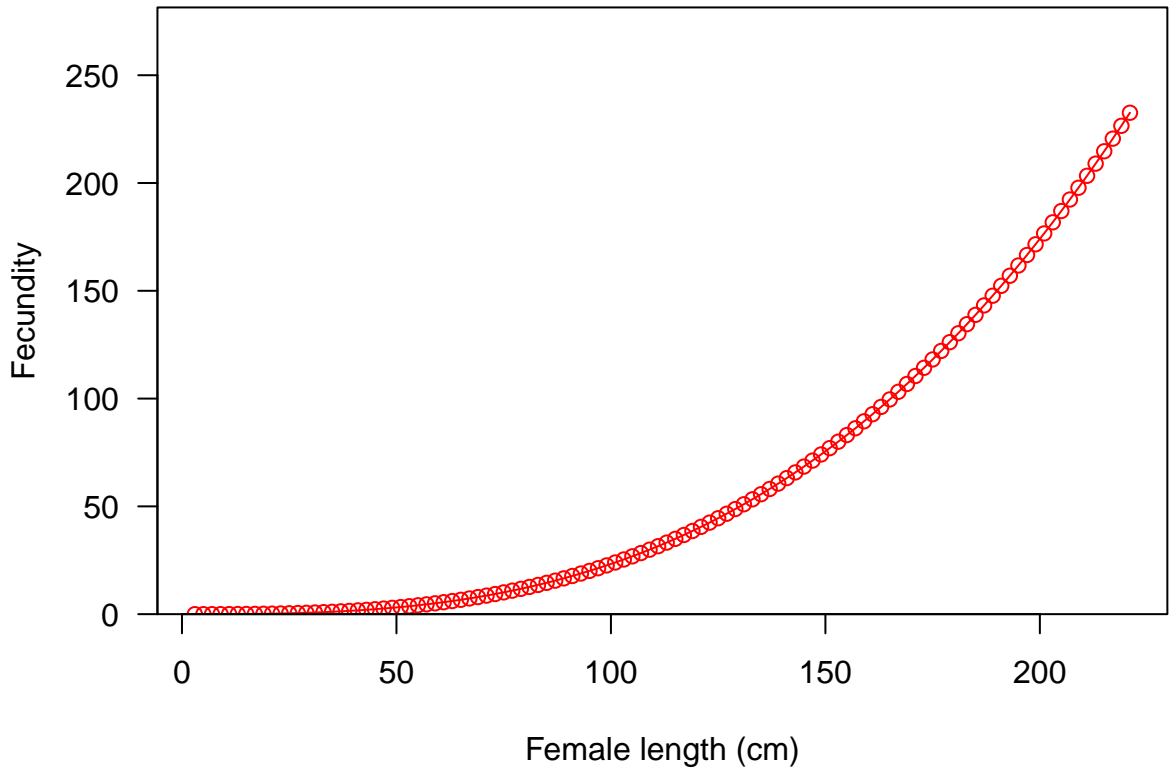


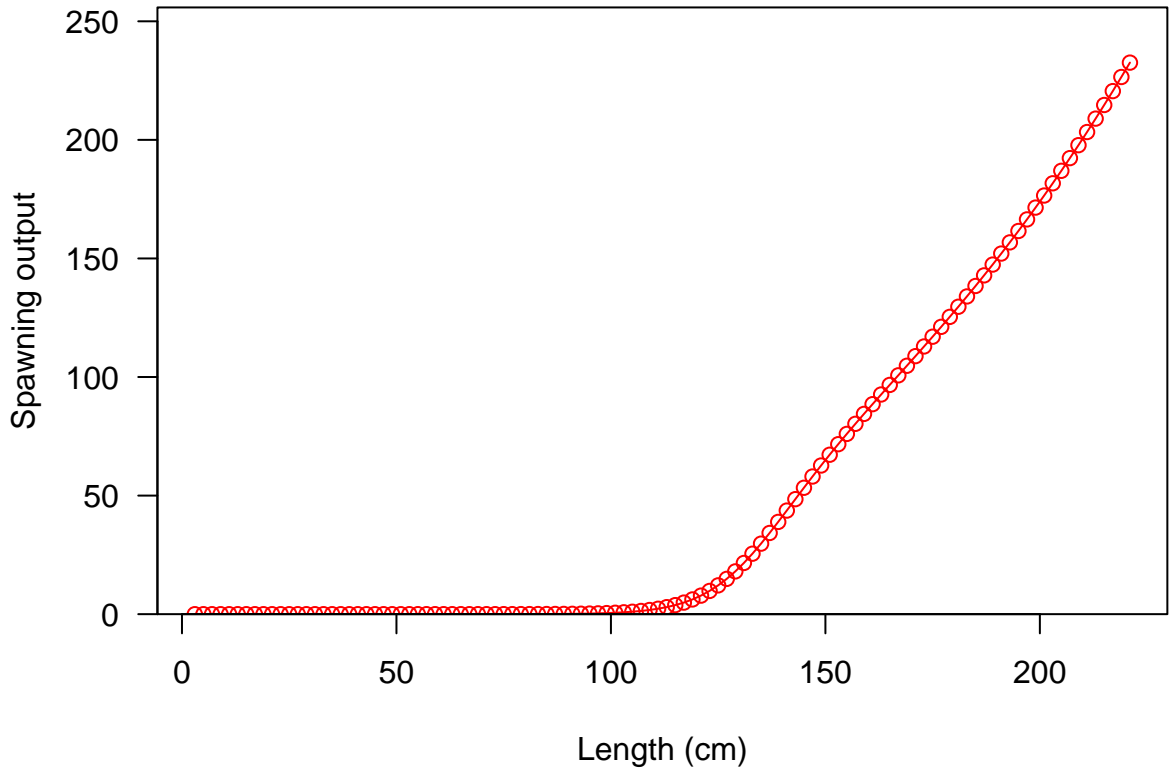


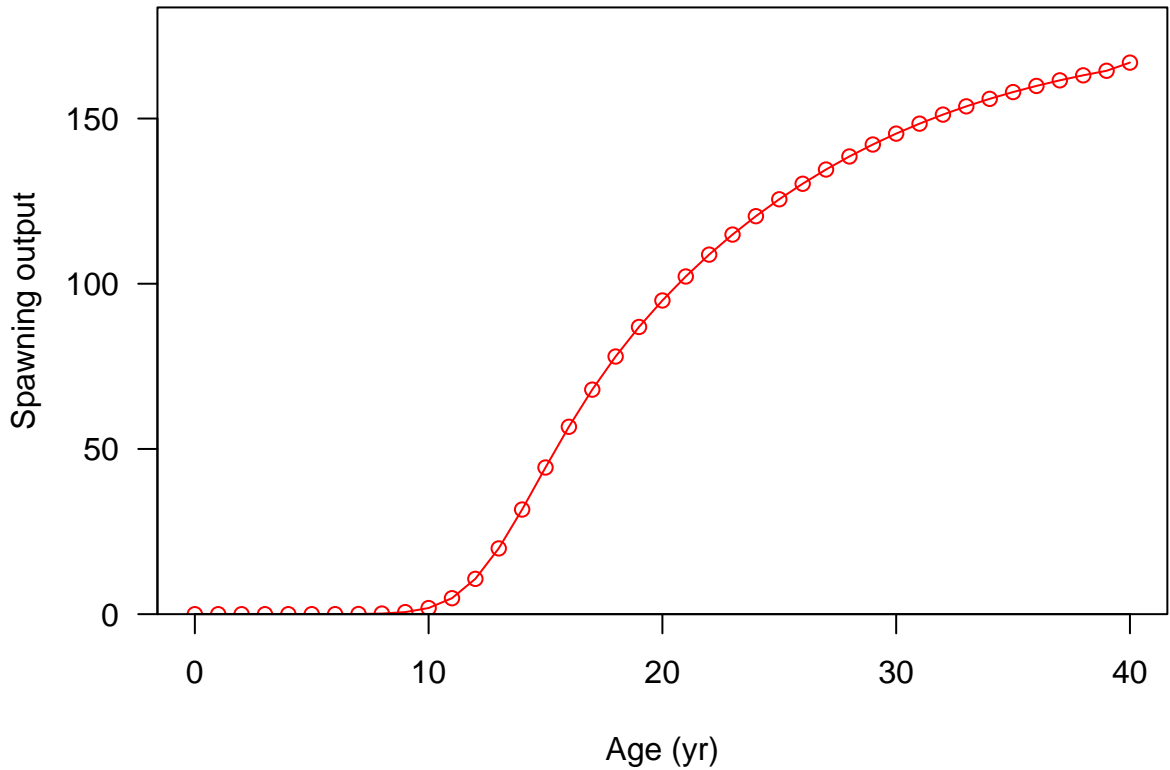


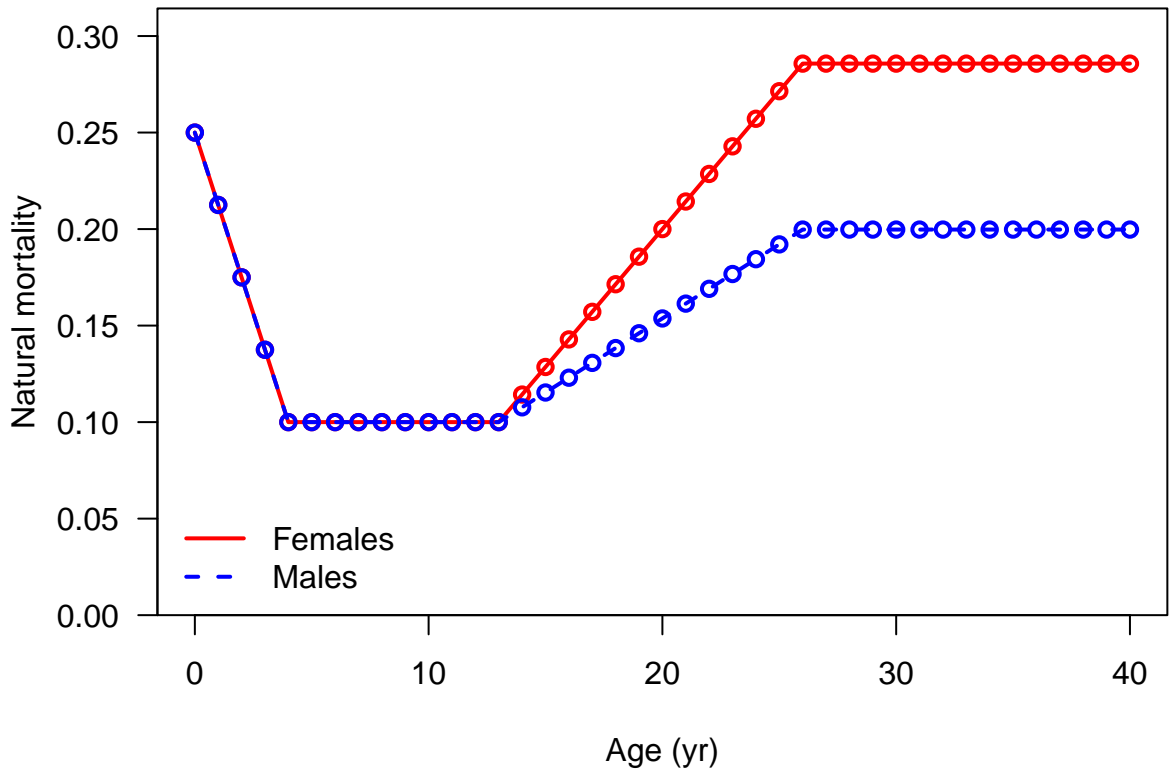




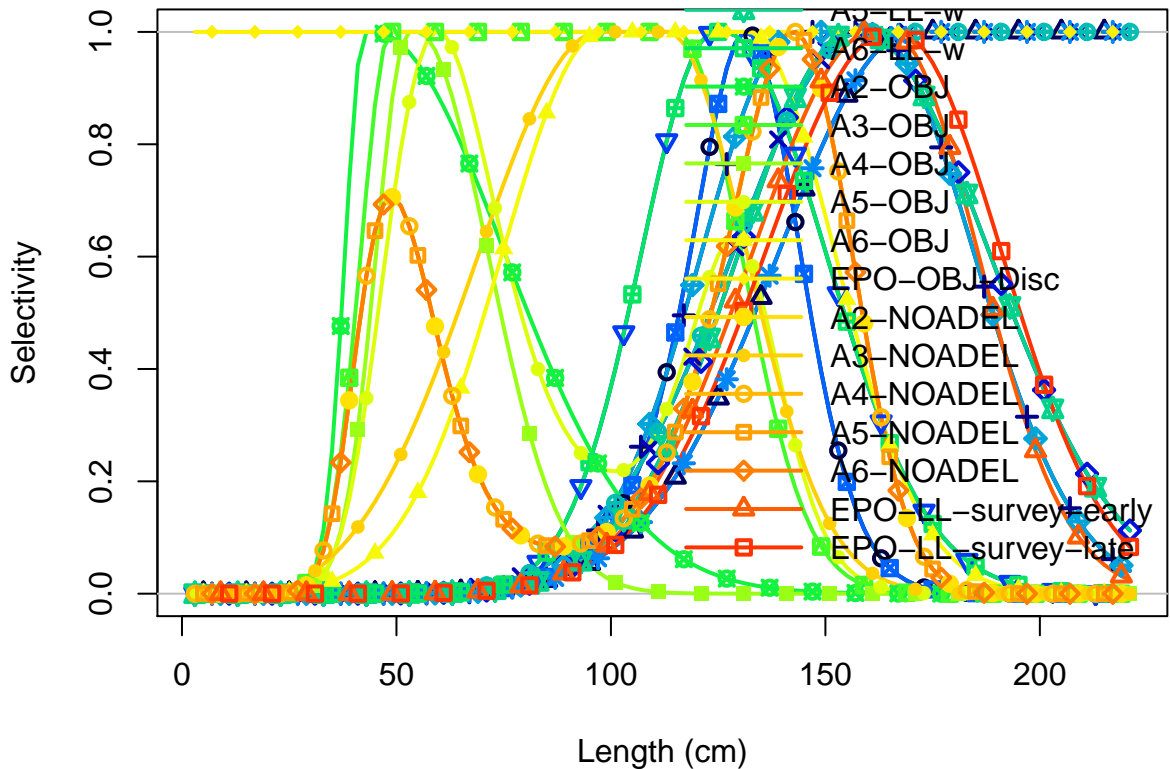




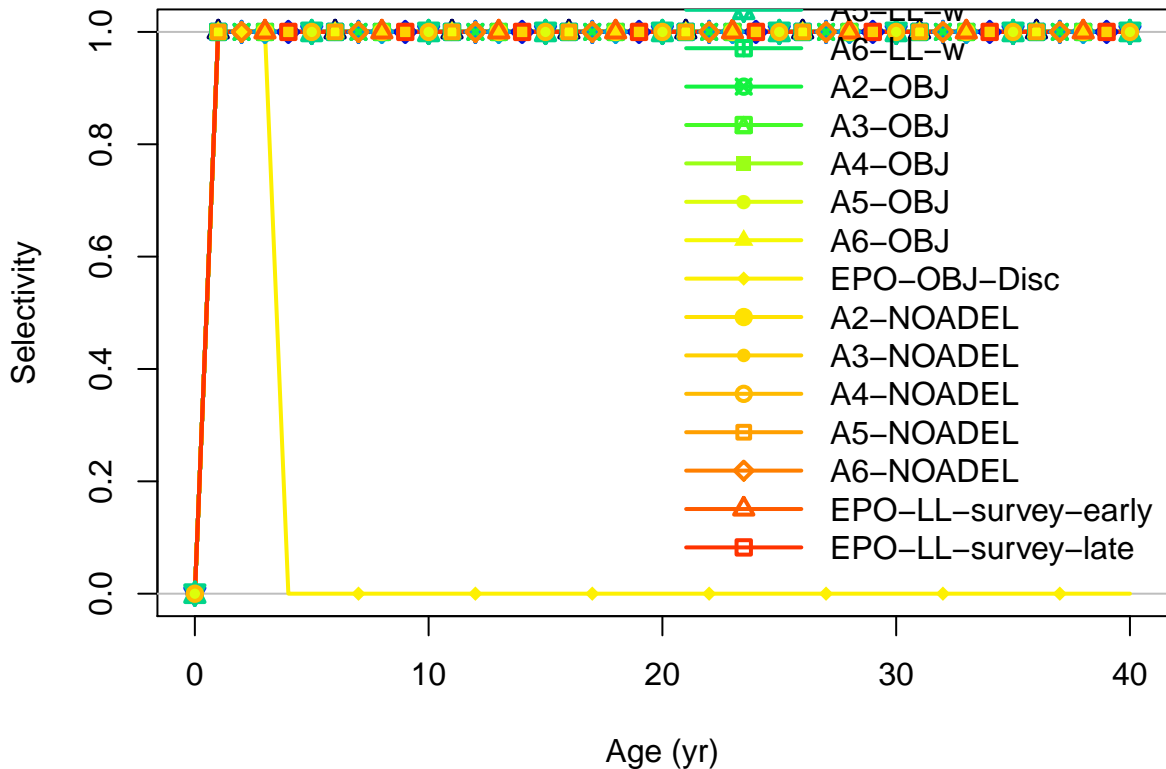




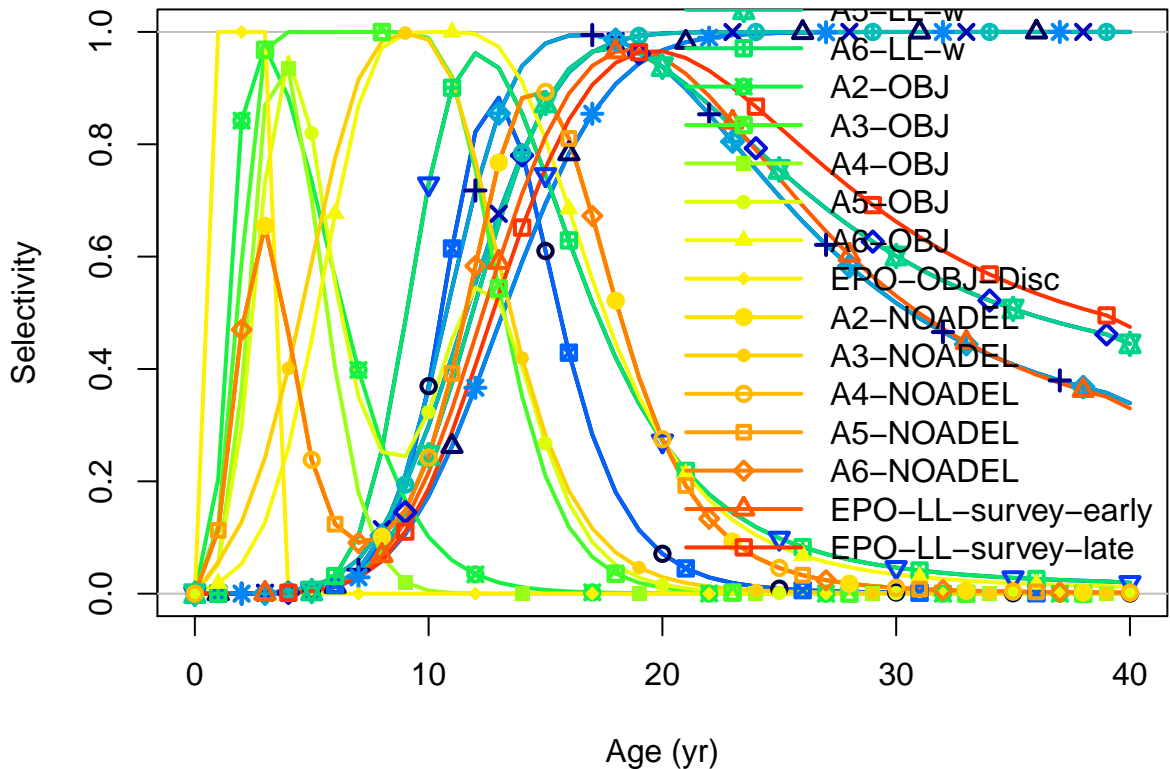
Length-based selectivity by fleet in 180



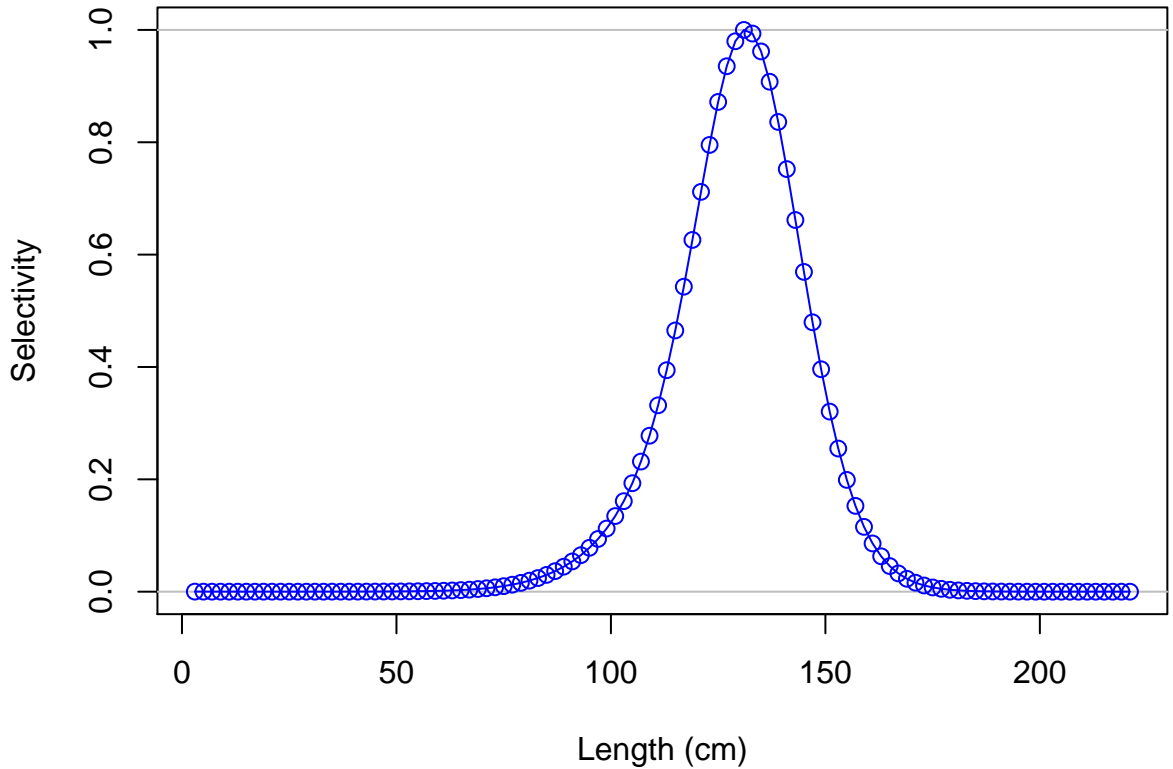
Age-based selectivity by fleet in 180



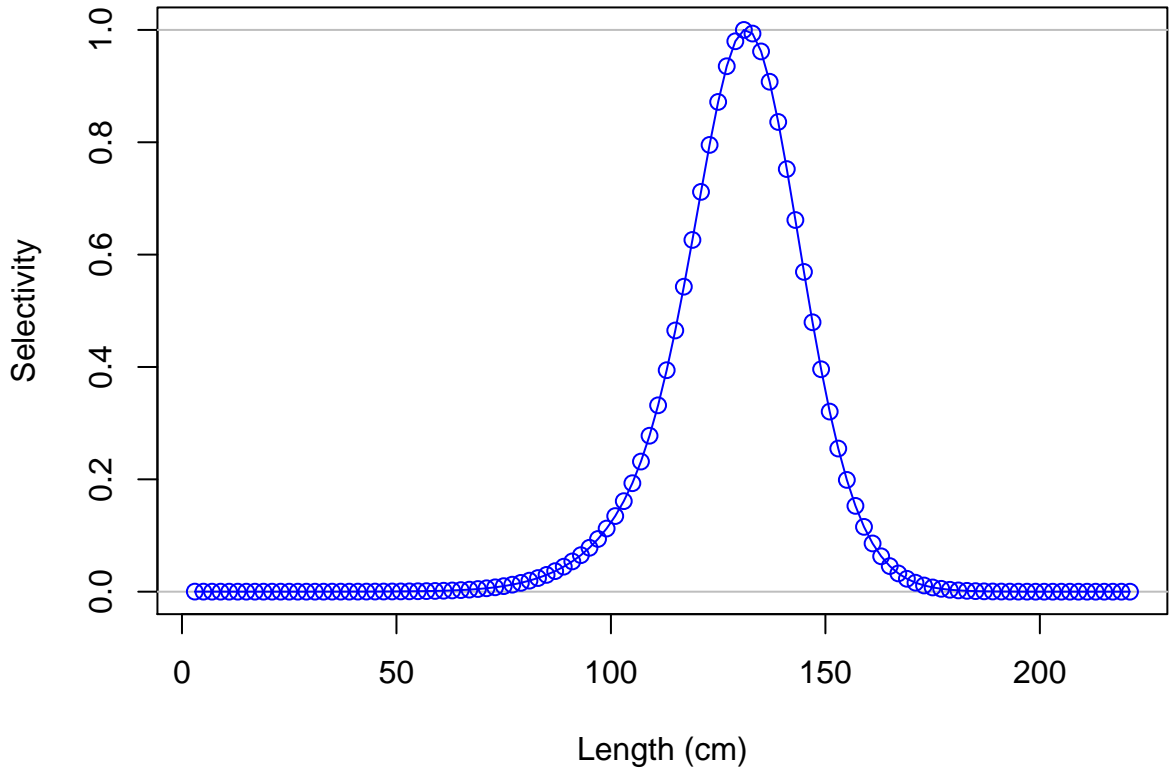
Derived age-based from length-based selectivity by fleet in 180



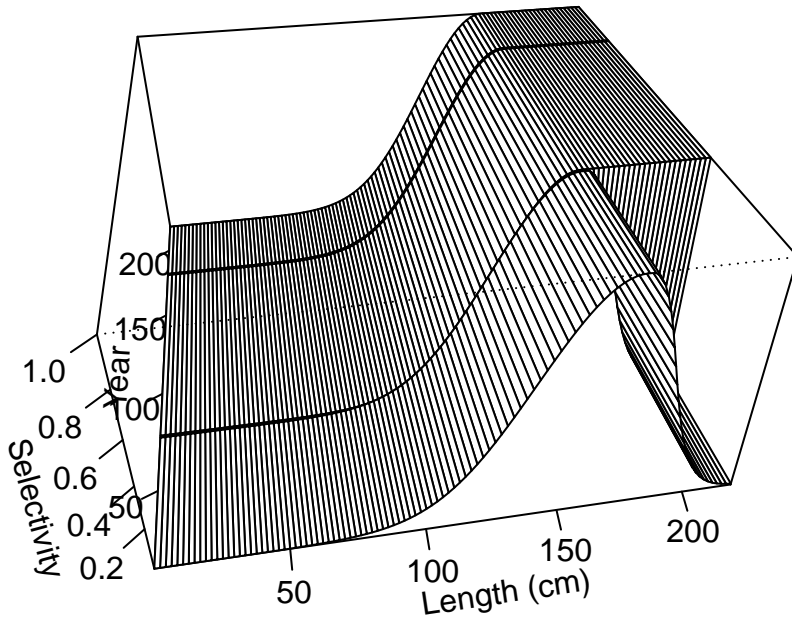
Female ending year selectivity for A1-LL-n



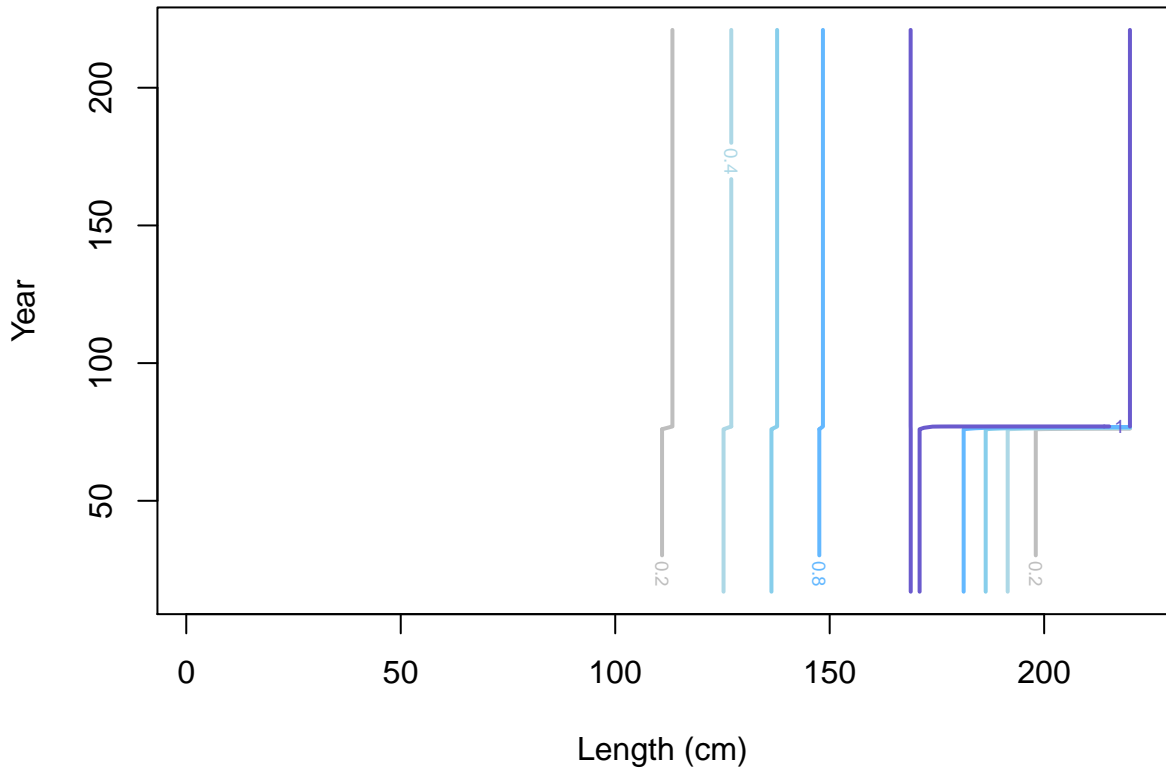
Male ending year selectivity for A1-LL-n



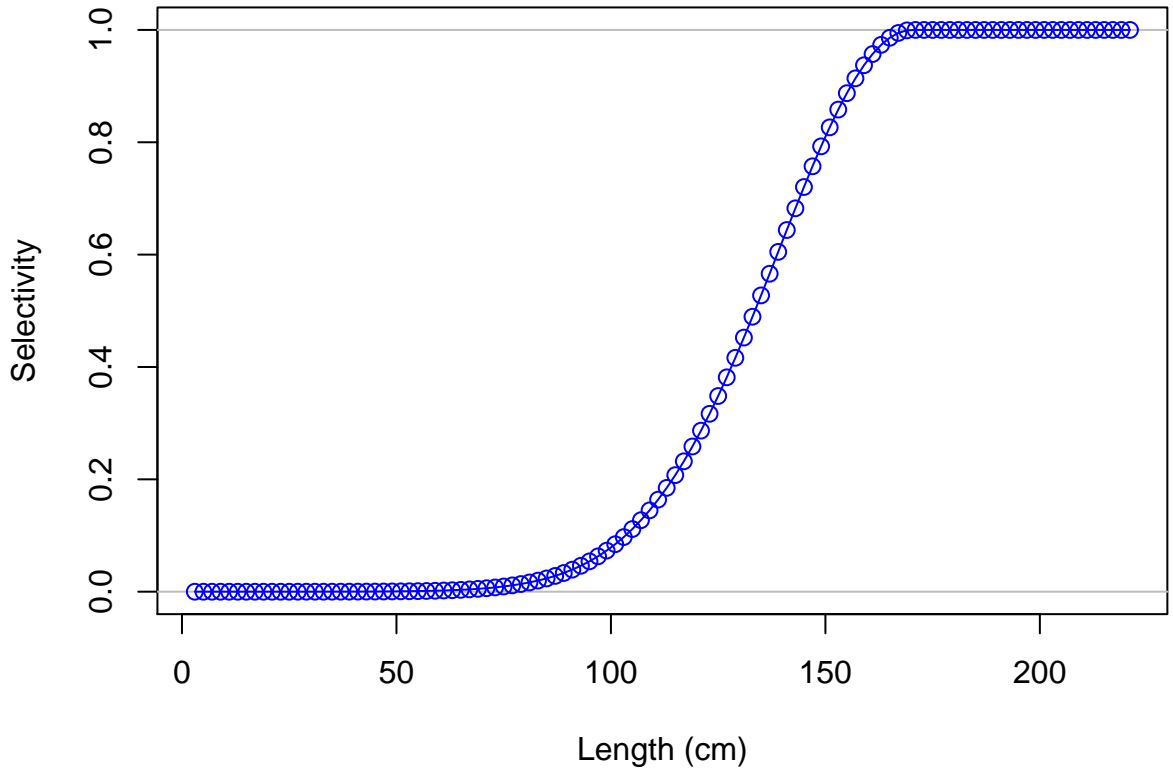
Female time-varying selectivity for A2-LL-n



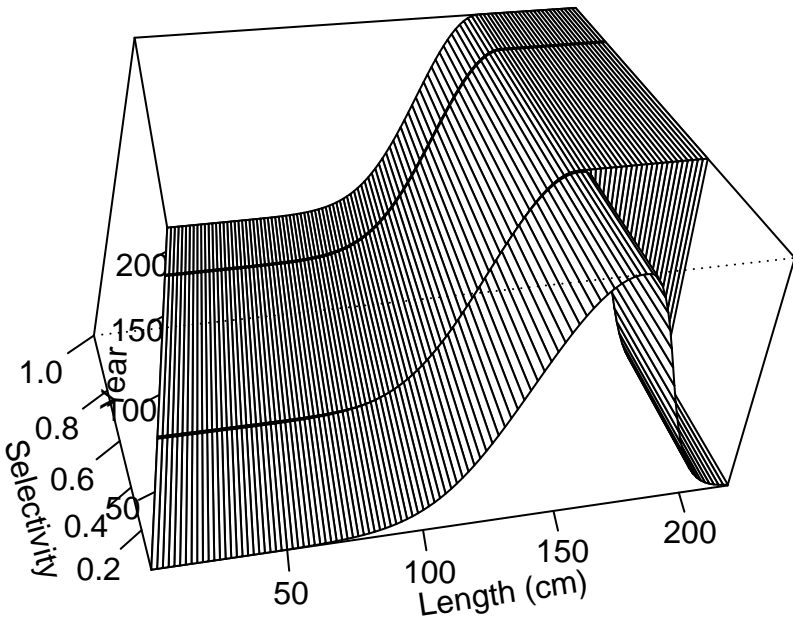
Female time-varying selectivity for A2-LL-n



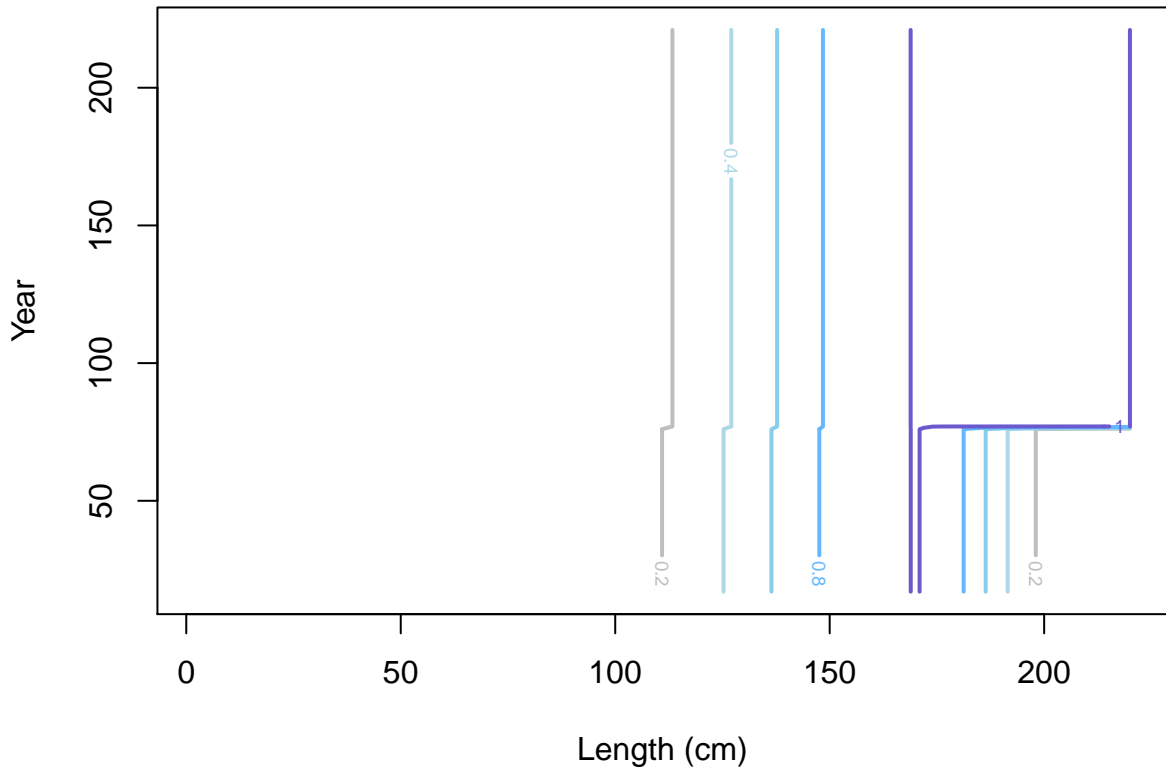
Female ending year selectivity for A2-LL-n



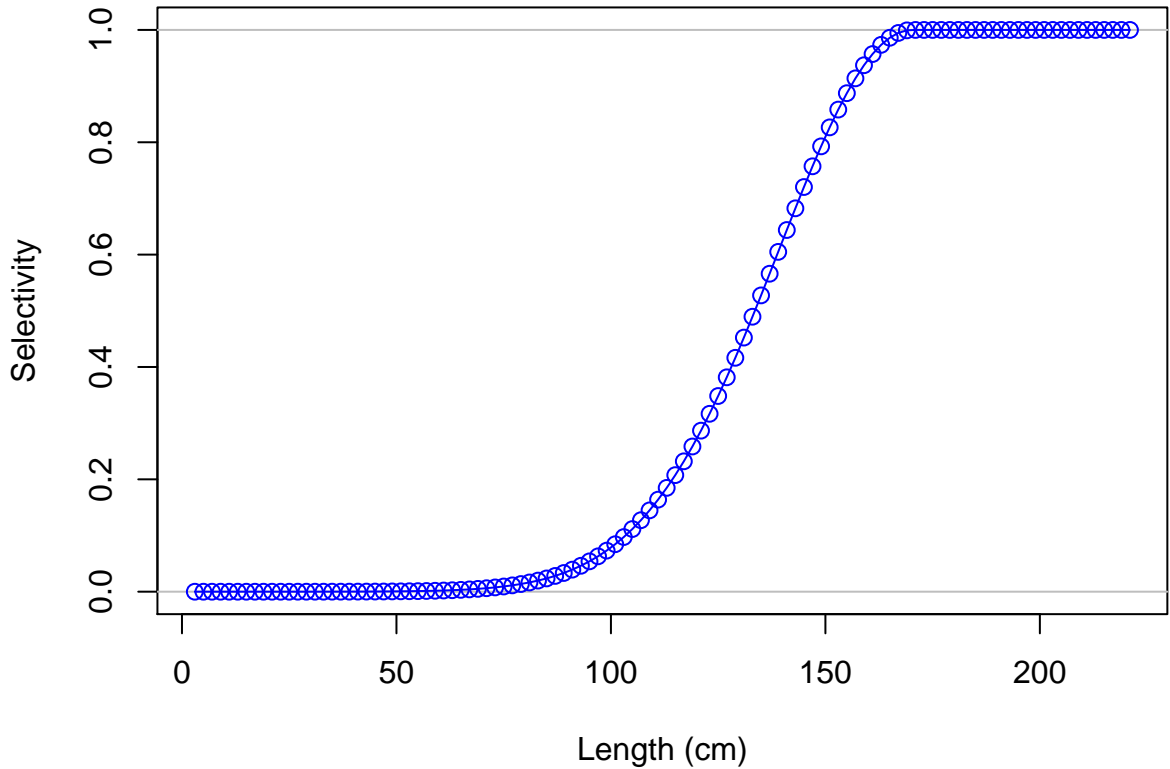
Male time-varying selectivity for A2-LL-n



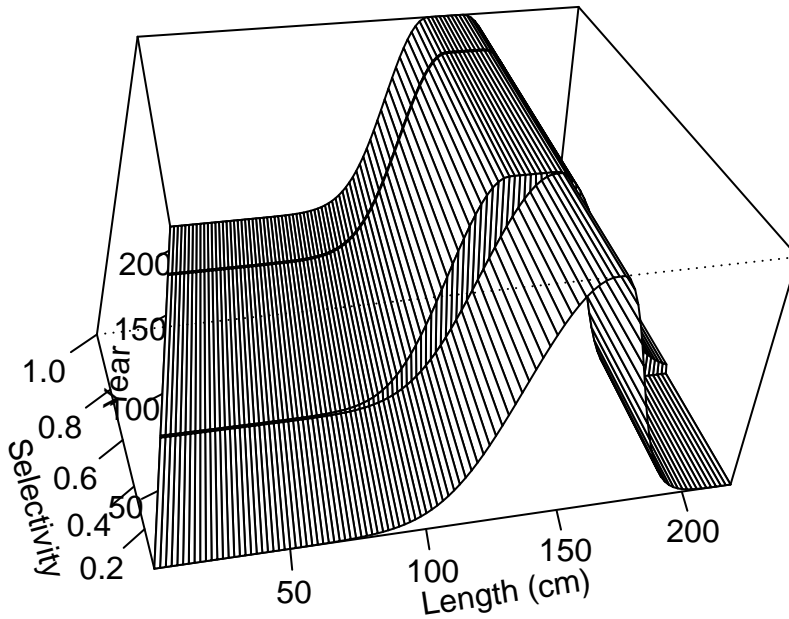
Male time-varying selectivity for A2-LL-n



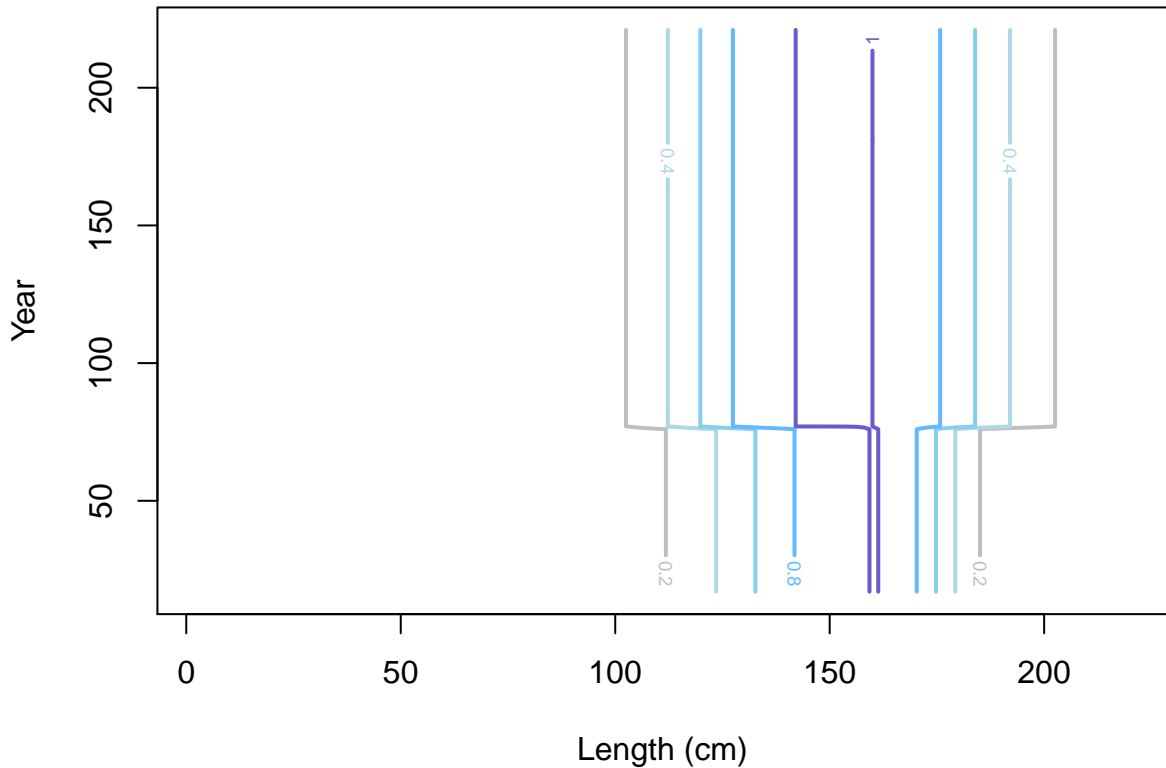
Male ending year selectivity for A2-LL-n



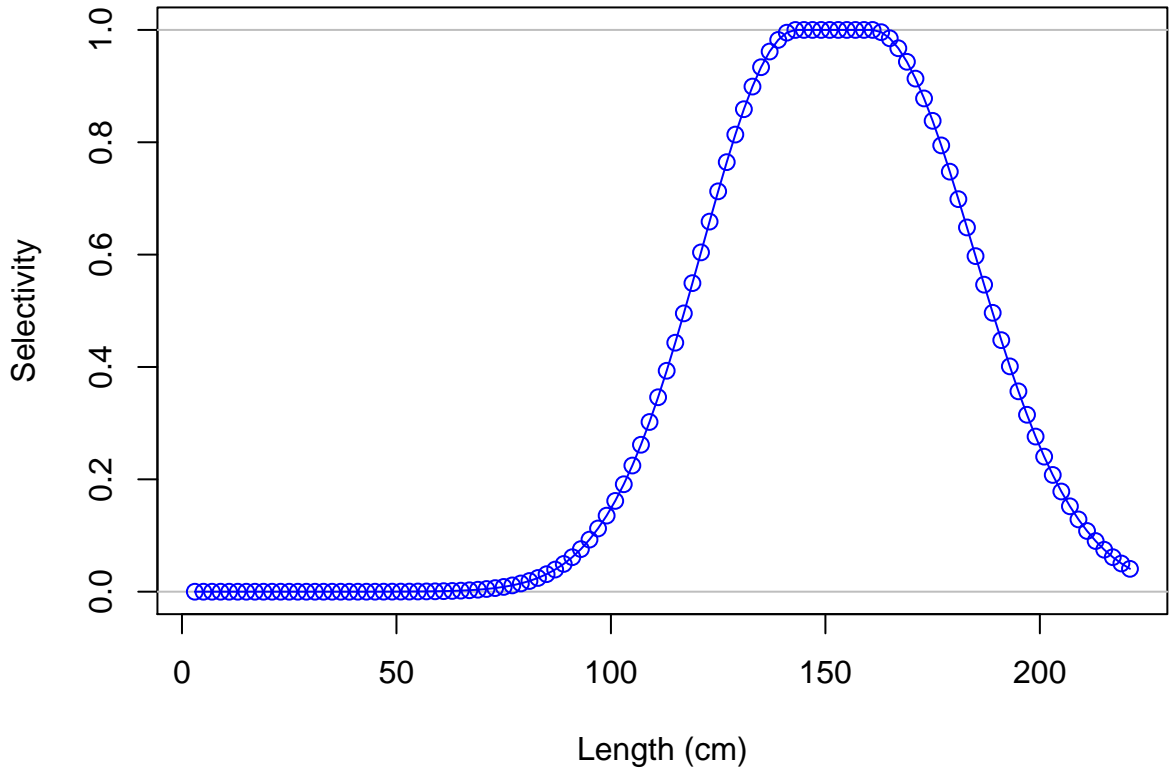
Female time-varying selectivity for A3-LL-n



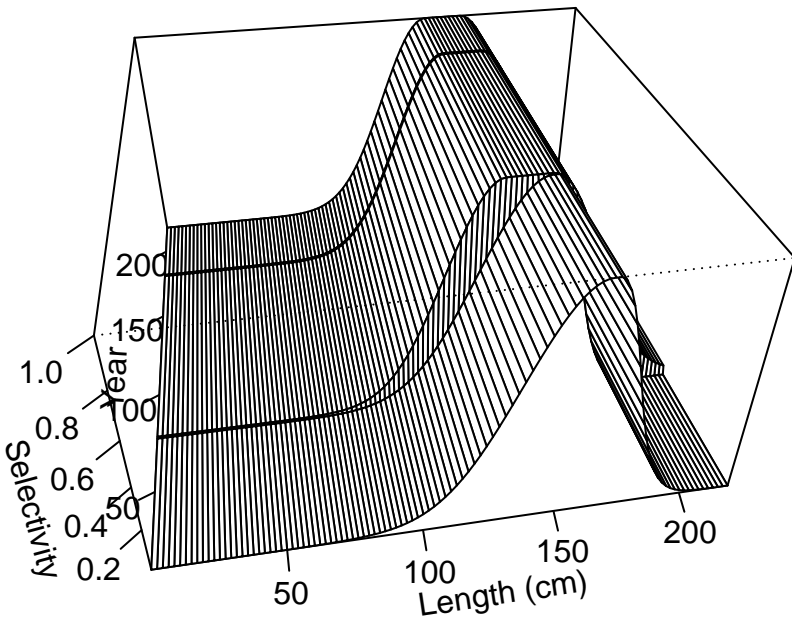
Female time-varying selectivity for A3-LL-n



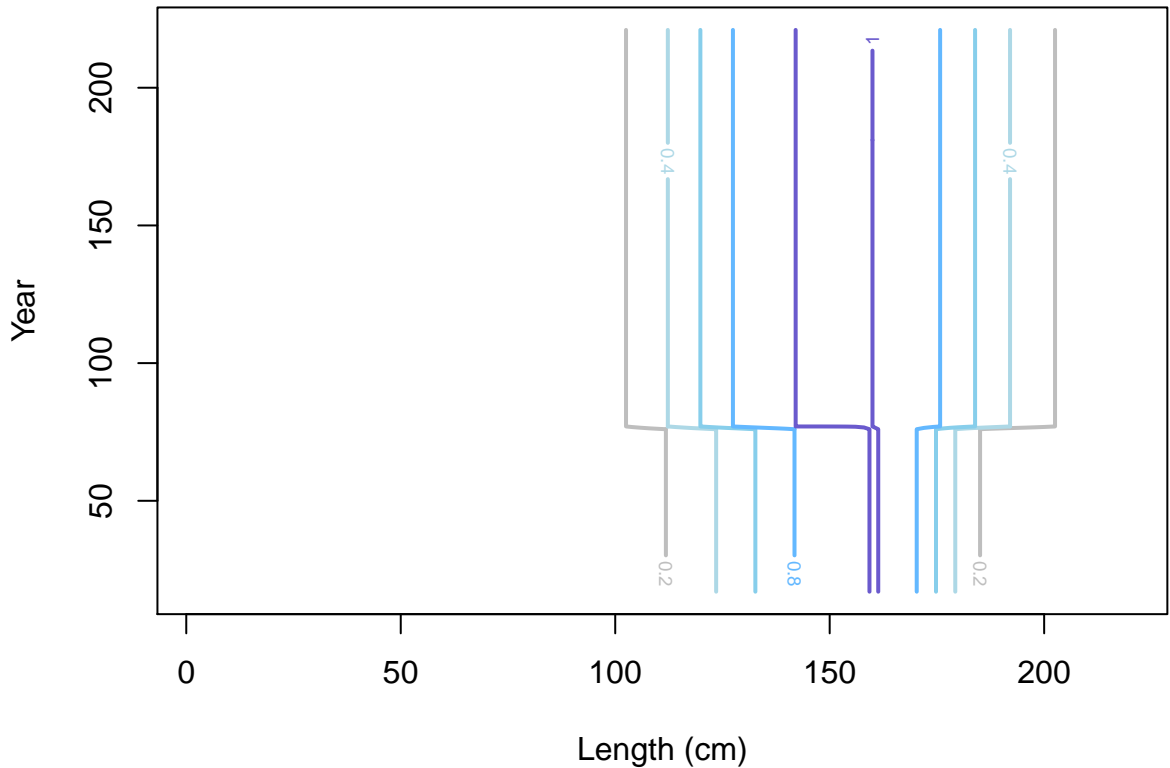
Female ending year selectivity for A3-LL-n



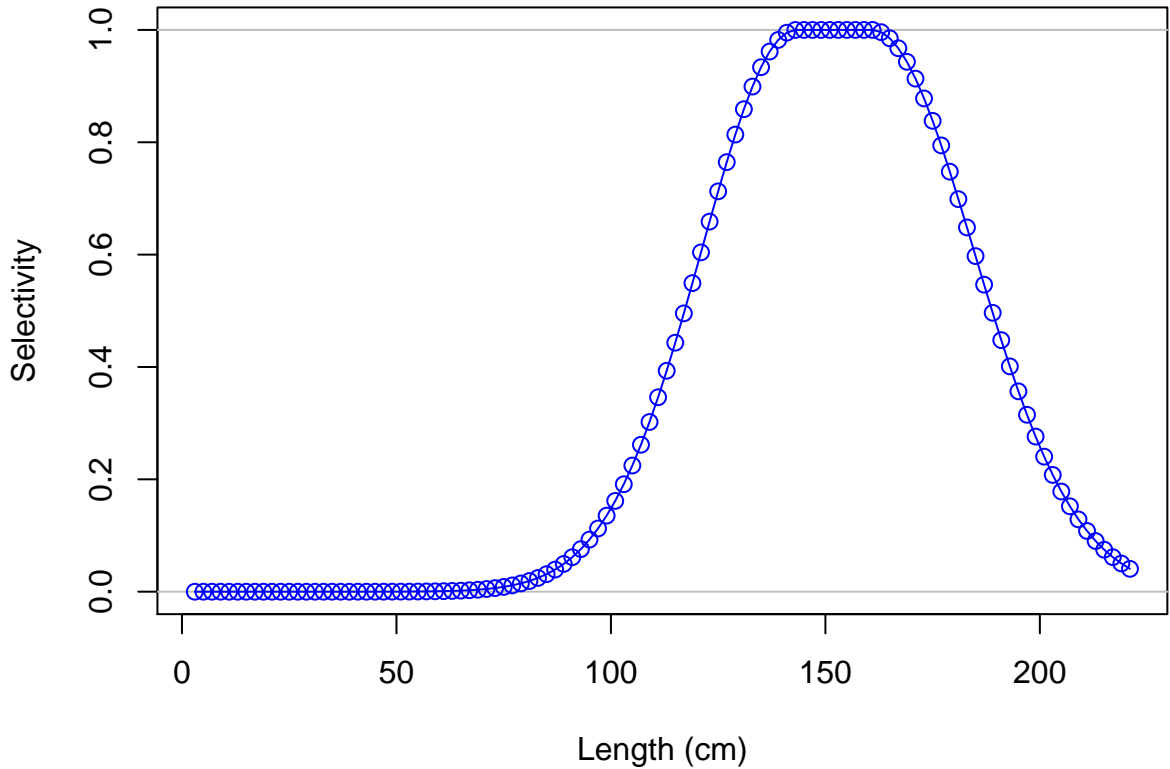
Male time-varying selectivity for A3-LL-n



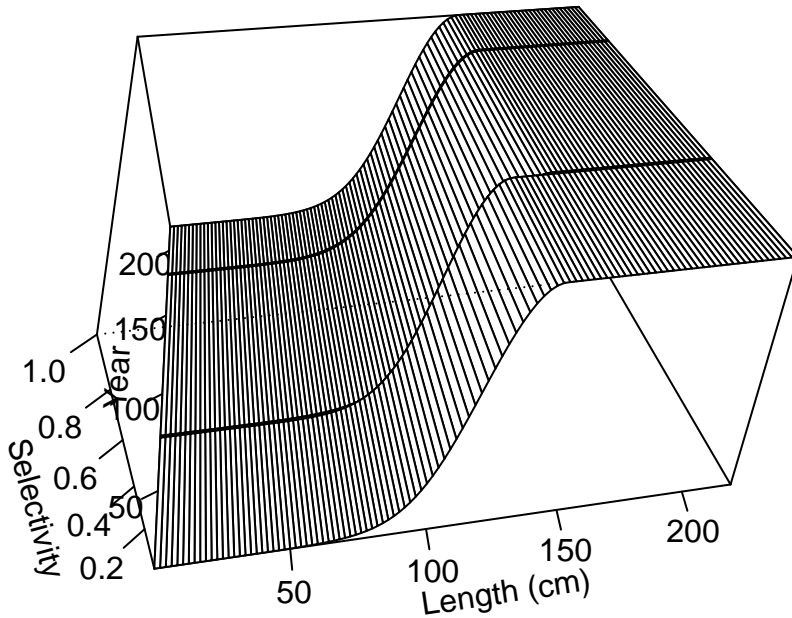
Male time-varying selectivity for A3-LL-n



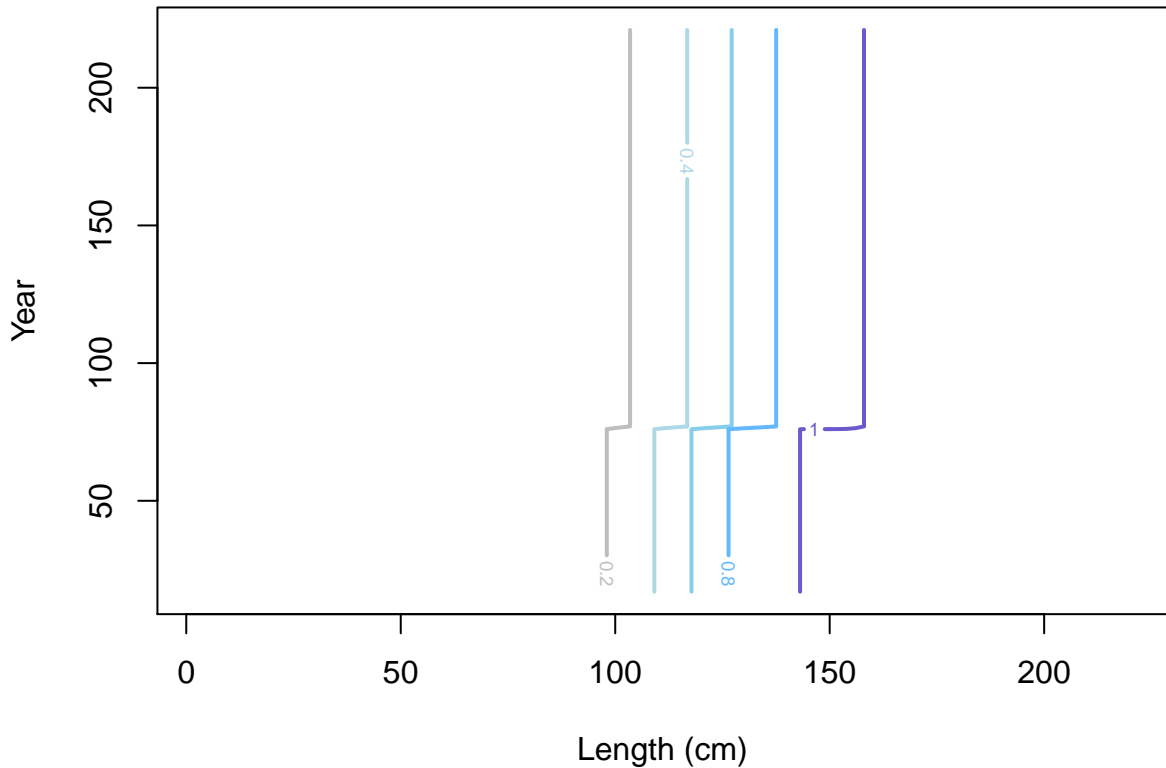
Male ending year selectivity for A3-LL-n



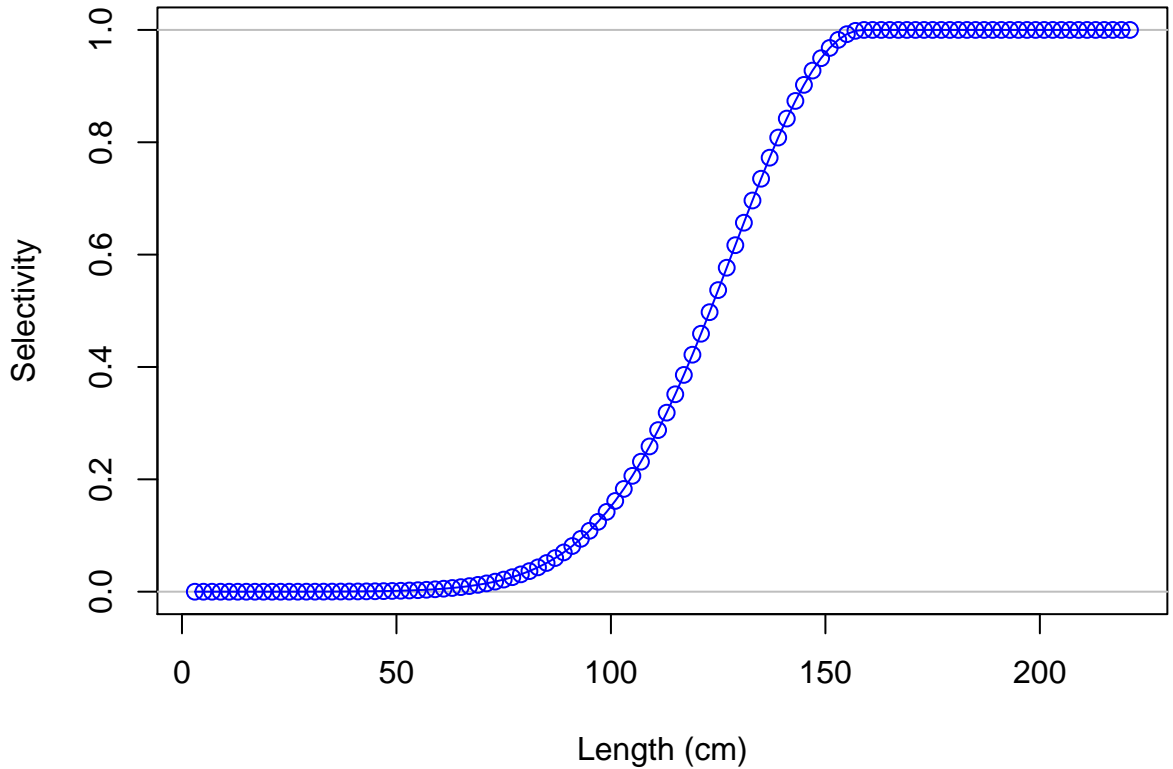
Female time-varying selectivity for A4-LL-n



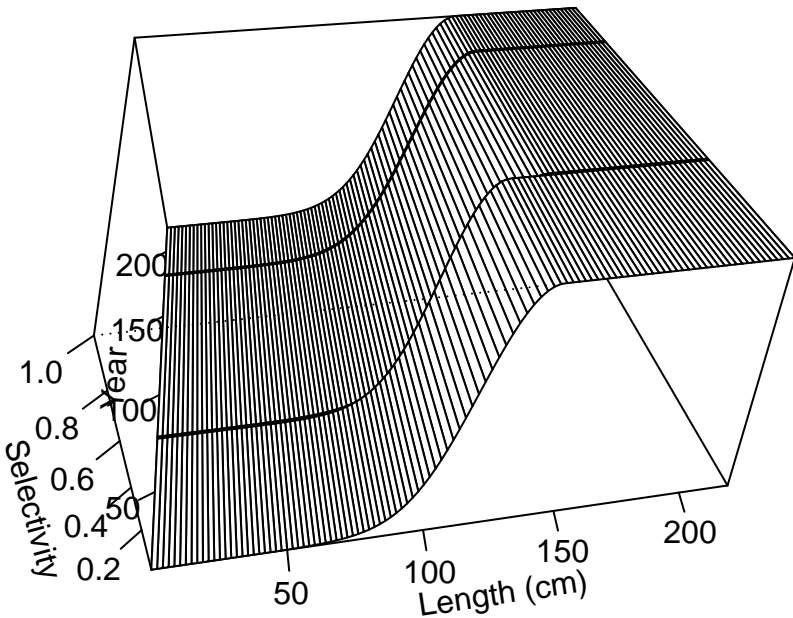
Female time-varying selectivity for A4-LL-n



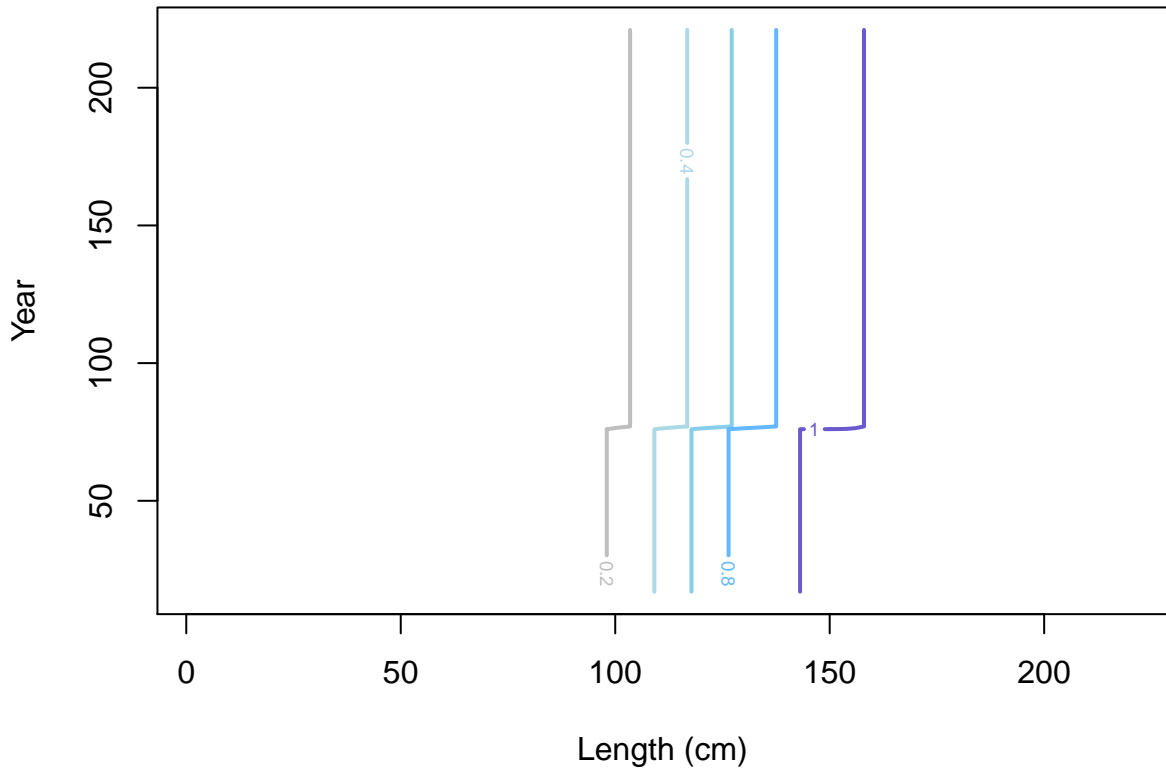
Female ending year selectivity for A4-LL-n



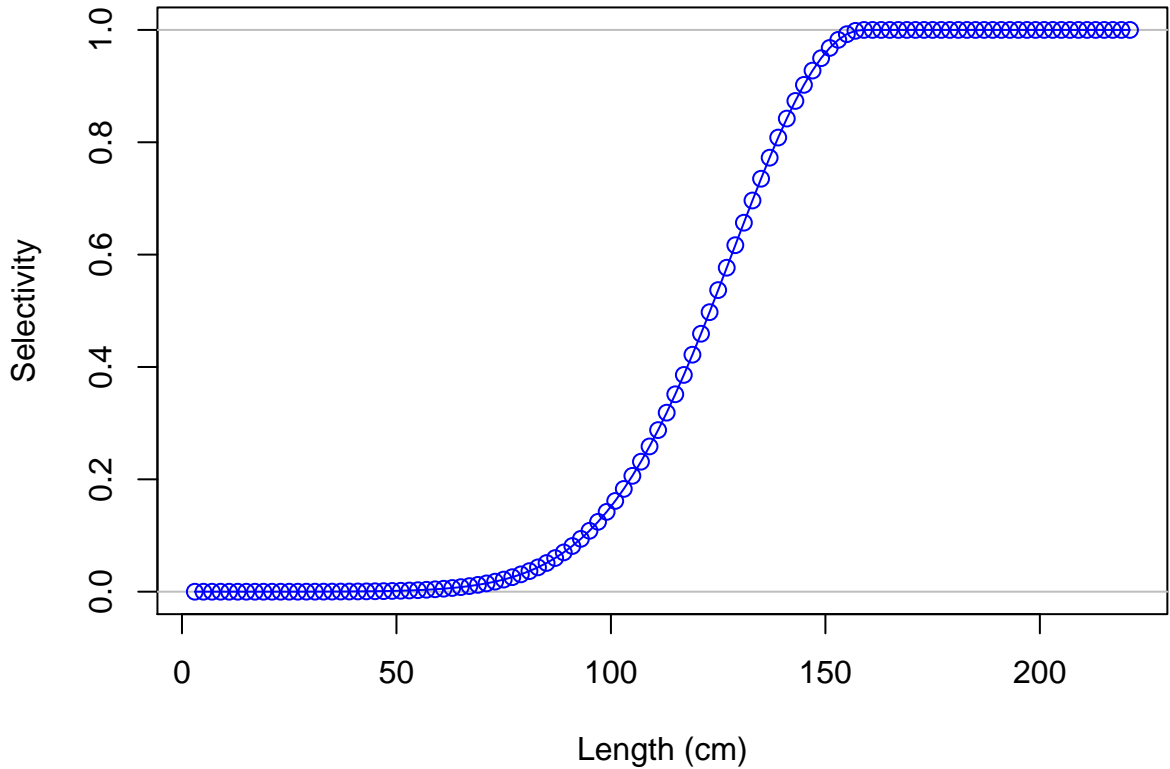
Male time-varying selectivity for A4-LL-n



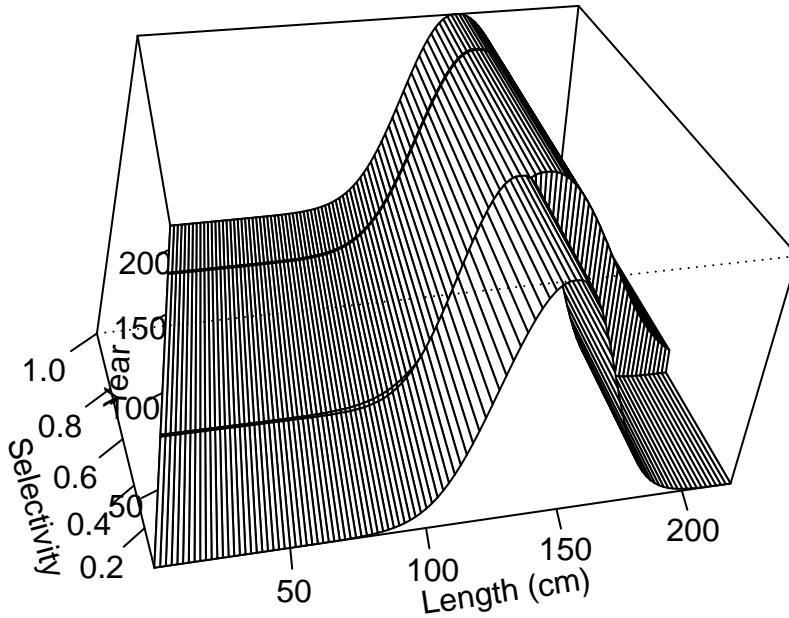
Male time-varying selectivity for A4-LL-n



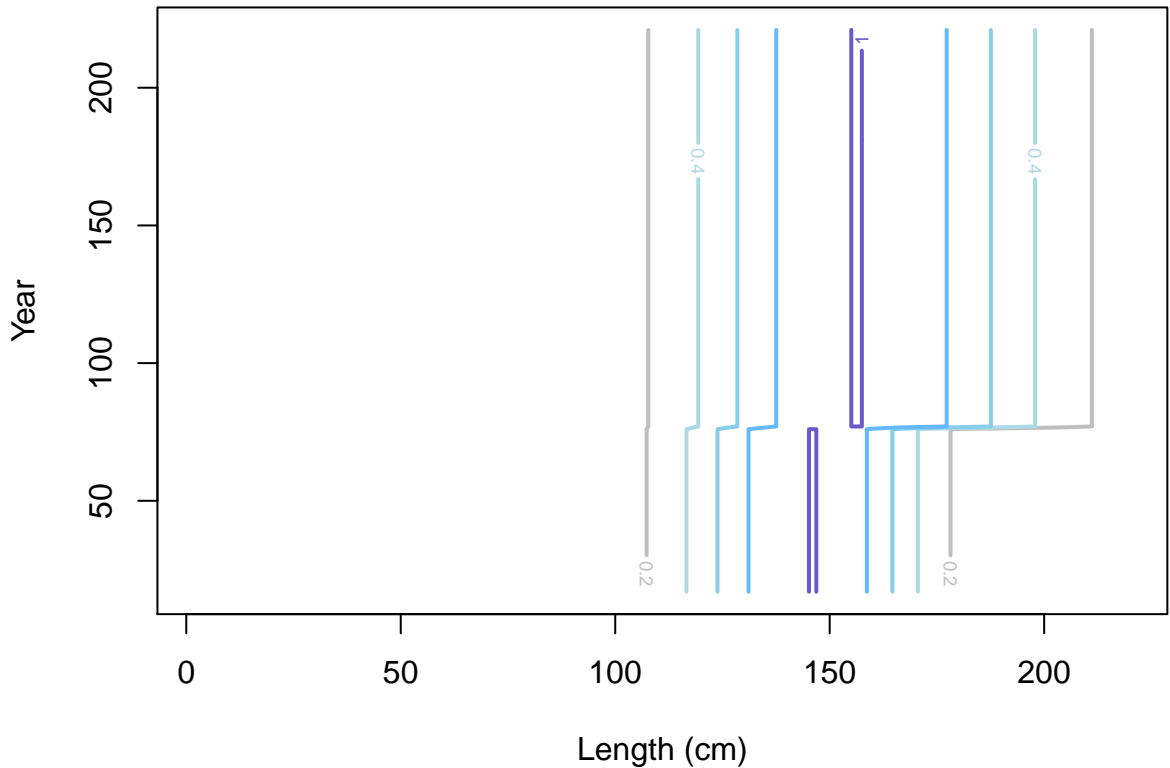
Male ending year selectivity for A4-LL-n



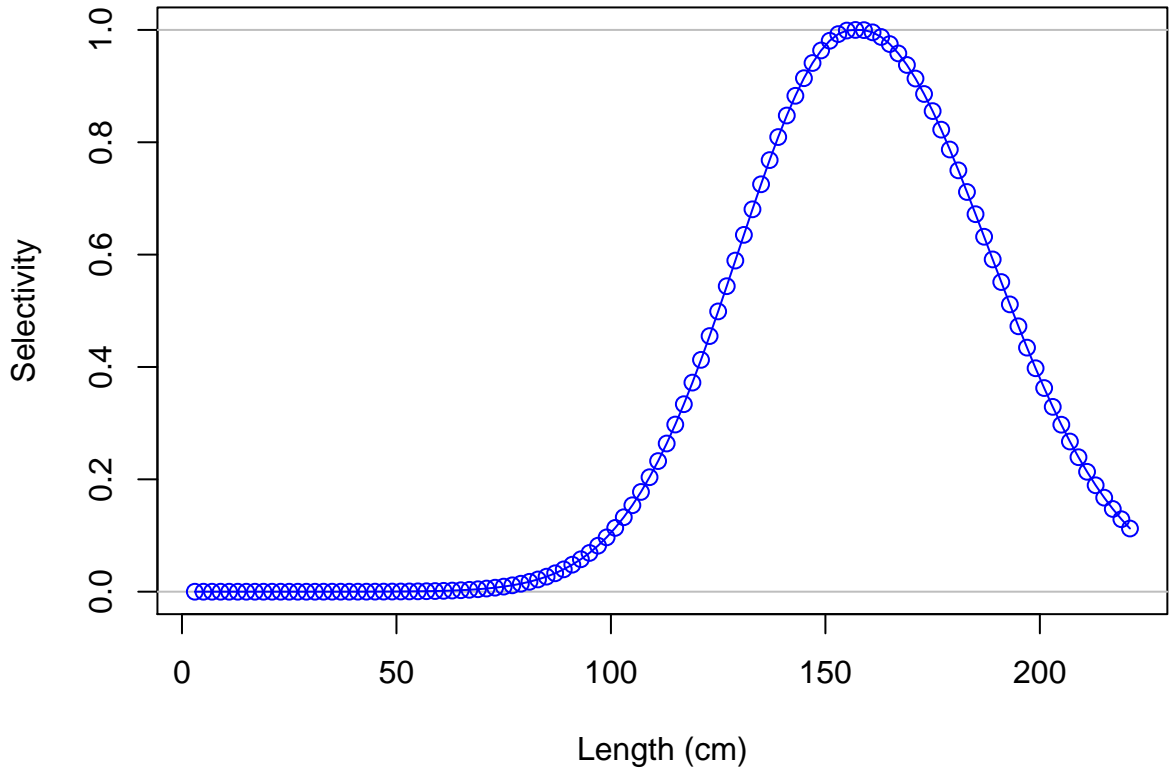
Female time-varying selectivity for A5-LL-n



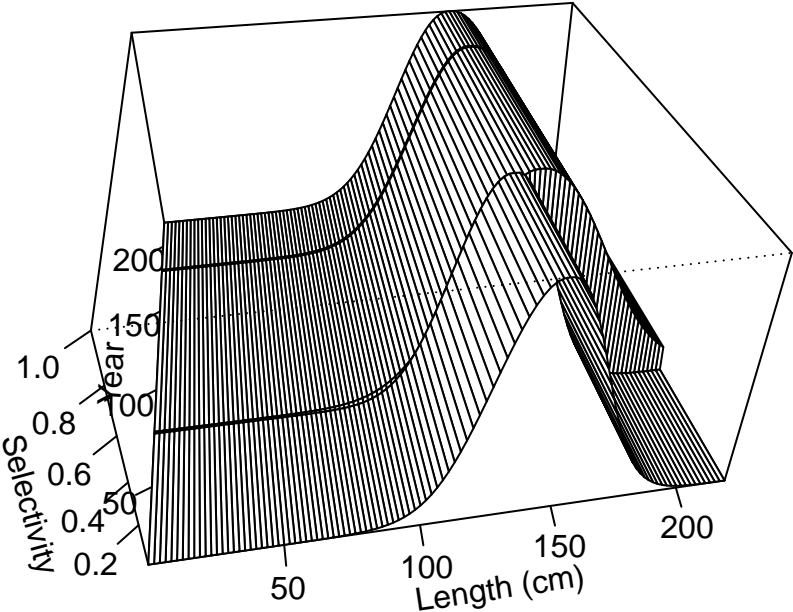
Female time-varying selectivity for A5-LL-n



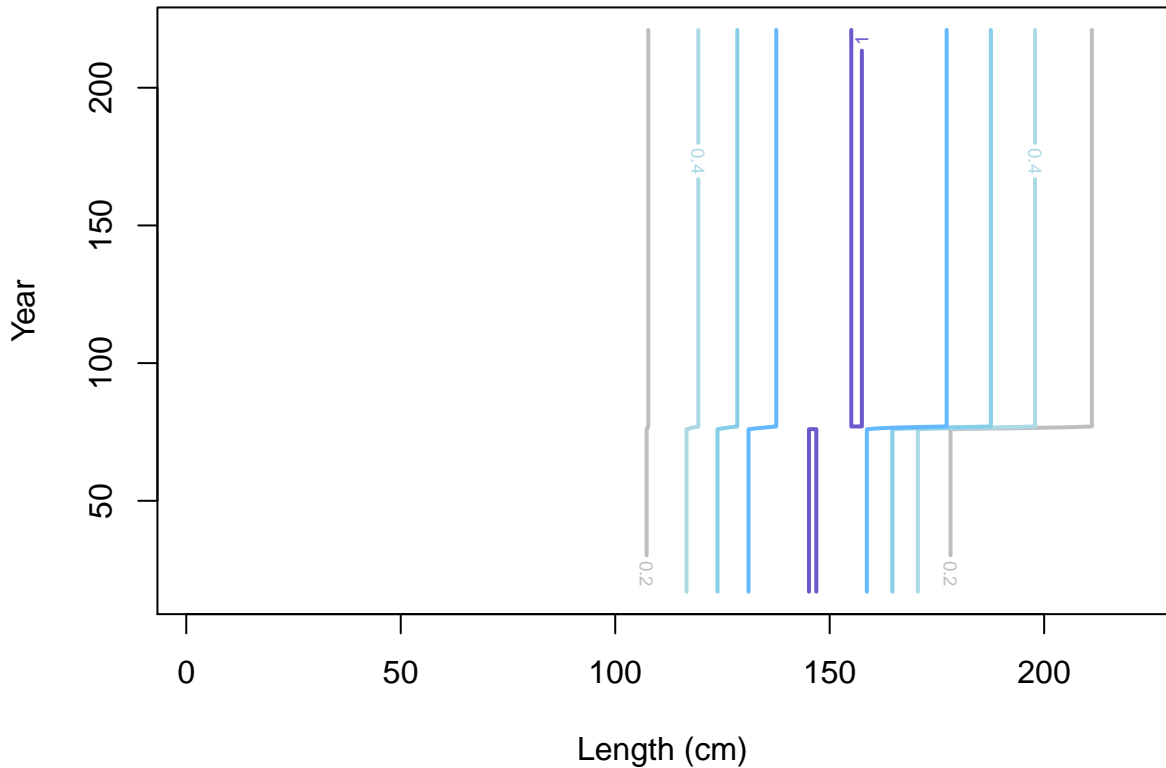
Female ending year selectivity for A5-LL-n



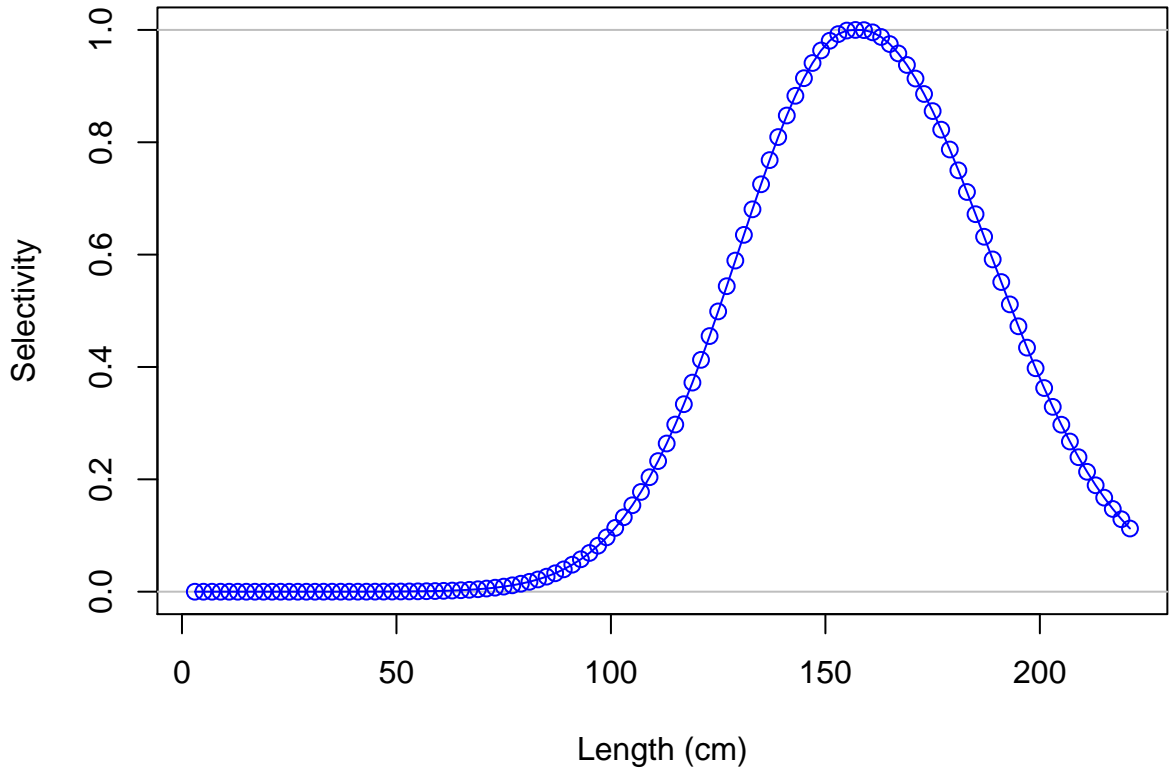
Male time-varying selectivity for A5-LL-n



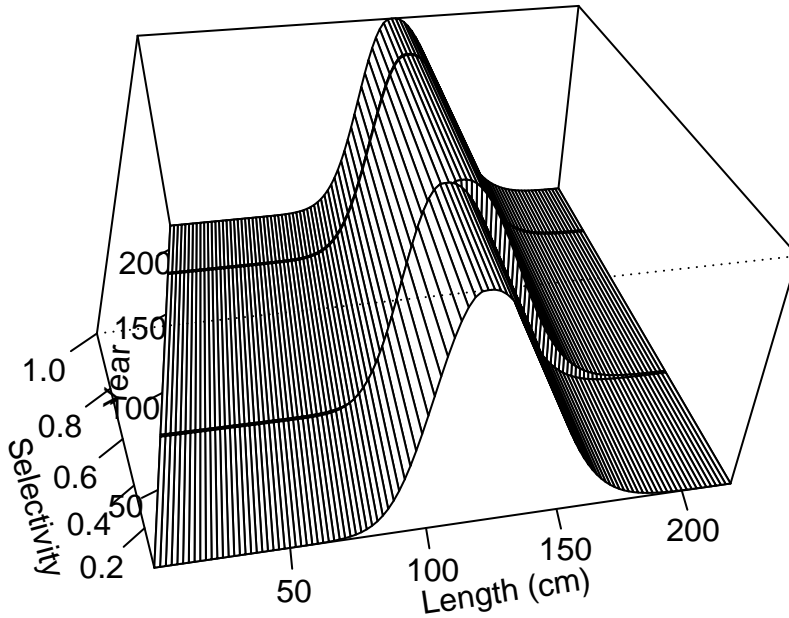
Male time-varying selectivity for A5-LL-n



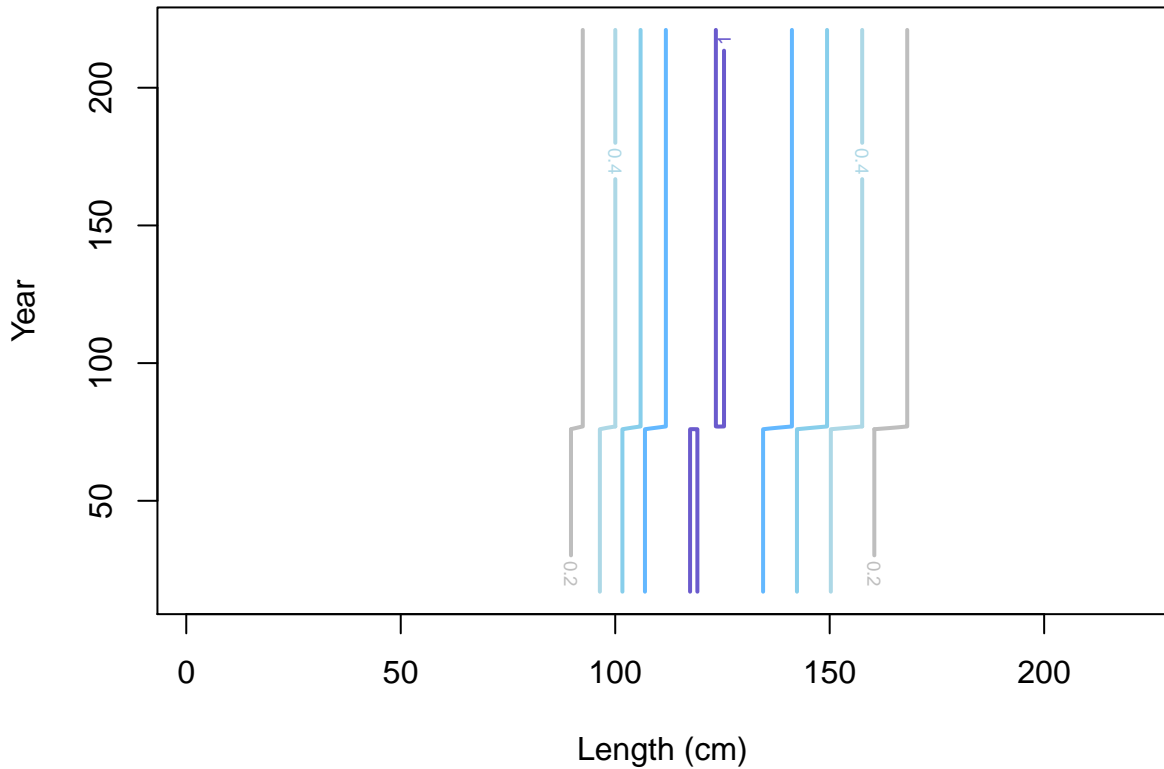
Male ending year selectivity for A5-LL-n



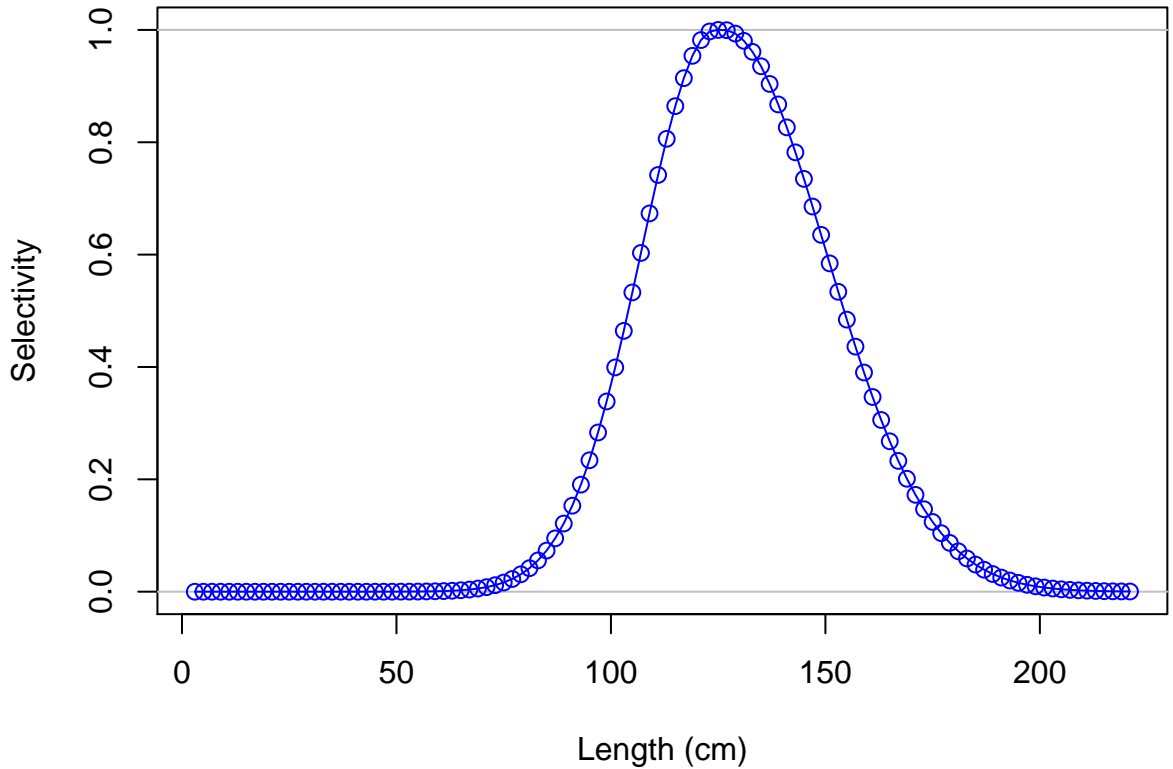
Female time-varying selectivity for A6-LL-n



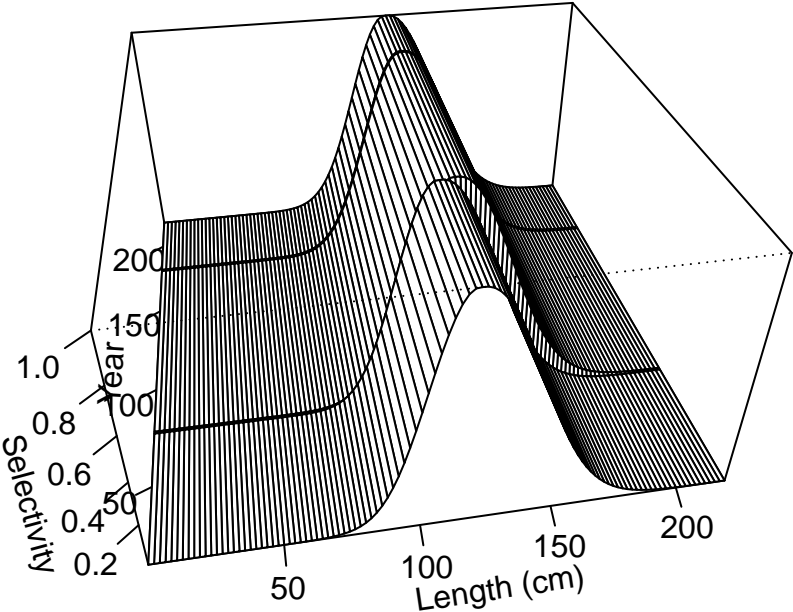
Female time-varying selectivity for A6-LL-n



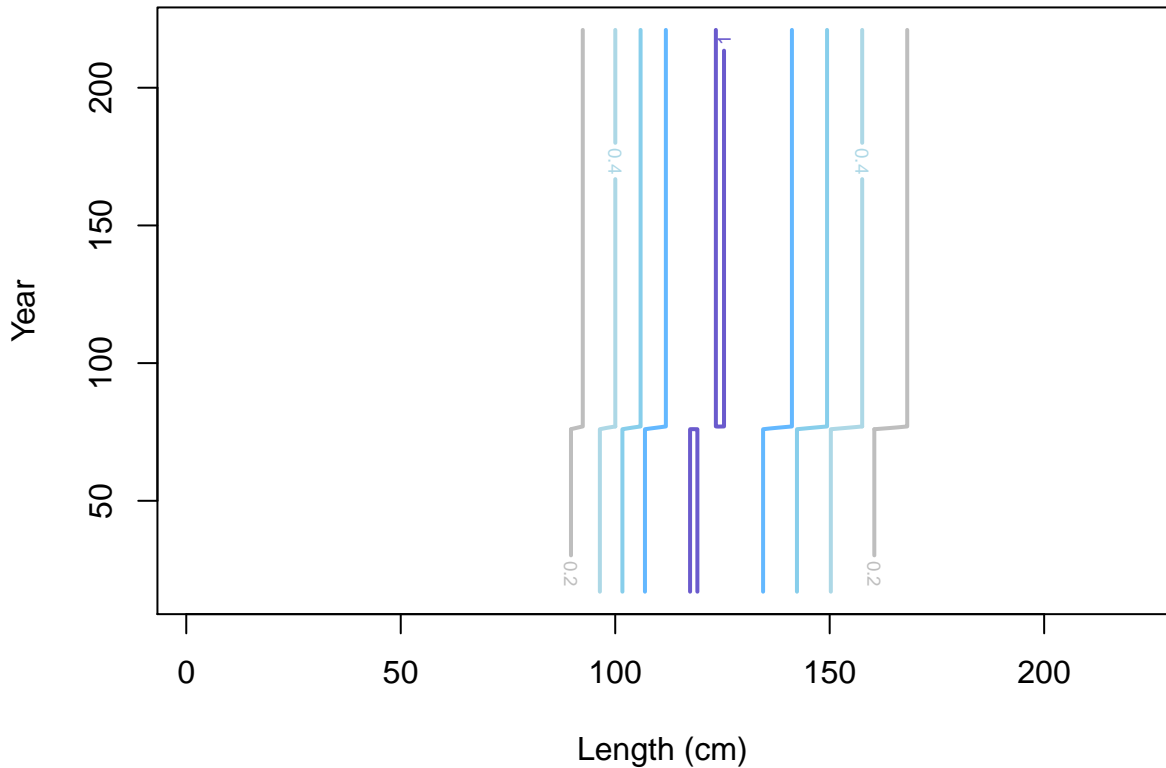
Female ending year selectivity for A6-LL-n



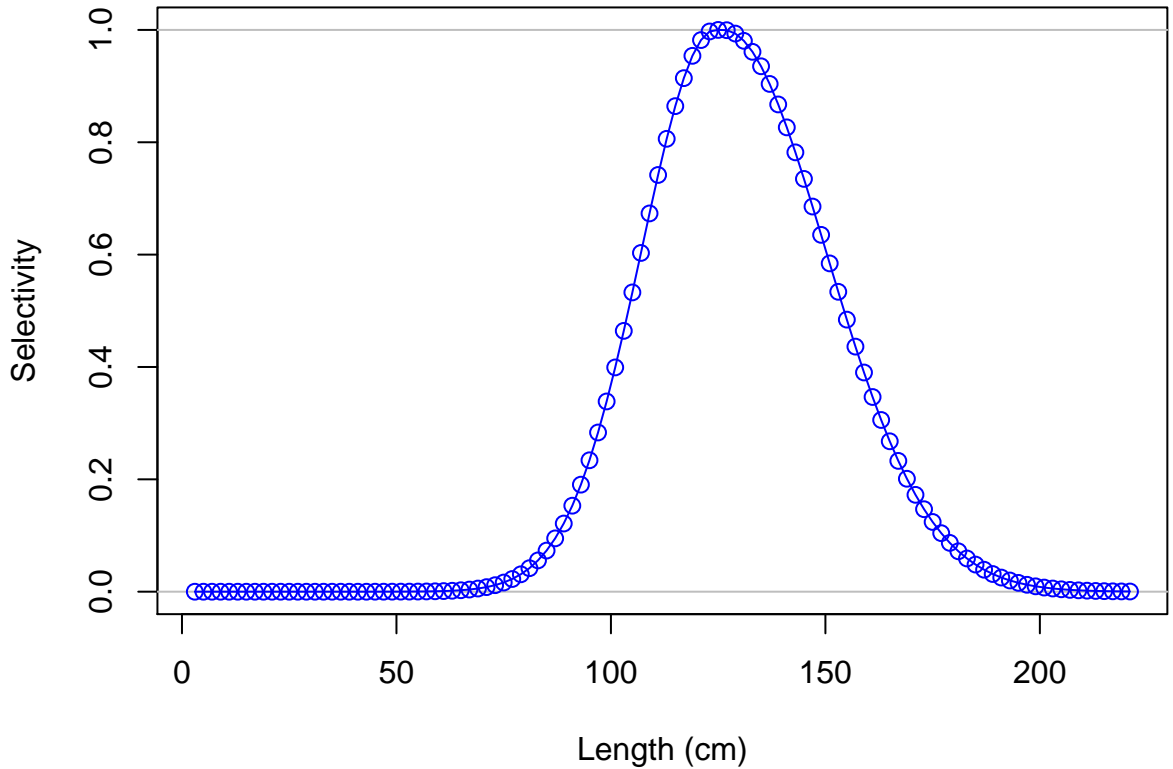
Male time-varying selectivity for A6-LL-n



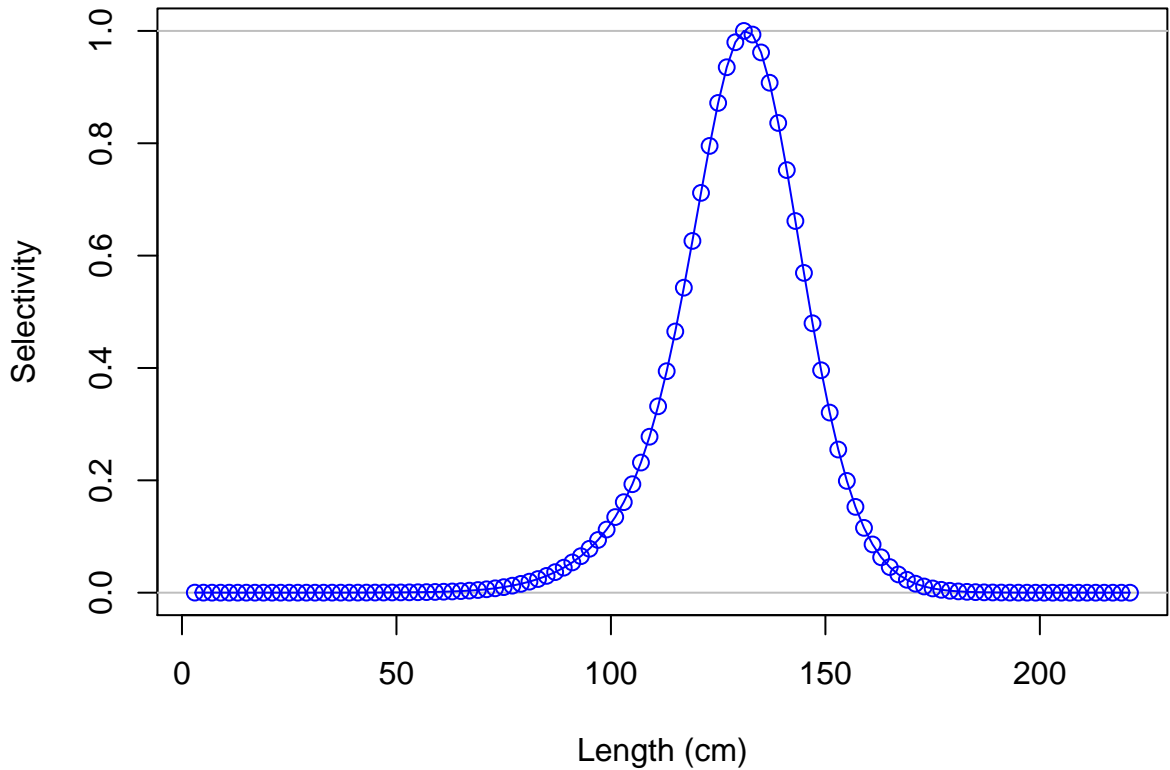
Male time-varying selectivity for A6-LL-n



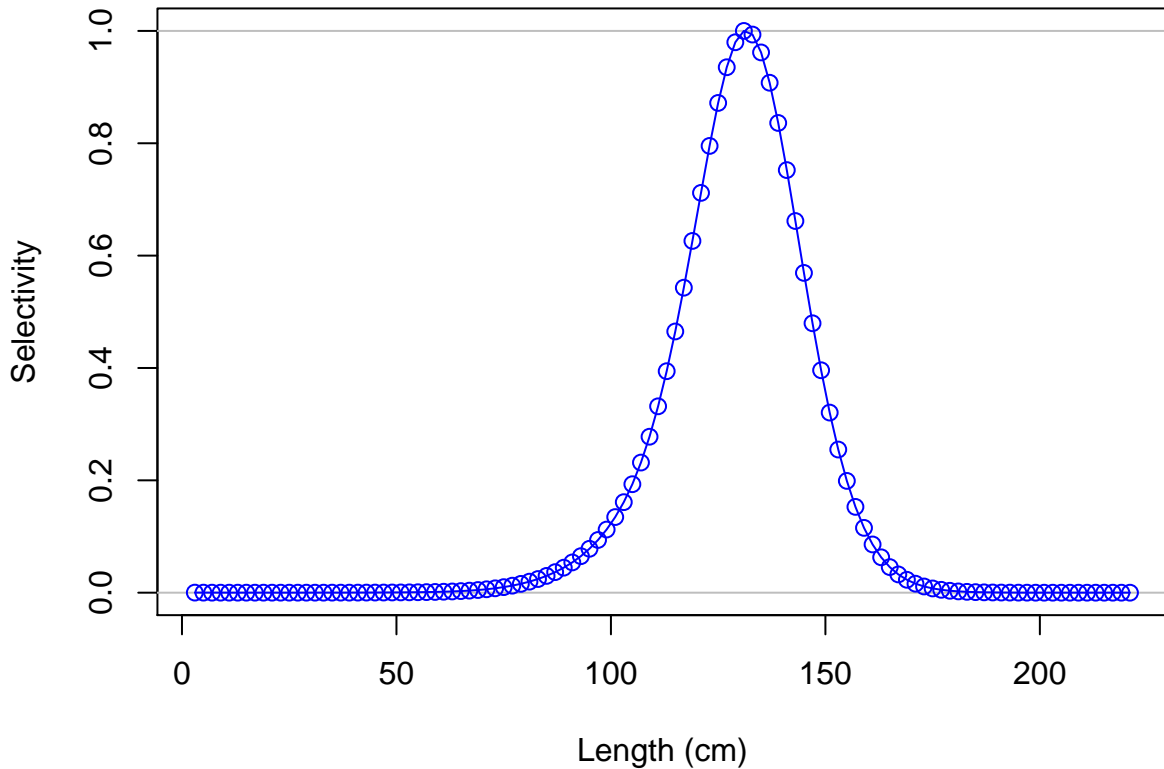
Male ending year selectivity for A6-LL-n



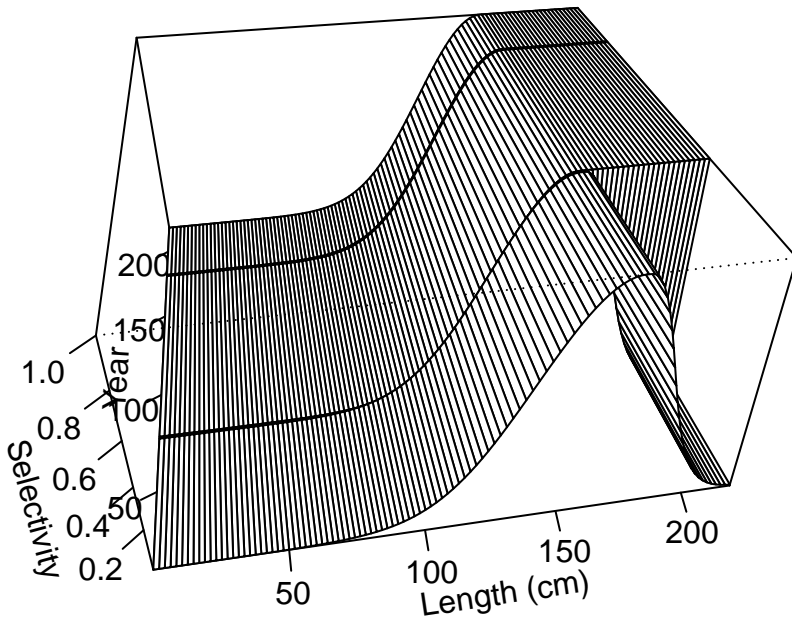
Female ending year selectivity for A1-LL-w



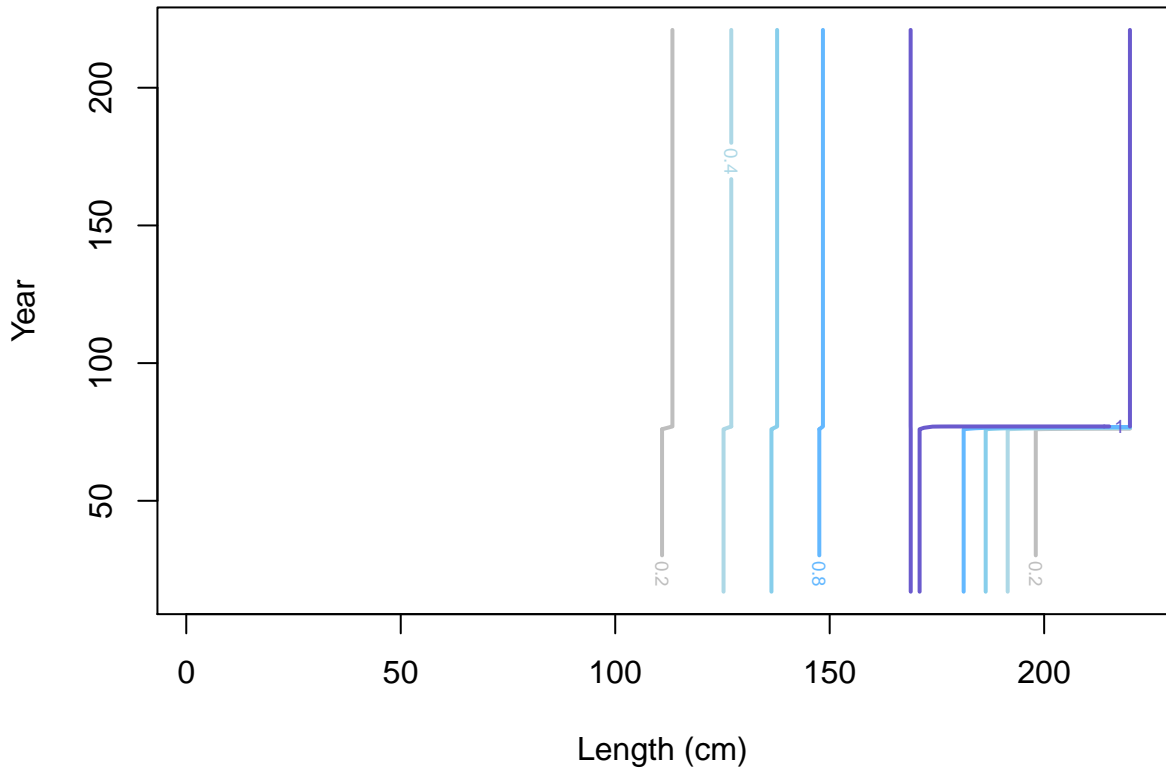
Male ending year selectivity for A1-LL-w



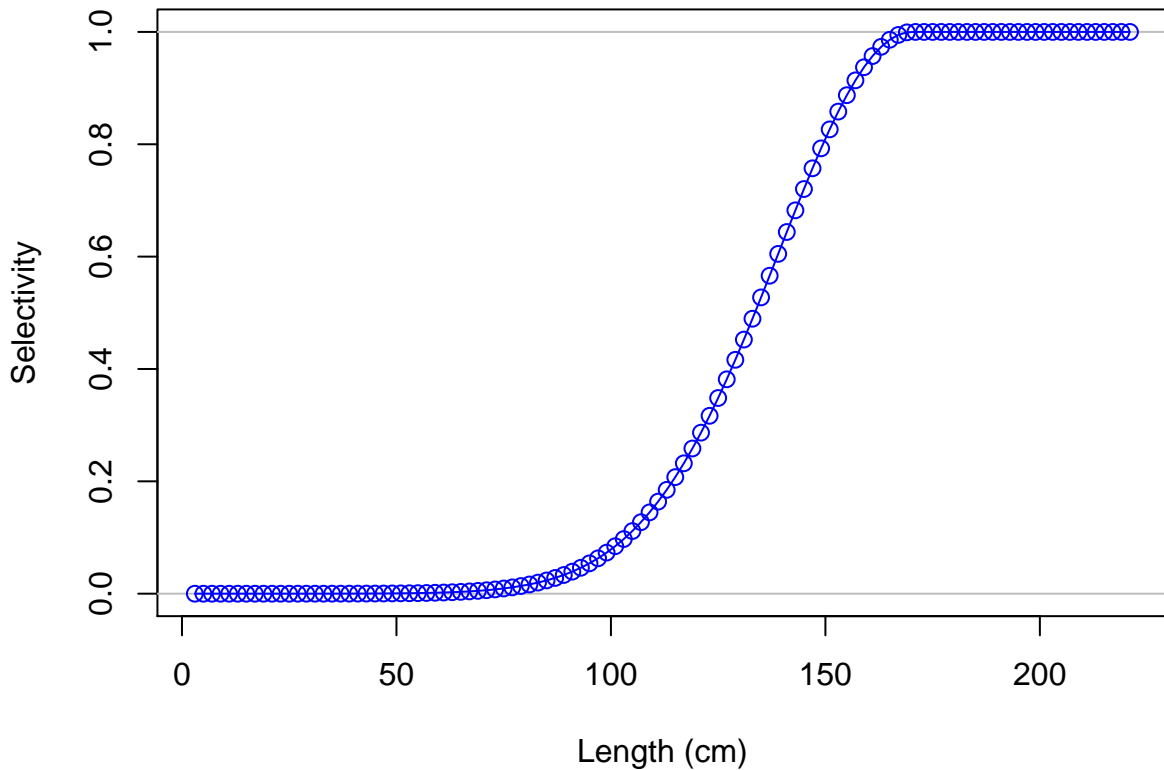
Female time-varying selectivity for A2-LL-w



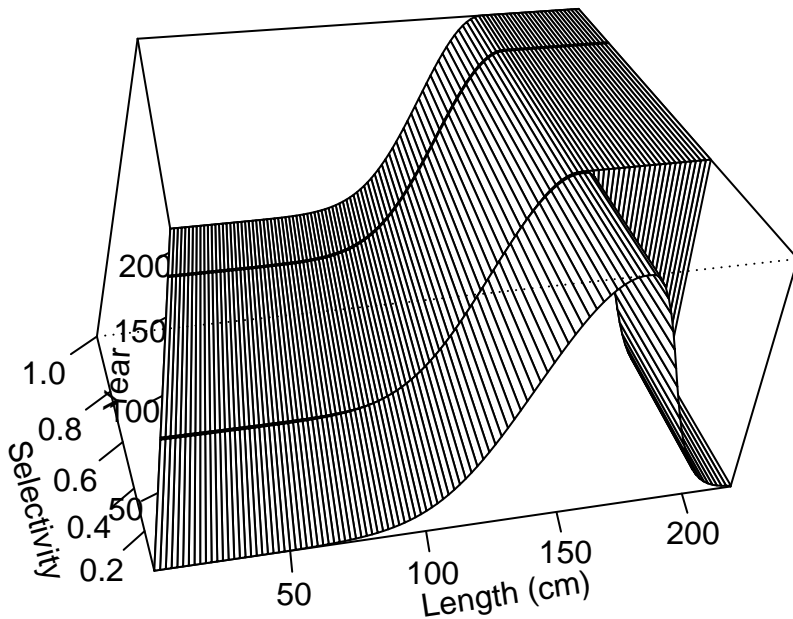
Female time-varying selectivity for A2-LL-w



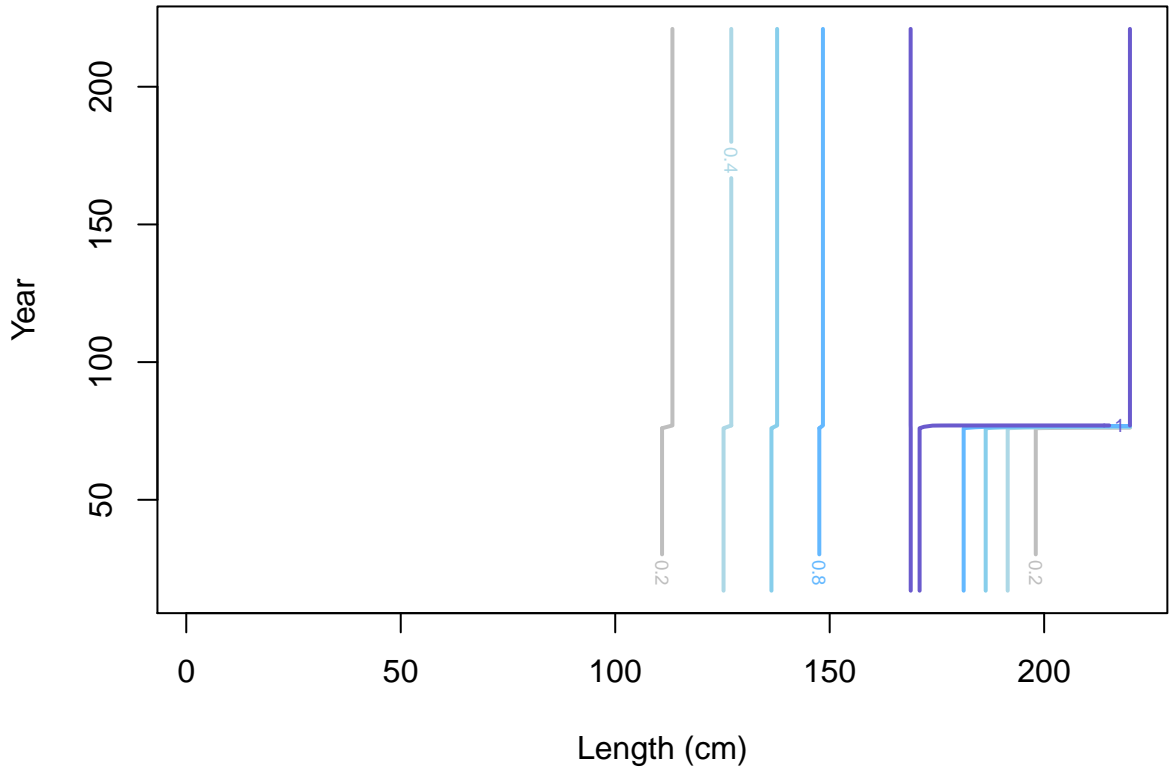
Female ending year selectivity for A2-LL-w



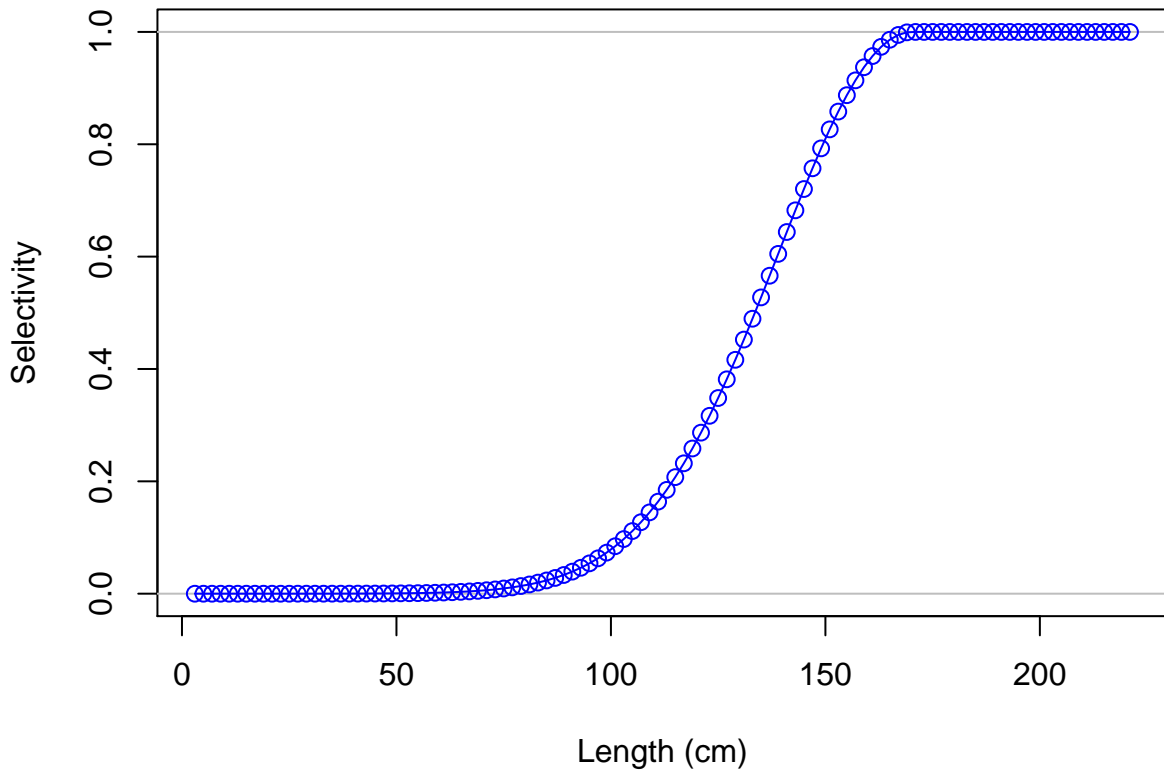
Male time-varying selectivity for A2-LL-w



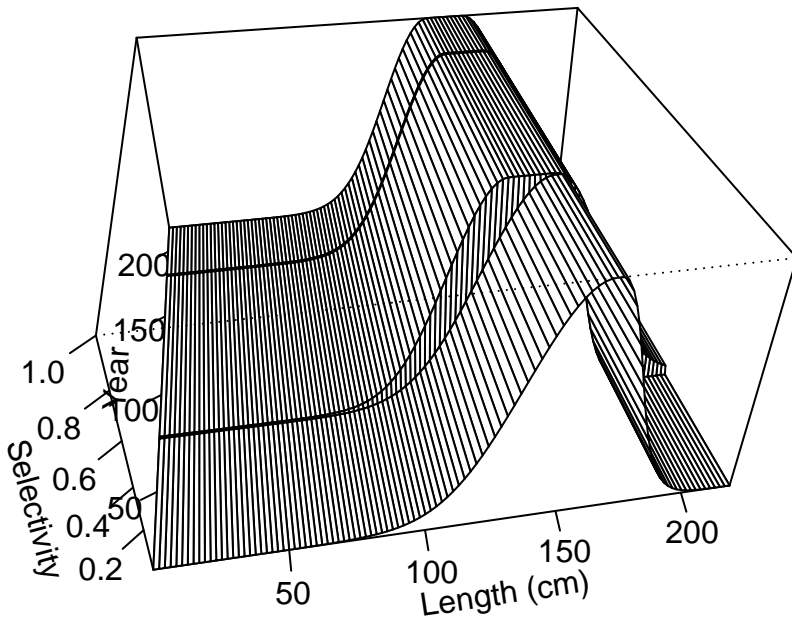
Male time-varying selectivity for A2-LL-w



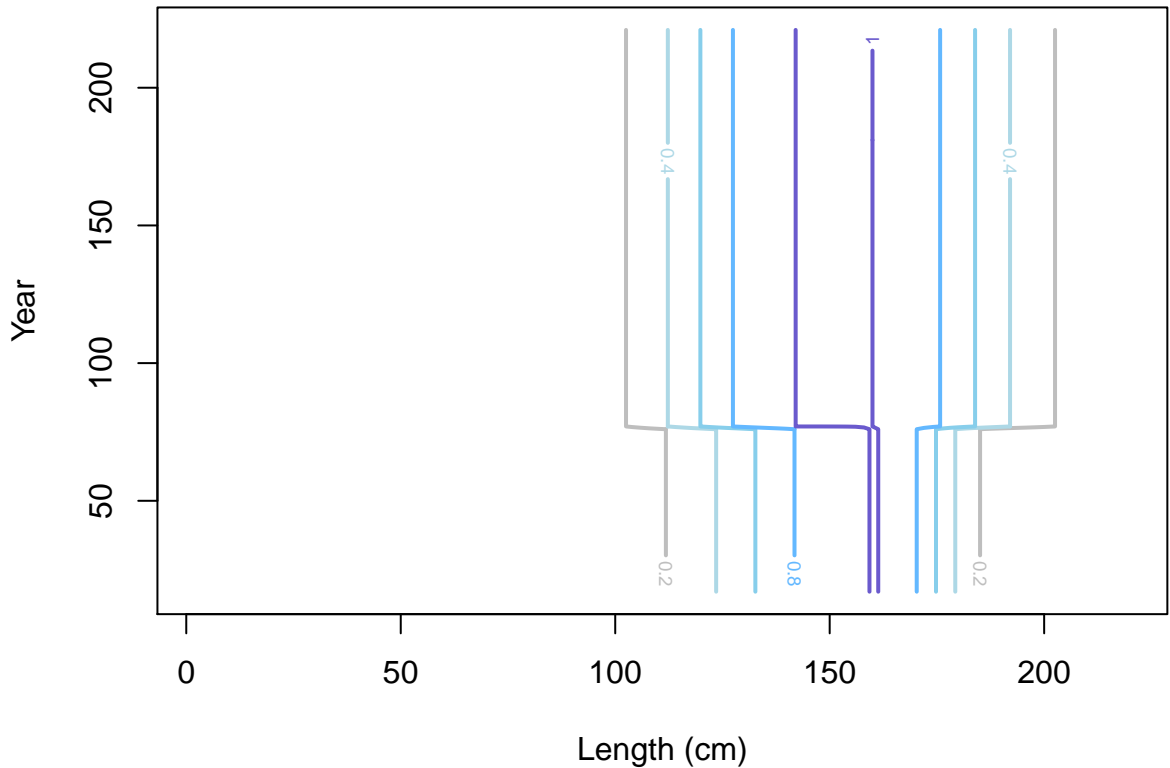
Male ending year selectivity for A2-LL-w



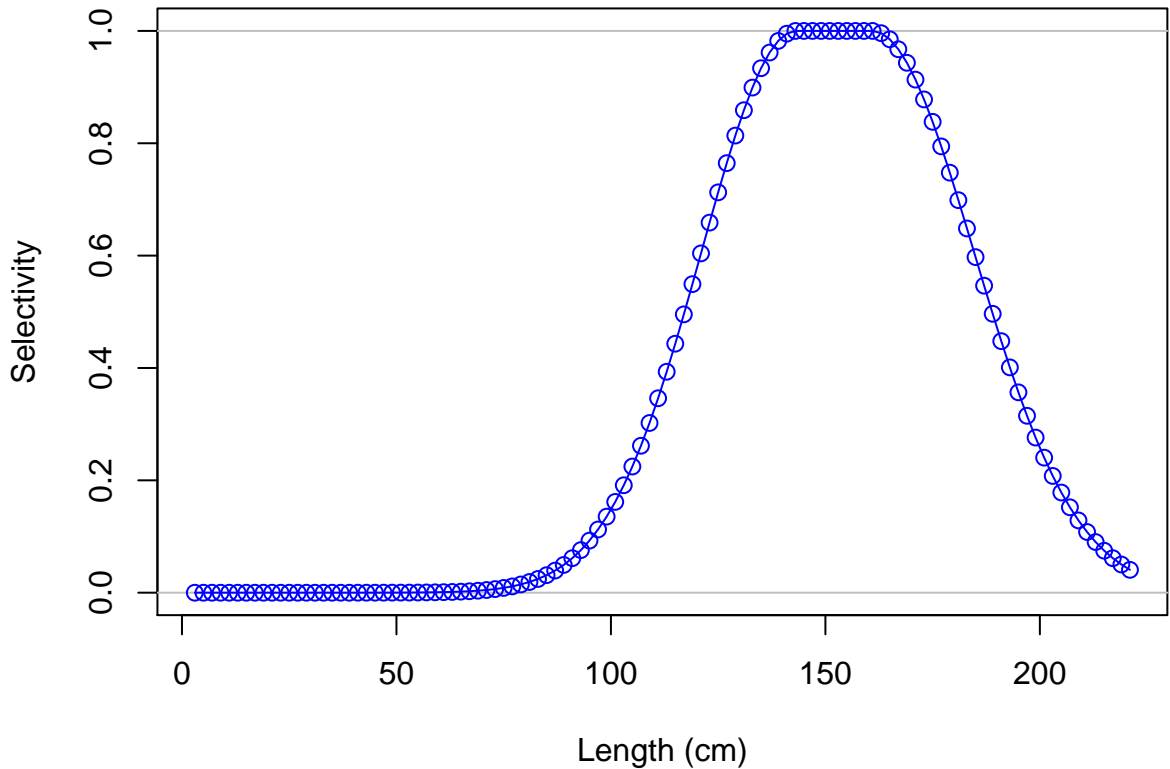
Female time-varying selectivity for A3-LL-w



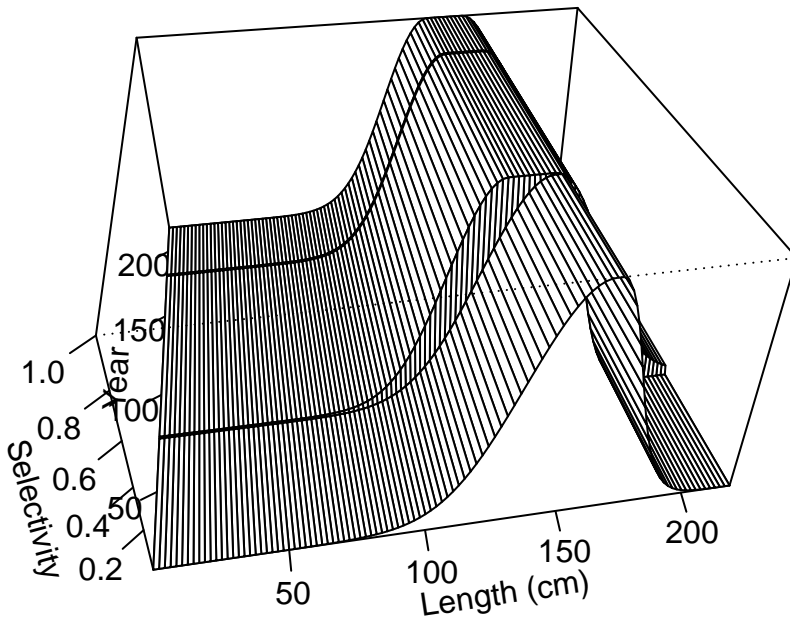
Female time-varying selectivity for A3-LL-w



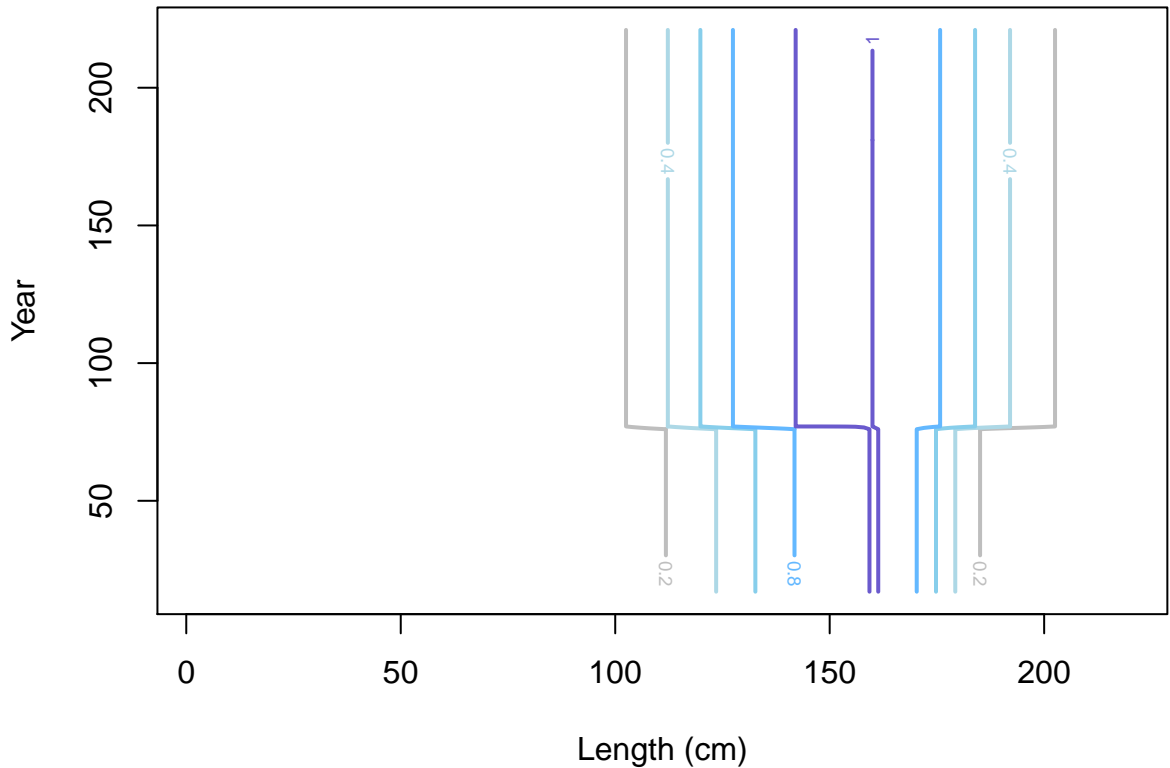
Female ending year selectivity for A3-LL-w



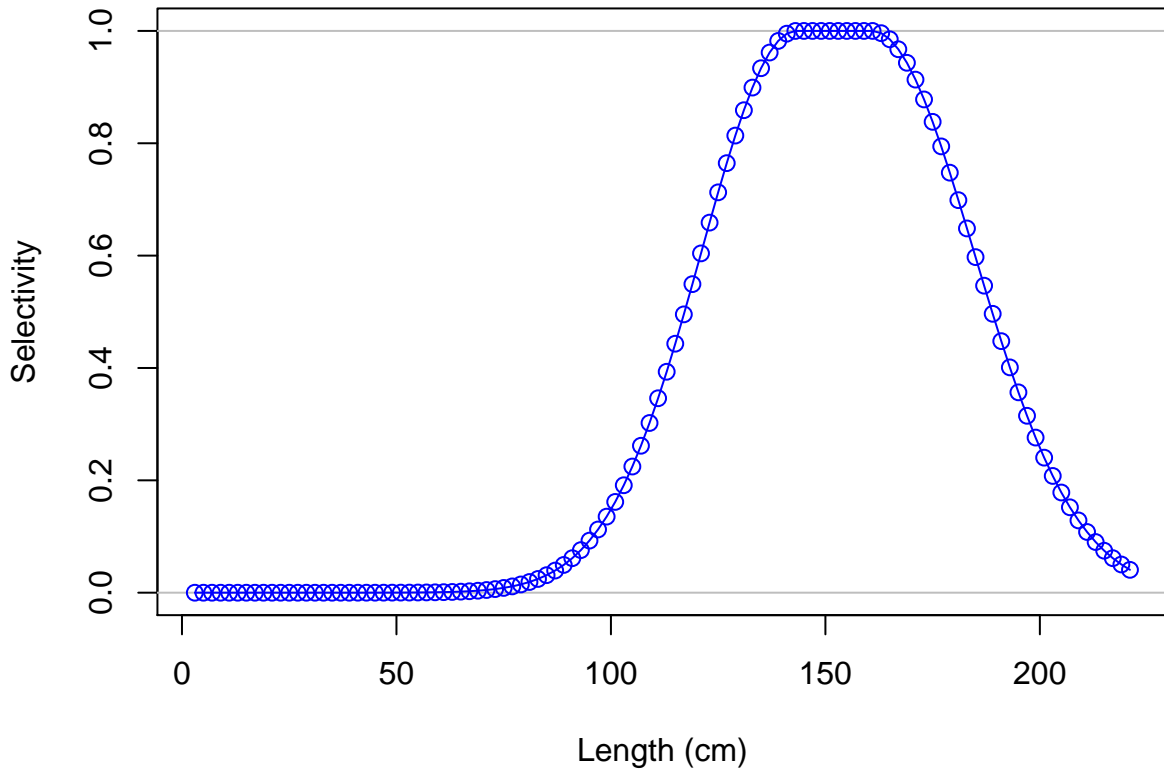
Male time-varying selectivity for A3-LL-w



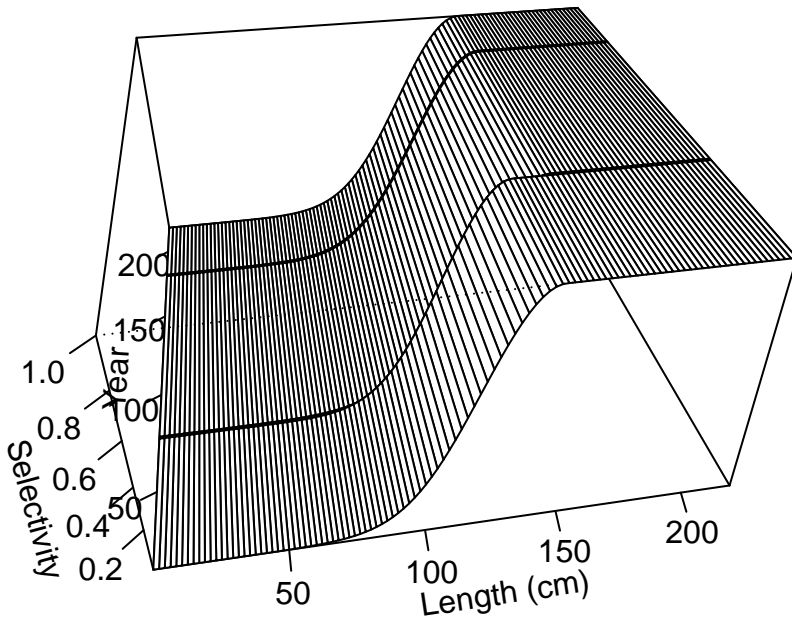
Male time-varying selectivity for A3-LL-w



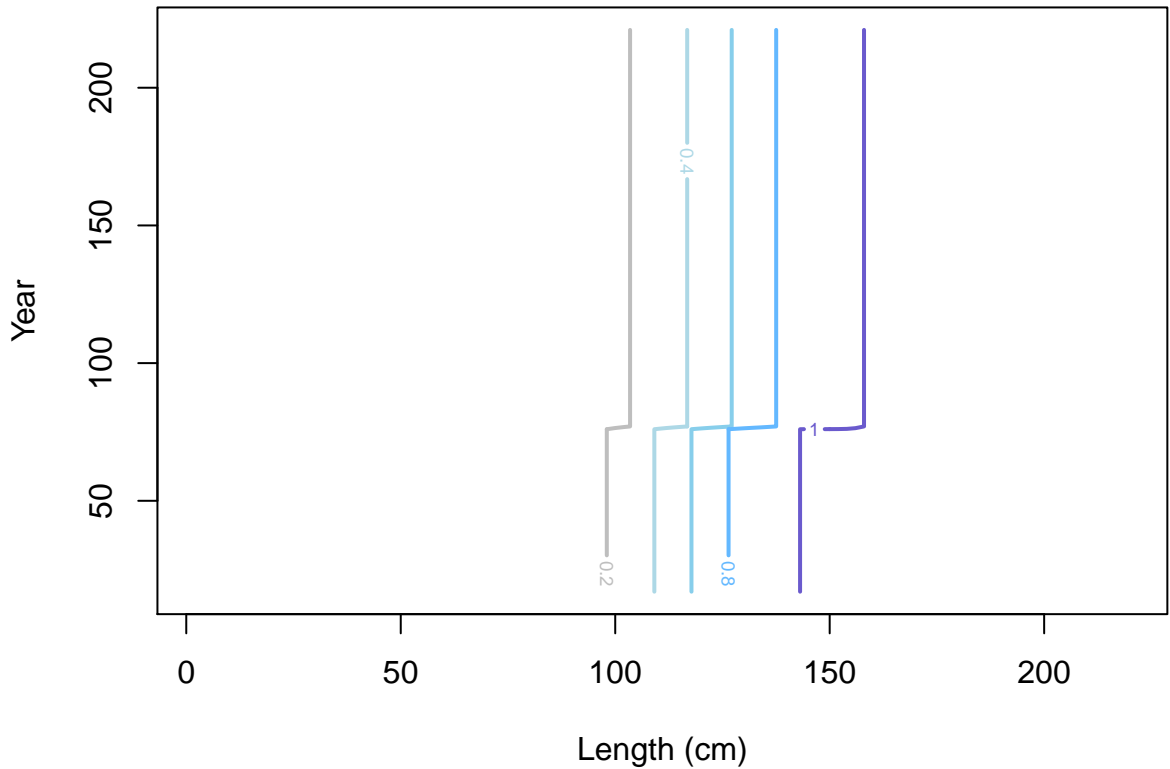
Male ending year selectivity for A3-LL-w



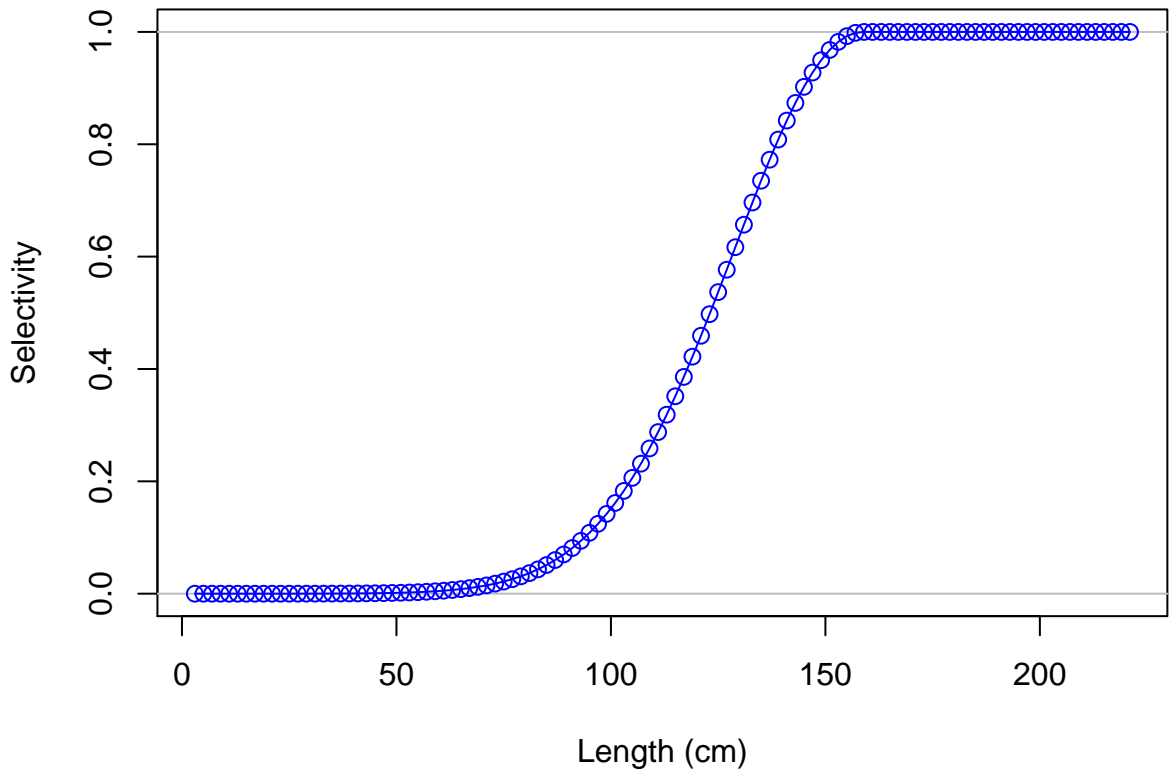
Female time-varying selectivity for A4-LL-w



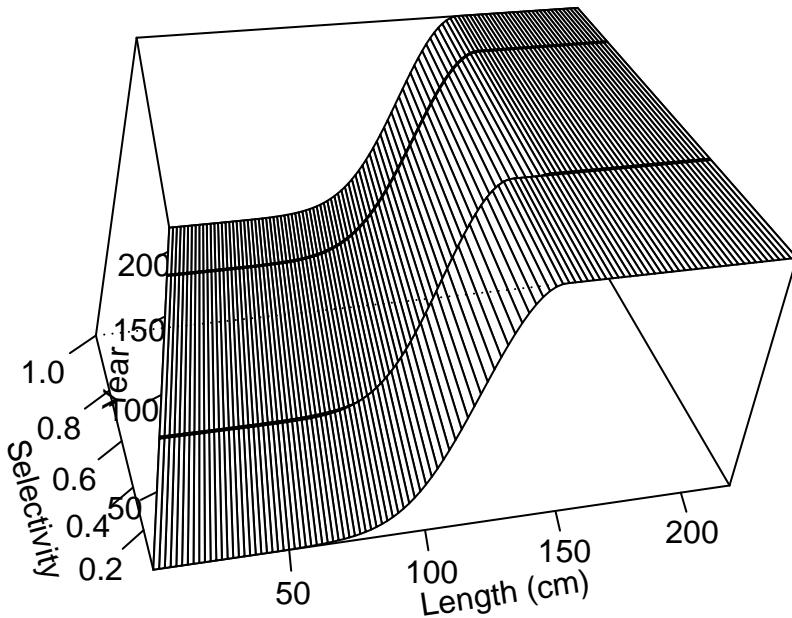
Female time-varying selectivity for A4-LL-w



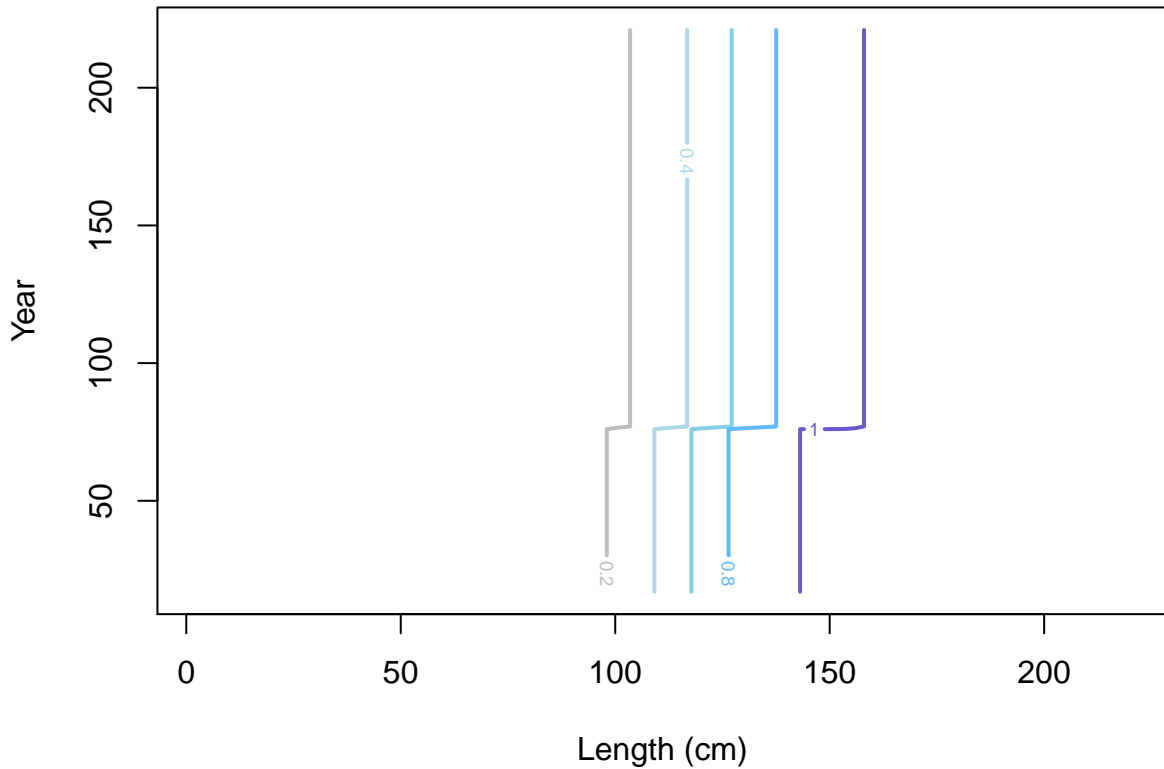
Female ending year selectivity for A4-LL-w



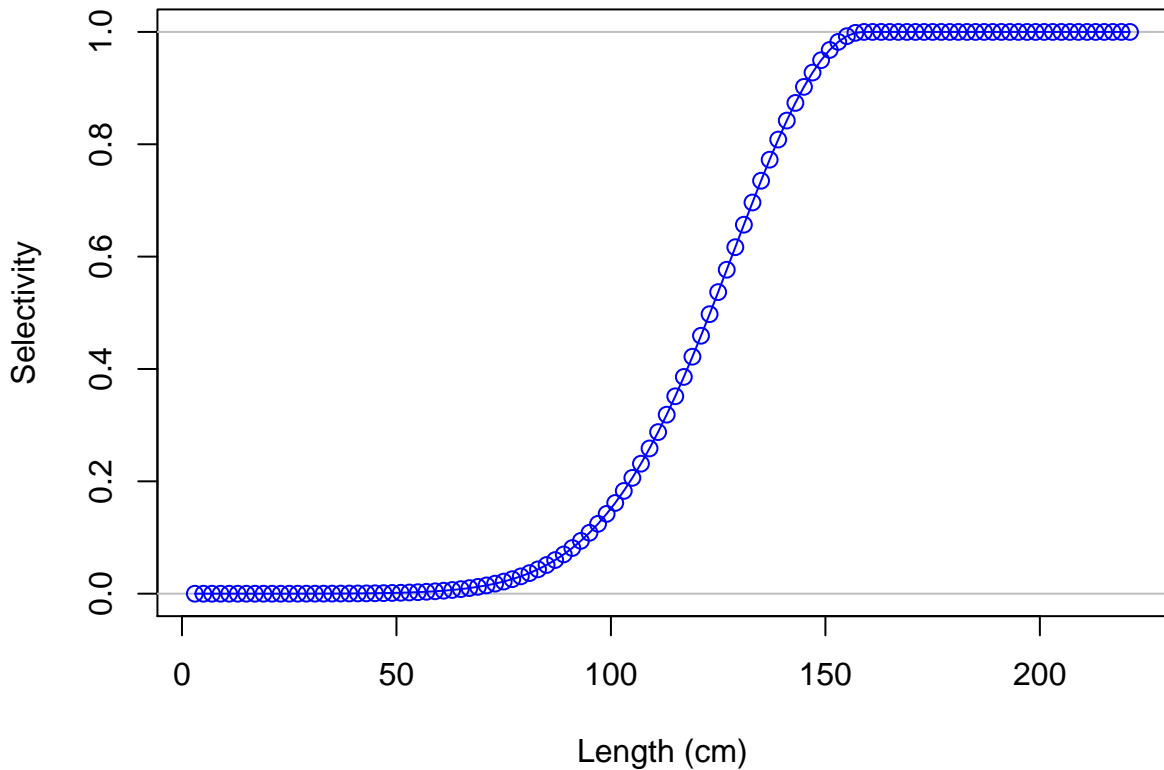
Male time-varying selectivity for A4-LL-w



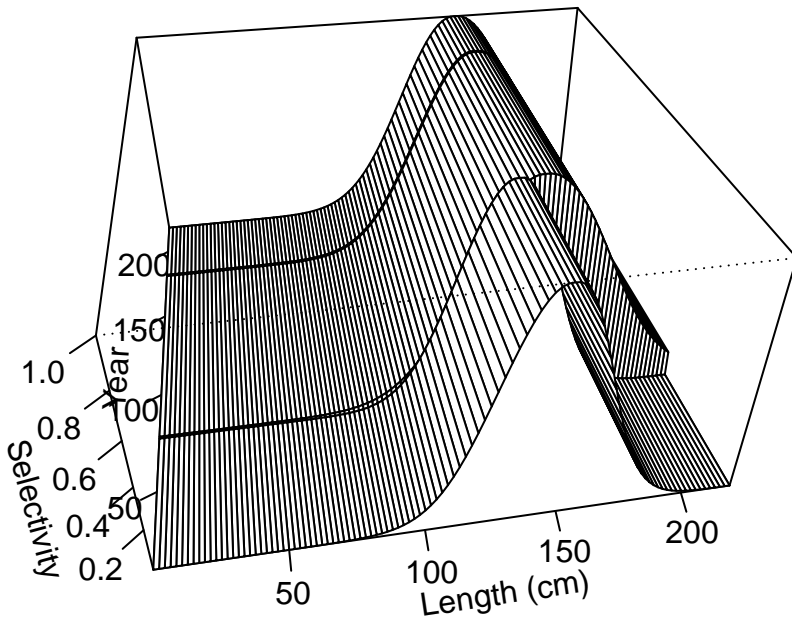
Male time-varying selectivity for A4-LL-w



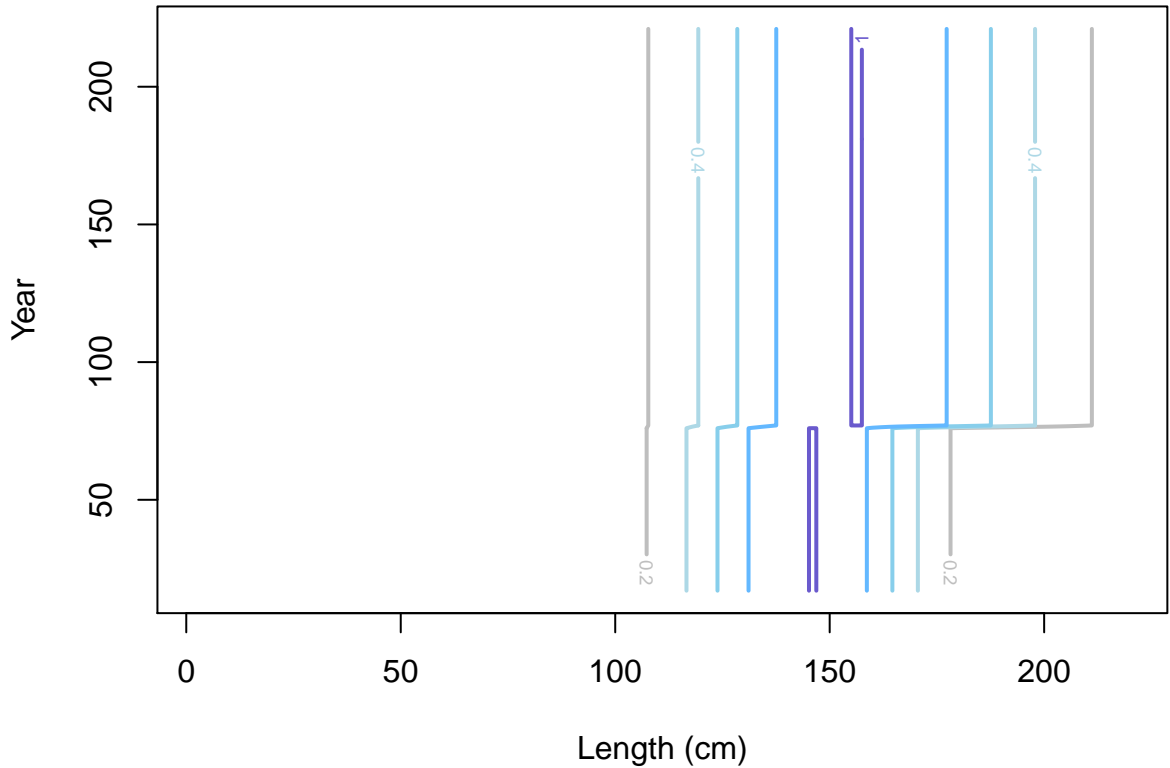
Male ending year selectivity for A4-LL-w



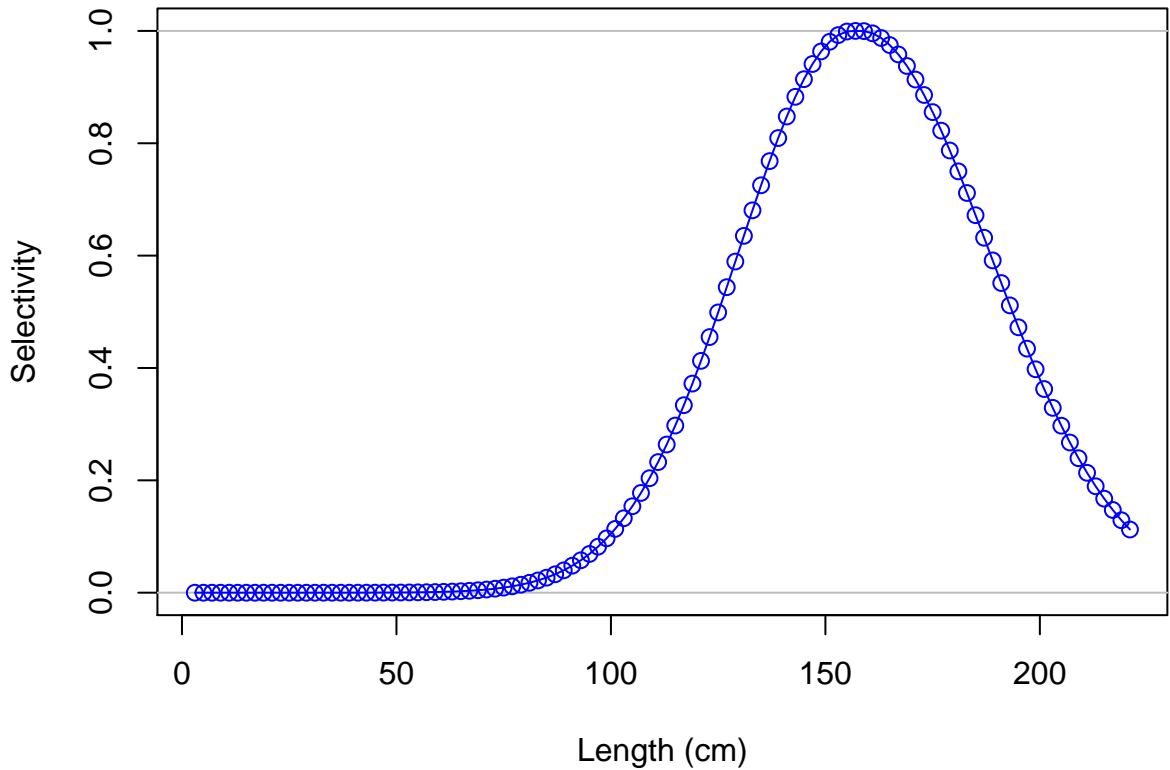
Female time-varying selectivity for A5-LL-w



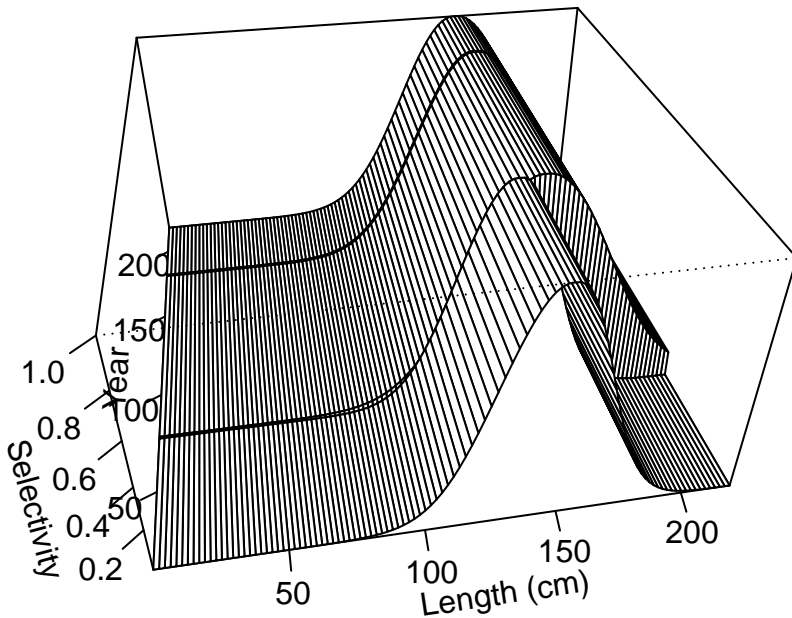
Female time-varying selectivity for A5-LL-w



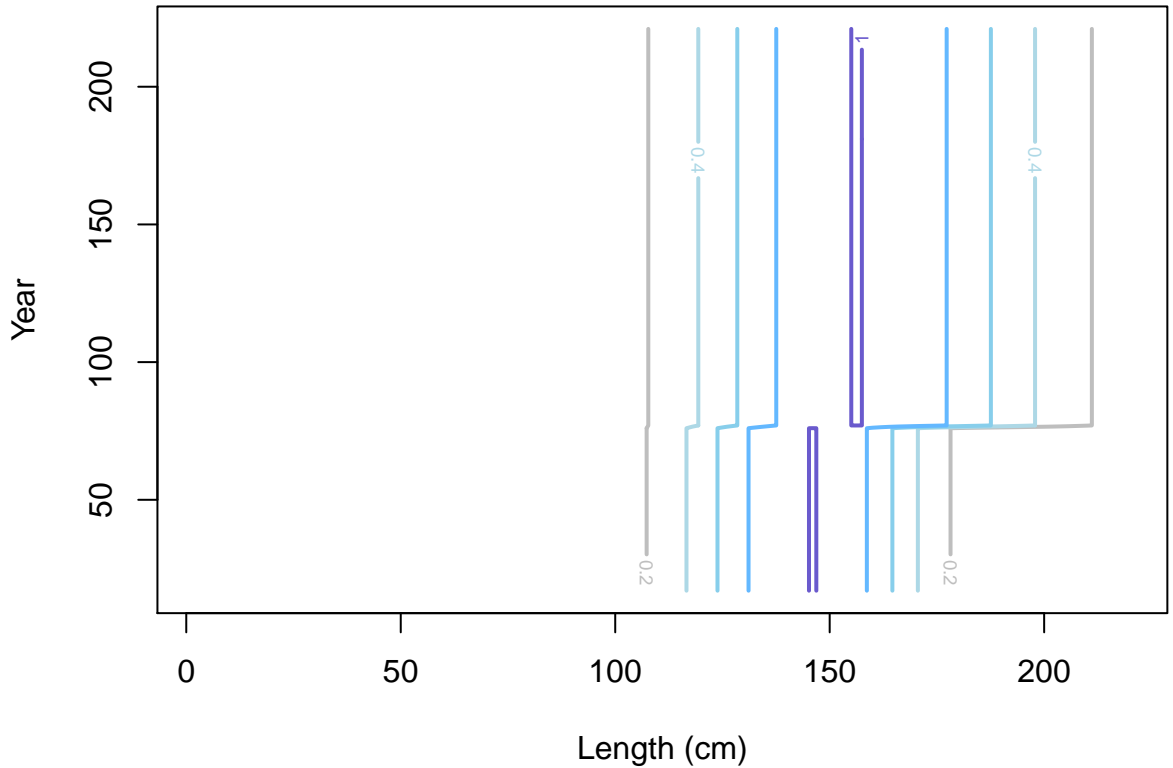
Female ending year selectivity for A5-LL-w



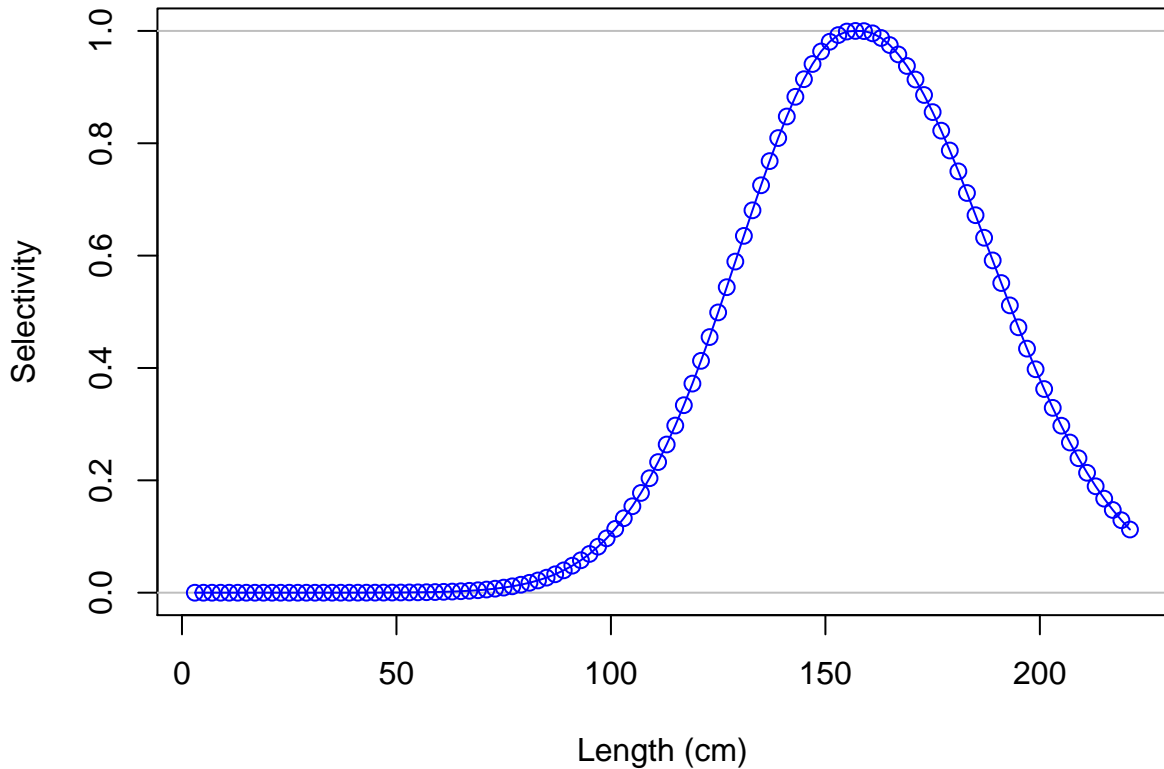
Male time-varying selectivity for A5-LL-w



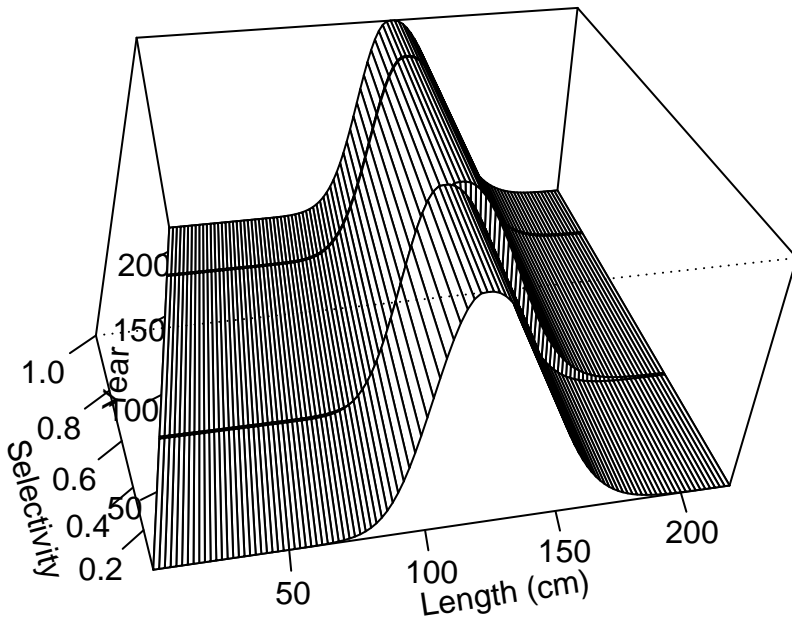
Male time-varying selectivity for A5-LL-w



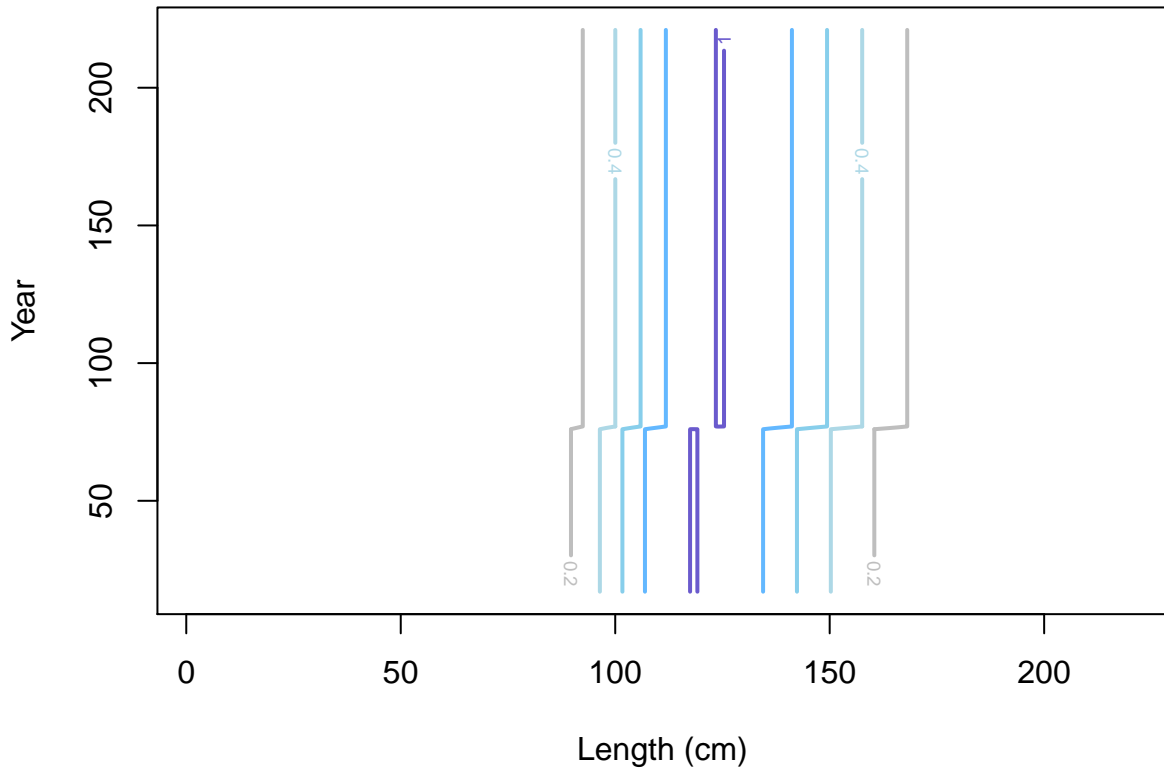
Male ending year selectivity for A5-LL-w



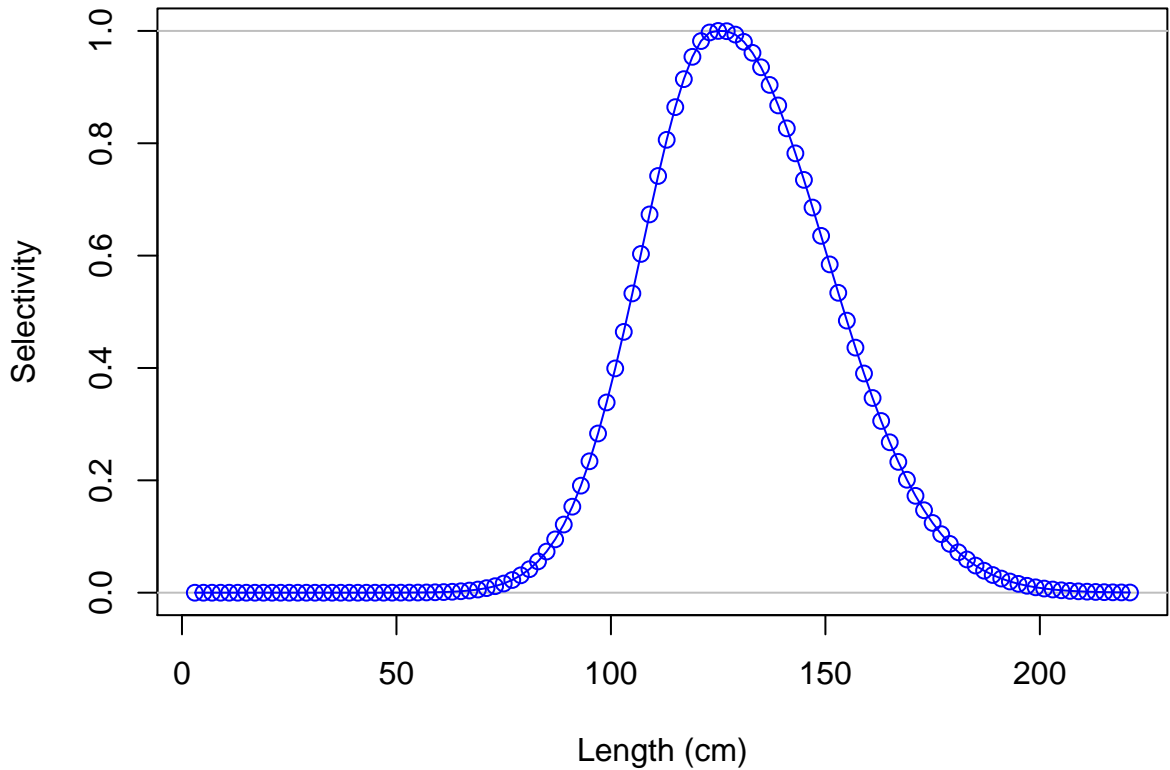
Female time-varying selectivity for A6-LL-w



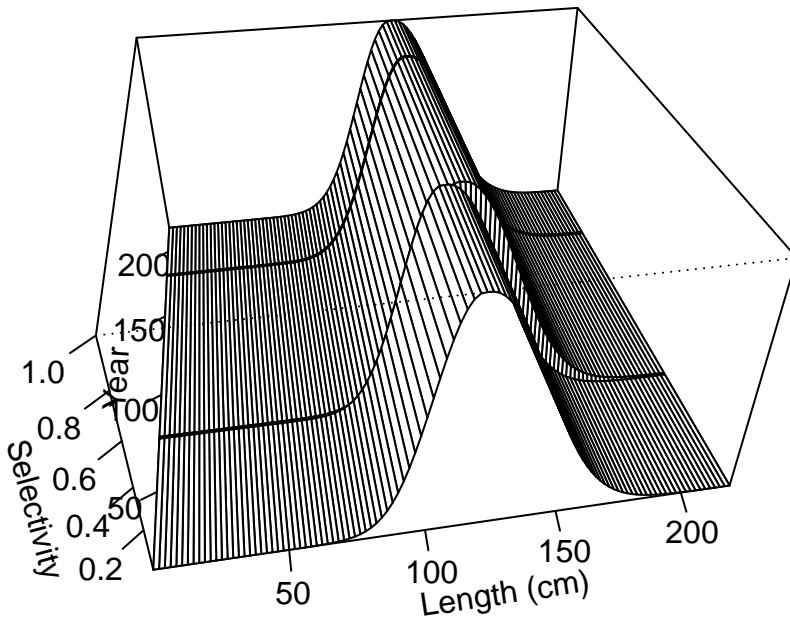
Female time-varying selectivity for A6-LL-w



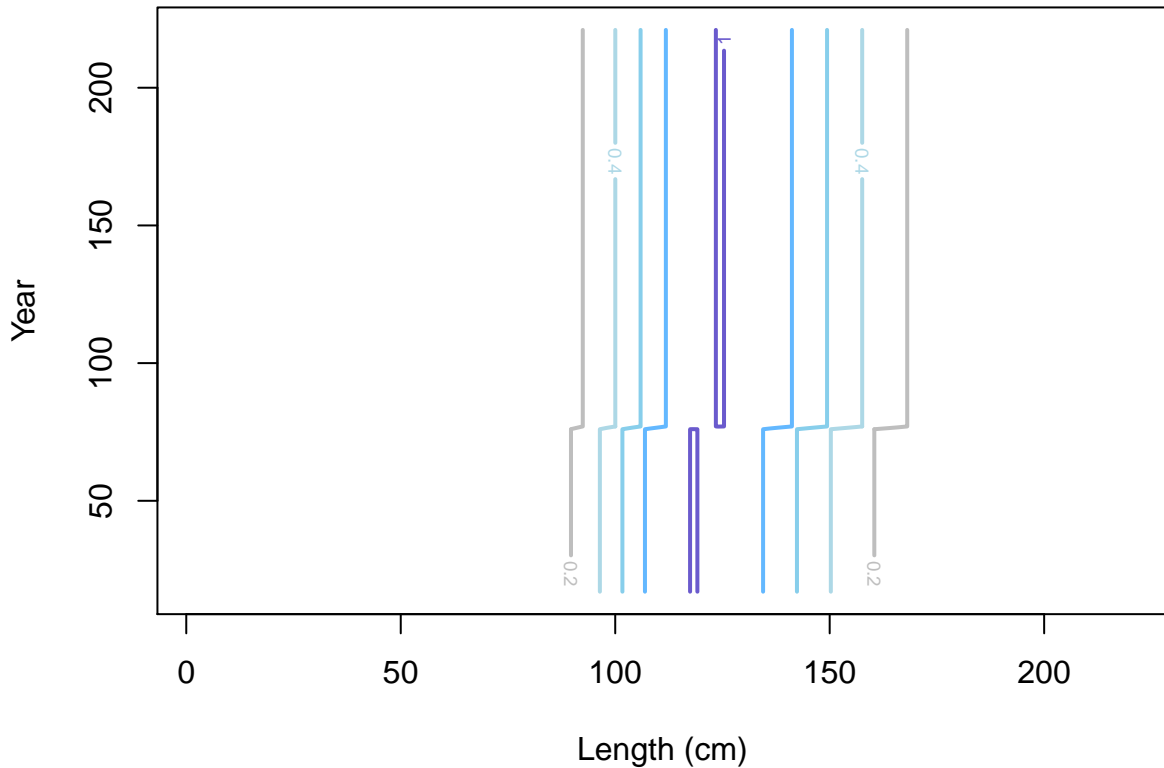
Female ending year selectivity for A6-LL-w



