

EPO yellowfin tuna  
Benchmark assessment 2020  
model: TBM.DS,  $h = 0.9$

Plots created using the 'r4ss' package in R

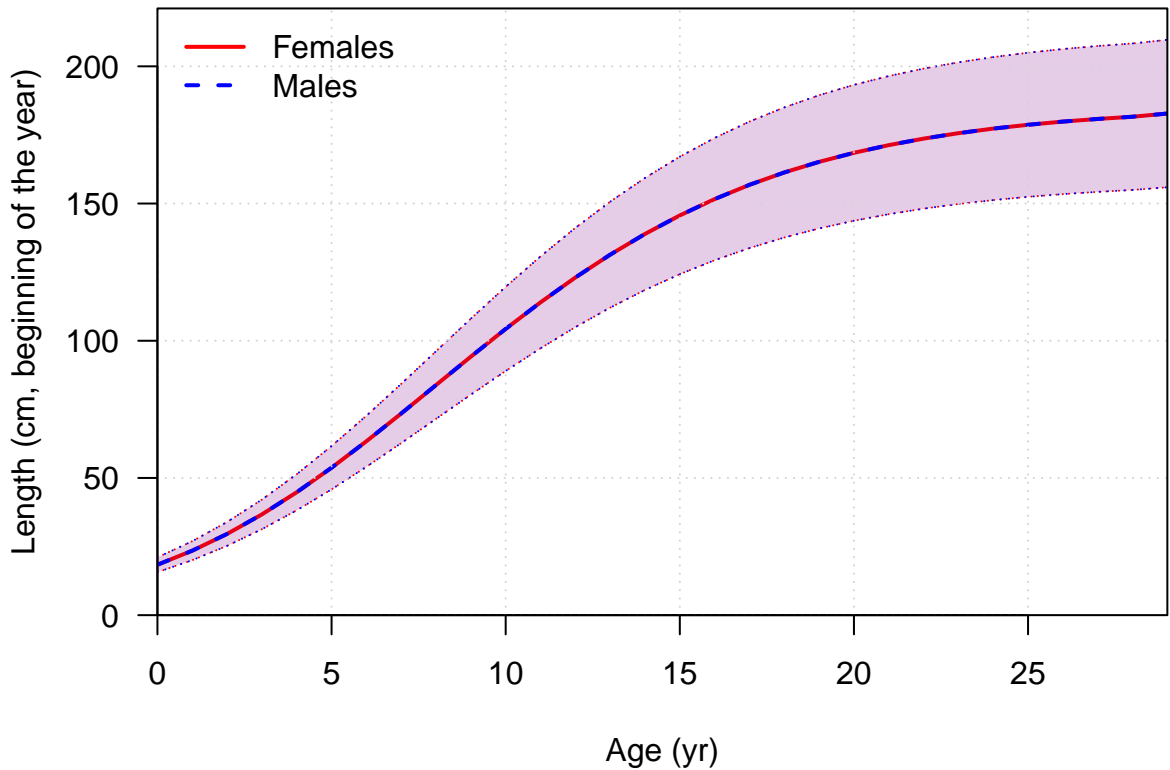
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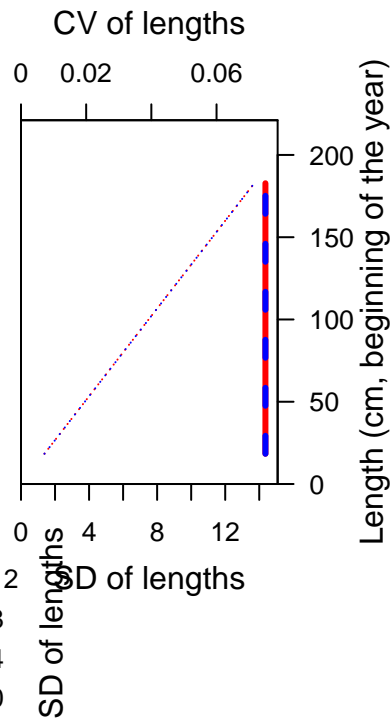
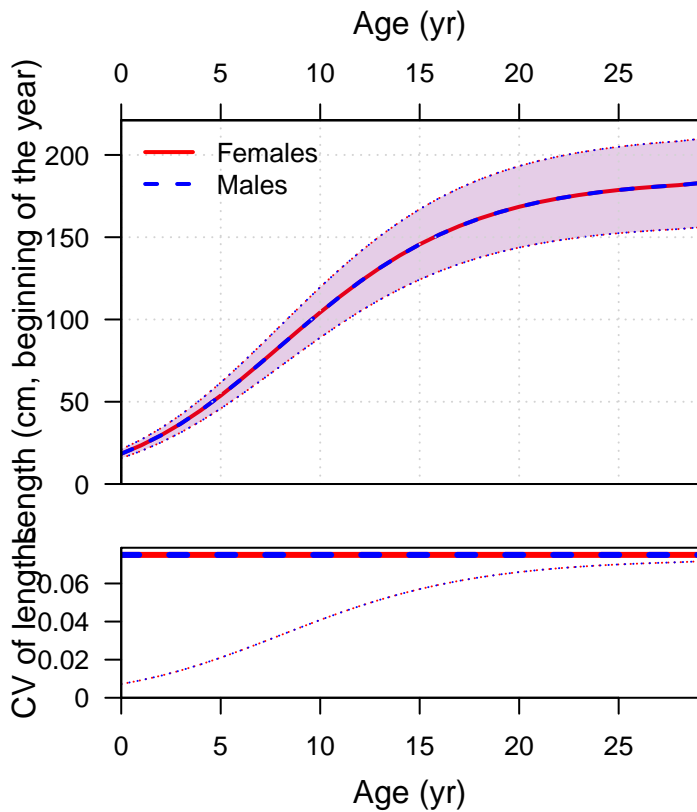
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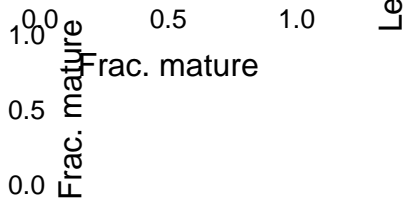
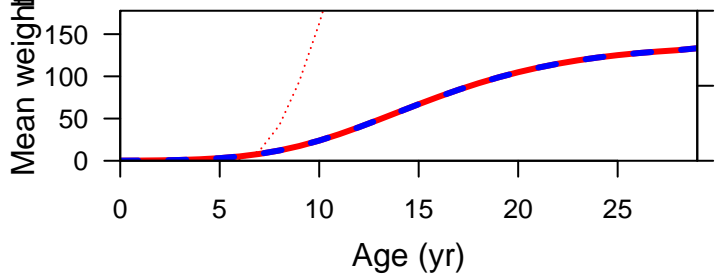
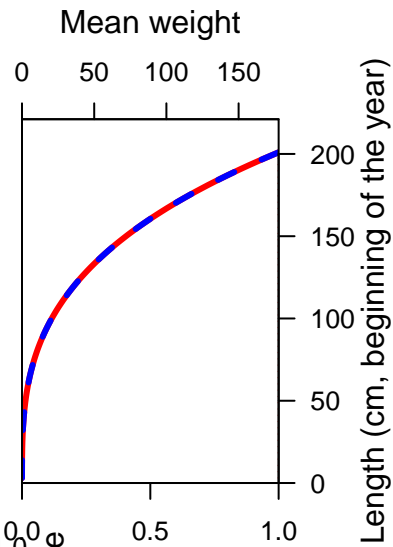
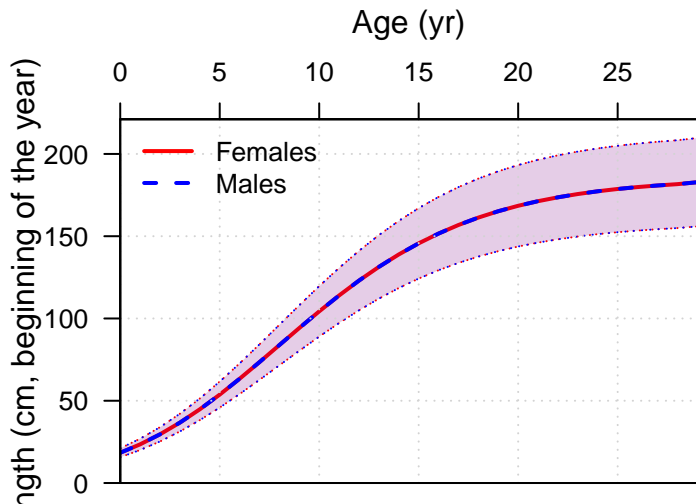
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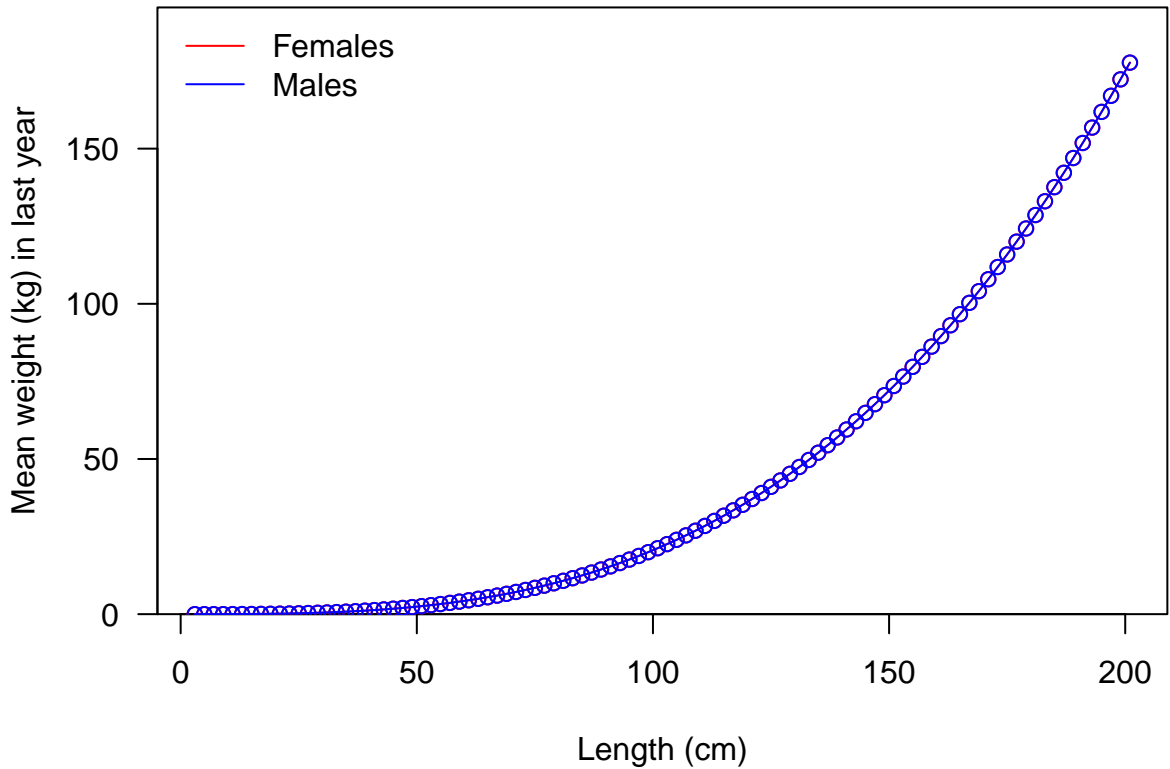
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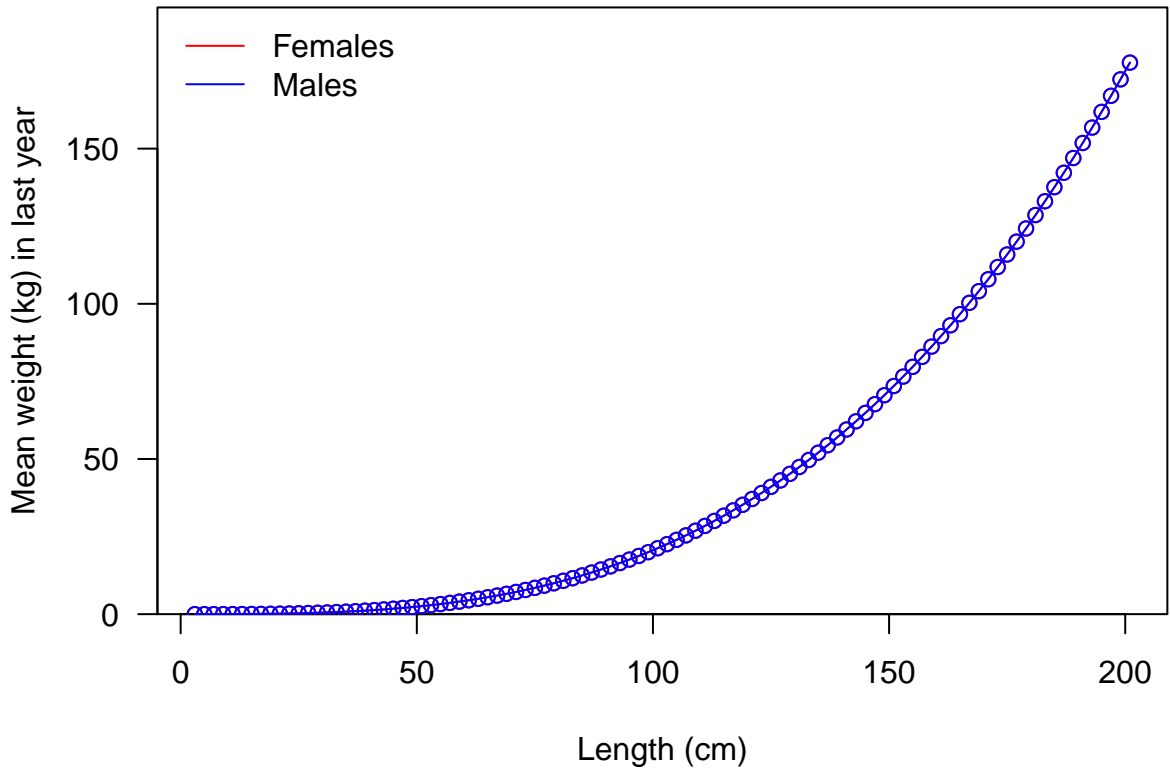
## Ending year expected growth (with 95% intervals)

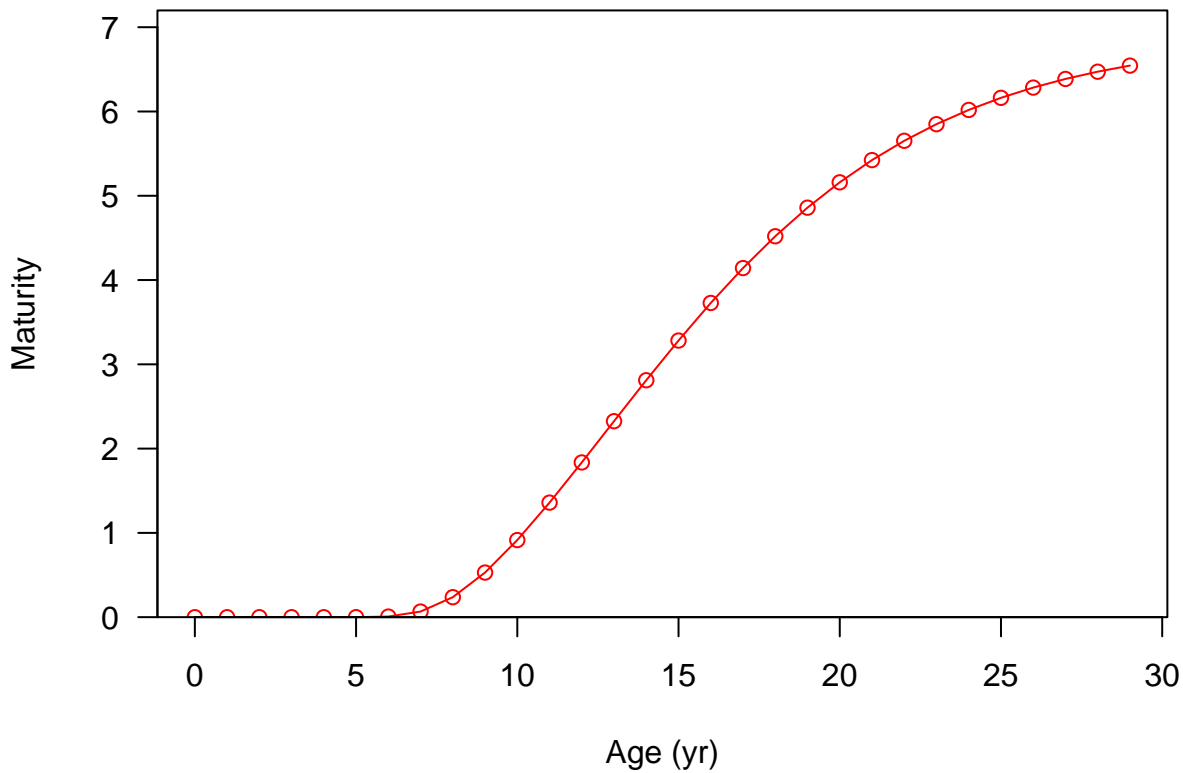




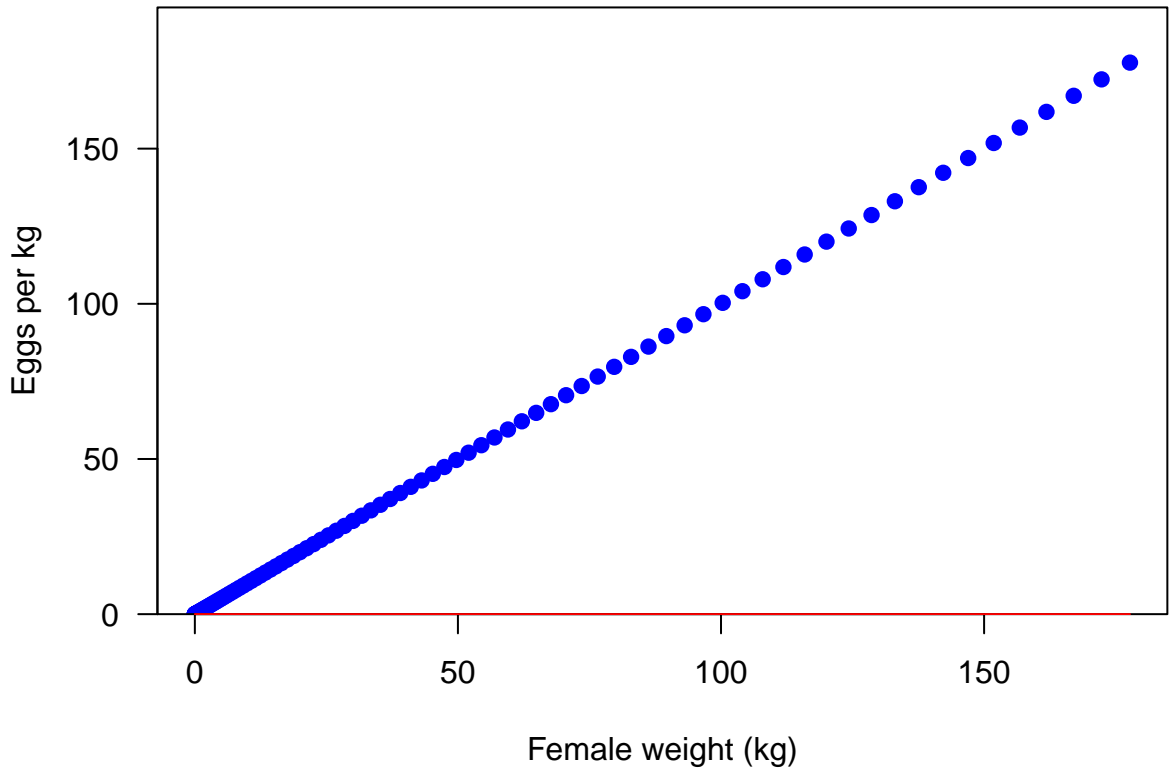


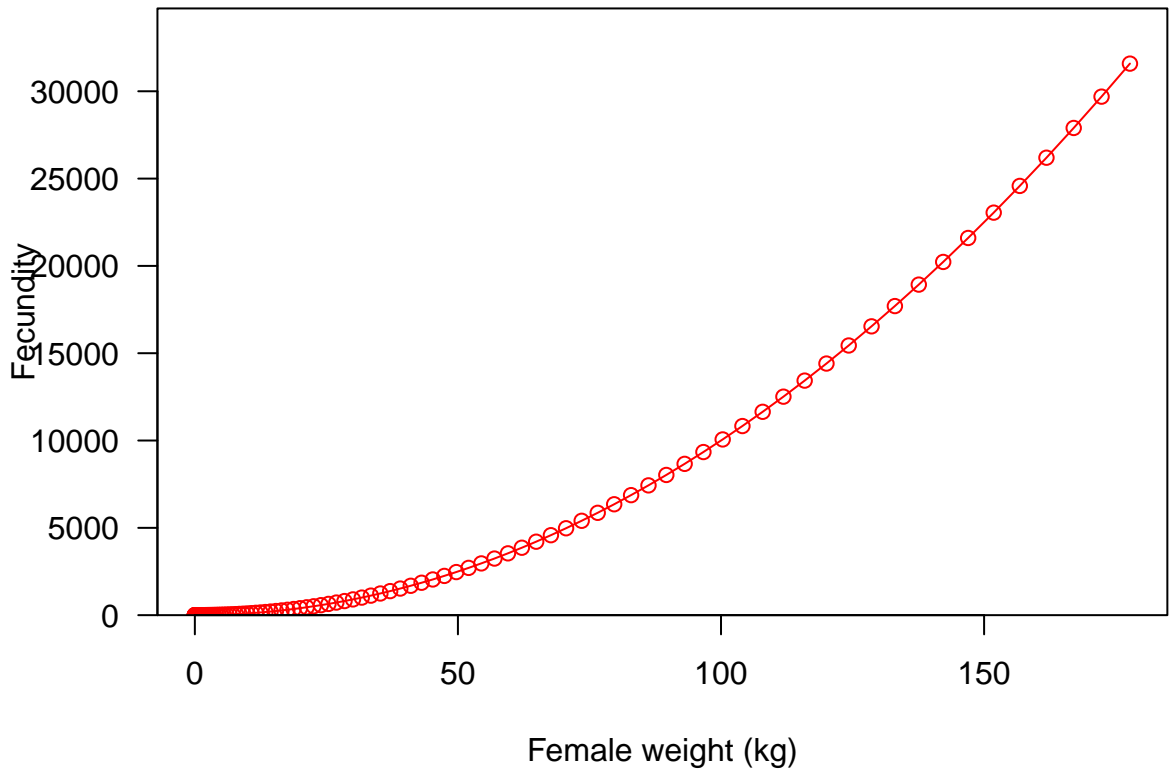


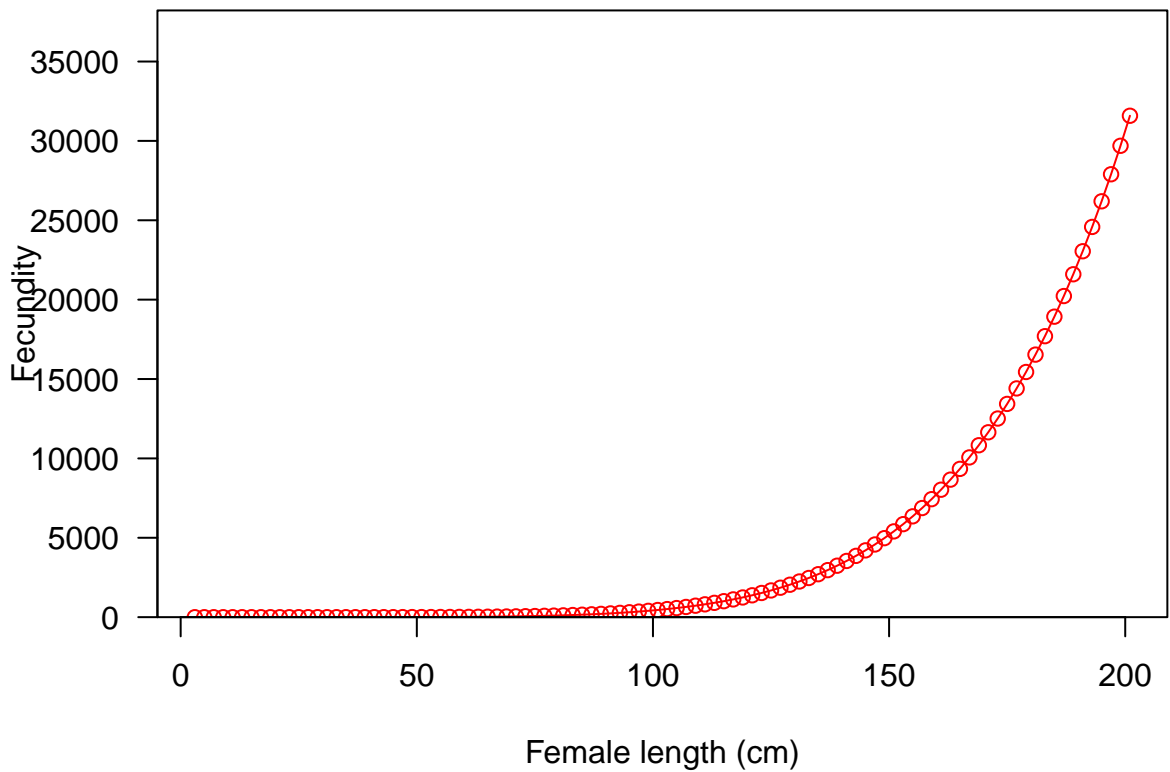


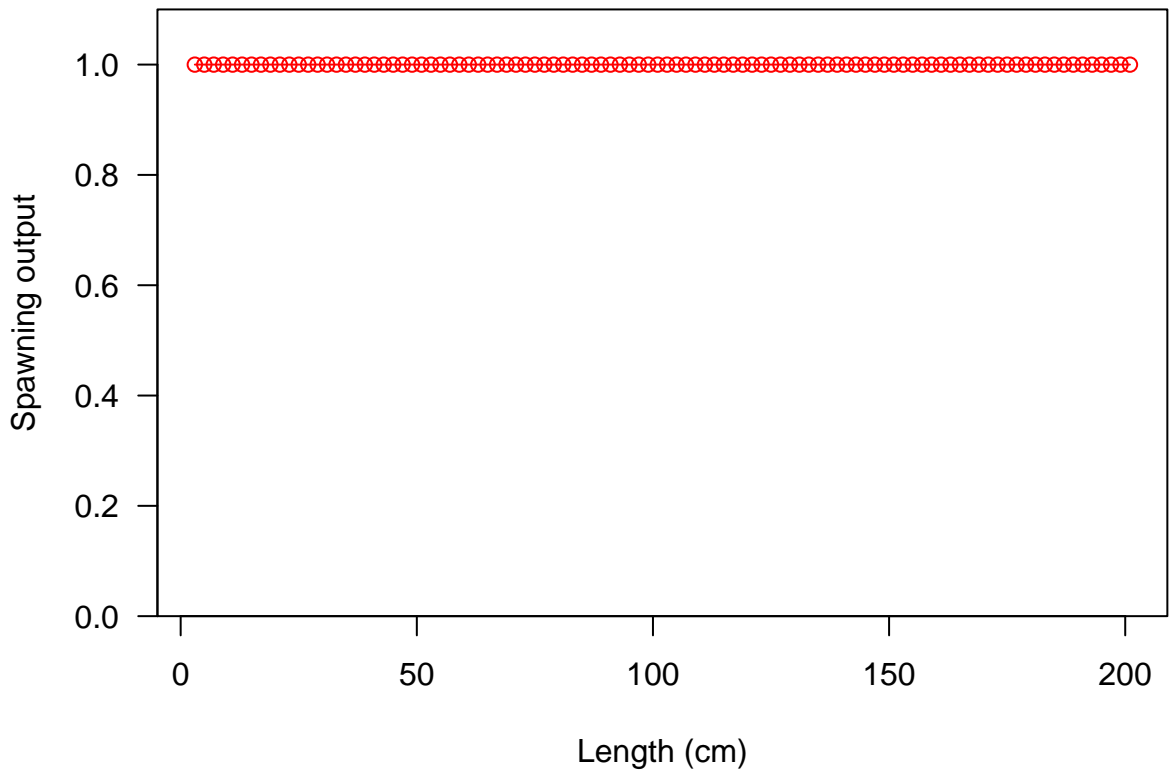


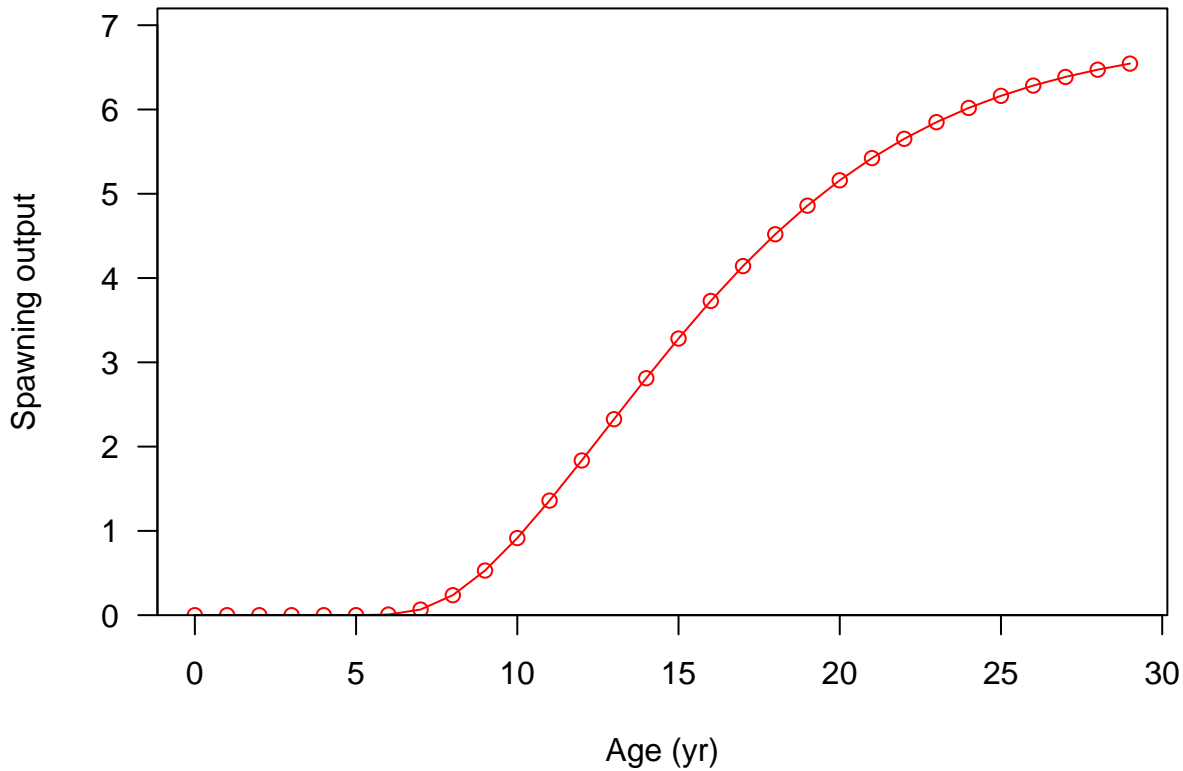




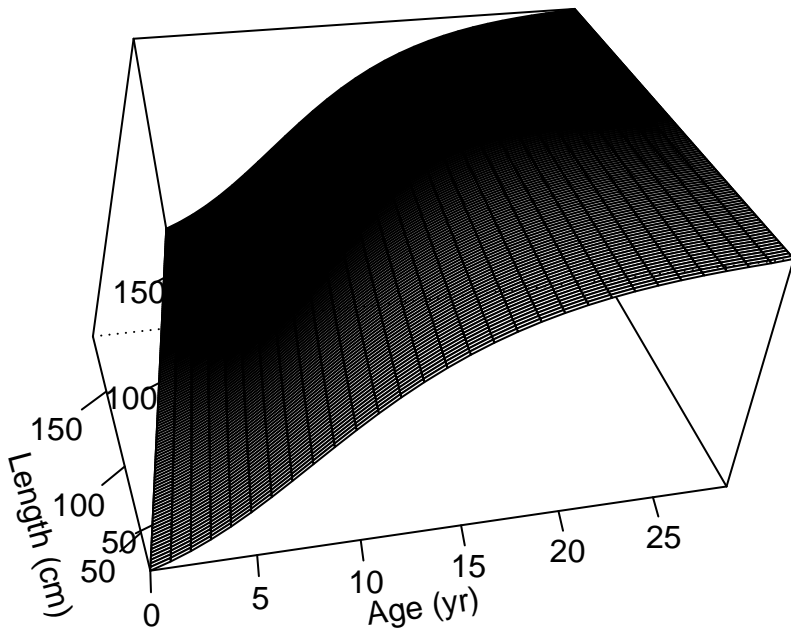




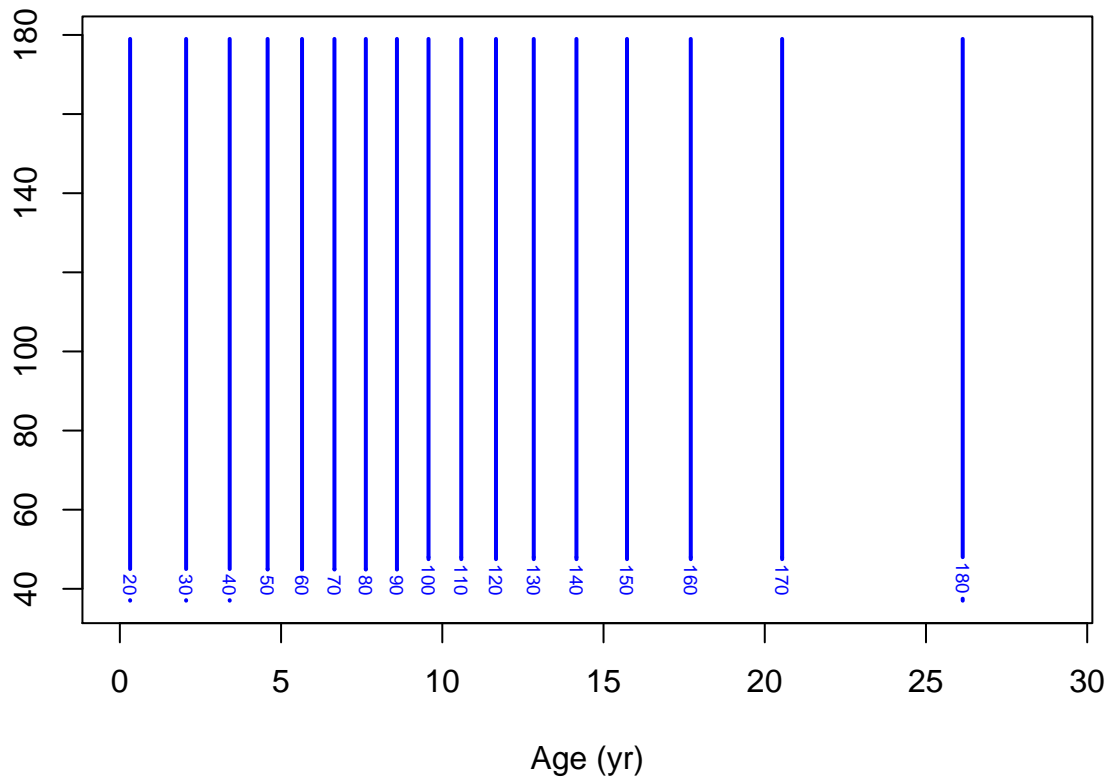




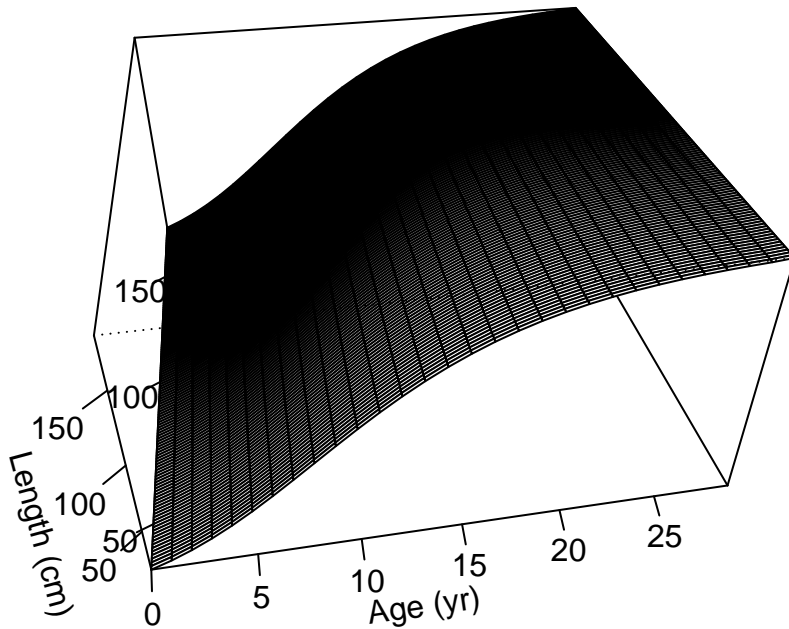
## Female time-varying growth



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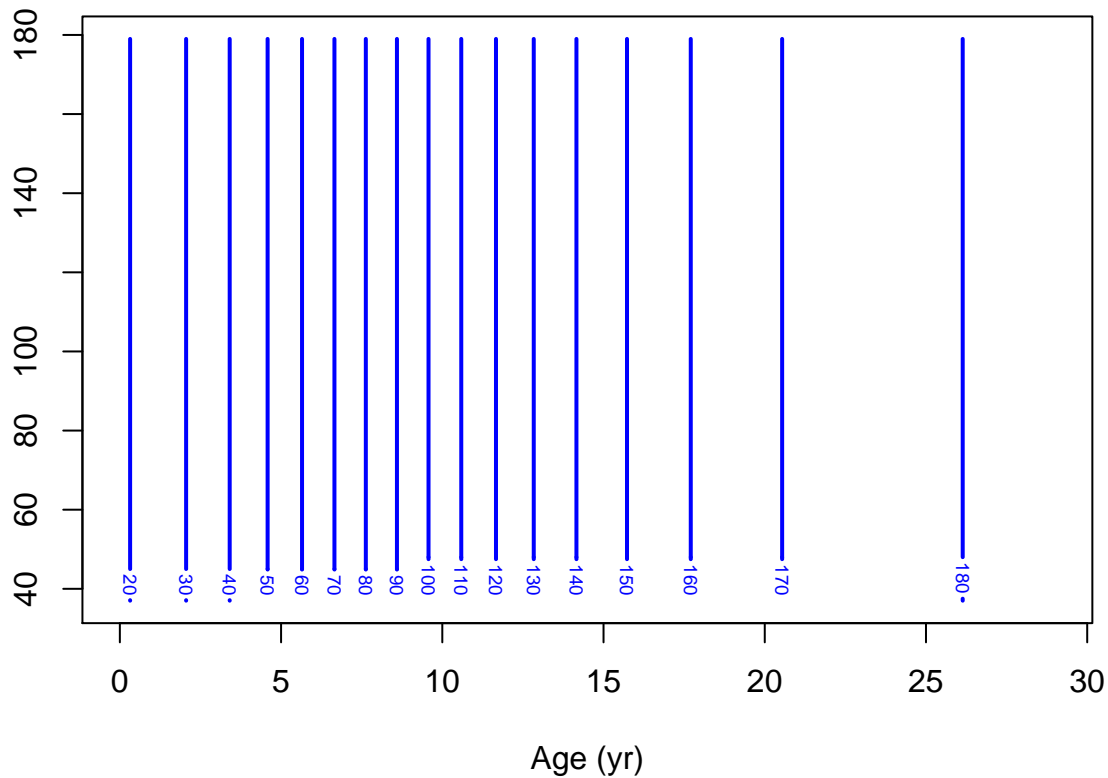


# Male time-varying growth

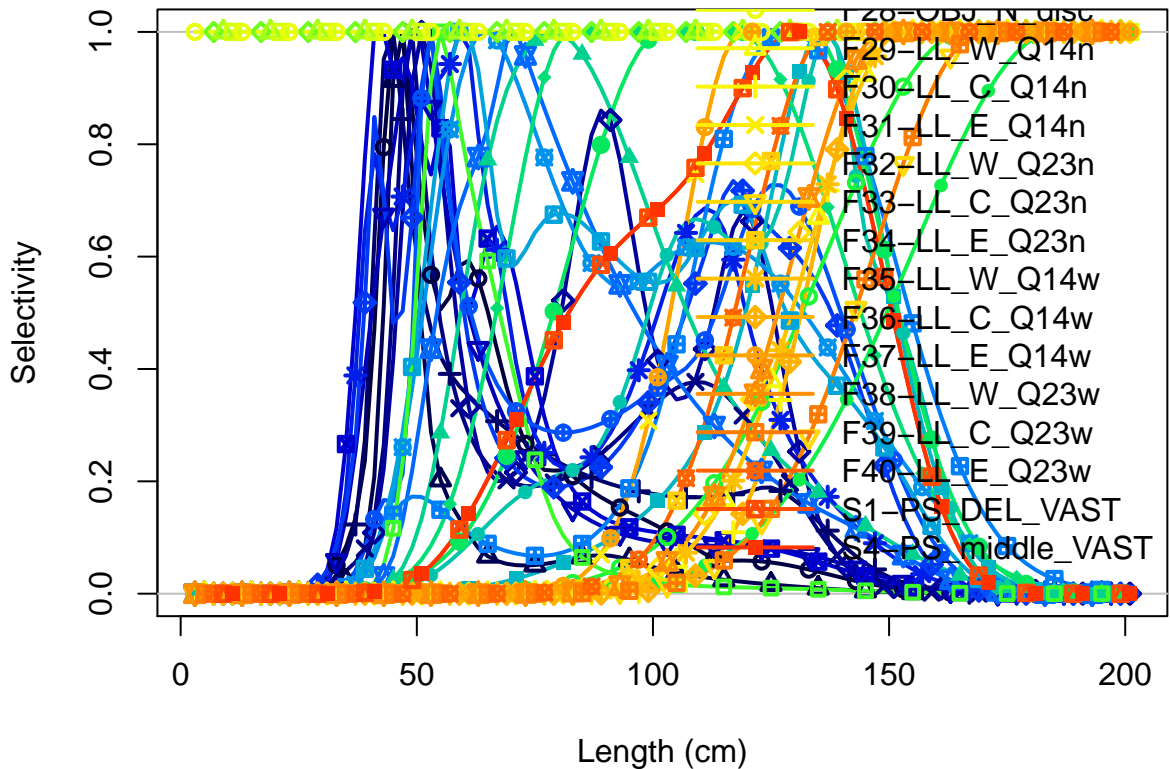




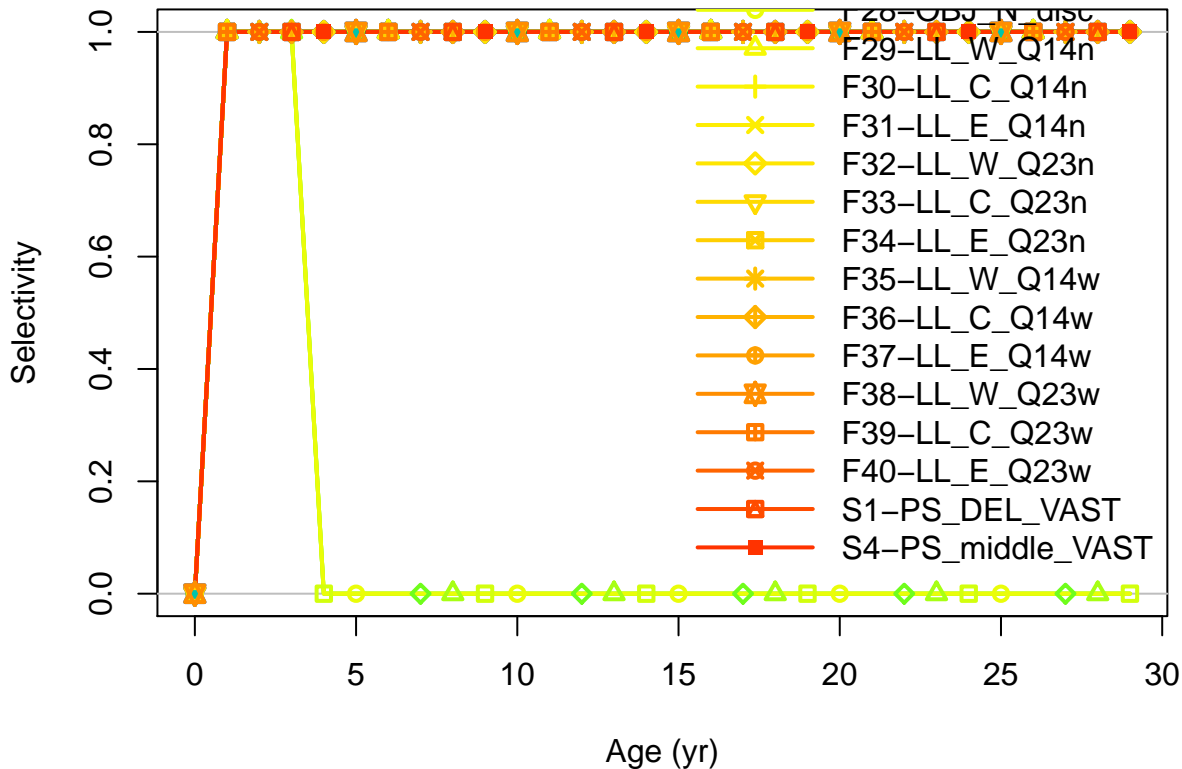
# Male time-varying growth



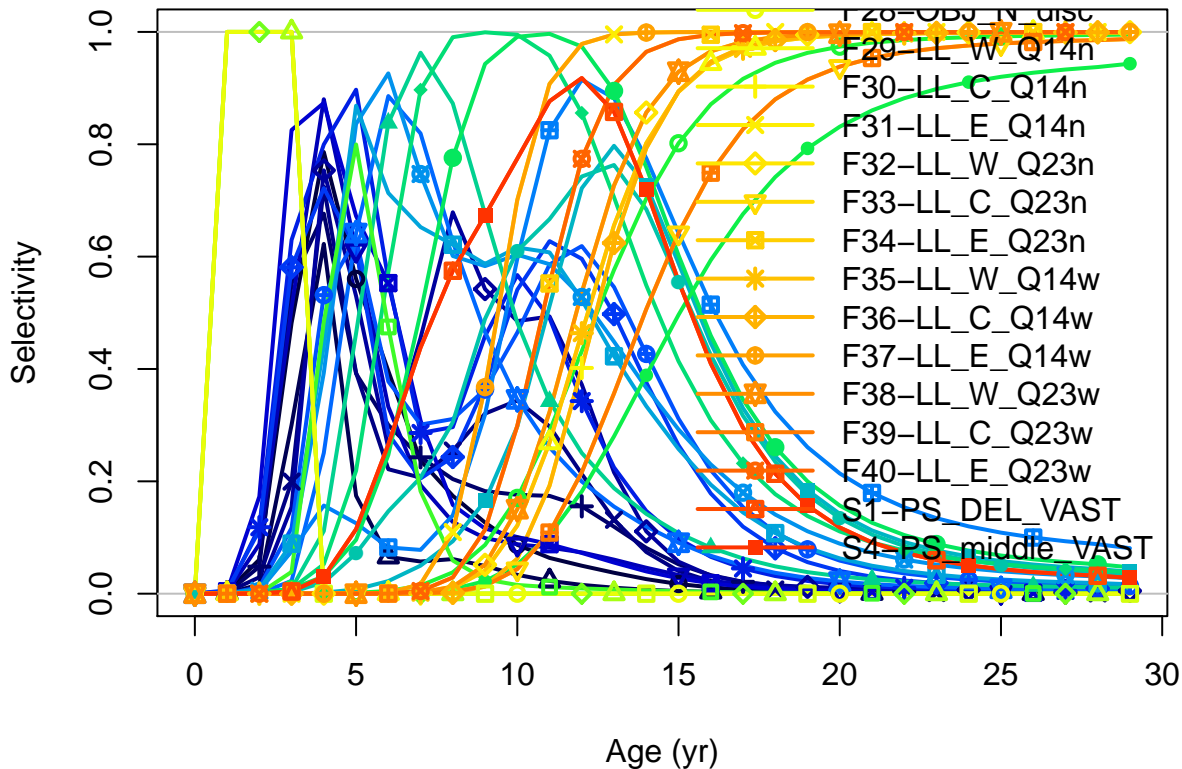
# Length-based selectivity by fleet in 180



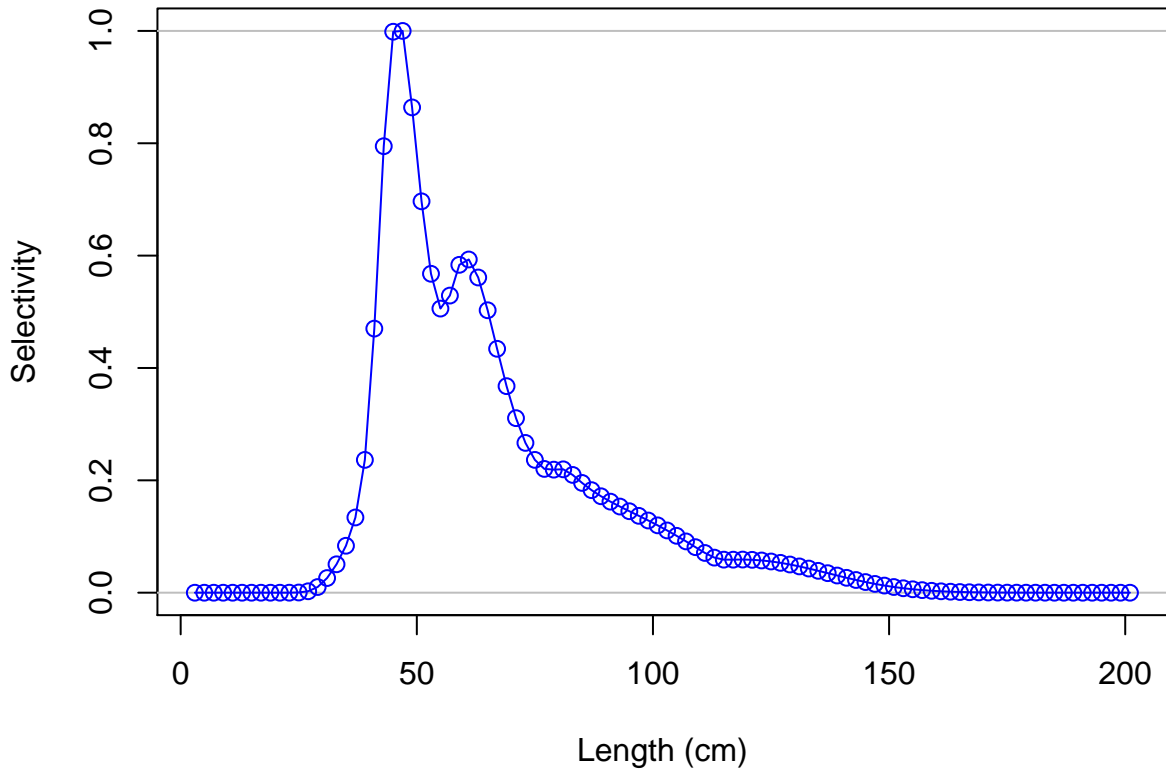
# Age-based selectivity by fleet in 180



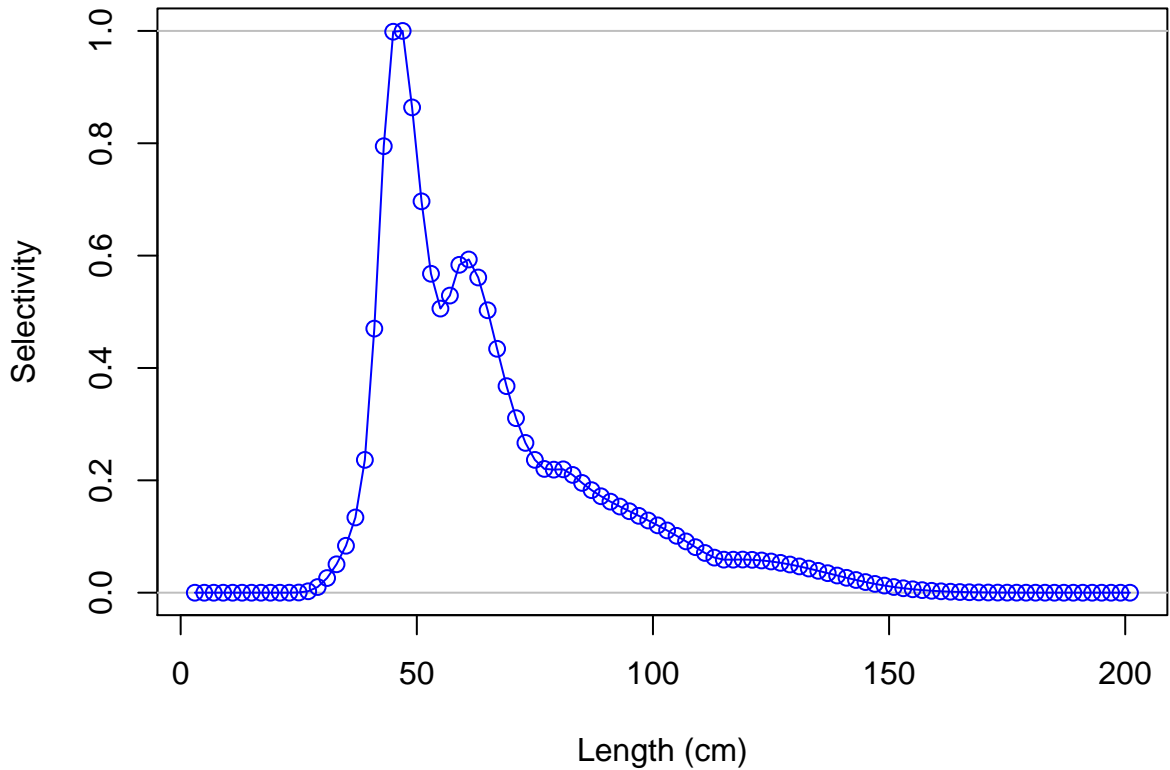
# Derived age-based from length-based selectivity by fleet in 180



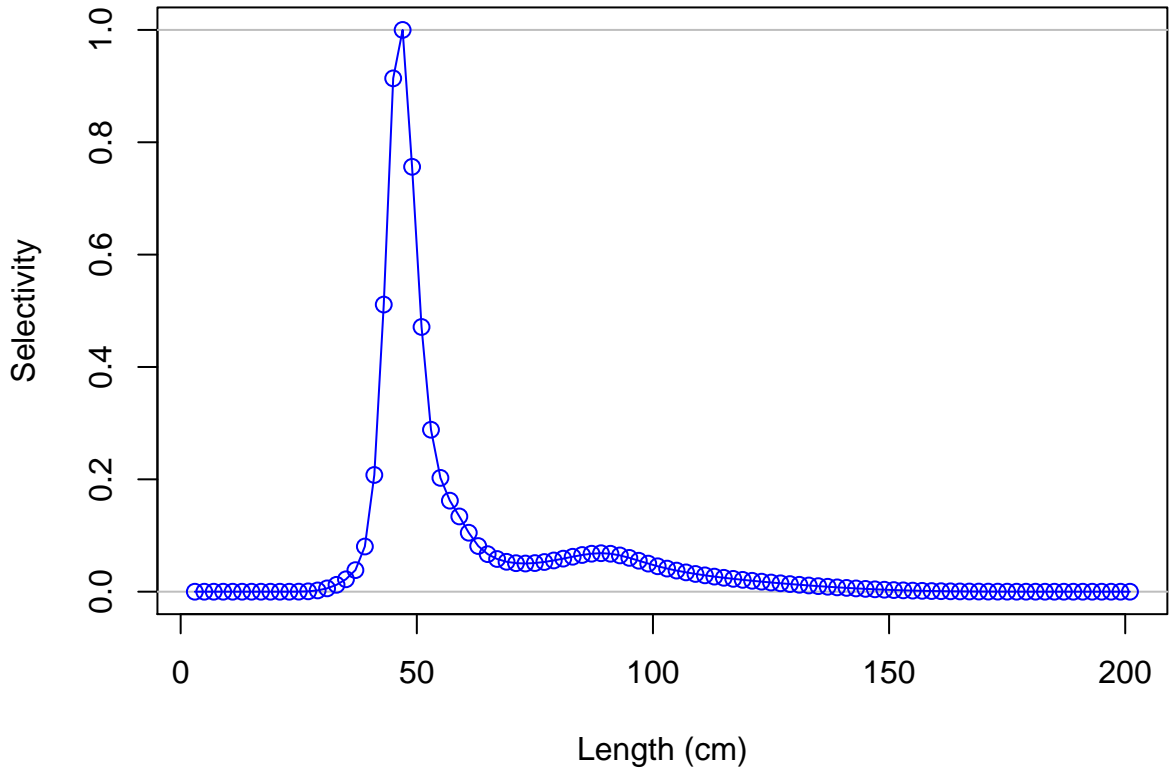
## Female ending year selectivity for F1-Obj\_N-Q14



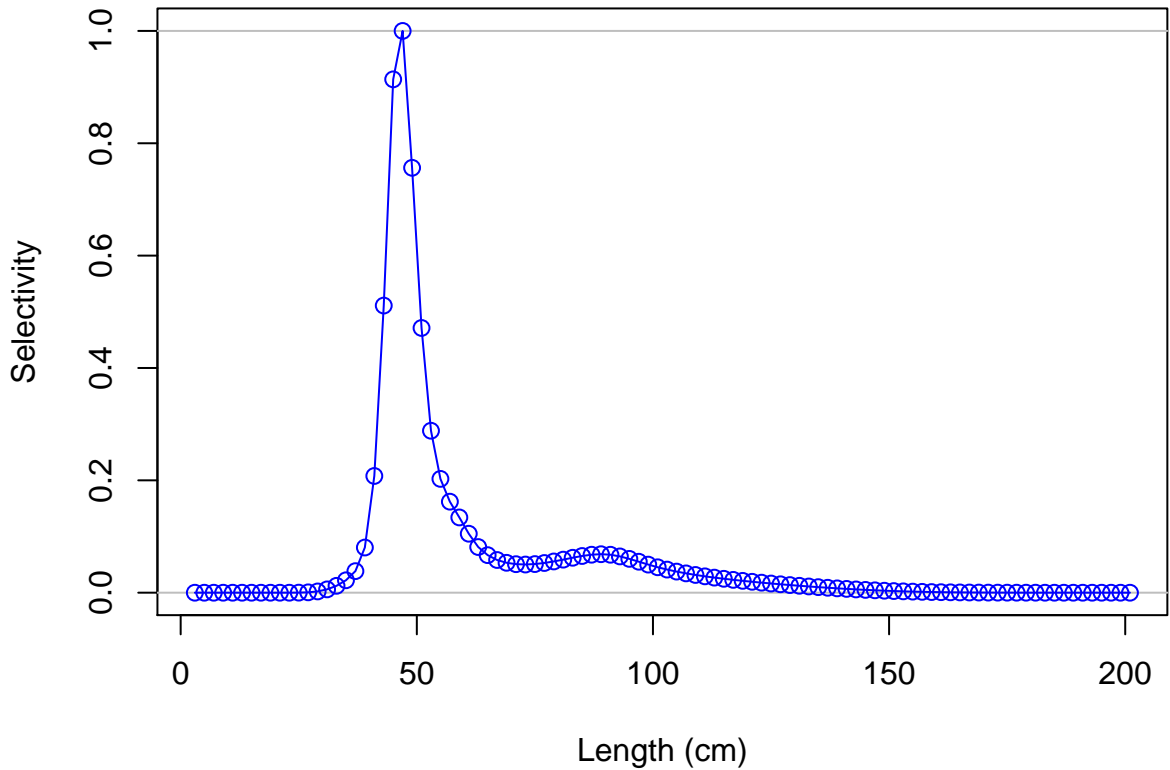
### Male ending year selectivity for F1-OBJ\_N-Q14



# Female ending year selectivity for F2-OBJ\_Nc\_Q14

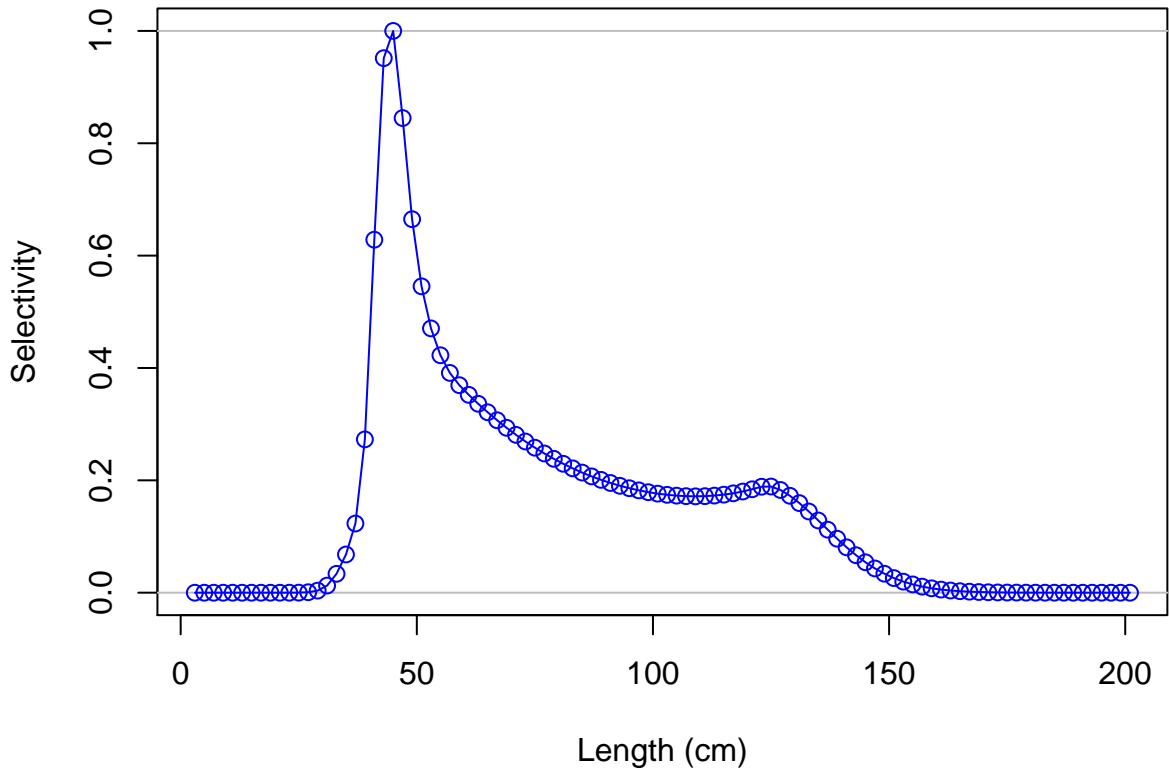


### Male ending year selectivity for F2-OBJ\_Nc\_Q14

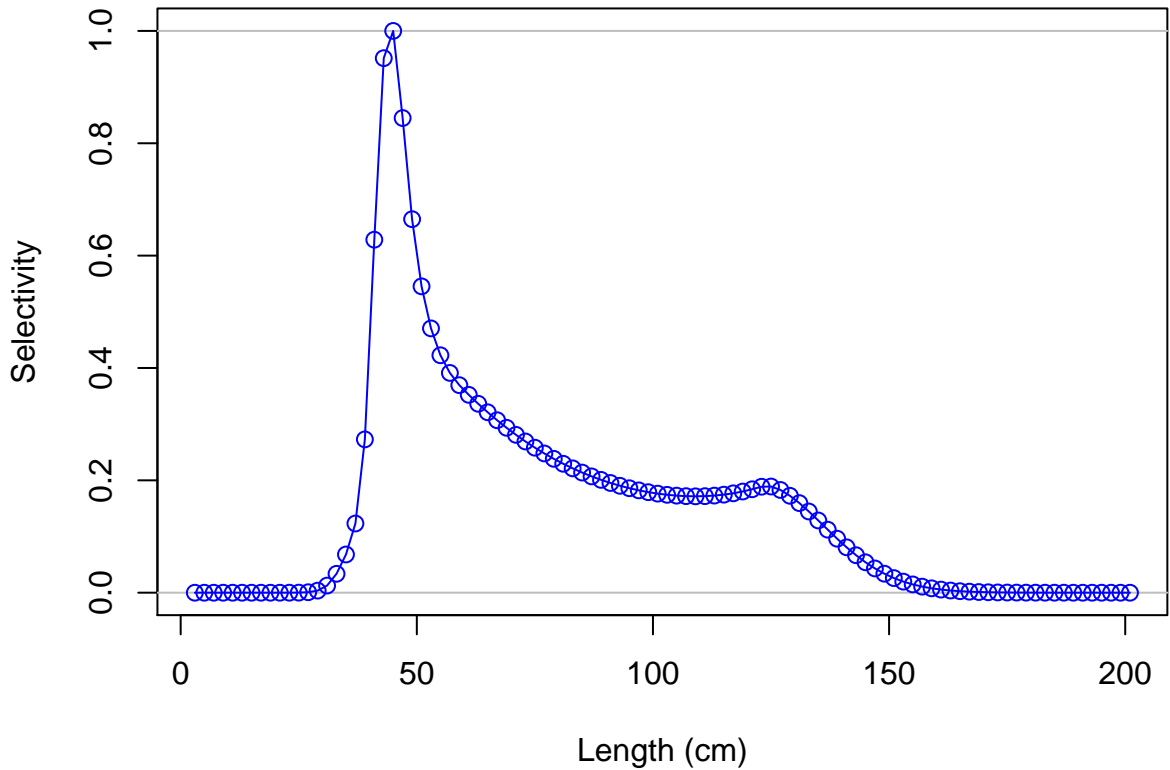




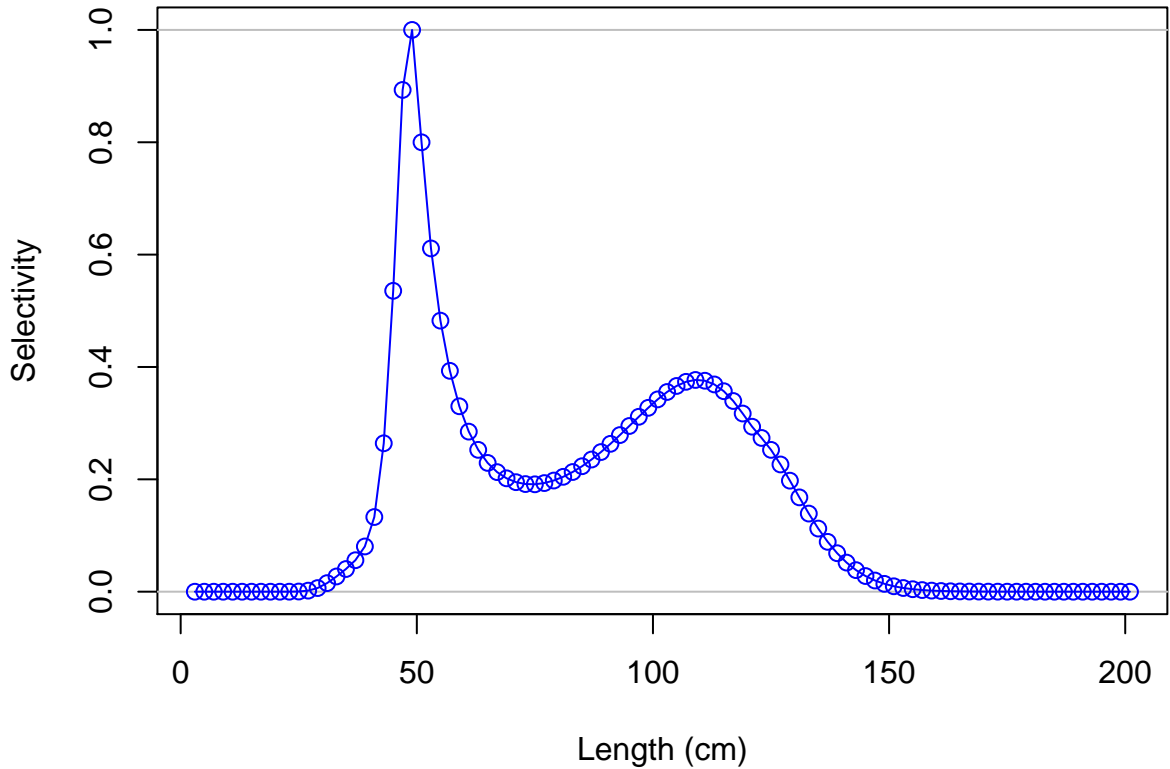
# Female ending year selectivity for F3-OBJ\_C\_Q14



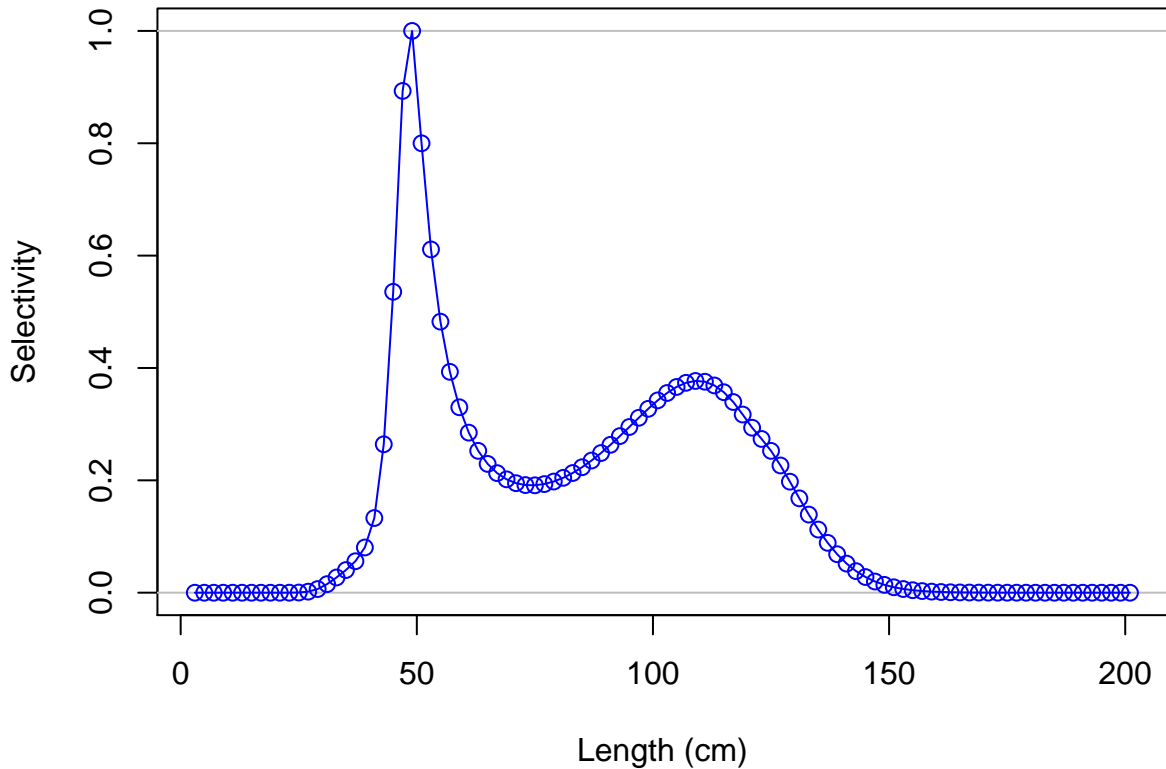
### Male ending year selectivity for F3-OBJ\_C\_Q14



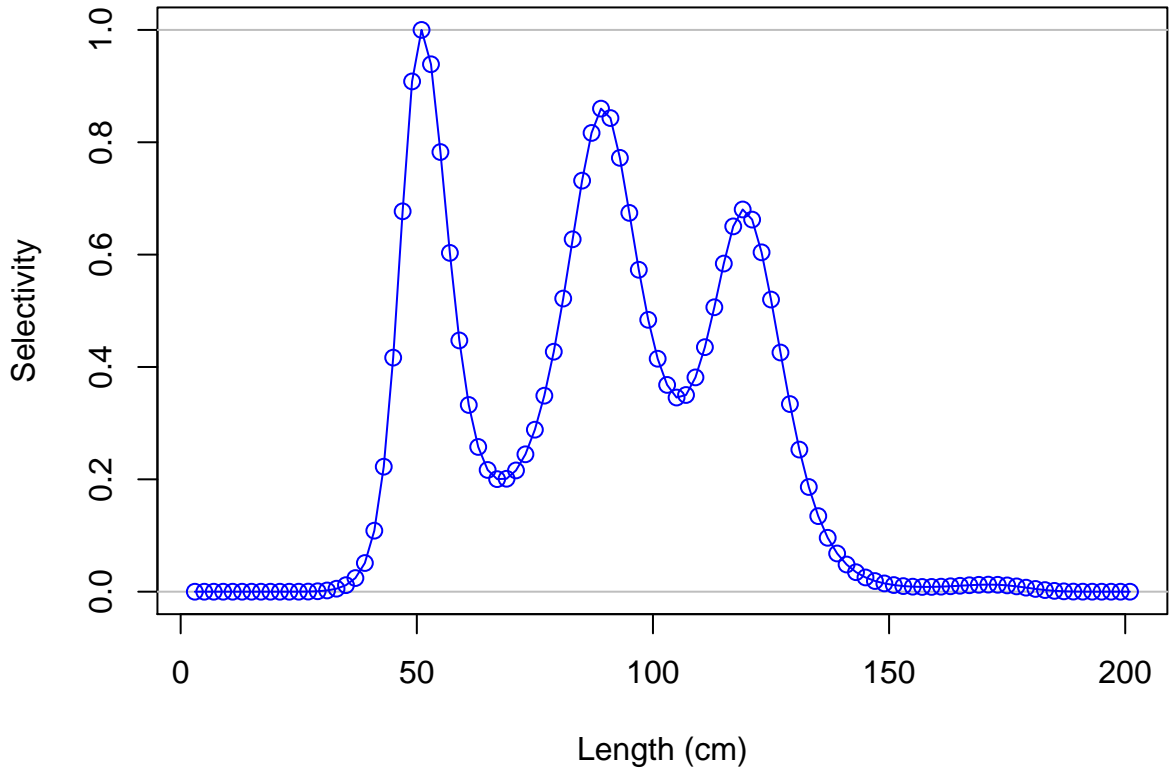
# Female ending year selectivity for F4-OBJ\_Cc\_Q14



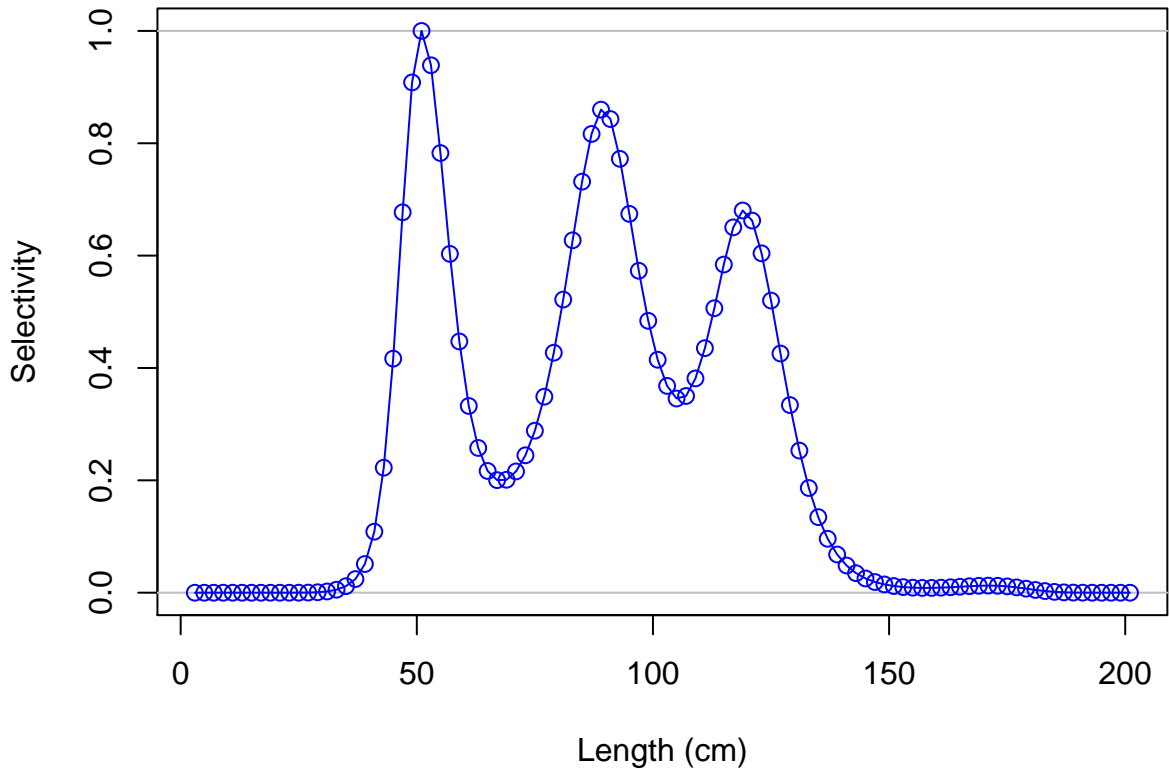
# Male ending year selectivity for F4-Obj\_Cc\_Q14



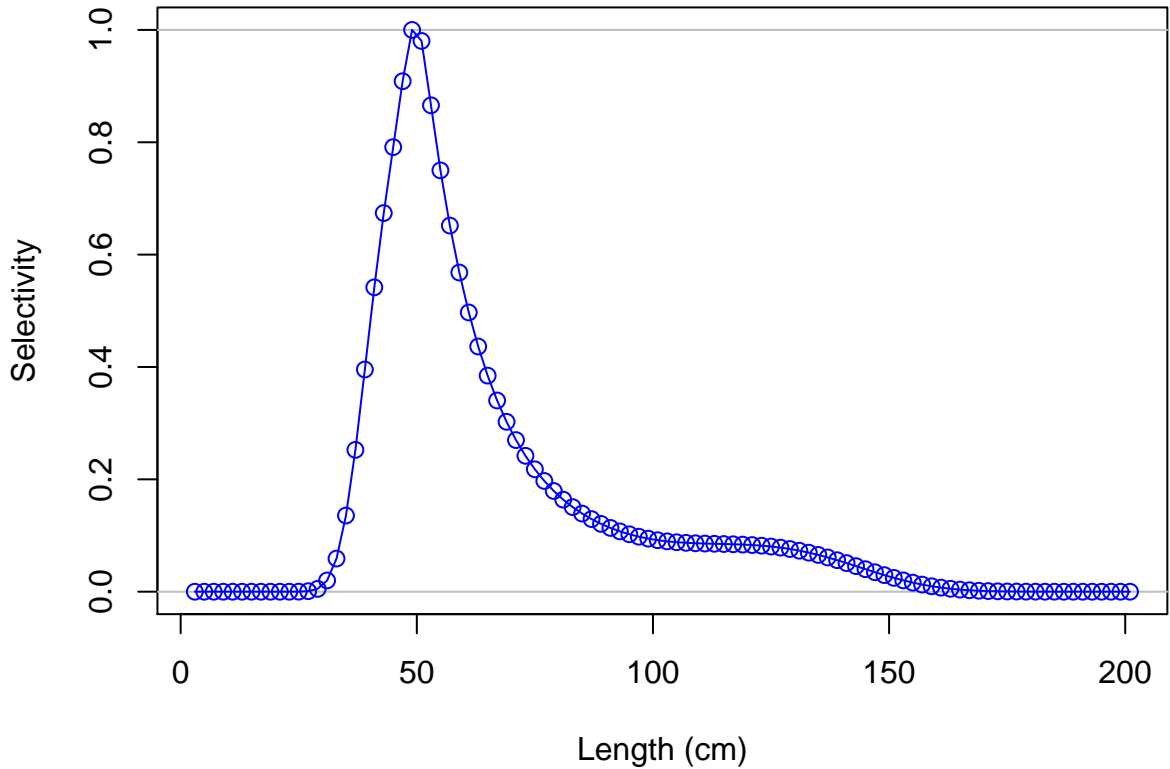
# Female ending year selectivity for F5-OBJ\_S\_Q14



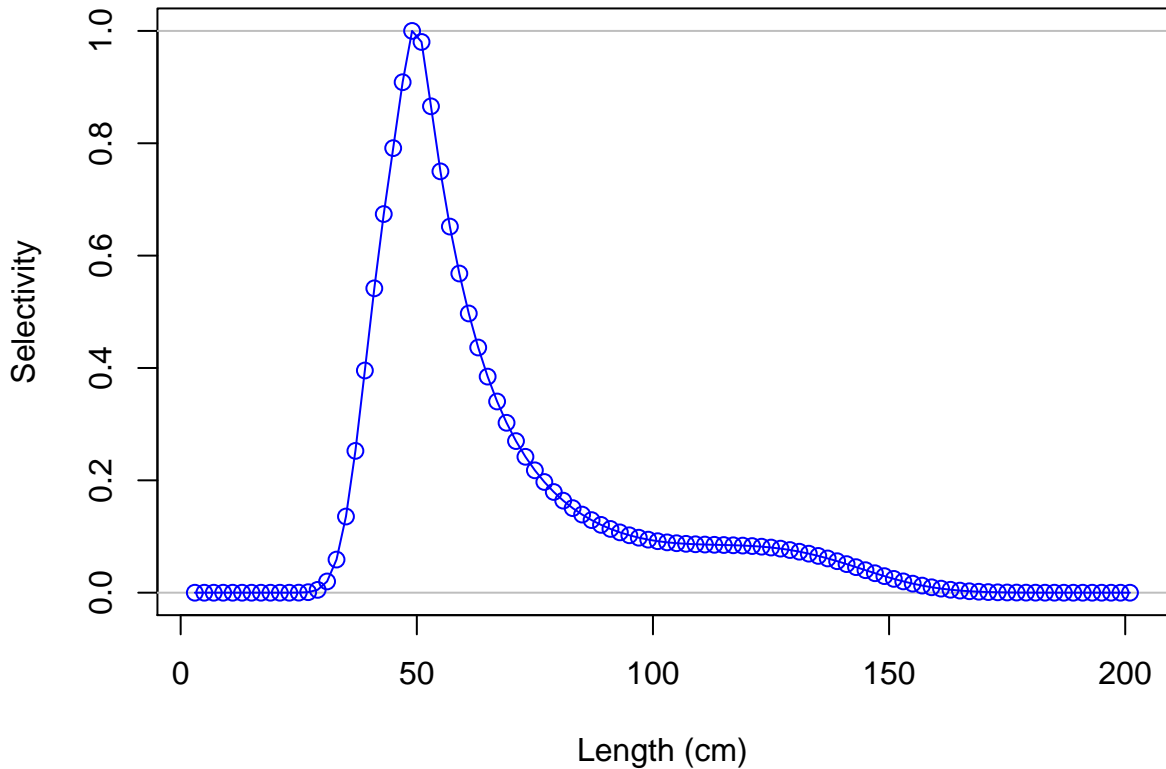
# Male ending year selectivity for F5-OBJ\_S\_Q14



## Female ending year selectivity for F6-OBJ\_N\_Q23

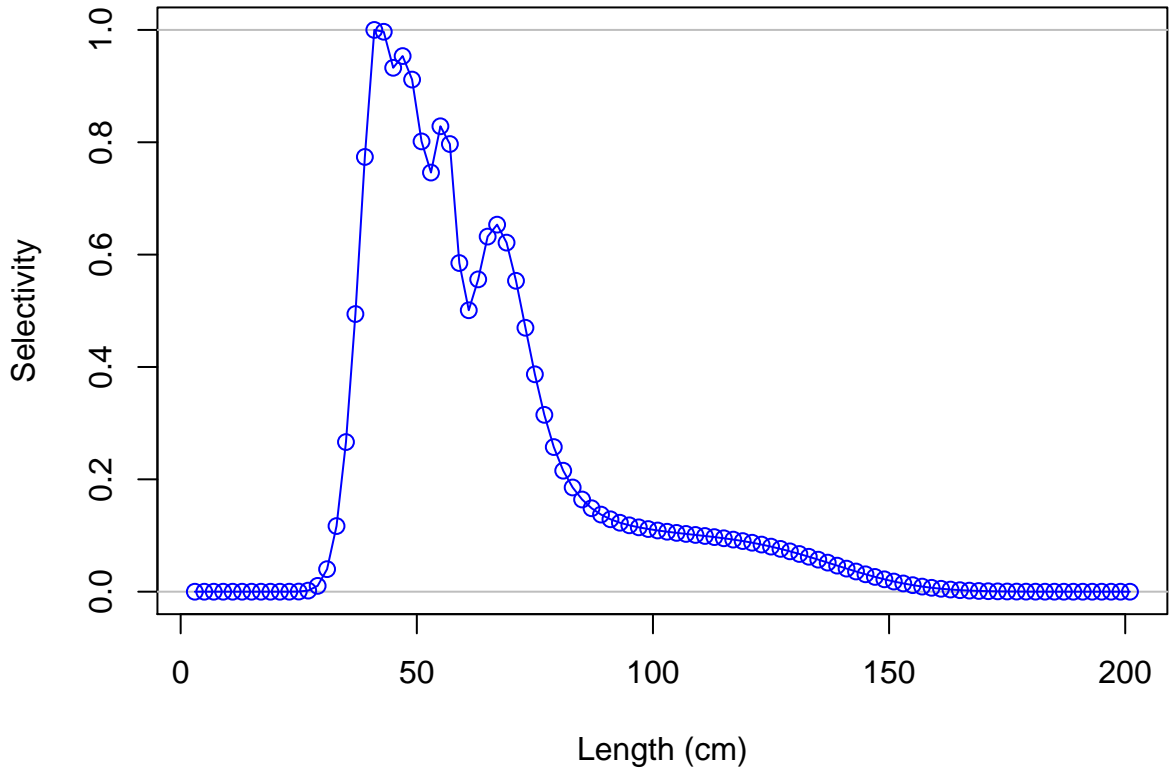


### Male ending year selectivity for F6-OBJ\_N\_Q23

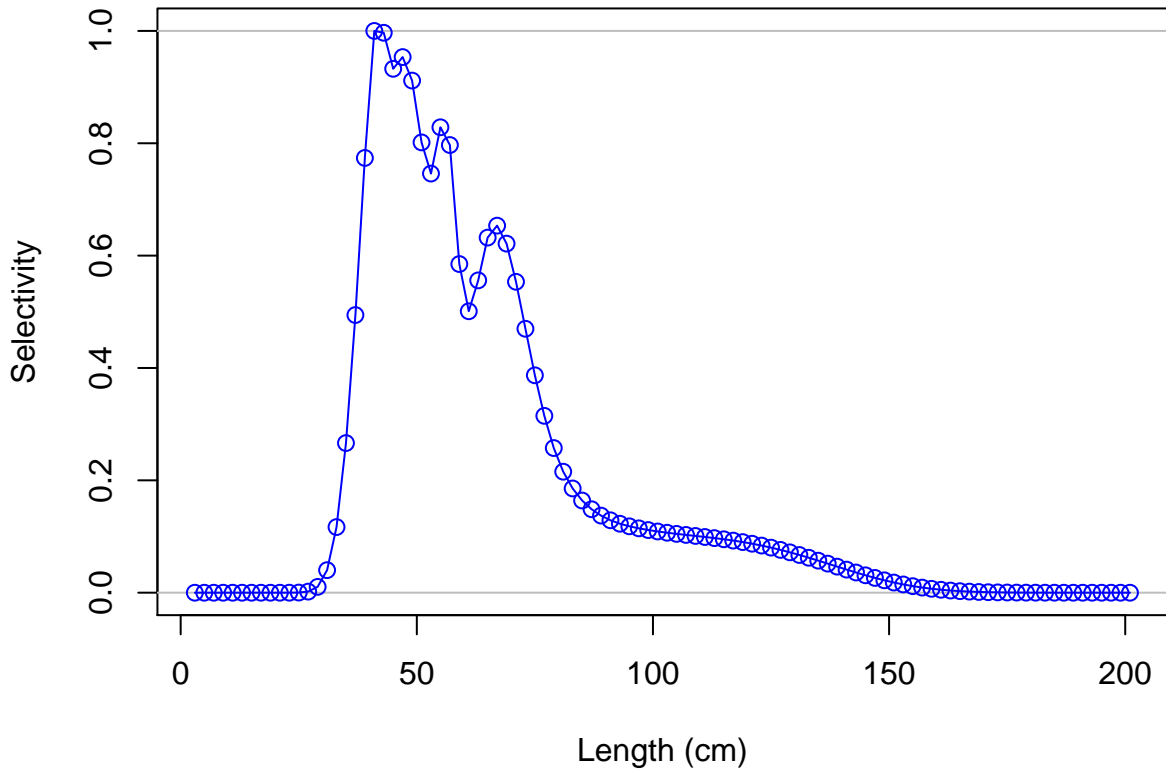




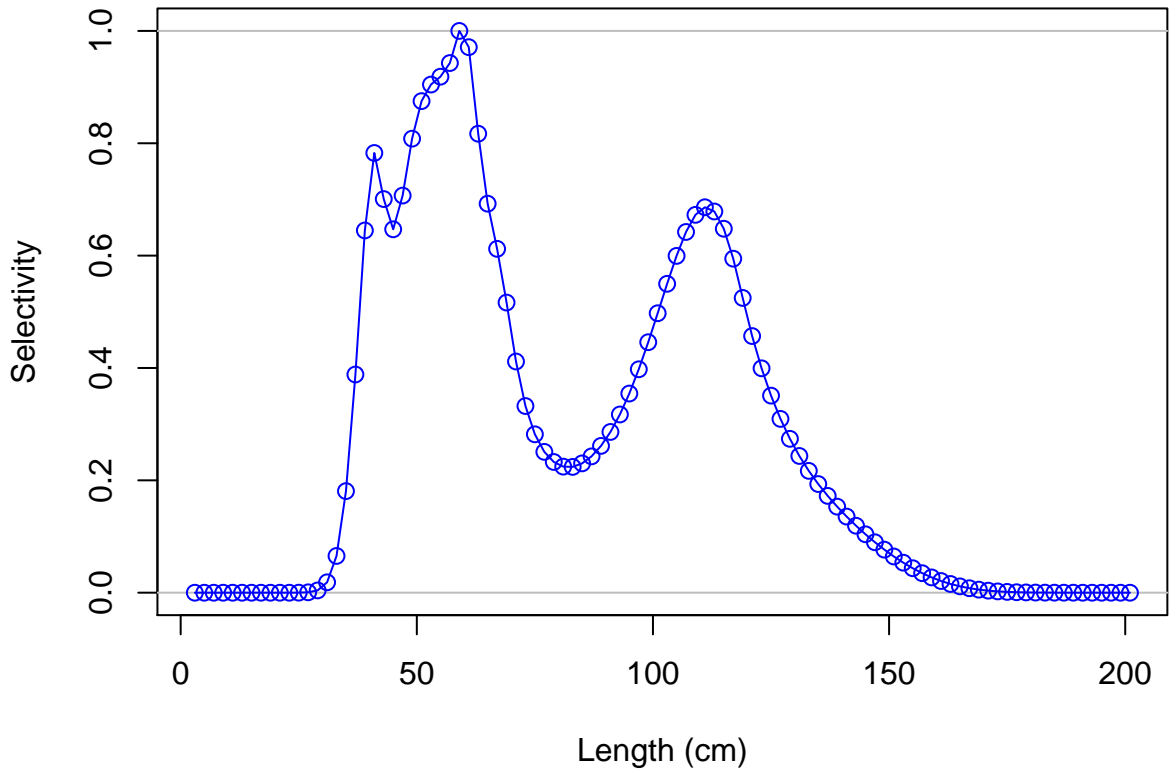
### Female ending year selectivity for F7-OBJ\_Nc\_Q23



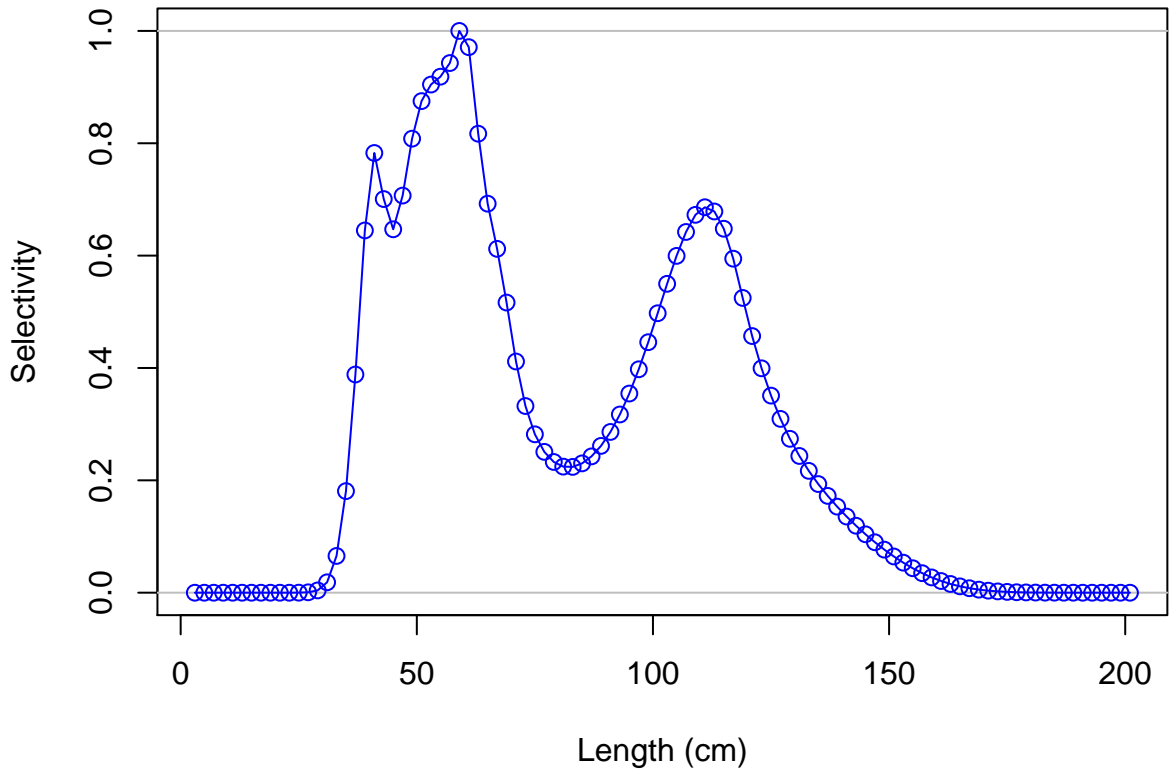
### Male ending year selectivity for F7-OBJ\_Nc\_Q23



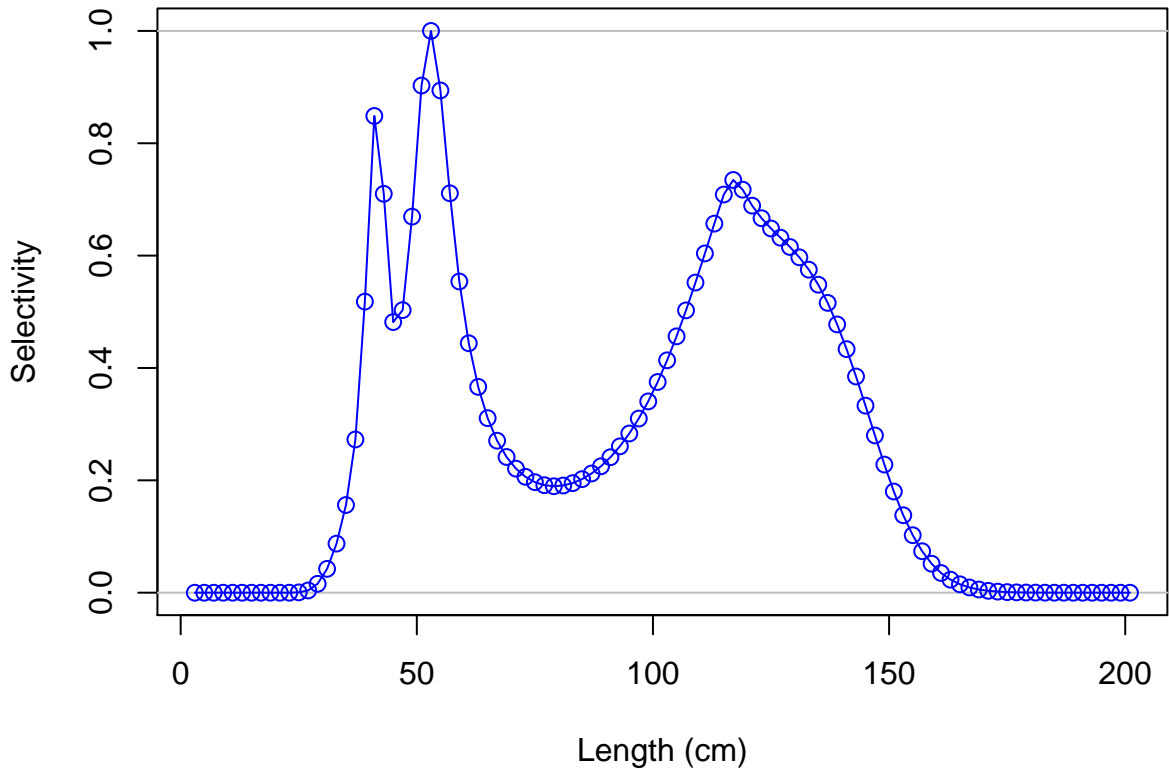
## Female ending year selectivity for F8-Obj\_C\_Q23



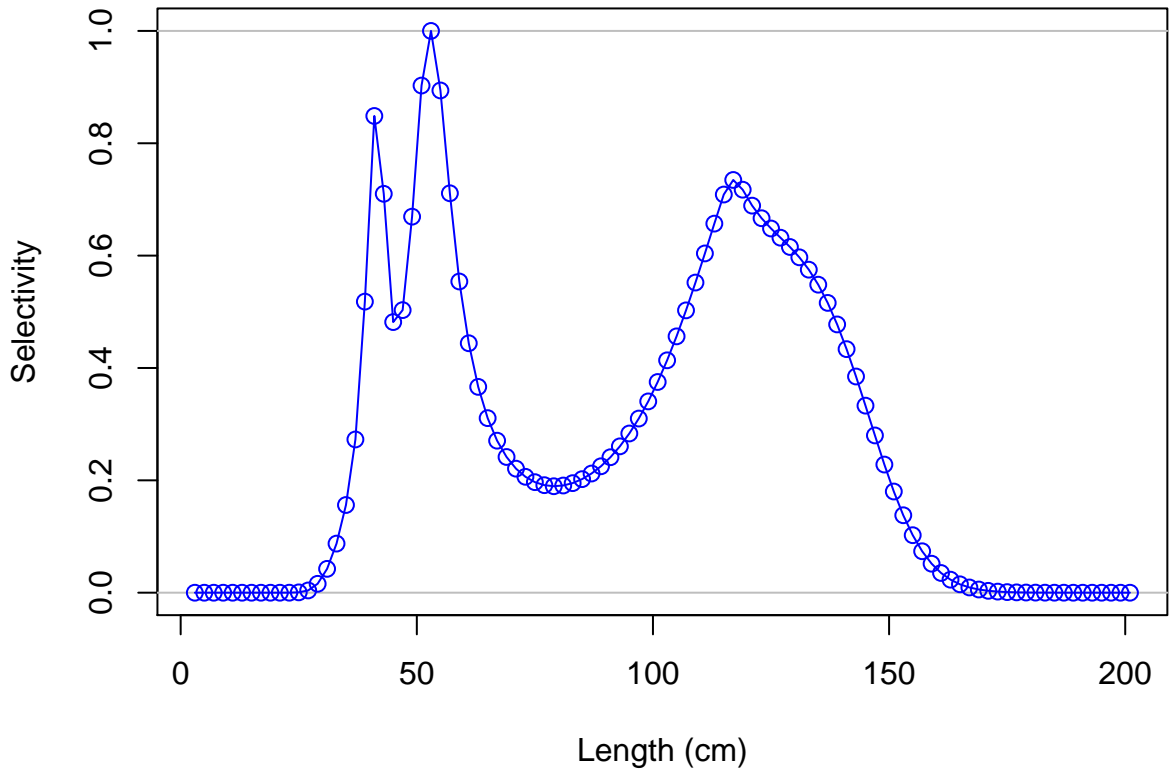
# Male ending year selectivity for F8-OBJ\_C\_Q23



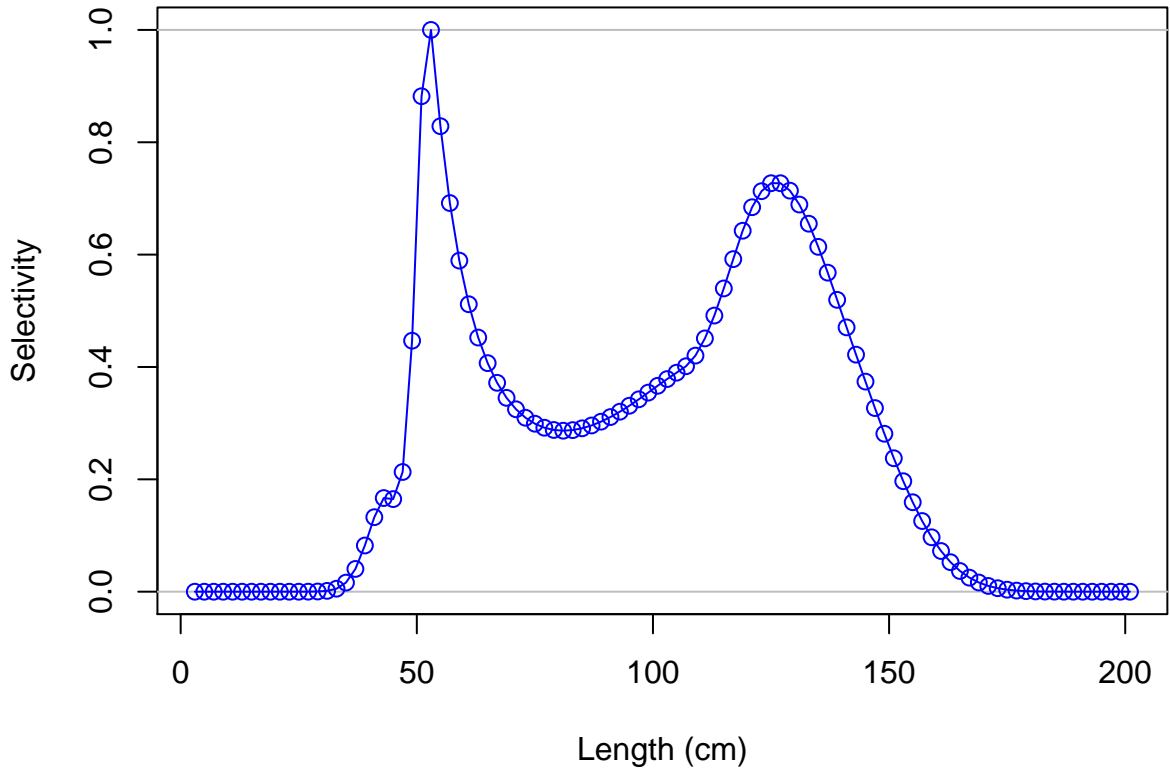
# Female ending year selectivity for F9-OBJ\_Cc\_Q23



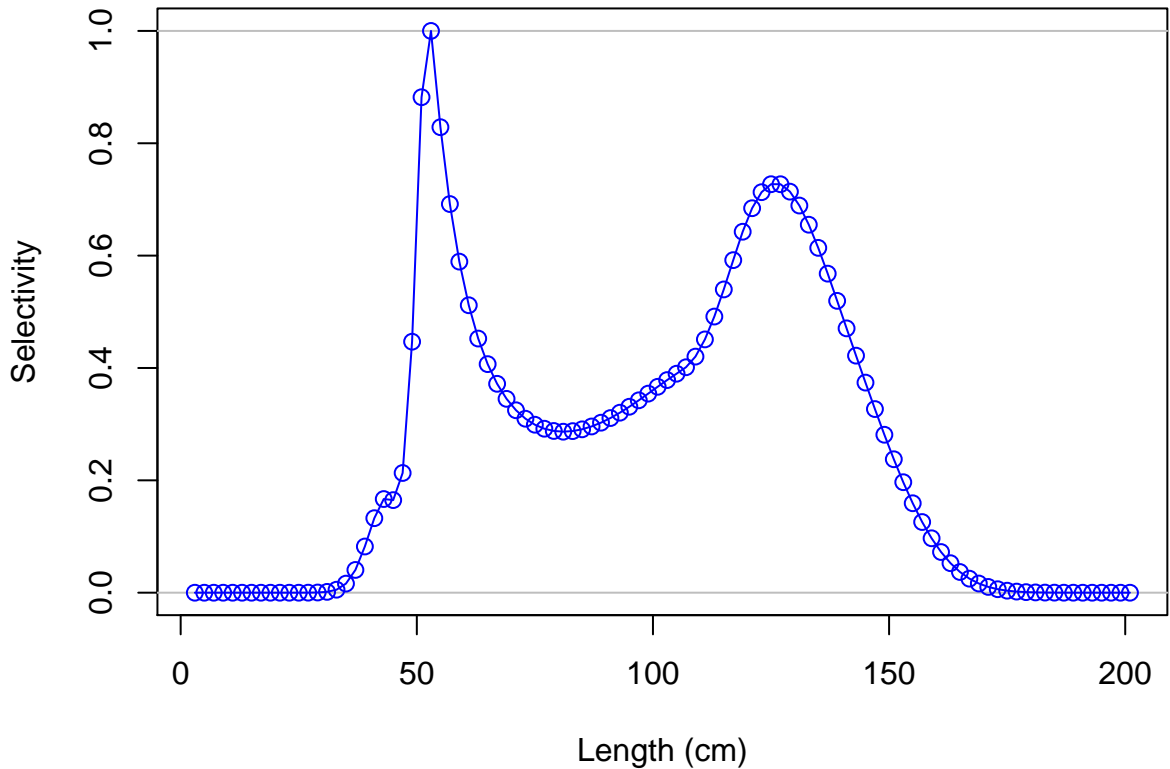
# Male ending year selectivity for F9-OBJ\_Cc\_Q23



# Female ending year selectivity for F10-OBJ\_S\_Q23

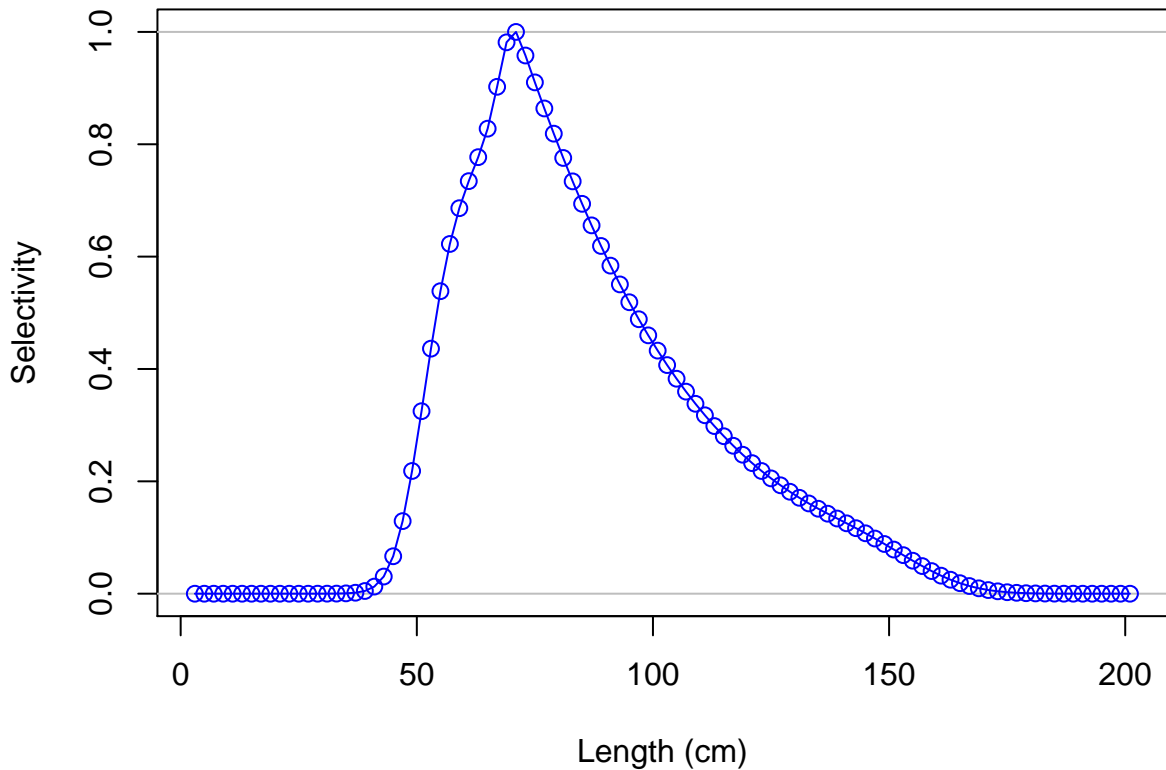


# Male ending year selectivity for F10-OBJ\_S\_Q23

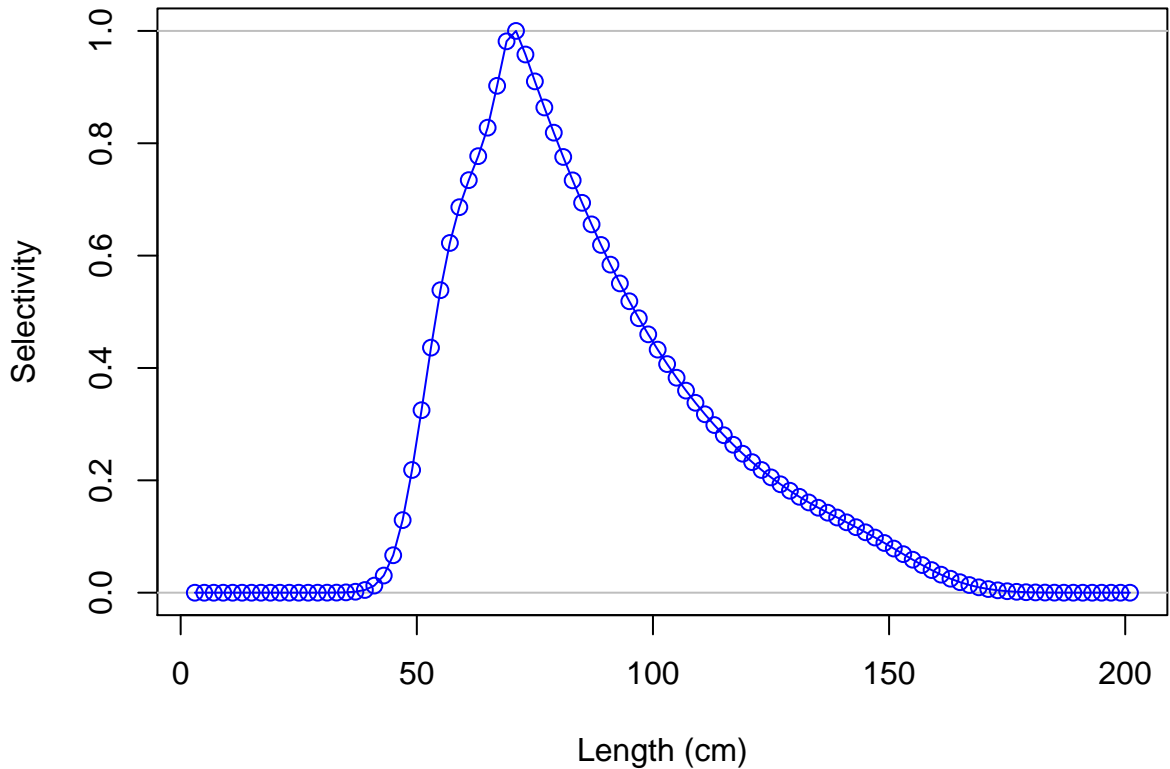




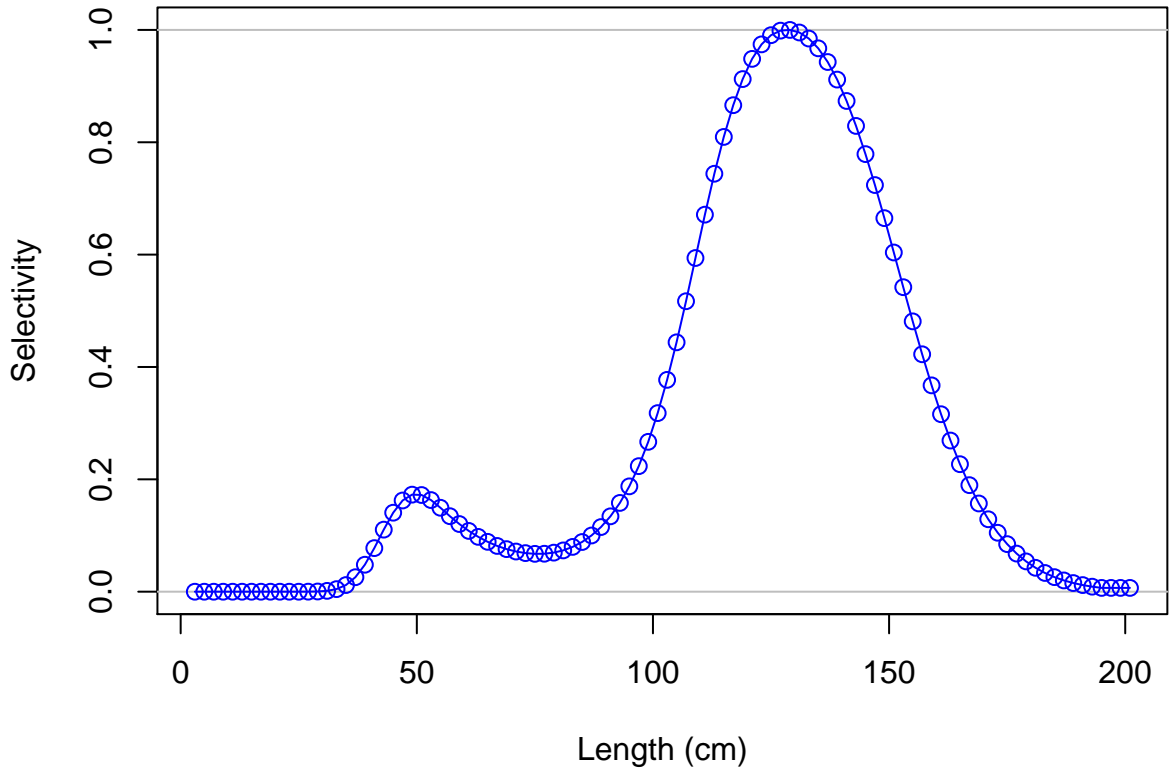
## Female ending year selectivity for F11-NOA\_N



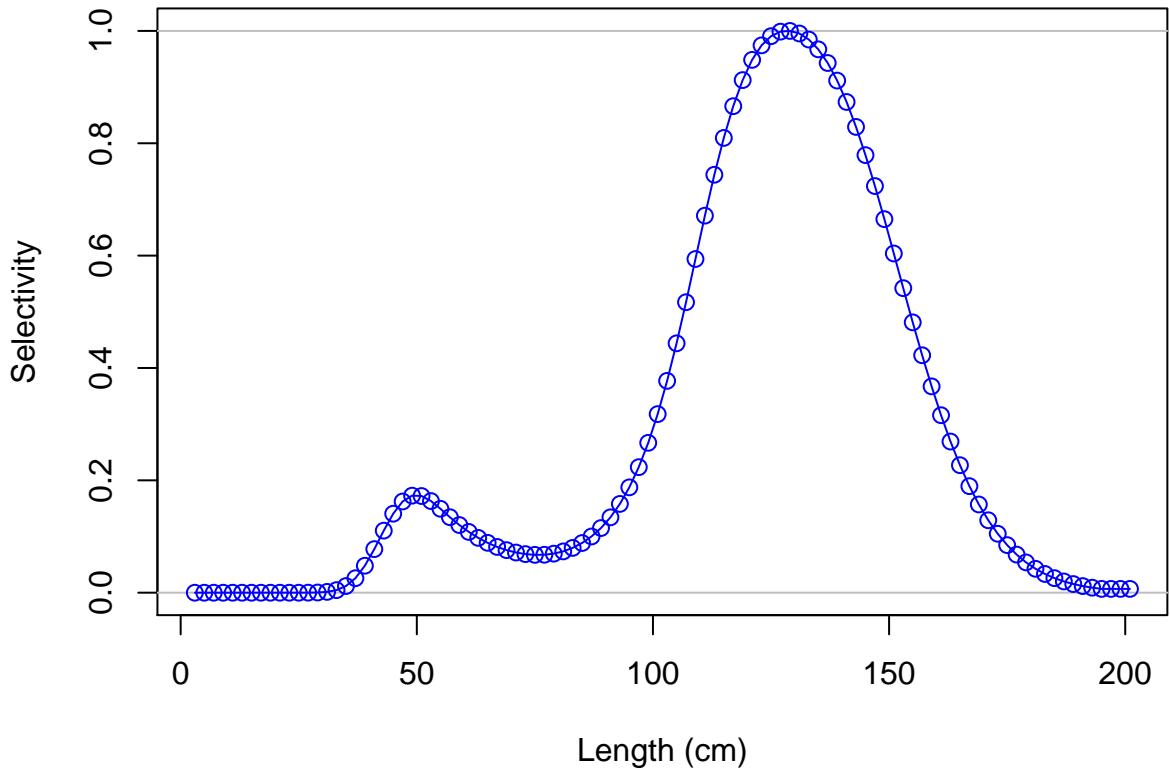
# Male ending year selectivity for F11-NOA\_N



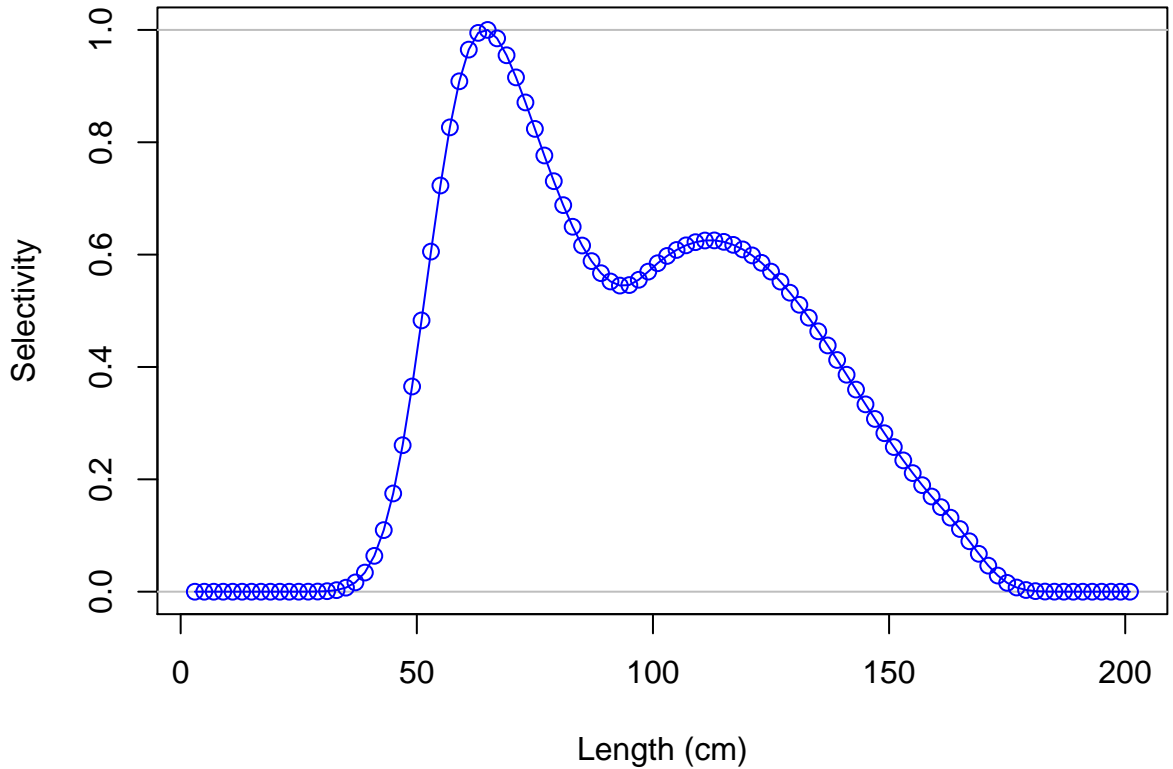
## Female ending year selectivity for F12-NOA\_C



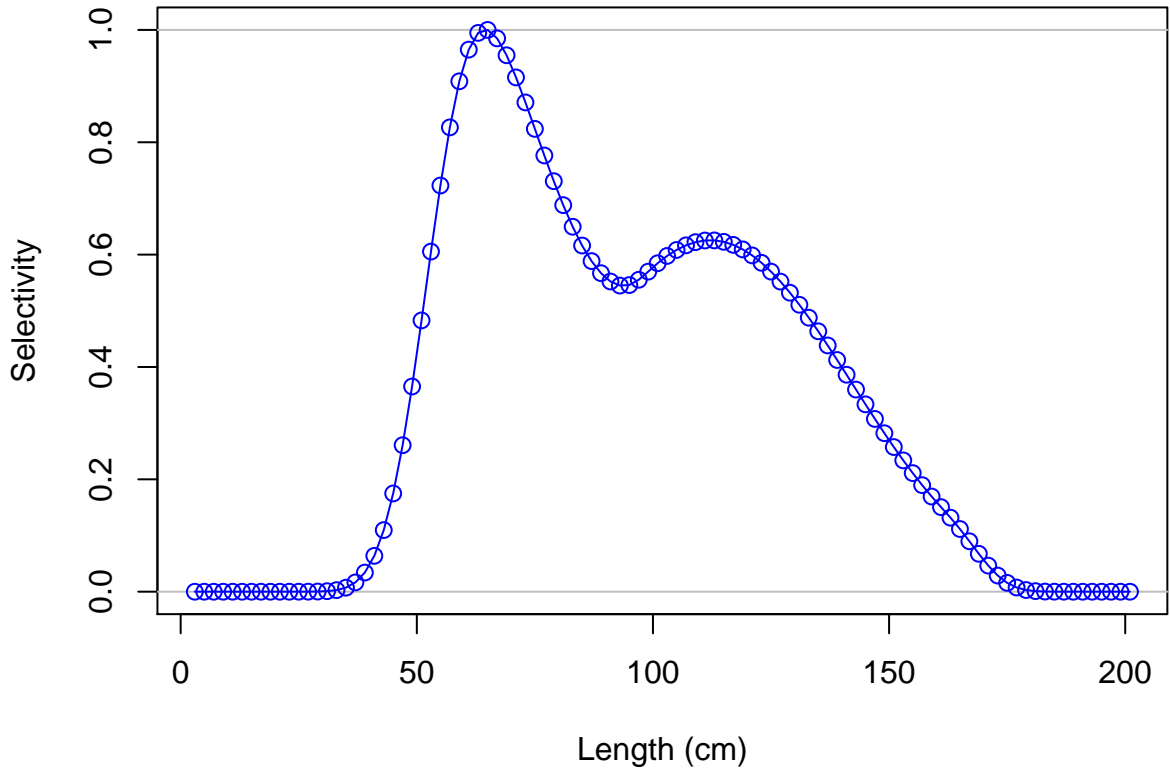
# Male ending year selectivity for F12-NOA\_C



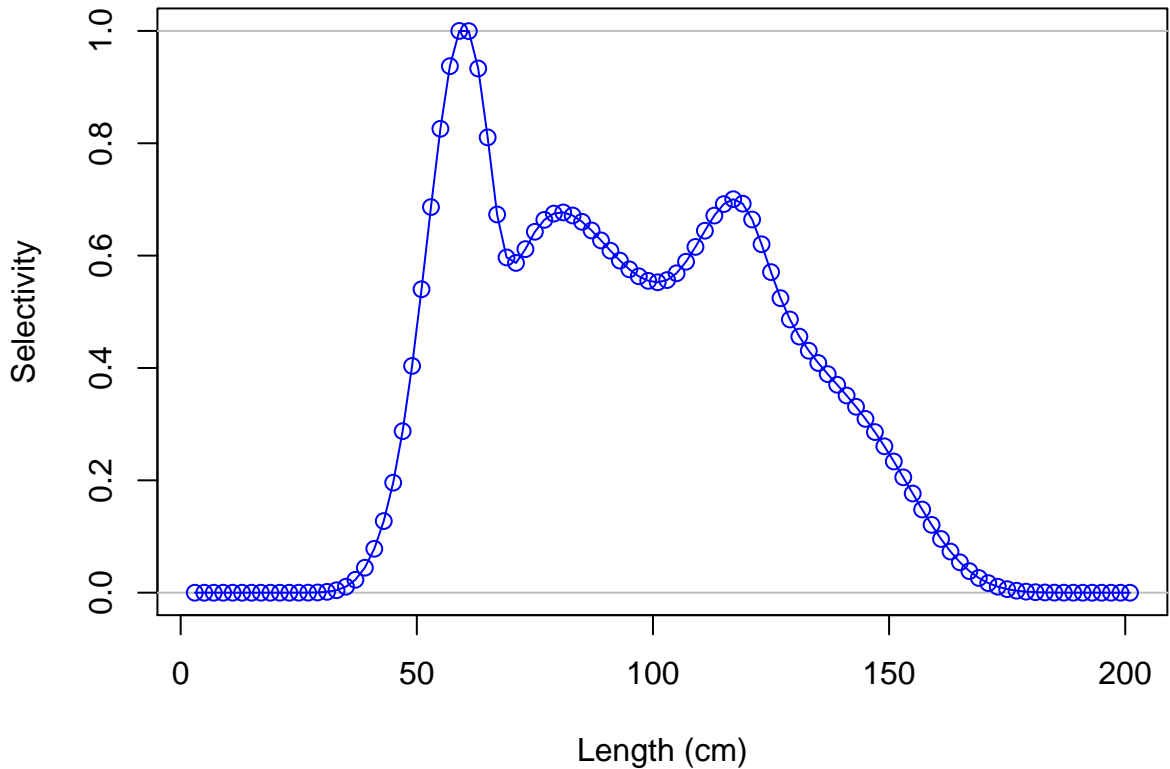
## Female ending year selectivity for F13-NOA\_I



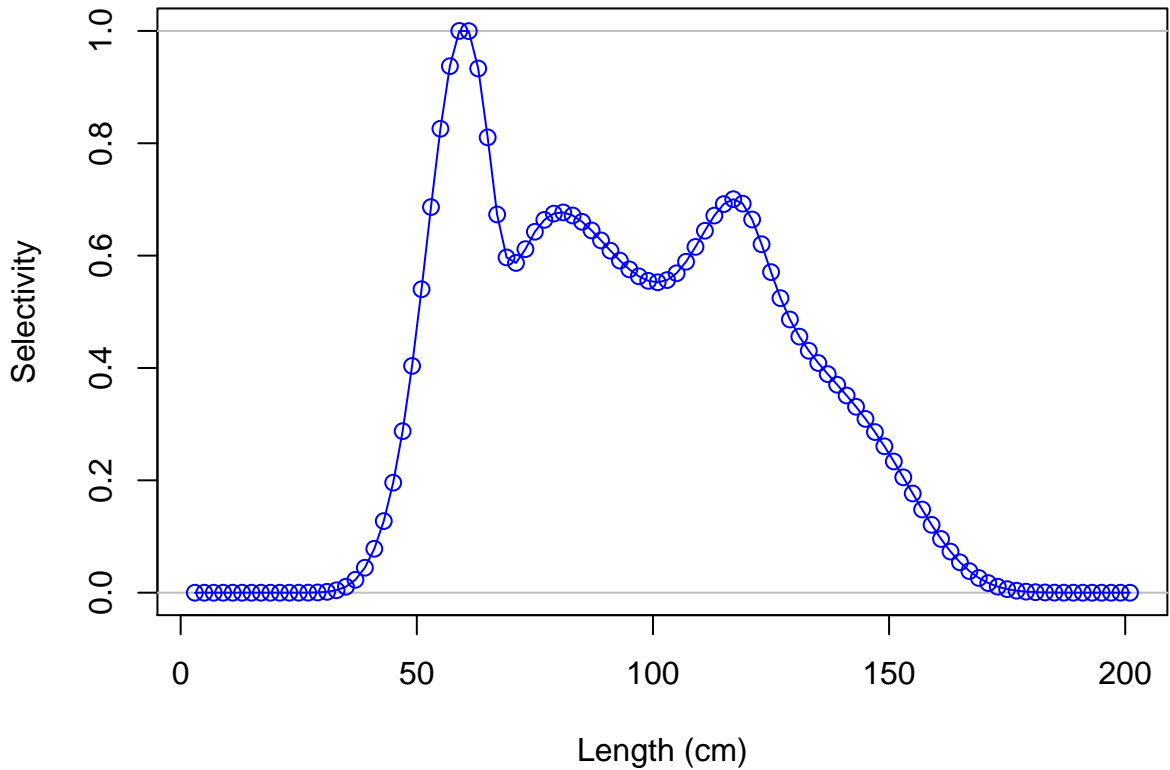
# Male ending year selectivity for F13-NOA\_I



# Female ending year selectivity for F14-NOA\_S

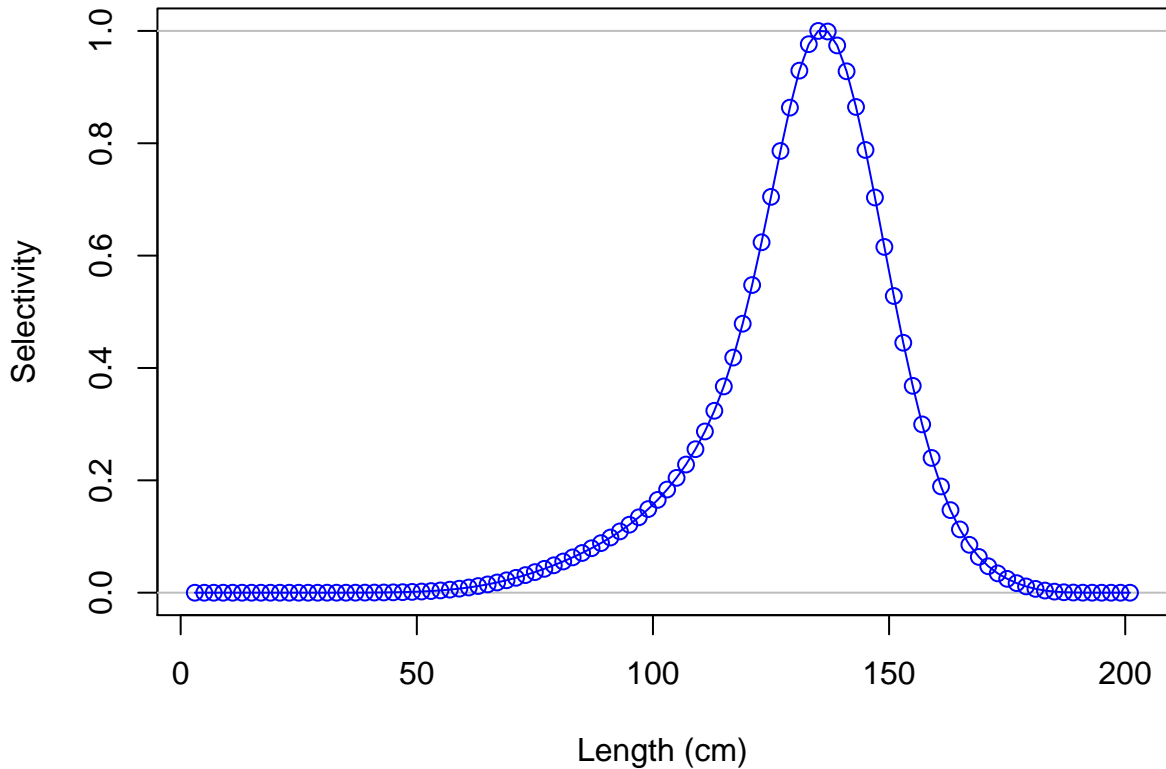


# Male ending year selectivity for F14-NOA\_S

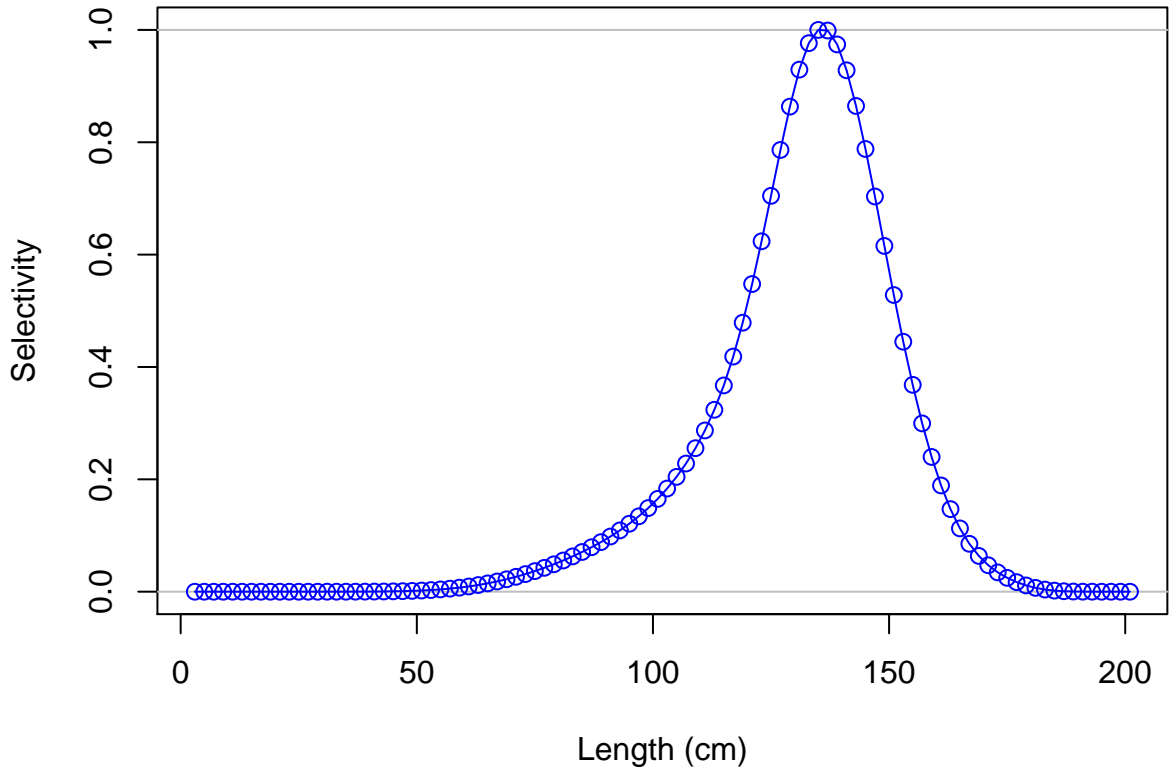




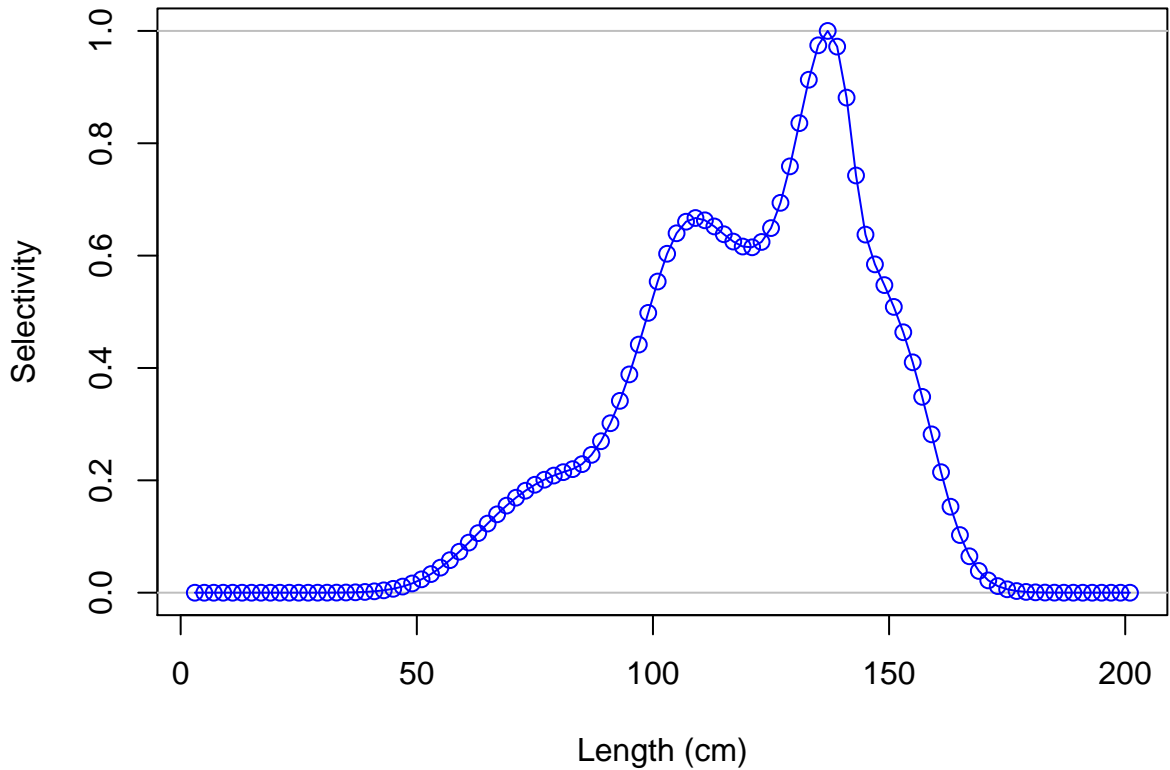
## Female ending year selectivity for F15-DEL\_N



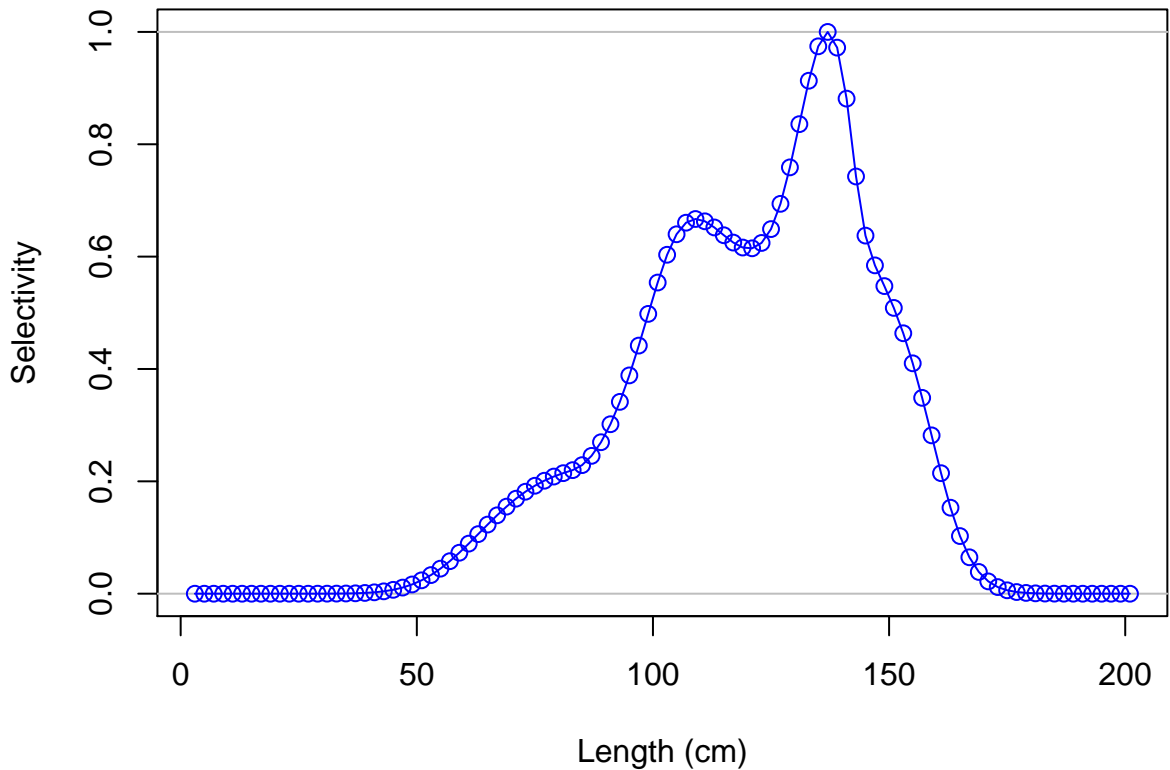
# Male ending year selectivity for F15-DEL\_N



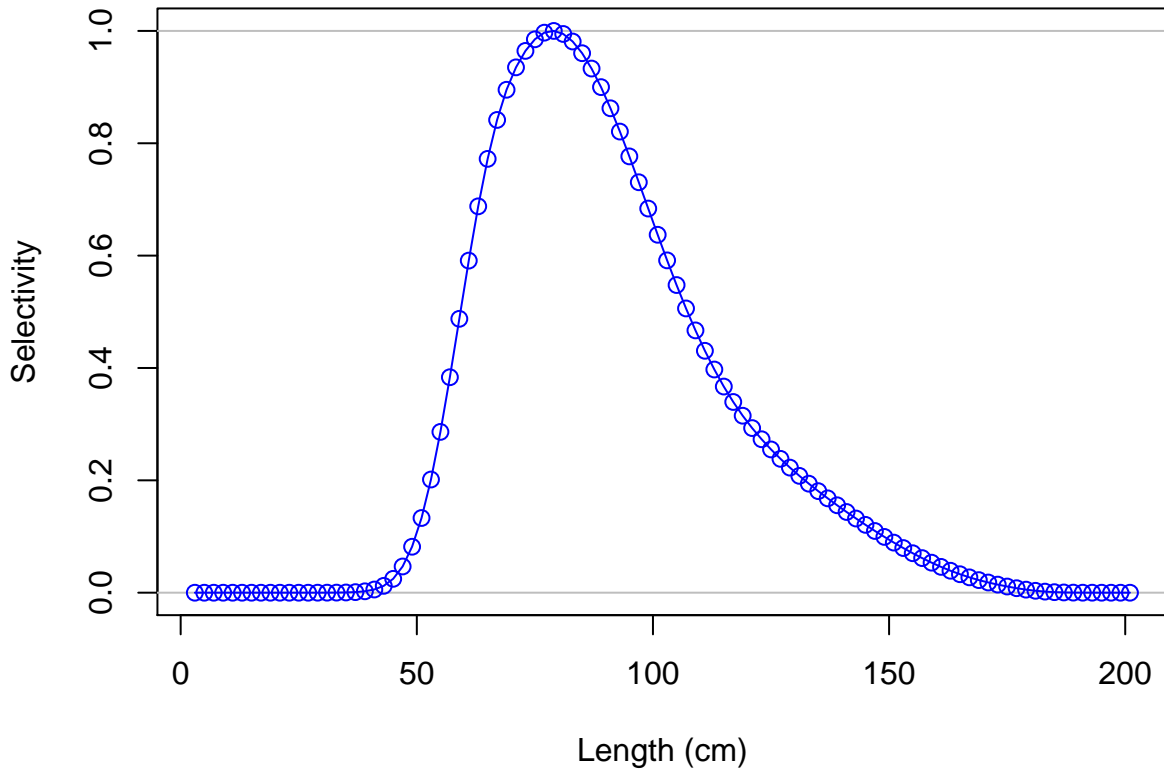
## Female ending year selectivity for F16-DEL\_NE



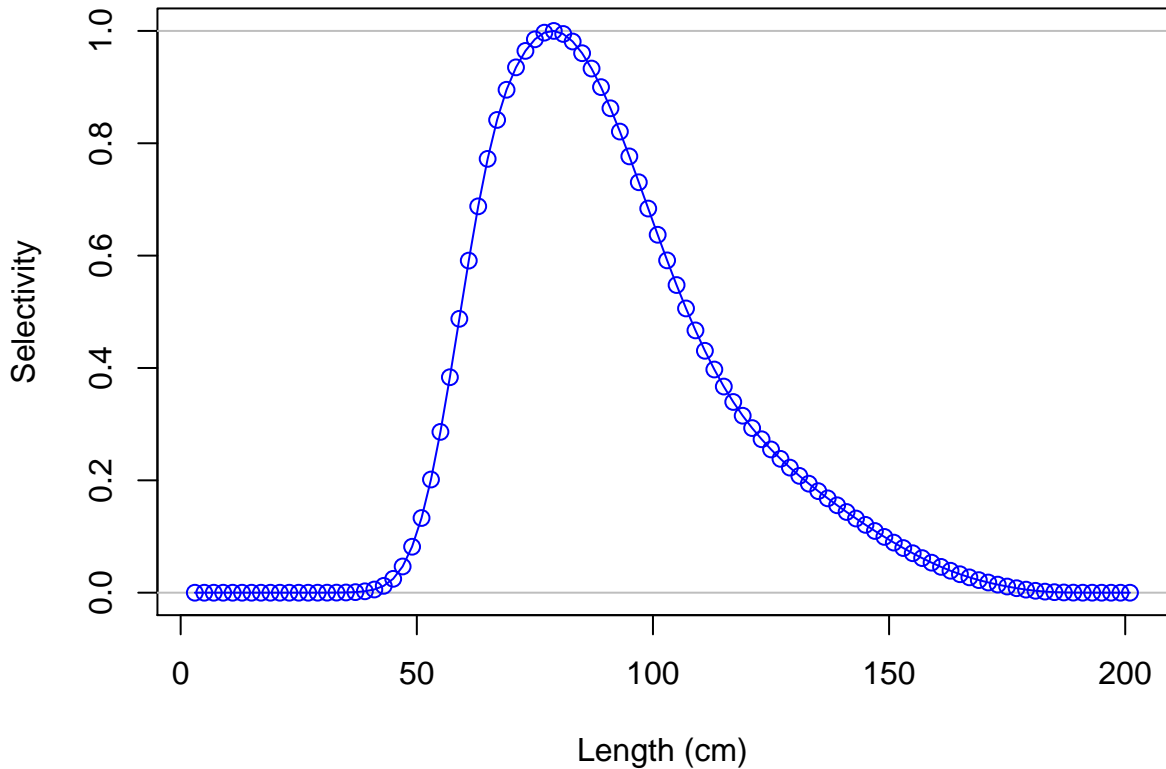
# Male ending year selectivity for F16-DEL\_NE



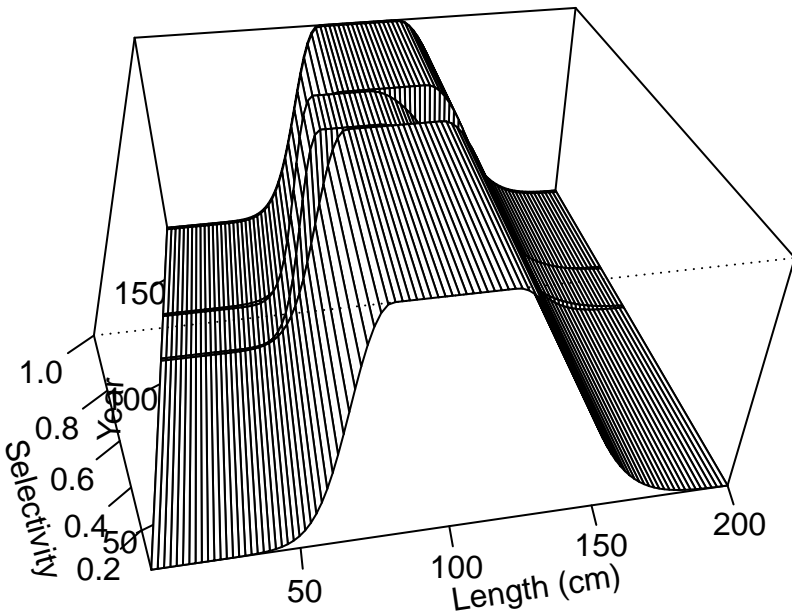
## Female ending year selectivity for F17-DEL\_M



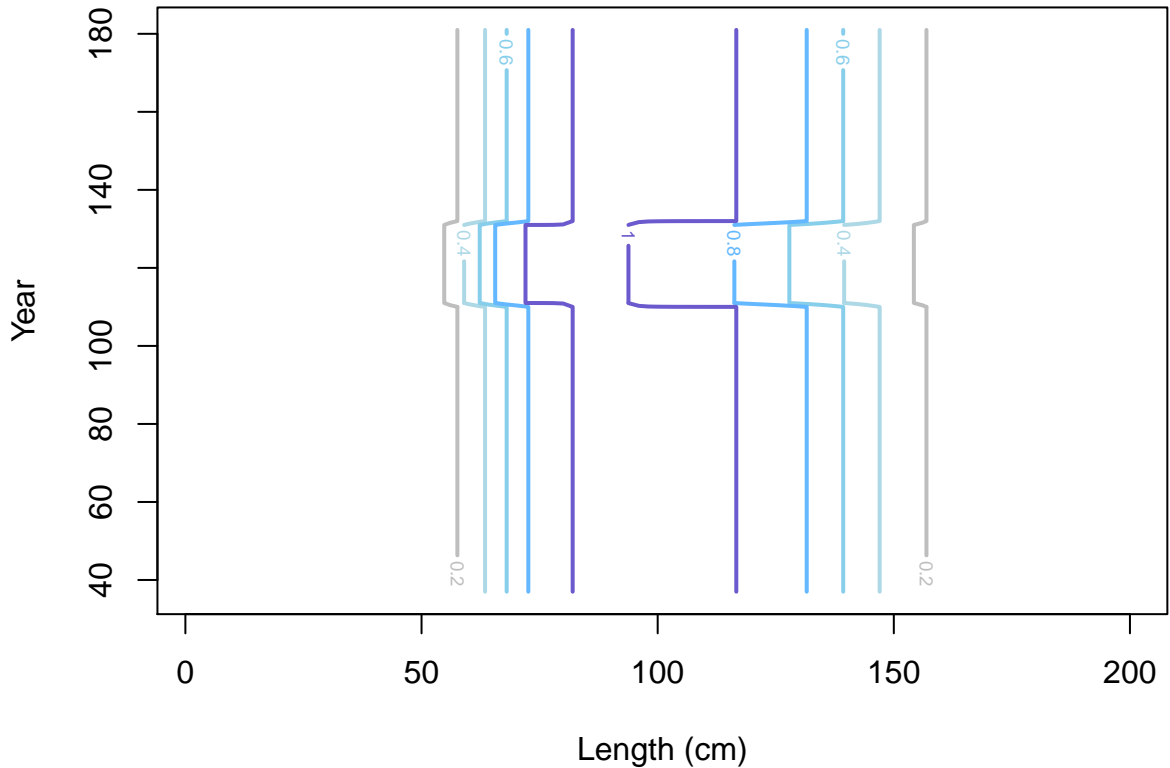
# Male ending year selectivity for F17-DEL\_M



## Female time-varying selectivity for F18-DEL\_C

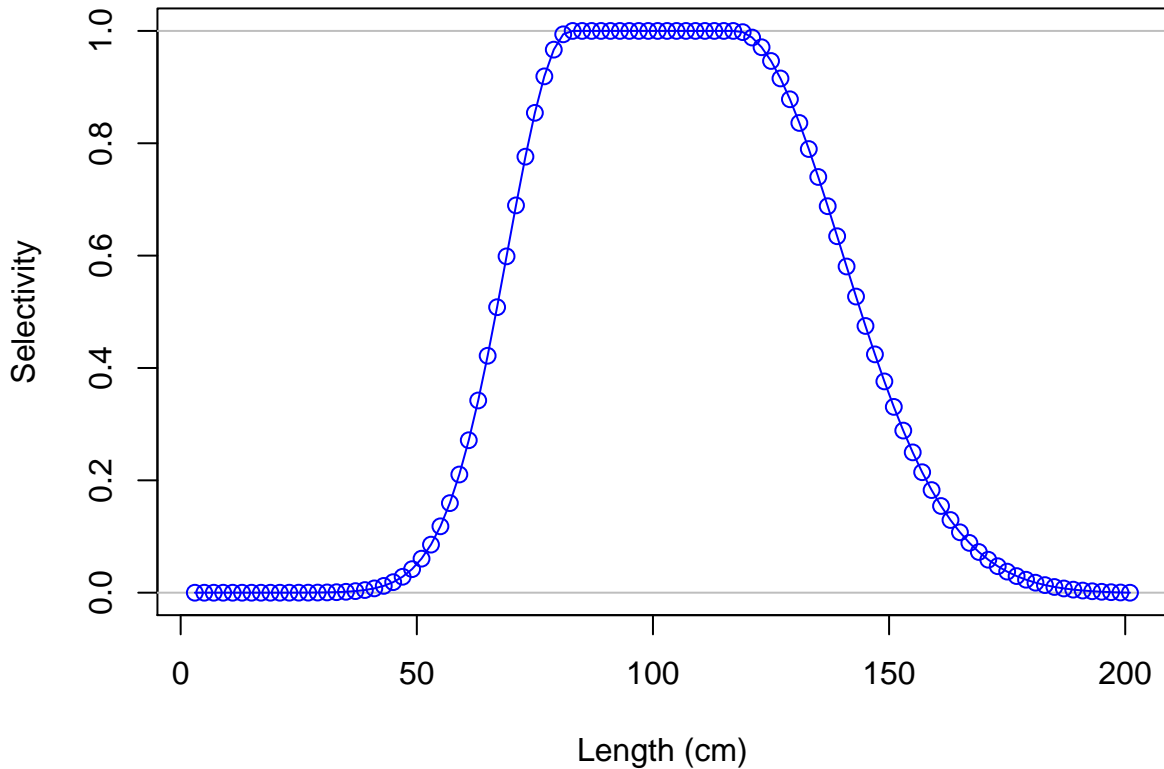


# Female time-varying selectivity for F18-DEL\_C

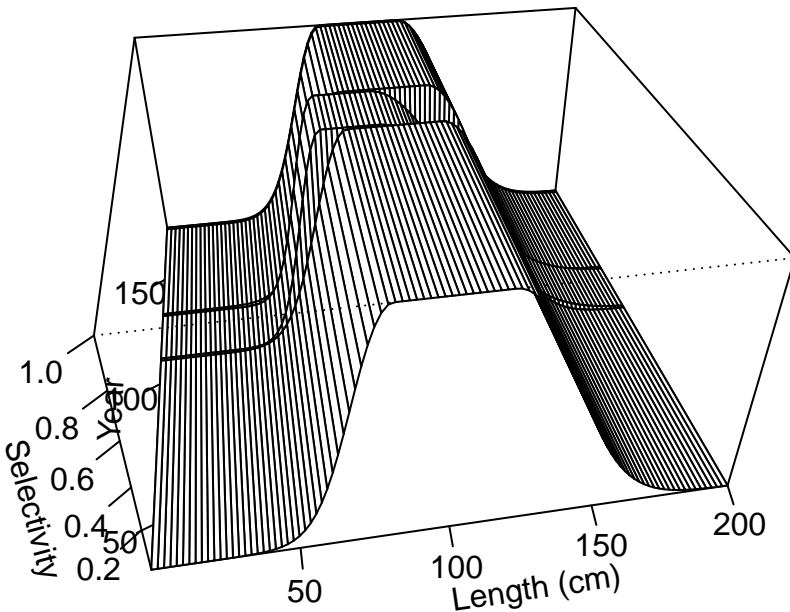




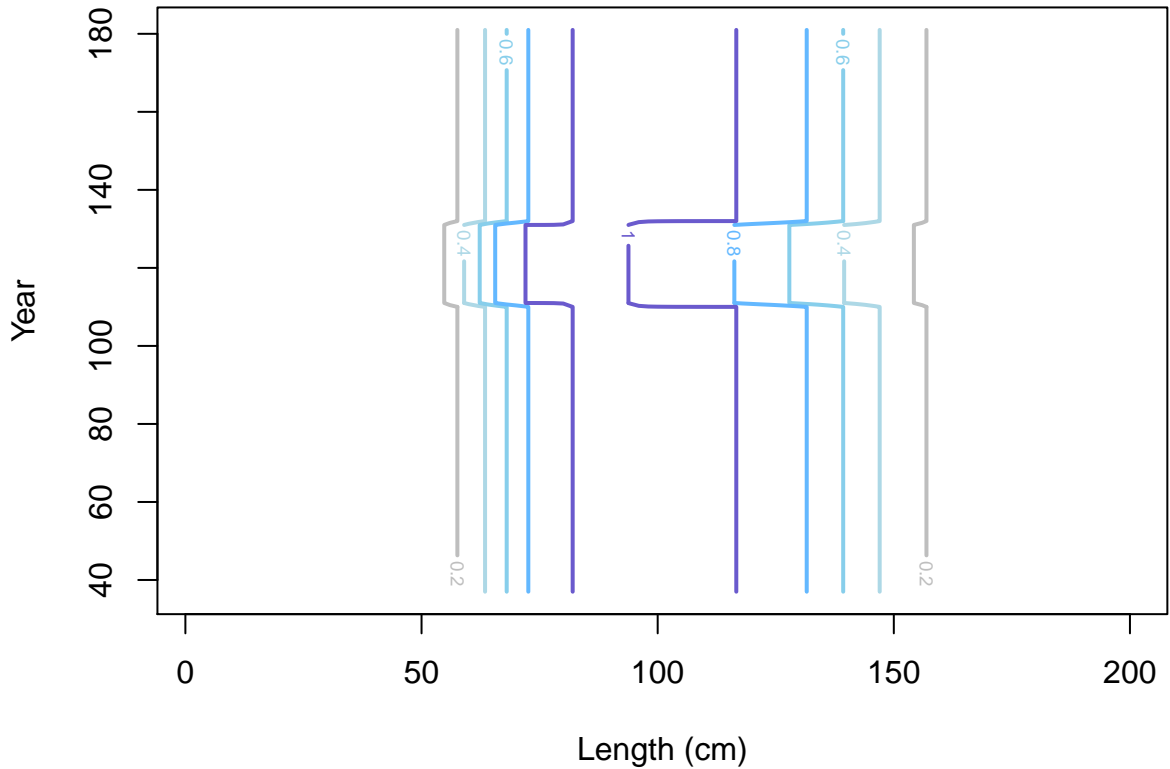
## Female ending year selectivity for F18-DEL\_C



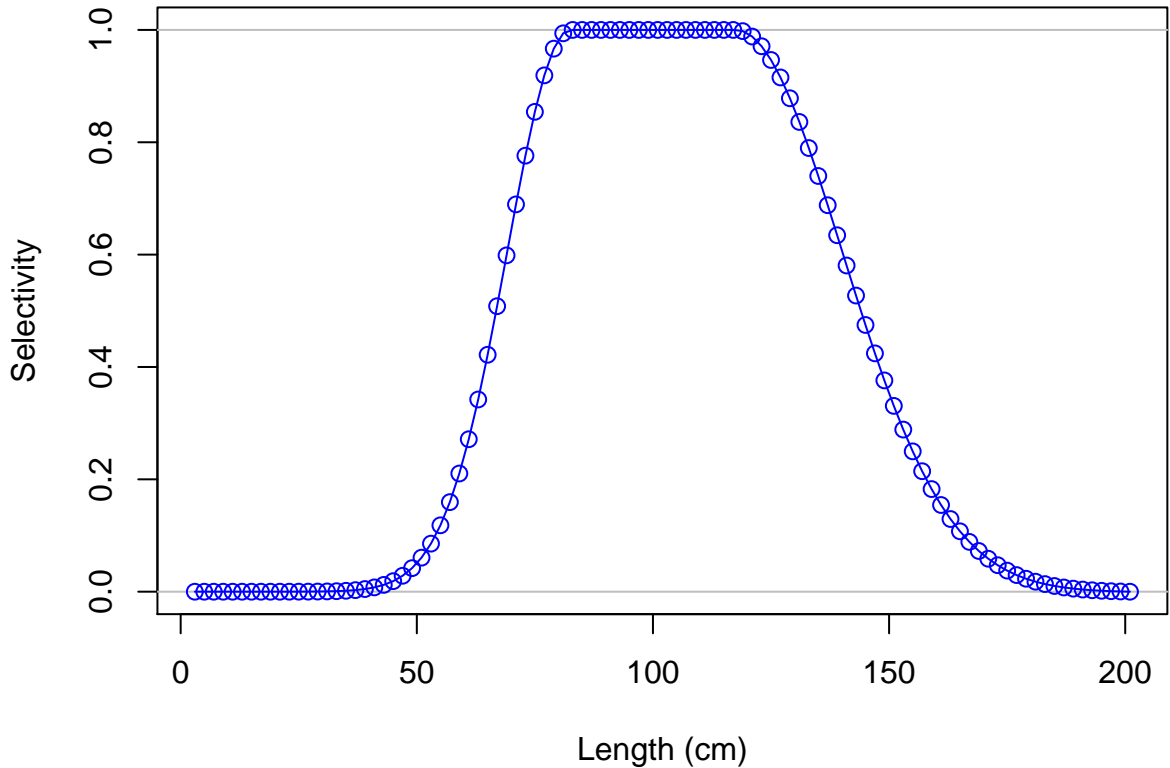
## Male time-varying selectivity for F18-DEL\_C



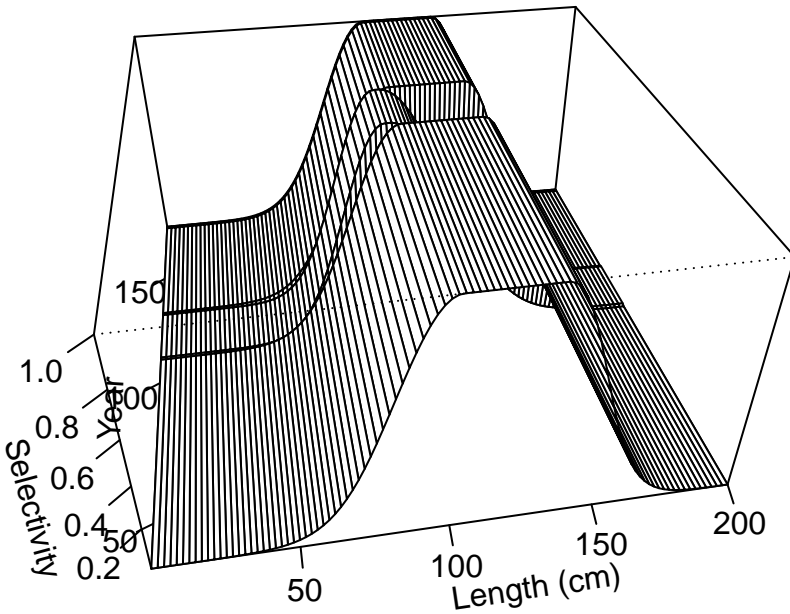
# Male time-varying selectivity for F18-DEL\_C



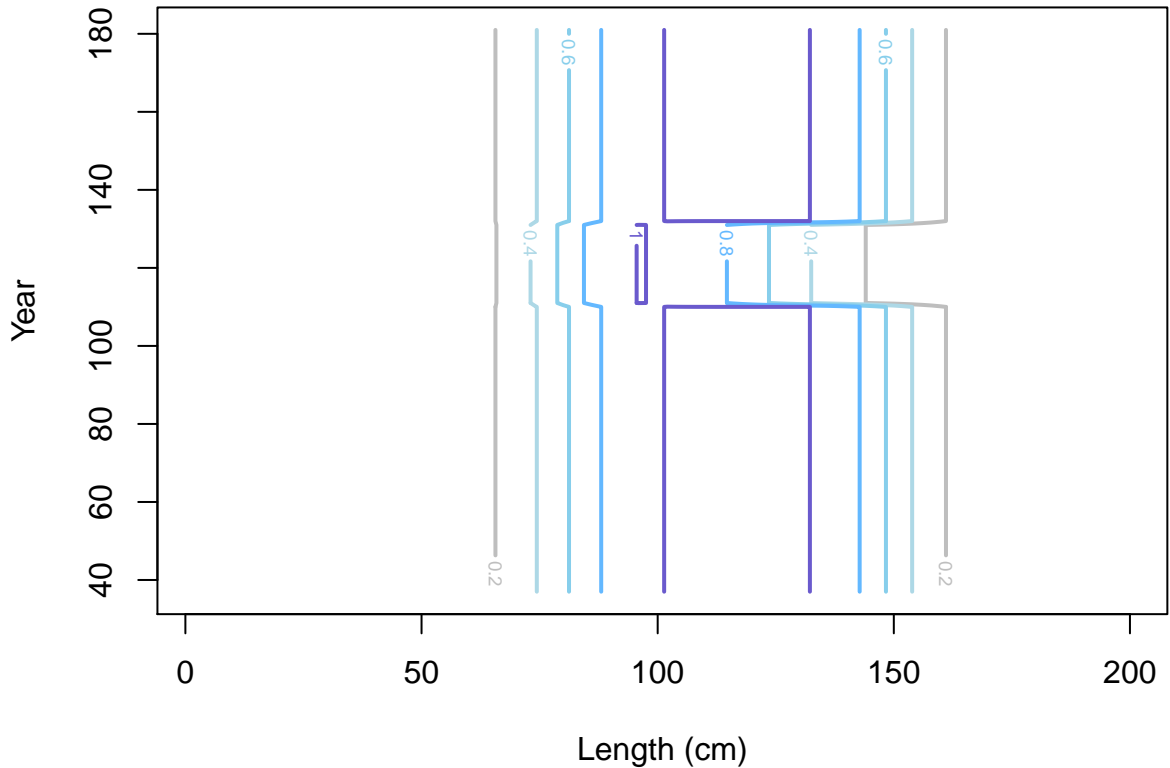
# Male ending year selectivity for F18-DEL\_C



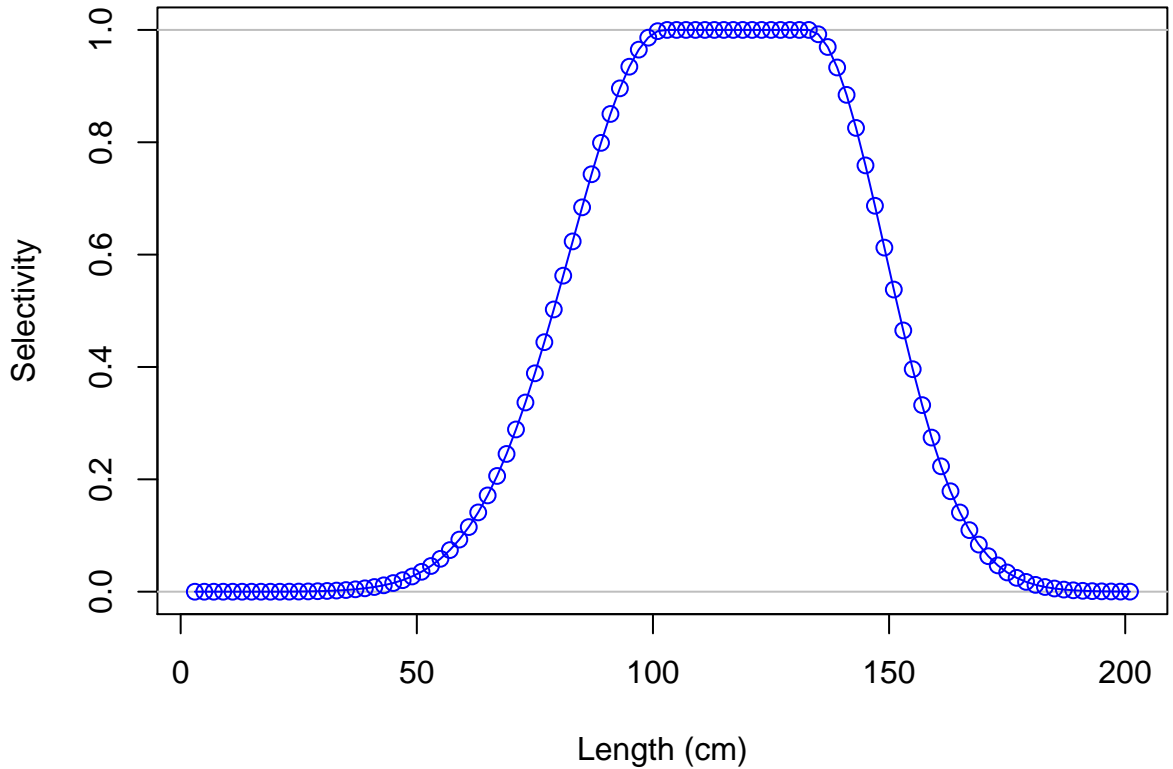
## Female time-varying selectivity for F19-DEL\_P



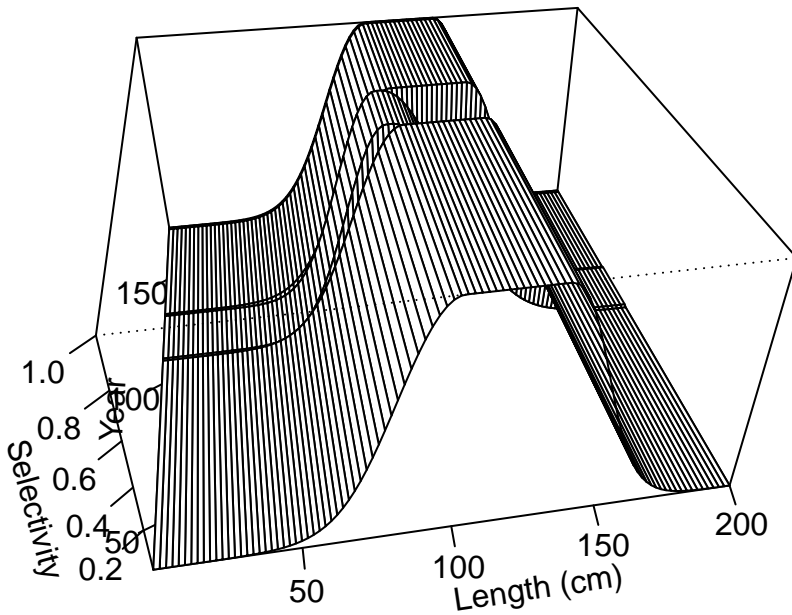
# Female time-varying selectivity for F19-DEL\_P



## Female ending year selectivity for F19-DEL\_P

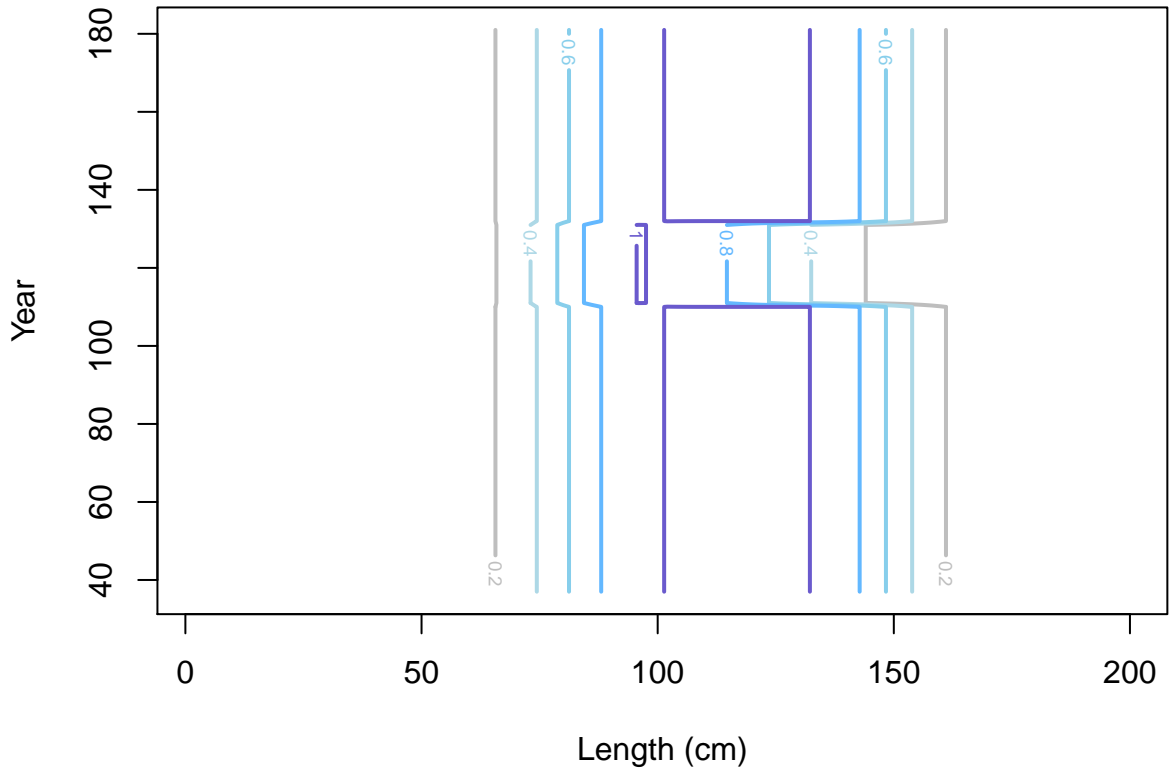


## Male time-varying selectivity for F19-DEL\_P

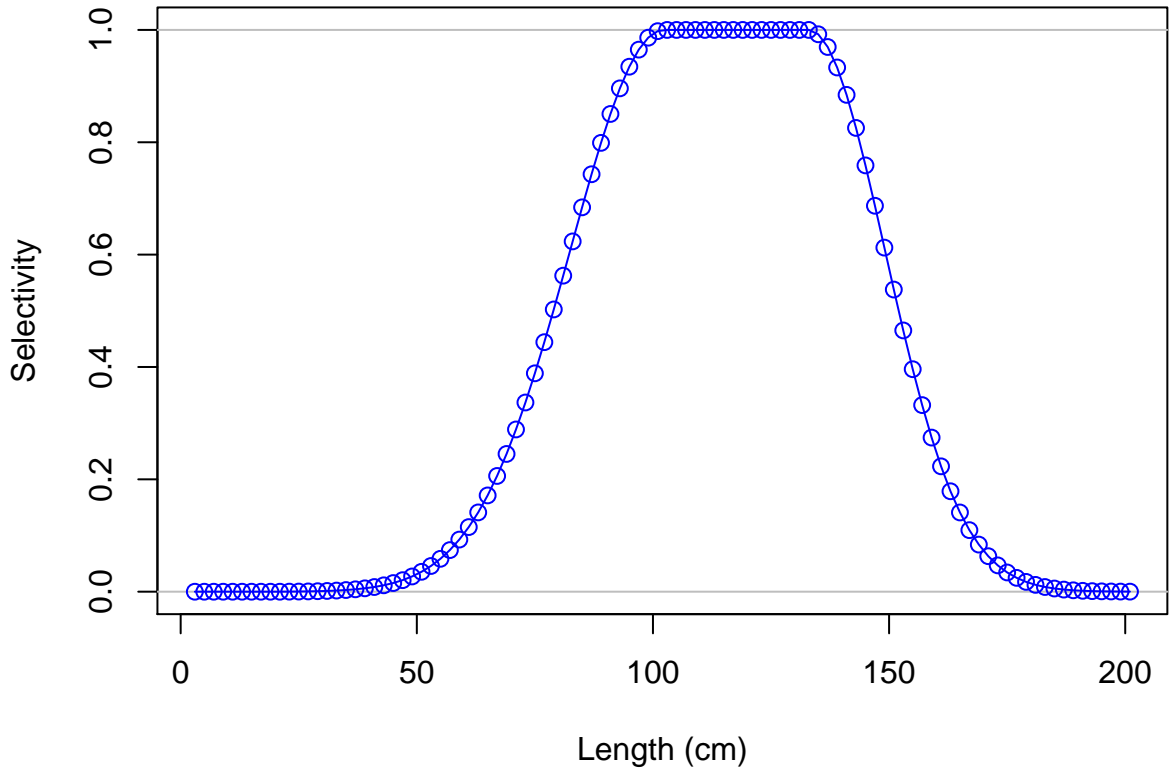




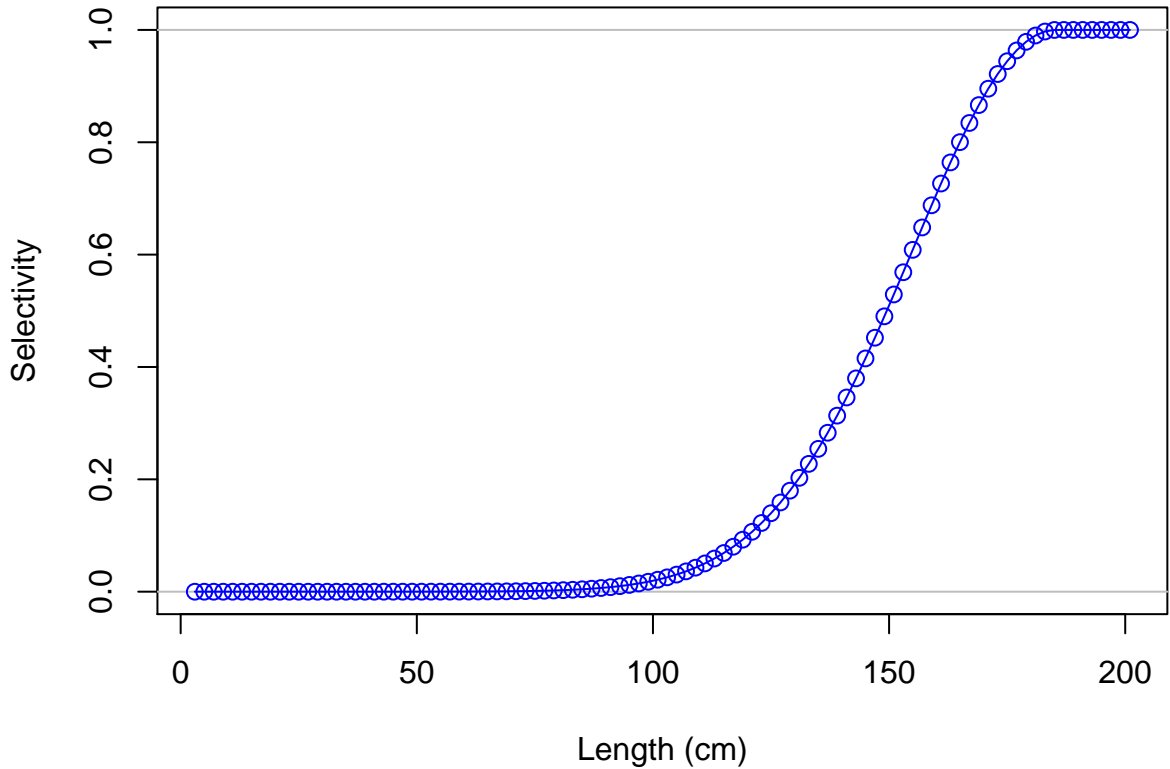
# Male time-varying selectivity for F19-DEL\_P



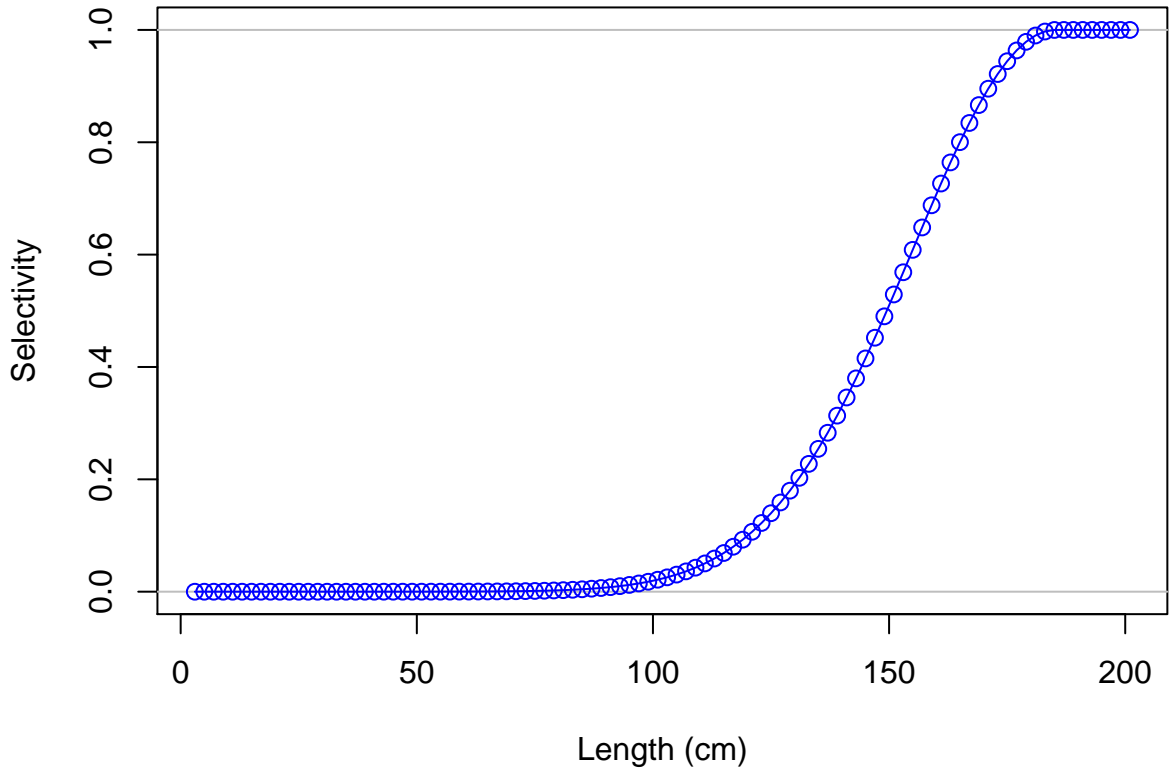
# Male ending year selectivity for F19-DEL\_P



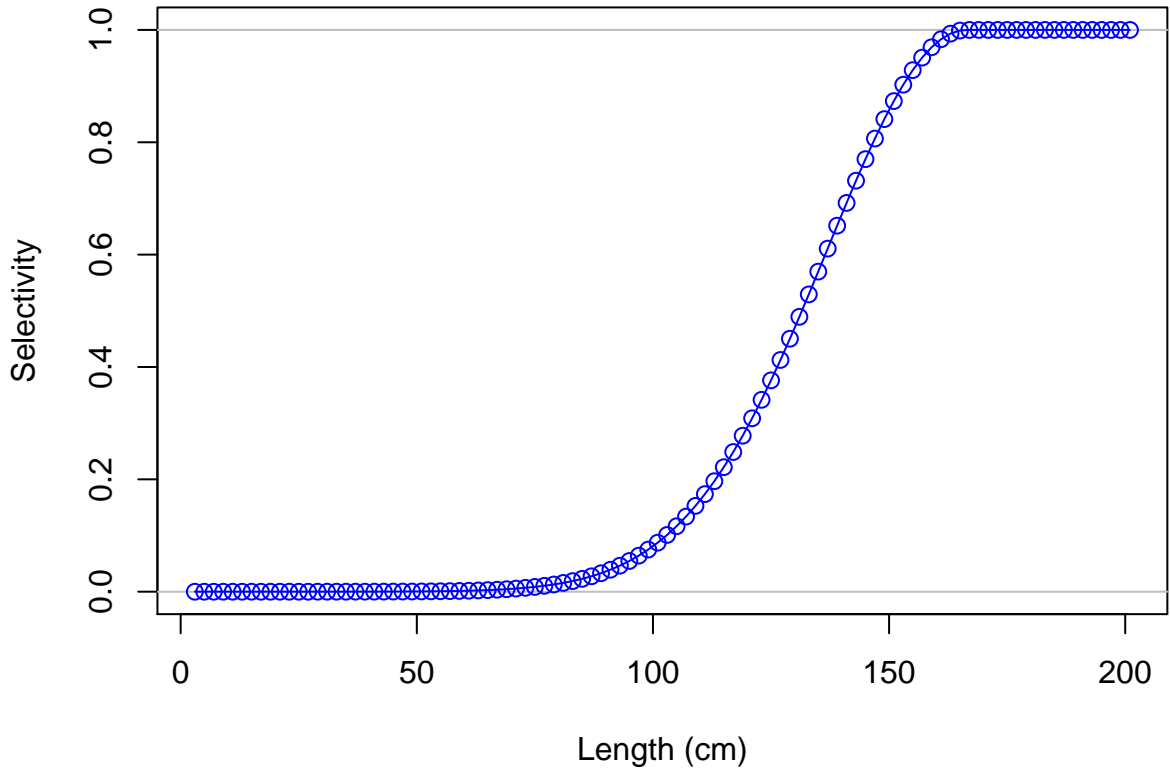
## Female ending year selectivity for F20-DEL\_S



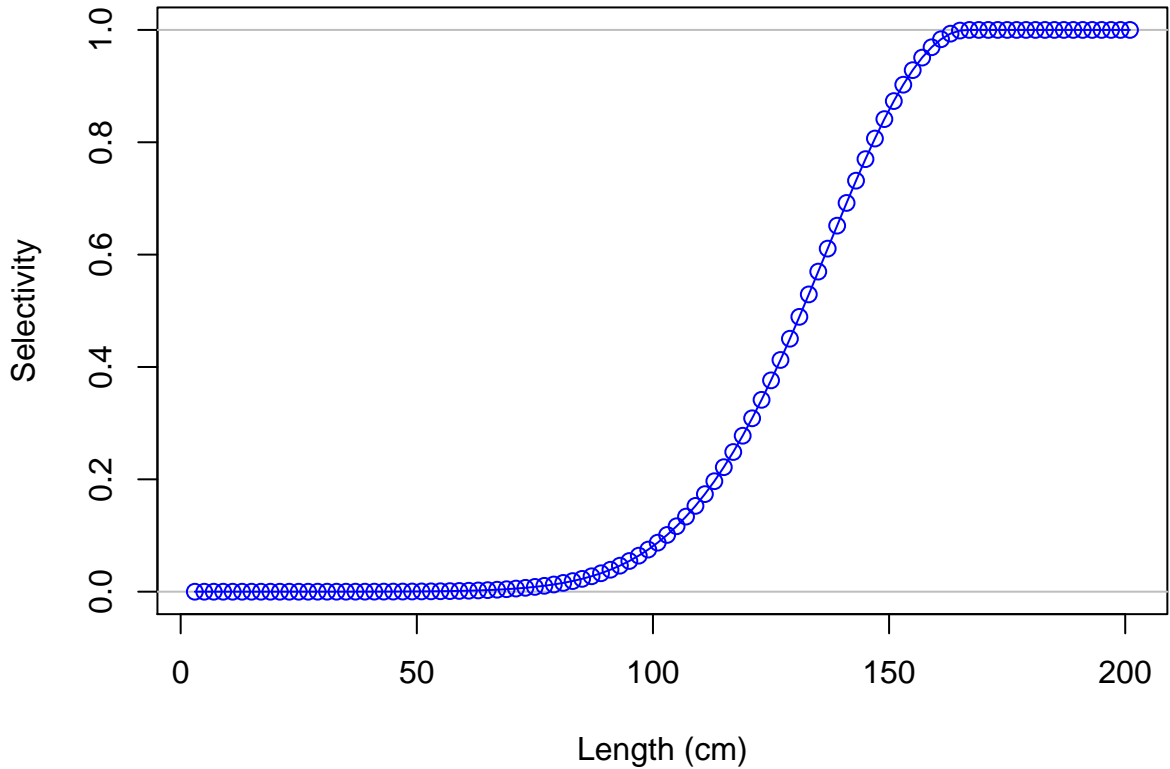
## Male ending year selectivity for F20-DEL\_S



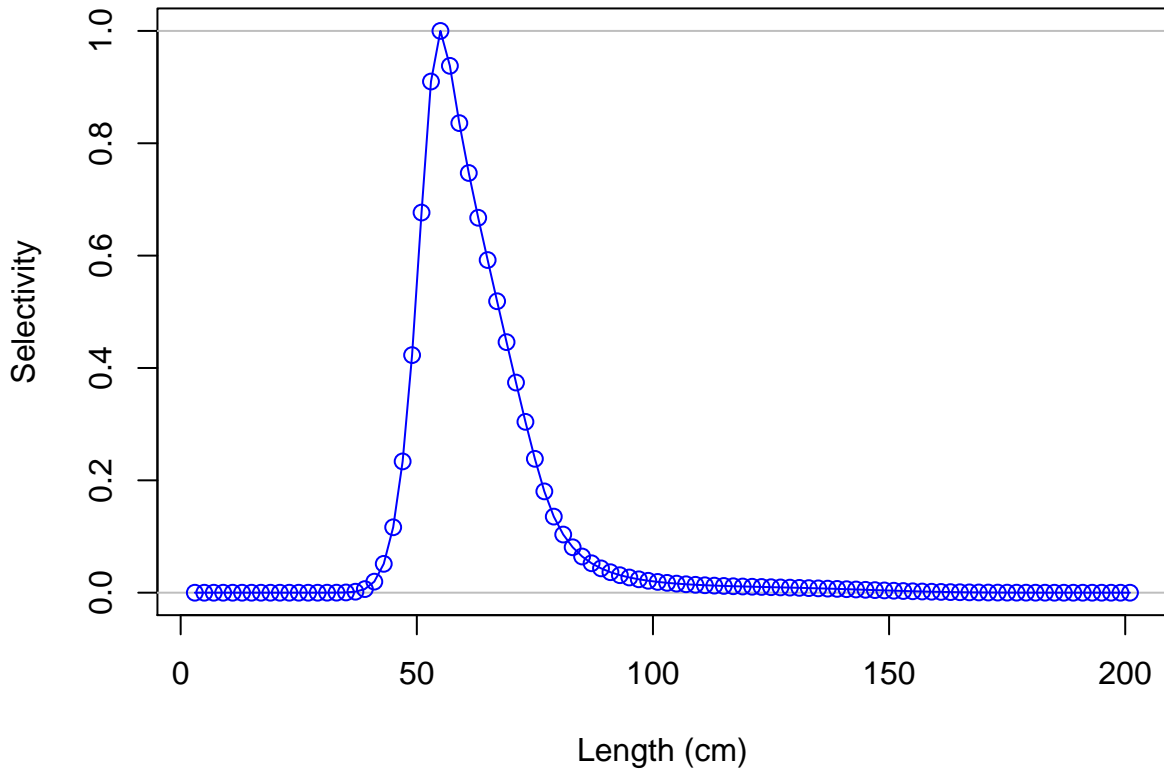
## Female ending year selectivity for F21-DEL\_I



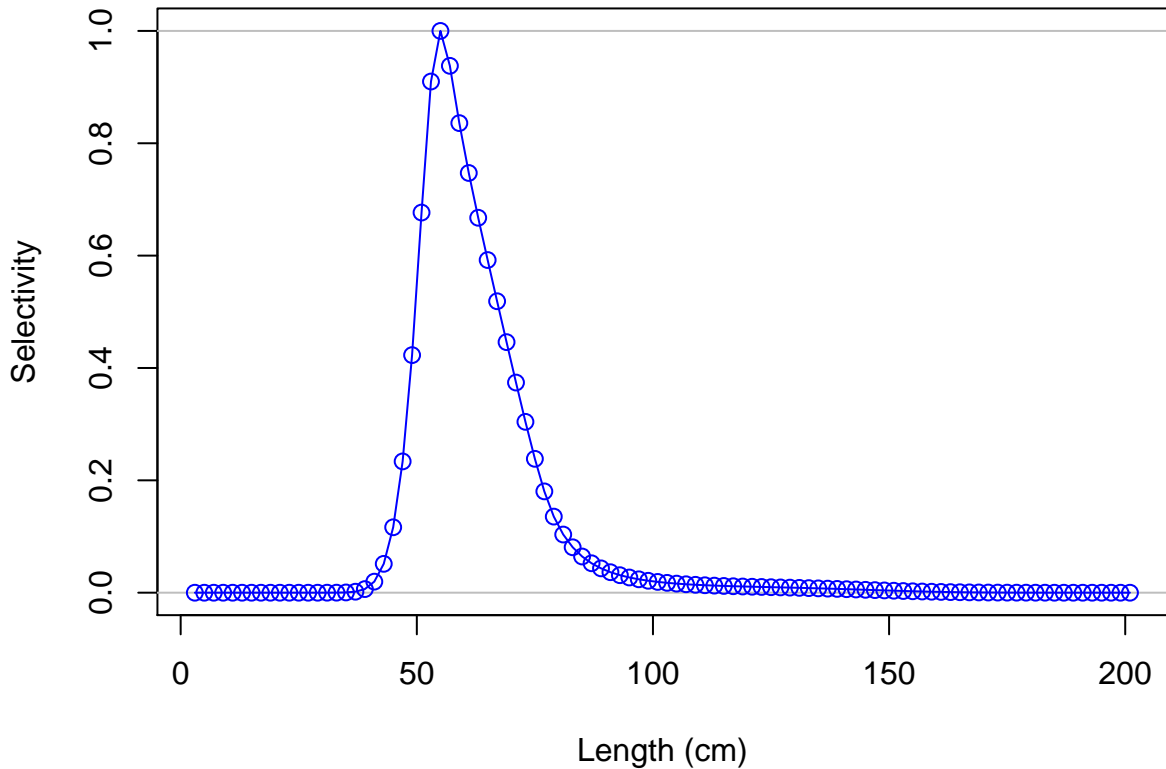
# Male ending year selectivity for F21-DEL\_I



## Female ending year selectivity for F22-BB

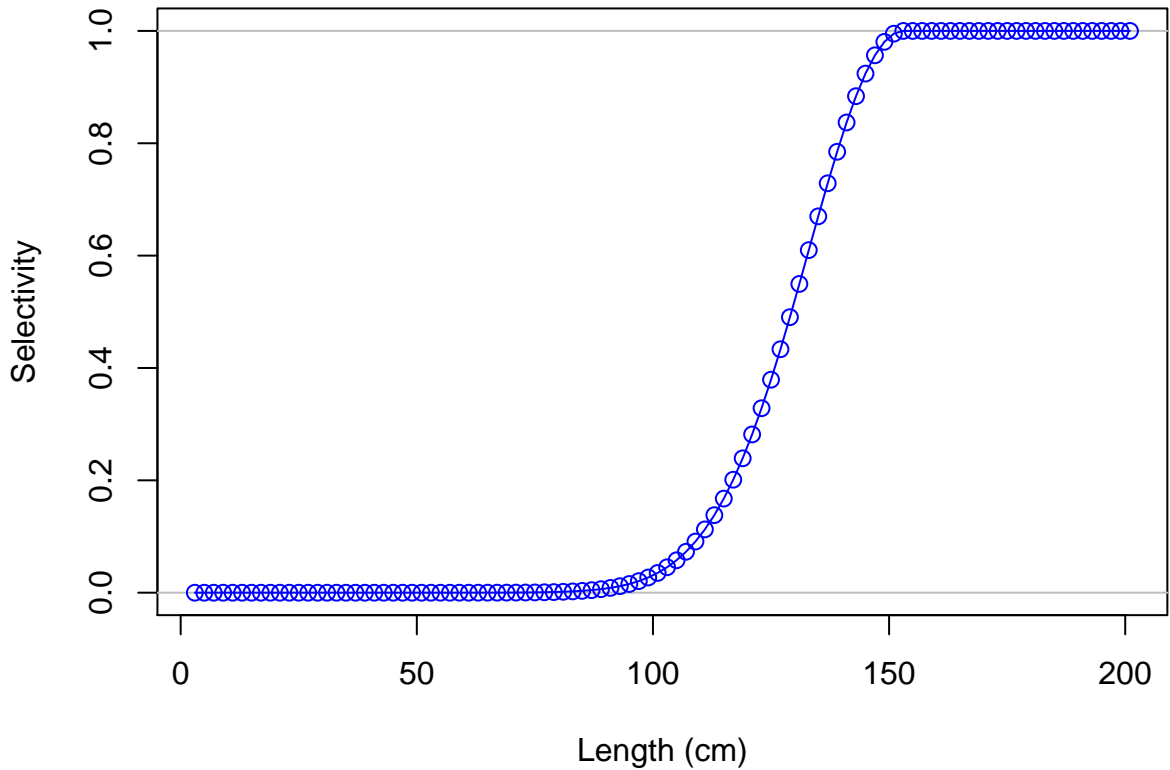


# Male ending year selectivity for F22-BB

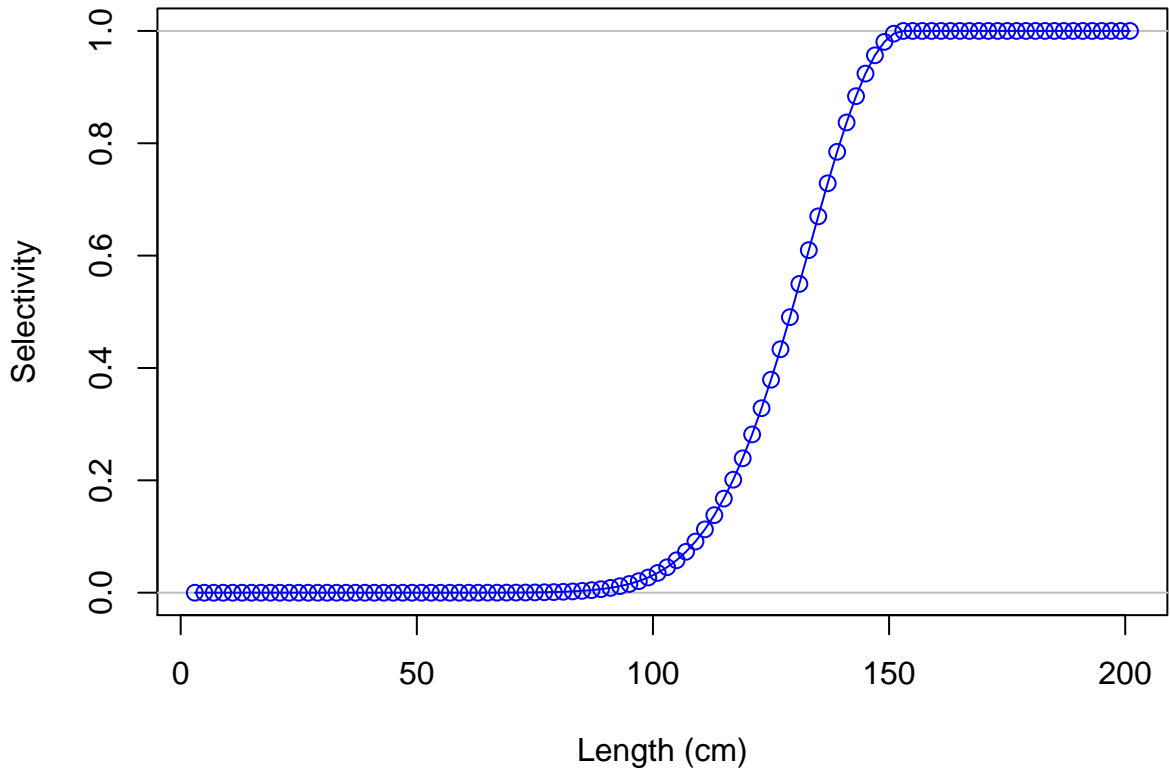




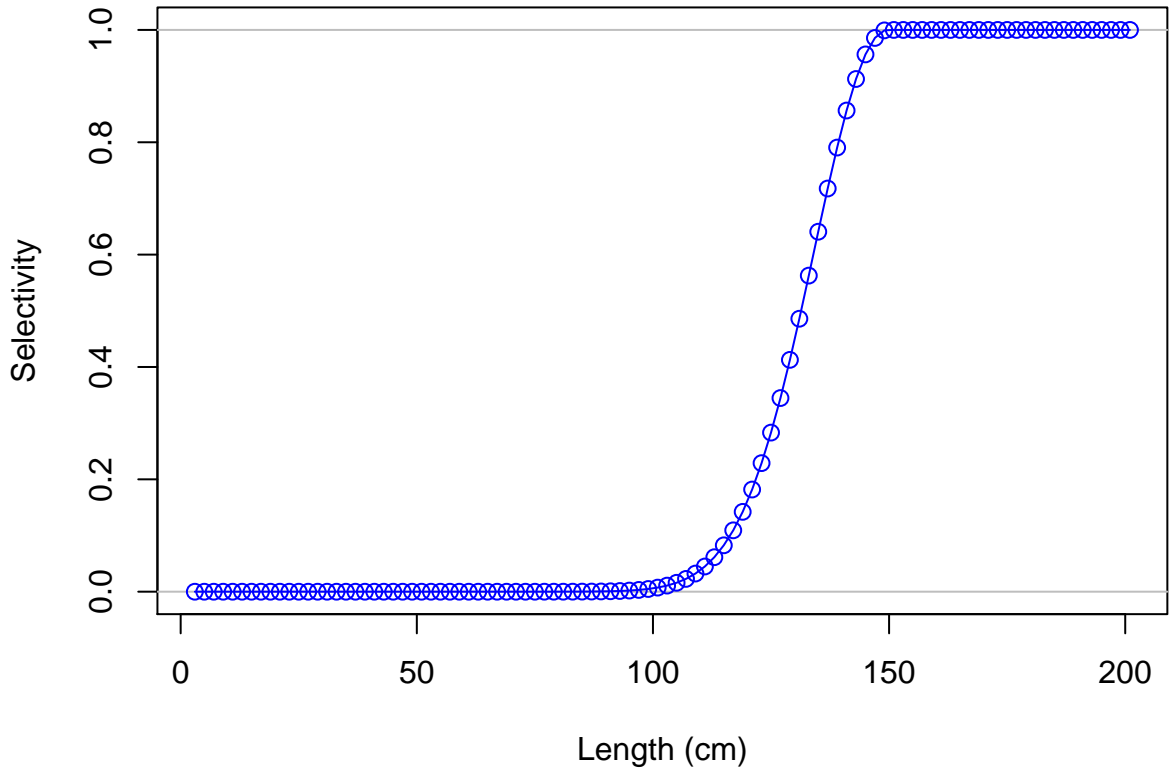
## Female ending year selectivity for F29-LL\_W\_Q14n



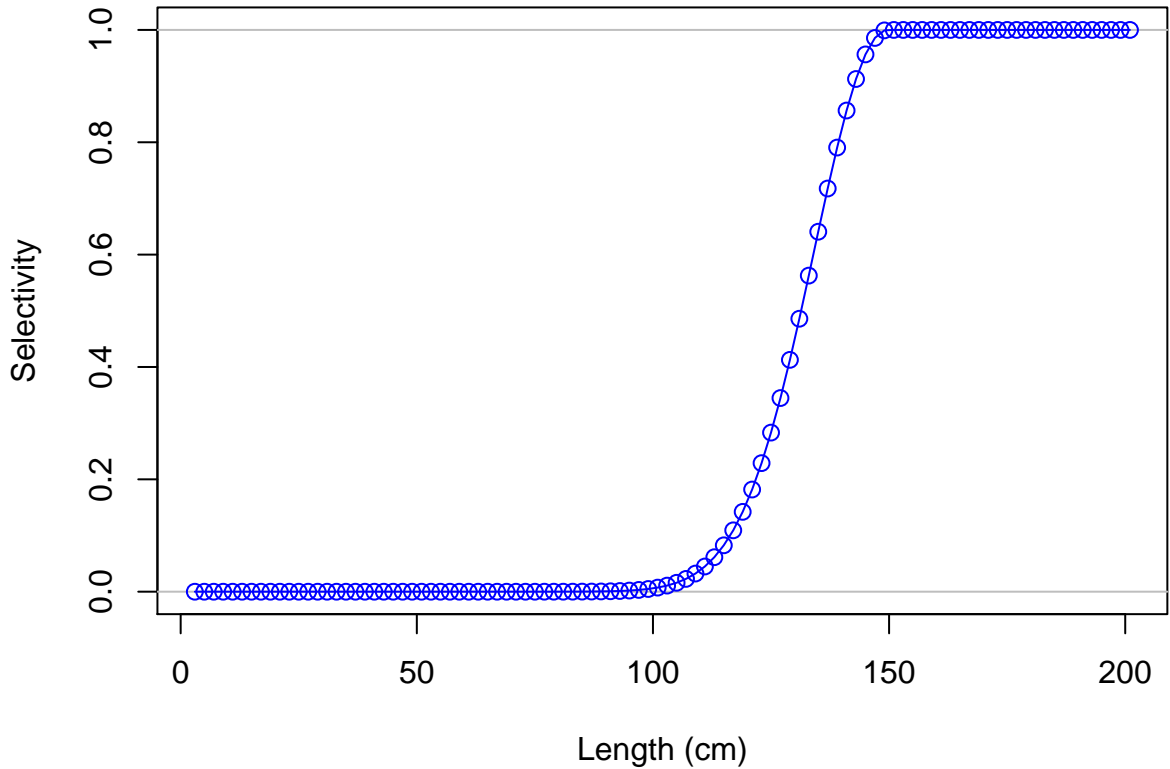
# Male ending year selectivity for F29-LL\_W\_Q14n



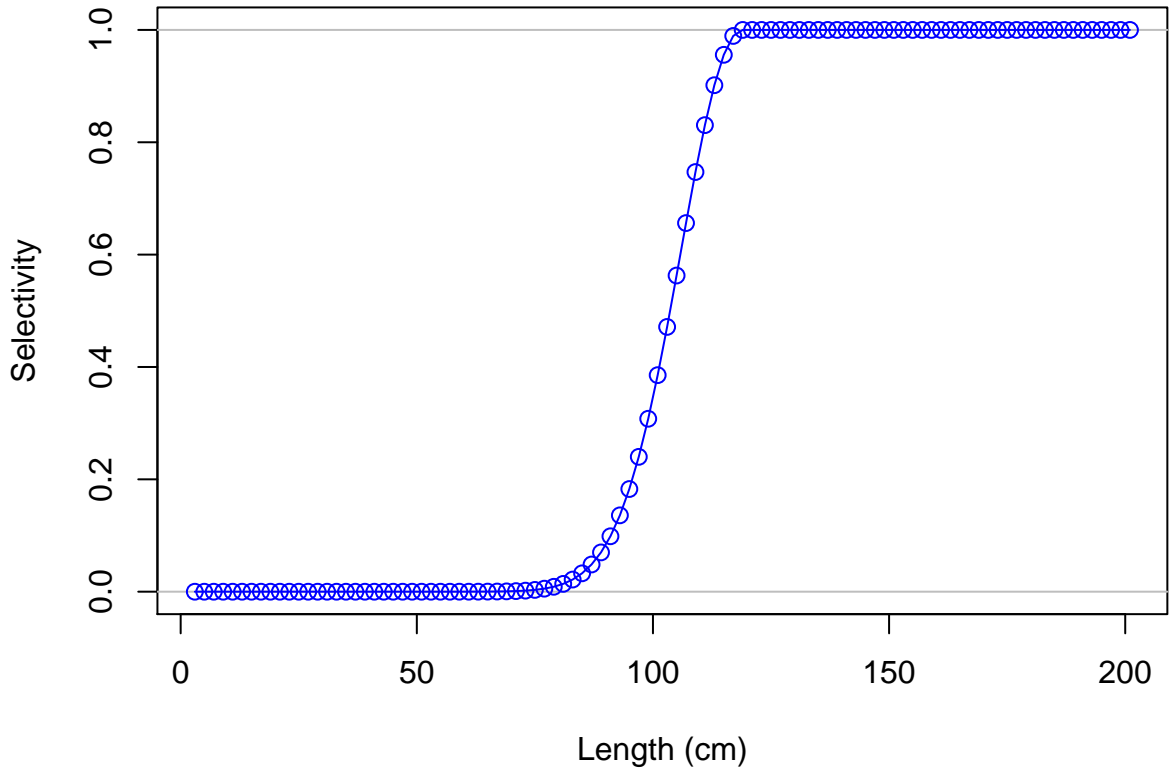
# Female ending year selectivity for F30-LL\_C\_Q14n



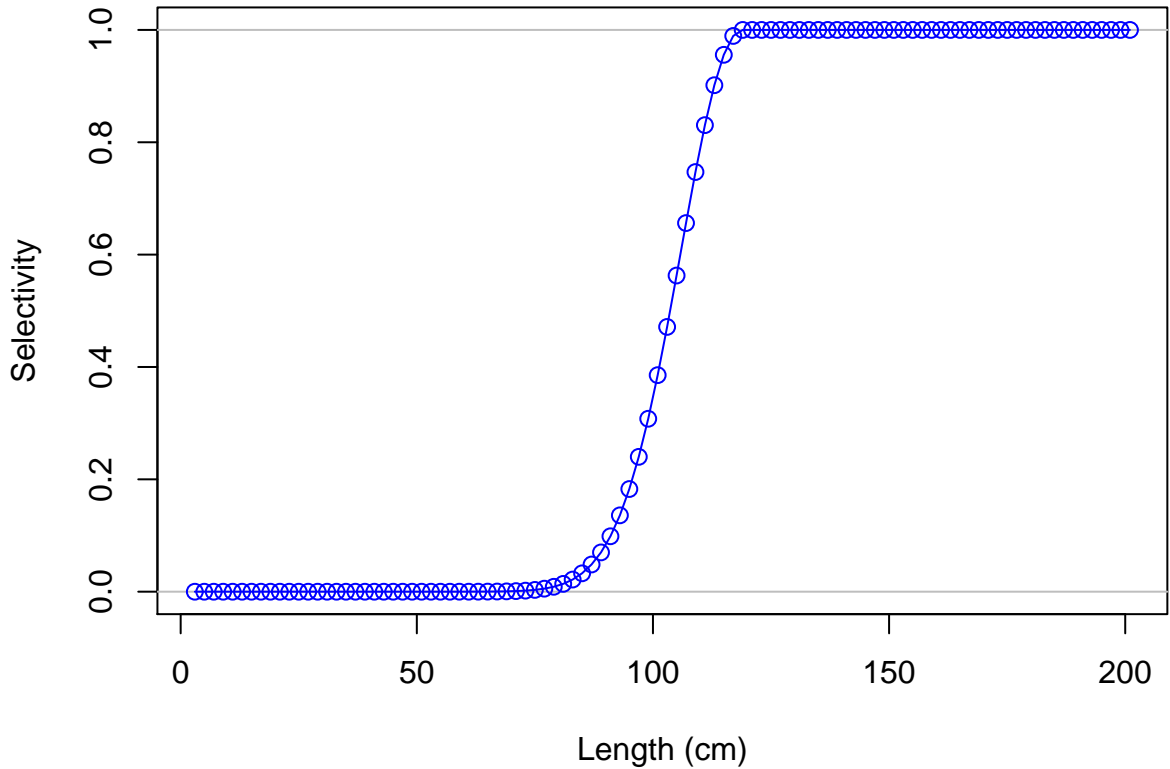
# Male ending year selectivity for F30-LL\_C\_Q14n



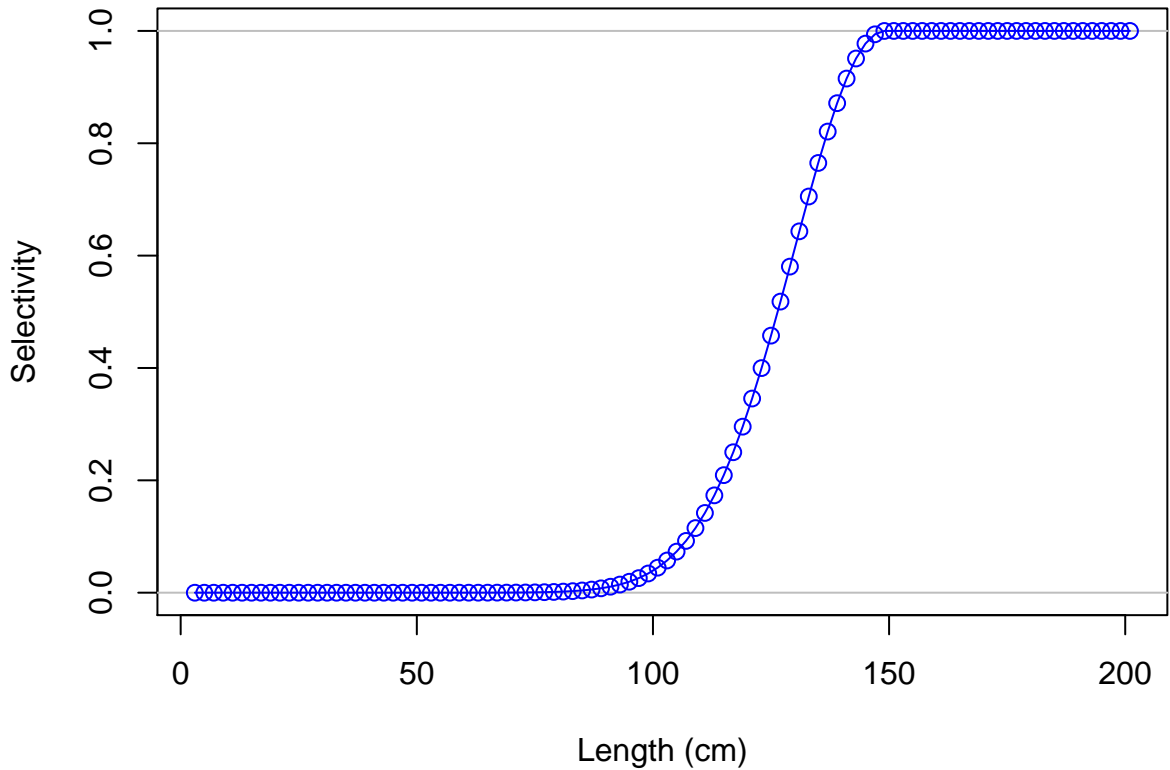
# Female ending year selectivity for F31-LL\_E\_Q14n



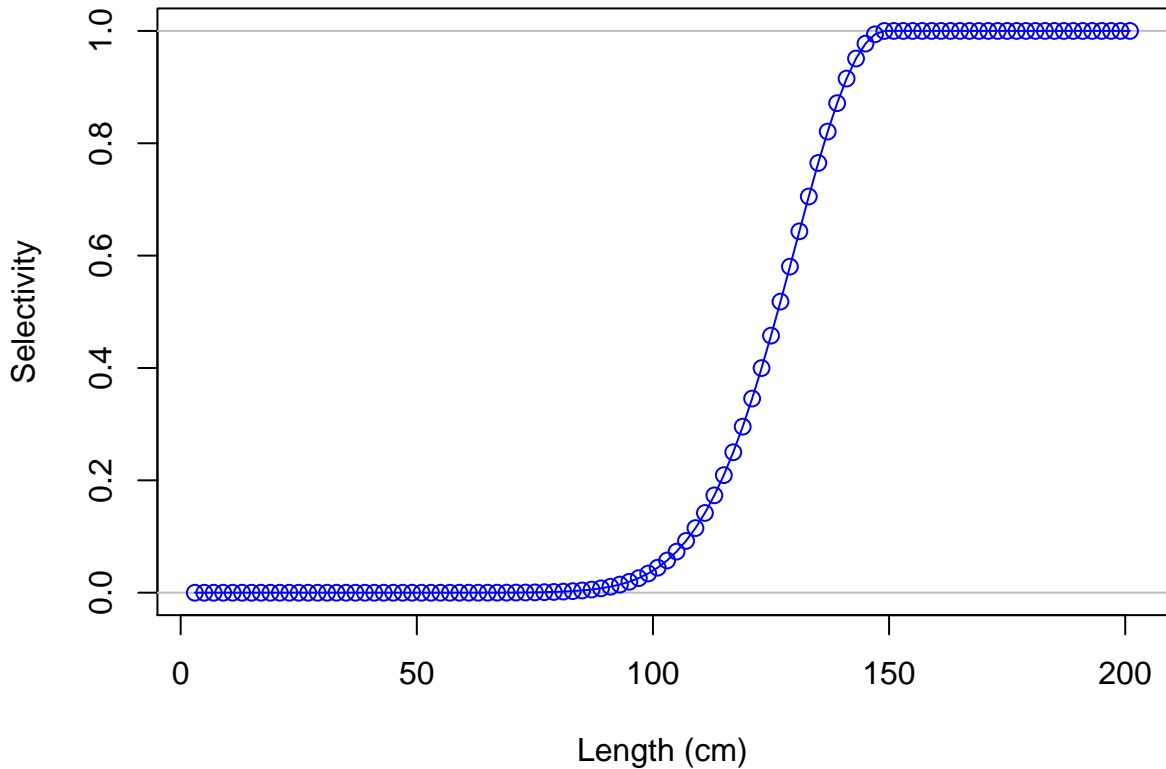
# Male ending year selectivity for F31-LL\_E\_Q14n



# Female ending year selectivity for F32-LL\_W\_Q23n

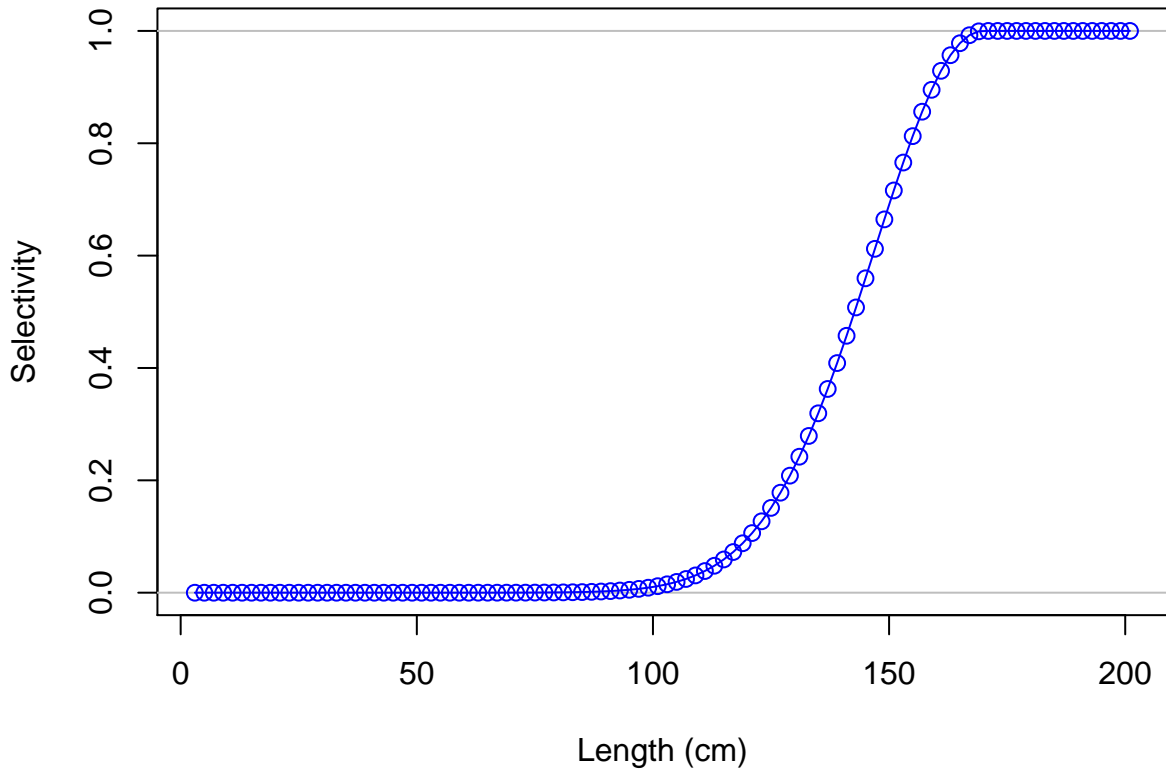


# Male ending year selectivity for F32-LL\_W\_Q23n

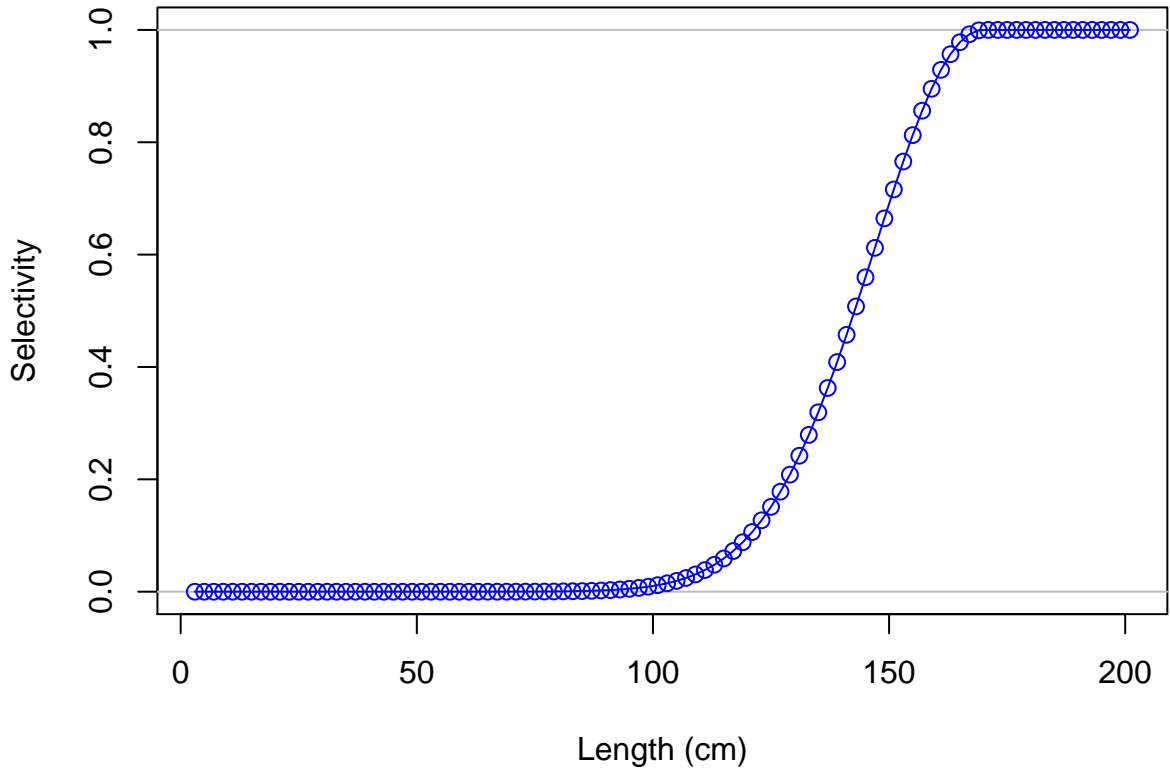




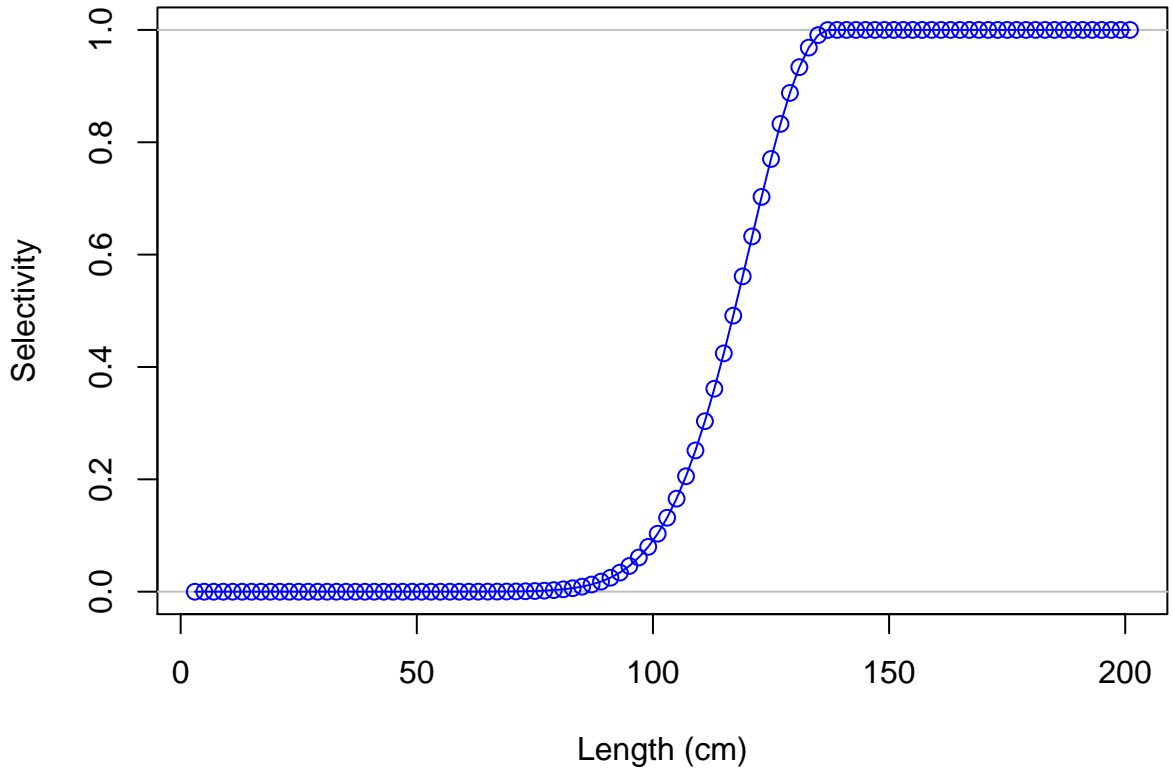
# Female ending year selectivity for F33-LL\_C\_Q23n



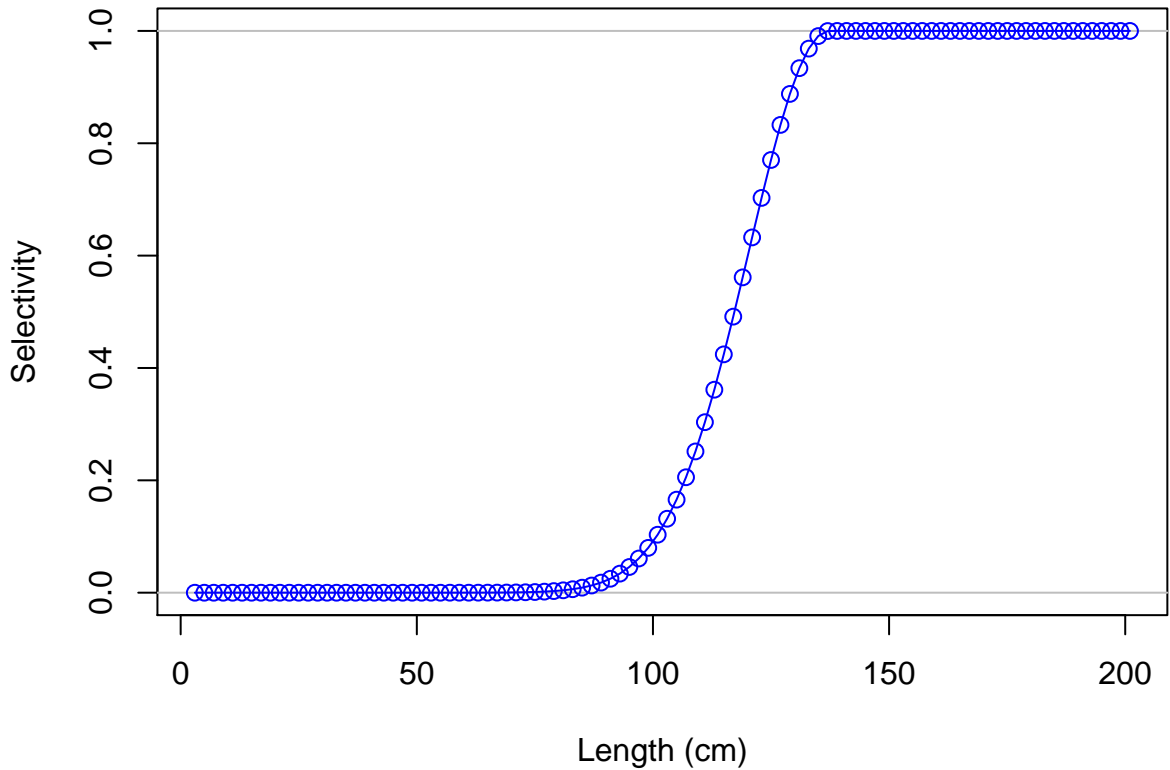
### Male ending year selectivity for F33-LL\_C\_Q23n



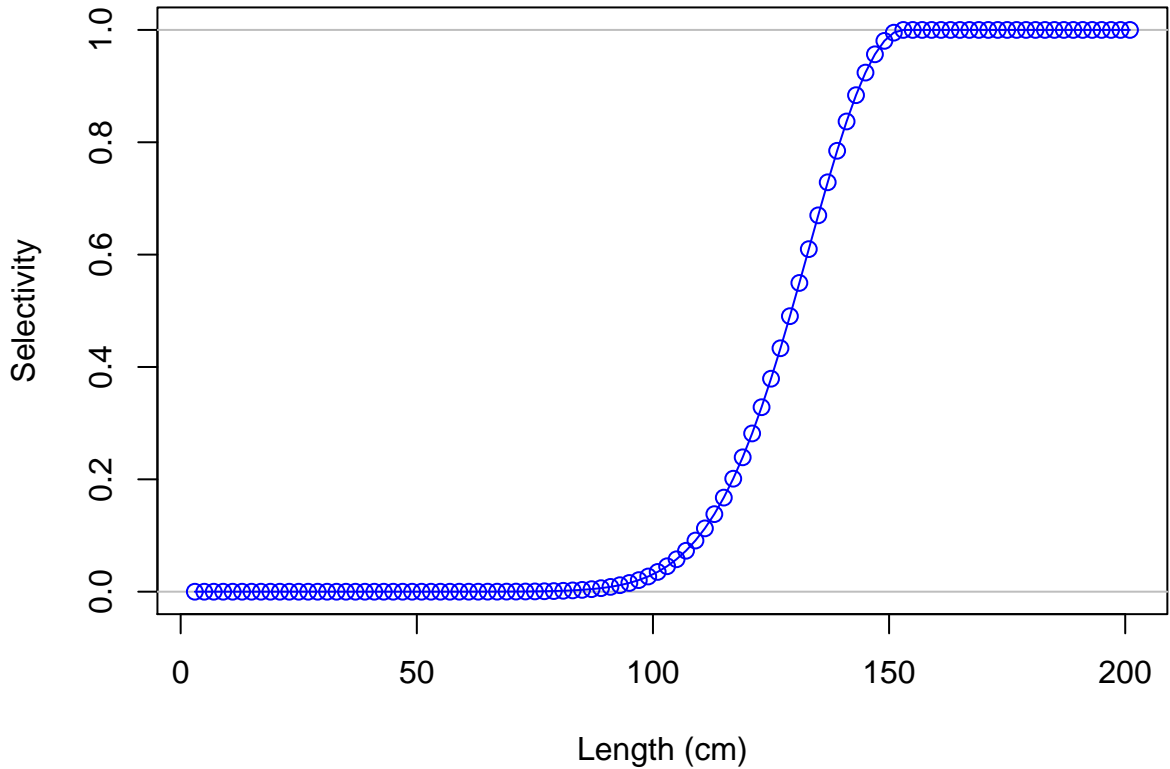
# Female ending year selectivity for F34-LL\_E\_Q23n



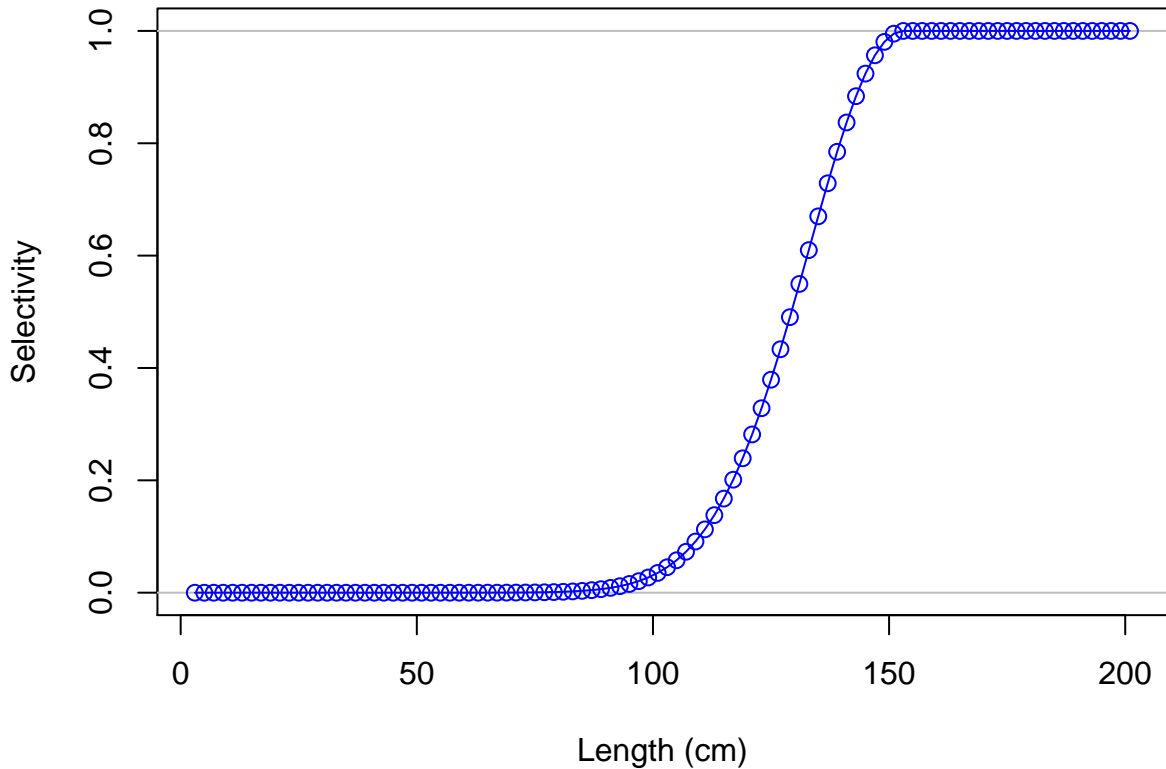
### Male ending year selectivity for F34-LL\_E\_Q23n



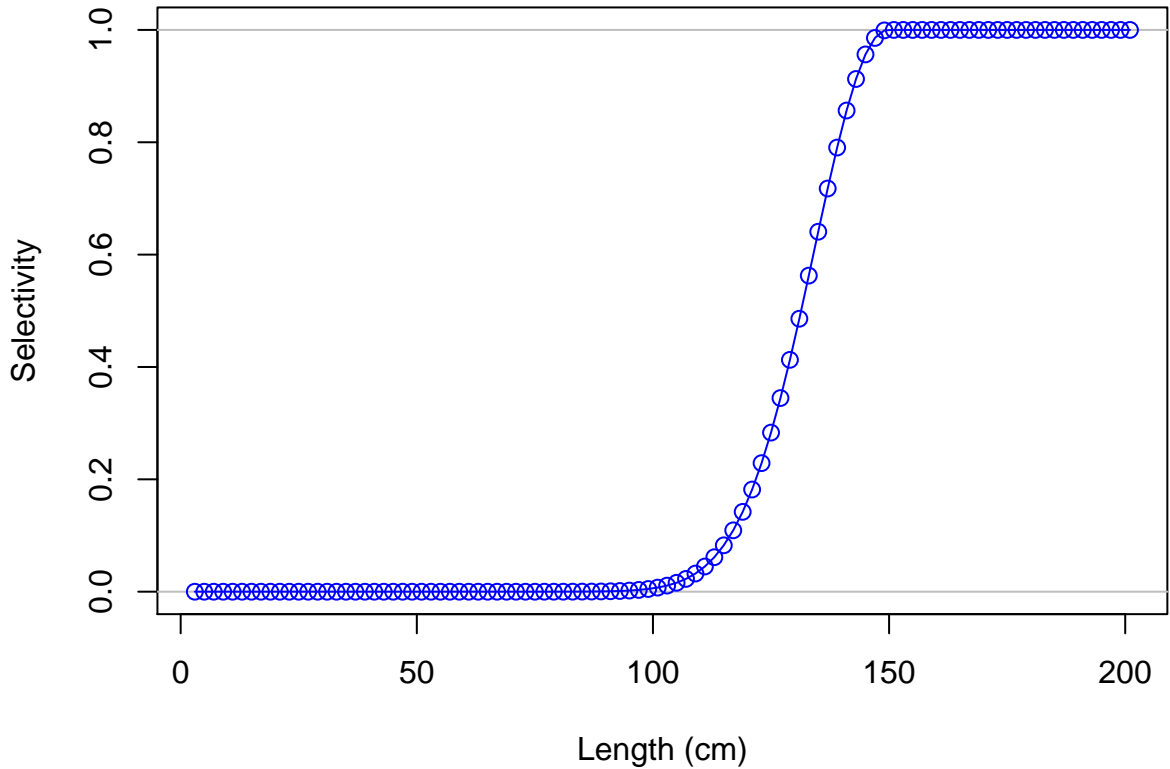
## Female ending year selectivity for F35-LL\_W\_Q14w



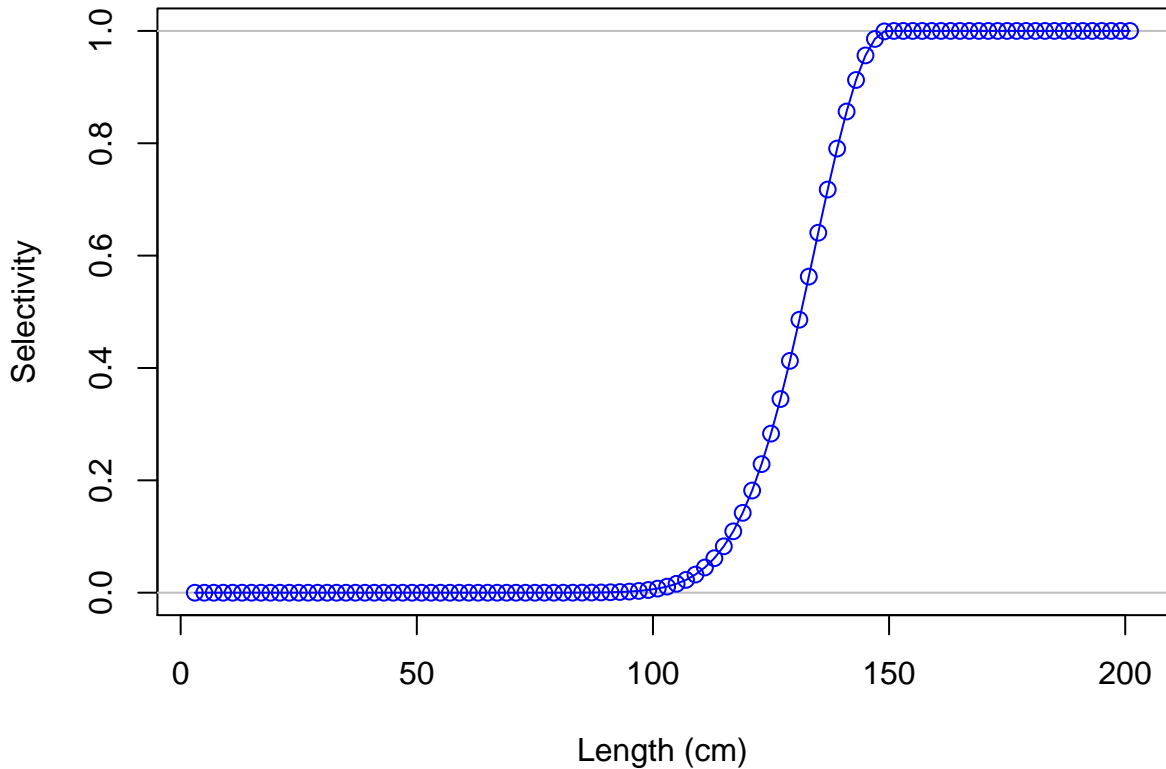
# Male ending year selectivity for F35-LL\_W\_Q14w



# Female ending year selectivity for F36-LL\_C\_Q14w

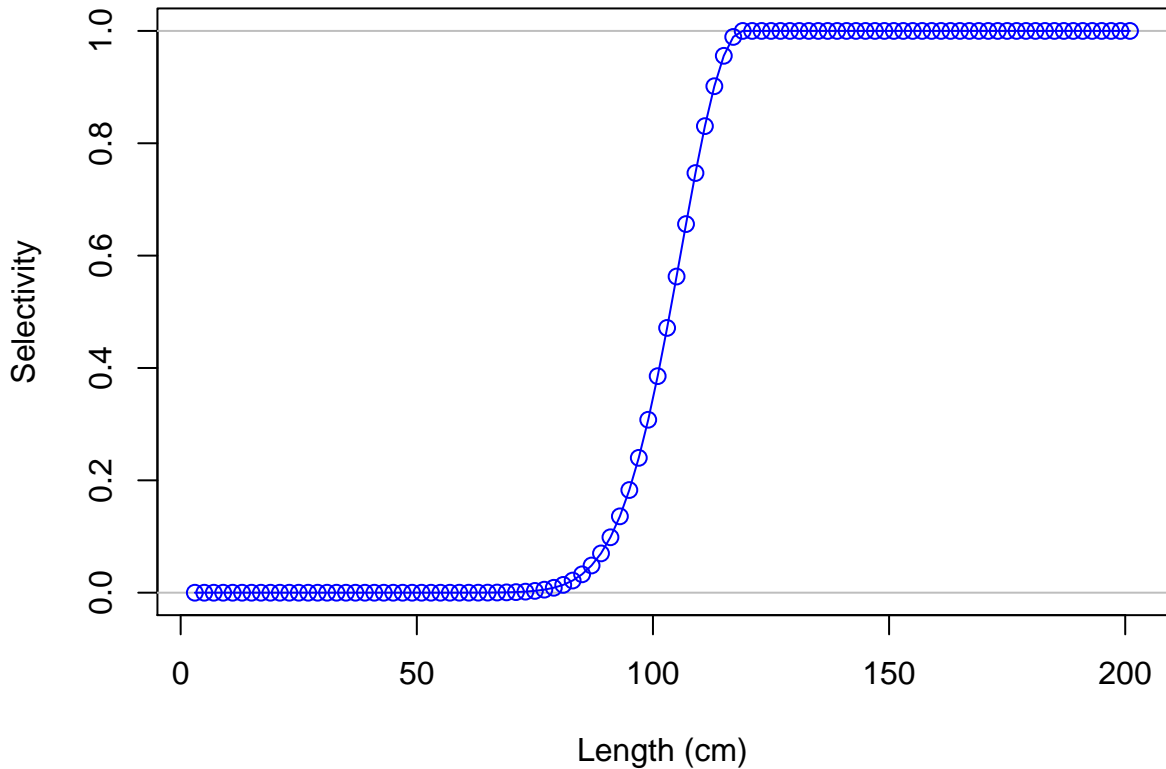


# Male ending year selectivity for F36-LL\_C\_Q14w

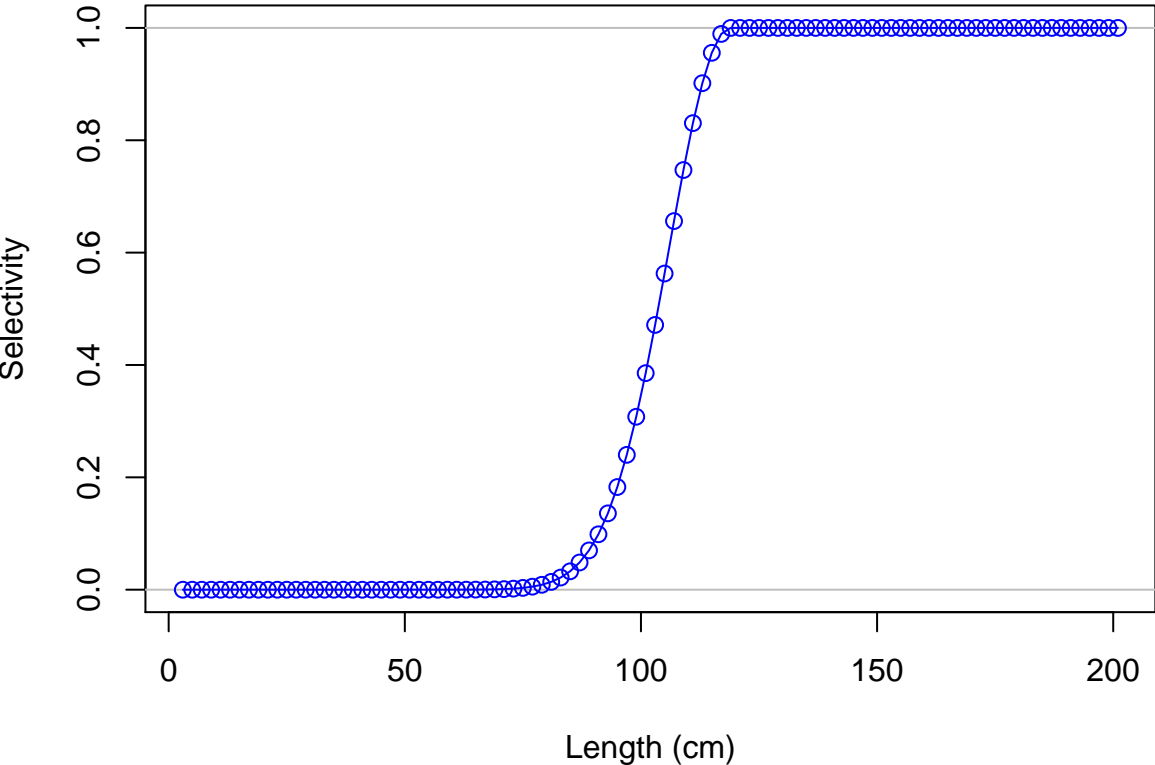




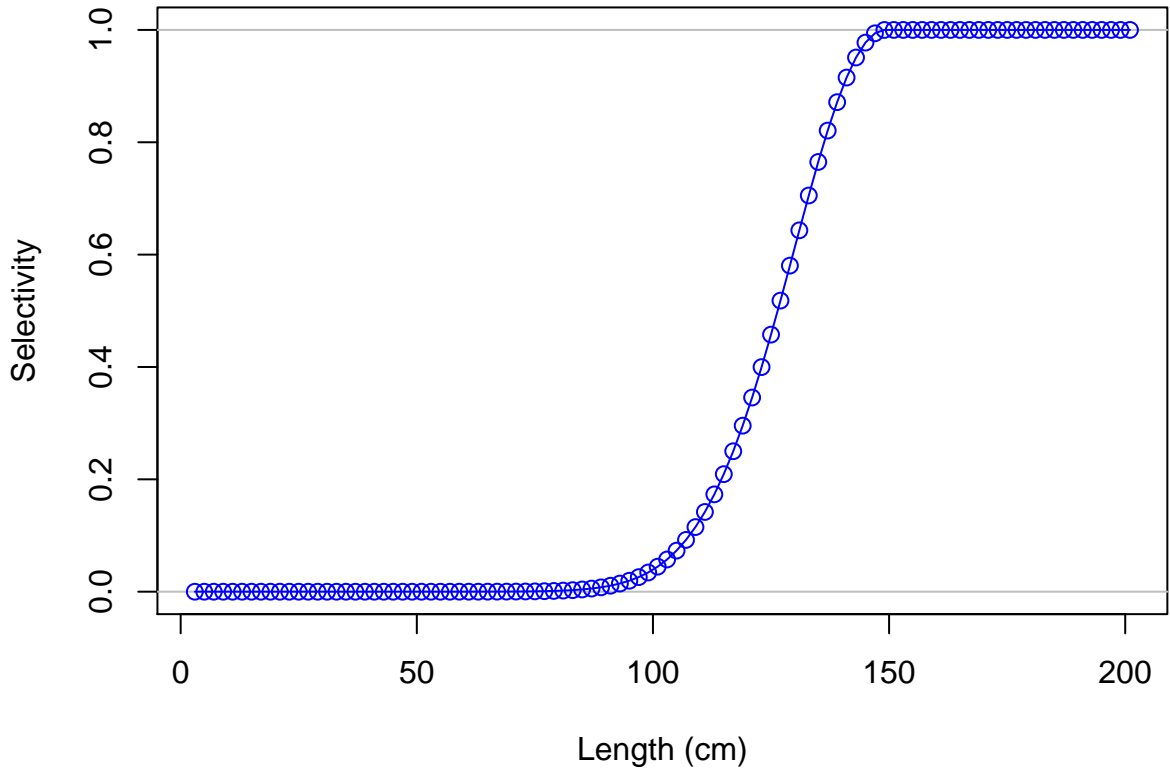
# Female ending year selectivity for F37-LL\_E\_Q14w



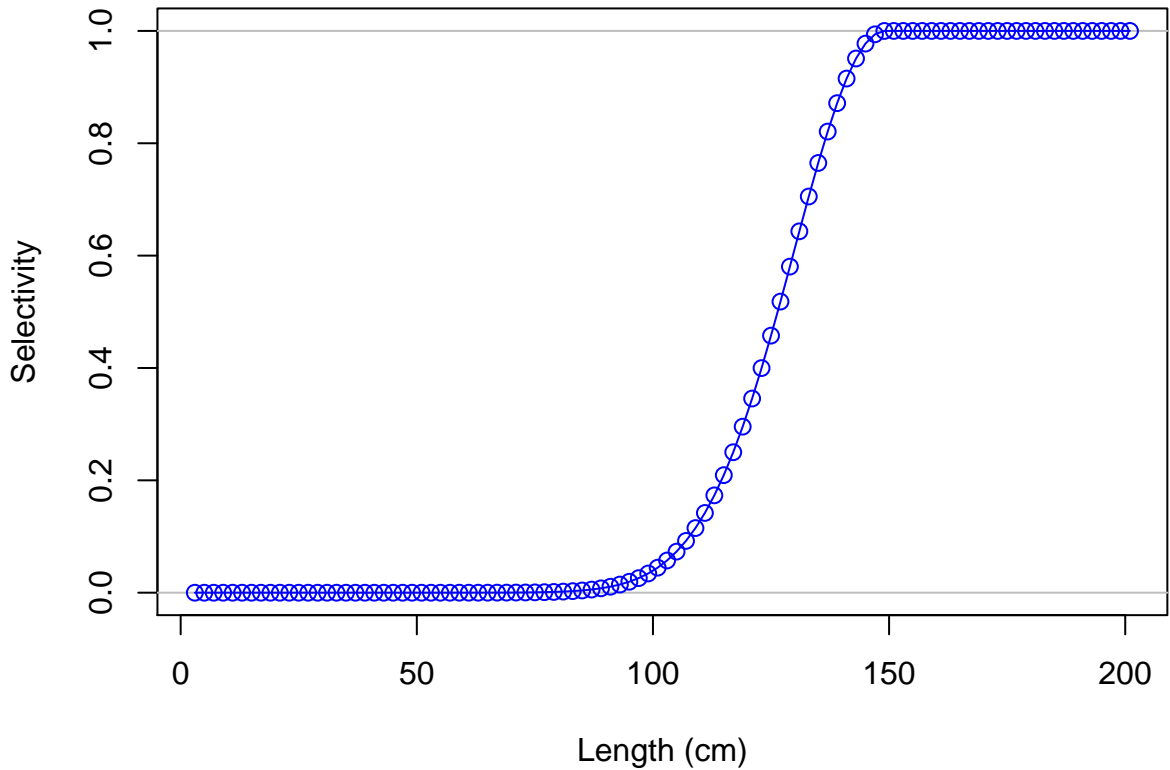
Male ending year selectivity for F37-LL\_E\_Q14w



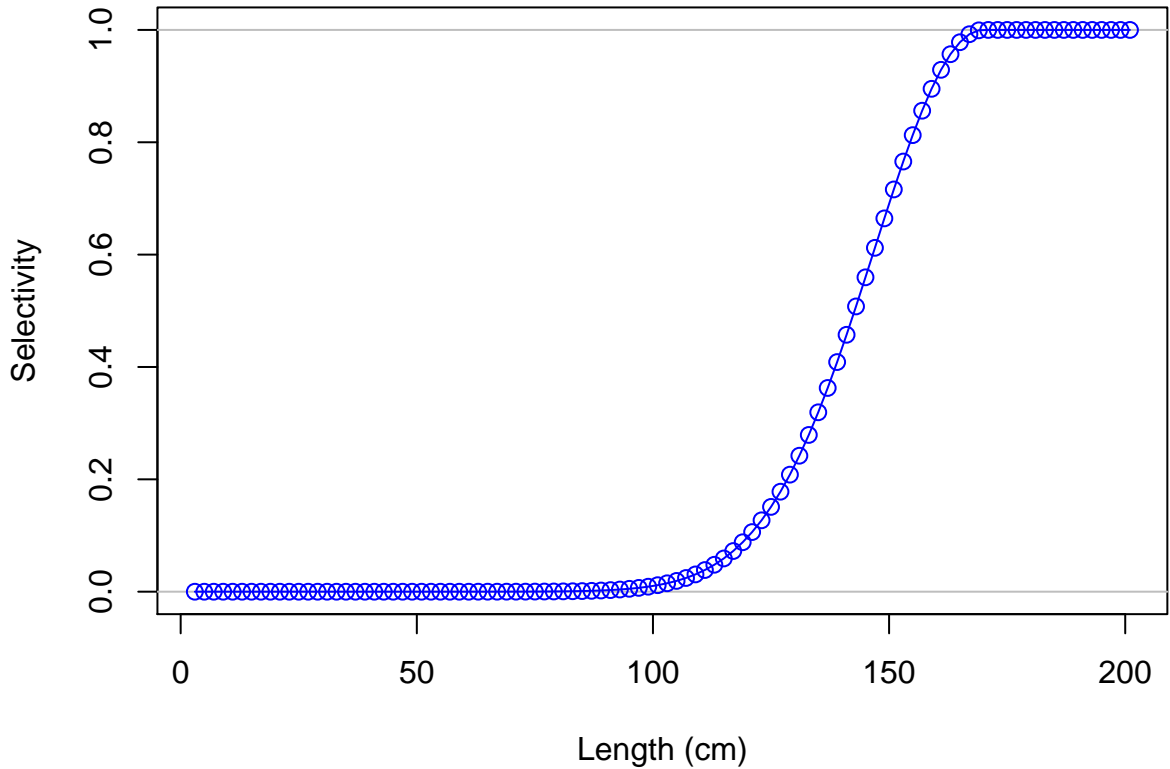
## Female ending year selectivity for F38-LL\_W\_Q23w



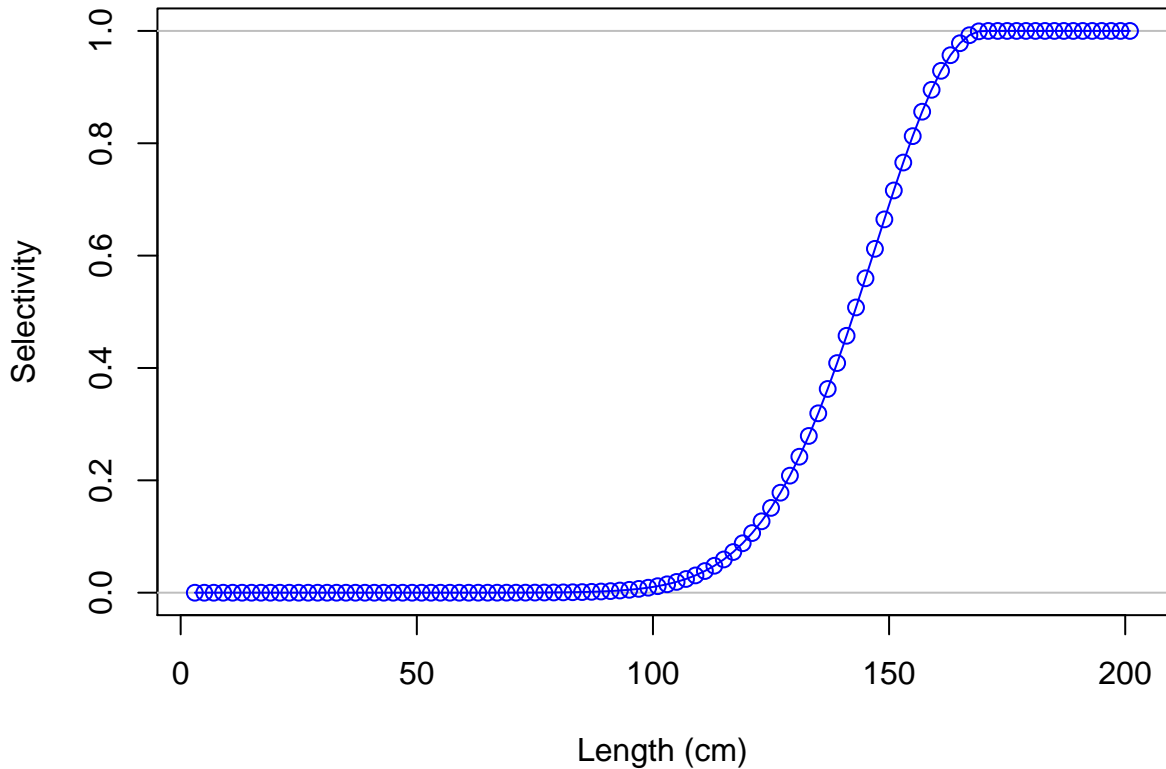
# Male ending year selectivity for F38-LL\_W\_Q23w



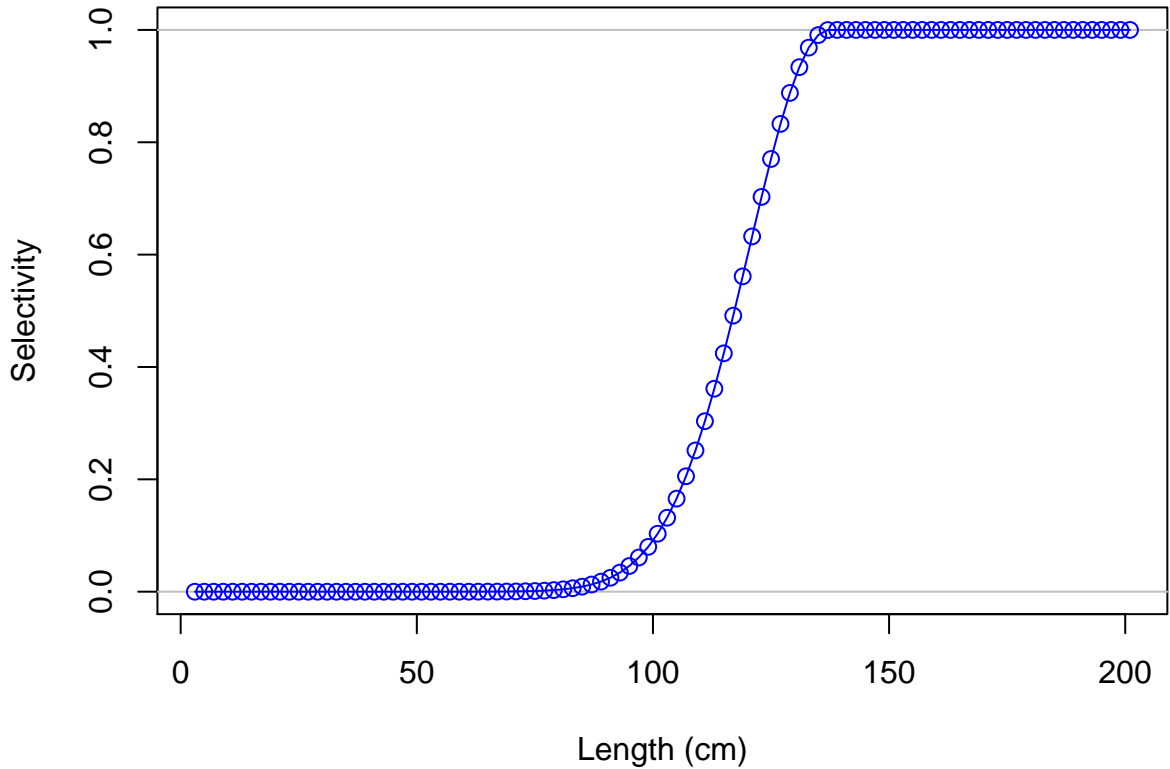
### Female ending year selectivity for F39-LL\_C\_Q23w



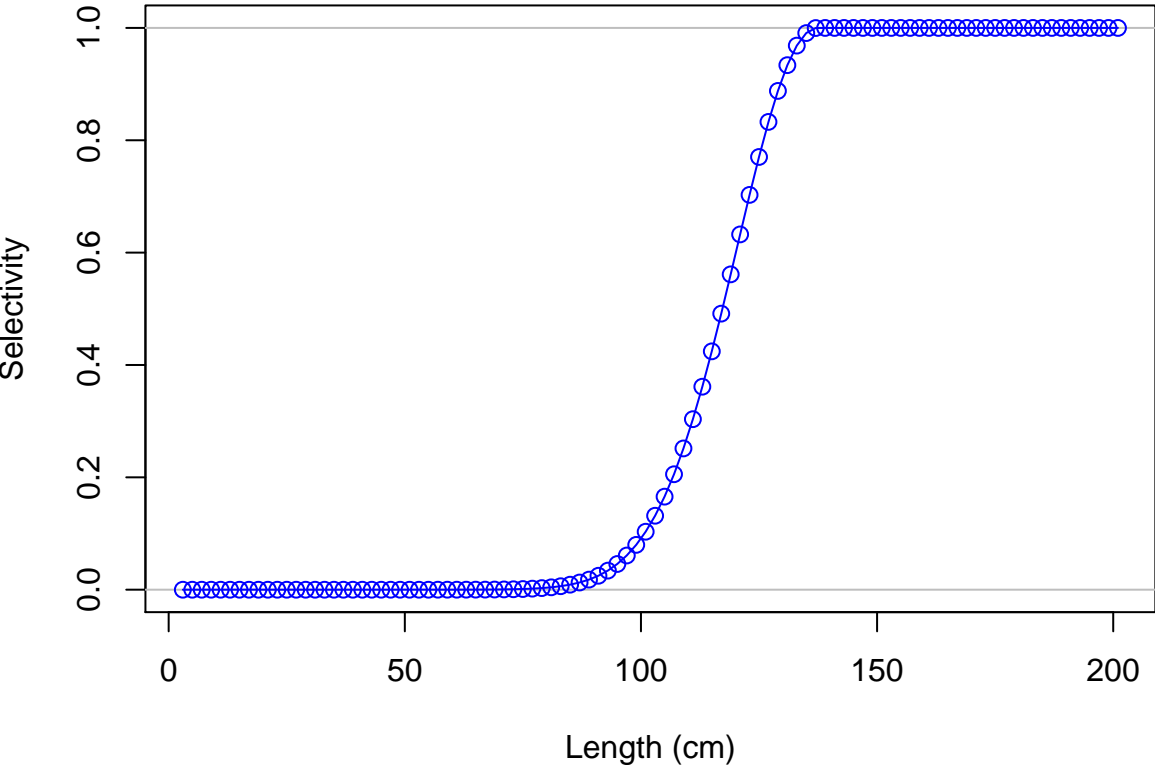
### Male ending year selectivity for F39-LL\_C\_Q23w



# Female ending year selectivity for F40-LL\_E\_Q23w

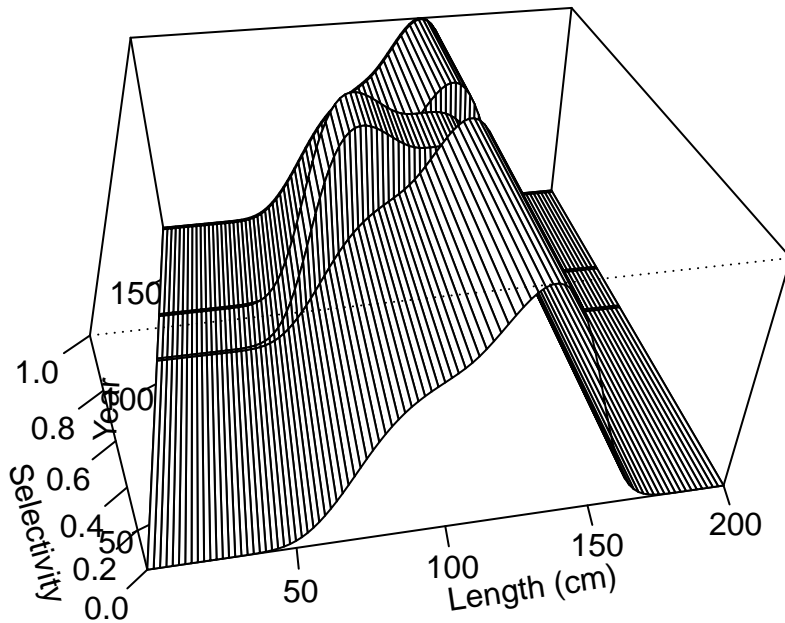


Male ending year selectivity for F40-LL\_E\_Q23w

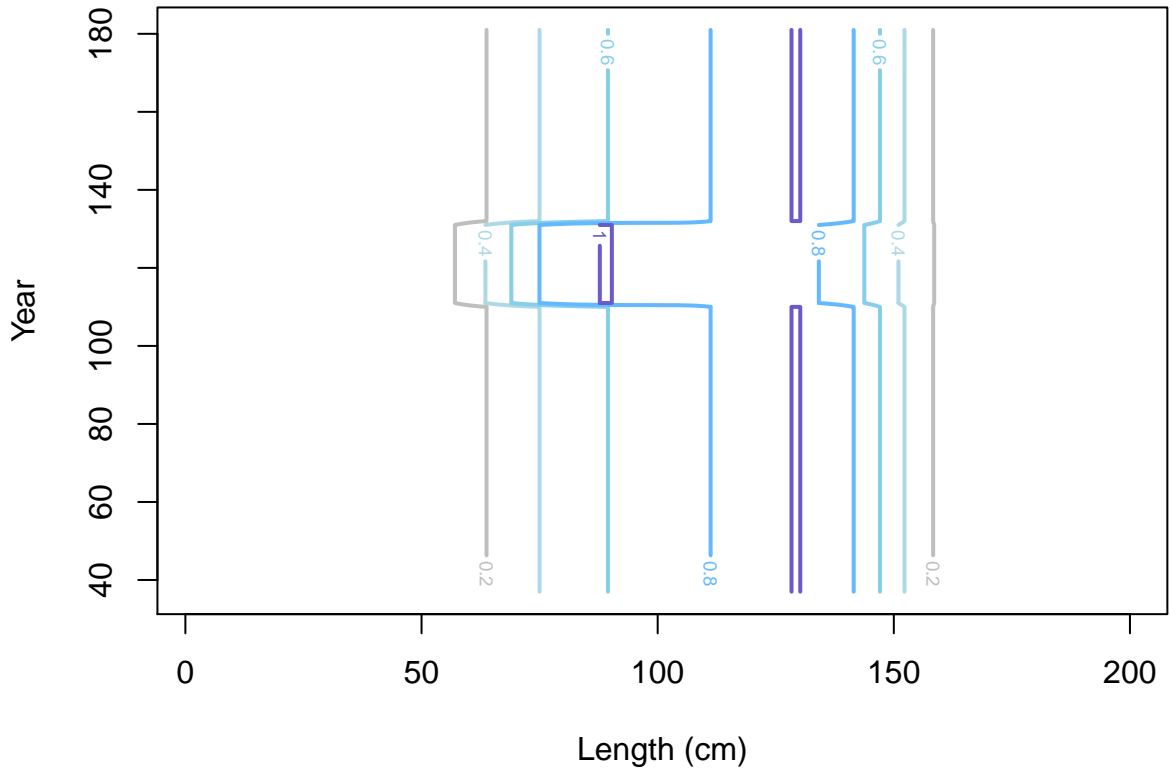




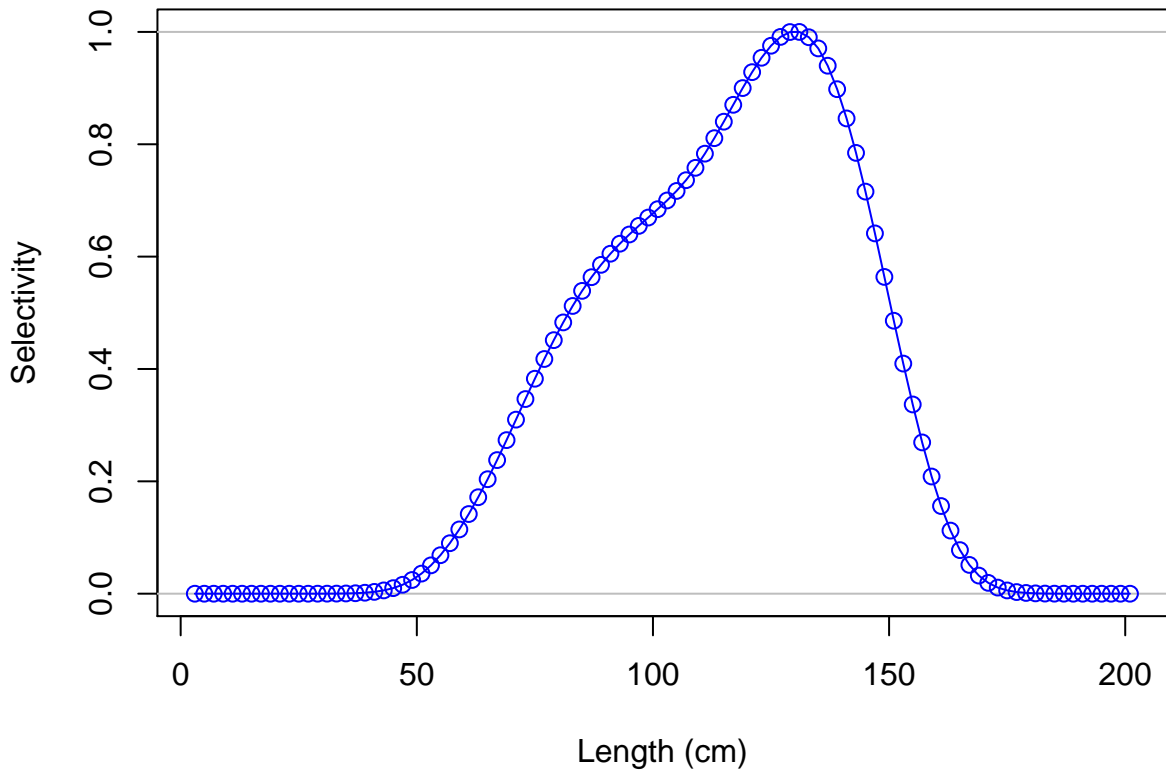
# Female time-varying selectivity for S1-PS\_DEL\_VAST



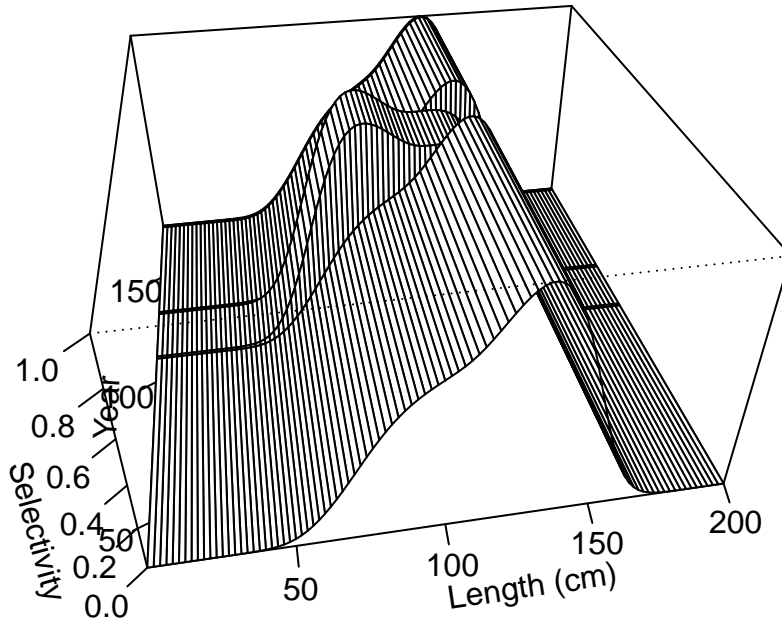
# Female time-varying selectivity for S1-PS\_DEL\_VAST



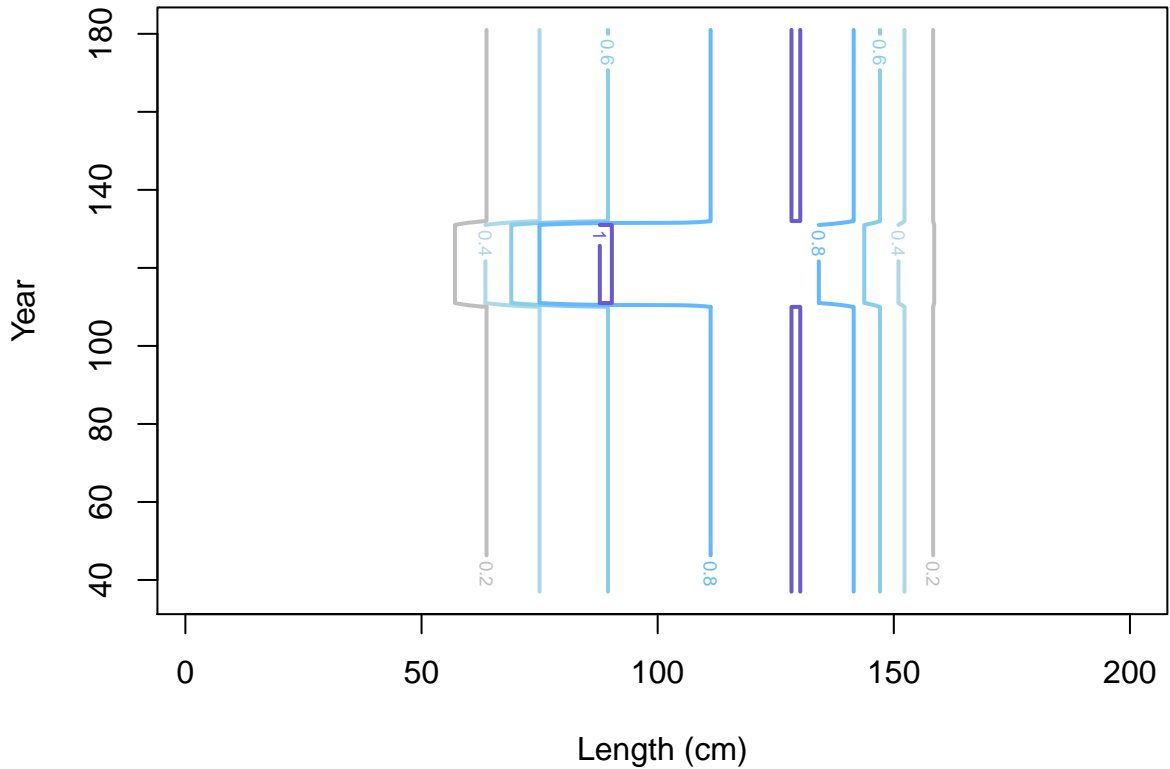
## Female ending year selectivity for S1-PS\_DEL\_VAST



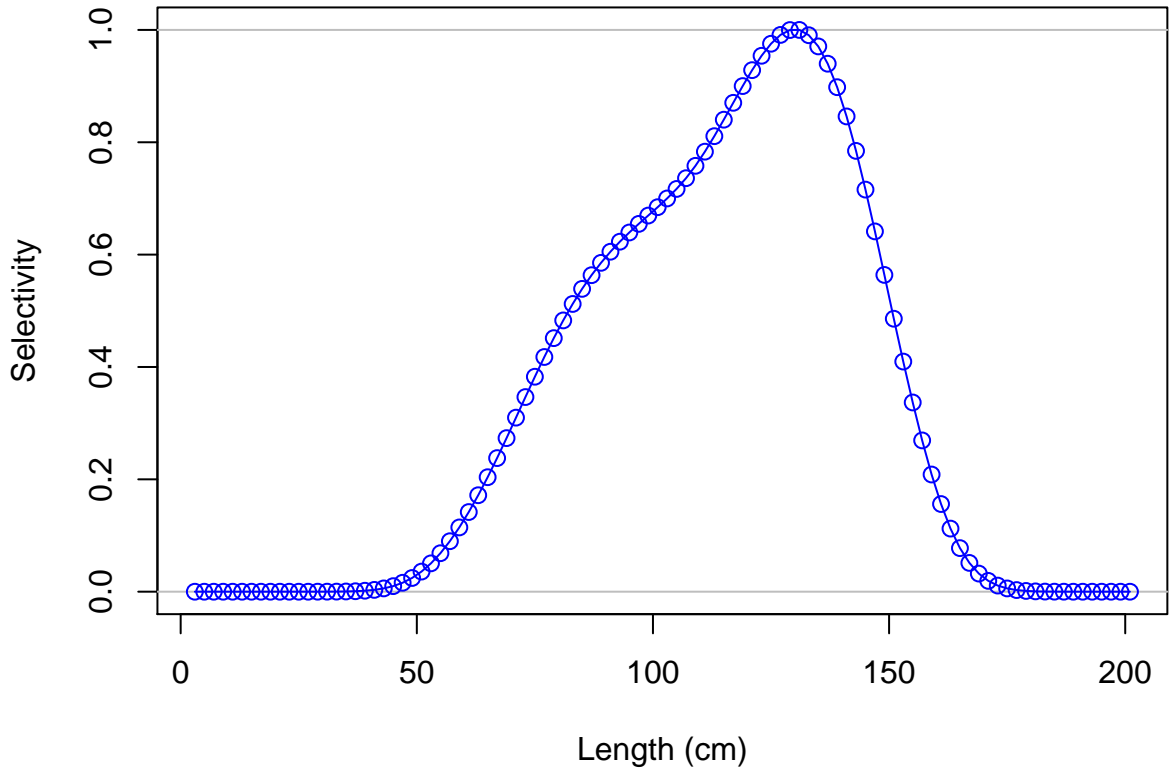
# Male time-varying selectivity for S1-PS\_DEL\_VAST



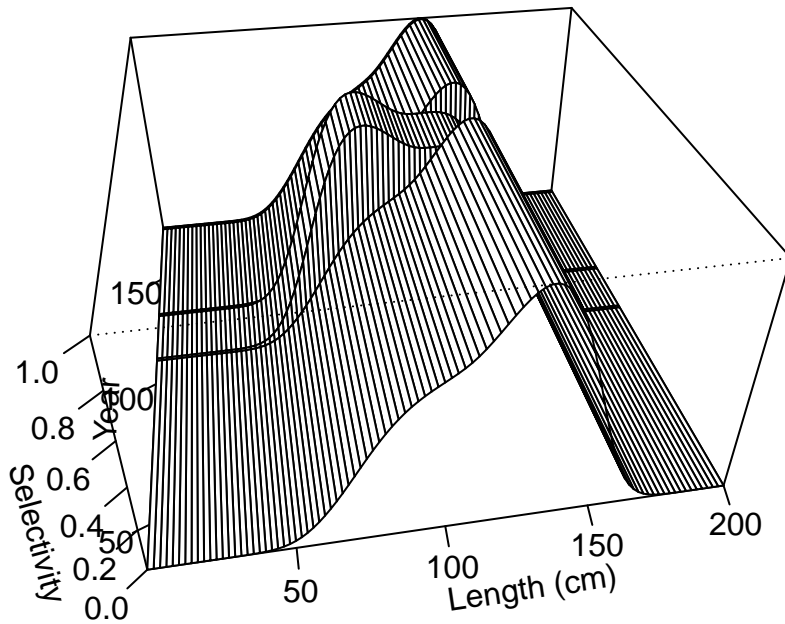
# Male time-varying selectivity for S1-PS\_DEL\_VAST



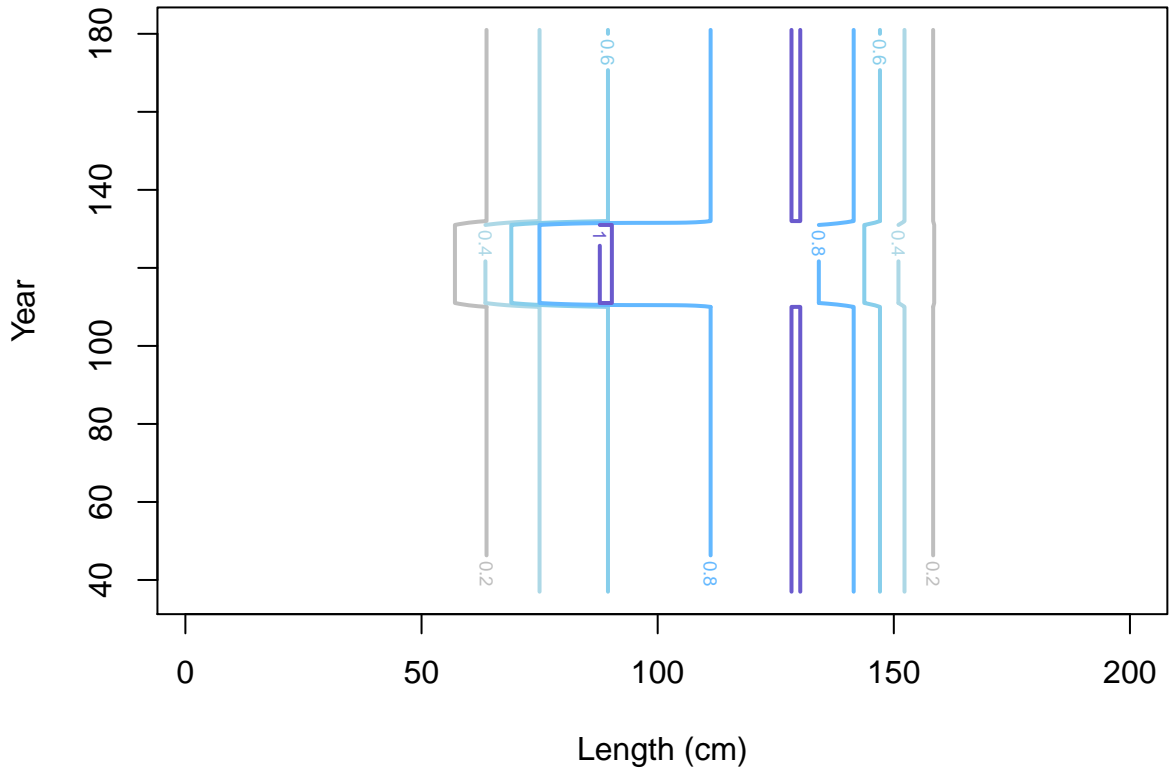
# Male ending year selectivity for S1-PS\_DEL\_VAST



# Female time-varying selectivity for S4-PS\_middle\_VAST

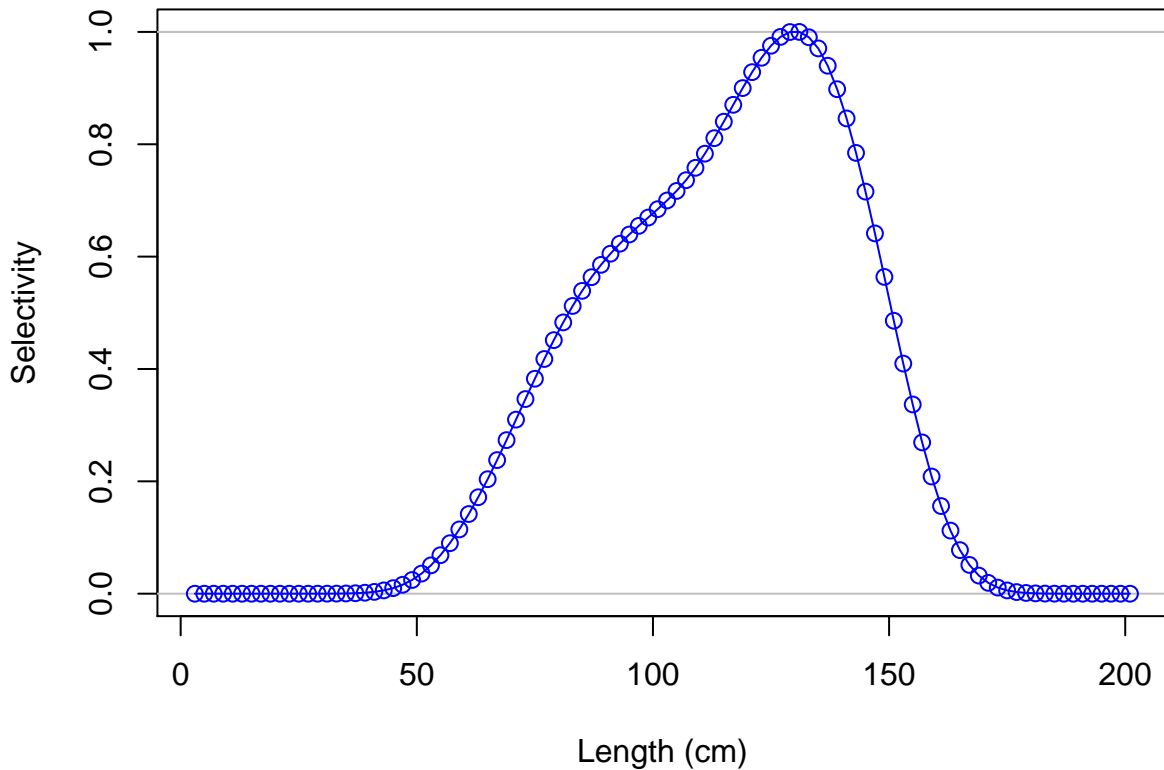


# Female time-varying selectivity for S4-PS\_middle\_VAST

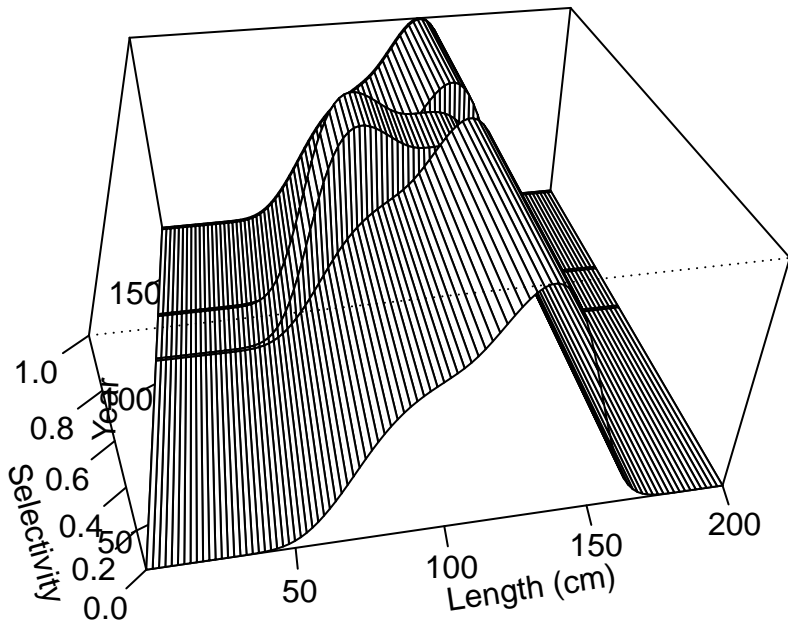




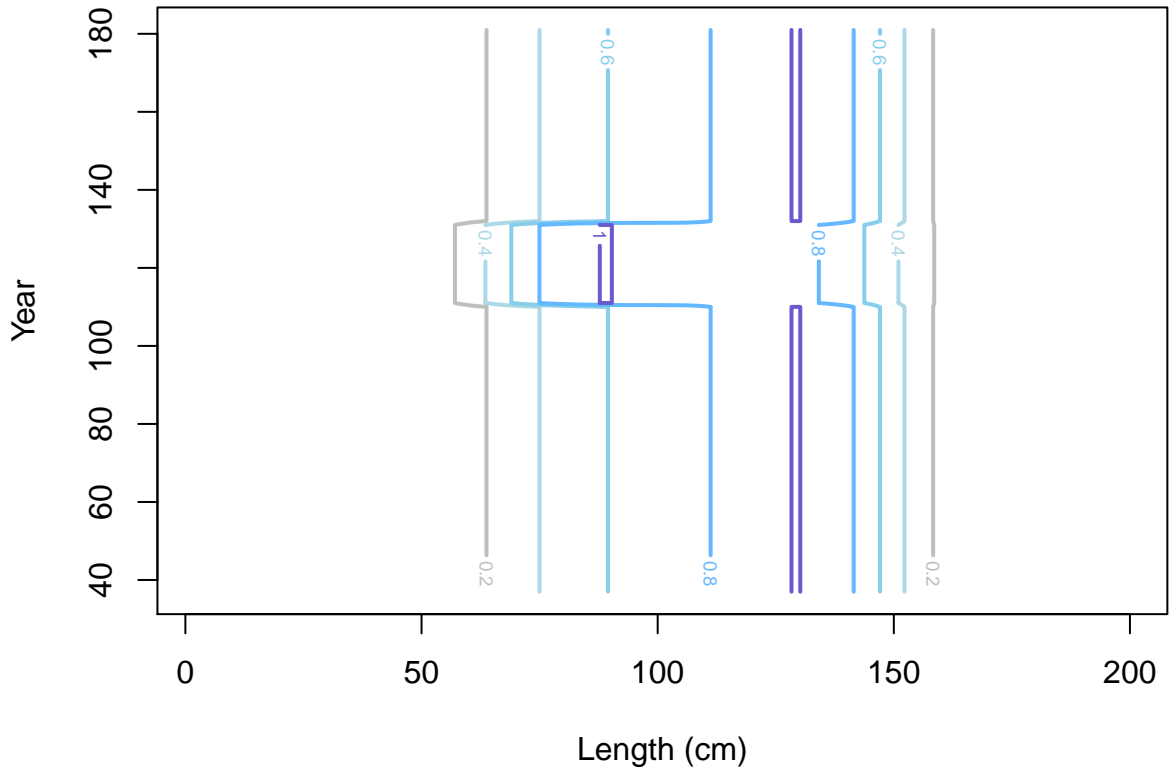
## Female ending year selectivity for S4-PS\_middle\_VAST



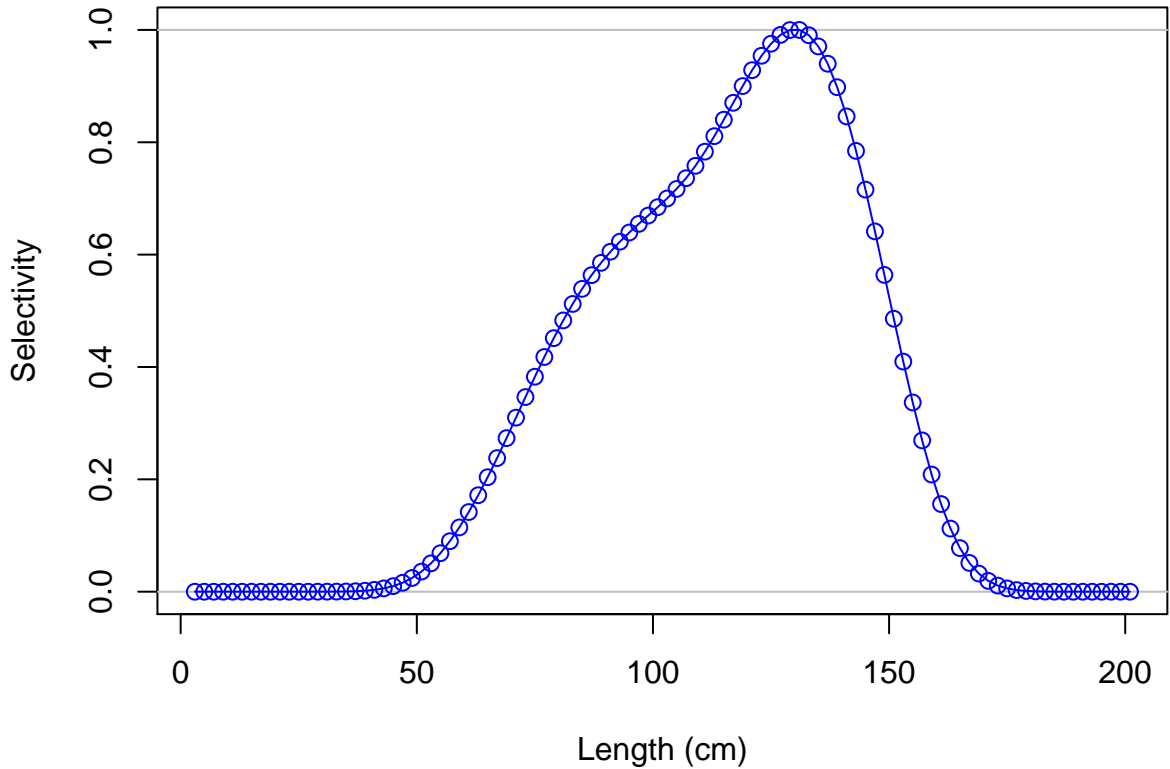
# Male time-varying selectivity for S4-PS\_middle\_VAST



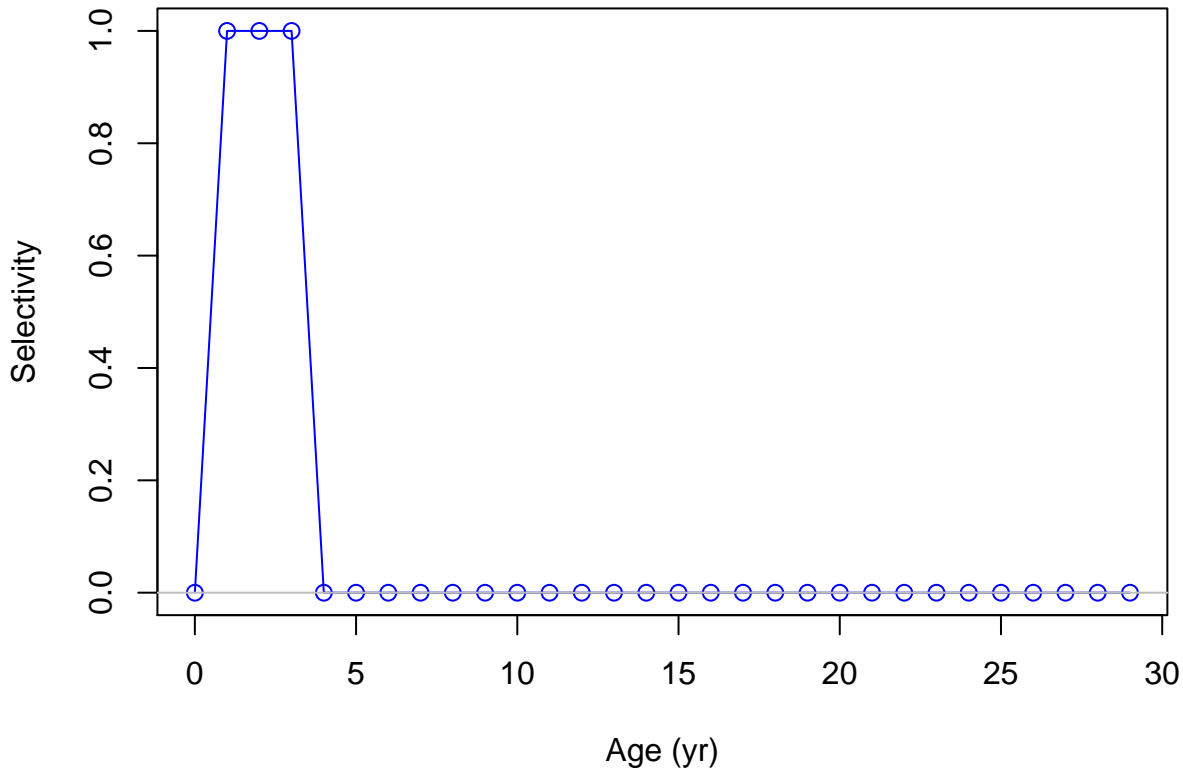
# Male time-varying selectivity for S4-PS\_middle\_VAST



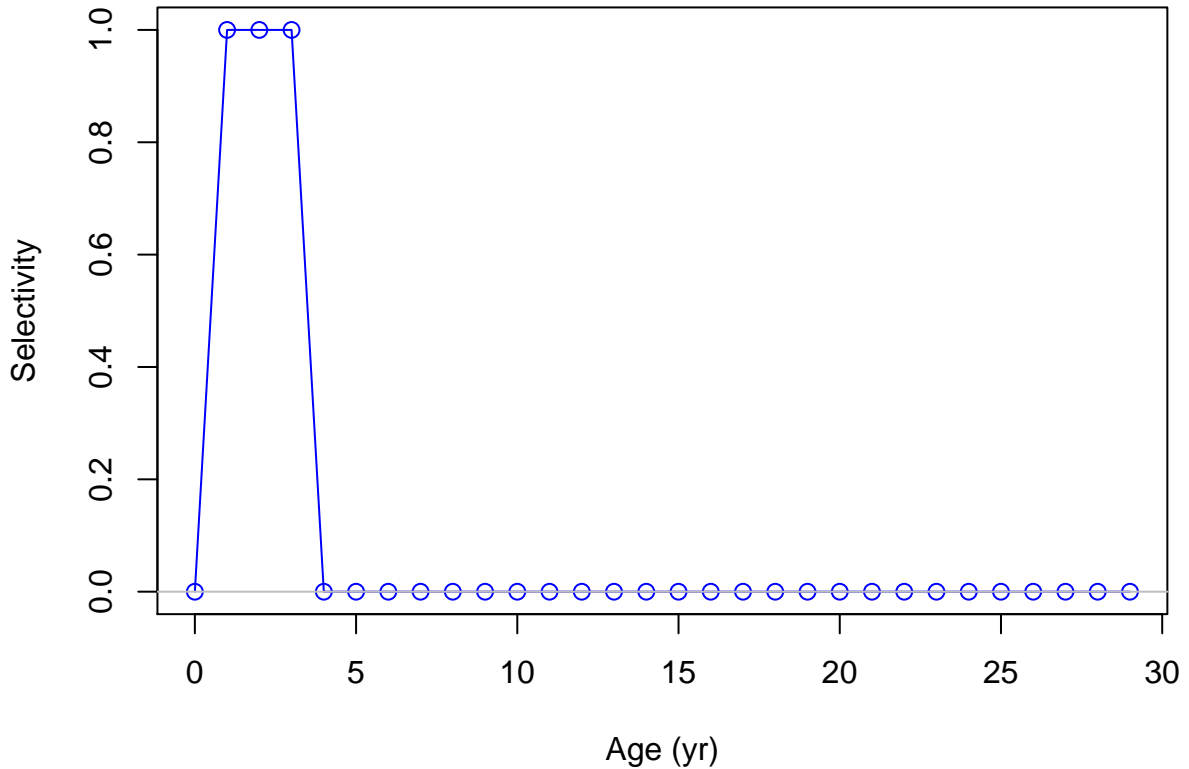
# Male ending year selectivity for S4-PS\_middle\_VAST



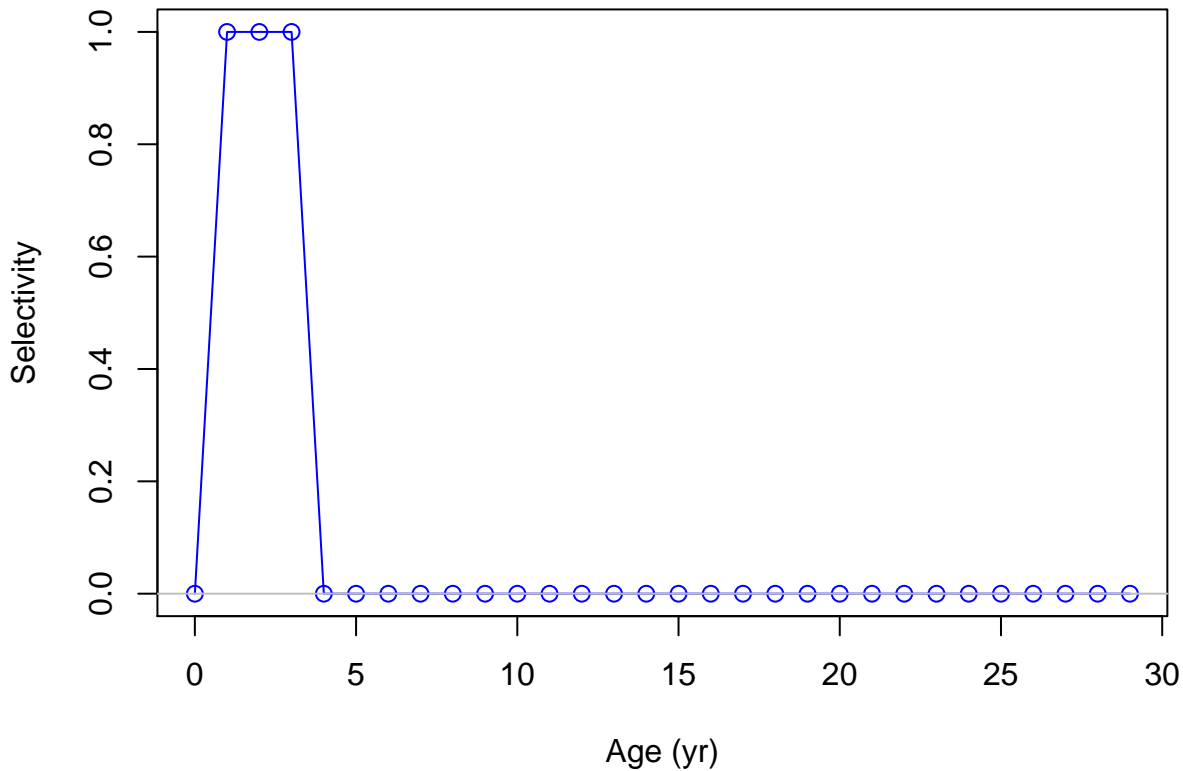
## Female ending year selectivity for F25-OBJ\_S\_disc



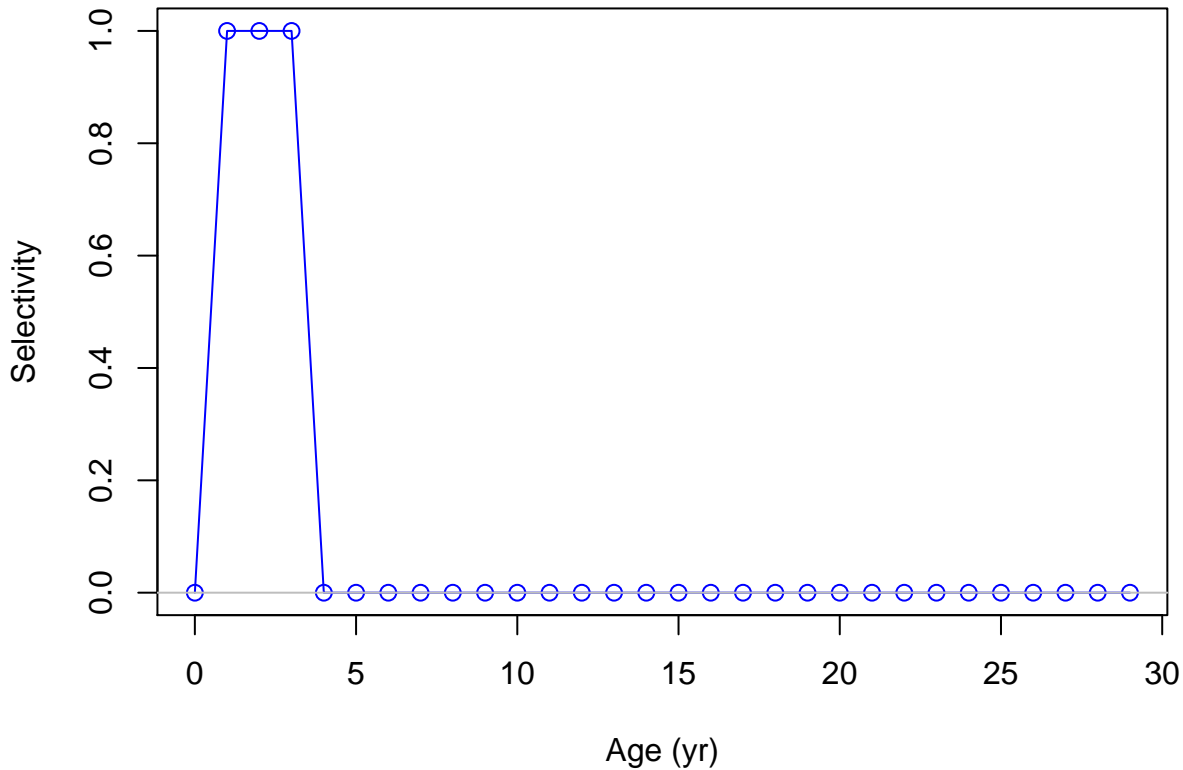
### Male ending year selectivity for F25-OBJ\_S\_disc



### Female ending year selectivity for F26-OBJ\_C\_disc

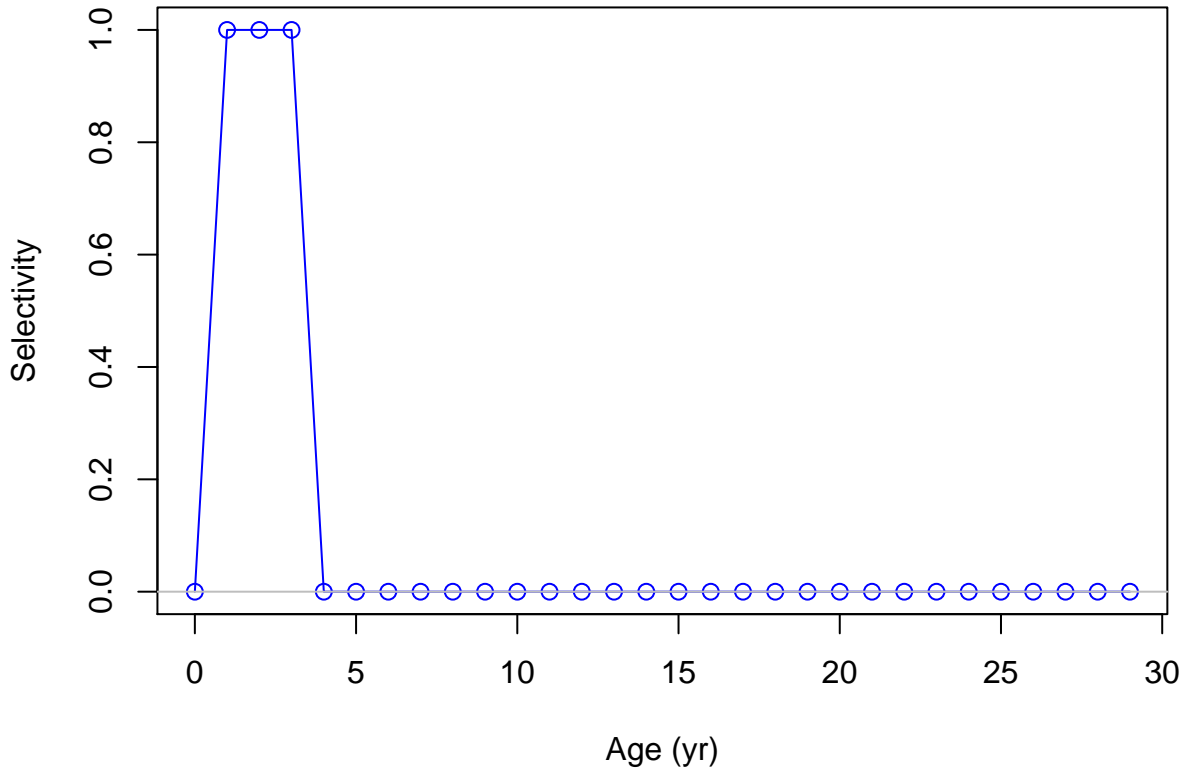


### Male ending year selectivity for F26-OBJ\_C\_disc

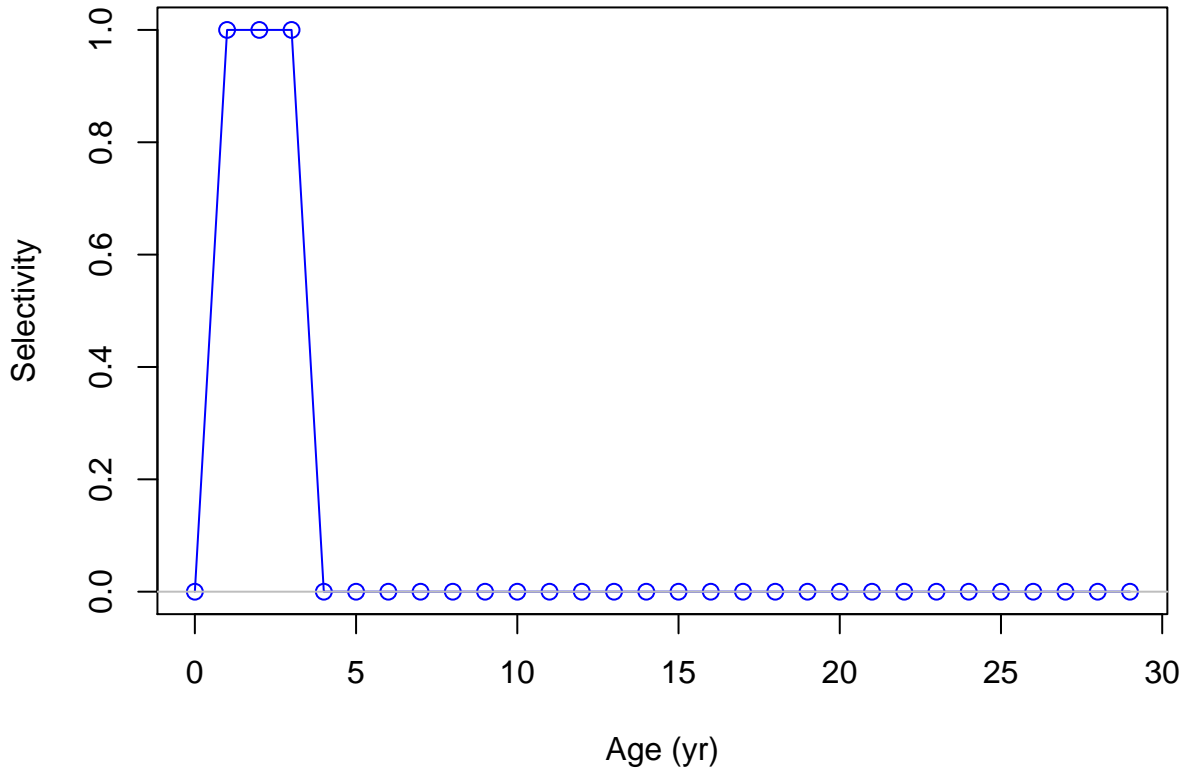




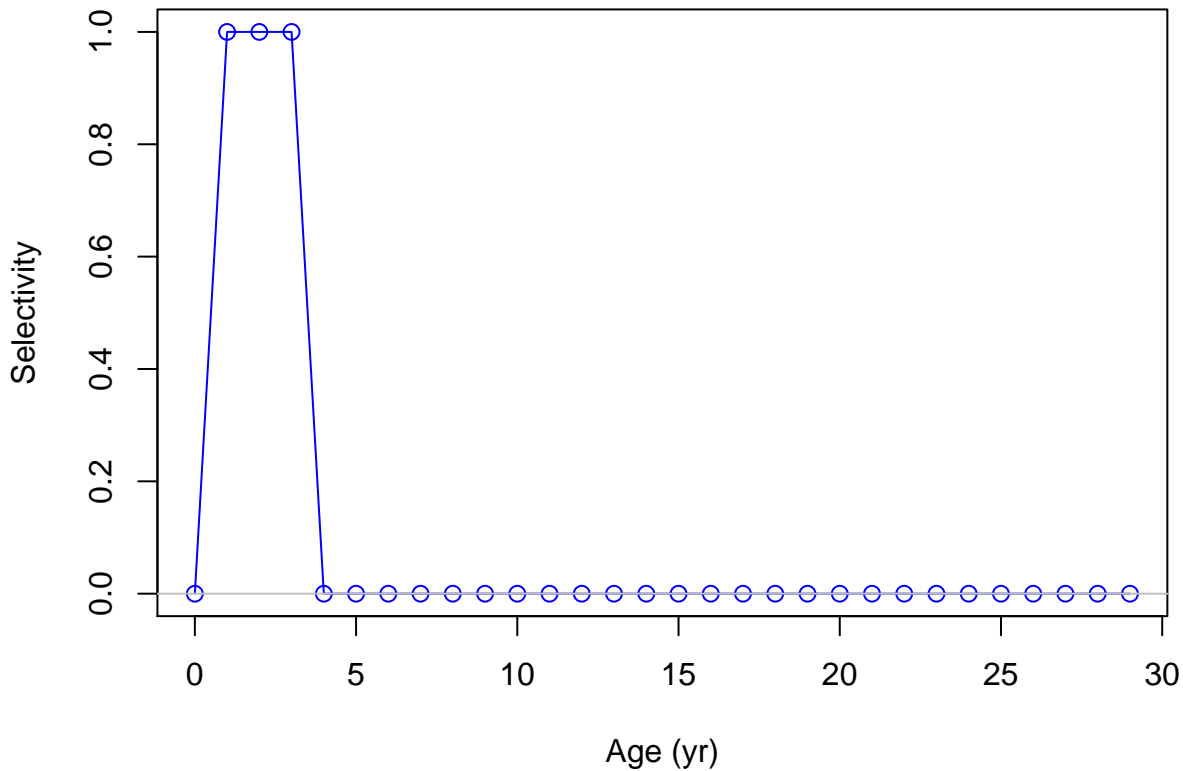
### Female ending year selectivity for F27-OBJ\_I\_disc



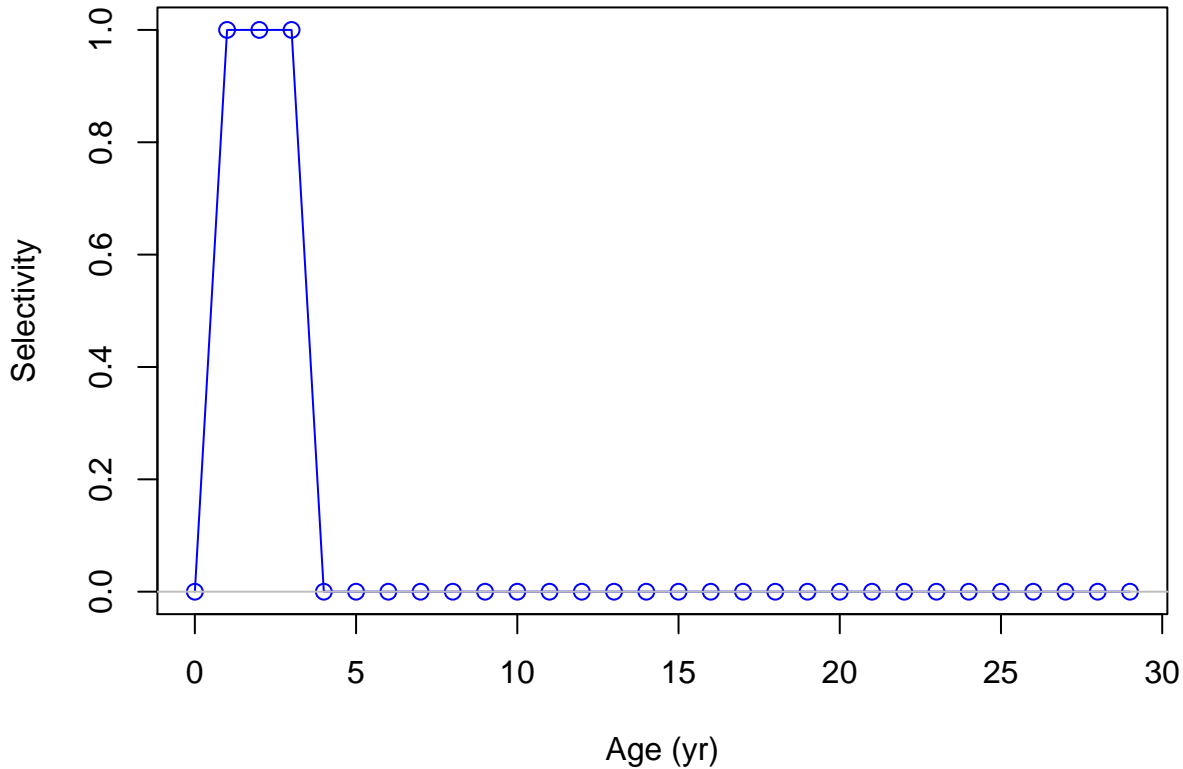
### Male ending year selectivity for F27-OBJ\_I\_disc



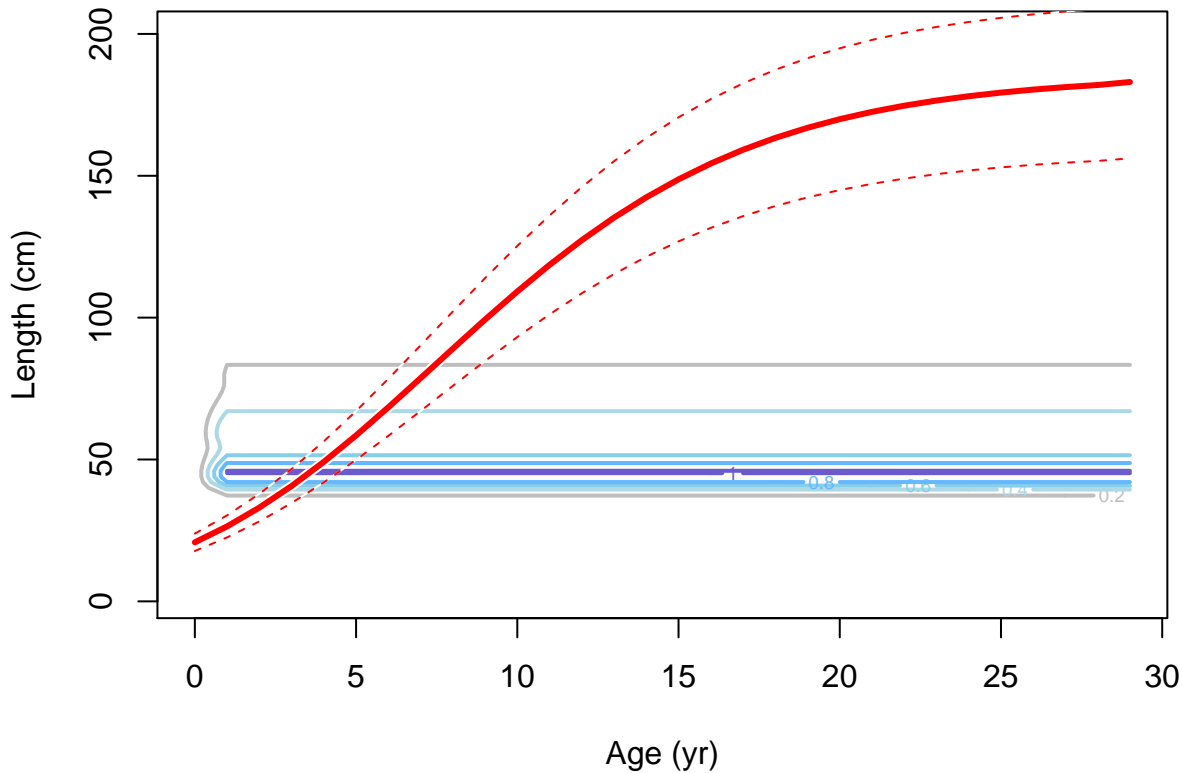
## Female ending year selectivity for F28-OBJ\_N\_disc



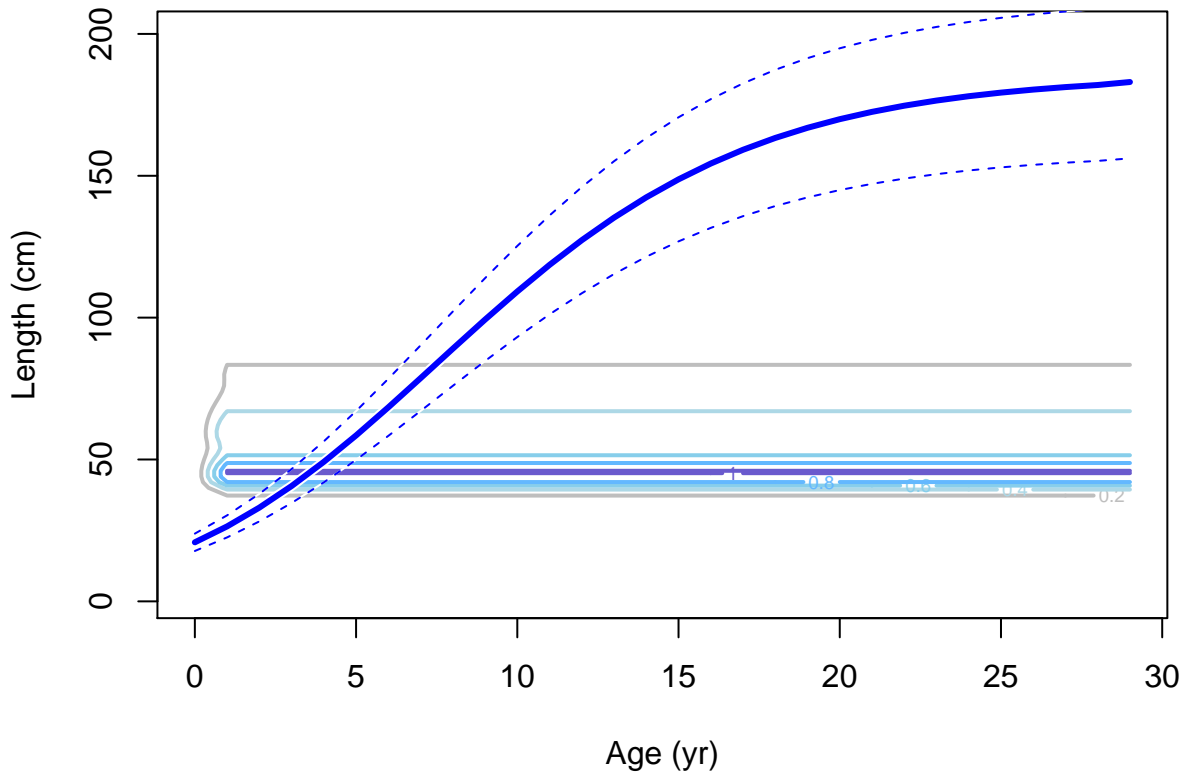
# Male ending year selectivity for F28-OBJ\_N\_disc



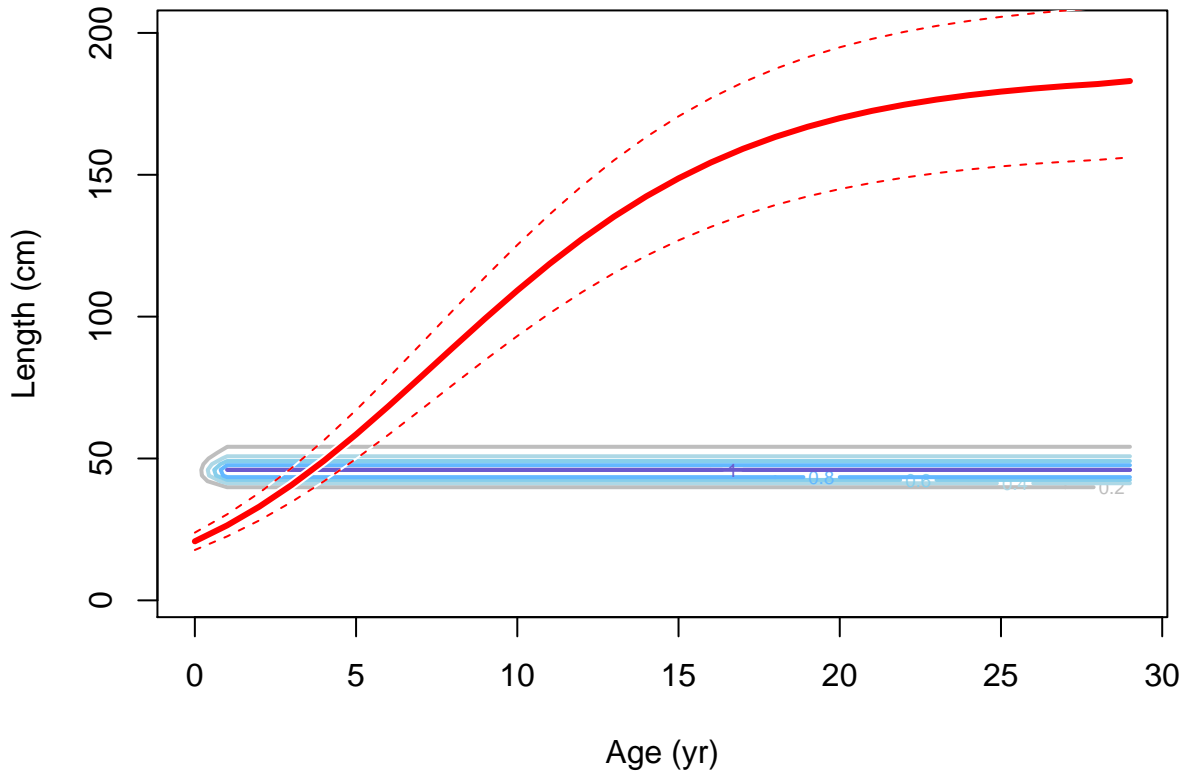
# Female ending year selectivity and growth for F1-Obj\_N-Q14



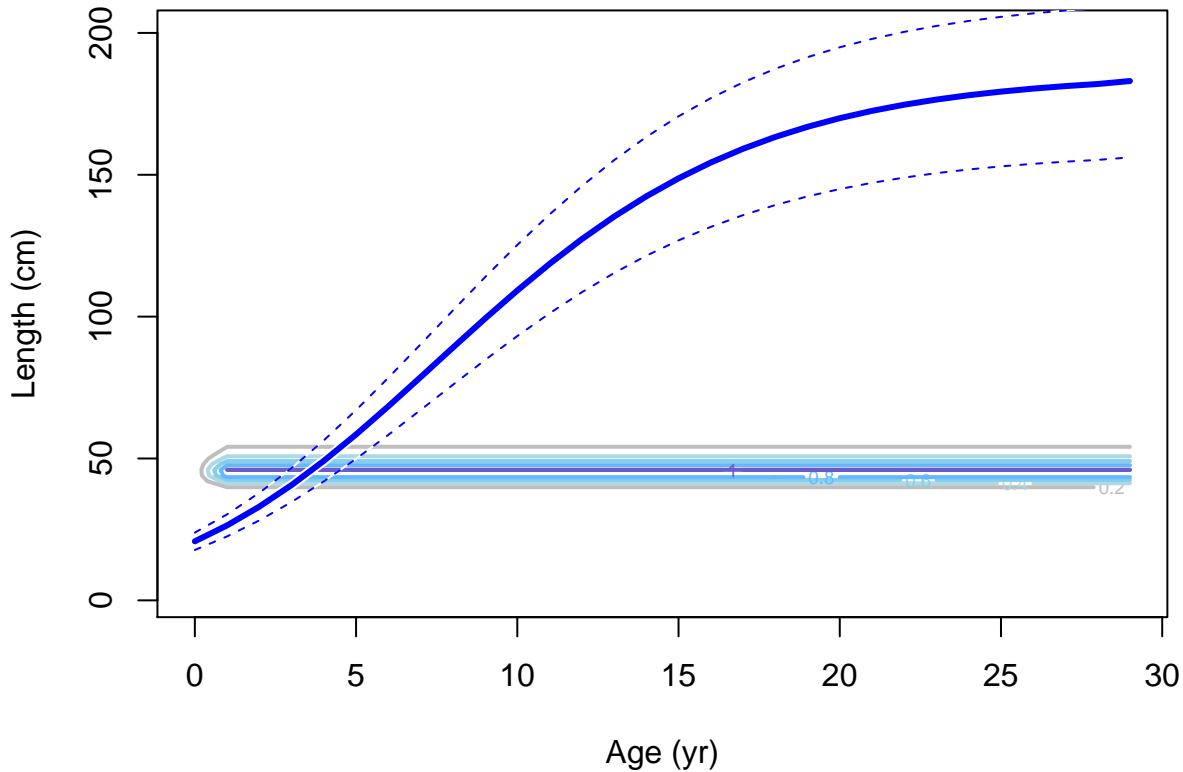
# Male ending year selectivity and growth for F1-OBJ\_N-Q14



# Female ending year selectivity and growth for F2-OBJ\_Nc\_Q14

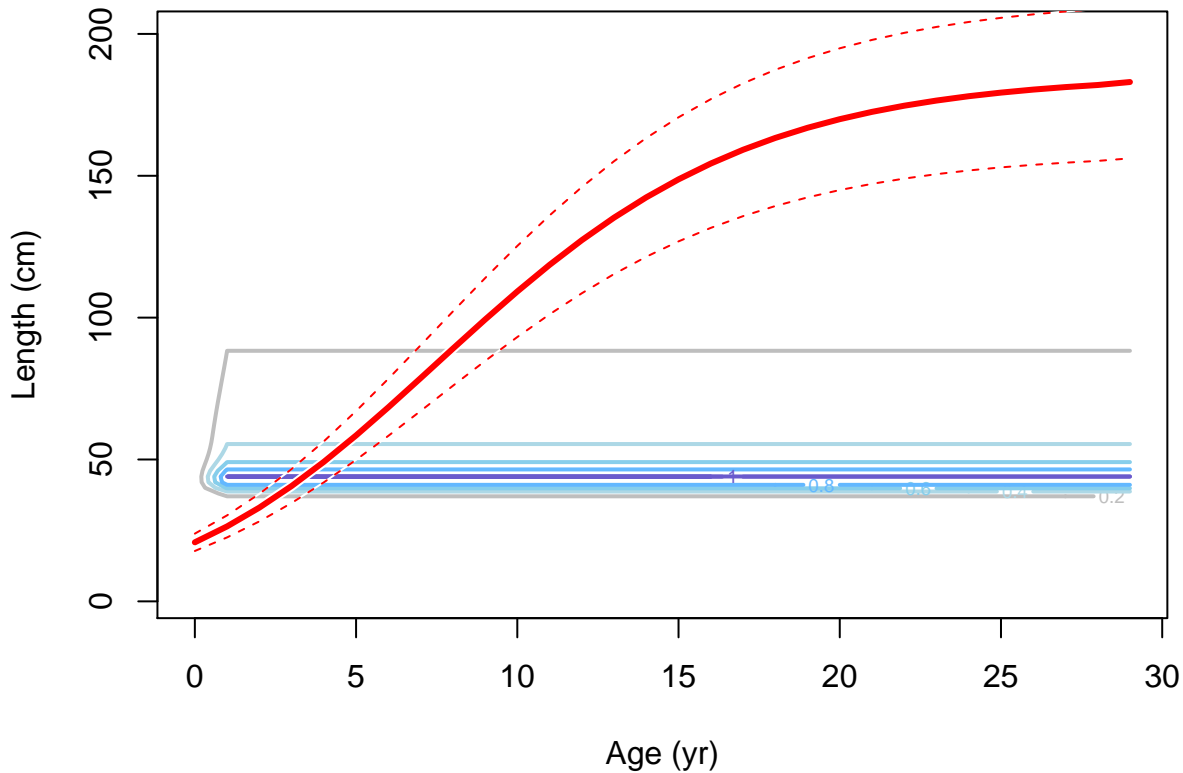


# Male ending year selectivity and growth for F2-OBJ\_Nc\_Q14

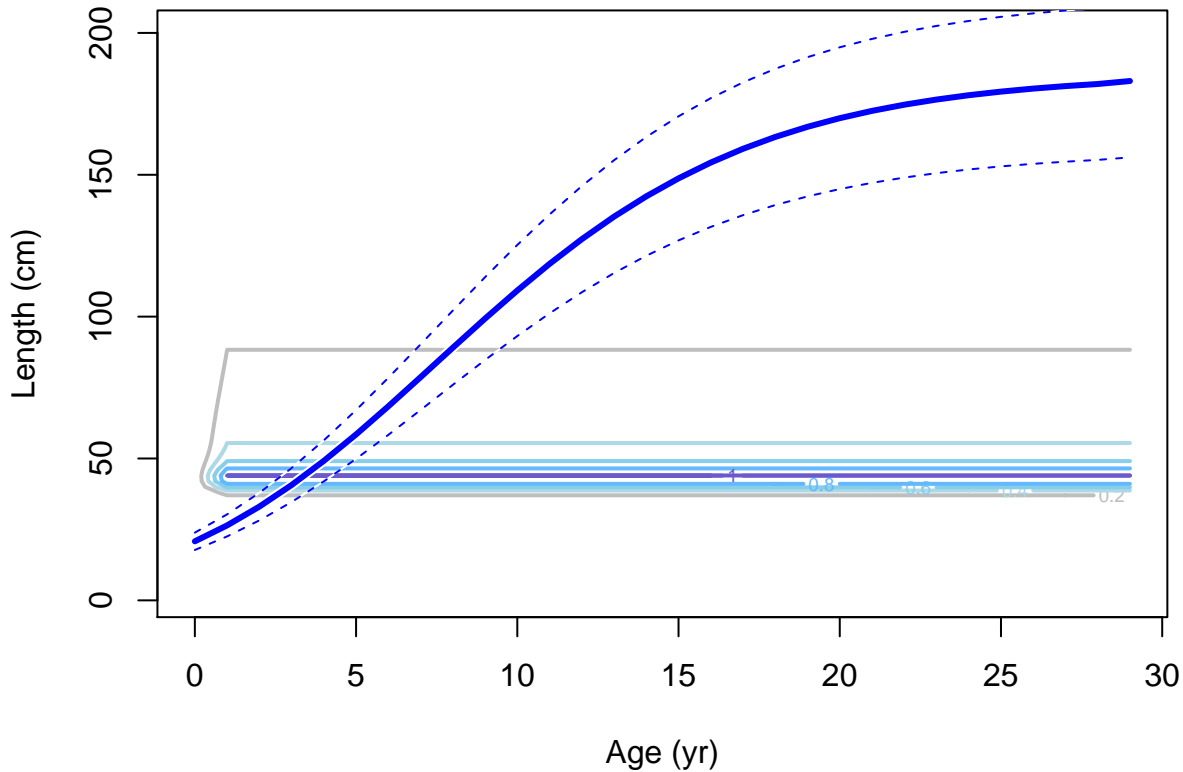




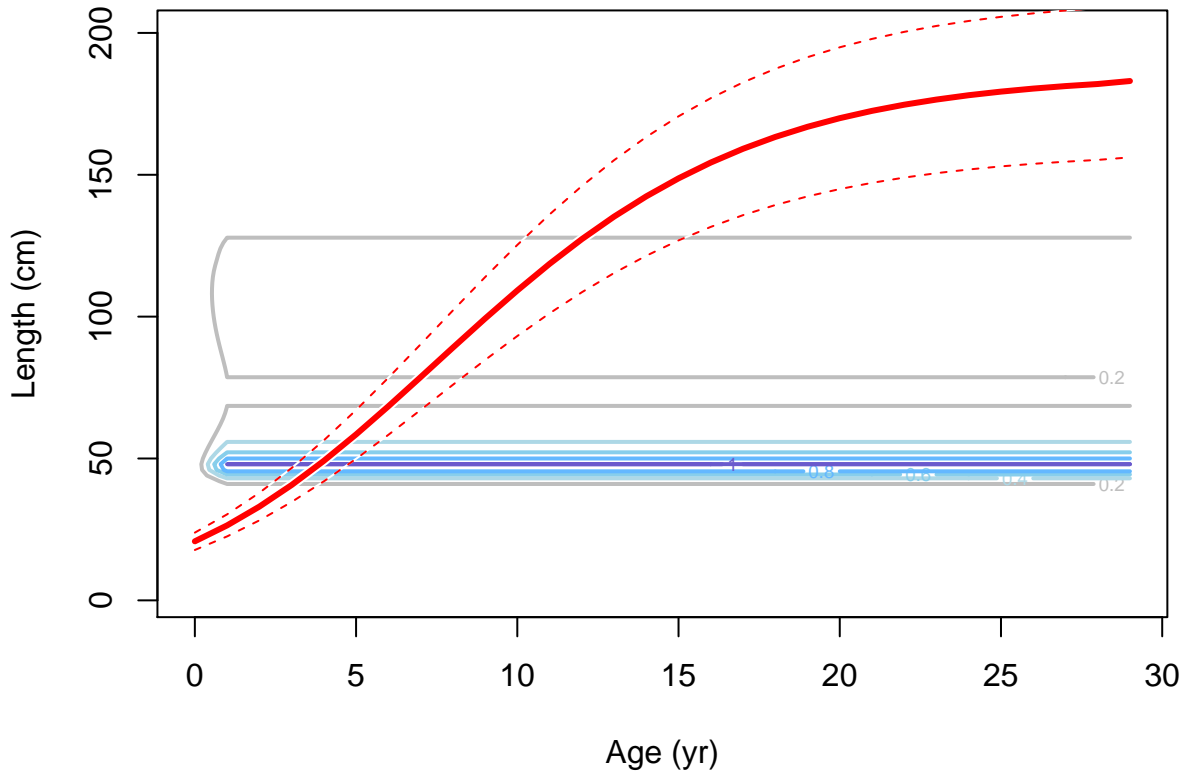
# Female ending year selectivity and growth for F3-OBJ\_C\_Q14



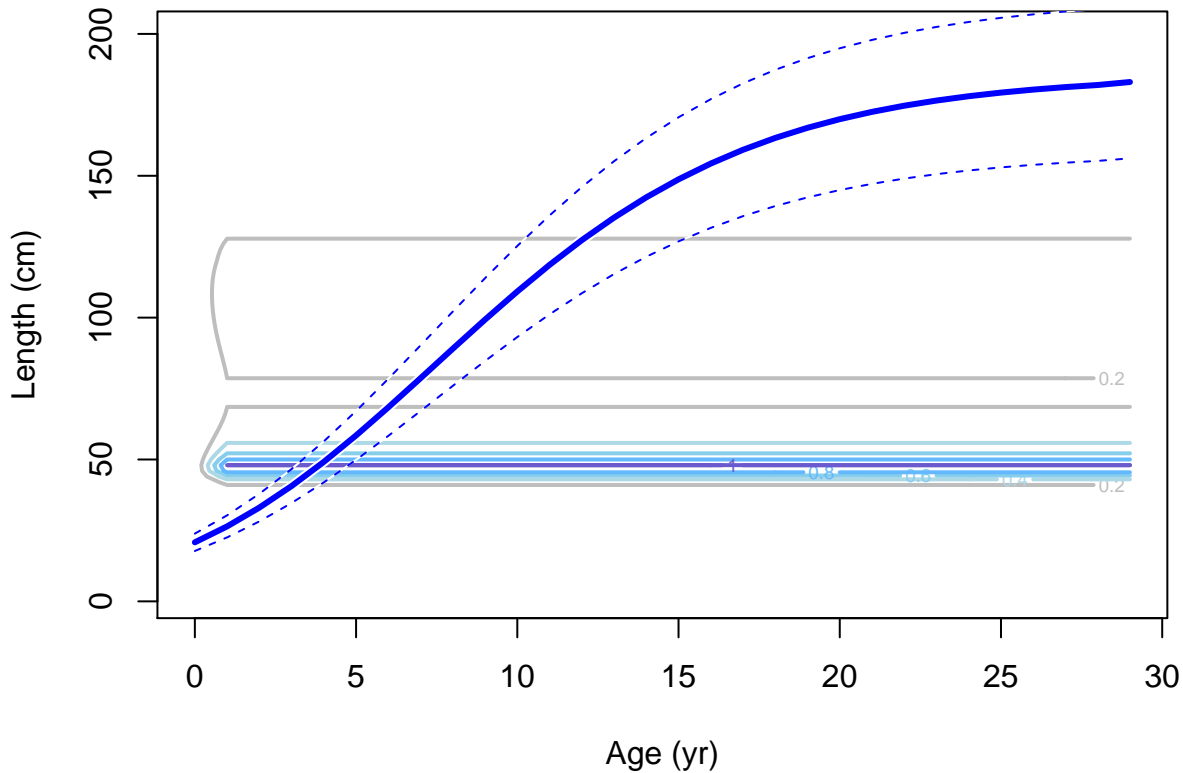
# Male ending year selectivity and growth for F3-OBJ\_C\_Q14



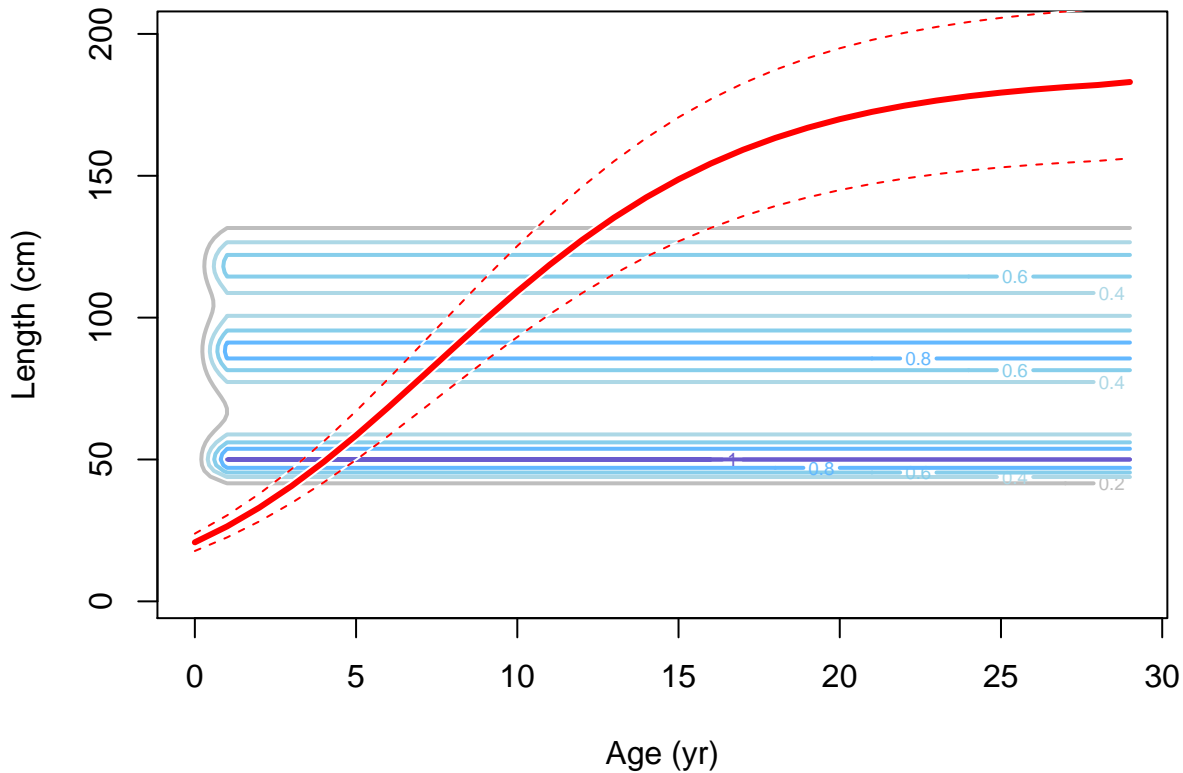
# Female ending year selectivity and growth for F4-OBJ\_Cc\_Q14



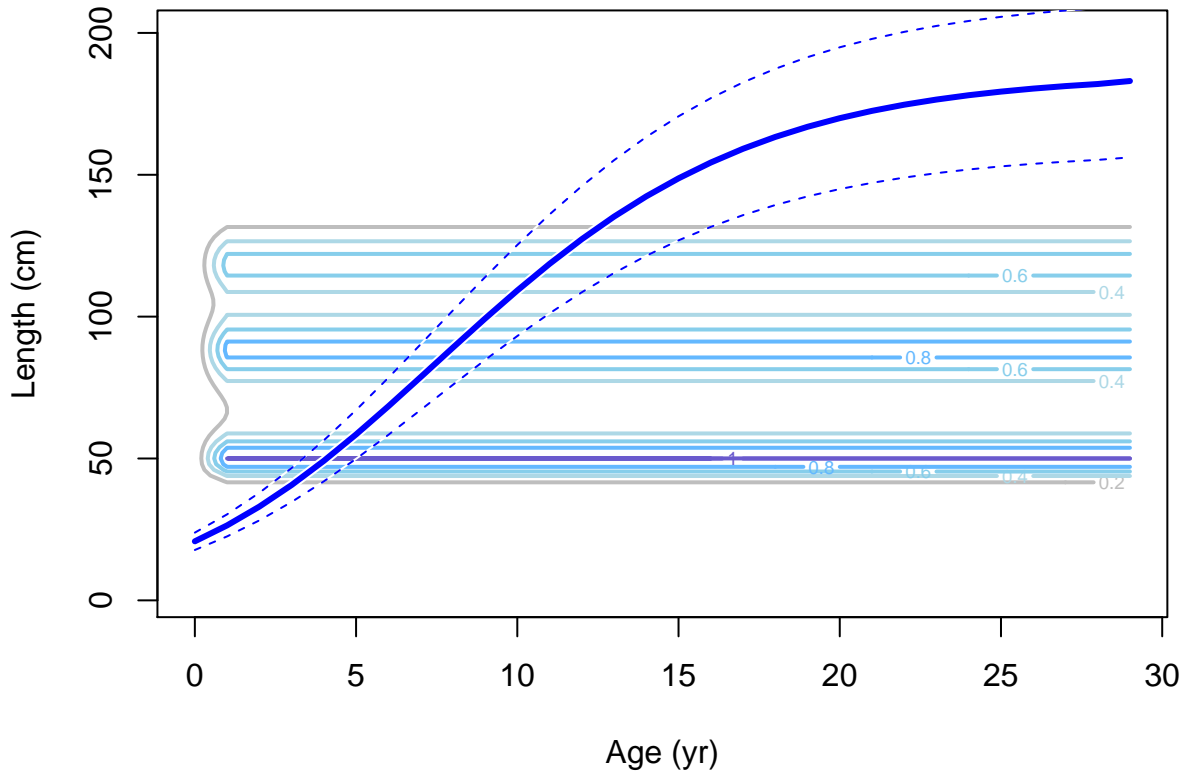
# Male ending year selectivity and growth for F4-Obj\_Cc\_Q14



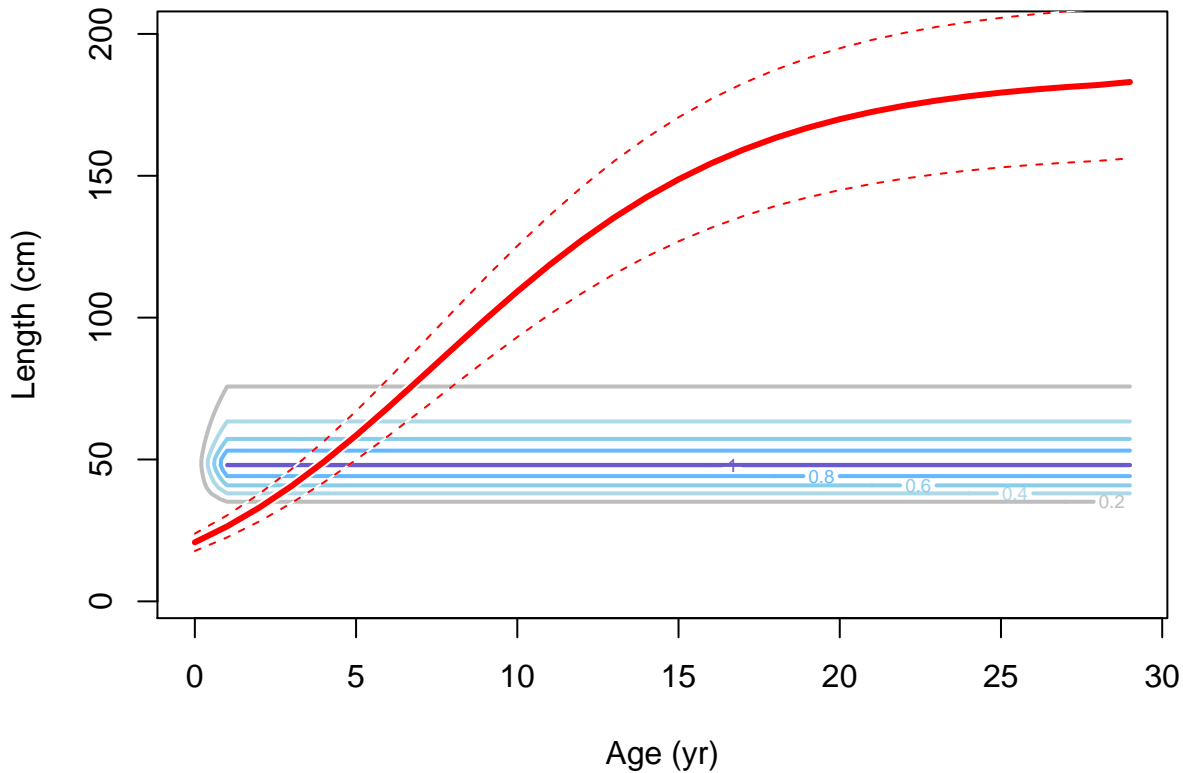
# Female ending year selectivity and growth for F5-OBJ\_S\_Q14



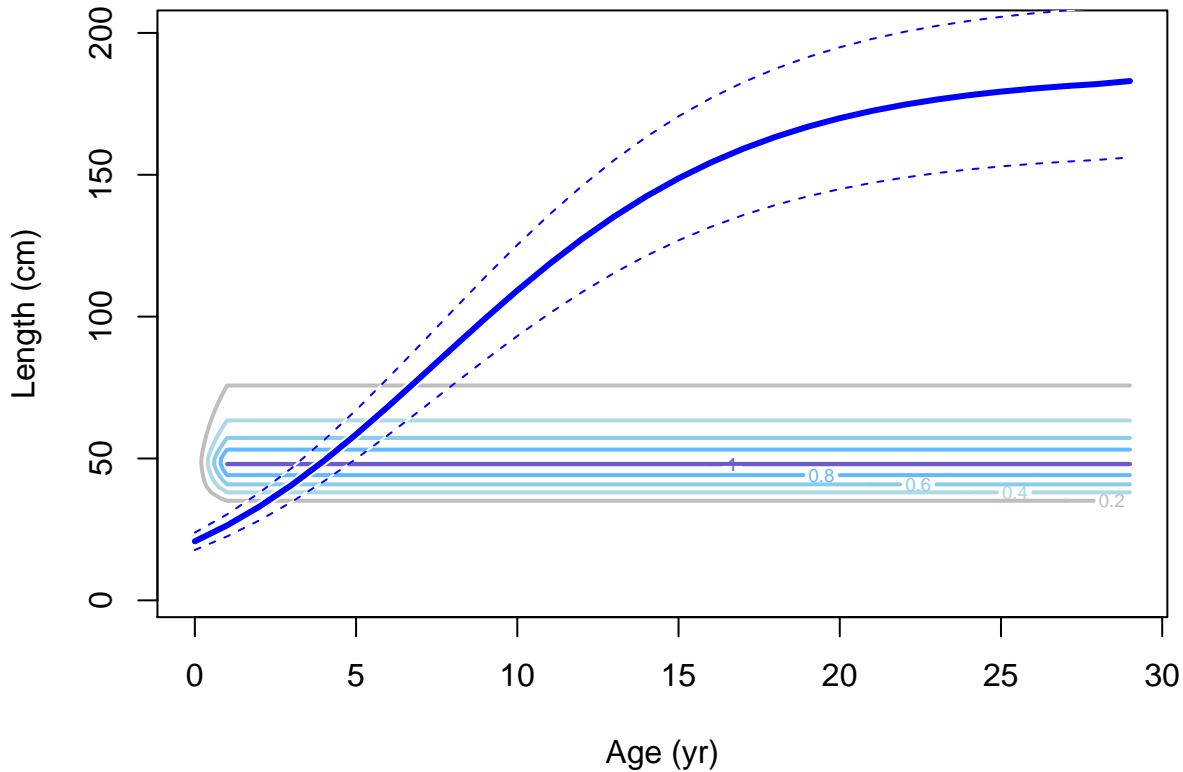
# Male ending year selectivity and growth for F5-OBJ\_S\_Q14



# Female ending year selectivity and growth for F6-OBJ\_N\_Q23

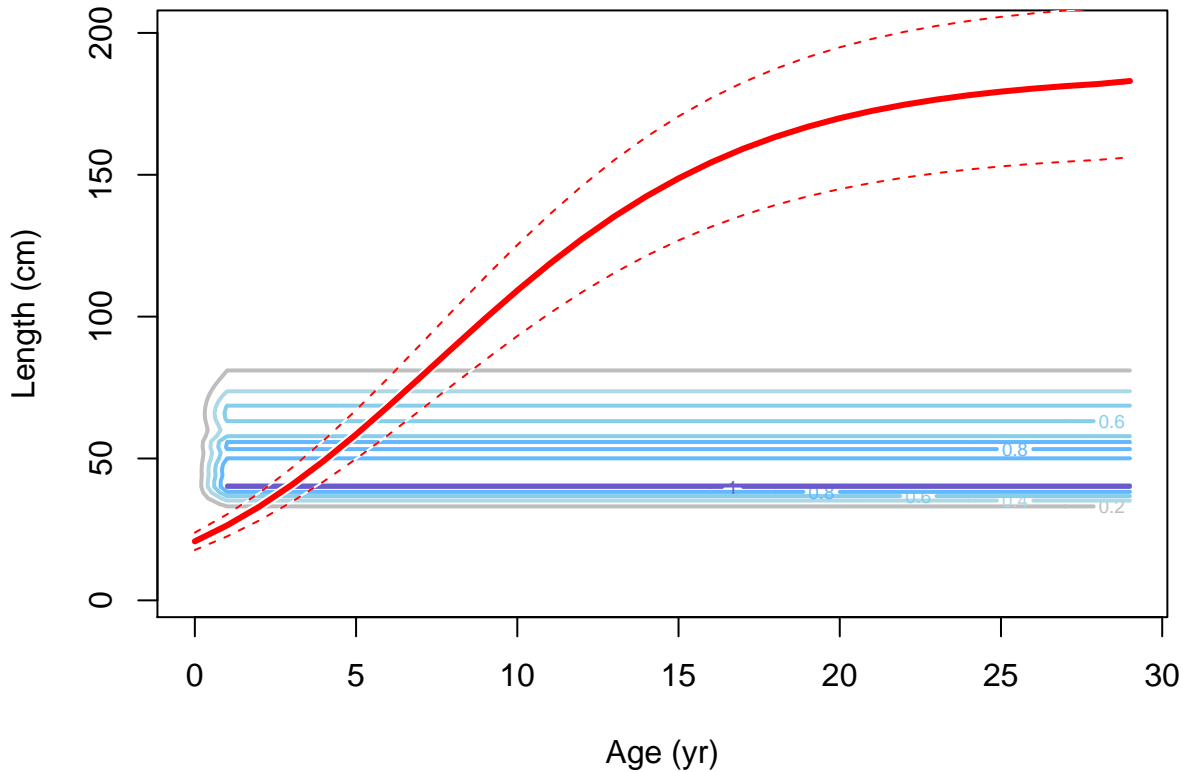


# Male ending year selectivity and growth for F6-OBJ\_N\_Q23

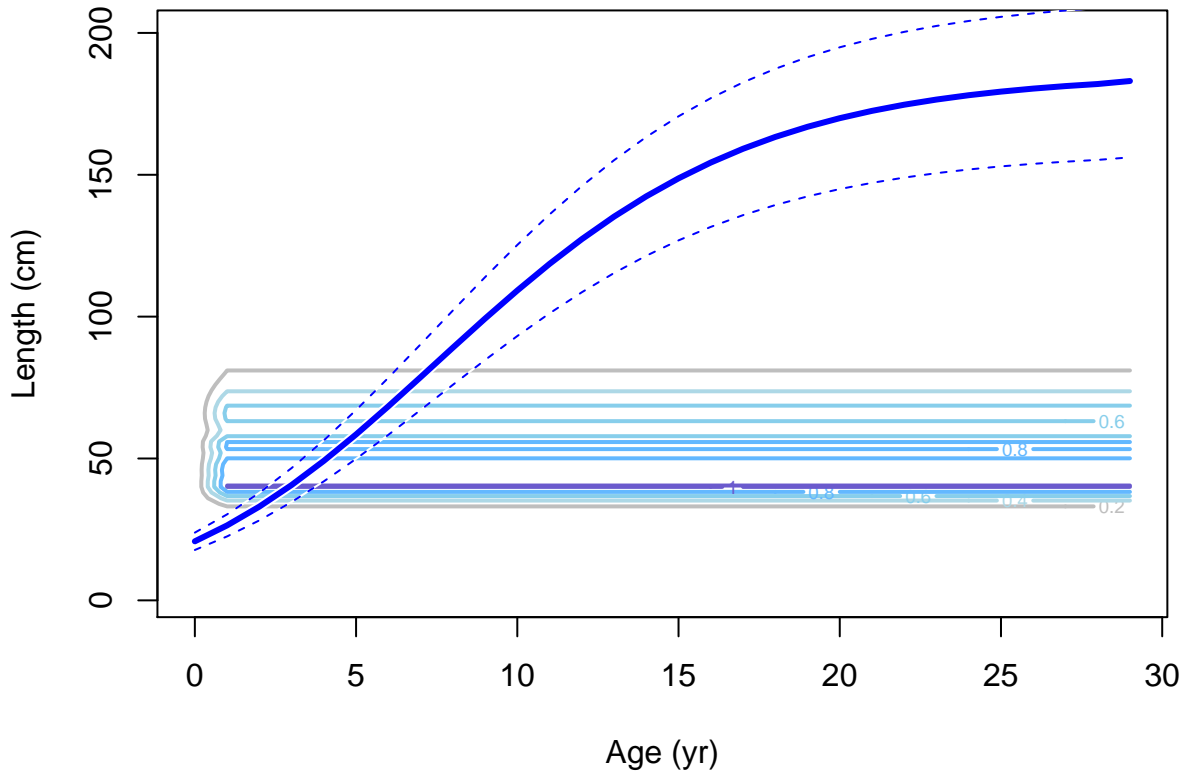




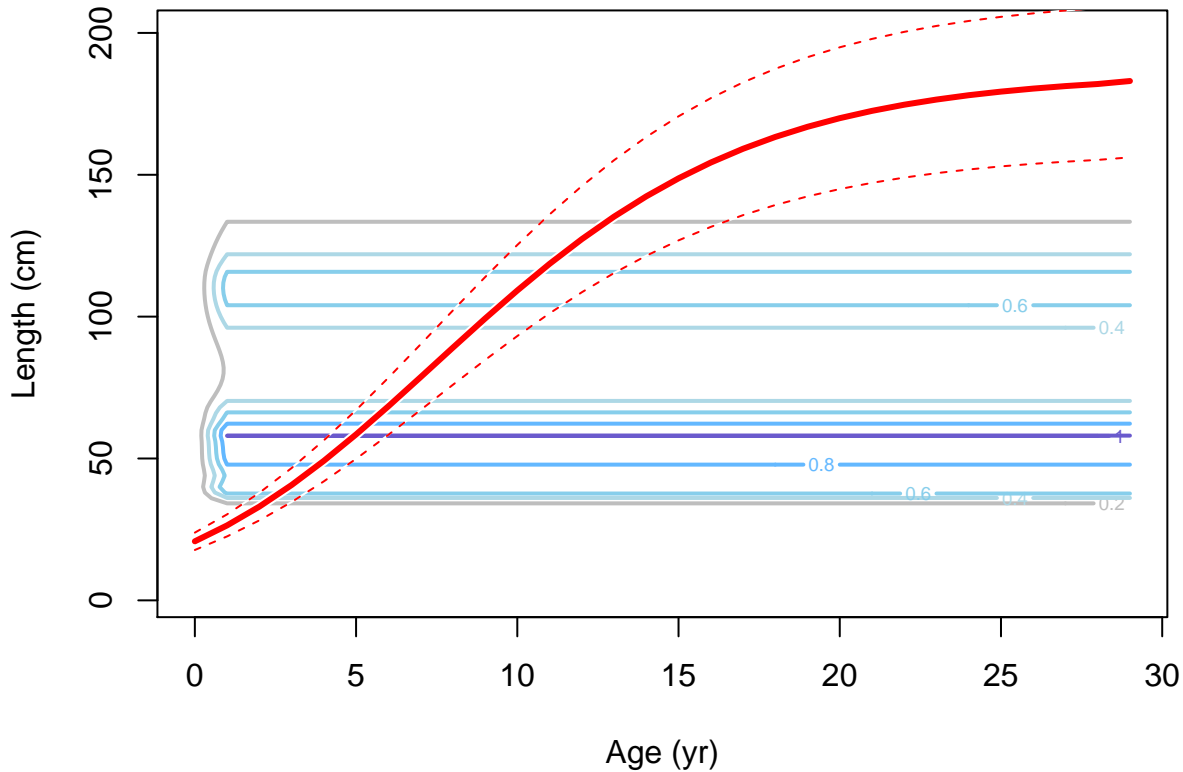
# Female ending year selectivity and growth for F7-OBJ\_Nc\_Q23



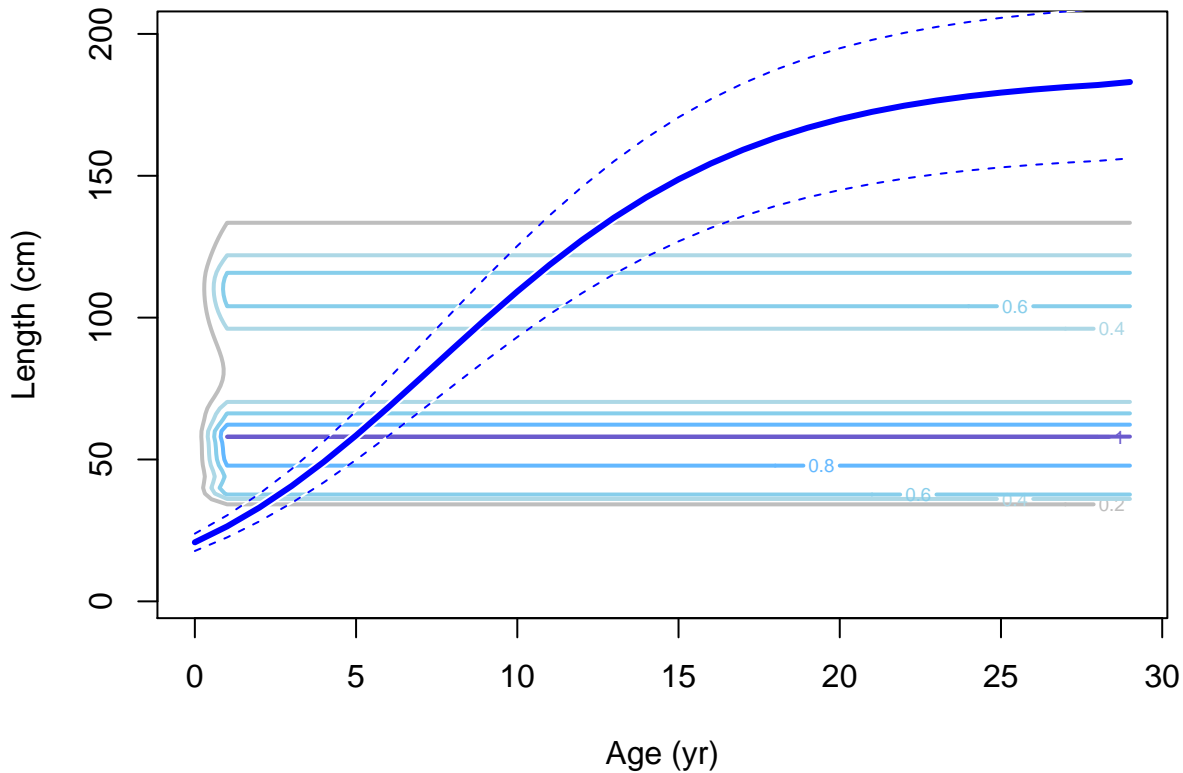
# Male ending year selectivity and growth for F7-OBJ\_Nc\_Q23



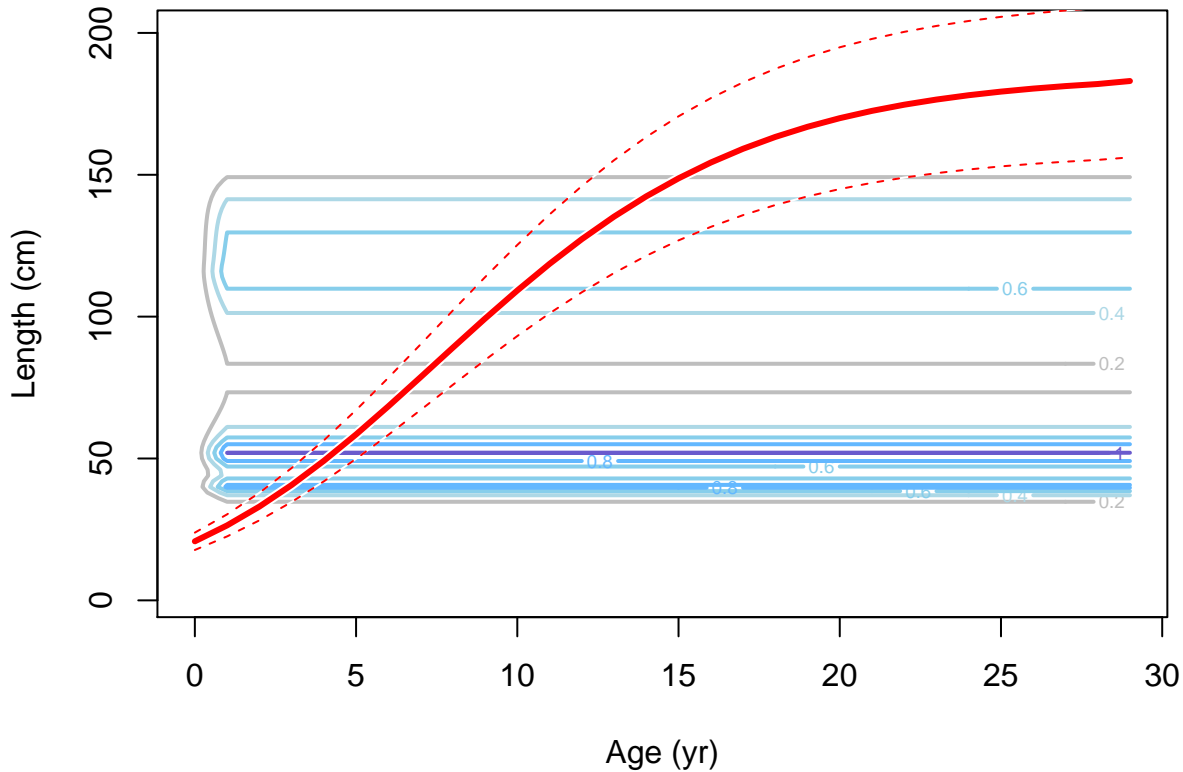
# Female ending year selectivity and growth for F8-OBJ\_C\_Q23



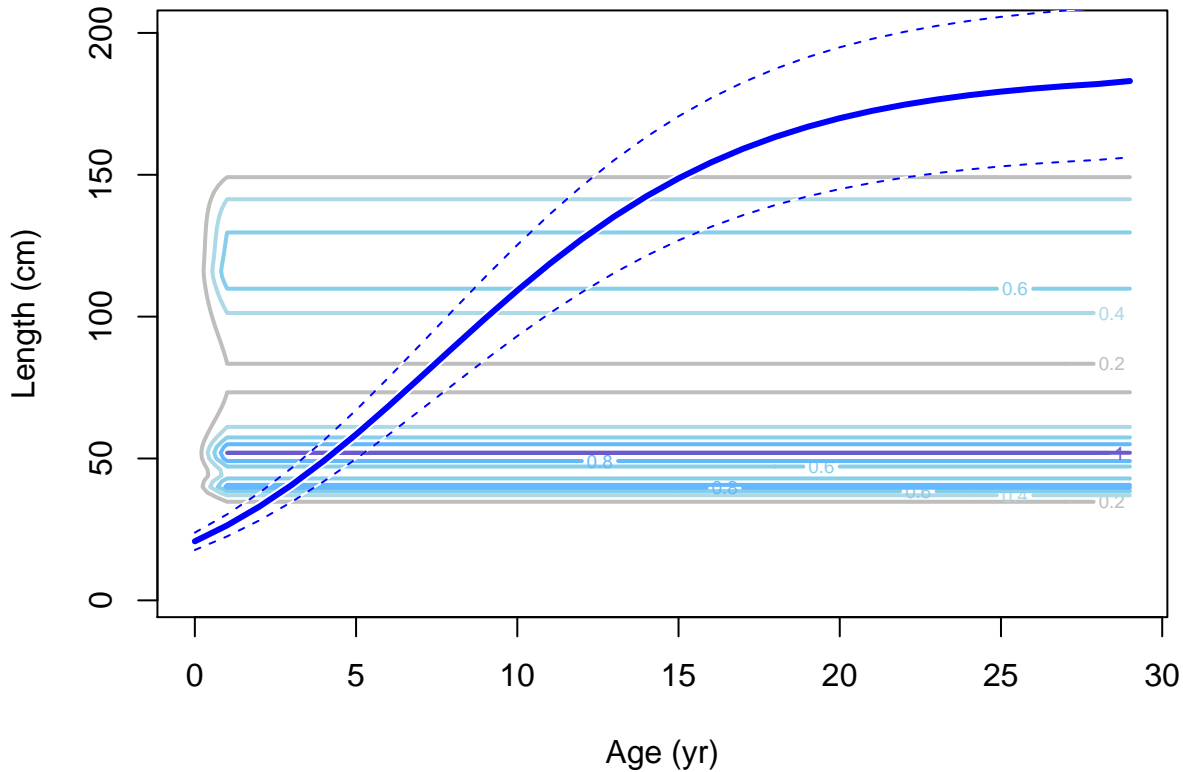
# Male ending year selectivity and growth for F8-OBJ\_C\_Q23



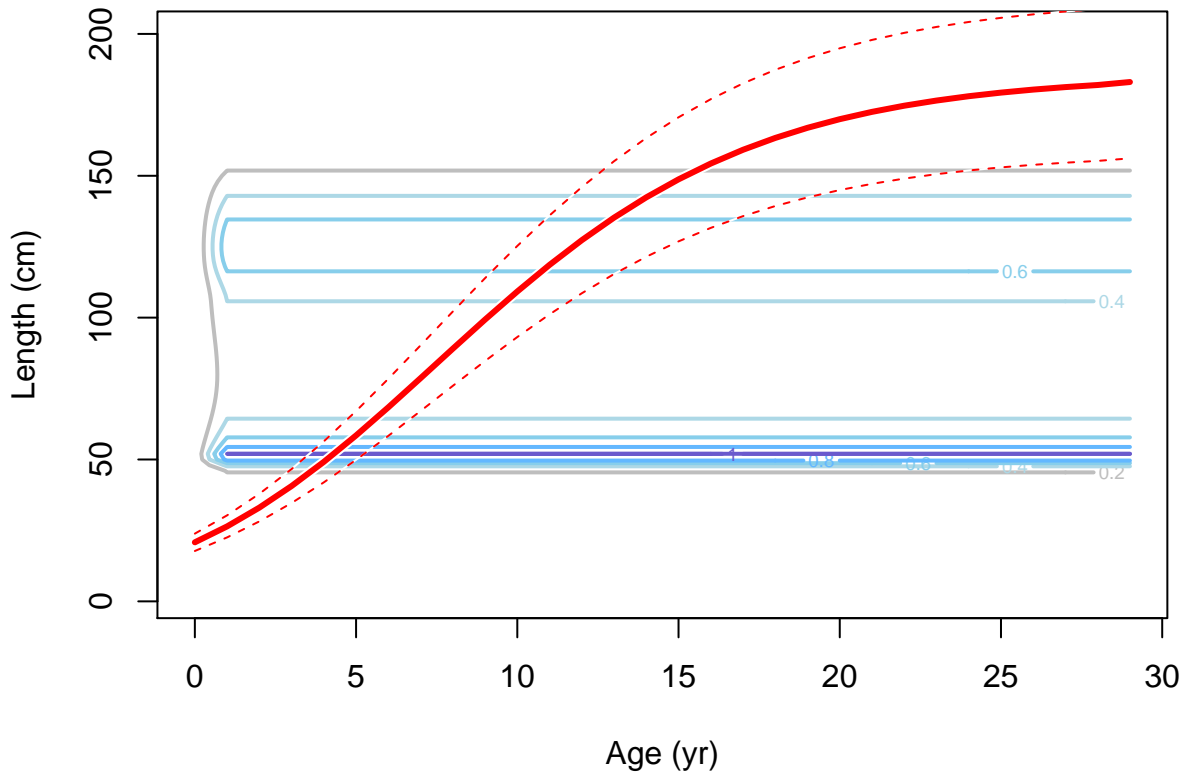
# Female ending year selectivity and growth for F9-OBJ\_Cc\_Q23



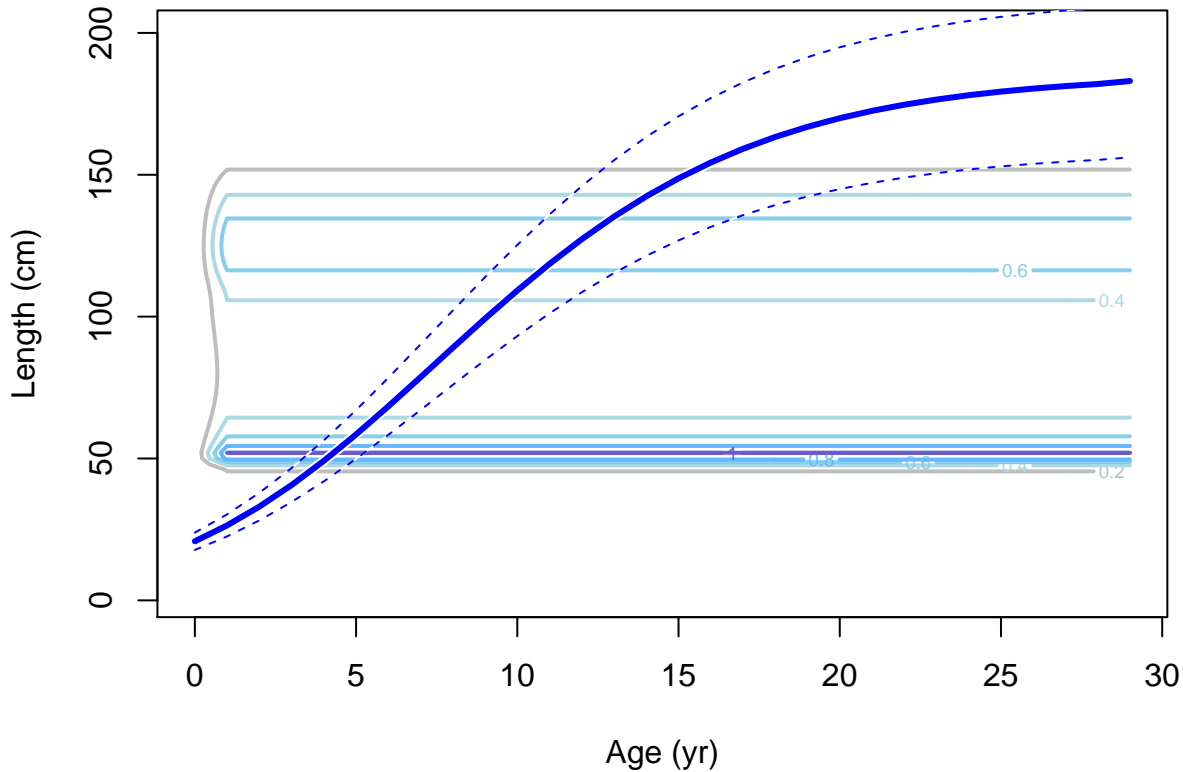
# Male ending year selectivity and growth for F9-OBJ\_Cc\_Q23



# Female ending year selectivity and growth for F10-OBJ\_S\_Q23

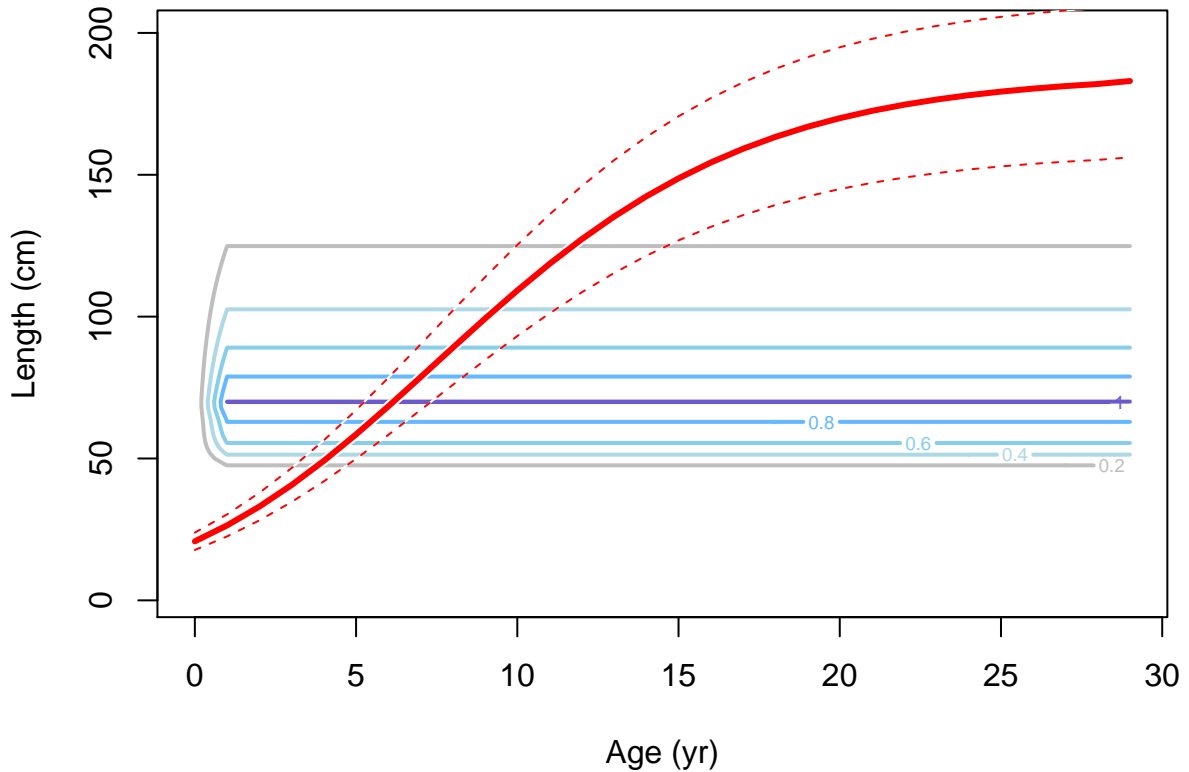


# Male ending year selectivity and growth for F10-OBJ\_S\_Q23

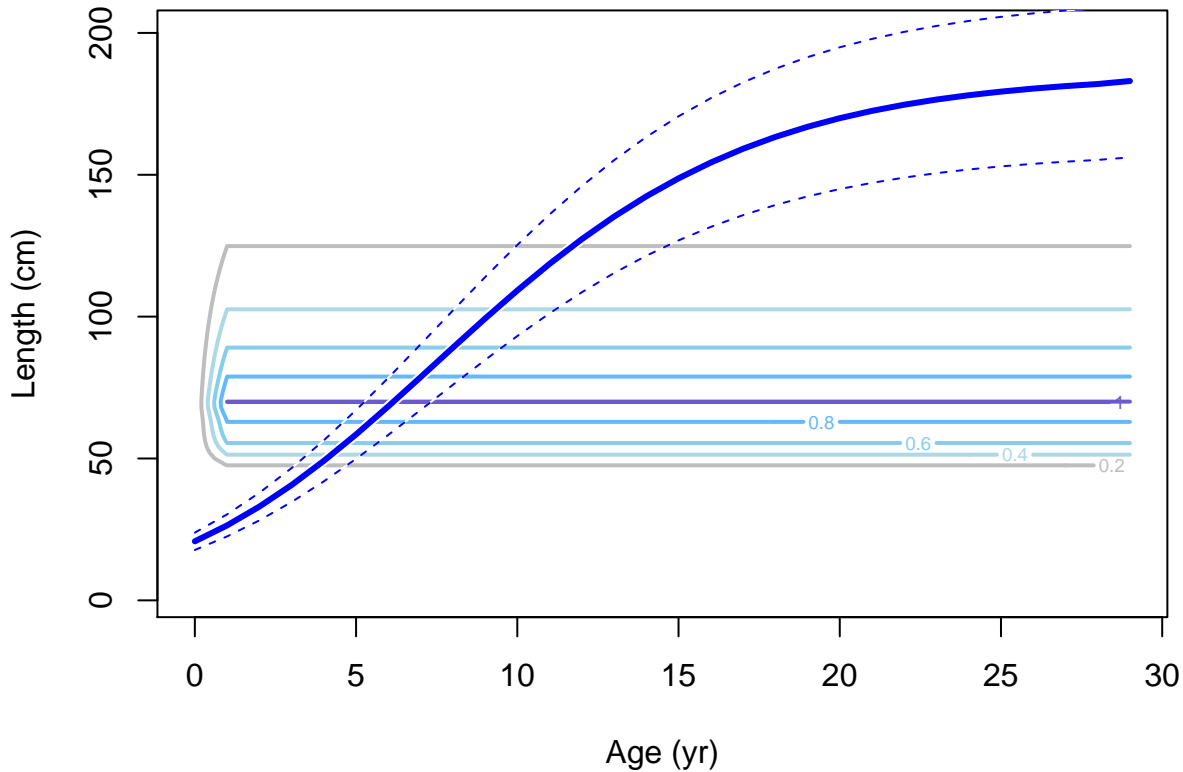




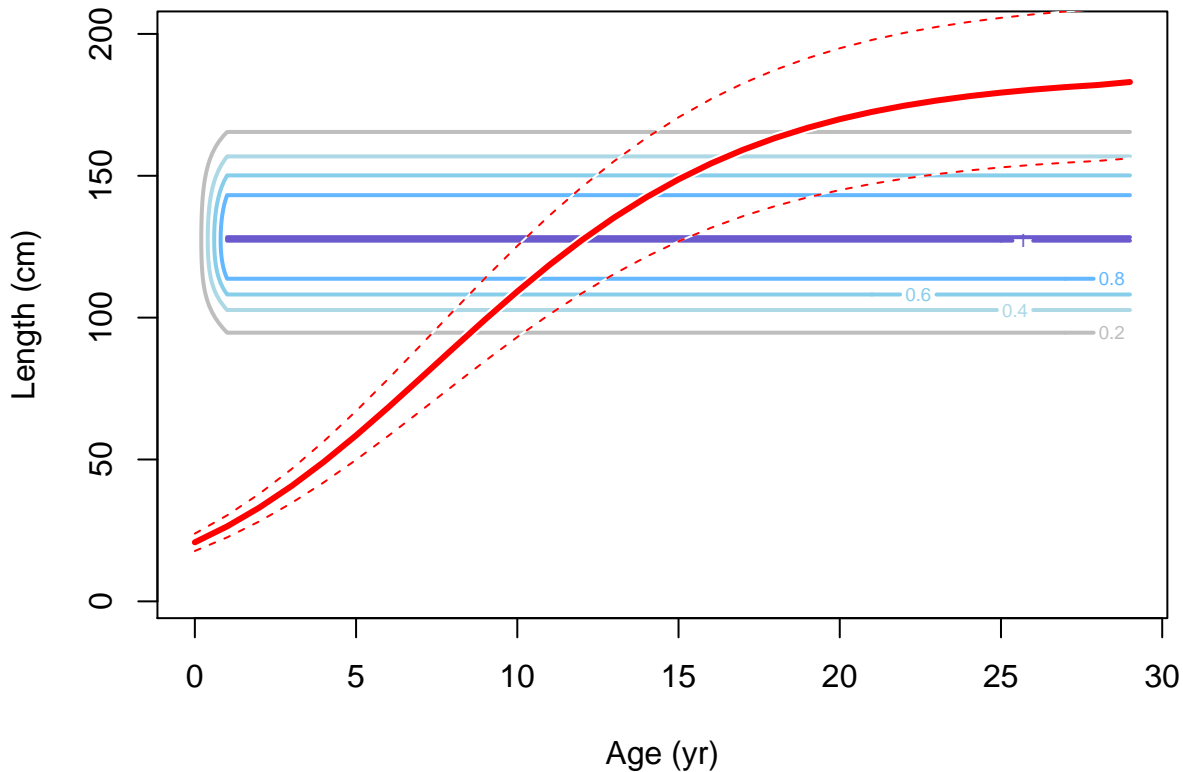
# Female ending year selectivity and growth for F11-NOA\_N



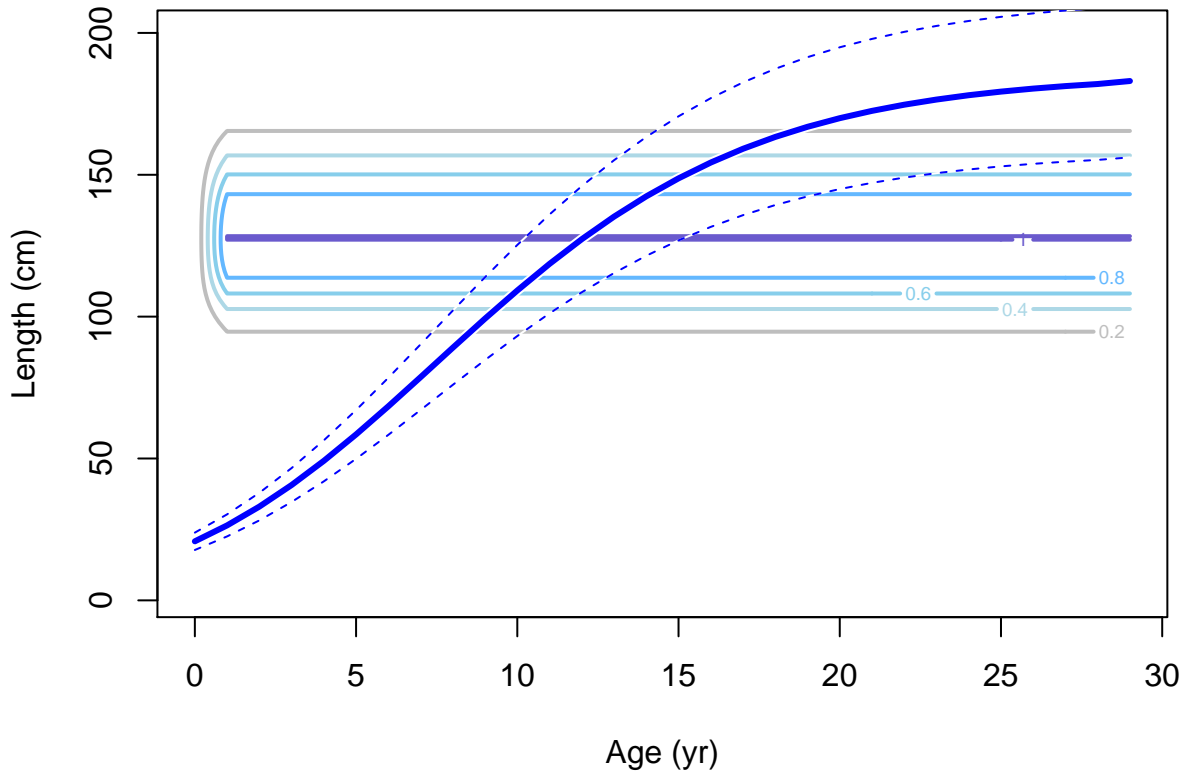
# Male ending year selectivity and growth for F11-NOA\_N



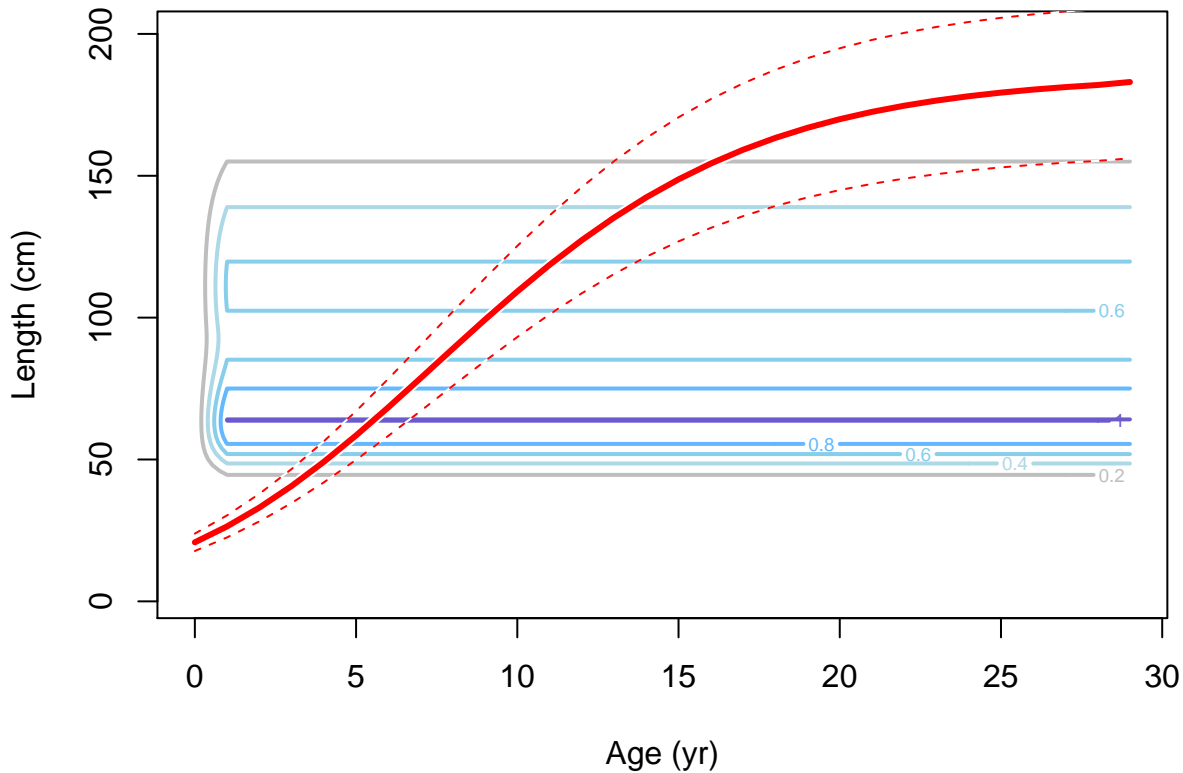
# Female ending year selectivity and growth for F12-NOA\_C



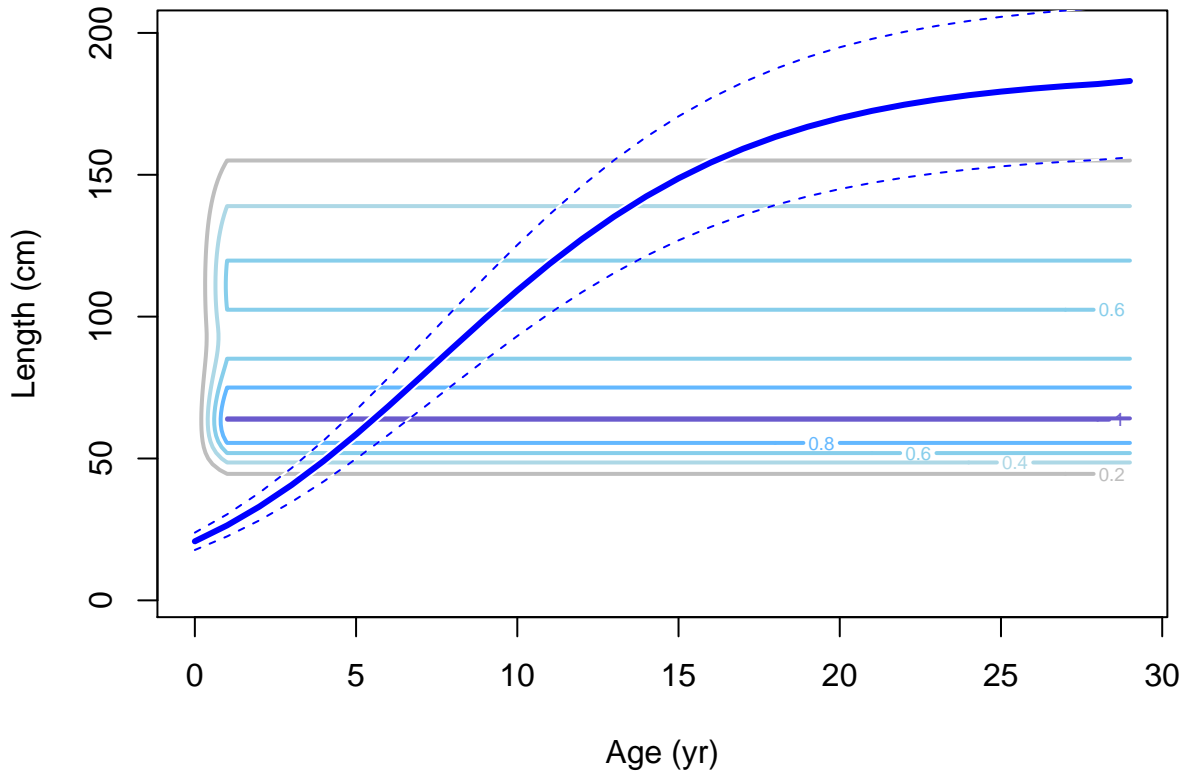
# Male ending year selectivity and growth for F12-NOA\_C



# Female ending year selectivity and growth for F13-NOA\_I

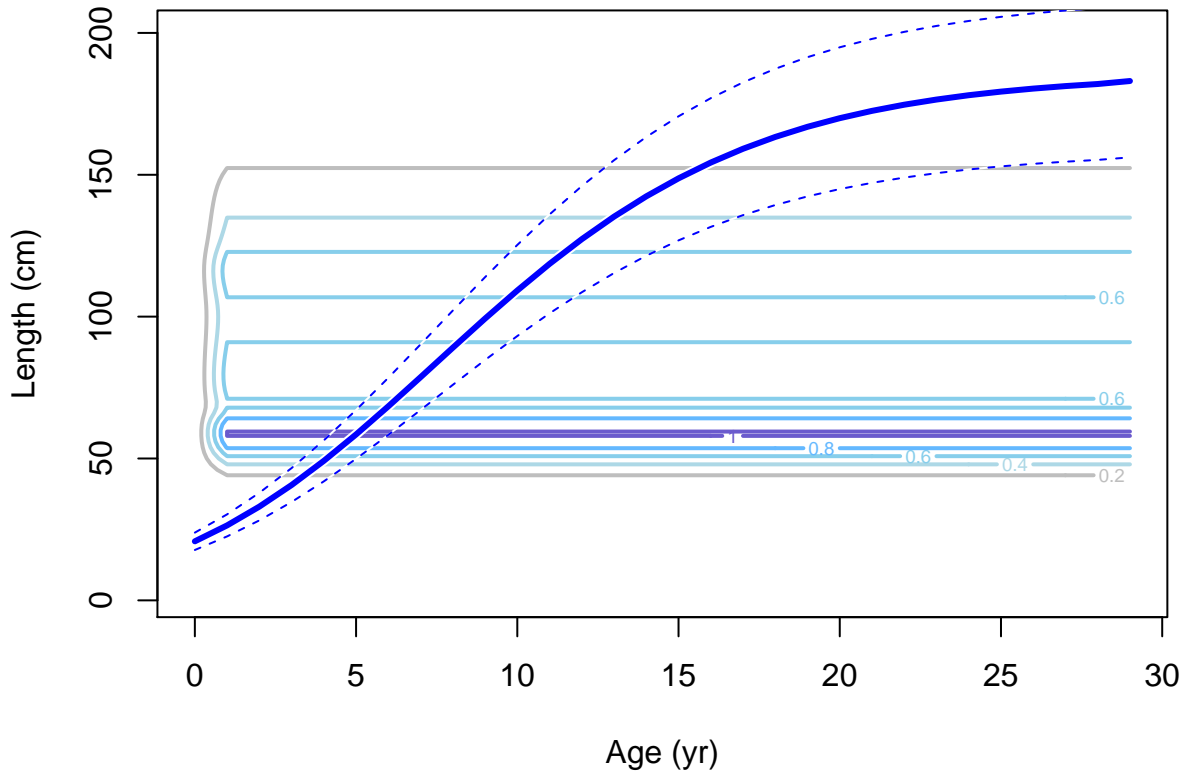


# Male ending year selectivity and growth for F13-NOA\_I



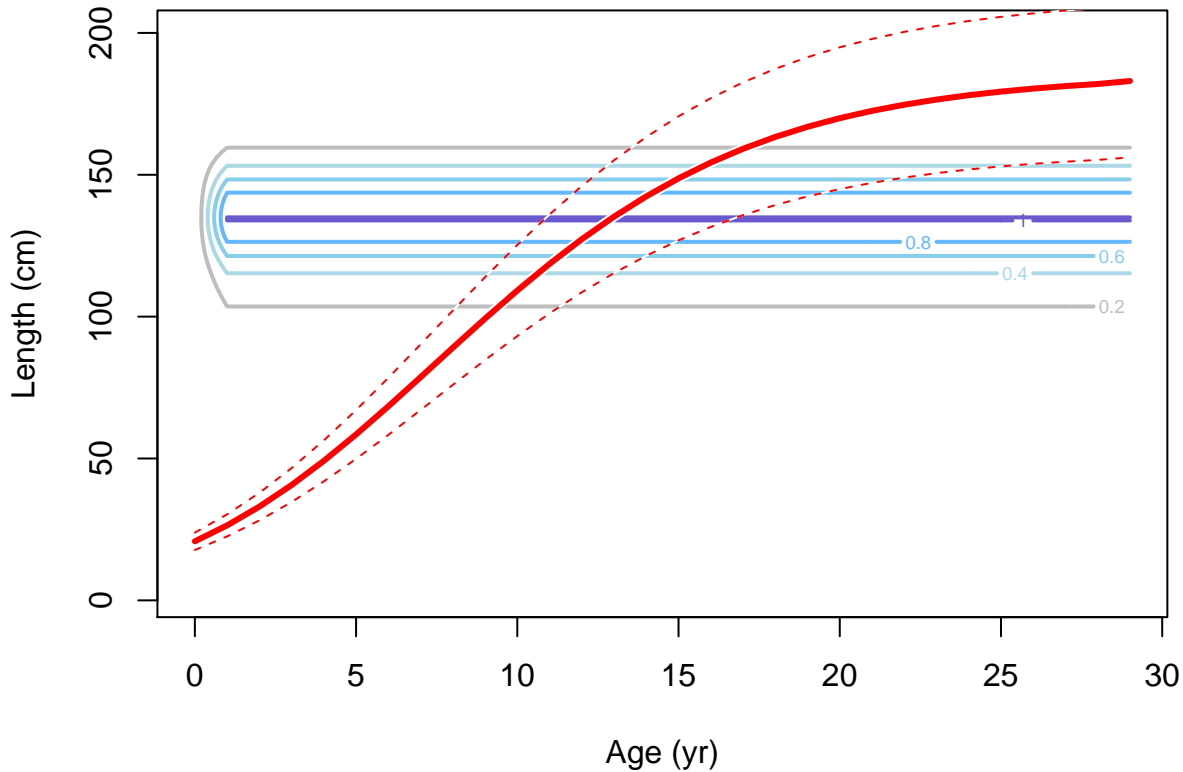


# Male ending year selectivity and growth for F14-NOA\_S

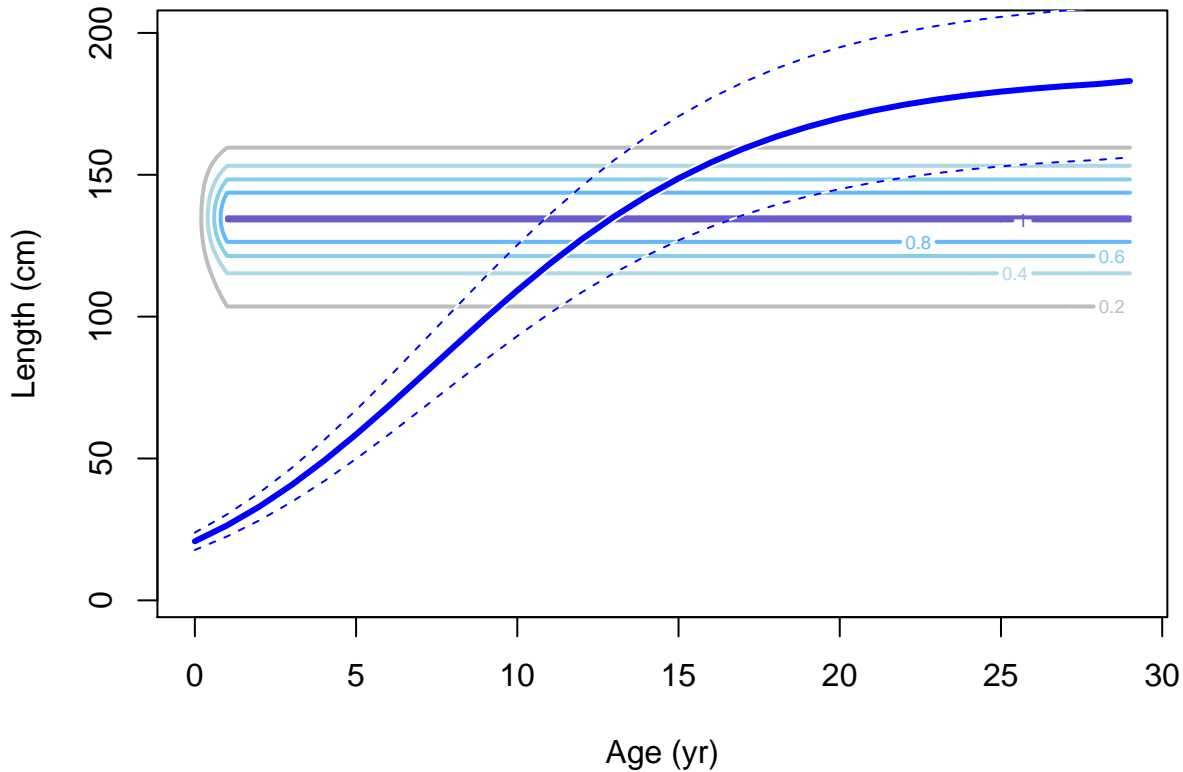




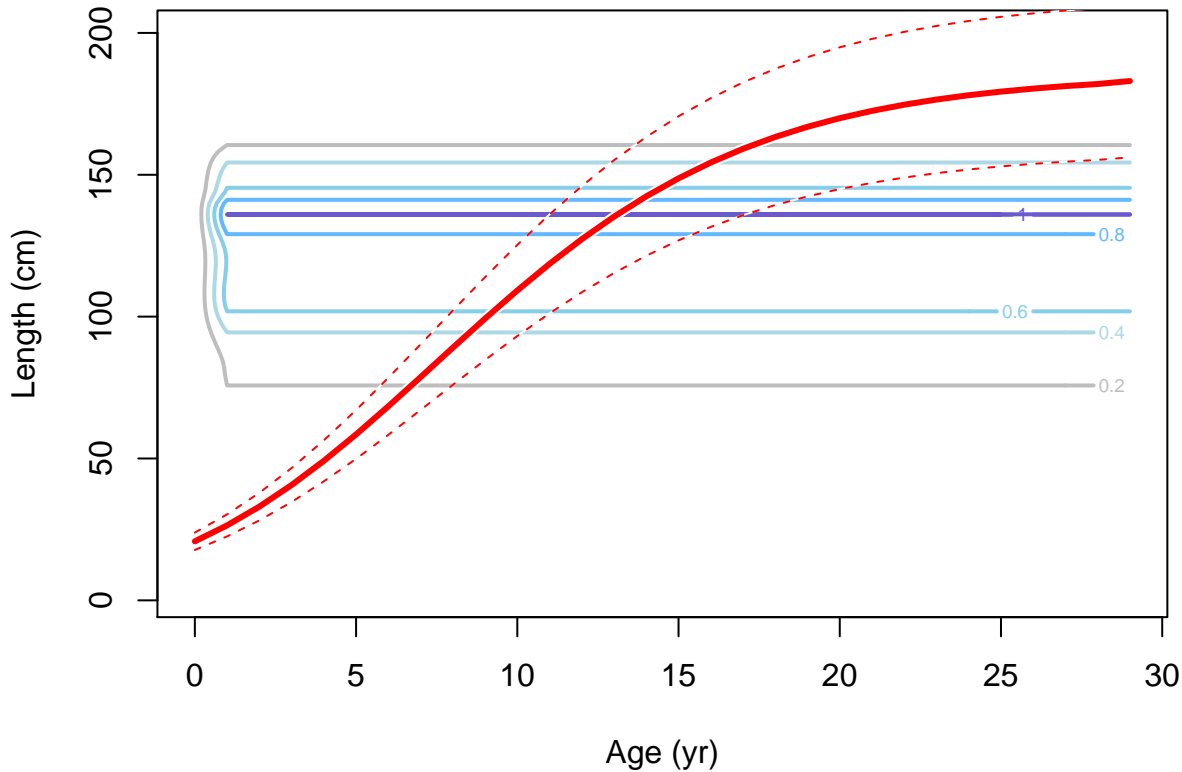
# Female ending year selectivity and growth for F15-DEL\_N



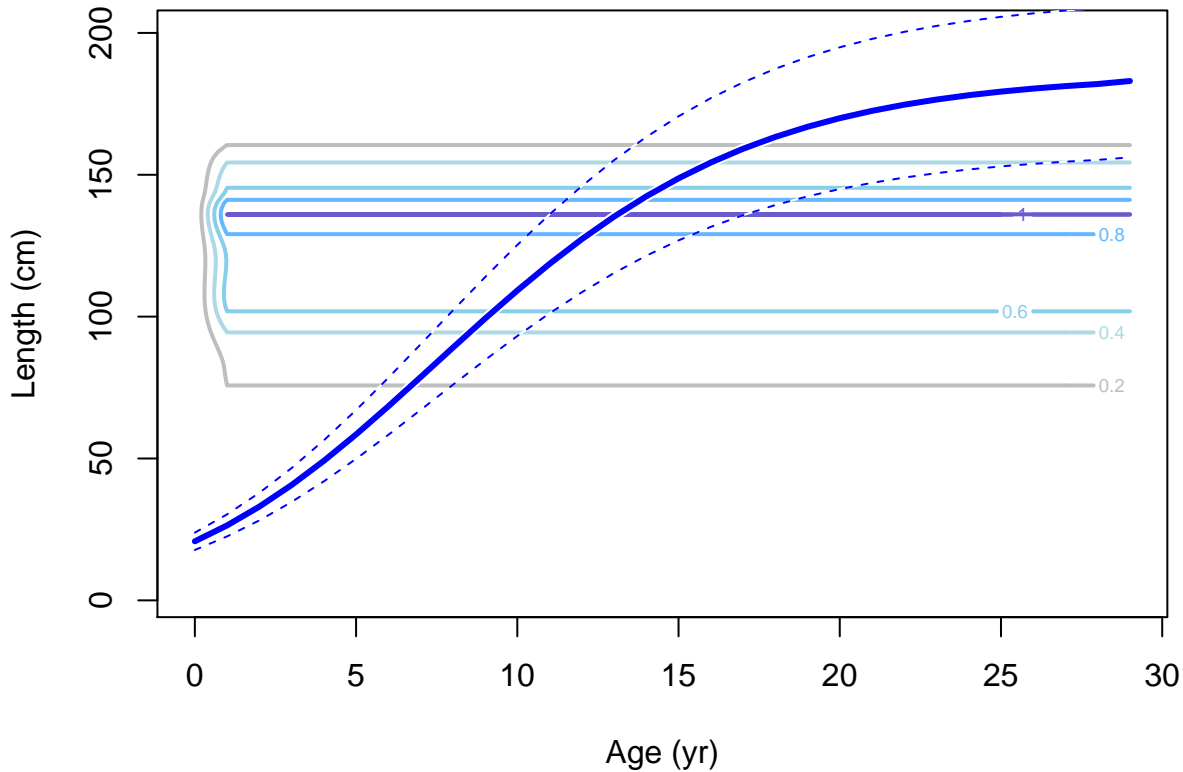
# Male ending year selectivity and growth for F15-DEL\_N



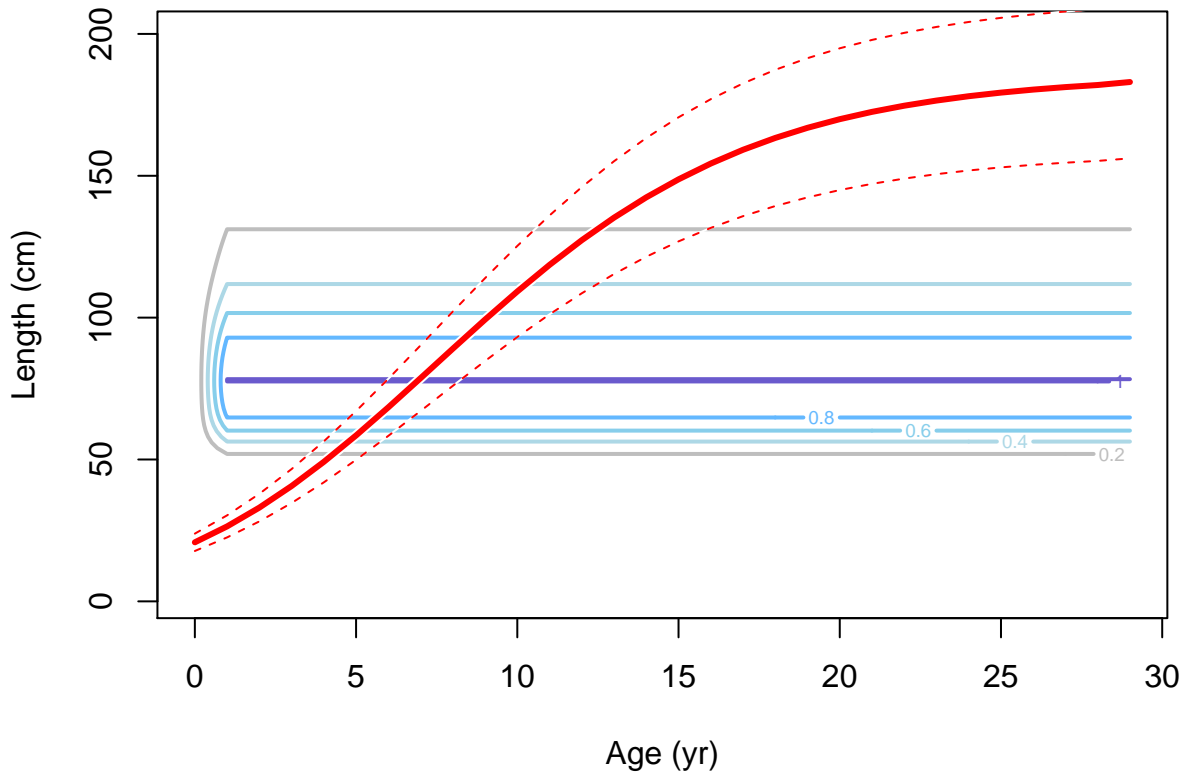
# Female ending year selectivity and growth for F16-DEL\_NE



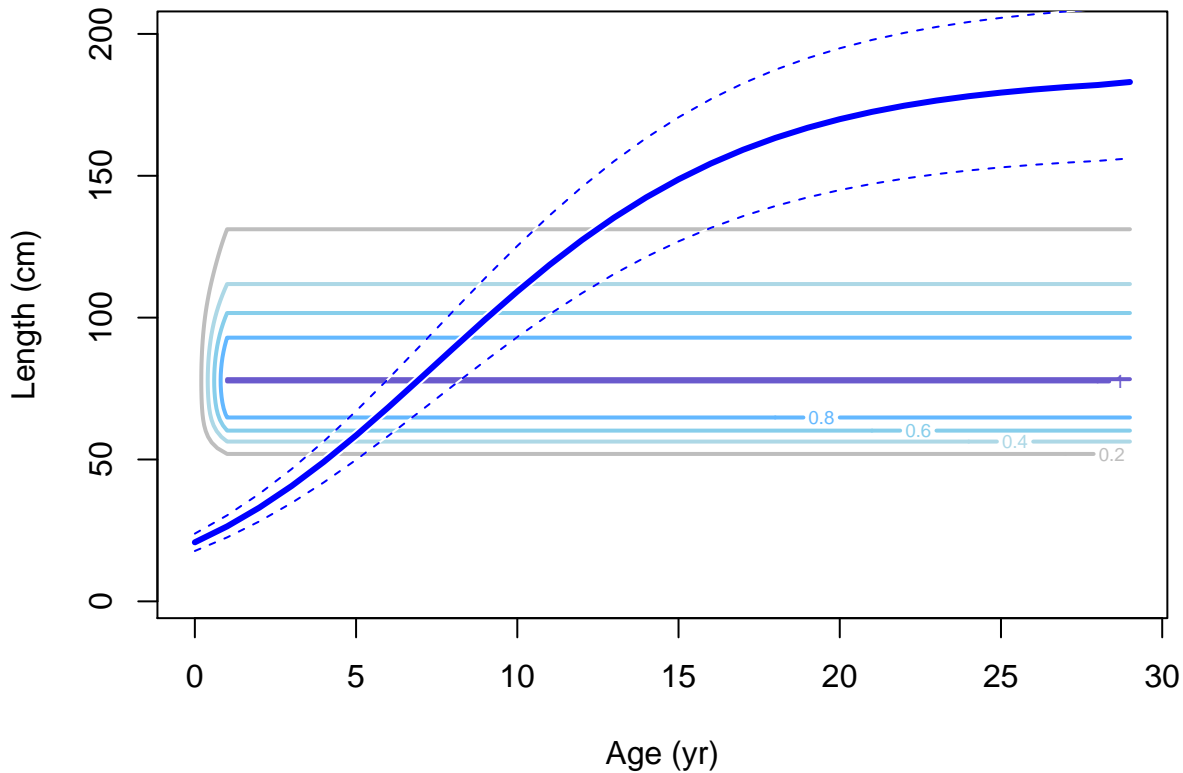
# Male ending year selectivity and growth for F16-DEL\_NE



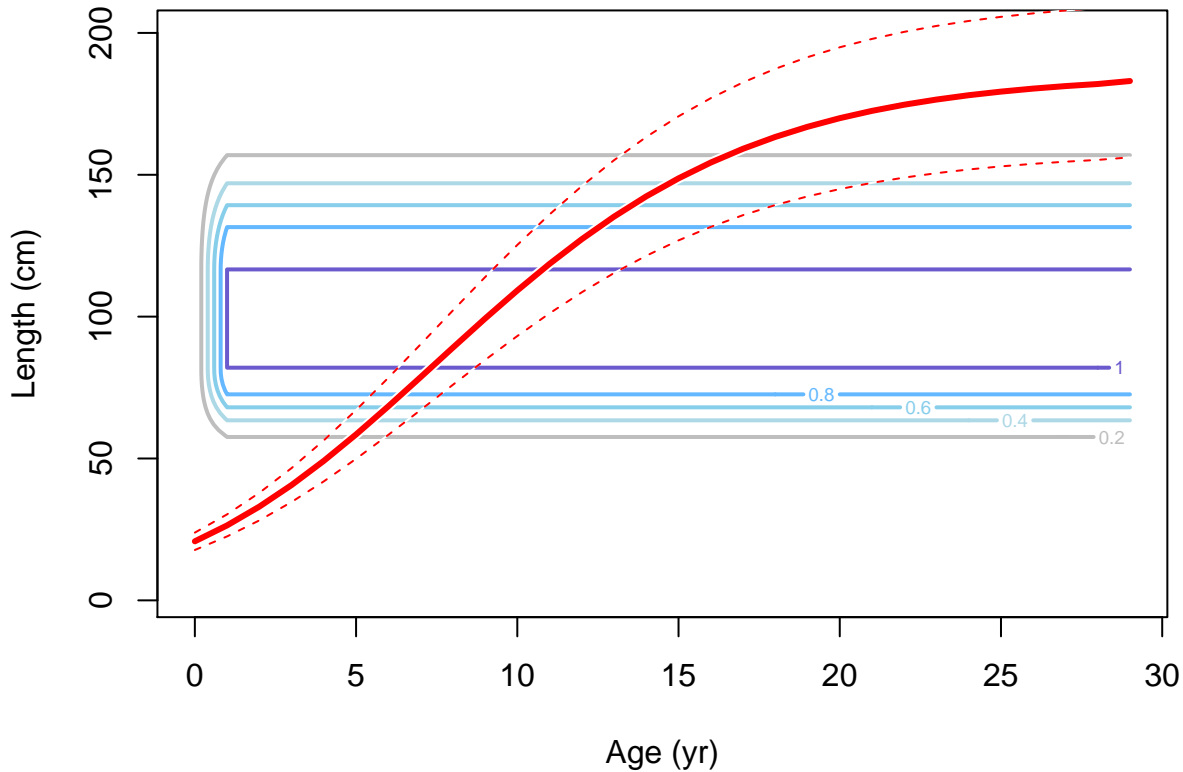
# Female ending year selectivity and growth for F17-DEL\_M



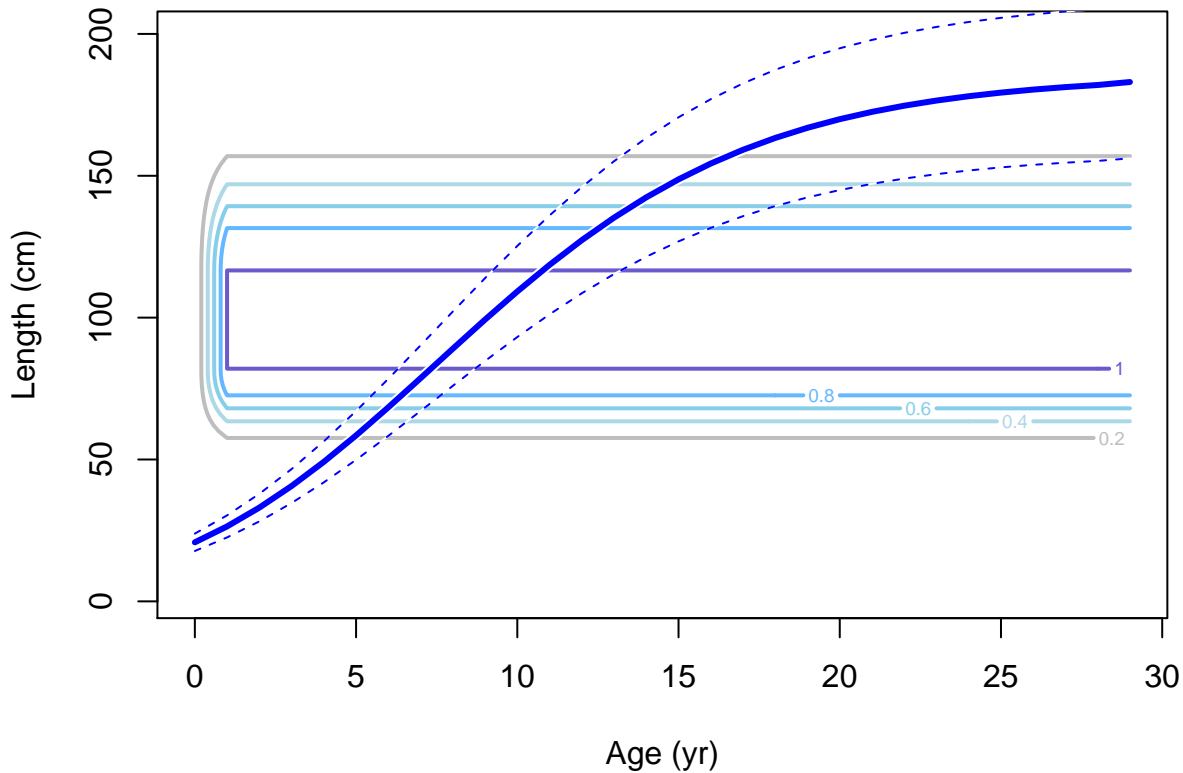
# Male ending year selectivity and growth for F17-DEL\_M



# Female ending year selectivity and growth for F18-DEL\_C

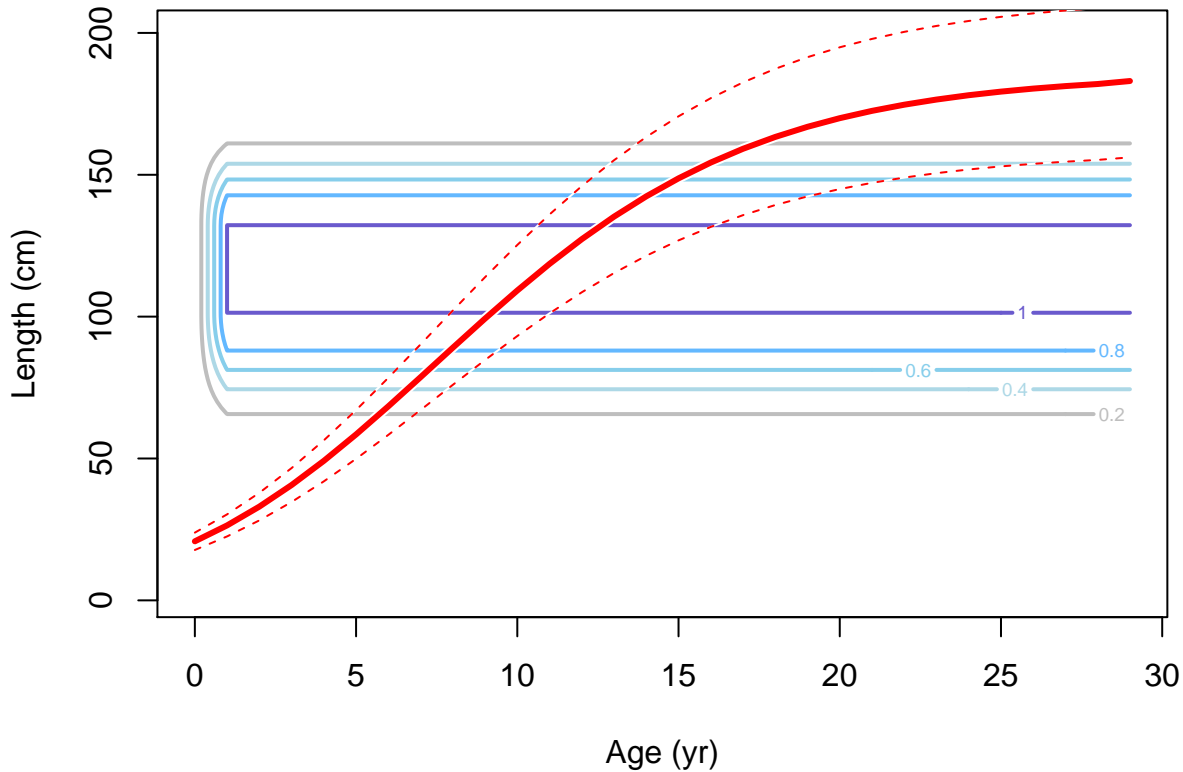


# Male ending year selectivity and growth for F18-DEL\_C

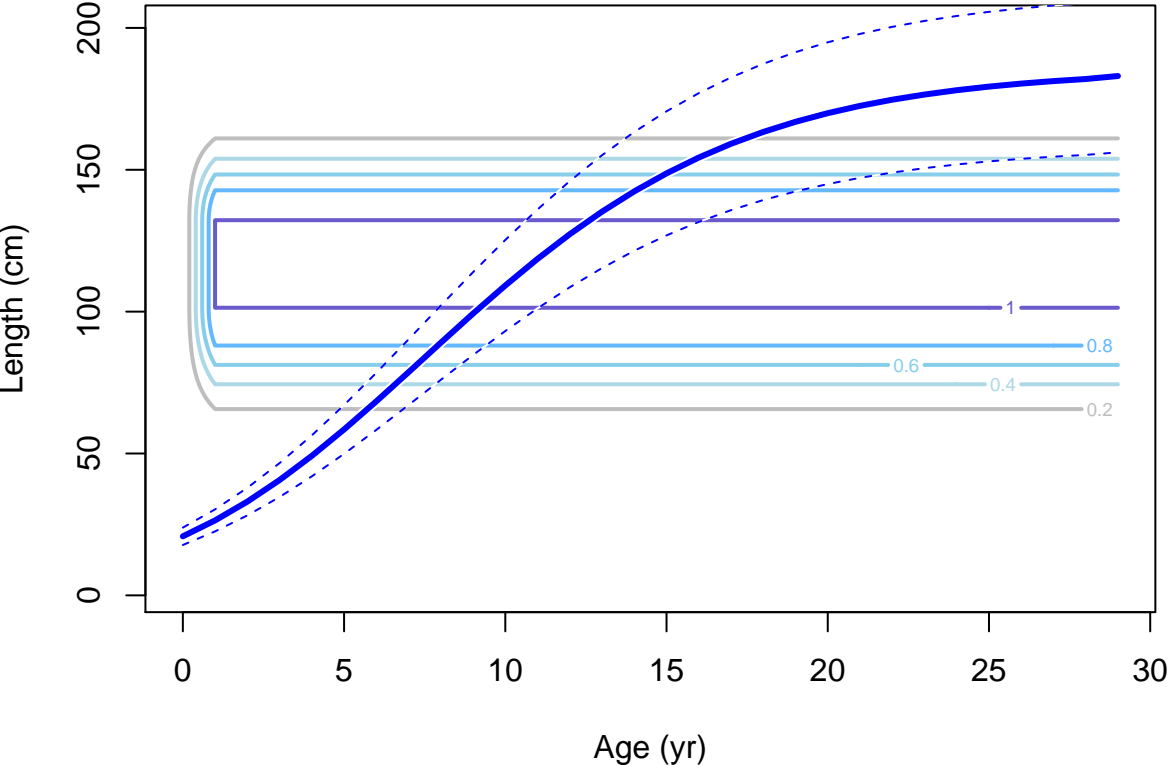




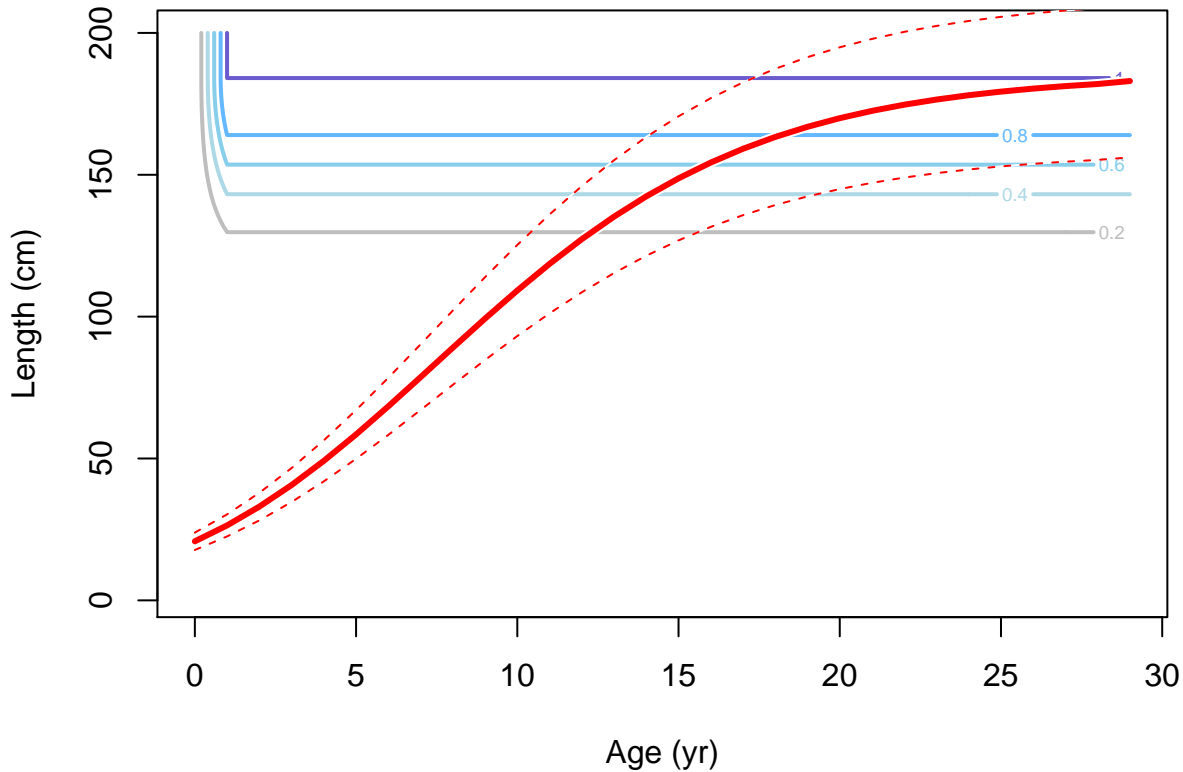
# Female ending year selectivity and growth for F19-DEL\_P



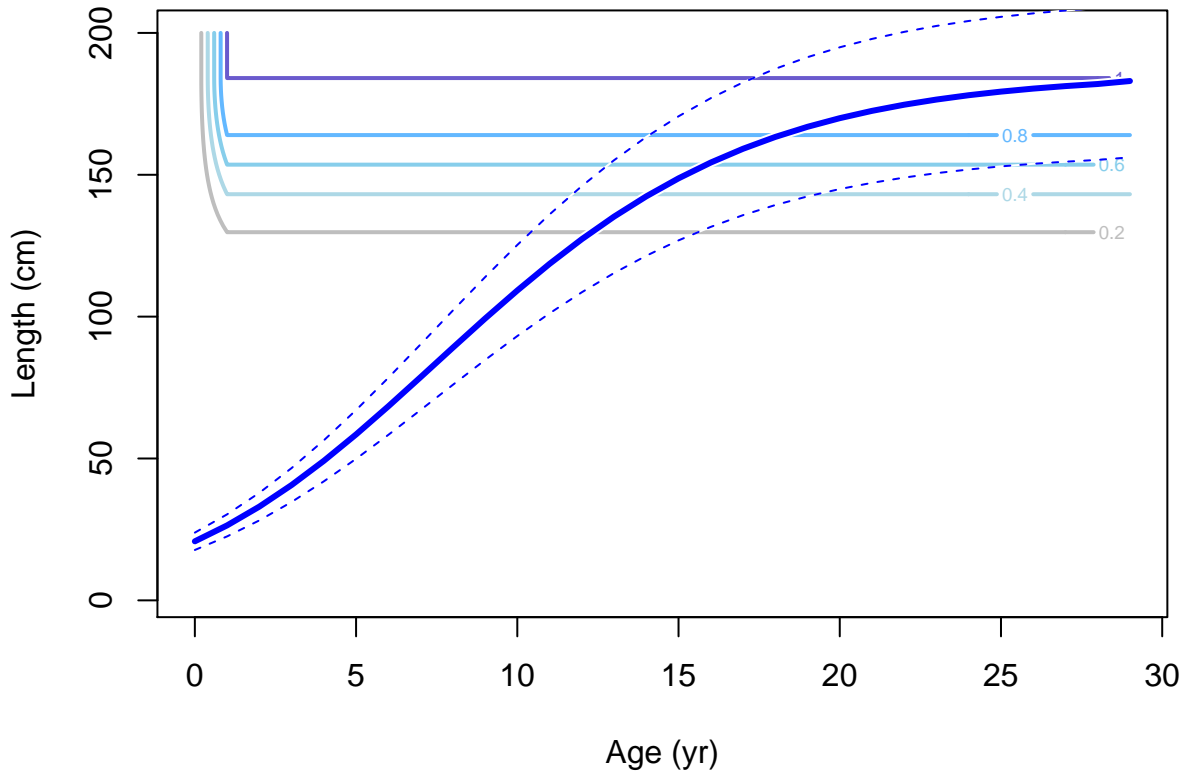
# Male ending year selectivity and growth for F19-DEL\_P



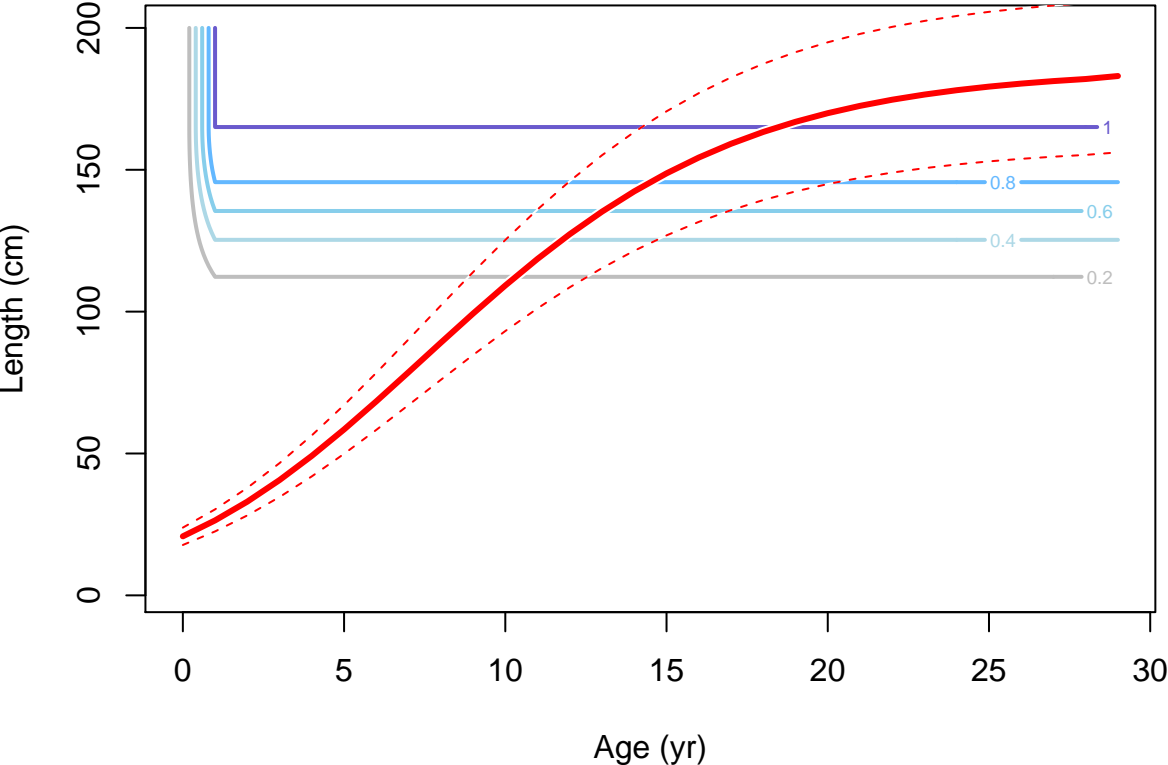
# Female ending year selectivity and growth for F20-DEL\_S



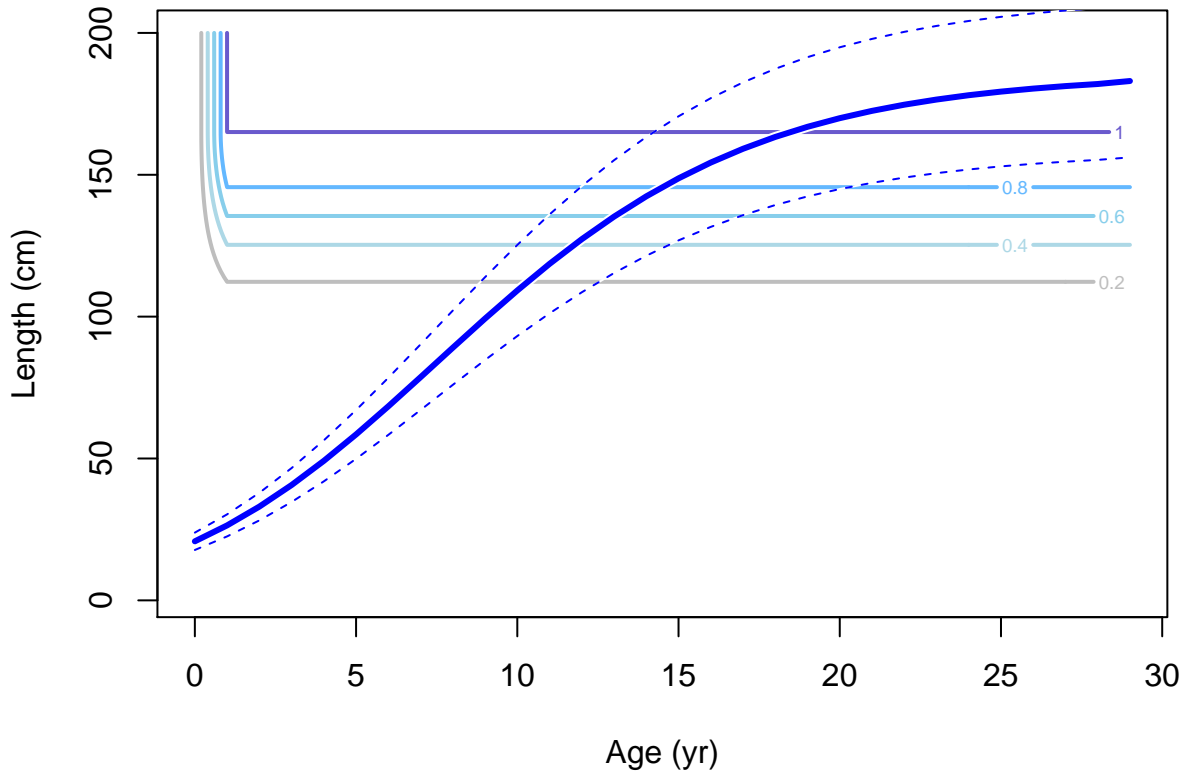
# Male ending year selectivity and growth for F20-DEL\_S



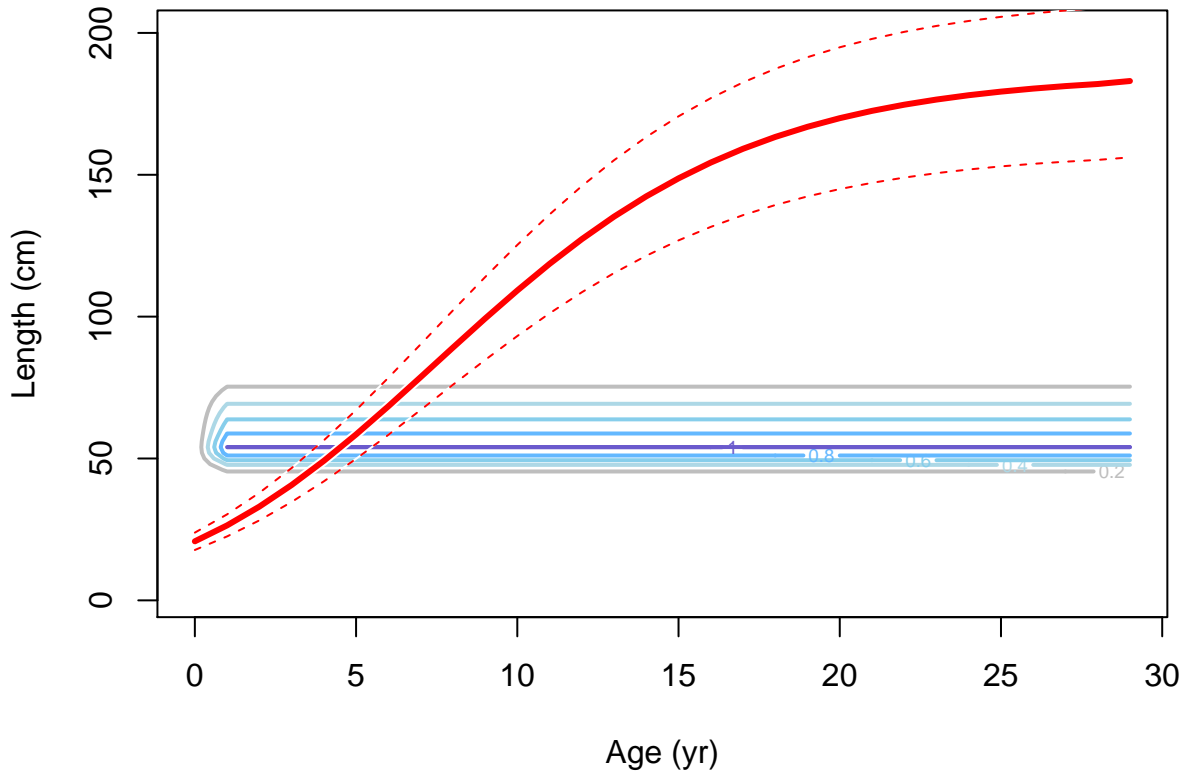
# Female ending year selectivity and growth for F21-DEL\_I



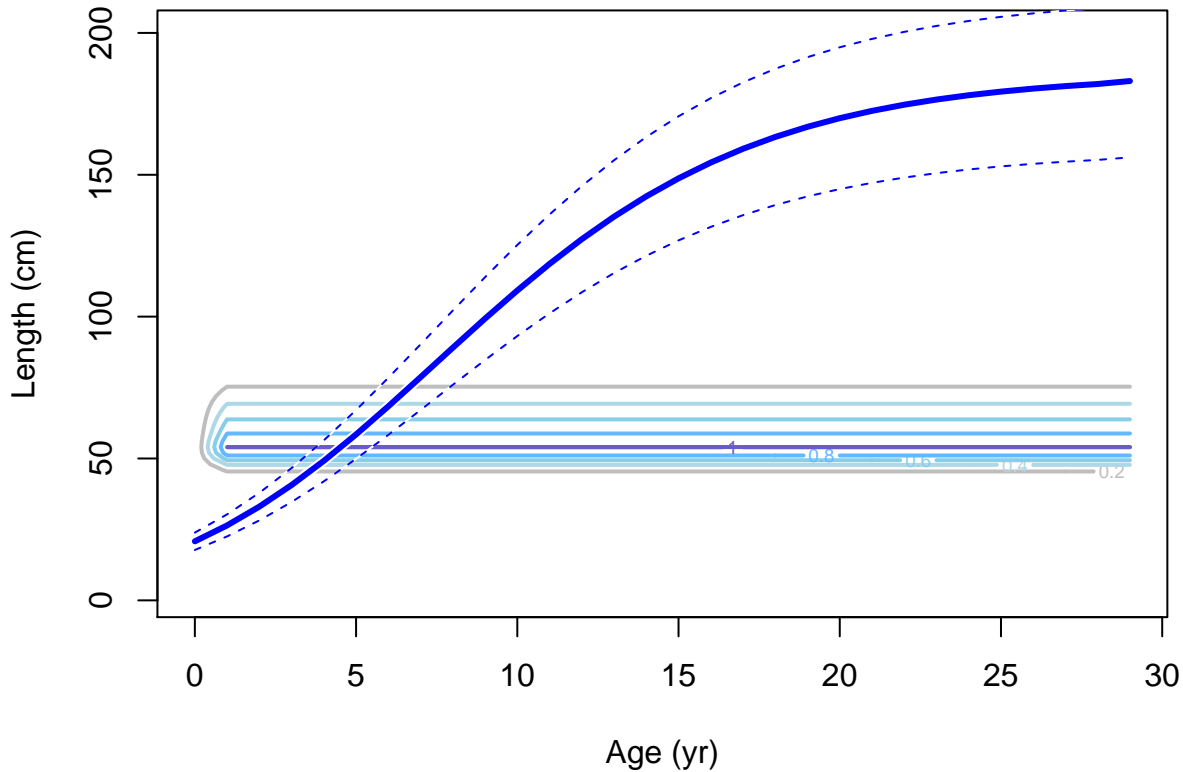
# Male ending year selectivity and growth for F21-DEL\_I



# Female ending year selectivity and growth for F22-BB

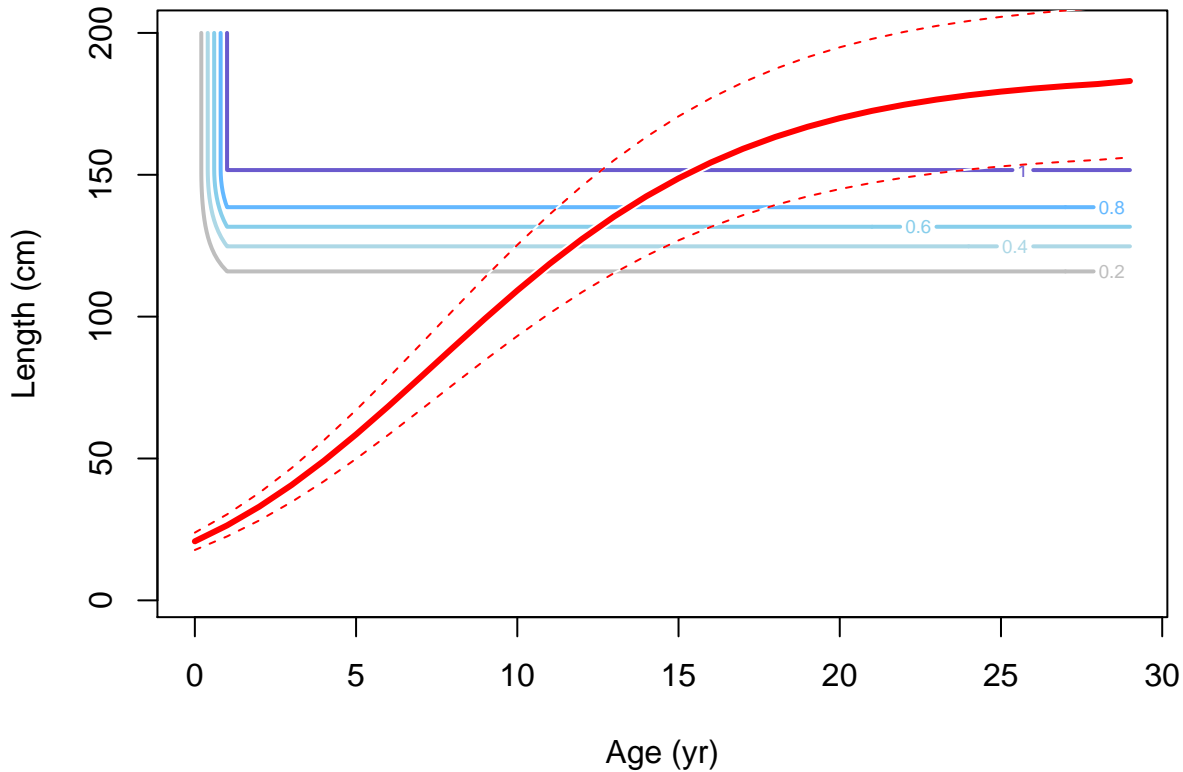


# Male ending year selectivity and growth for F22-BB

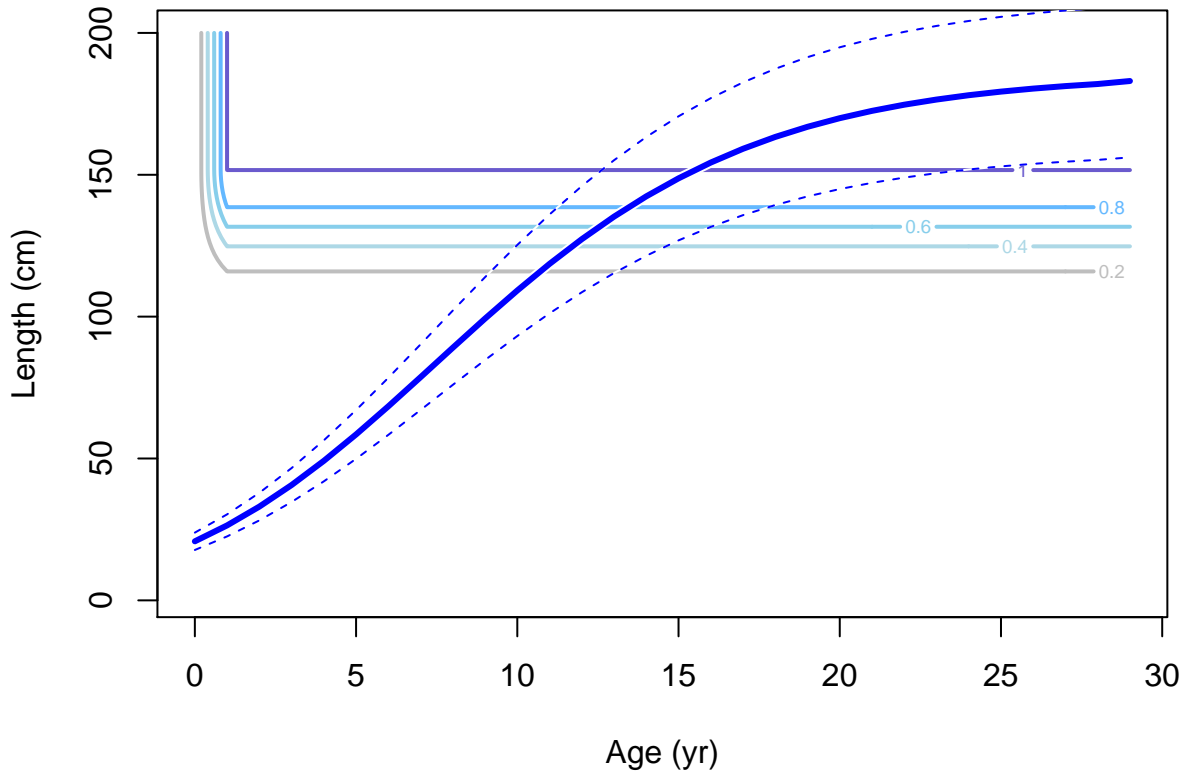




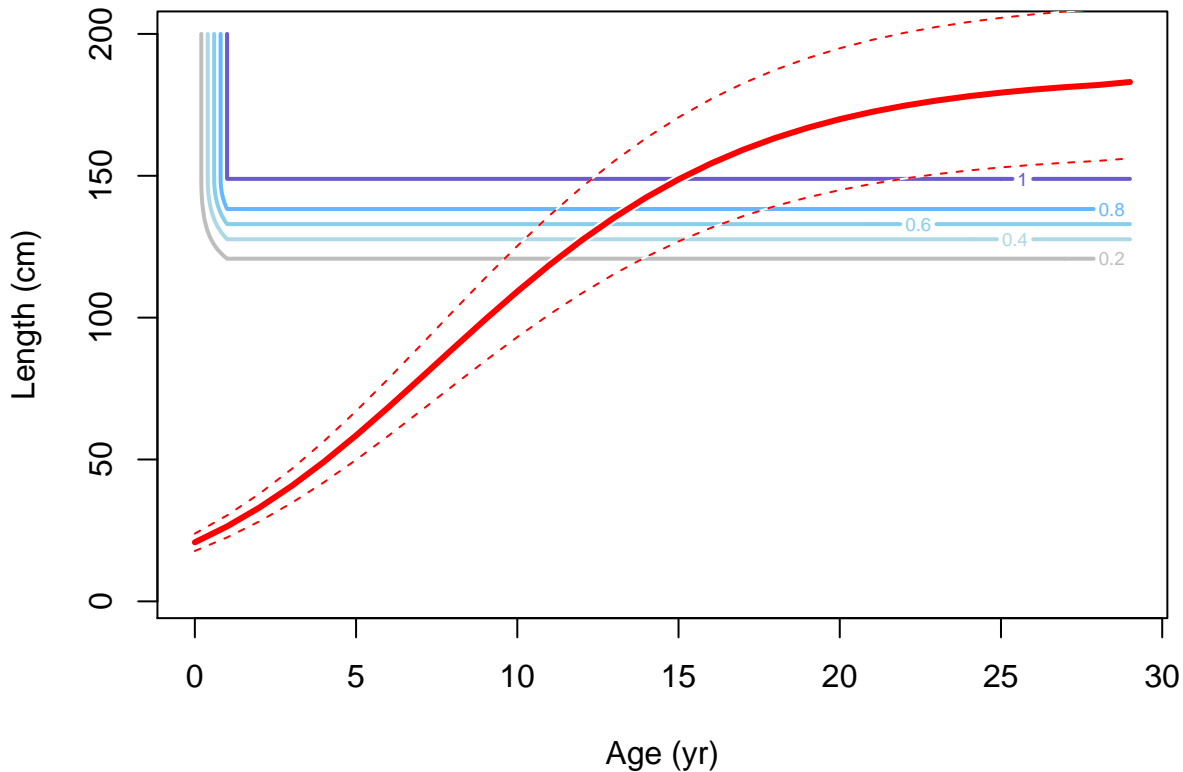
# Female ending year selectivity and growth for F29-LL\_W\_Q14n



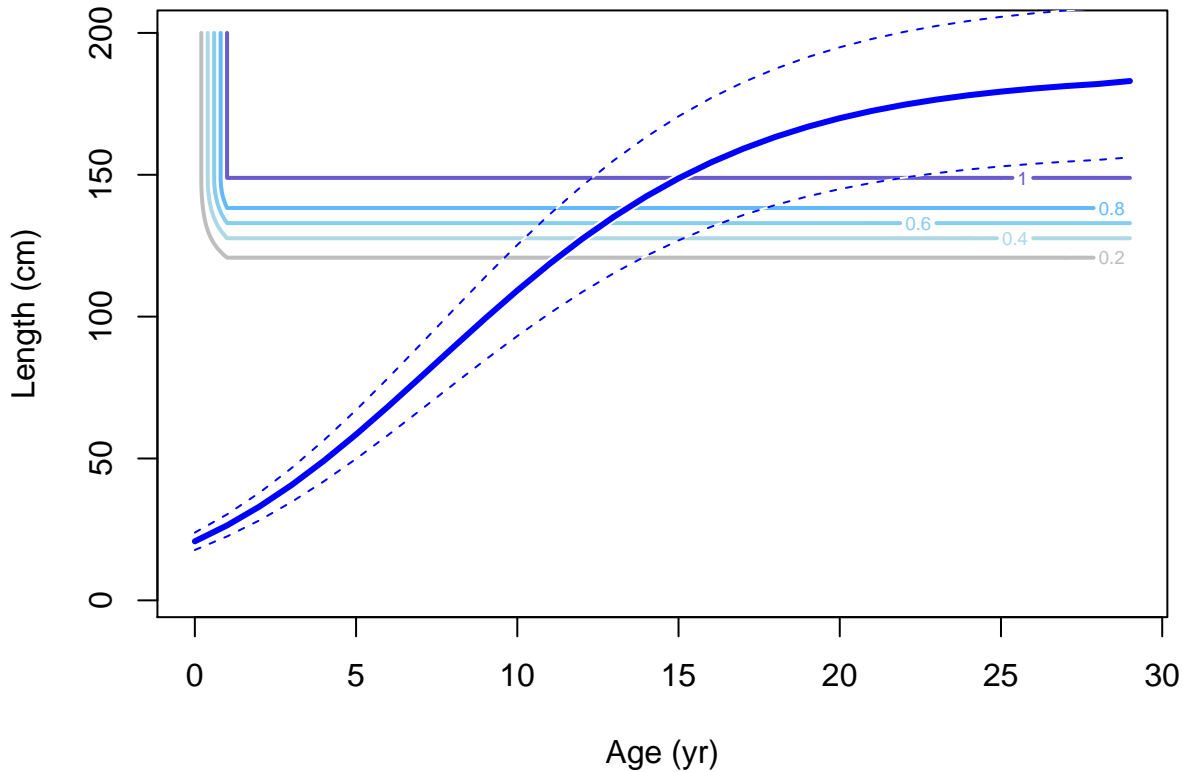
# Male ending year selectivity and growth for F29-LL\_W\_Q14n



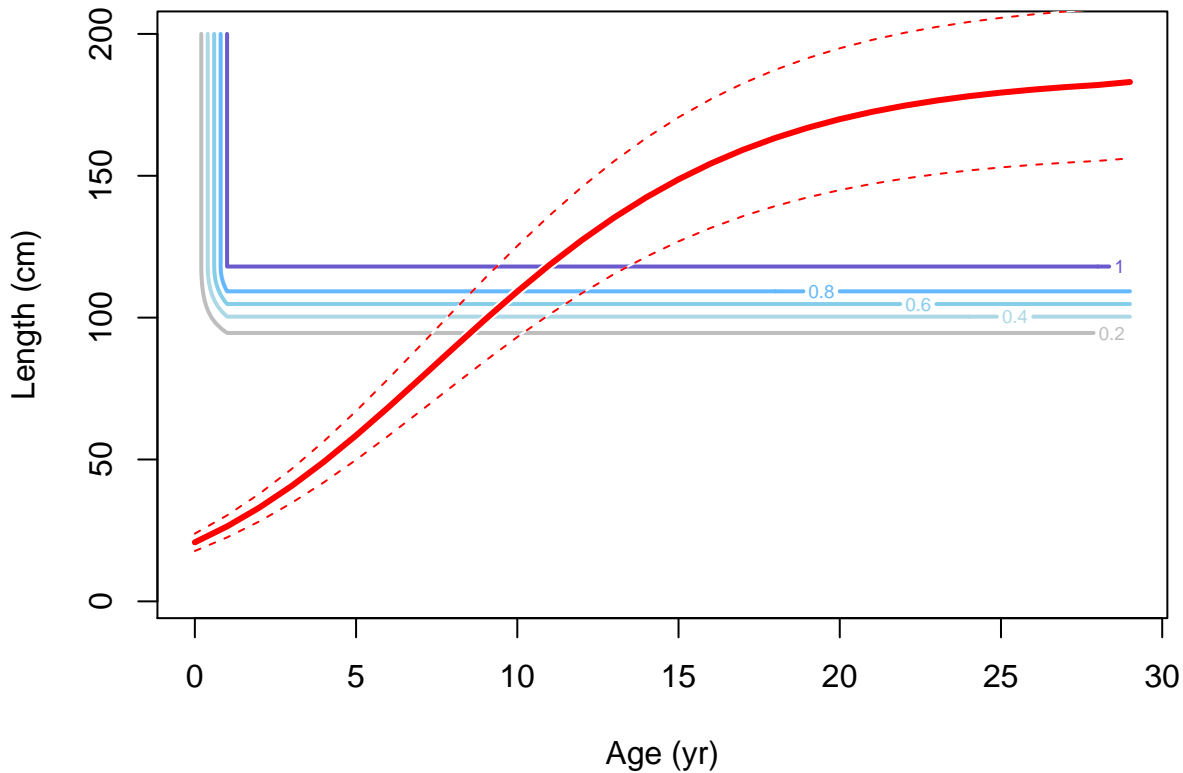
# Female ending year selectivity and growth for F30-LL\_C\_Q14n



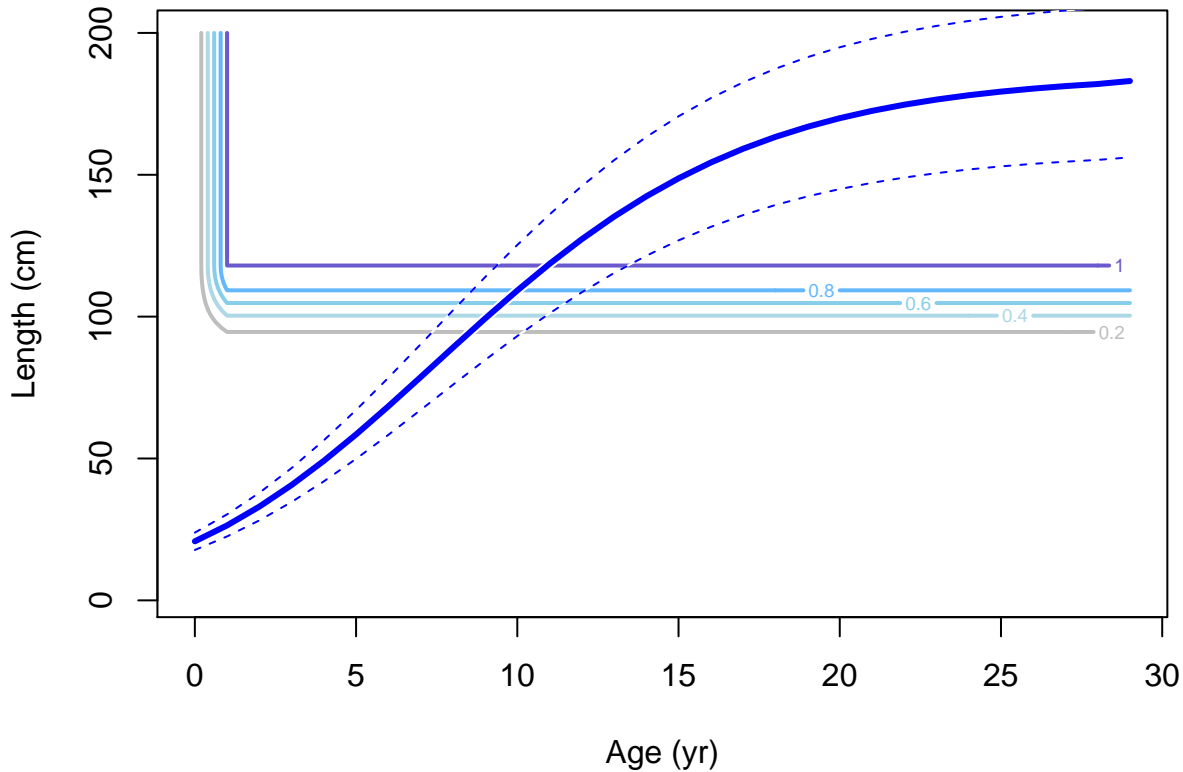
# Male ending year selectivity and growth for F30-LL\_C\_Q14n



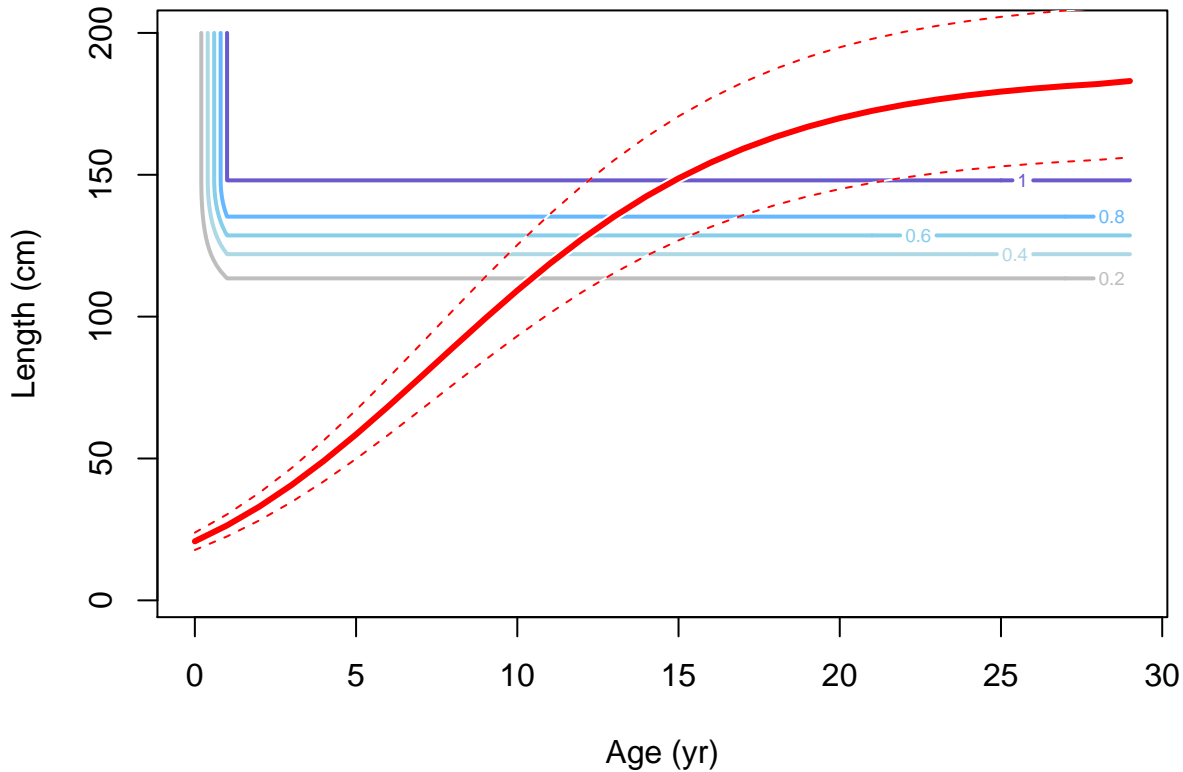
# Female ending year selectivity and growth for F31-LL\_E\_Q14n



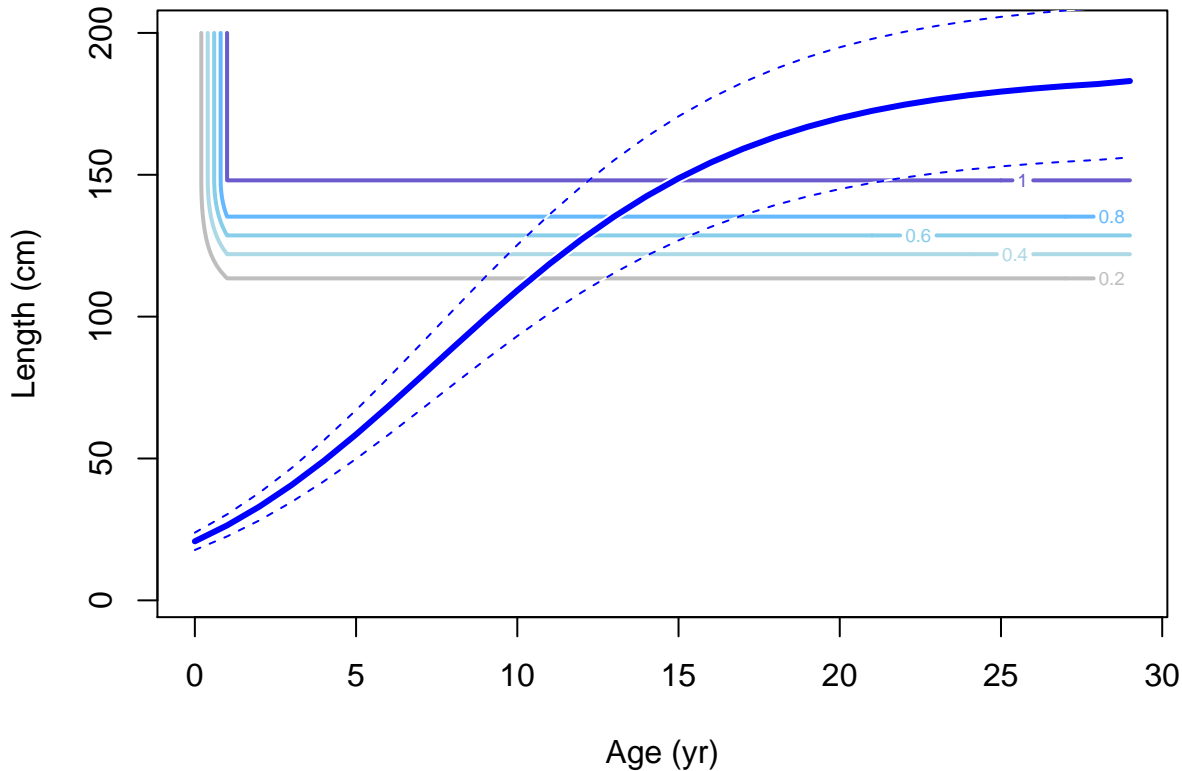
# Male ending year selectivity and growth for F31-LL\_E\_Q14n



# Female ending year selectivity and growth for F32-LL\_W\_Q23n

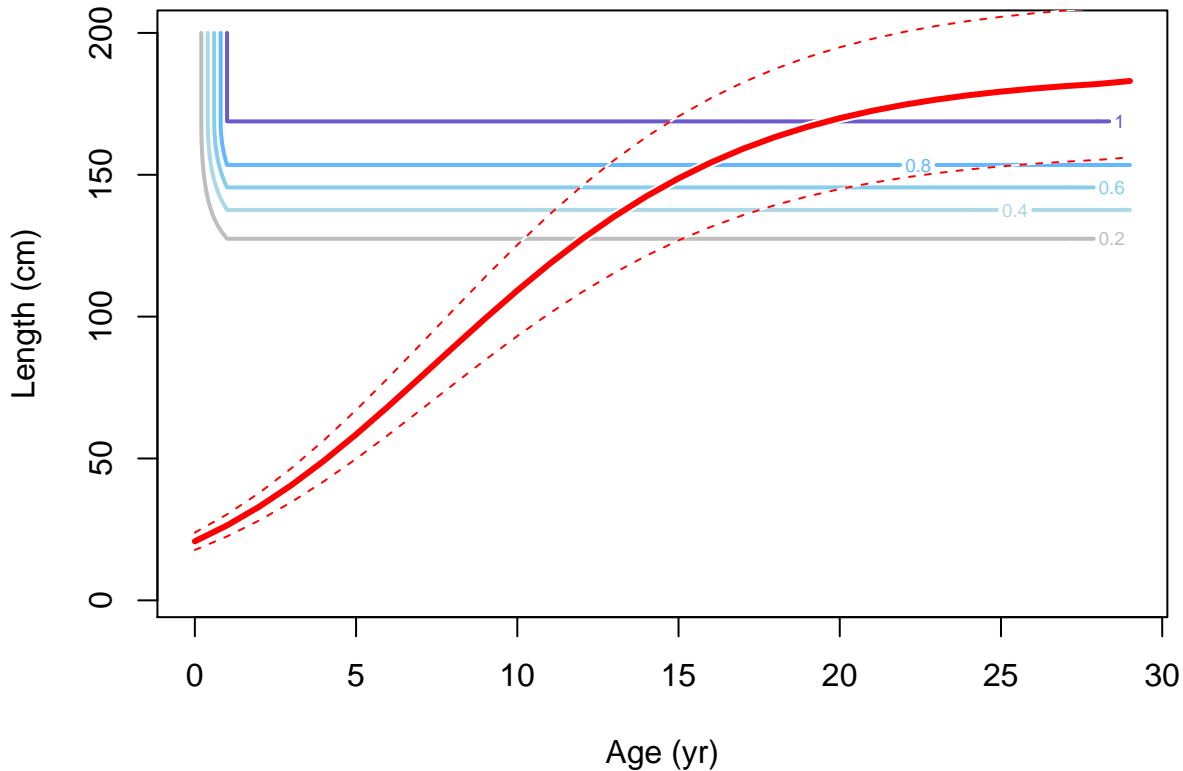


# Male ending year selectivity and growth for F32-LL\_W\_Q23n

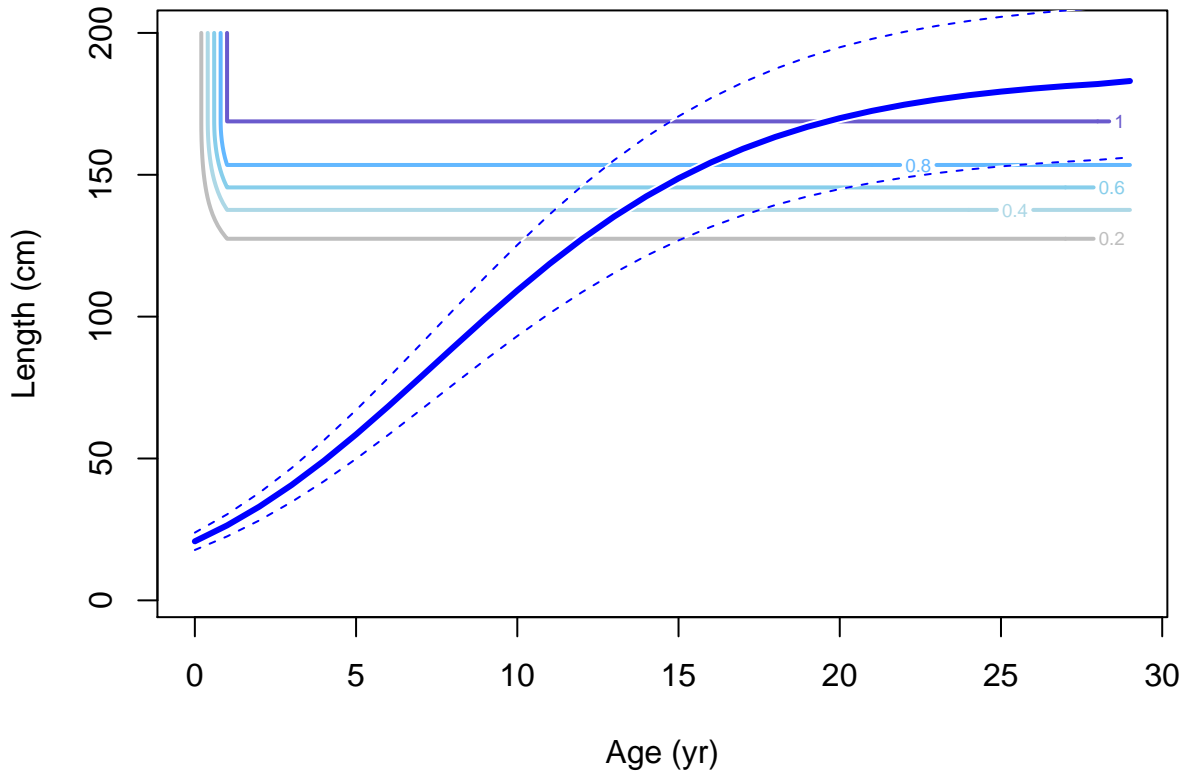




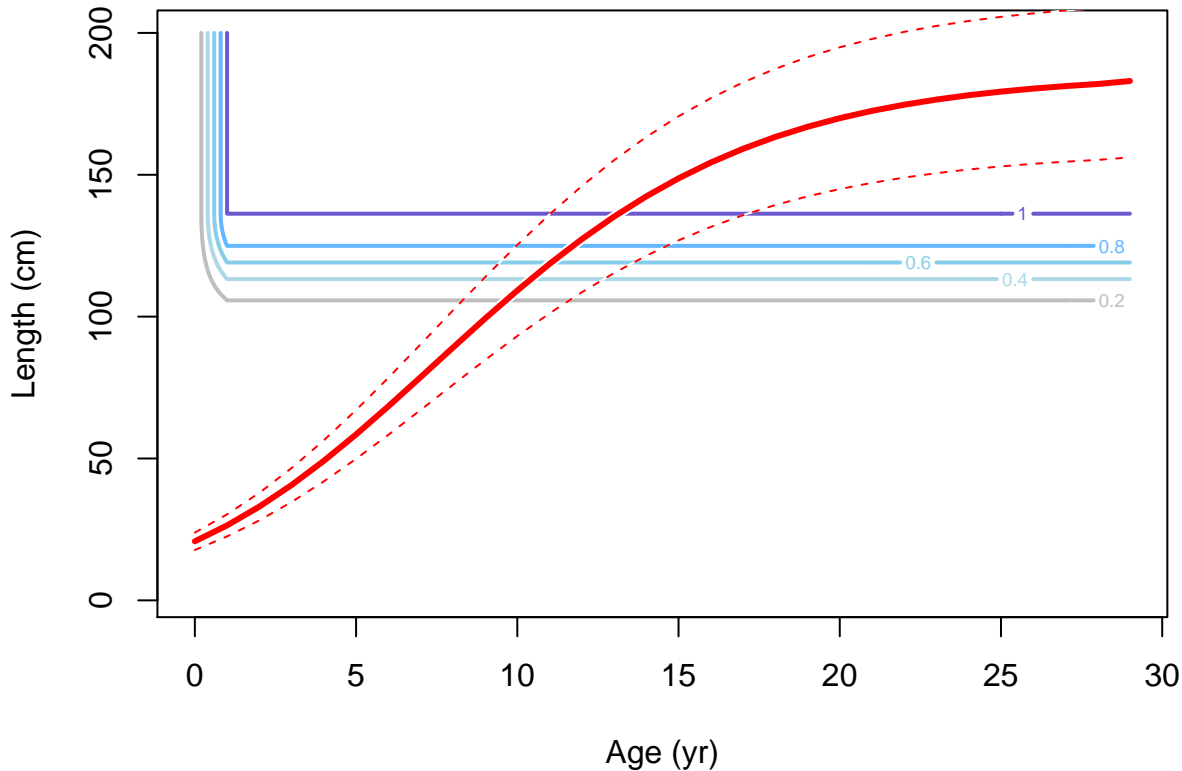
# Female ending year selectivity and growth for F33-LL\_C\_Q23n



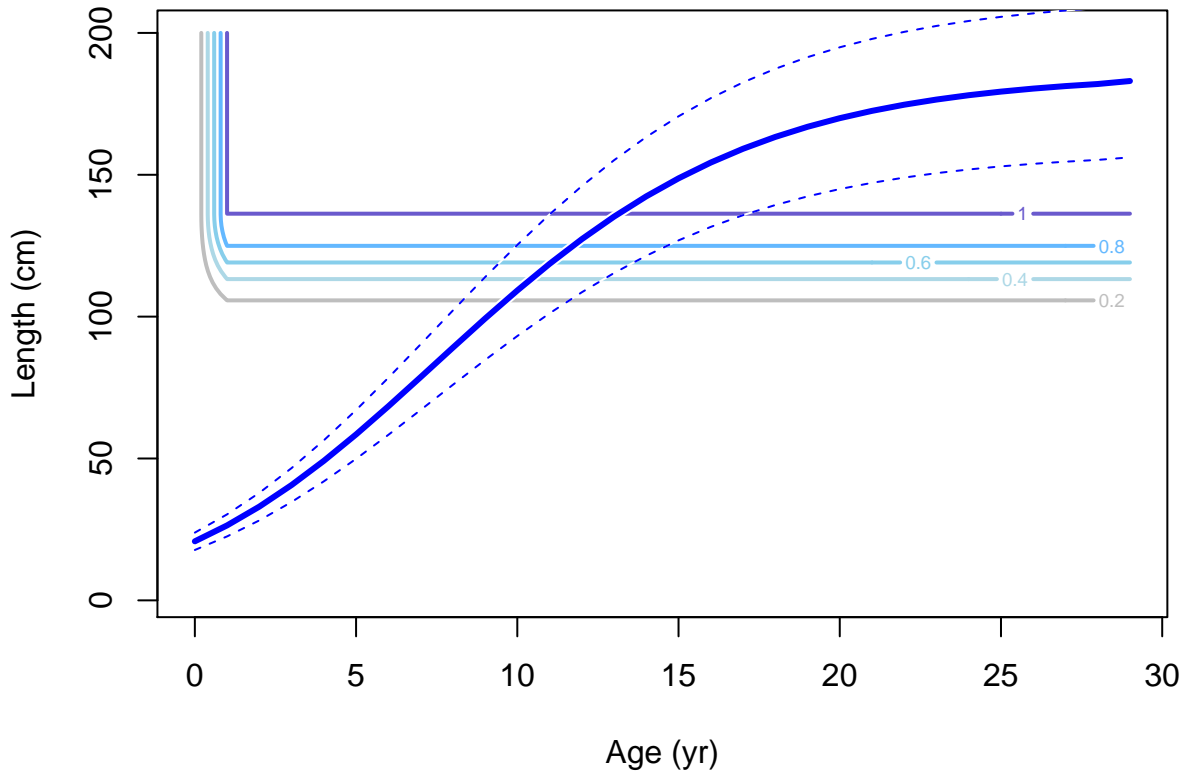
# Male ending year selectivity and growth for F33-LL\_C\_Q23n



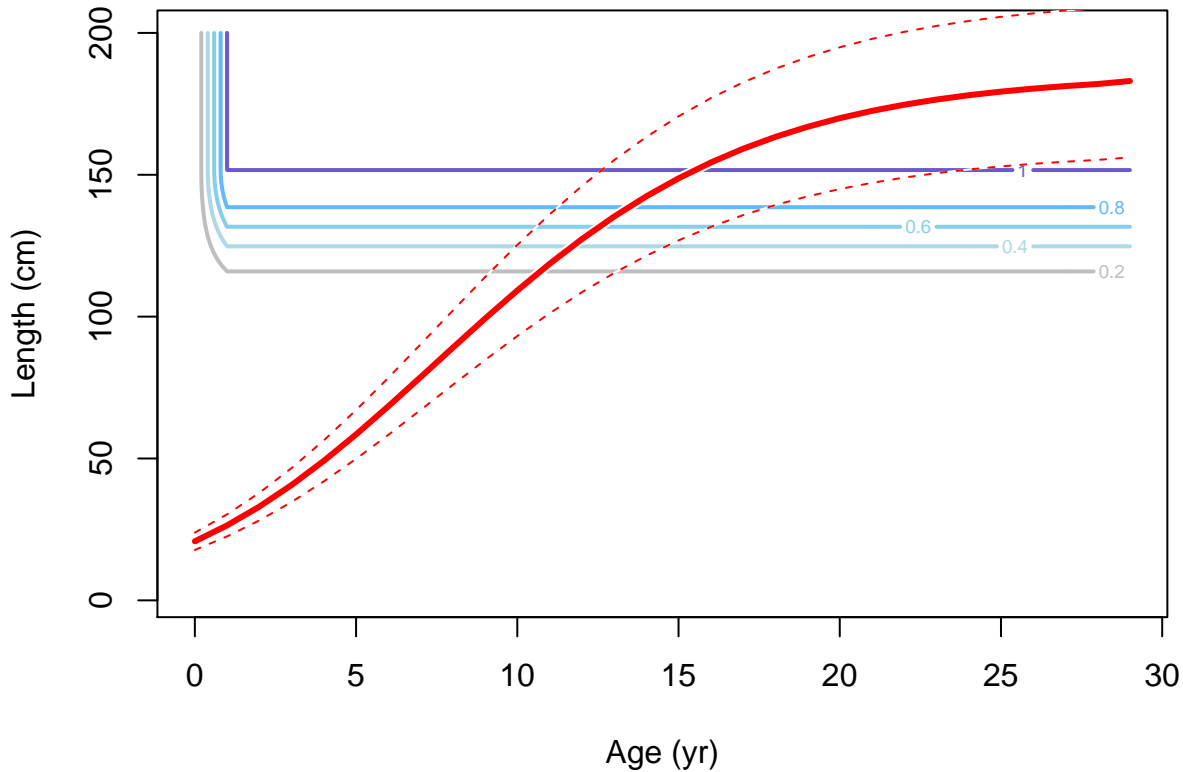
# Female ending year selectivity and growth for F34-LL\_E\_Q23n



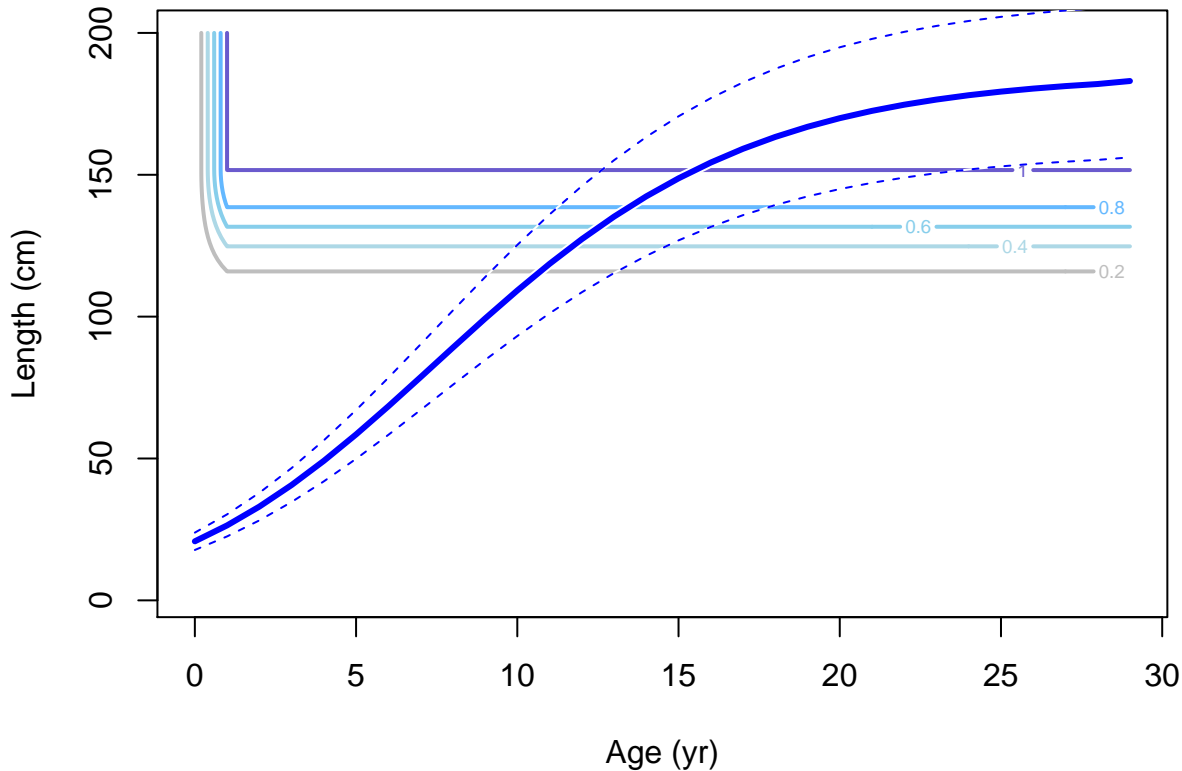
# Male ending year selectivity and growth for F34-LL\_E\_Q23n



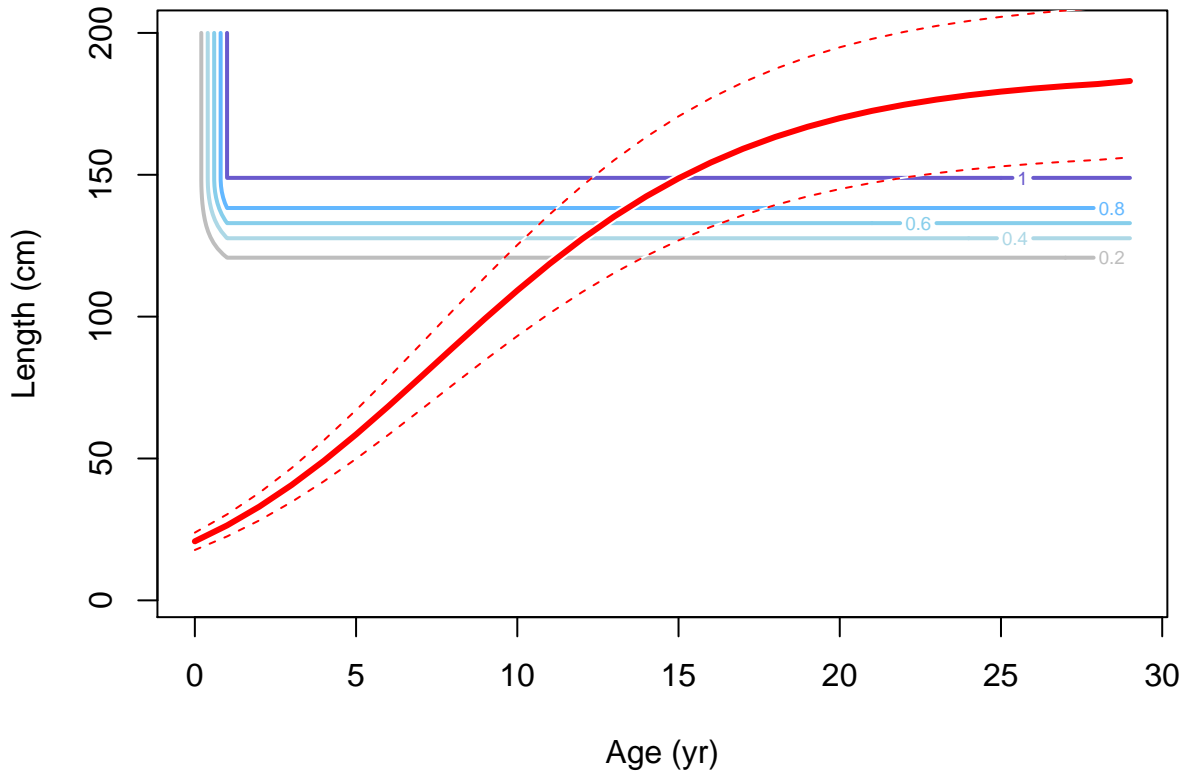
# Female ending year selectivity and growth for F35-LL\_W\_Q14w



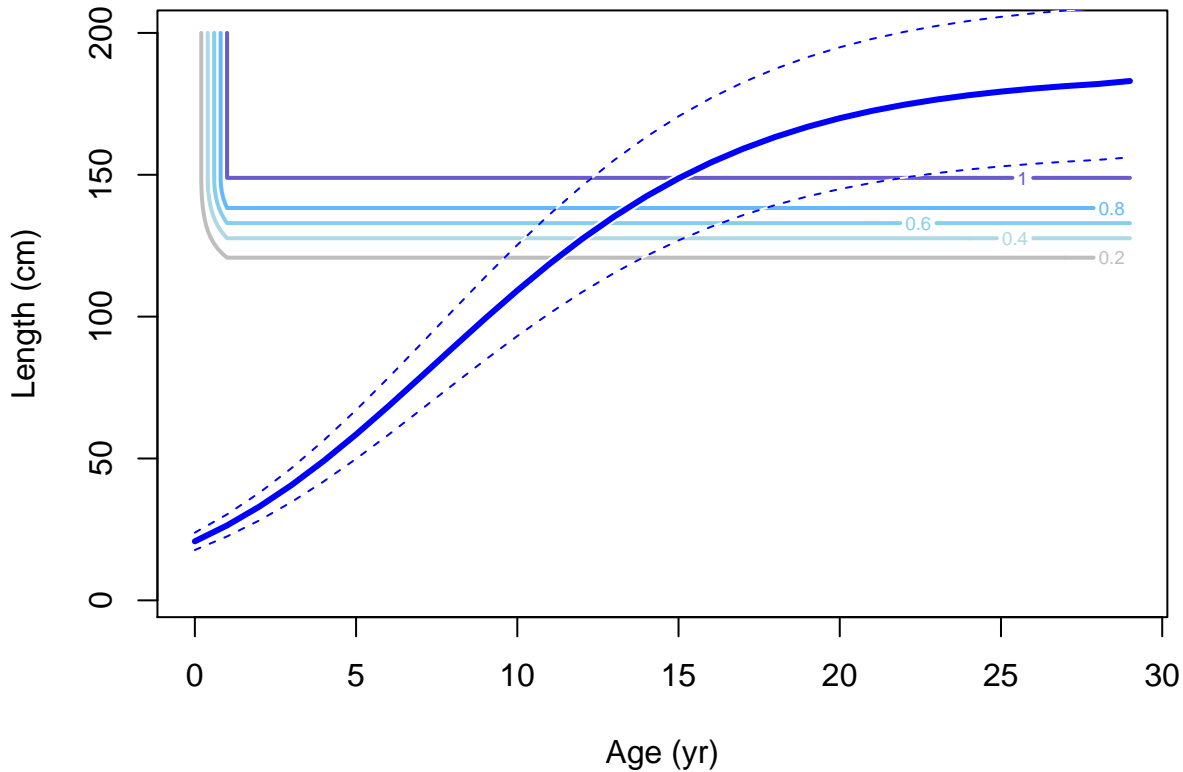
# Male ending year selectivity and growth for F35-LL\_W\_Q14w



# Female ending year selectivity and growth for F36-LL\_C\_Q14w

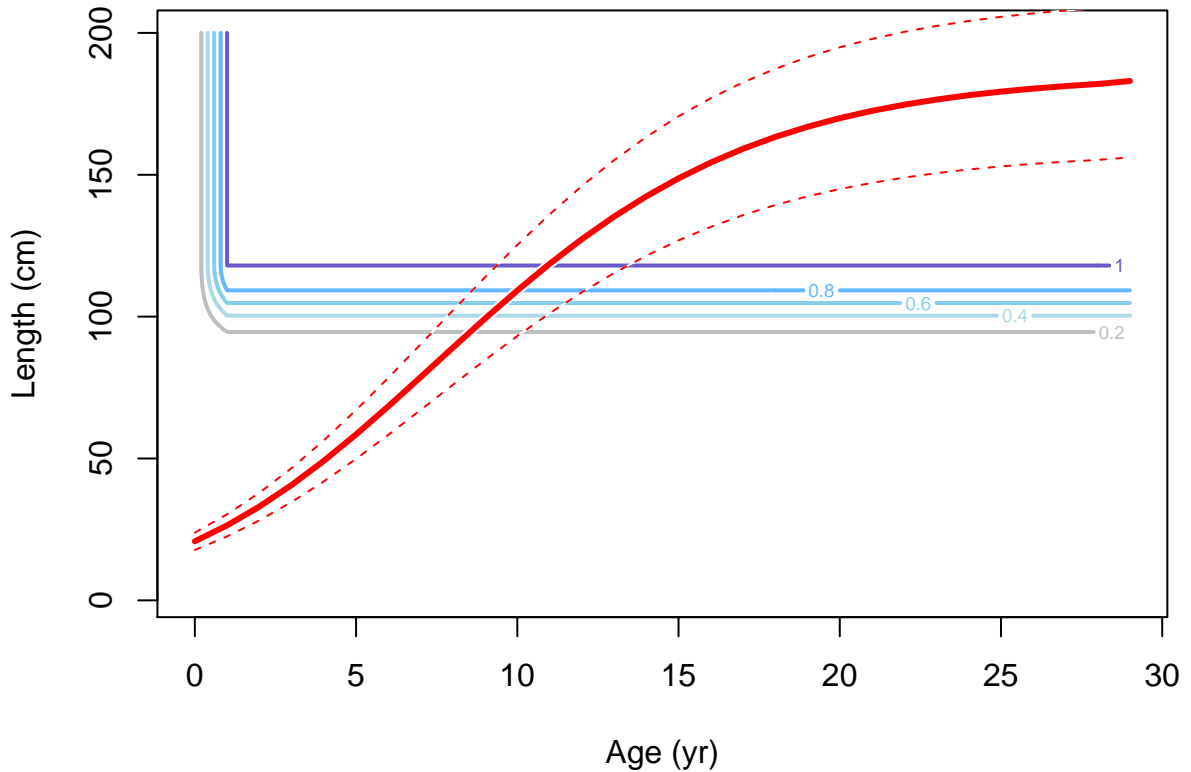


# Male ending year selectivity and growth for F36-LL\_C\_Q14w

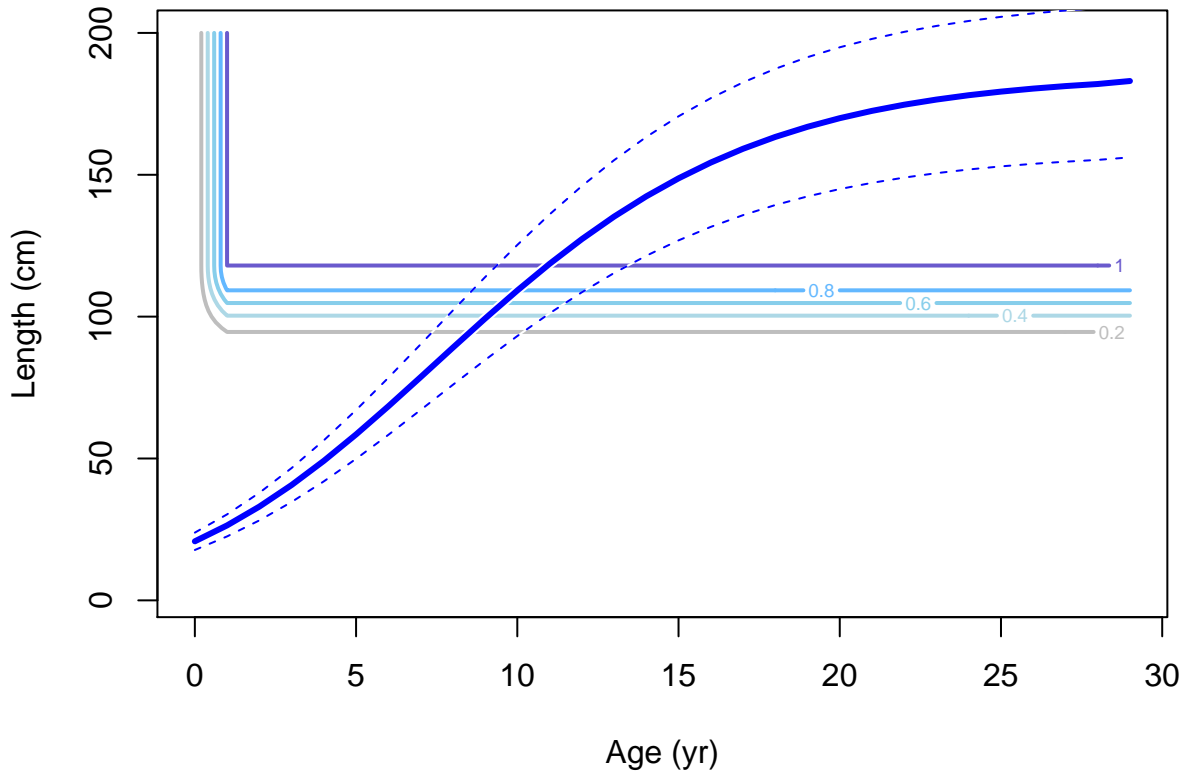




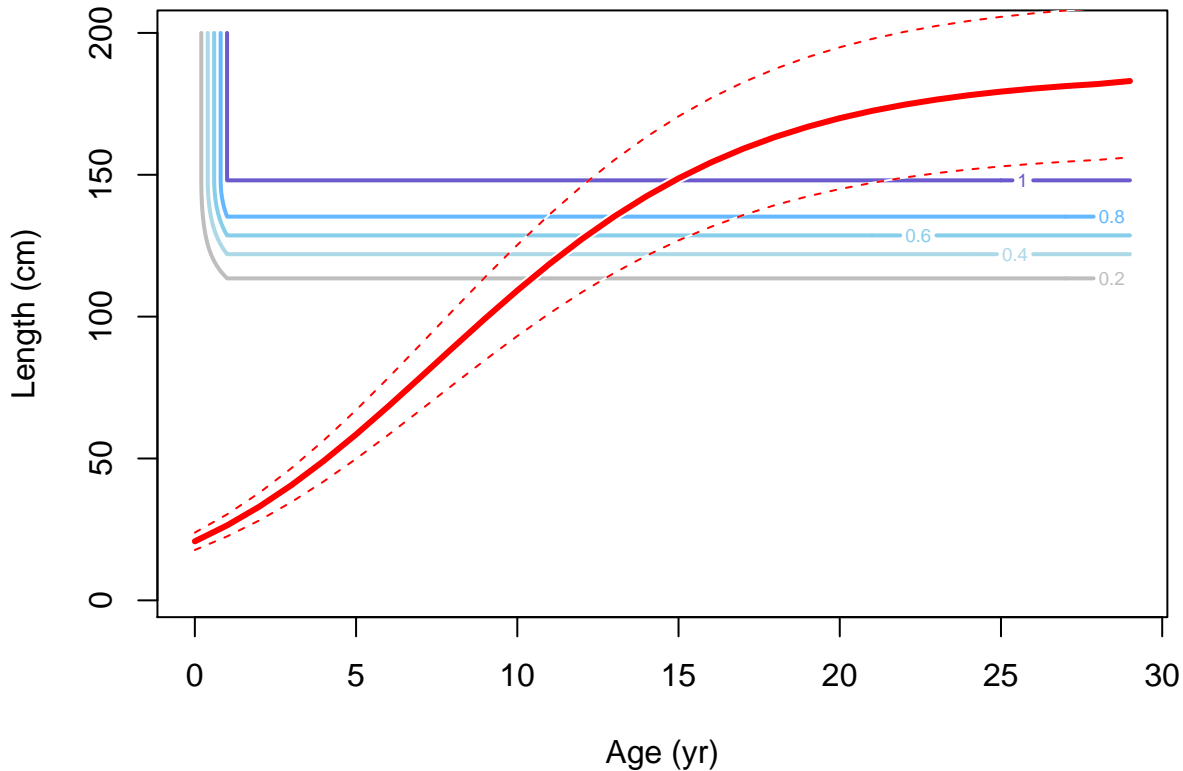
# Female ending year selectivity and growth for F37-LL\_E\_Q14w



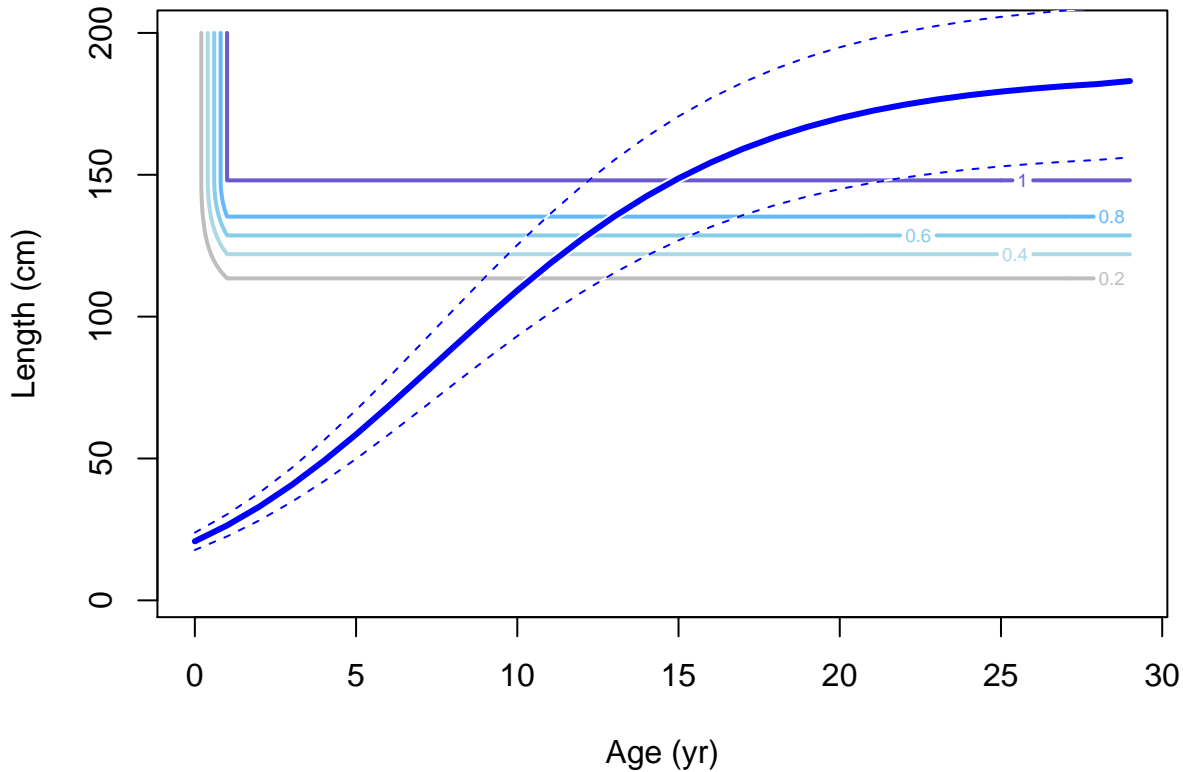
# Male ending year selectivity and growth for F37-LL\_E\_Q14w



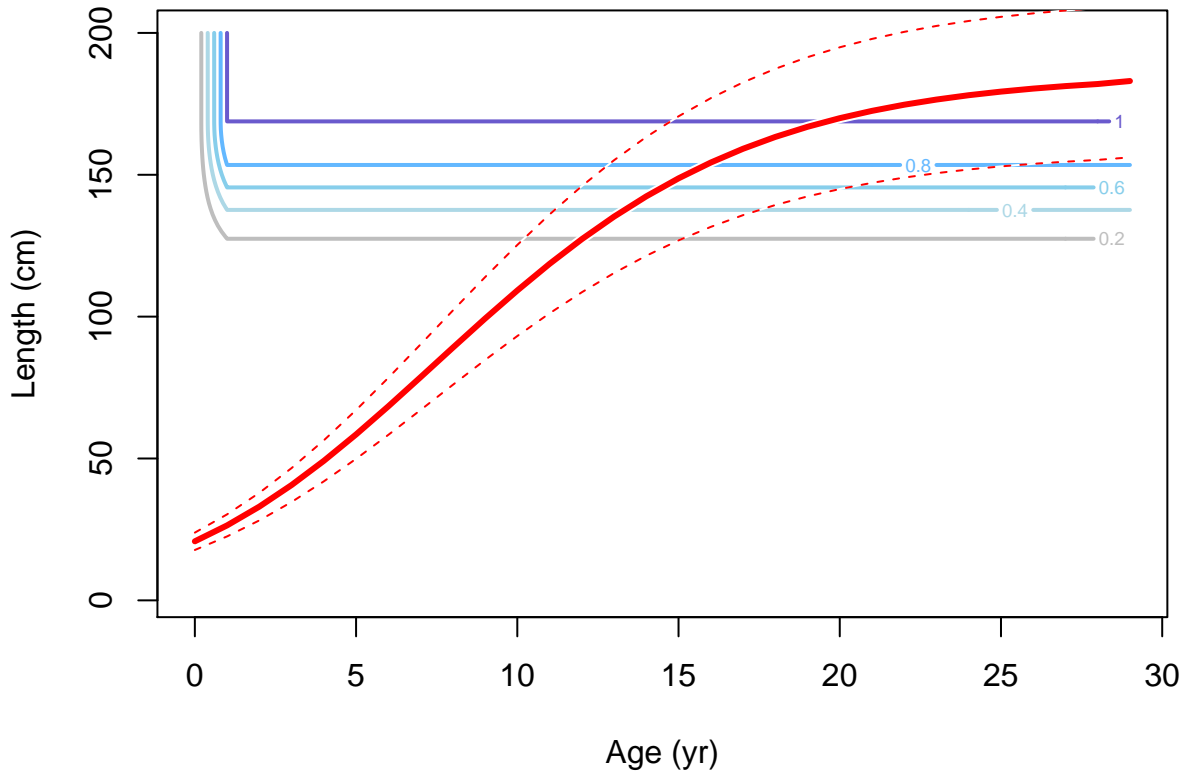
# Female ending year selectivity and growth for F38-LL\_W\_Q23w



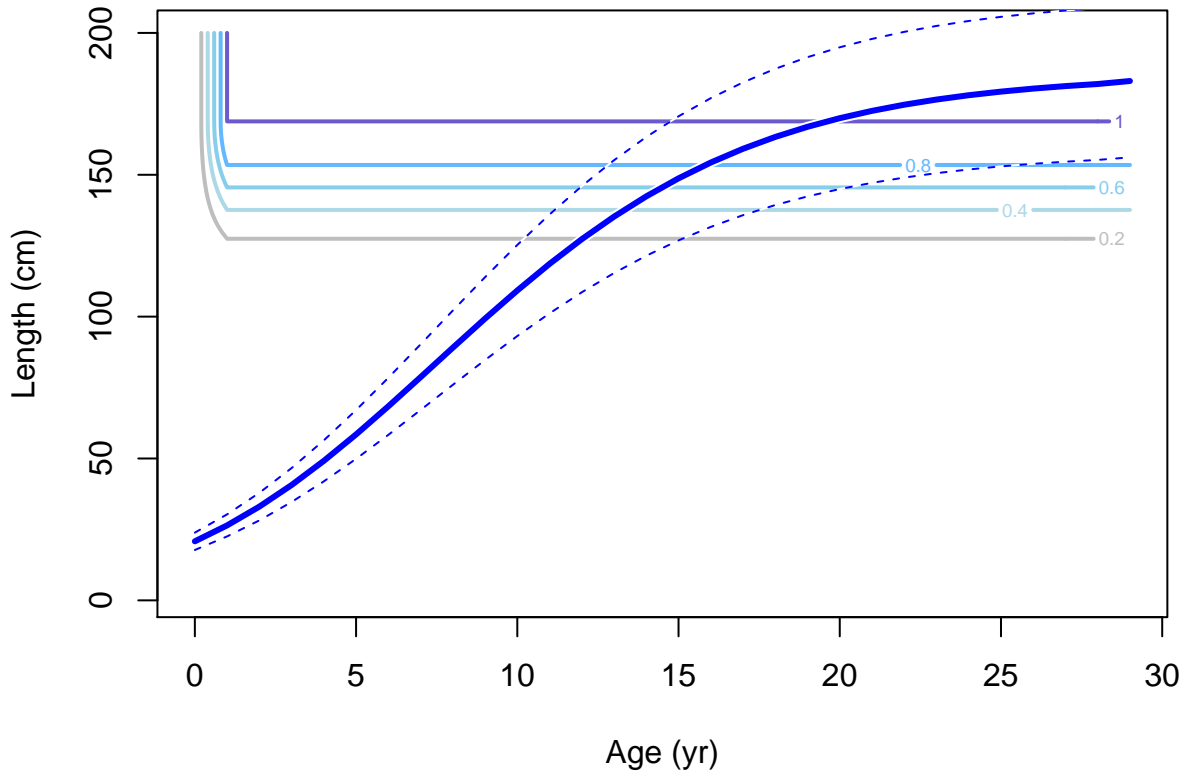
# Male ending year selectivity and growth for F38-LL\_W\_Q23w



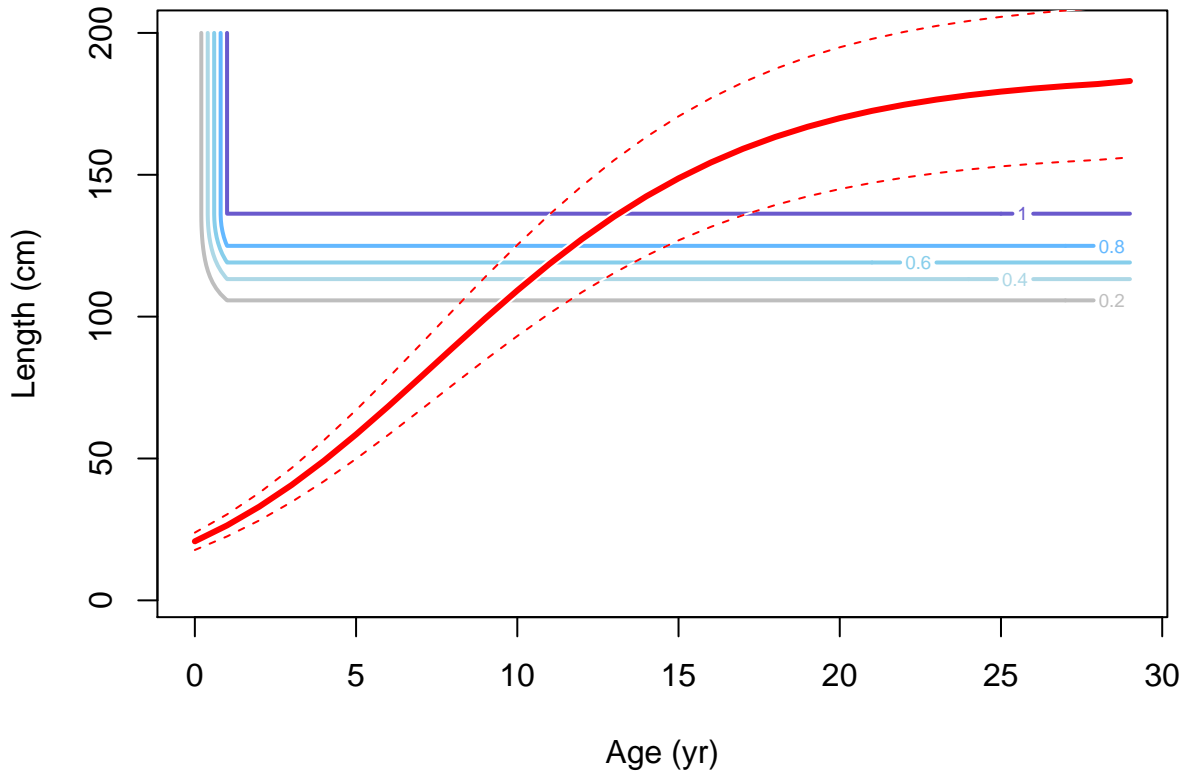
# Female ending year selectivity and growth for F39-LL\_C\_Q23w



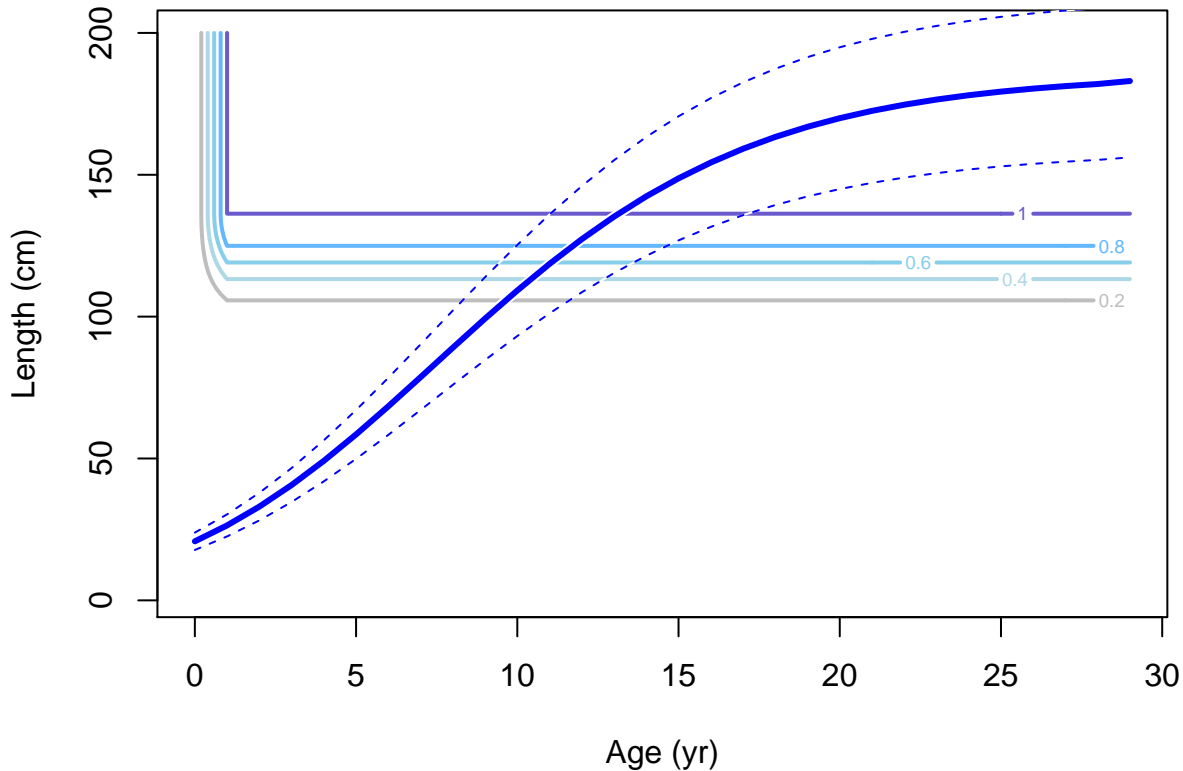
# Male ending year selectivity and growth for F39-LL\_C\_Q23w



# Female ending year selectivity and growth for F40-LL\_E\_Q23w

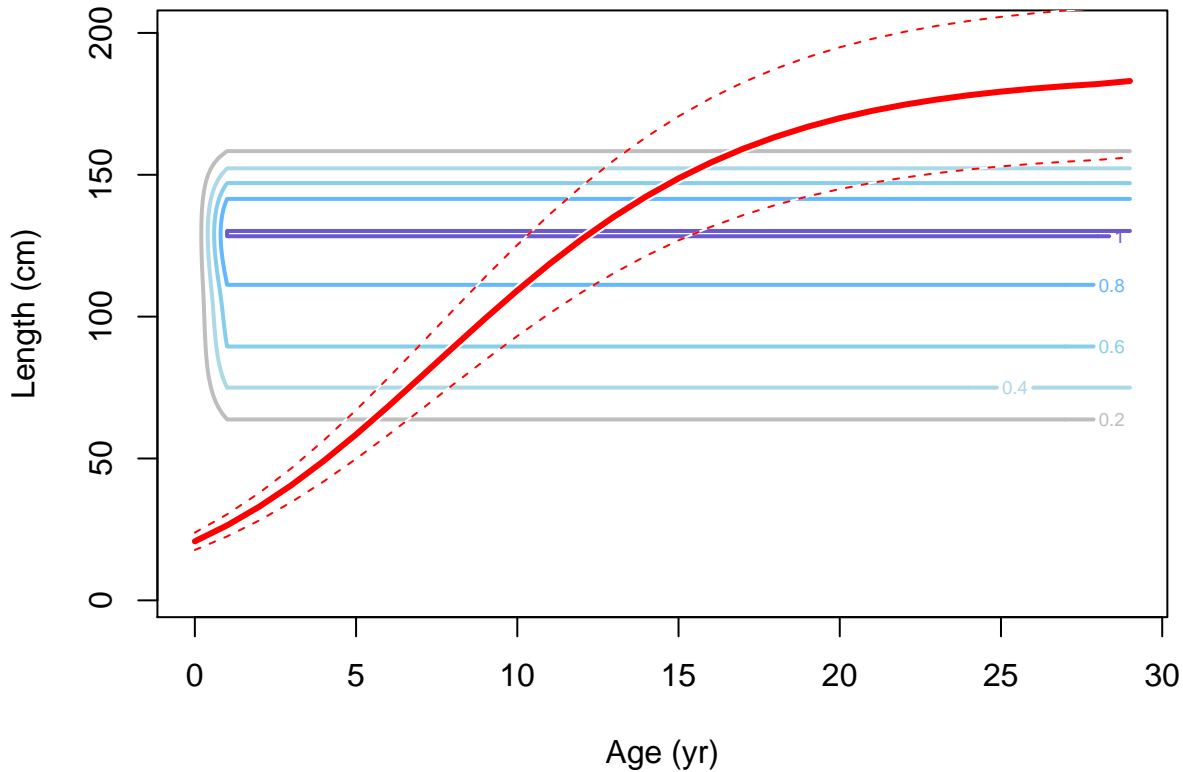


# Male ending year selectivity and growth for F40-LL\_E\_Q23w

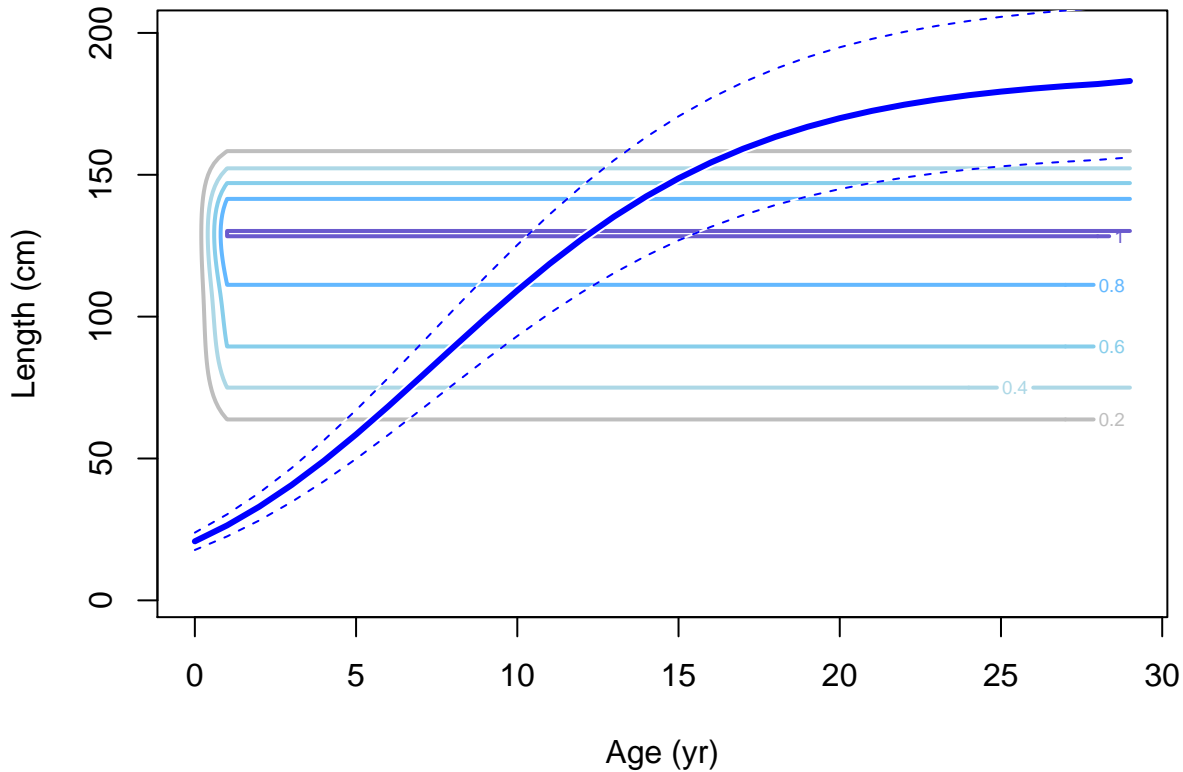




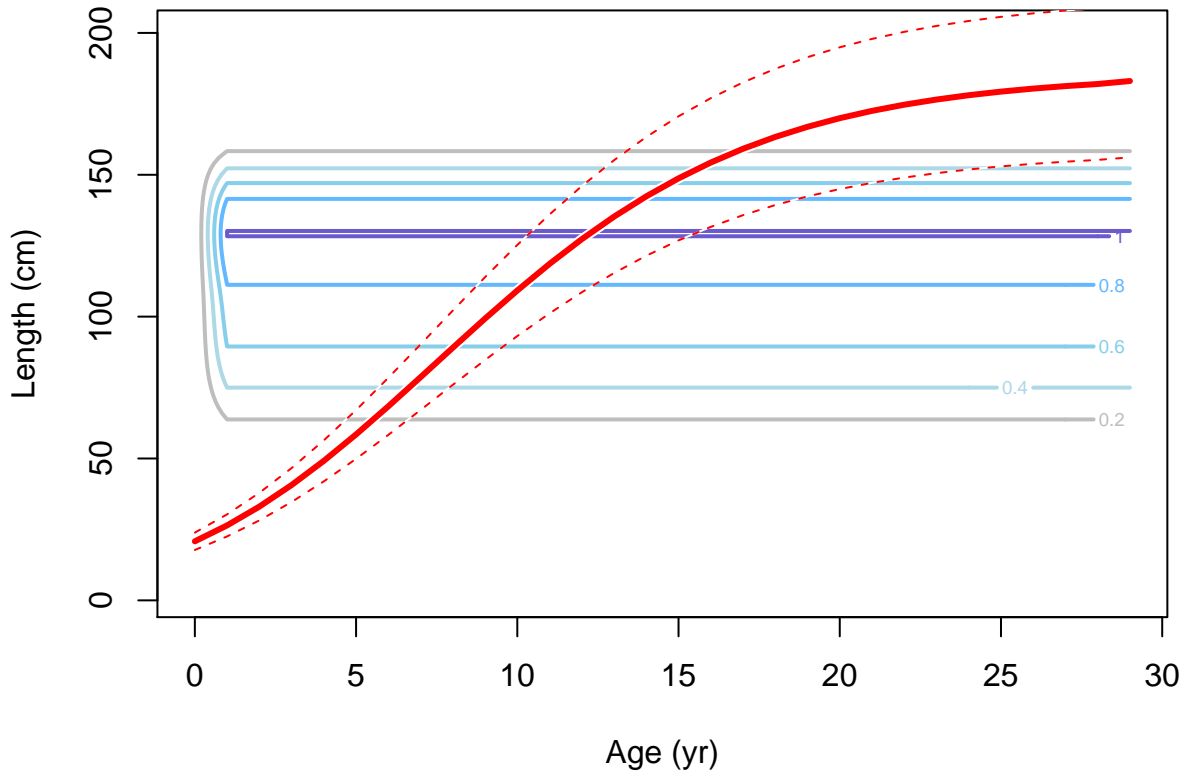
# Female ending year selectivity and growth for S1-PS\_DEL\_VAST



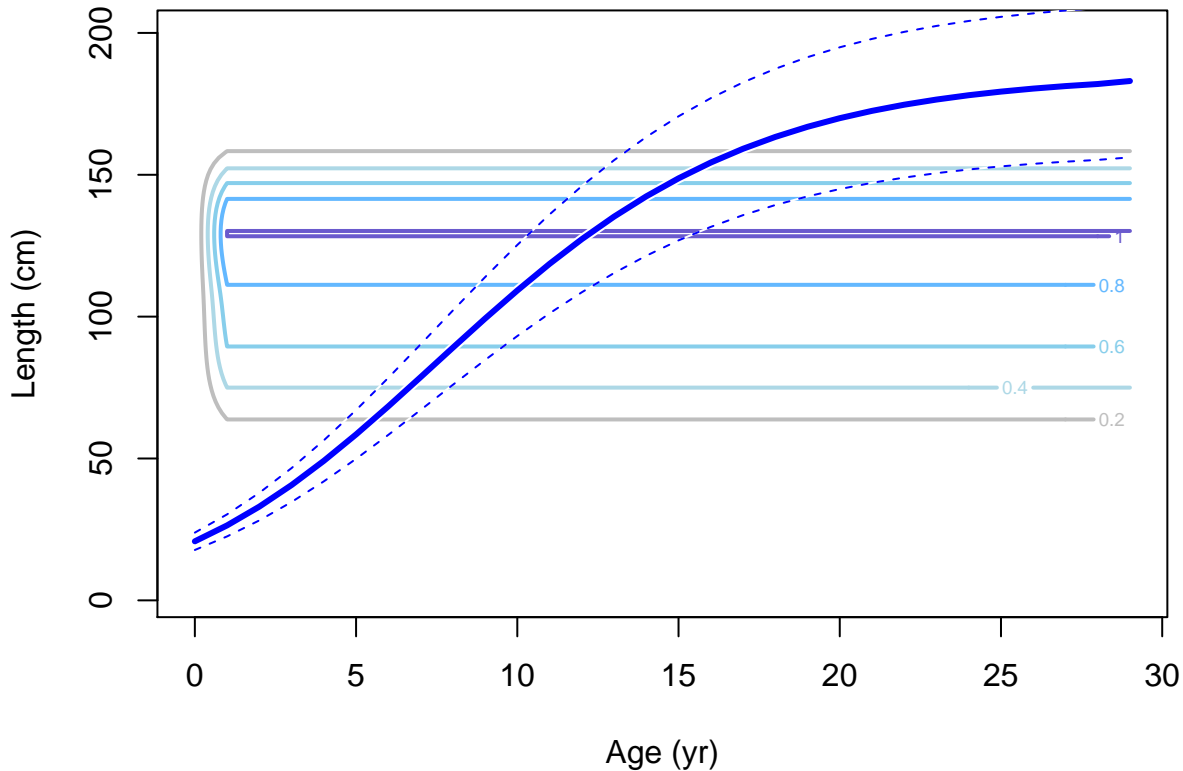
# Male ending year selectivity and growth for S1-PS\_DEL\_VAST



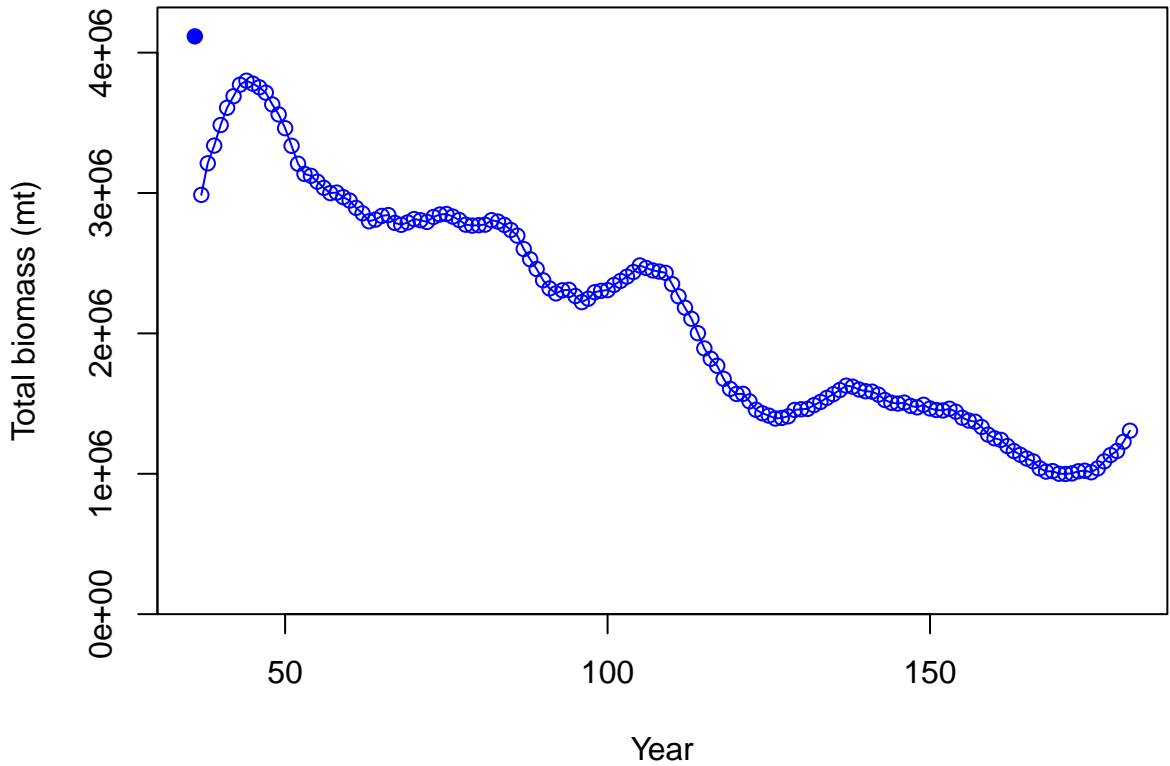
# Female ending year selectivity and growth for S4-PS\_middle\_VAST



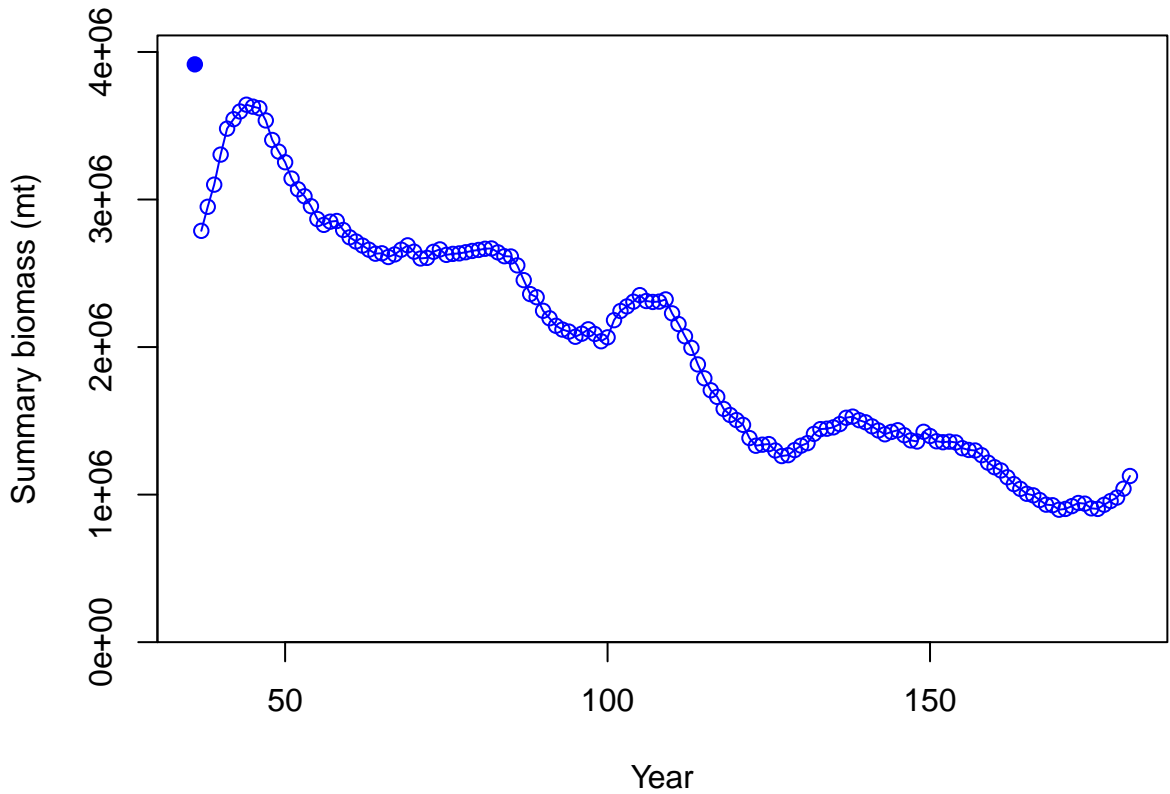
# Male ending year selectivity and growth for S4-PS\_middle\_VAST



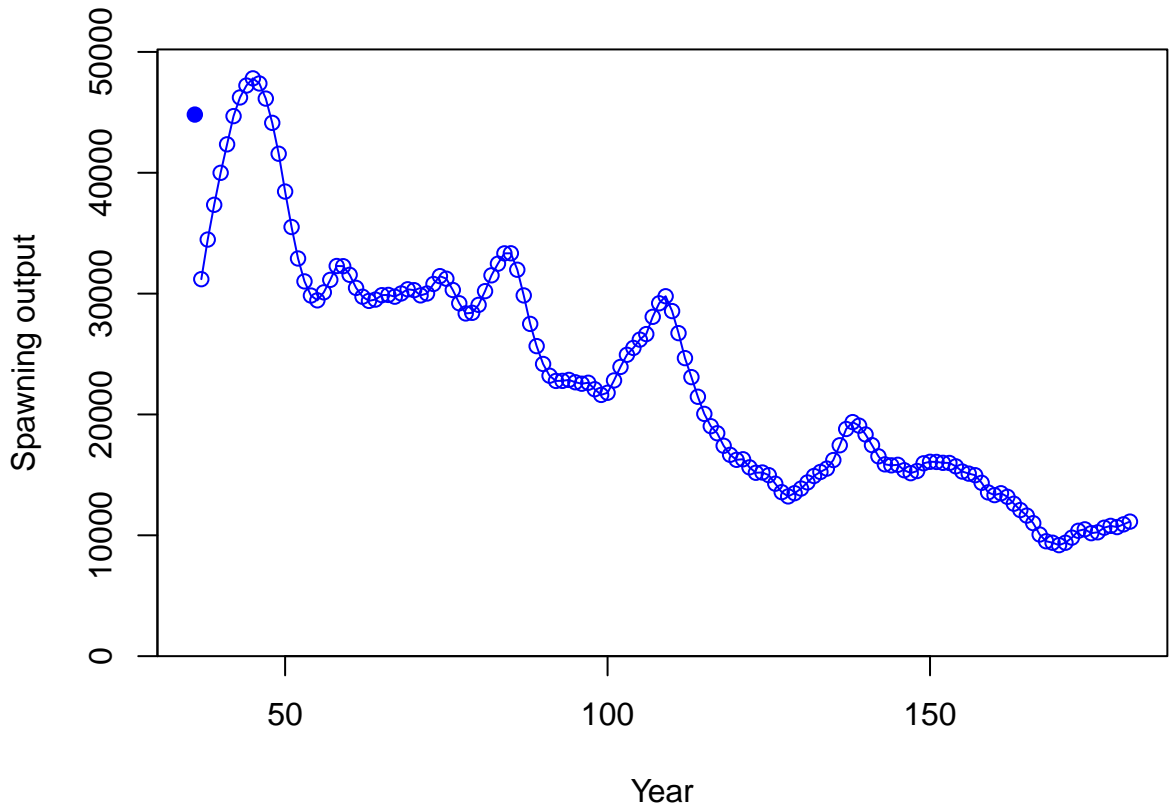
# Total biomass (mt)



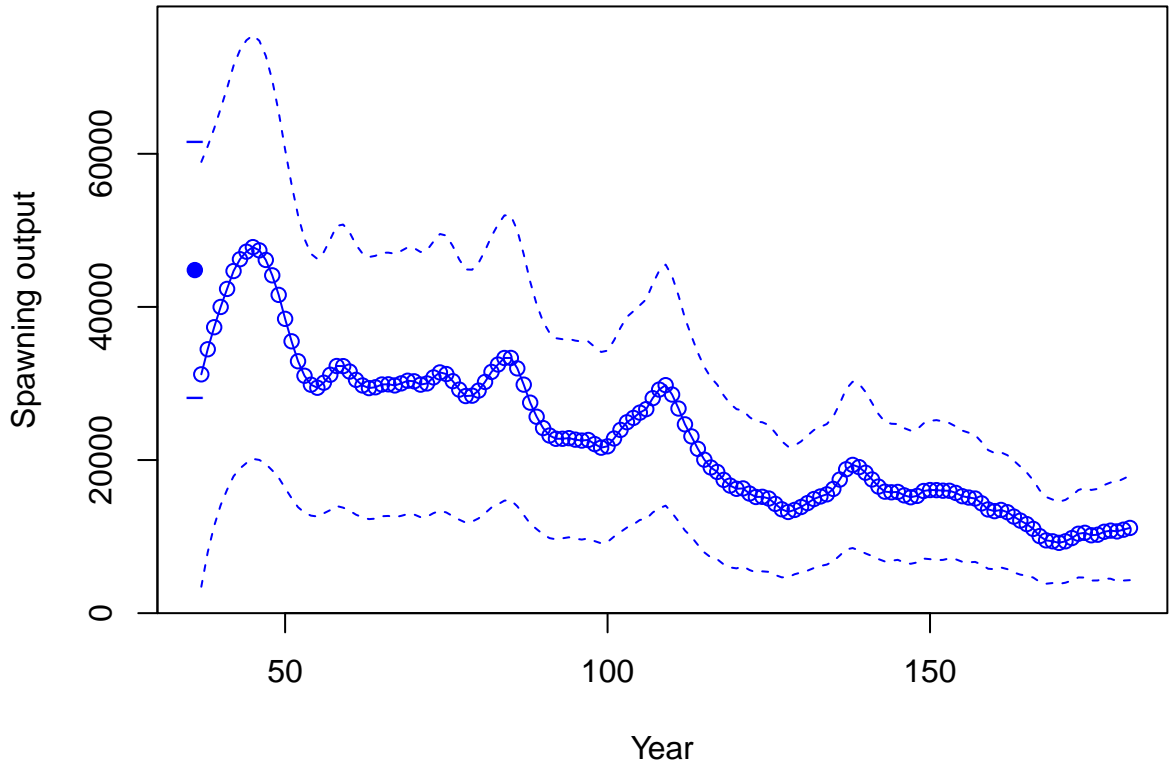
# Summary biomass (mt)