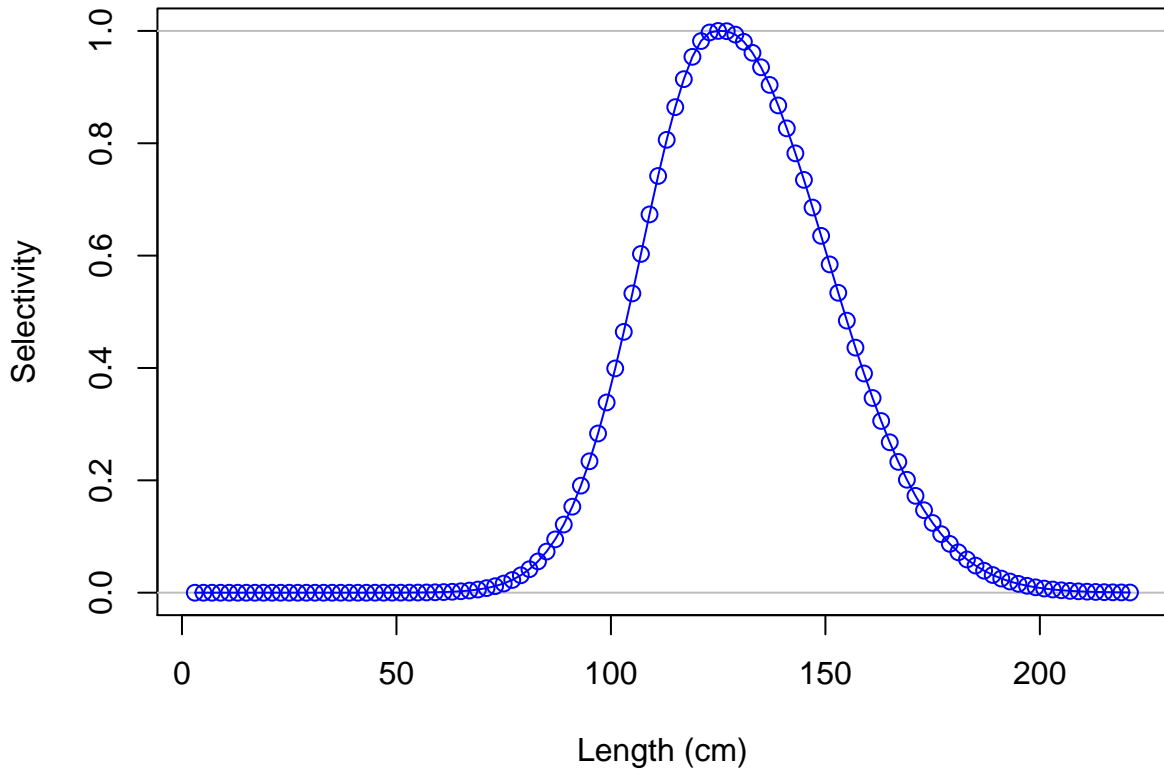
Male time-varying selectivity for A6-LL-w



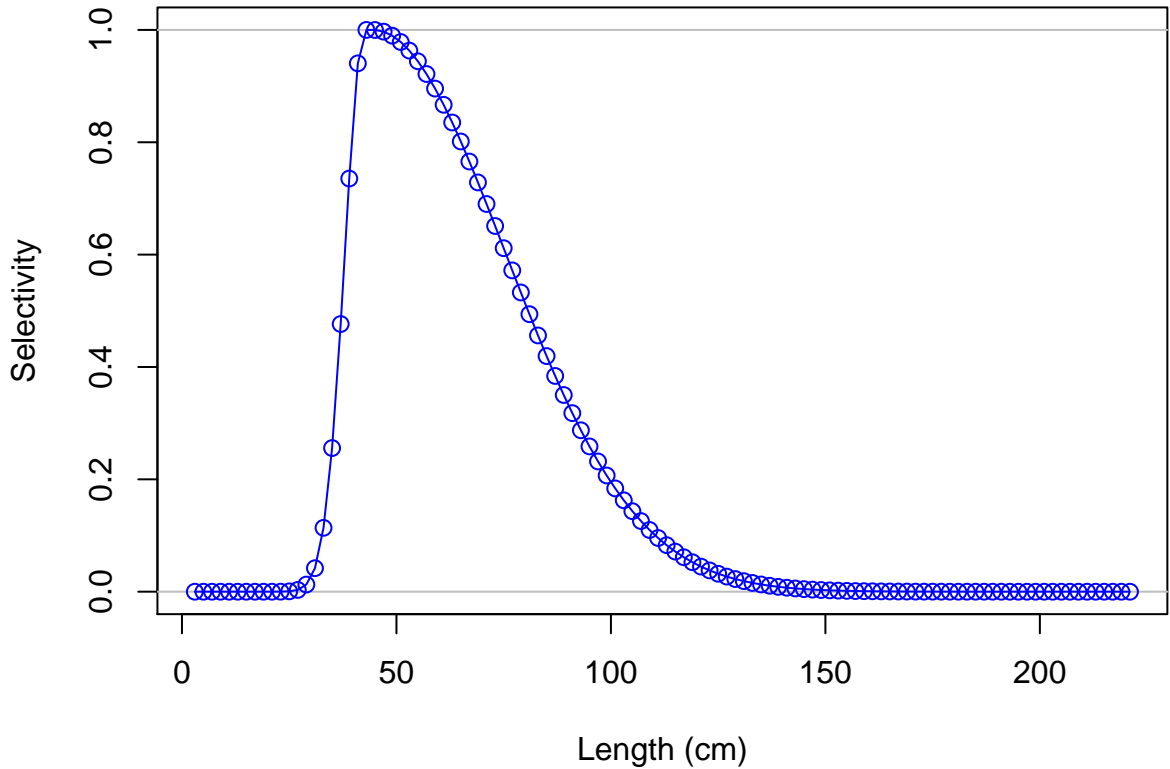
Male time-varying selectivity for A6-LL-w



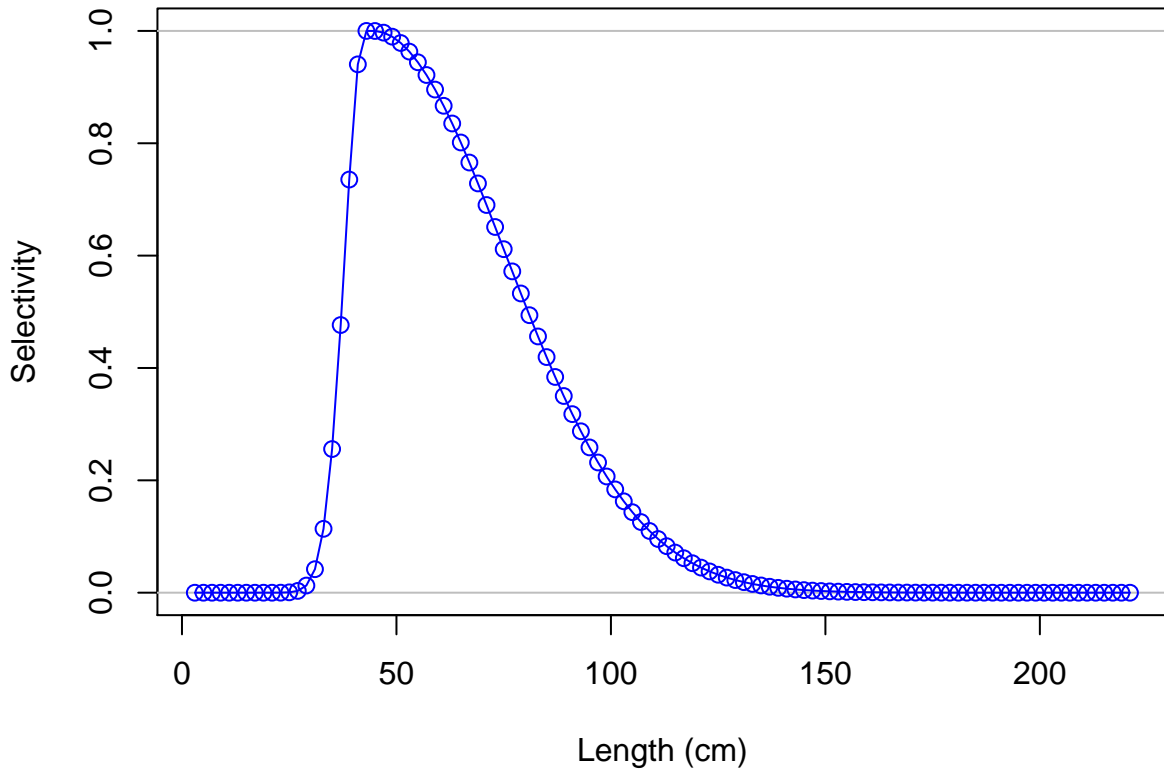
Male ending year selectivity for A6-LL-w



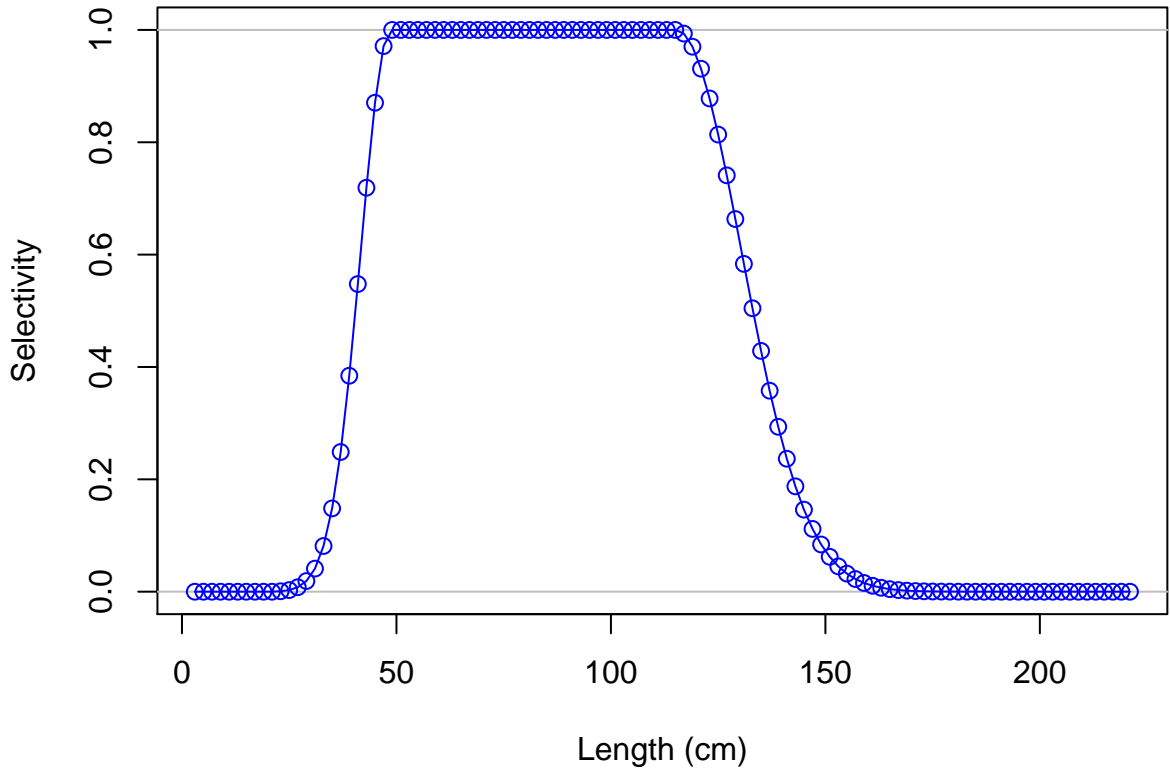
Female ending year selectivity for A2-OBJ



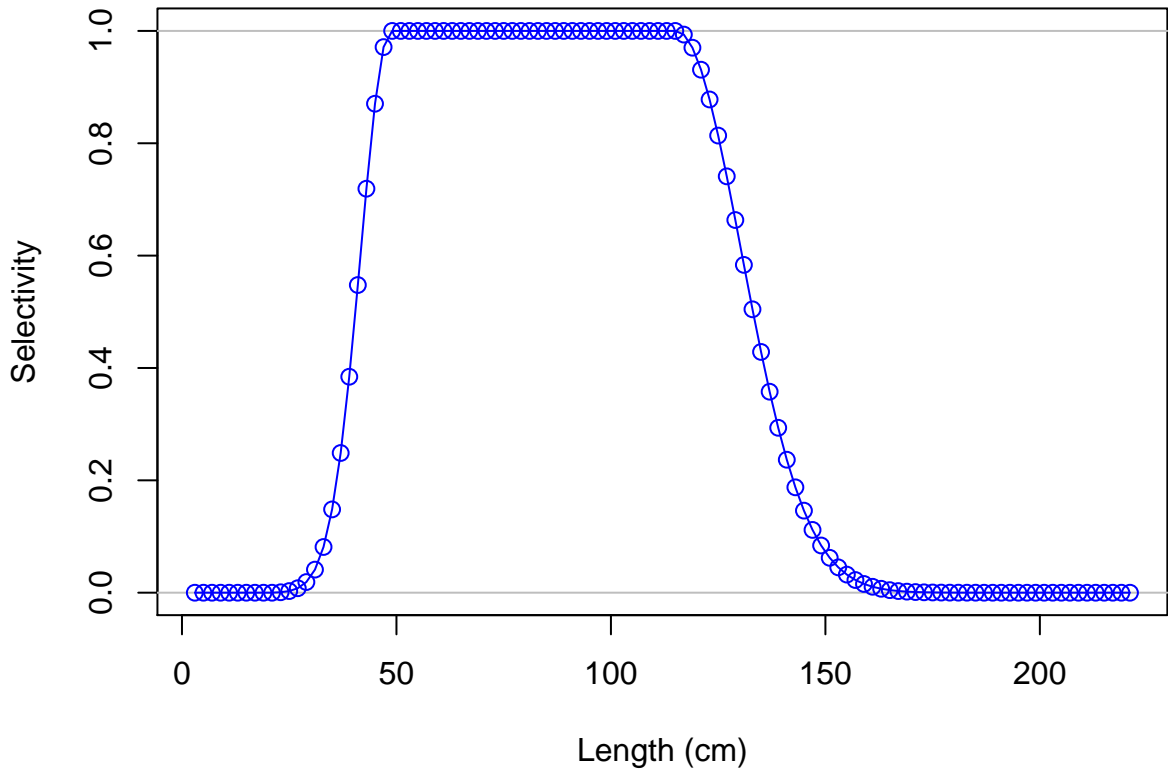
Male ending year selectivity for A2-OBJ



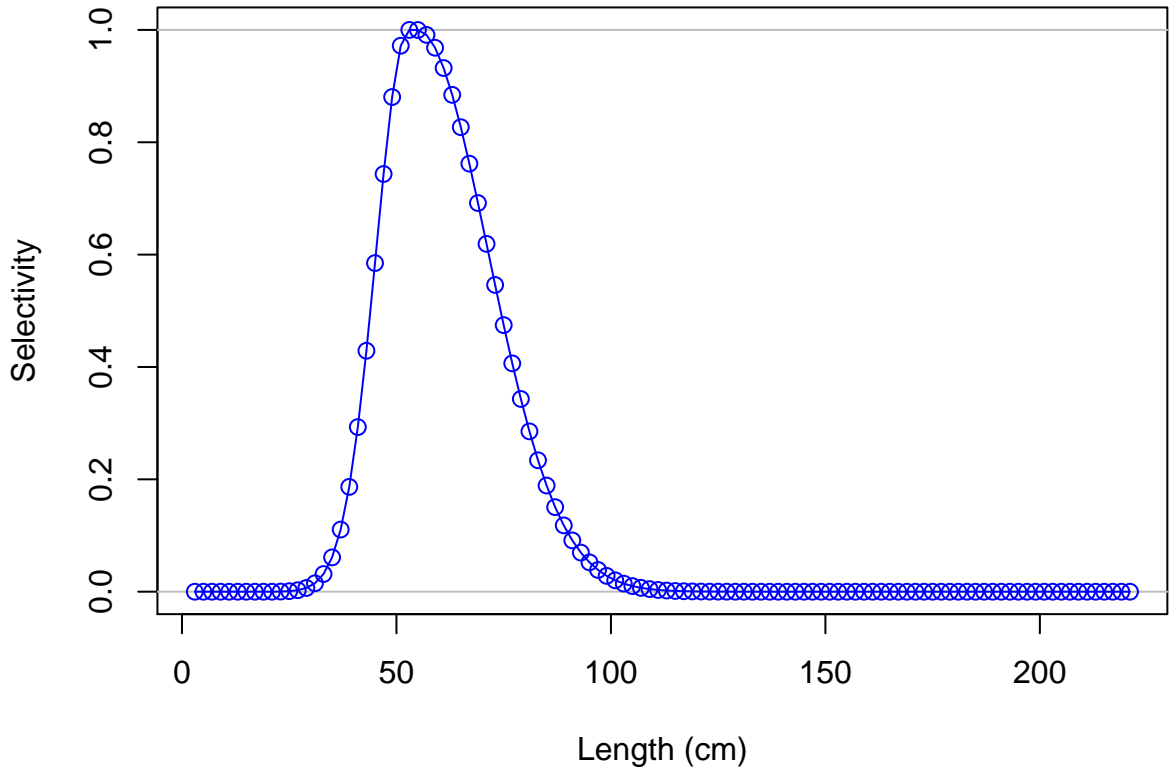
Female ending year selectivity for A3-OBJ



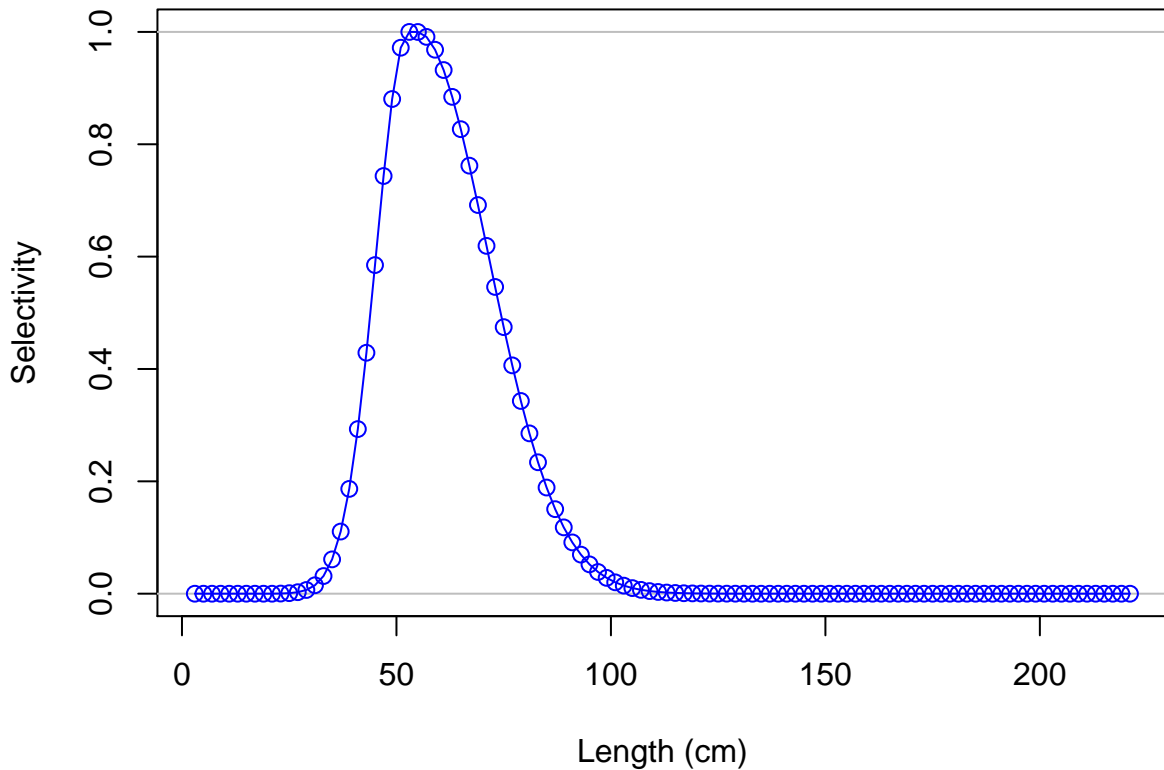
Male ending year selectivity for A3-OBJ



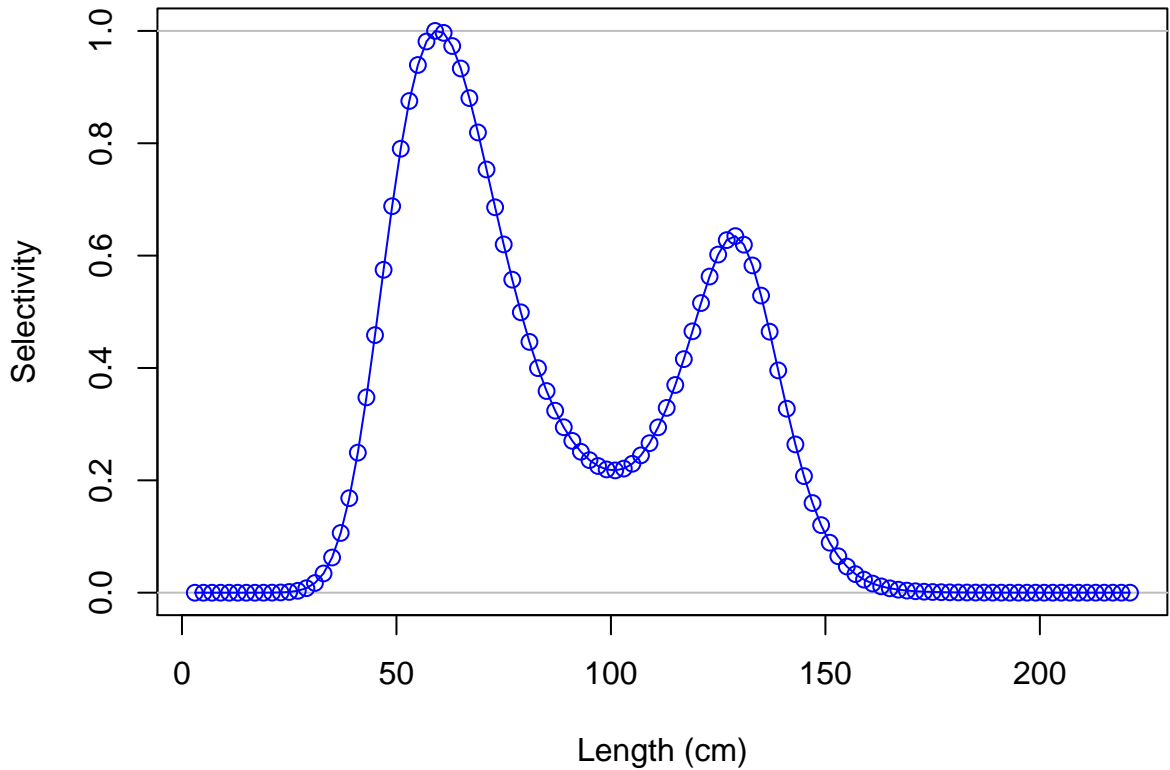
Female ending year selectivity for A4-Obj



Male ending year selectivity for A4-OBJ



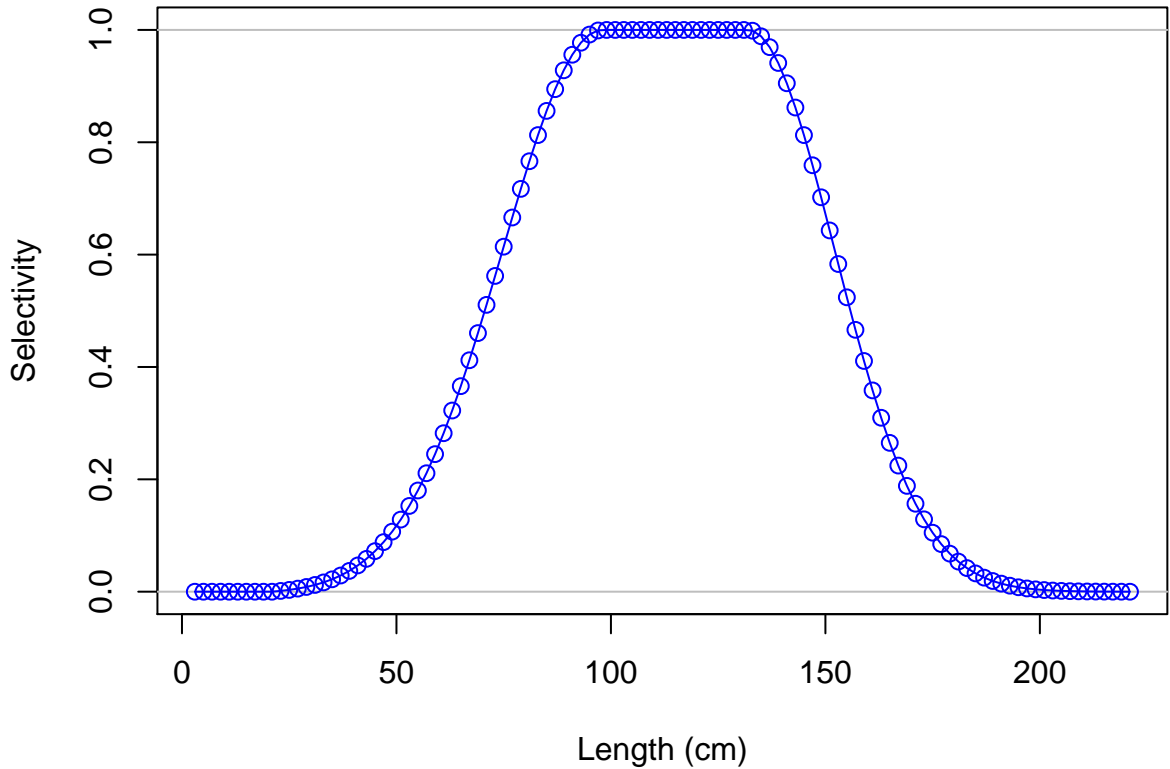
Female ending year selectivity for A5-OBJ



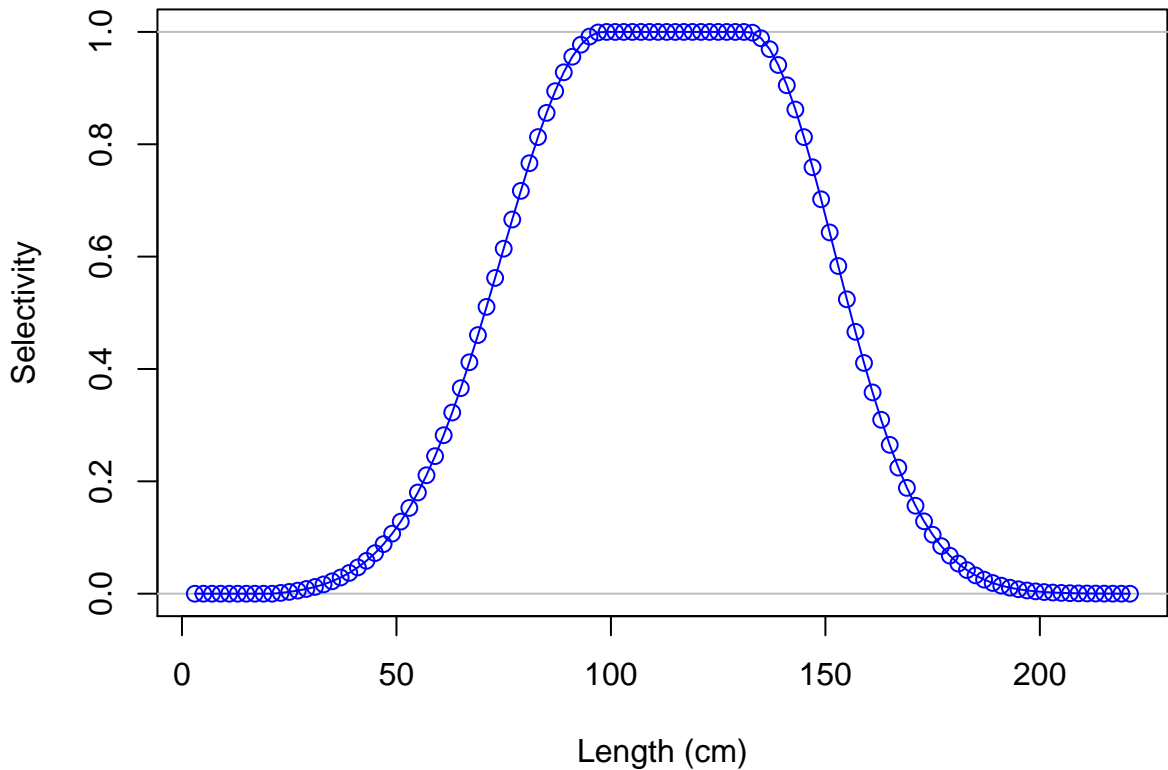
Male ending year selectivity for A5-OBJ



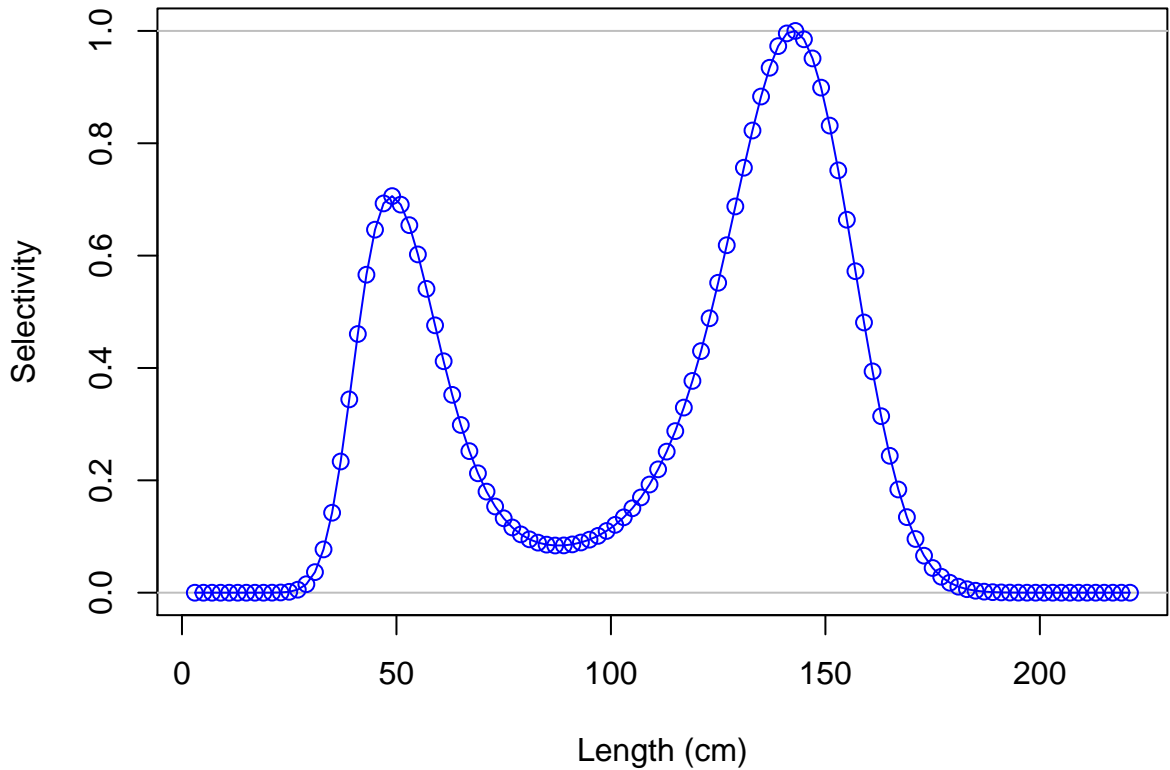
Female ending year selectivity for A6-OBJ



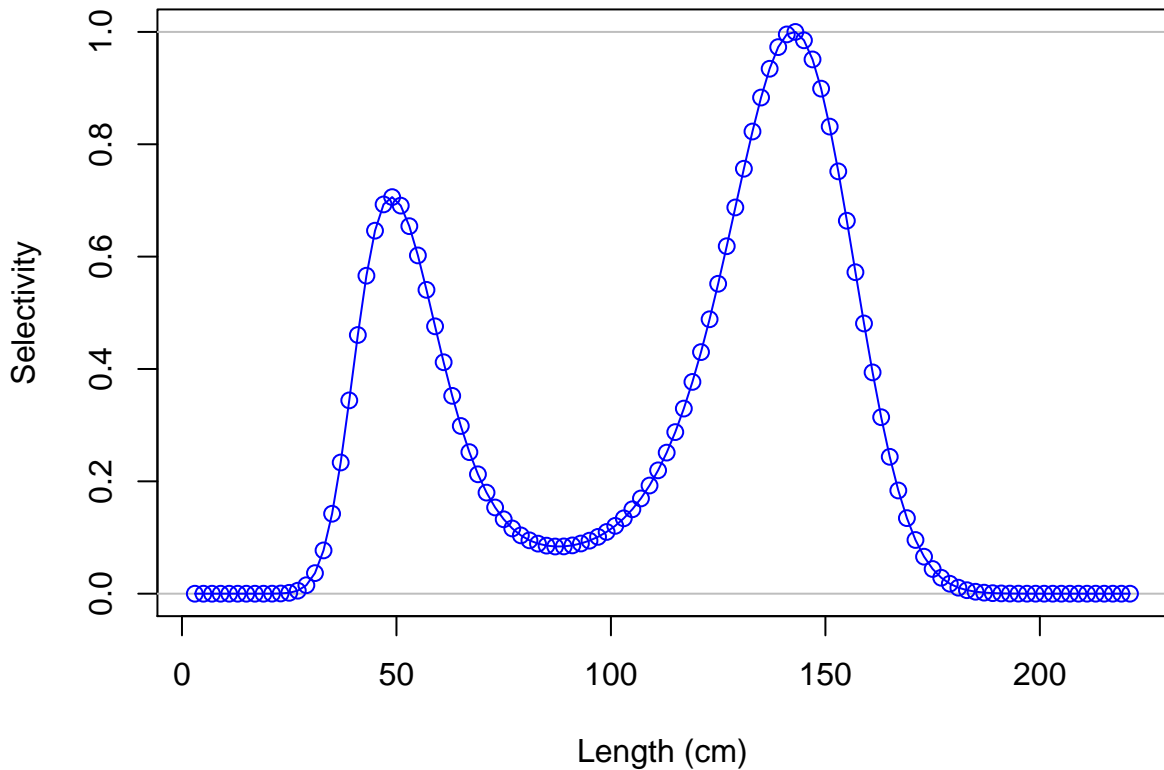
Male ending year selectivity for A6-OBJ



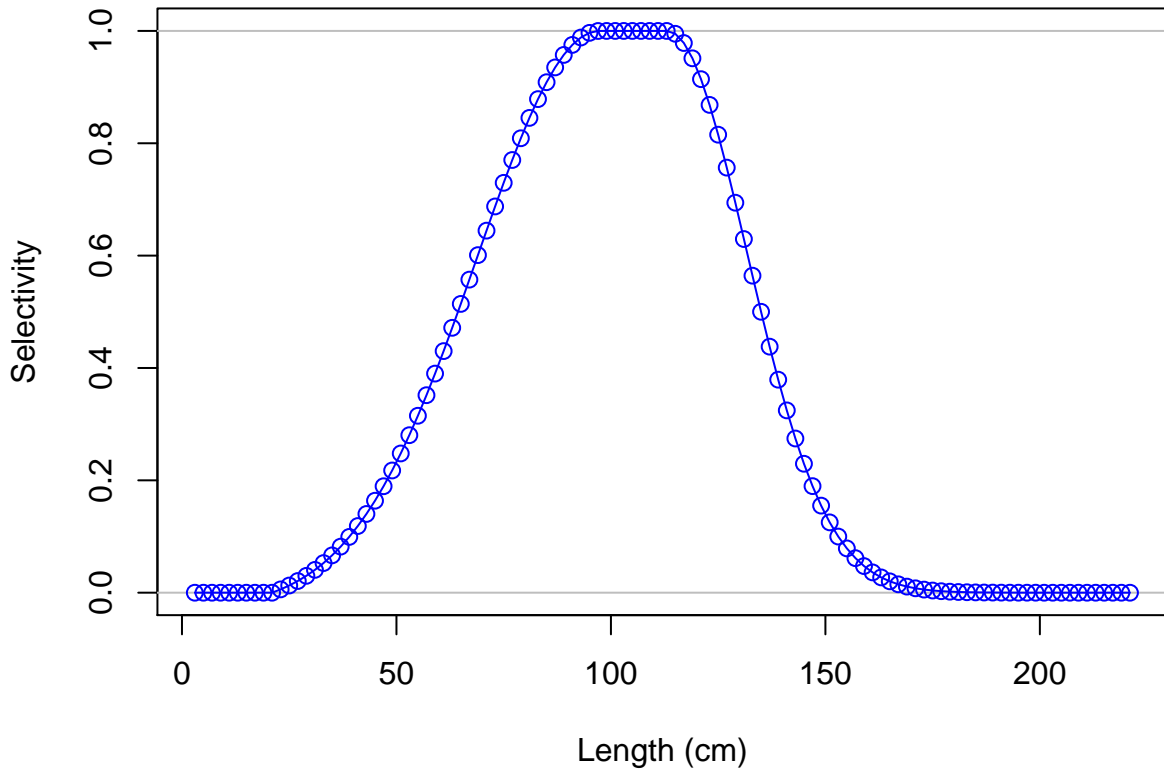
Female ending year selectivity for A2-NOADEL



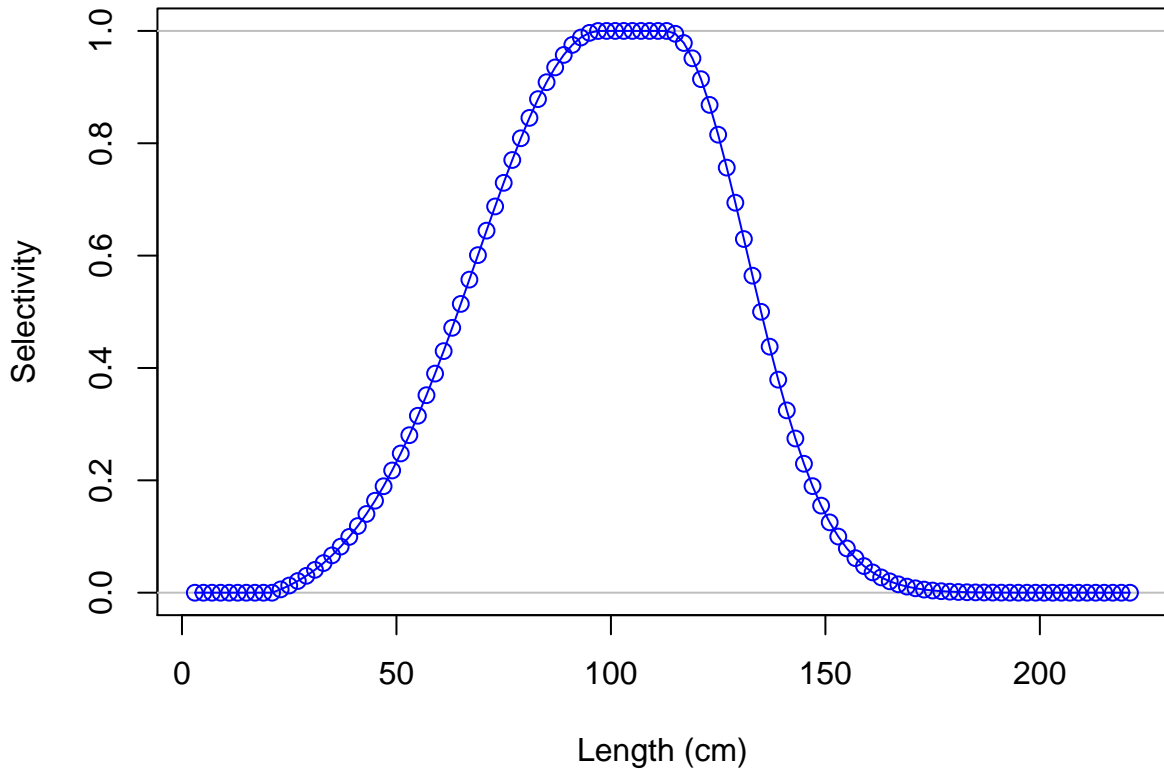
Male ending year selectivity for A2-NOADEL



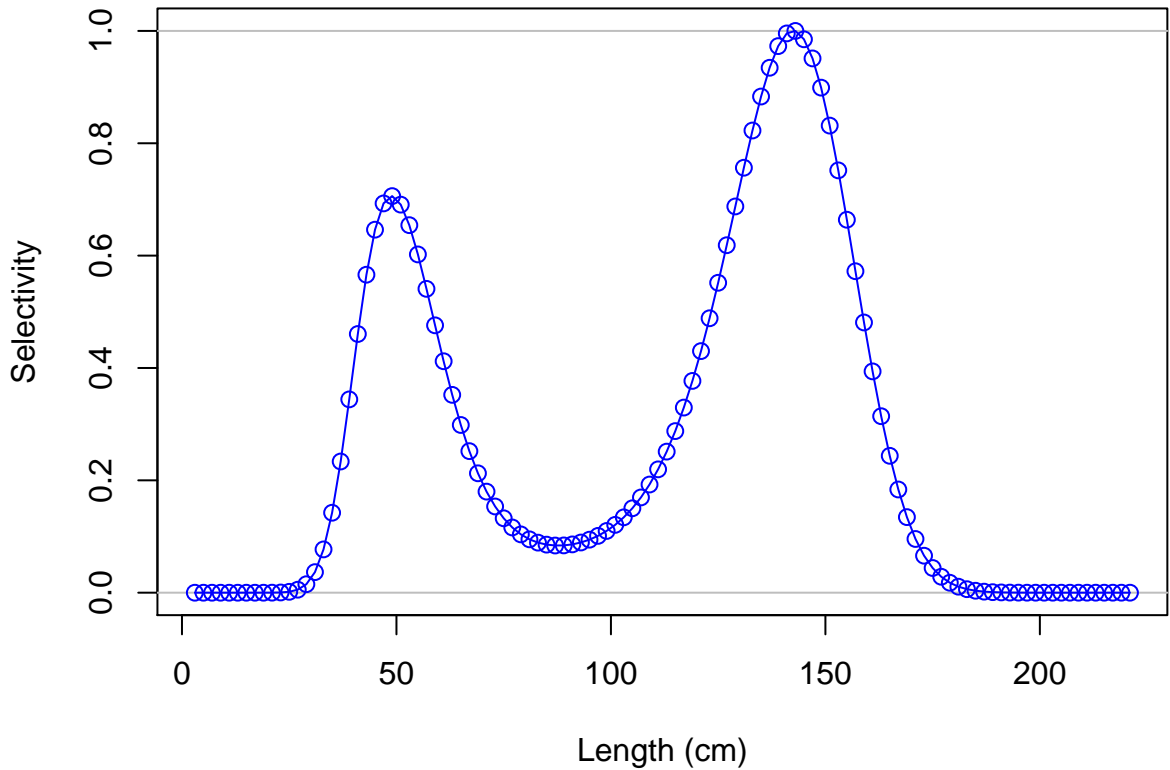
Female ending year selectivity for A3-NOADEL



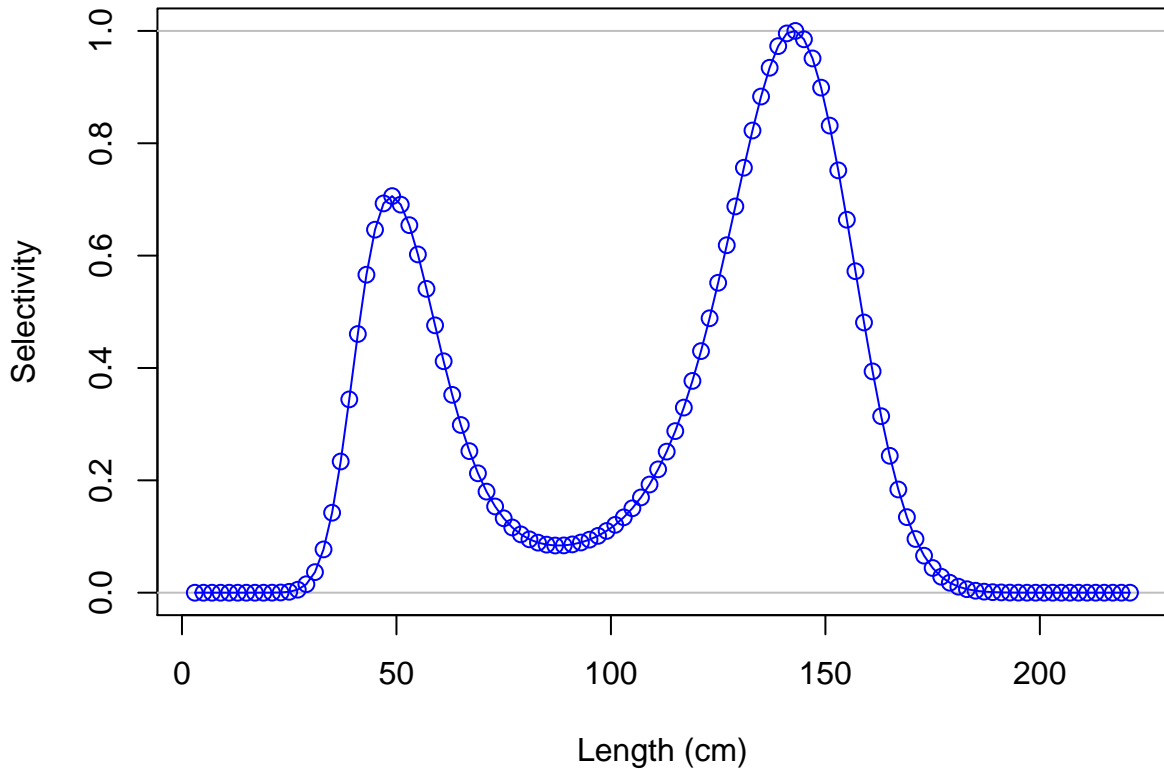
Male ending year selectivity for A3-NOADEL



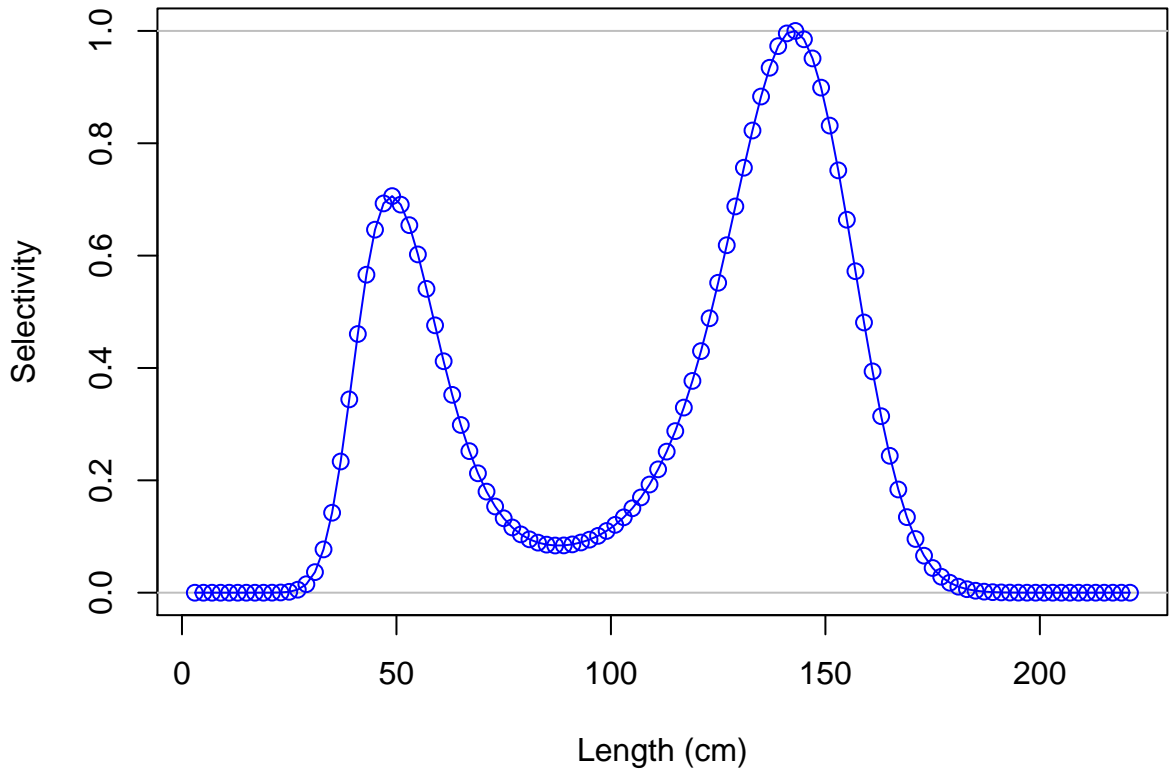
Female ending year selectivity for A4-NOADEL



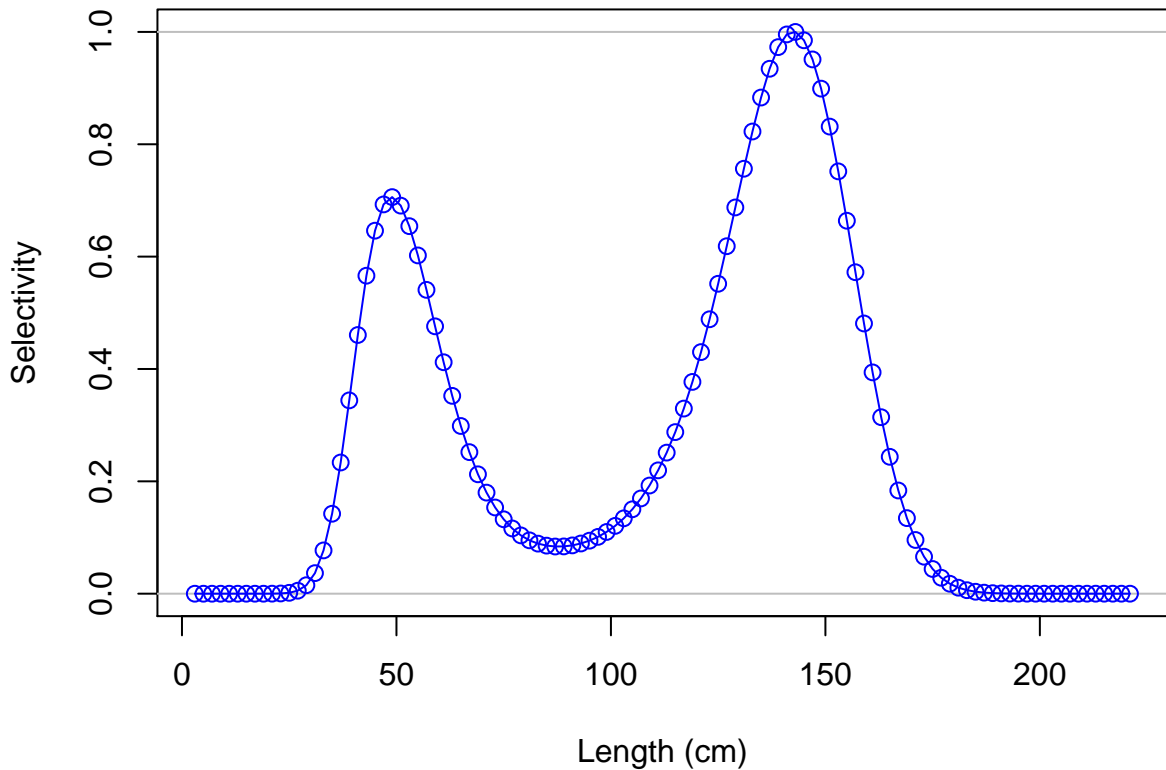
Male ending year selectivity for A4-NOADEL



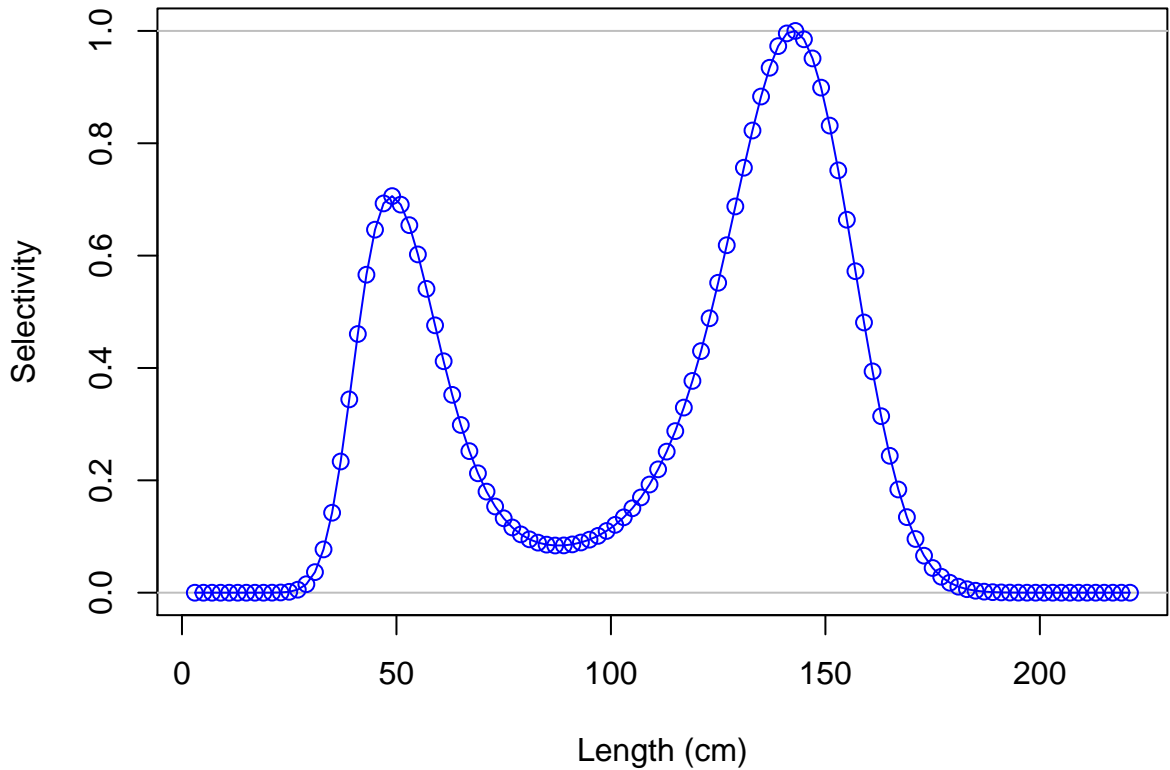
Female ending year selectivity for A5-NOADEL



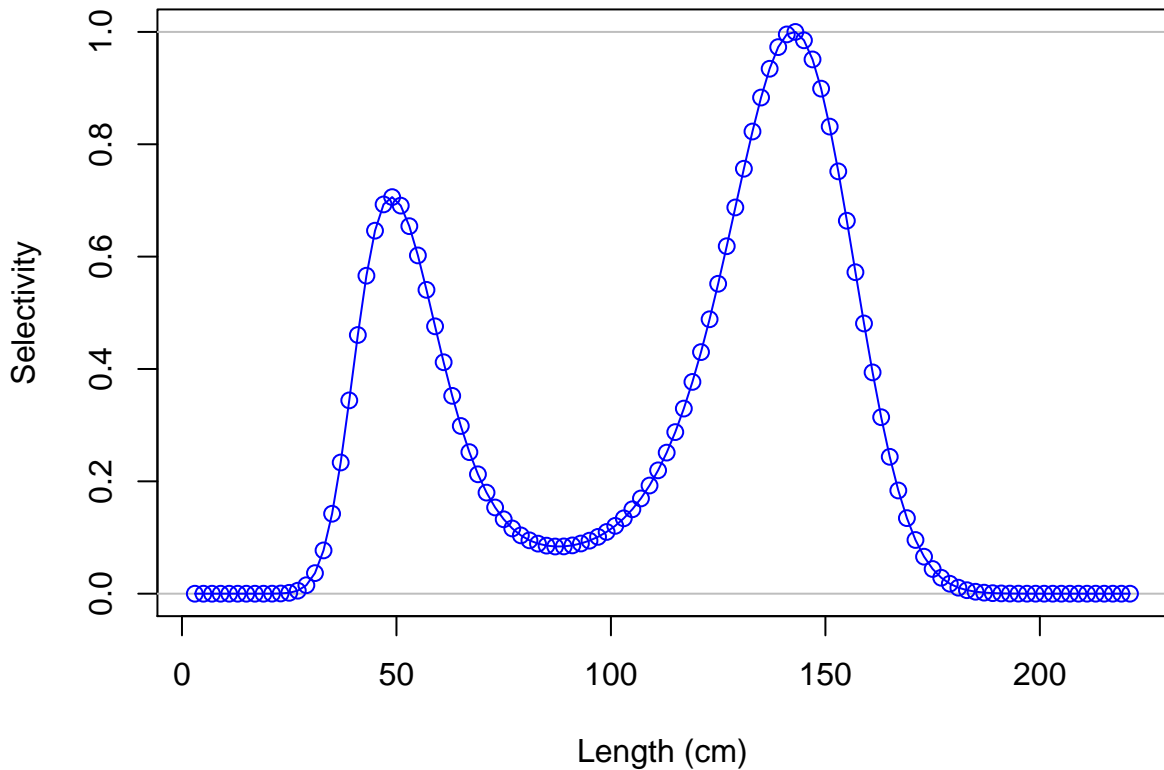
Male ending year selectivity for A5-NOADEL



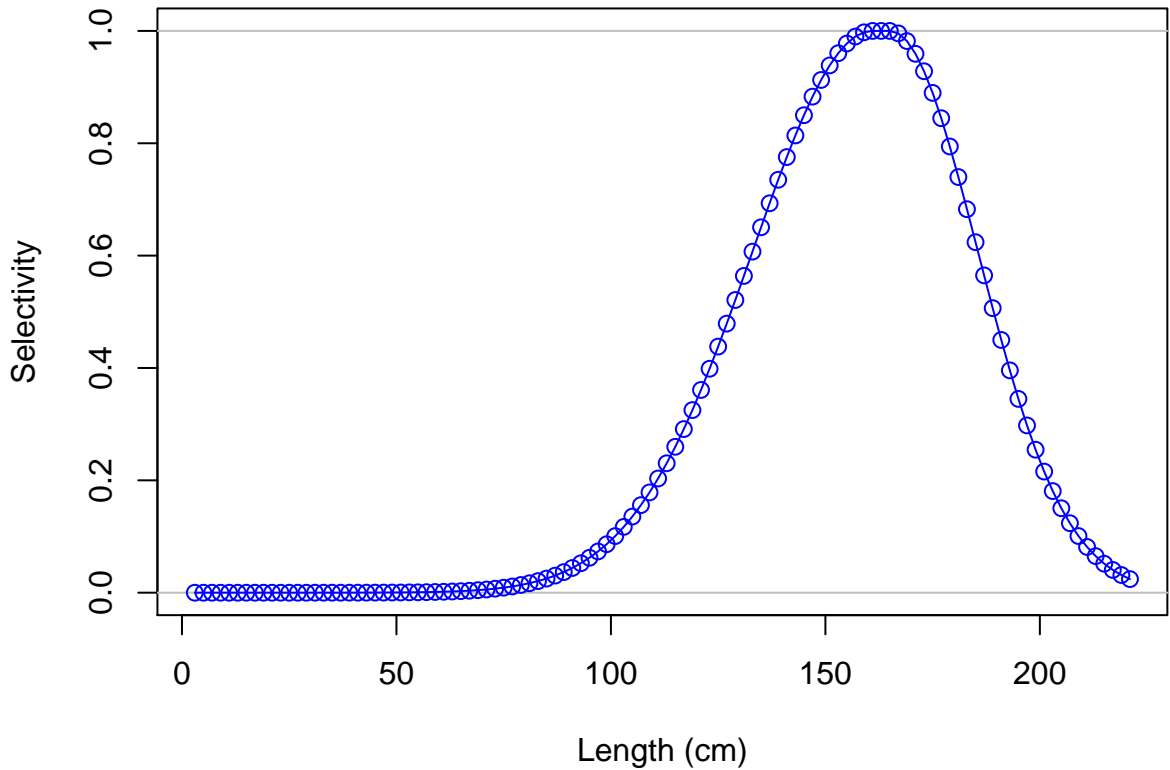
Female ending year selectivity for A6-NOADEL



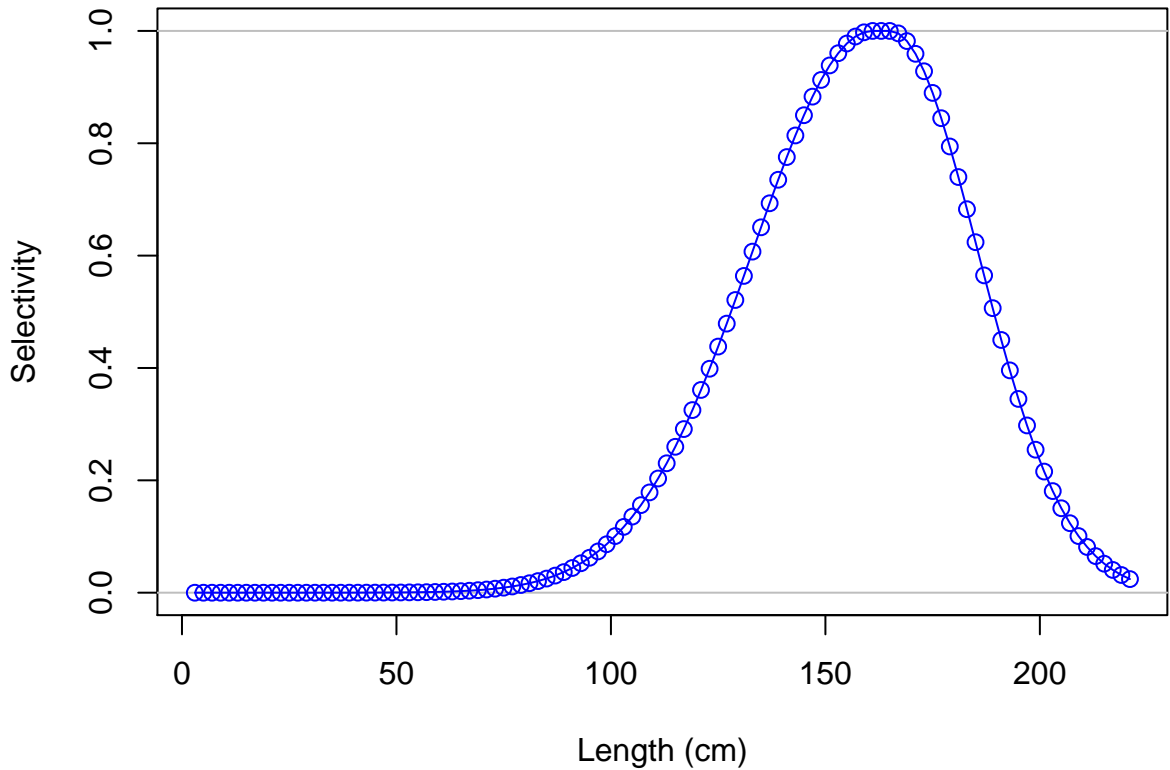
Male ending year selectivity for A6-NOADEL



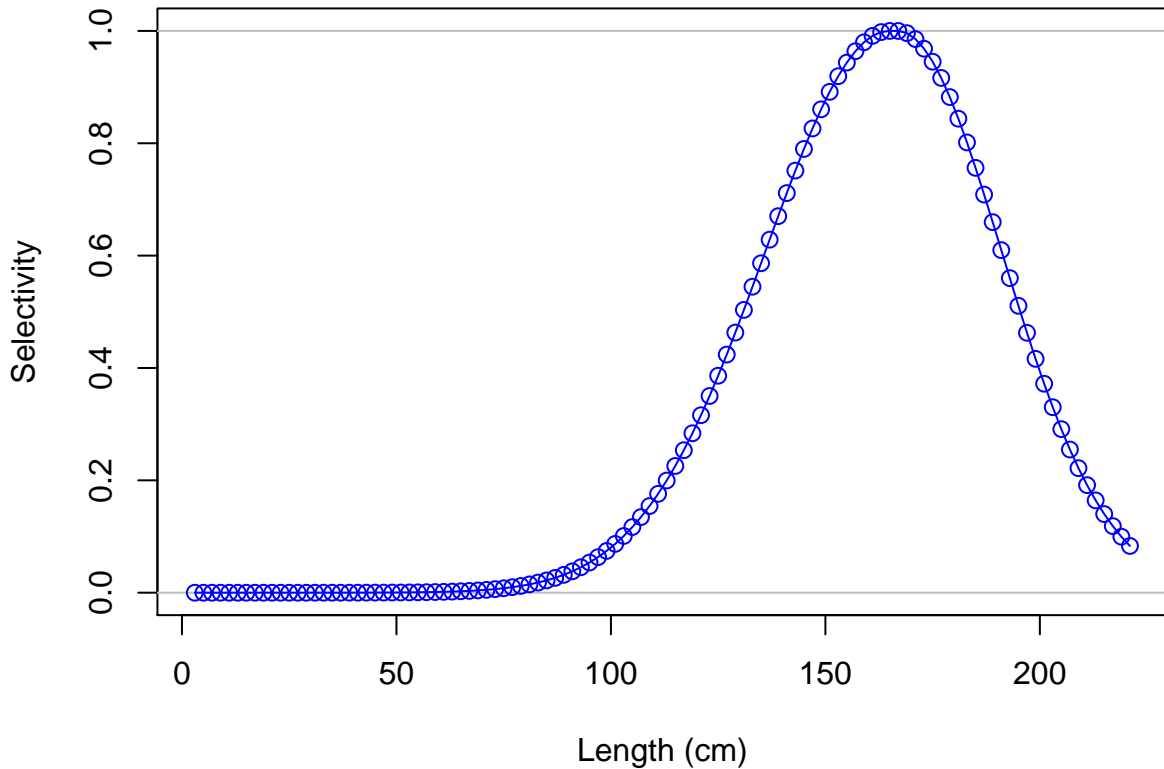
Female ending year selectivity for EPO-LL-survey-early



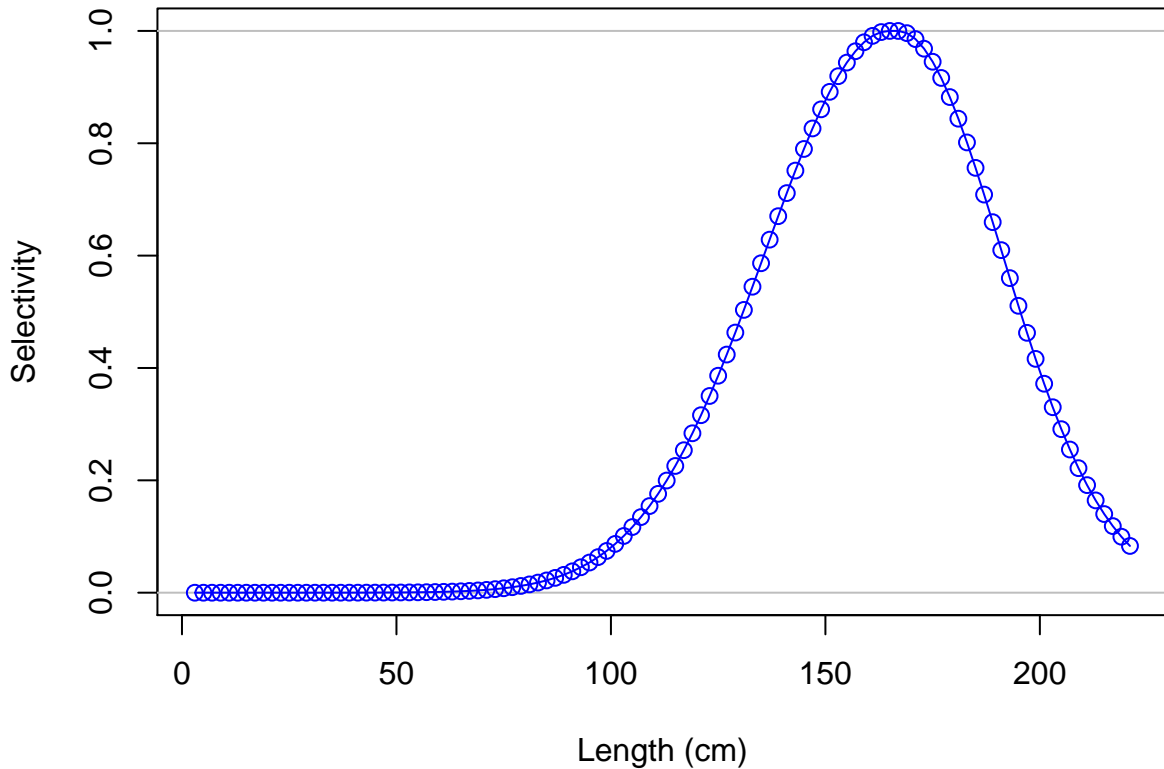
Male ending year selectivity for EPO-LL-survey-early



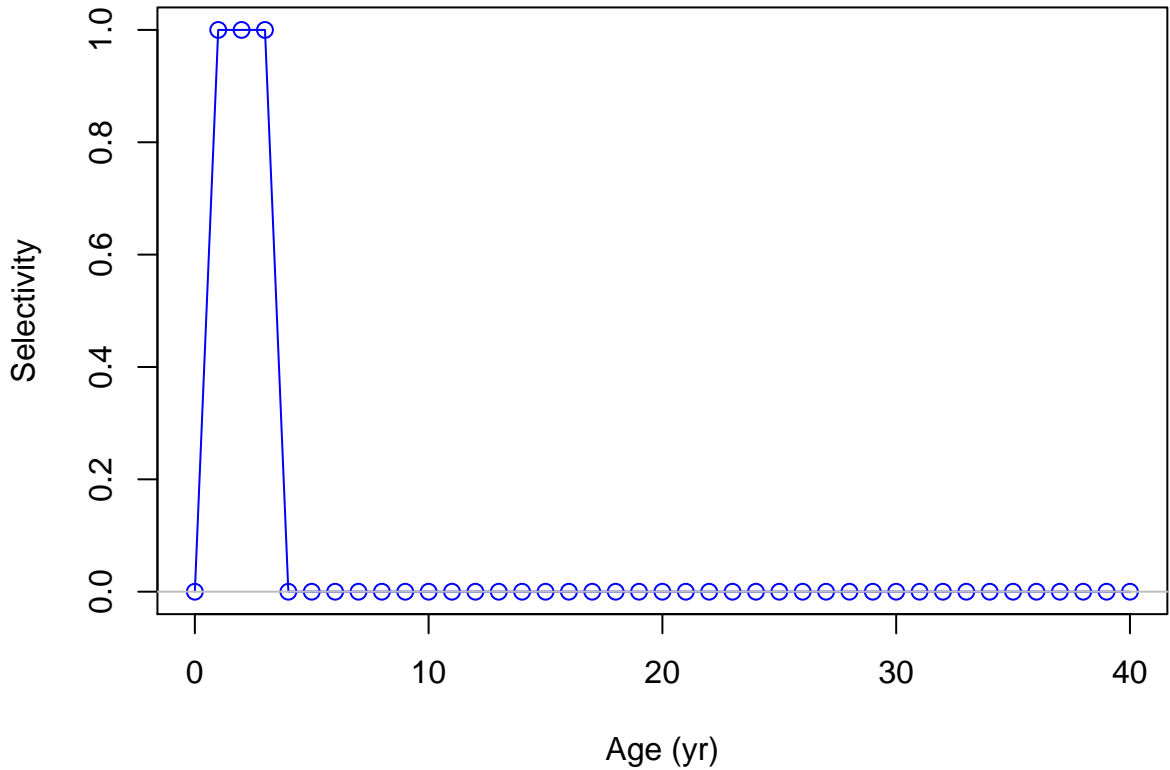
Female ending year selectivity for EPO-LL-survey-late



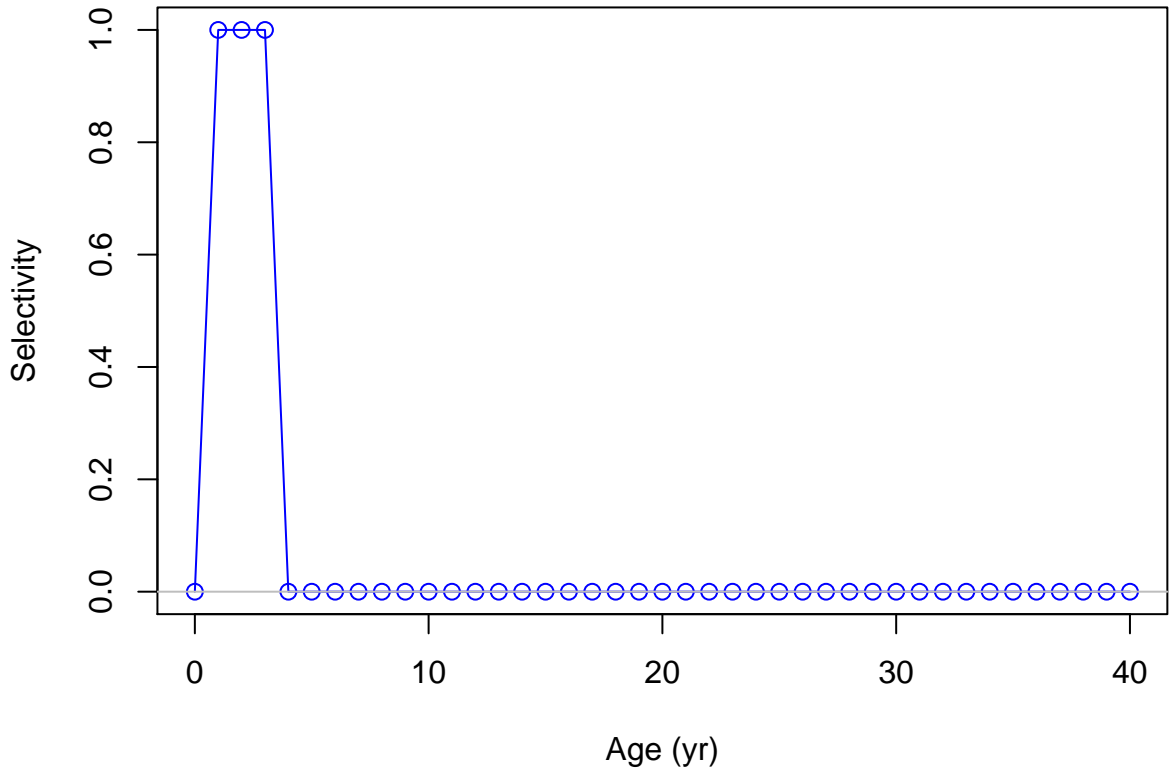
Male ending year selectivity for EPO-LL-survey-late



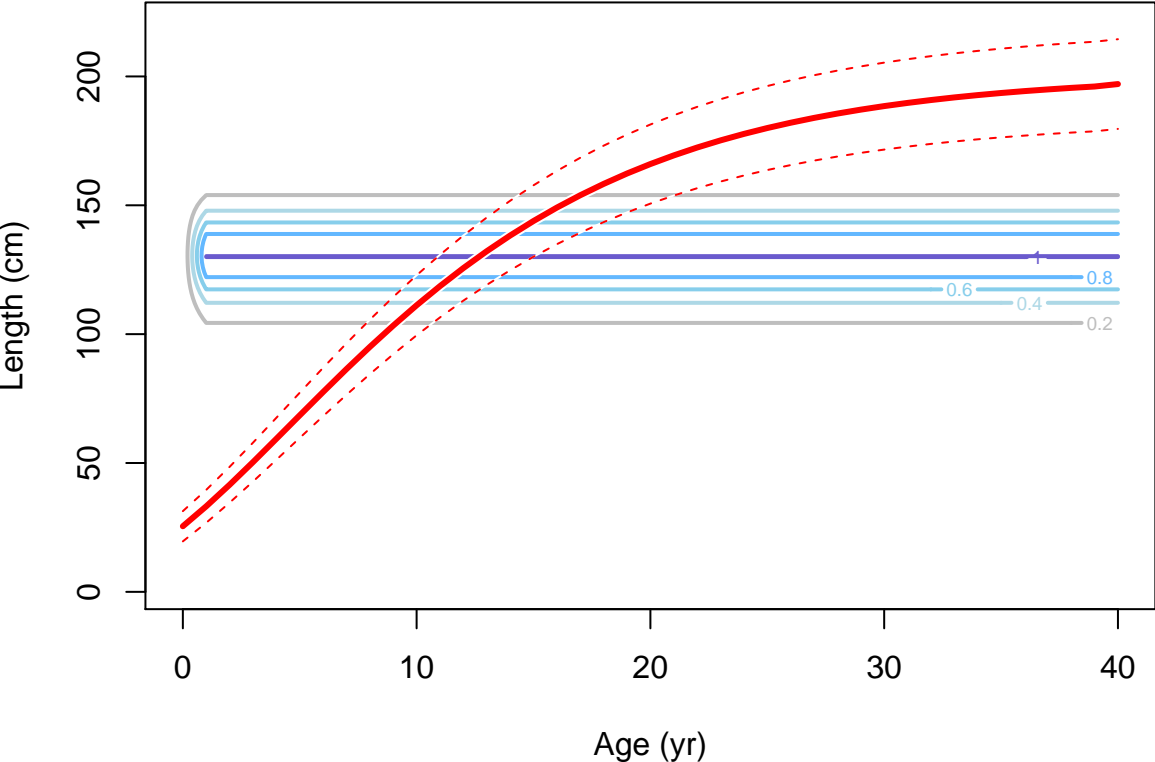
Female ending year selectivity for EPO-OBJ-Disc



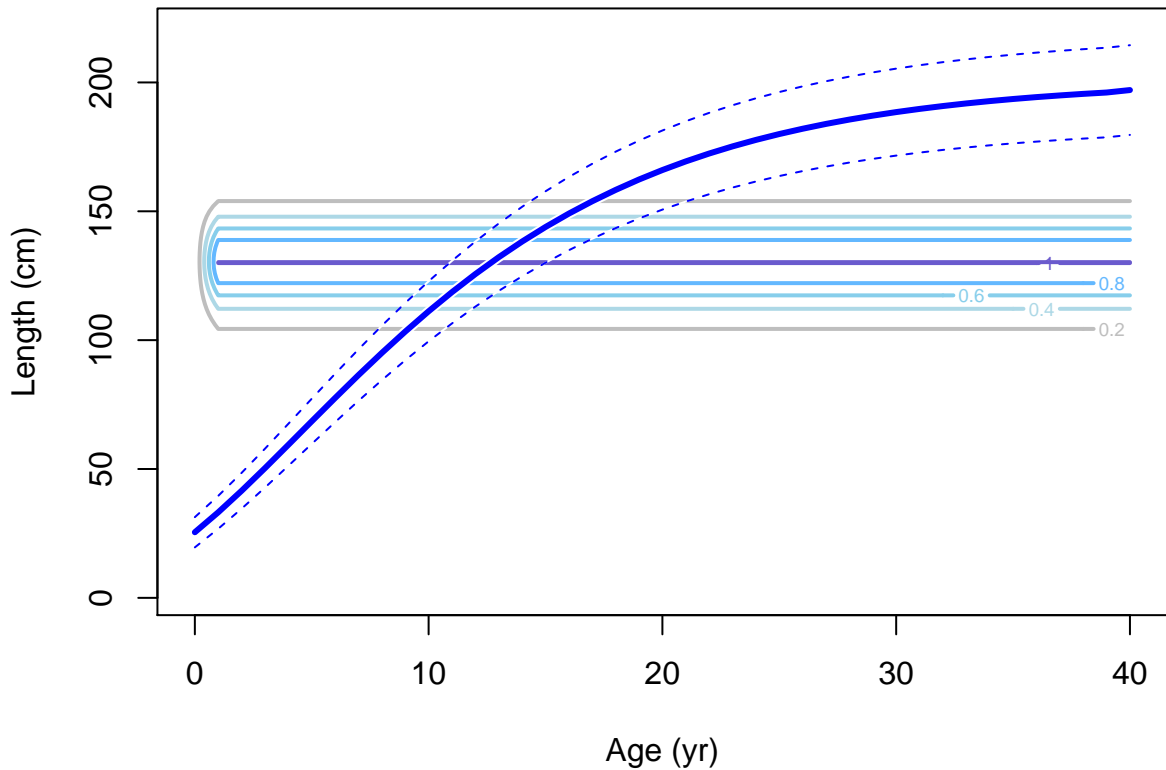
Male ending year selectivity for EPO-Obj-Disc



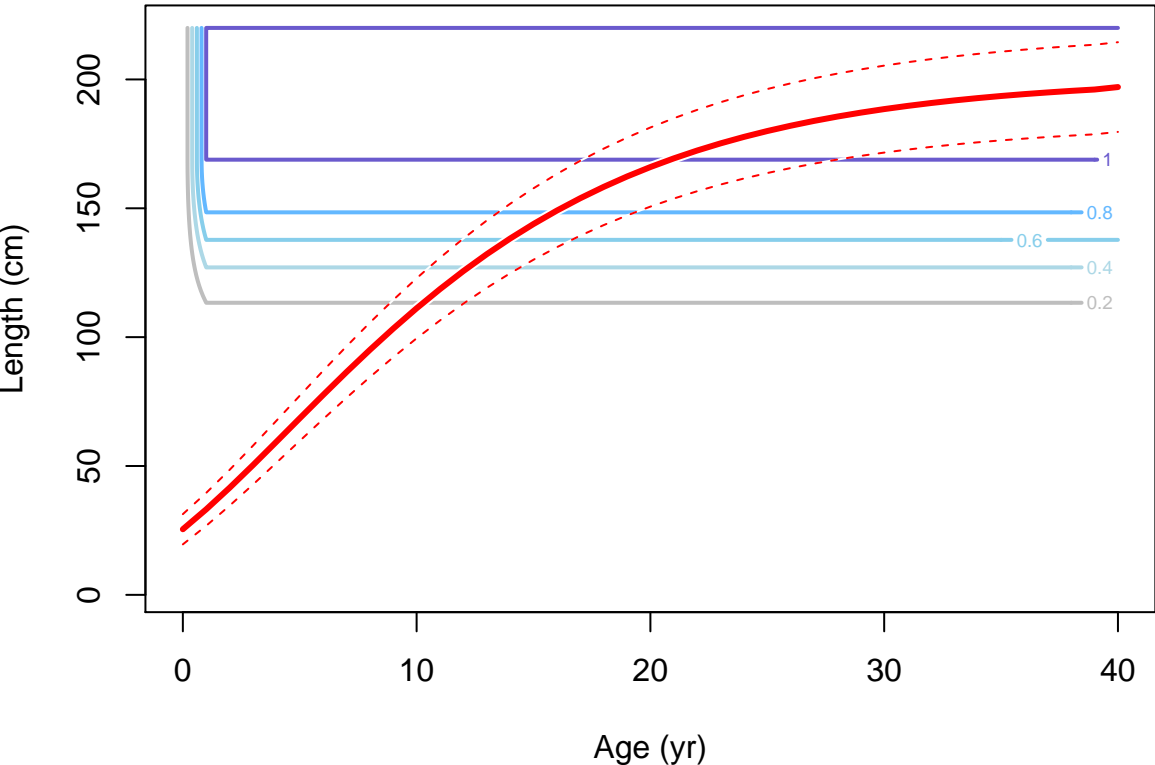
Female ending year selectivity and growth for A1-LL-n



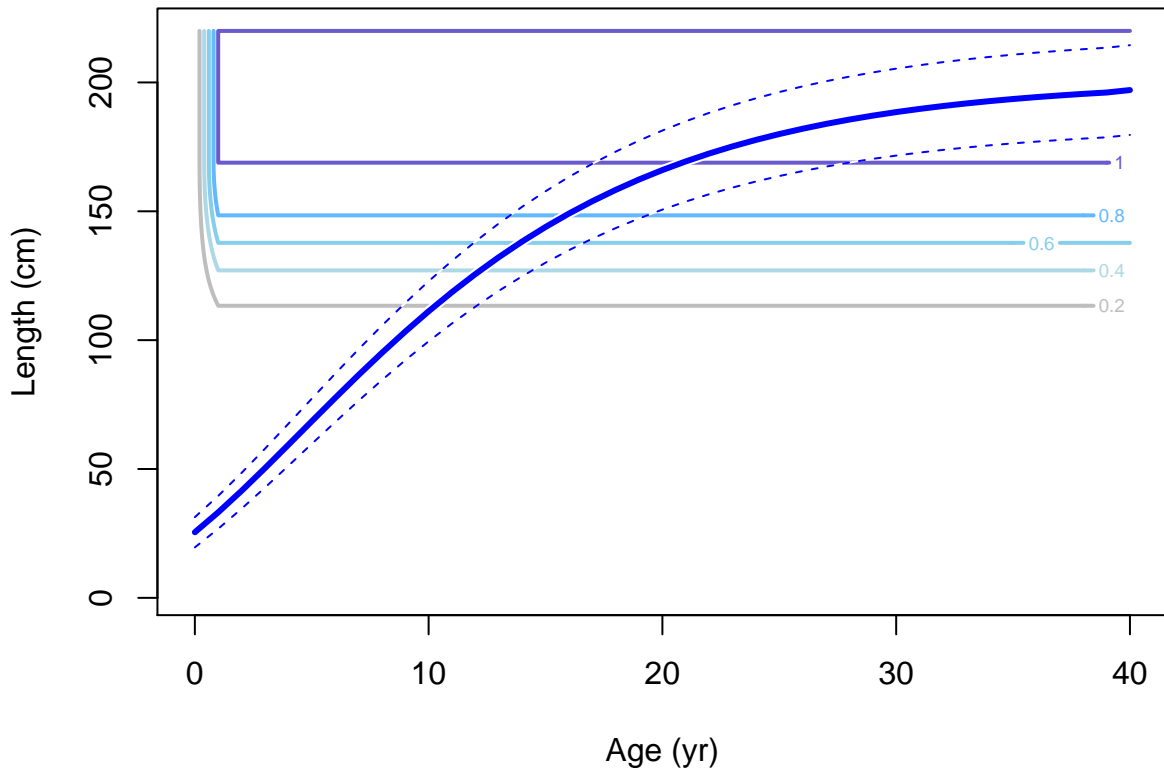
Male ending year selectivity and growth for A1-LL-n



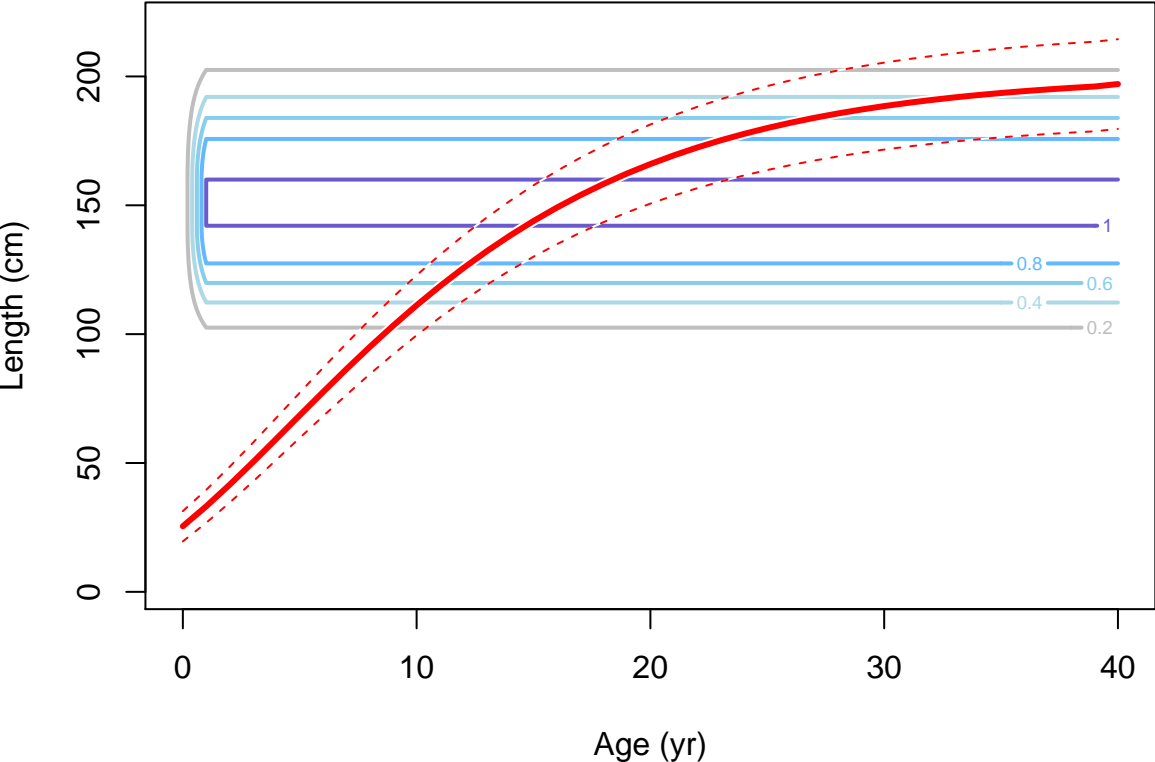
Female ending year selectivity and growth for A2-LL-n



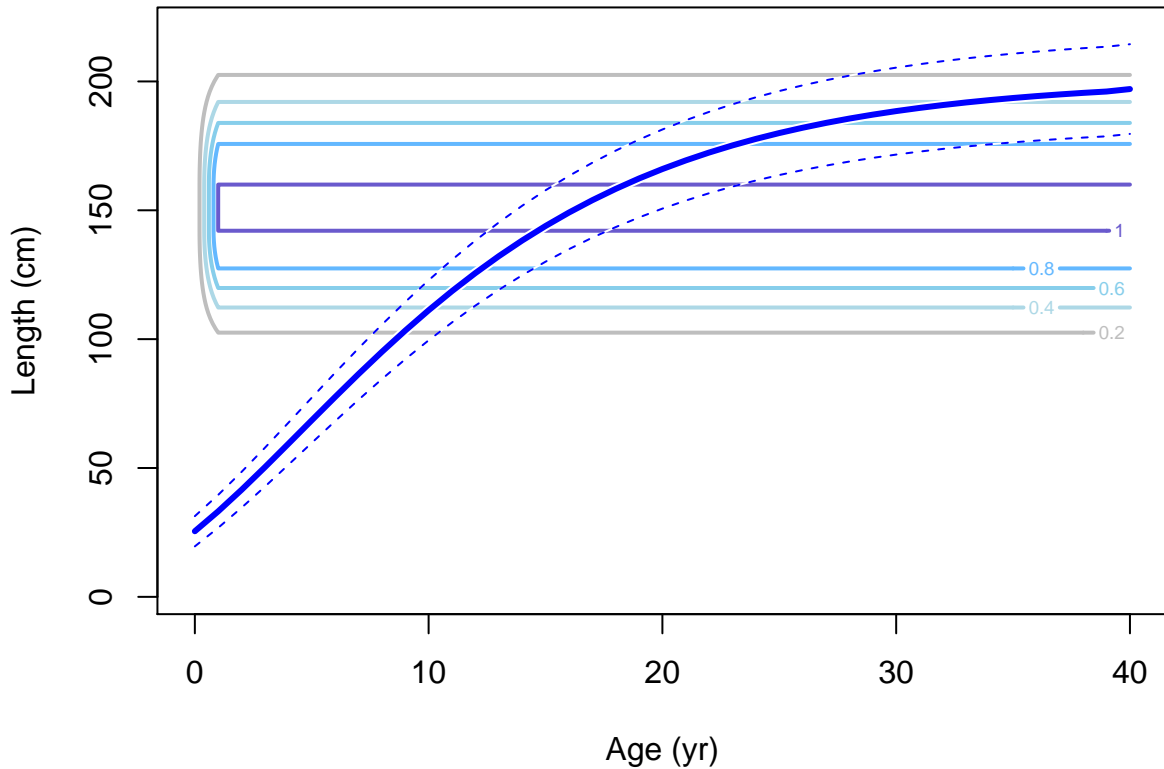
Male ending year selectivity and growth for A2-LL-n



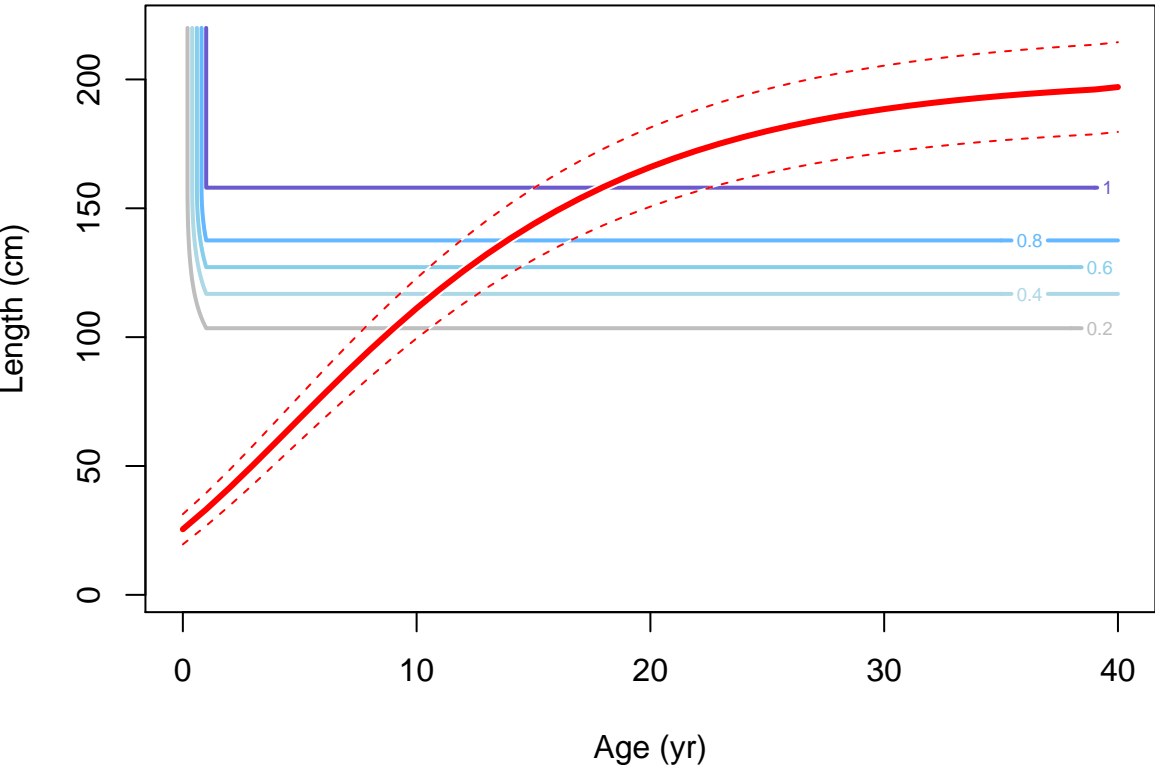
Female ending year selectivity and growth for A3-LL-n



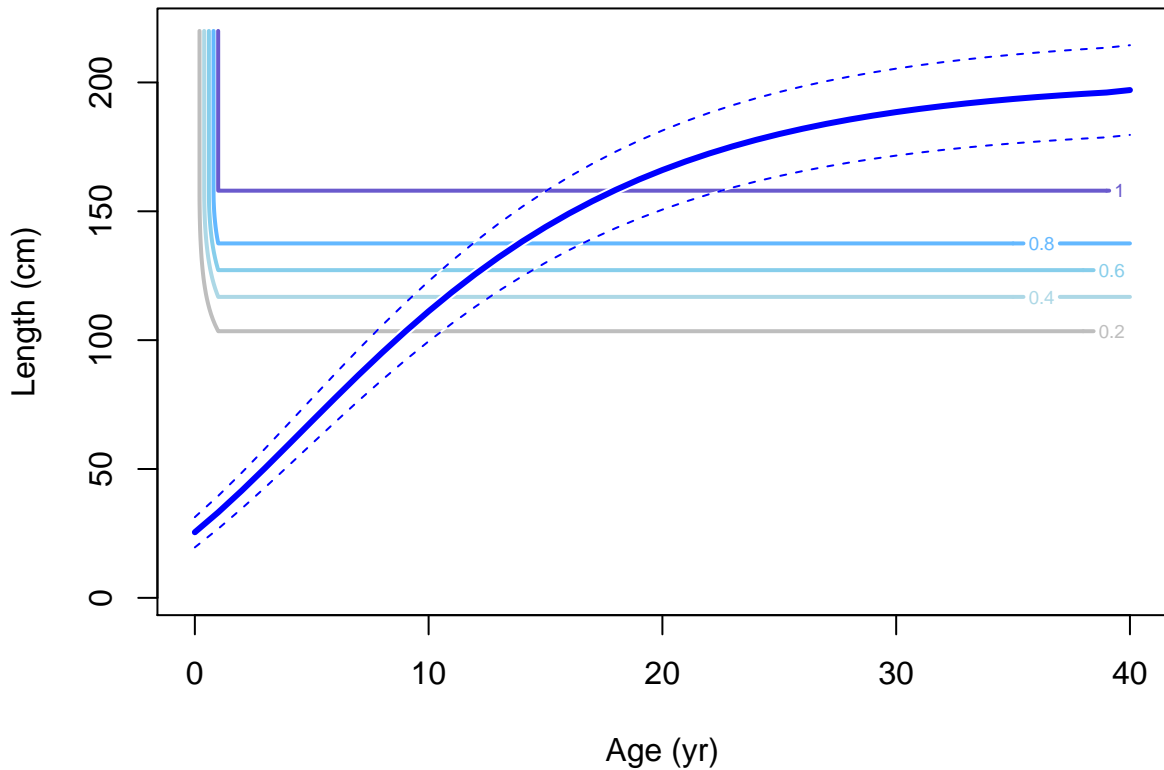
Male ending year selectivity and growth for A3-LL-n



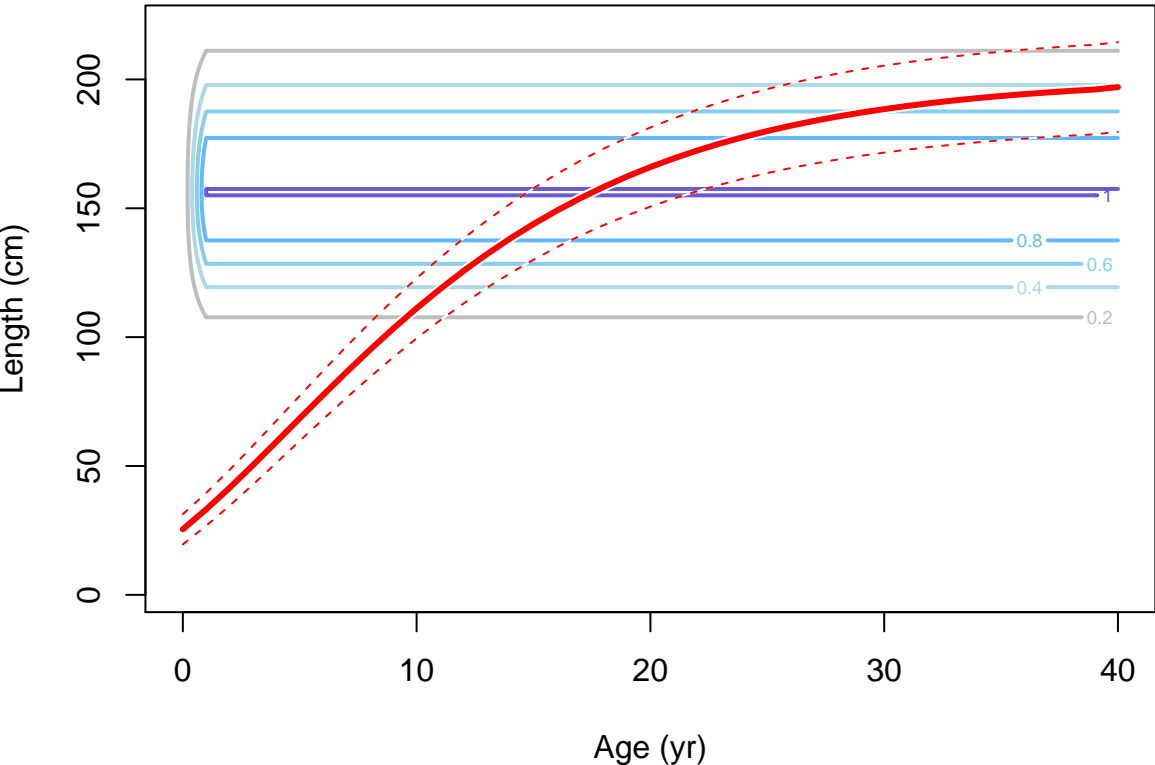
Female ending year selectivity and growth for A4-LL-n



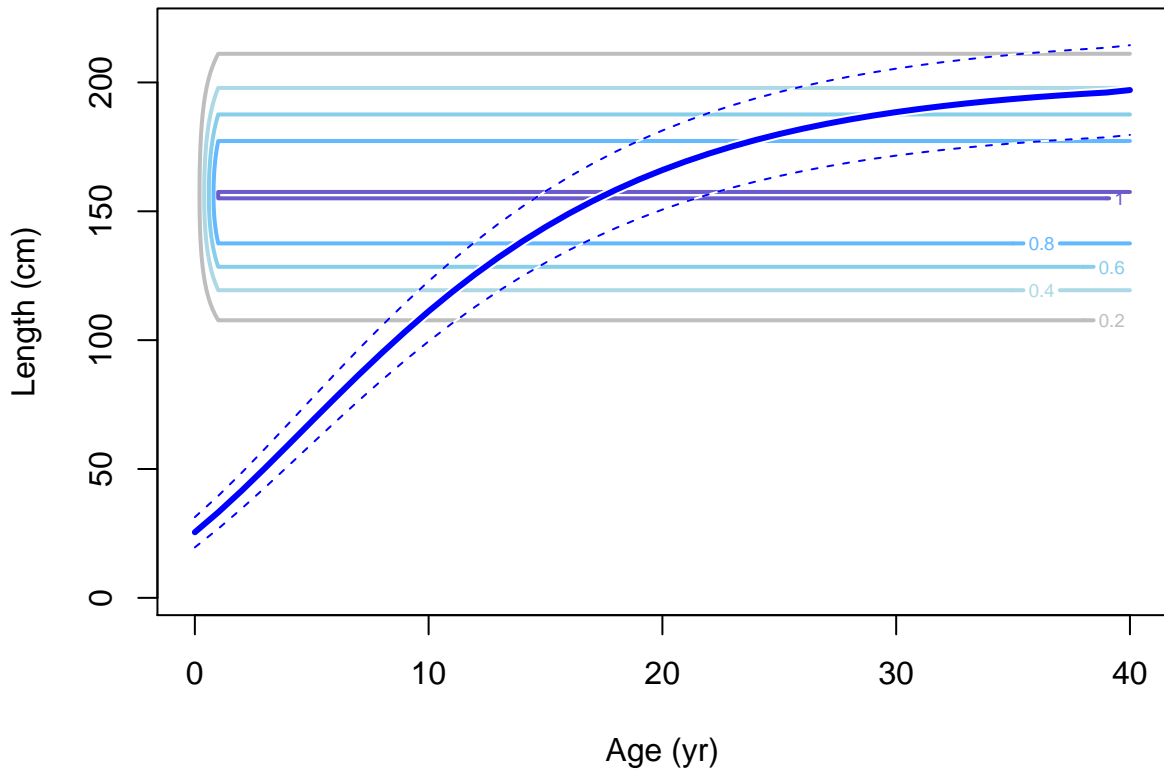
Male ending year selectivity and growth for A4-LL-n



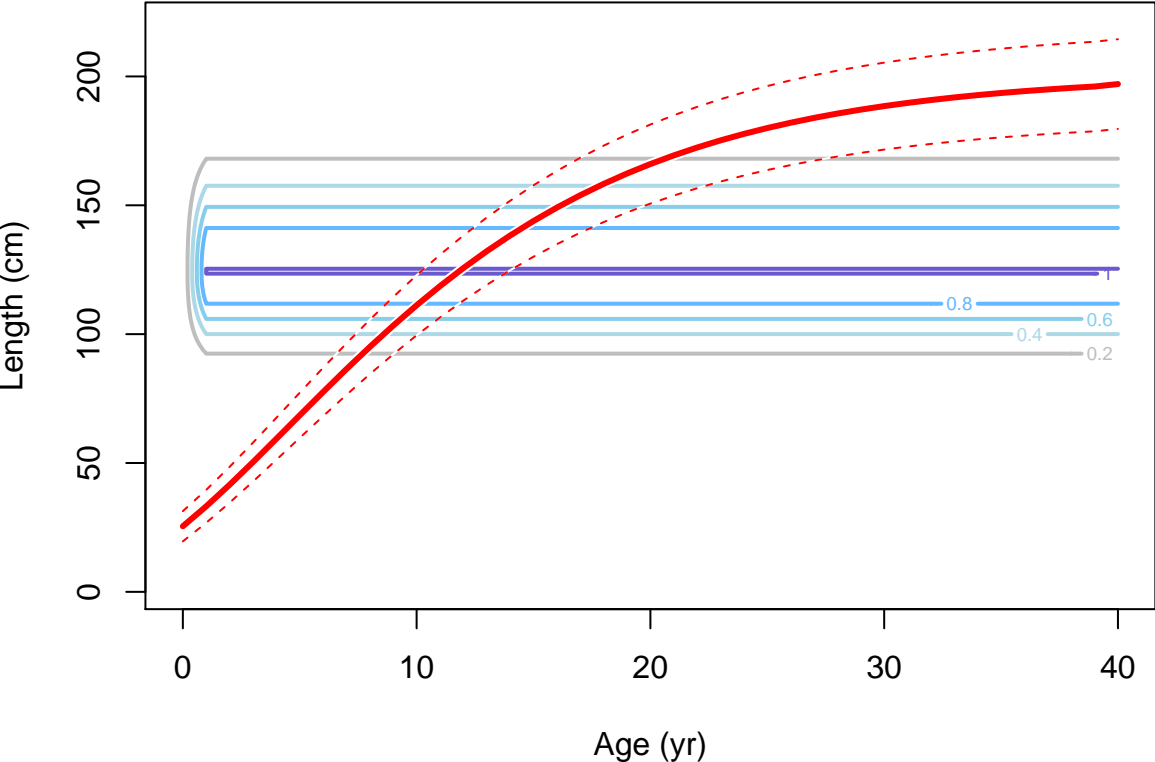
Female ending year selectivity and growth for A5-LL-n



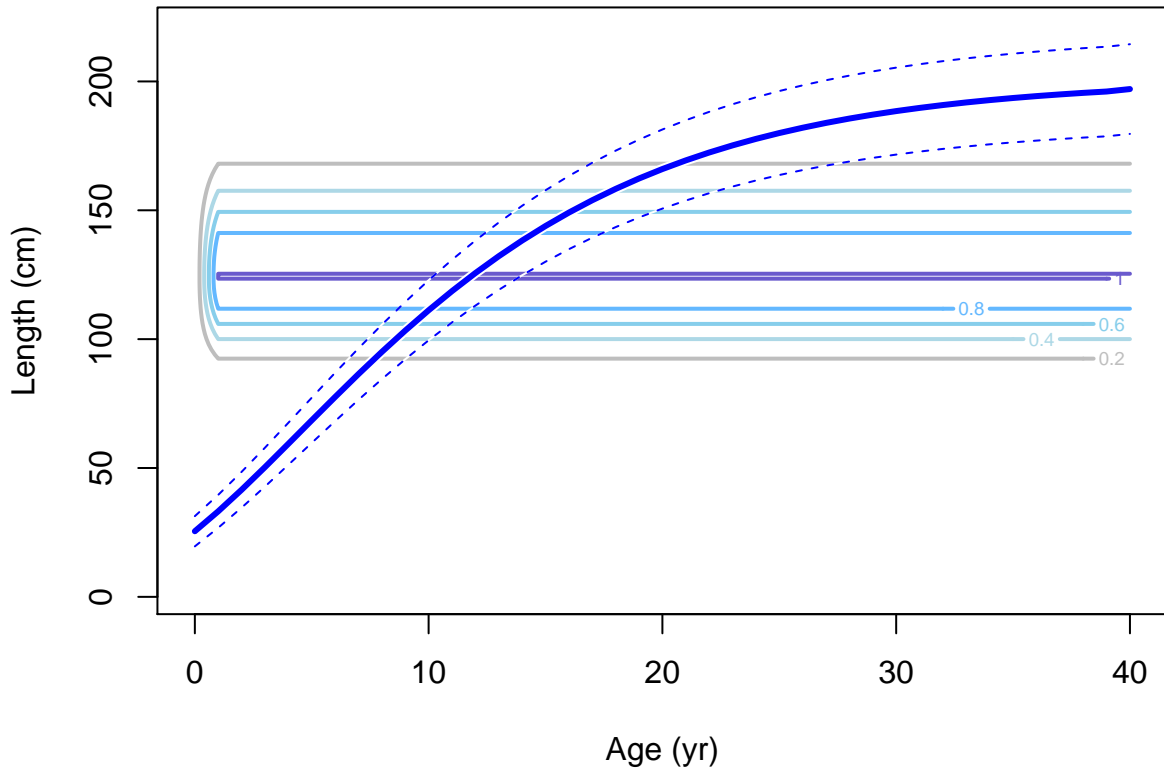
Male ending year selectivity and growth for A5-LL-n



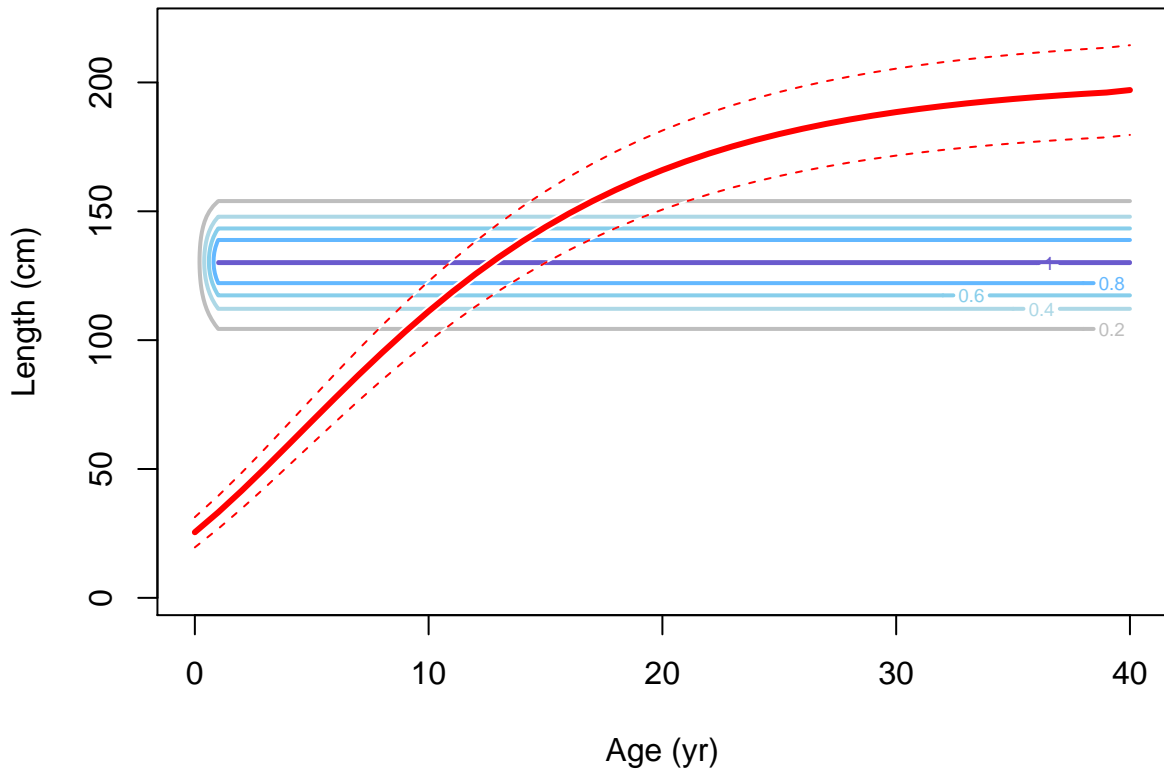
Female ending year selectivity and growth for A6-LL-n



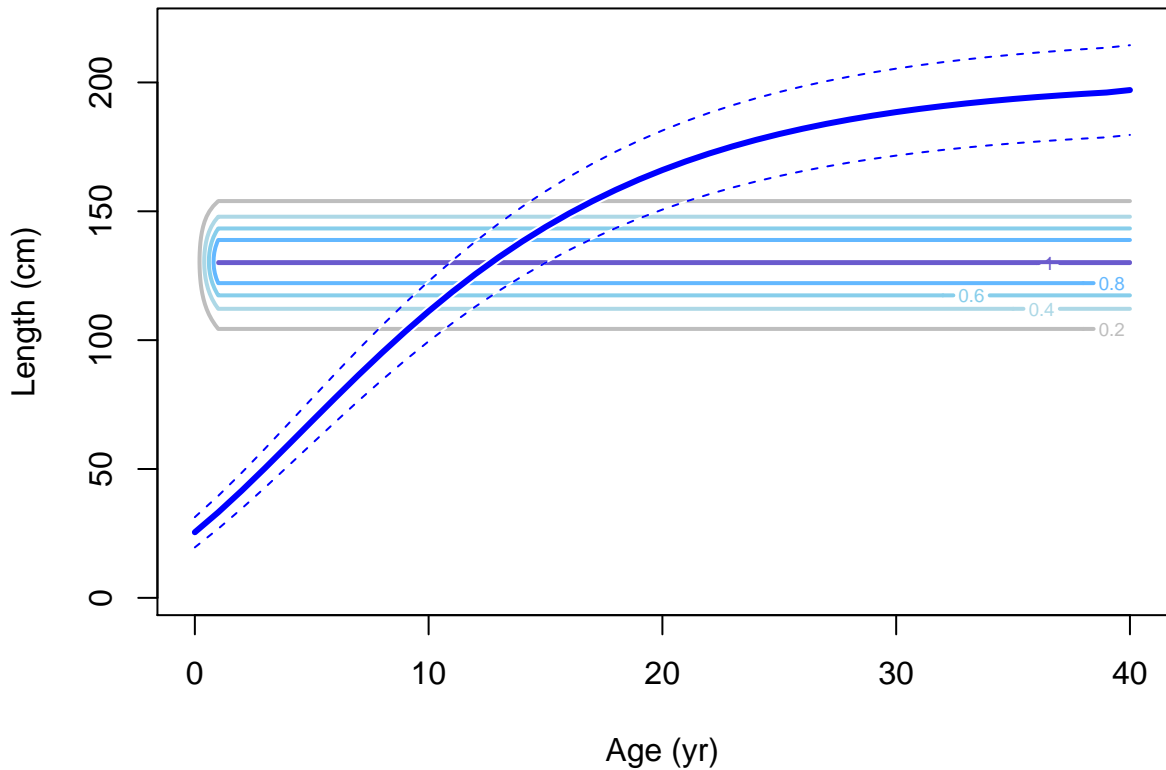
Male ending year selectivity and growth for A6-LL-n



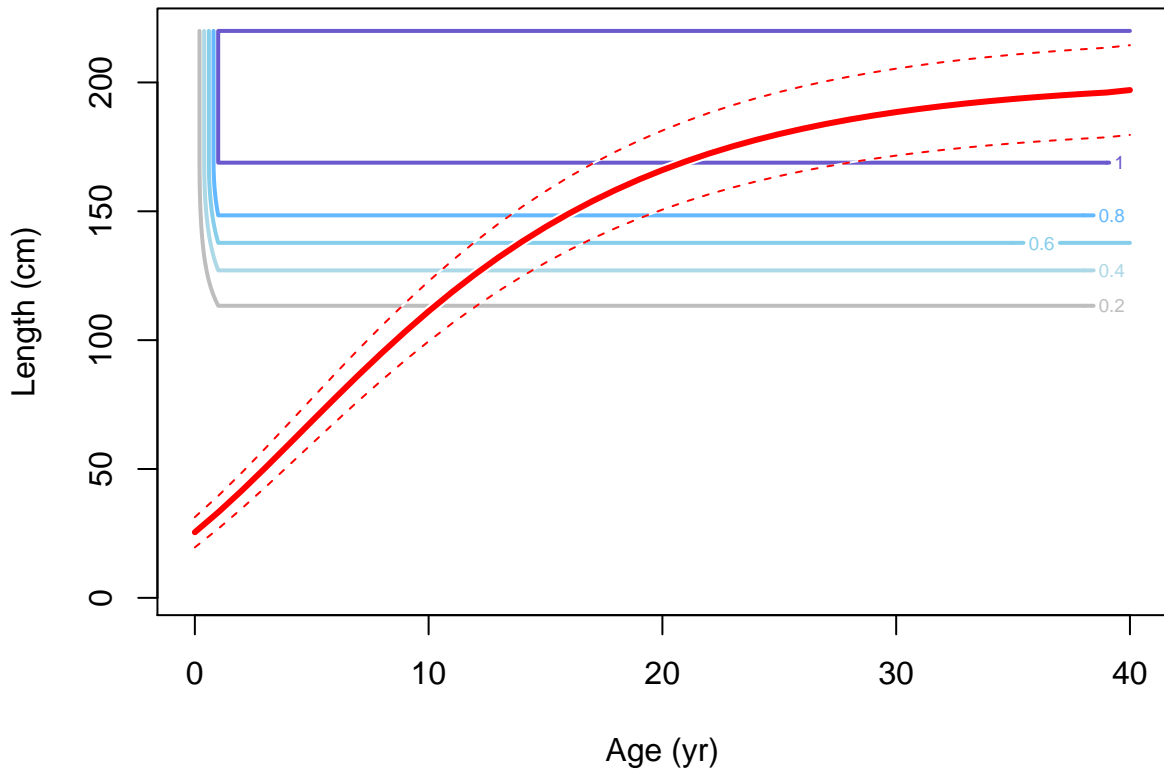
Female ending year selectivity and growth for A1-LL-w



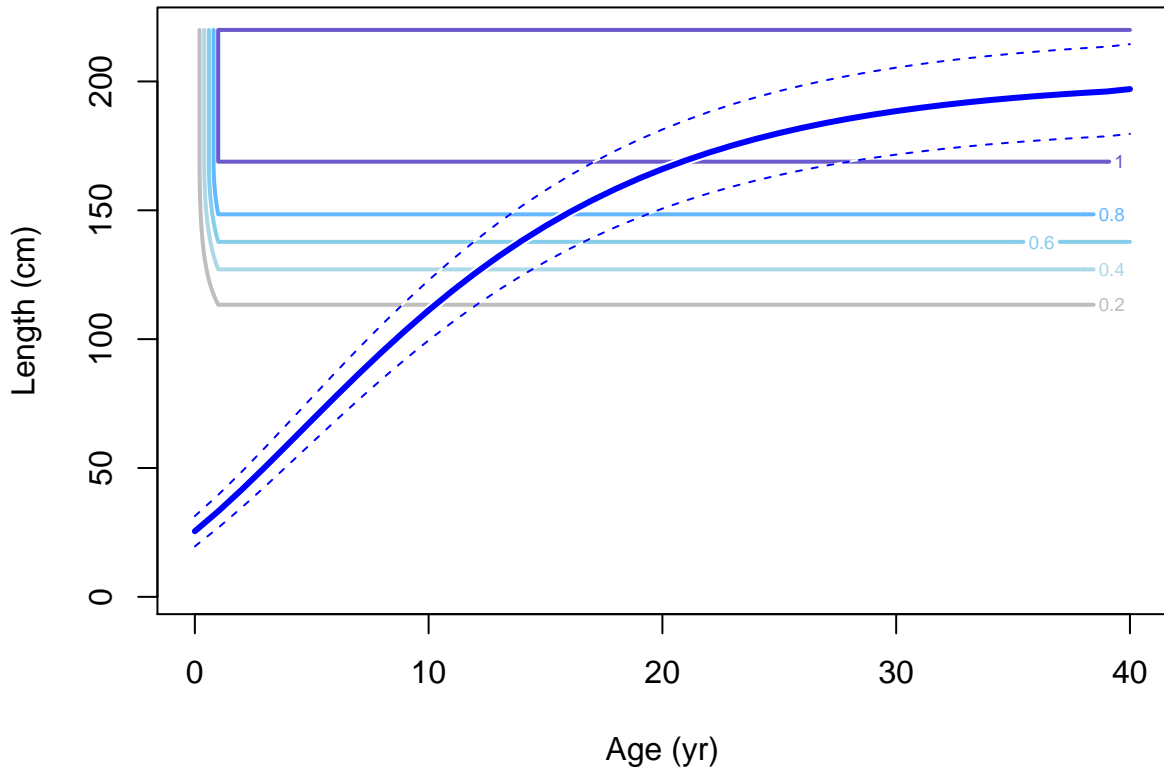
Male ending year selectivity and growth for A1-LL-w



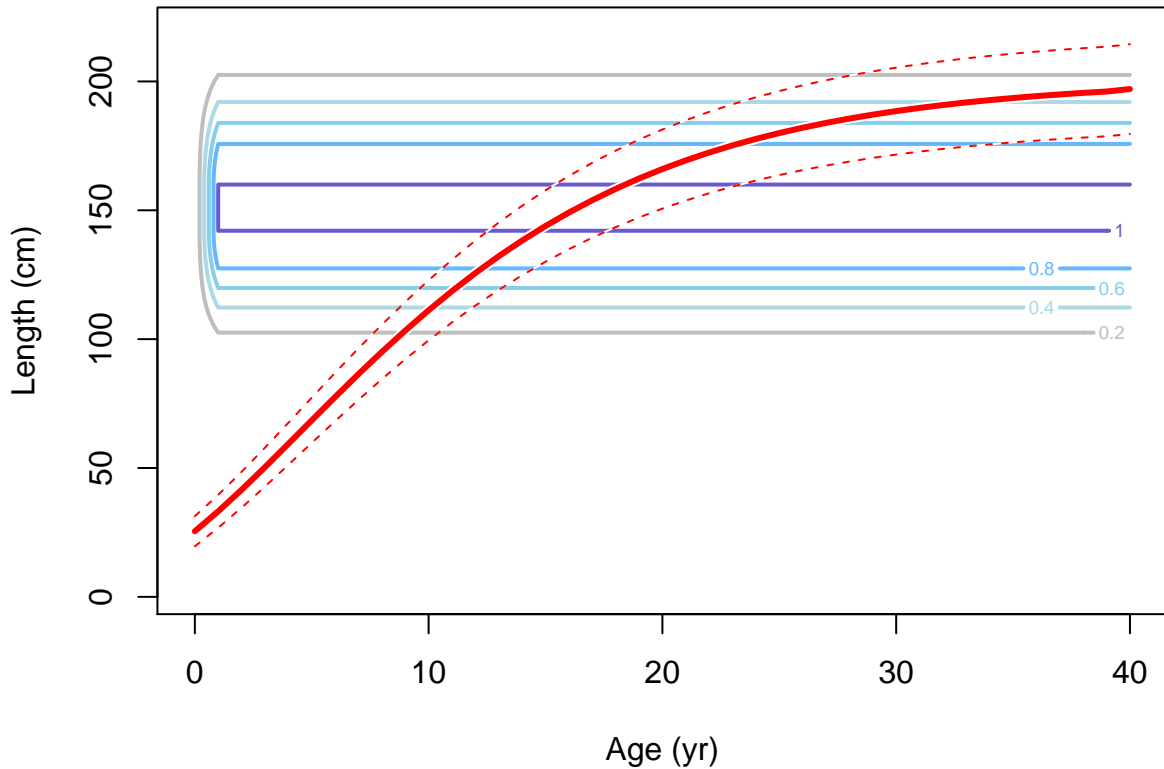
Female ending year selectivity and growth for A2-LL-w



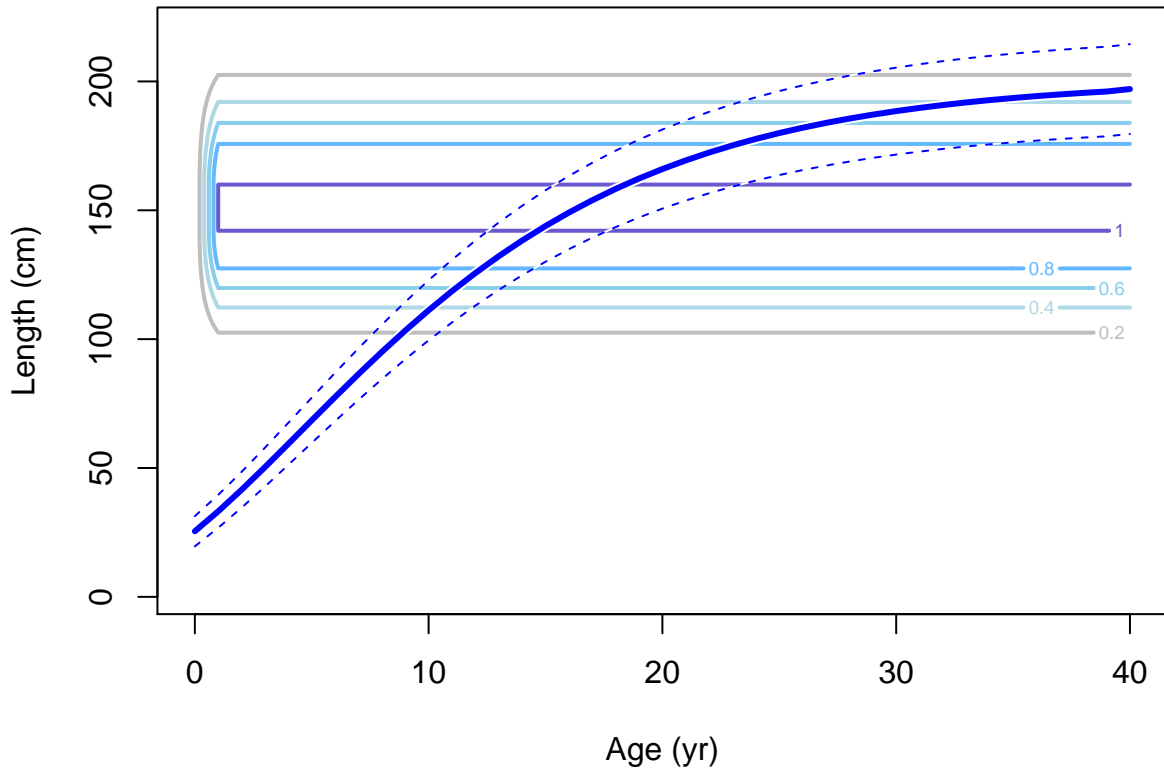
Male ending year selectivity and growth for A2-LL-w



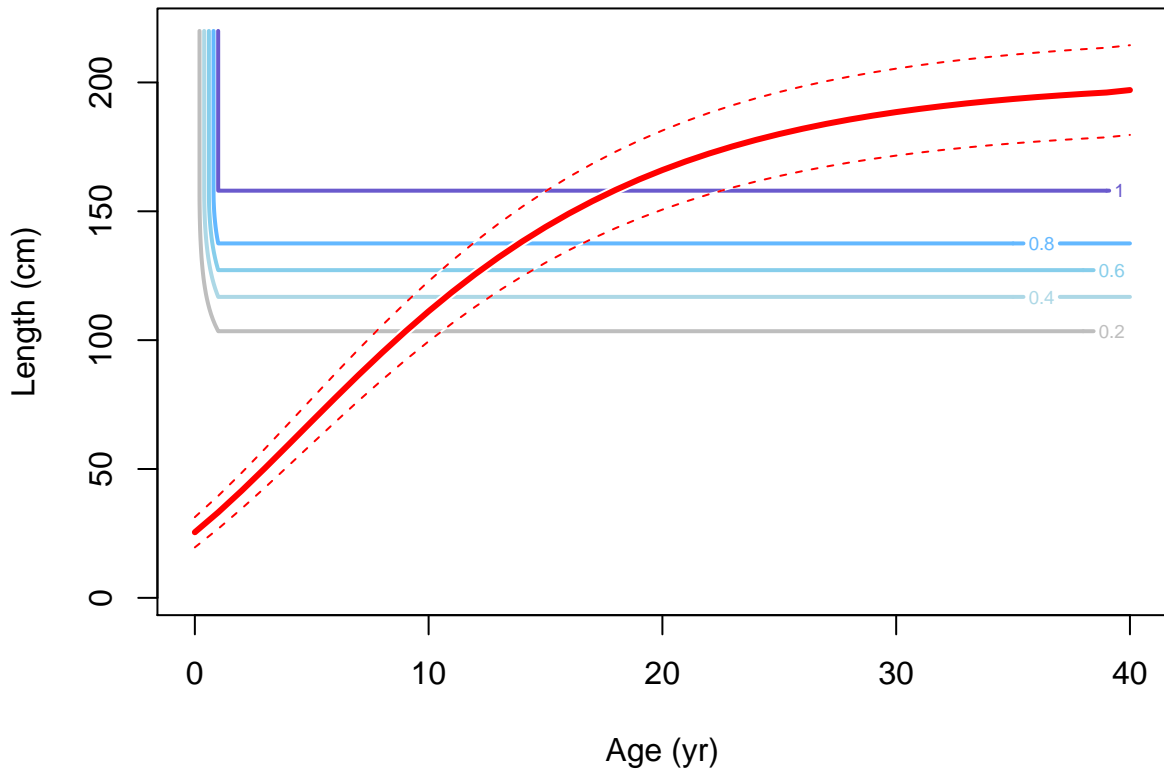
Female ending year selectivity and growth for A3-LL-w



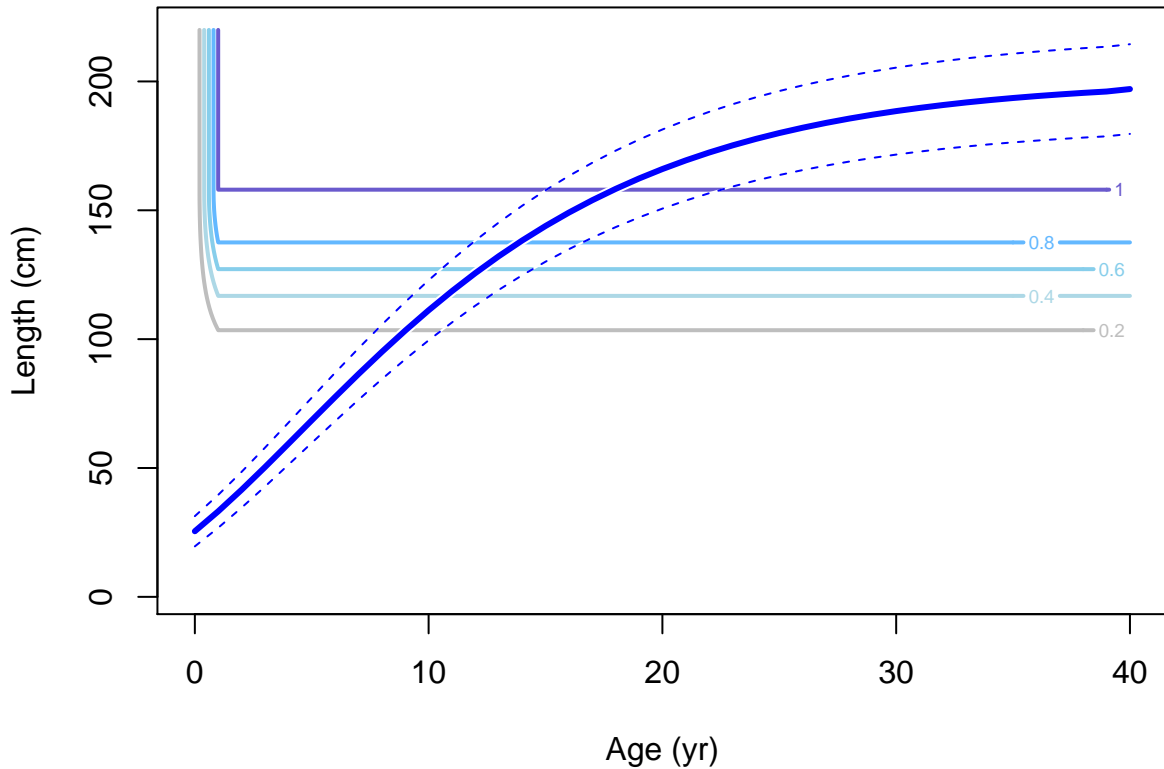
Male ending year selectivity and growth for A3-LL-w



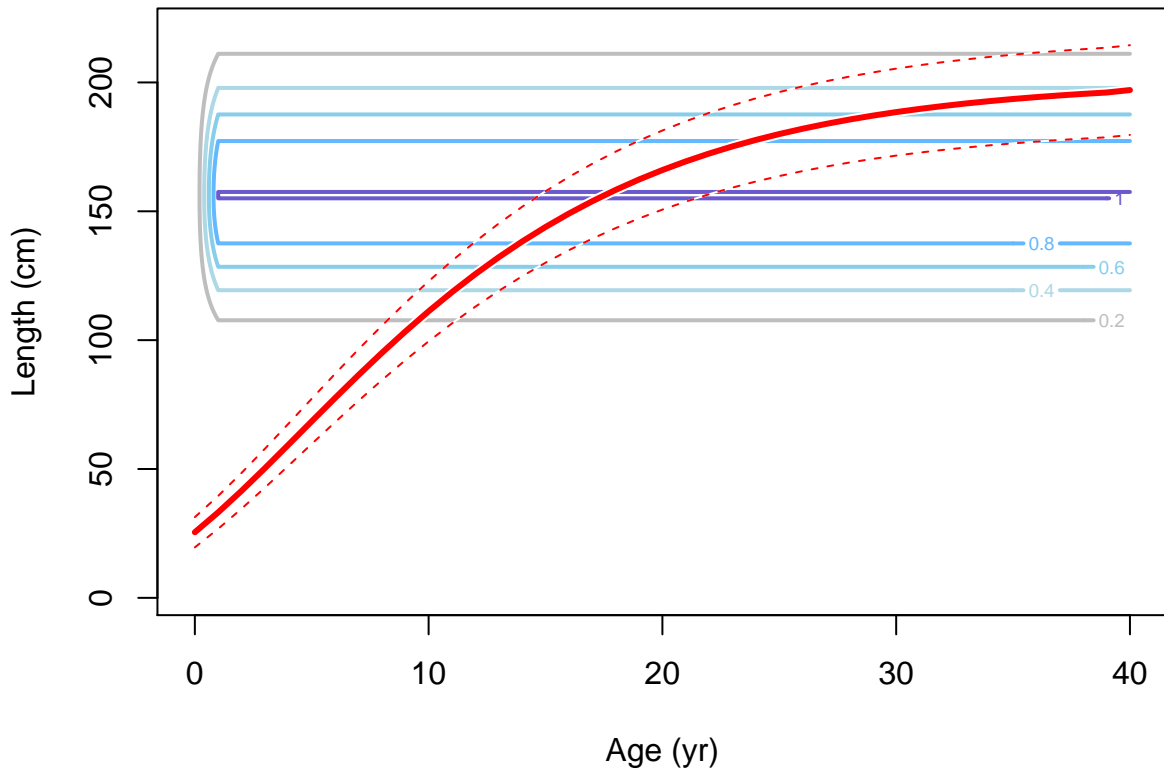
Female ending year selectivity and growth for A4-LL-w



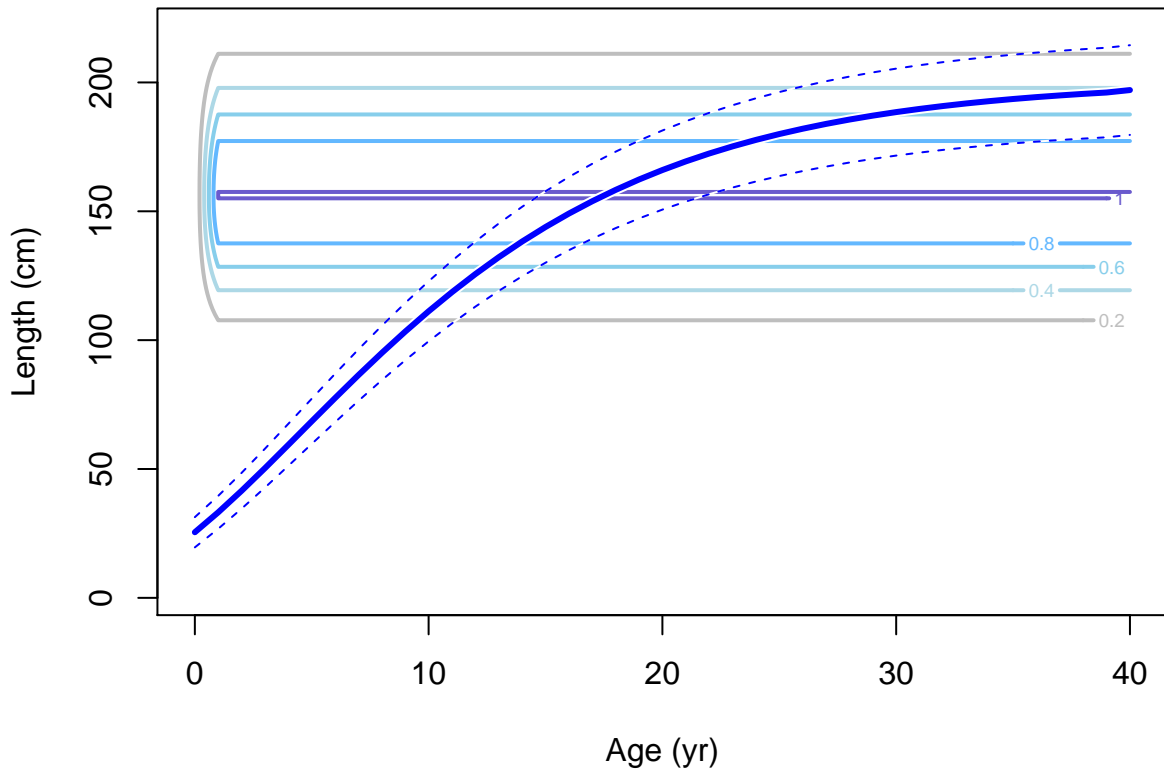
Male ending year selectivity and growth for A4-LL-w



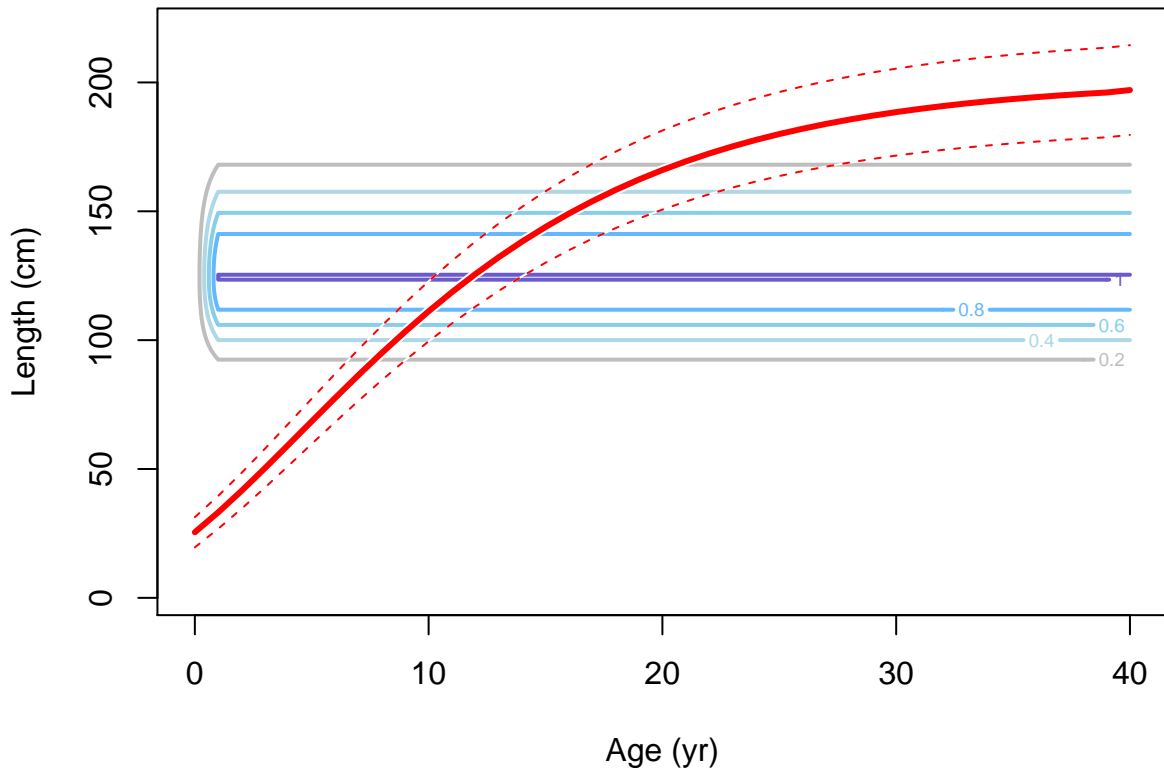
Female ending year selectivity and growth for A5-LL-w



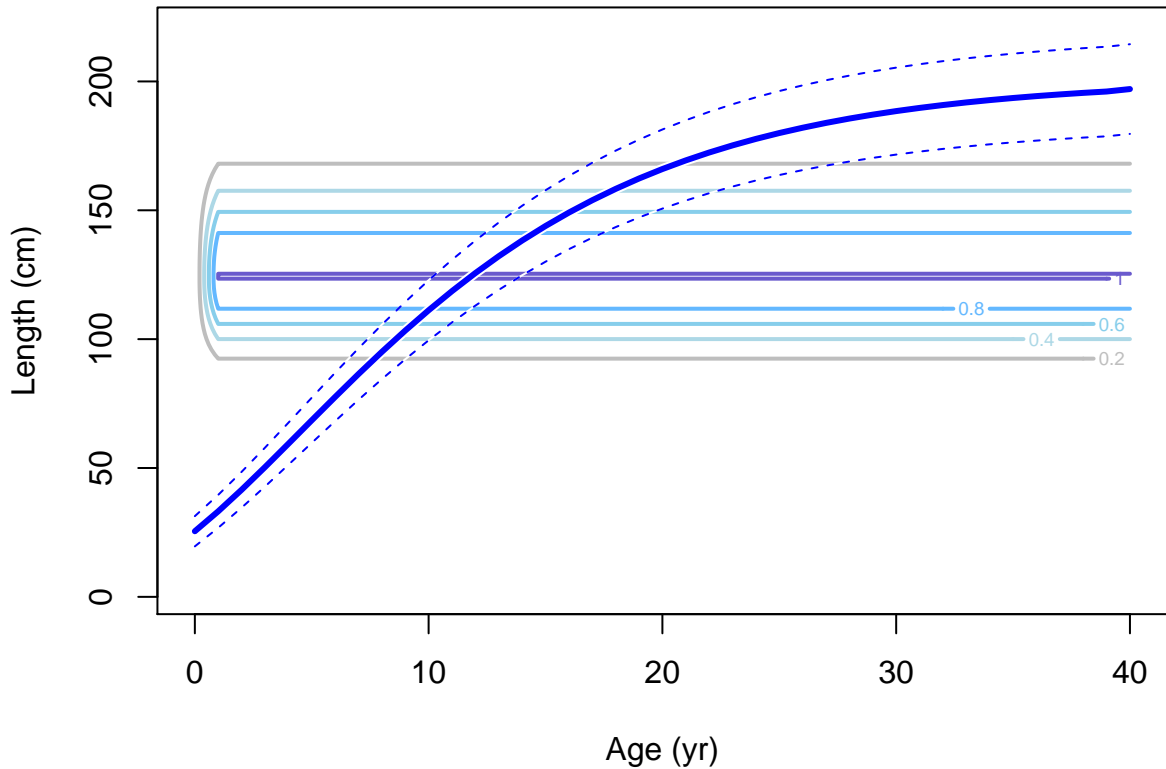
Male ending year selectivity and growth for A5-LL-w



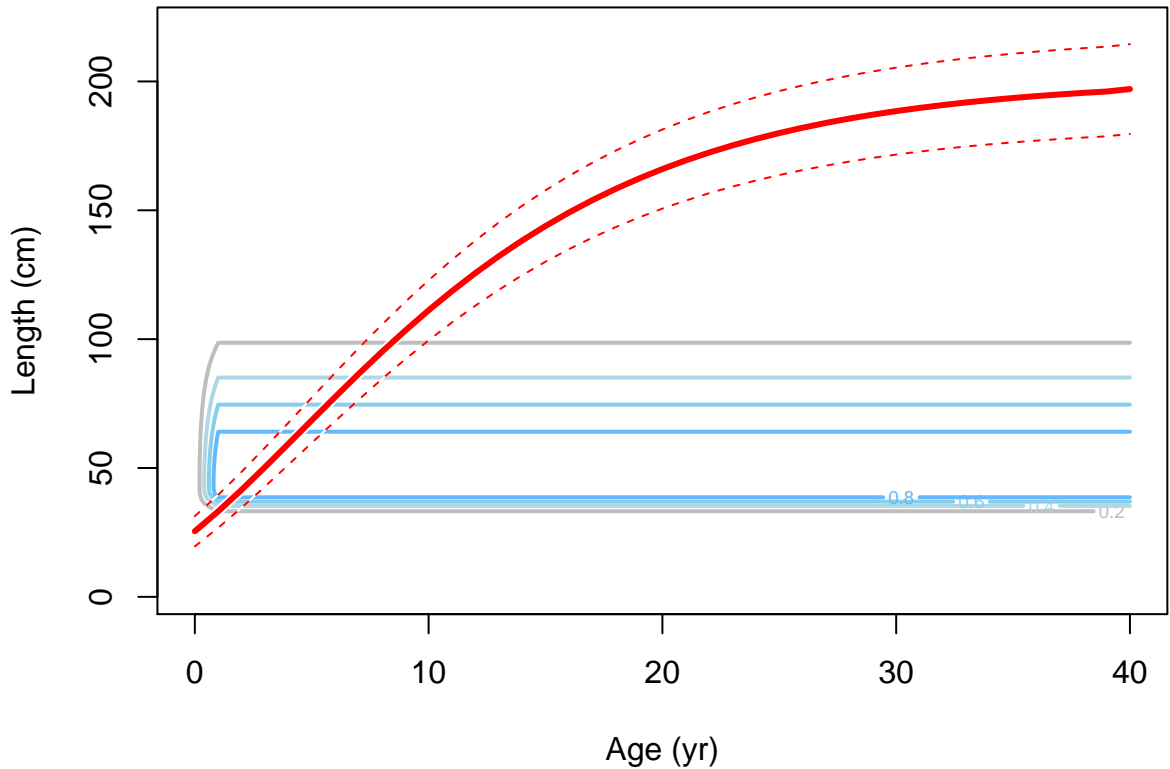
Female ending year selectivity and growth for A6-LL-w



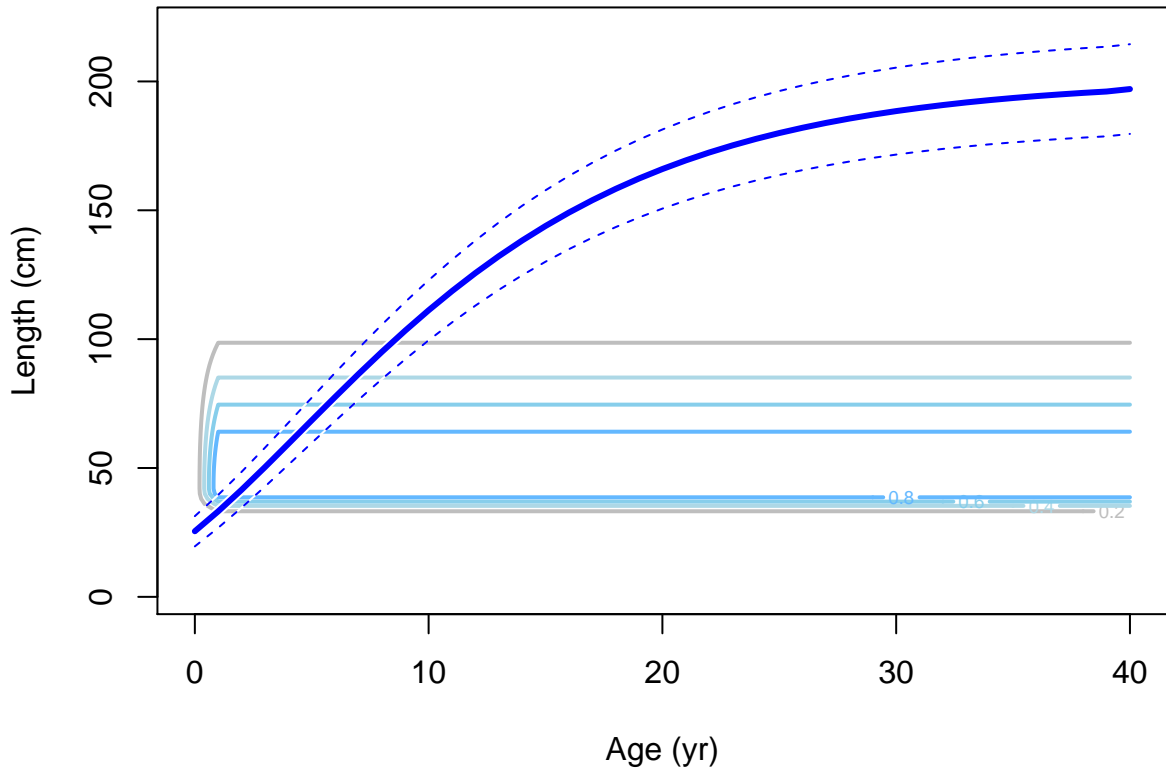
Male ending year selectivity and growth for A6-LL-w



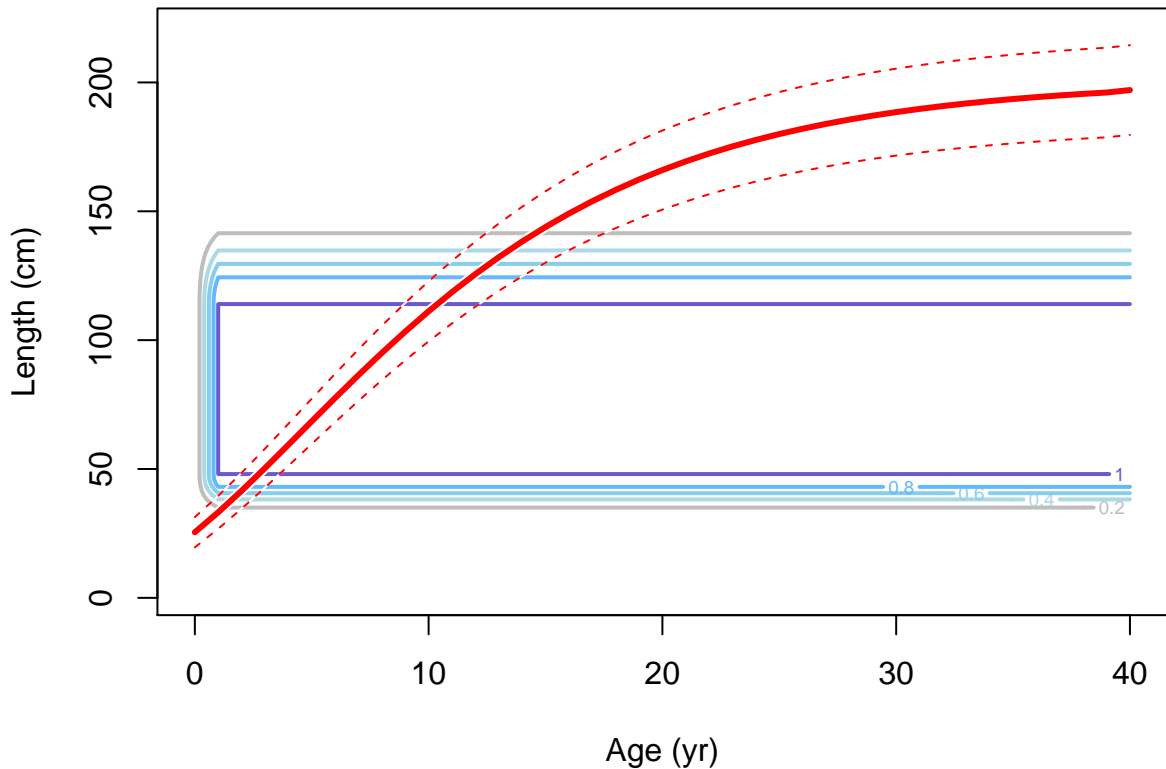
Female ending year selectivity and growth for A2-OBJ



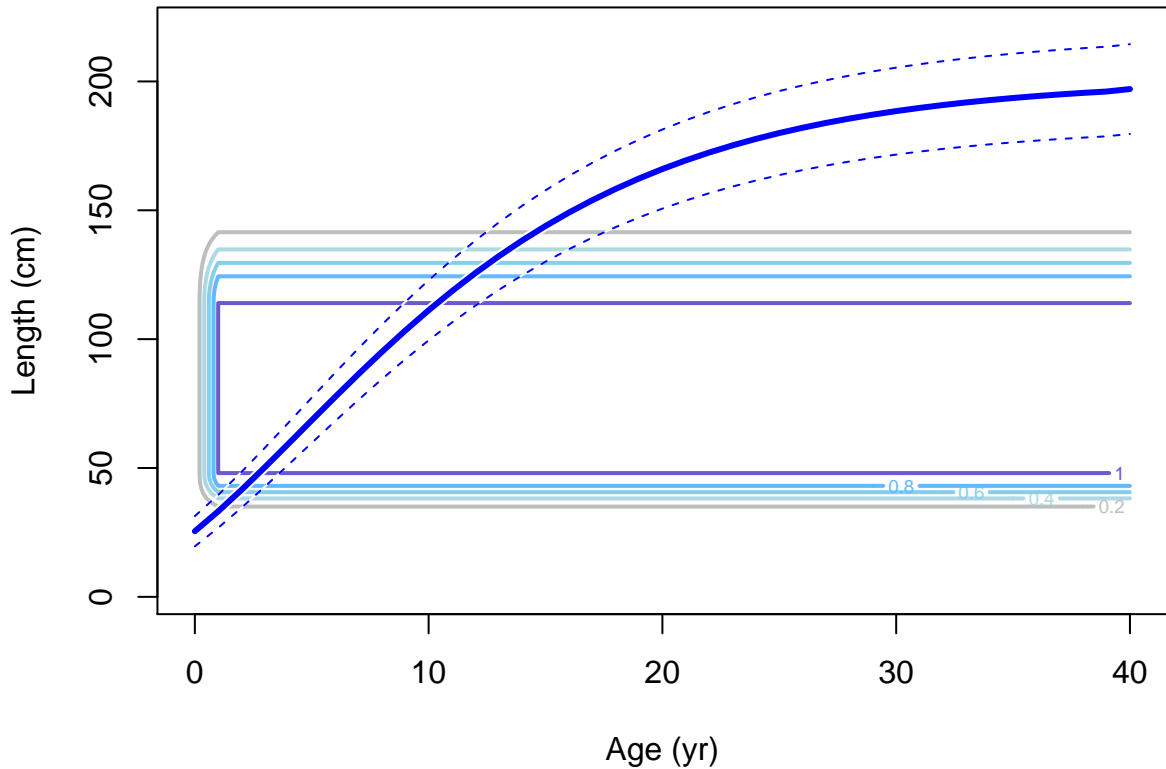
Male ending year selectivity and growth for A2-OBJ



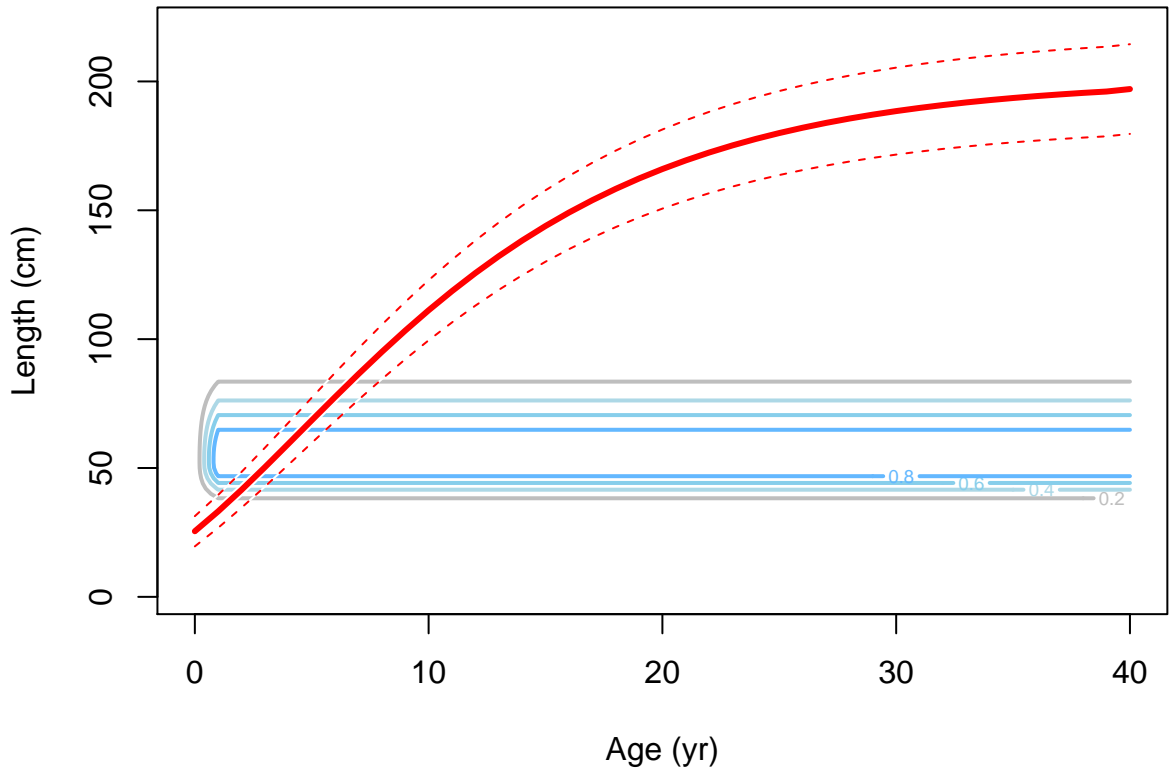
Female ending year selectivity and growth for A3-OBJ



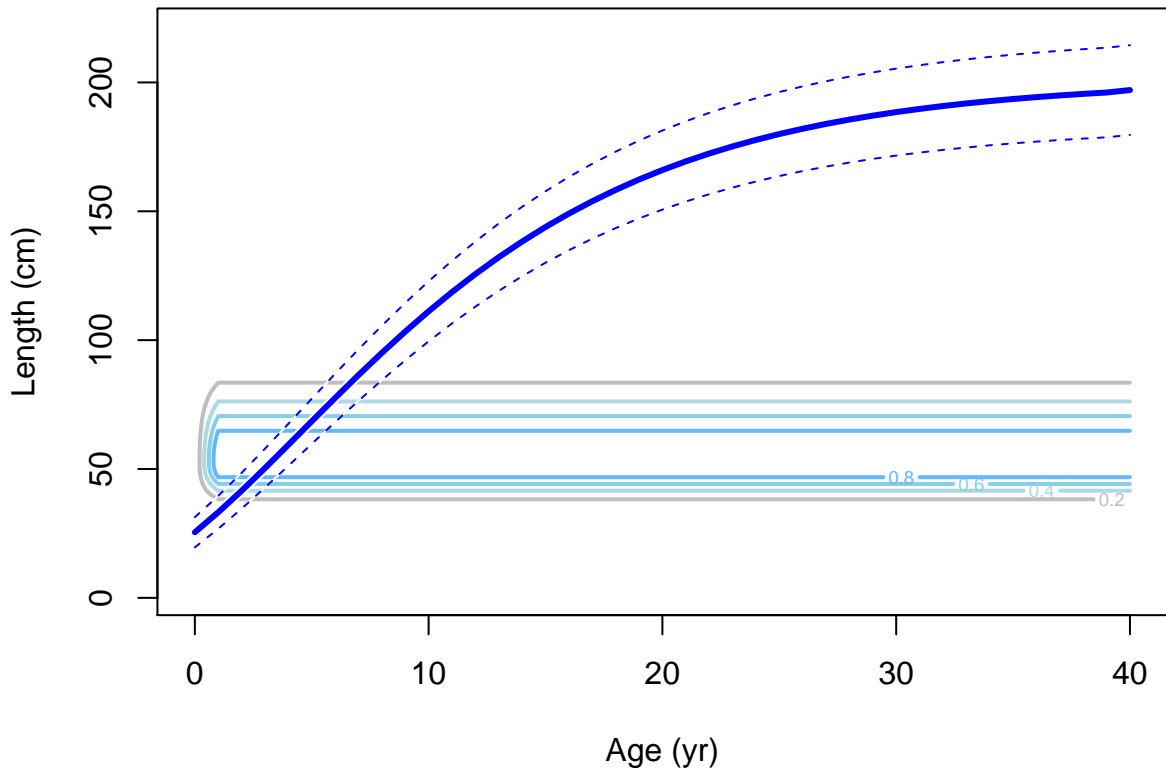
Male ending year selectivity and growth for A3-OBJ



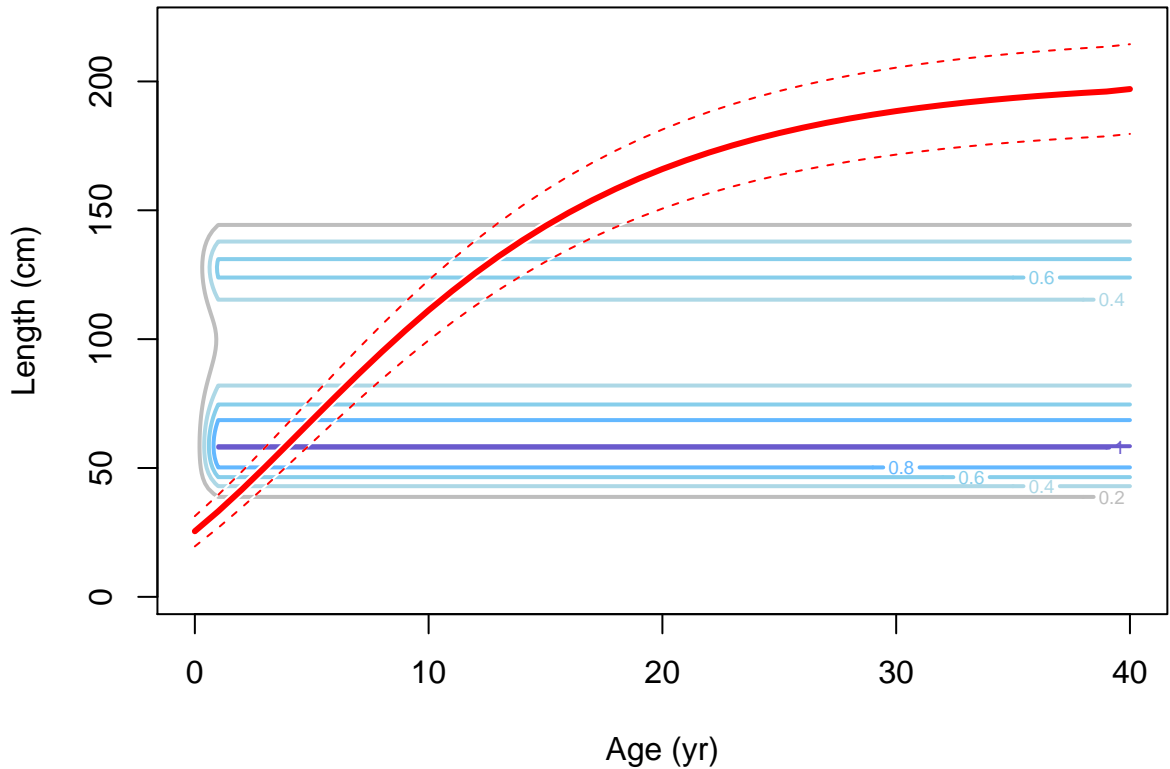
Female ending year selectivity and growth for A4-OBJ



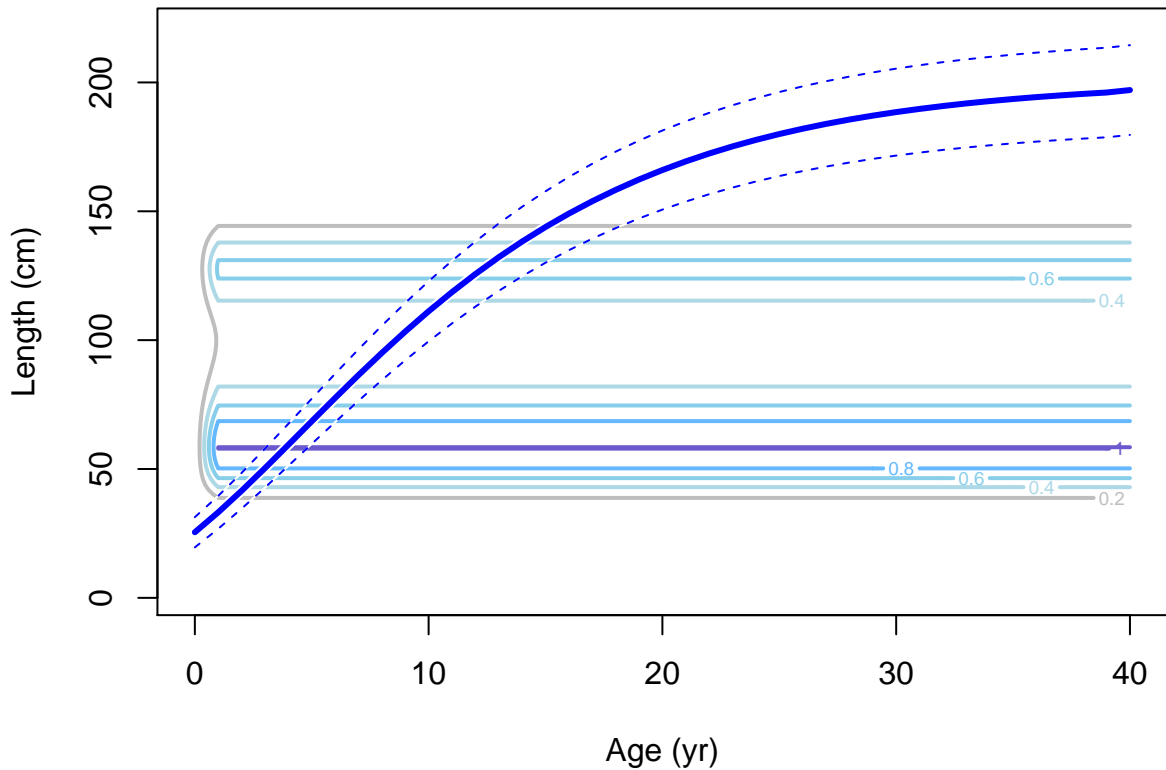
Male ending year selectivity and growth for A4-OBJ



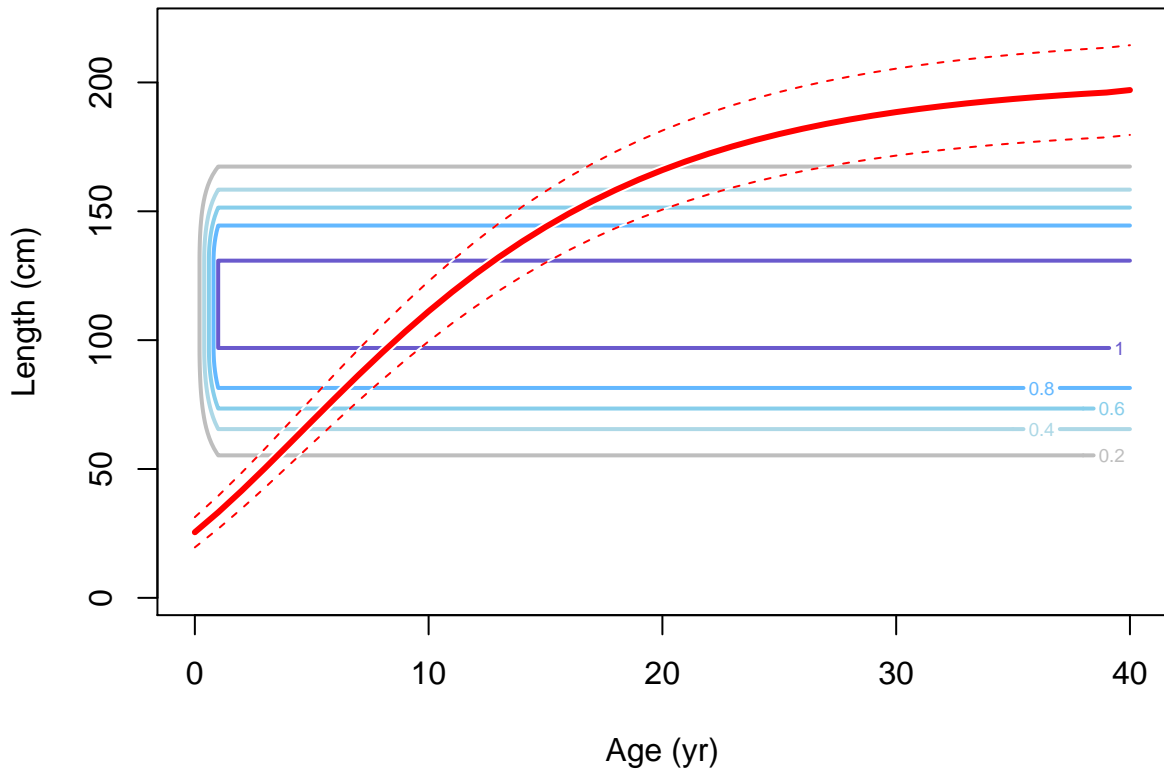
Female ending year selectivity and growth for A5-OBJ



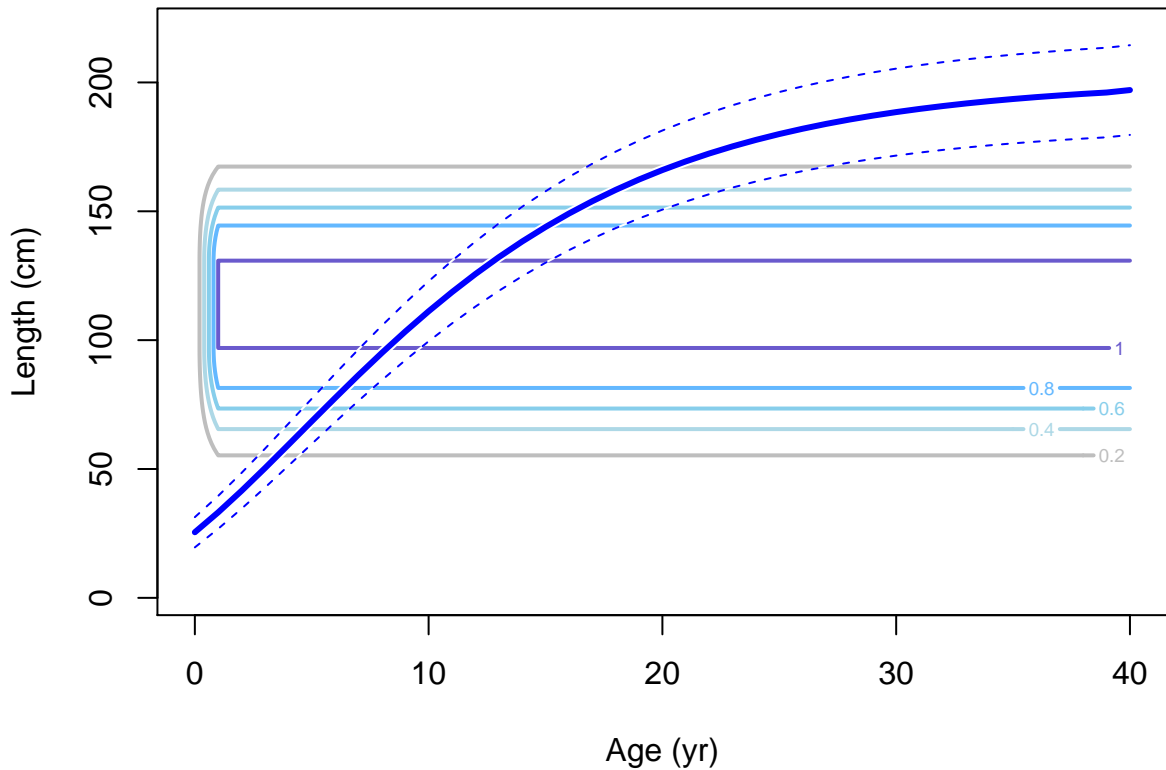
Male ending year selectivity and growth for A5-OBJ



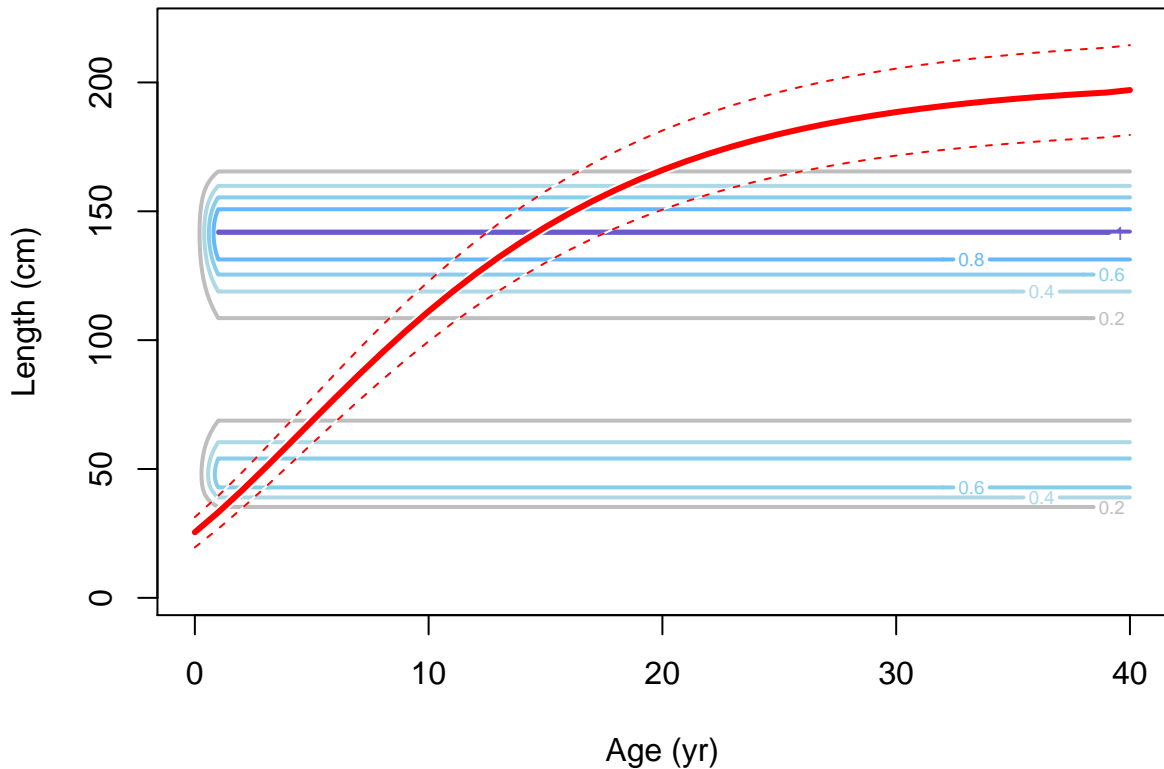
Female ending year selectivity and growth for A6-OBJ