# Spawning output

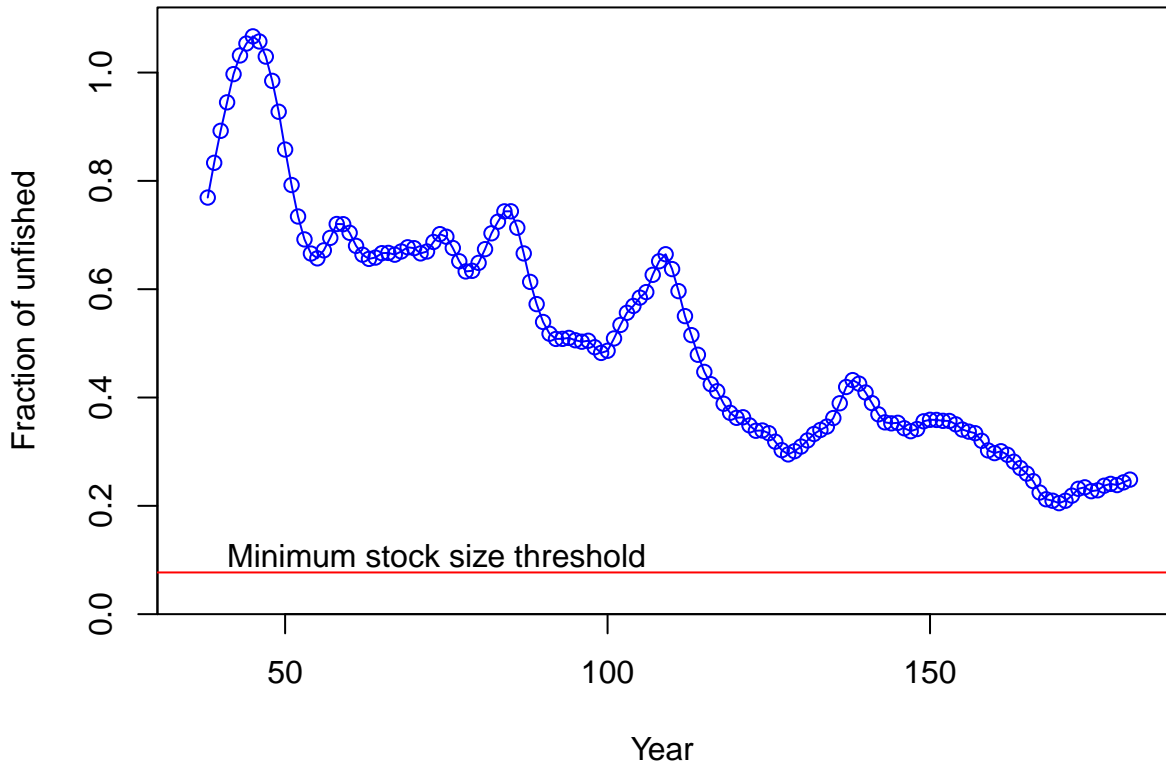


## Spawning output with ~95% asymptotic intervals

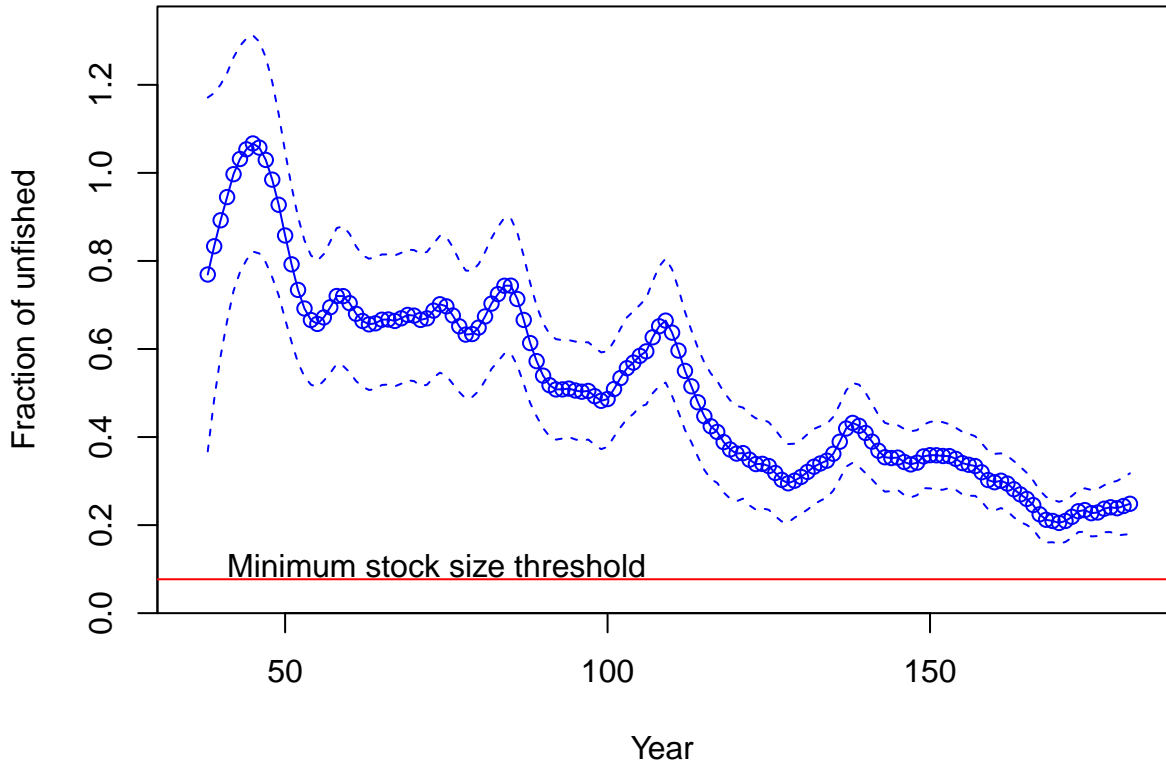




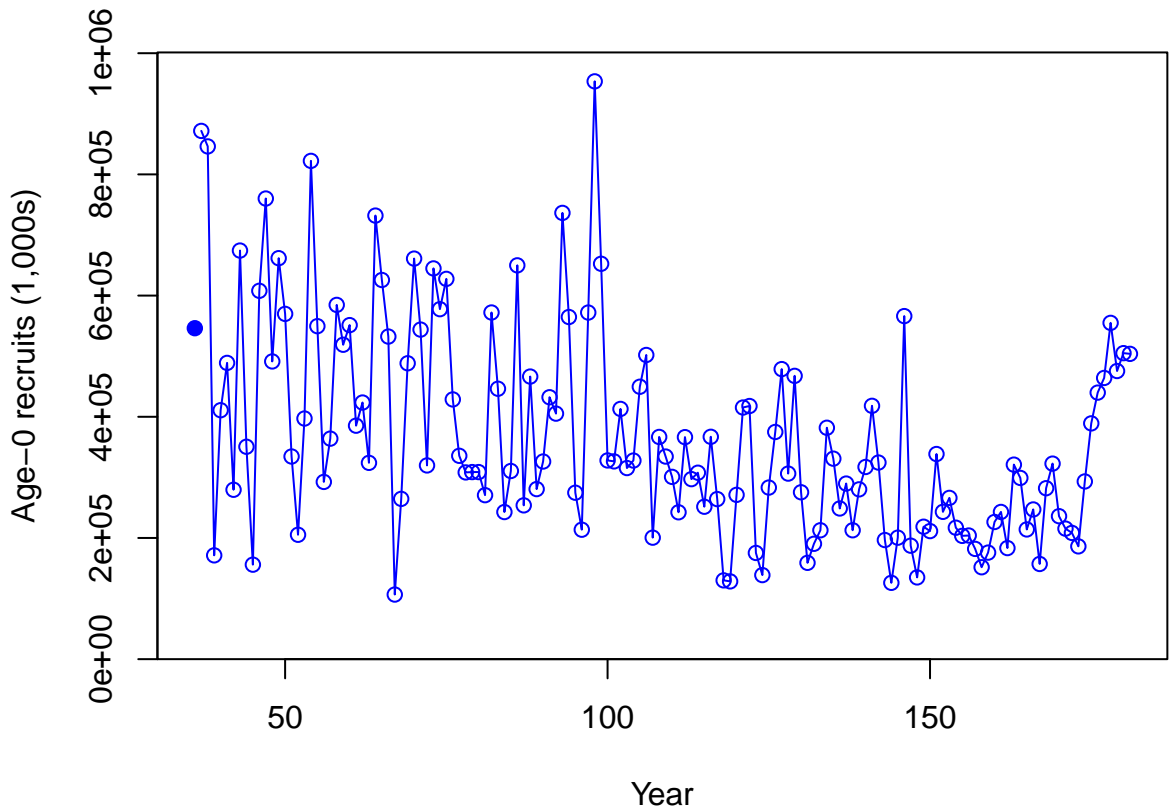
# Fraction of unfished



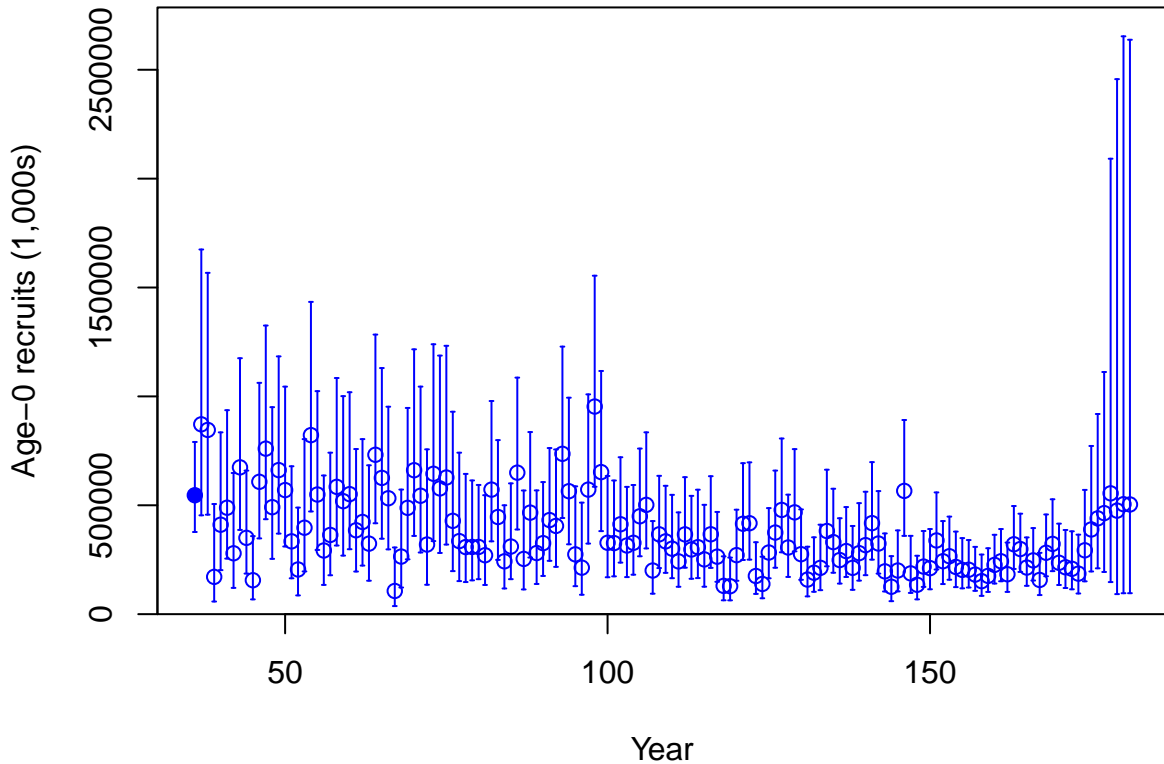
## Fraction of unfished with ~95% asymptotic intervals



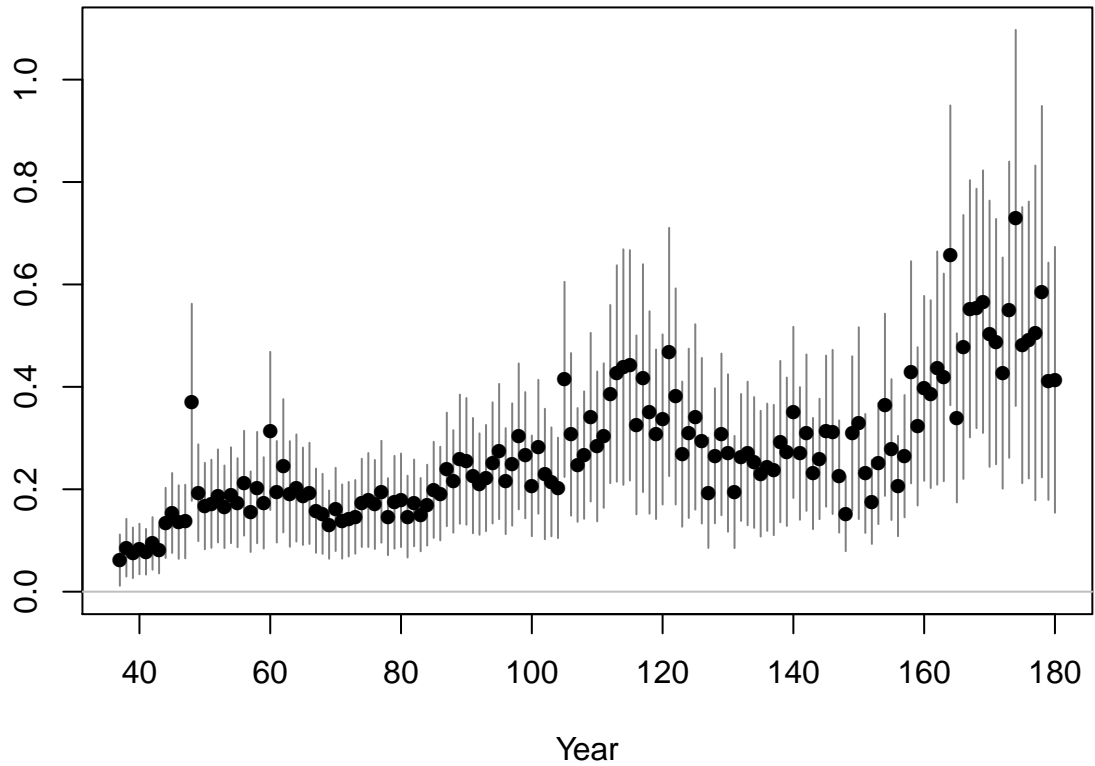
# Age-0 recruits (1,000s)

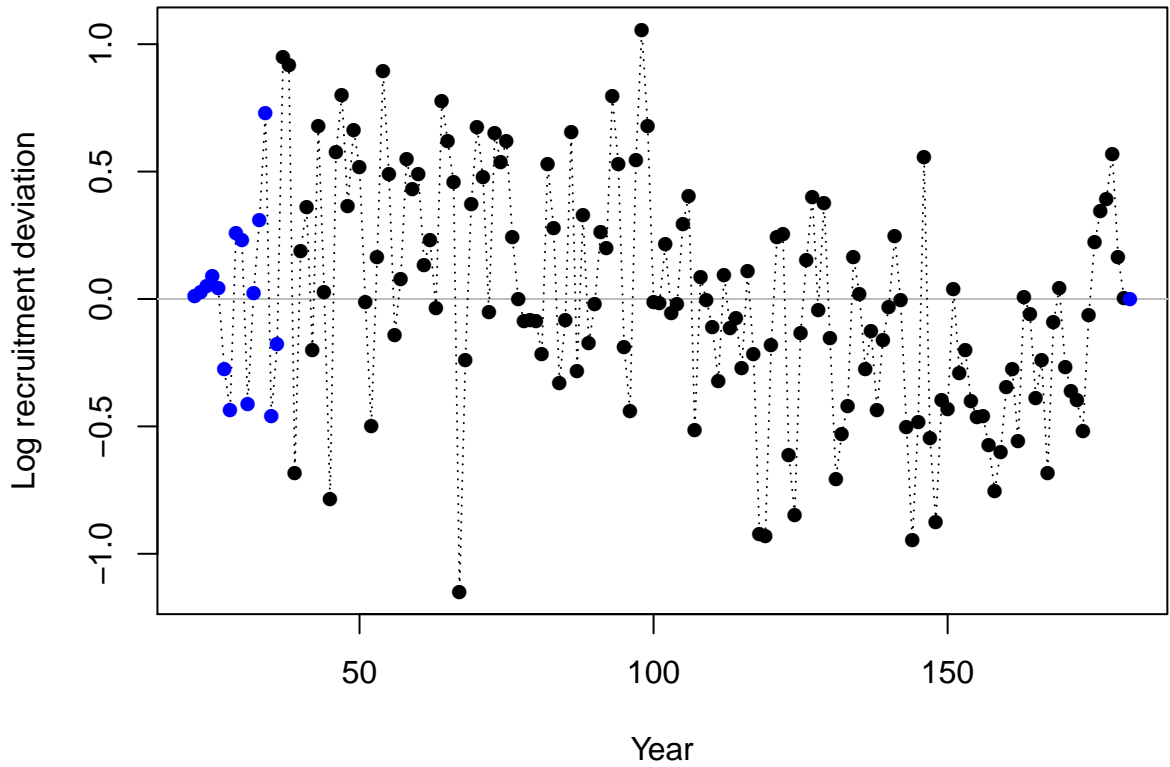


# Age-0 recruits (1,000s) with ~95% asymptotic intervals

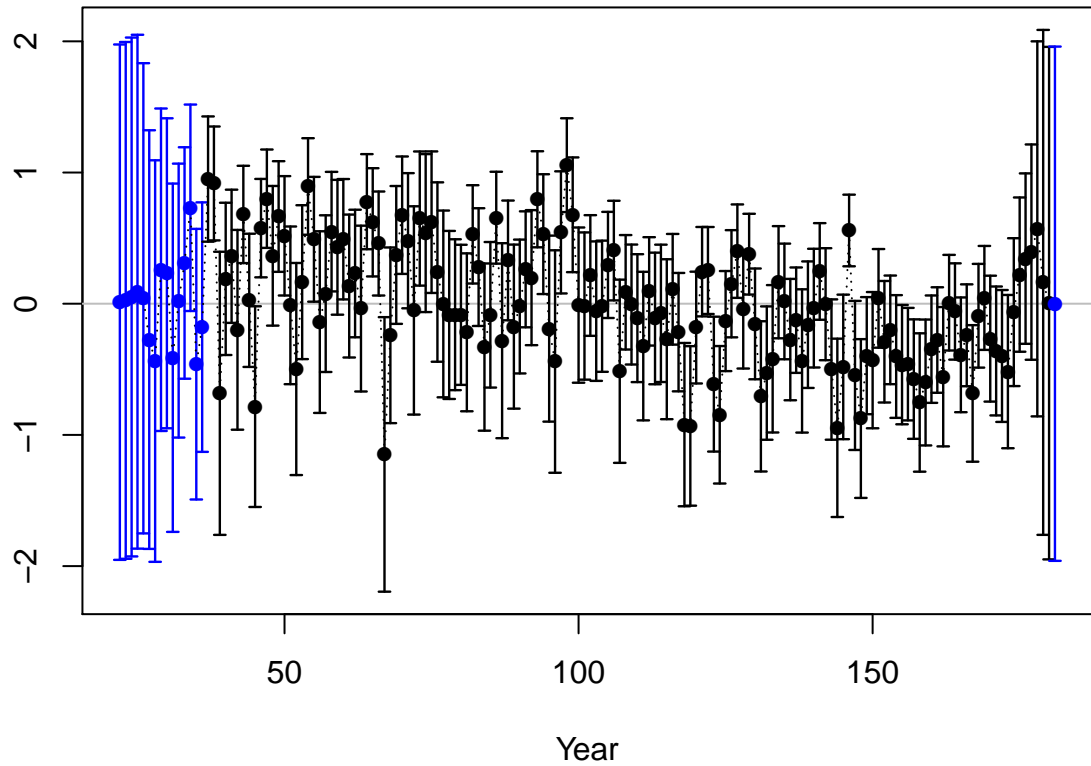


Summary Fishing Mortality

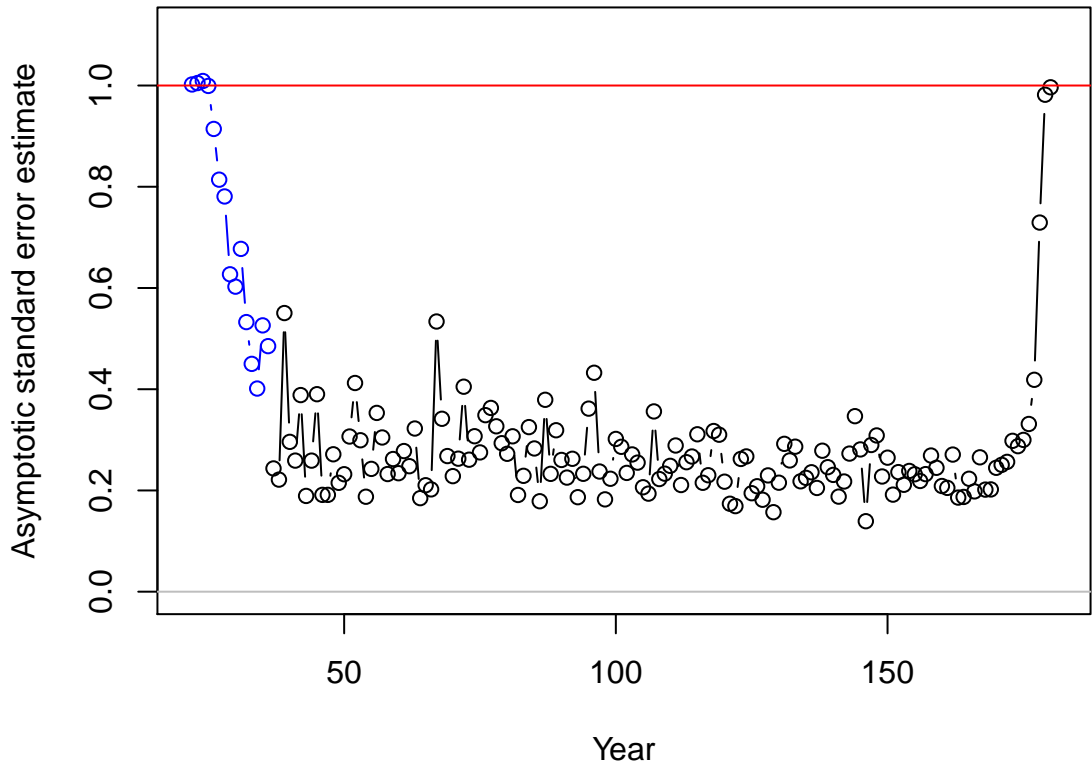




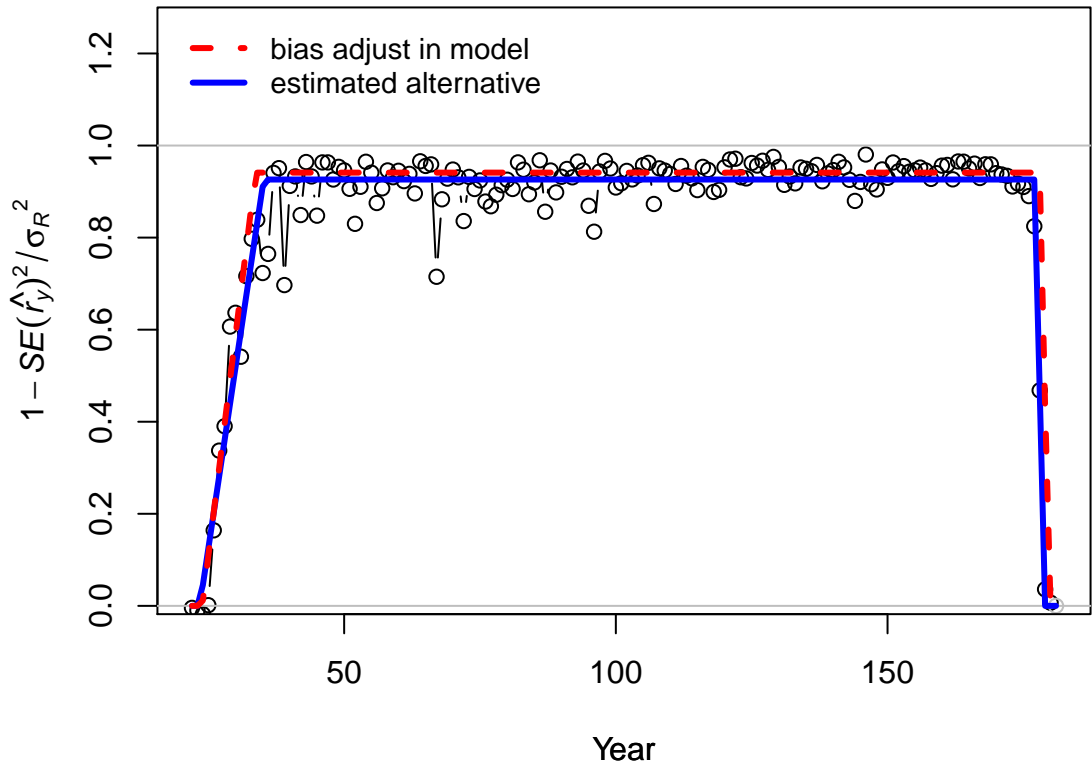
Log recruitment deviation



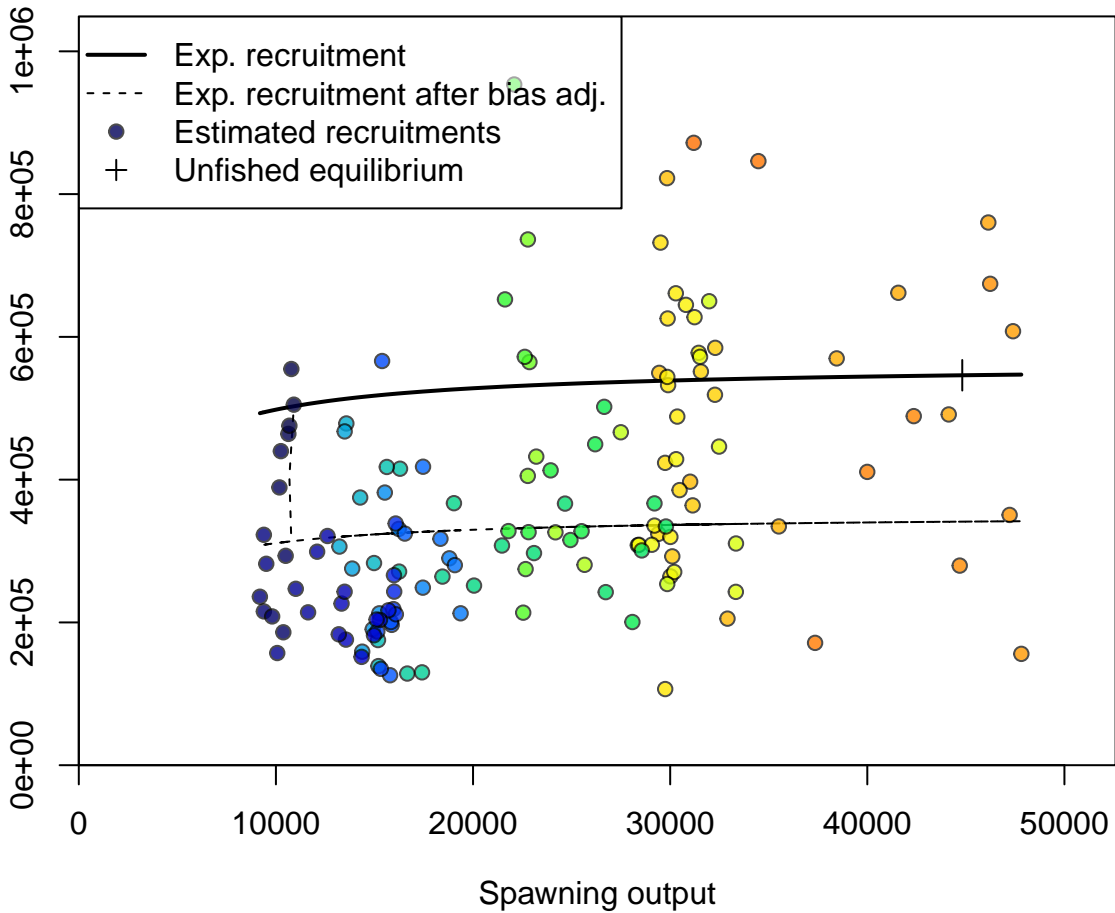
# Recruitment deviation variance



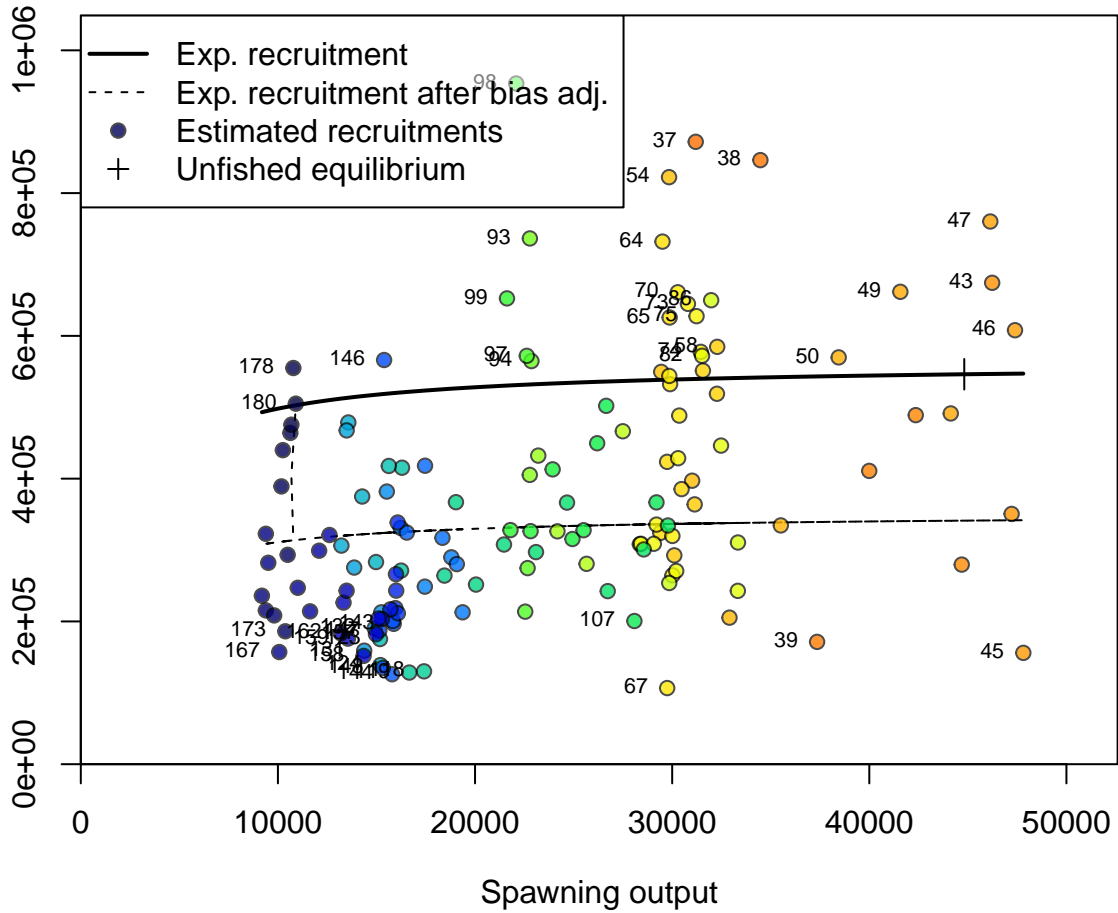




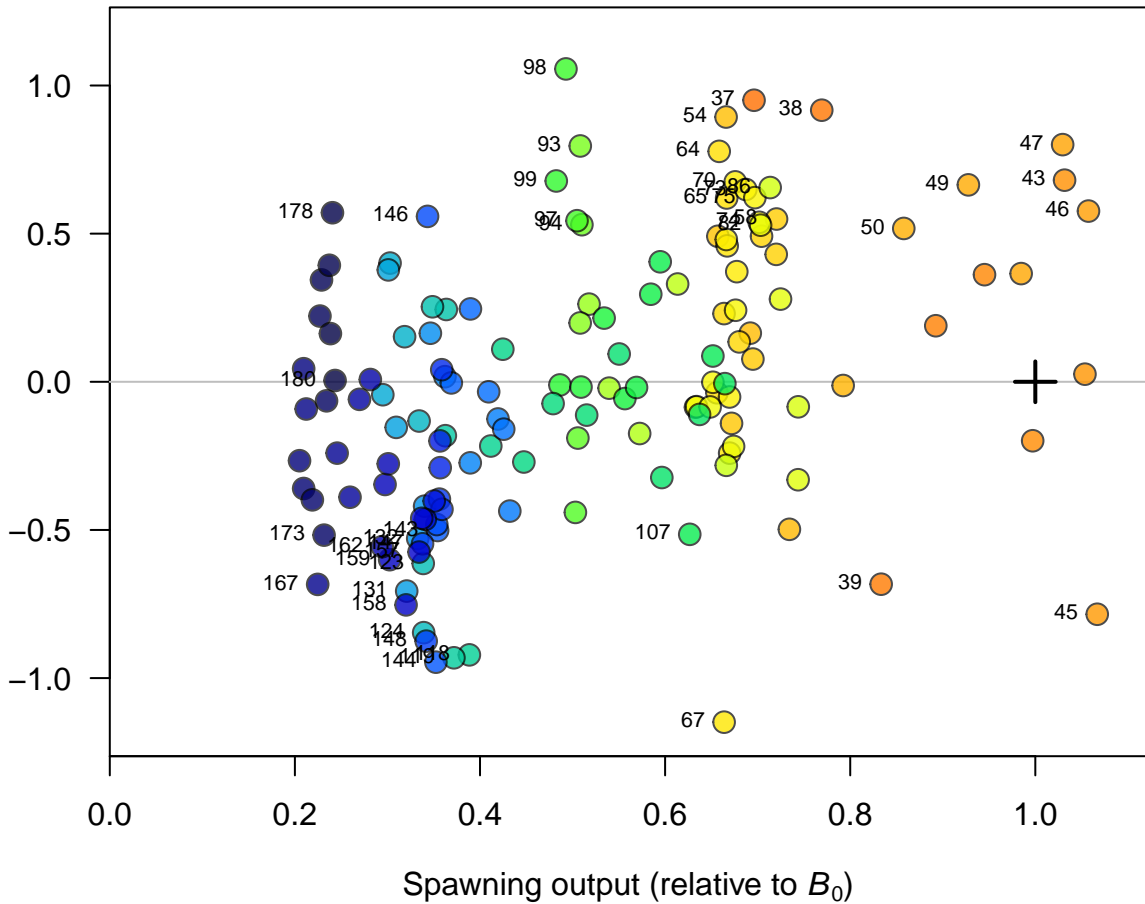
Recruitment (1,000s)

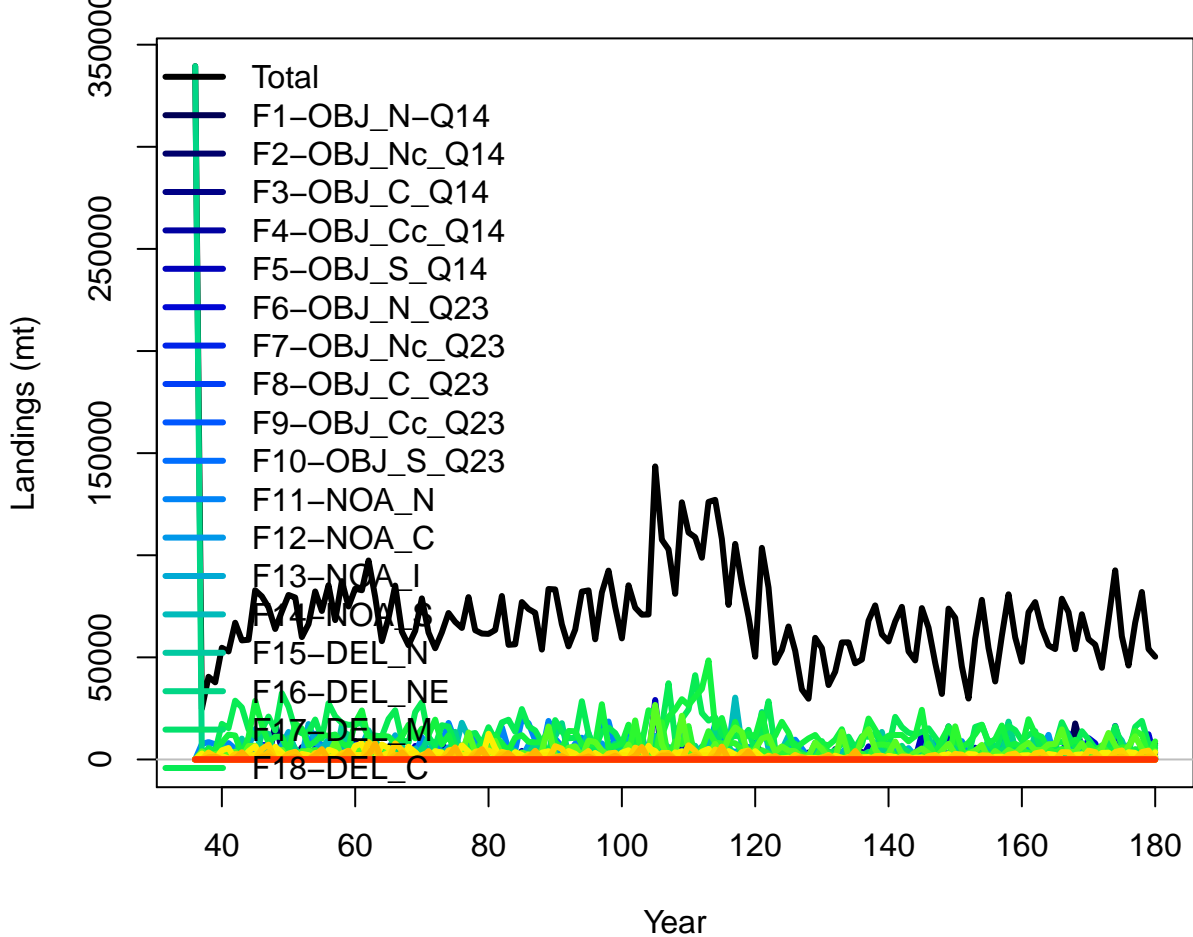


Recruitment (1,000s)



Log recruitment deviation





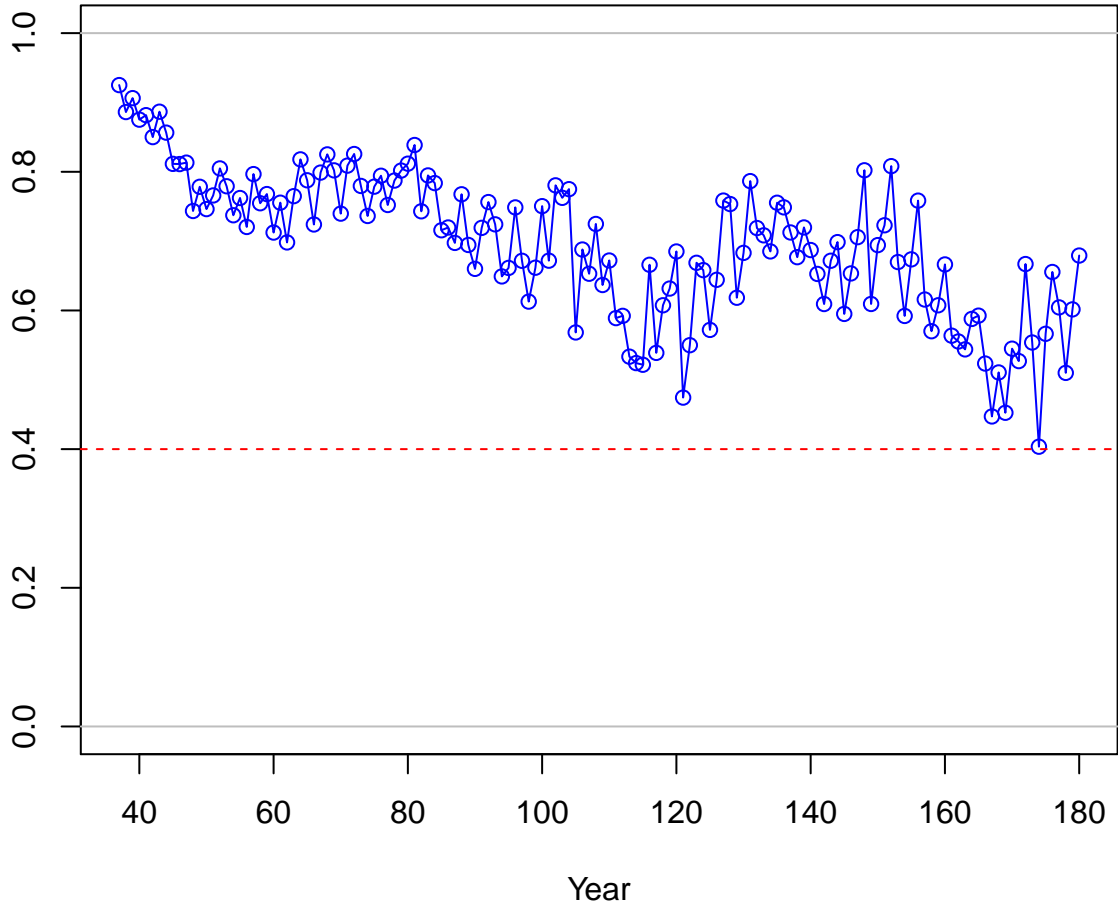




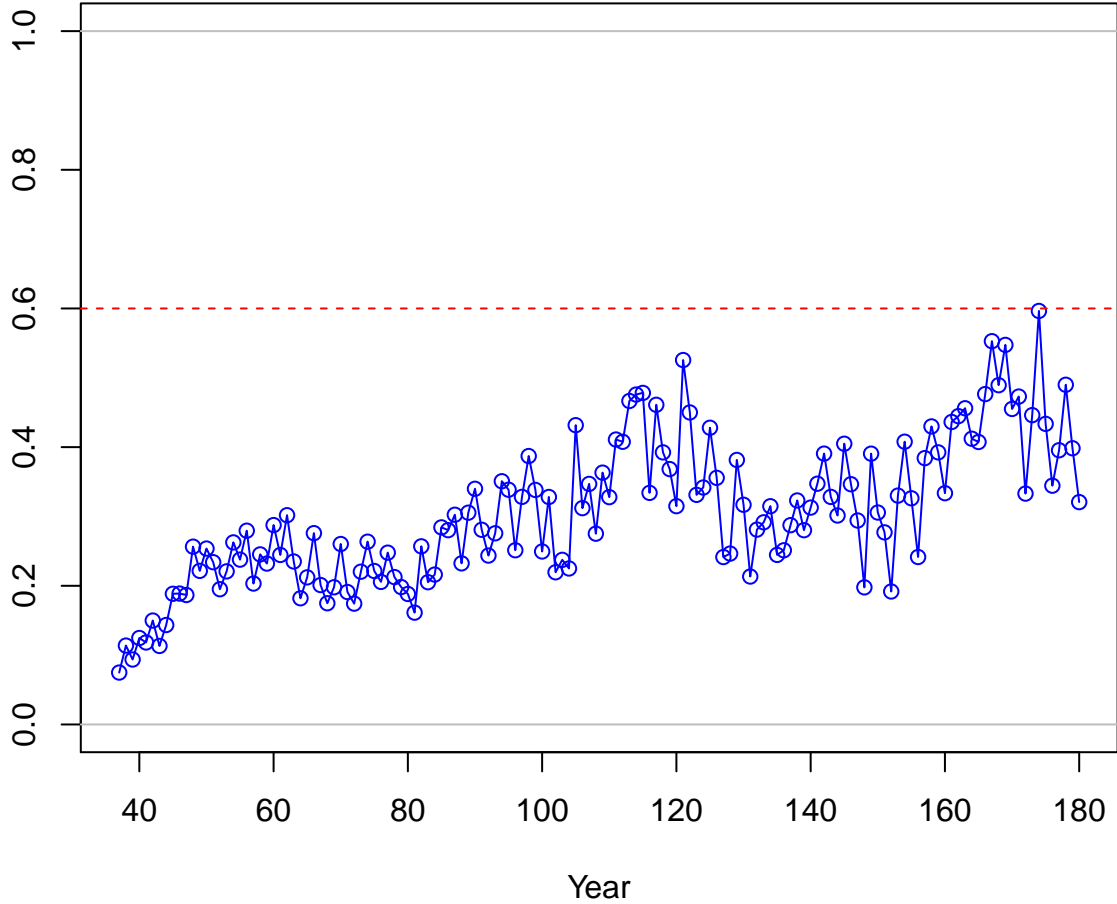


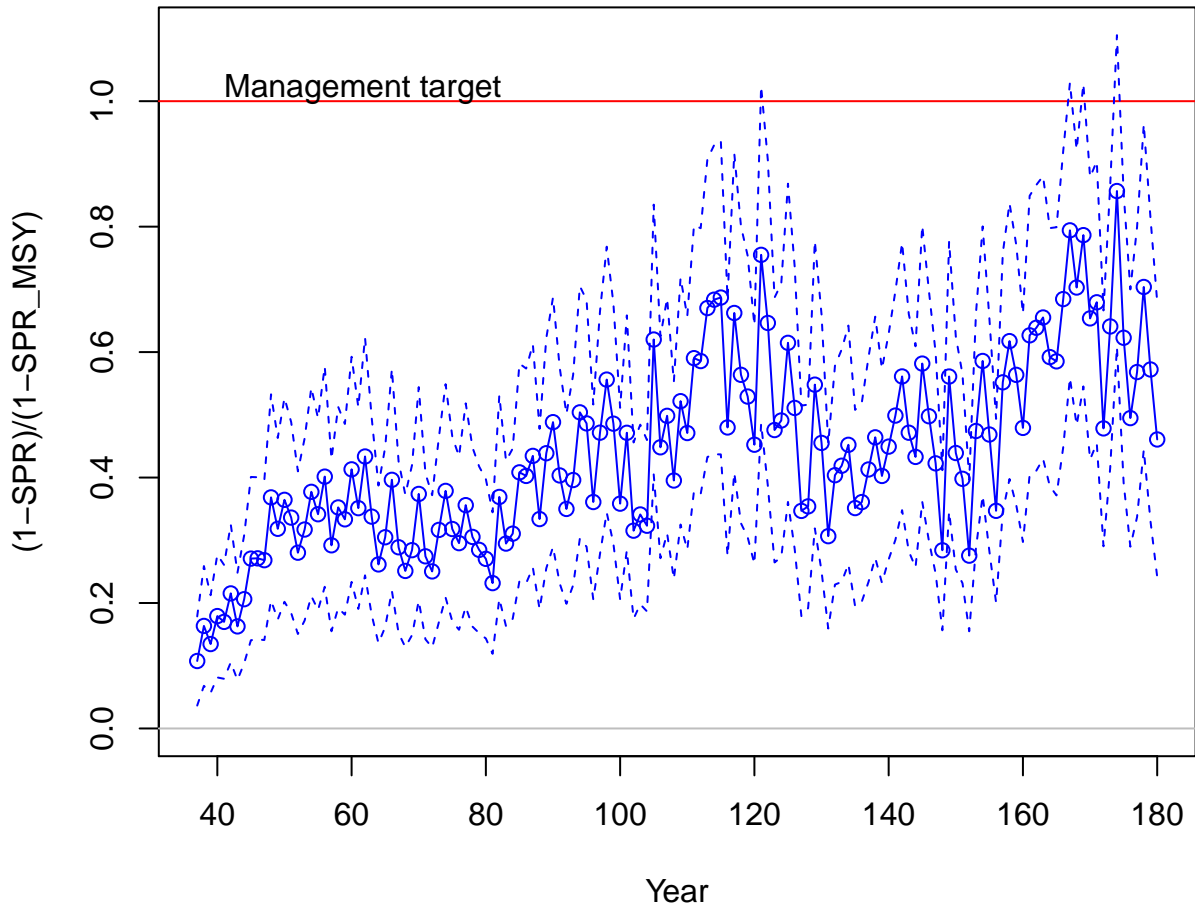


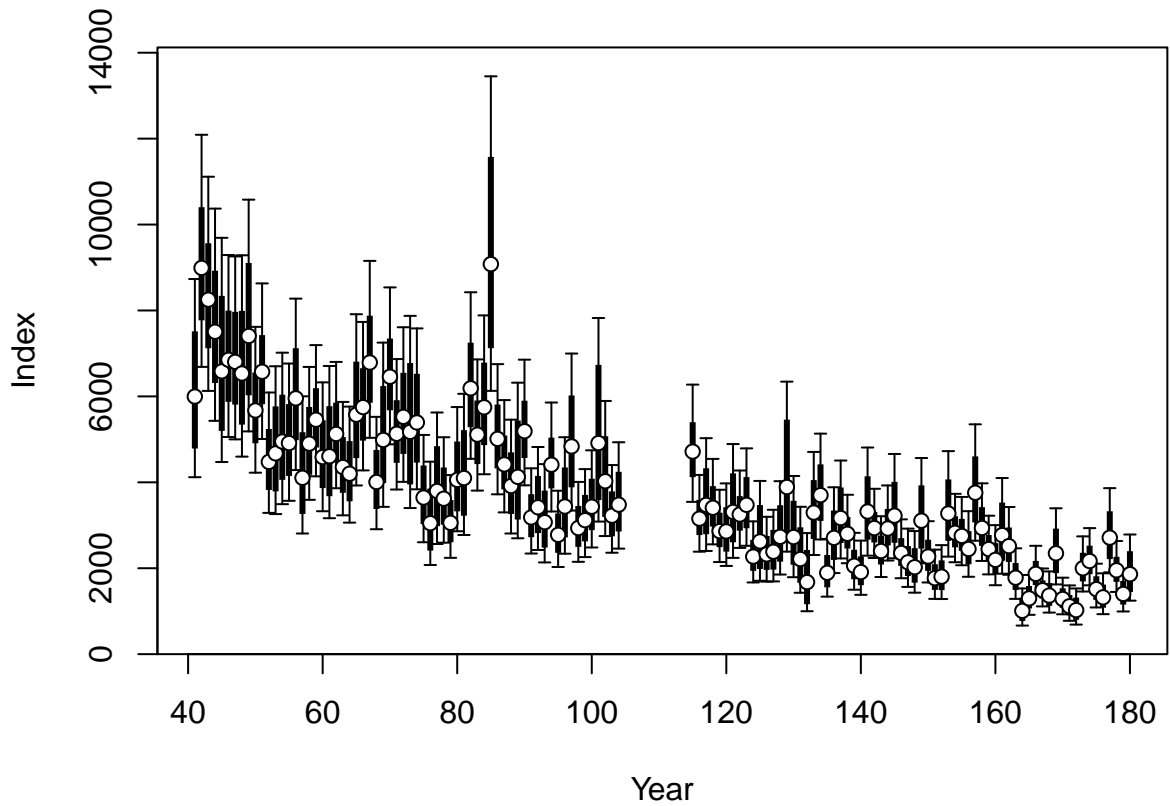
SPR

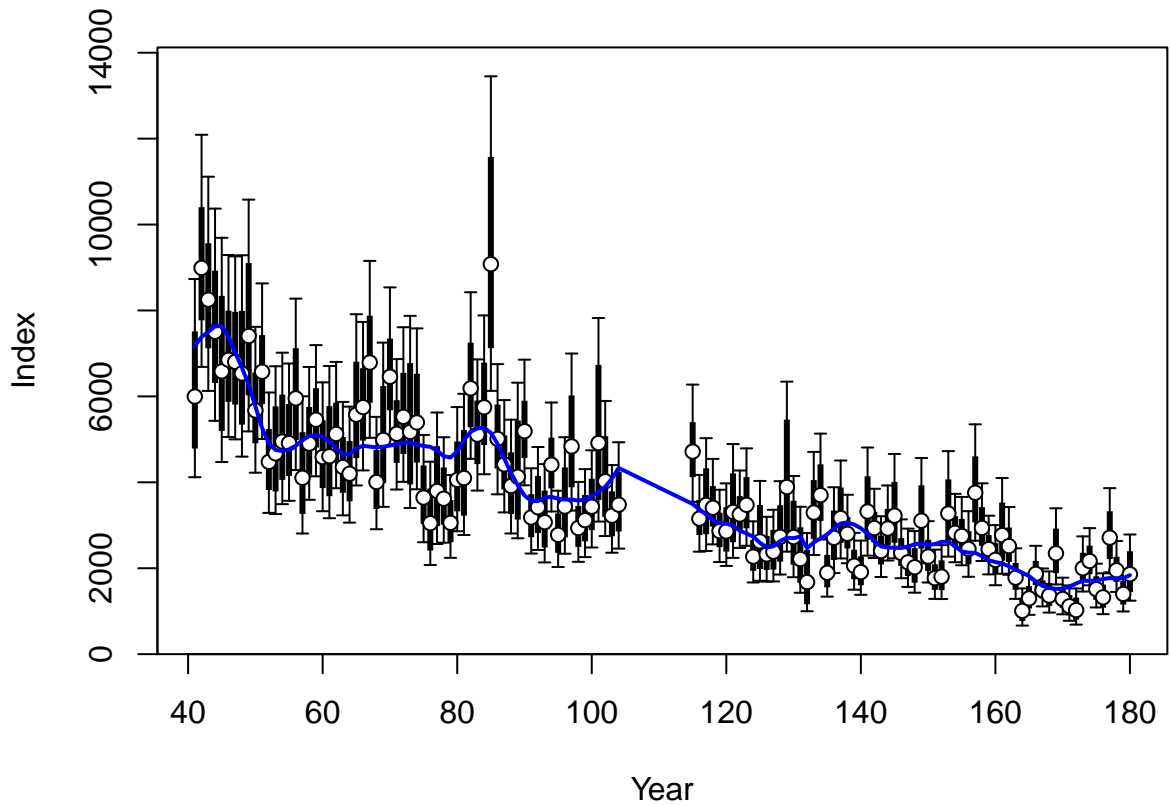


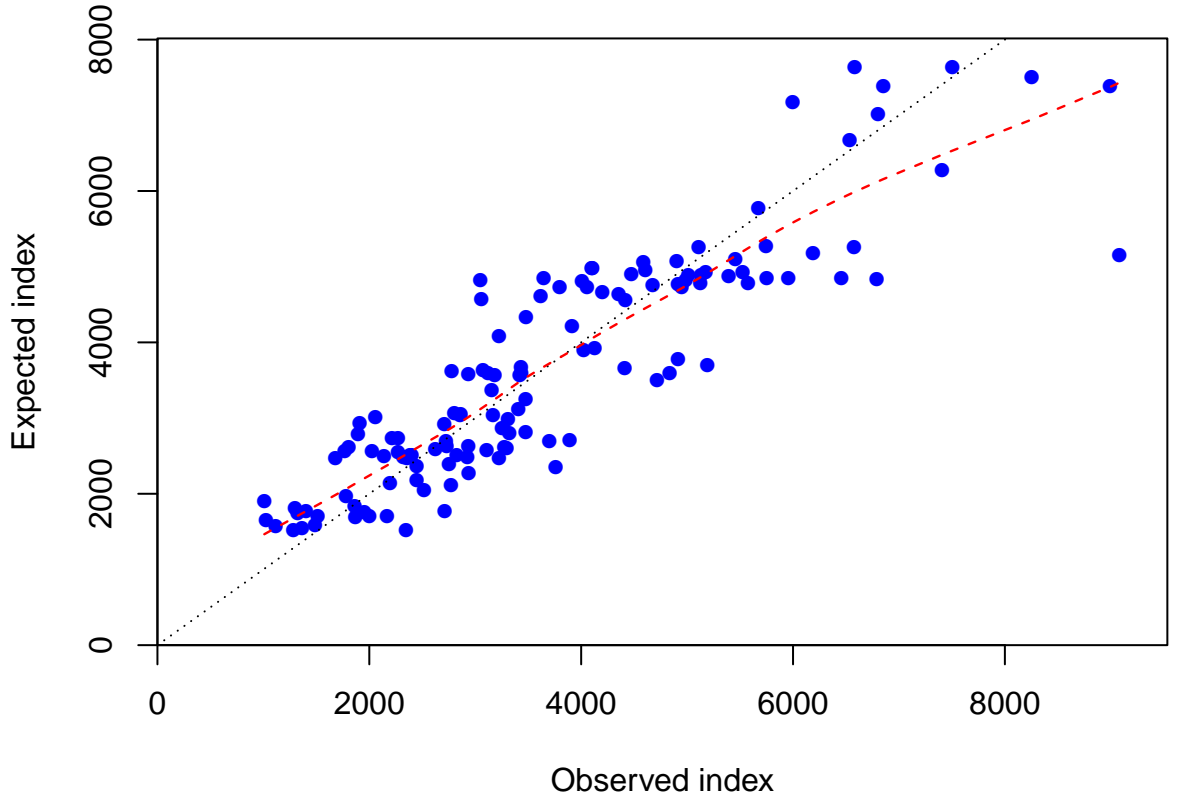
1-SPR

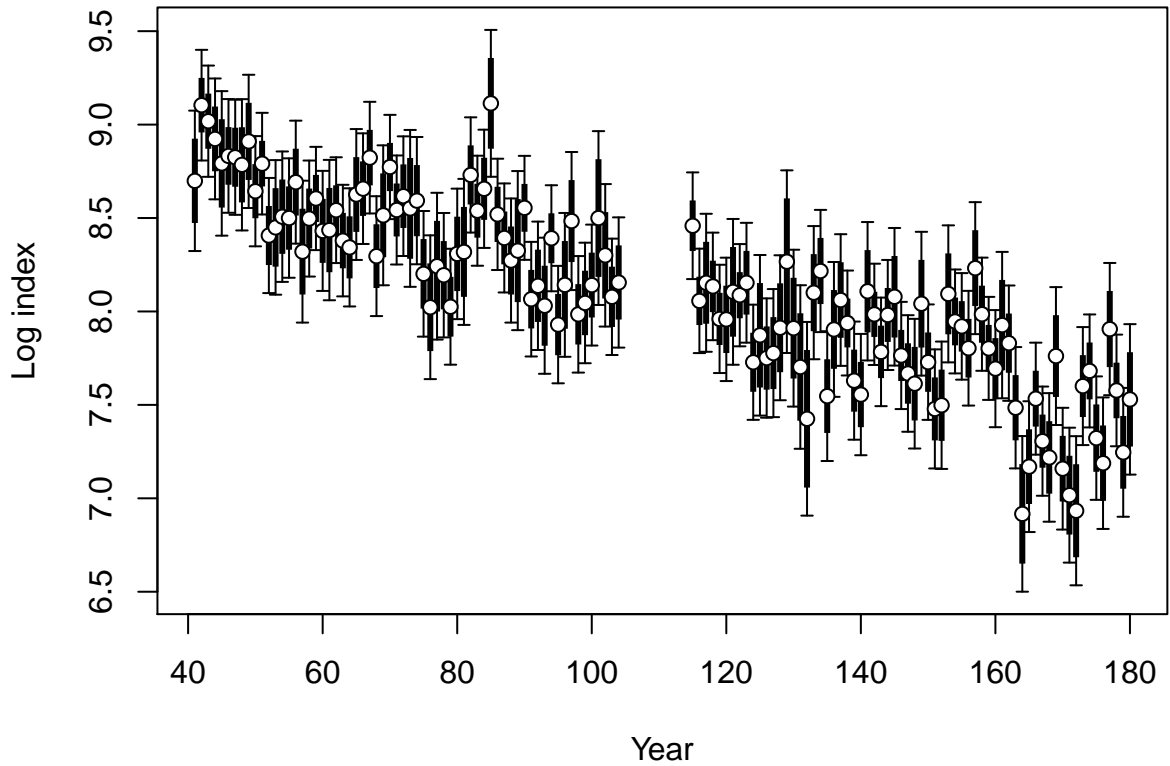


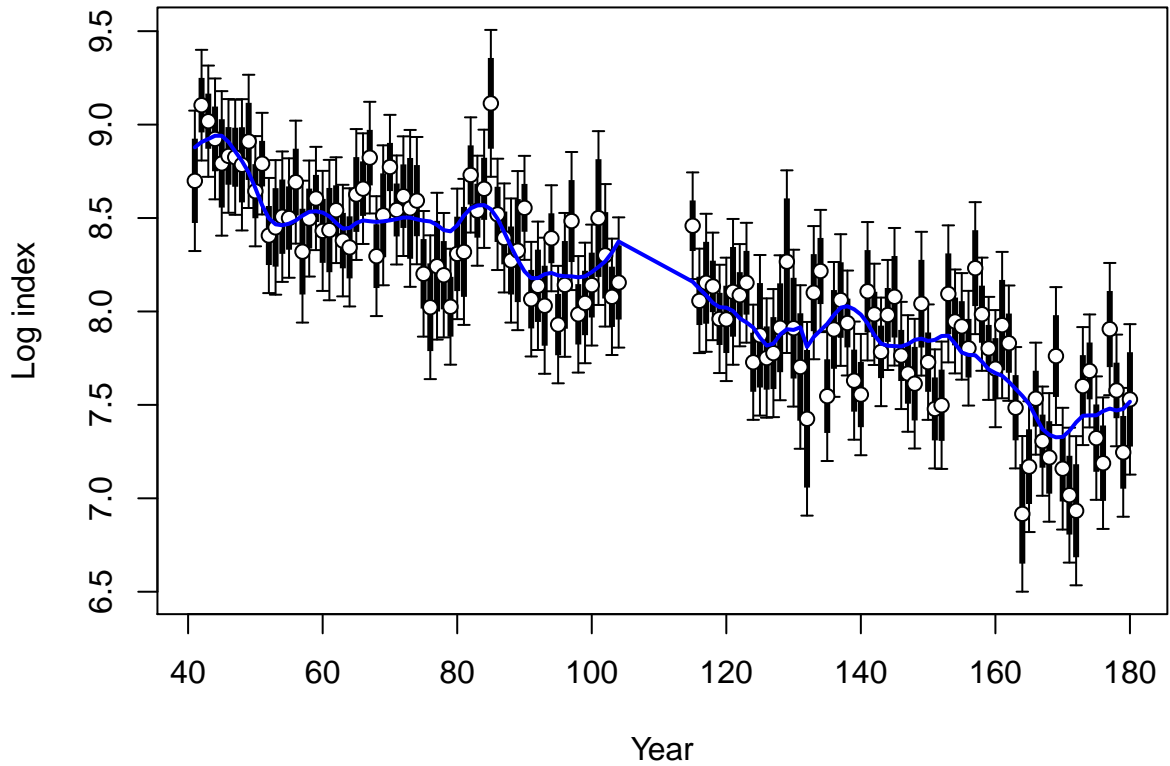




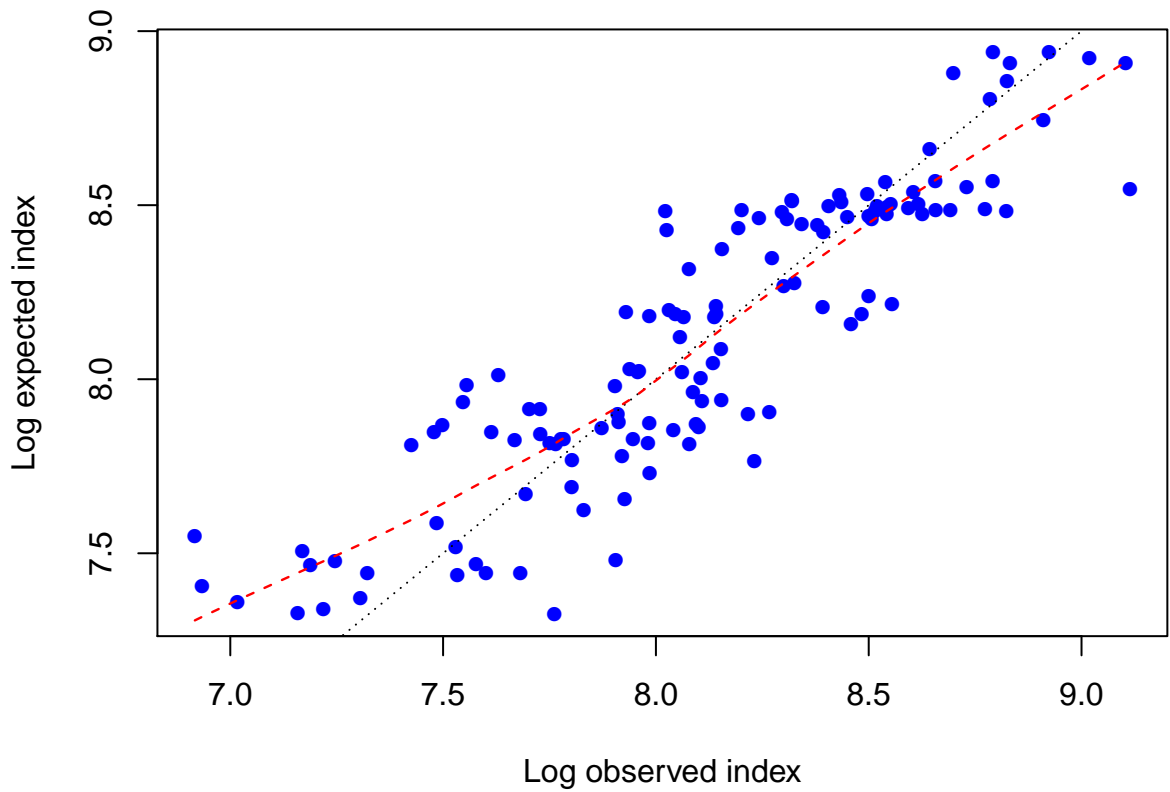


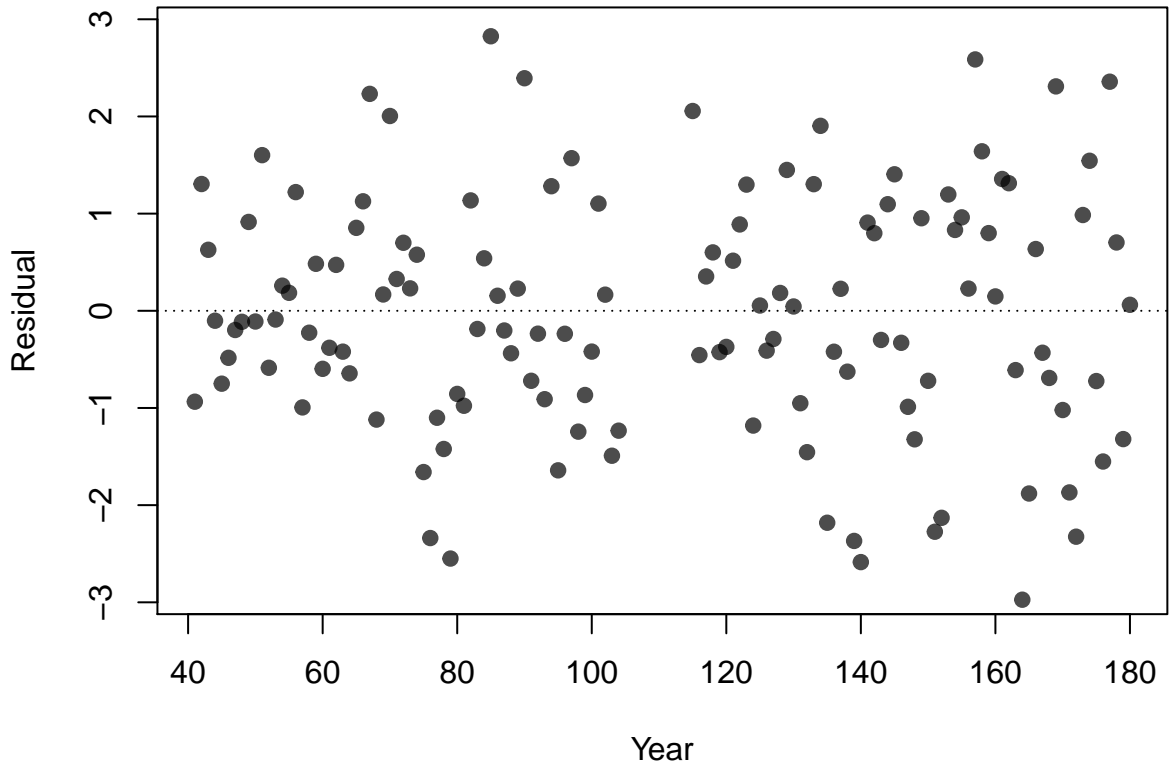


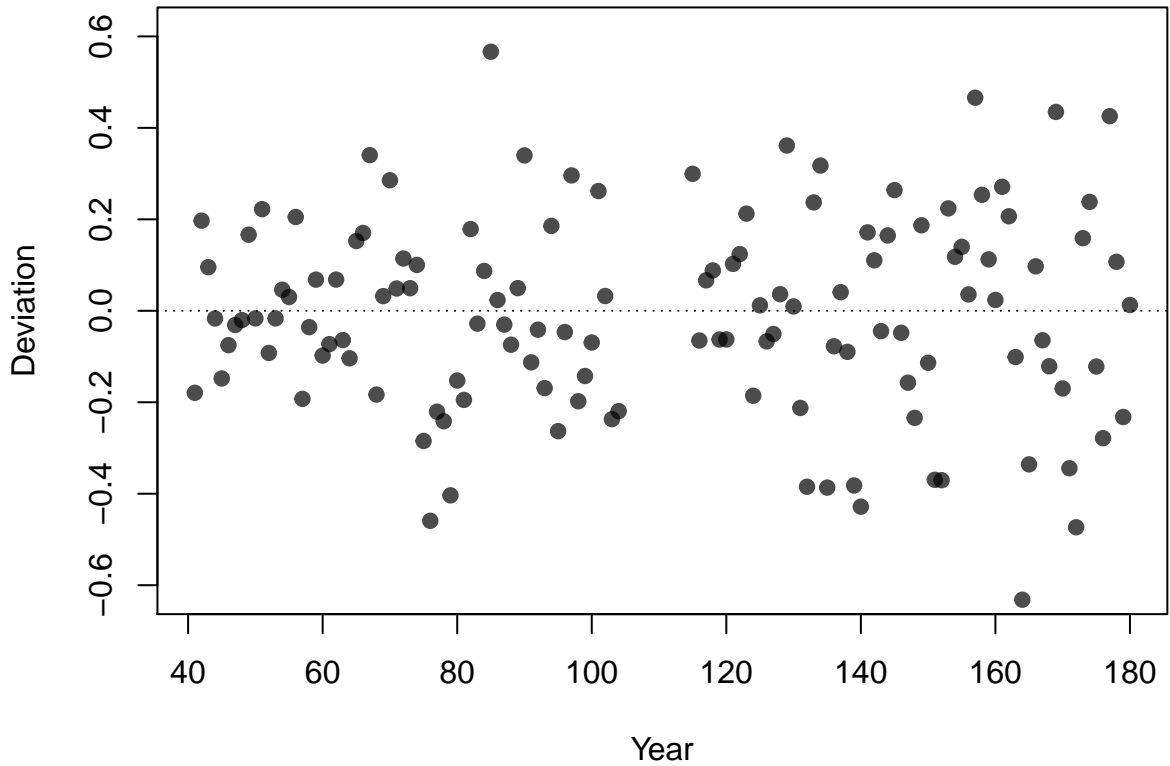


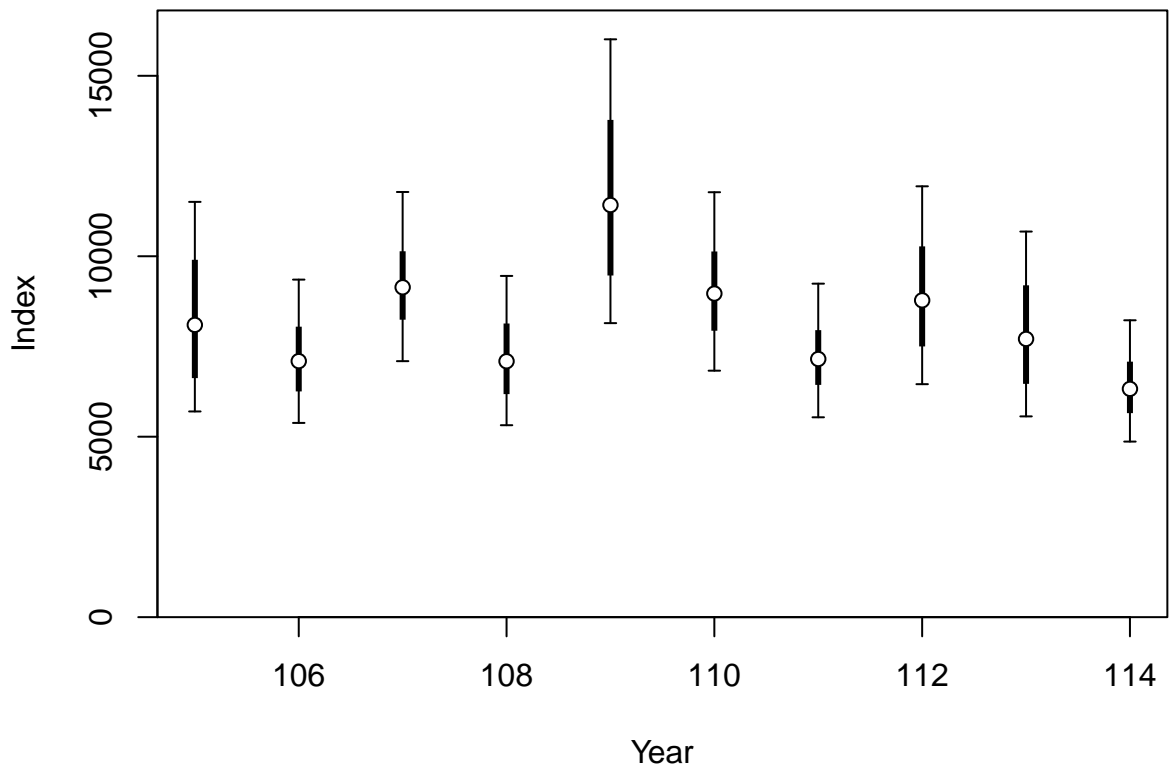


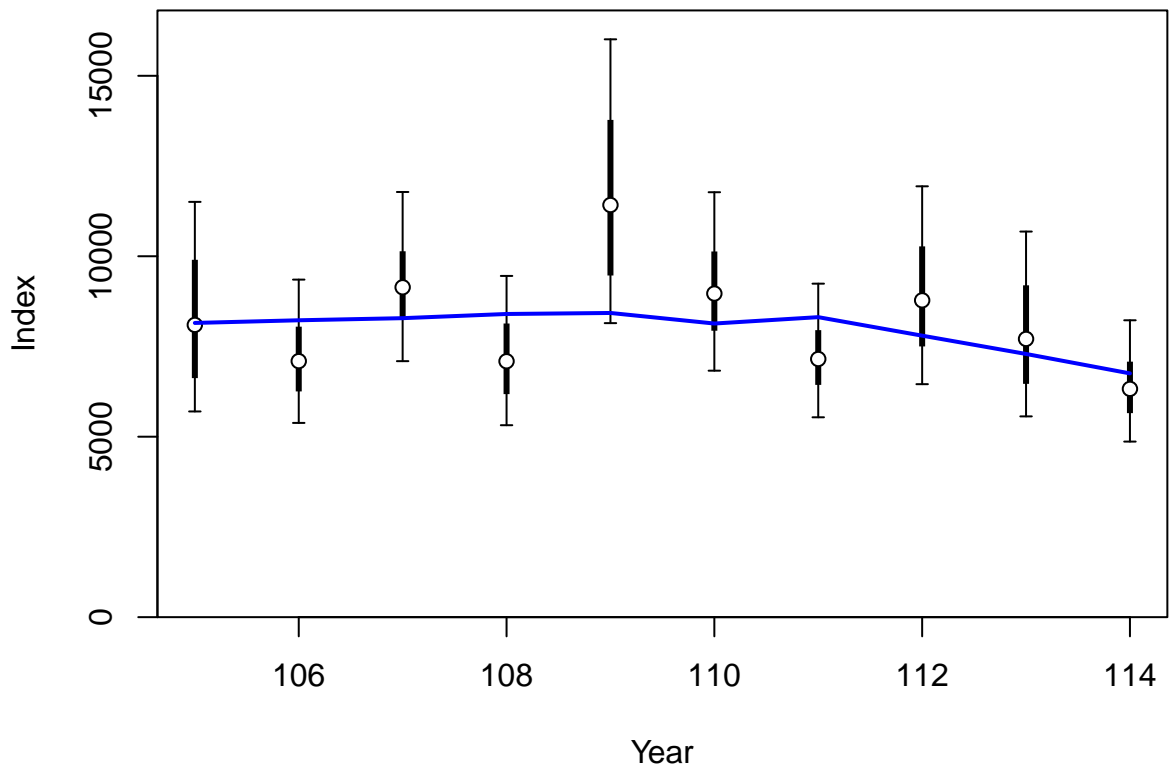


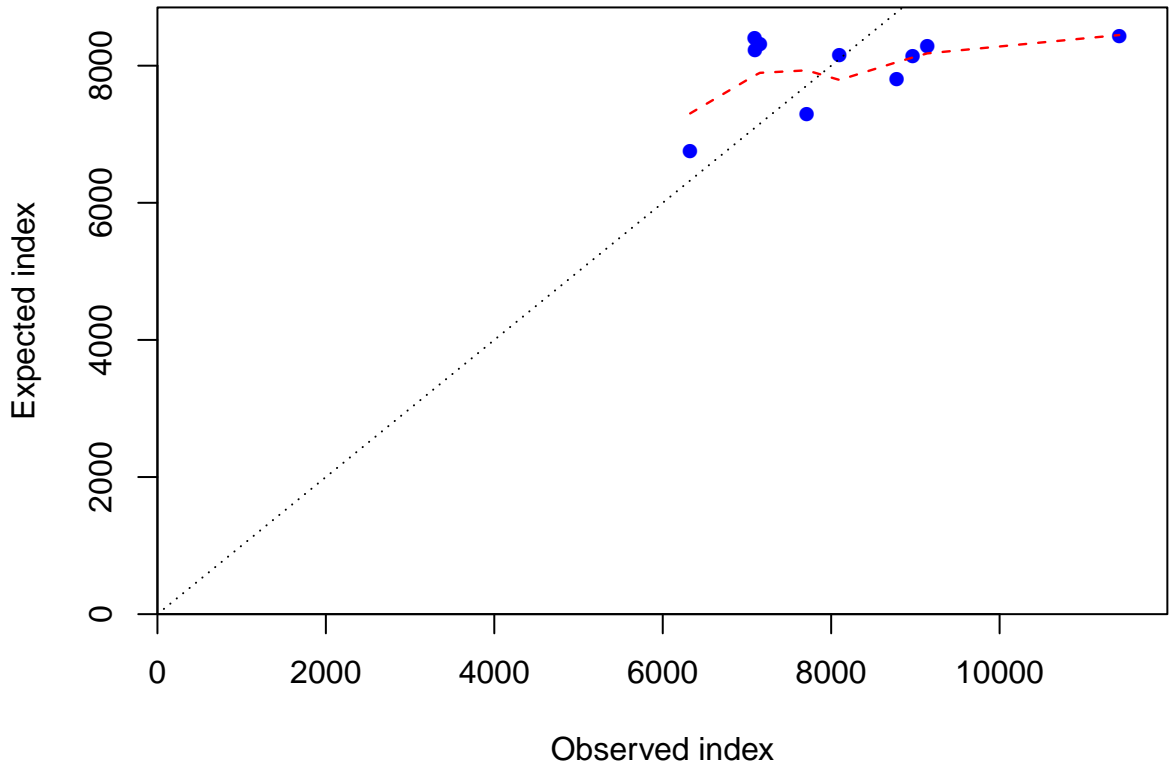


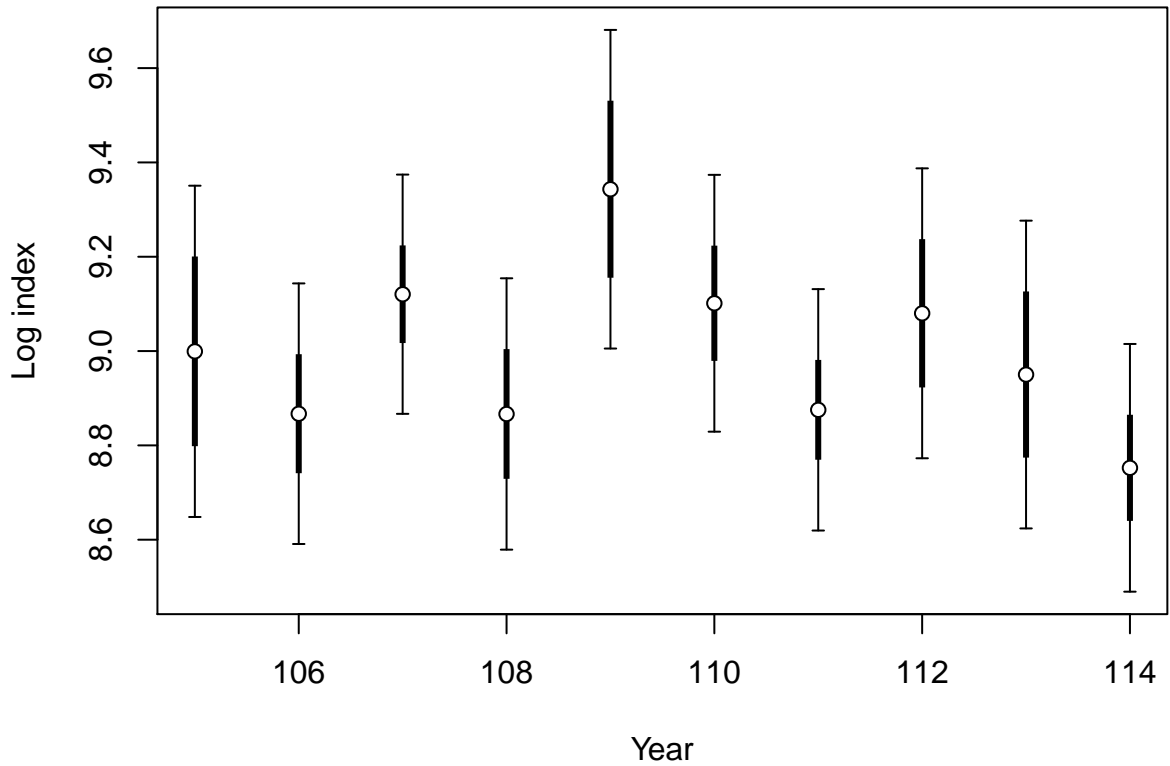


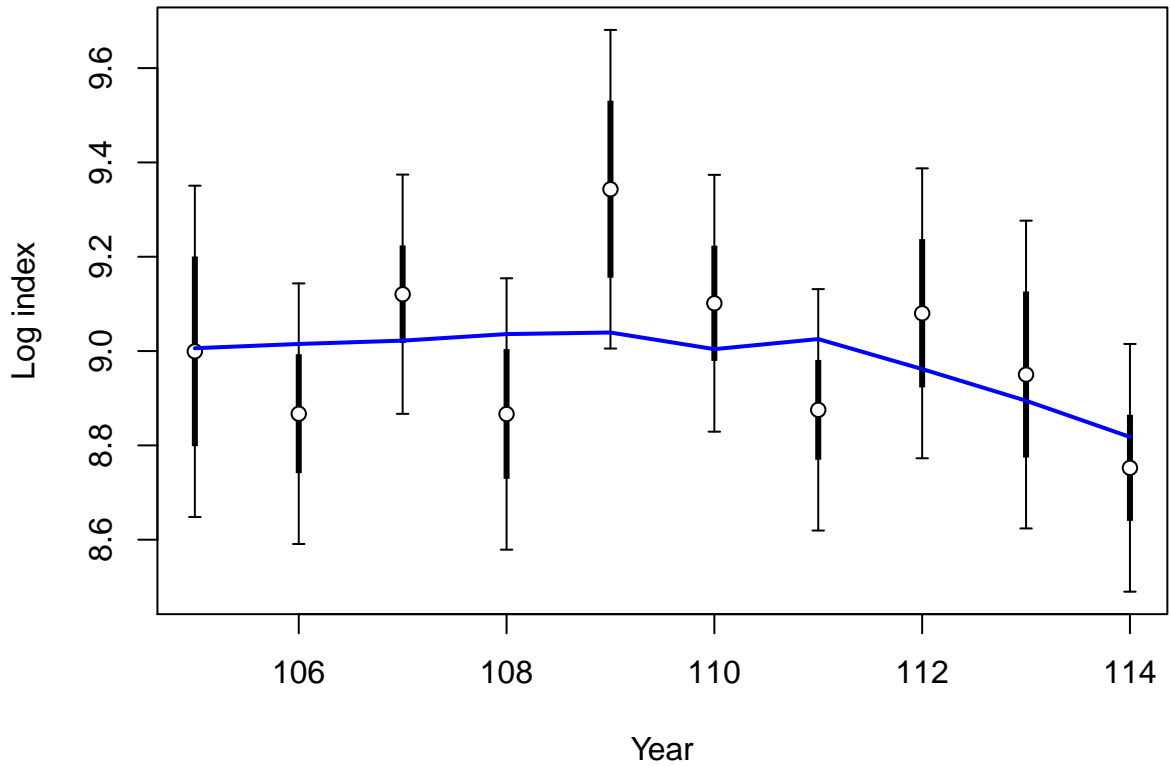




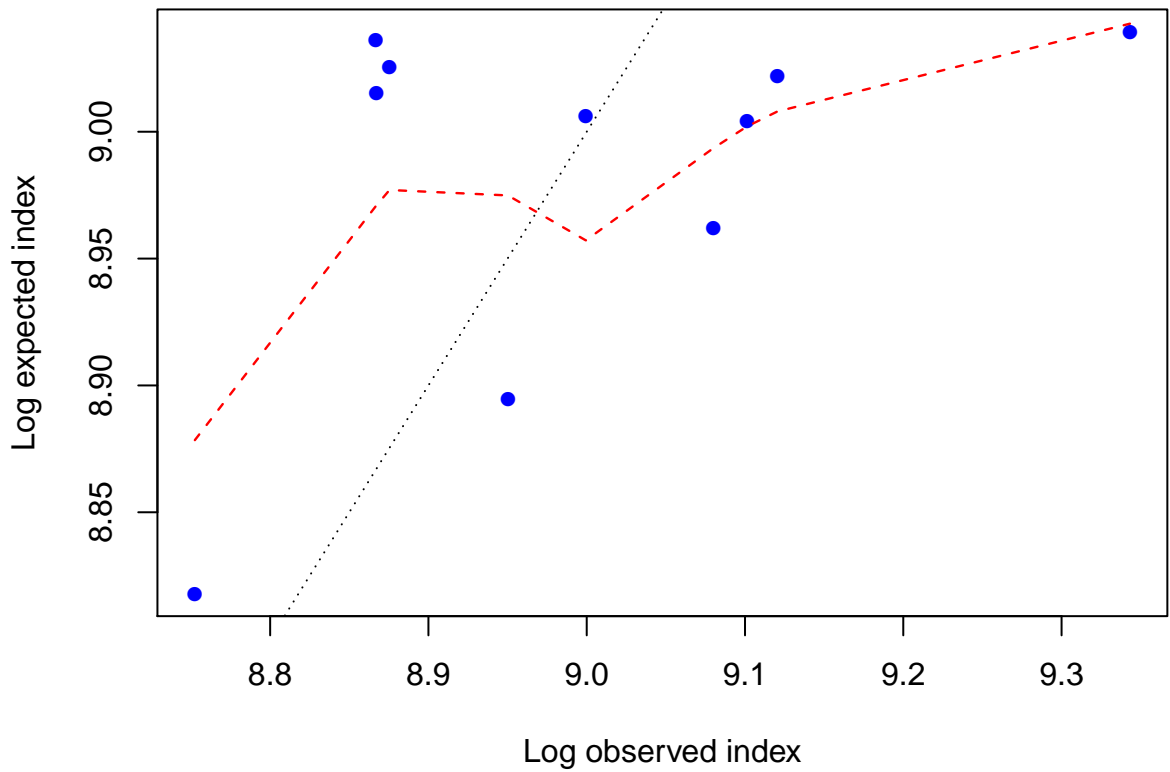


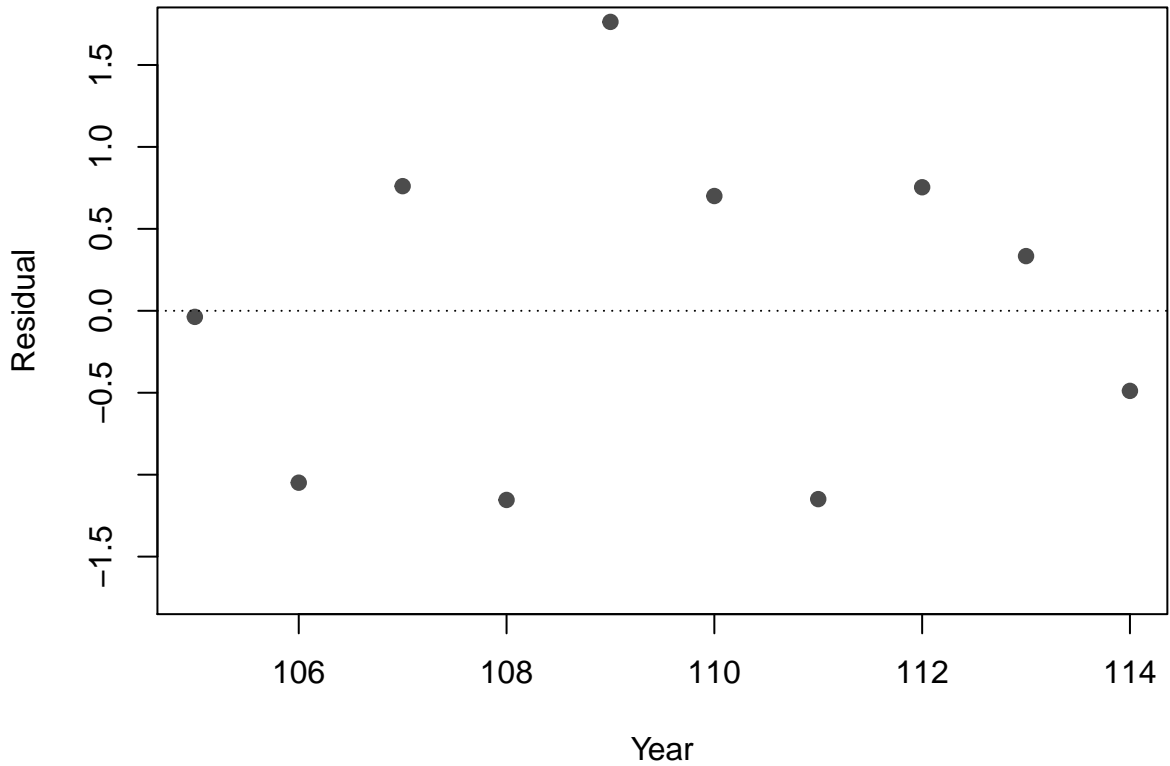


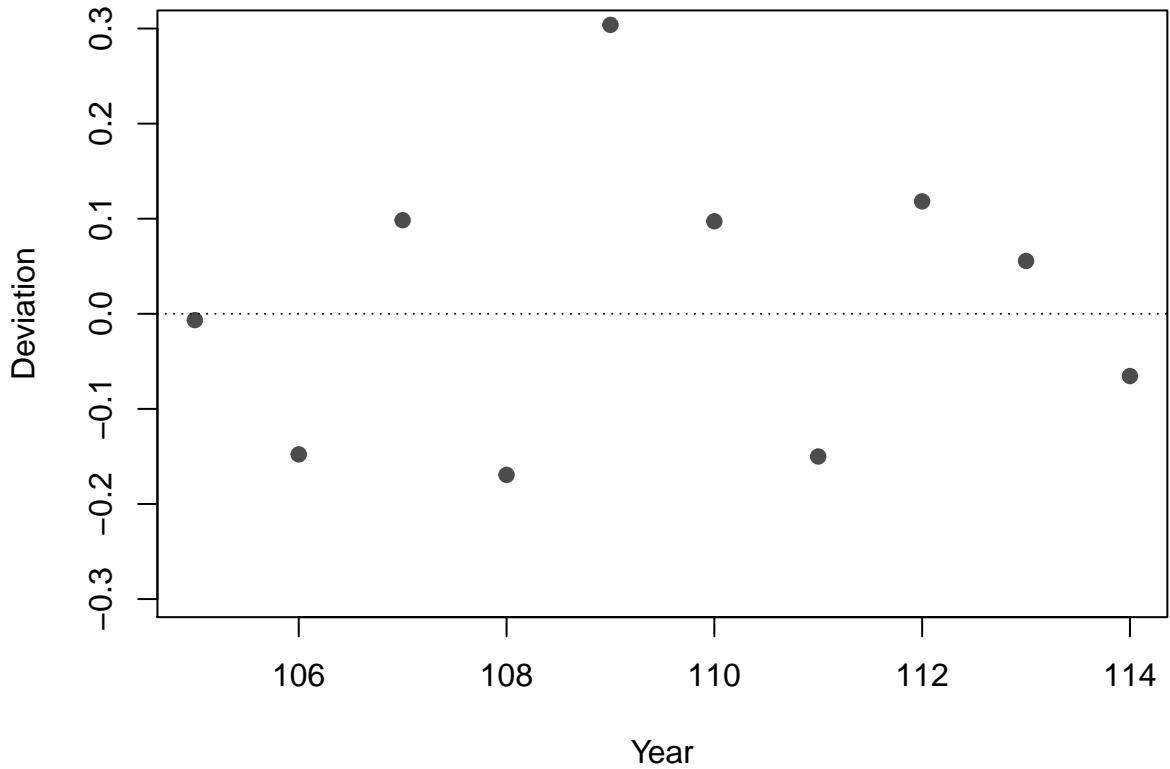


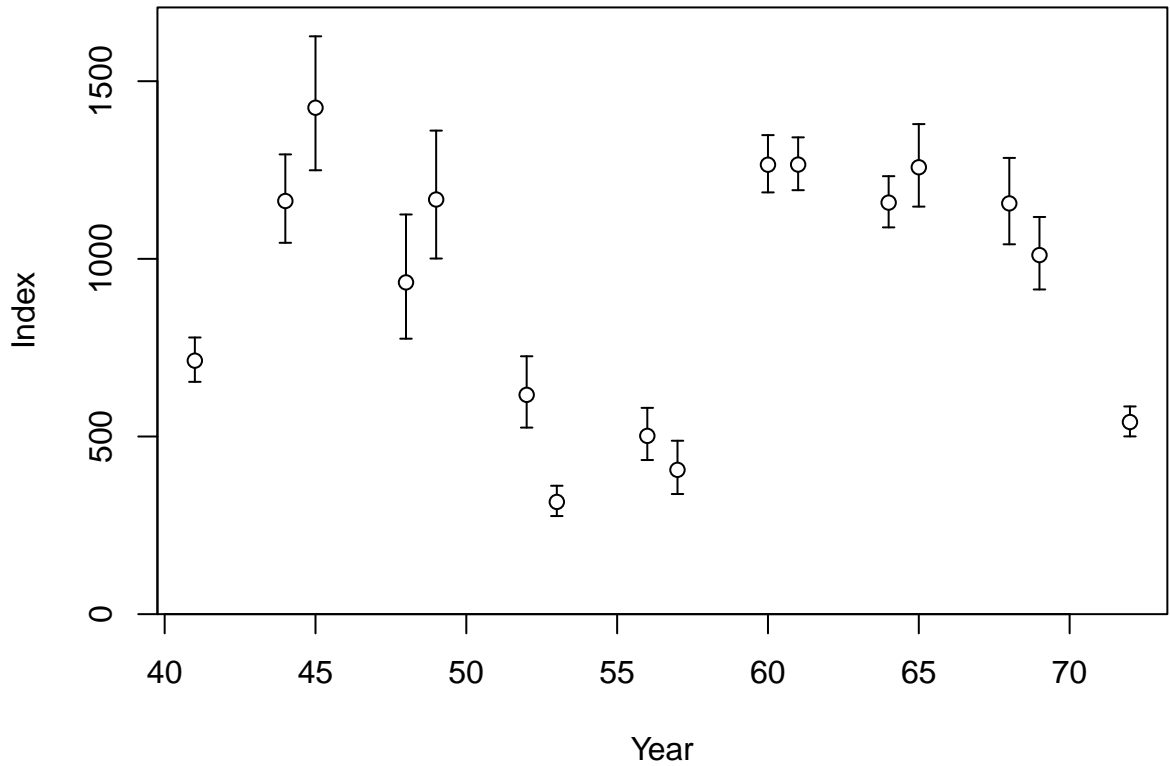


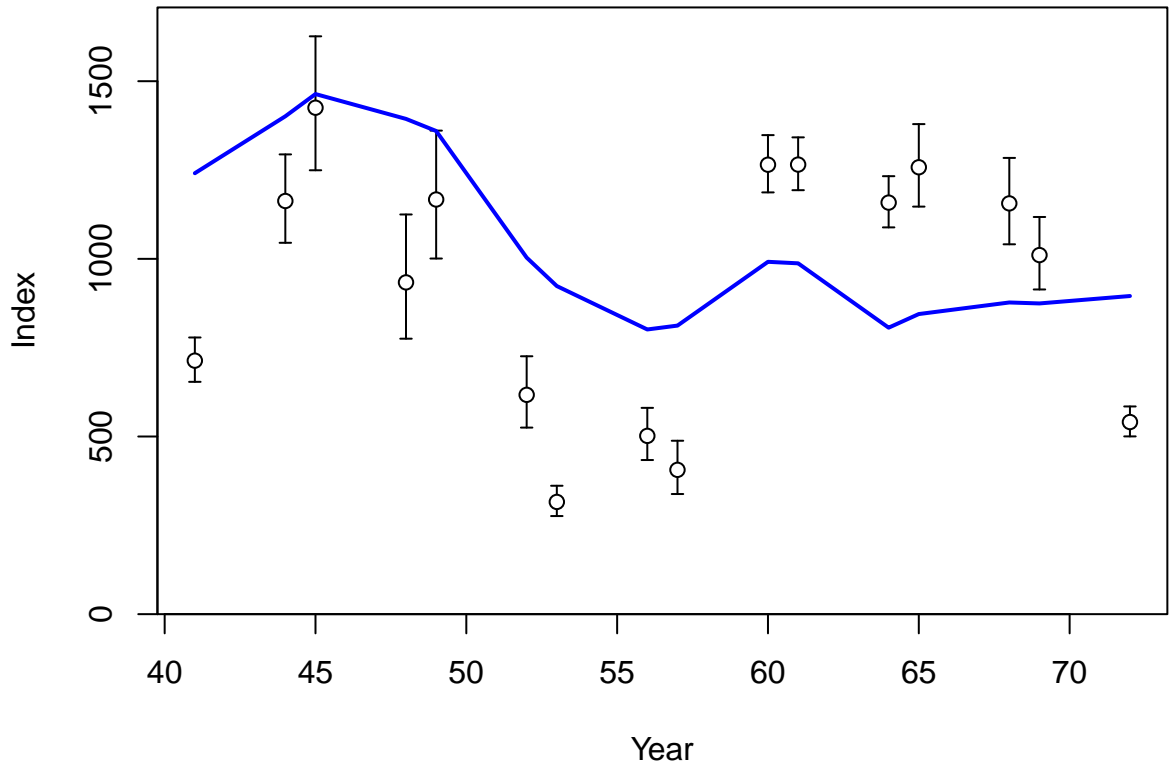


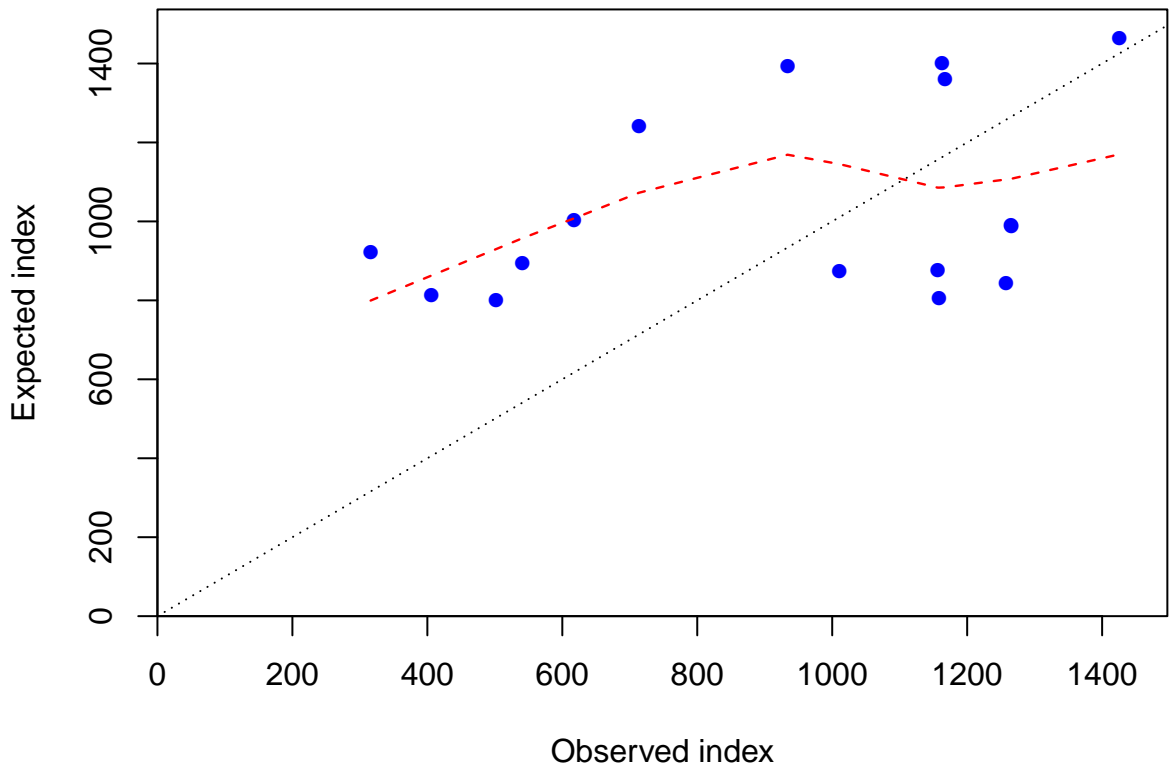


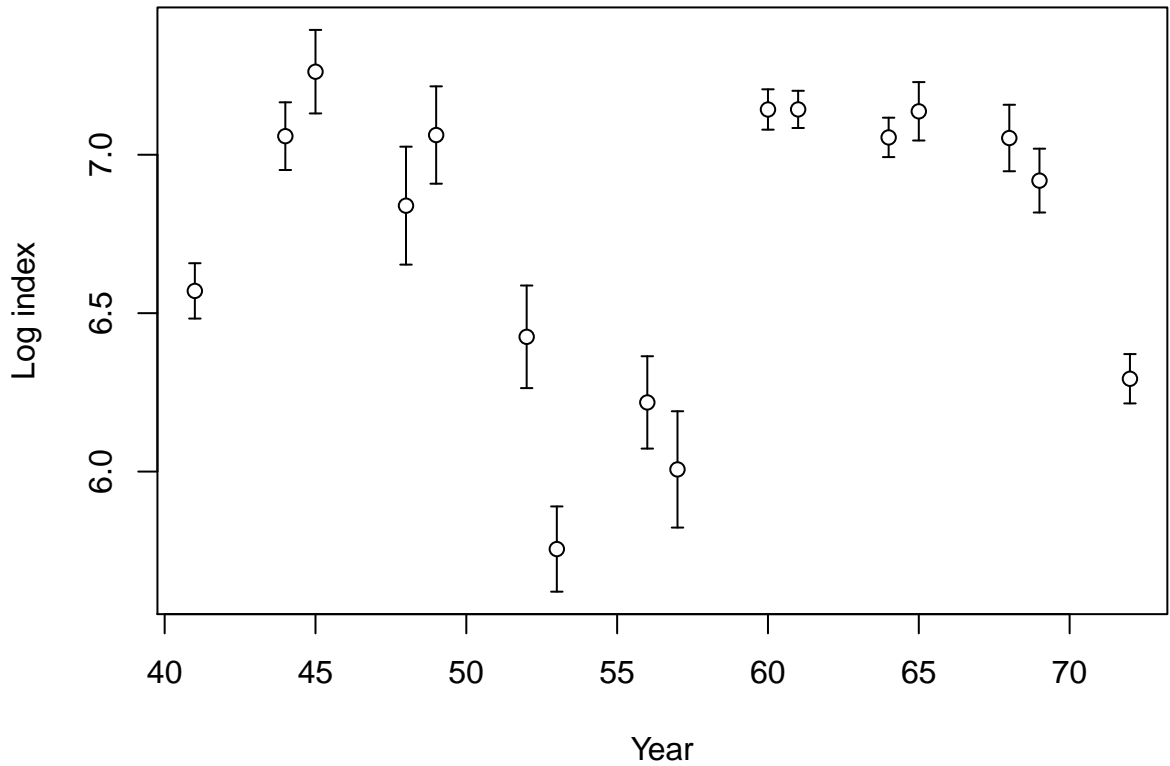


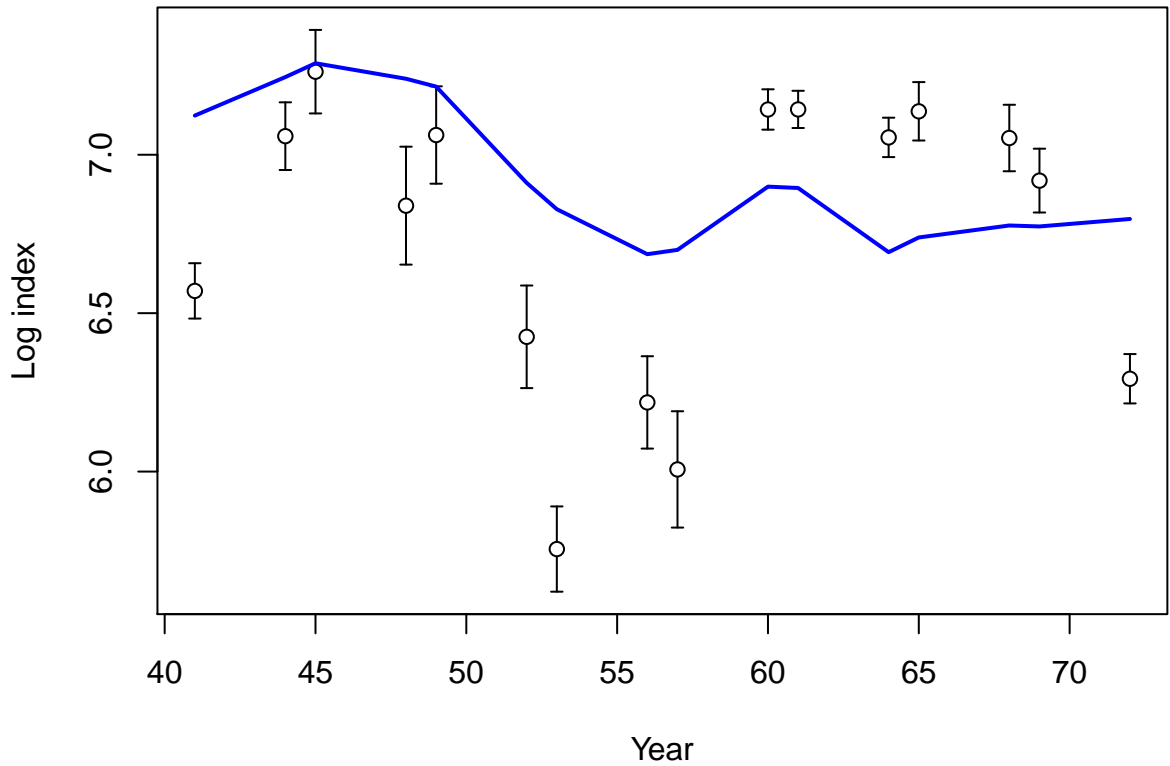




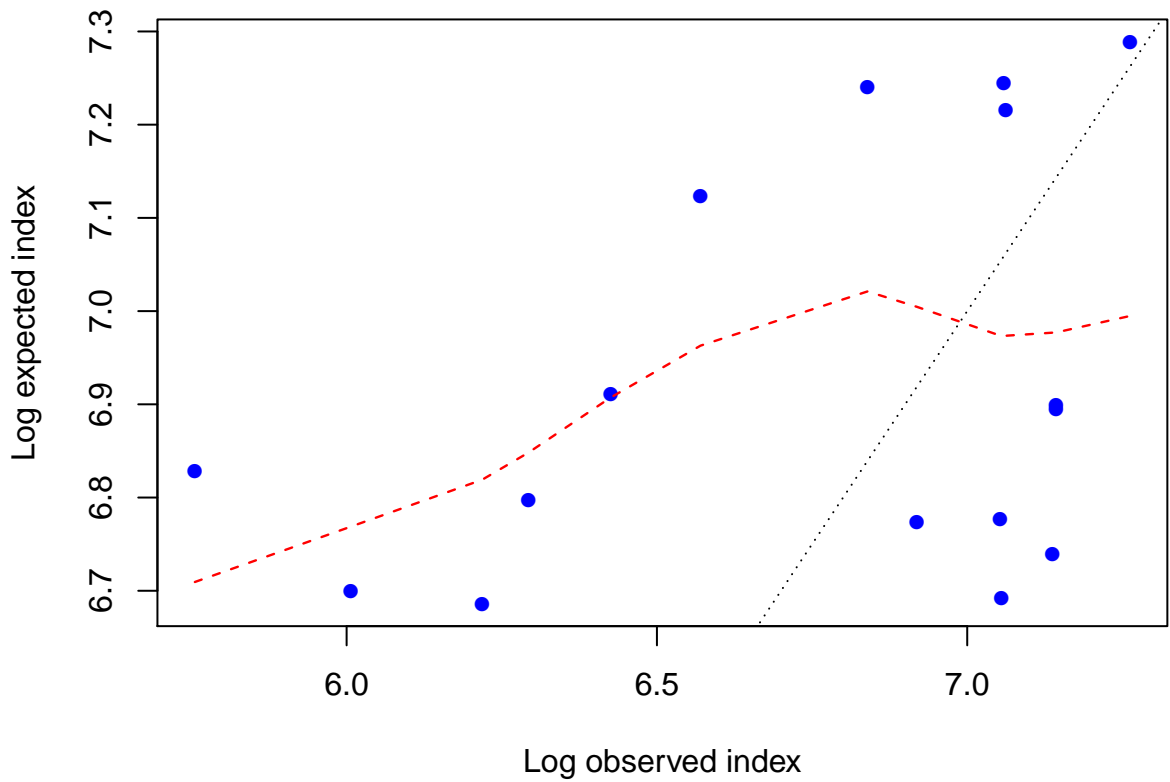


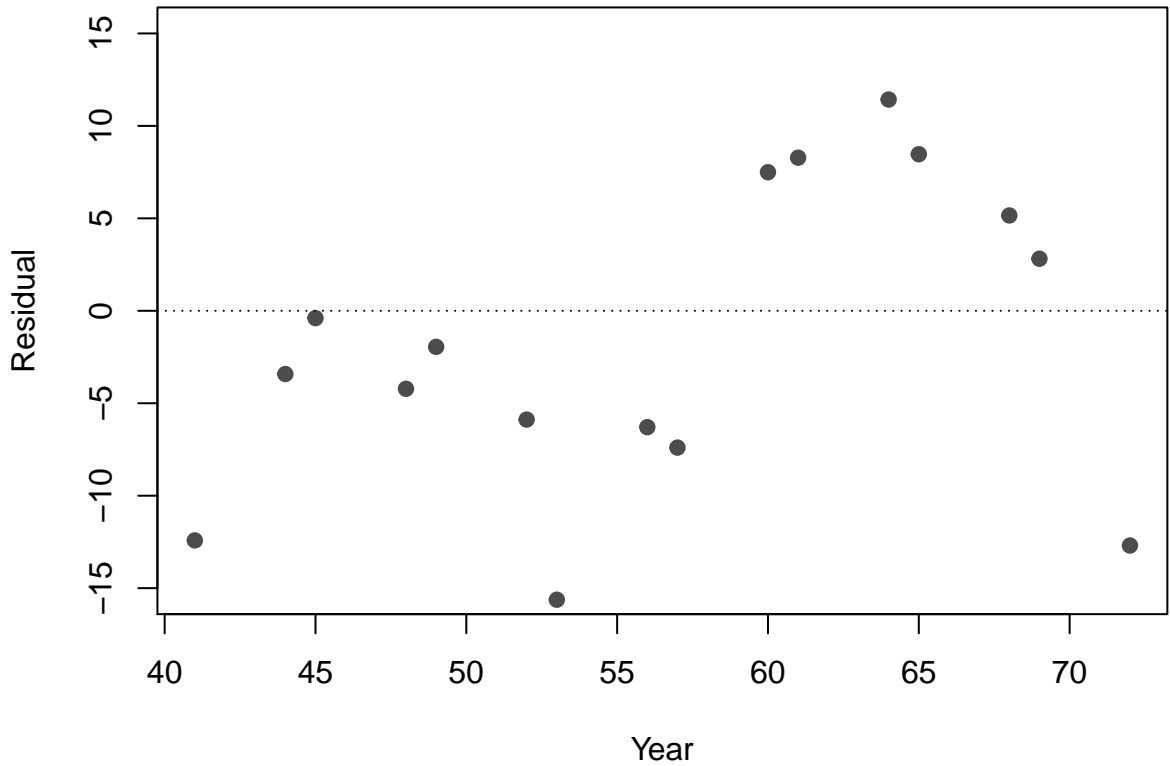


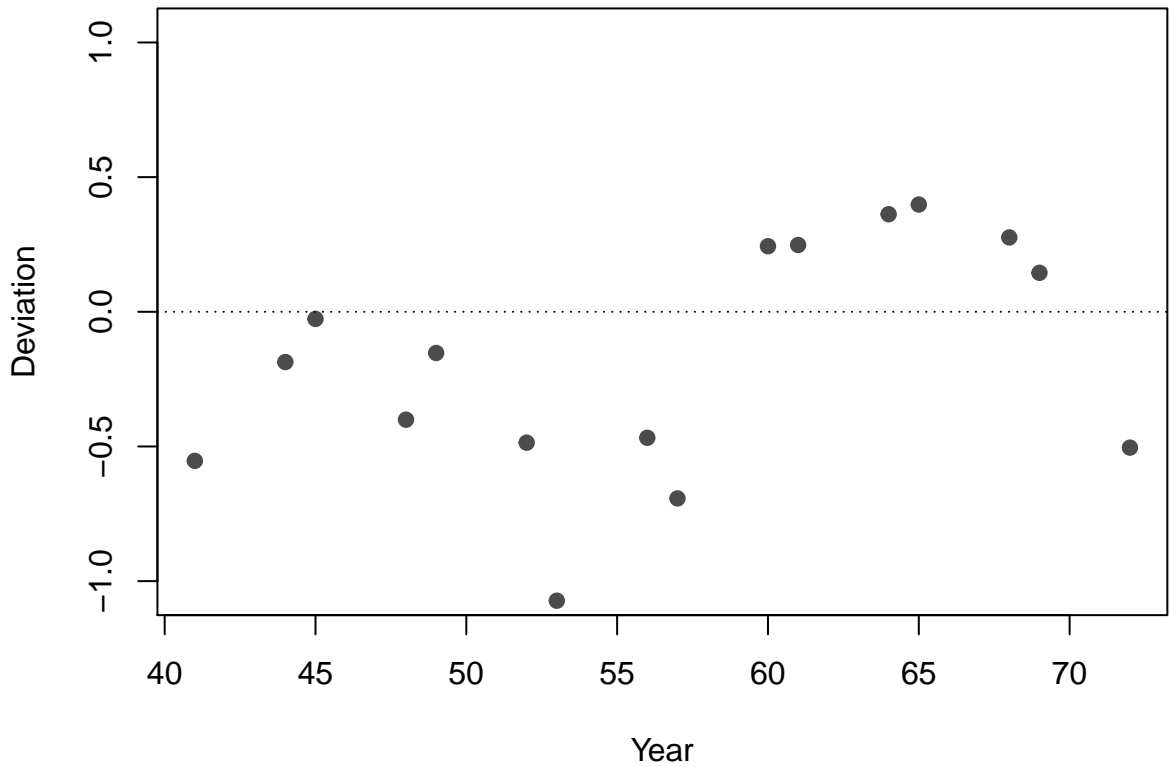


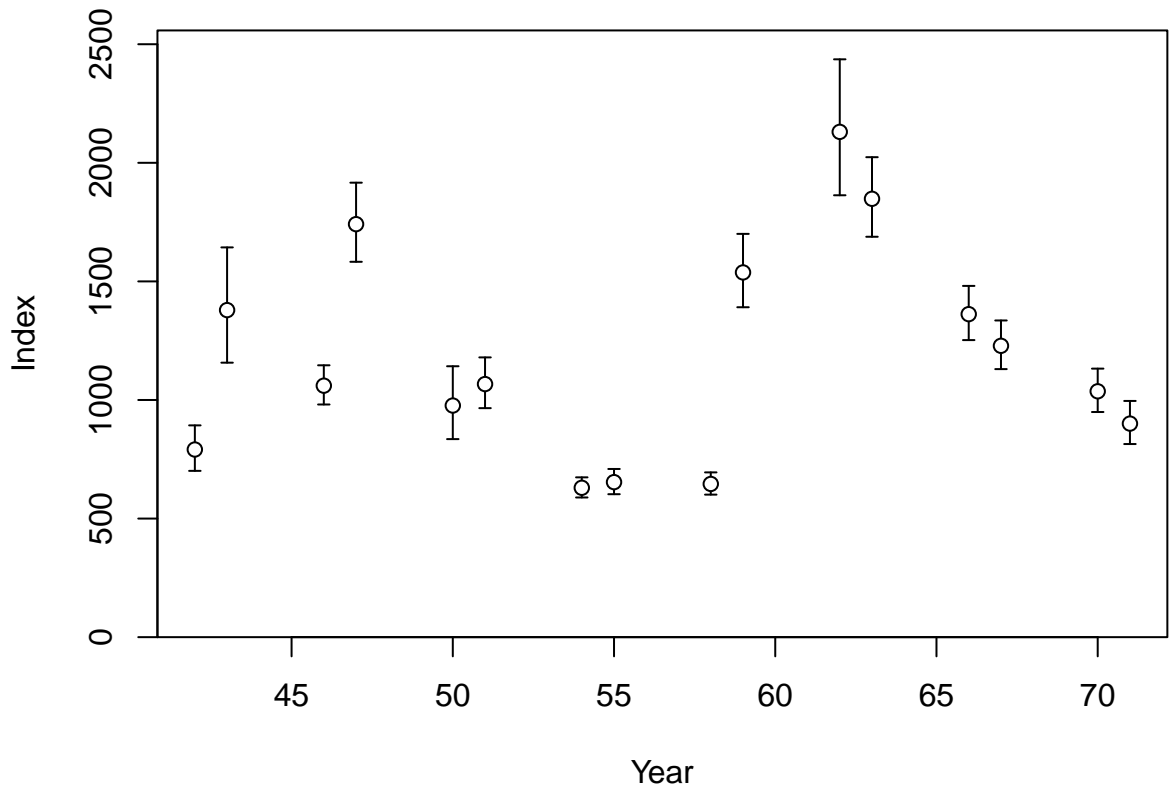


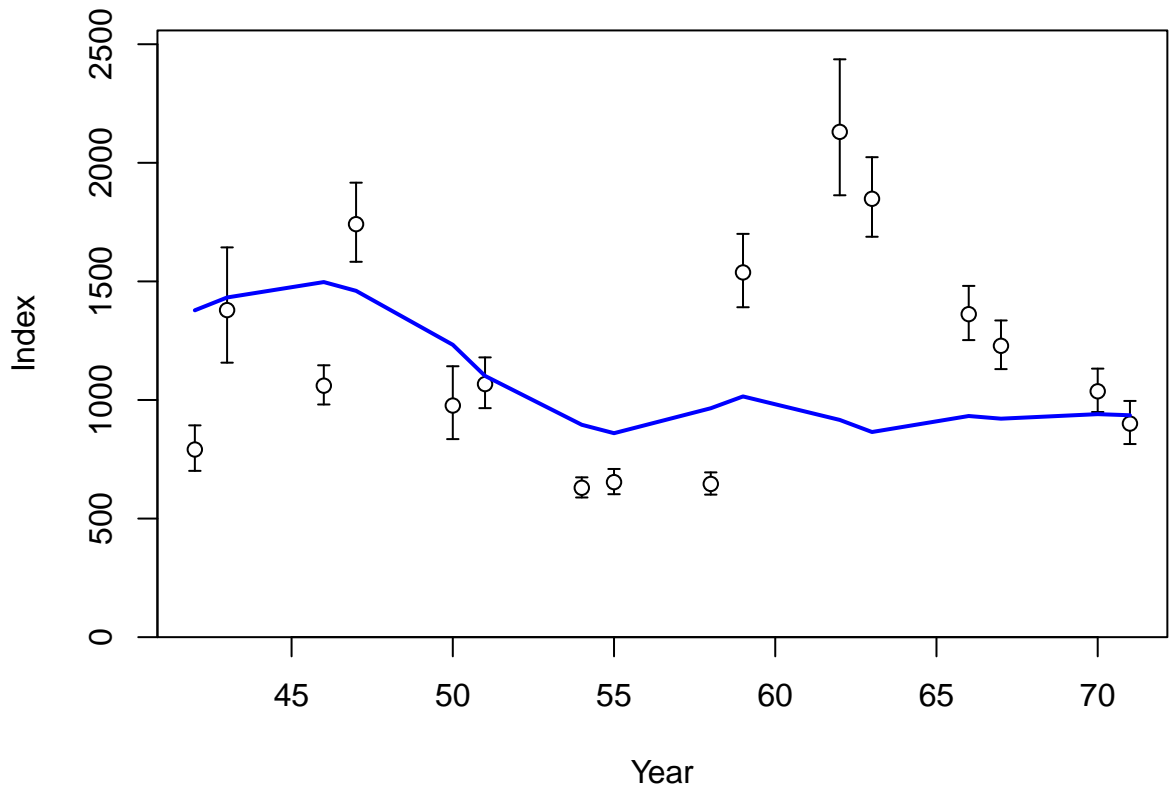


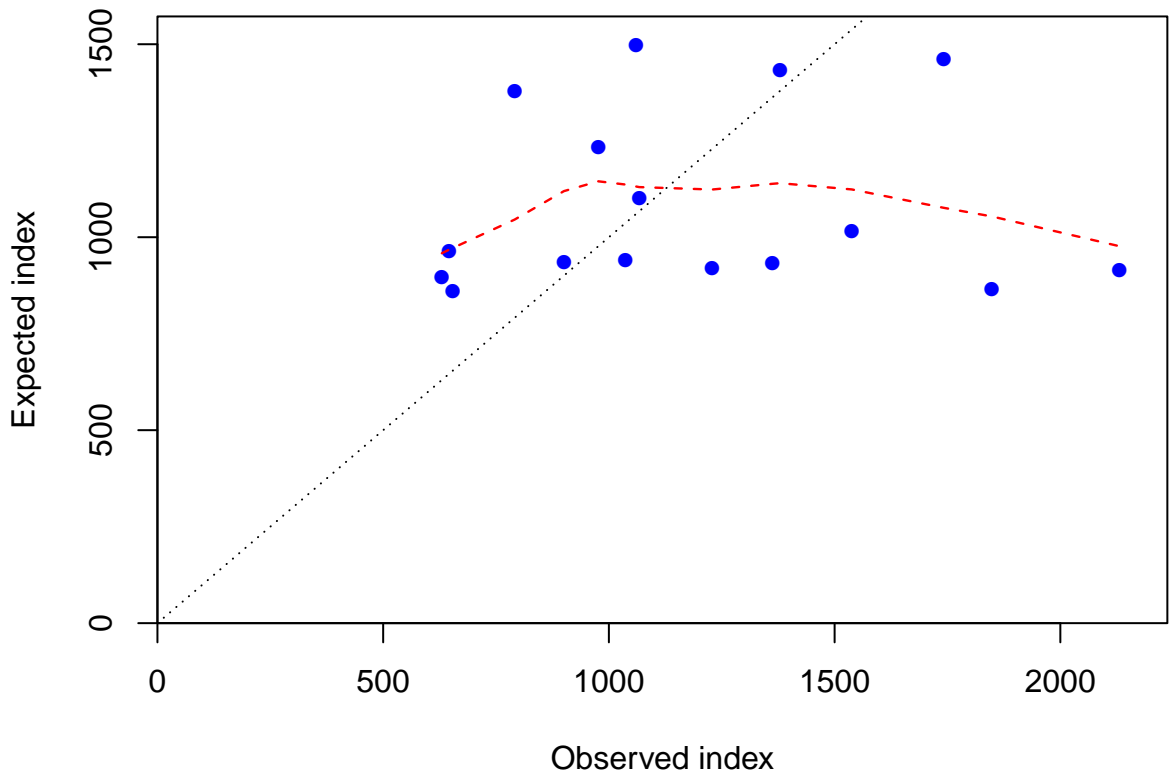


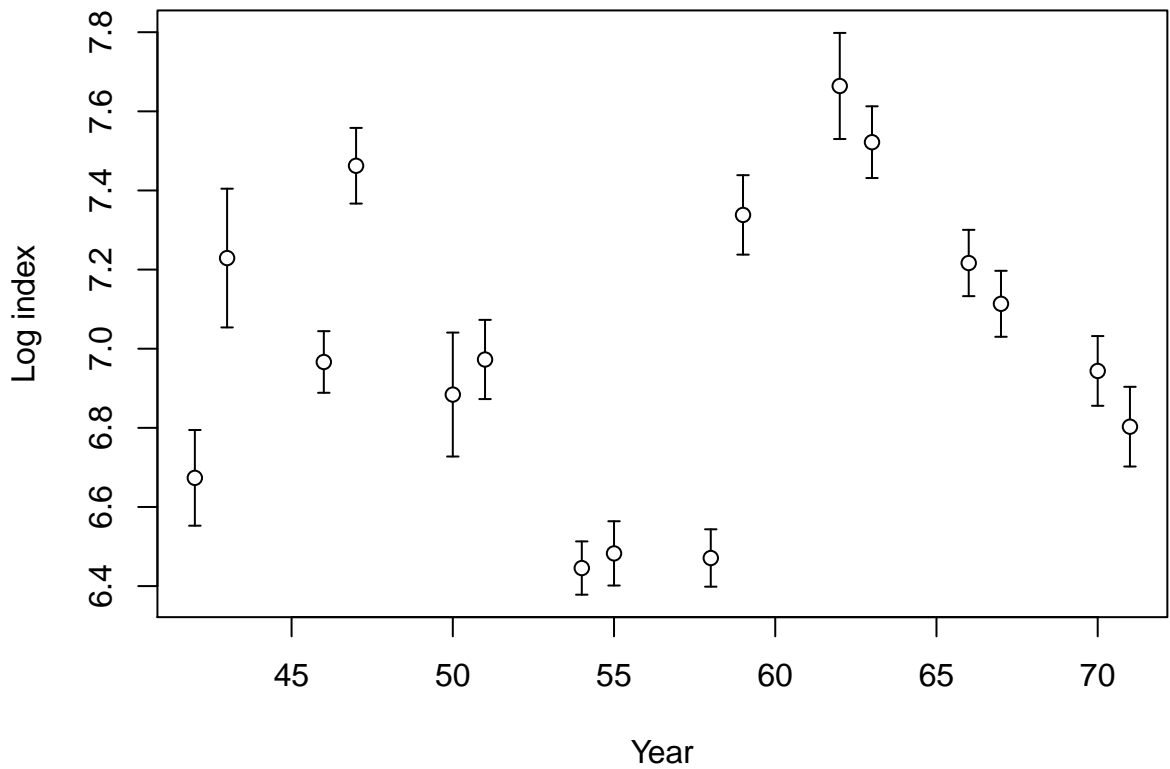


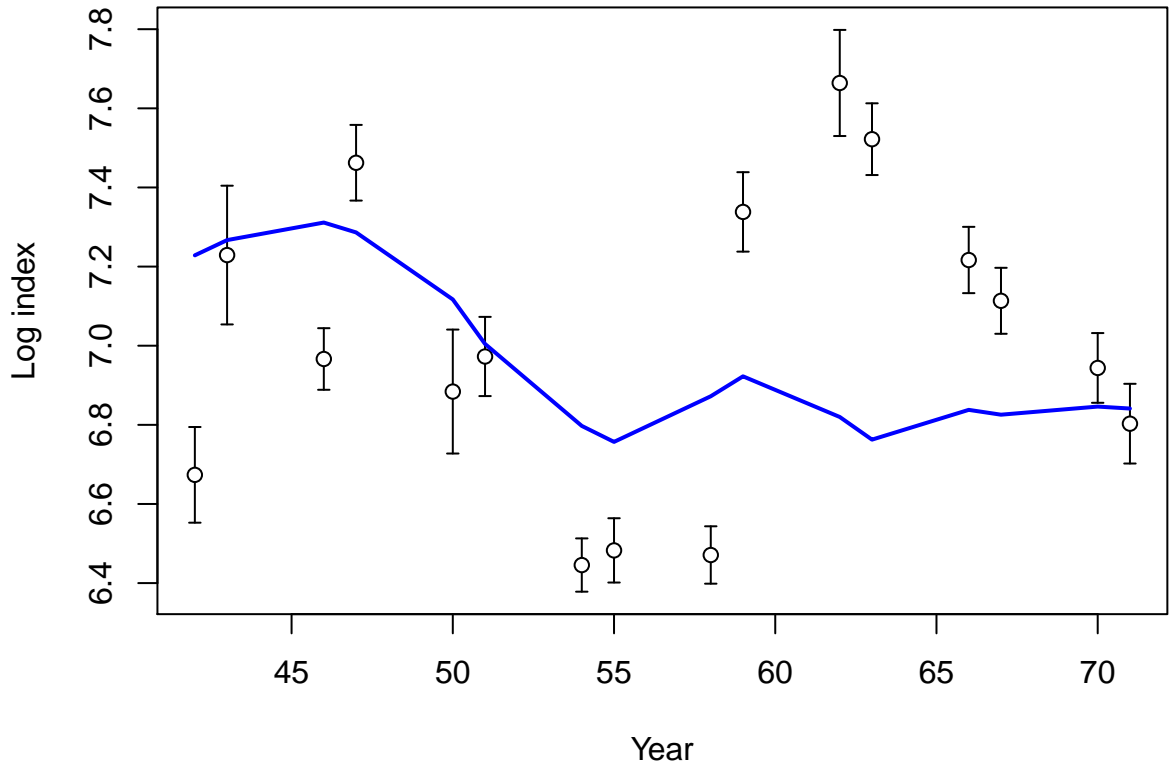




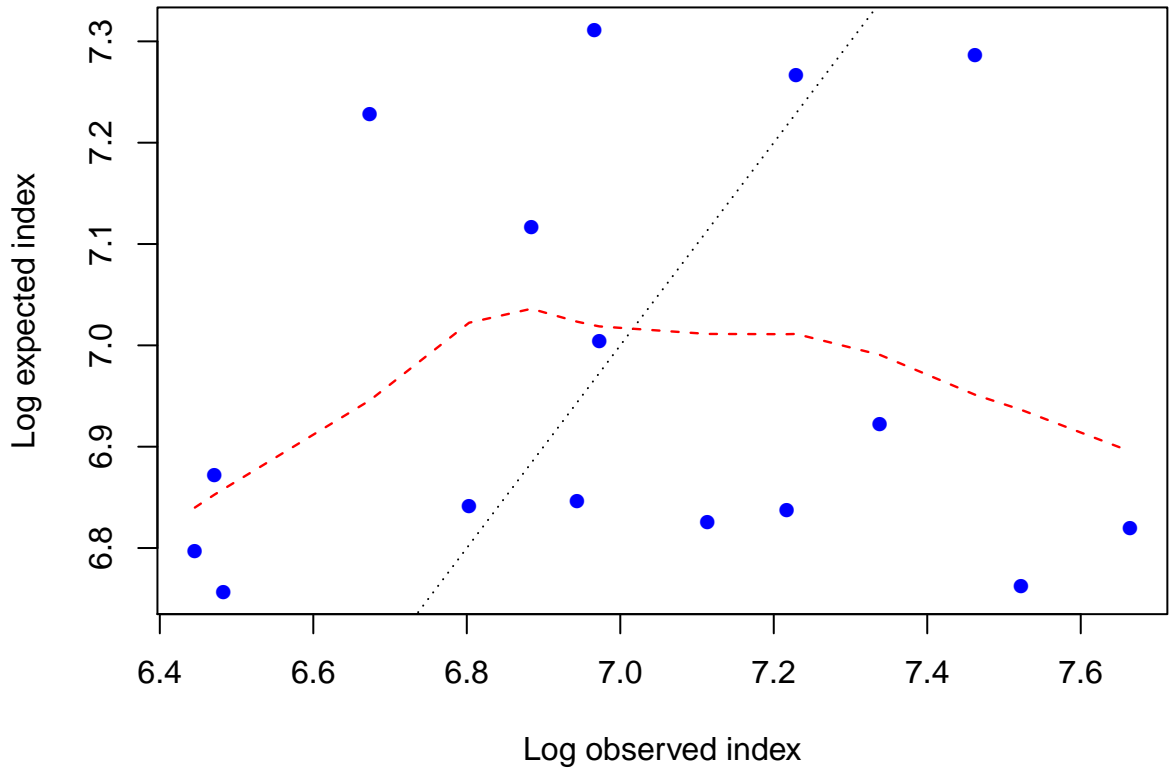


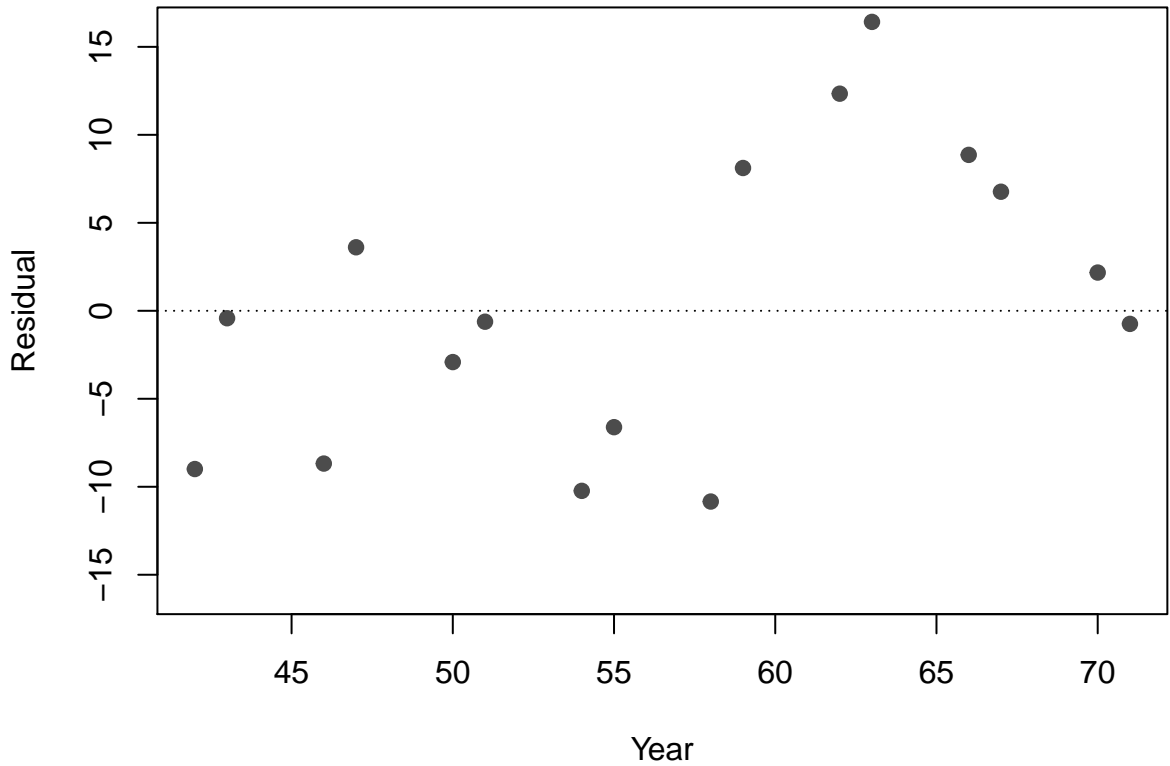


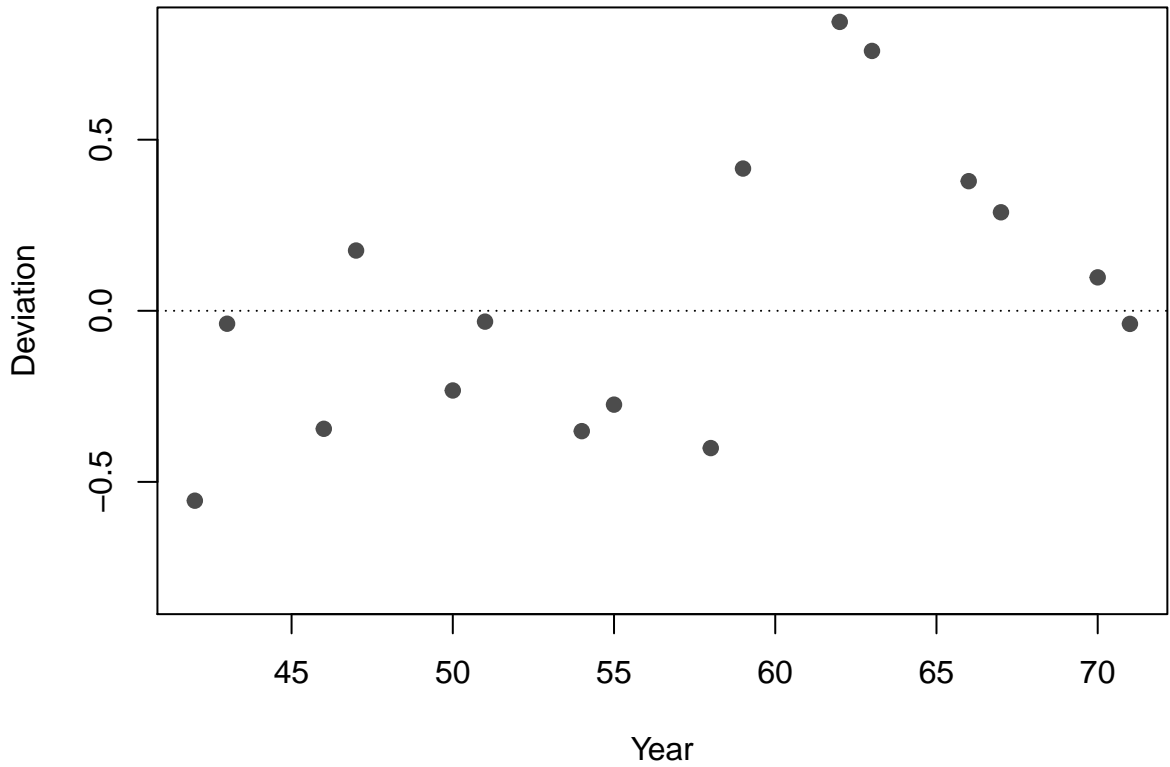


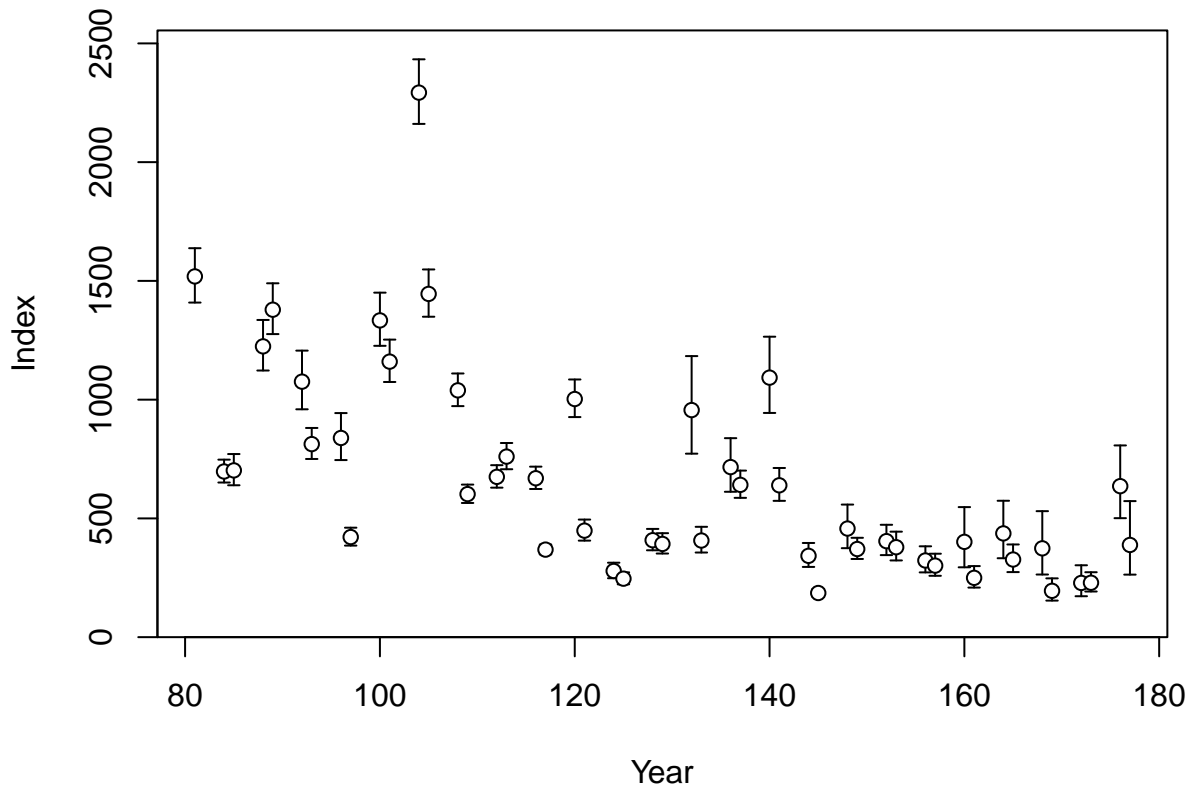


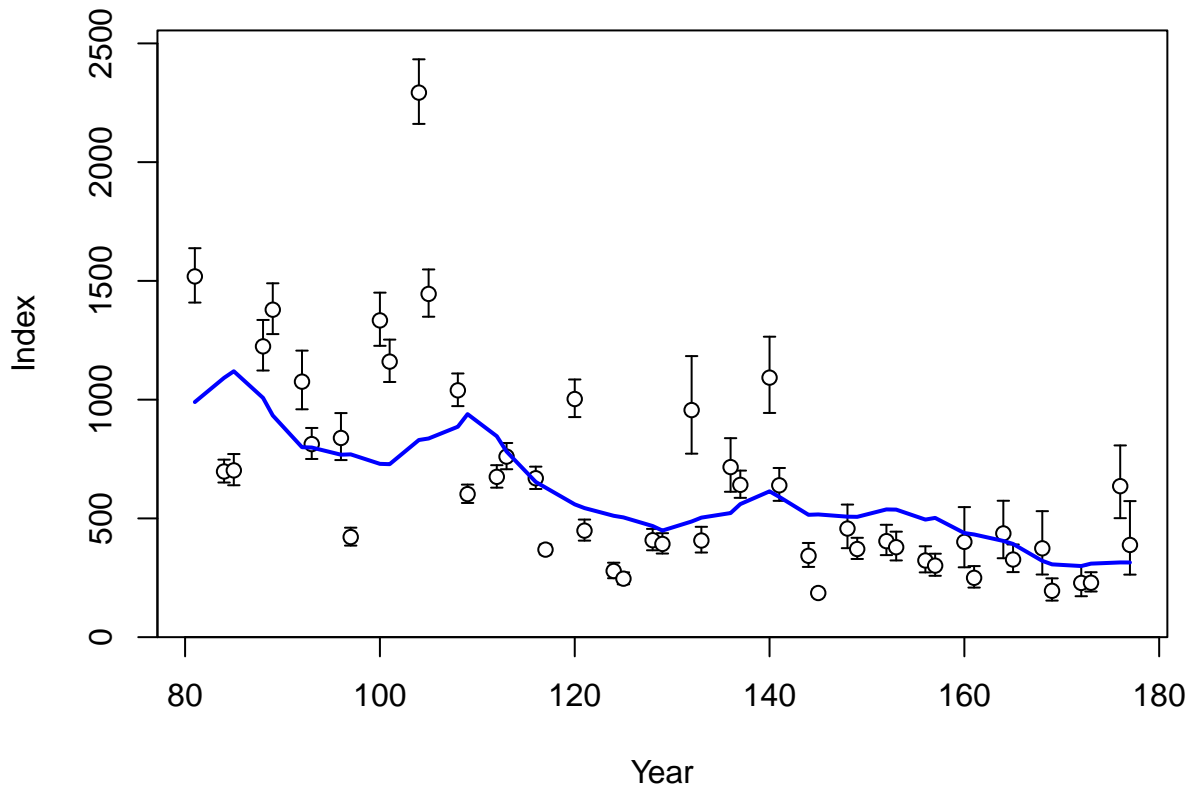


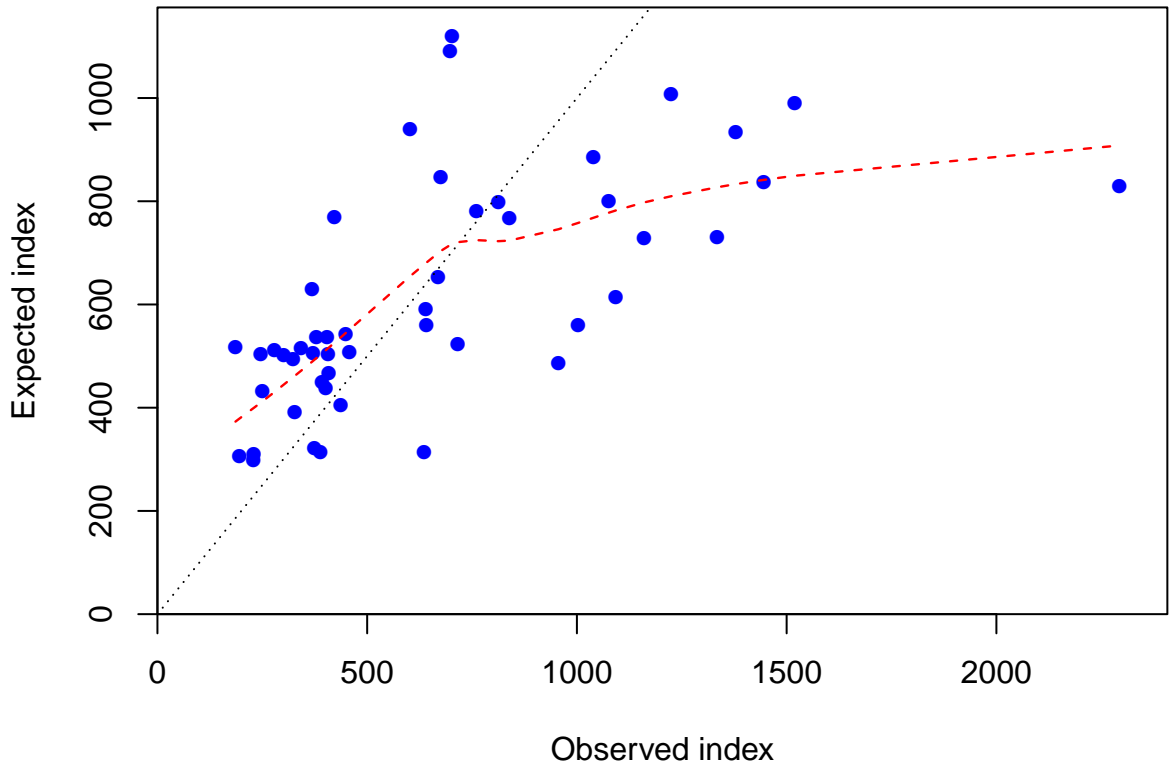


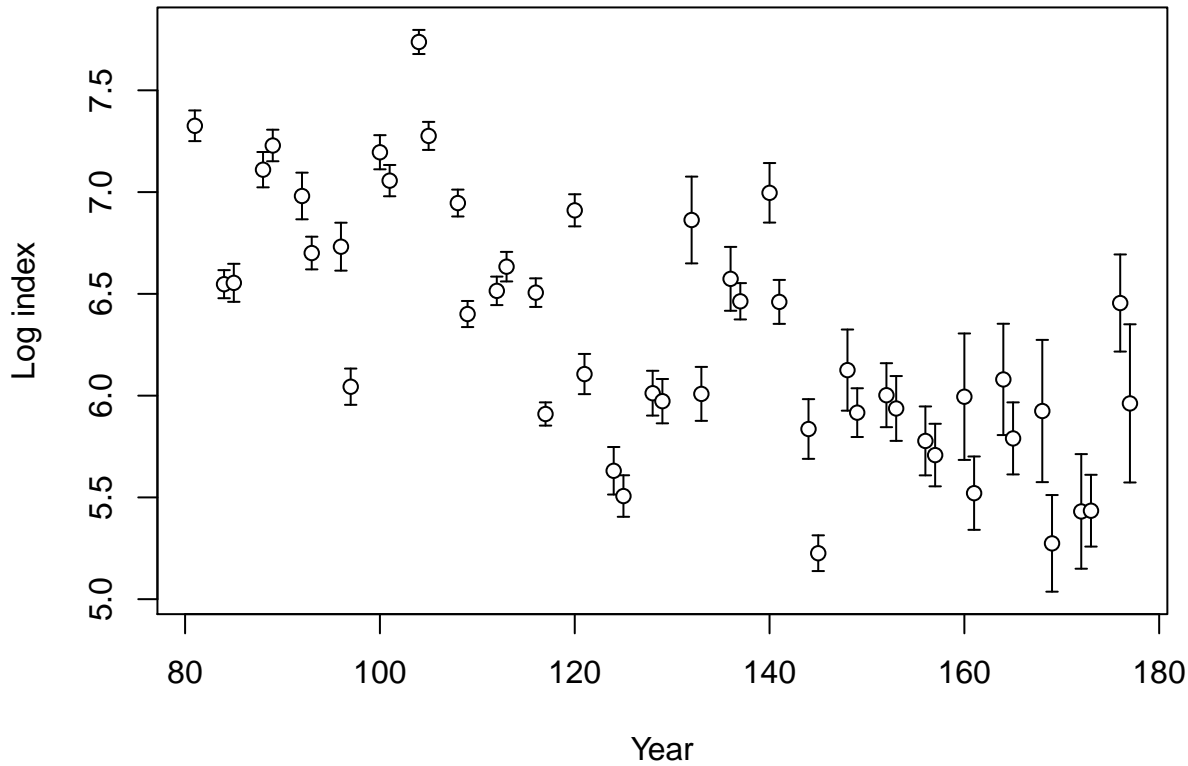


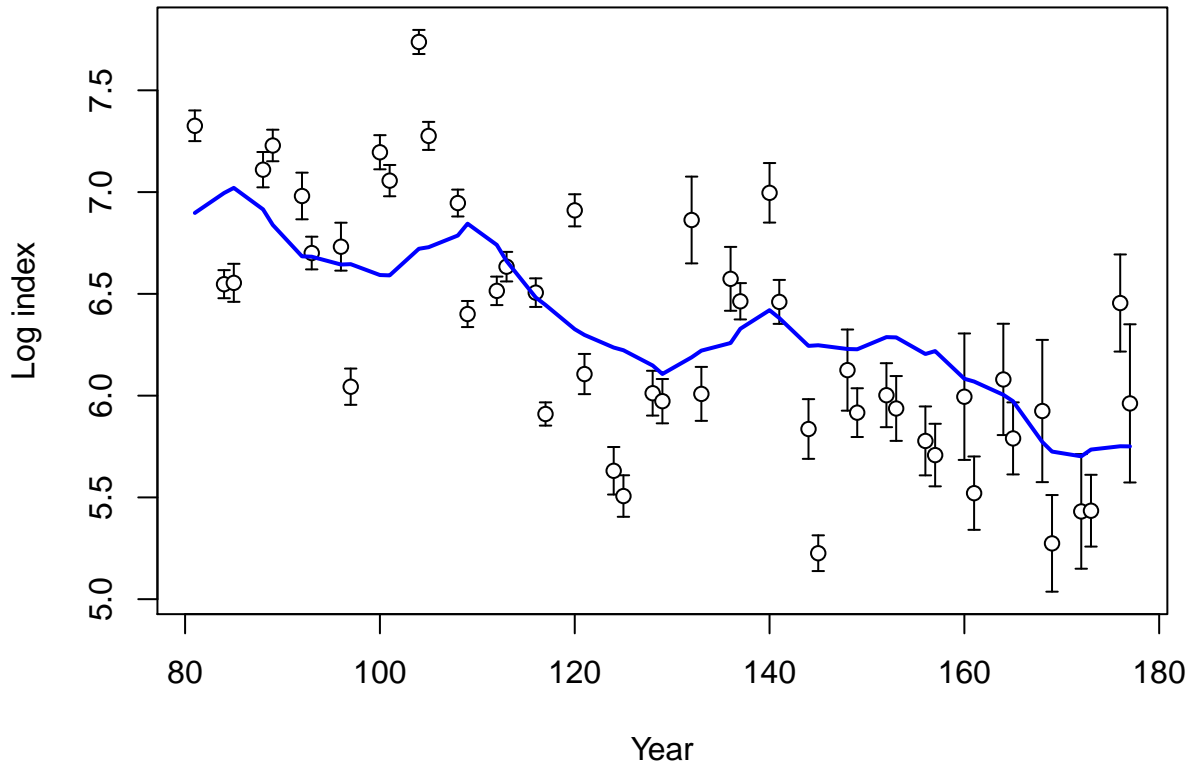




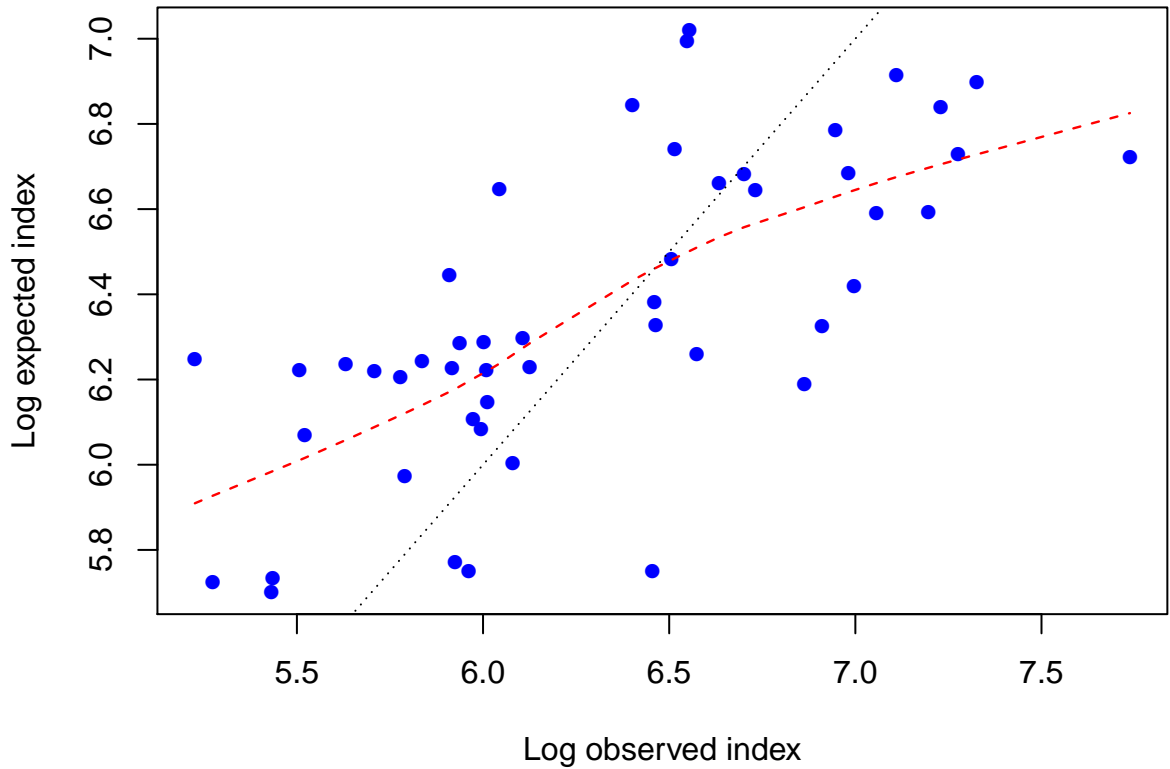


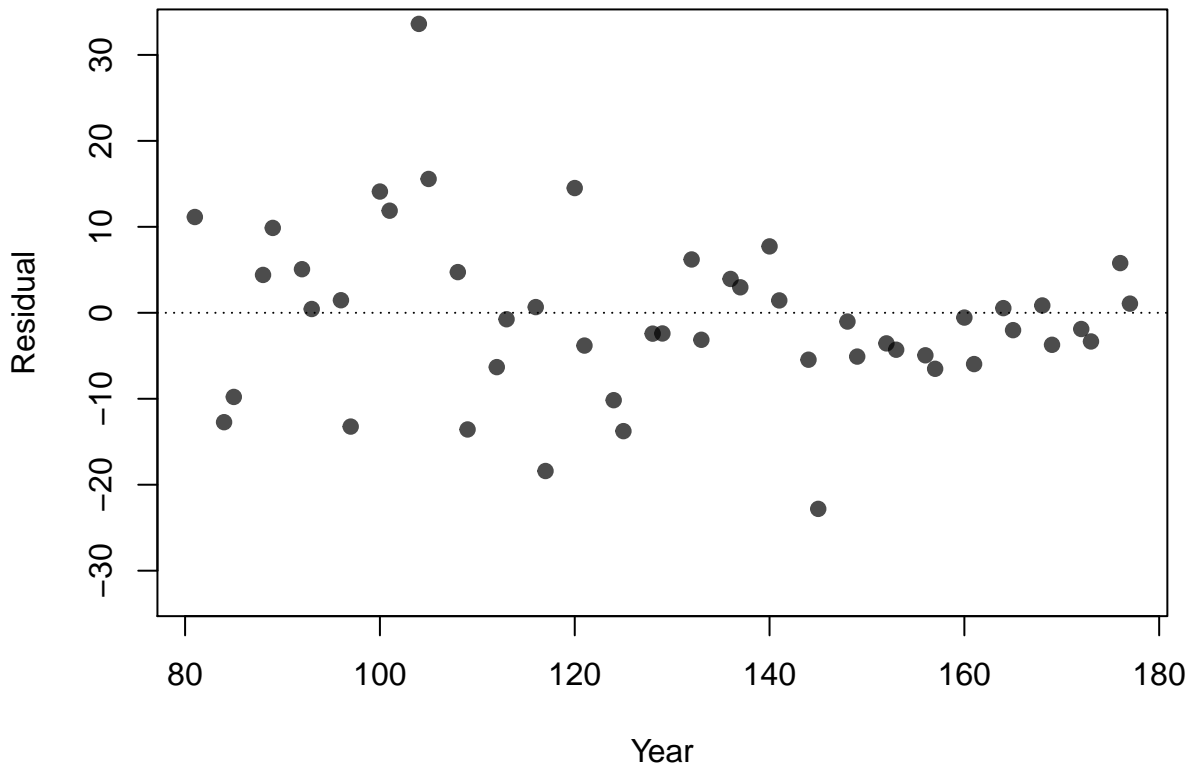


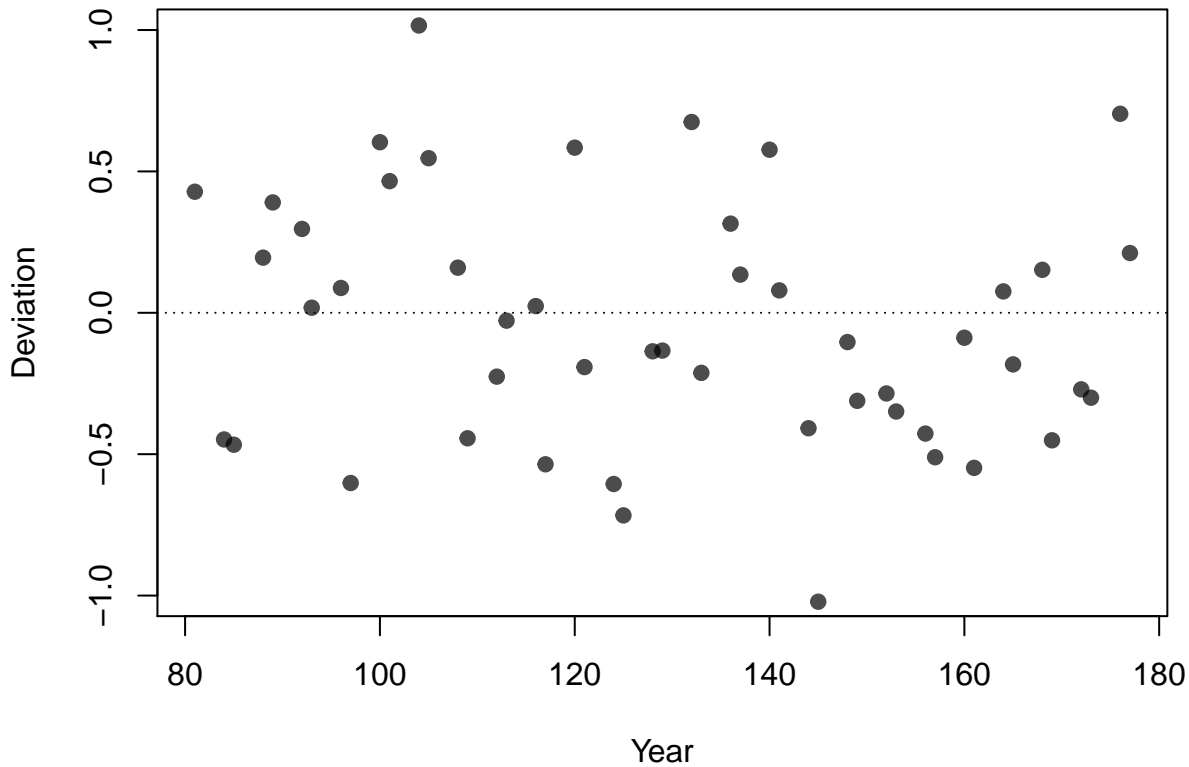


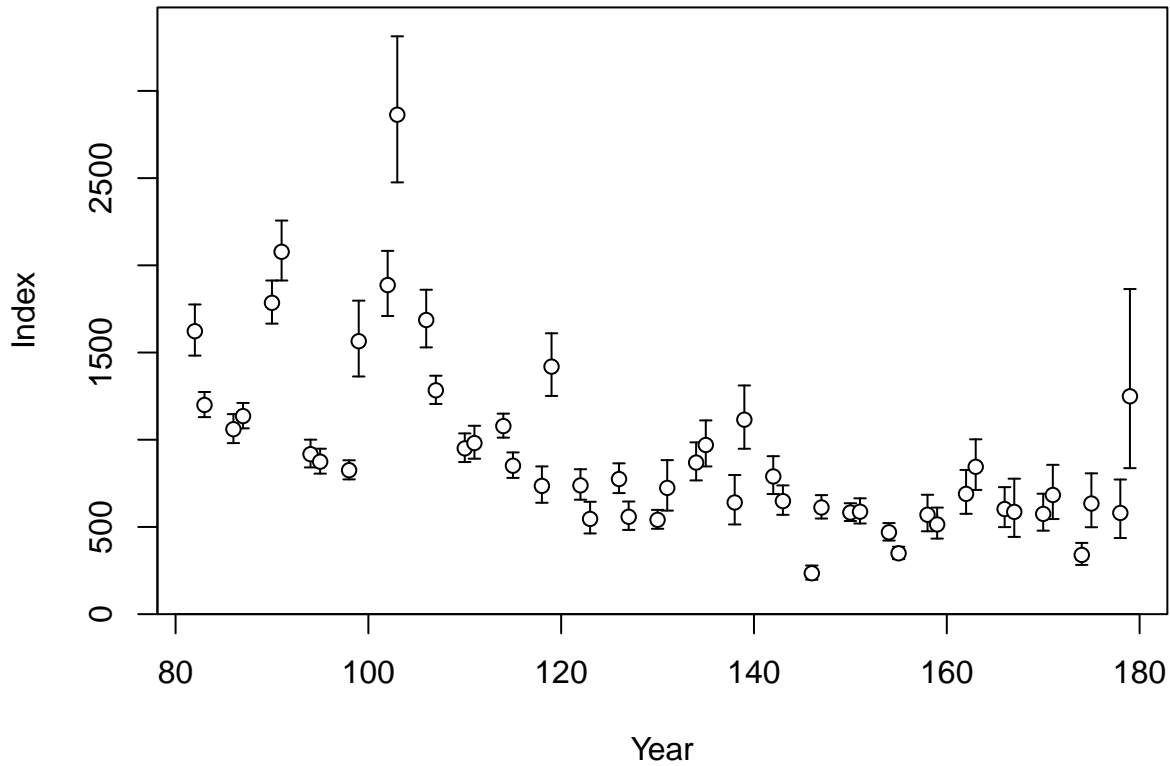


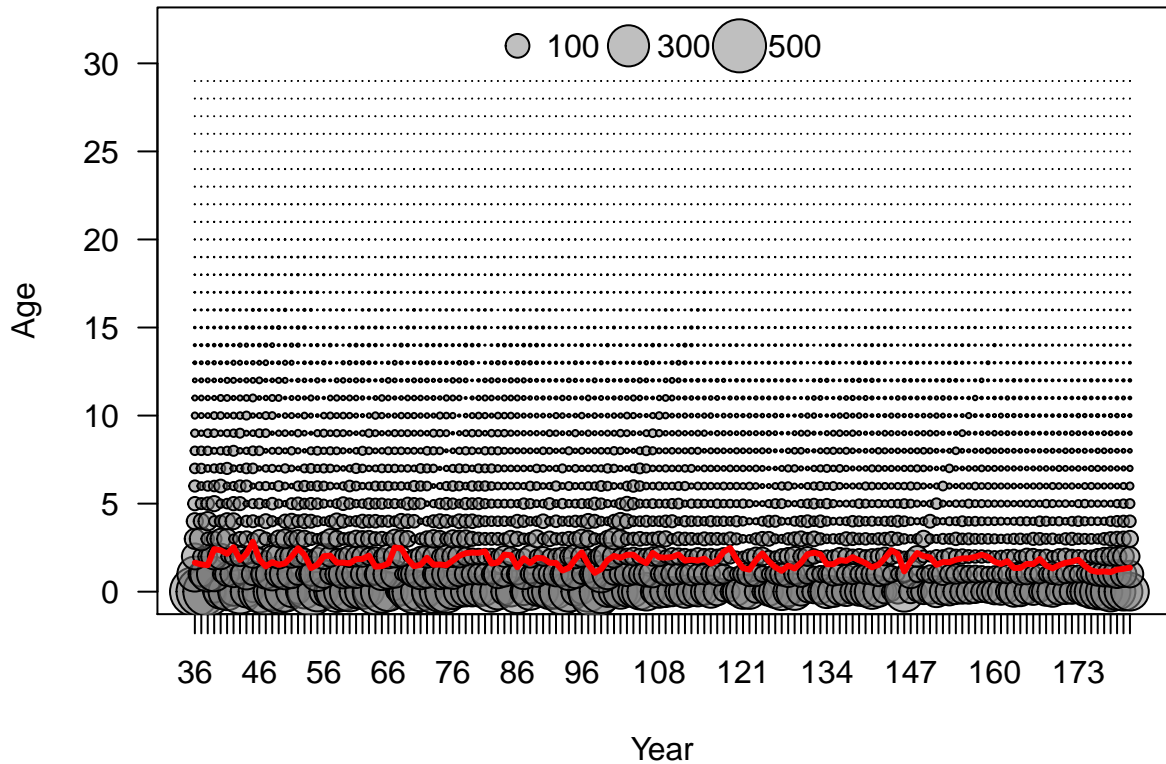


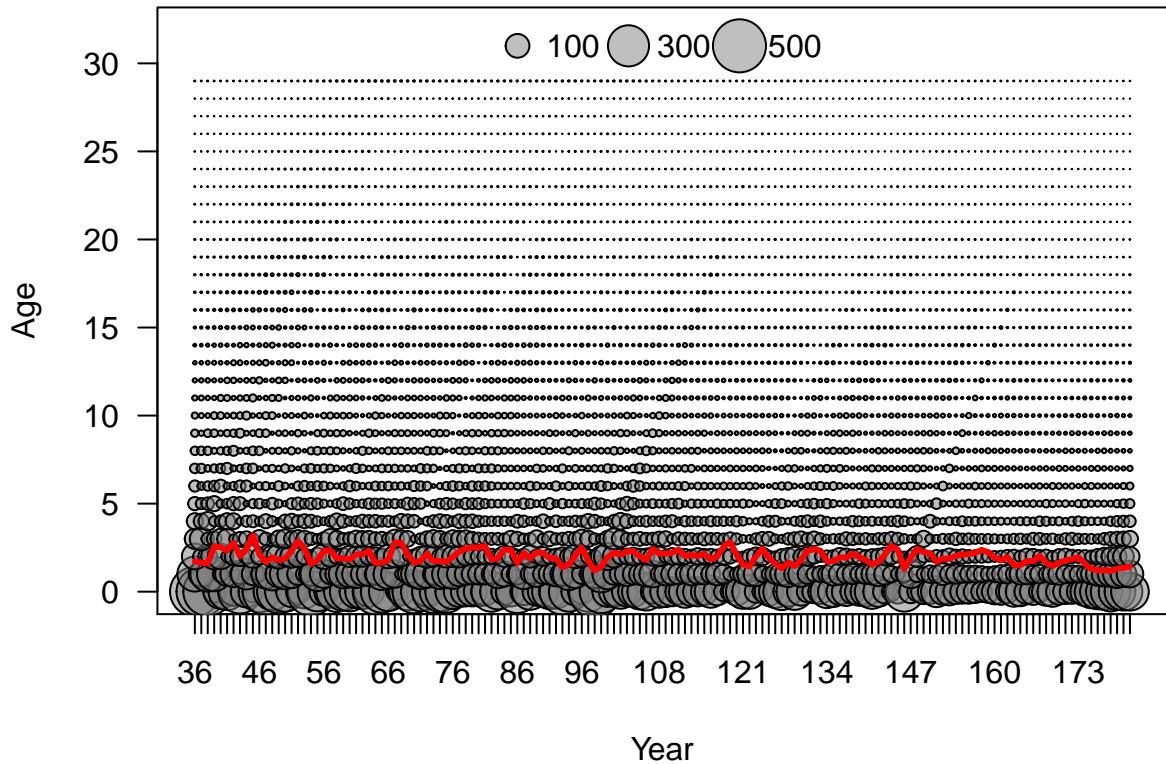


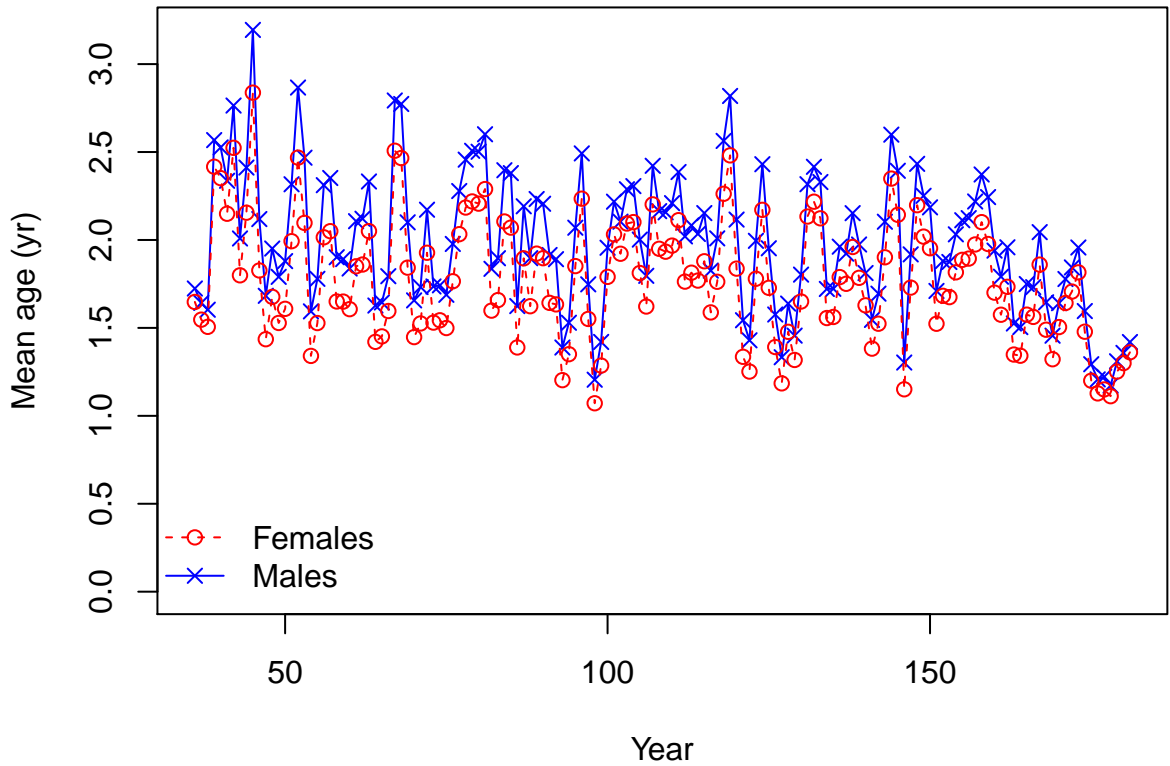


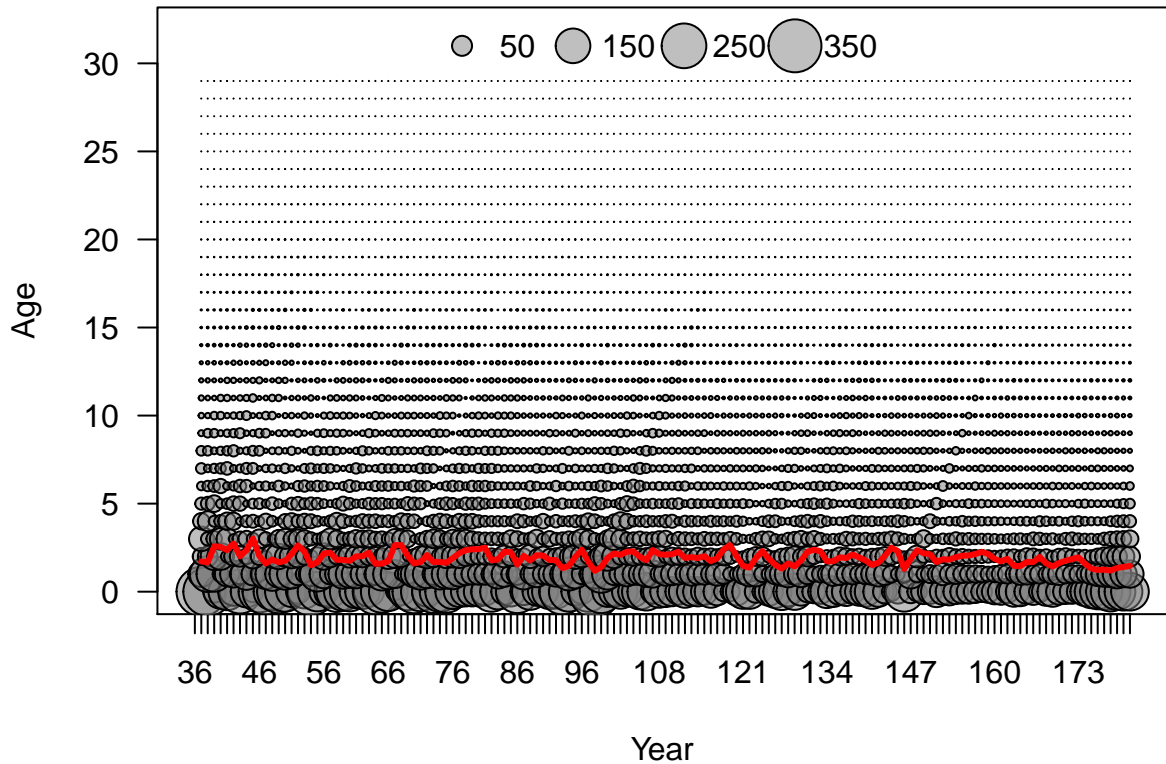




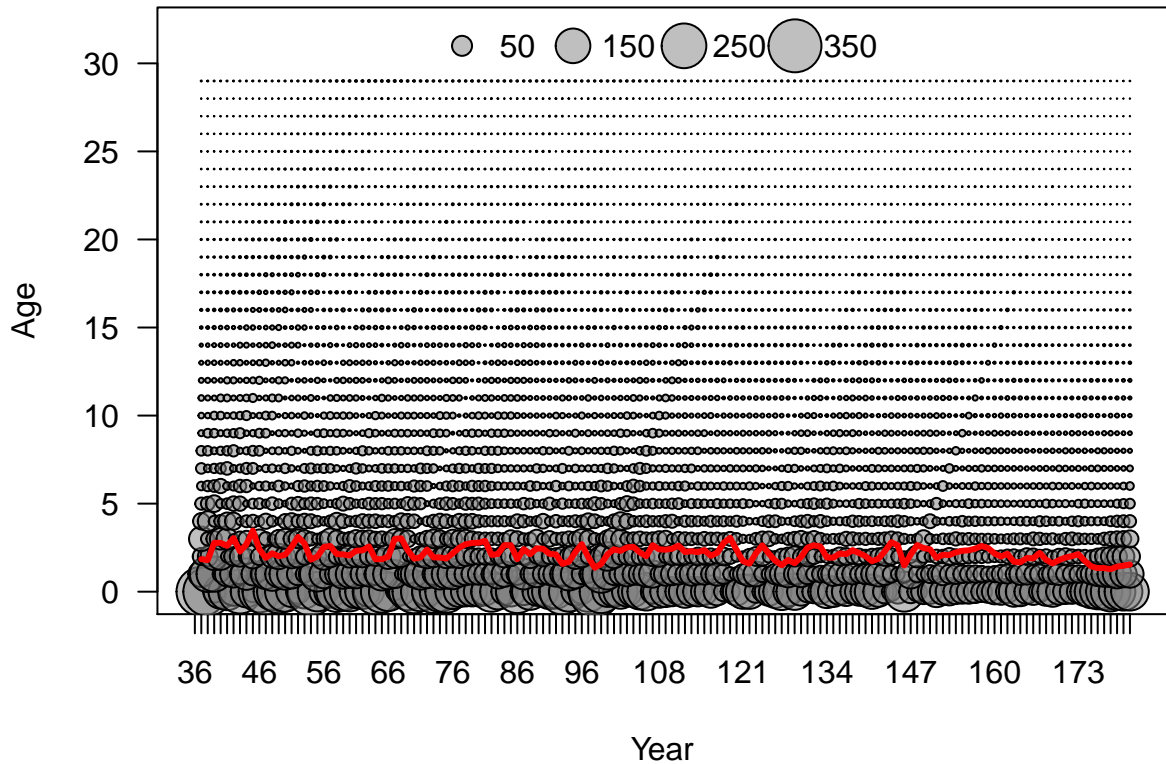


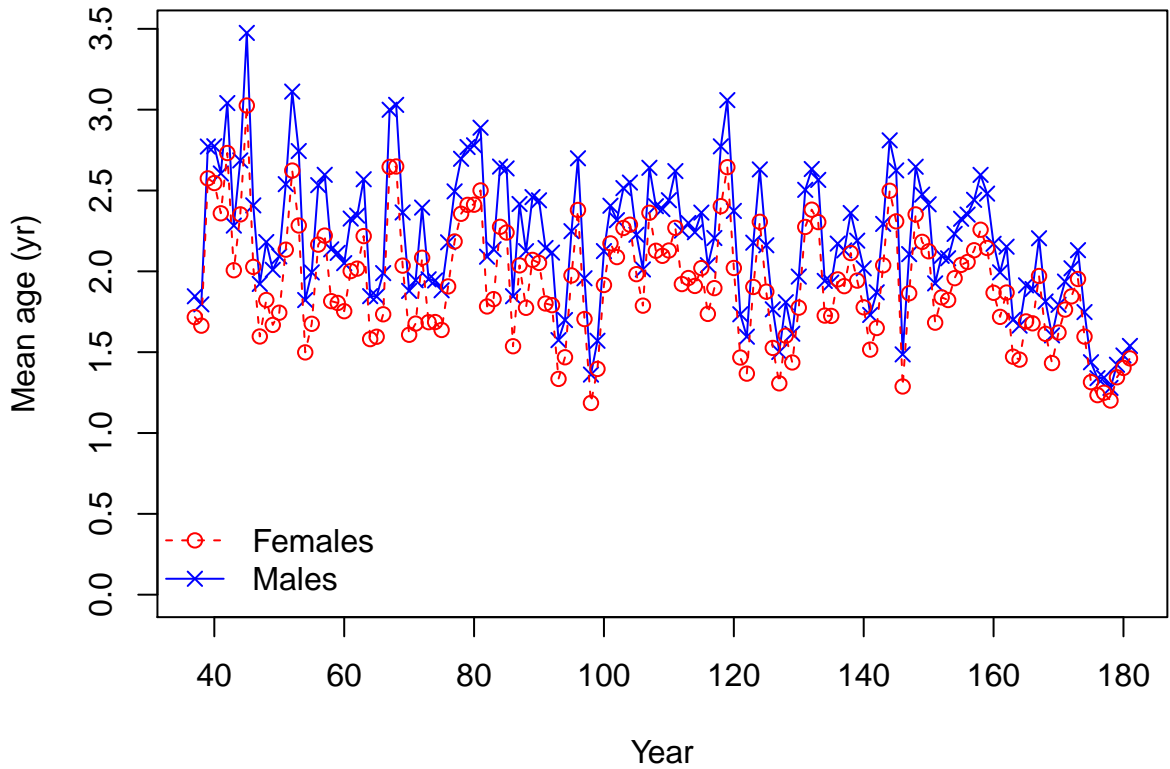


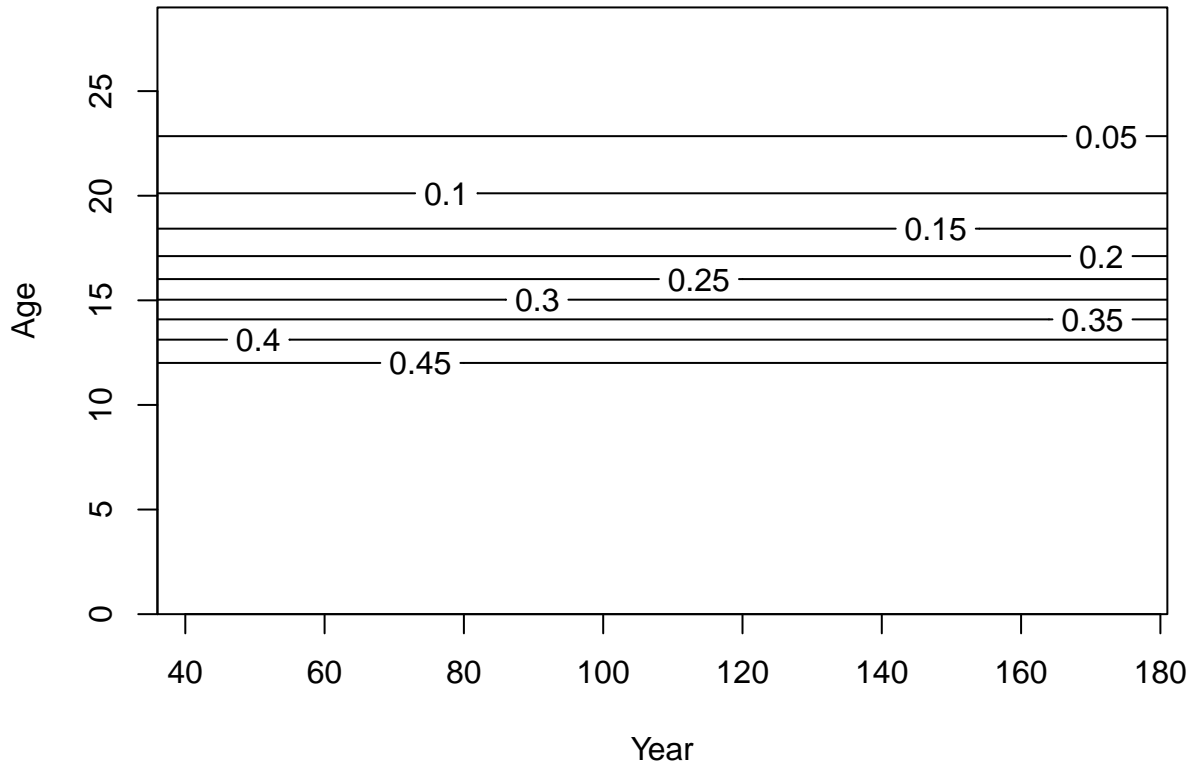


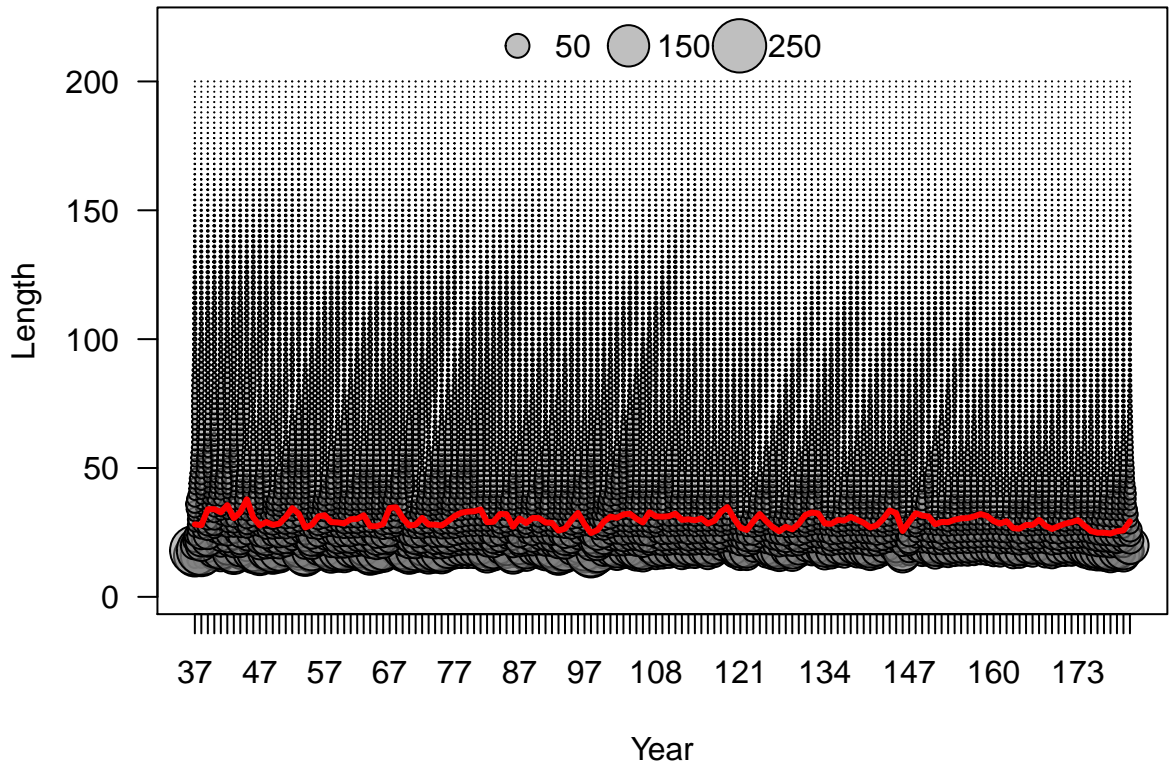


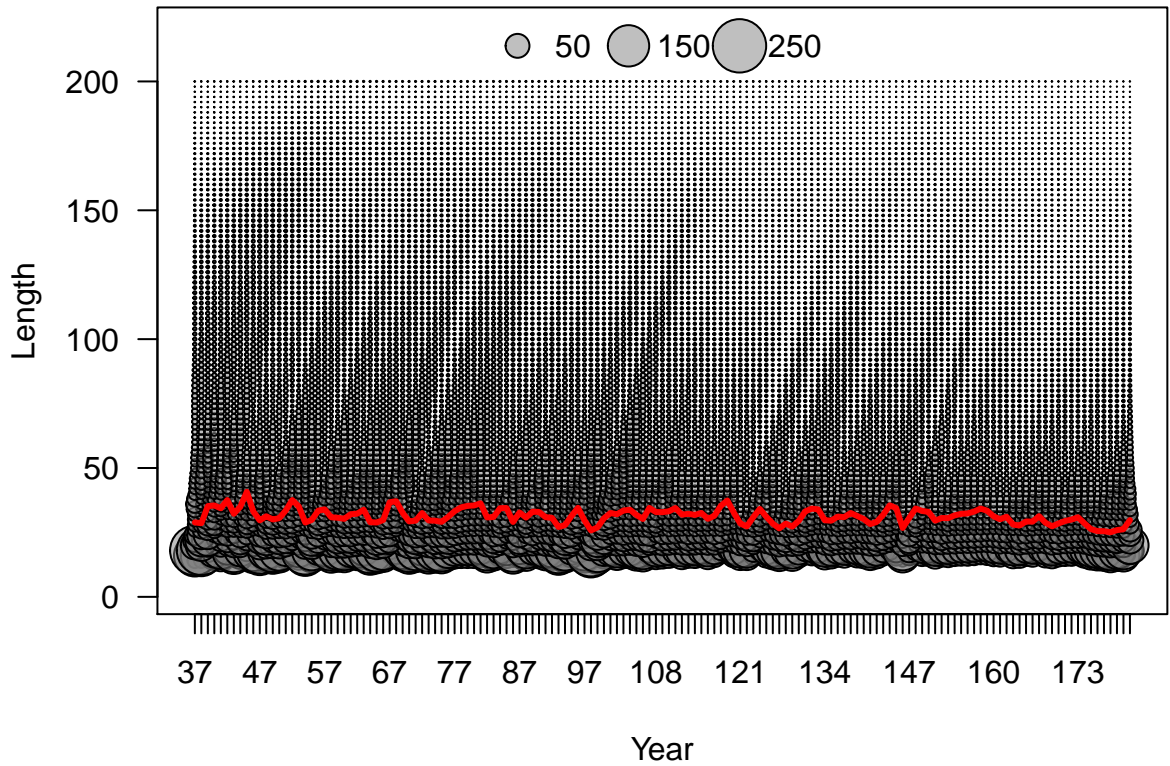


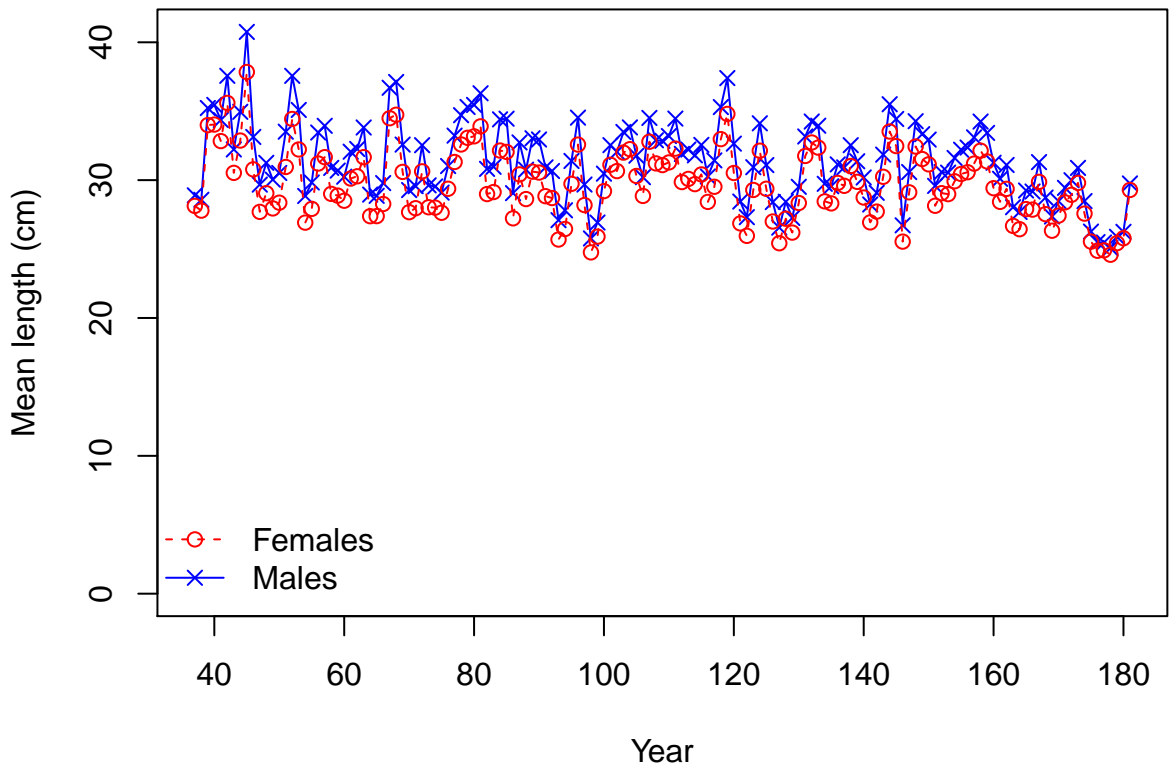


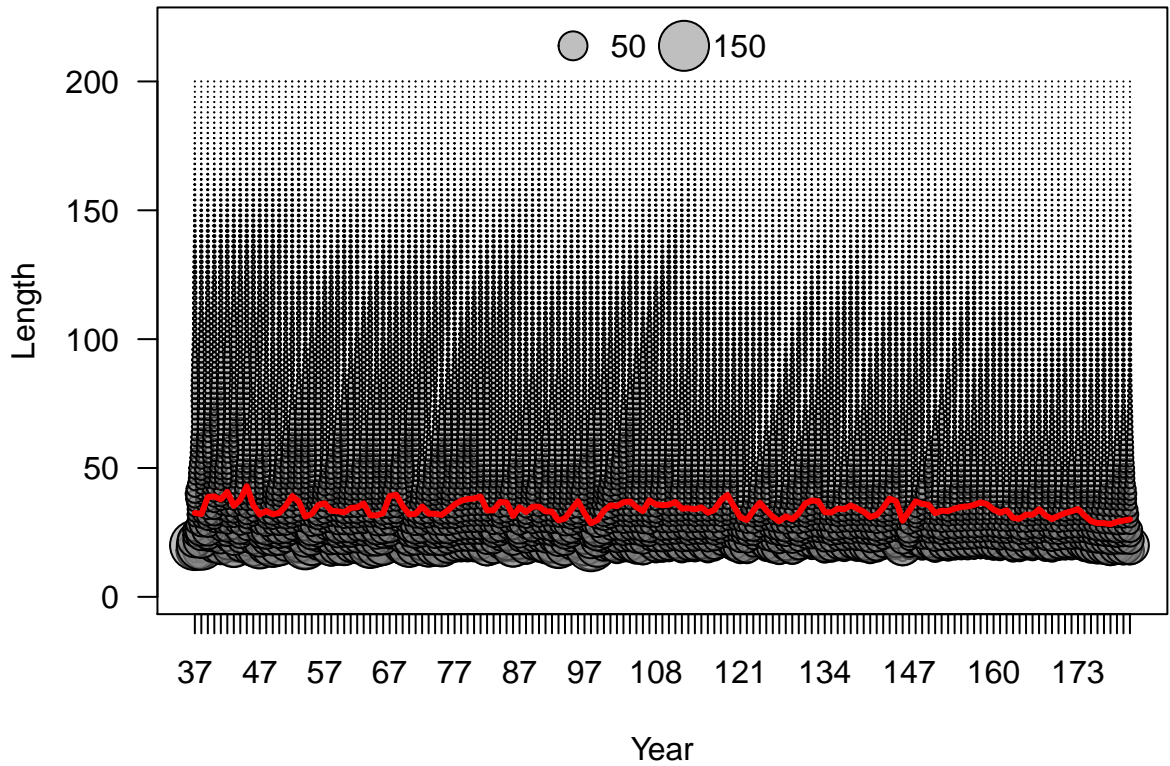


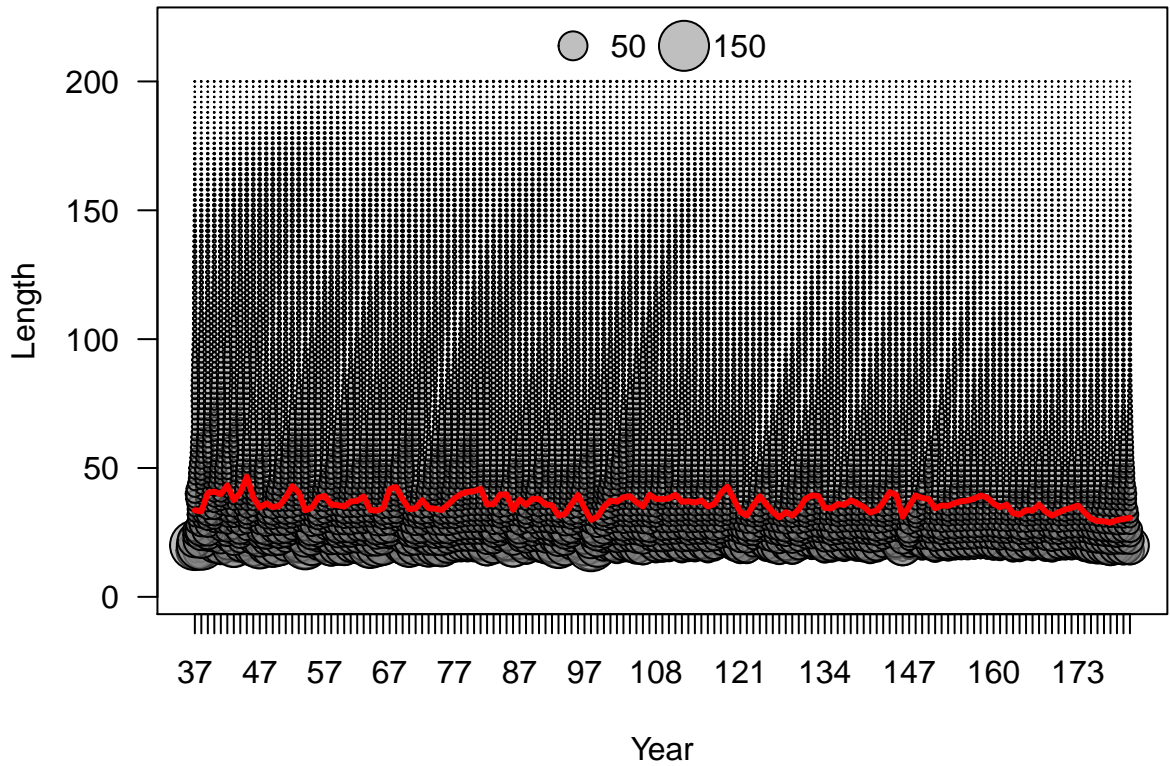




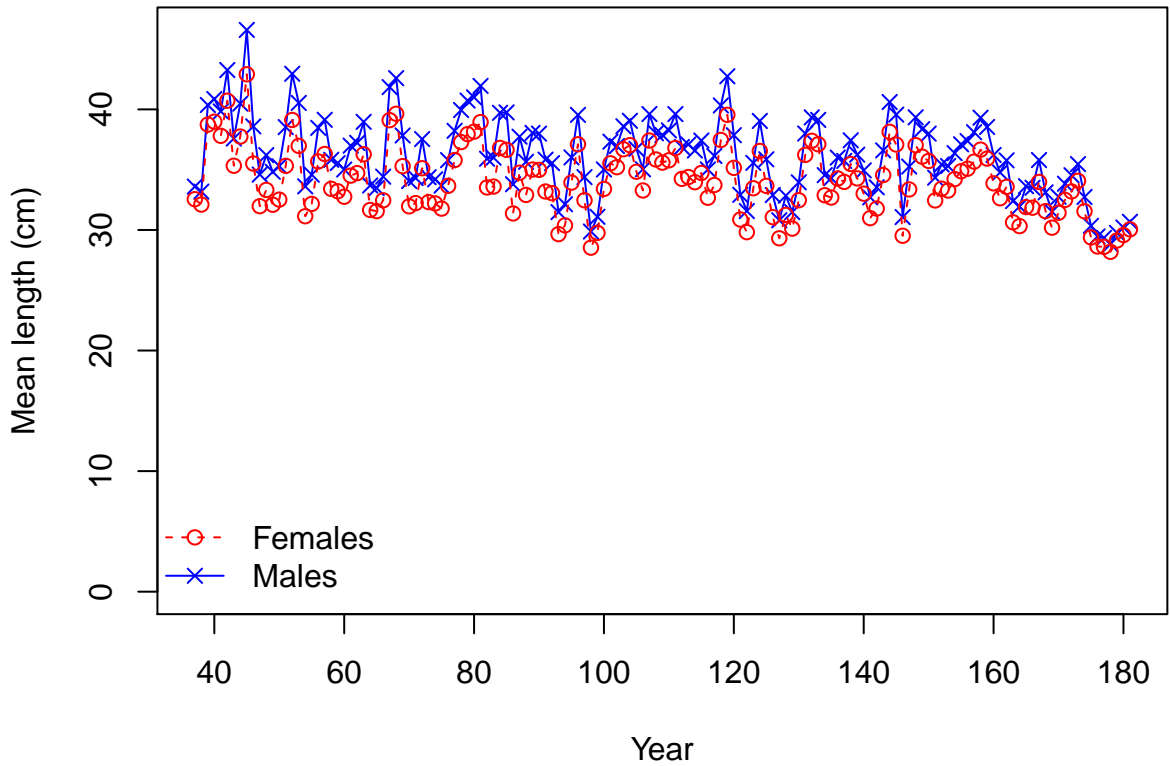


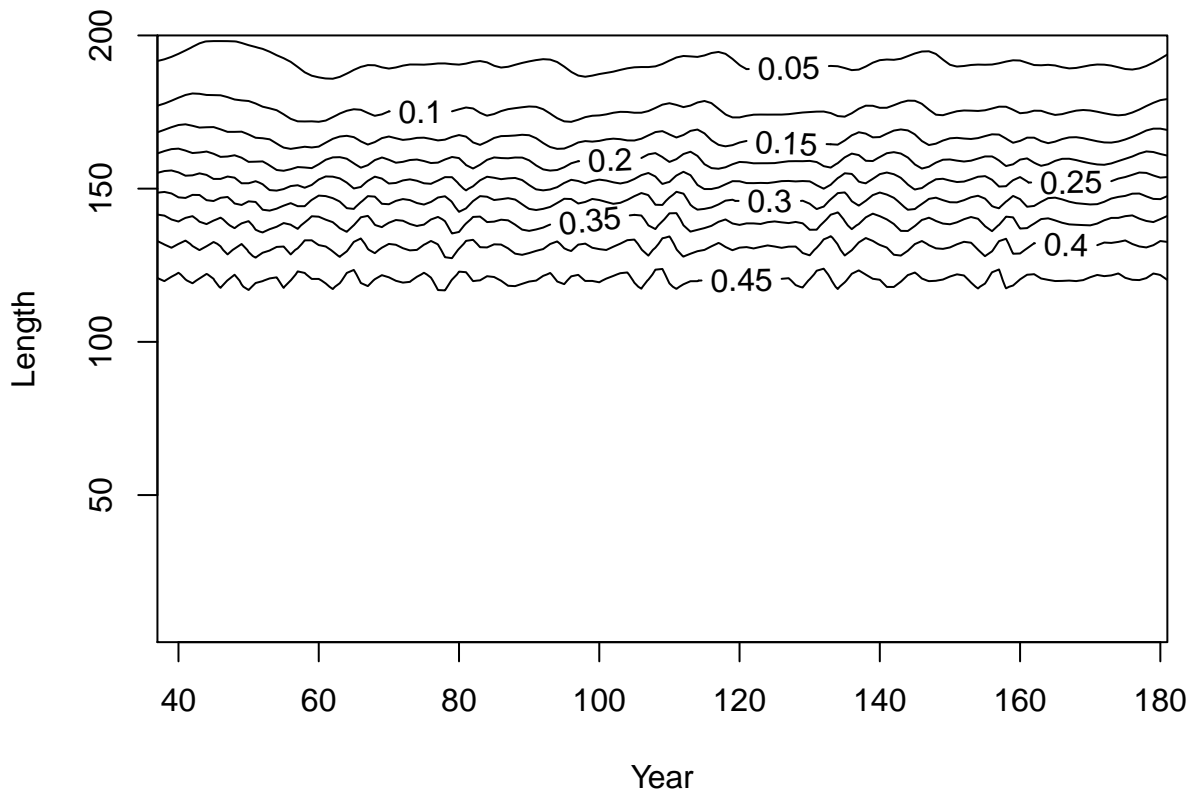


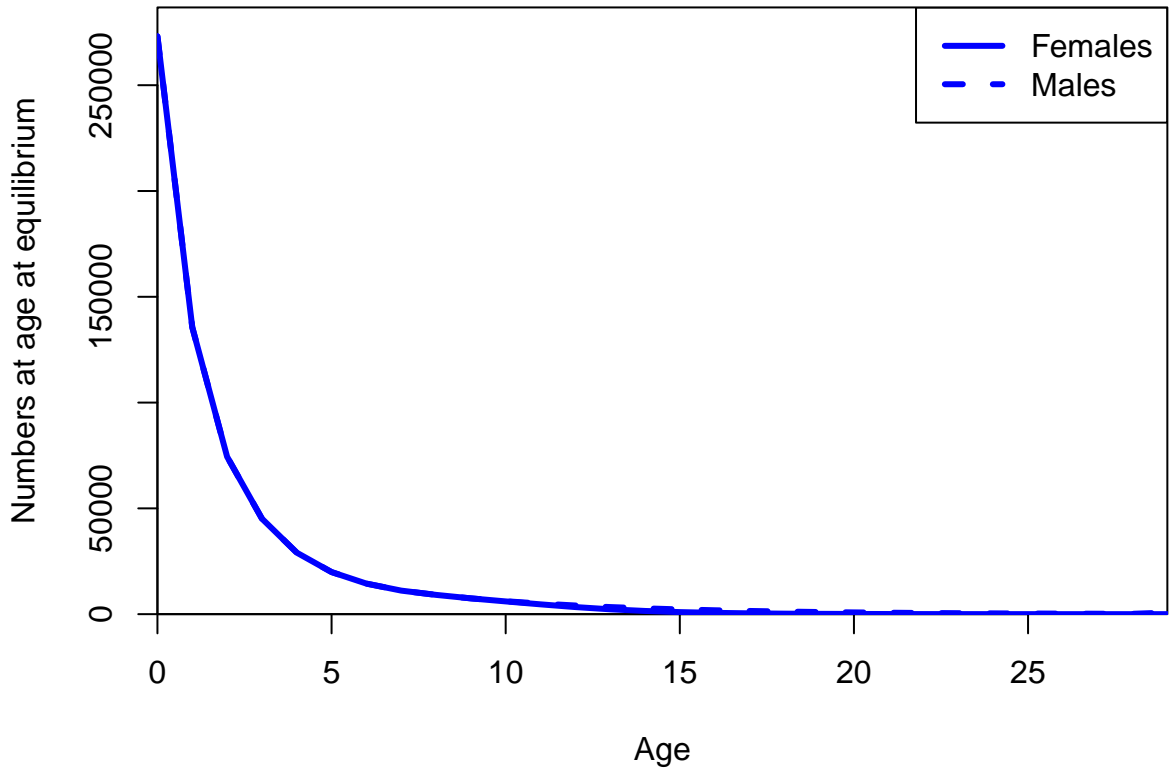


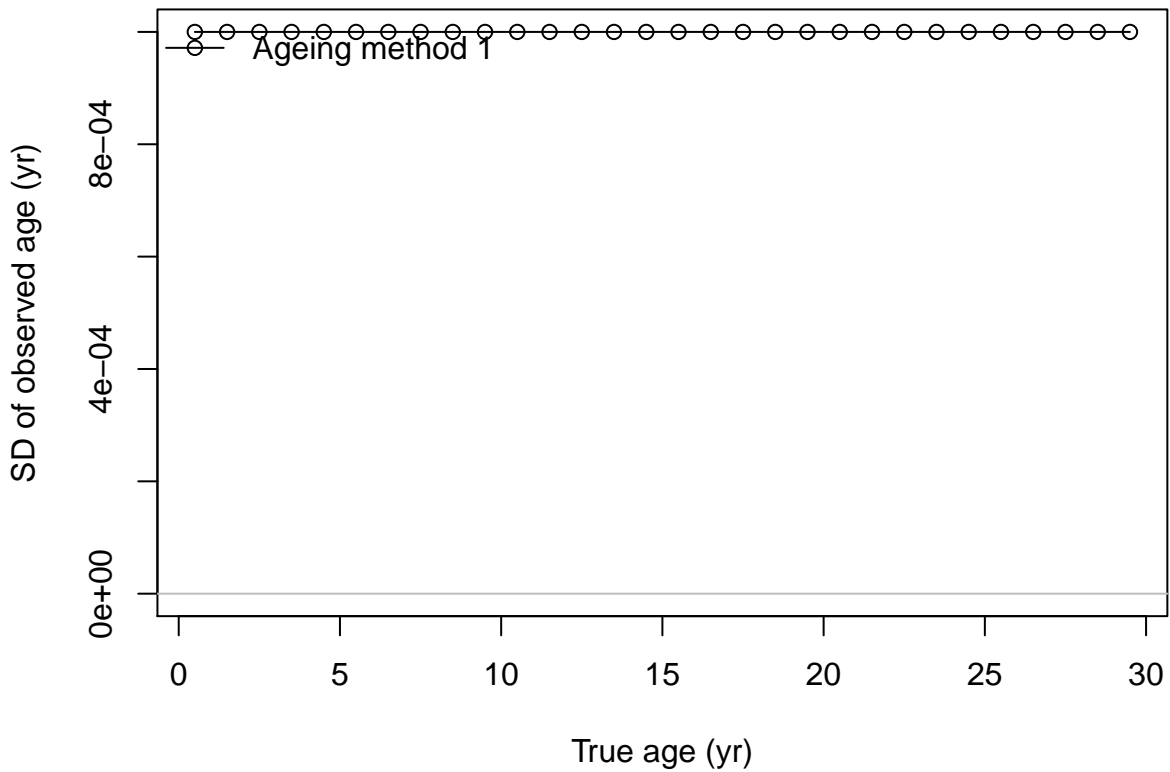


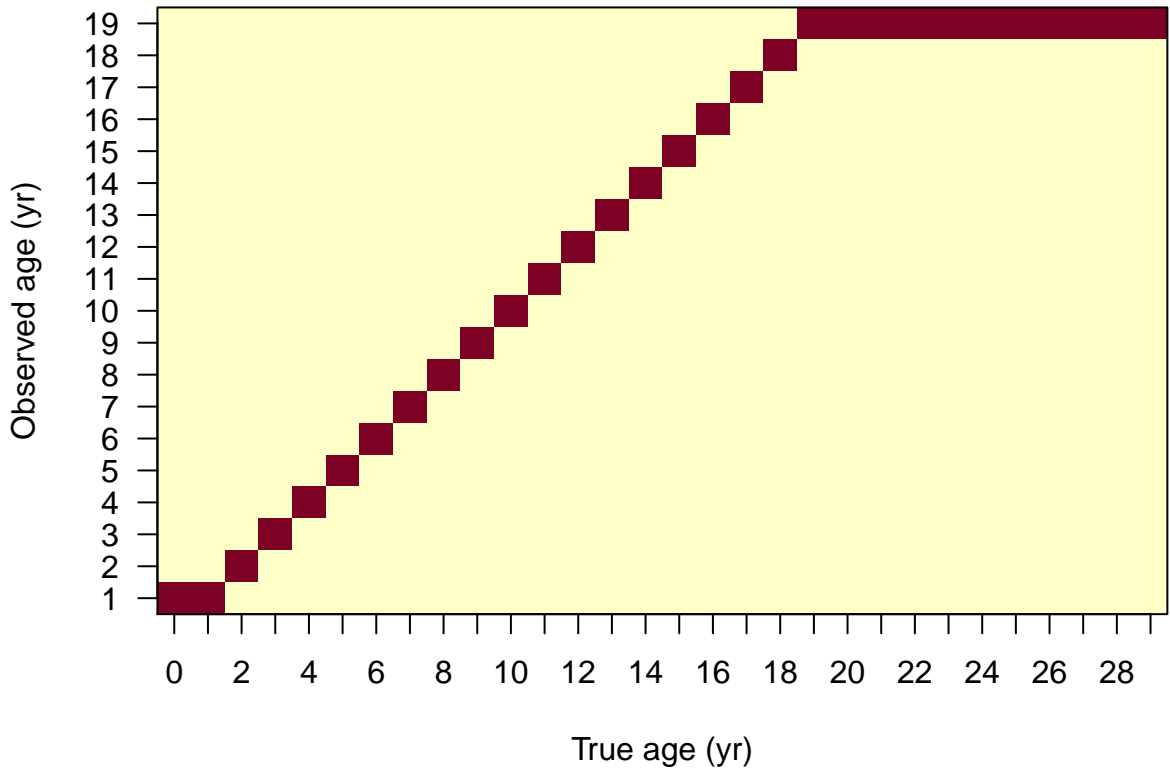


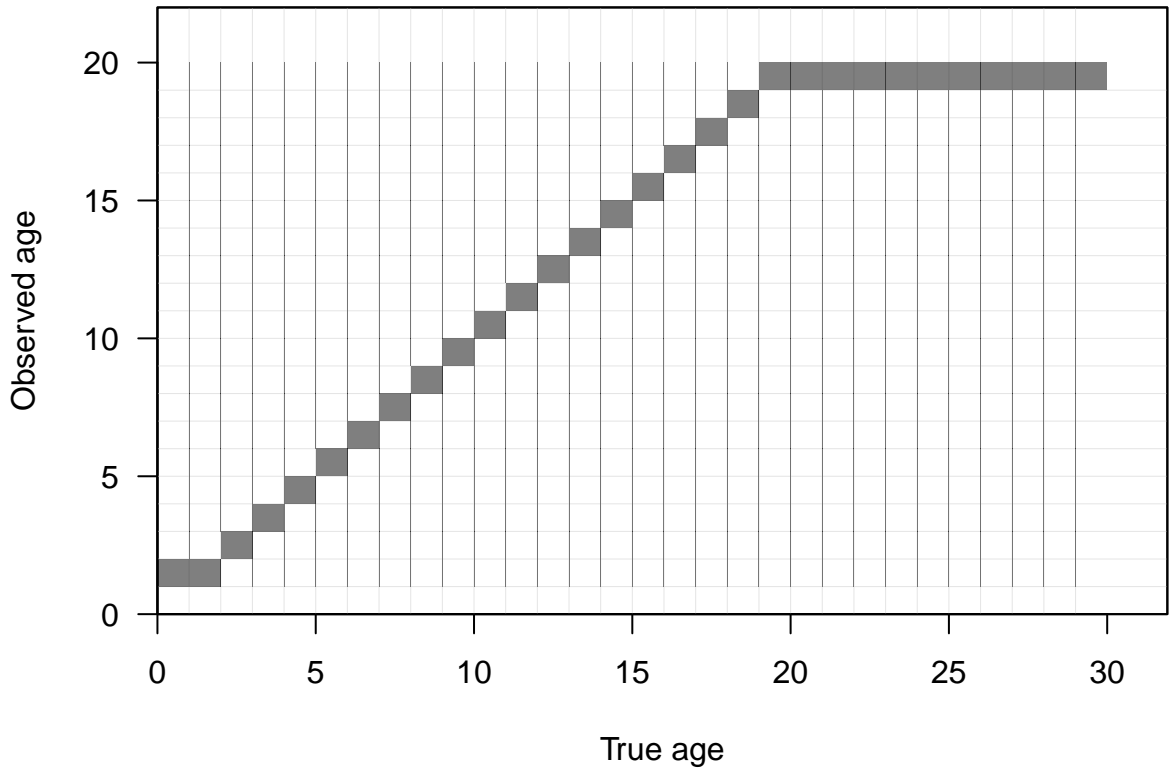


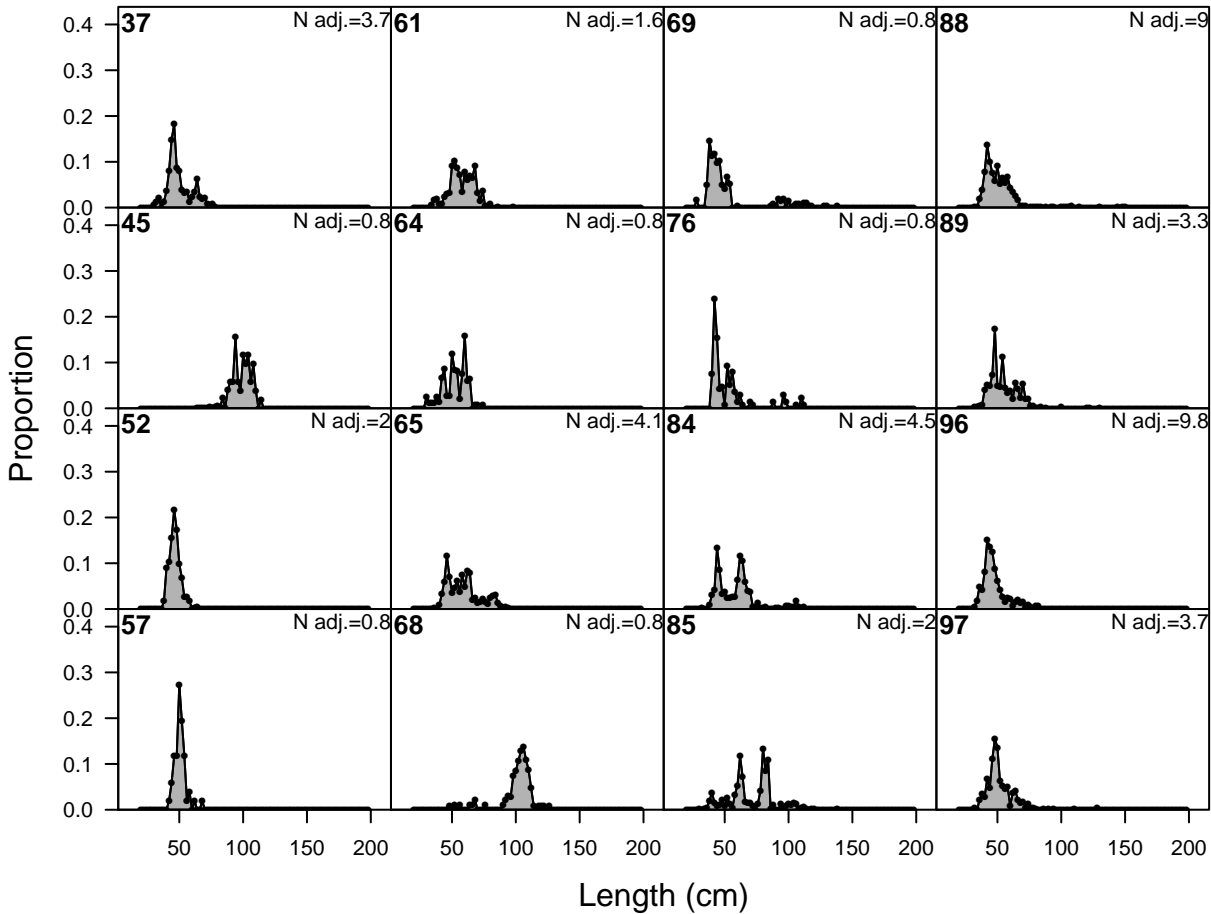


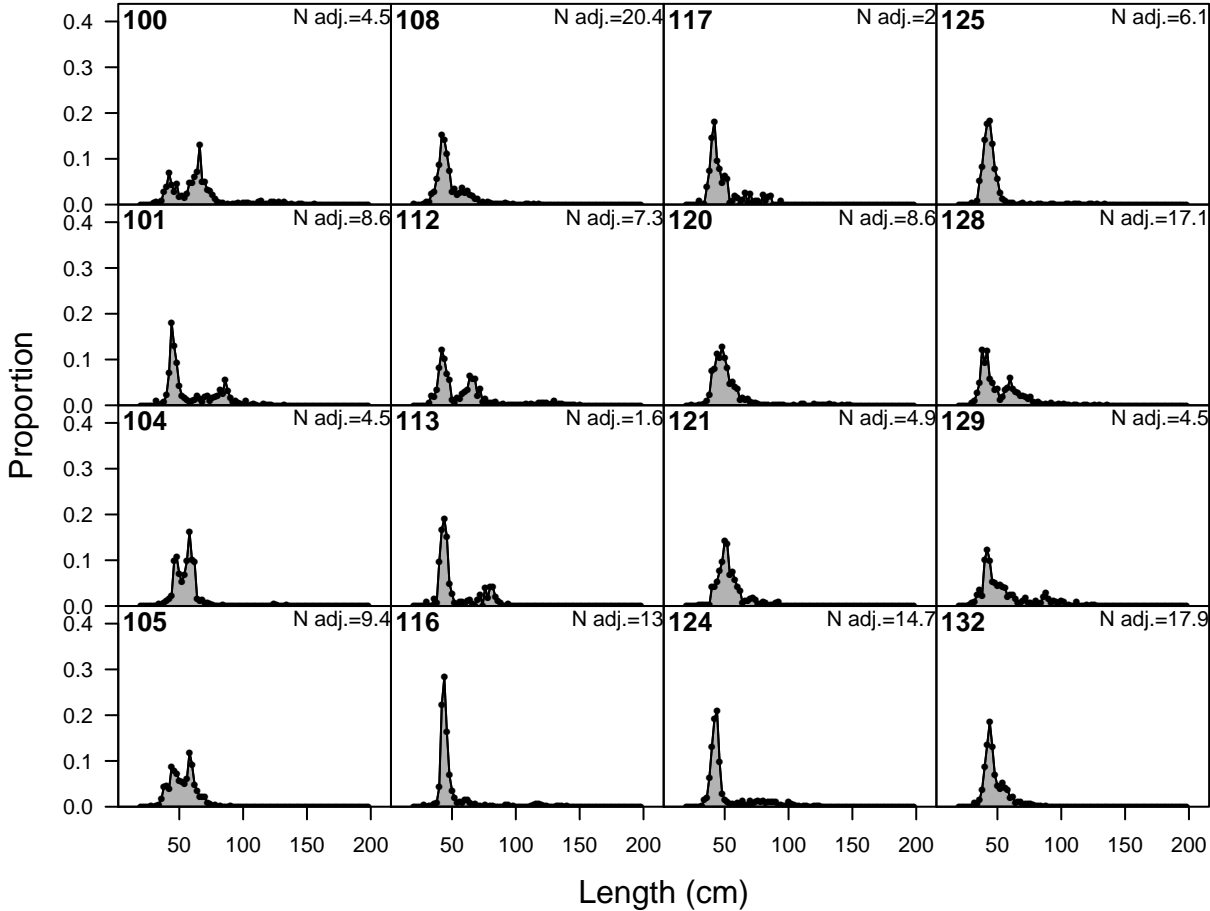




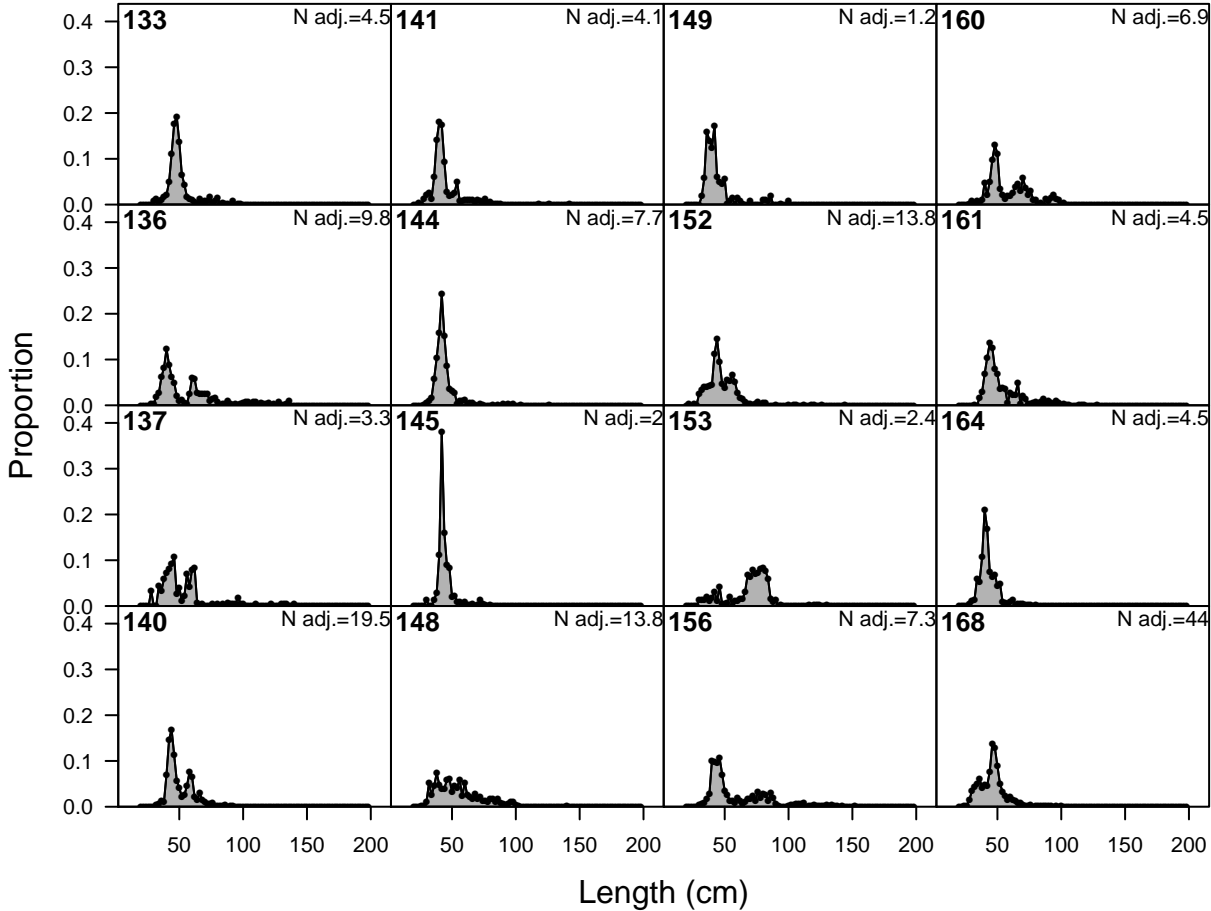


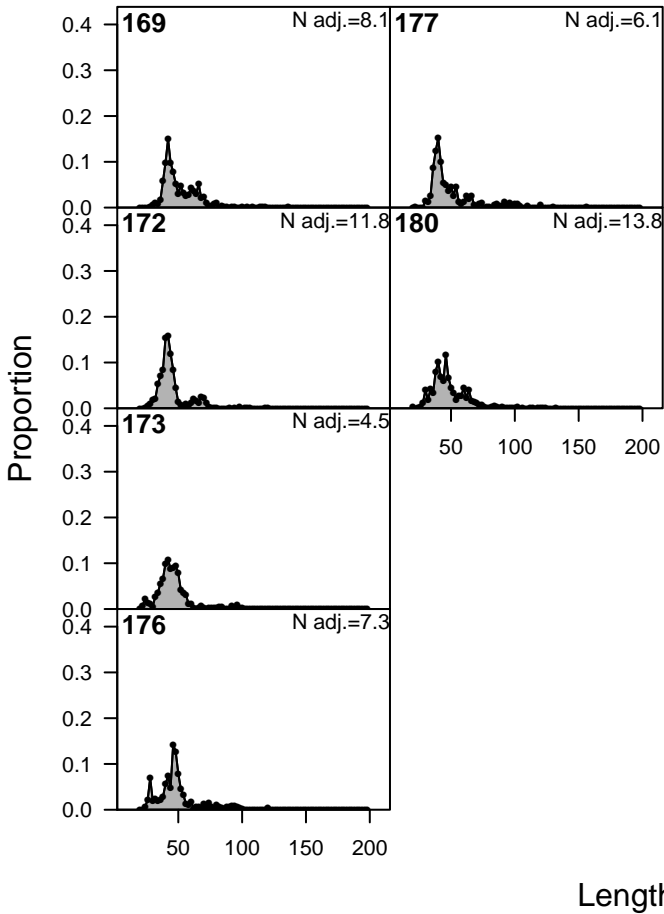


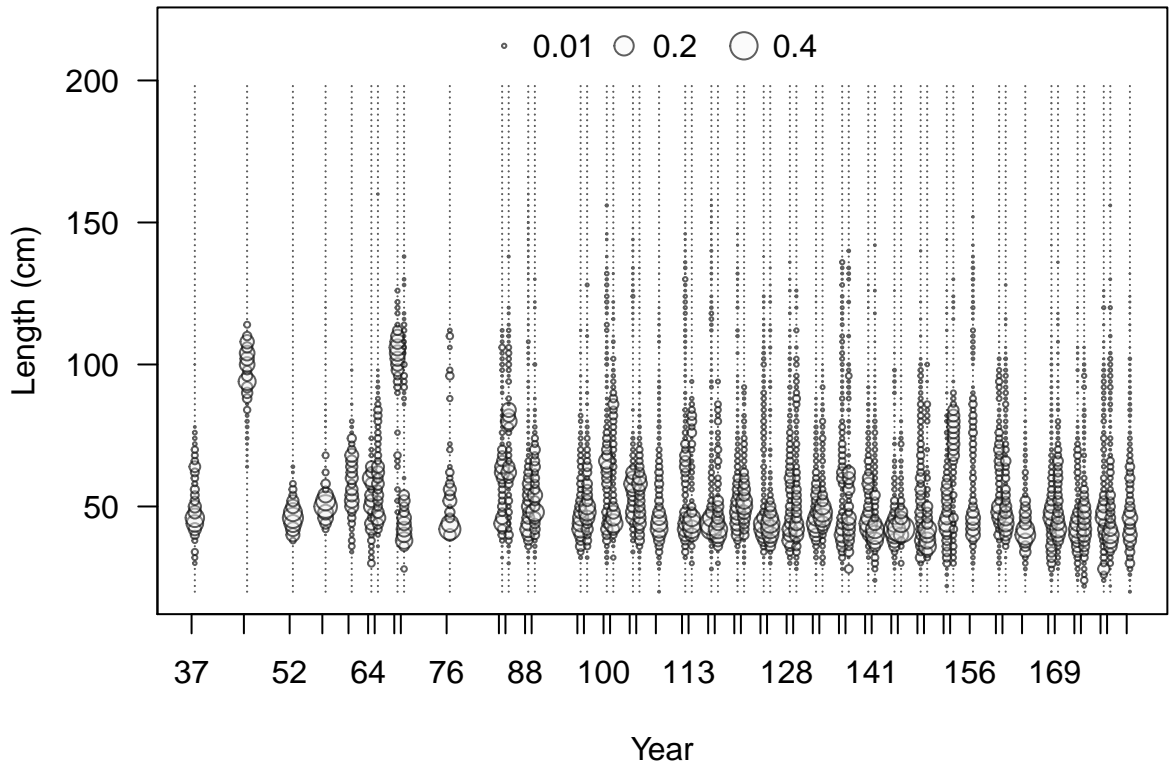




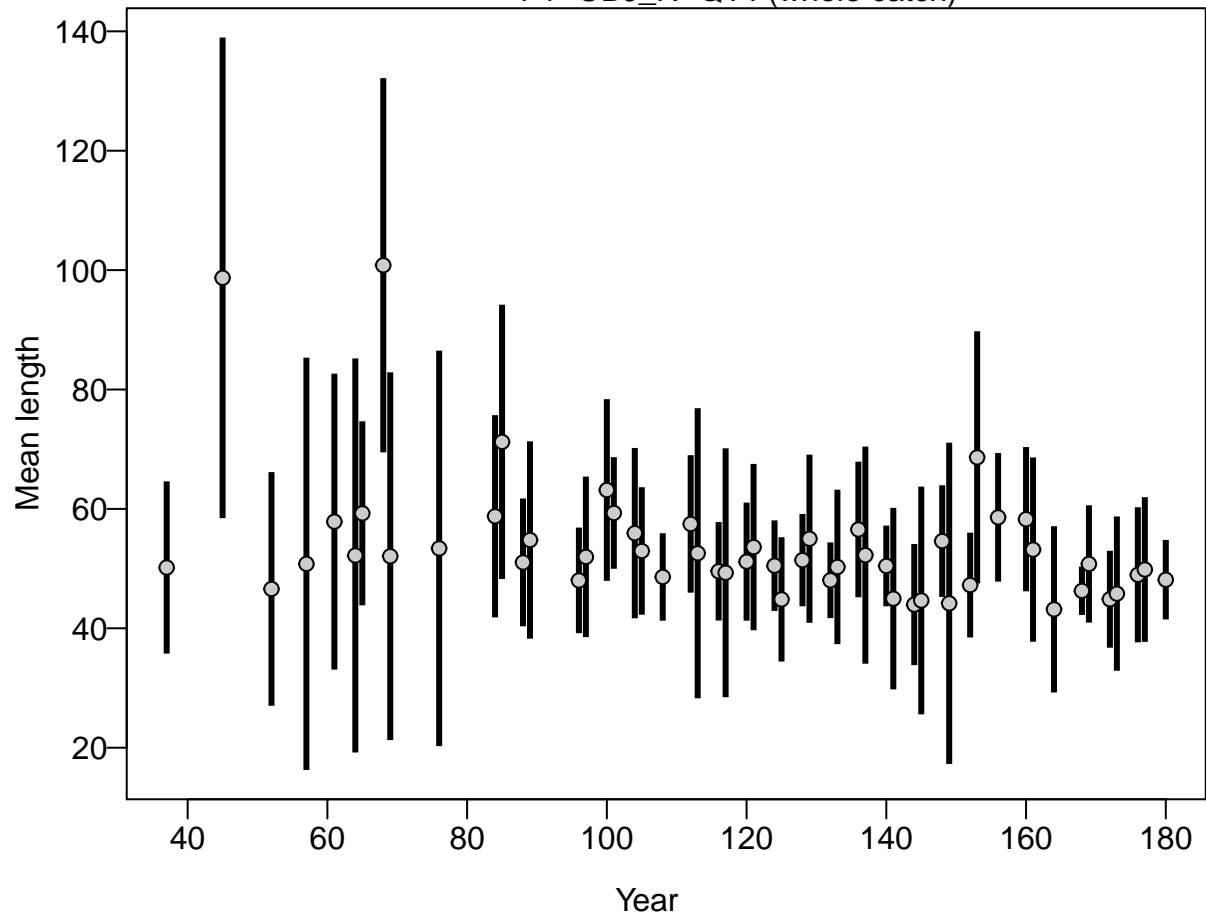


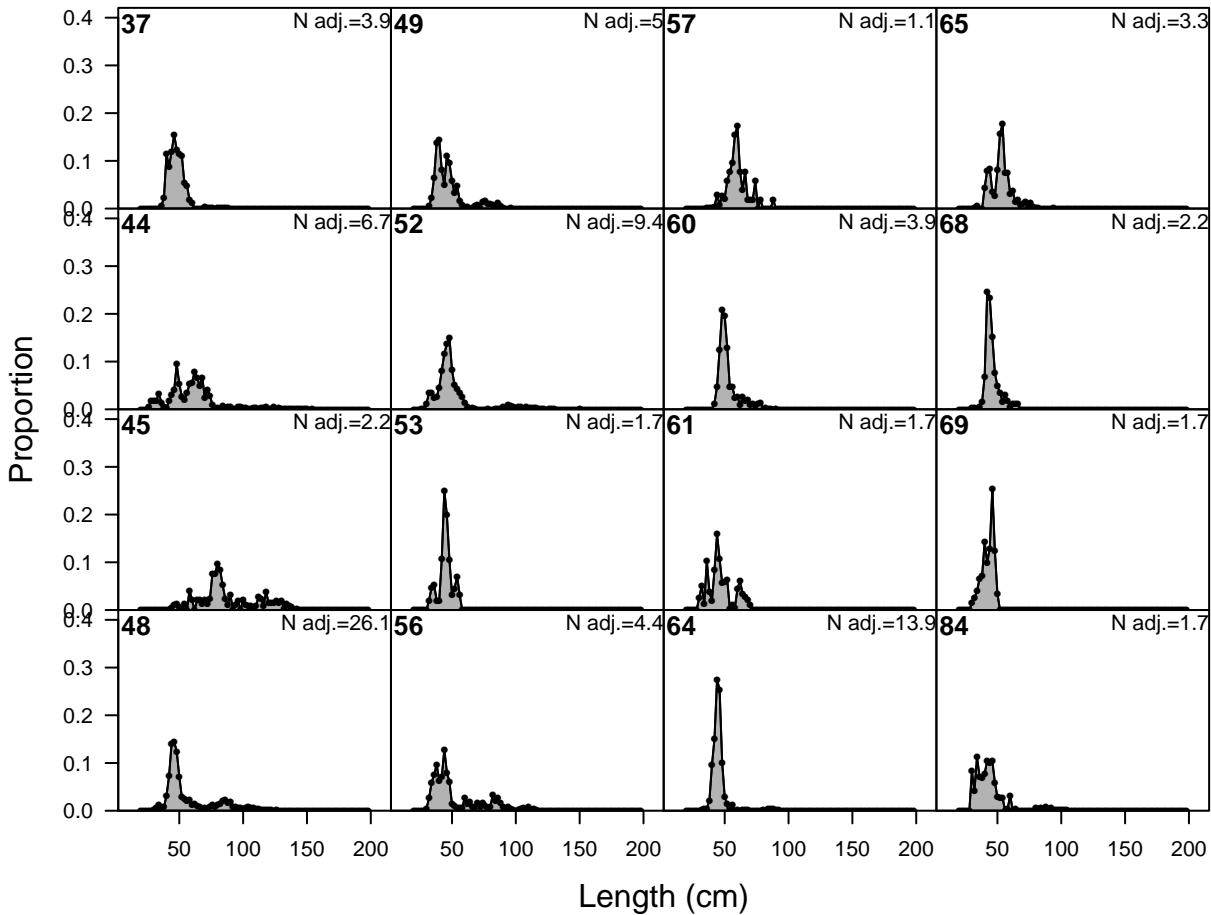


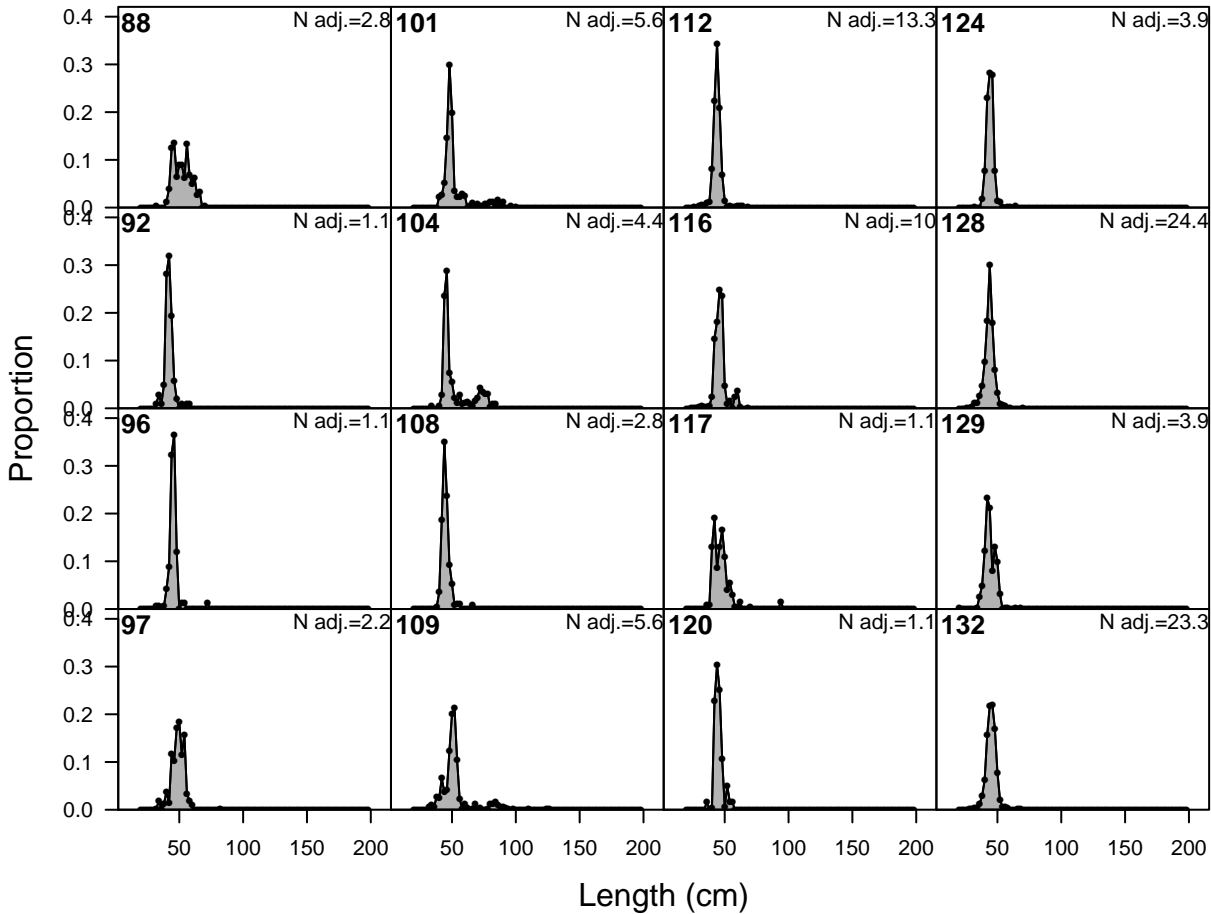


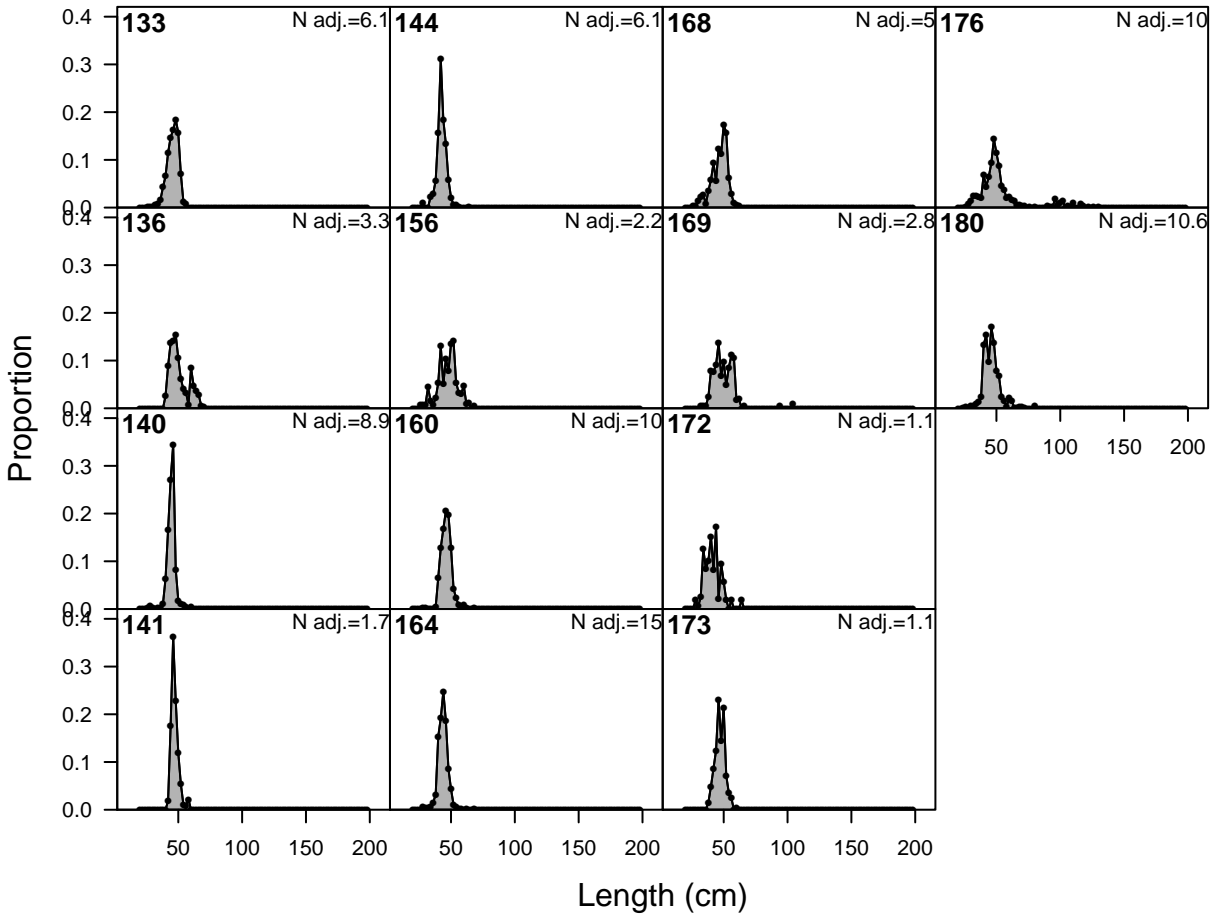


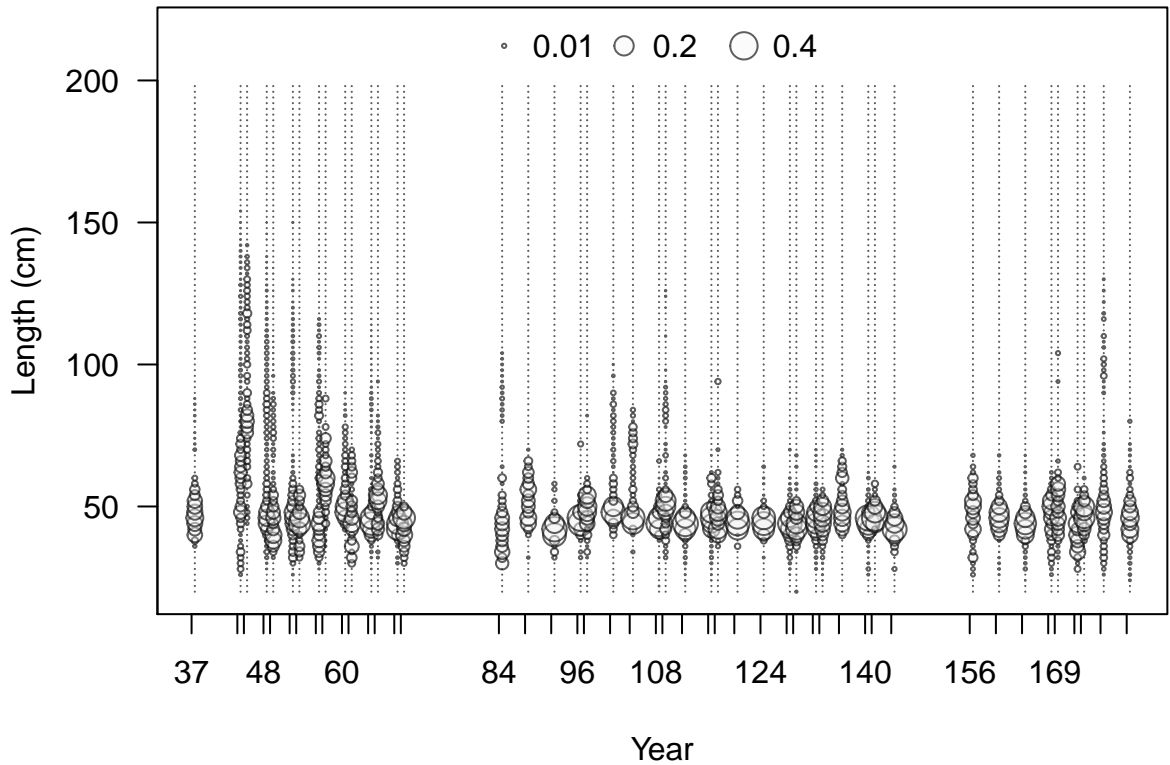
F1-OBJ\_N-Q14 (whole catch)





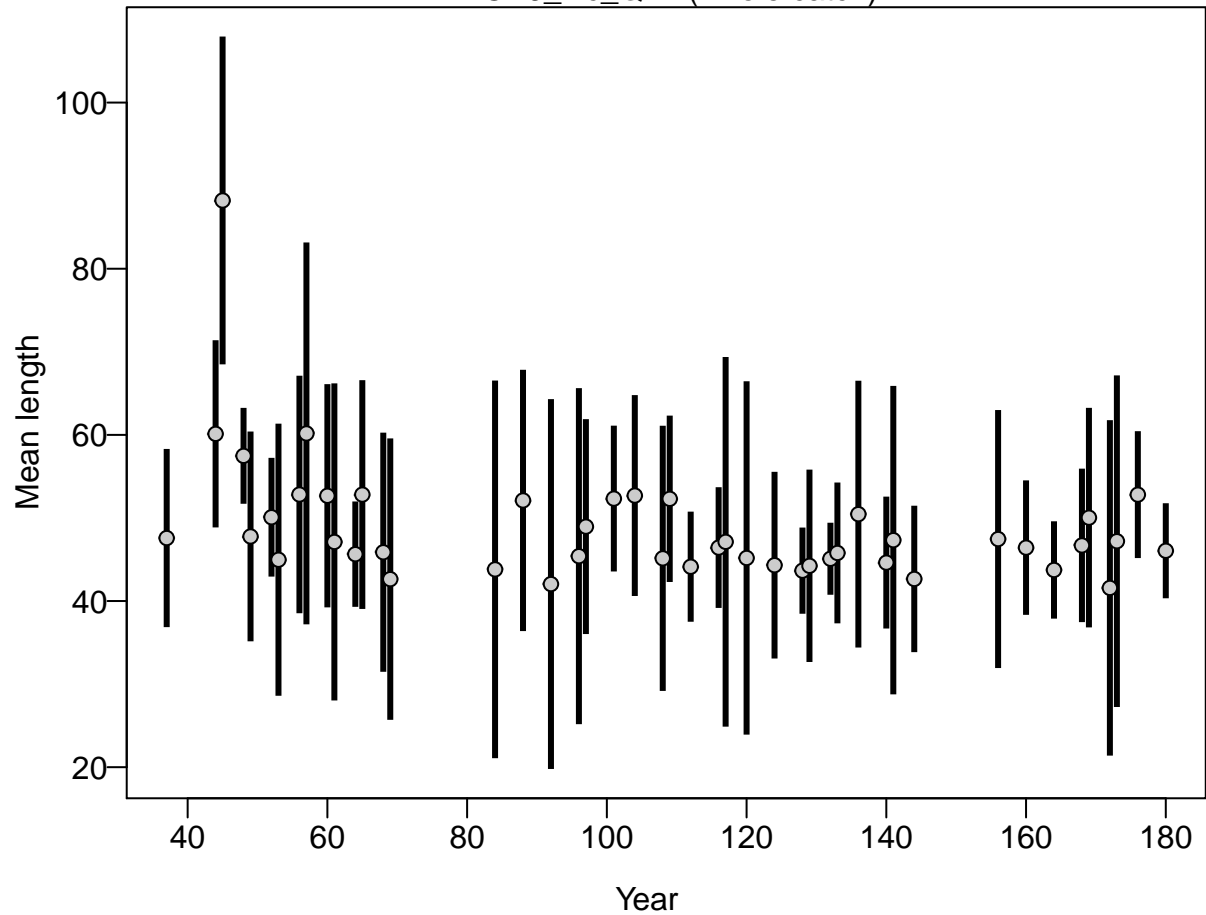


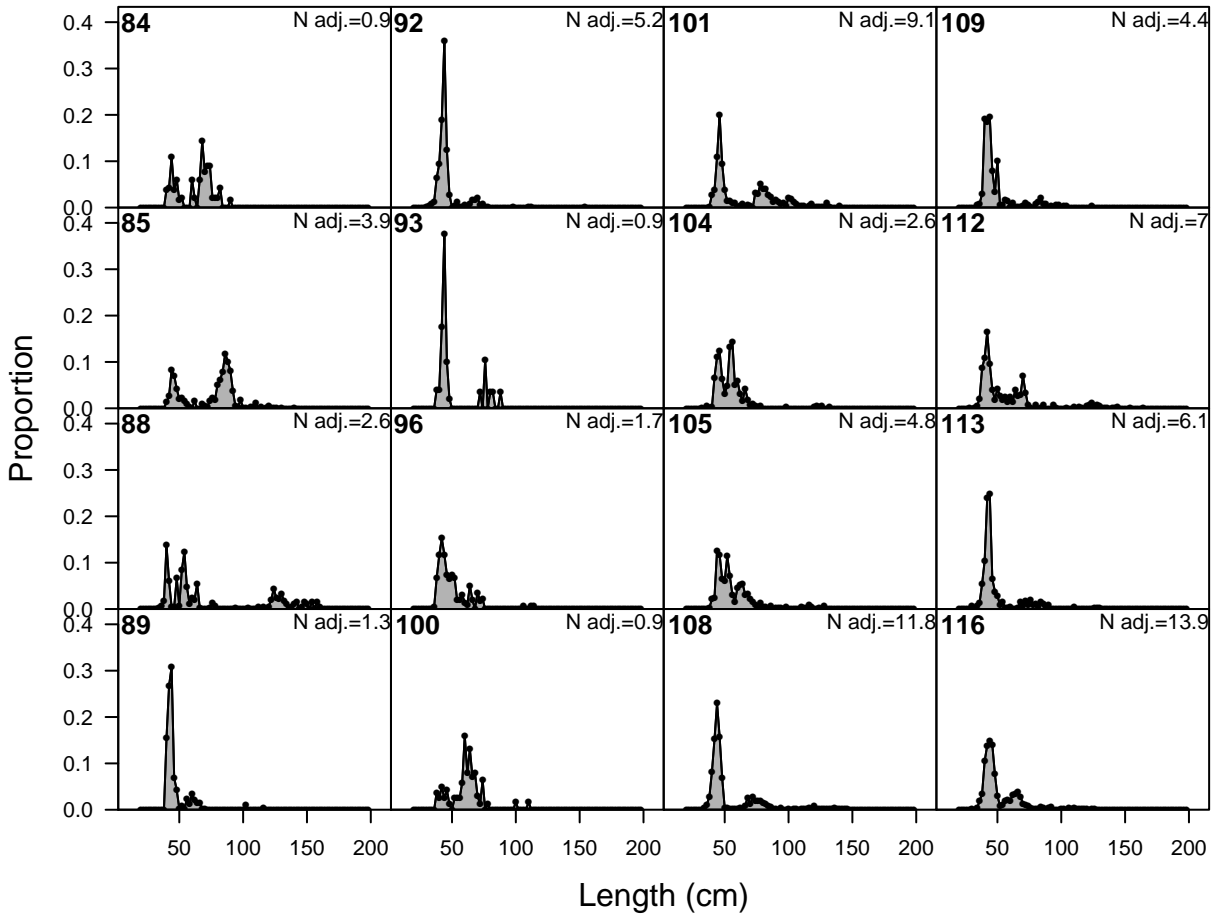


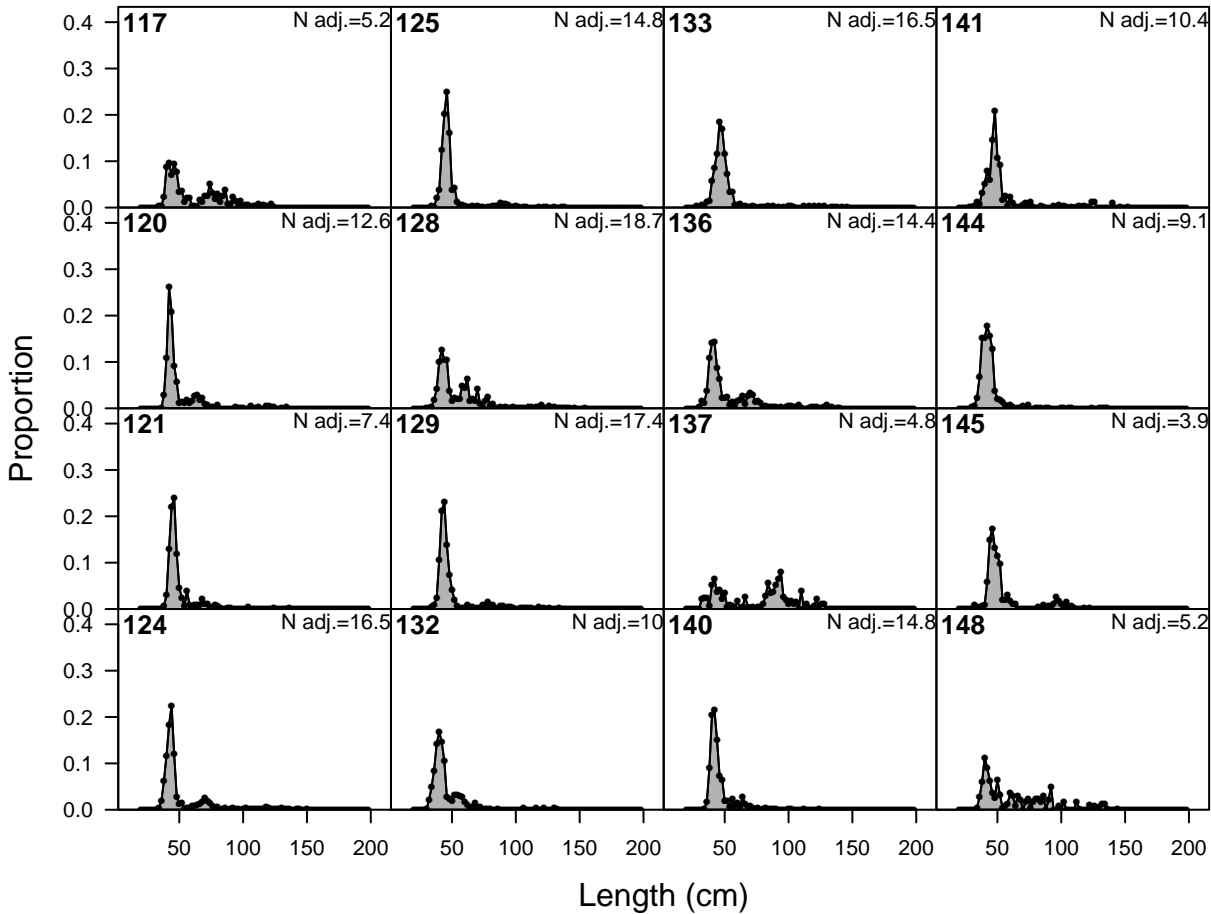


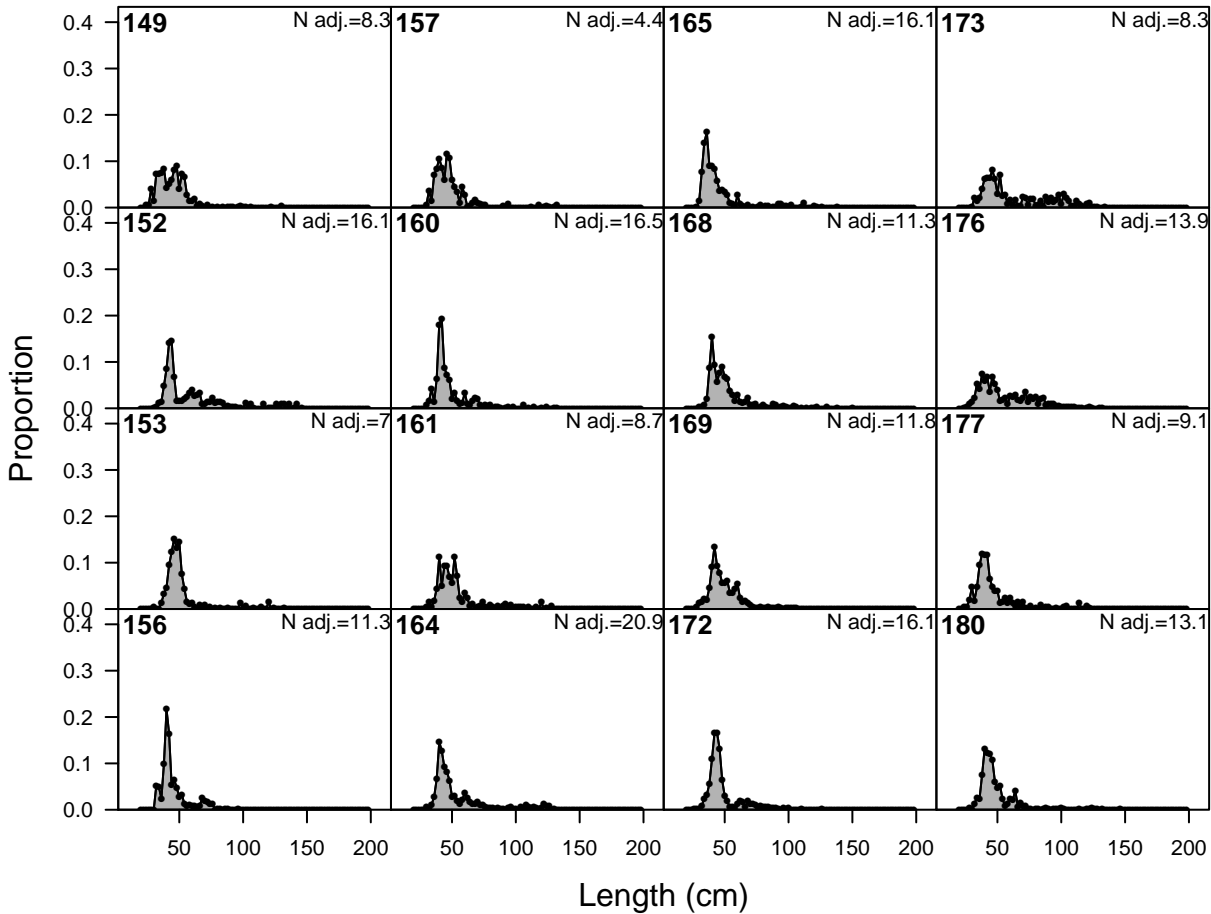


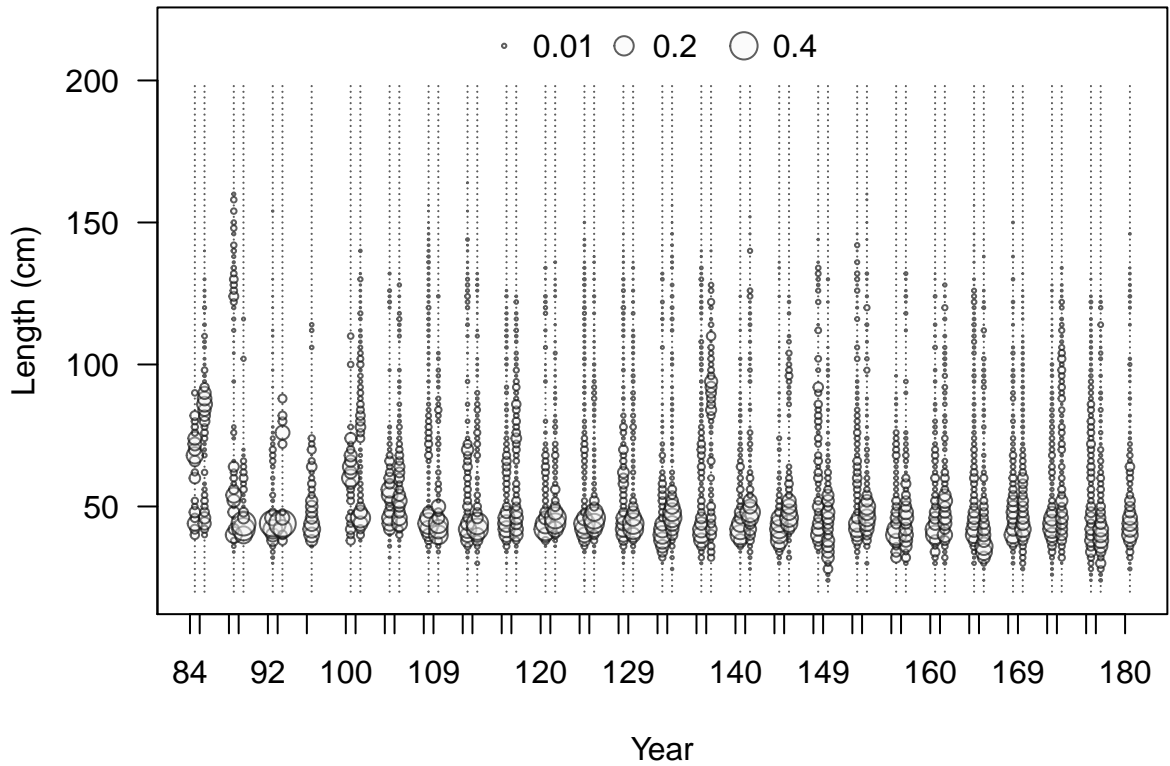
F2-OBJ\_Nc\_Q14 (whole catch)



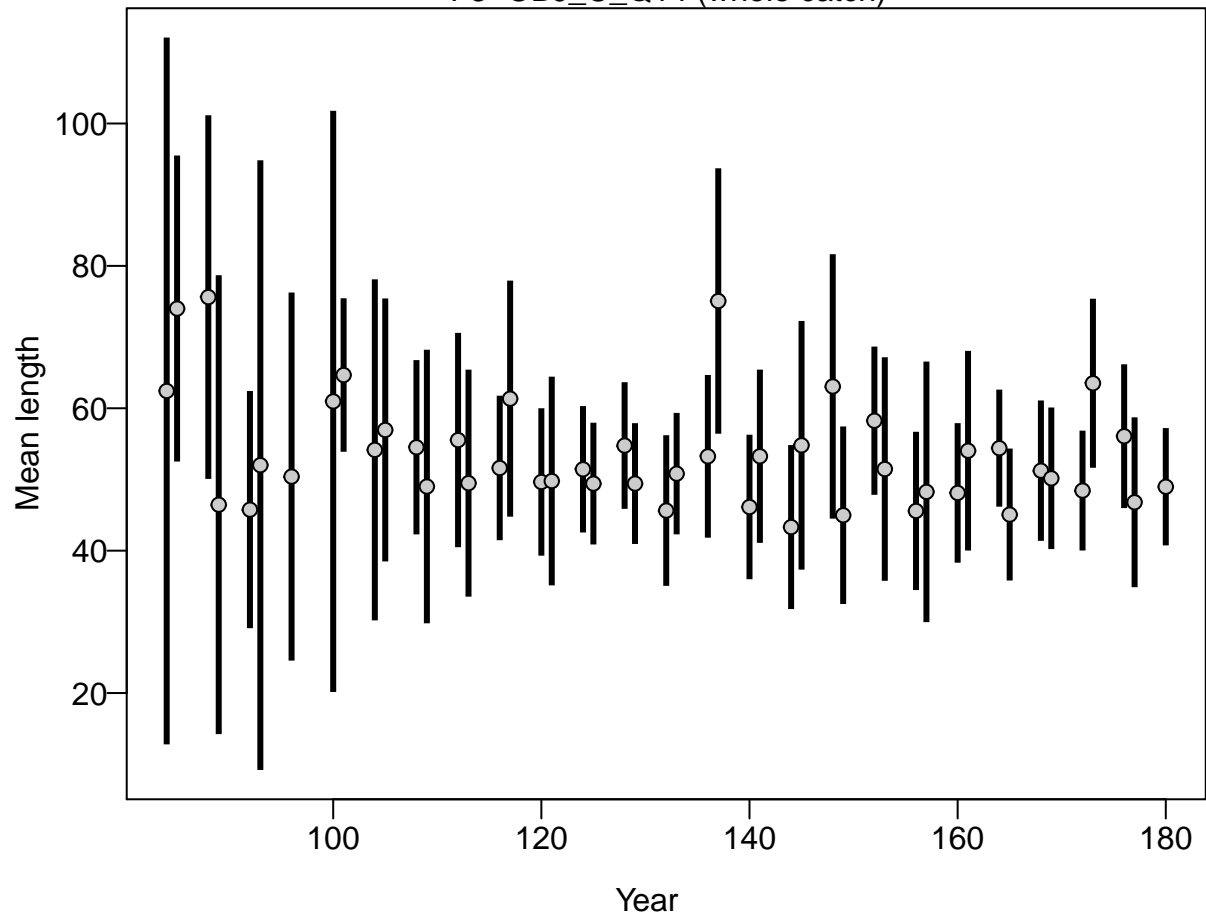


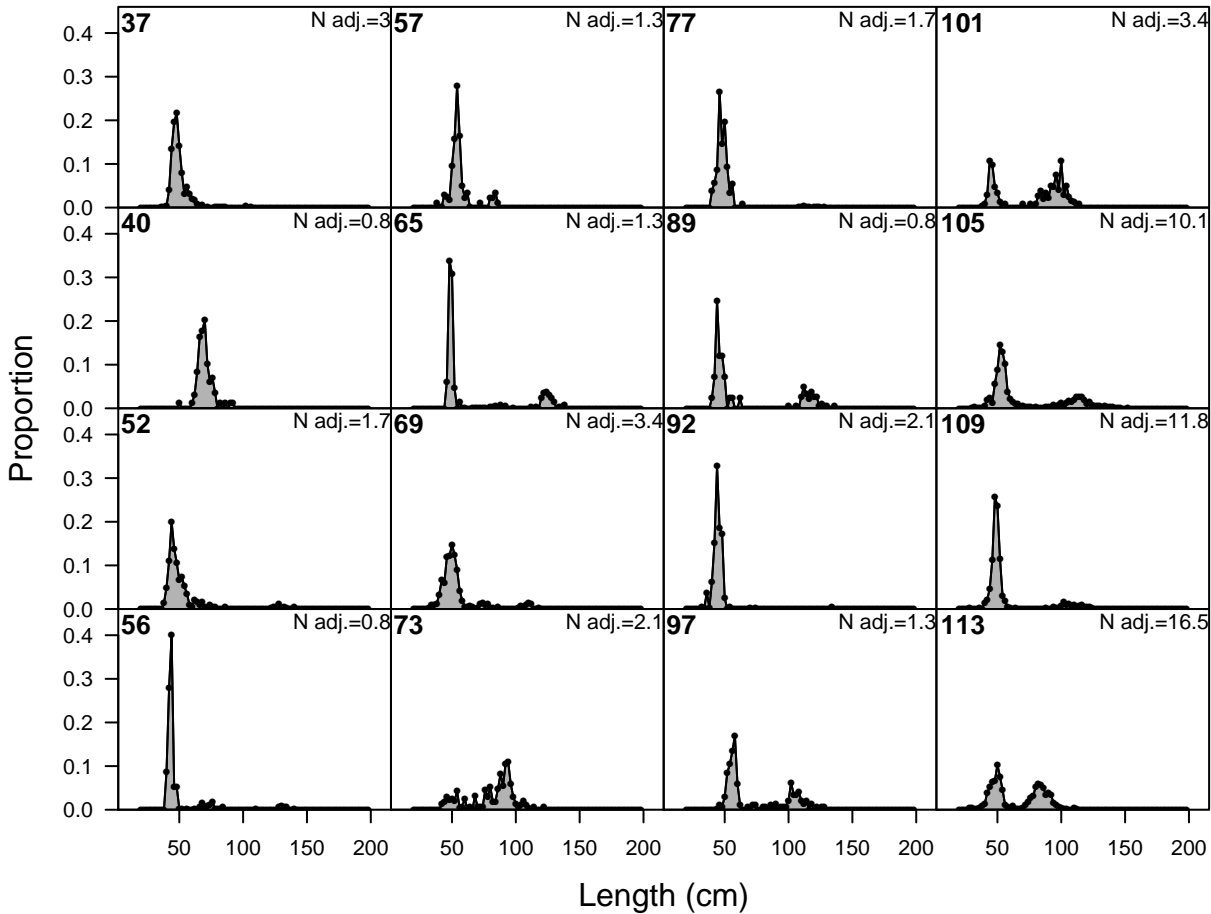


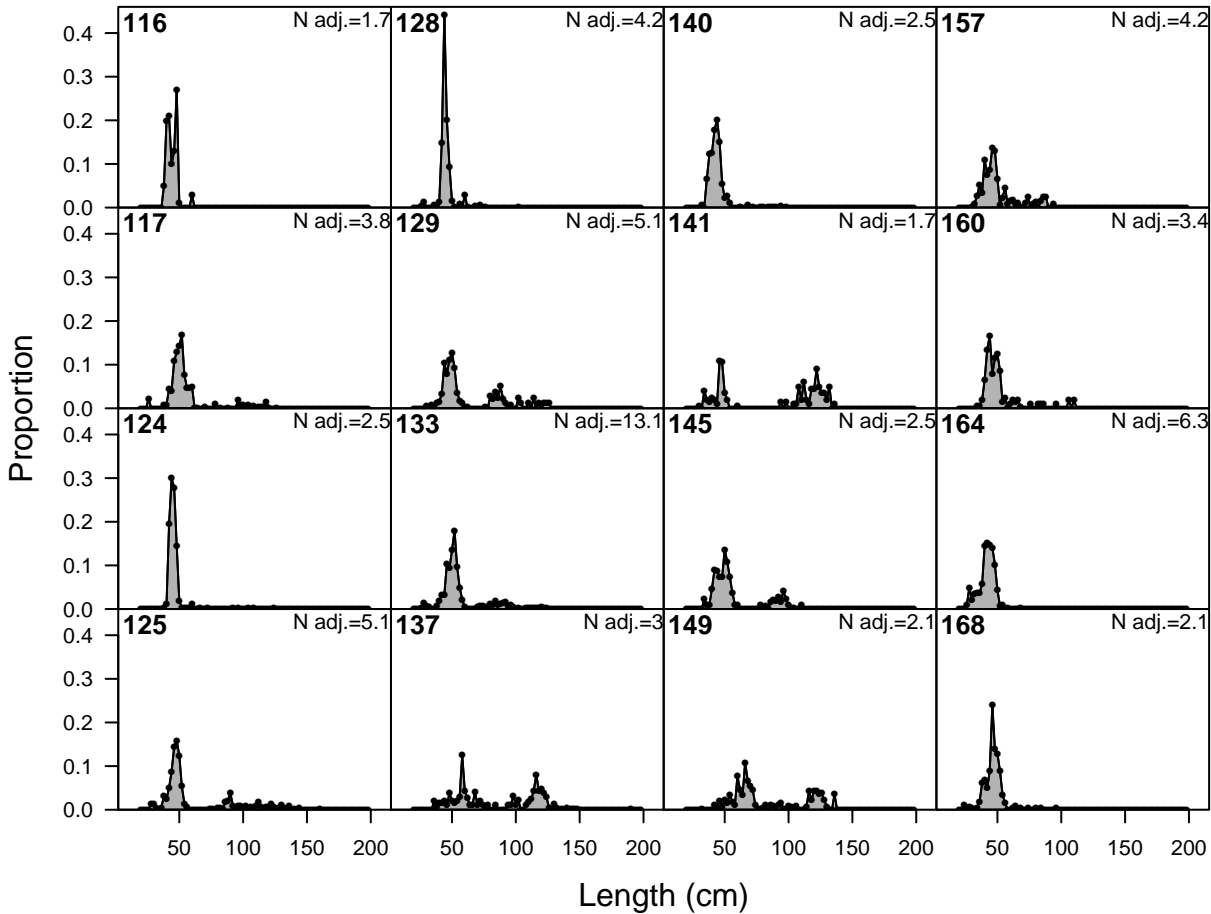




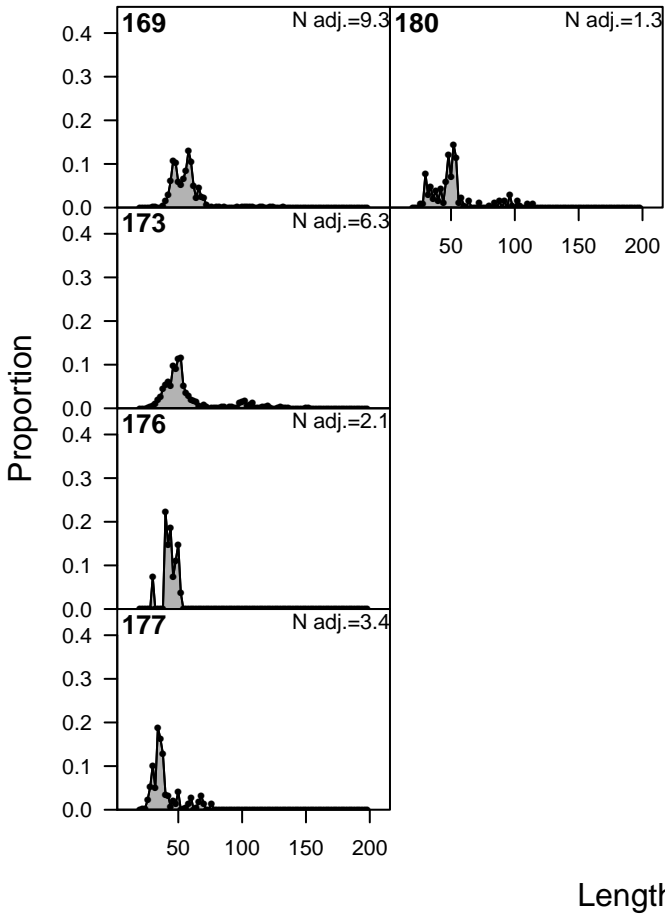
F3-OBJ\_C\_Q14 (whole catch)

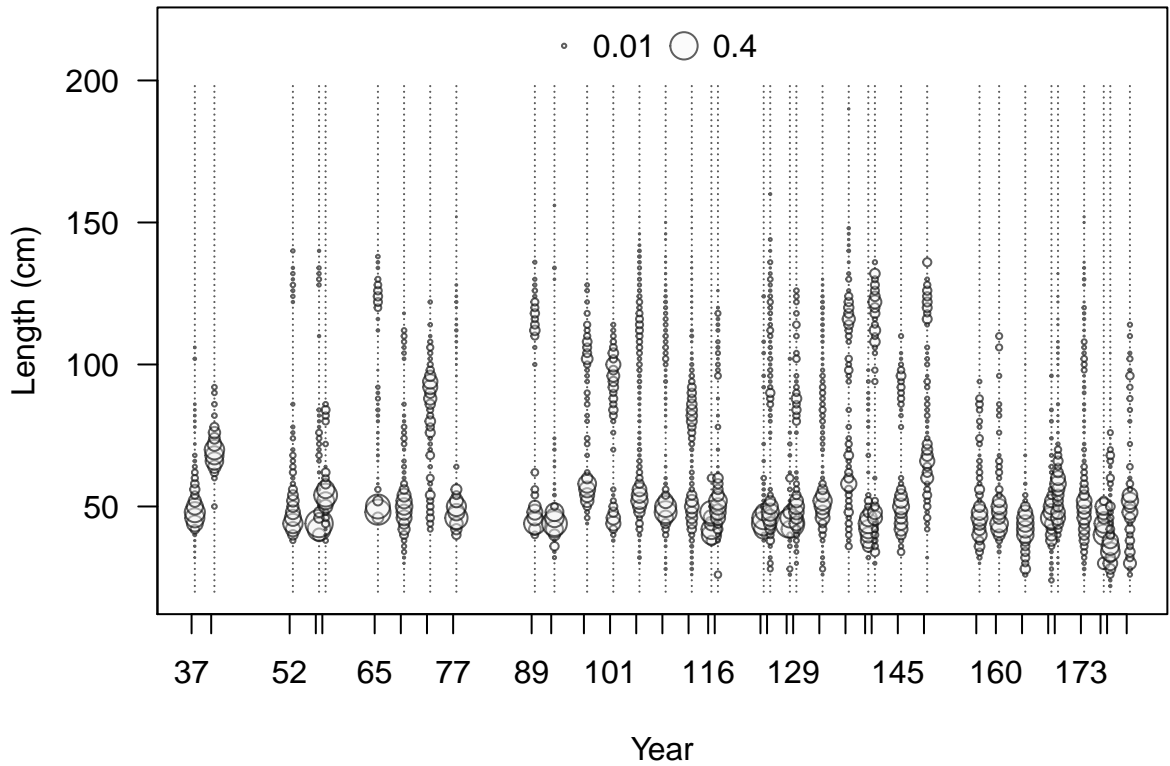




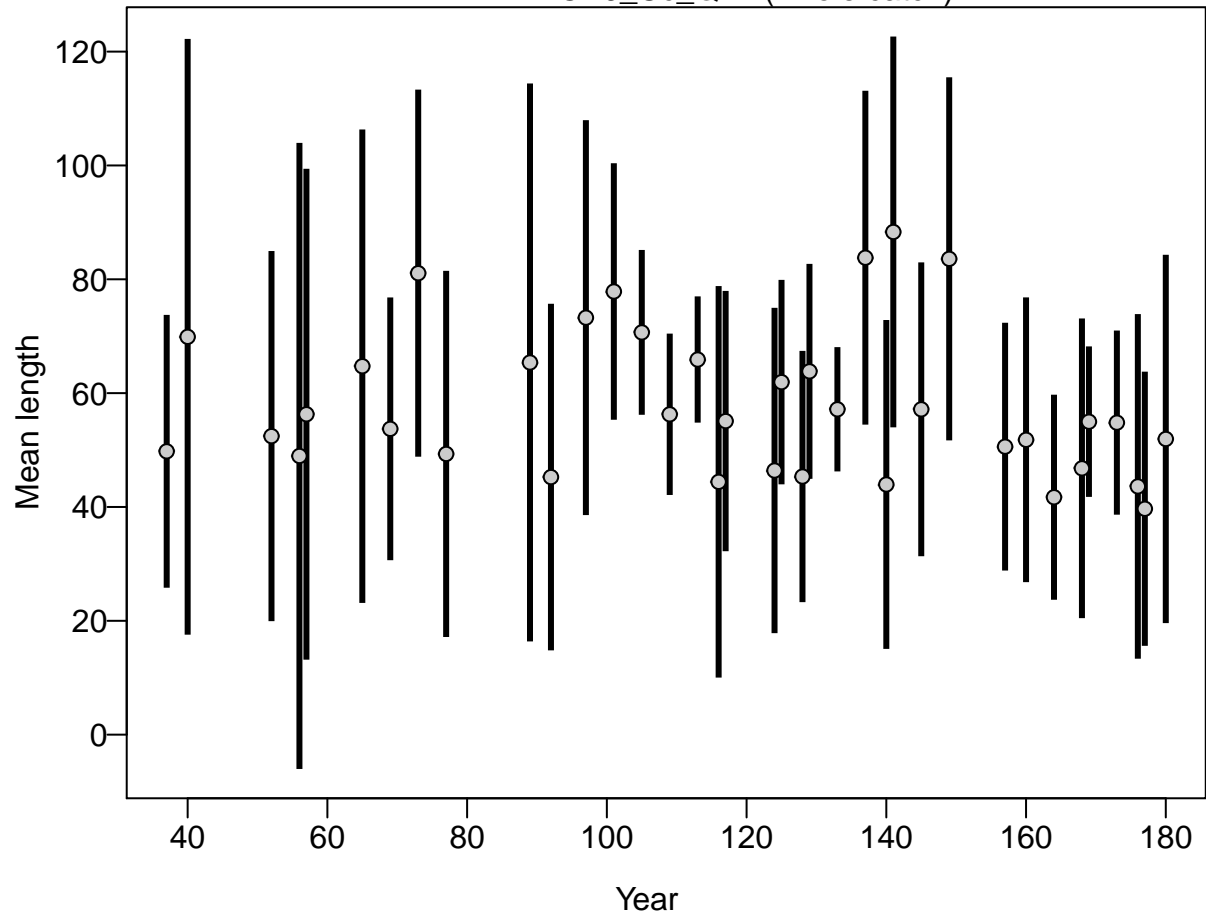


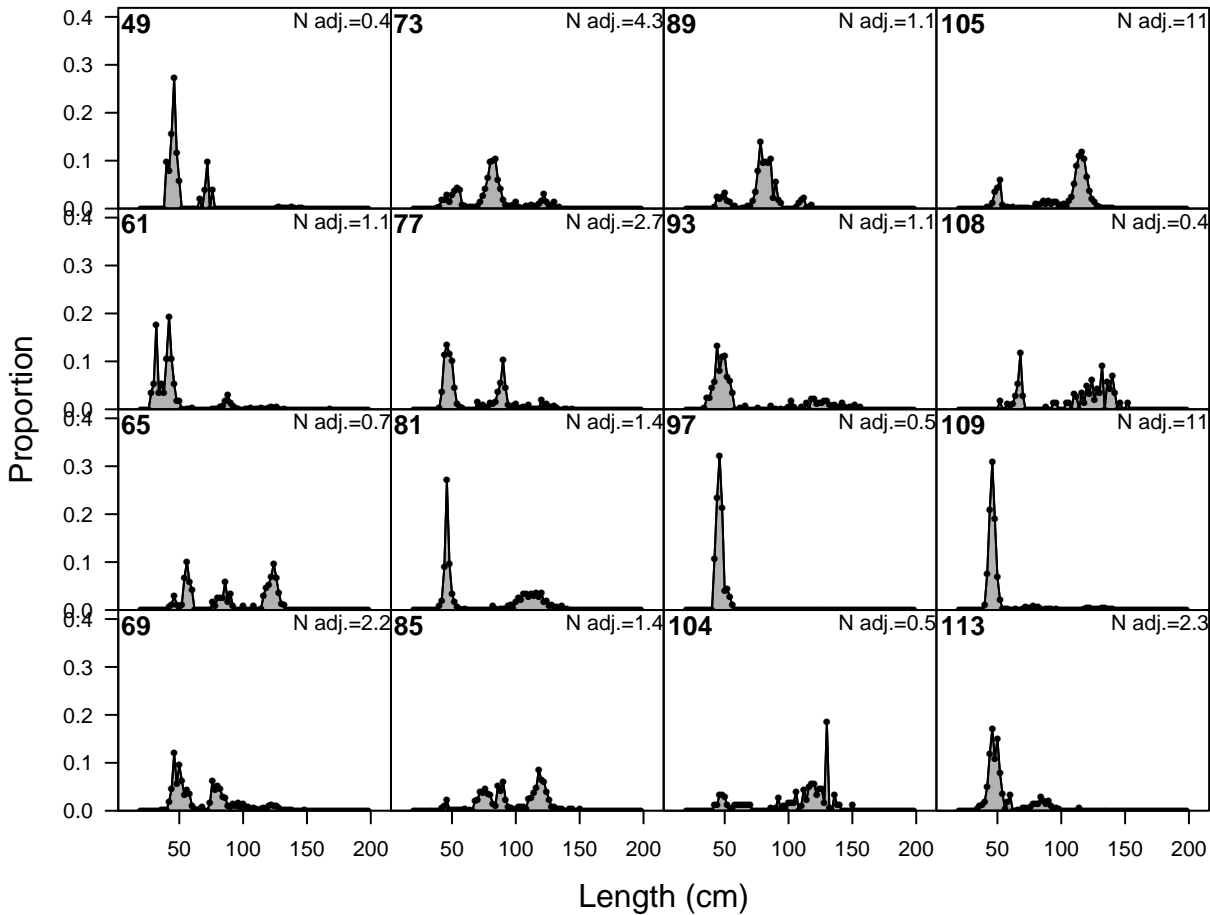


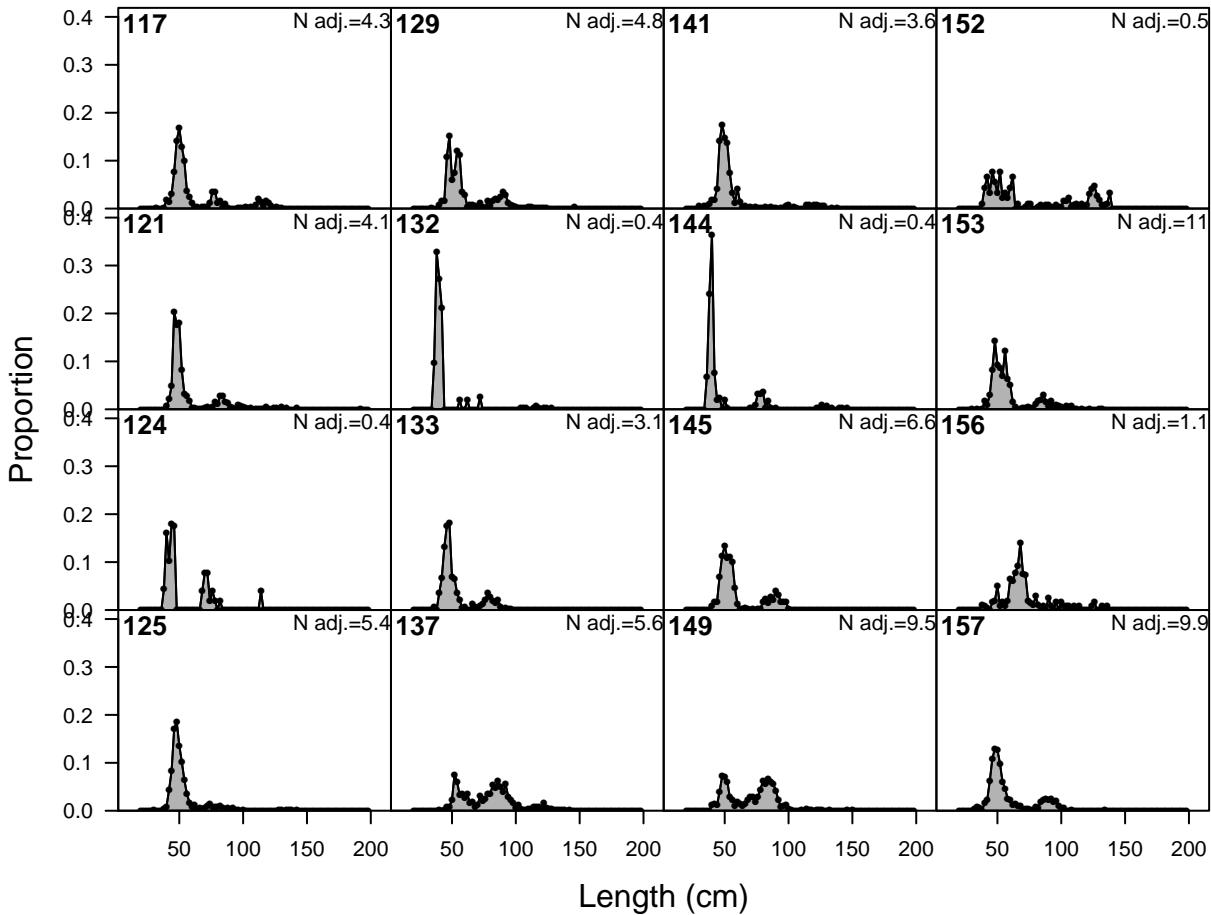


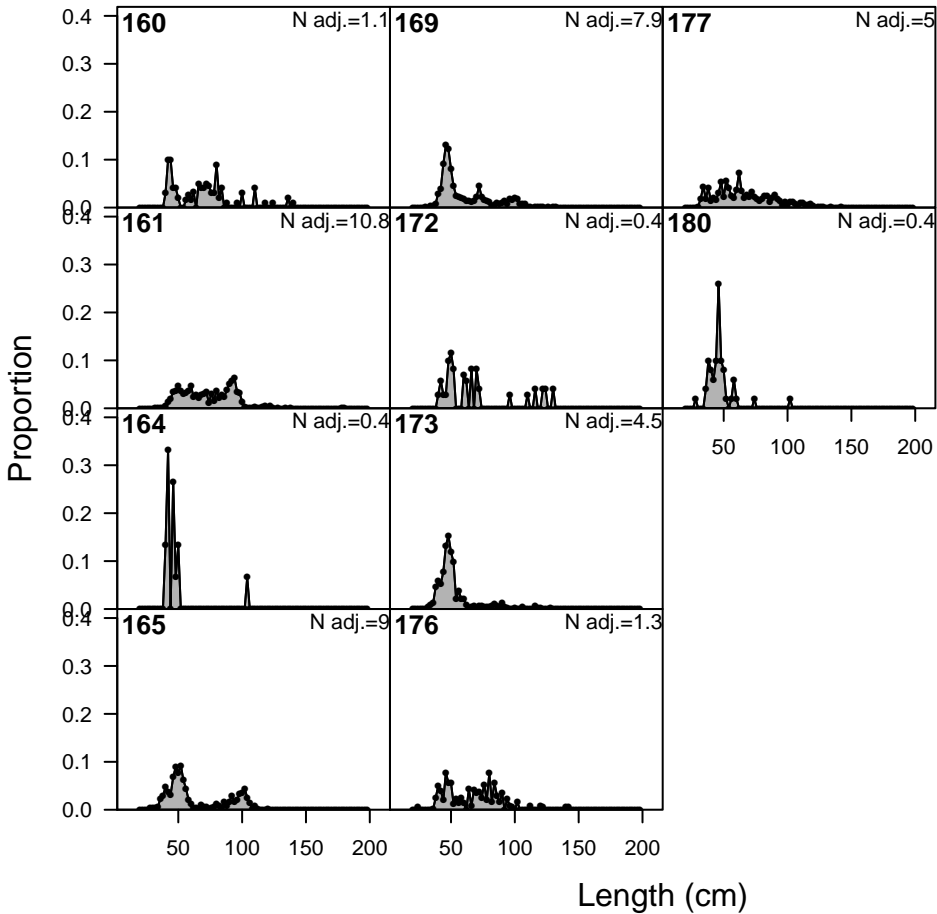


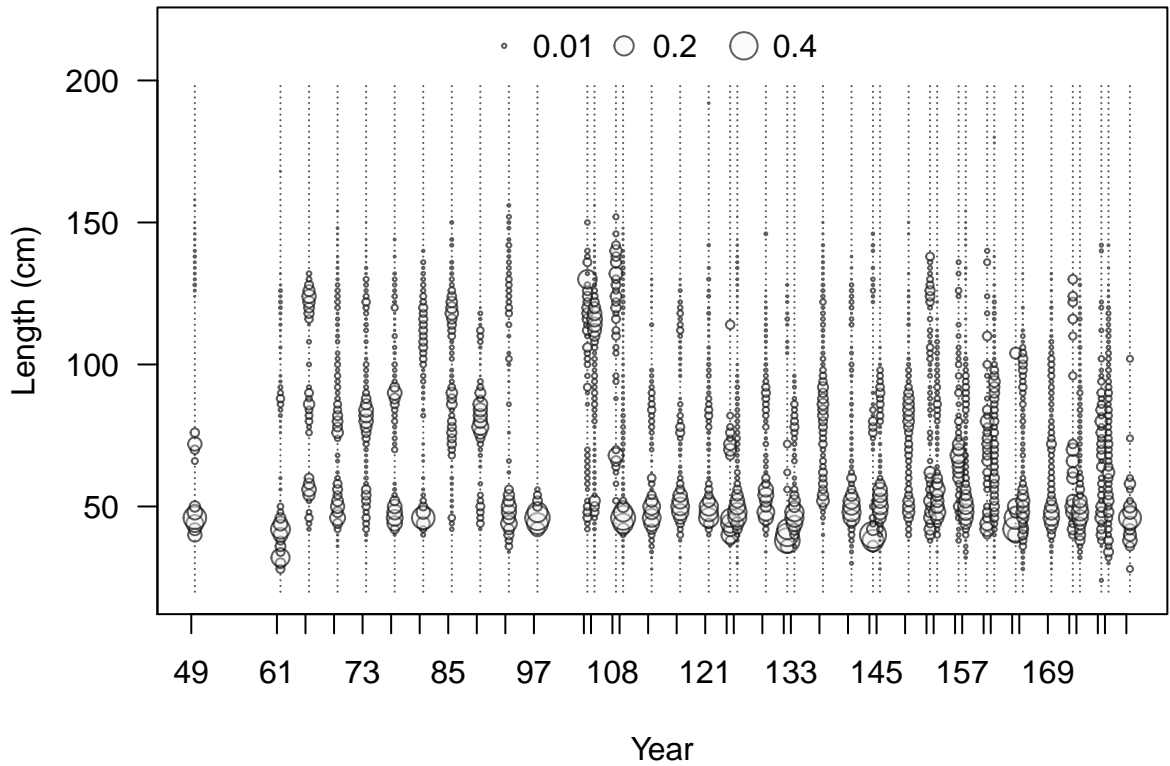
F4-Obj\_Cc\_Q14 (whole catch)



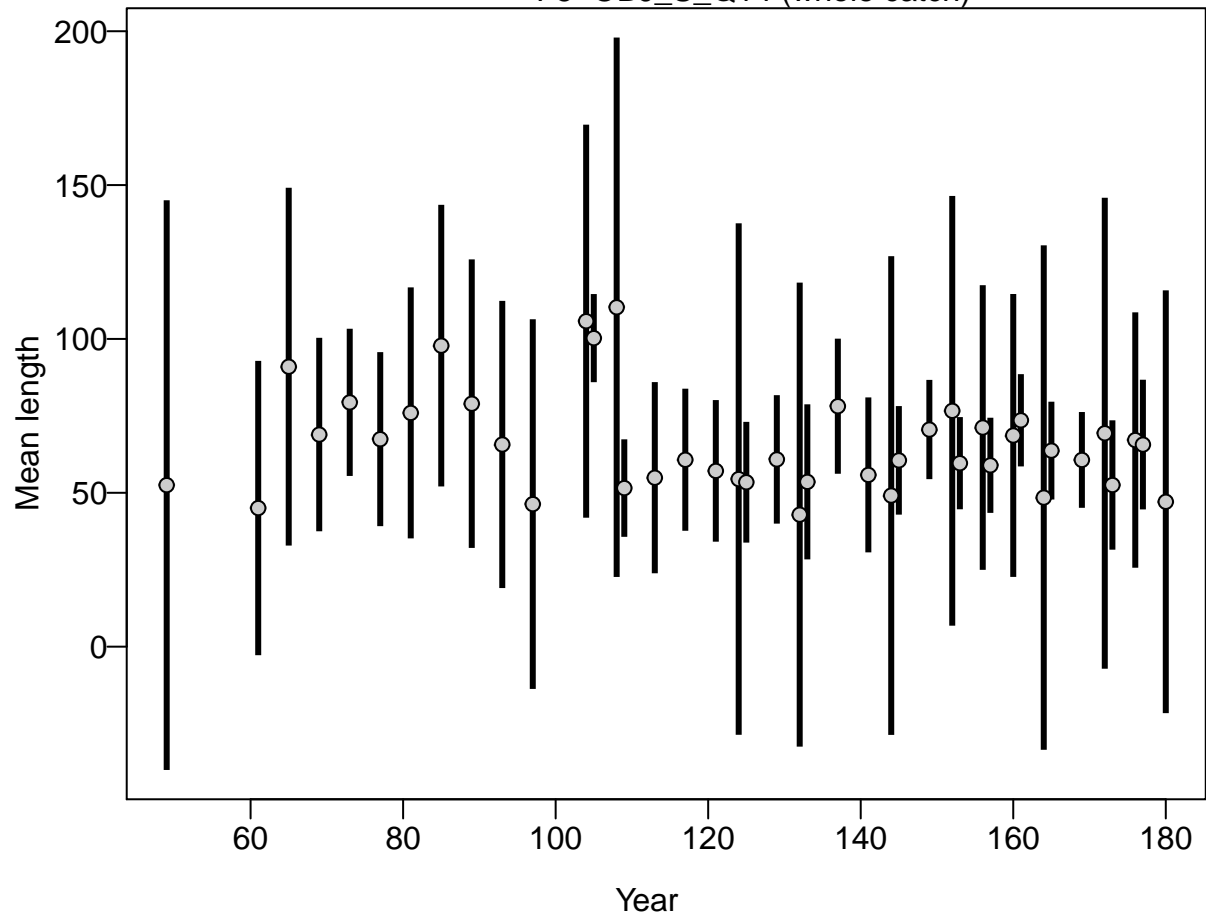




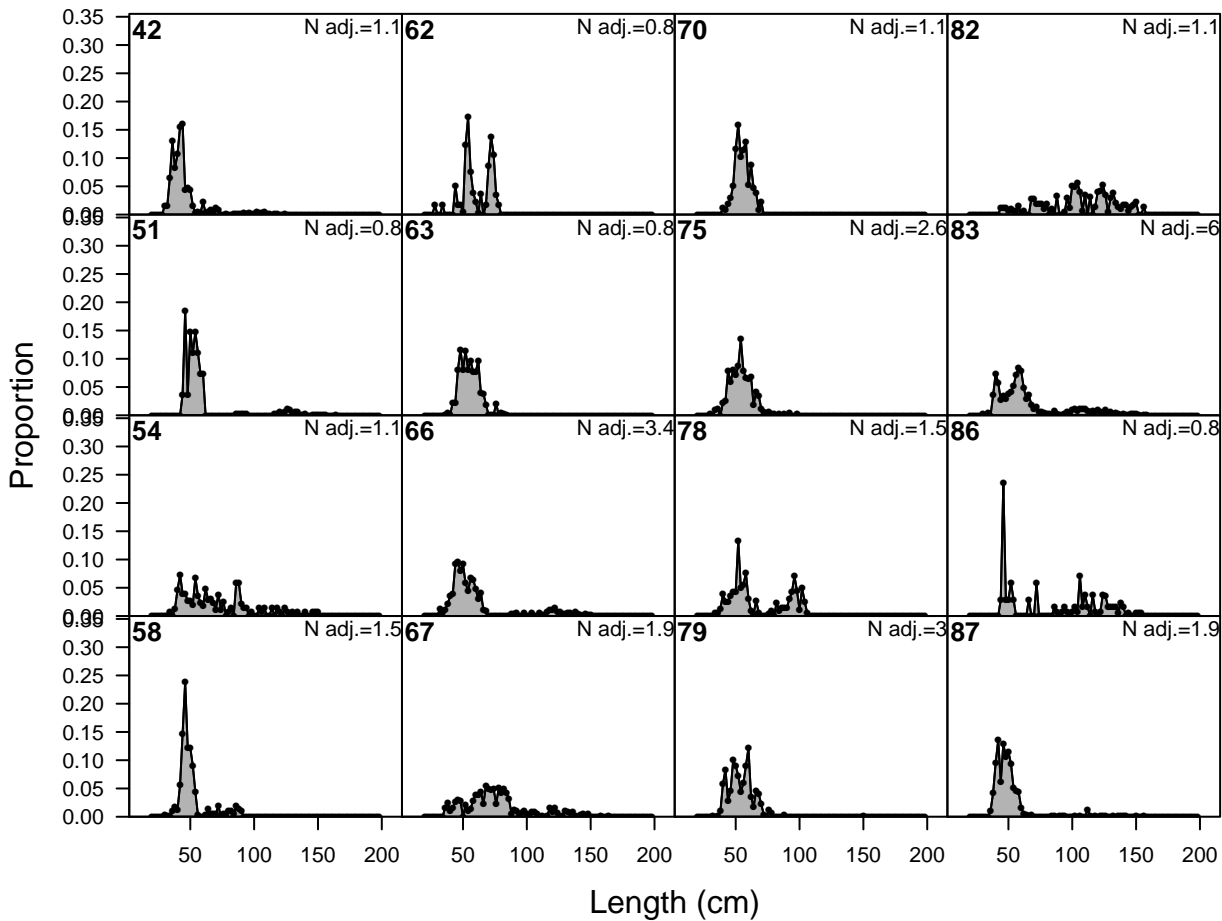




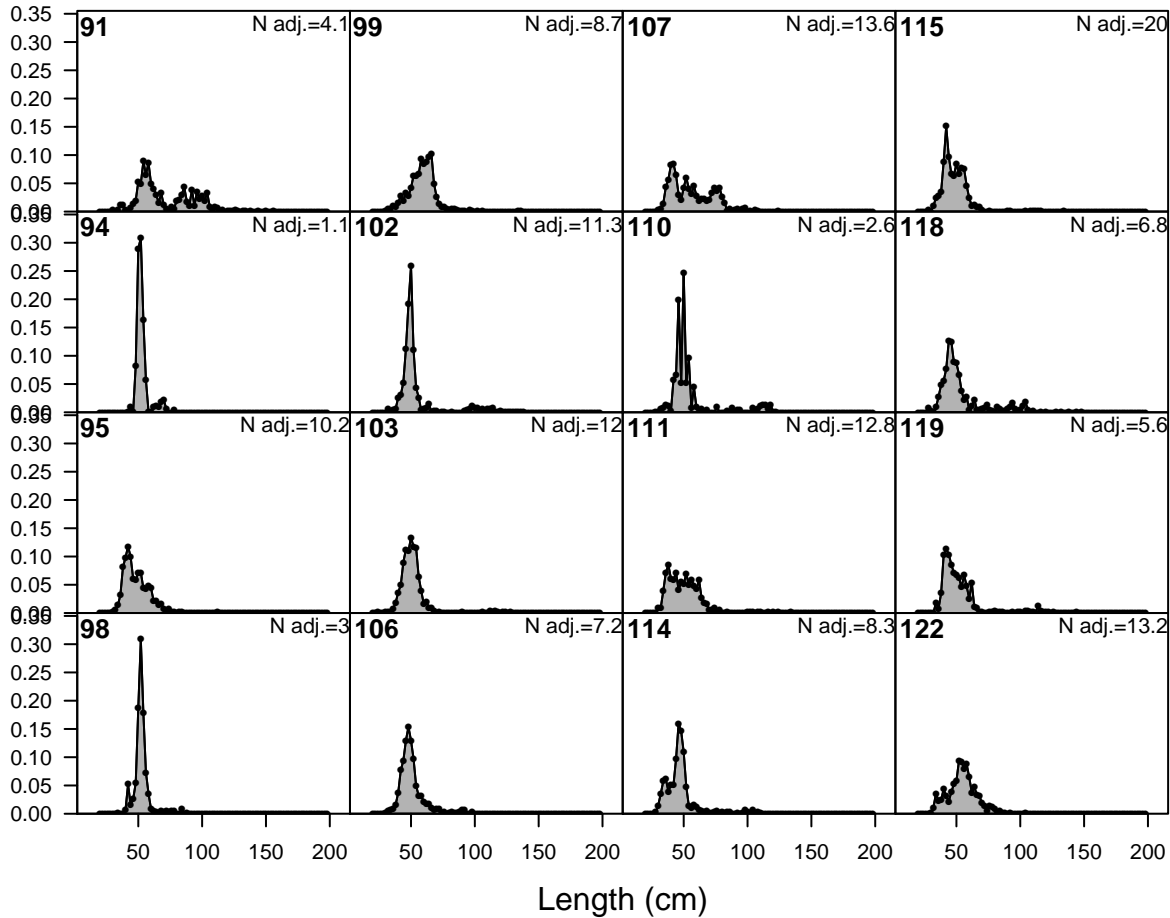
F5-OBJ\_S\_Q14 (whole catch)



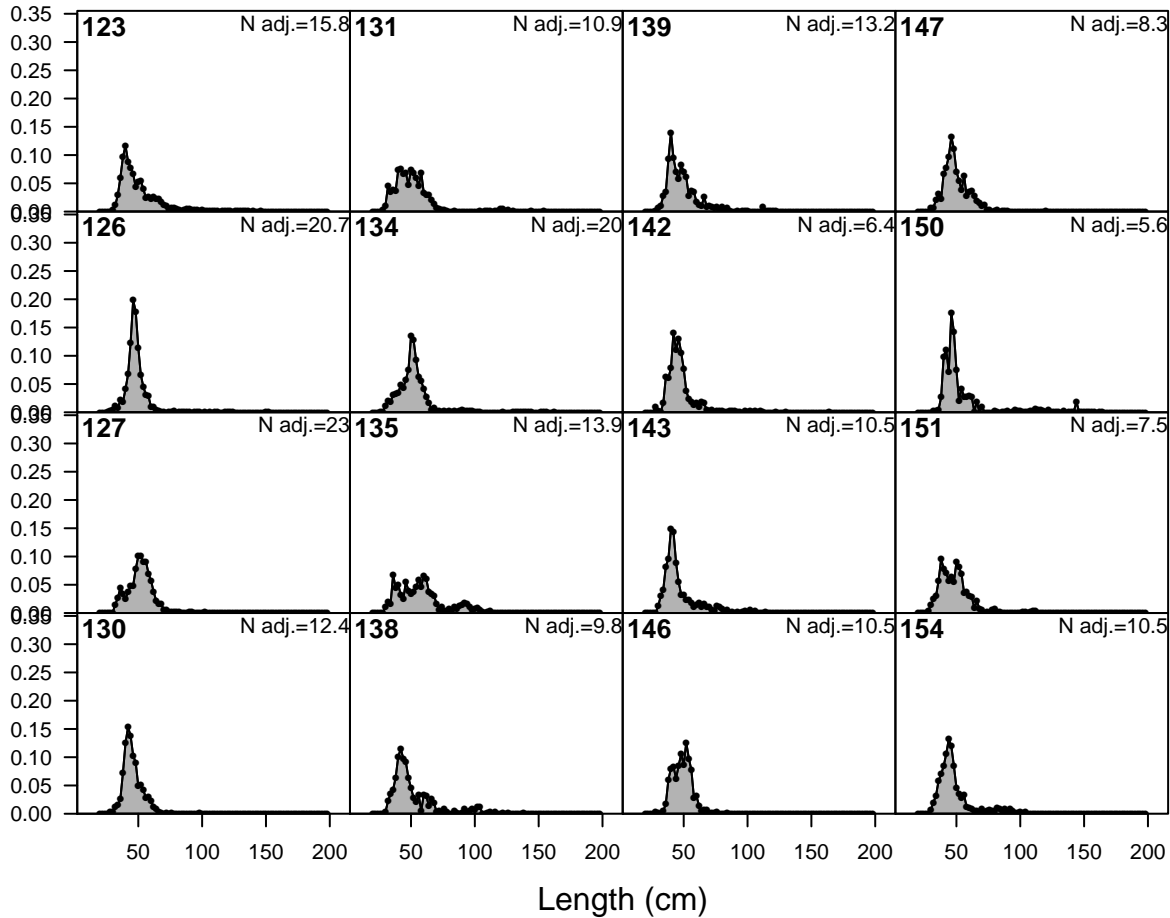




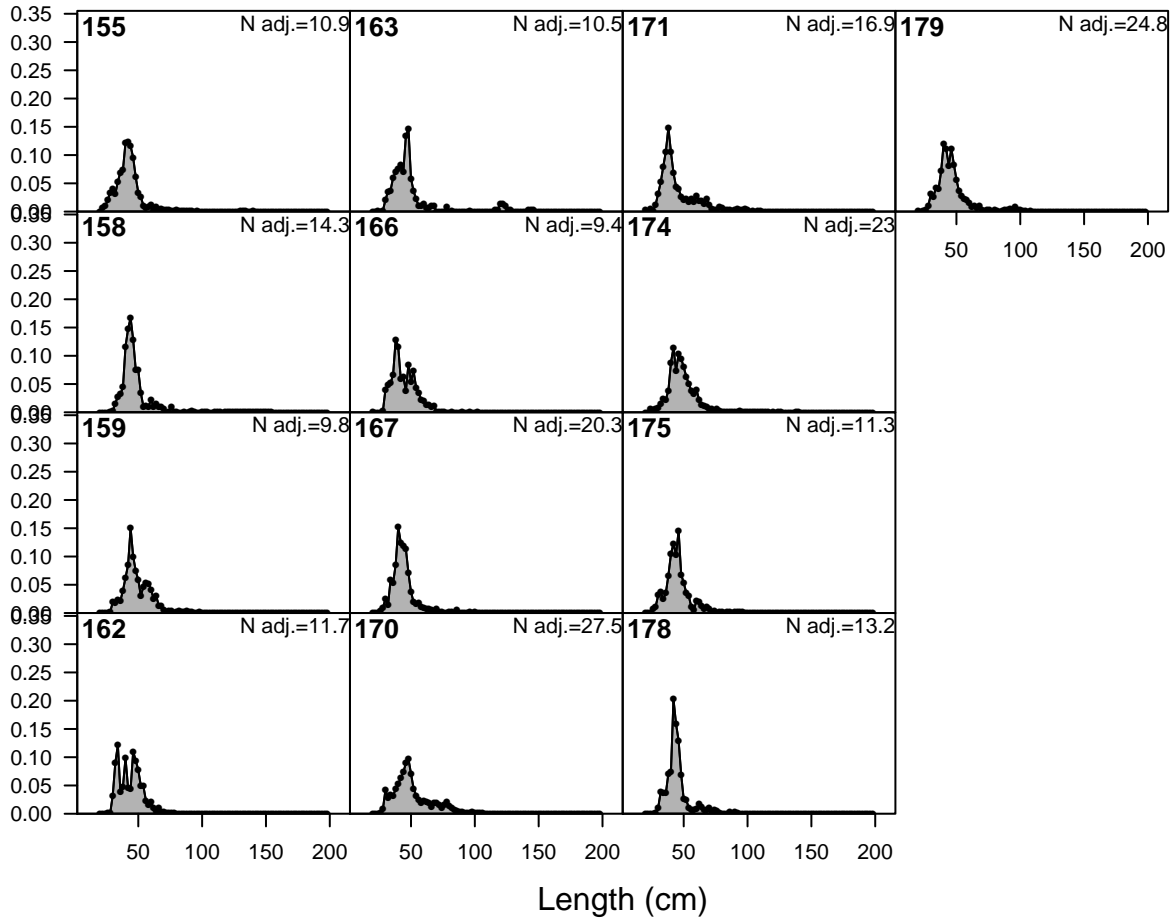
Proportion

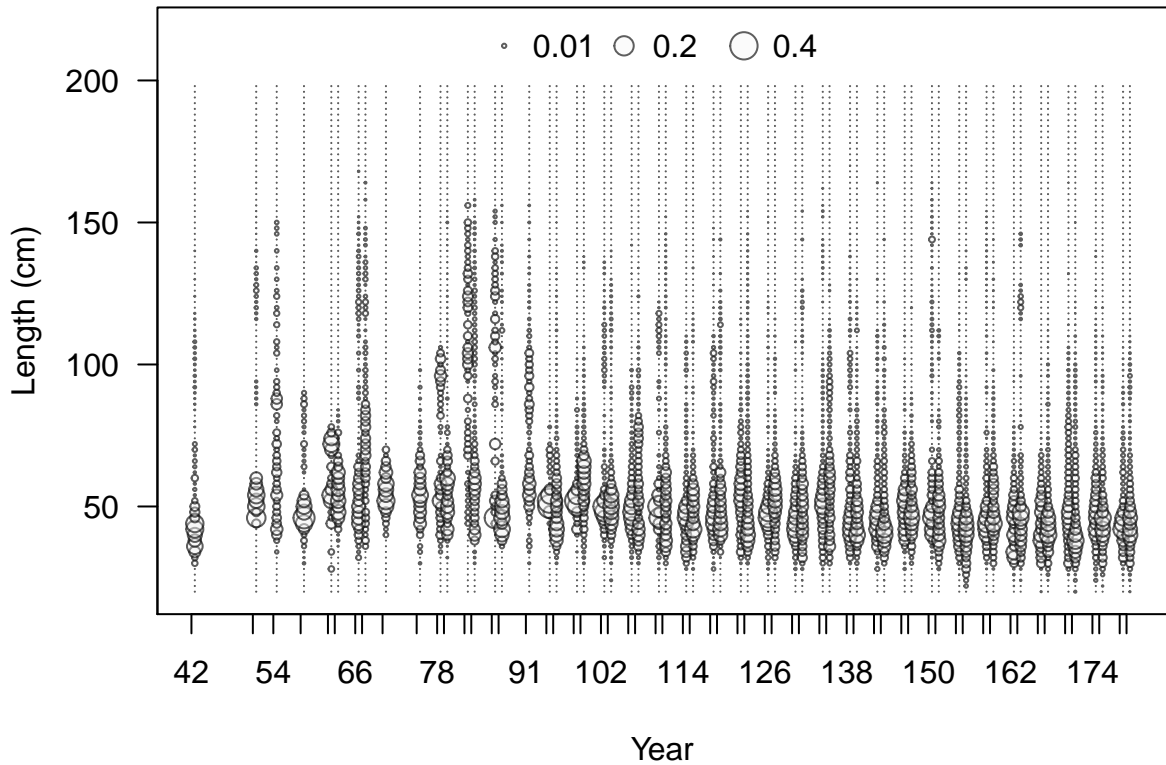


Proportion

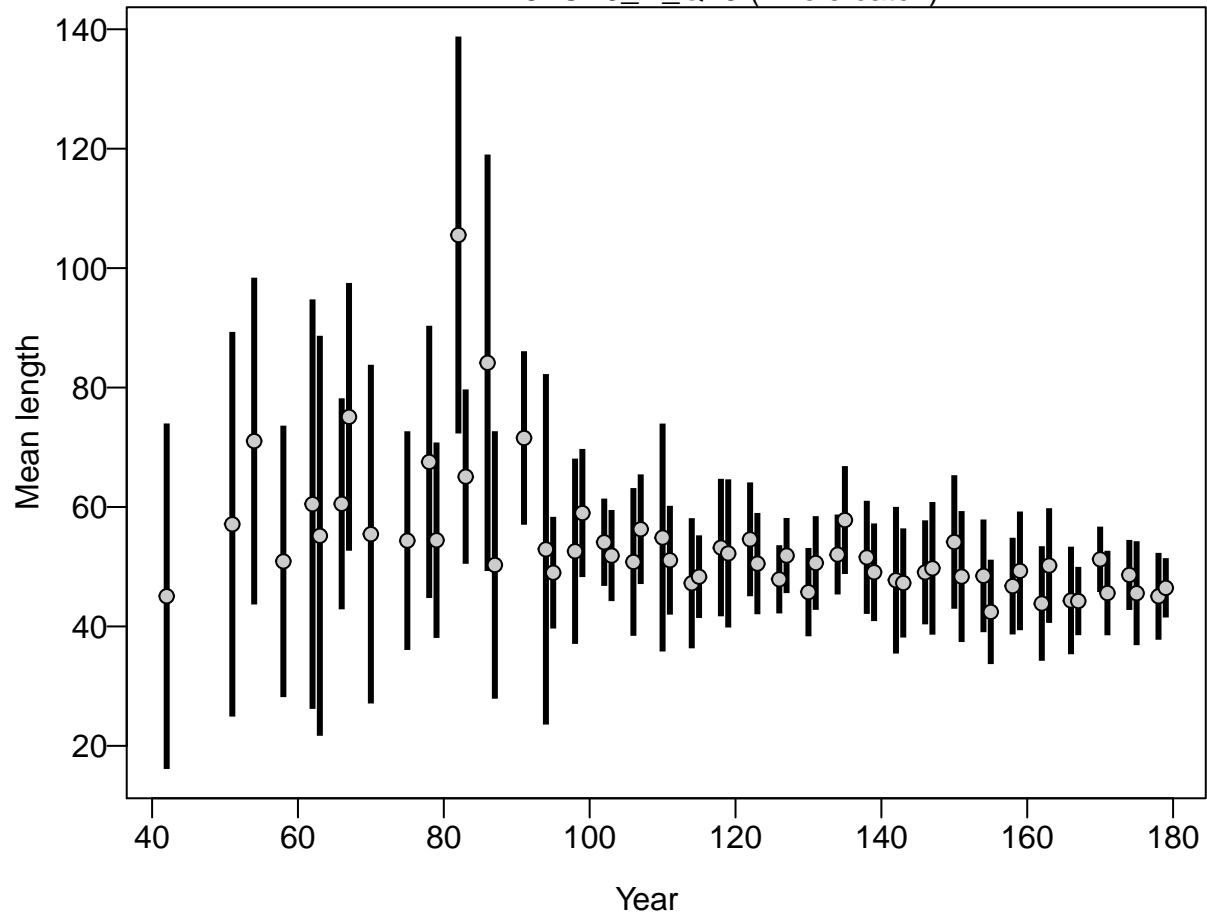


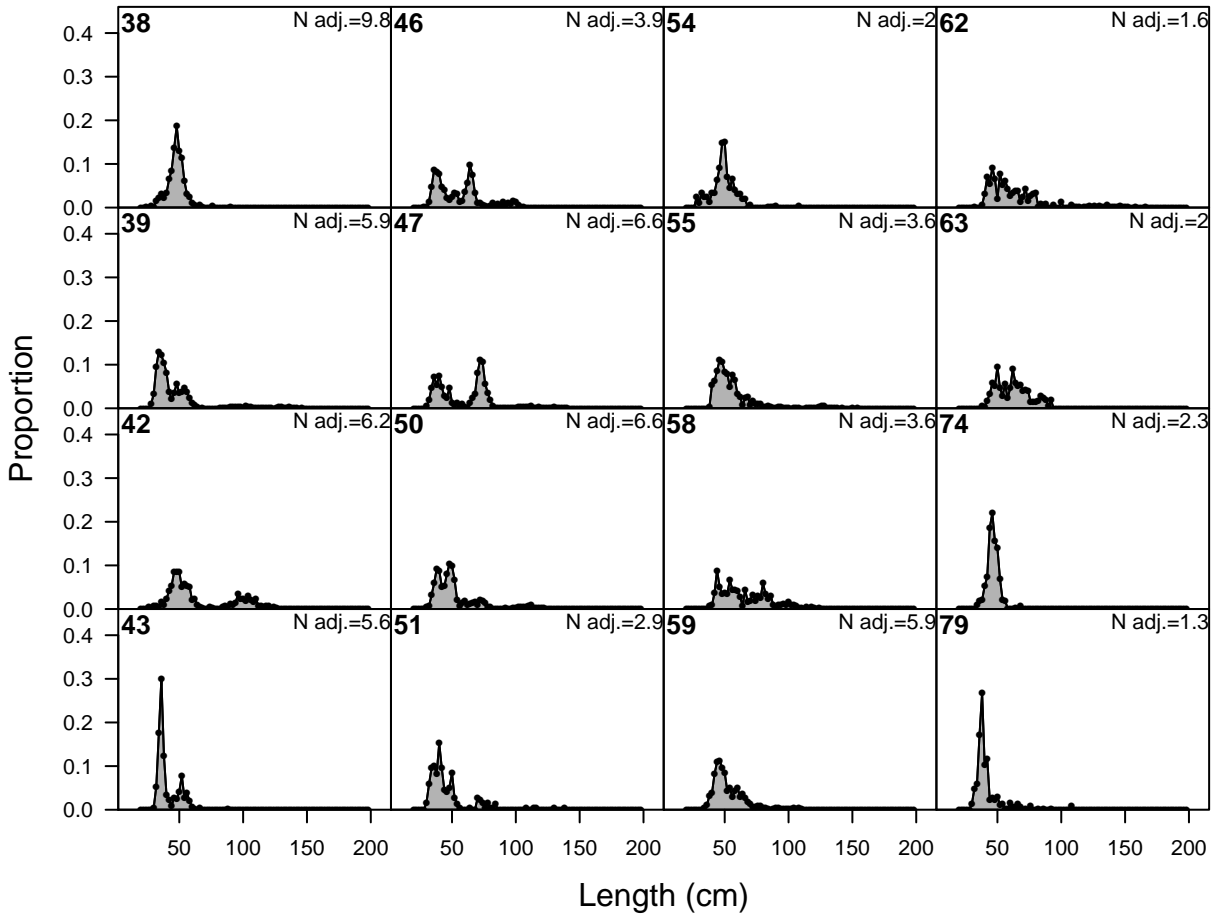
Proportion

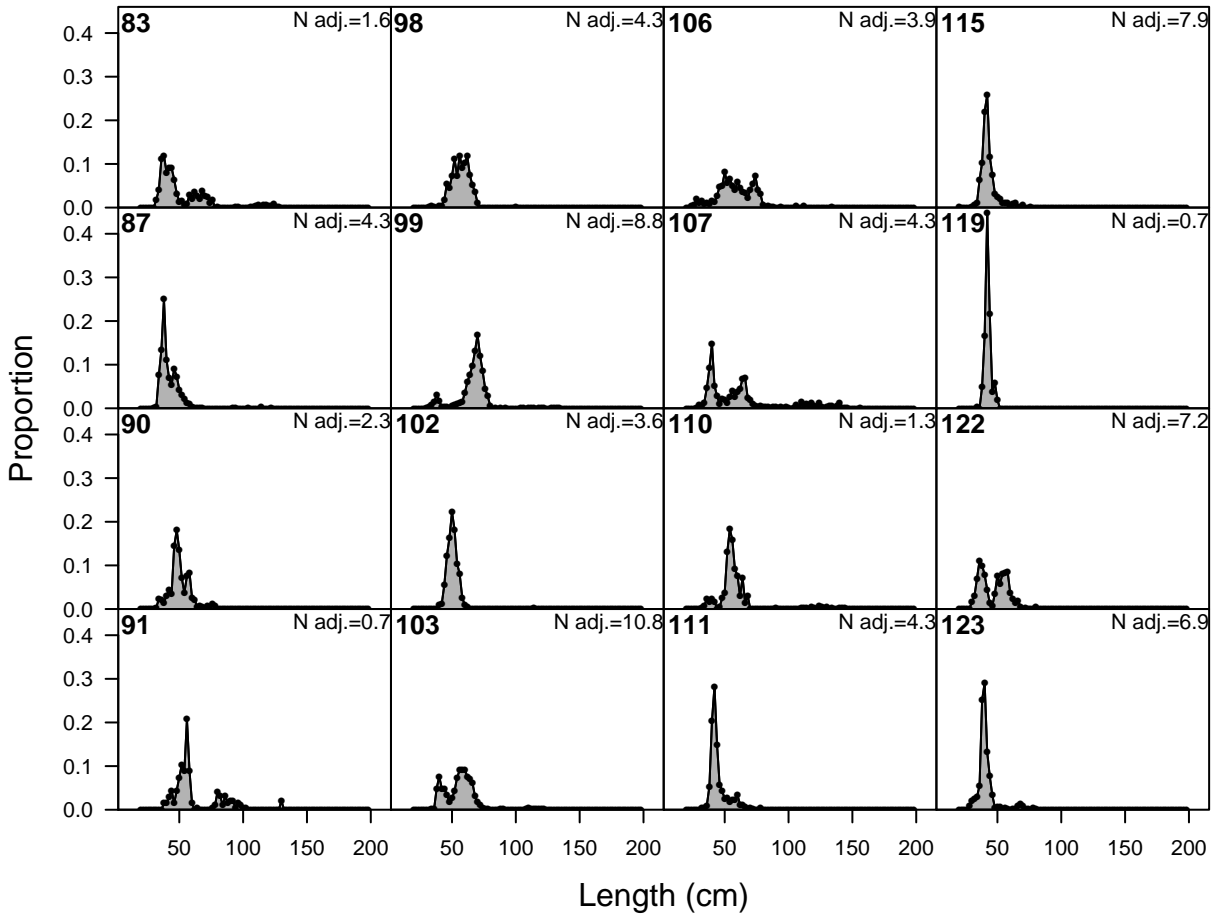




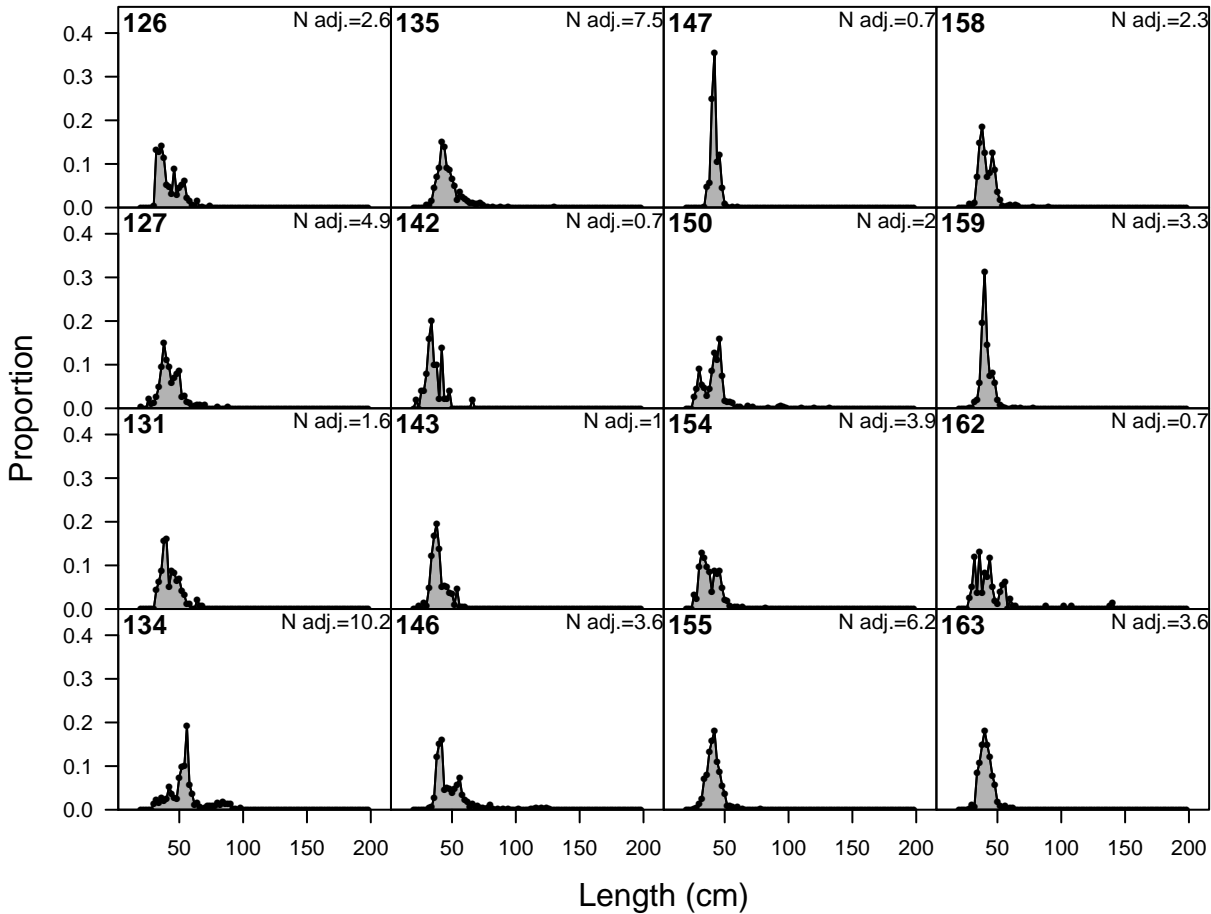
F6-OBJ\_N\_Q23 (whole catch)

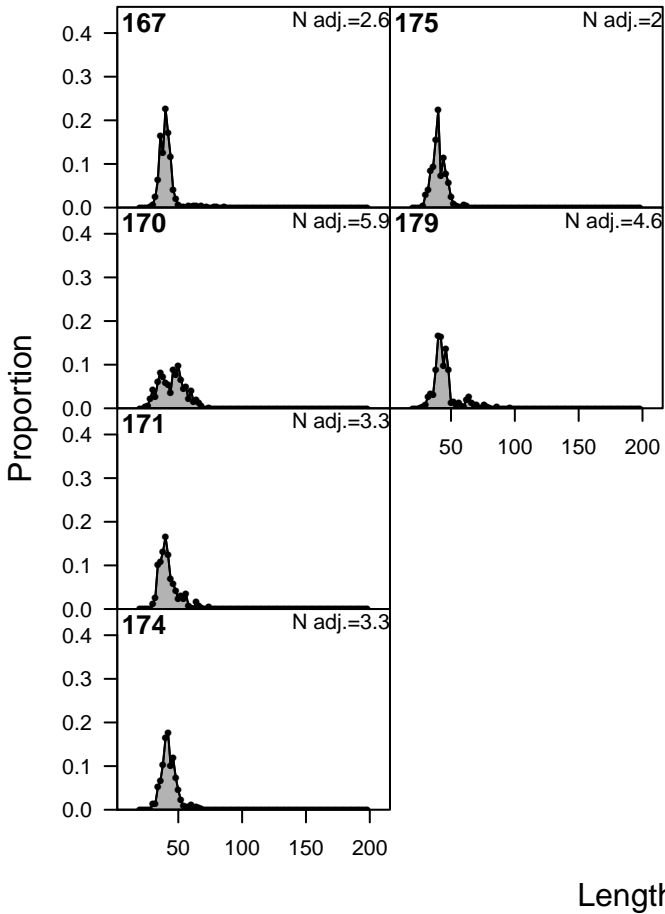


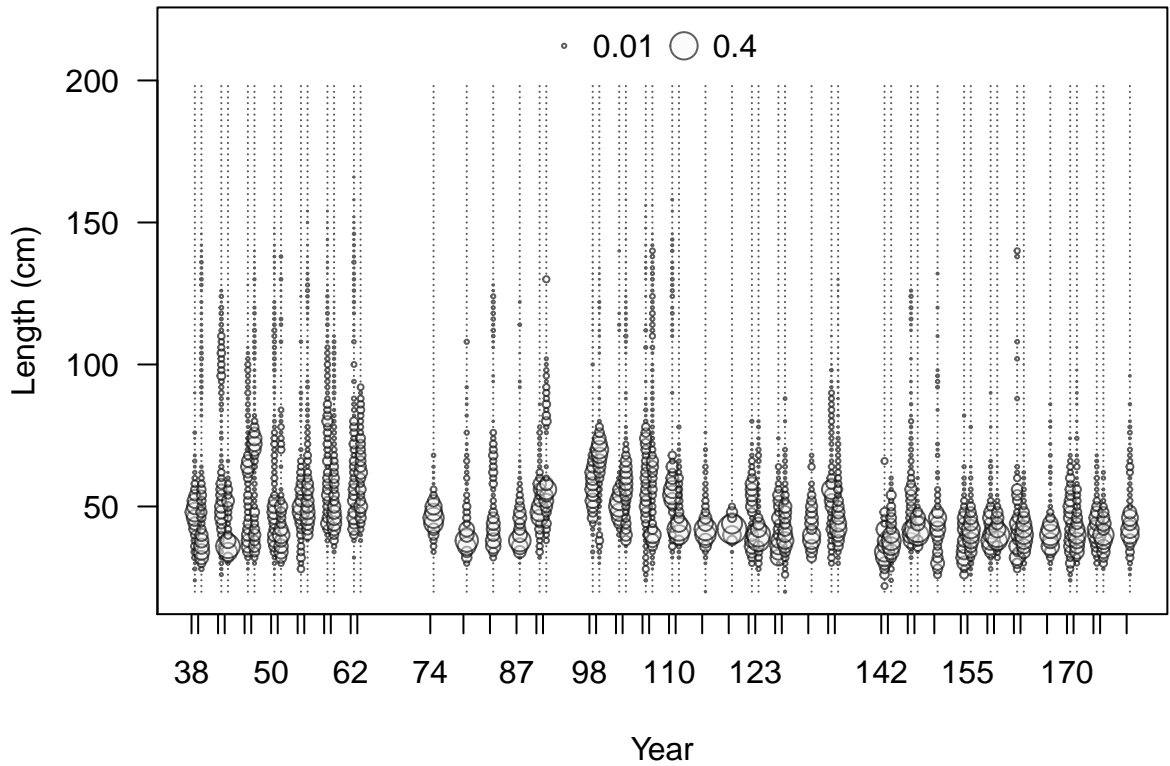




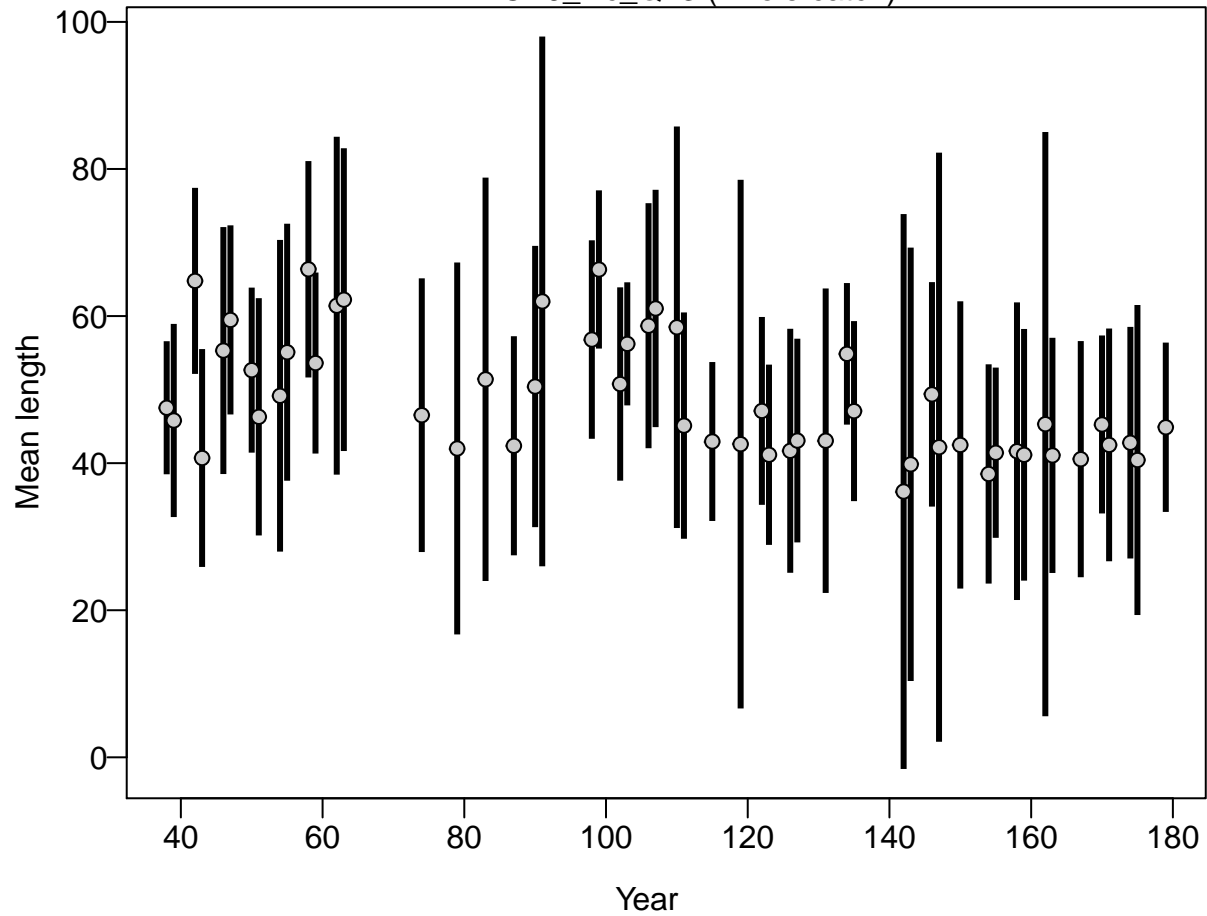


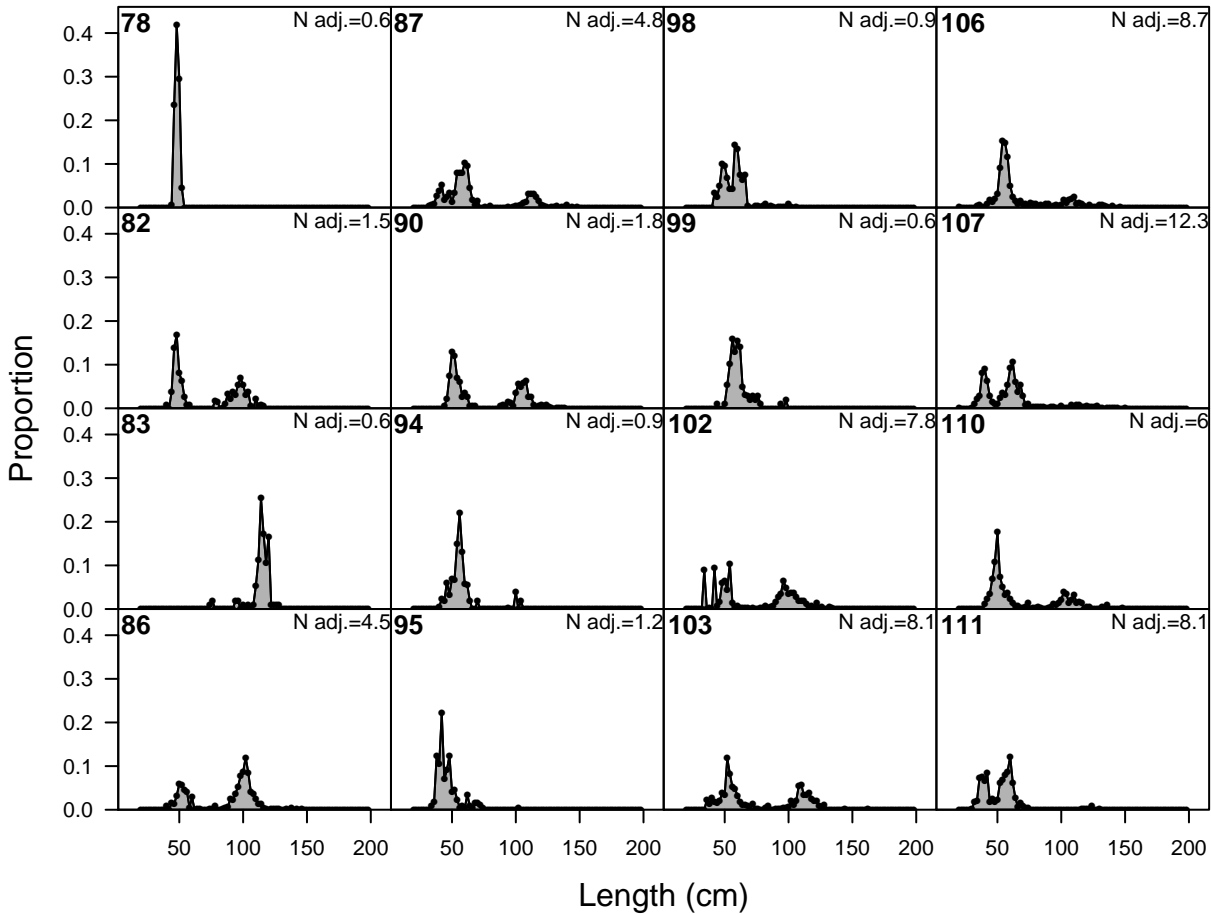


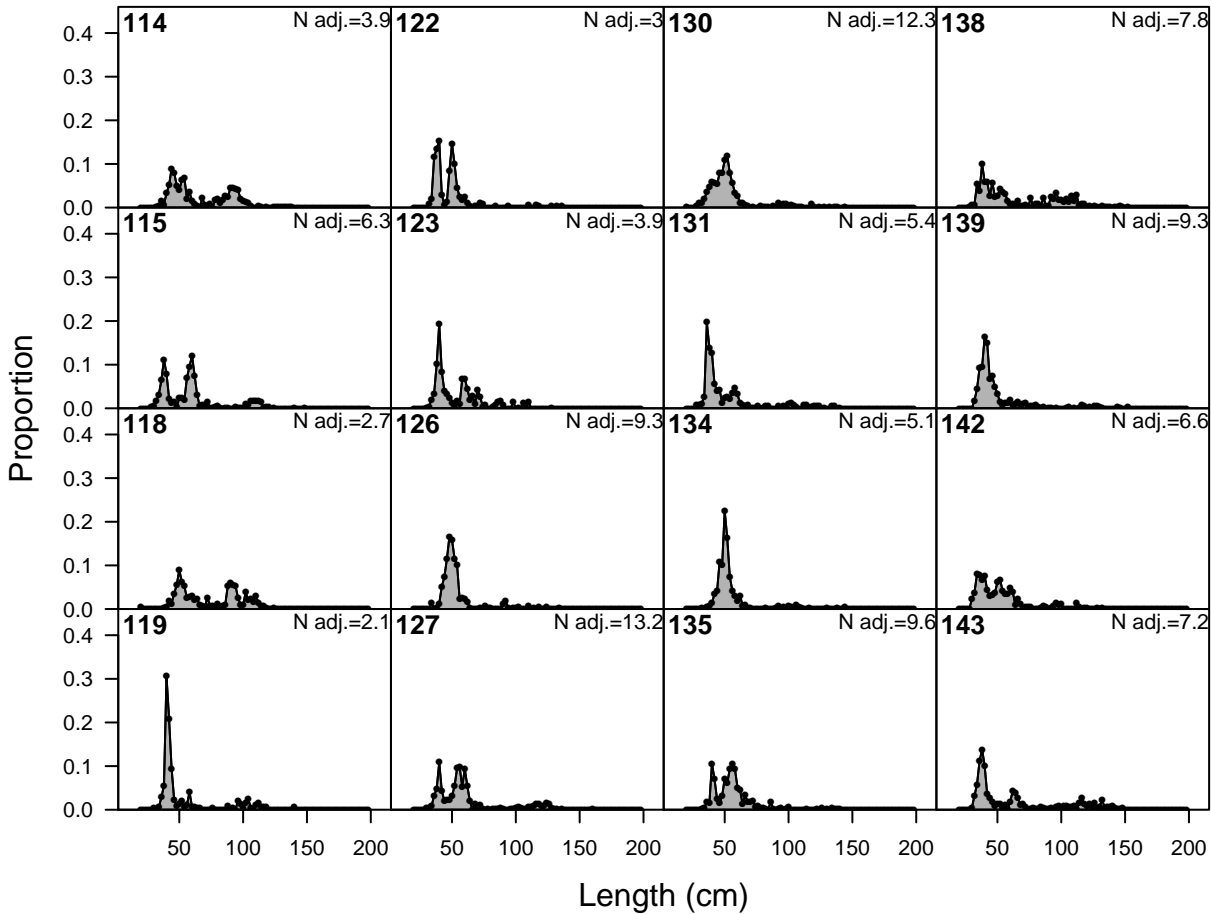


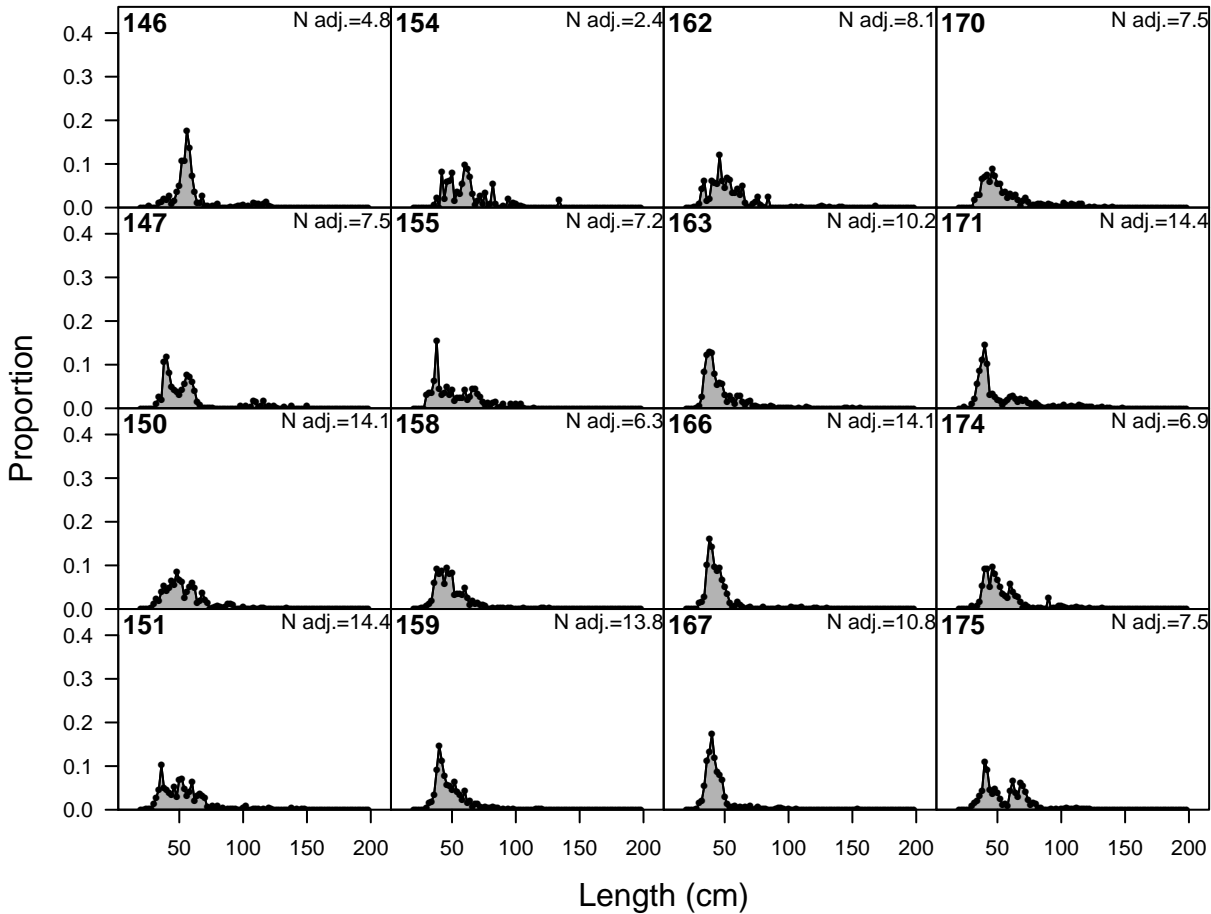


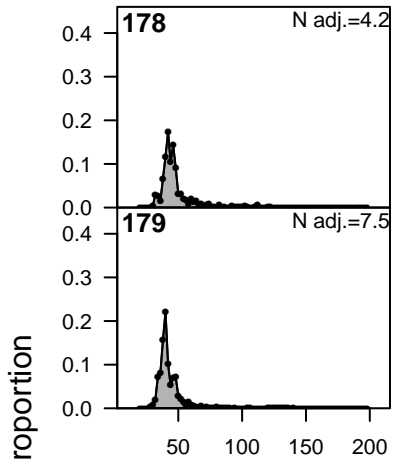
F7-OBJ\_Nc\_Q23 (whole catch)





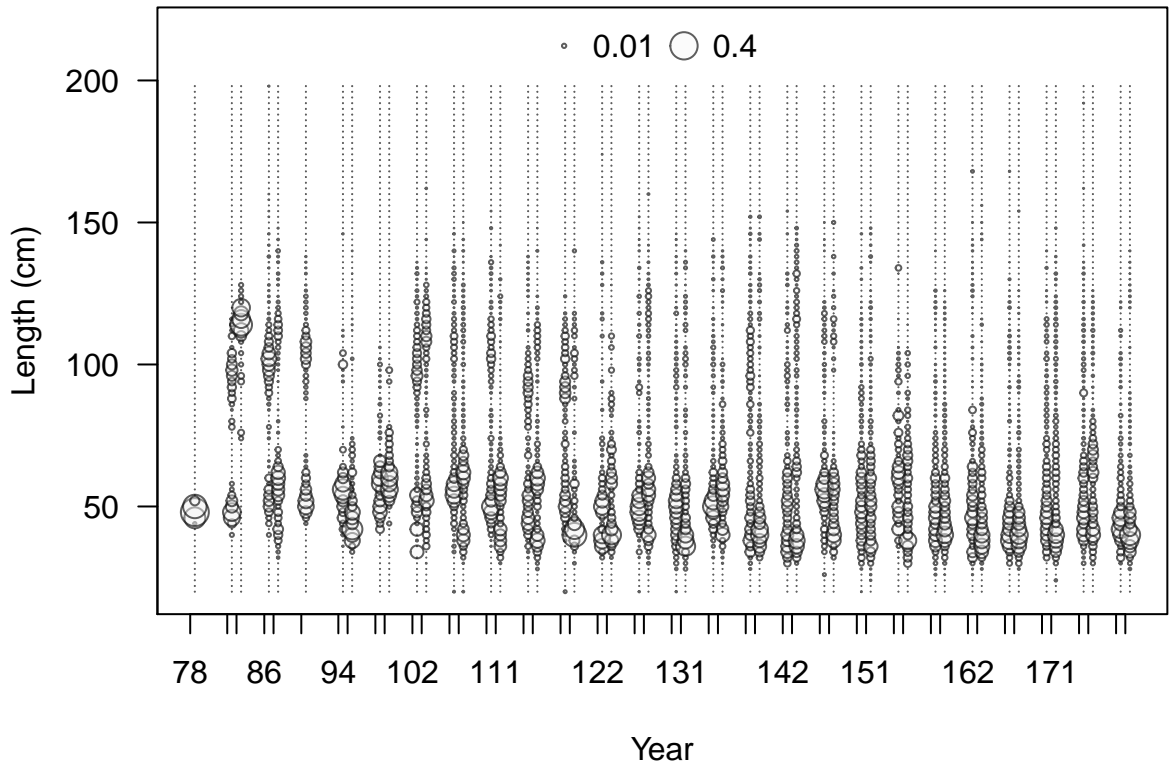




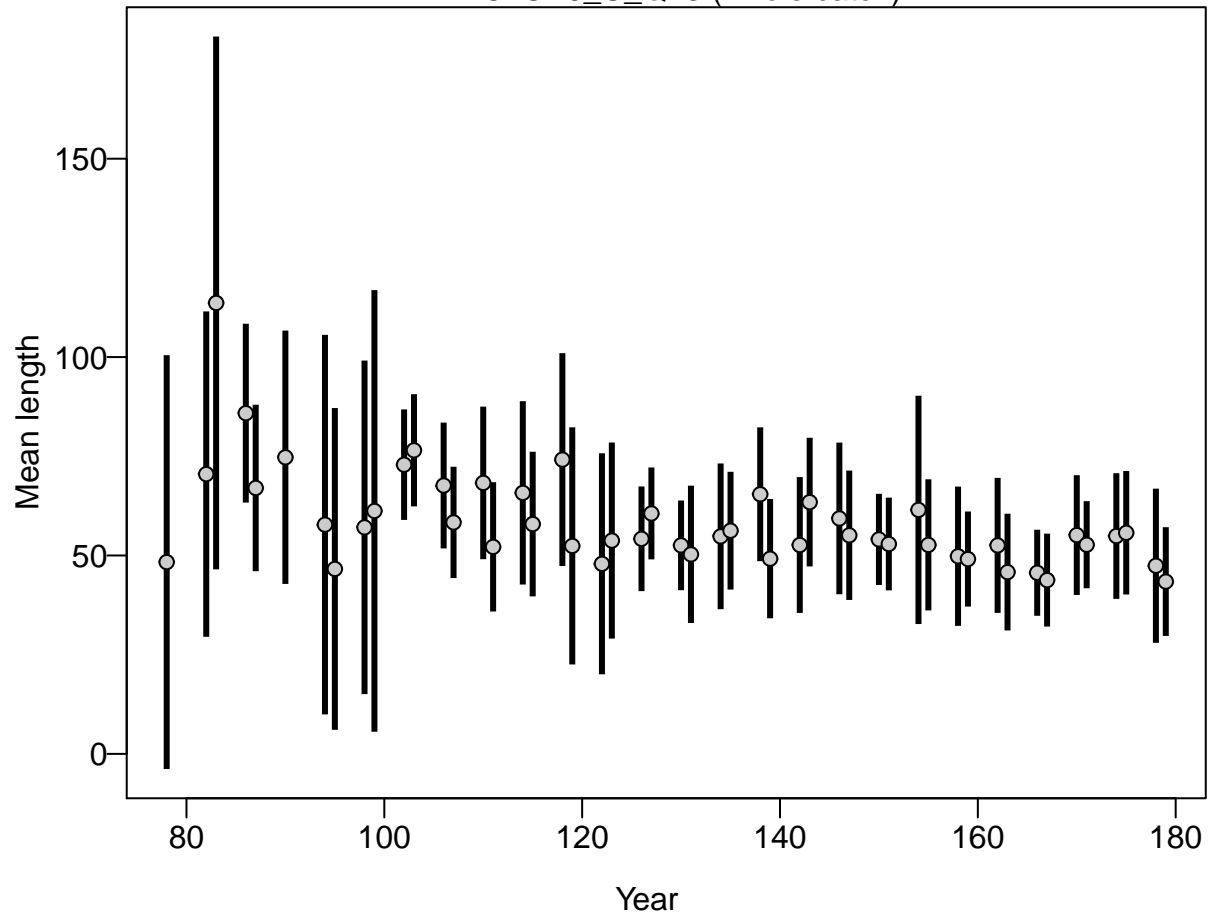


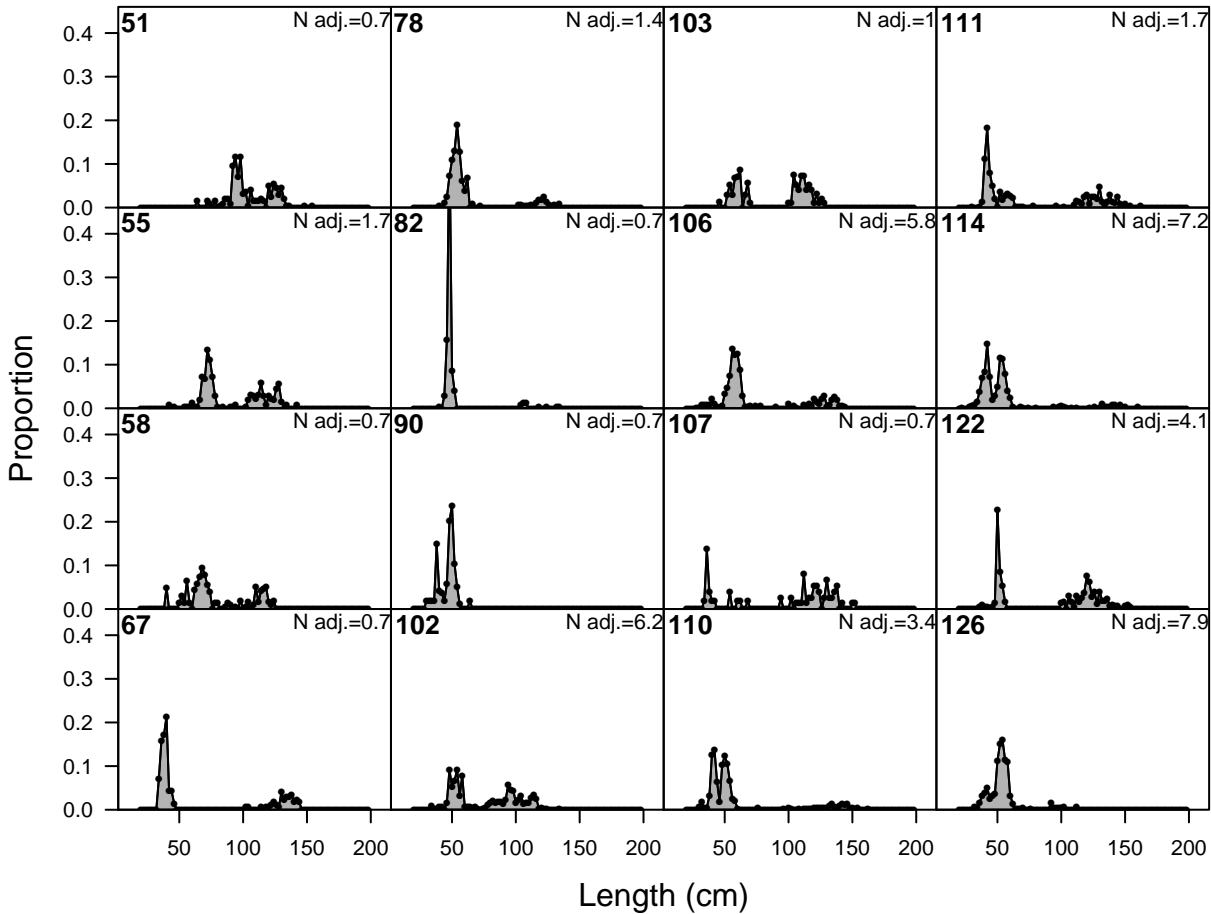
Length (cm)

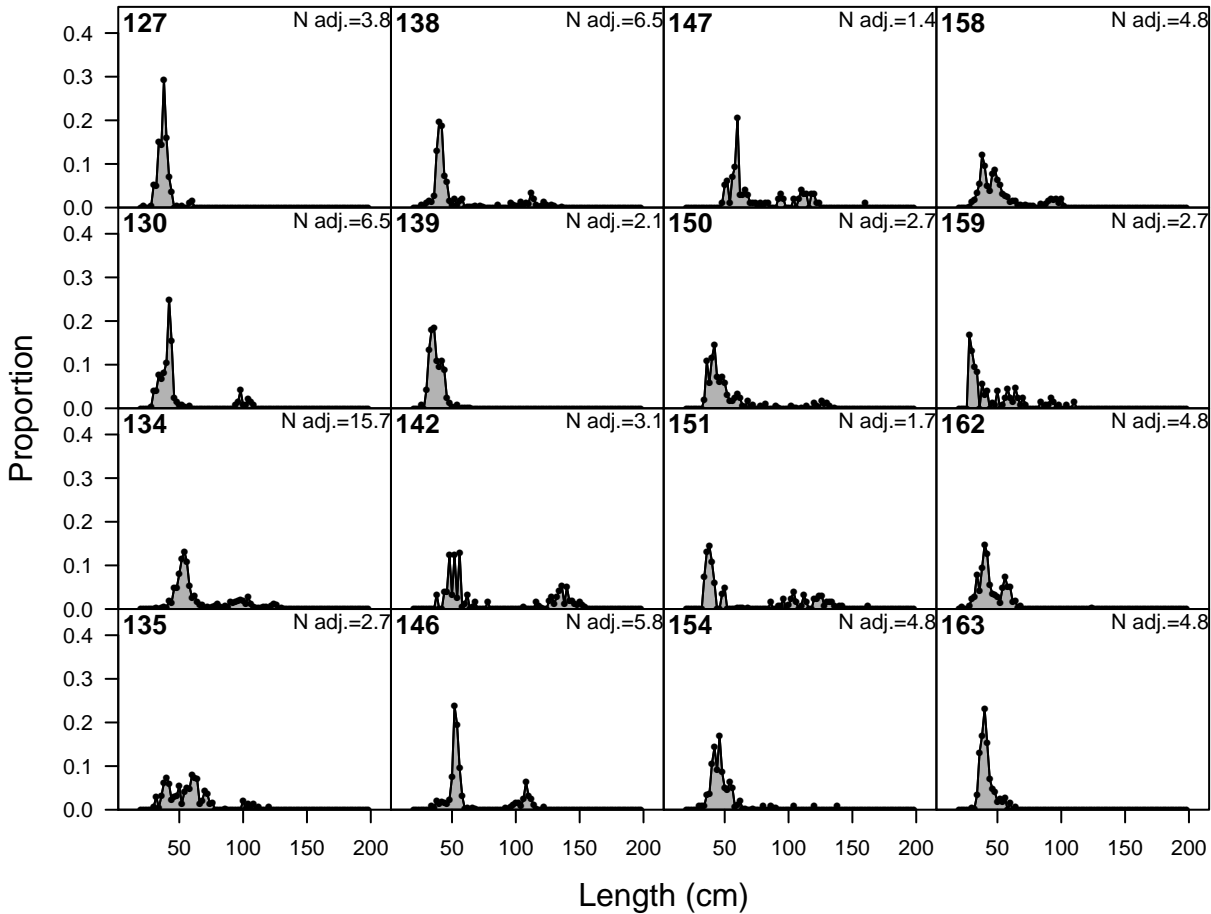


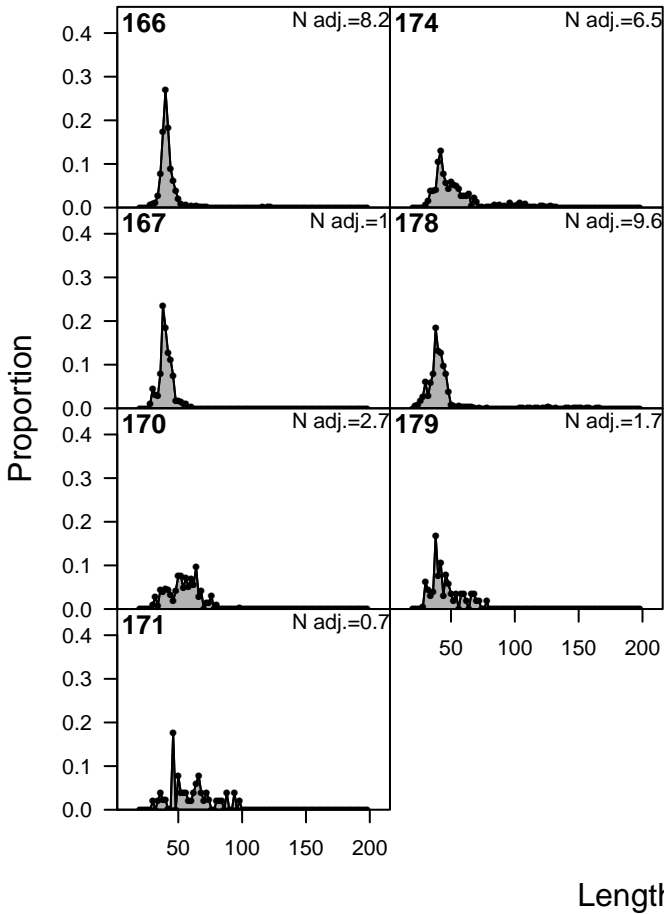


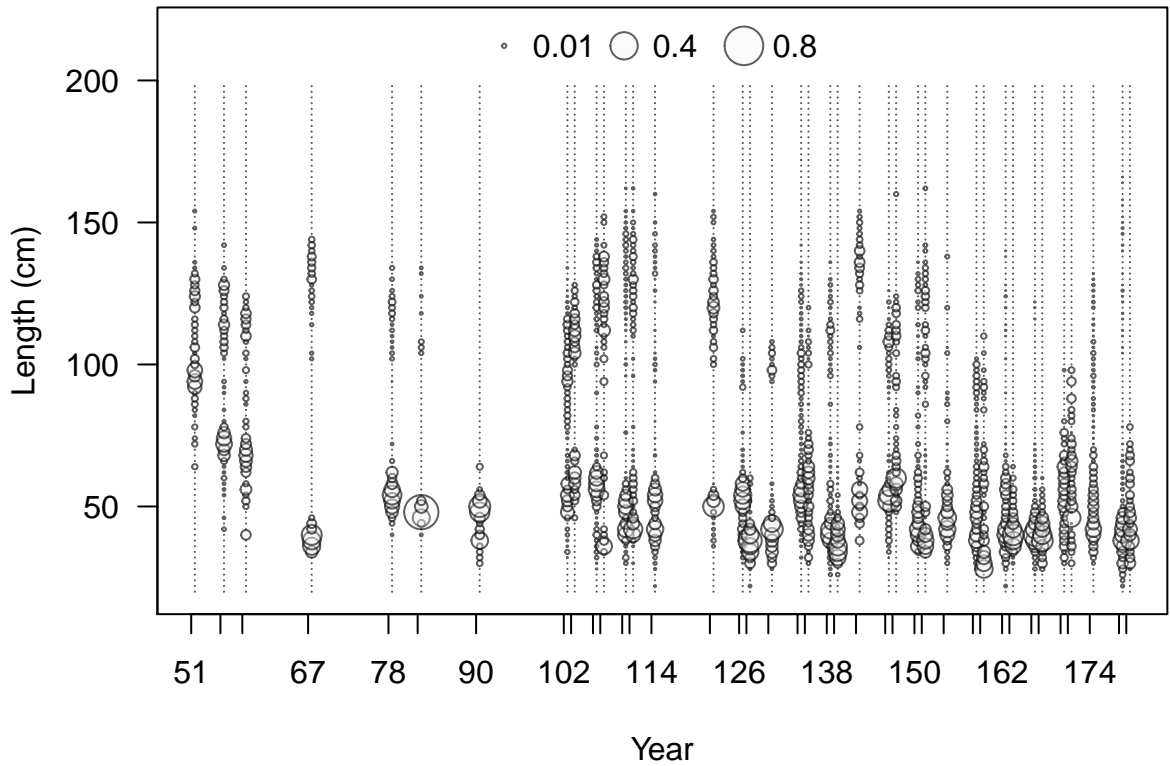
F8-OBJ\_C\_Q23 (whole catch)



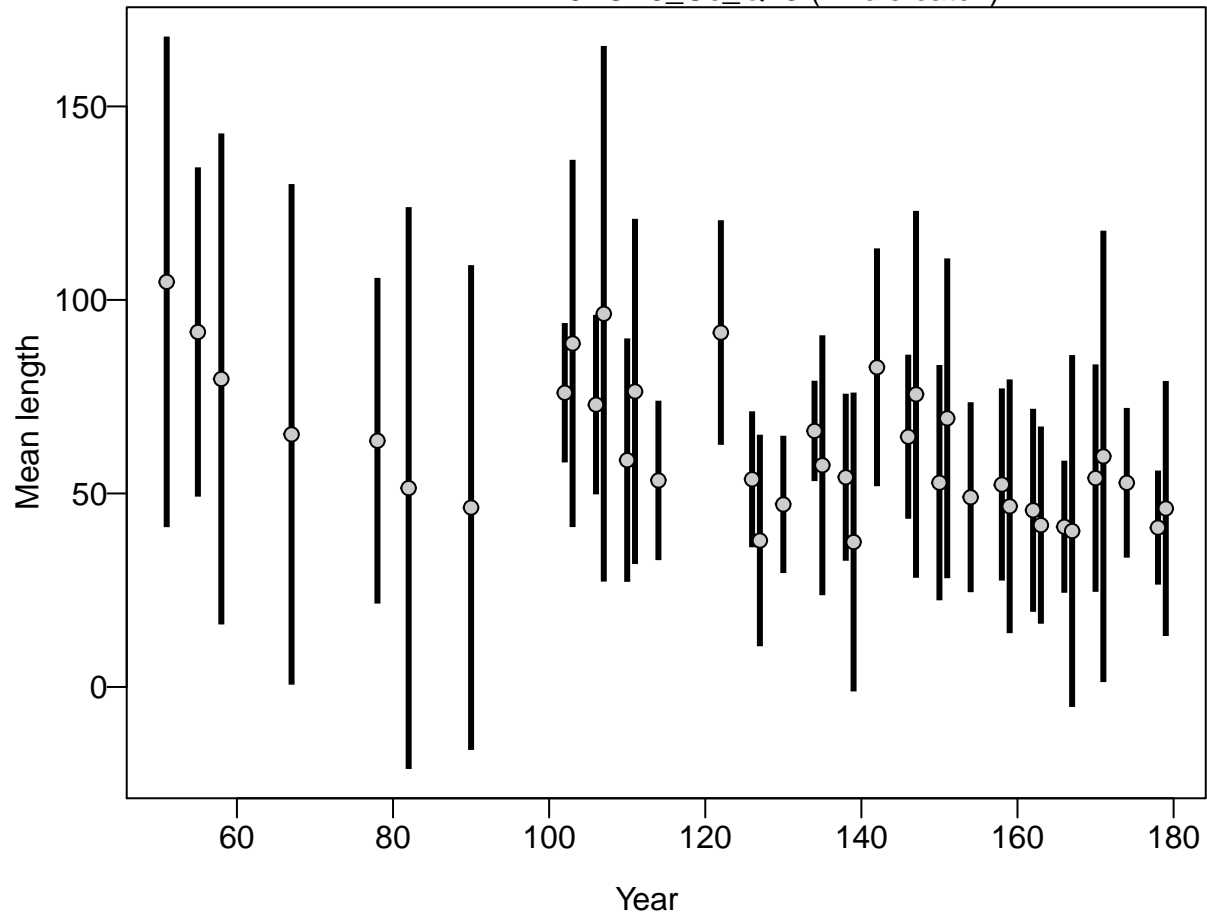




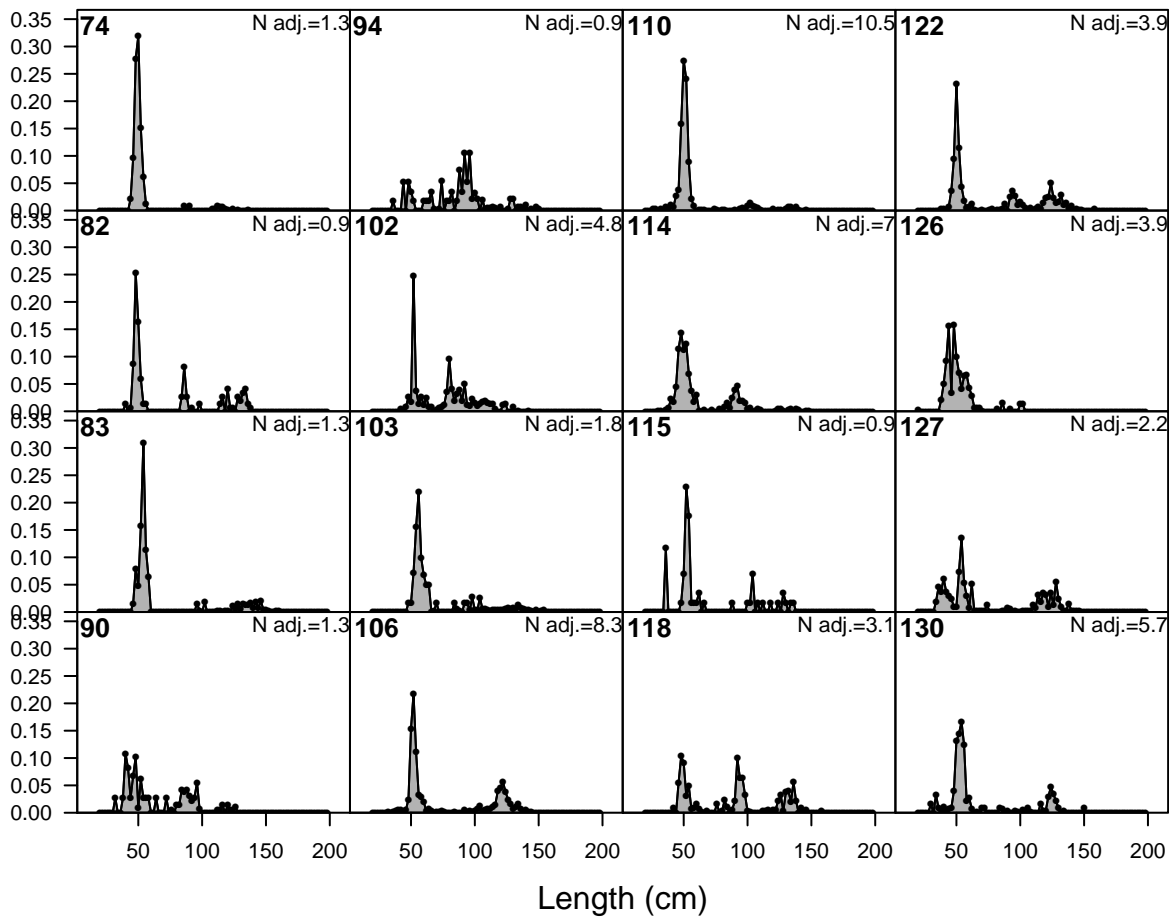




F9-OBJ\_Cc\_Q23 (whole catch)

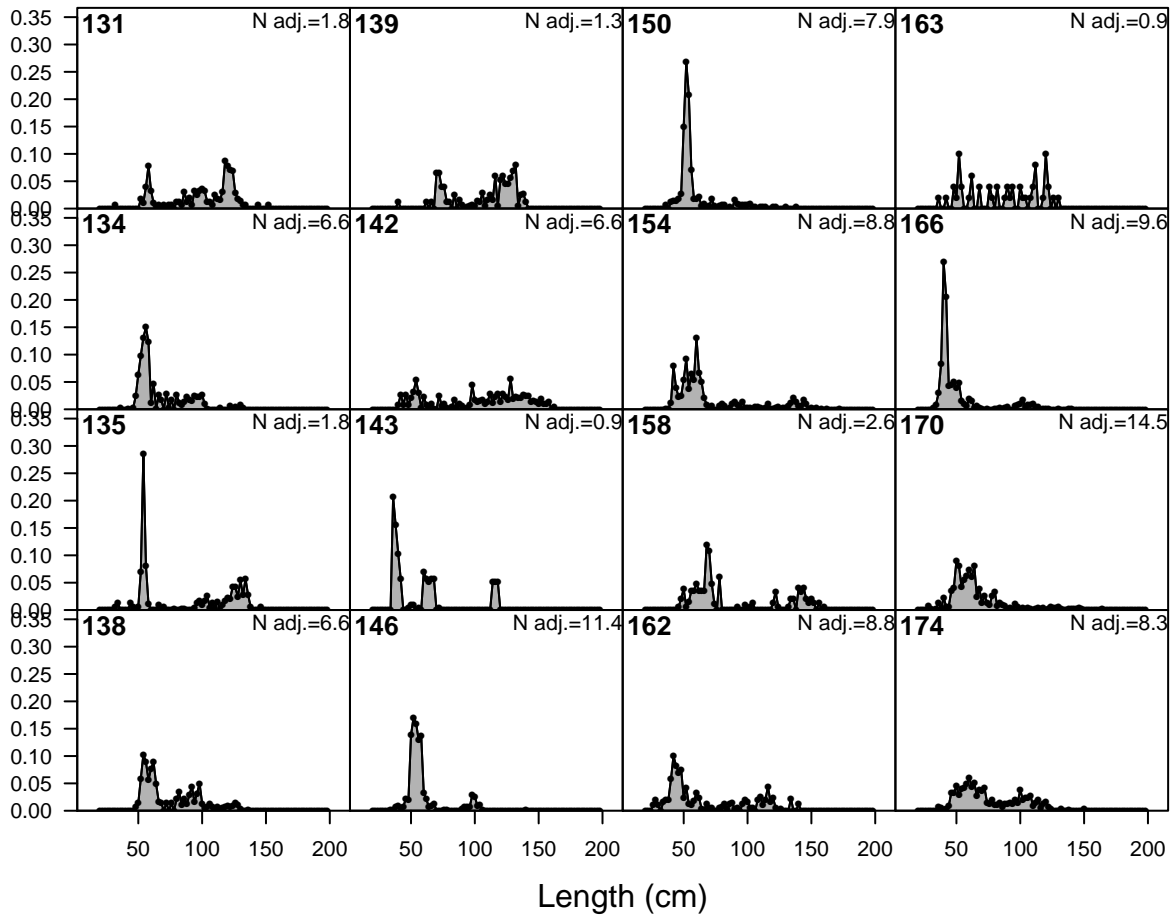


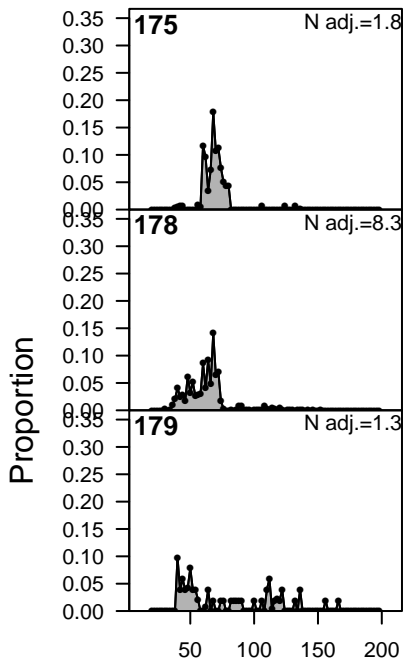
Proportion



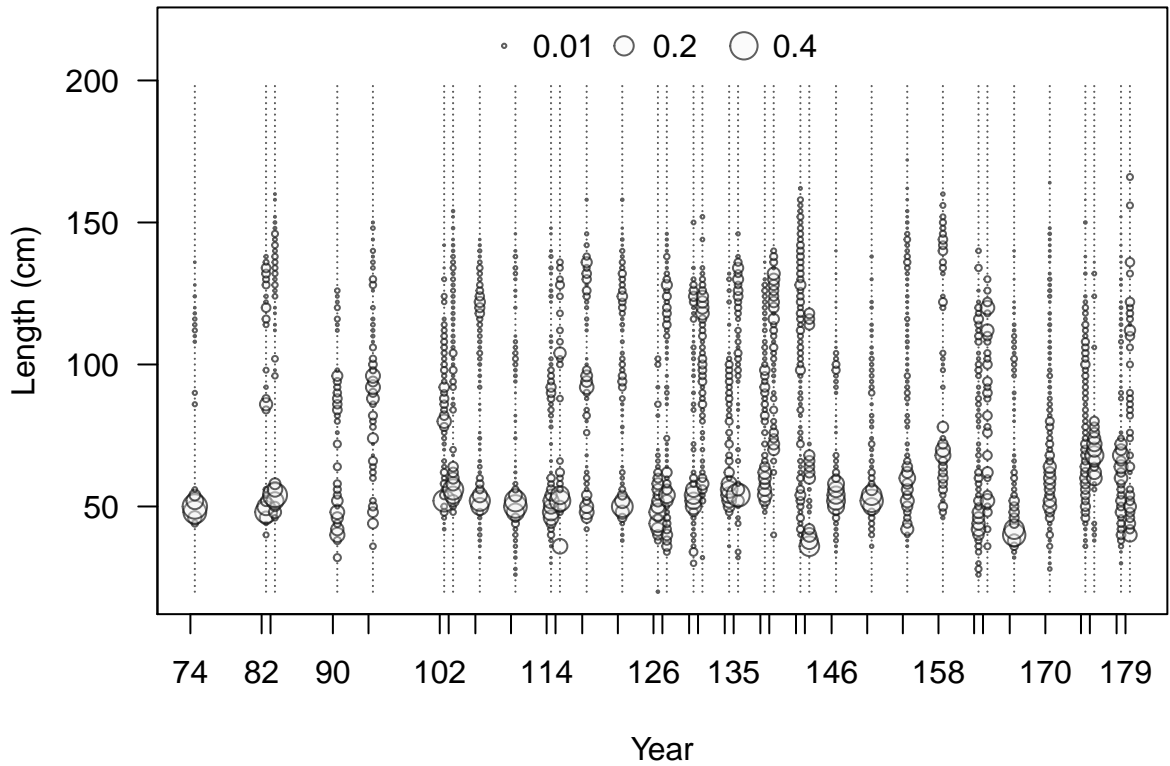


Proportion

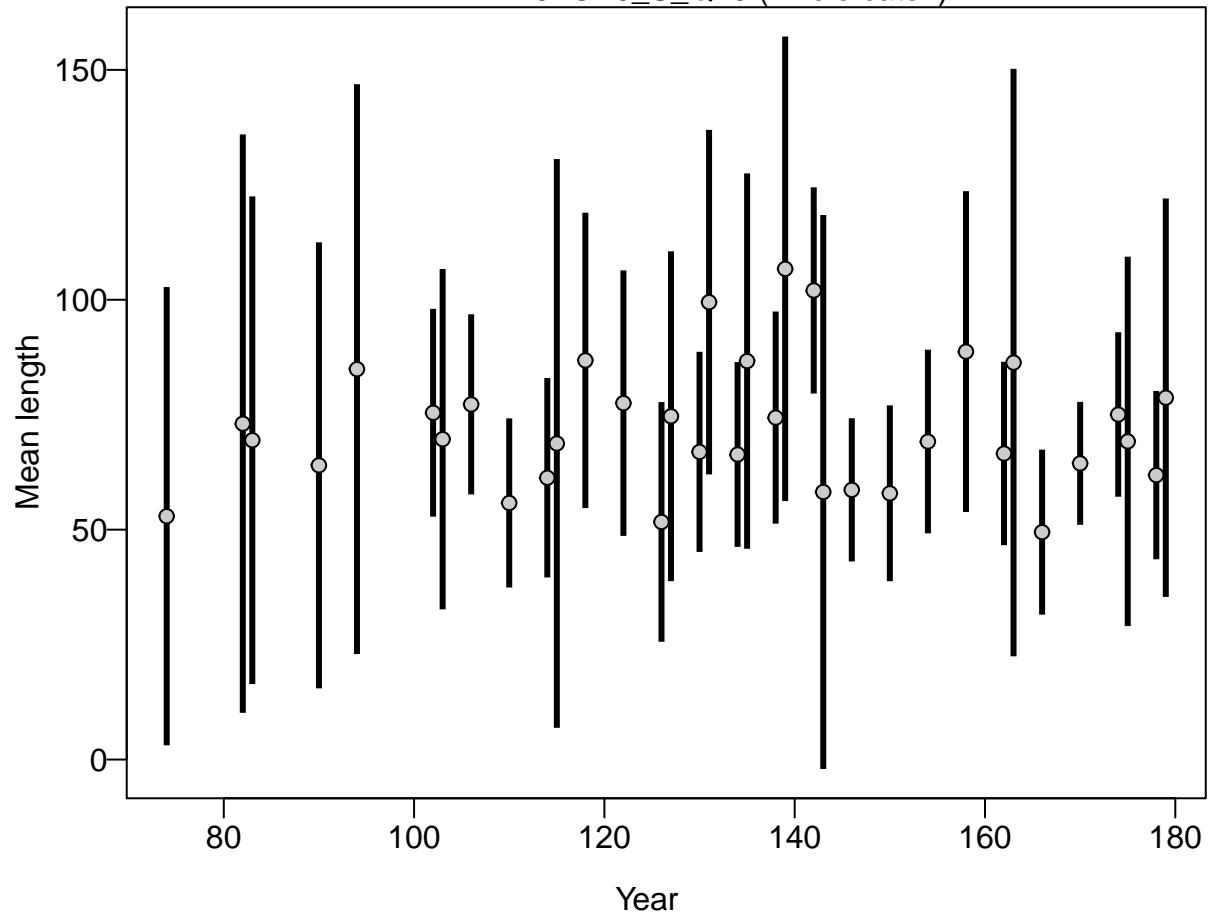




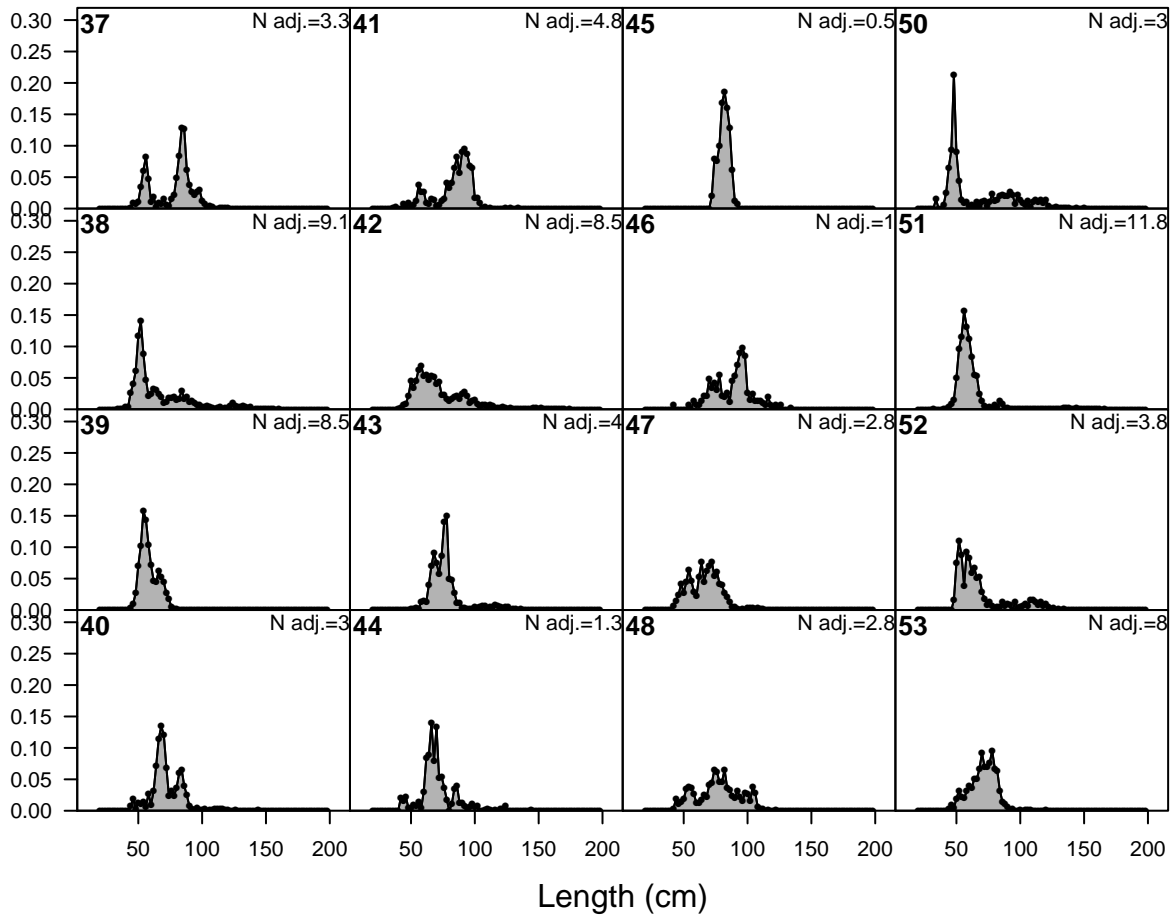
Length (cm)



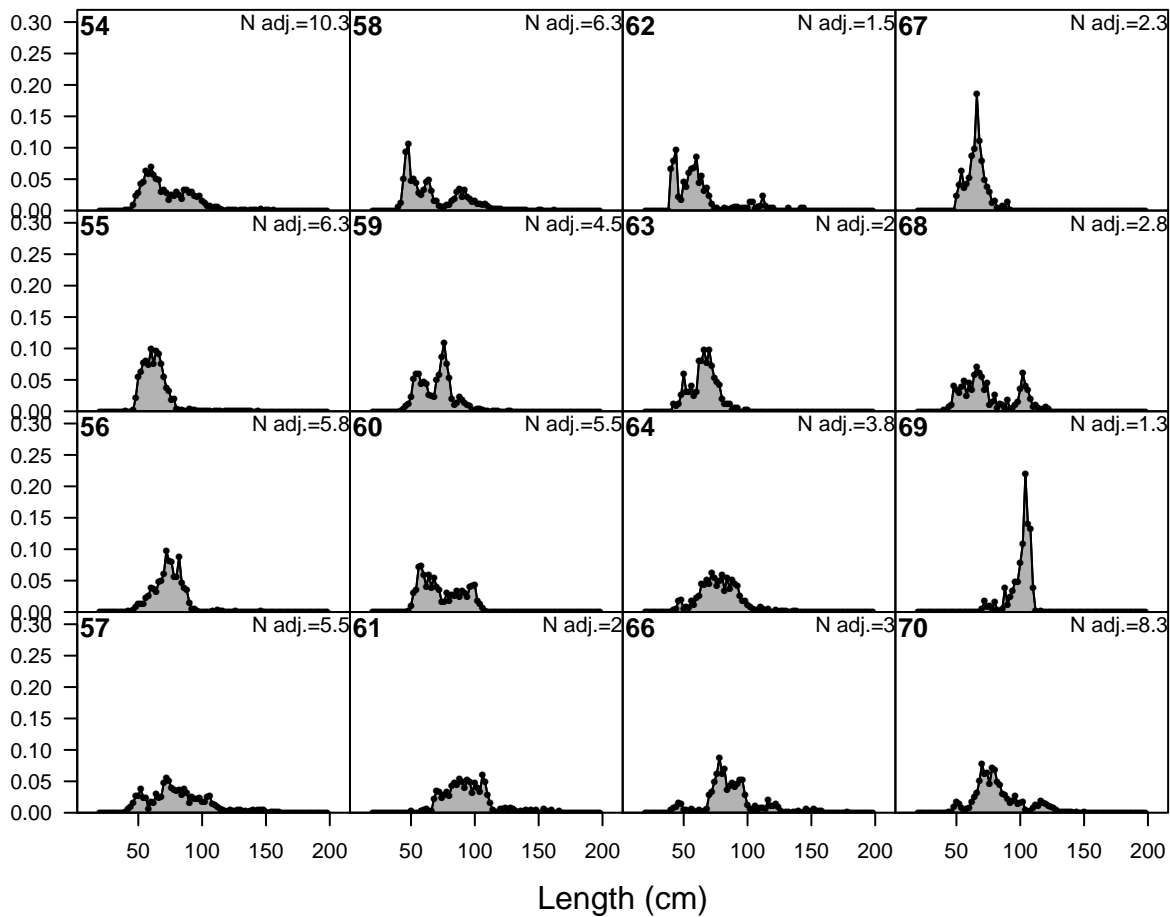
F10-OBJ\_S\_Q23 (whole catch)



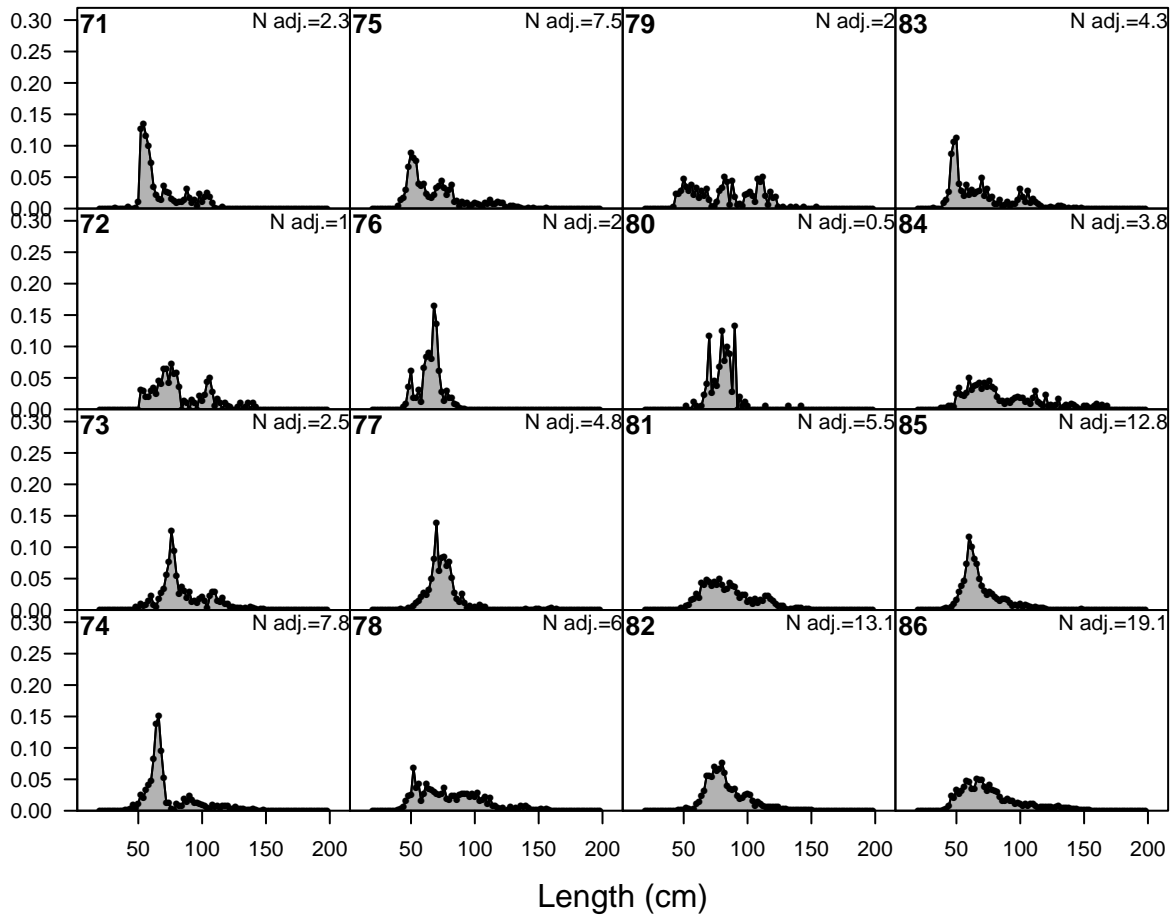
Proportion



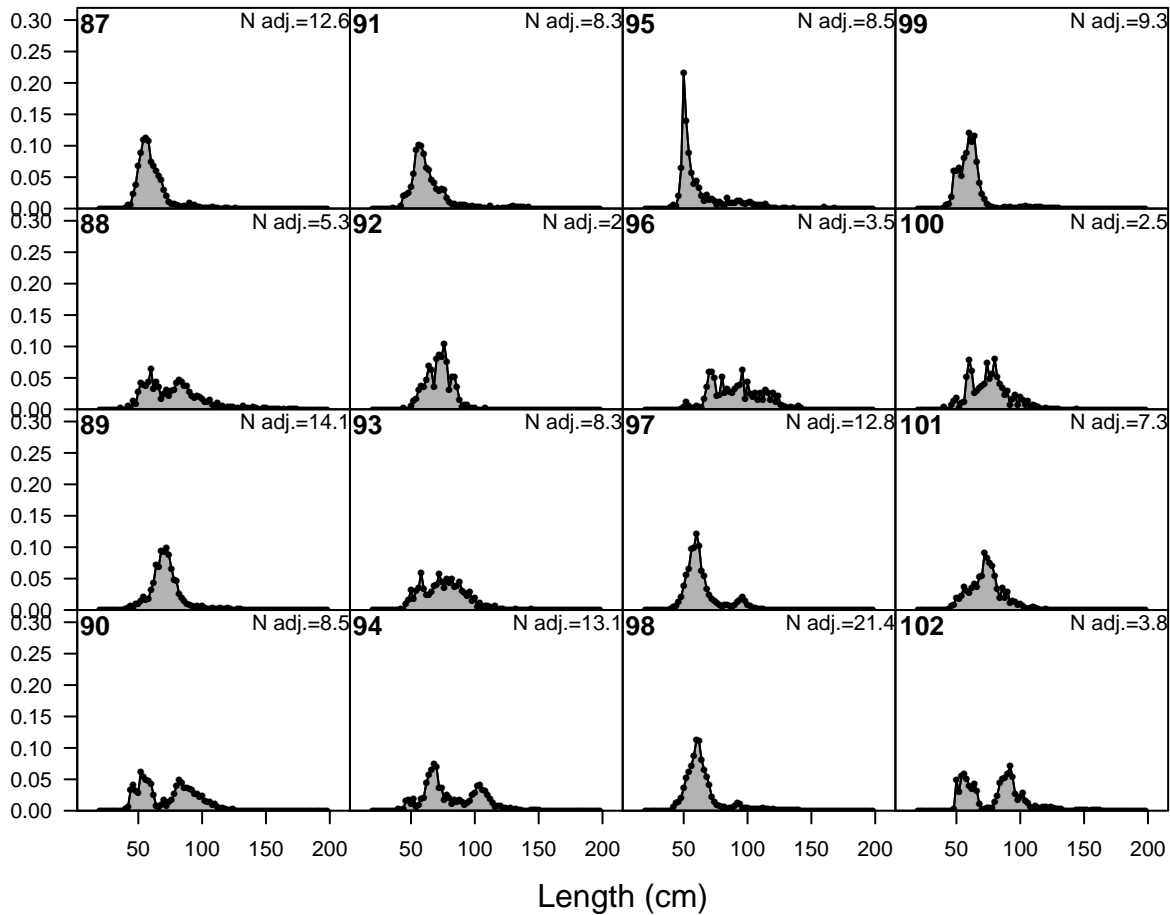
Proportion



Proportion

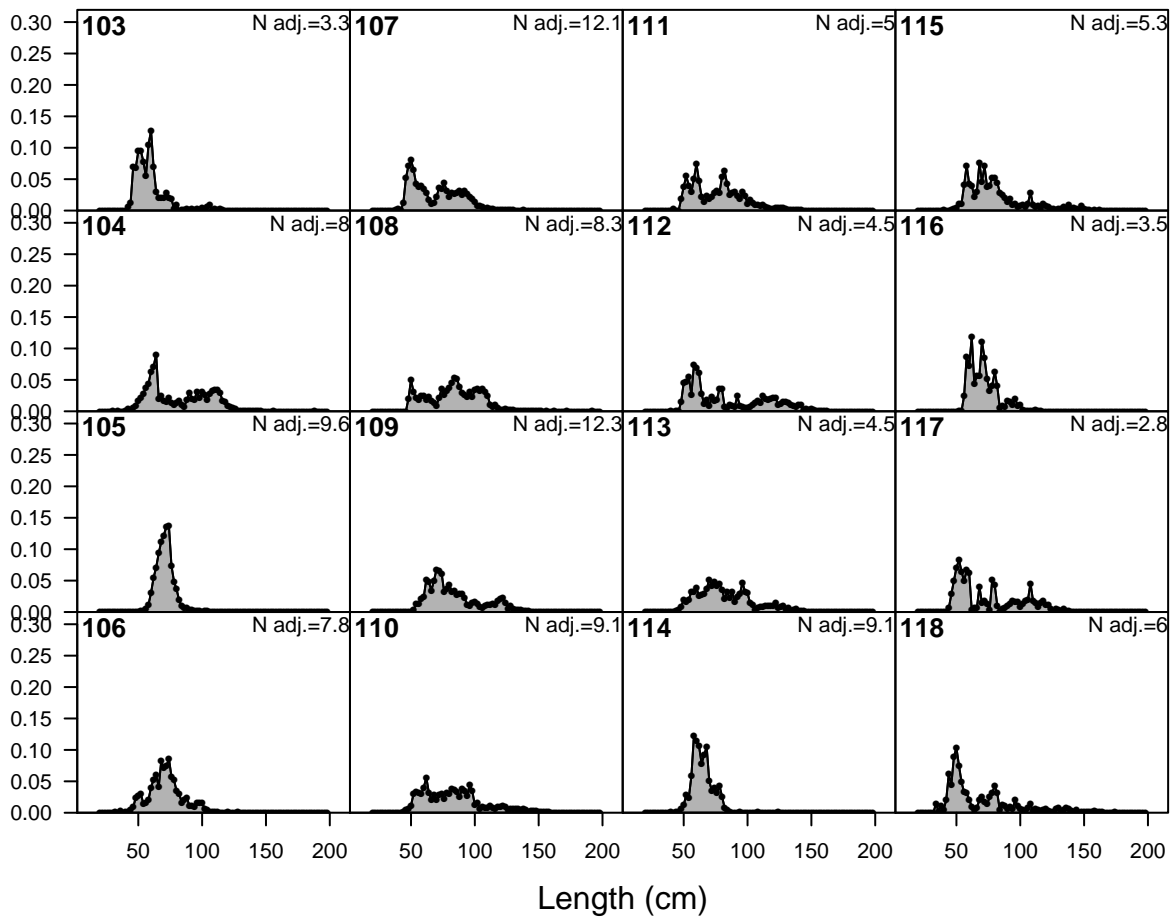


Proportion

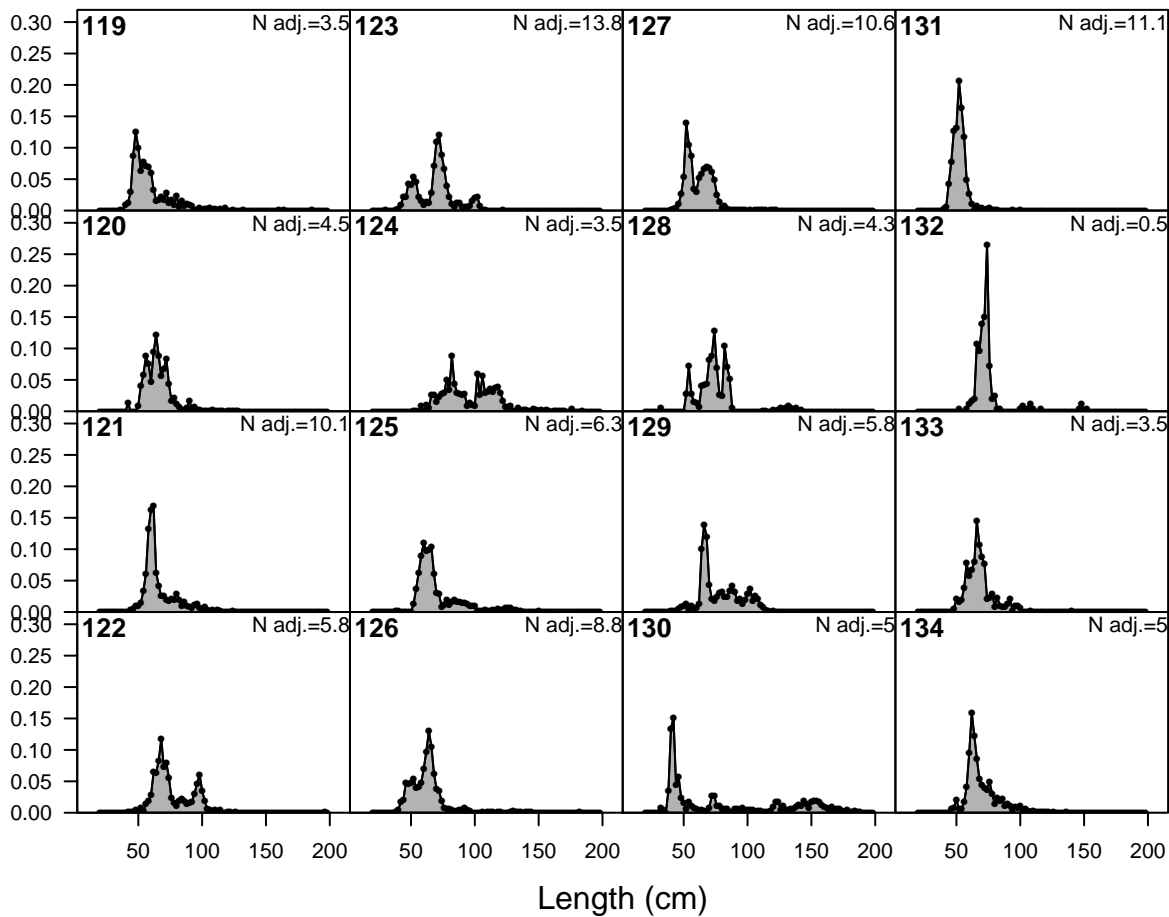




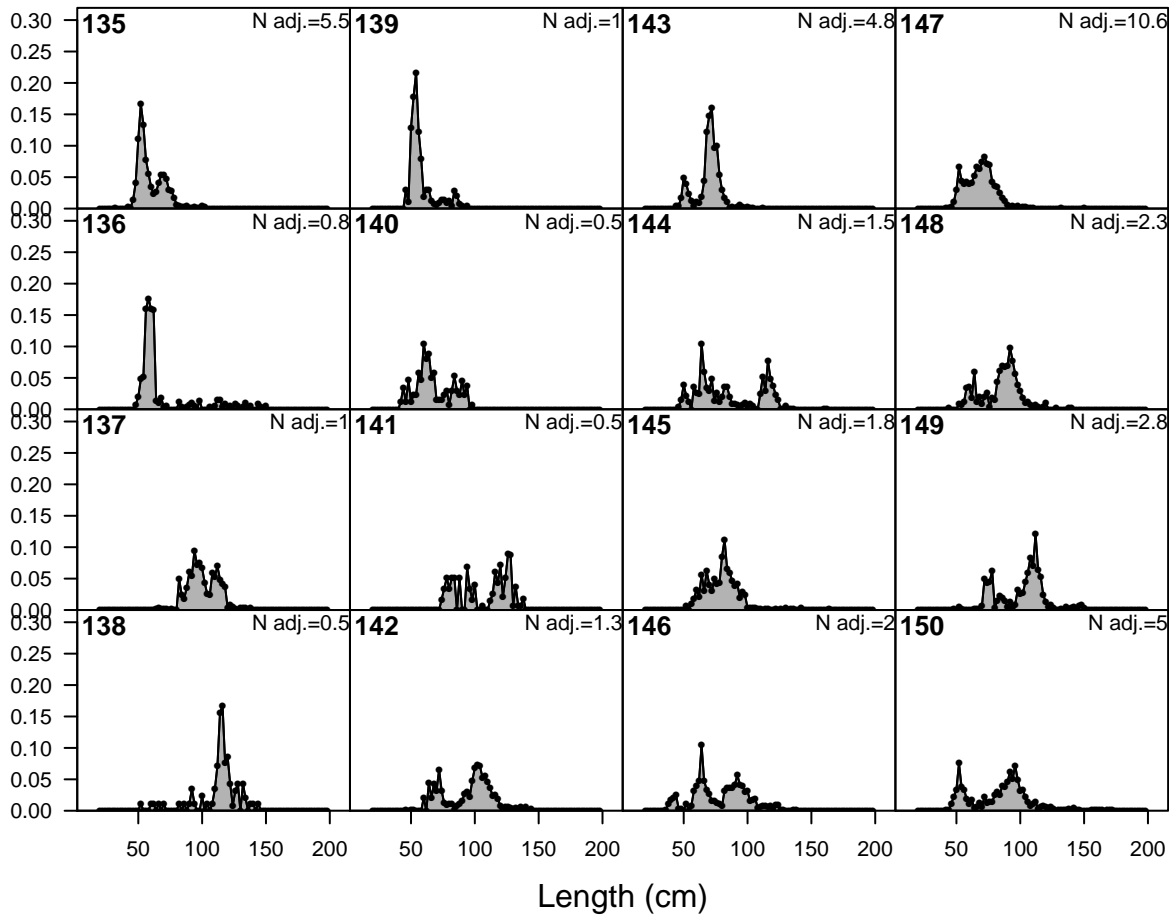
Proportion



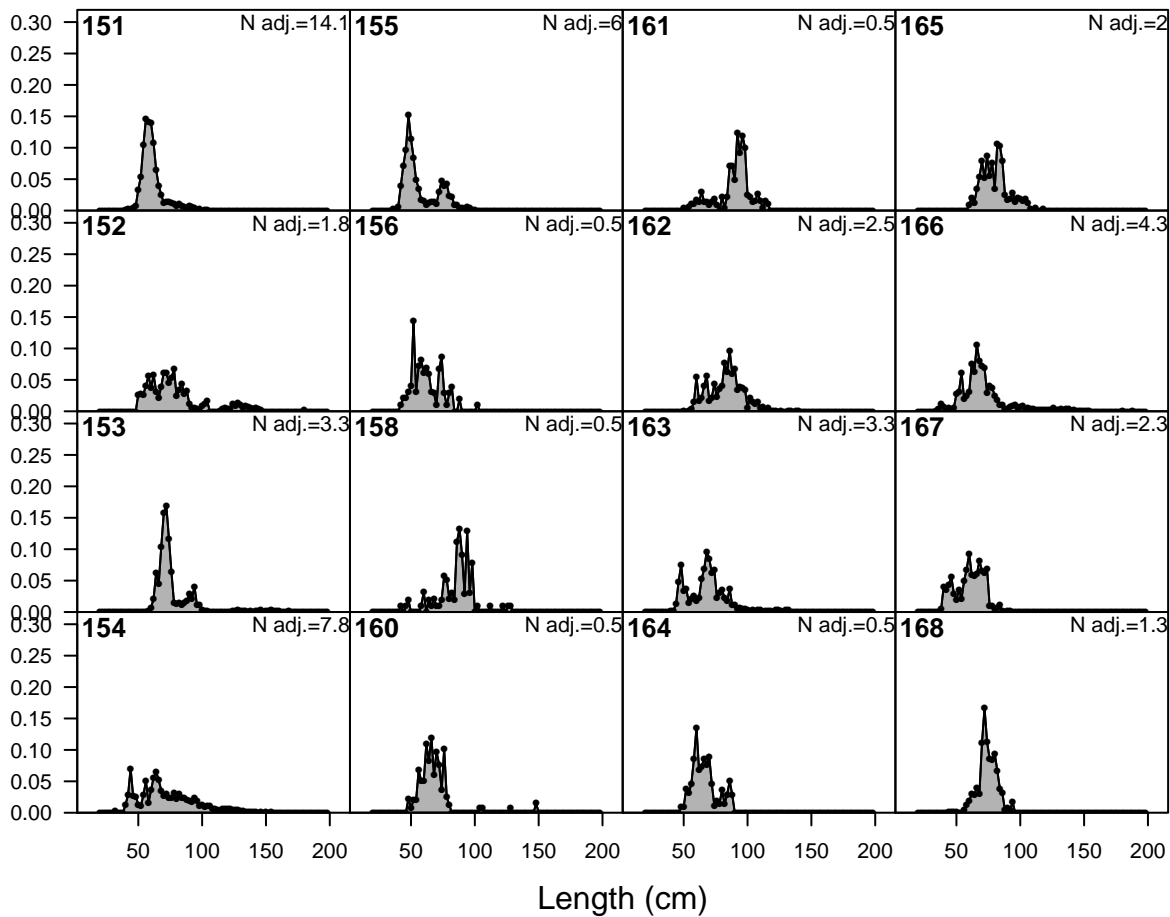
Proportion



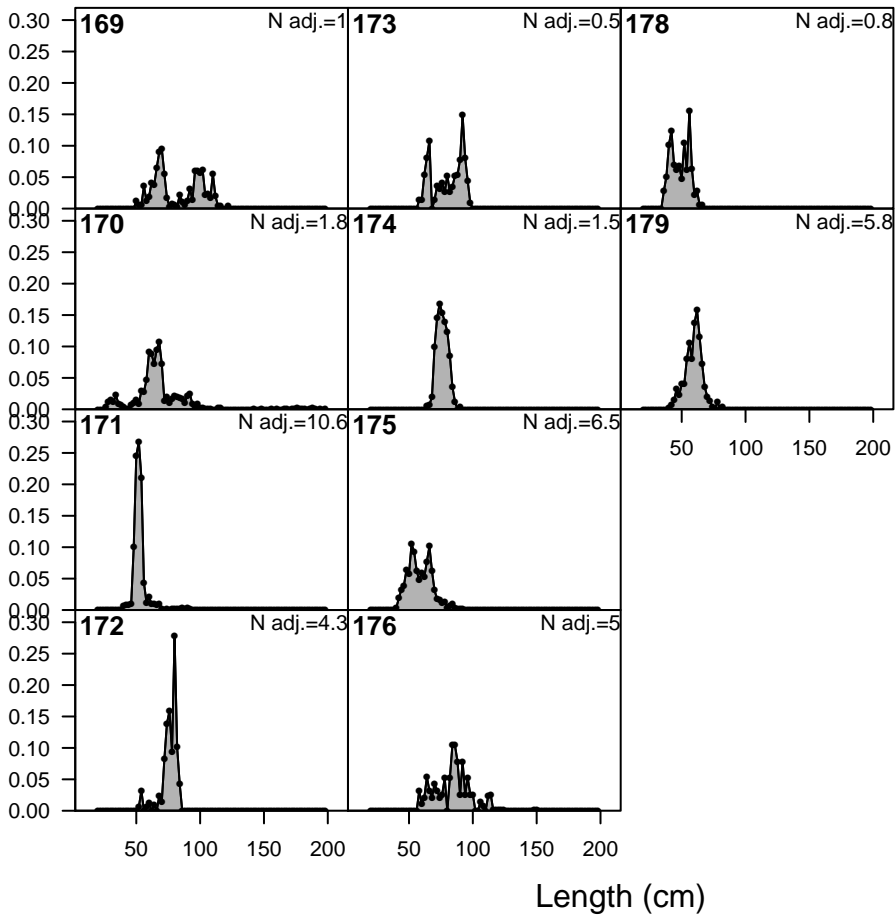
Proportion

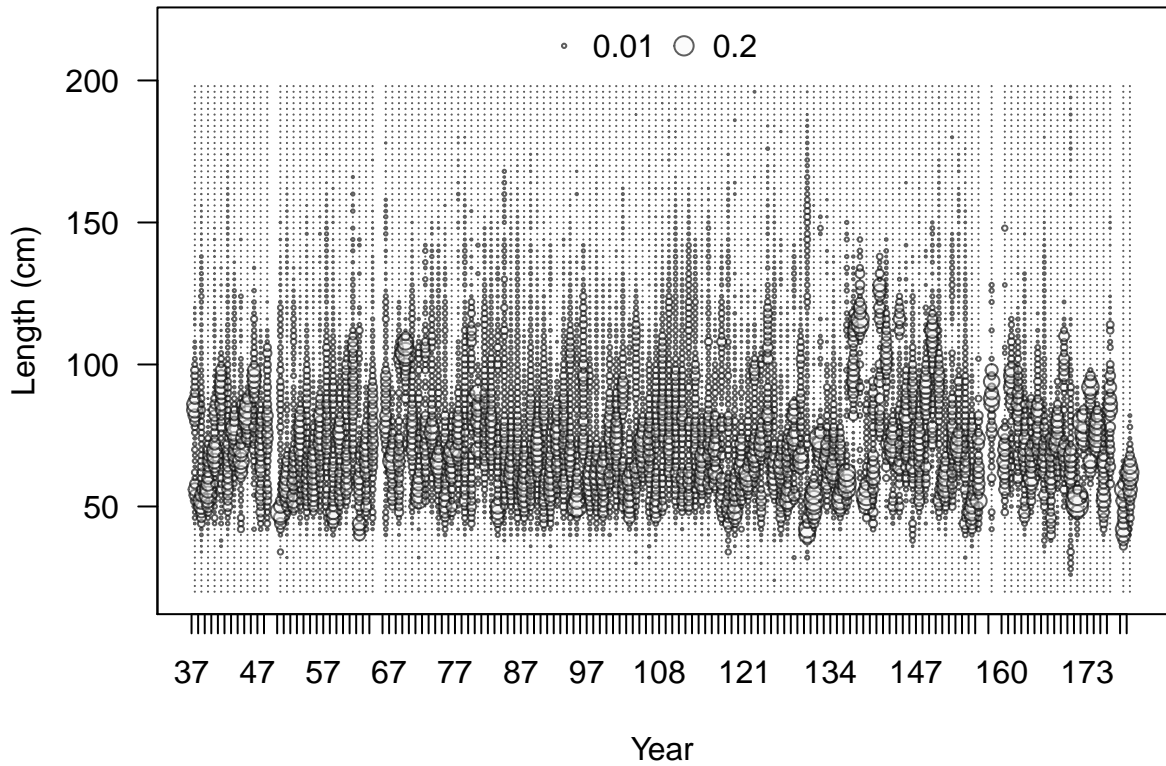


Proportion

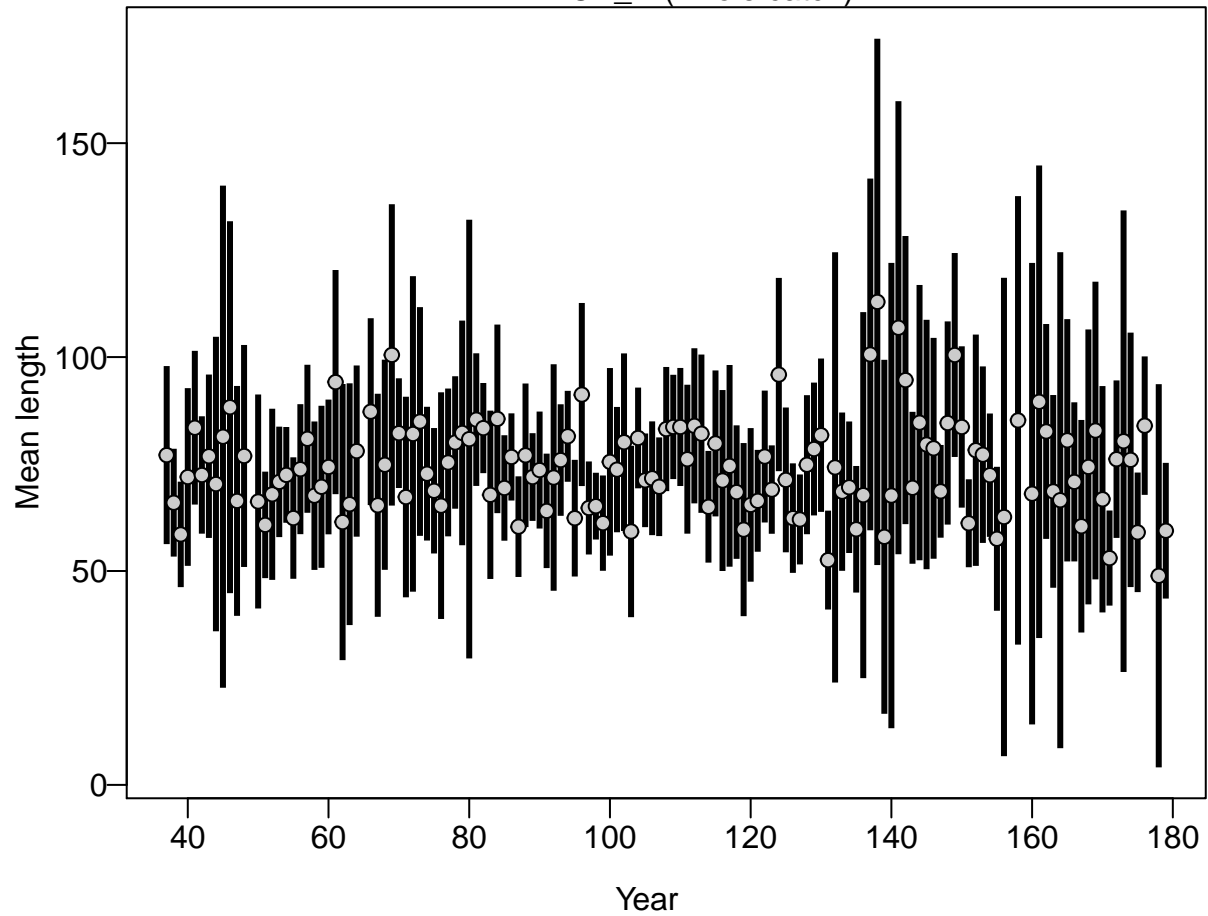


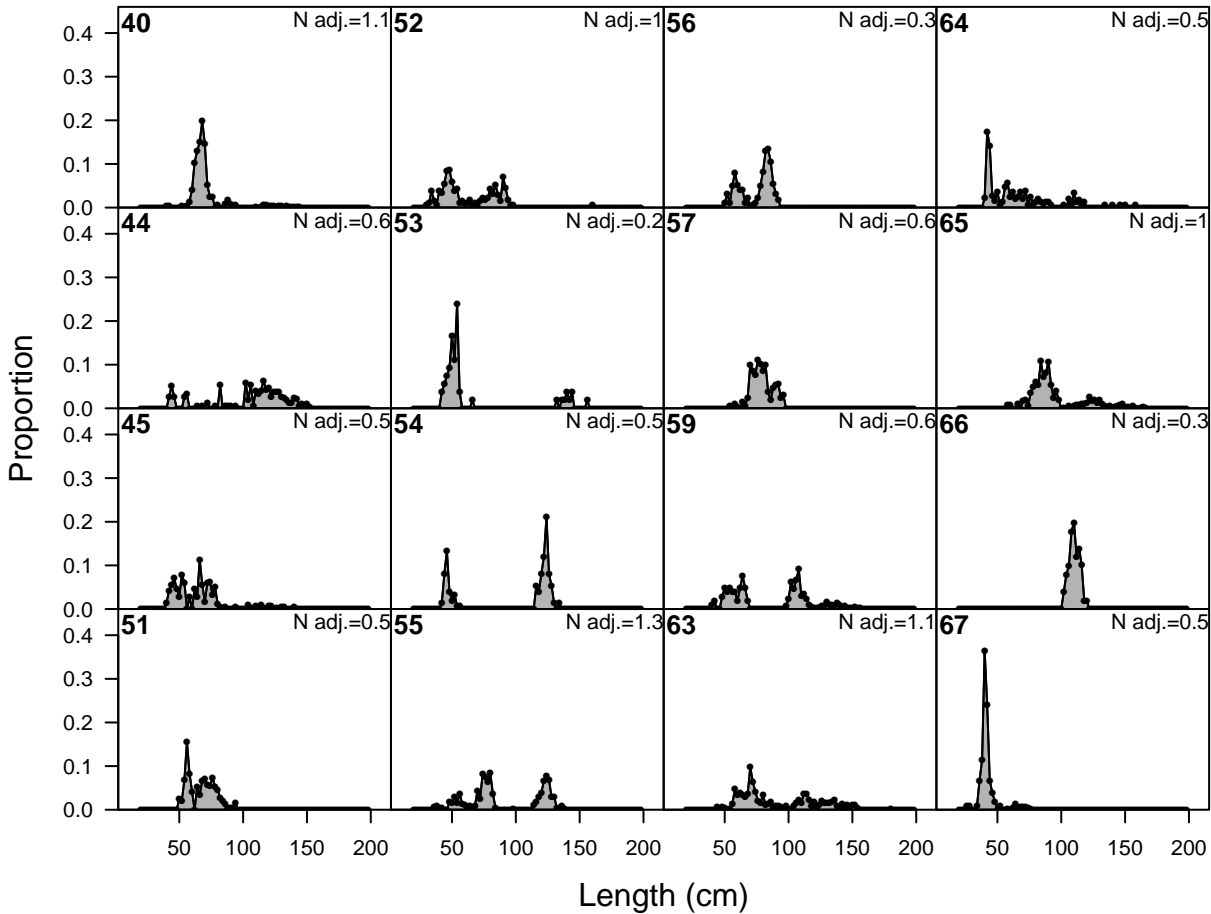
Proportion



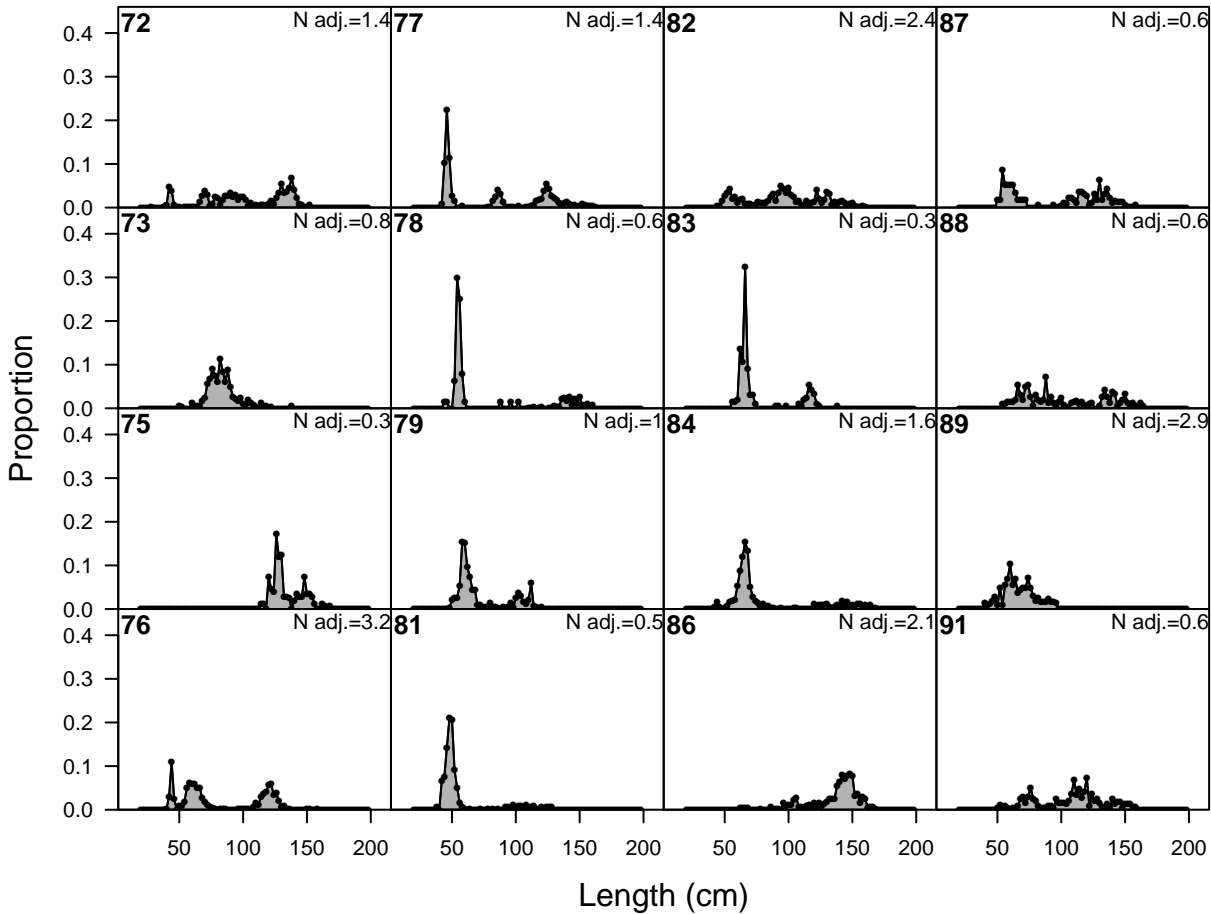


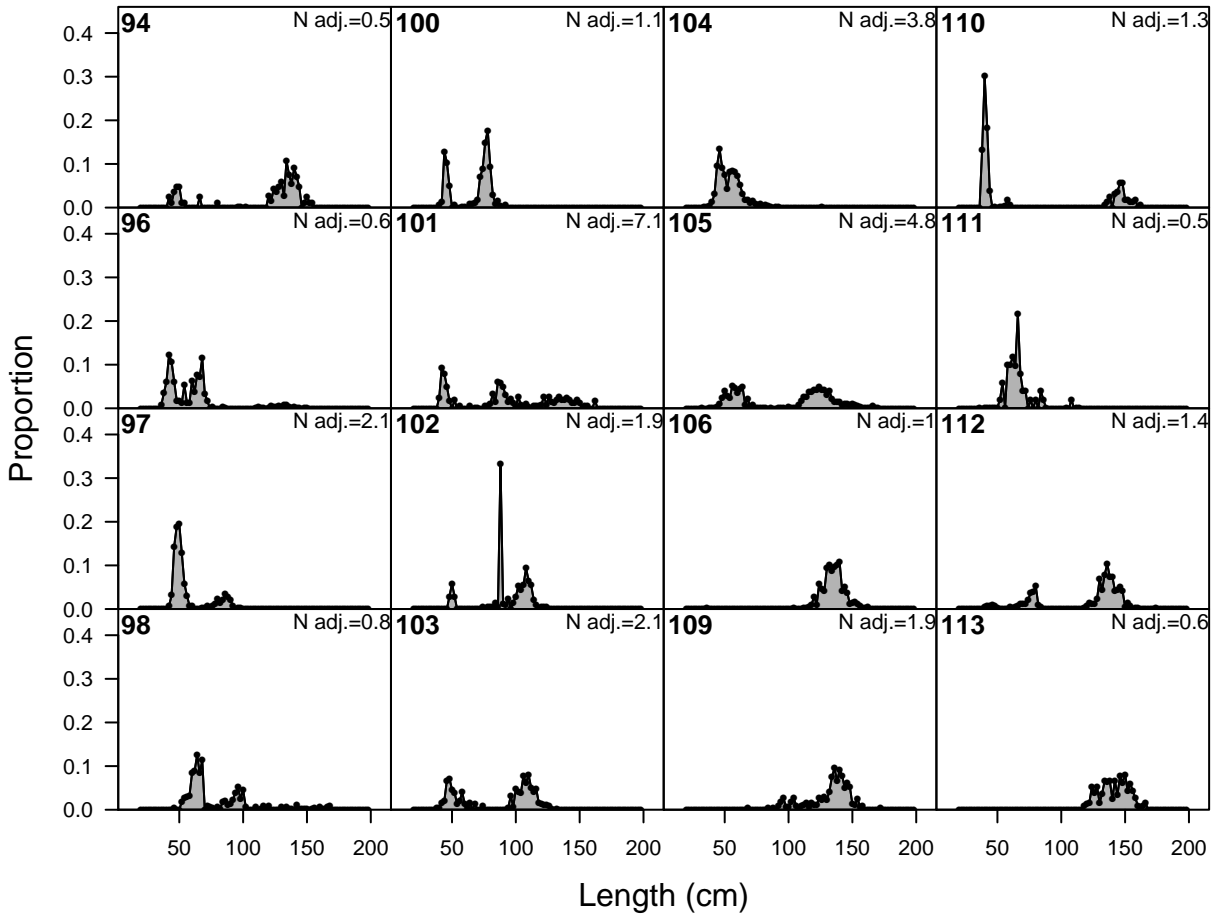
F11-NOA\_N (whole catch)

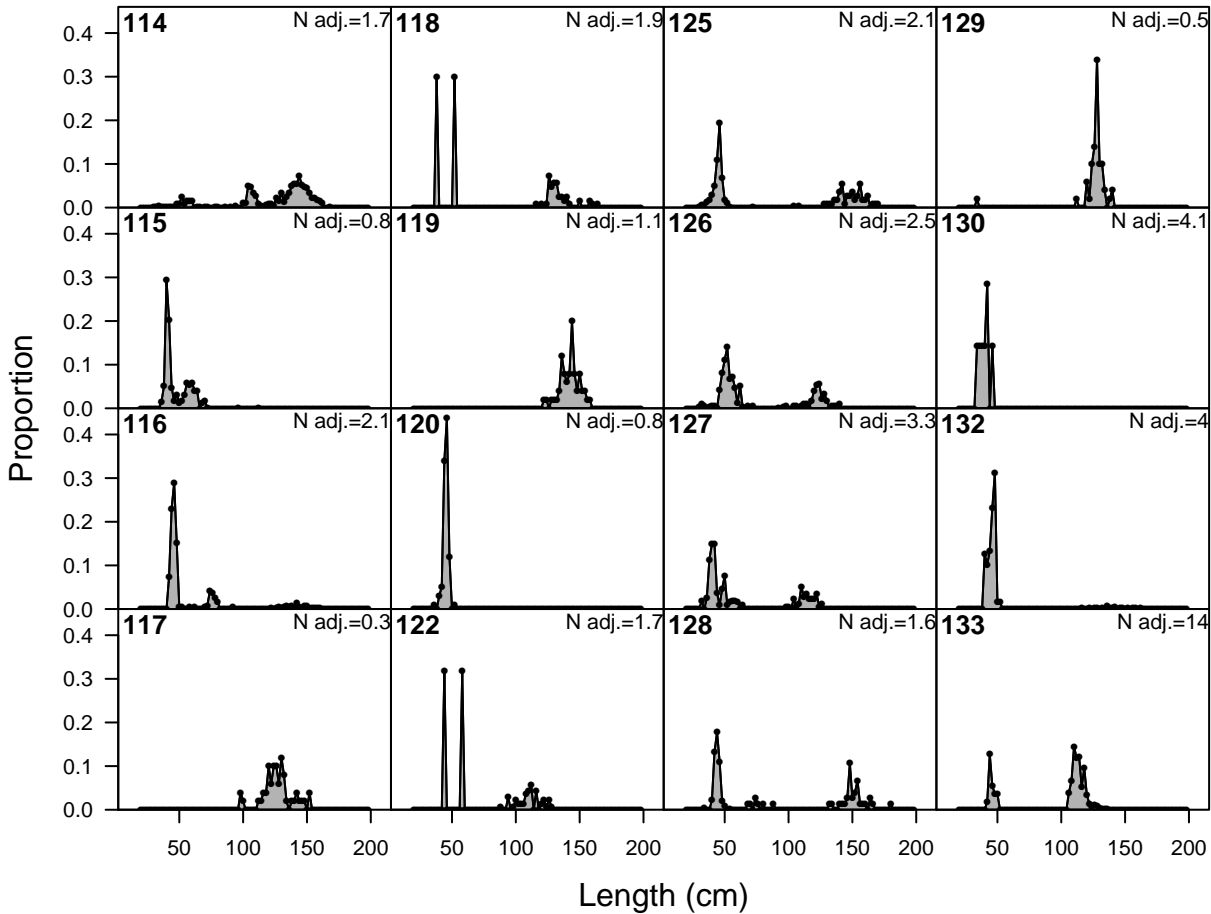


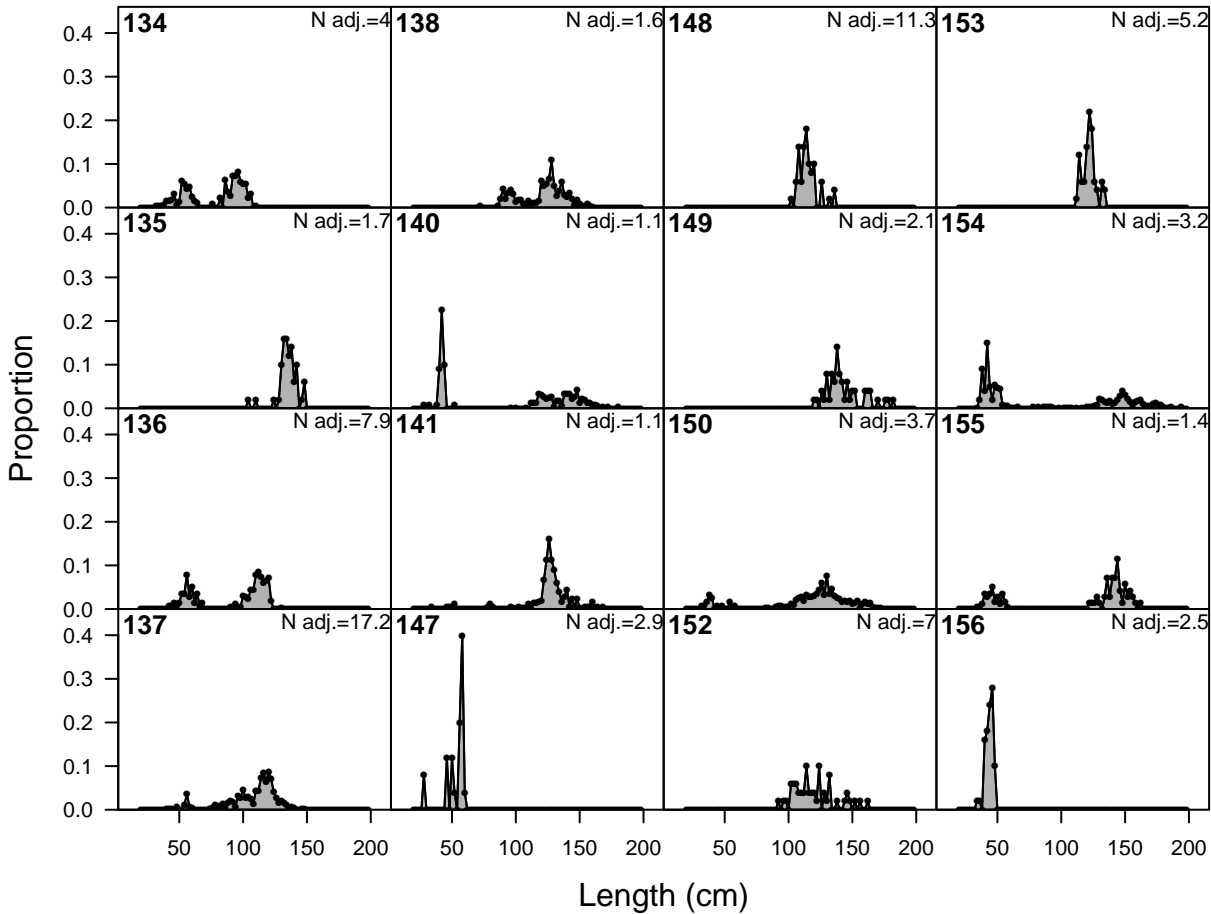


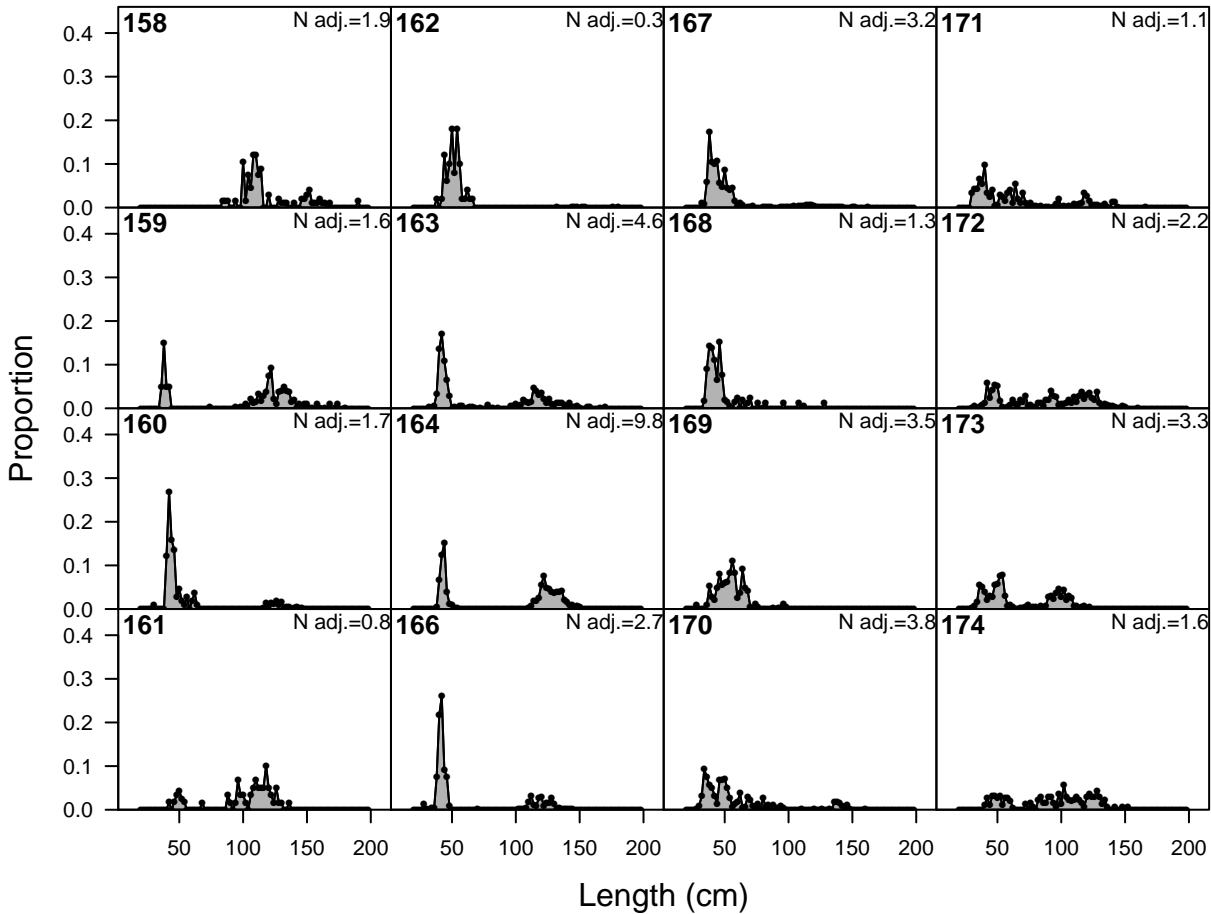


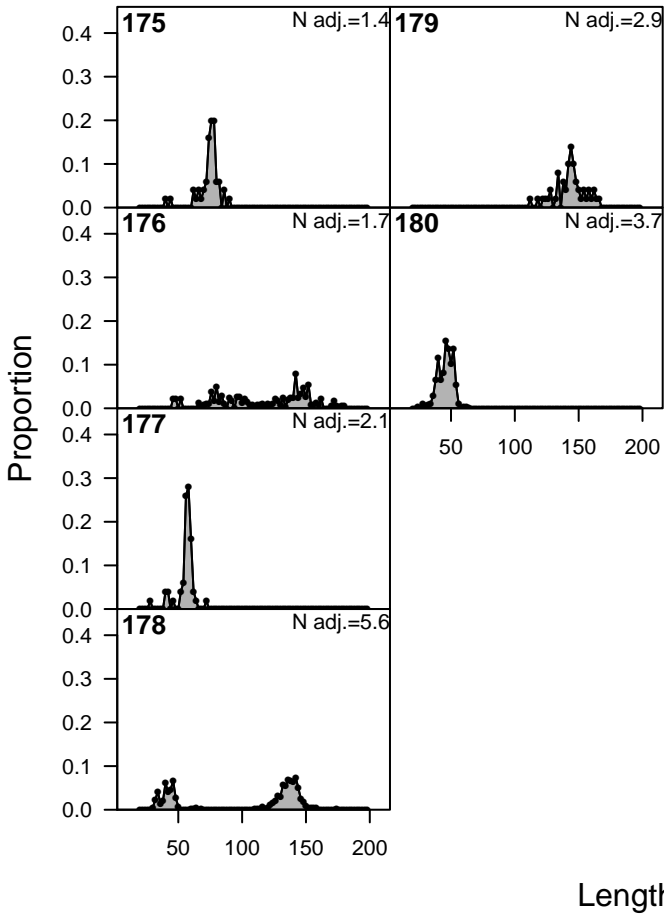


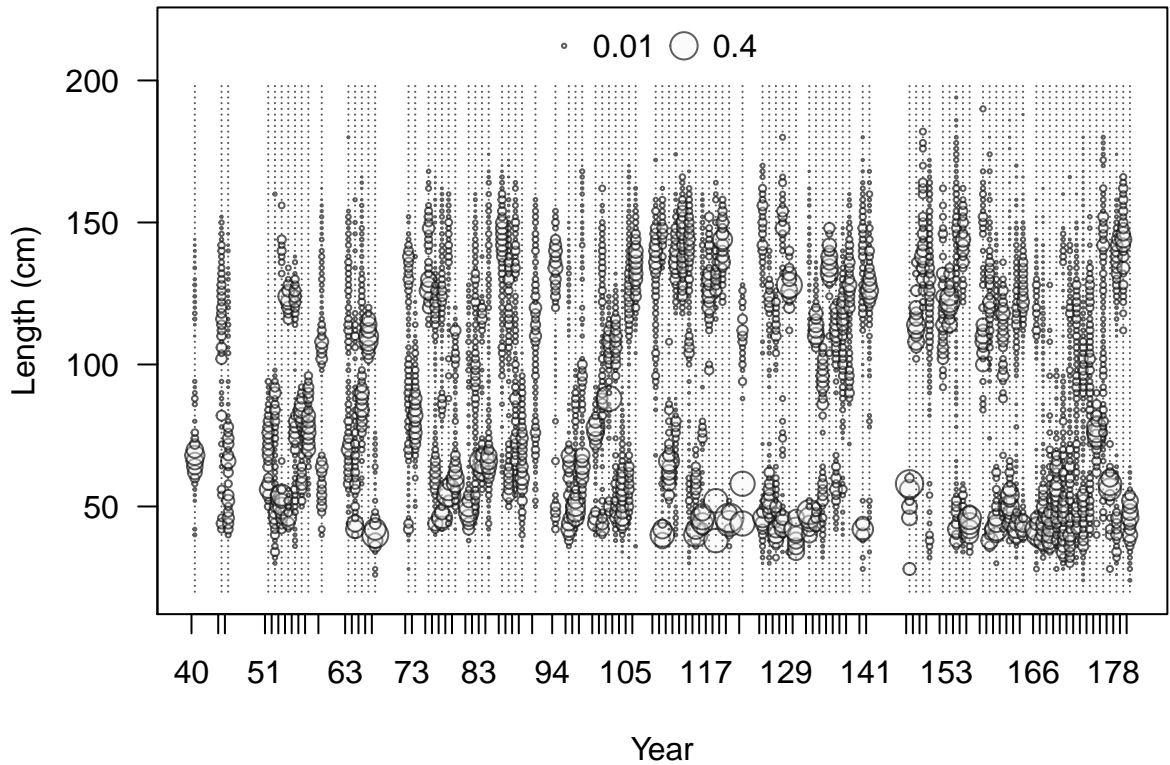




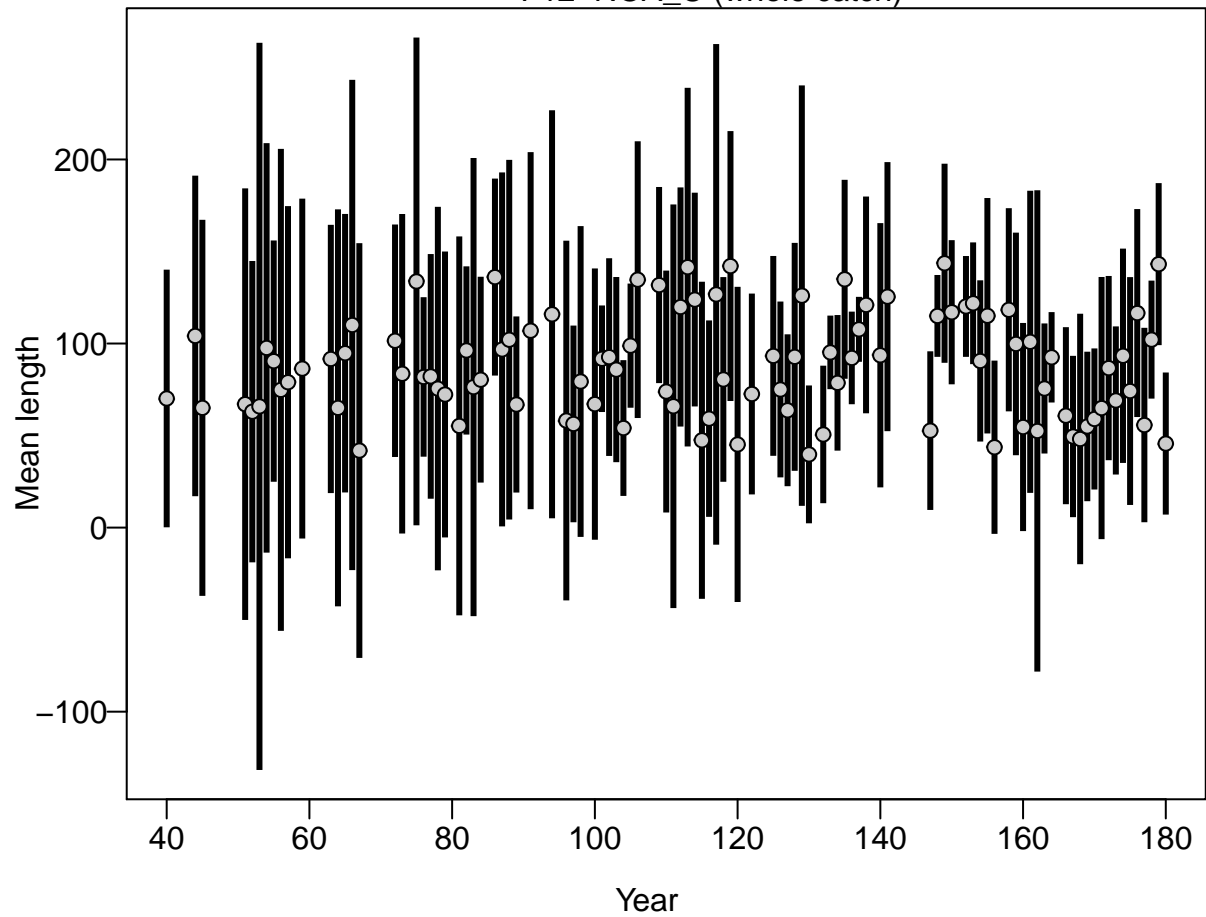




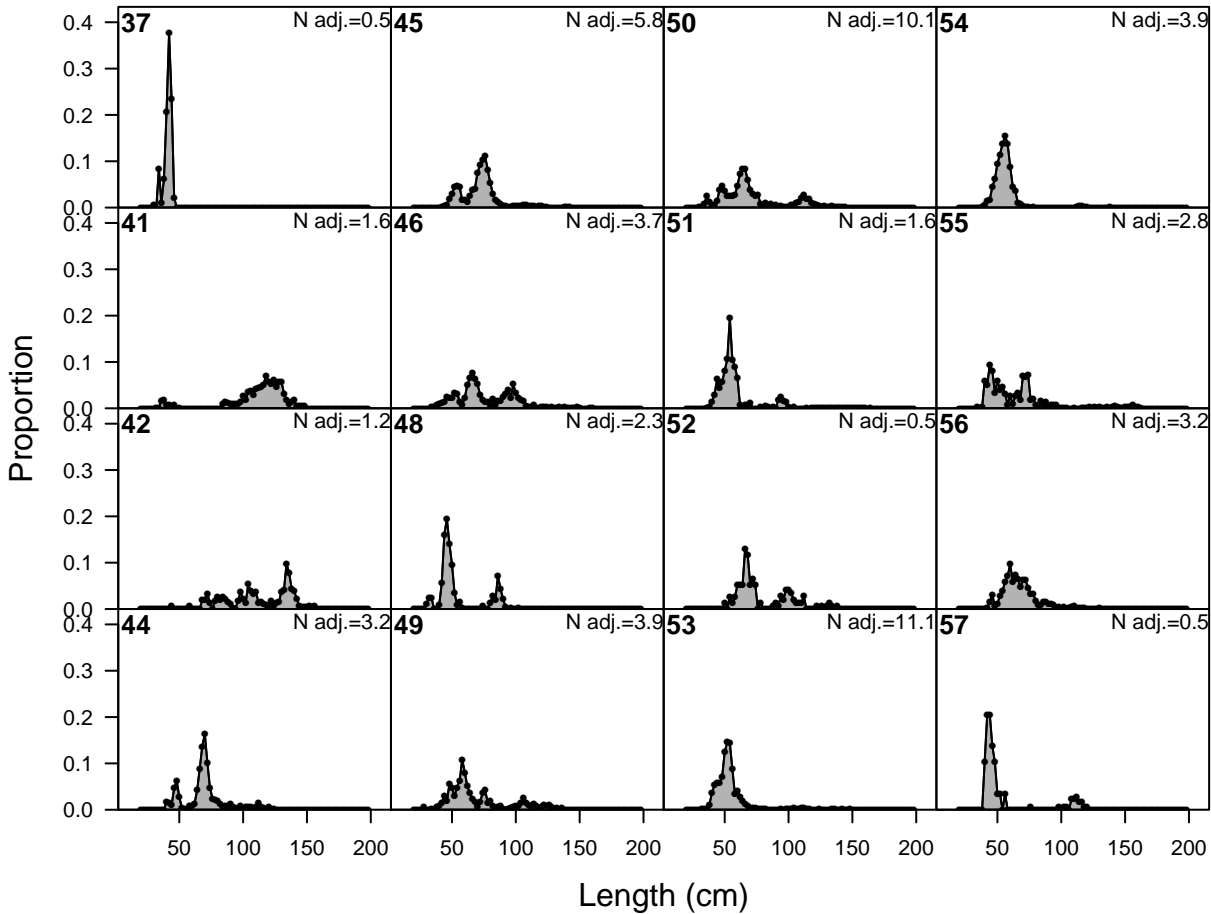


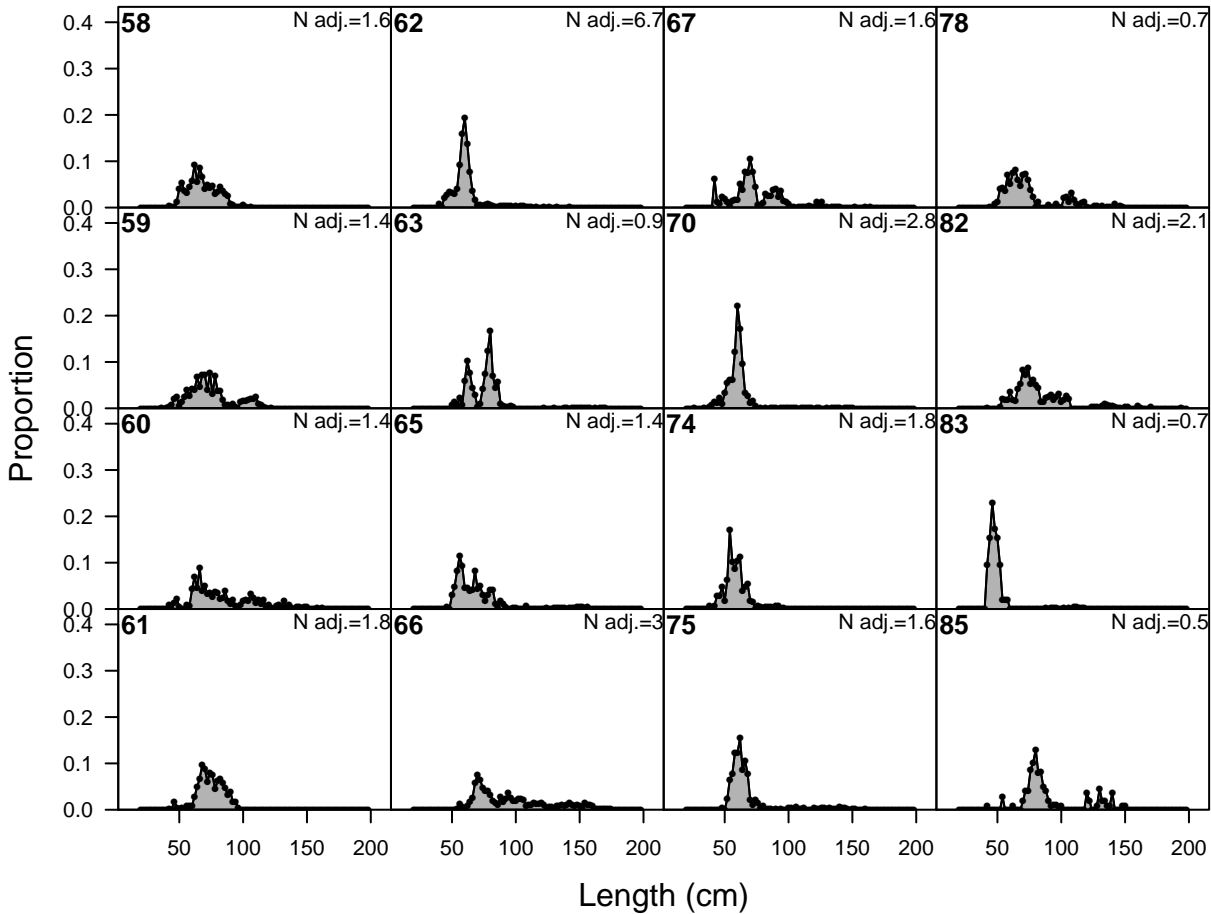


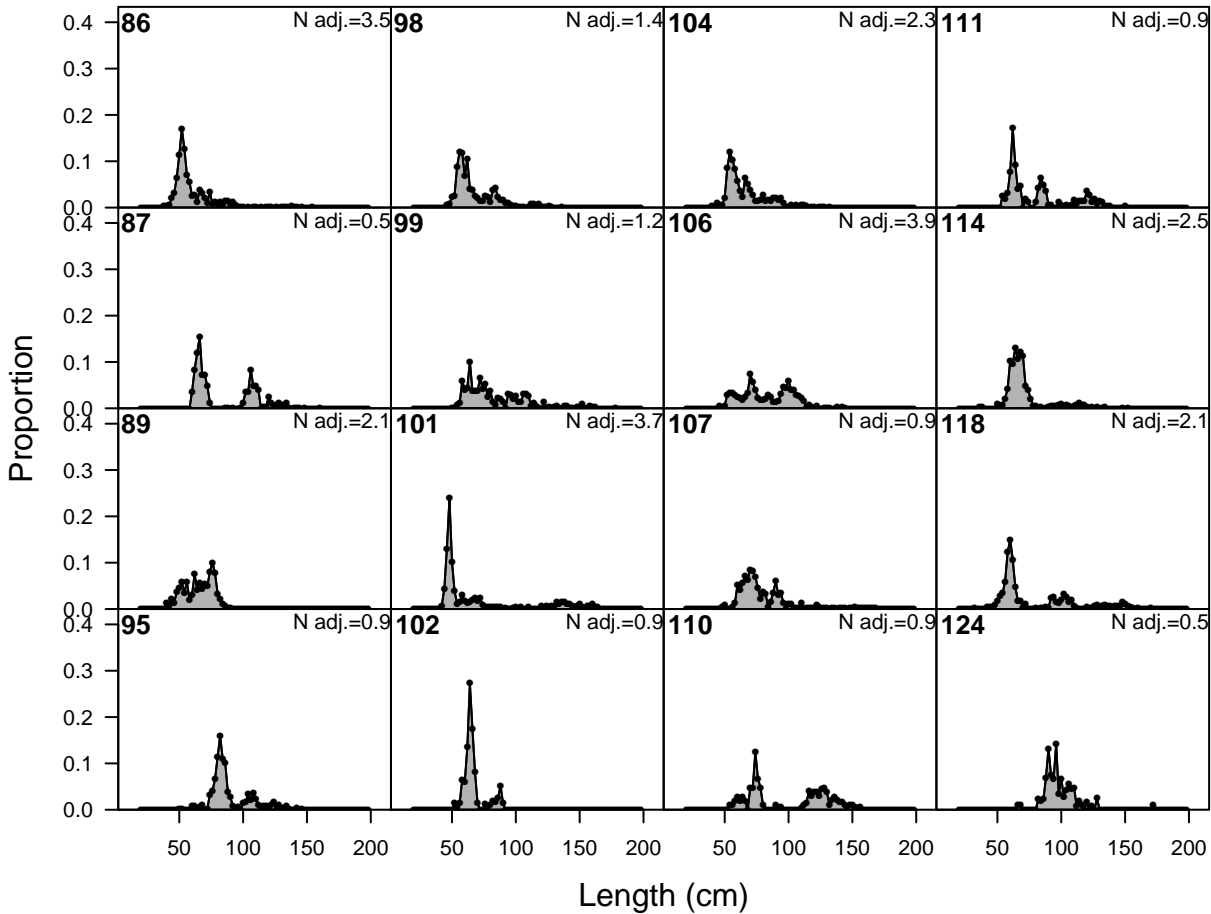
## F12-NOA\_C (whole catch)

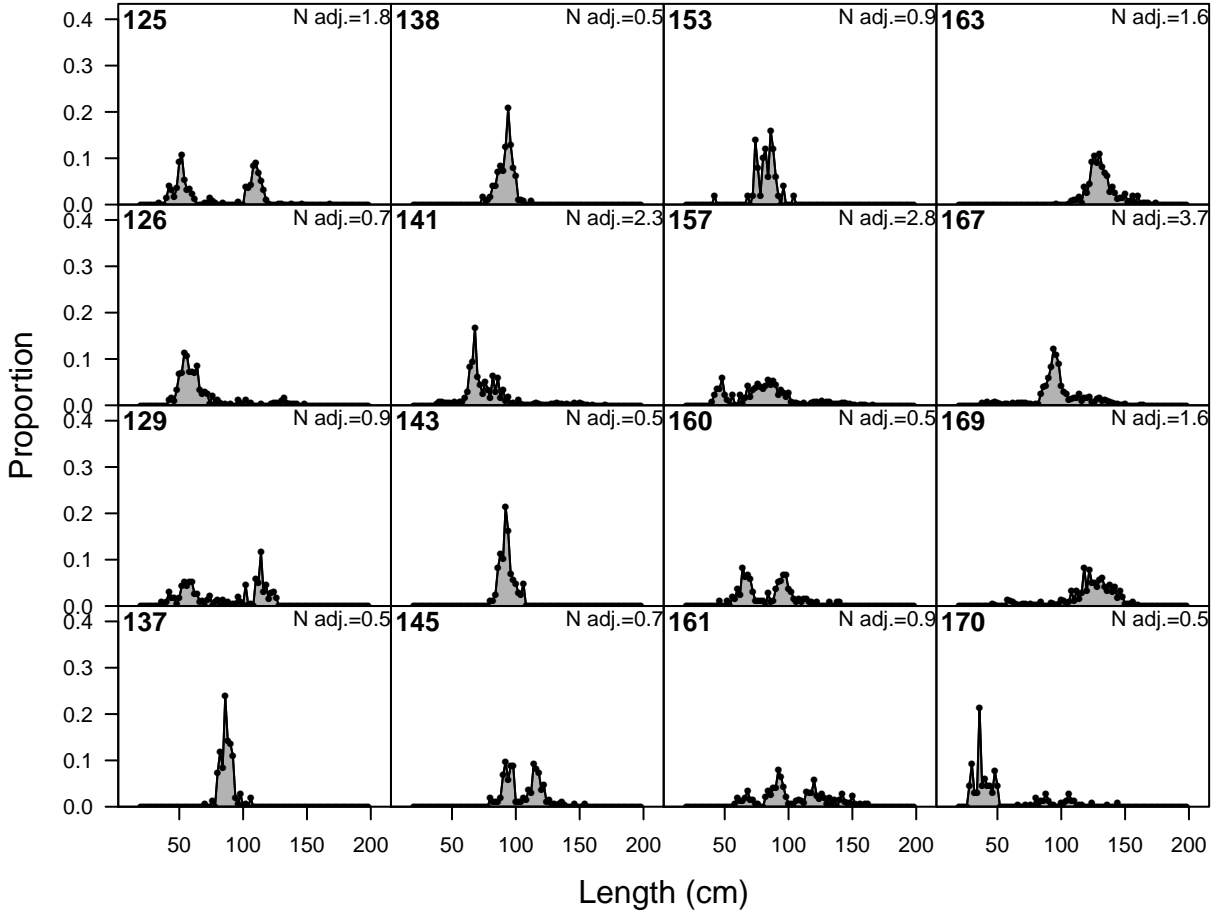


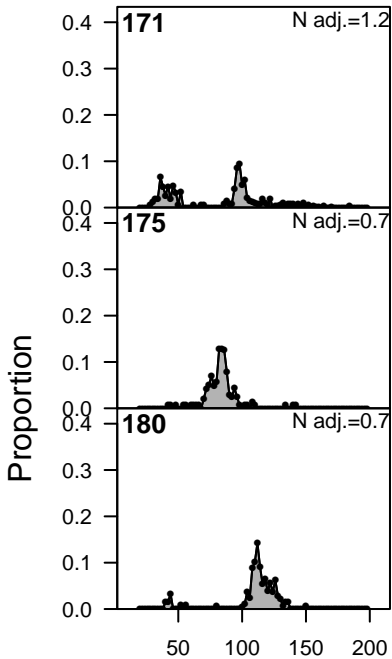




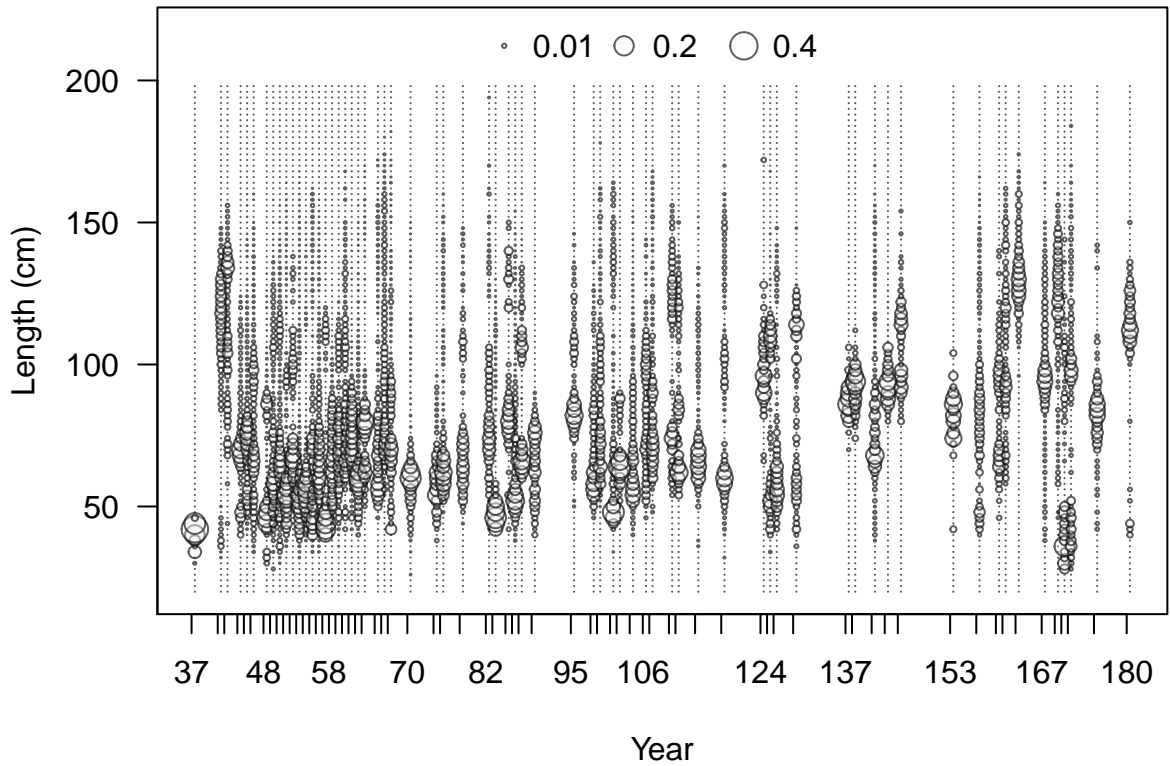




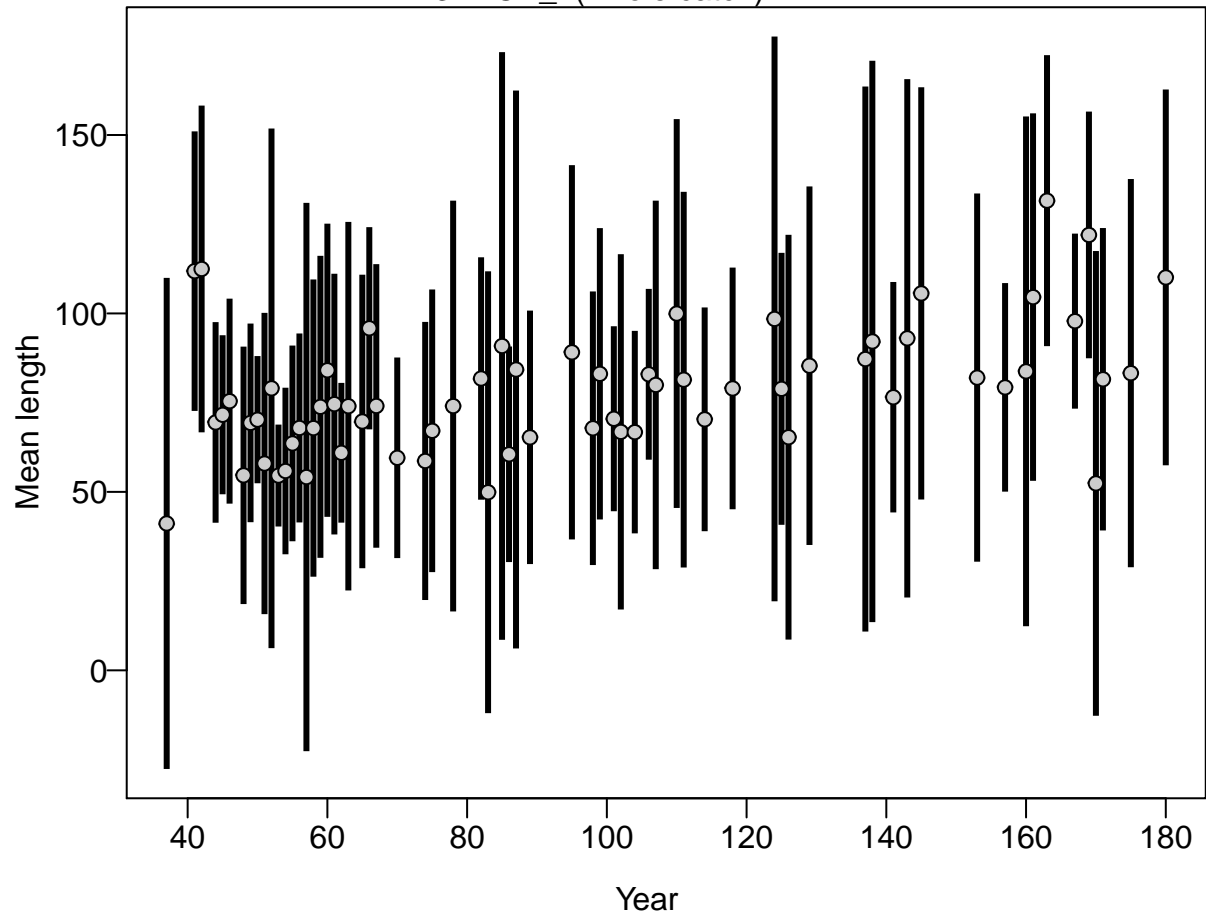


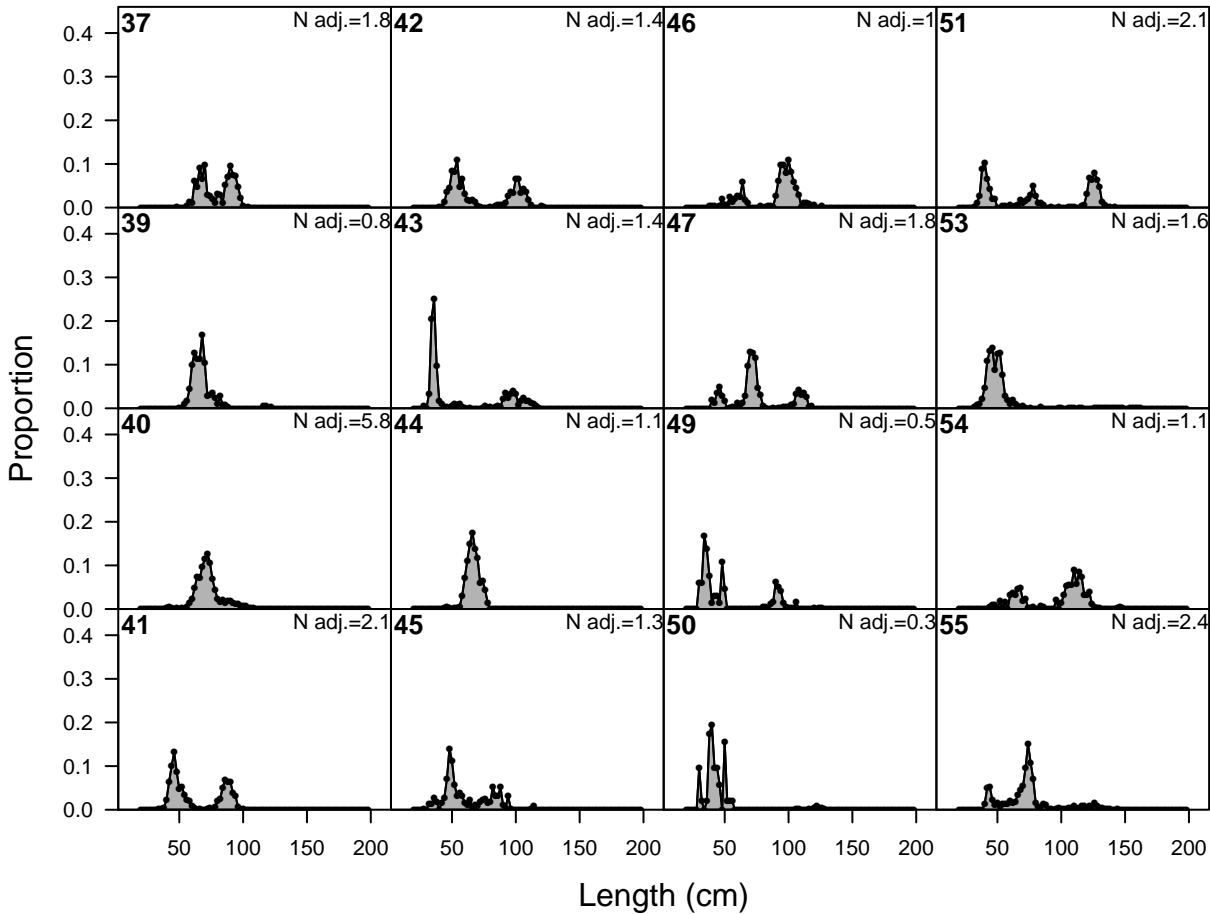


Length (cm)

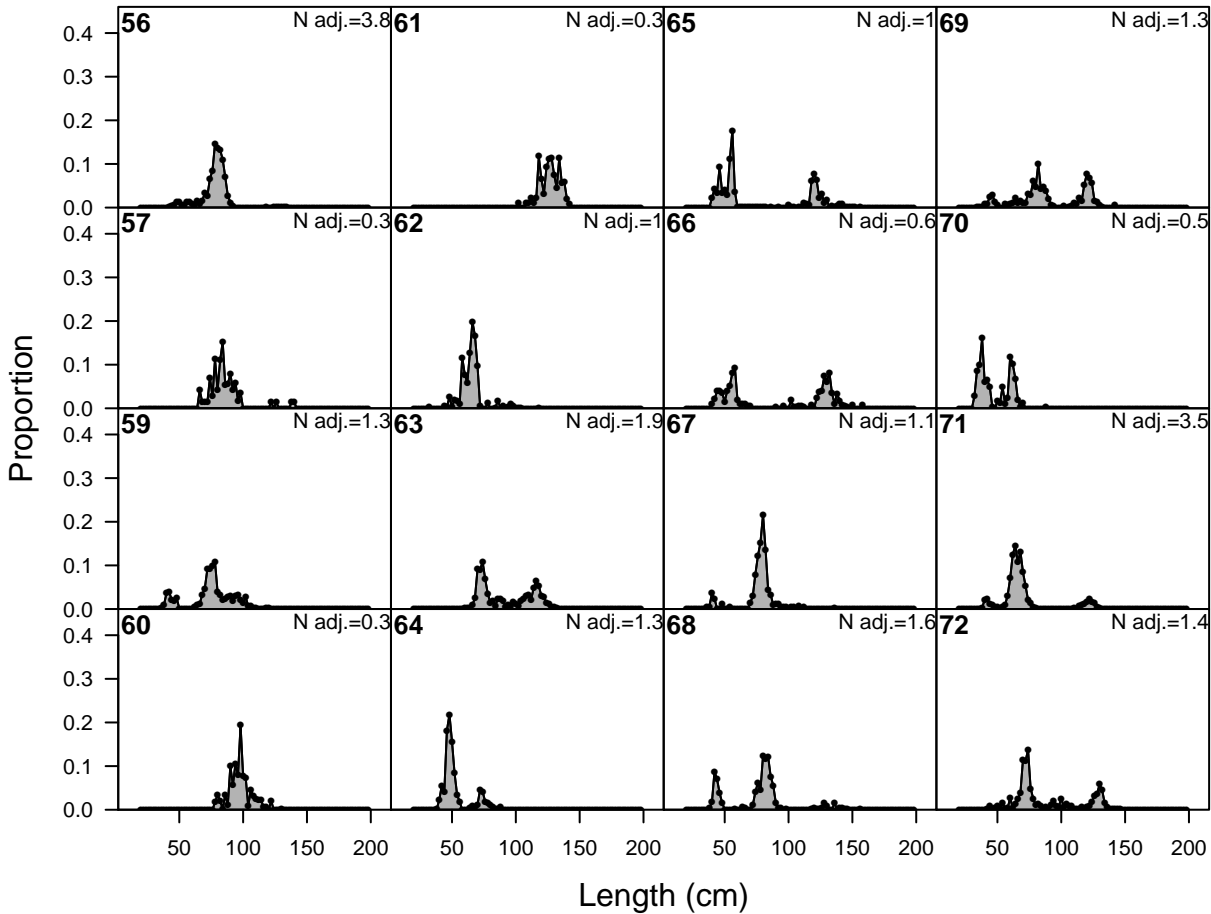


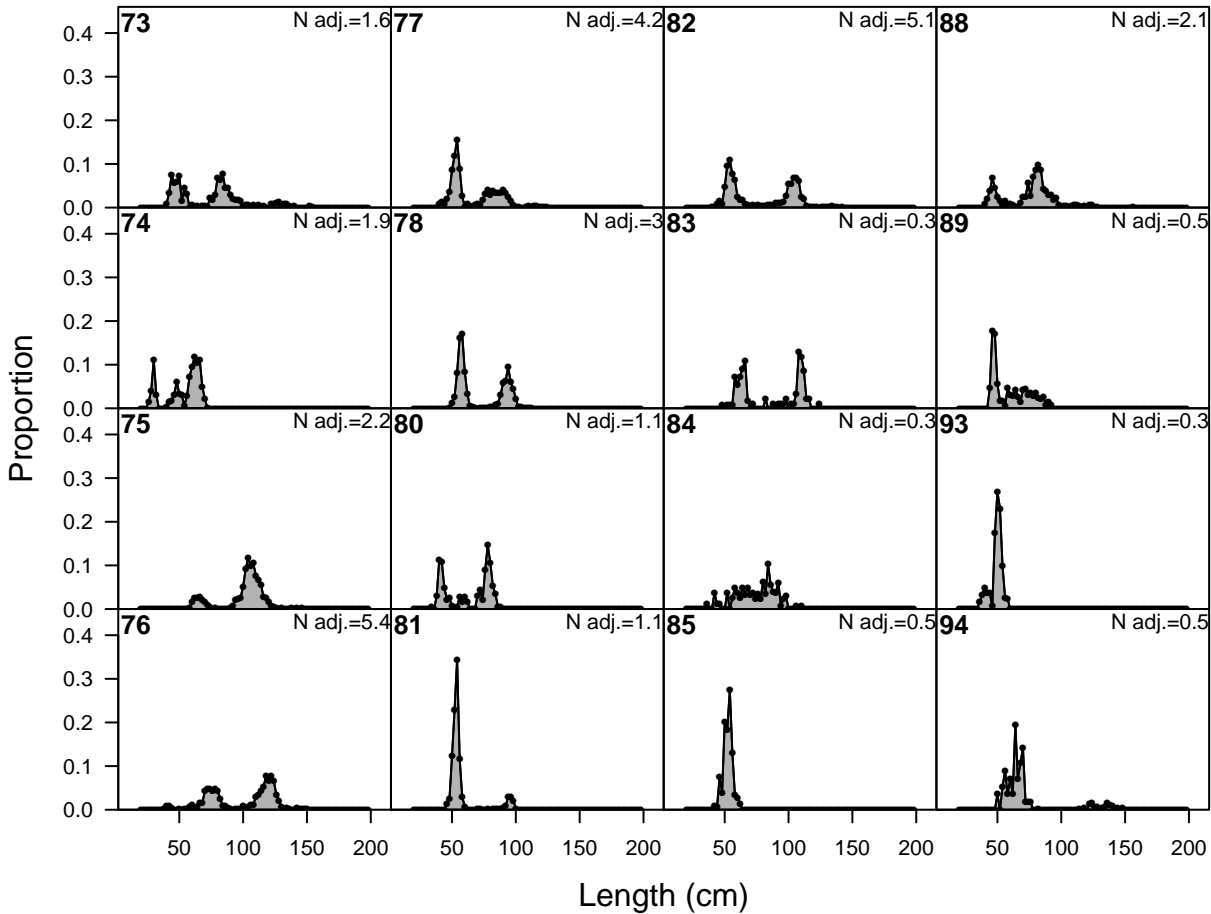
F13-NOA\_I (whole catch)

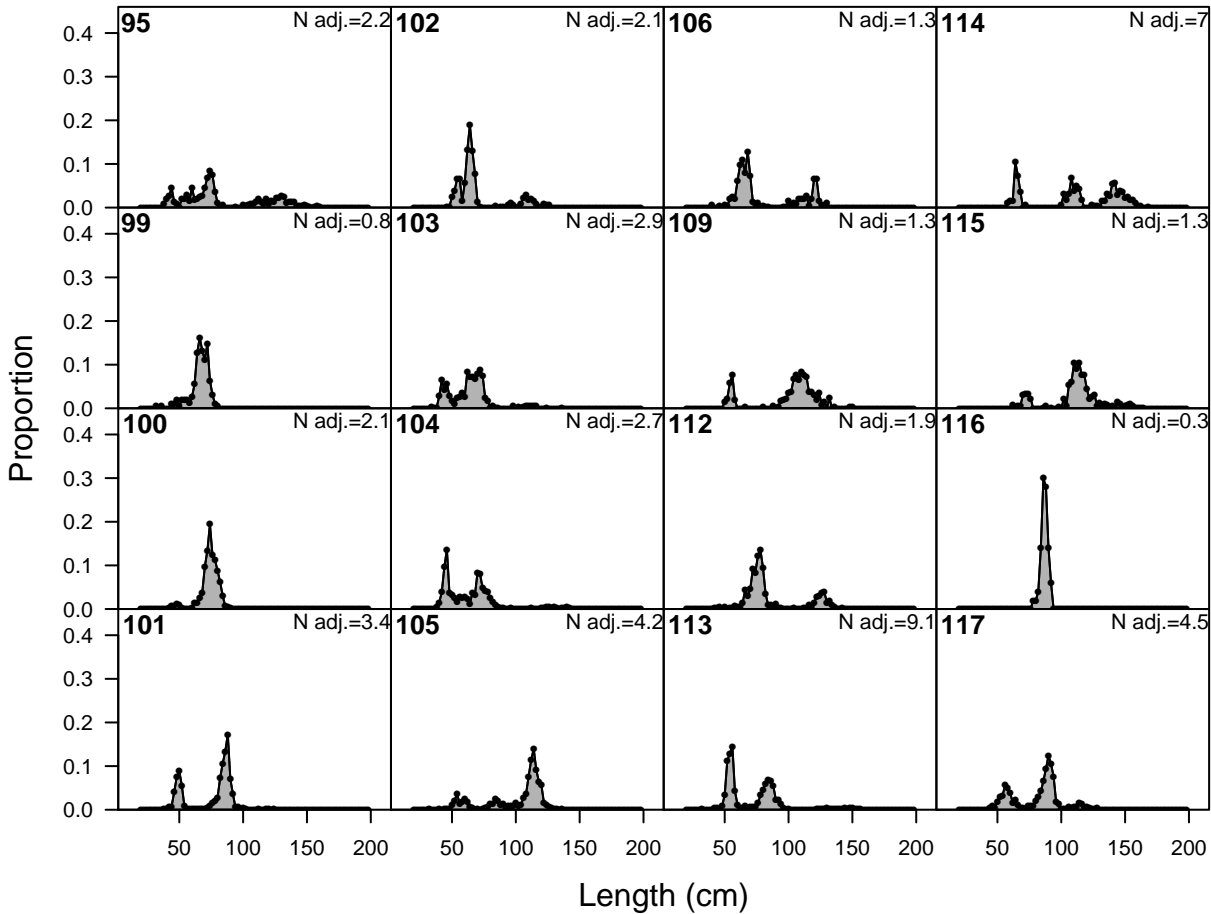


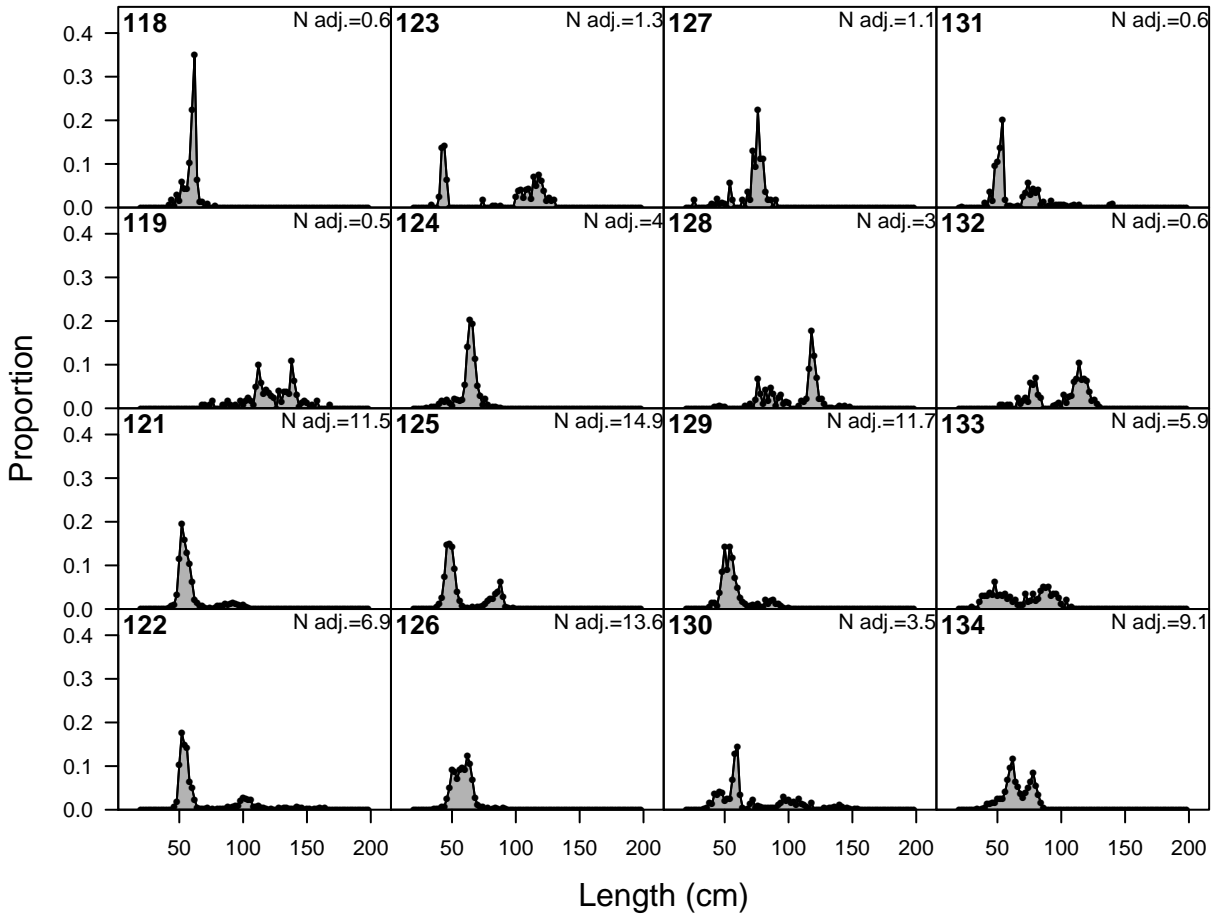


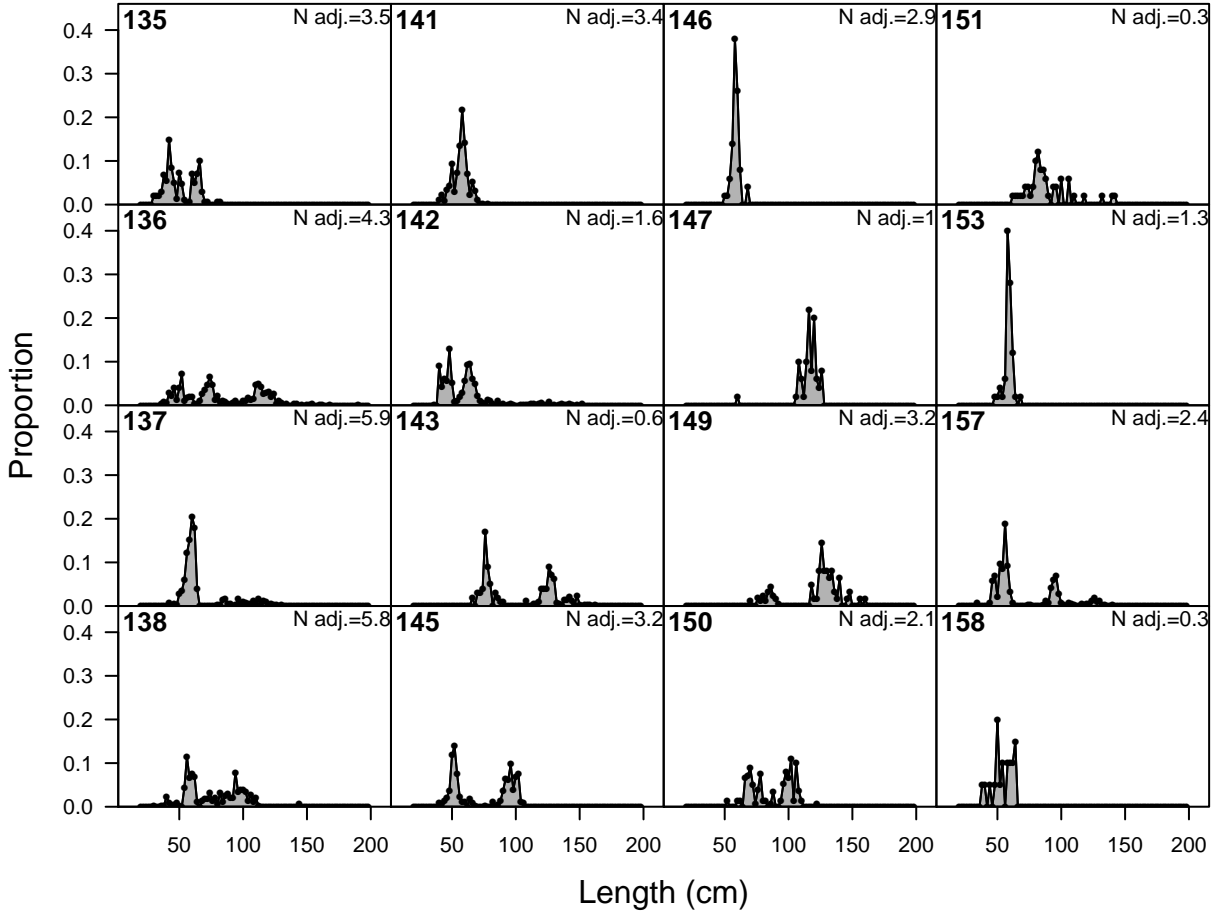


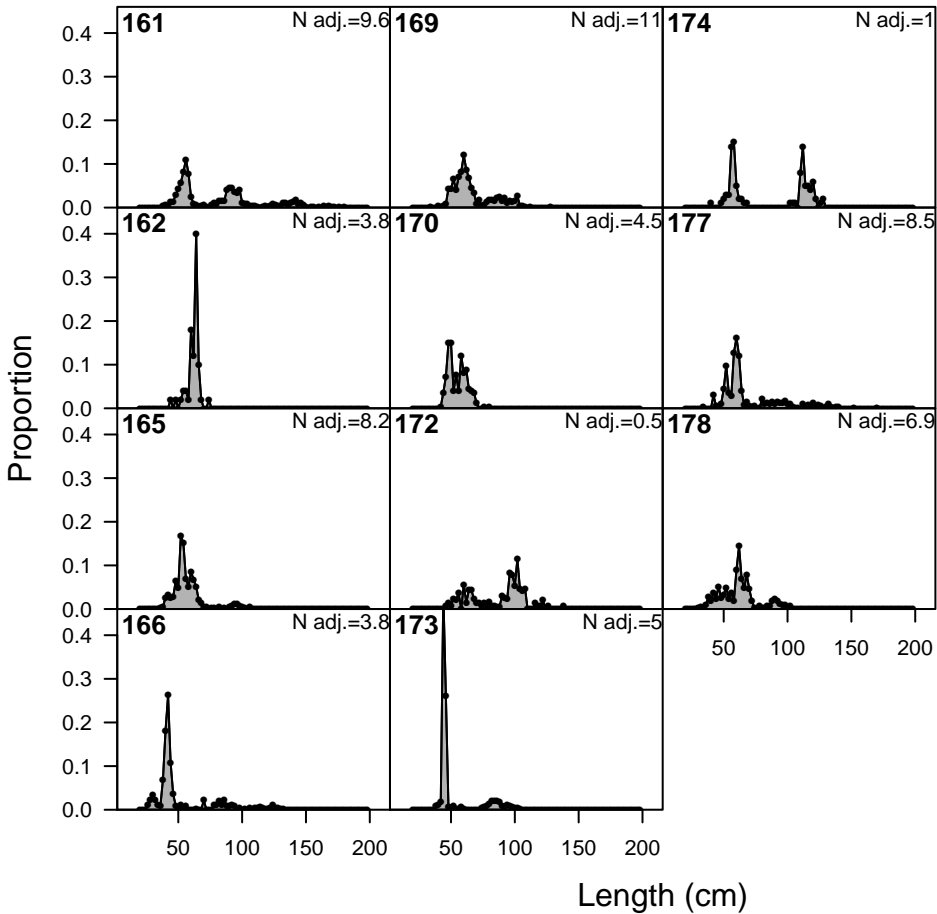


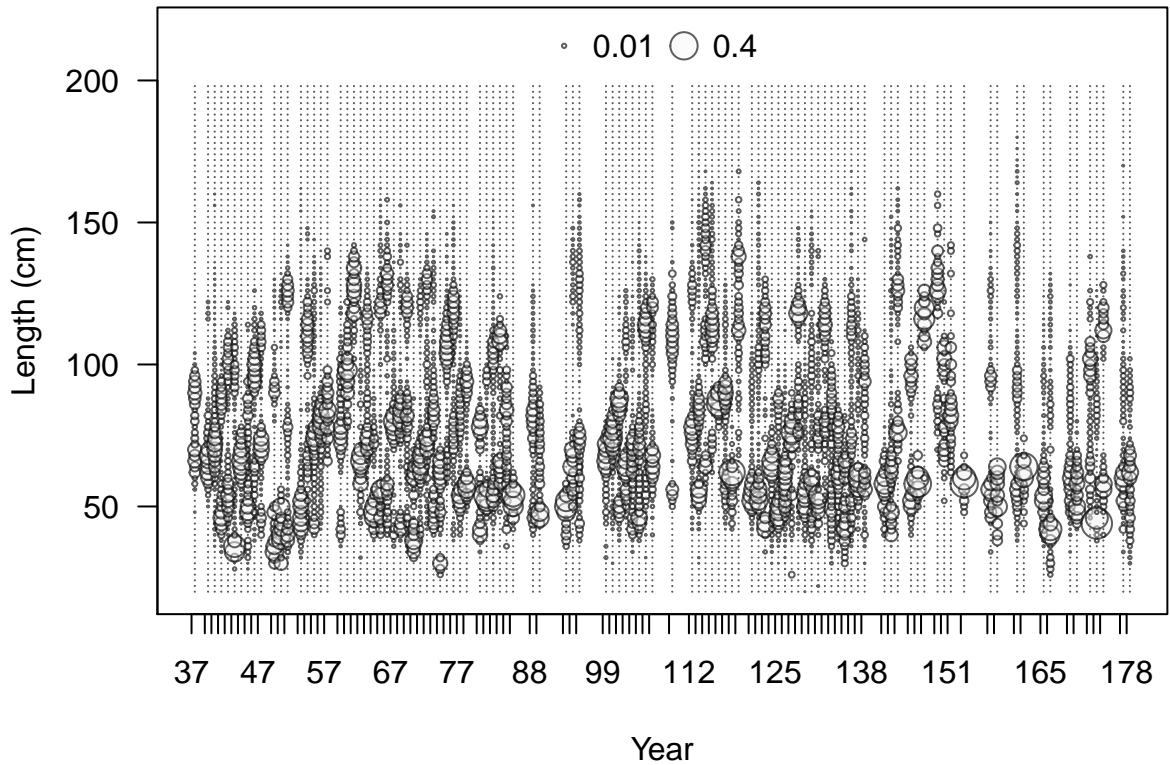




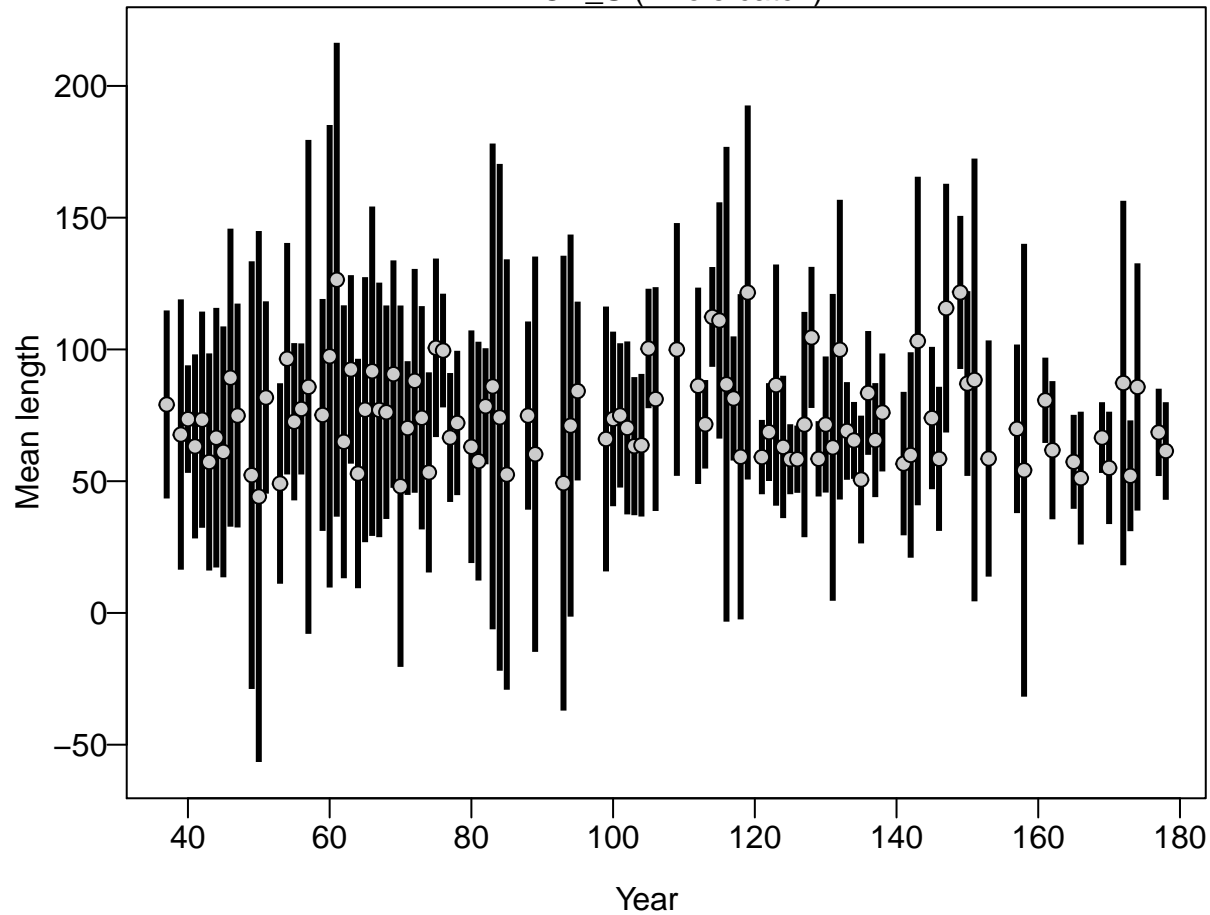




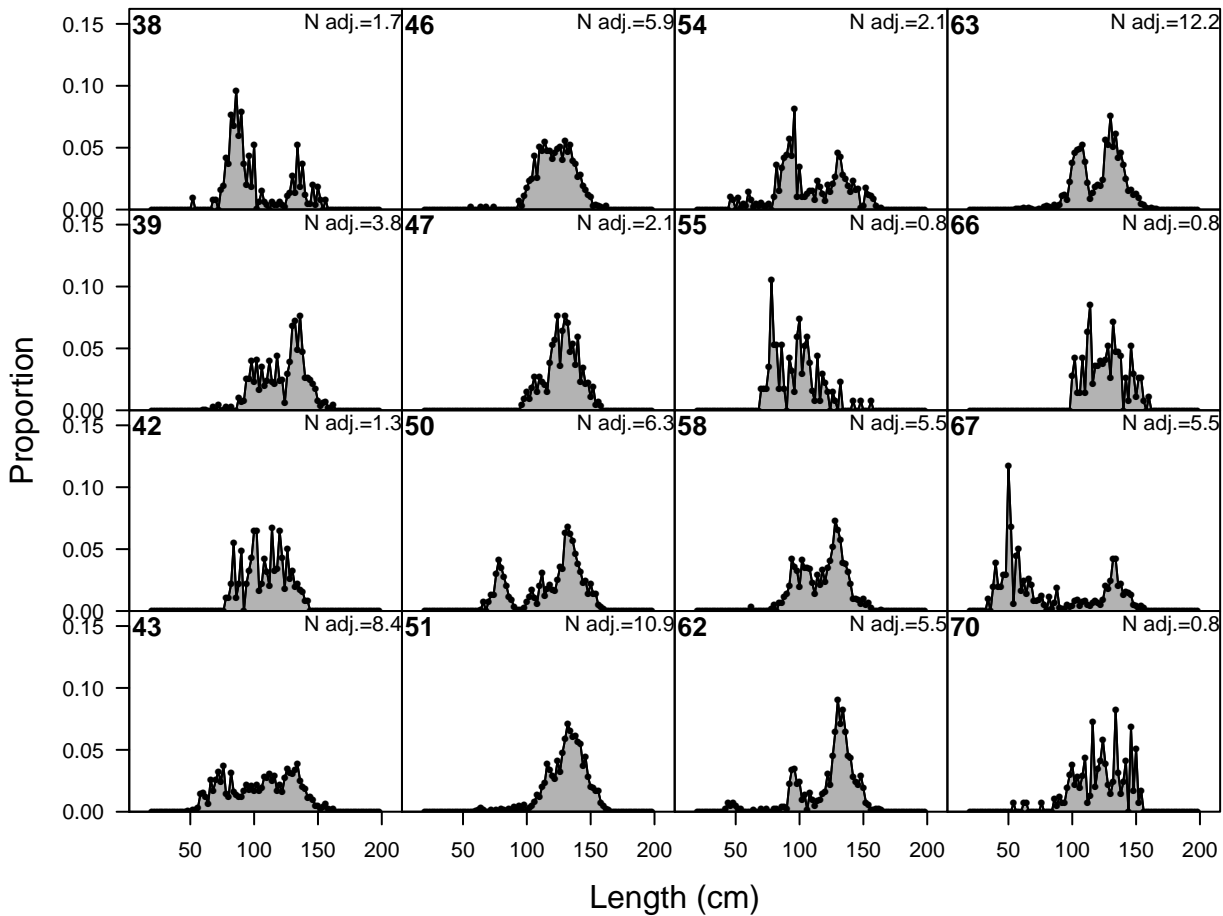




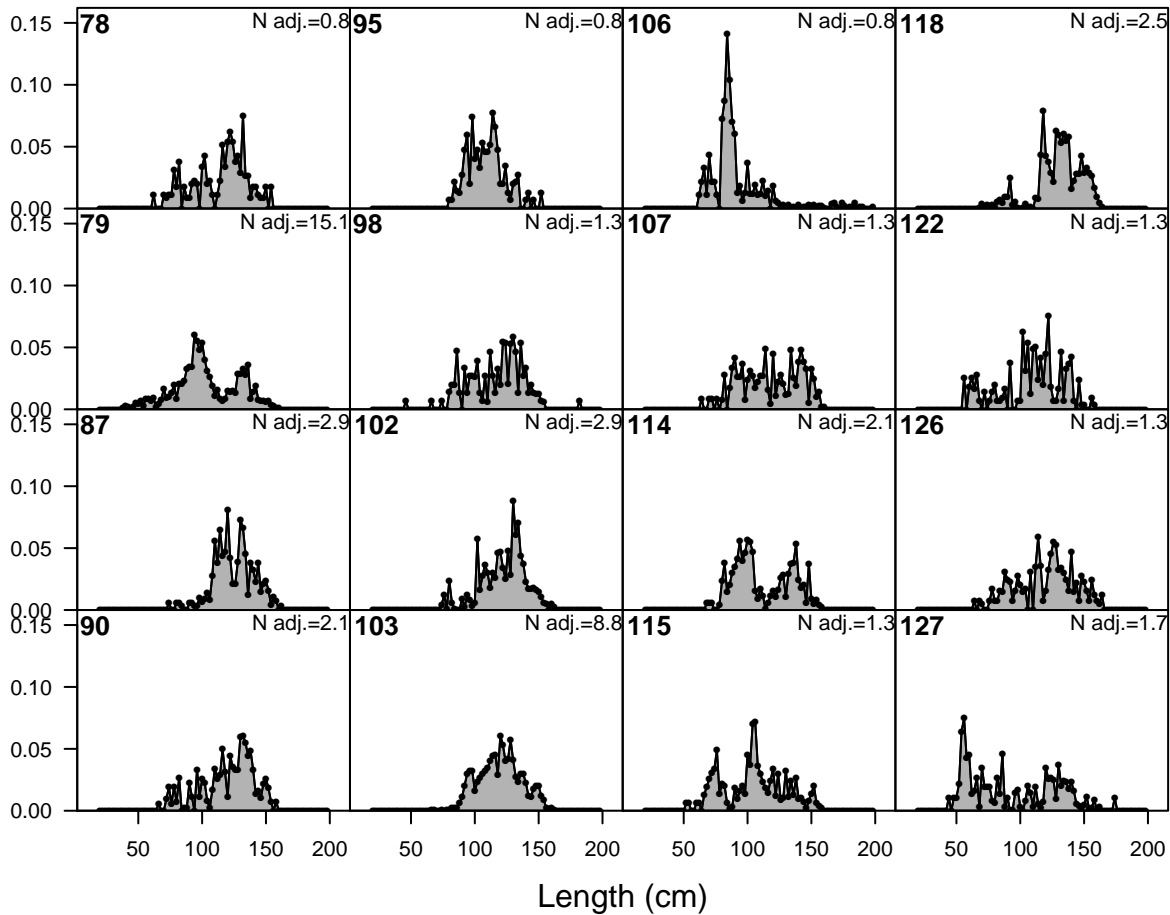
## F14-NOA\_S (whole catch)



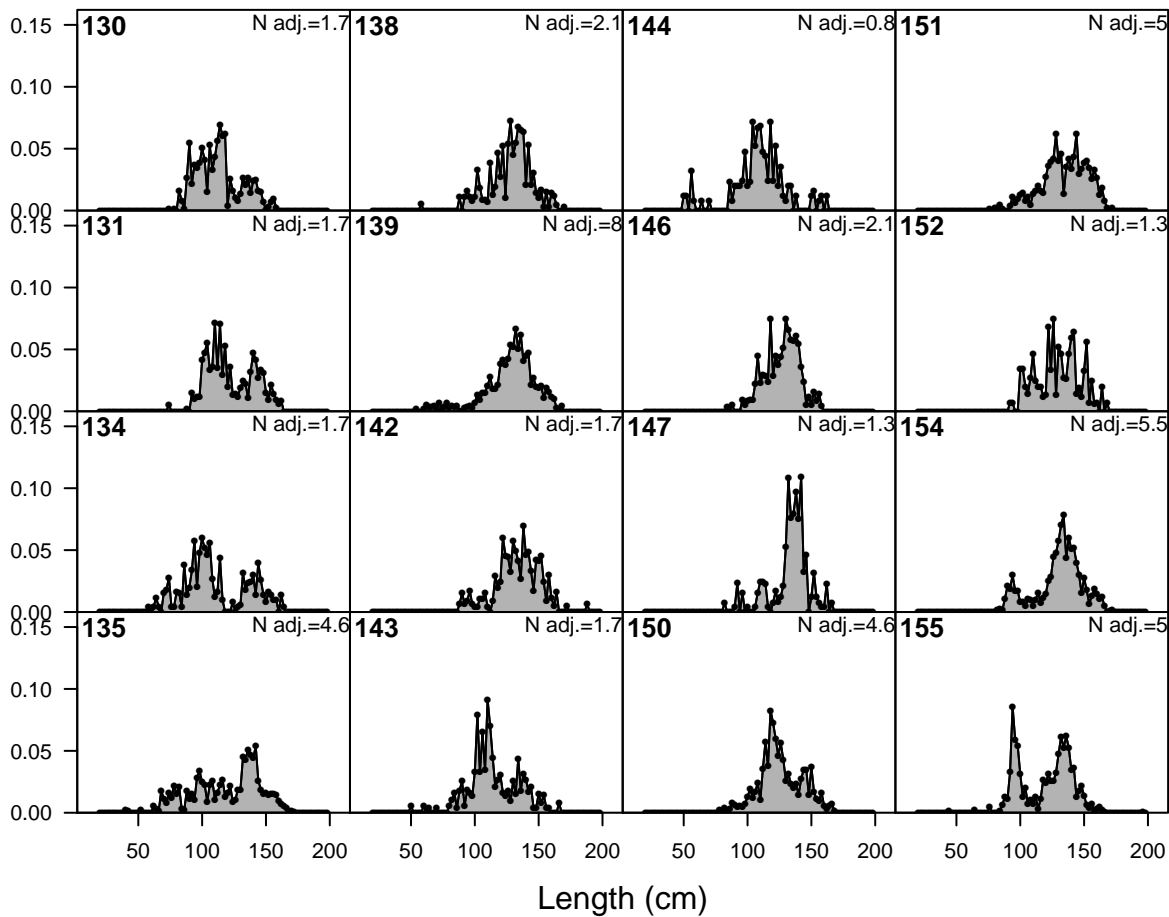




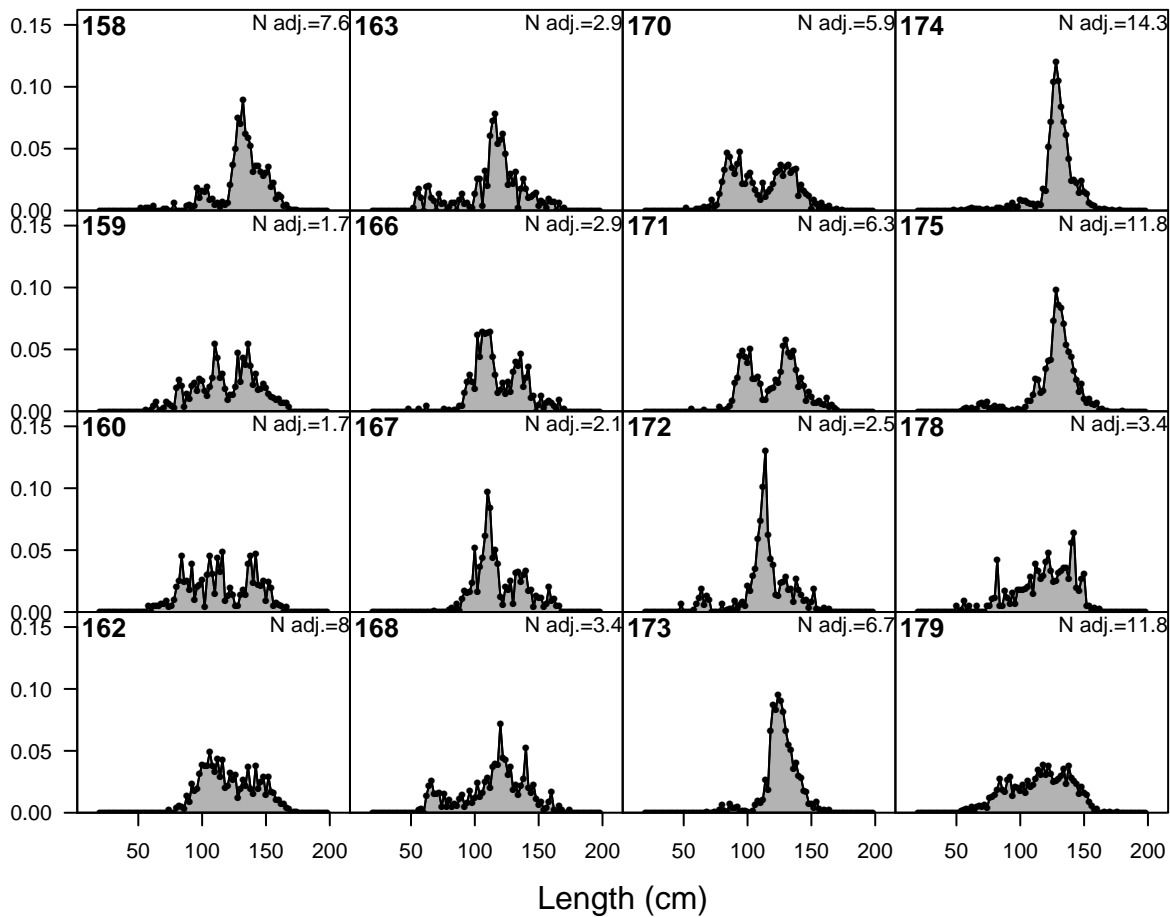
Proportion

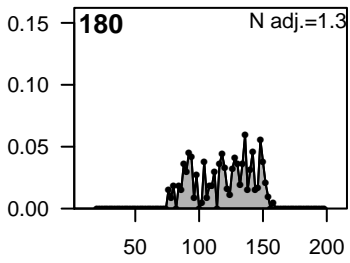


Proportion



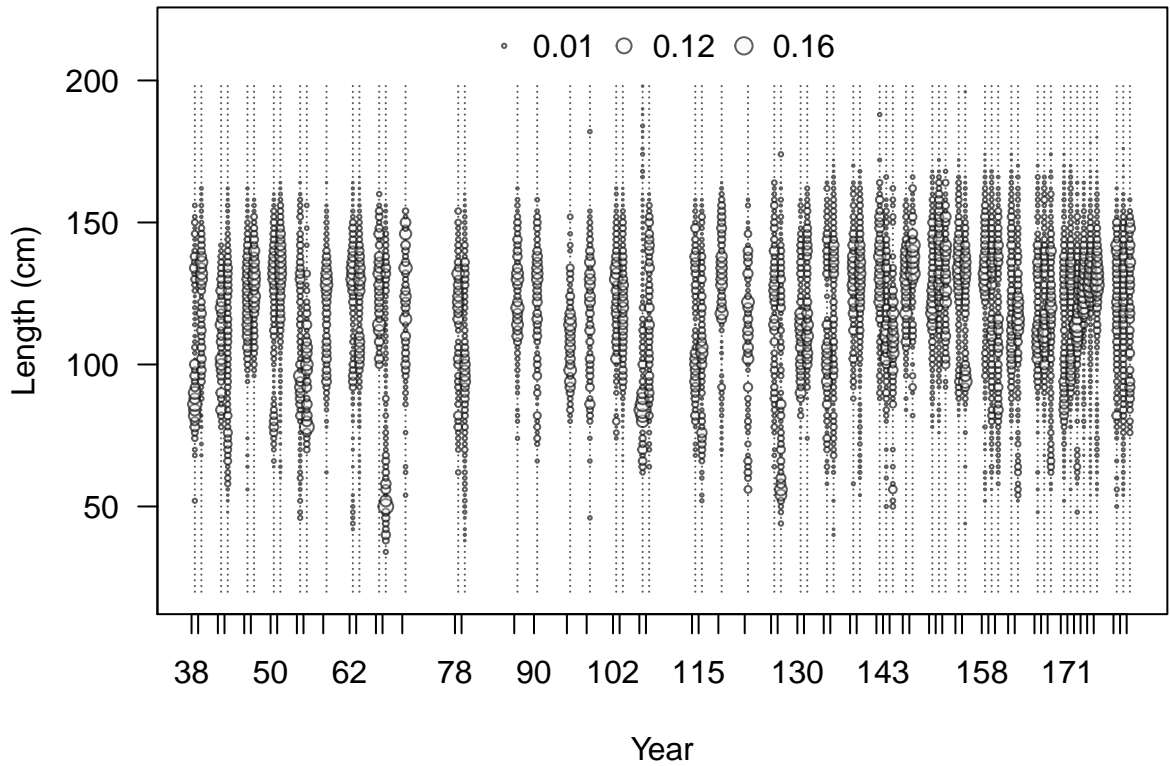
Proportion



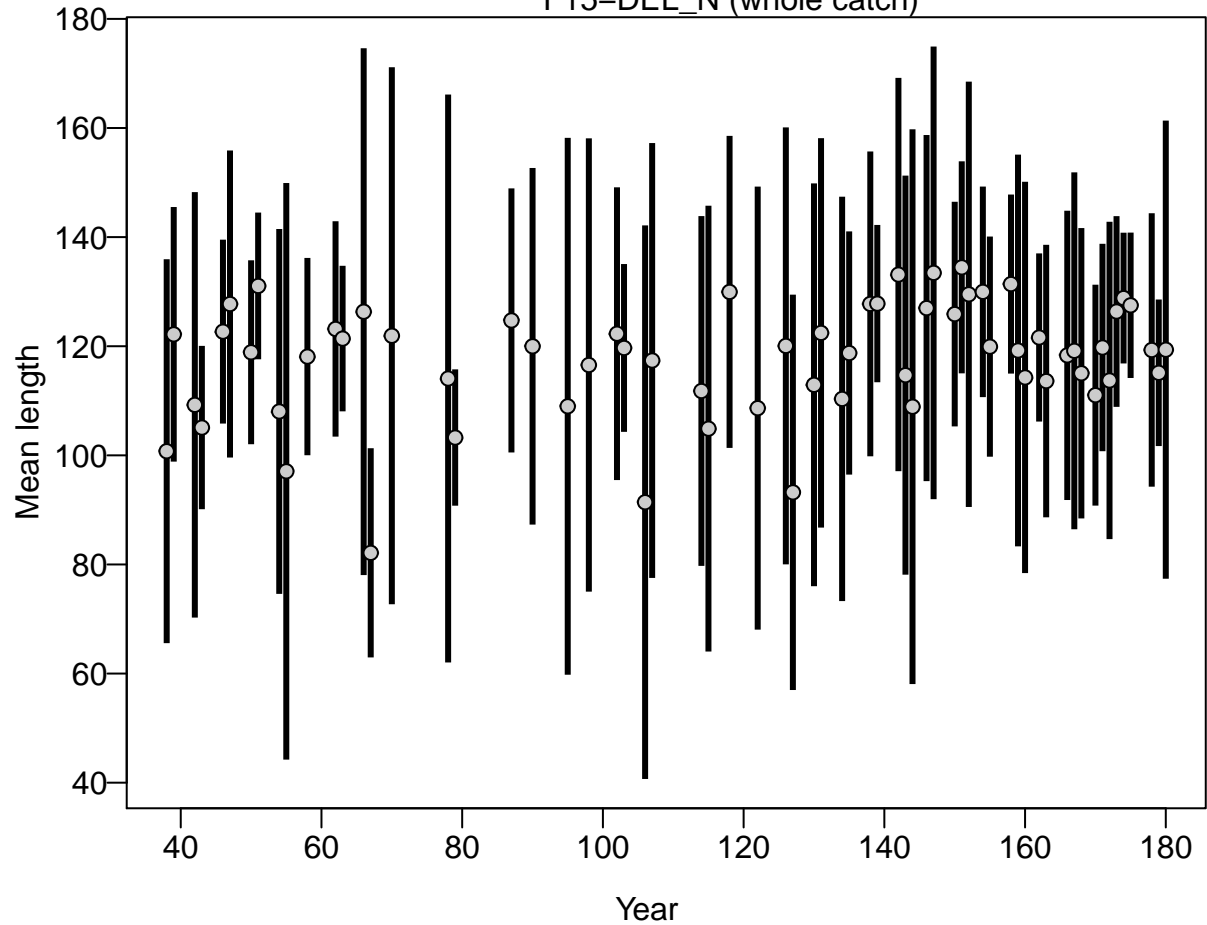


Proportion

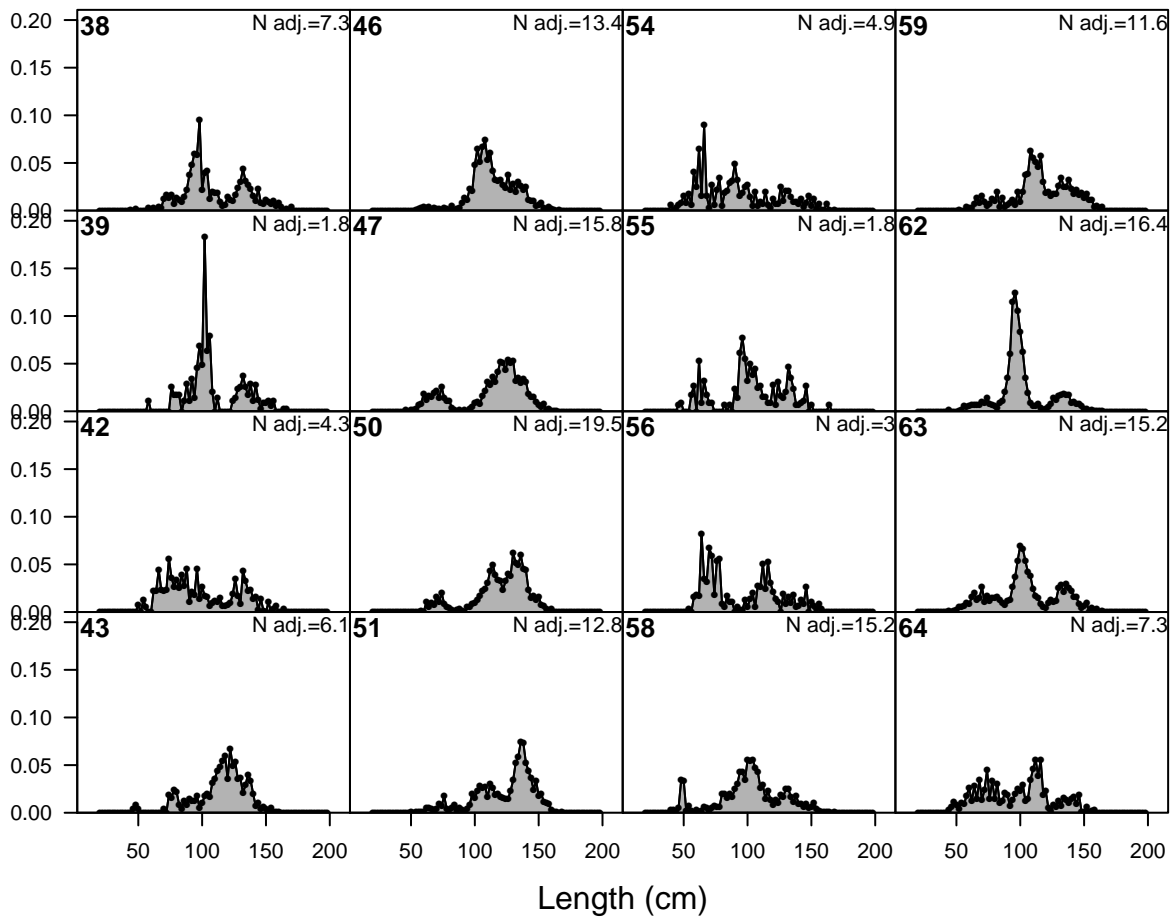
Length (cm)



F15-DEL\_N (whole catch)