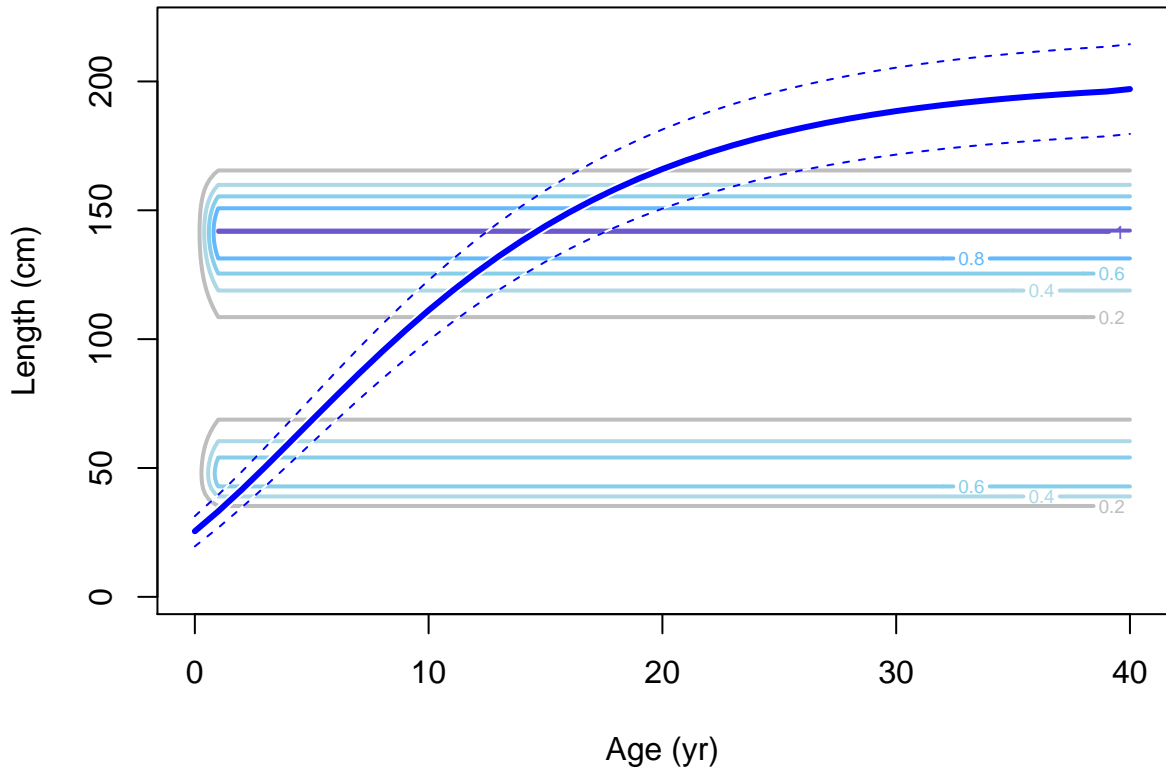
Male ending year selectivity and growth for A6-OBJ



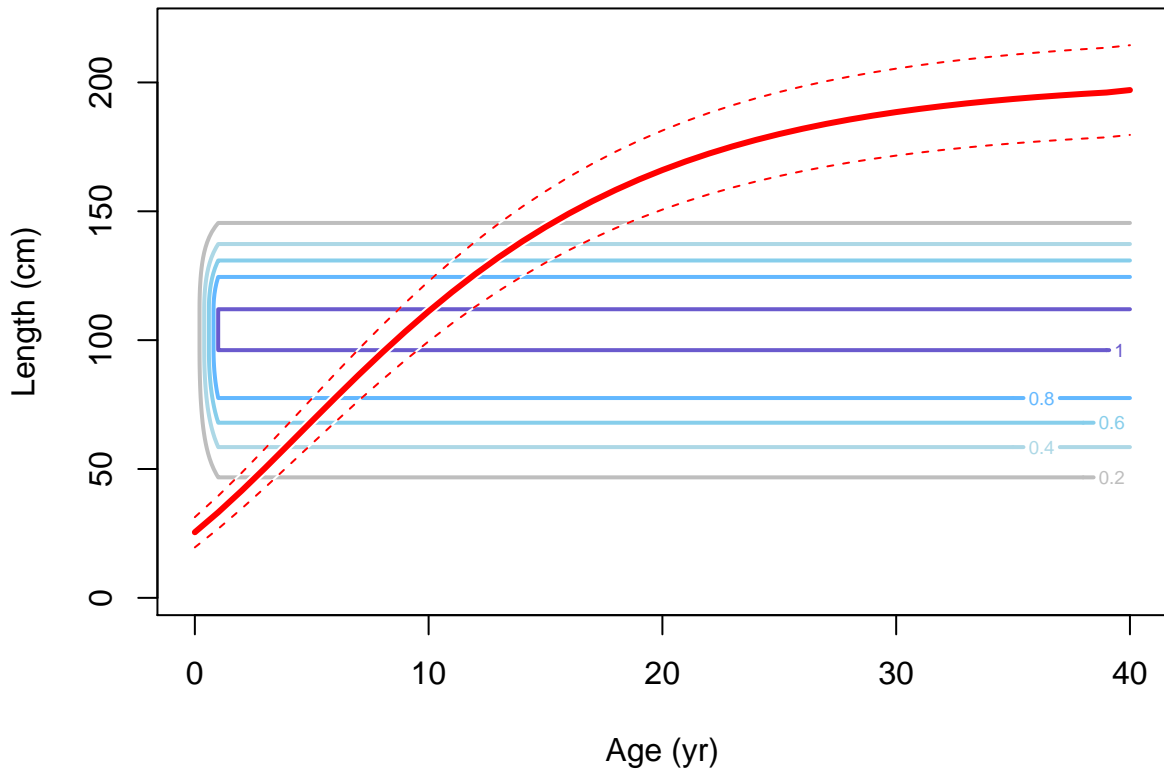
Female ending year selectivity and growth for A2-NOADEL



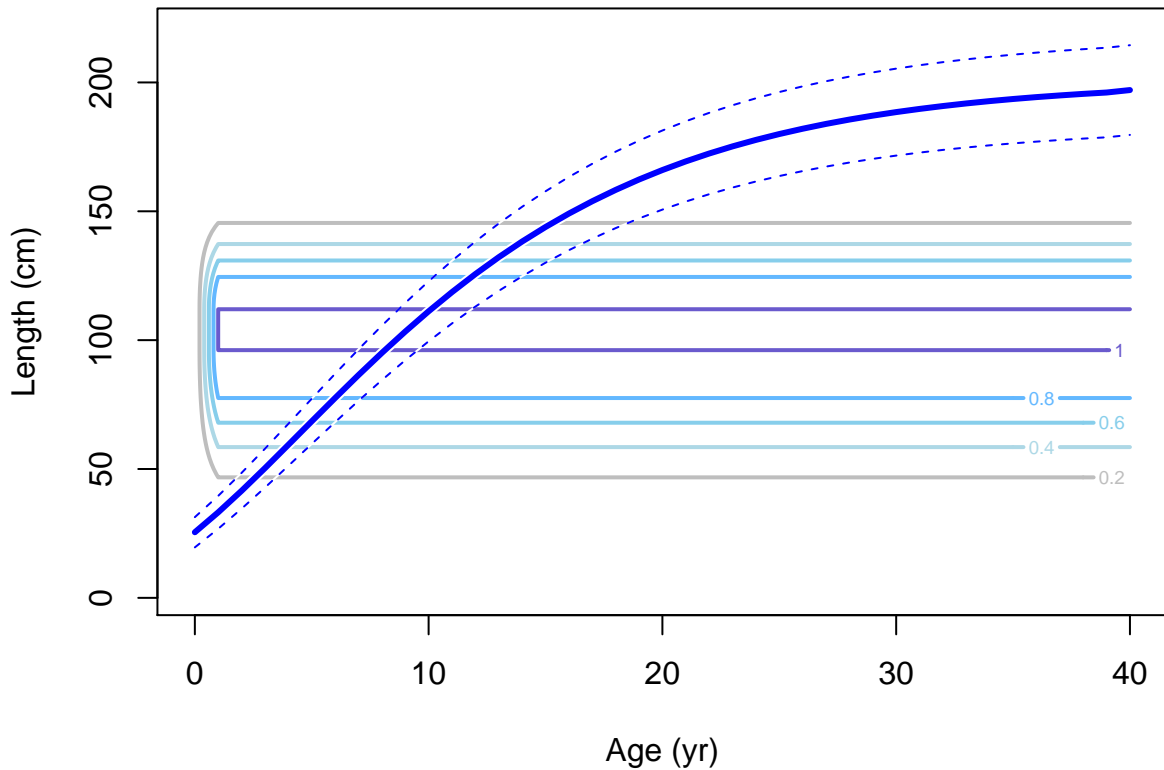
Male ending year selectivity and growth for A2-NOADEL



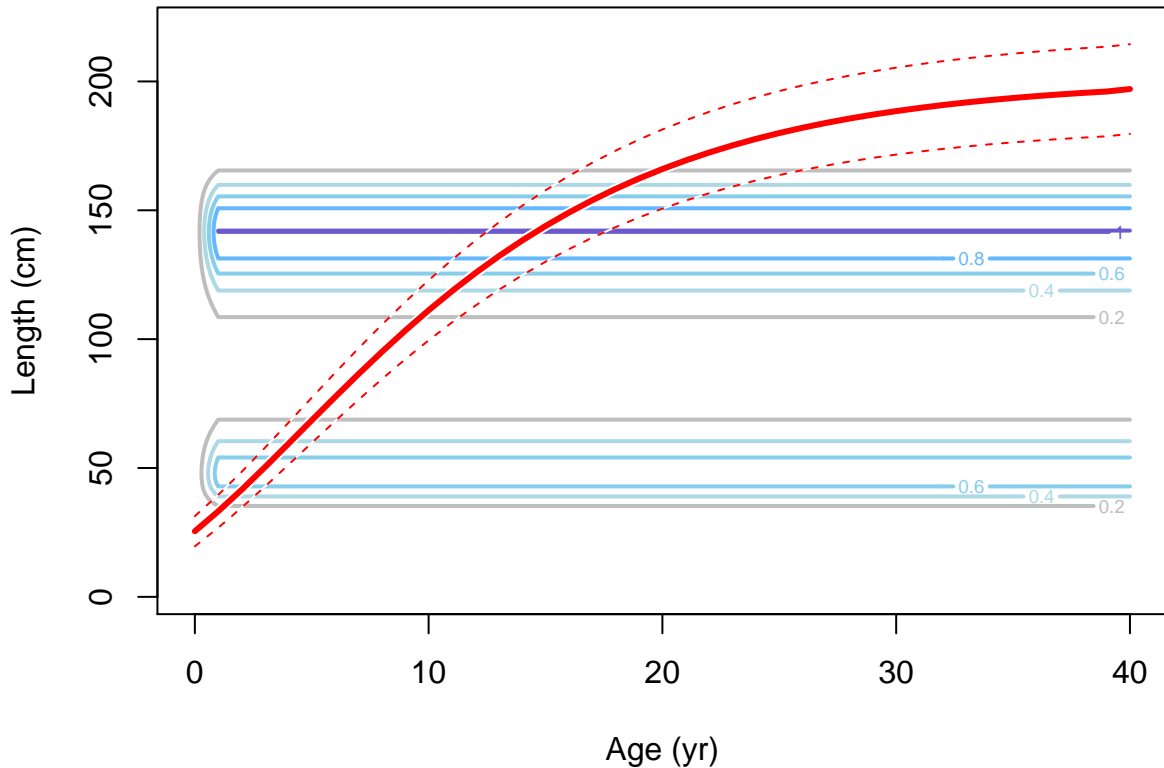
Female ending year selectivity and growth for A3-NOADEL



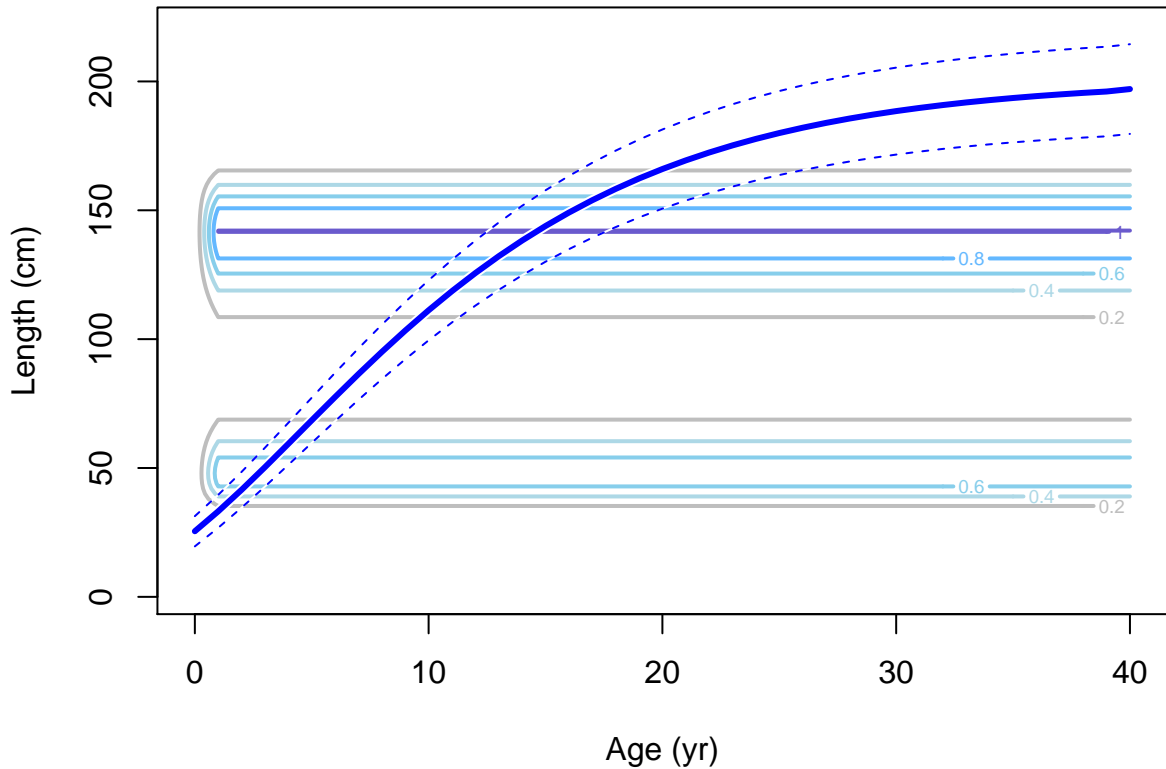
Male ending year selectivity and growth for A3-NOADEL



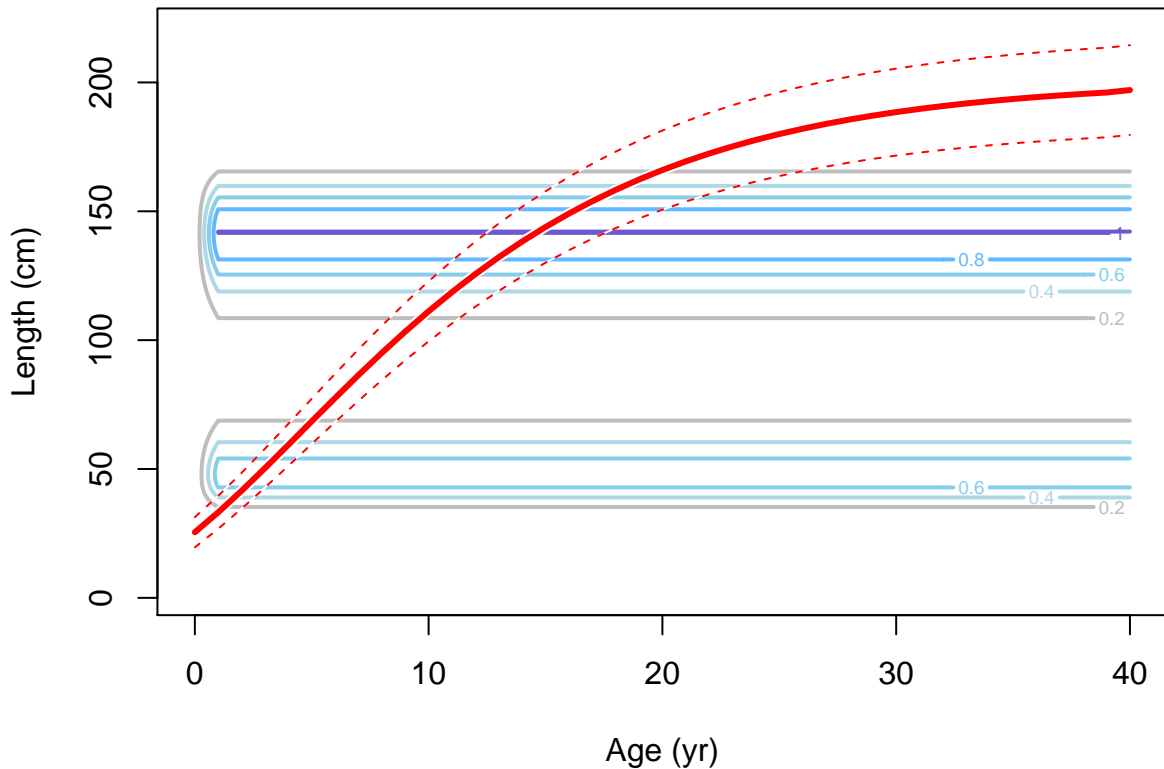
Female ending year selectivity and growth for A4-NOADEL



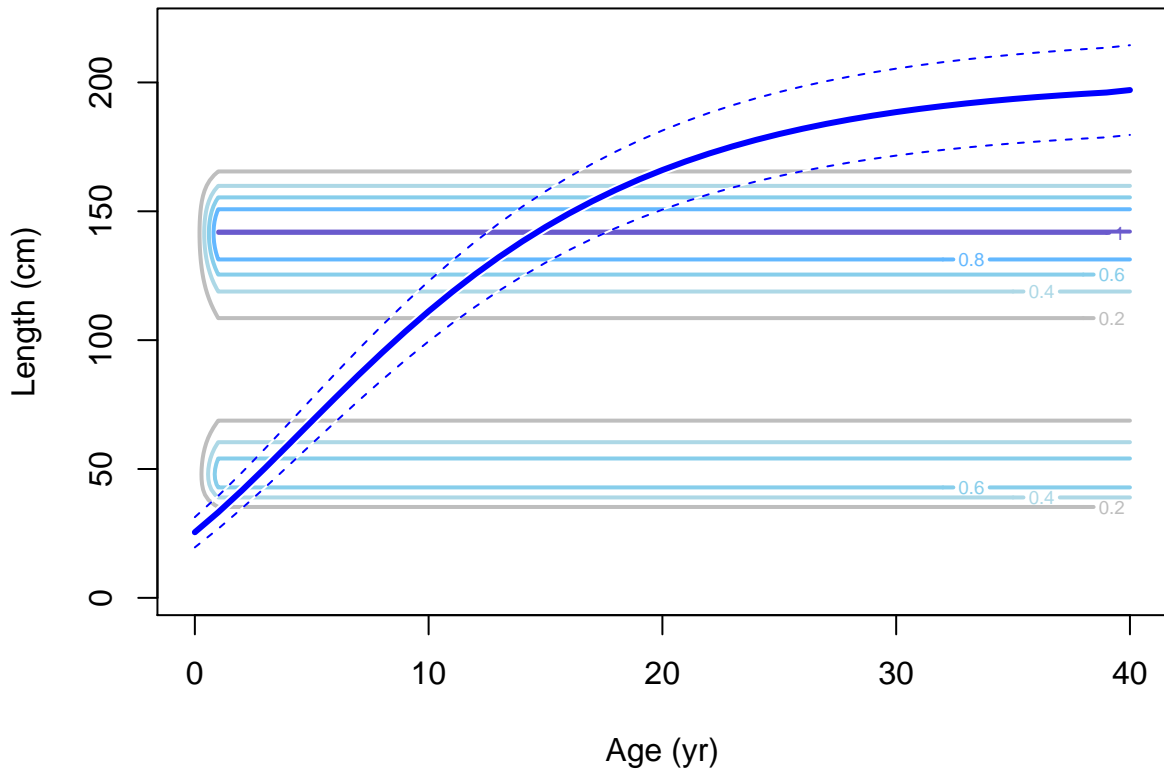
Male ending year selectivity and growth for A4-NOADEL



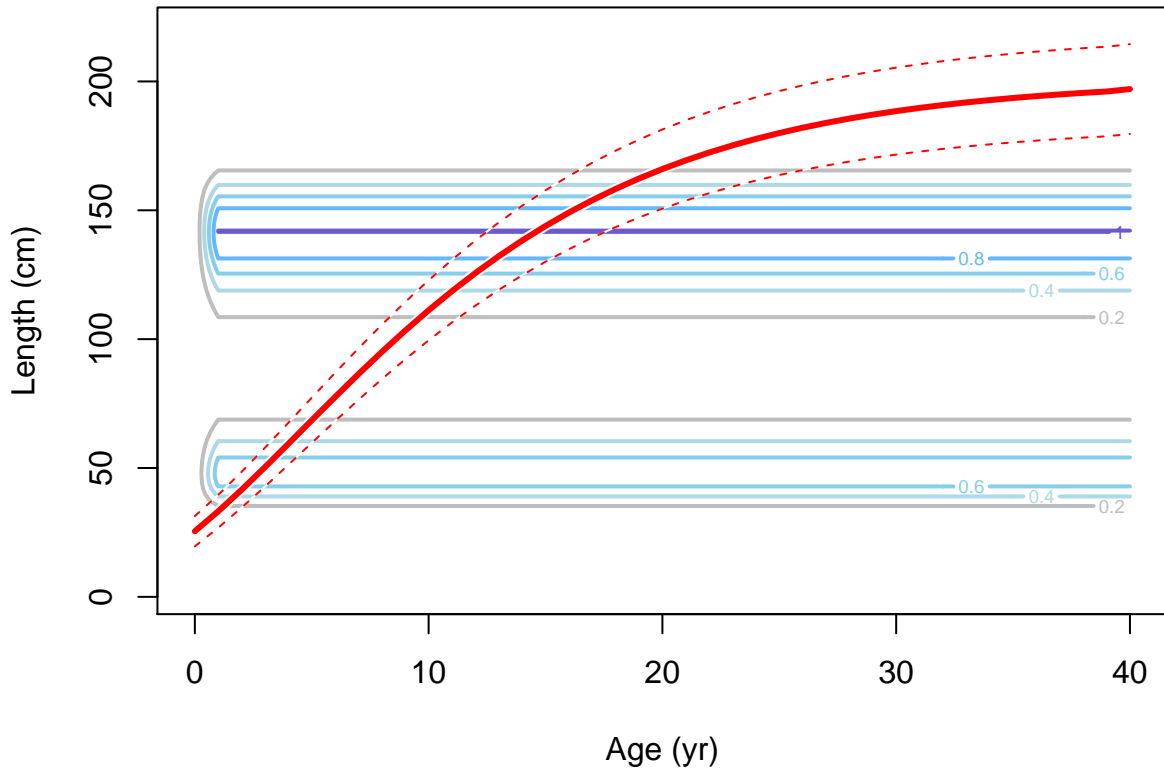
Female ending year selectivity and growth for A5-NOADEL



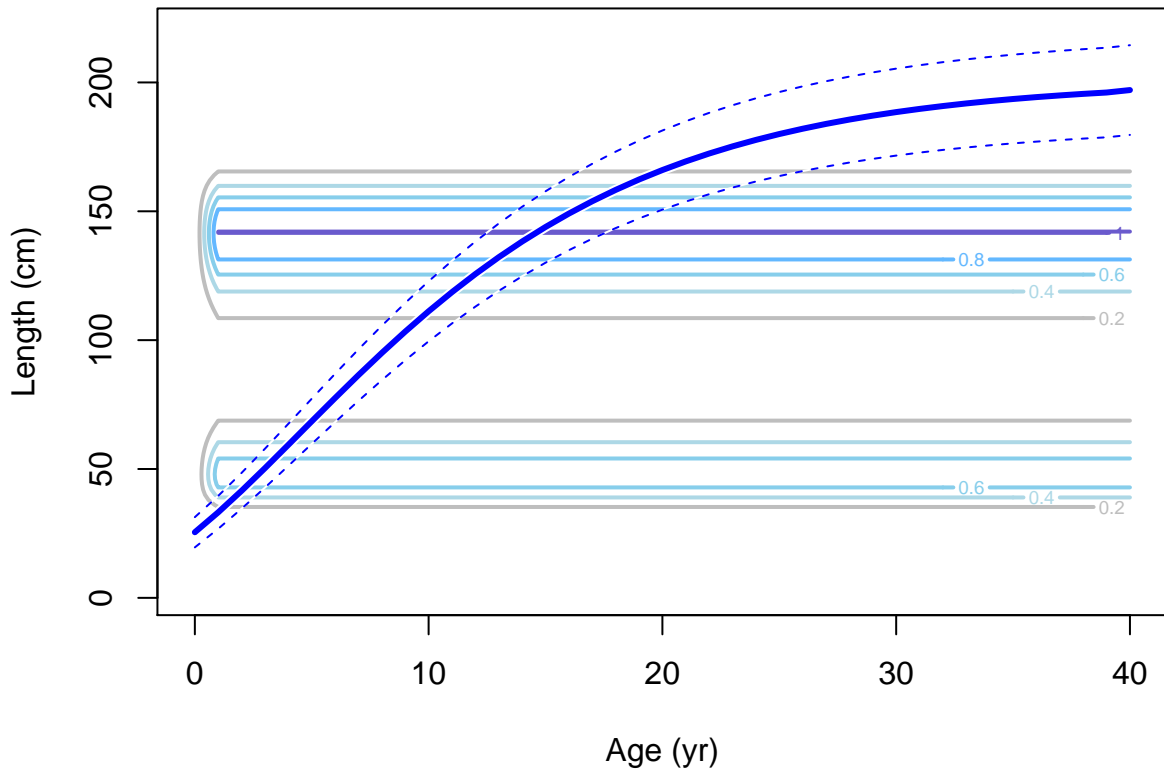
Male ending year selectivity and growth for A5-NOADEL



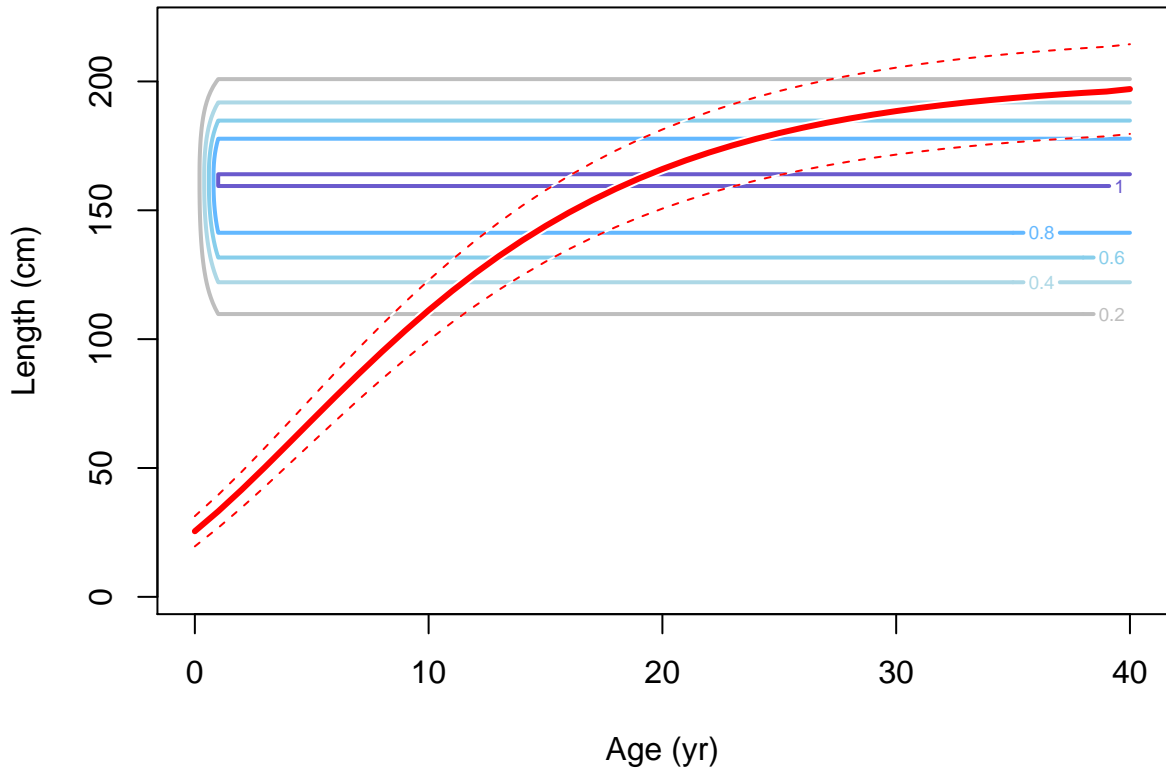
Female ending year selectivity and growth for A6-NOADEL



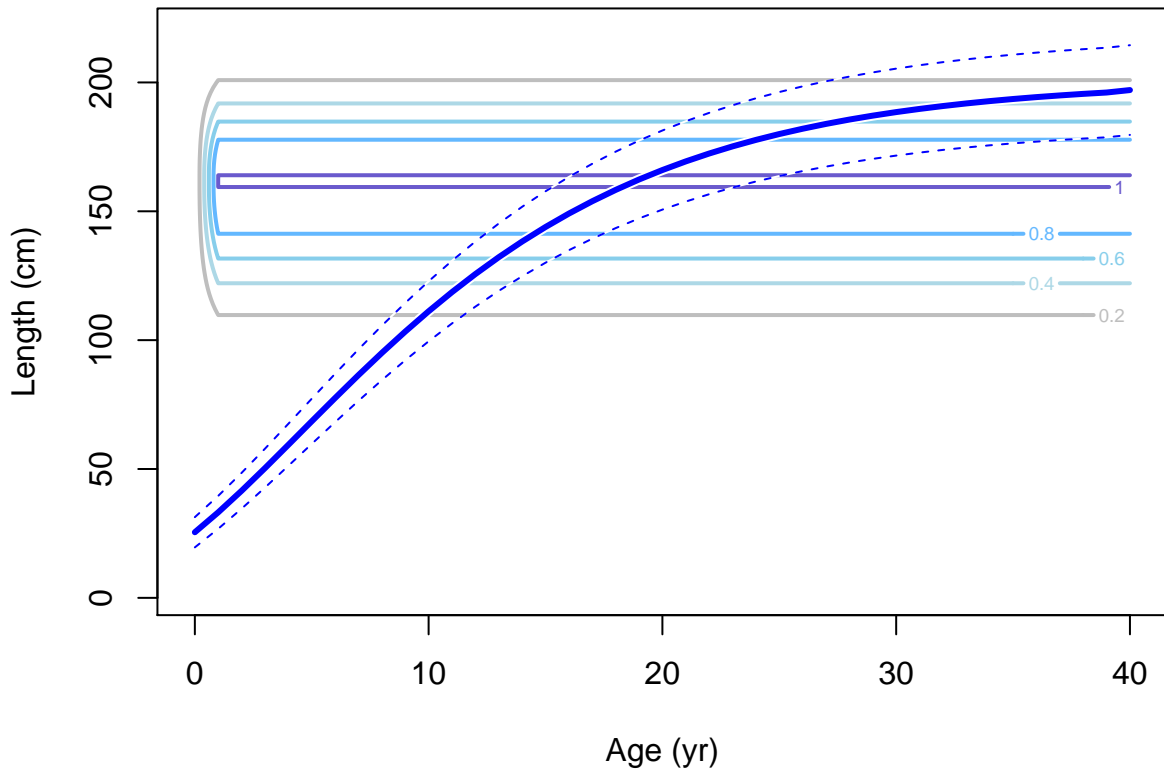
Male ending year selectivity and growth for A6-NOADEL



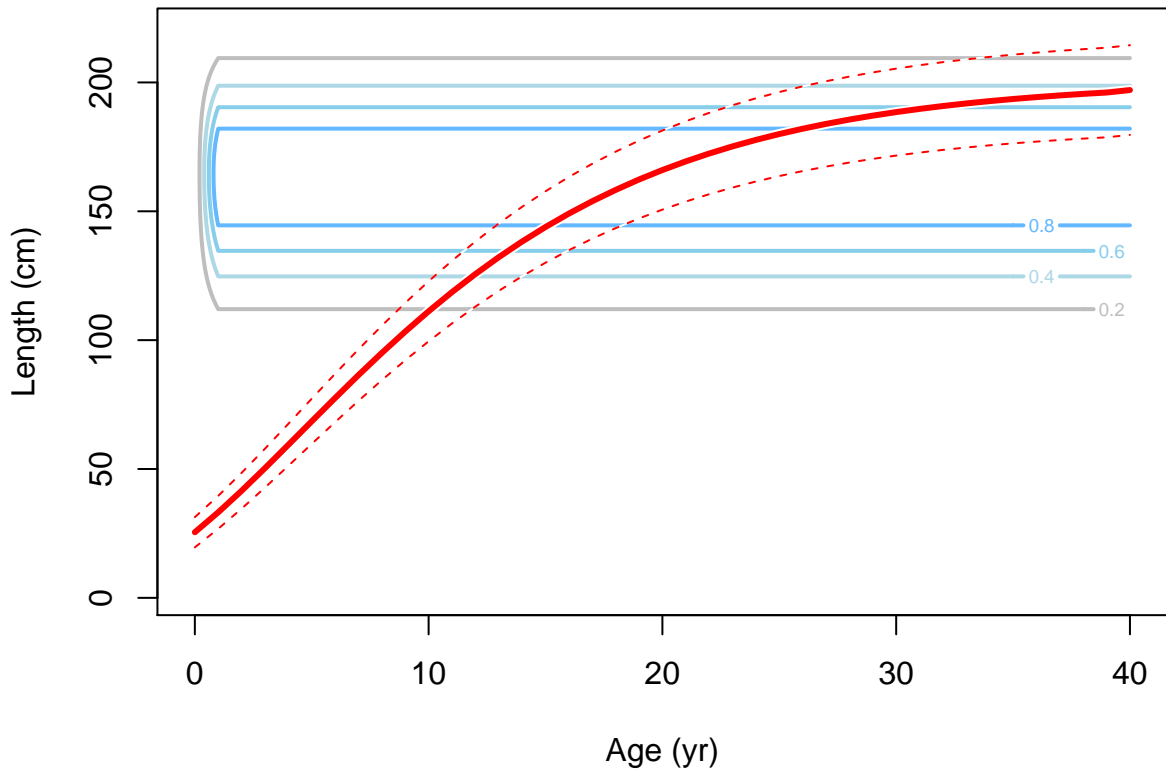
Female ending year selectivity and growth for EPO-LL-survey-early



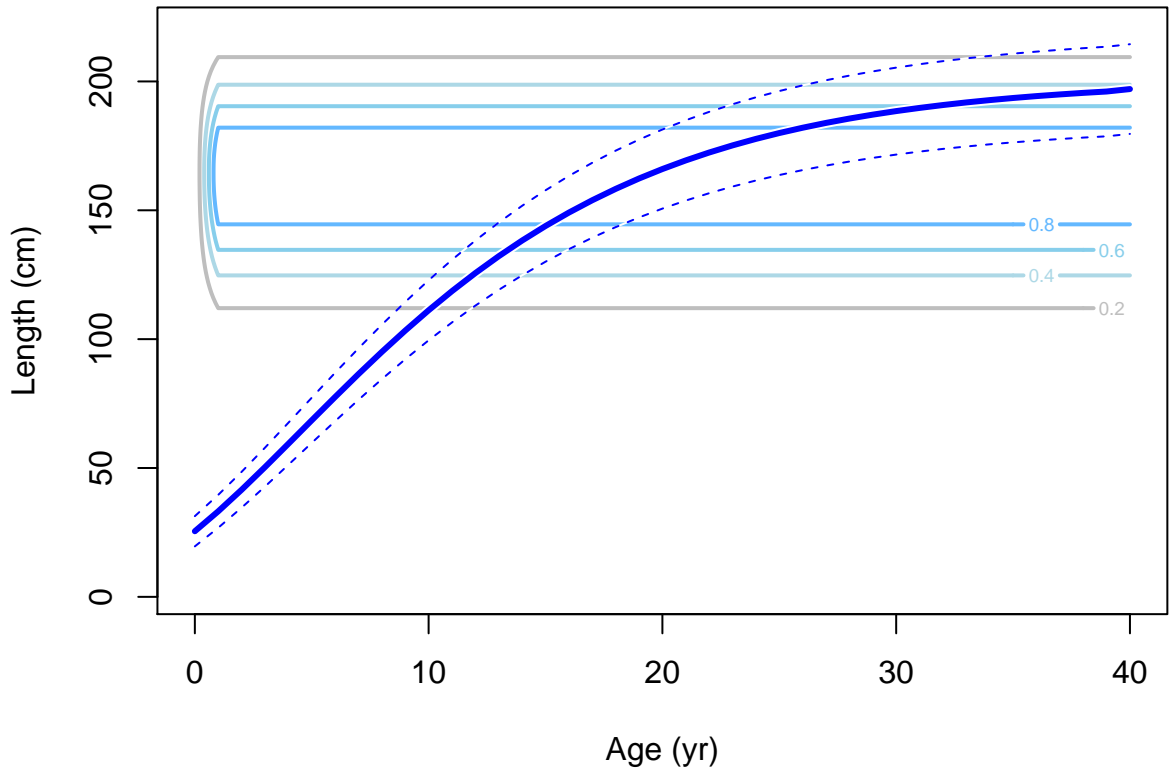
Male ending year selectivity and growth for EPO-LL-survey-early



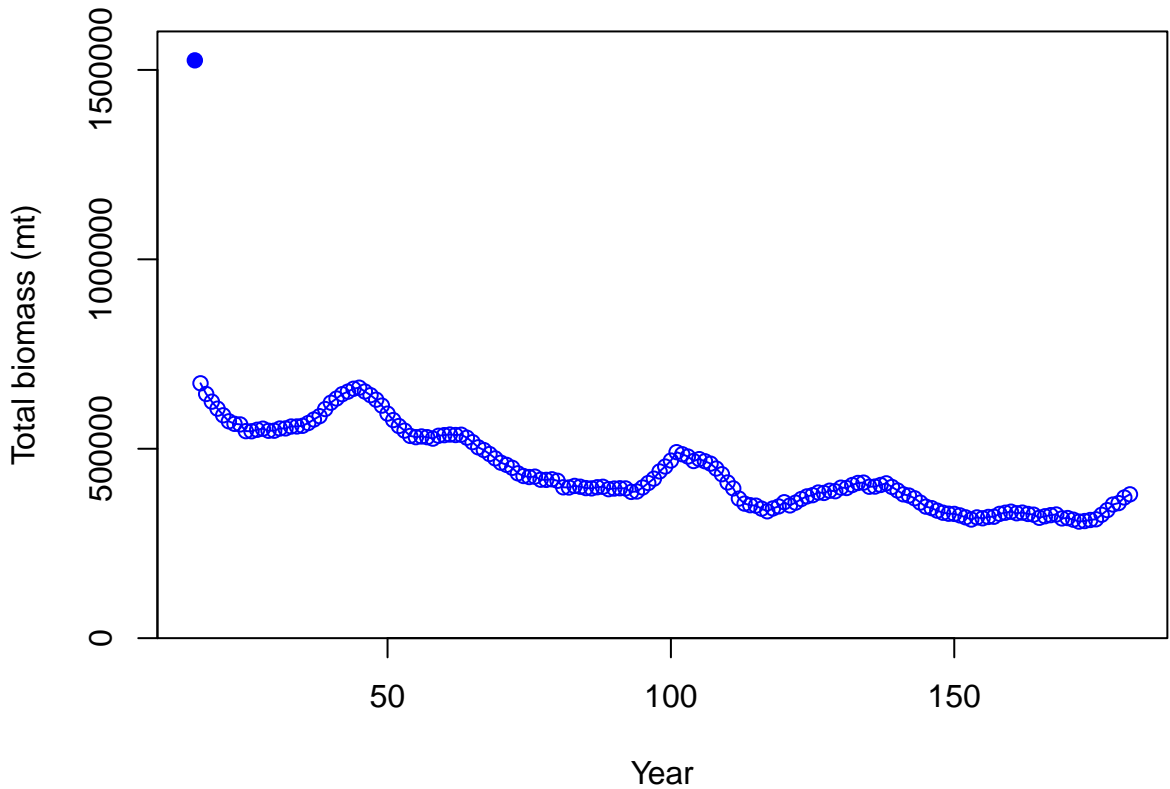
Female ending year selectivity and growth for EPO-LL-survey-late



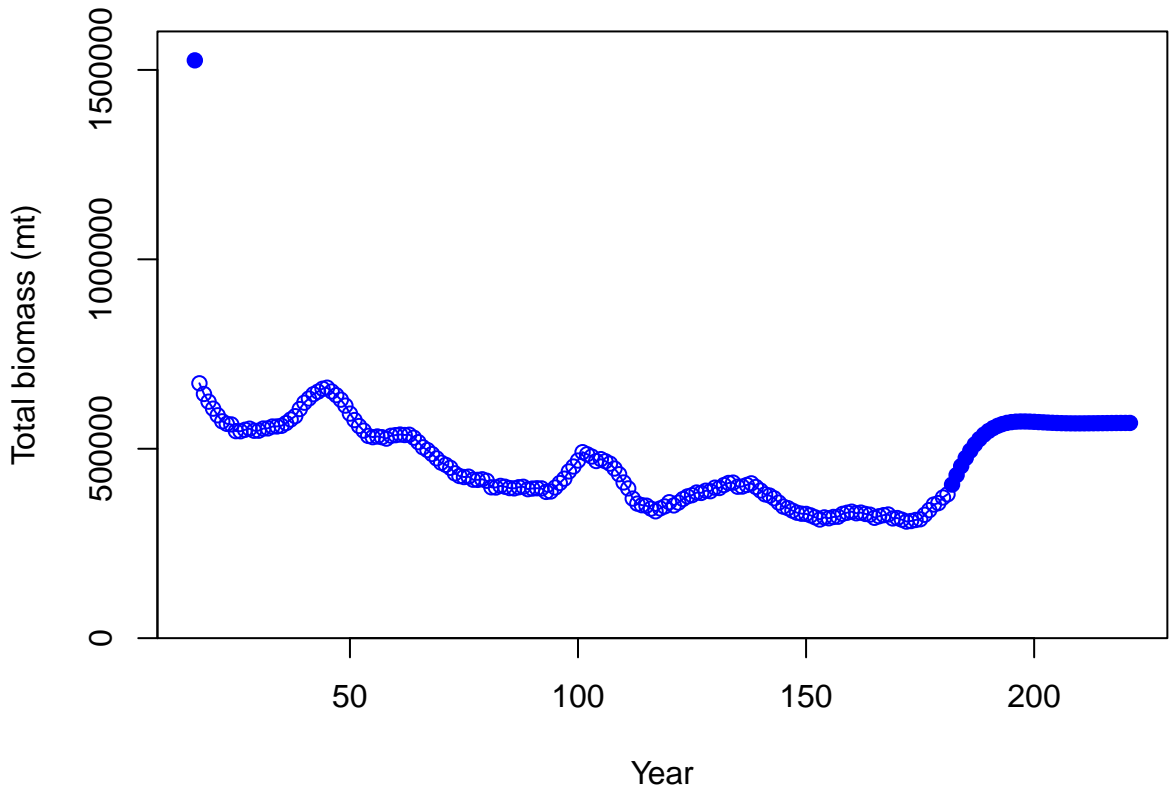
Male ending year selectivity and growth for EPO-LL-survey-late



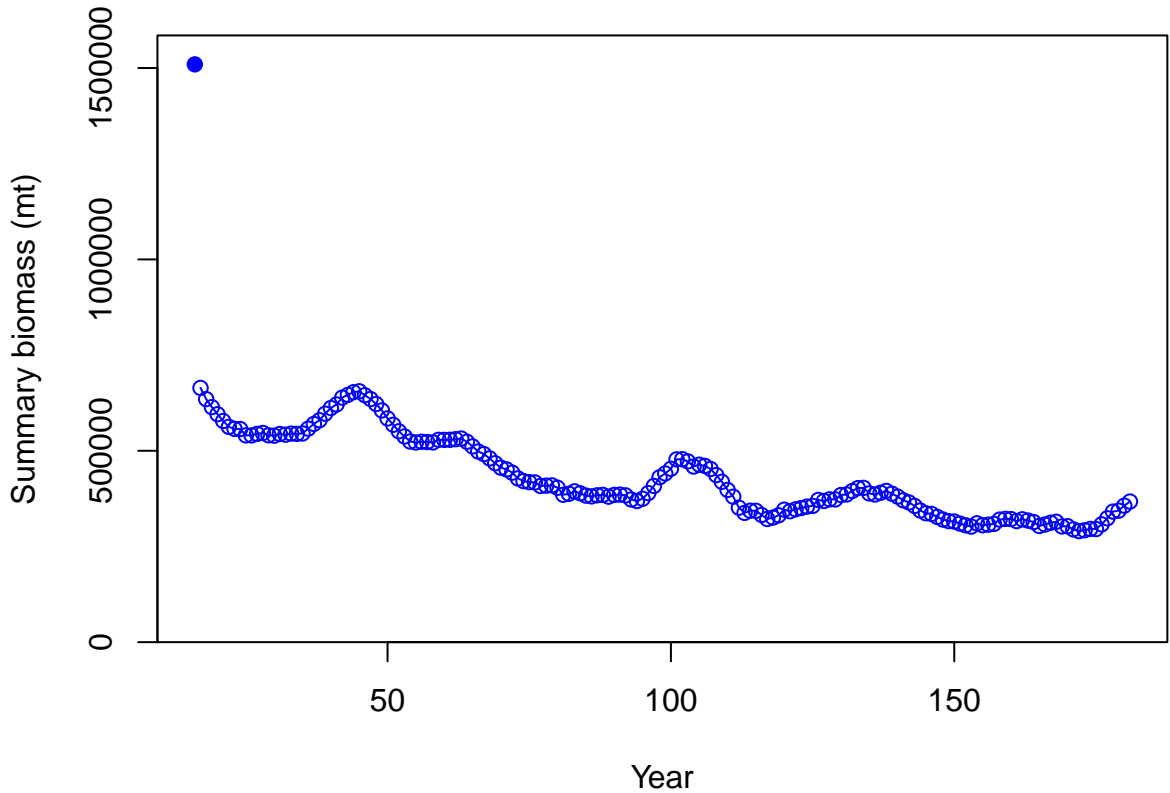
Total biomass (mt)



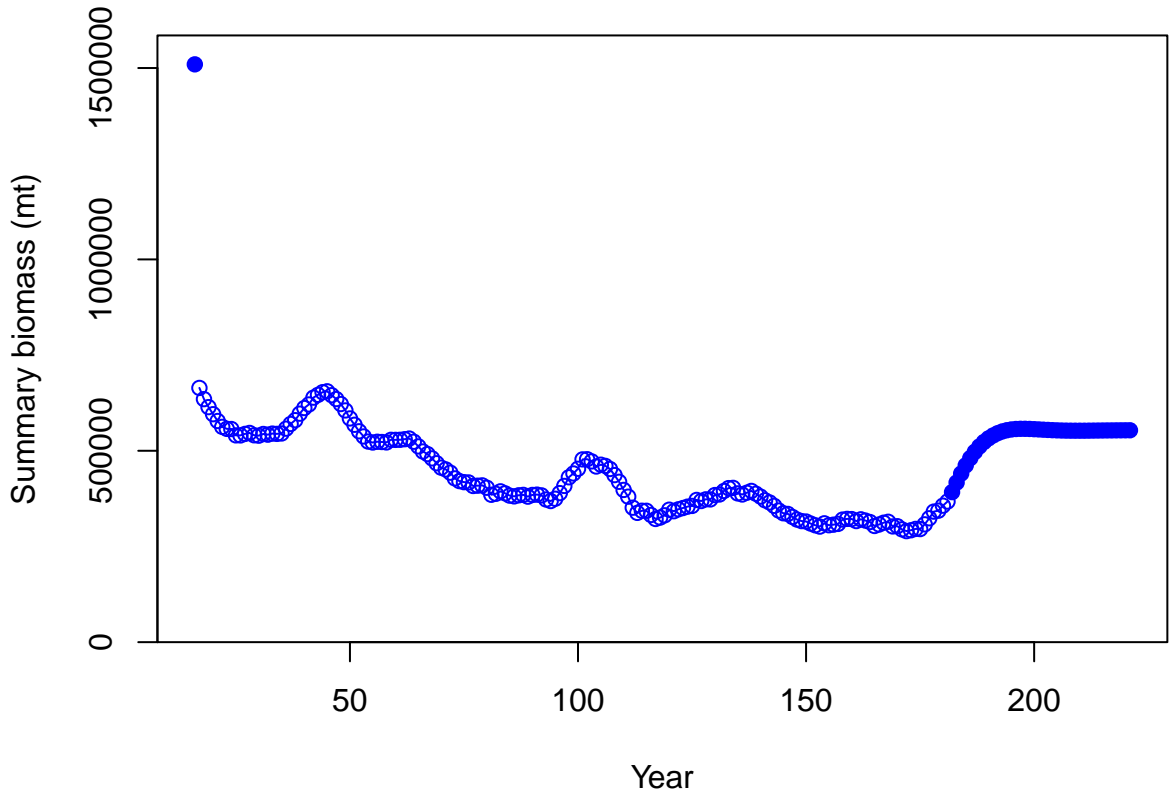
Total biomass (mt) with forecast



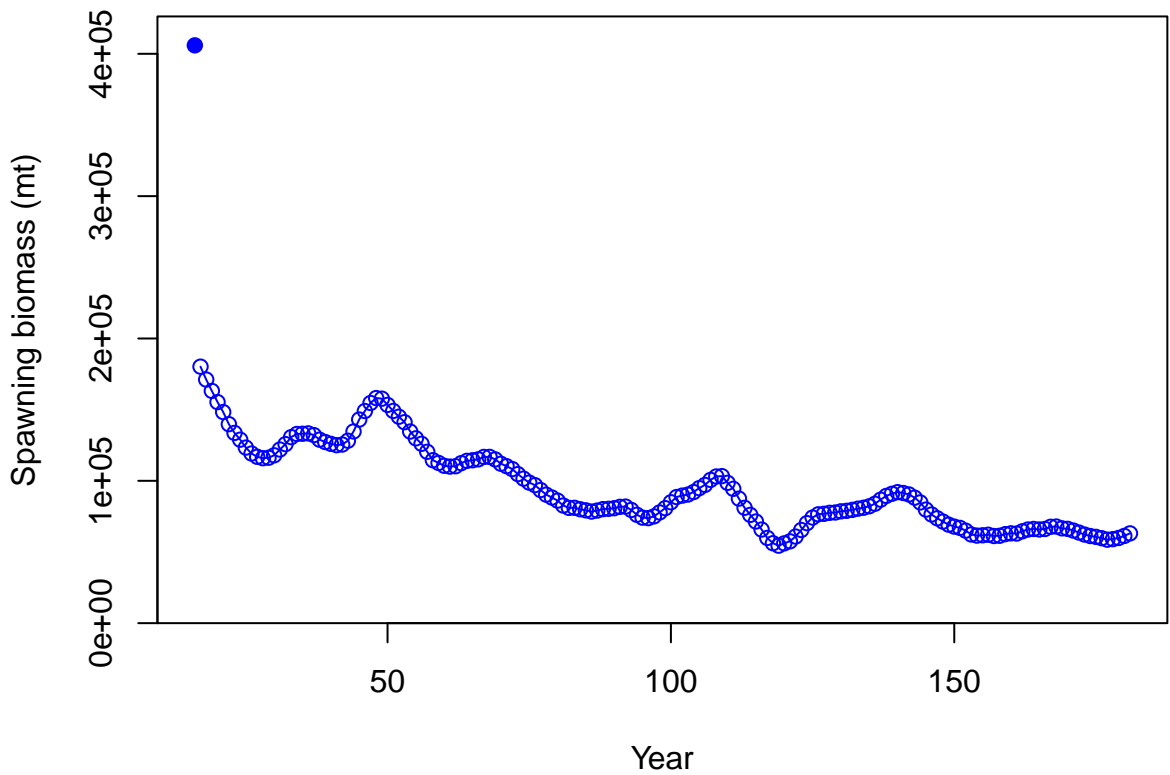
Summary biomass (mt)



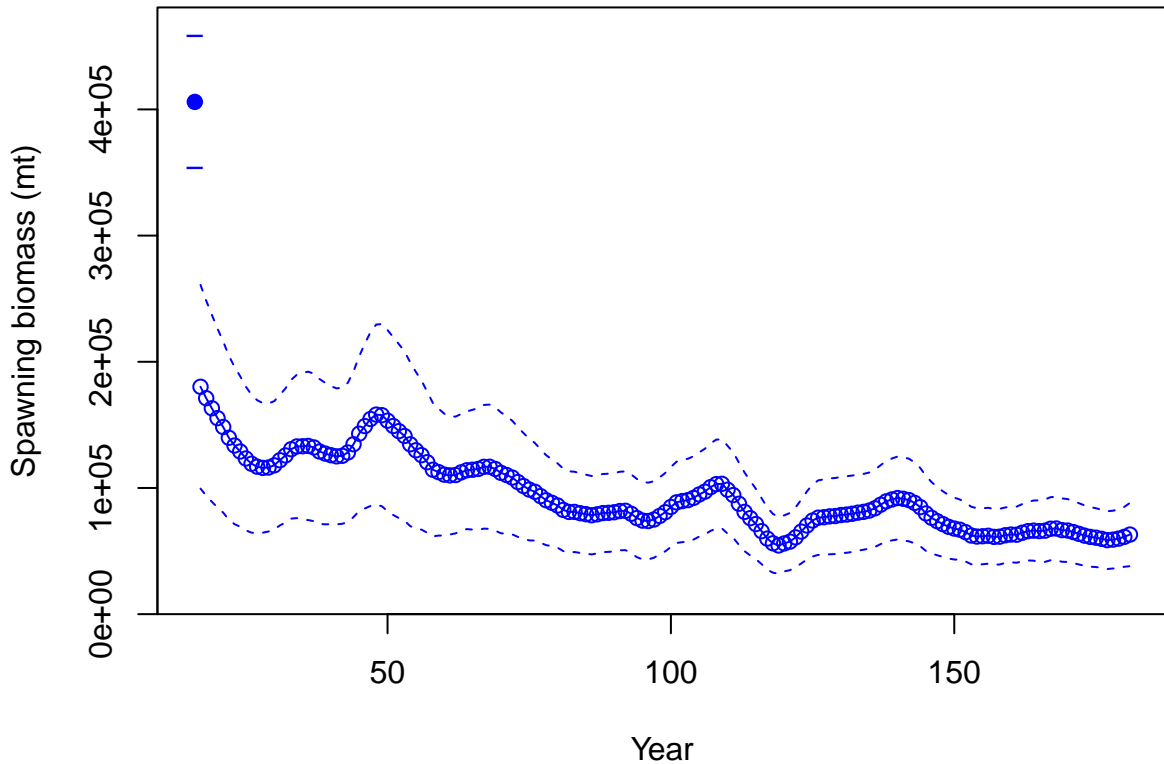
Summary biomass (mt) with forecast



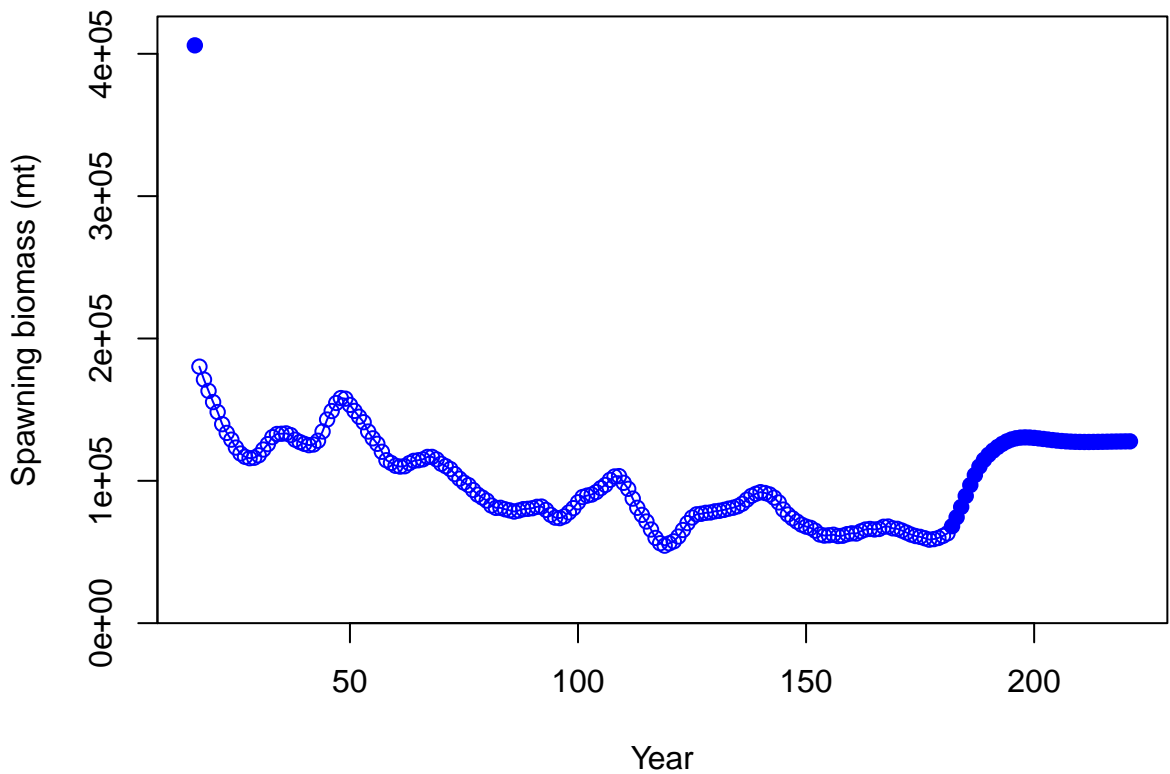
Spawning biomass (mt)



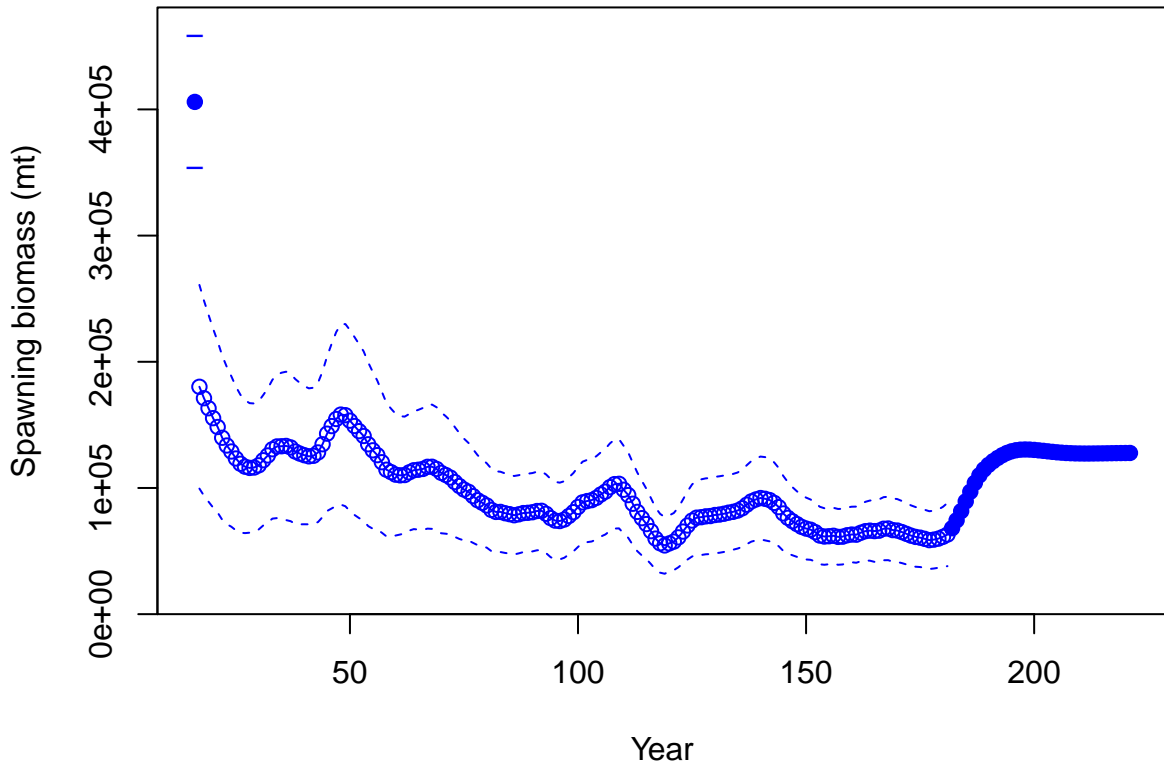
Spawning biomass (mt) with ~95% asymptotic intervals



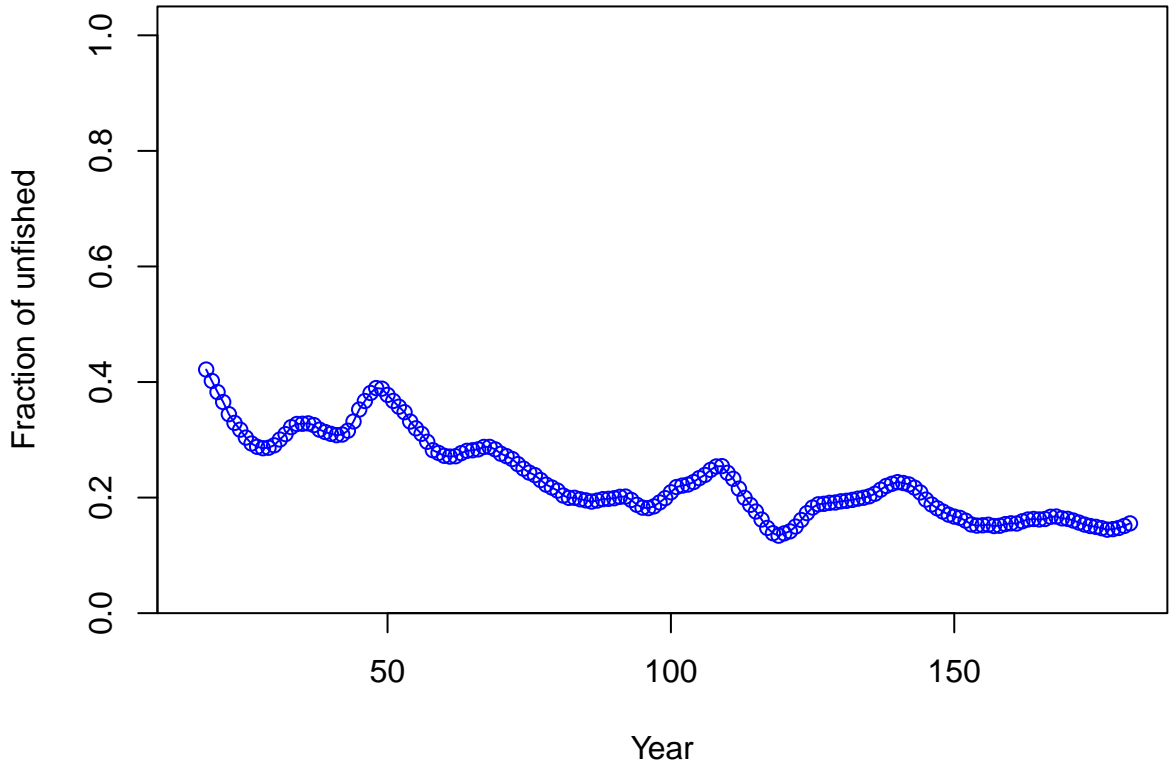
Spawning biomass (mt) with forecast



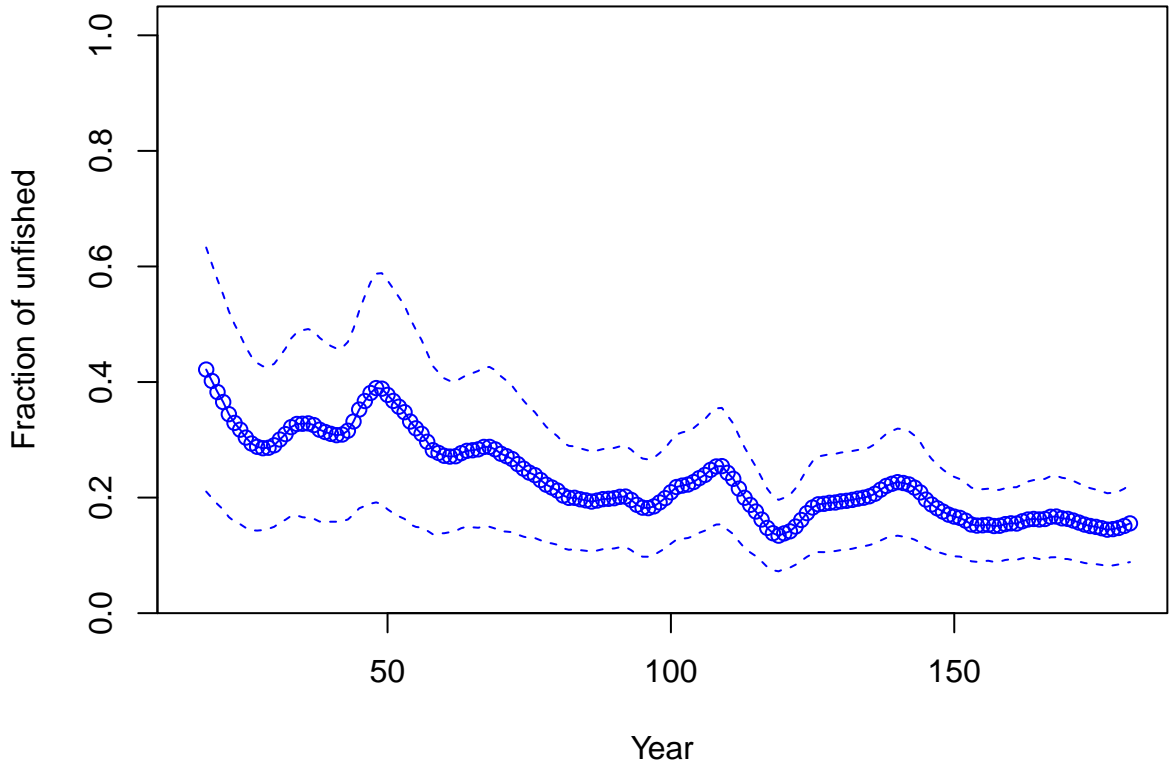
Spawning biomass (mt) with forecast with ~95% asymptotic intervals



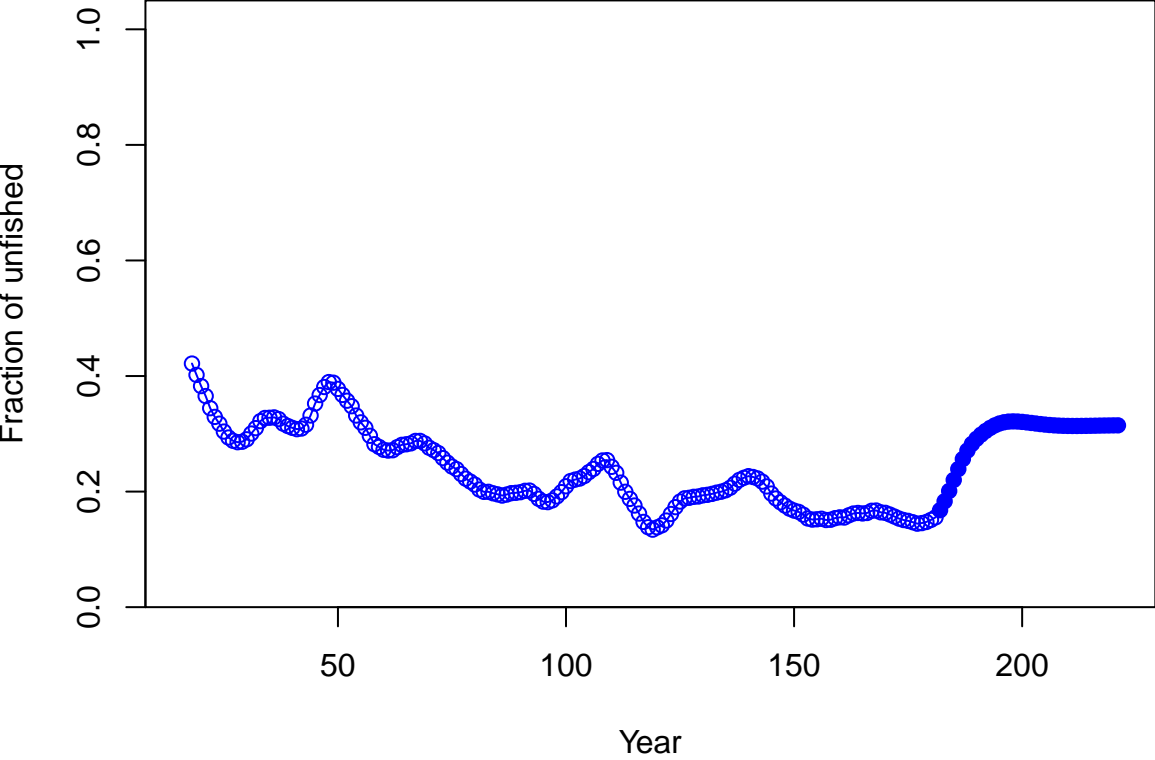
Fraction of unfished



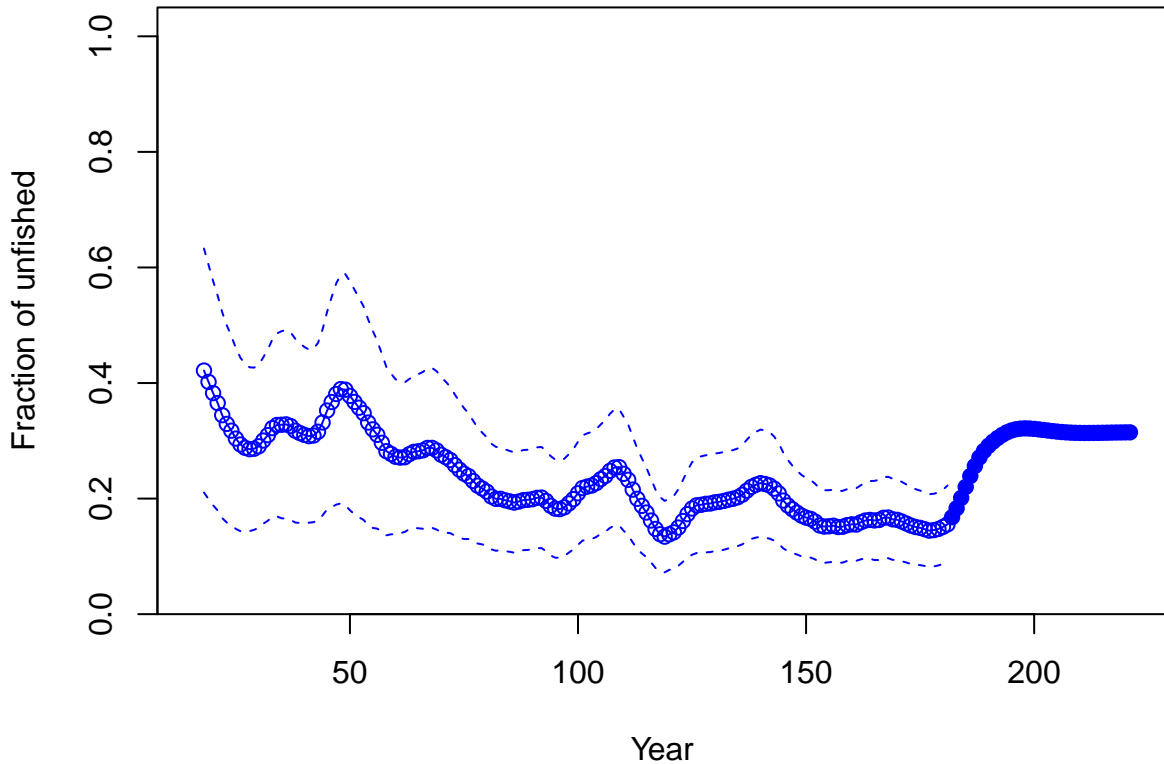
Fraction of unfished with ~95% asymptotic intervals



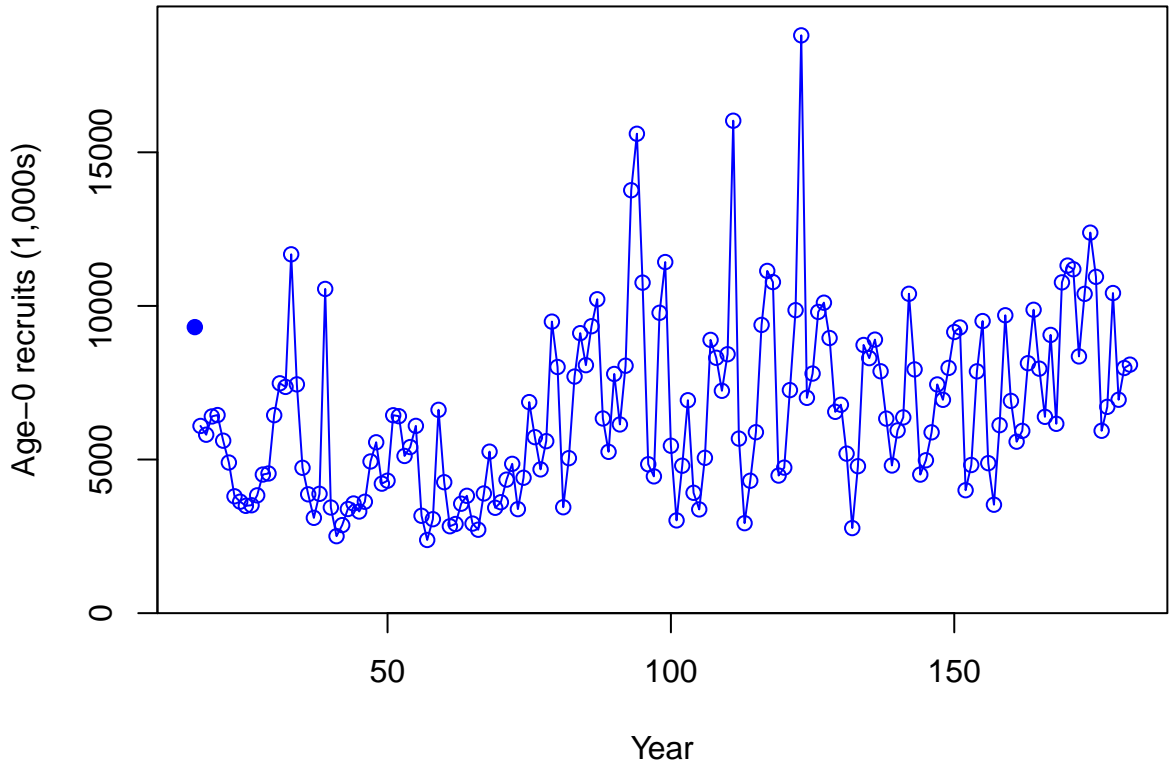
Fraction of unfished with forecast



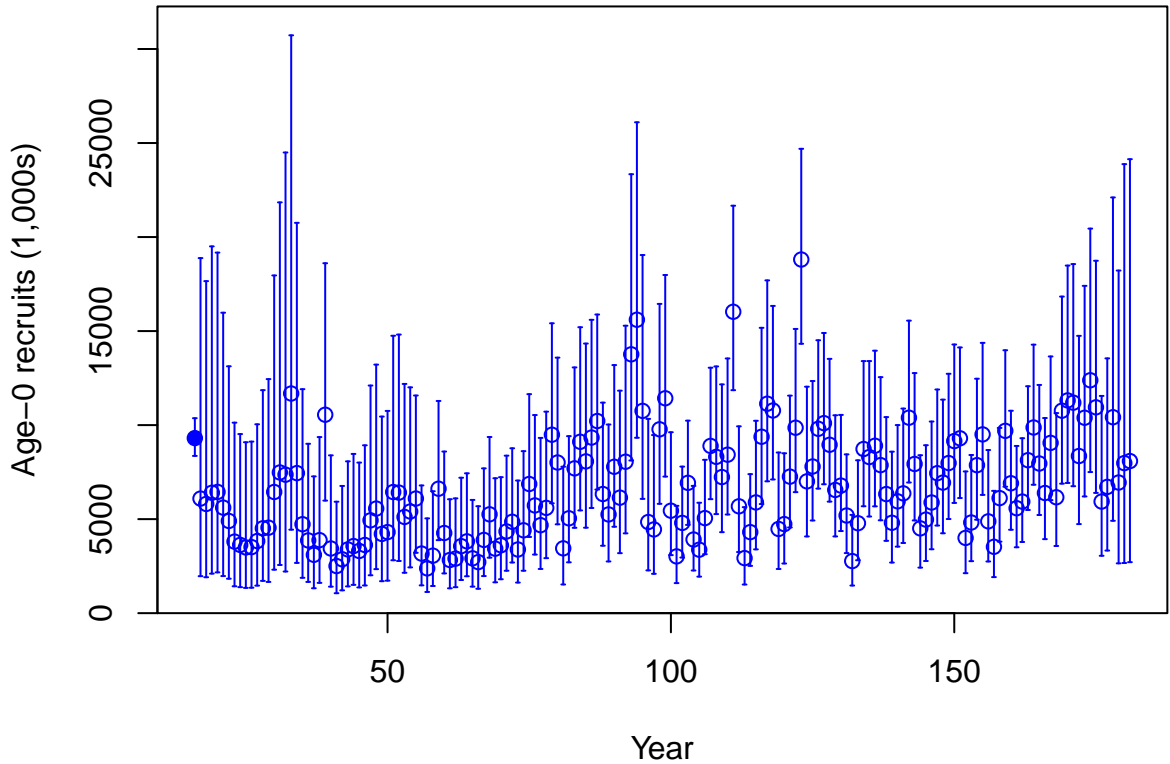
Fraction of unfished with forecast with ~95% asymptotic intervals



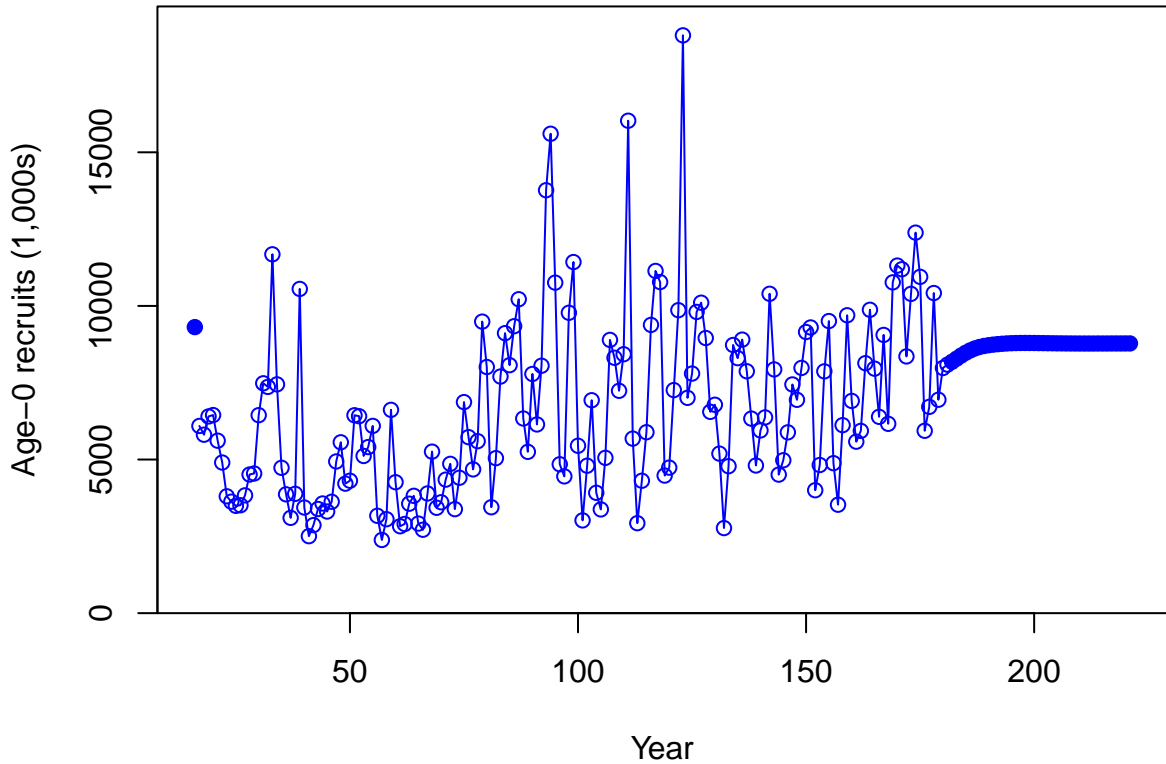
Age-0 recruits (1,000s)



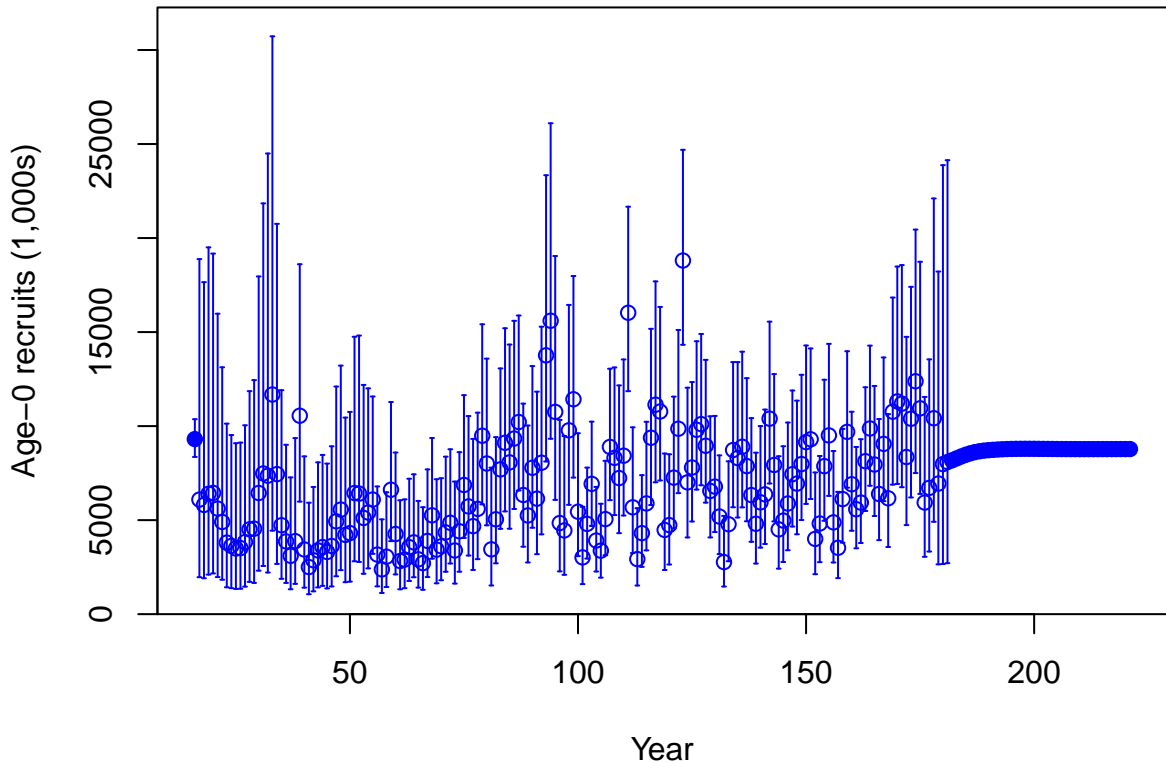
Age-0 recruits (1,000s) with ~95% asymptotic intervals



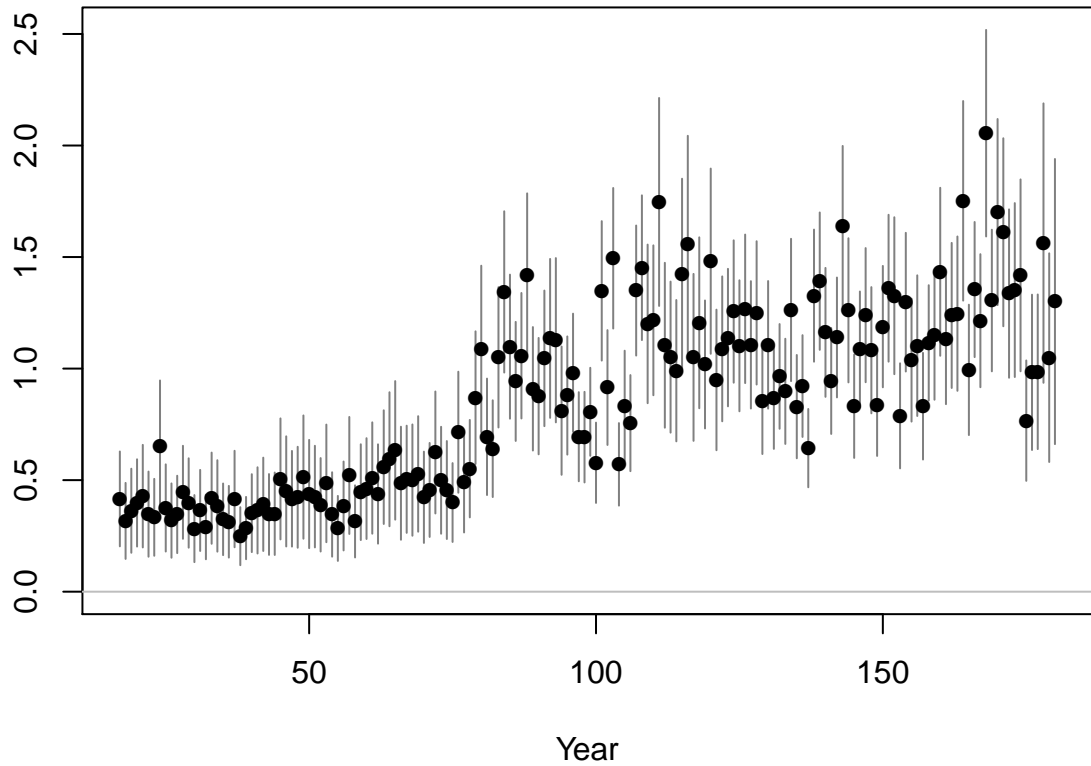
Age-0 recruits (1,000s) with forecast

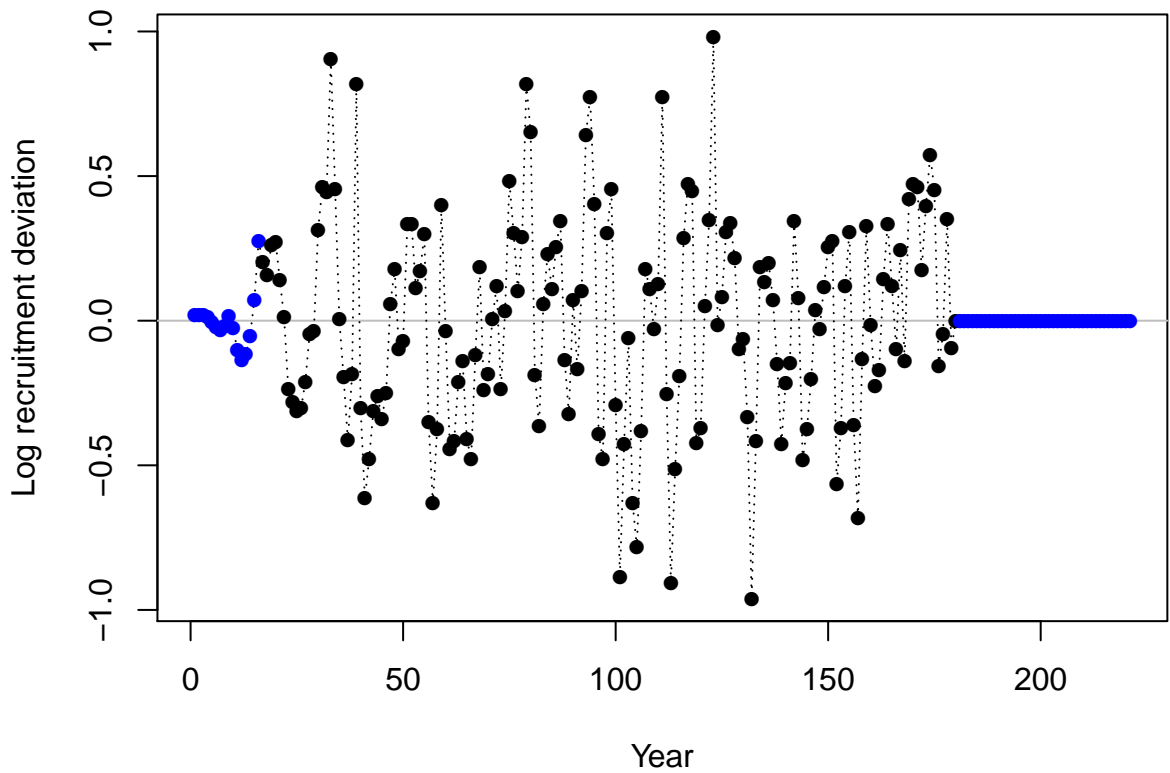


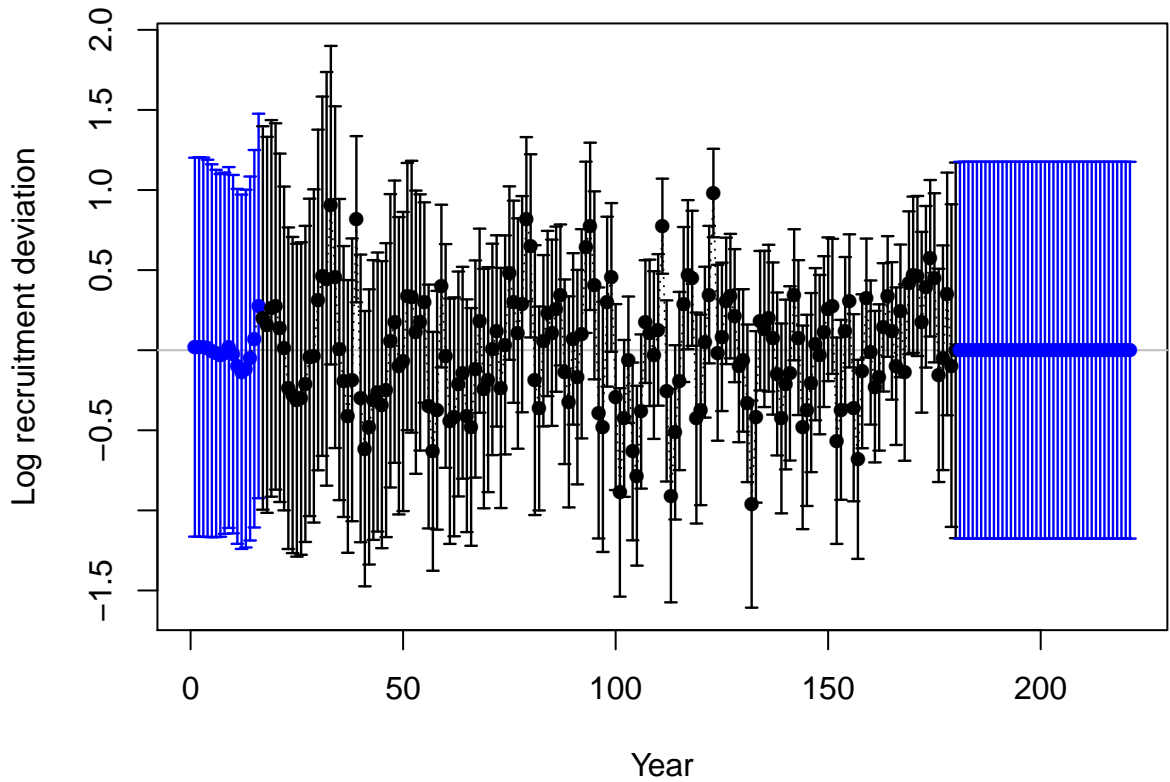
Age-0 recruits (1,000s) with forecast with ~95% asymptotic intervals



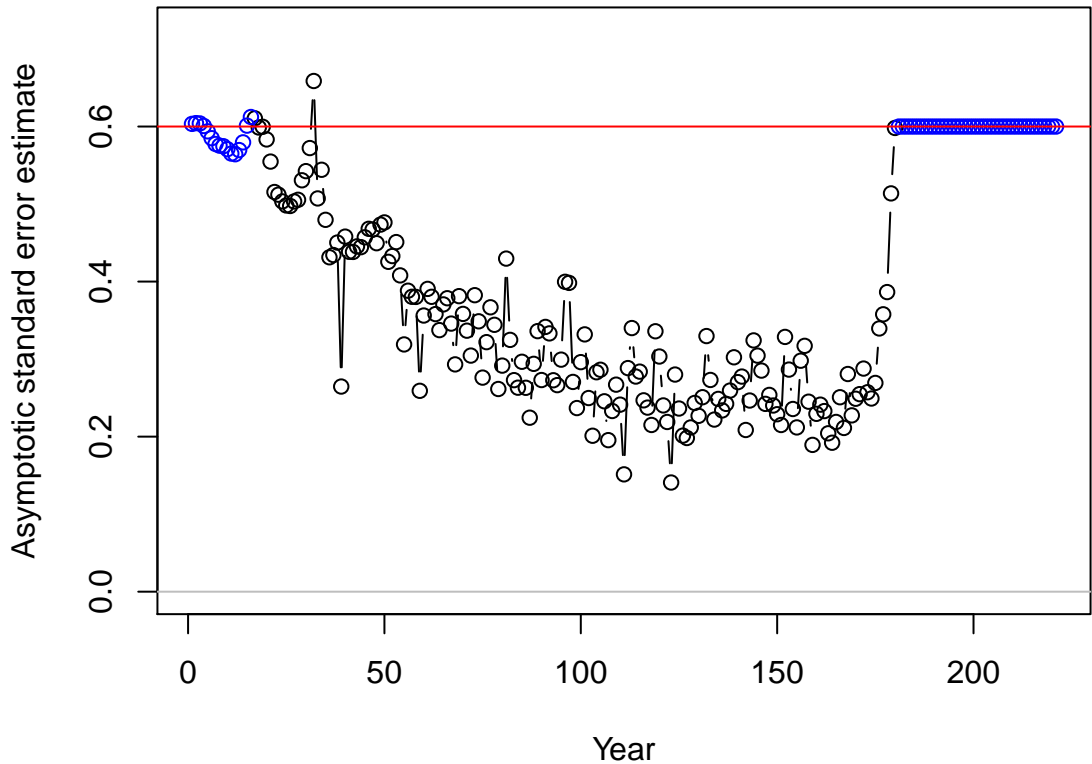
Summary Fishing Mortality

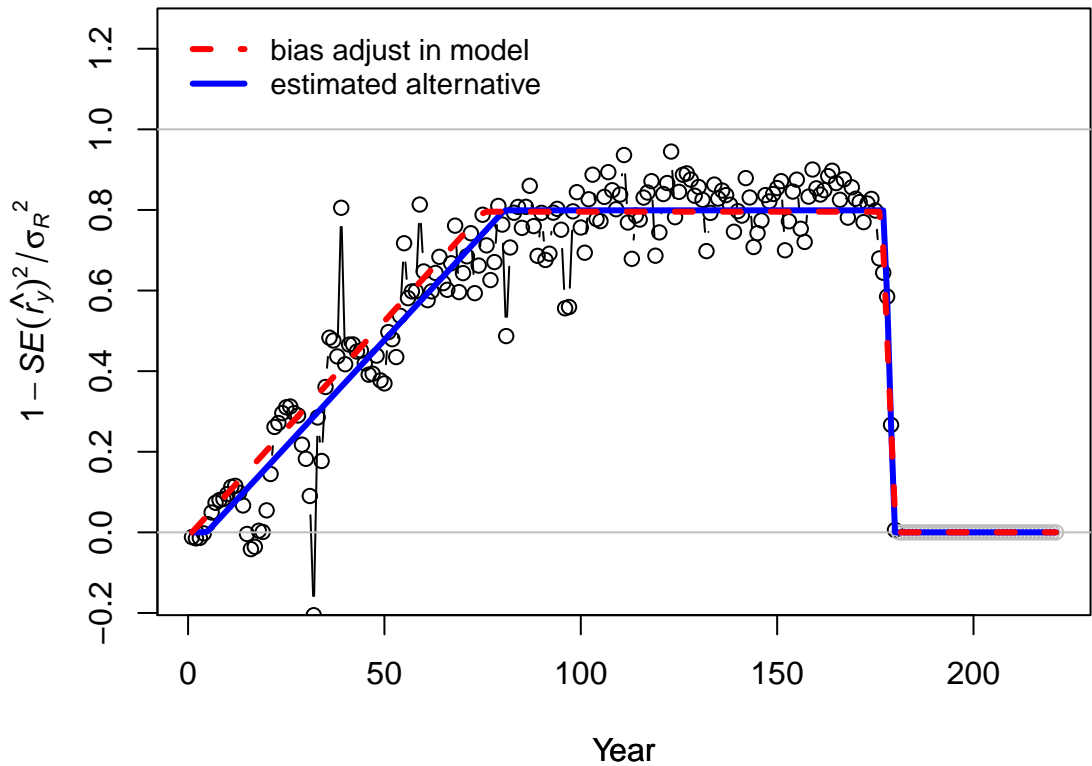


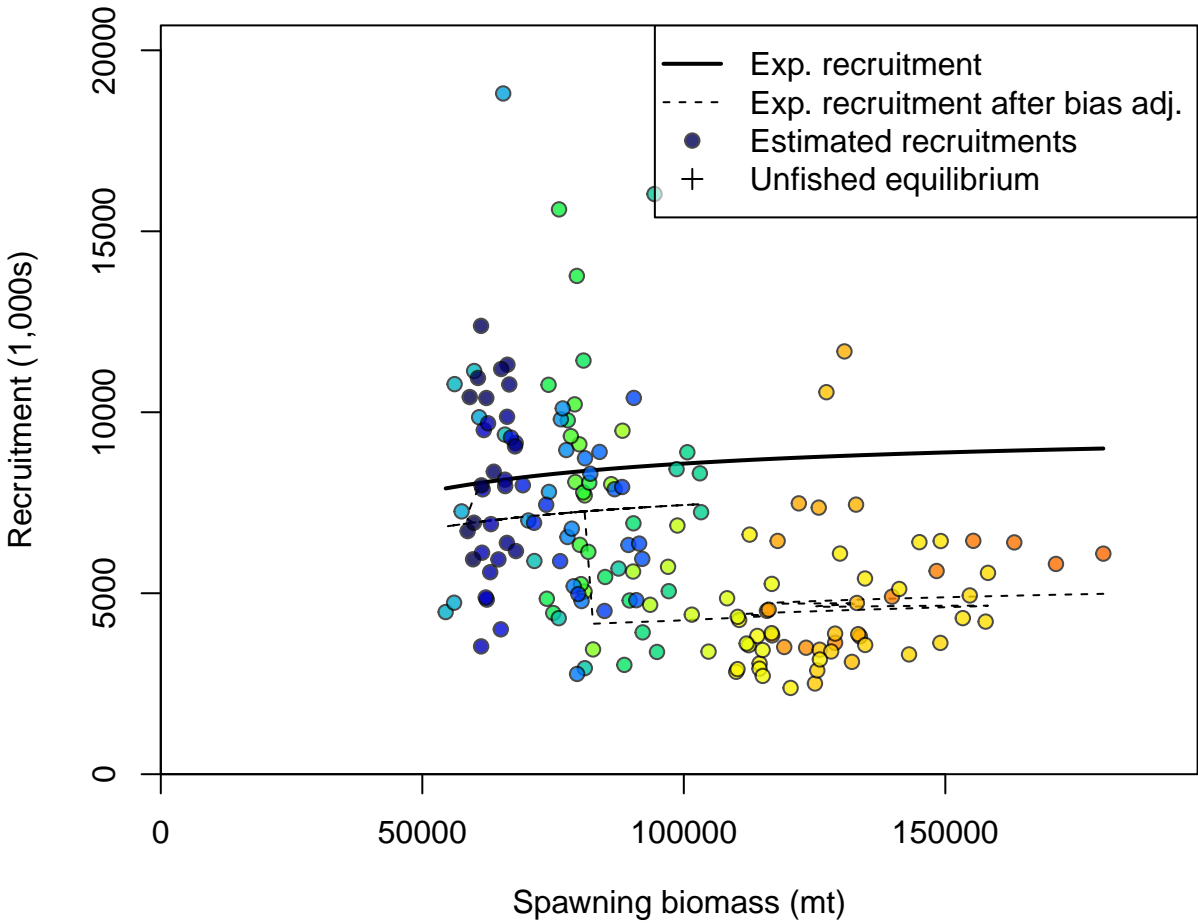


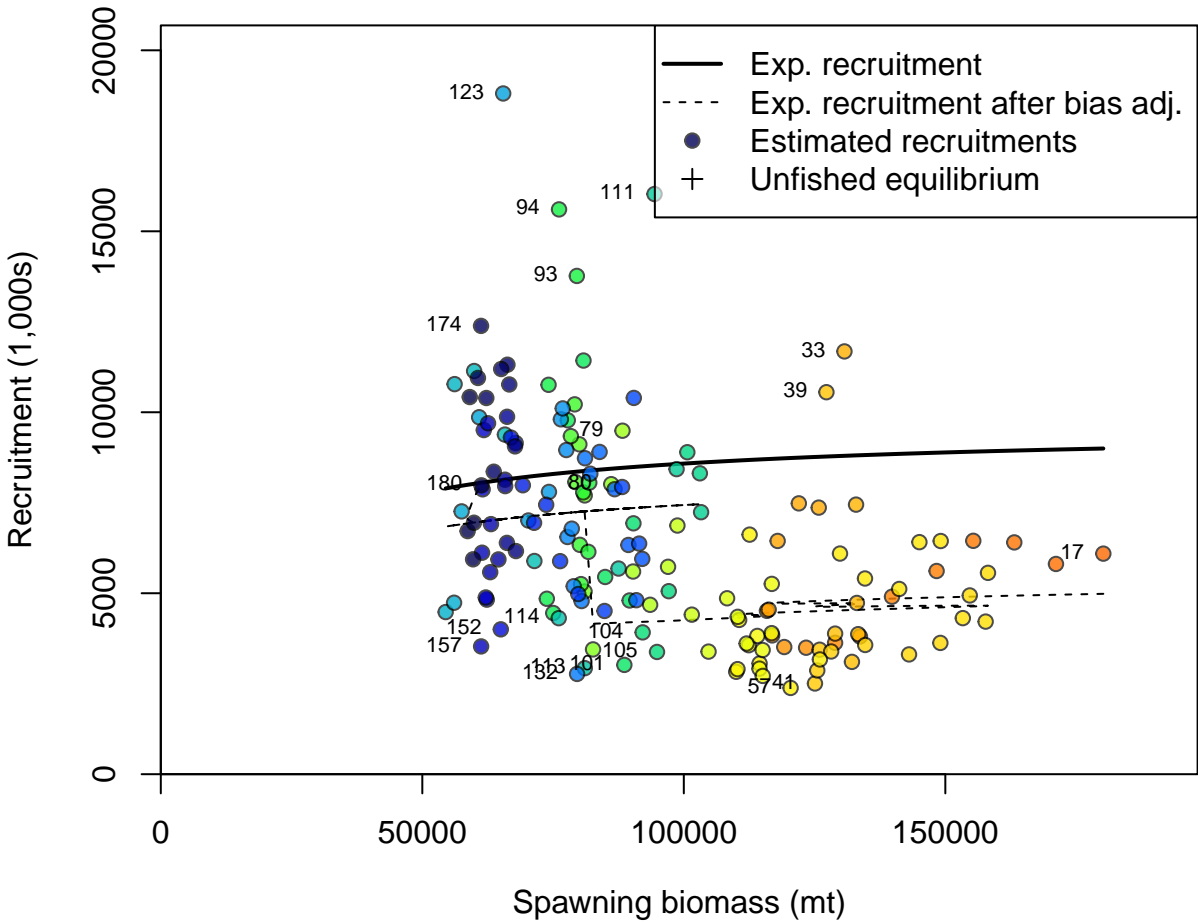


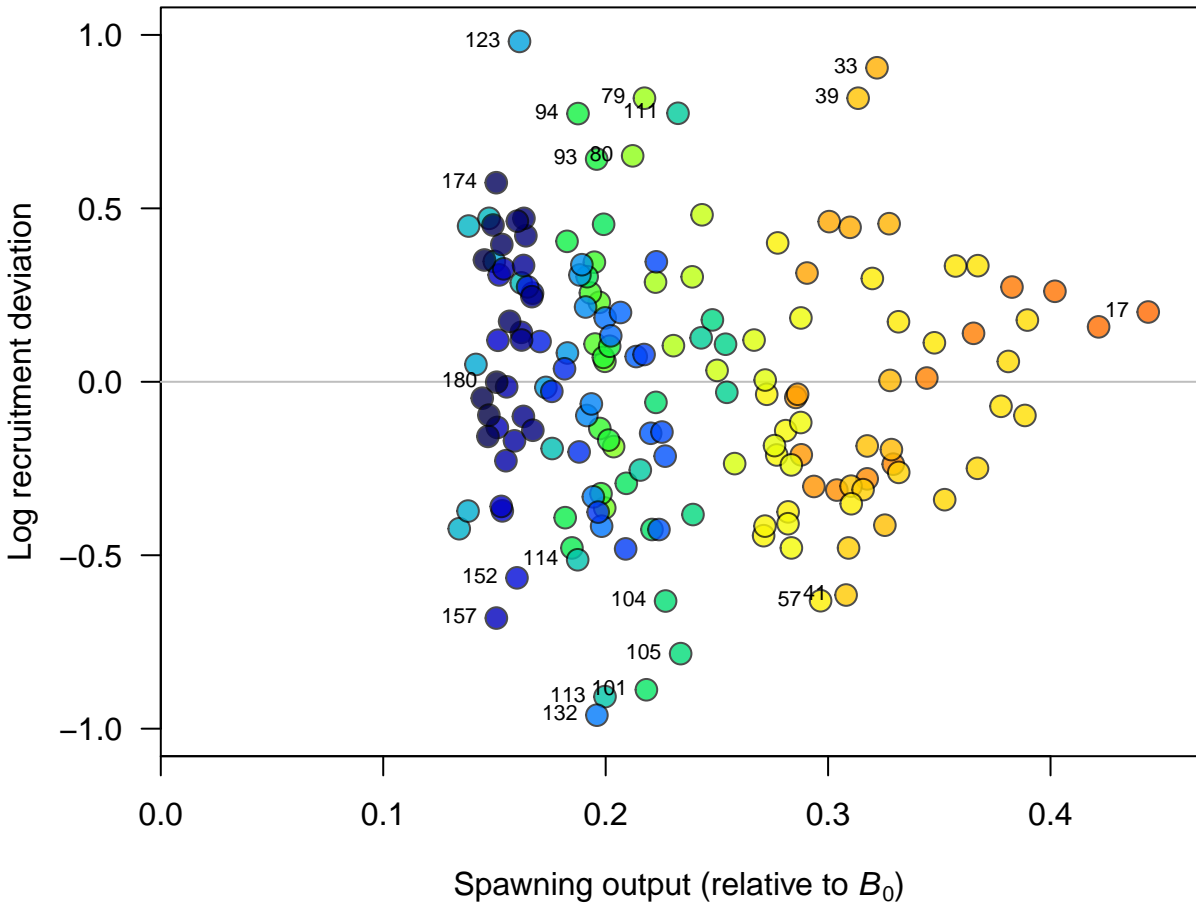
Recruitment deviation variance

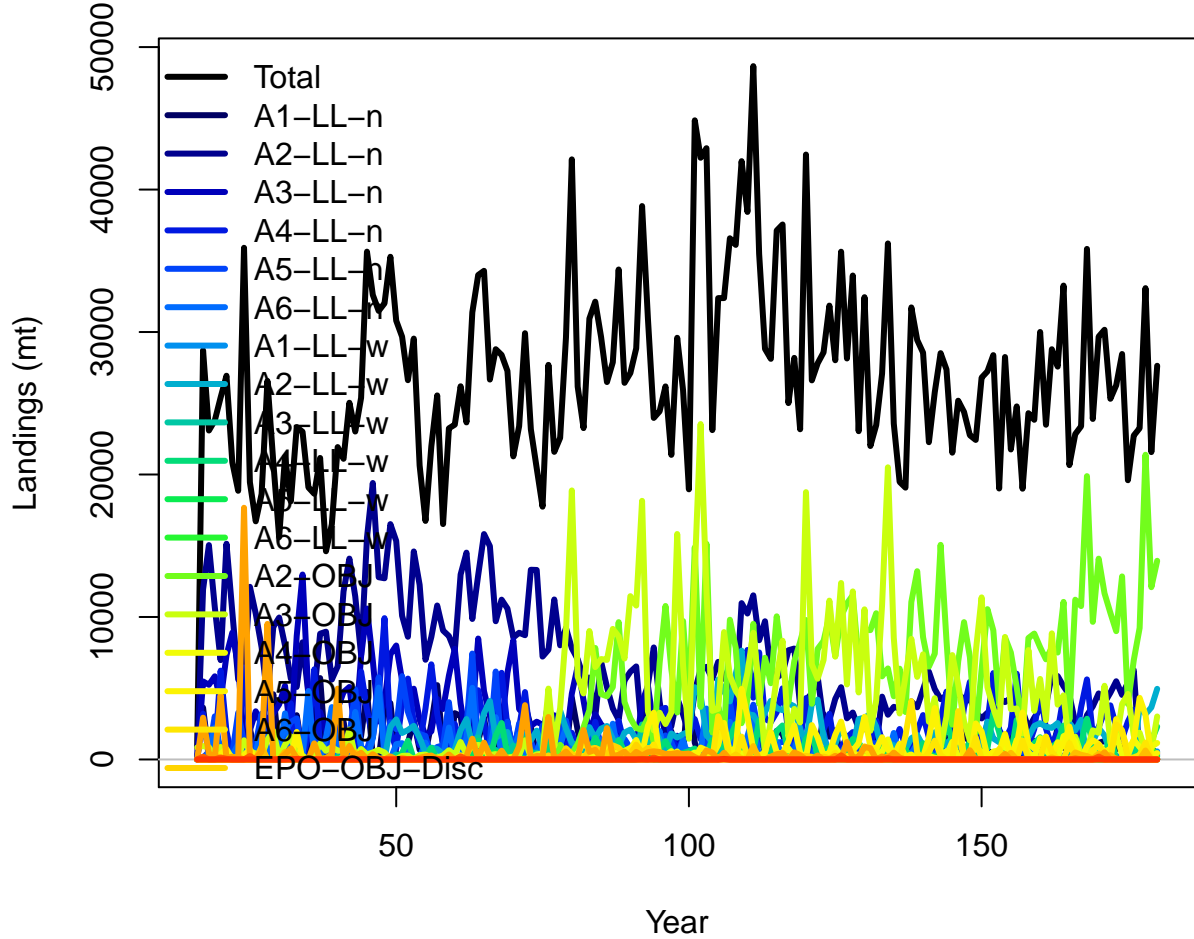




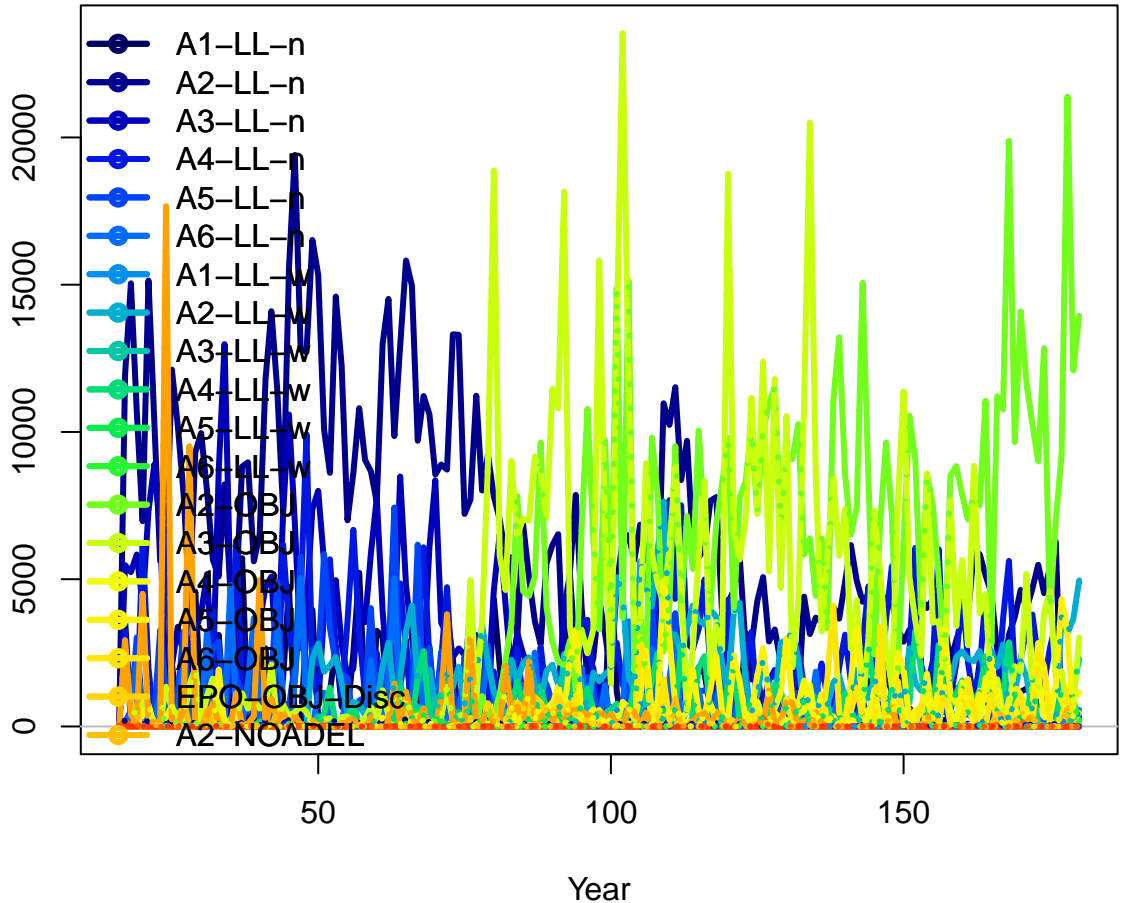




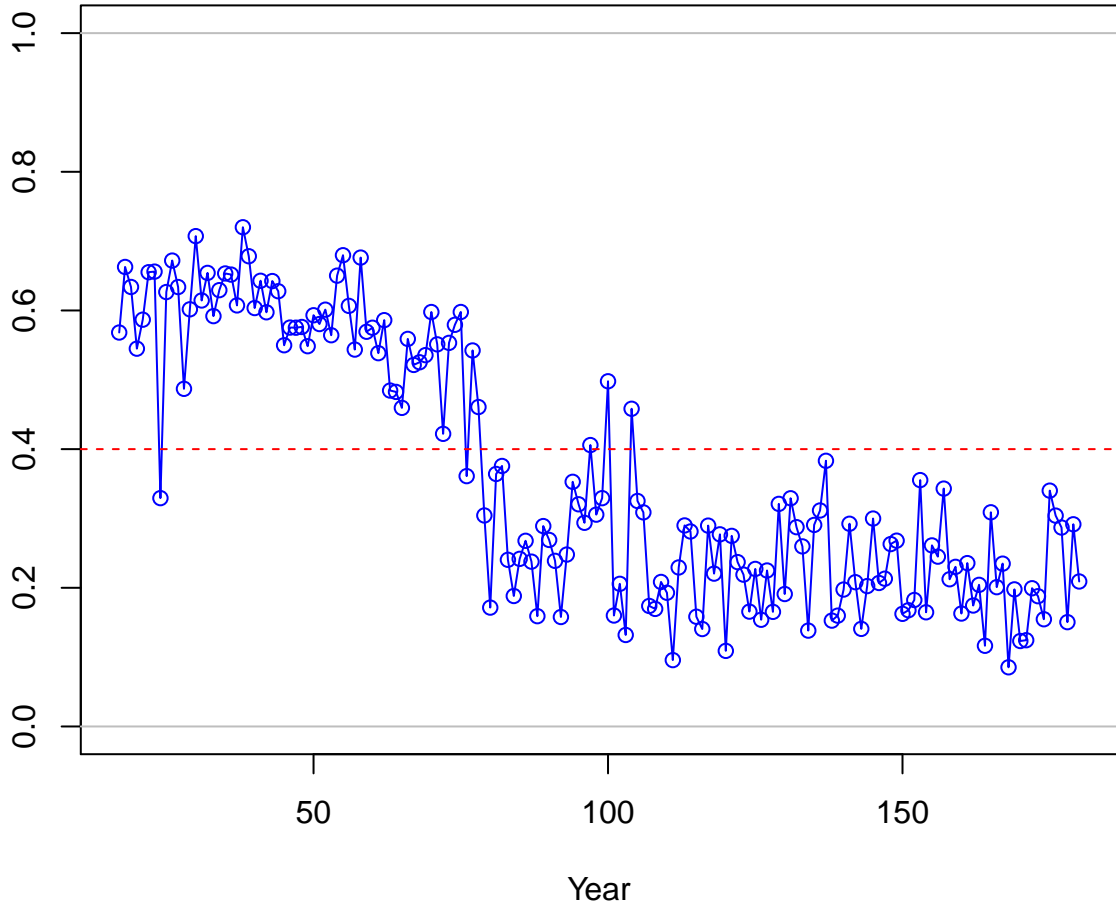




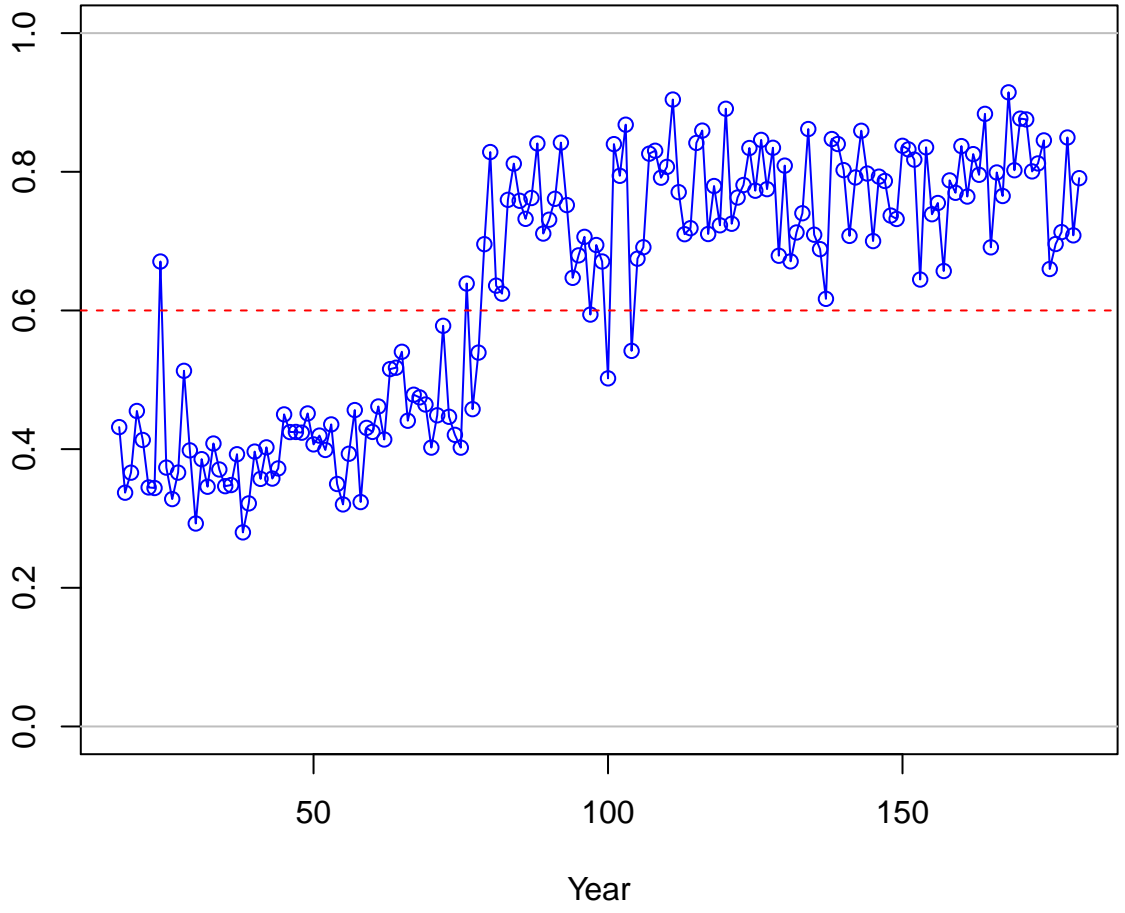
Observed and expected Landings (mt)

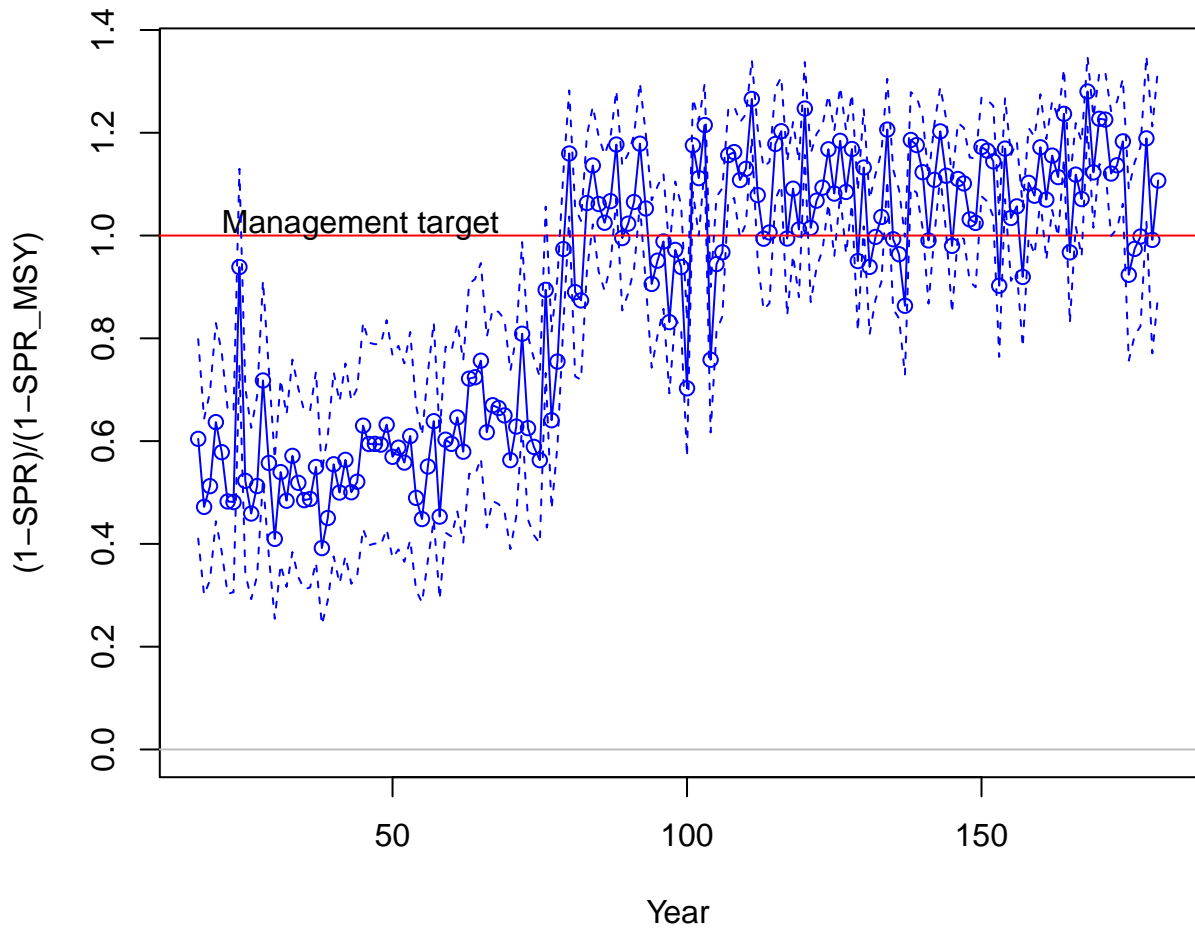


SPR

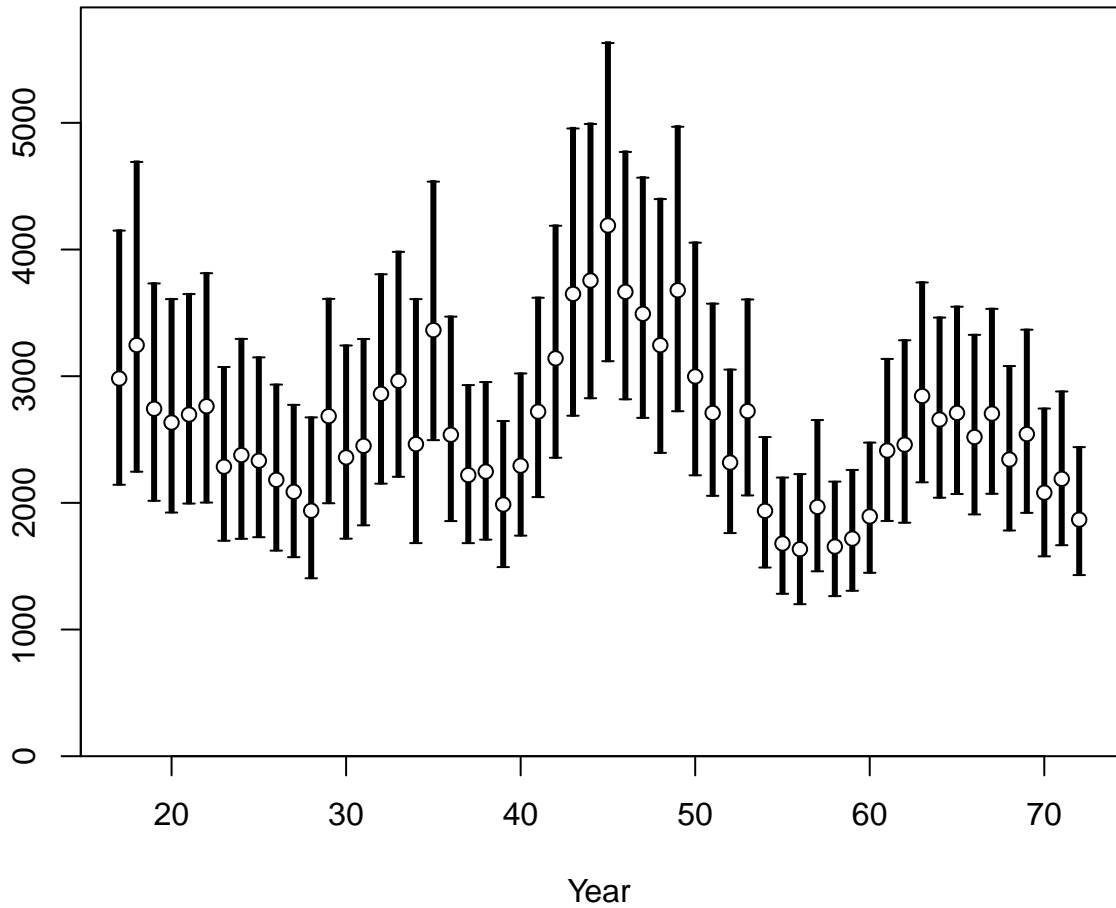


1-SPR

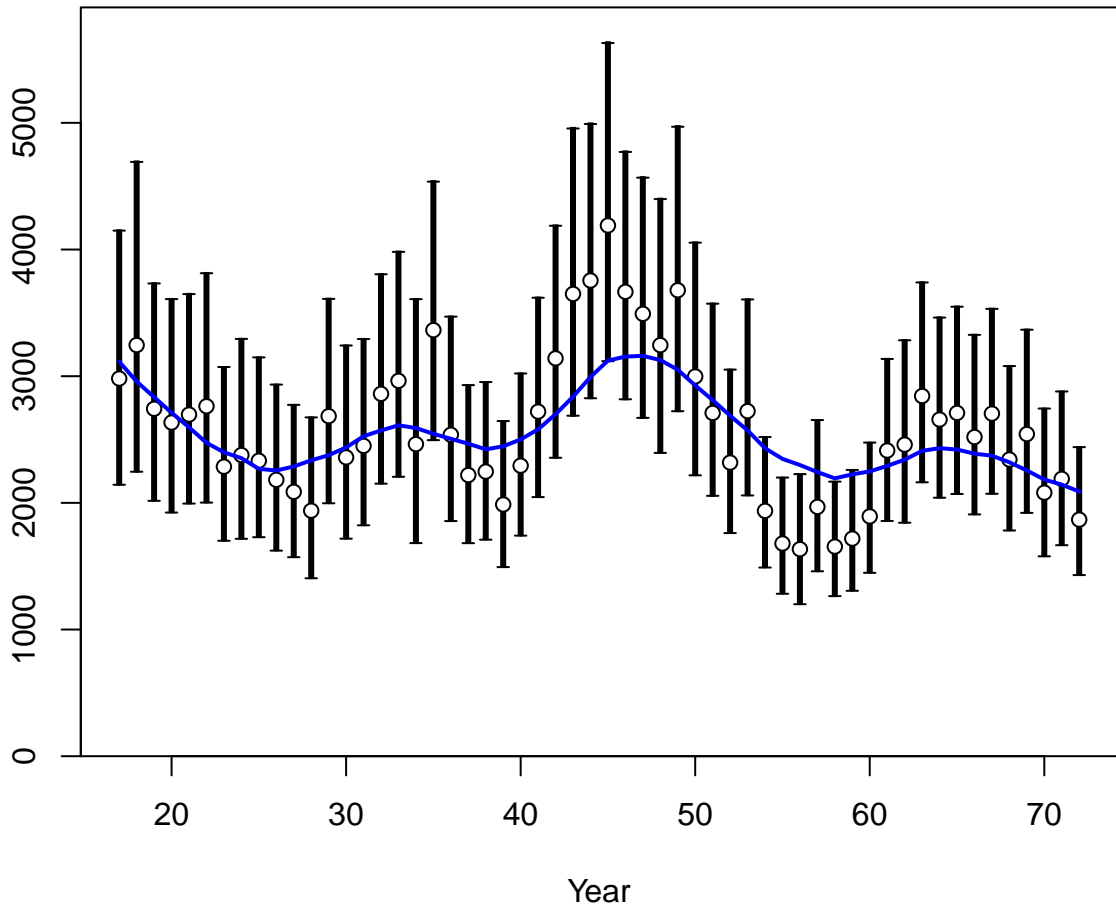




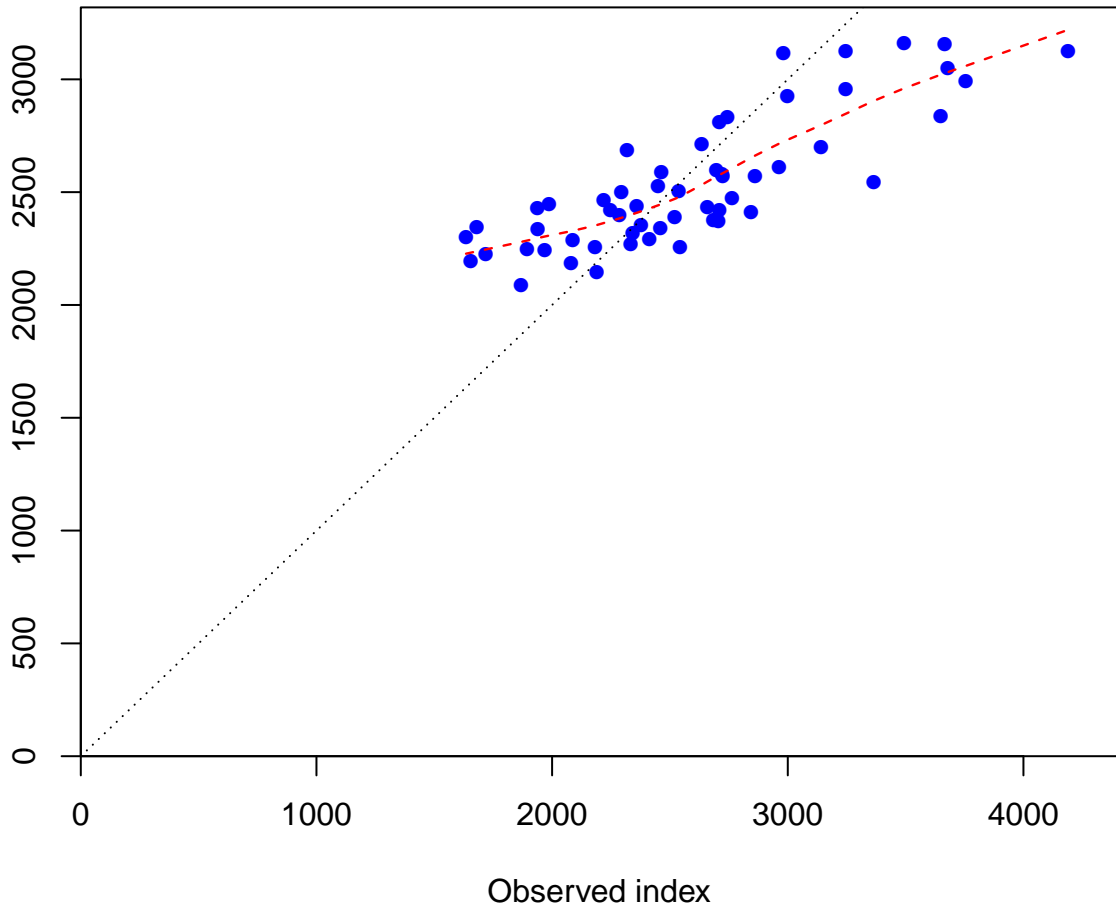
Index



Index



Expected index



Log index

8.5

8.0

7.5

20

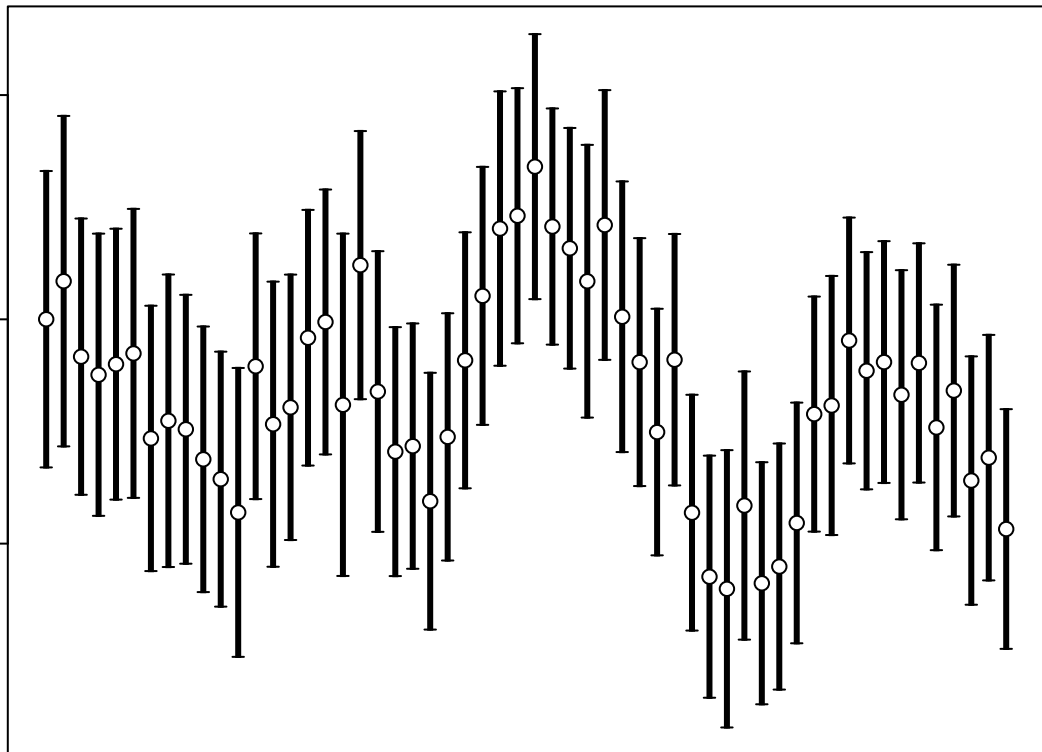
30

40

60

70

Year



Log index

8.5

8.0

7.5

20

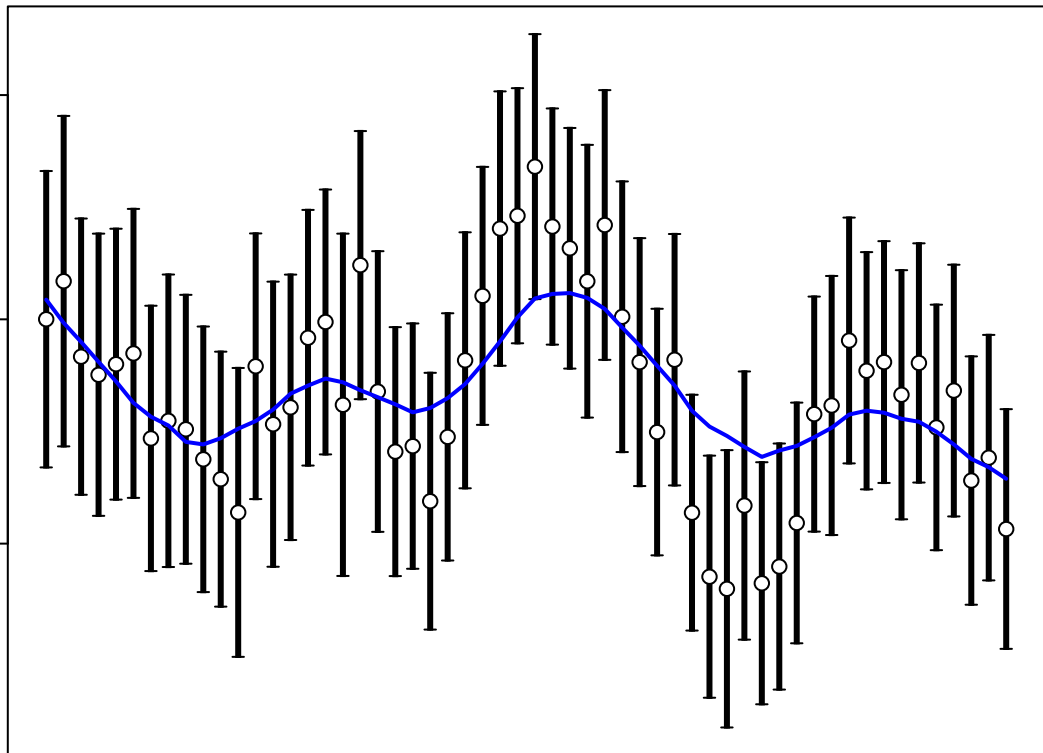
30

40

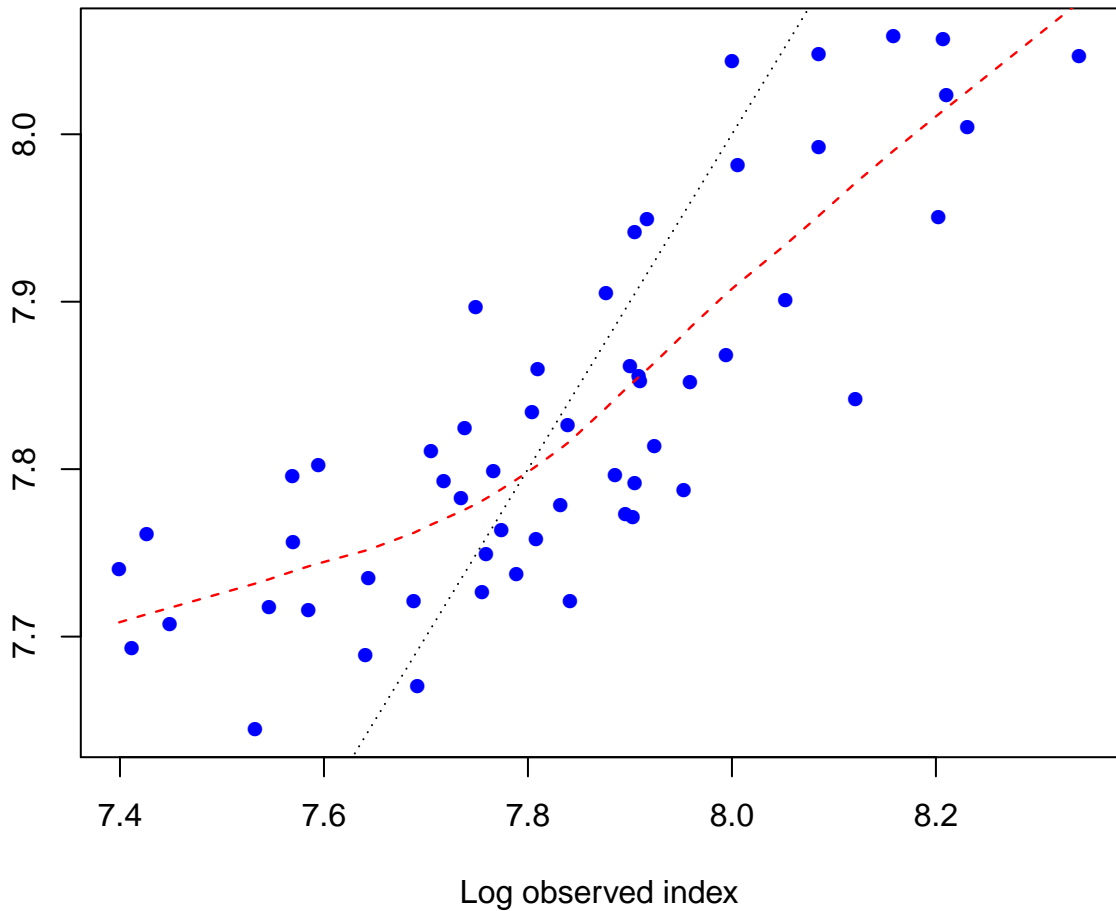
60

70

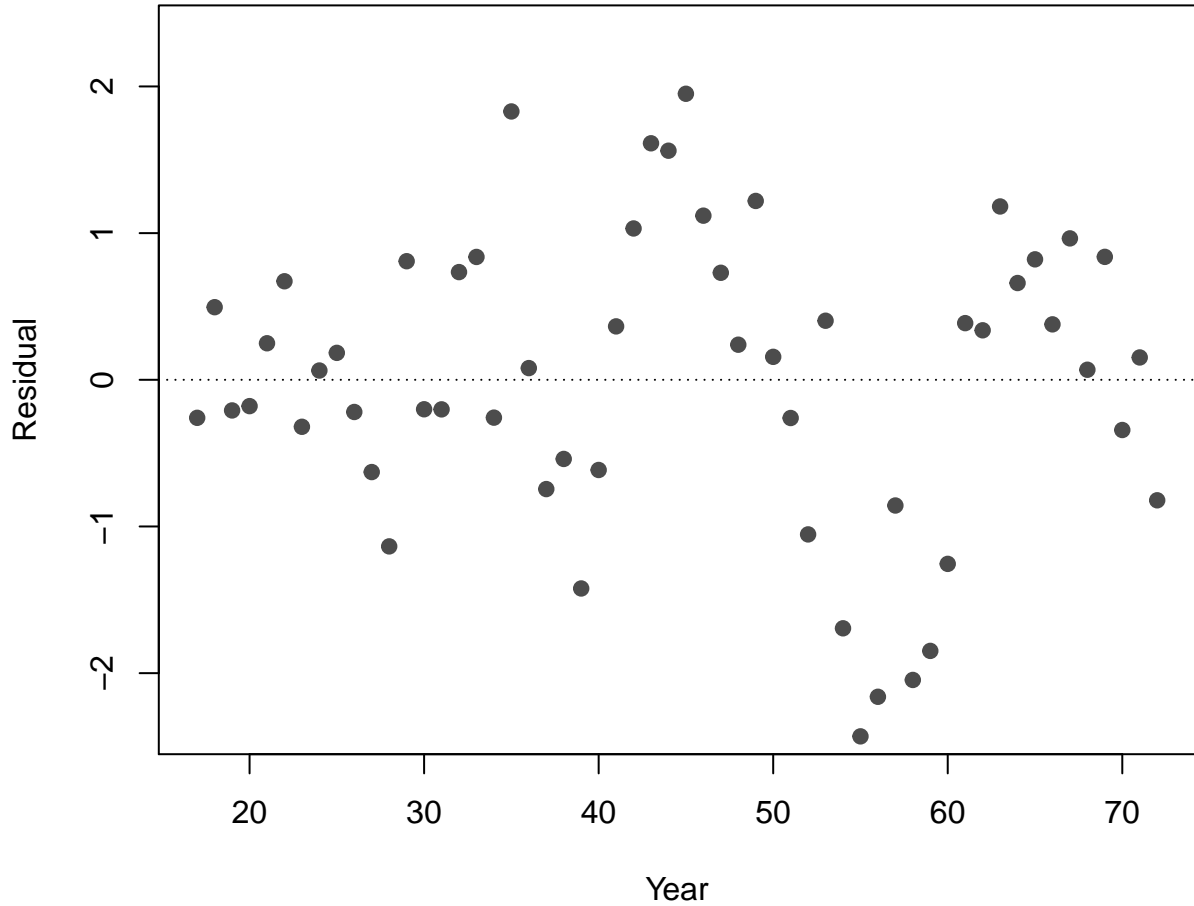
Year



Log expected index

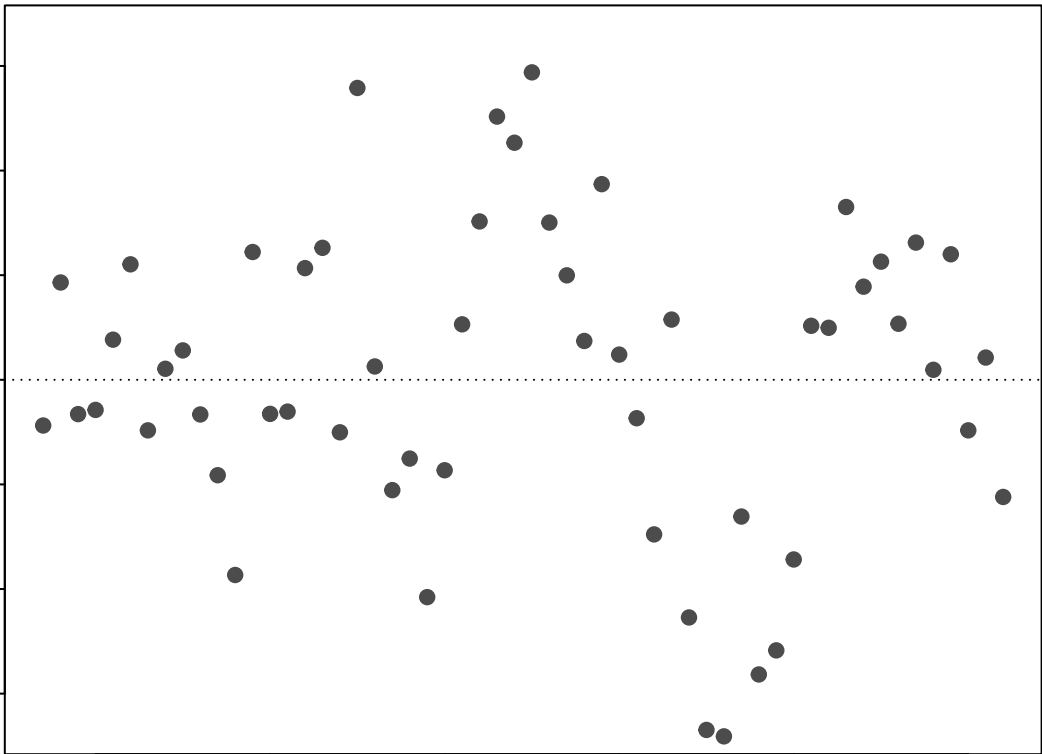


Log observed index

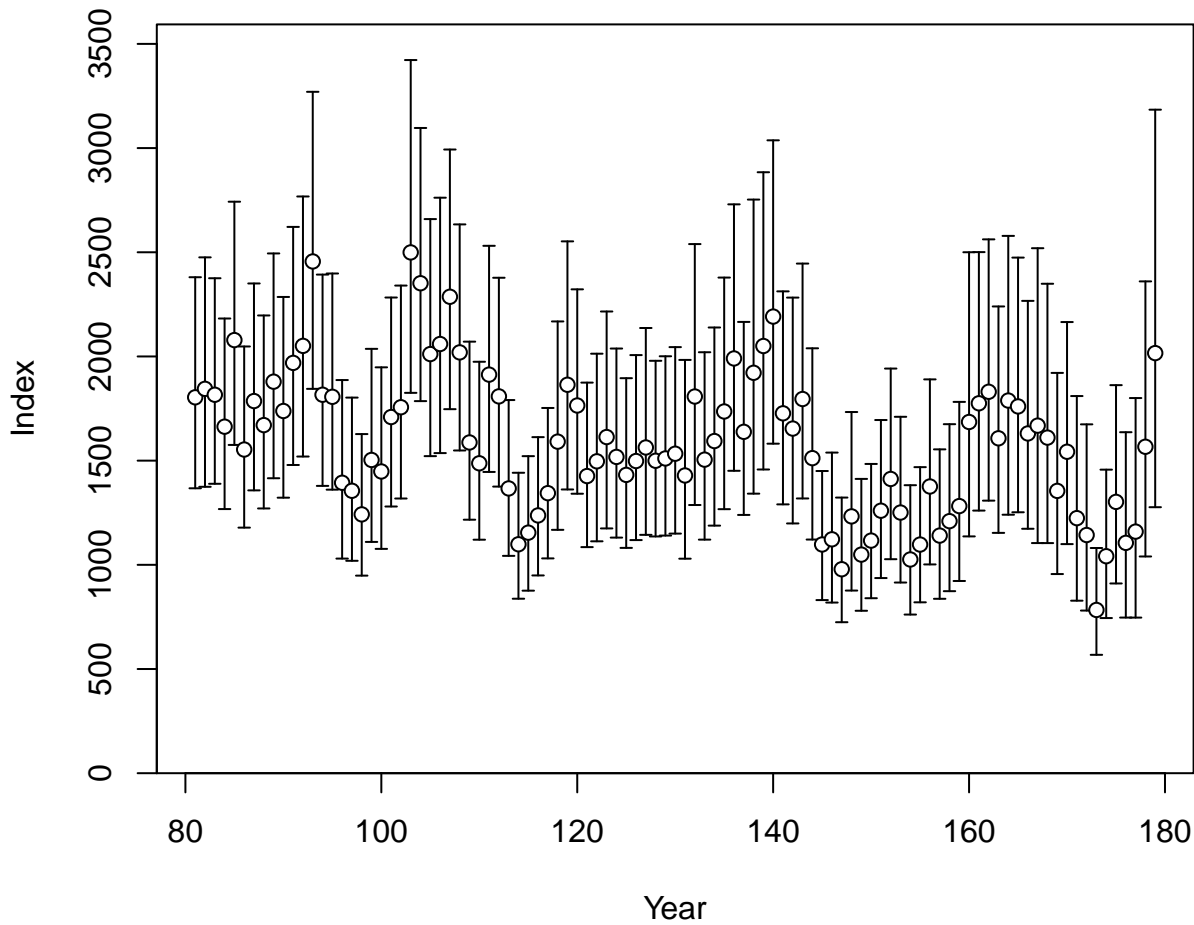


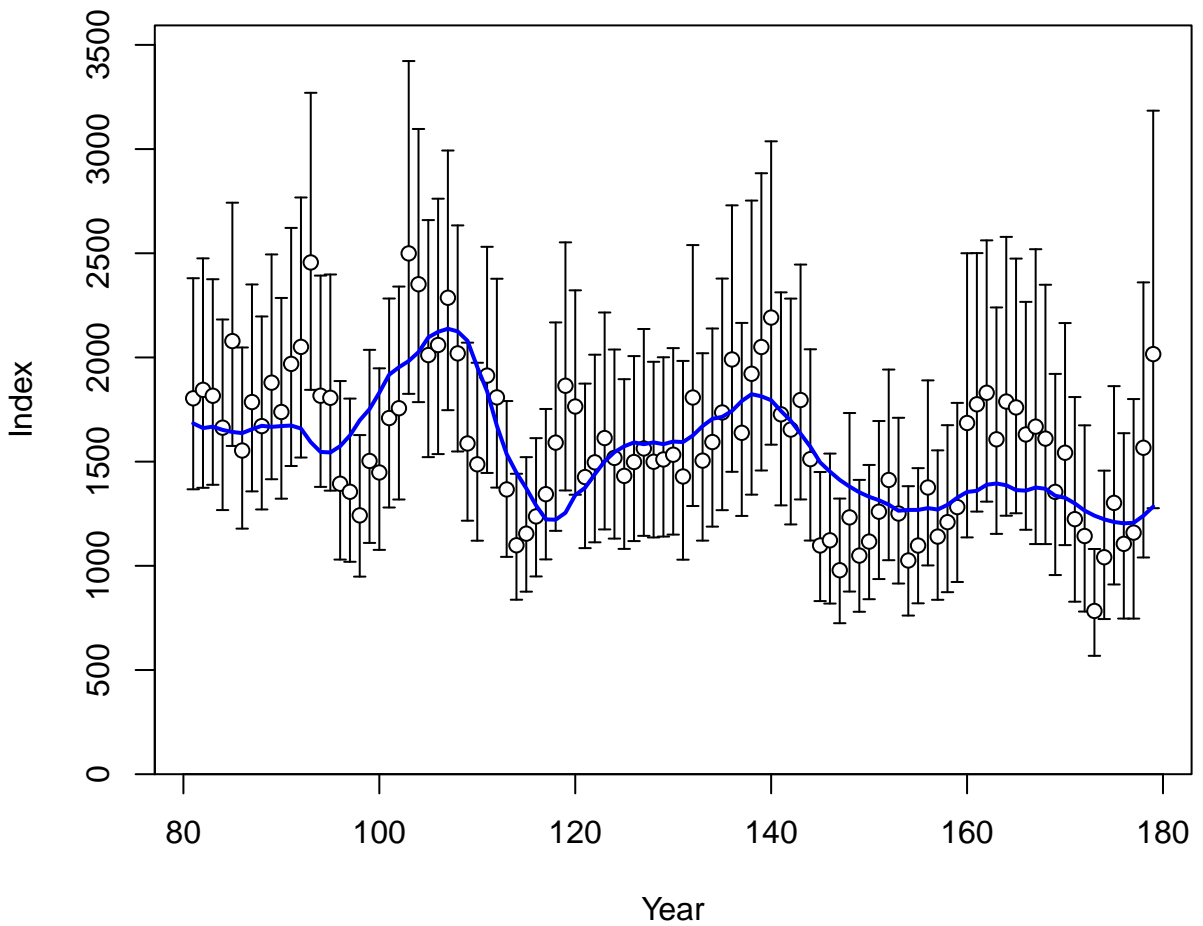
Deviation

0.3
0.2
0.1
0.0
-0.1
-0.2
-0.3

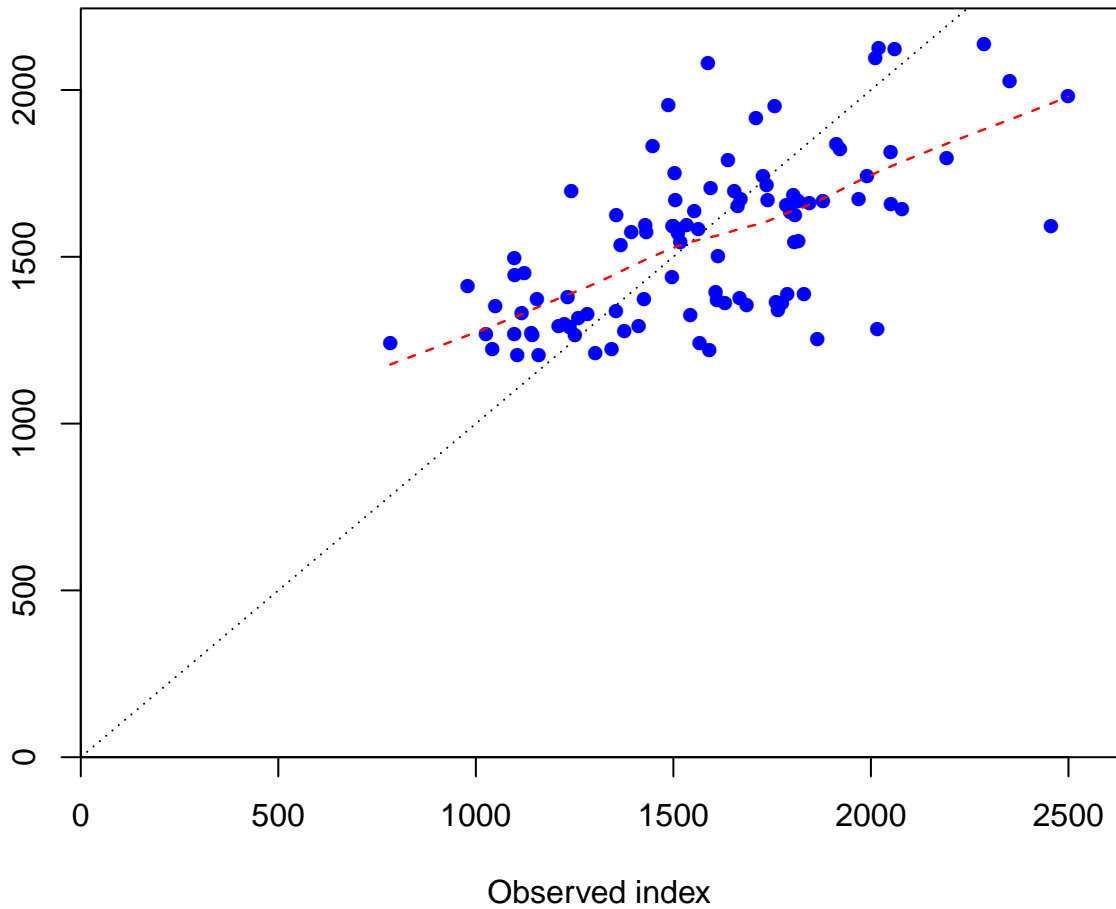


Year





Expected index



Log index

8.0
7.5
7.0
6.5

80

100

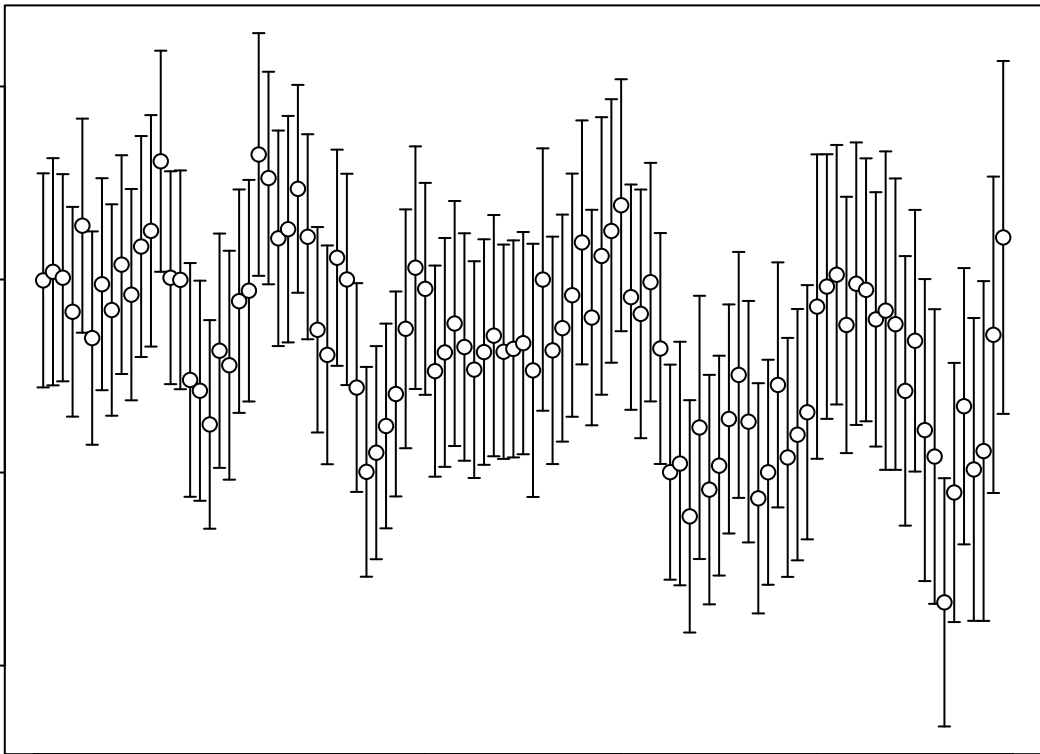
120

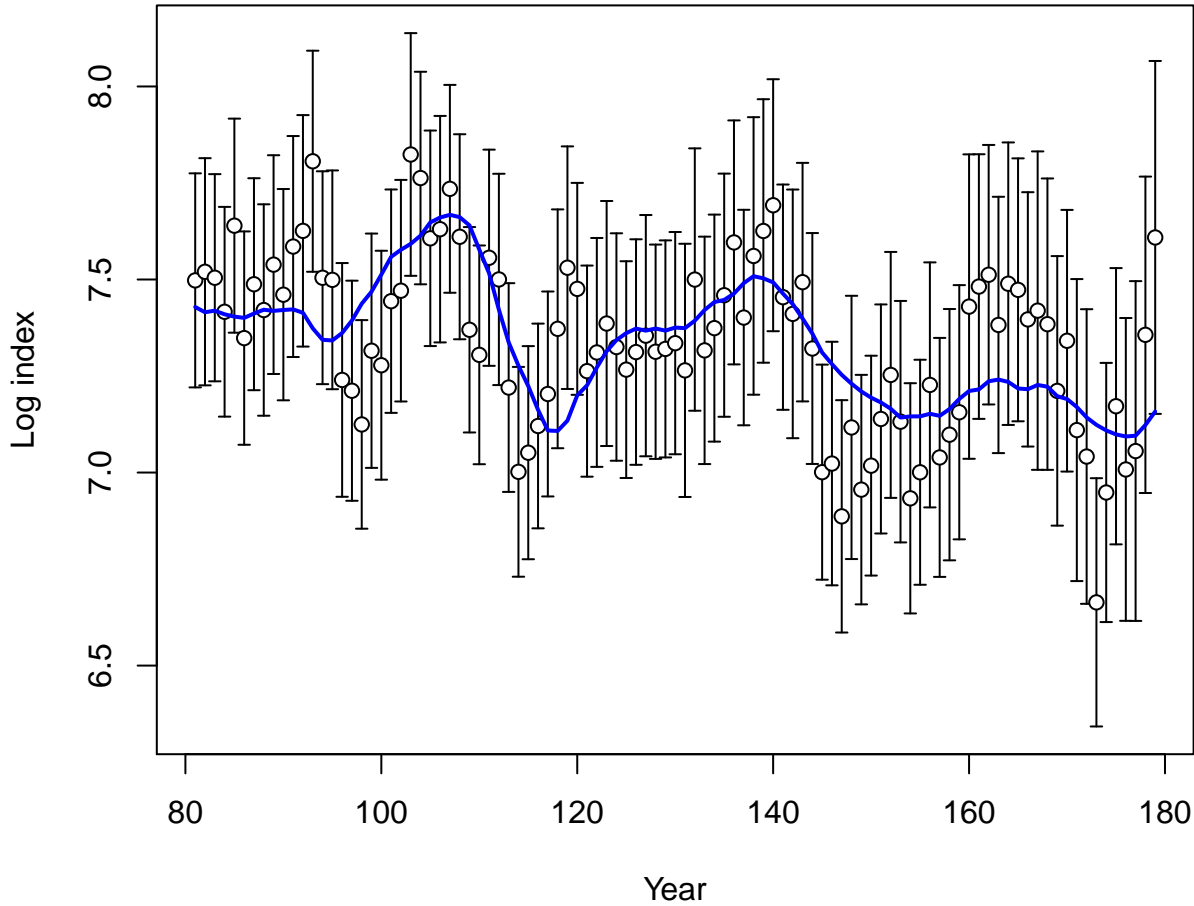
140

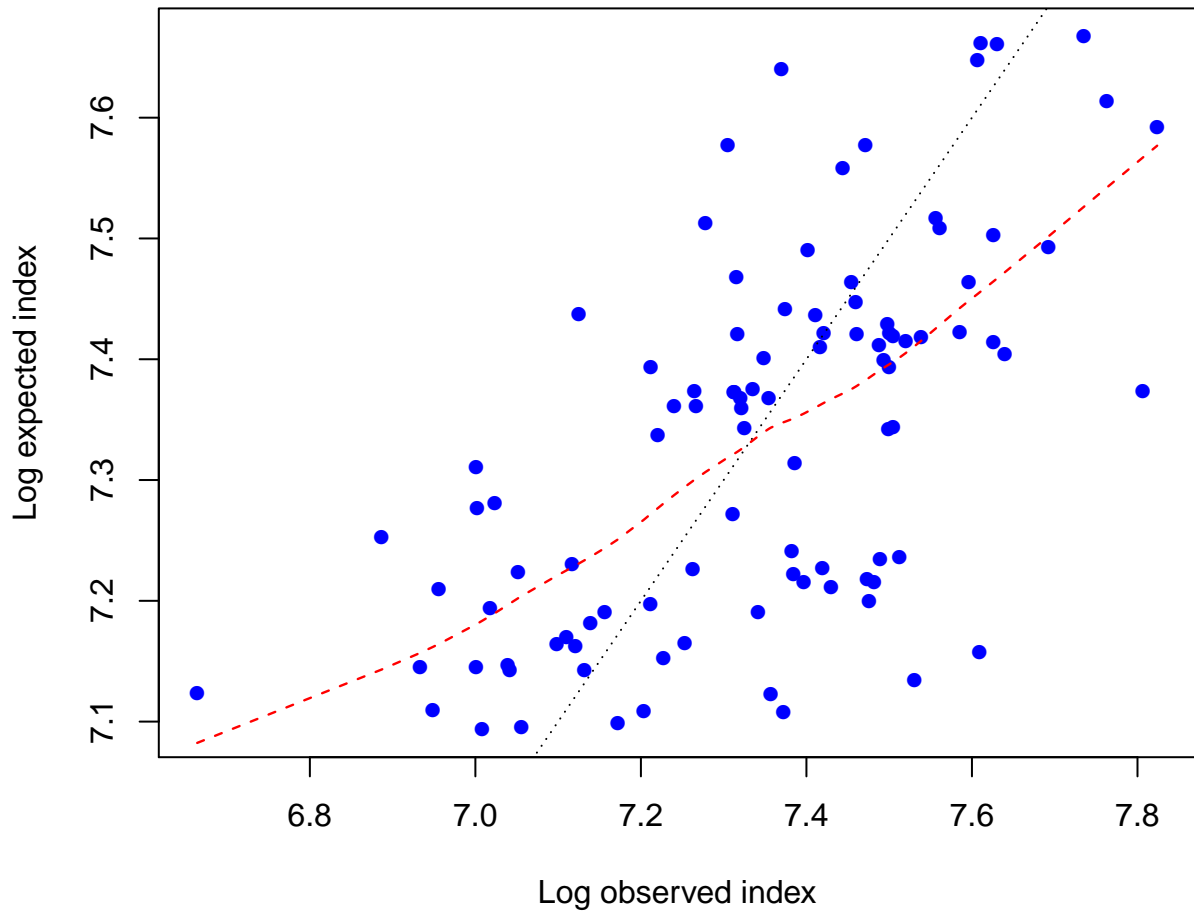
160

180

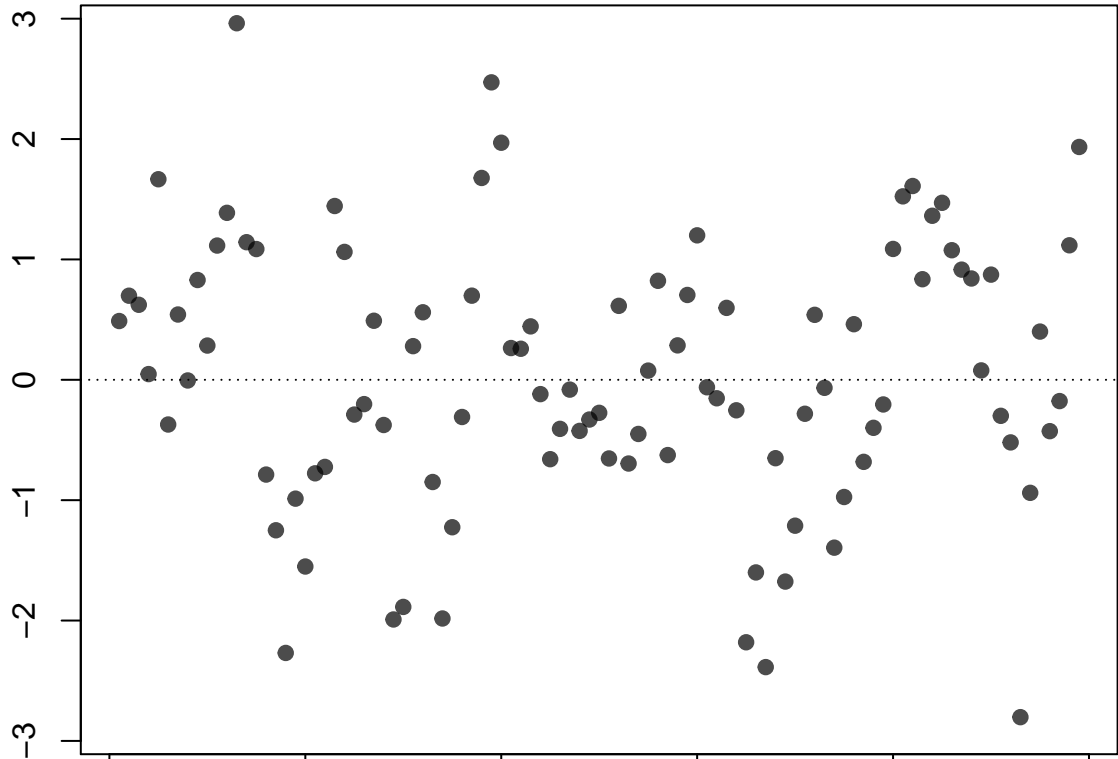
Year







Residual



80

100

120

140

160

180

Year

3

2

1

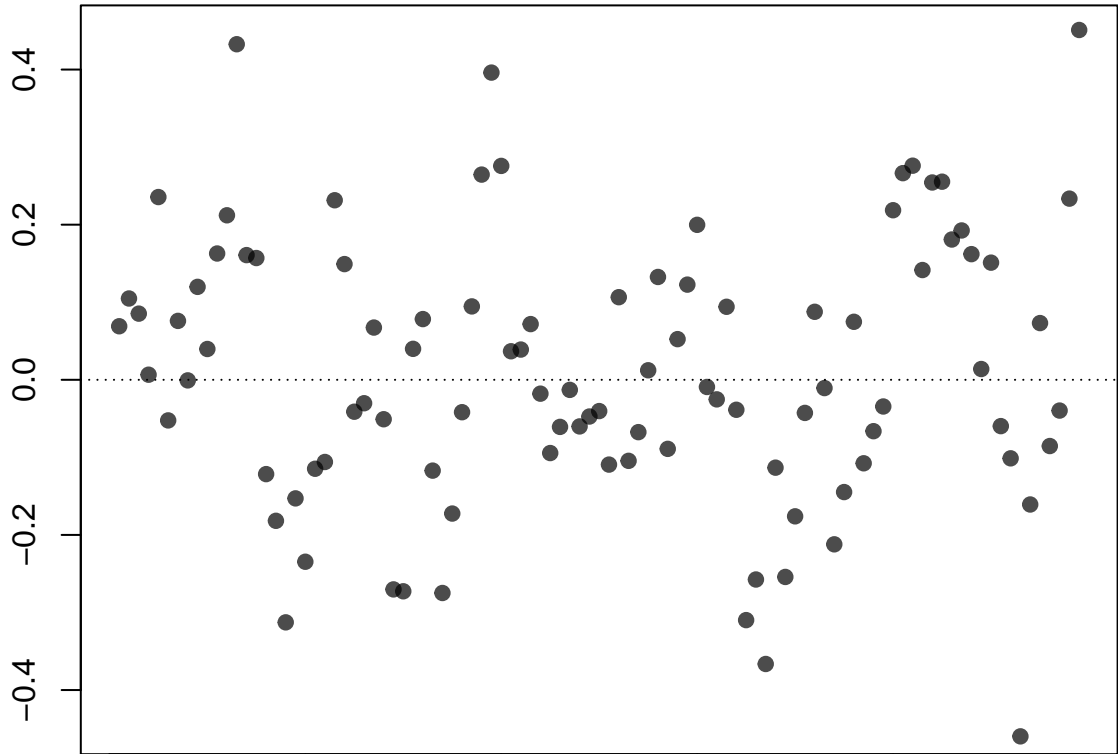
0

-1

-2

-3

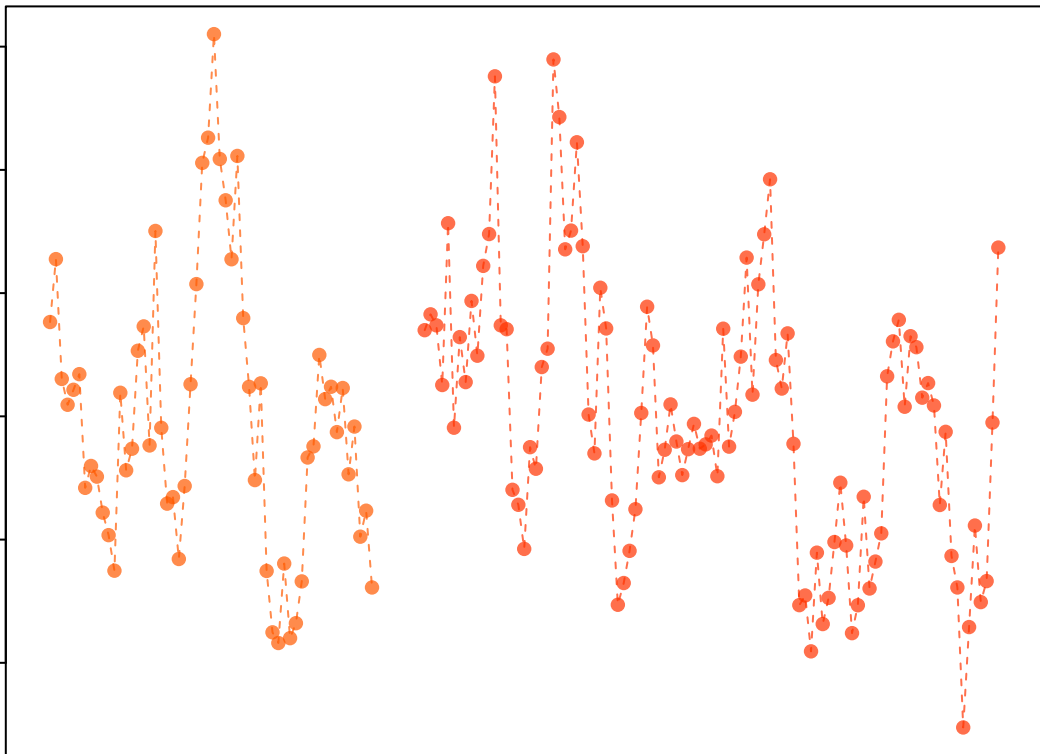
Deviation



Year

Standardized index

1.6
1.4
1.2
1.0
0.8
0.6



50

100

150

Year

Age

○ 0.1 ○ 5 ○ 10

40

30

20

10

0

16

27

38

49

60

71

82

93

106

120

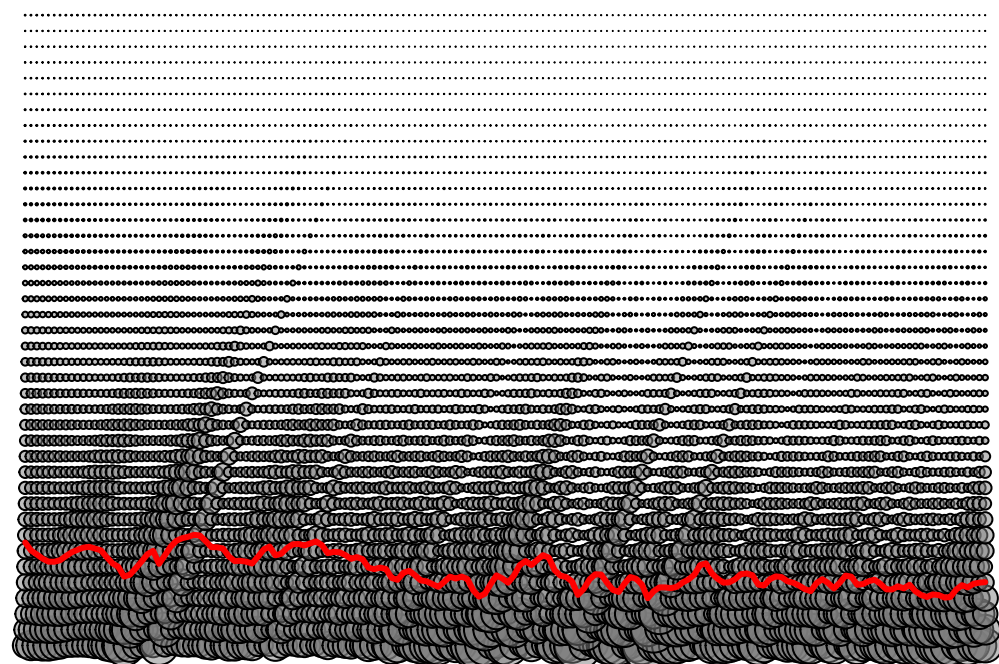
134

148

162

176

Year



Age

○ 0.1 ○ 5 ○ 10

40

30

20

10

0

16

27

38

49

60

71

82

93

106

120

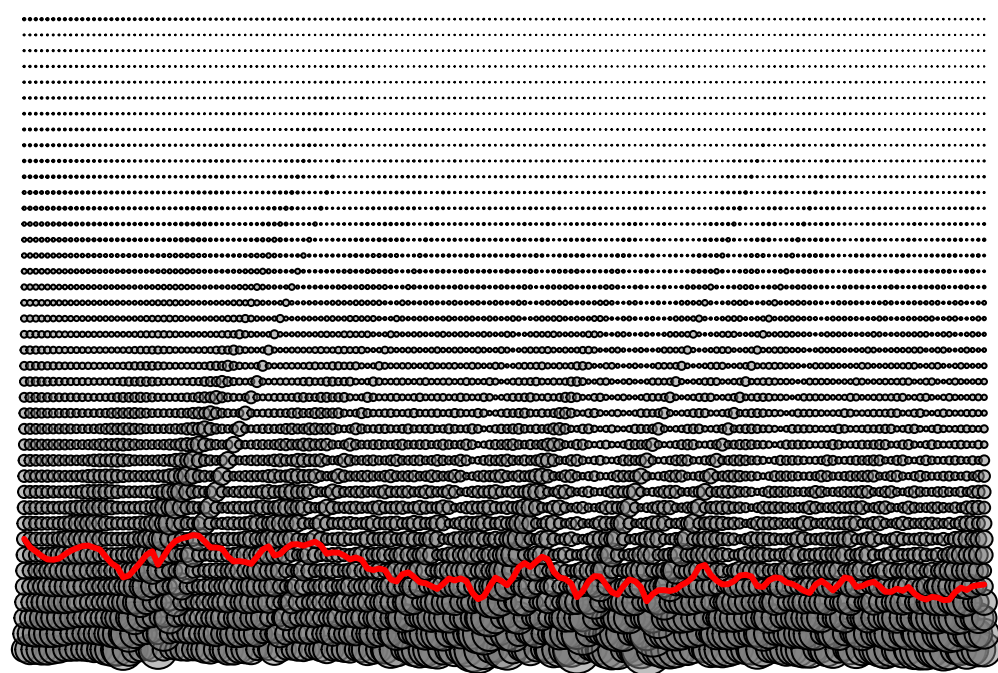
134

148

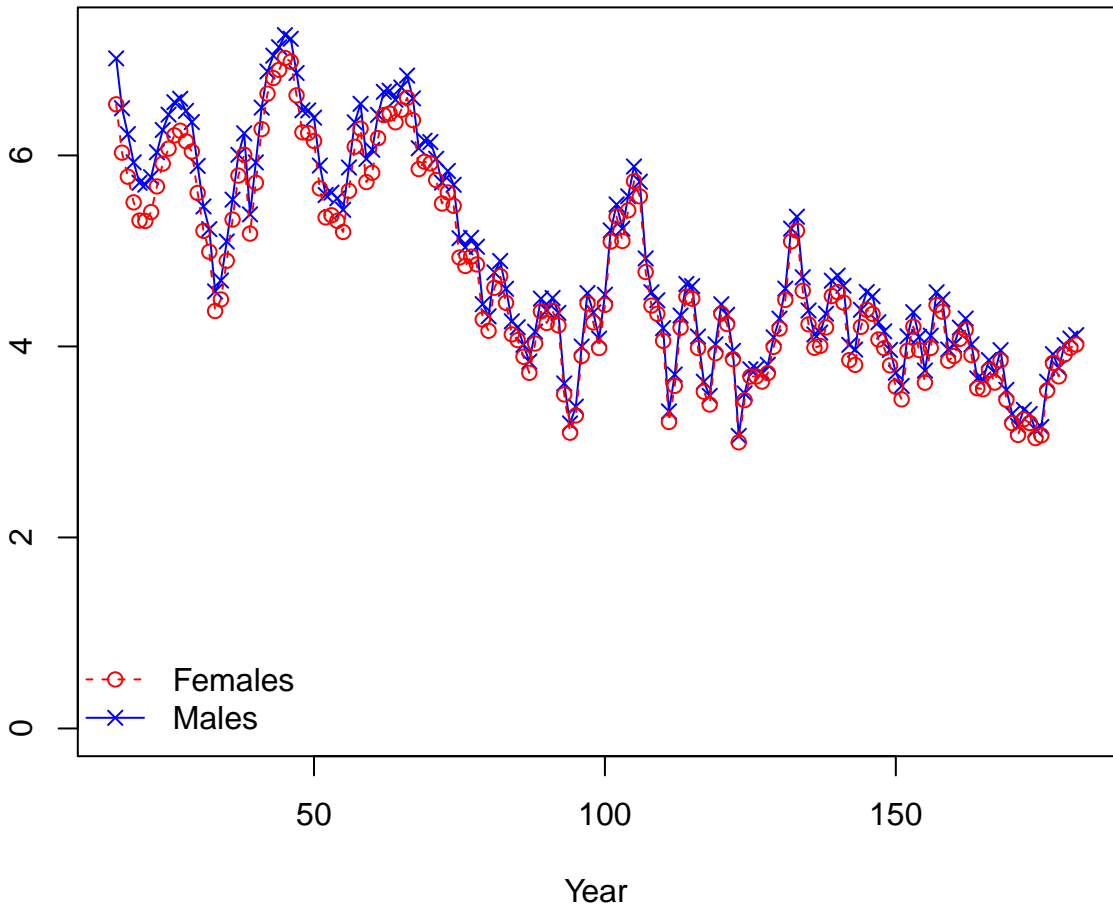
162

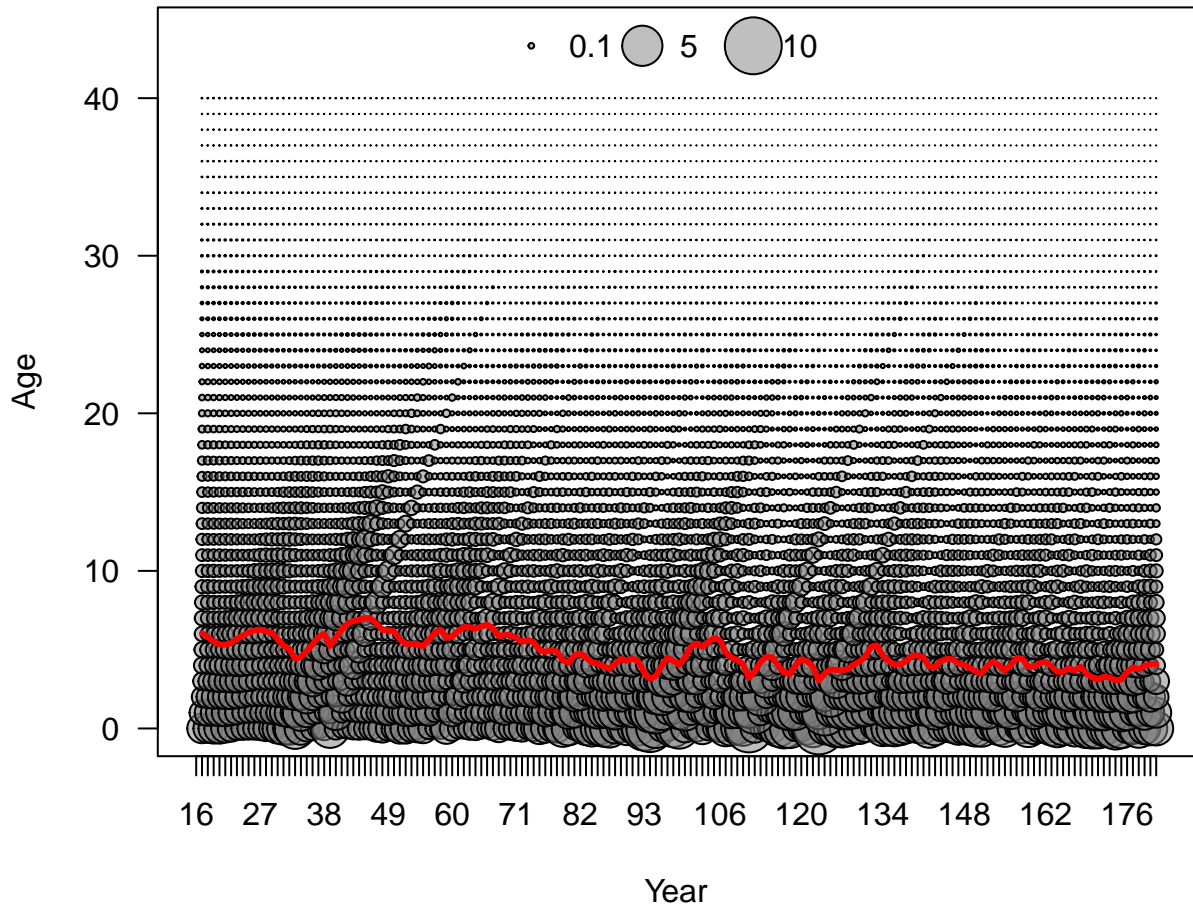
176

Year



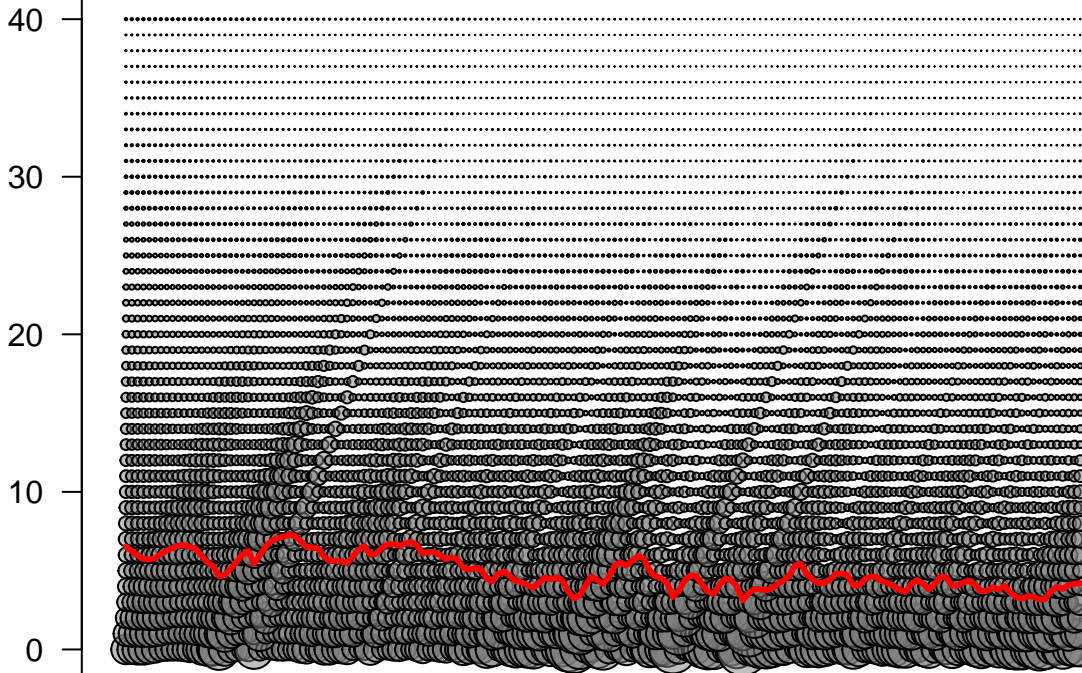
Mean age (yr)