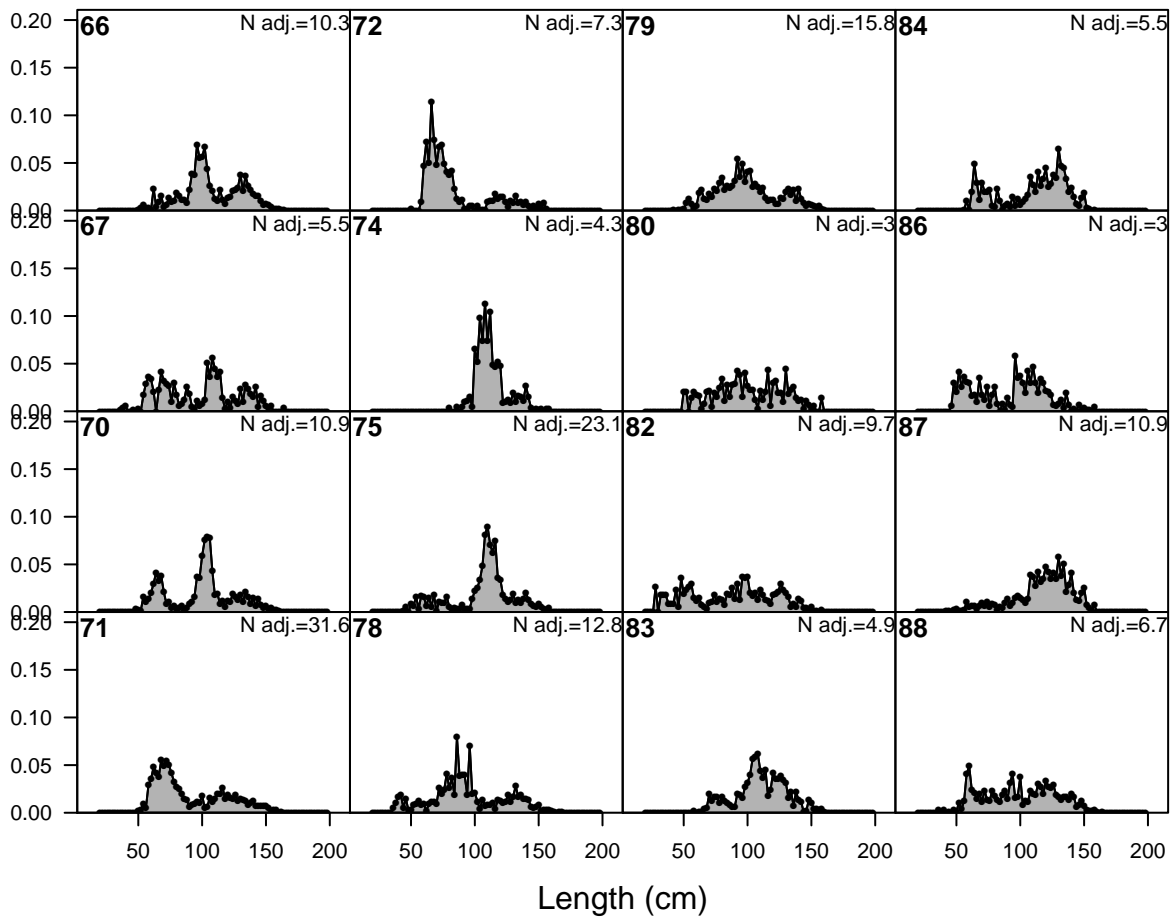


Proportion

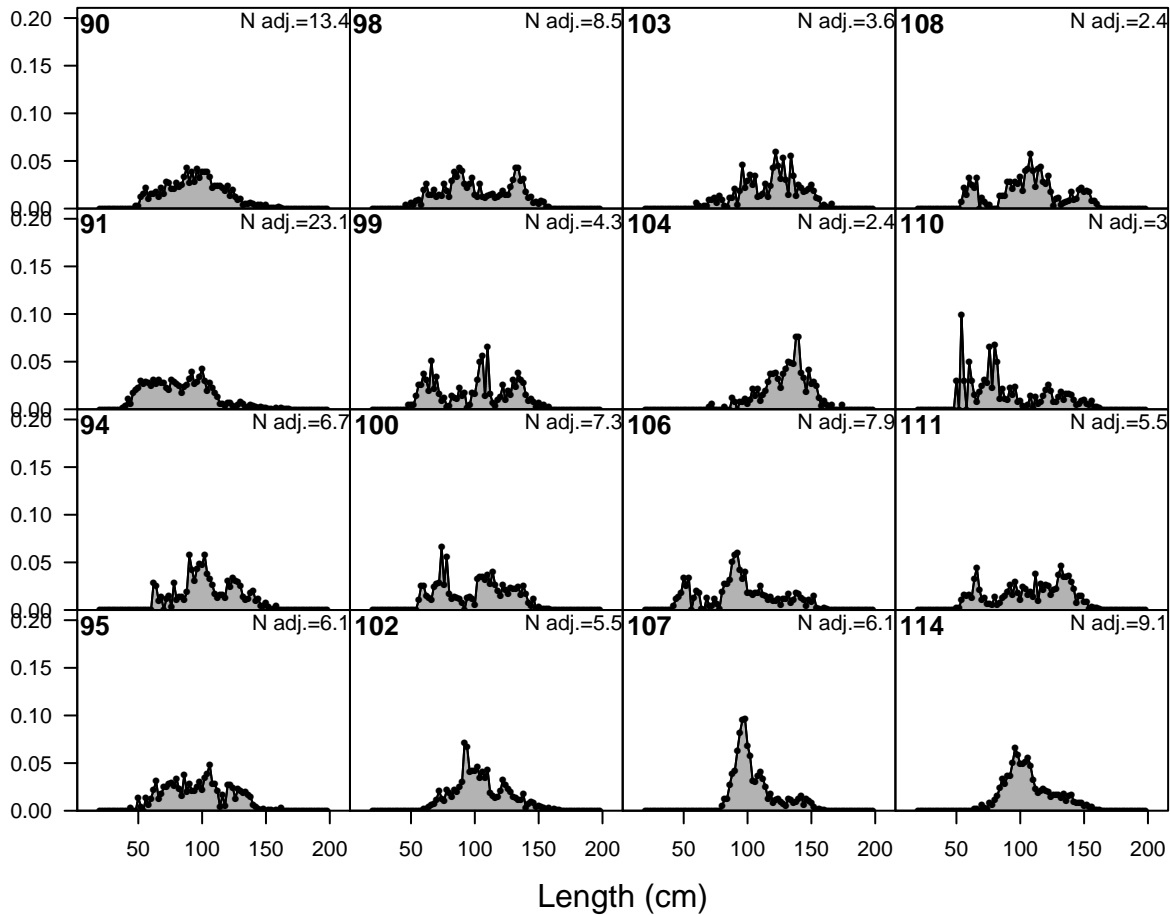




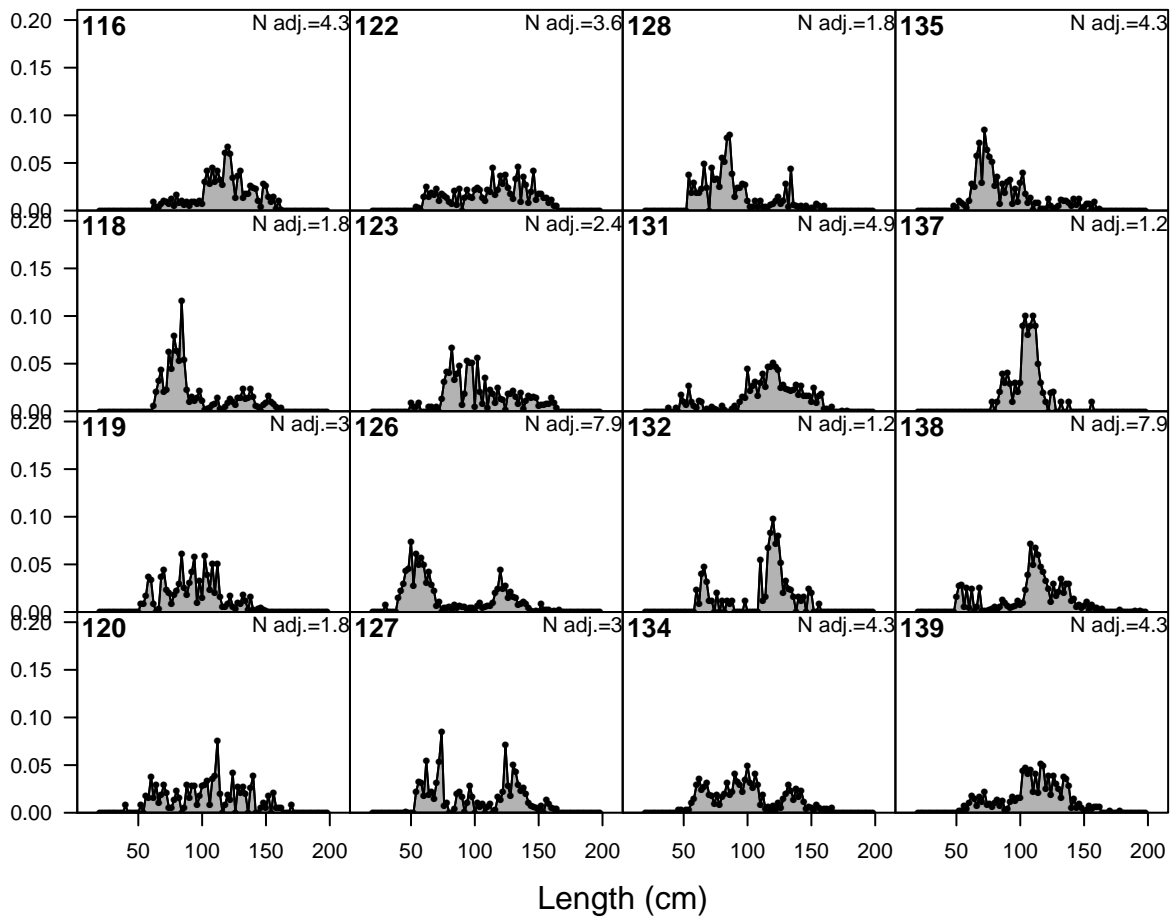
Proportion



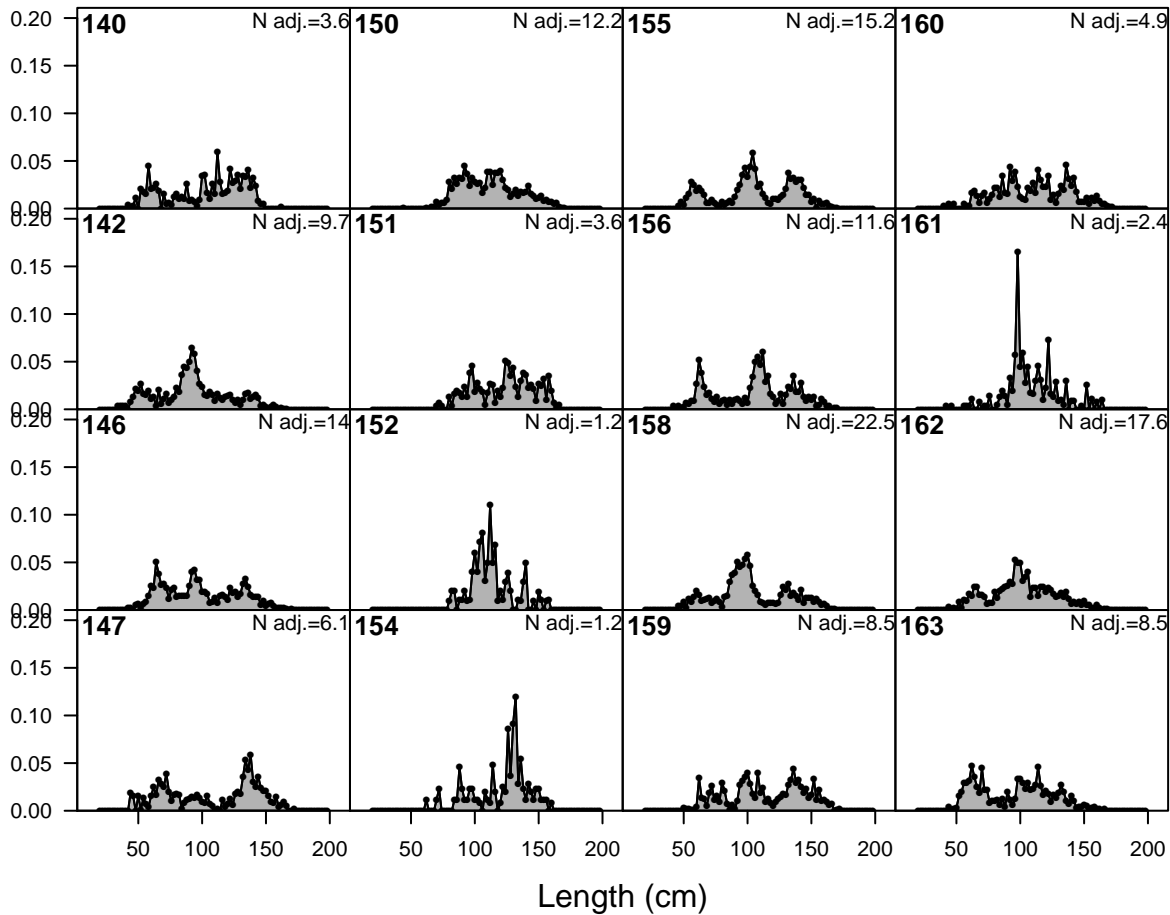
Proportion



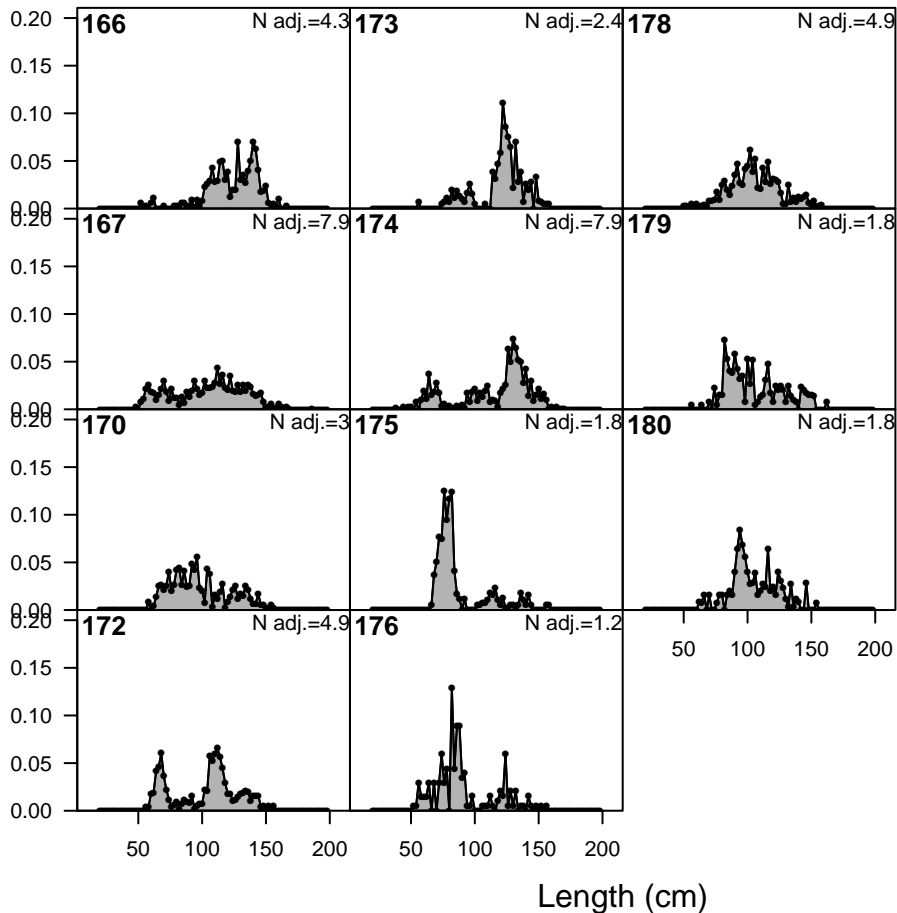
Proportion

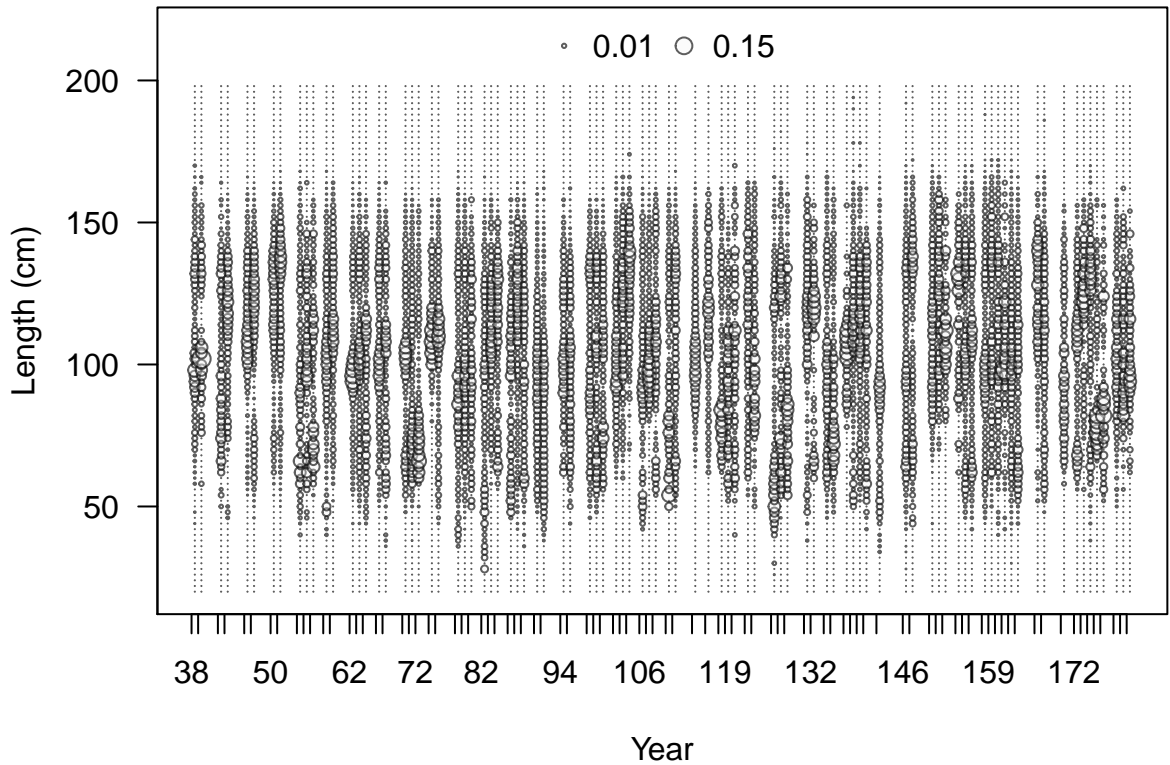


Proportion

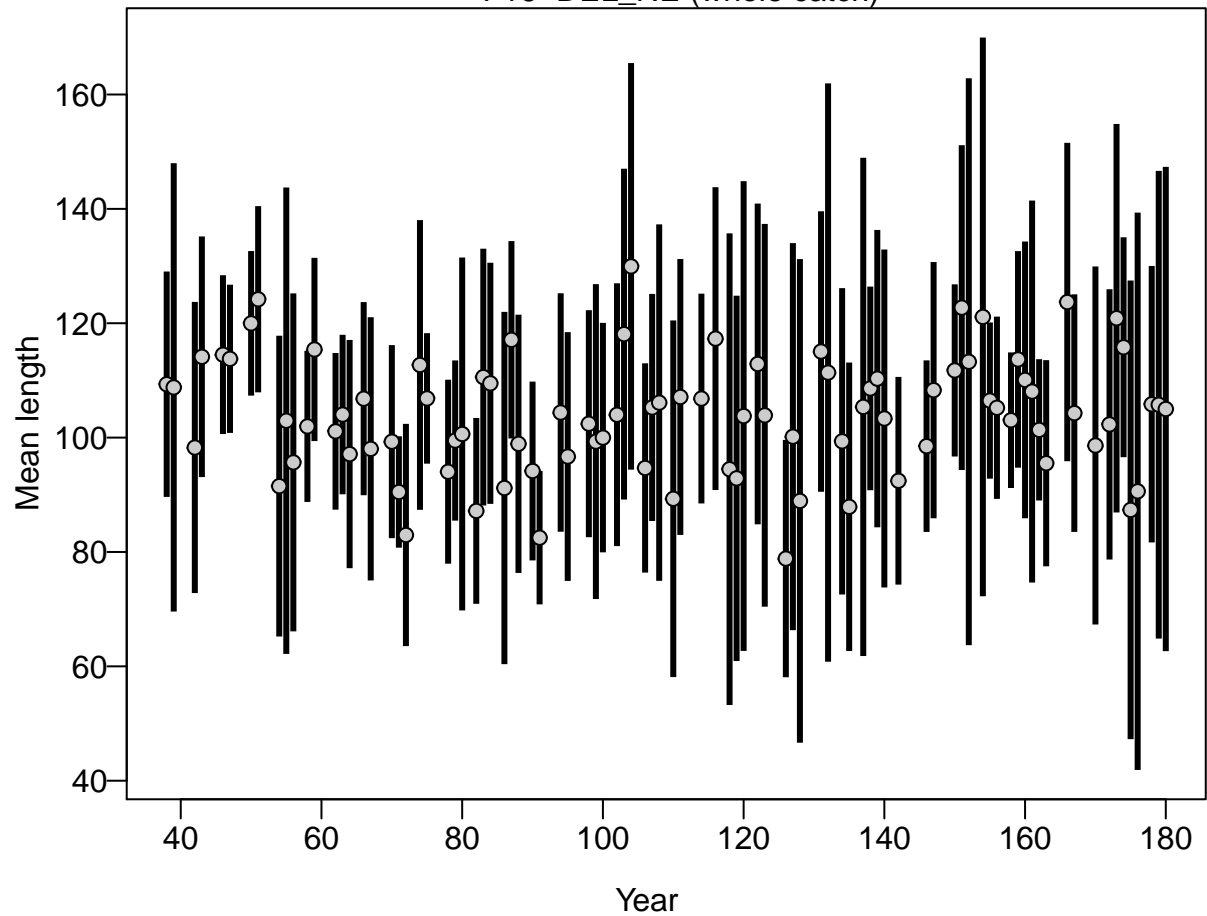


Proportion

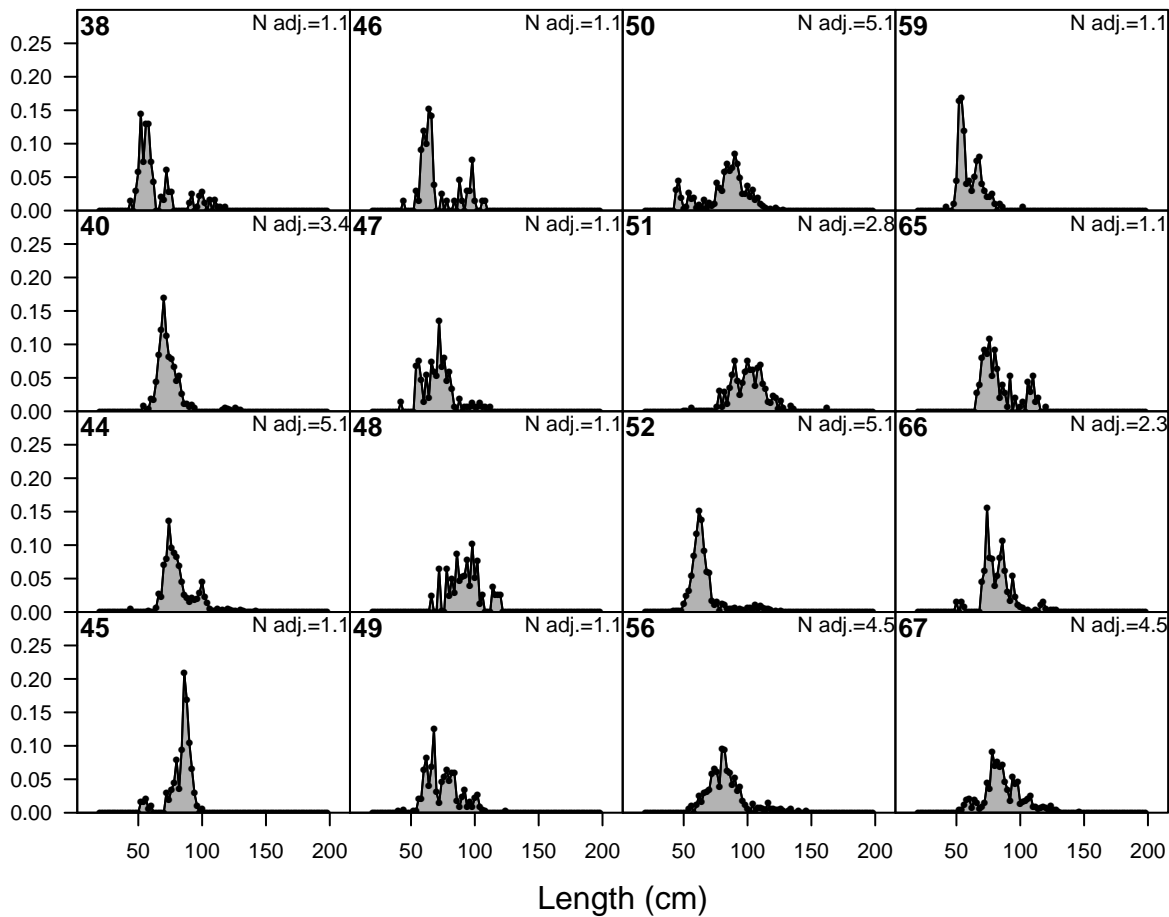




F16-DEL\_NE (whole catch)

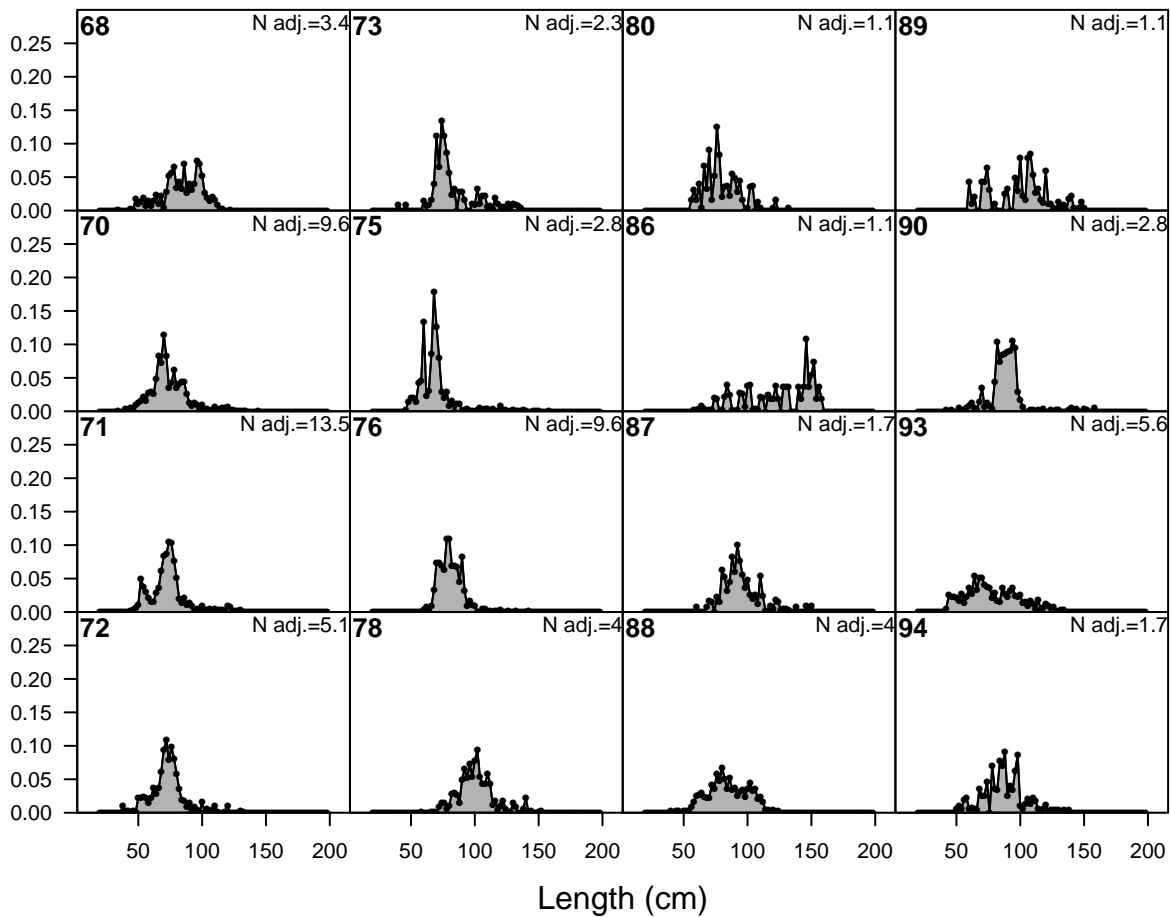


Proportion

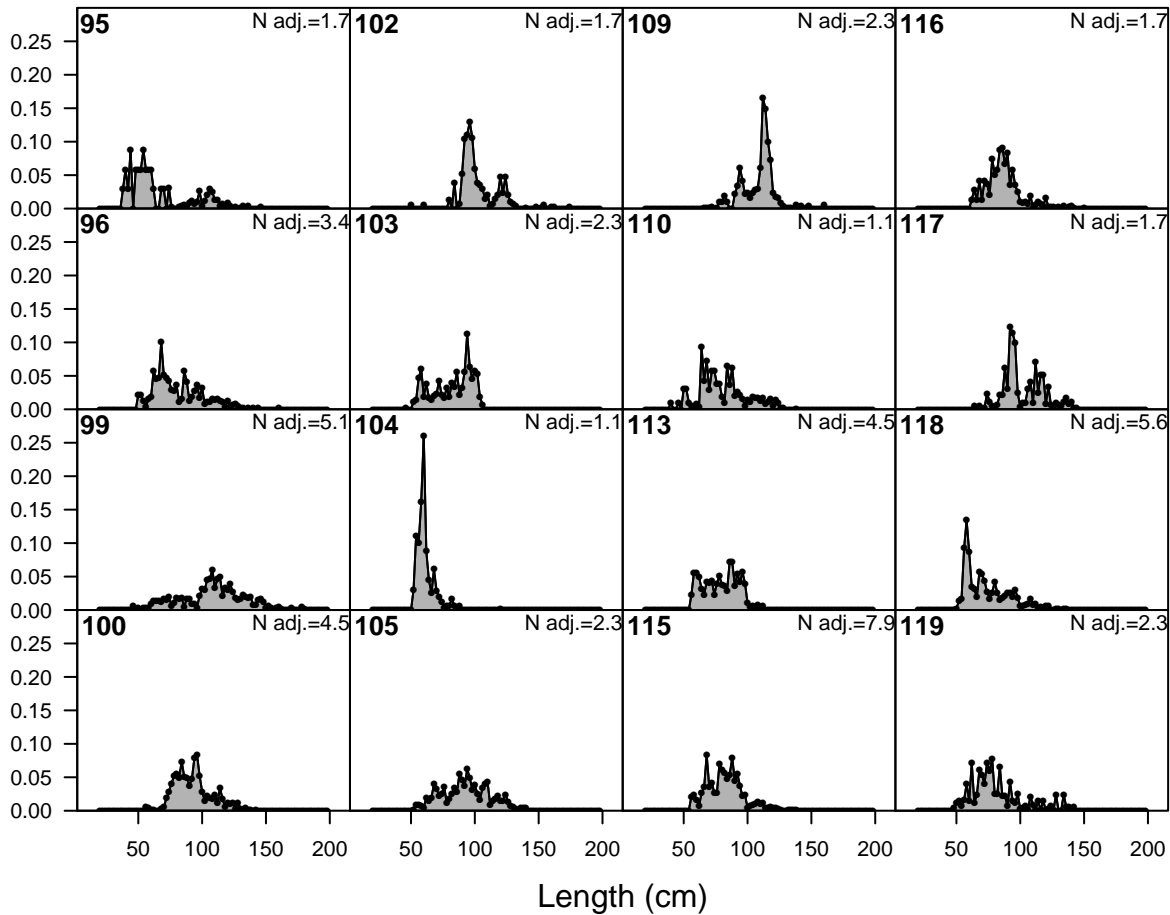




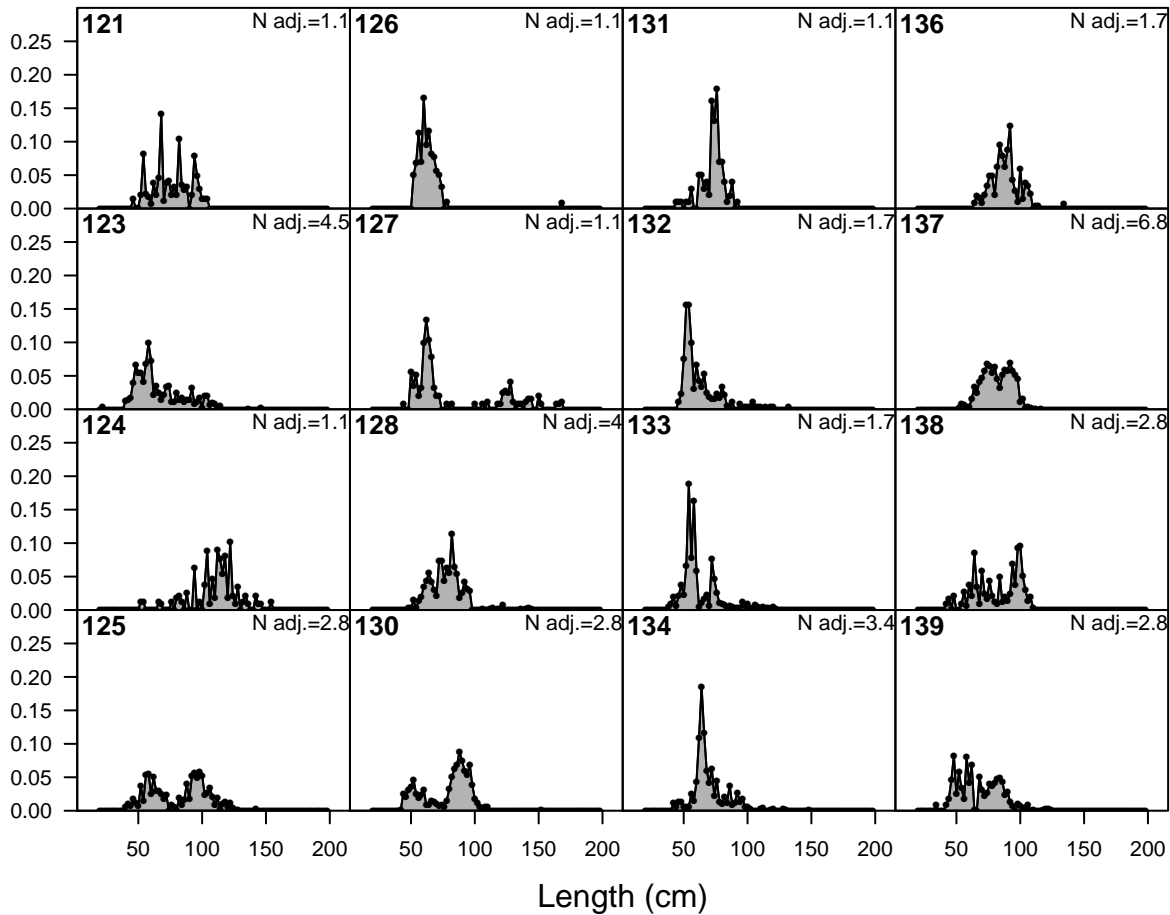
Proportion



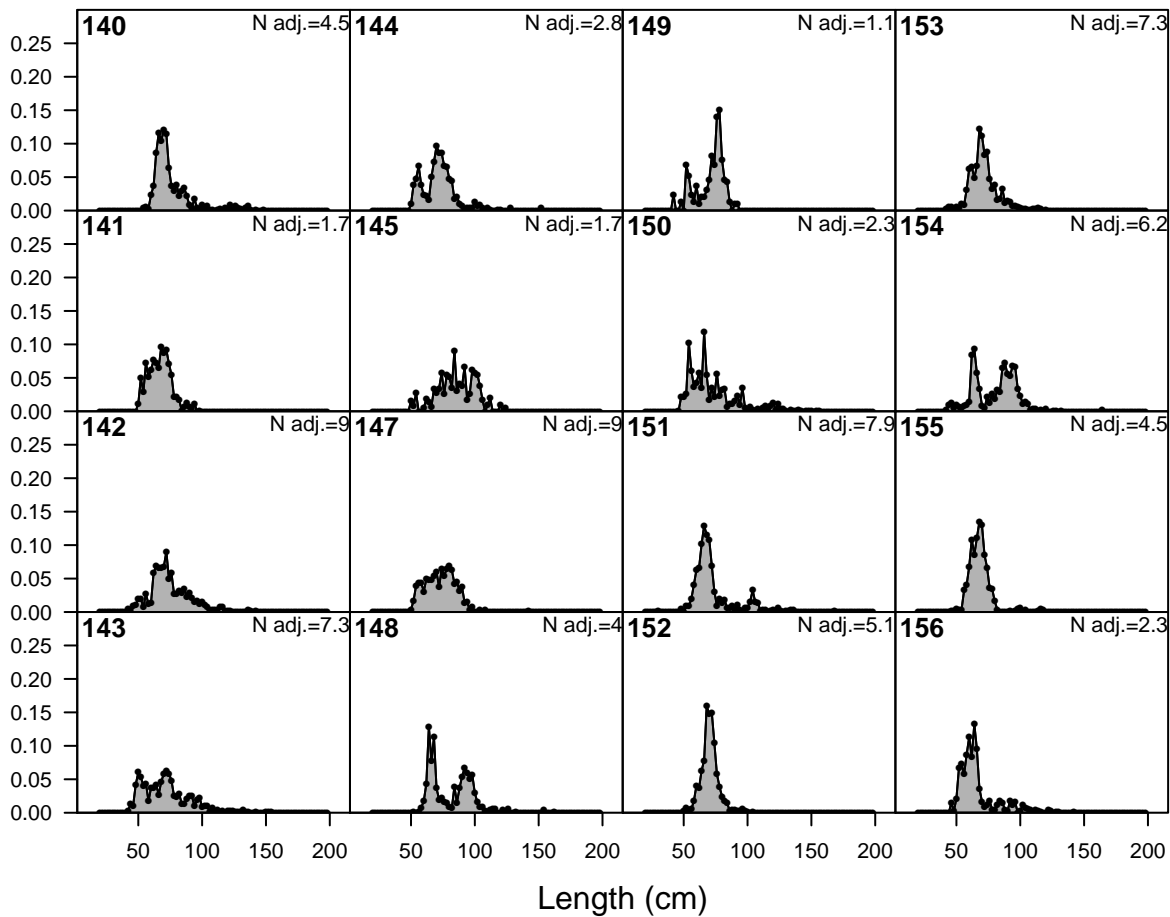
Proportion



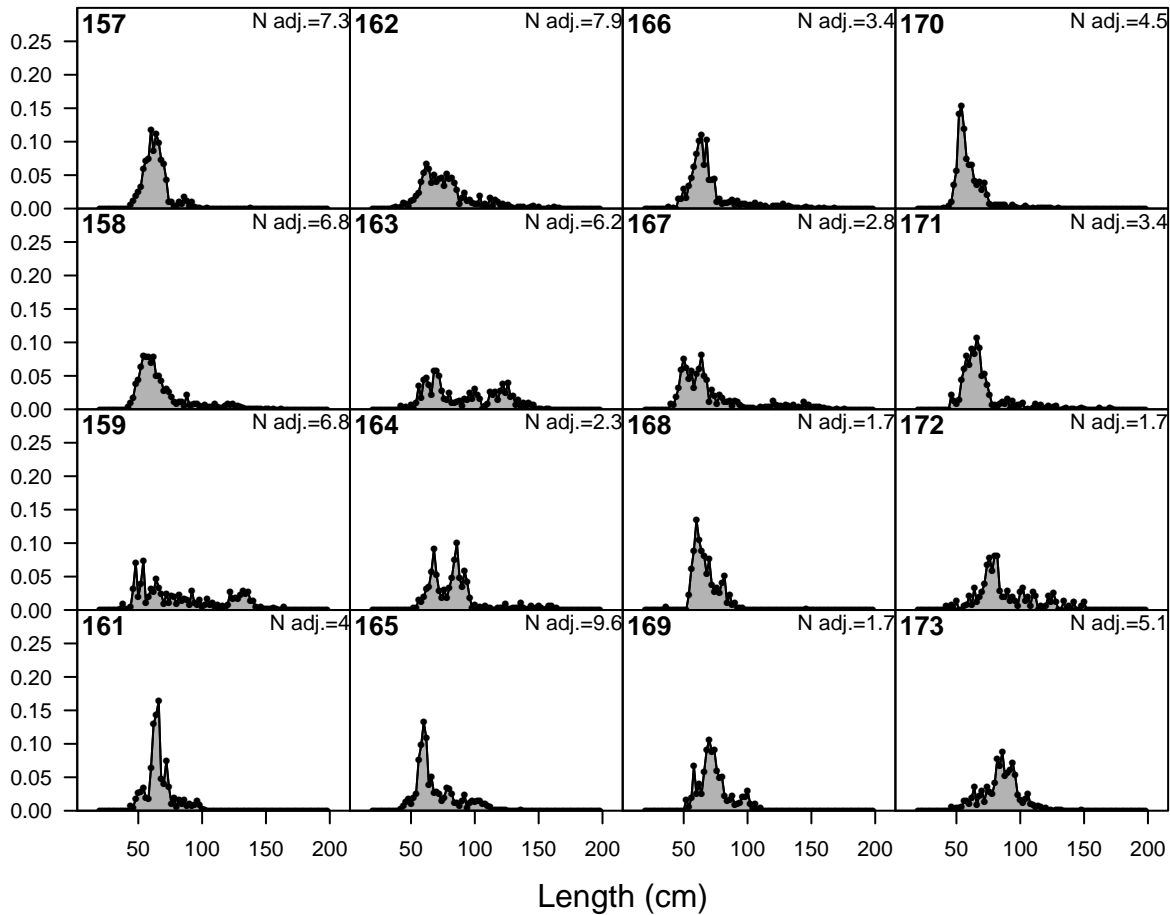
Proportion

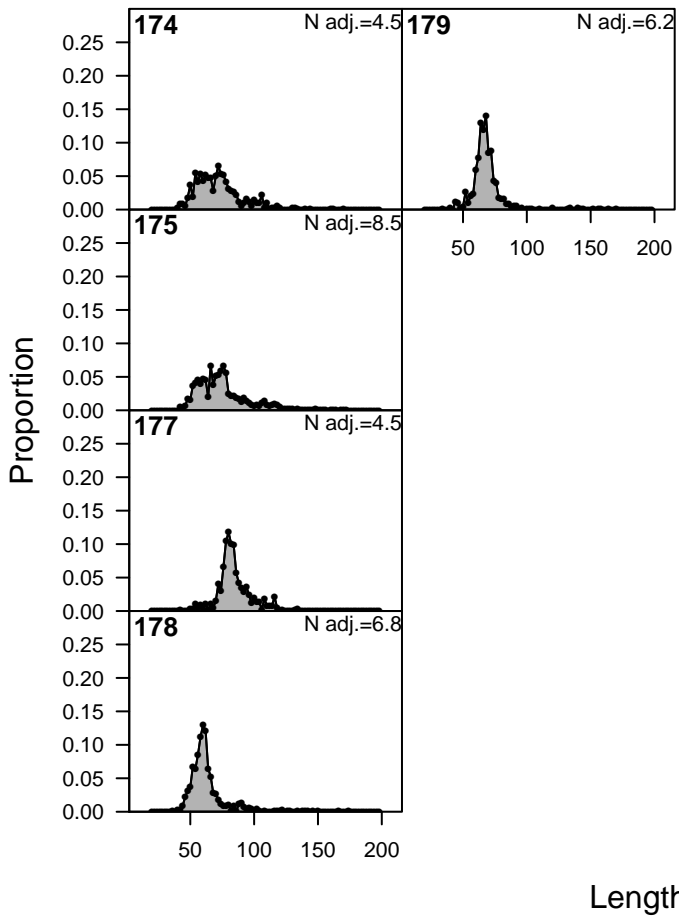


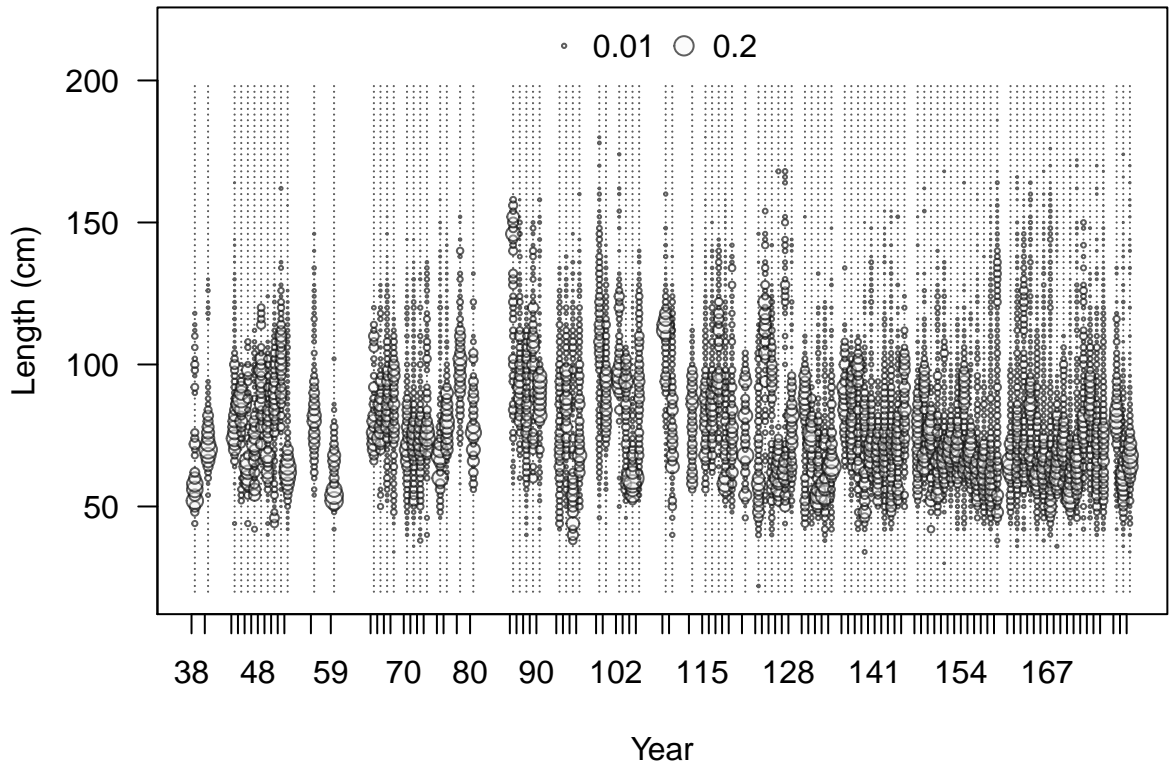
Proportion



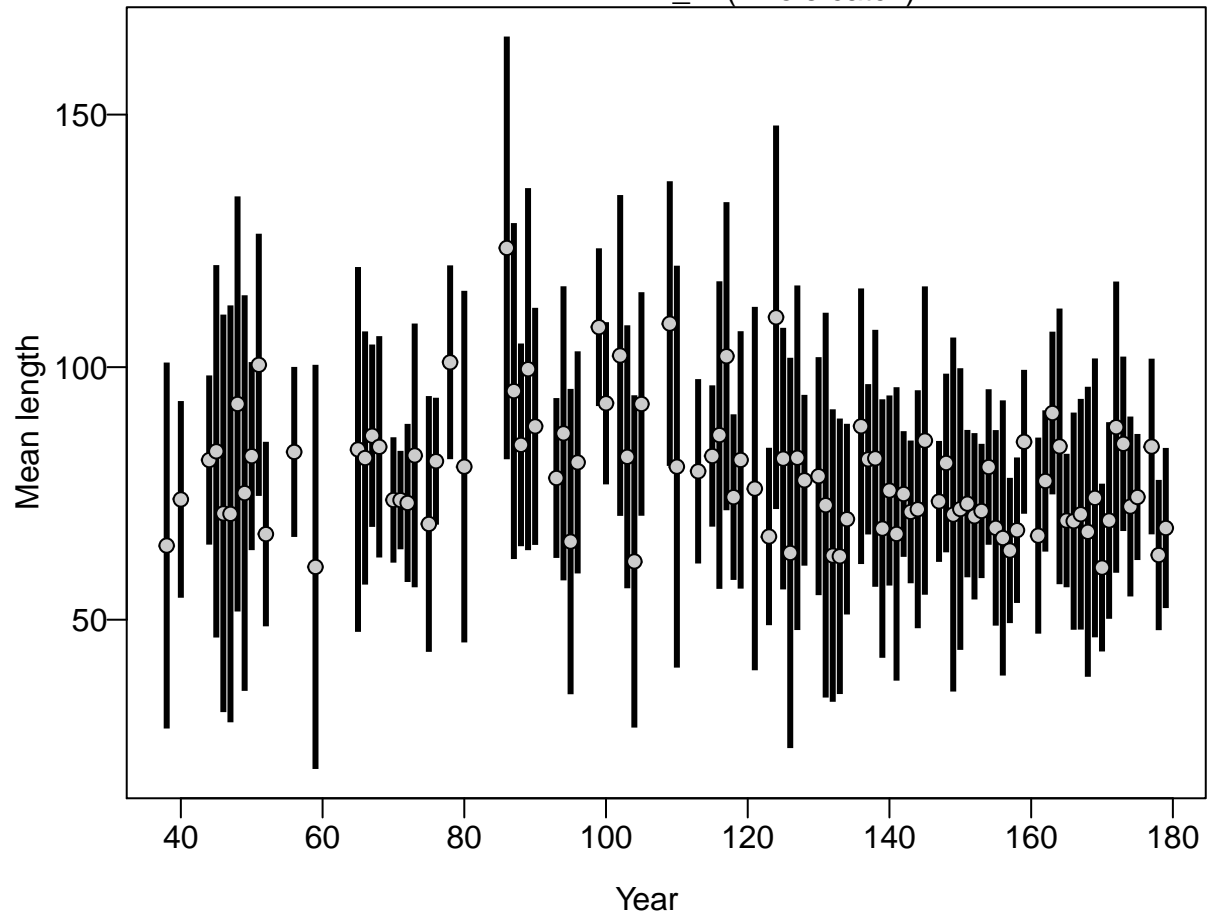
Proportion





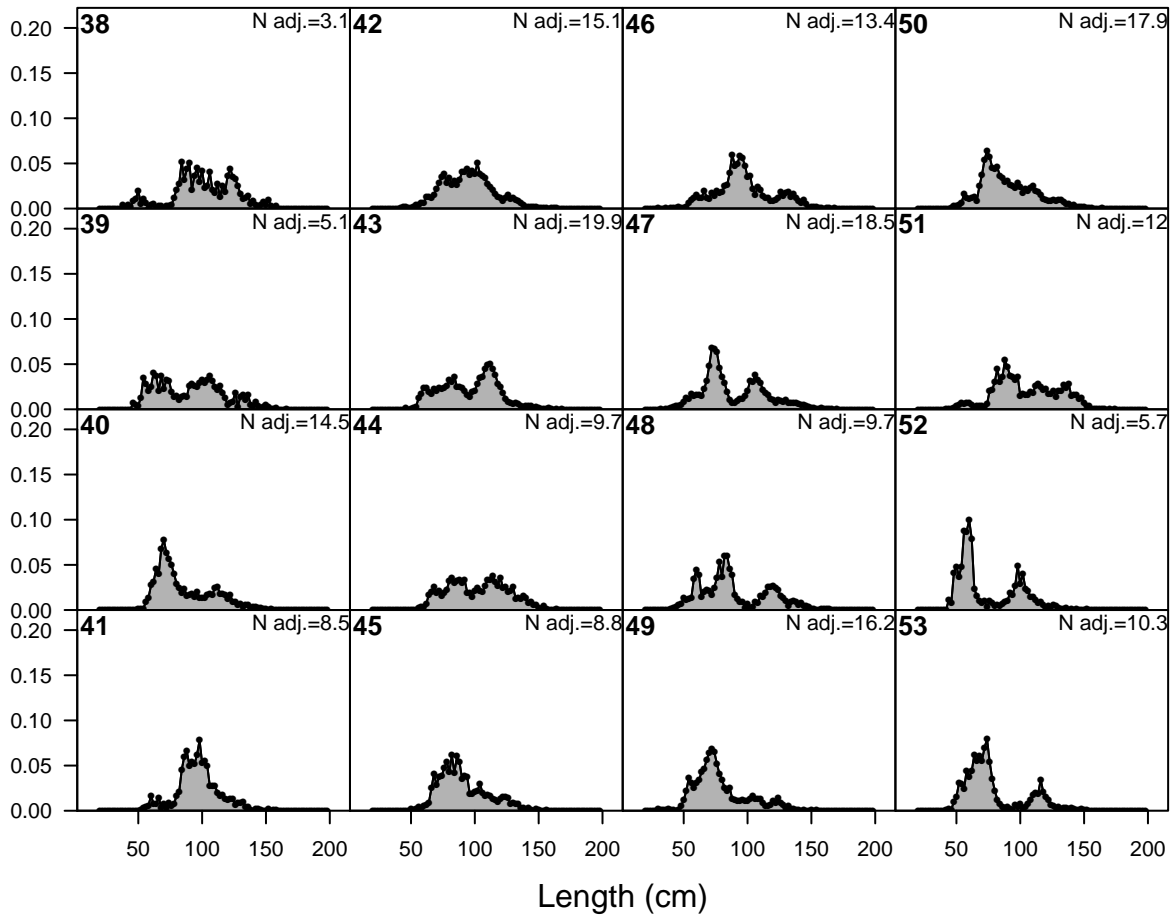


F17-DEL\_M (whole catch)

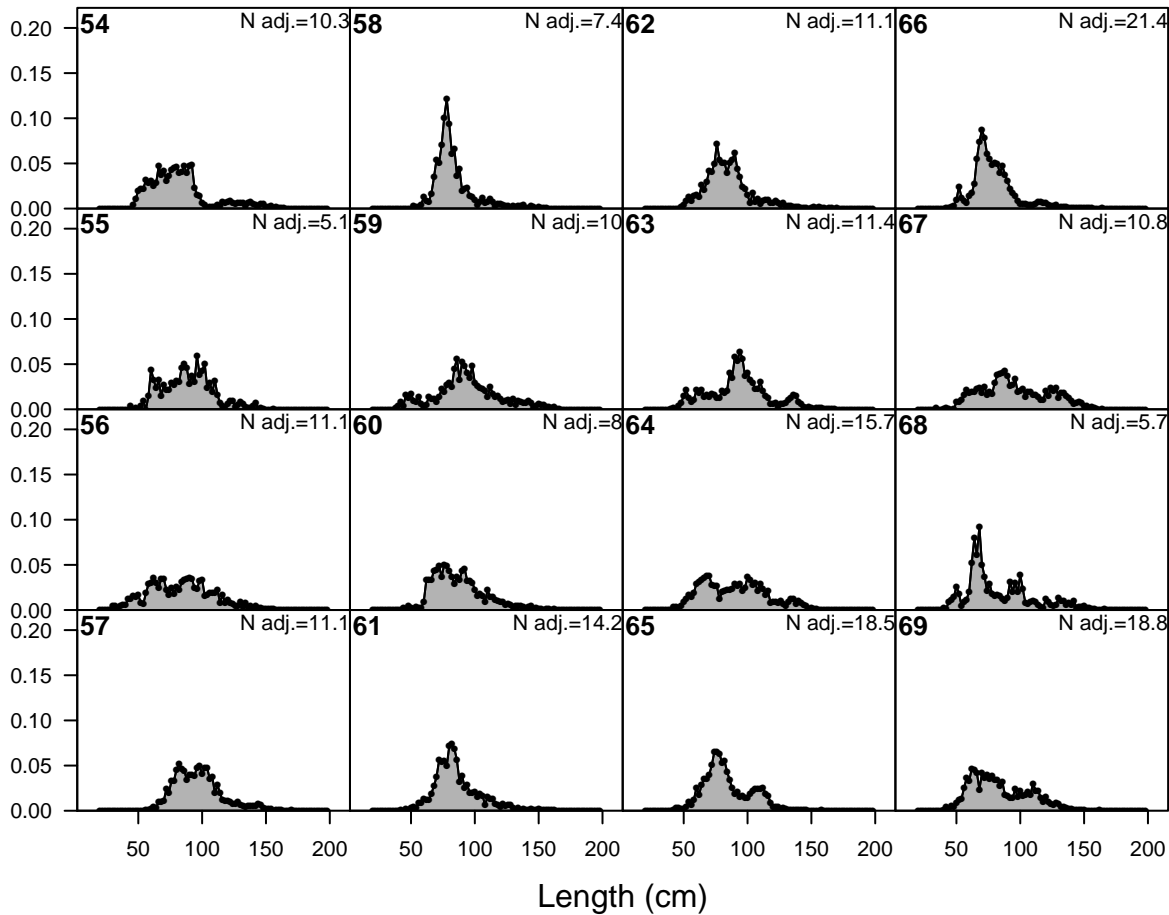




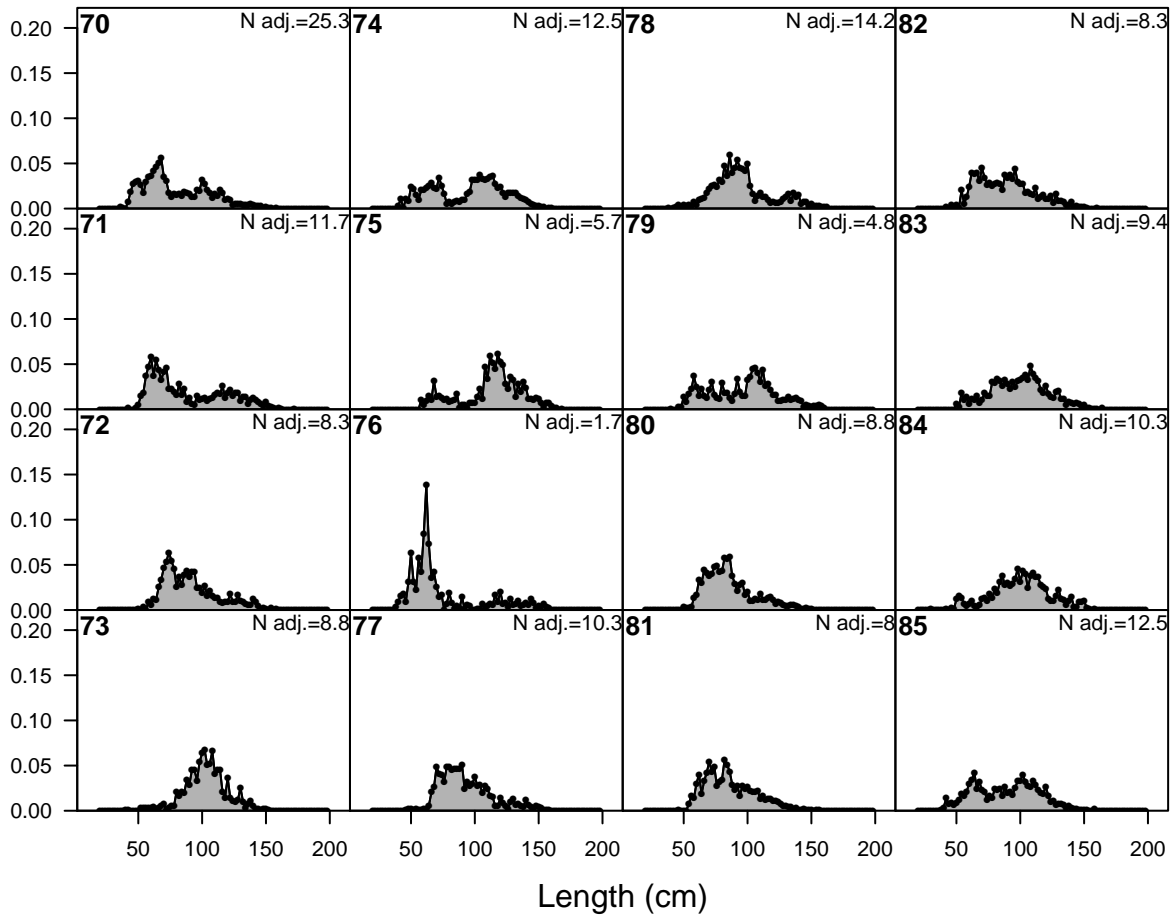
Proportion



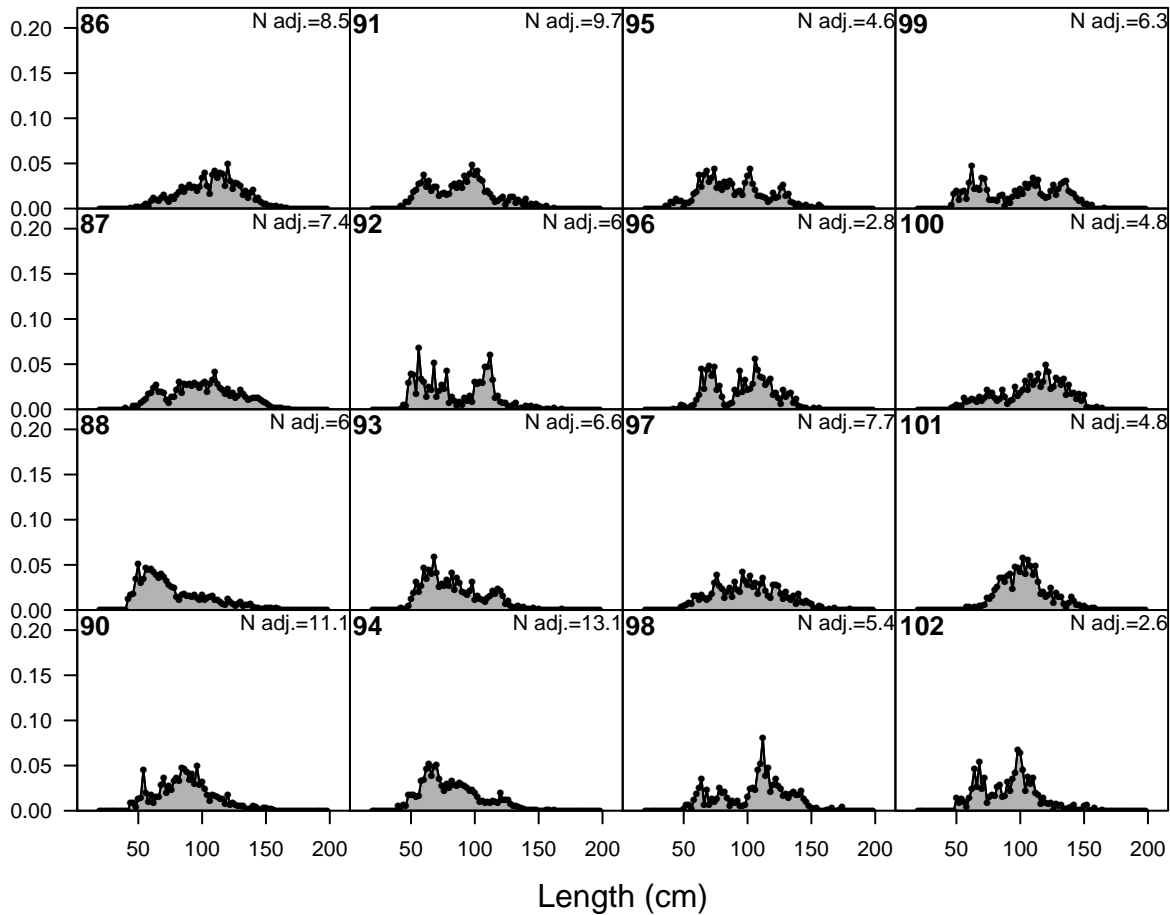
Proportion



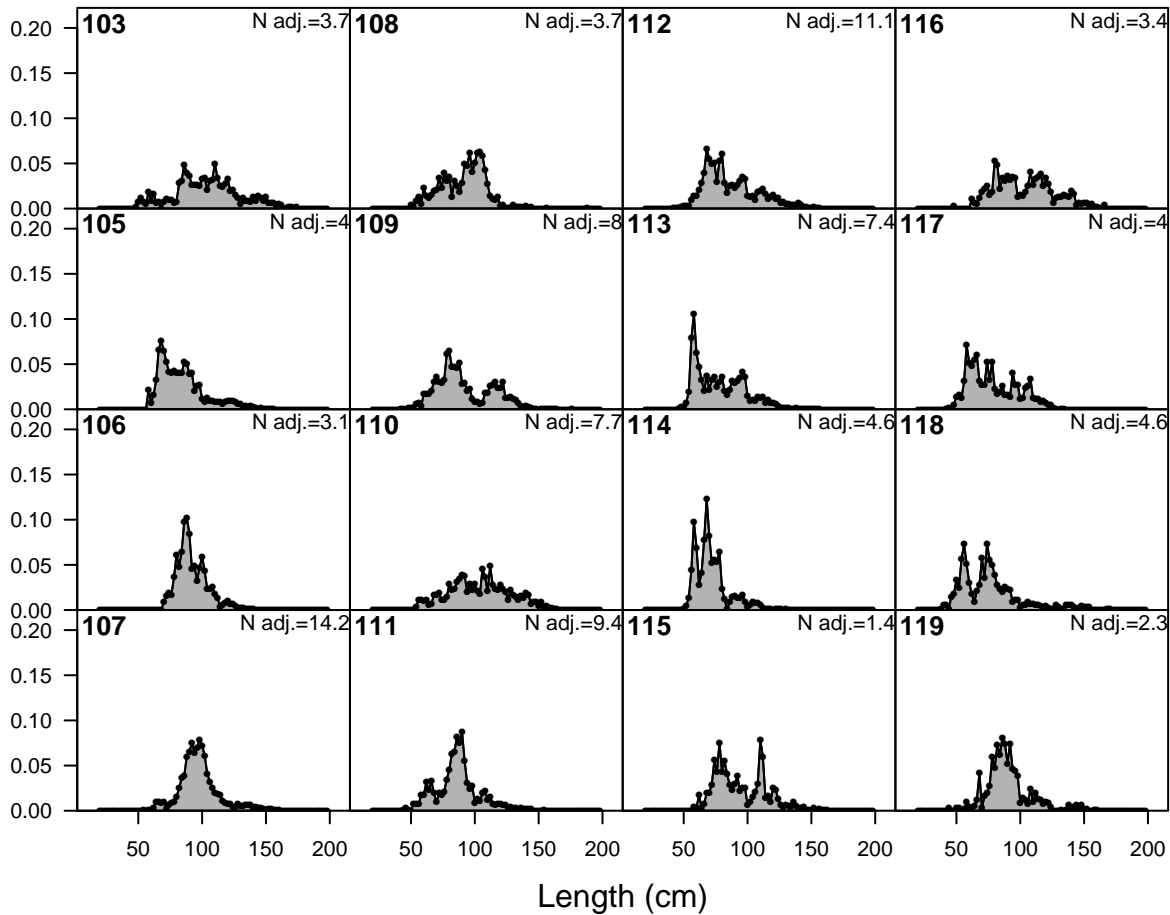
Proportion



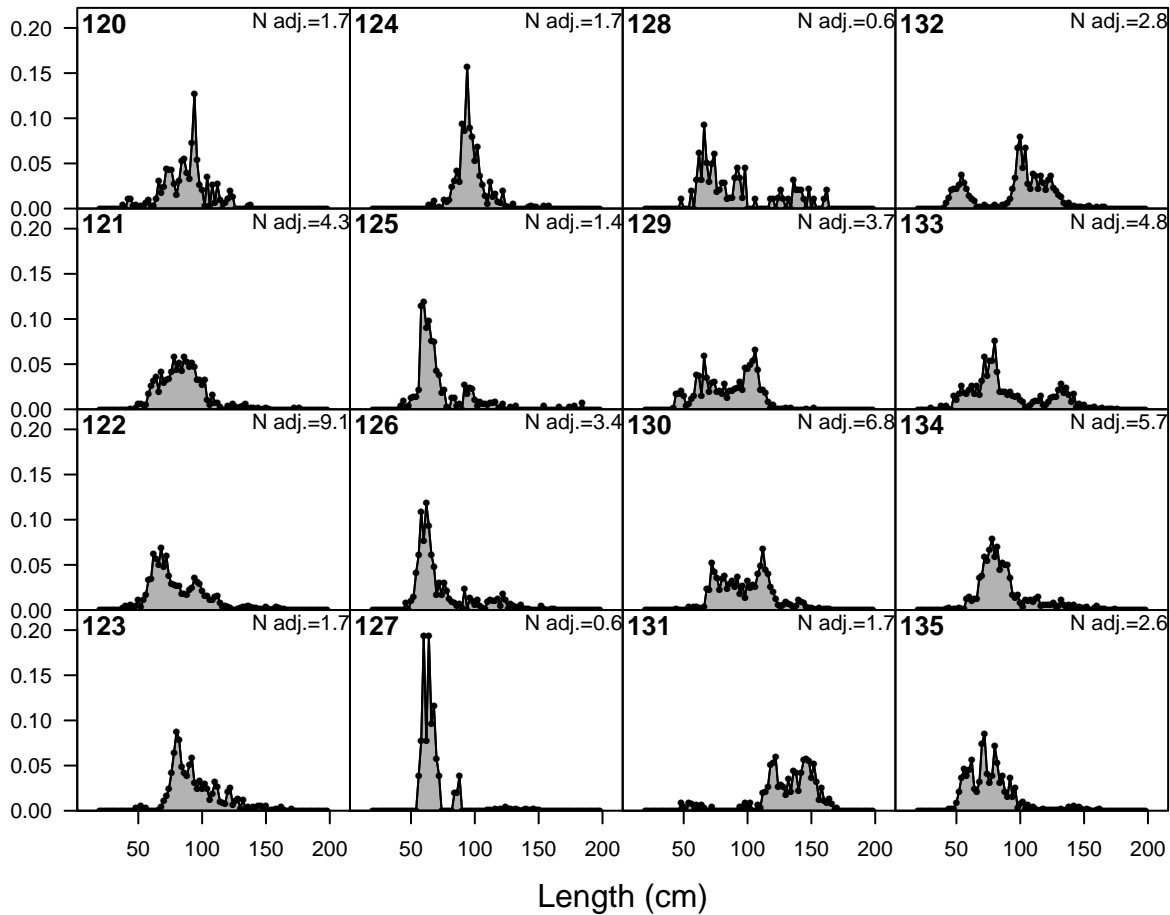
Proportion



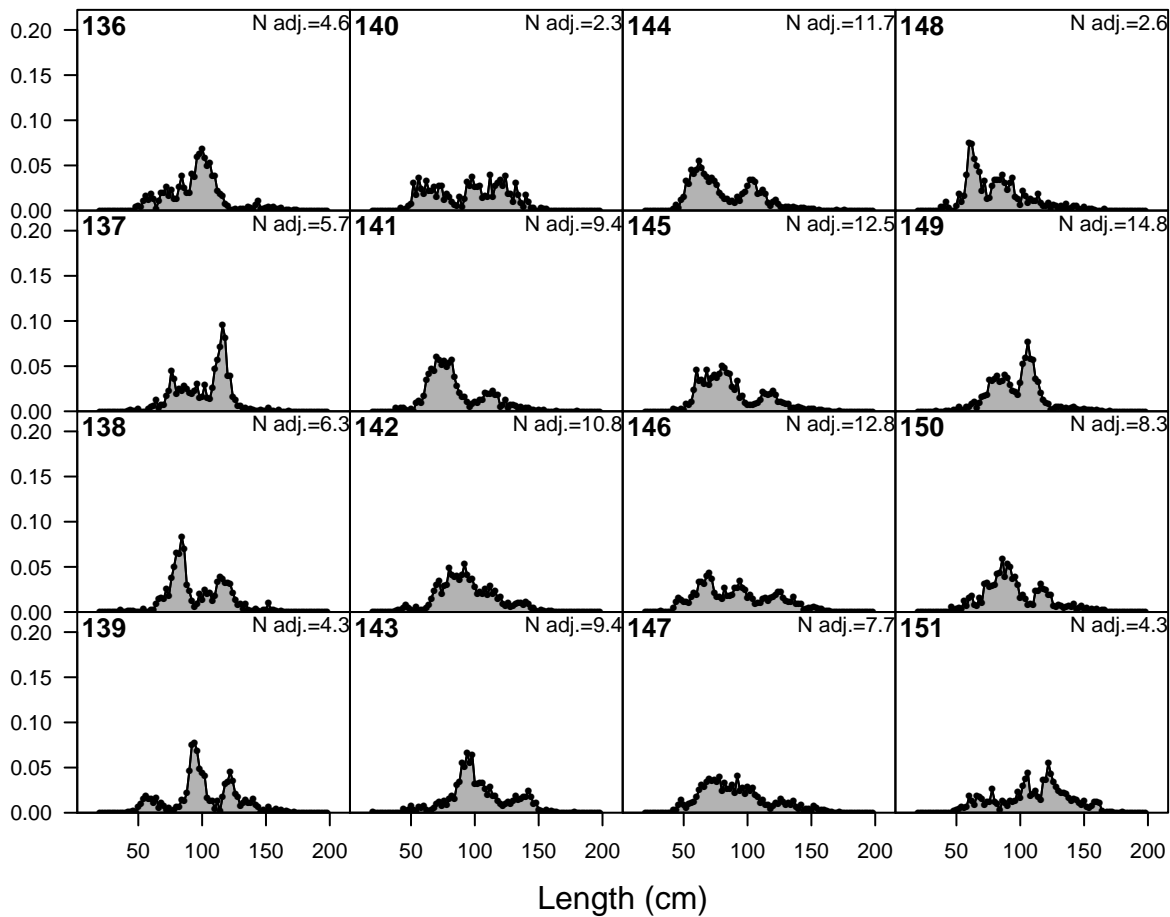
Proportion



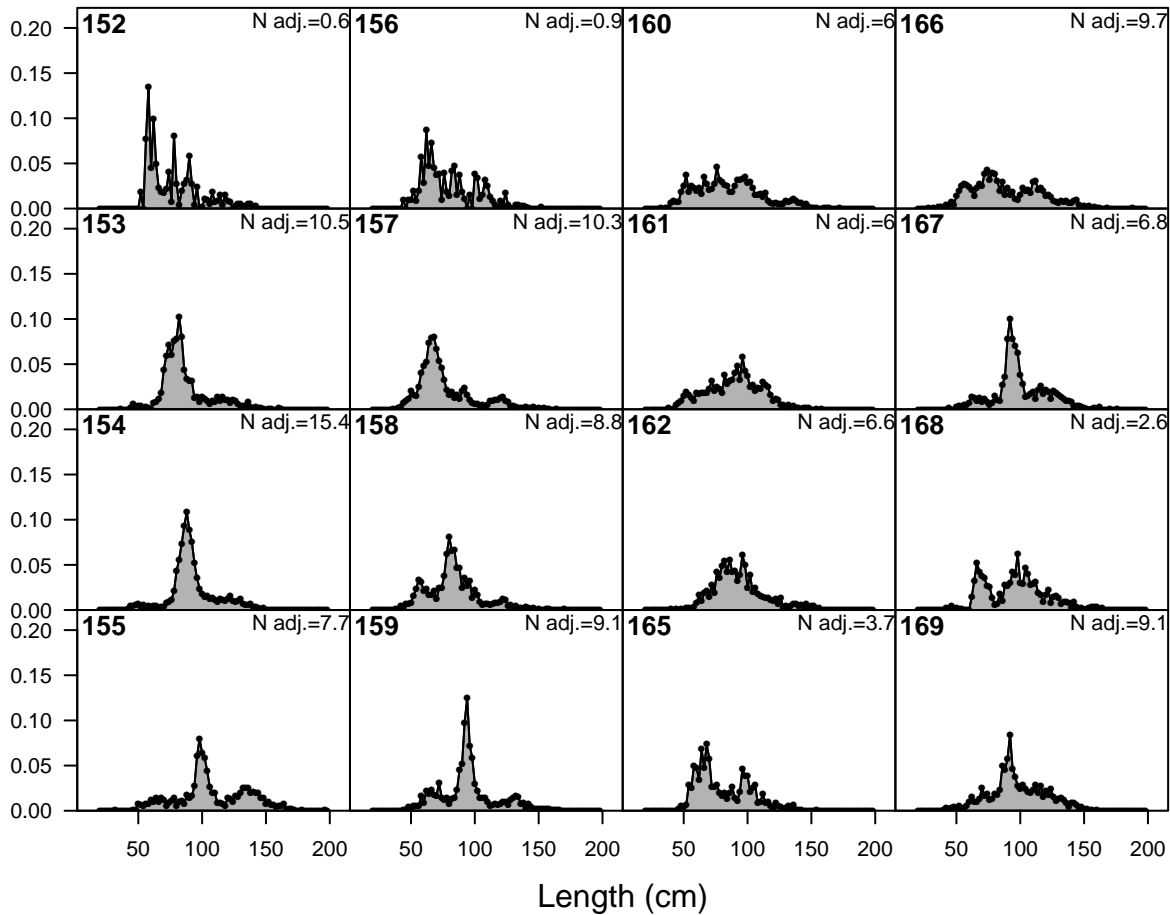
Proportion



Proportion

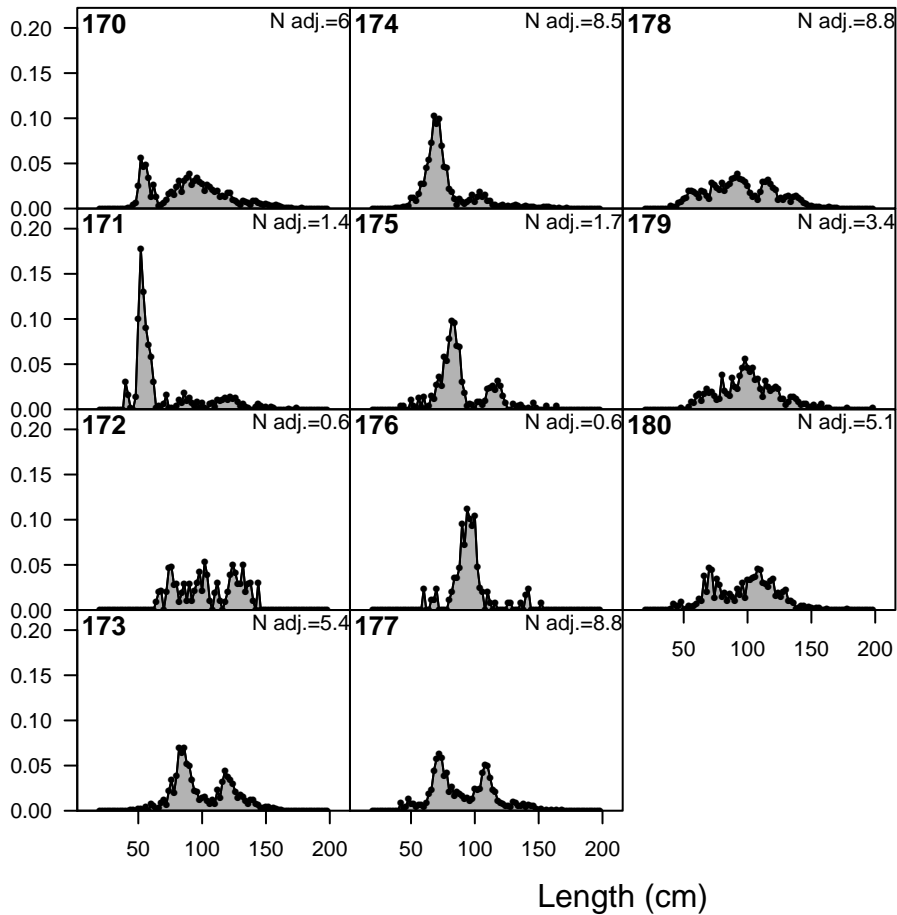


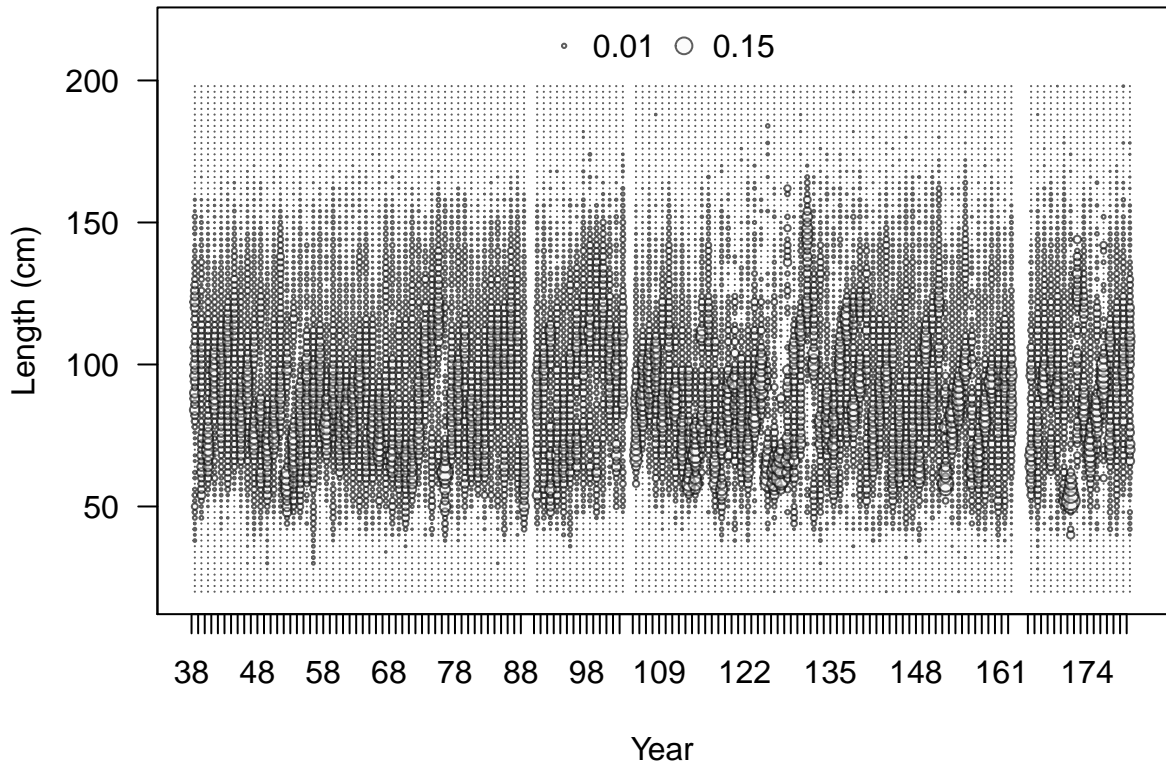
Proportion



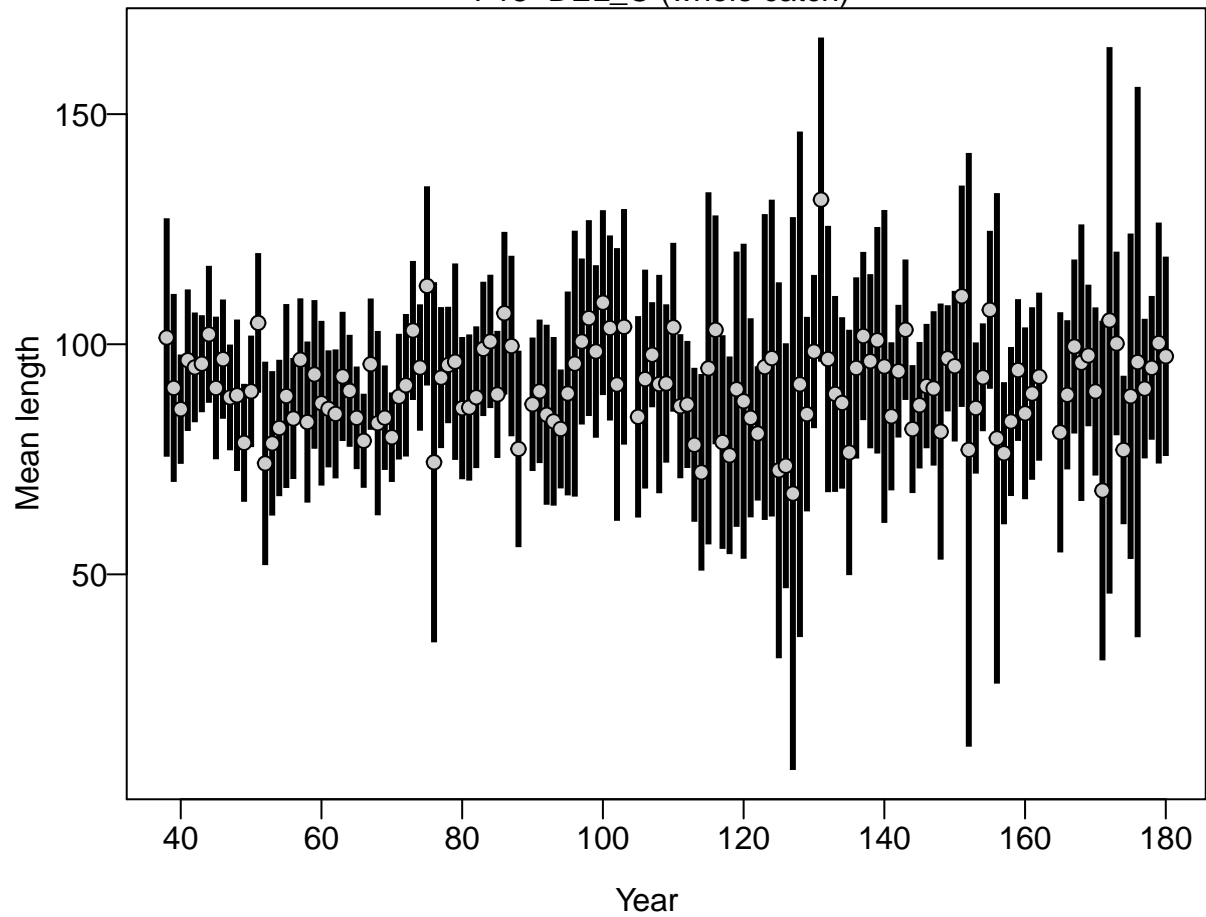


Proportion

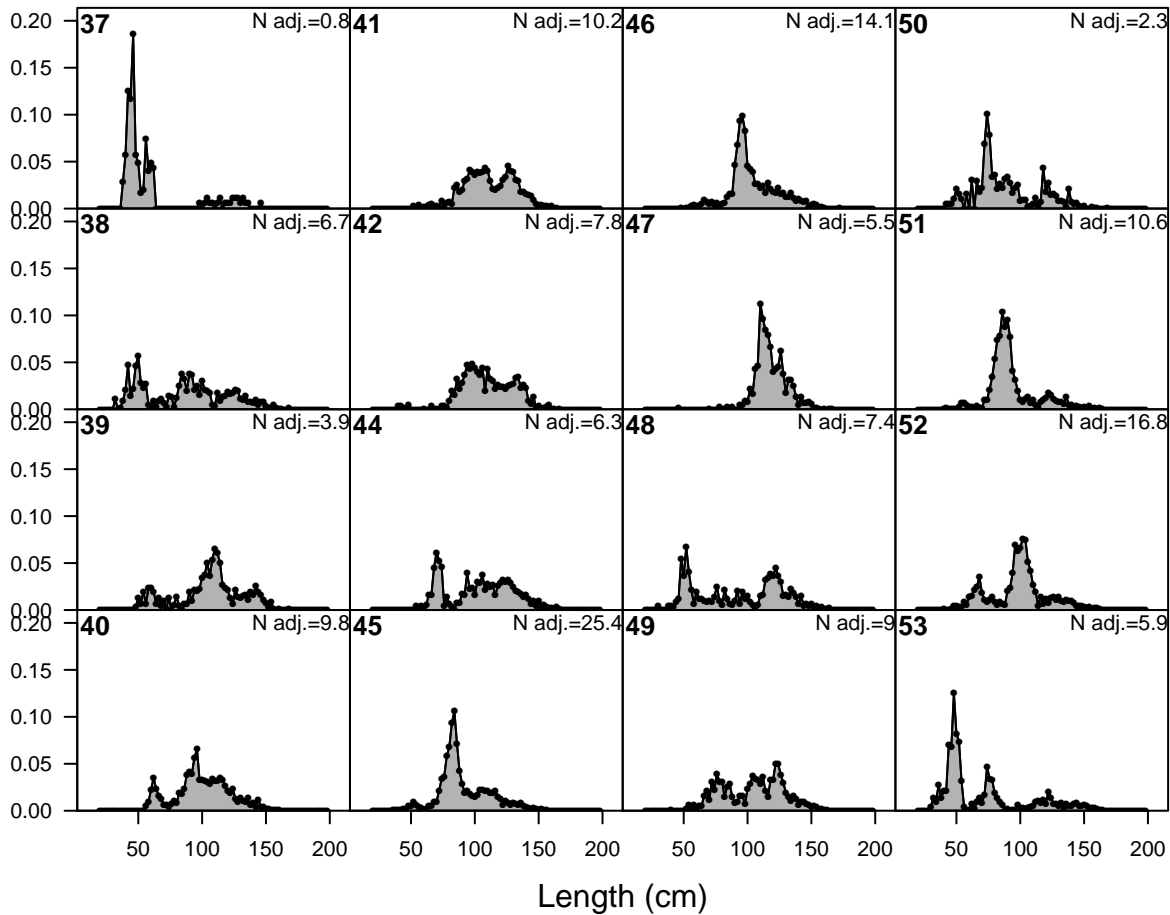




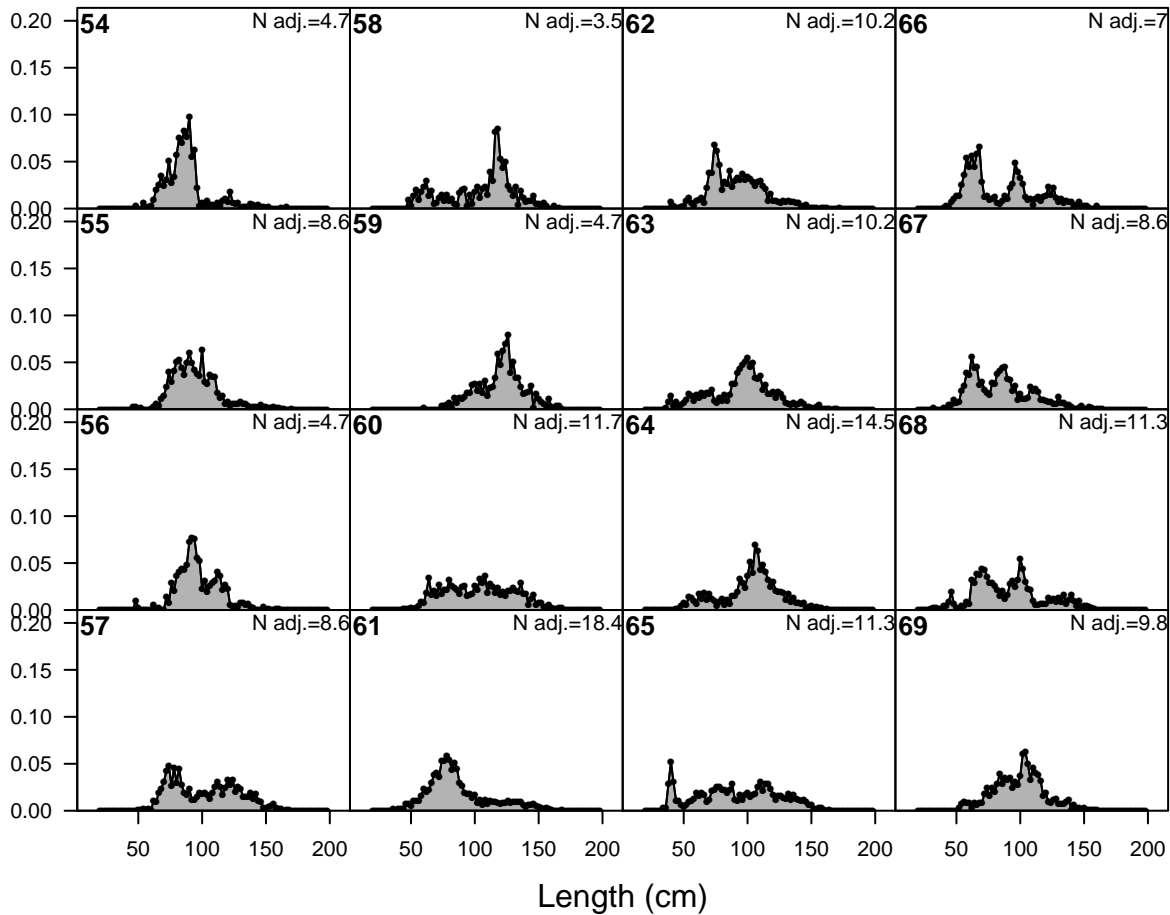
F18-DEL\_C (whole catch)



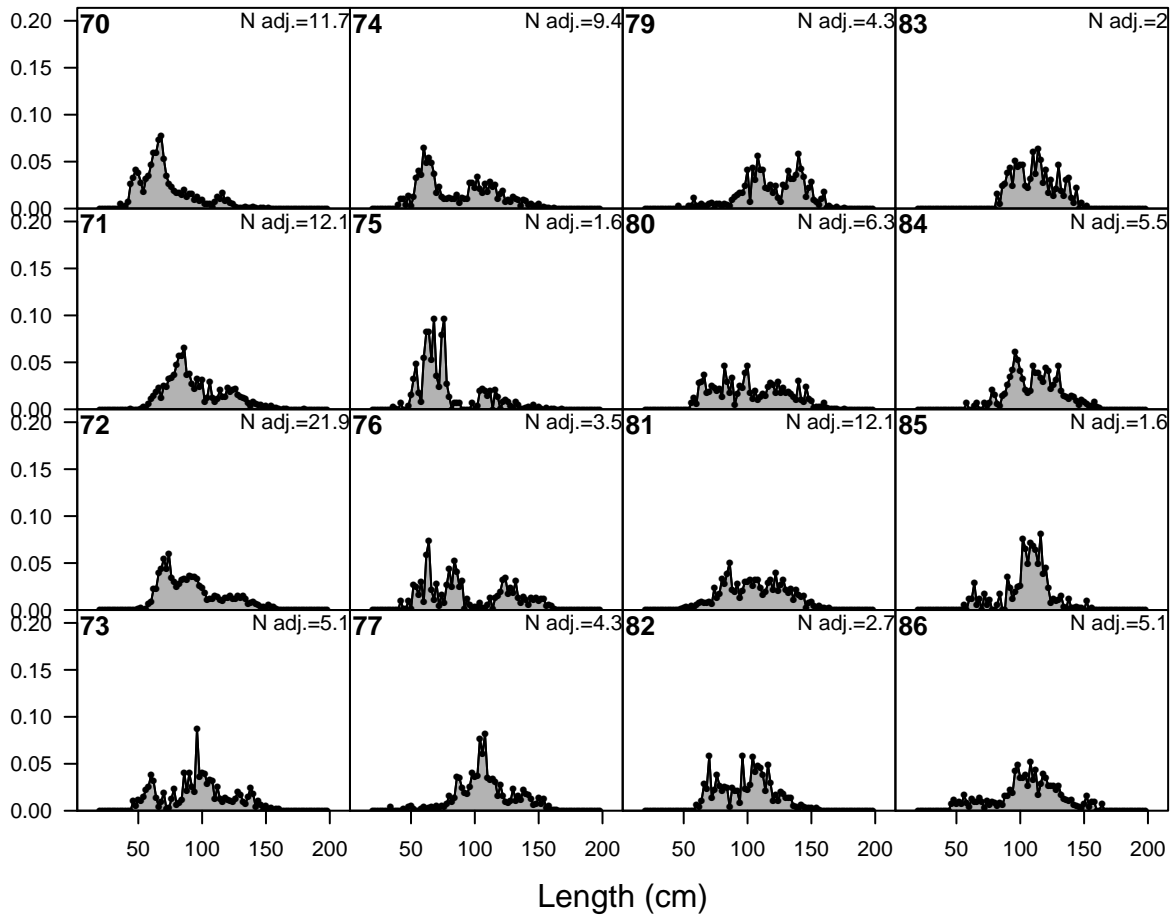
Proportion



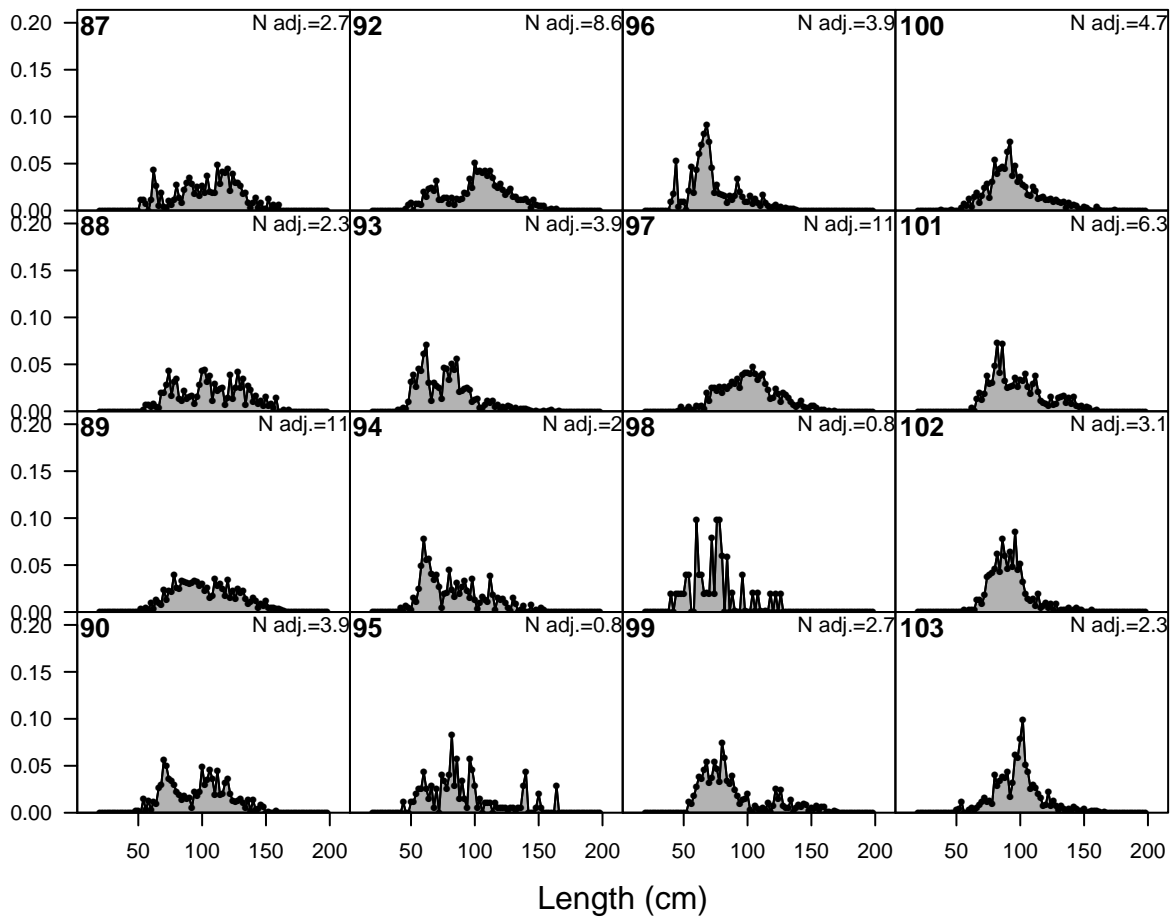
Proportion



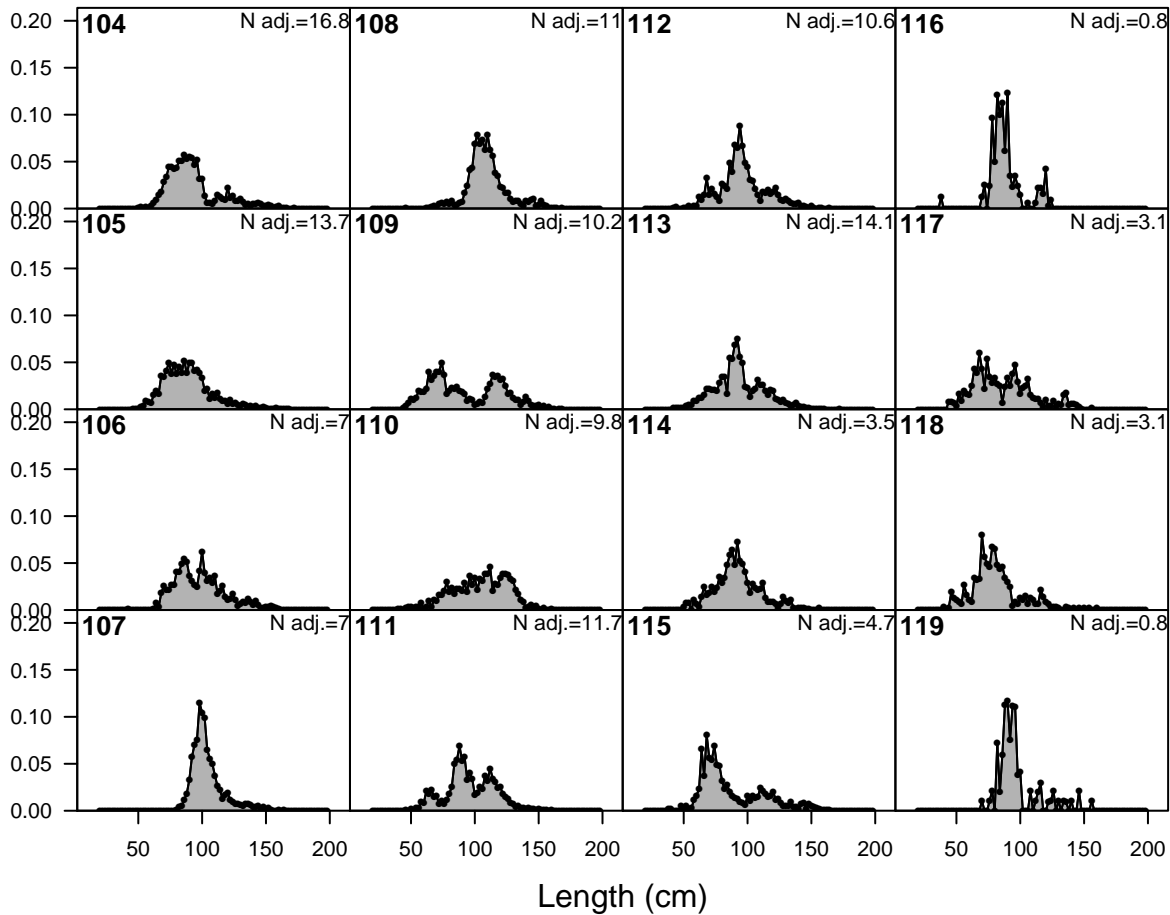
Proportion



Proportion

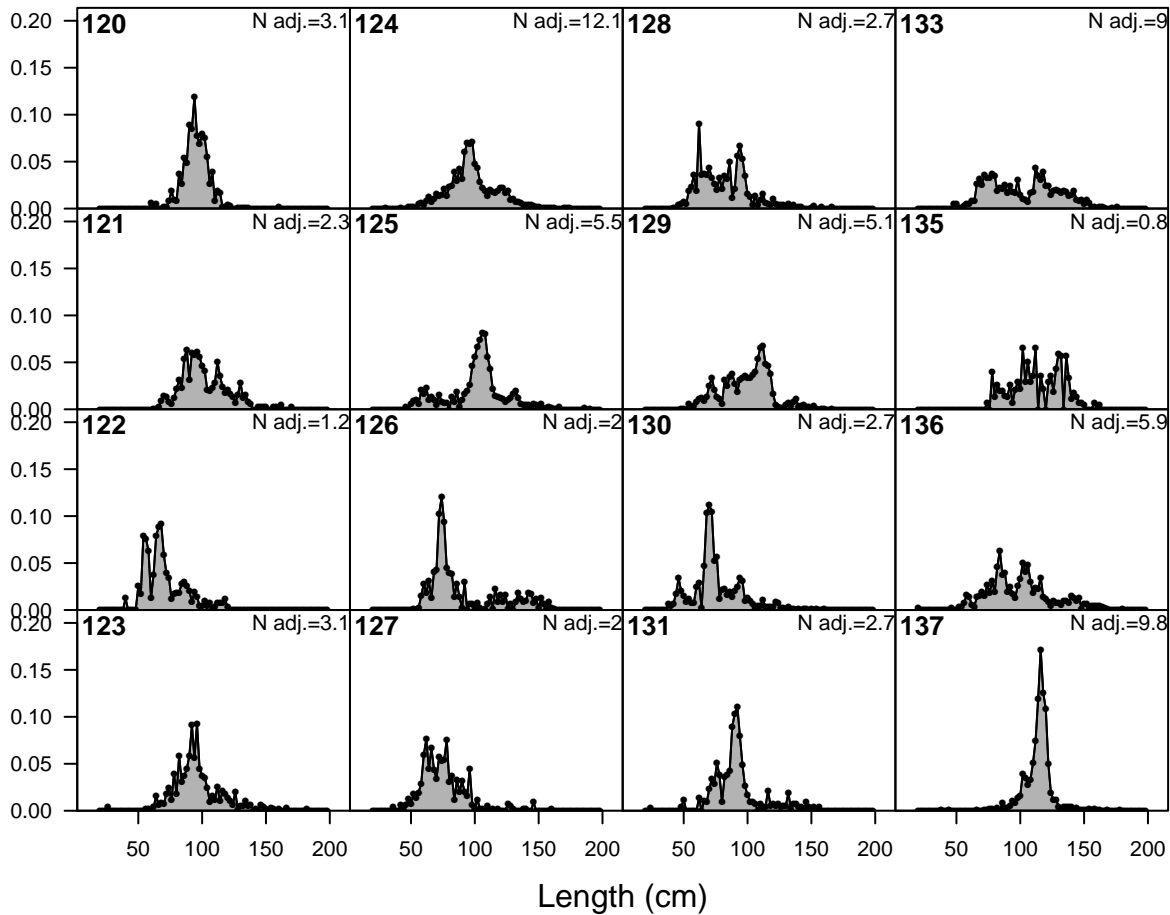


Proportion

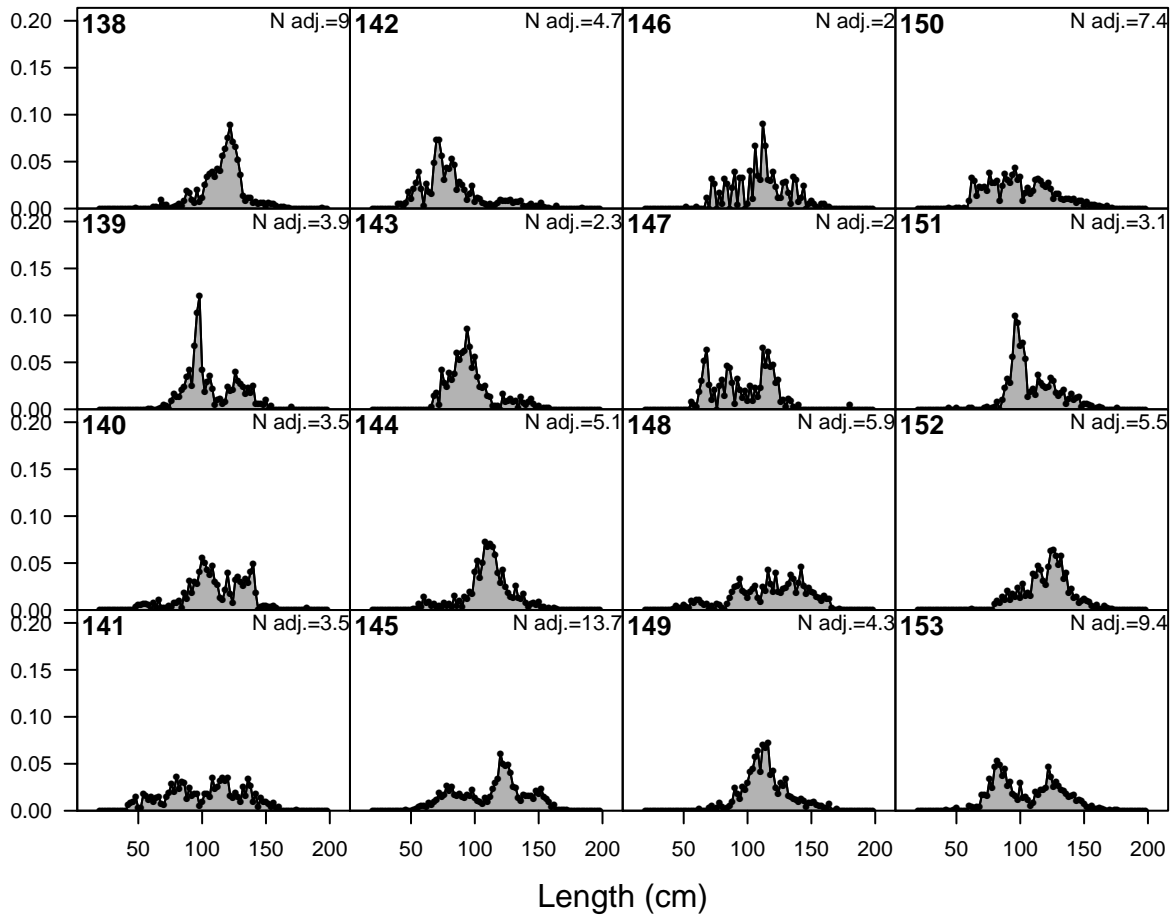




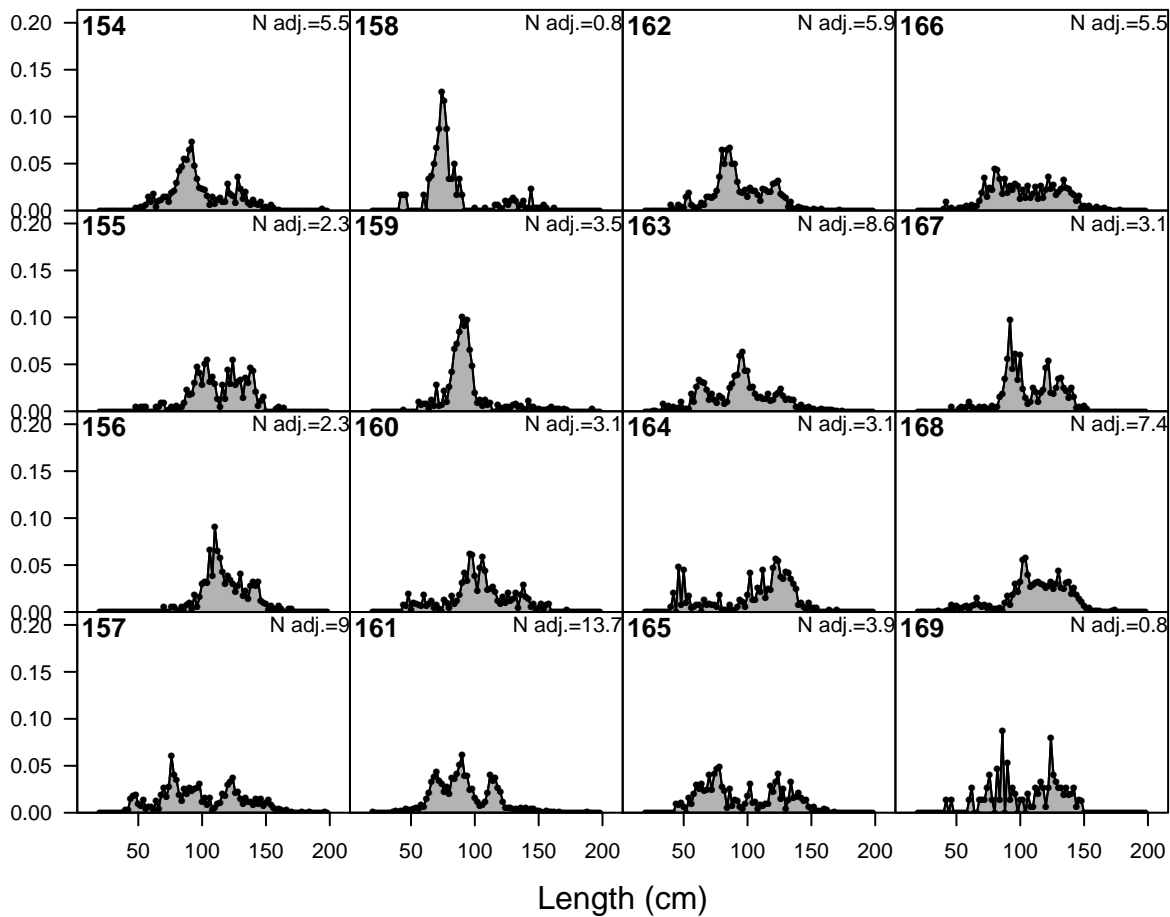
Proportion



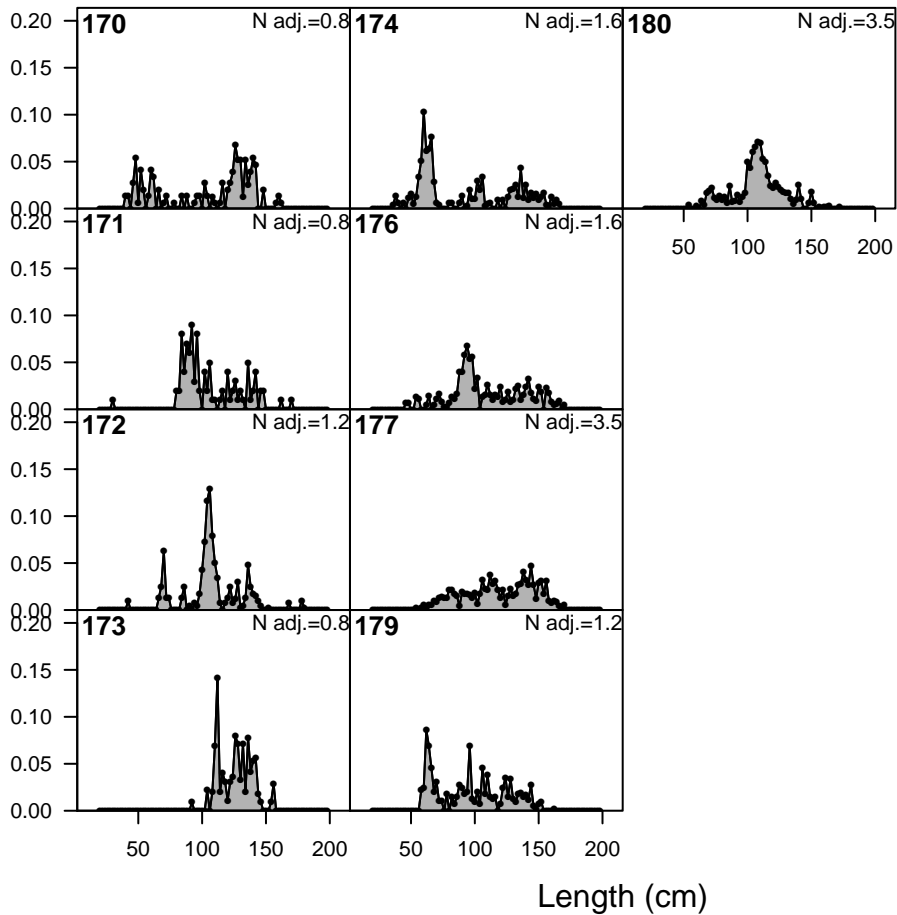
Proportion

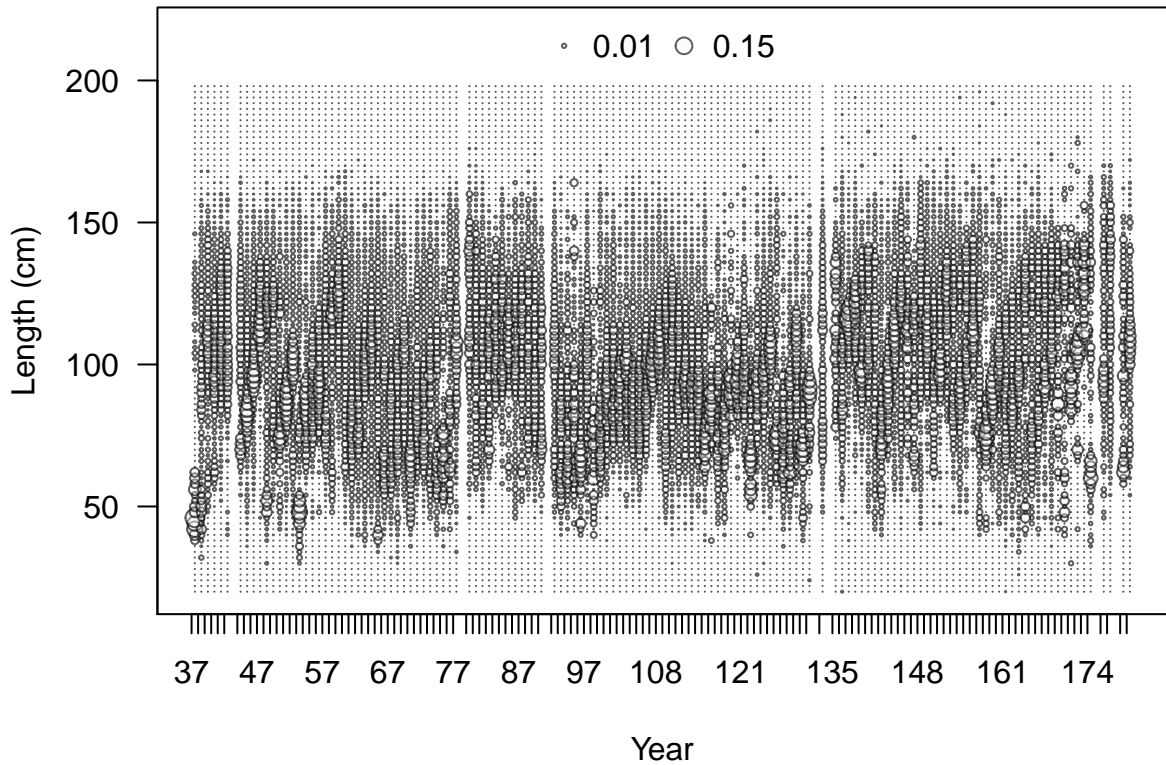


Proportion

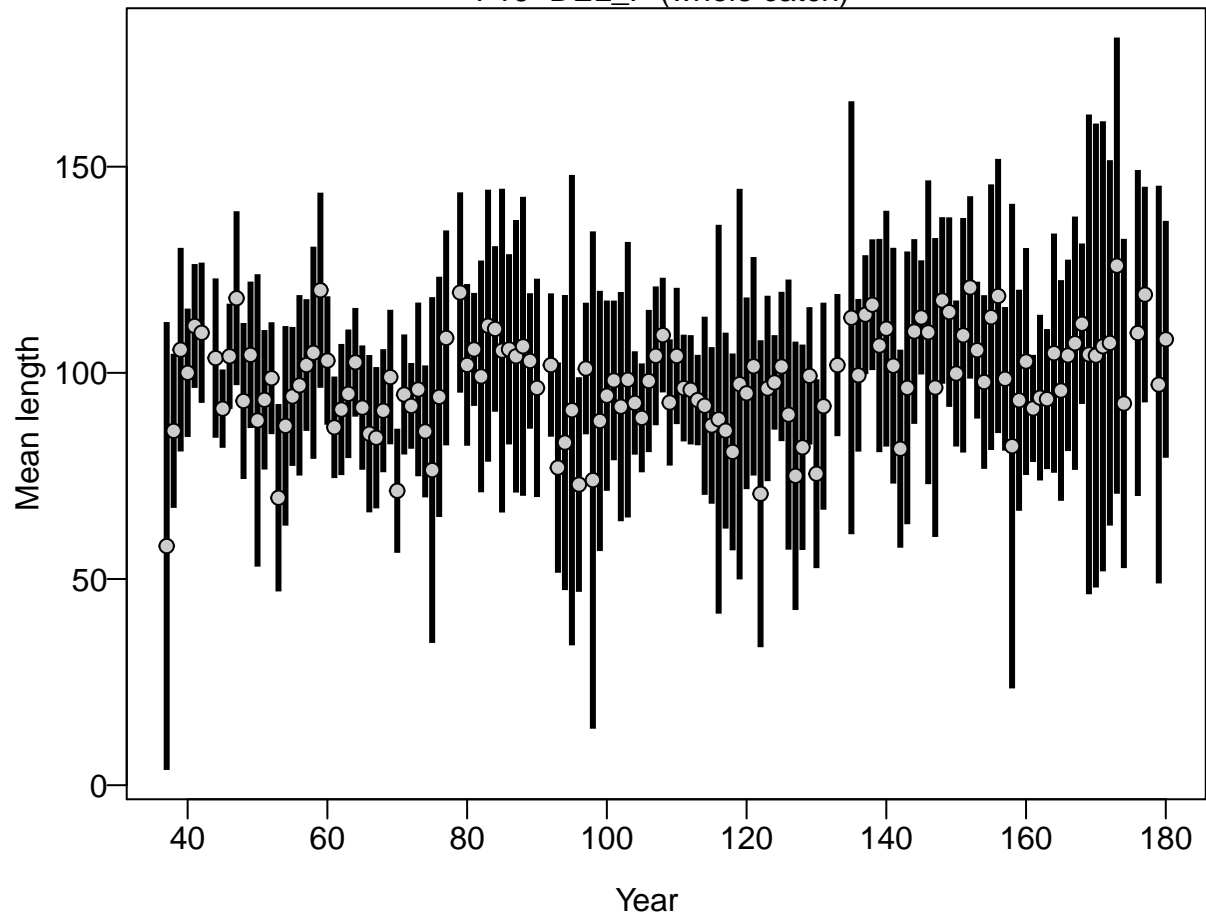


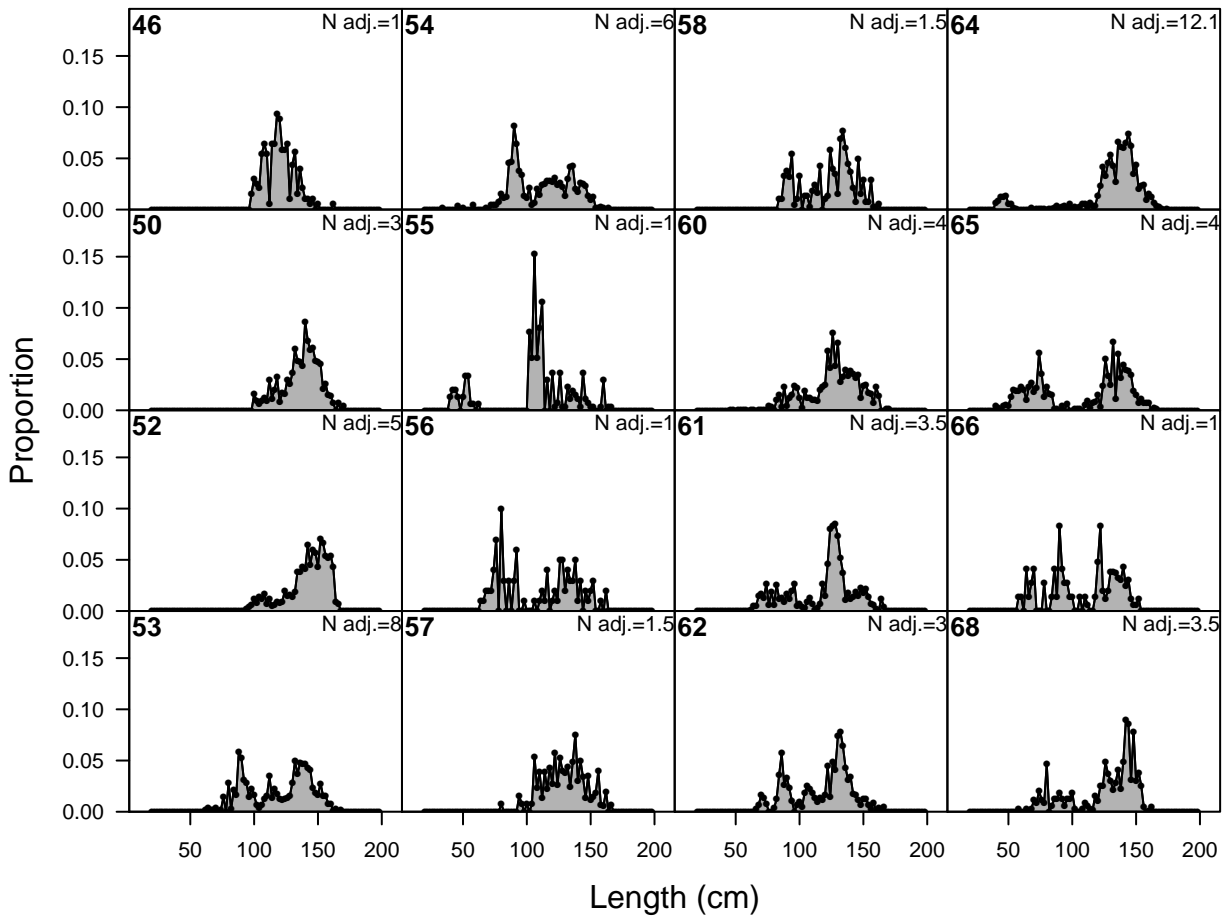
Proportion

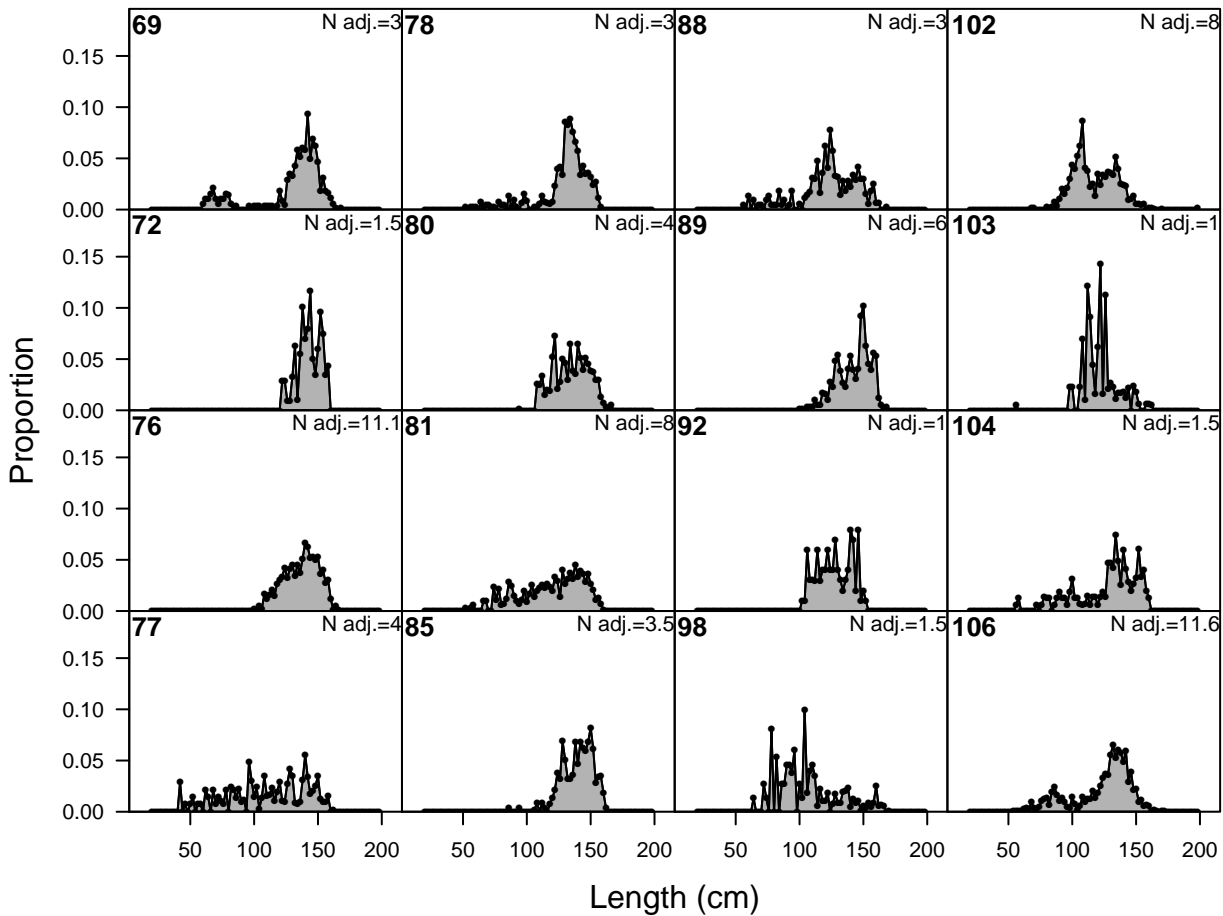




F19-DEL\_P (whole catch)

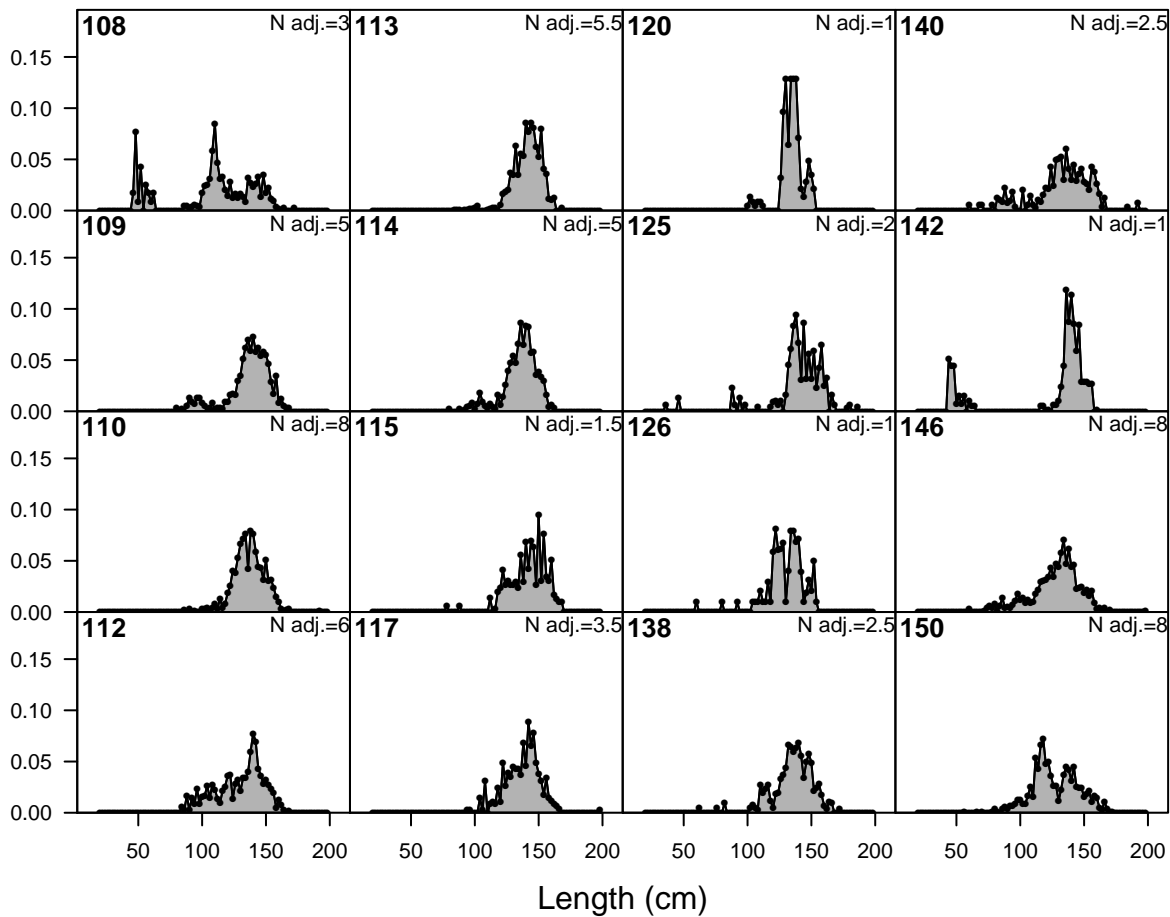




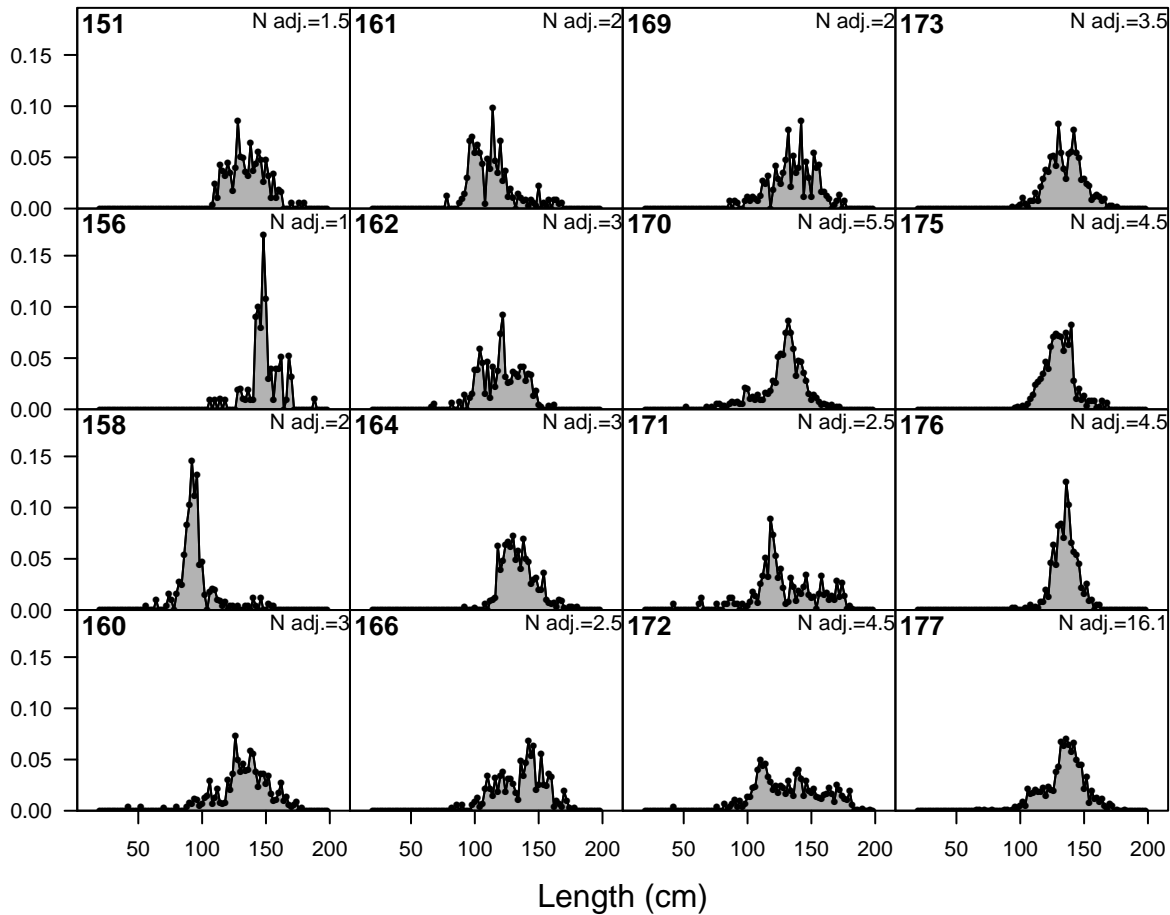


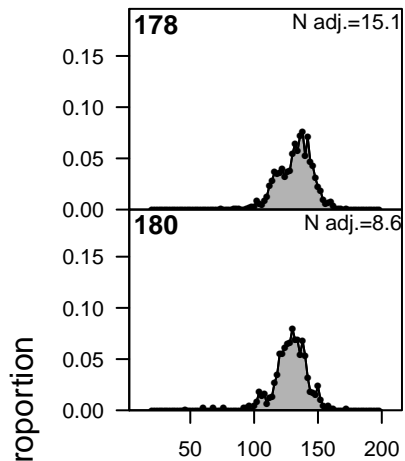


Proportion

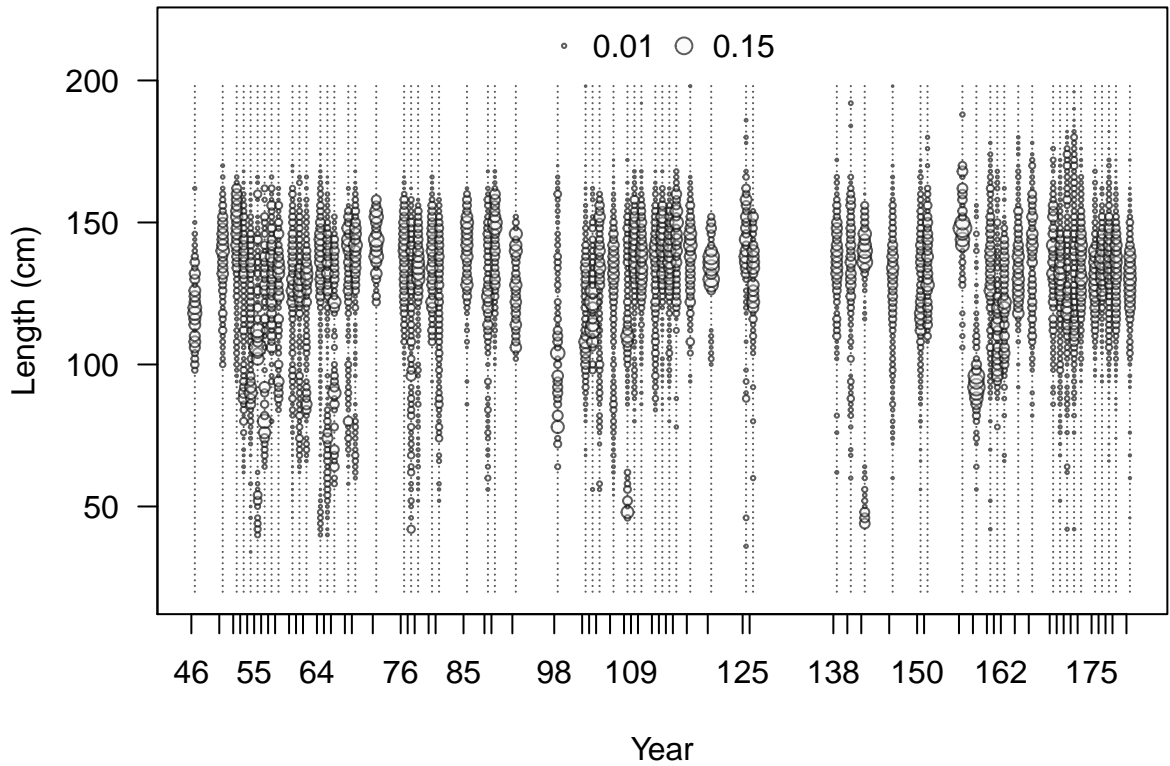


Proportion

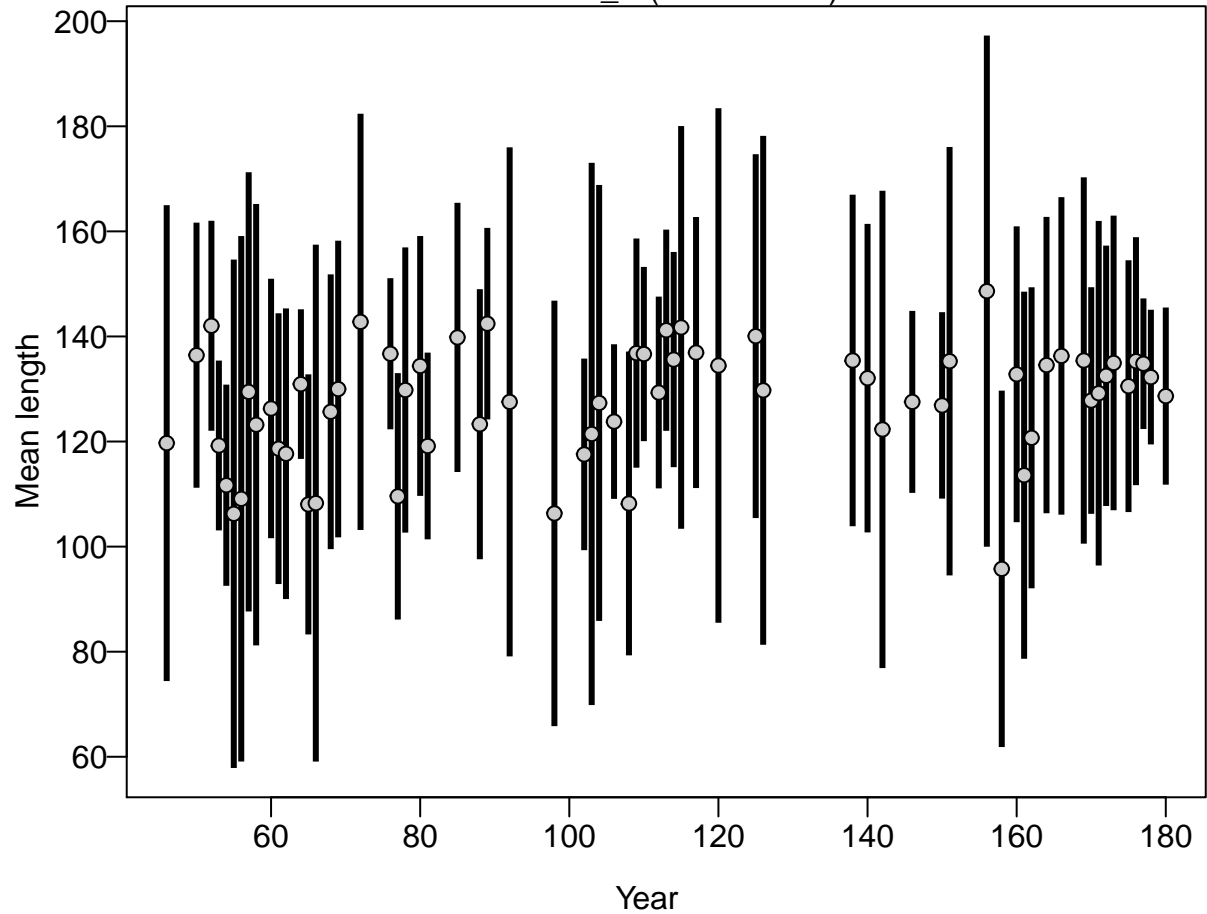


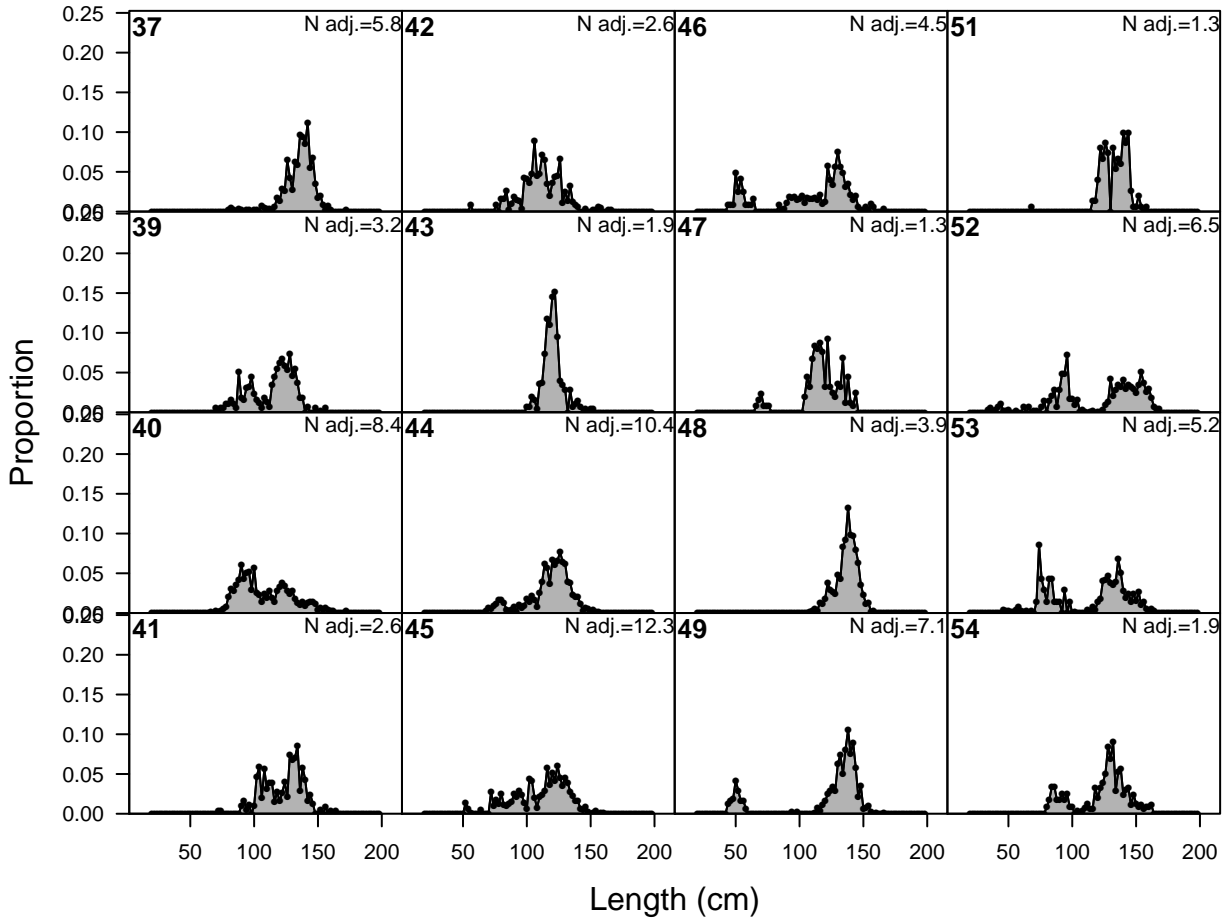


Length (cm)

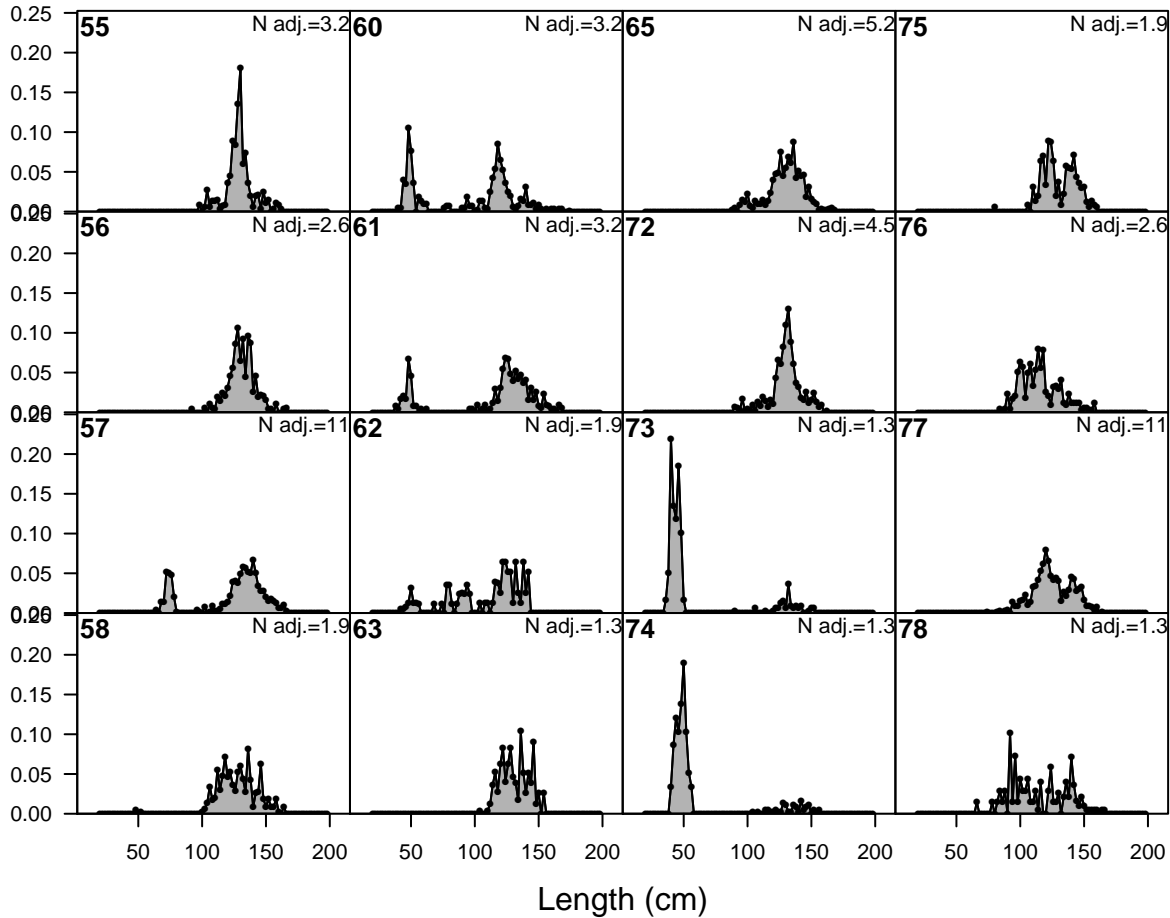


## F20-DEL\_S (whole catch)

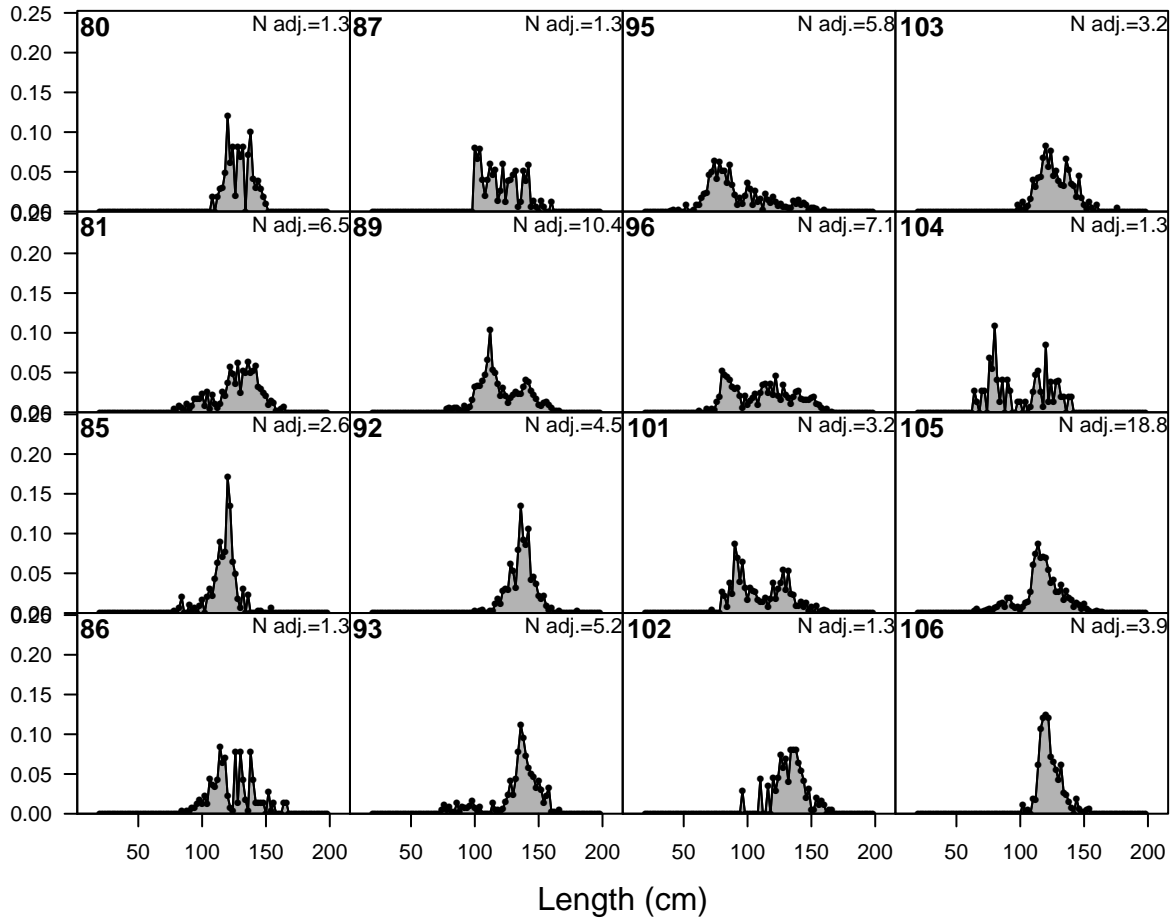




Proportion

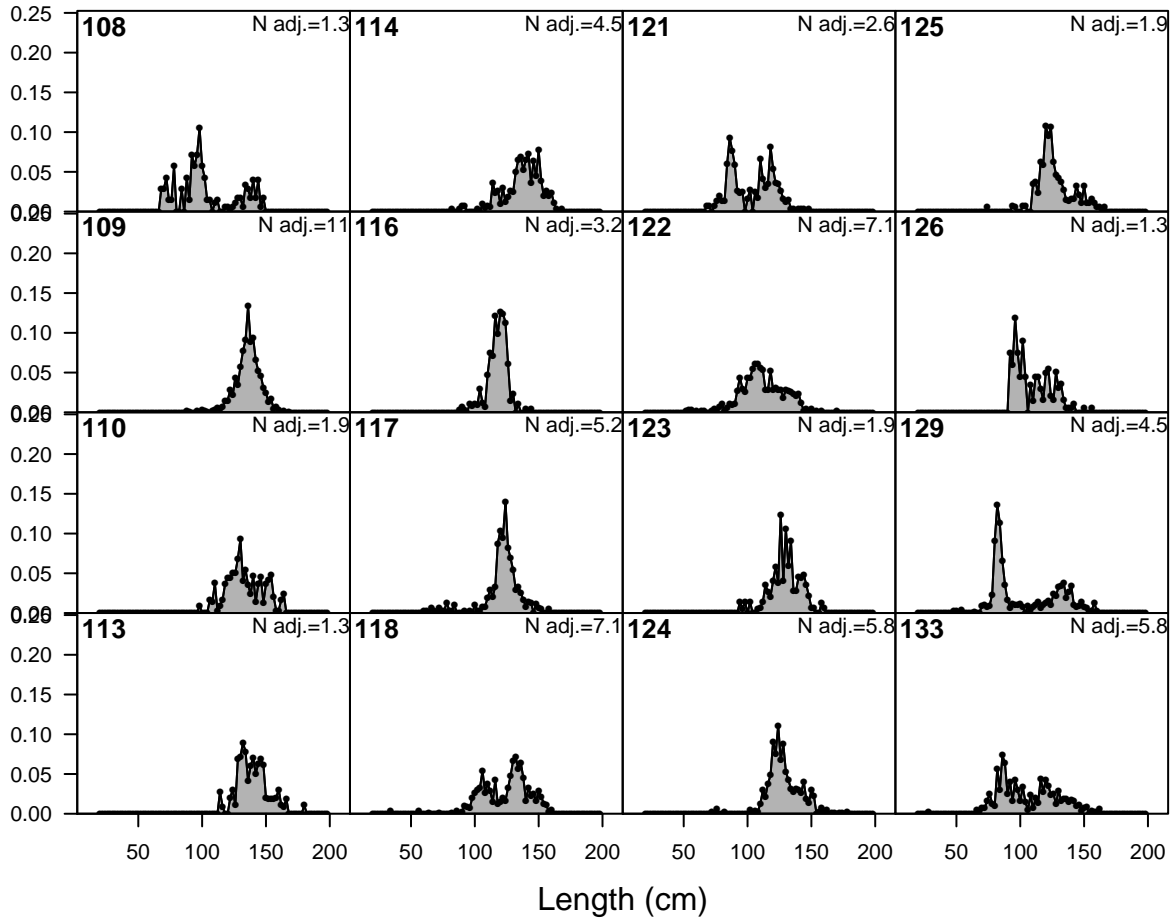


Proportion

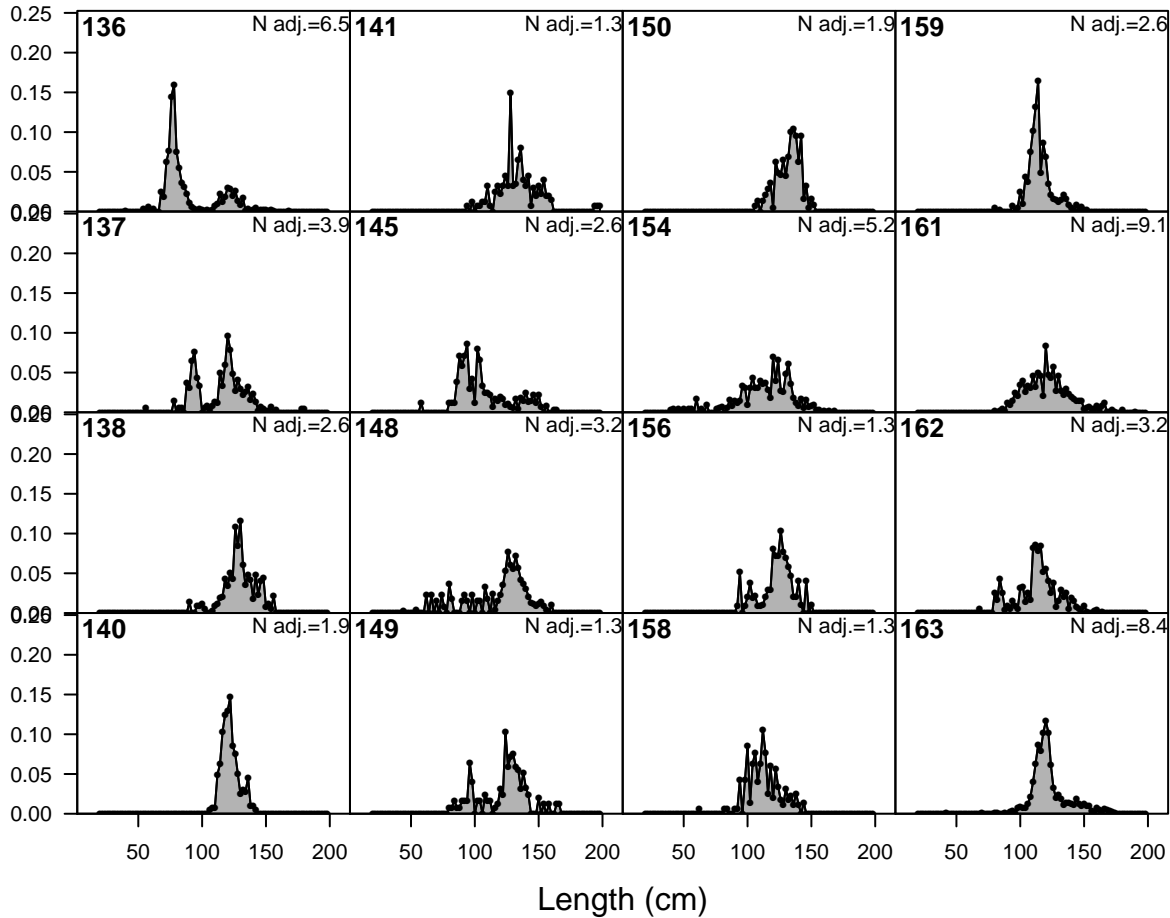




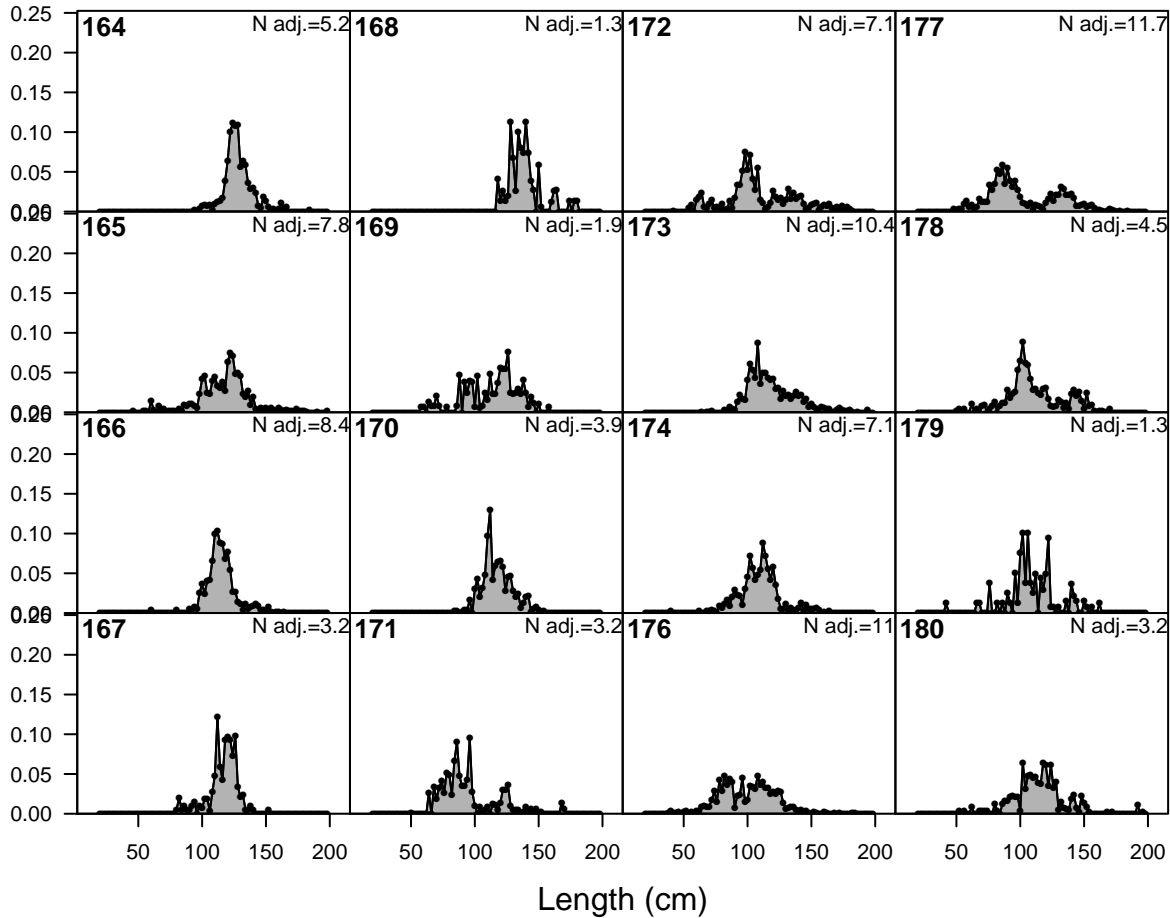
Proportion

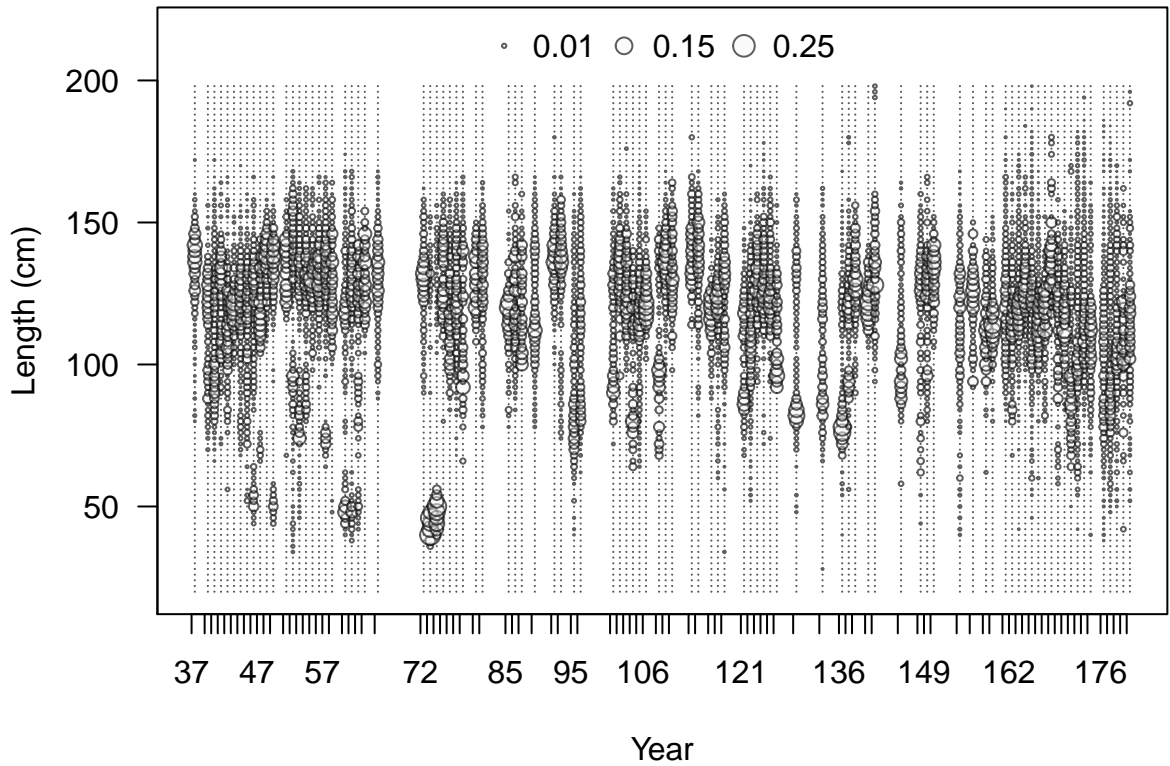


Proportion

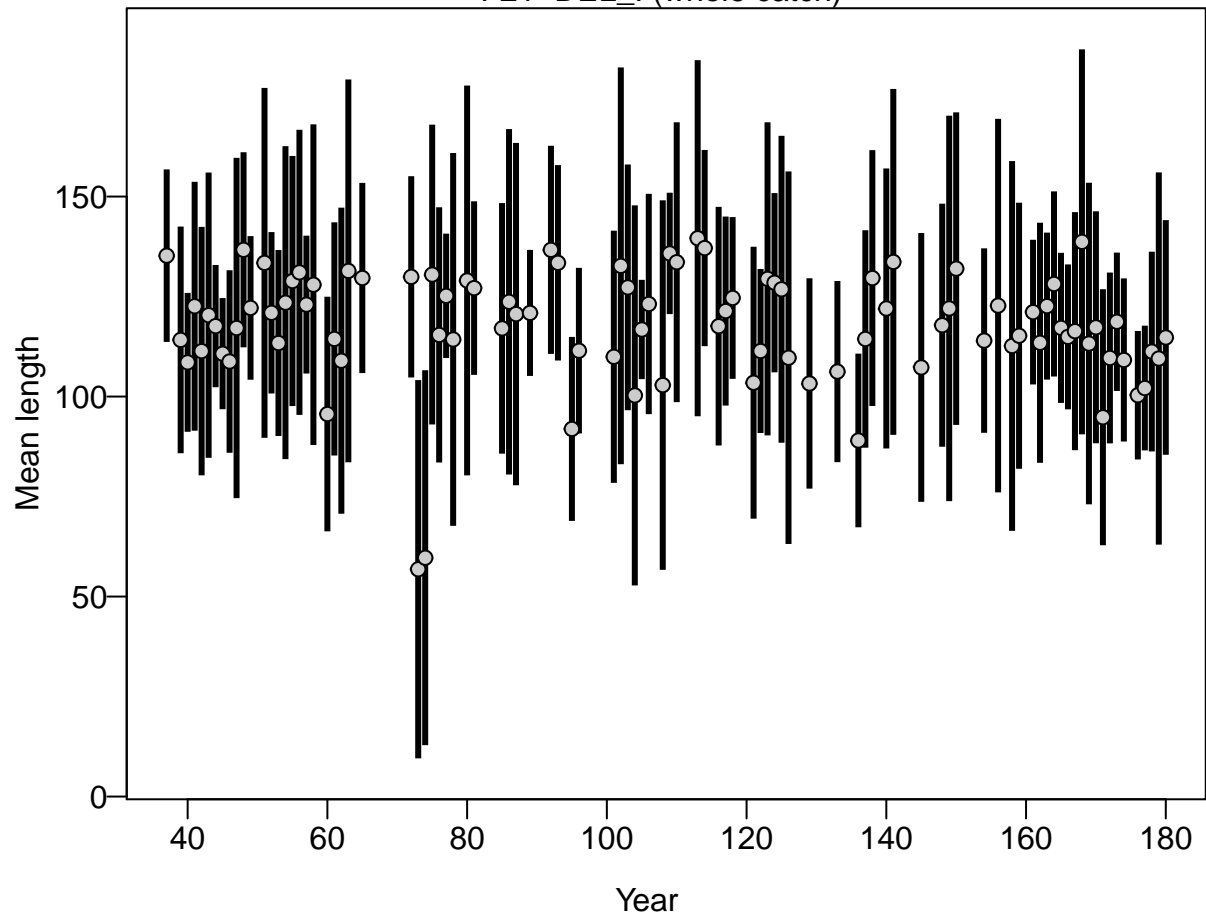


Proportion

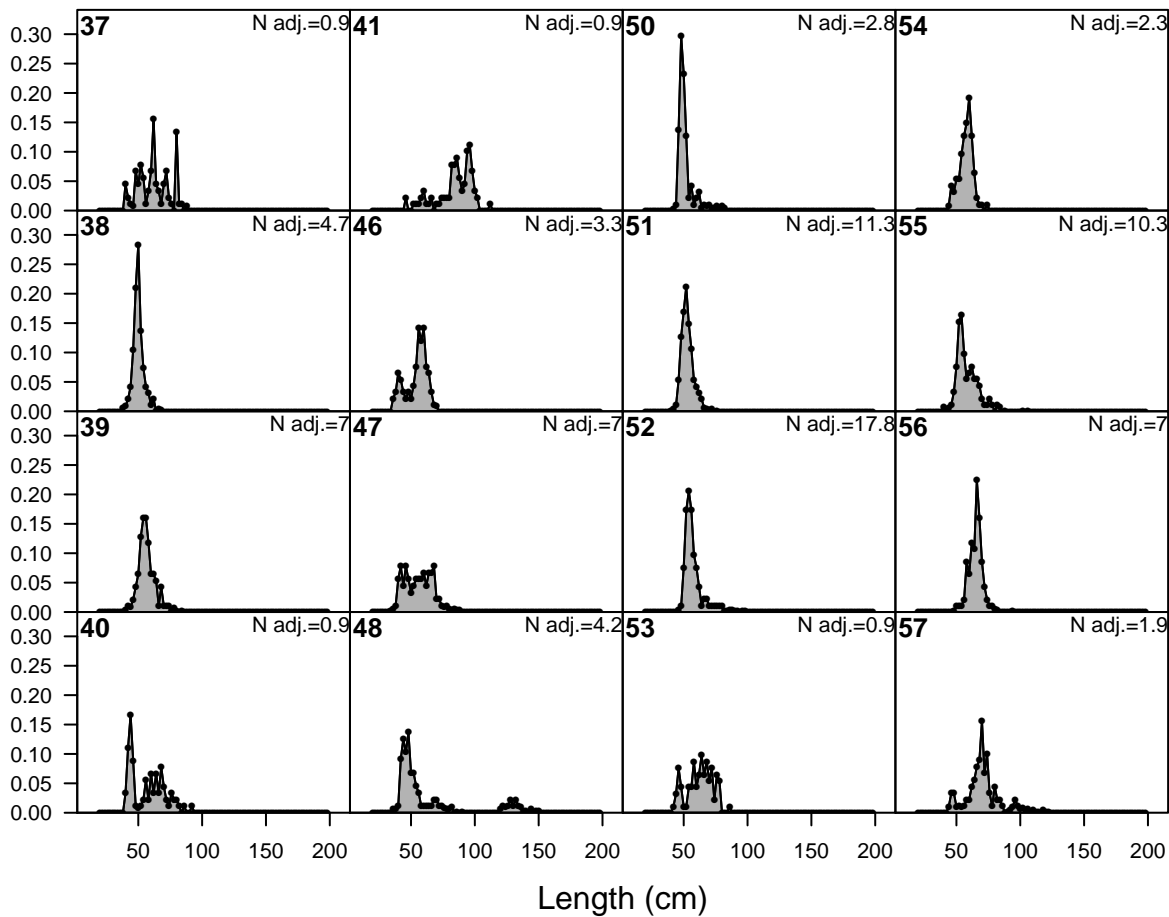




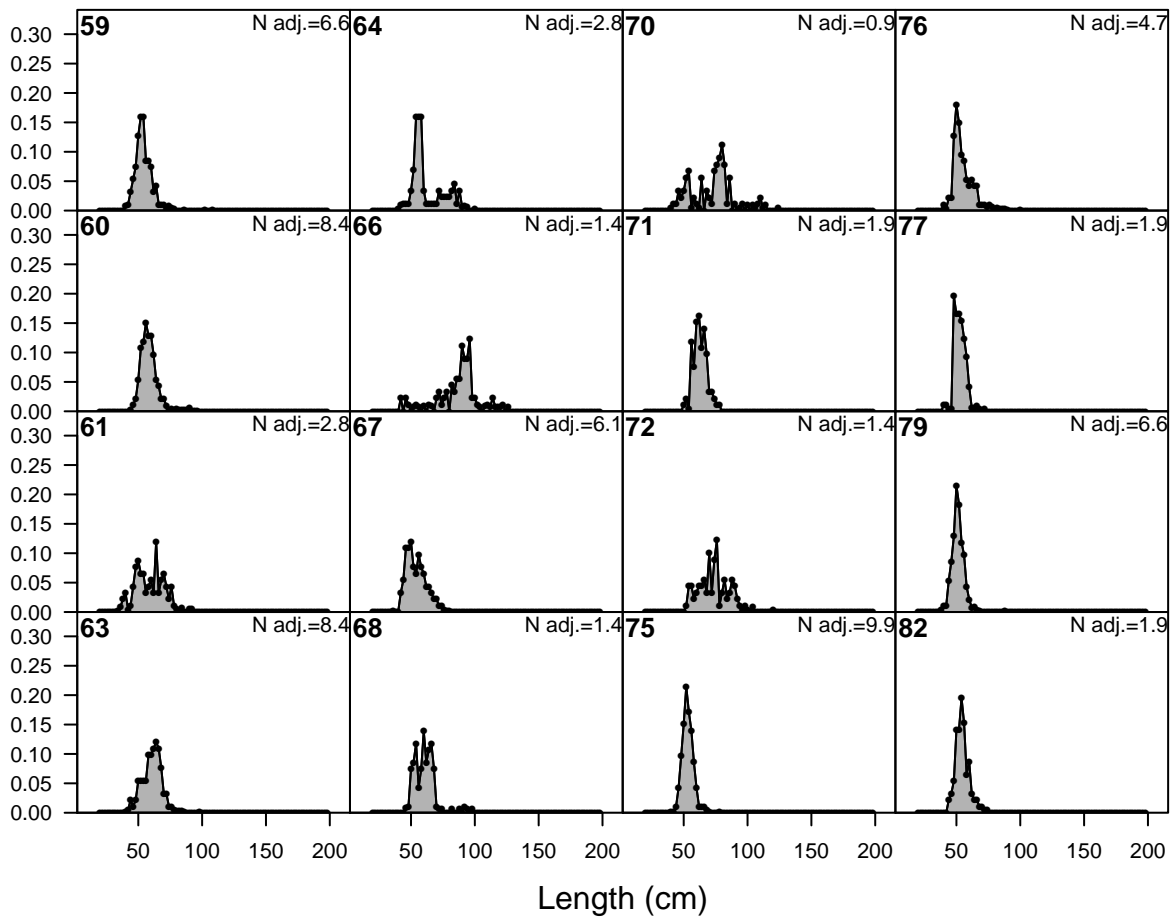
## F21-DEL\_I (whole catch)



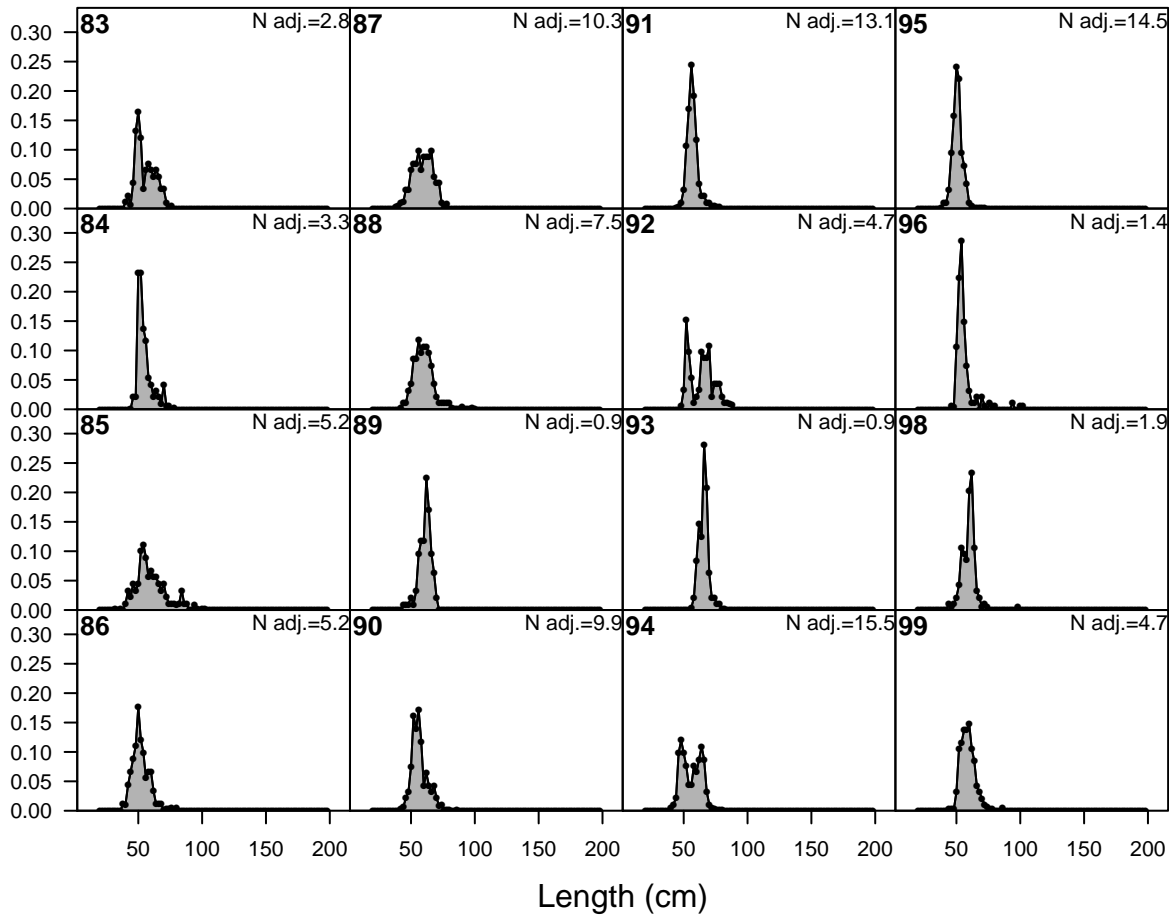
Proportion



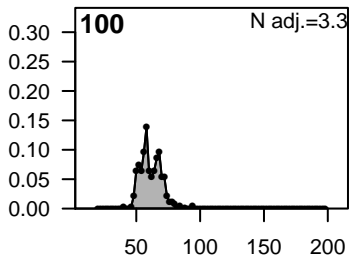
Proportion



Proportion

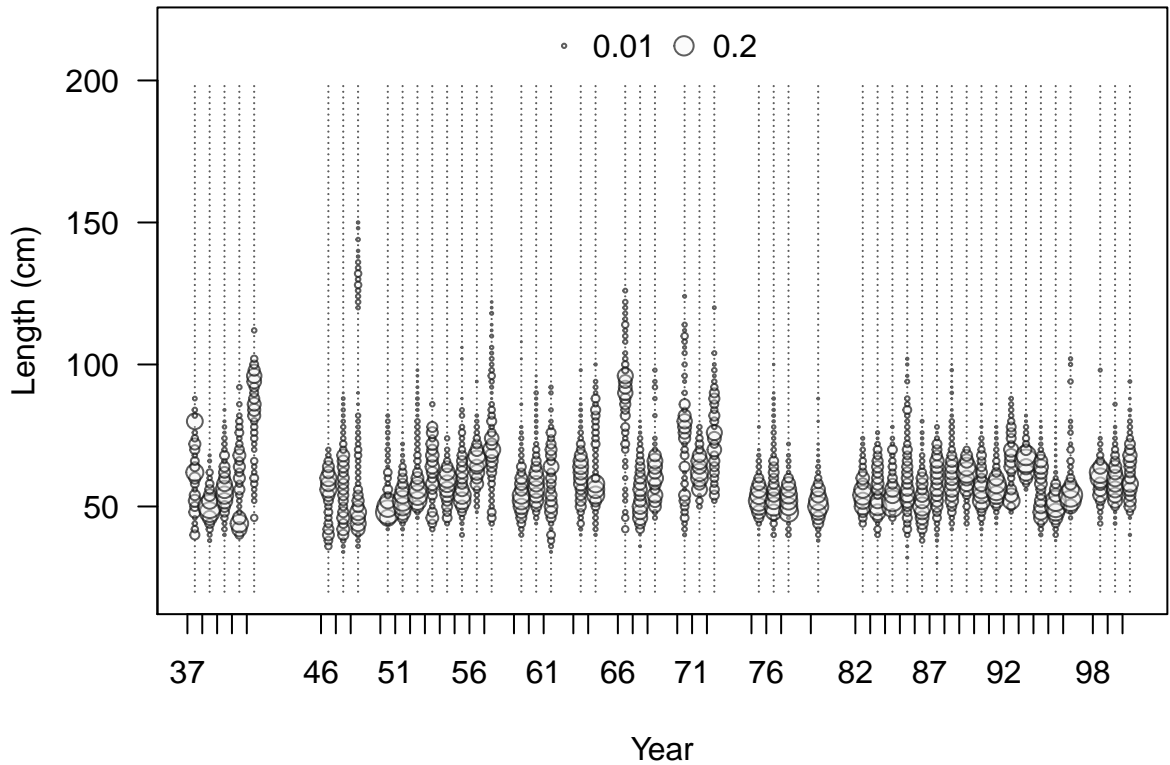




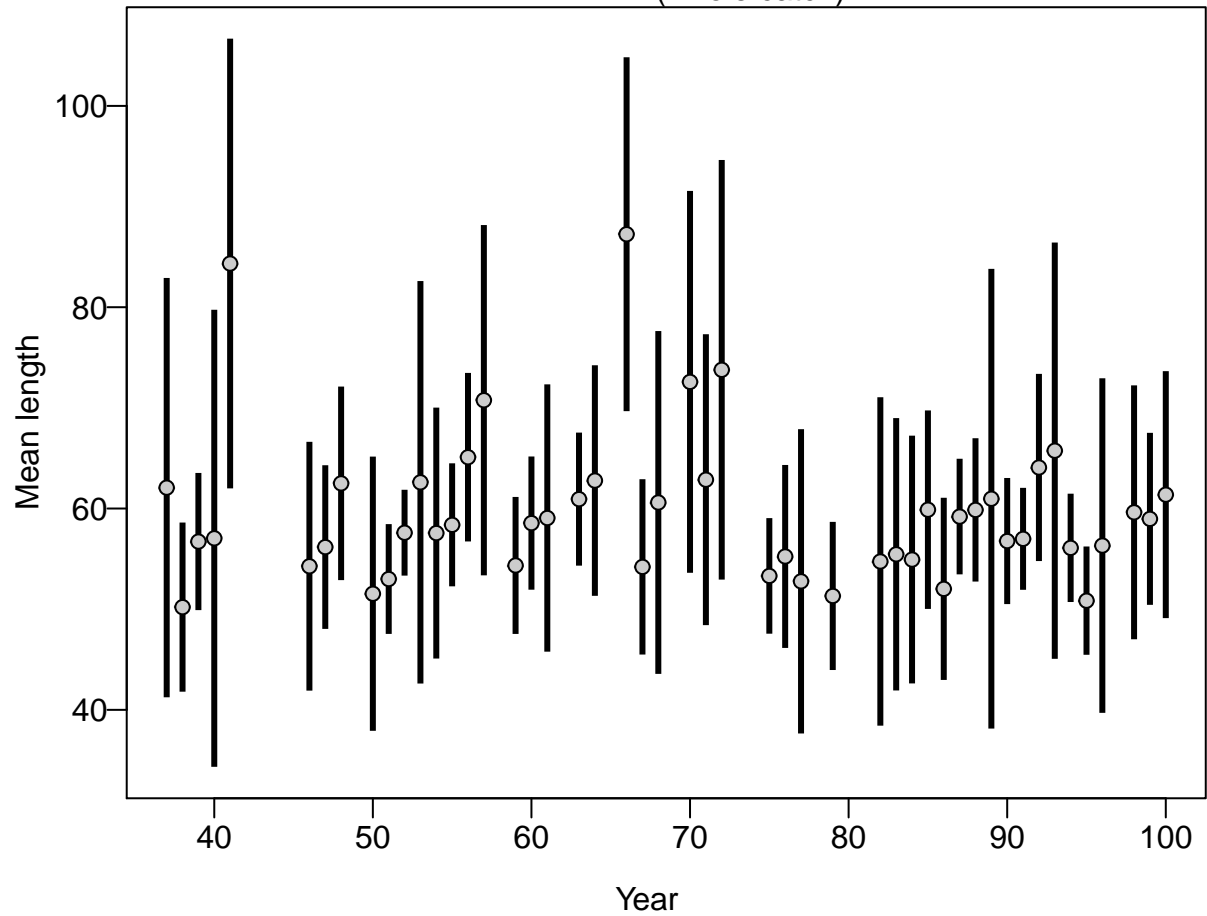


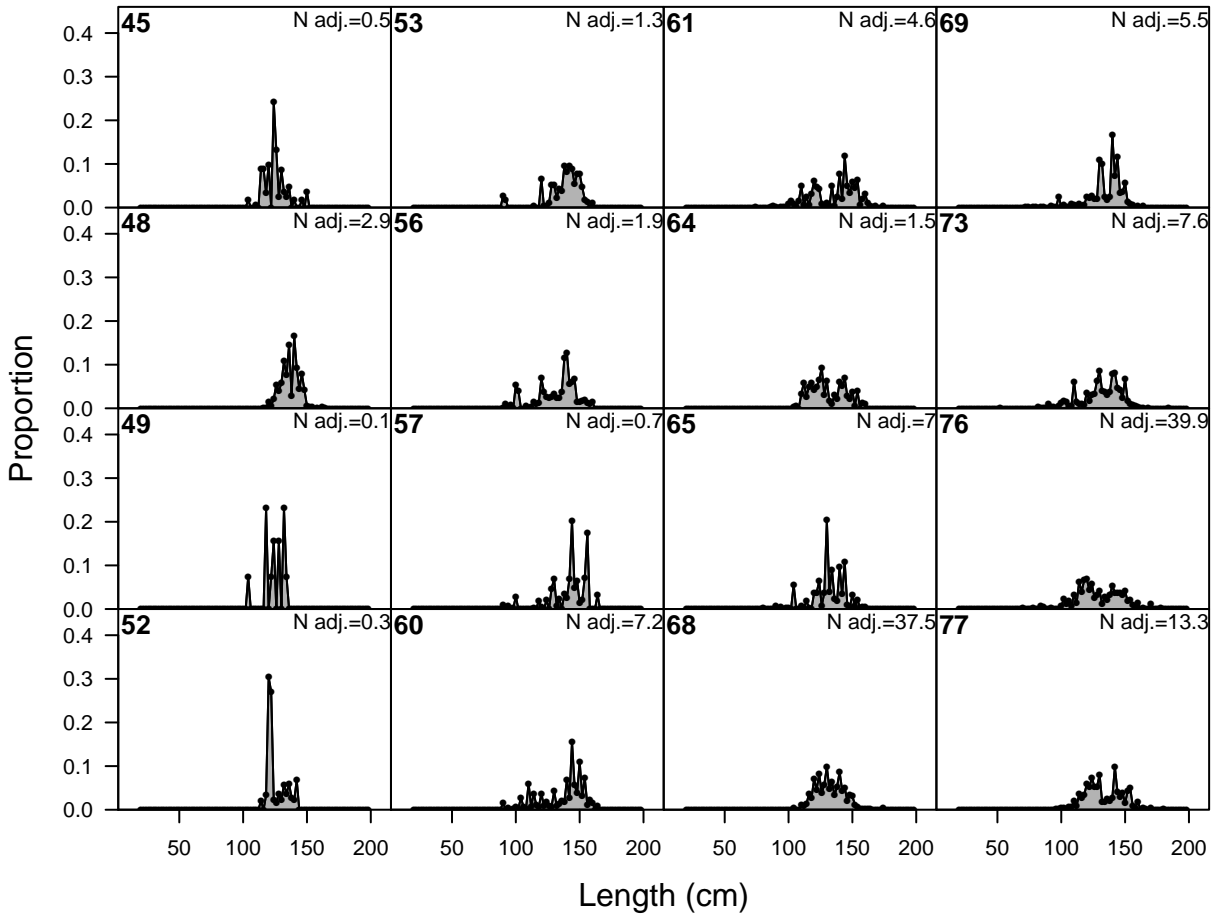
Proportion

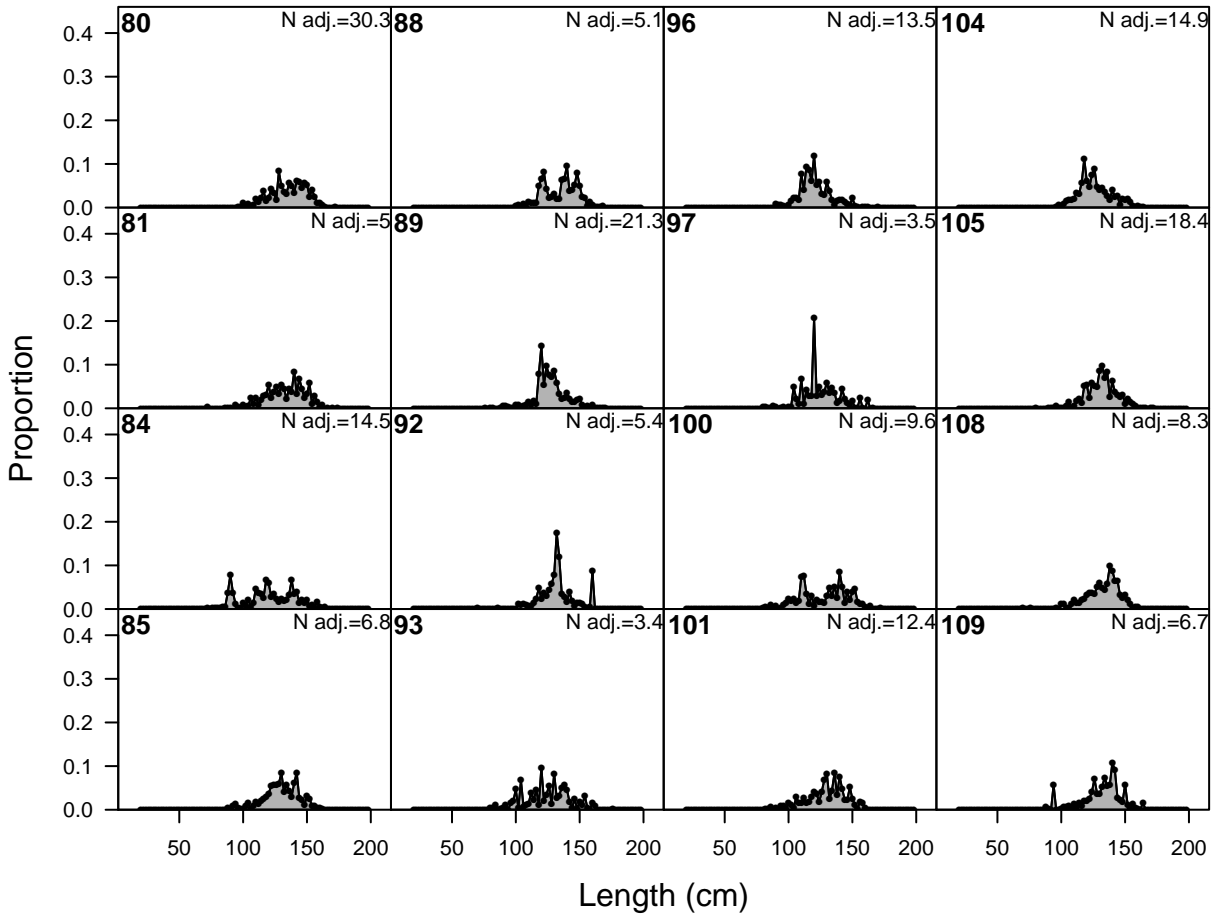
Length (cm)

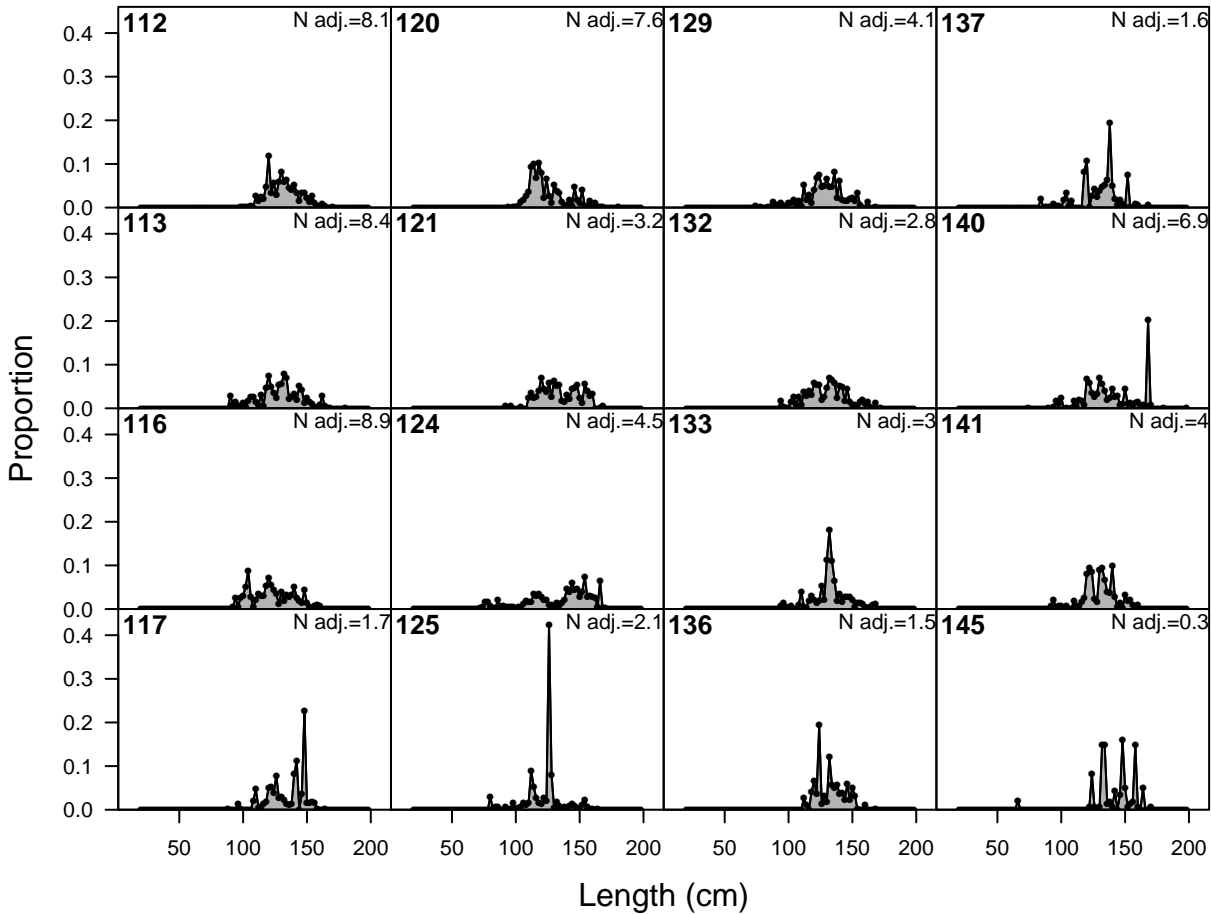


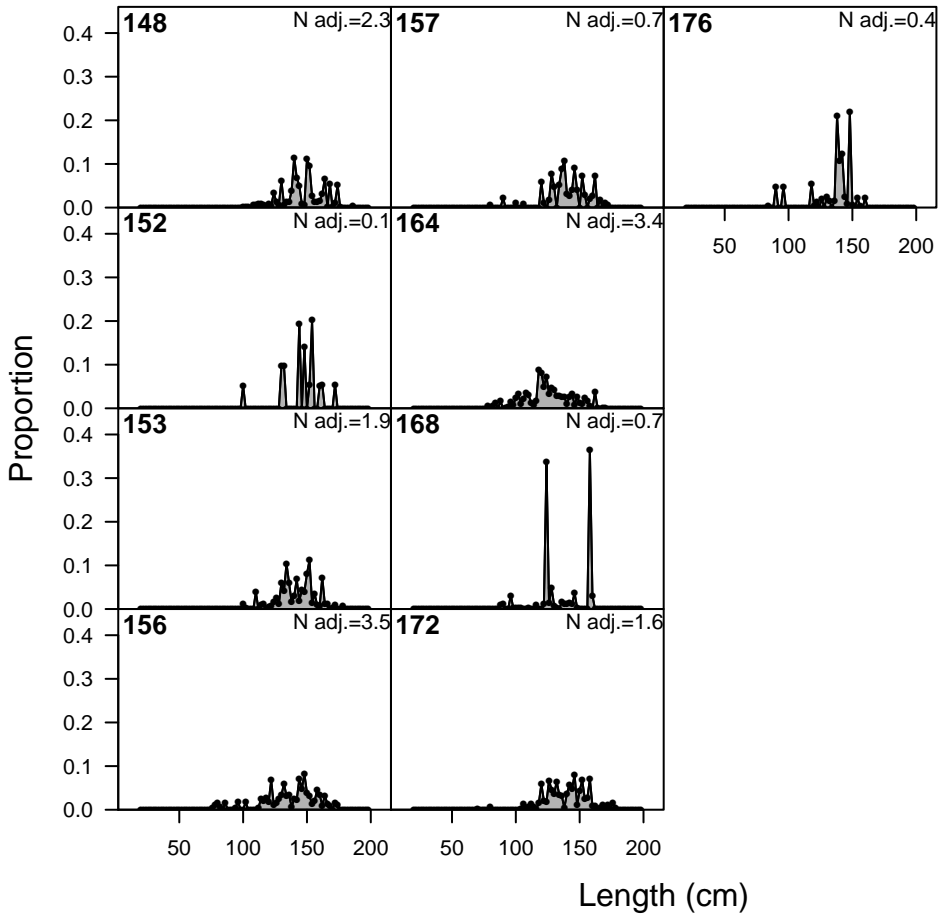
F22-BB (whole catch)

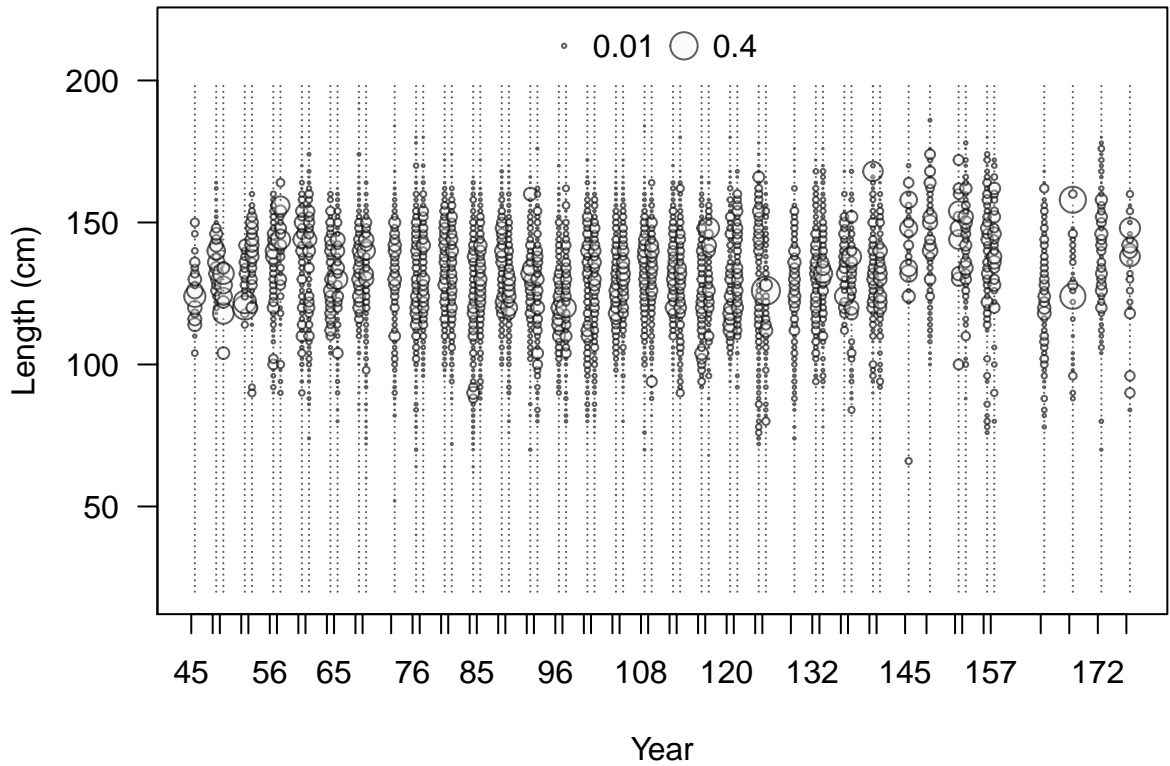






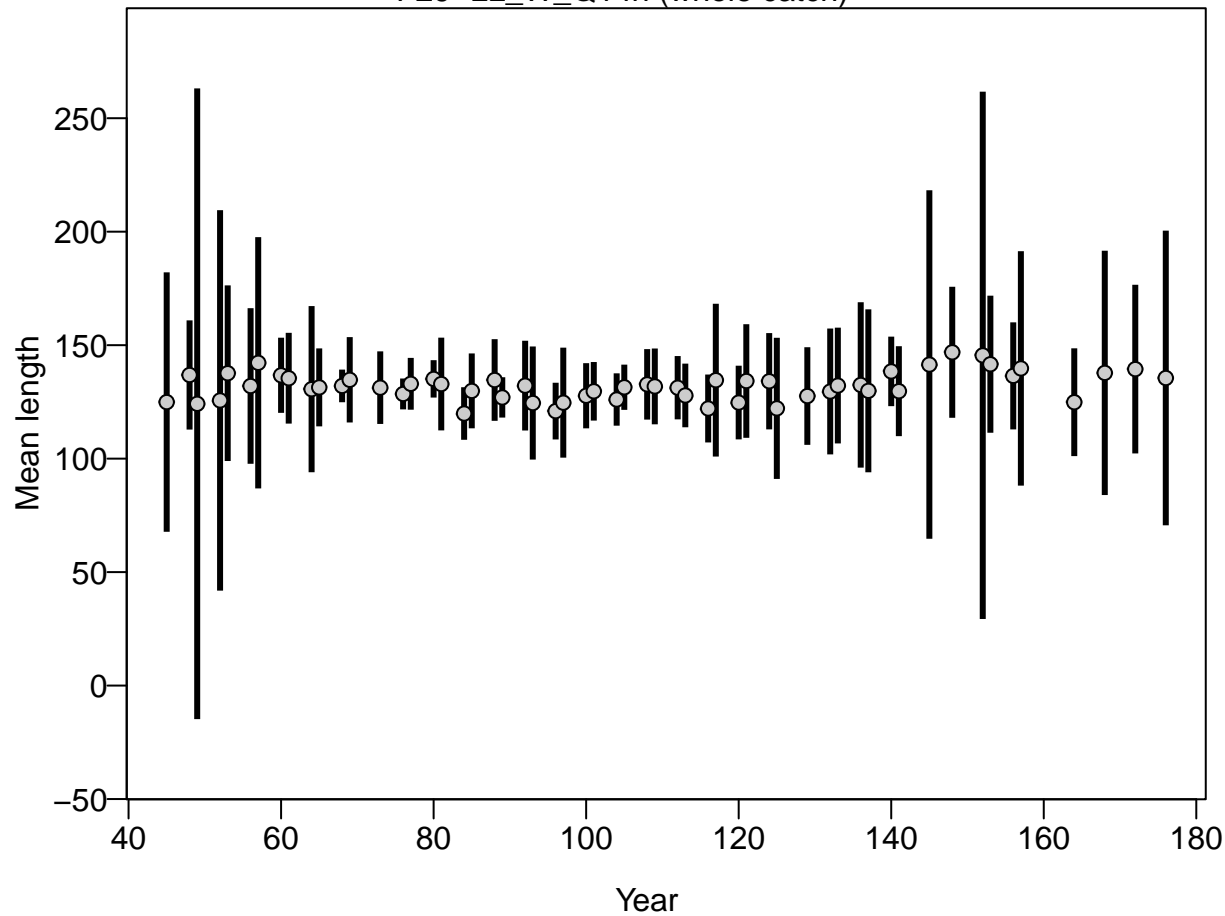




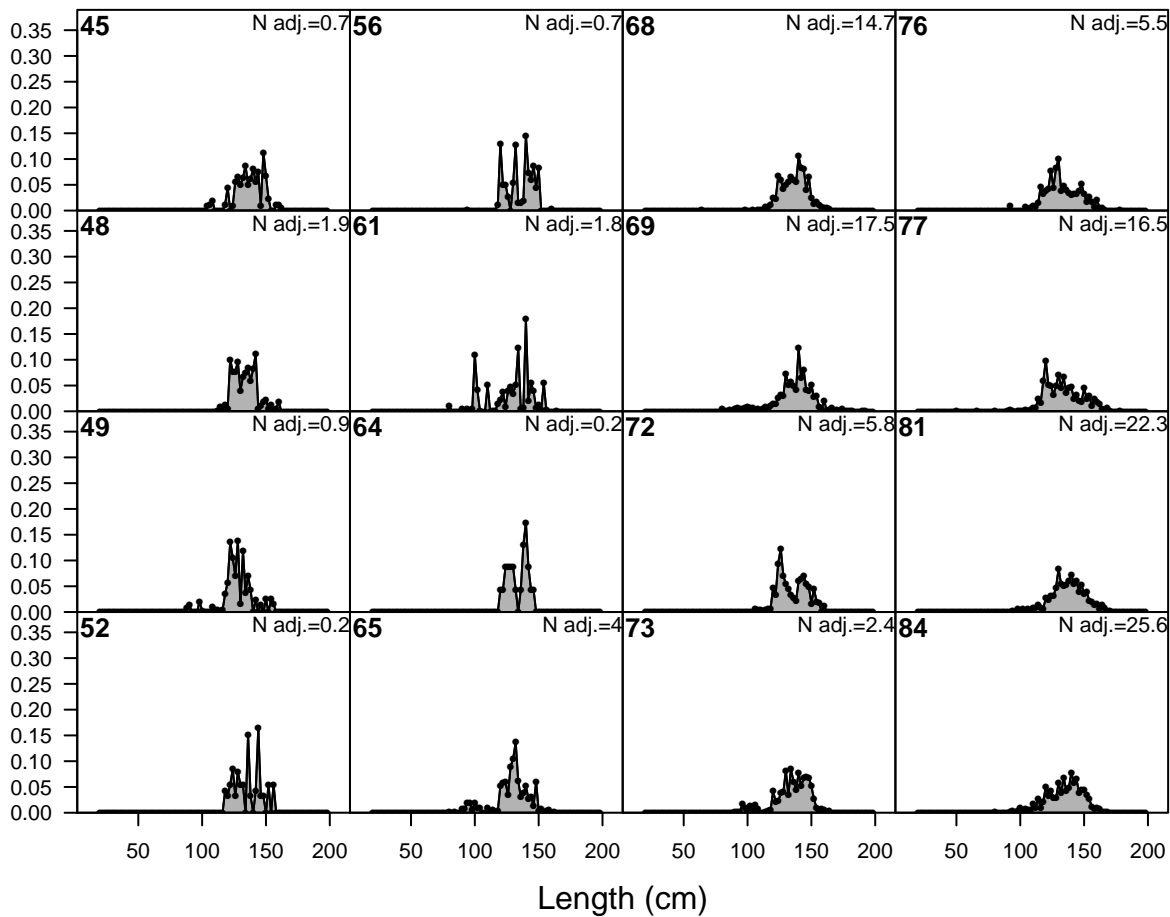




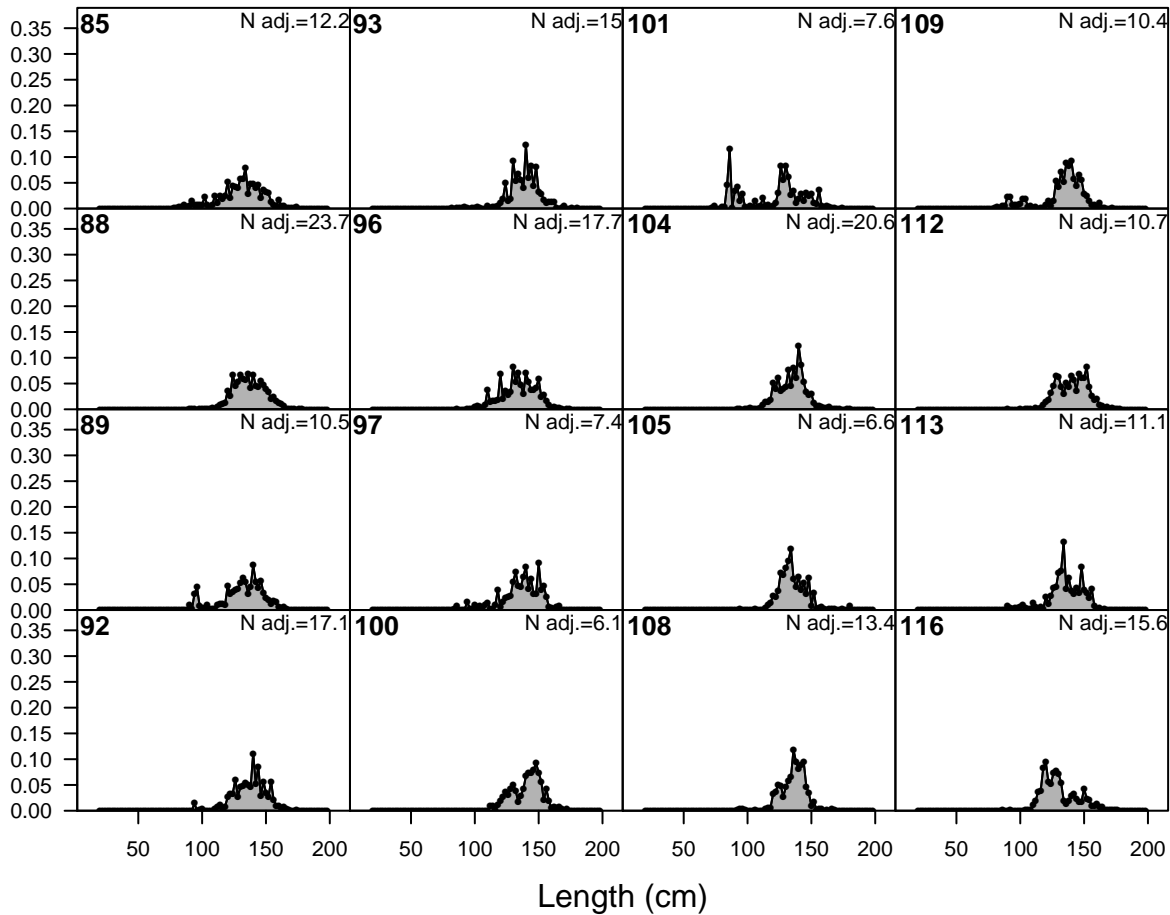
F29-LL\_W\_Q14n (whole catch)



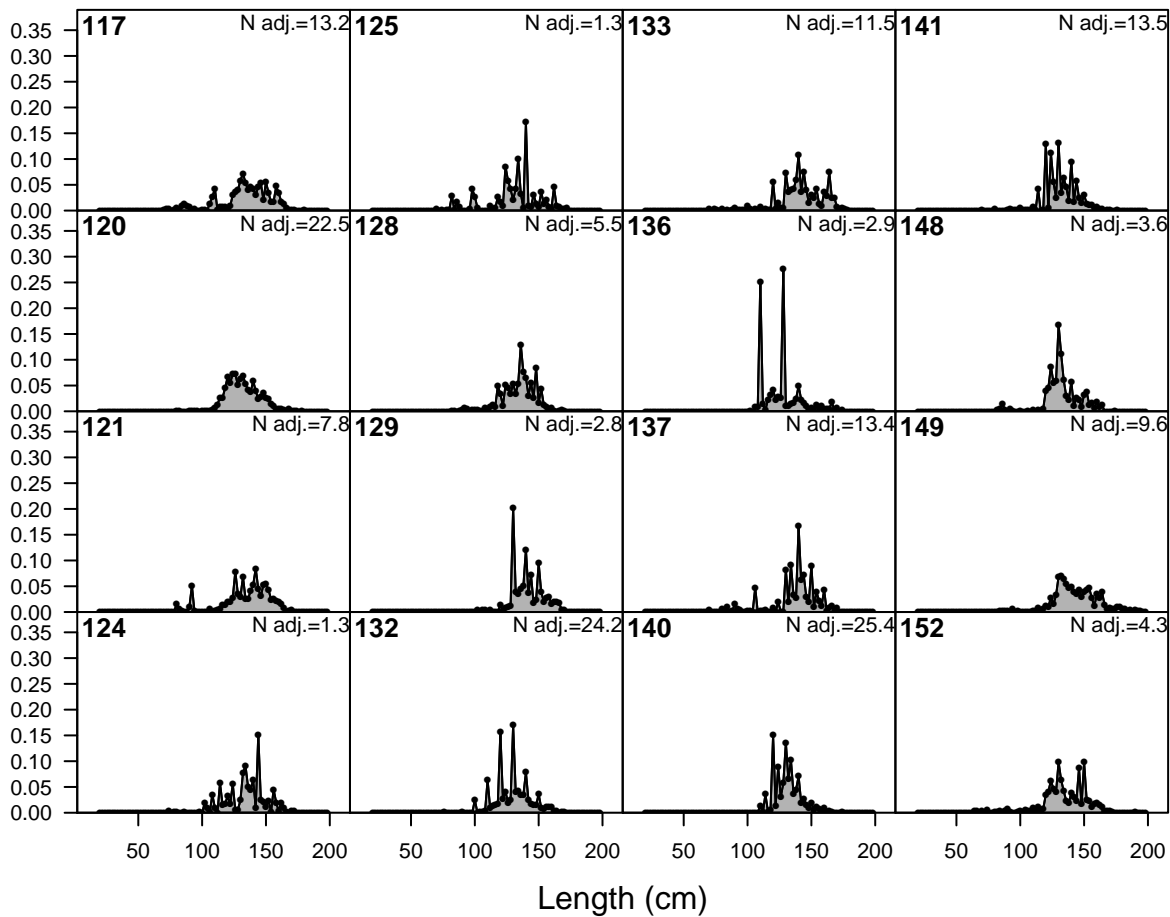
Proportion



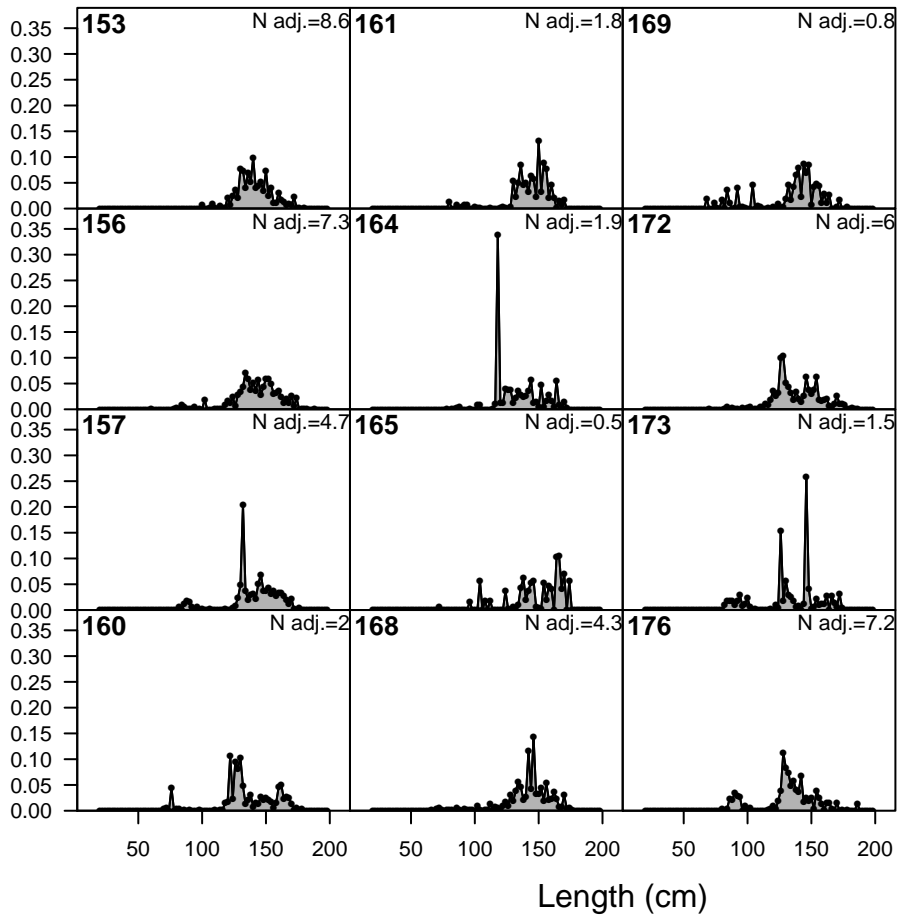
Proportion

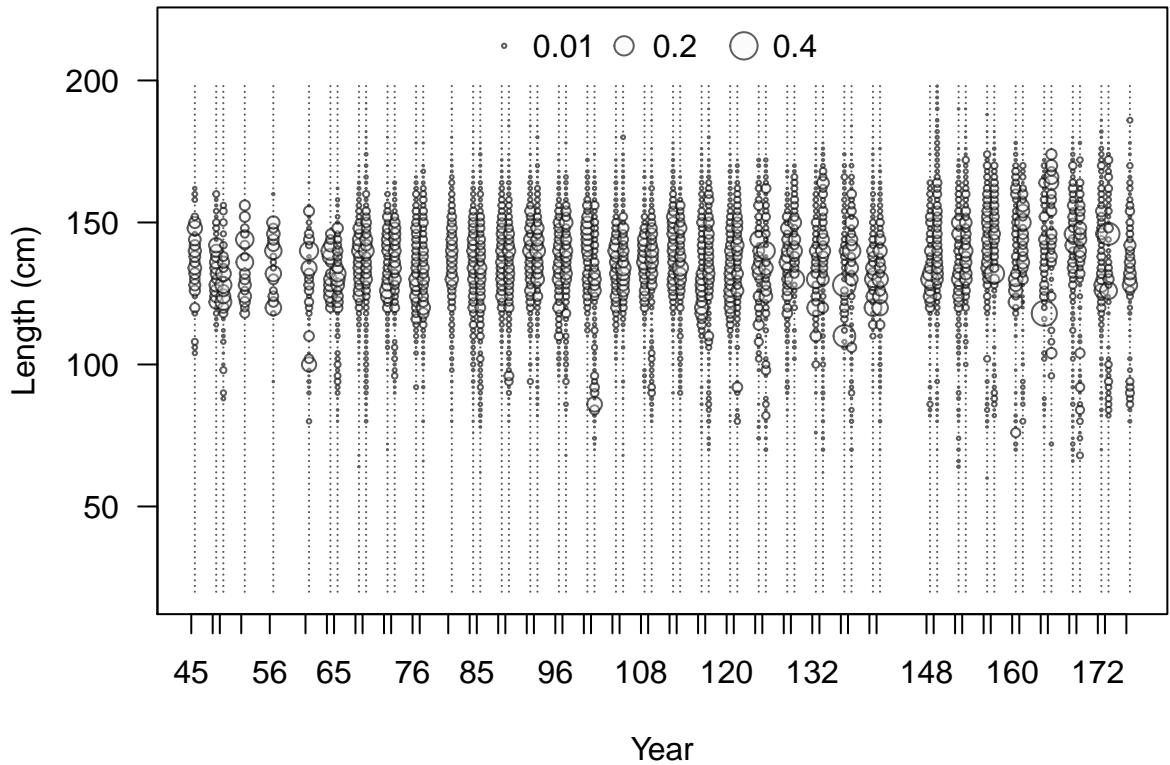


Proportion

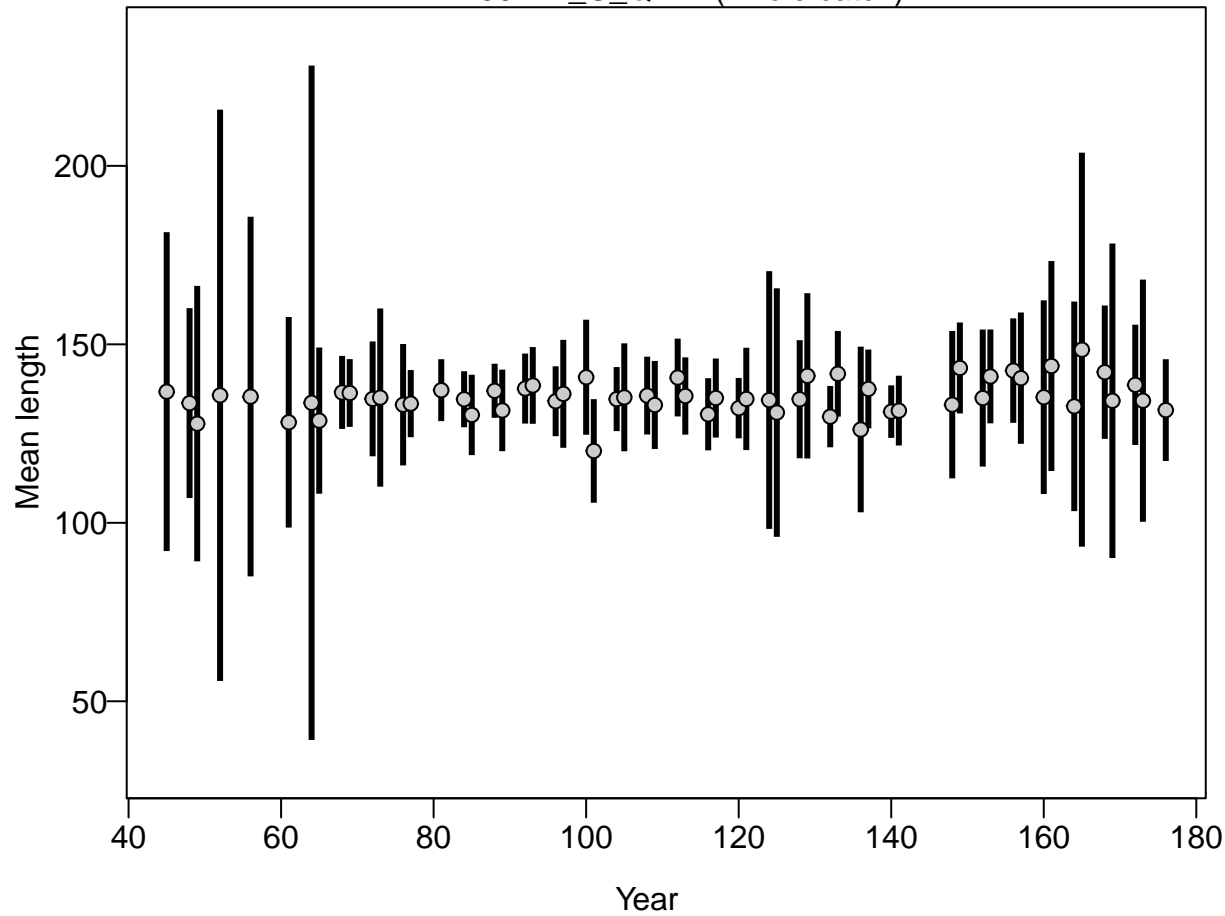


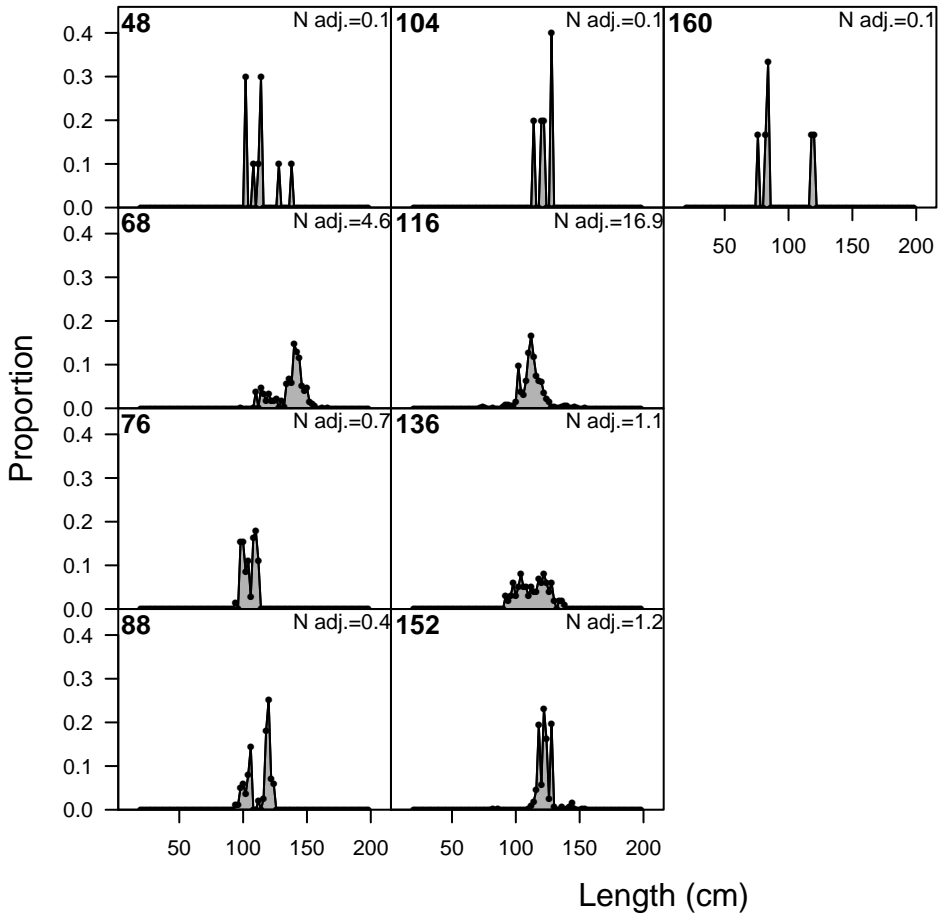
Proportion



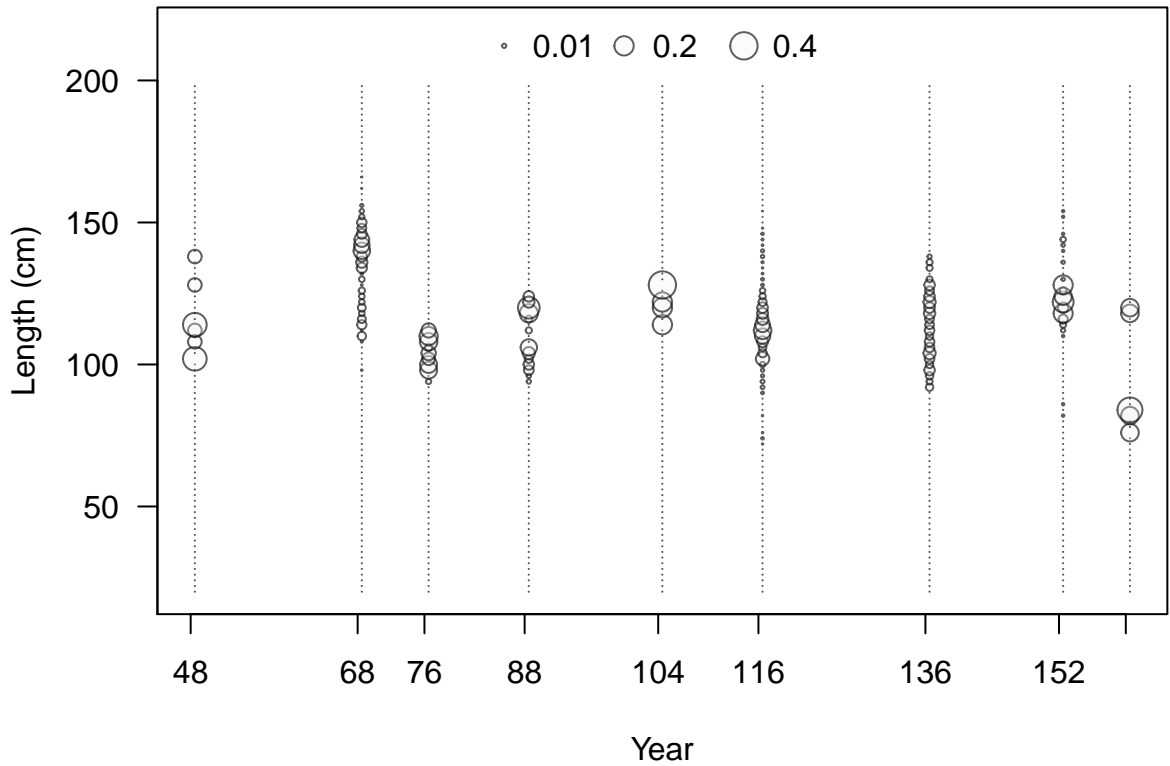


F30-LL\_C\_Q14n (whole catch)

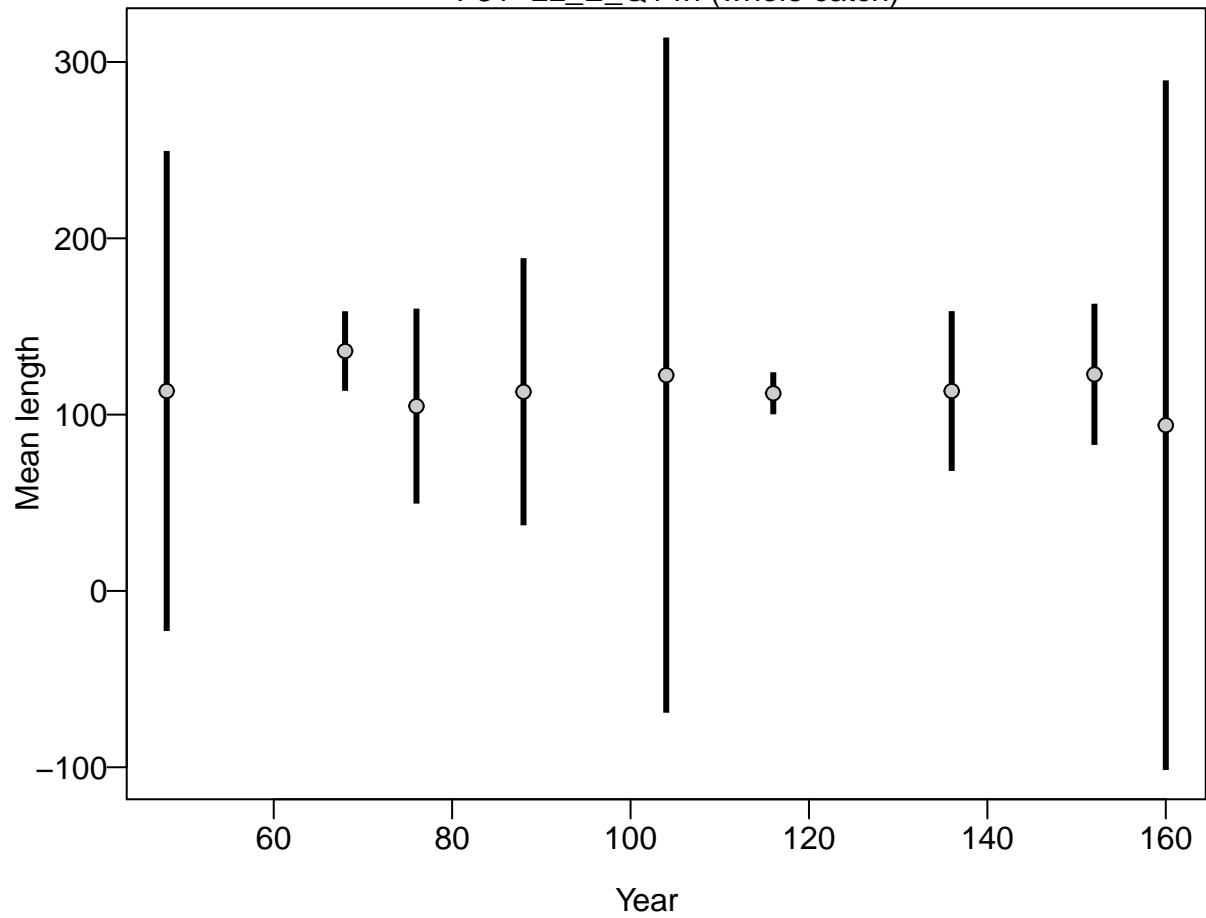




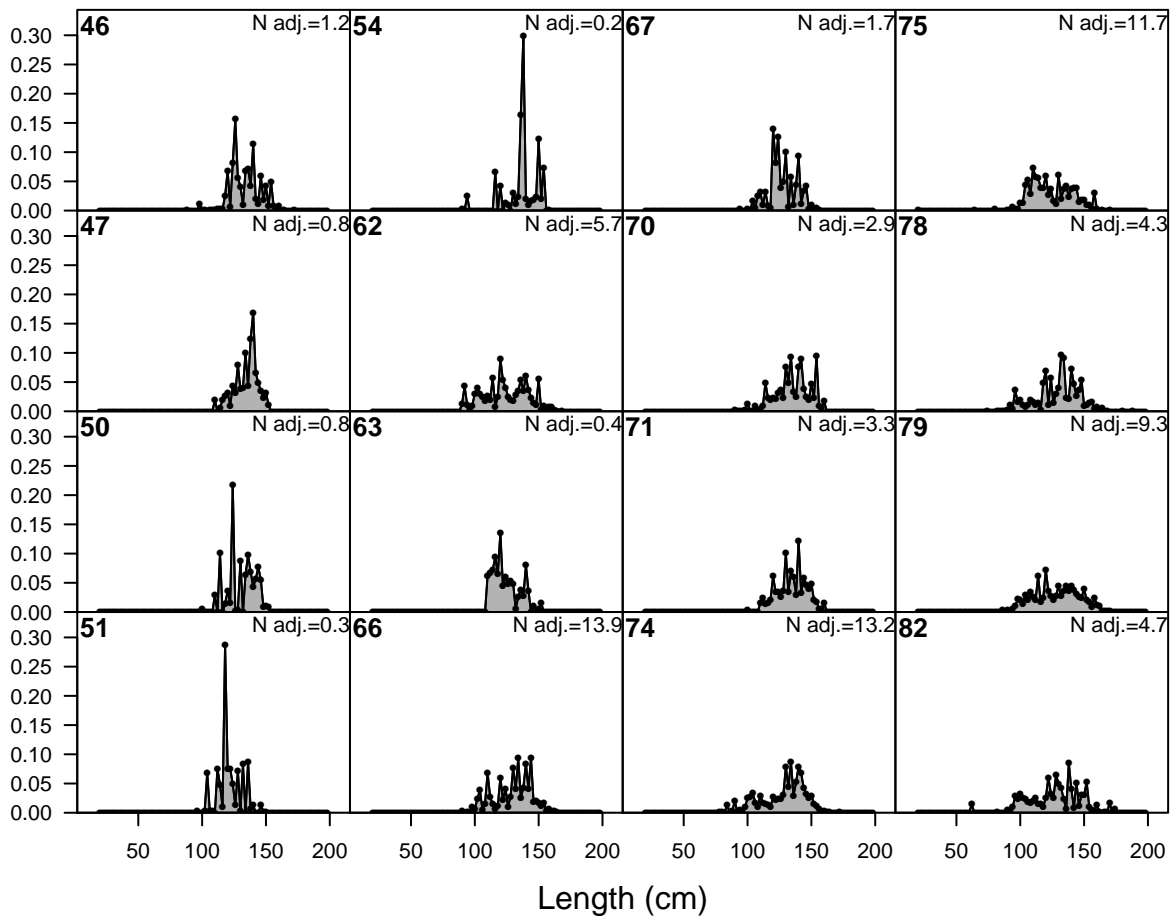




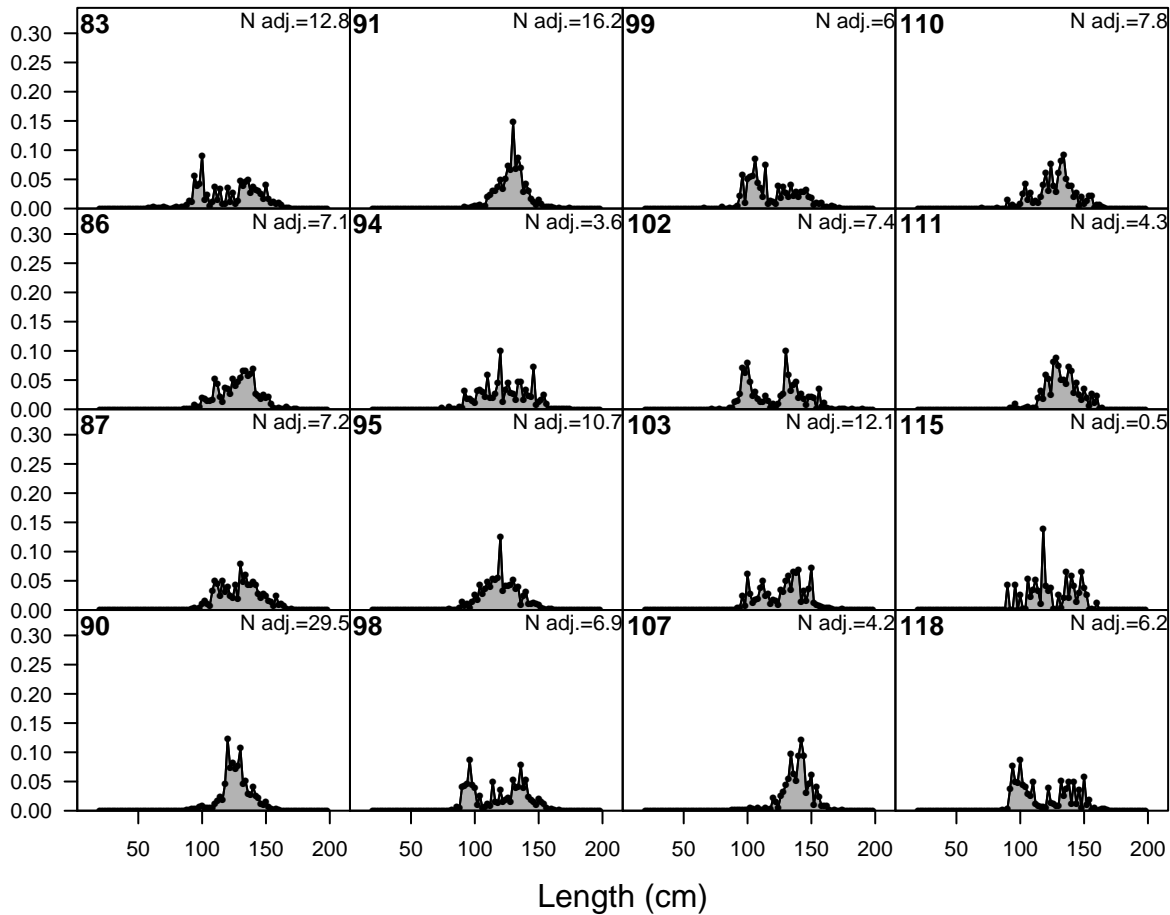
F31-LL\_E\_Q14n (whole catch)



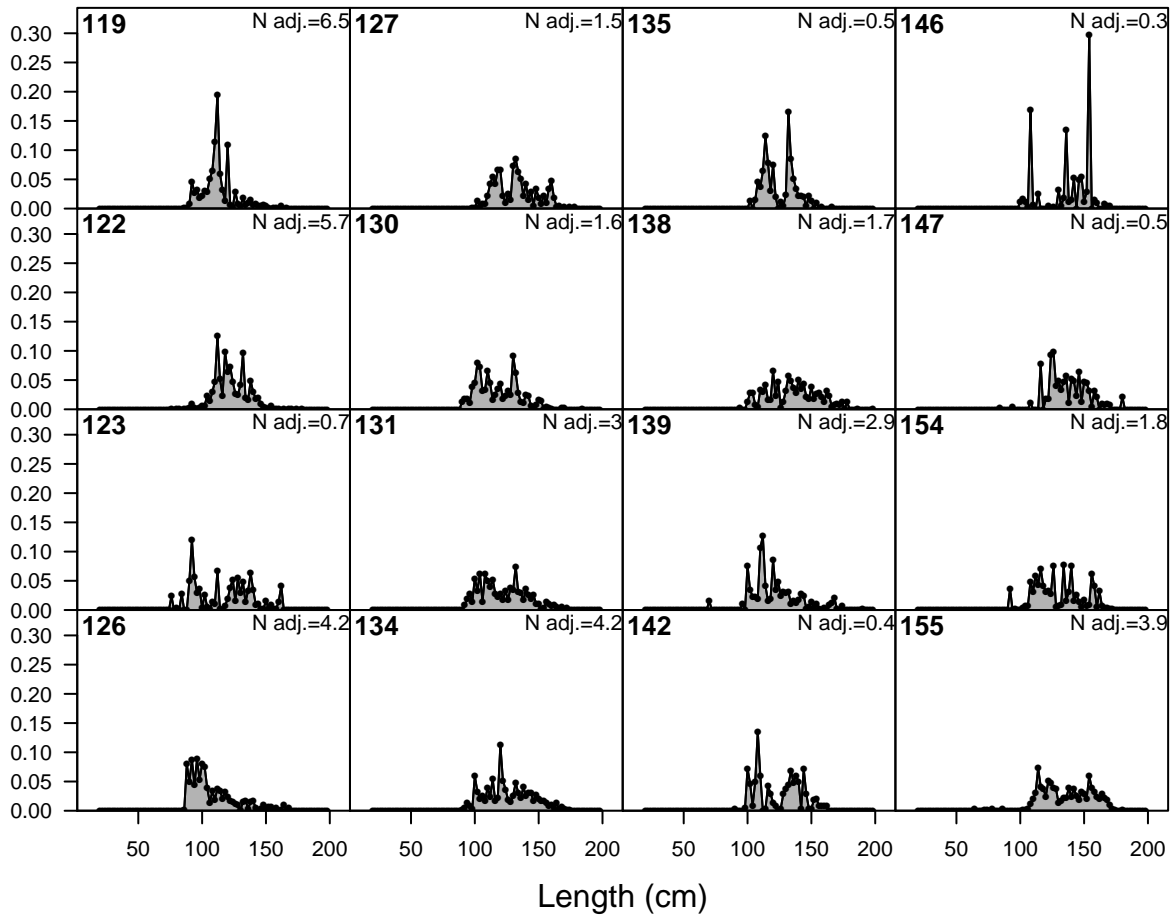
Proportion



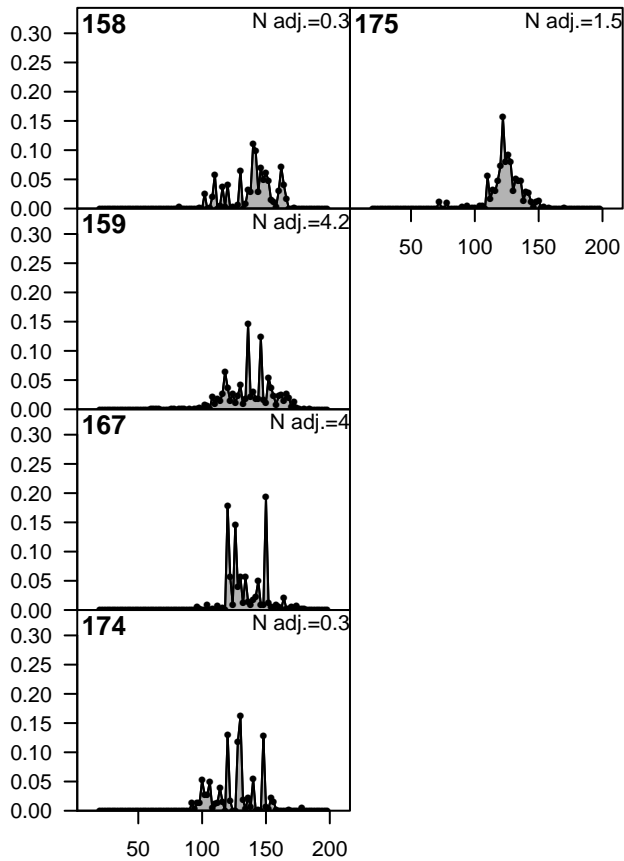
Proportion

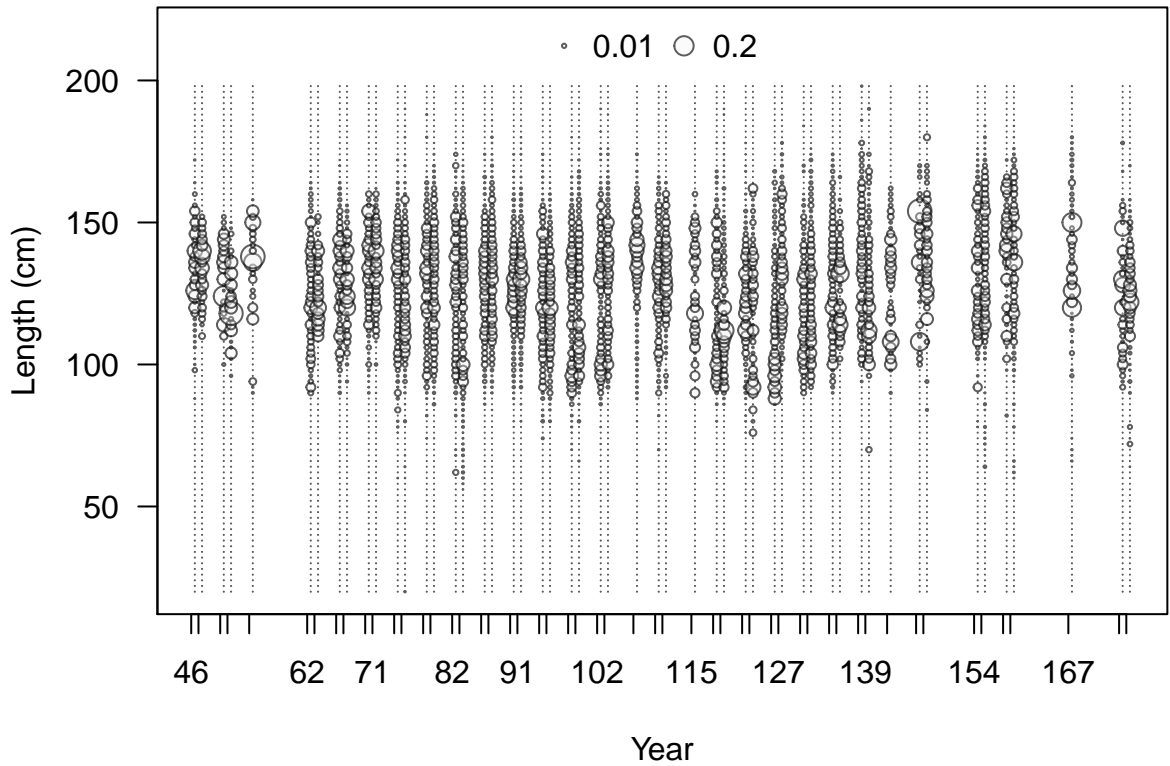


Proportion

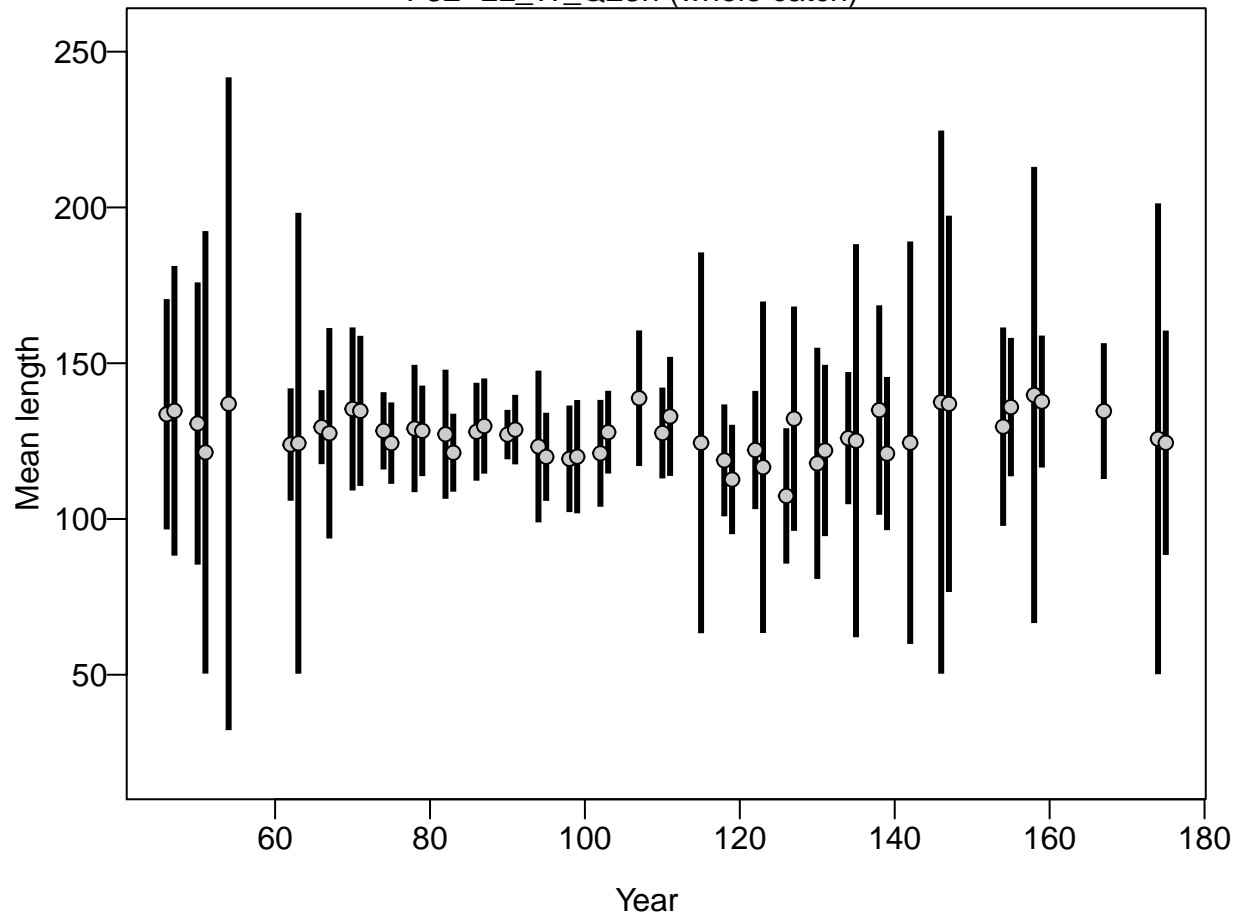


Proportion

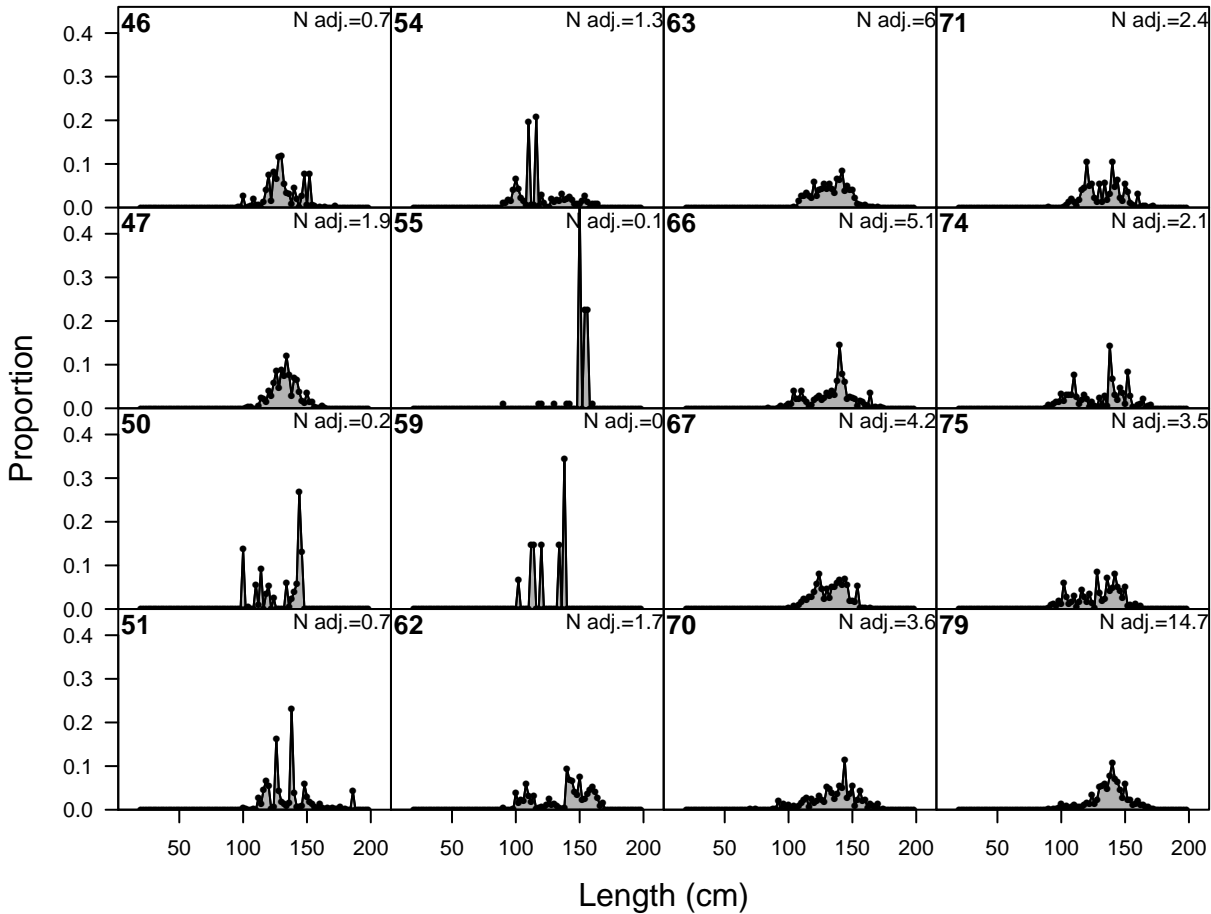


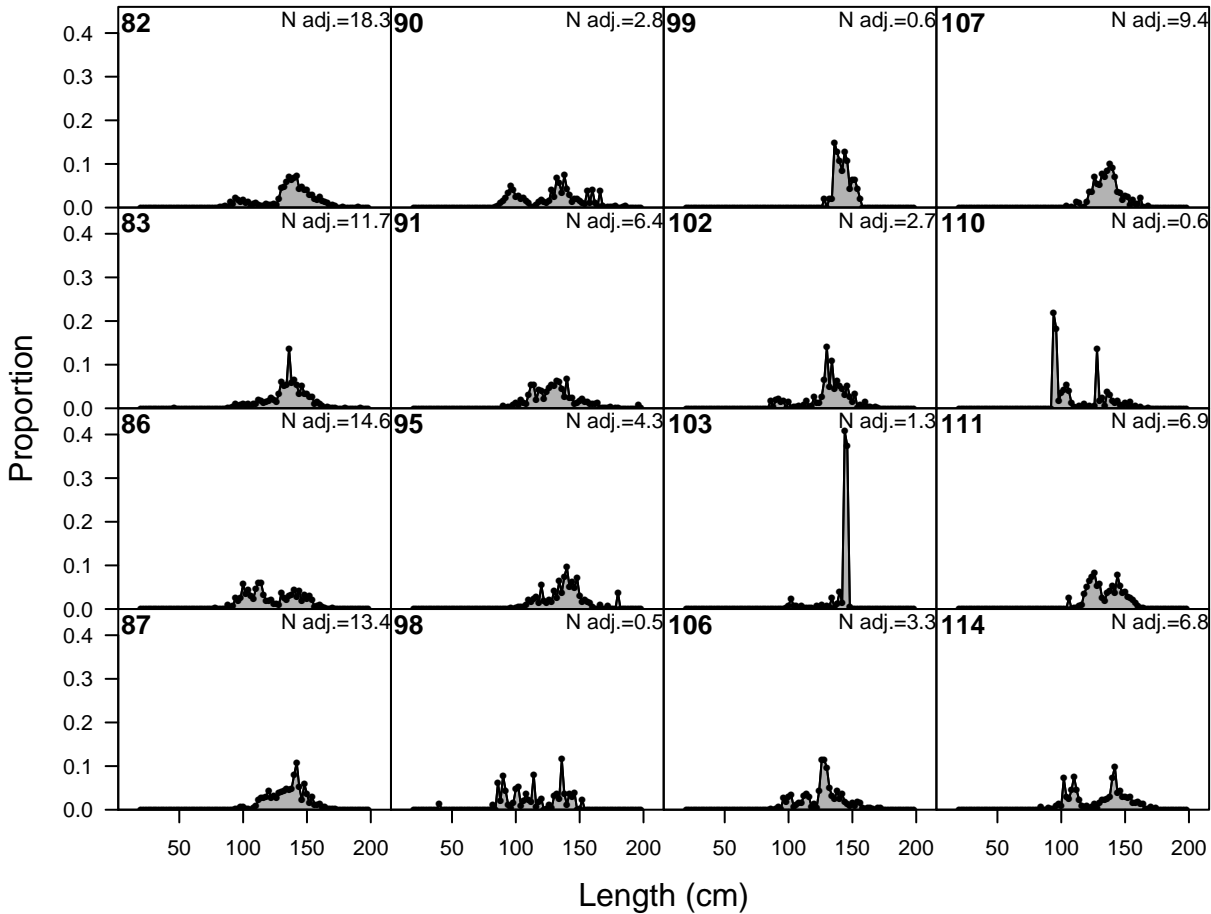


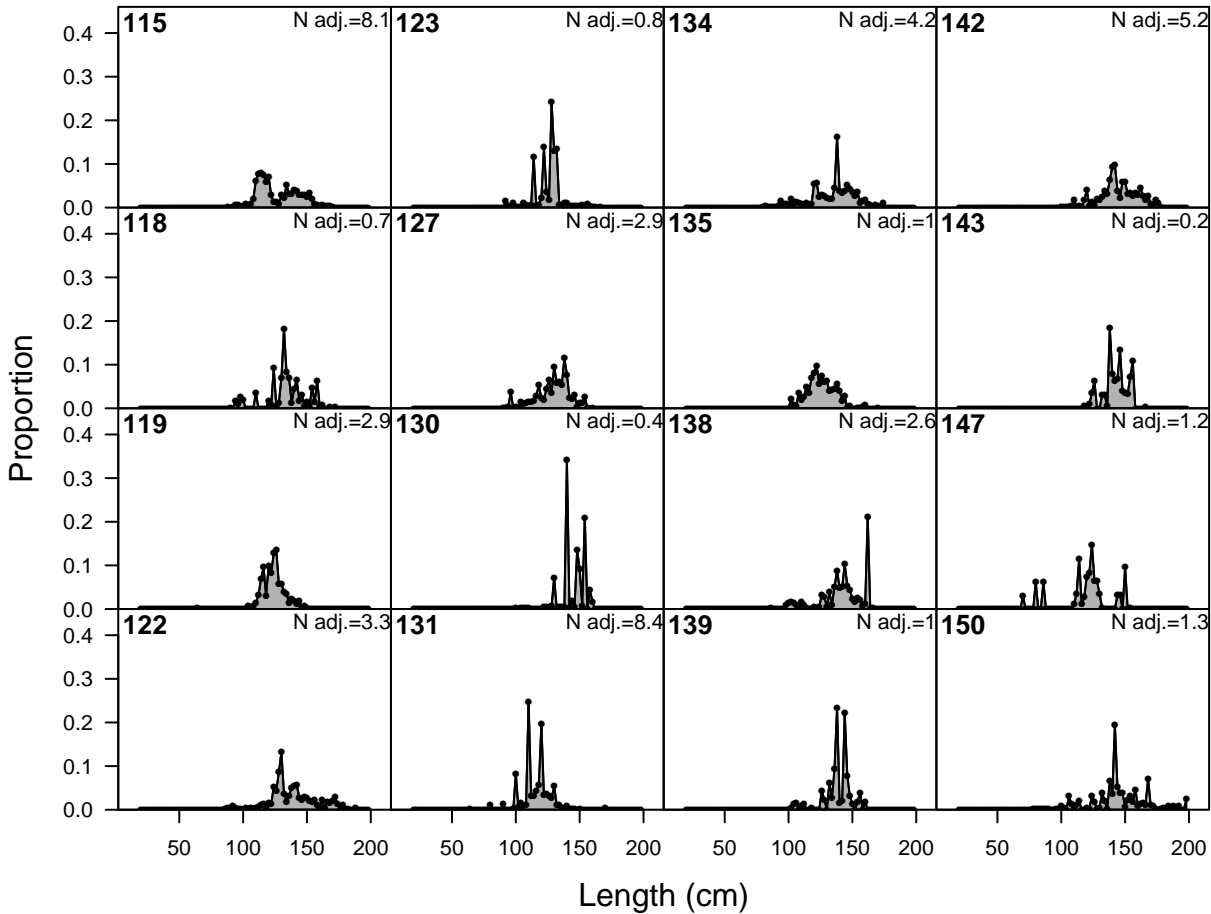
F32-LL\_W\_Q23n (whole catch)

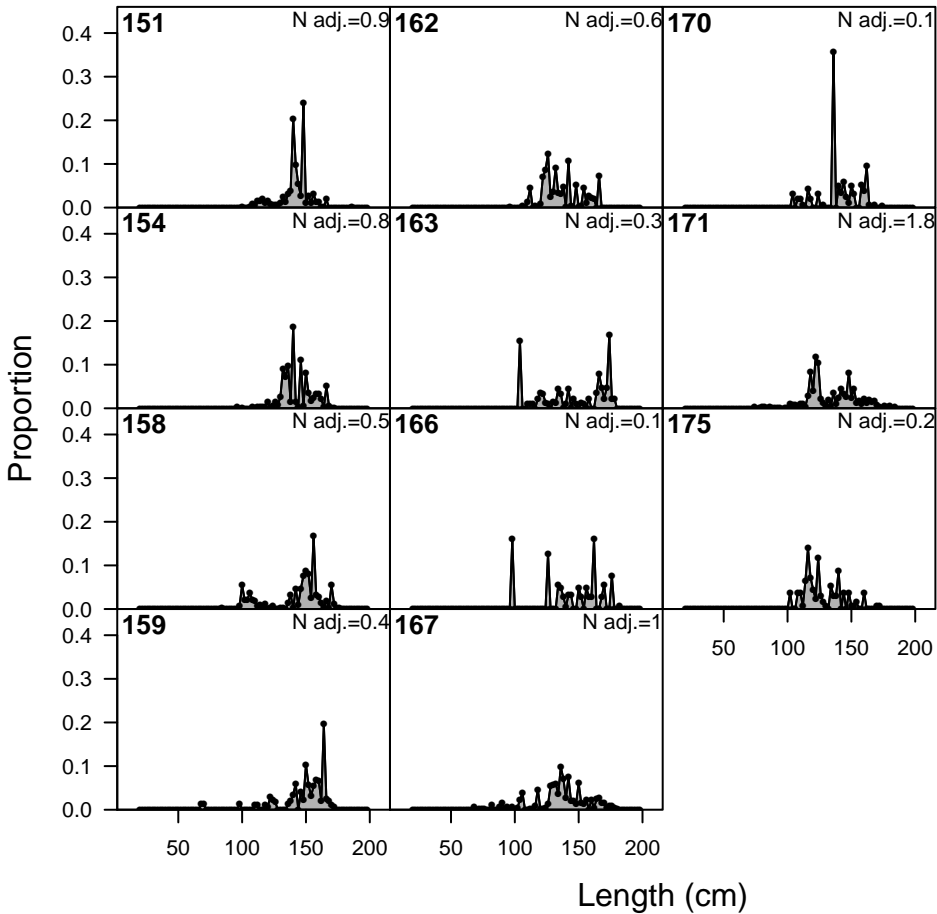


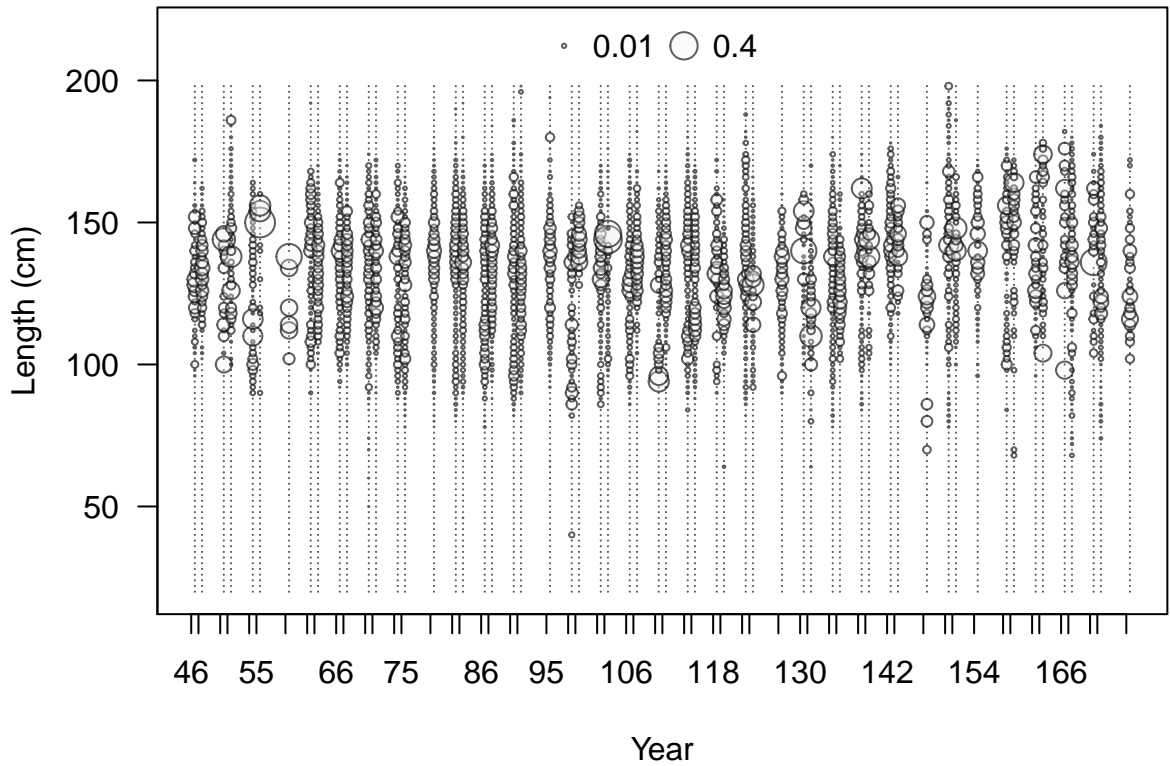




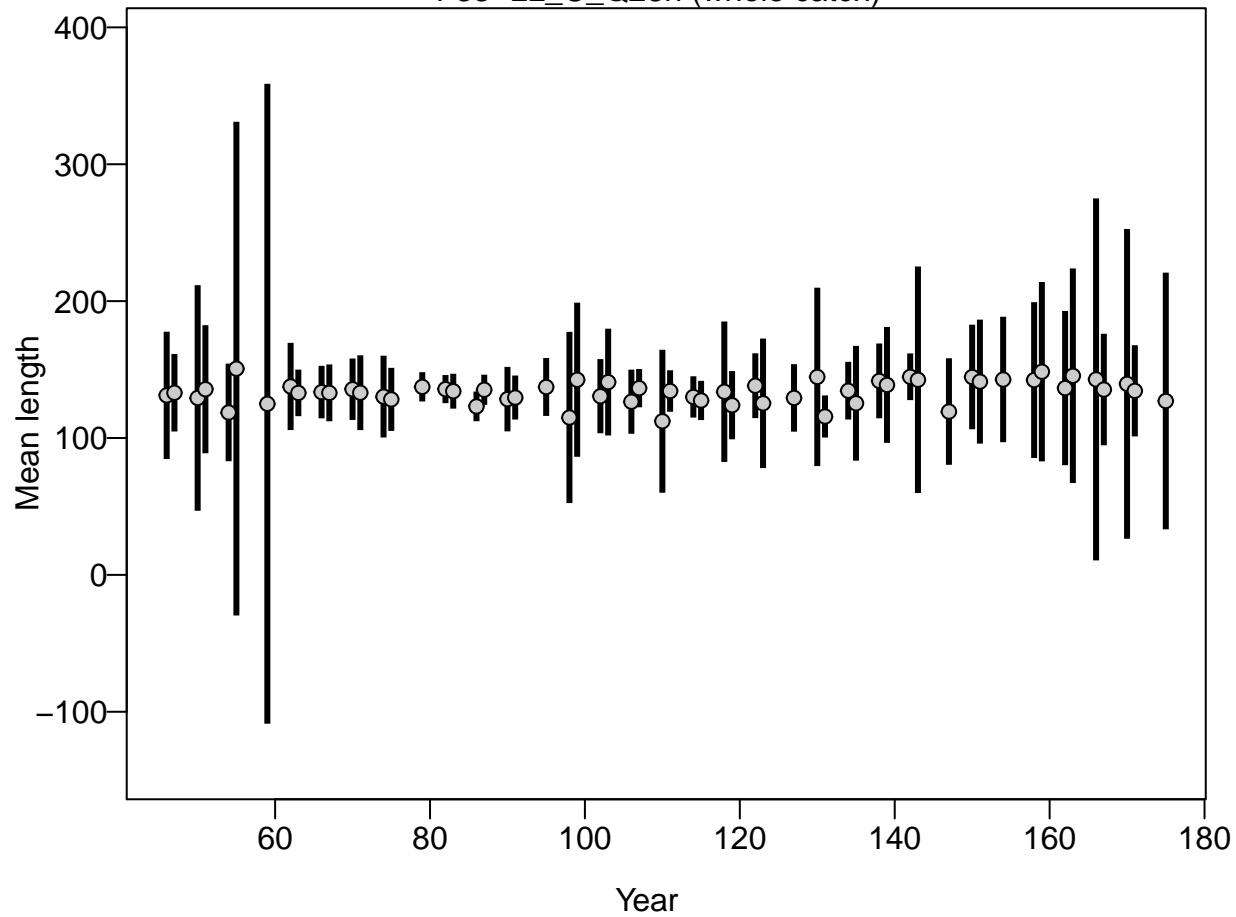


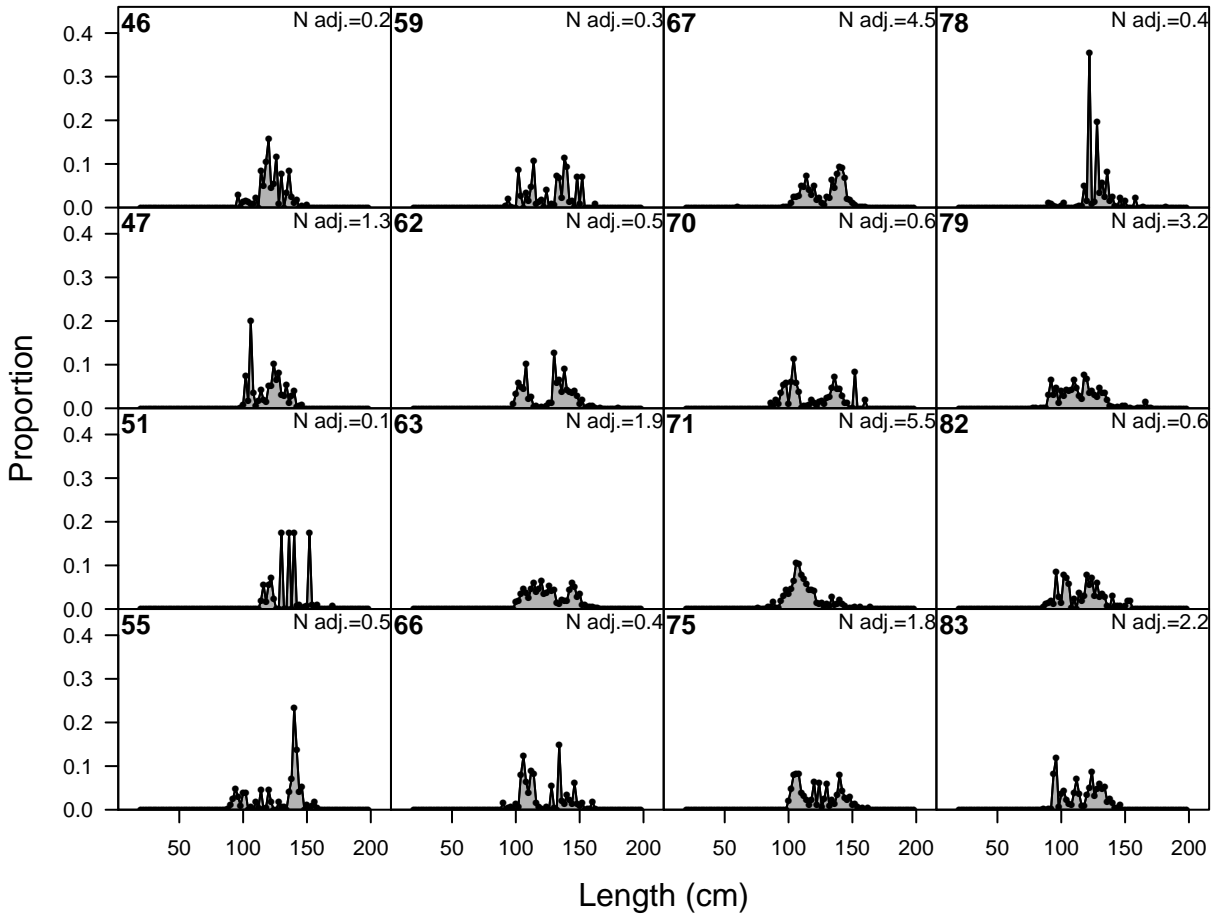


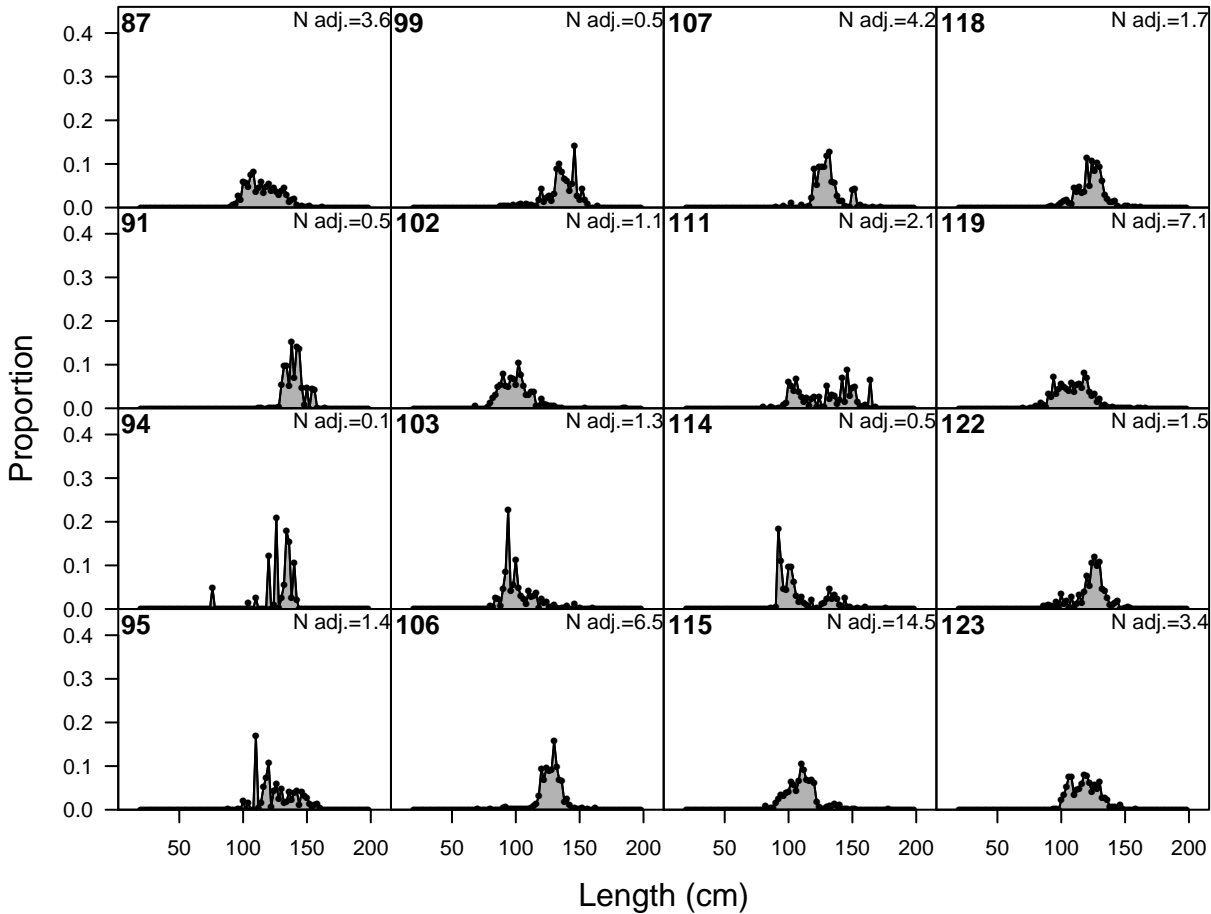




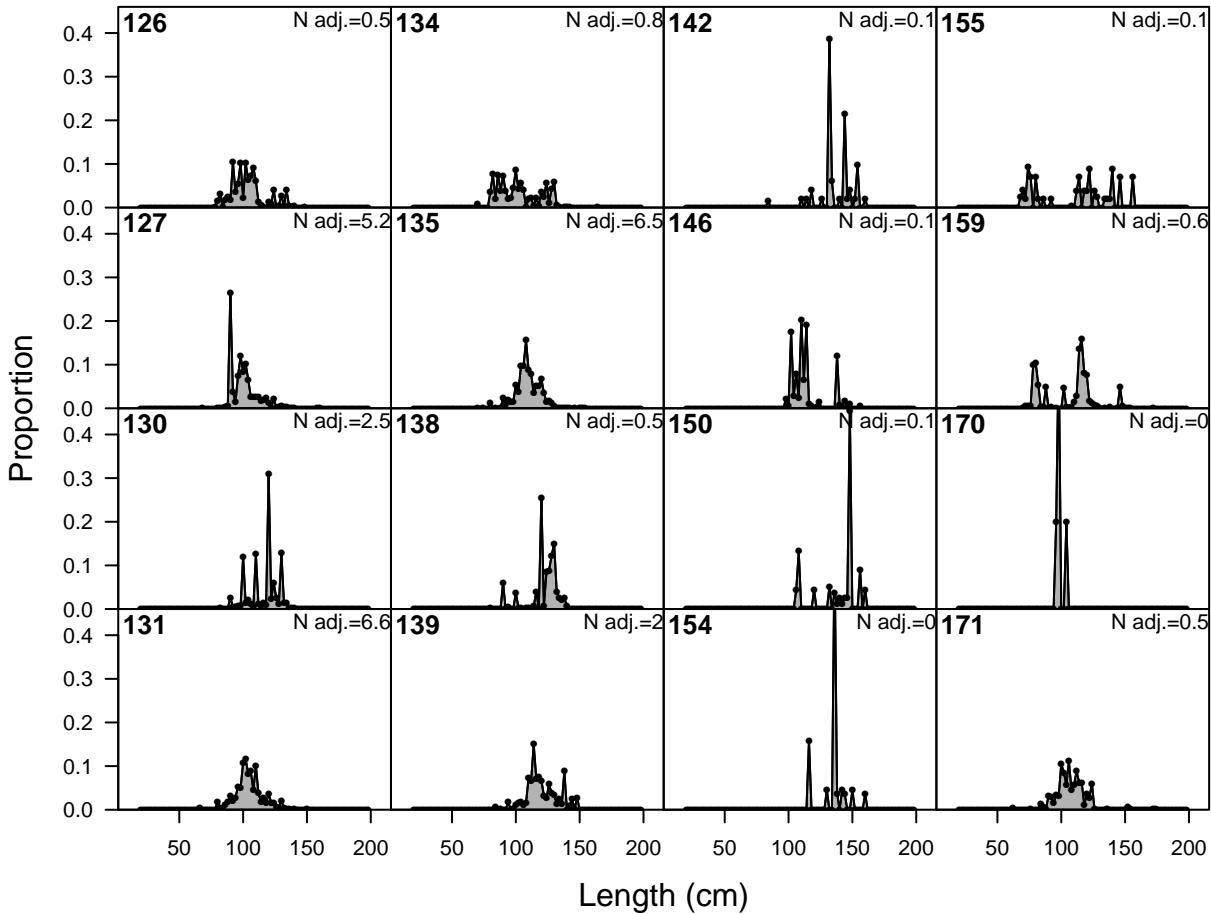
F33-LL\_C\_Q23n (whole catch)