Age

○ 0.1 ● 5 ● 10



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

Year

Mean age (yr)

6

4

2

0

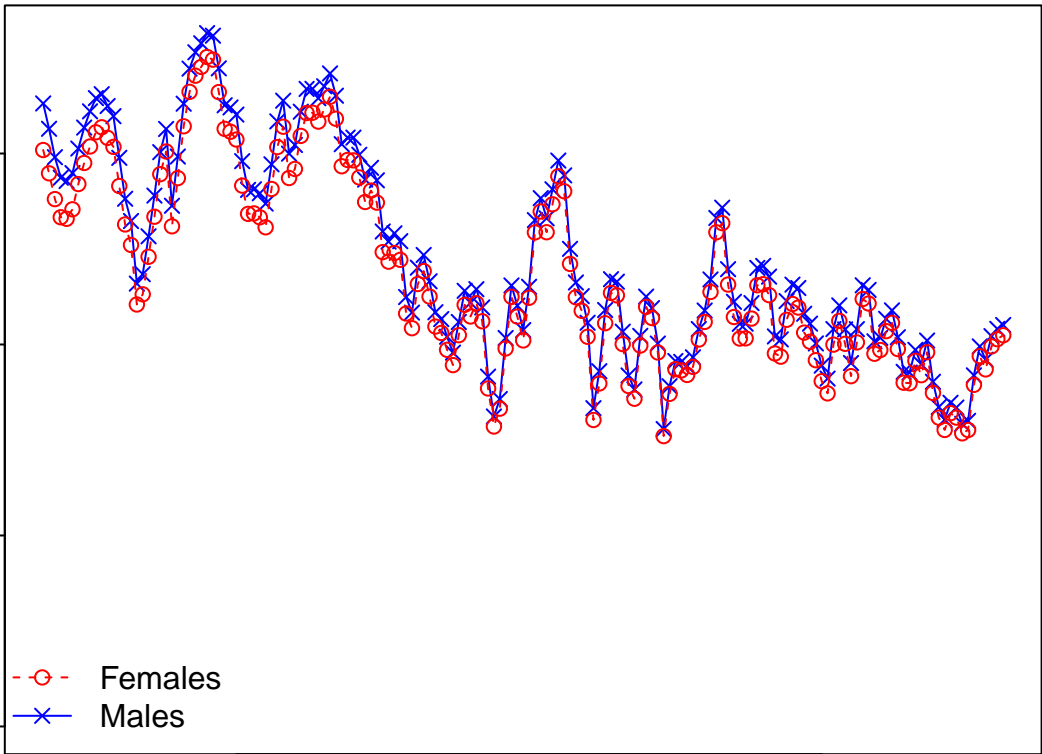
-o- Females
-x- Males

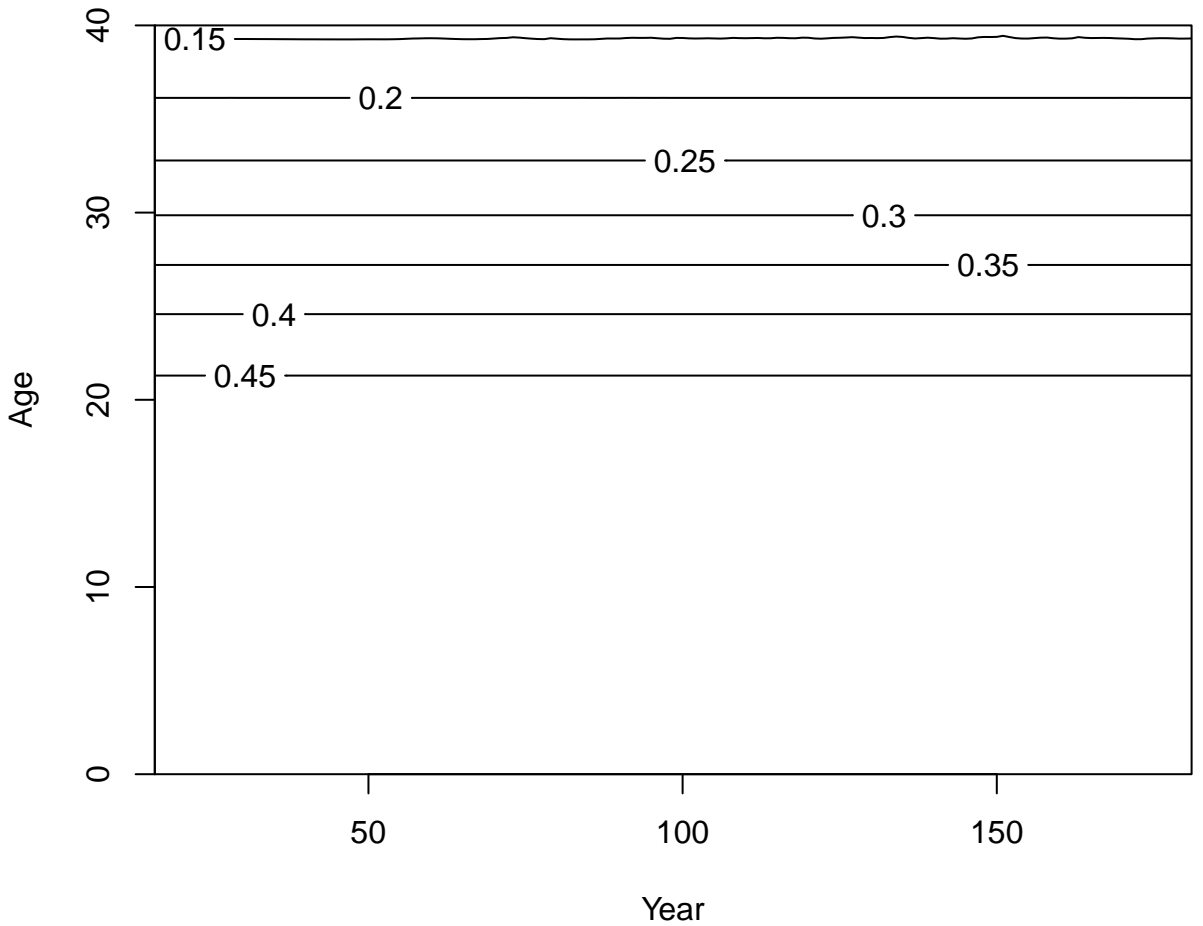
50

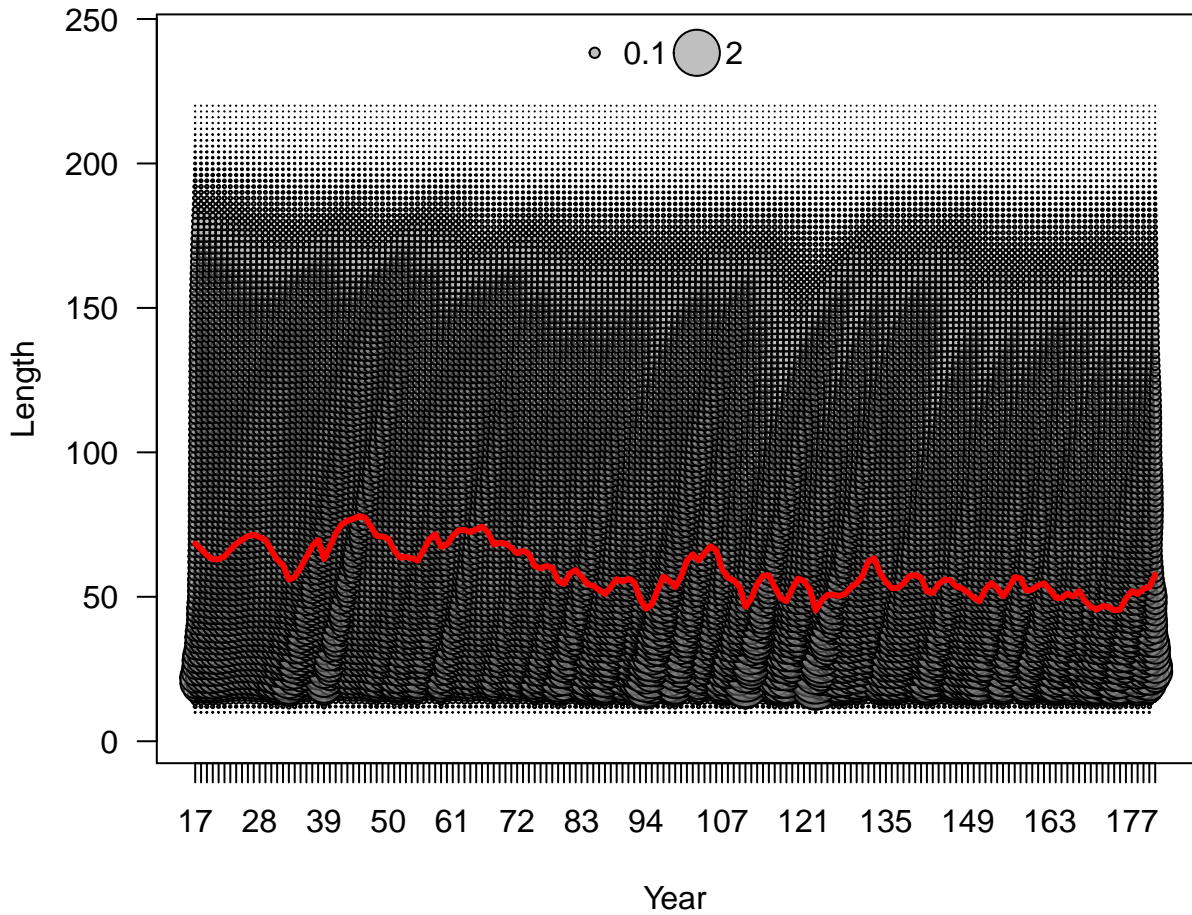
100

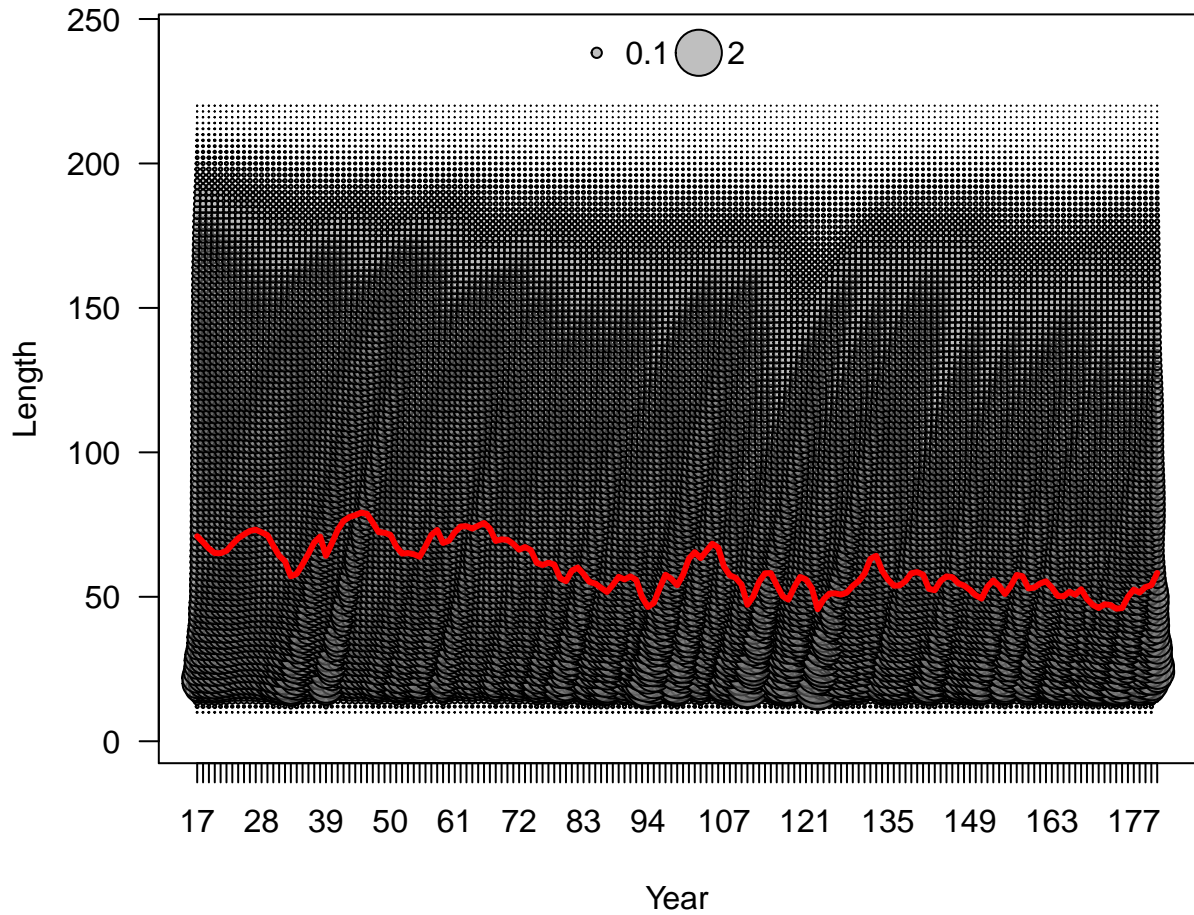
150

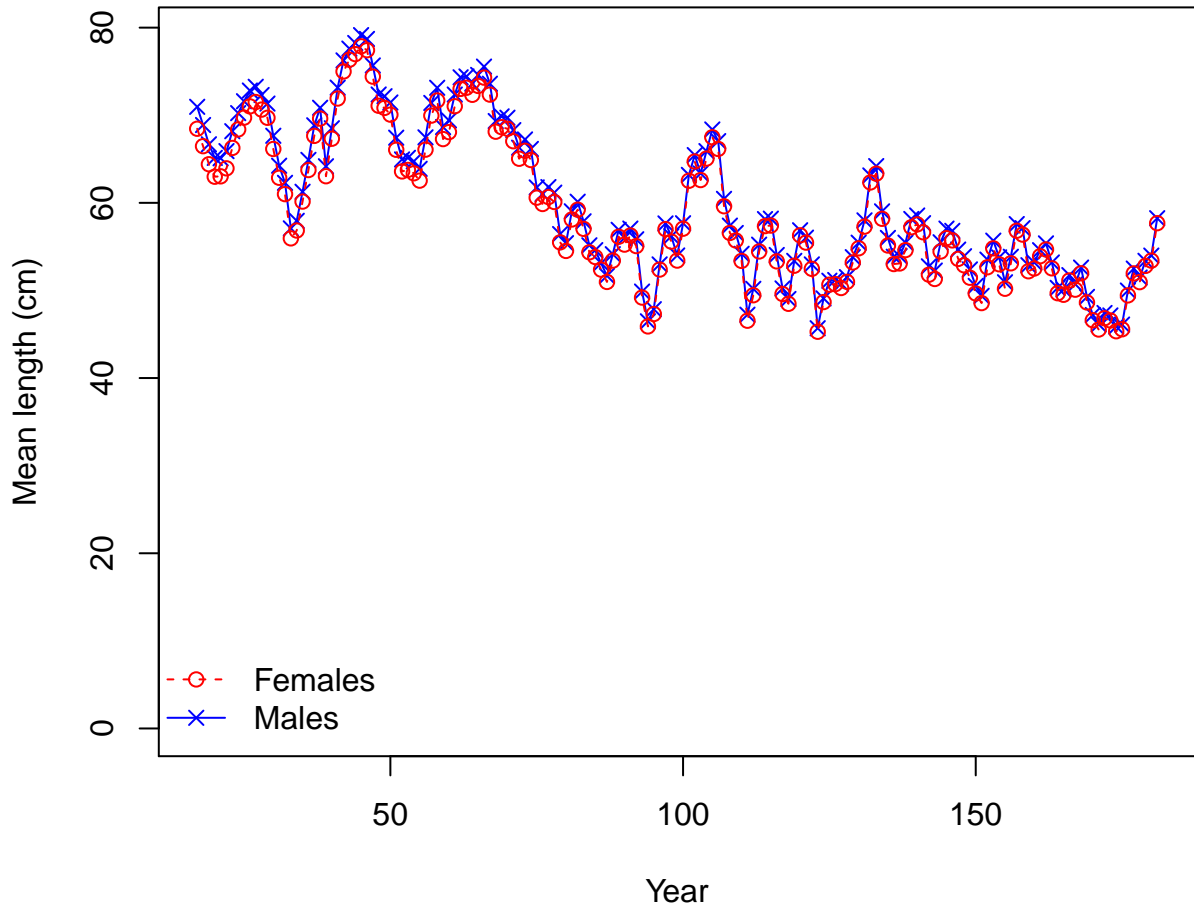
Year

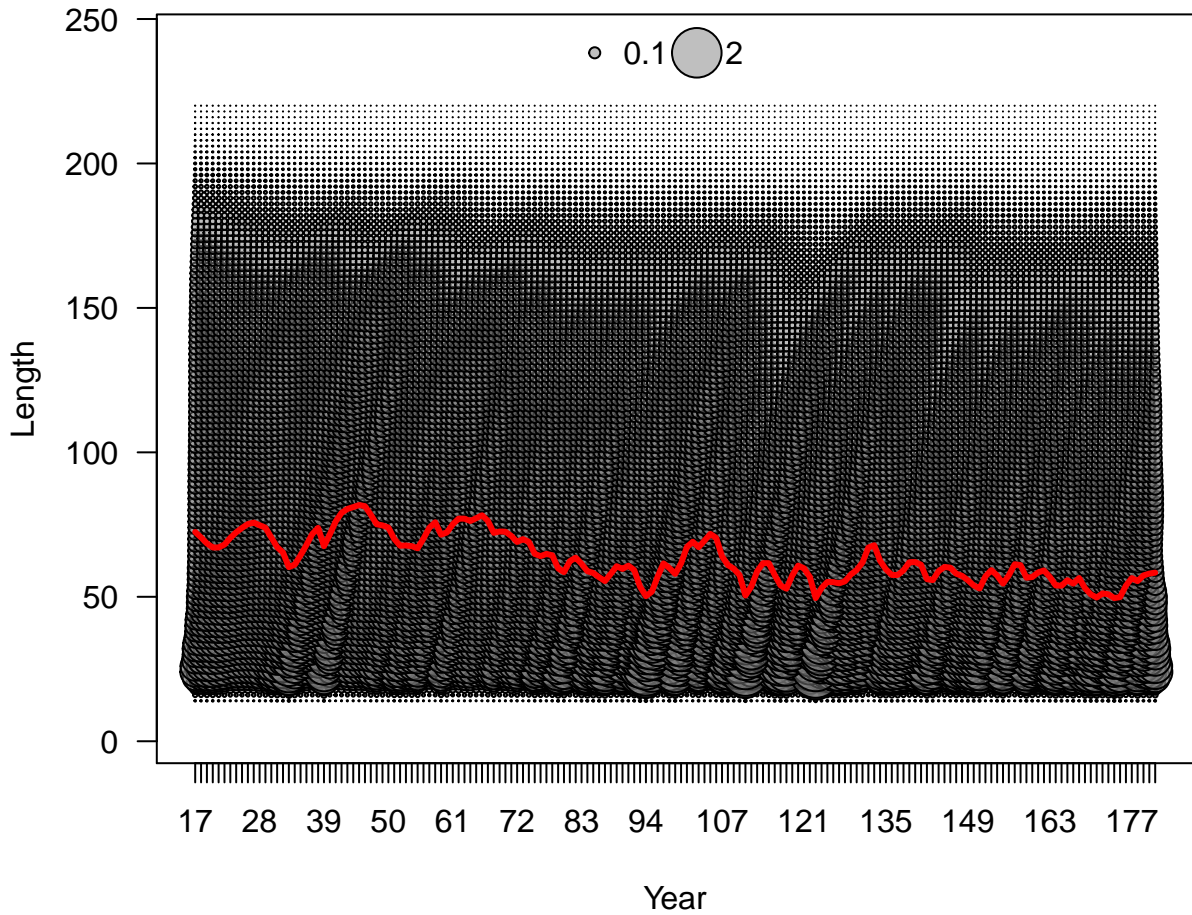


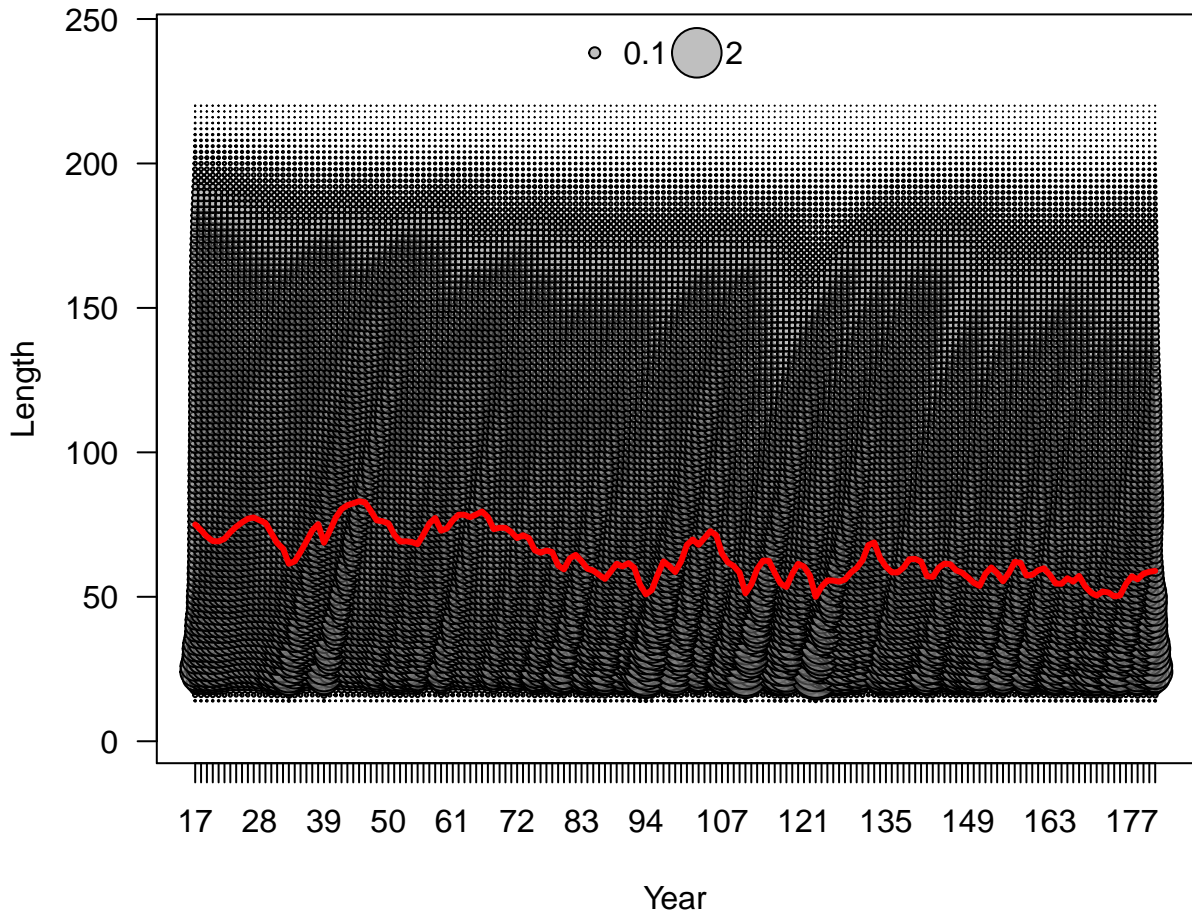


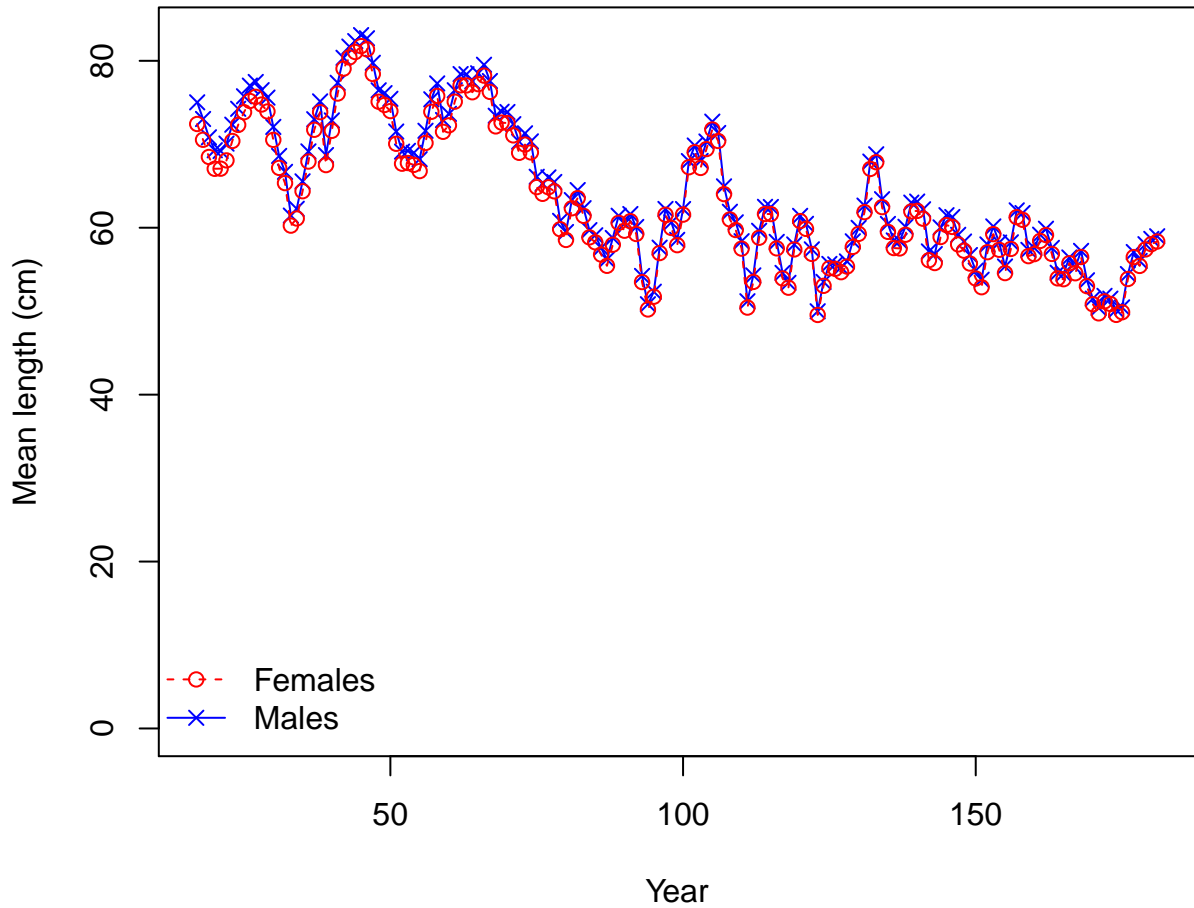




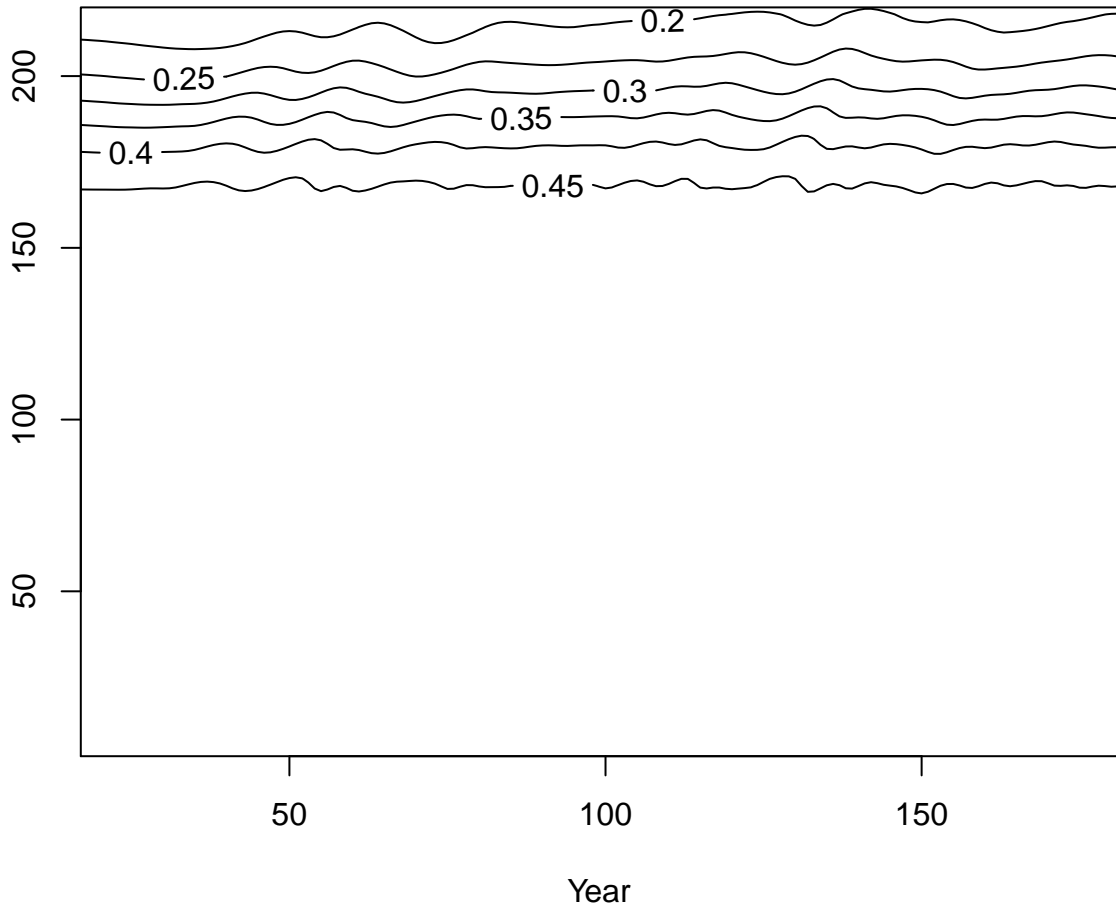


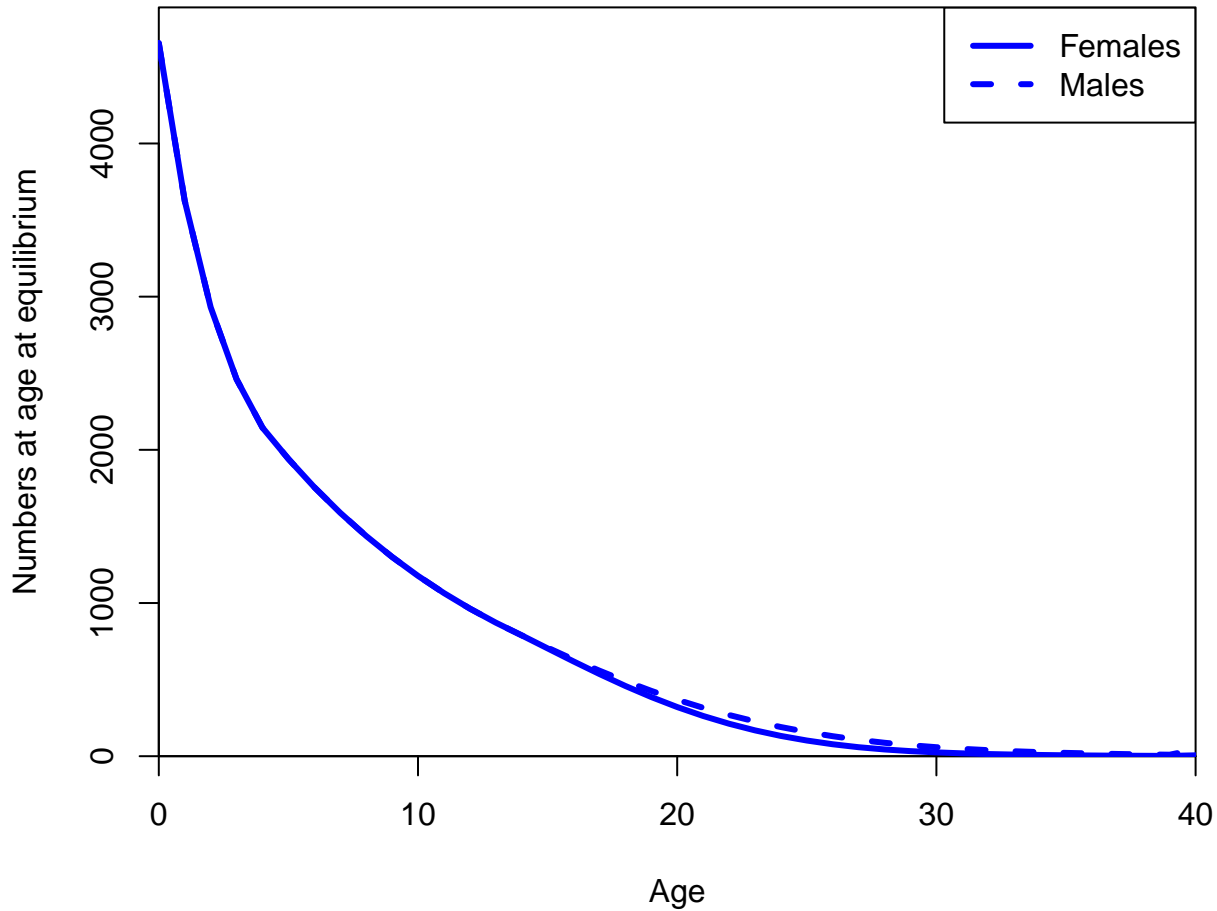


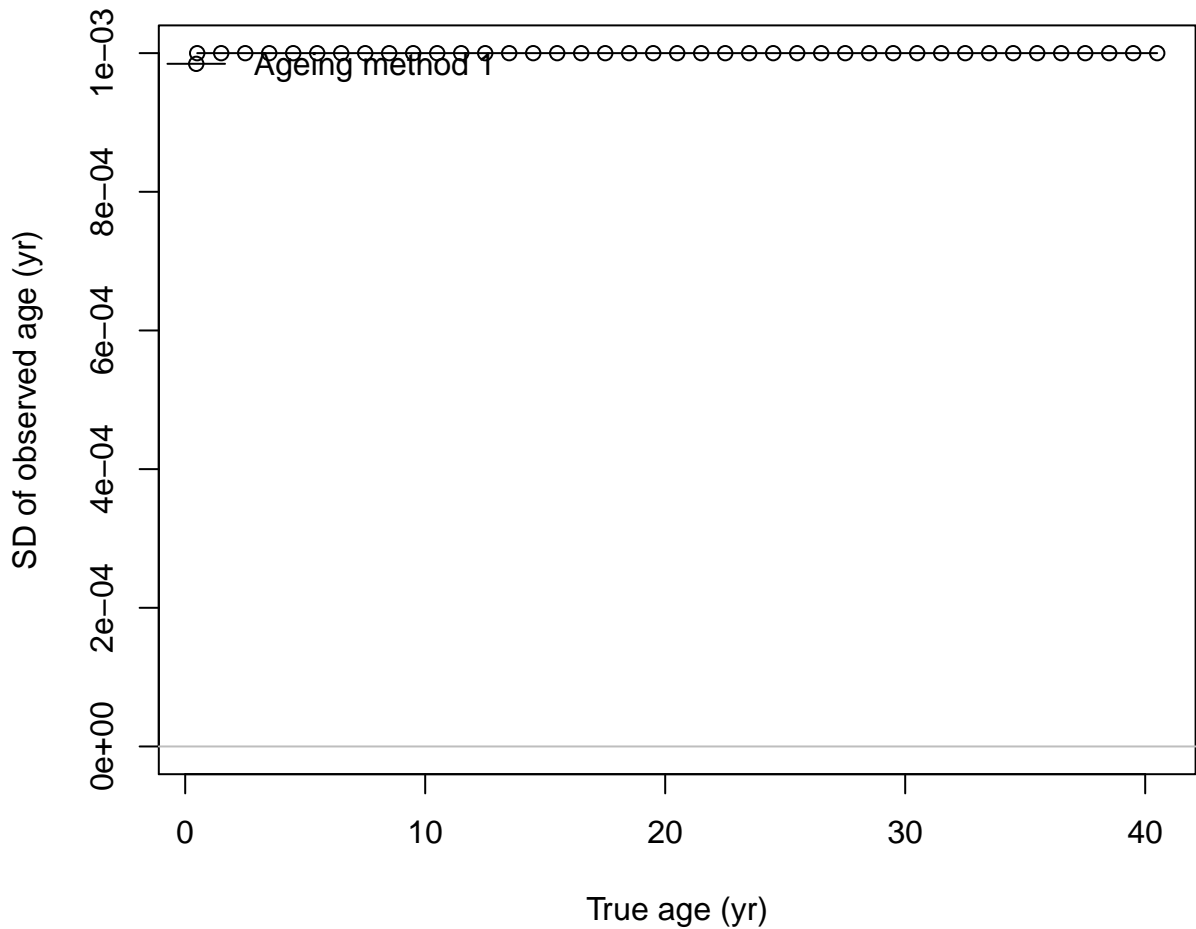




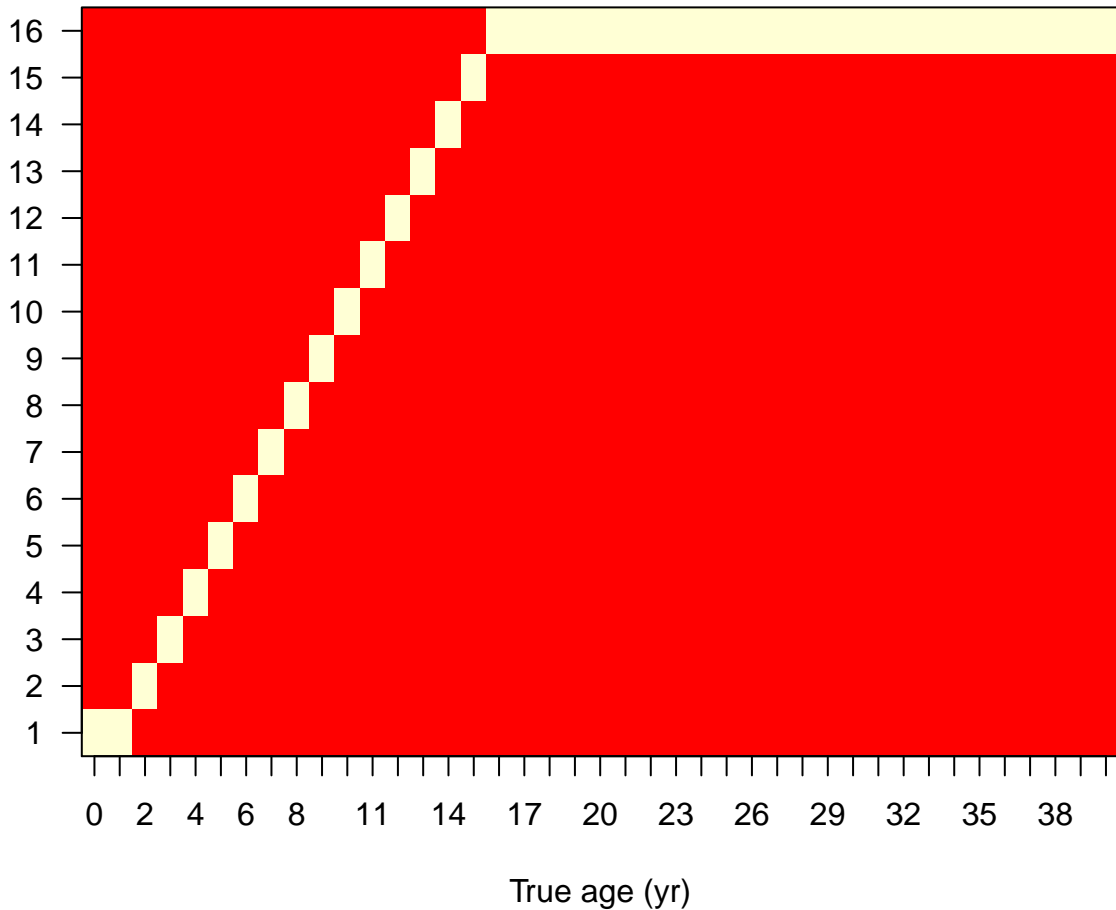
Length



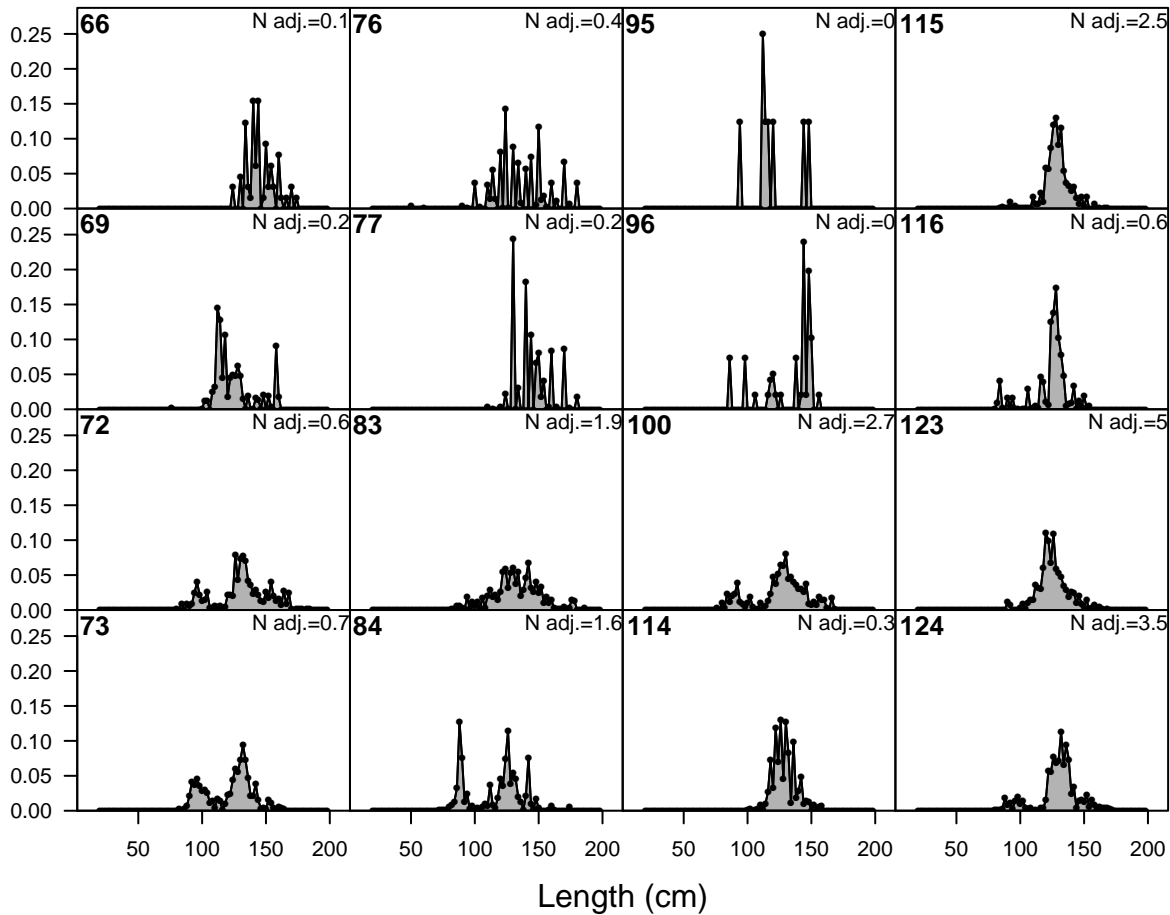


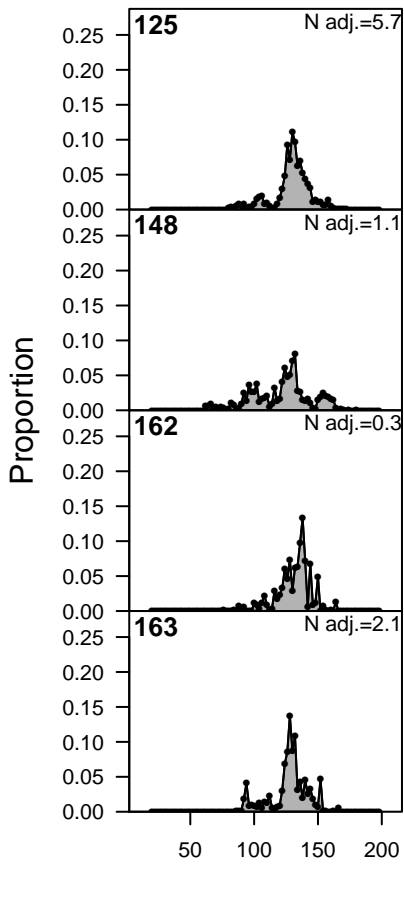


Observed age (yr)

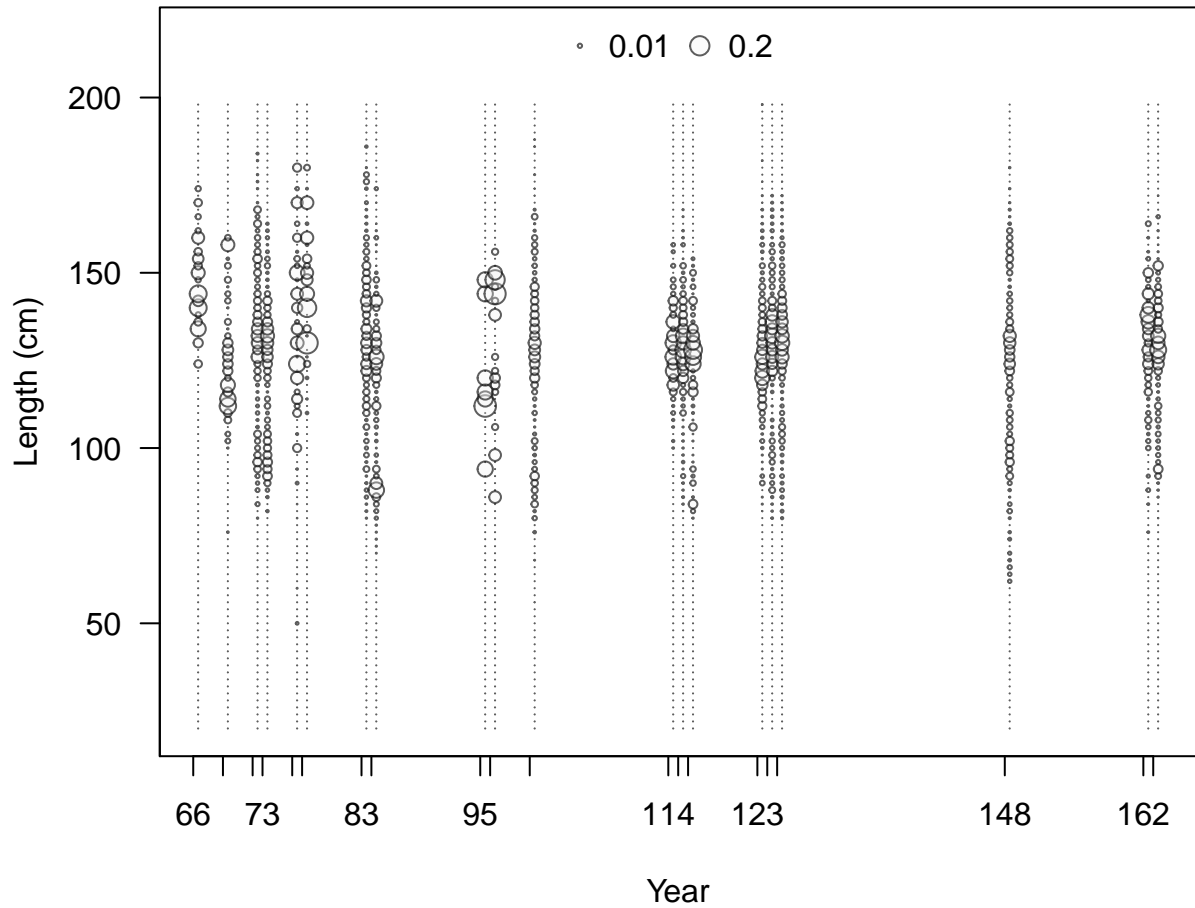


Proportion

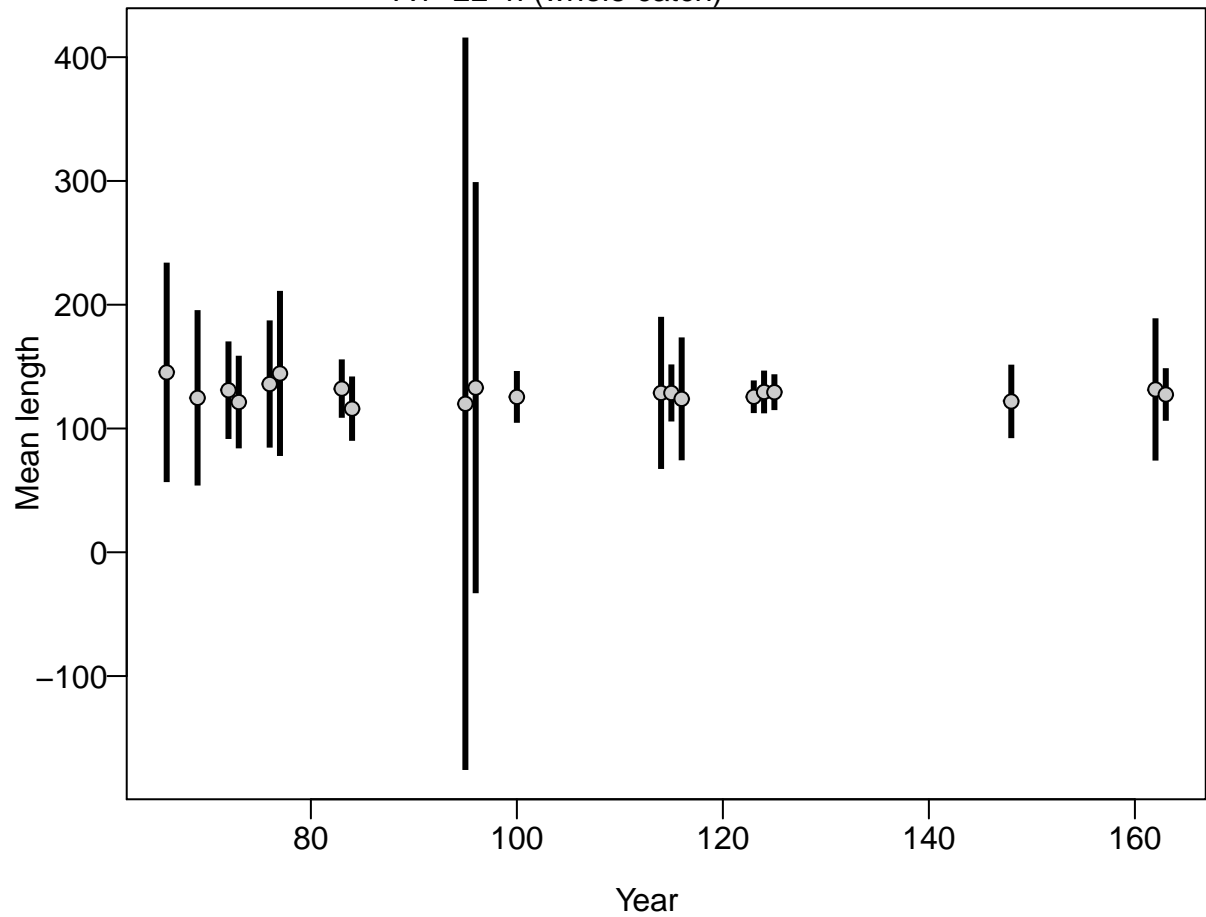




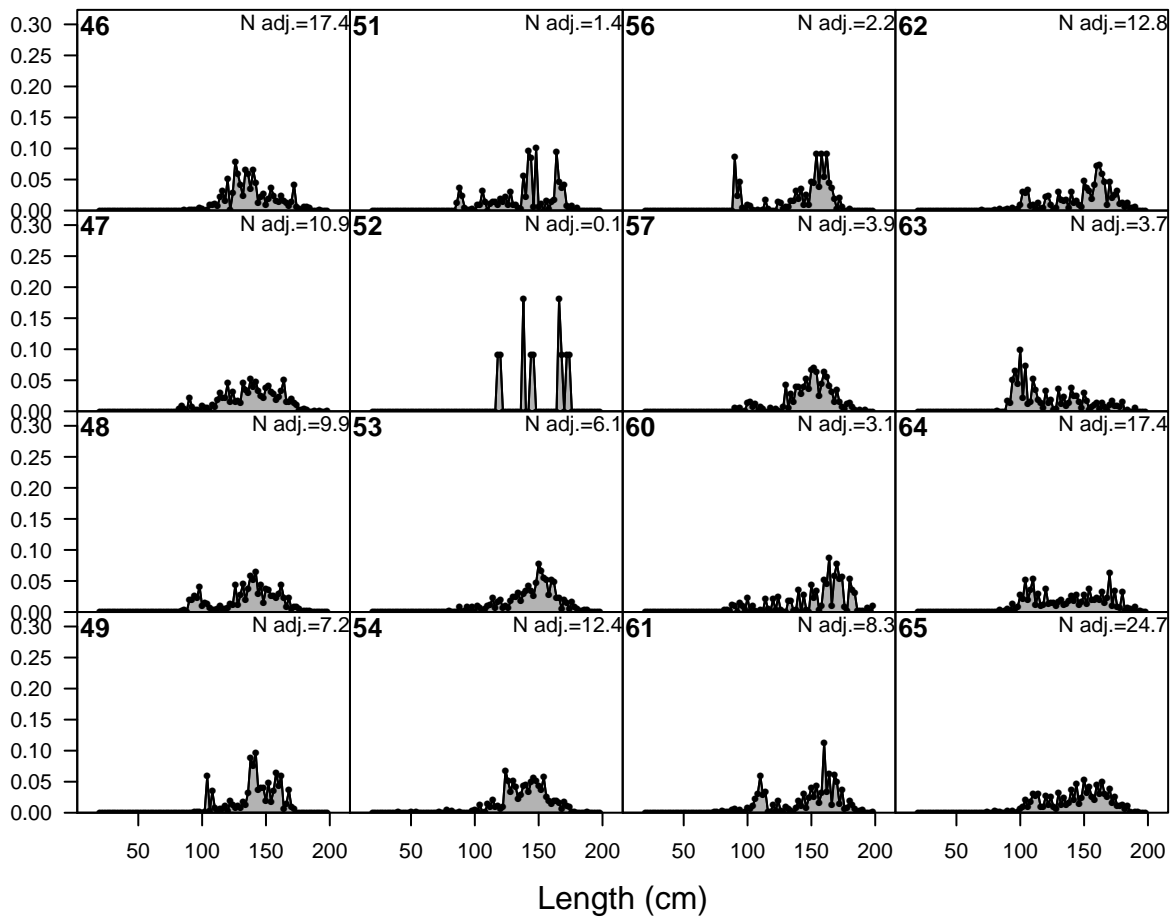
Length (cm)



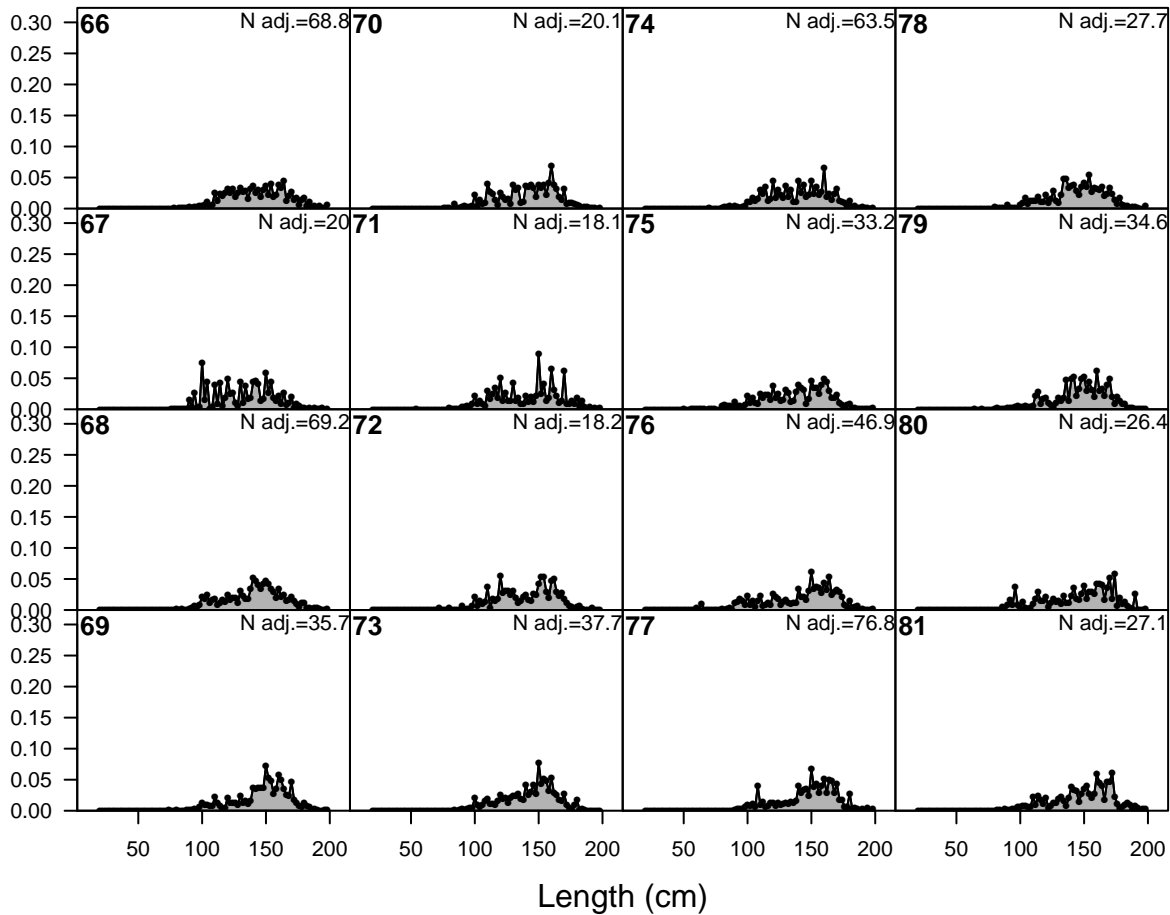
A1-LL-n (whole catch)



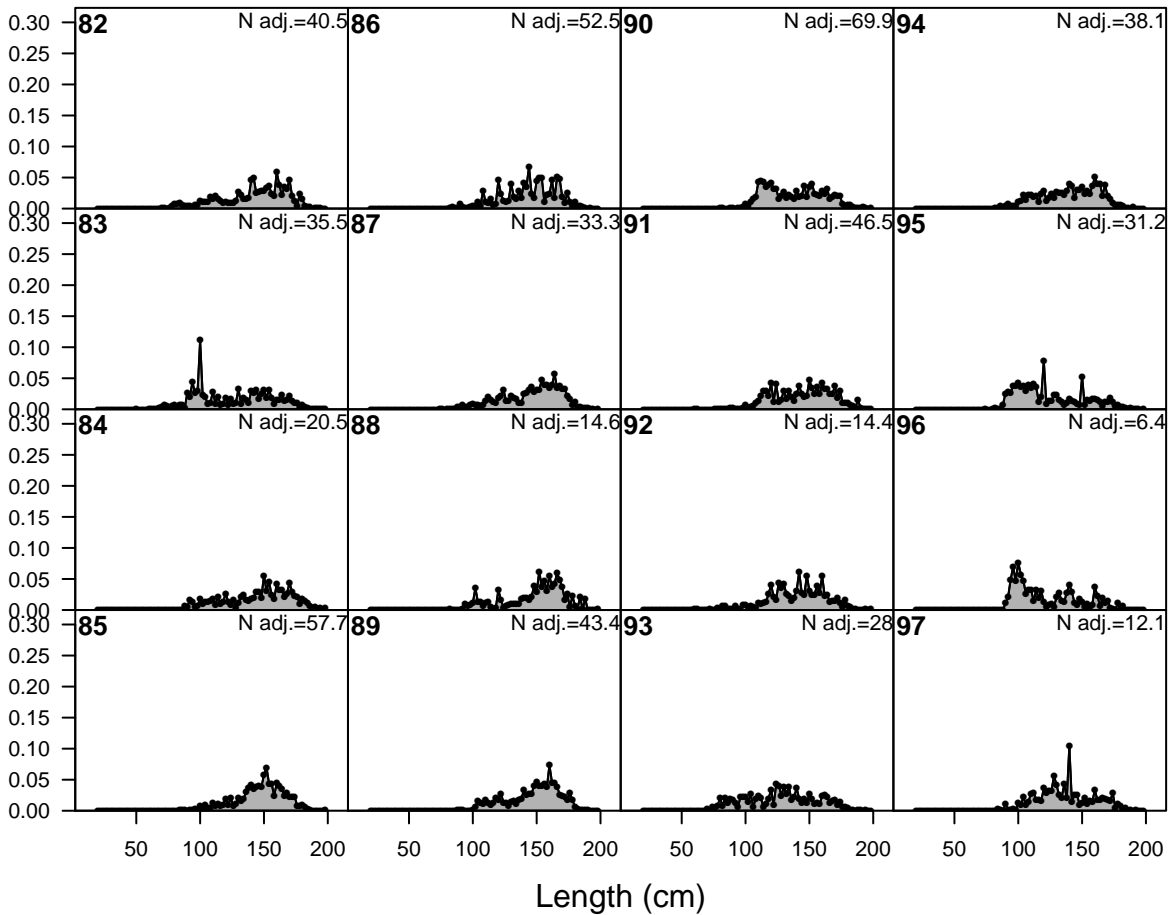
Proportion



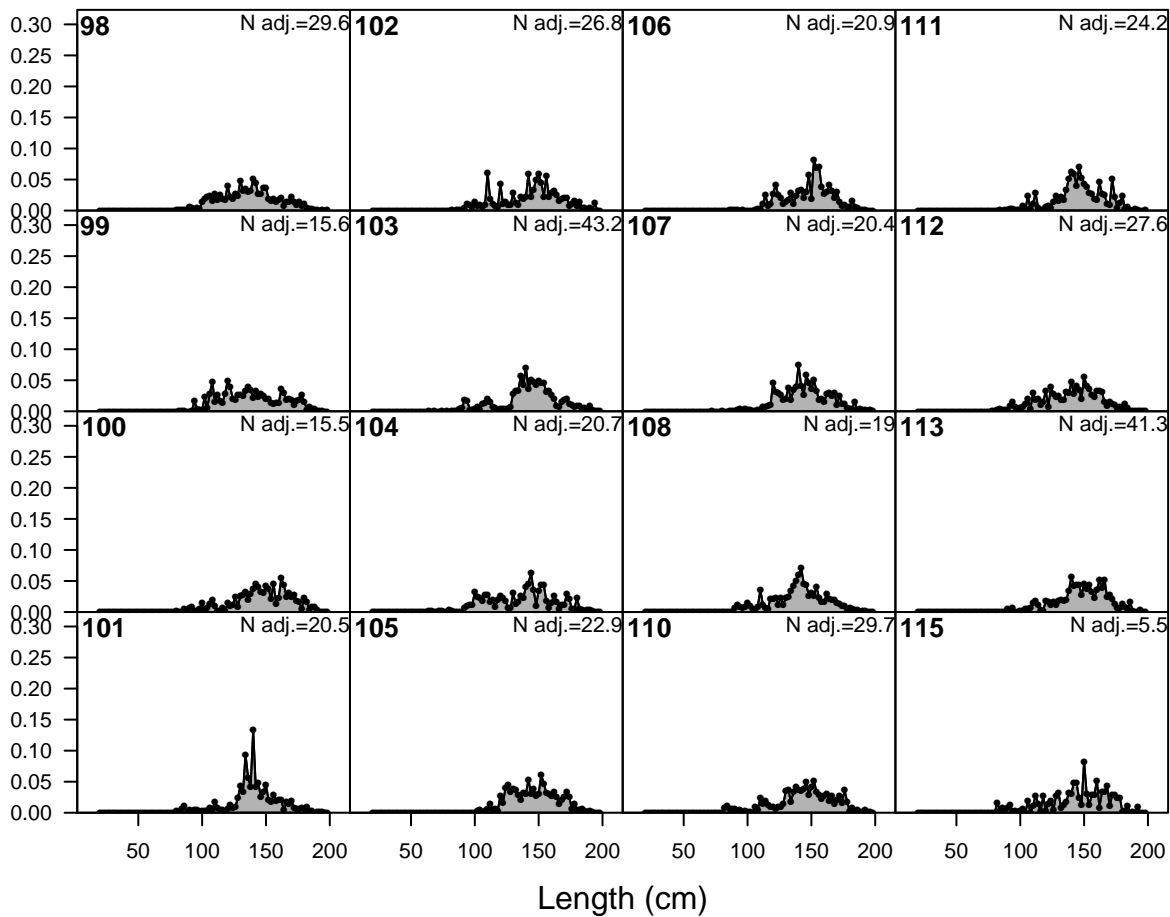
Proportion



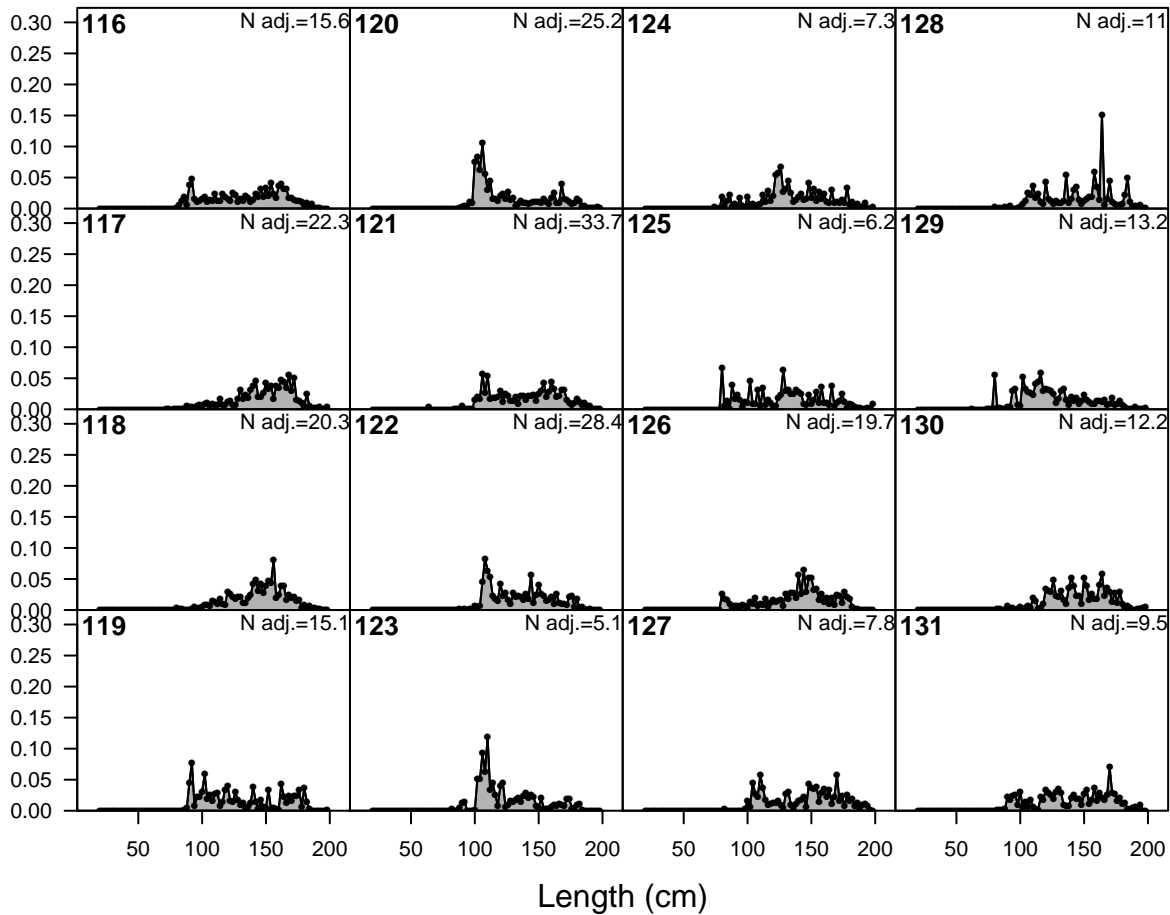
Proportion



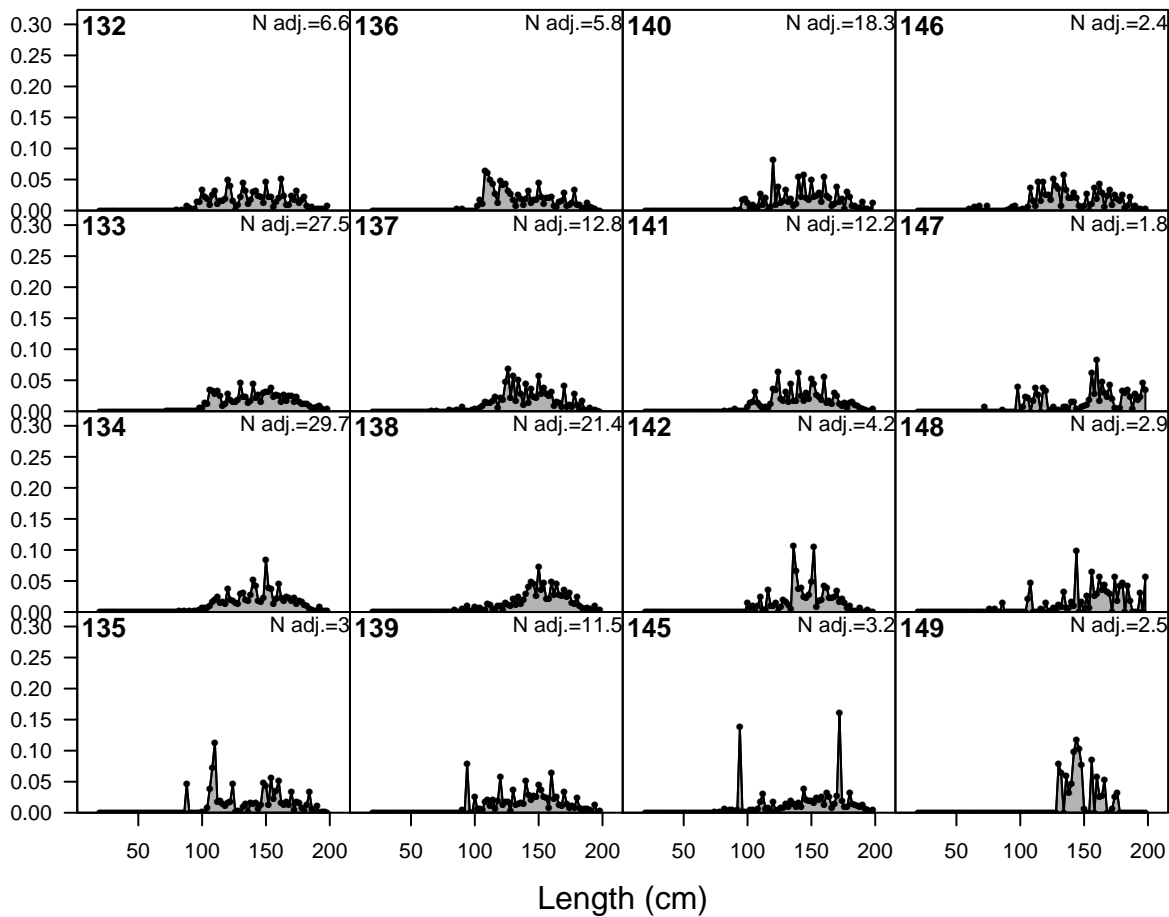
Proportion



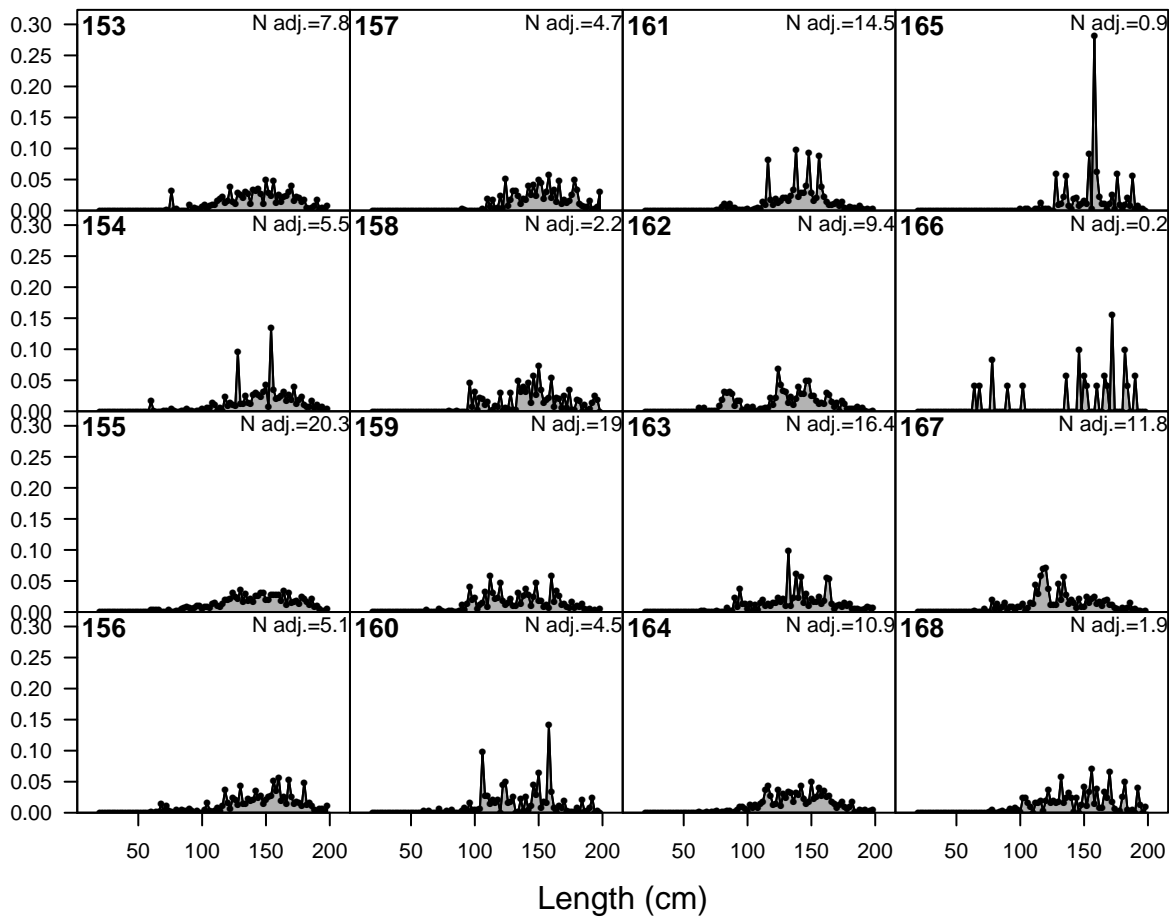
Proportion



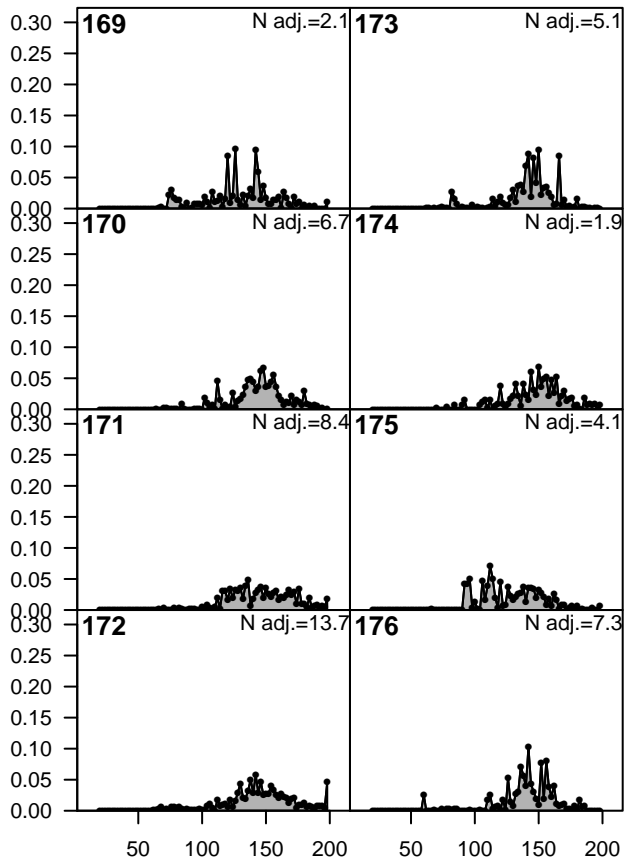
Proportion



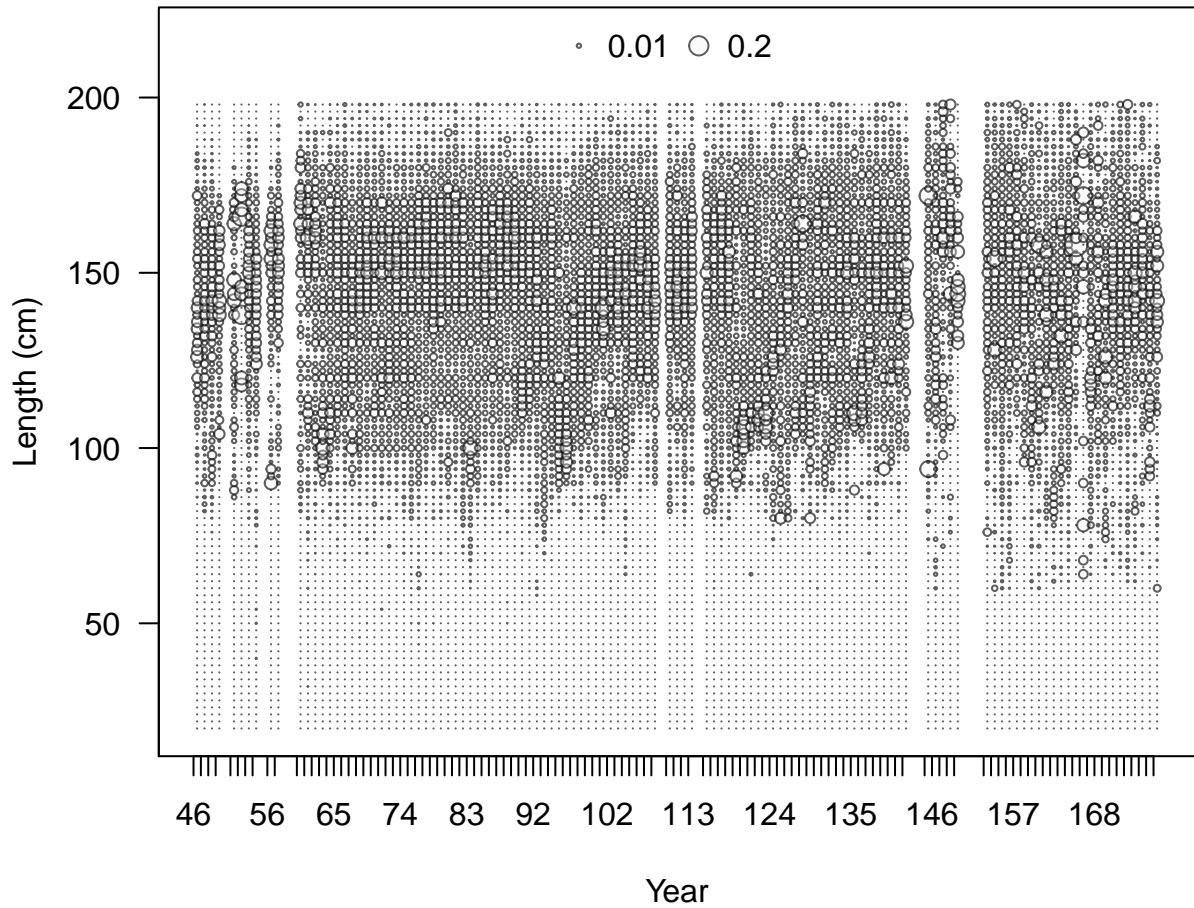
Proportion



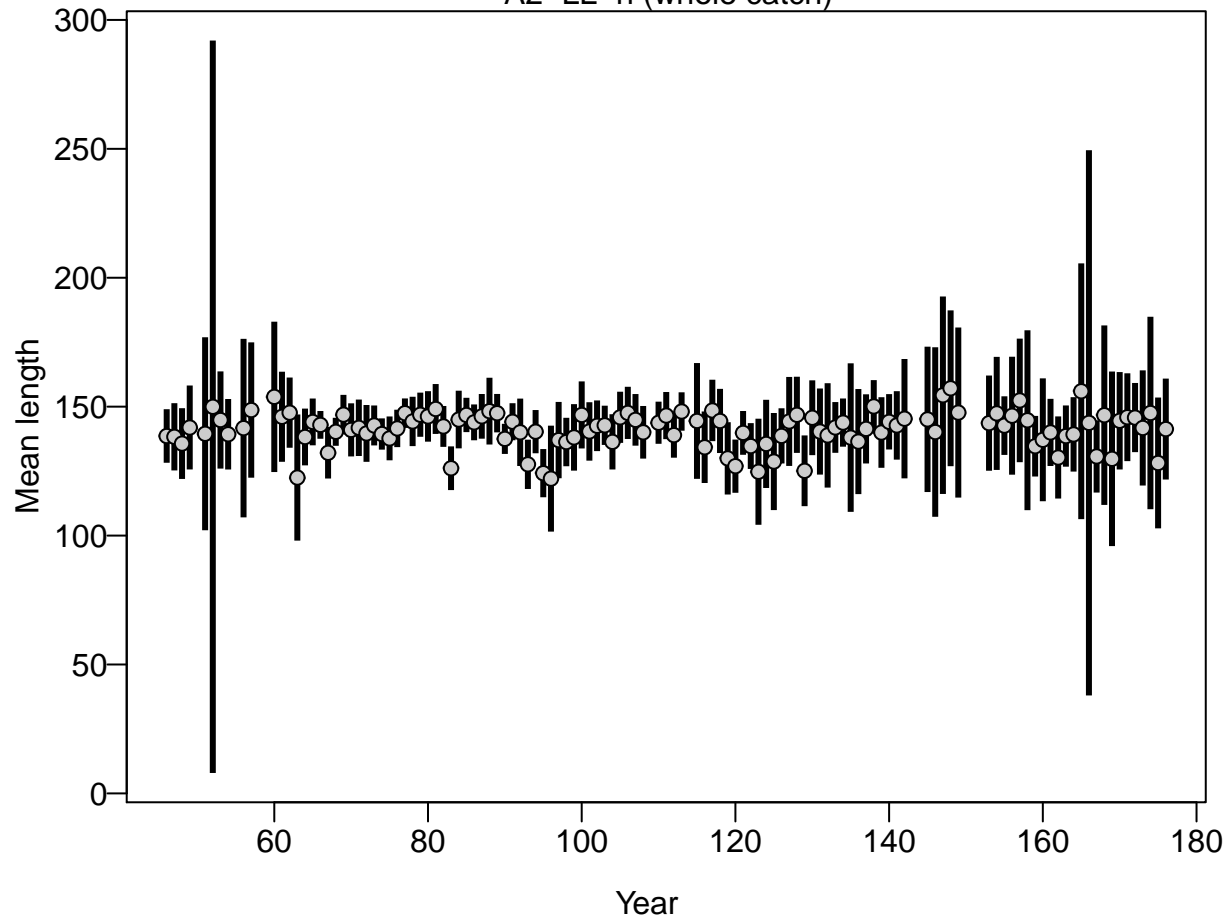
Proportion



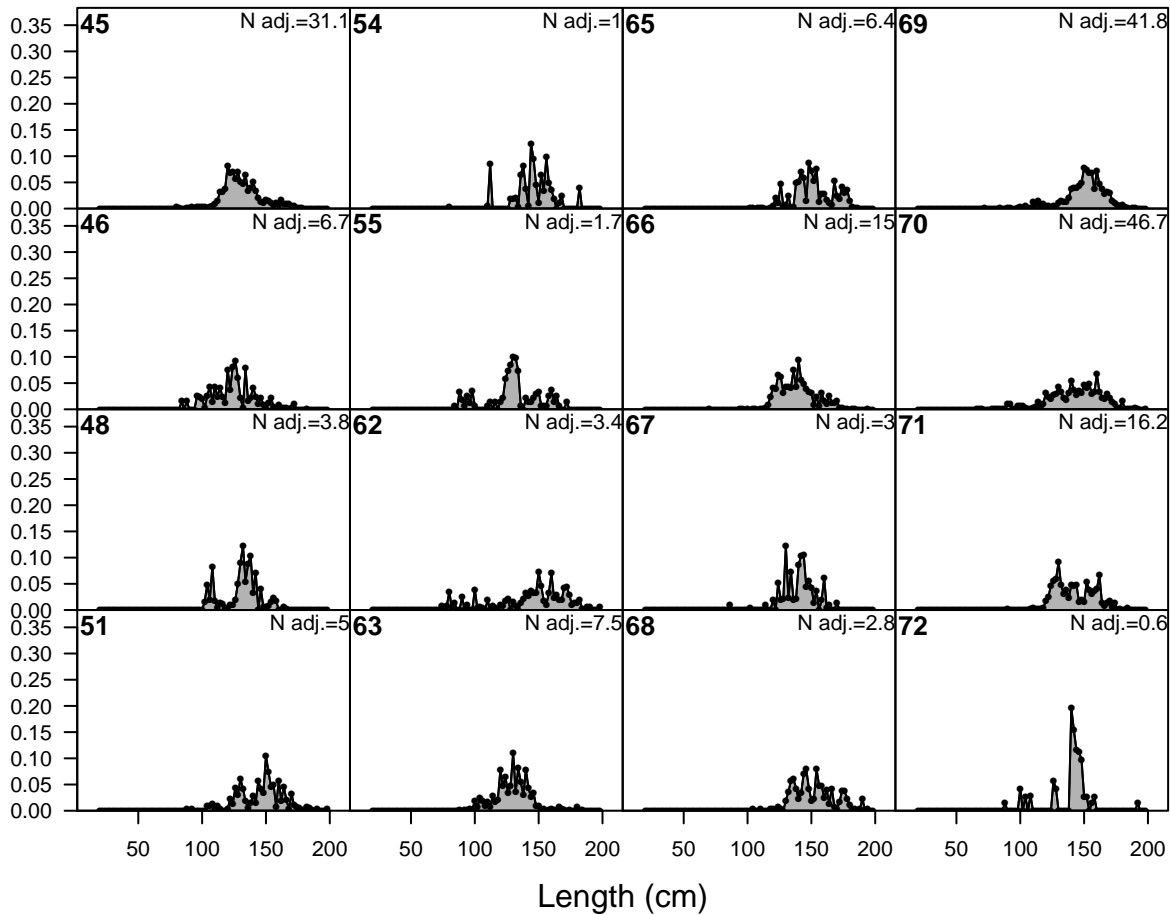
Length (cm)



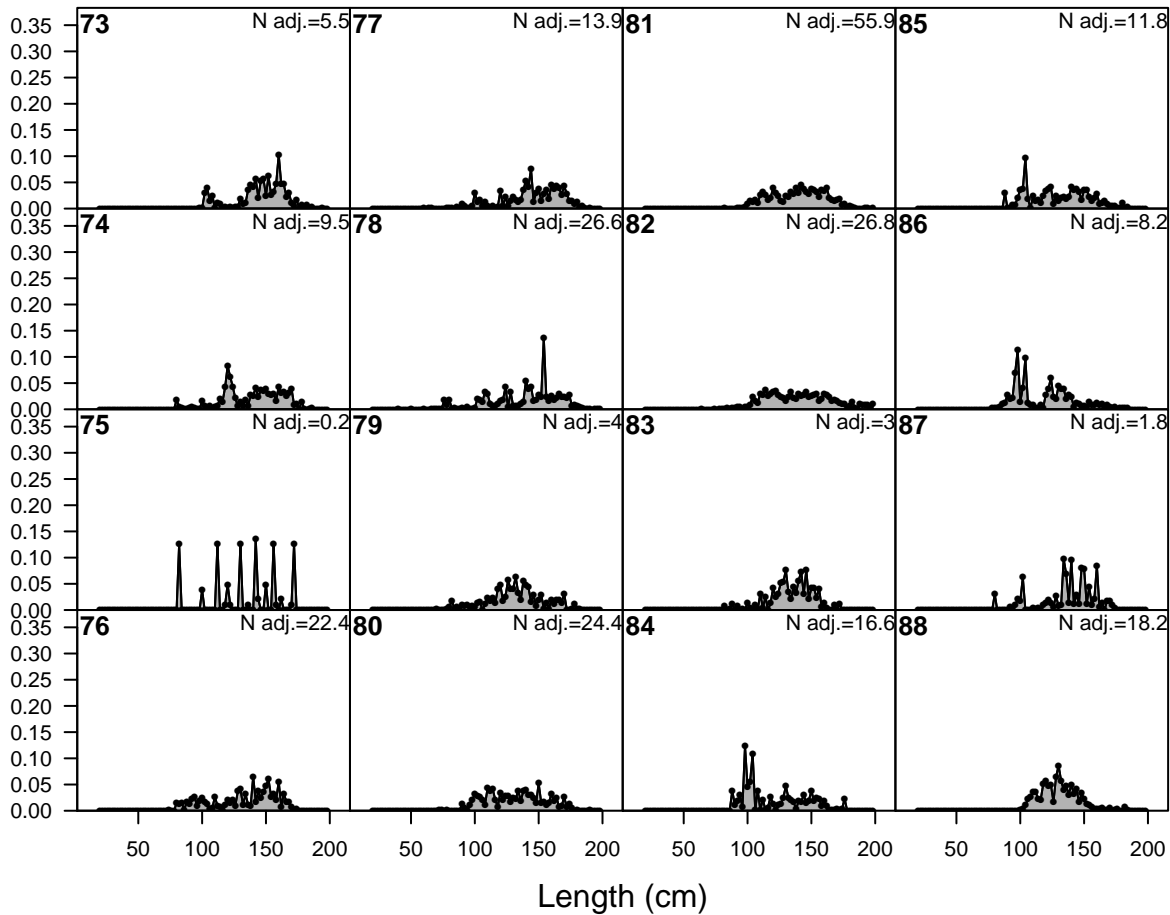
A2-LL-n (whole catch)



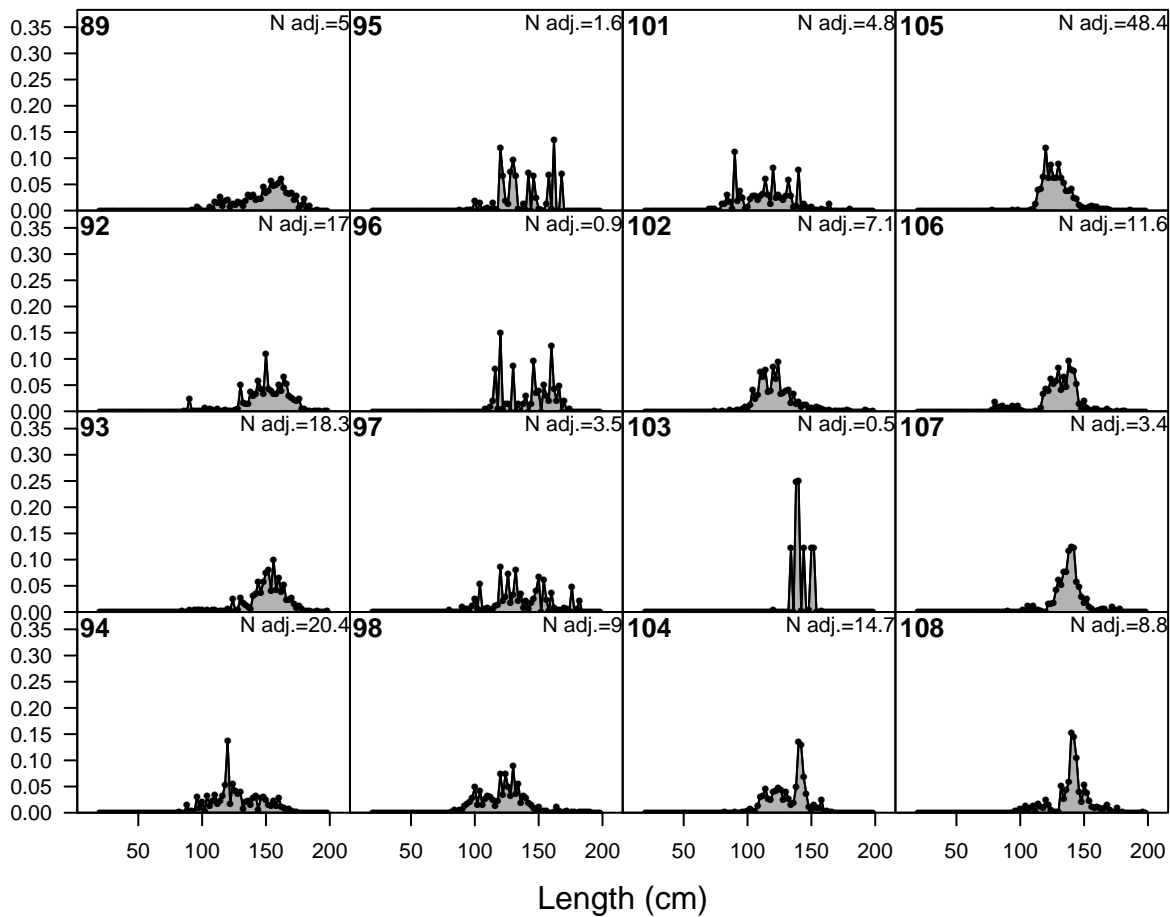
Proportion



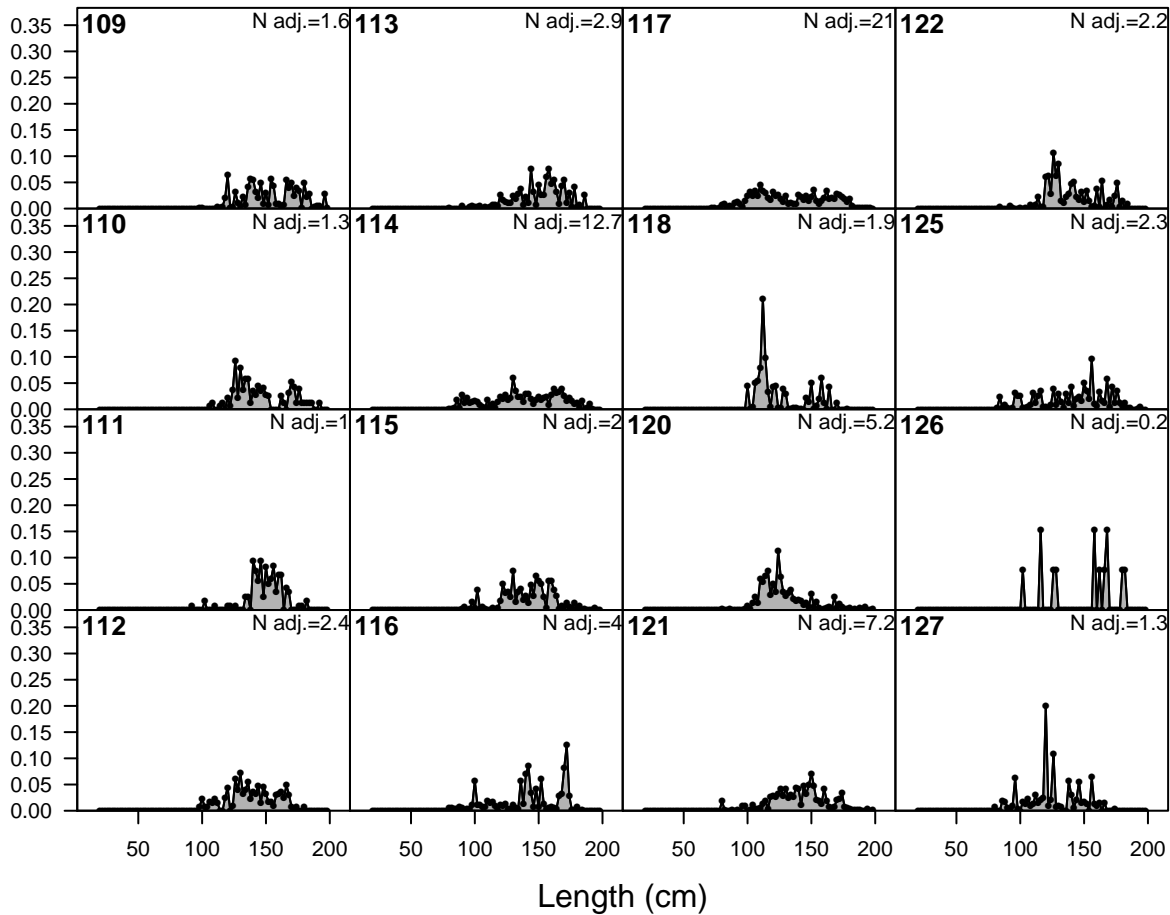
Proportion



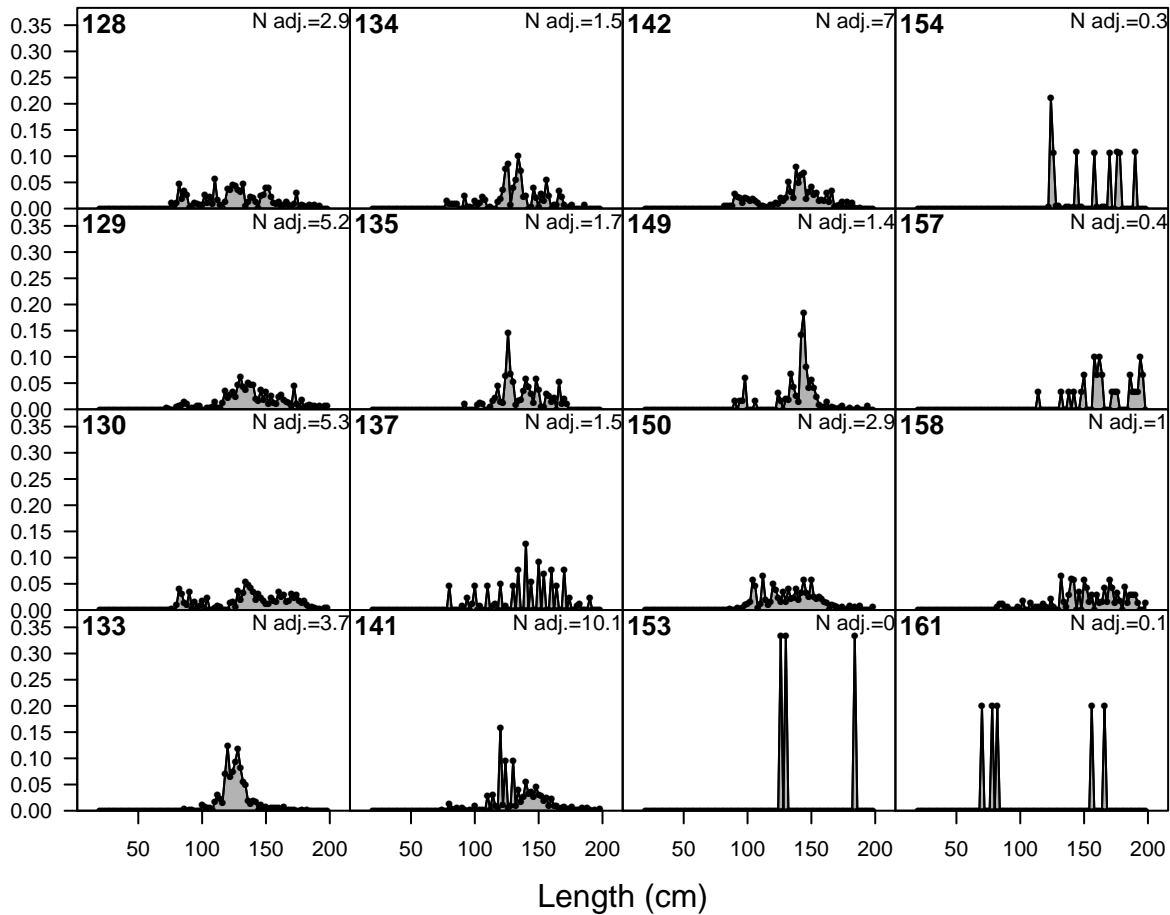
Proportion



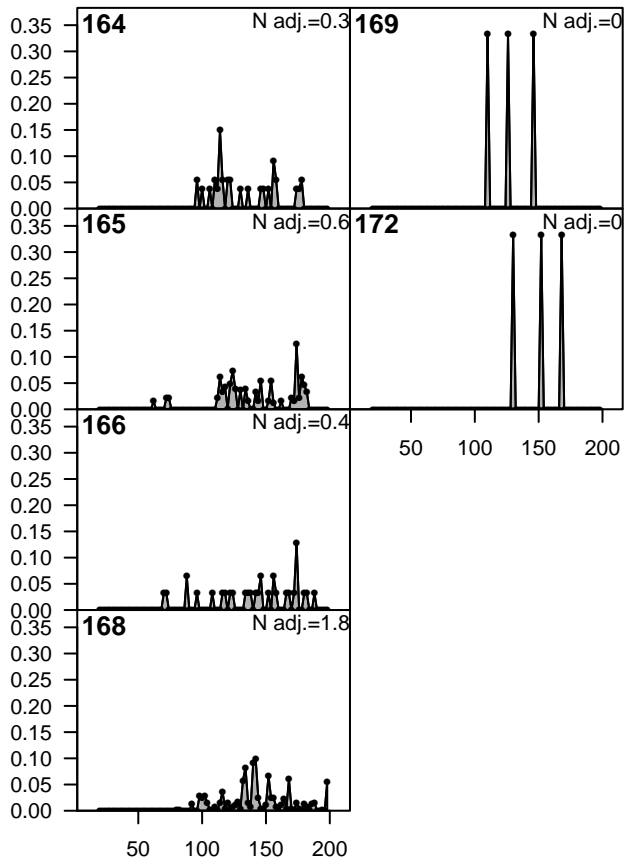
Proportion



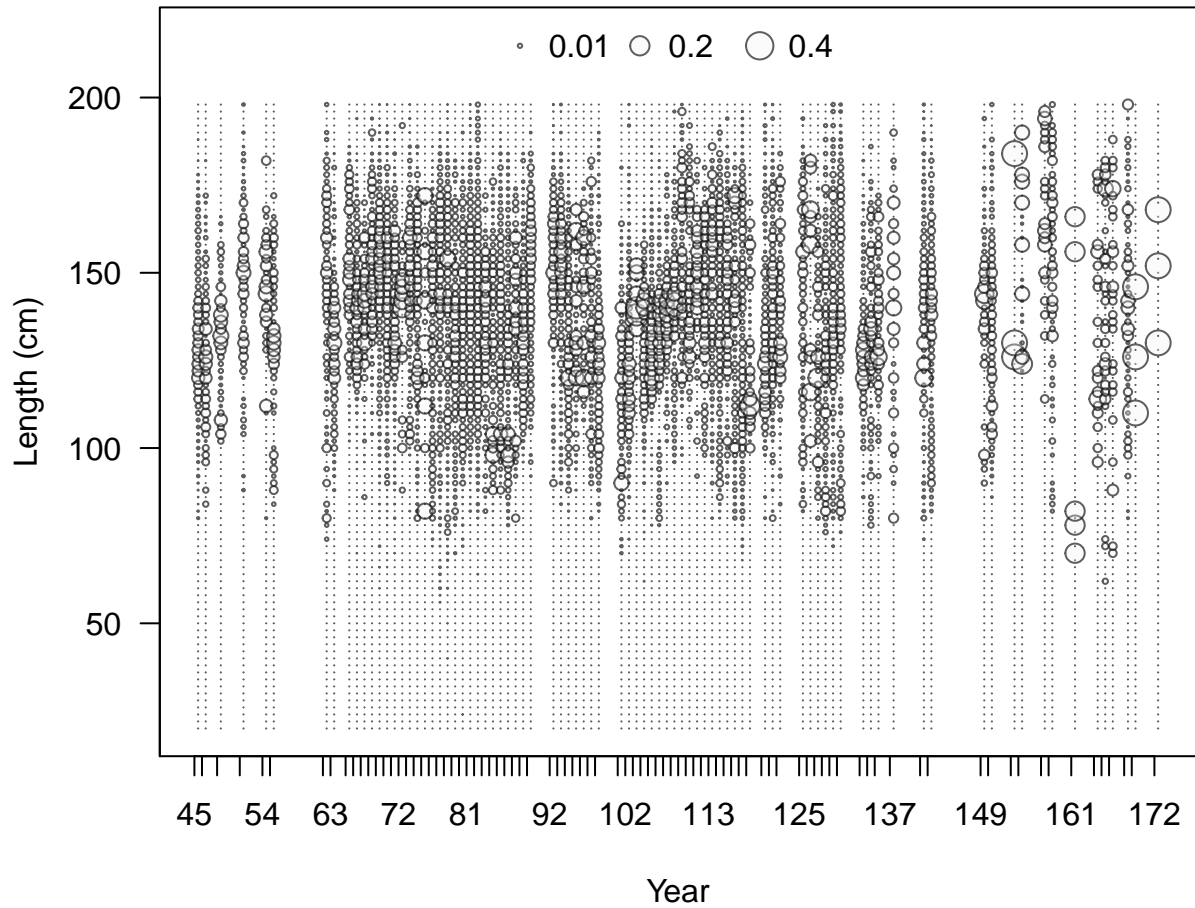
Proportion



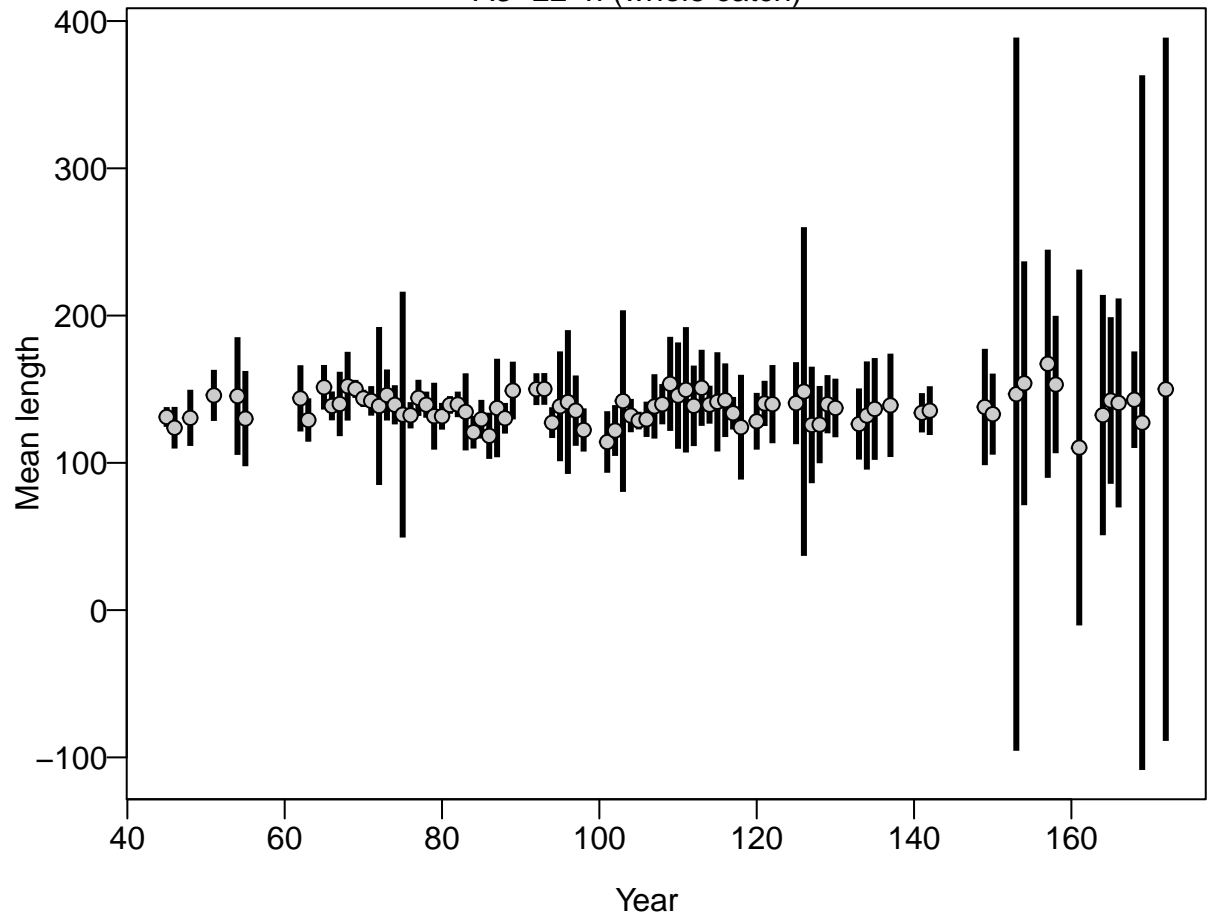
Proportion



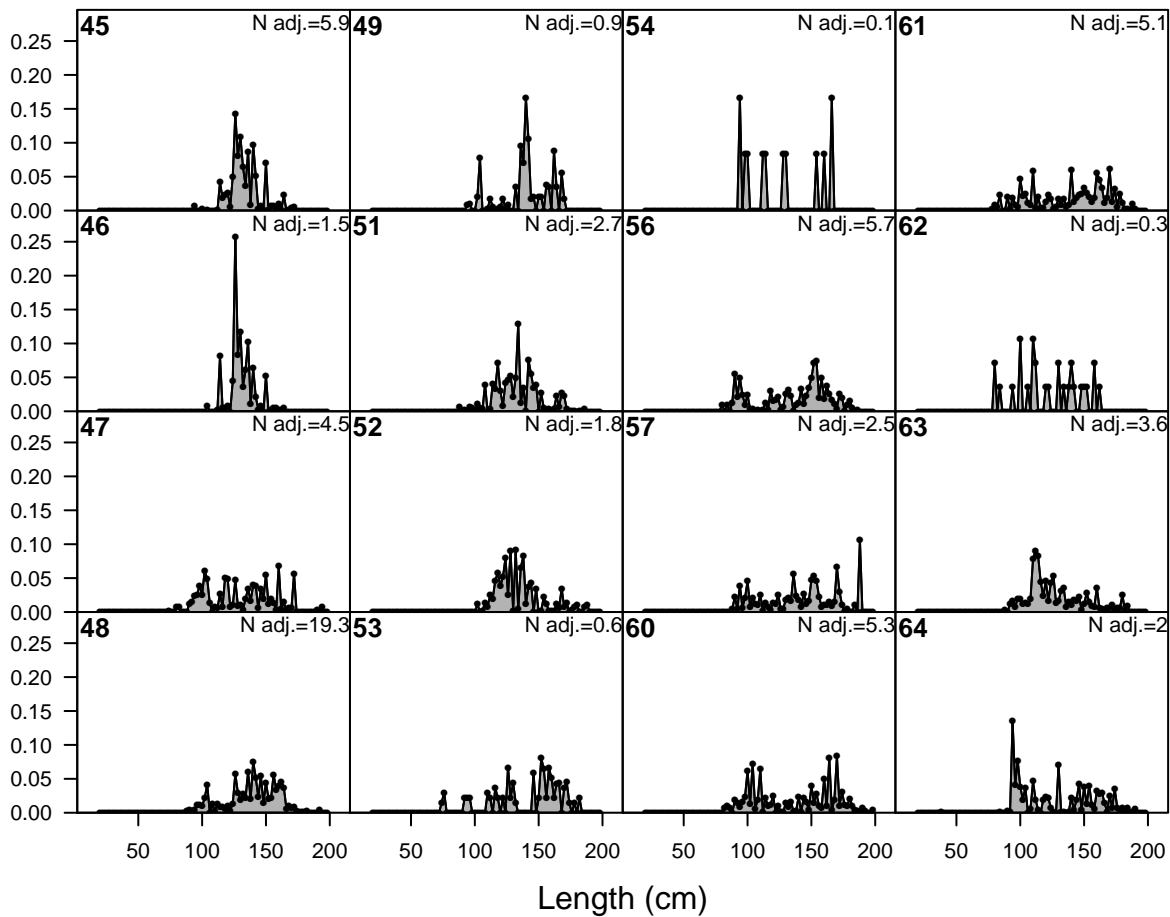
Length (cm)



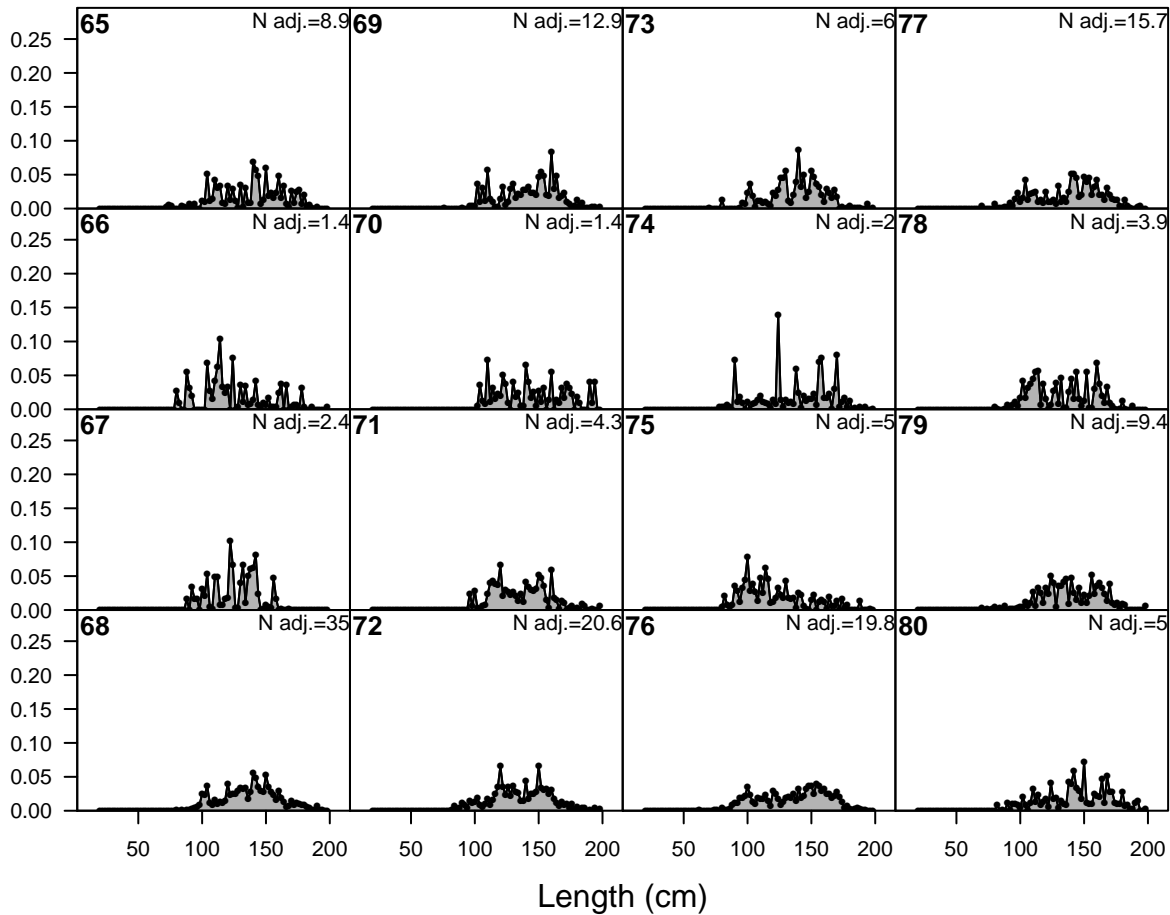
A3-LL-n (whole catch)



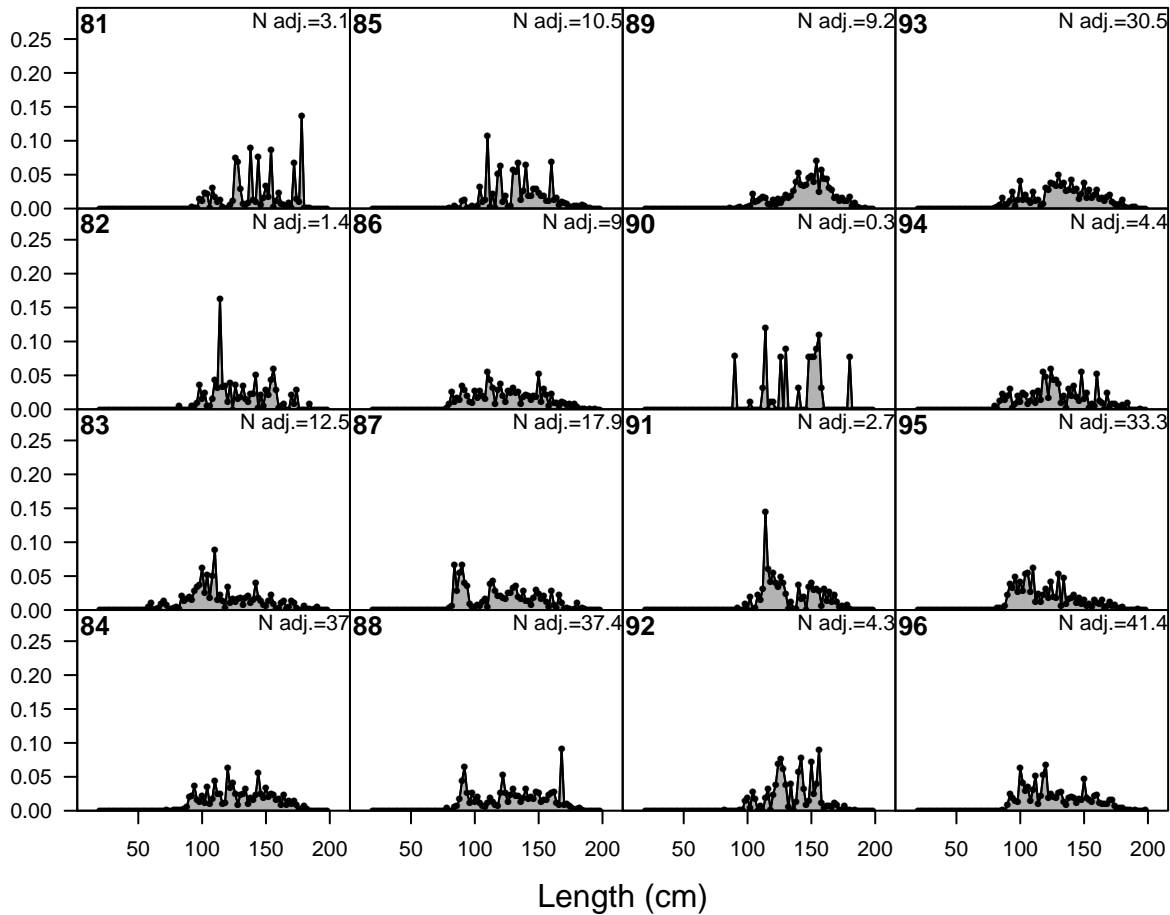
Proportion



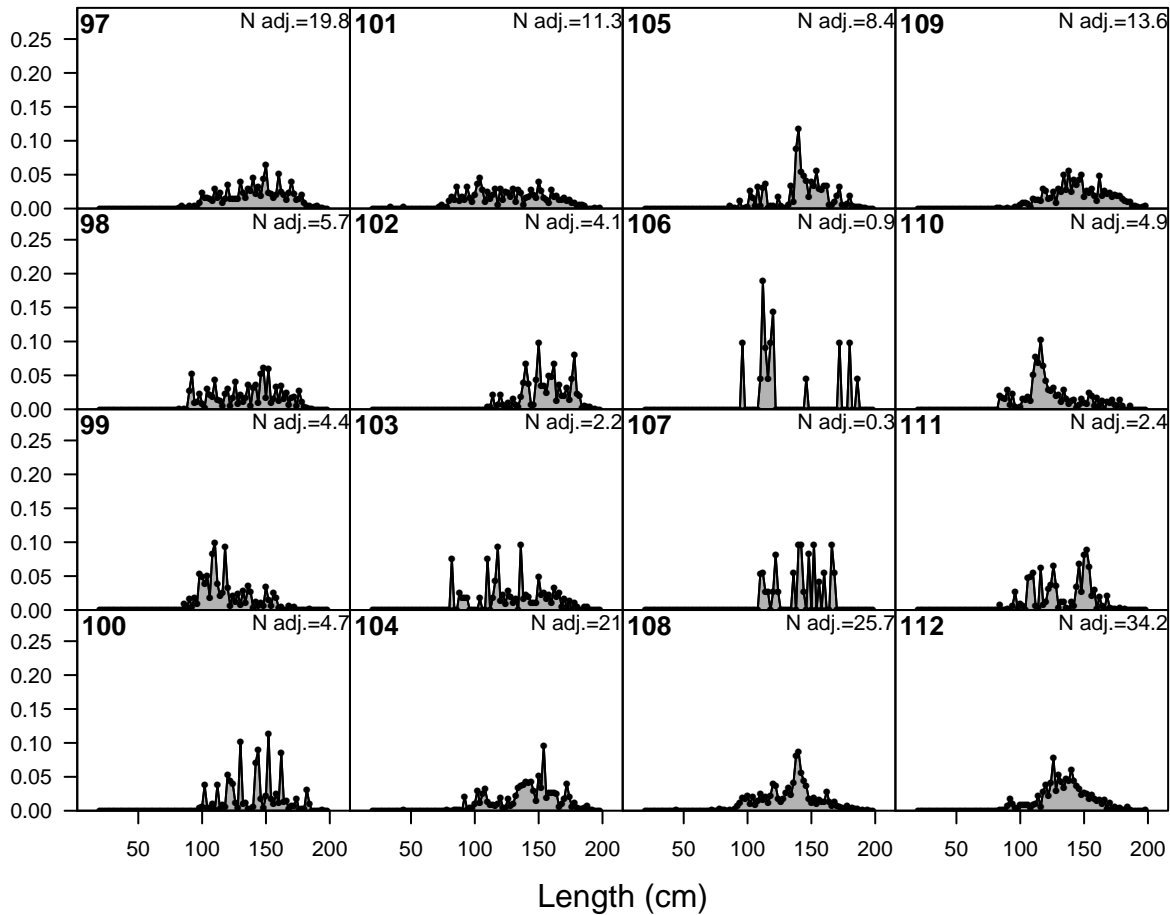
Proportion



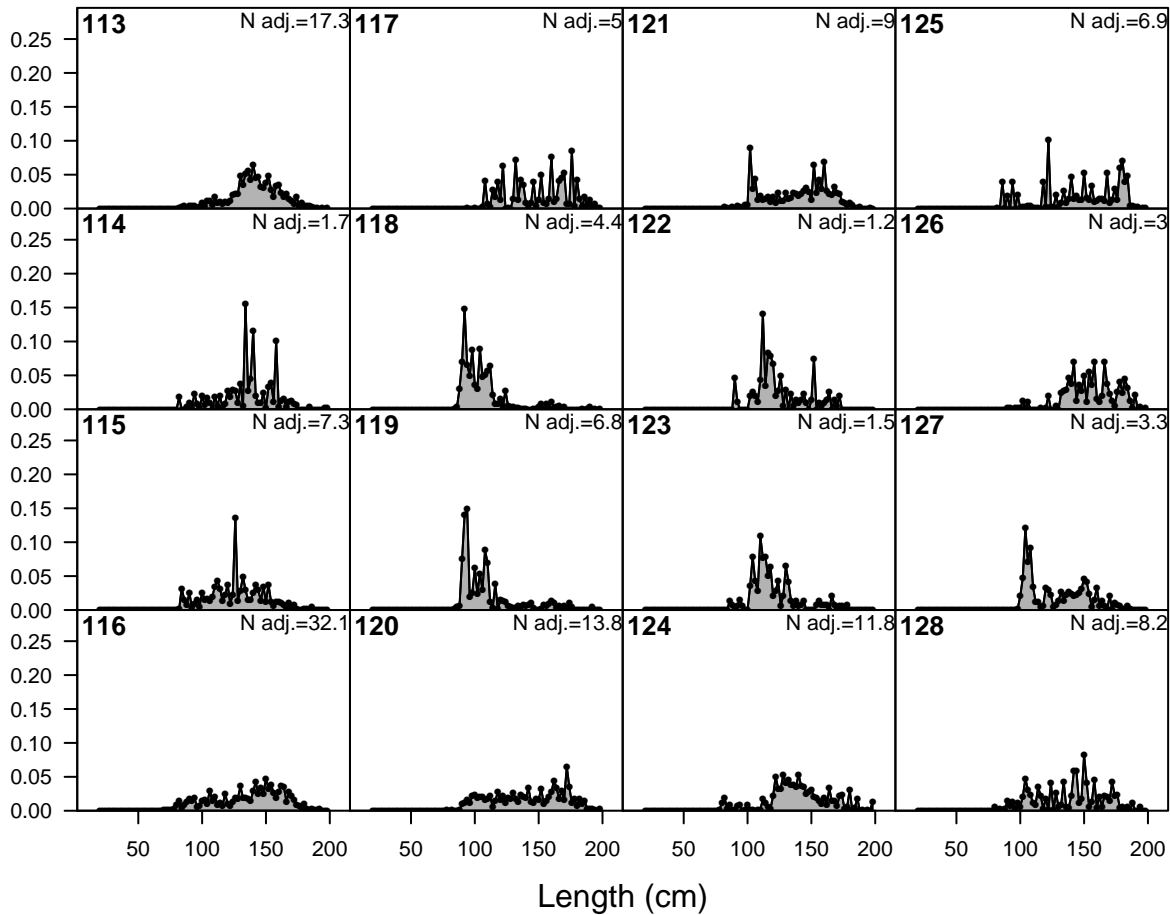
Proportion



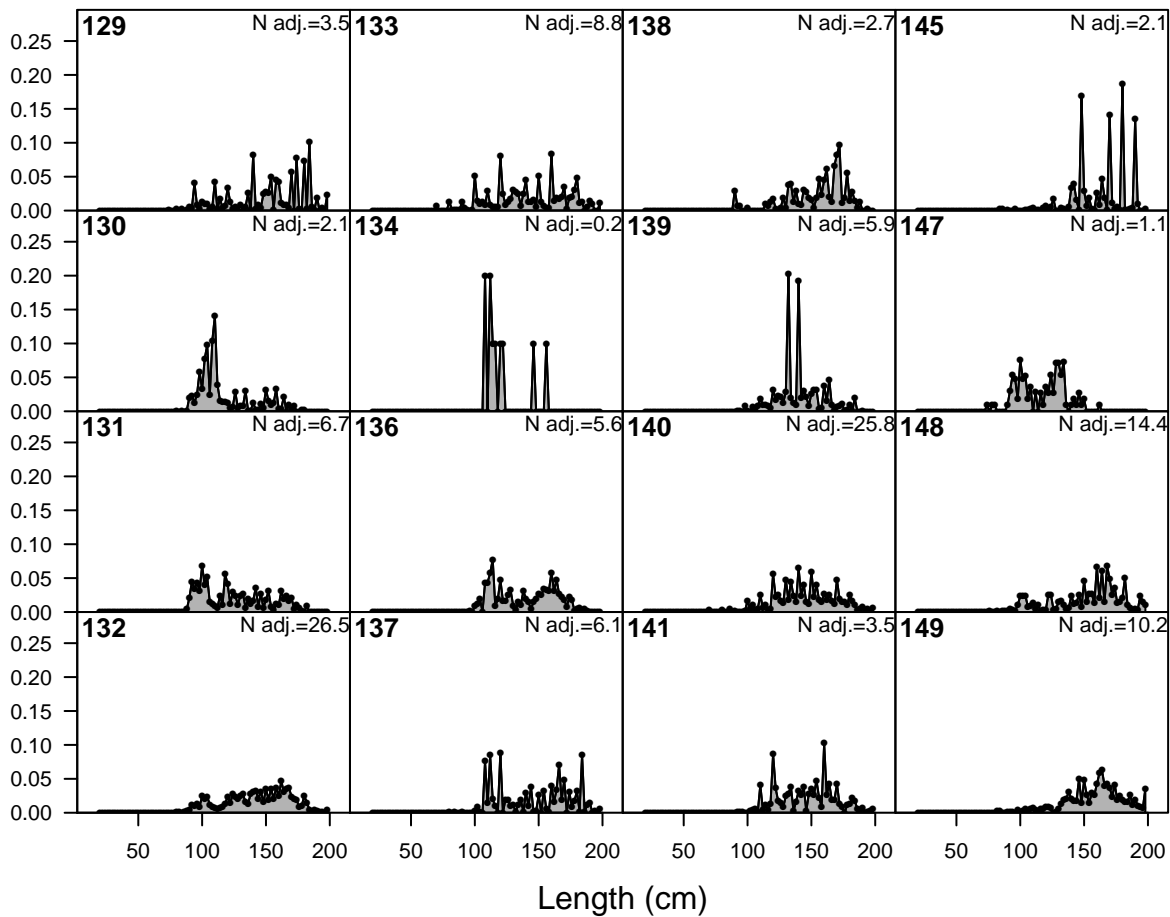
Proportion



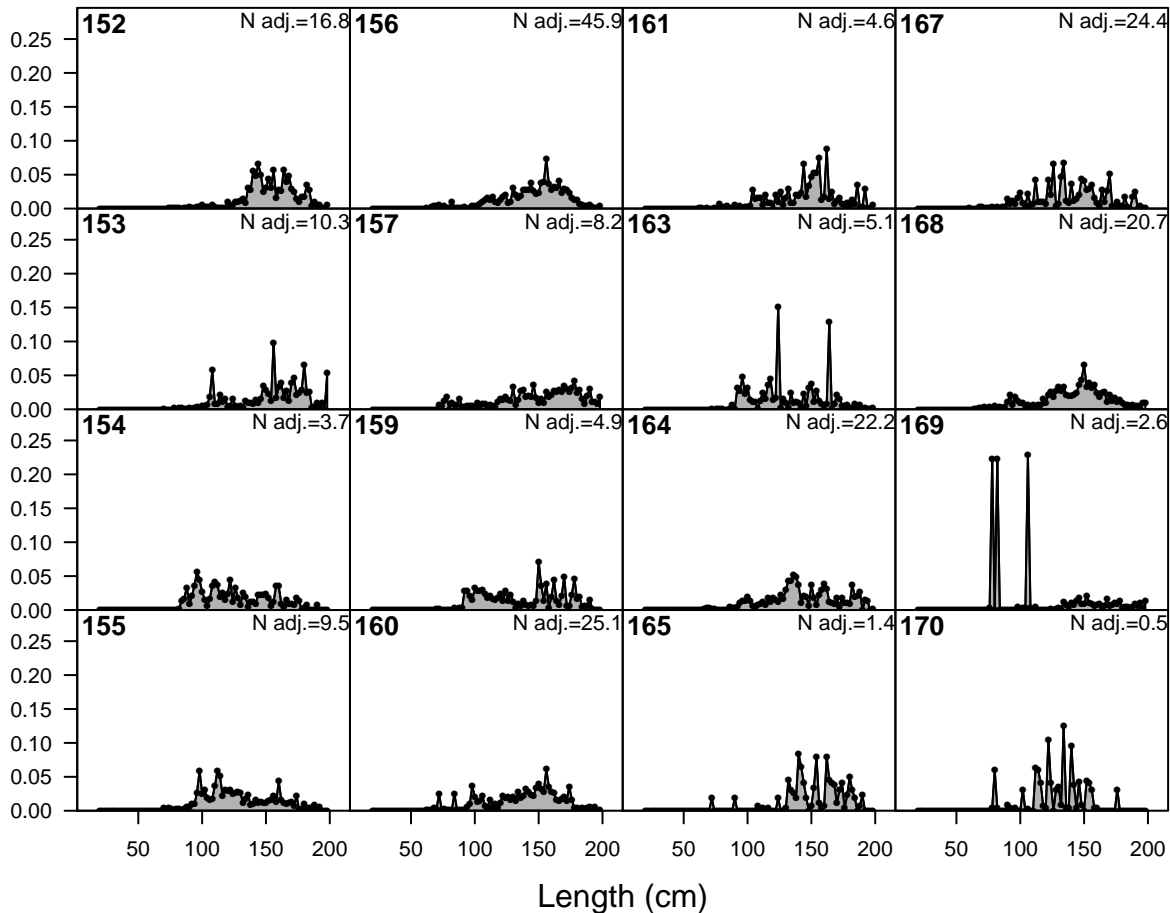
Proportion



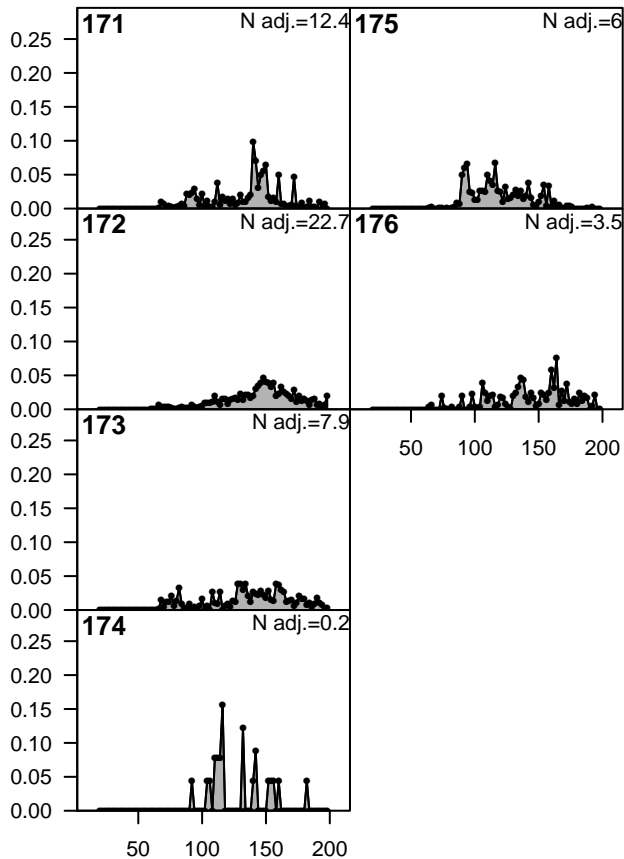
Proportion



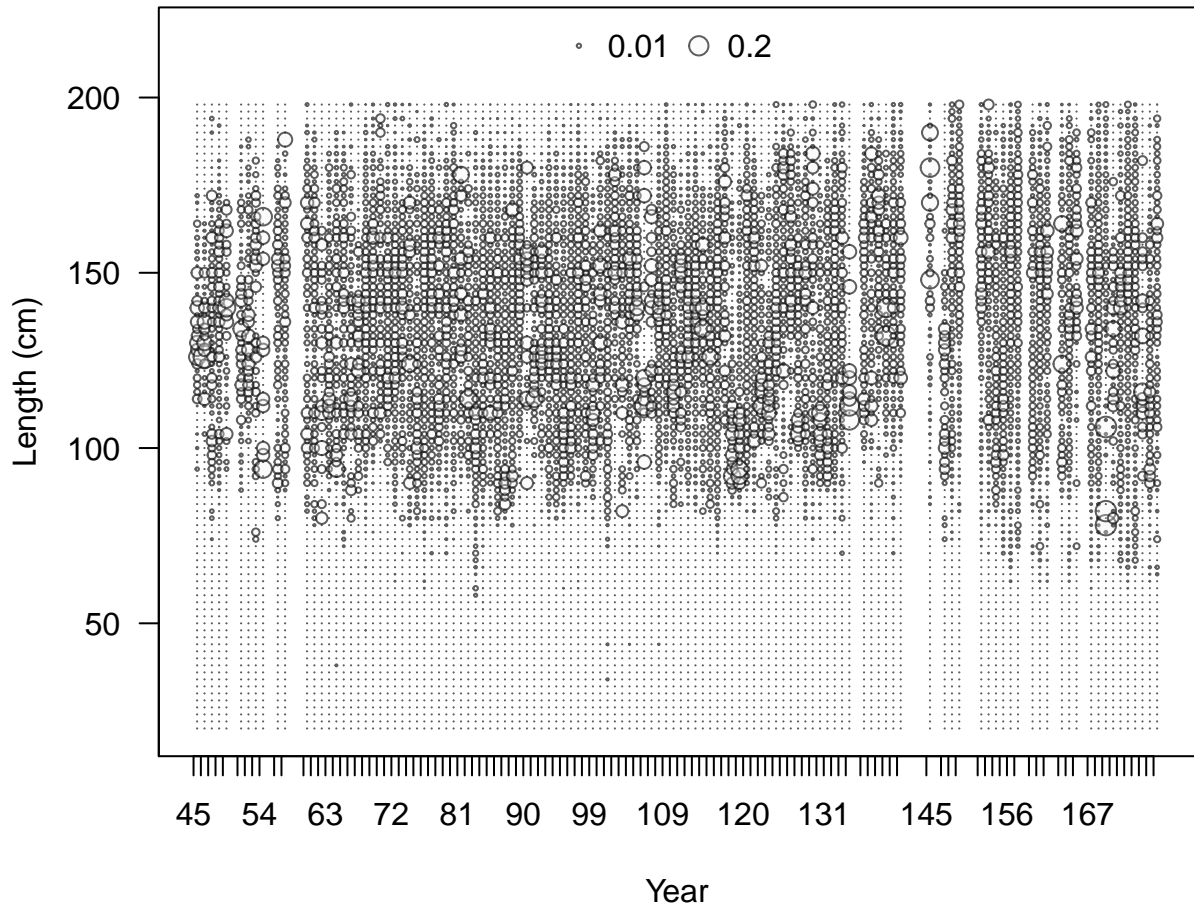
Proportion



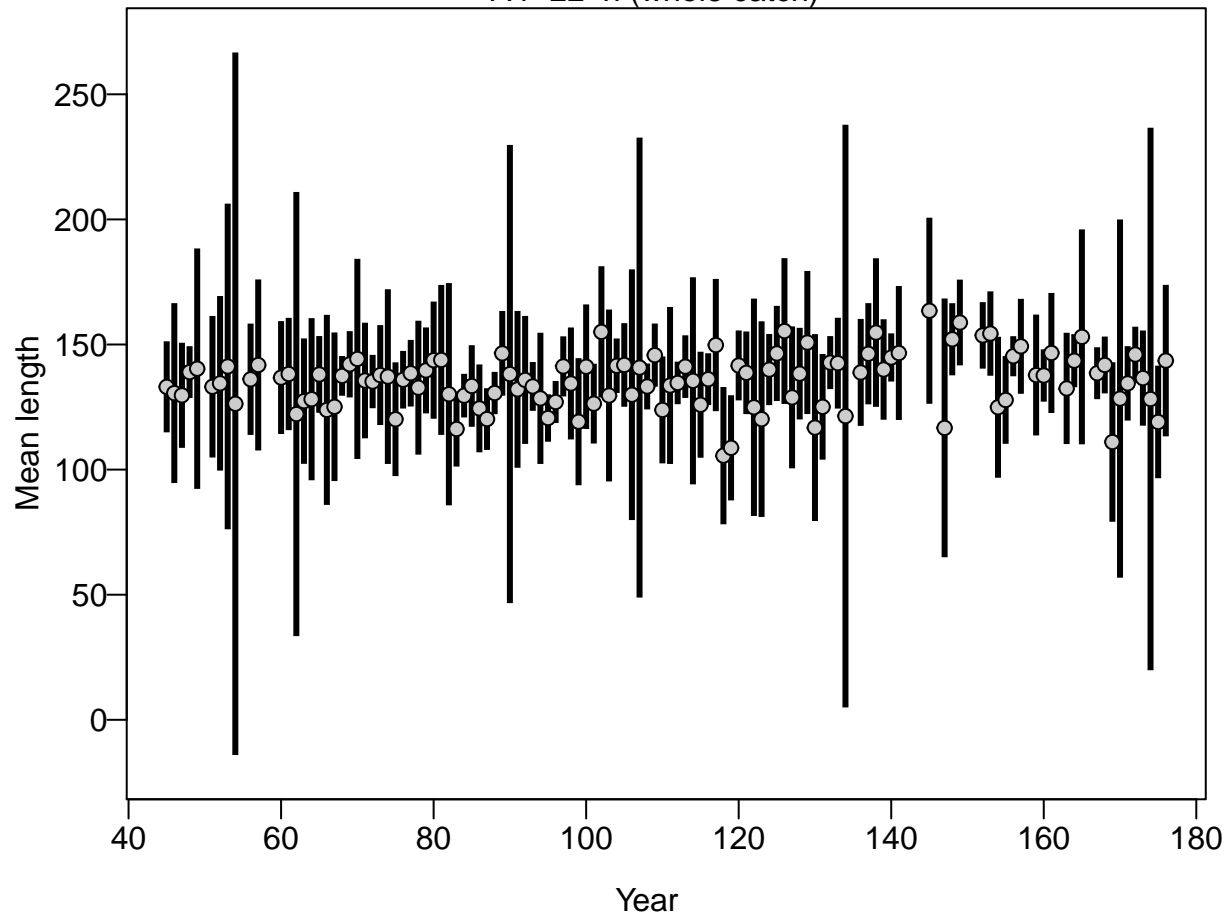
Proportion



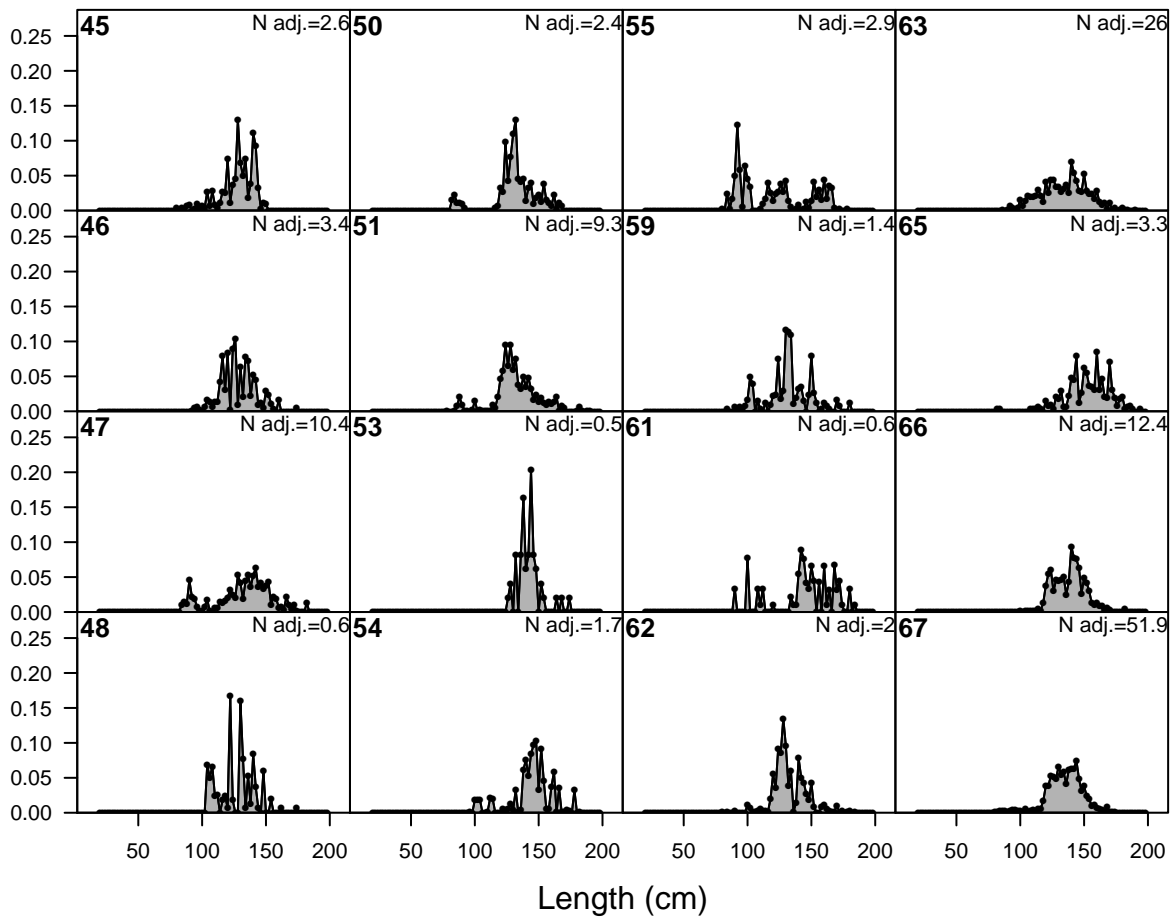
Length (cm)



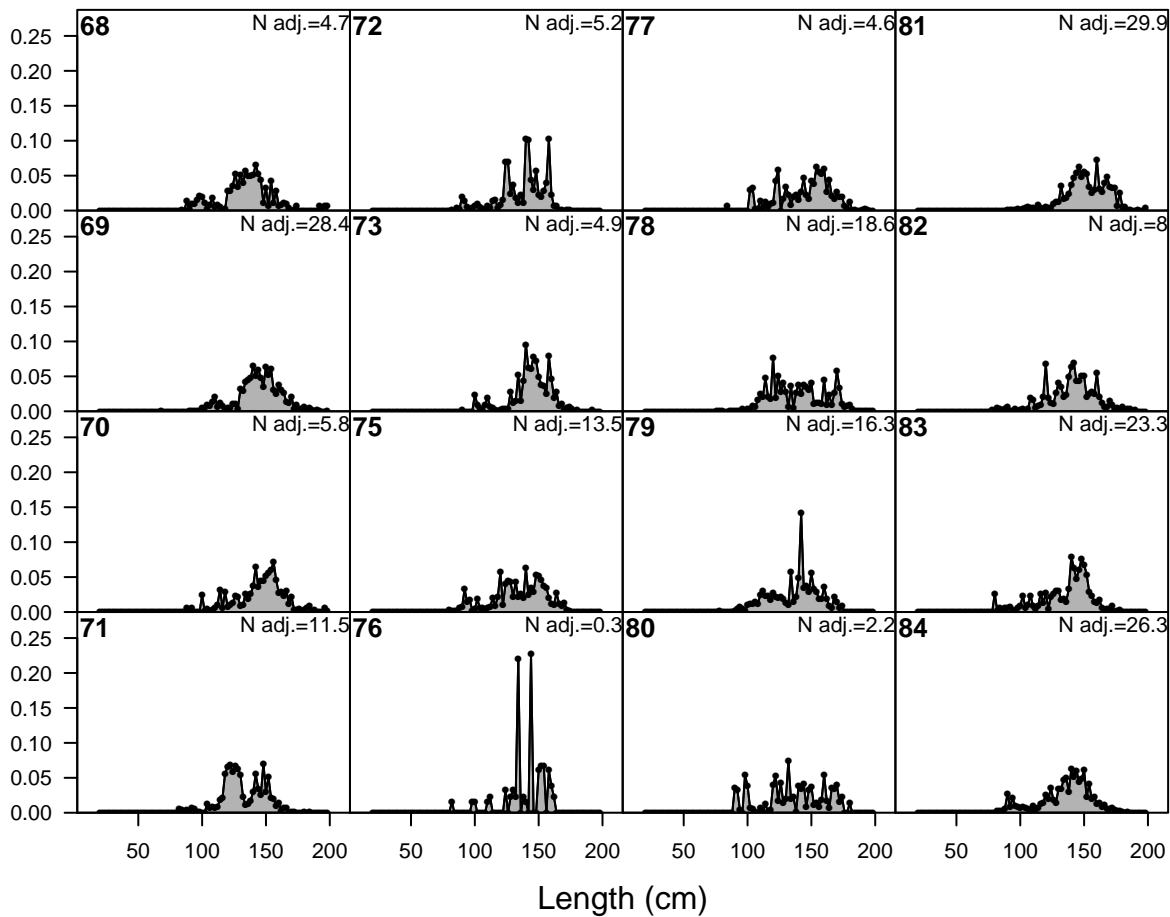
A4-LL-n (whole catch)