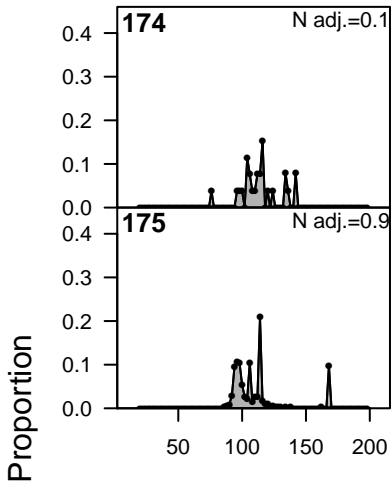




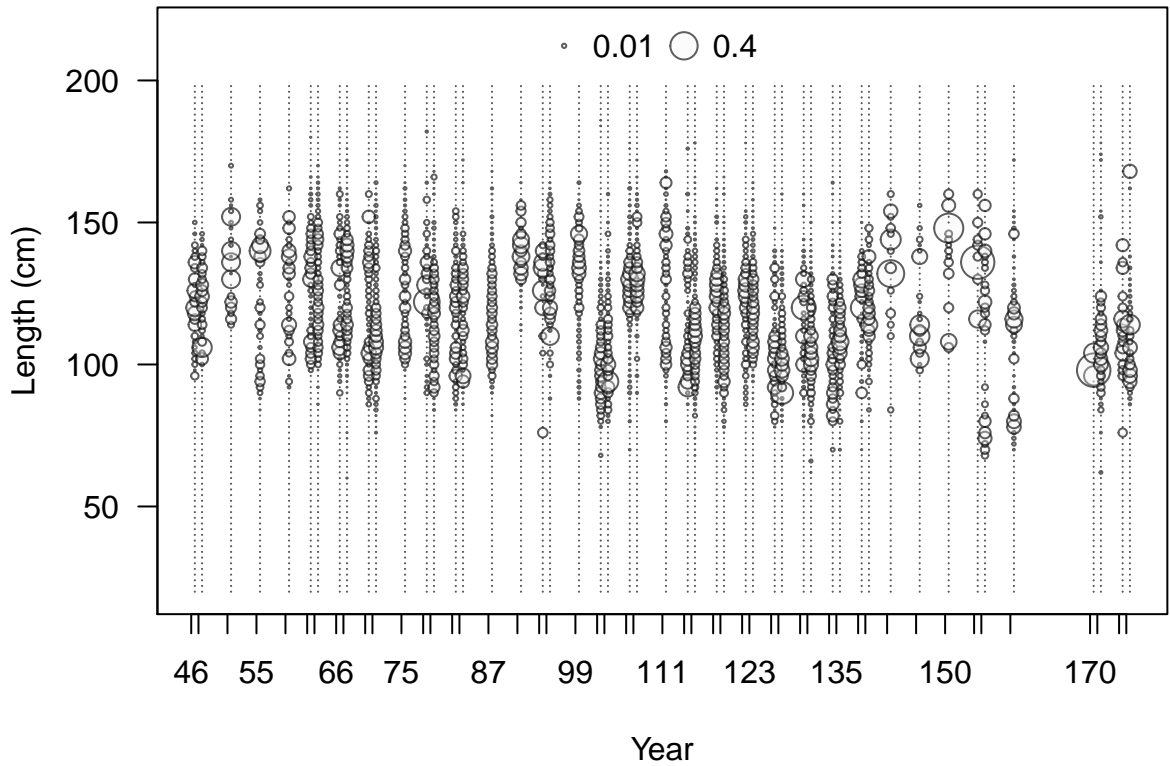




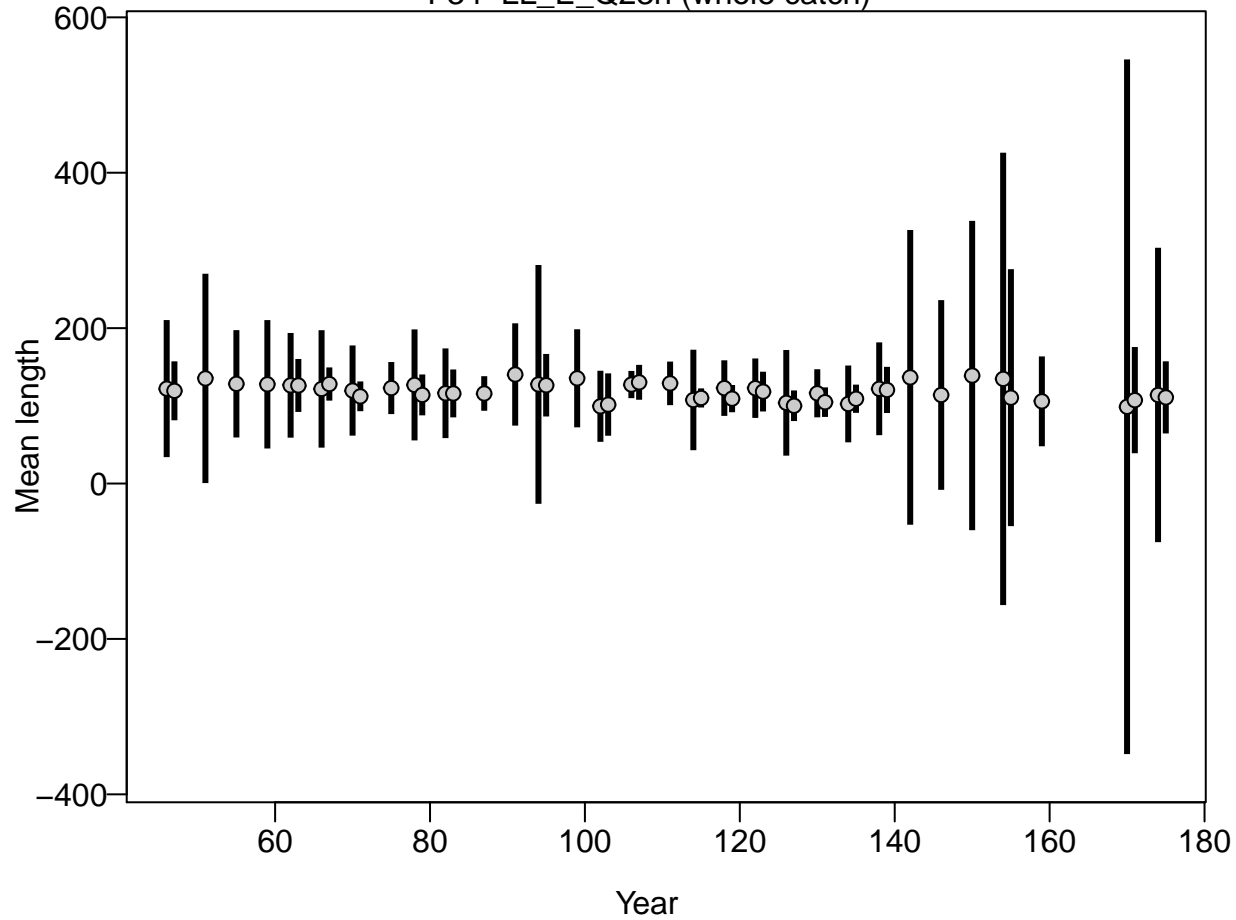




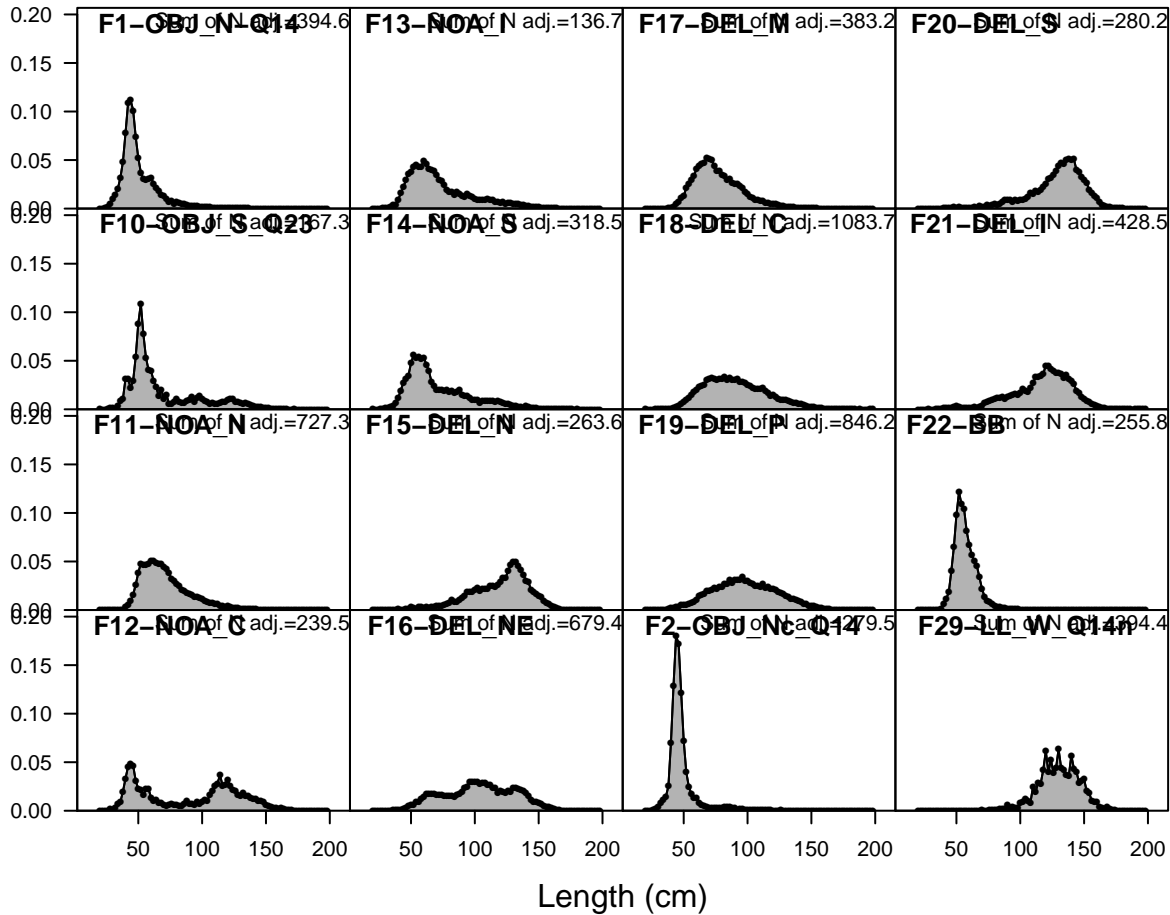
Length (cm)



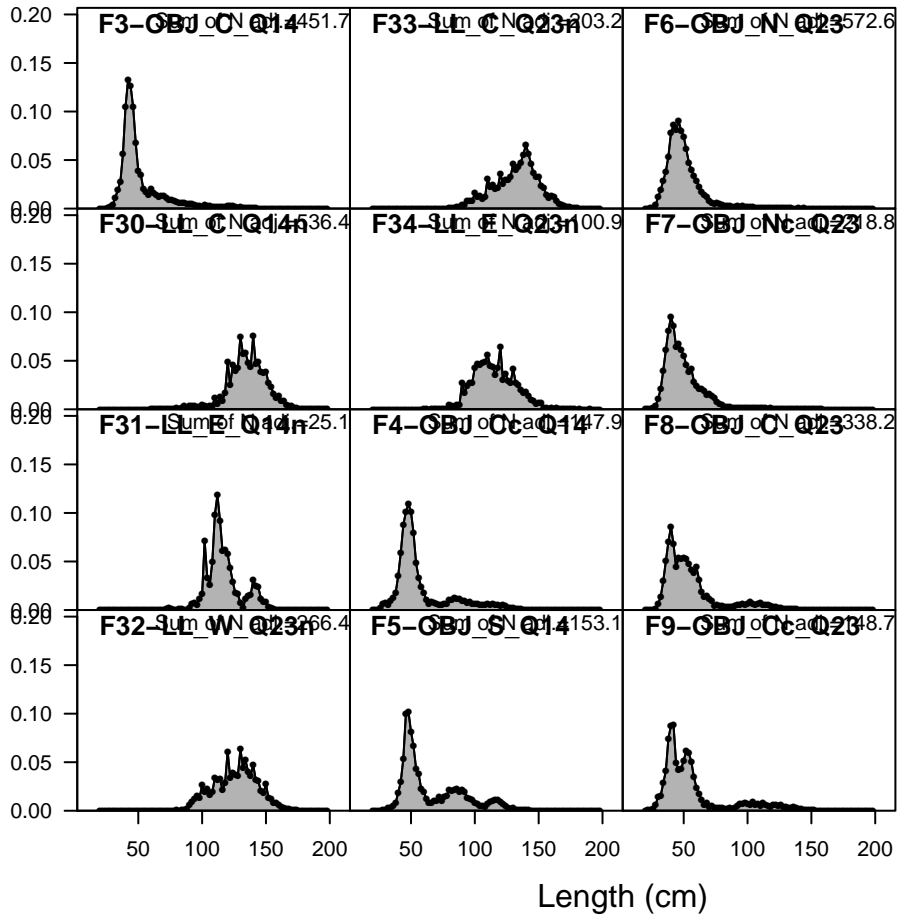
F34-LL\_E\_Q23n (whole catch)

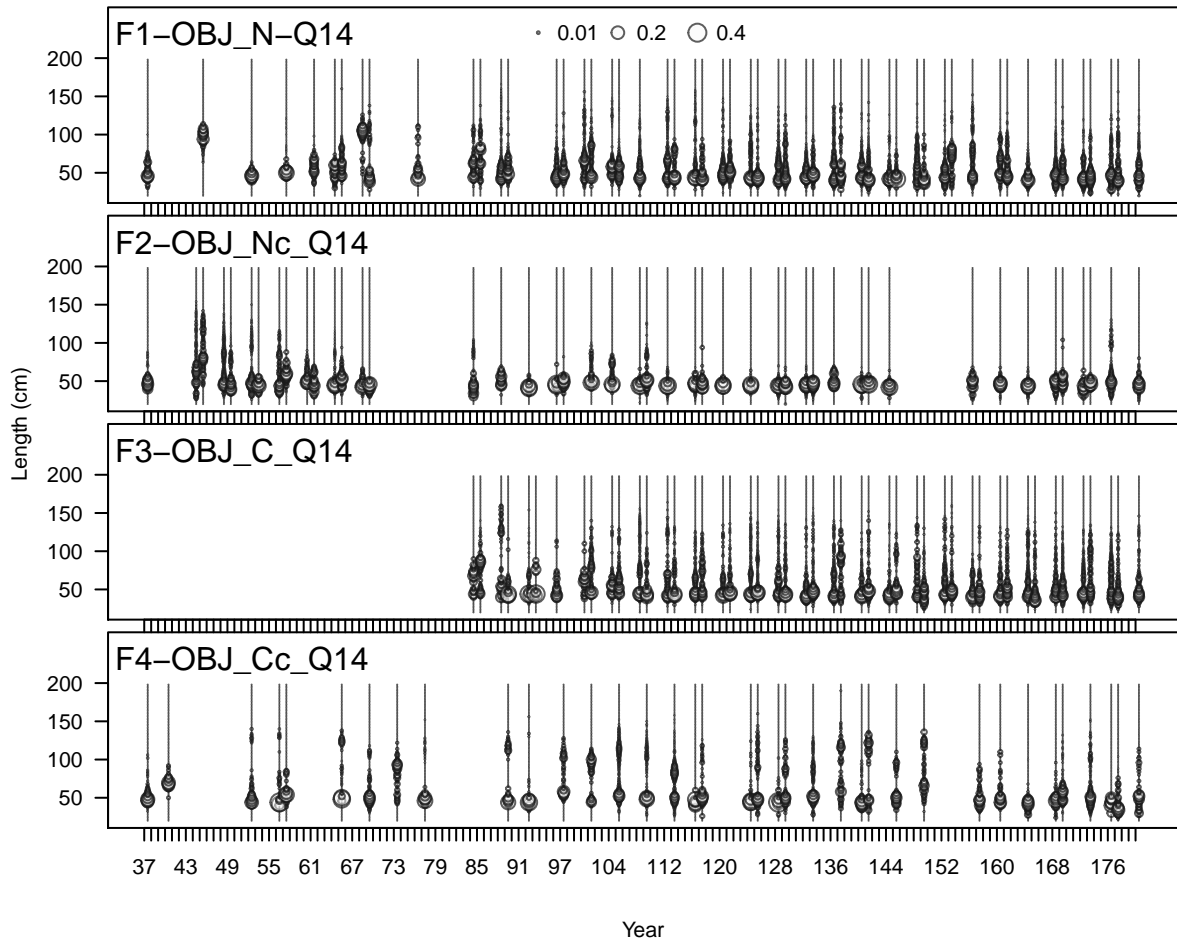


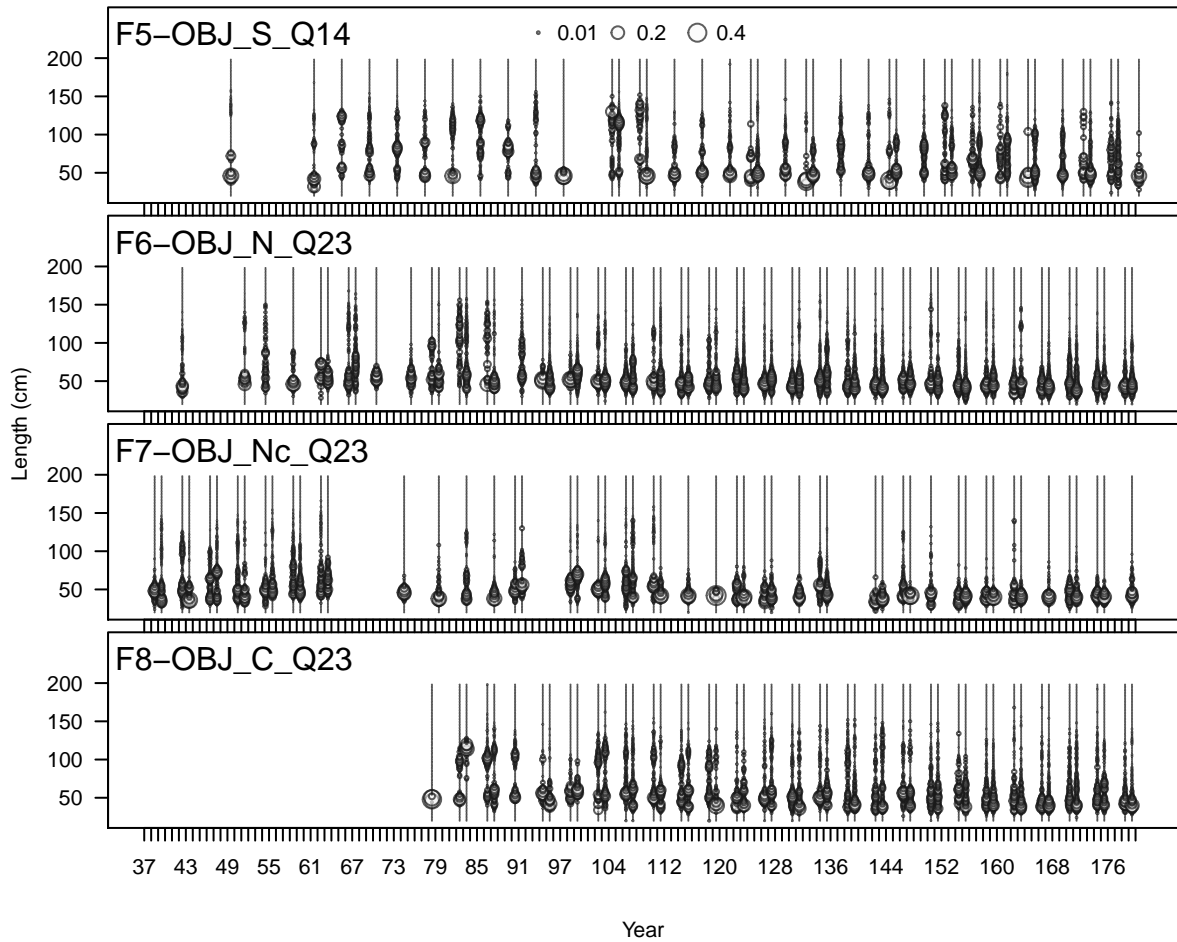
Proportion



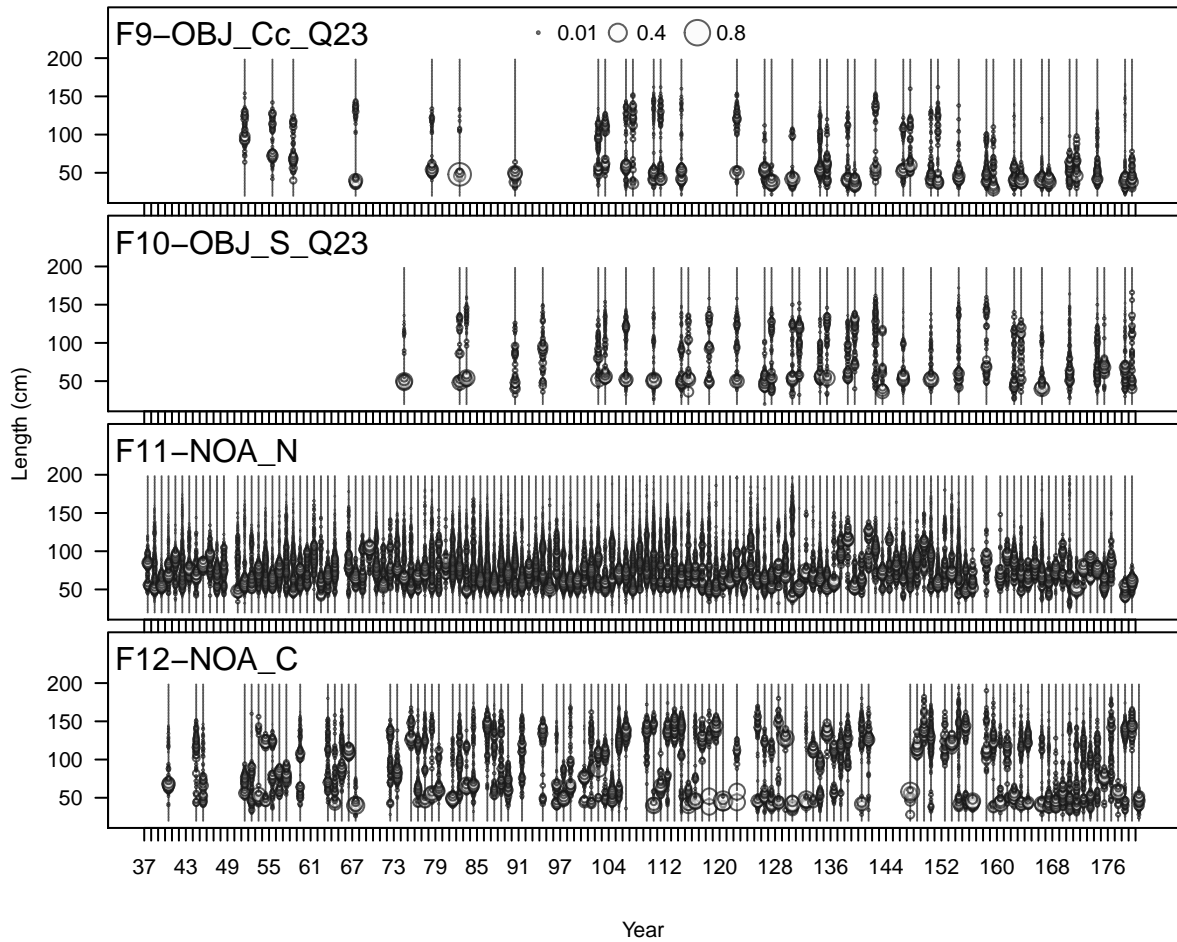
Proportion

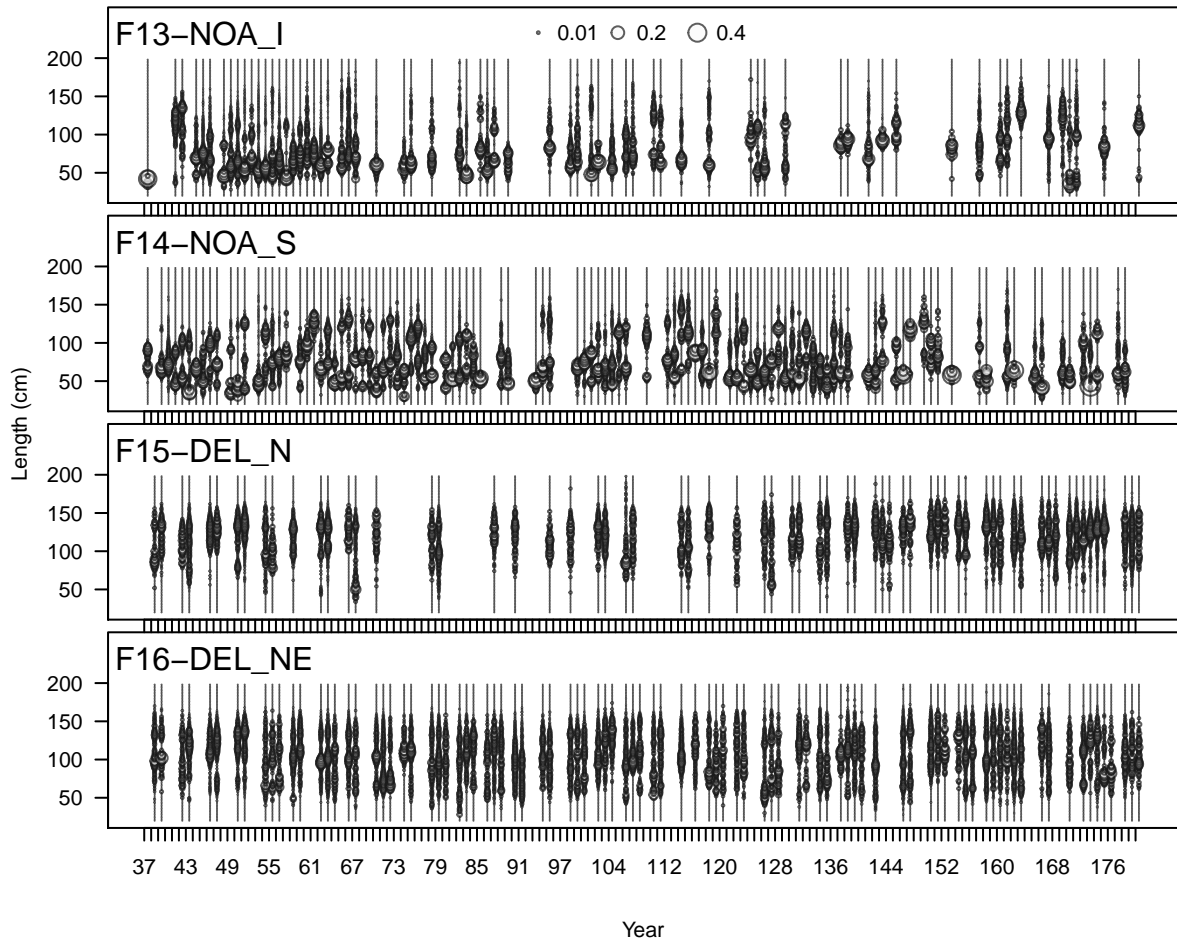


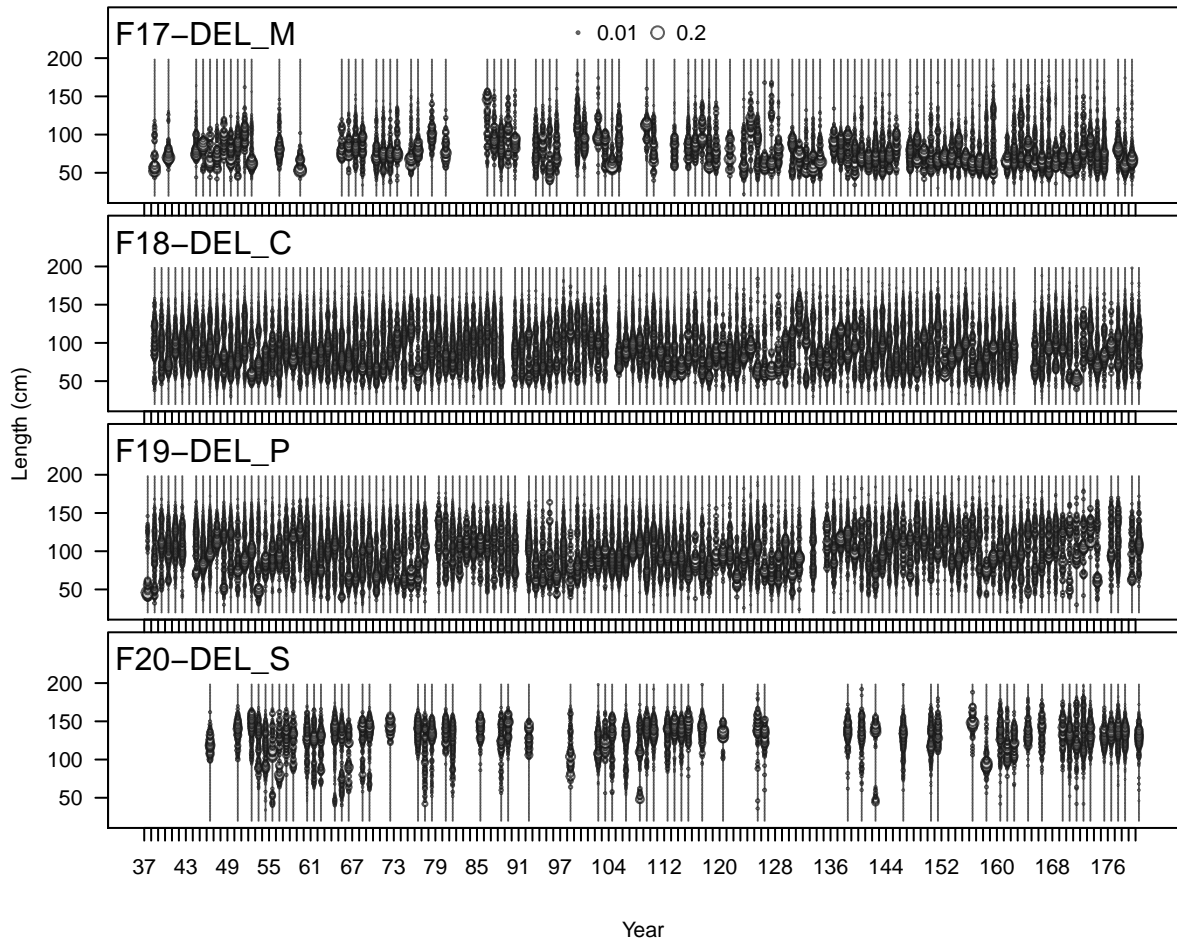


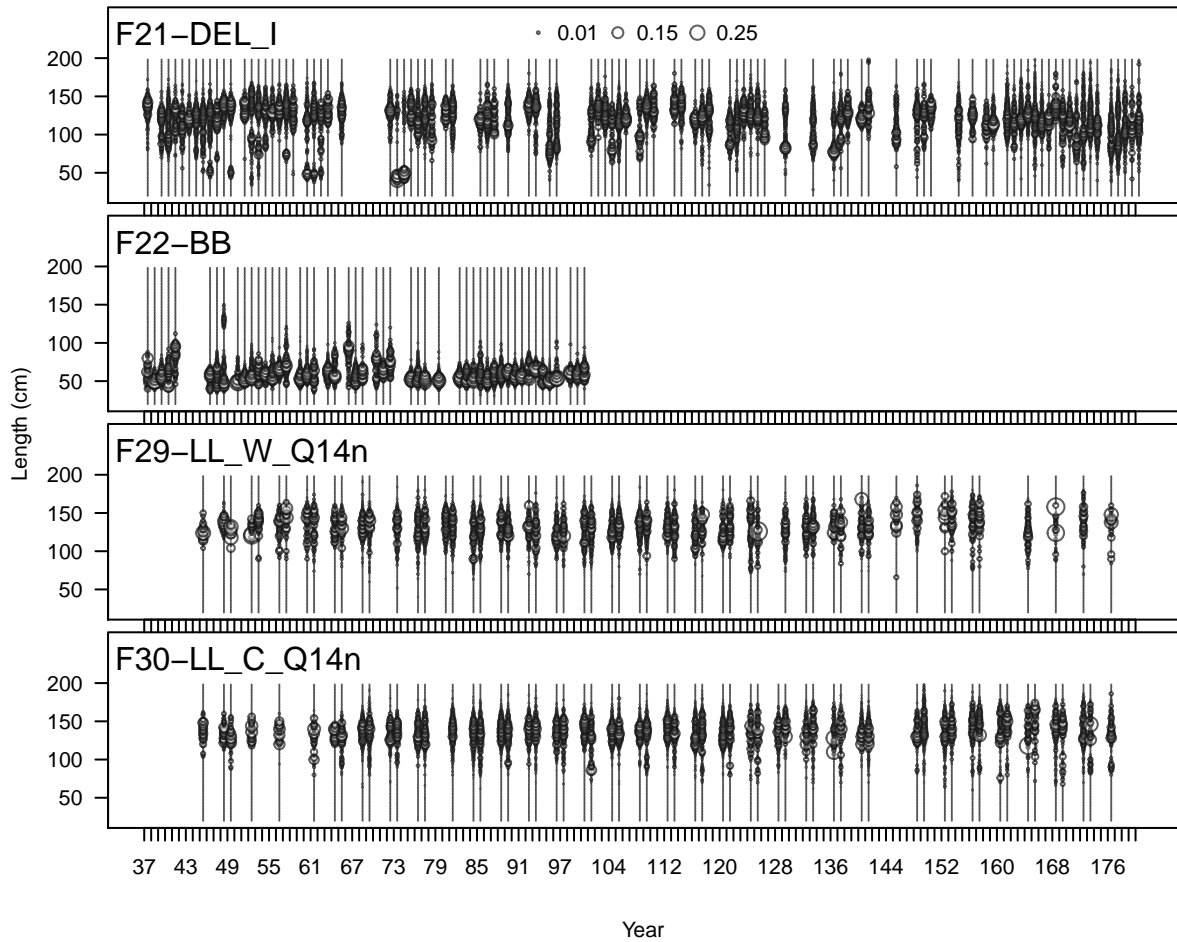


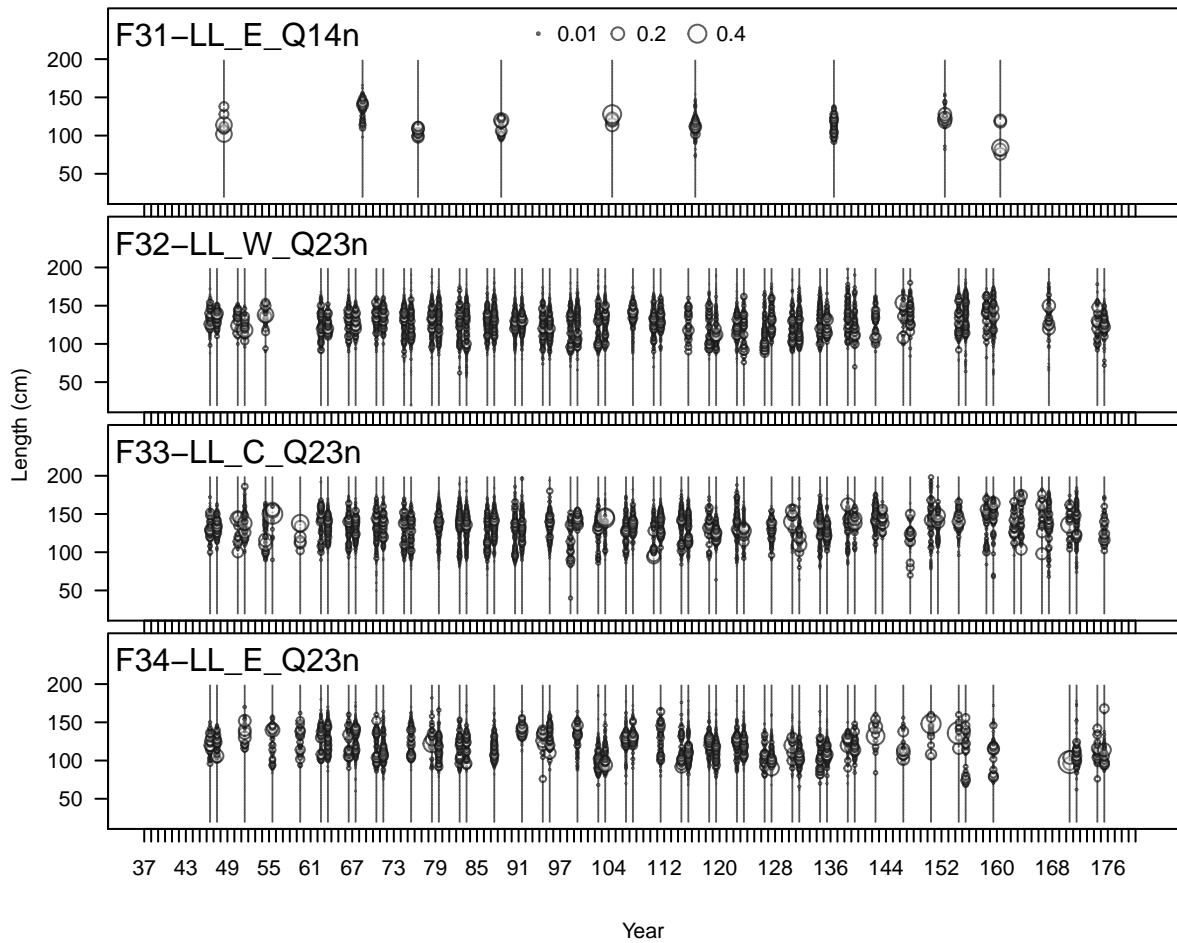


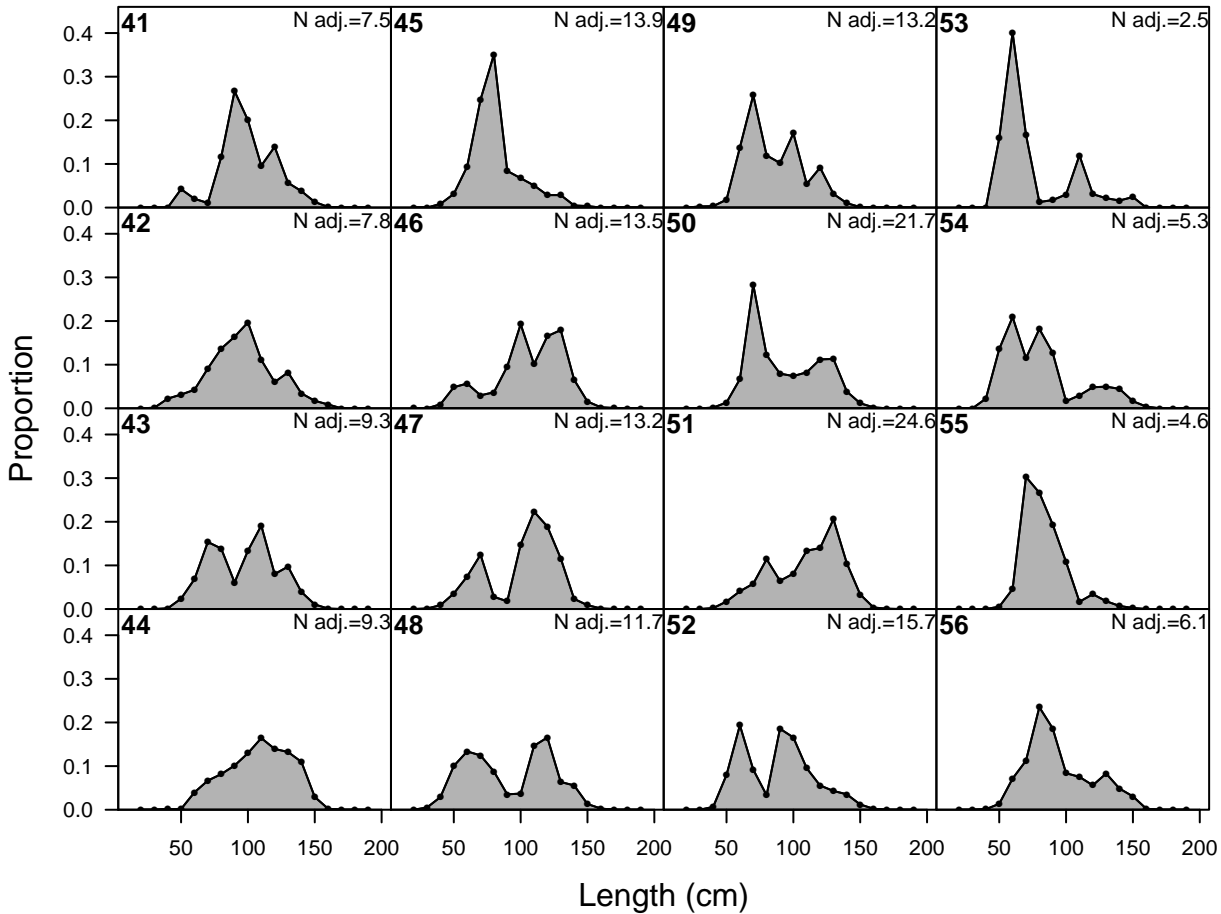


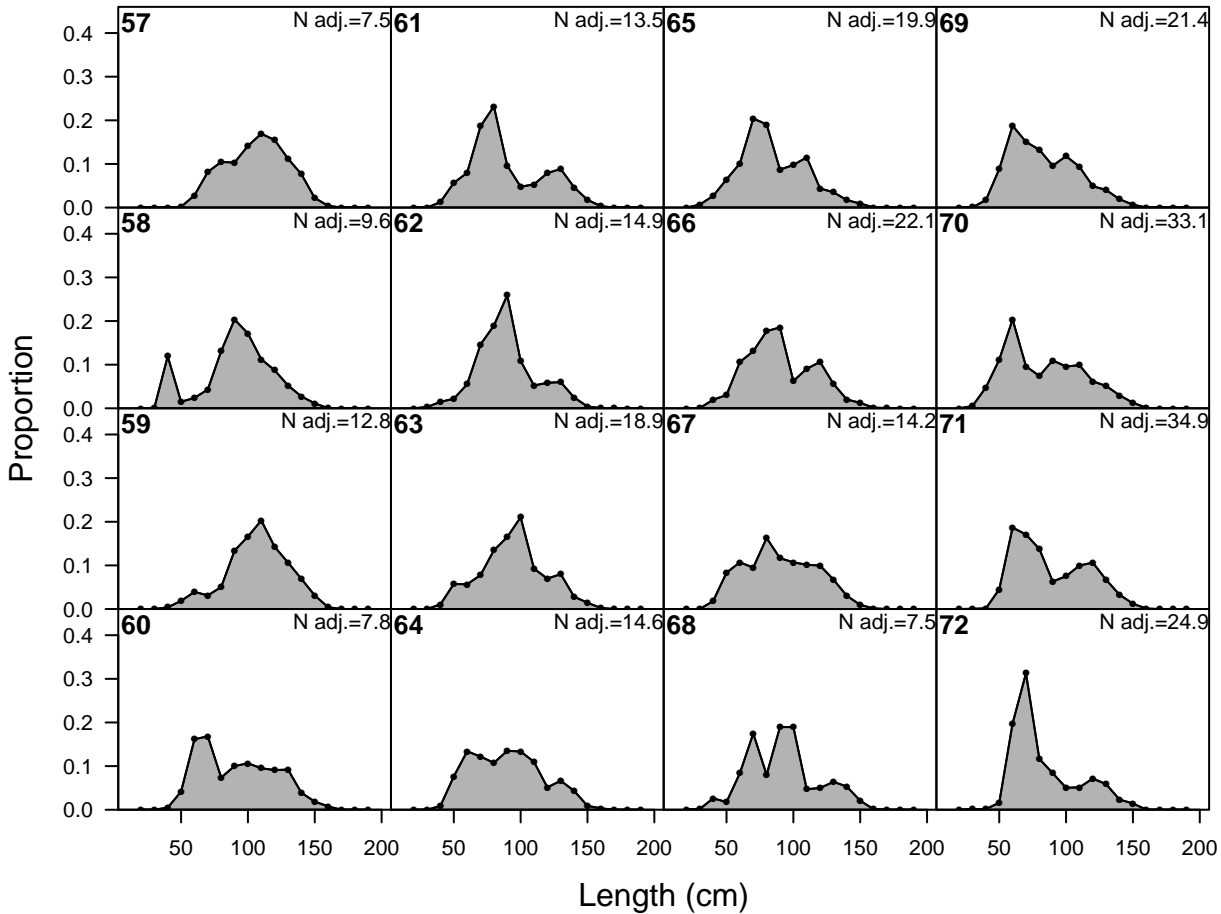


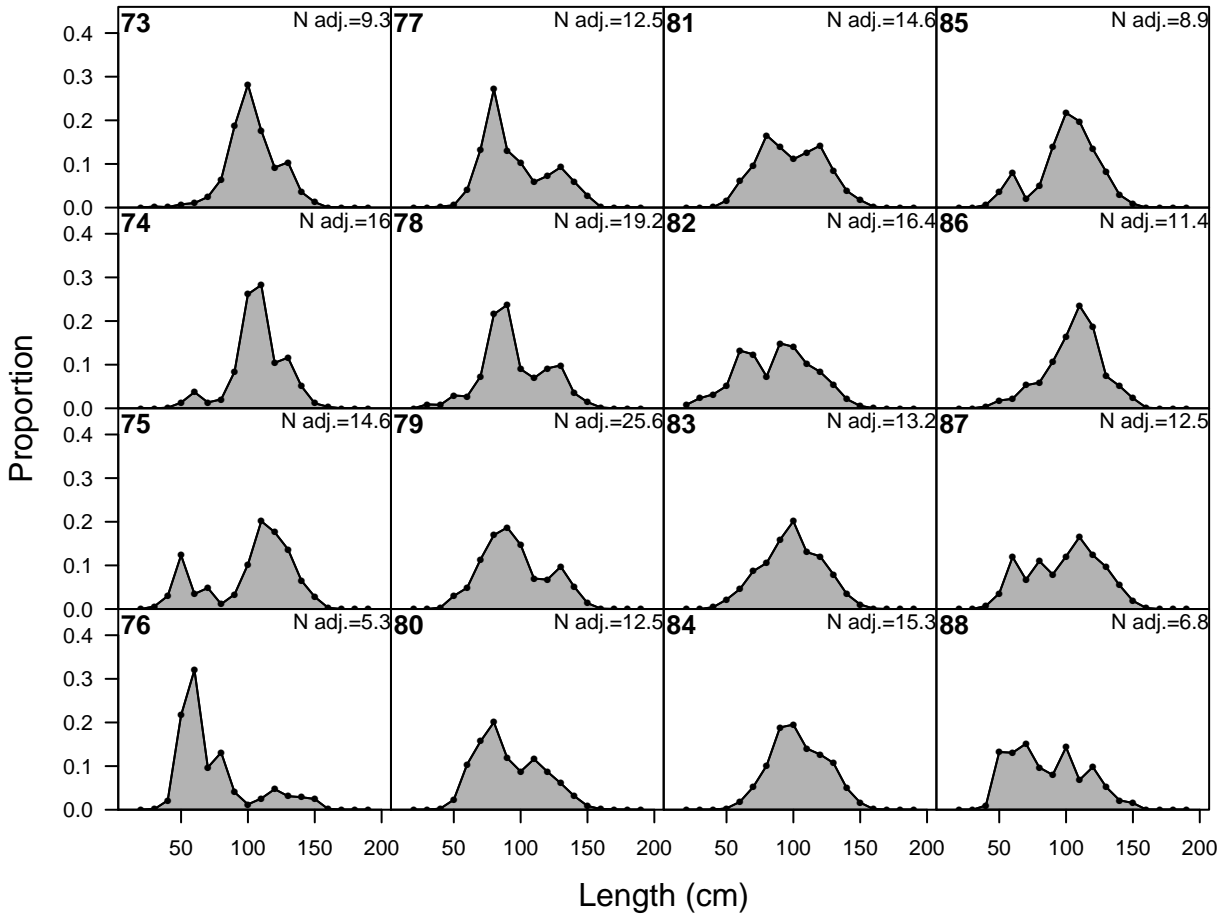




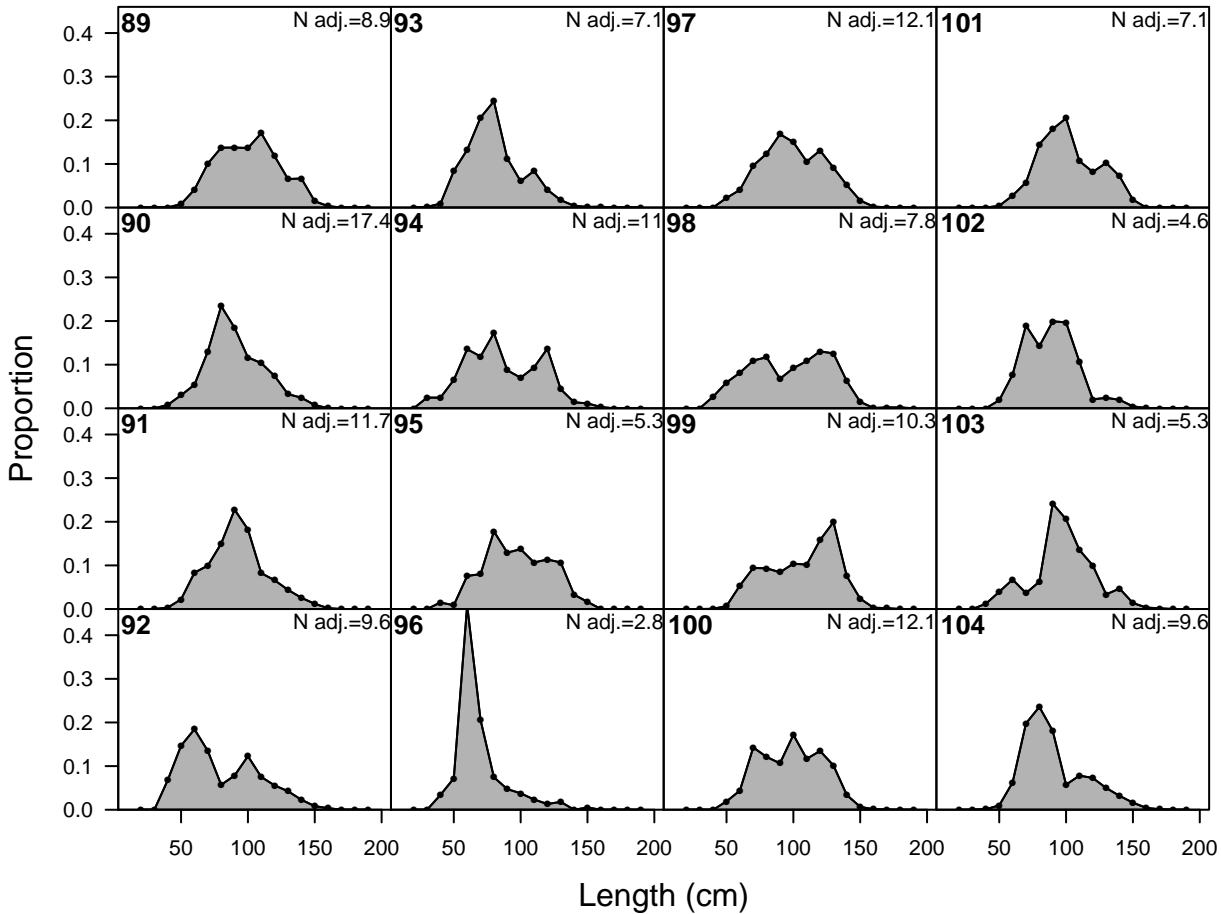


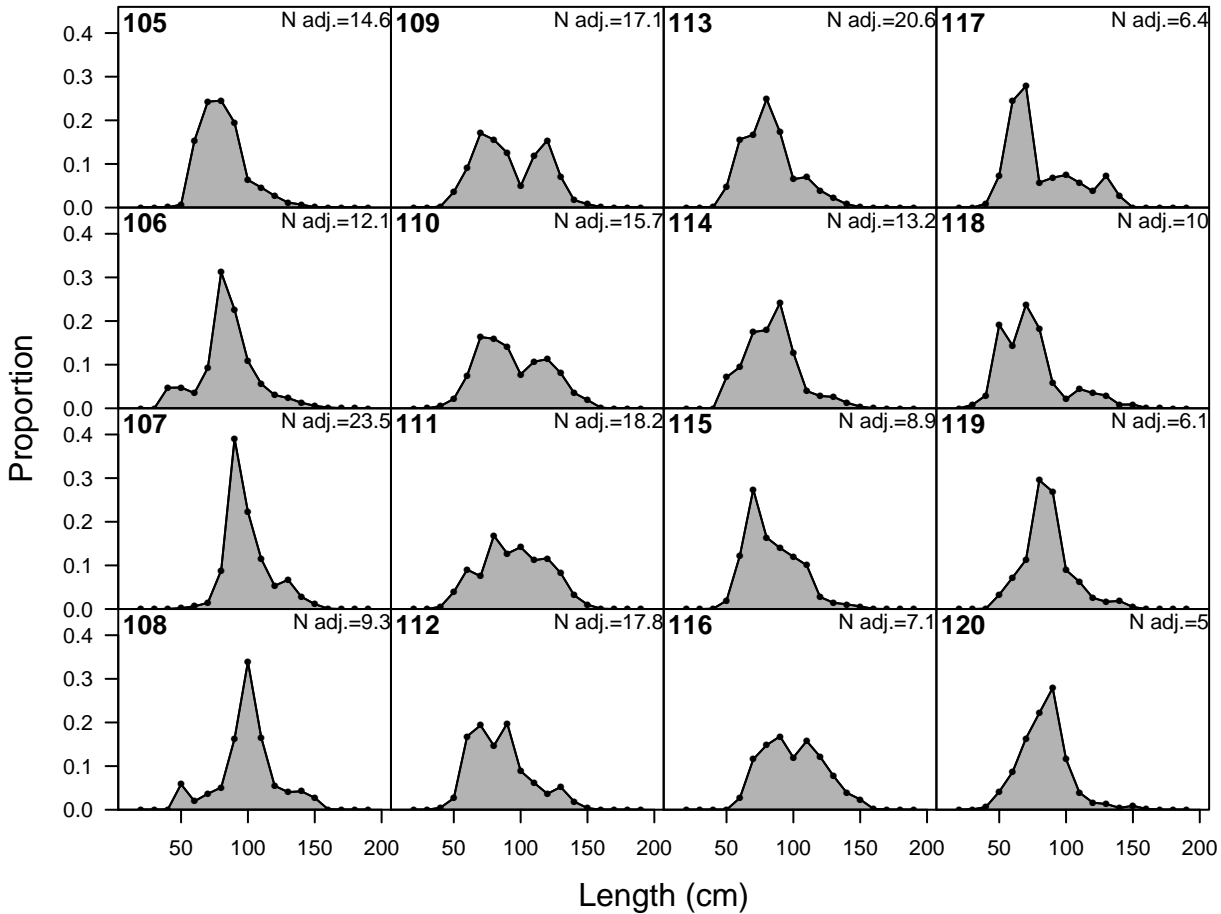


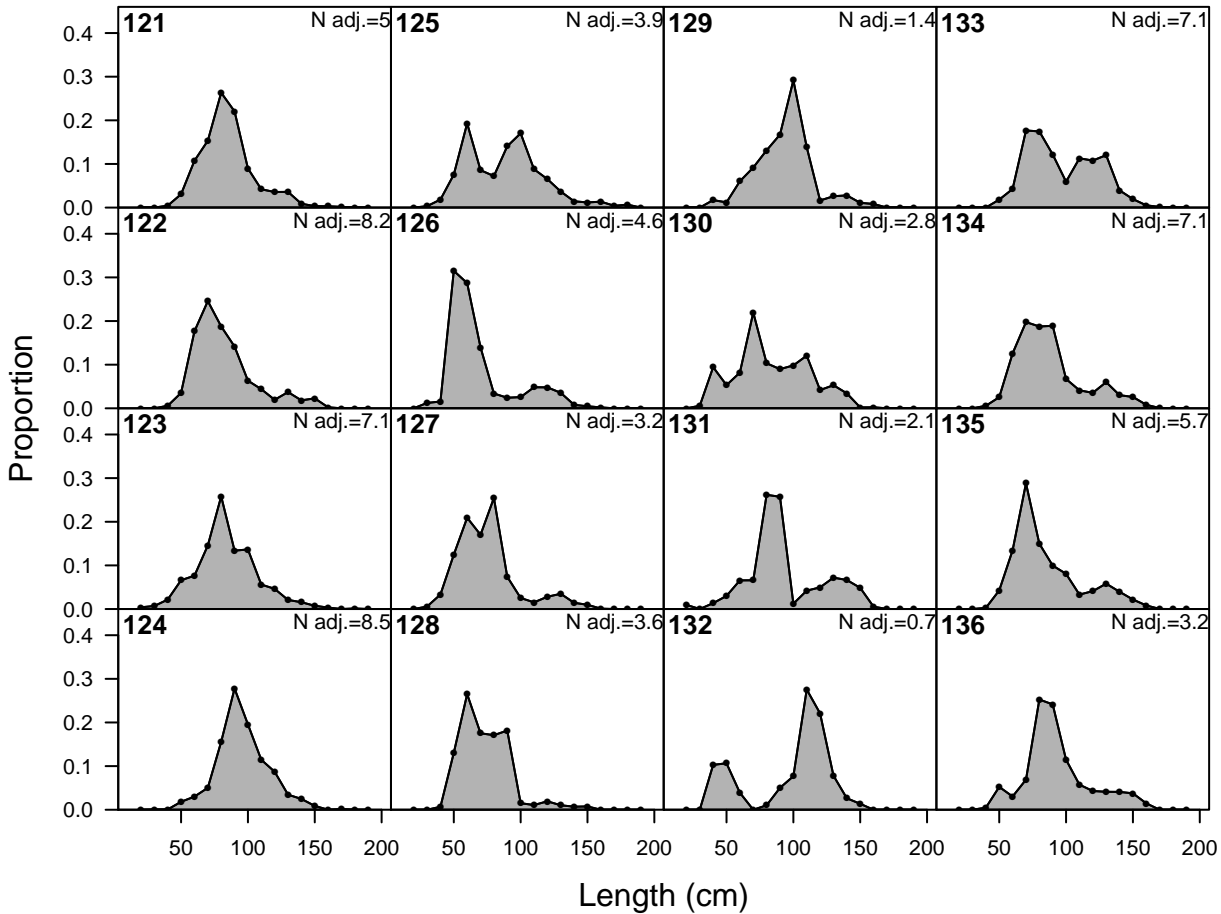


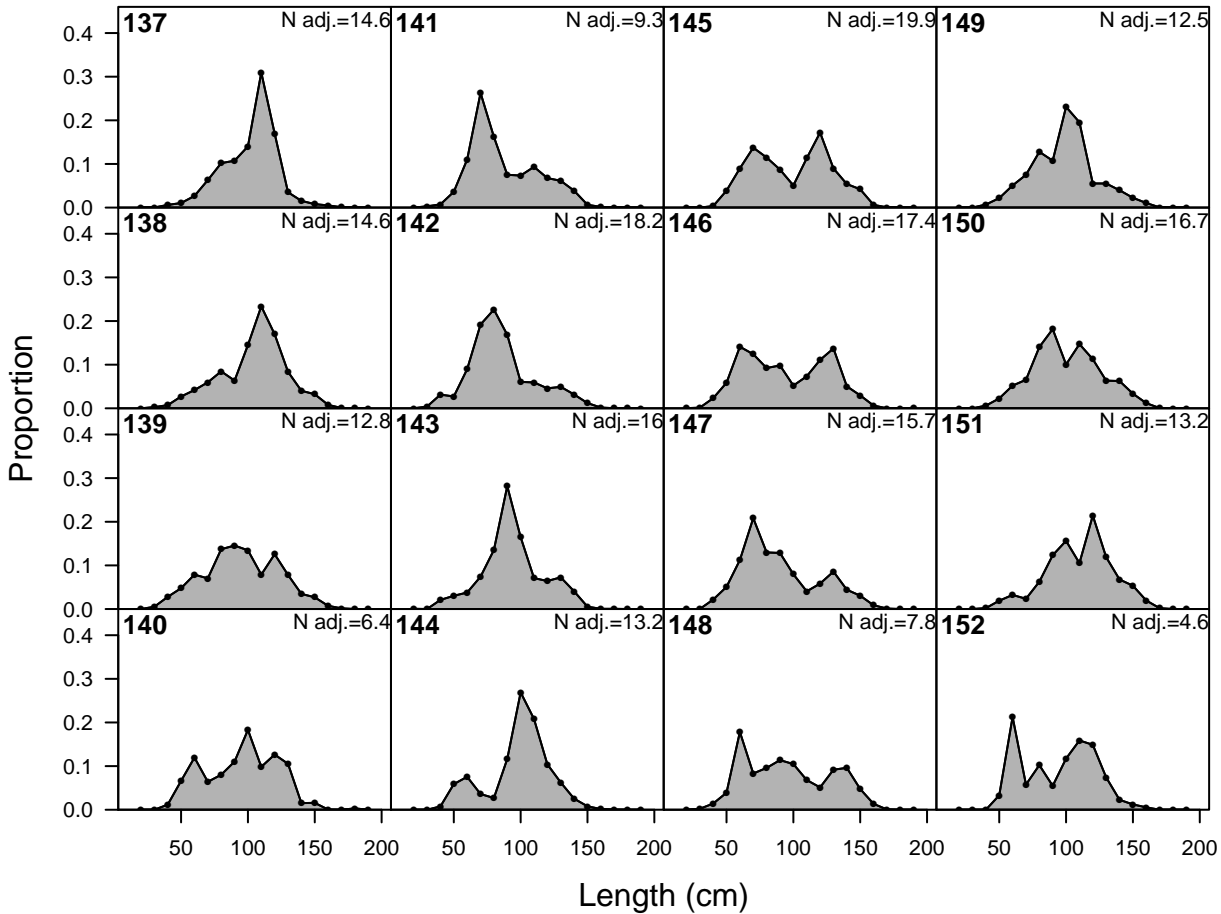


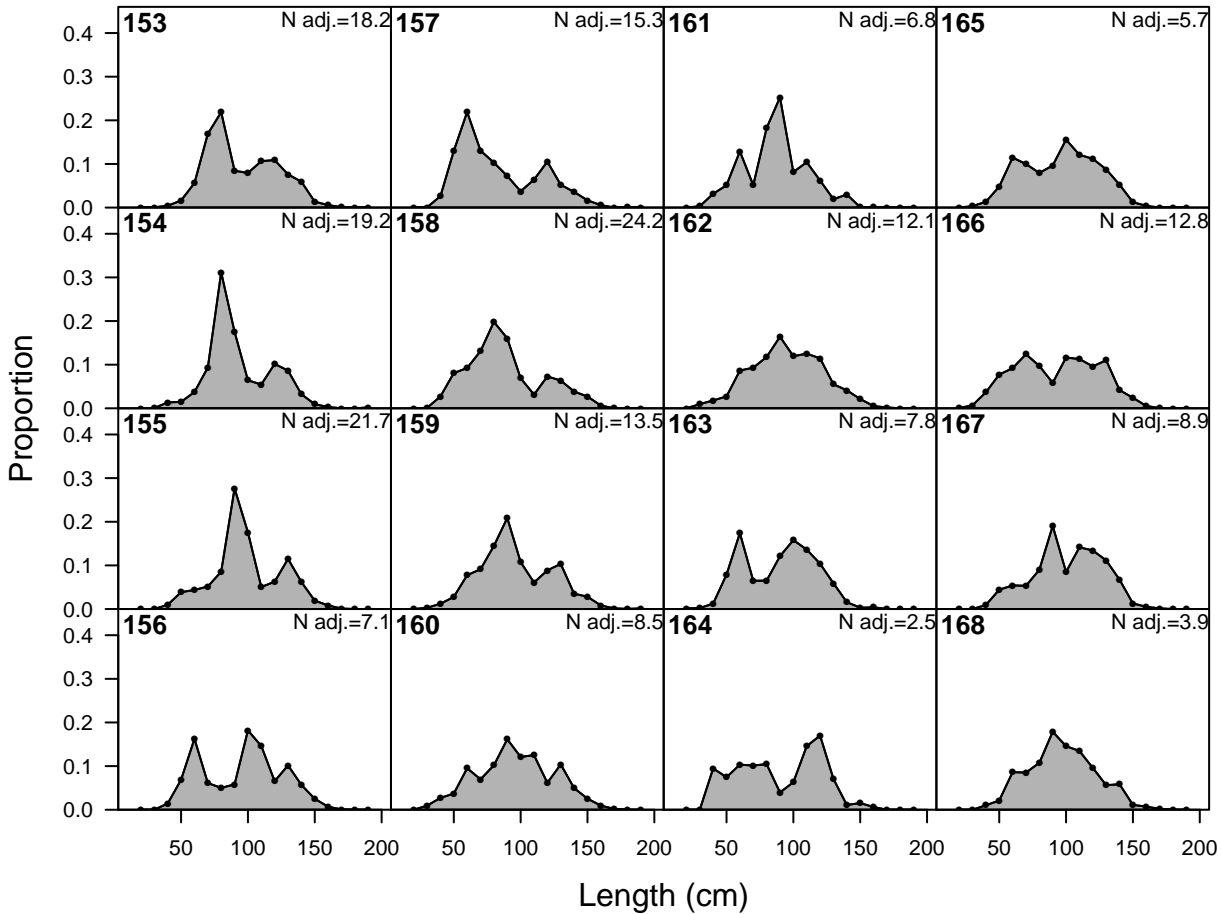


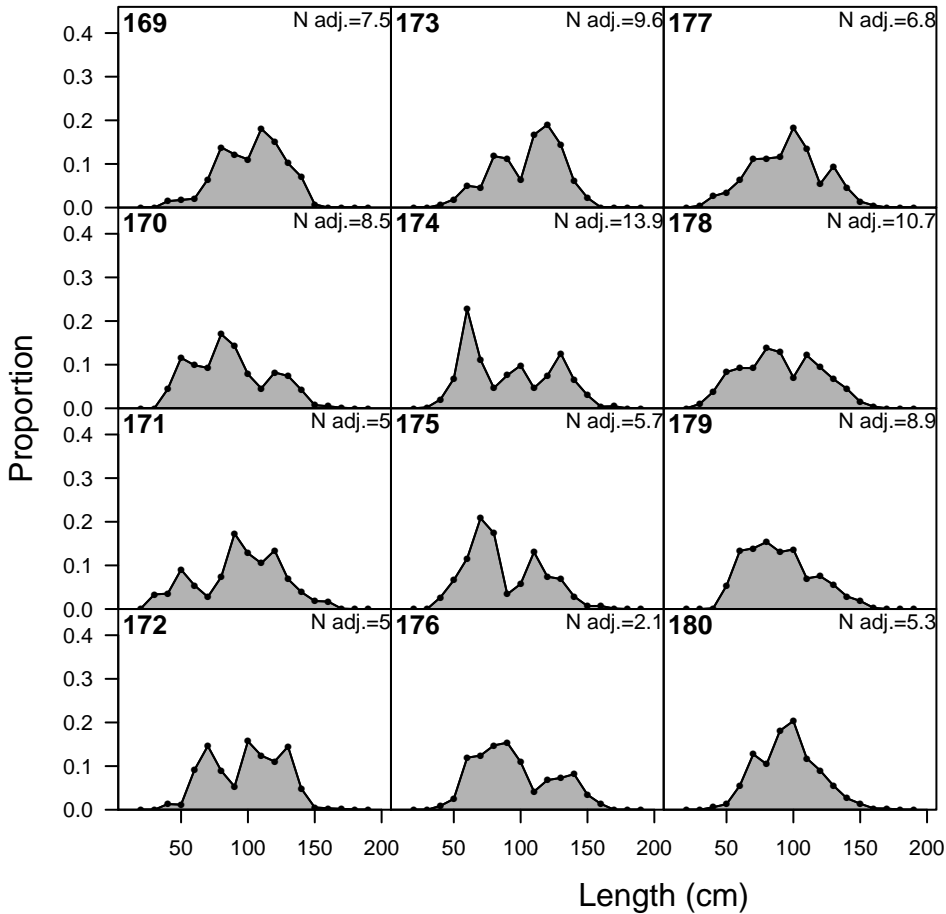


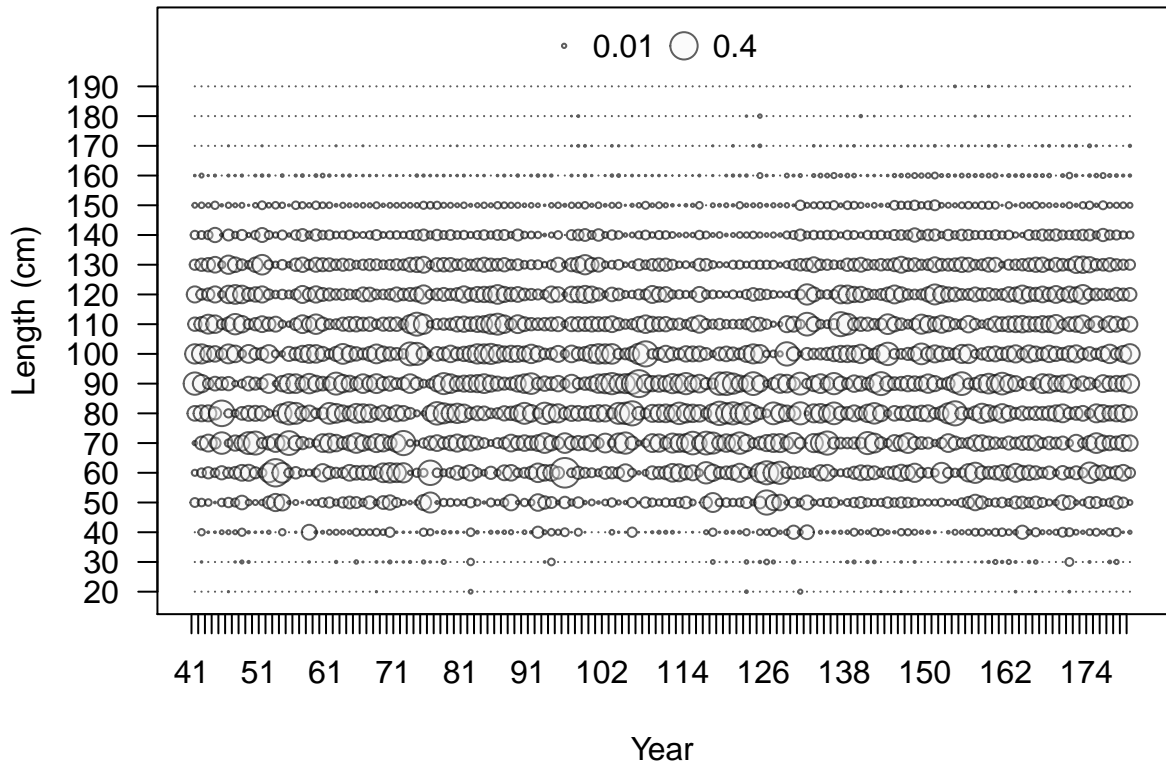




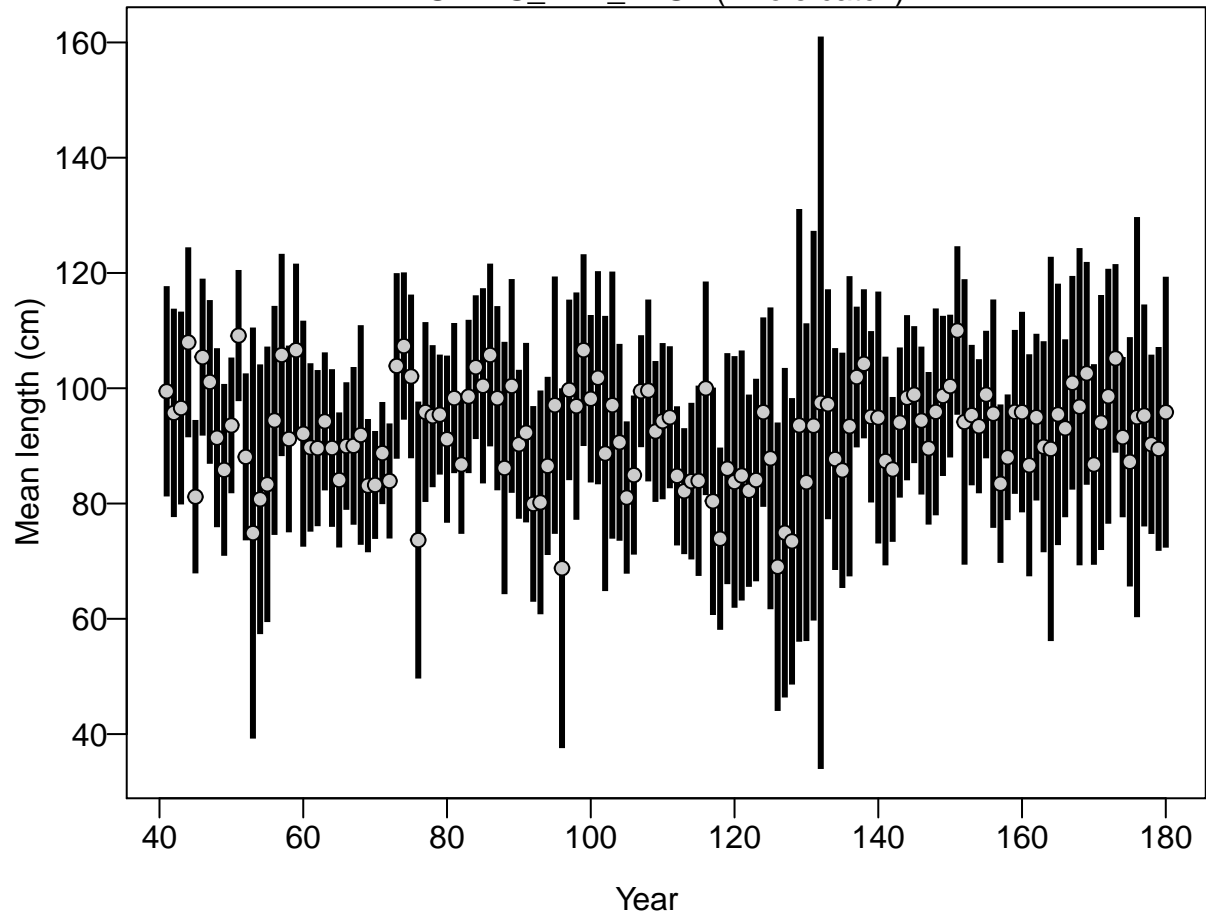








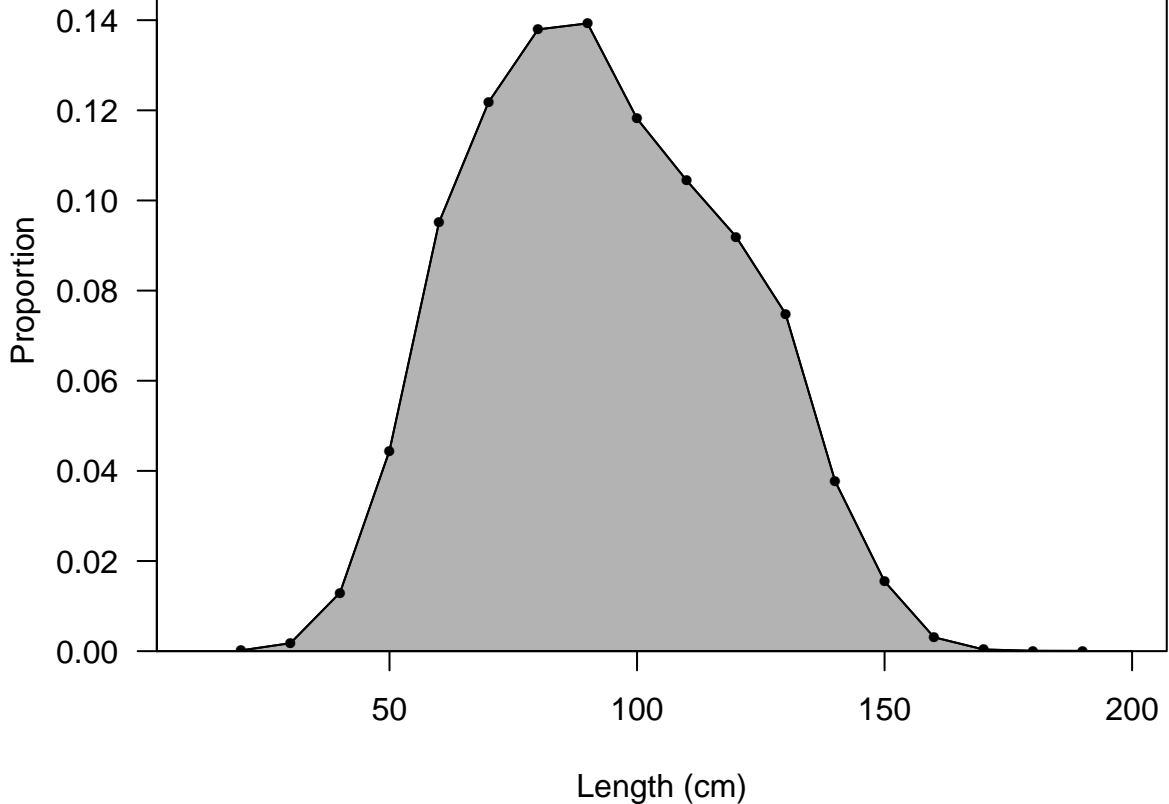
## S1-PS\_DEL\_VAST (whole catch)

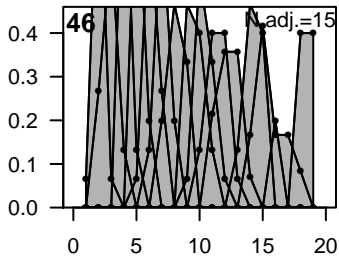




**S1-PS\_DEL\_VAST**

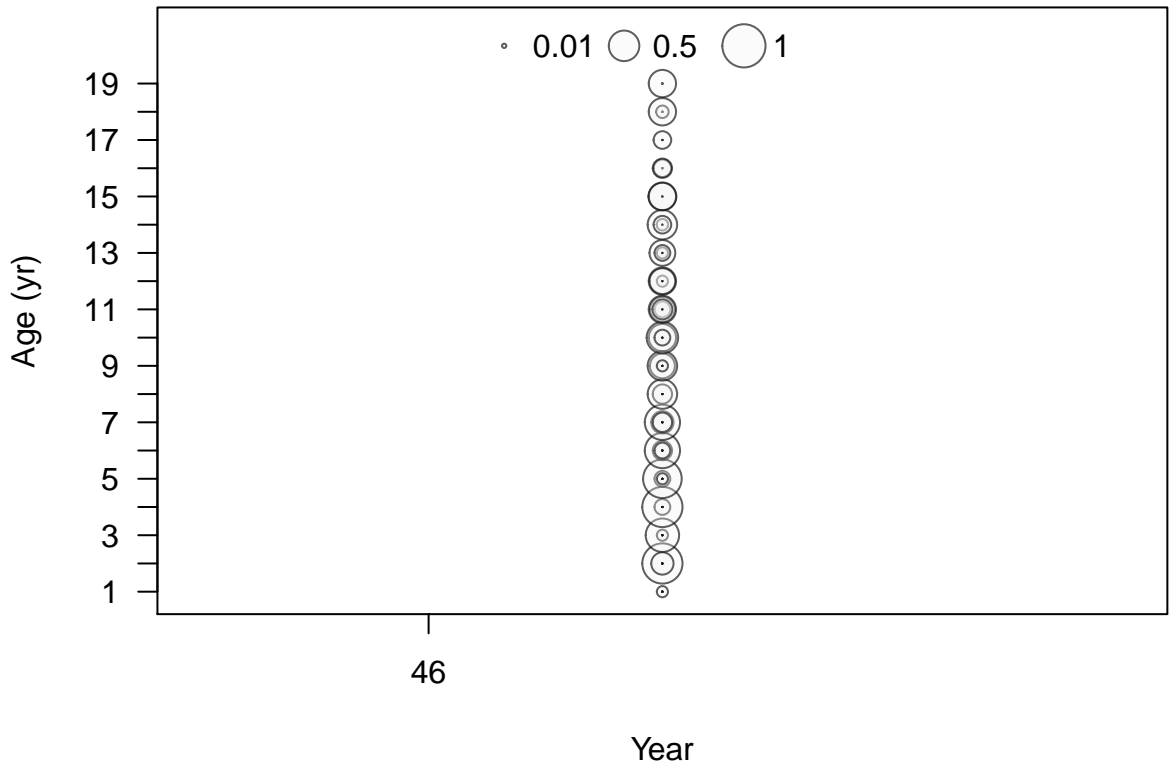
Sum of N adj.=1584.1





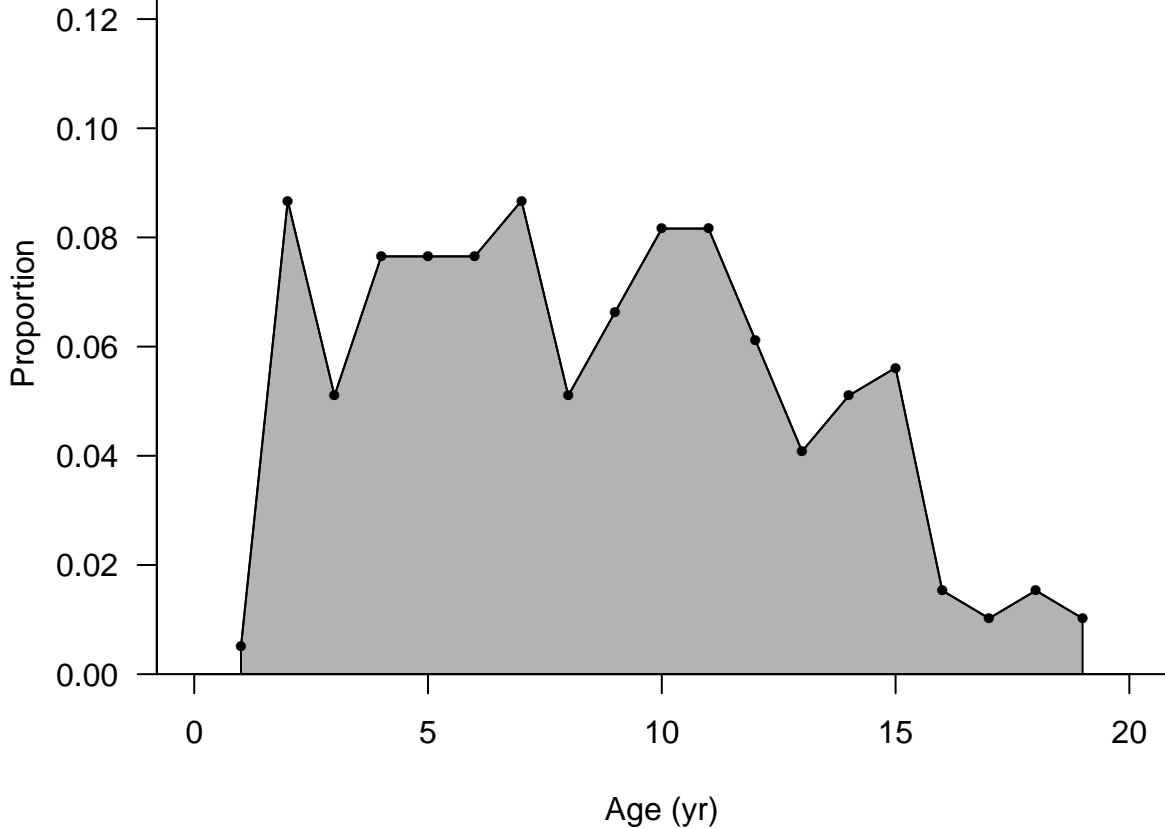
Proportion

Age (yr)



**F18-DEL\_C**

Sum of N adj.=196

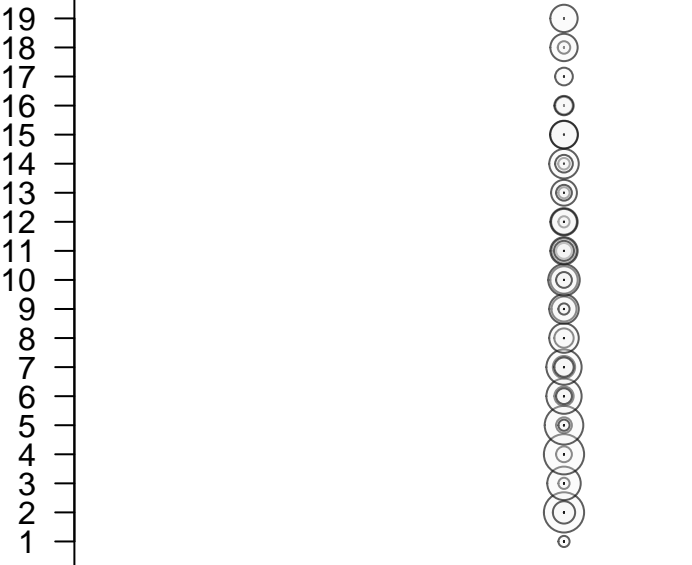


F18-DEL\_C    ◦ 0.01    ○ 0.5    ○ 1

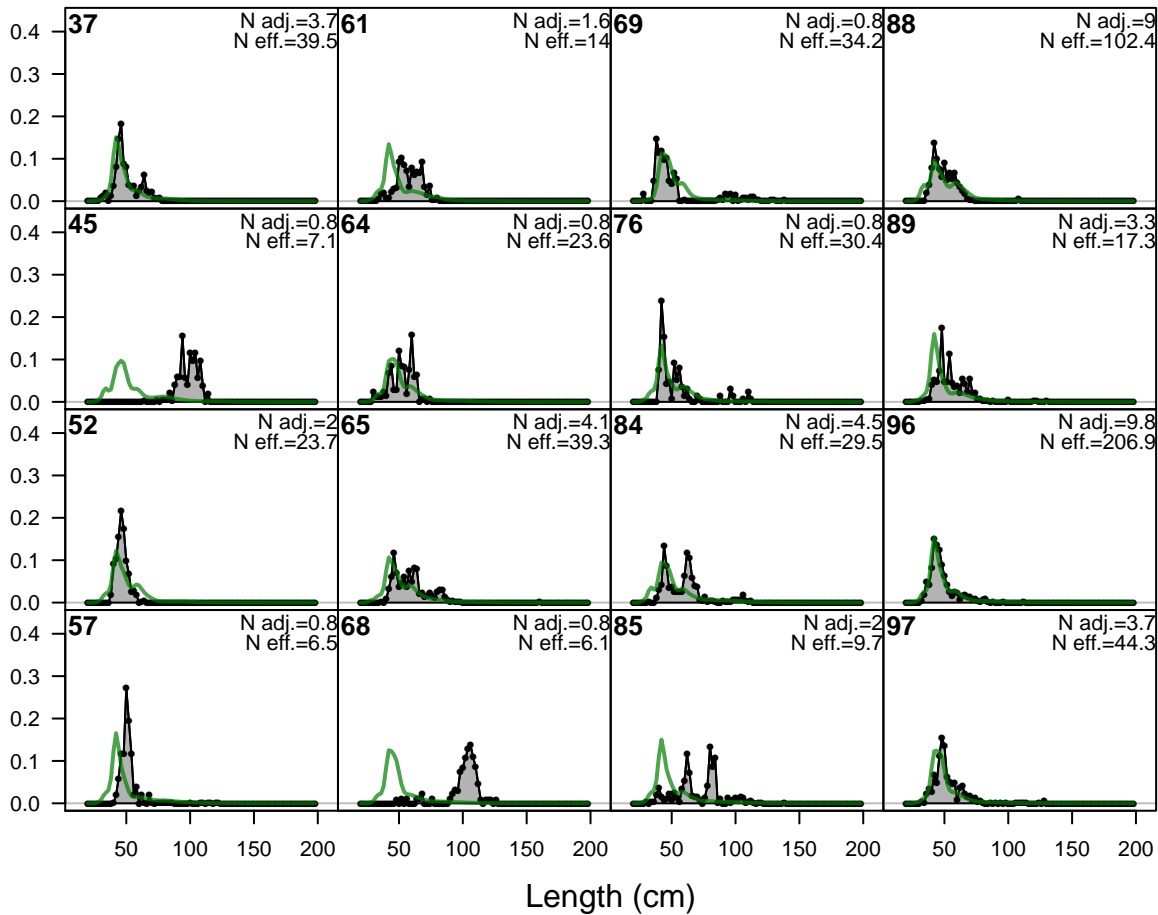
Age (yr)  
19  
18  
17  
16  
15  
14  
13  
12  
11  
10  
9  
8  
7  
6  
5  
4  
3  
2  
1

46

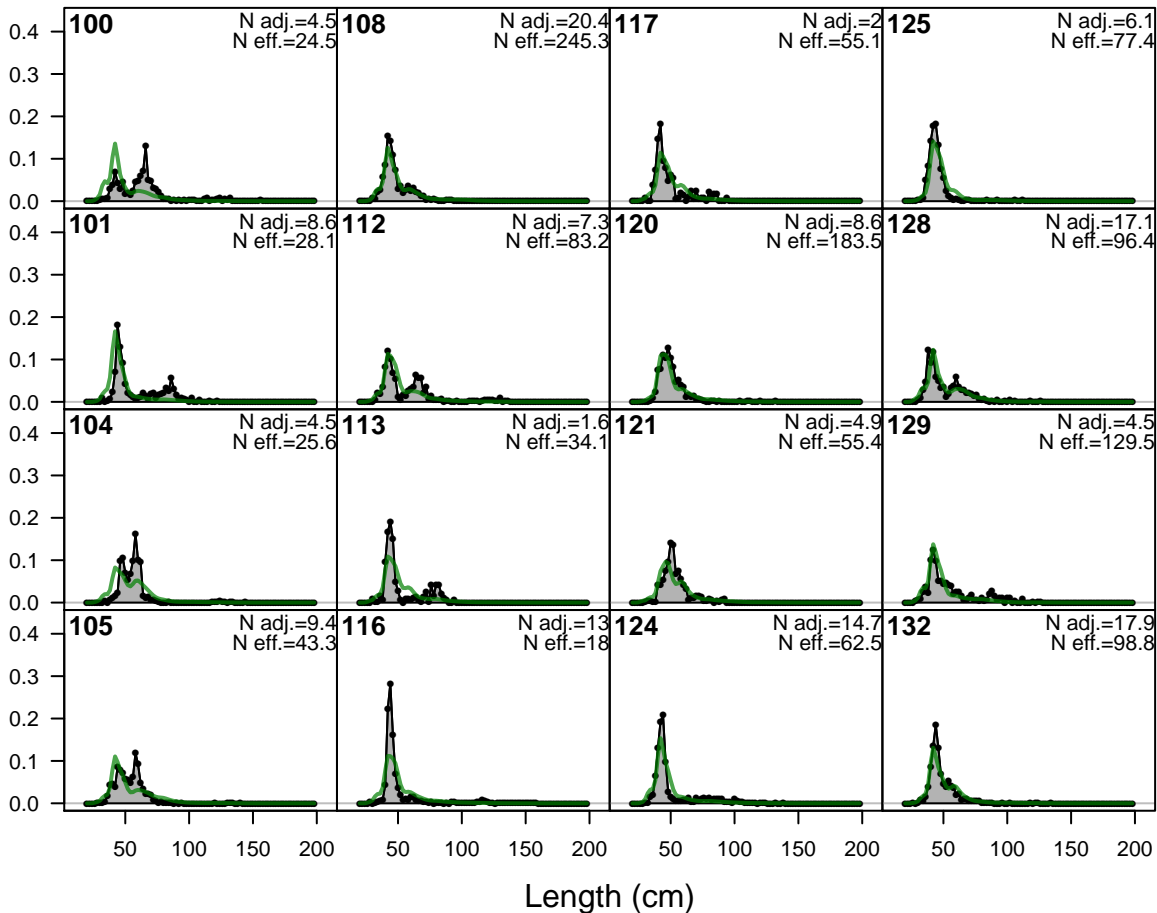
Year



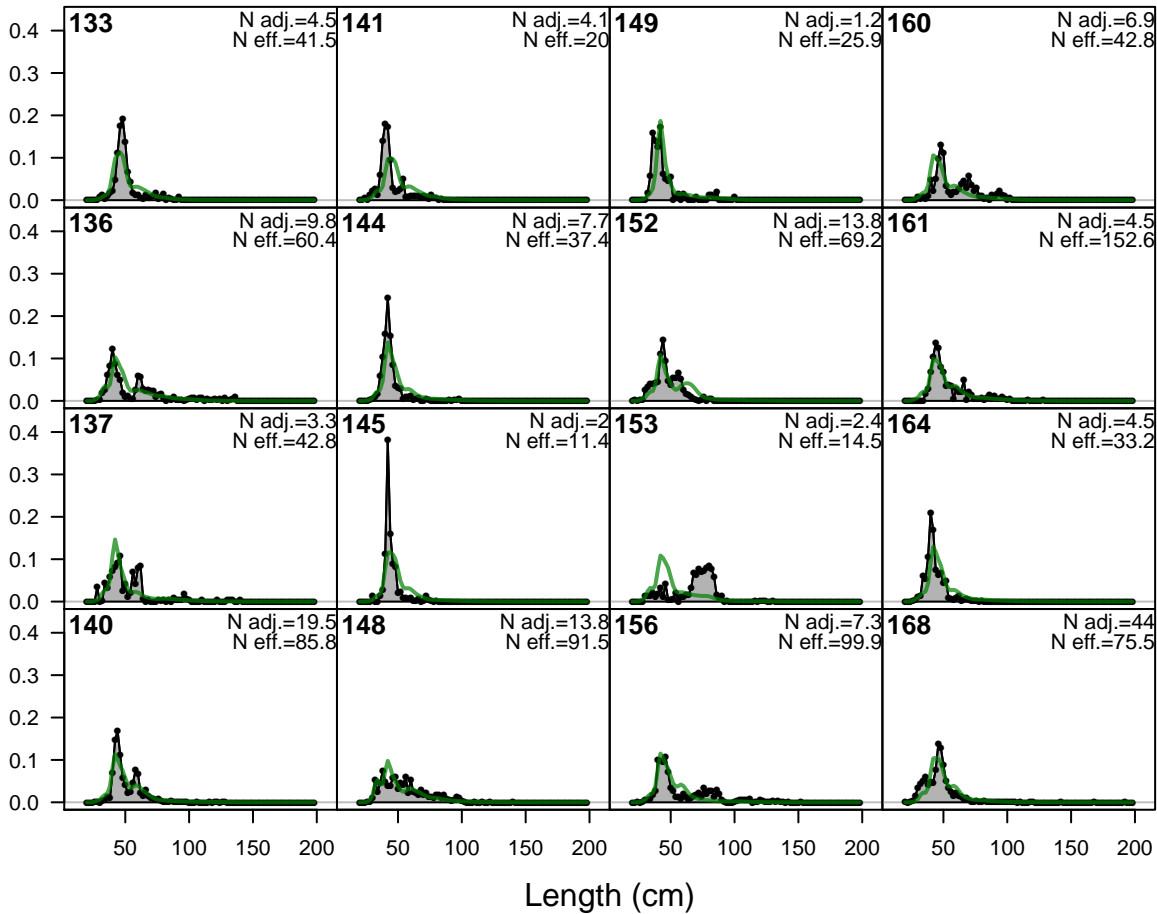
Proportion



Proportion

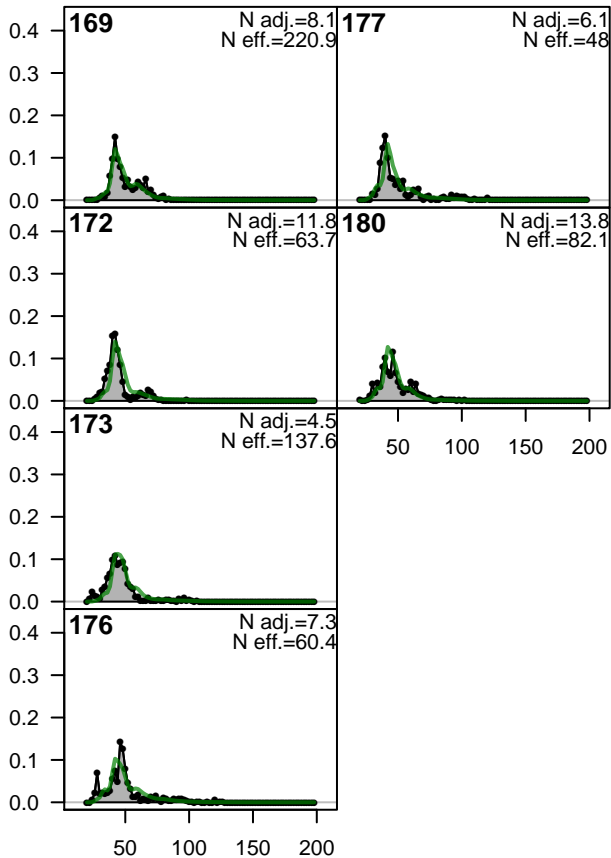


Proportion

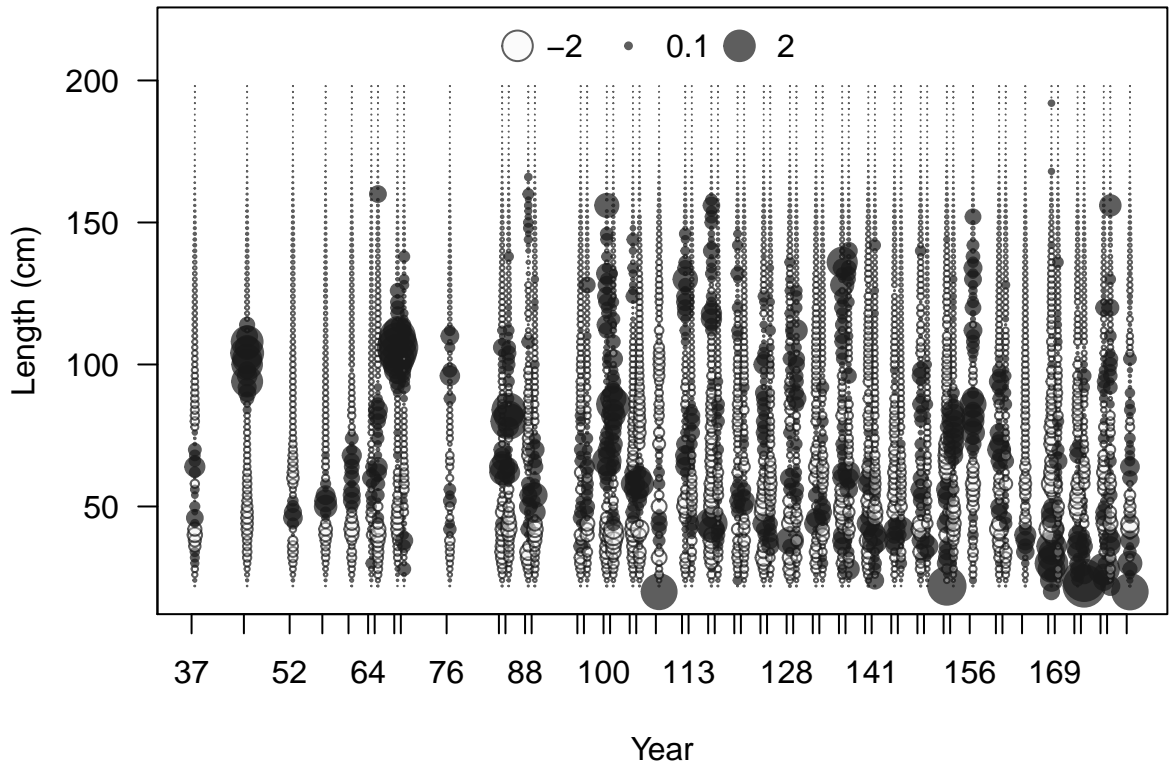


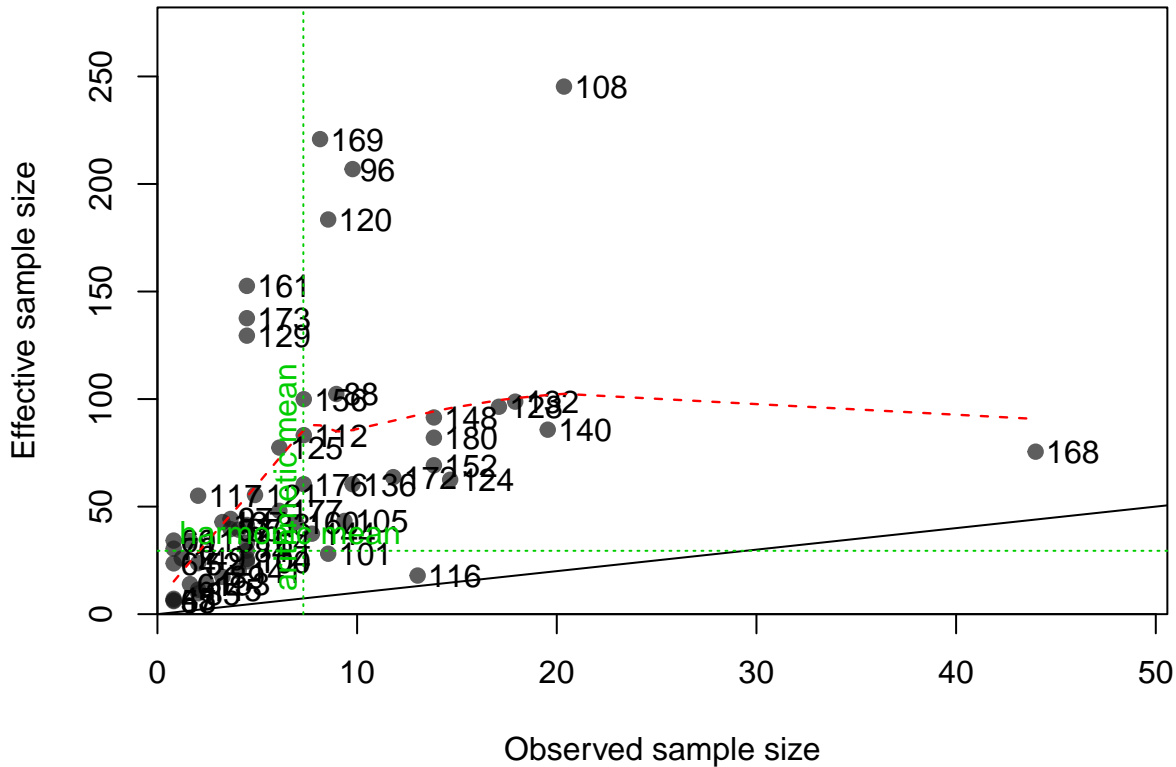


Proportion

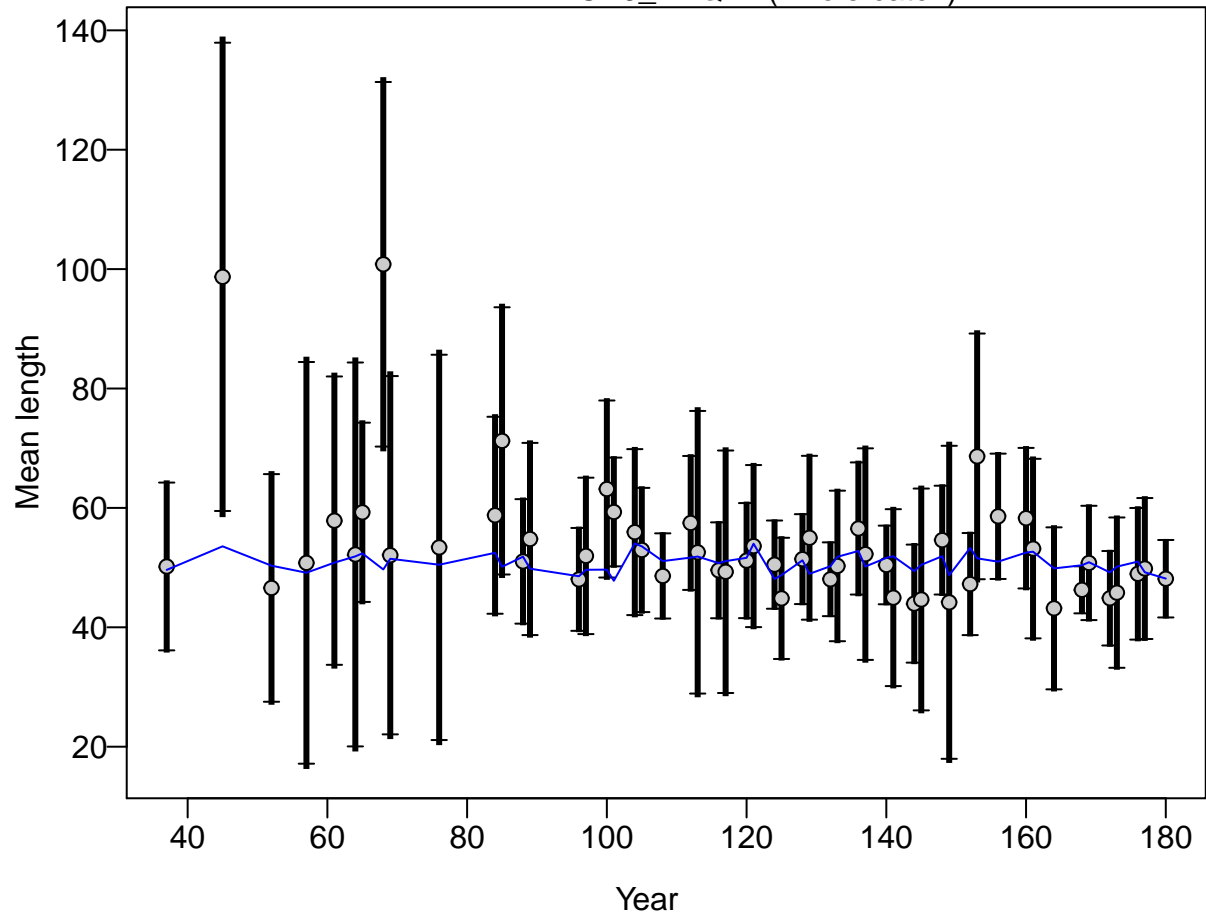


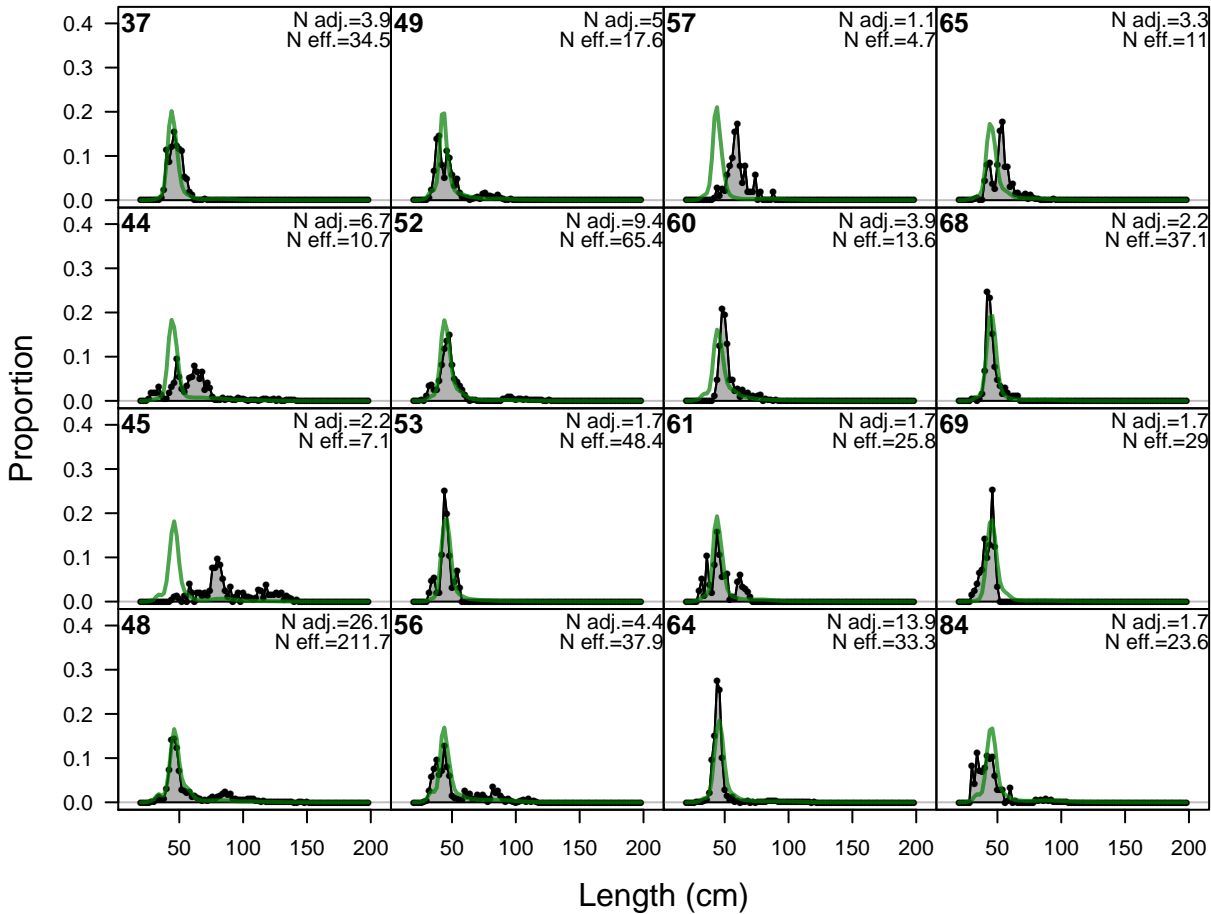
Length (cm)



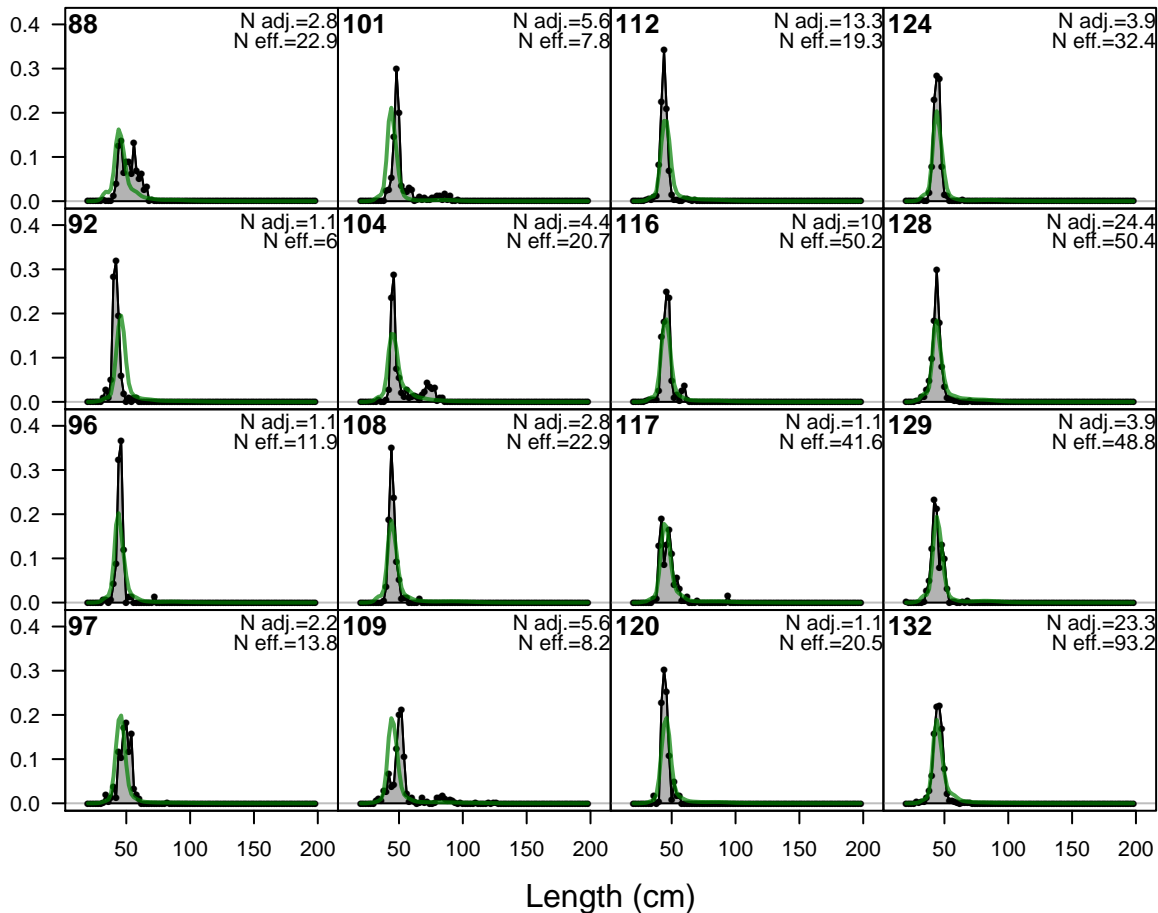


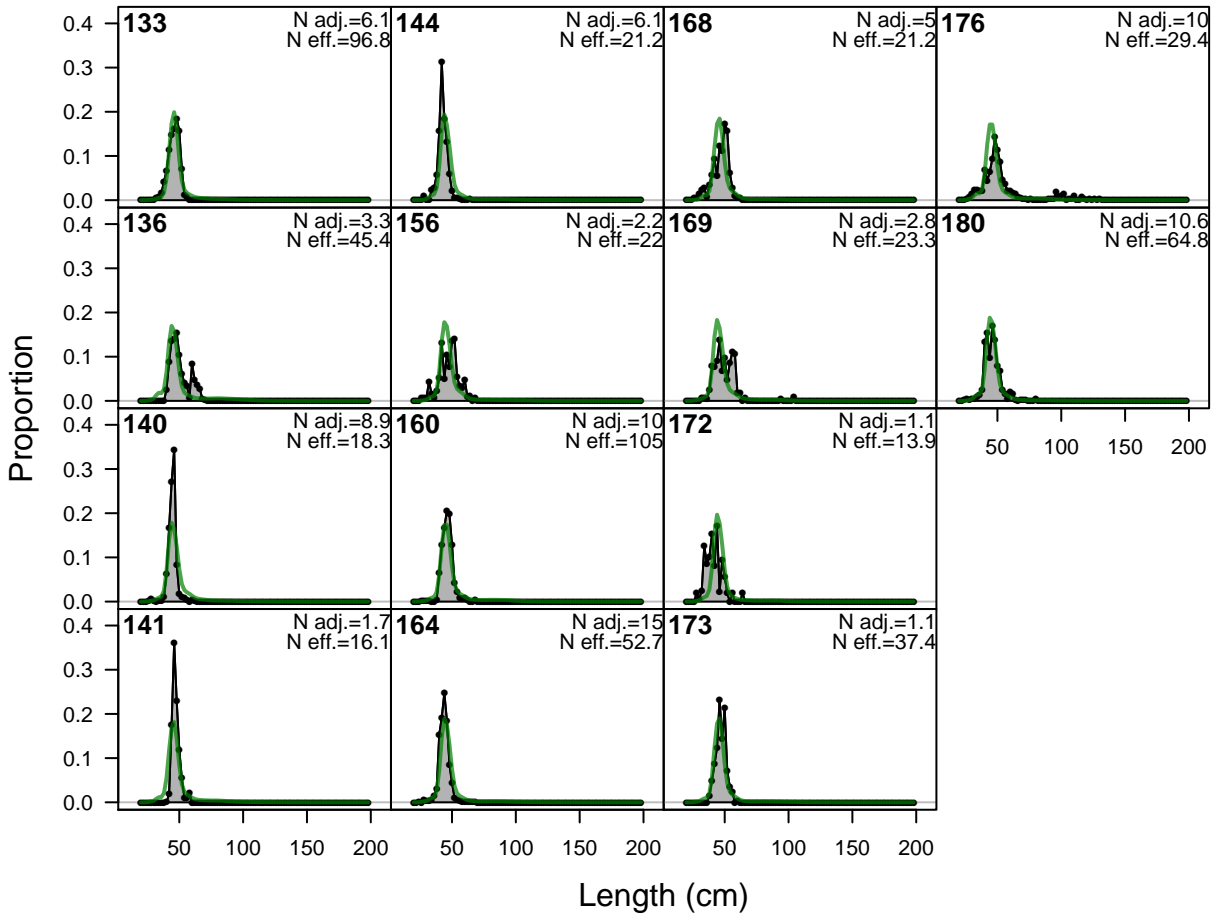
F1-OBJ\_N-Q14 (whole catch)

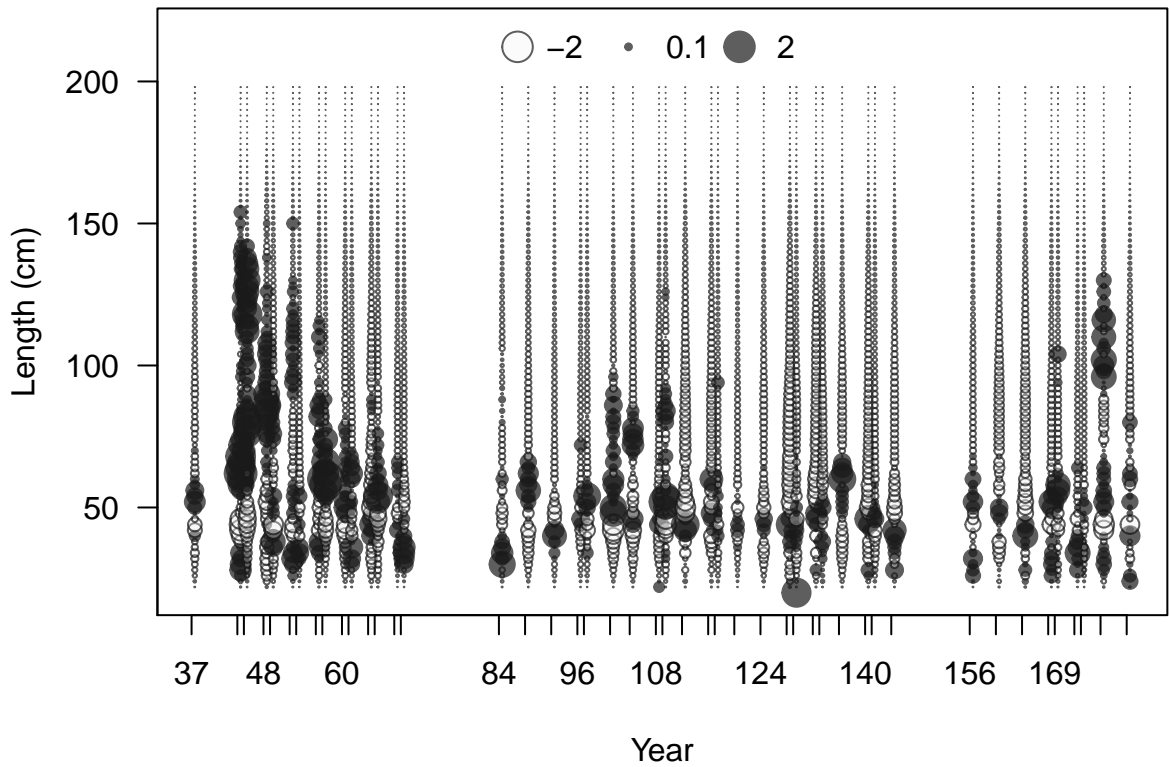




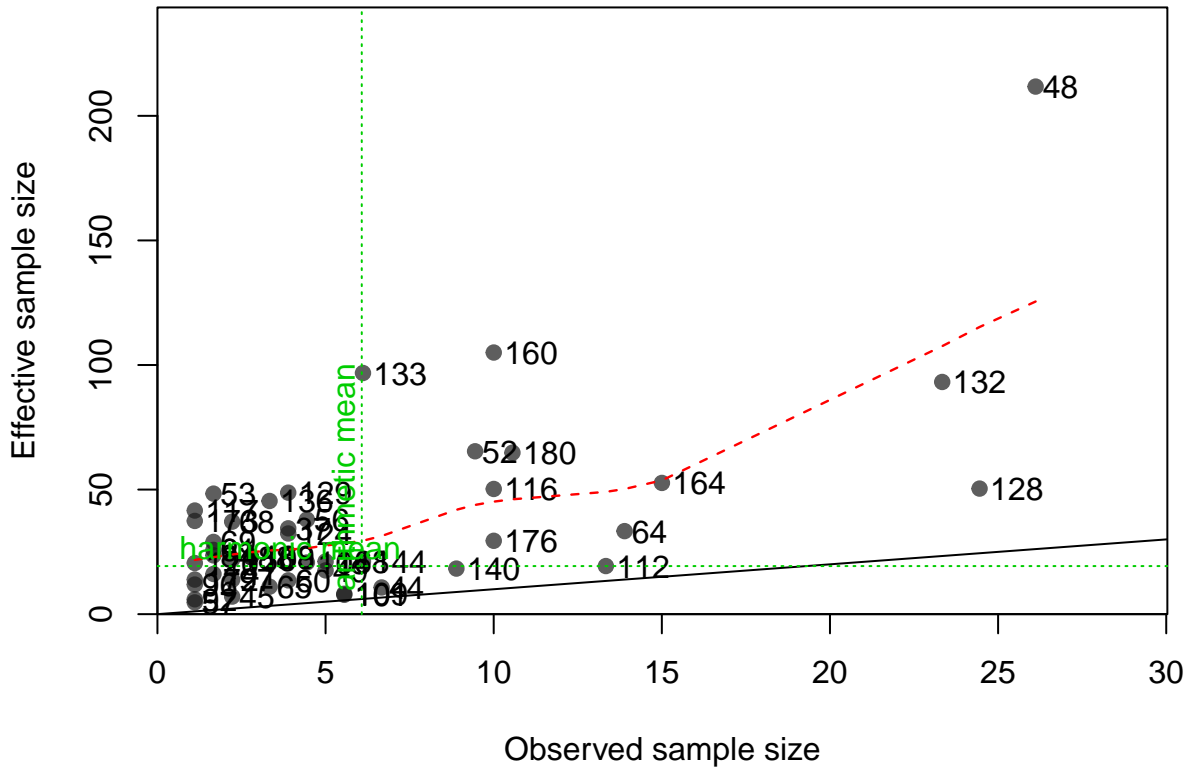
Proportion



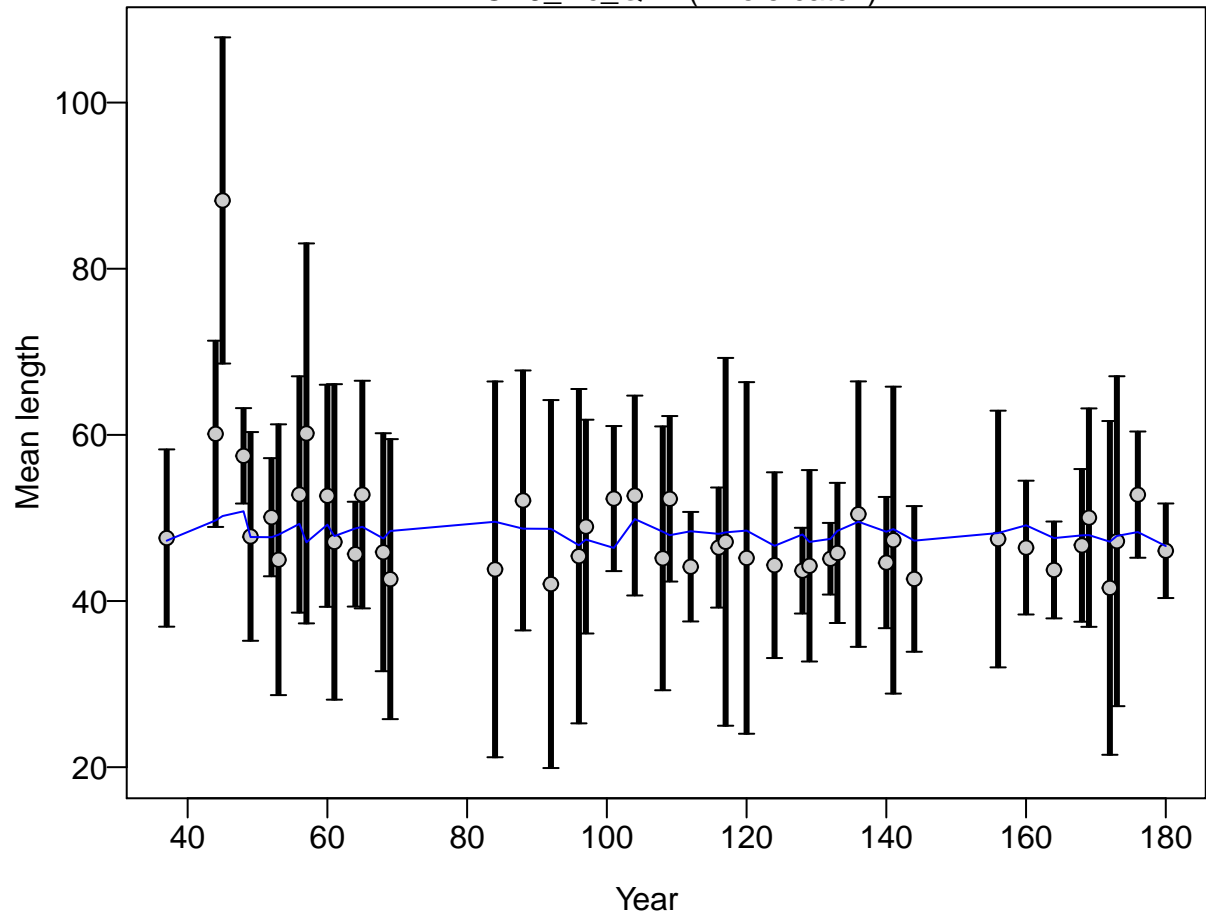




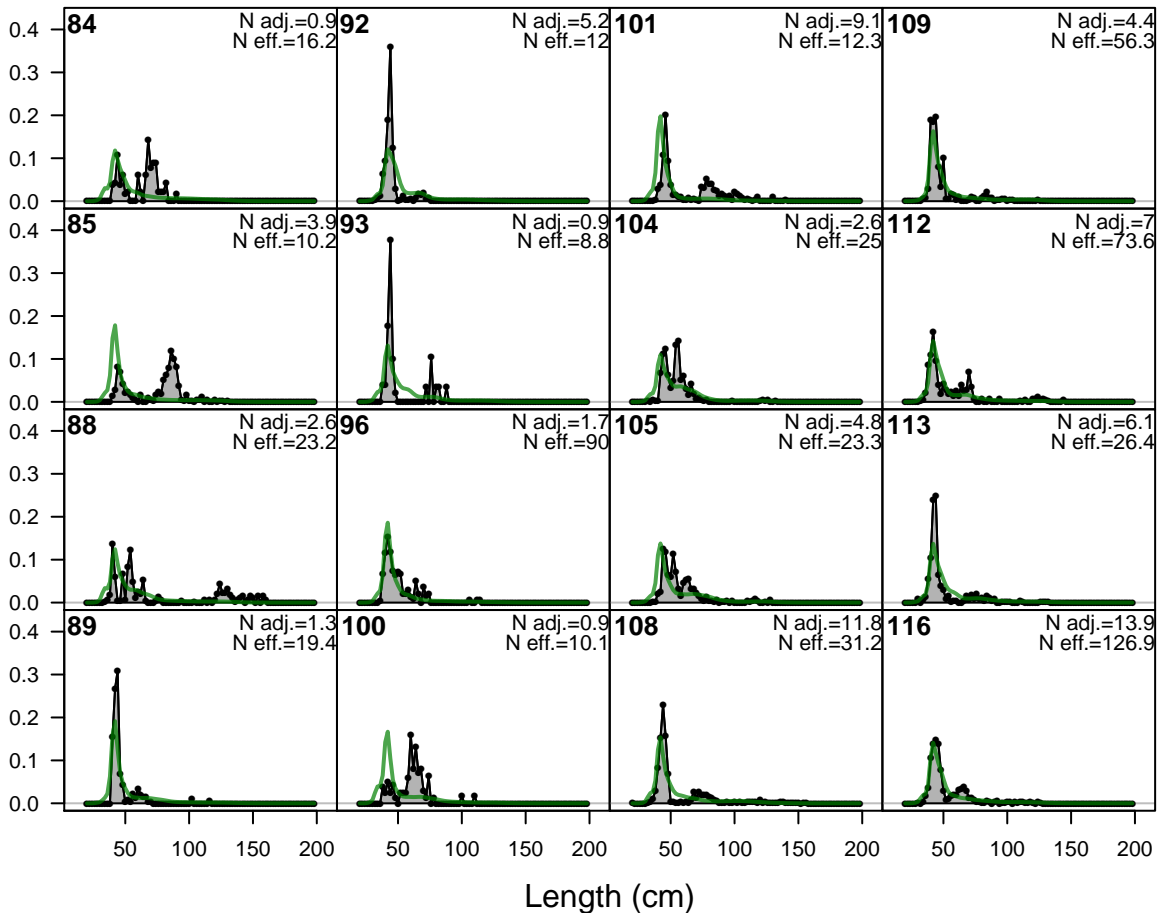




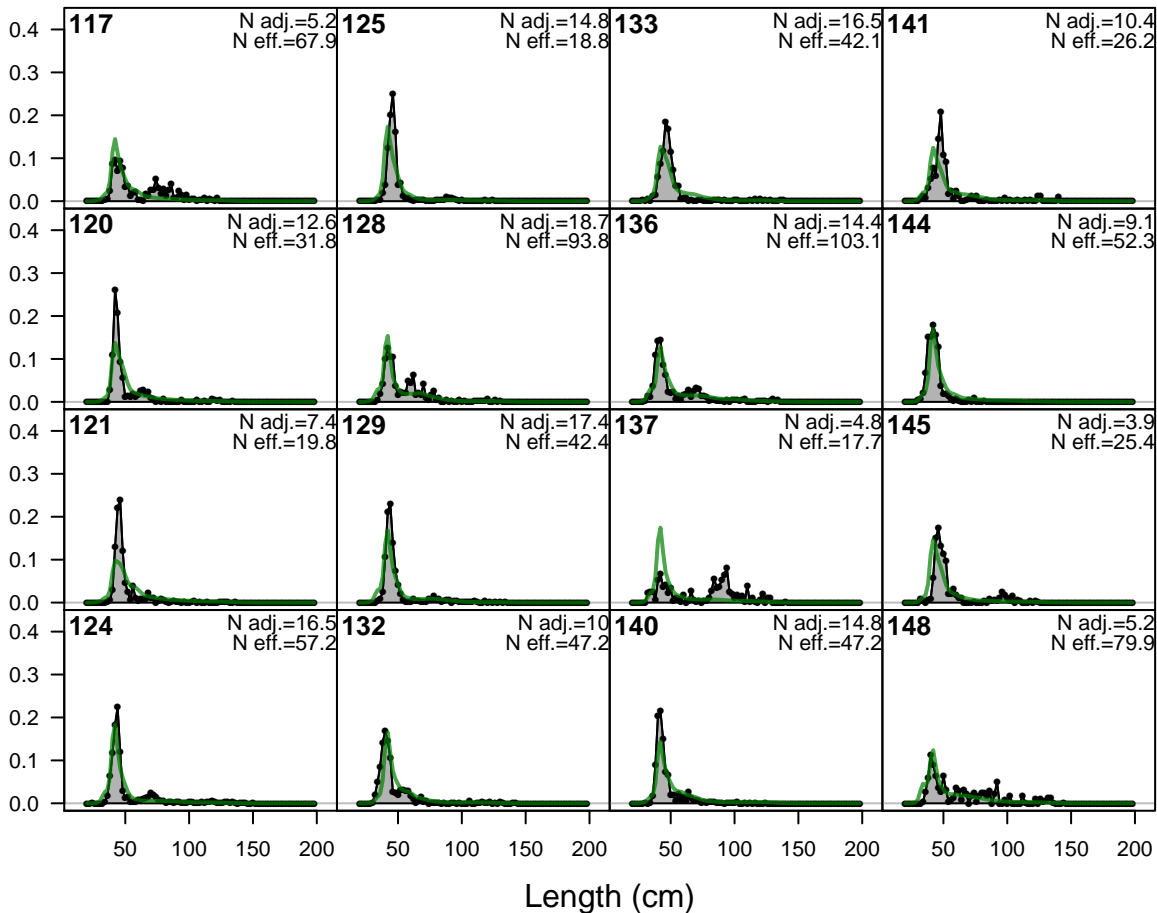
F2-OBJ\_Nc\_Q14 (whole catch)



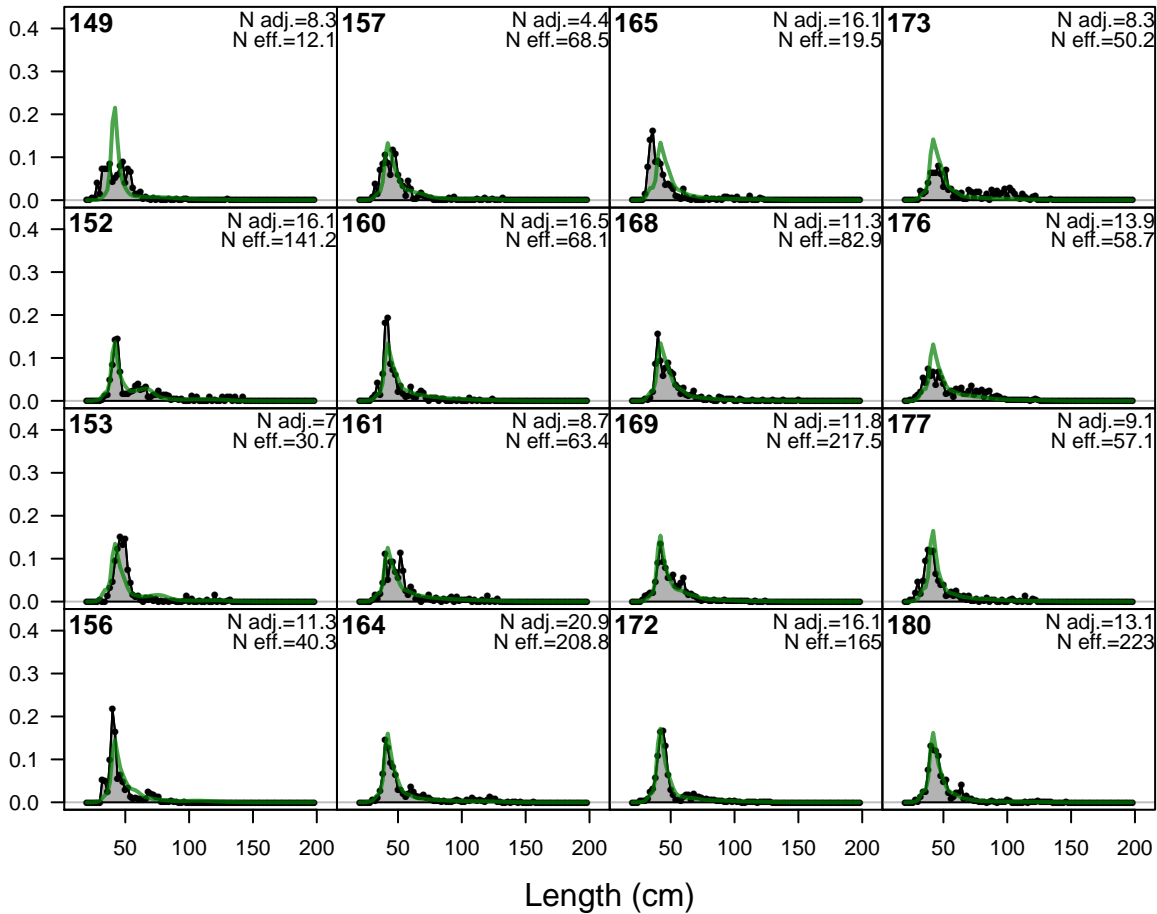
Proportion

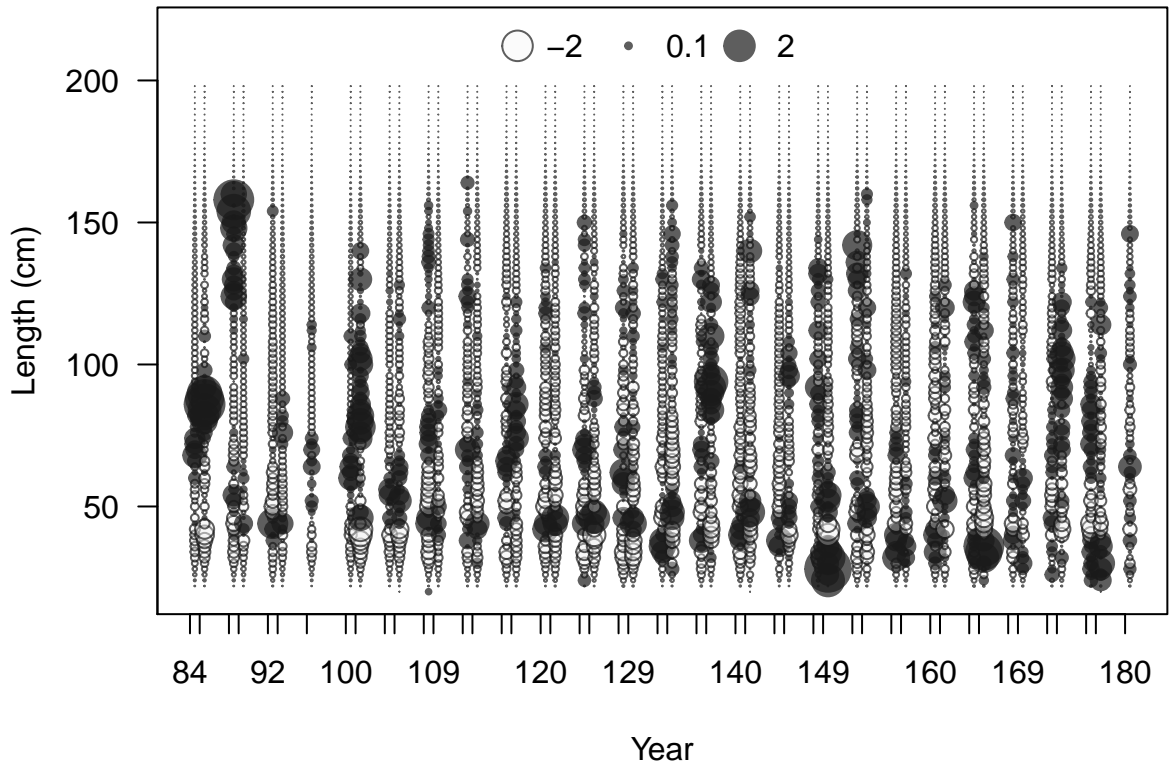


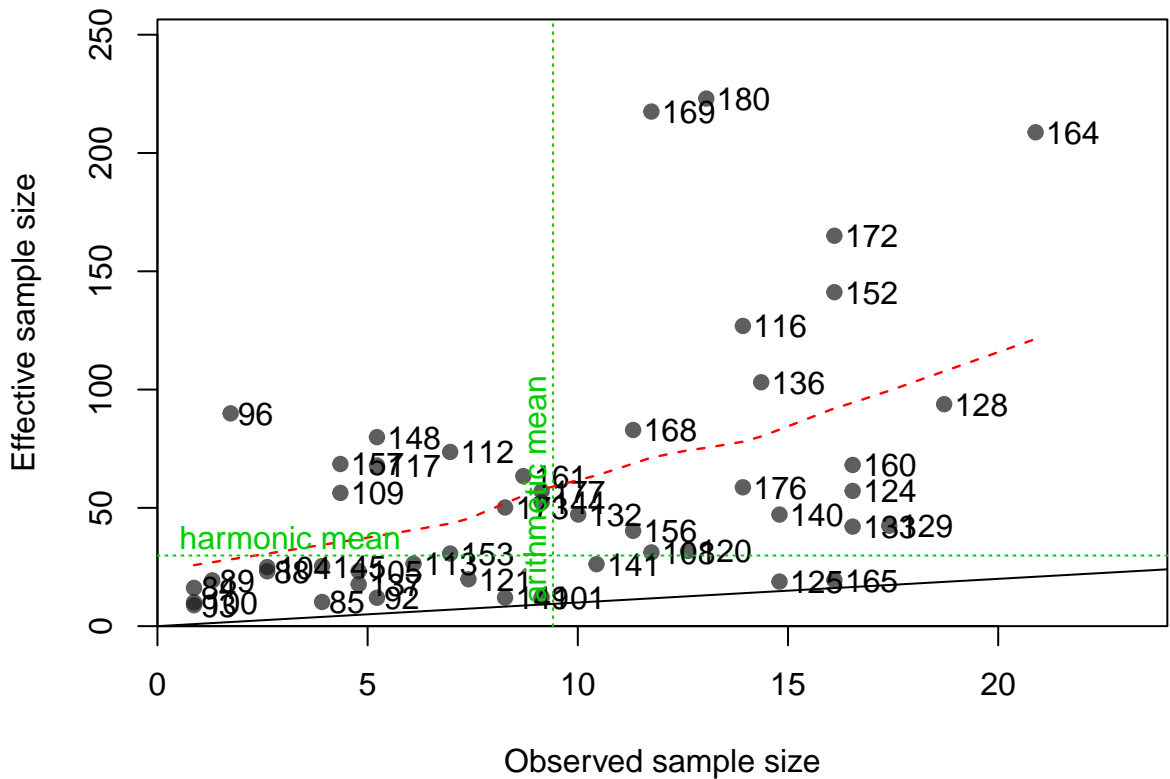
Proportion



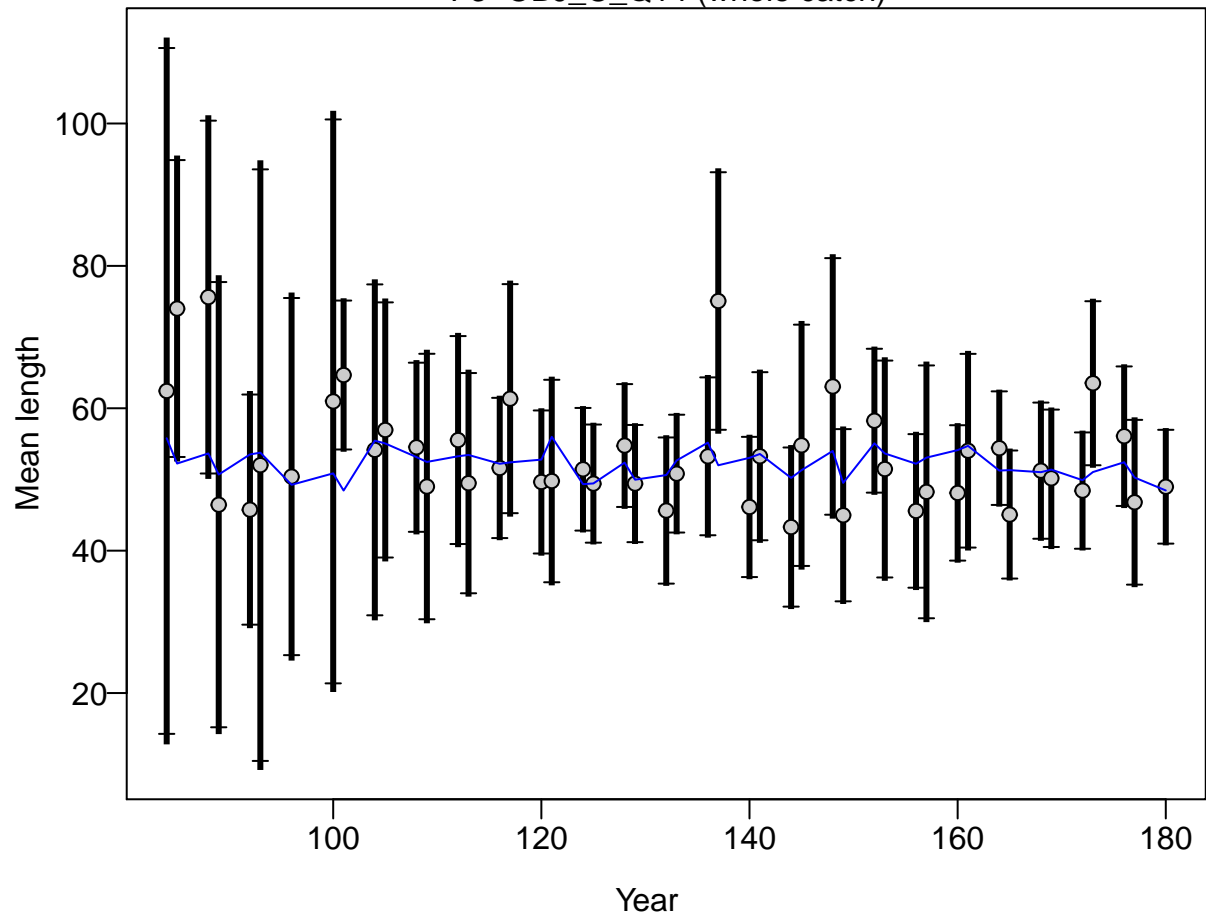
Proportion





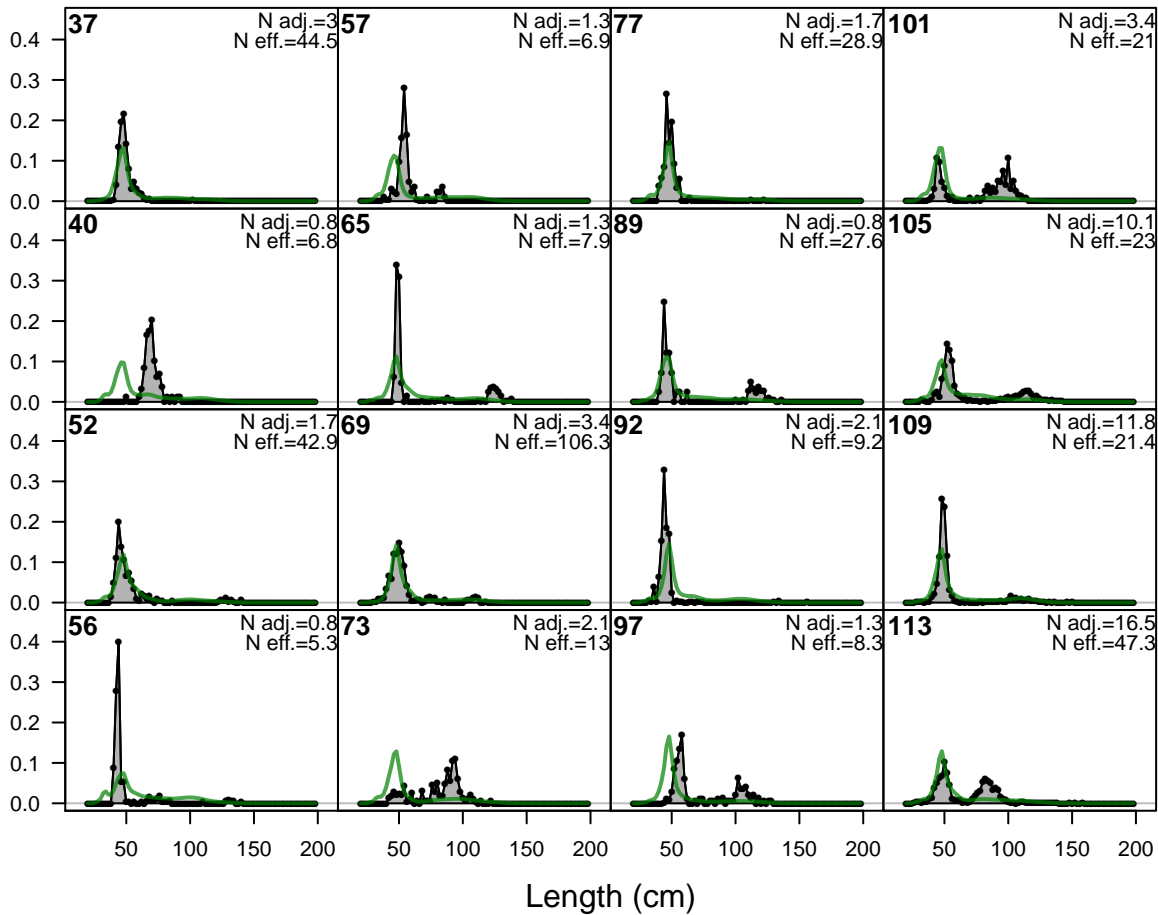


F3-OBJ\_C\_Q14 (whole catch)

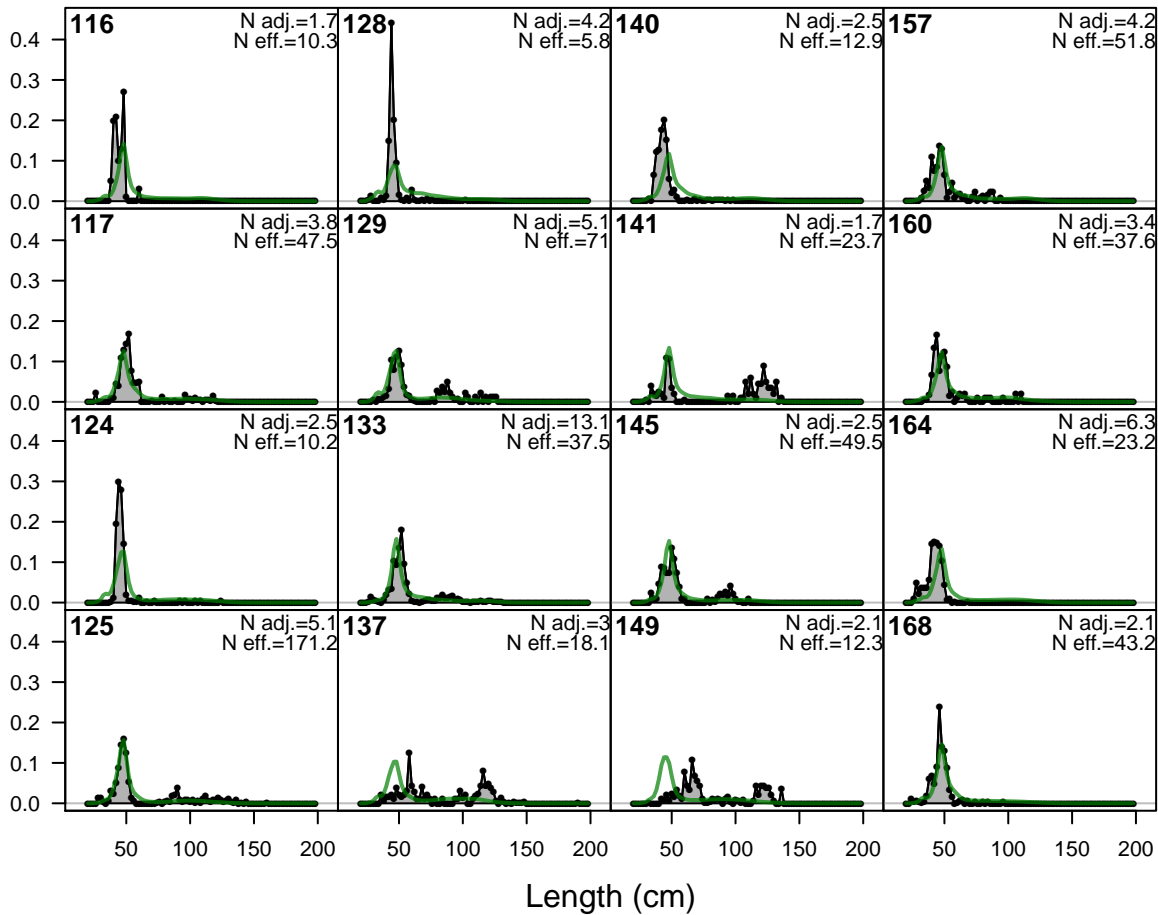




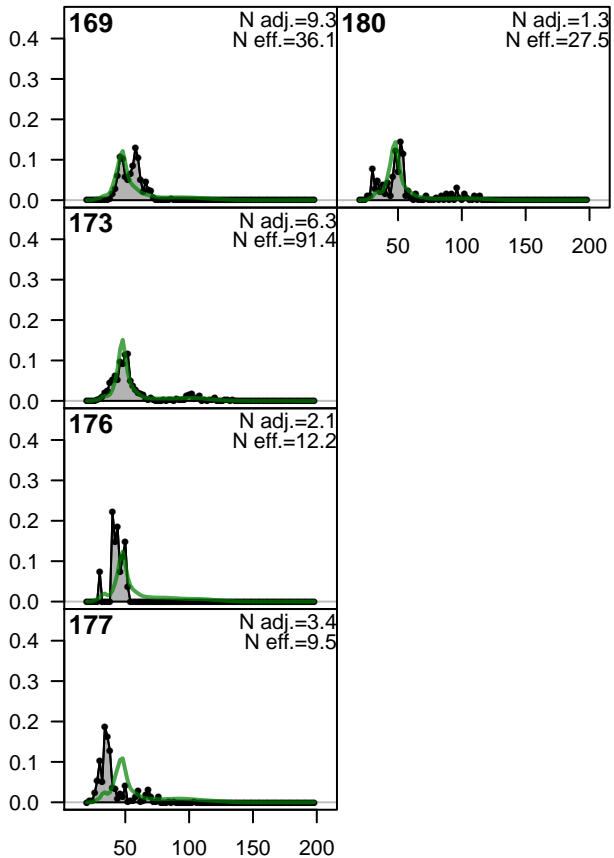
Proportion



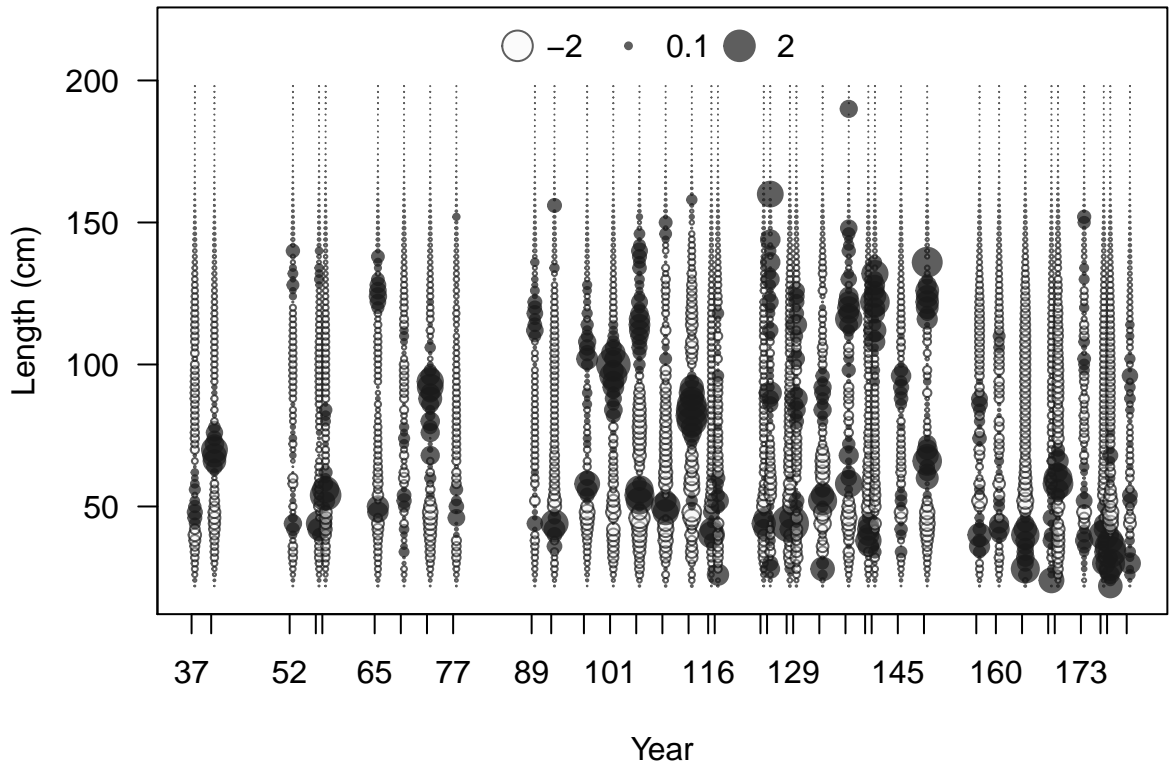
Proportion

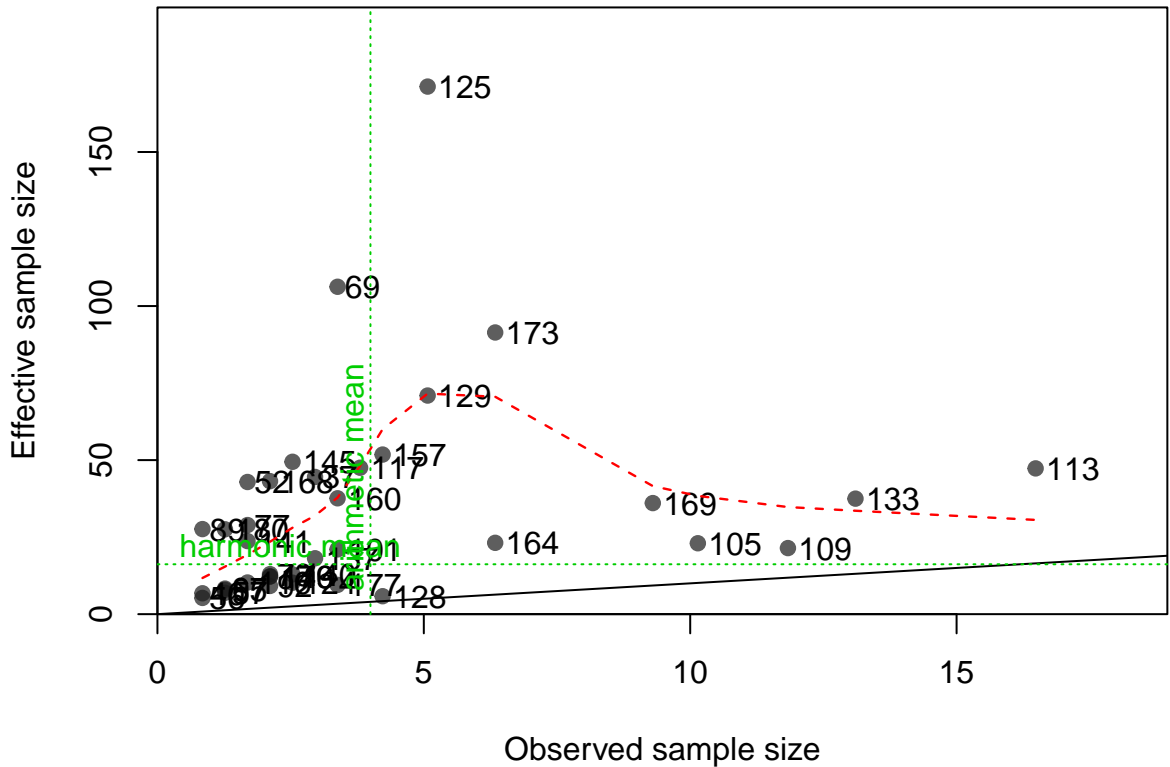


Proportion

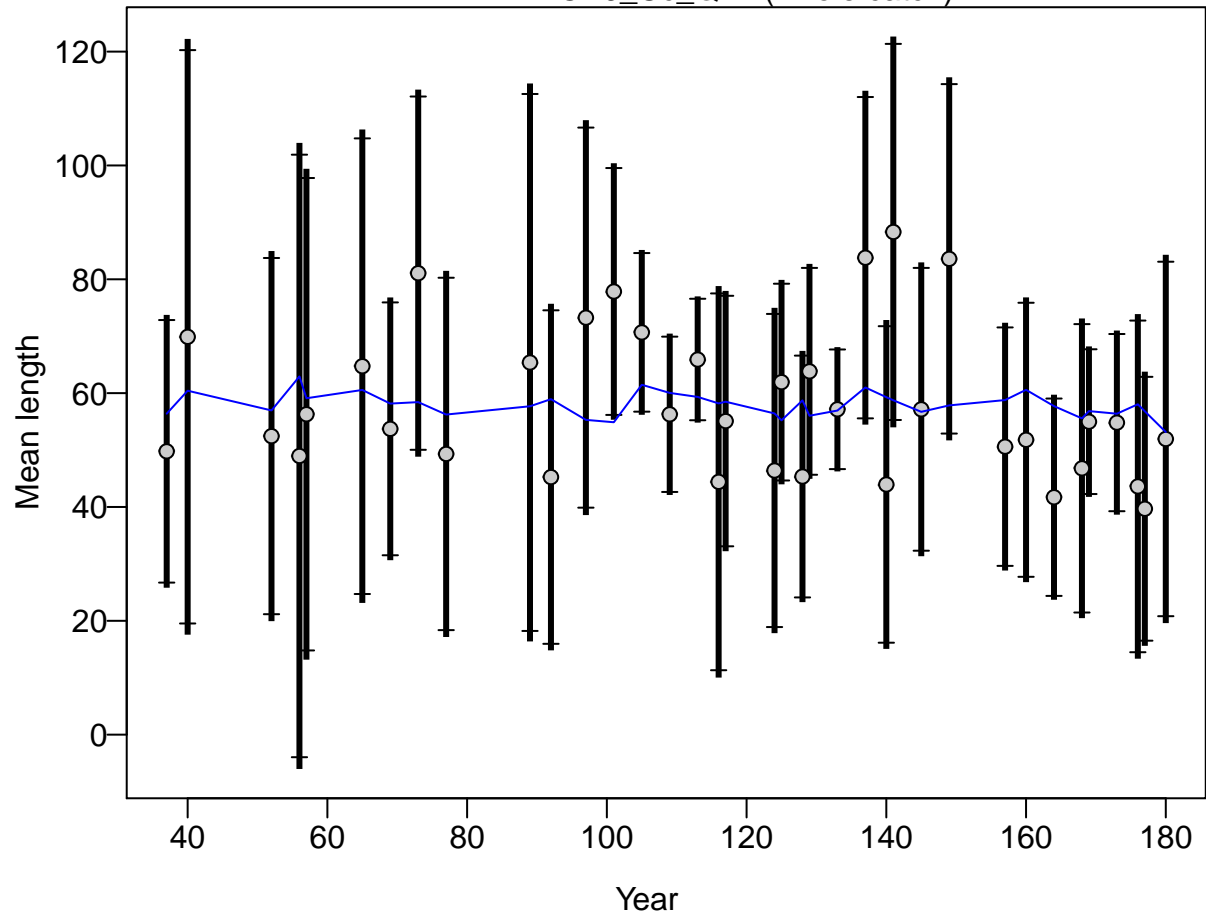


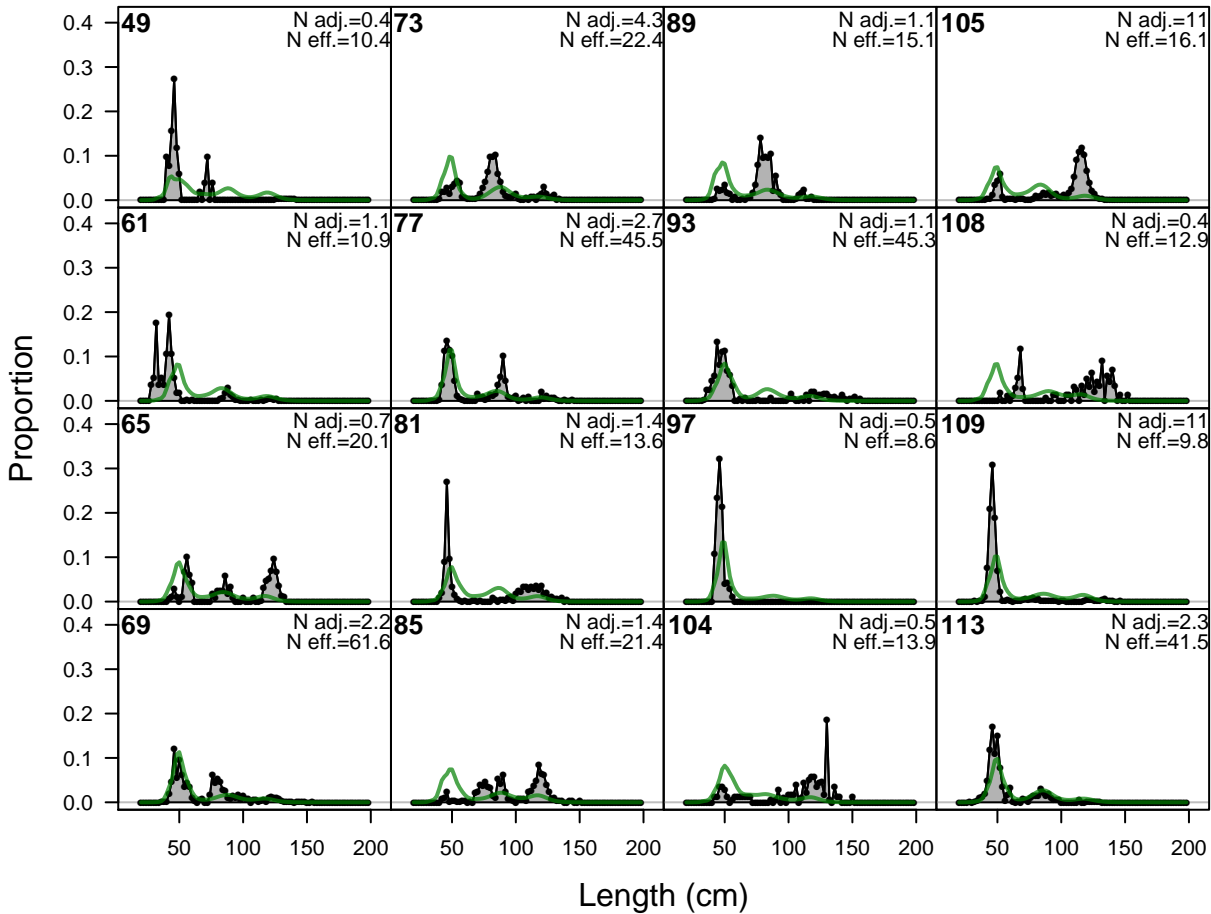
Length (cm)



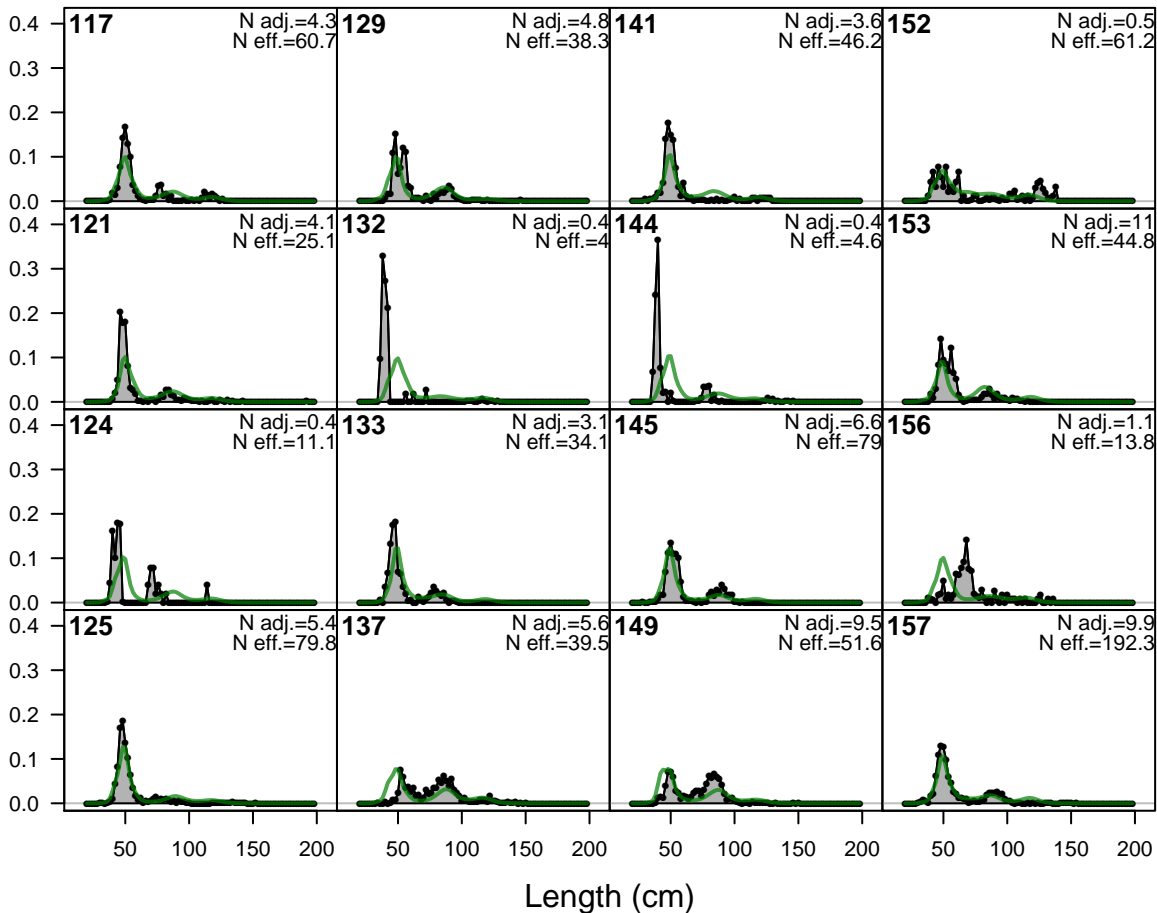


F4-OBJ\_Cc\_Q14 (whole catch)



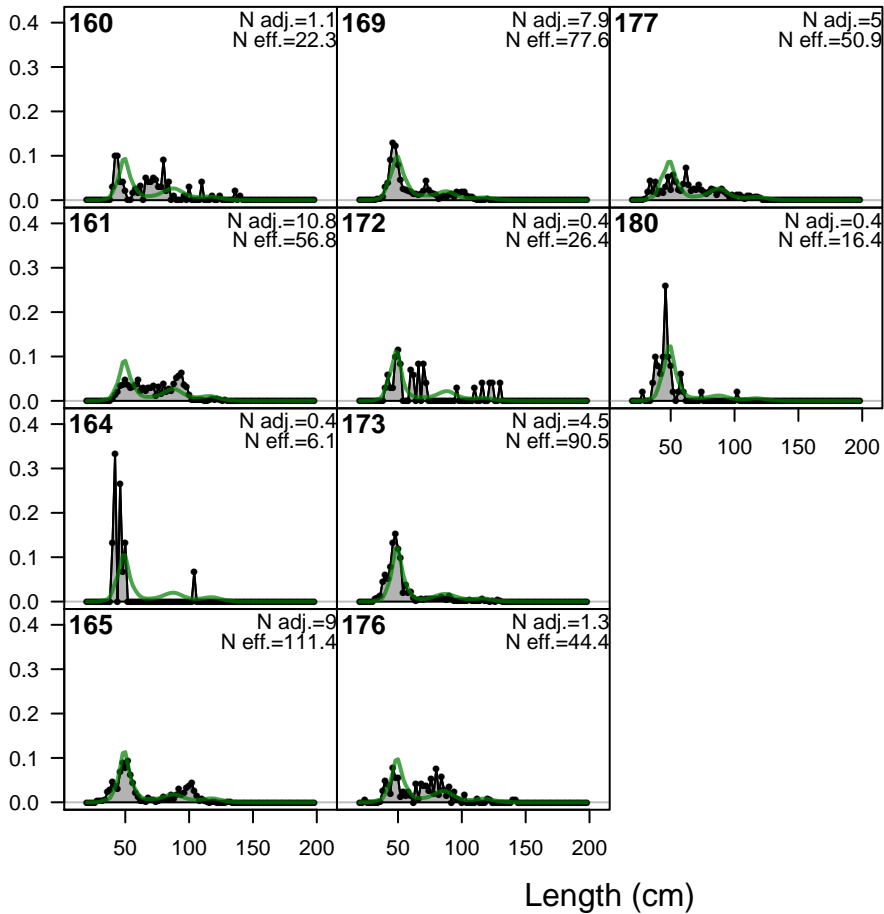


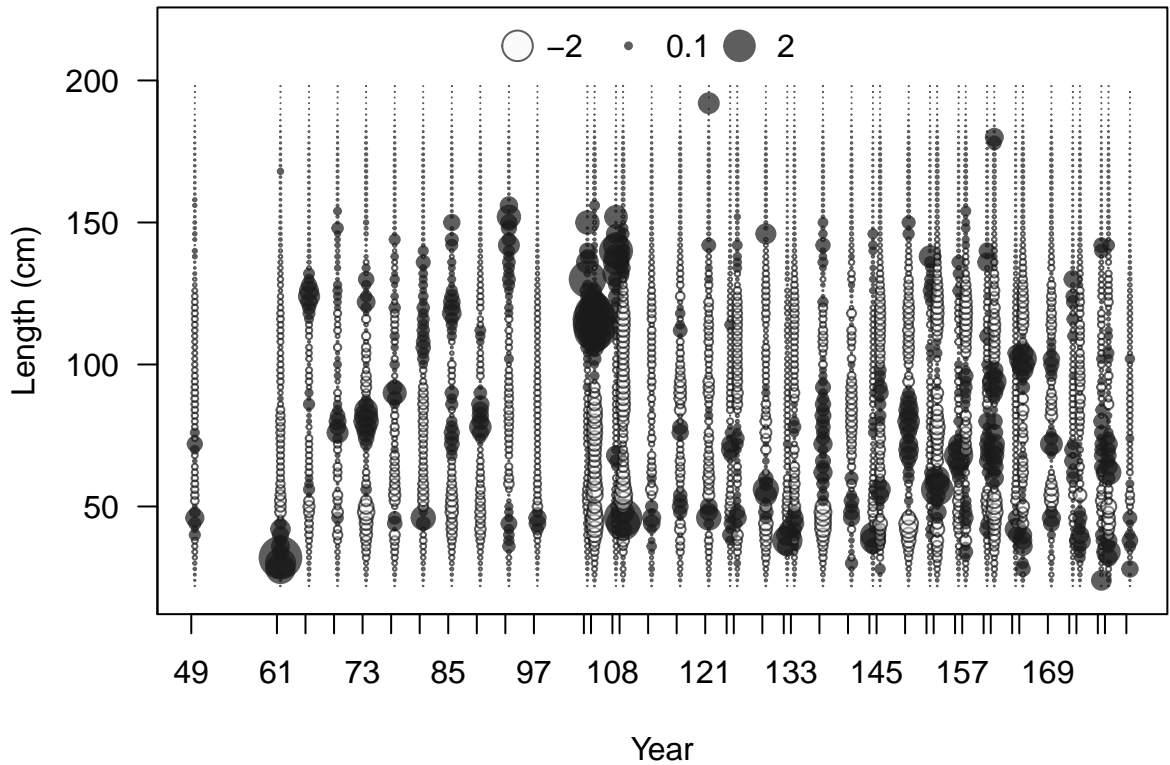
Proportion

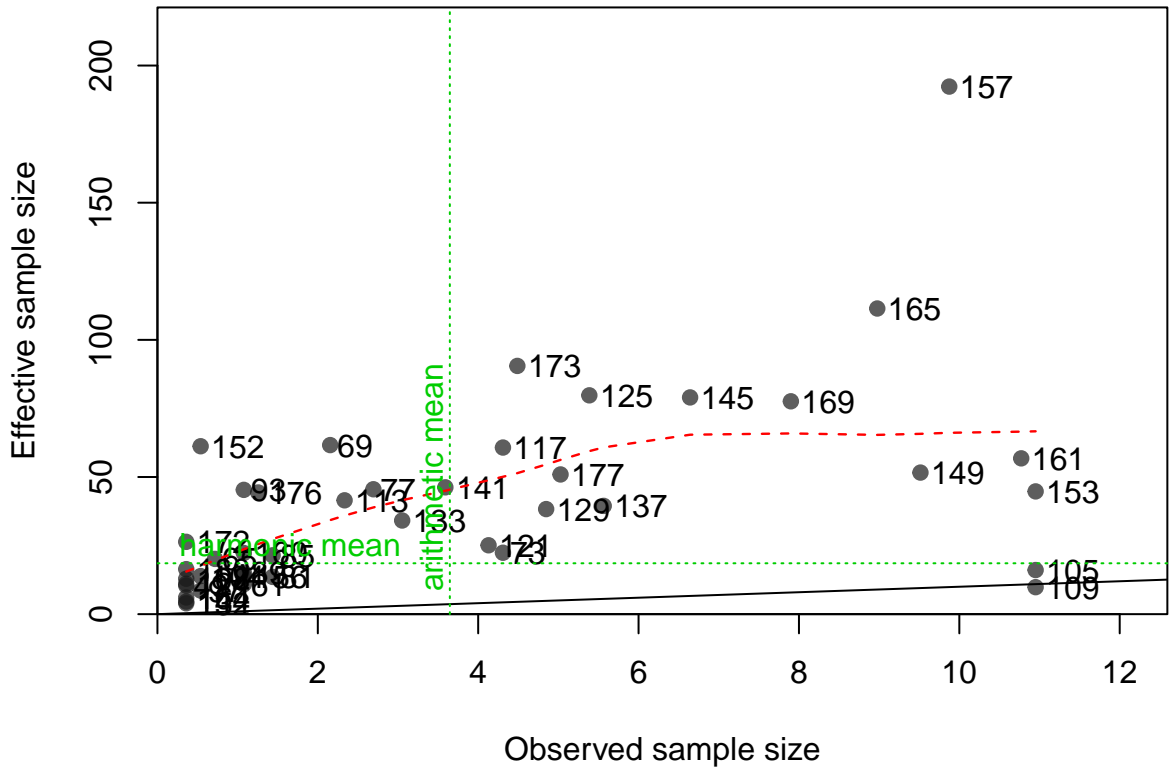




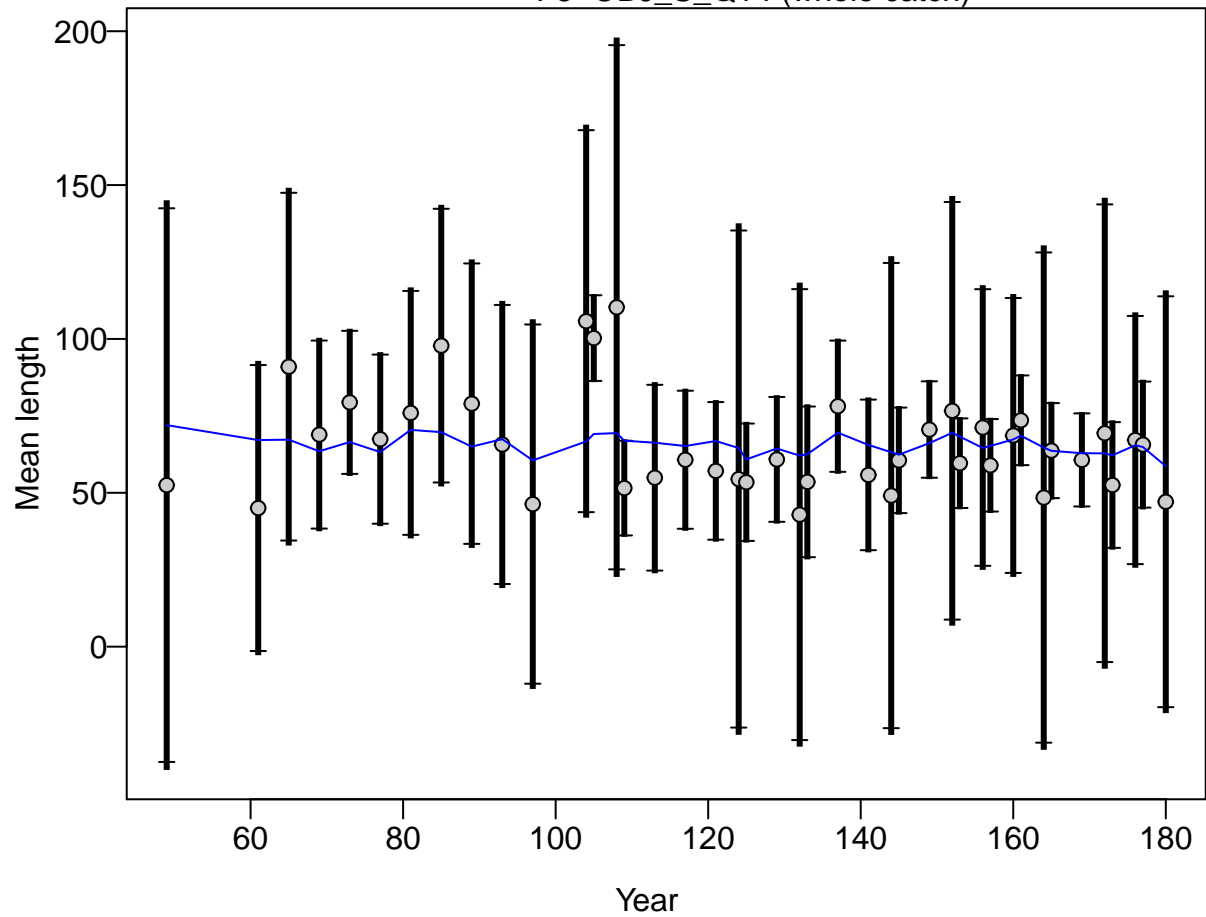
Proportion



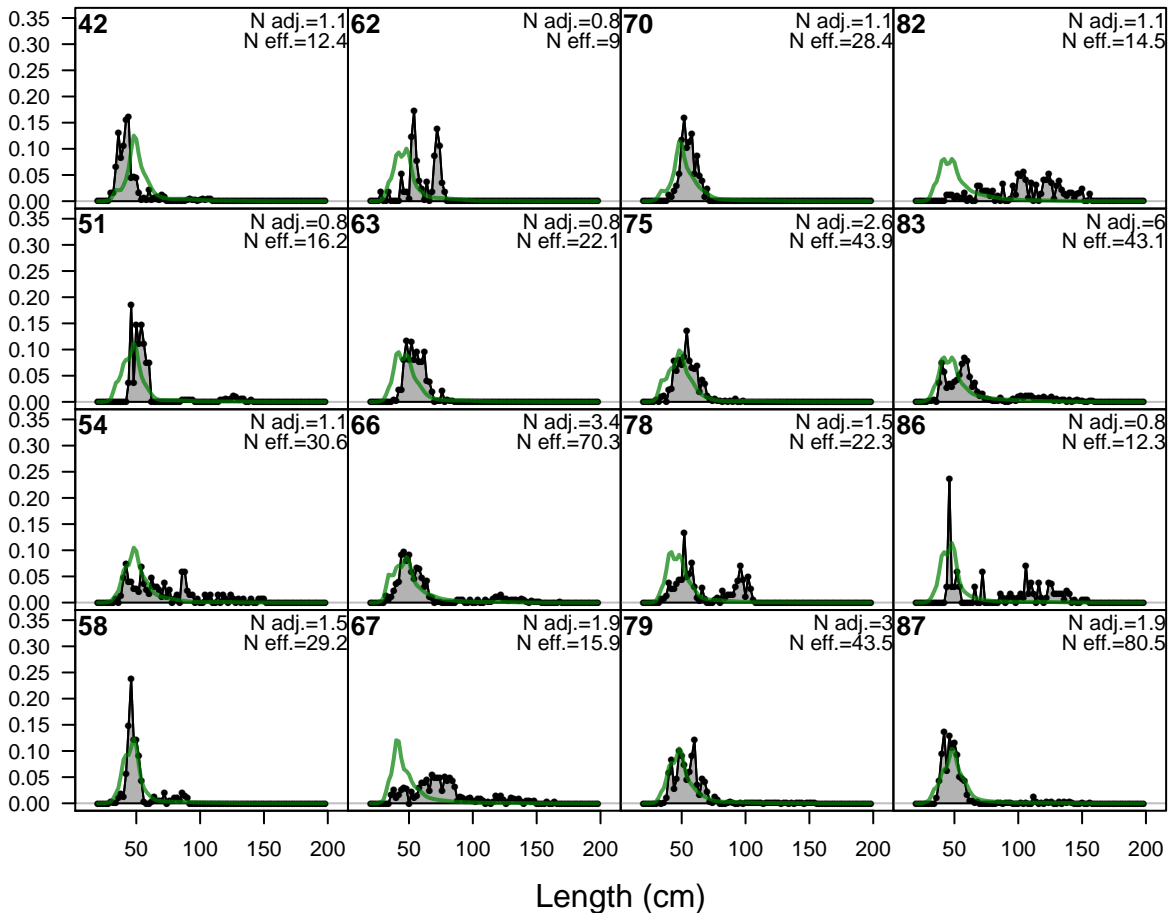




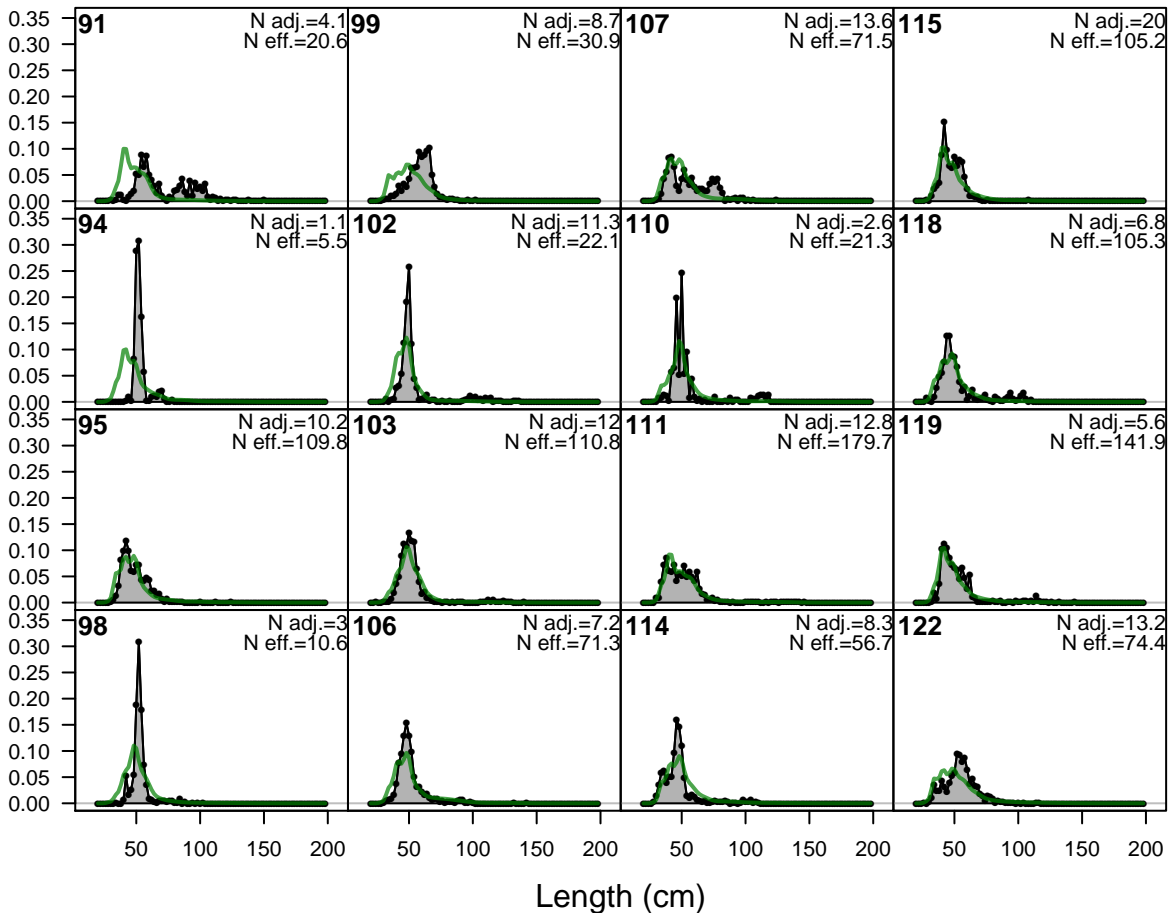
F5-OBJ\_S\_Q14 (whole catch)



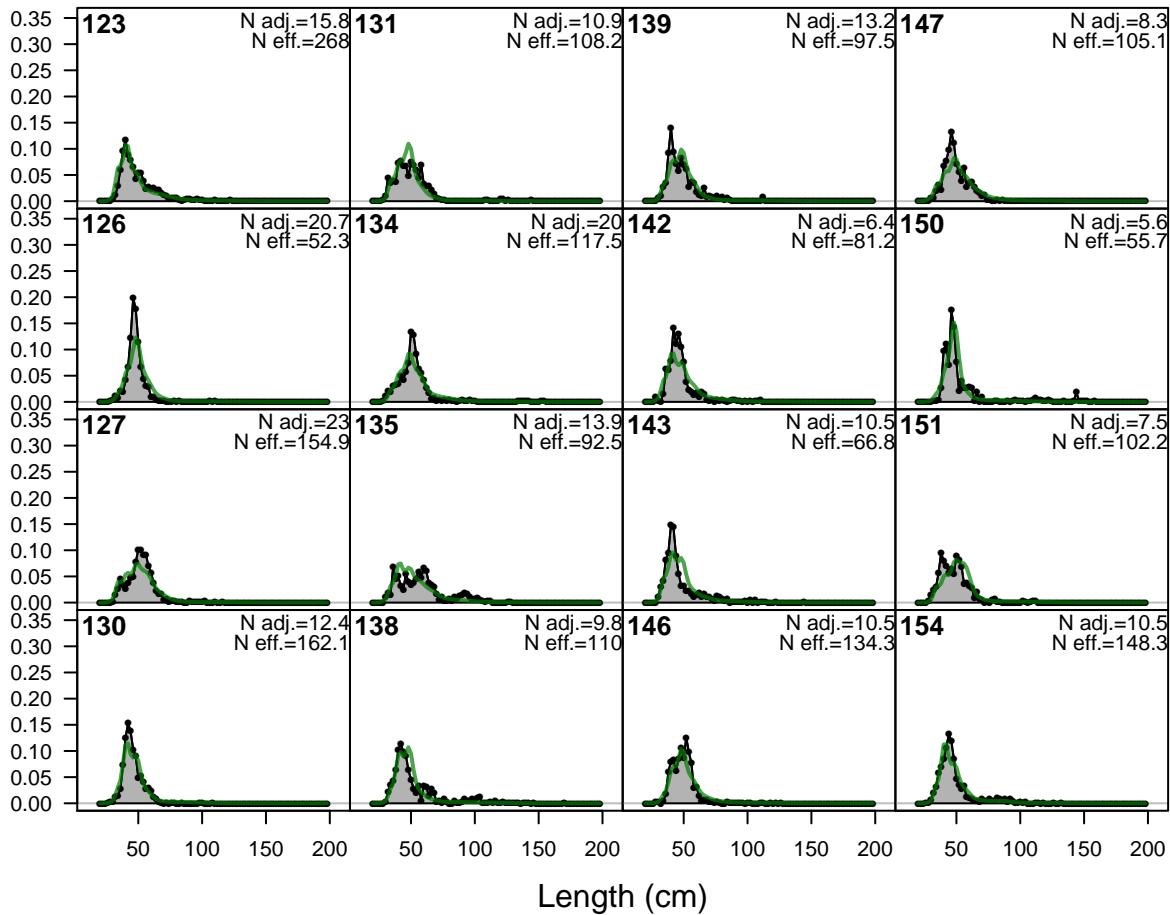
Proportion



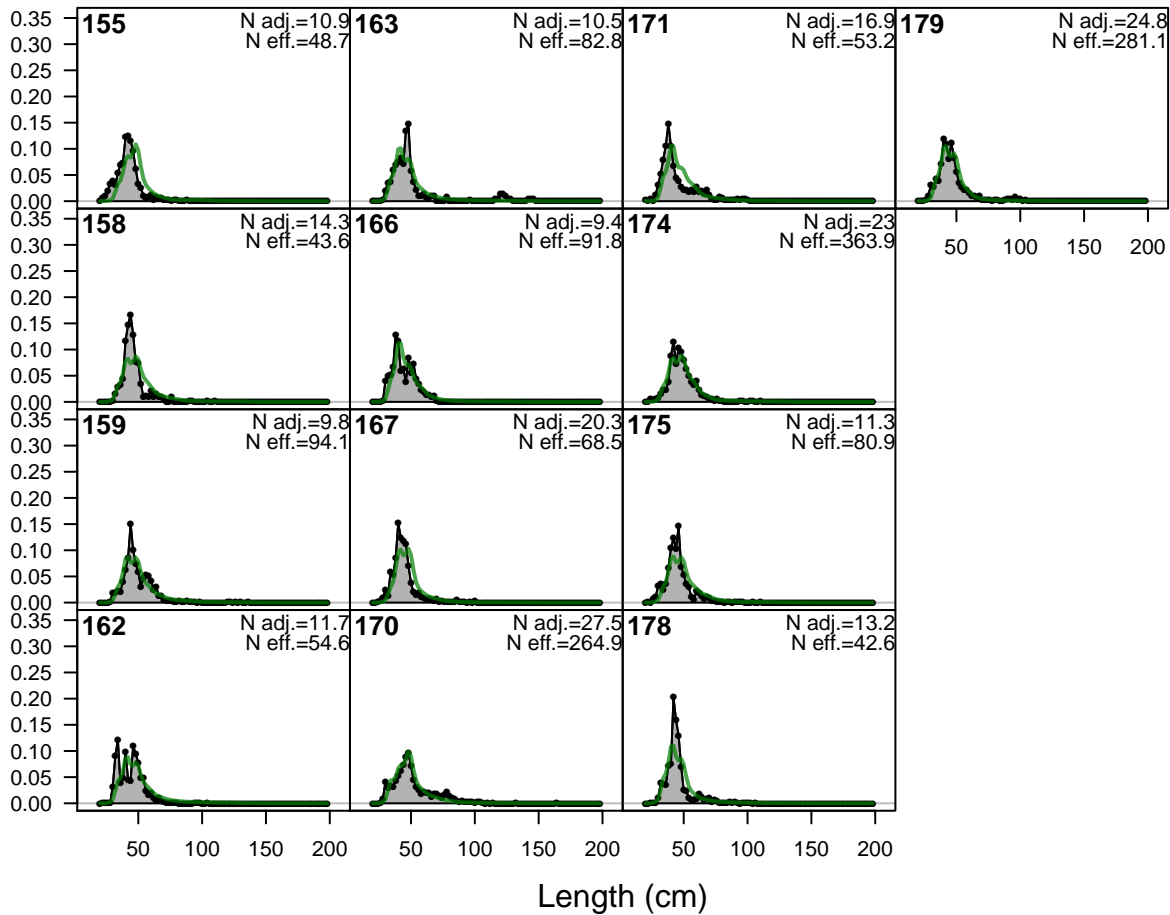
Proportion



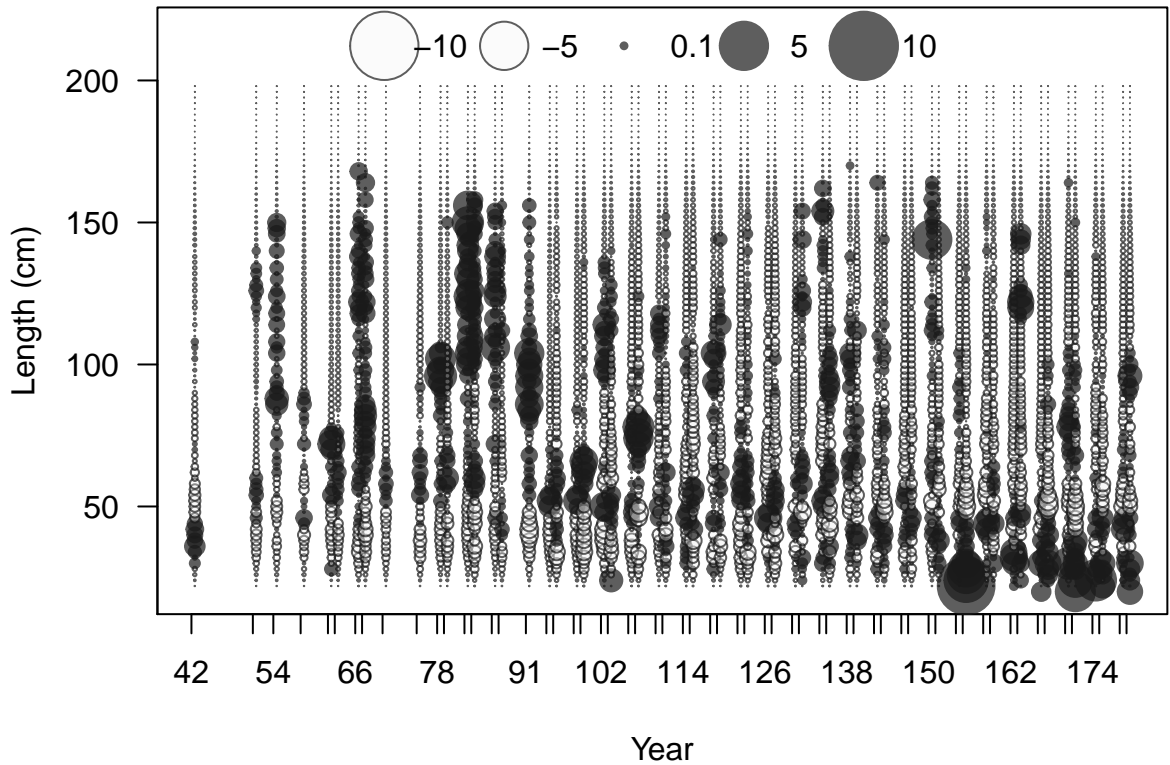
Proportion

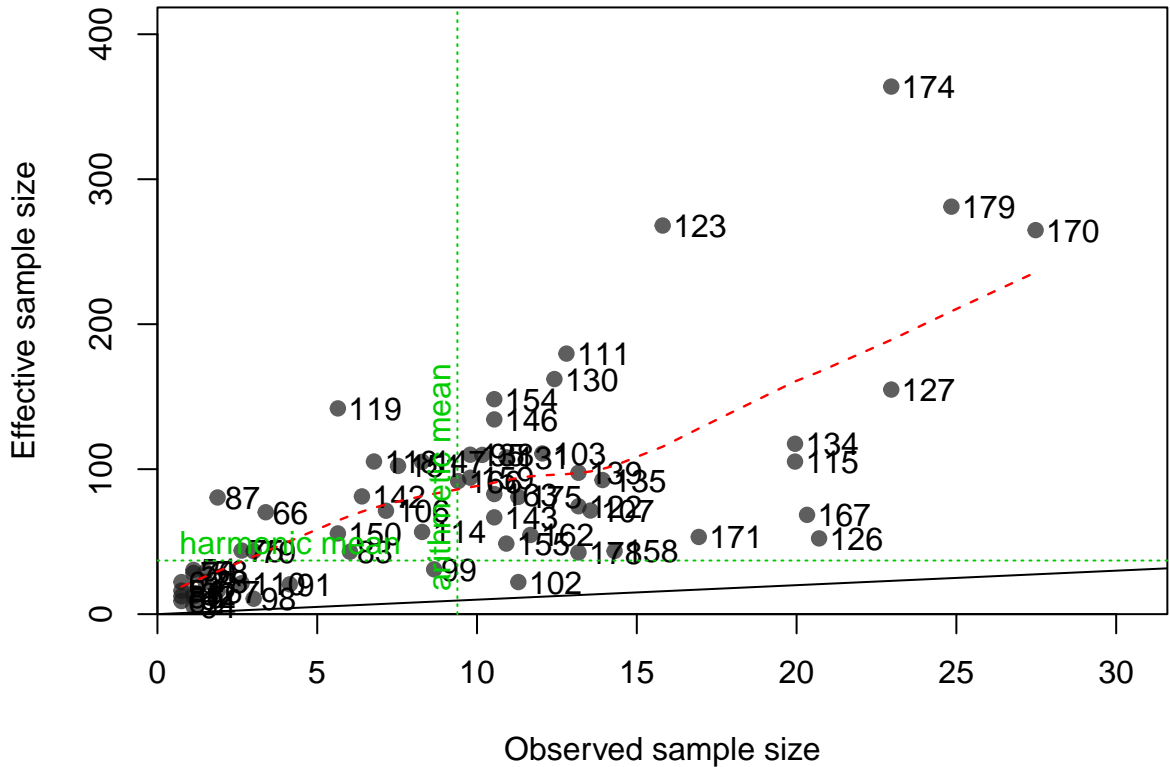


Proportion

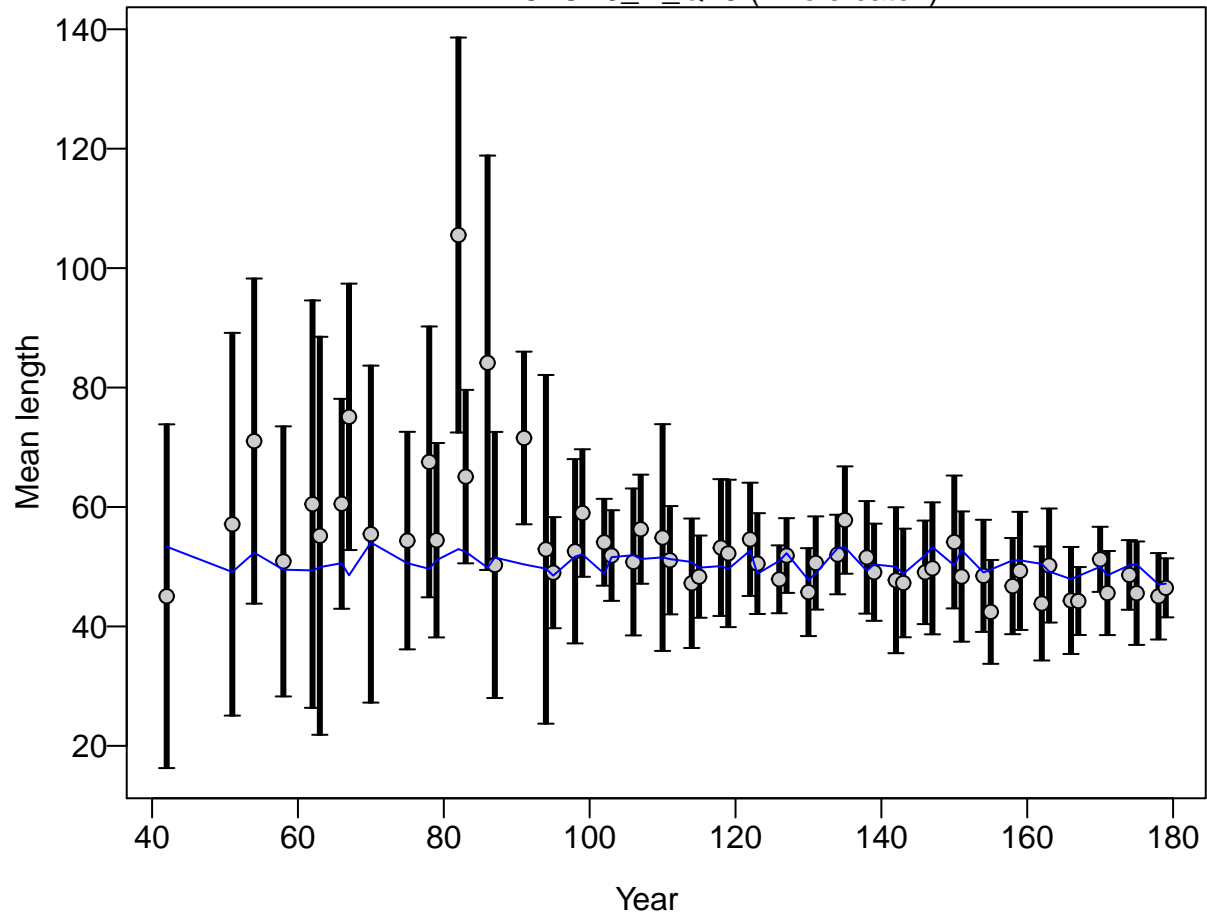




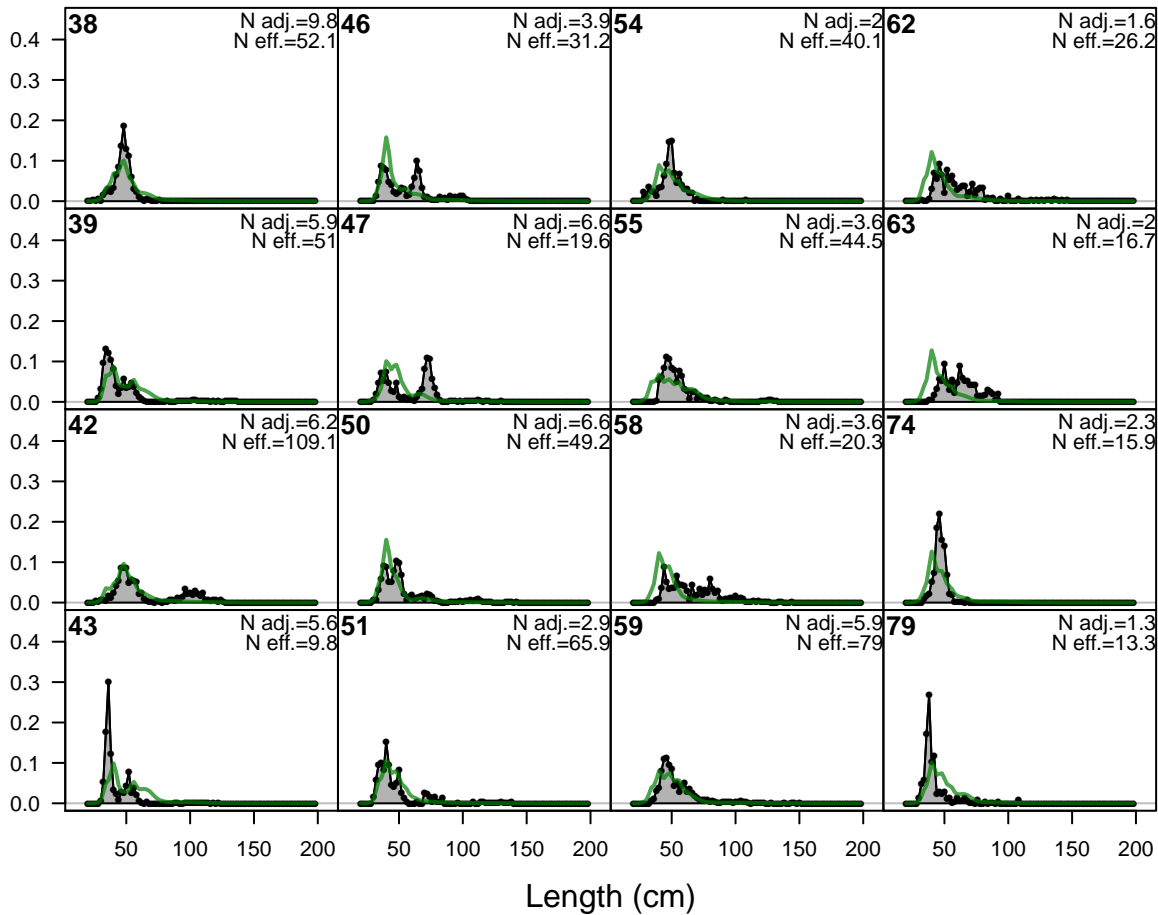




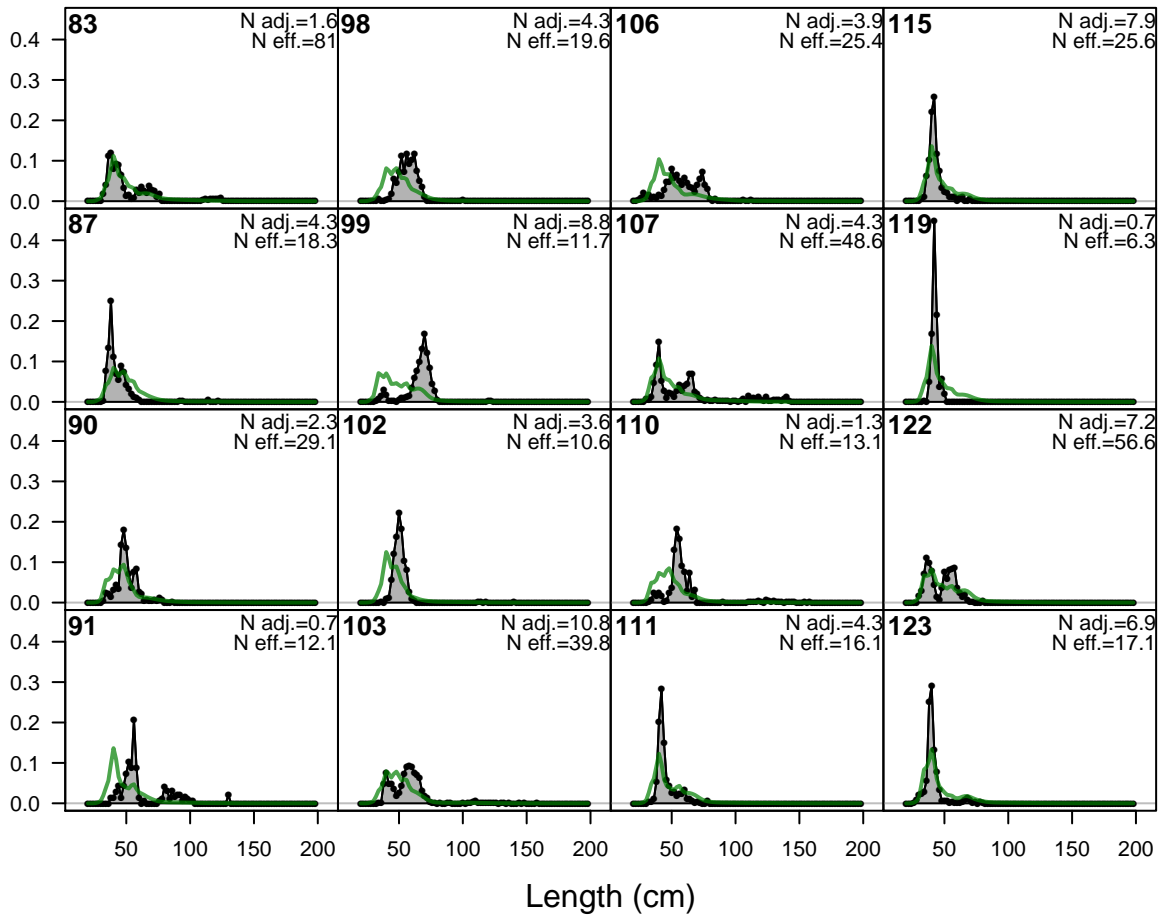
F6-OBJ\_N\_Q23 (whole catch)



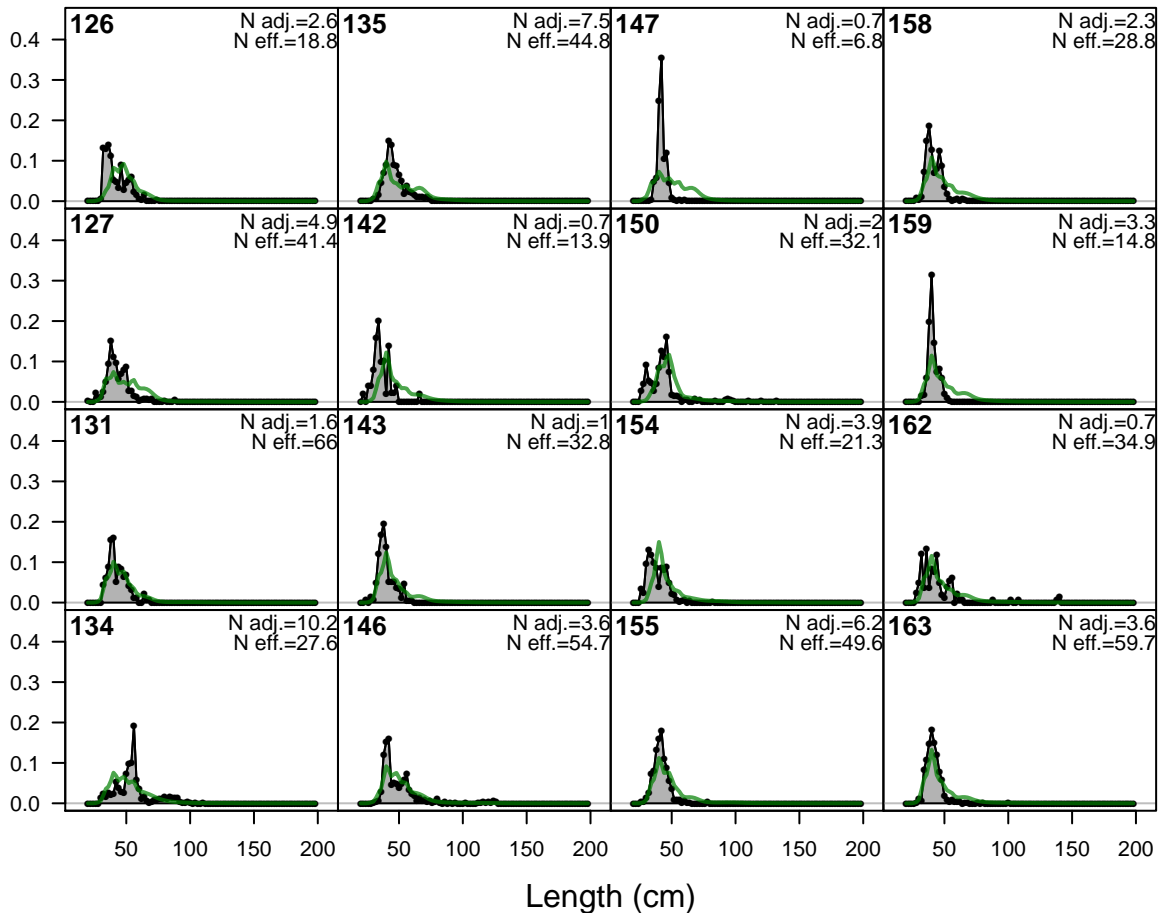
Proportion



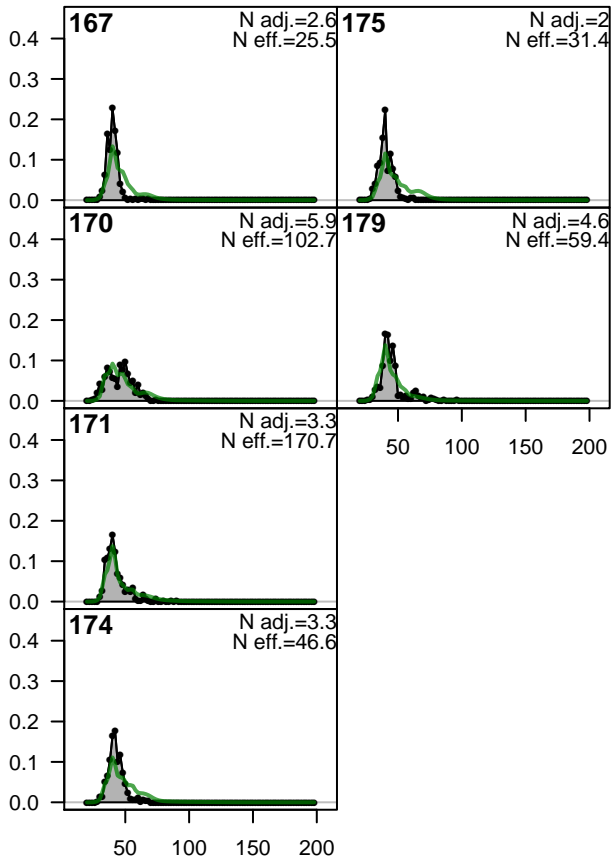
Proportion



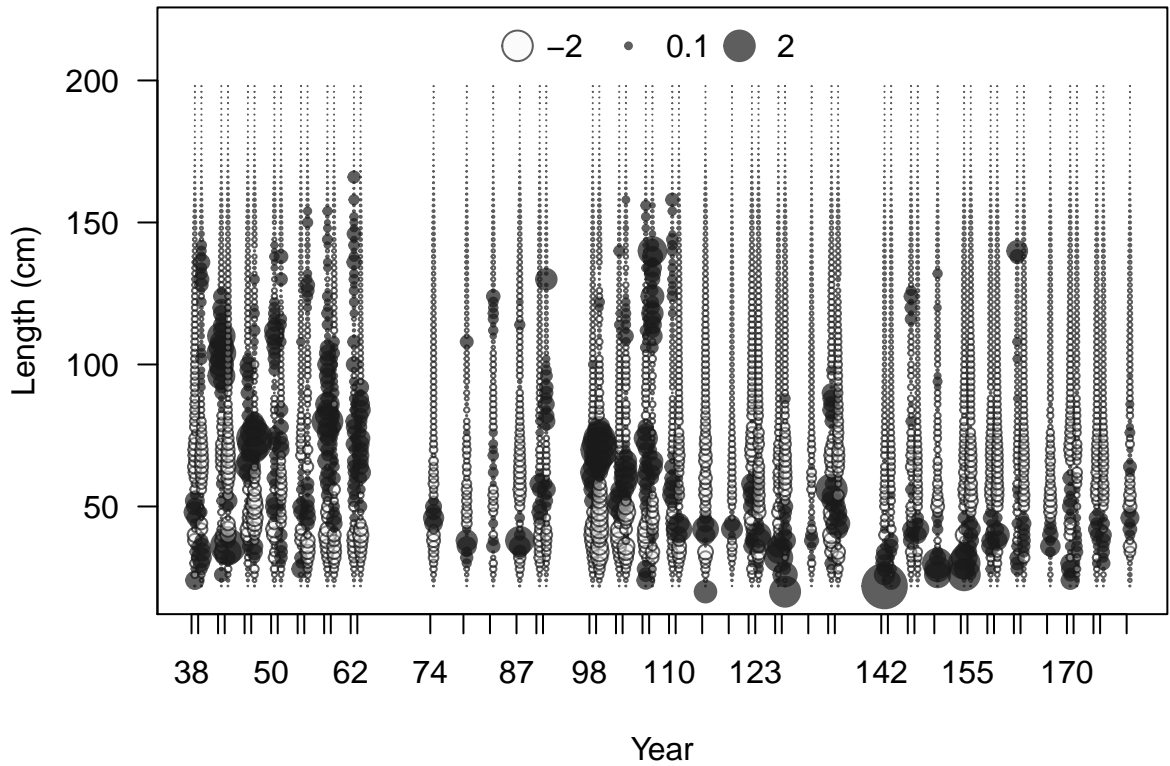
Proportion



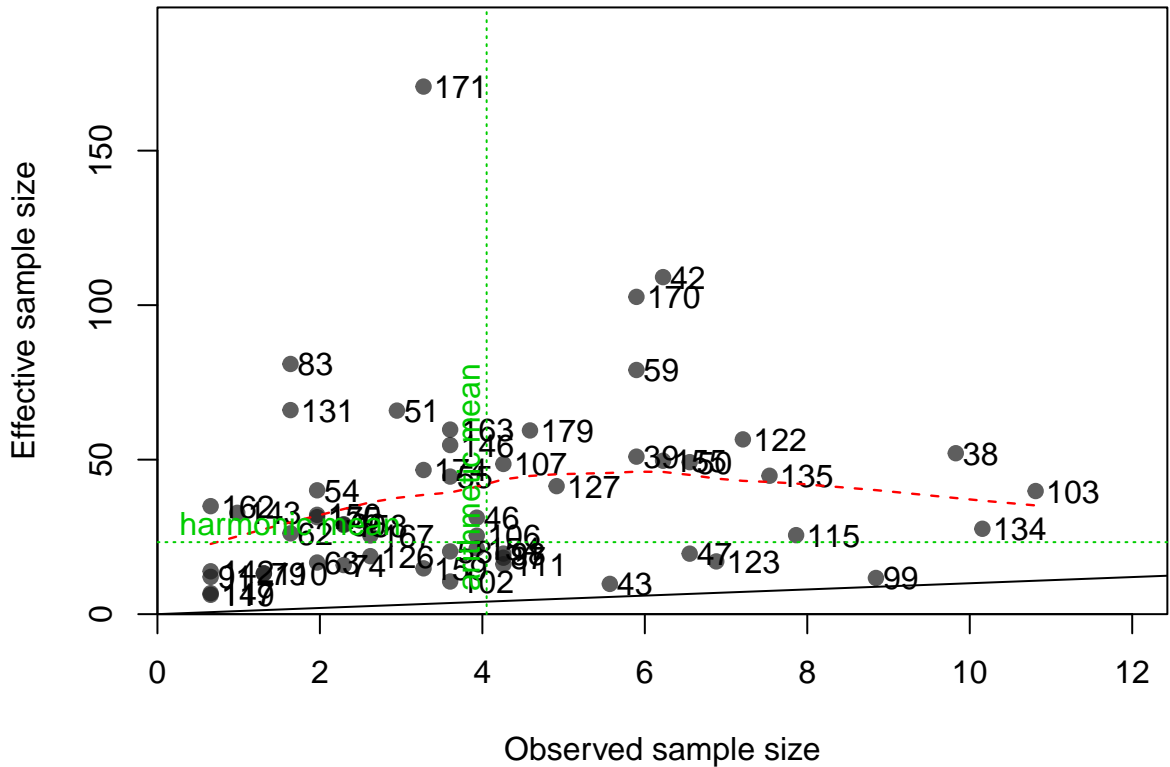
Proportion



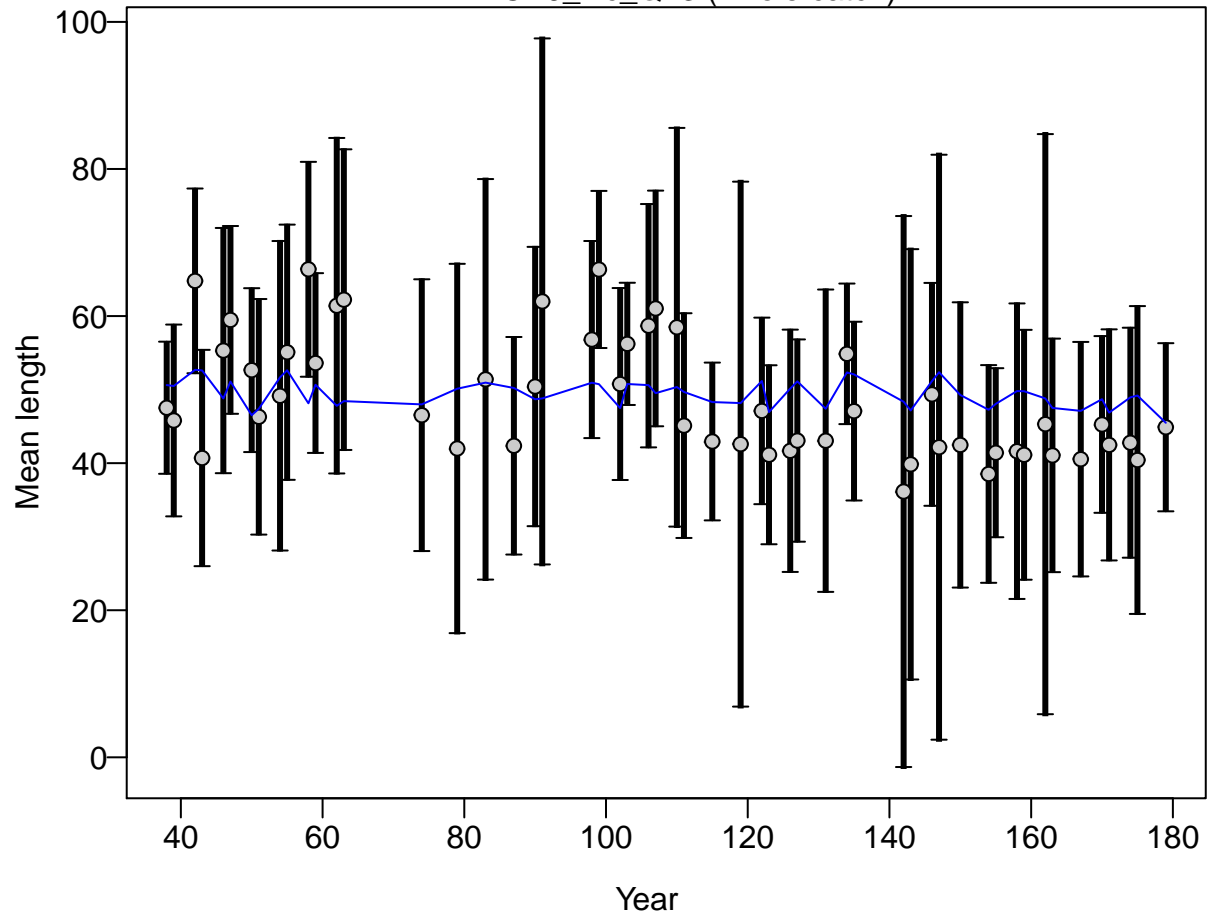
Length (cm)



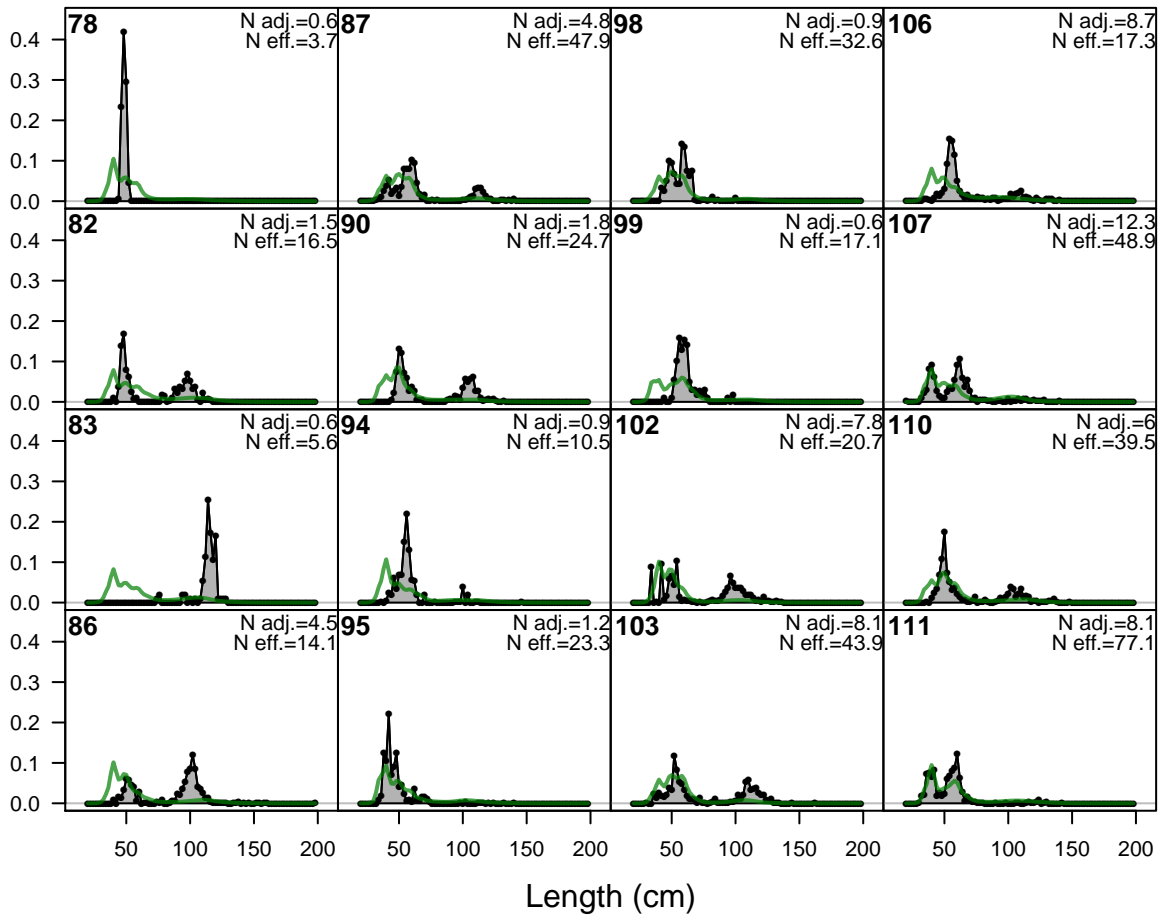




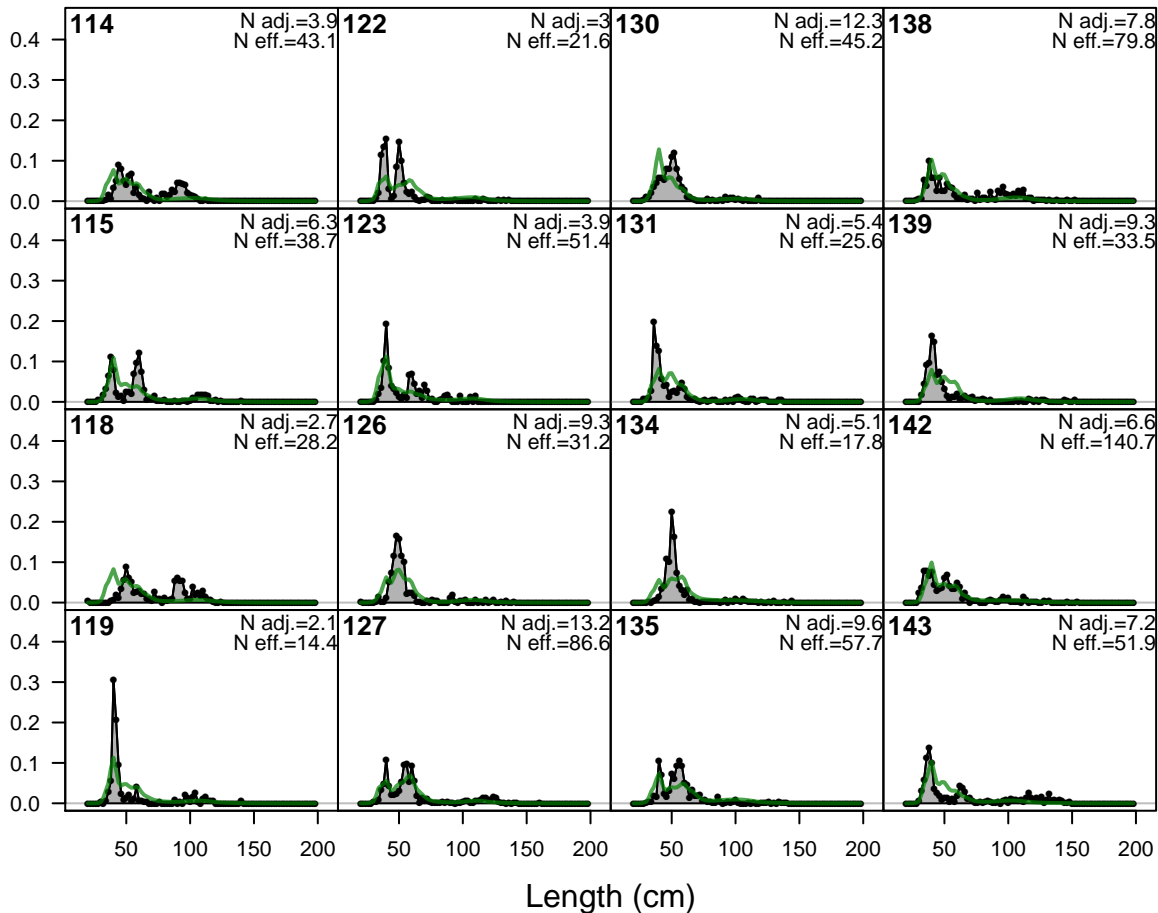
F7-OBJ\_Nc\_Q23 (whole catch)



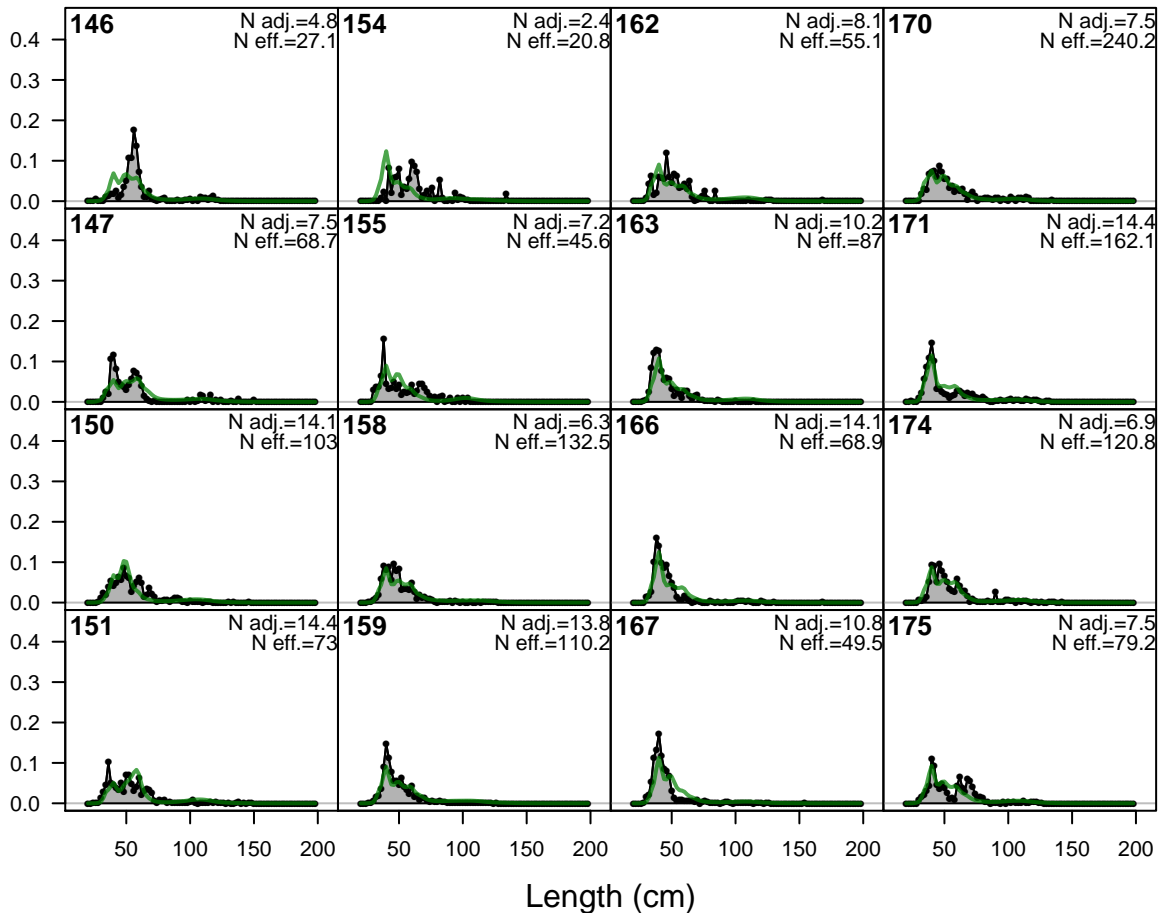
Proportion

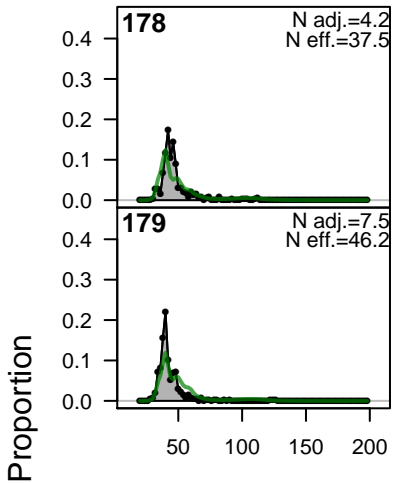


Proportion

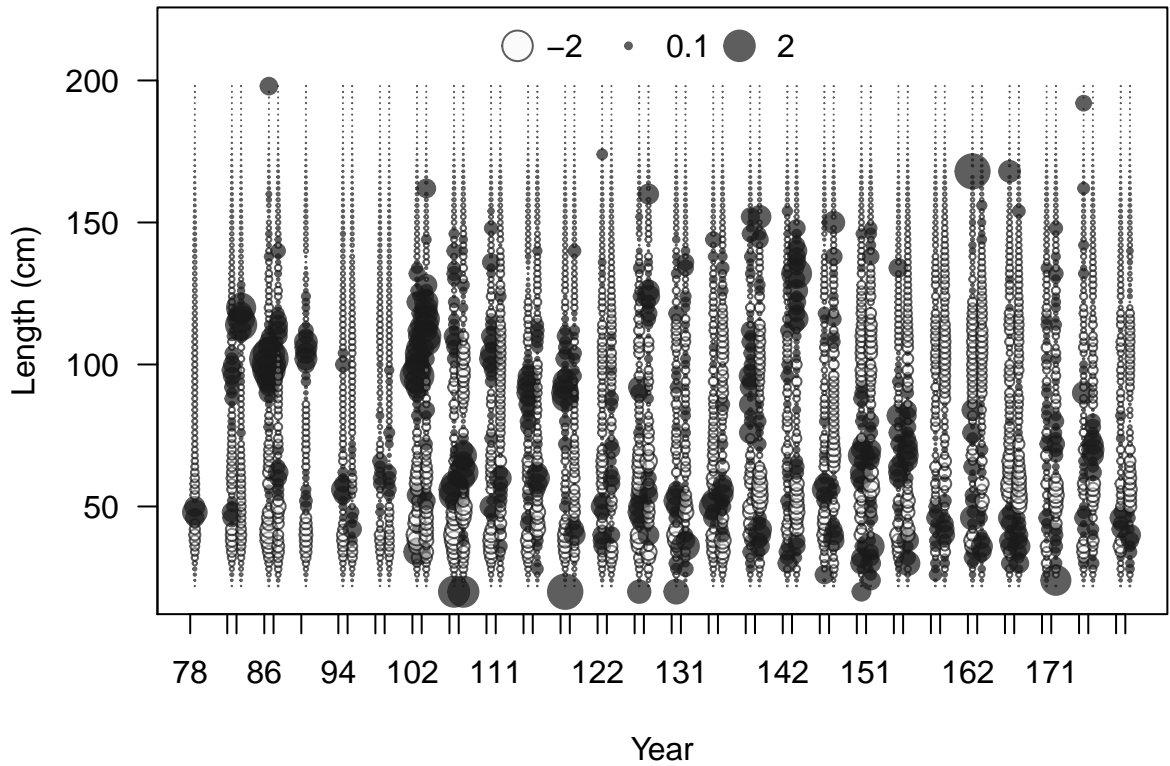


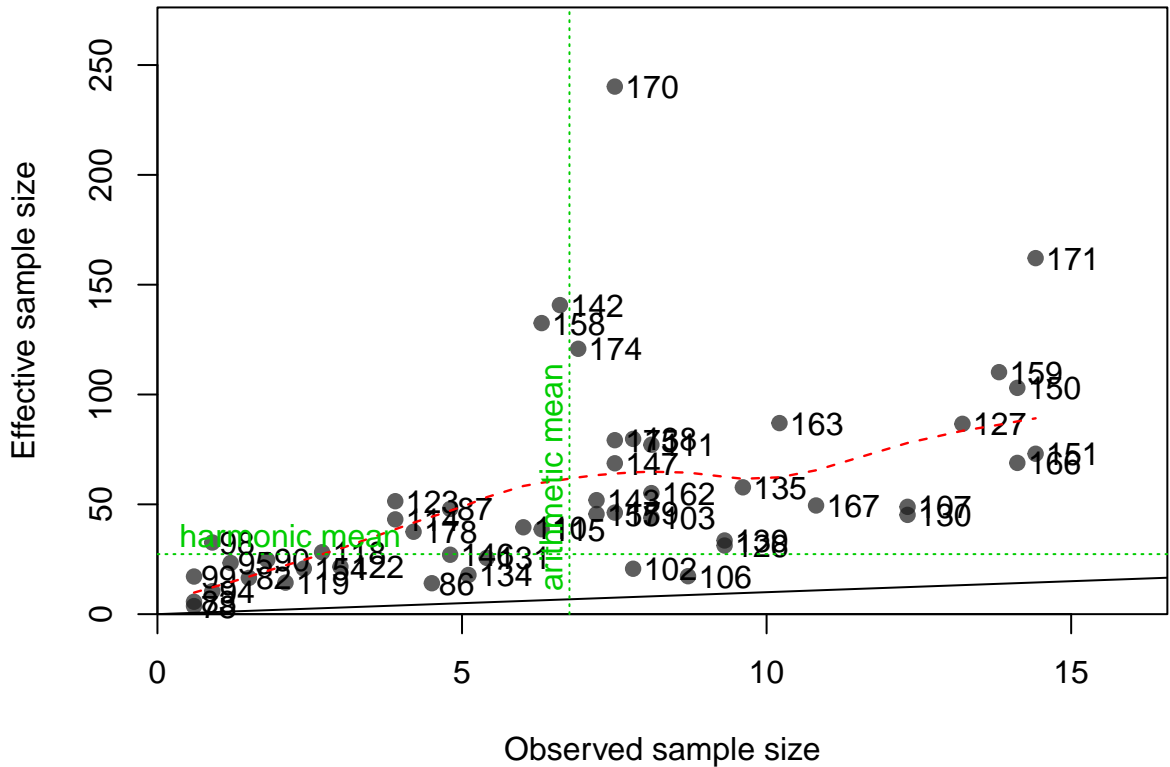
Proportion





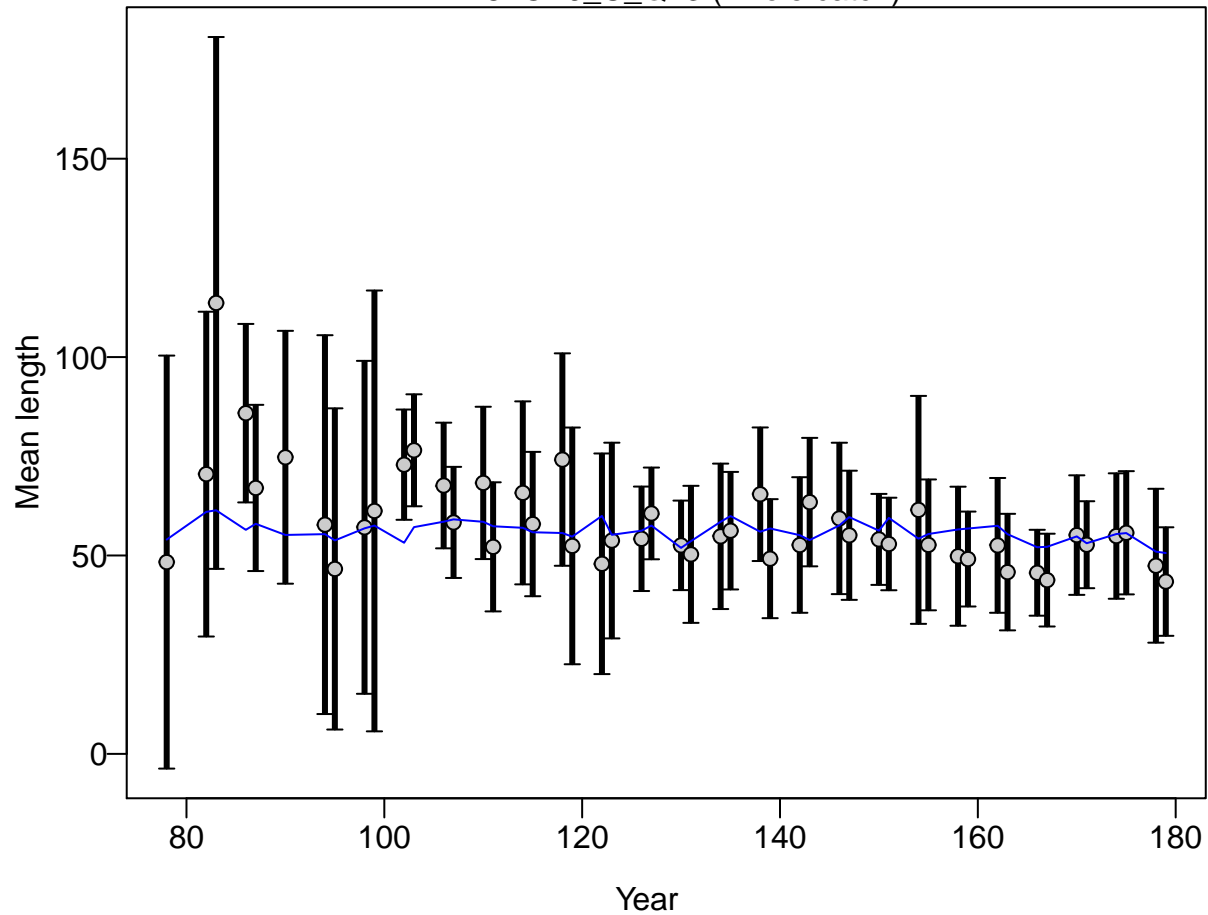
Length (cm)



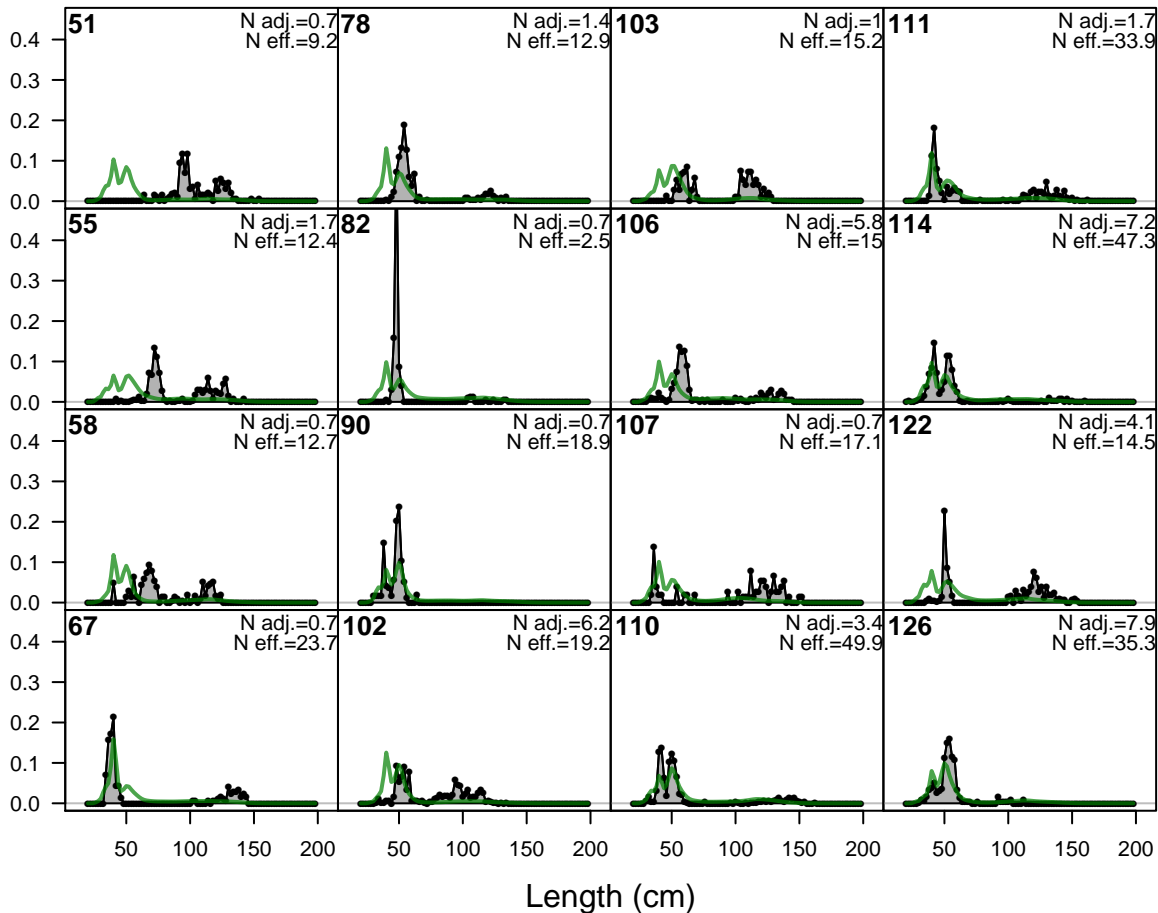




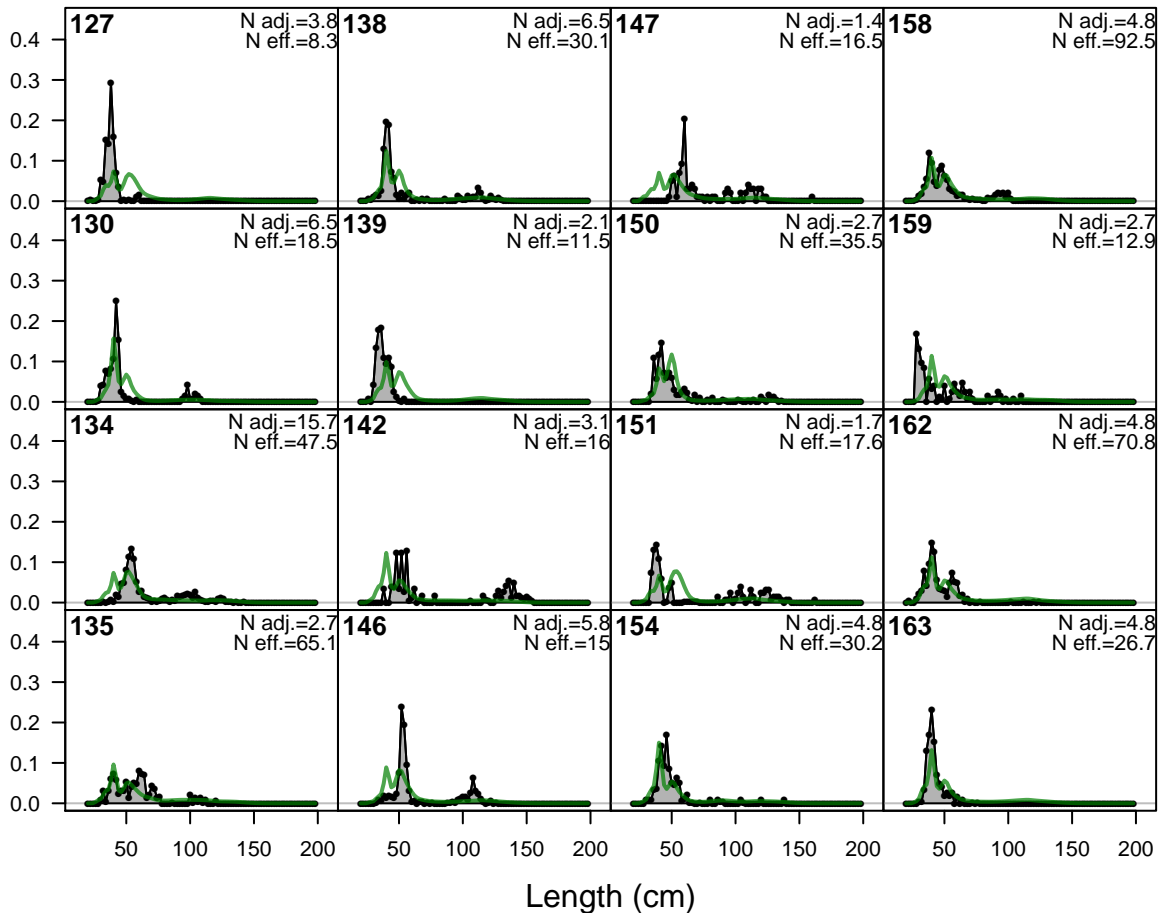
F8-OBJ\_C\_Q23 (whole catch)



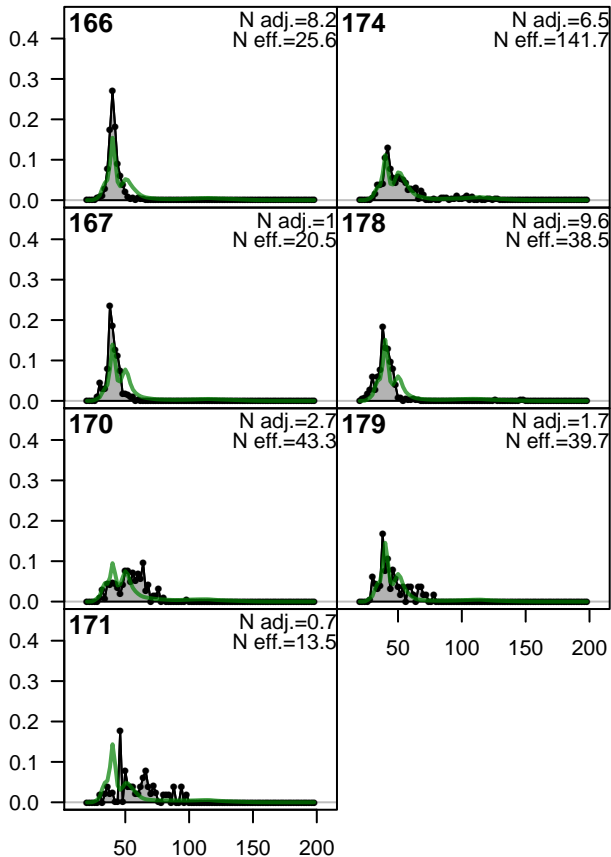
Proportion



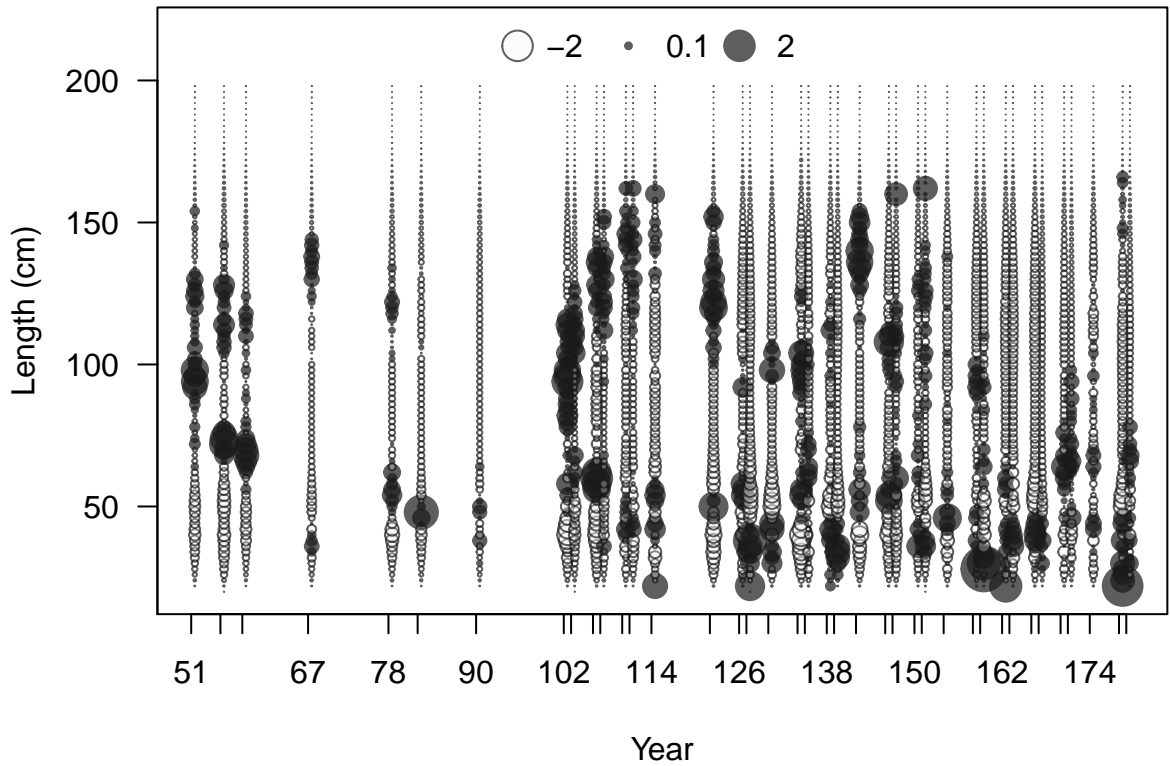
Proportion



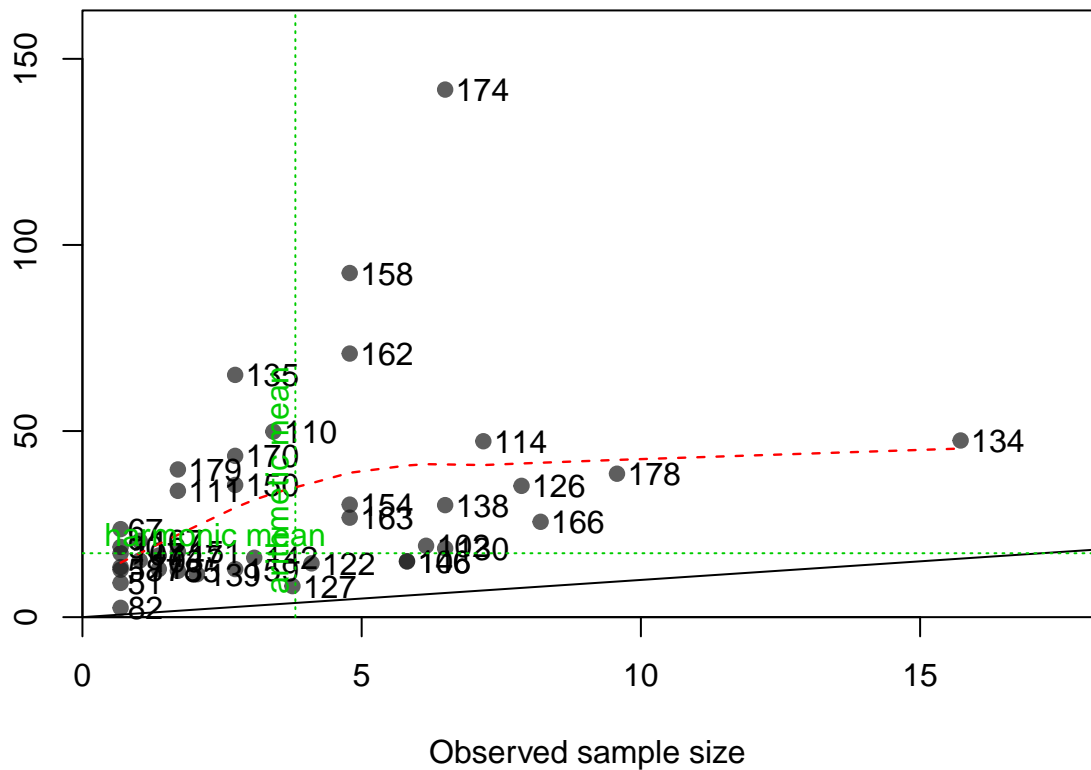
Proportion



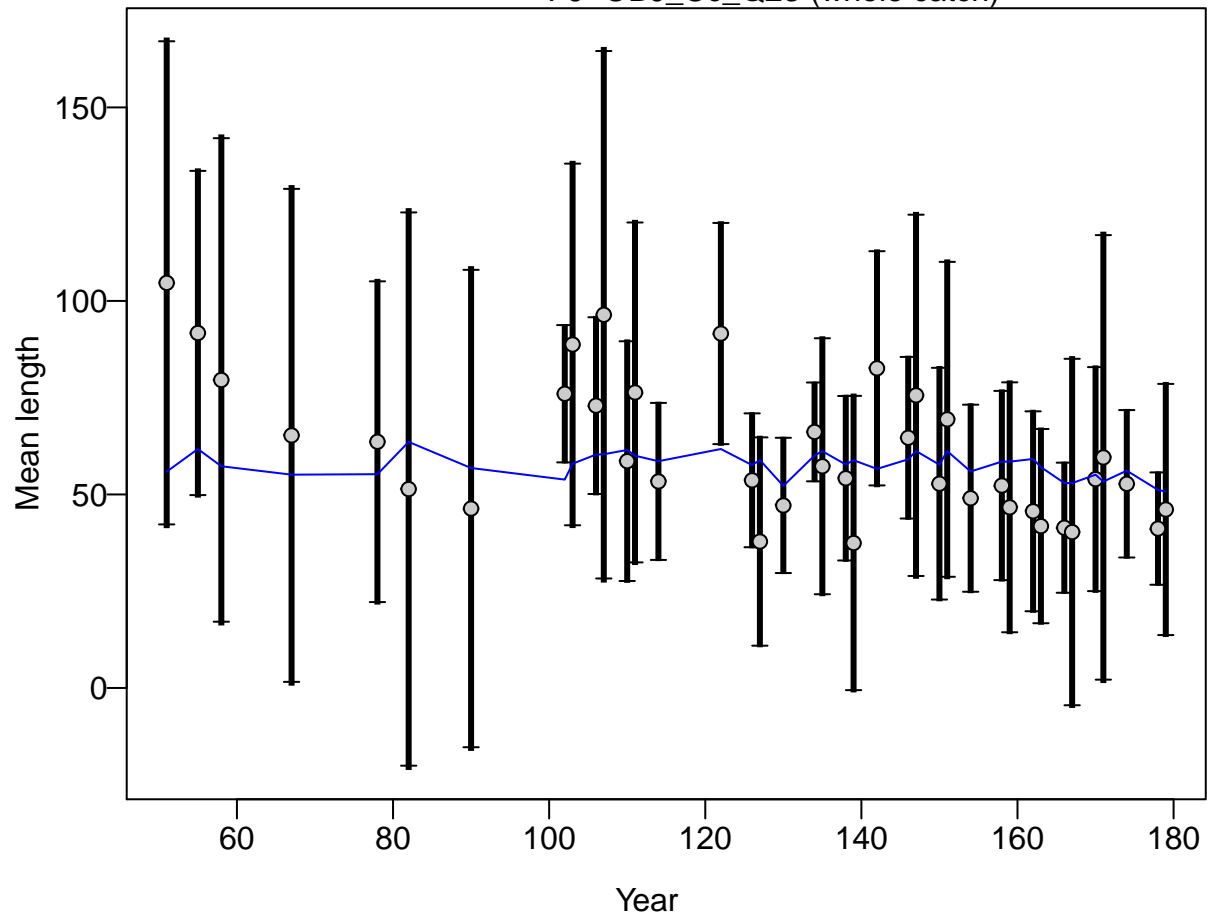
Length (cm)



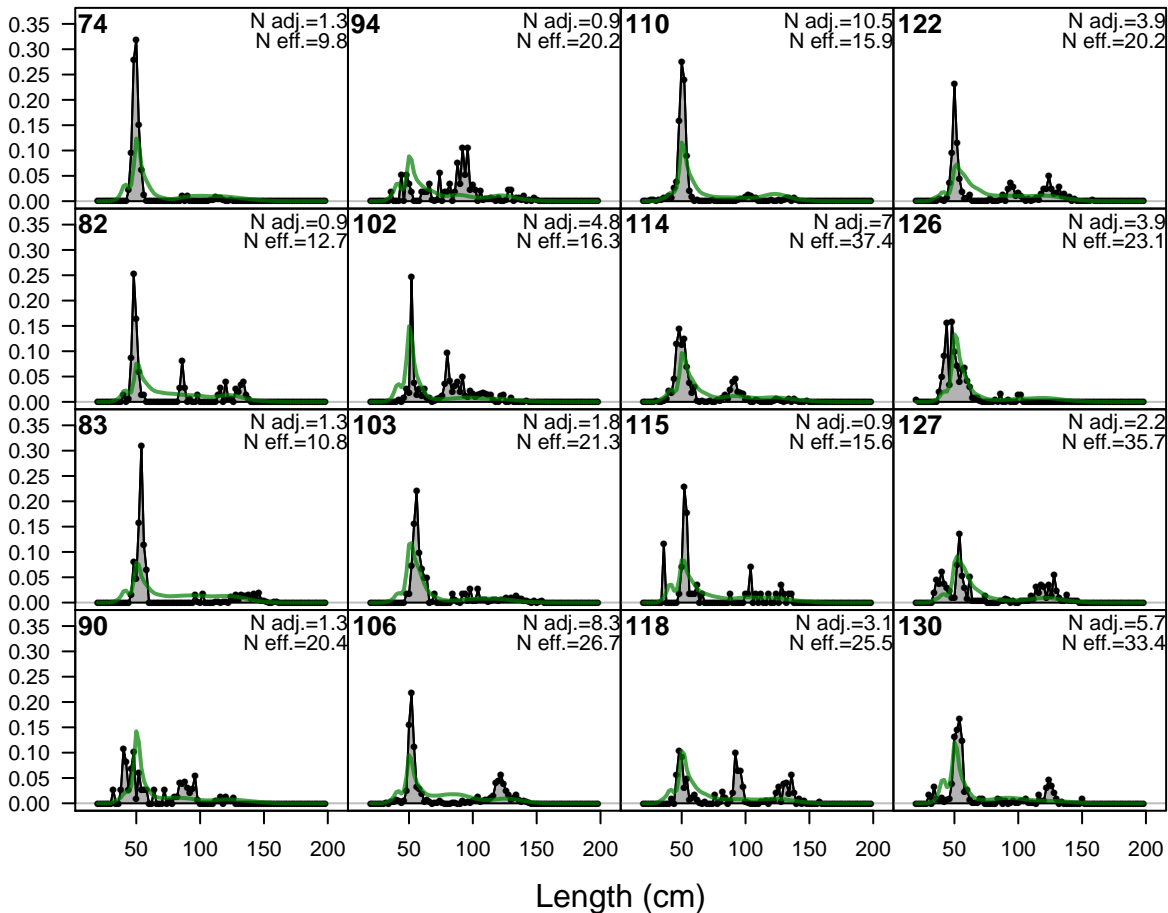
Effective sample size



F9-OBJ\_Cc\_Q23 (whole catch)