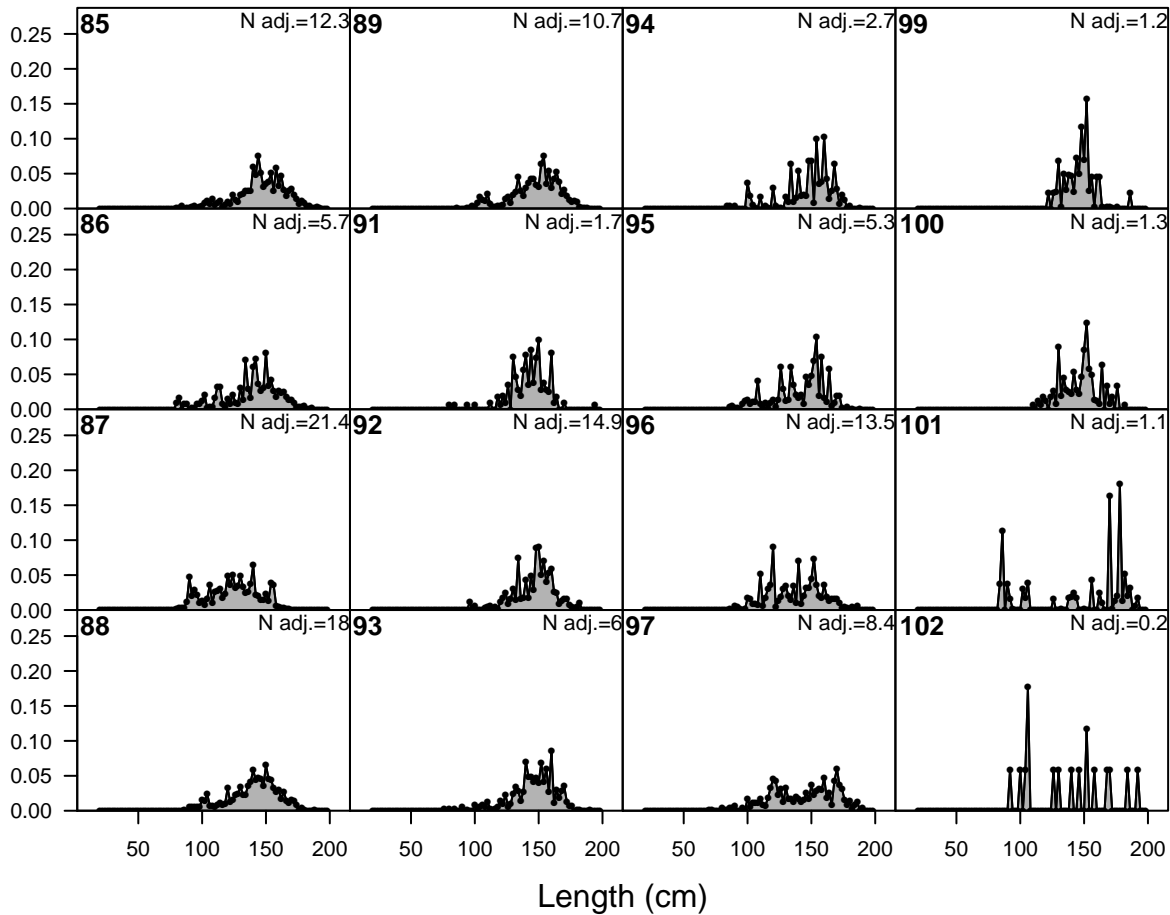
Proportion



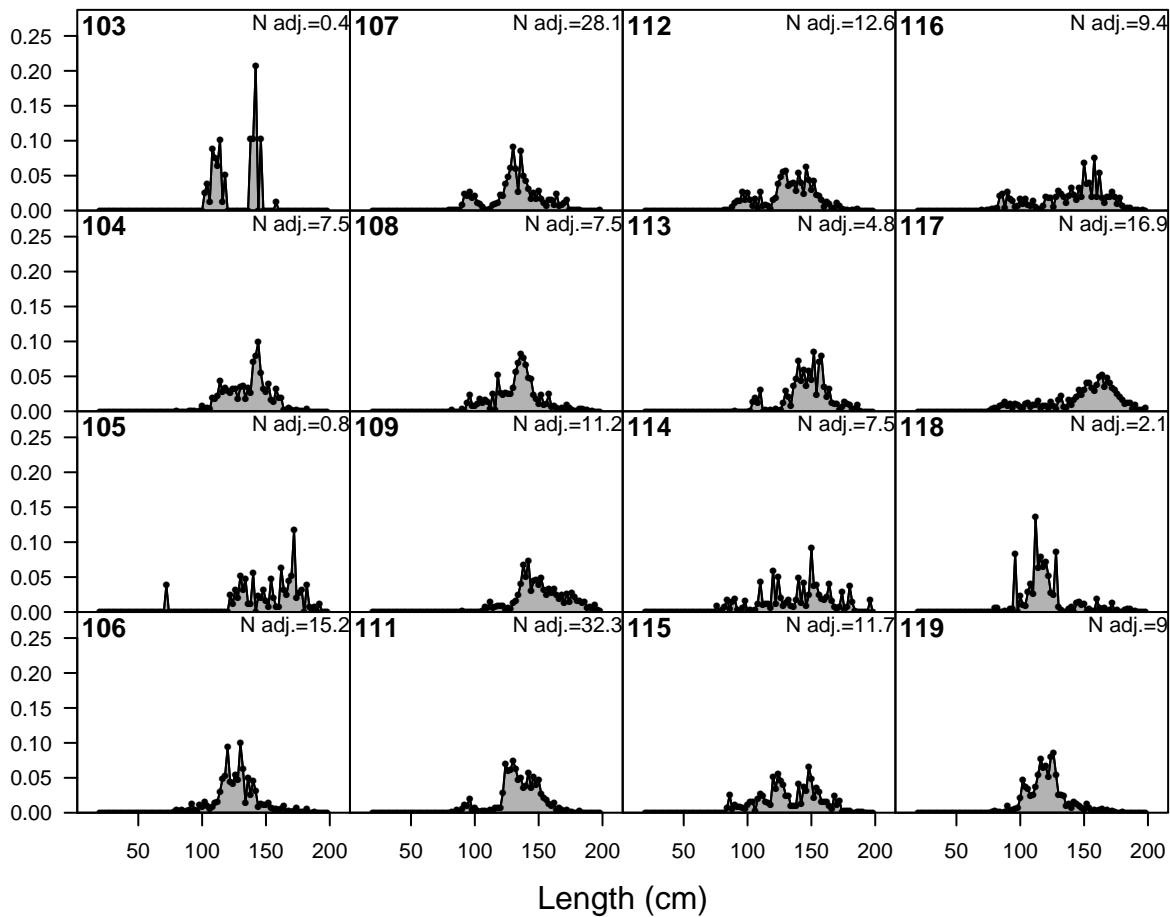
Proportion



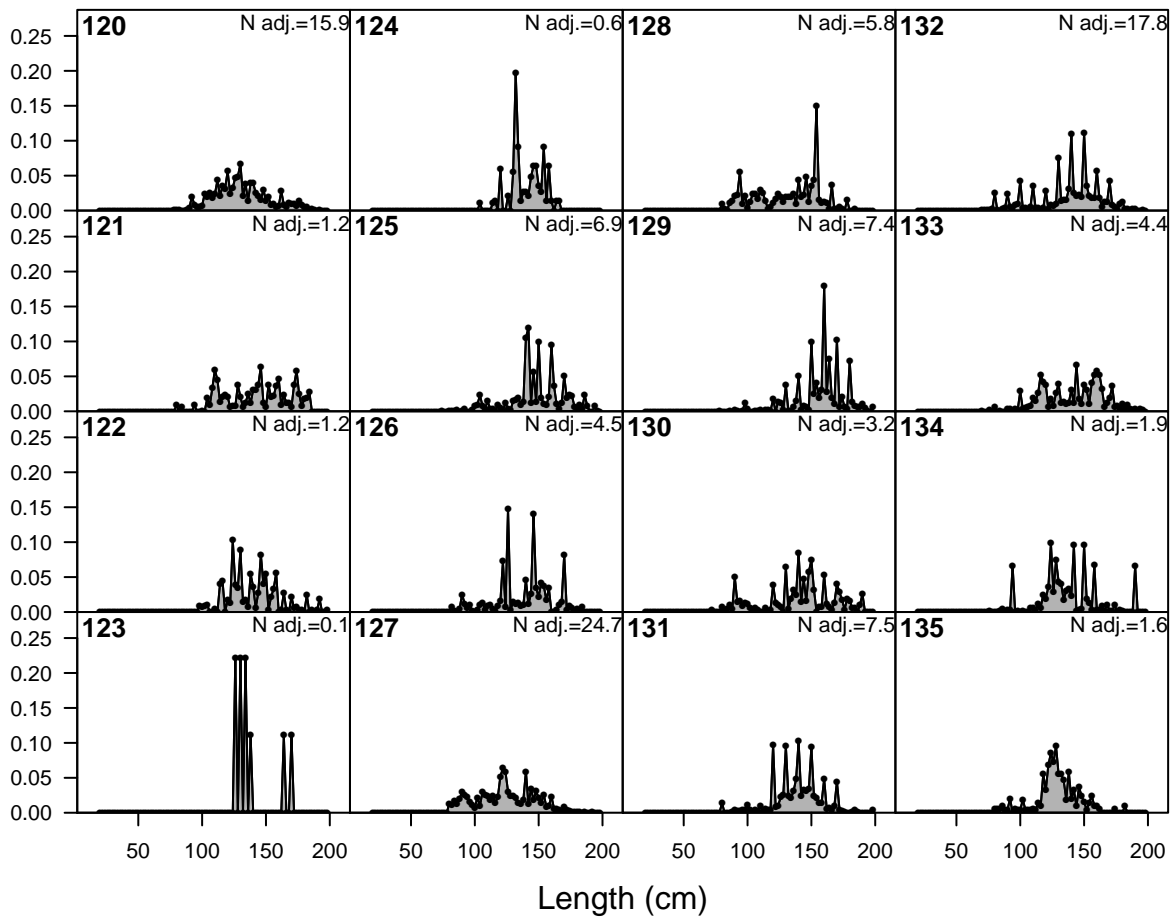
Proportion



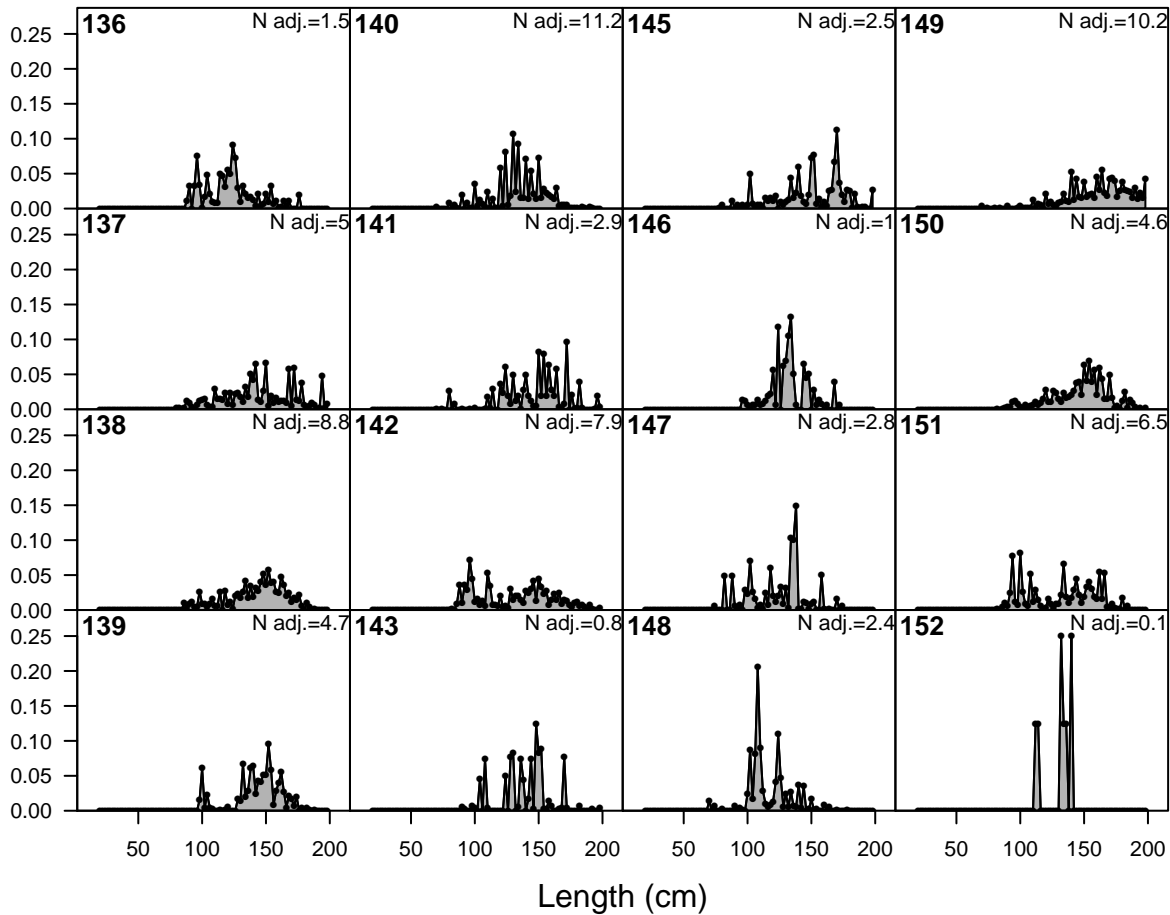
Proportion



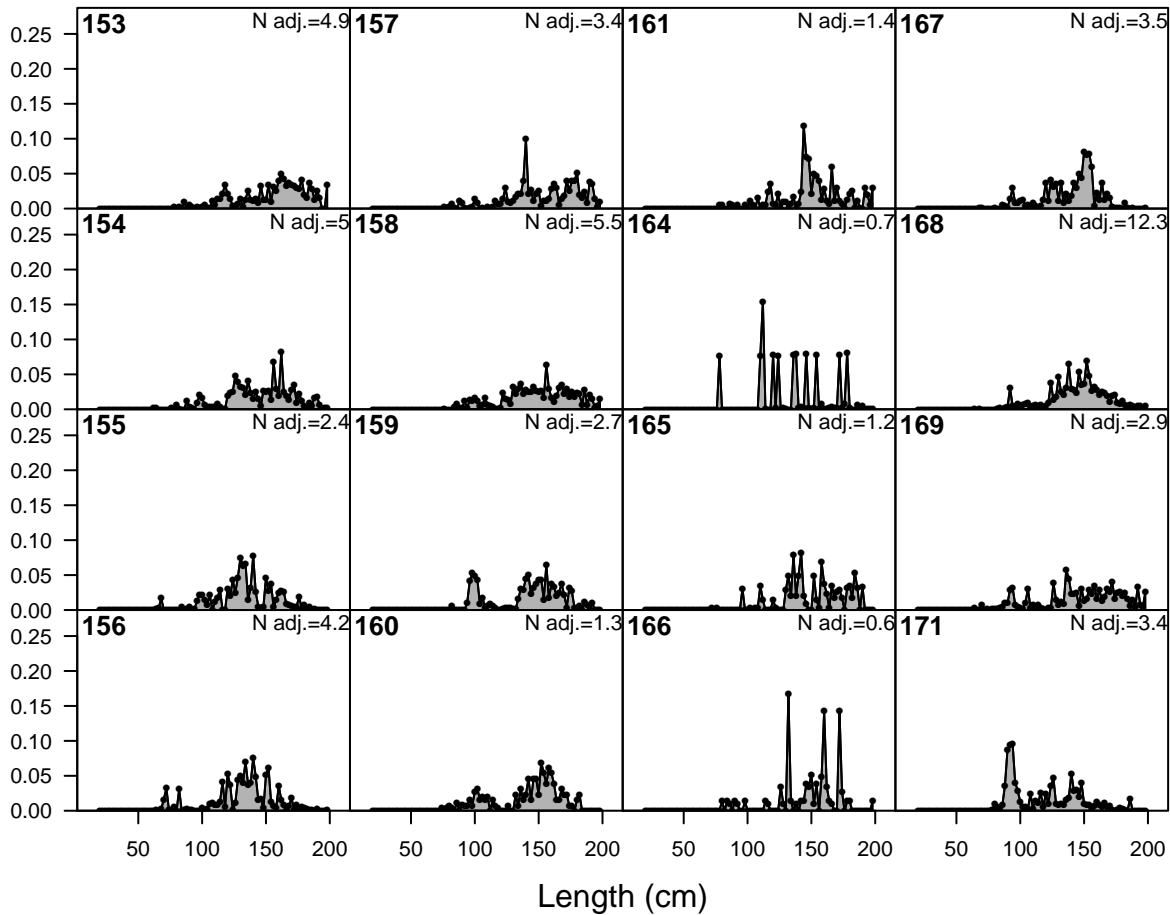
Proportion

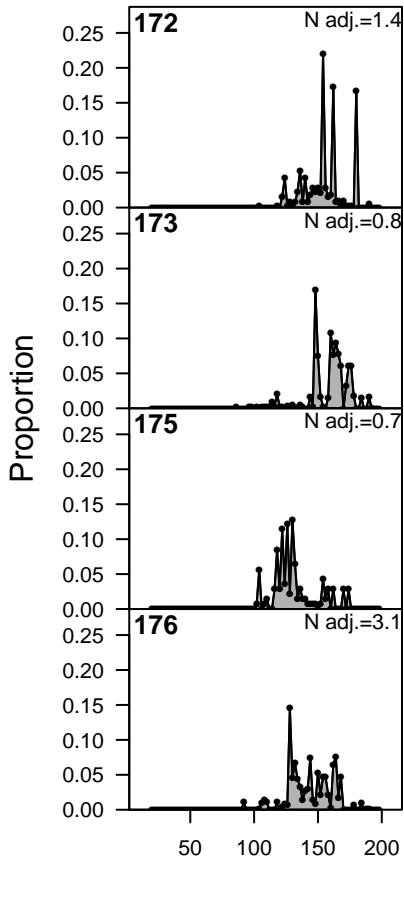


Proportion

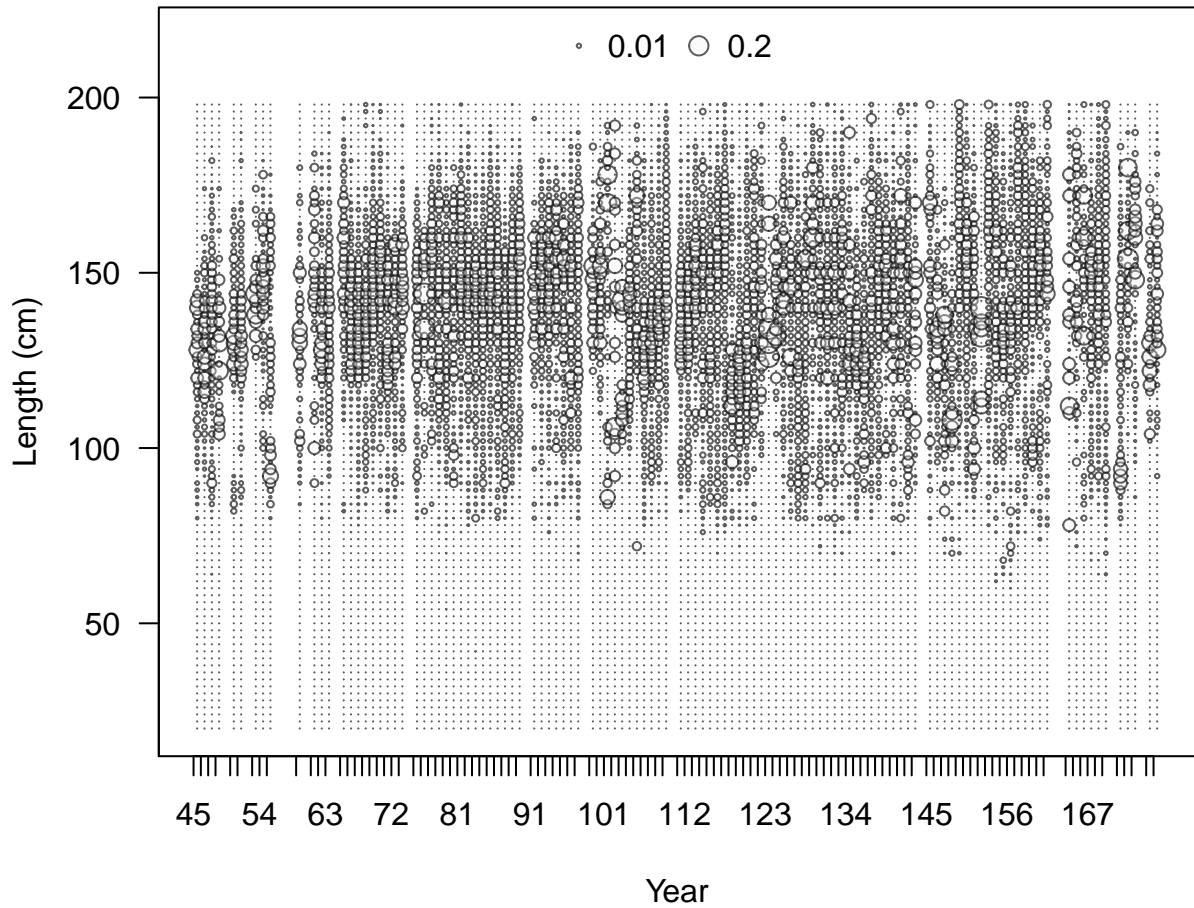


Proportion

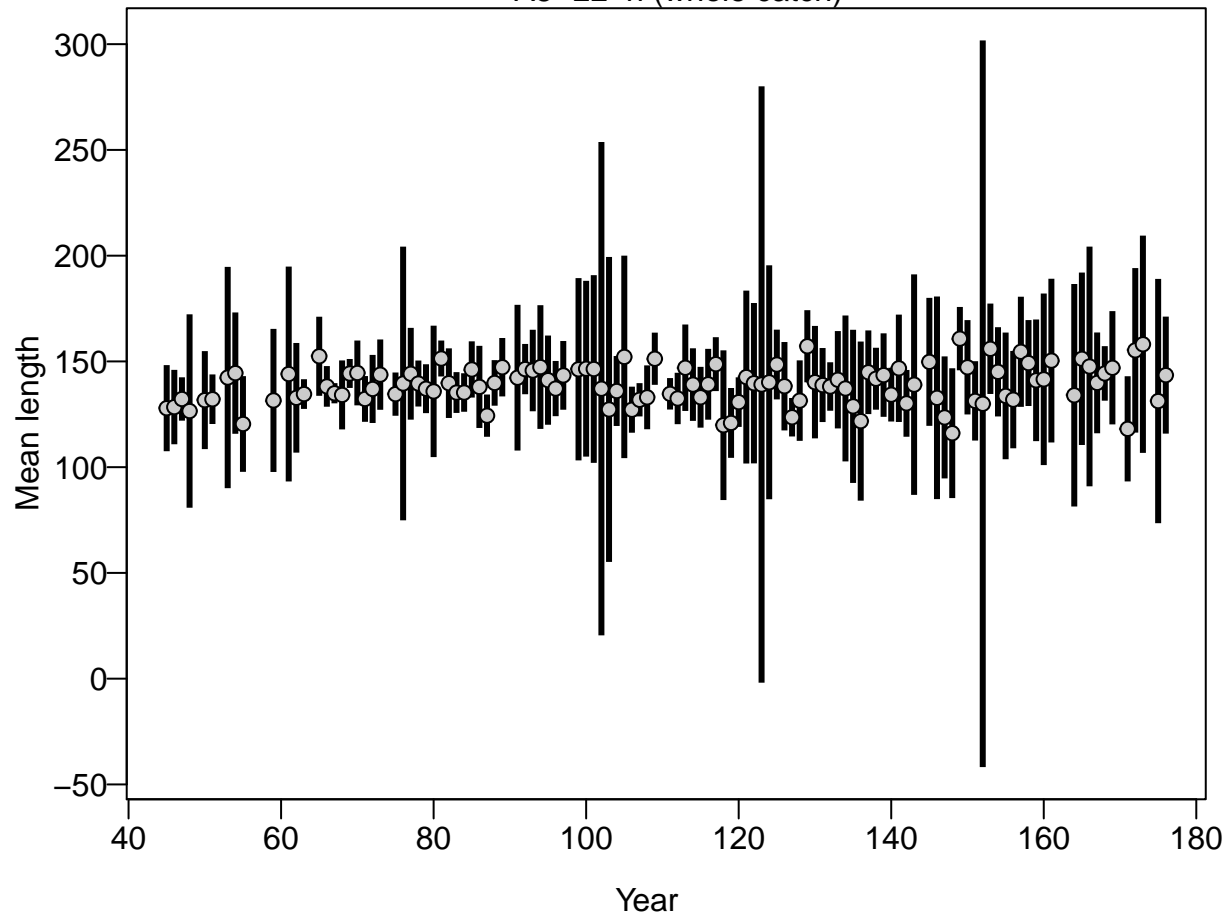


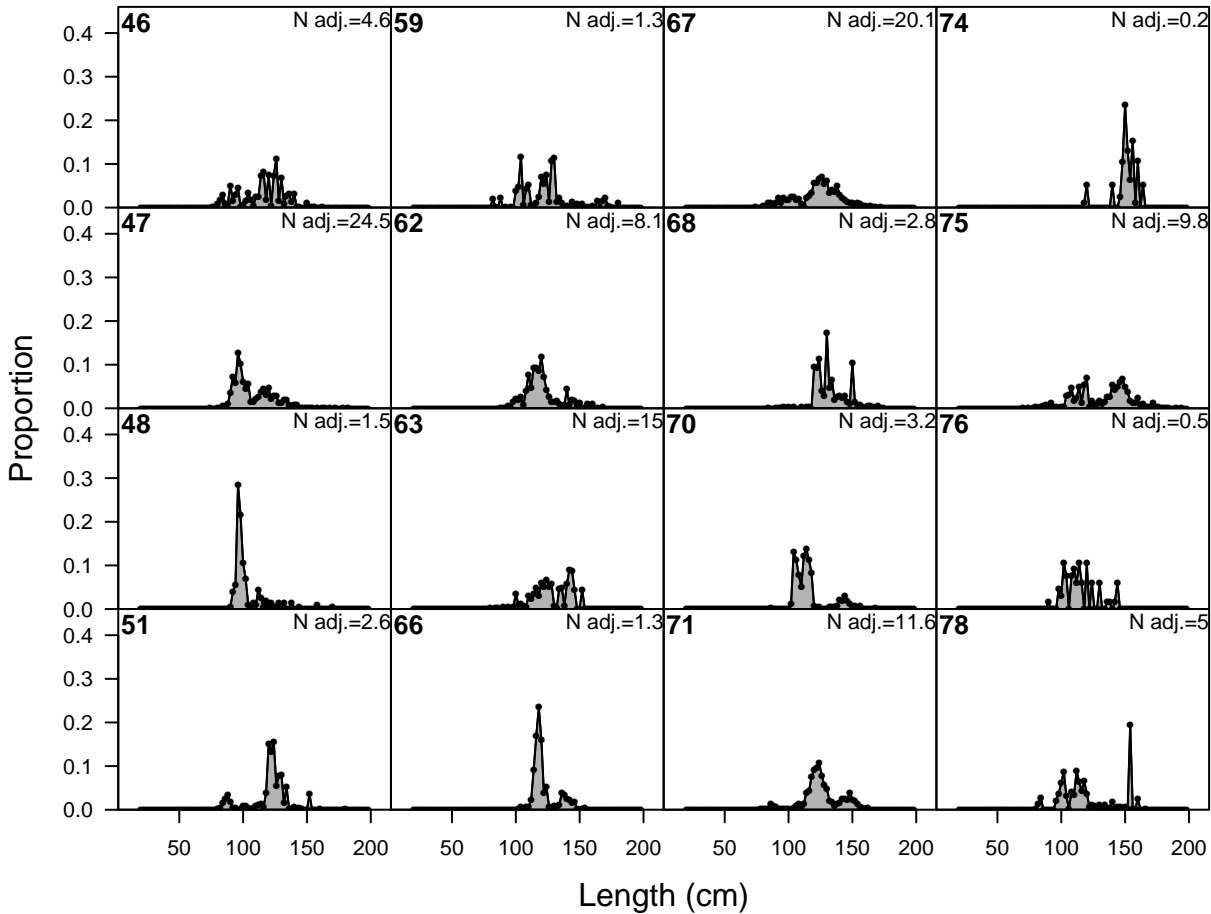


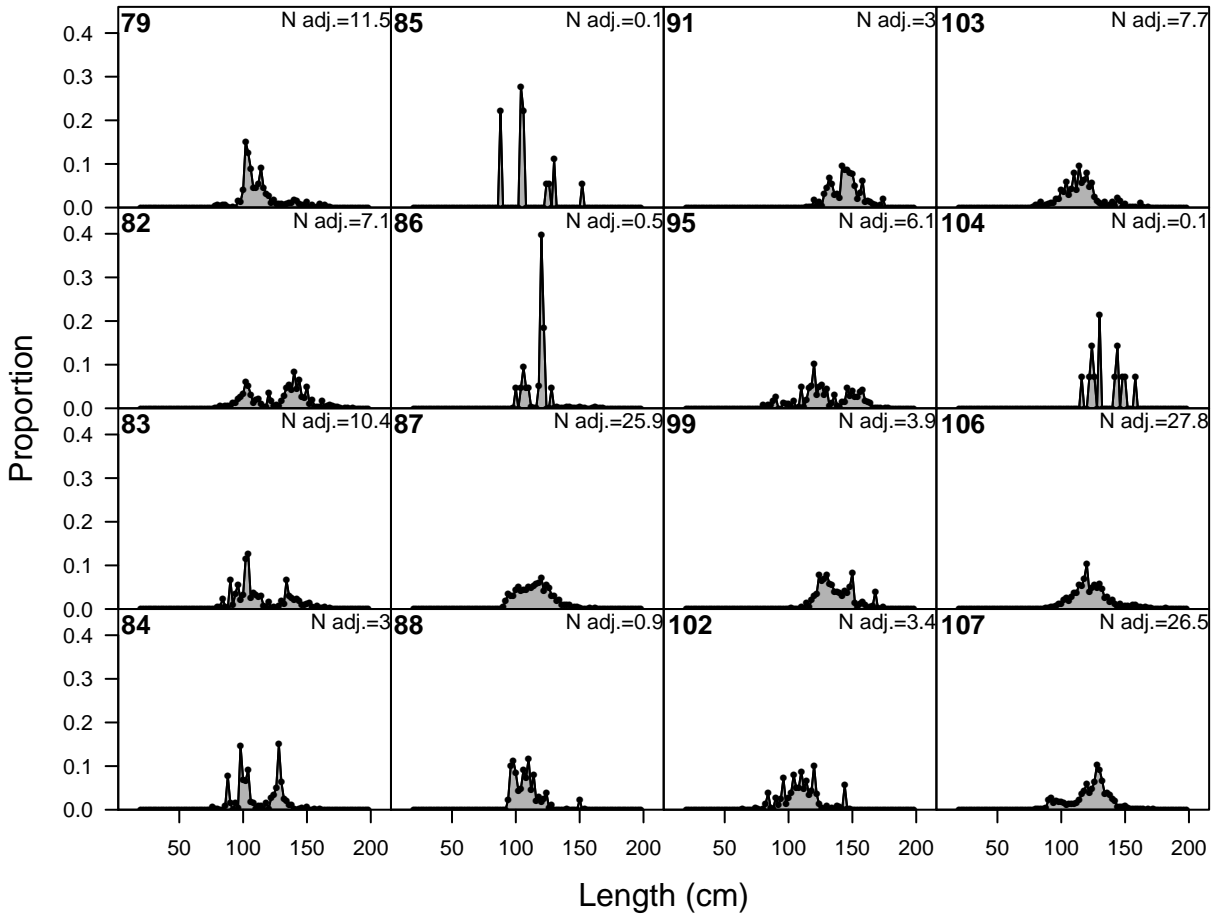
Length (cm)

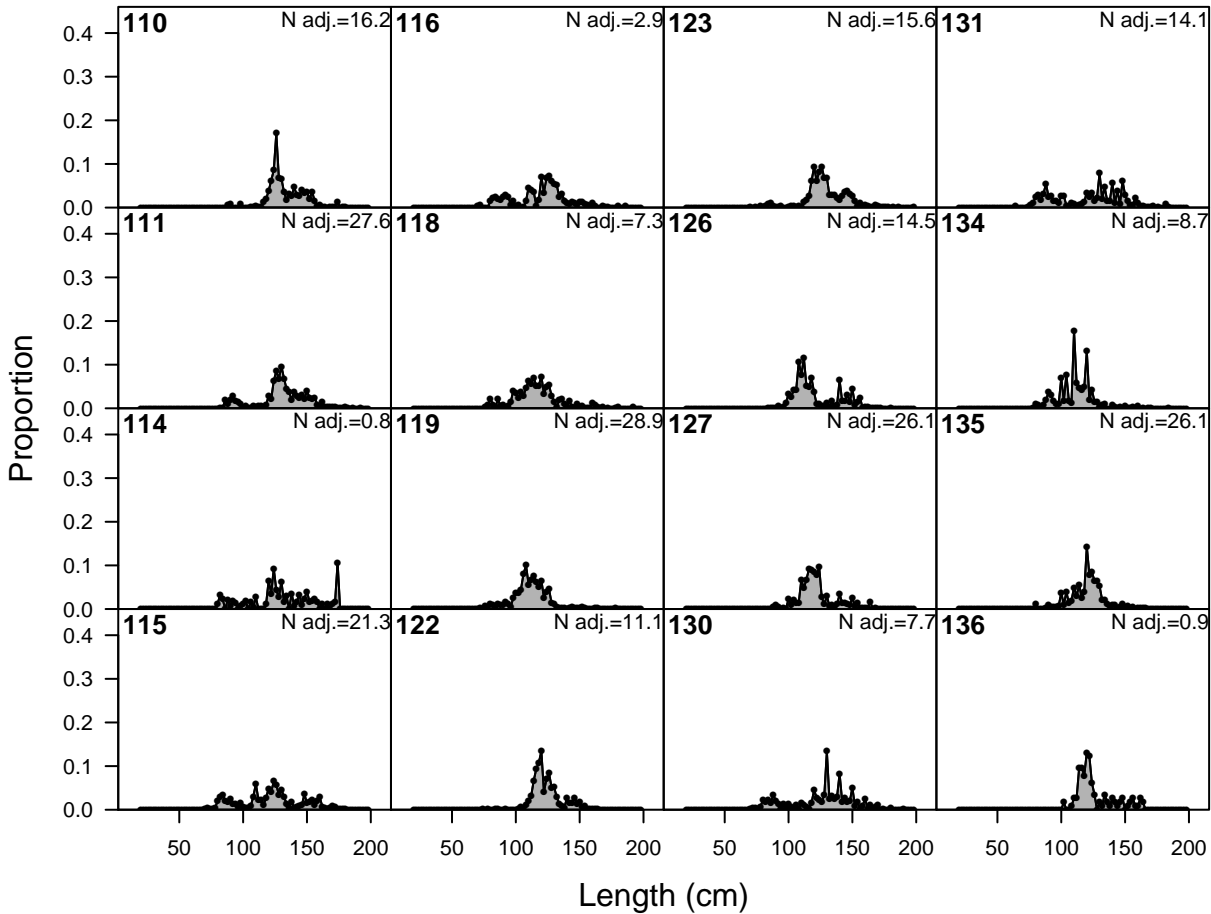


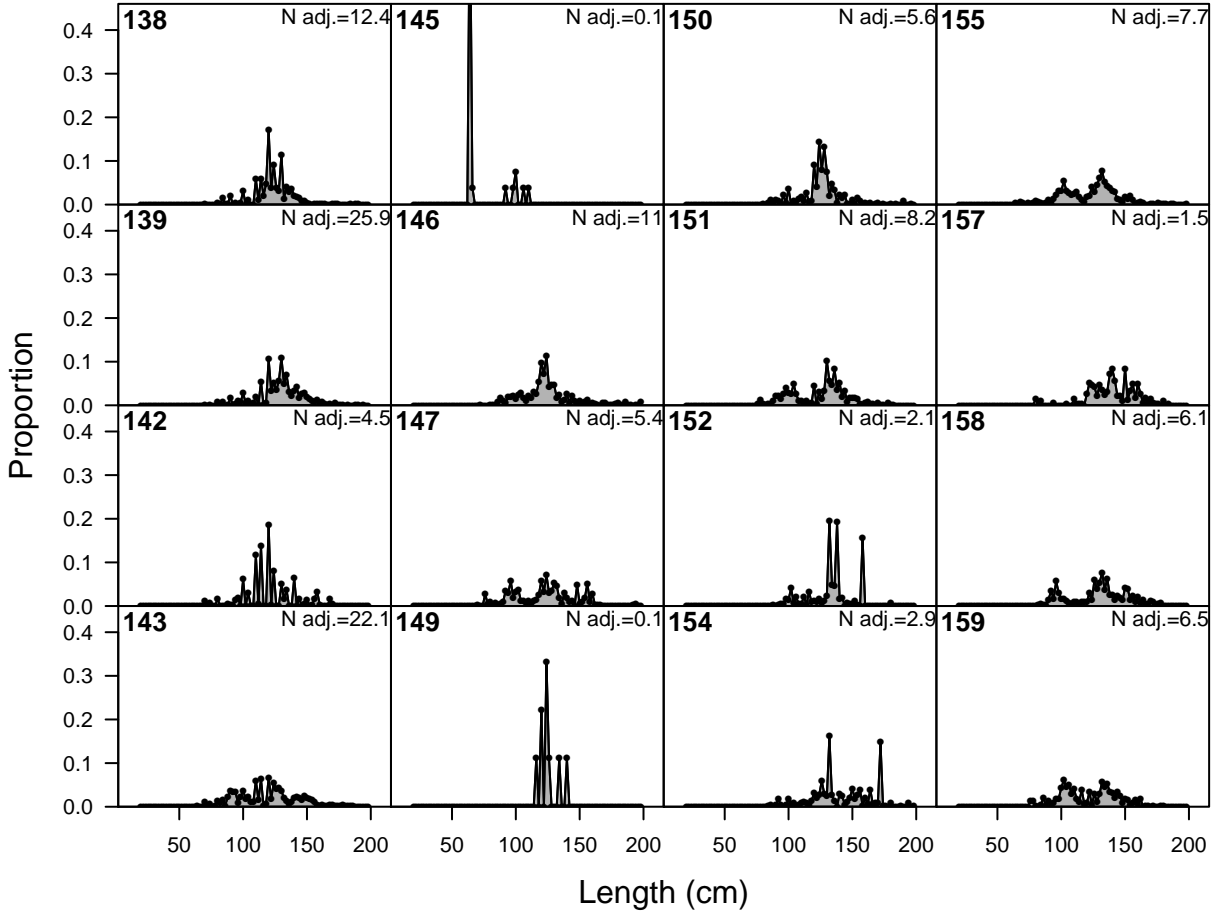
A5-LL-n (whole catch)

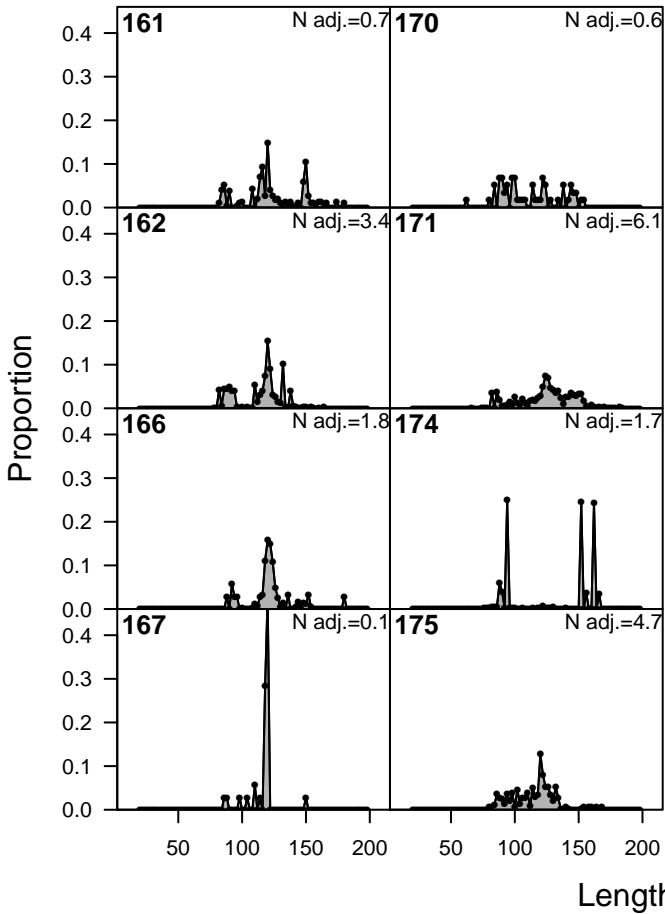


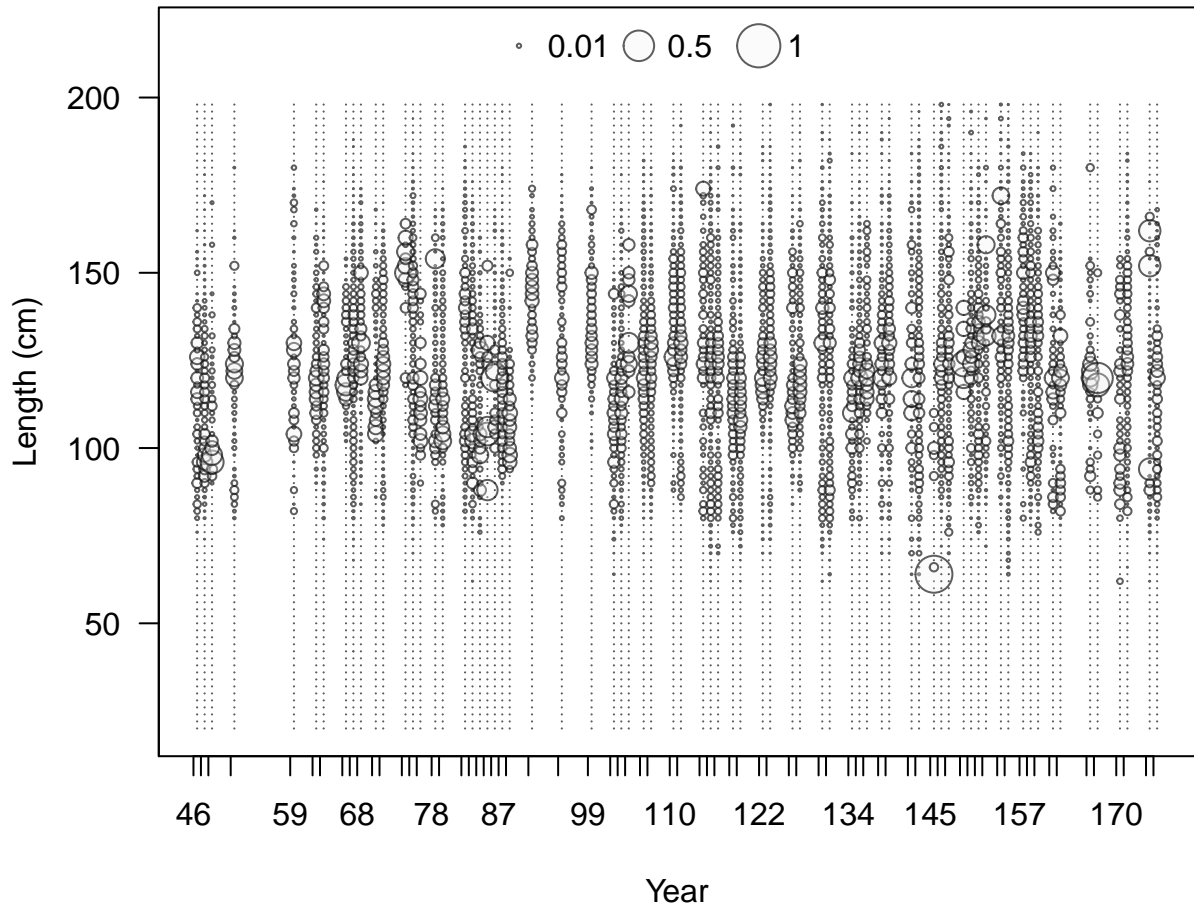




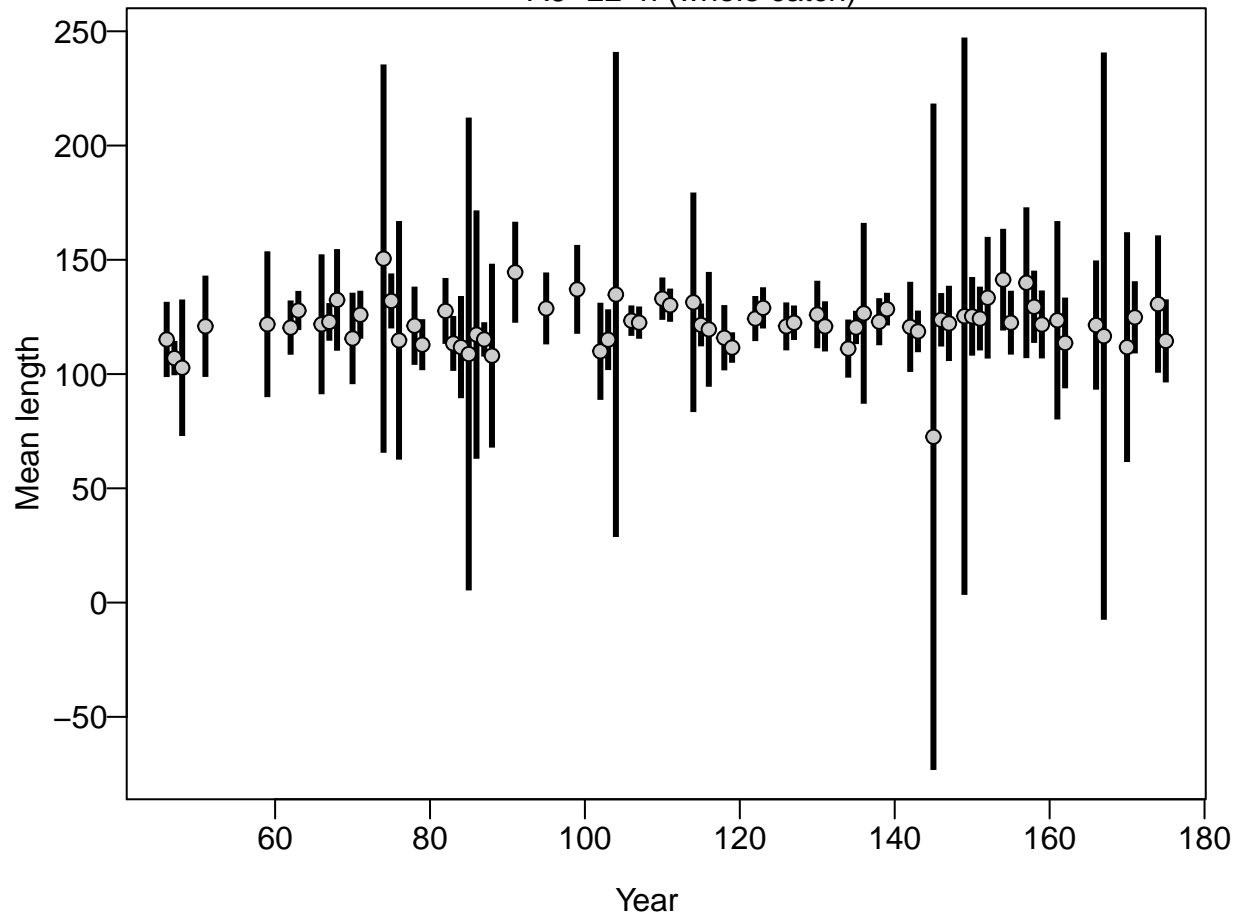


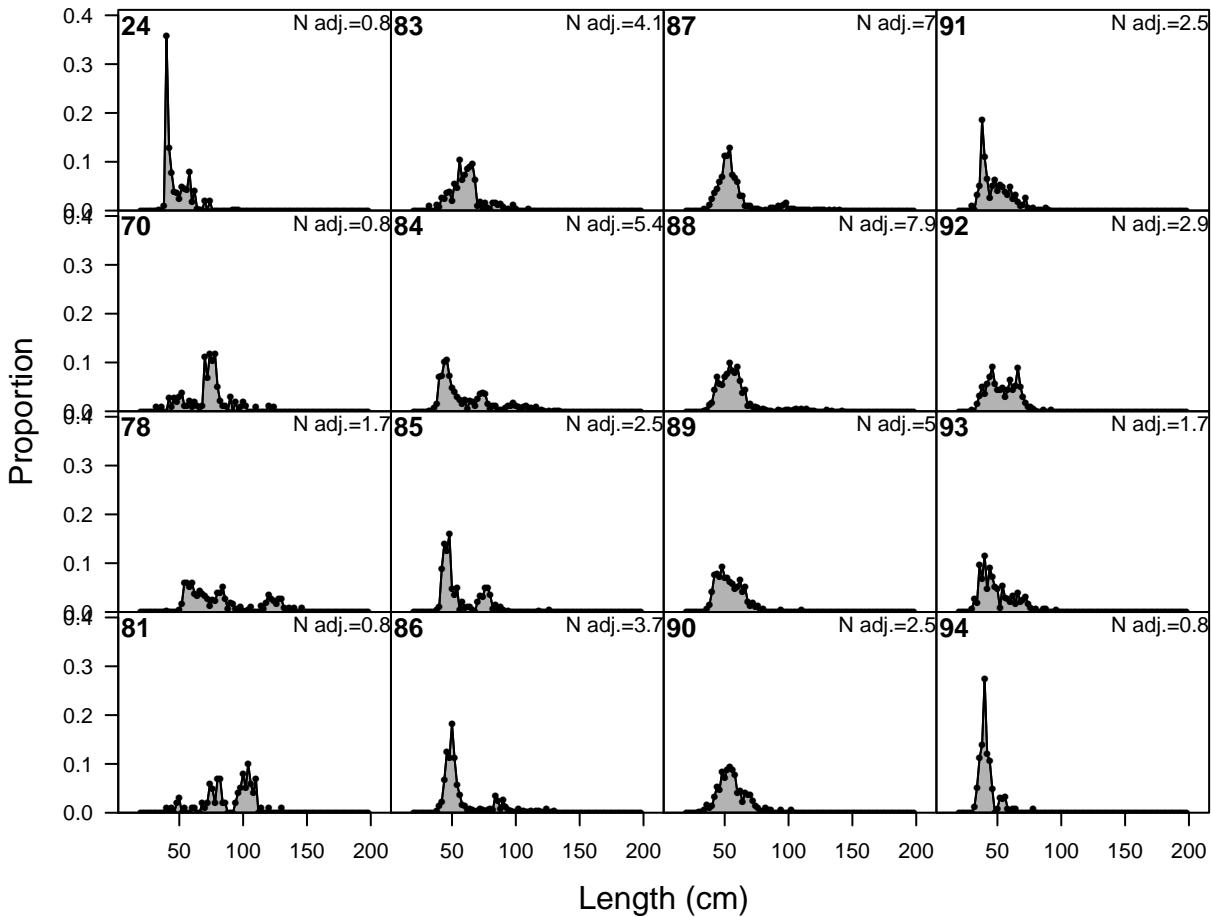


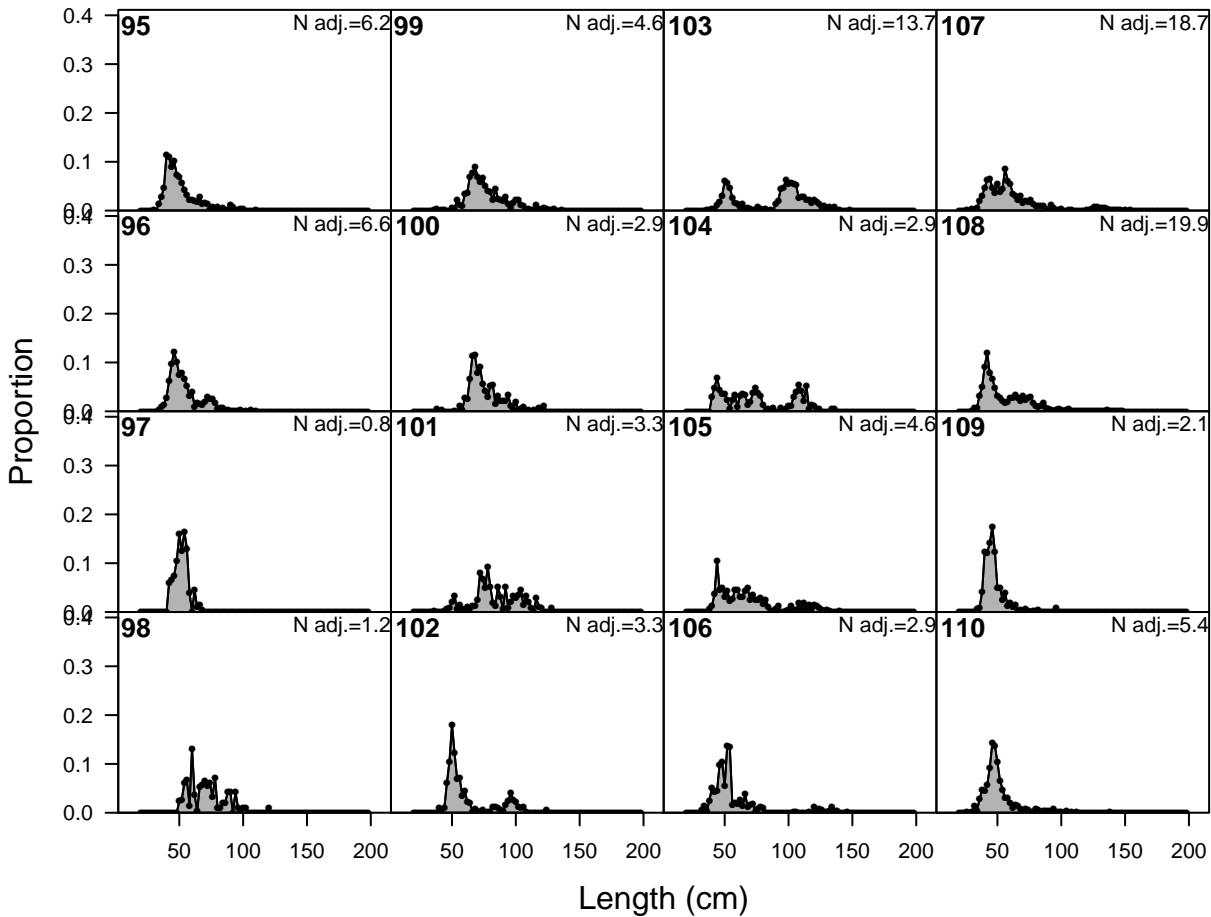


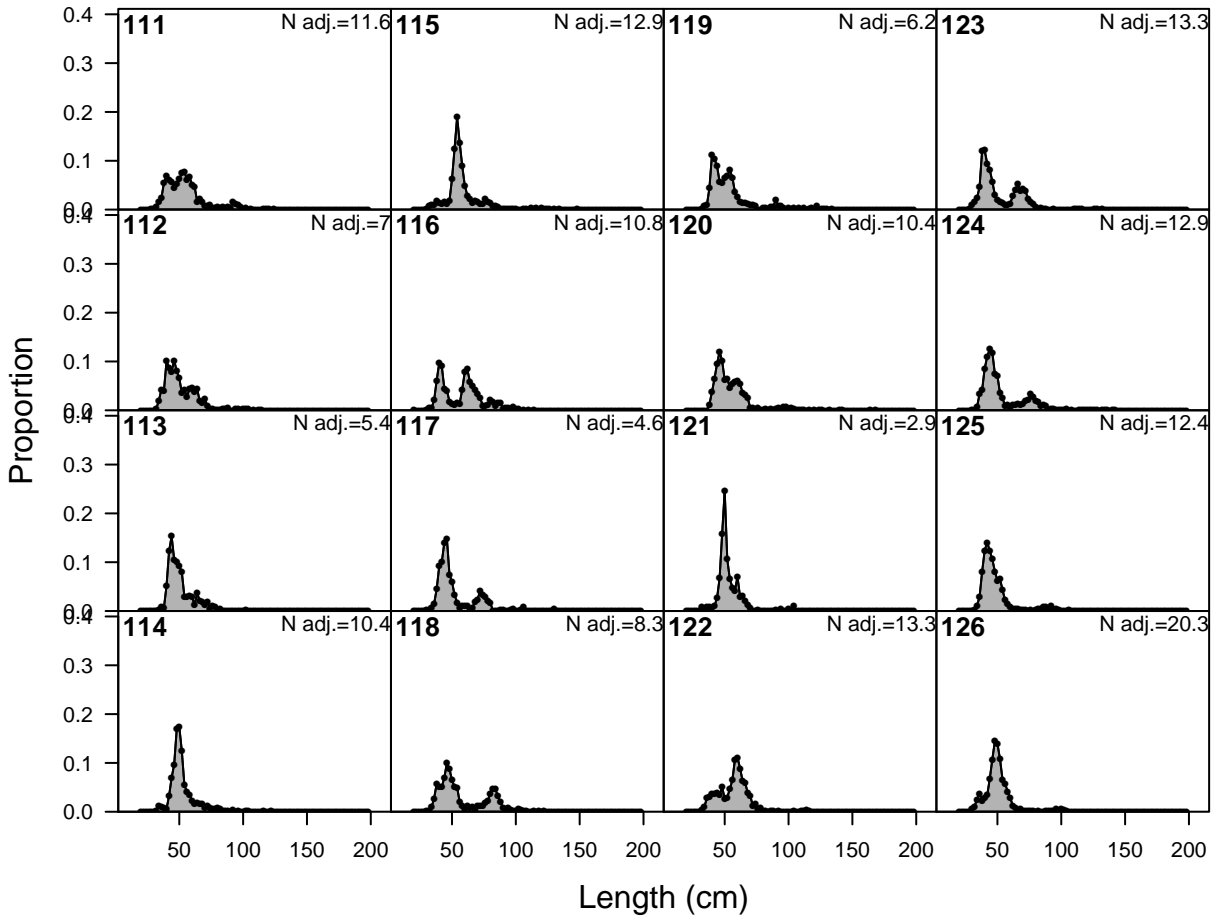


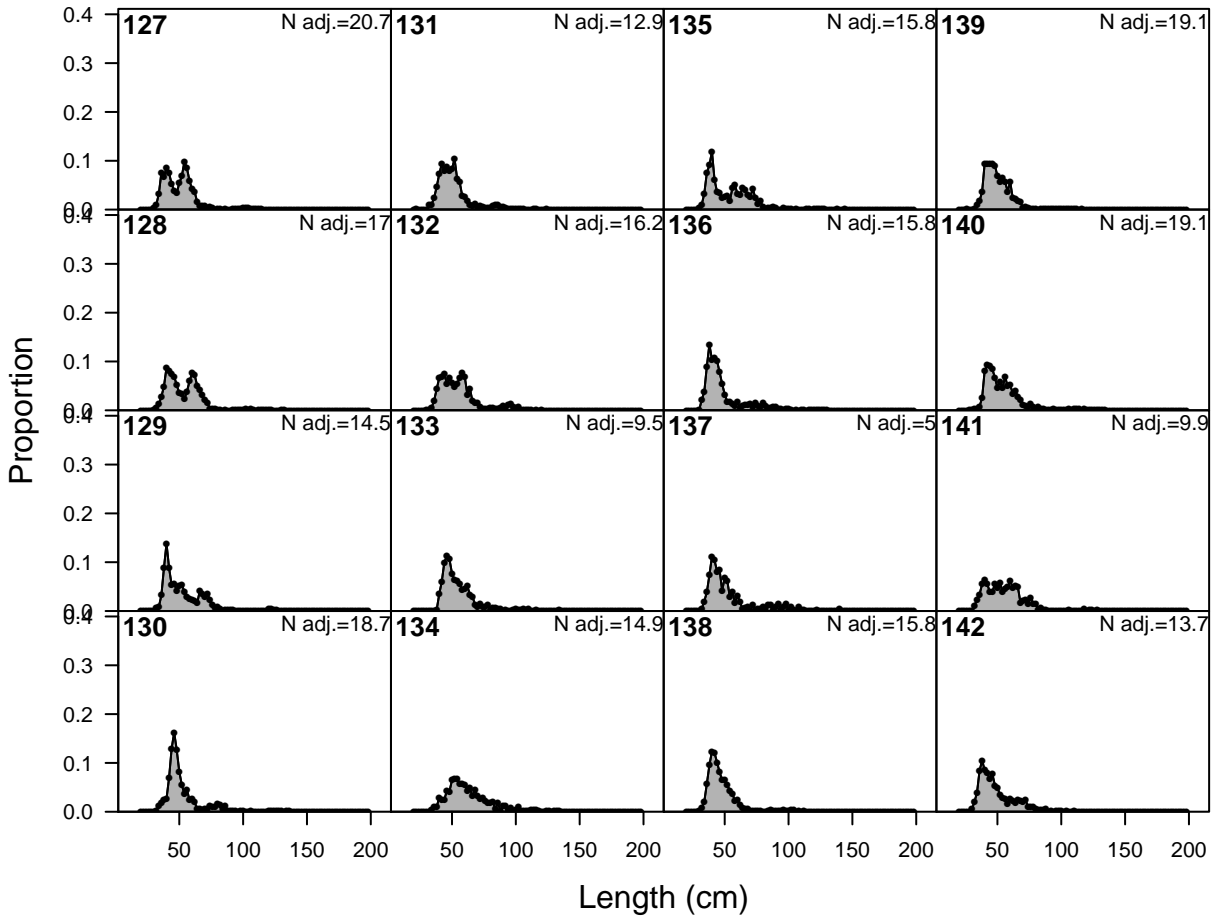
A6-LL-n (whole catch)

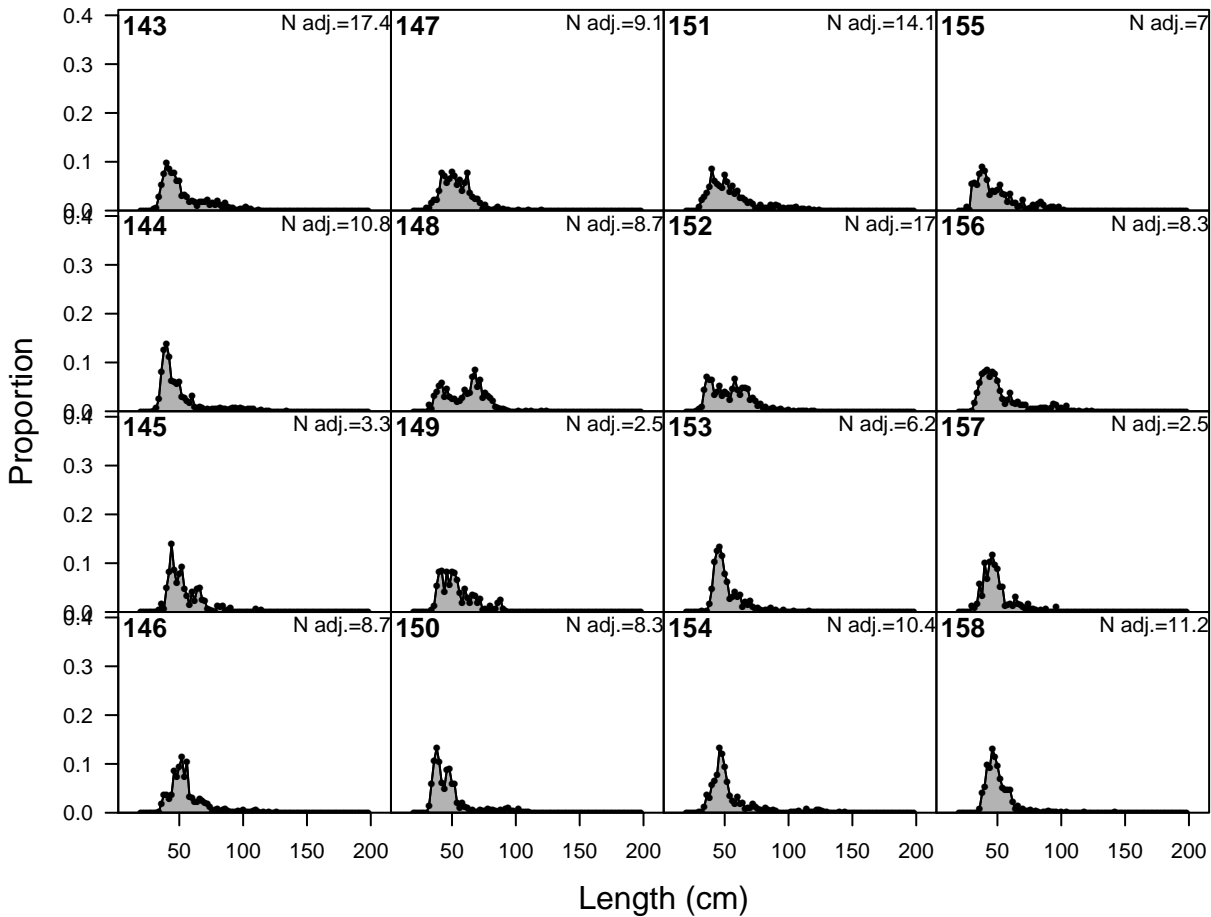


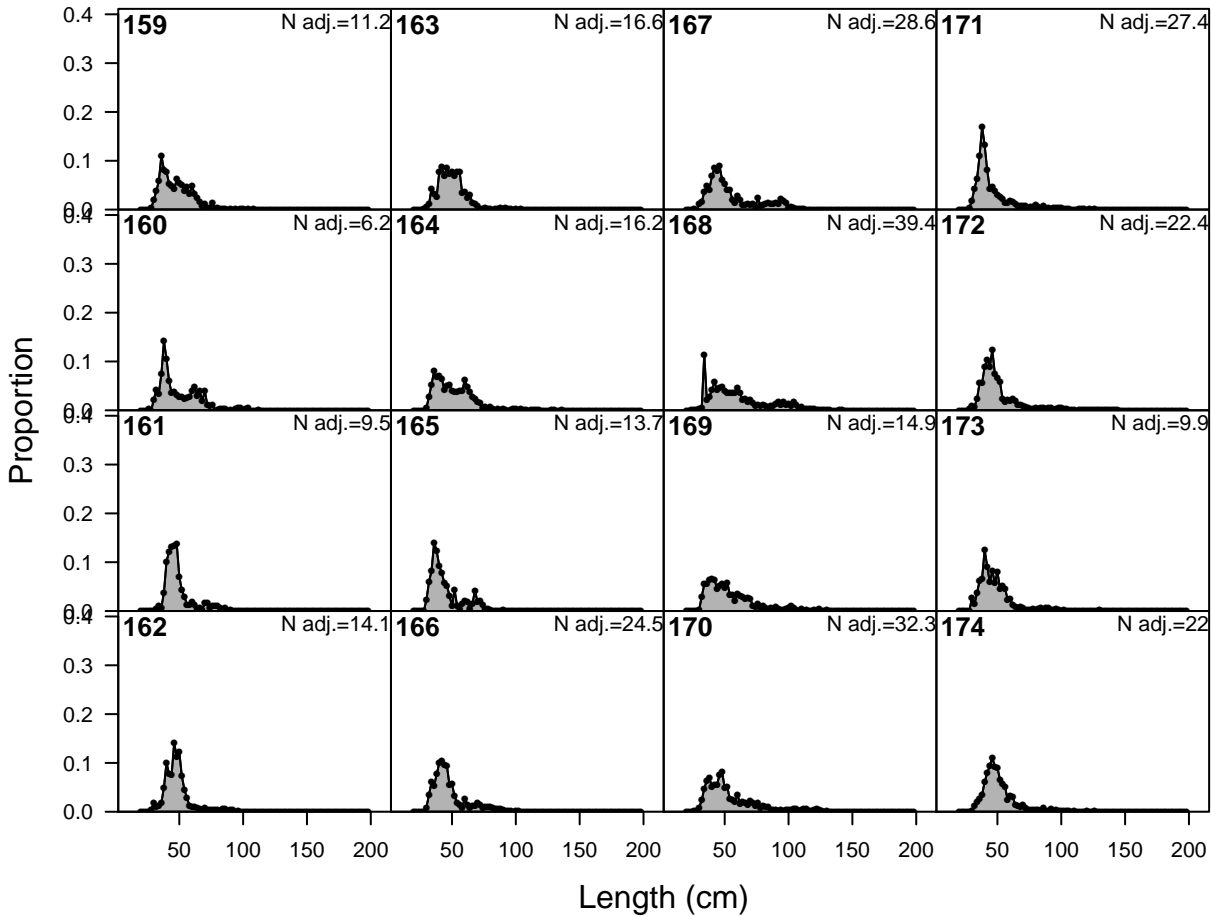


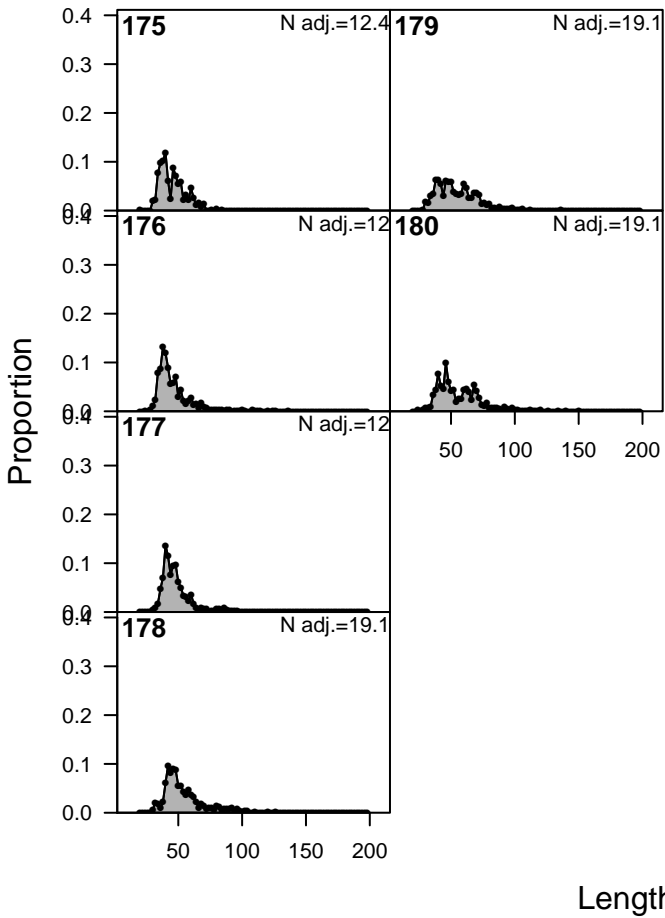


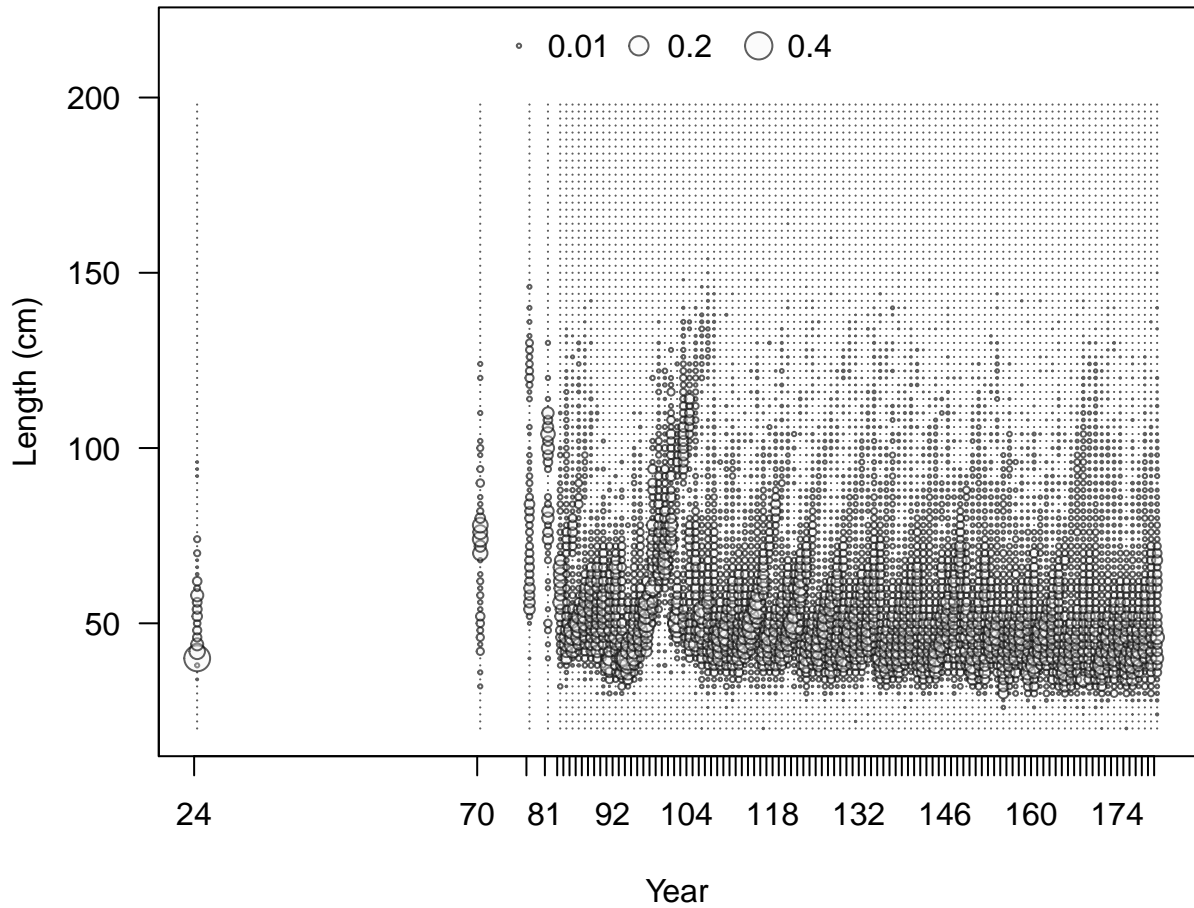




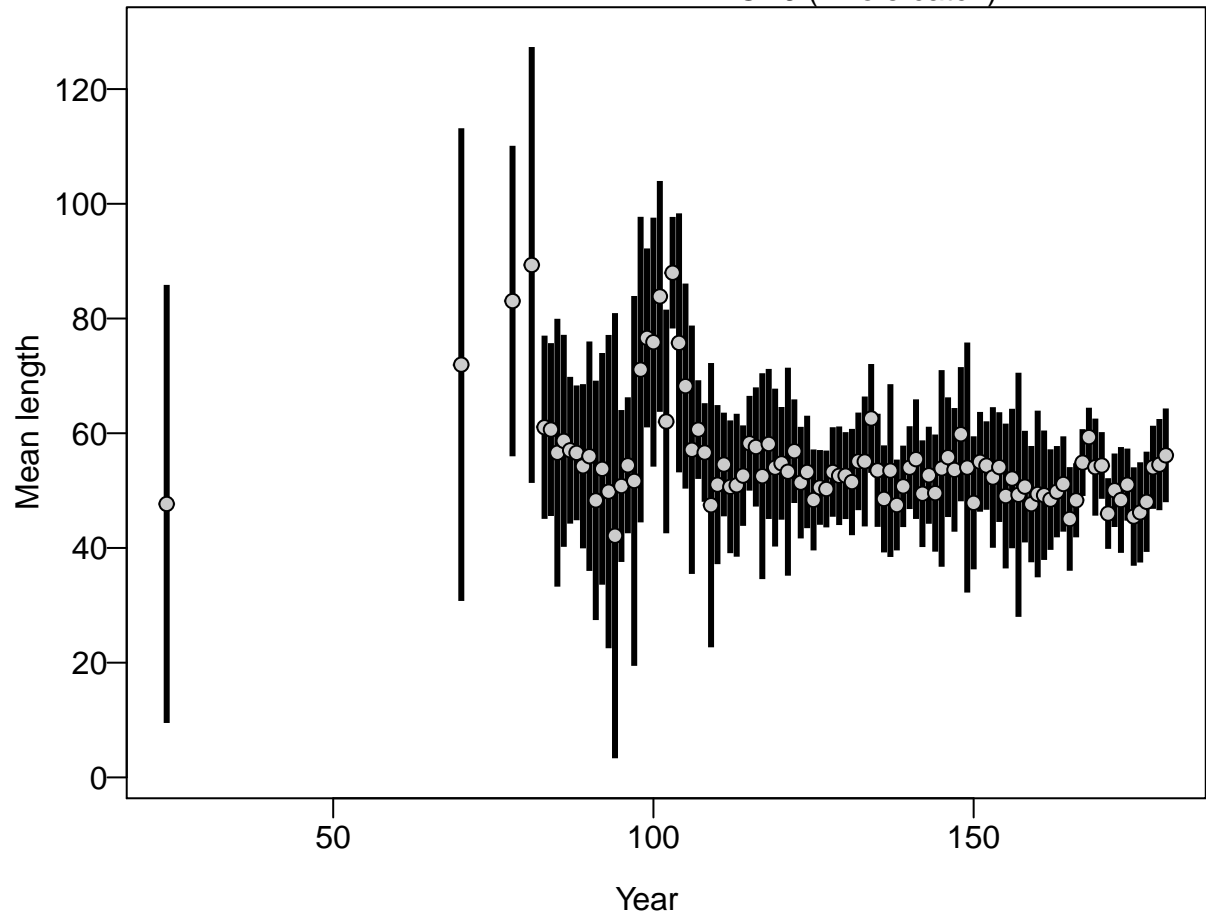


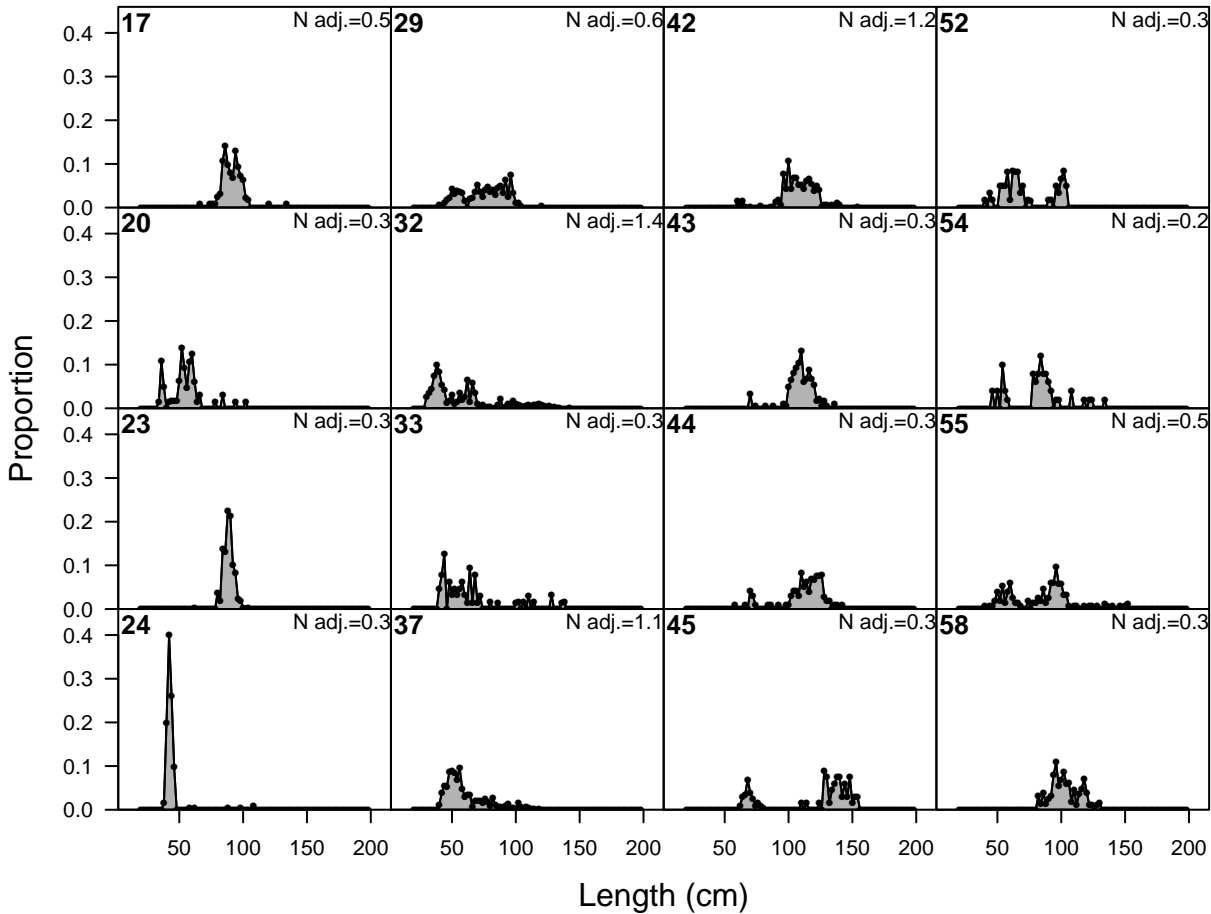


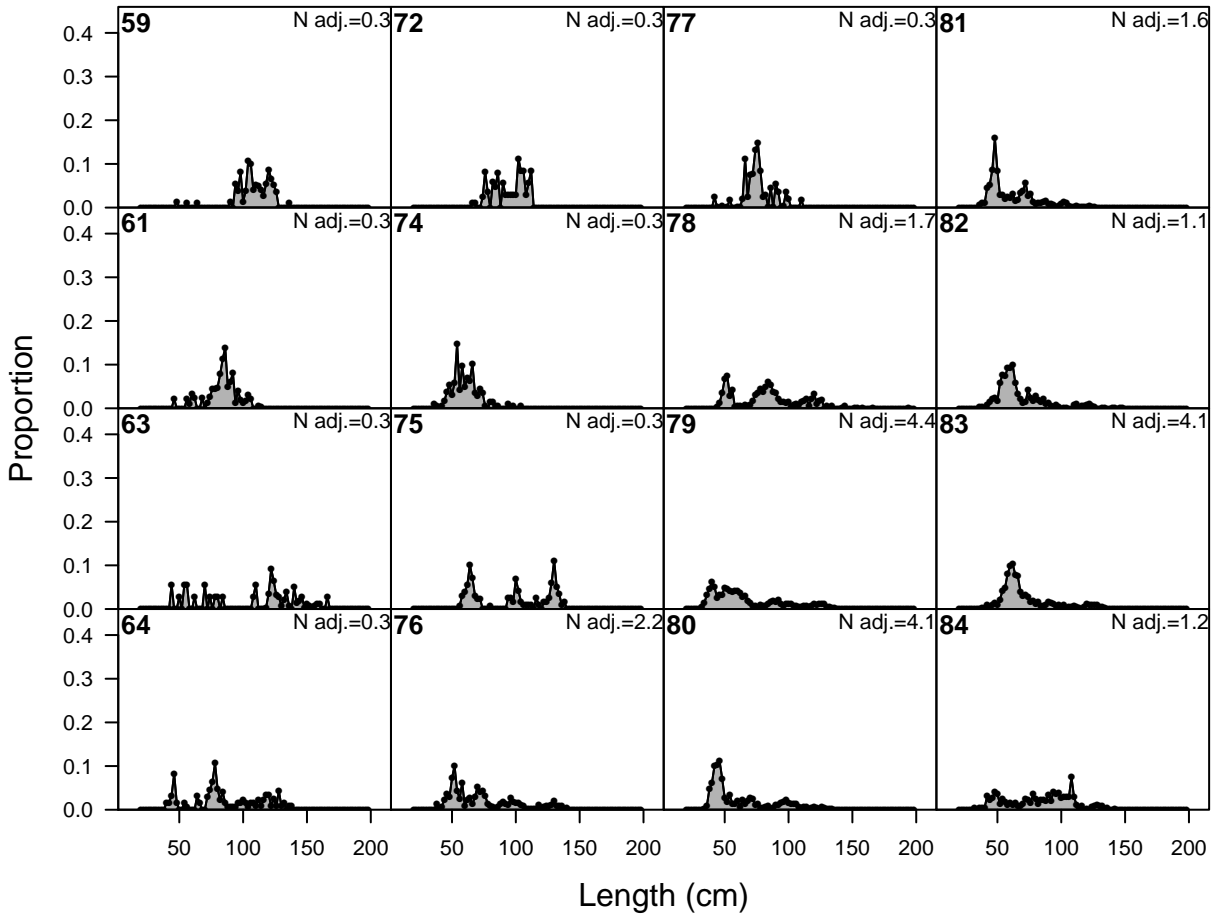


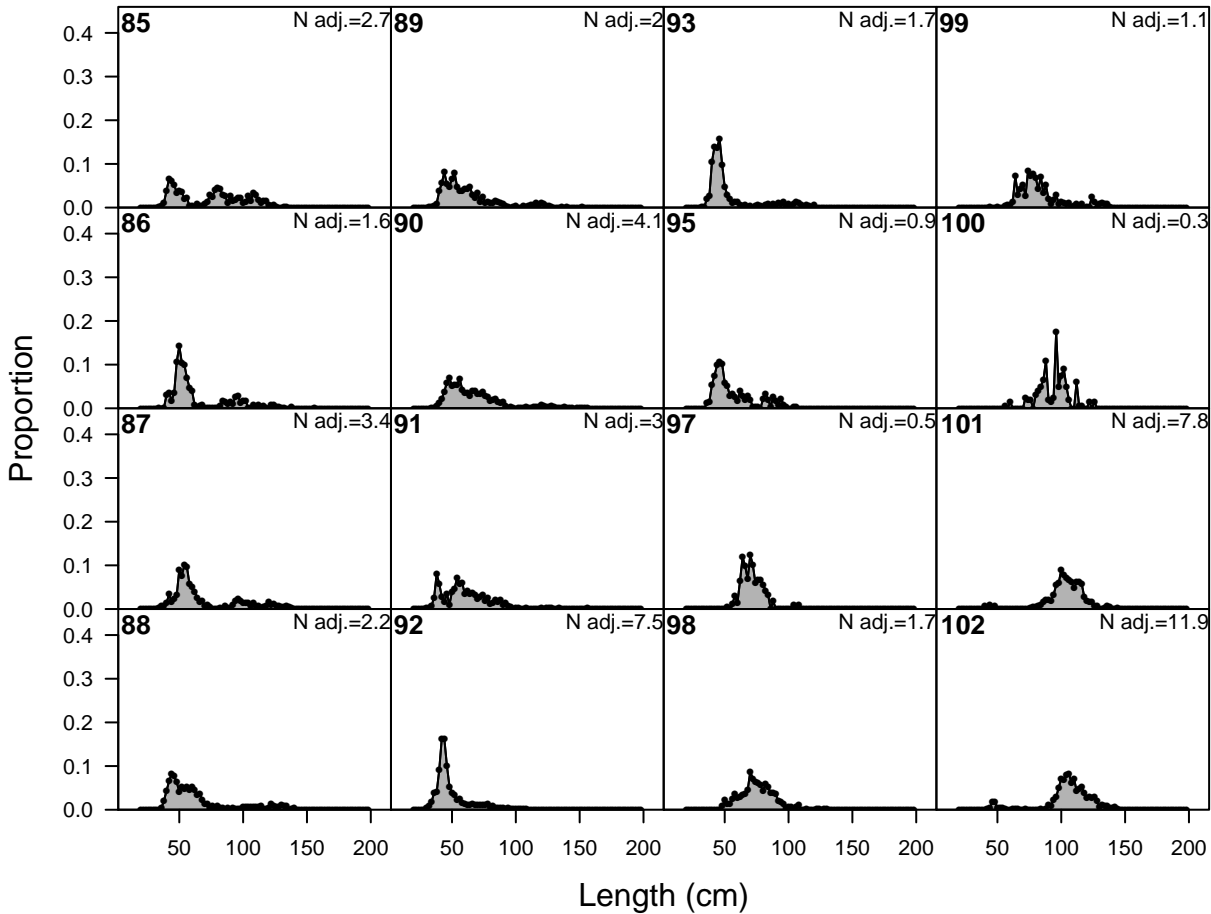


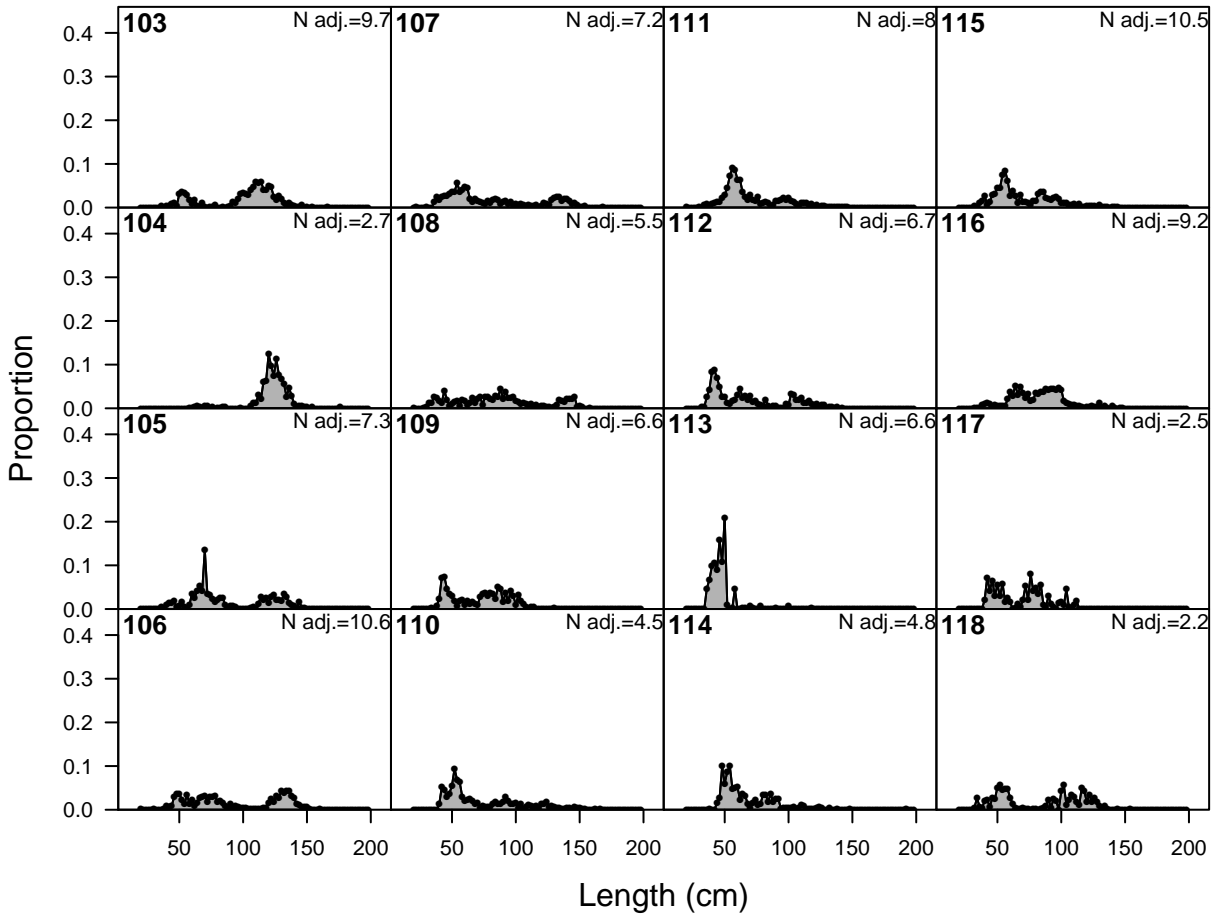
A2-OBJ (whole catch)

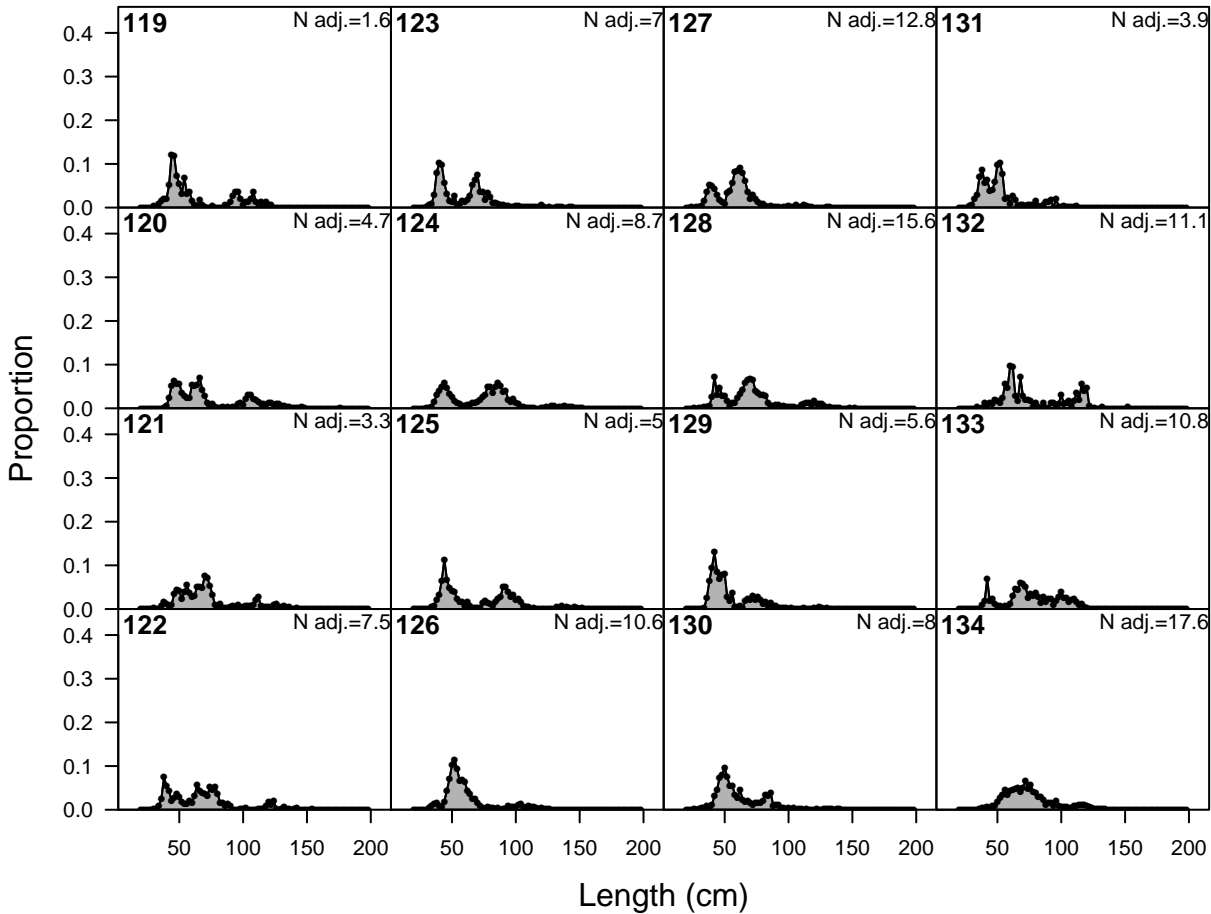


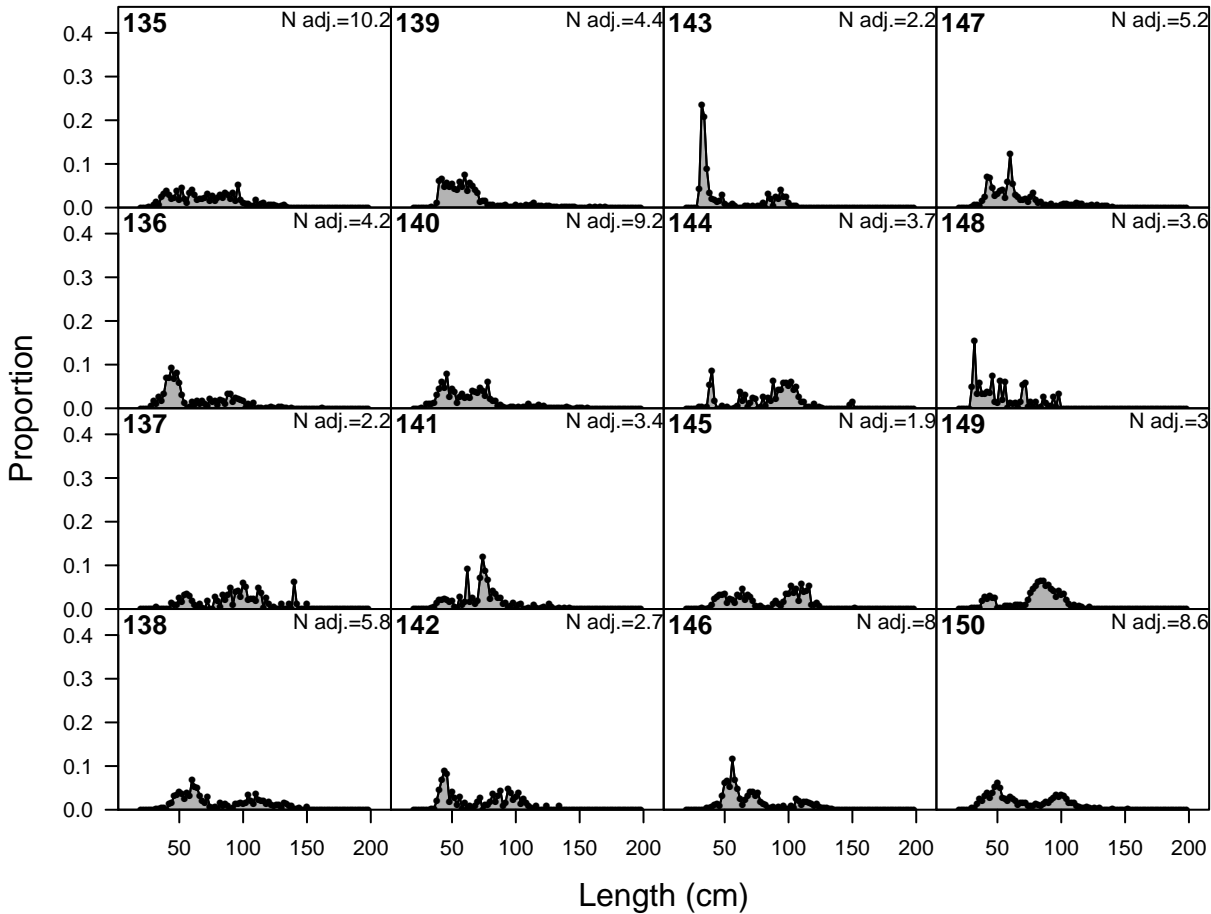


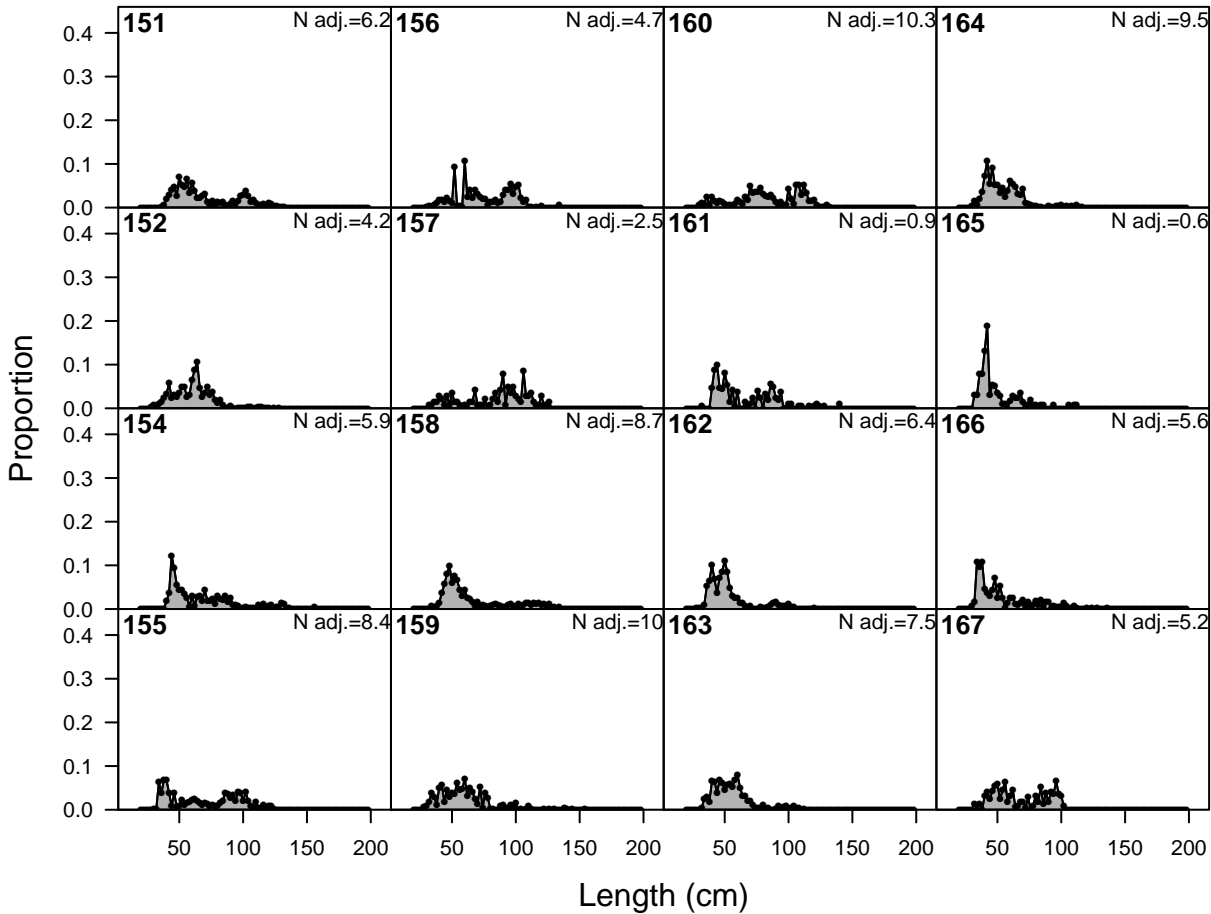


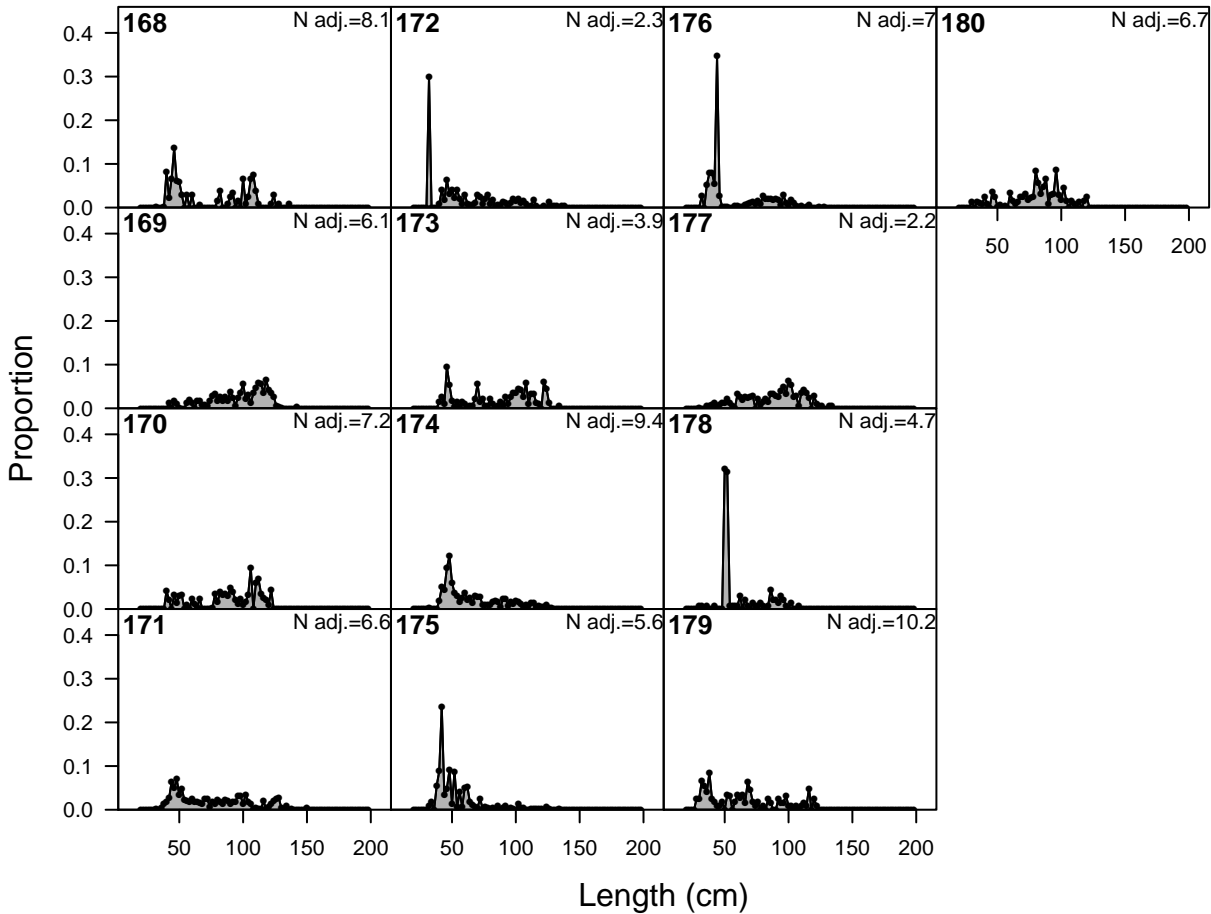


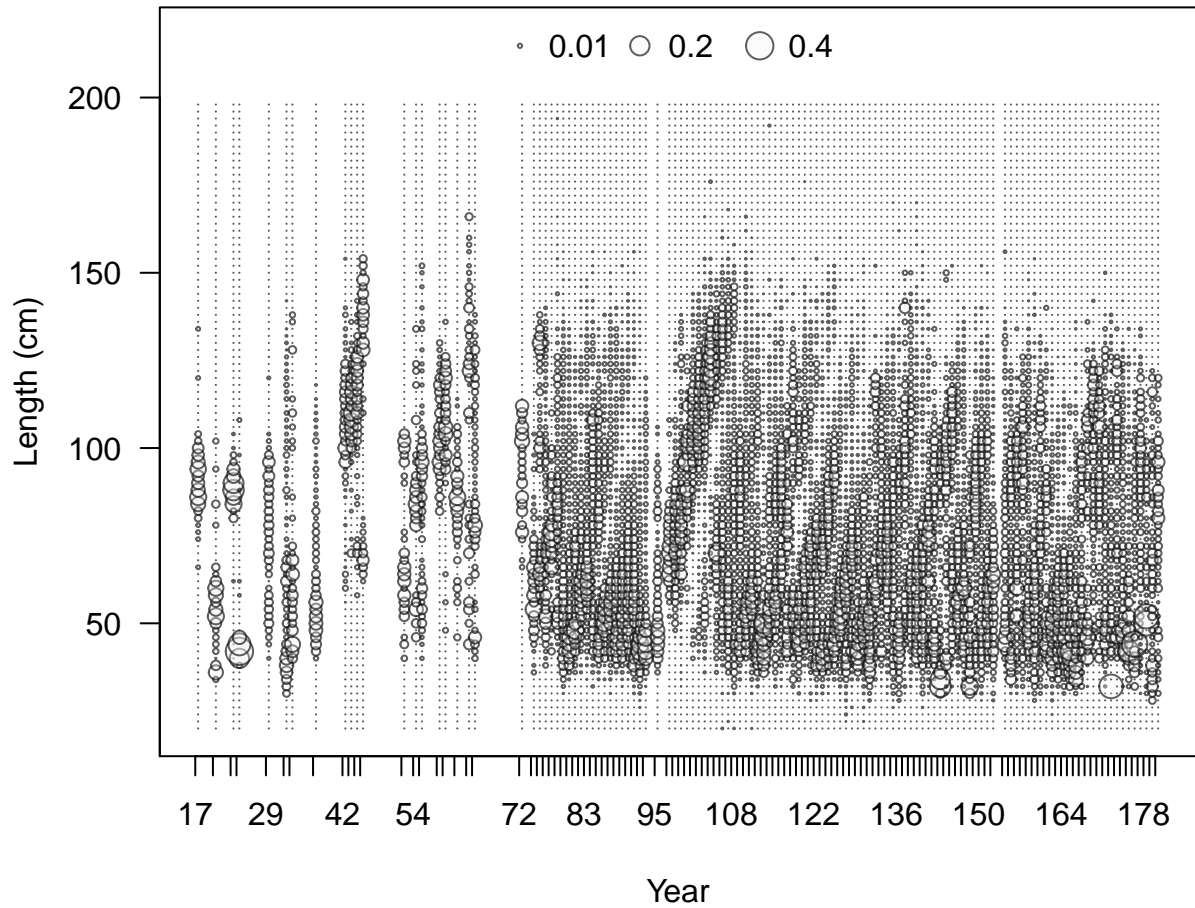




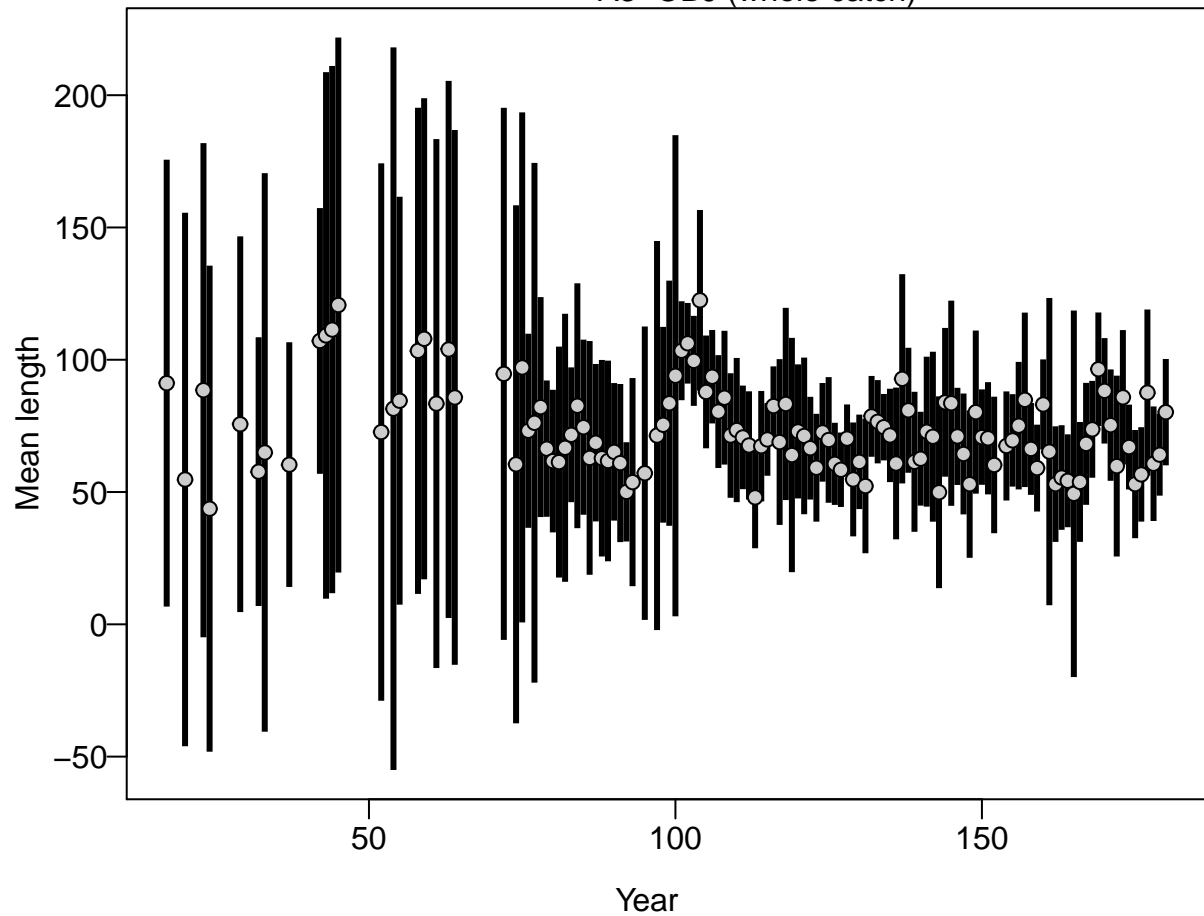




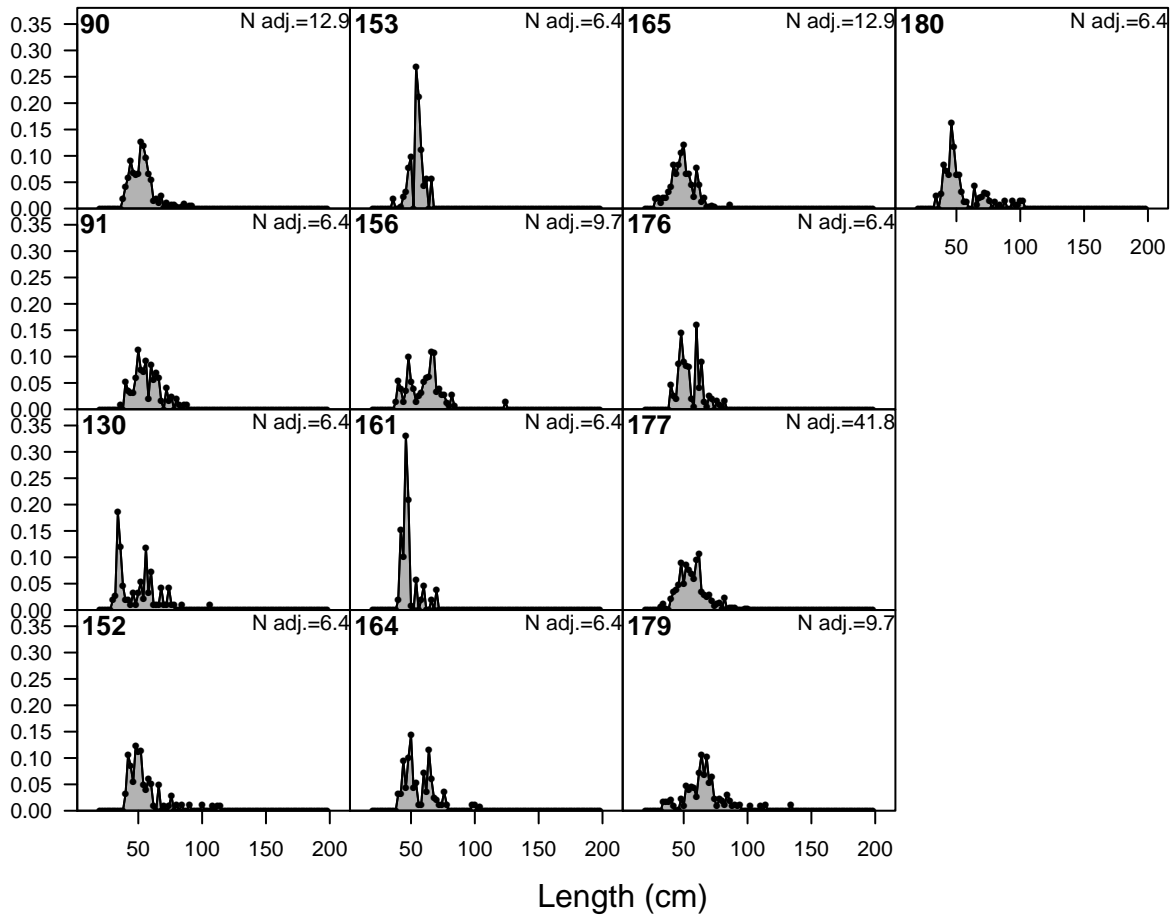


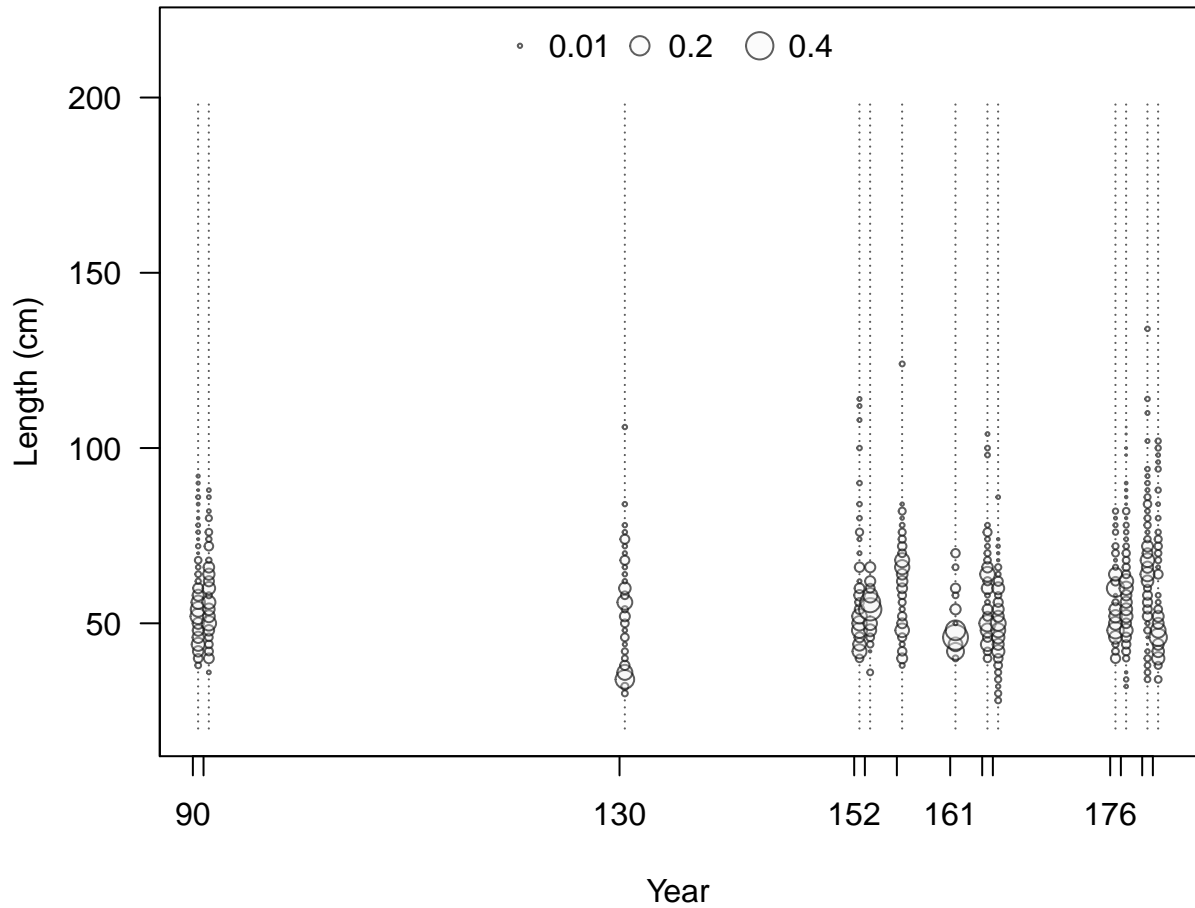


A3-OBJ (whole catch)

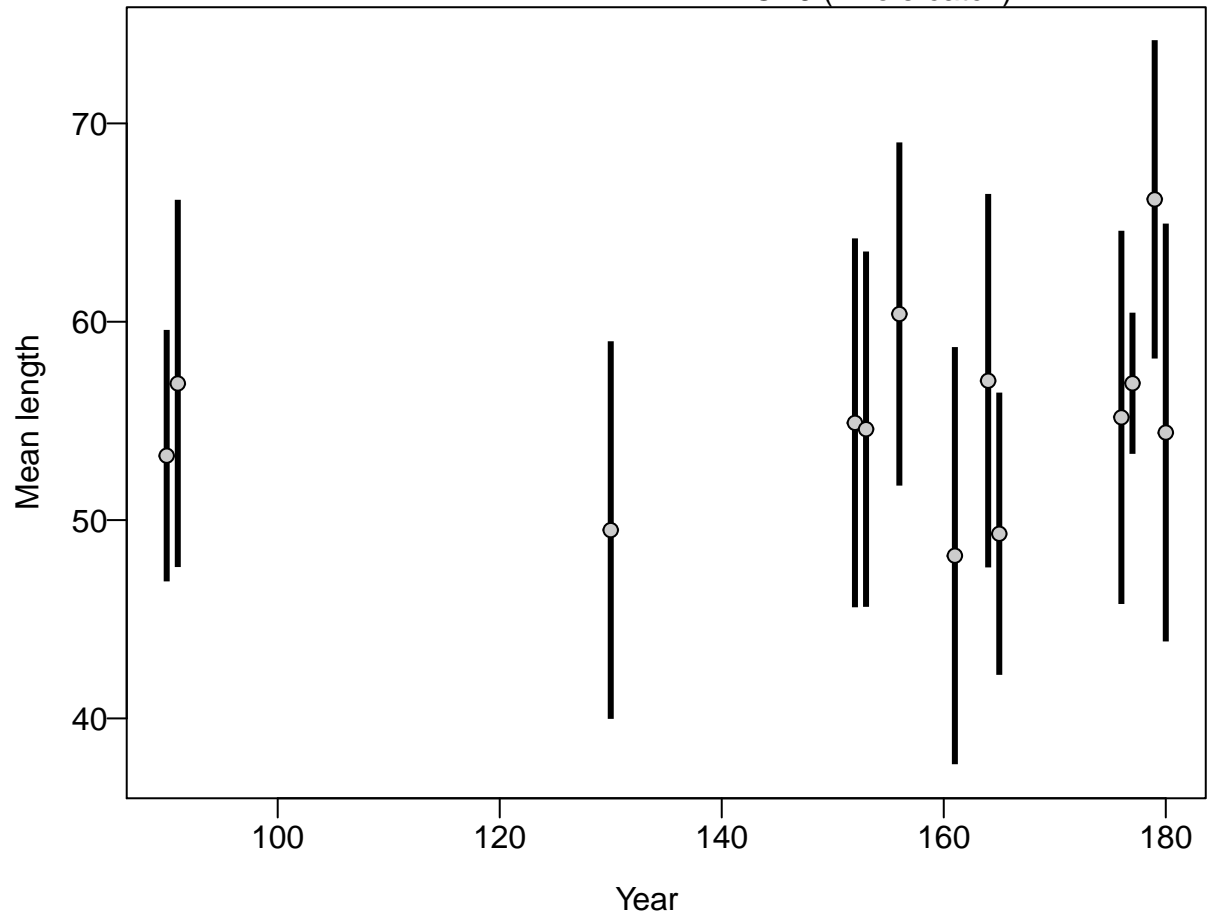


Proportion

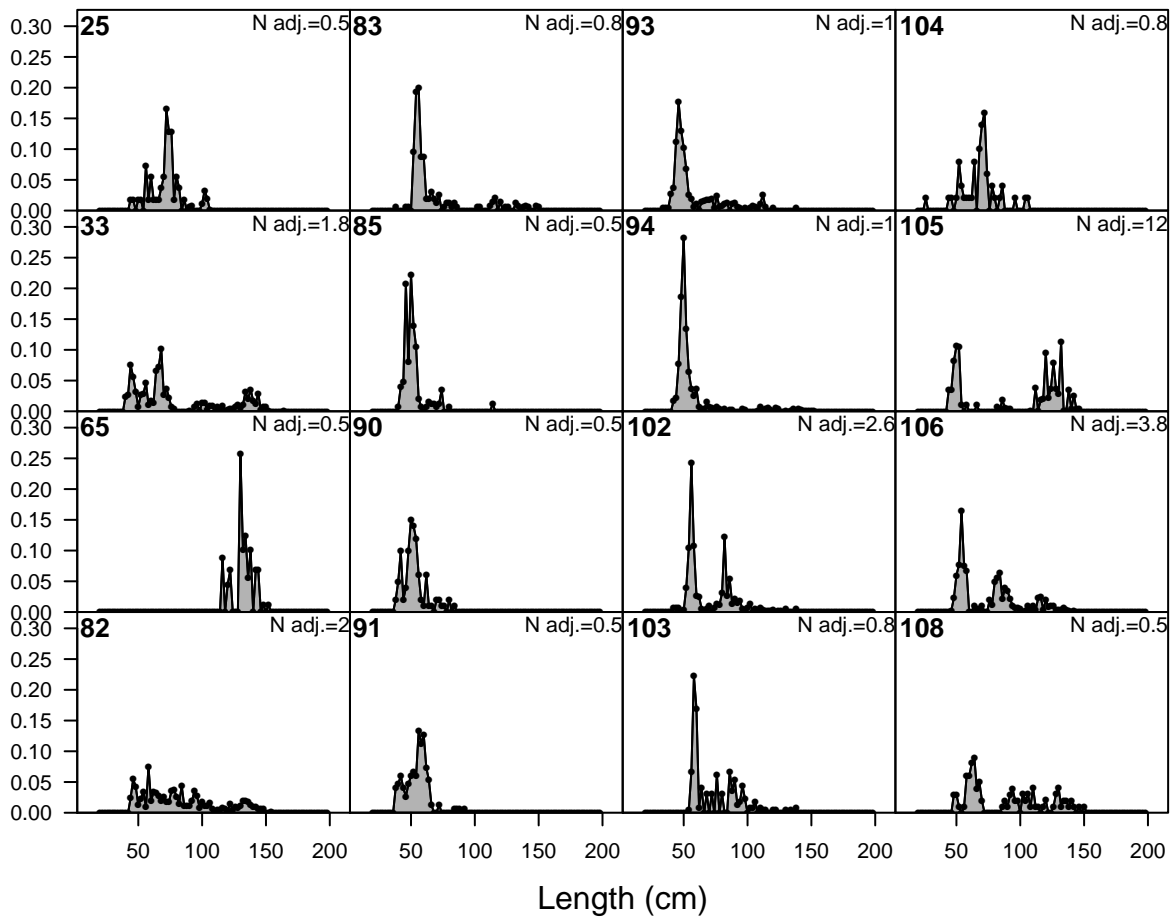




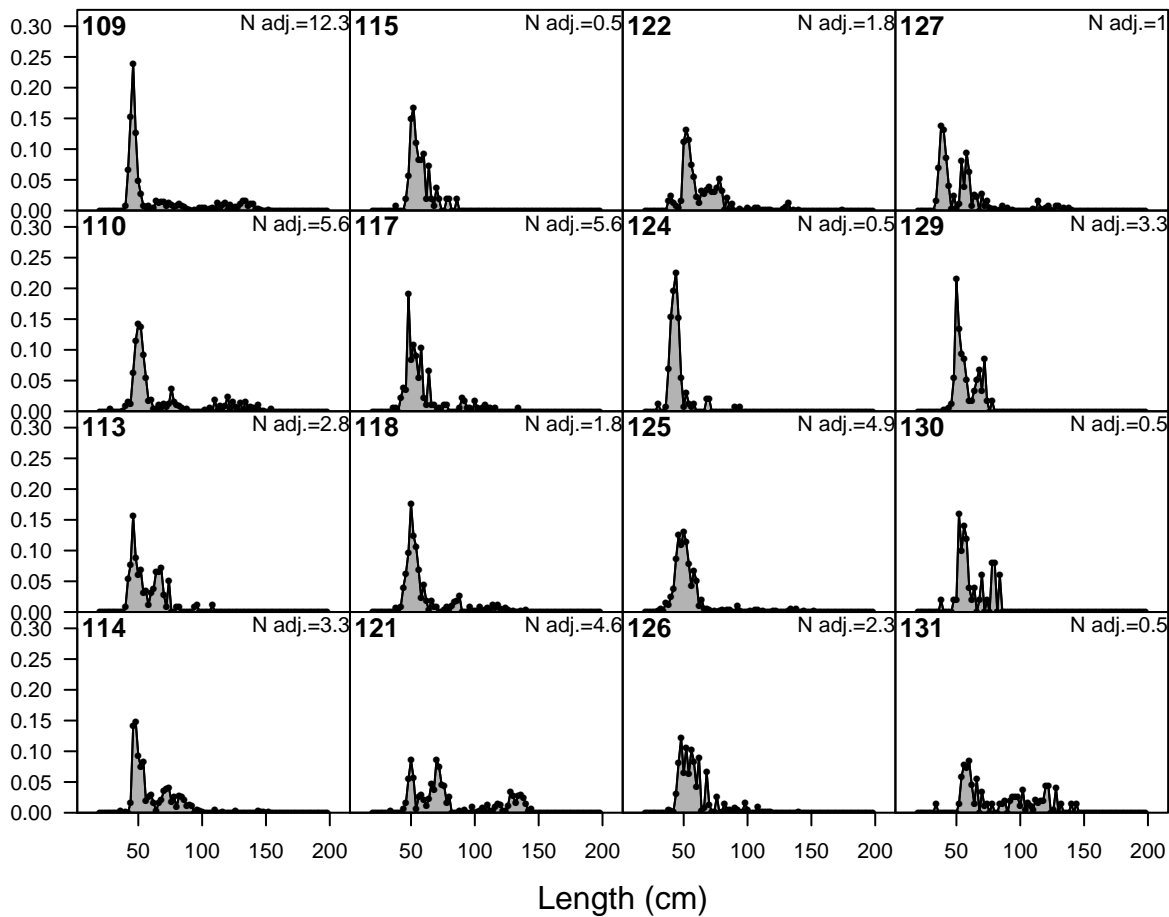
A4-OBJ (whole catch)



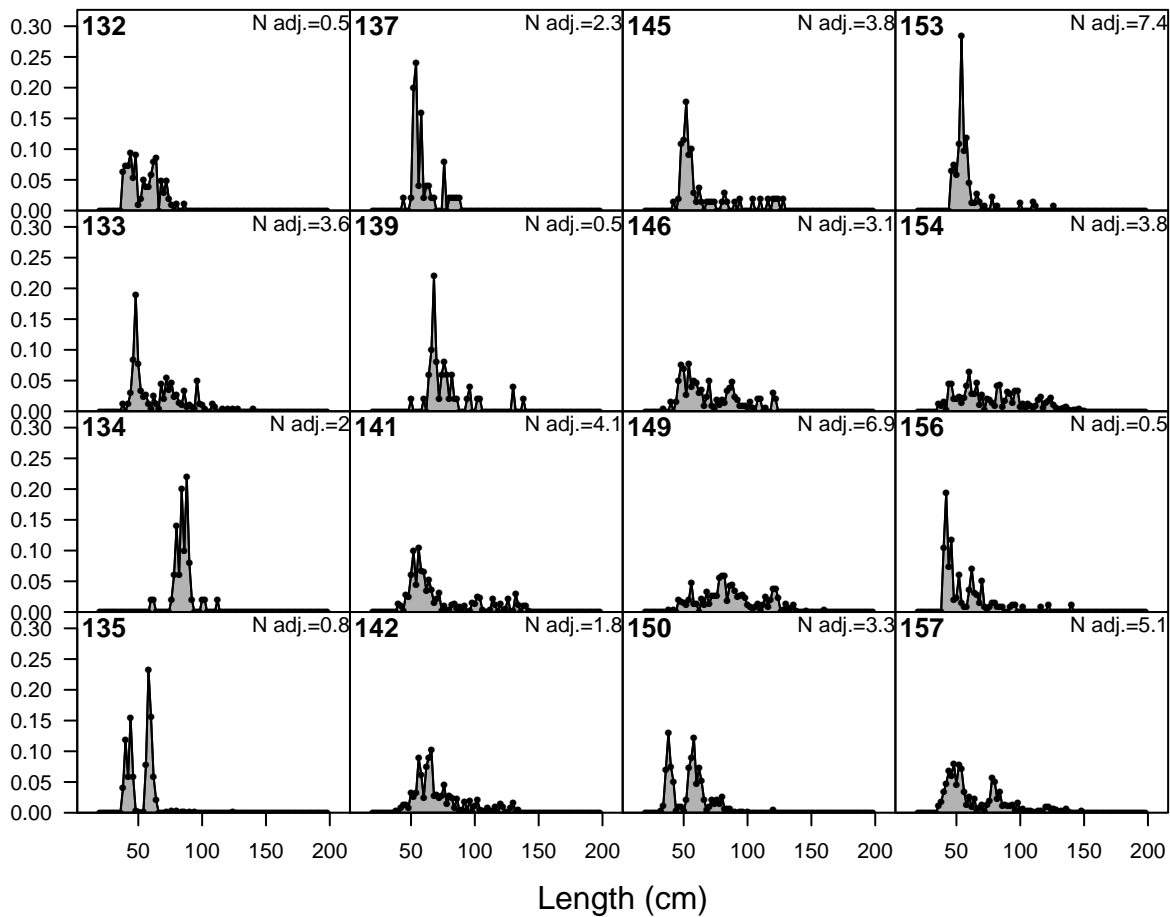
Proportion



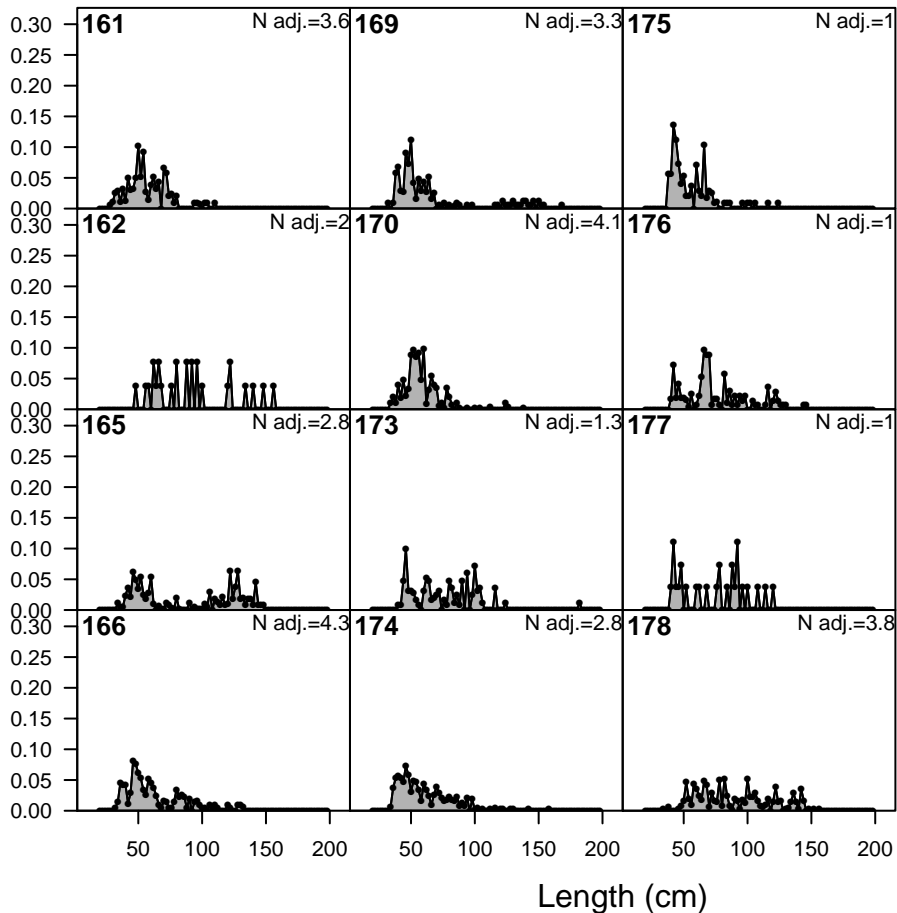
Proportion

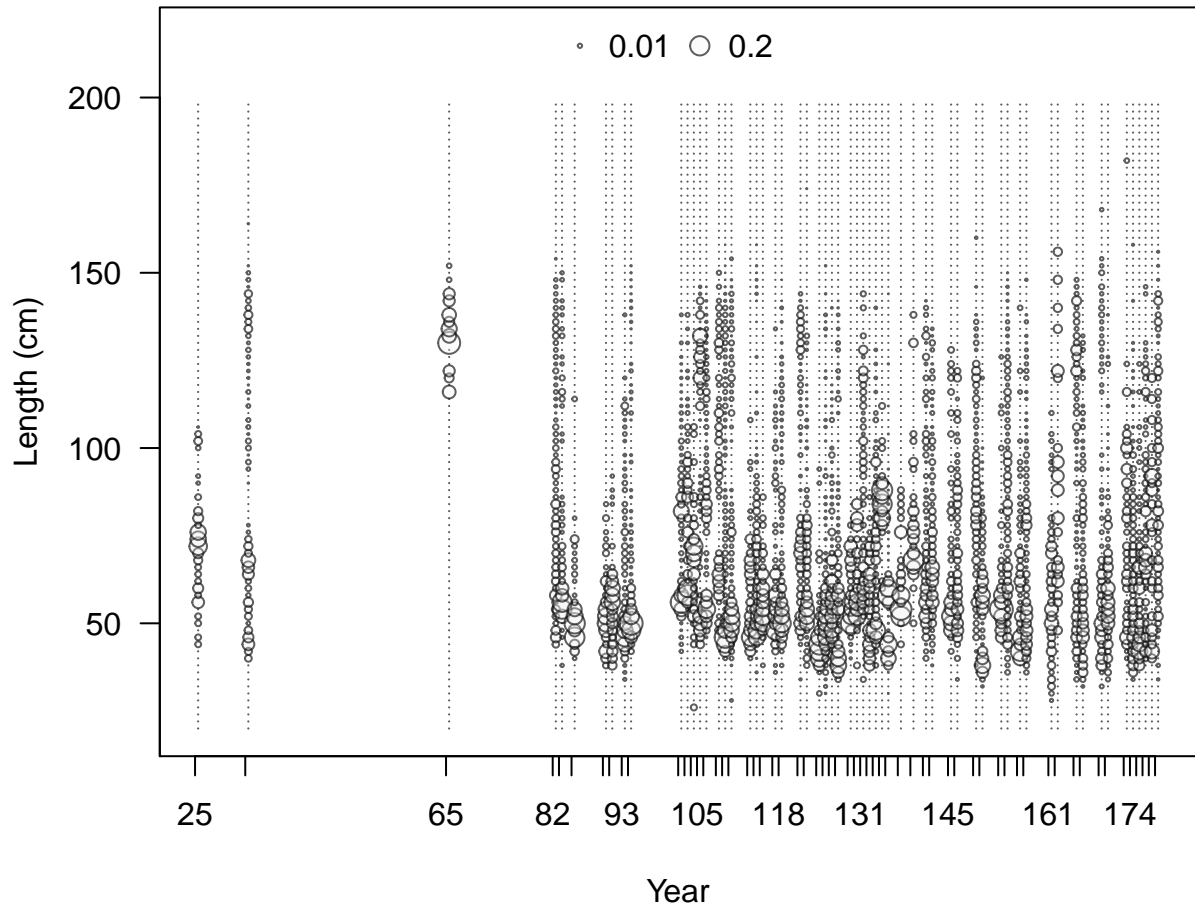


Proportion

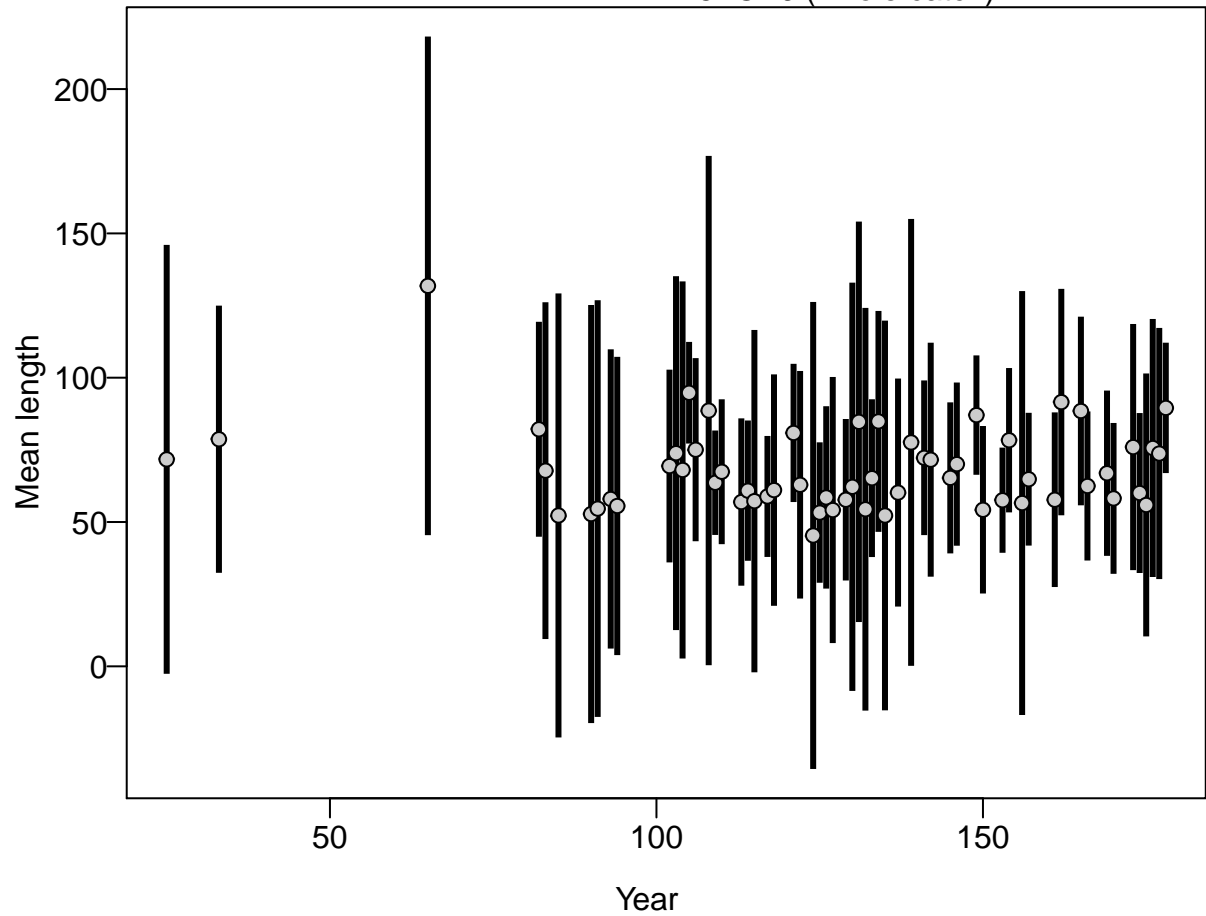


Proportion

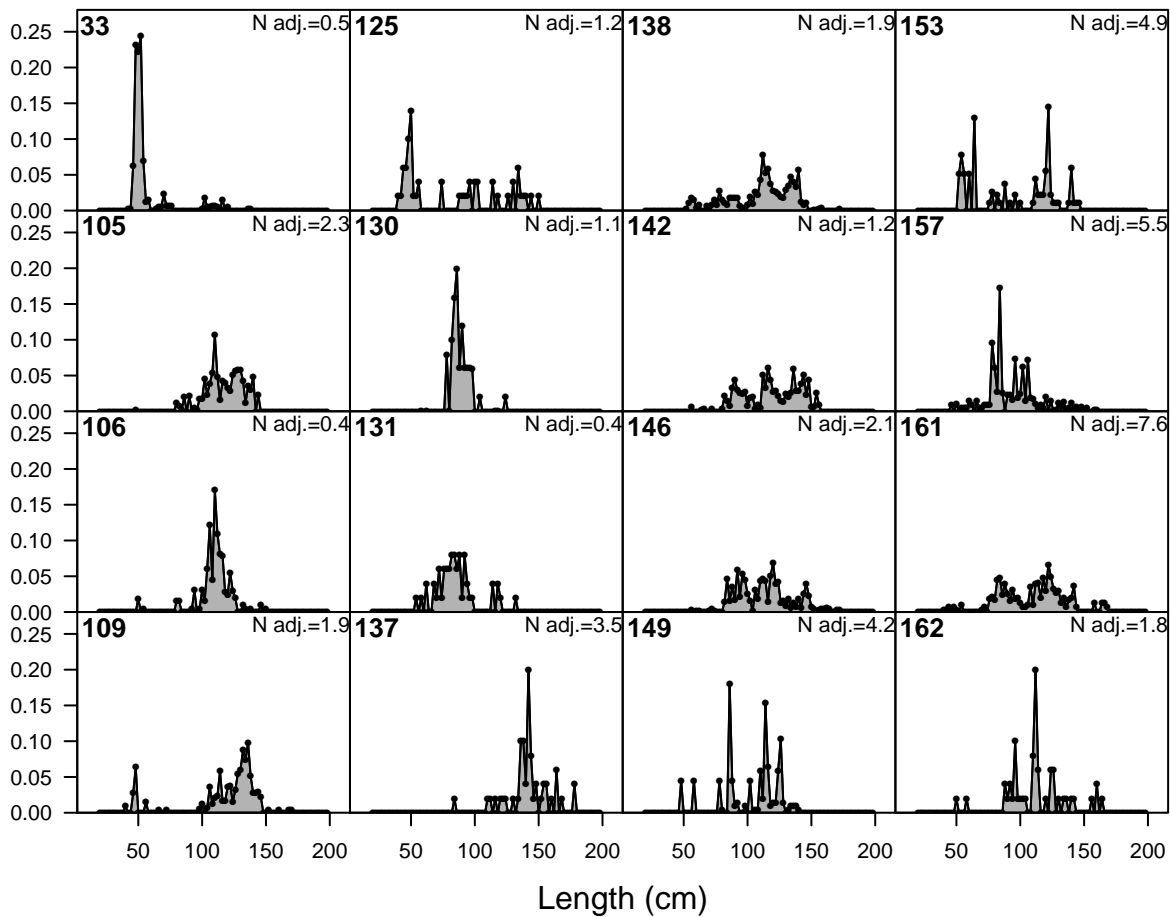




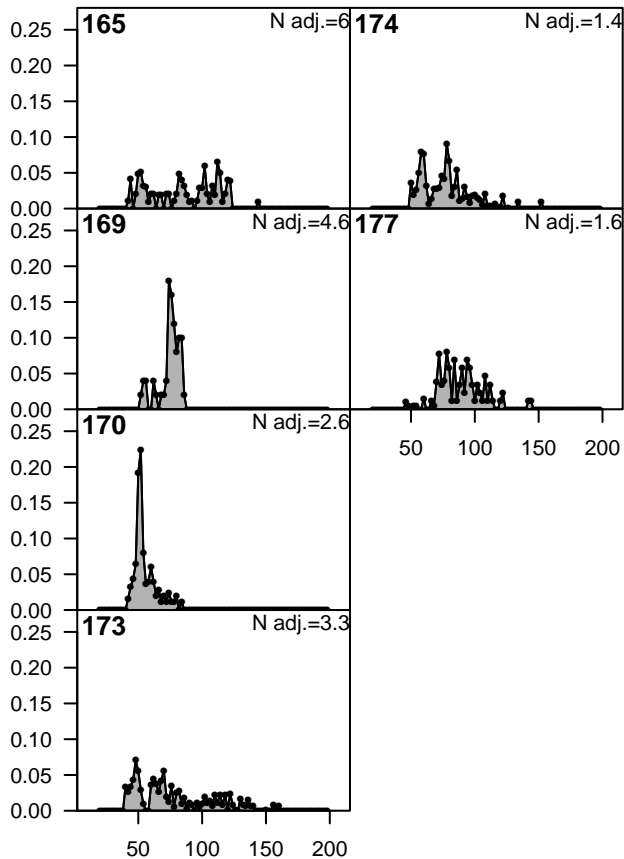
A5-OBJ (whole catch)



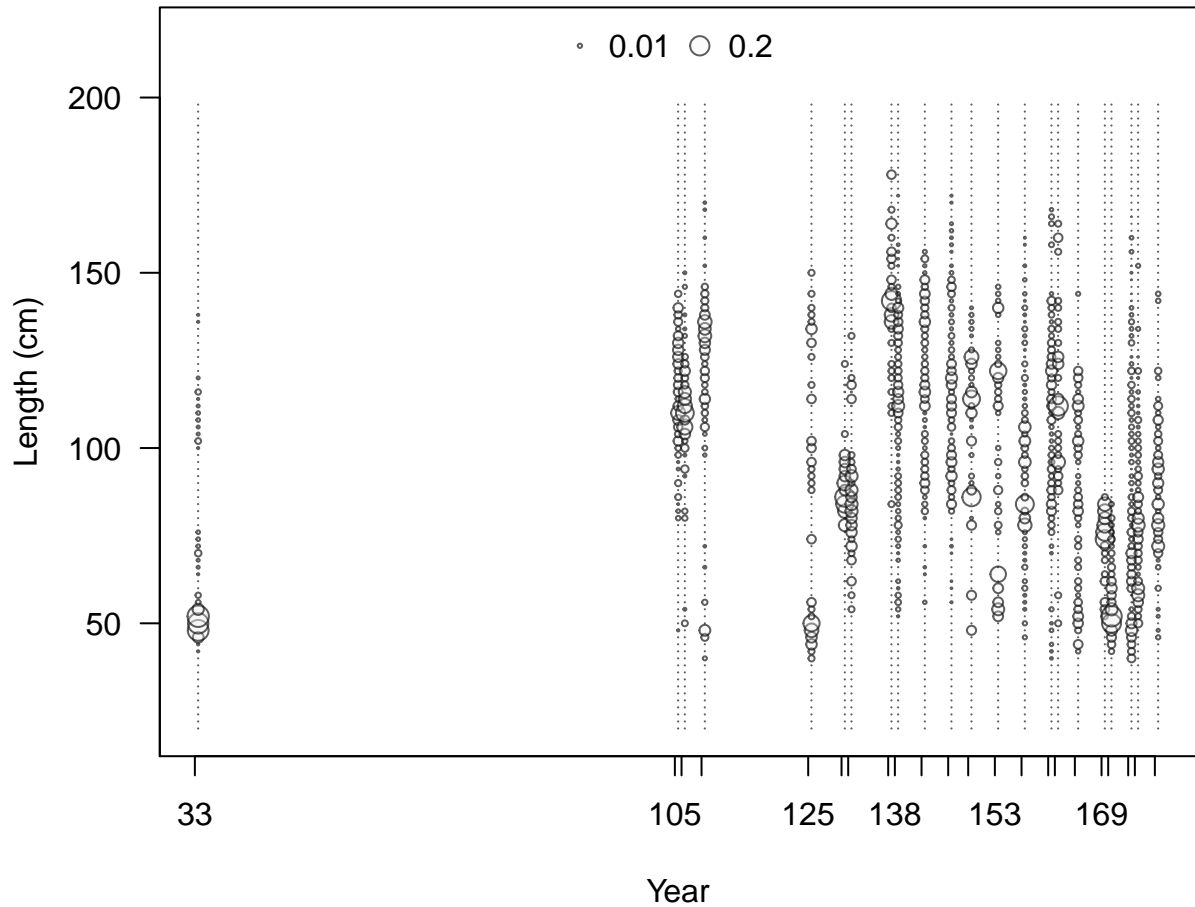
Proportion



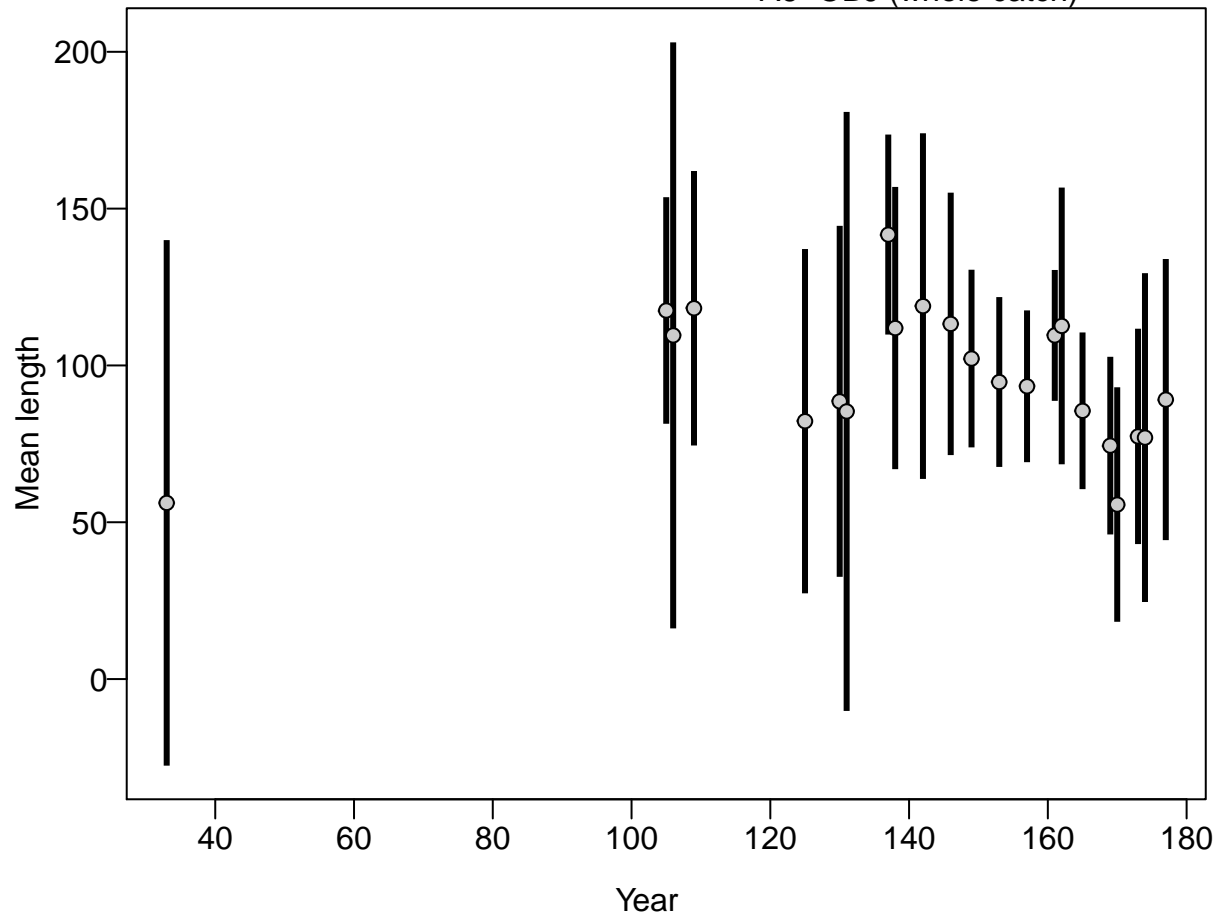
Proportion

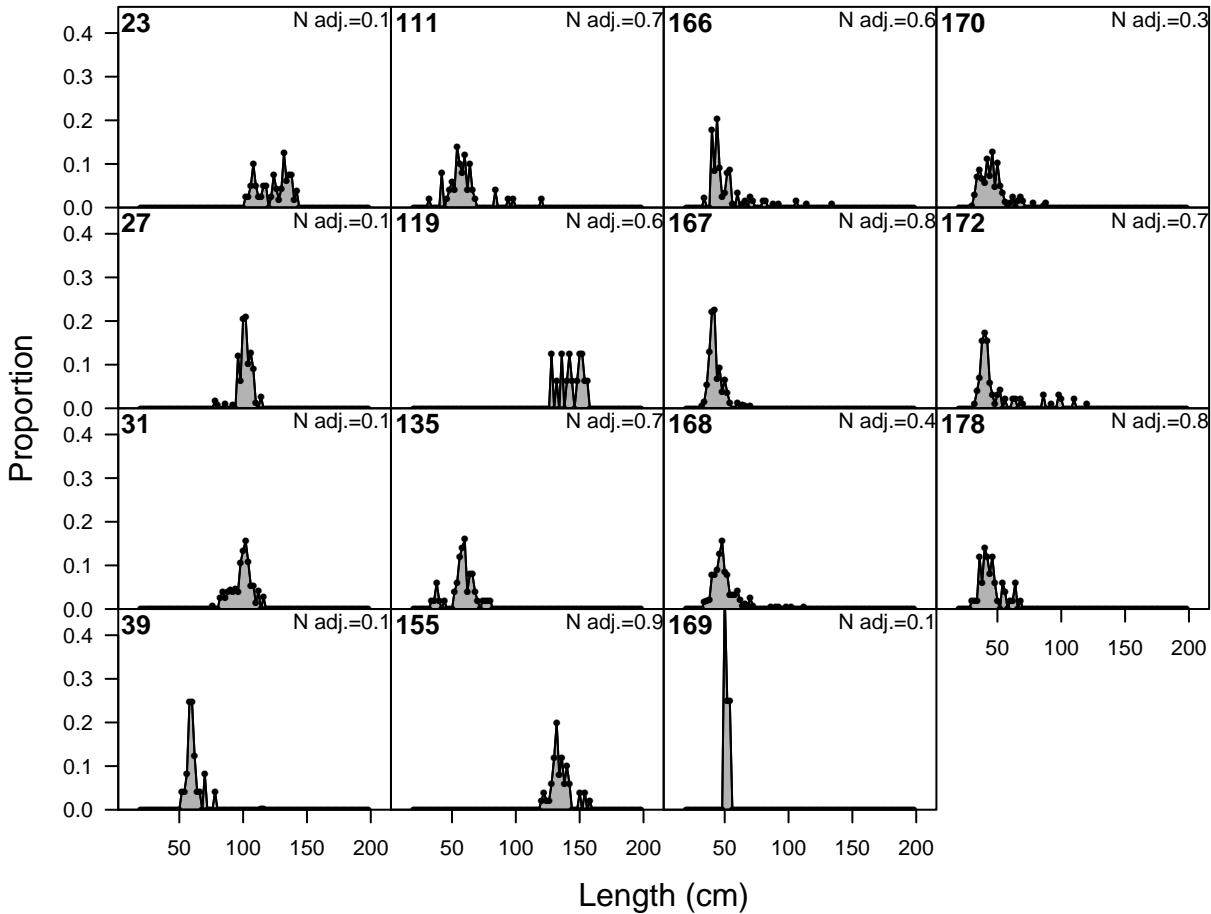


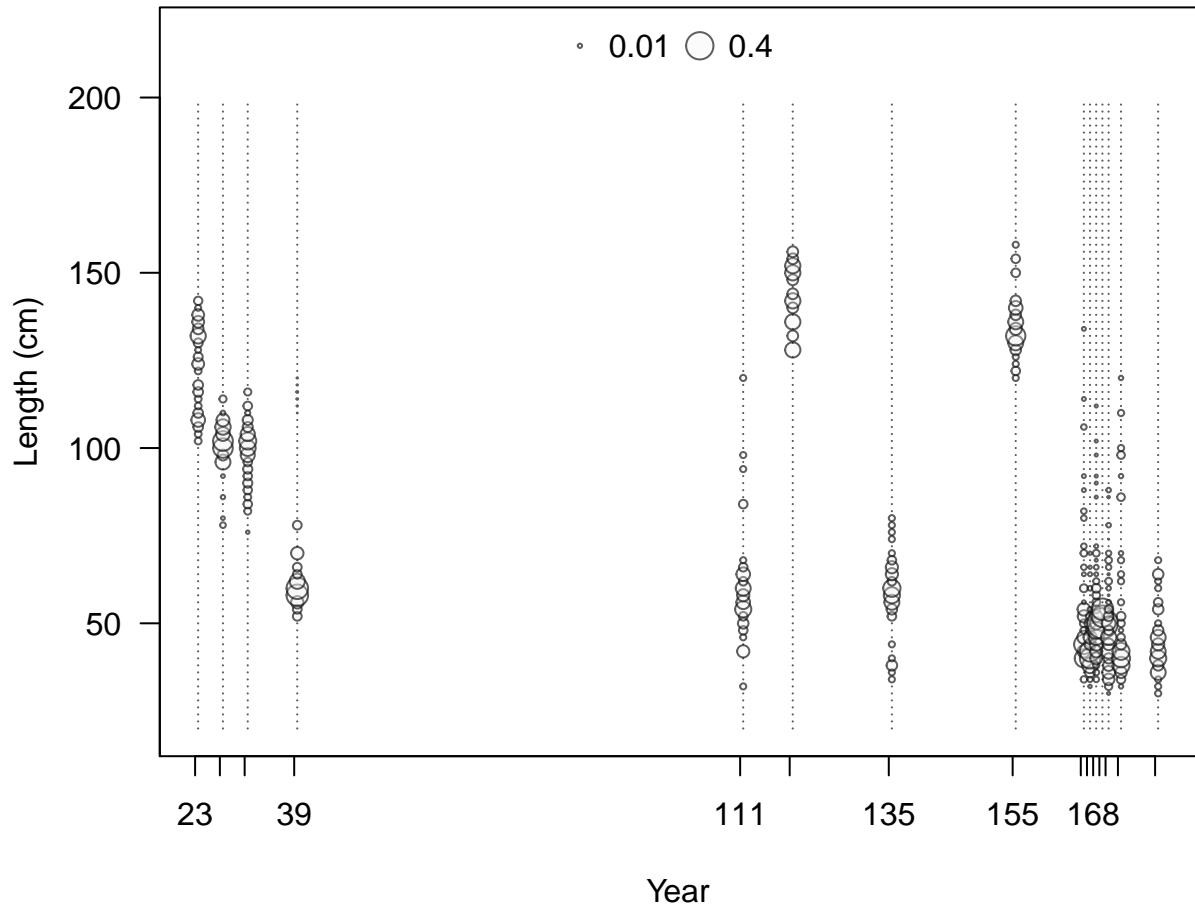
Length (cm)



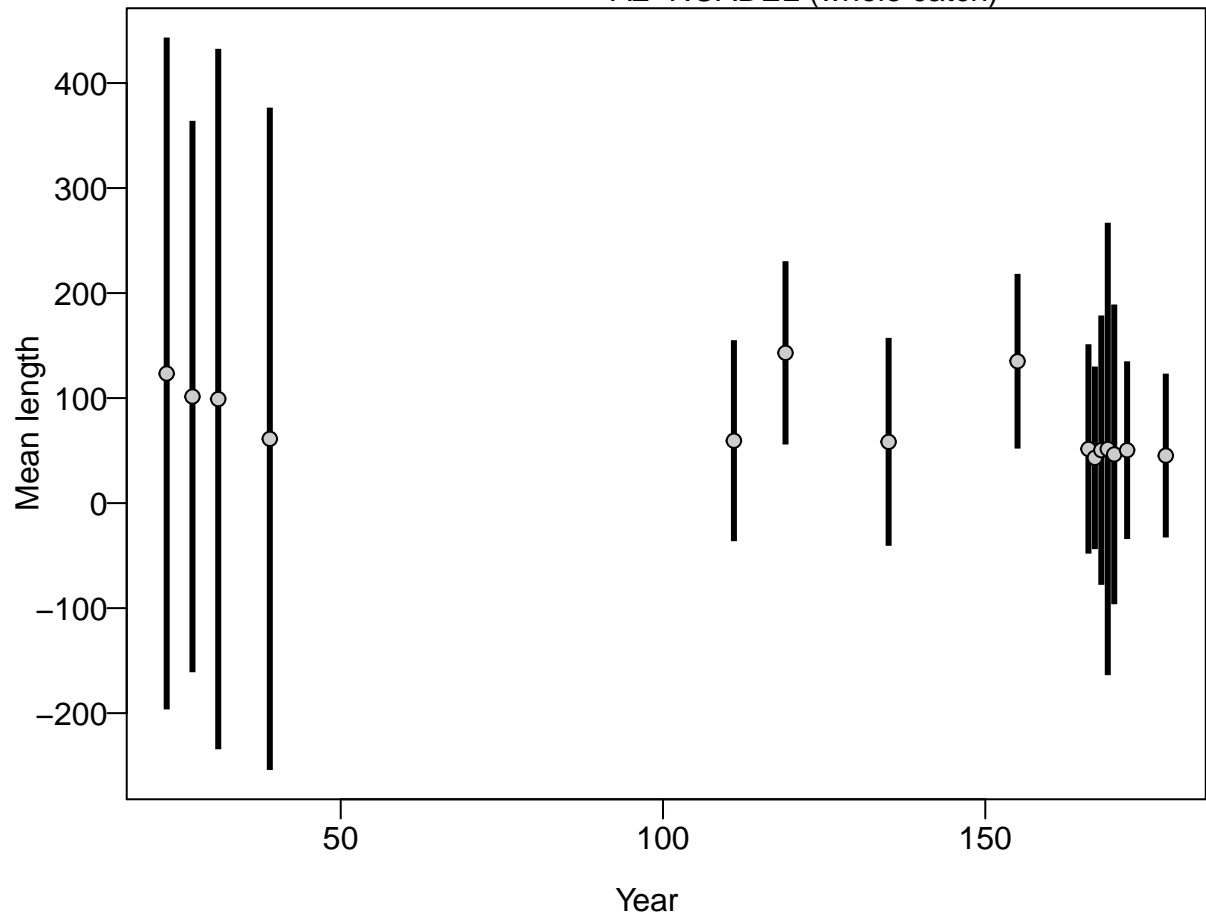
A6-OBJ (whole catch)

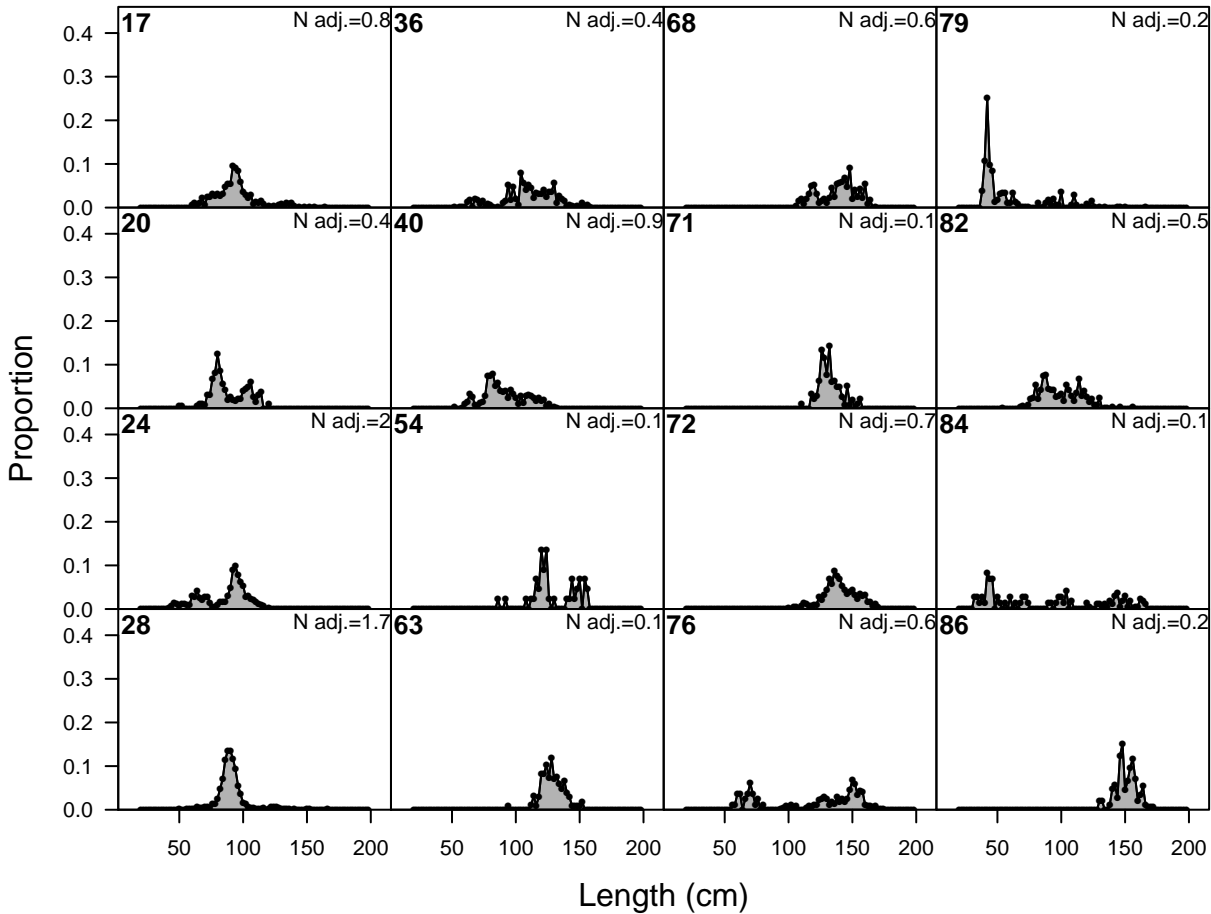


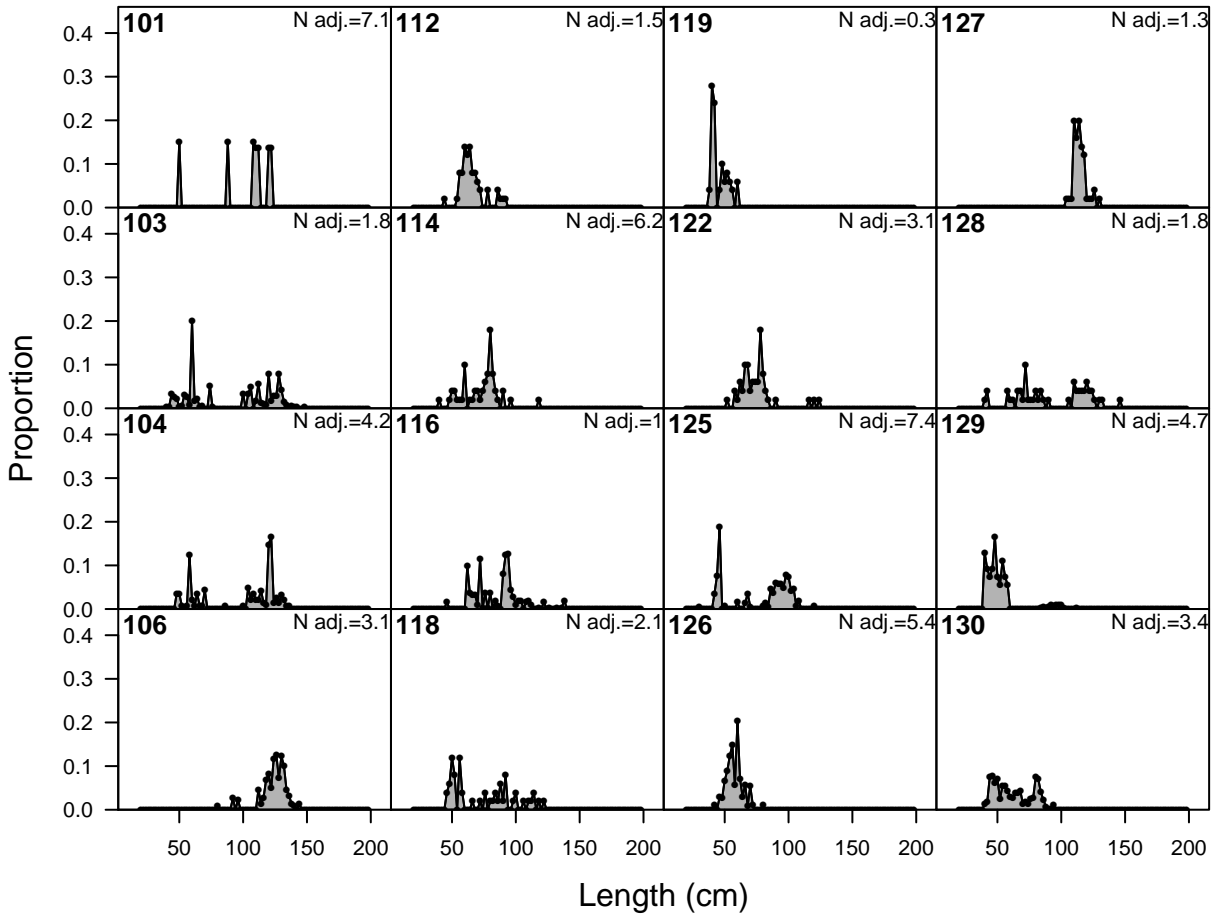


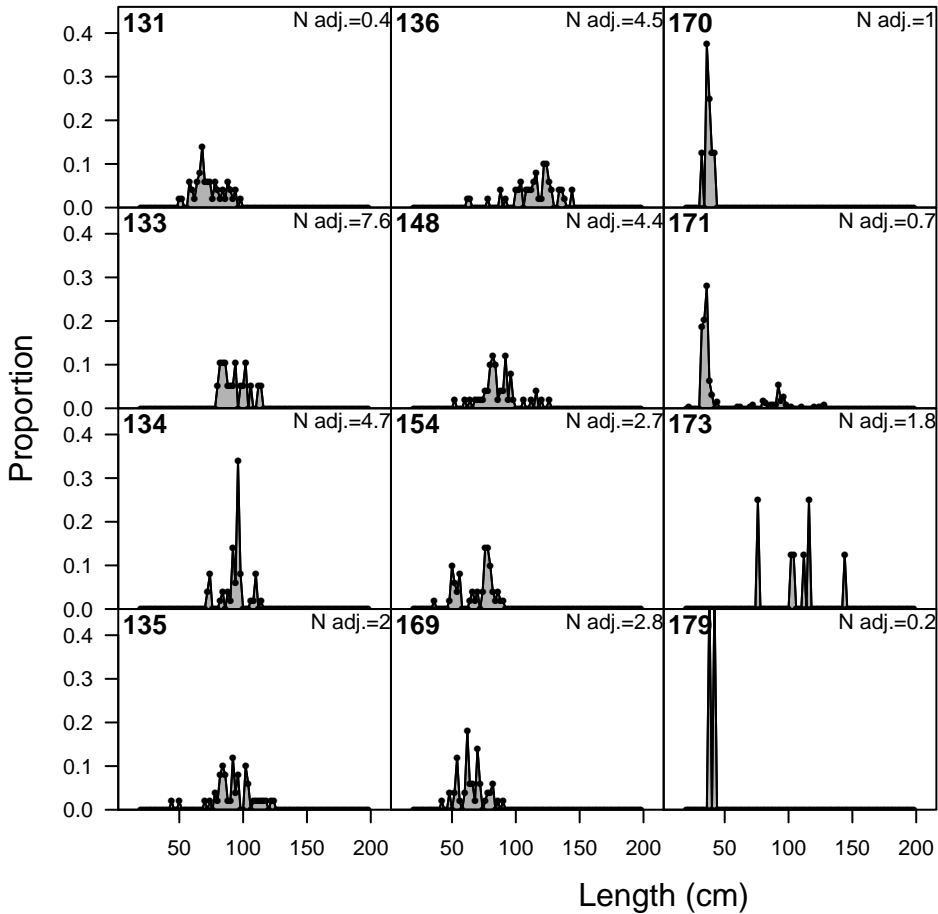


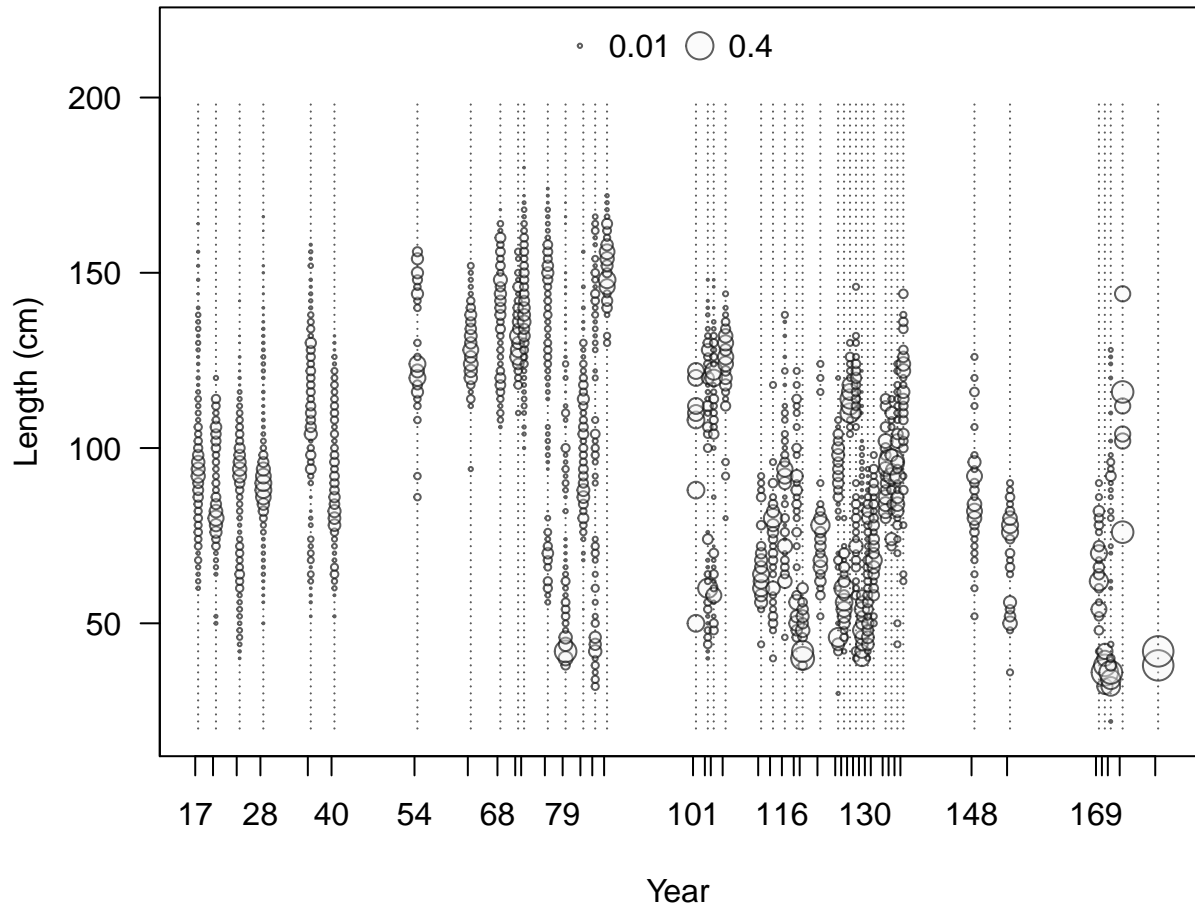
A2-NOADEL (whole catch)



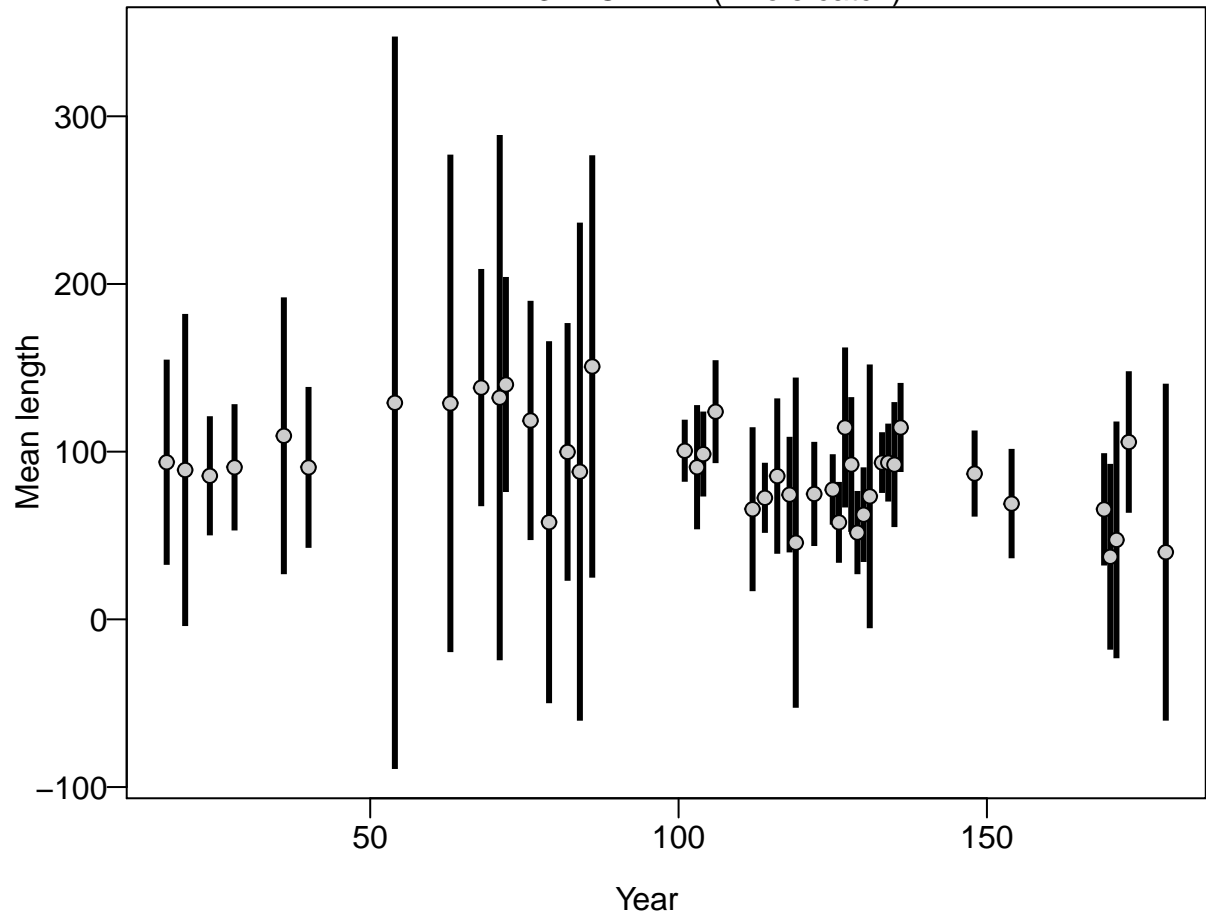


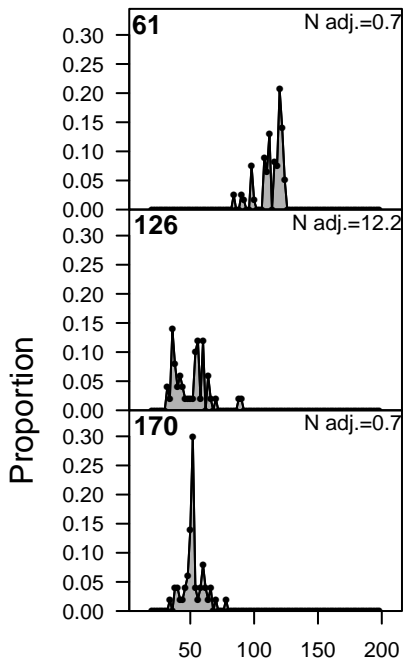






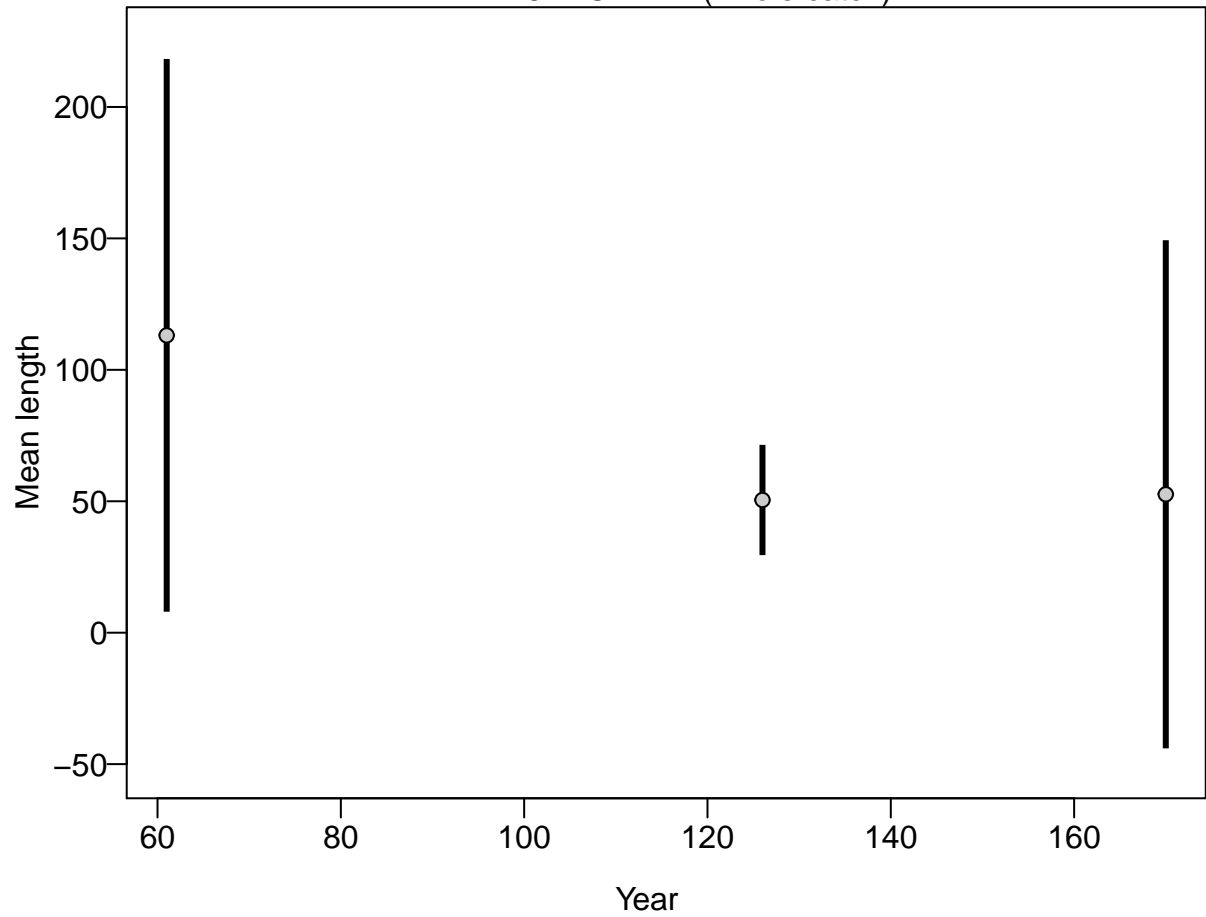
A3-NOADEL (whole catch)



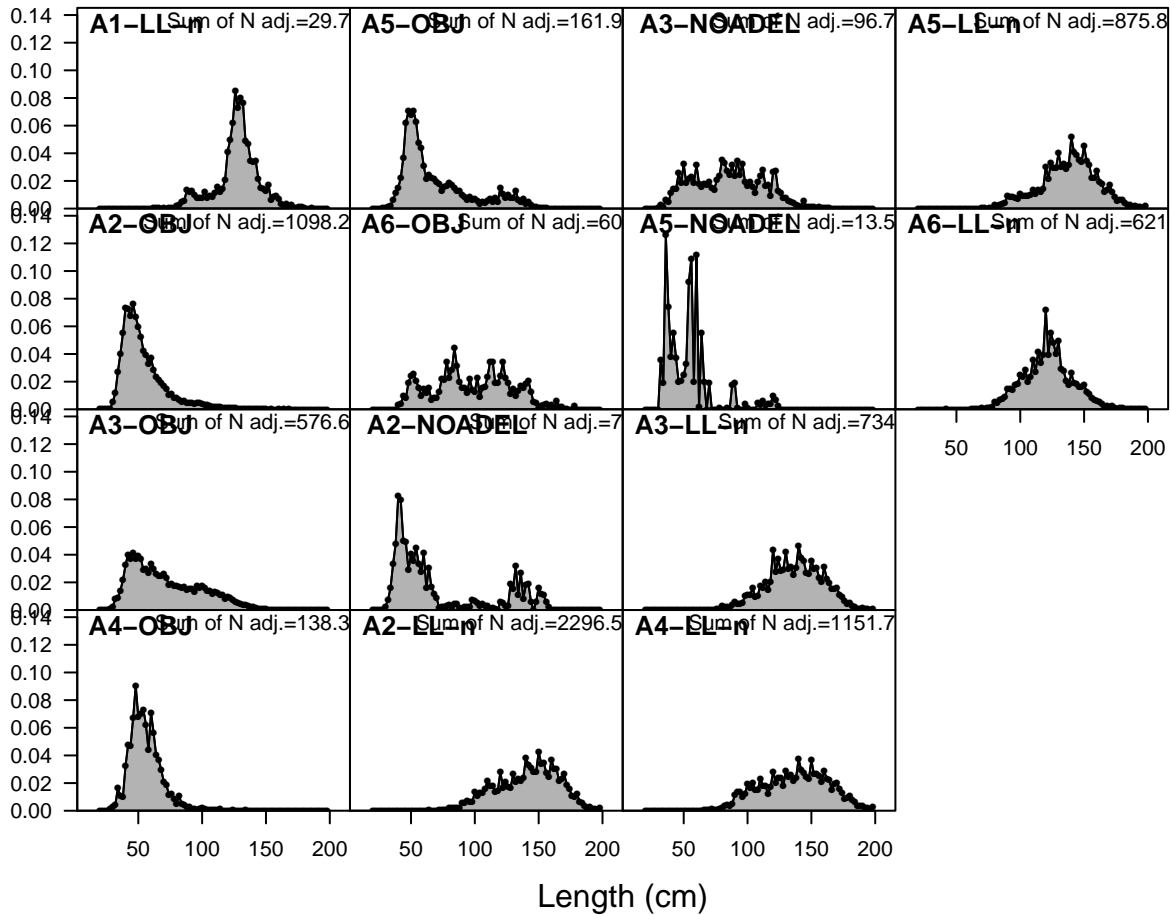


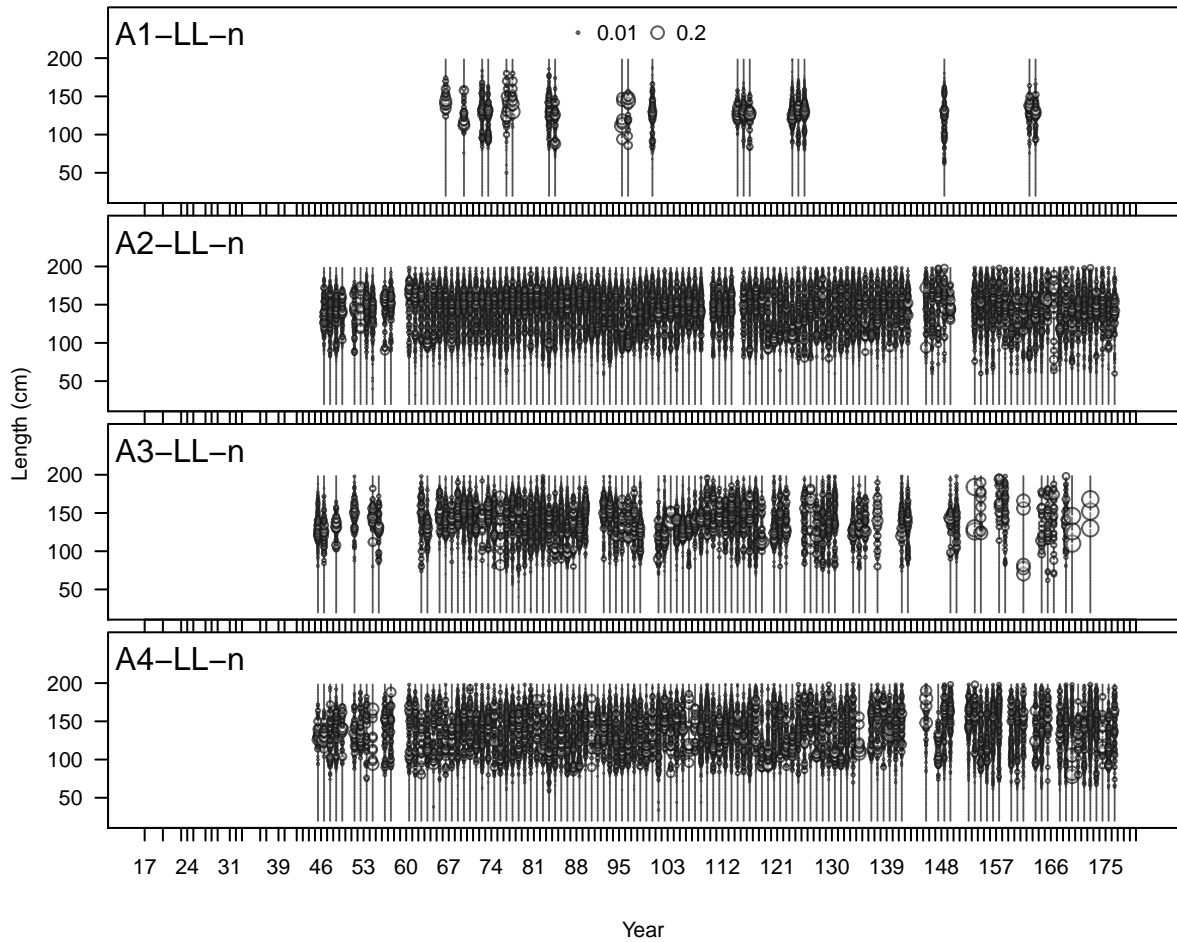
Length (cm)

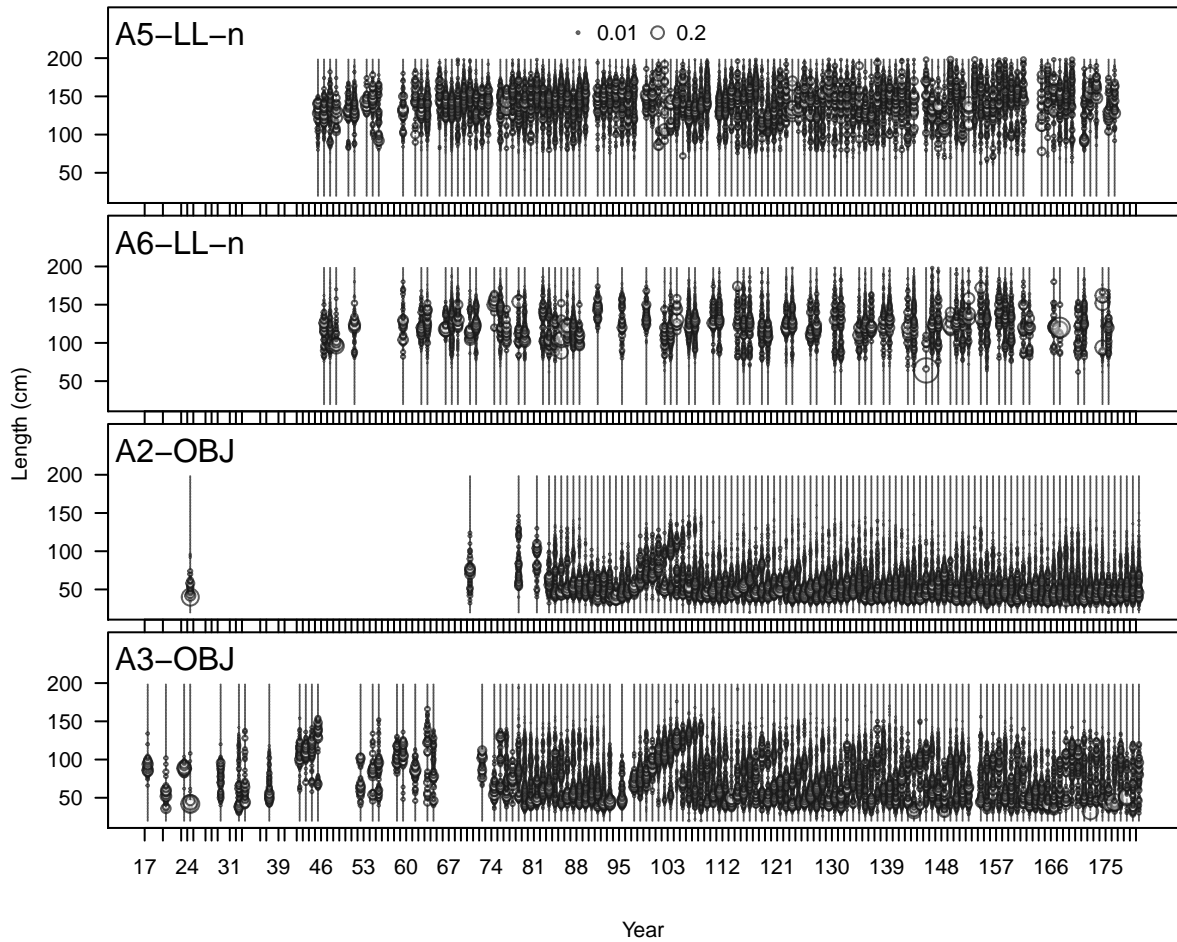
A5-NOADEL (whole catch)

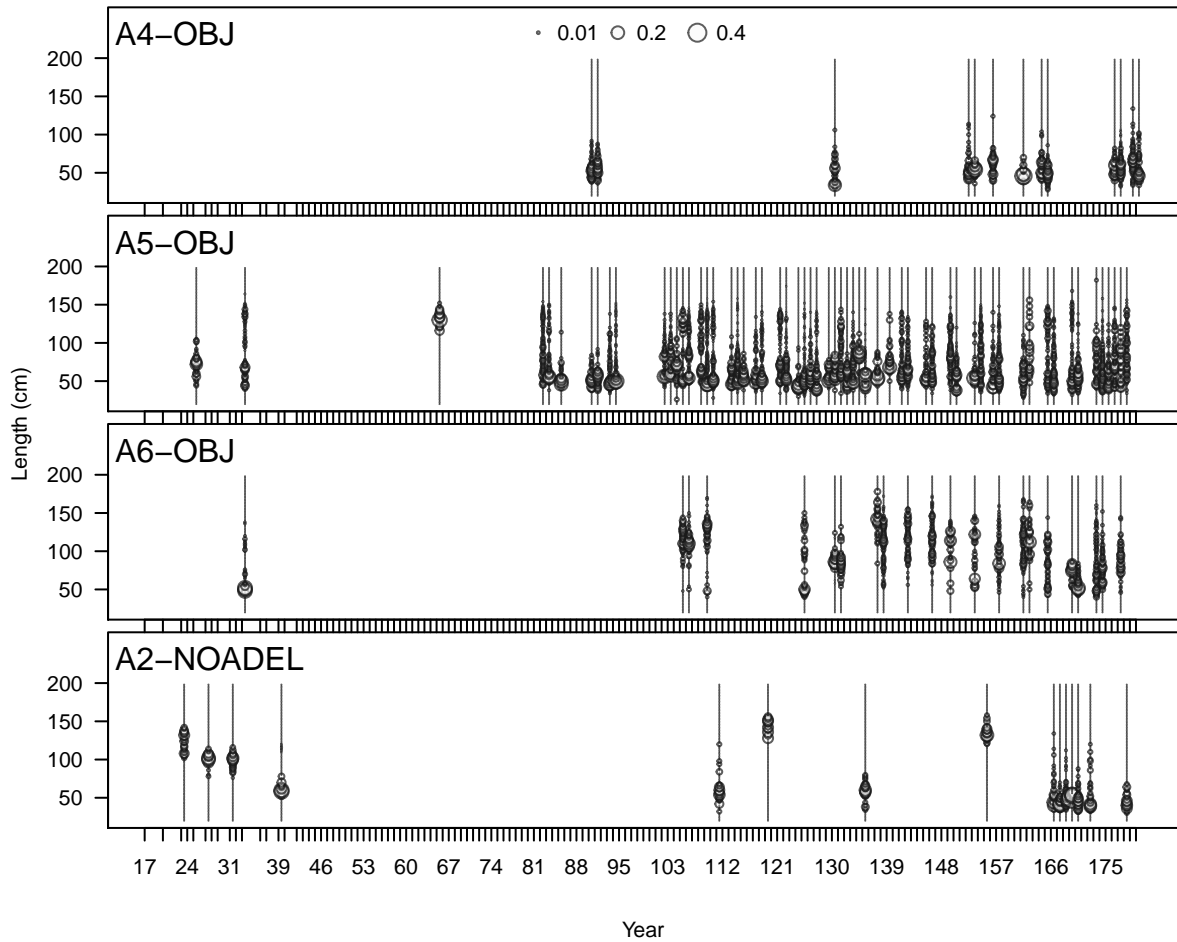


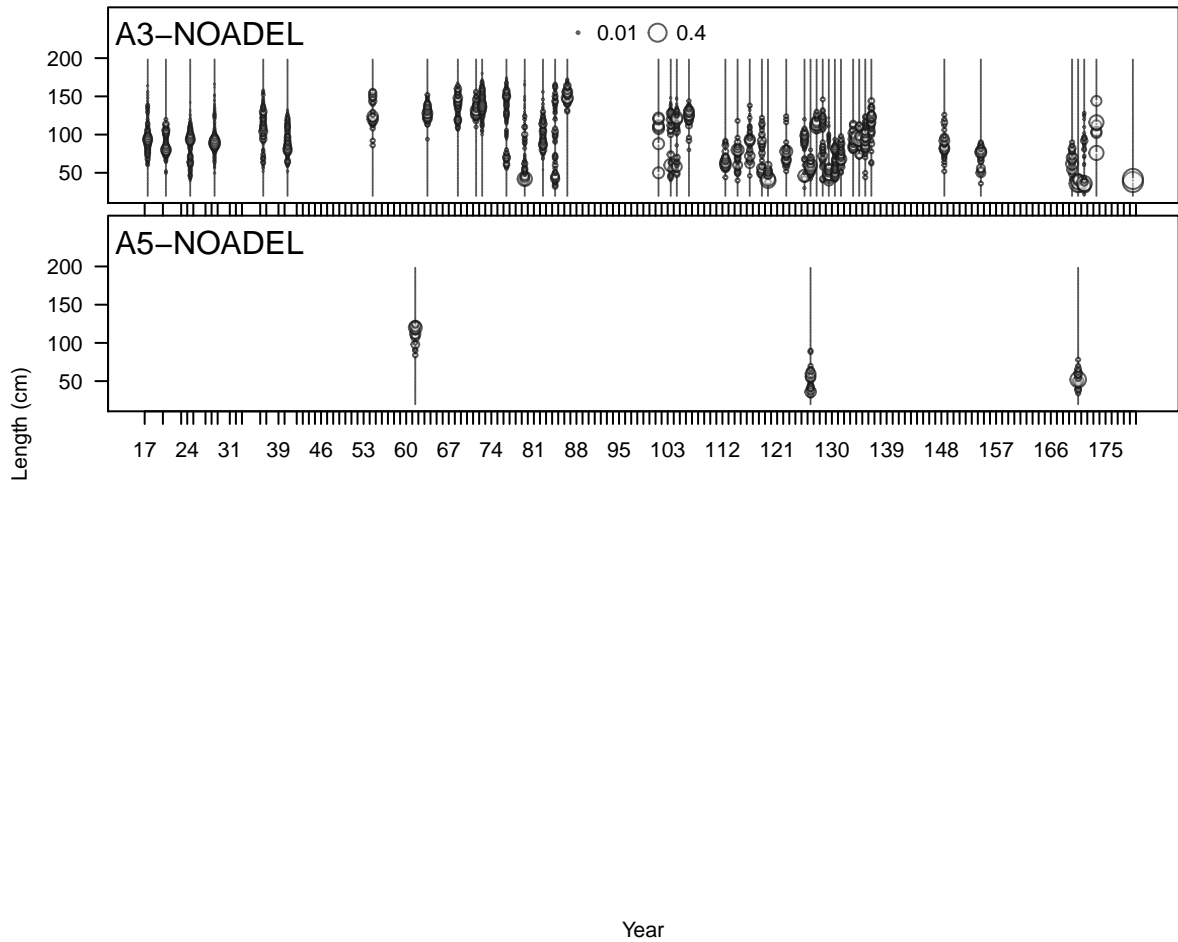
Proportion



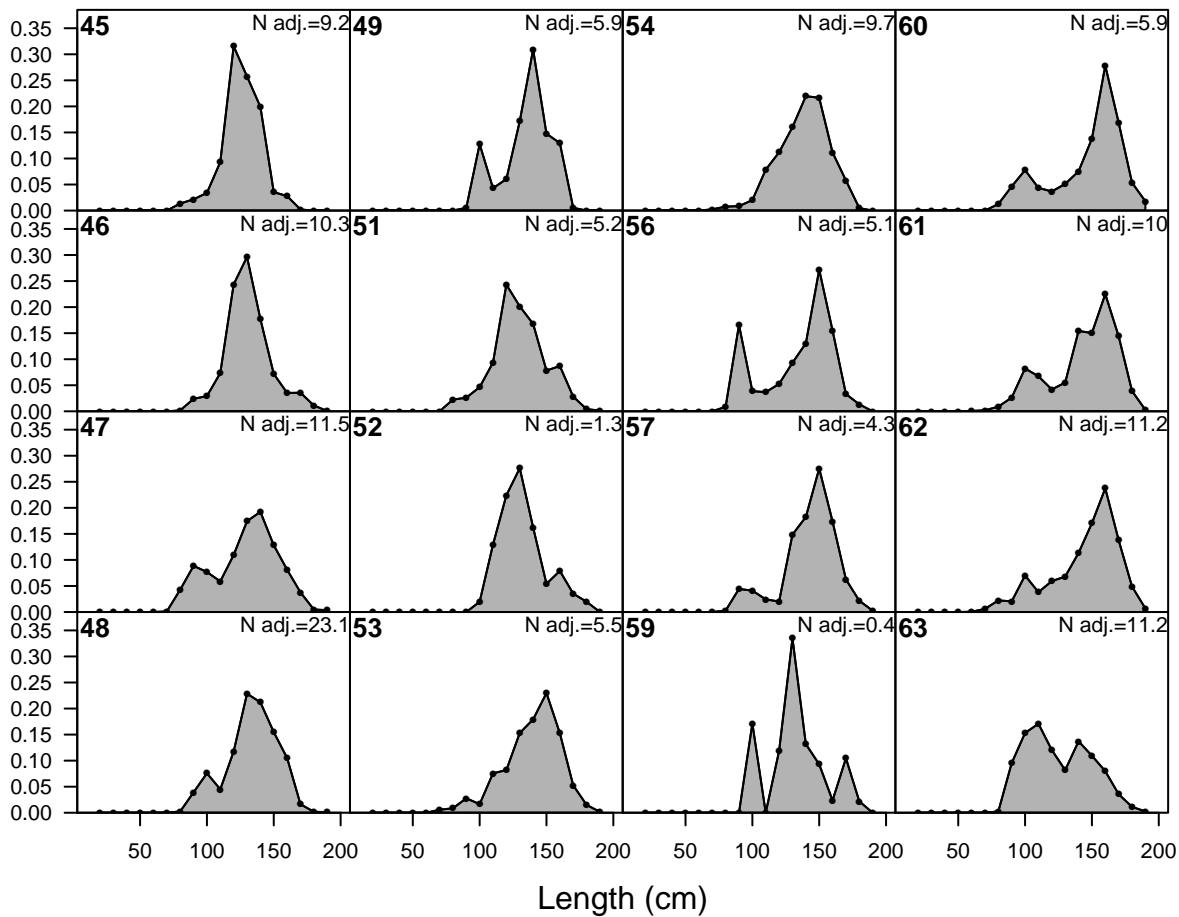




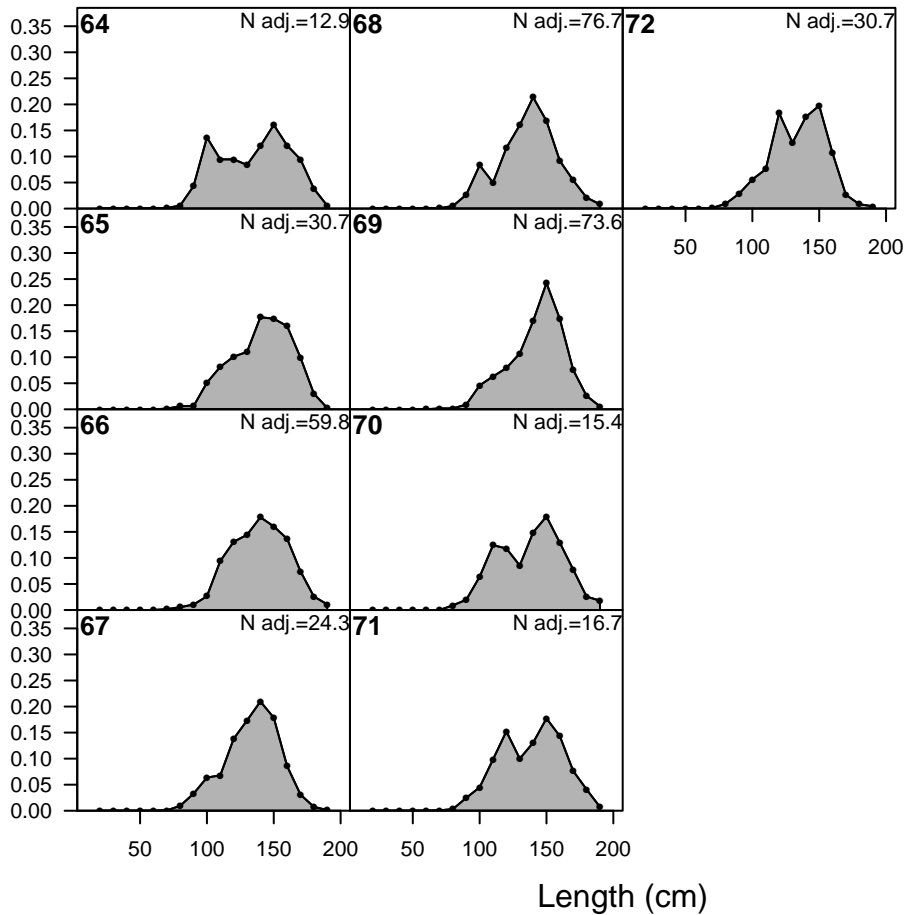


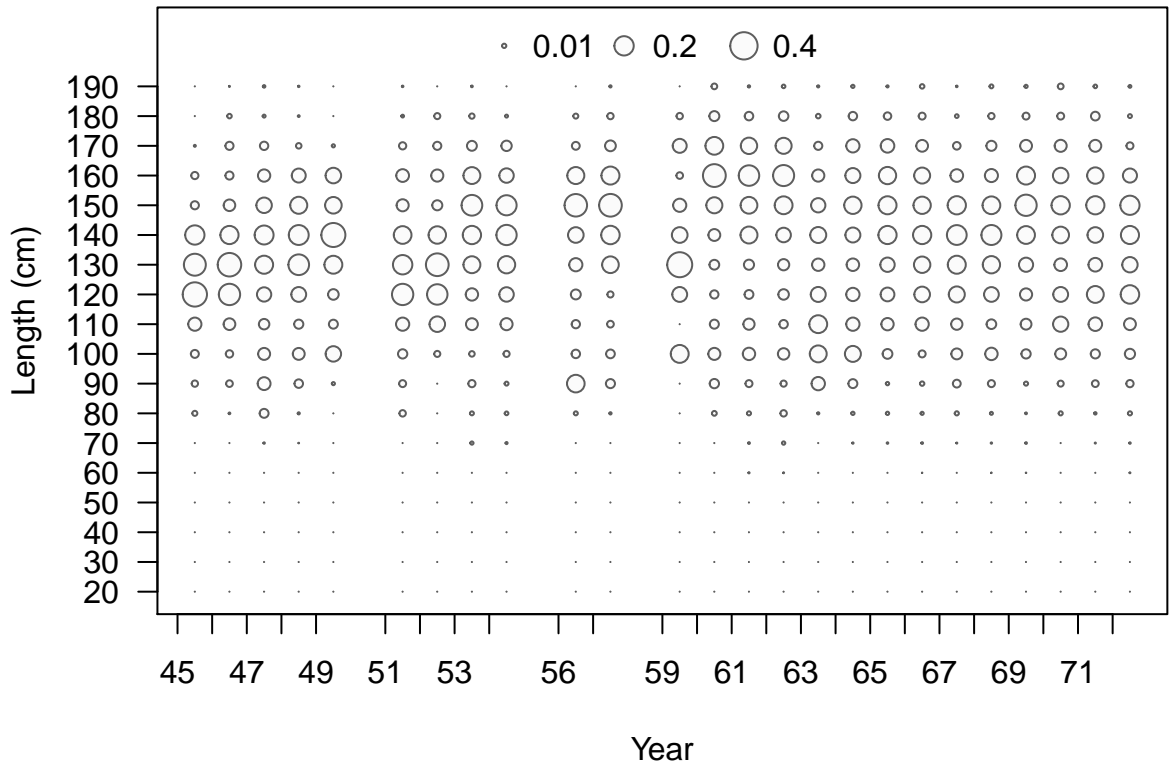


Proportion

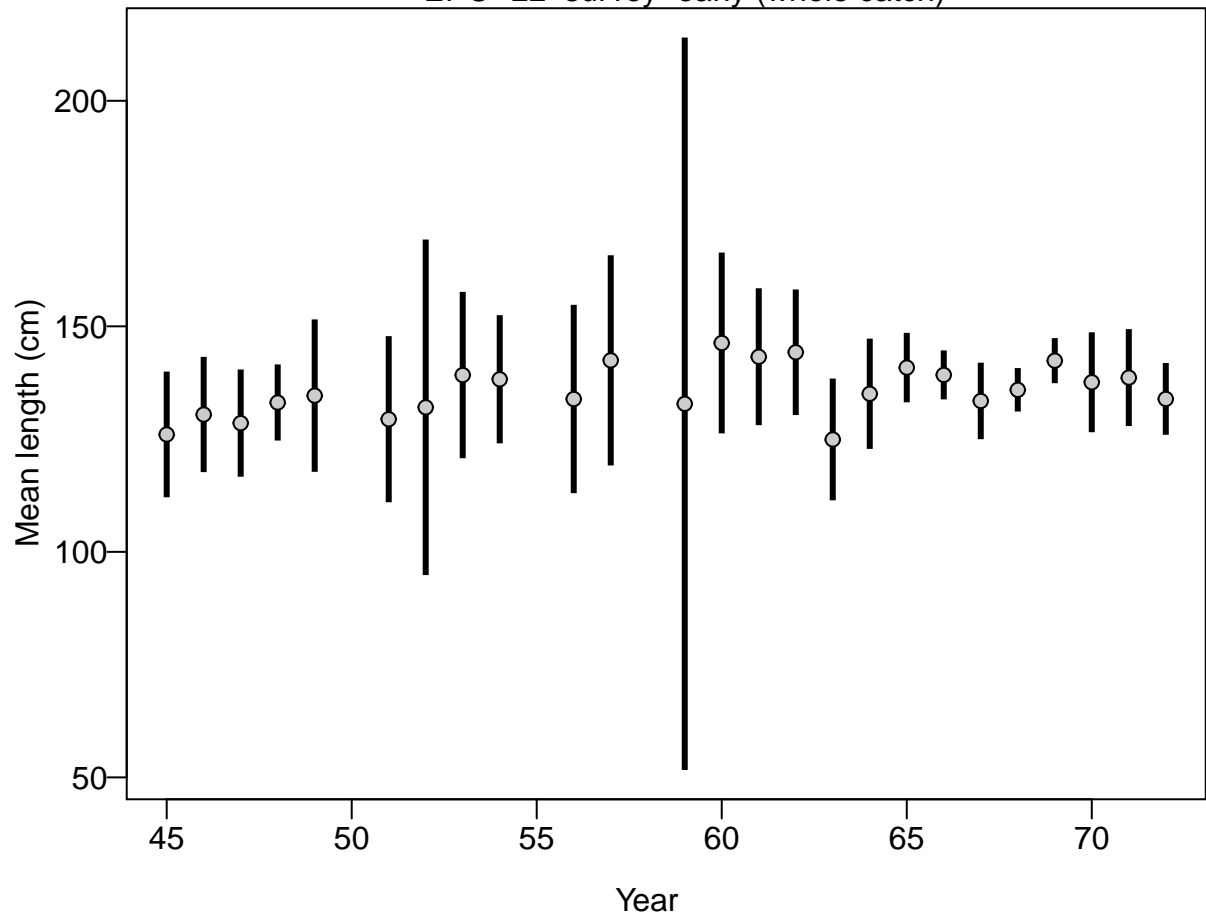


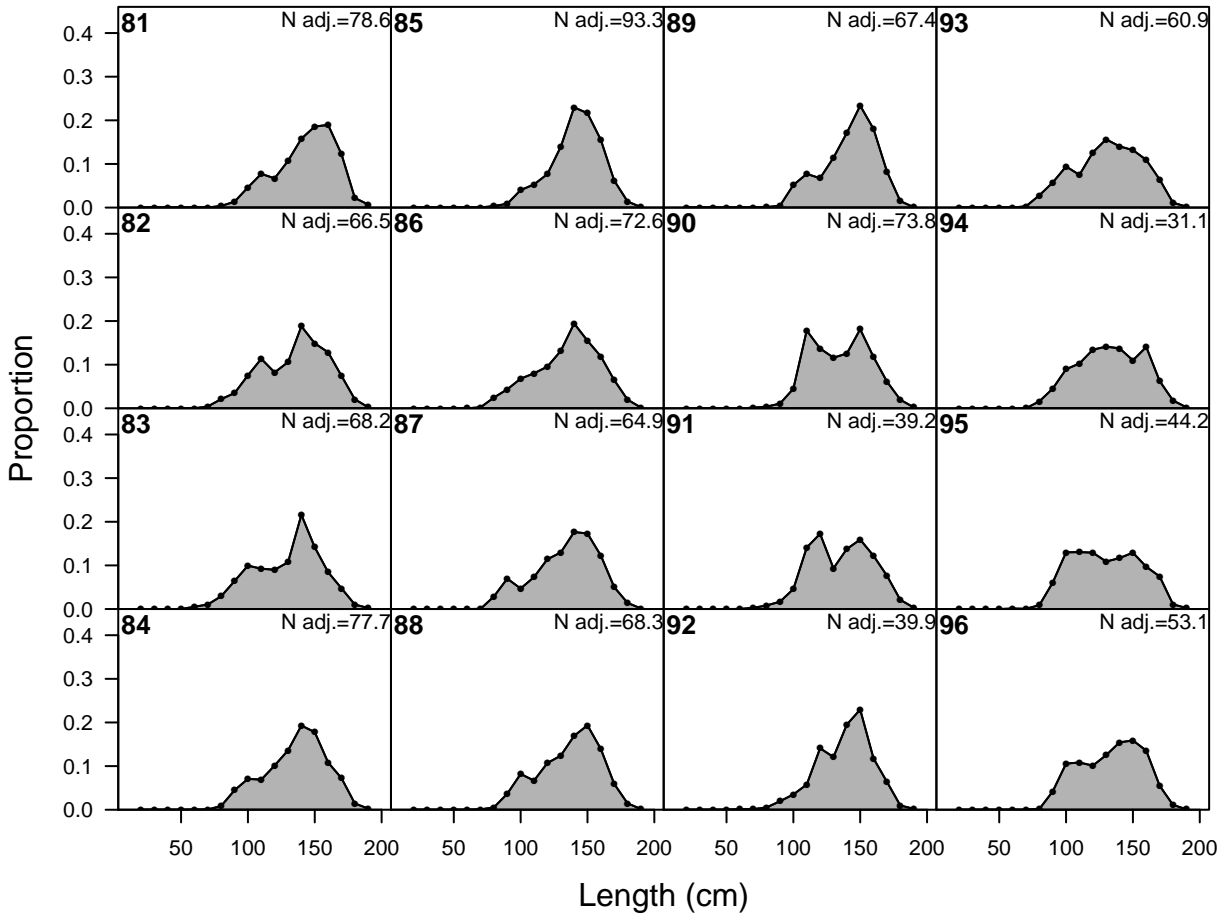
Proportion

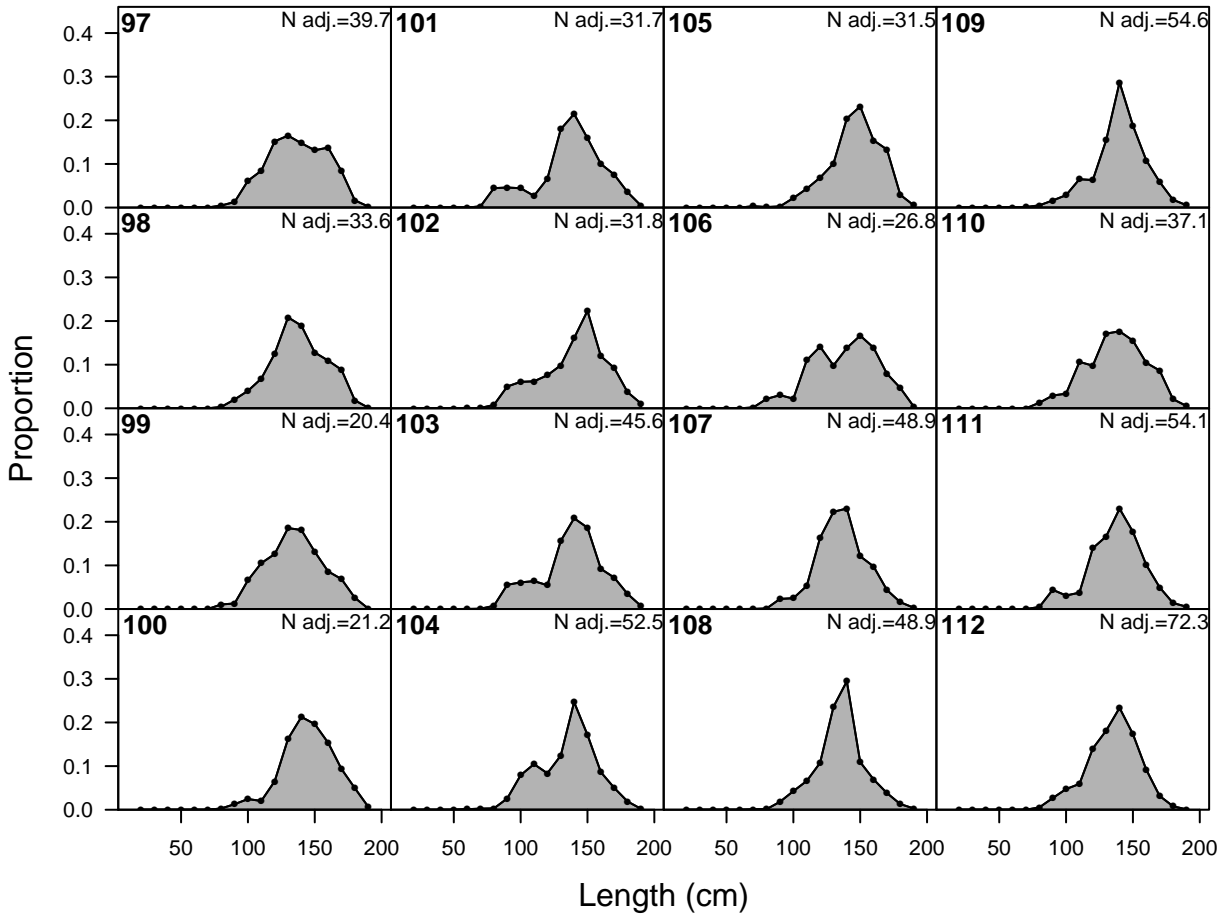


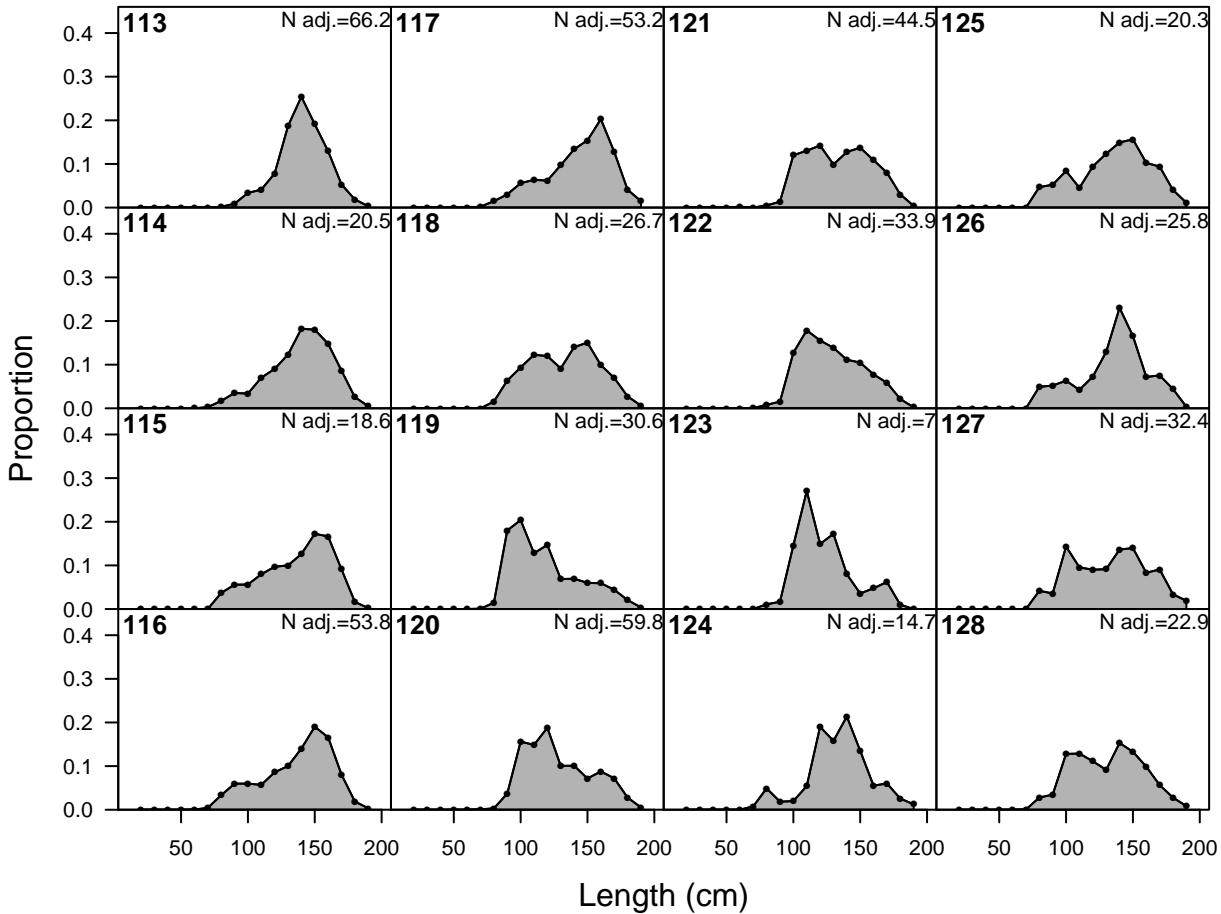


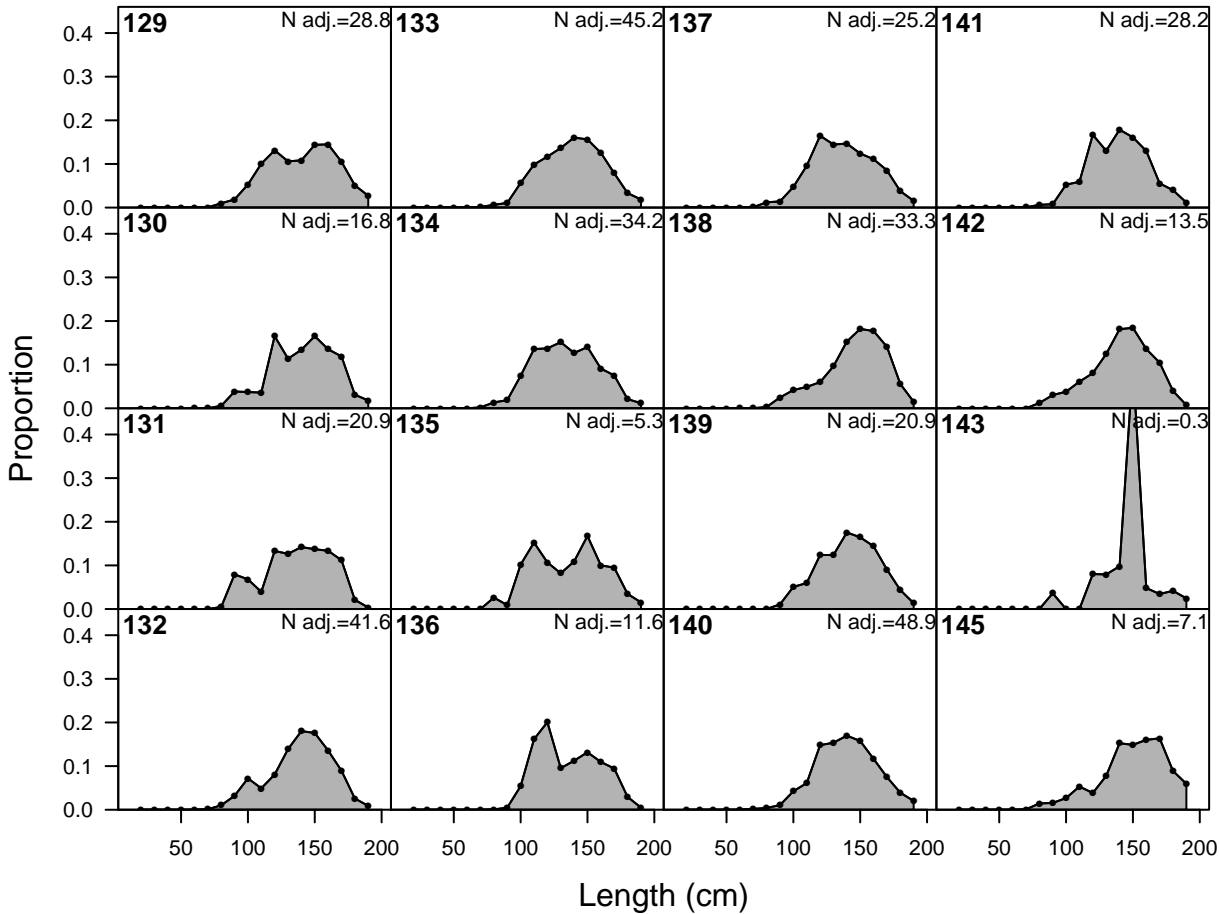
EPO-LL-survey-early (whole catch)

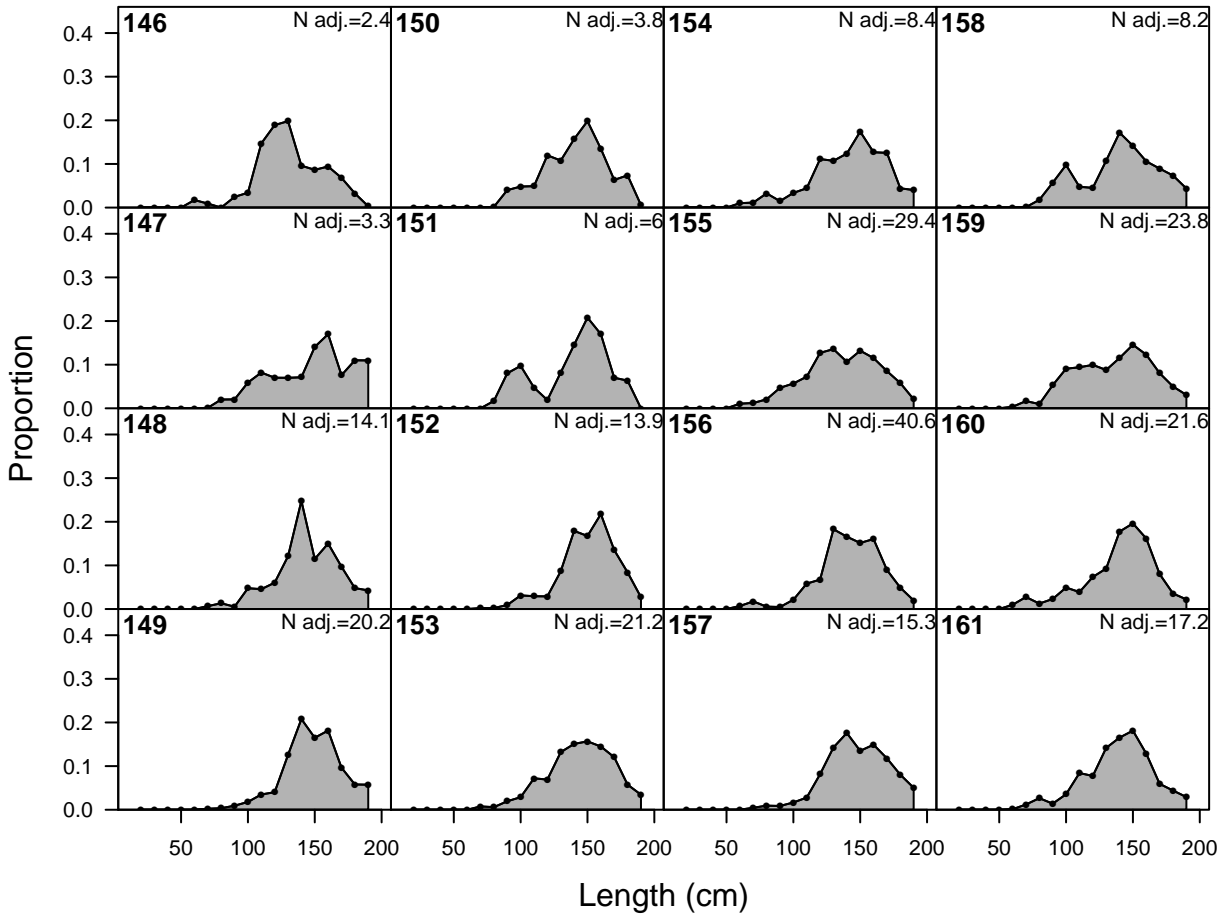


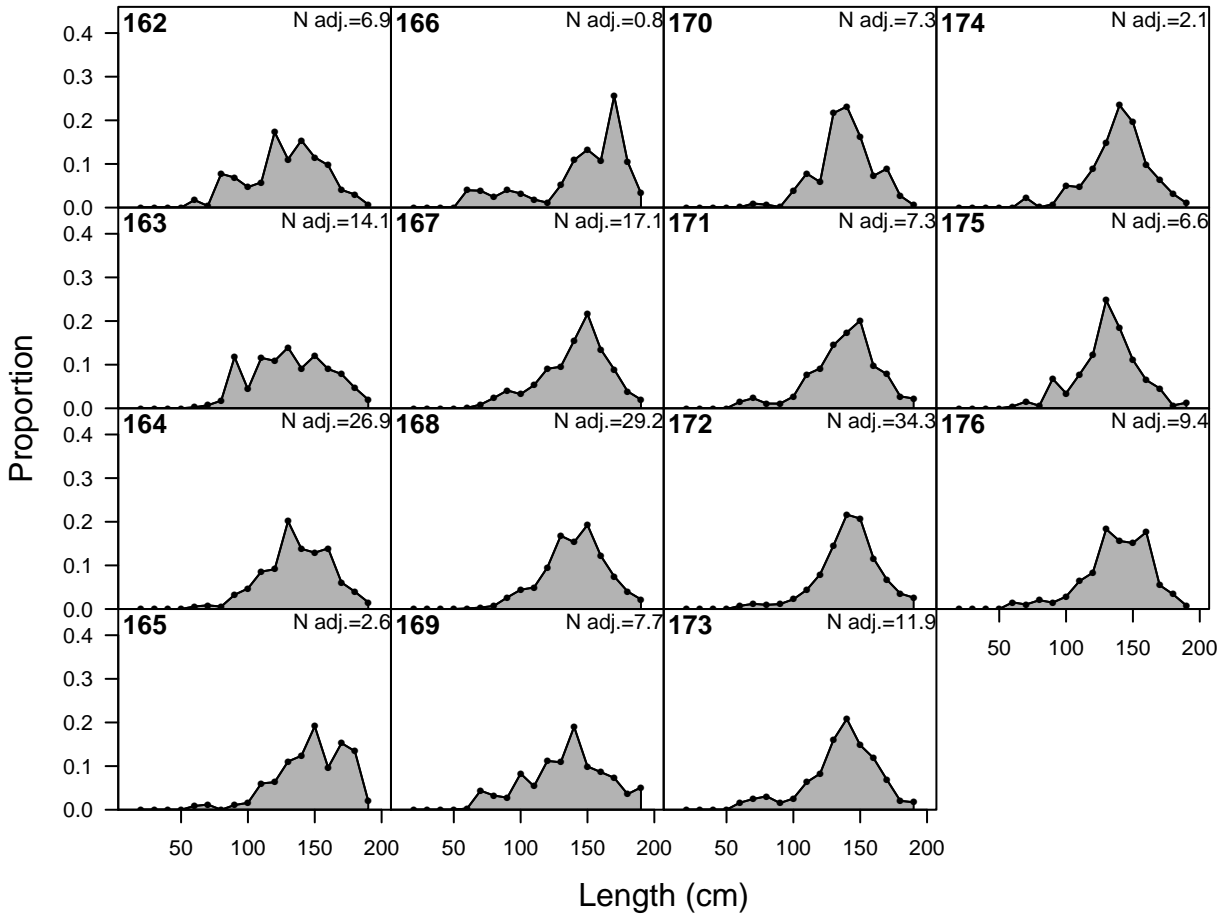


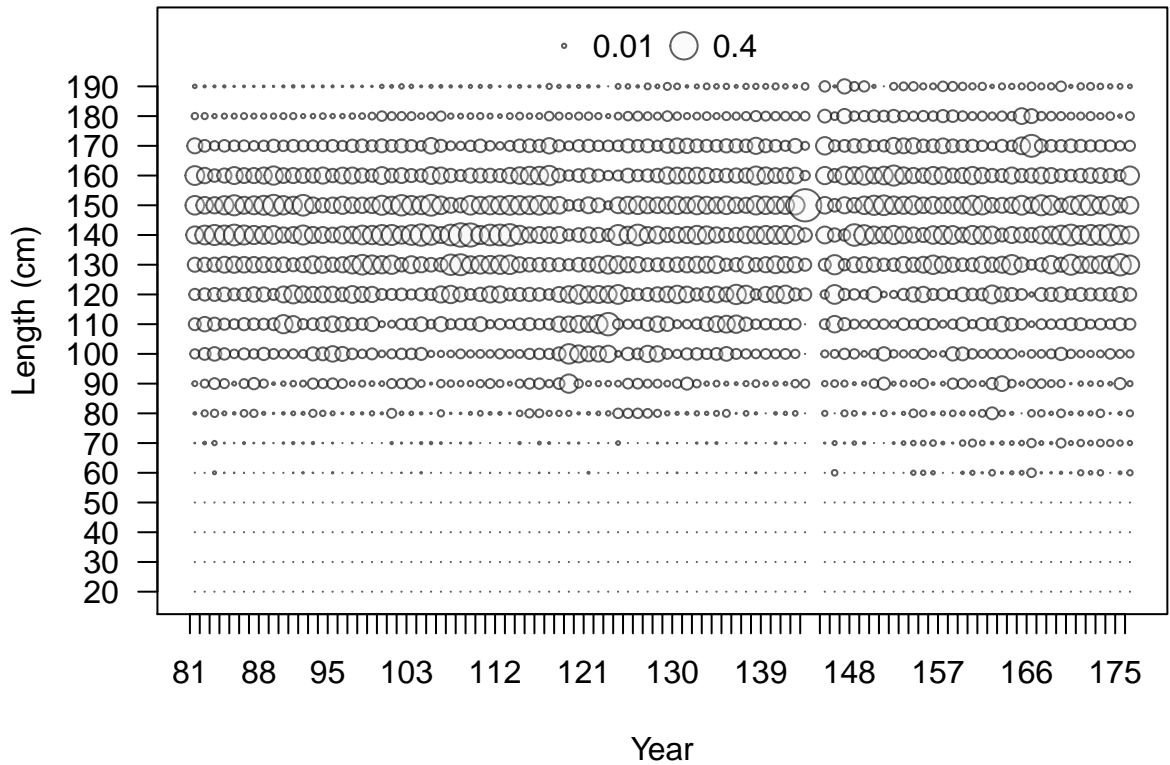




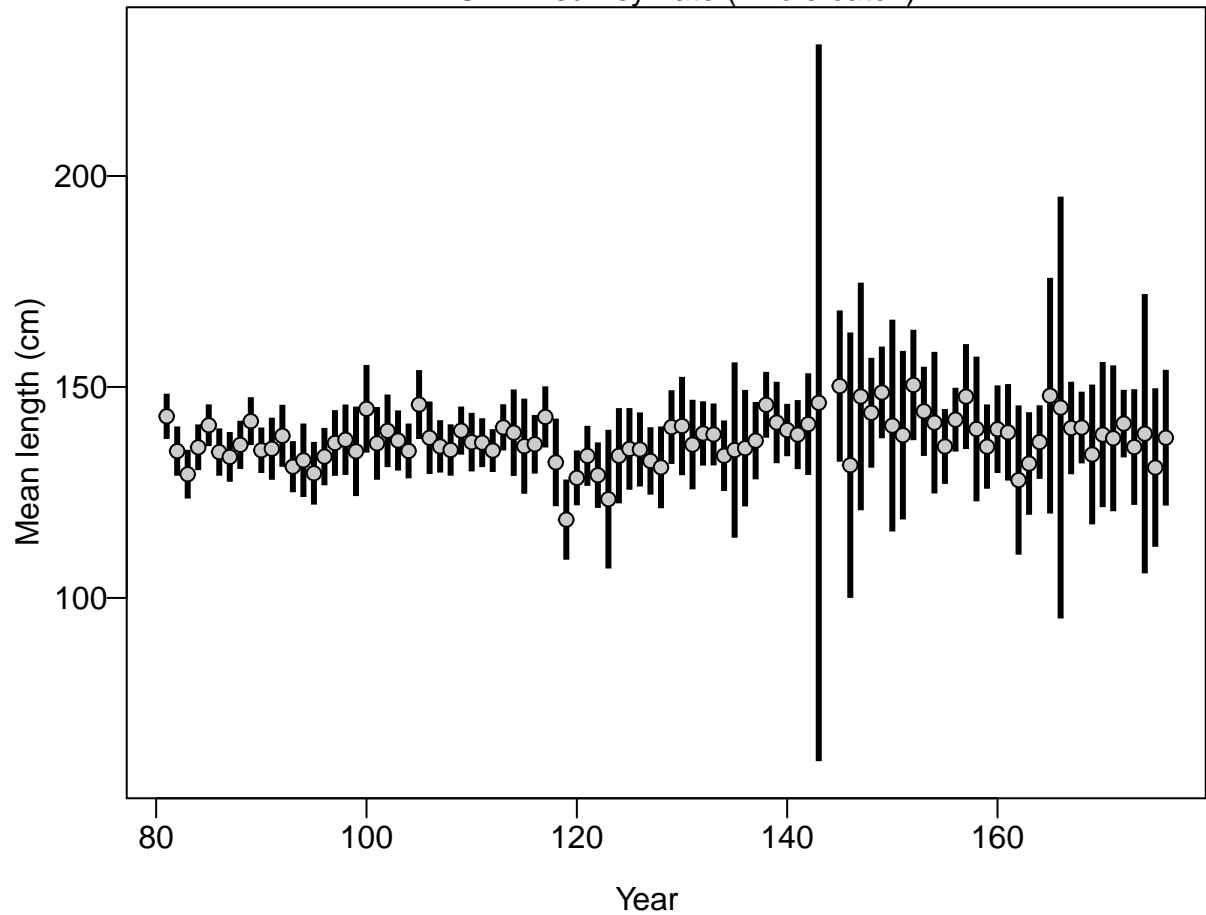








EPO-LL-survey-late (whole catch)



EPO-LL-survey-early

Sum of N adj.=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

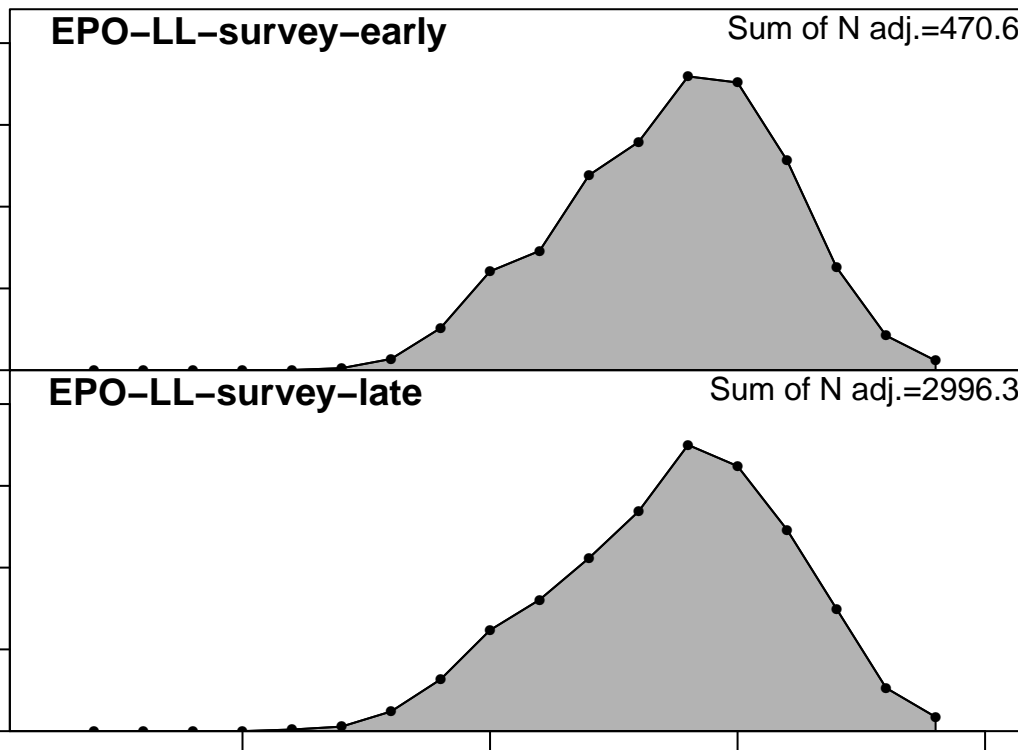
50

100

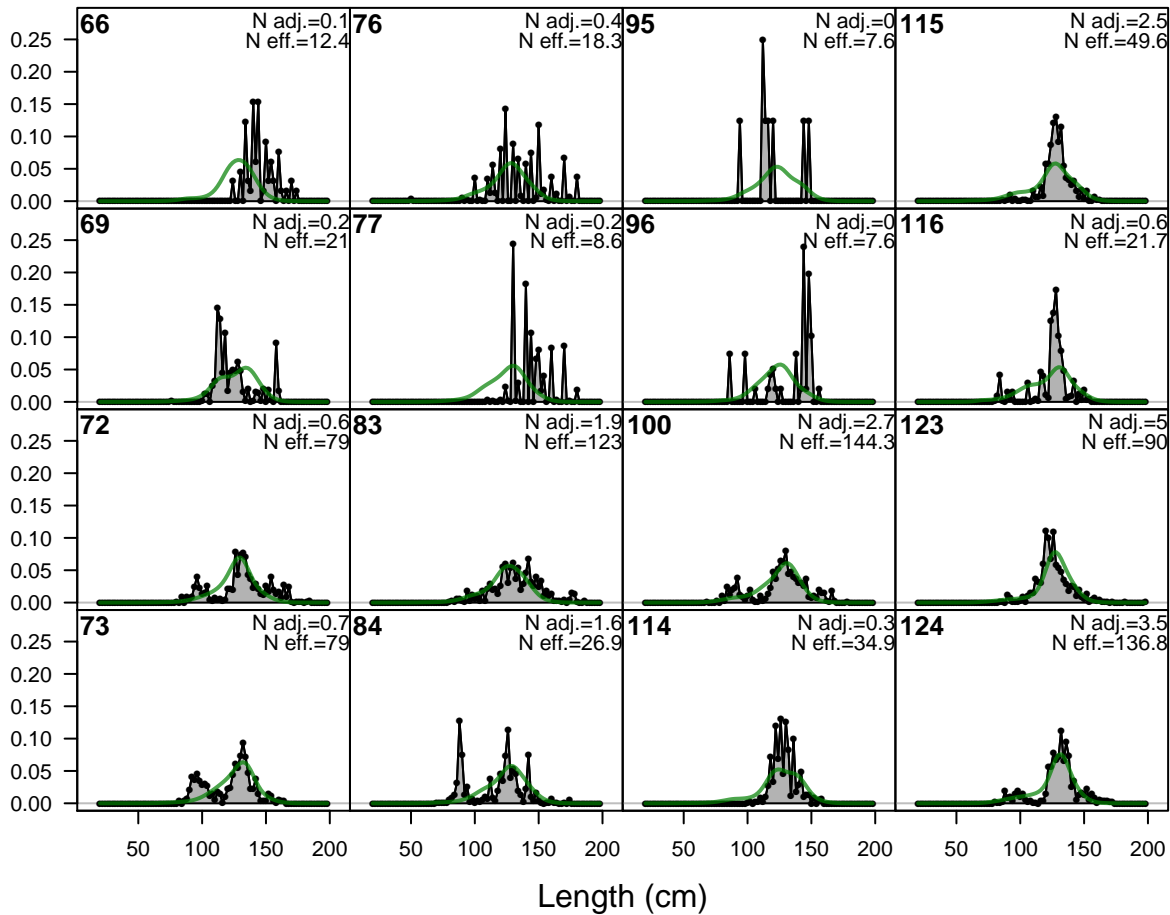
150

200

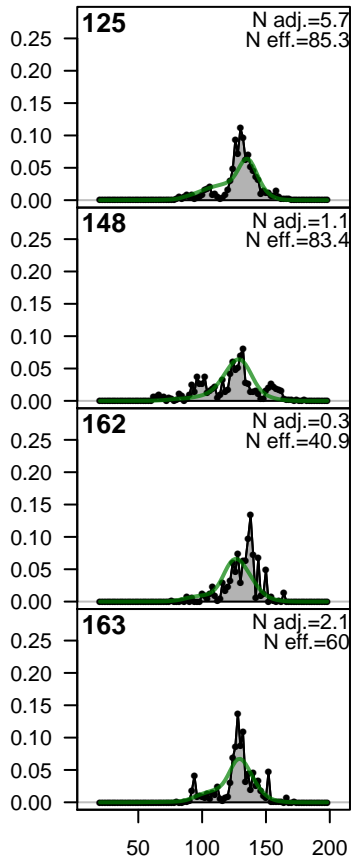
Length (cm)



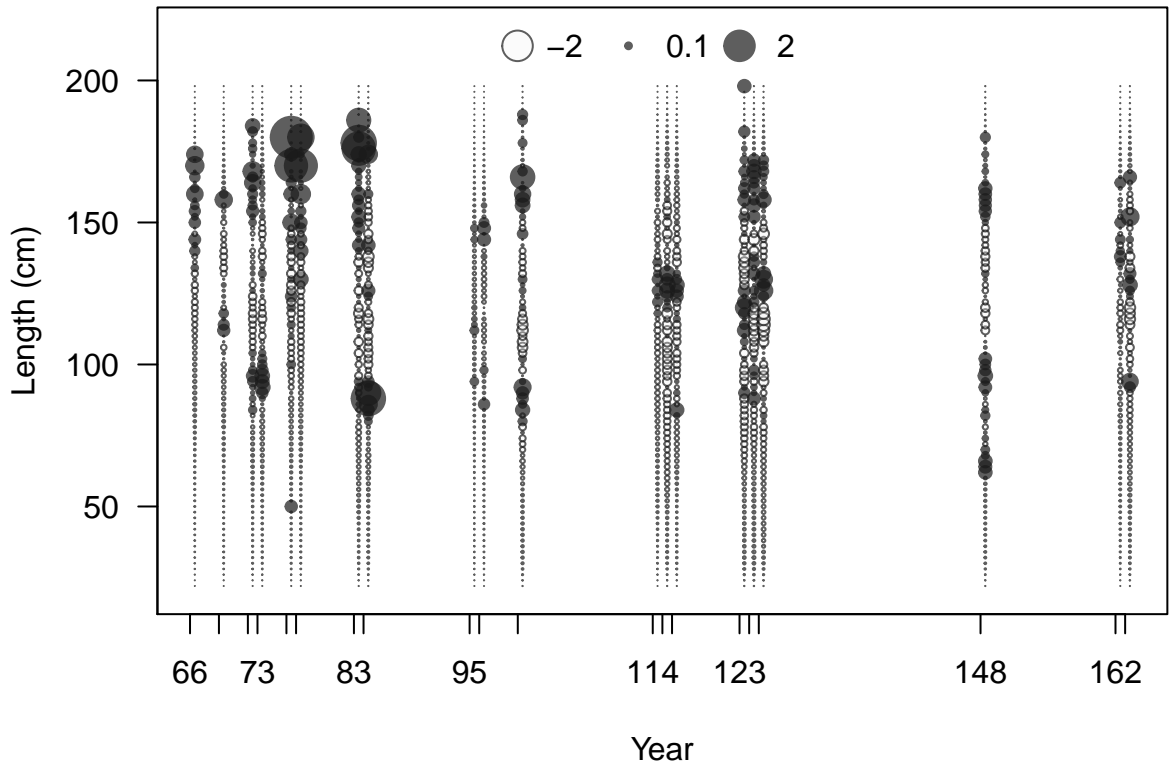
Proportion

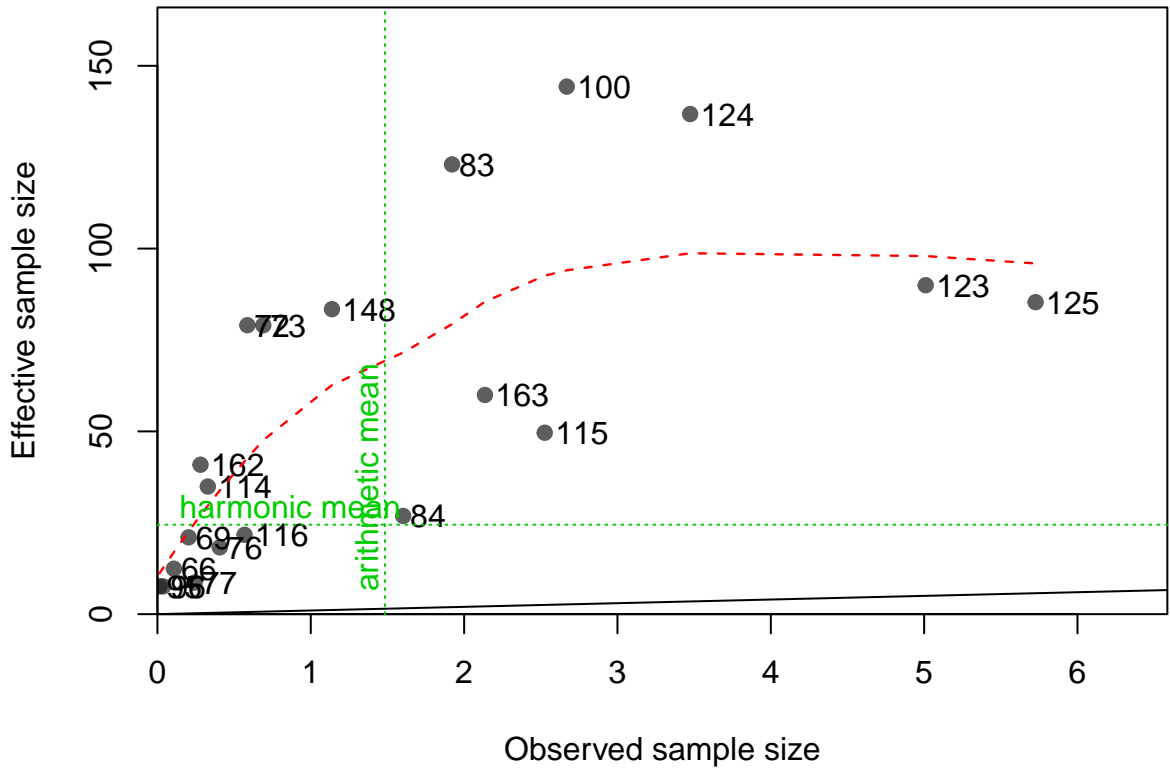


Proportion

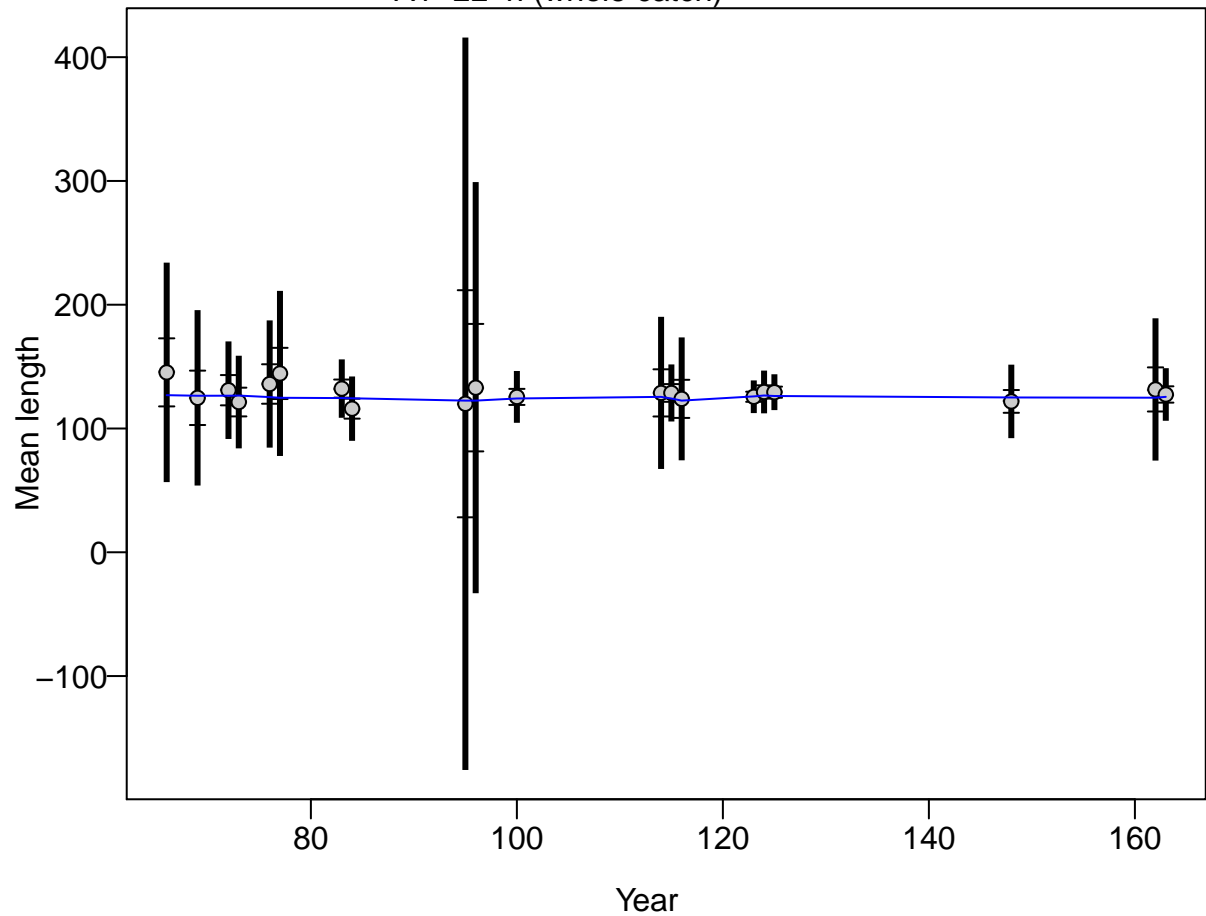


Length (cm)

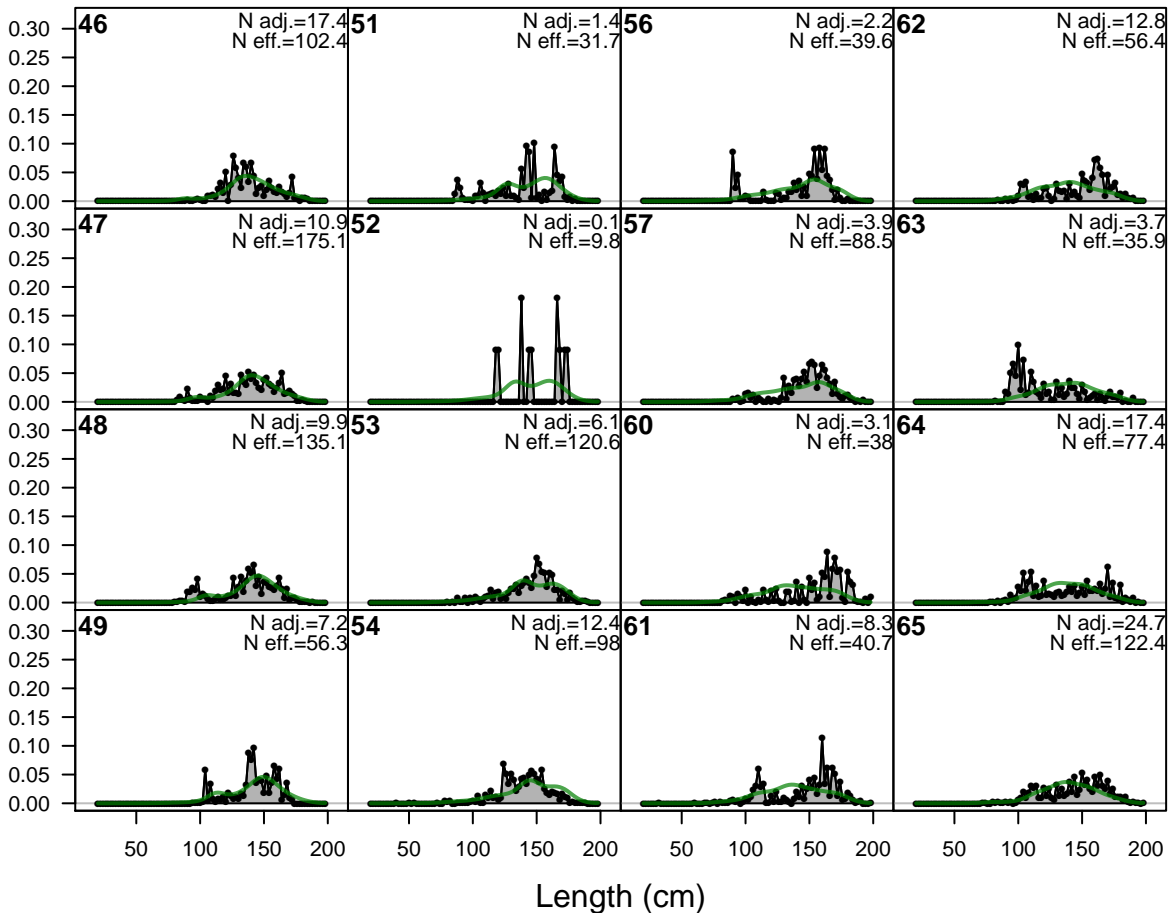




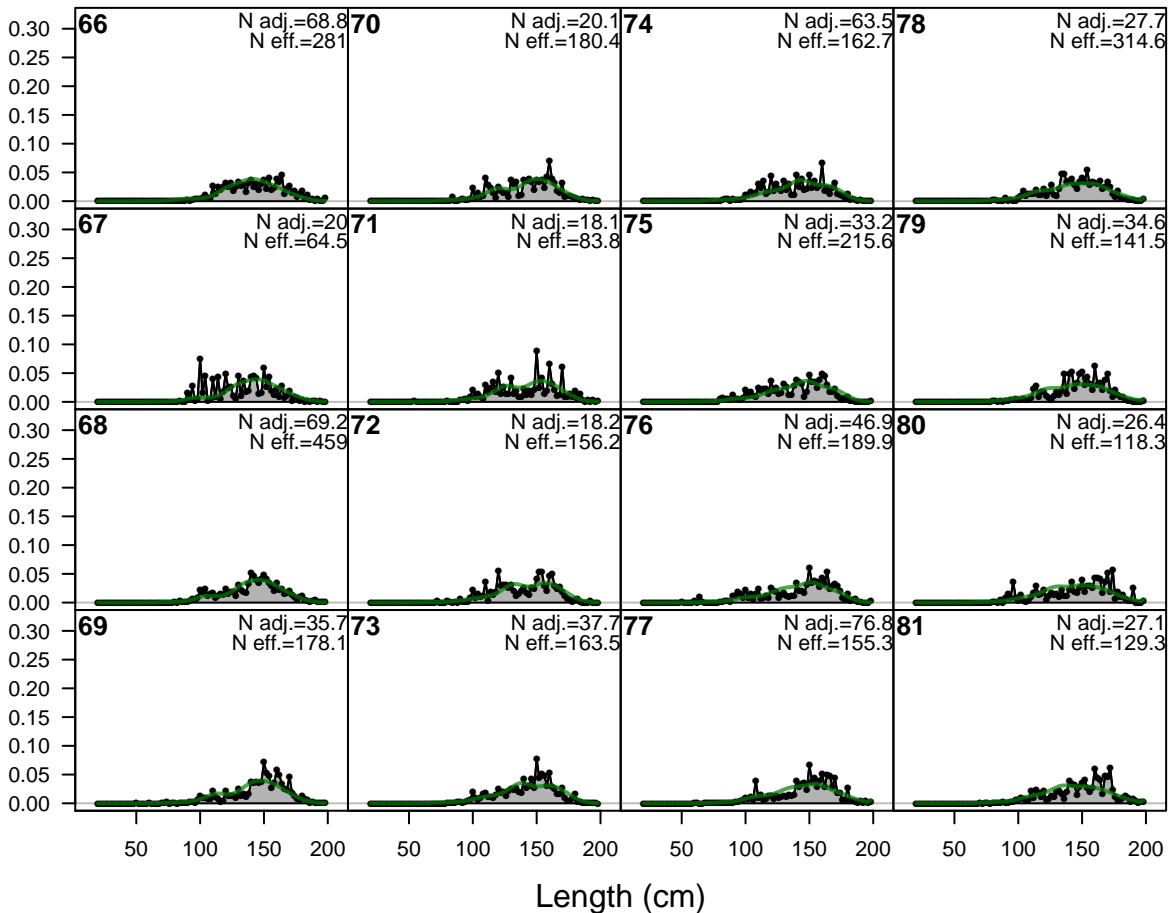
A1-LL-n (whole catch)



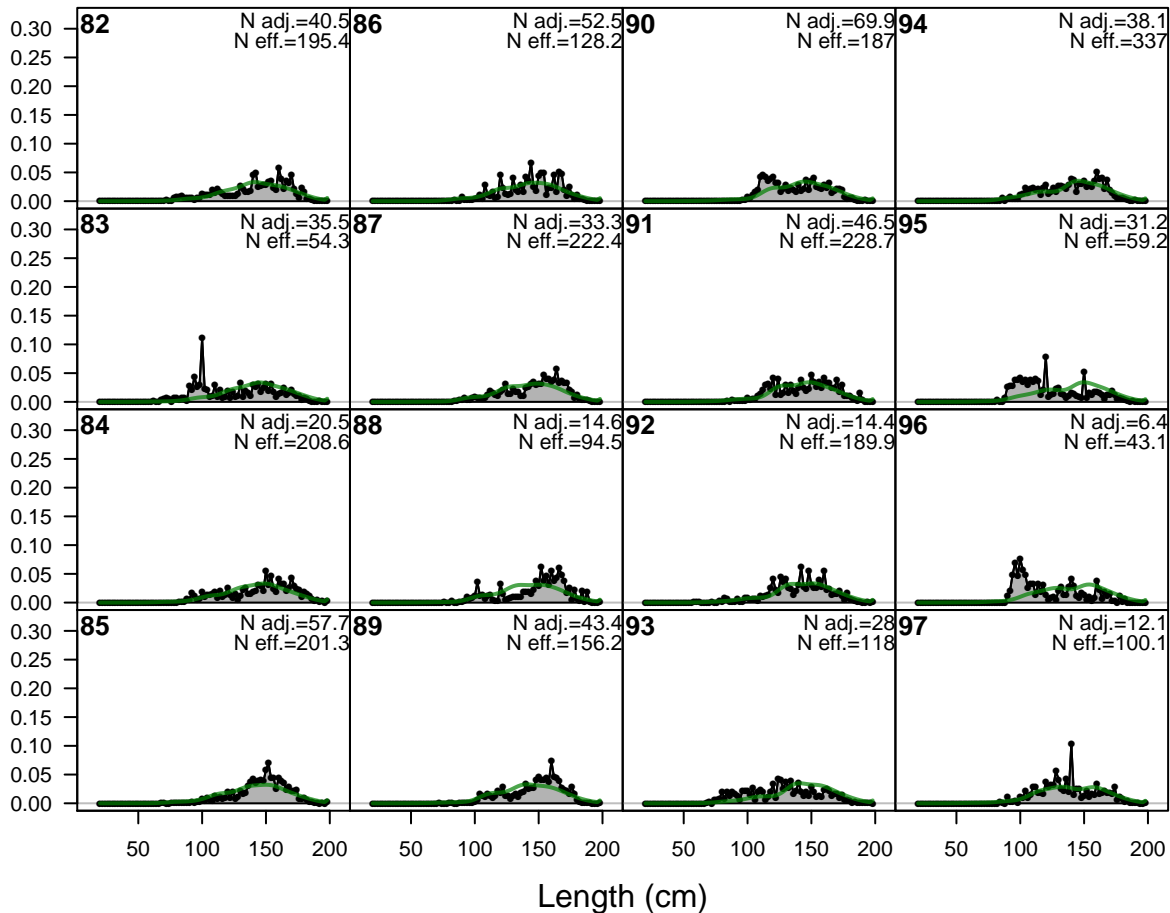
Proportion



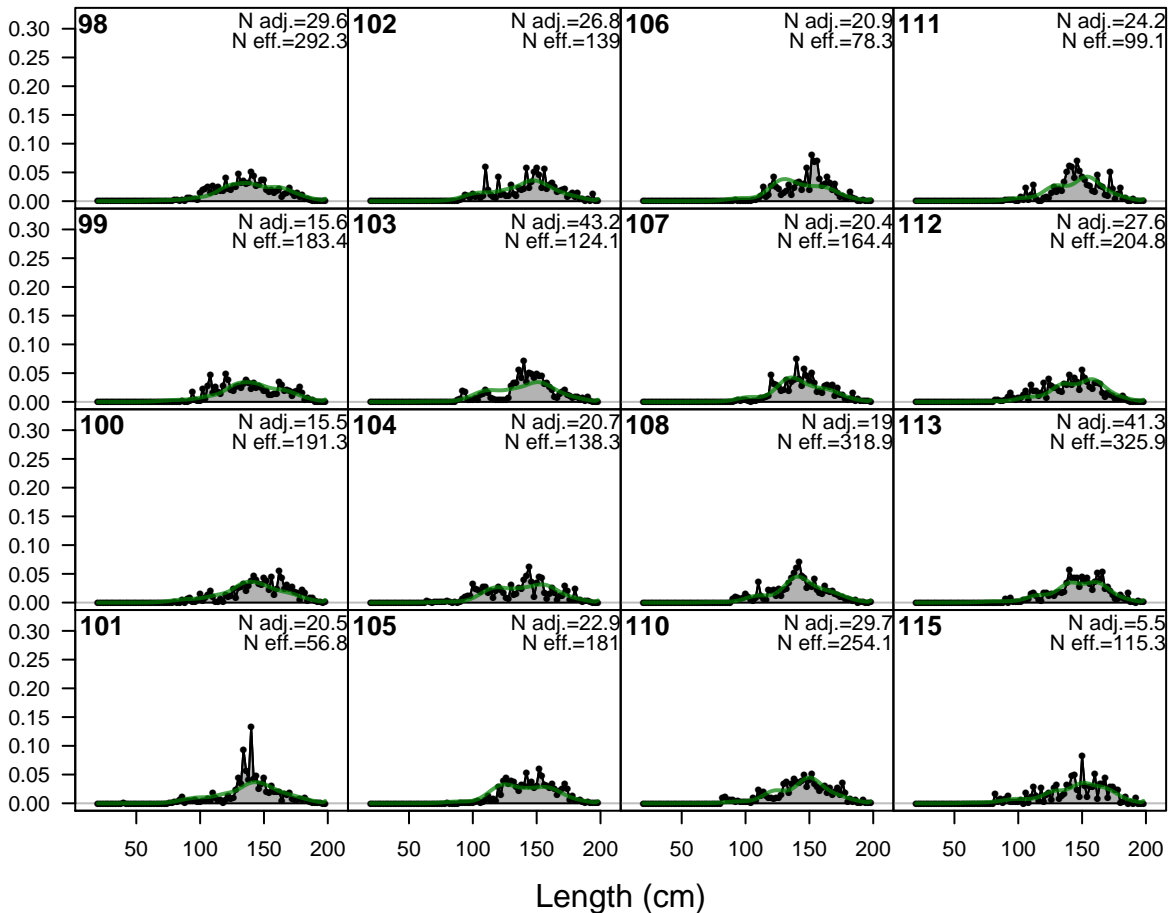
Proportion



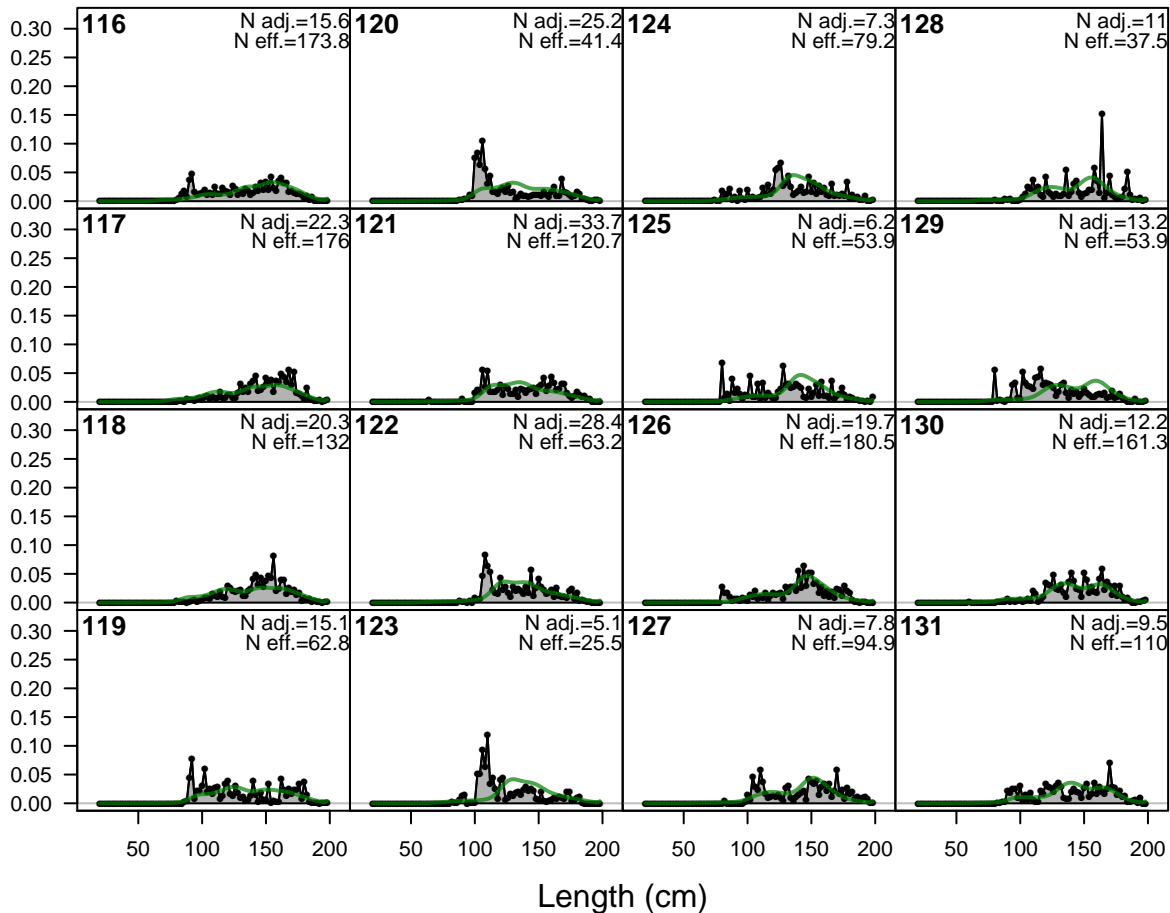
Proportion



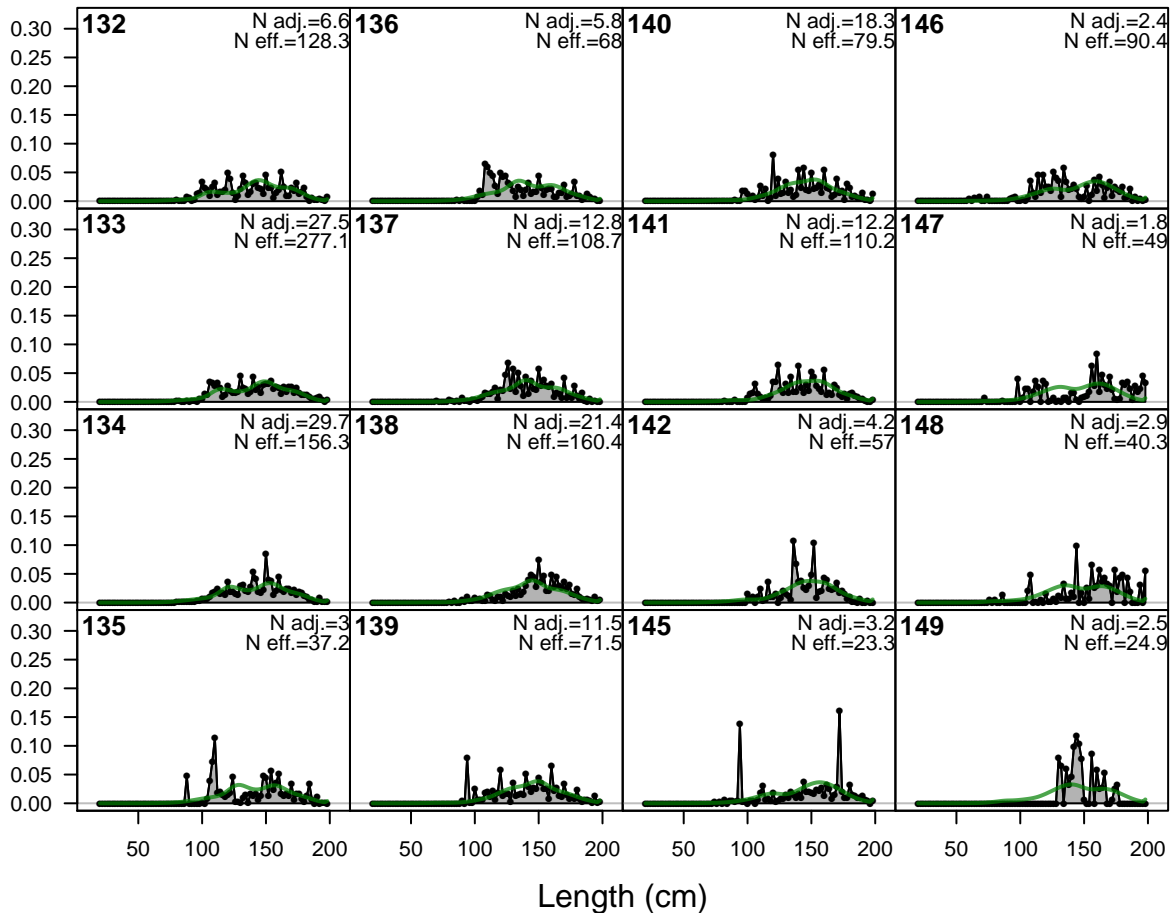
Proportion



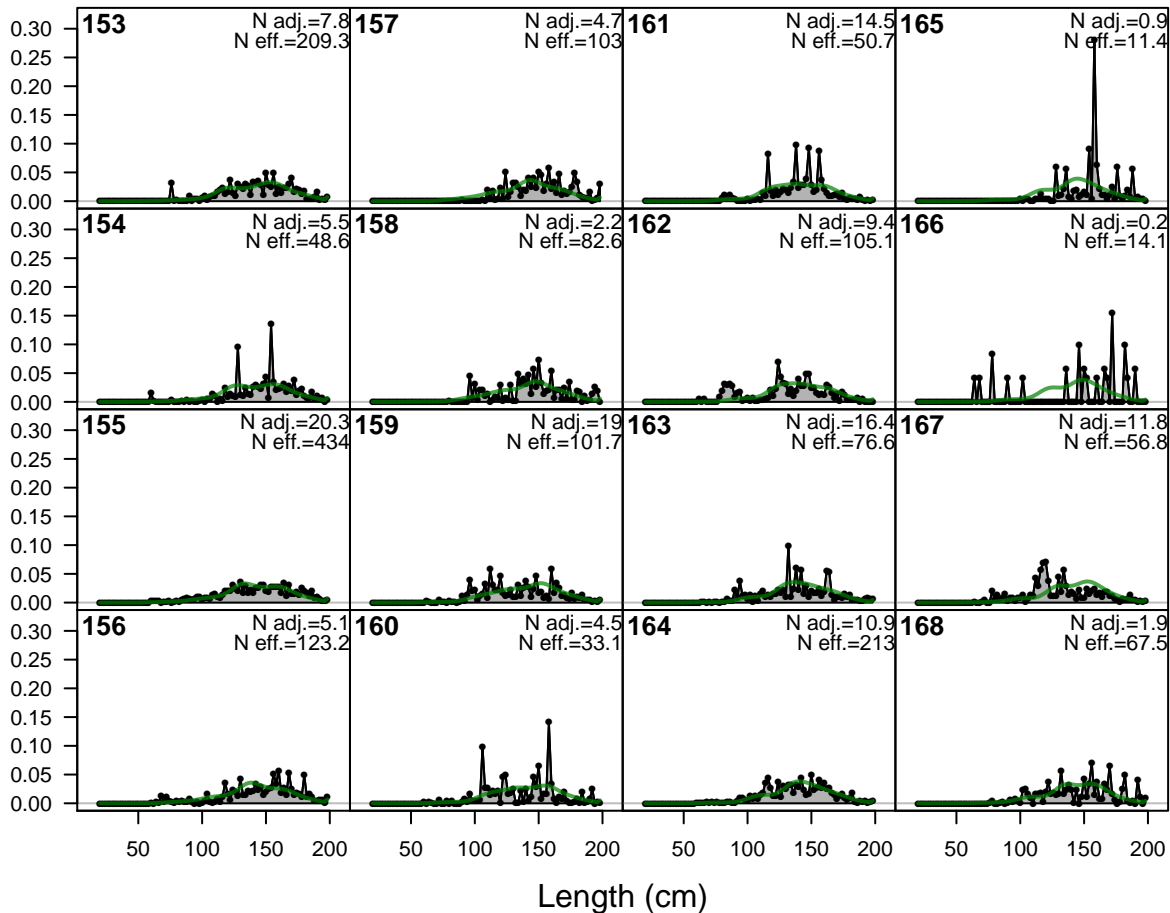
Proportion



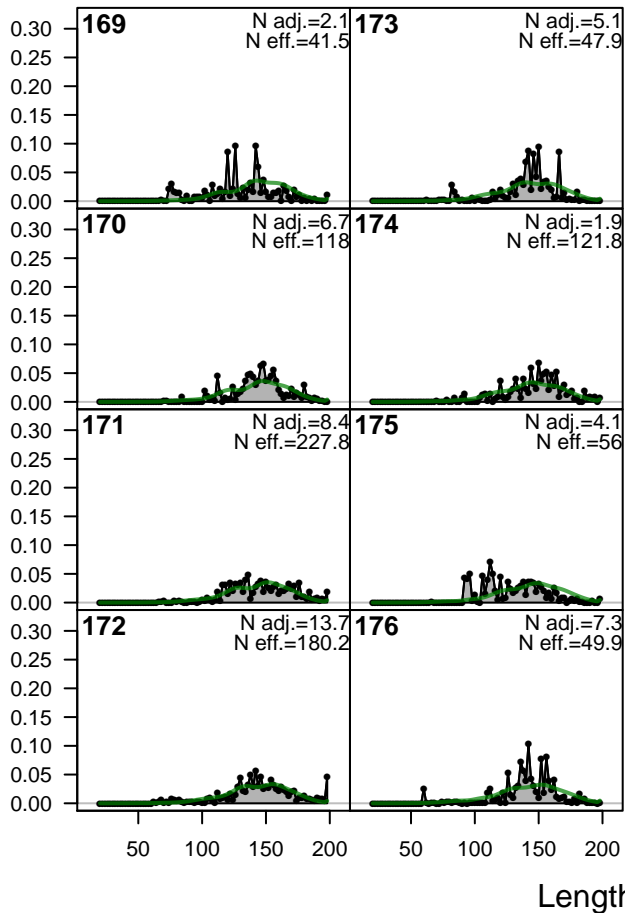
Proportion

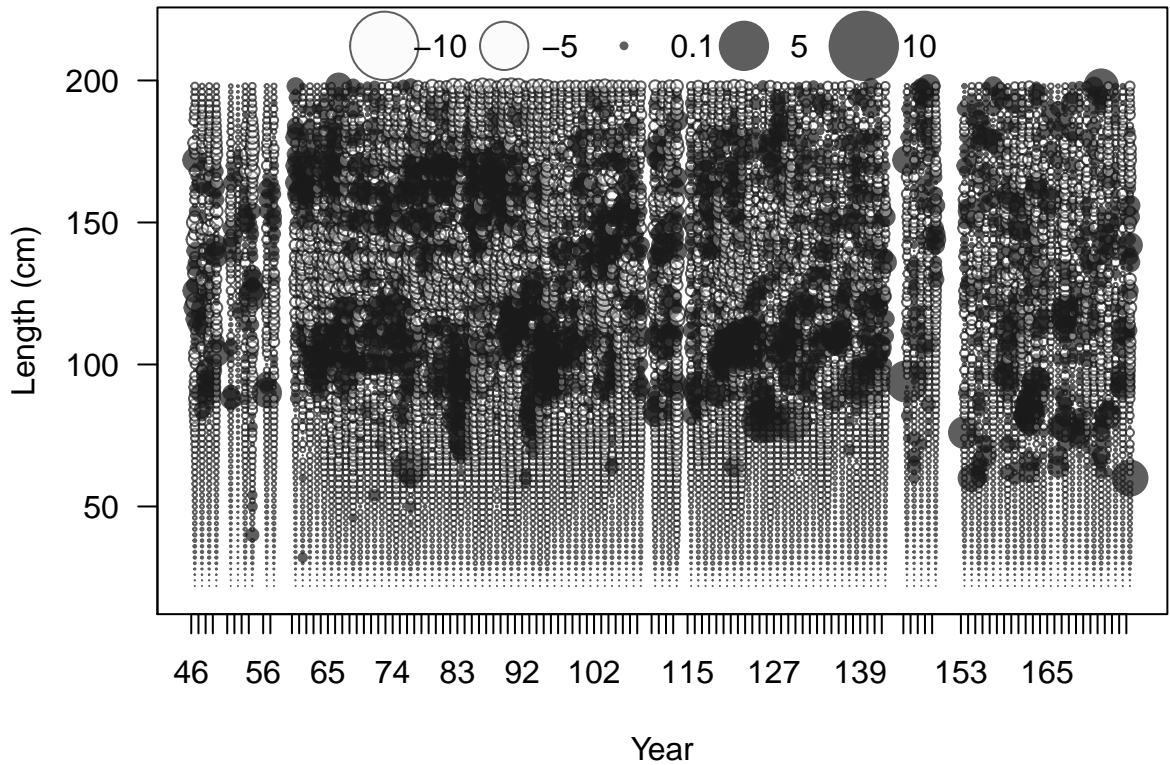


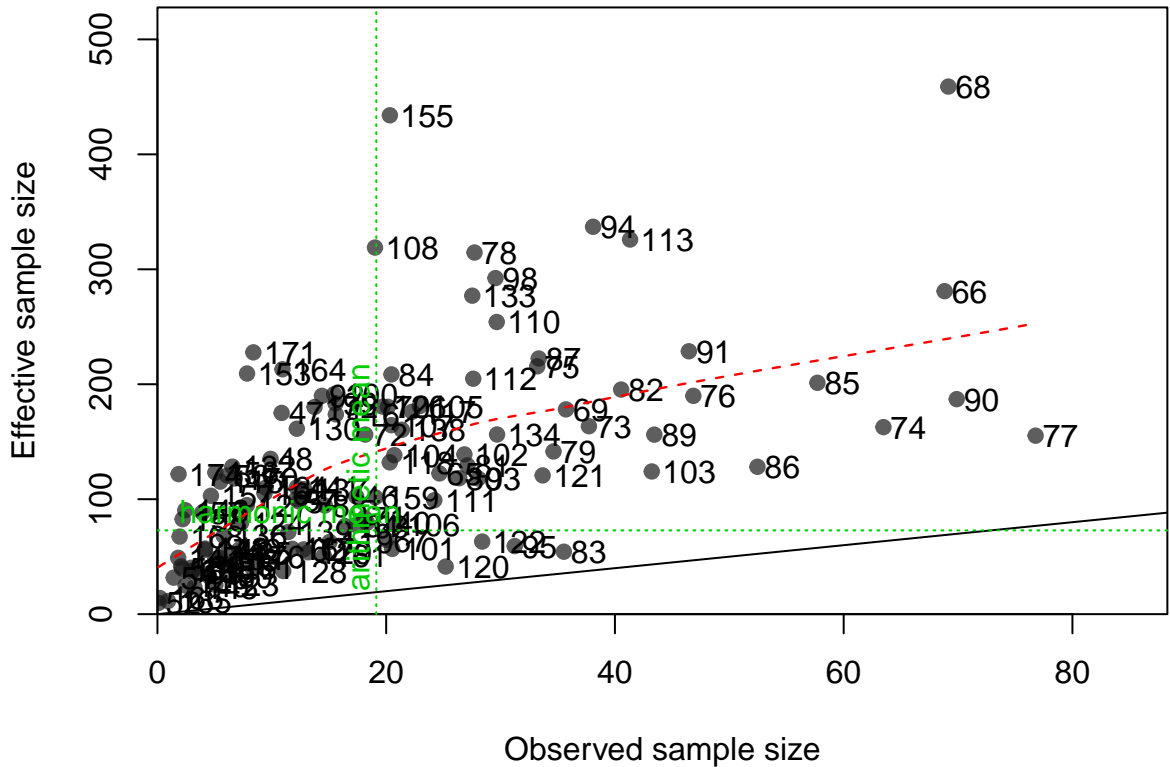
Proportion



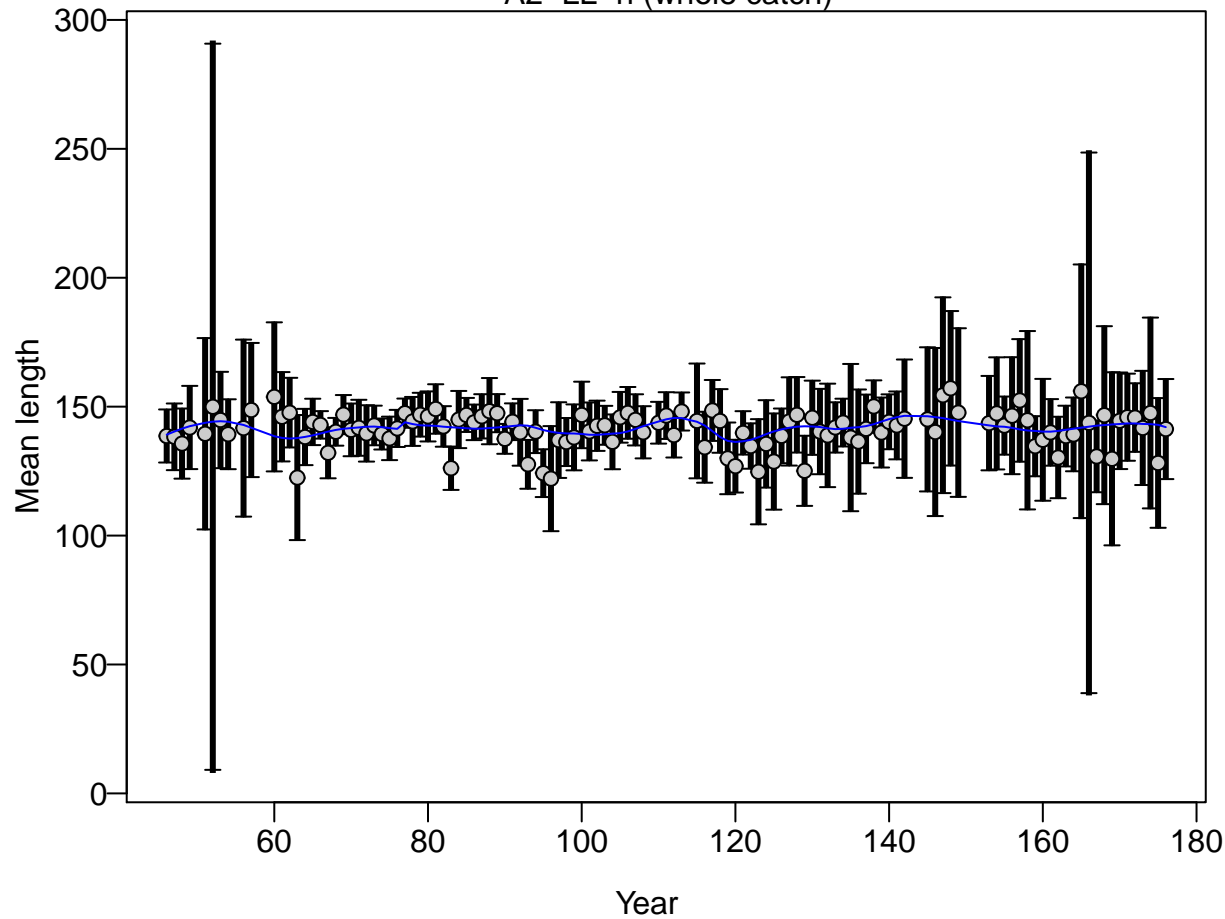
Proportion



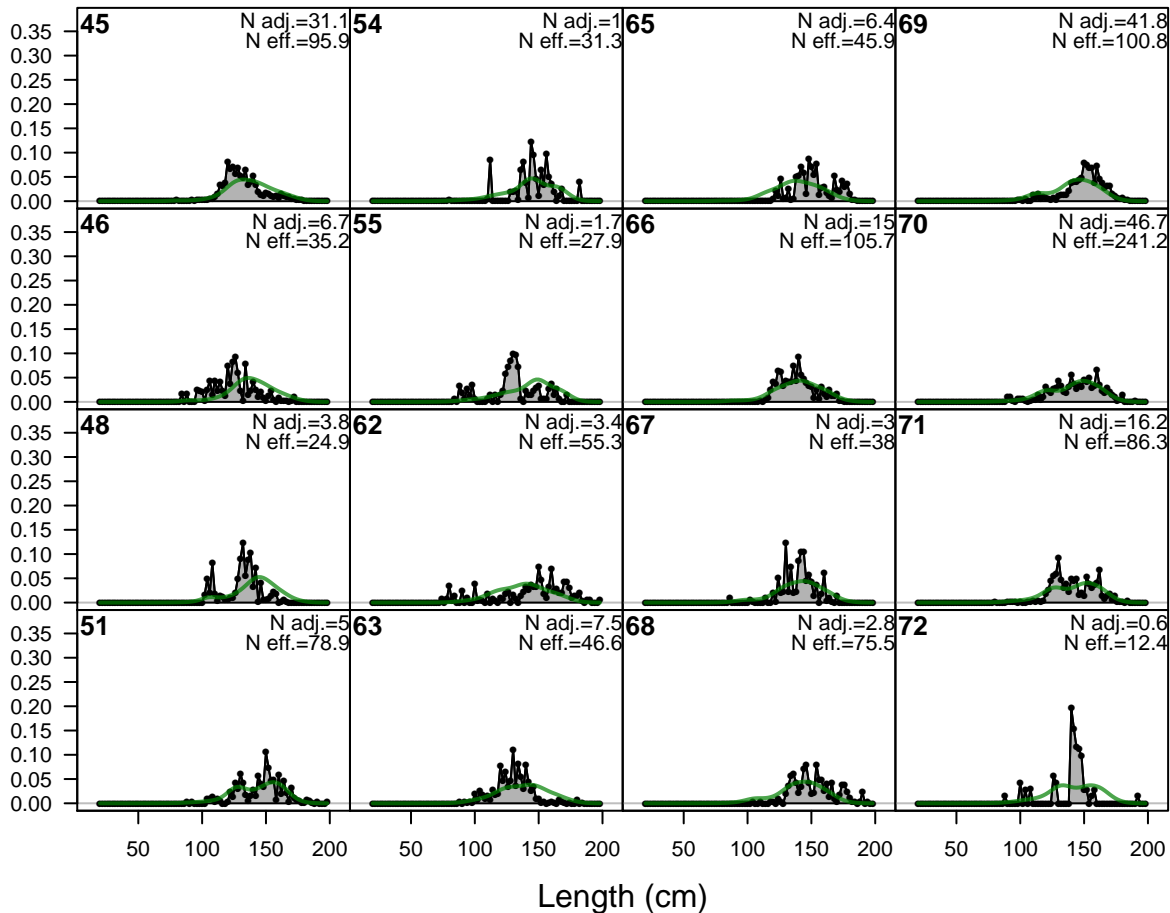




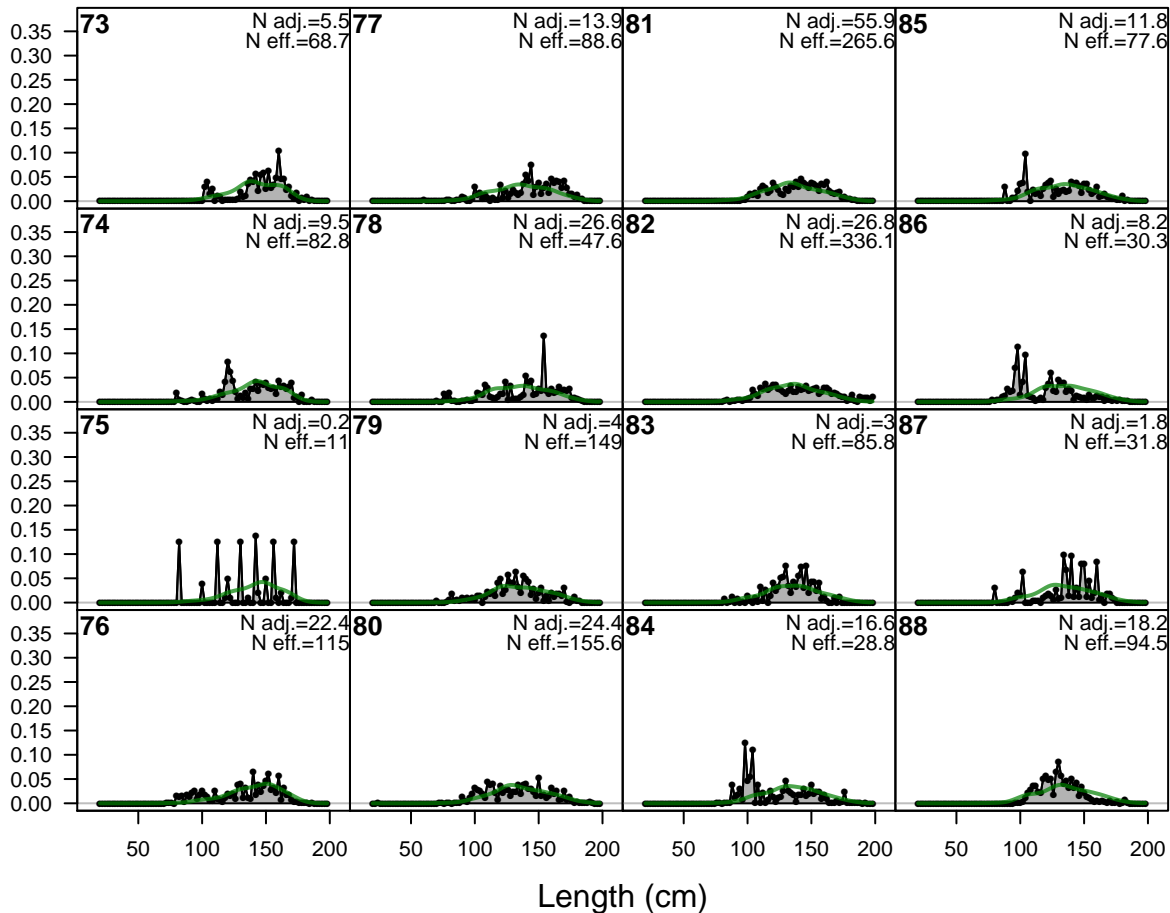
A2-LL-n (whole catch)



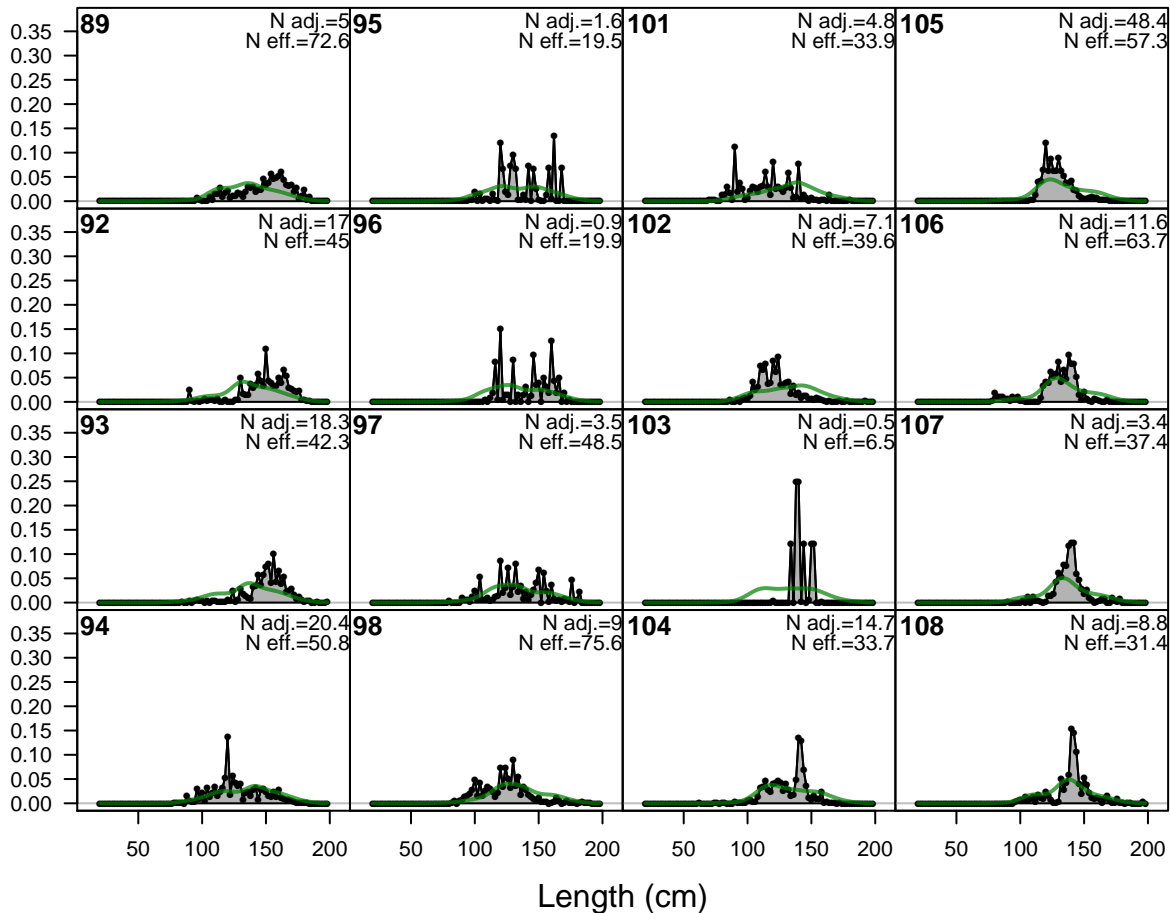
Proportion



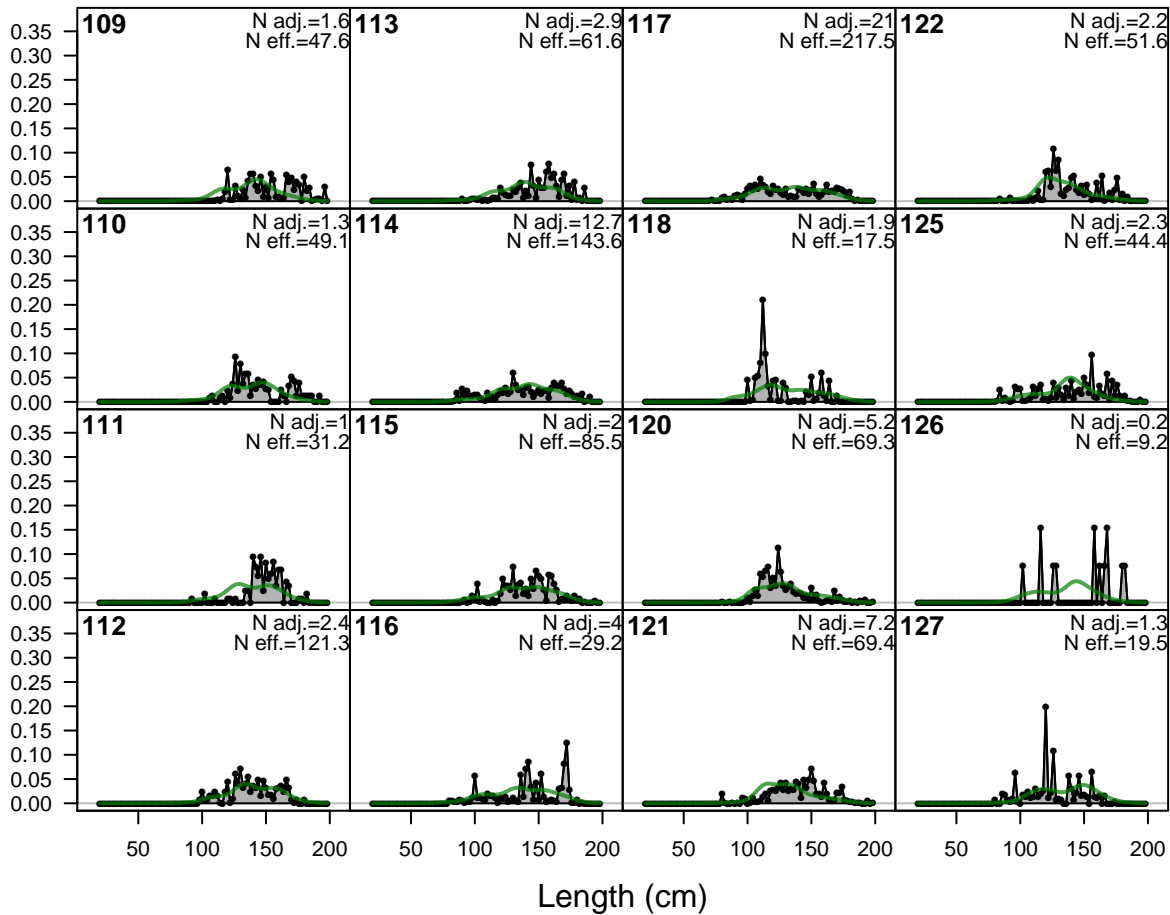
Proportion



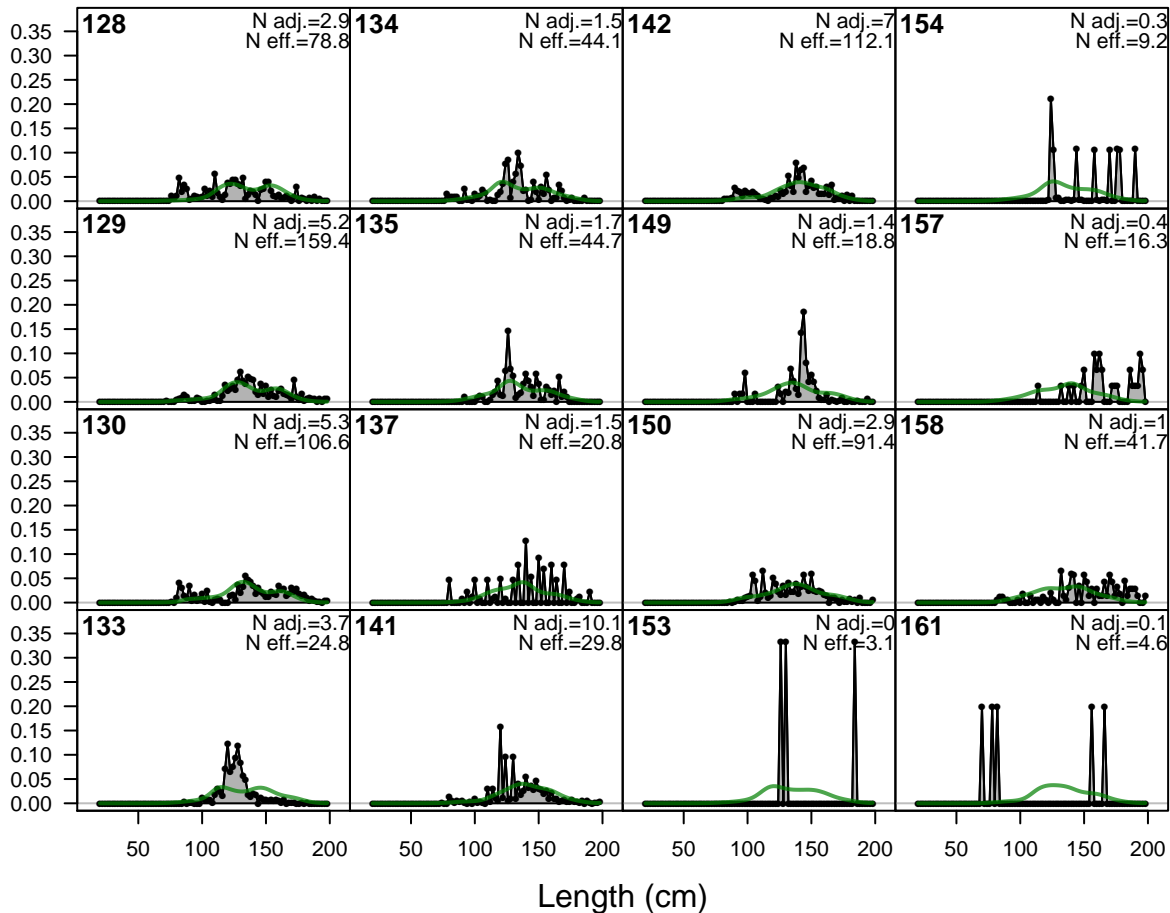
Proportion



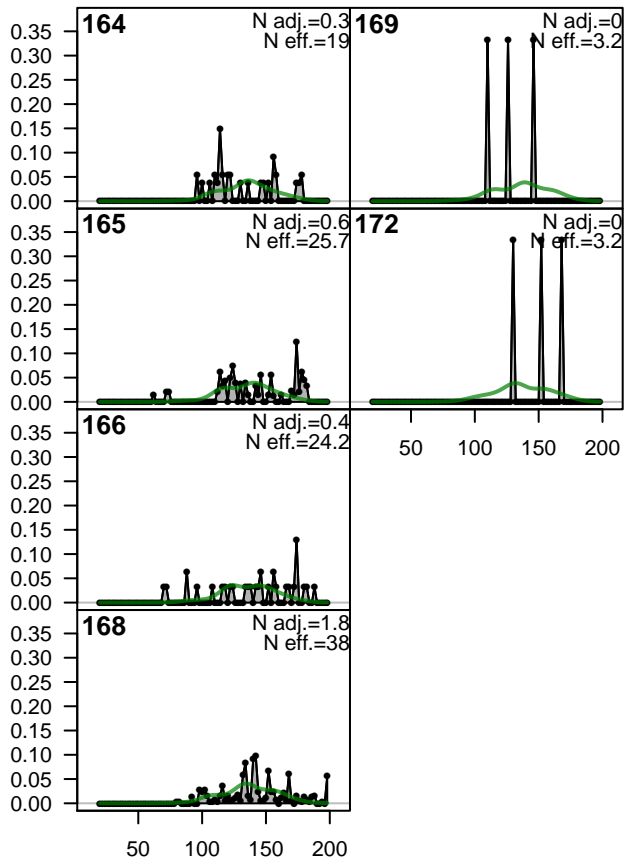
Proportion



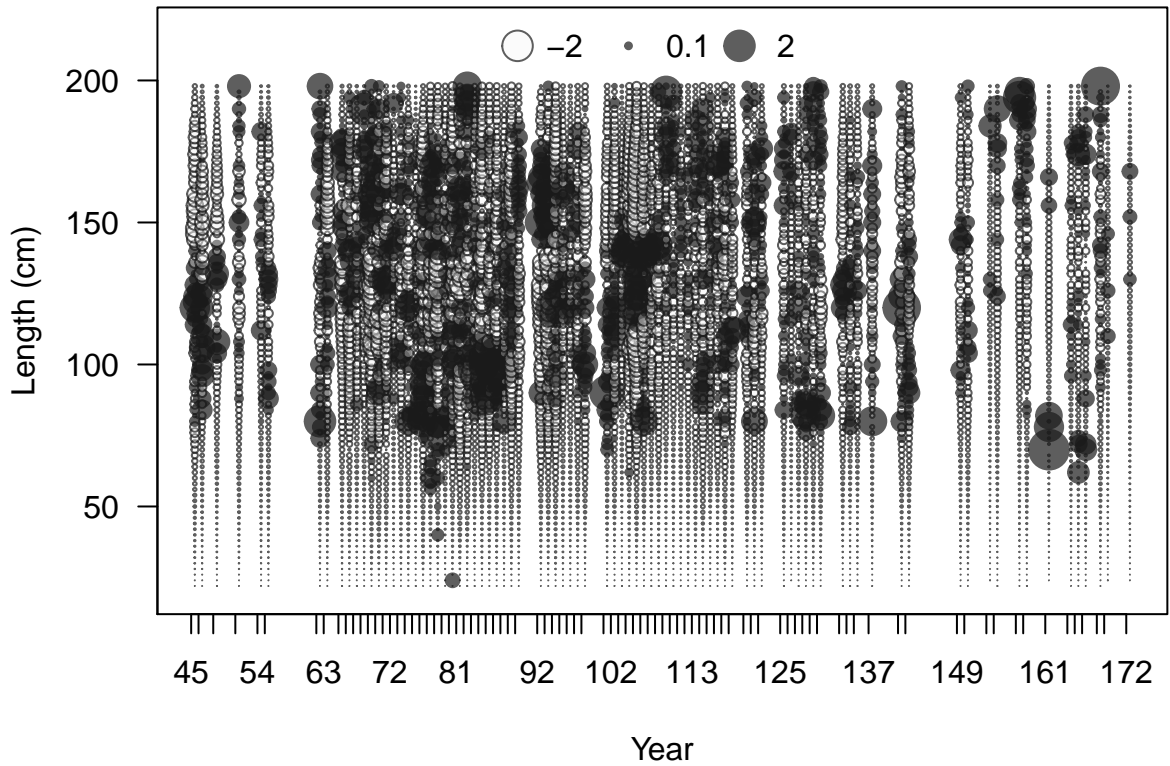
Proportion

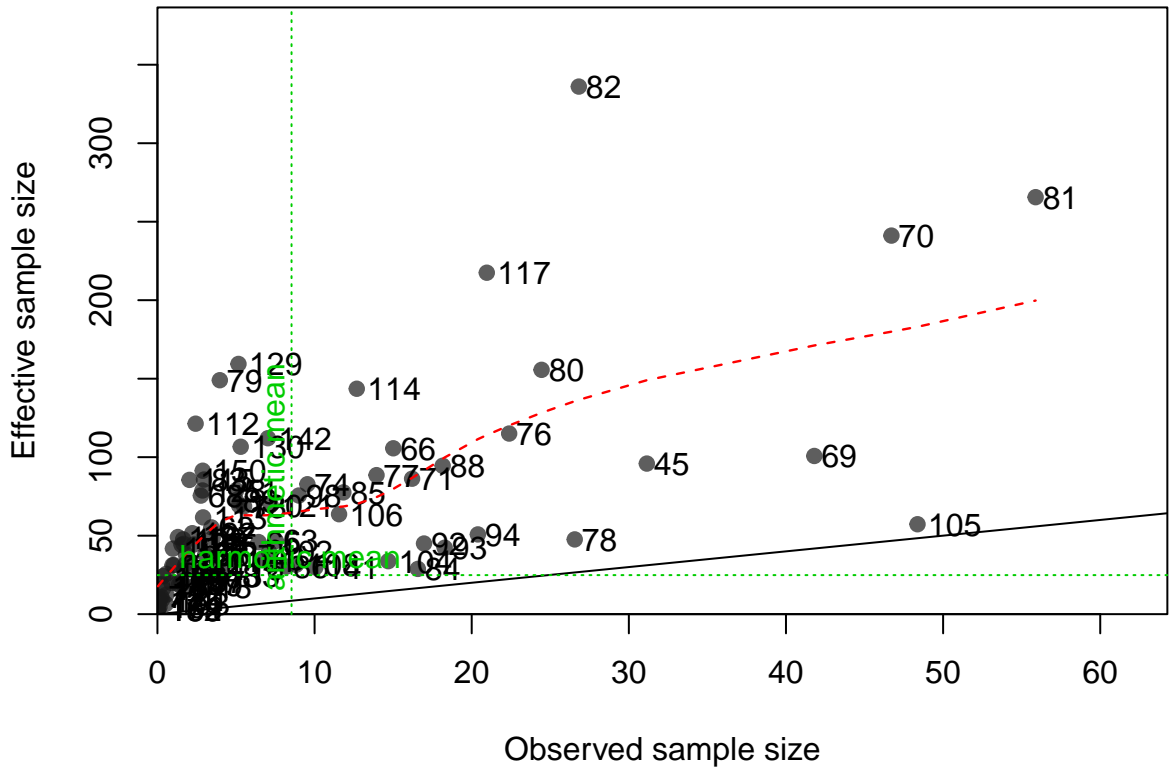


Proportion

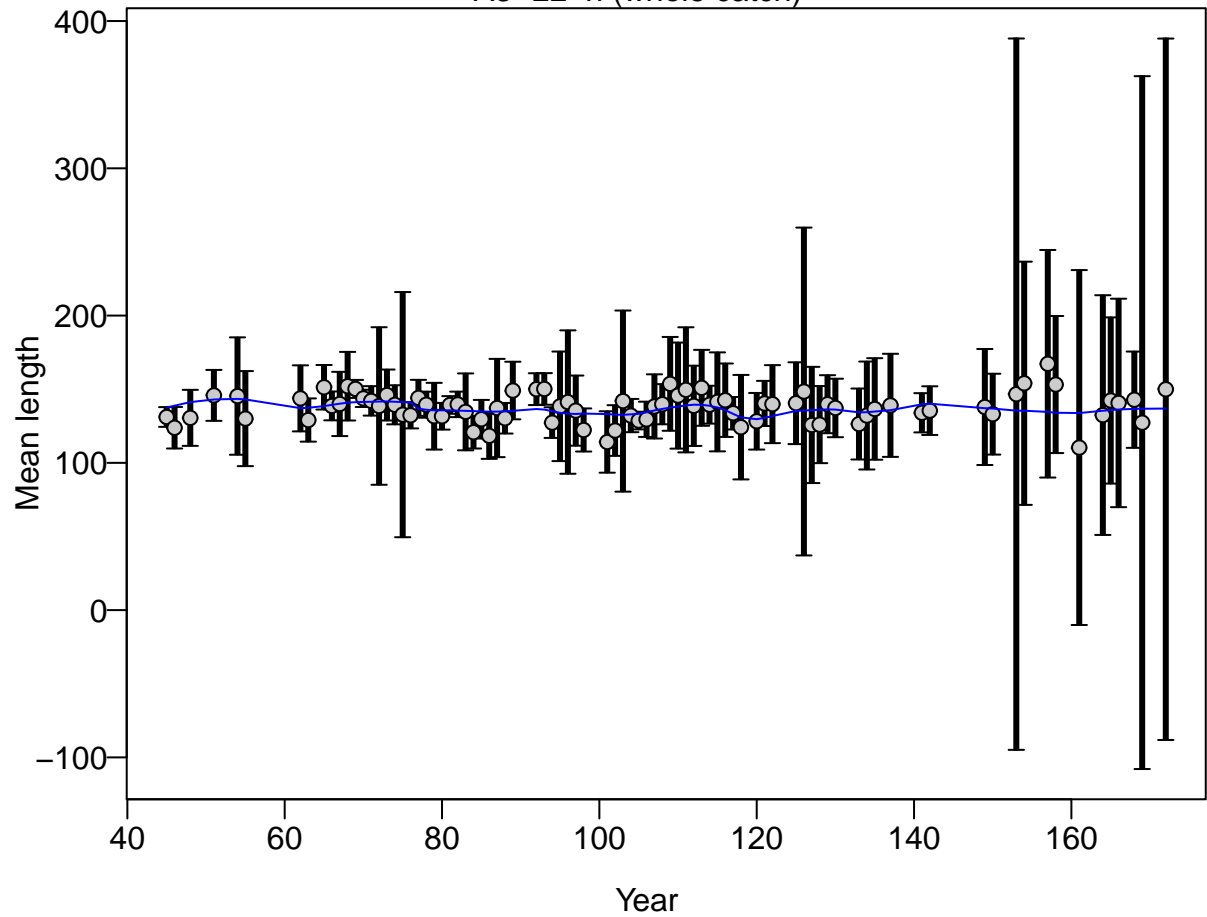


Length (cm)

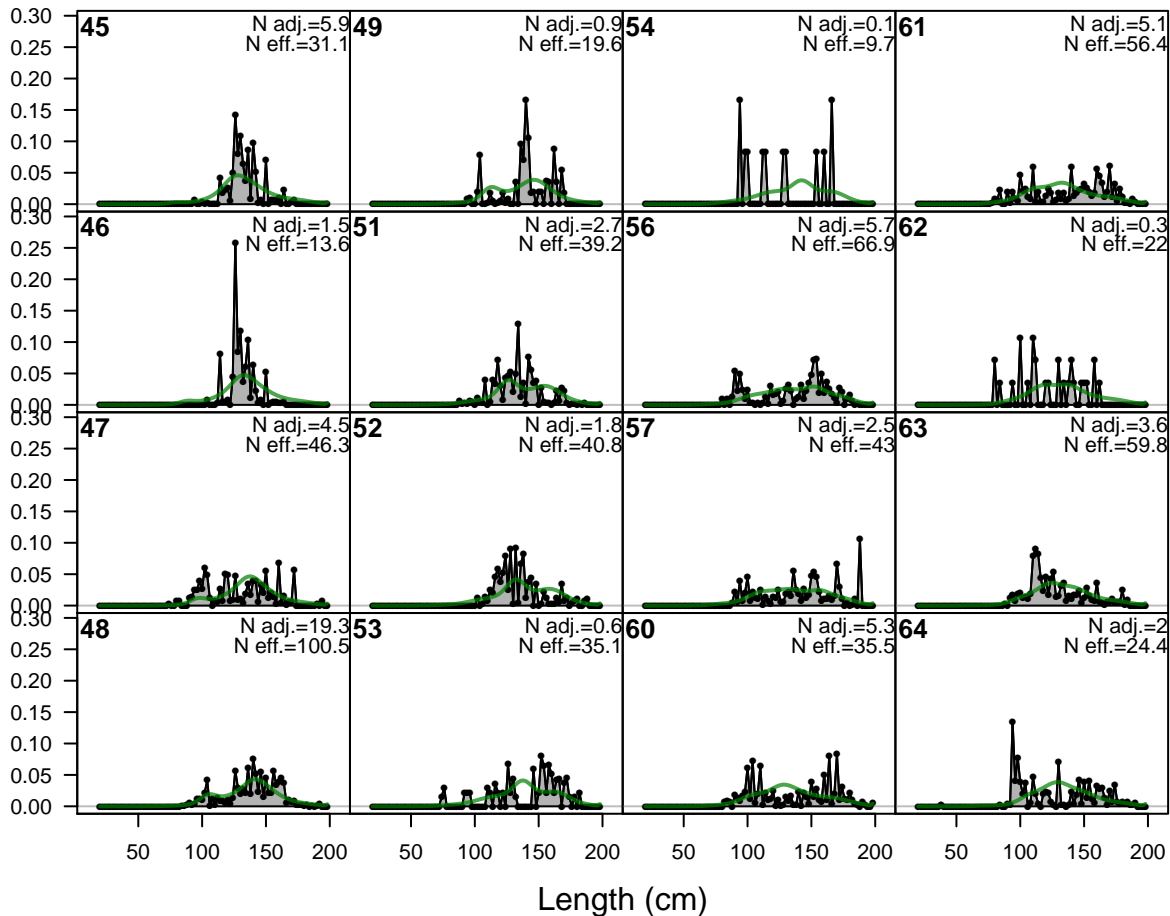




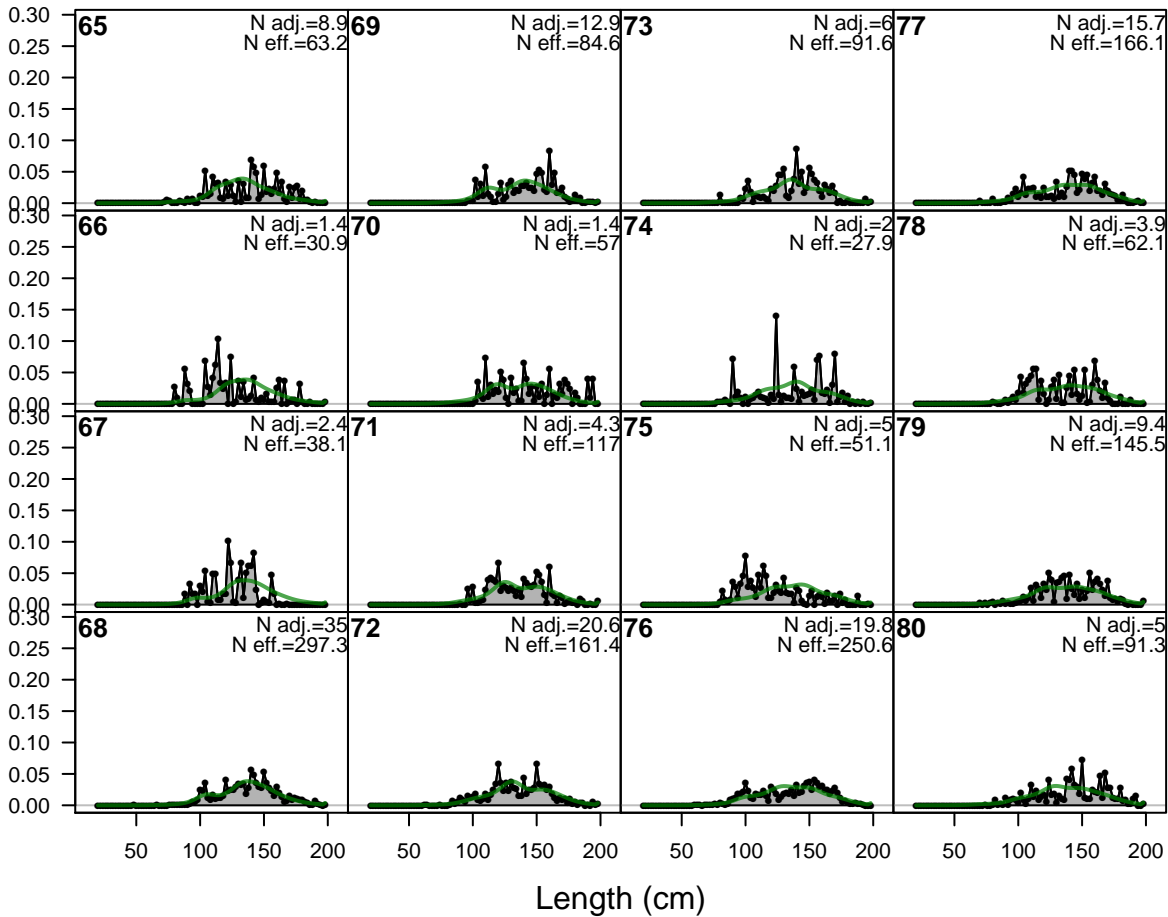
A3-LL-n (whole catch)



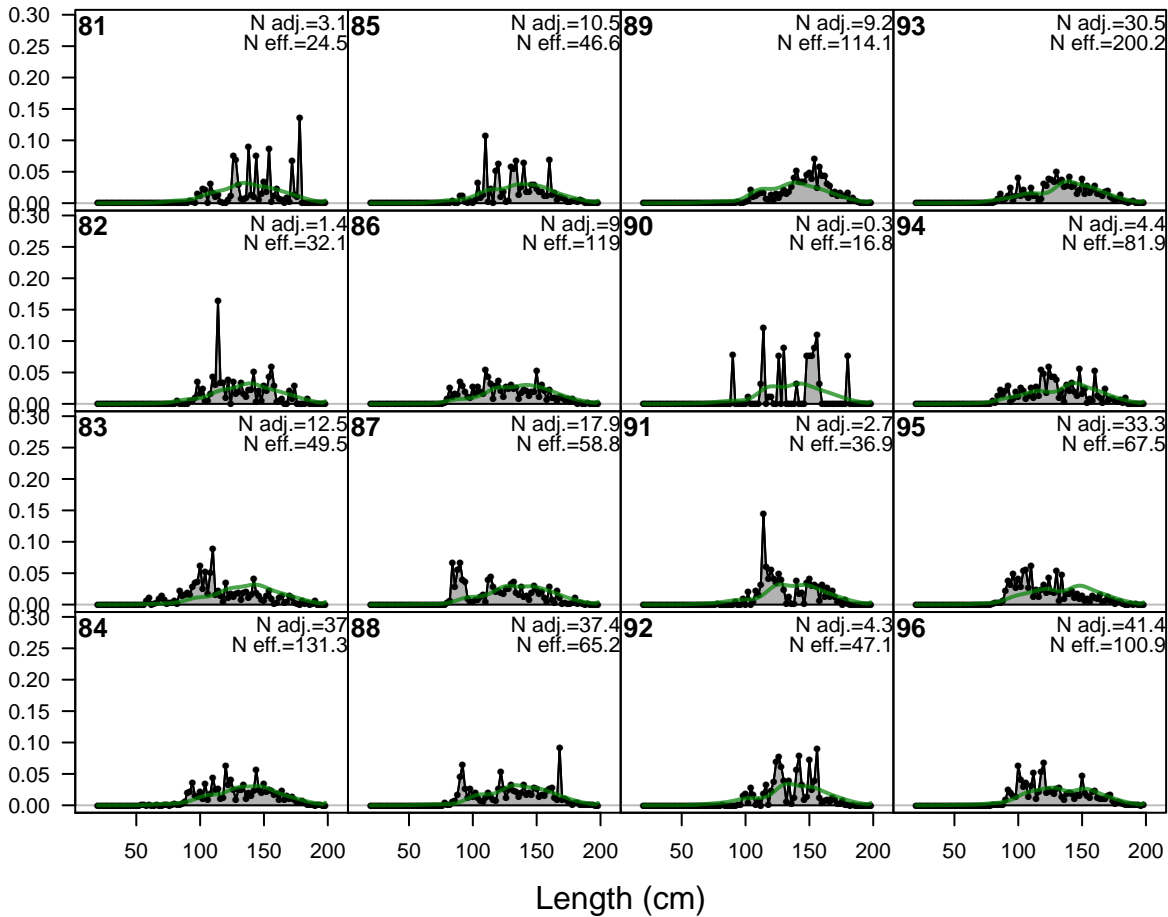
Proportion



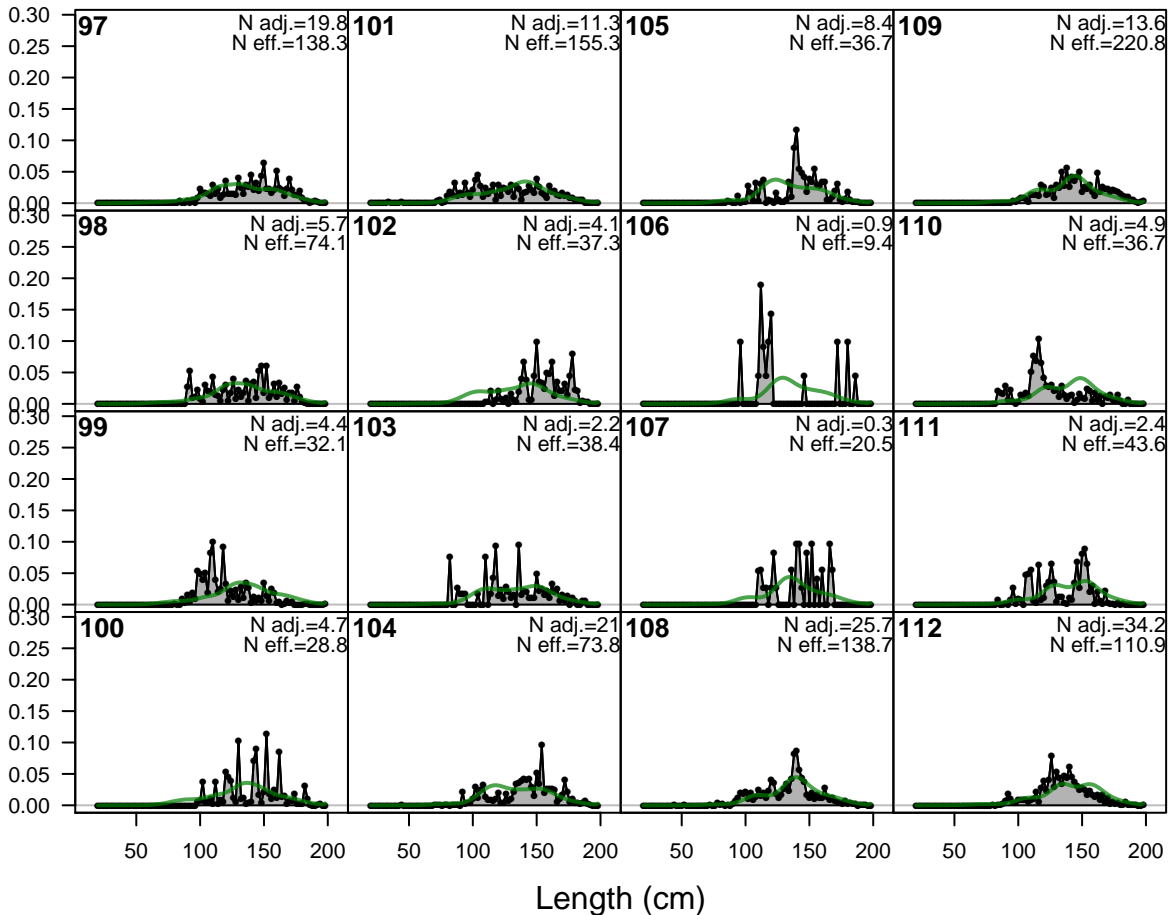
Proportion



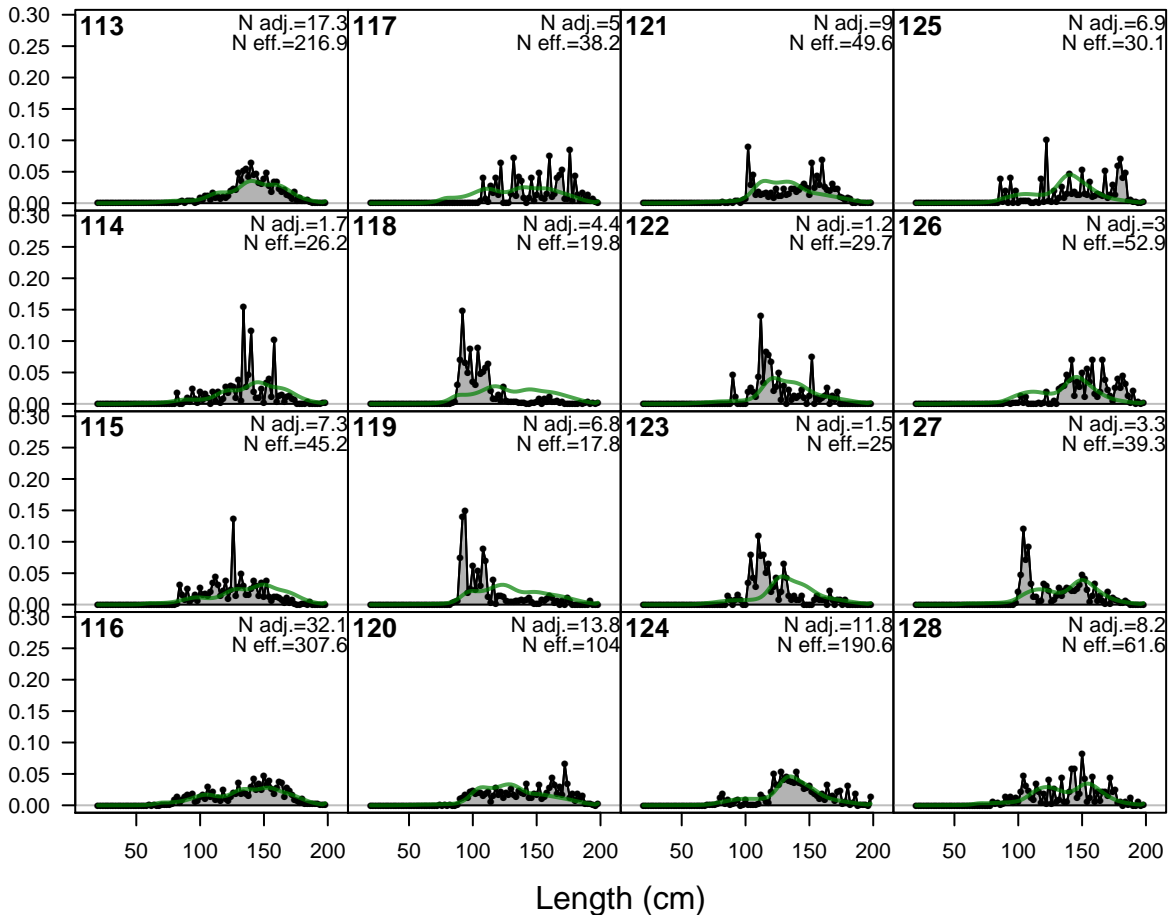
Proportion



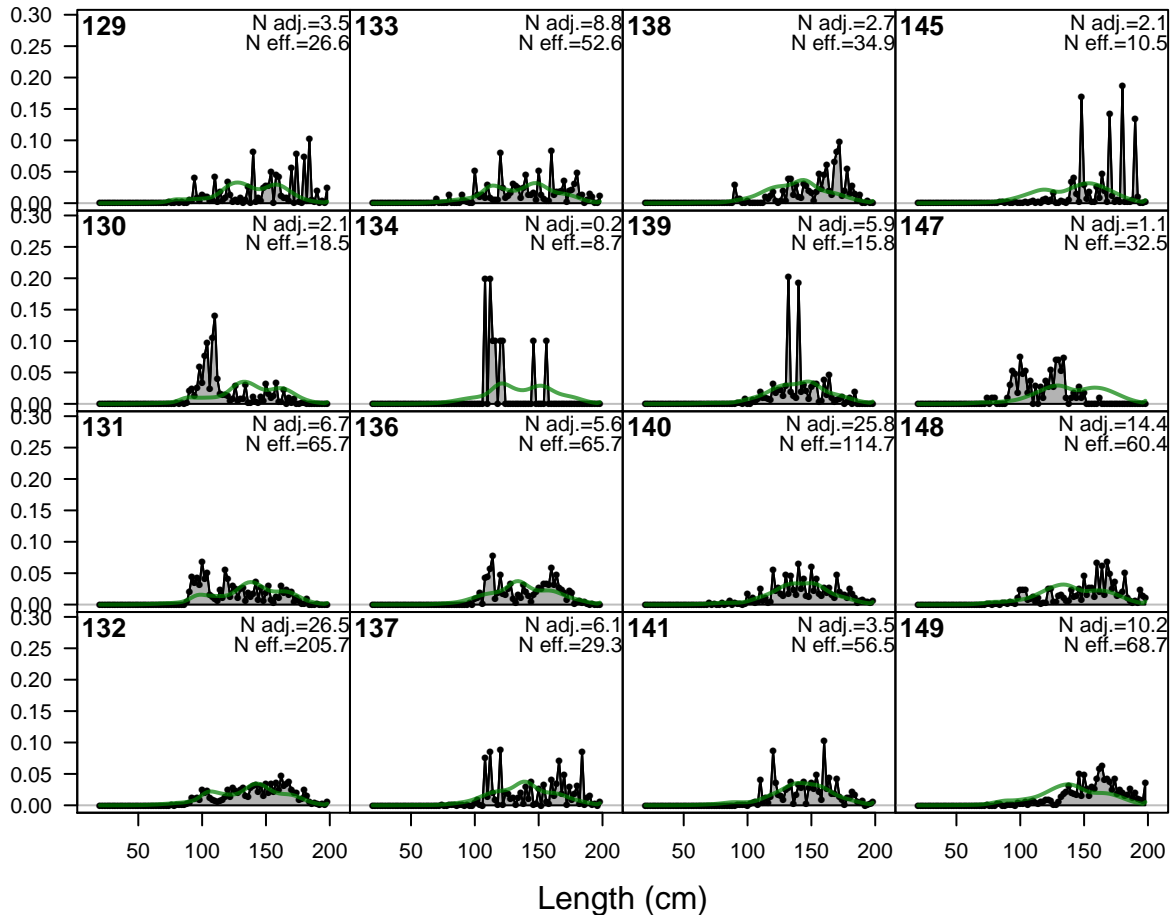
Proportion



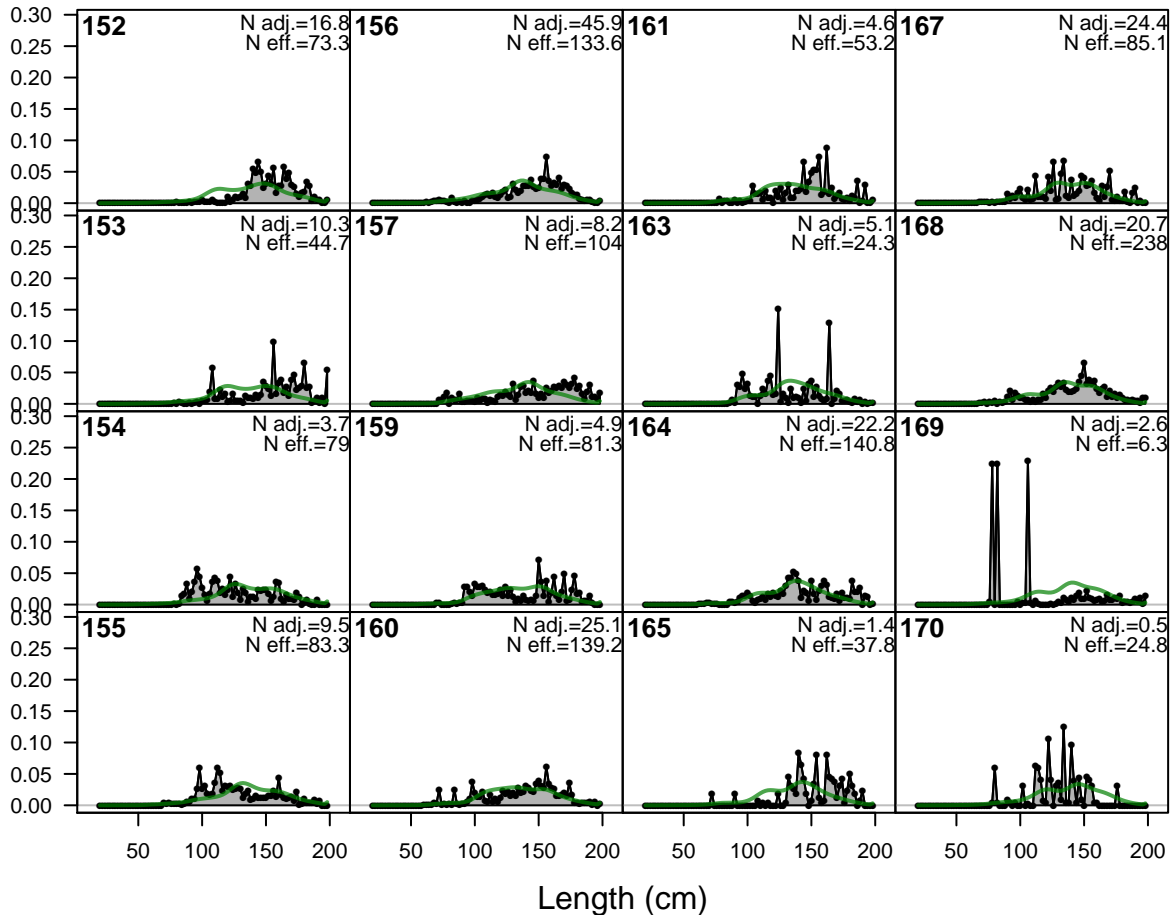
Proportion



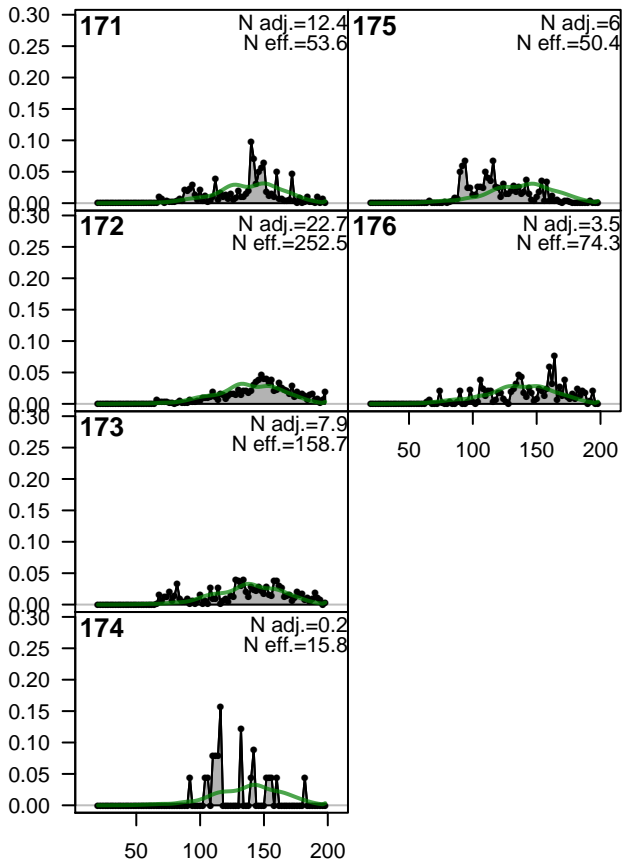
Proportion



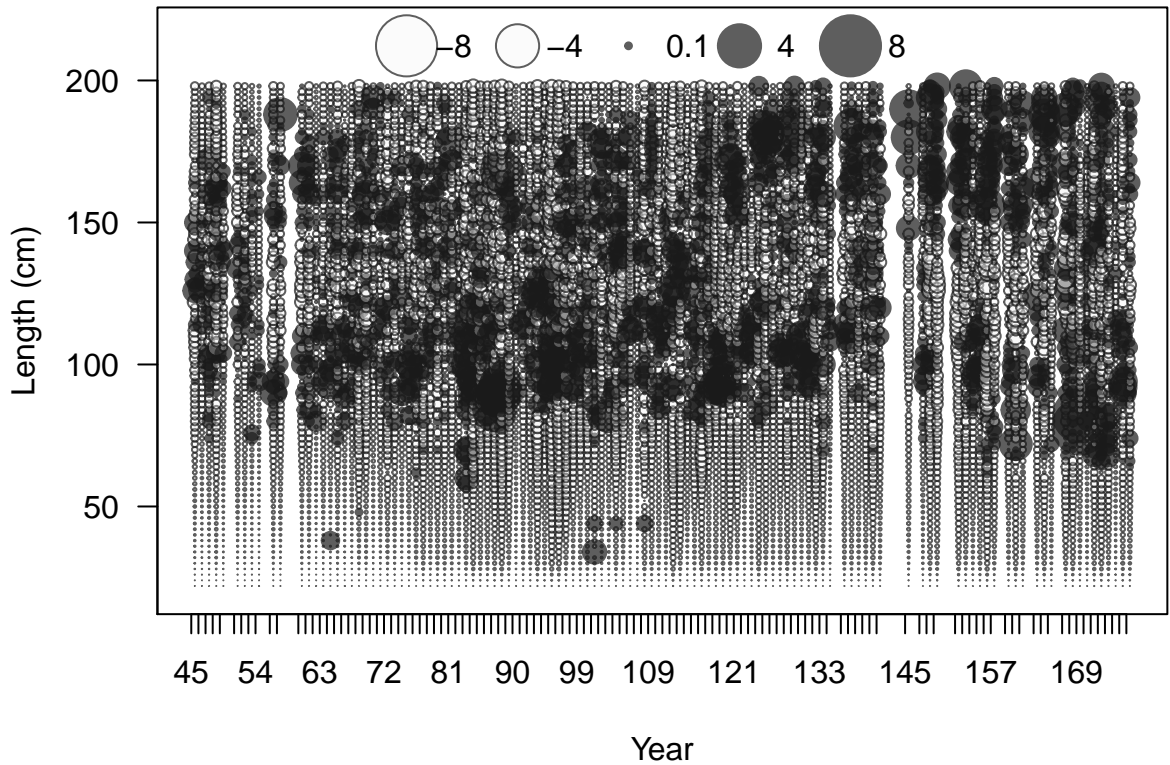
Proportion

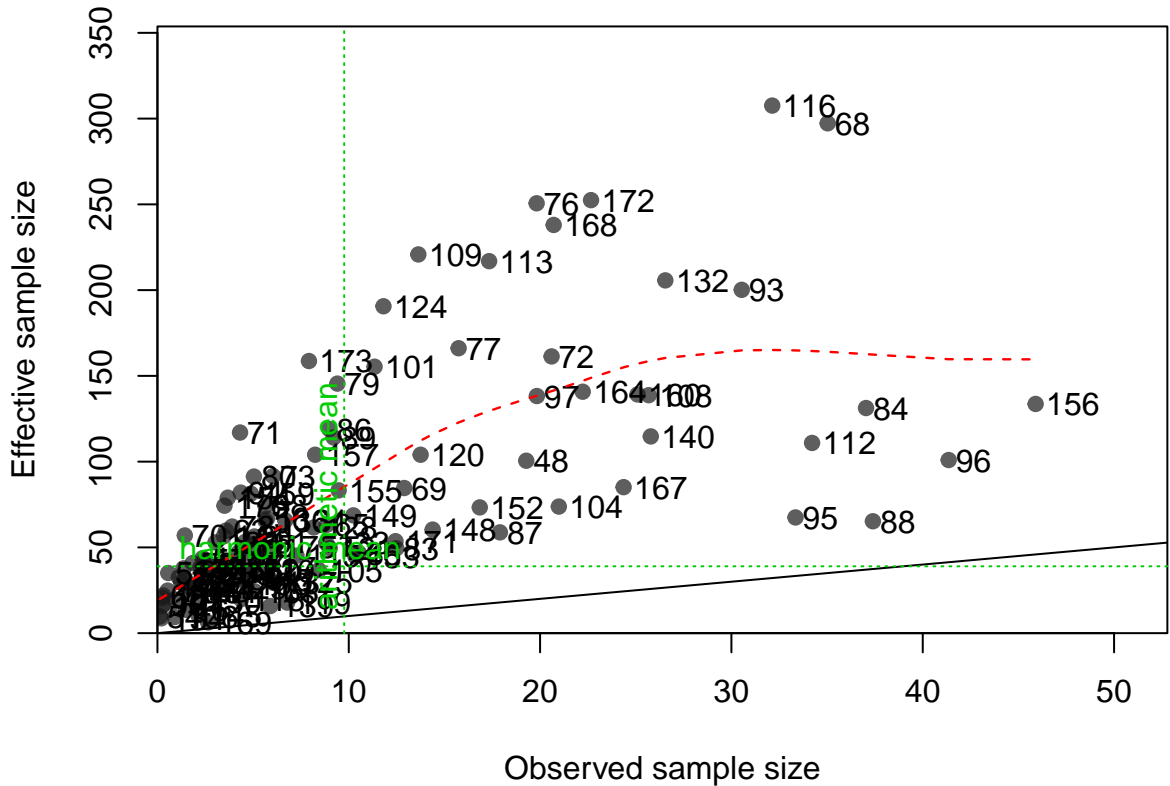


Proportion

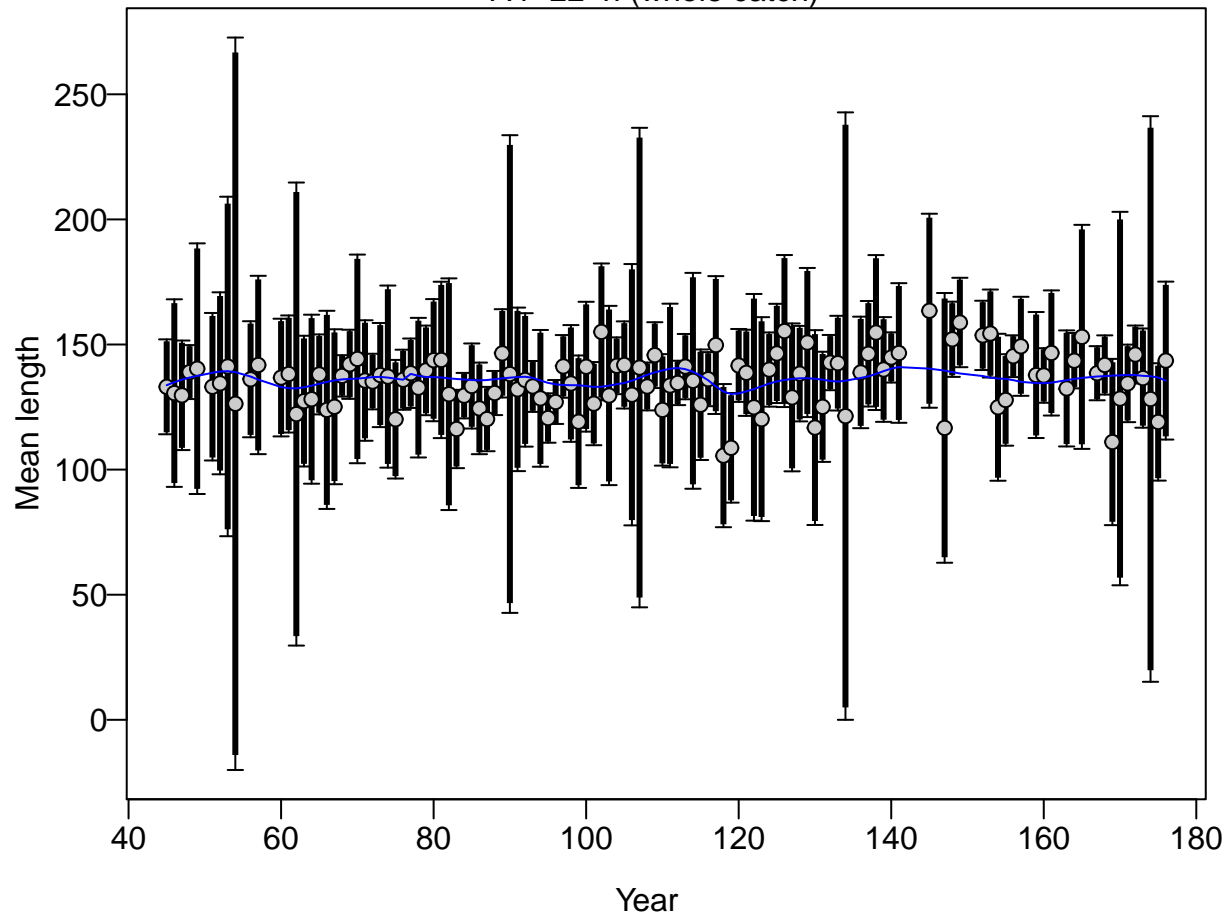


Length (cm)

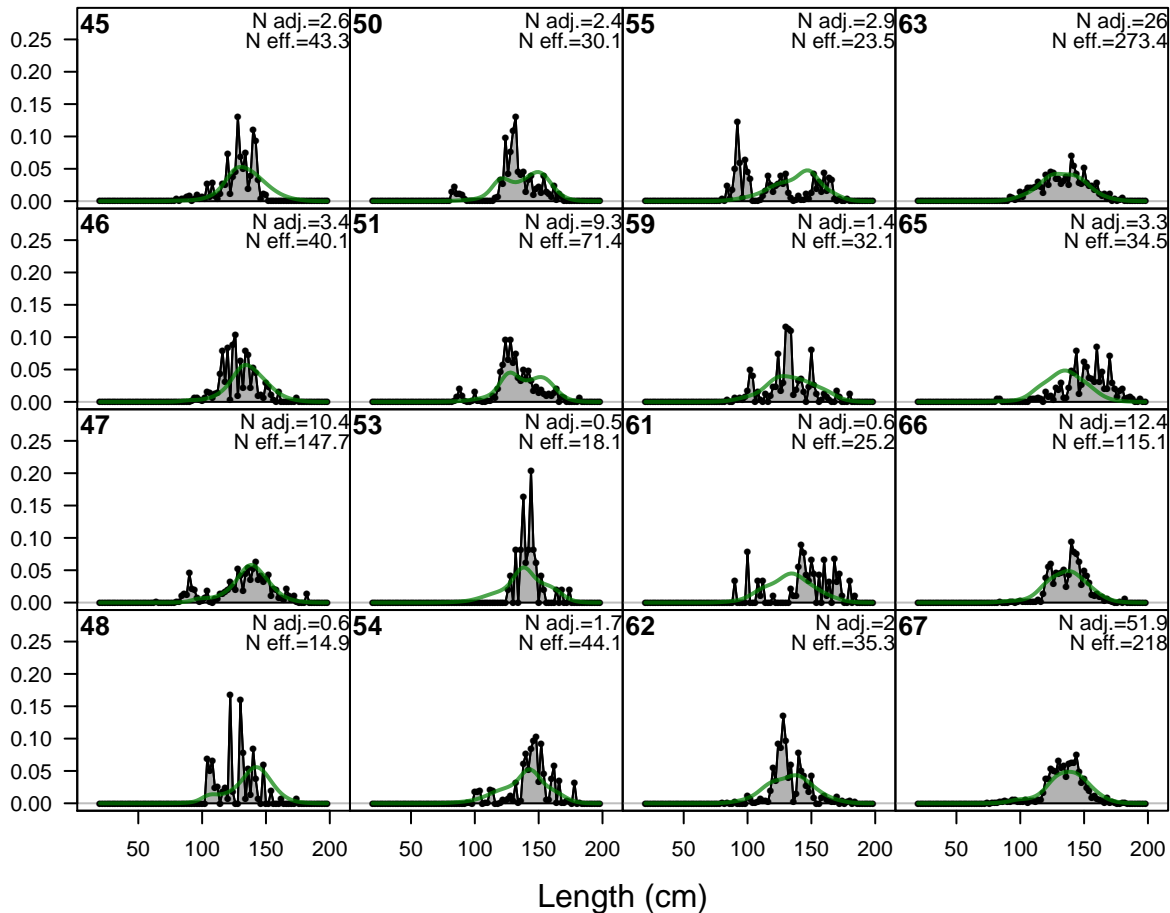




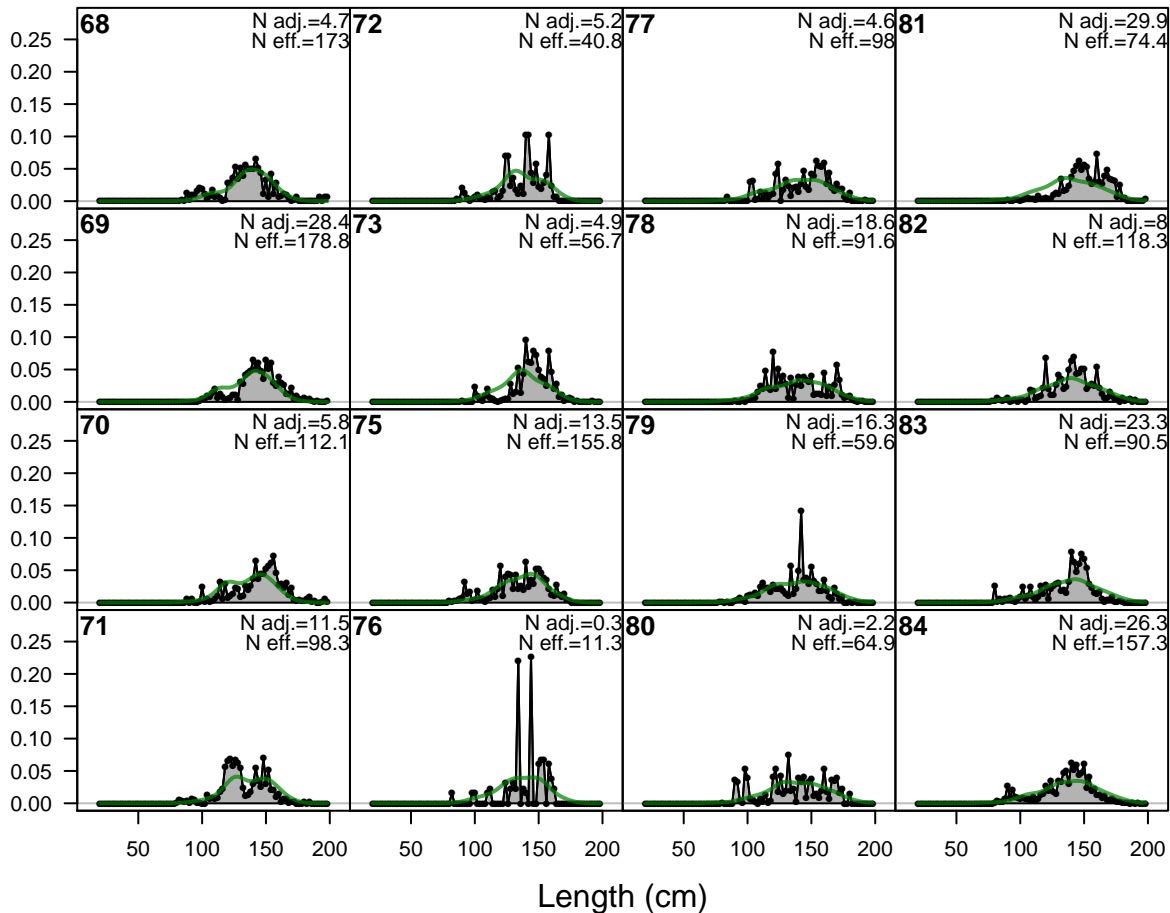
A4-LL-n (whole catch)