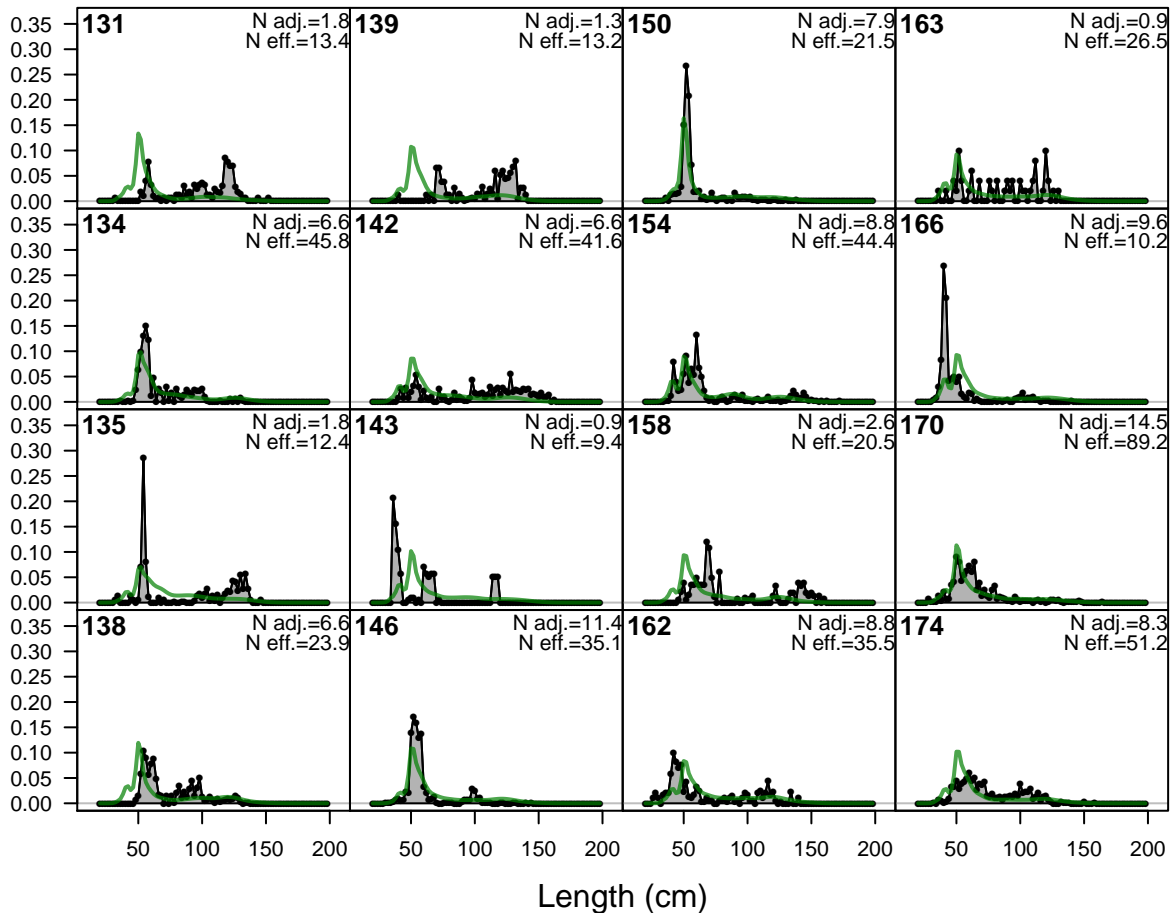


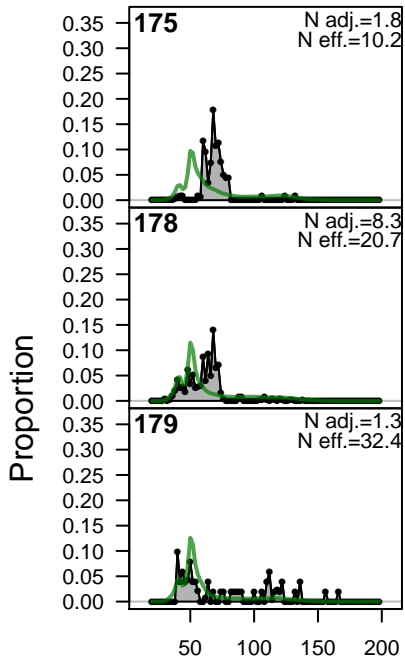
Proportion



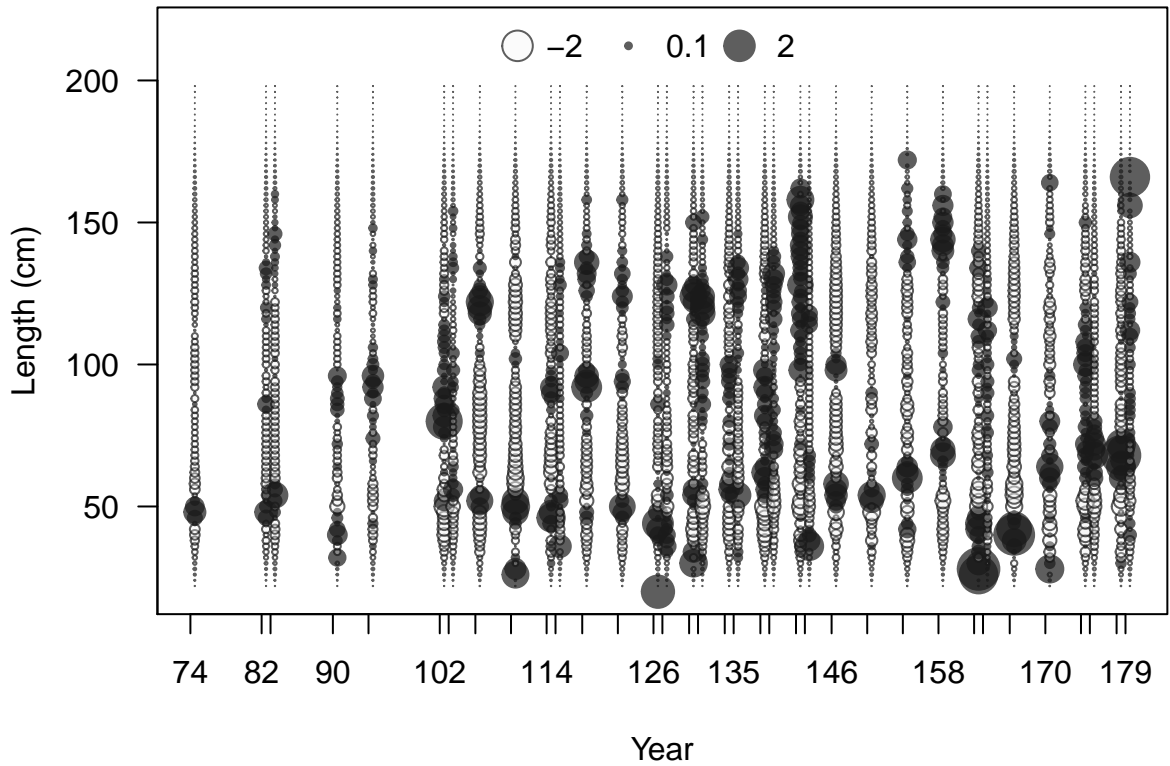


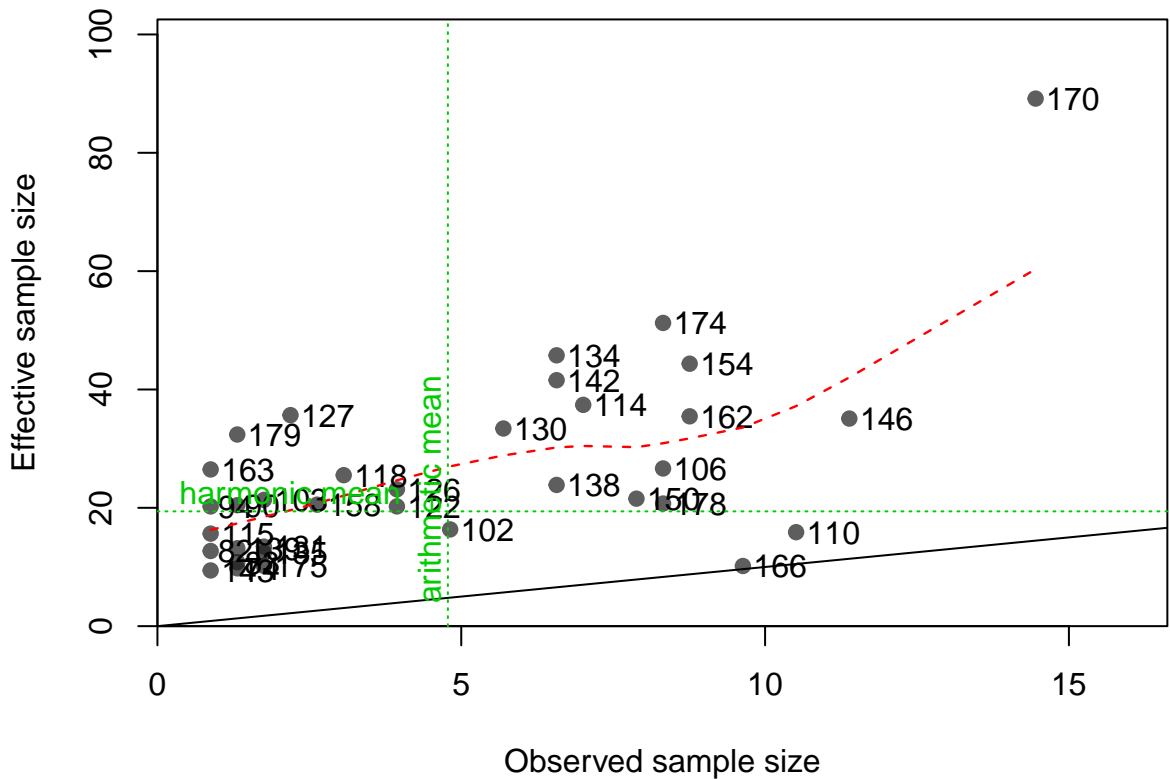
Proportion



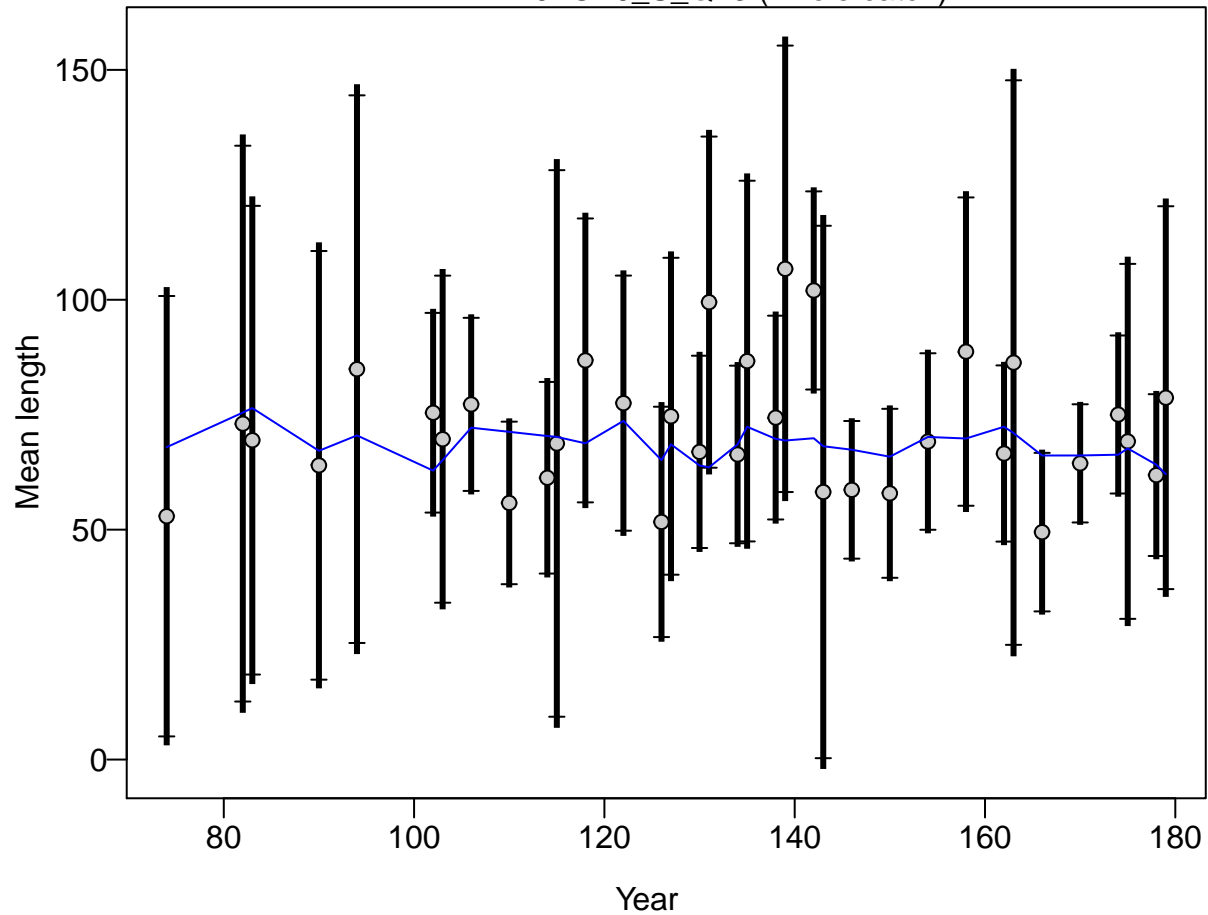


Length (cm)

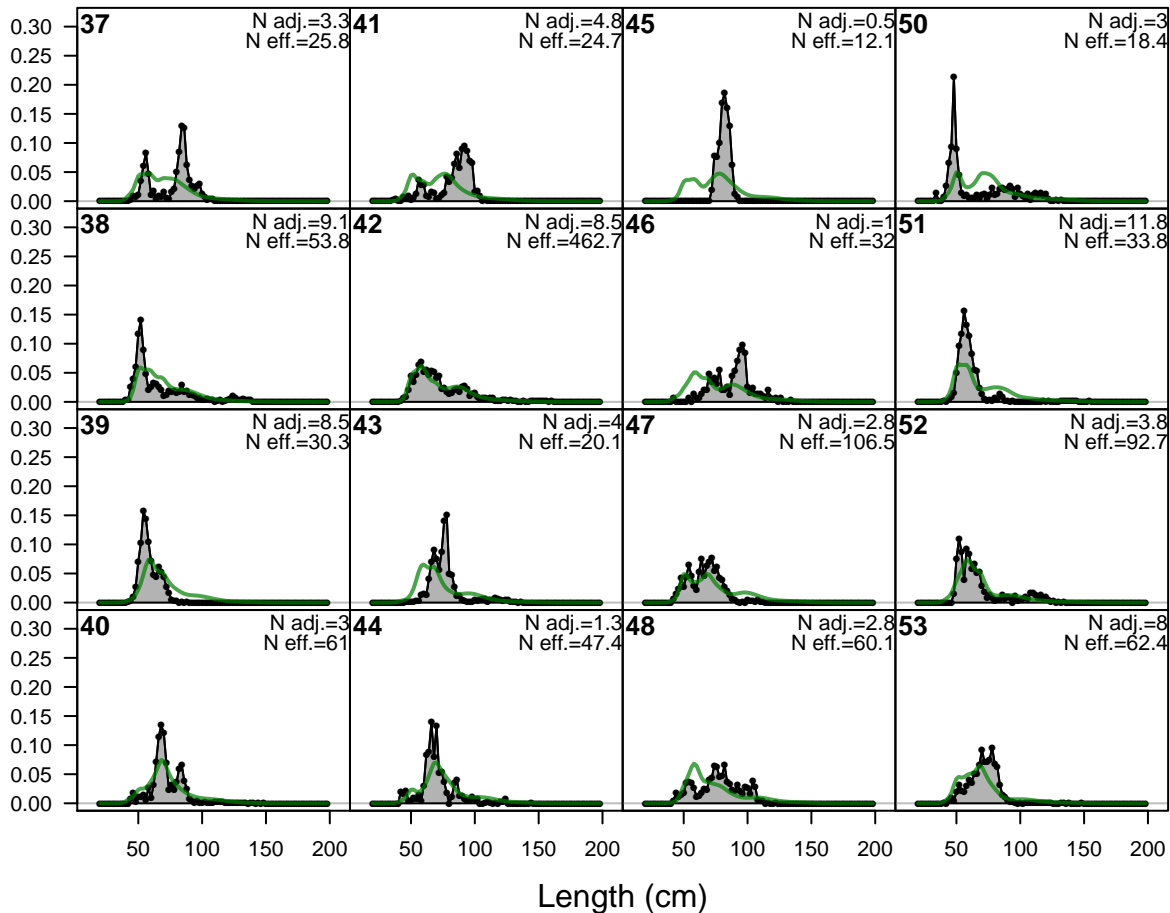




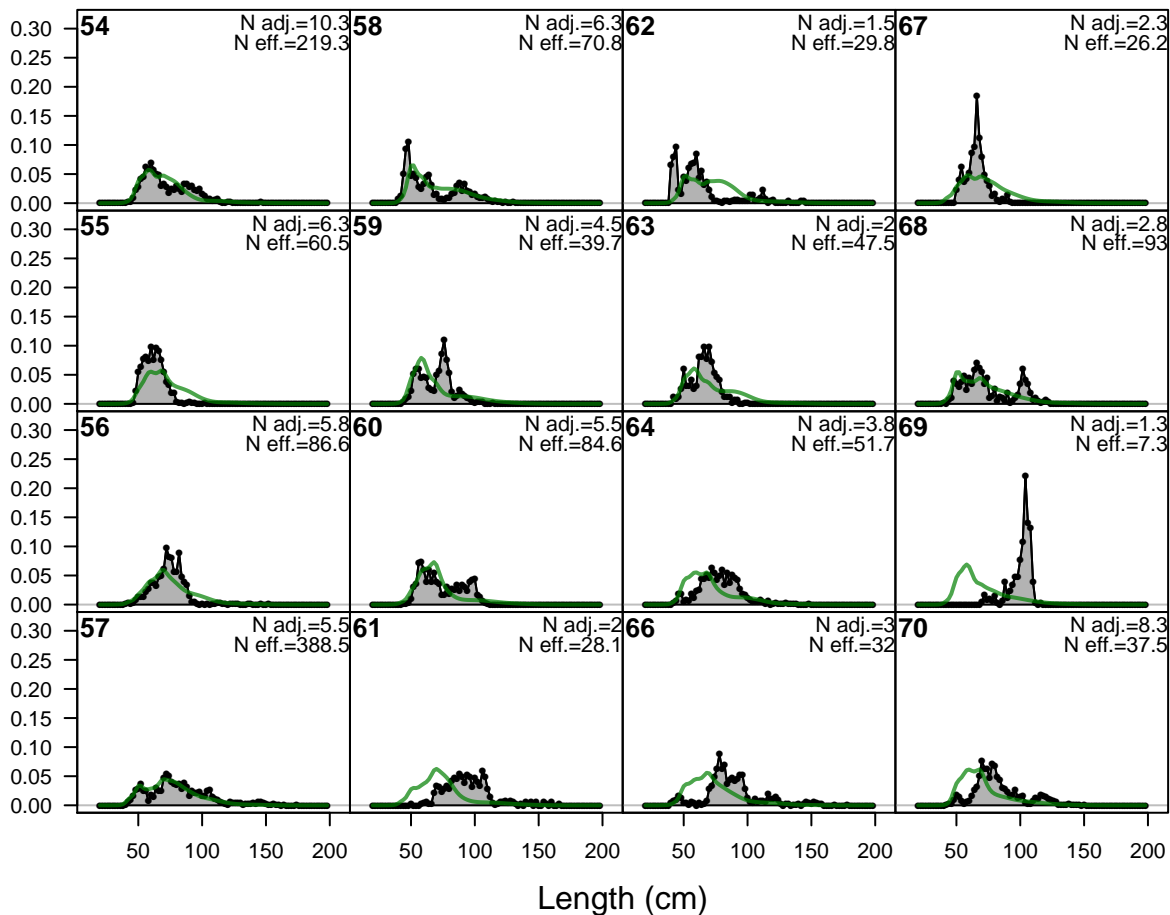
F10-OBJ\_S\_Q23 (whole catch)



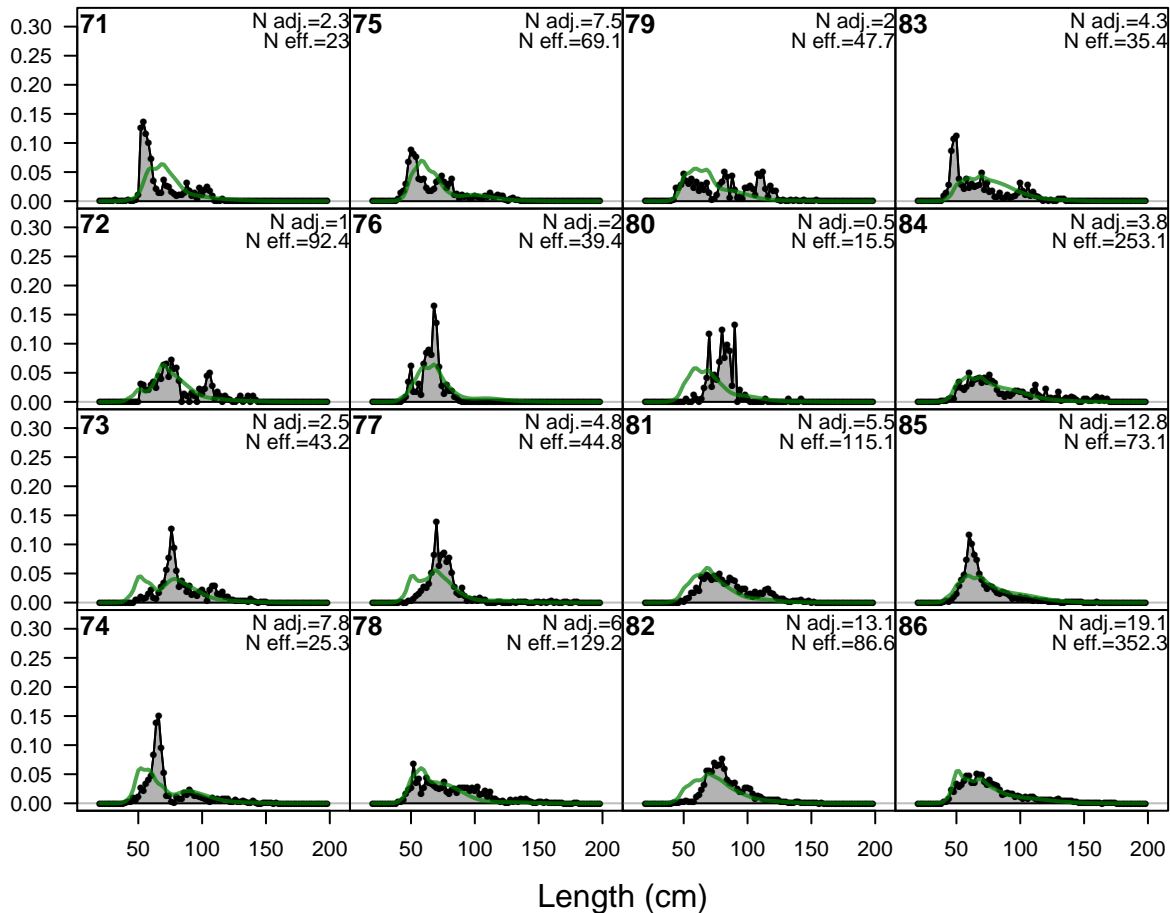
Proportion



Proportion

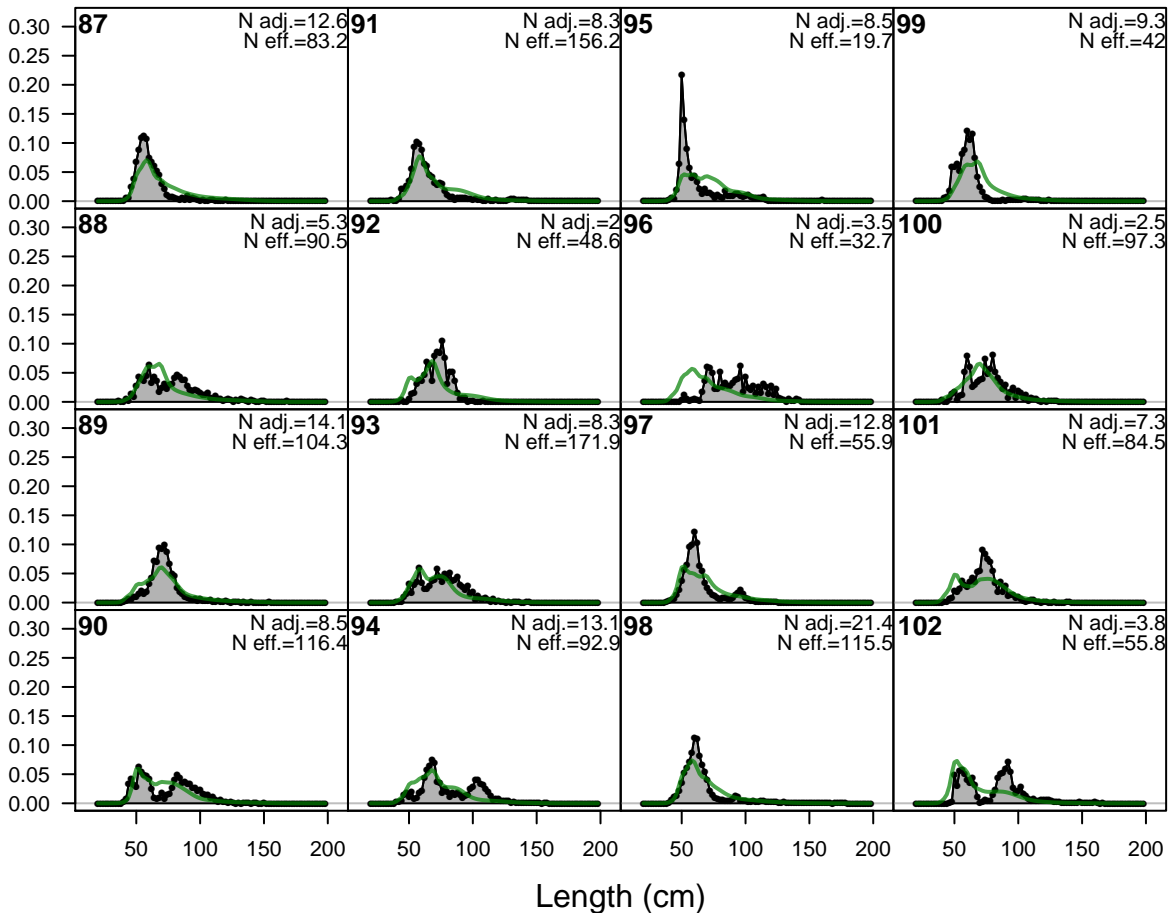


Proportion

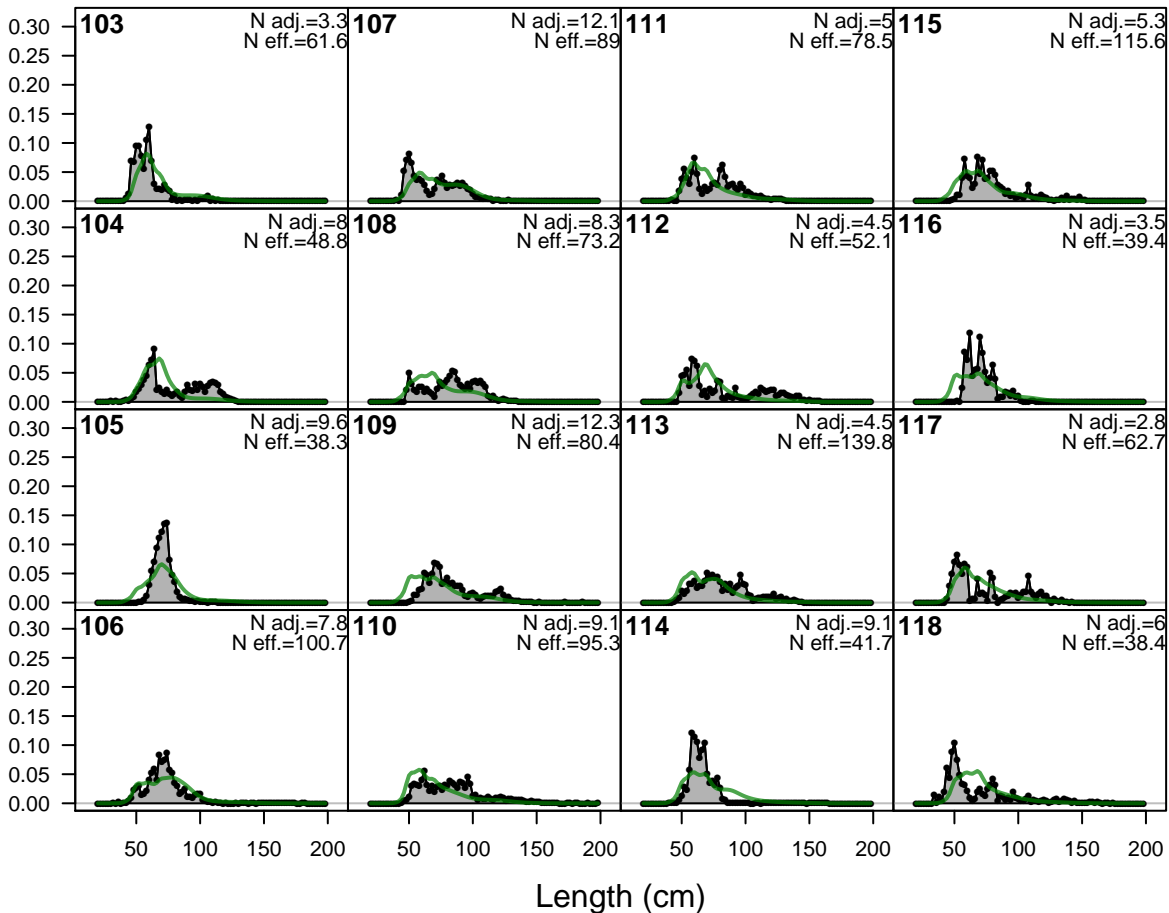




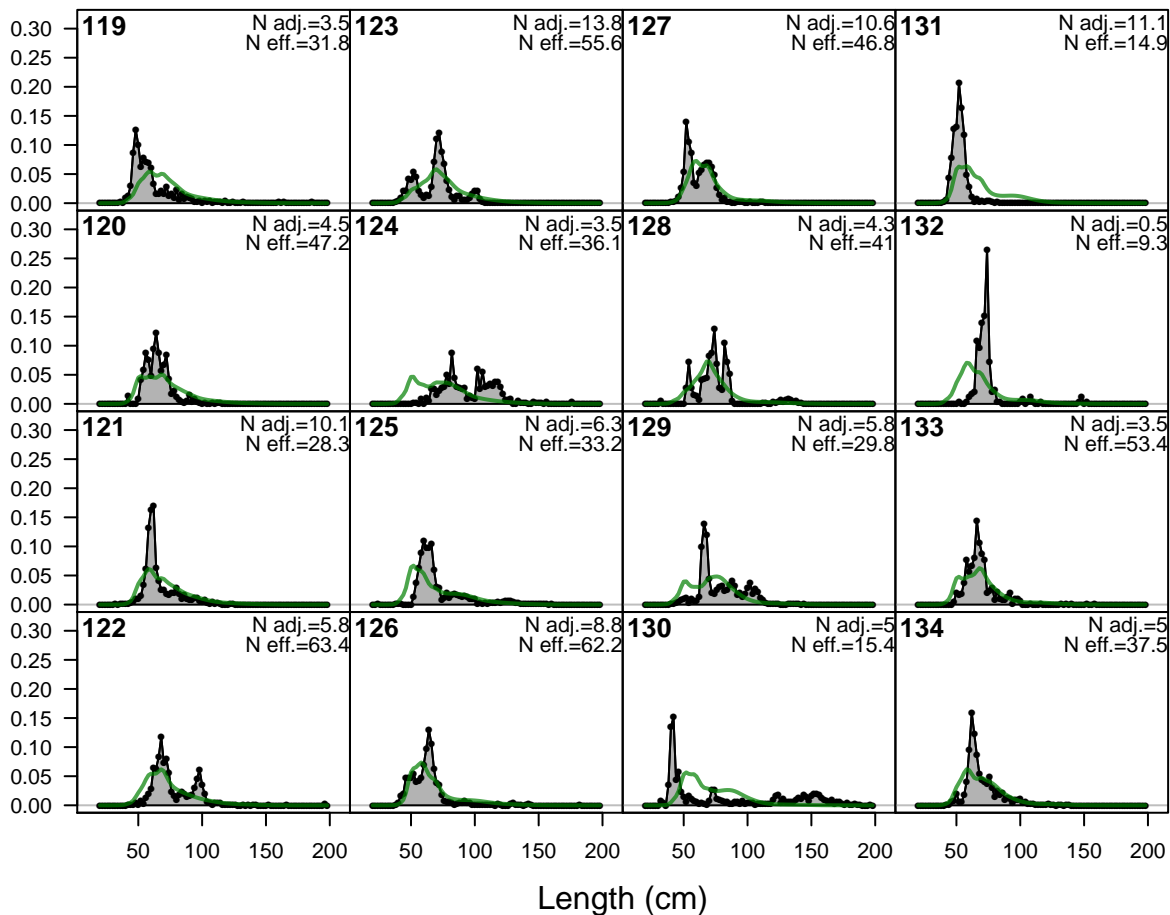
Proportion



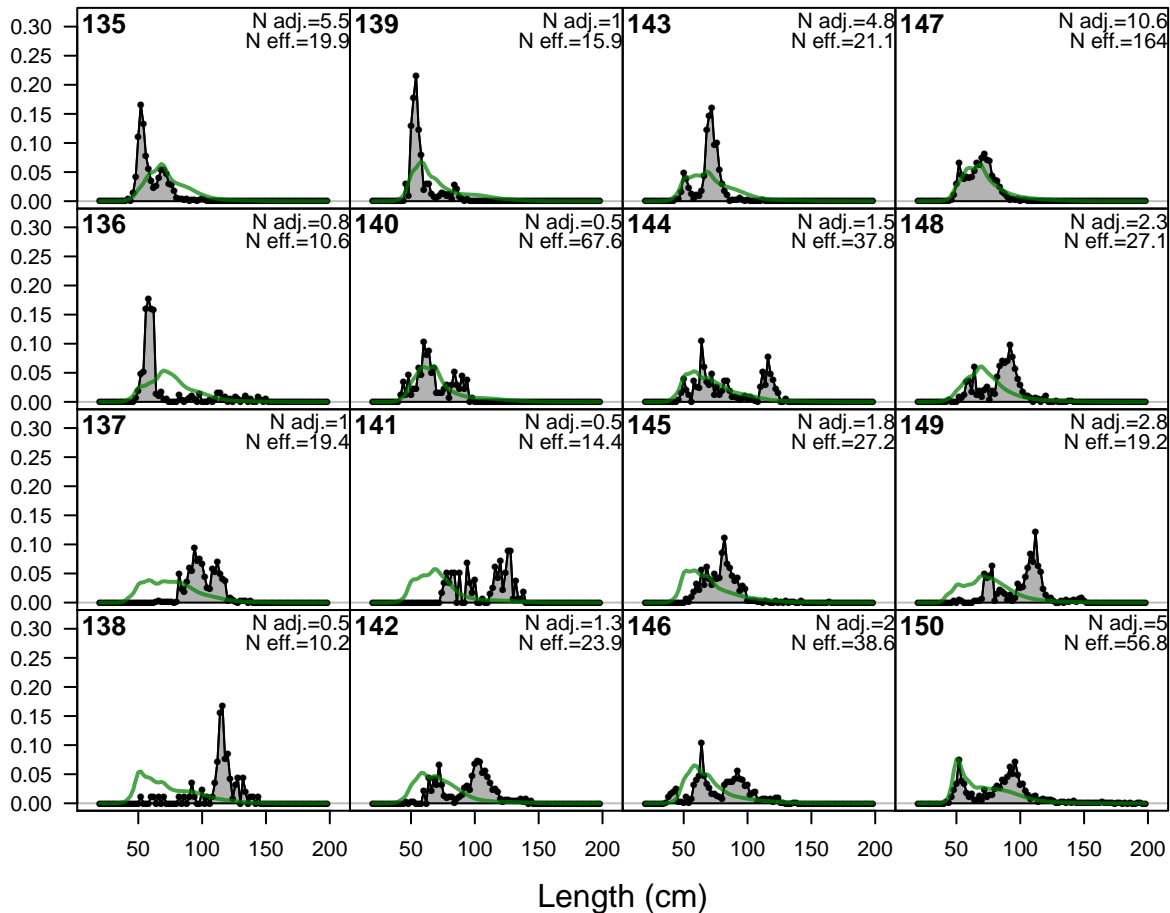
Proportion



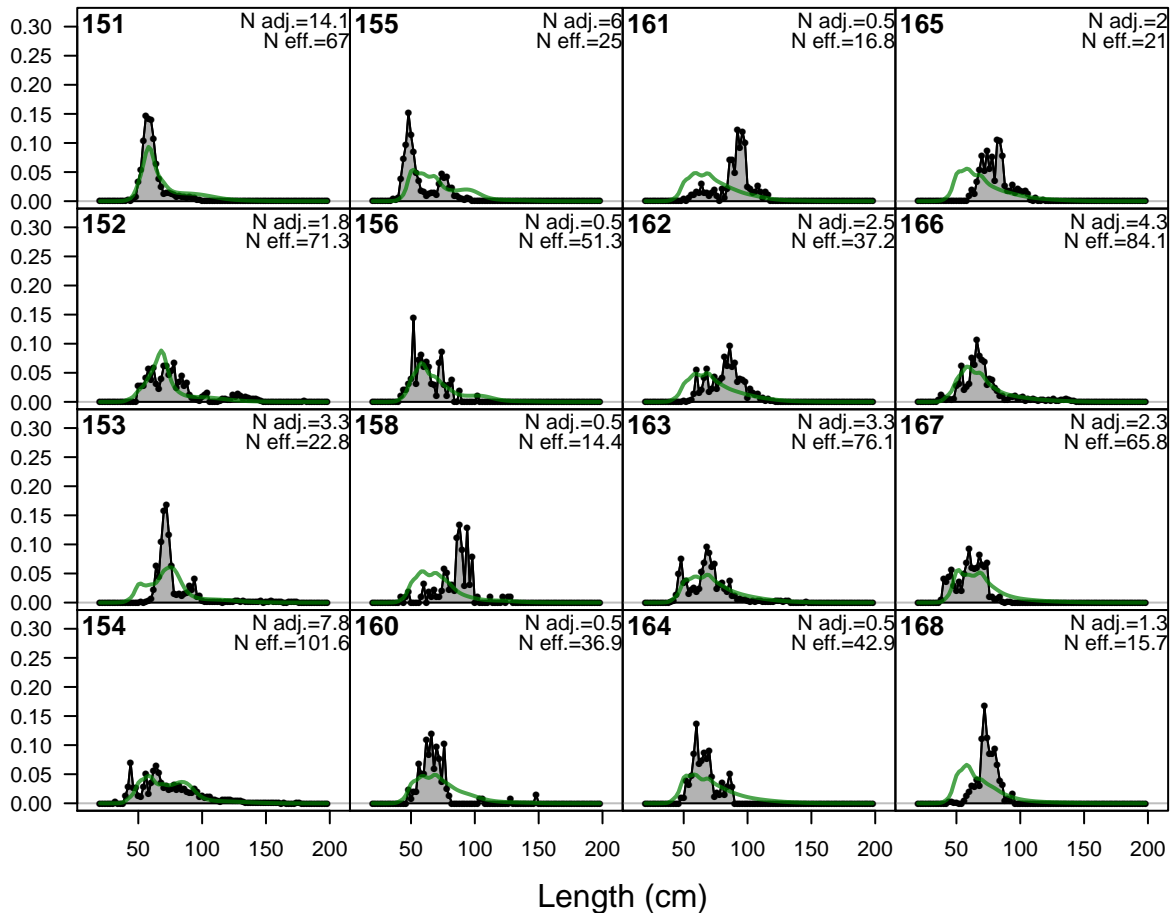
Proportion



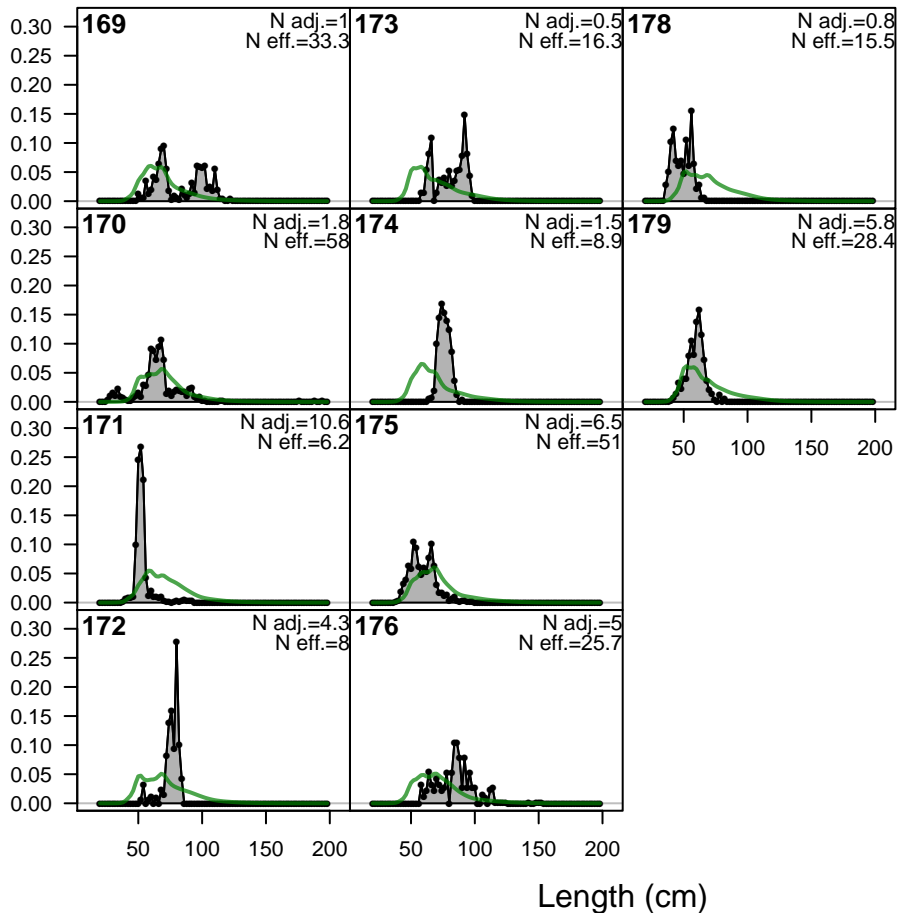
Proportion

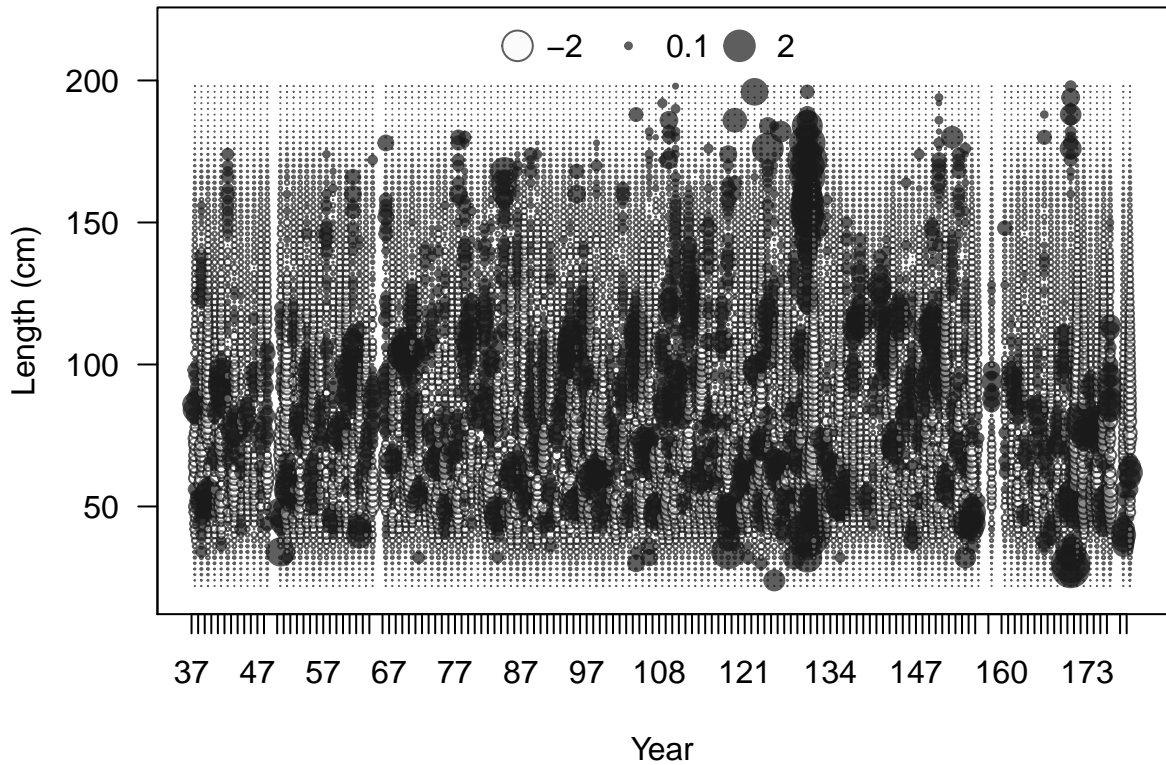


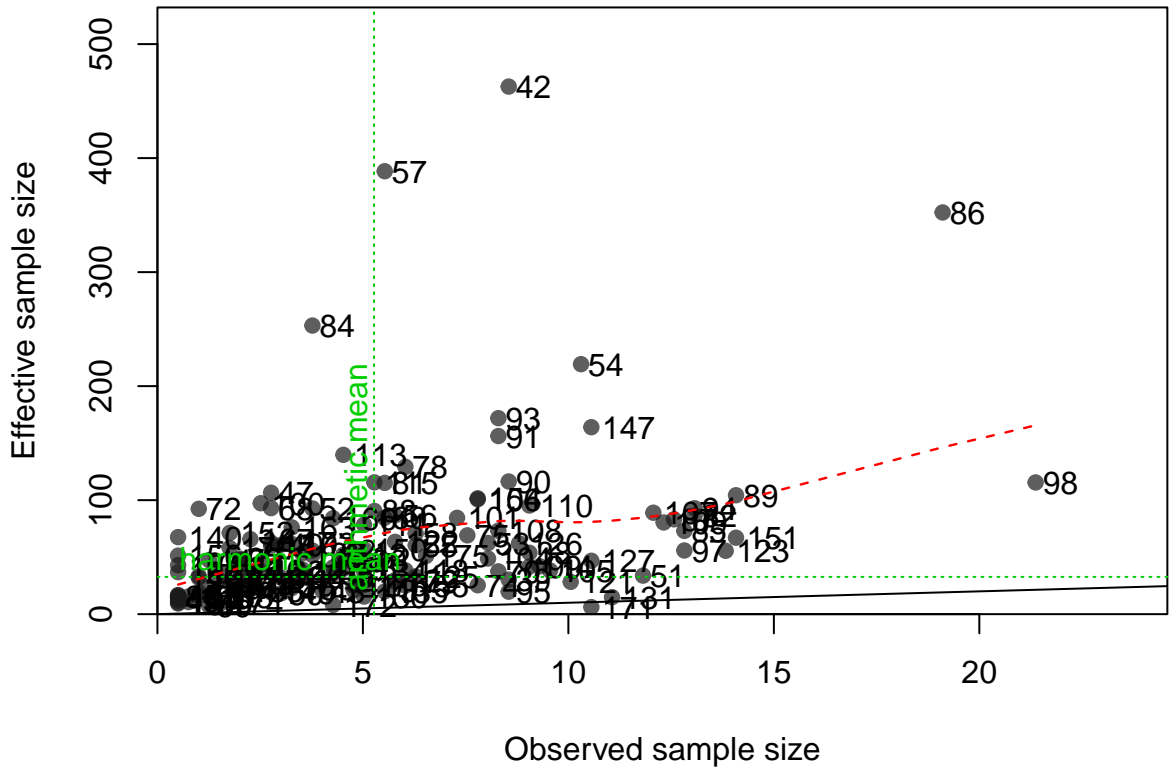
Proportion



Proportion

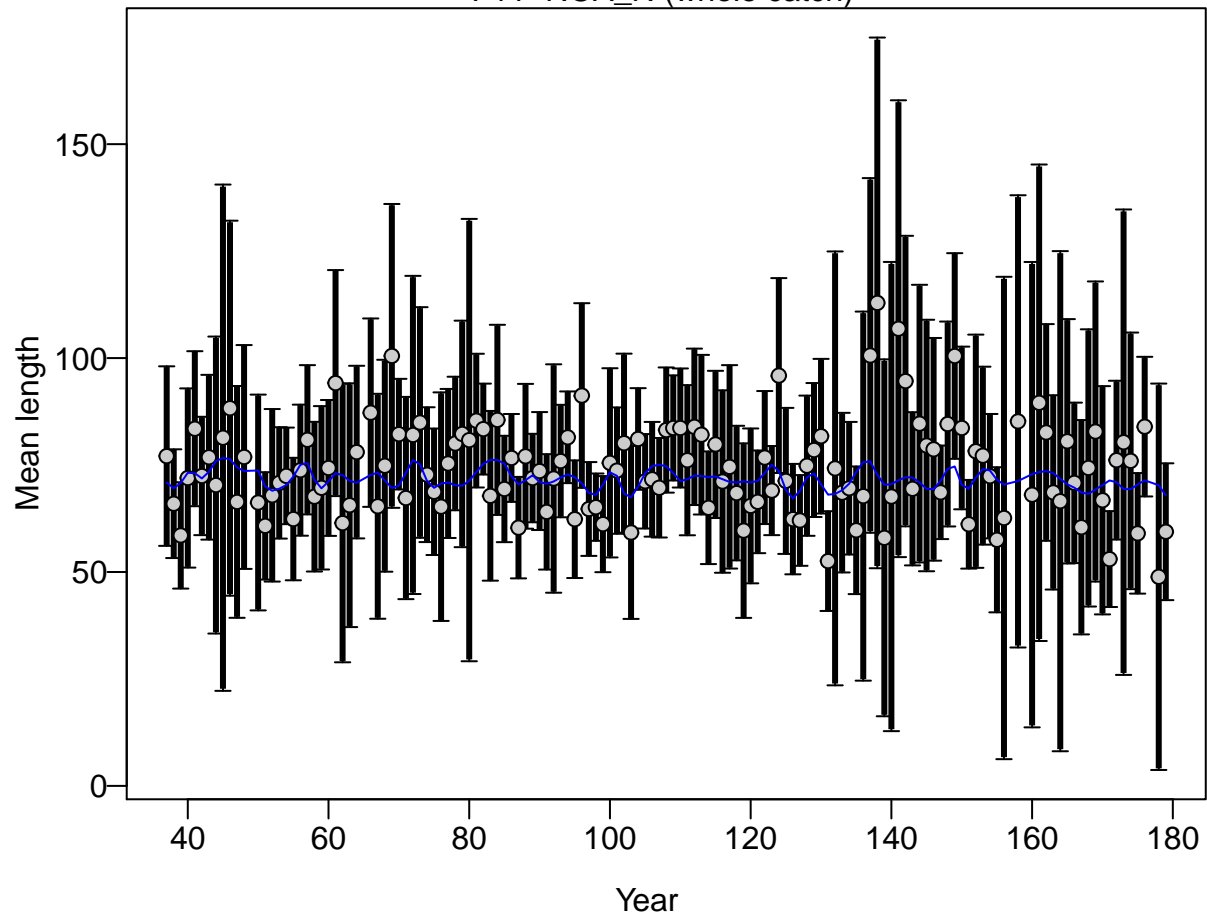




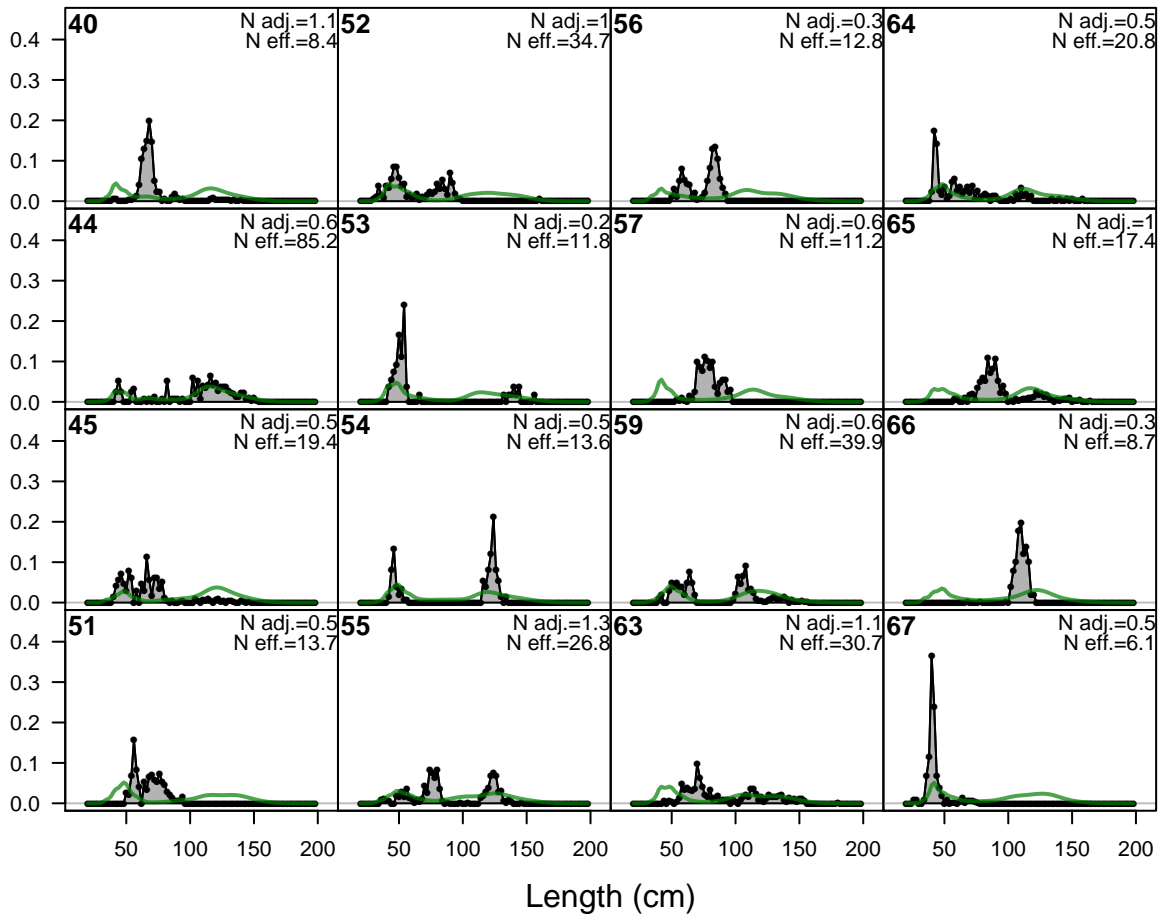




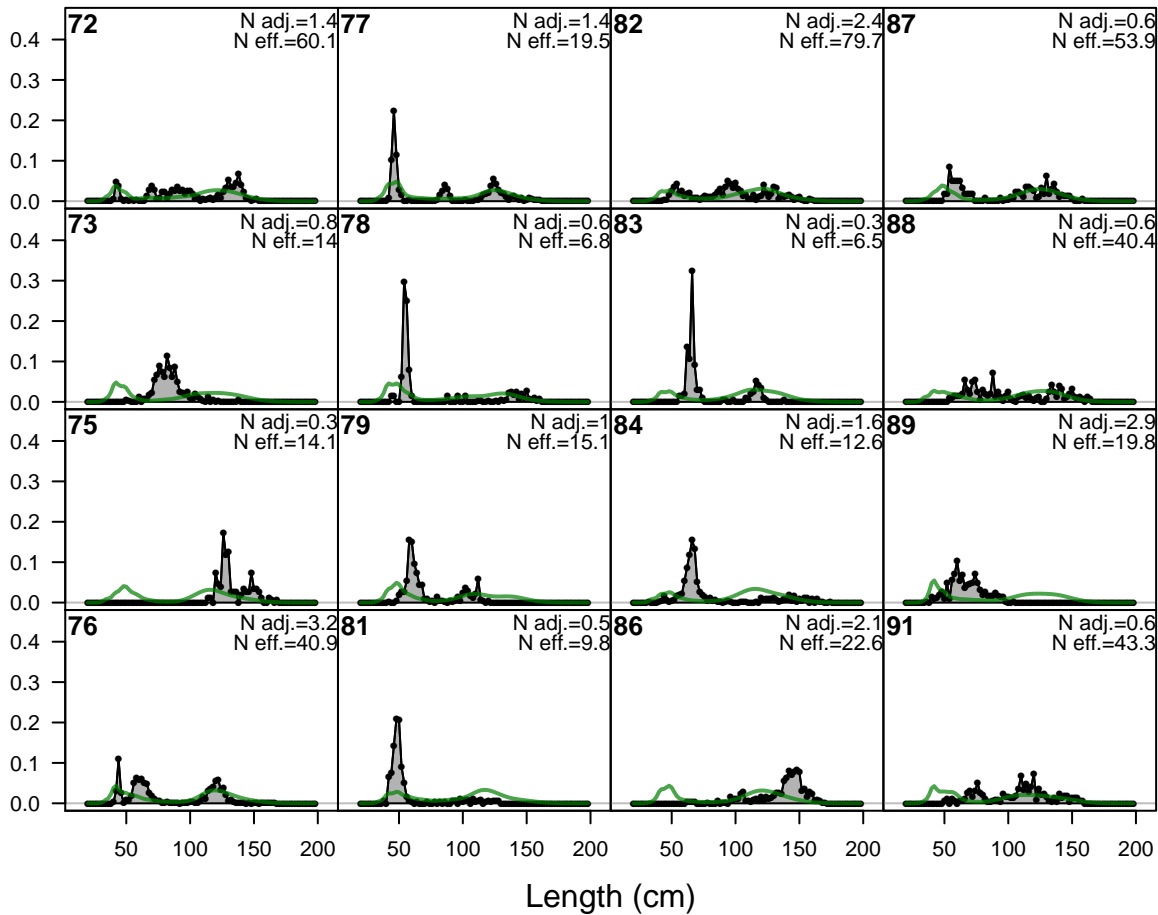
F11-NOA\_N (whole catch)



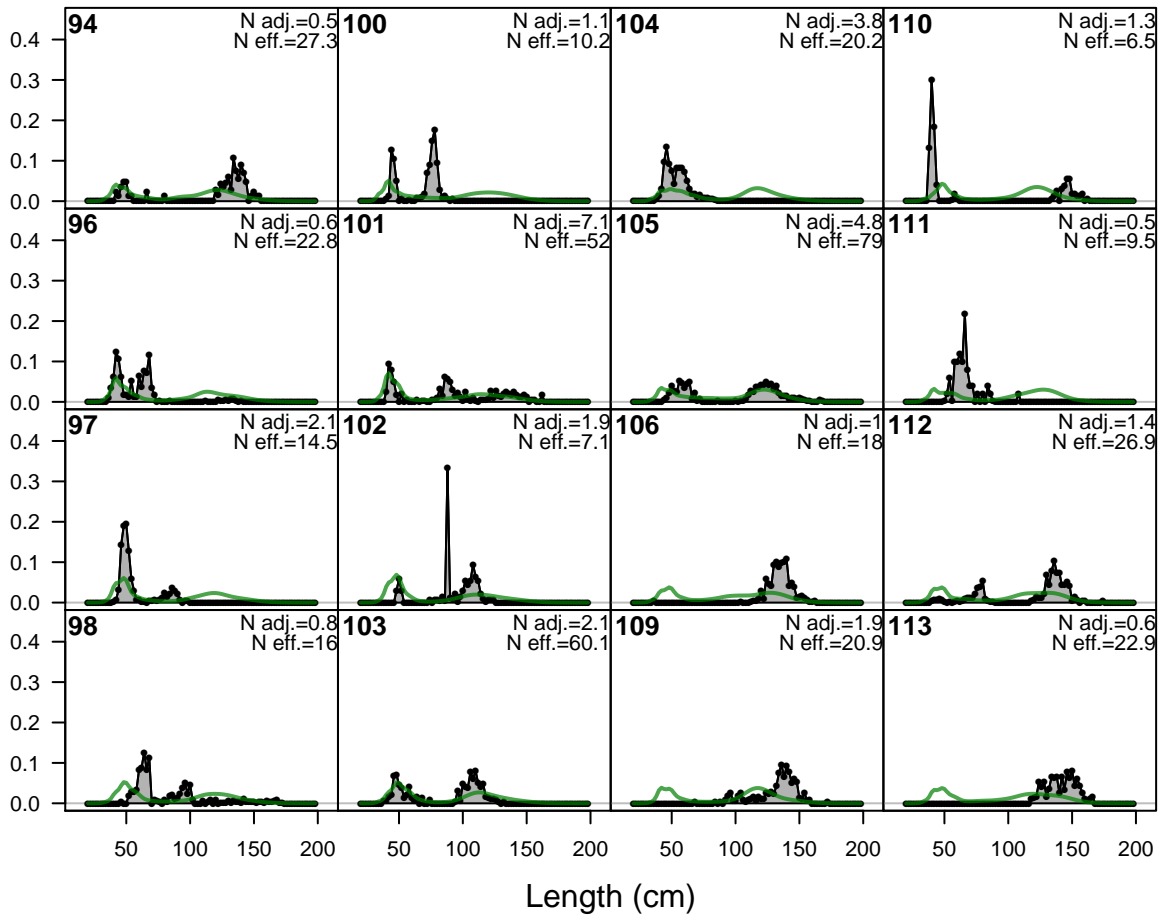
Proportion



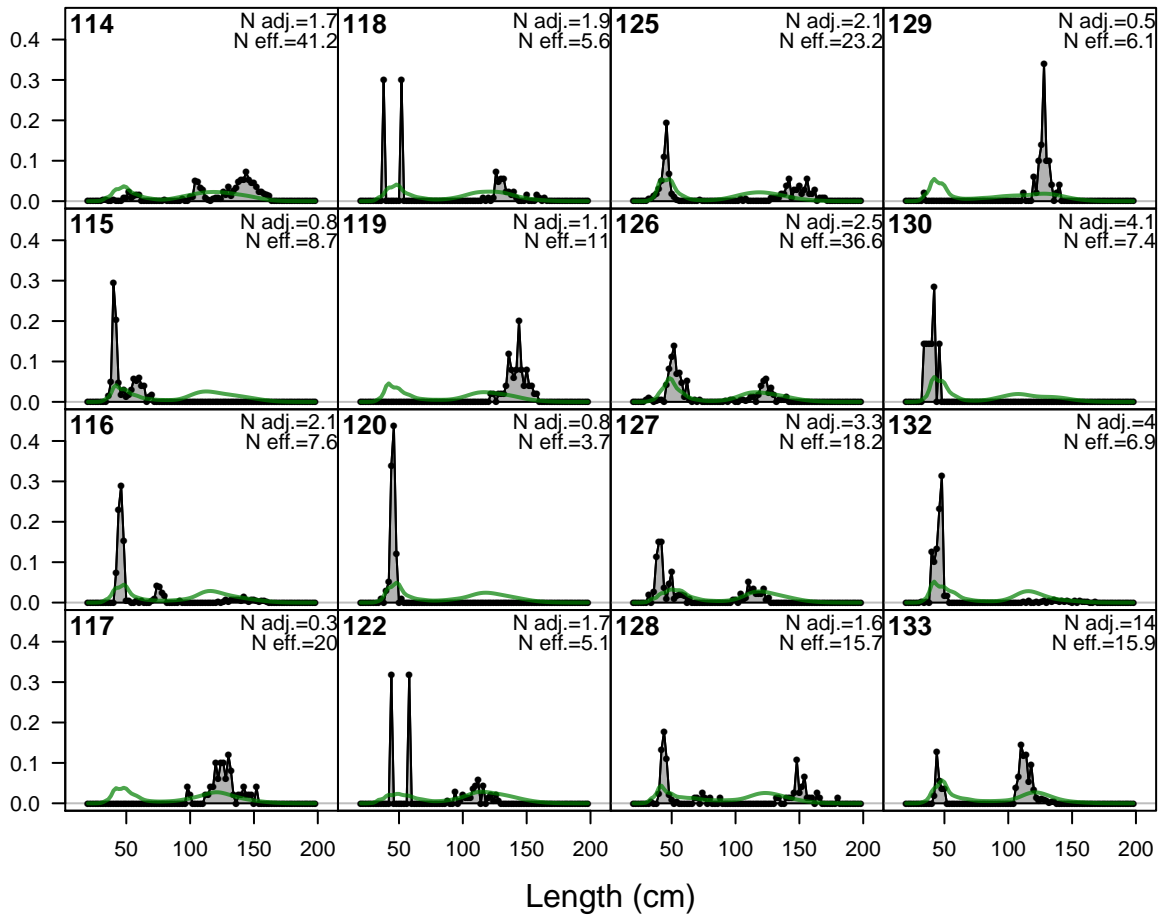
Proportion



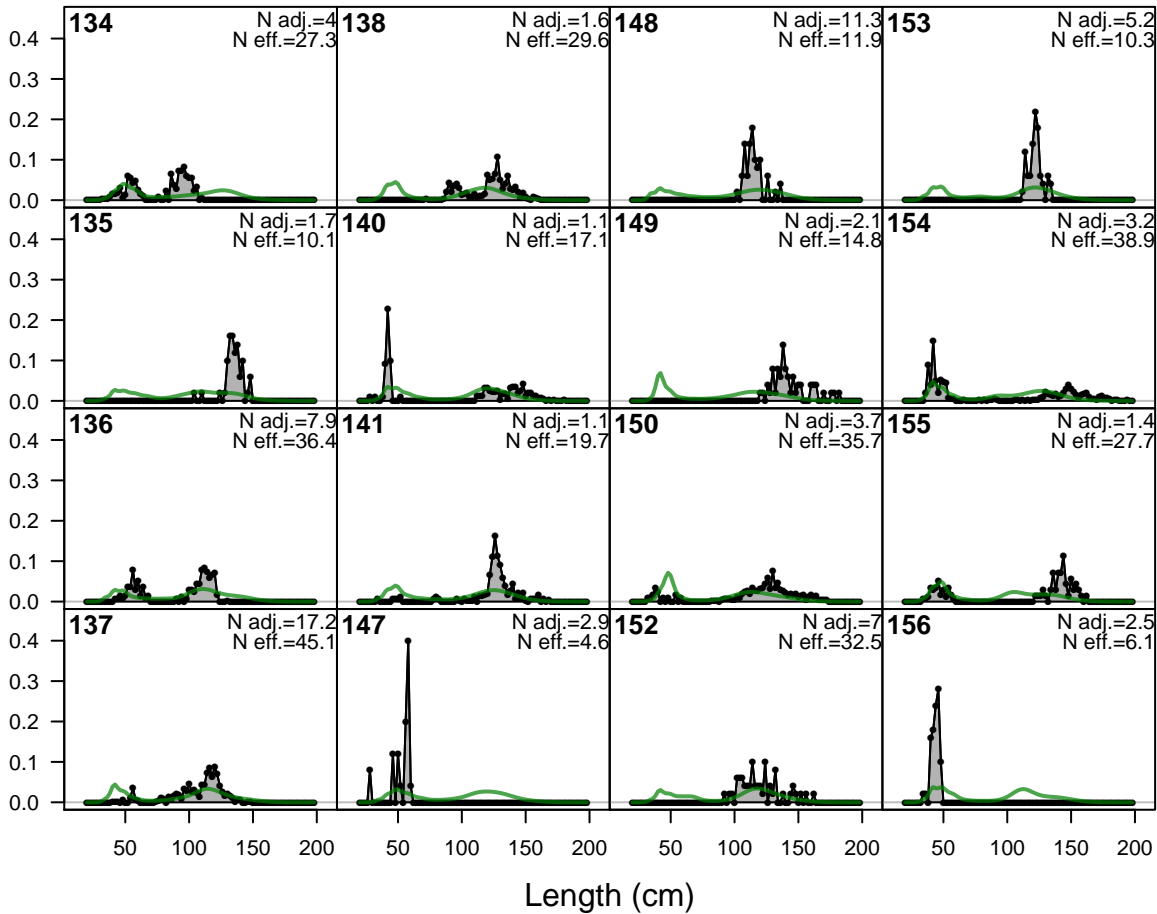
Proportion



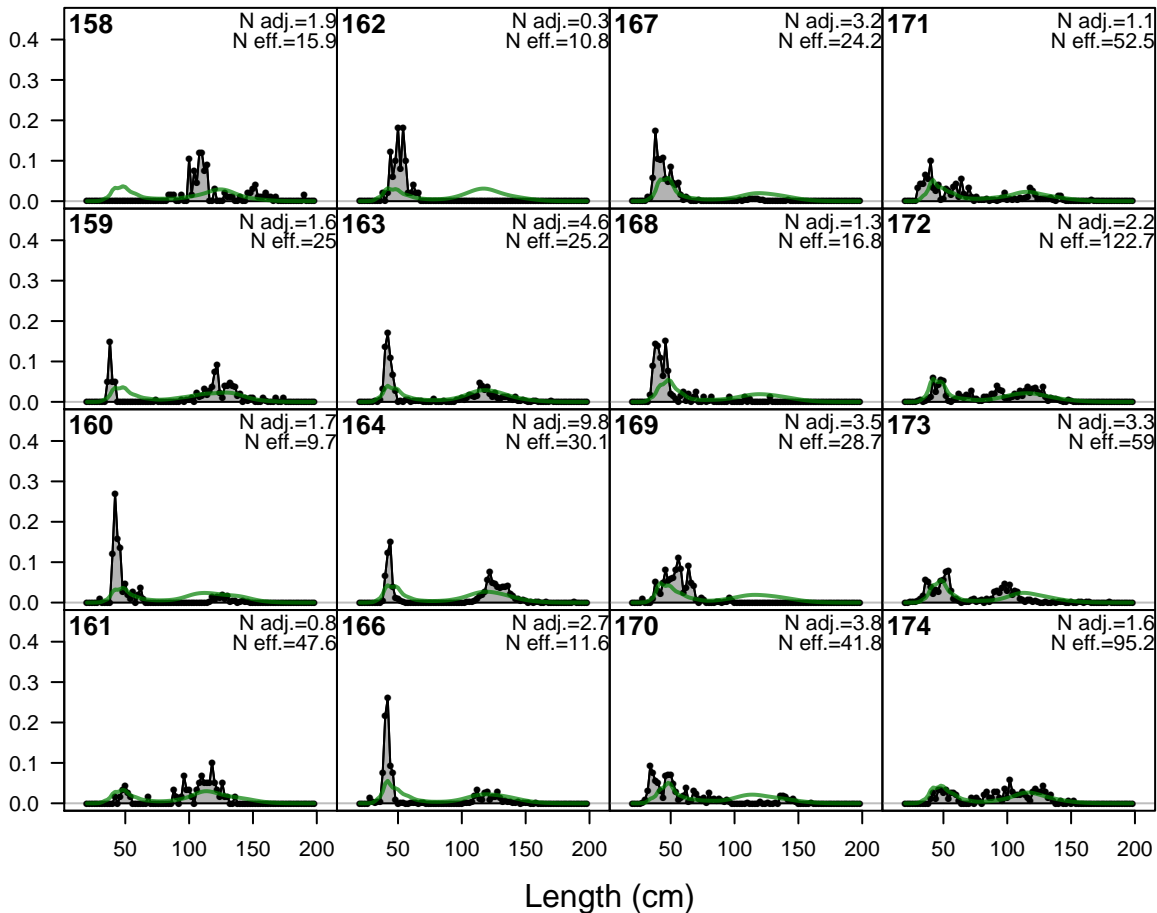
Proportion



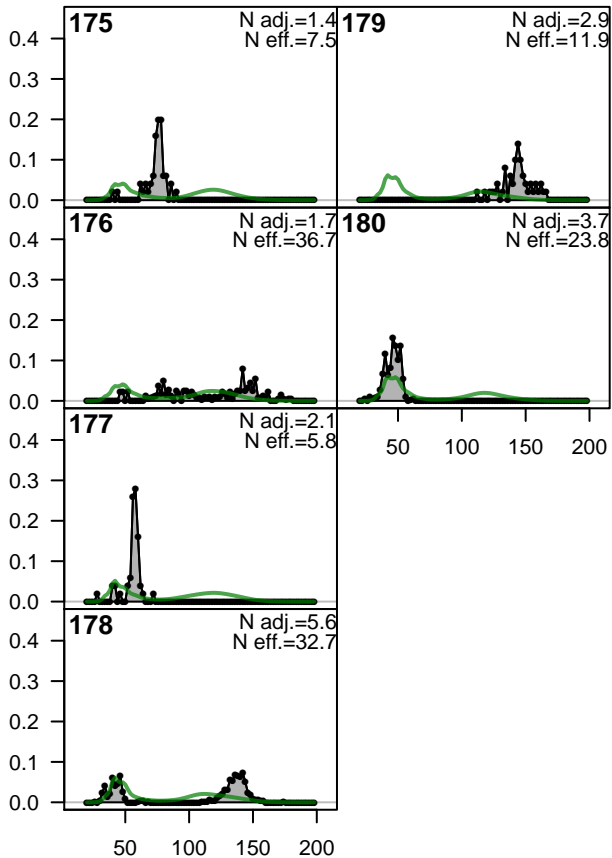
Proportion



Proportion

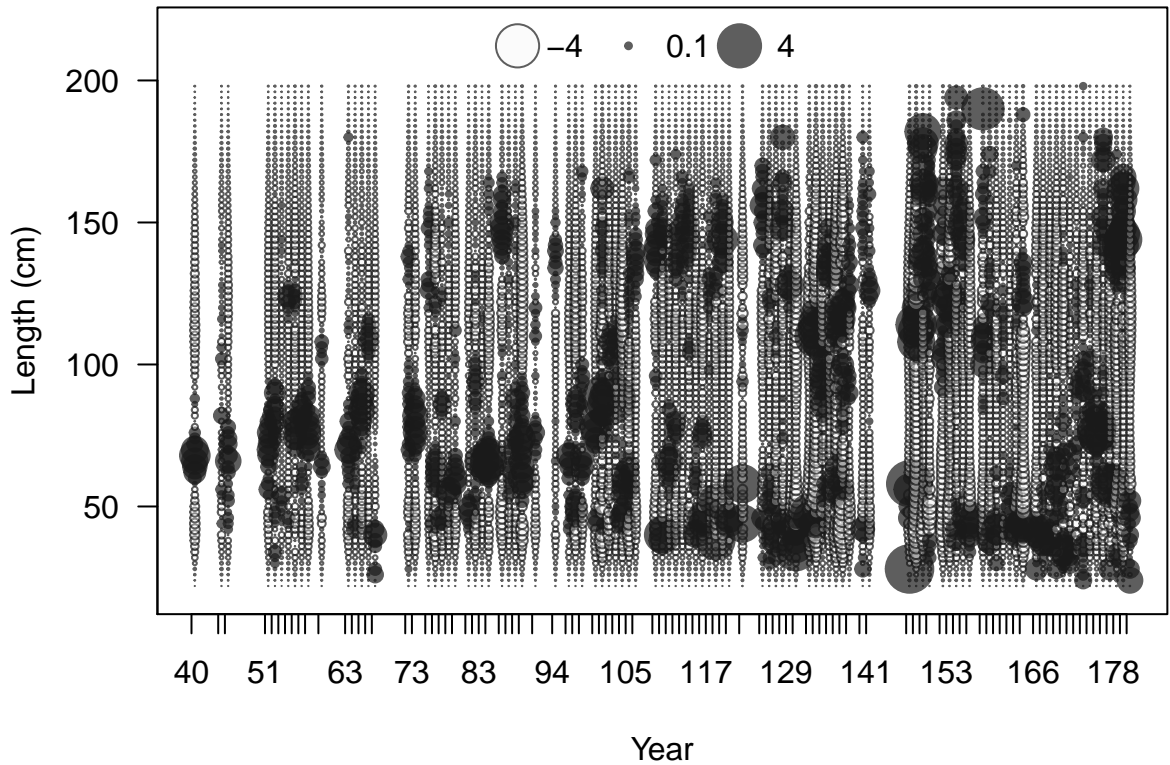


Proportion



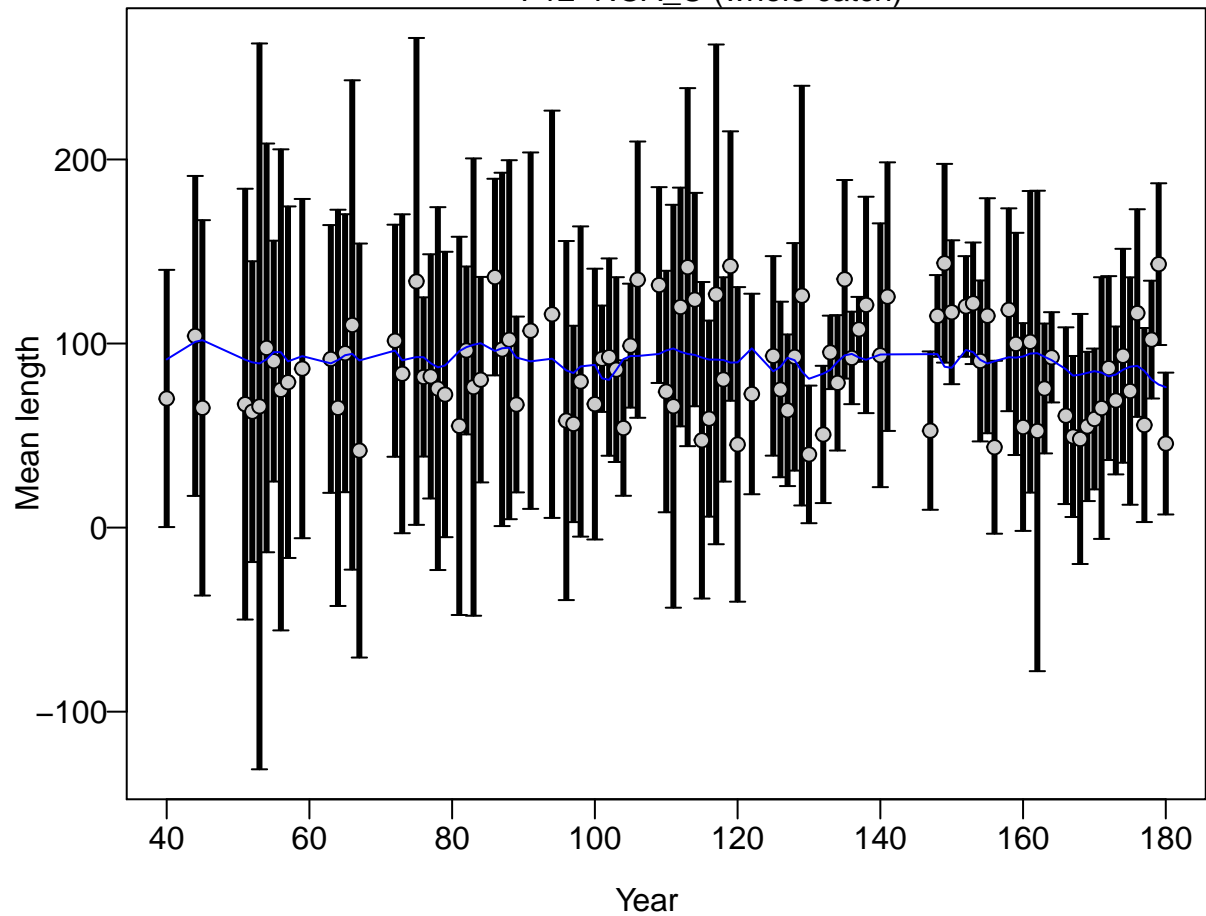
Length (cm)



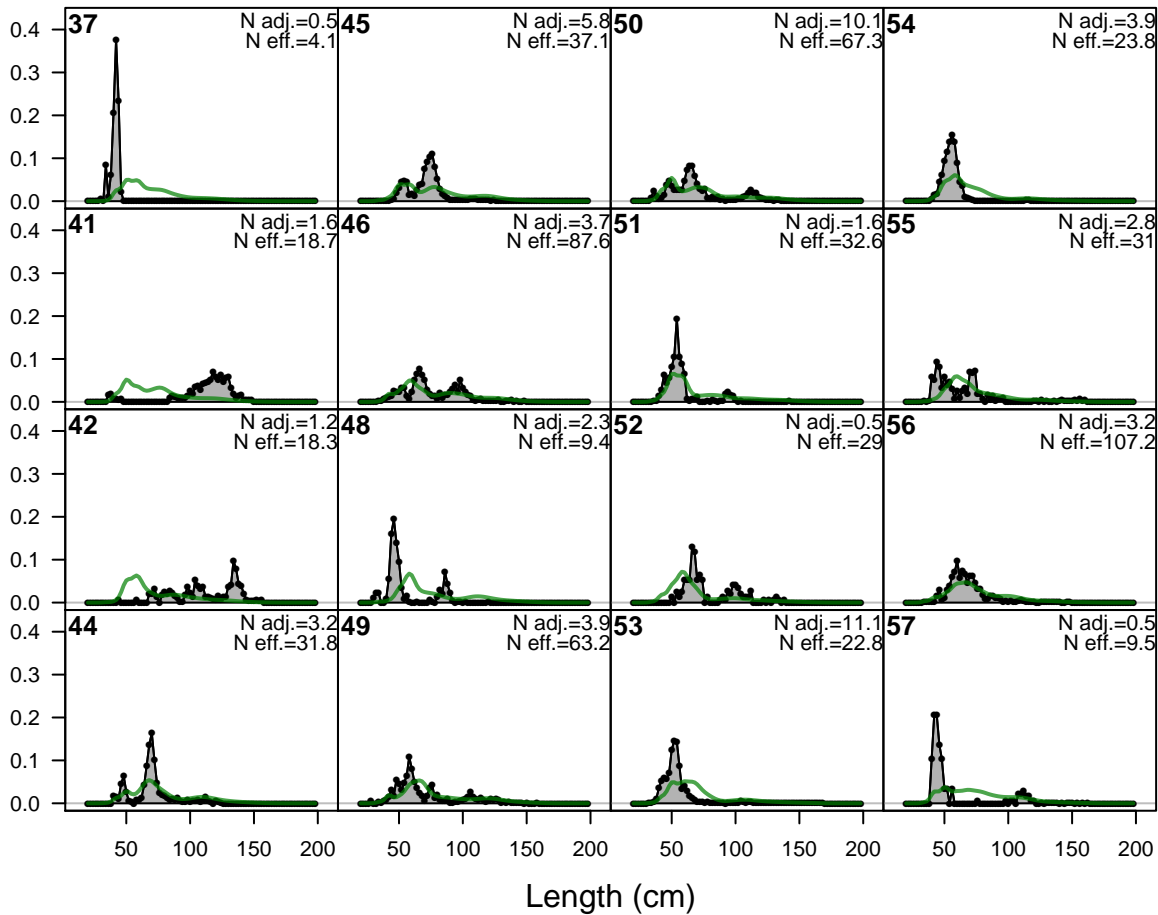




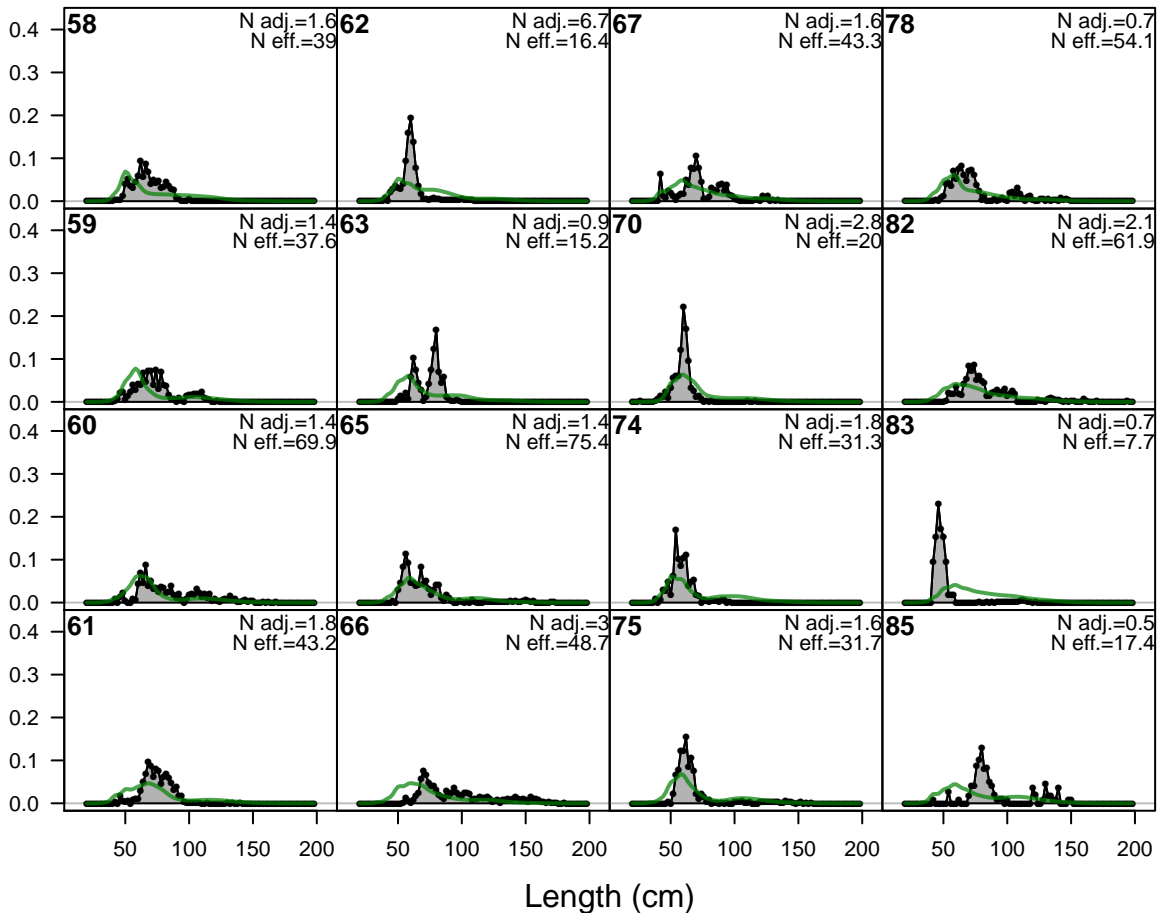
F12-NOA\_C (whole catch)



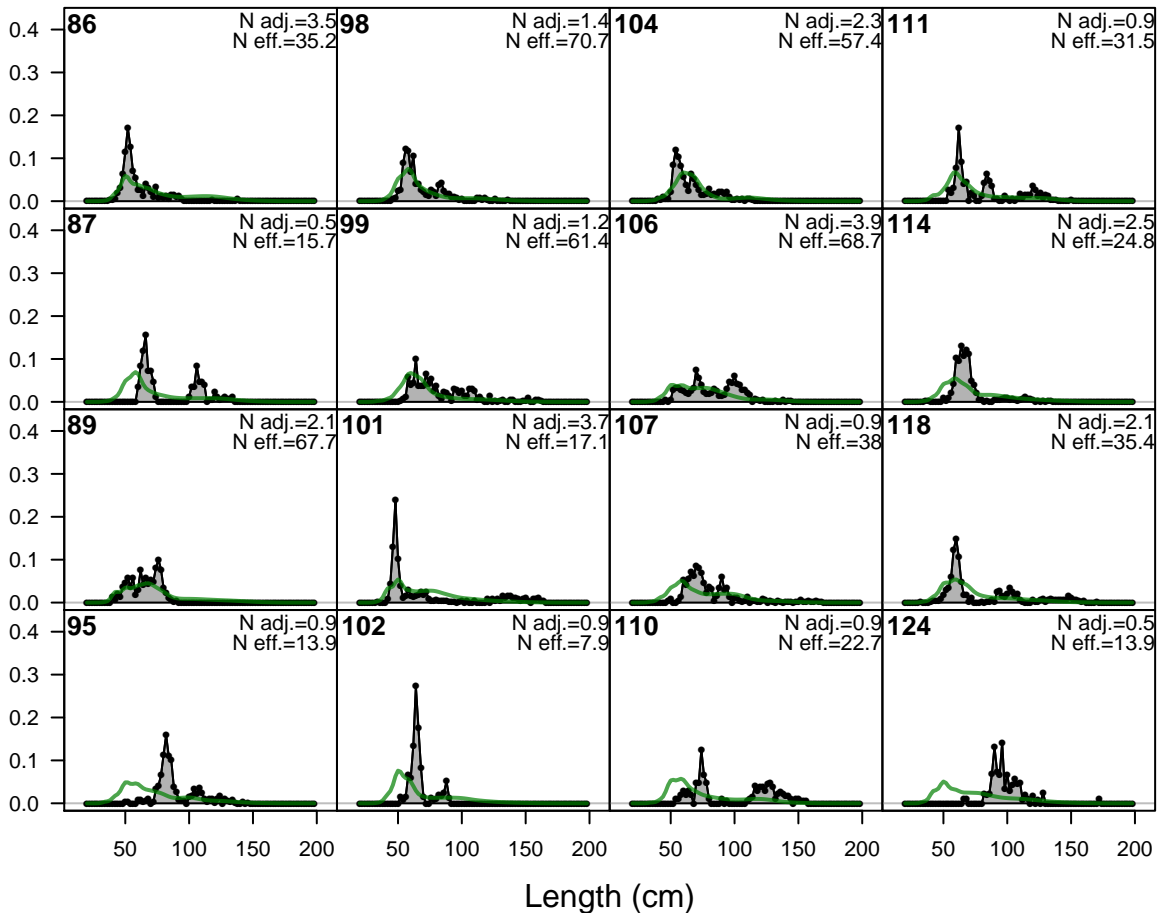
Proportion



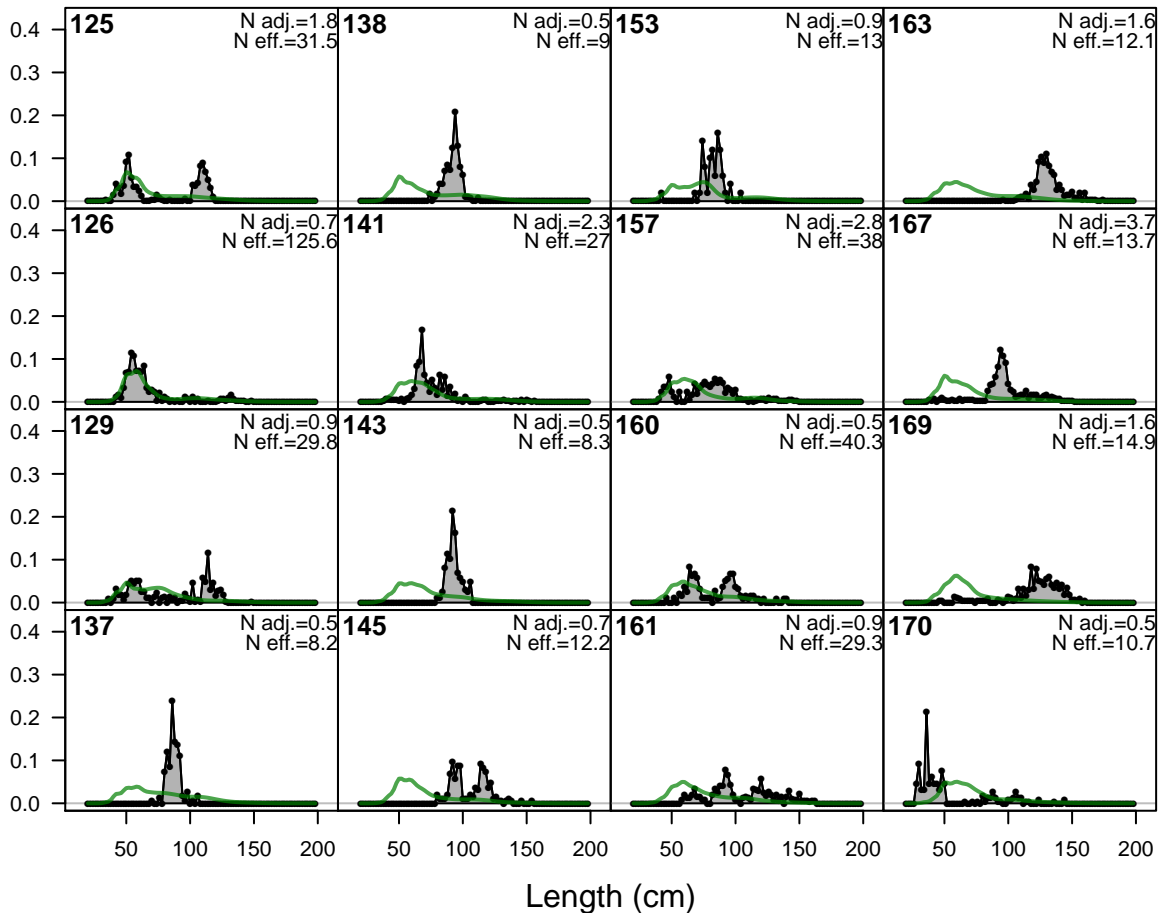
Proportion

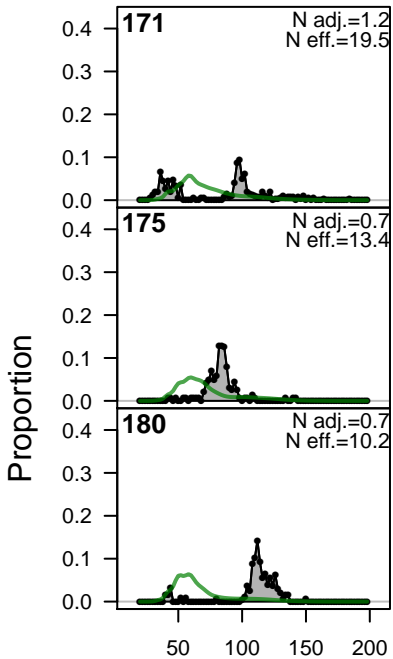


Proportion



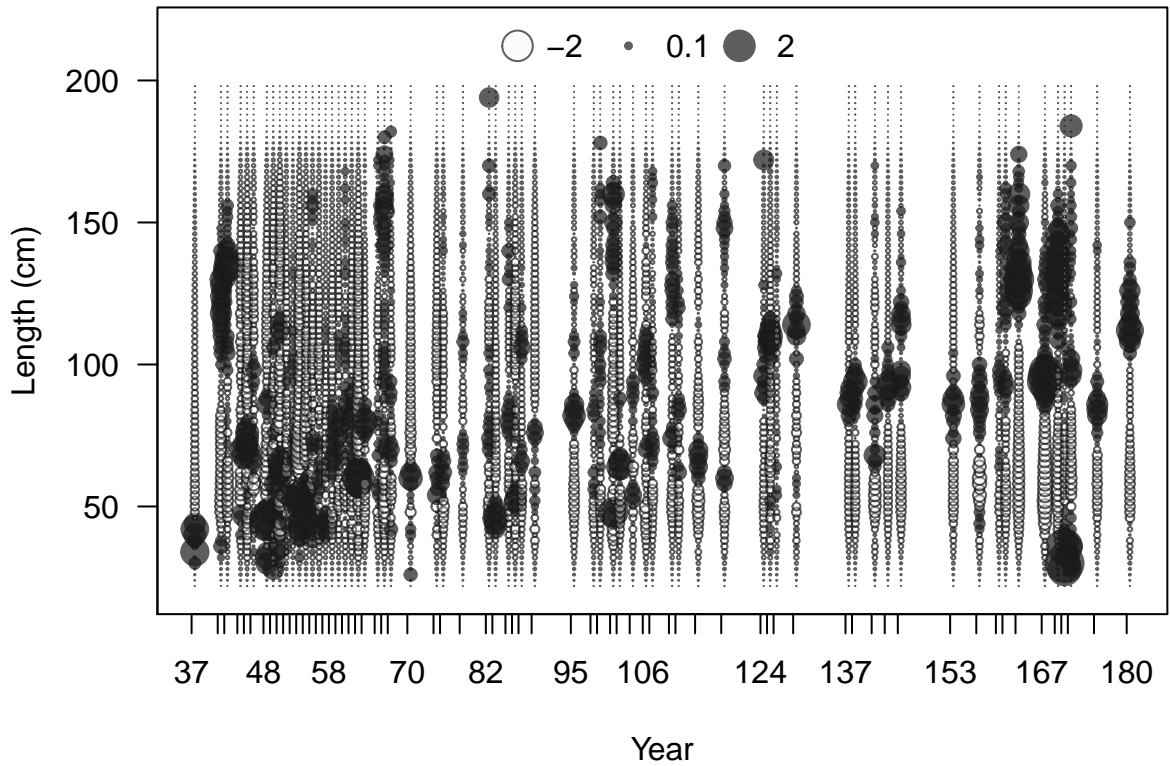
Proportion





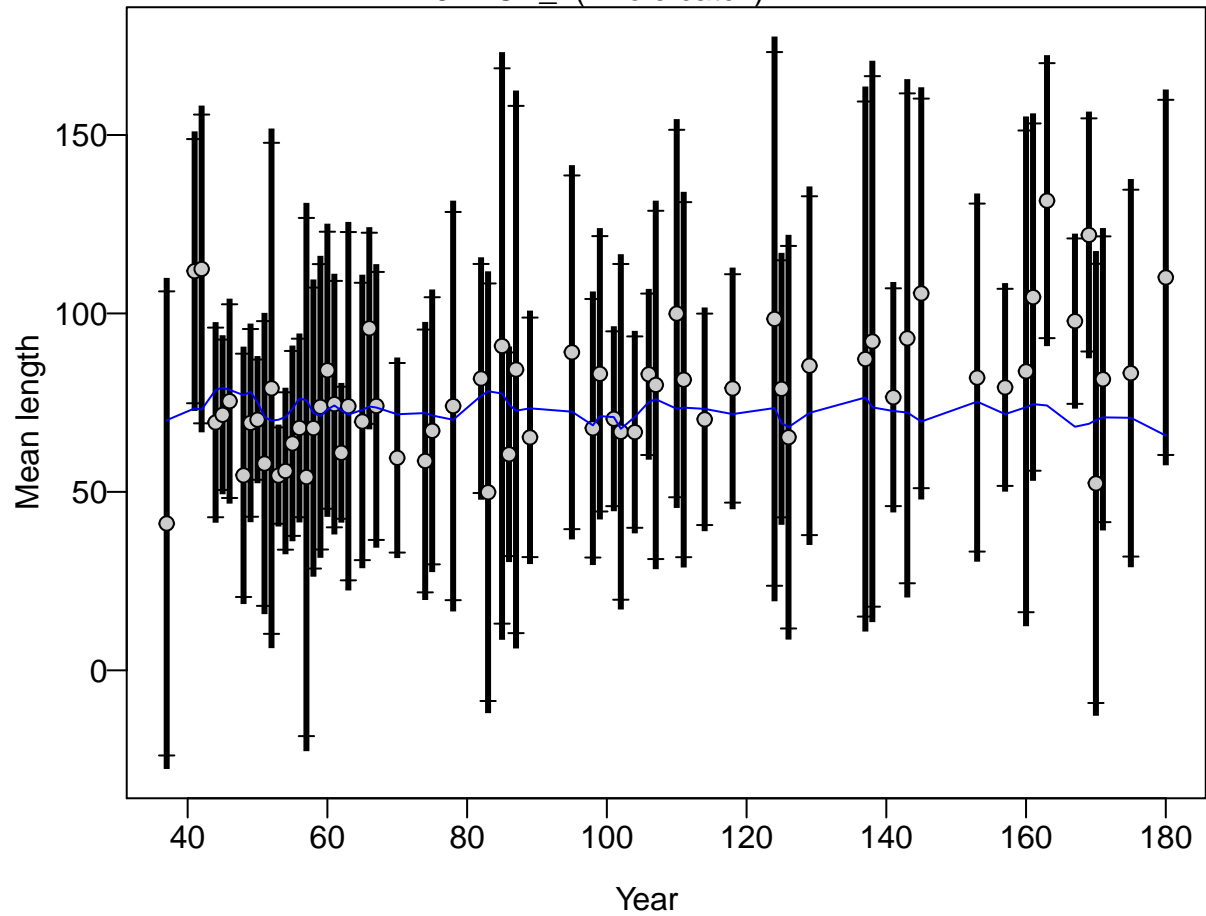
Length (cm)



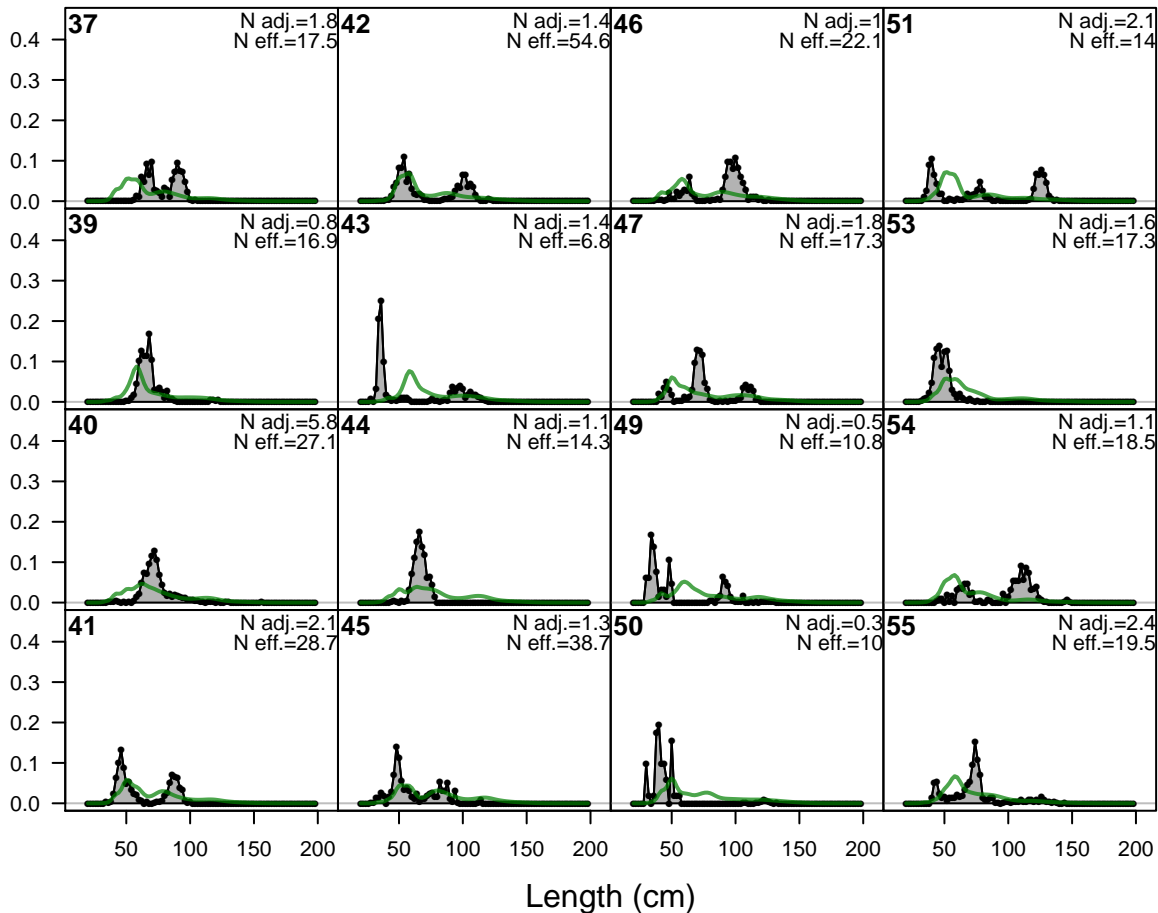




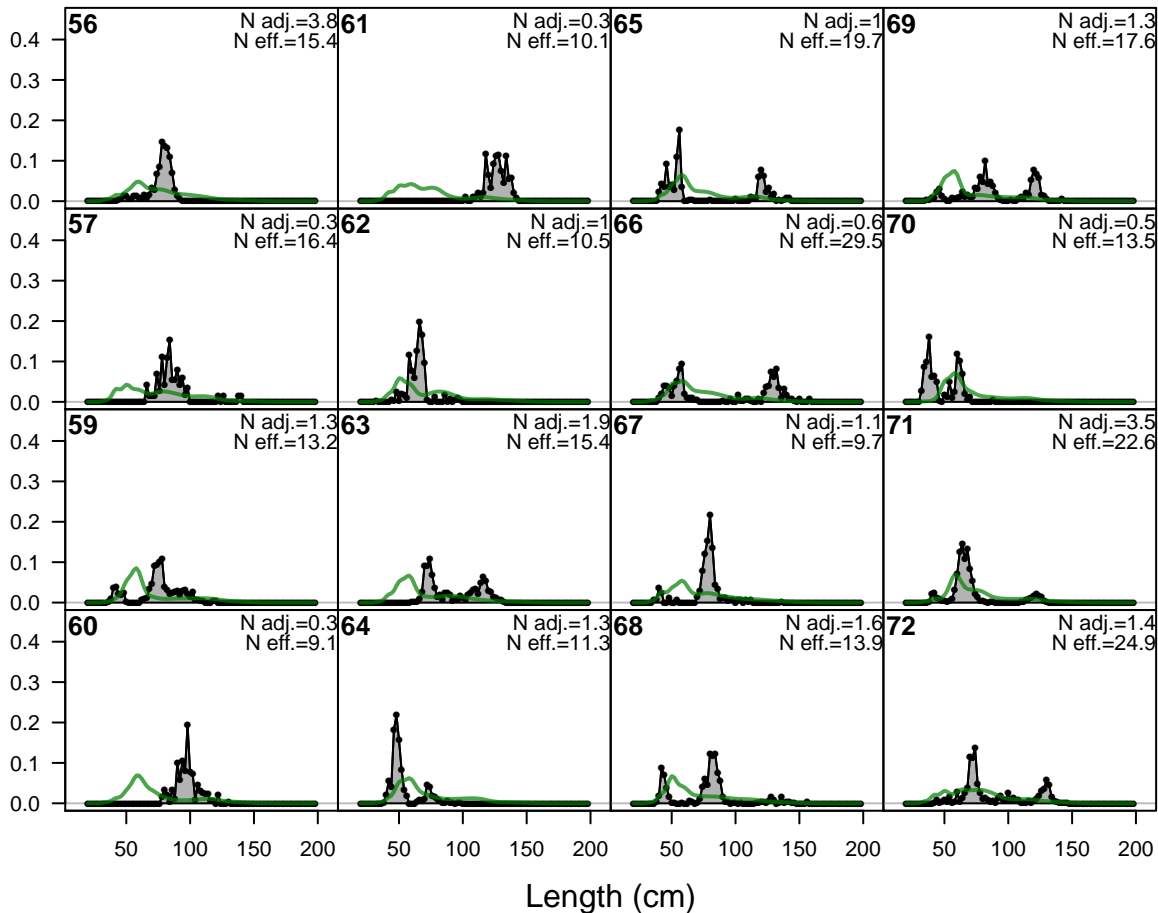
F13-NOA\_I (whole catch)



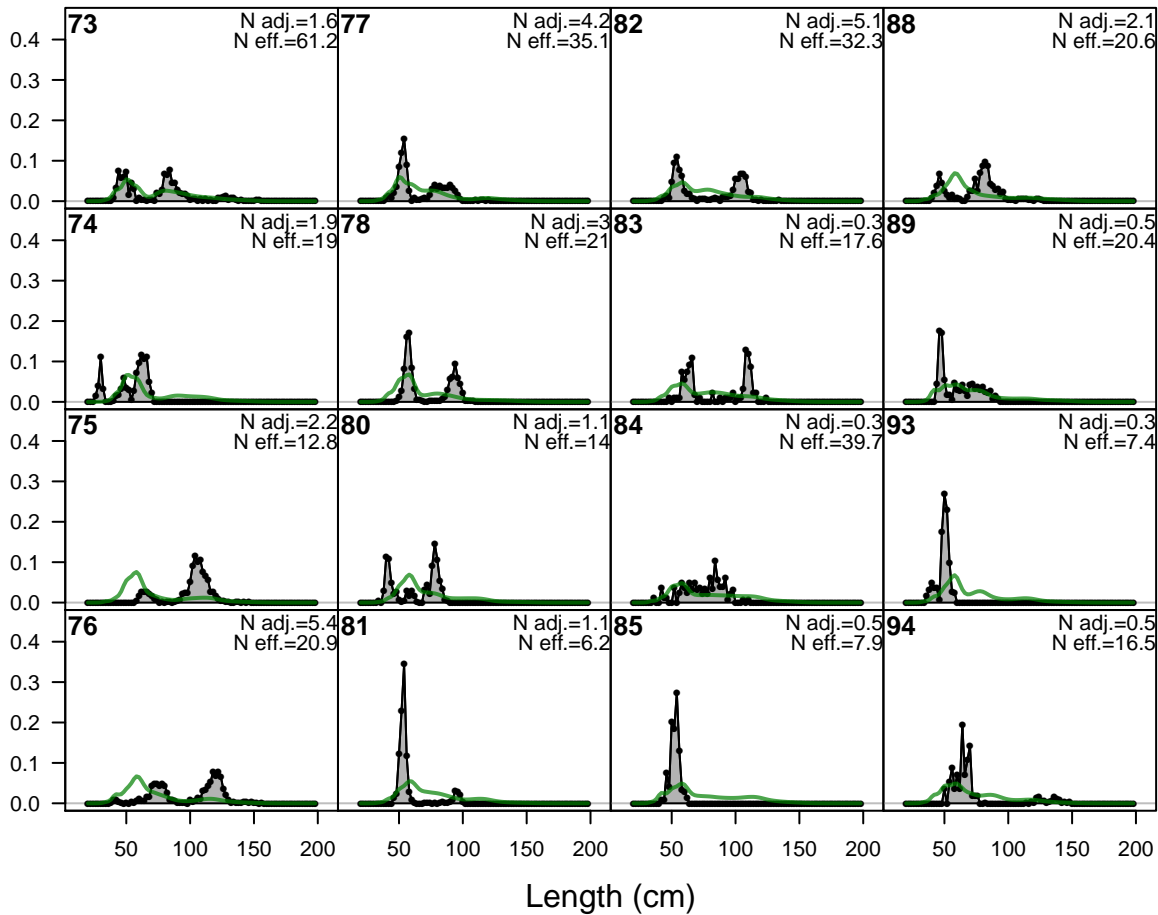
Proportion



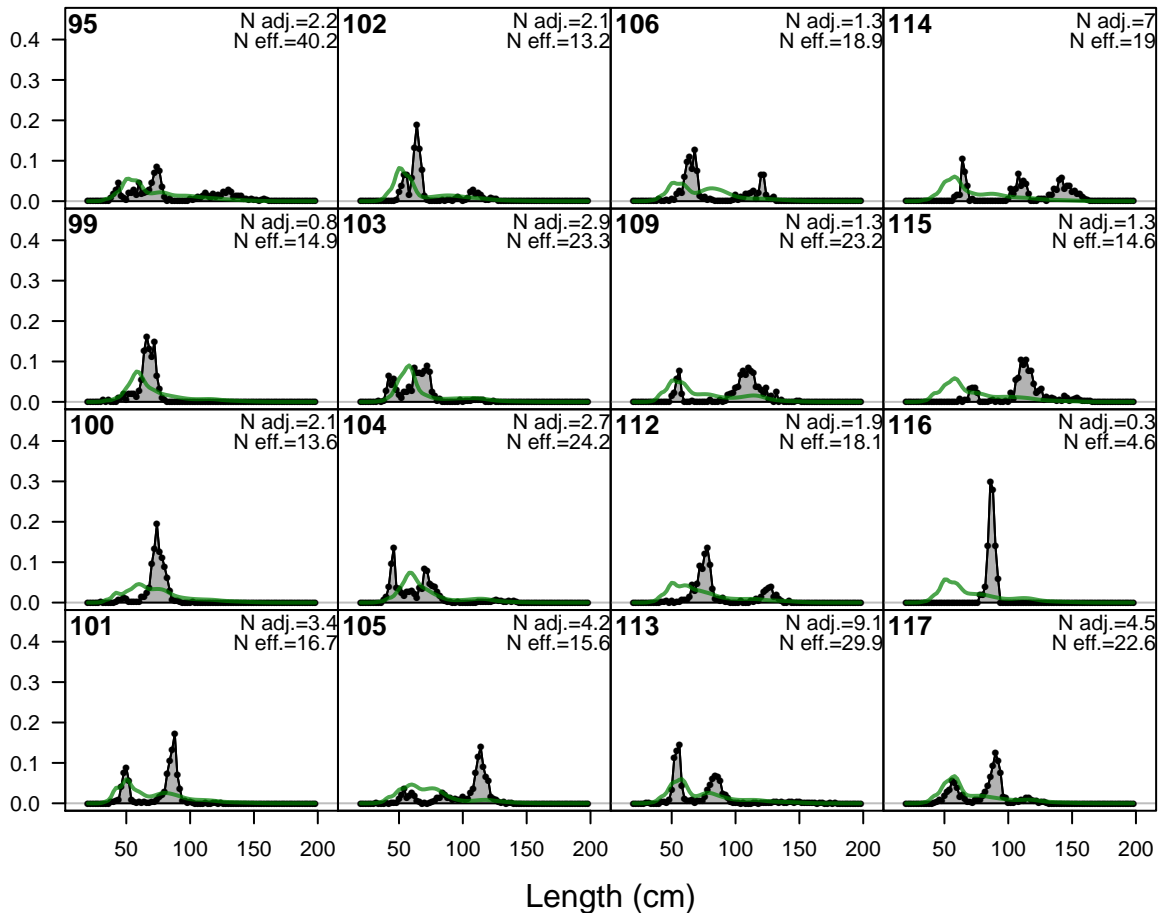
Proportion



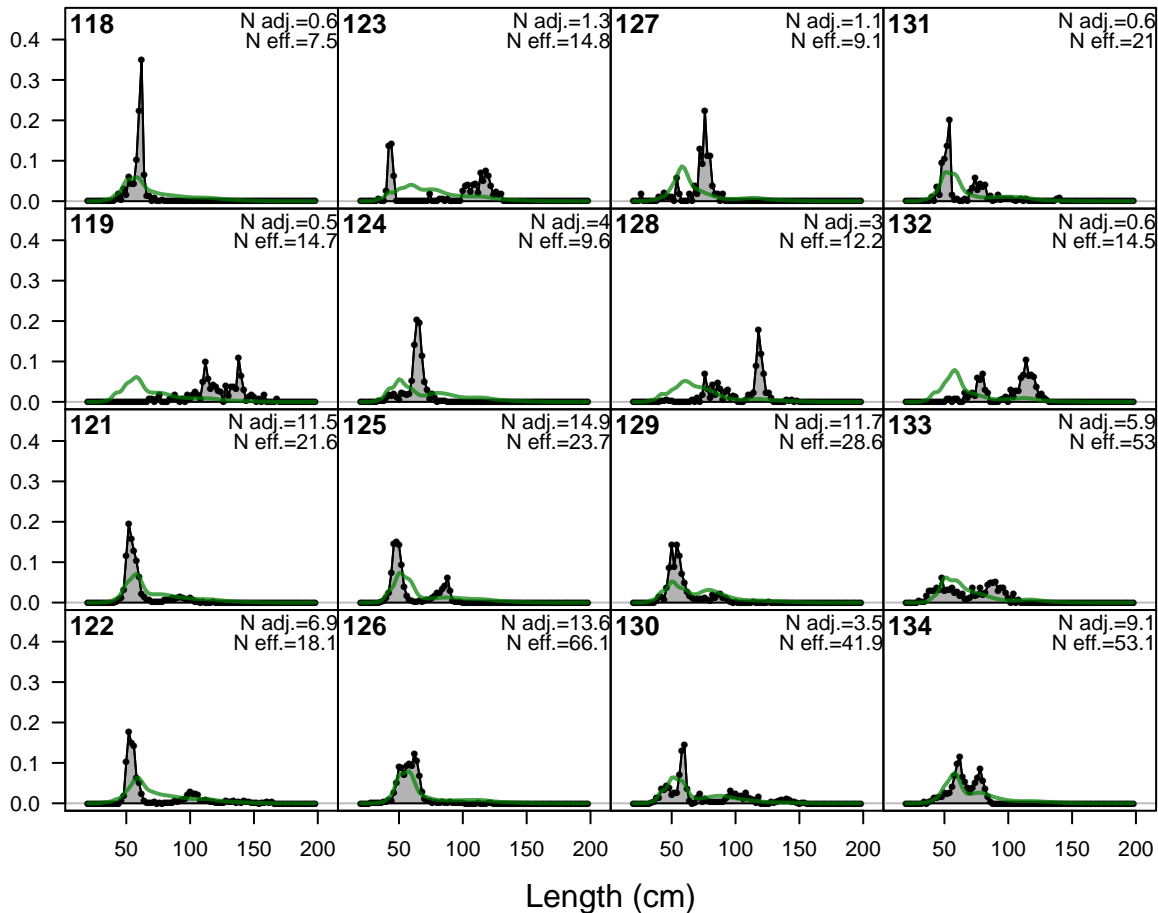
Proportion



Proportion

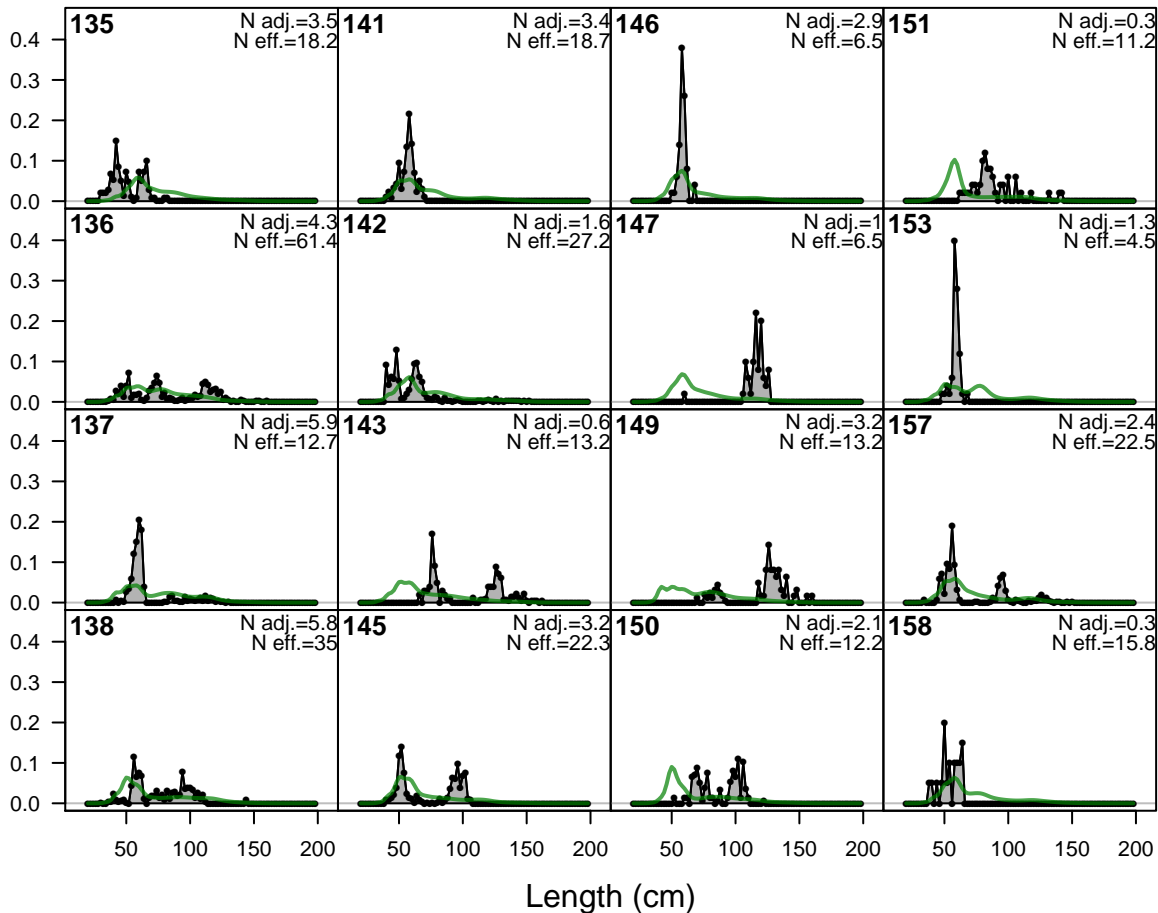


Proportion

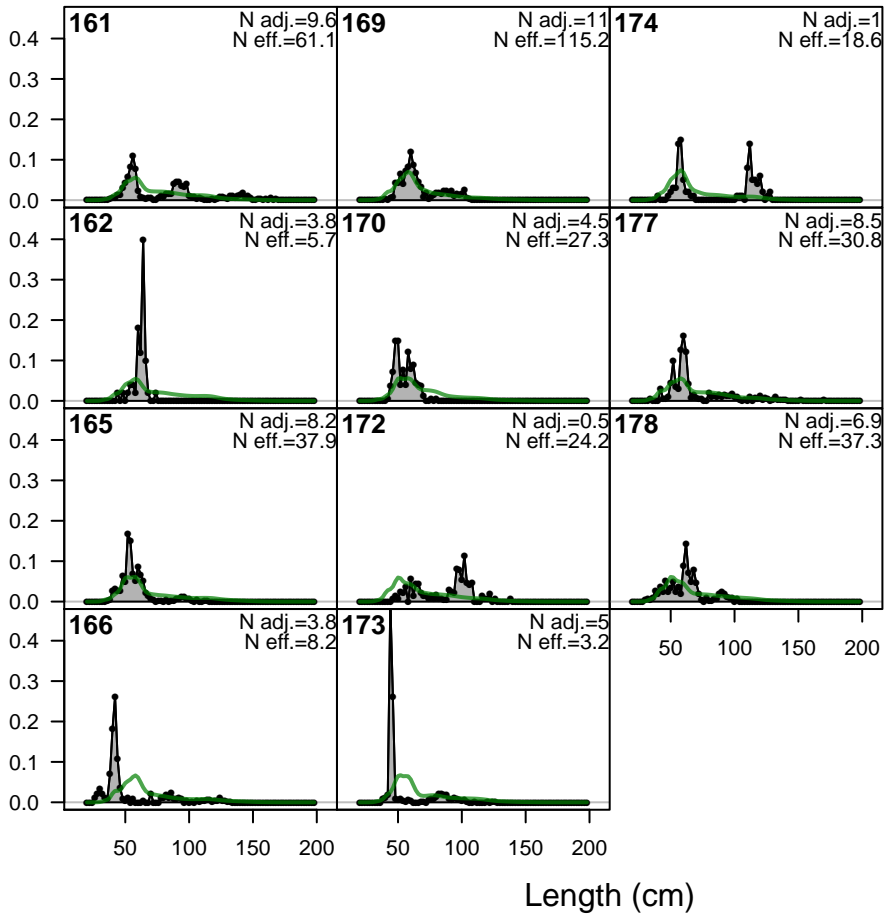


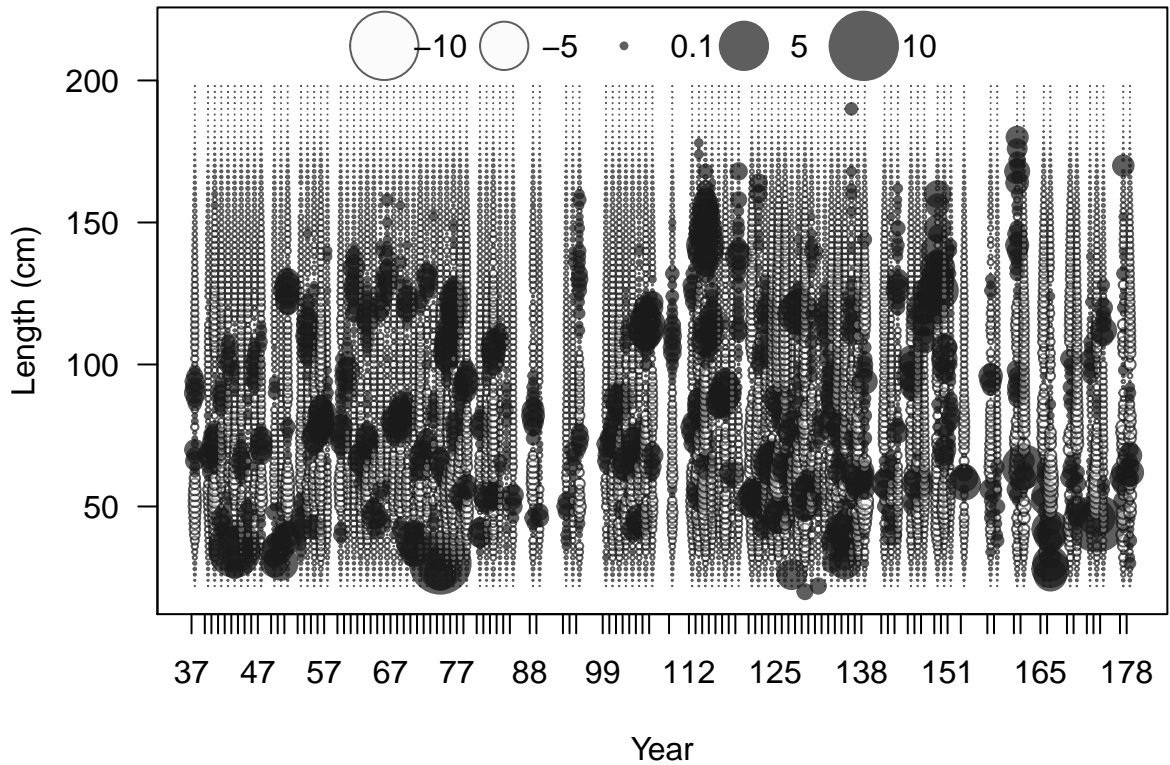


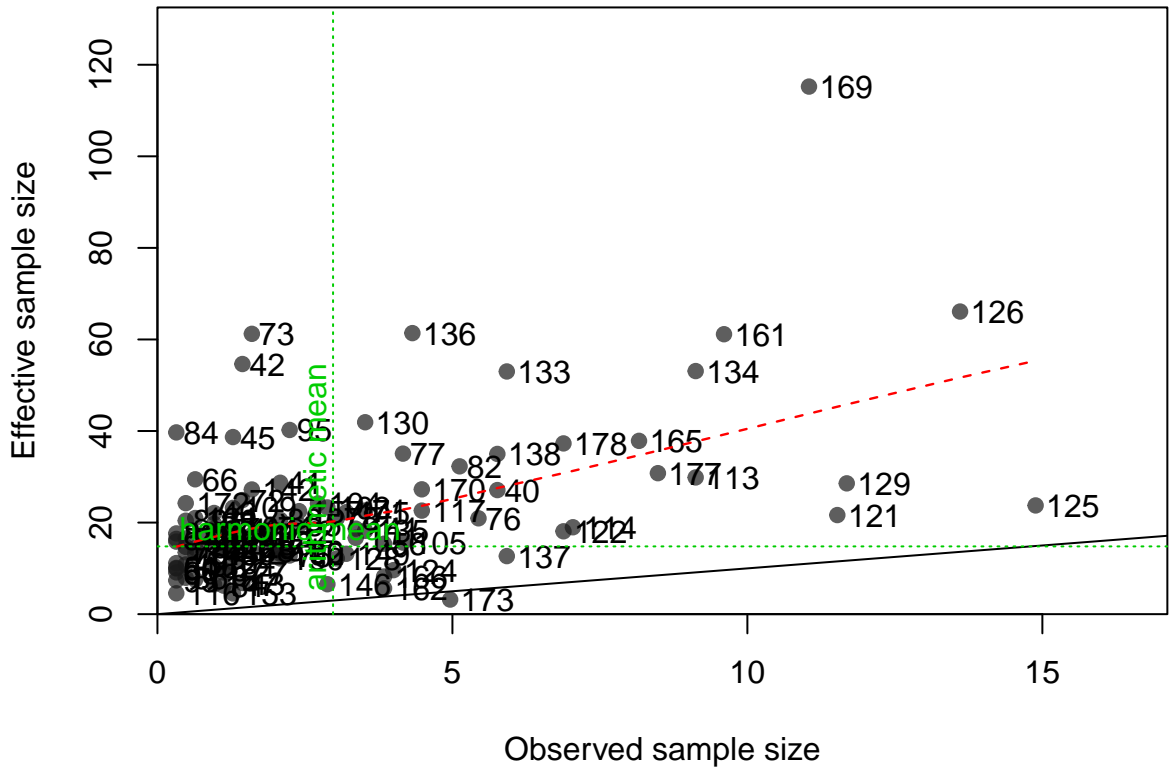
Proportion



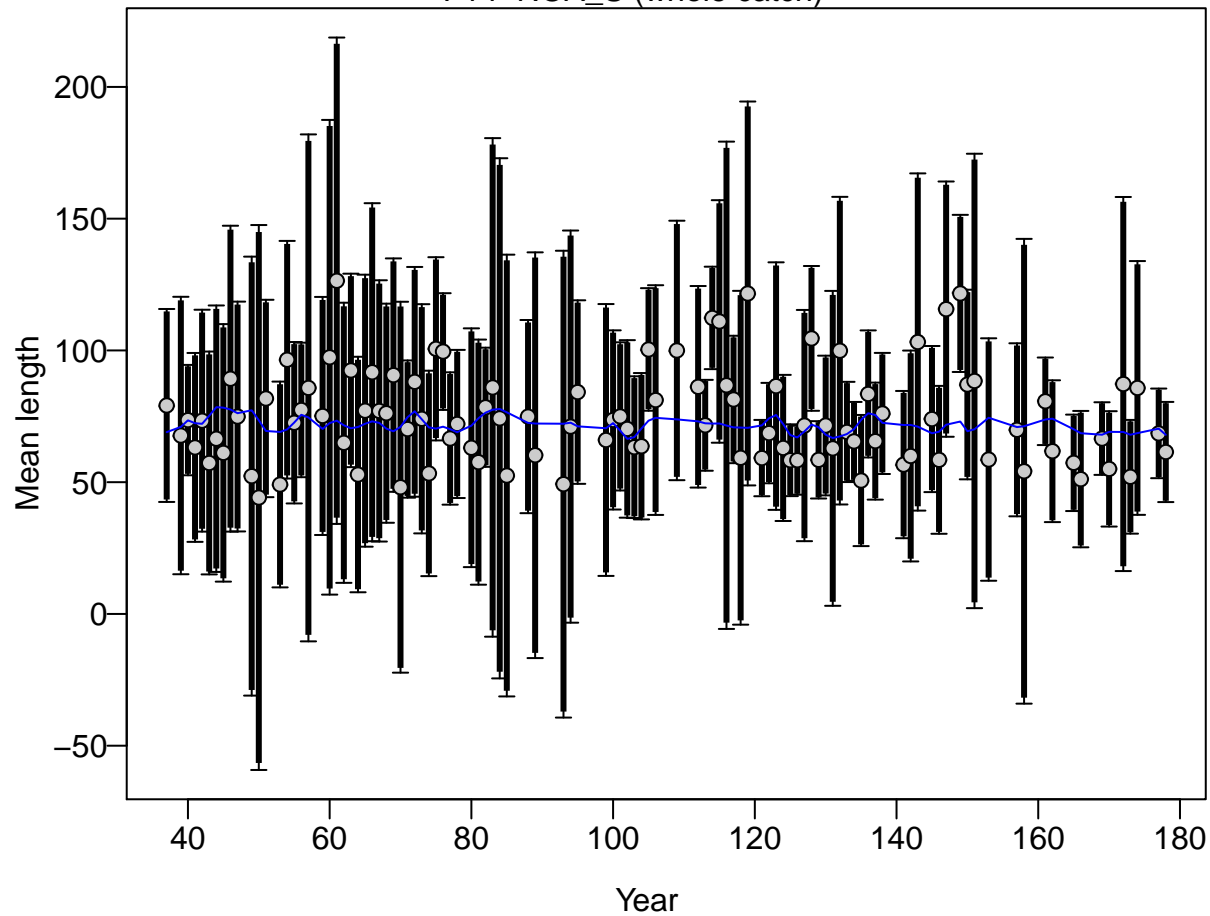
Proportion



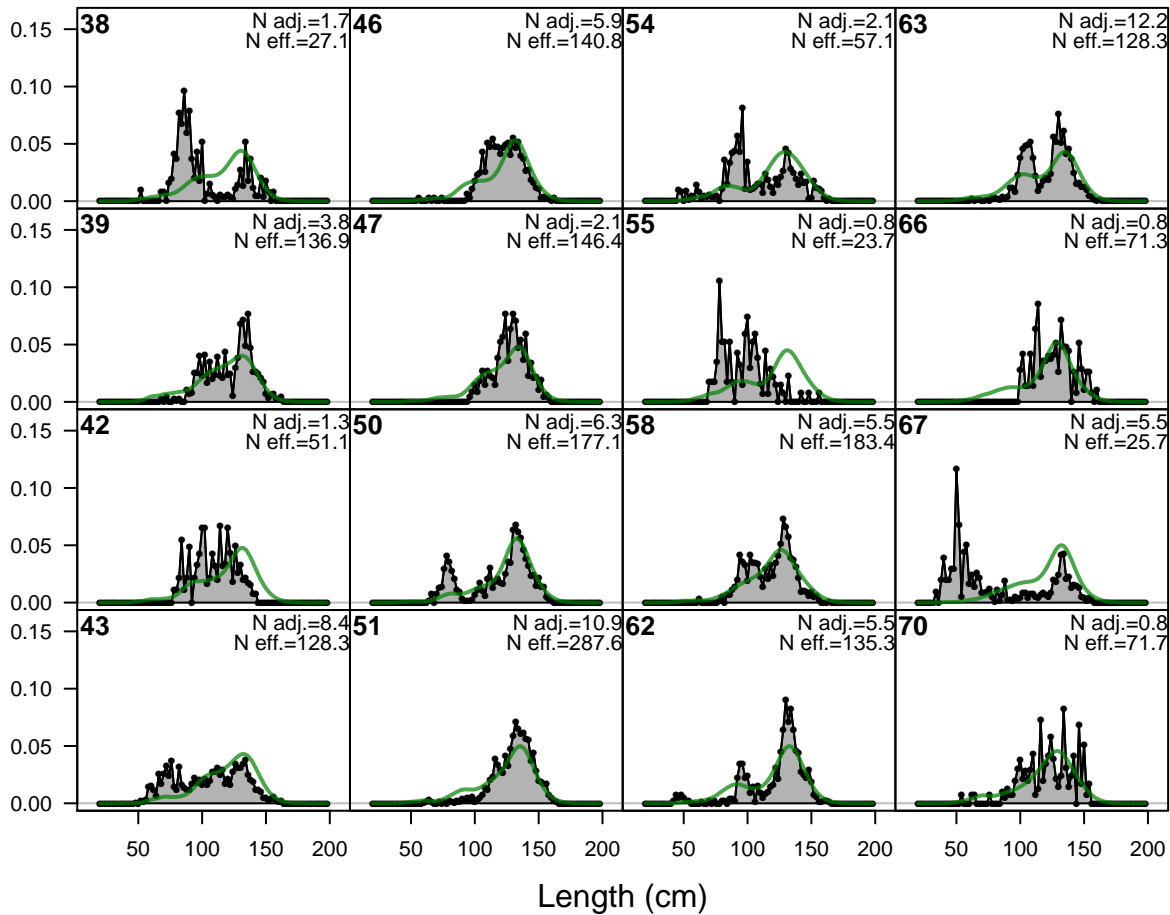




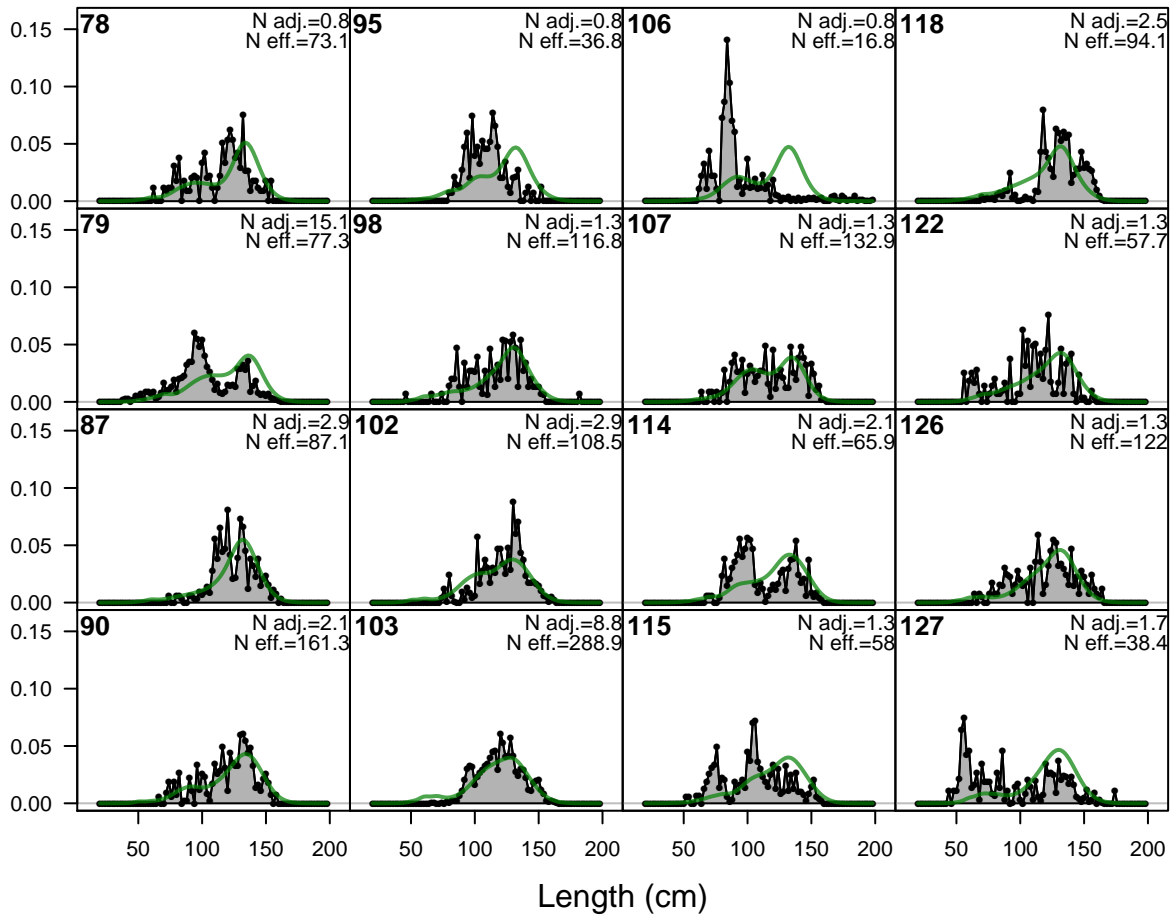
F14-NOA\_S (whole catch)



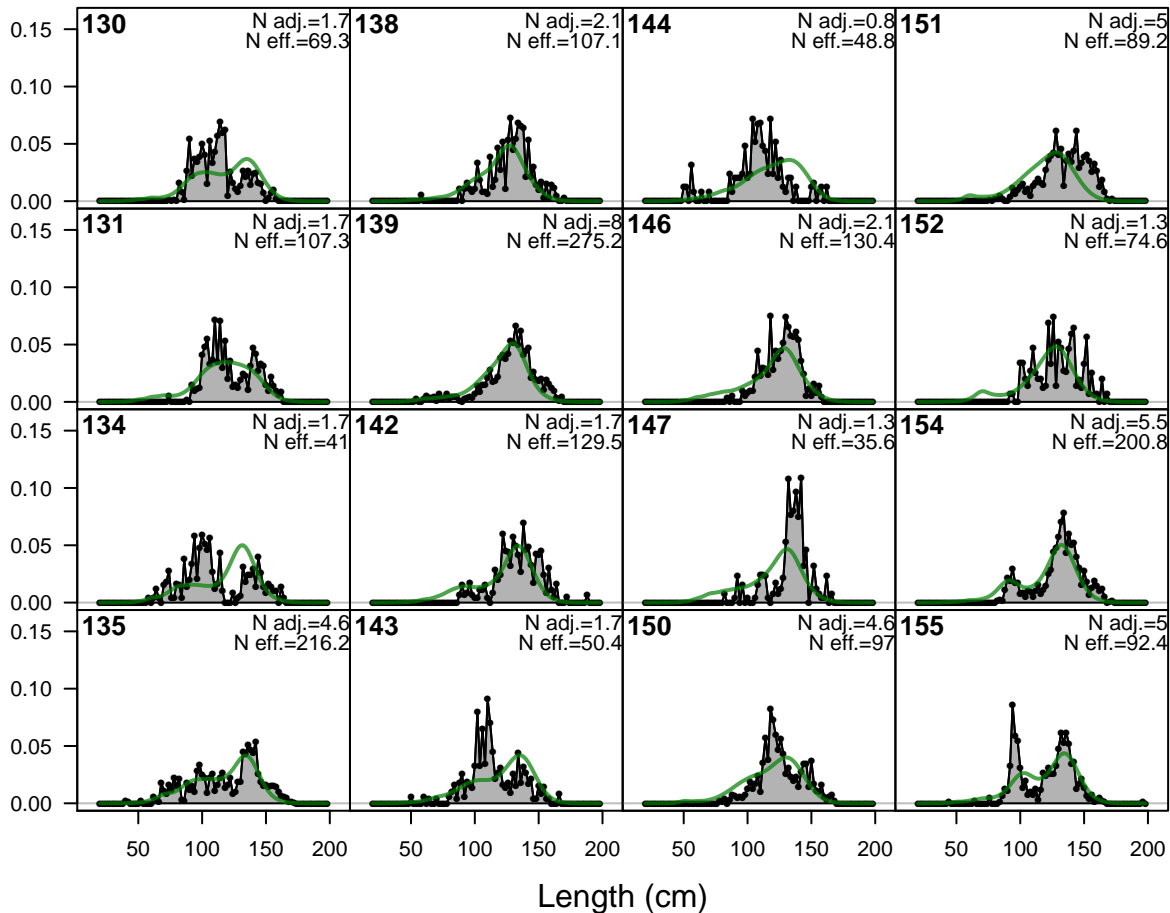
Proportion



Proportion

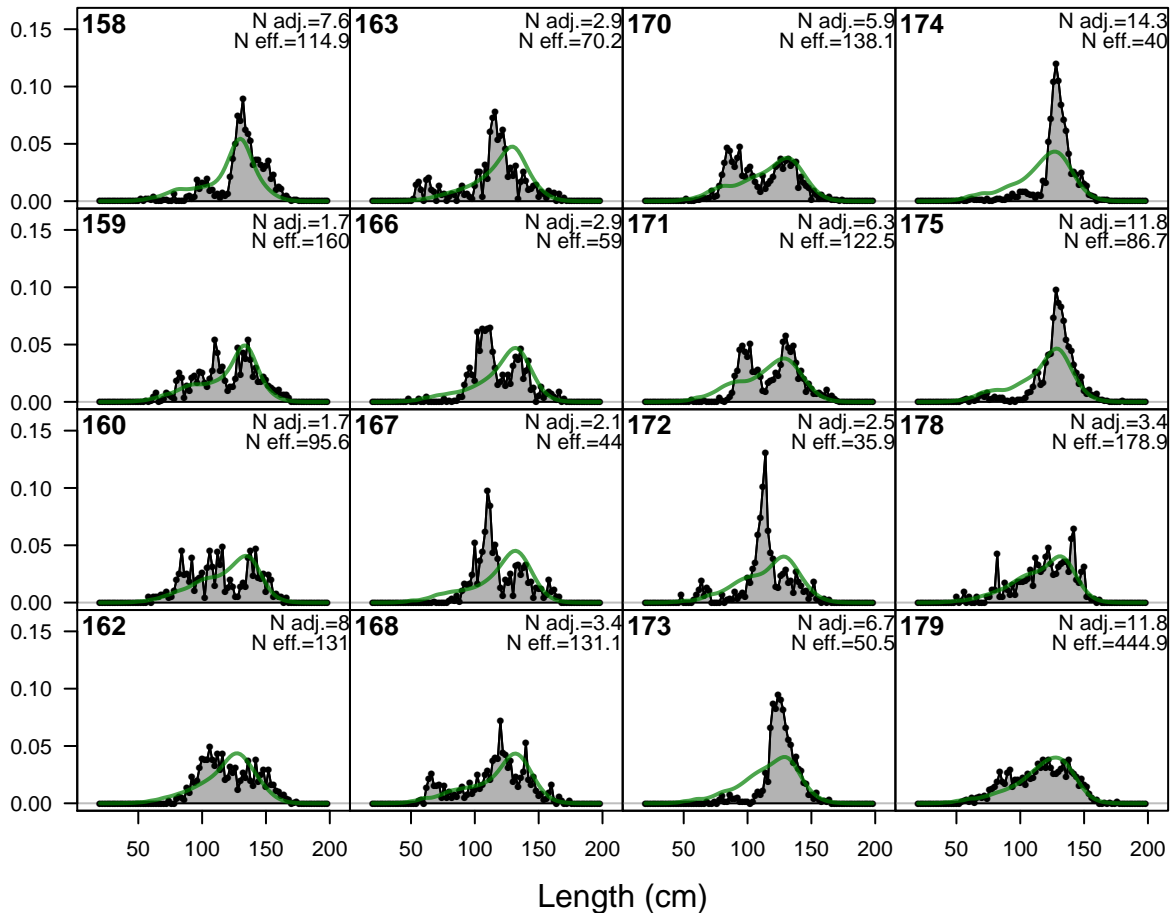


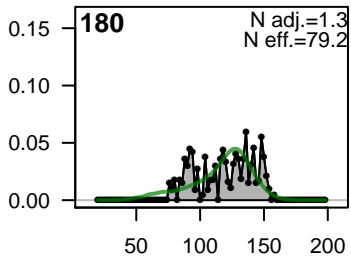
Proportion





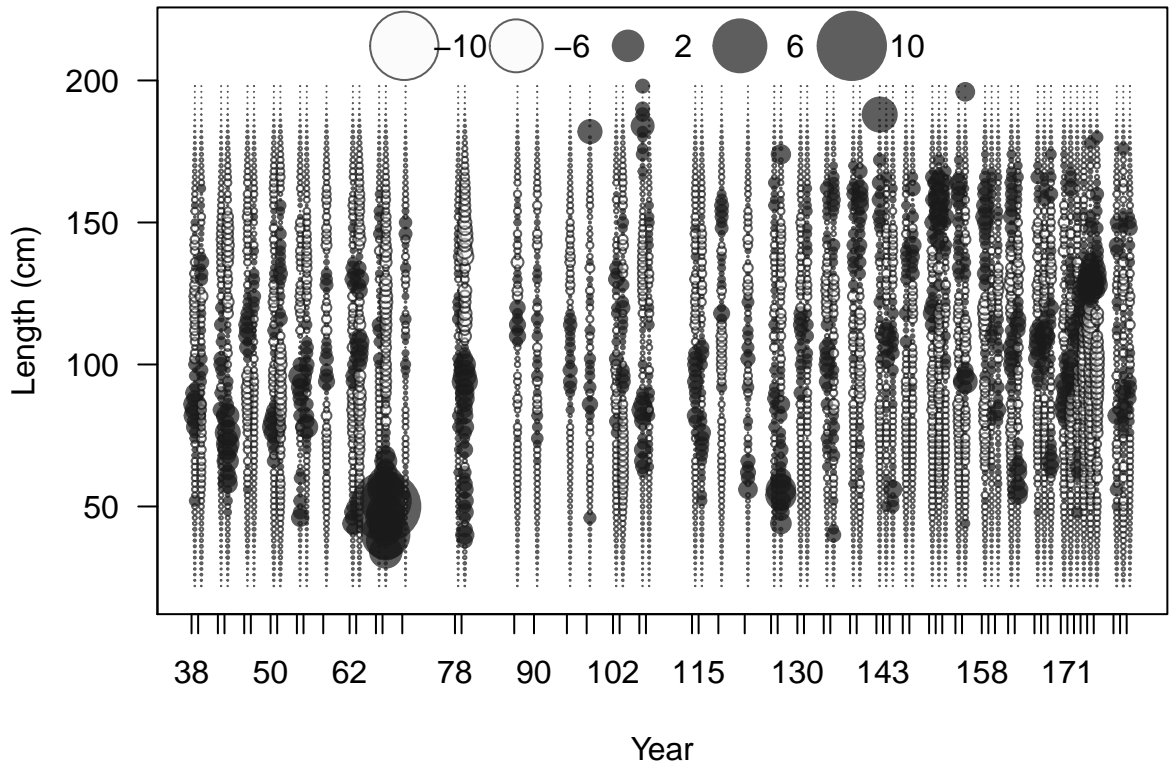
Proportion

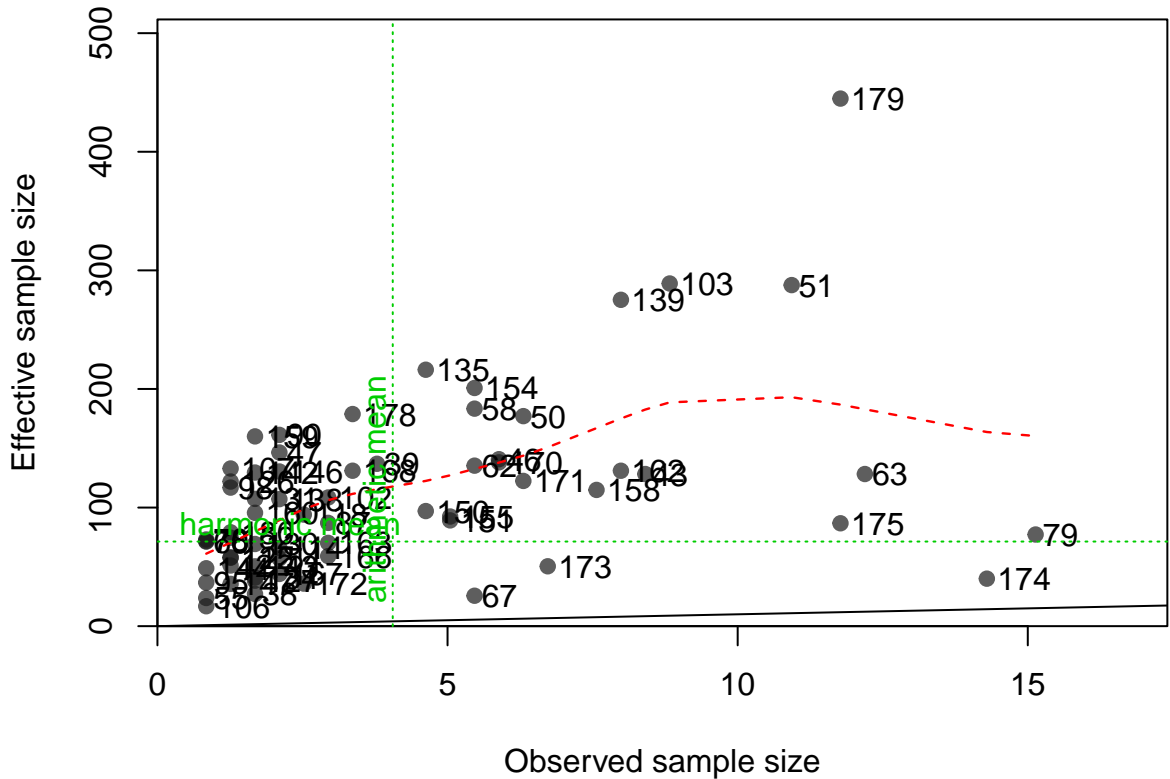




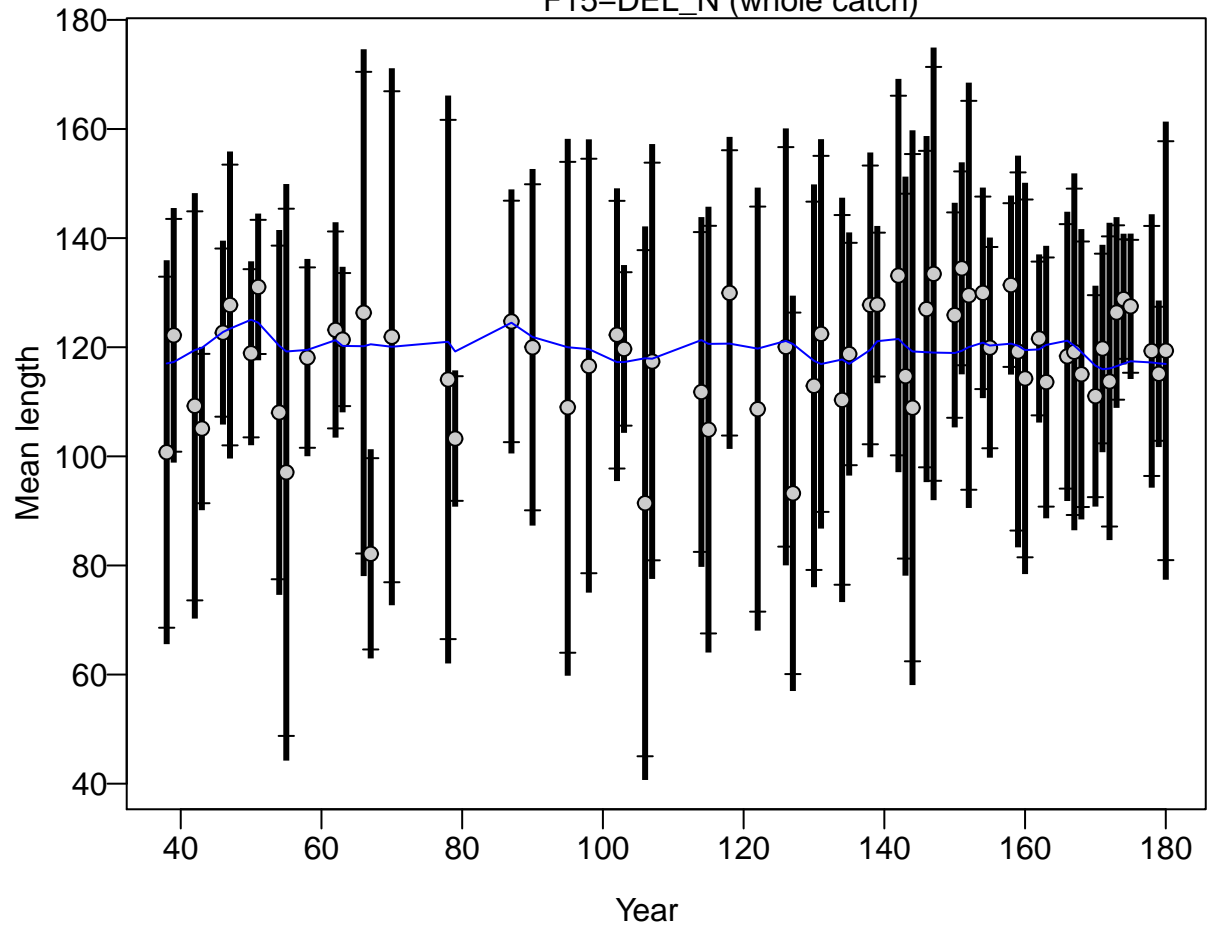
Proportion

Length (cm)

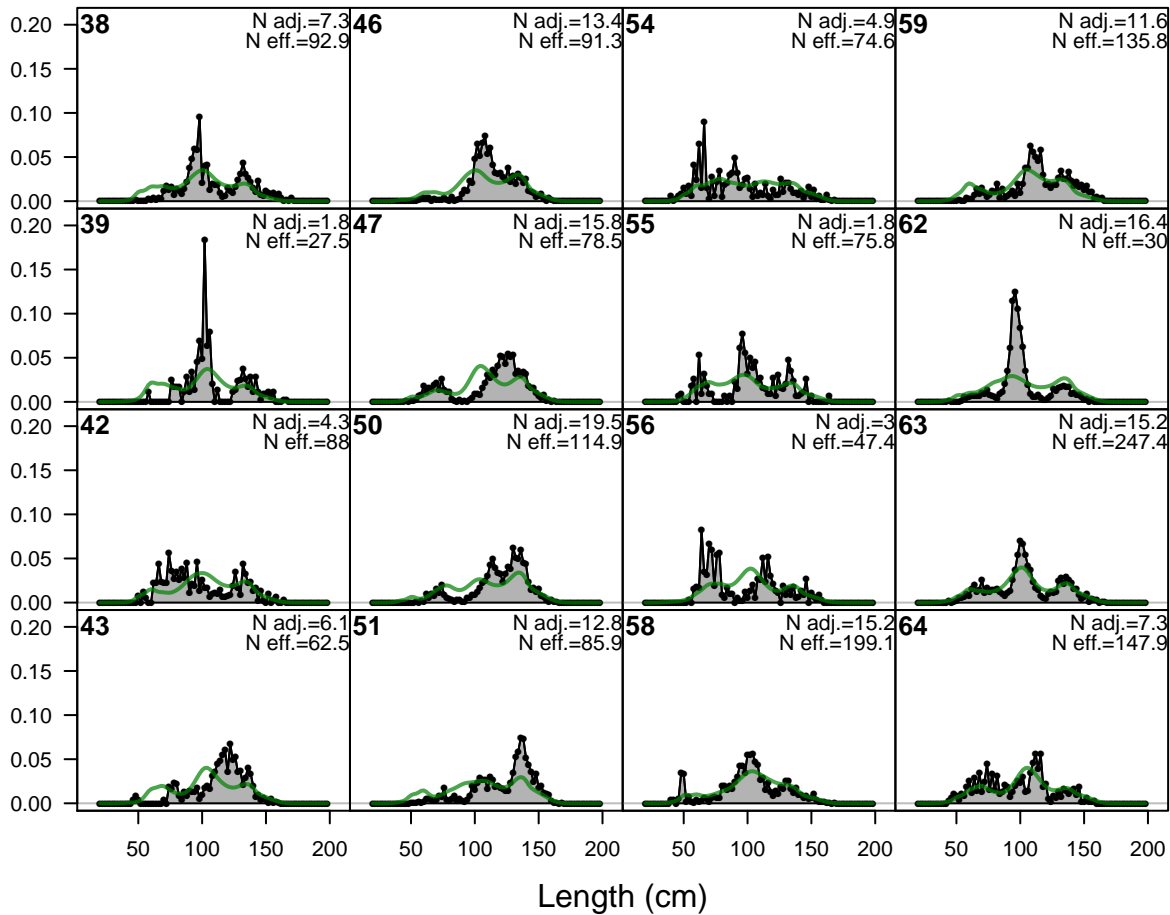




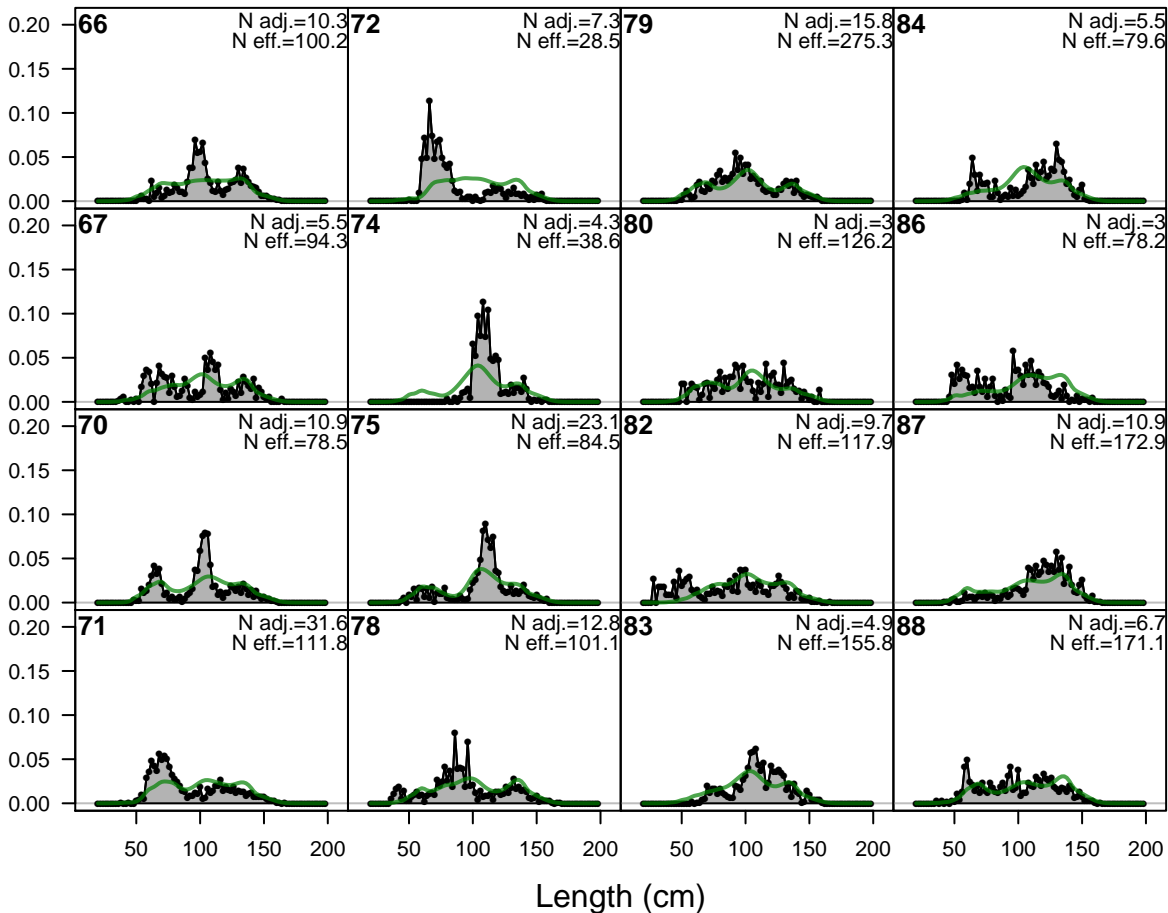
## F15-DEL\_N (whole catch)



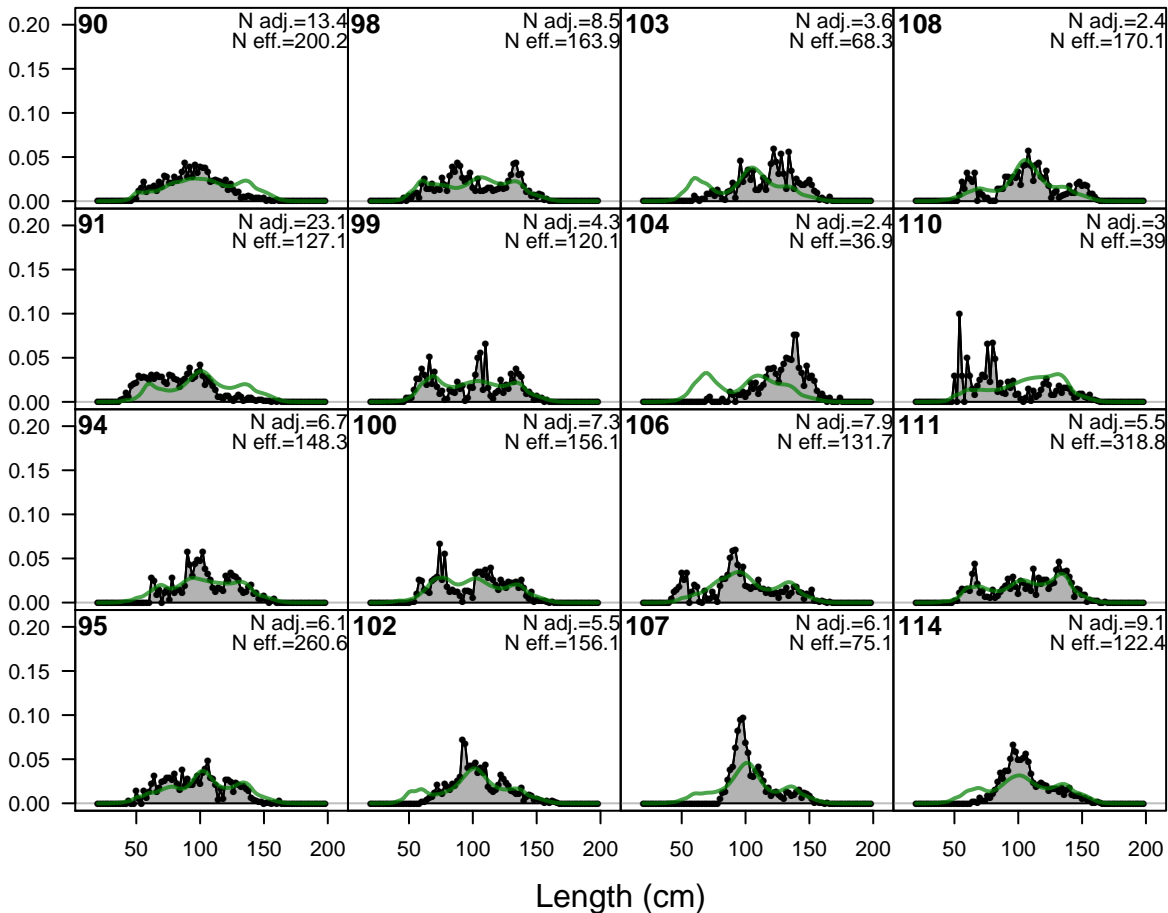
Proportion



Proportion

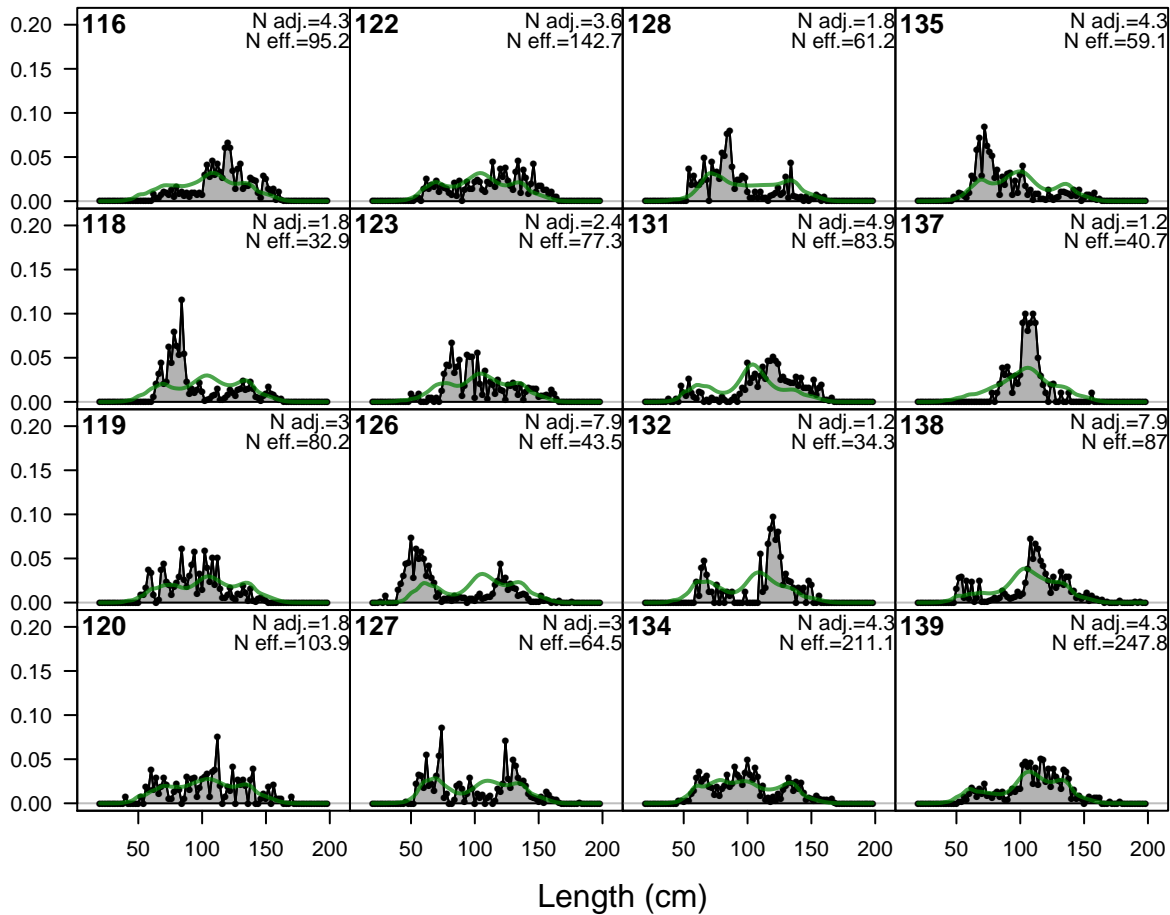


Proportion

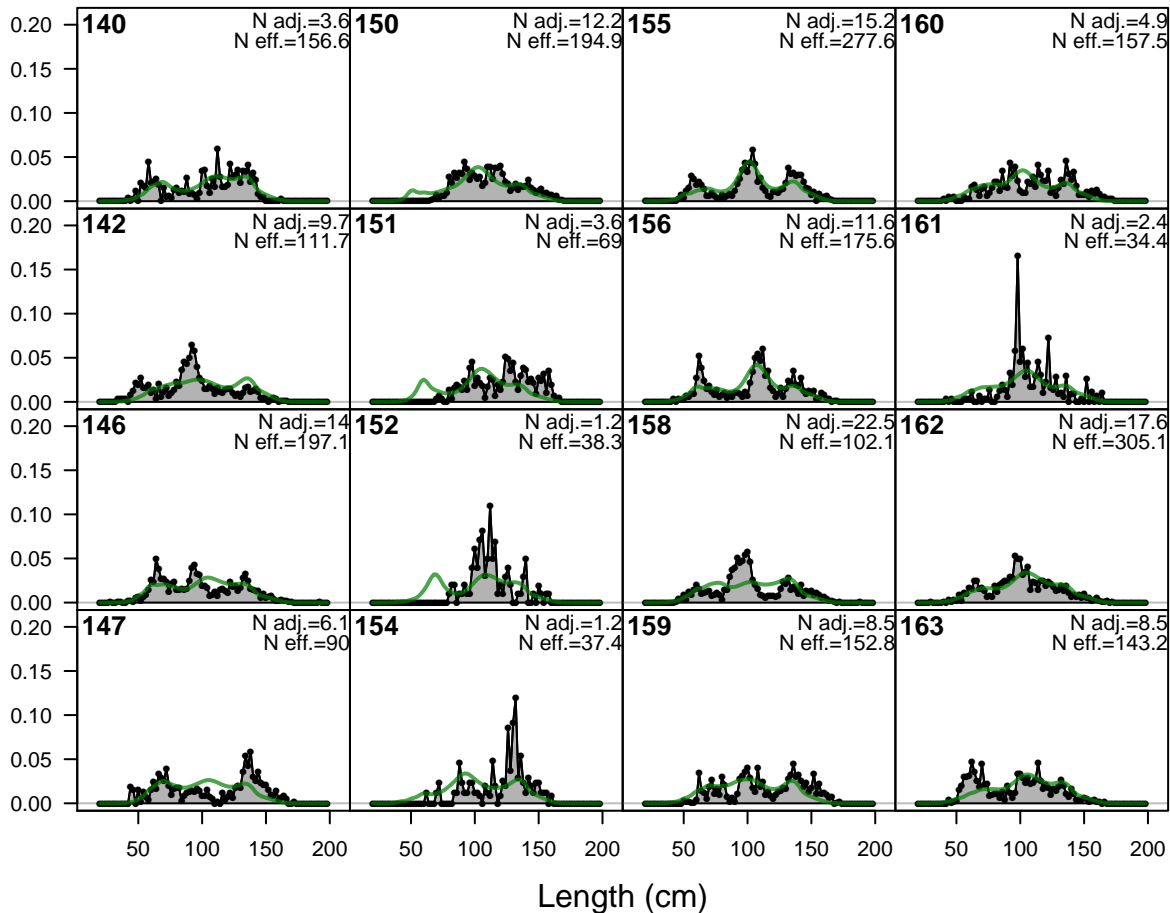




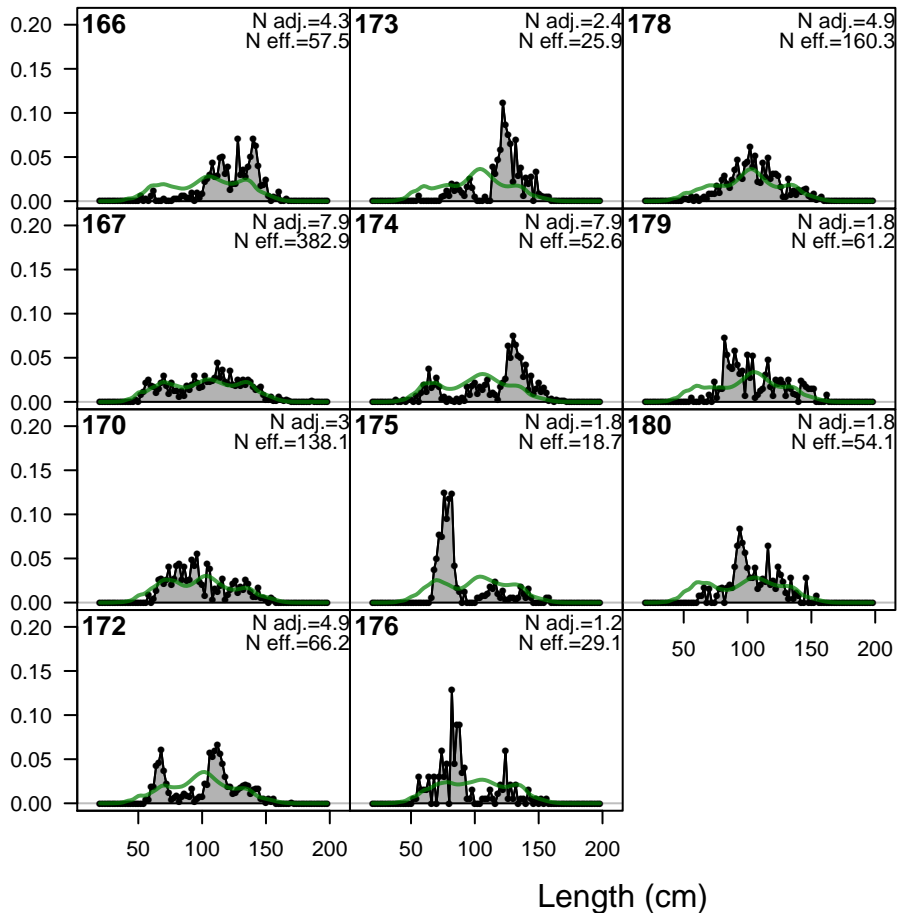
Proportion

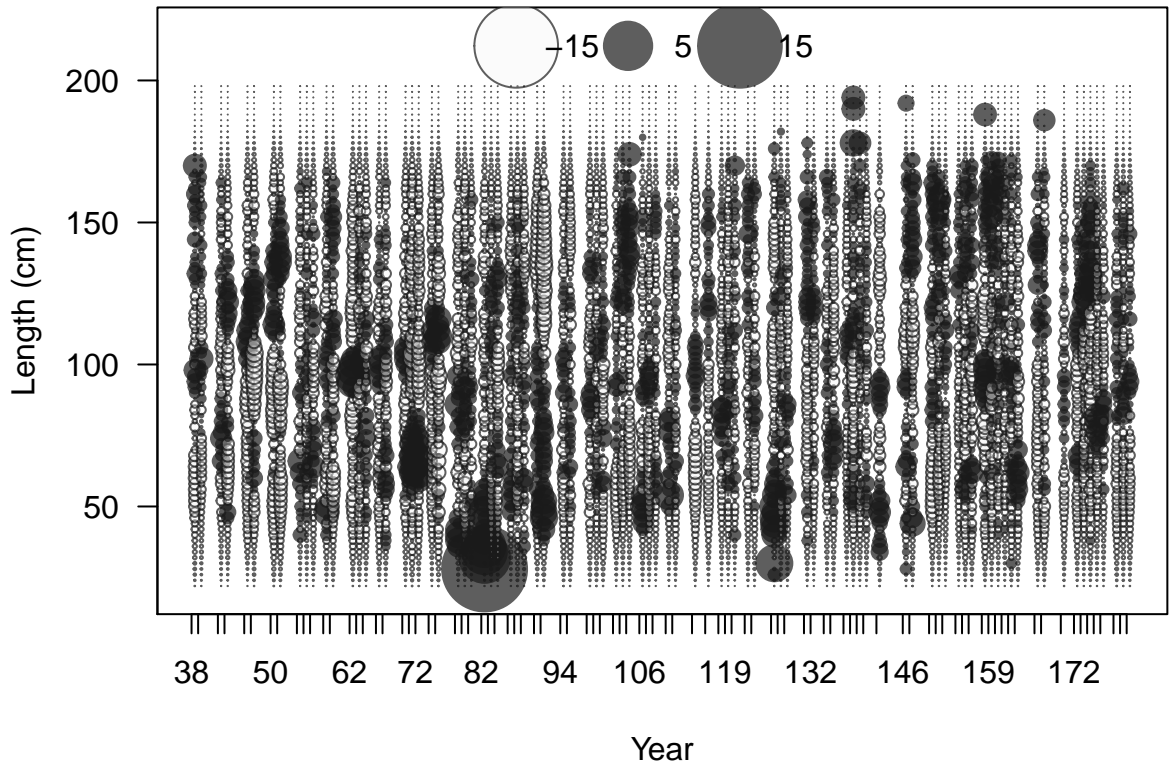


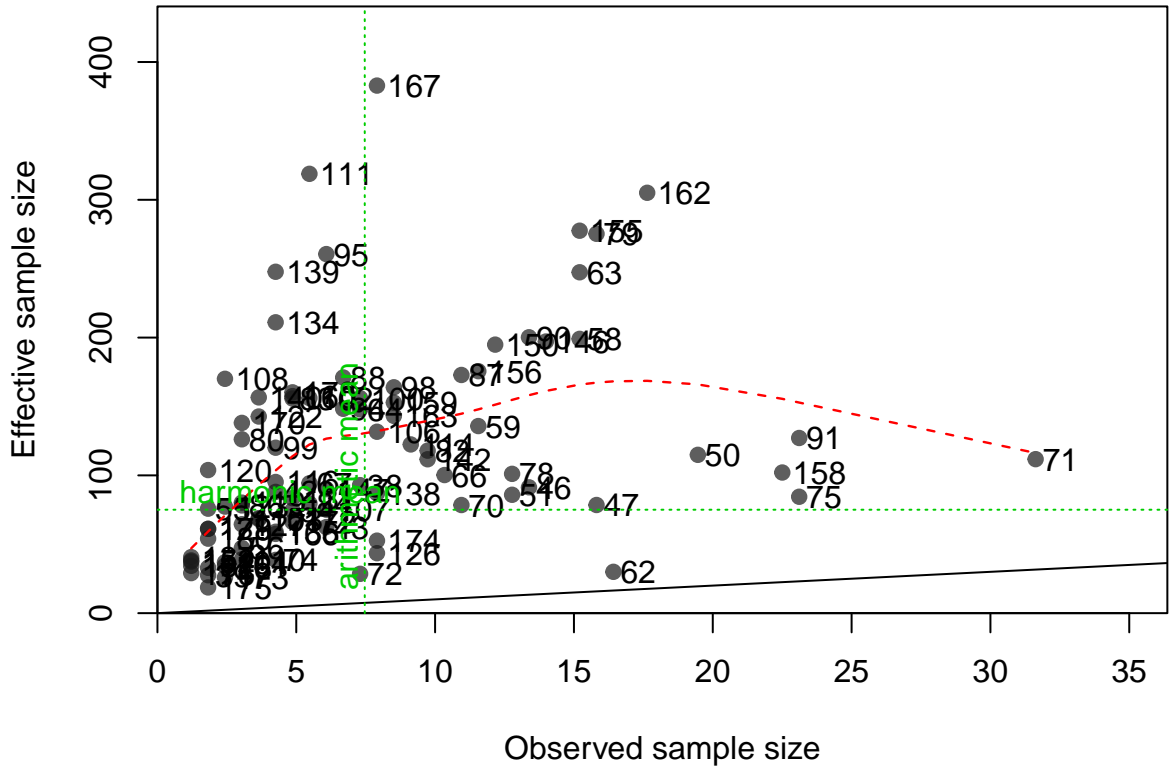
Proportion



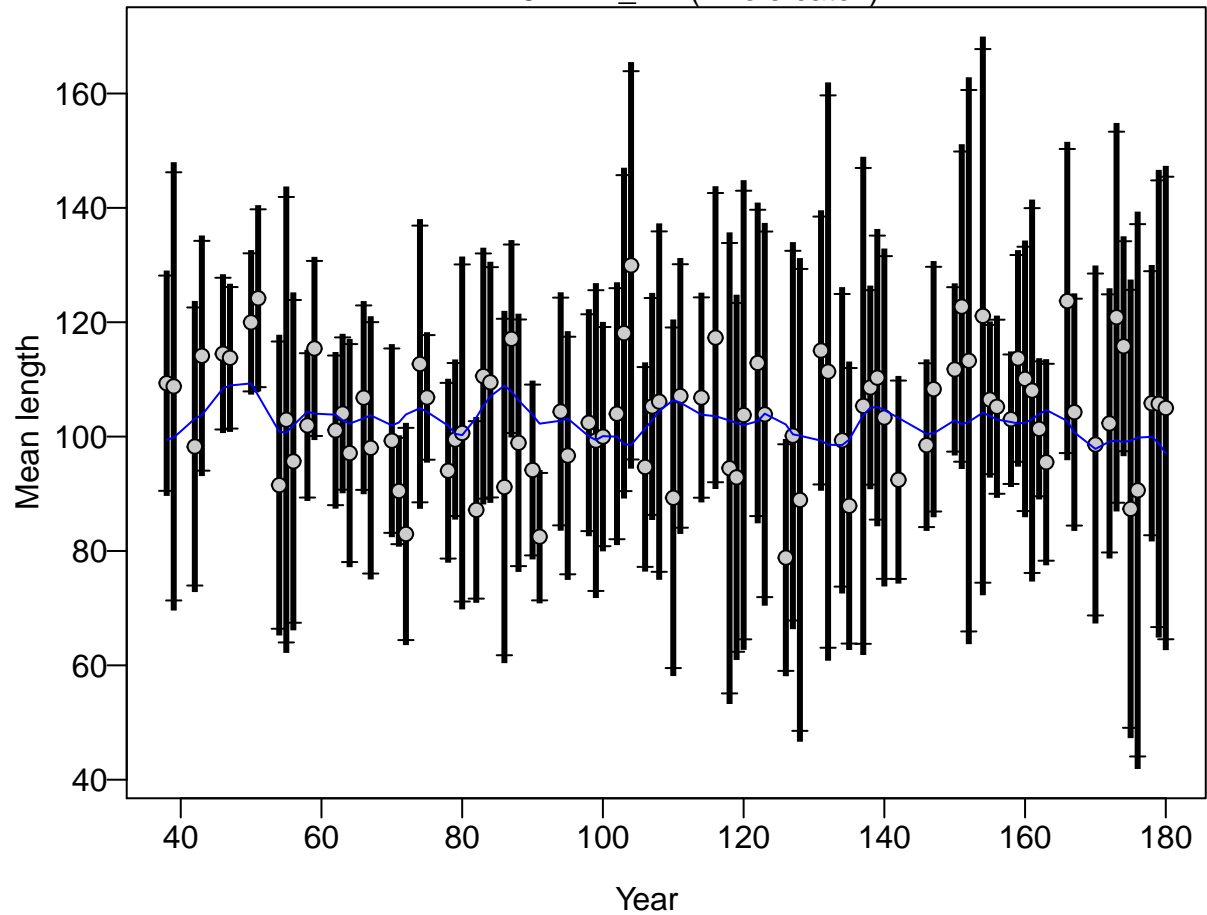
Proportion



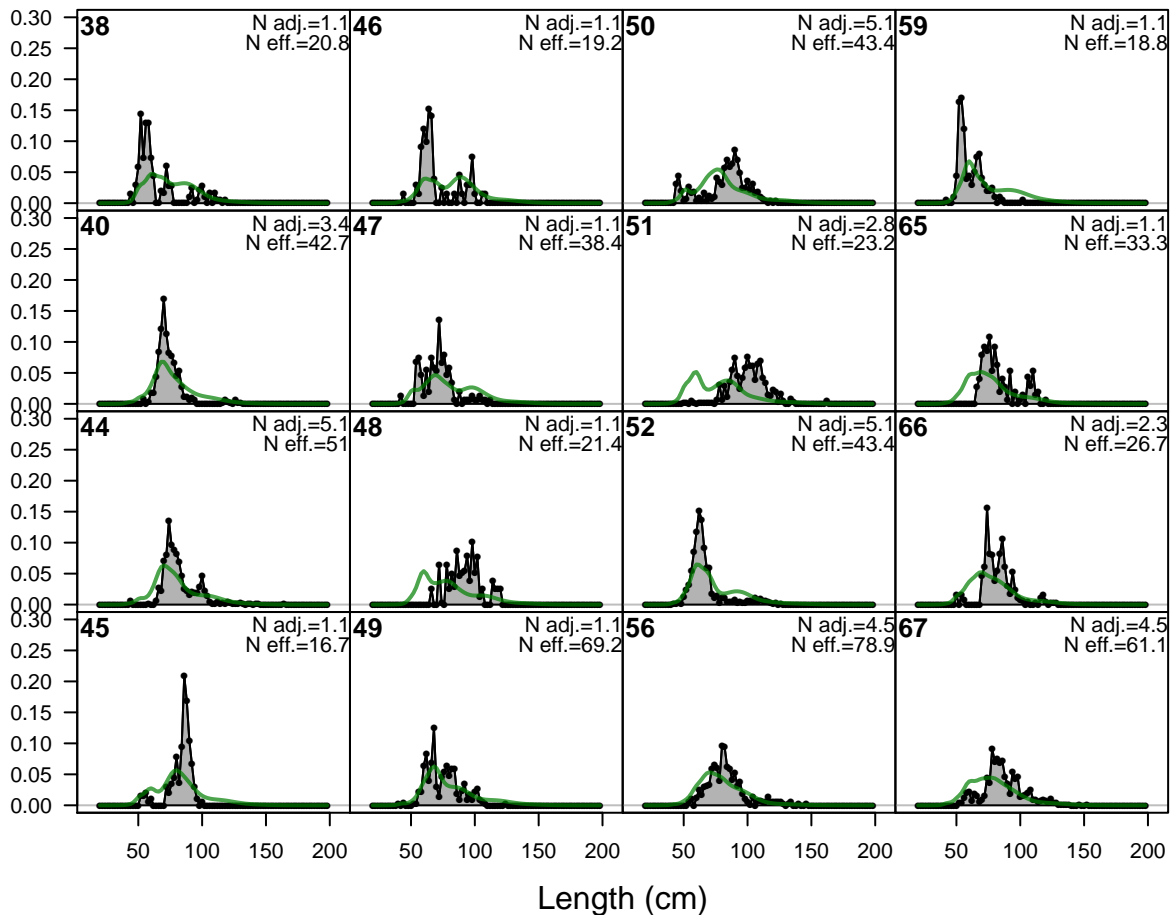




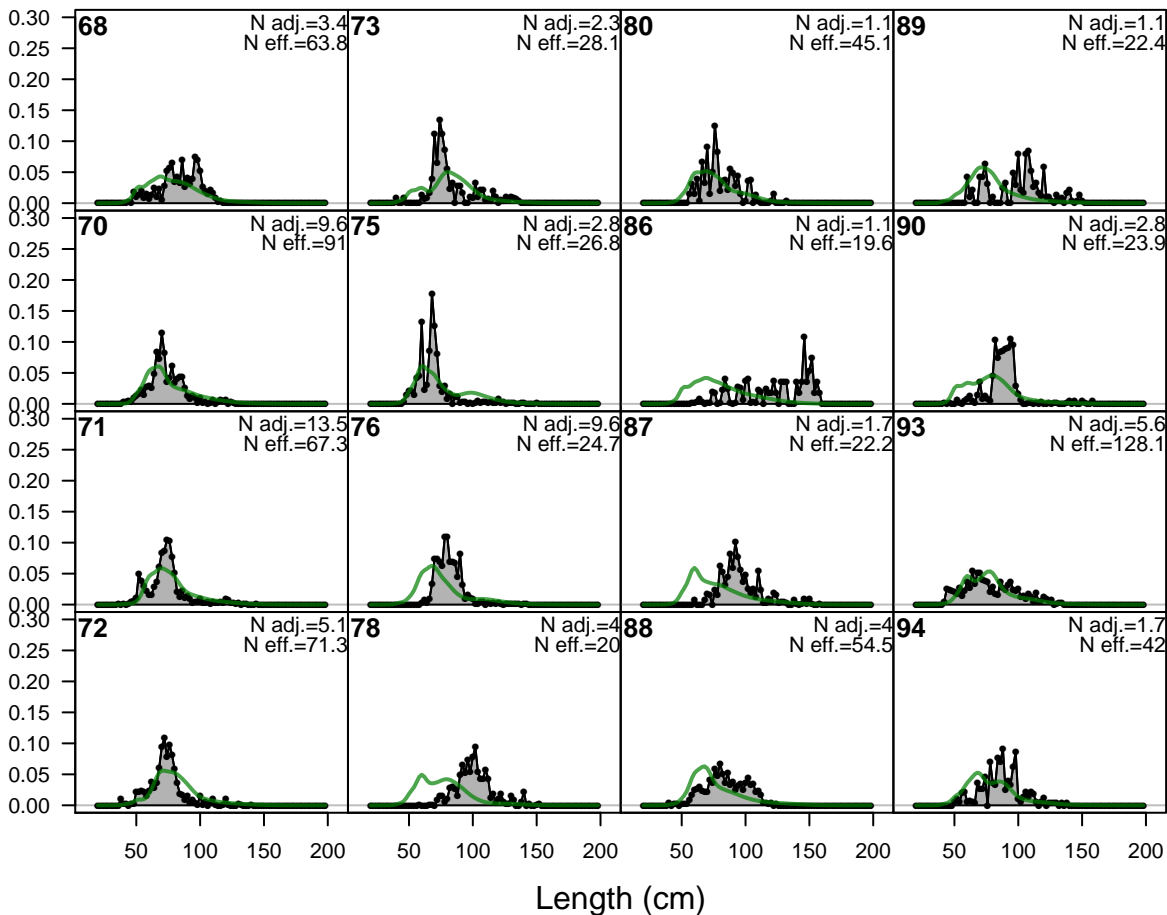
F16-DEL\_NE (whole catch)



Proportion

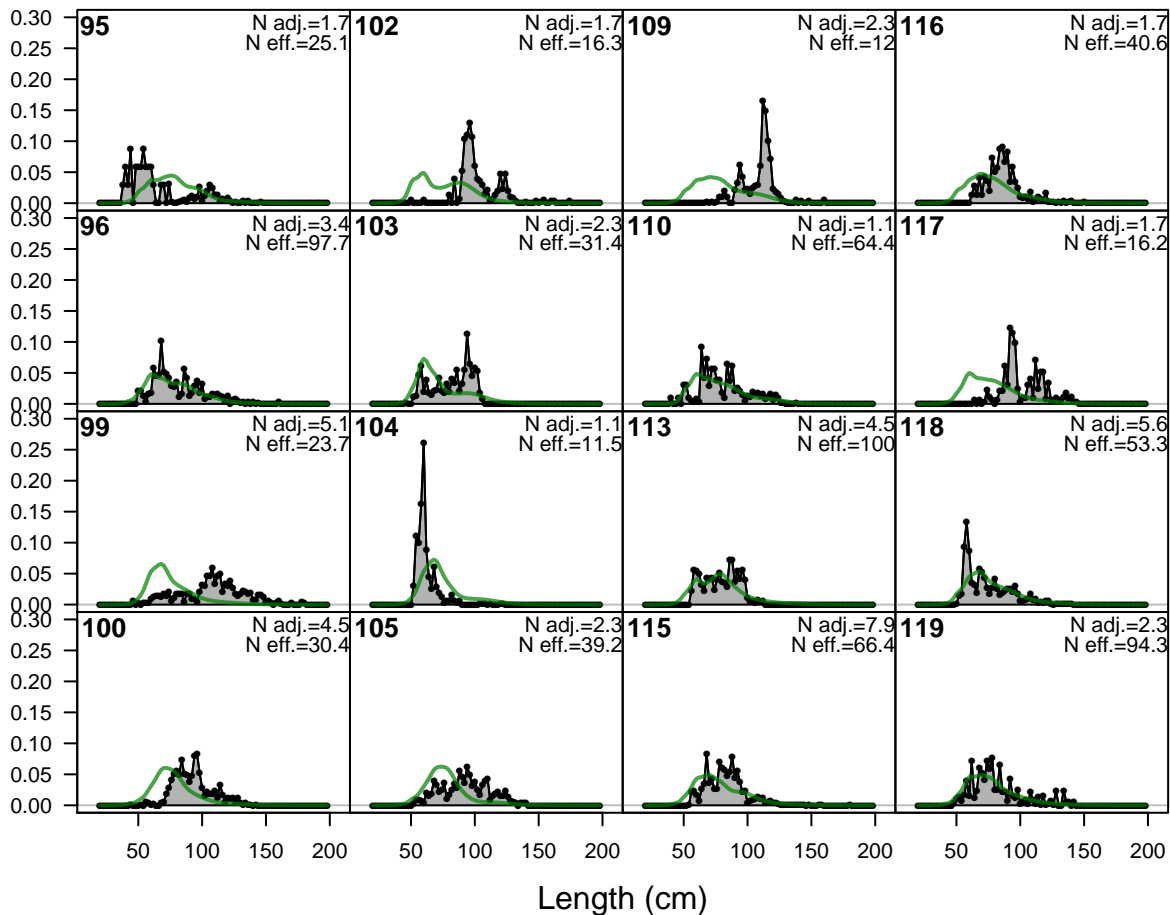


Proportion

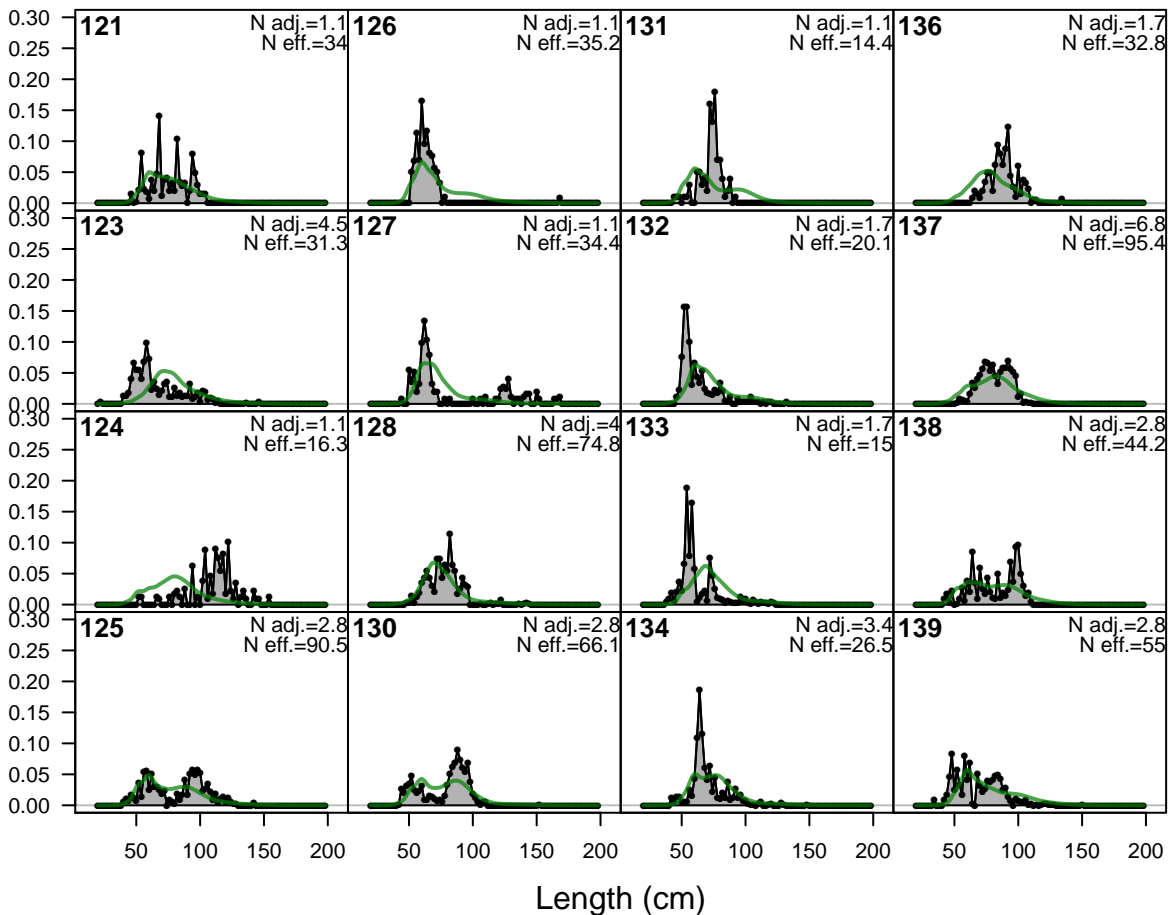




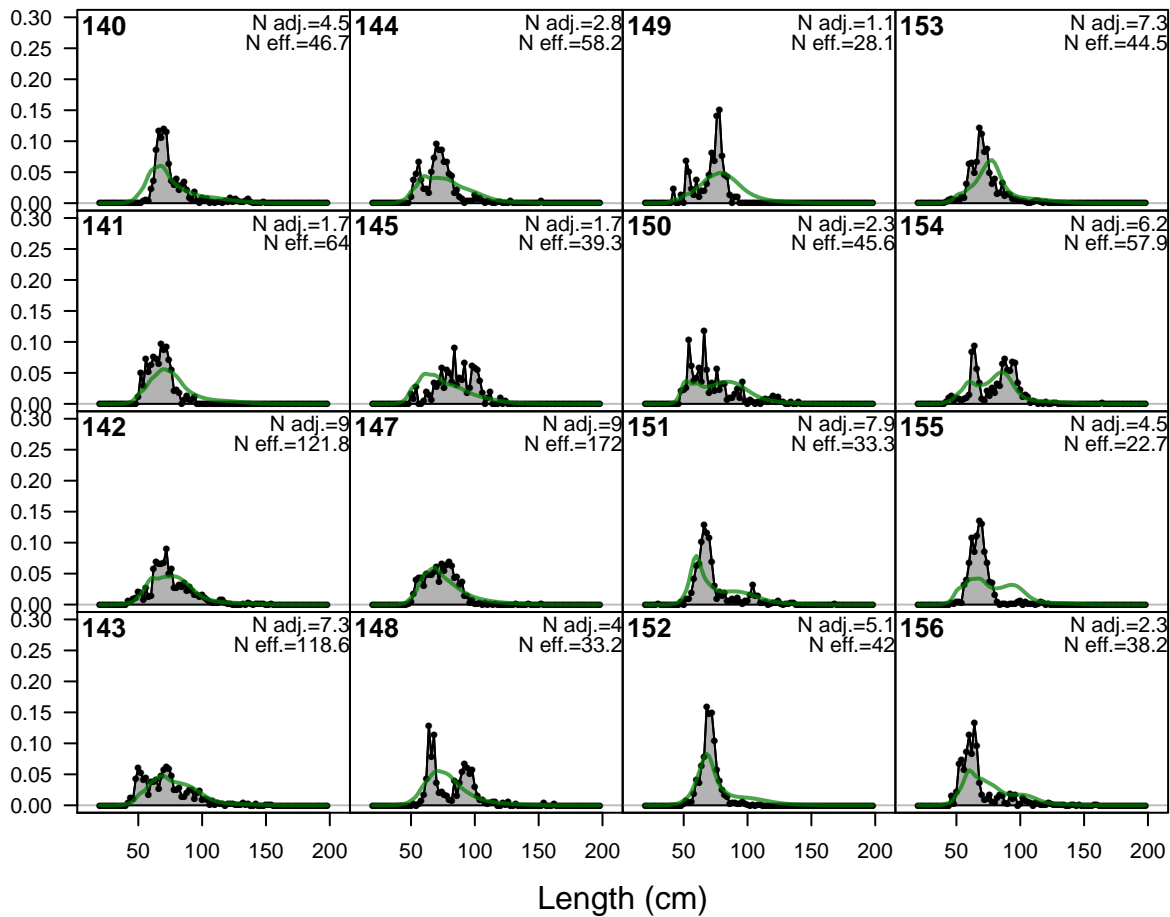
Proportion



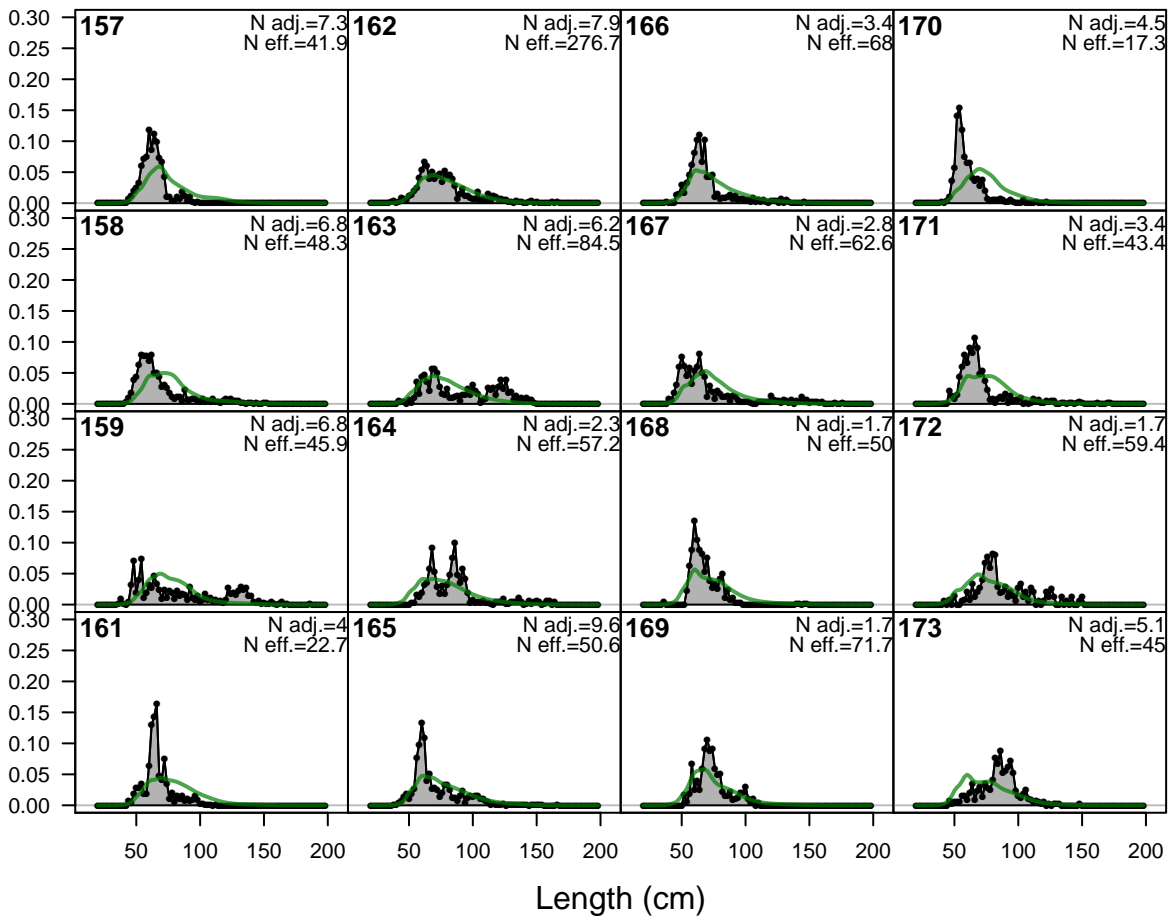
Proportion



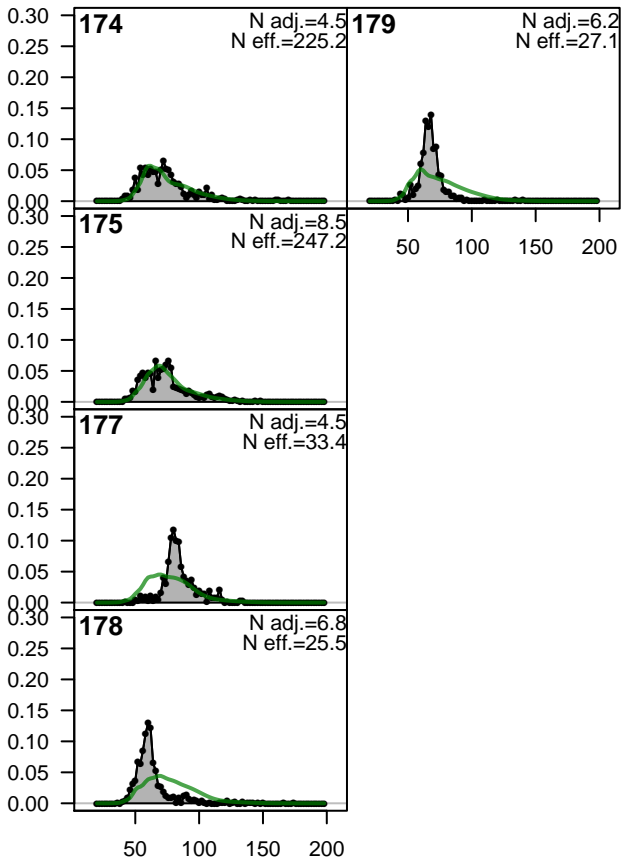
Proportion



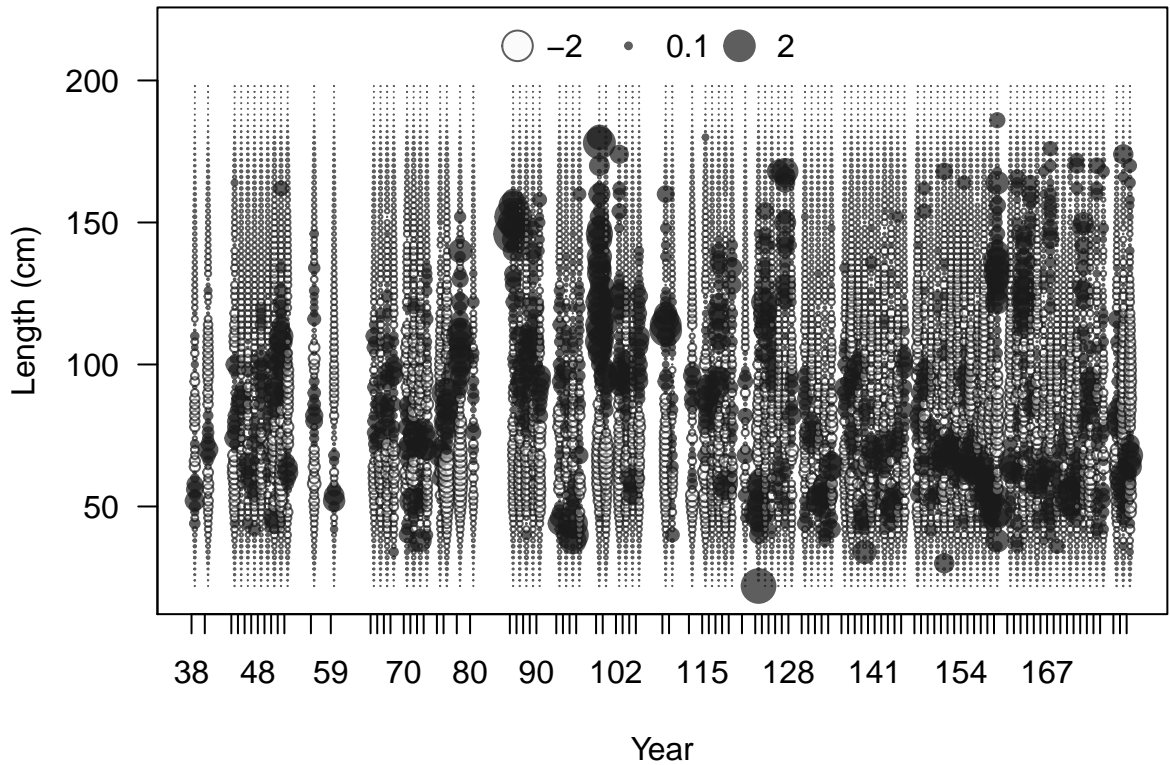
Proportion

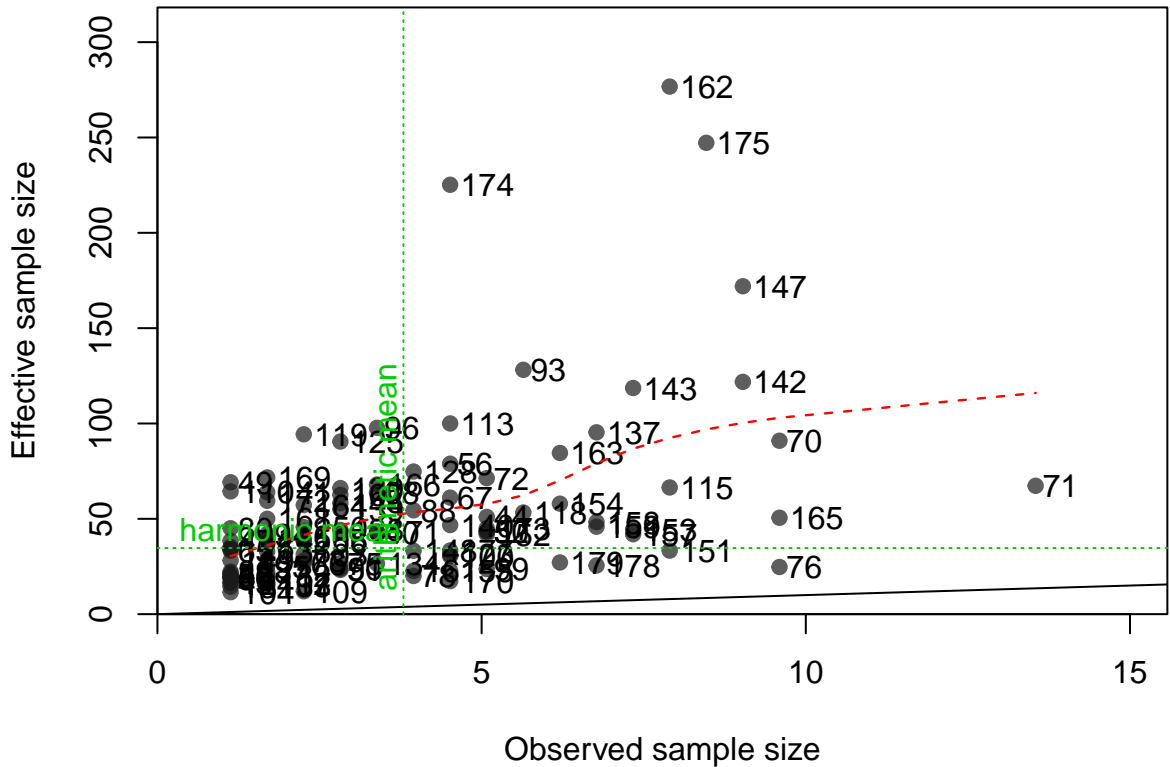


Proportion

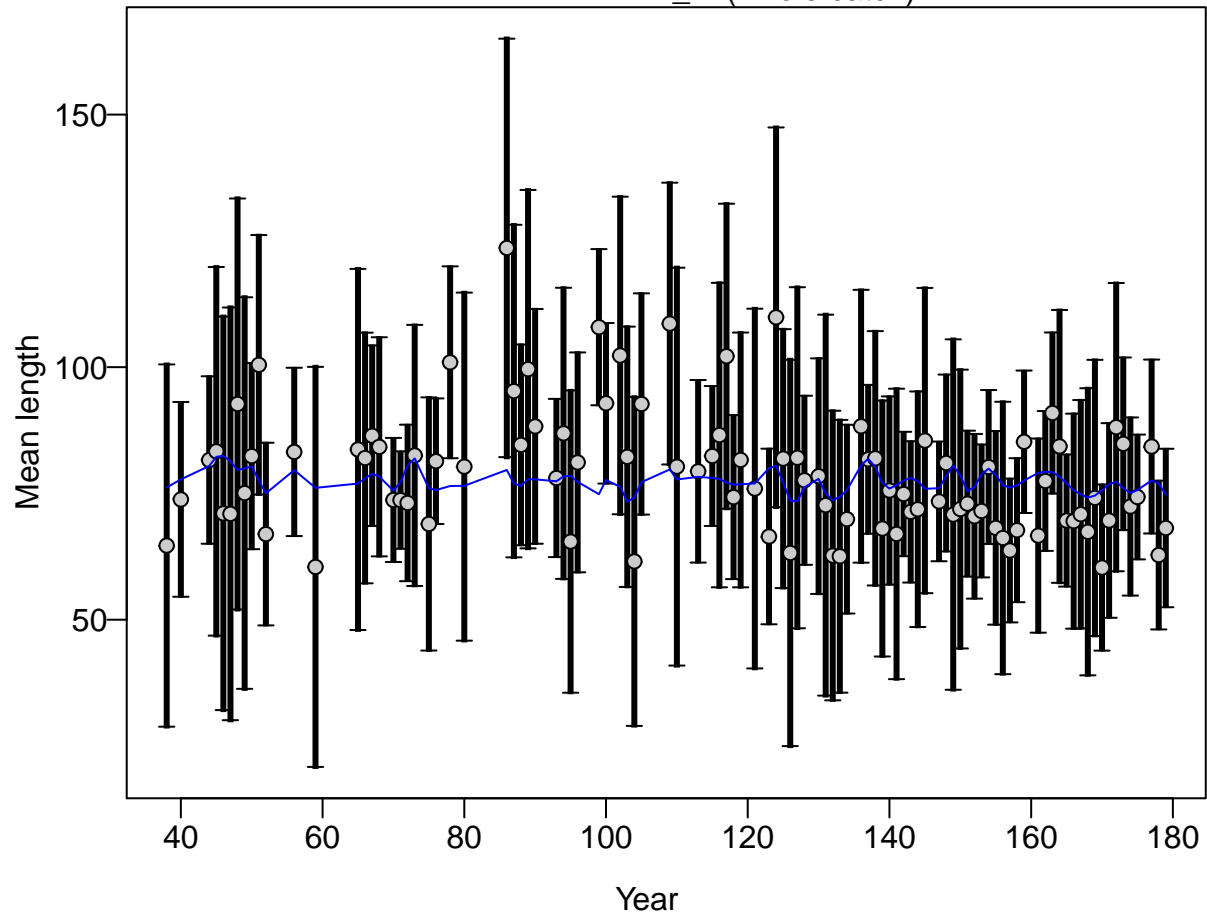


Length (cm)



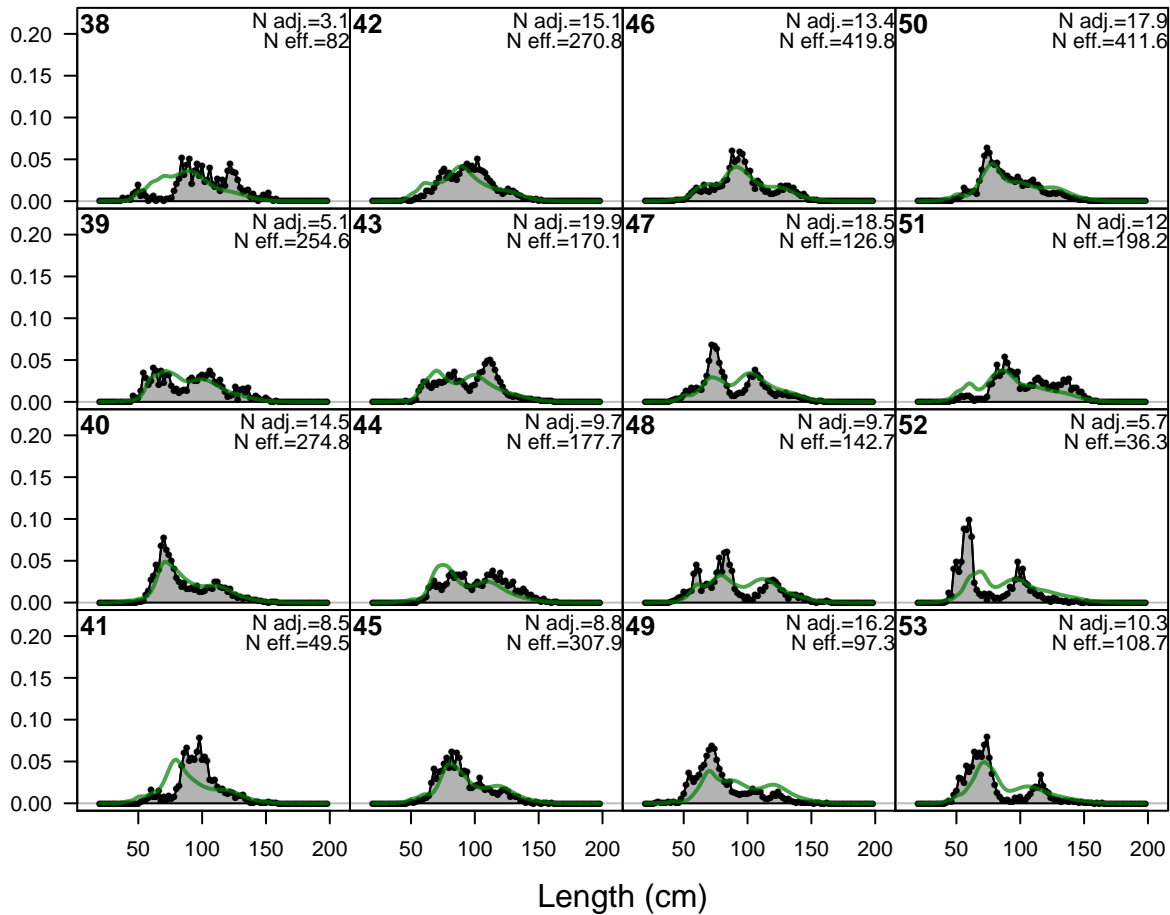


F17-DEL\_M (whole catch)

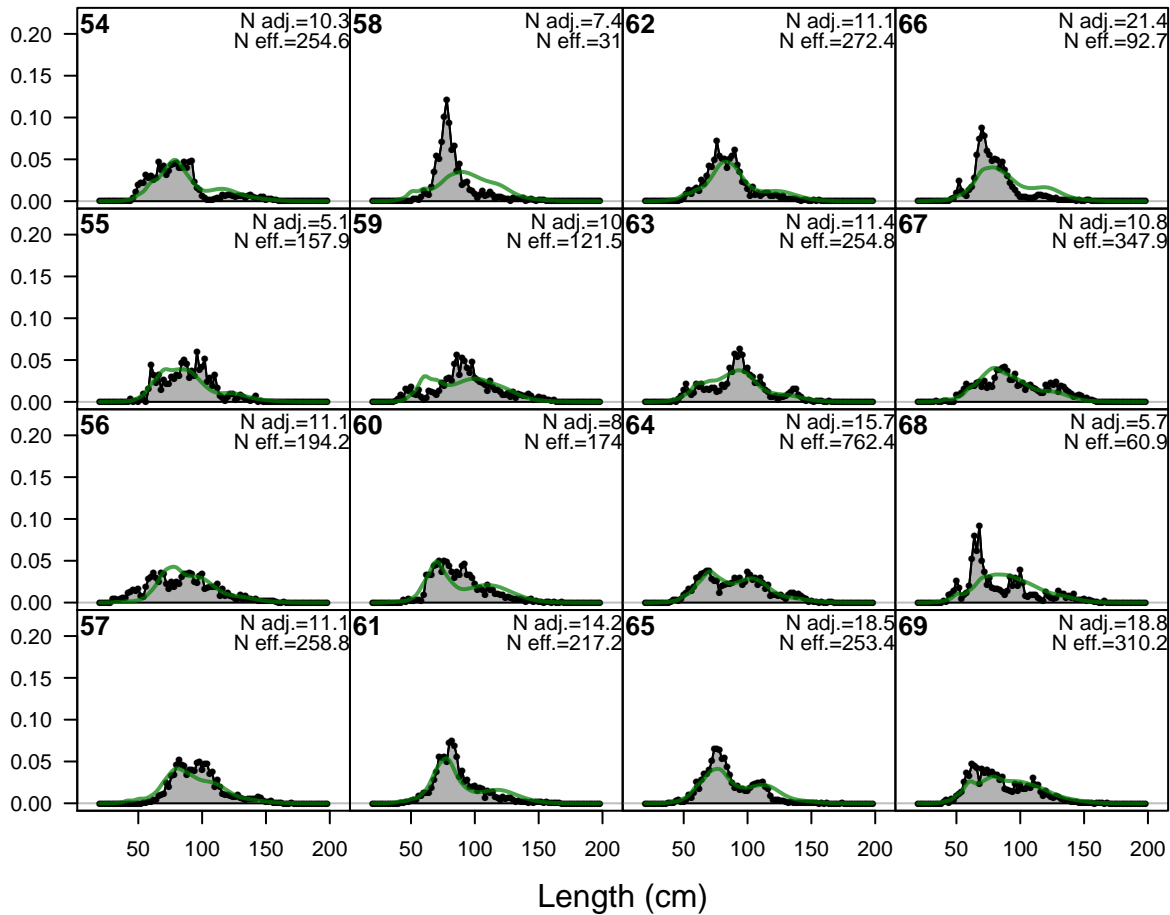




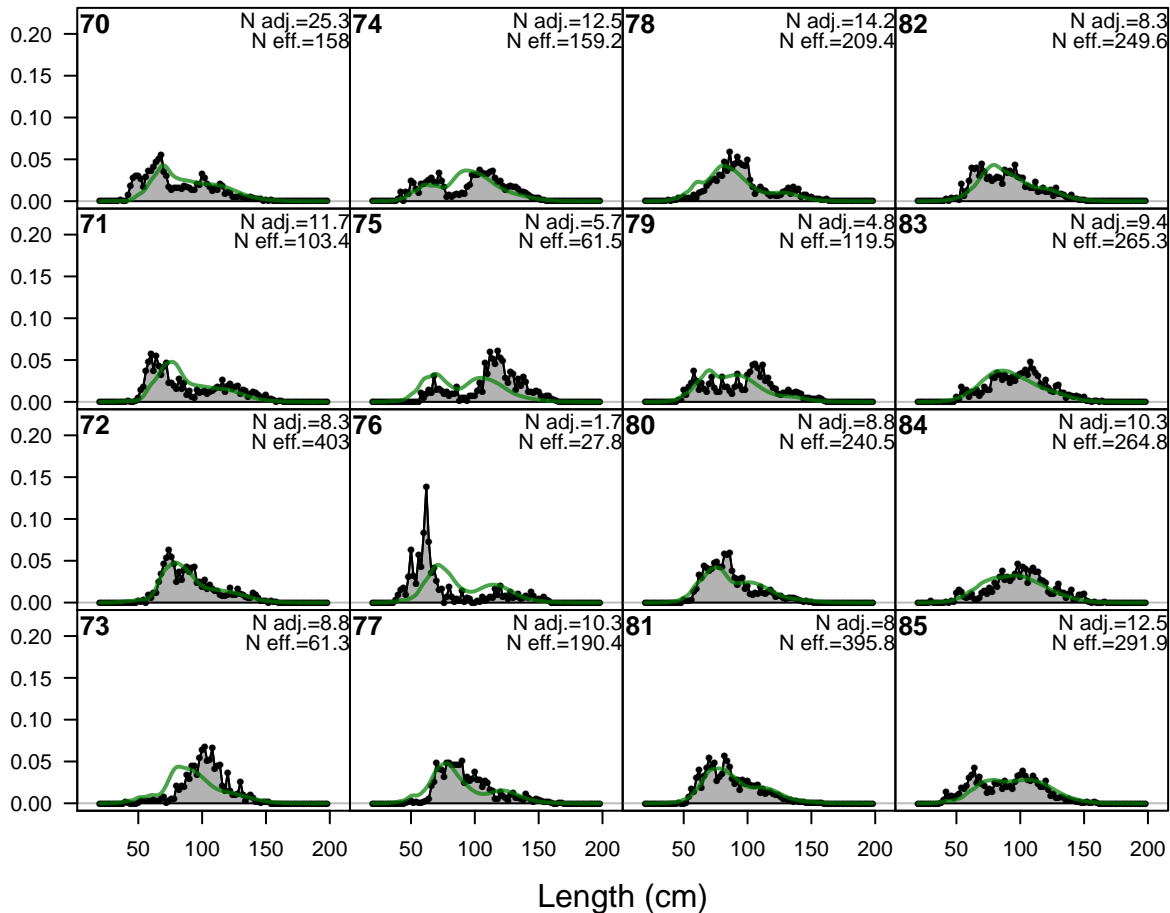
Proportion



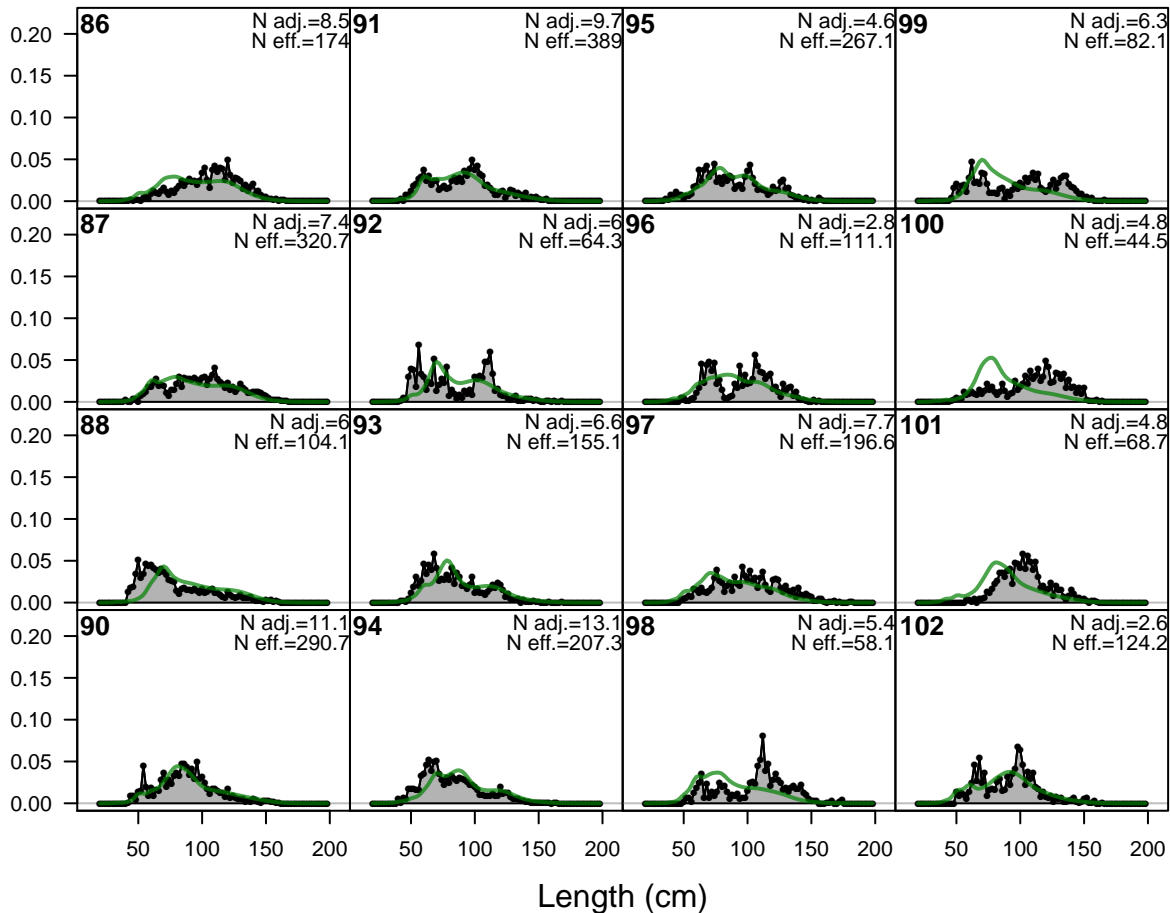
Proportion



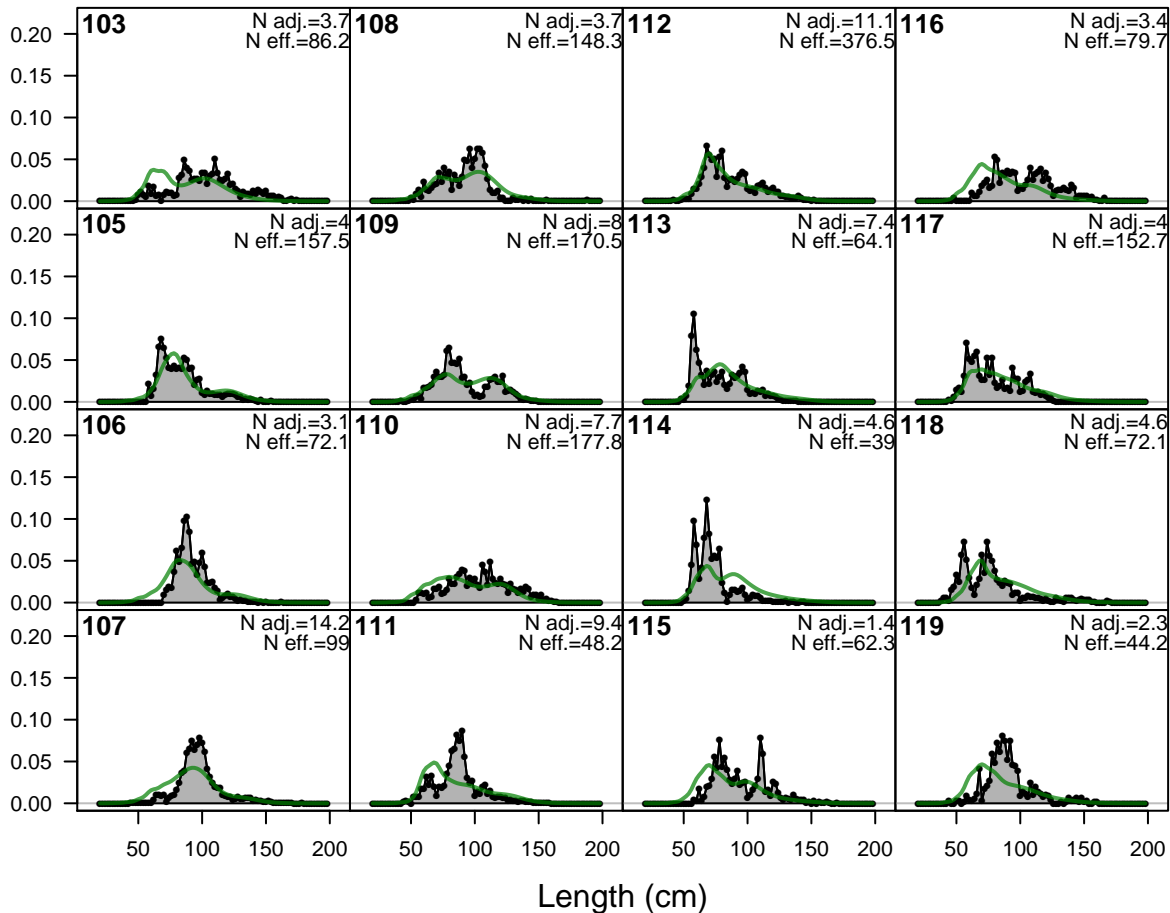
Proportion



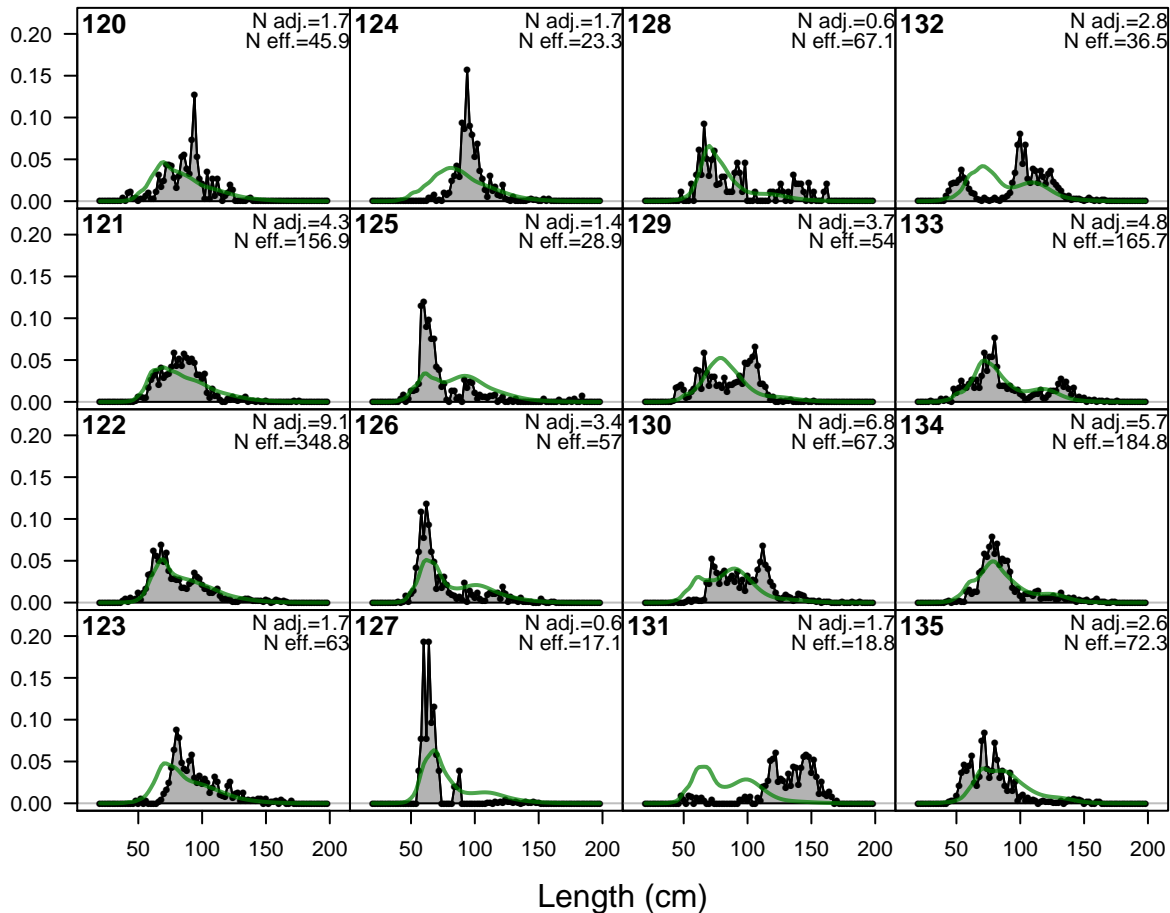
Proportion



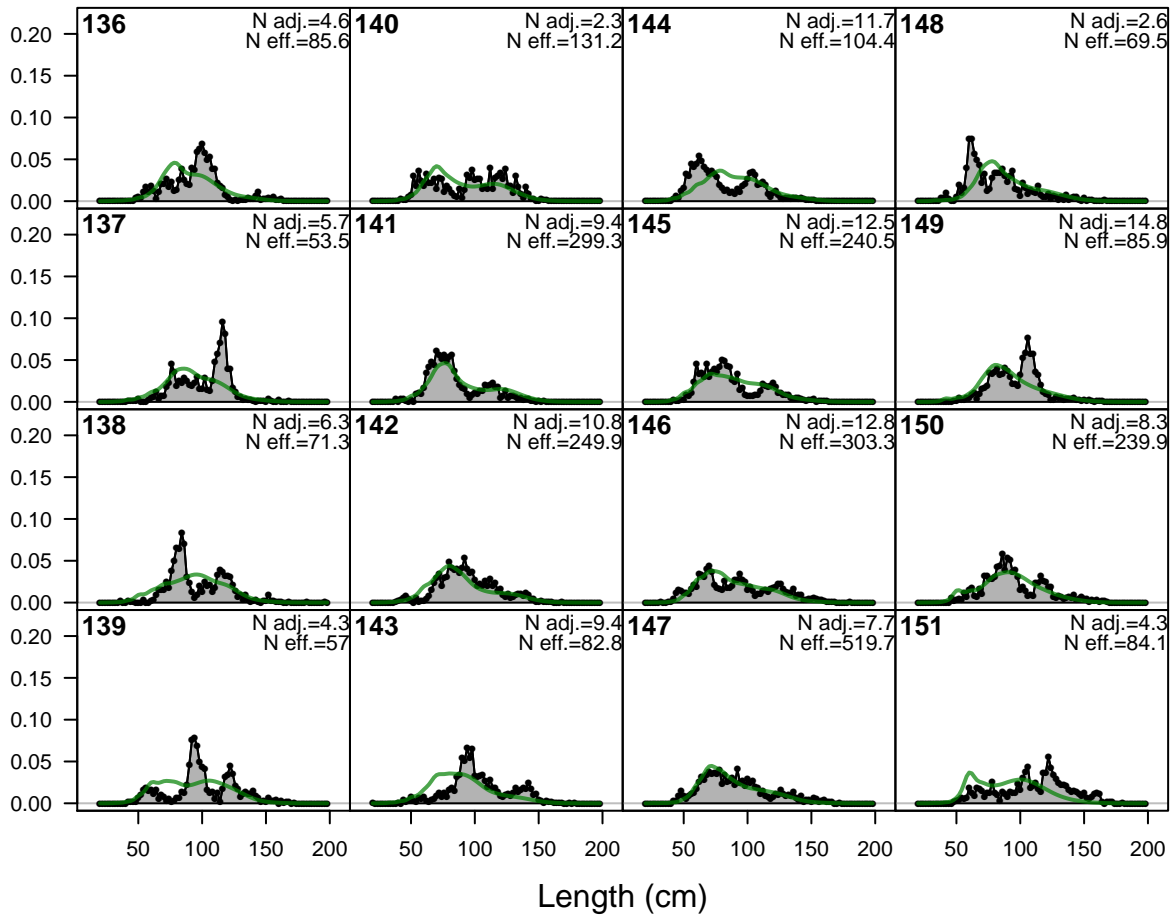
Proportion



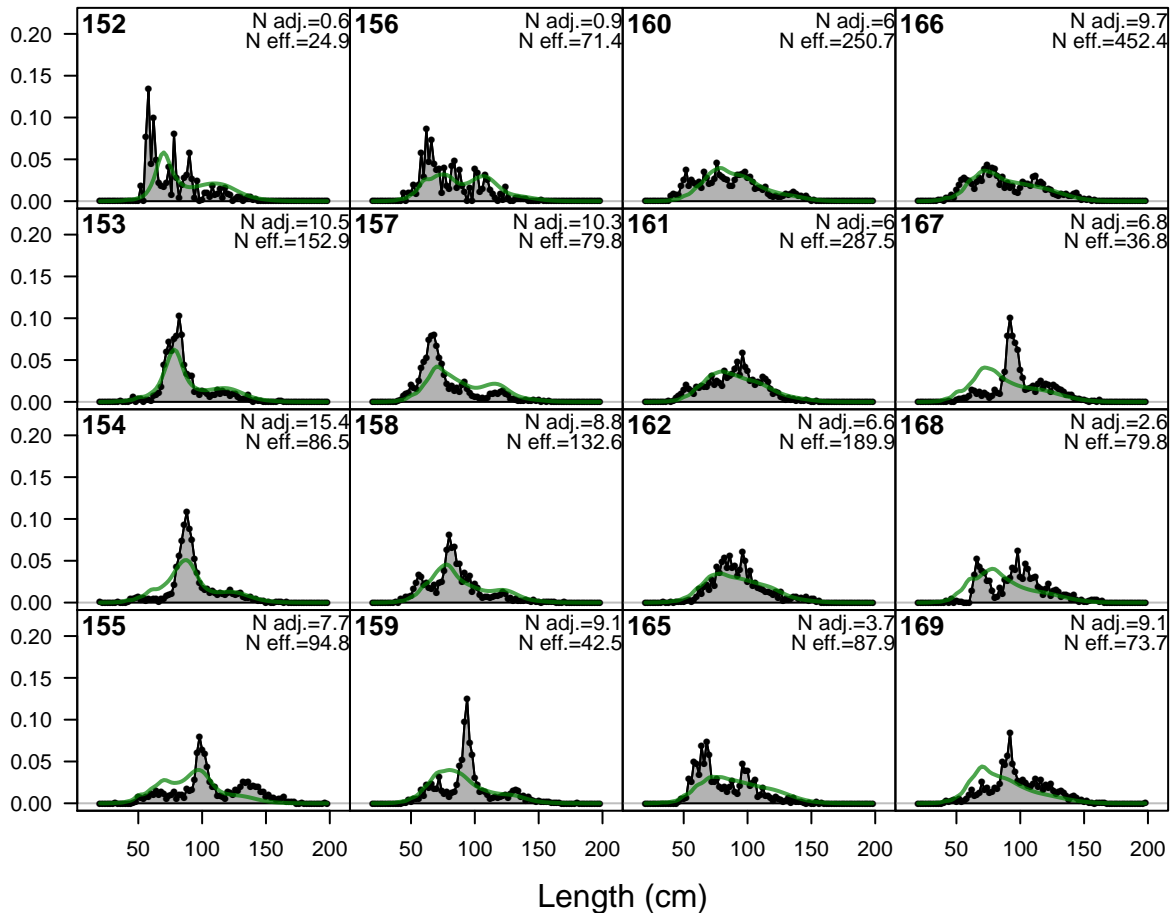
Proportion



Proportion

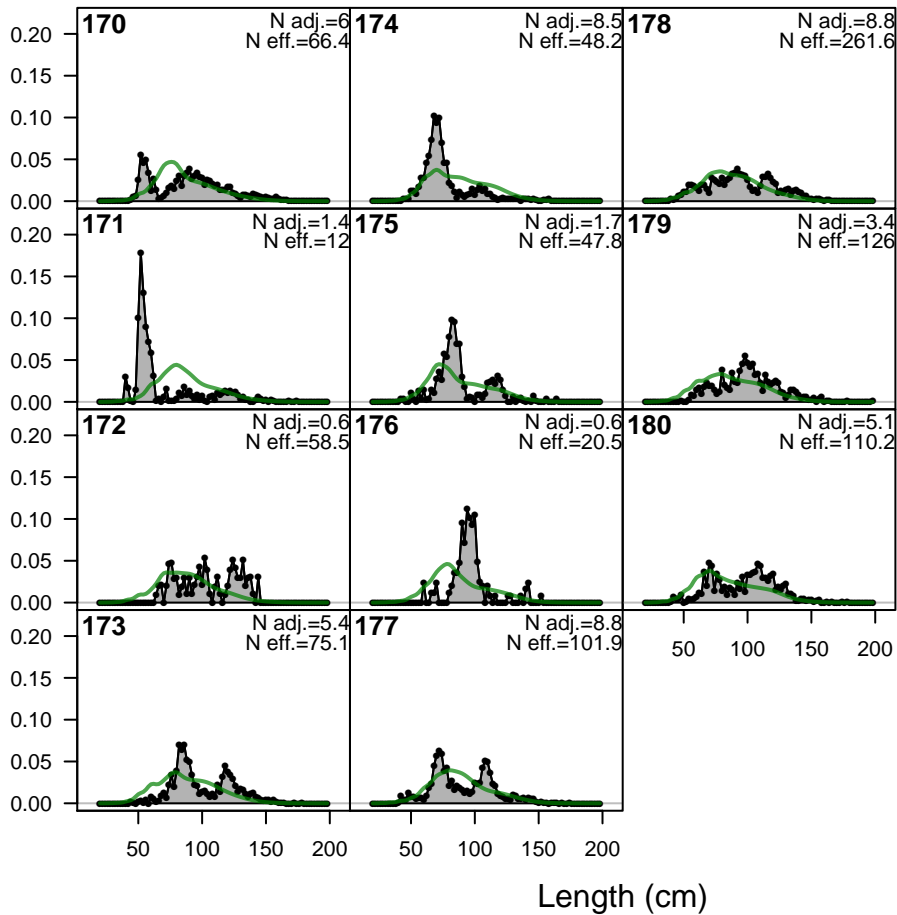


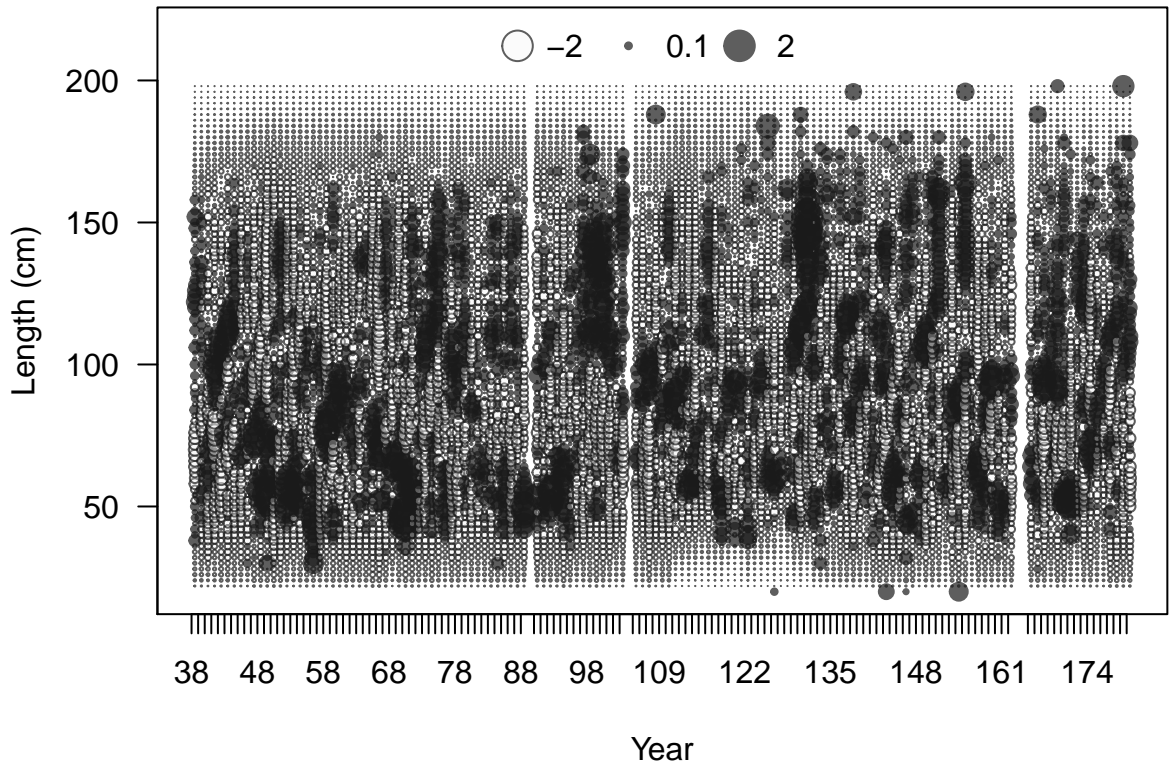
Proportion



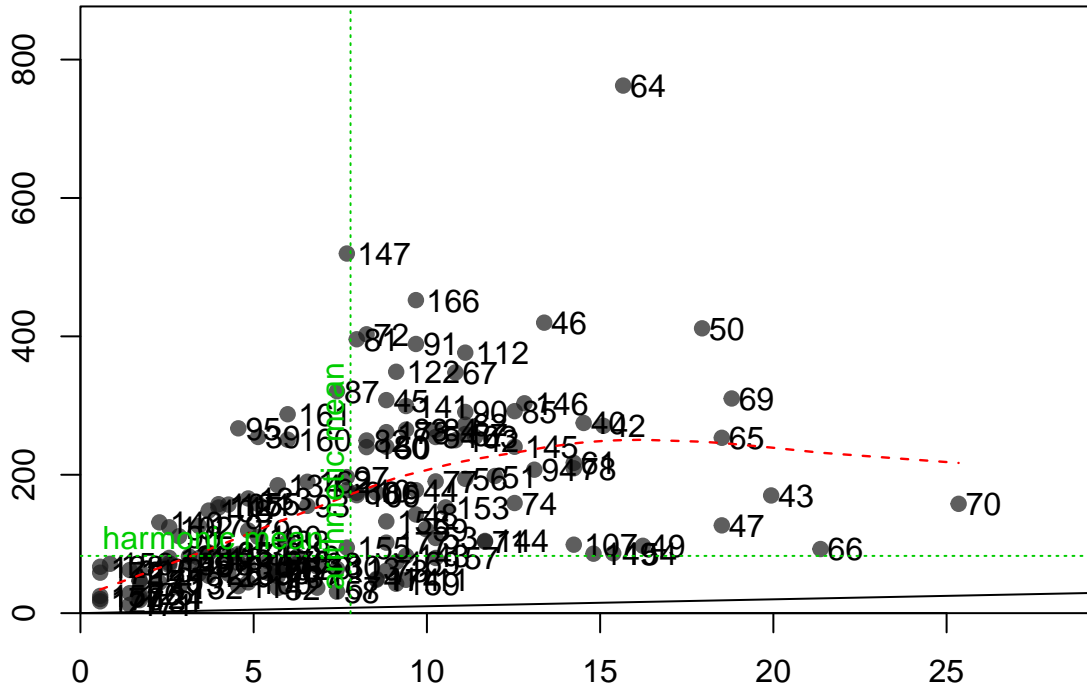


Proportion



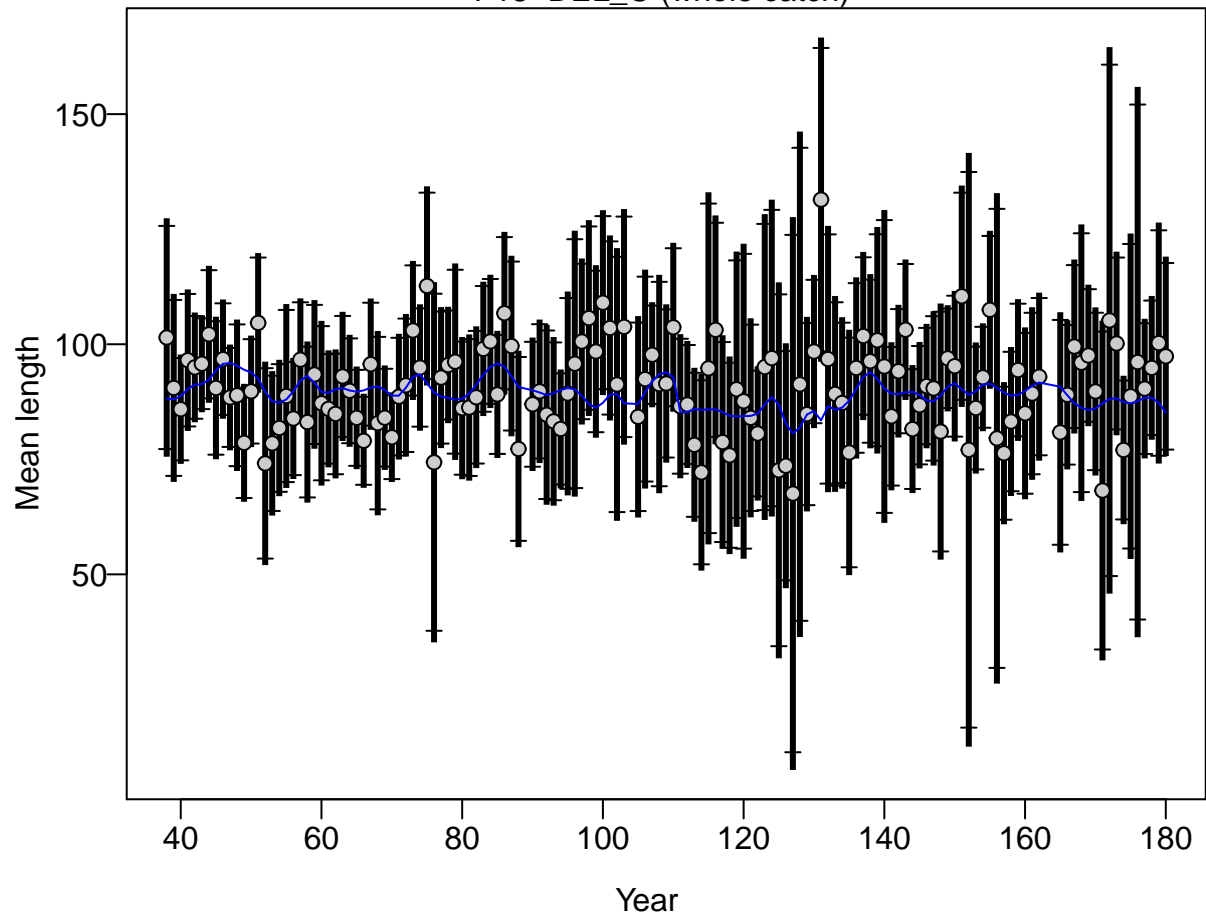


Effective sample size

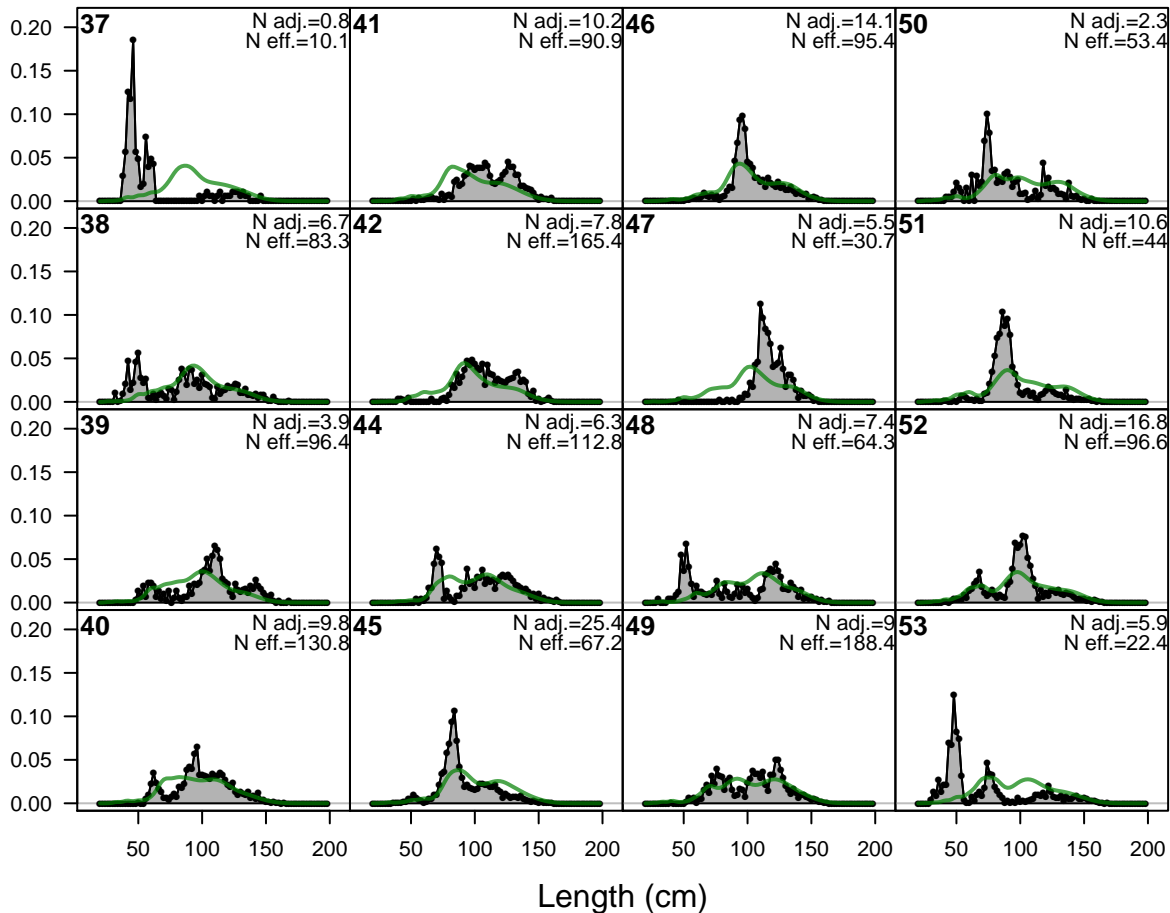


Observed sample size

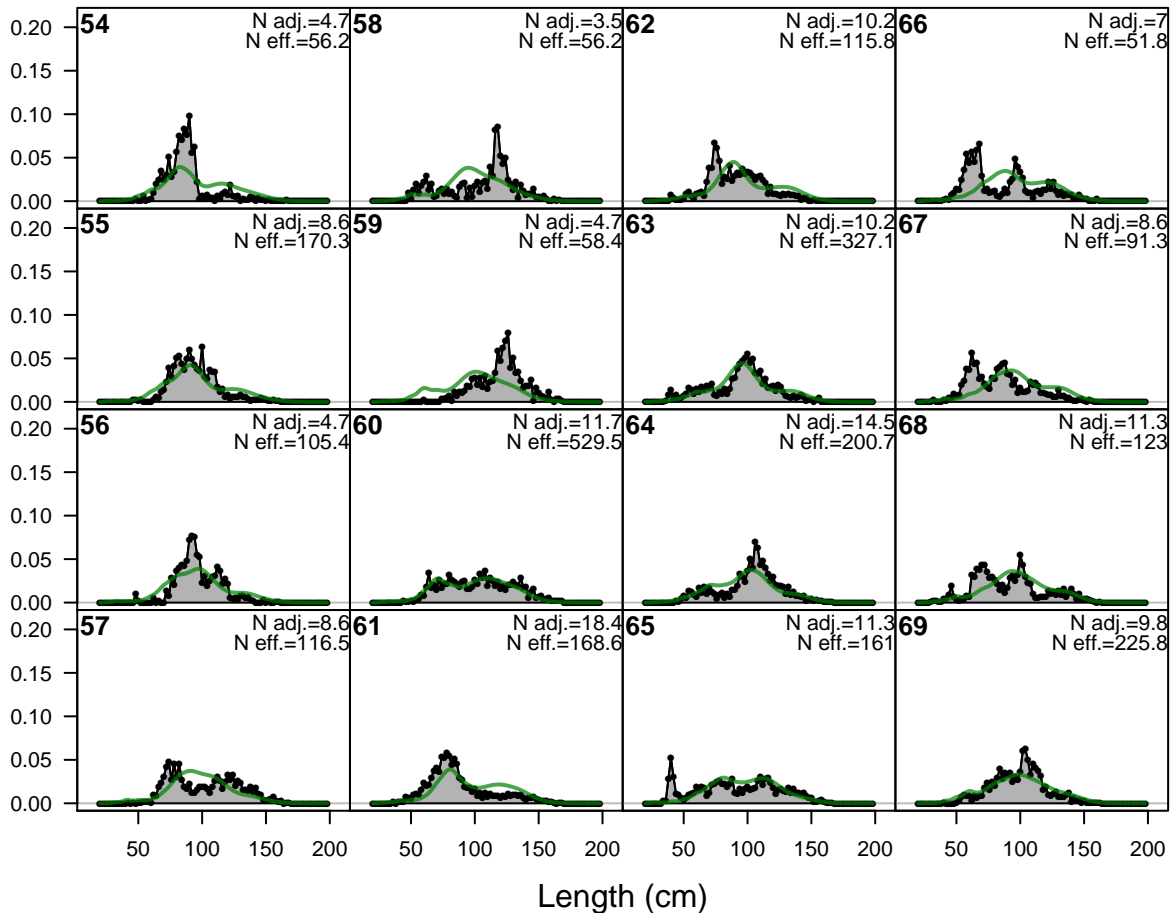
F18-DEL\_C (whole catch)