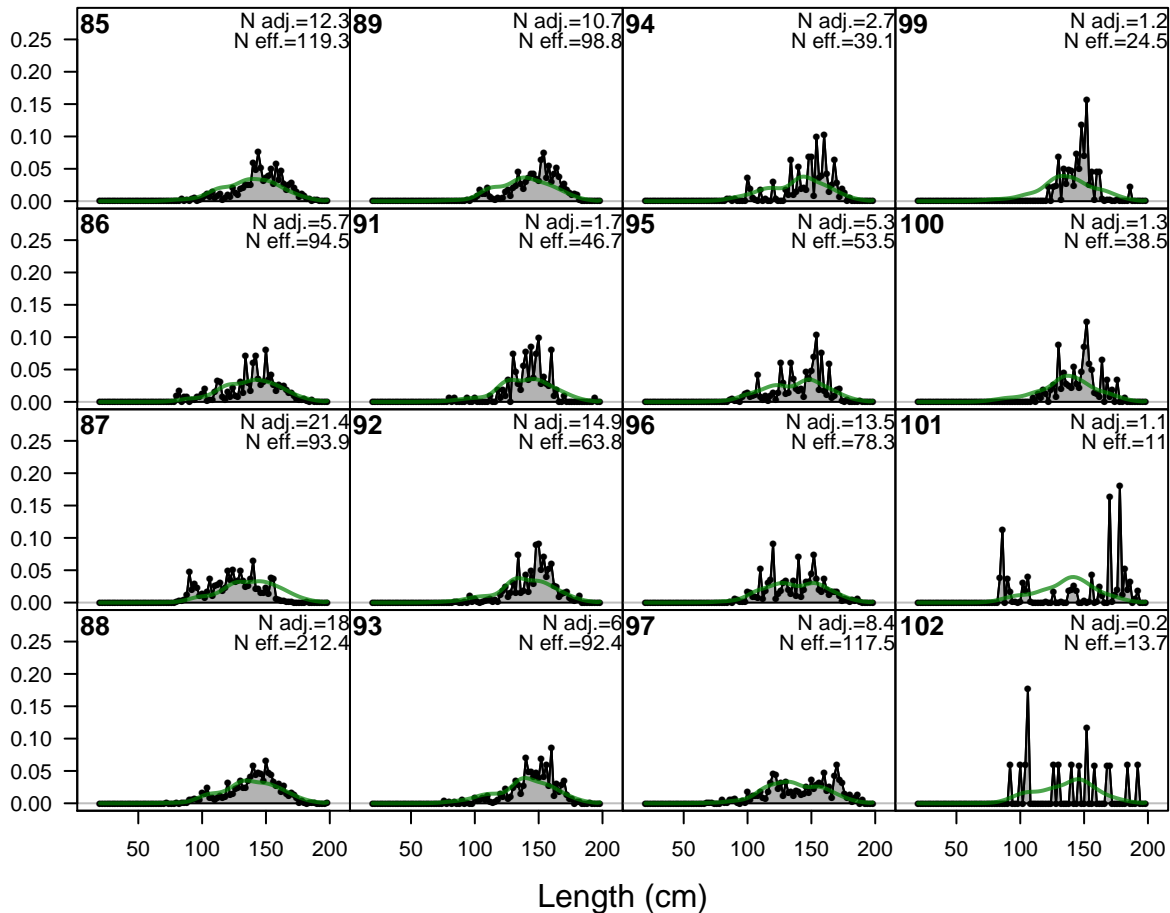
Proportion



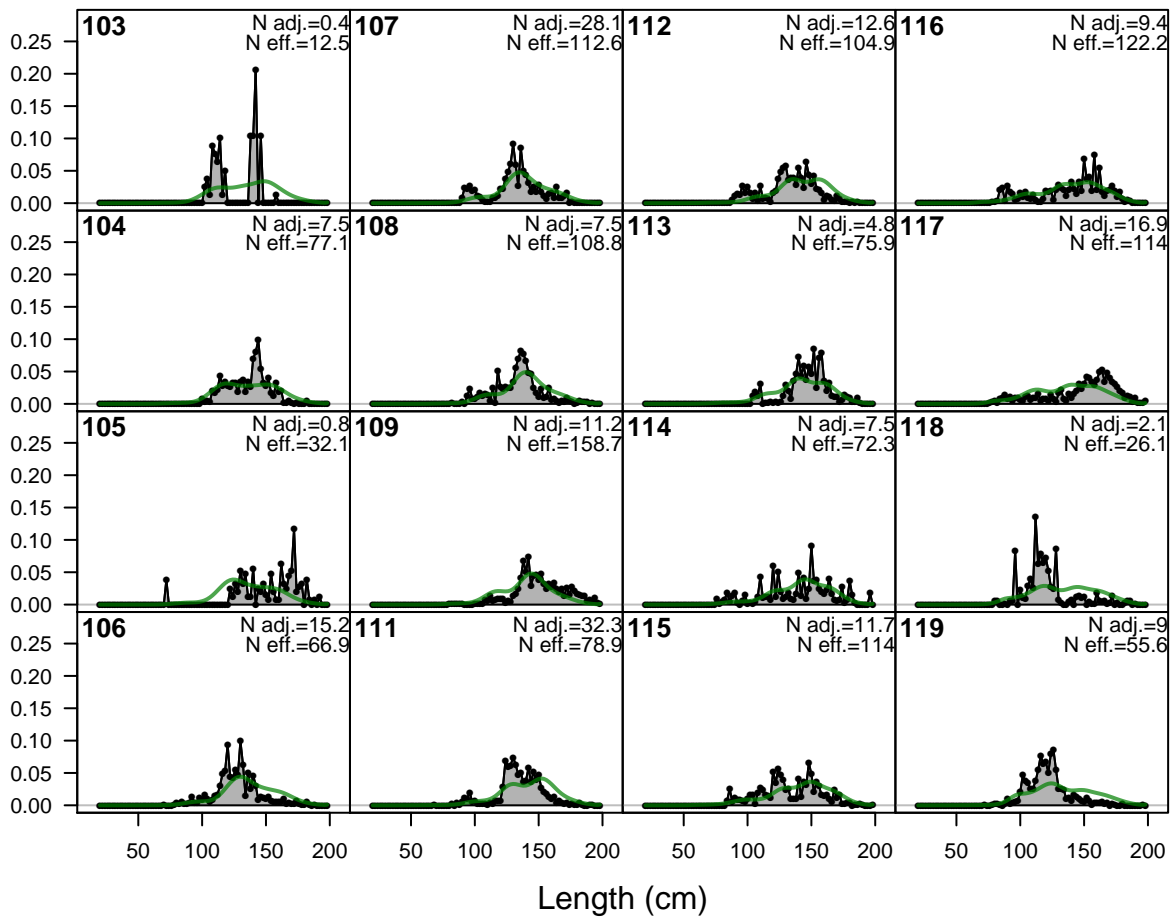
Proportion



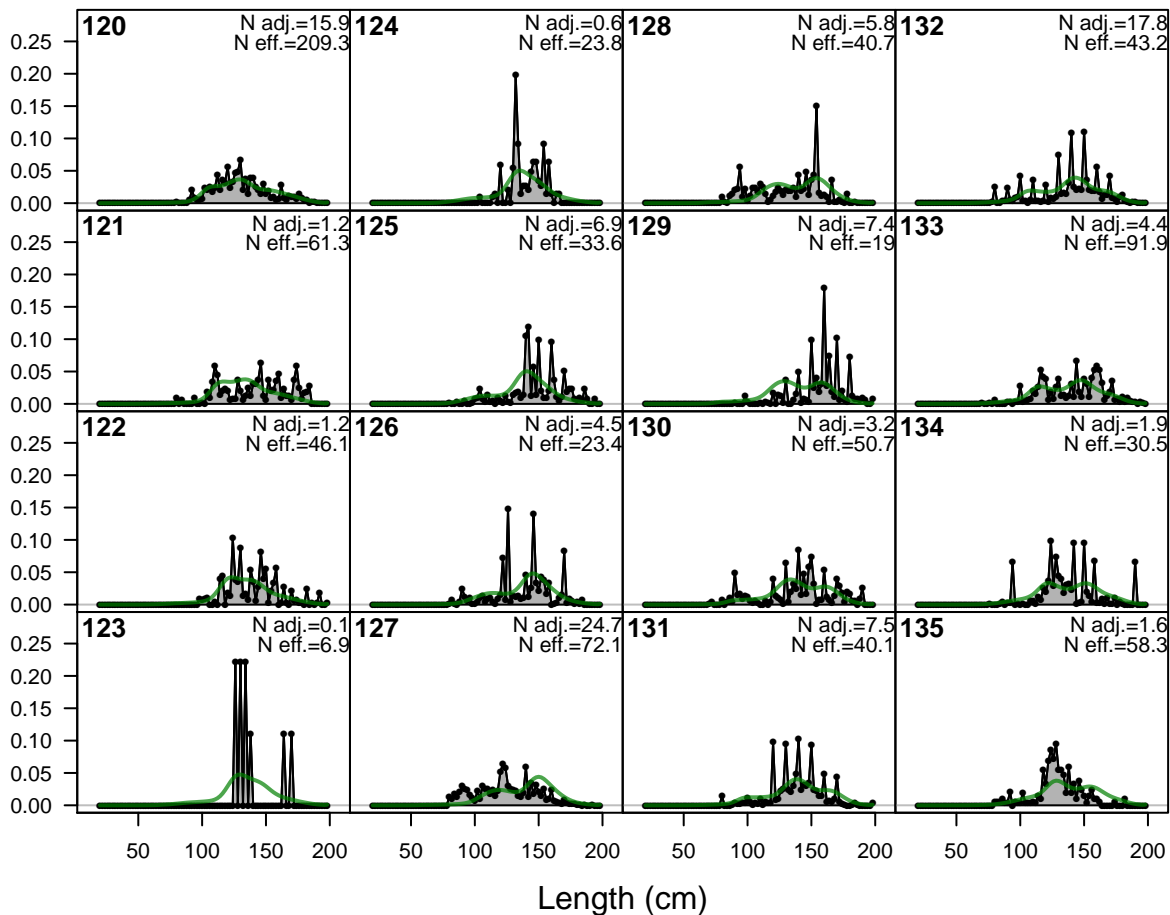
Proportion



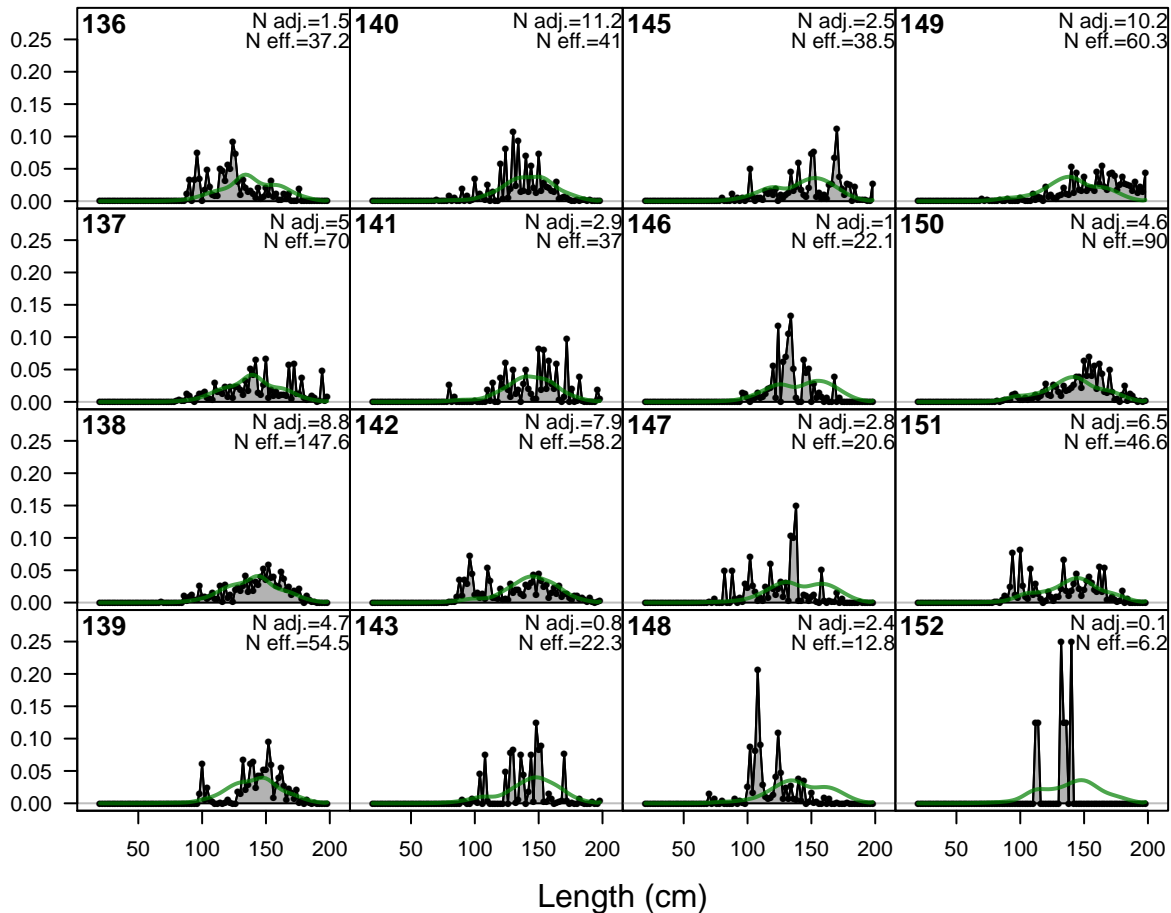
Proportion



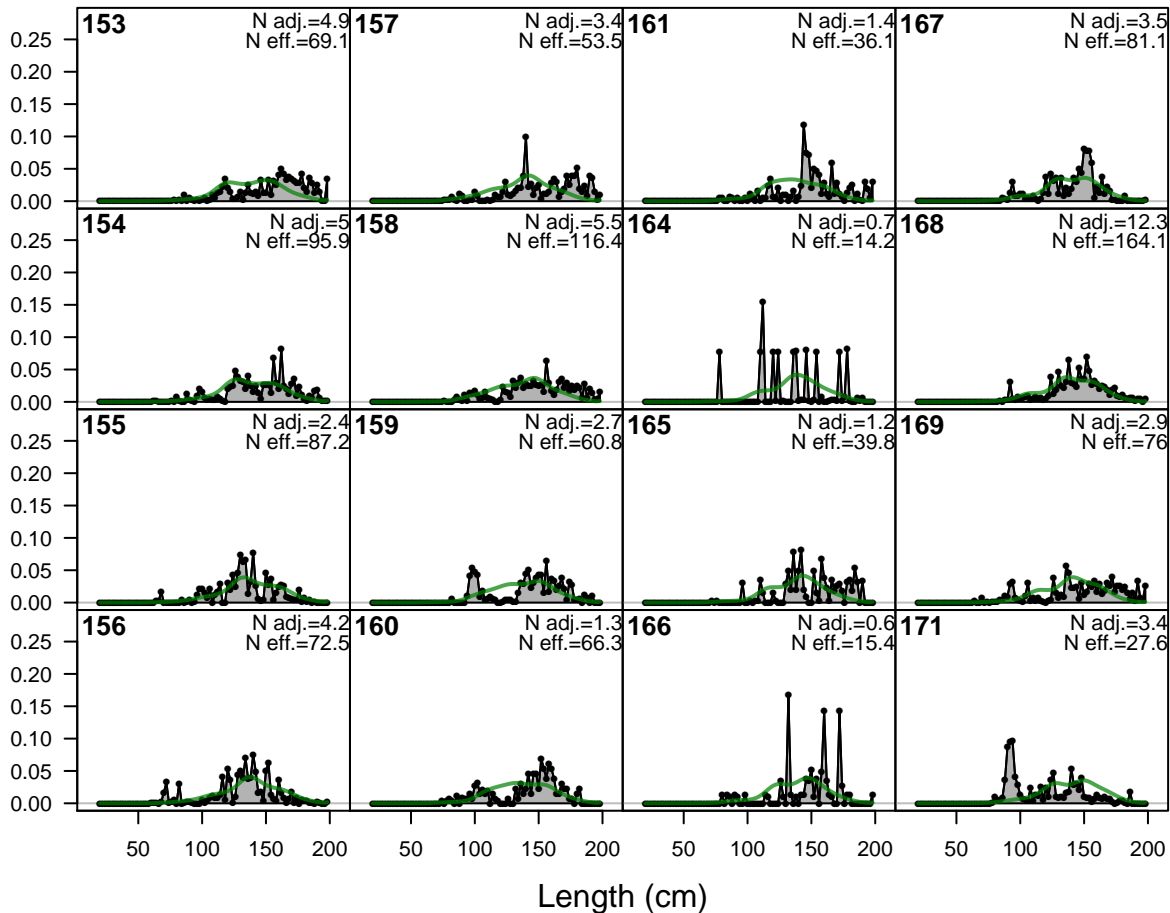
Proportion



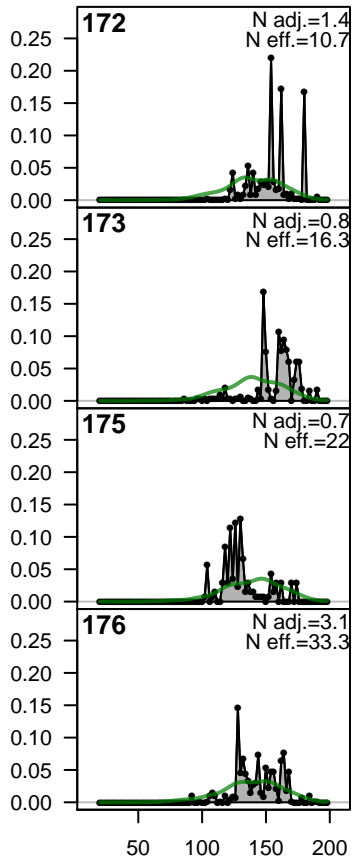
Proportion



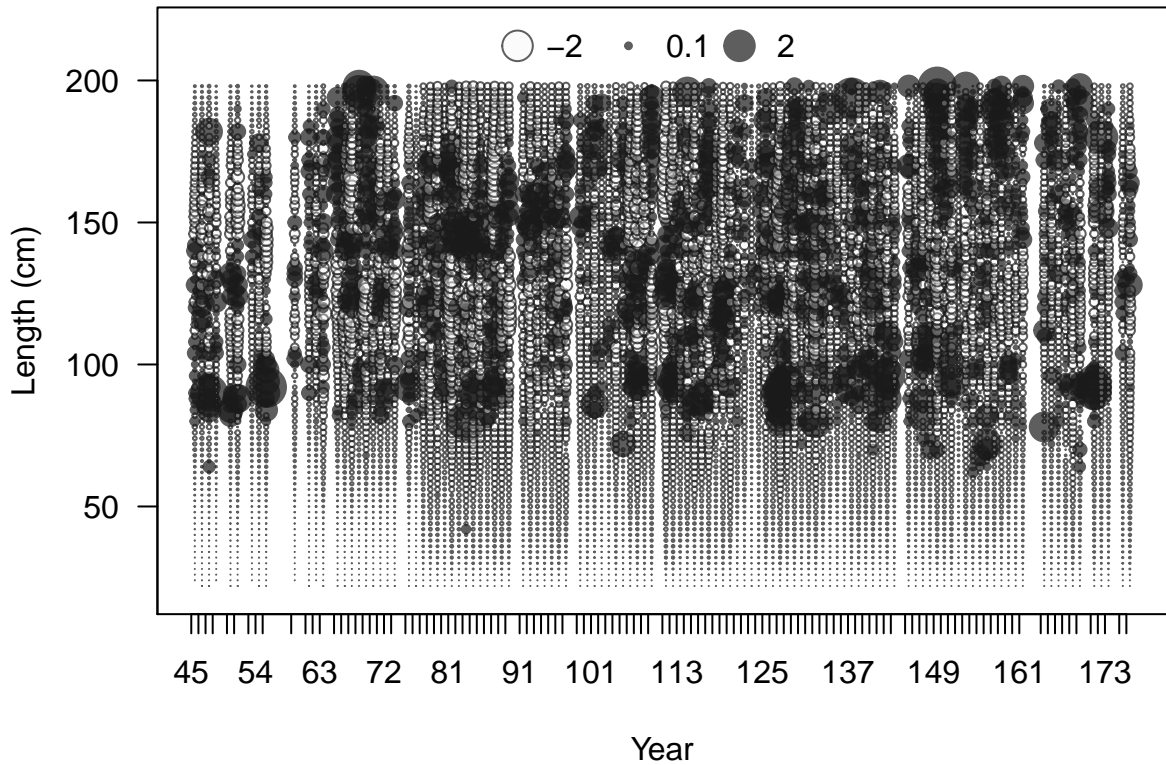
Proportion

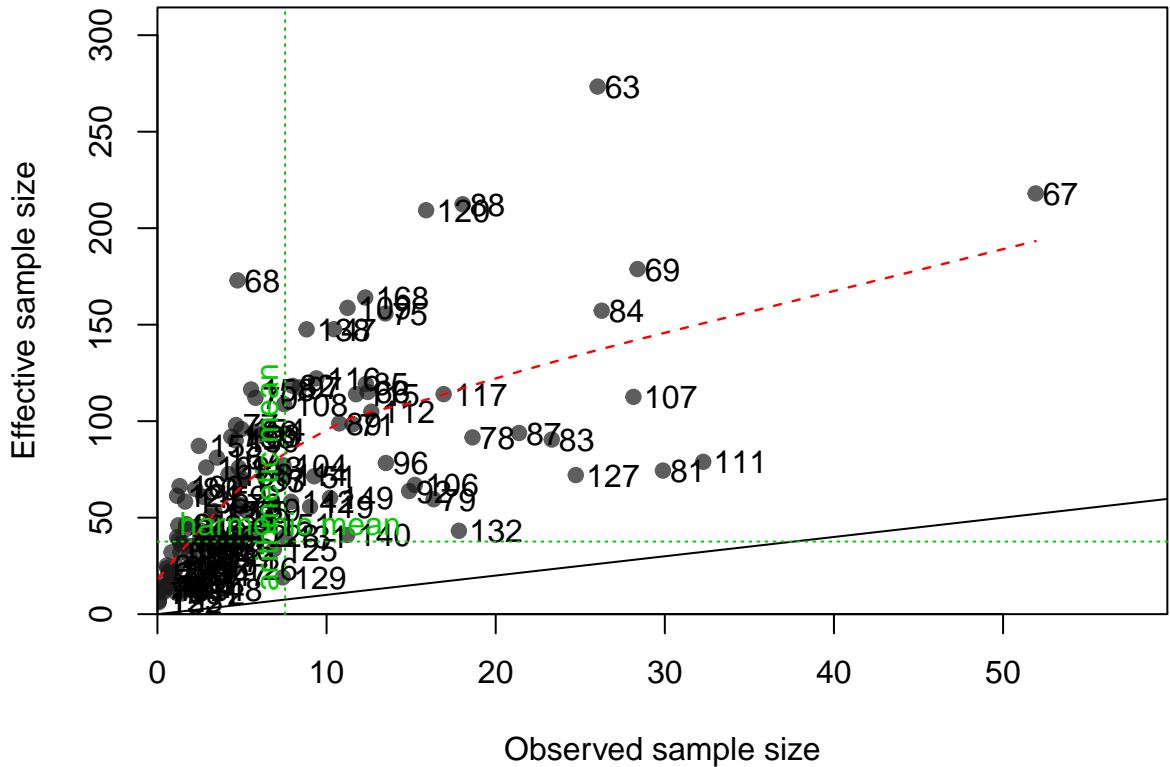


Proportion

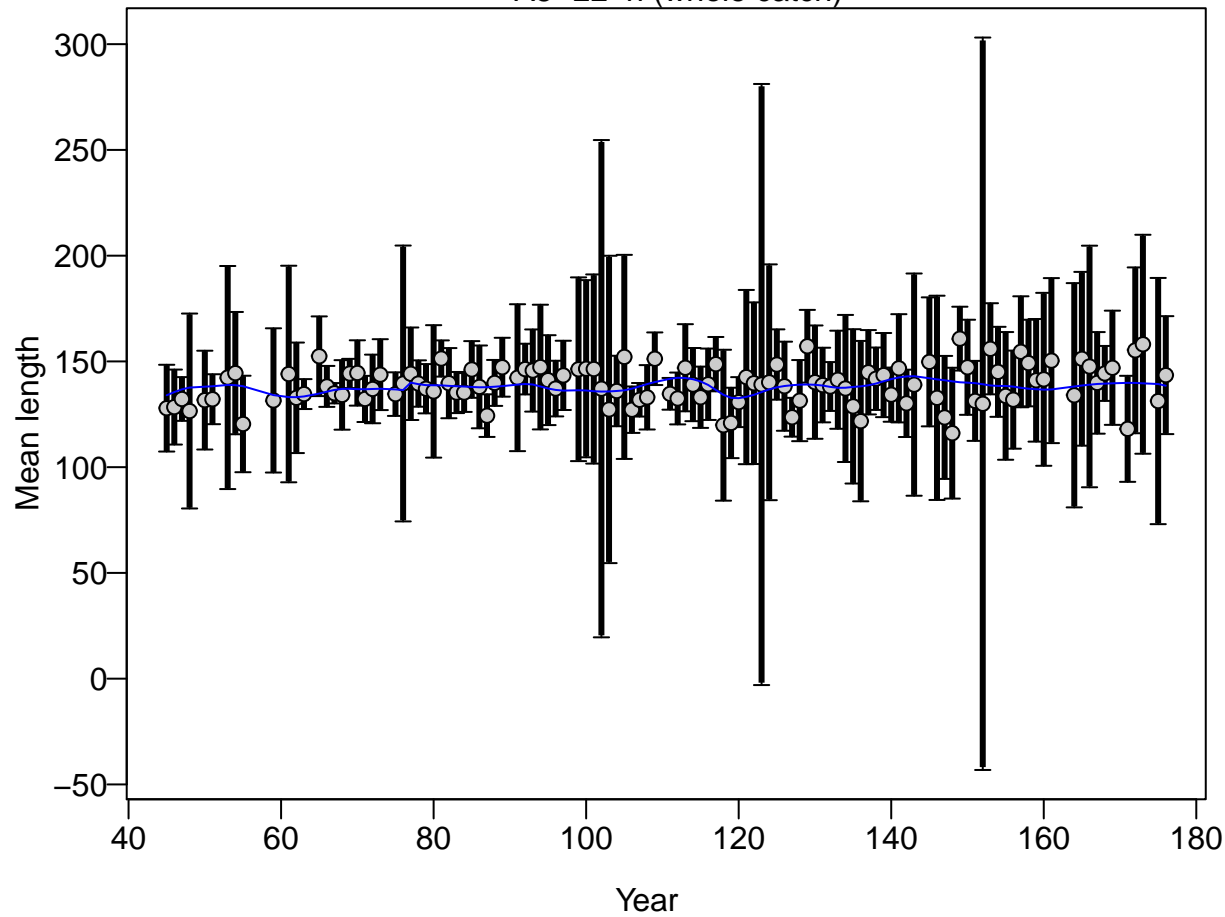


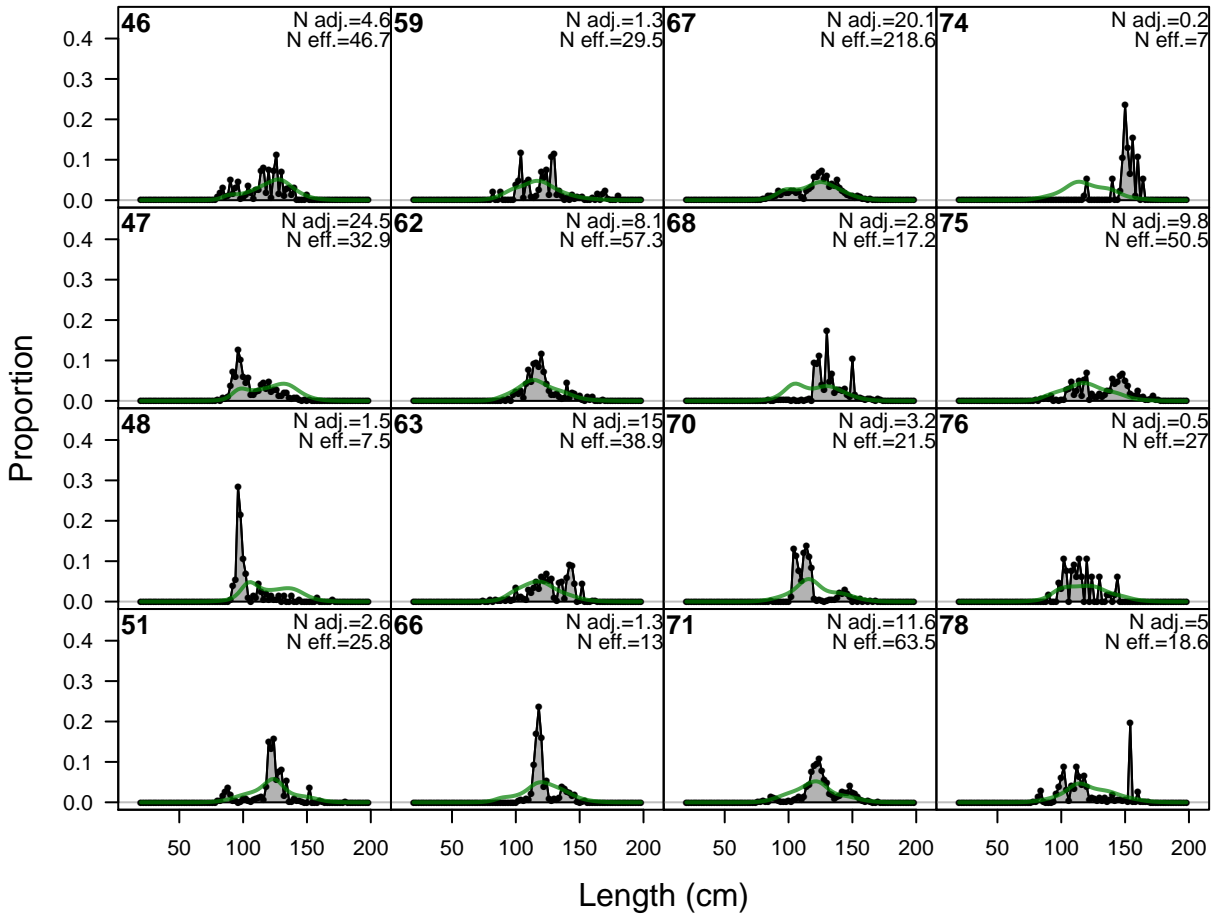
Length (cm)



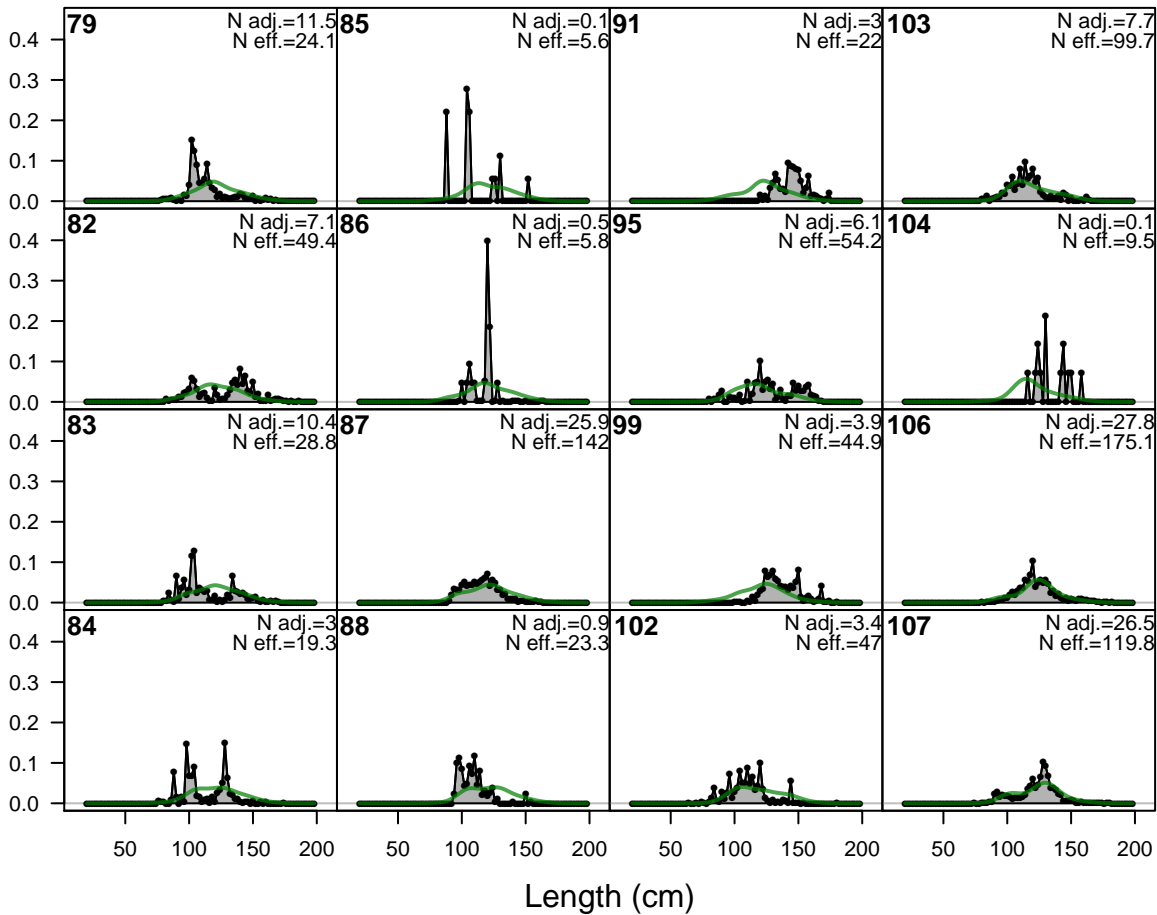


A5-LL-n (whole catch)

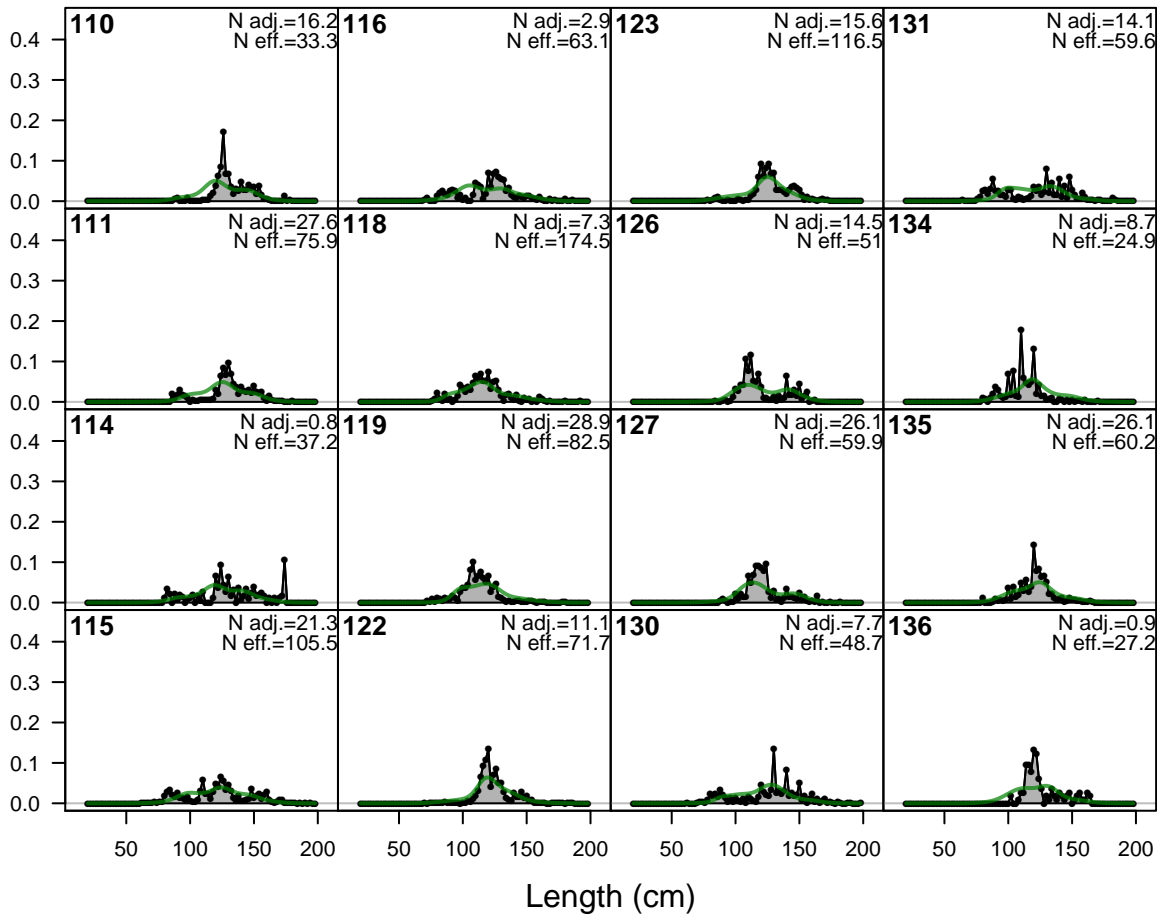




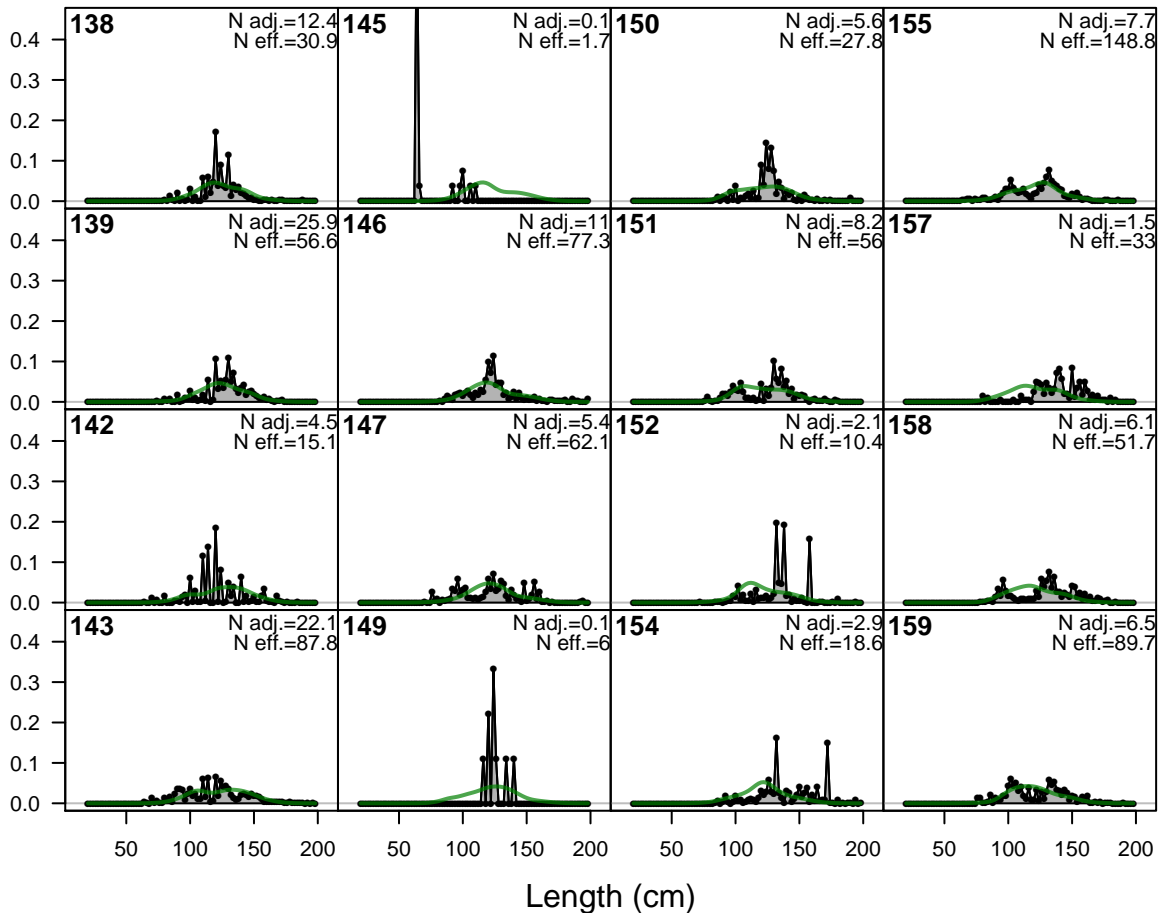
Proportion



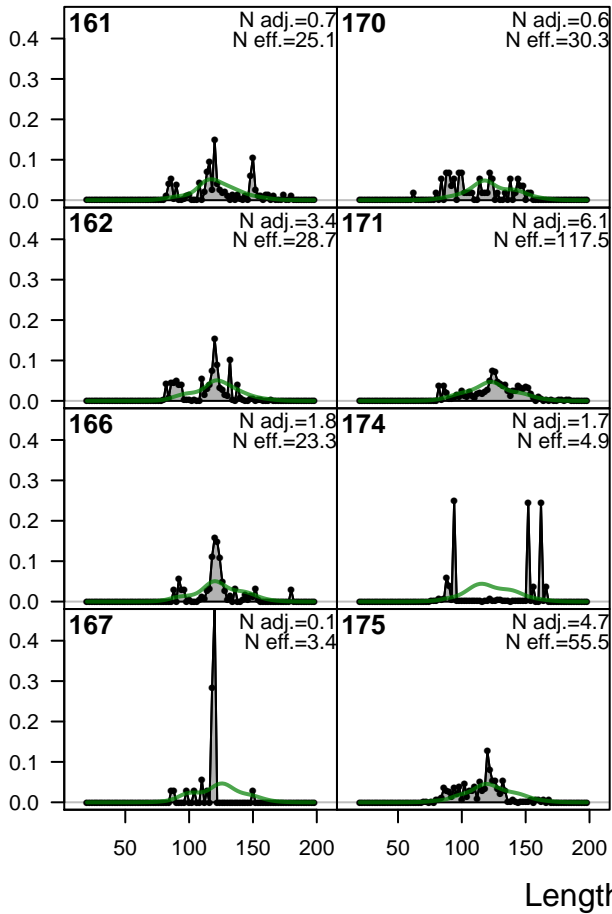
Proportion

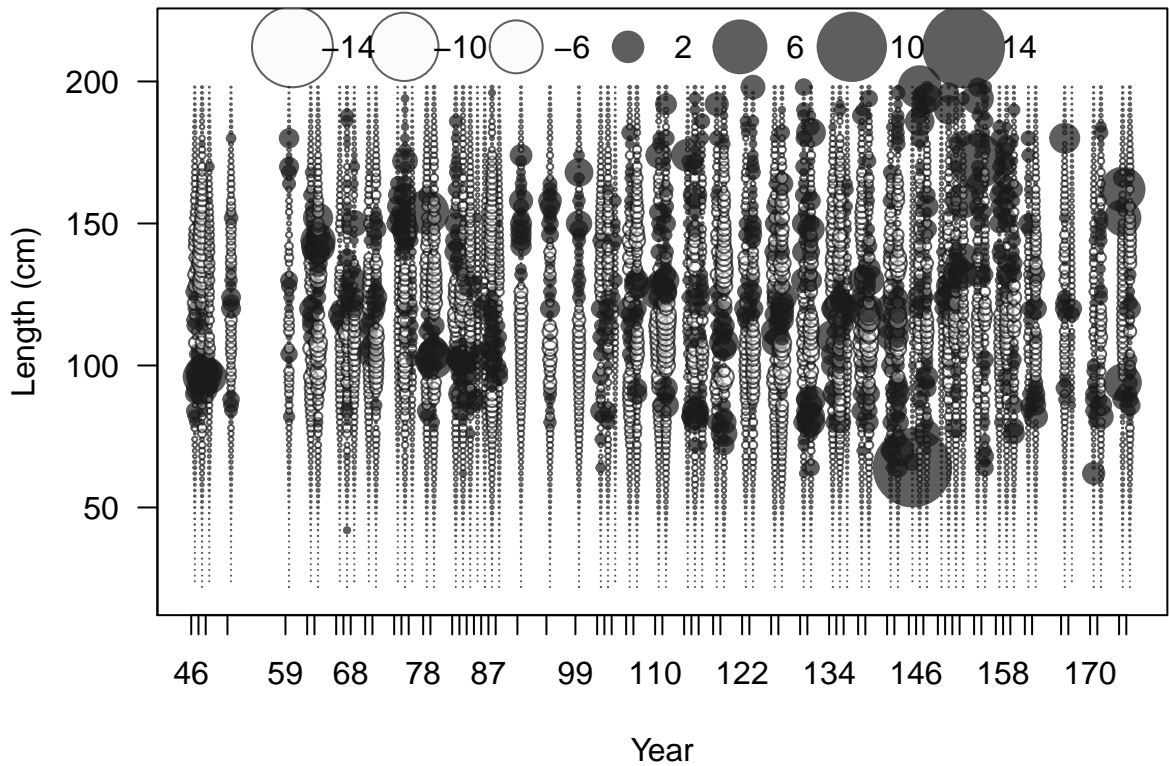


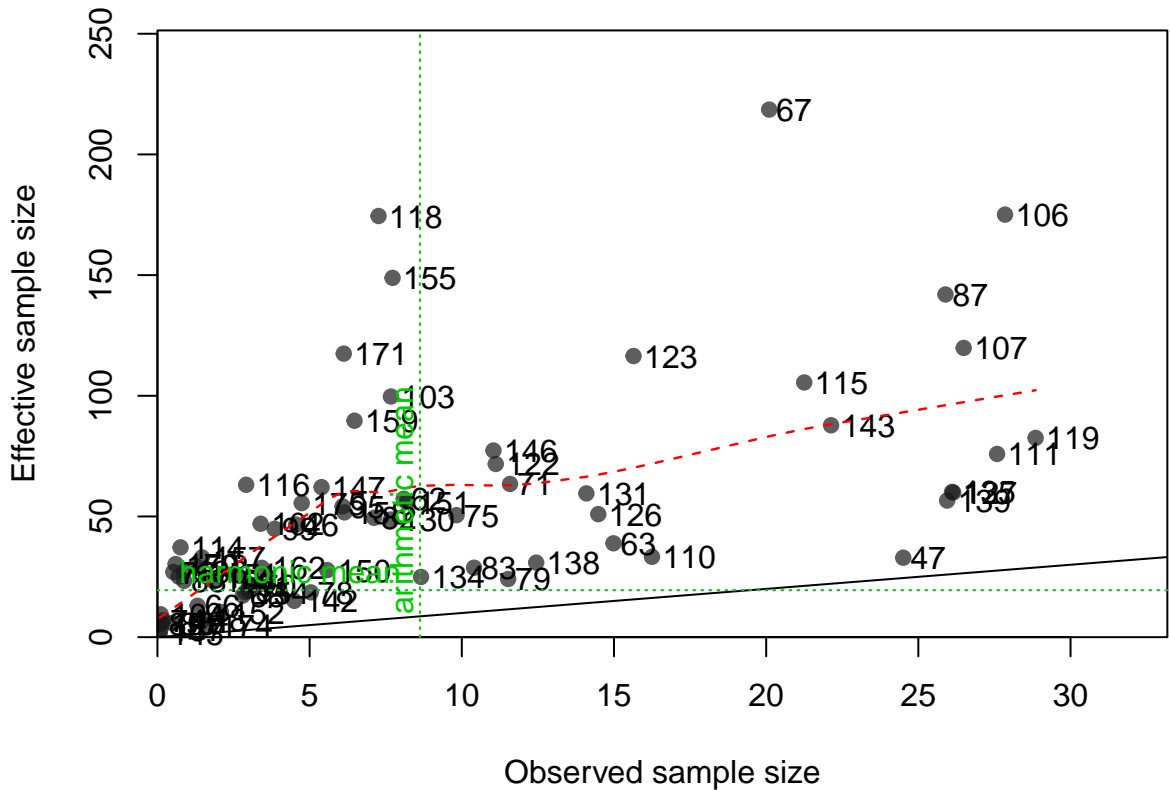
Proportion



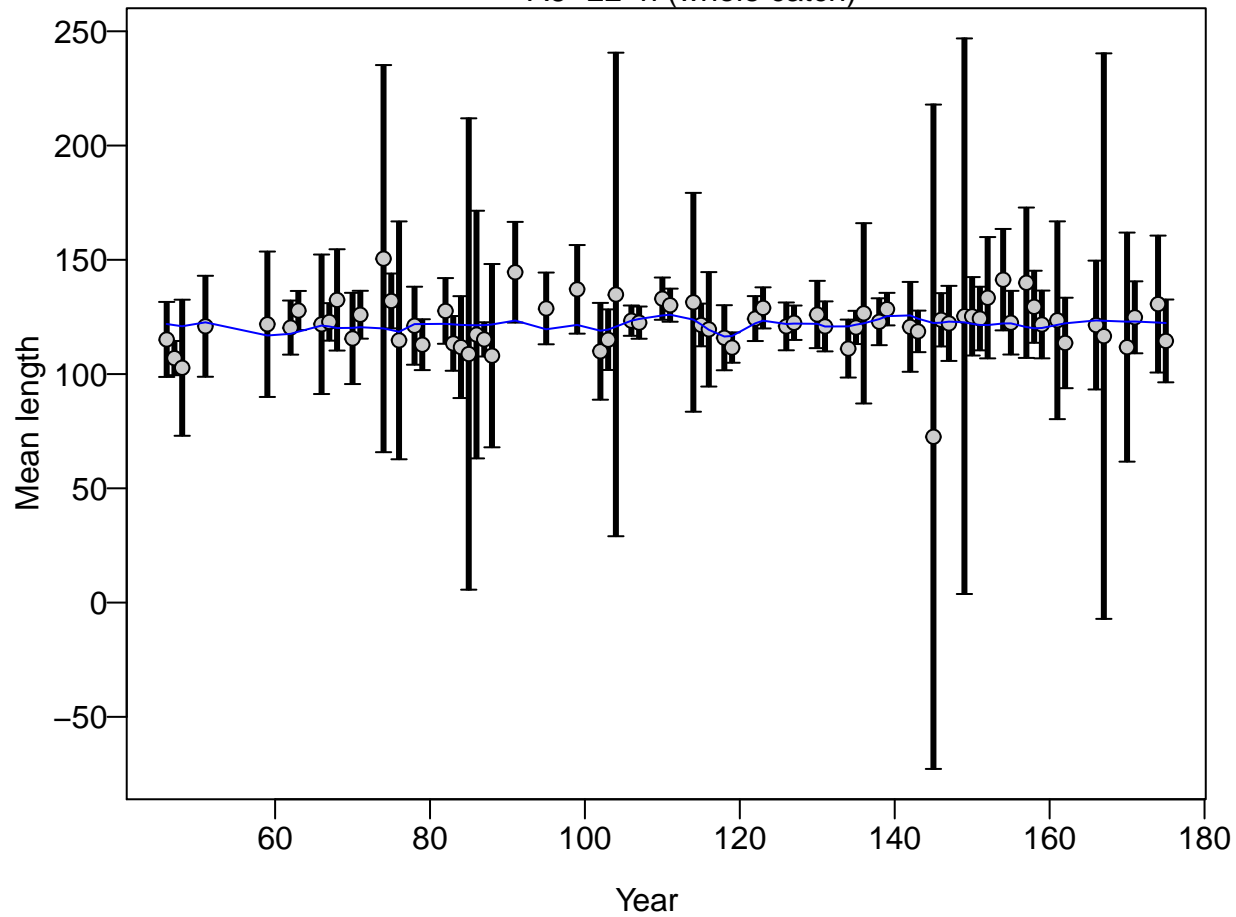
Proportion

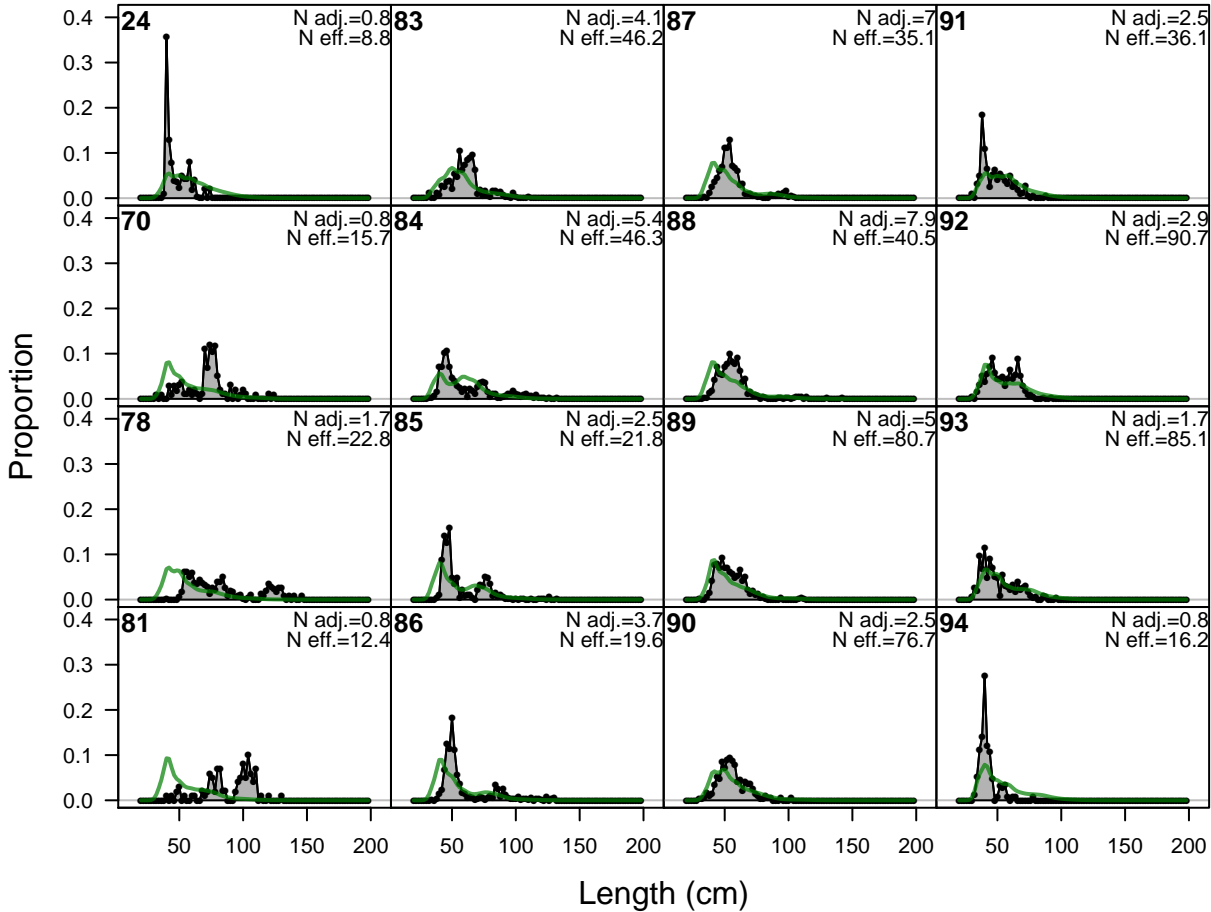


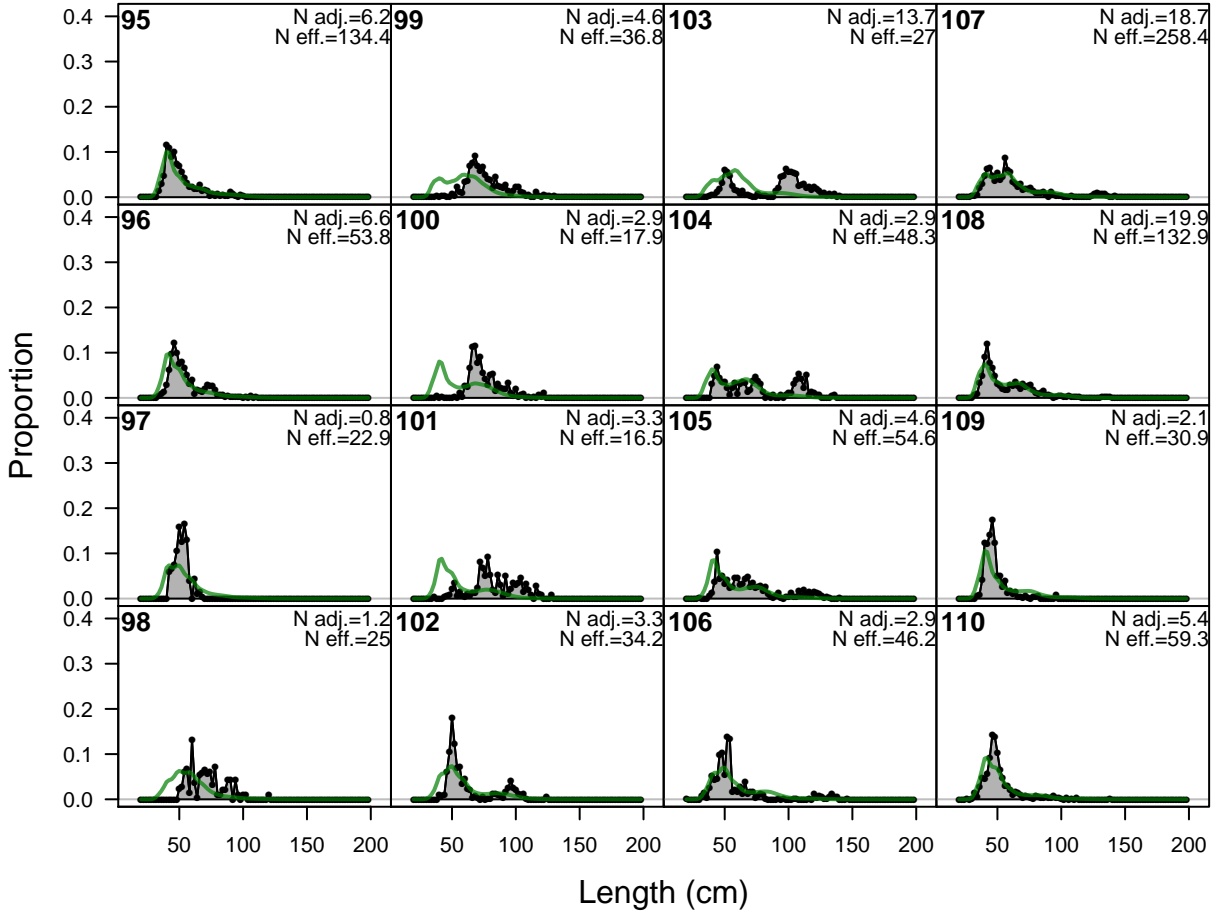




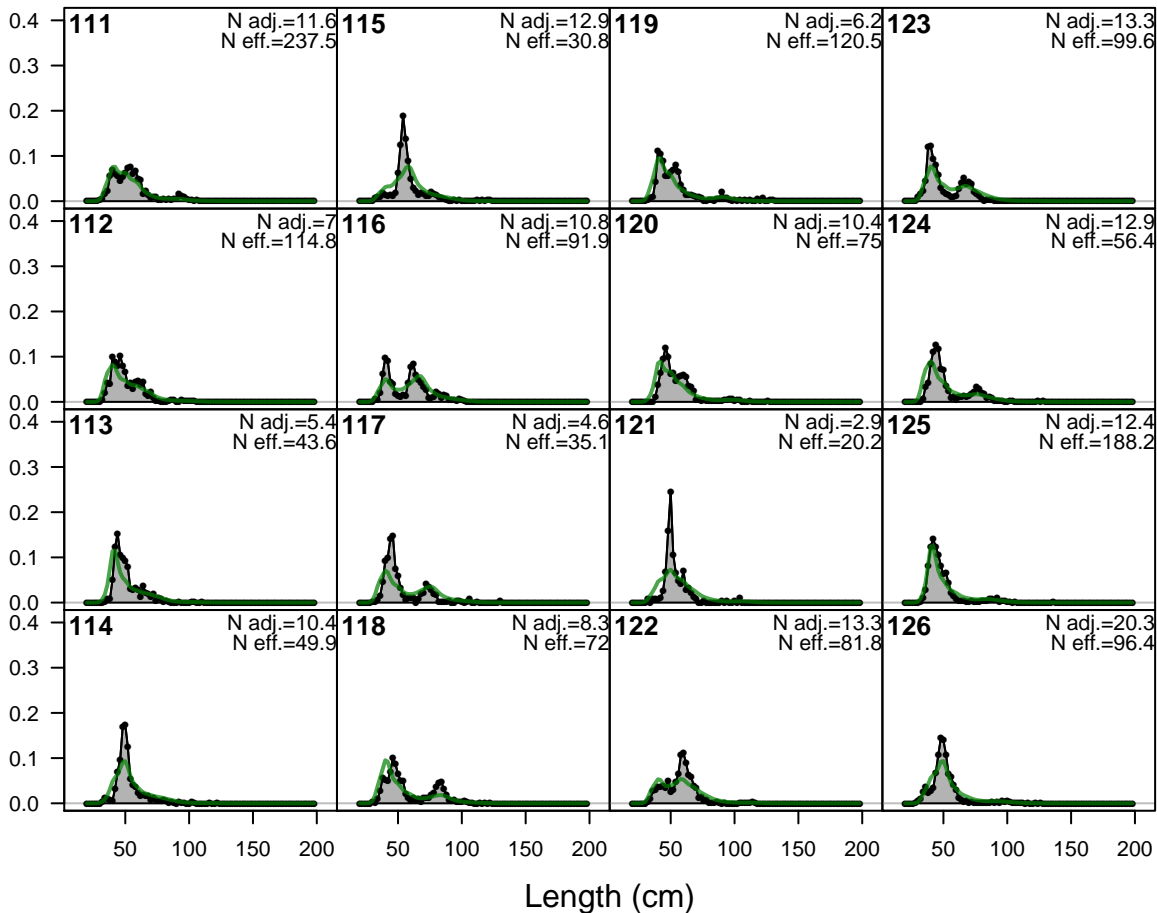
A6-LL-n (whole catch)



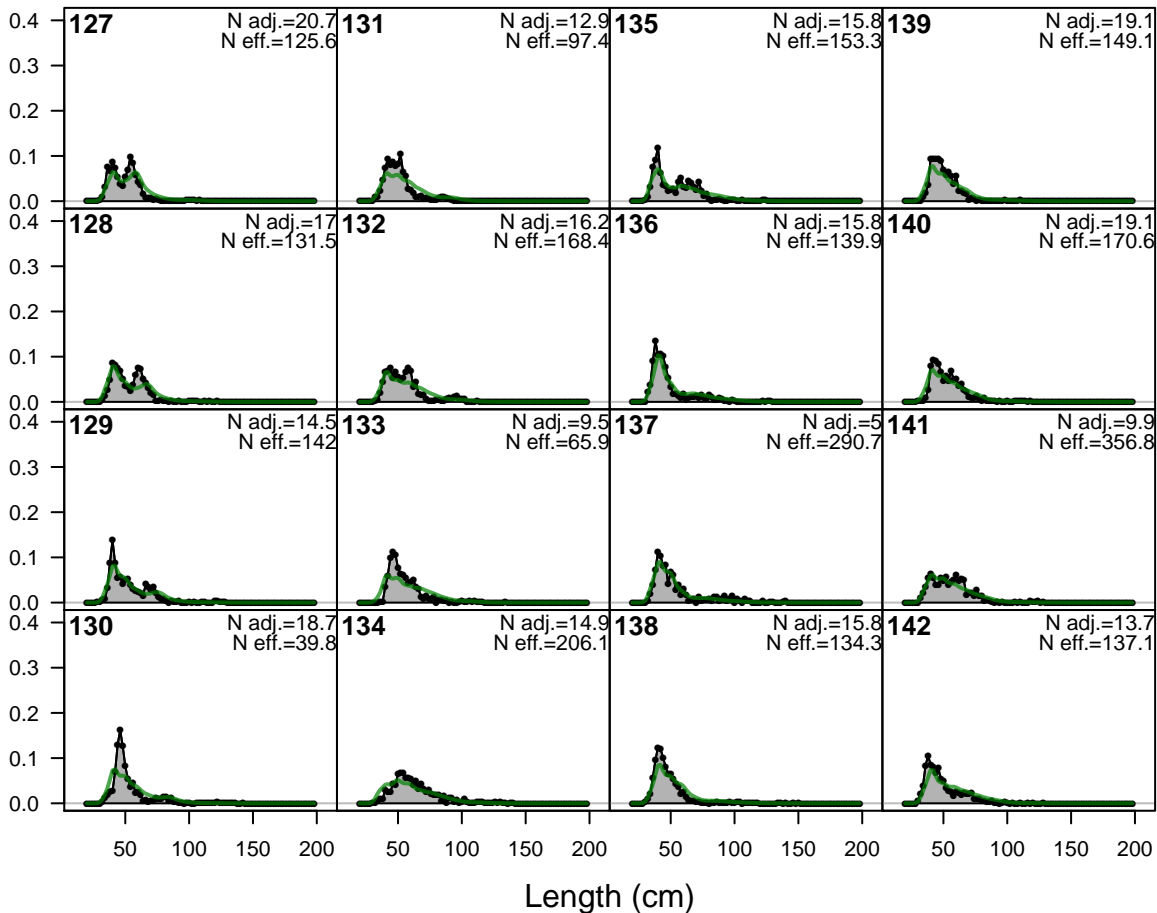




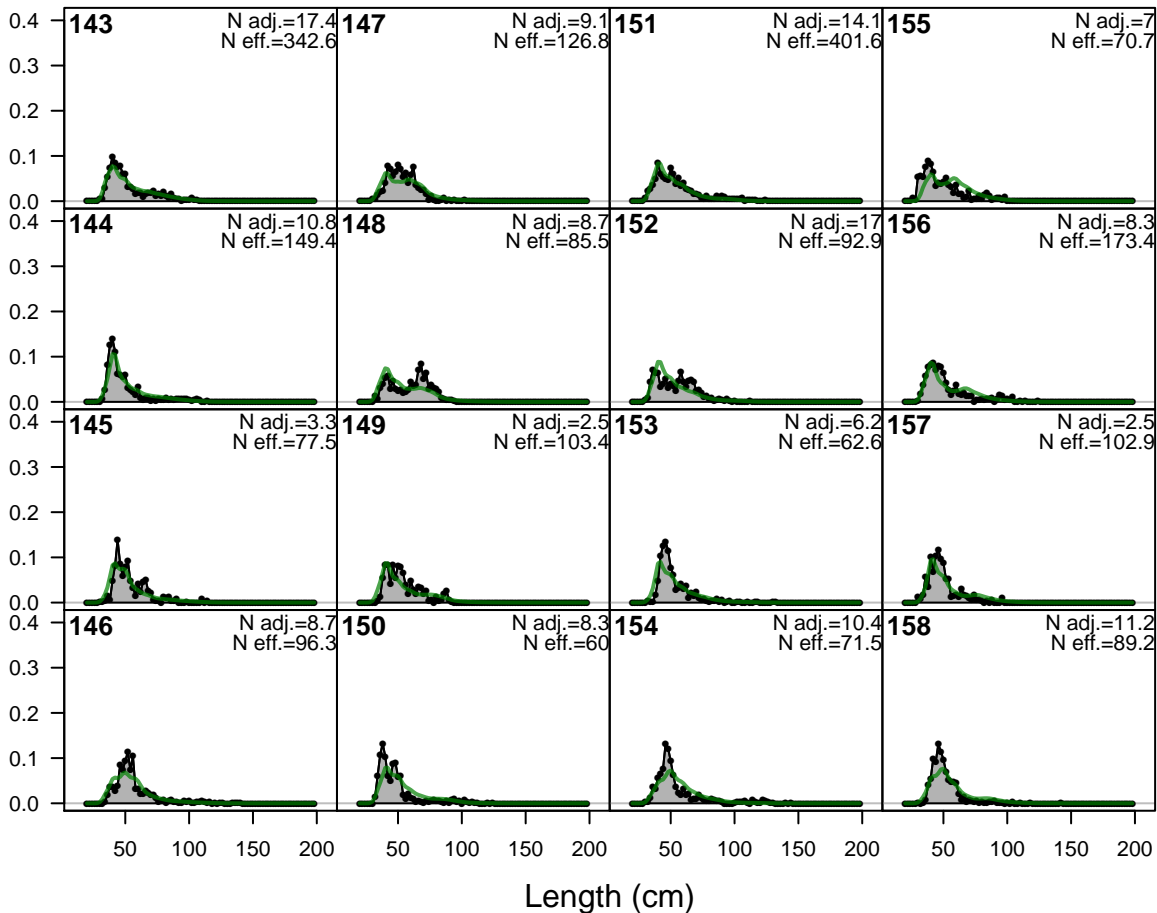
Proportion

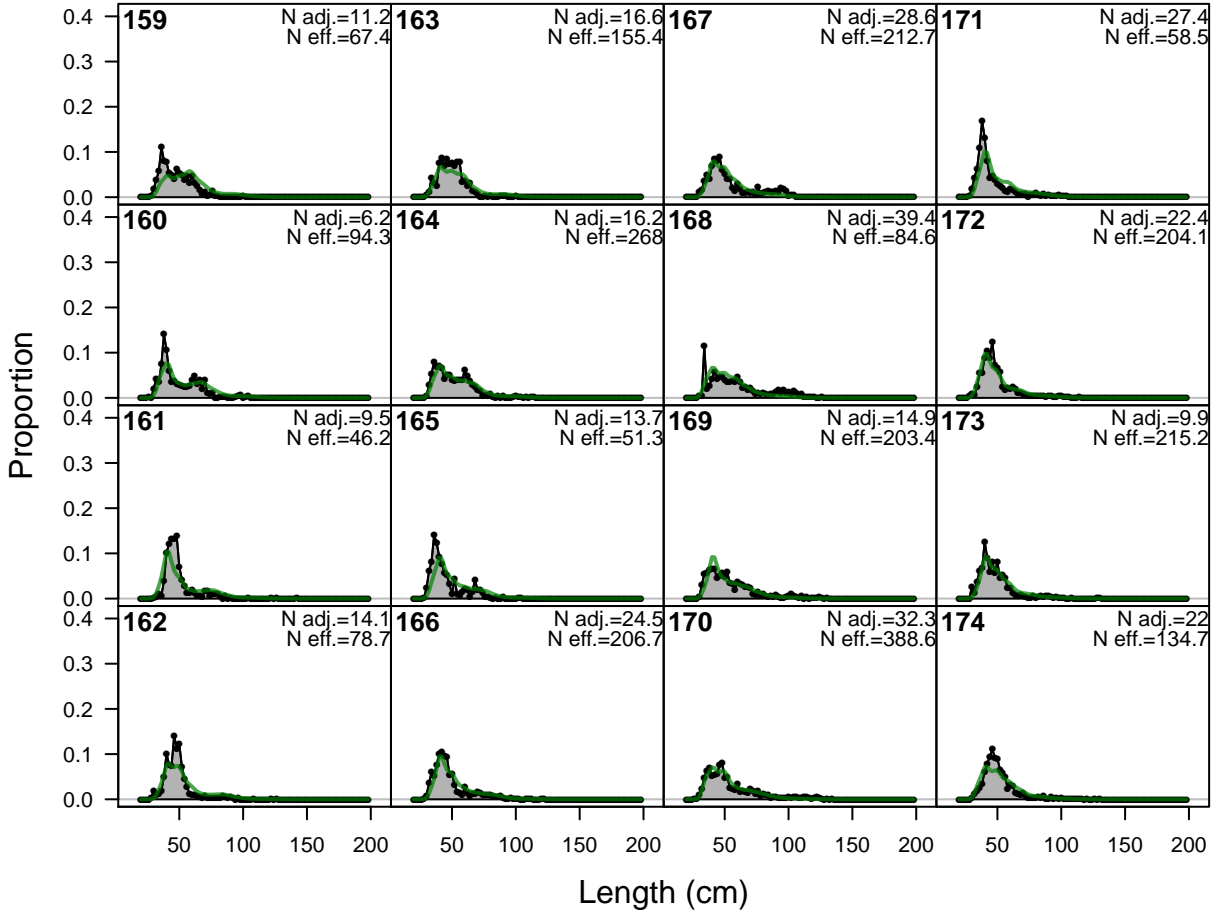


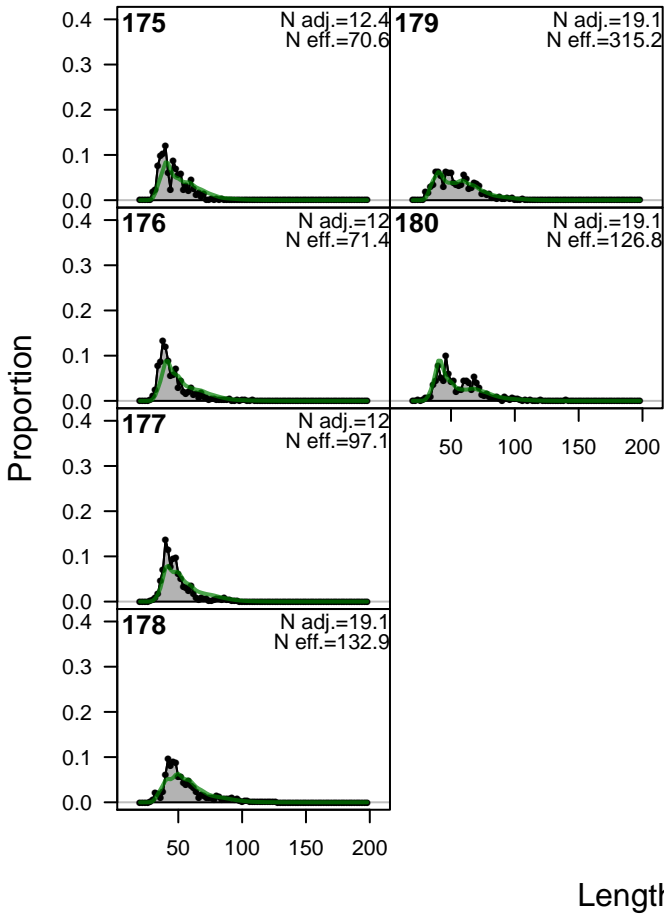
Proportion



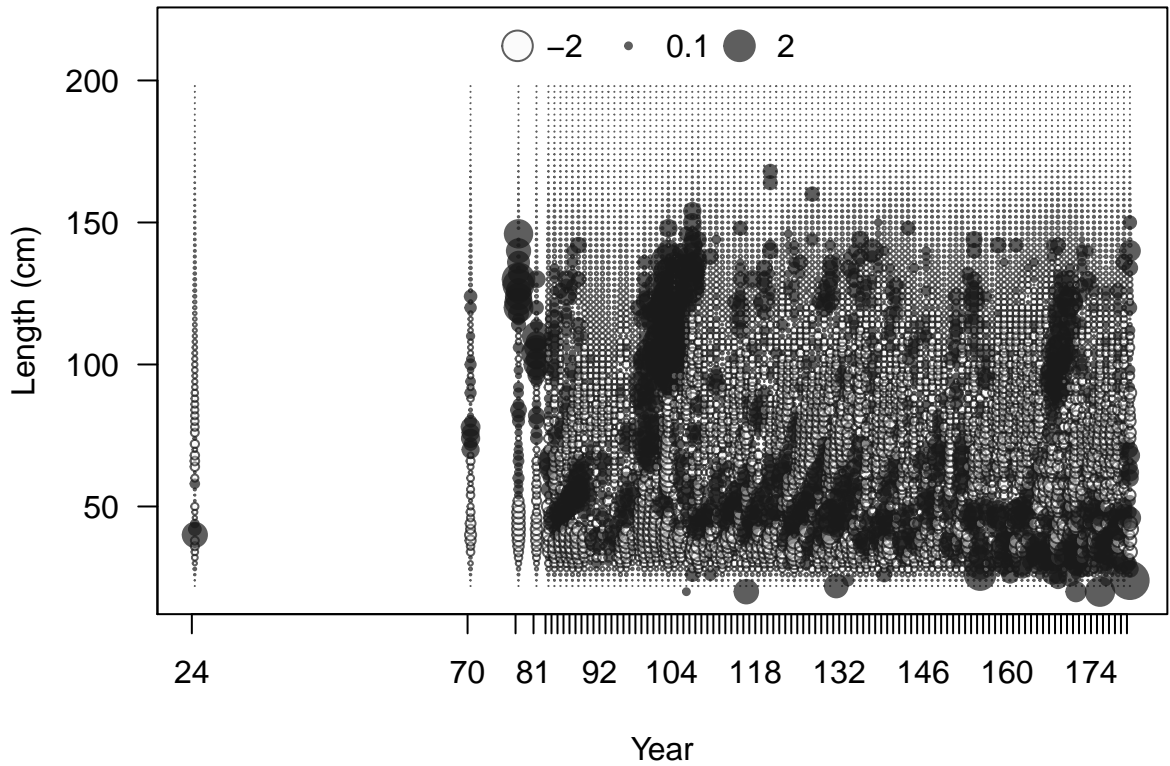
Proportion

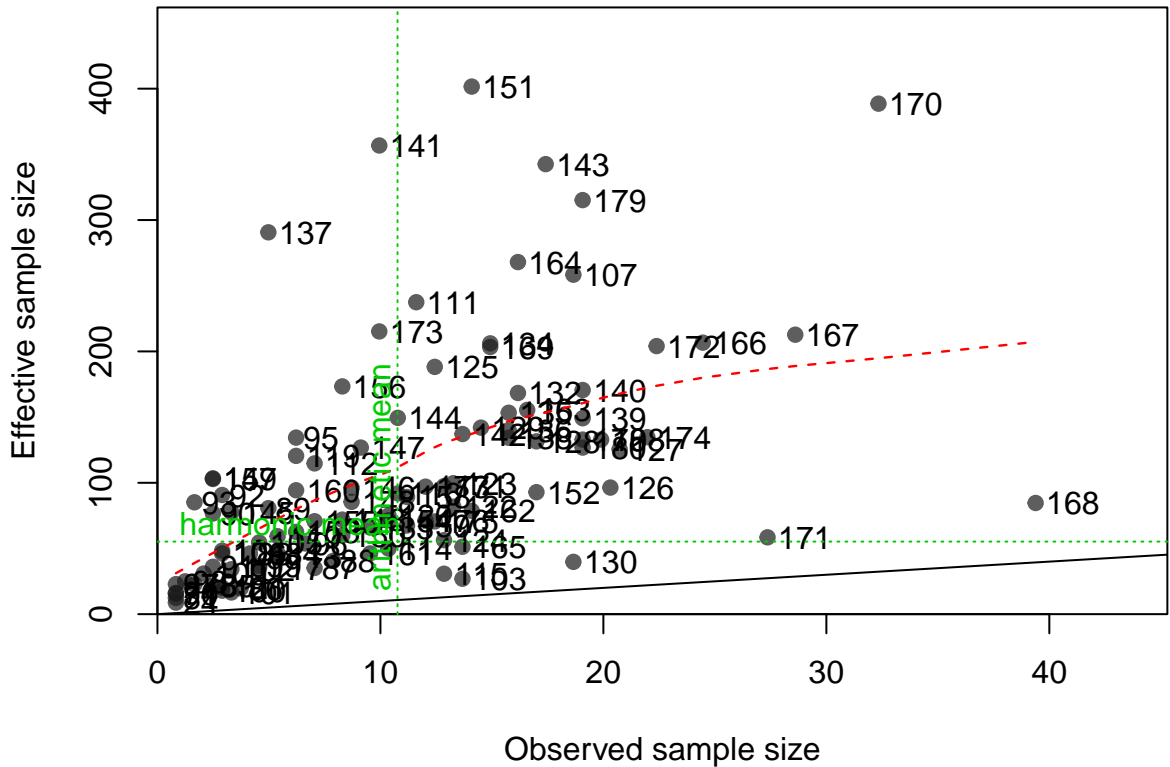




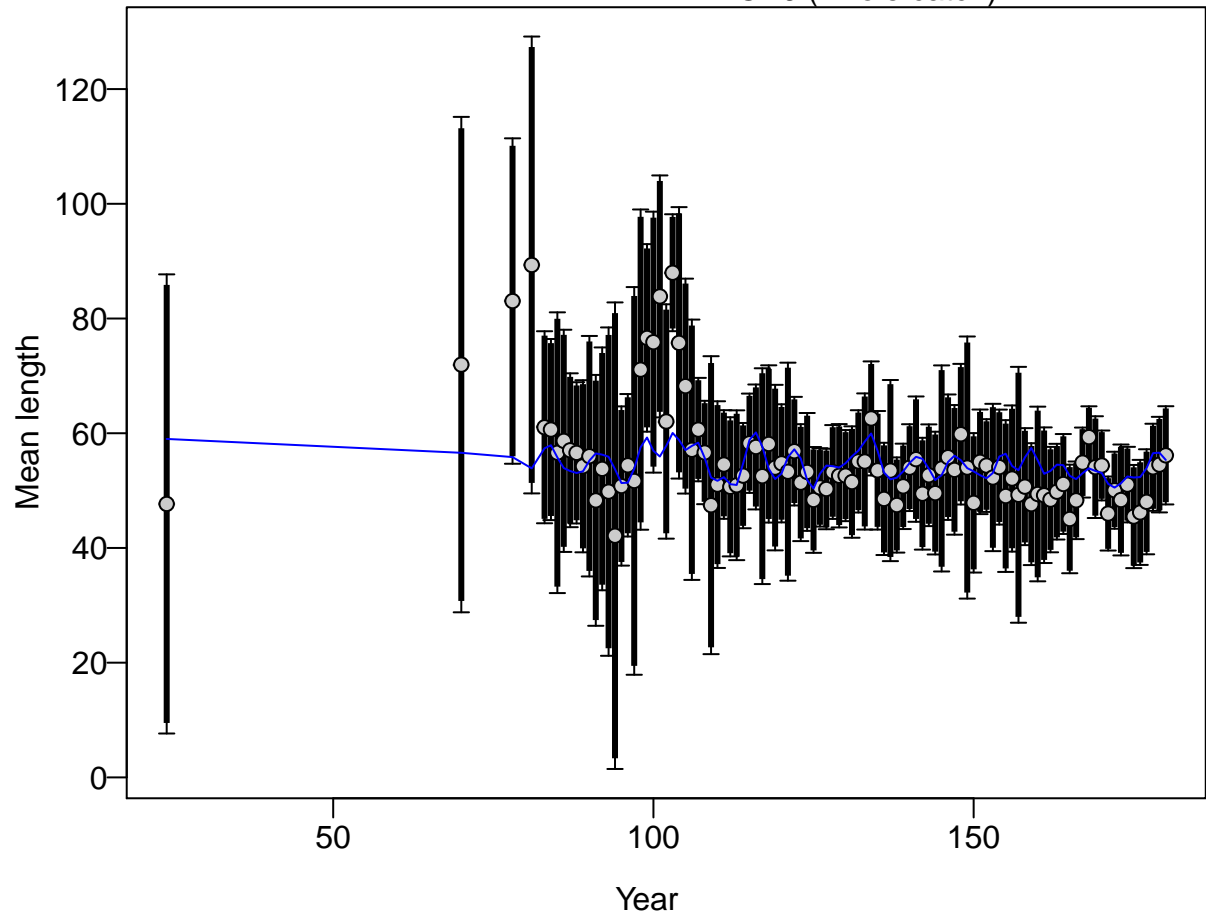


Length (cm)

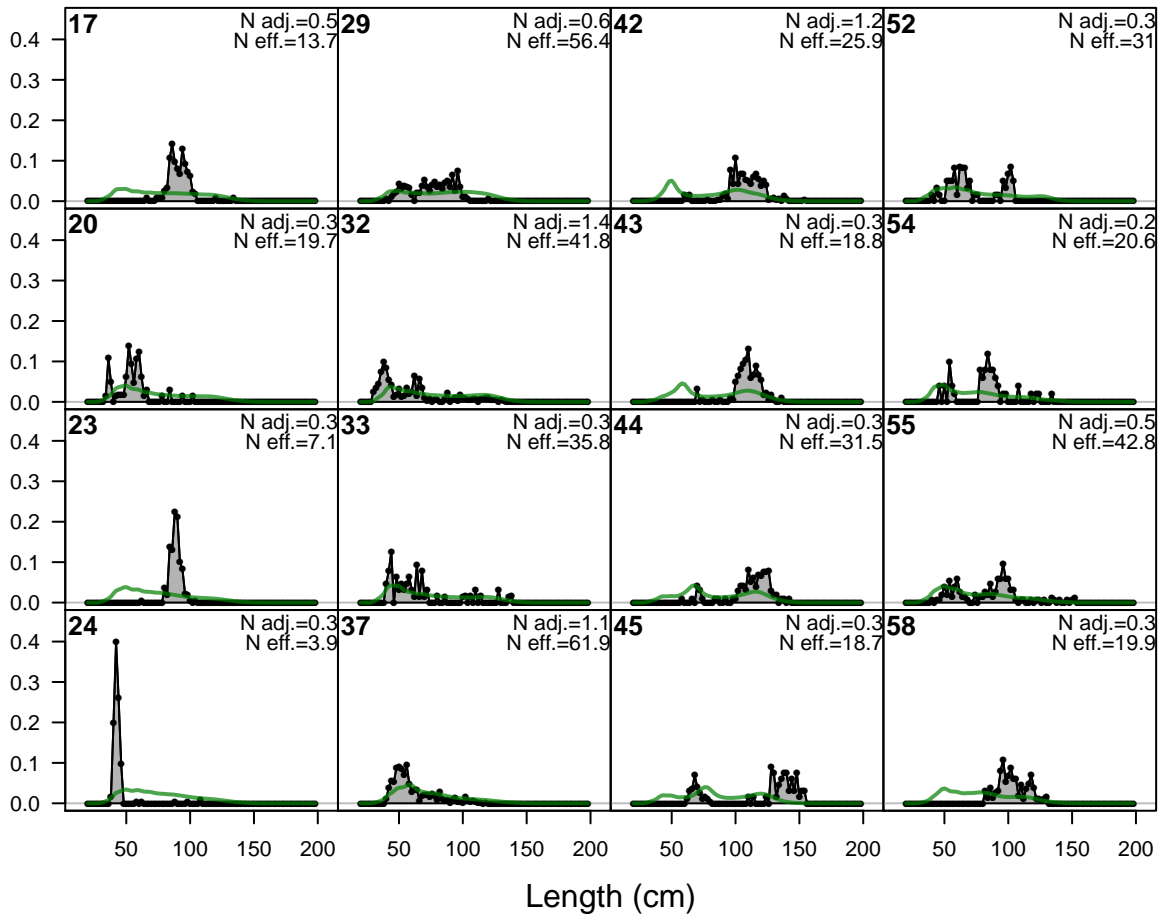




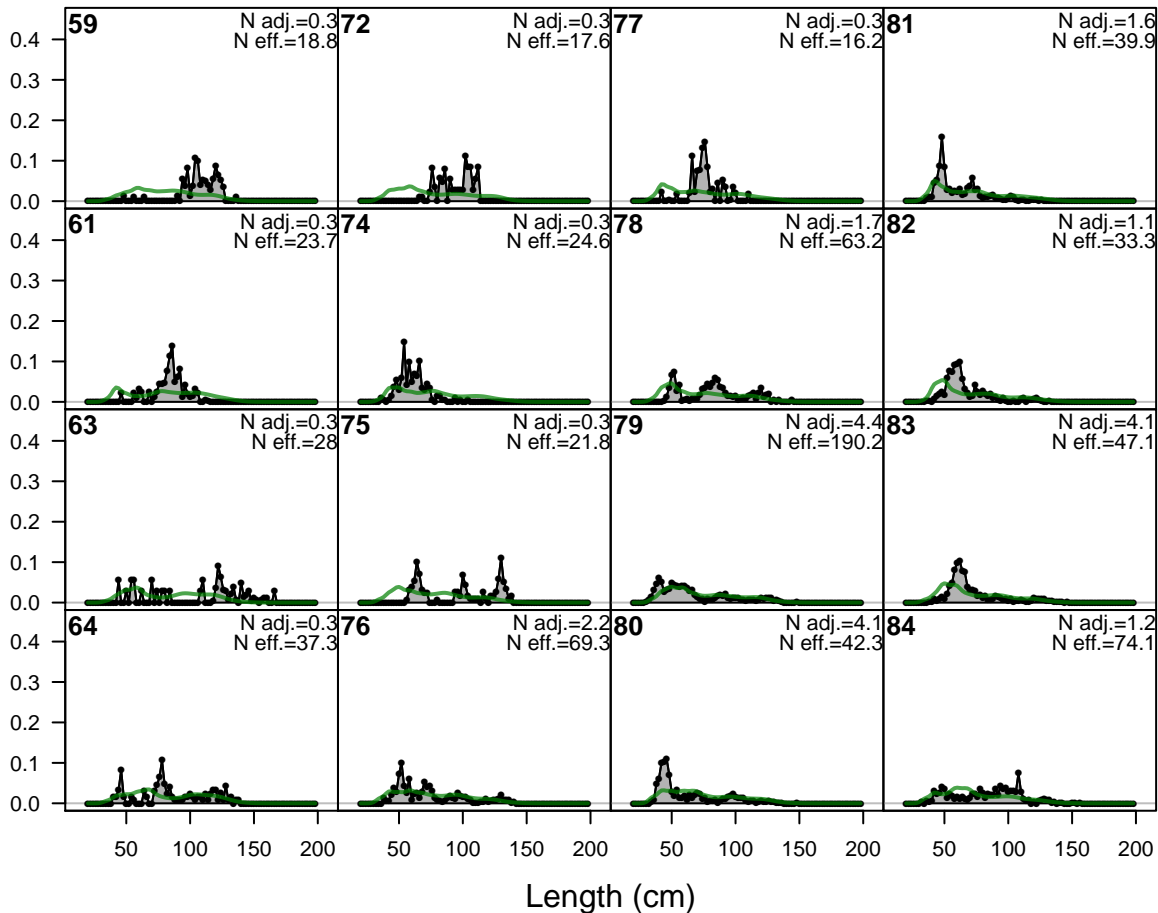
A2-OBJ (whole catch)



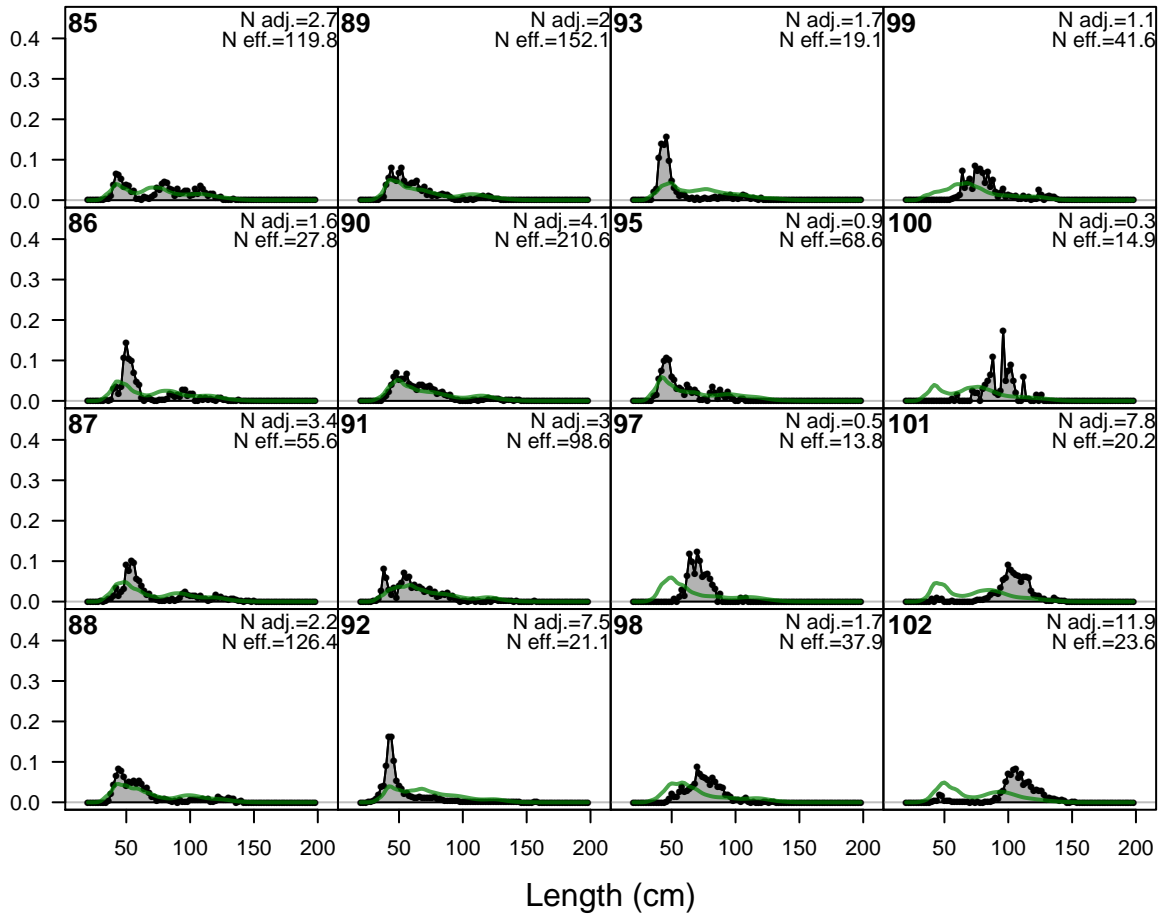
Proportion



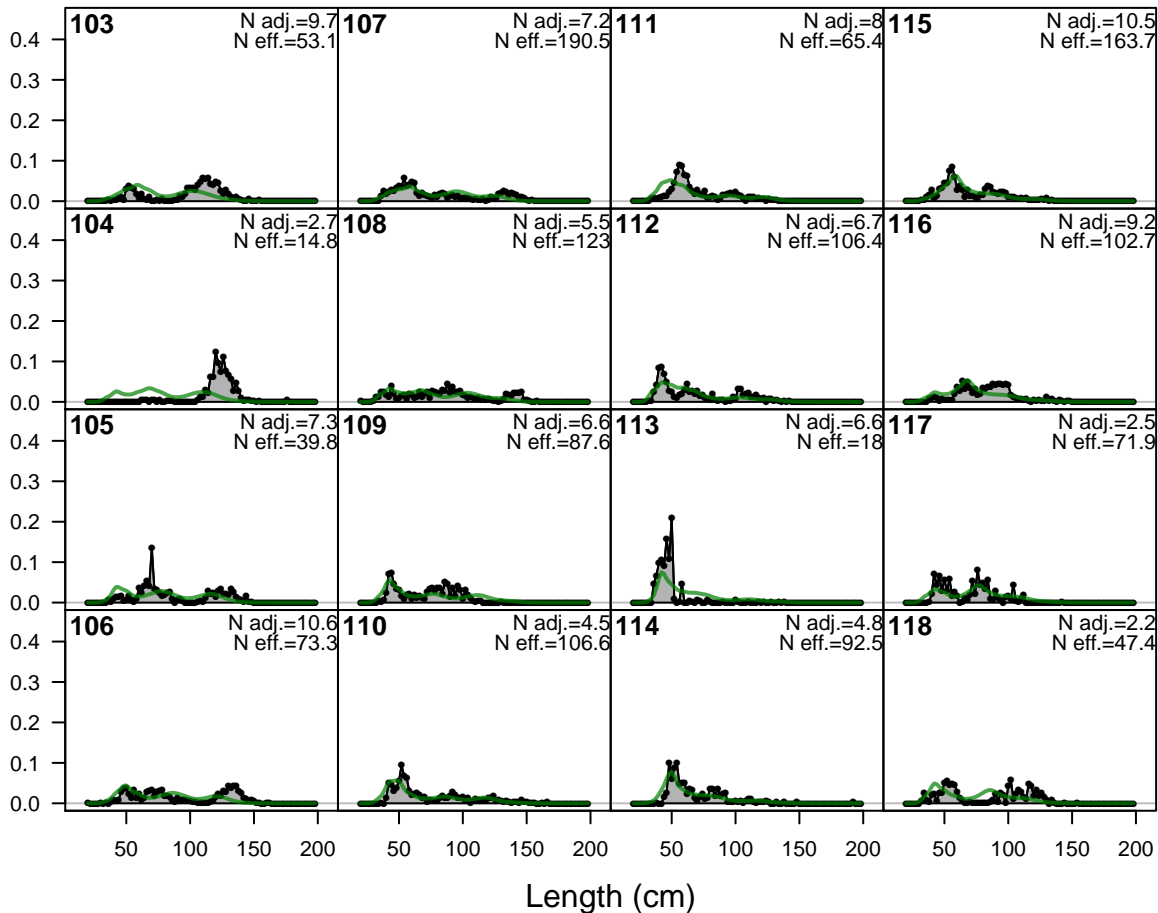
Proportion



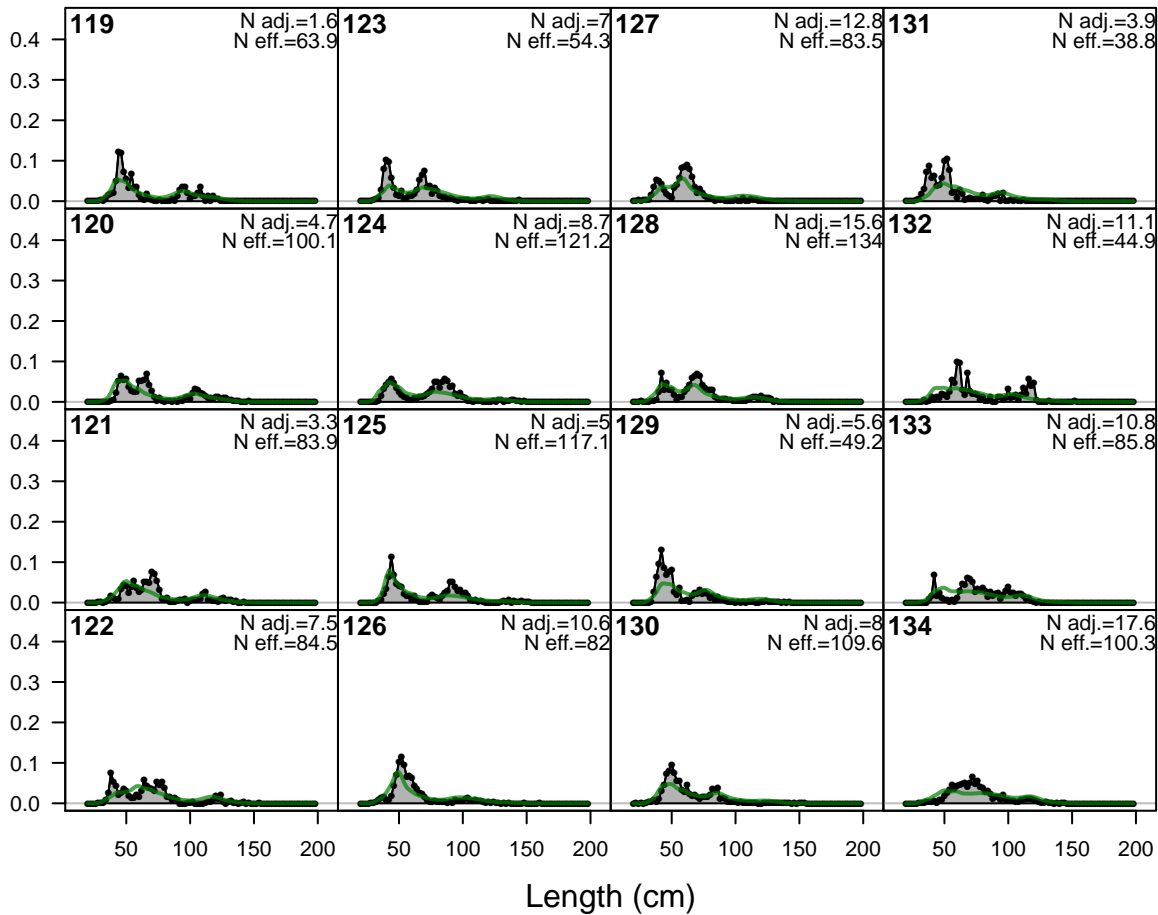
Proportion



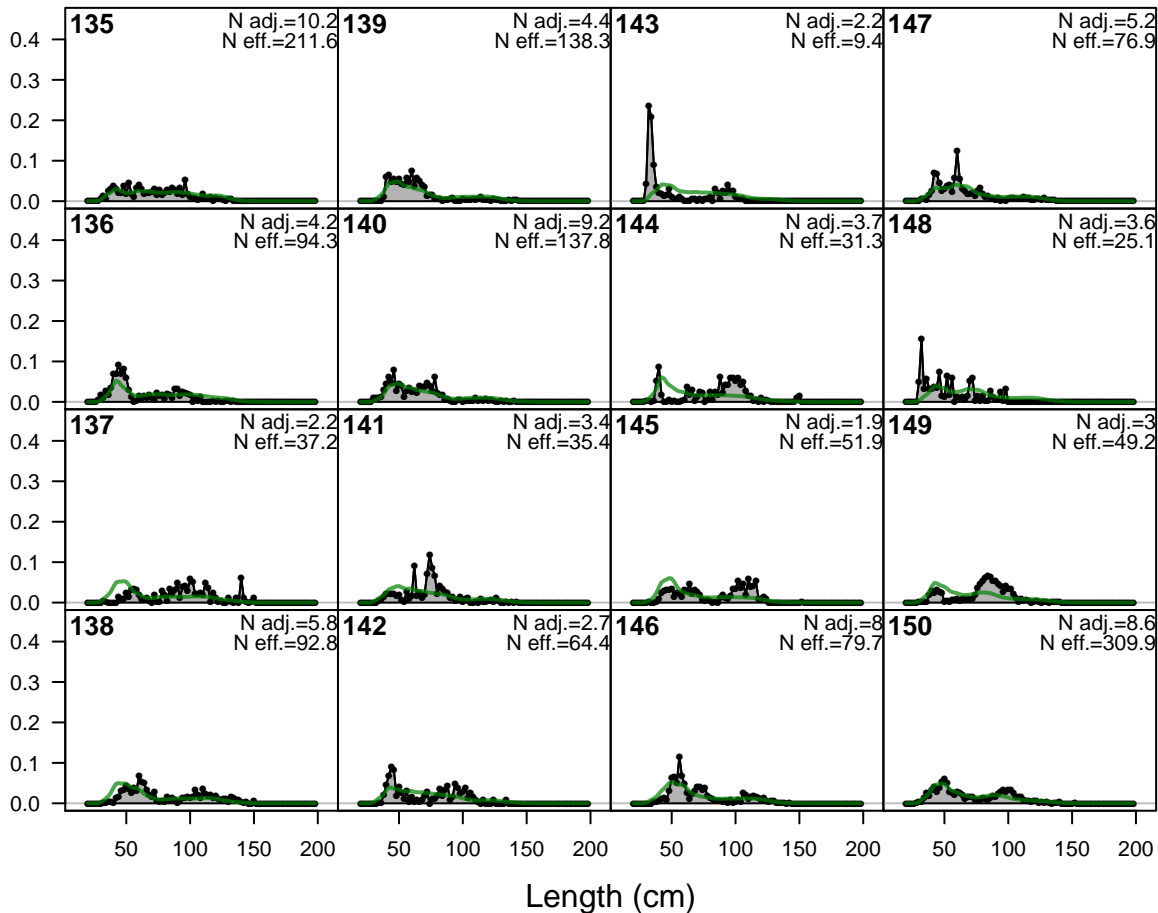
Proportion



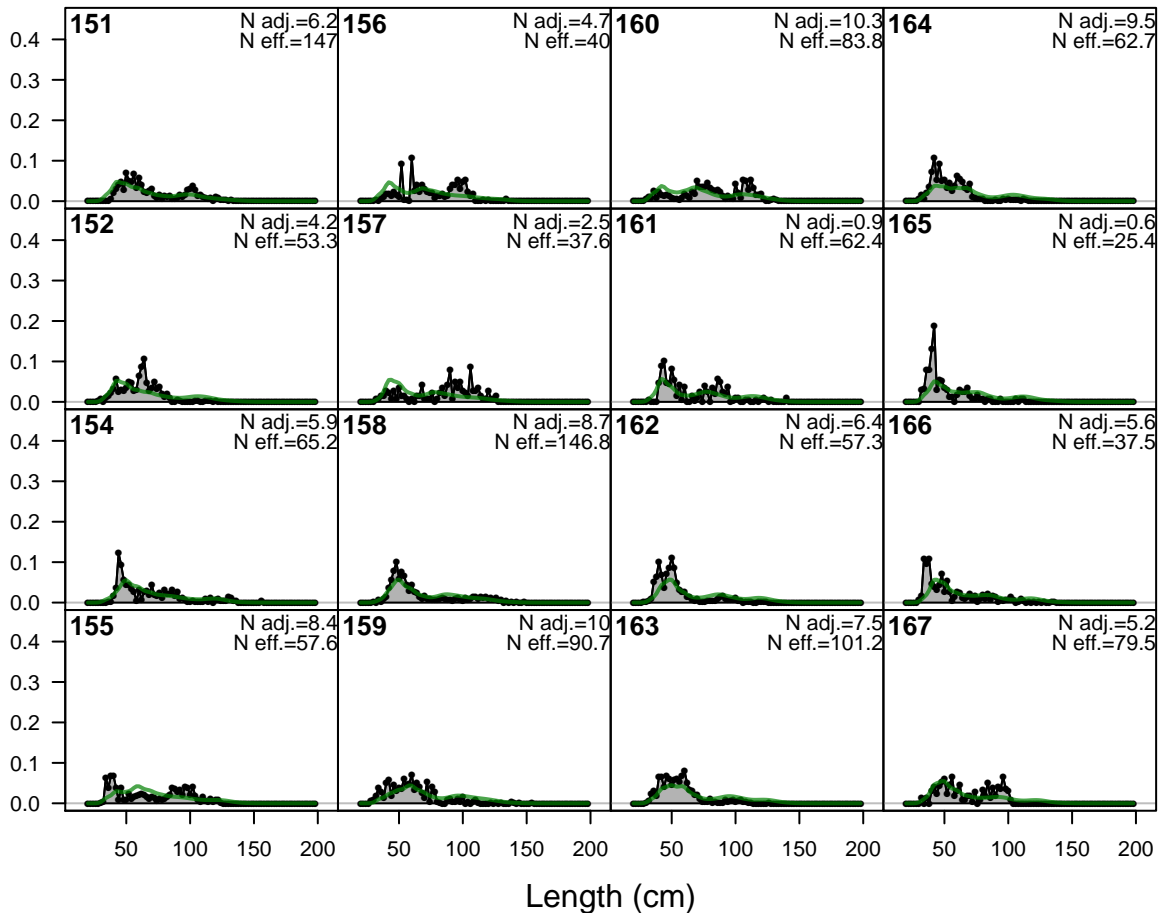
Proportion

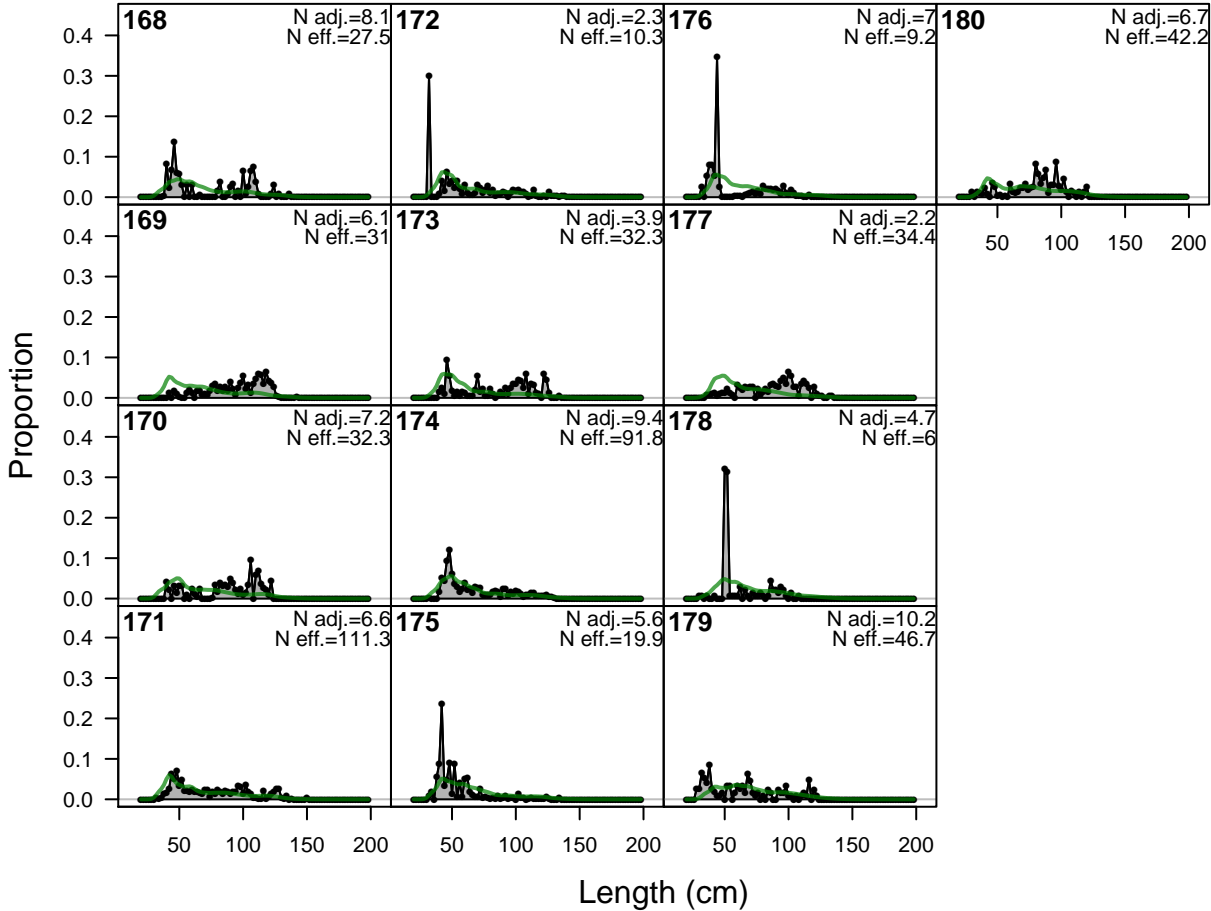


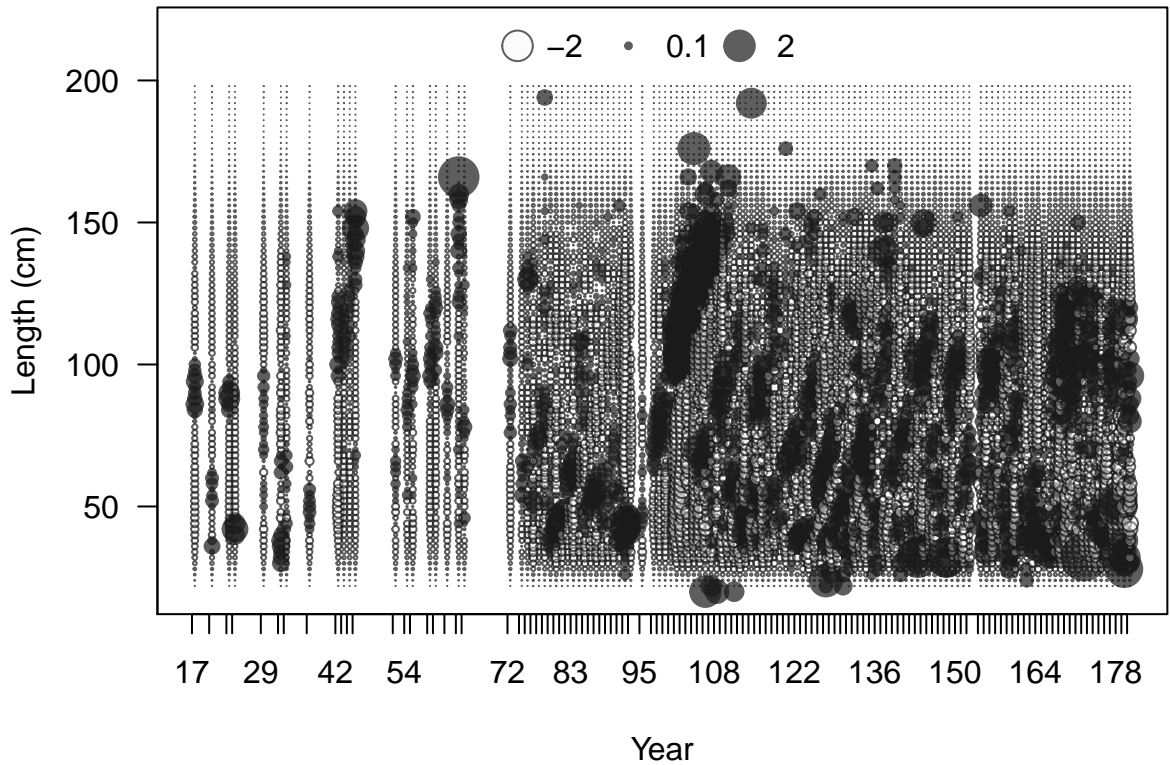
Proportion



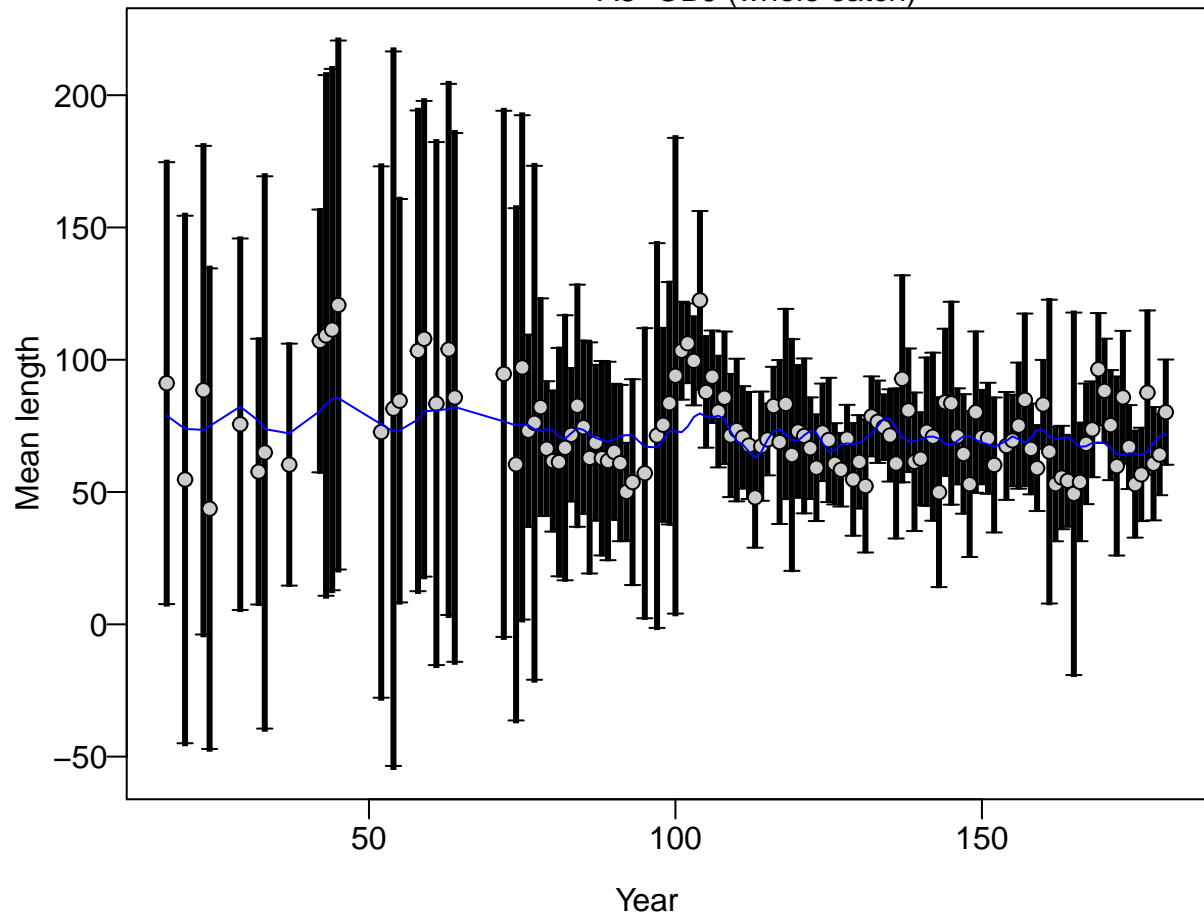
Proportion



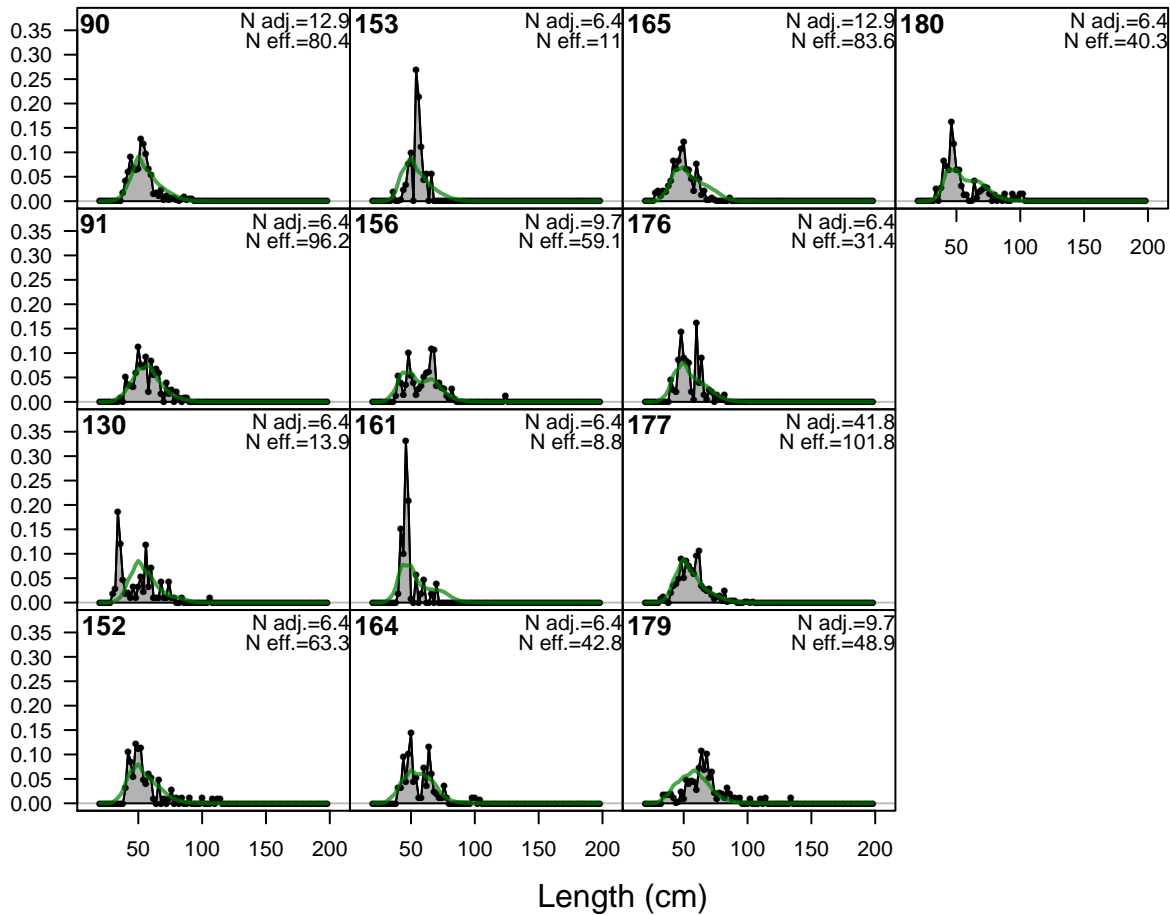


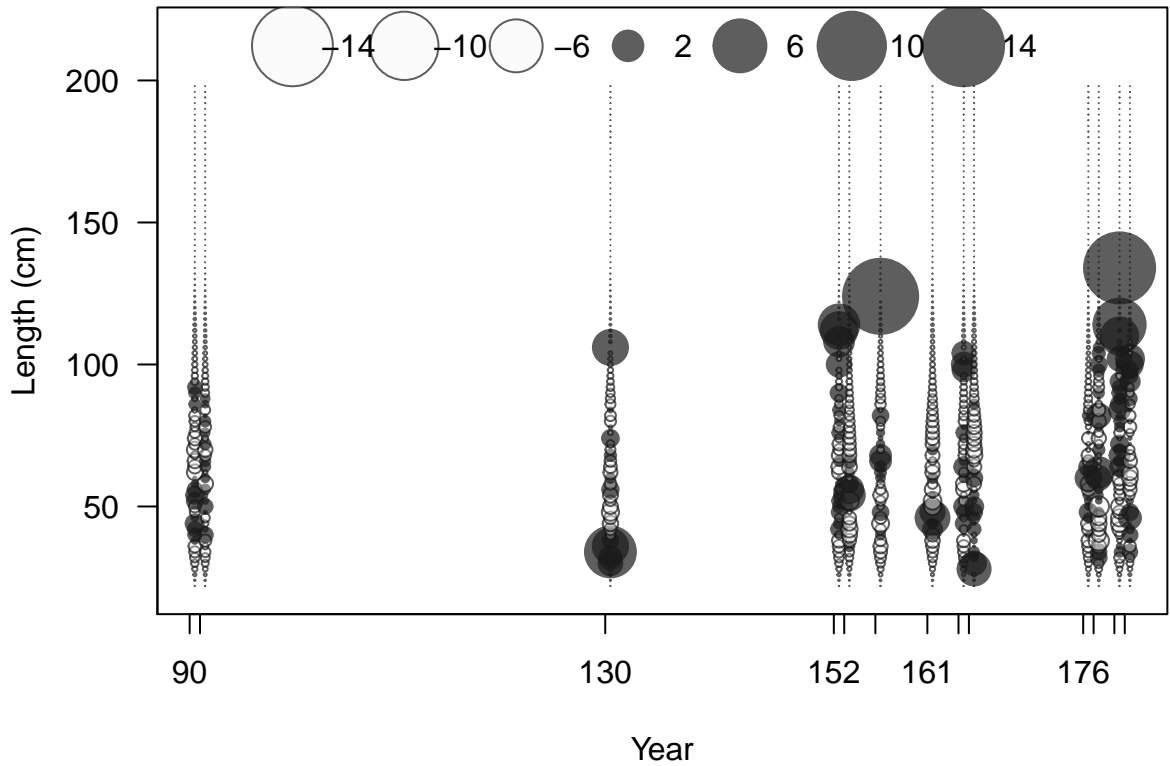


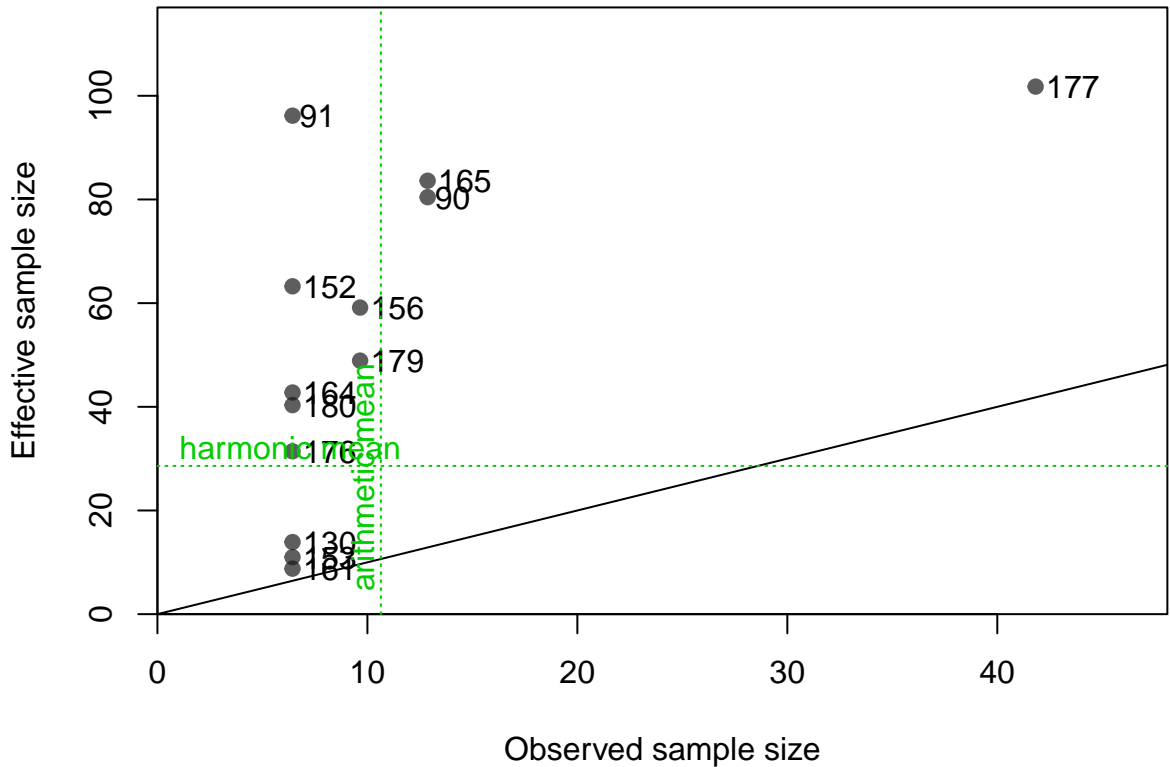
A3-OBJ (whole catch)



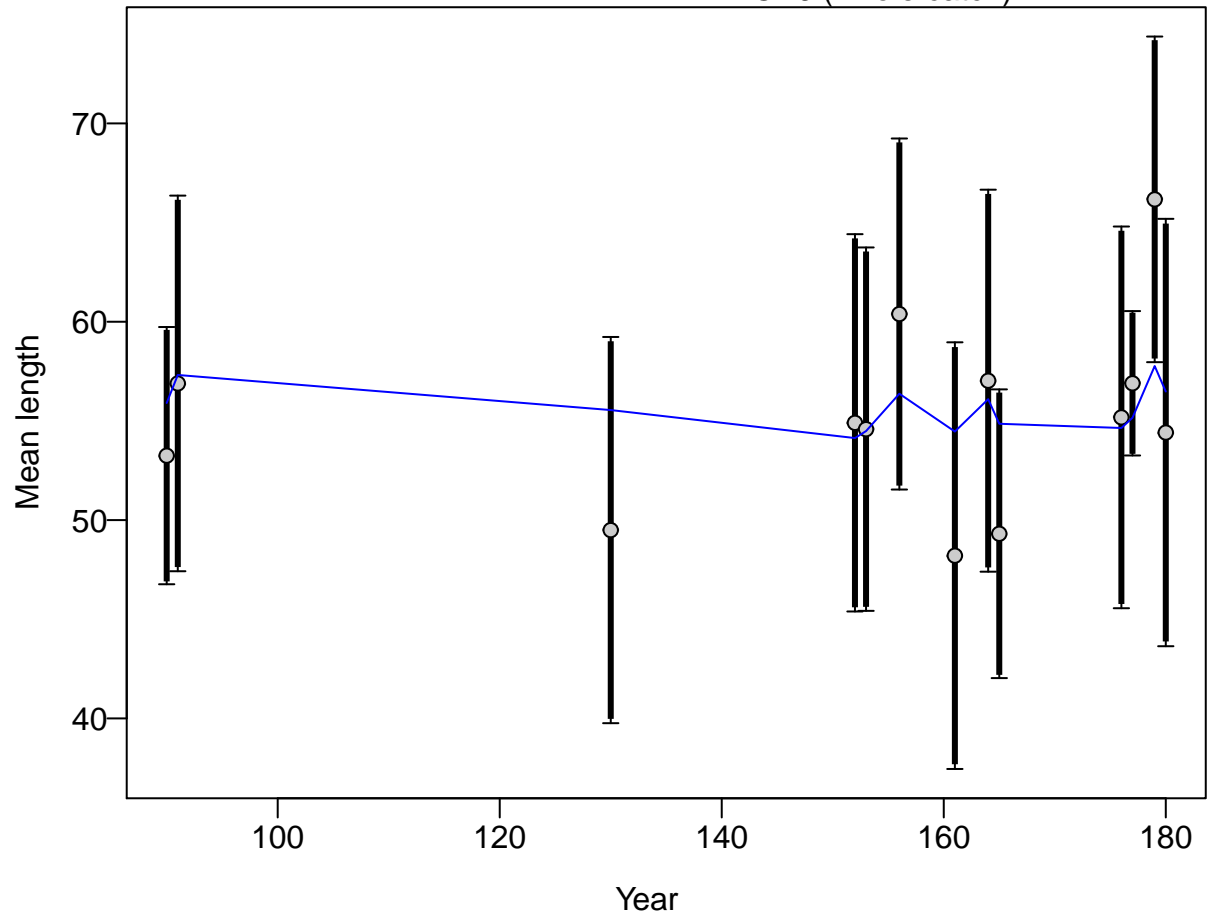
Proportion



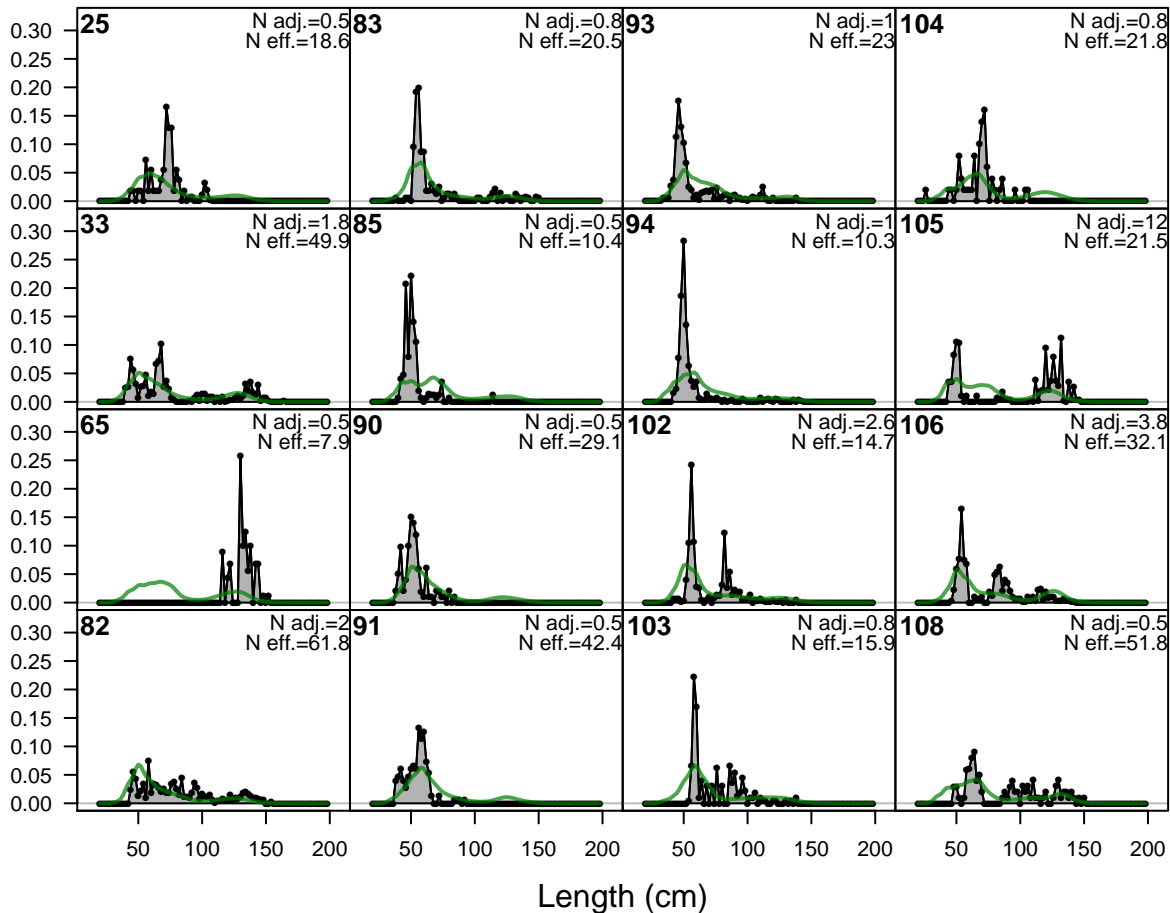




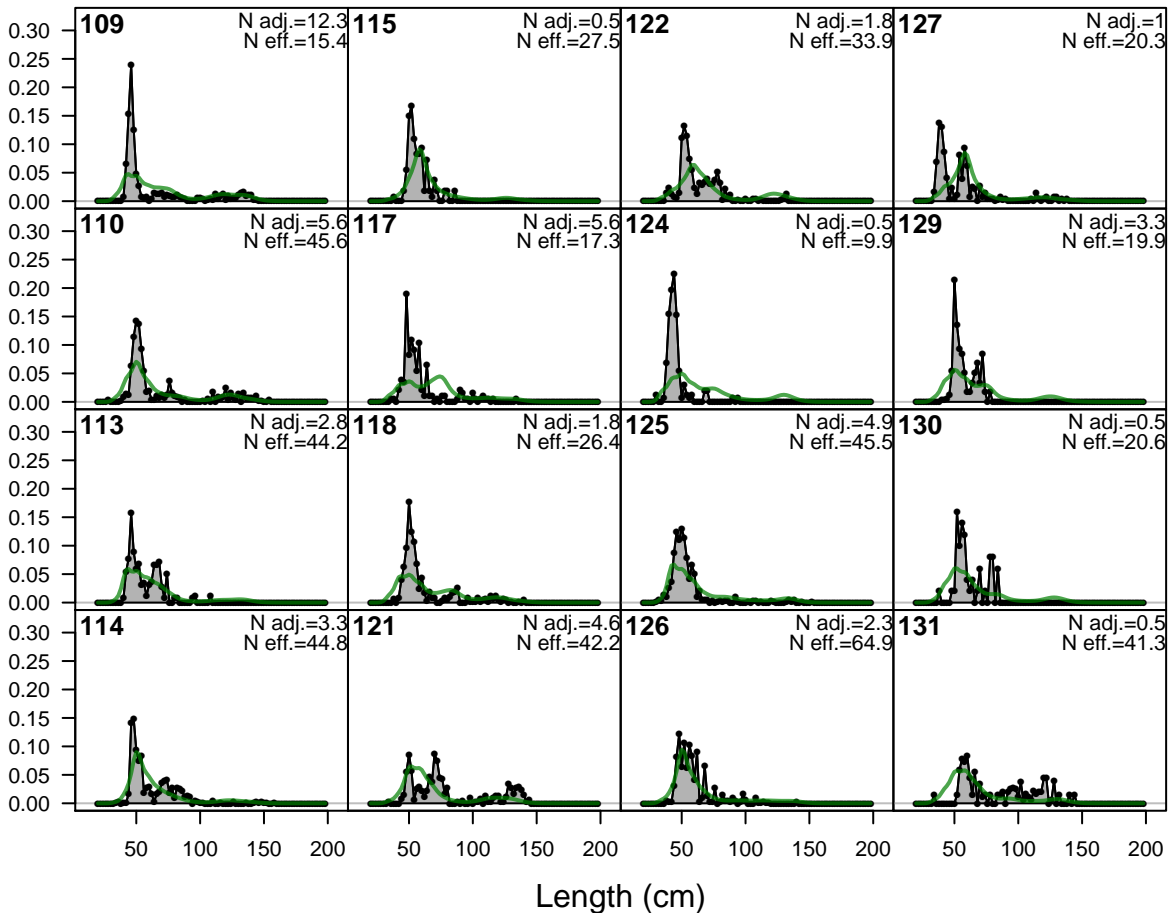
A4-OBJ (whole catch)



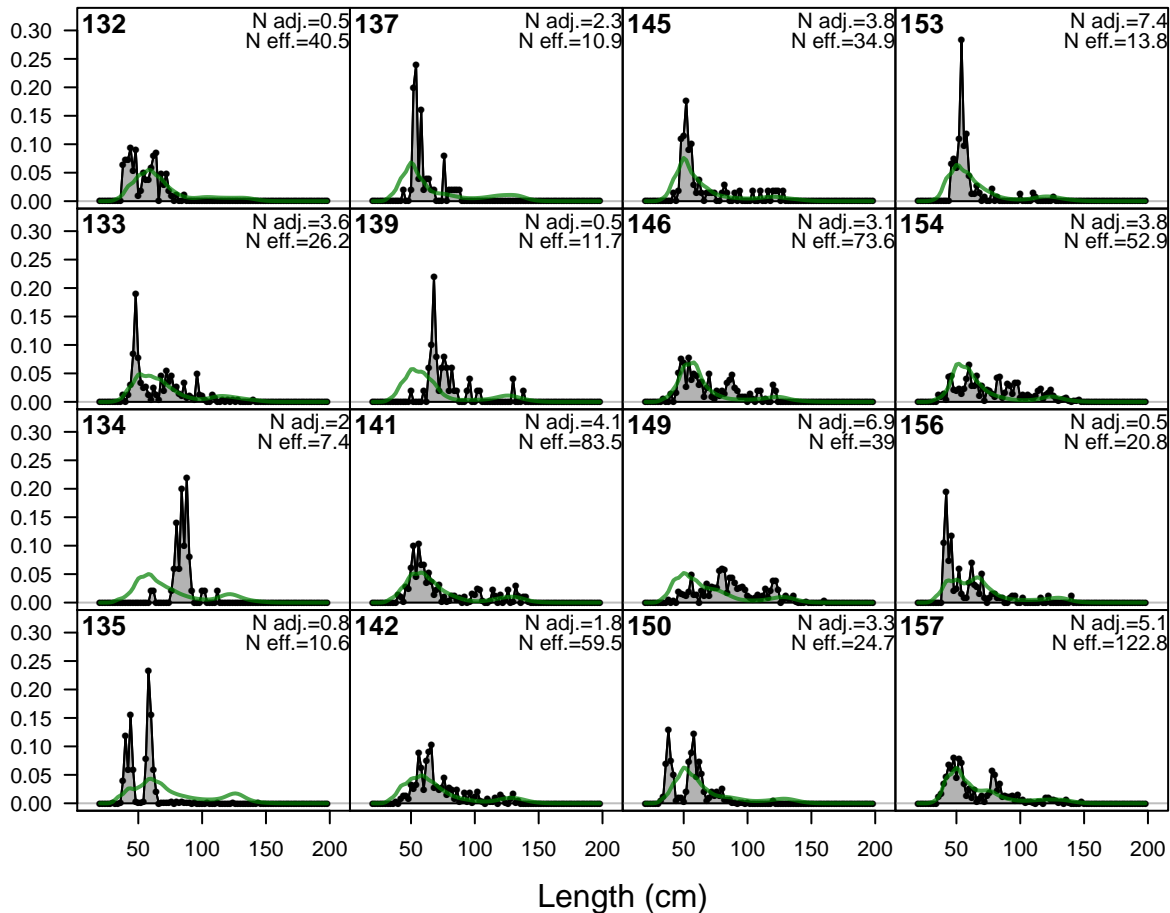
Proportion



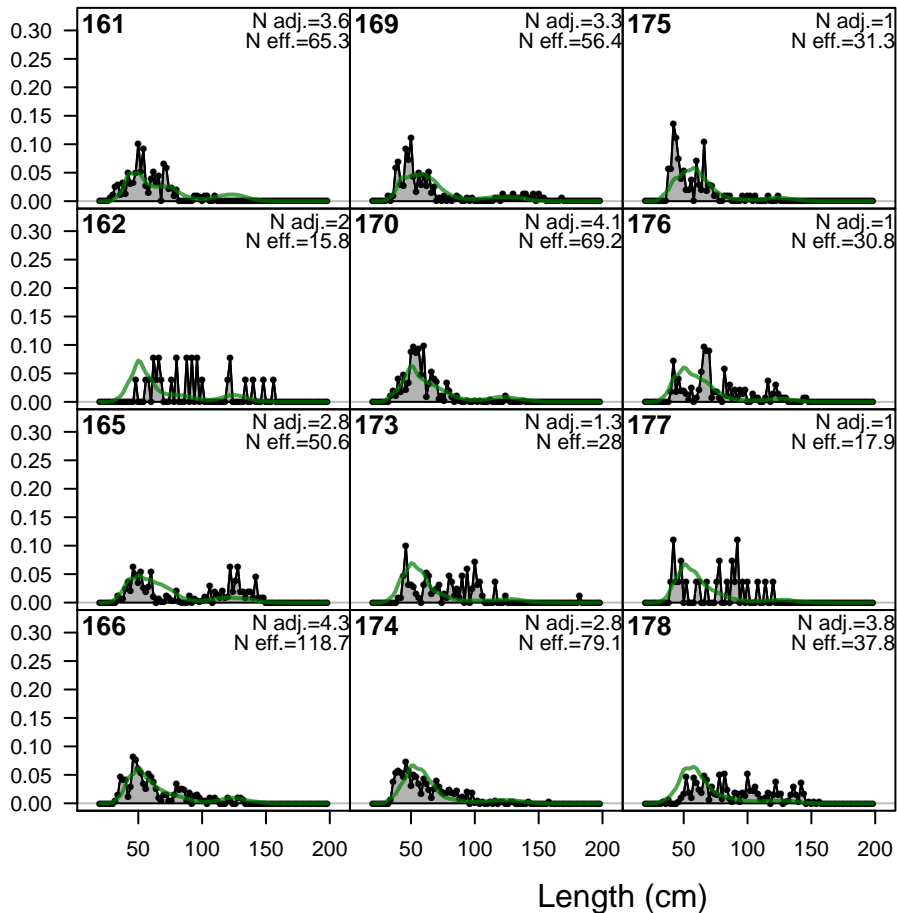
Proportion

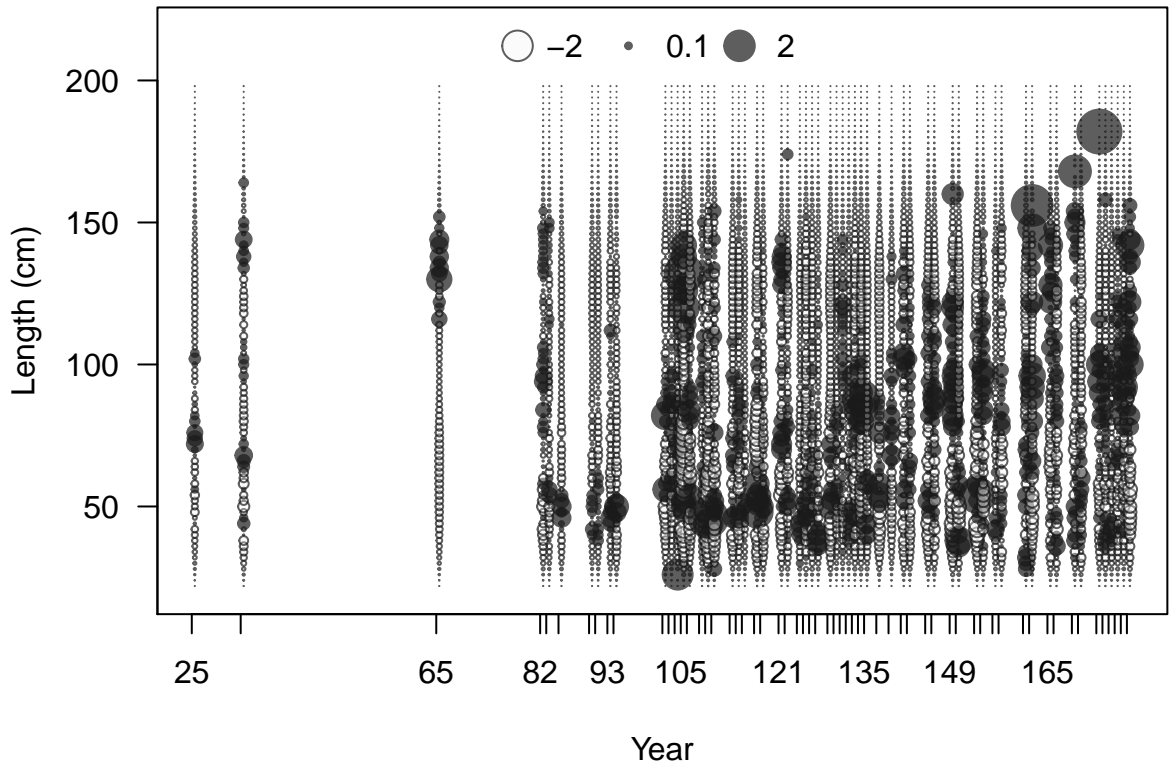


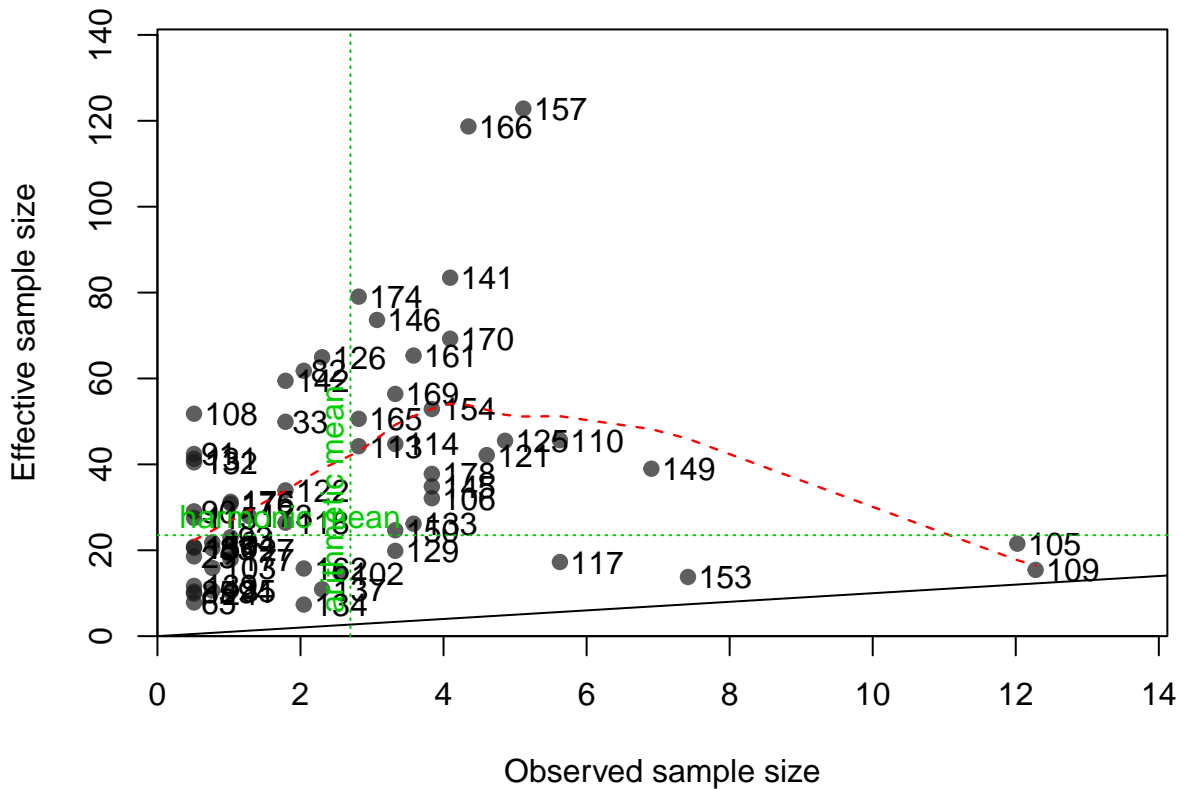
Proportion



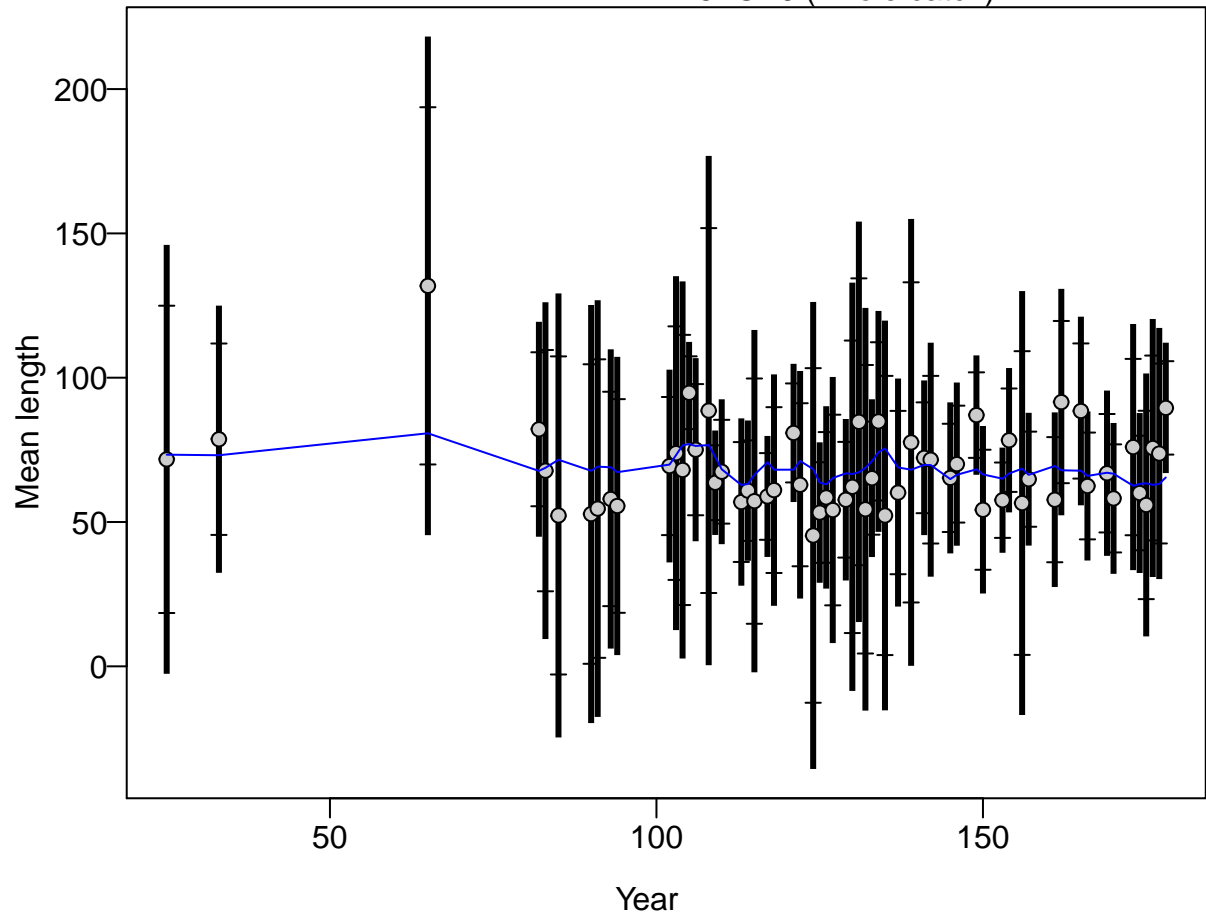
Proportion



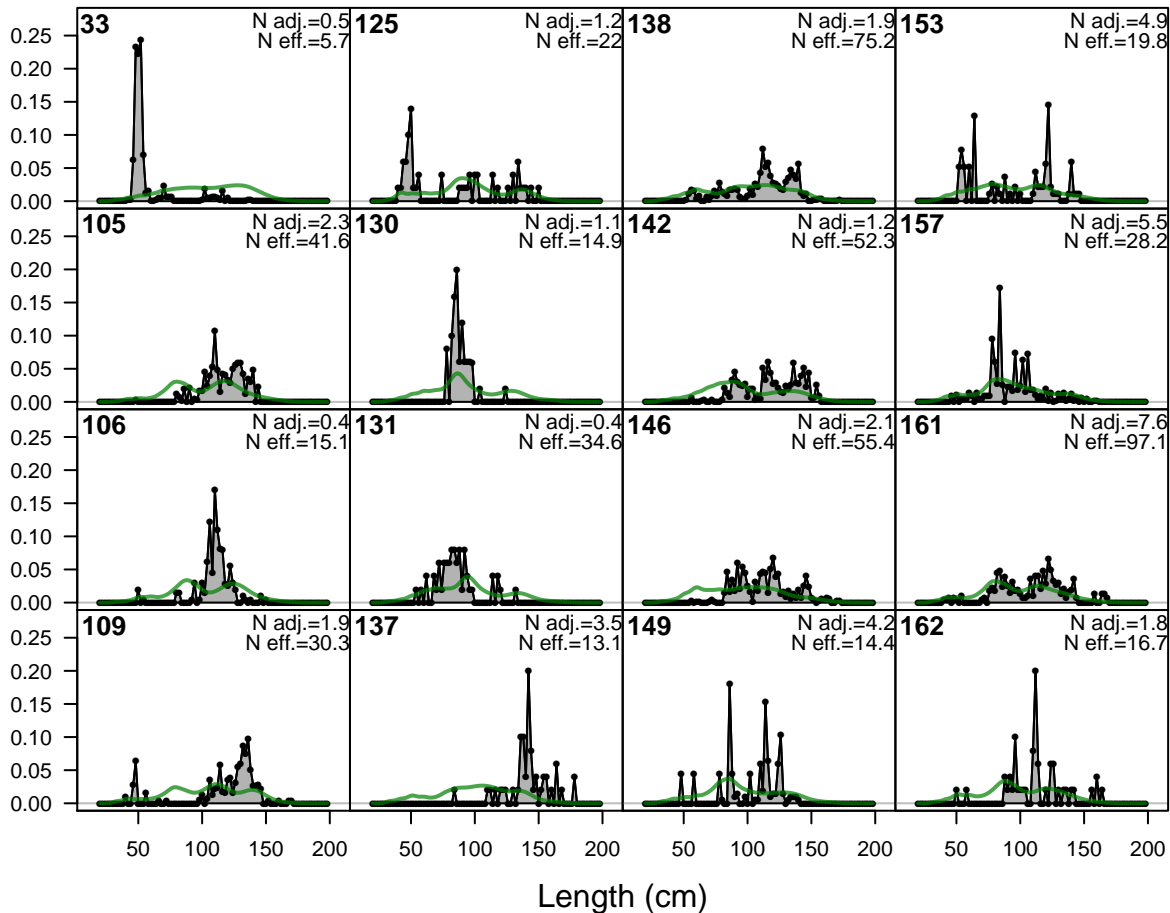




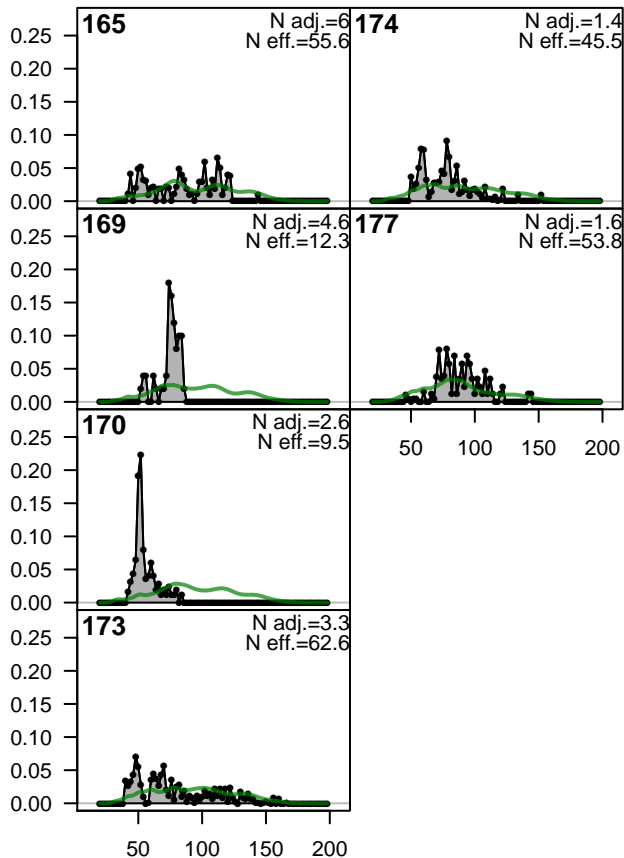
A5-OBJ (whole catch)



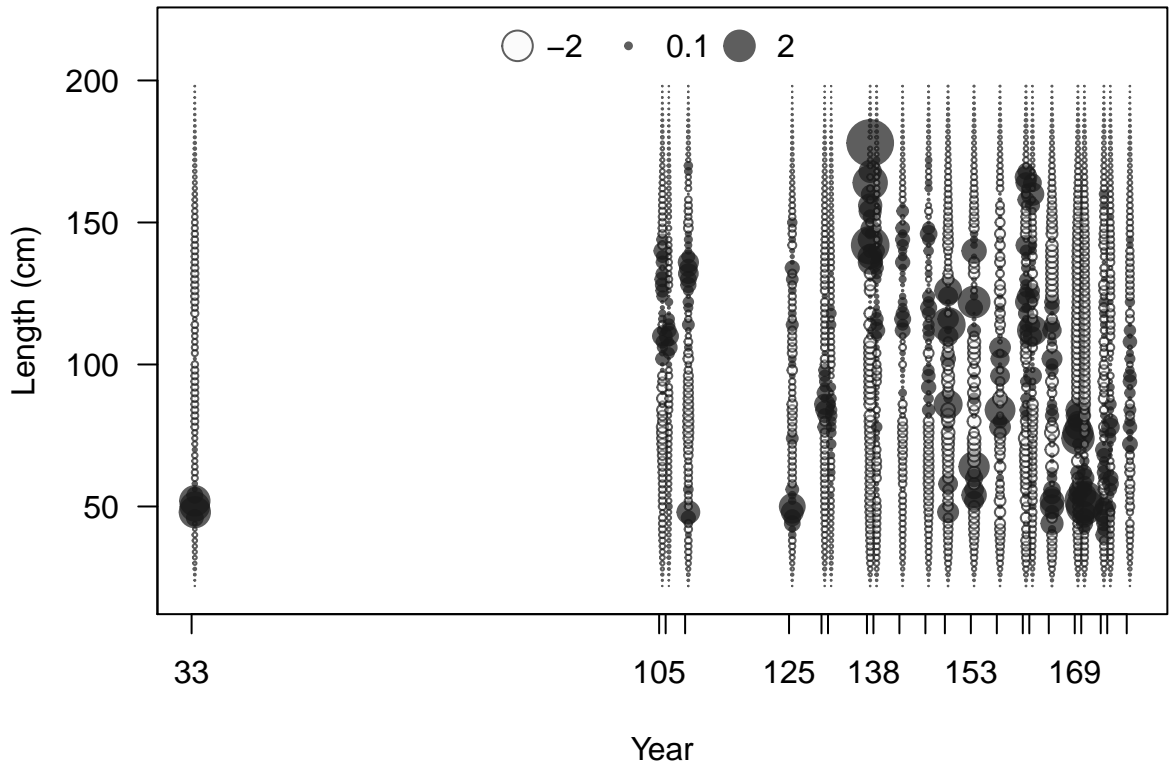
Proportion

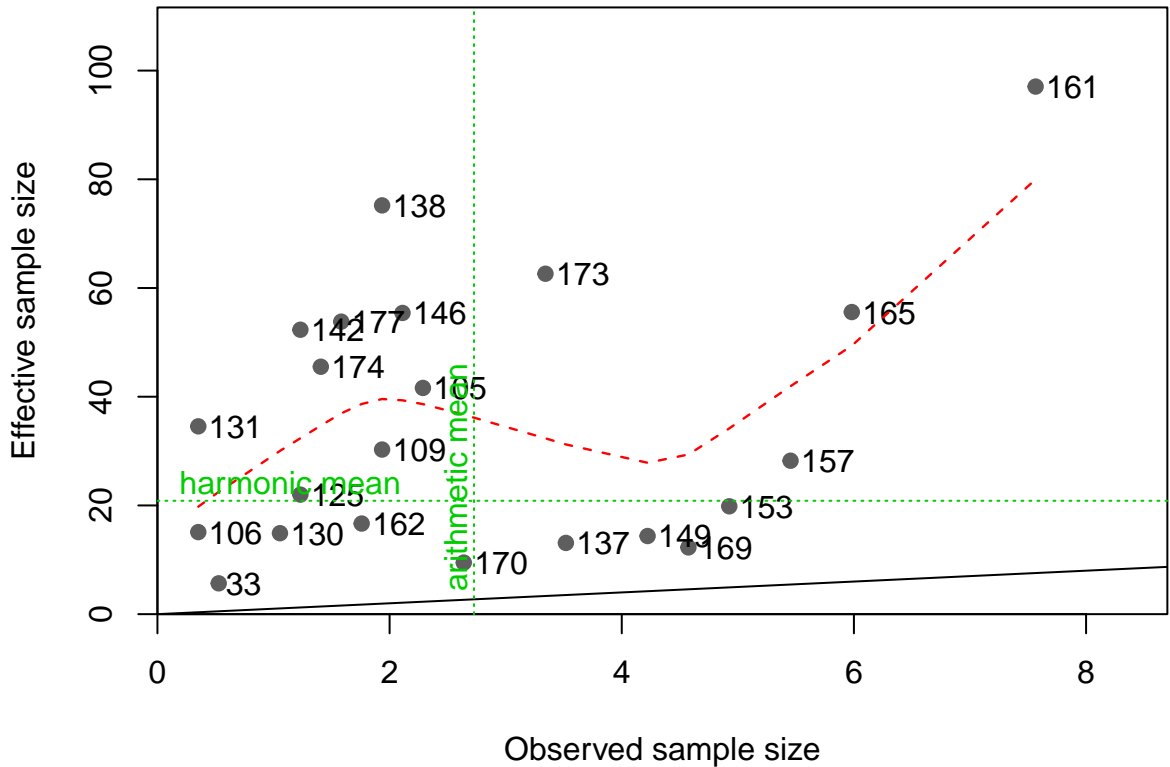


Proportion

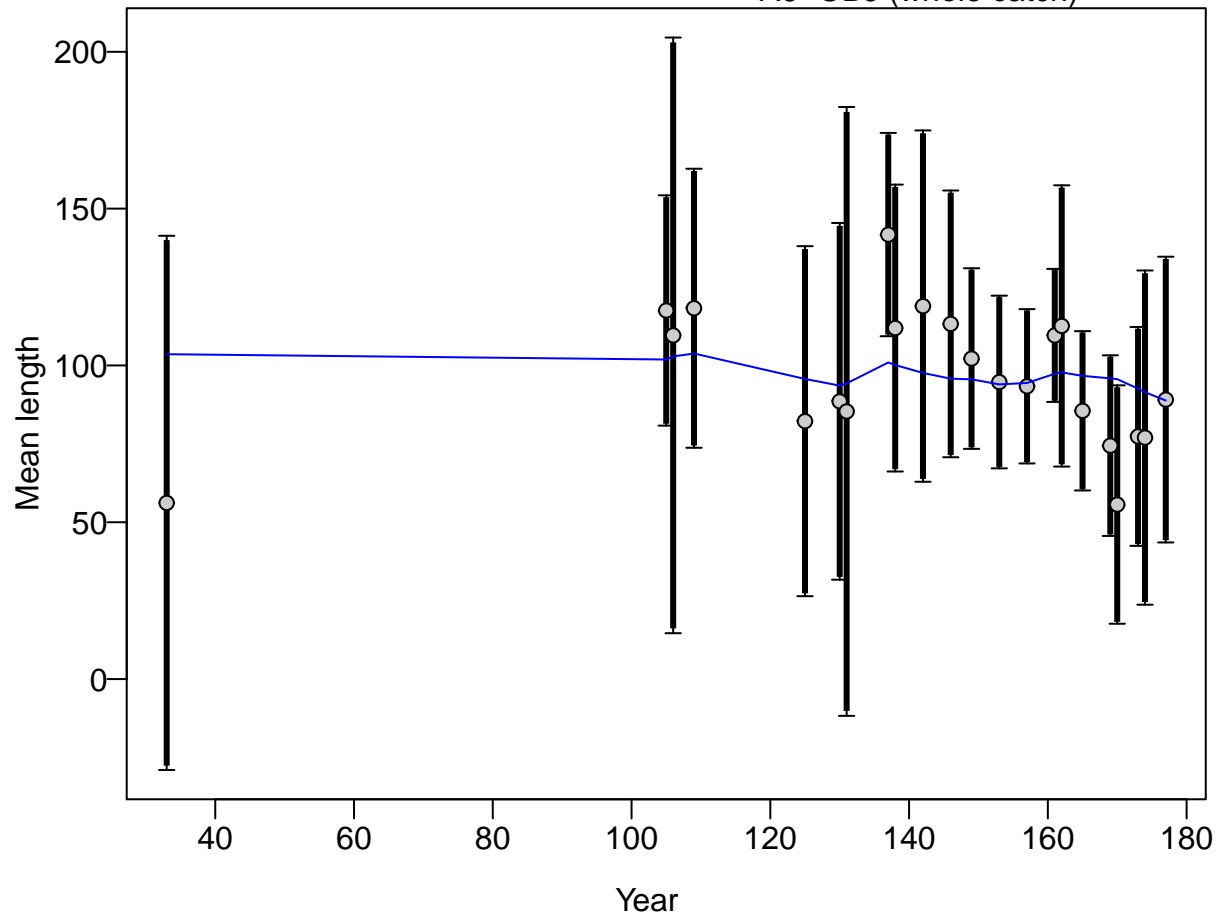


Length (cm)

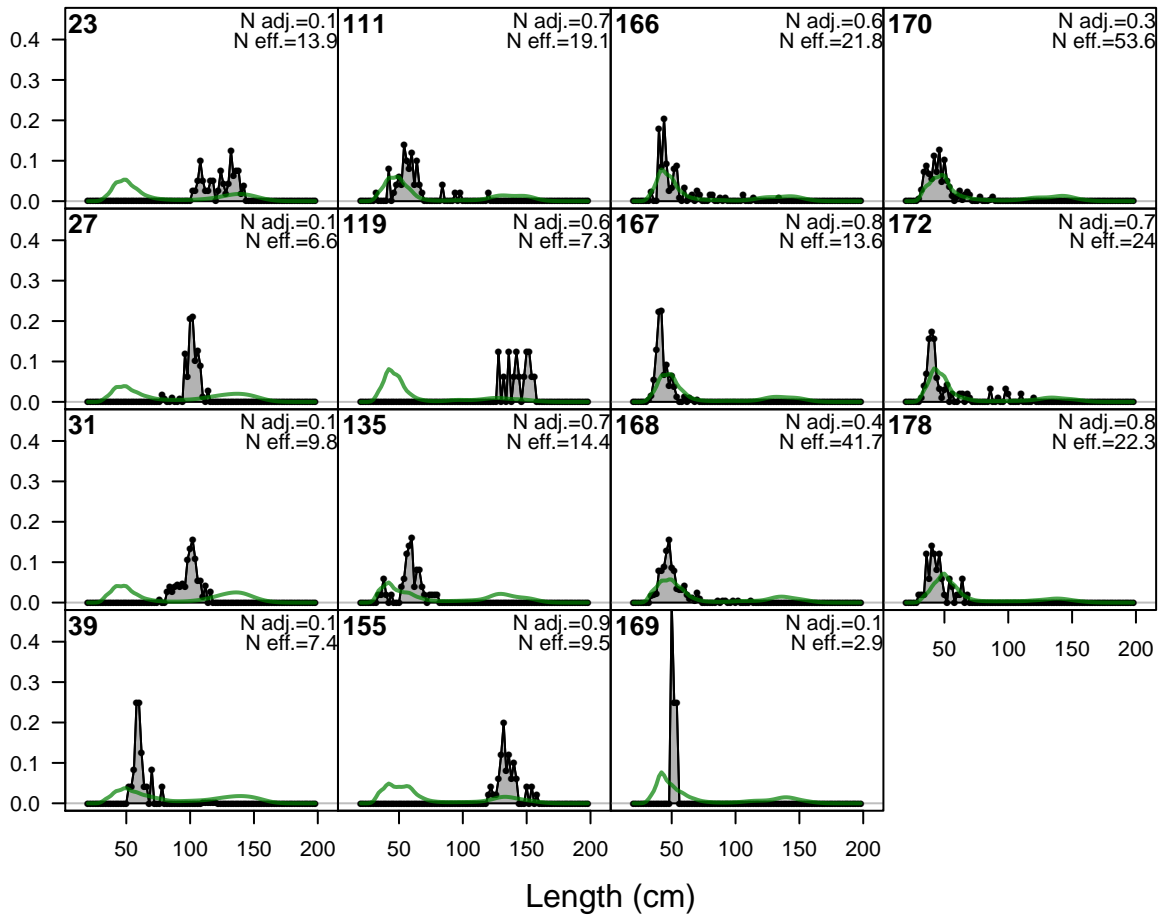


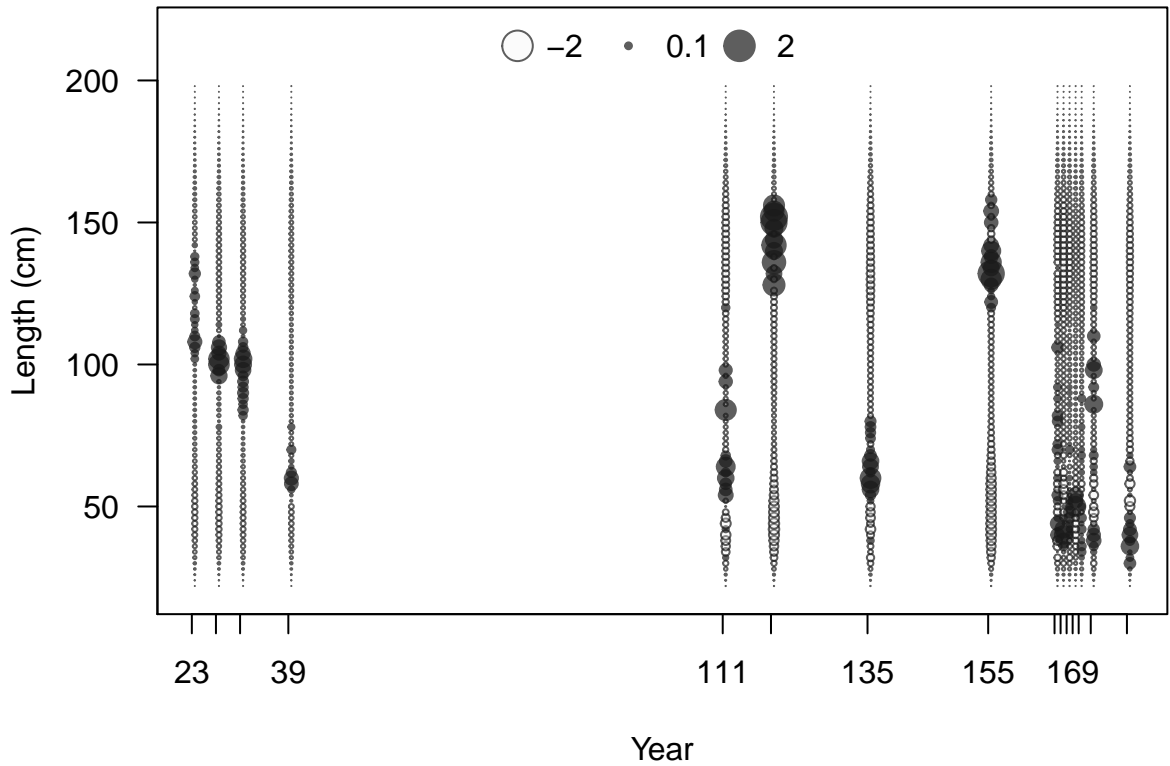


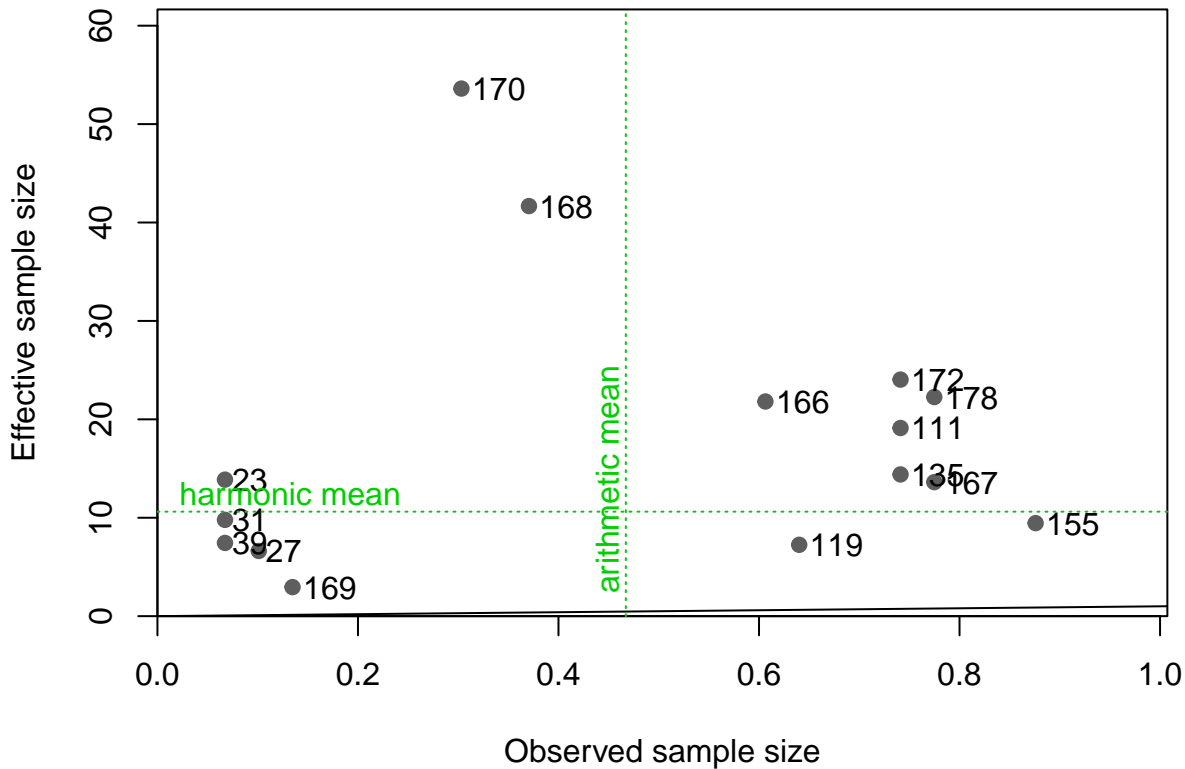
A6-OBJ (whole catch)



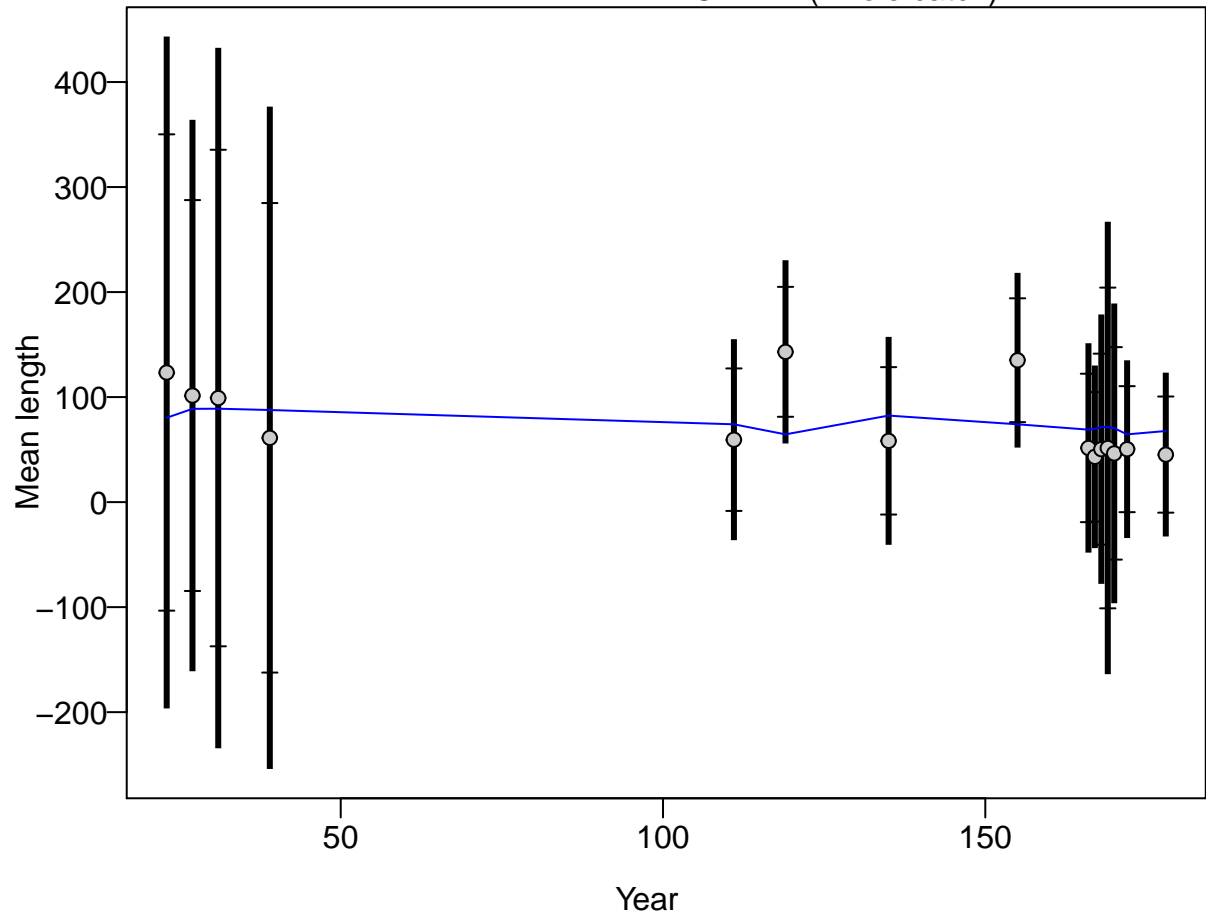
Proportion



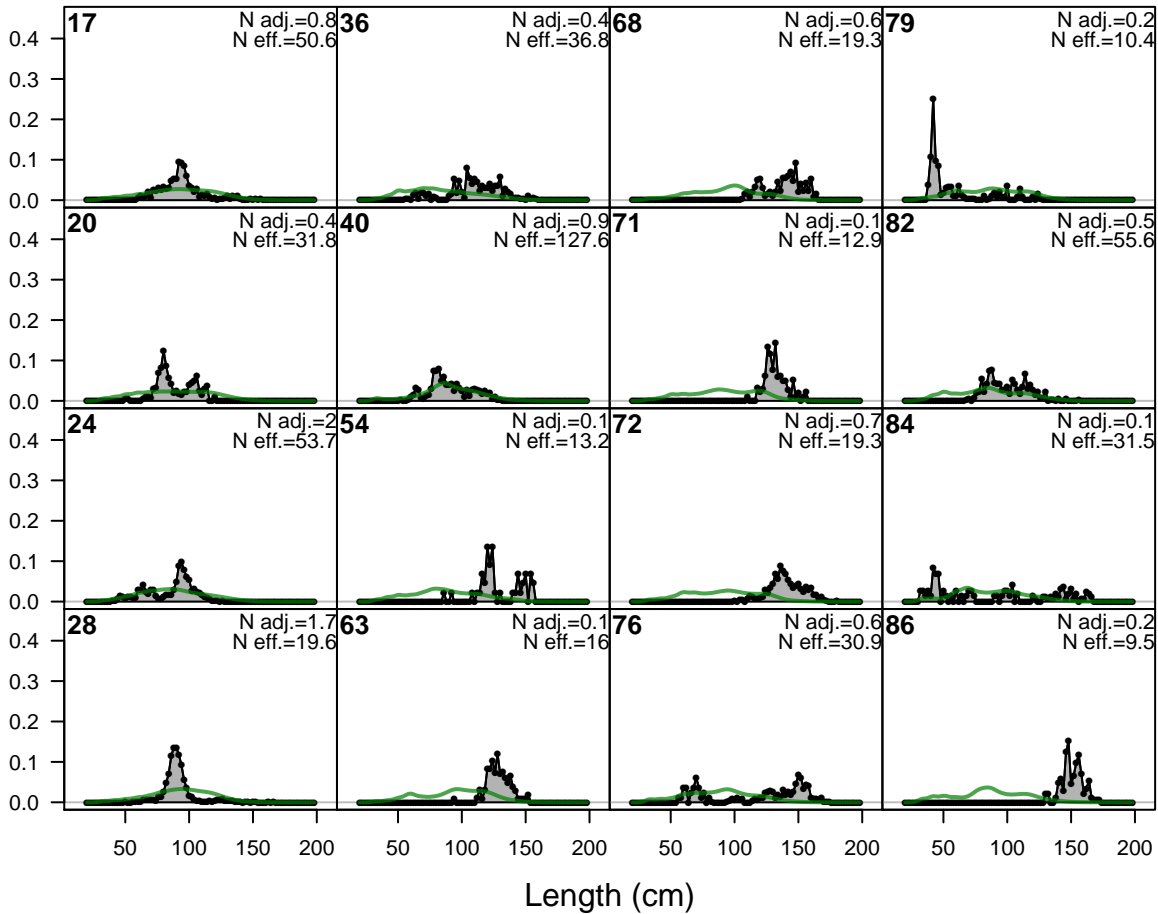




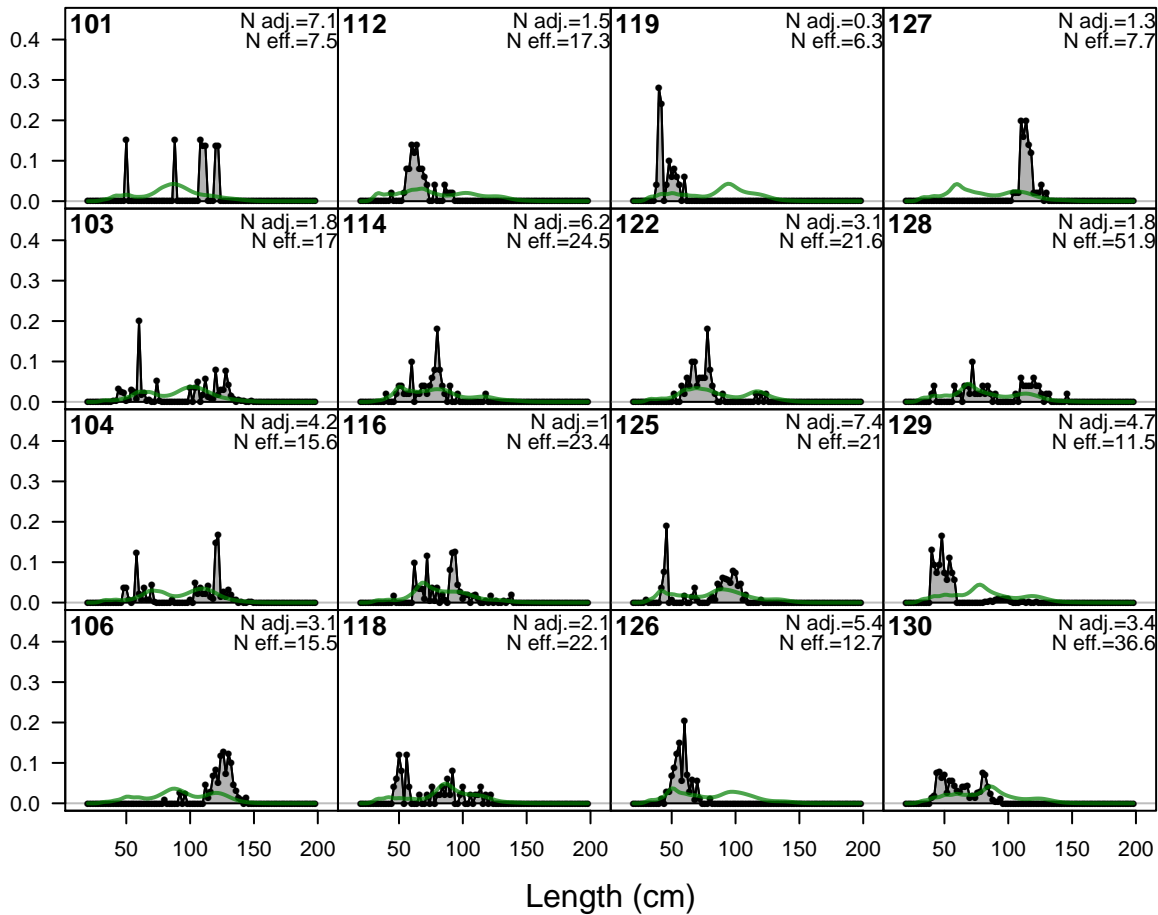
A2-NOADEL (whole catch)



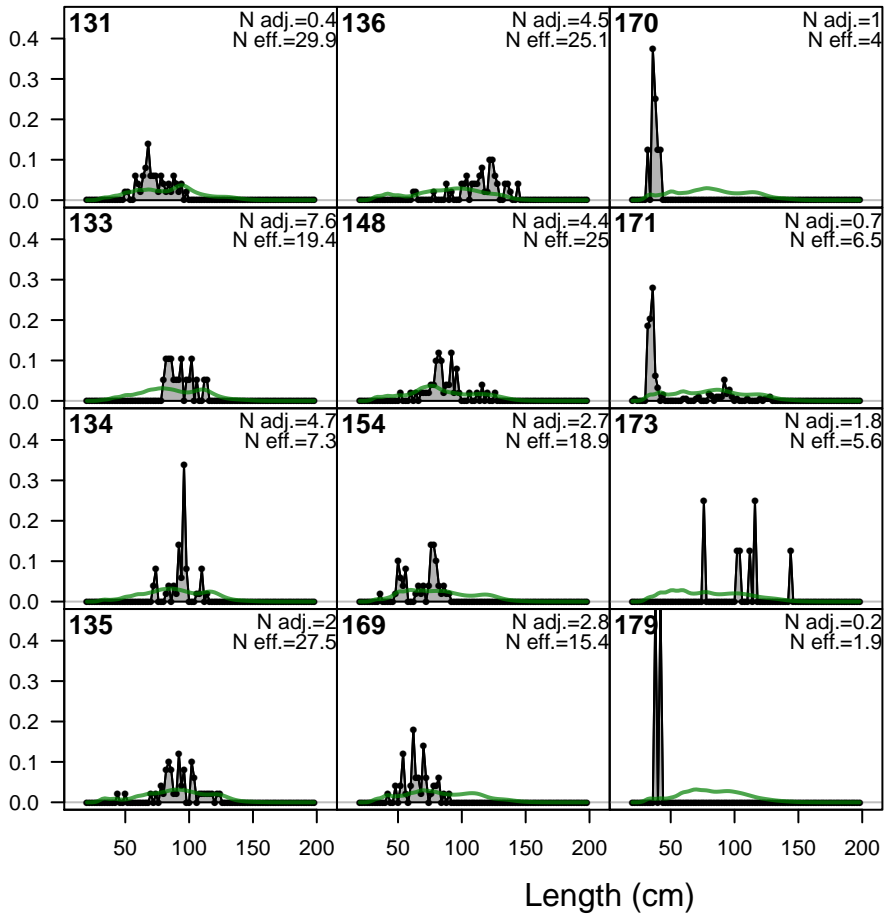
Proportion

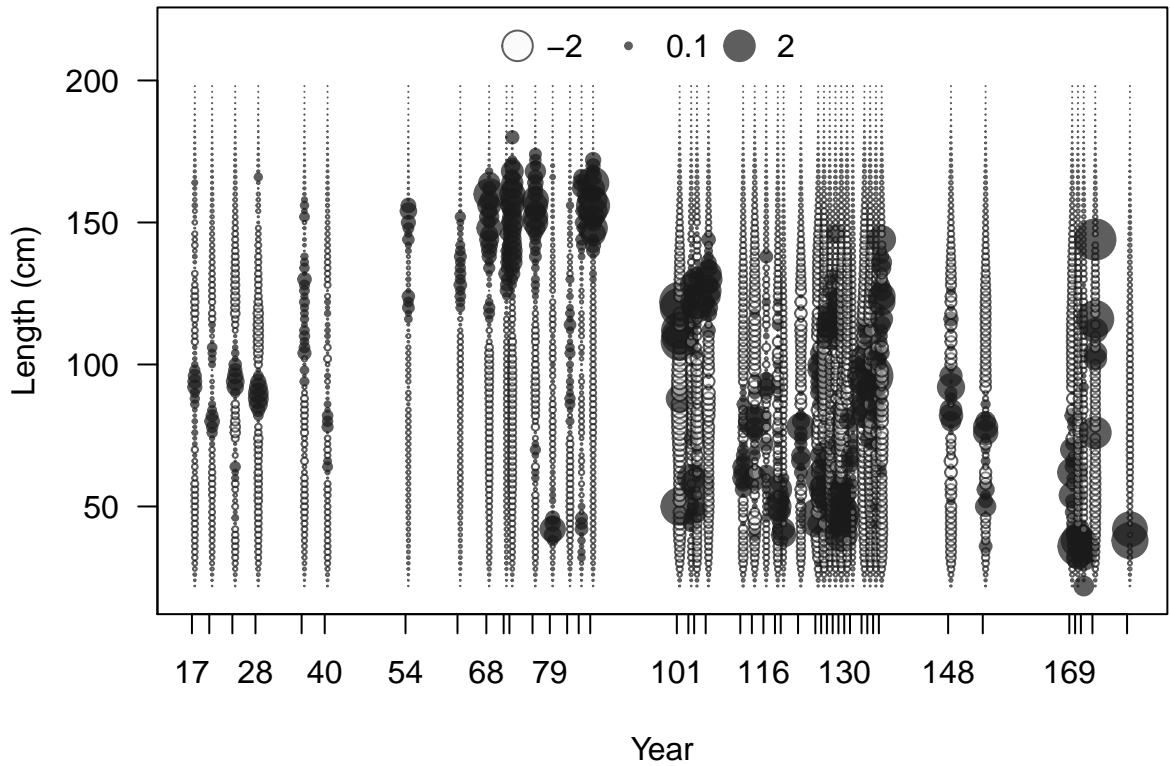


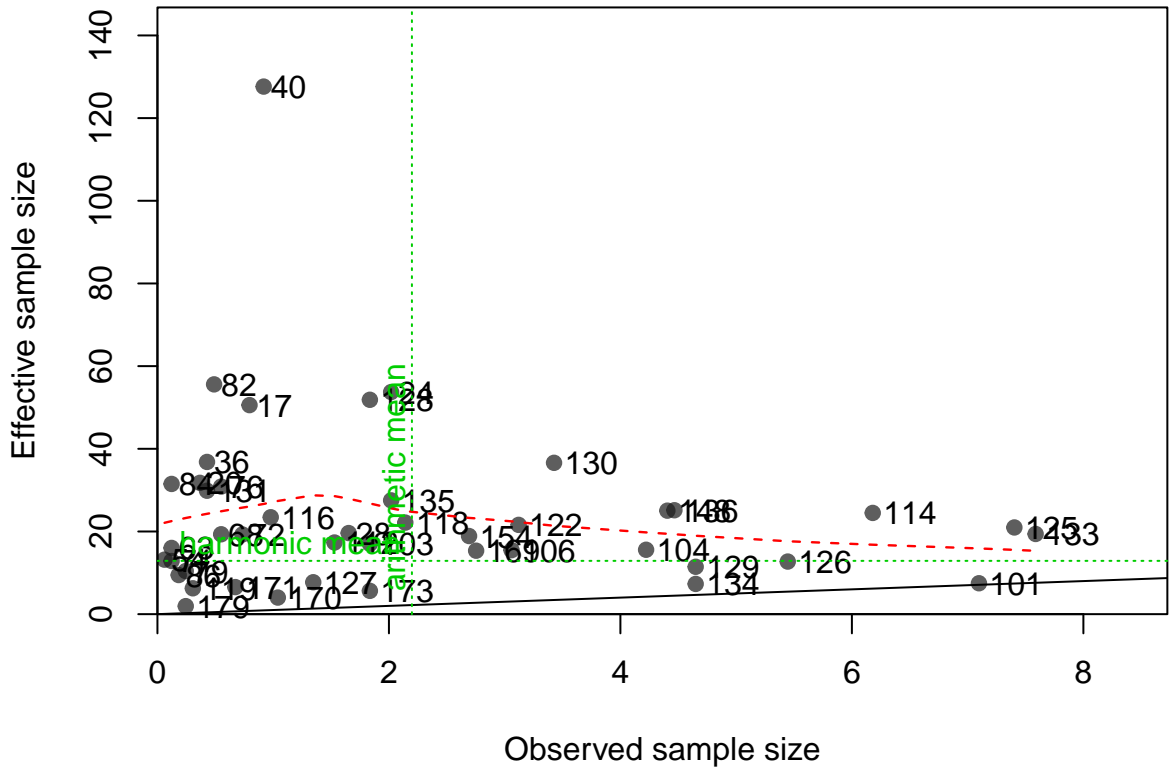
Proportion



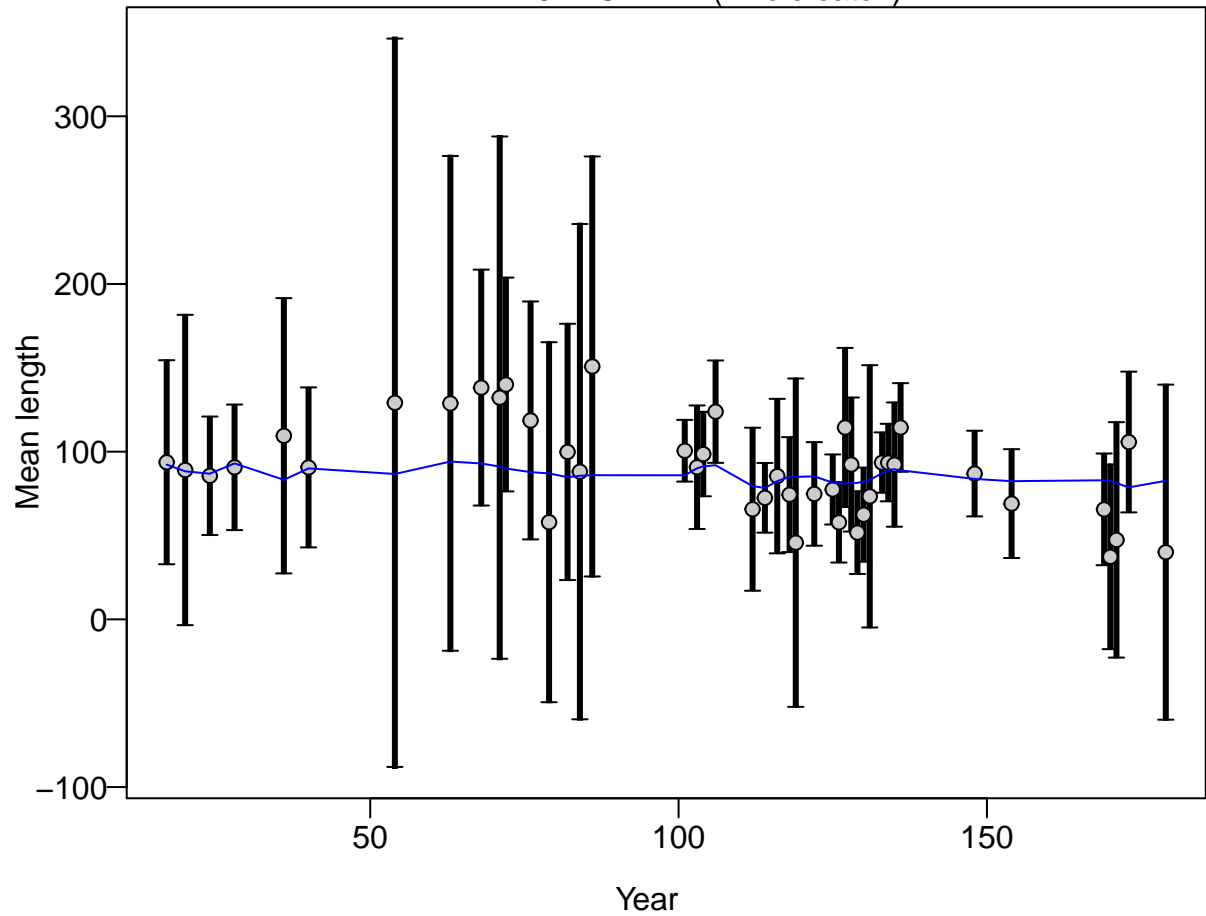
Proportion

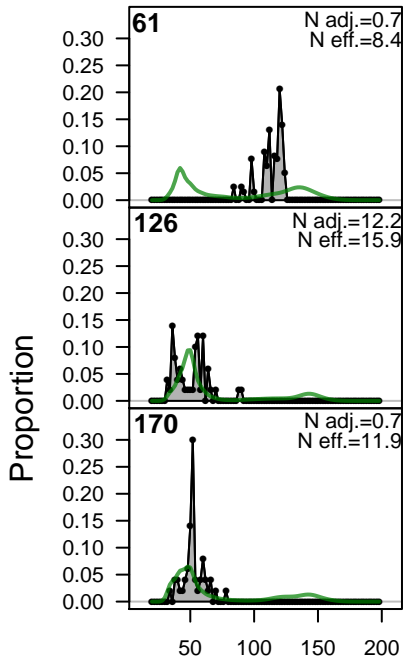




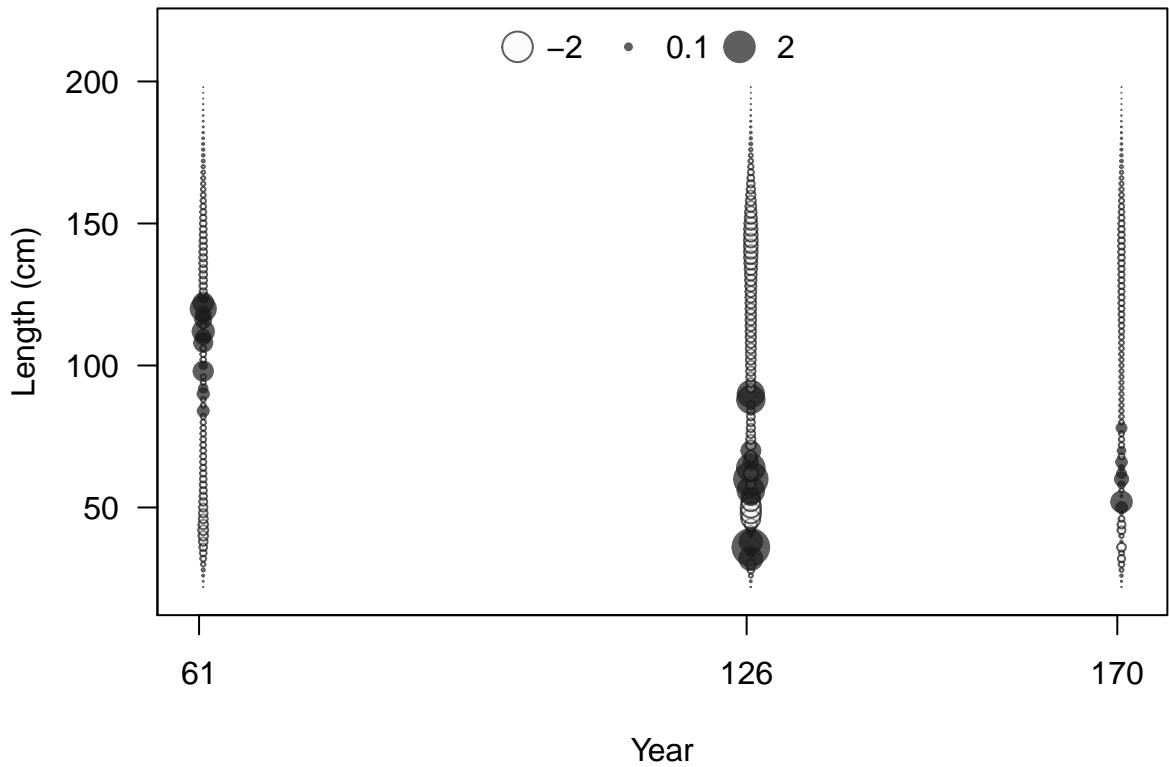


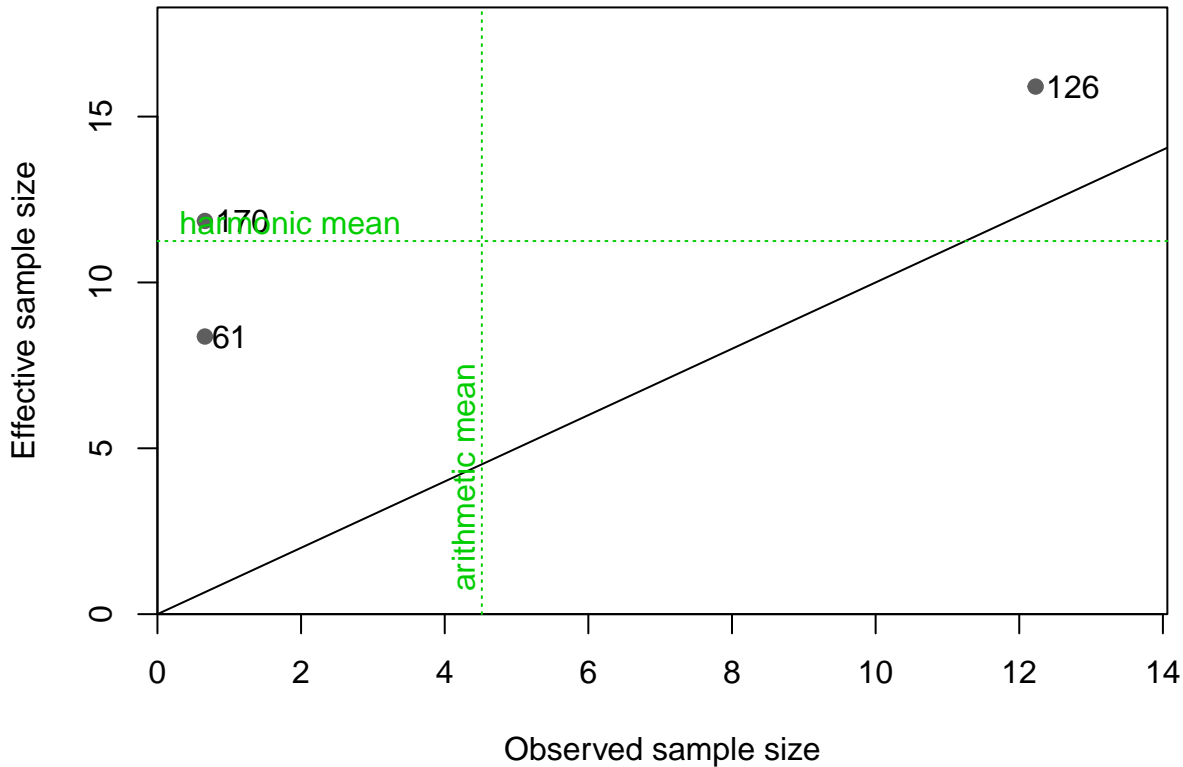
A3-NOADEL (whole catch)



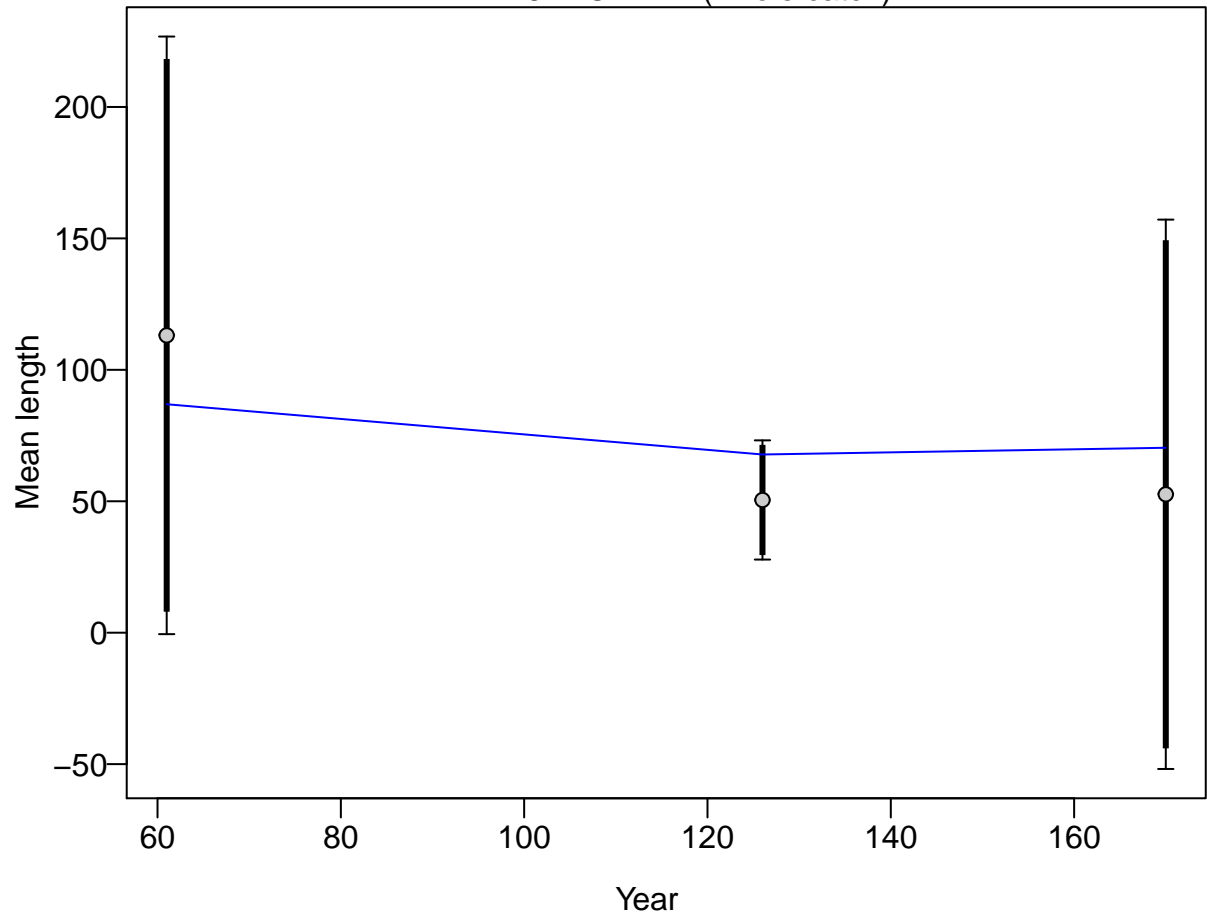


Length (cm)

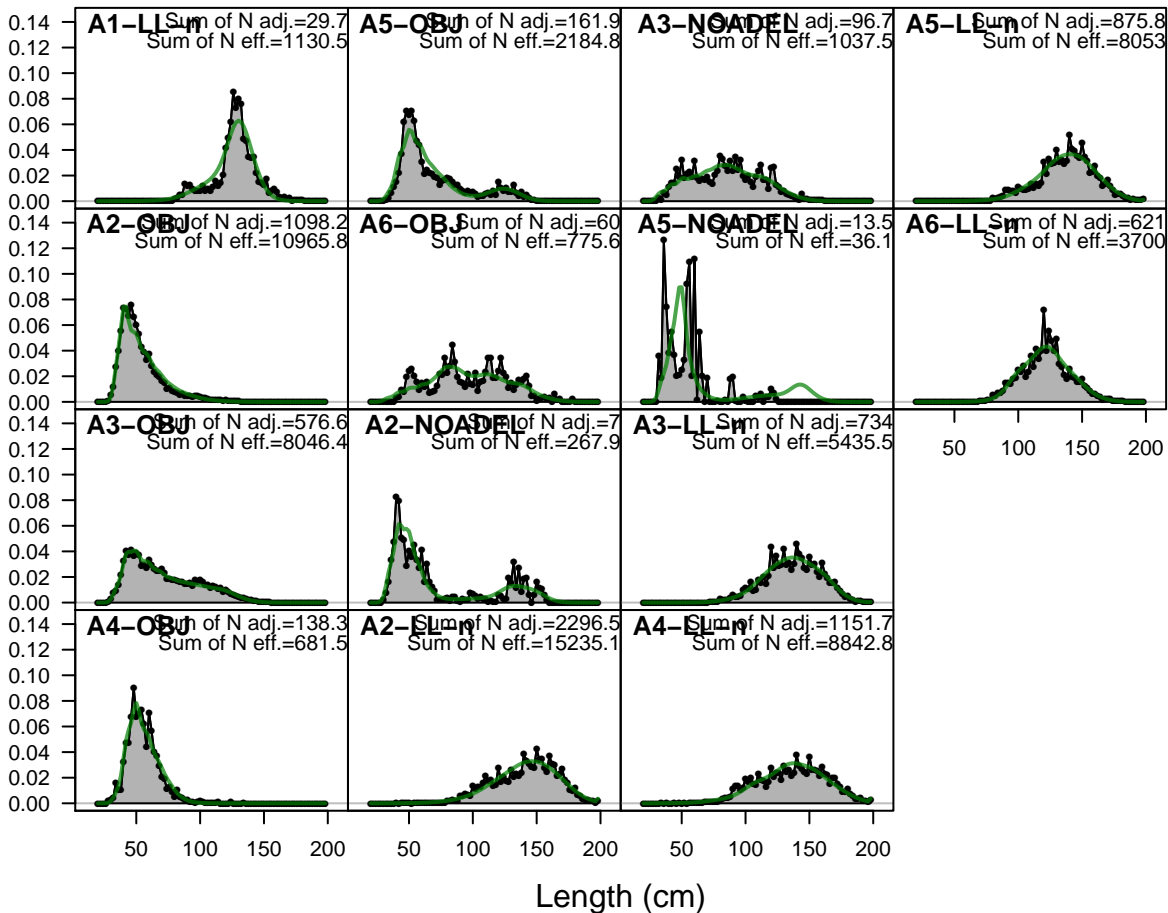


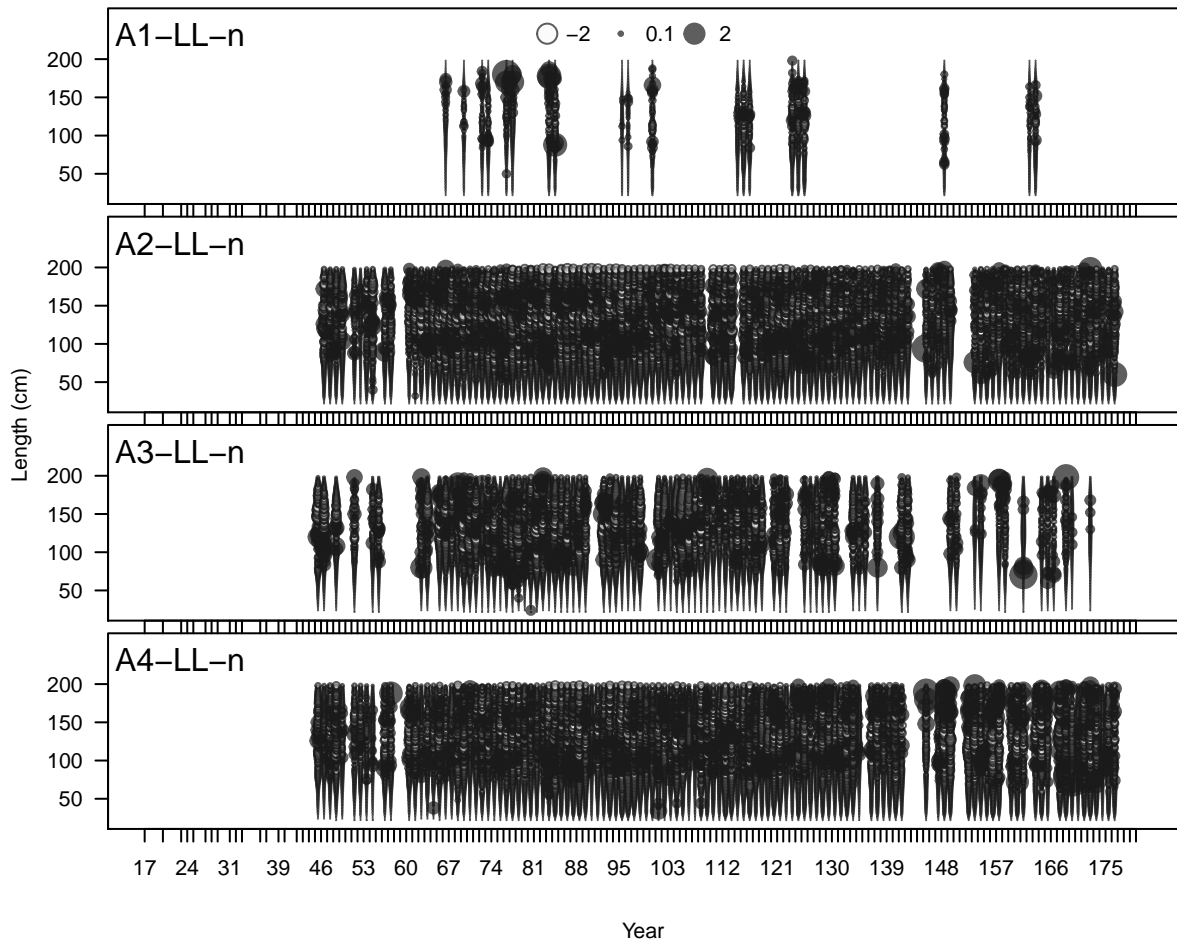


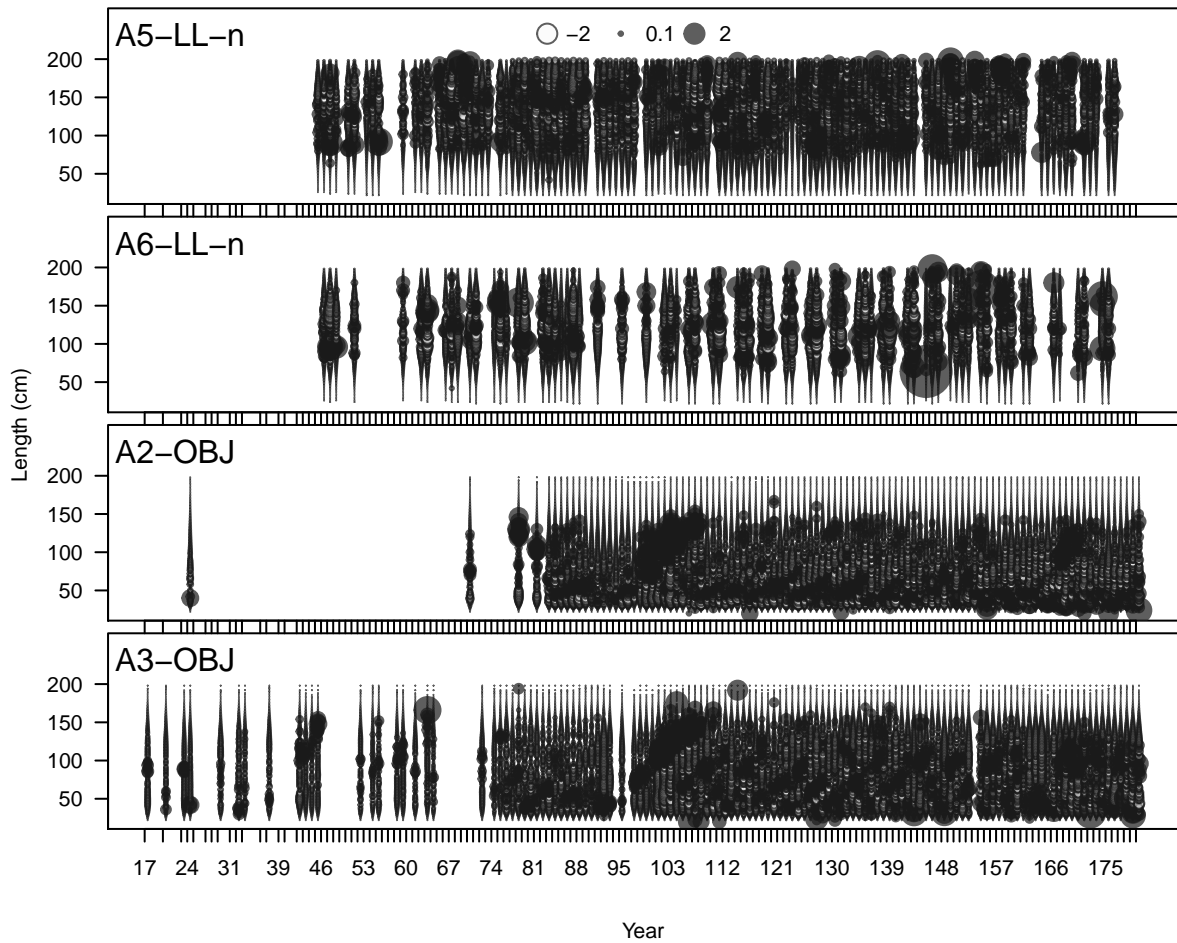
A5-NOADEL (whole catch)

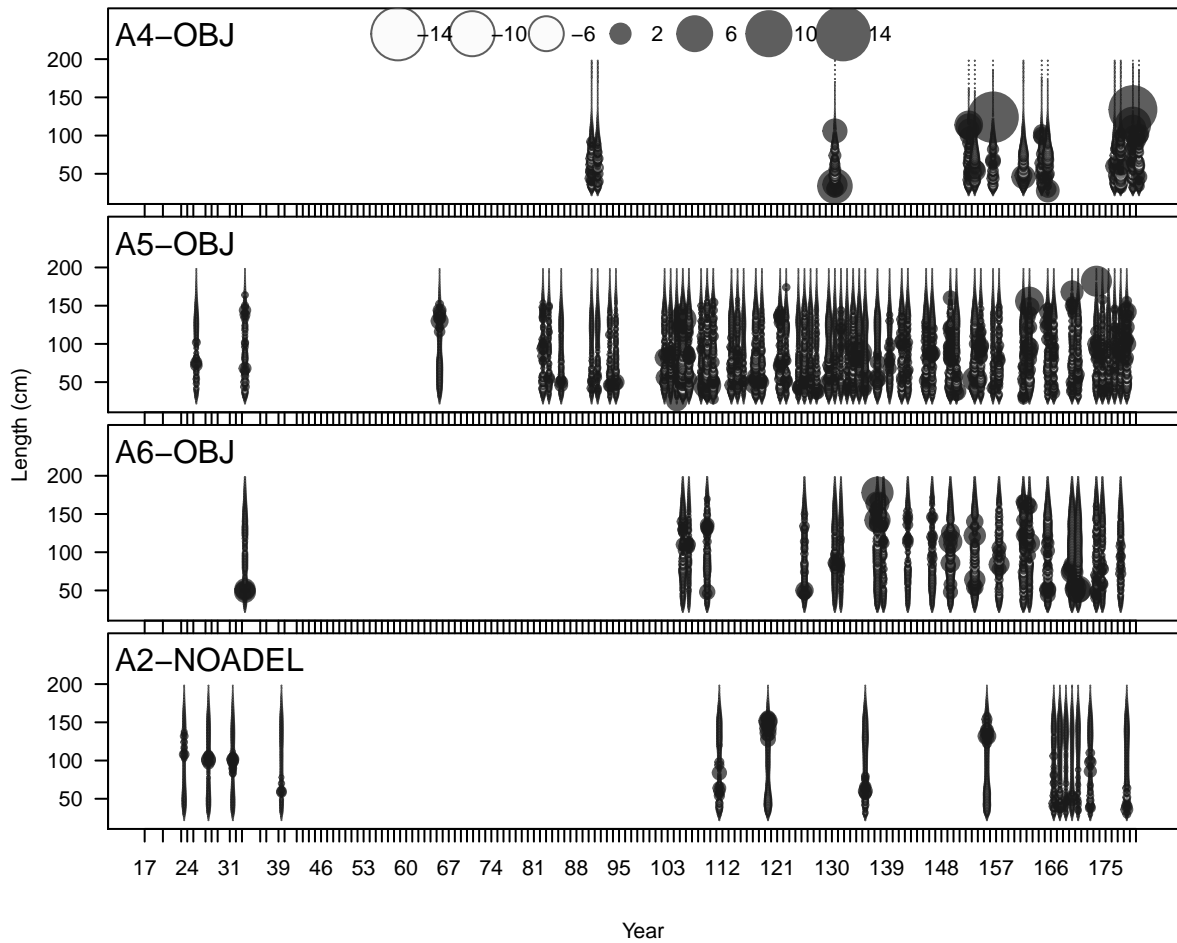


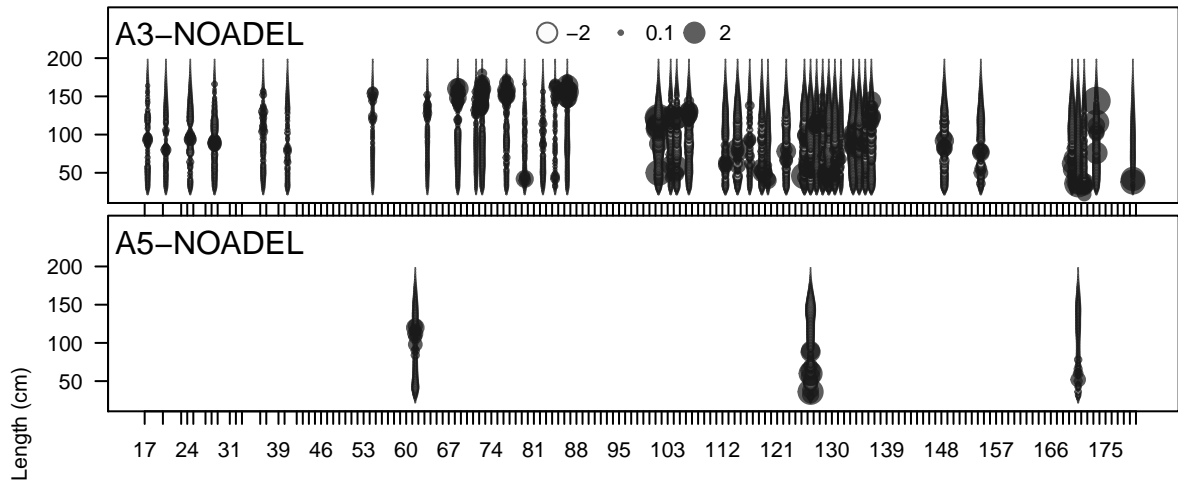
Proportion





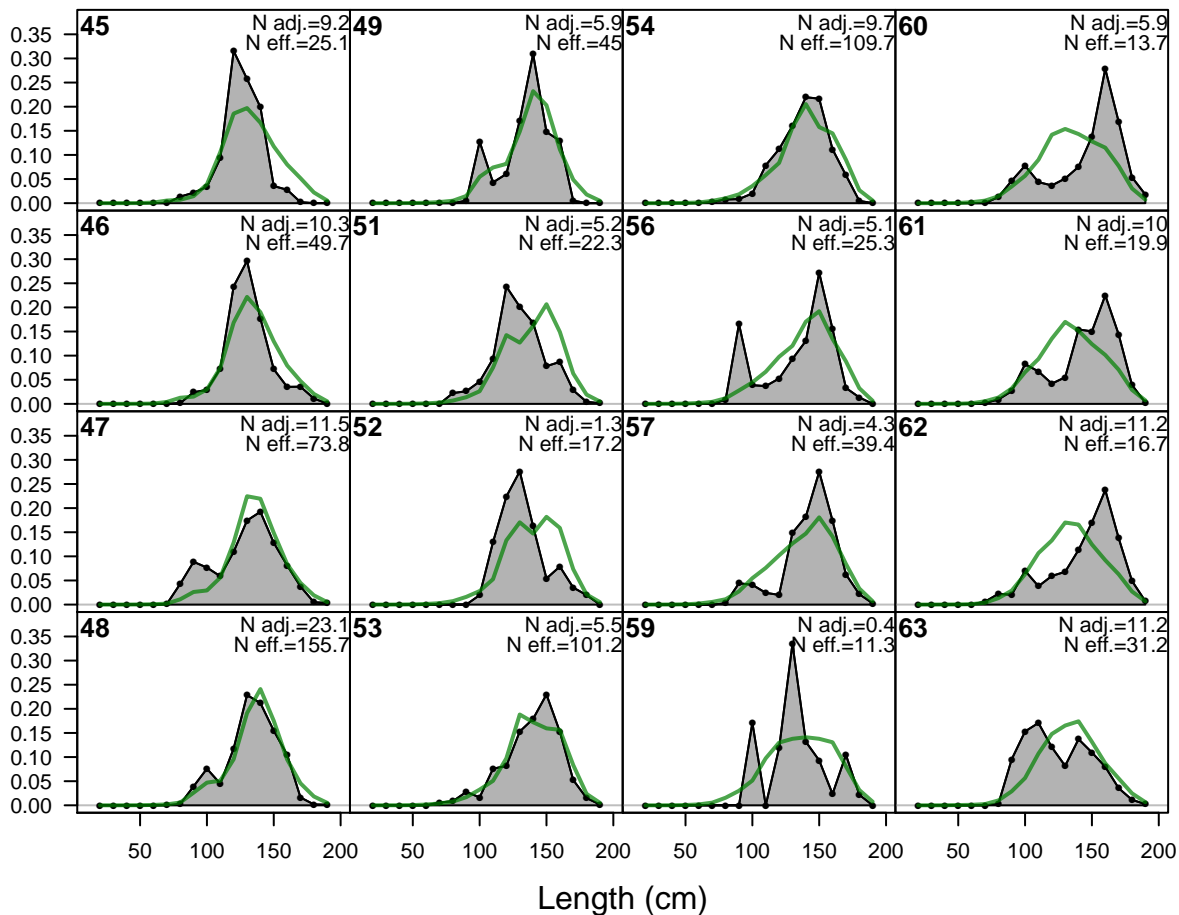




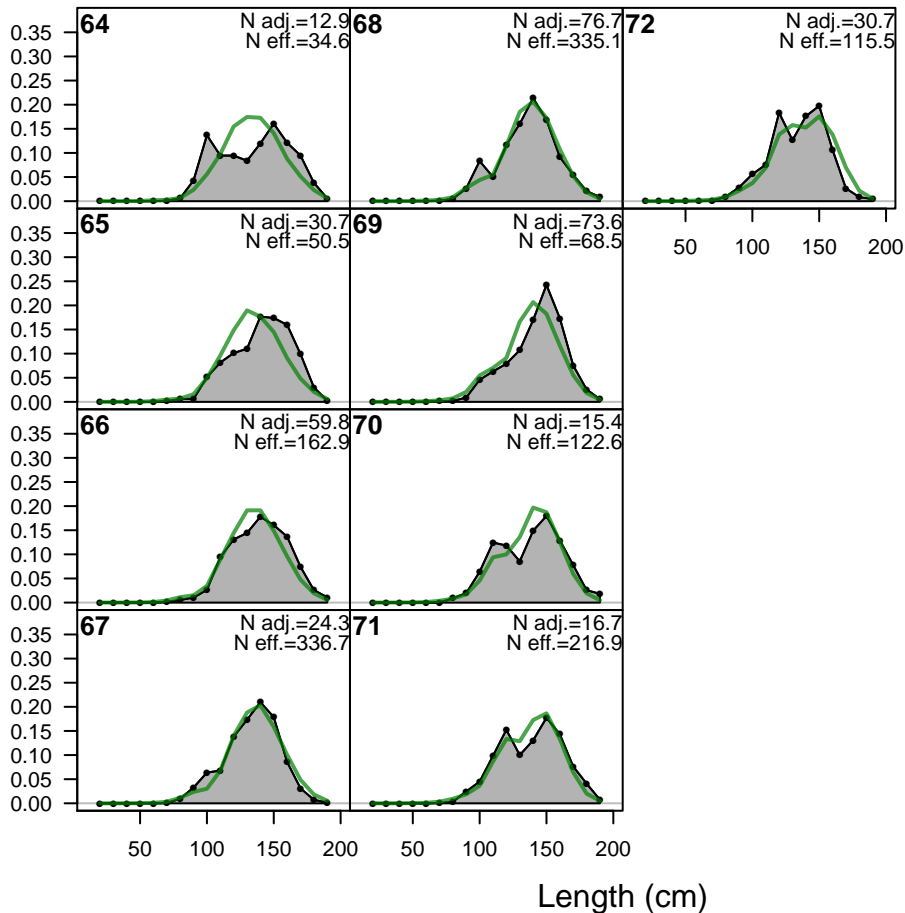


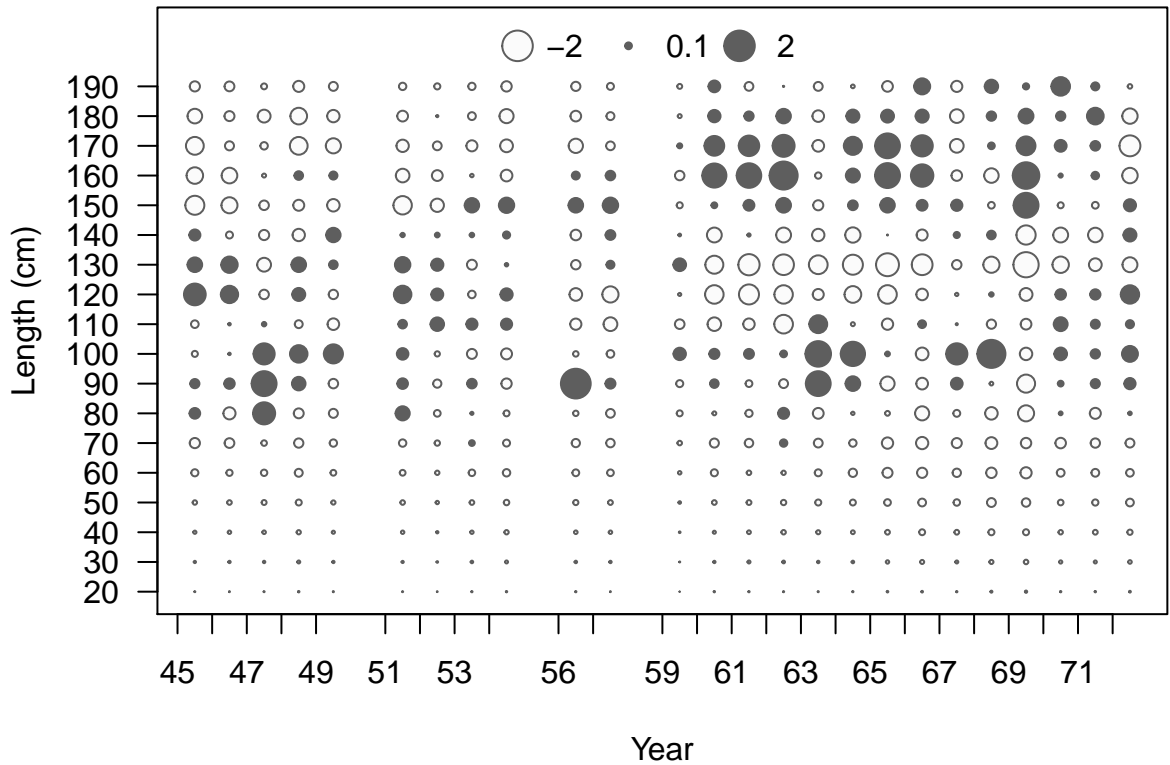
Year

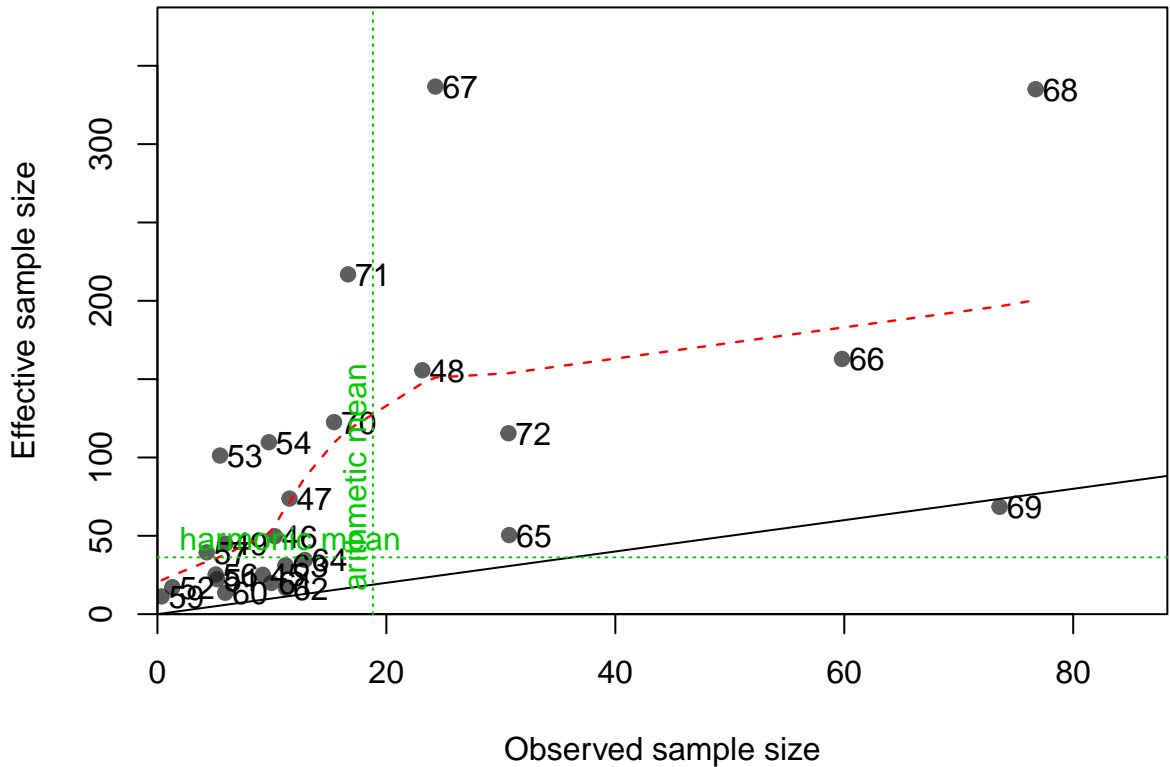
Proportion



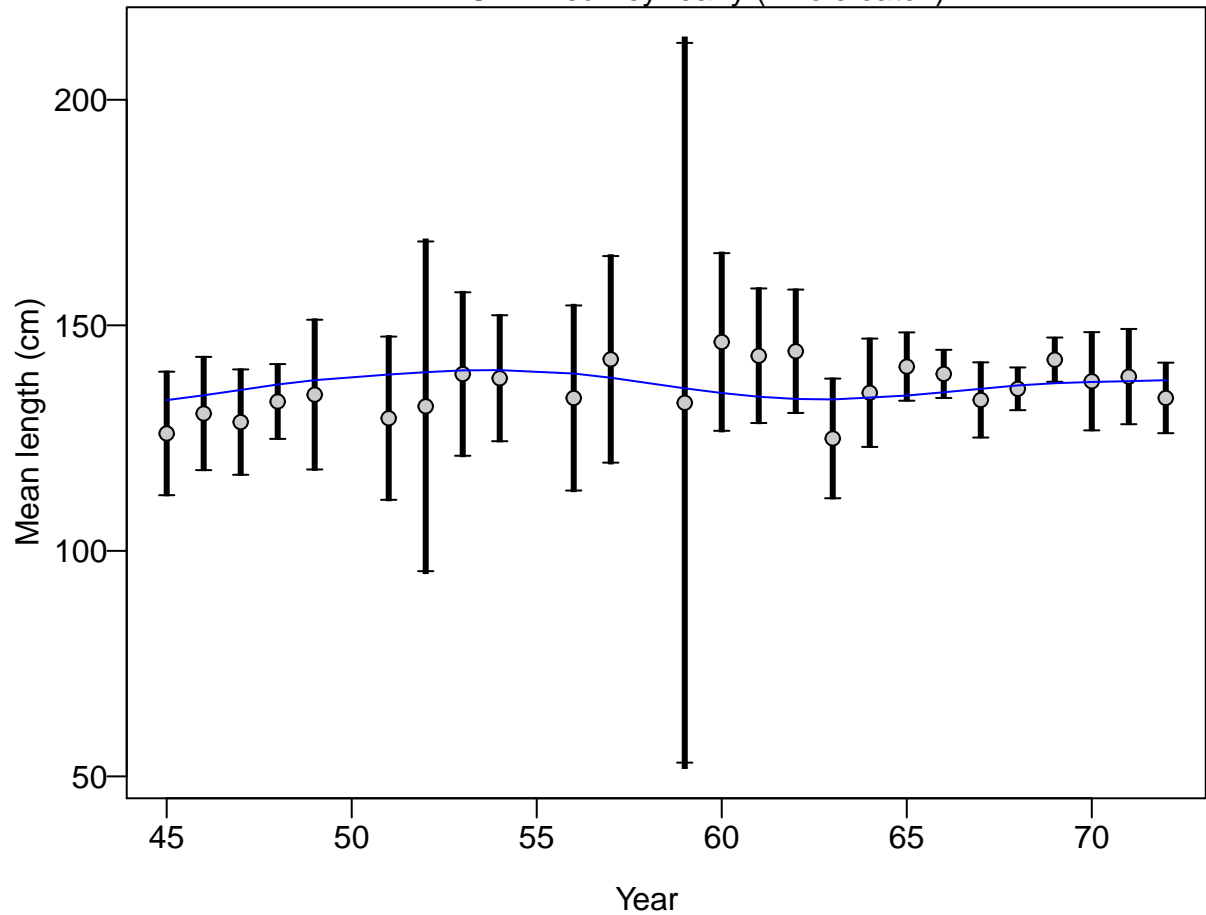
Proportion



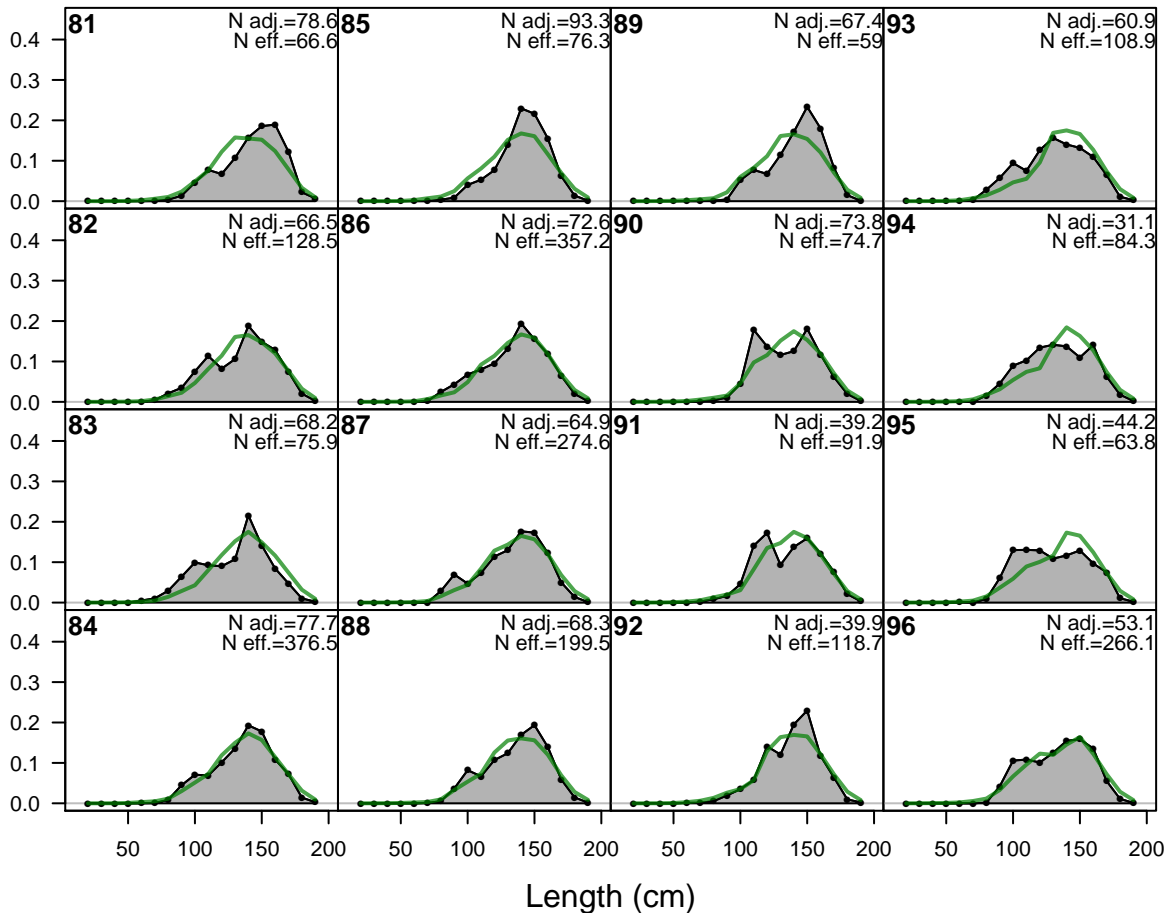




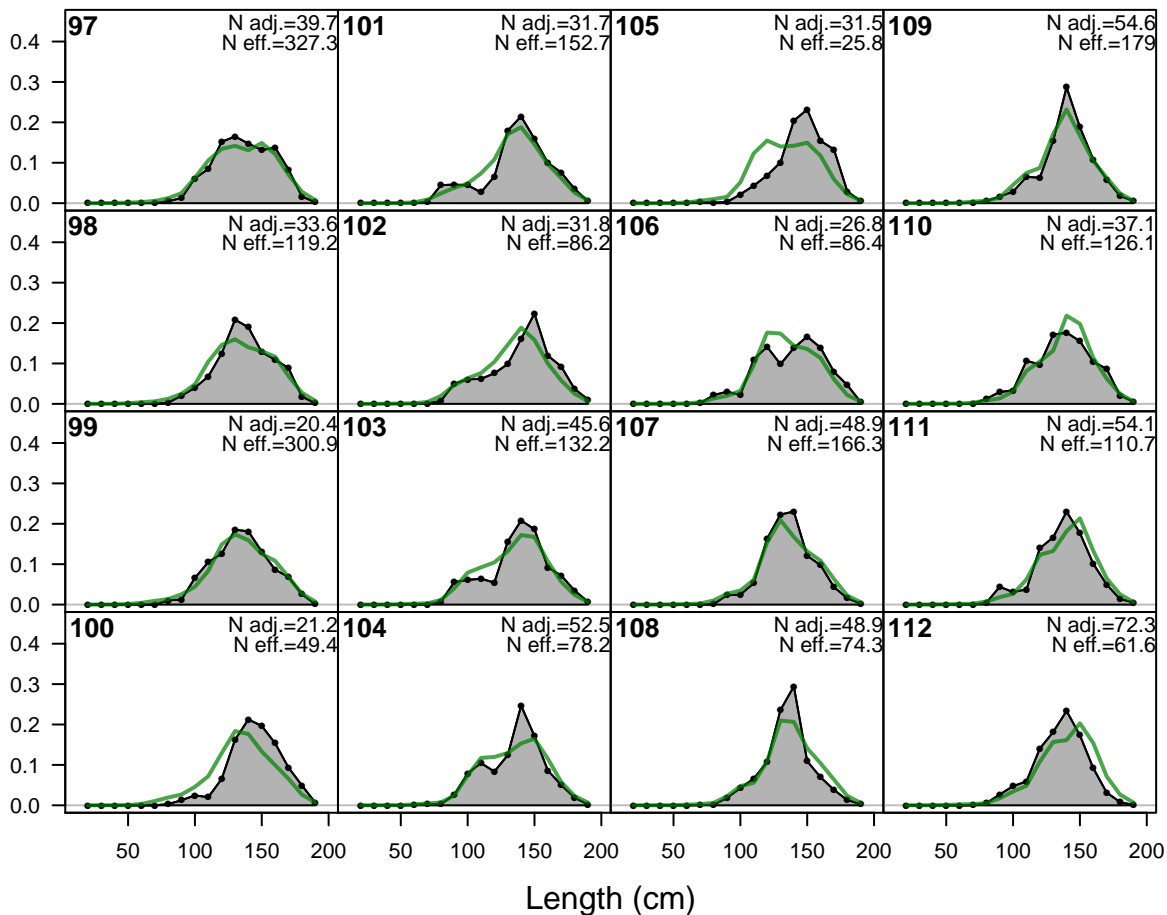
EPO-LL-survey-early (whole catch)



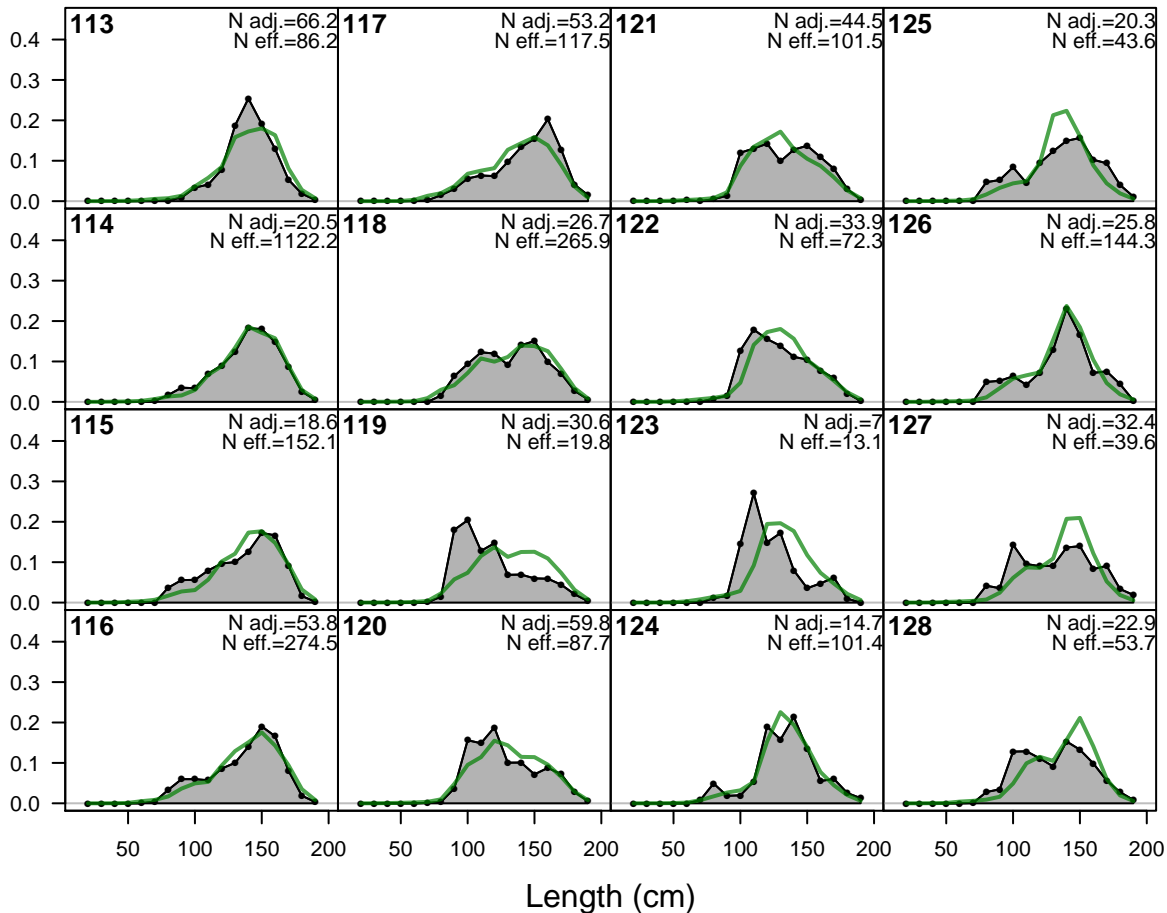
Proportion



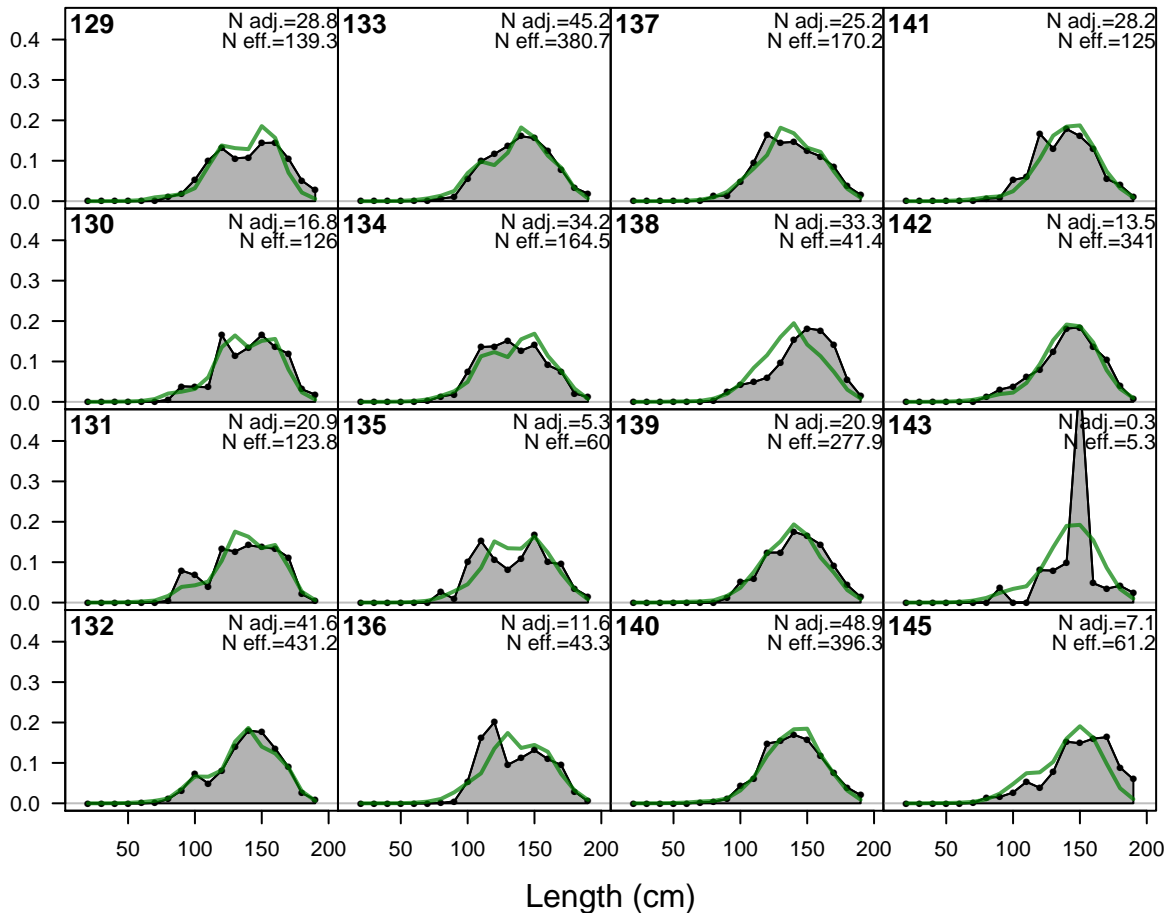
Proportion



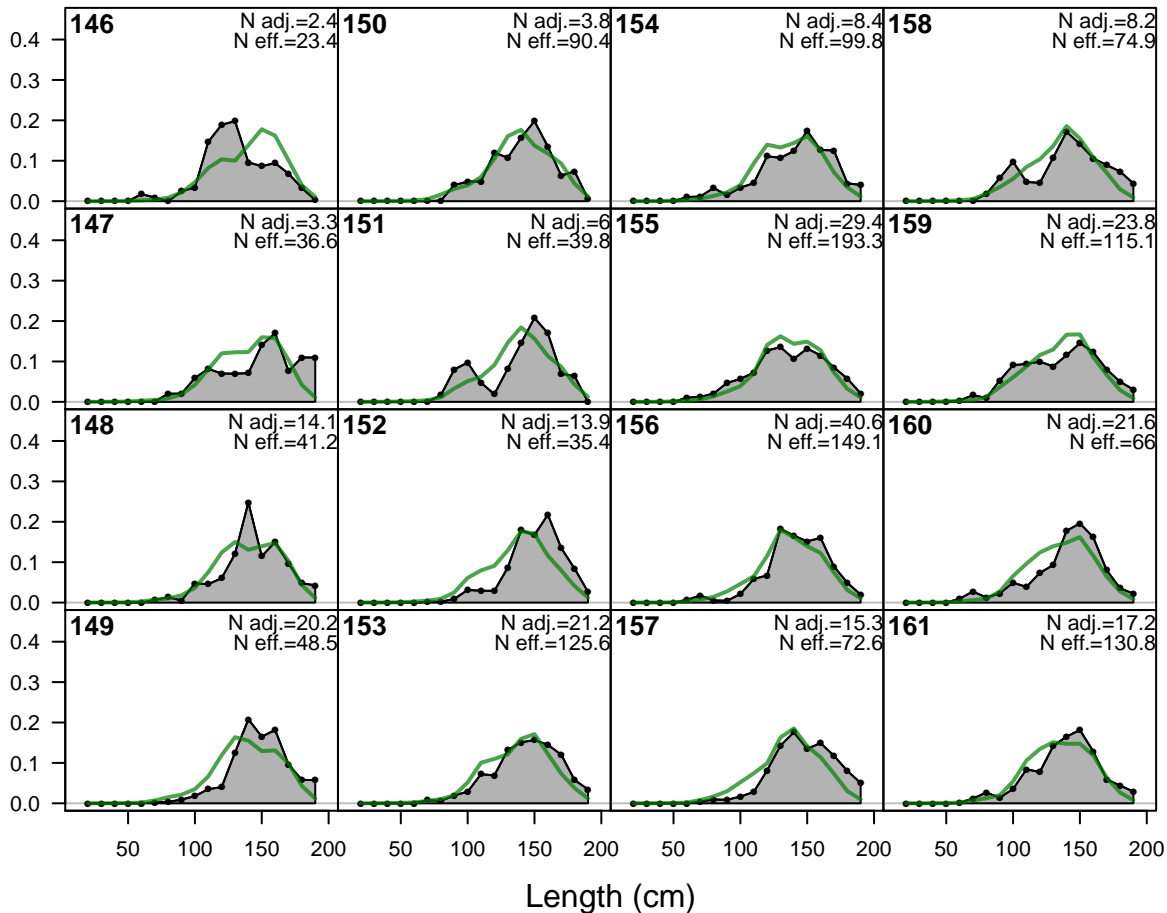
Proportion



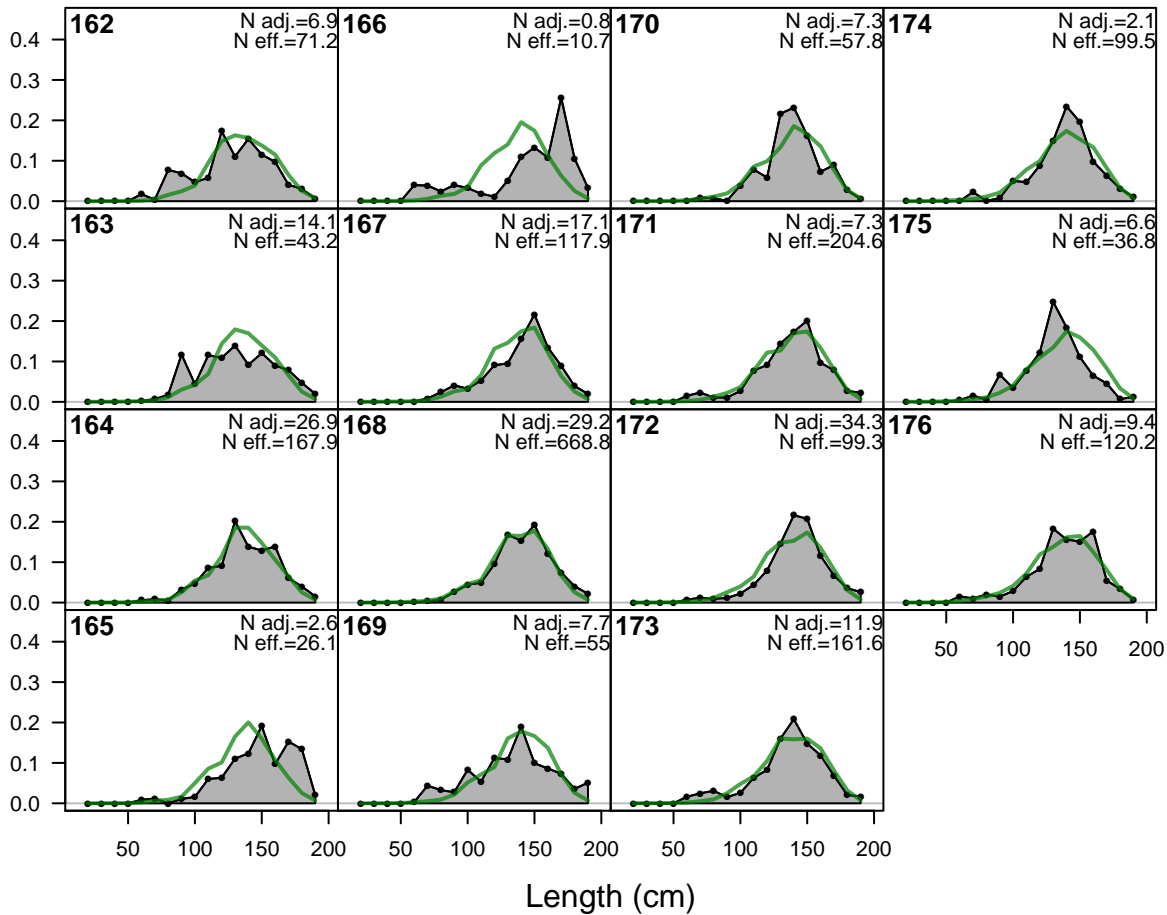
Proportion

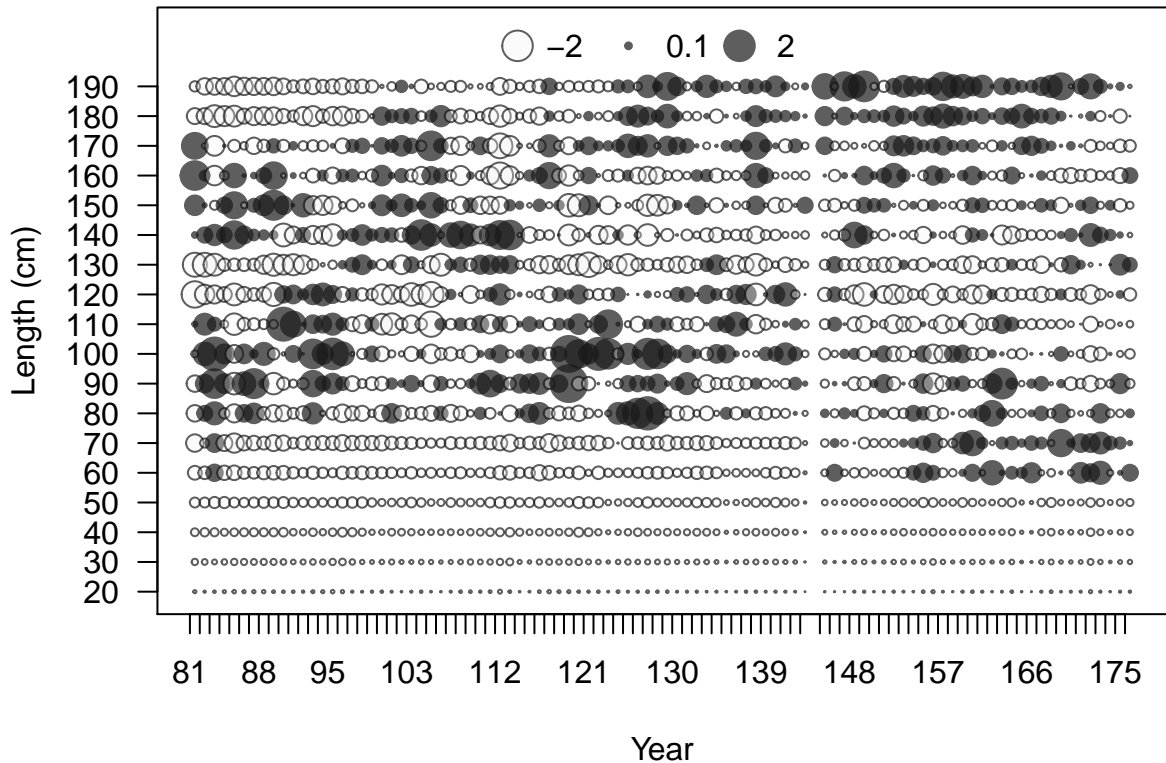


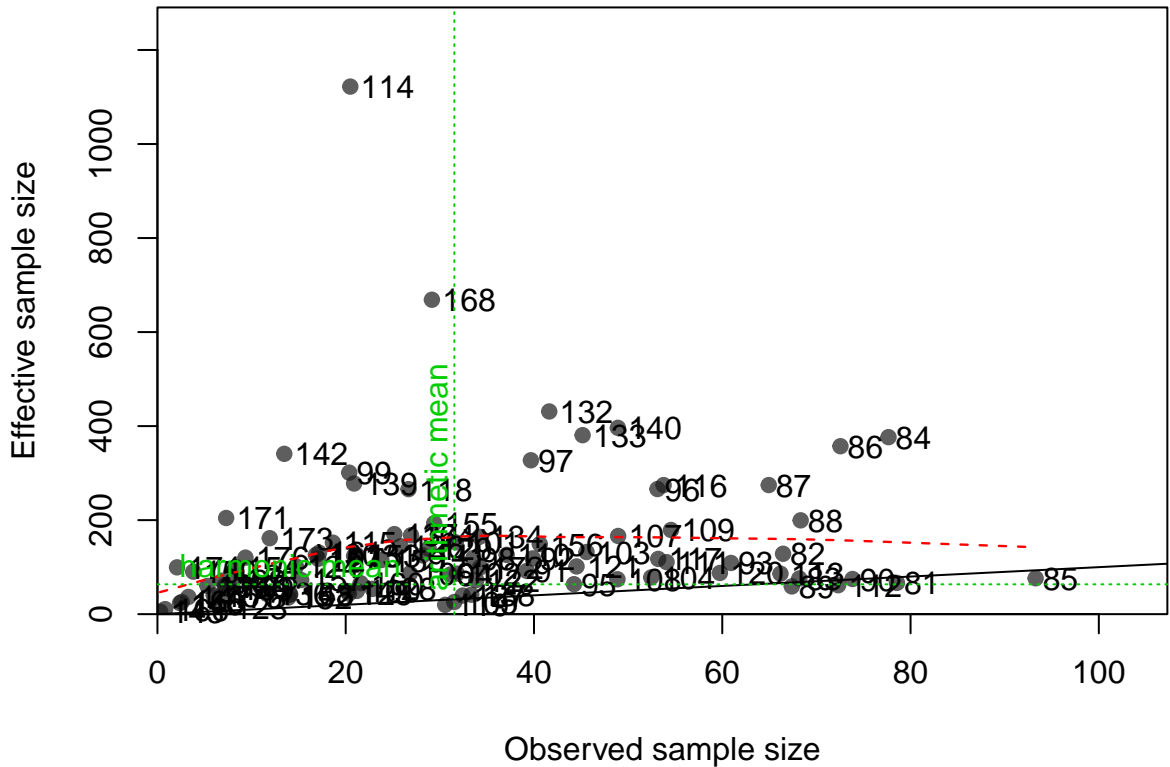
Proportion



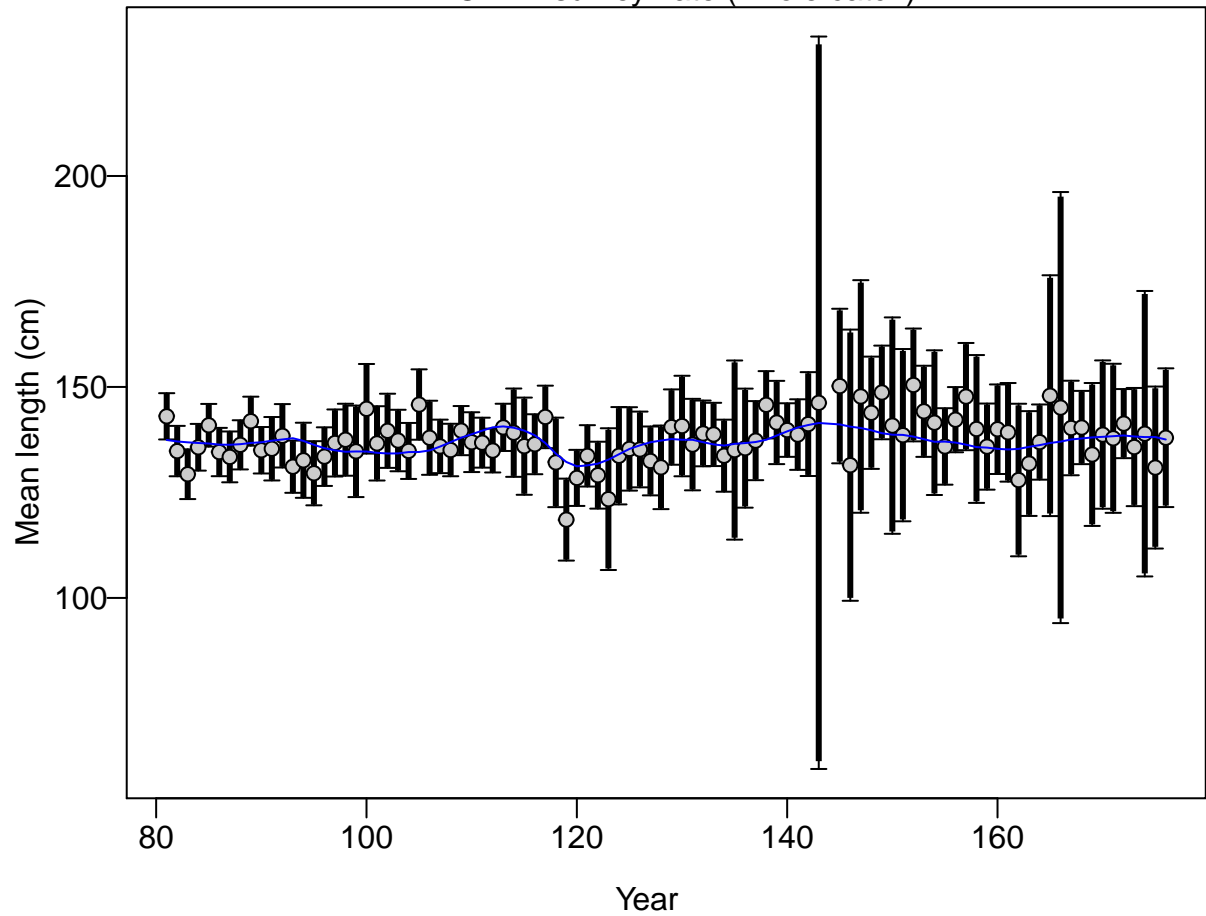
Proportion





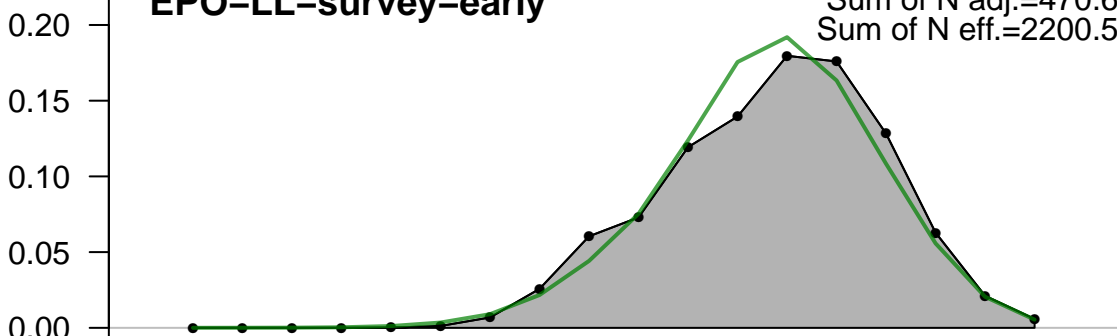


EPO-LL-survey-late (whole catch)



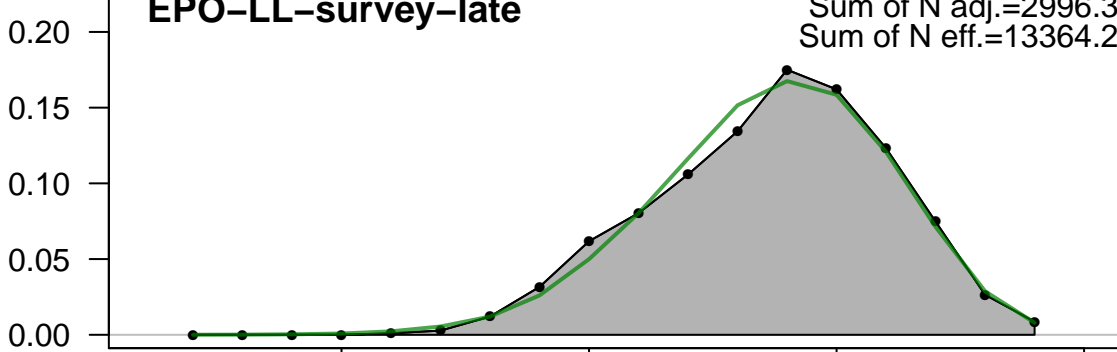
EPO-LL-survey-early

Sum of N adj.=470.6
Sum of N eff.=2200.5



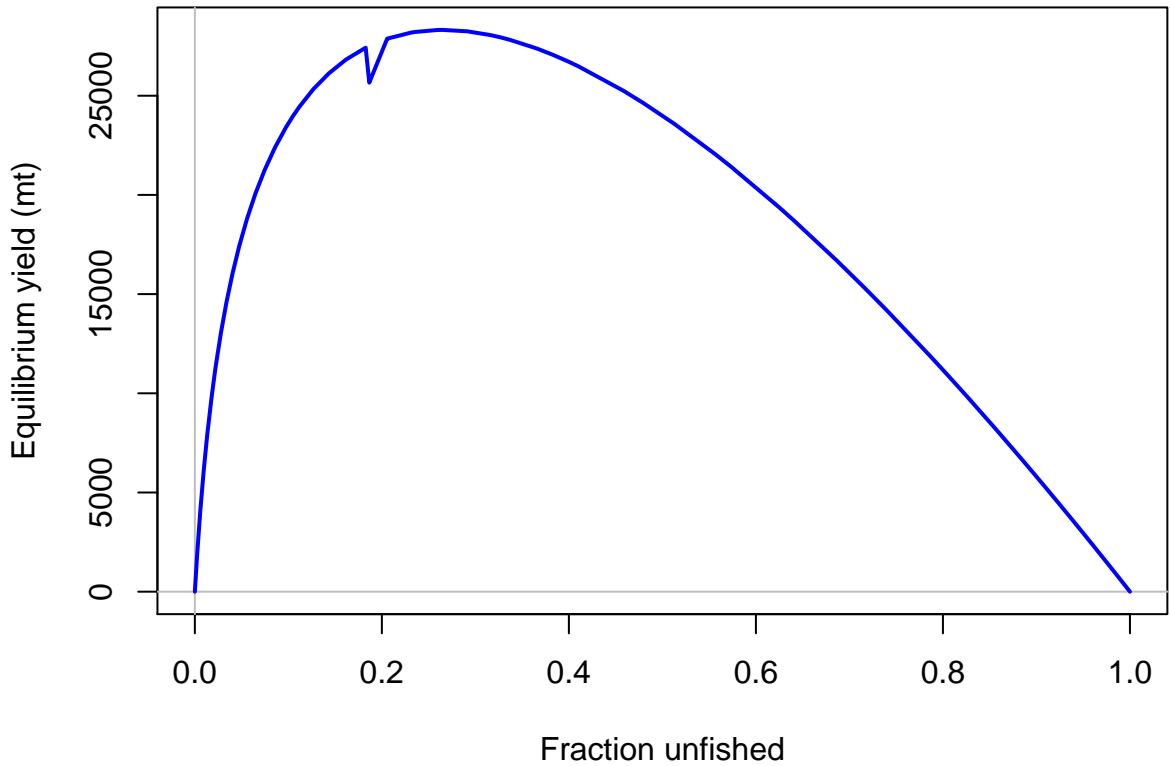
EPO-LL-survey-late

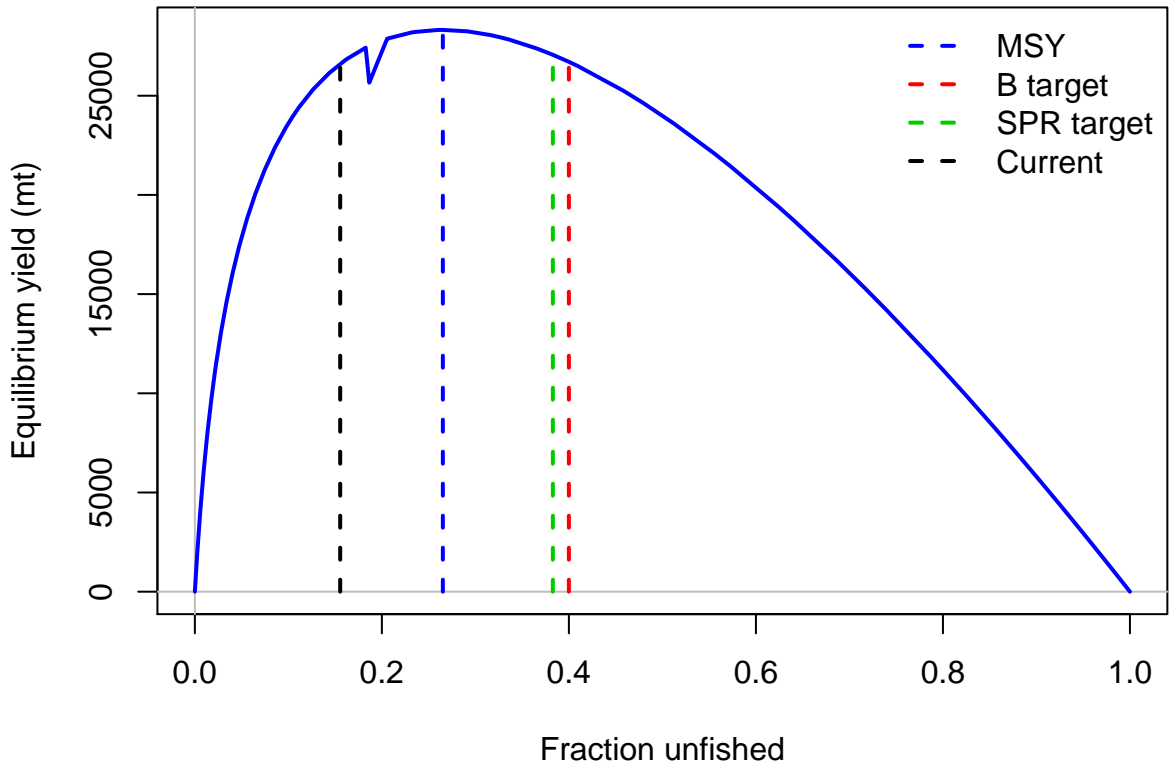
Sum of N adj.=2996.3
Sum of N eff.=13364.2

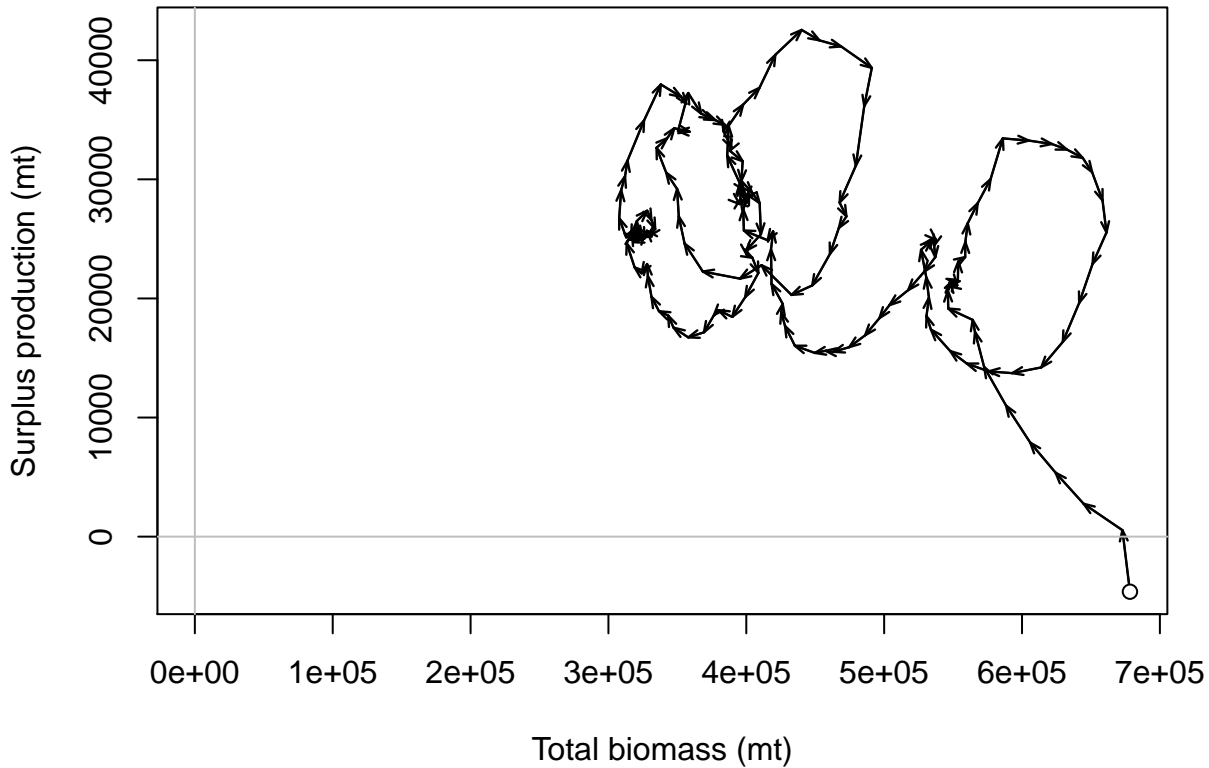


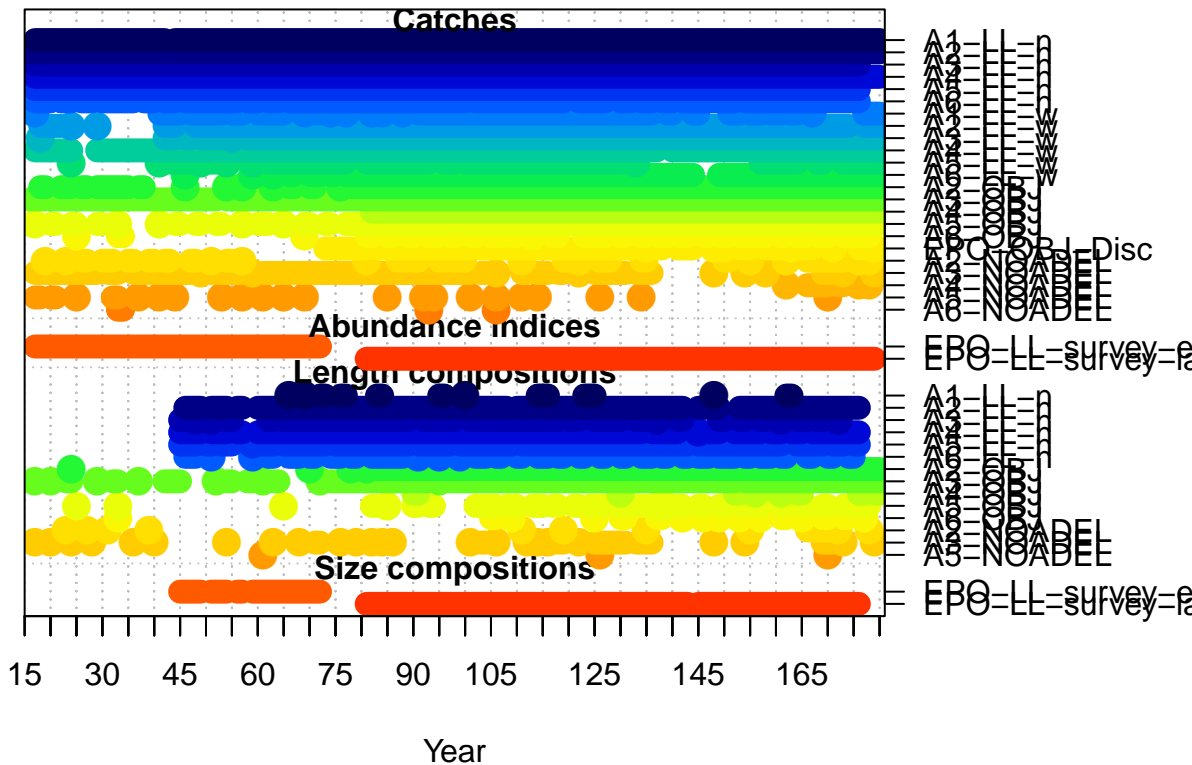
Length (cm)

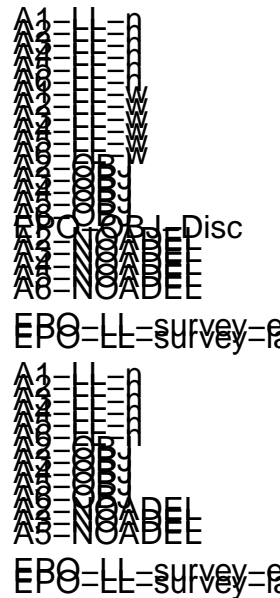
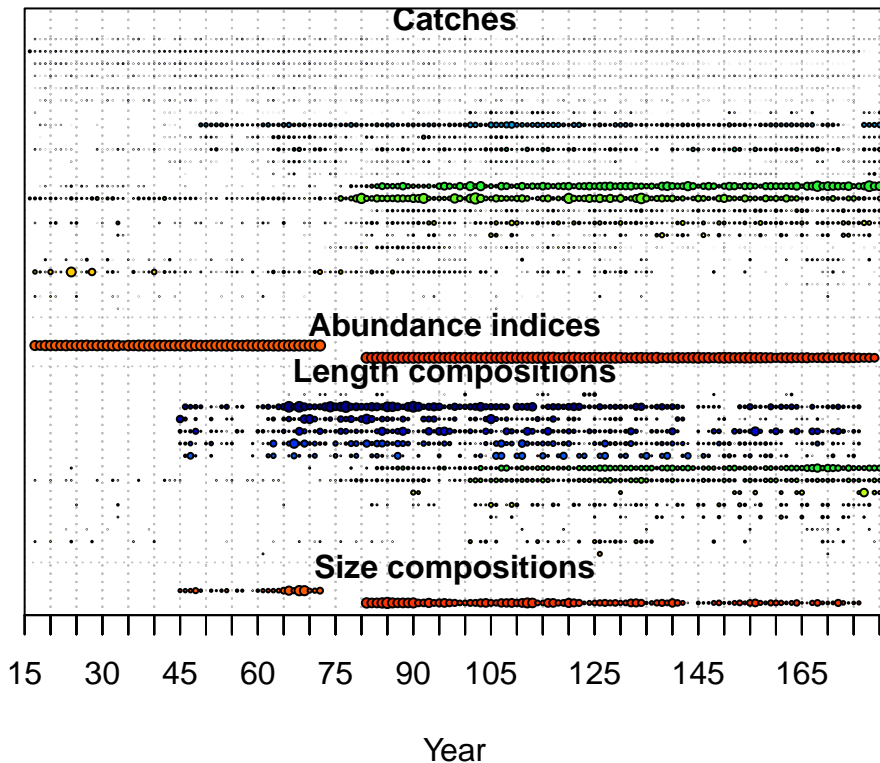
Proportion



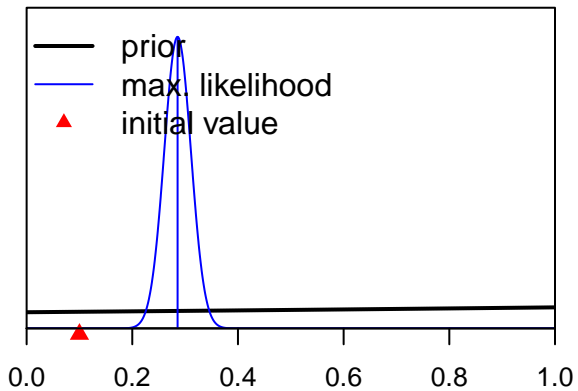




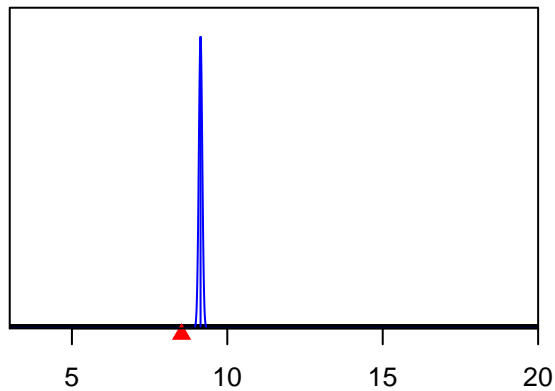




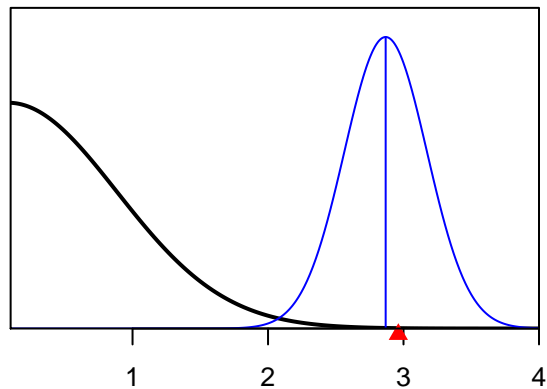
NatM_p_4_Fem_GP_1



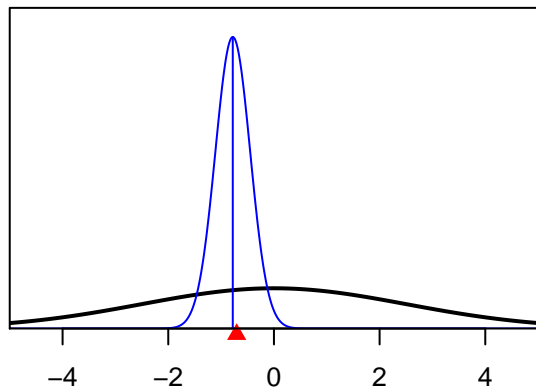
SR_LN(R0)



SD_young_Fem_GP_1

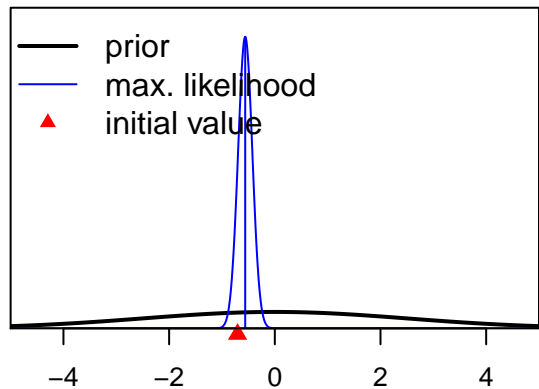


SR_regime_BLK1add_16

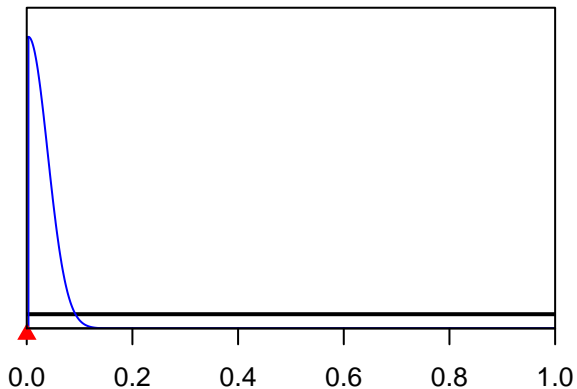


Parameter value

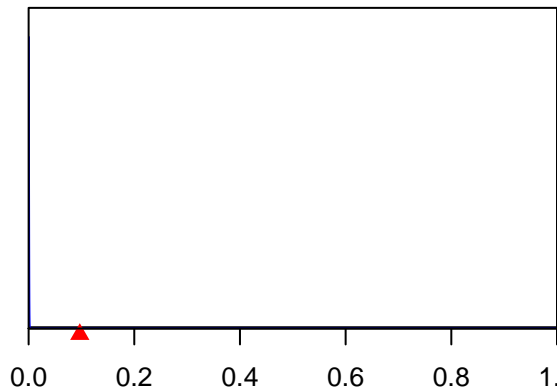
SR_regime_BLK1add_17



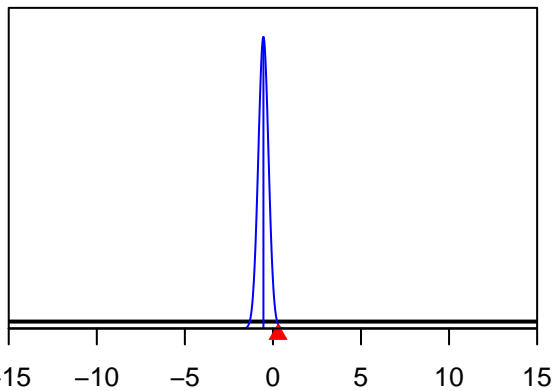
InitF_seas_1_flt_14A3-OBJ



InitF_seas_1_flt_2A2-LL-n



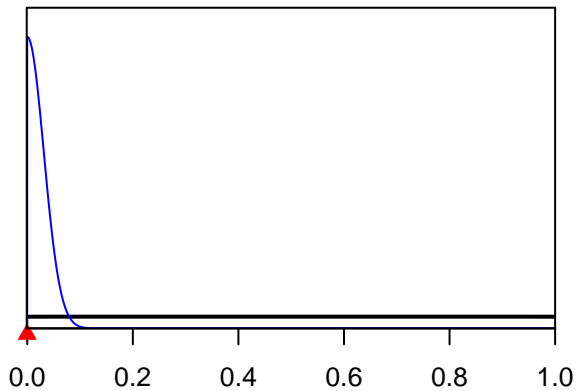
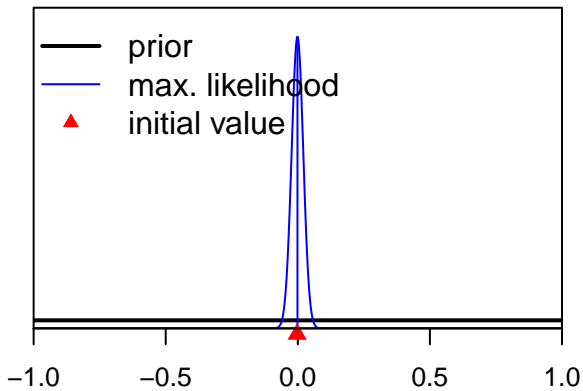
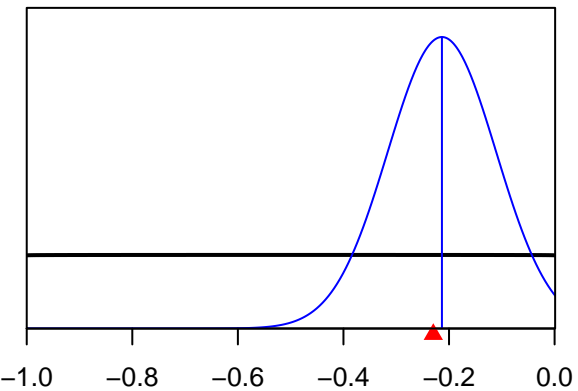
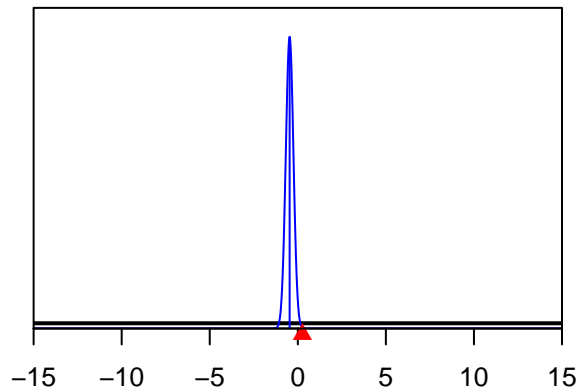
LnQ_base_EPO-LL-survey-early(24)



Parameter value

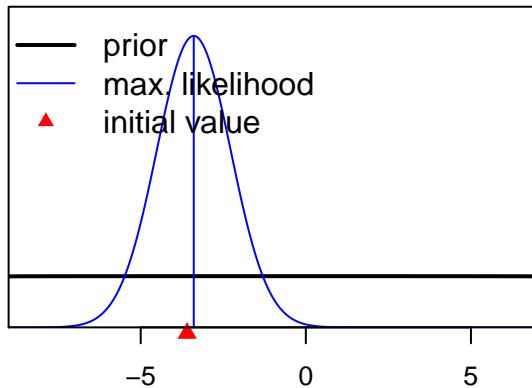
Q_extraSD_EPO-LL-survey-early(24)**SizeSpline_GradLo_A1-LL-n(1)**

Density

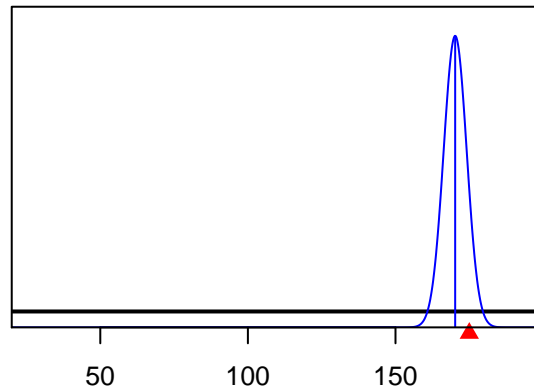
**LnQ_base_EPO-LL-survey-late(25)****SizeSpline_GradHi_A1-LL-n(1)**

Parameter value

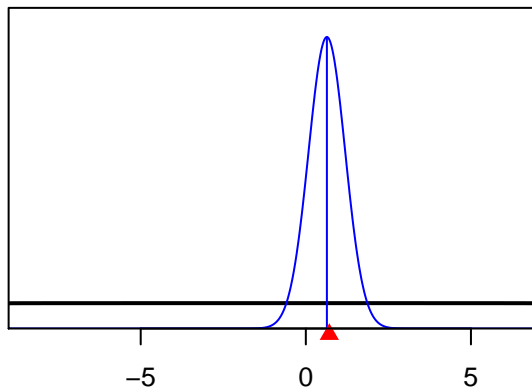
SizeSpline_Val_2_A1-LL-n(1)



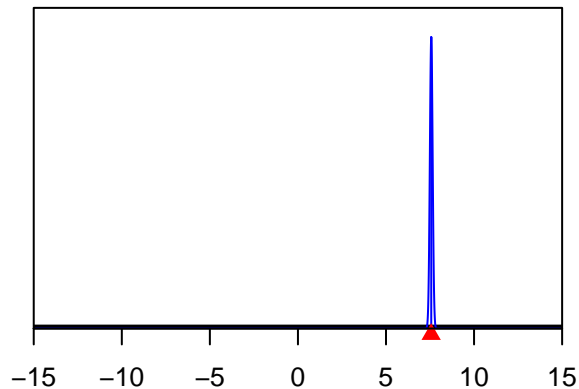
Size_DbIN_peak_A2-LL-n(2)



SizeSpline_Val_4_A1-LL-n(1)

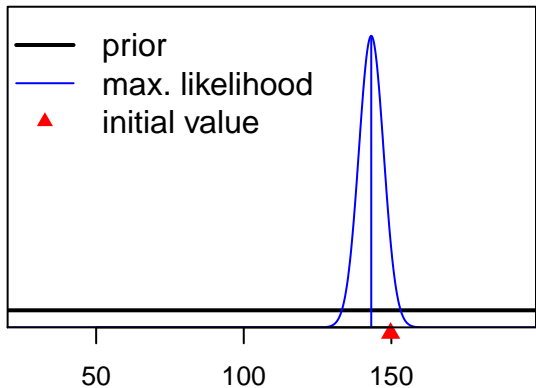


Size_DbIN_ascend_se_A2-LL-n(2)

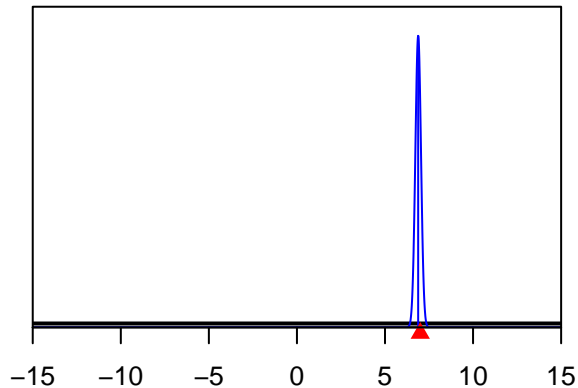


Parameter value

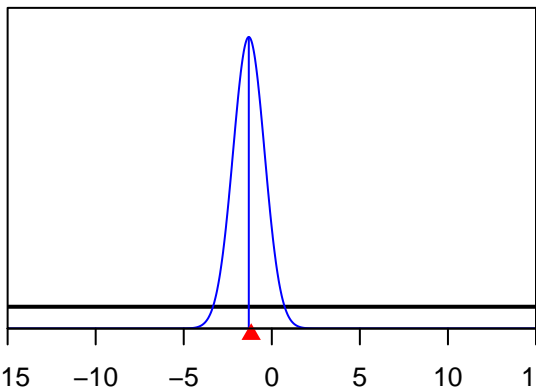
Size_DbIN_peak_A3-LL-n(3)



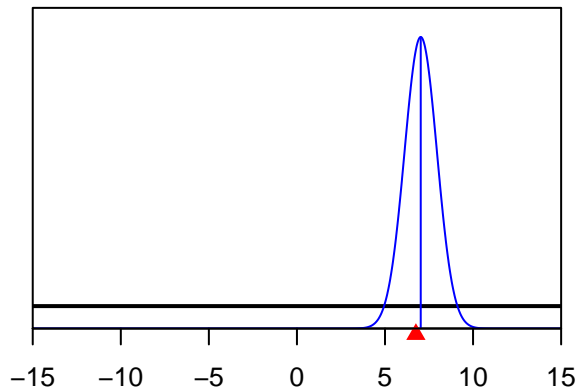
Size_DbIN_ascend_se_A3-LL-n(3)



Size_DbIN_top_logit_A3-LL-n(3)



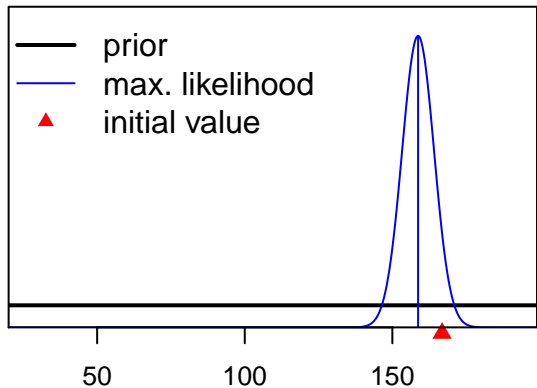
Size_DbIN_descend_se_A3-LL-n(3)



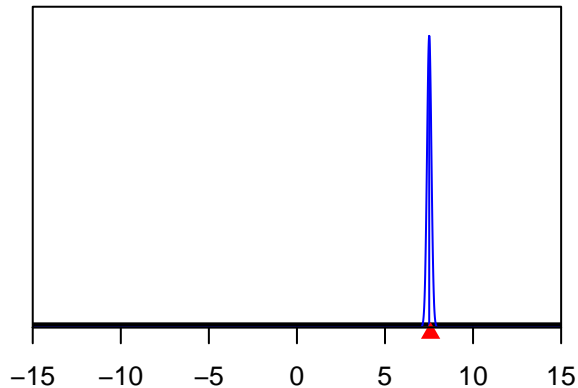
Parameter value

Density

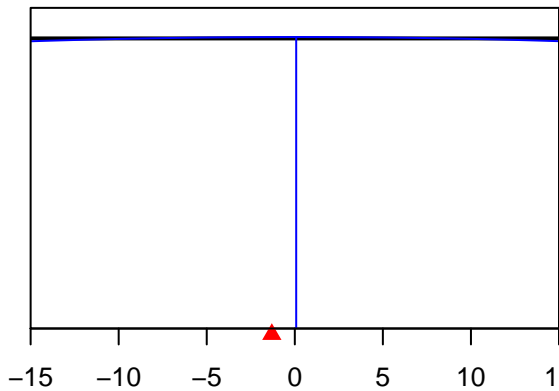
Size_DbIN_peak_A4-LL-n(4)



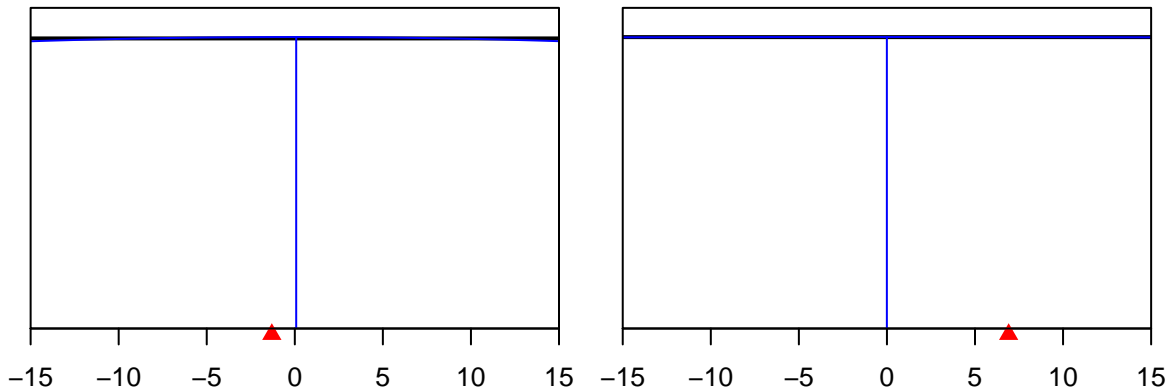
Size_DbIN_ascend_se_A4-LL-n(4)



Size_DbIN_top_logit_A4-LL-n(4)

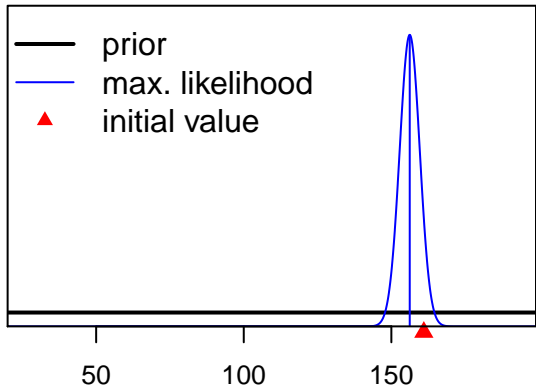


Size_DbIN_descend_se_A4-LL-n(4)

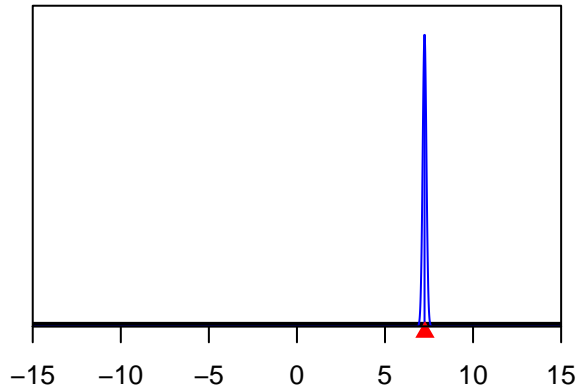


Parameter value

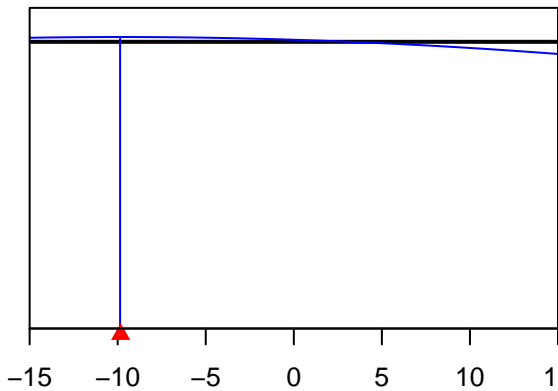
Size_DbIN_peak_A5-LL-n(5)



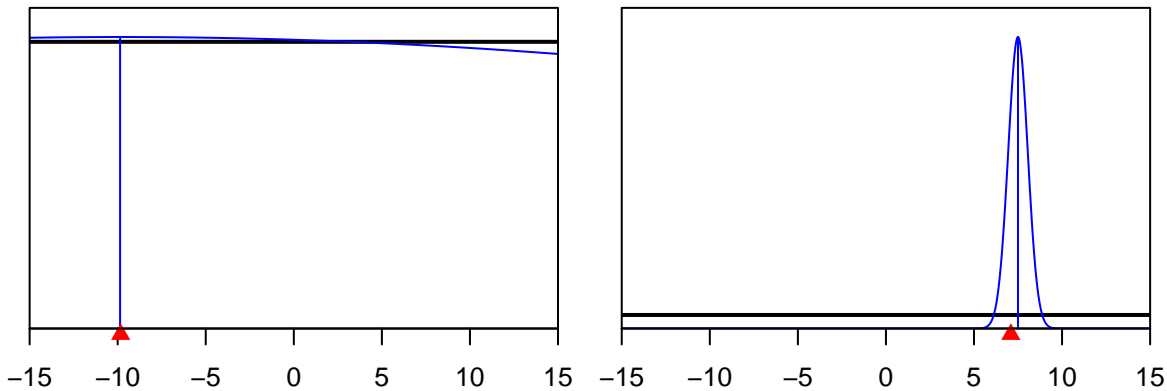
Size_DbIN_ascend_se_A5-LL-n(5)



Size_DbIN_top_logit_A5-LL-n(5)

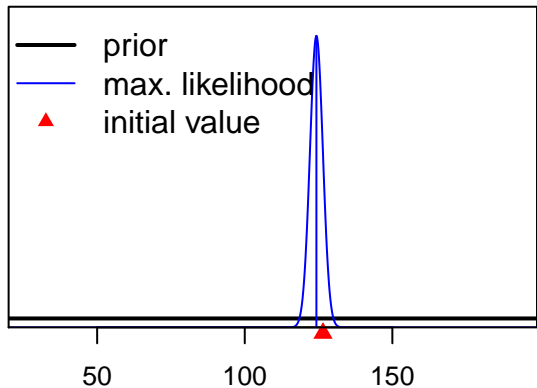


Size_DbIN_descend_se_A5-LL-n(5)

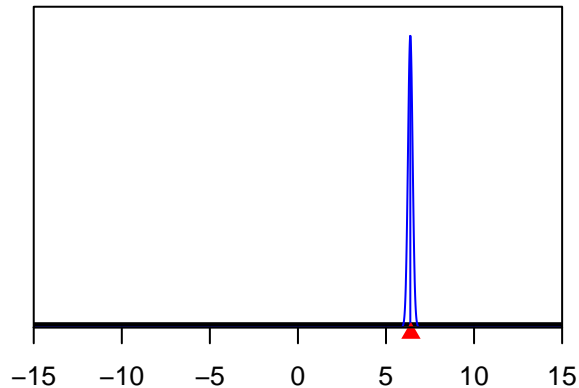


Parameter value

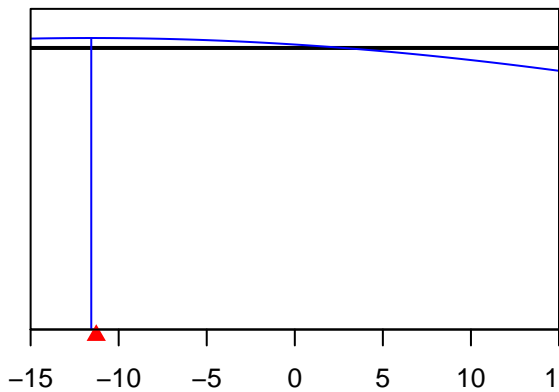
Size_DbIN_peak_A6-LL-n(6)



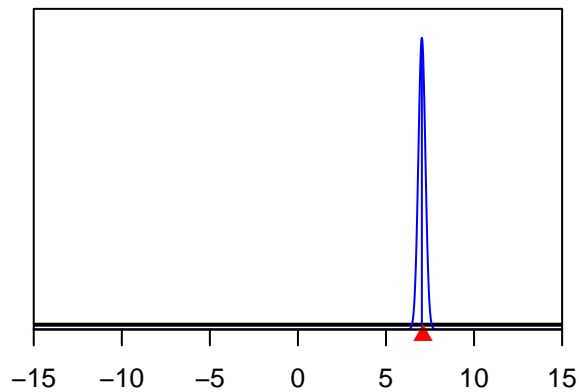
Size_DbIN_ascend_se_A6-LL-n(6)



Size_DbIN_top_logit_A6-LL-n(6)

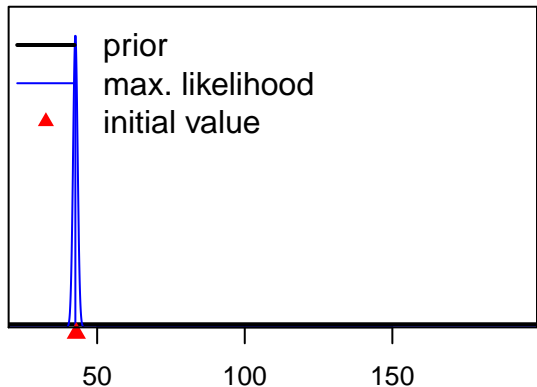


Size_DbIN_descend_se_A6-LL-n(6)

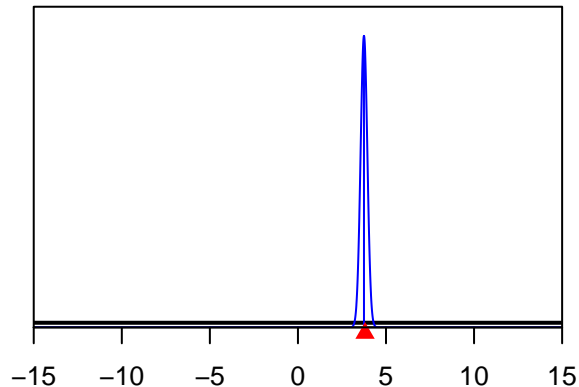


Parameter value

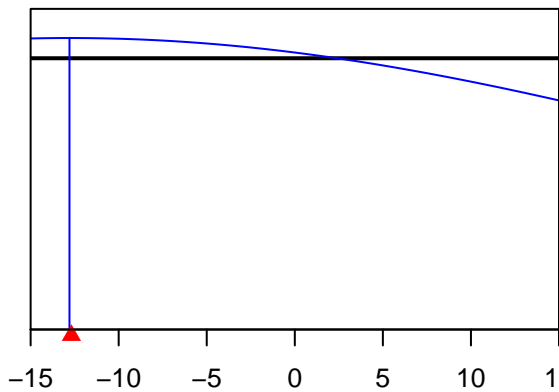
Size_DbIN_peak_A2-OBJ(13)



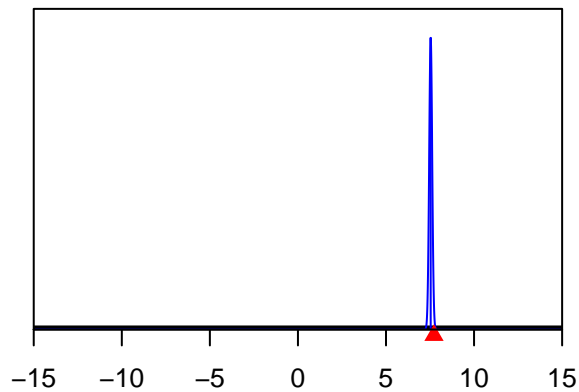
Size_DbIN_ascend_se_A2-OBJ(13)



Size_DbIN_top_logit_A2-OBJ(13)

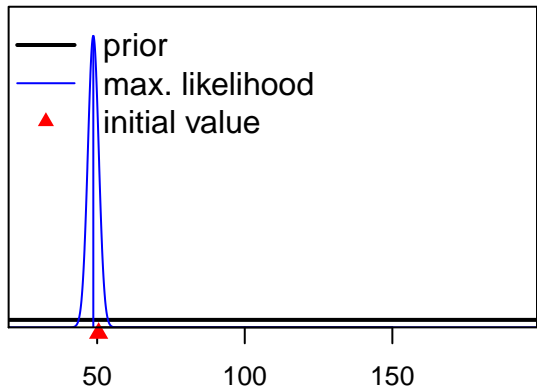


Size_DbIN_descend_se_A2-OBJ(13)

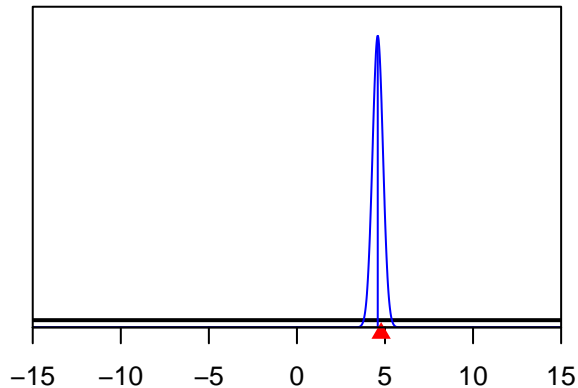


Parameter value

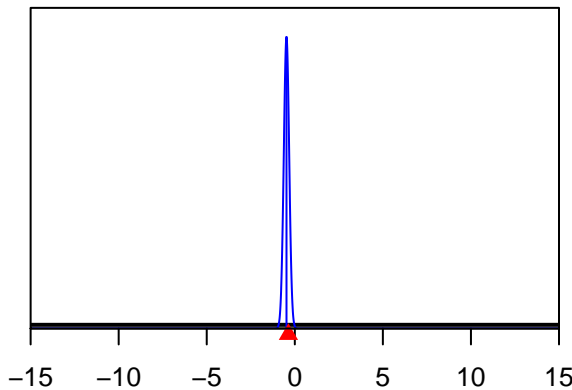
Size_DbIN_peak_A3-OBJ(14)



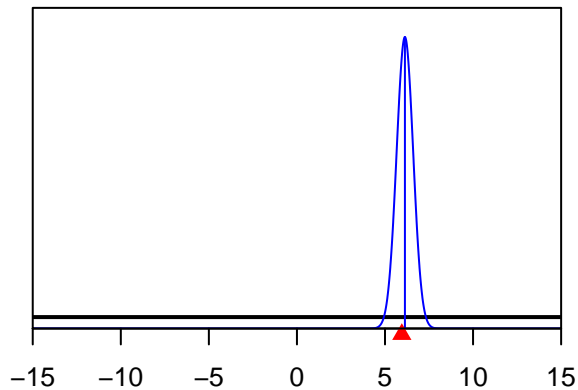
Size_DbIN_ascend_se_A3-OBJ(14)



Size_DbIN_top_logit_A3-OBJ(14)

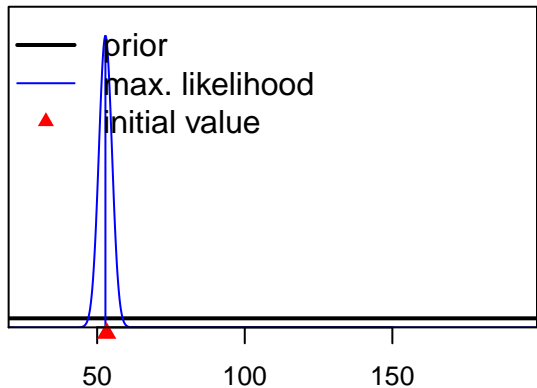


Size_DbIN_descend_se_A3-OBJ(14)

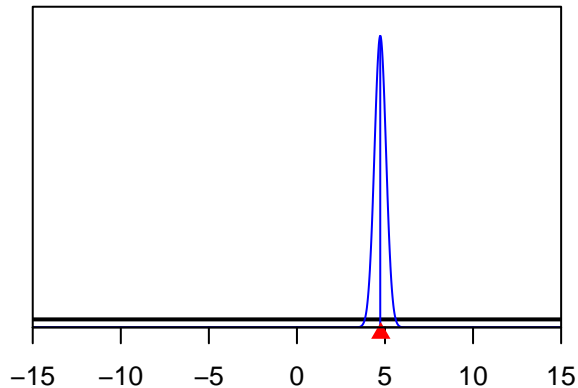


Parameter value

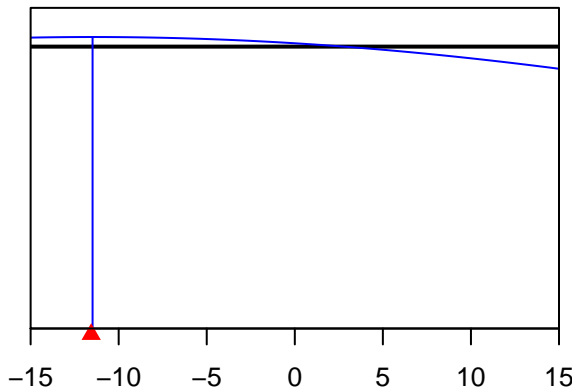
Size_DbIN_peak_A4-Obj(15)



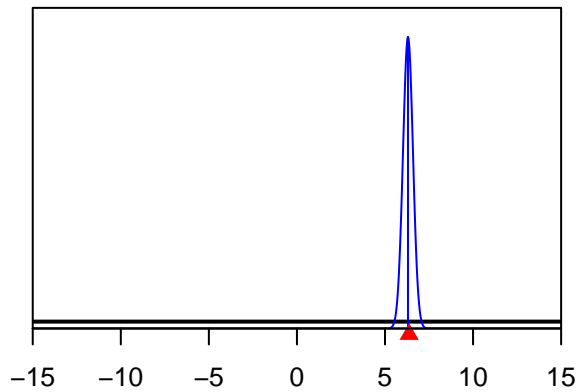
Size_DbIN_ascend_se_A4-Obj(15)



Size_DbIN_top_logit_A4-Obj(15)

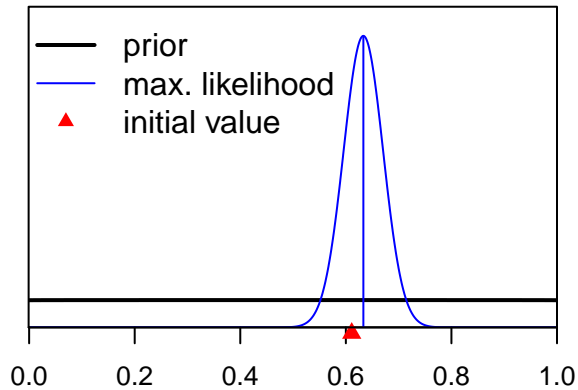


Size_DbIN_descend_se_A4-Obj(15)

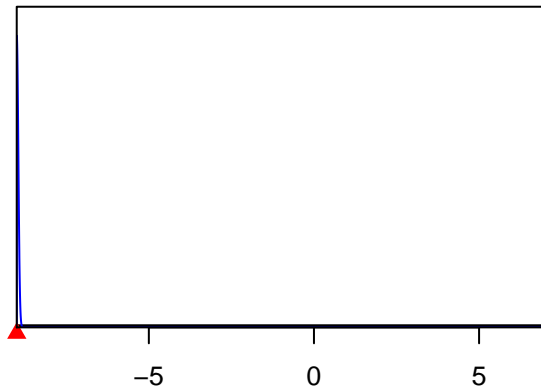


Parameter value

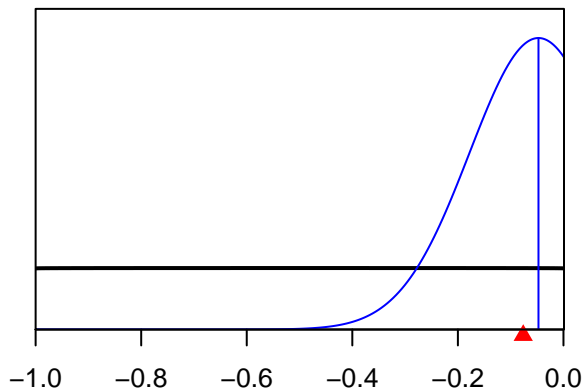
SizeSpline_GradLo_A5-Obj(16)



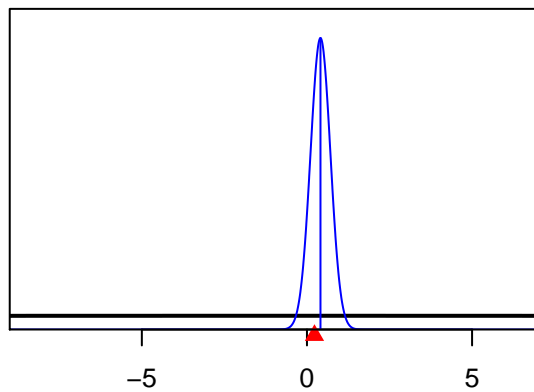
SizeSpline_Val_1_A5-Obj(16)



SizeSpline_GradHi_A5-Obj(16)

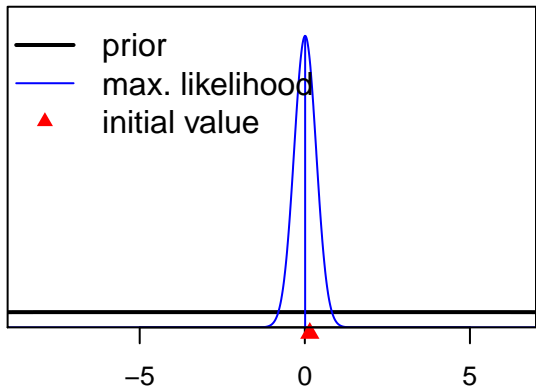


SizeSpline_Val_2_A5-Obj(16)

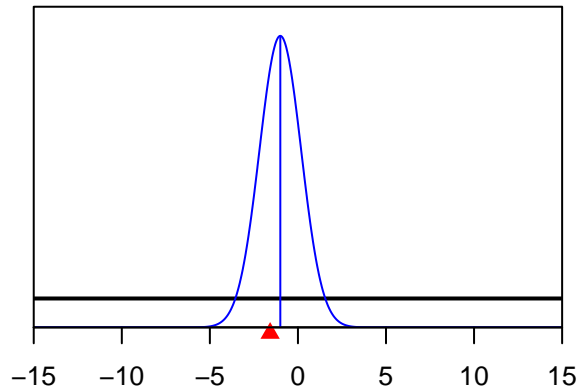


Parameter value

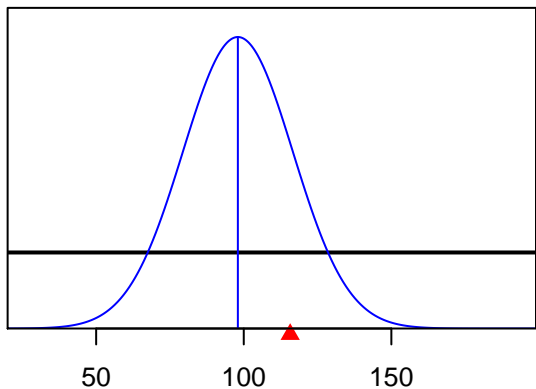
SizeSpline_Val_4_A5-OBJ(16)



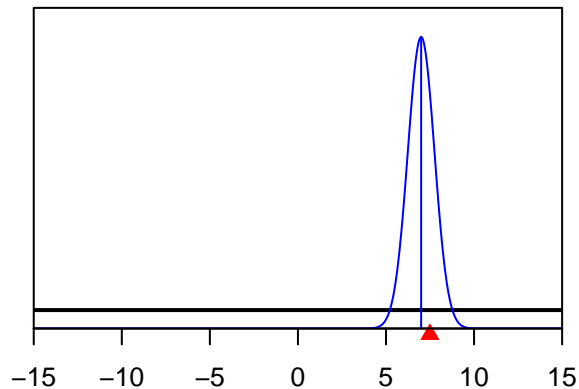
Size_DbIN_top_logit_A6-OBJ(17)



Size_DbIN_peak_A6-OBJ(17)

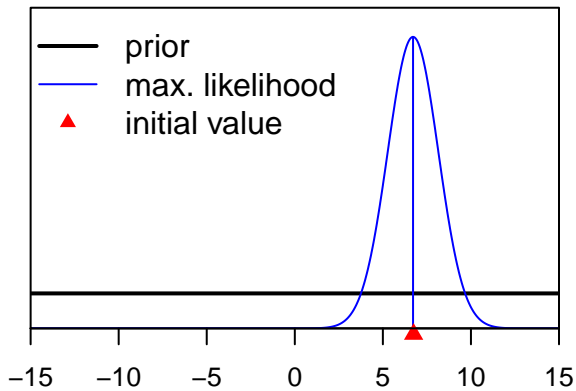


Size_DbIN_ascend_se_A6-OBJ(17)

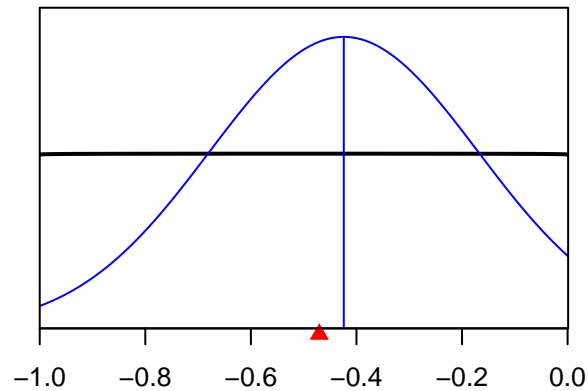


Parameter value

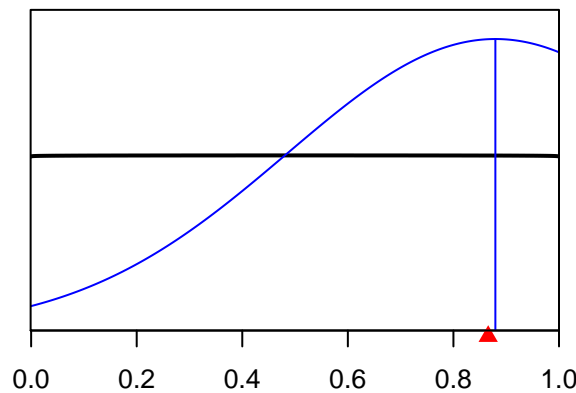
Size_DblN_descend_se_A6-Obj(17)



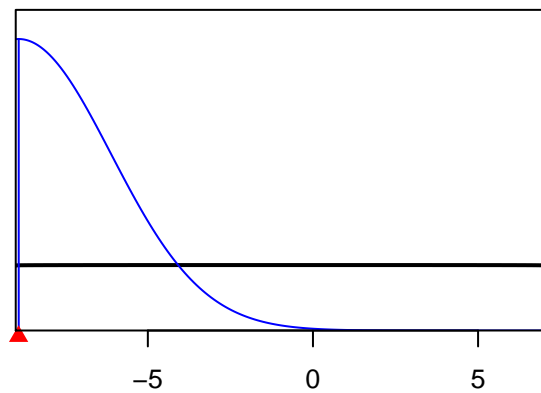
SizeSpline_GradHi_A2-NOADEL(19)



SizeSpline_GradLo_A2-NOADEL(19)

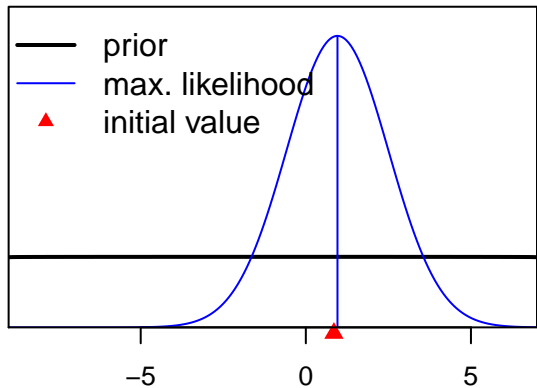


SizeSpline_Val_1_A2-NOADEL(19)

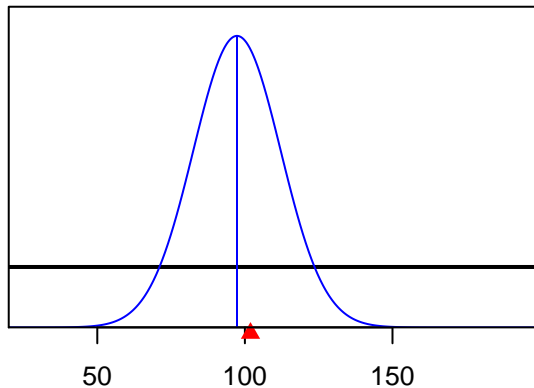


Parameter value

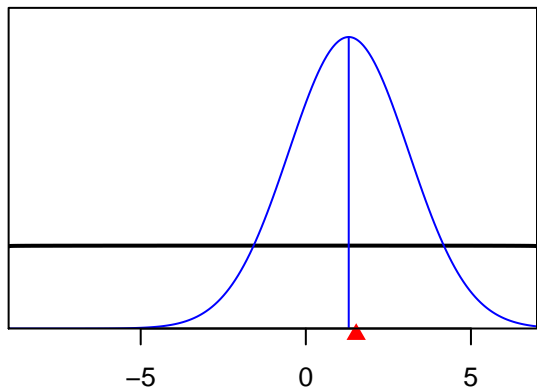
SizeSpline_Val_2_A2-NOADEL(19)



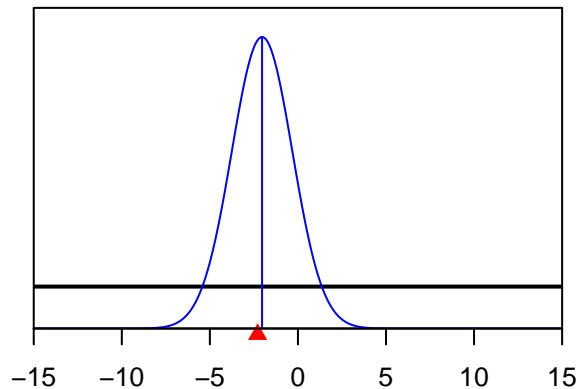
Size_DbIN_peak_A3-NOADEL(20)



SizeSpline_Val_4_A2-NOADEL(19)



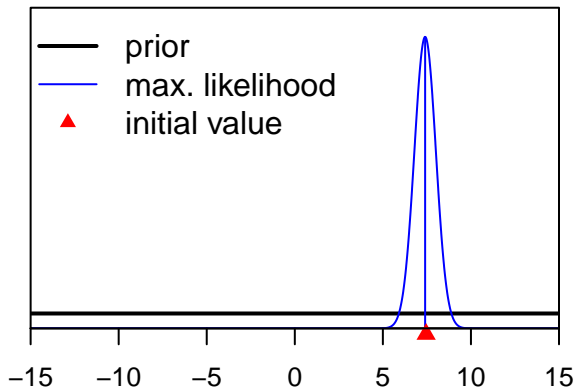
Size_DbIN_top_logit_A3-NOADEL(20)



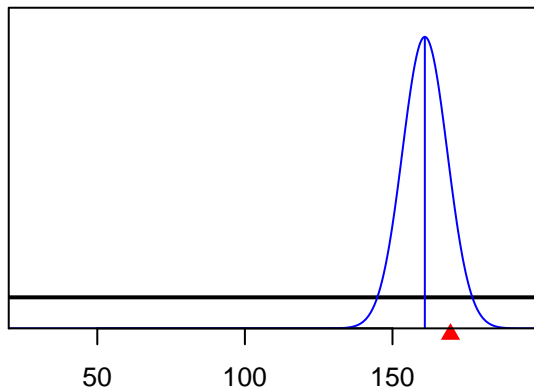
Parameter value

Density

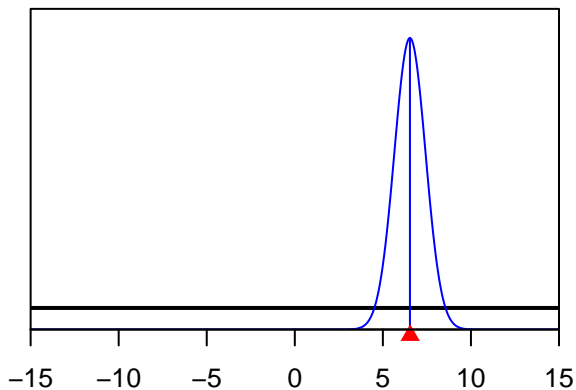
Size_DbIN_ascend_se_A3-NOADEL(20)



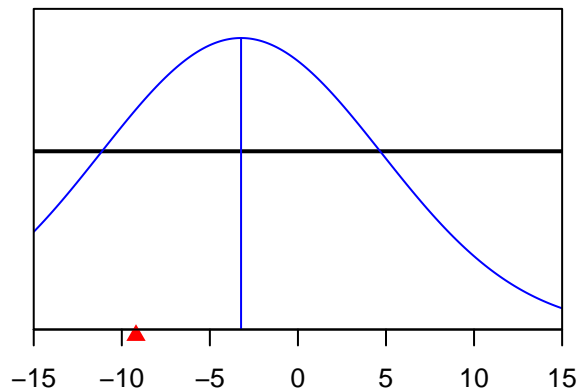
Size_DbIN_peak_EPO-LL-survey-early(24)



Size_DbIN_descend_se_A3-NOADEL(20)



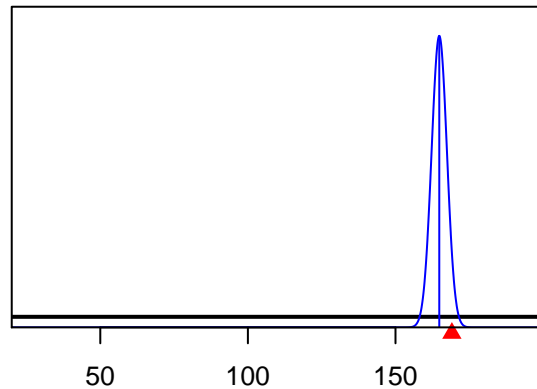
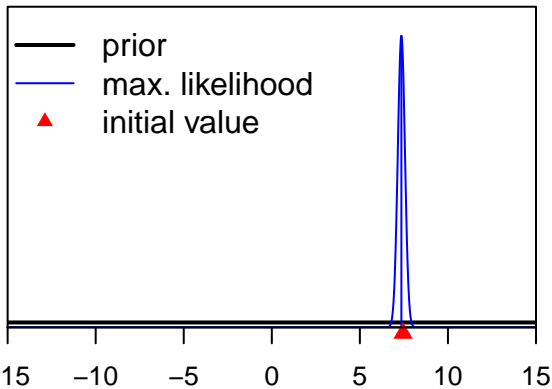
Size_DbIN_top_logit_EPO-LL-survey-early(24)



Parameter value

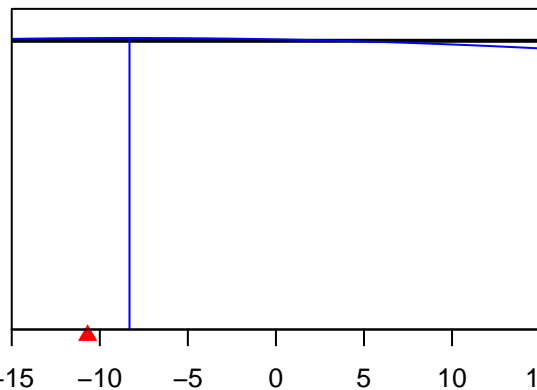
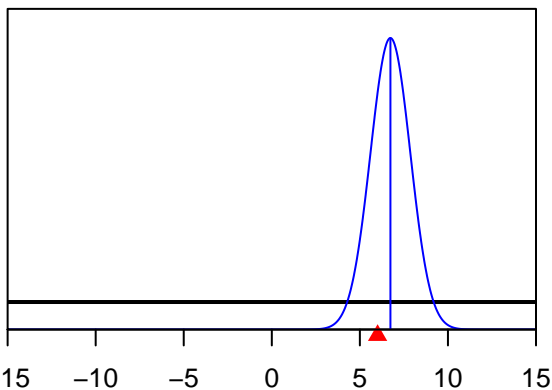
ize_DbIN_ascend_se_EPO-LL-survey-early(2)

Size_DbIN_peak_EPO-LL-survey-late(25)



ze_DbIN_descend_se_EPO-LL-survey-early(2)

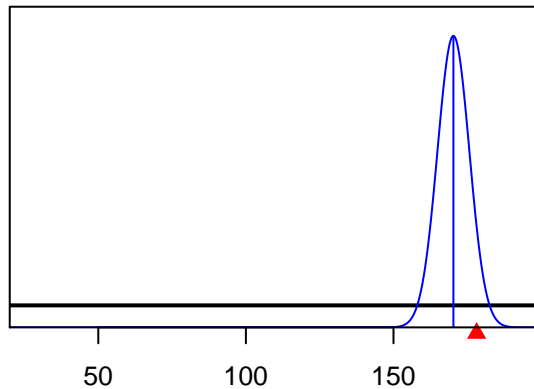
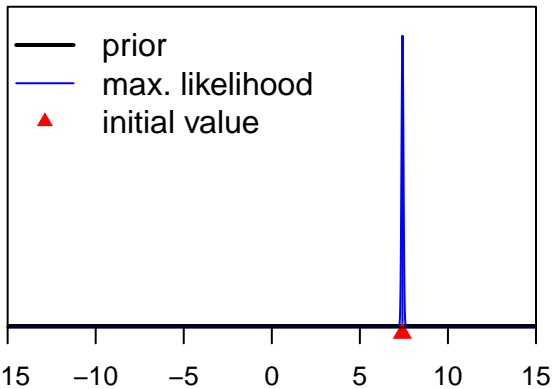
Size_DbIN_top_logit_EPO-LL-survey-late(25)



Parameter value

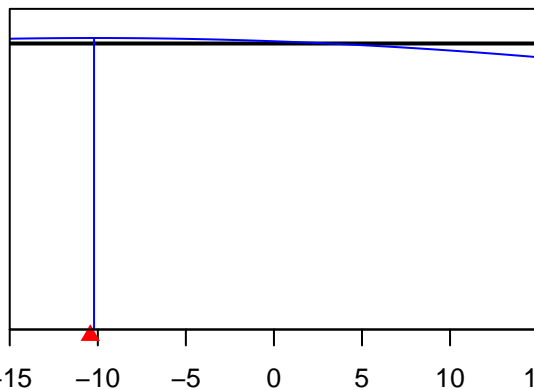
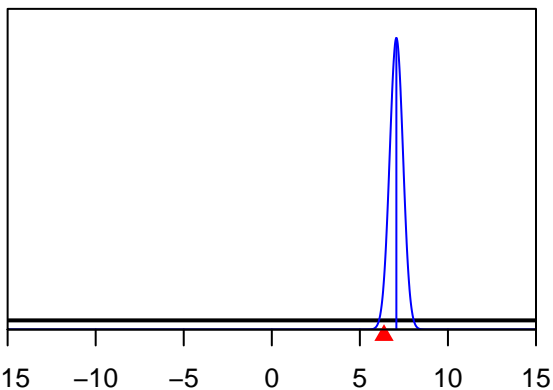
size_DblN_ascend_se_EPO-LL-survey-late(25

Size_DblN_peak_A2-LL-n(2)_BLK2repl_17



ize_DblN_descend_se_EPO-LL-survey-late(25

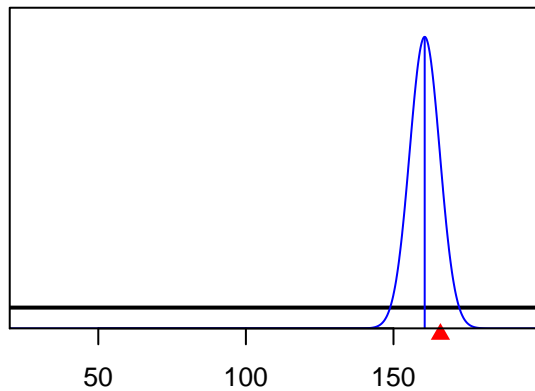
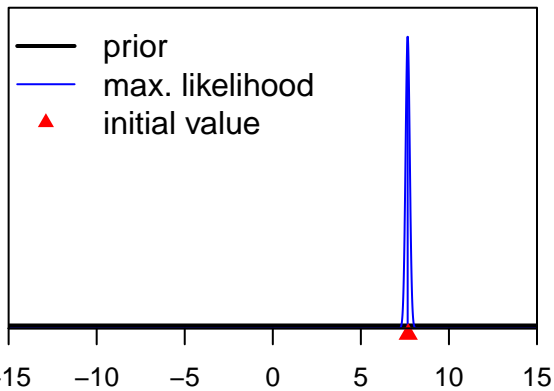
Size_DblN_top_logit_A2-LL-n(2)_BLK2repl_17



Parameter value

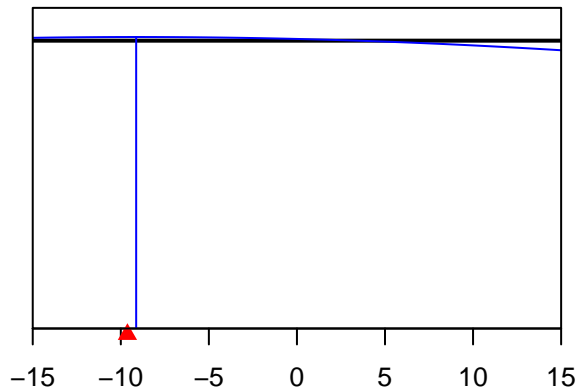
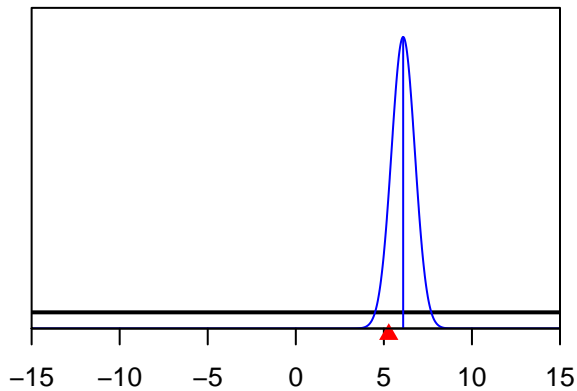
ize_DbIN_ascend_se_A2-LL-n(2)_BLK2repl_1

Size_DbIN_peak_A3-LL-n(3)_BLK2repl_17



ize_DbIN_descend_se_A2-LL-n(2)_BLK2repl_1

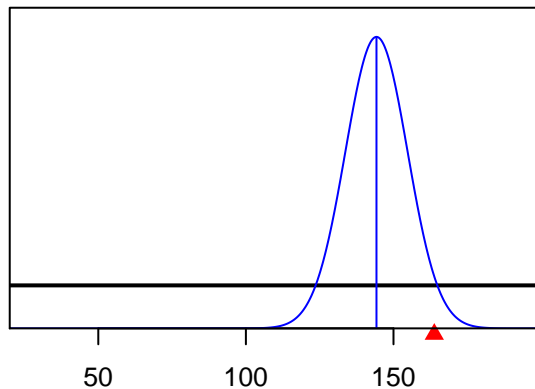
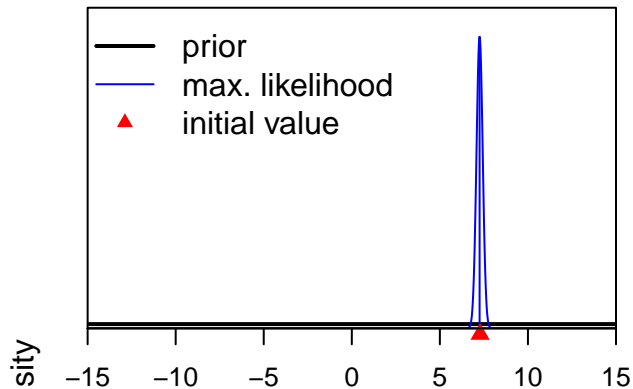
Size_DbIN_top_logit_A3-LL-n(3)_BLK2repl_17



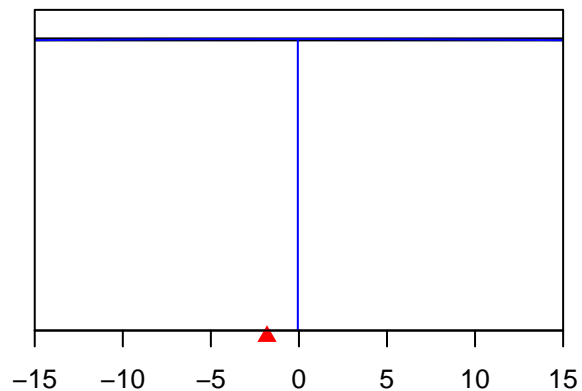
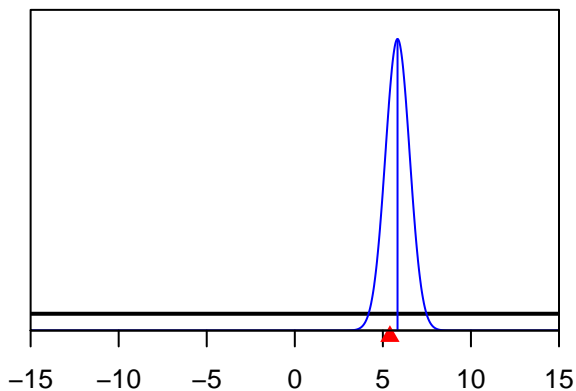
Parameter value

ize_DbIN_ascend_se_A3-LL-n(3)_BLK2repl_1

Size_DbIN_peak_A4-LL-n(4)_BLK2repl_17



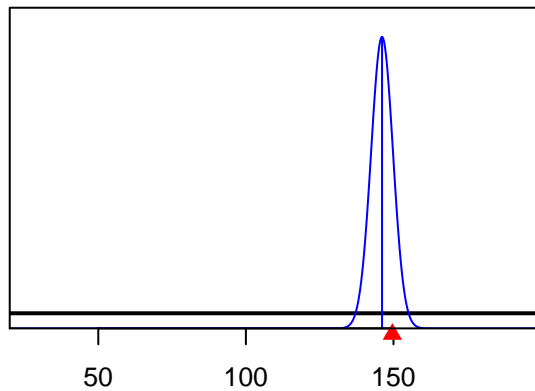
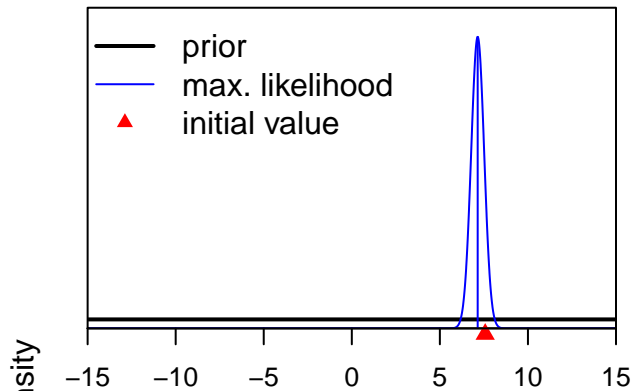
ize_DbIN_descend_se_A3-LL-n(3)_BLK2repl_1 Size_DbIN_top_logit_A4-LL-n(4)_BLK2repl_17



Parameter value

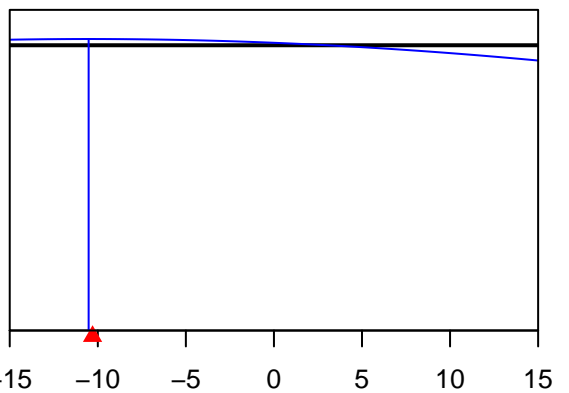
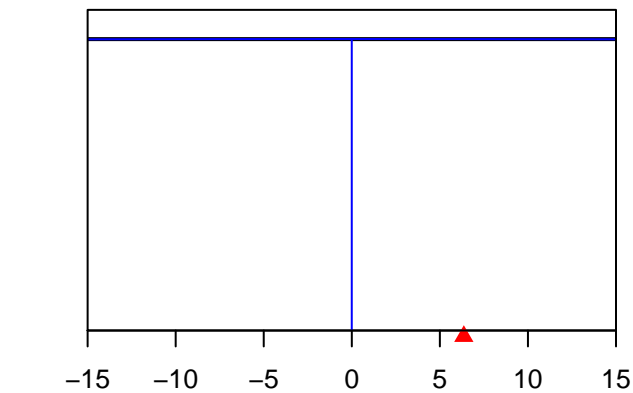
ize_DbIN_ascend_se_A4-LL-n(4)_BLK2repl_1

Size_DbIN_peak_A5-LL-n(5)_BLK2repl_17



ize_DbIN_descend_se_A4-LL-n(4)_BLK2repl_1

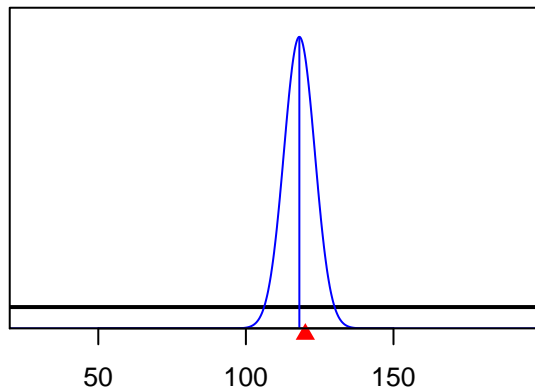
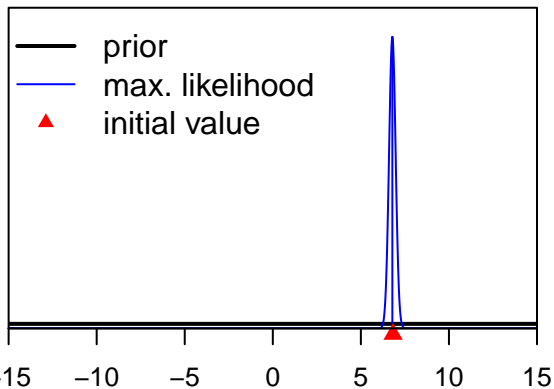
Size_DbIN_top_logit_A5-LL-n(5)_BLK2repl_17



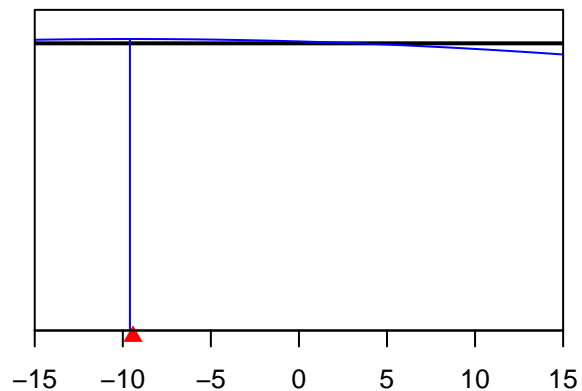
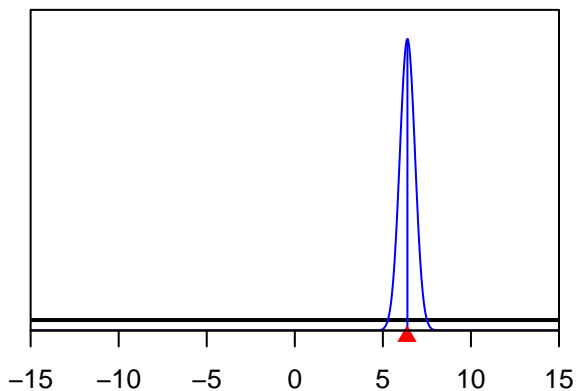
Parameter value

ize_DbIN_ascend_se_A5-LL-n(5)_BLK2repl_1

Size_DbIN_peak_A6-LL-n(6)_BLK2repl_17

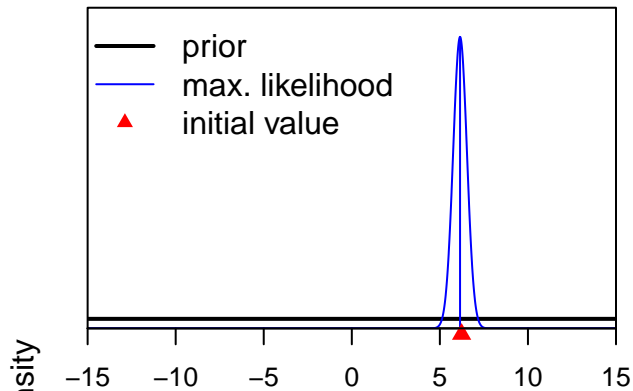


ize_DbIN_descend_se_A5-LL-n(5)_BLK2repl_1 Size_DbIN_top_logit_A6-LL-n(6)_BLK2repl_17



Parameter value

ize_DbIN_ascend_se_A6-LL-n(6)_BLK2repl_1



ize_DbIN_descend_se_A6-LL-n(6)_BLK2repl_1