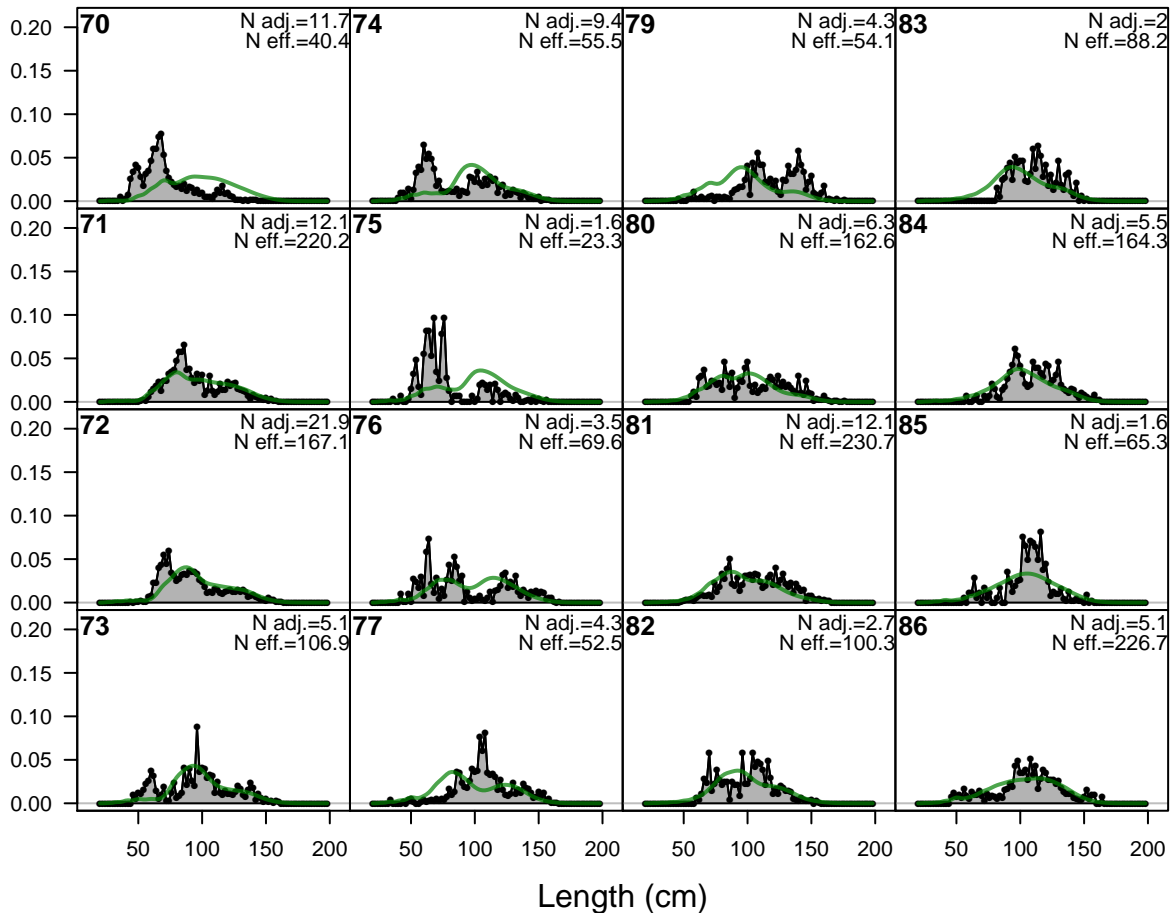
Proportion



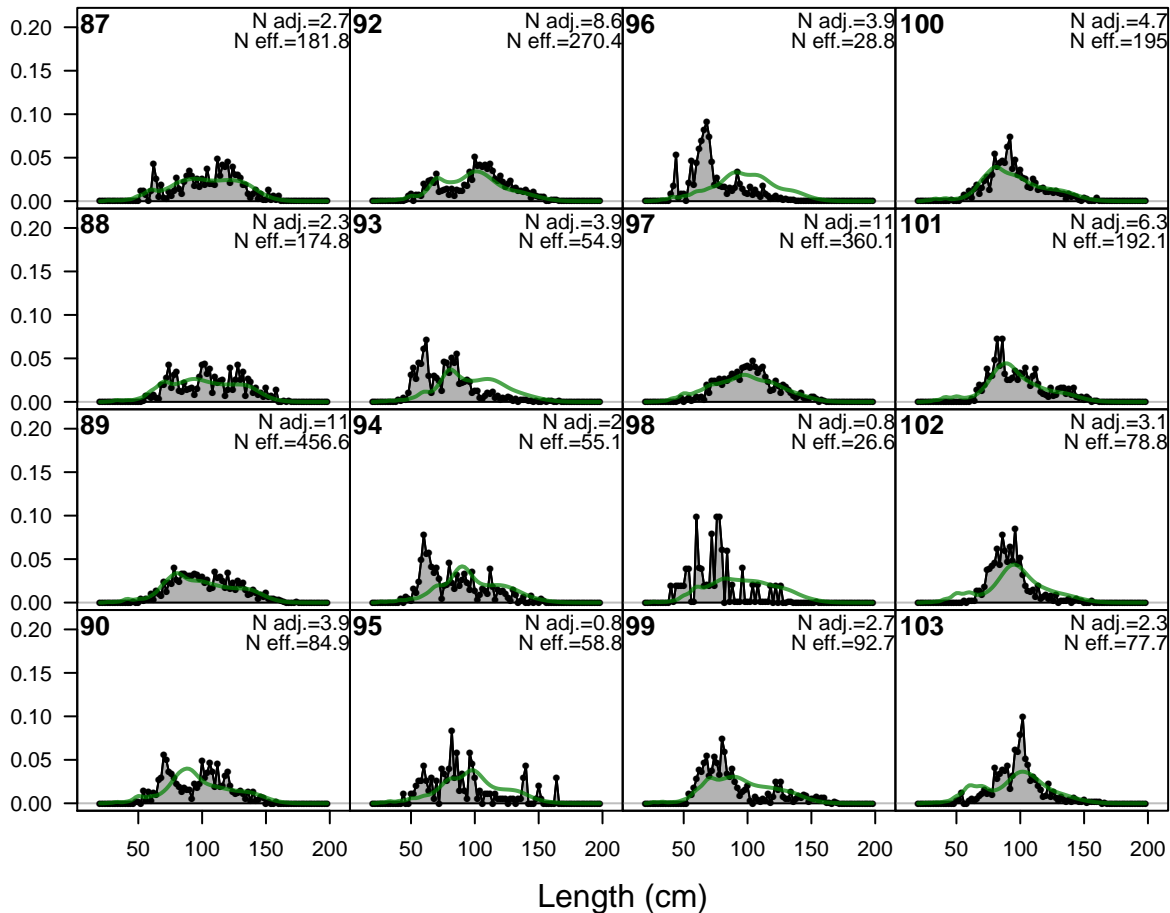
Proportion



Proportion

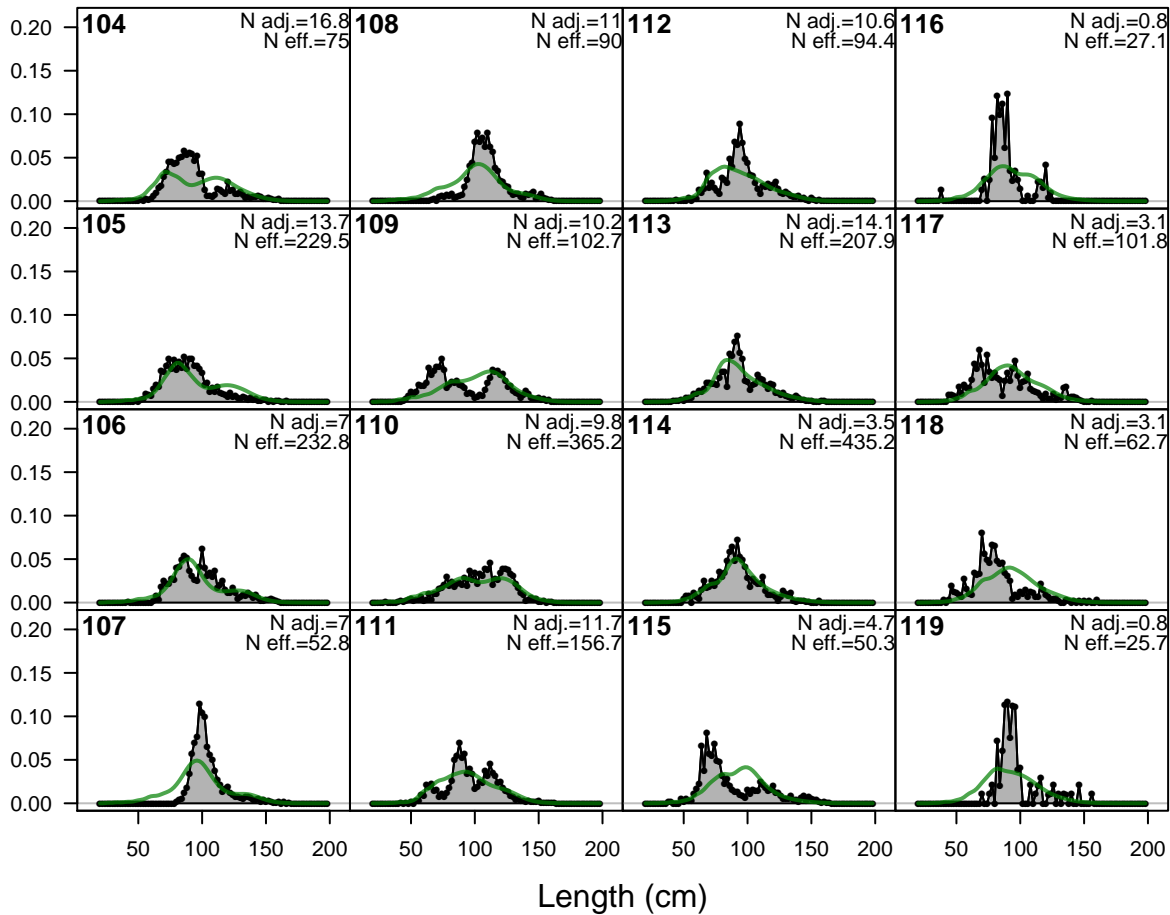


Proportion

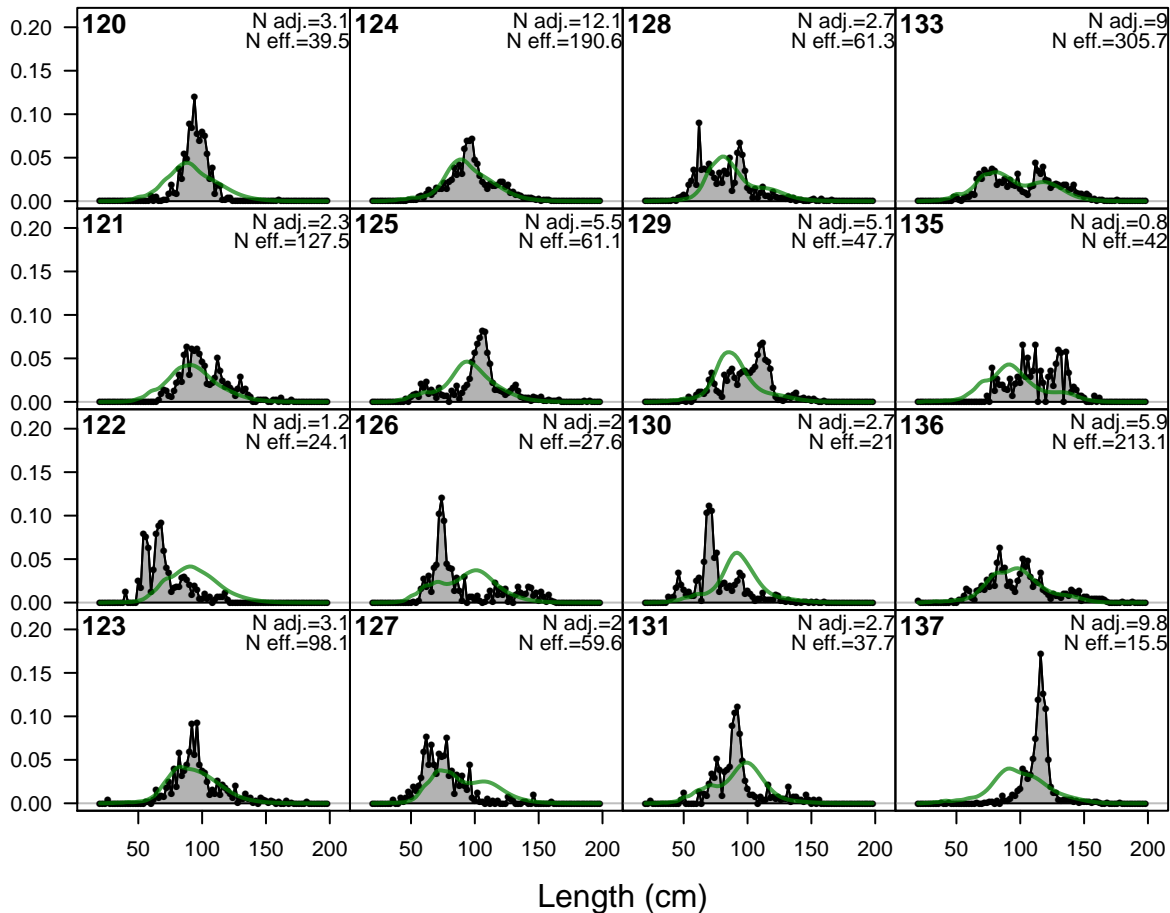




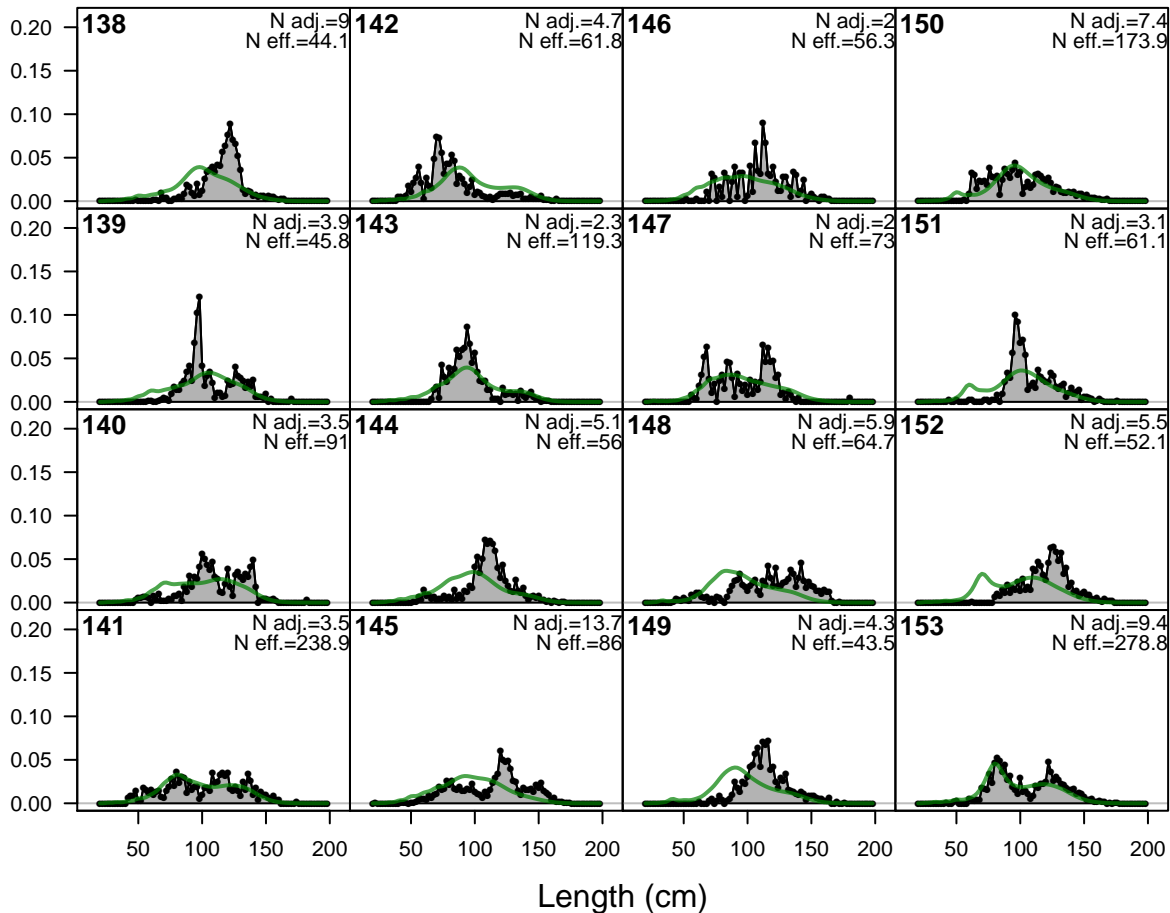
Proportion



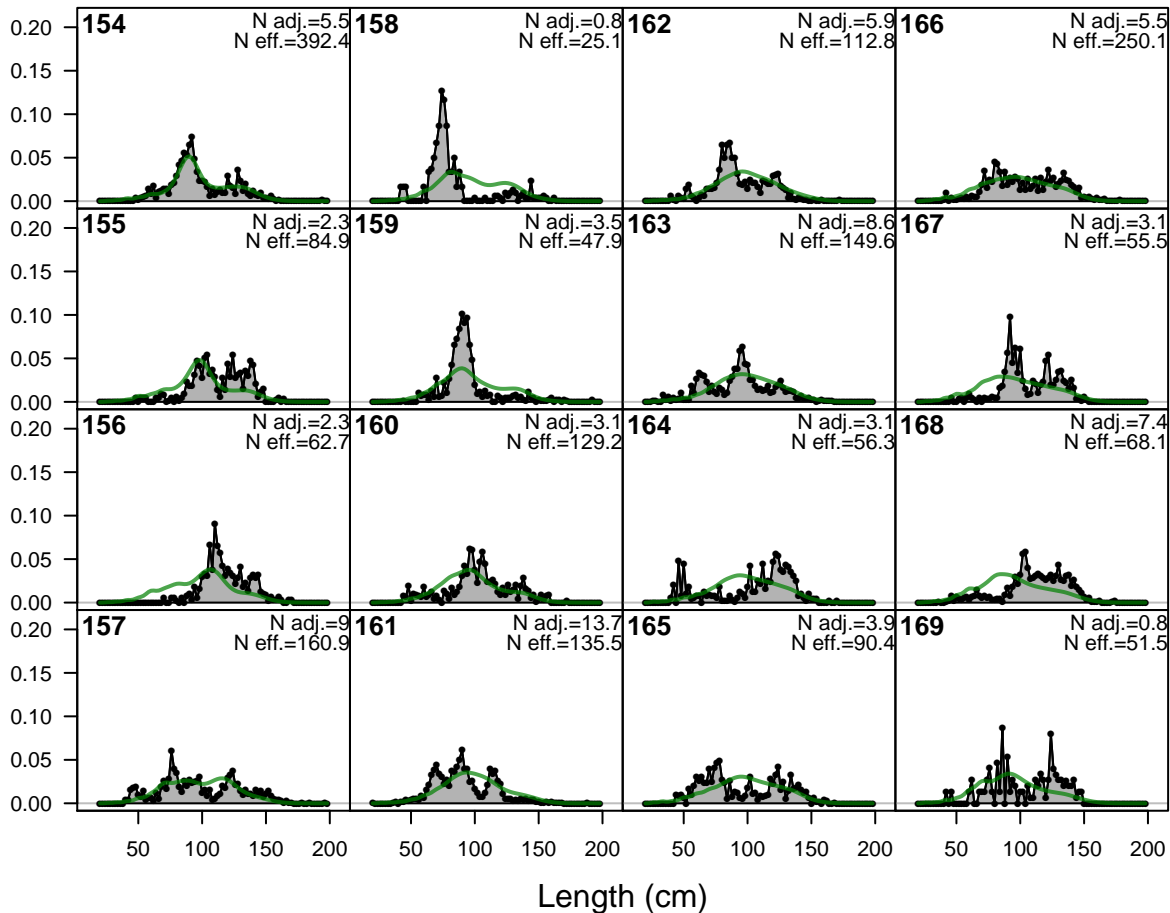
Proportion



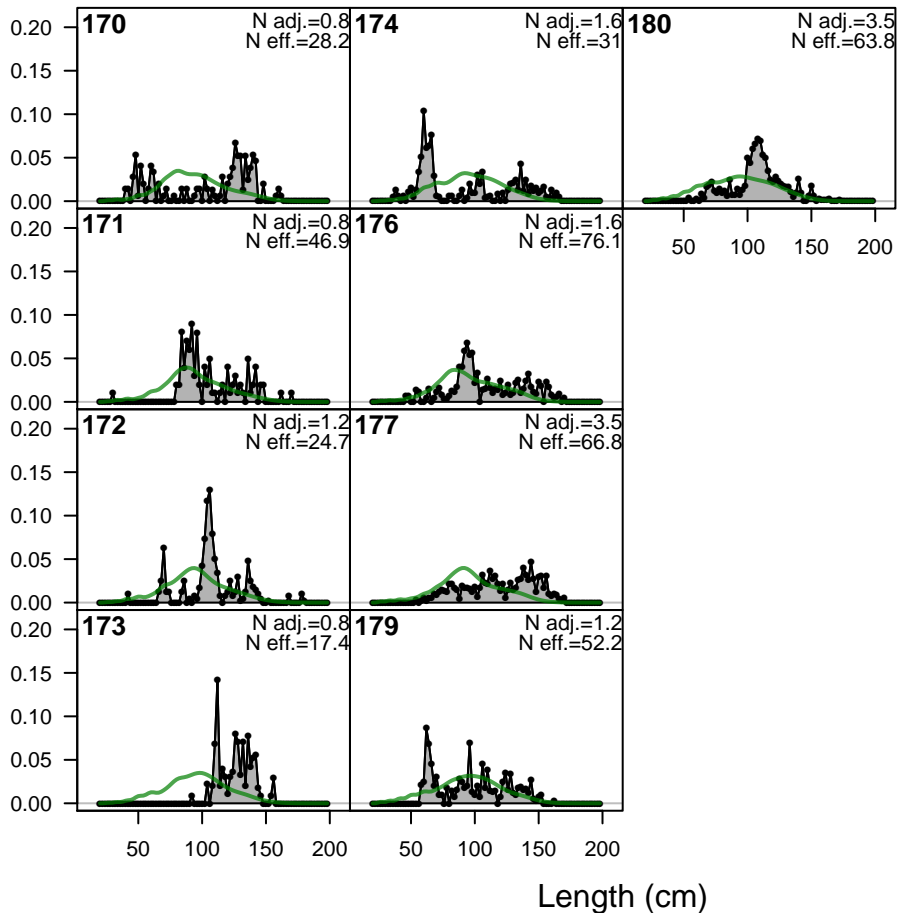
Proportion

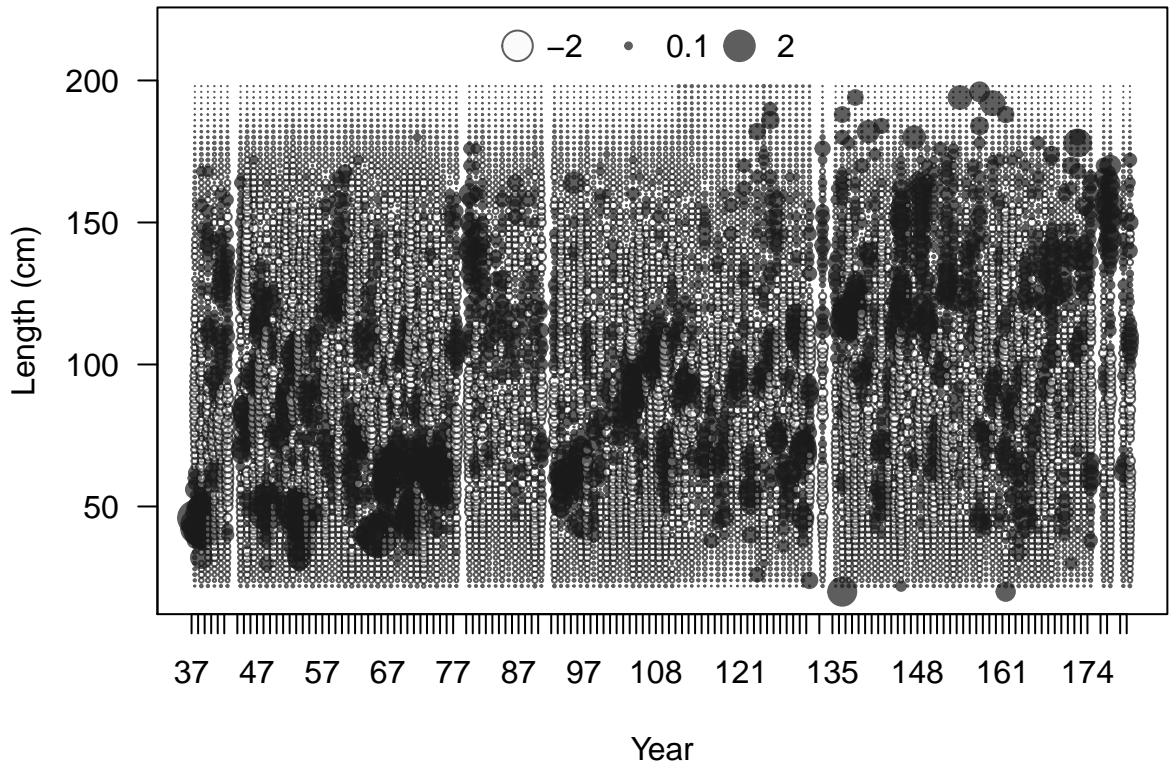


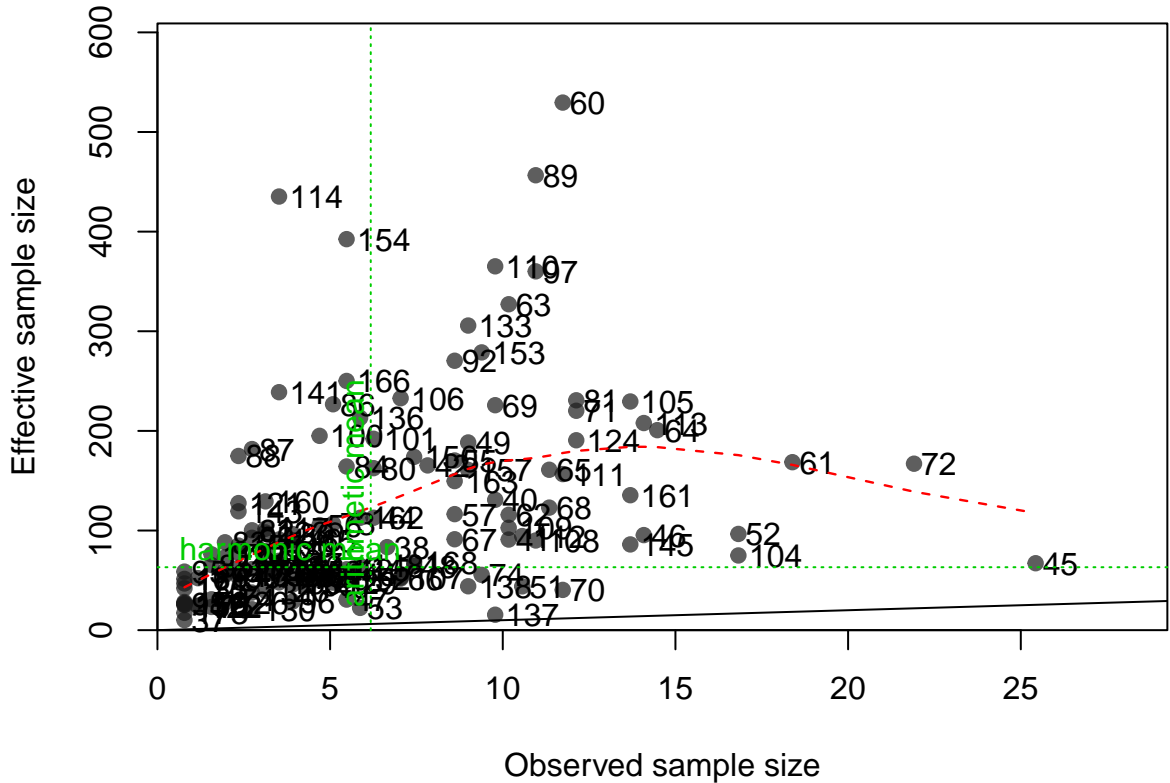
Proportion



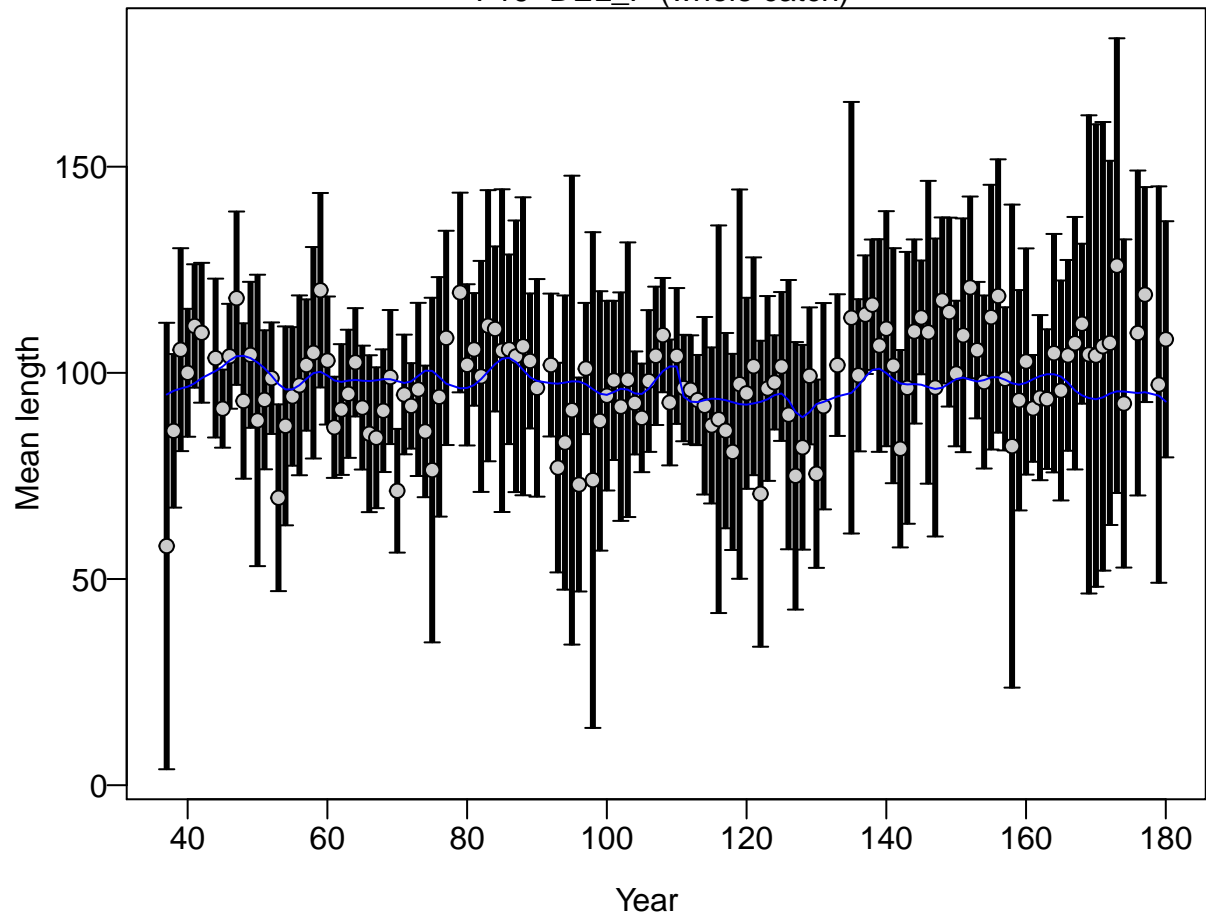
Proportion





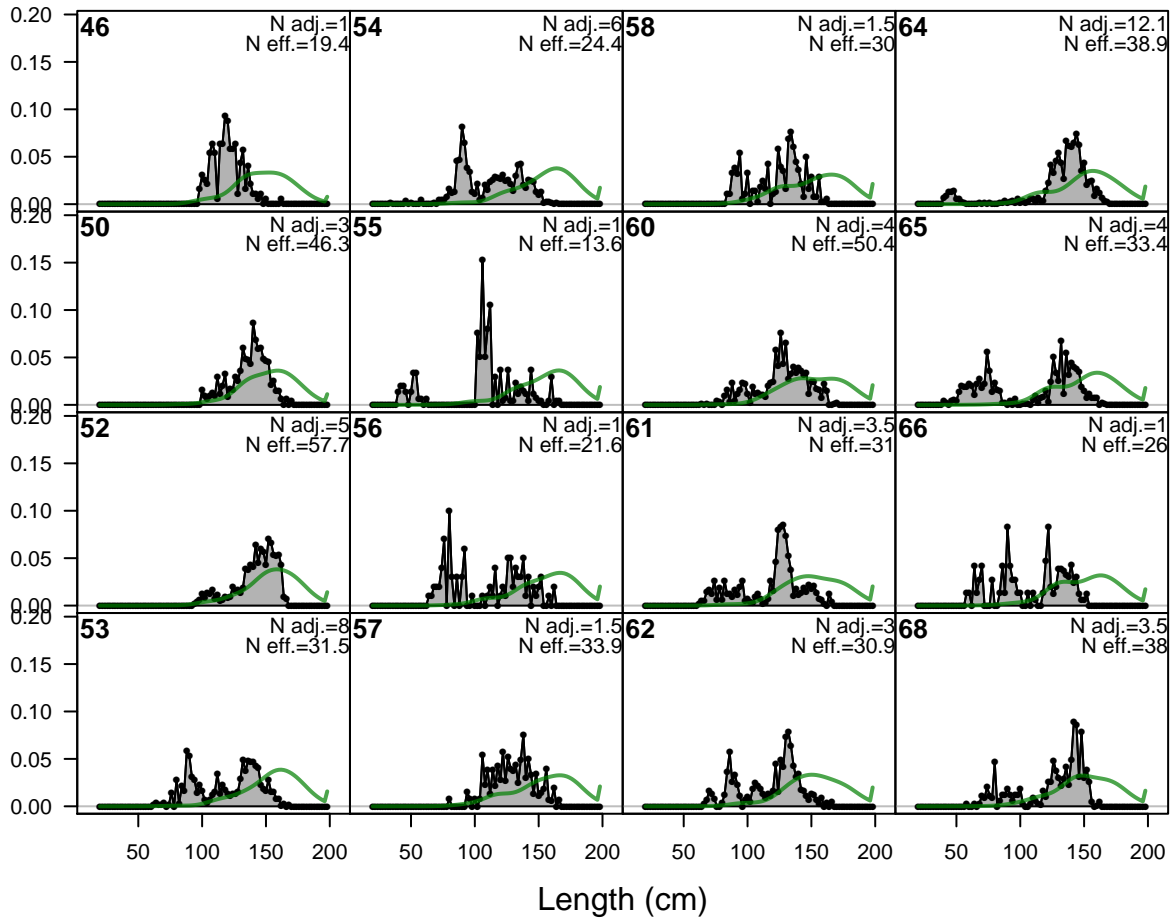


F19-DEL\_P (whole catch)

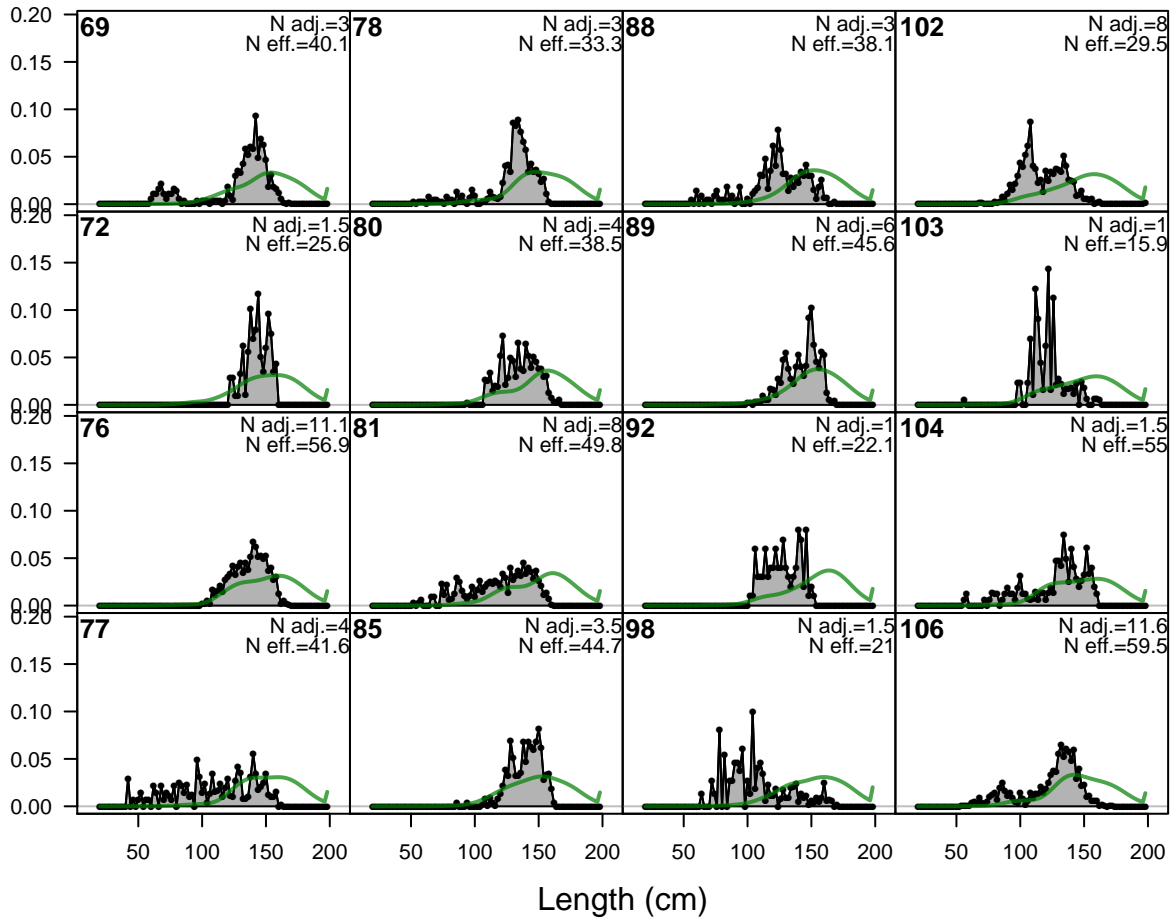




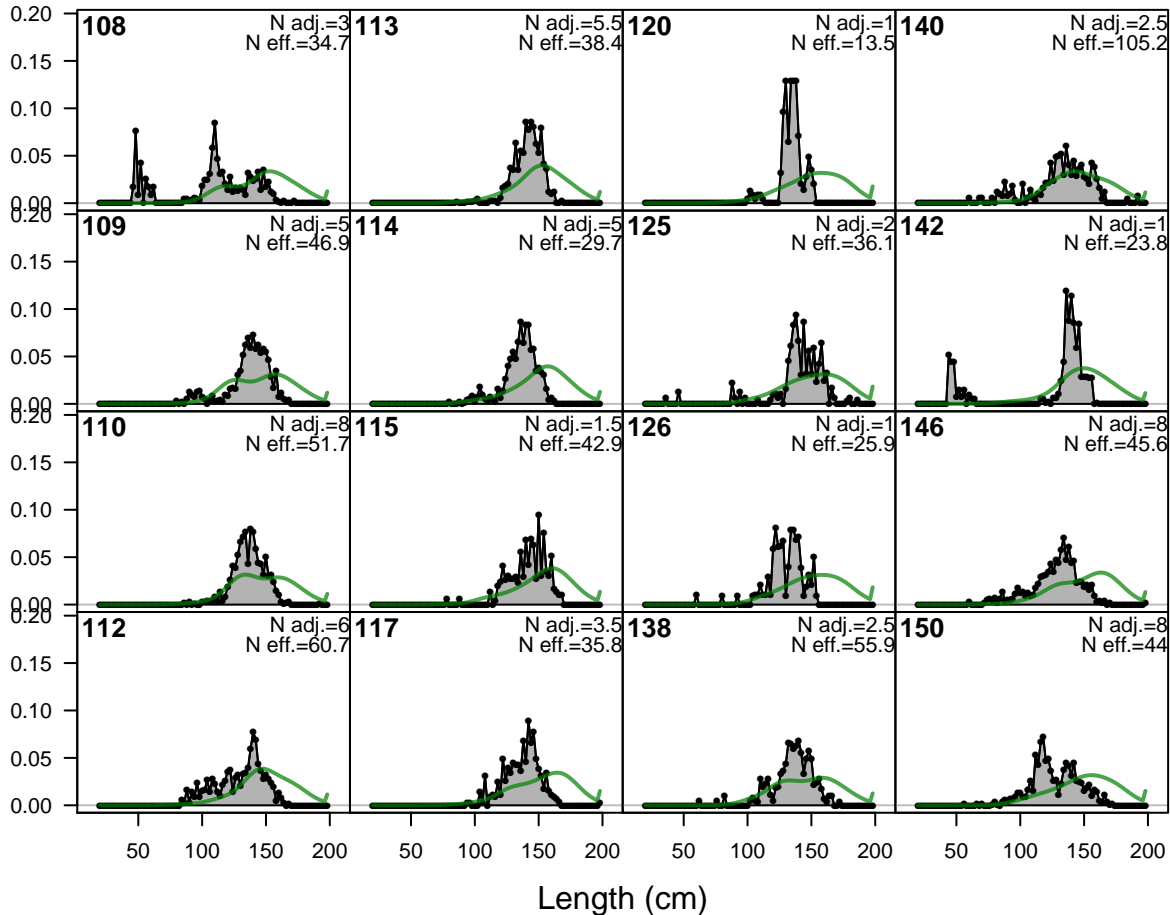
Proportion



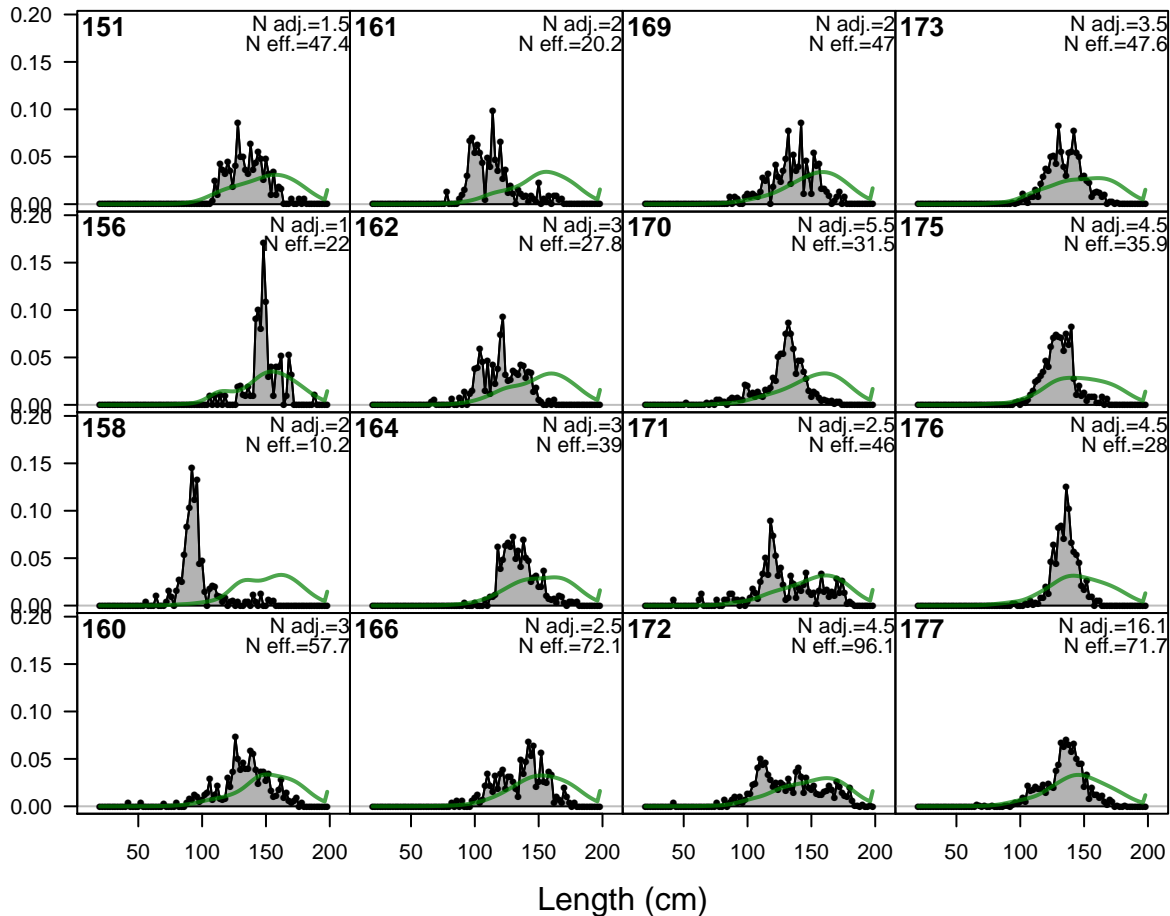
Proportion



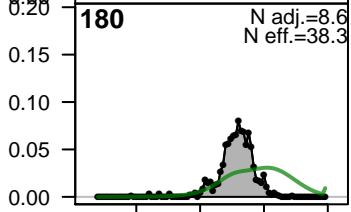
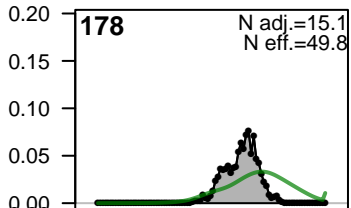
Proportion



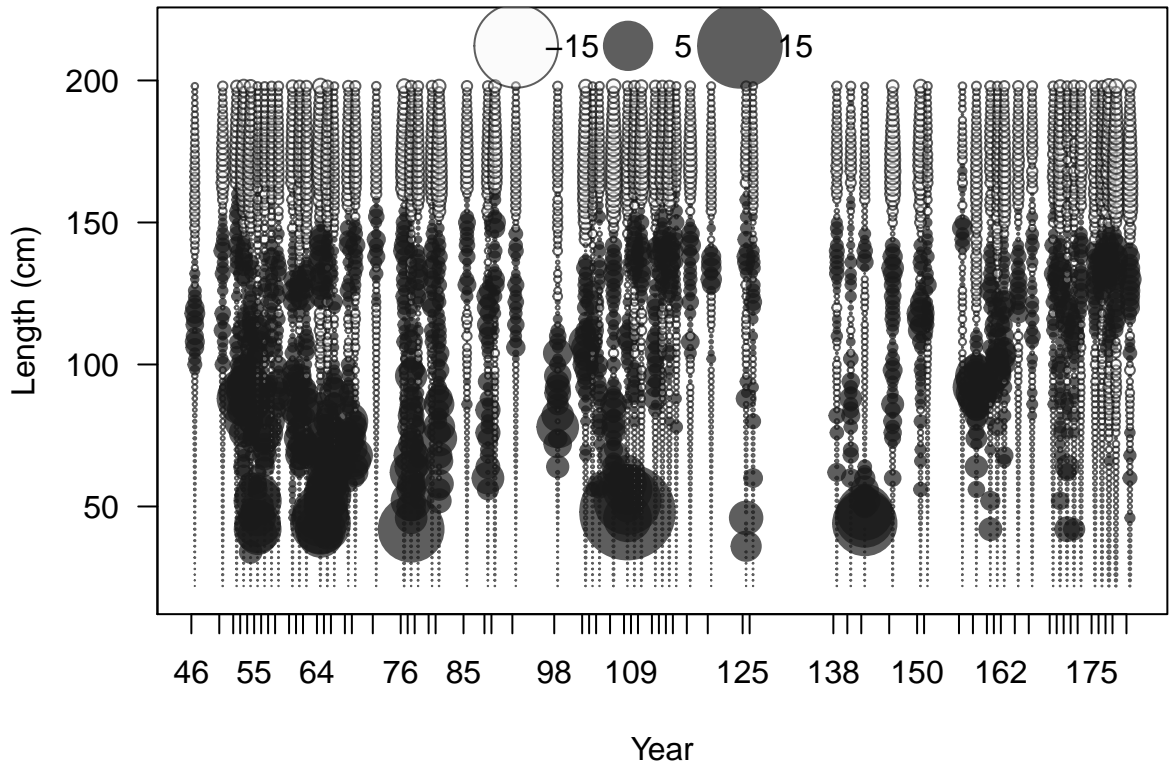
Proportion

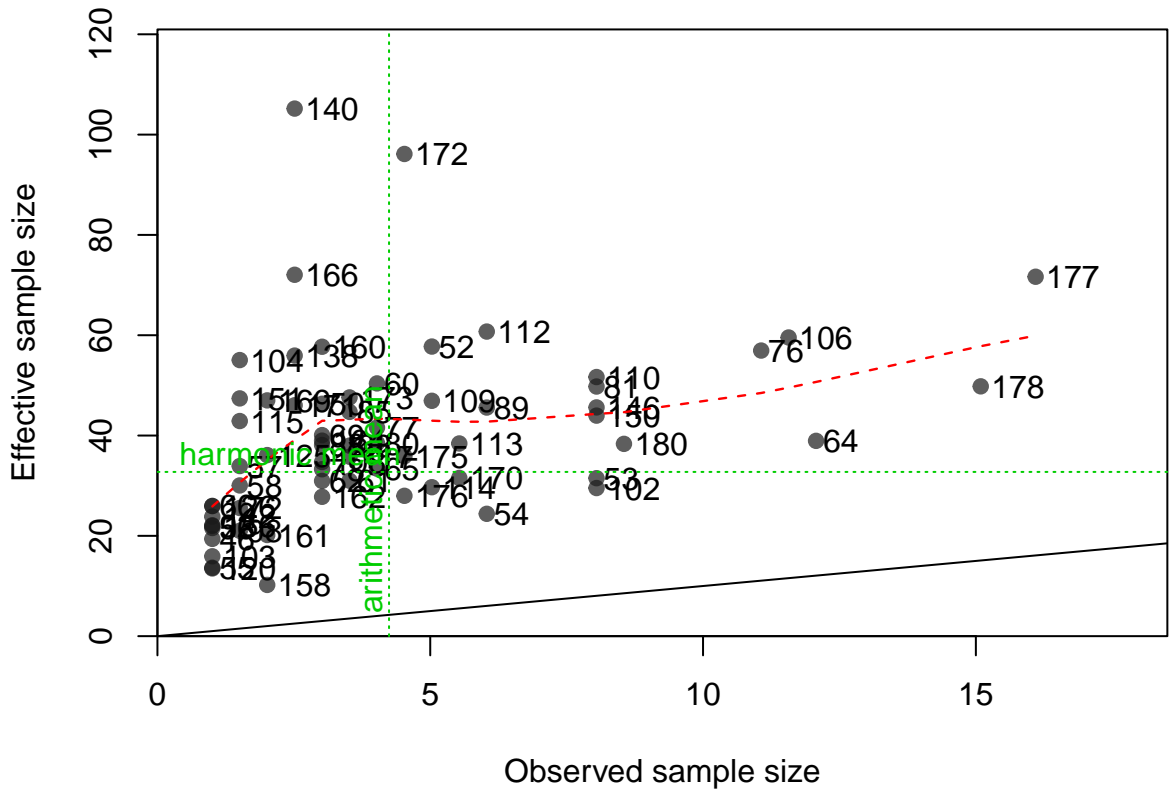


Proportion

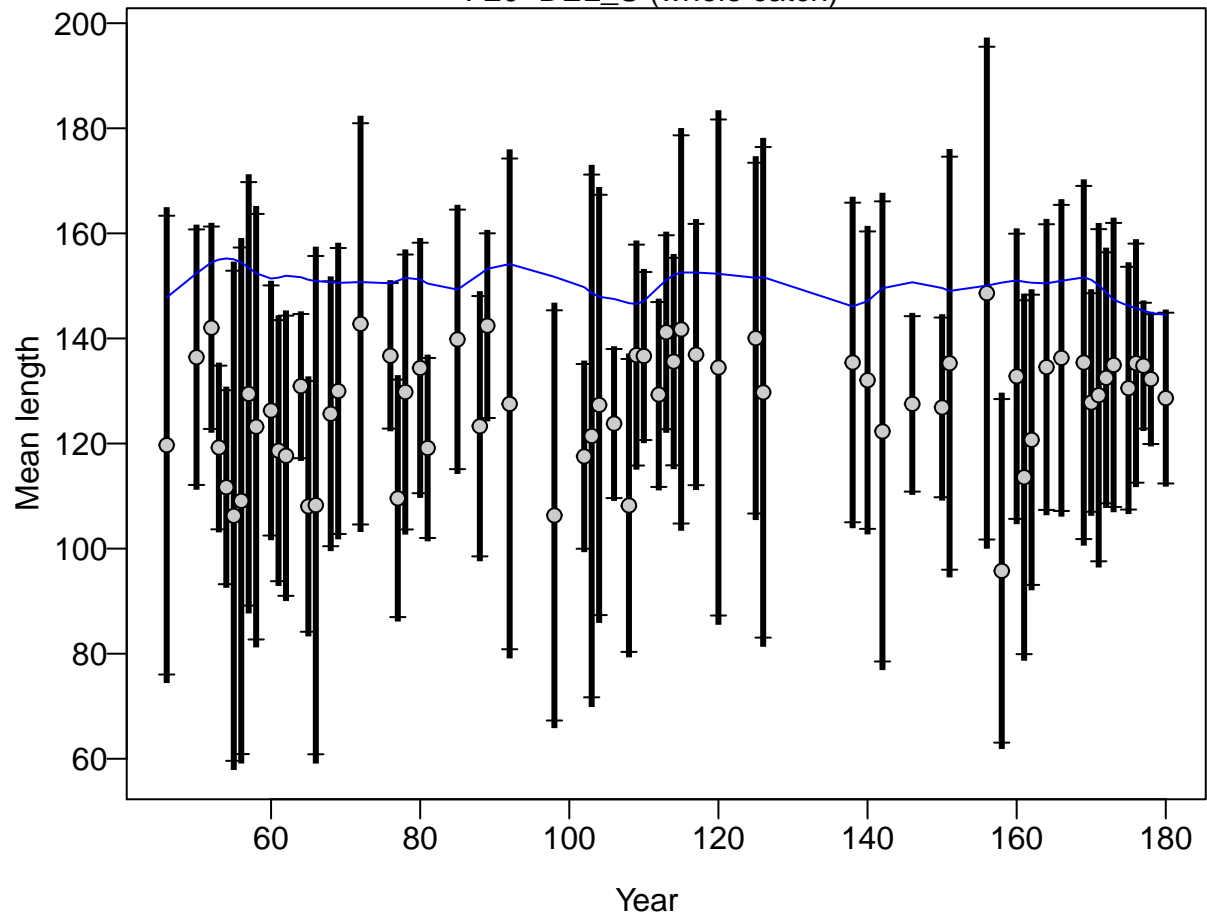


Length (cm)



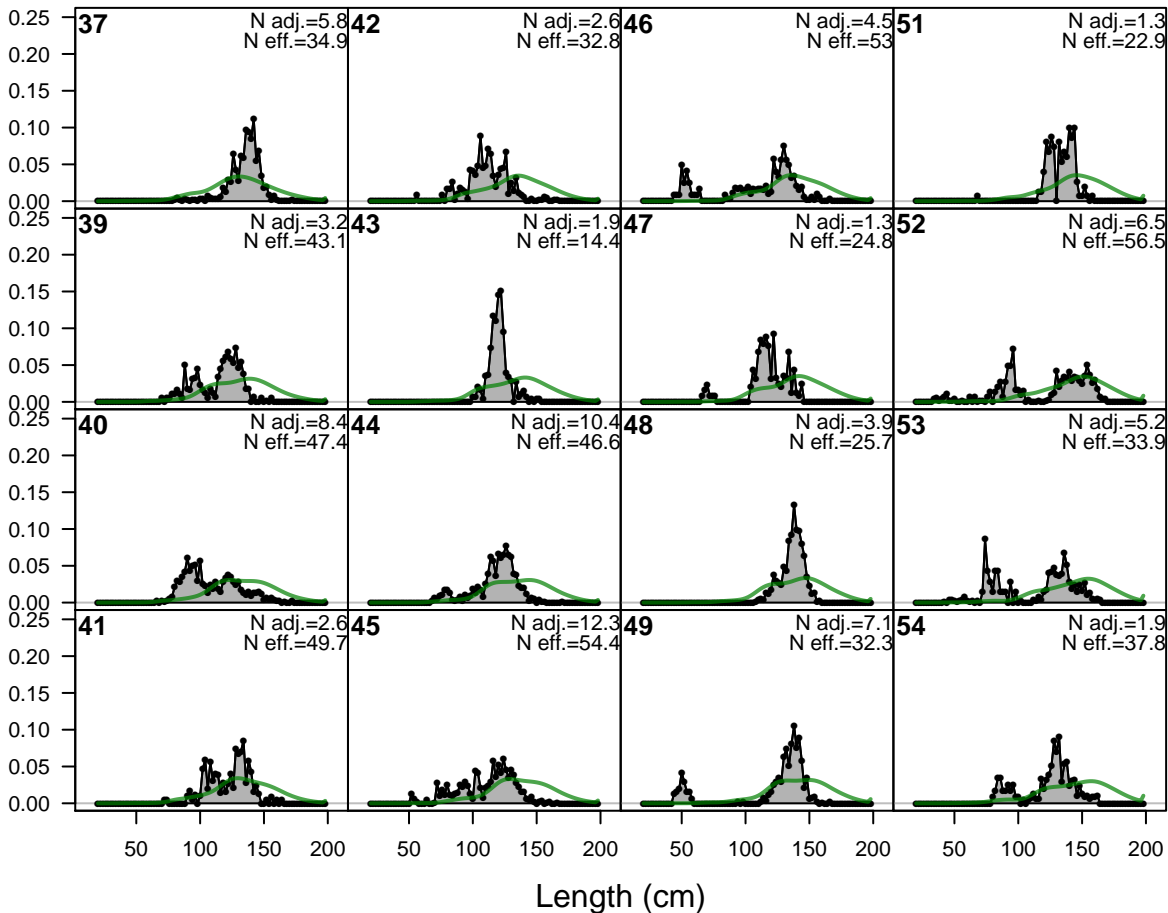


## F20-DEL\_S (whole catch)

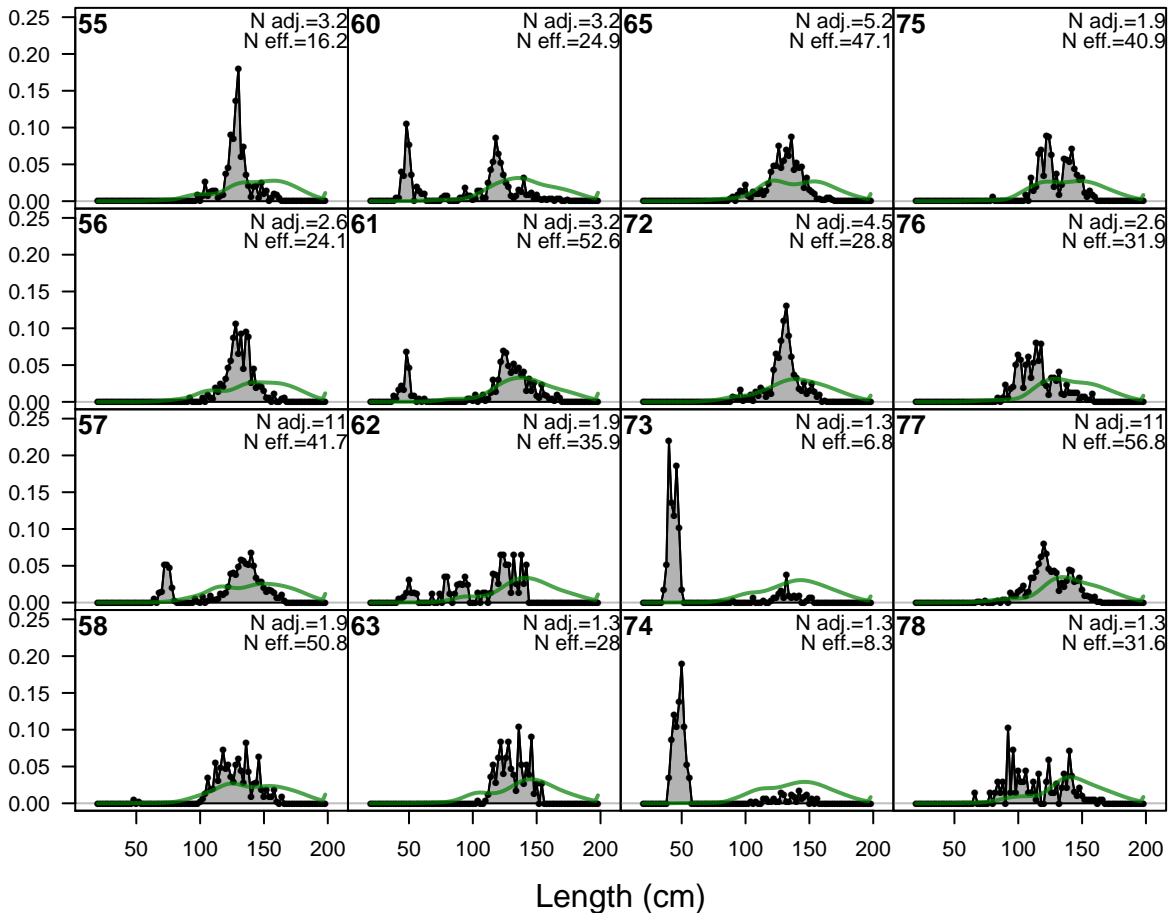




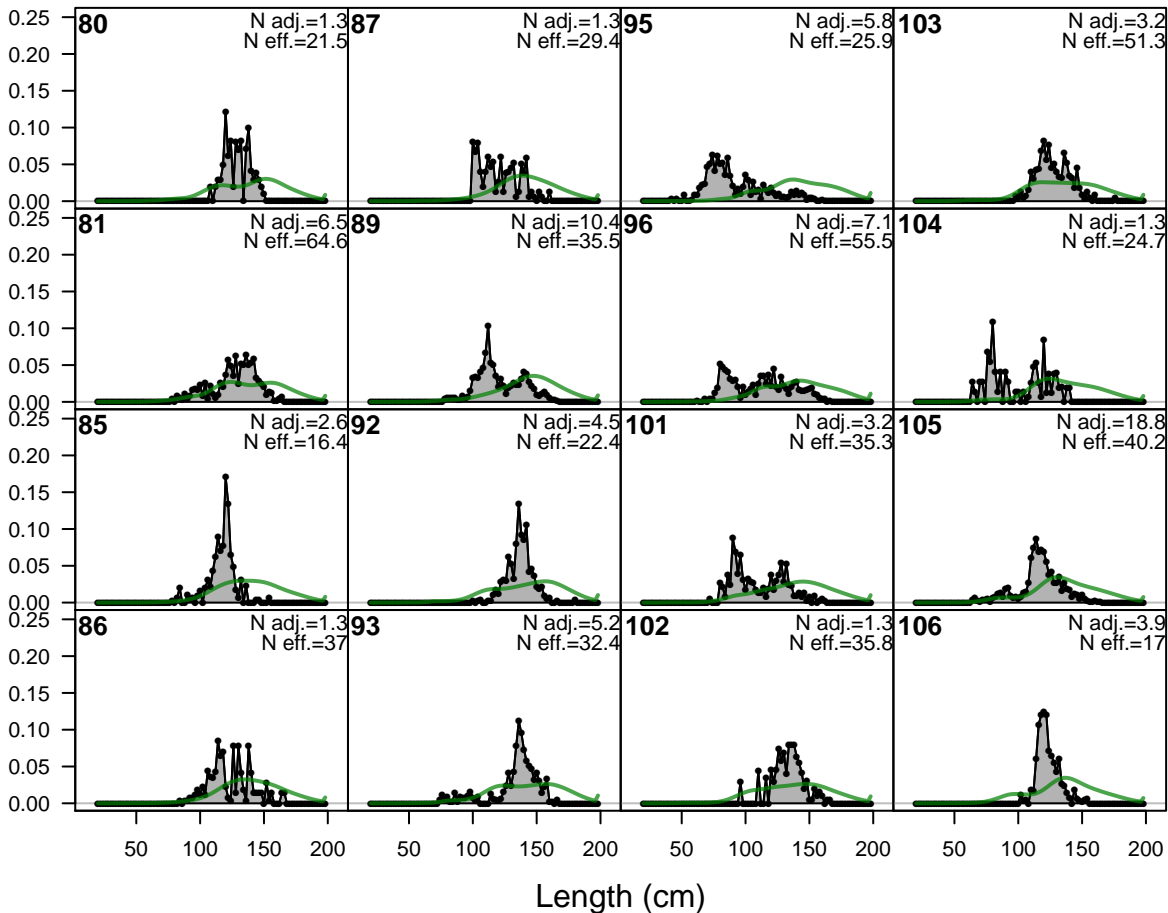
Proportion



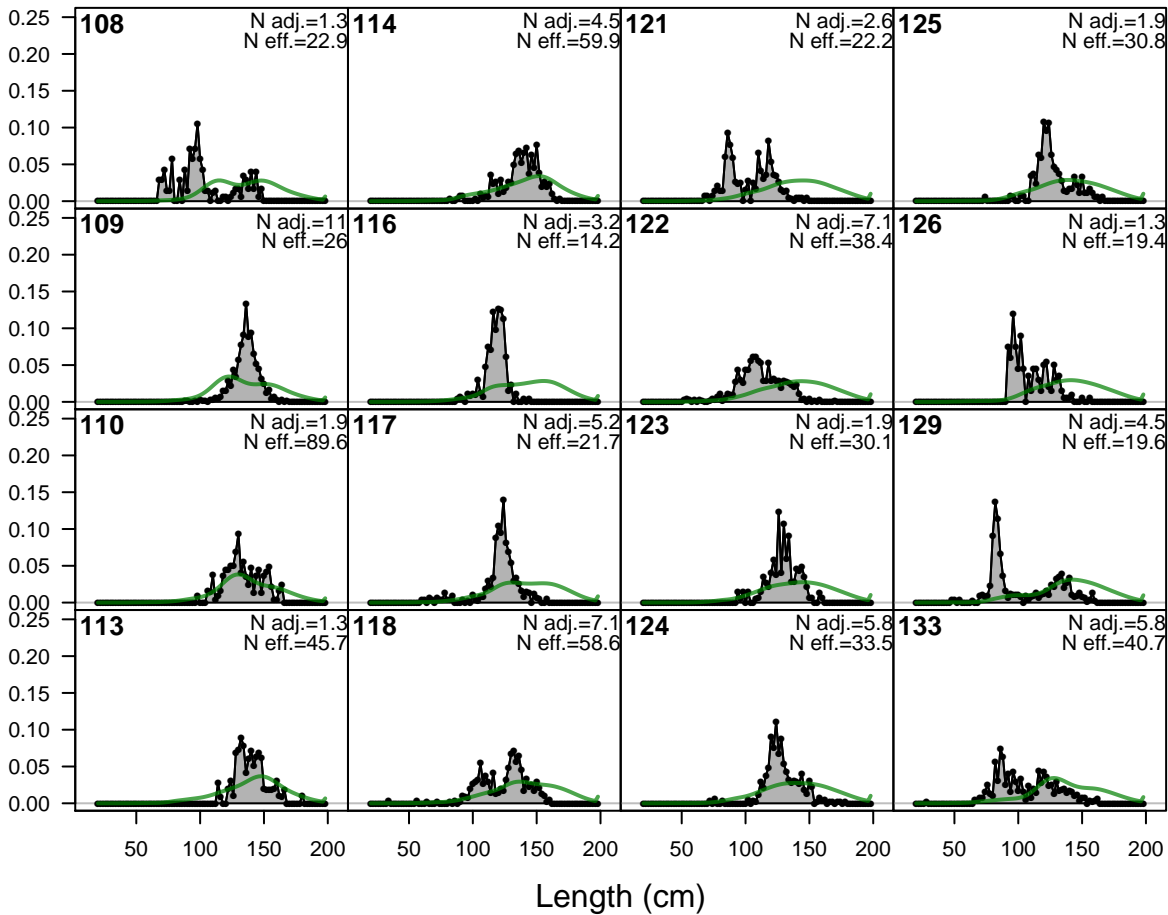
Proportion



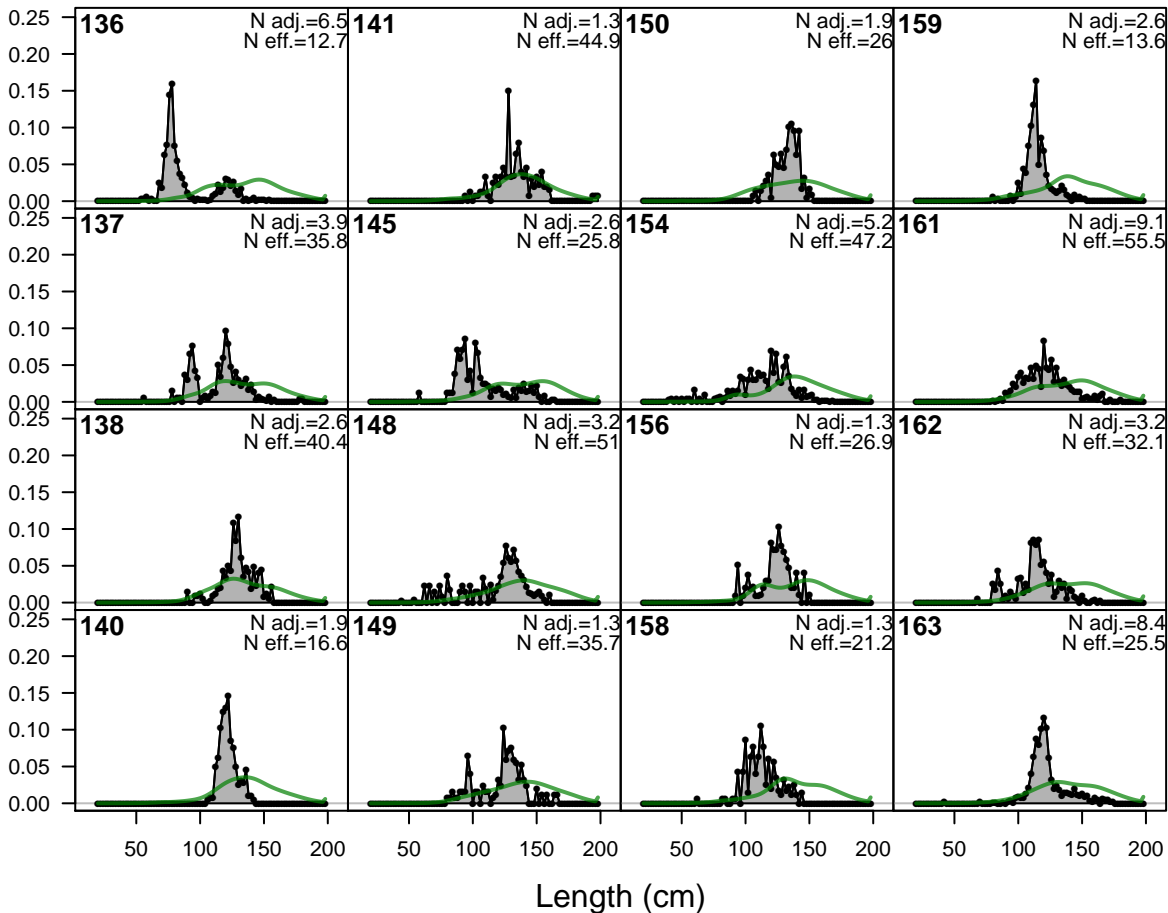
Proportion



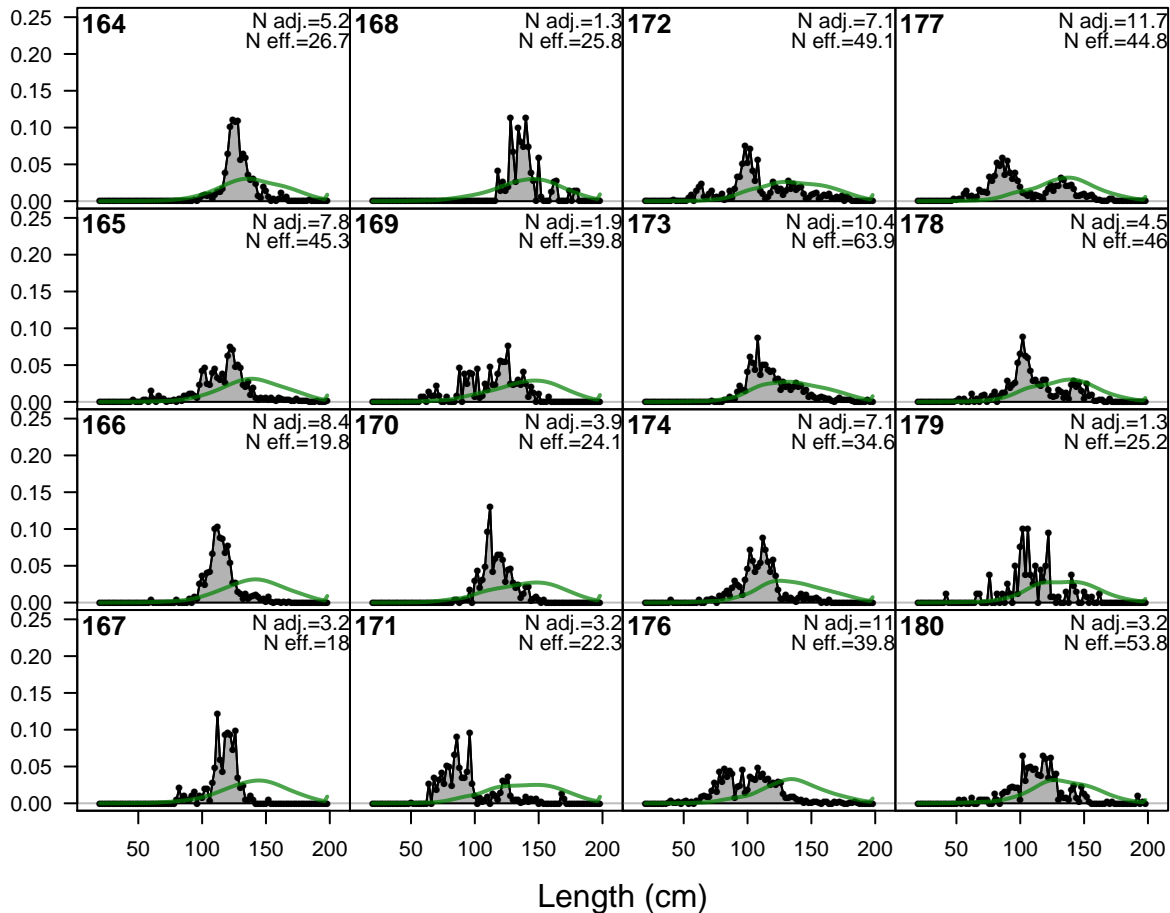
Proportion

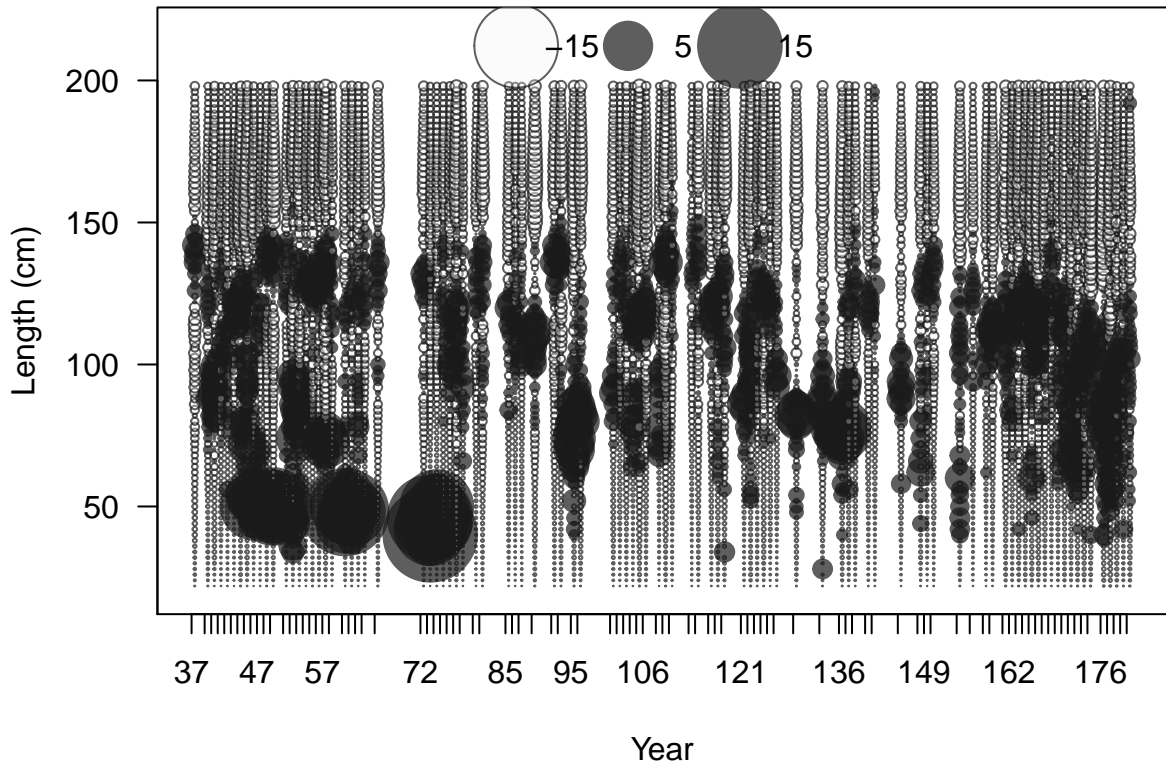


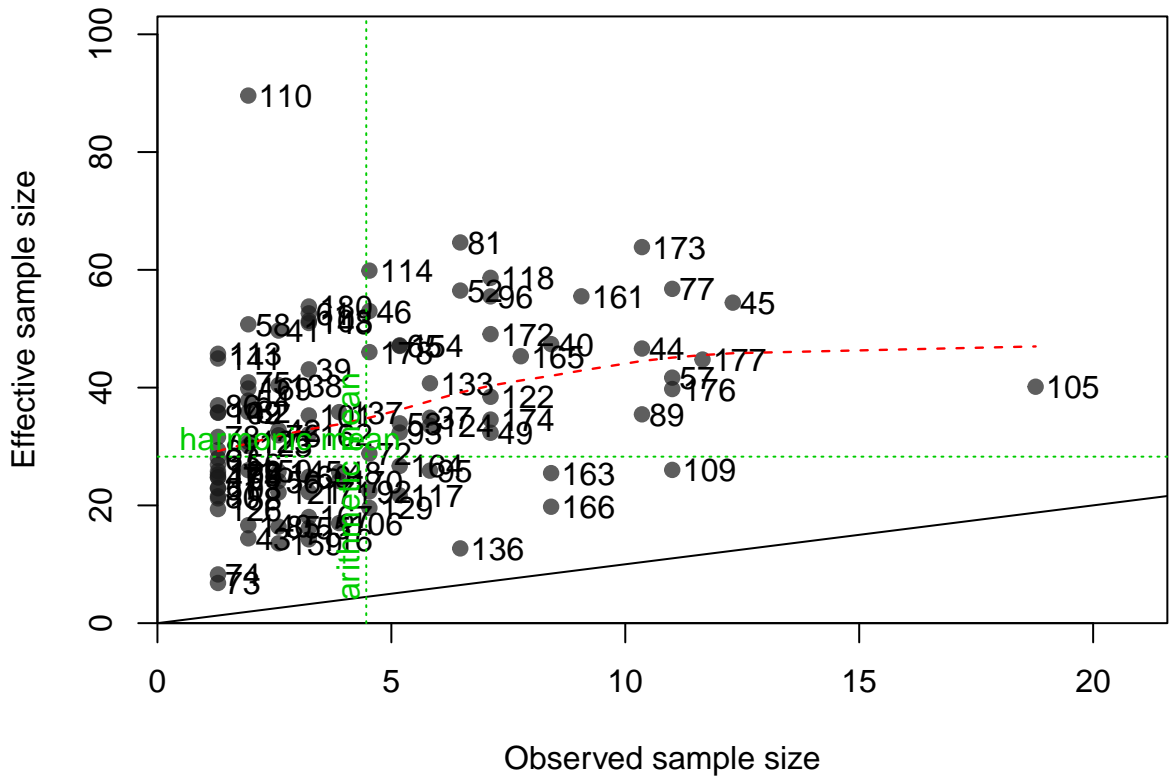
Proportion



Proportion

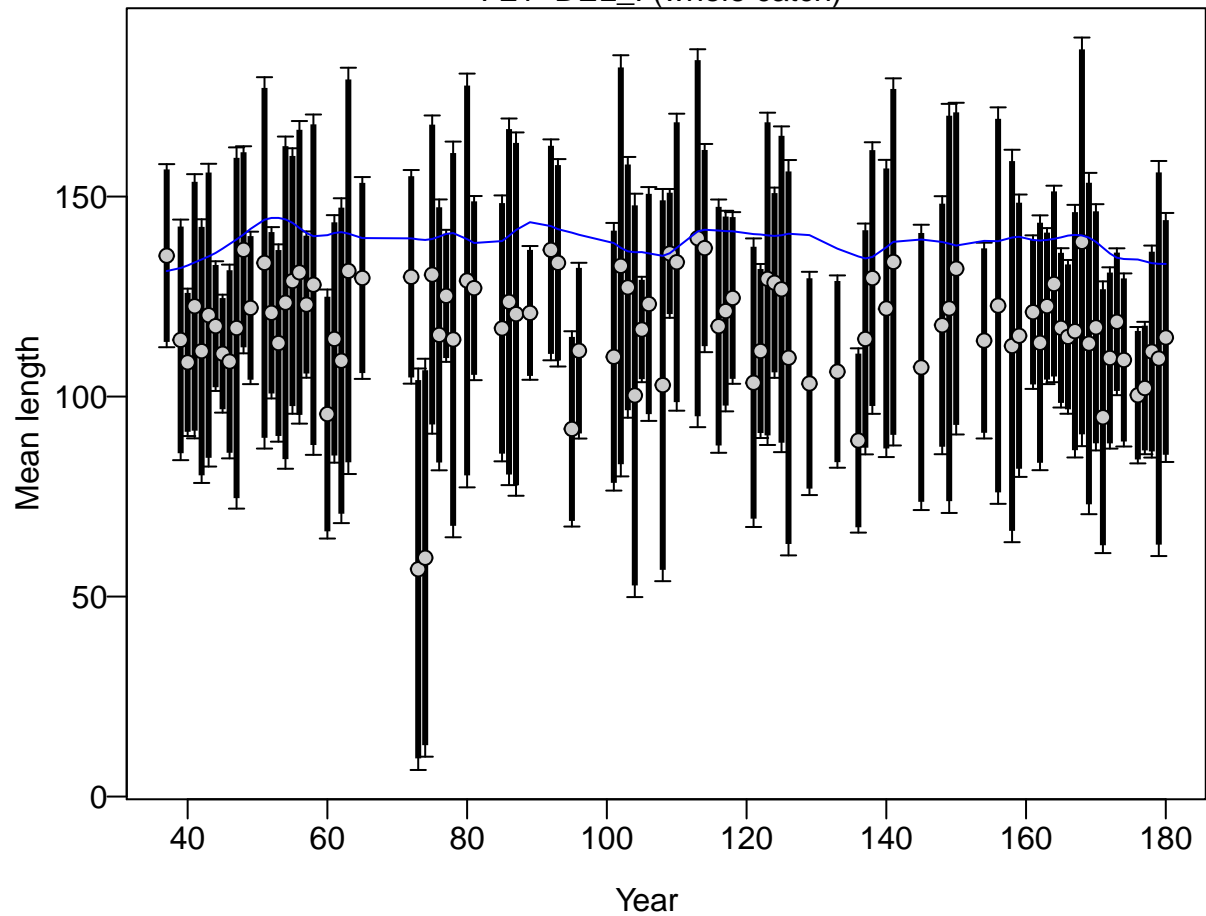




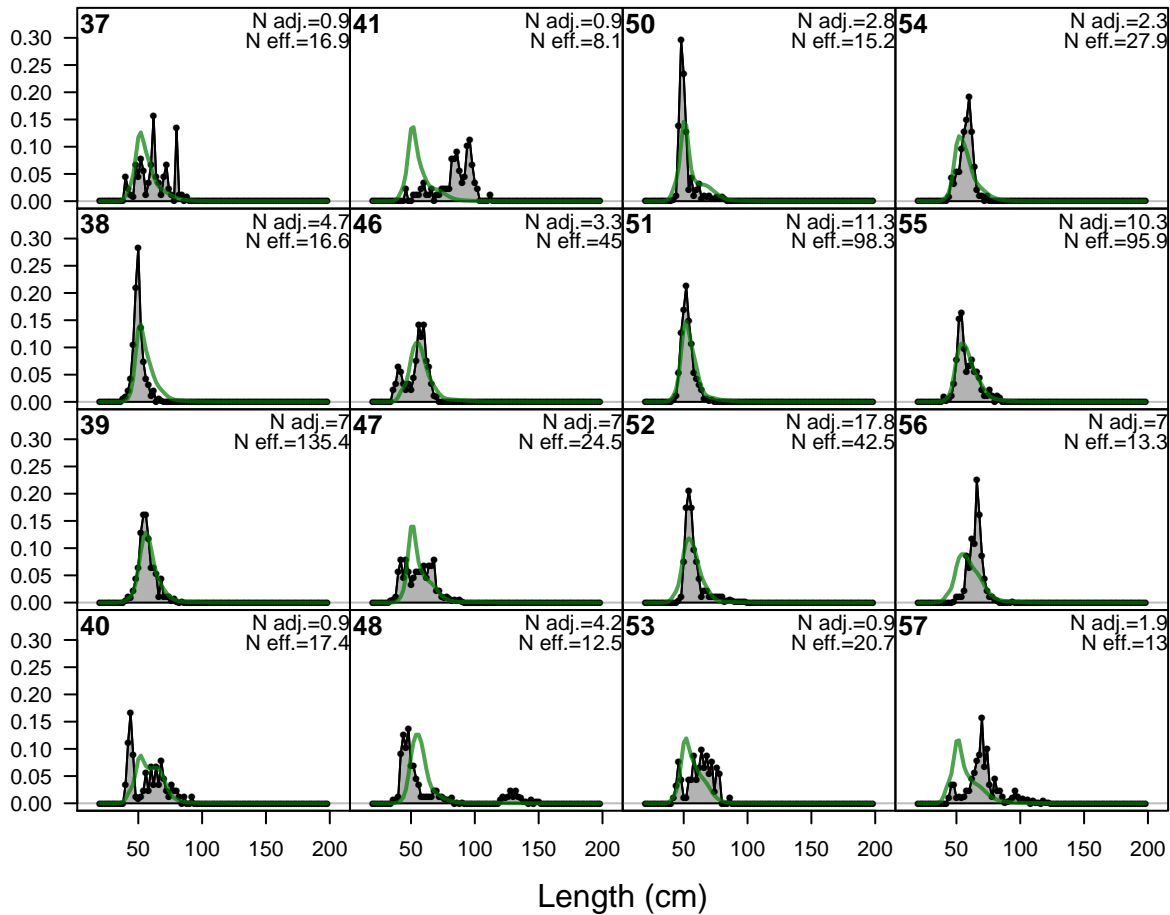




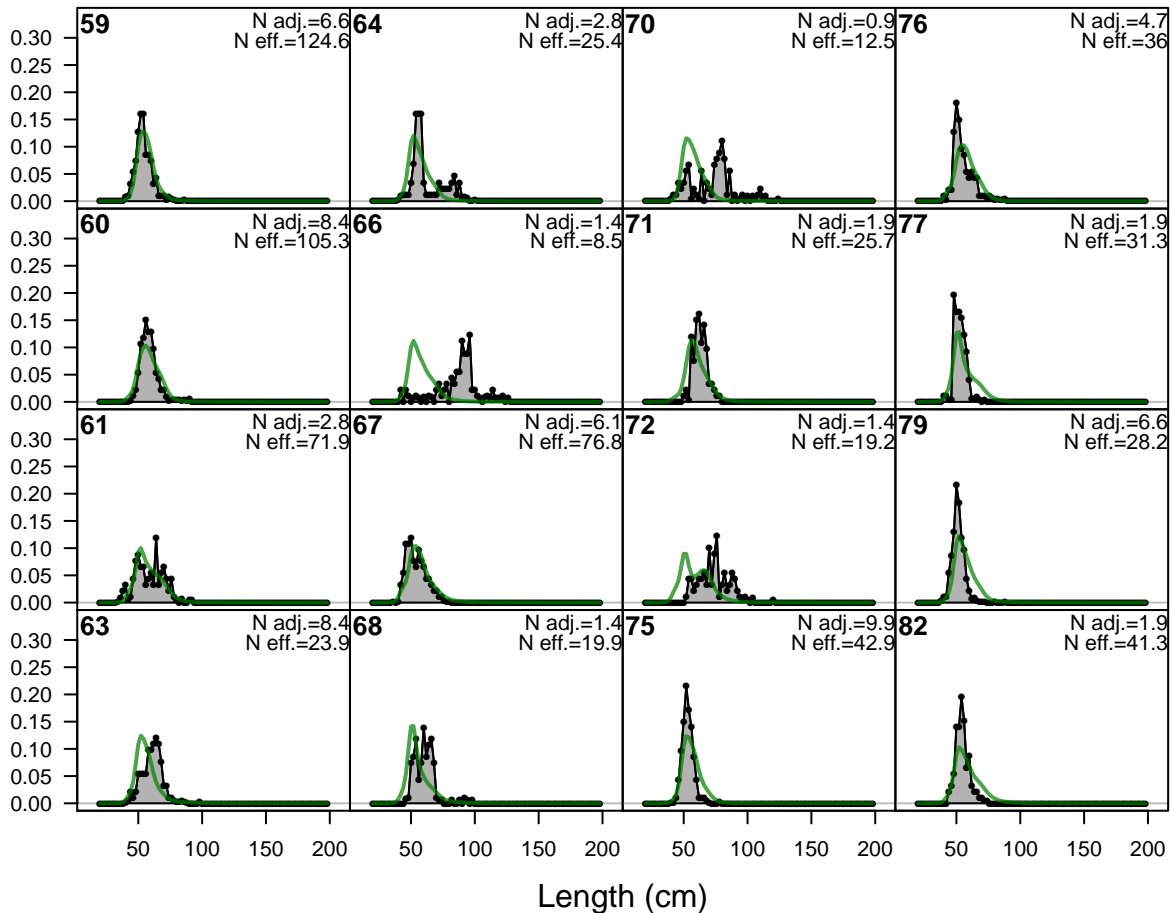
## F21-DEL\_I (whole catch)



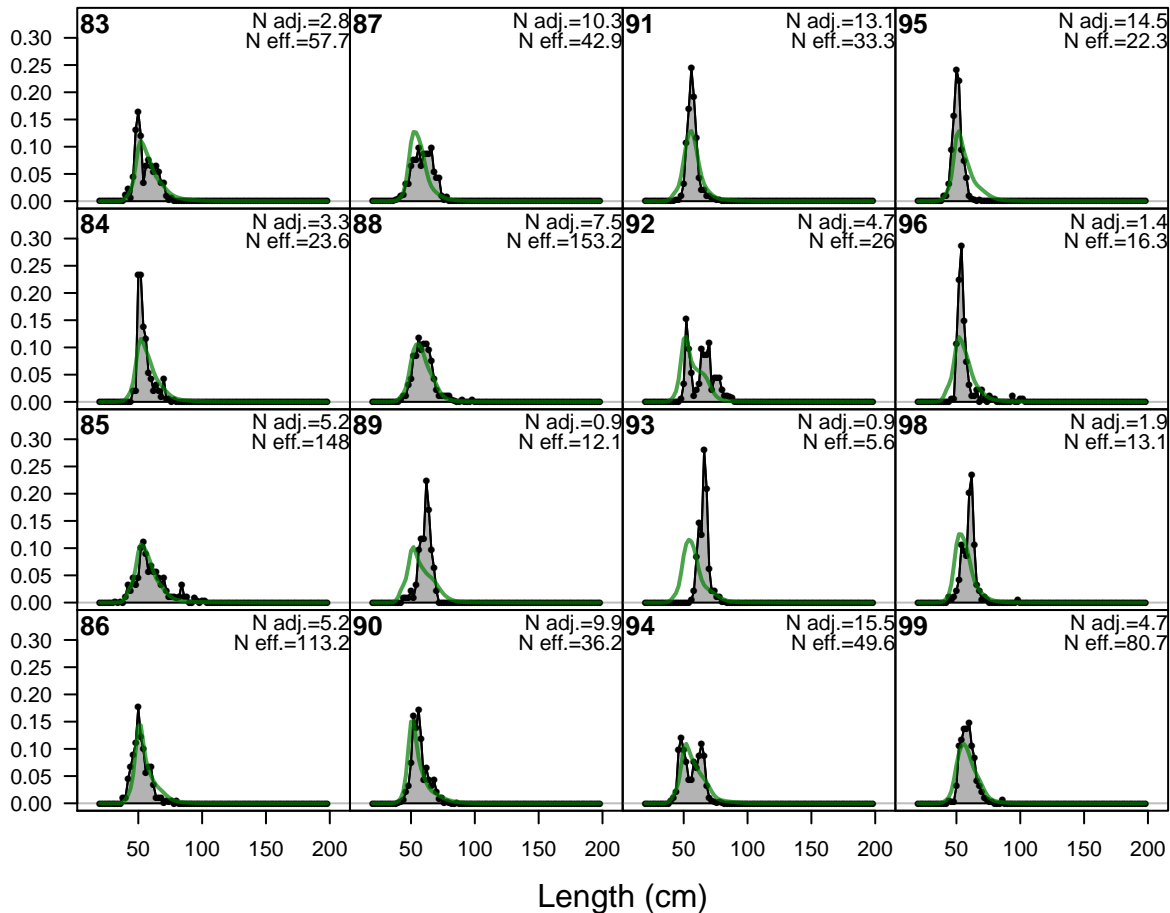
Proportion

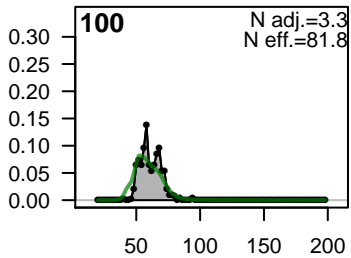


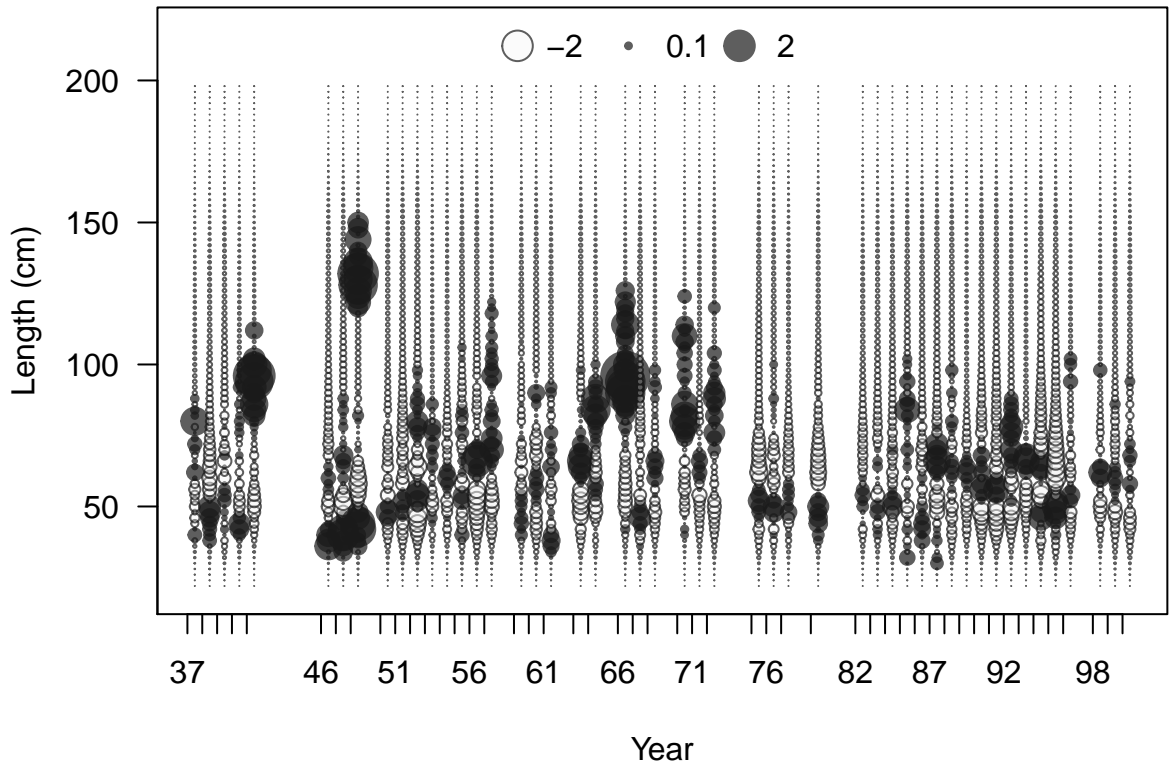
Proportion

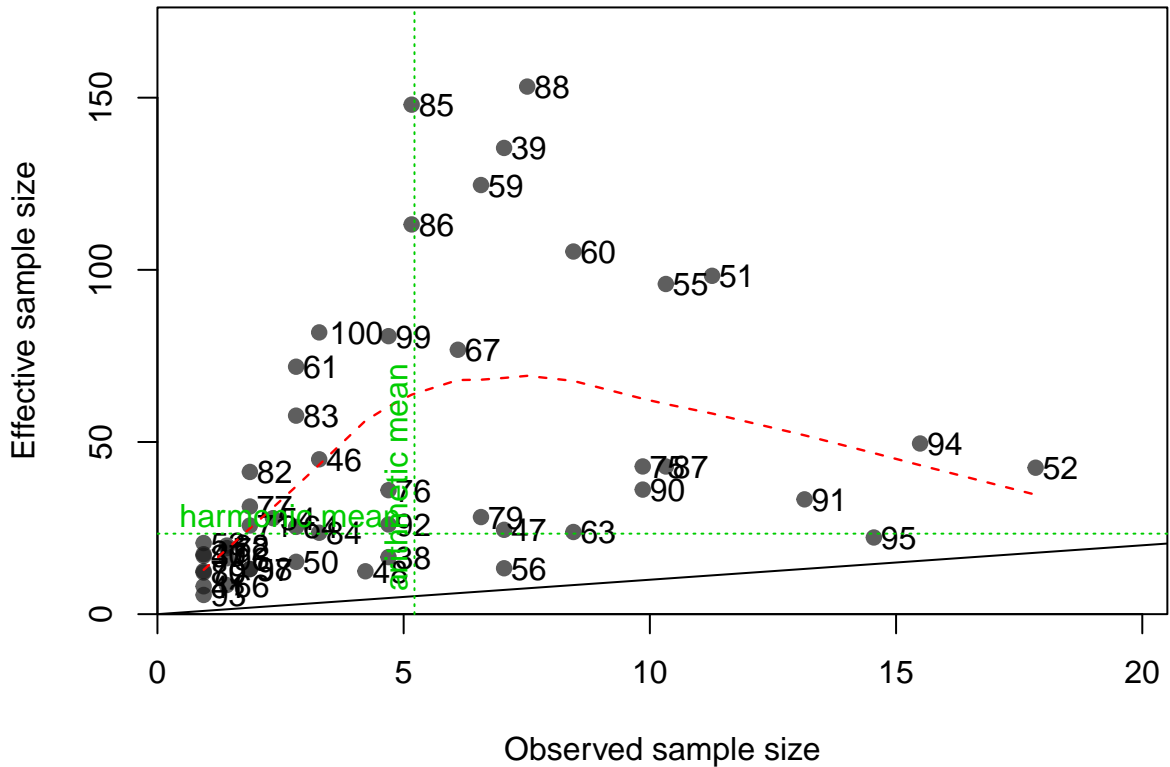


Proportion

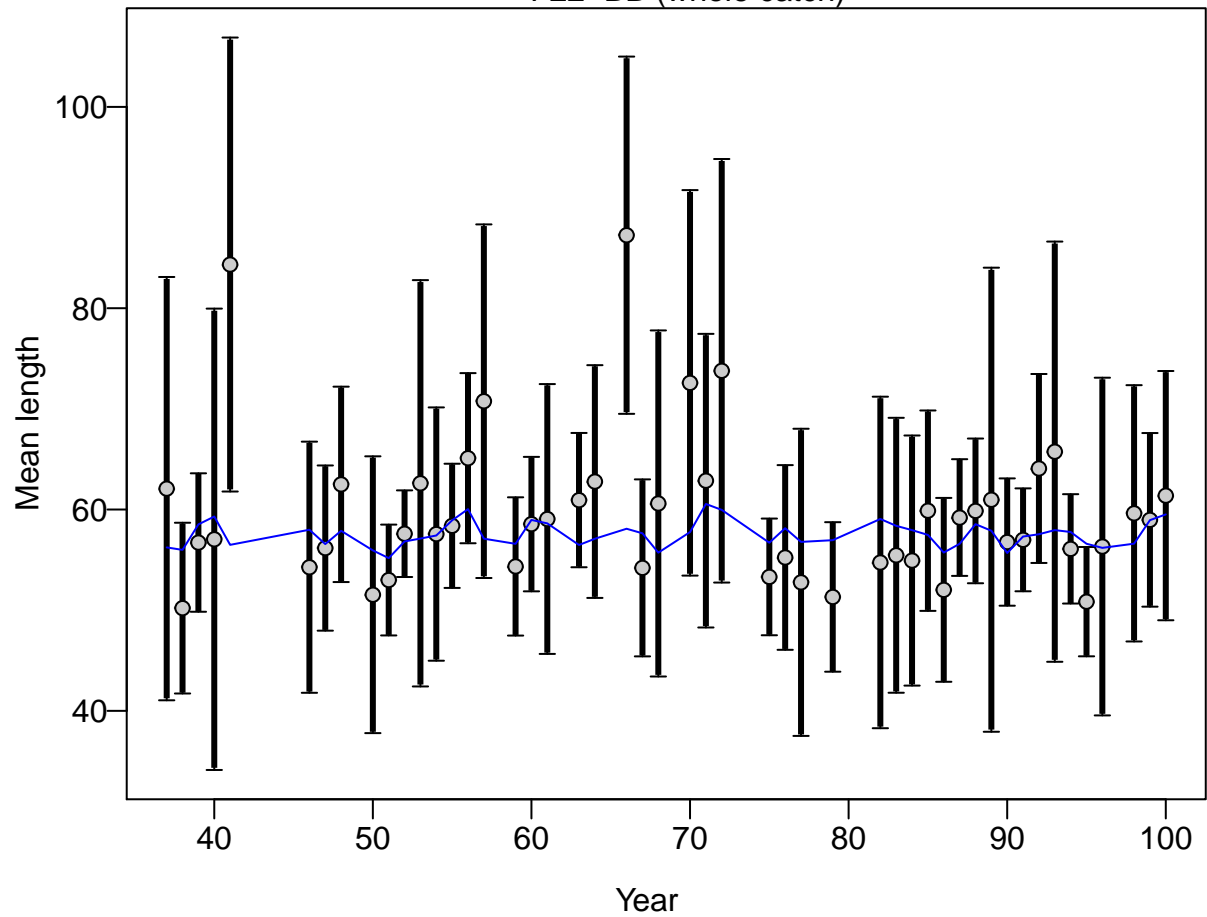






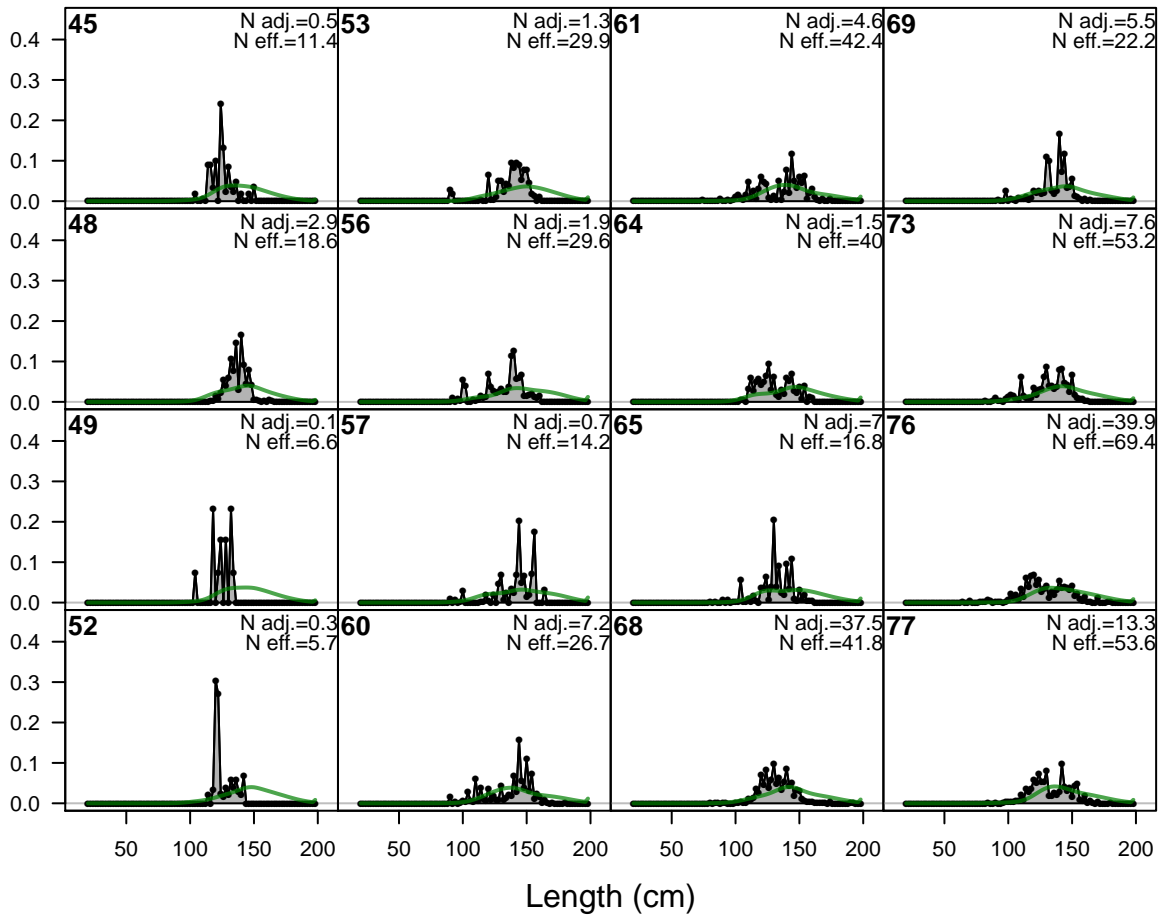


## F22-BB (whole catch)

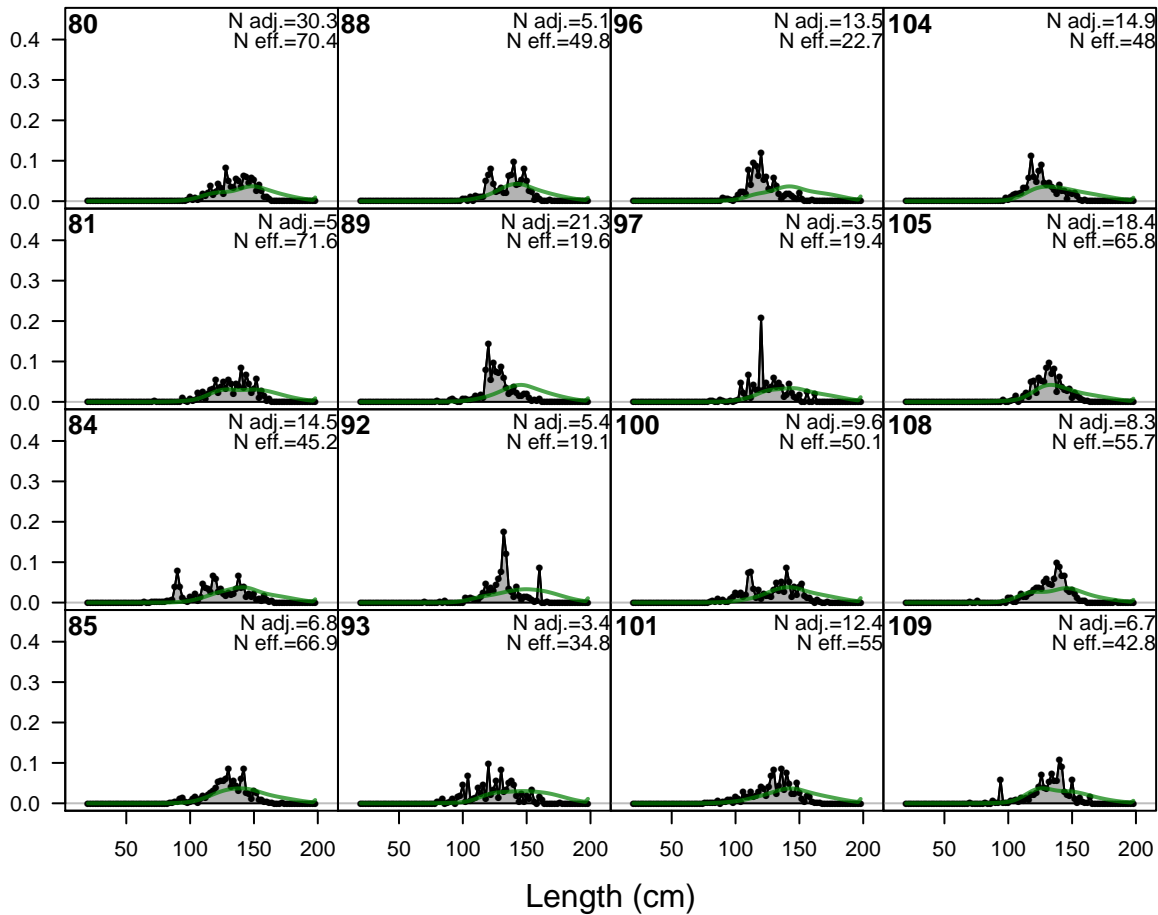




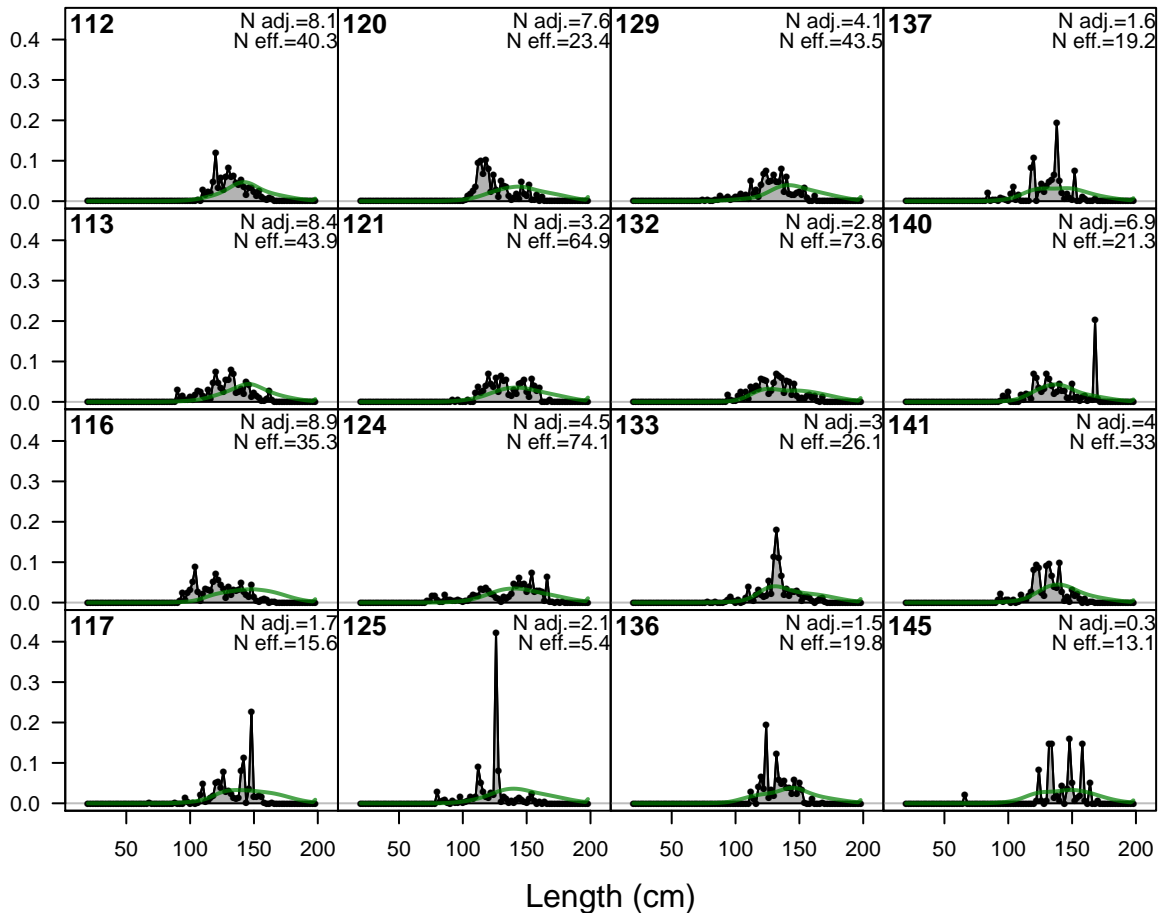
Proportion



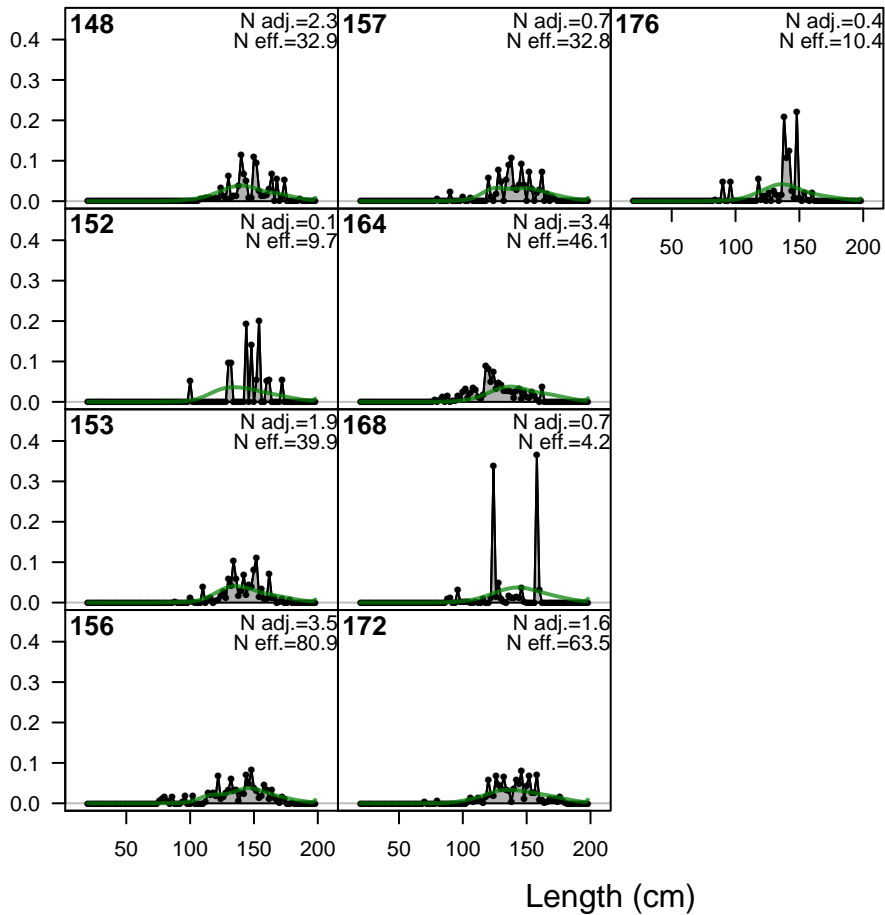
Proportion

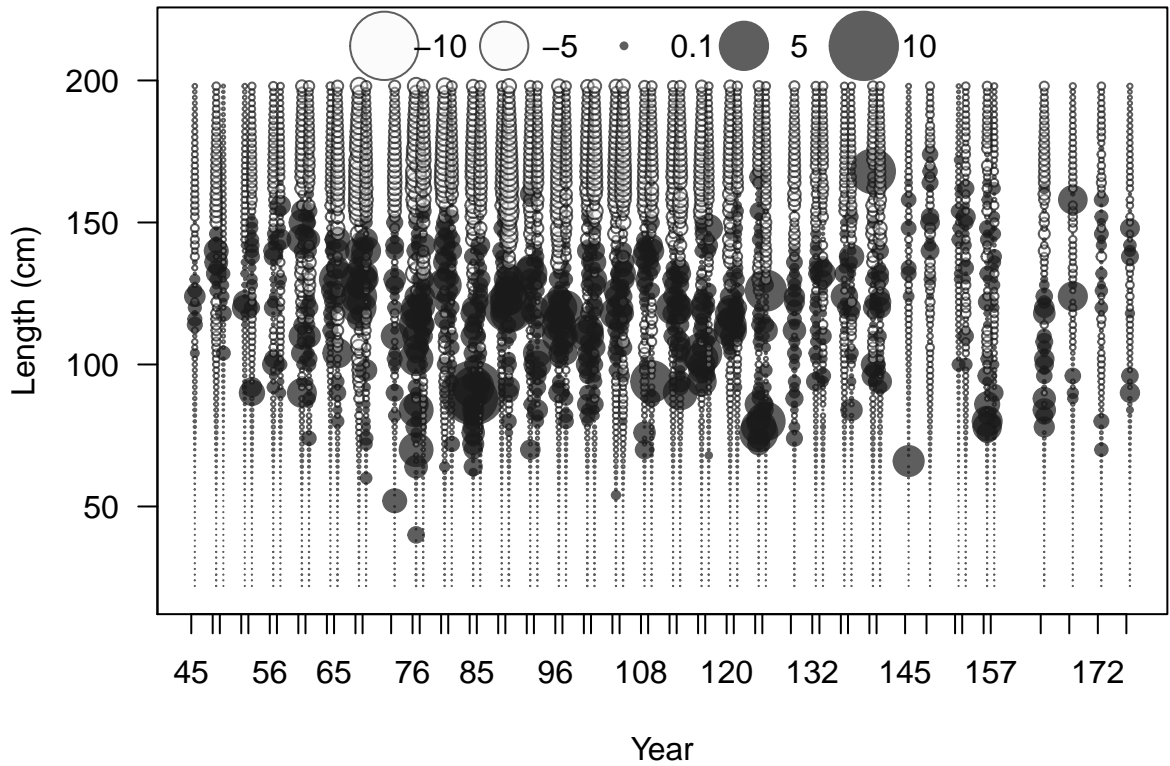


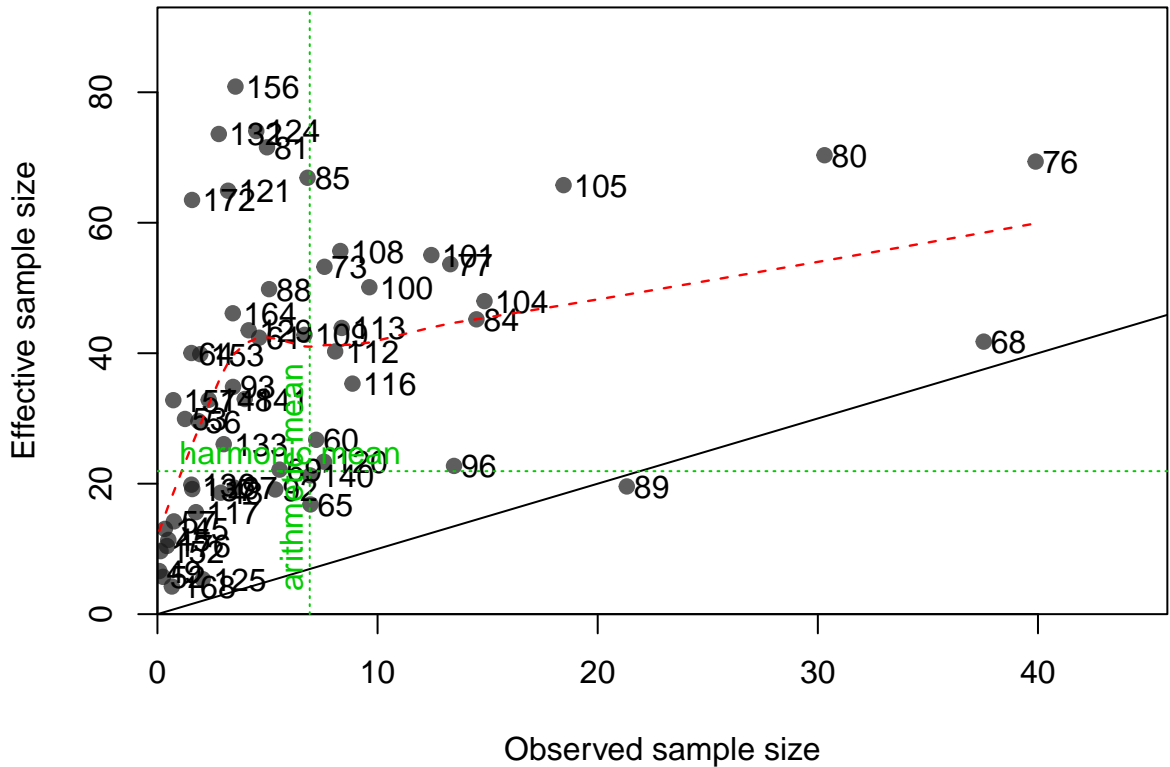
Proportion



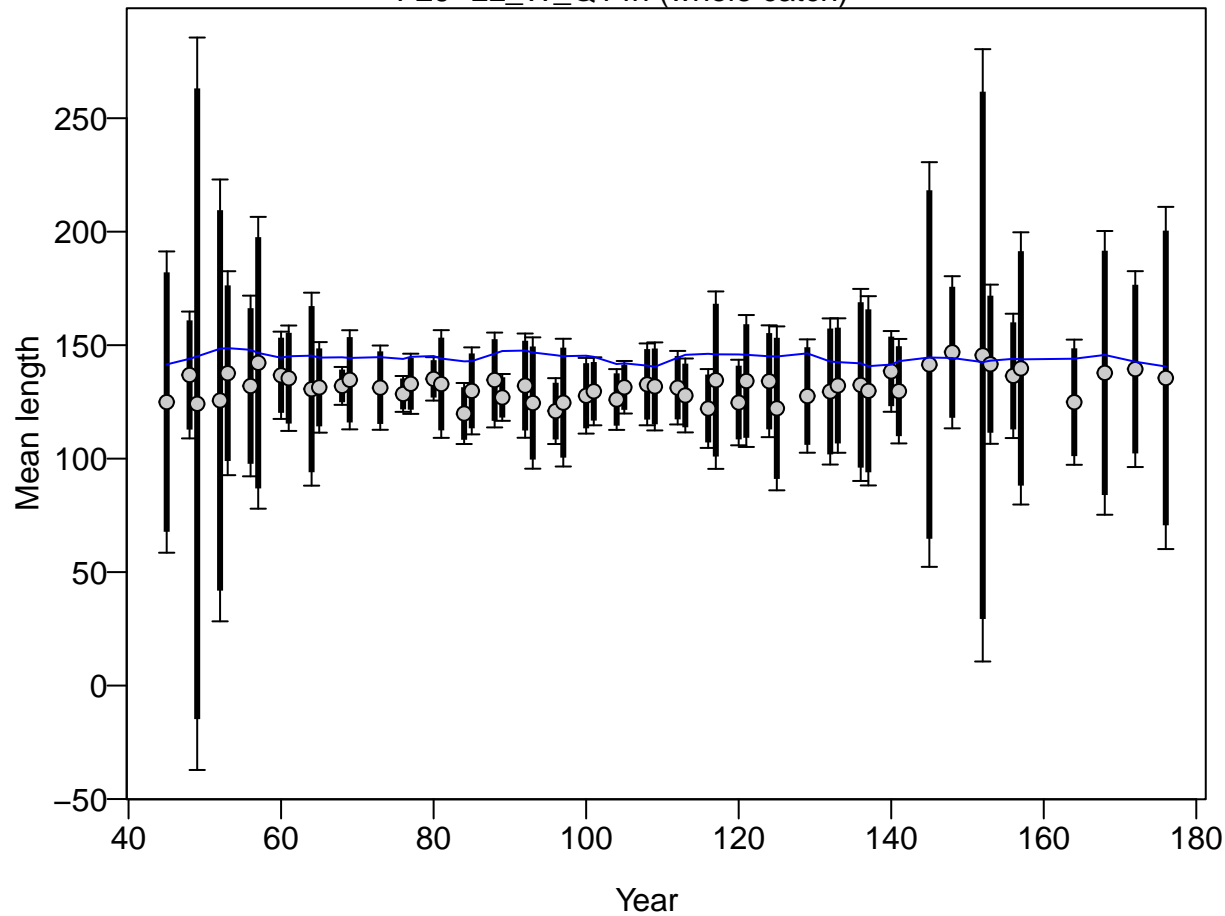
Proportion



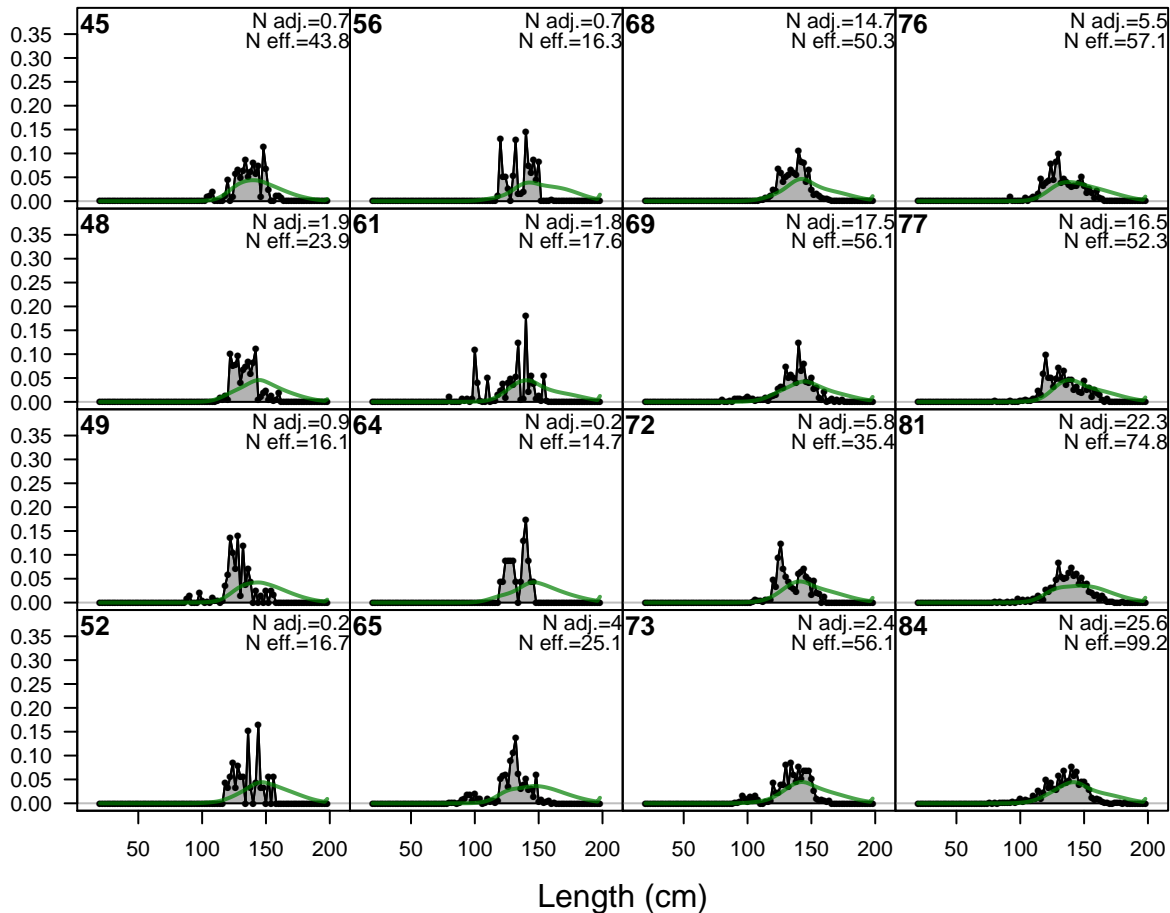




F29-LL\_W\_Q14n (whole catch)

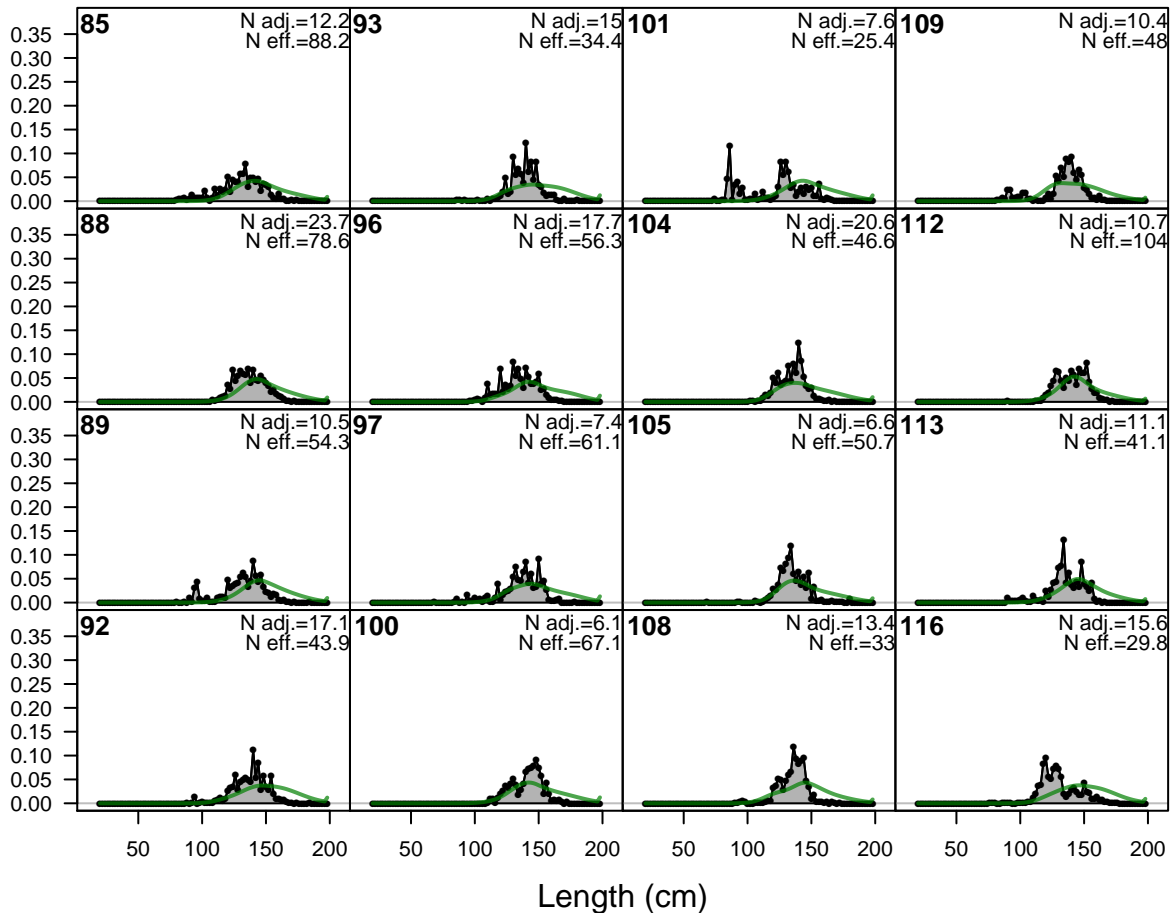


Proportion

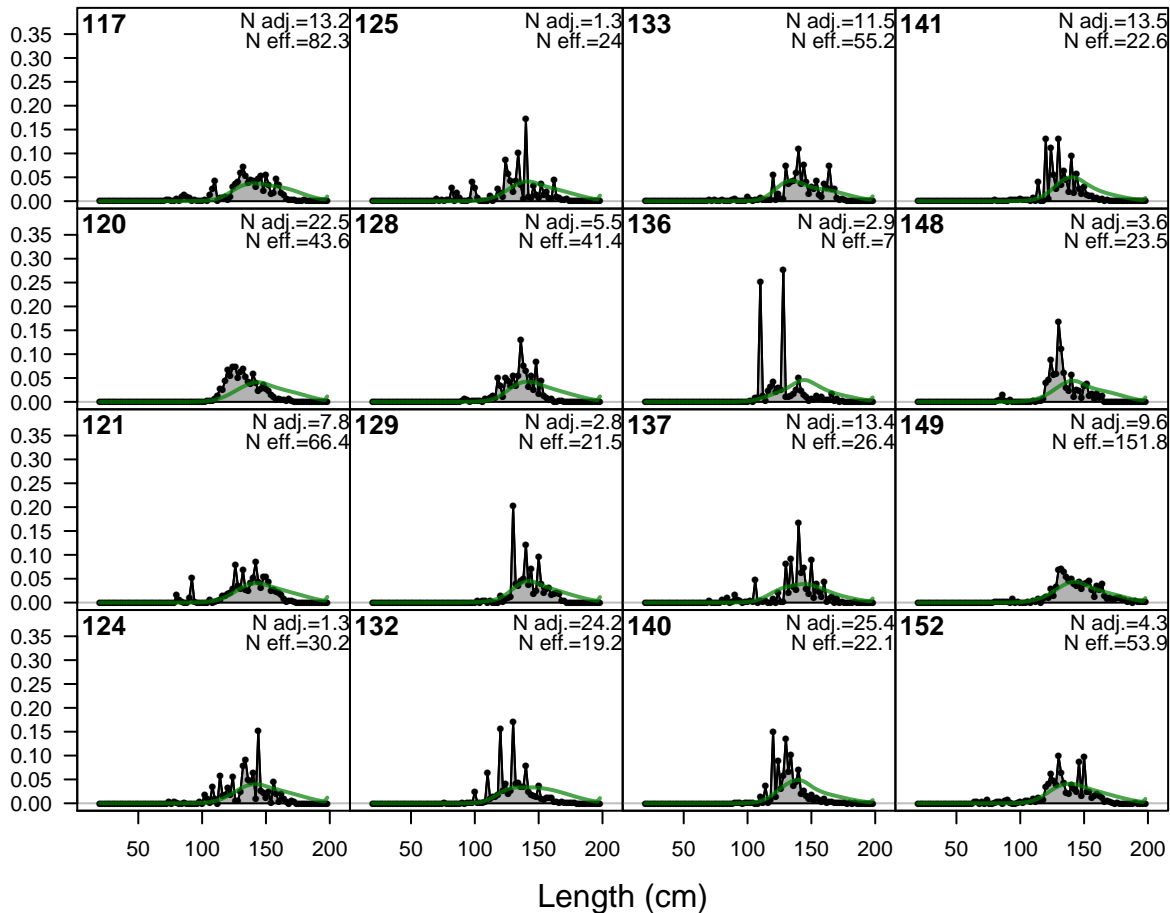




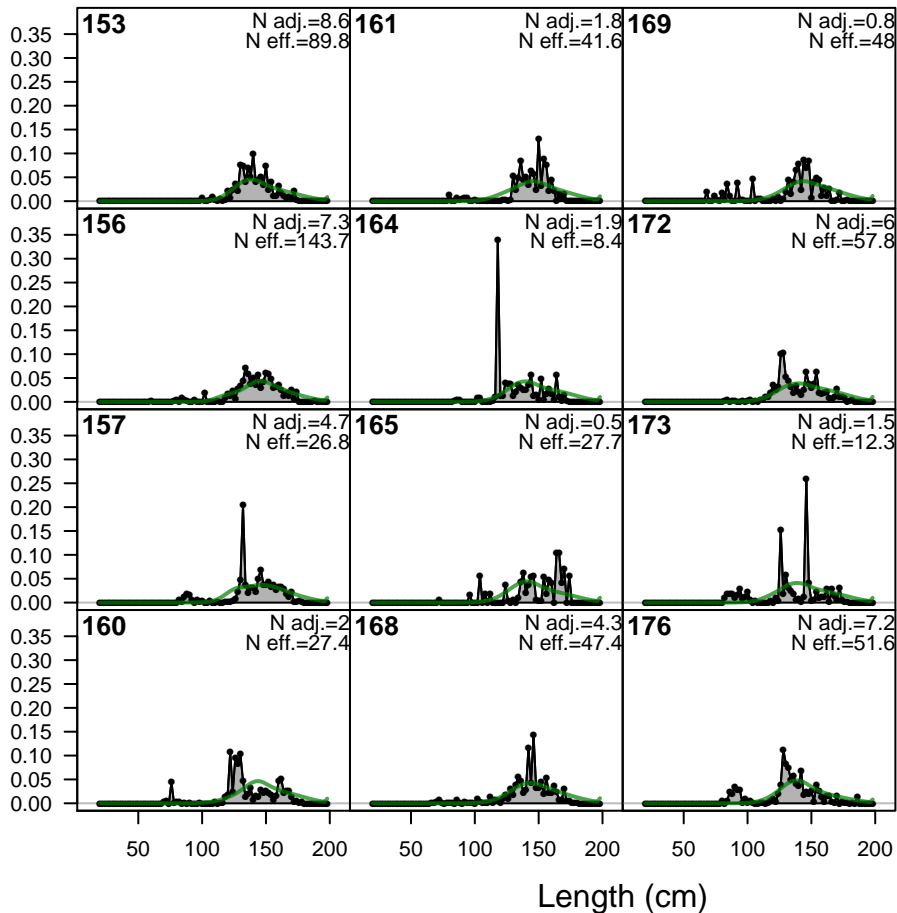
Proportion

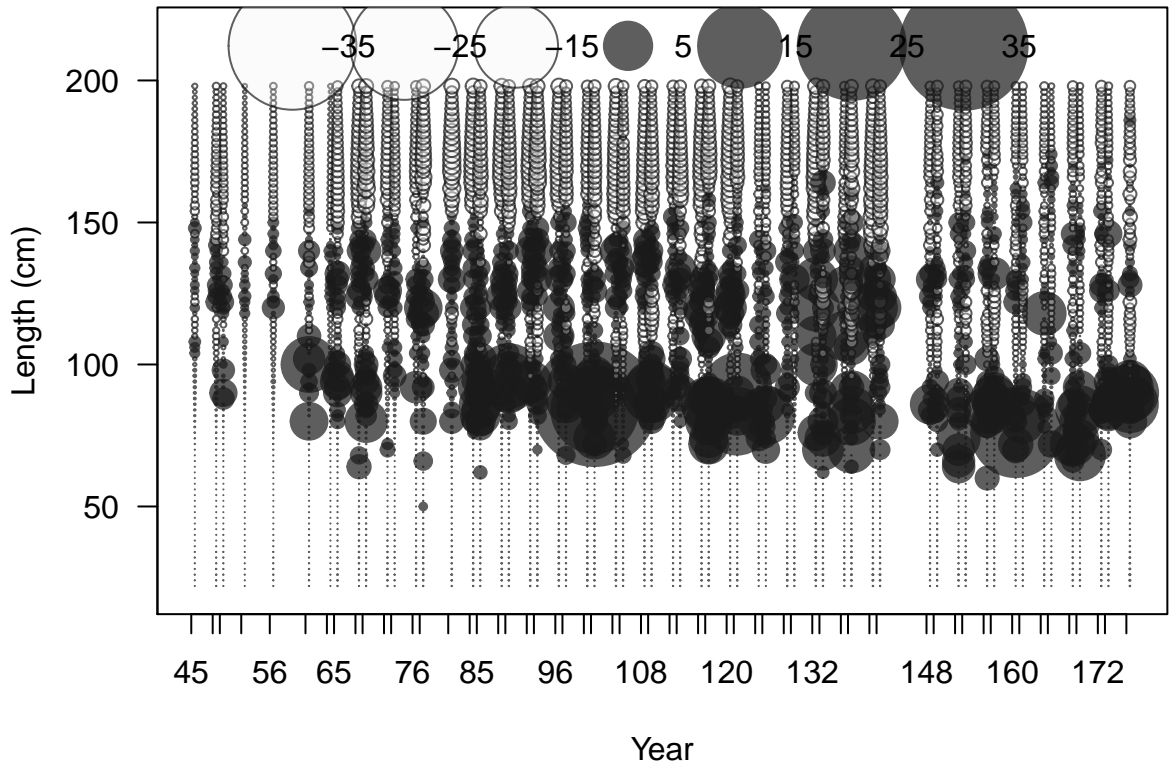


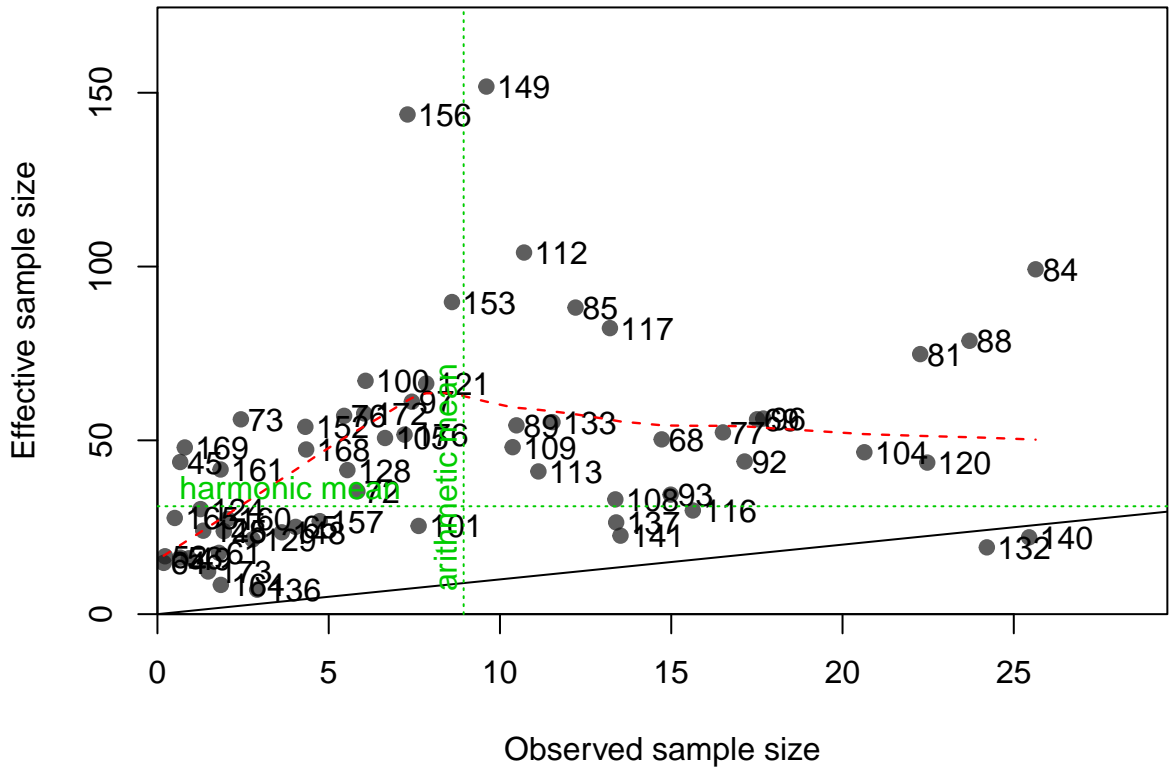
Proportion



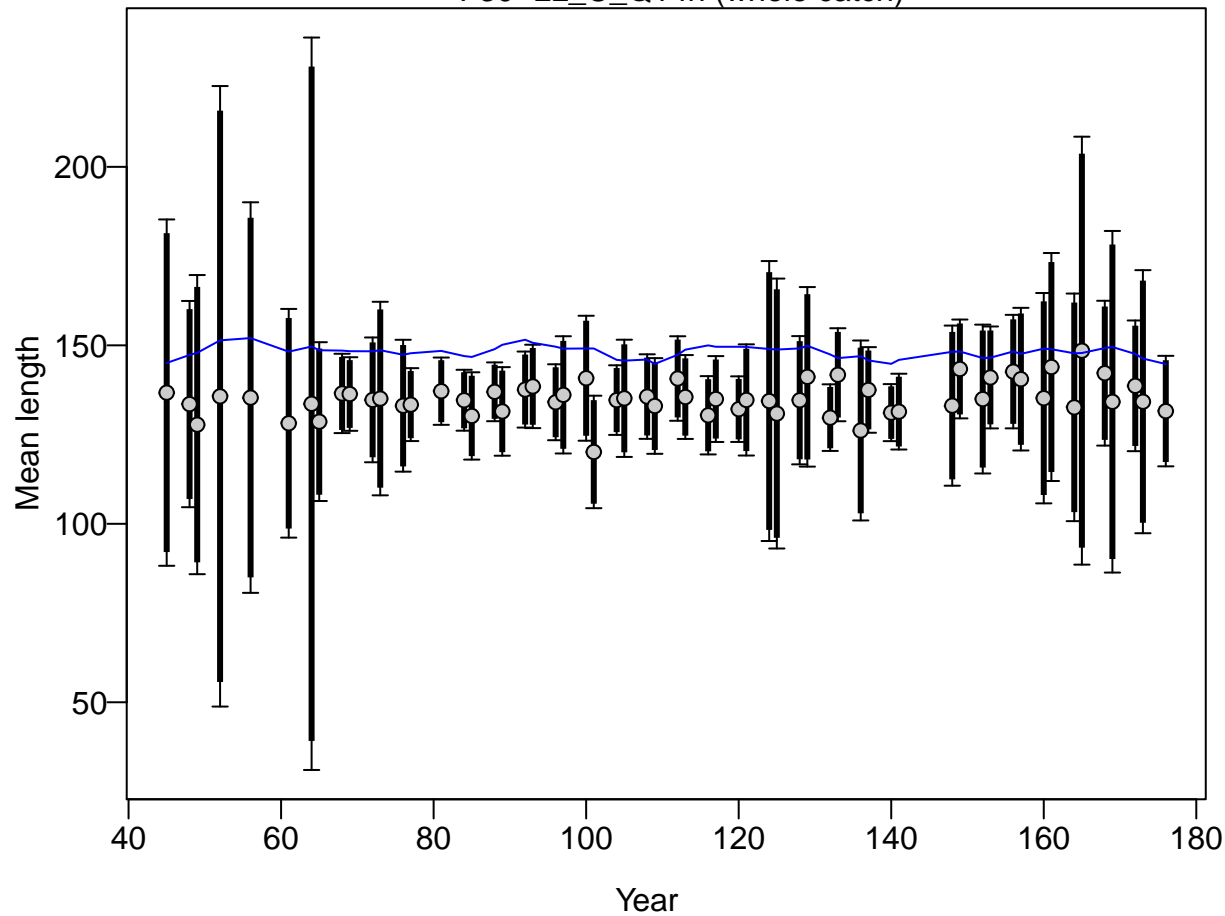
Proportion

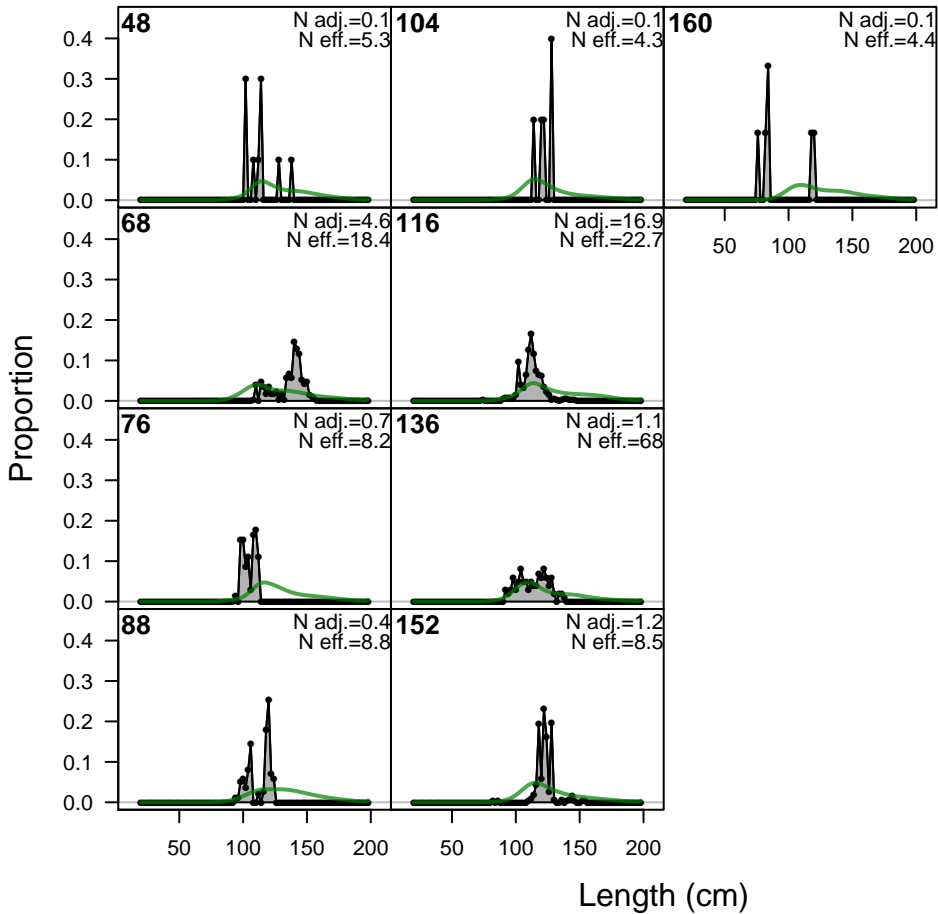


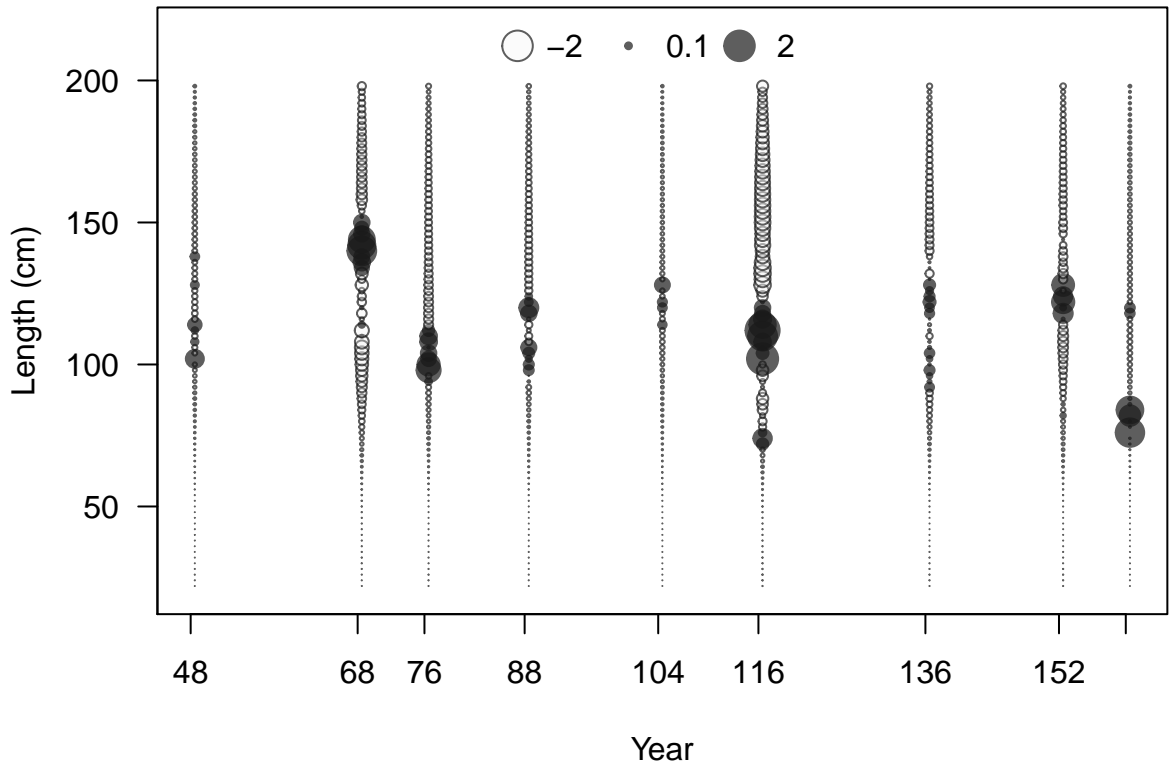




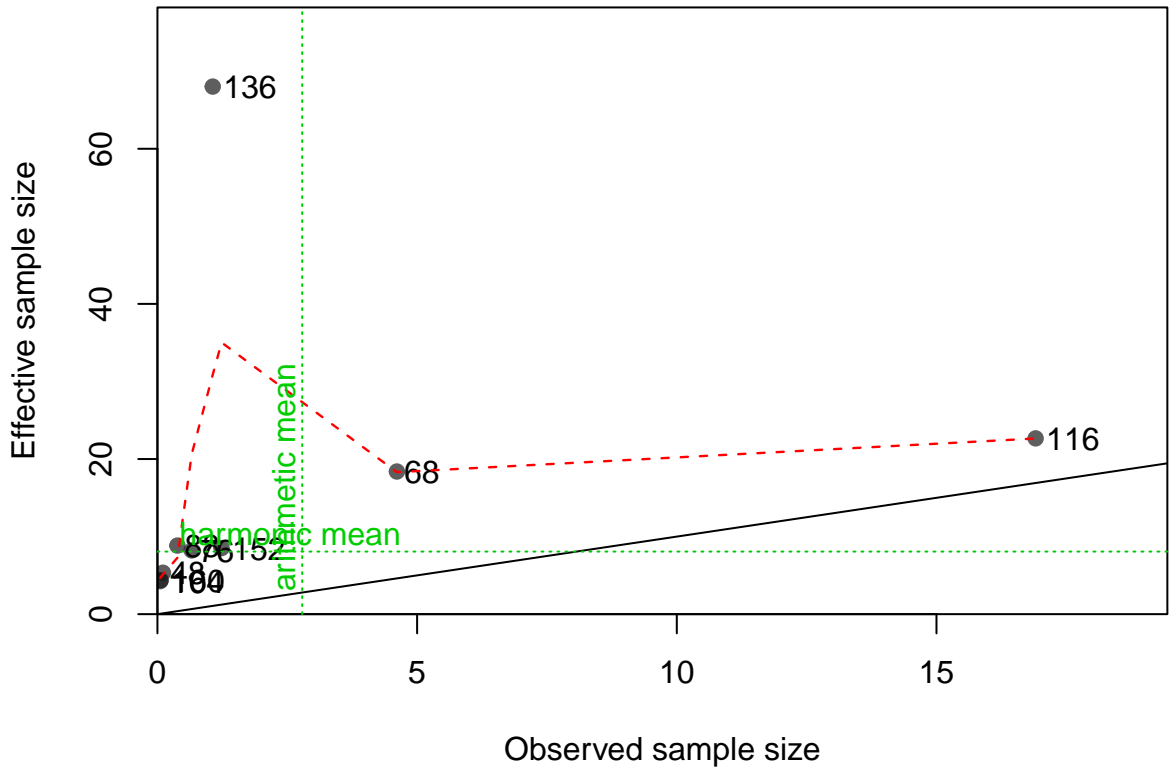
F30-LL\_C\_Q14n (whole catch)



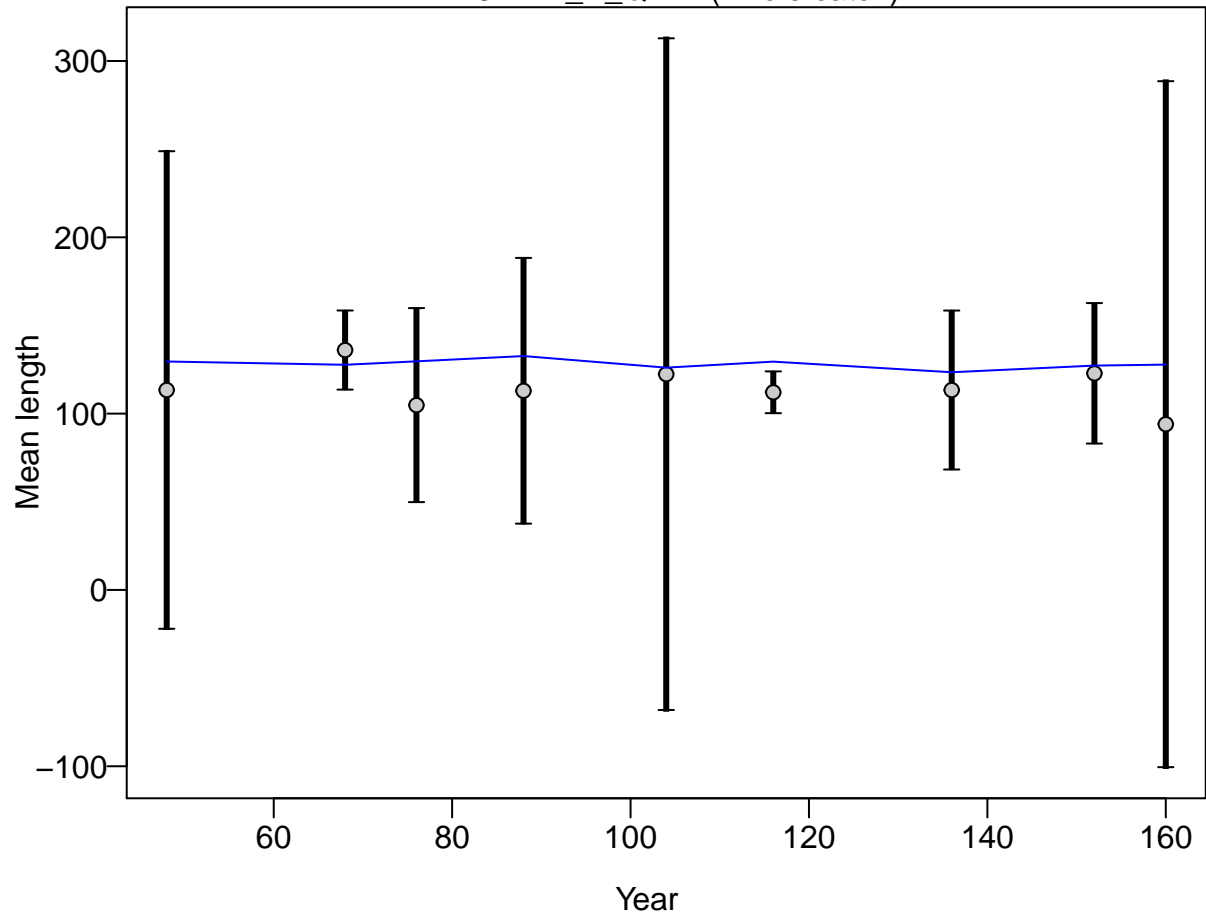




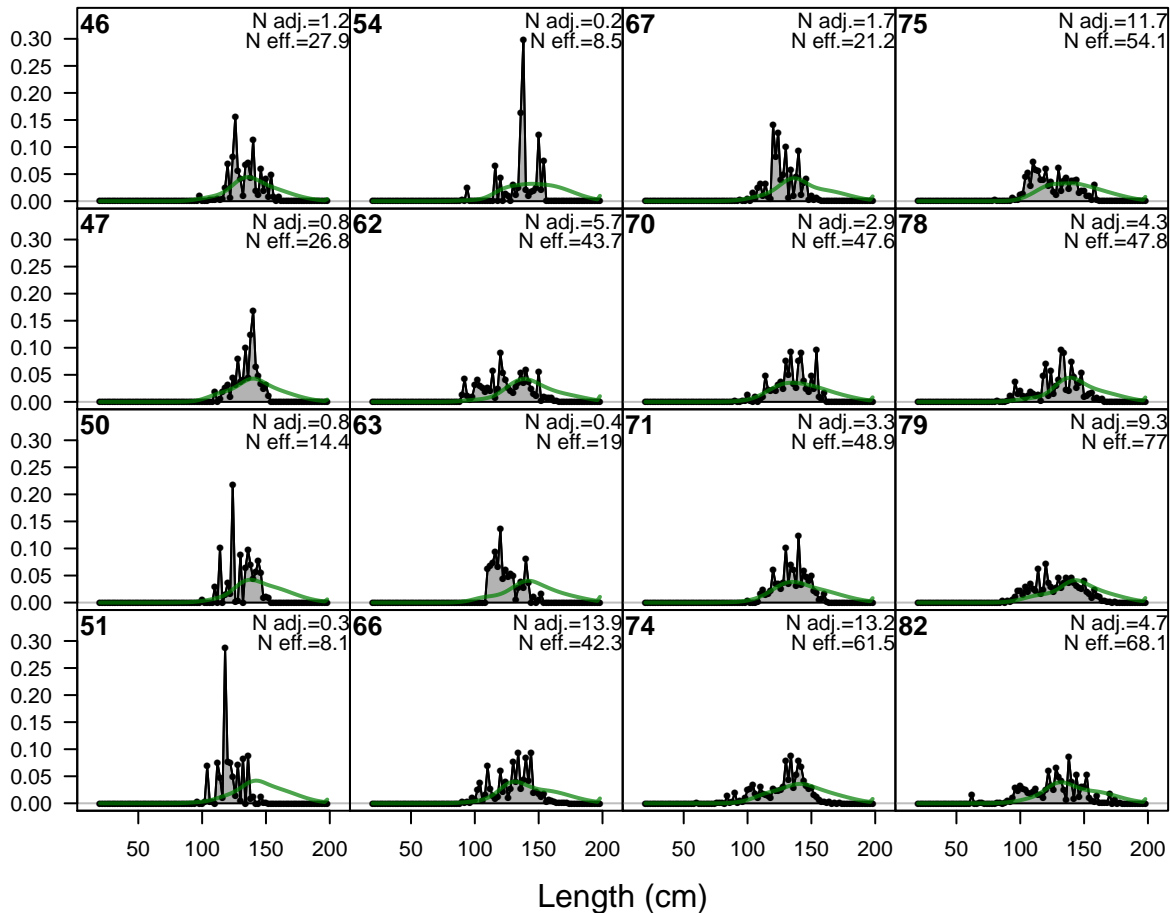




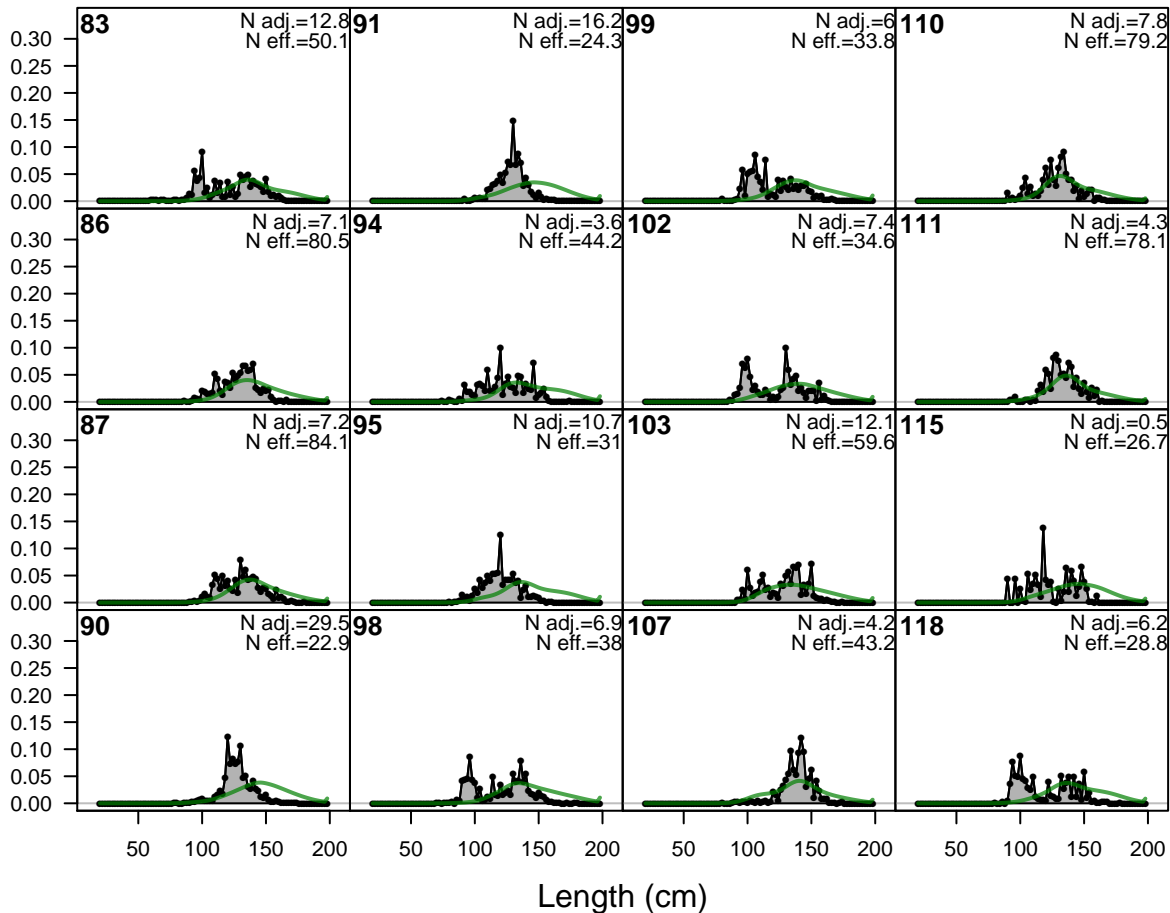
F31-LL\_E\_Q14n (whole catch)



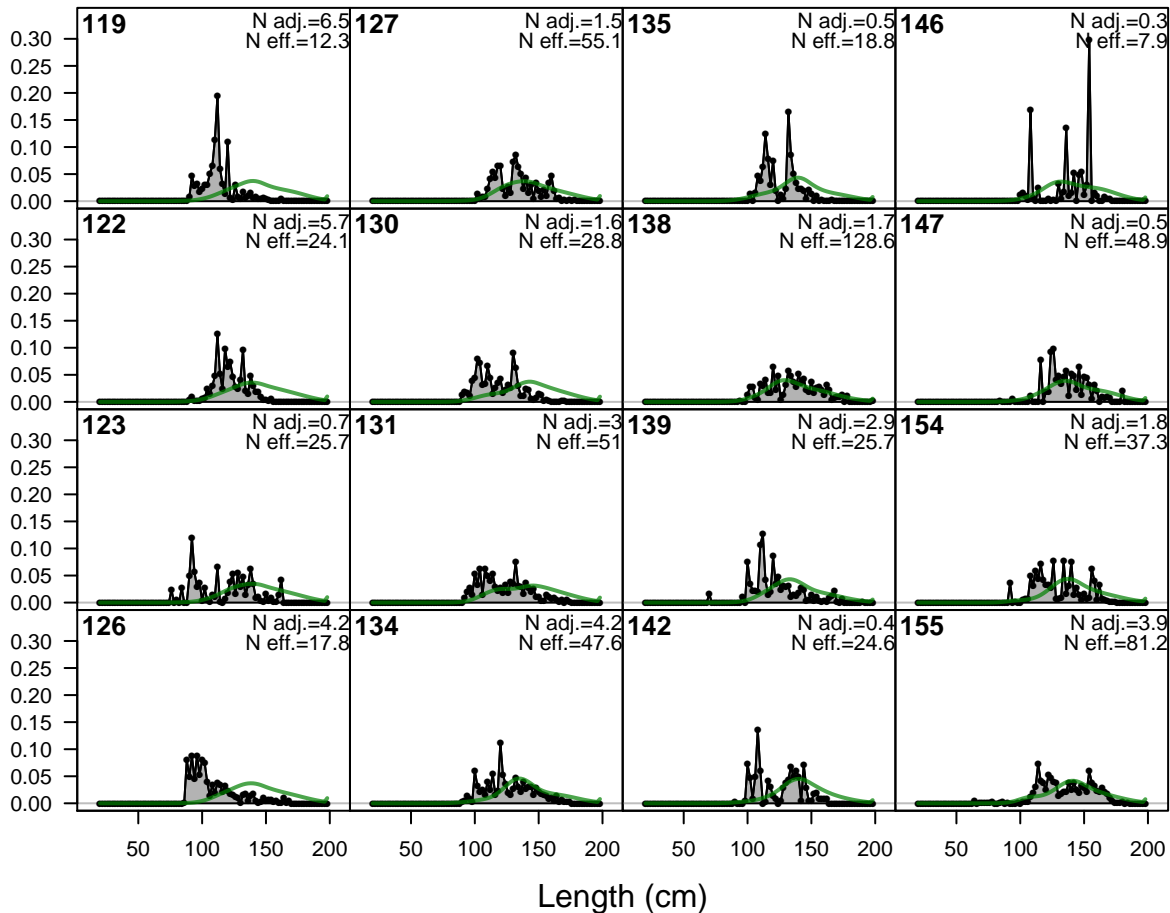
Proportion



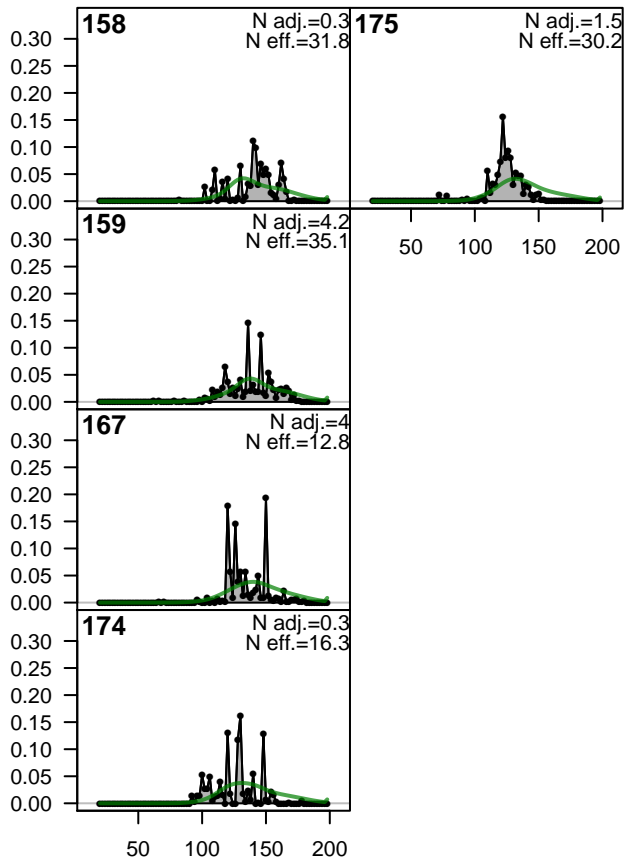
Proportion



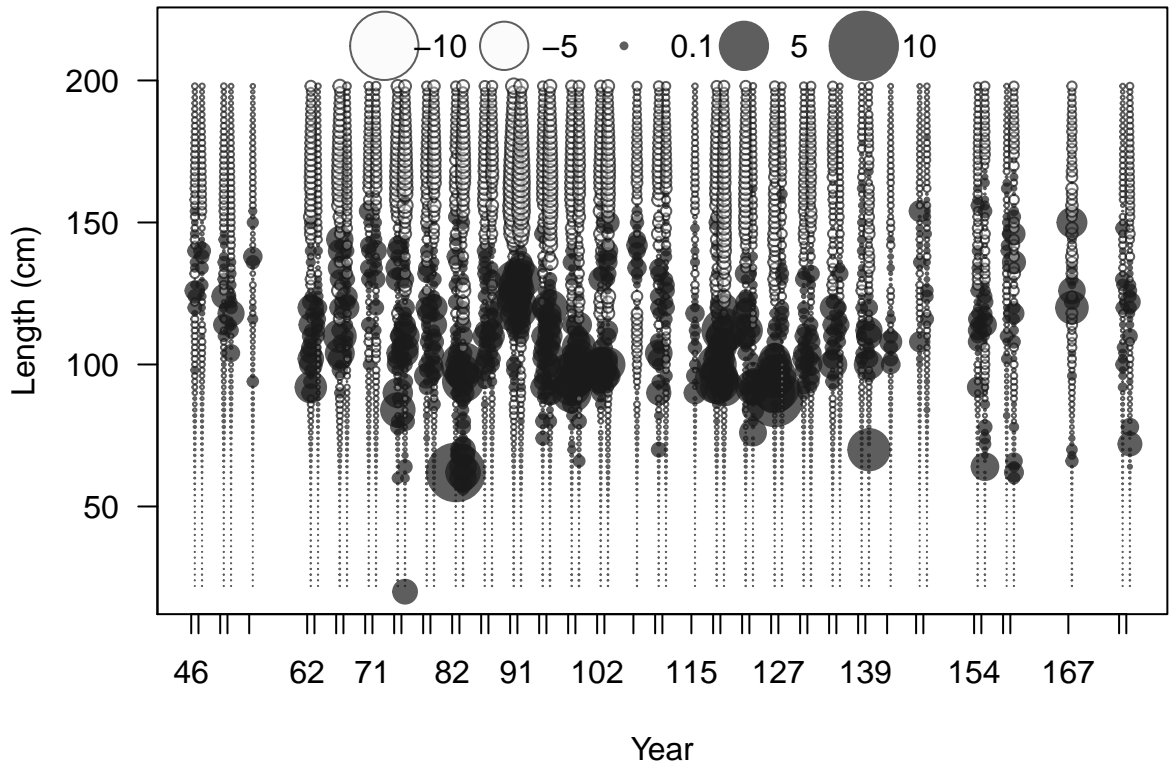
Proportion

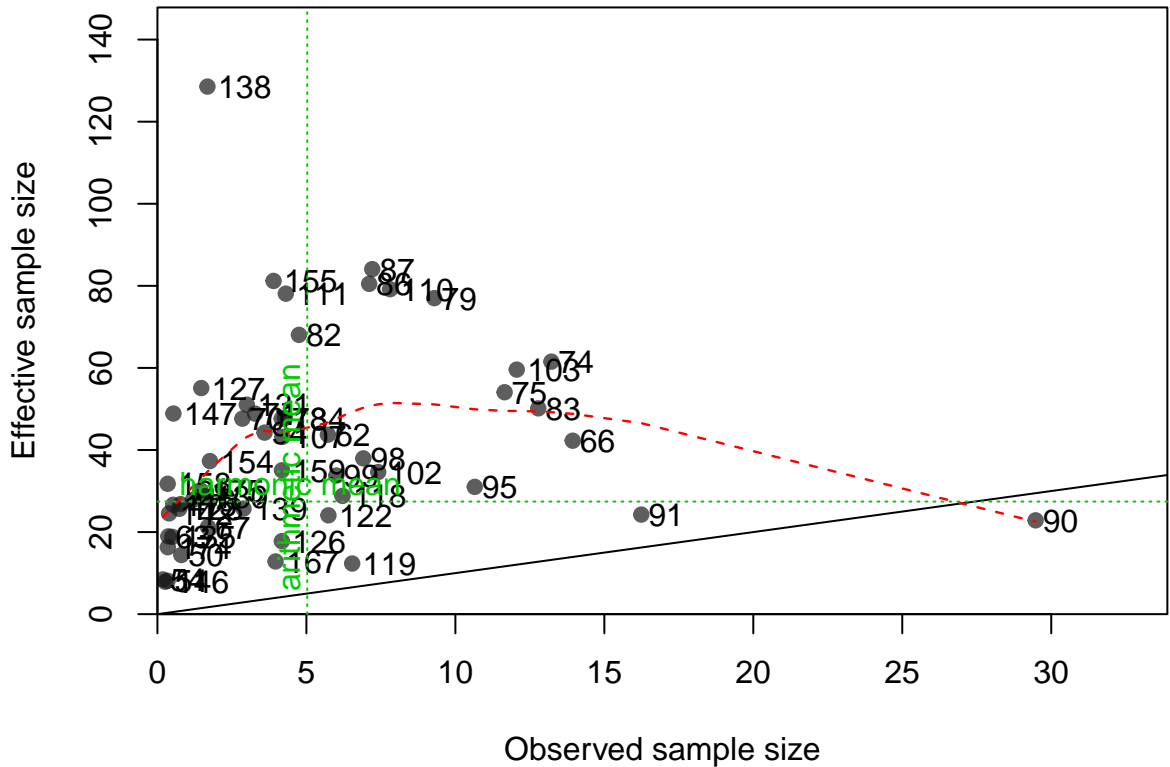


Proportion



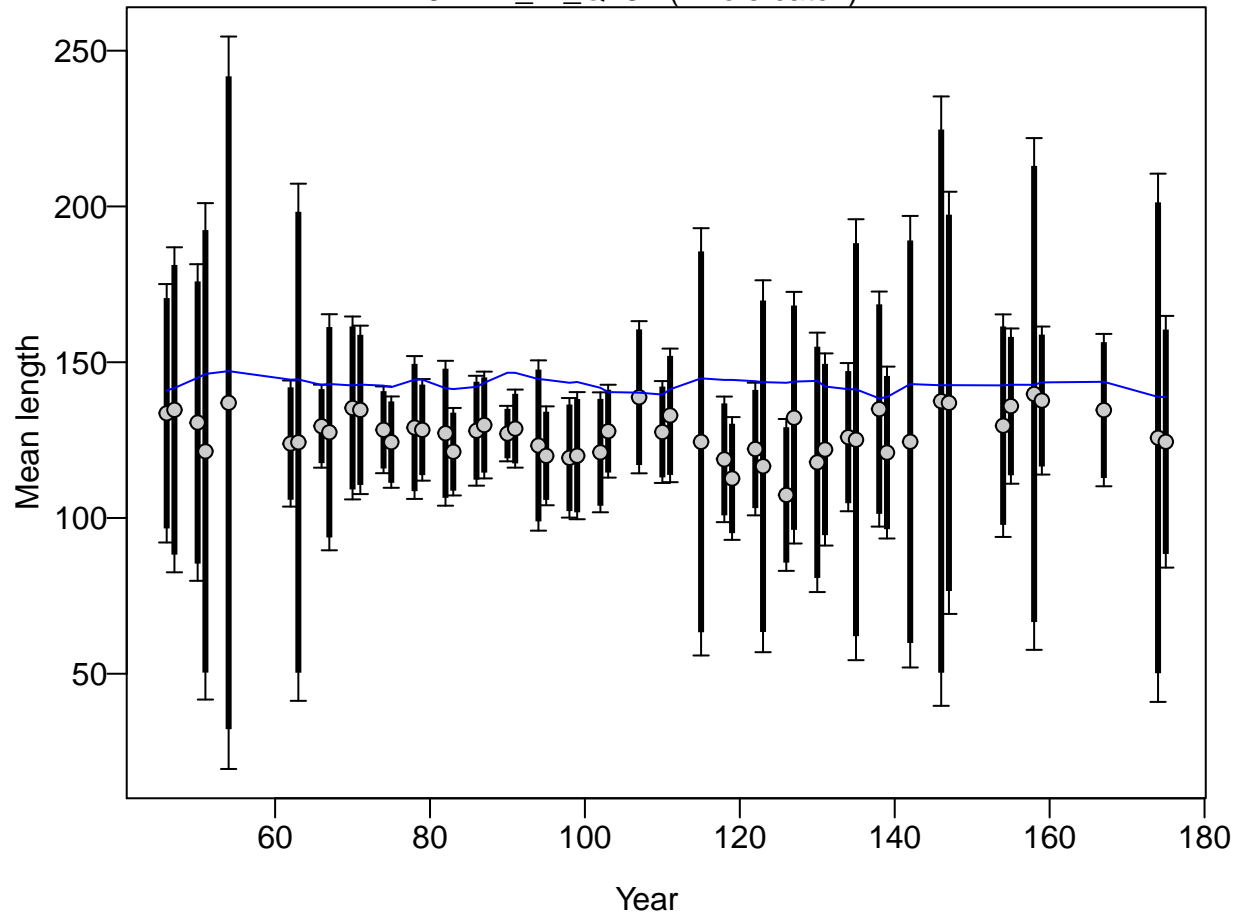
Length (cm)



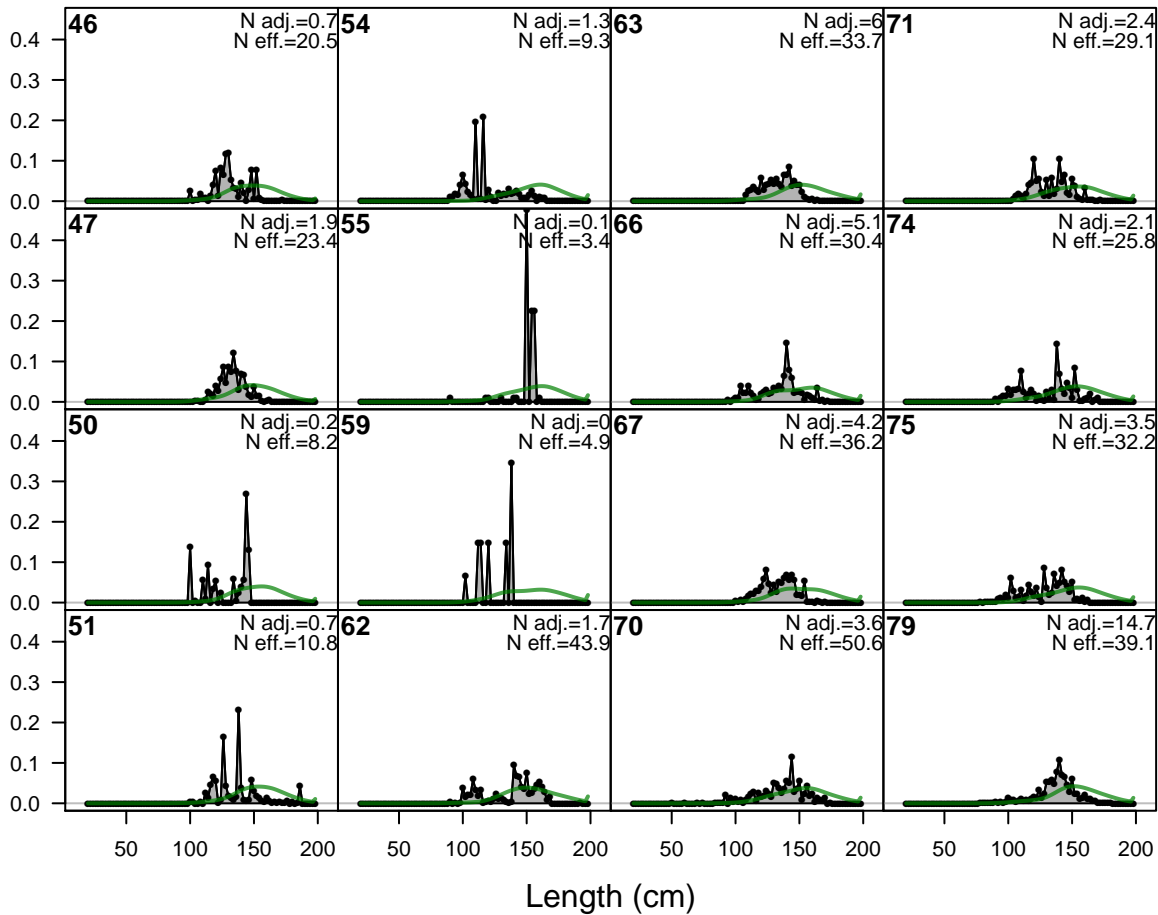




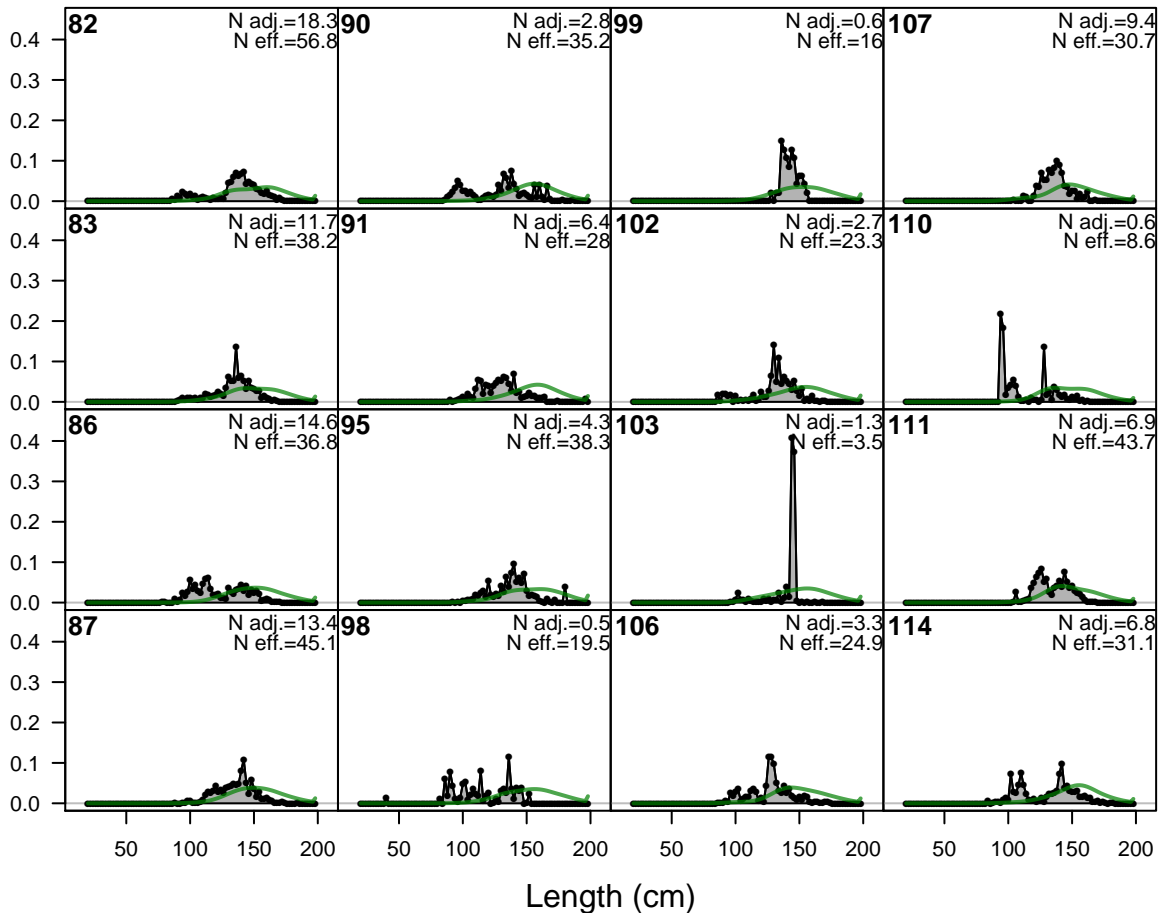
F32-LL\_W\_Q23n (whole catch)



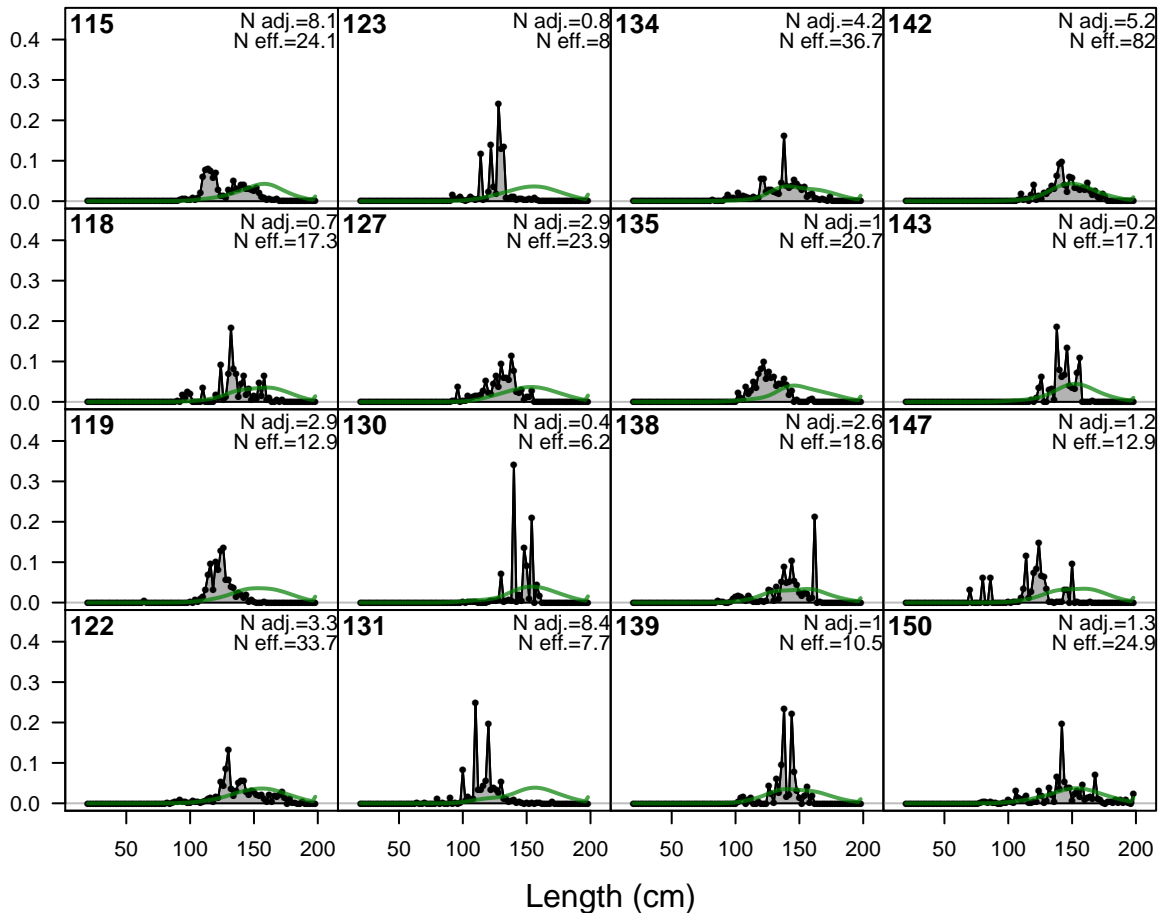
Proportion



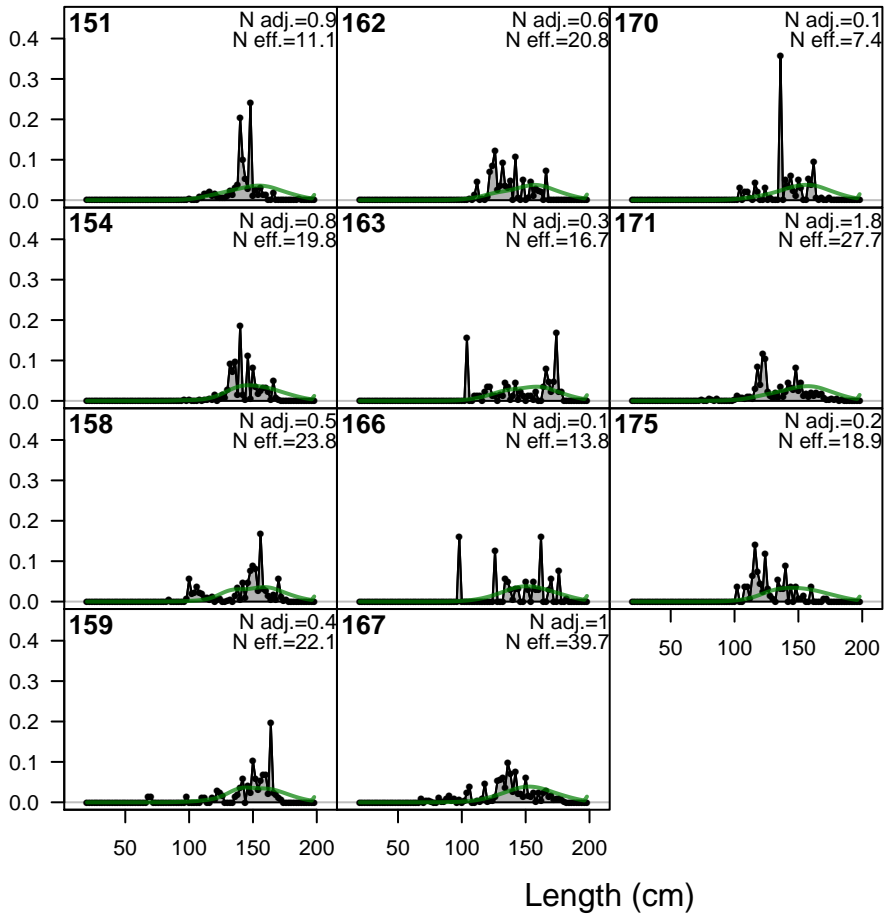
Proportion

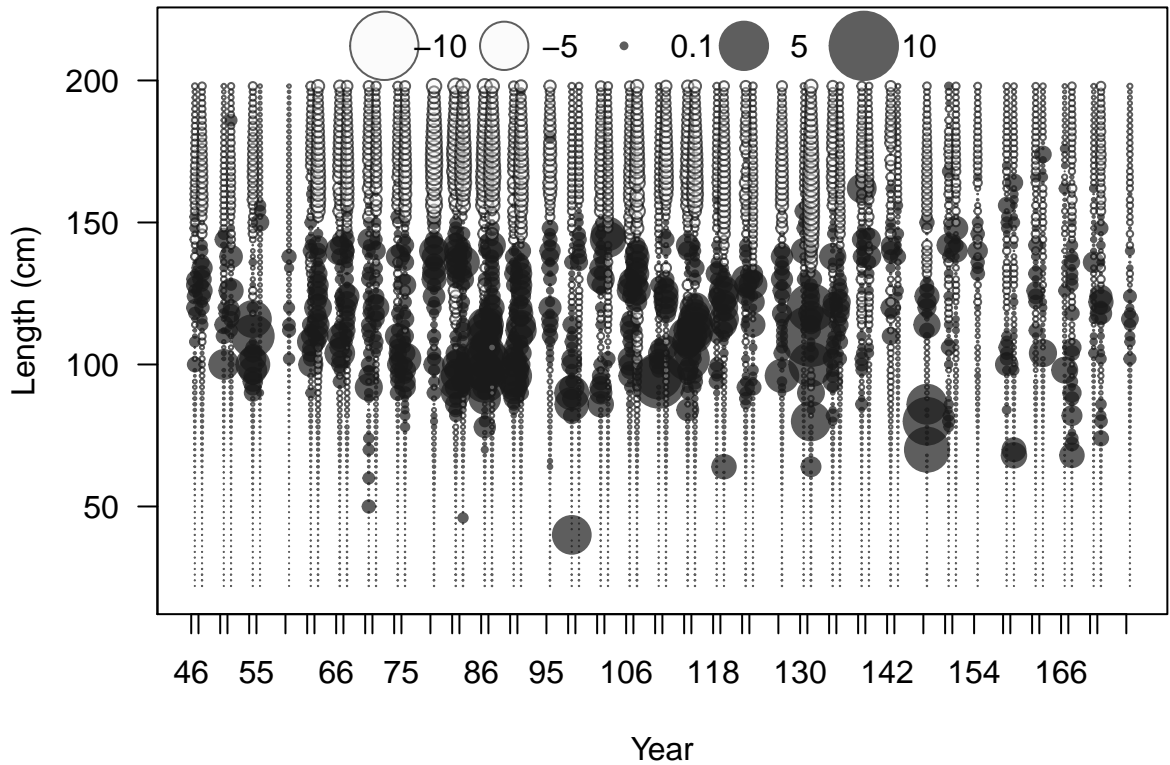


Proportion

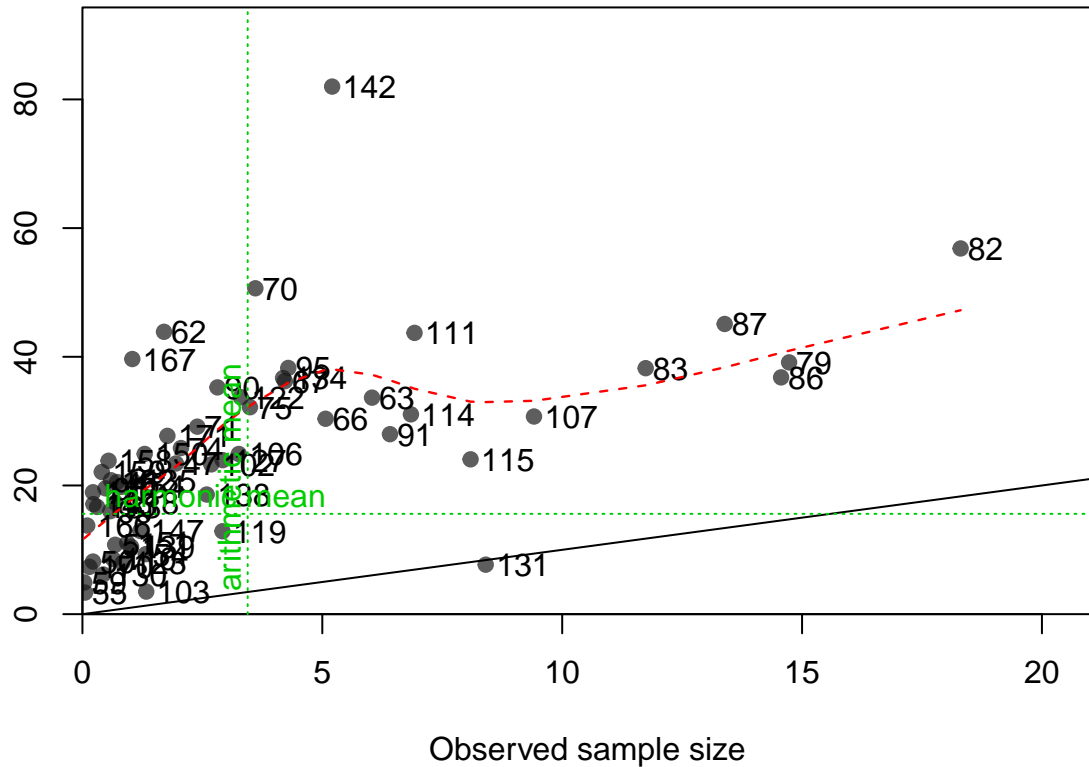


Proportion

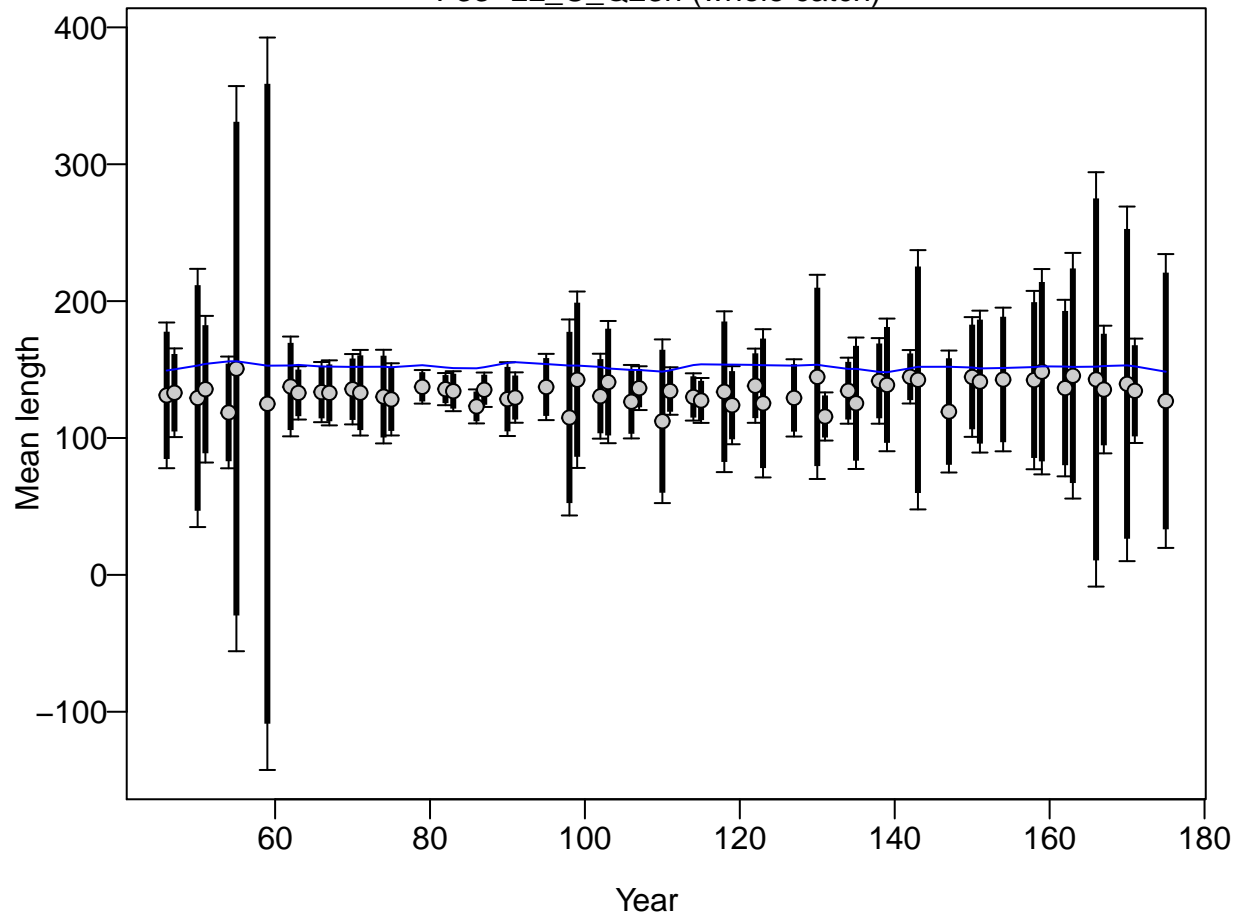




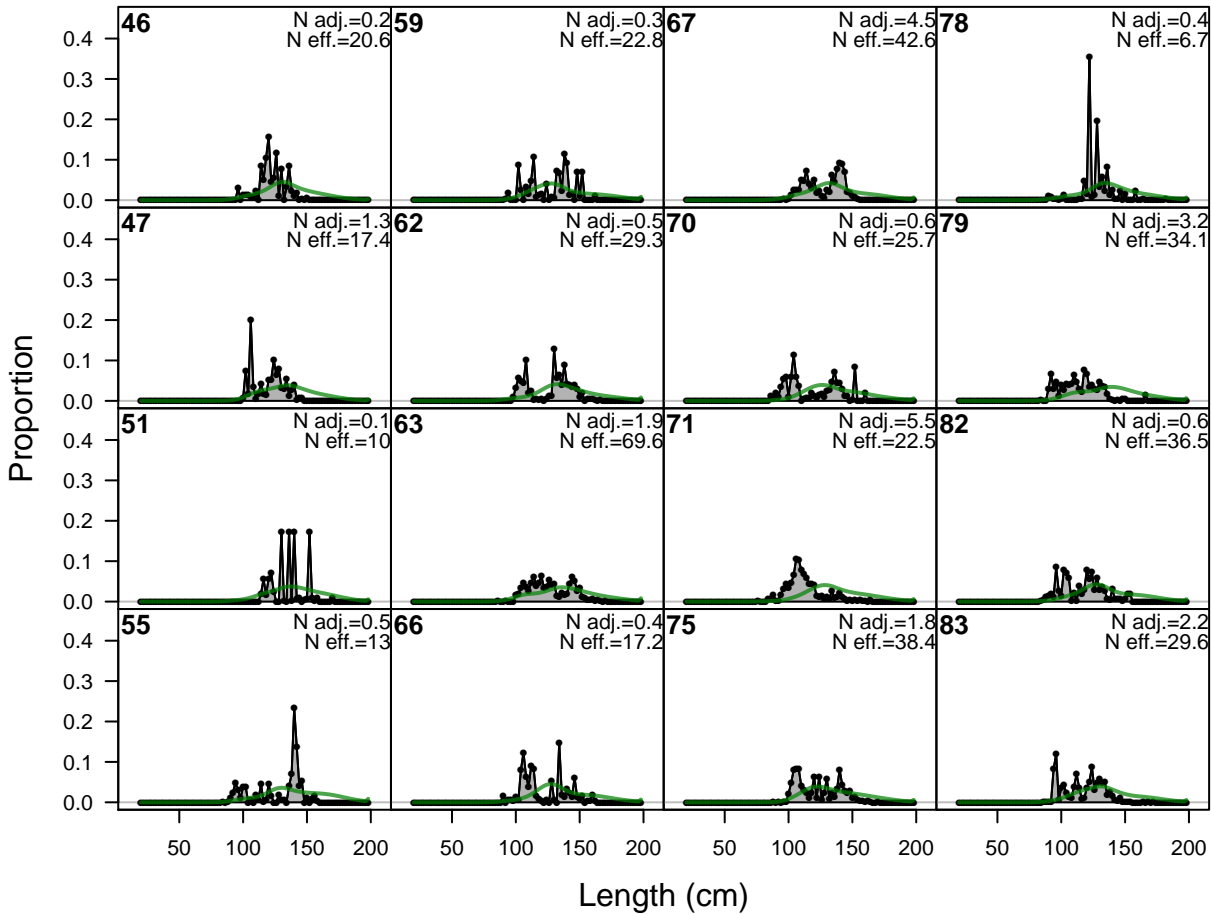
Effective sample size



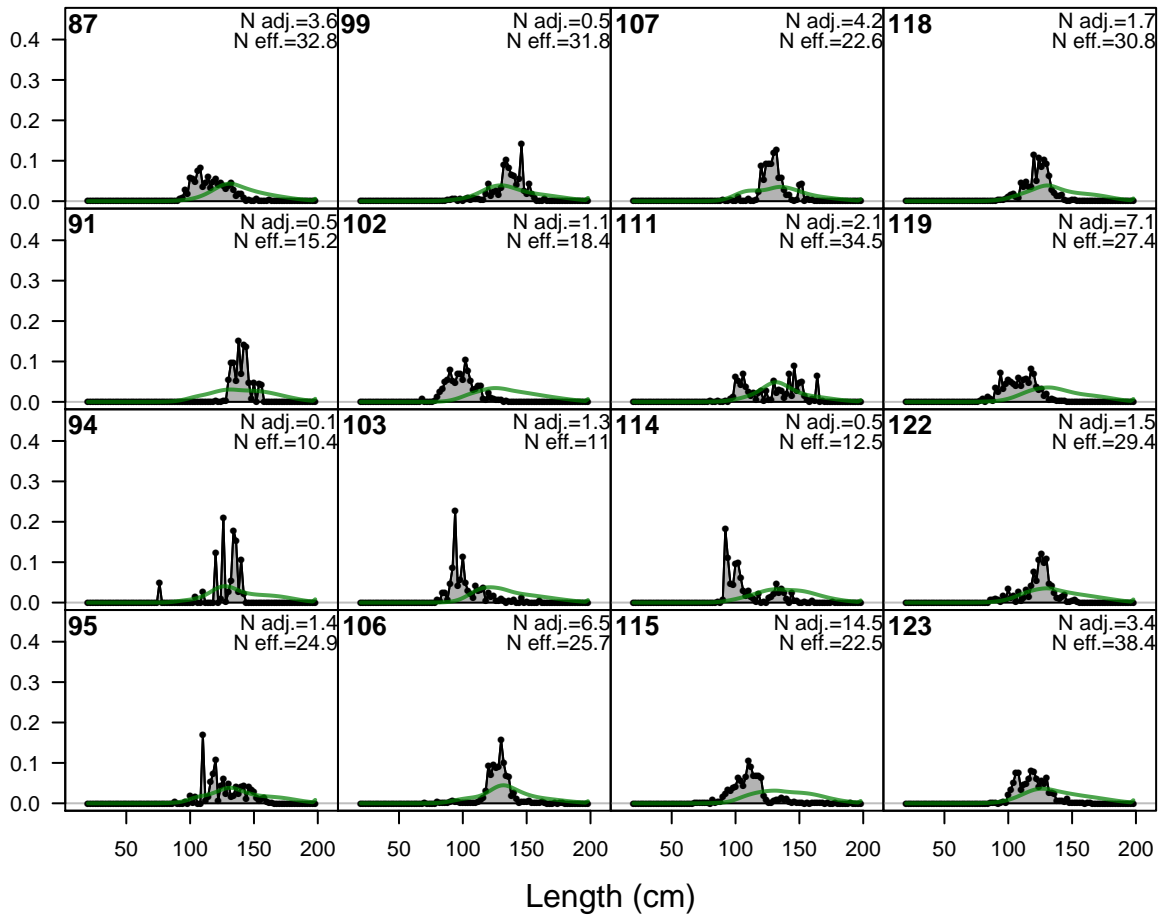
F33-LL\_C\_Q23n (whole catch)



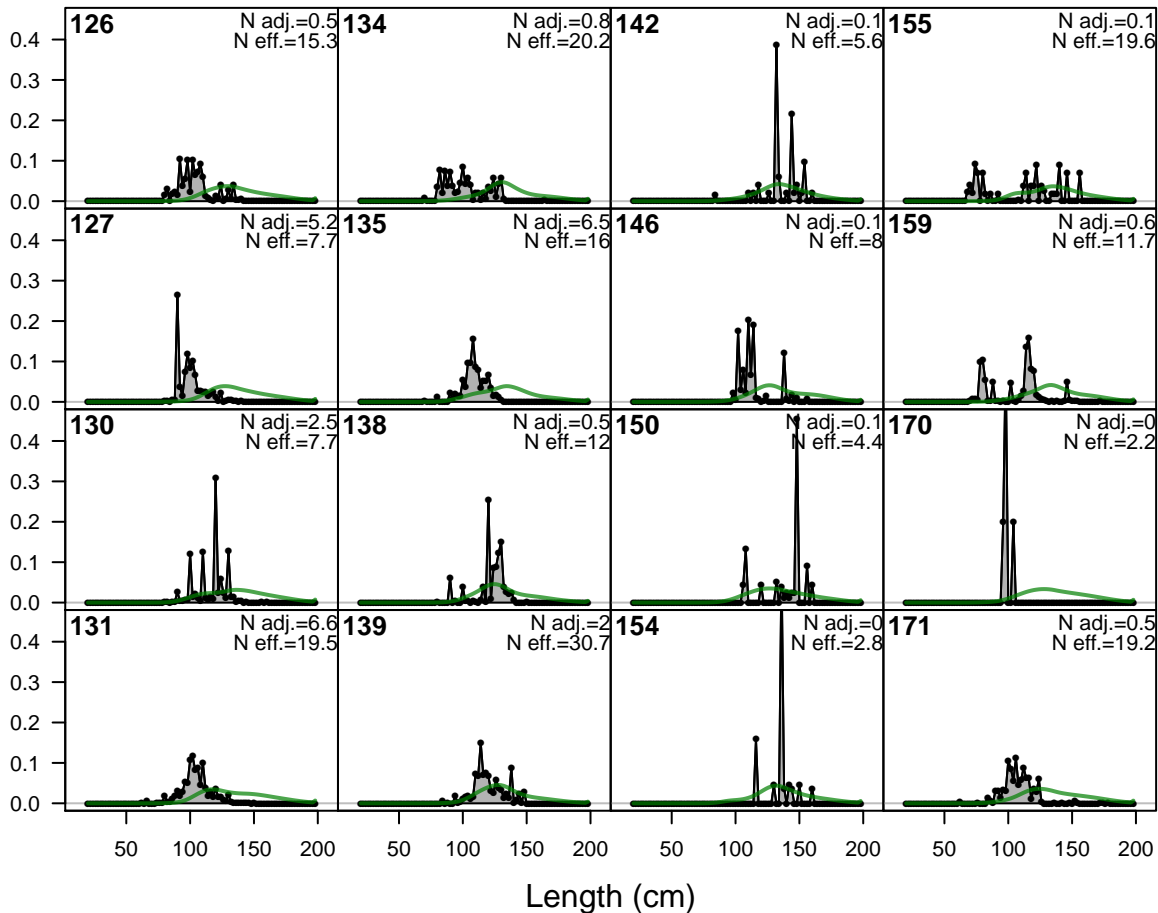


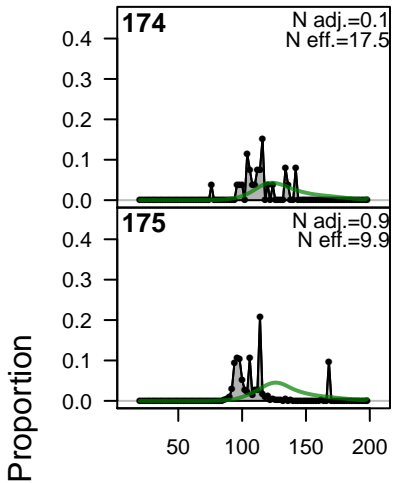


Proportion

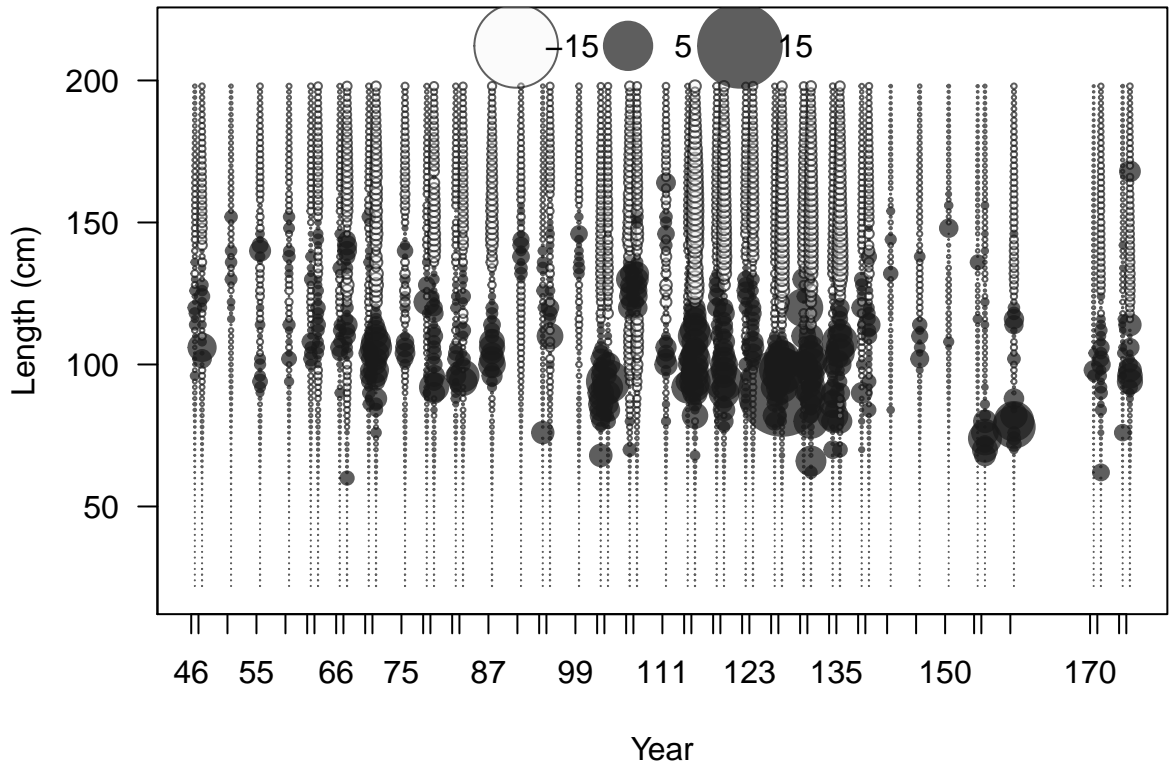


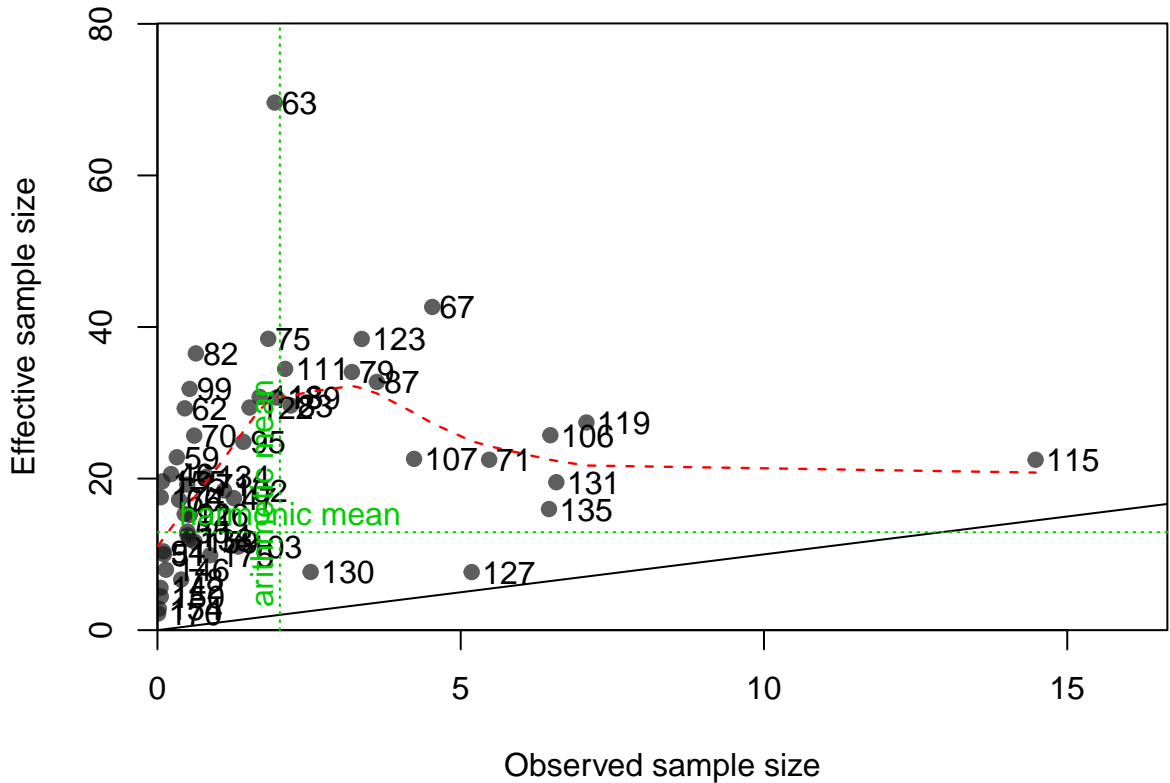
Proportion



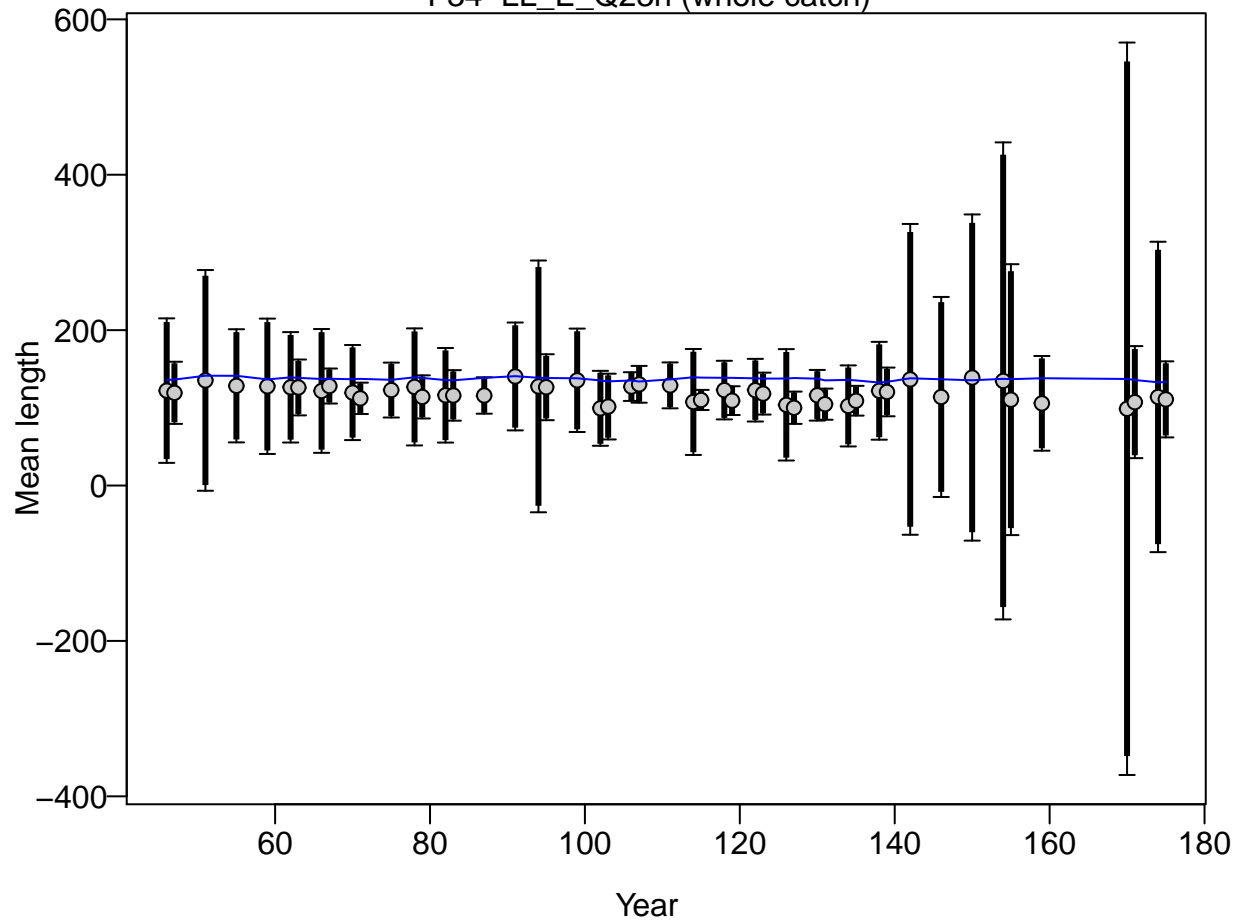


Length (cm)

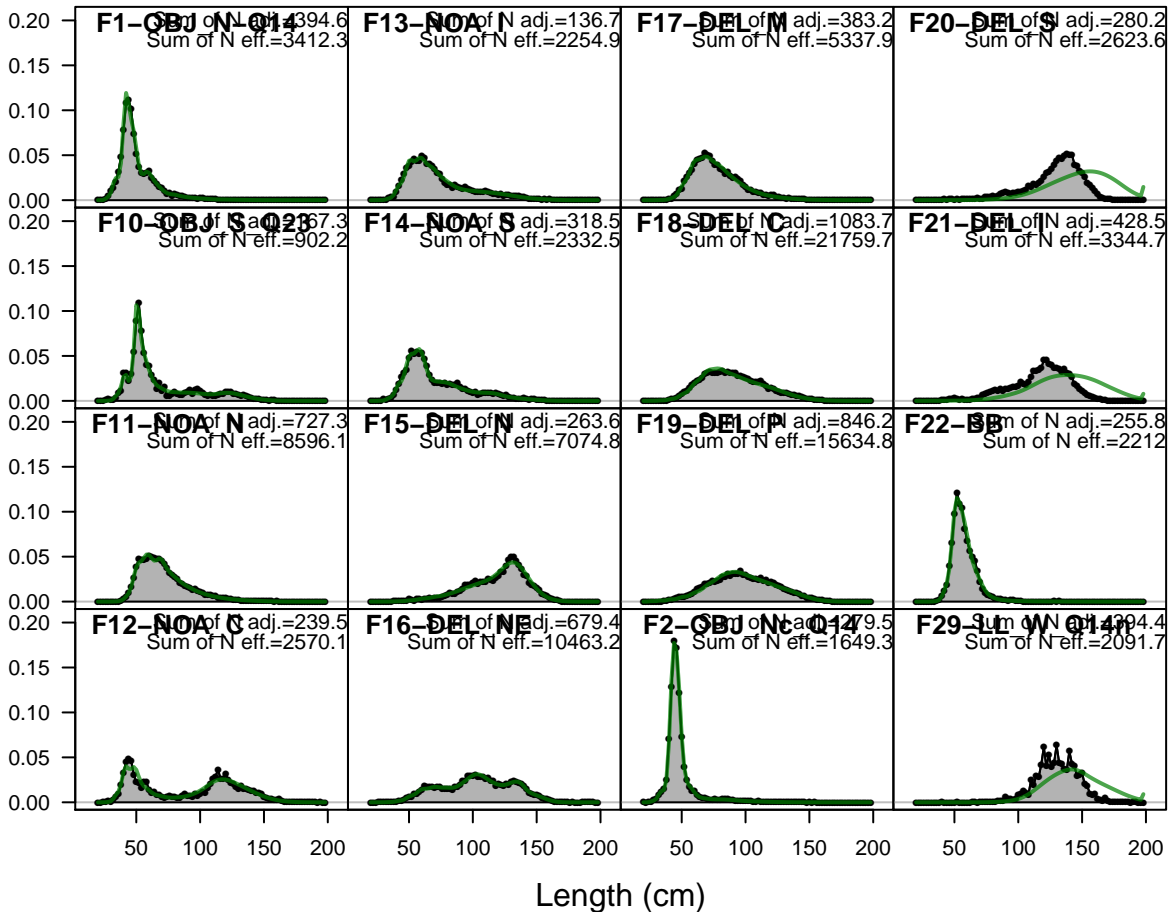




F34-LL\_E\_Q23n (whole catch)



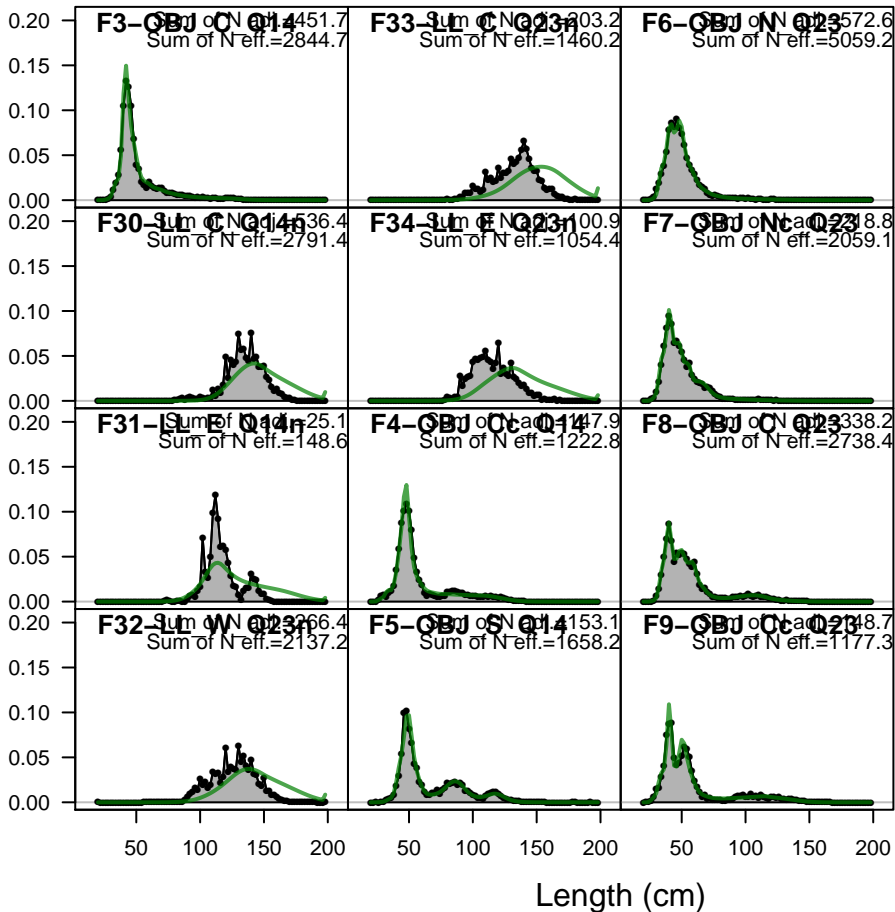
Proportion

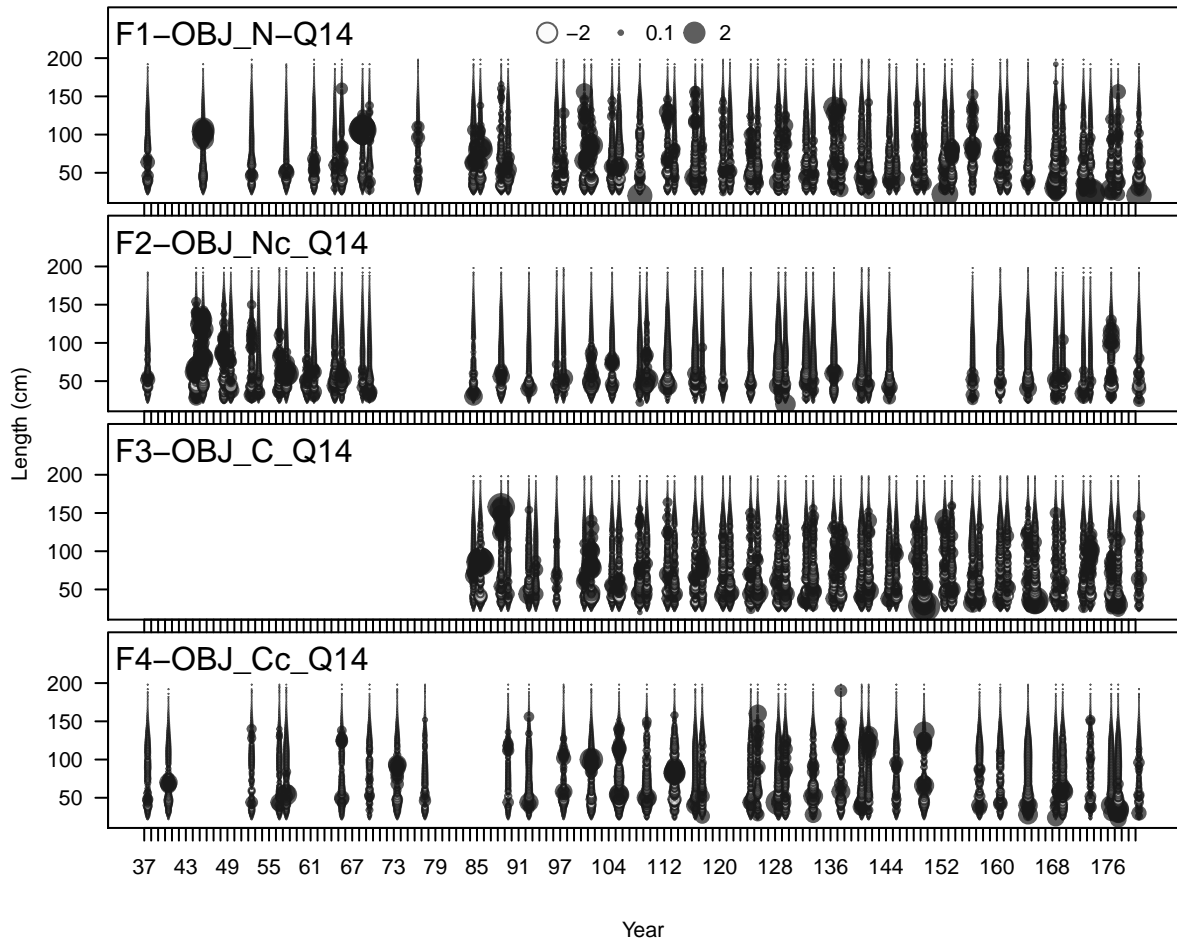


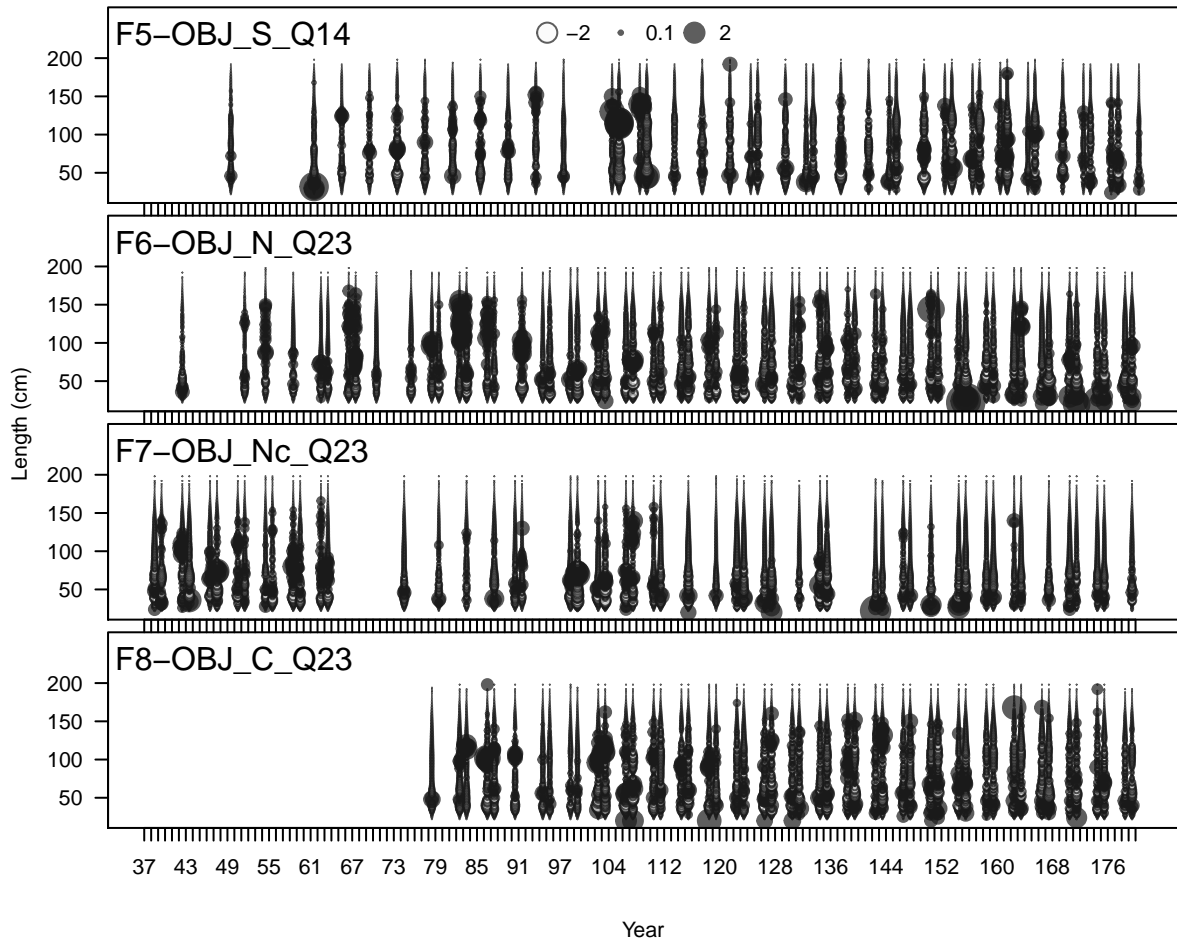
Length (cm)

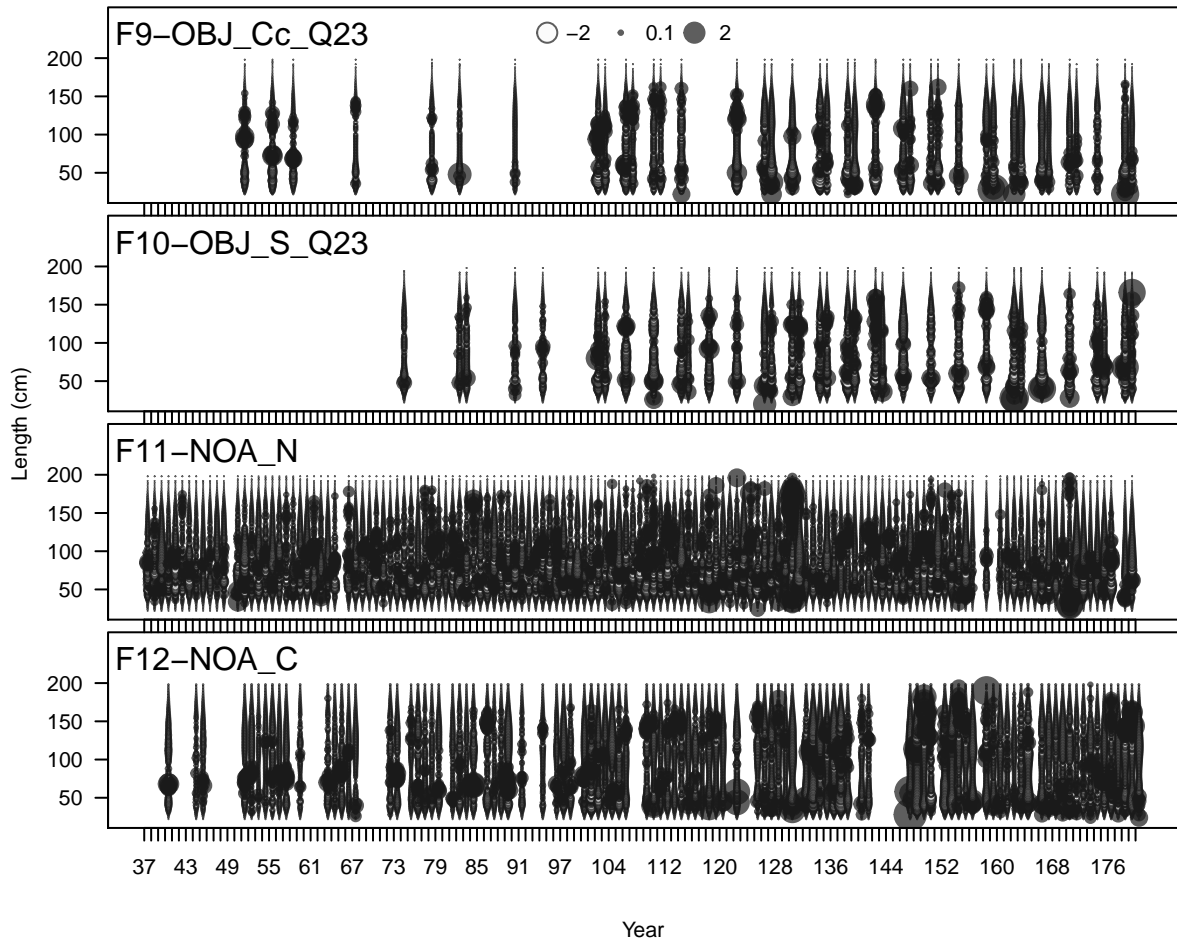


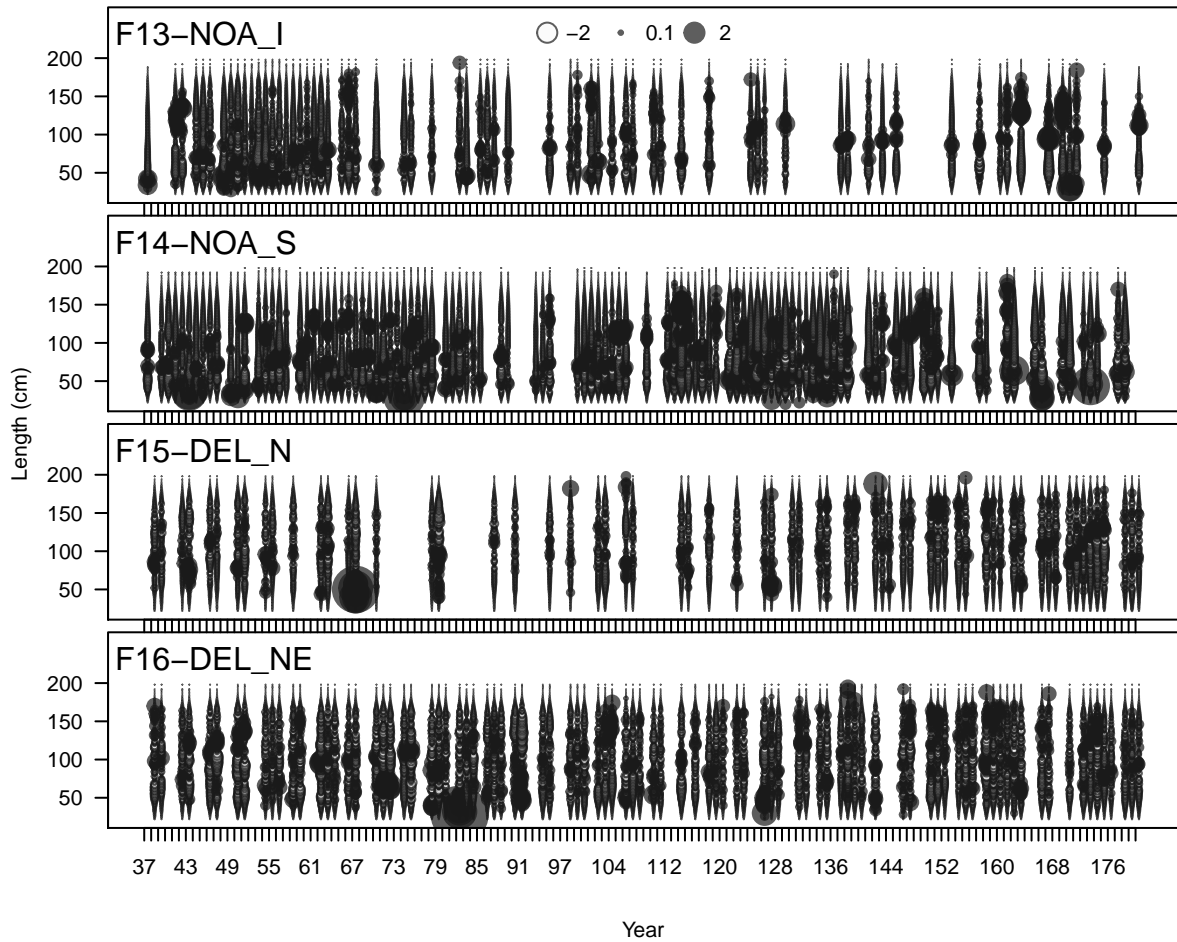
Proportion

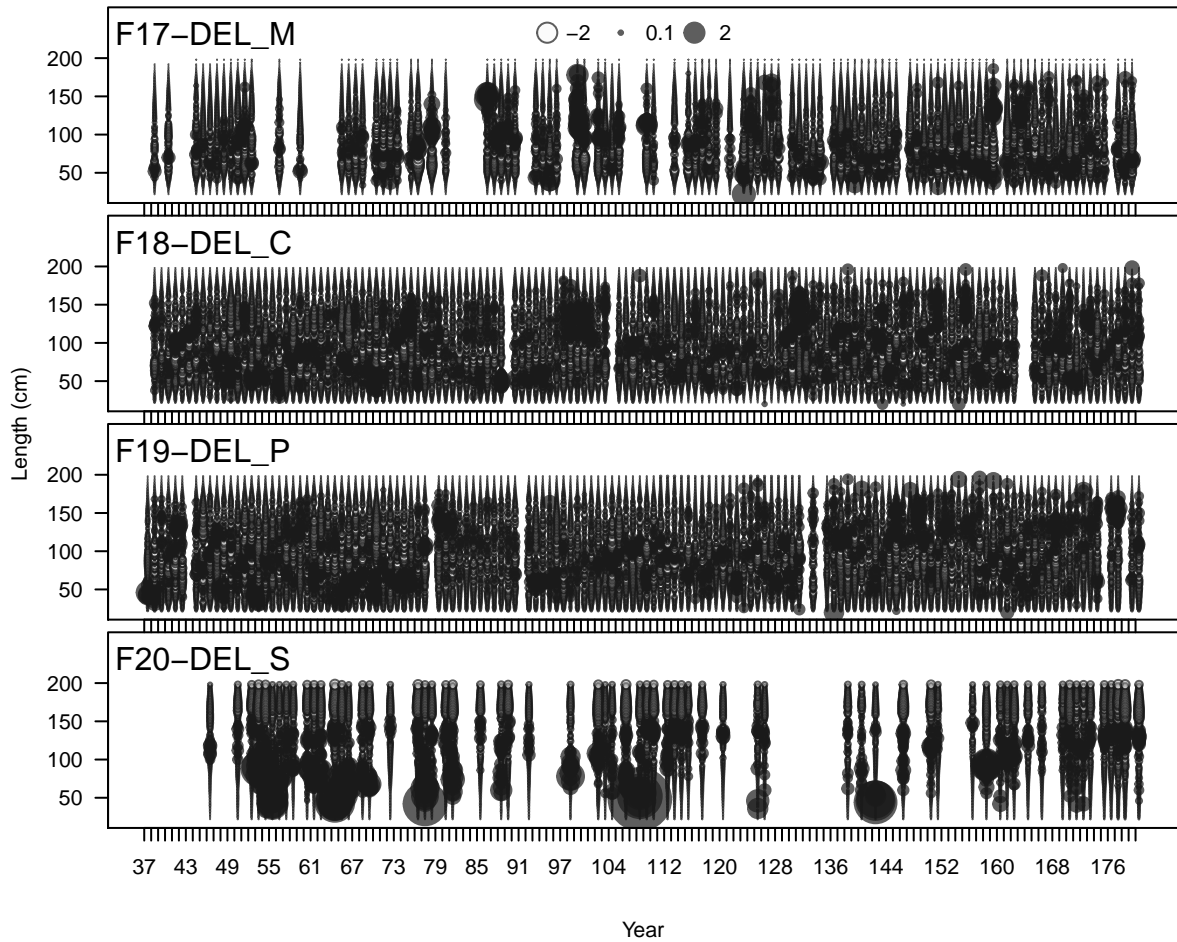


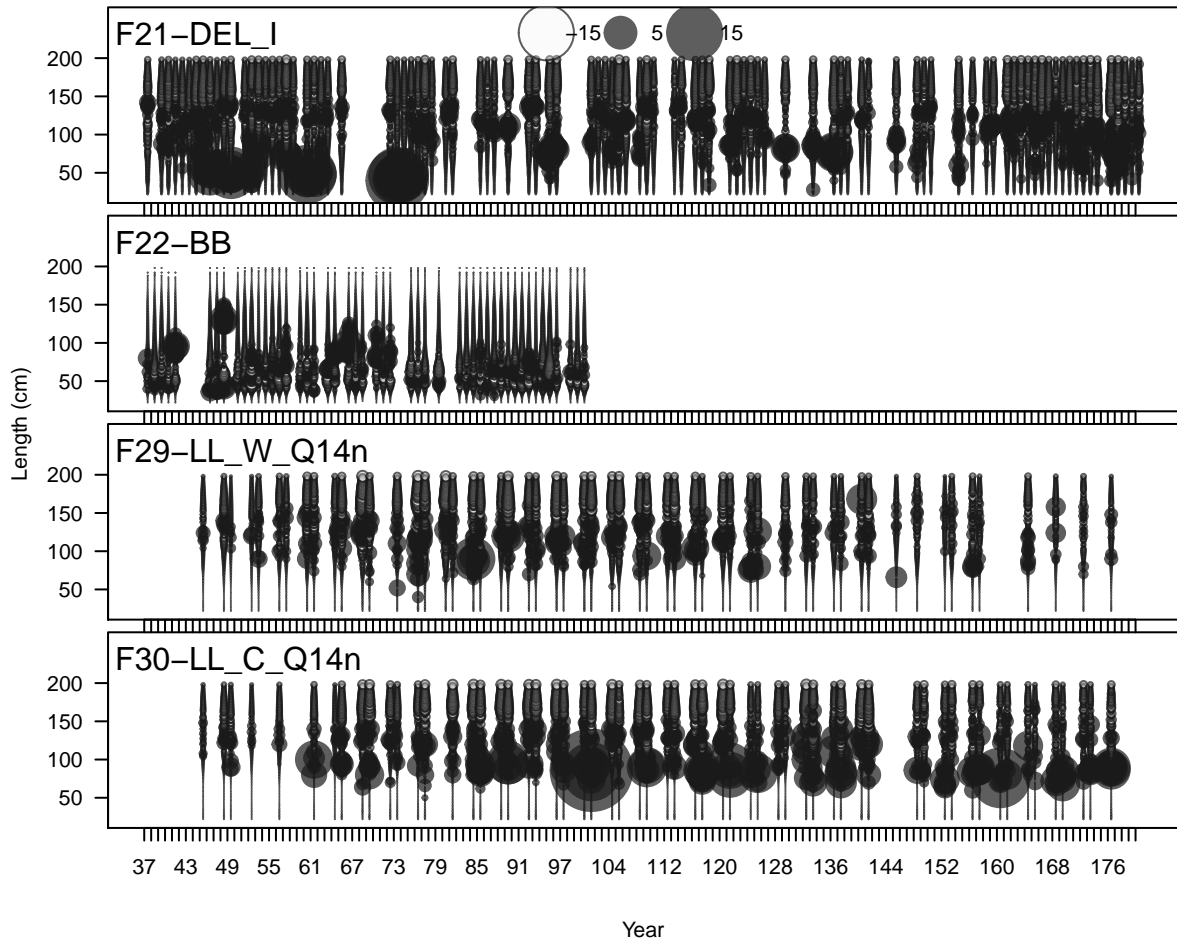


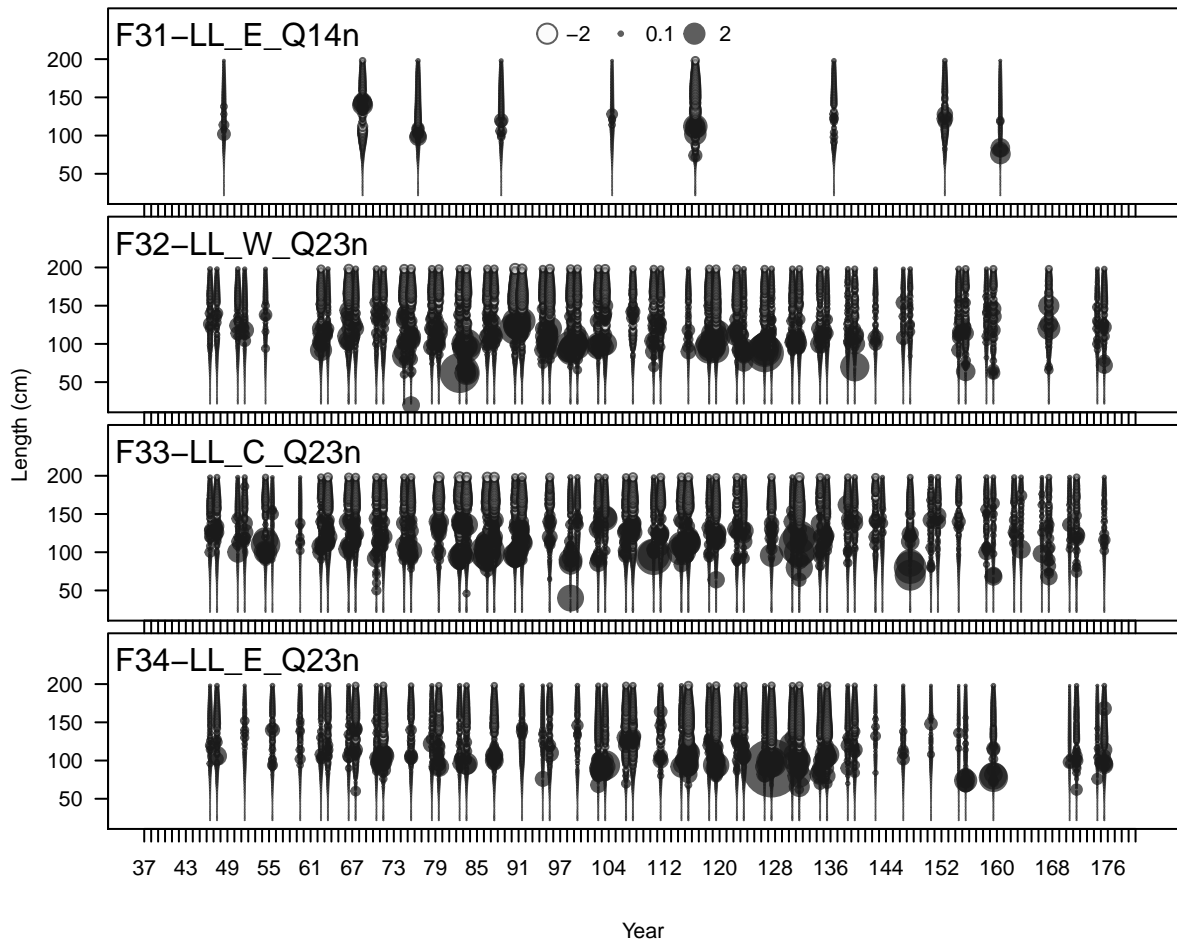






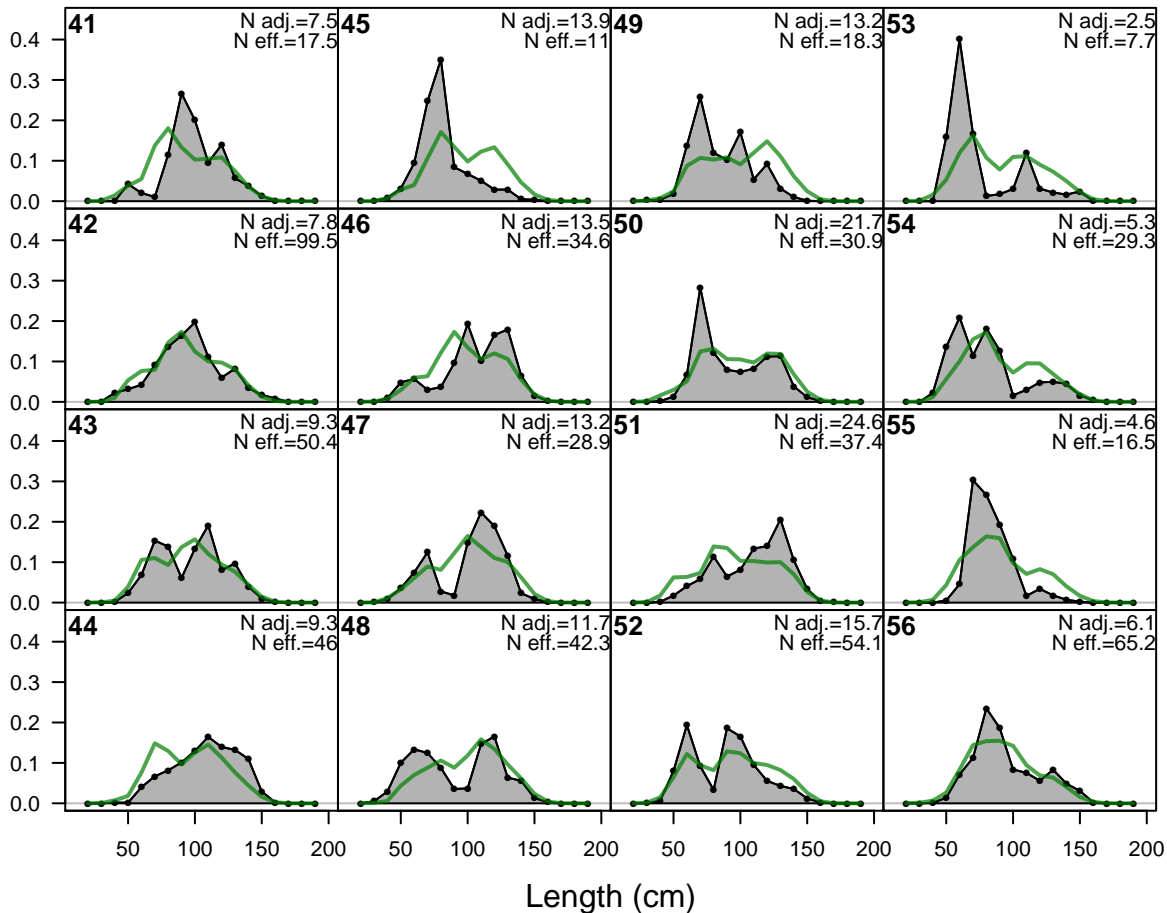




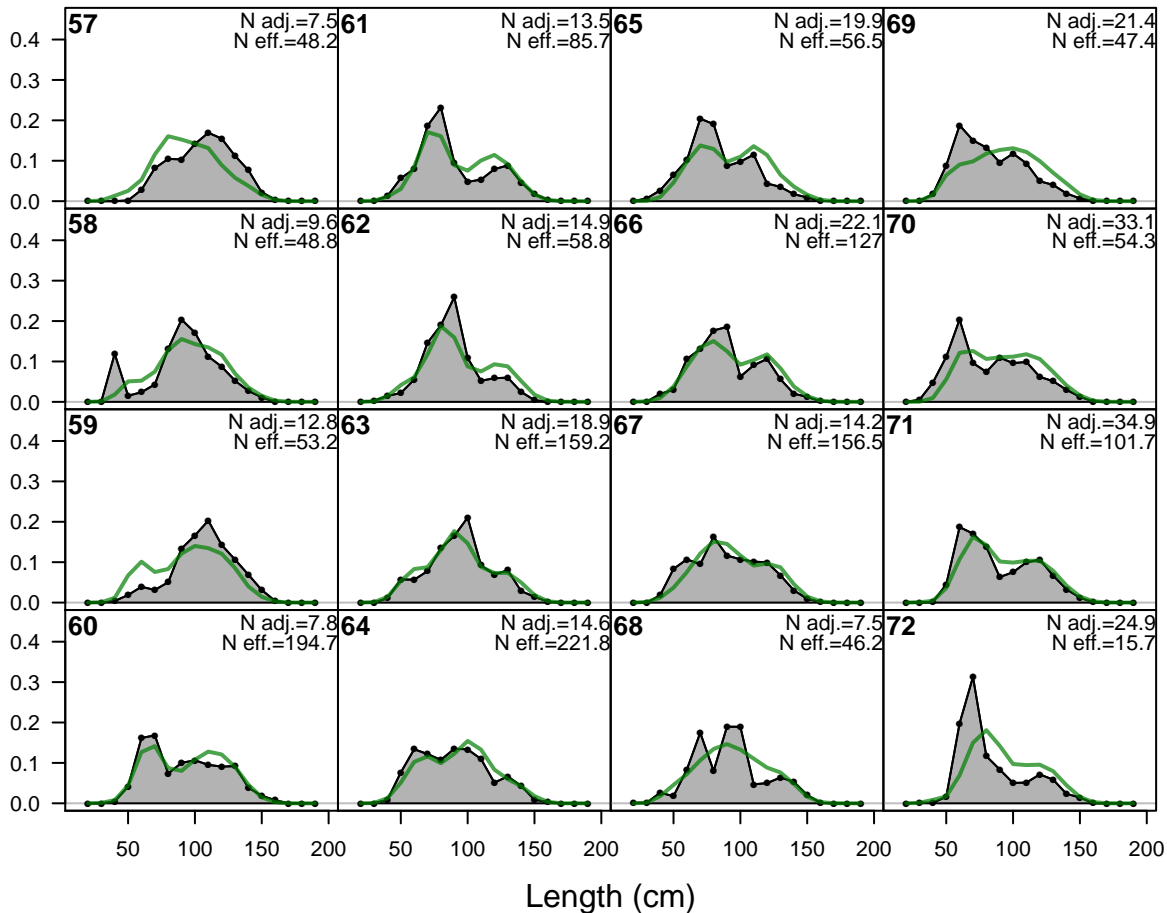




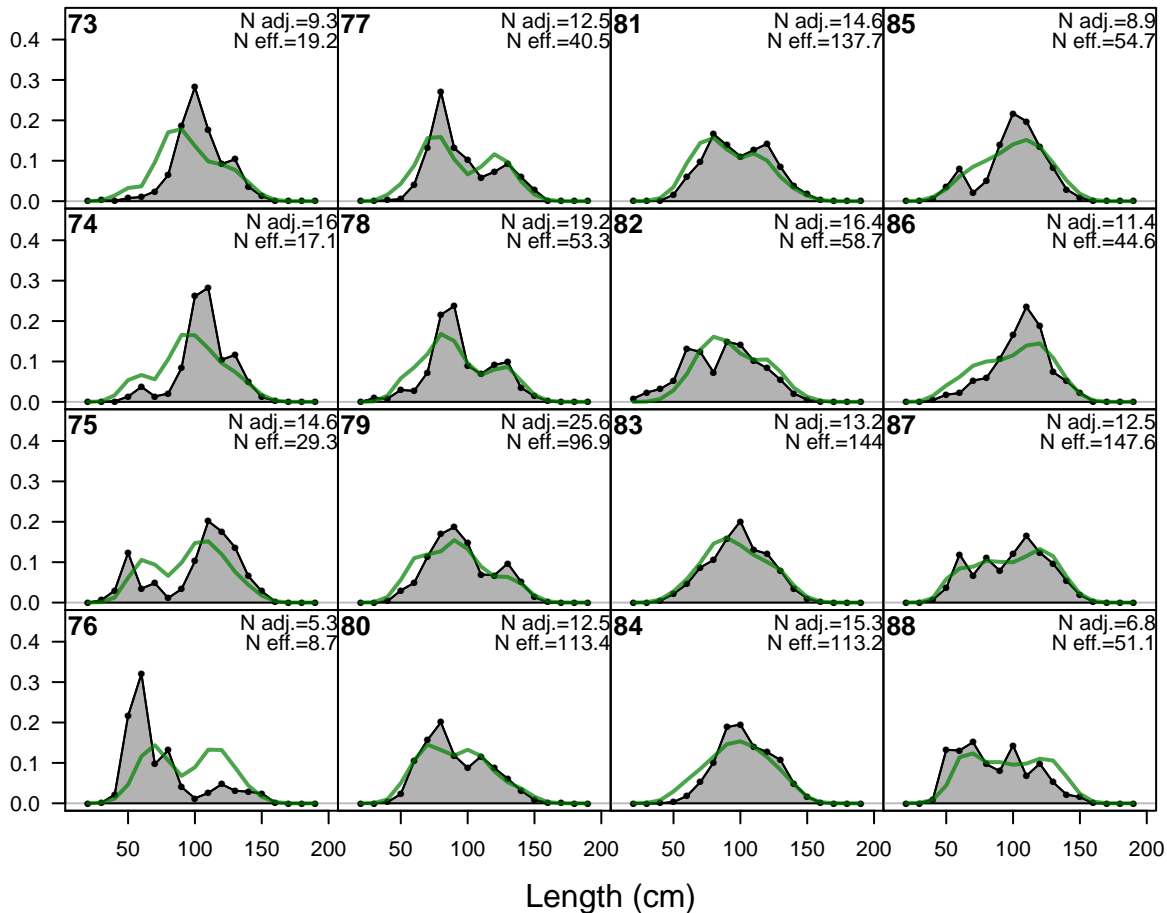
Proportion

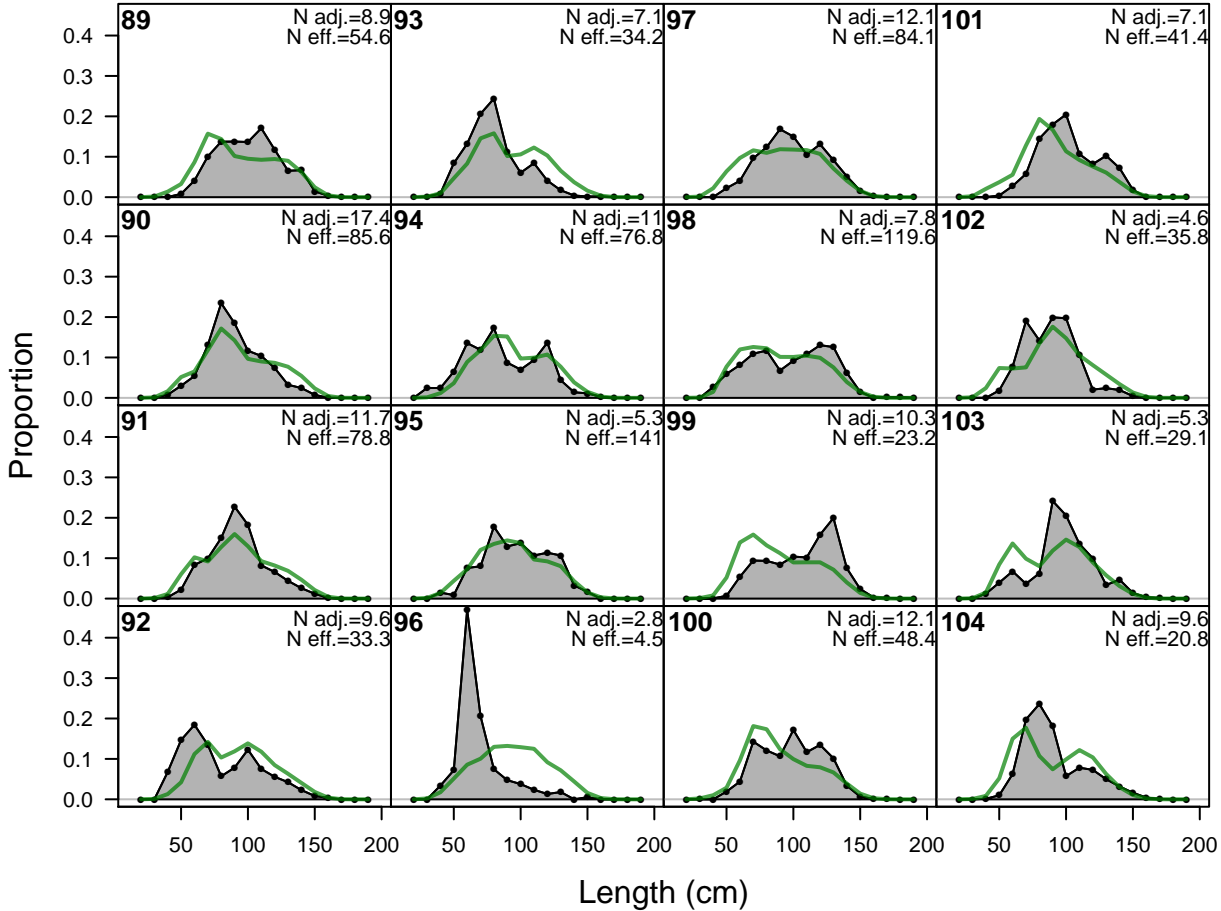


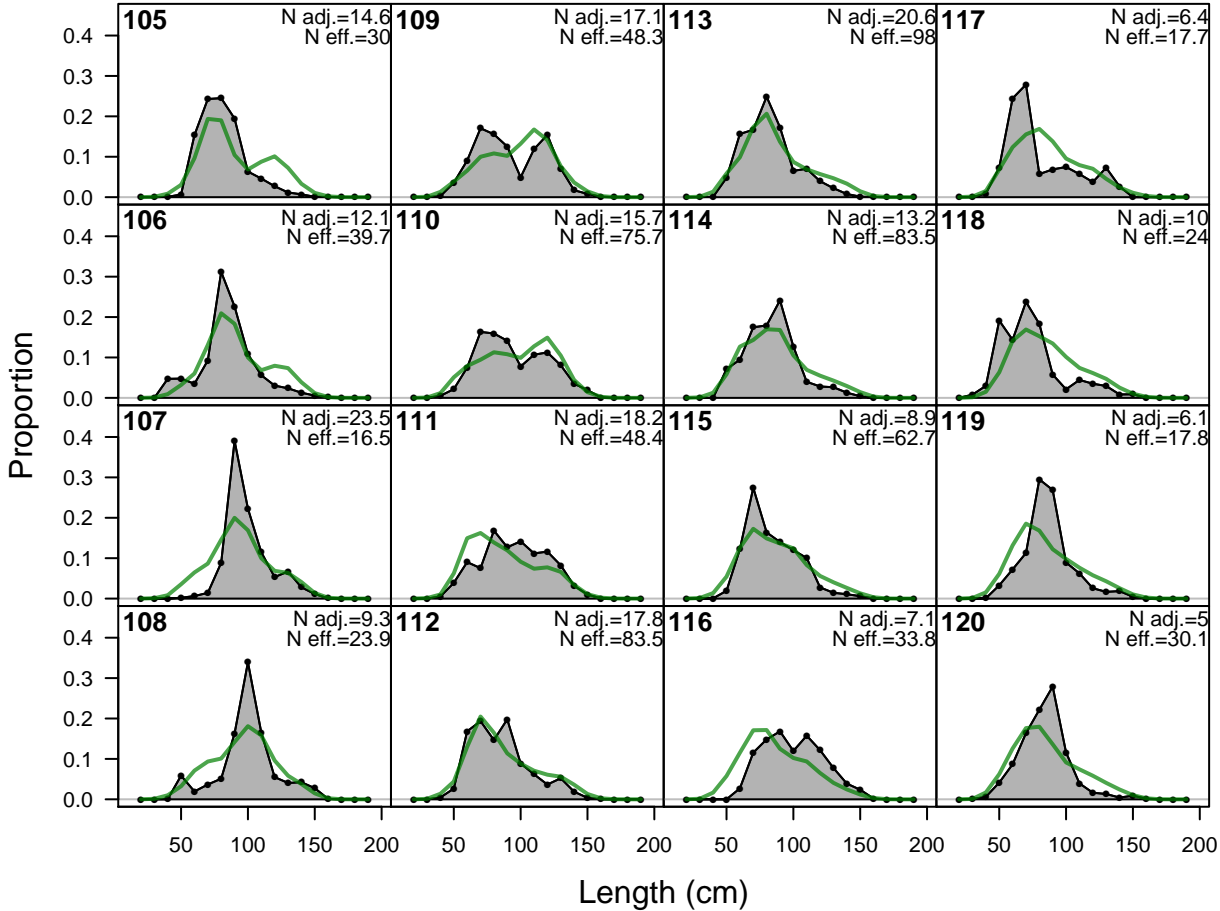
Proportion



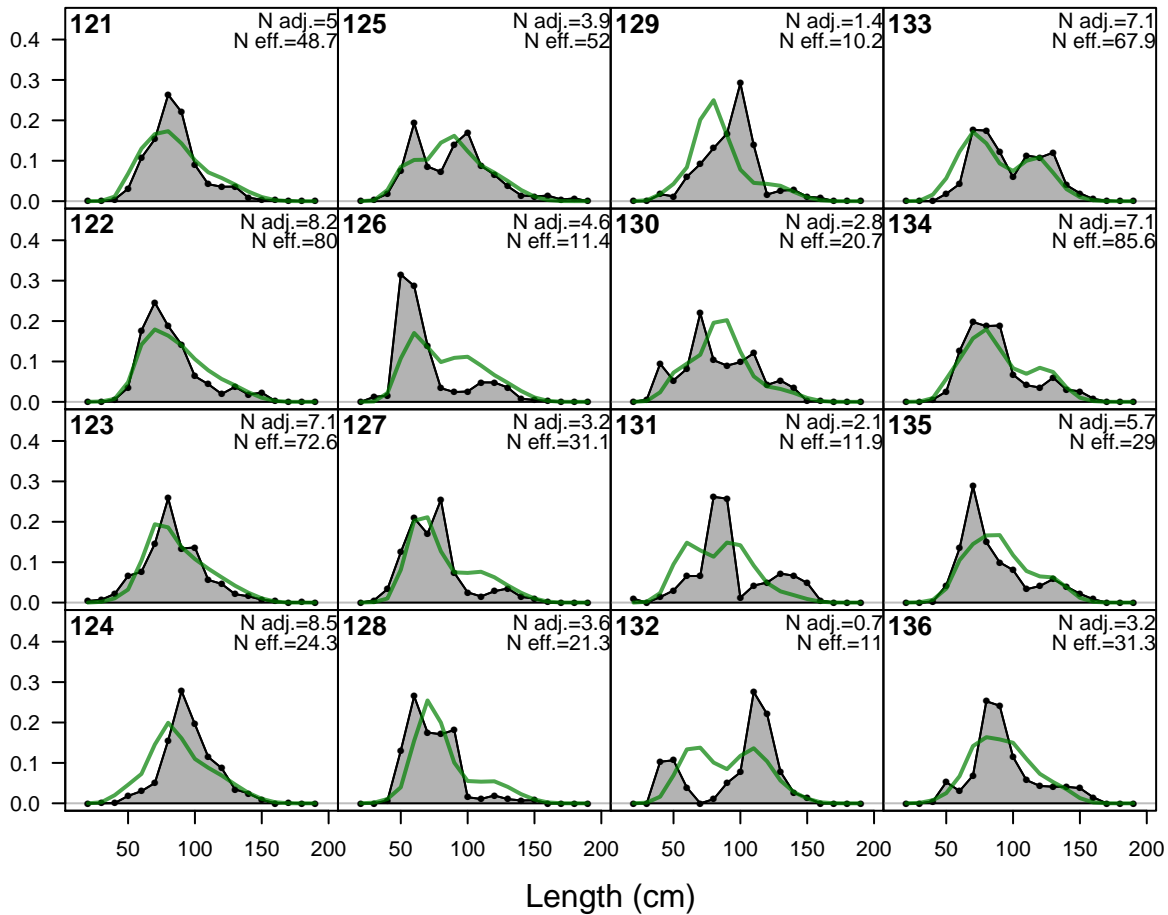
Proportion



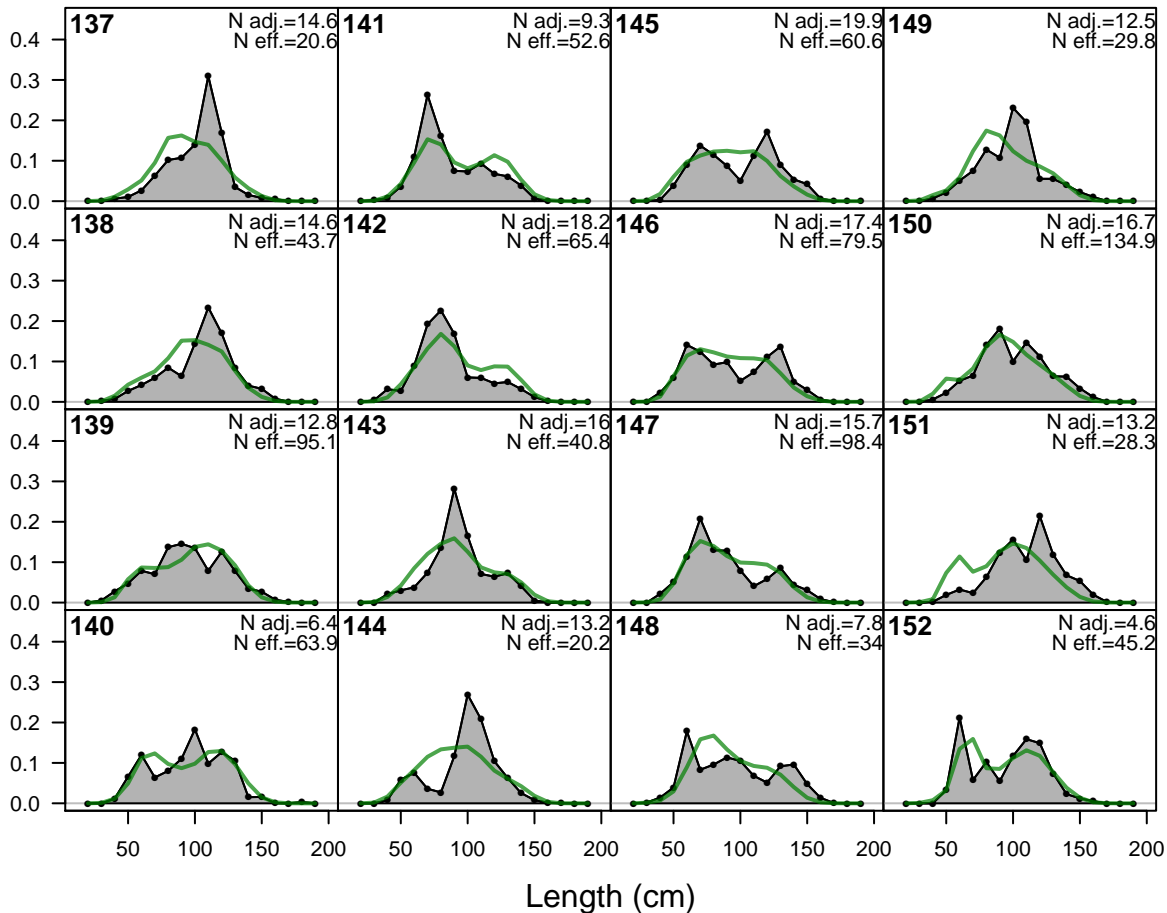




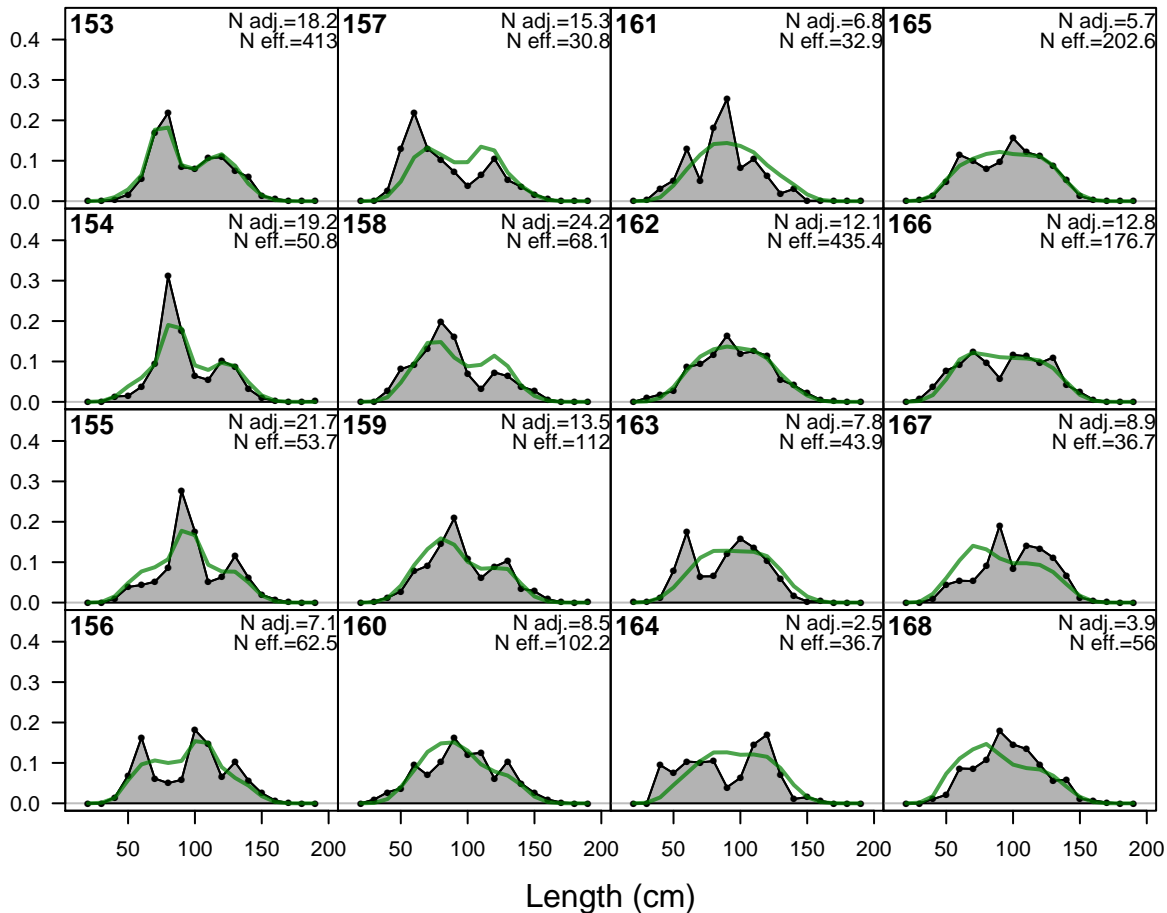
Proportion



Proportion

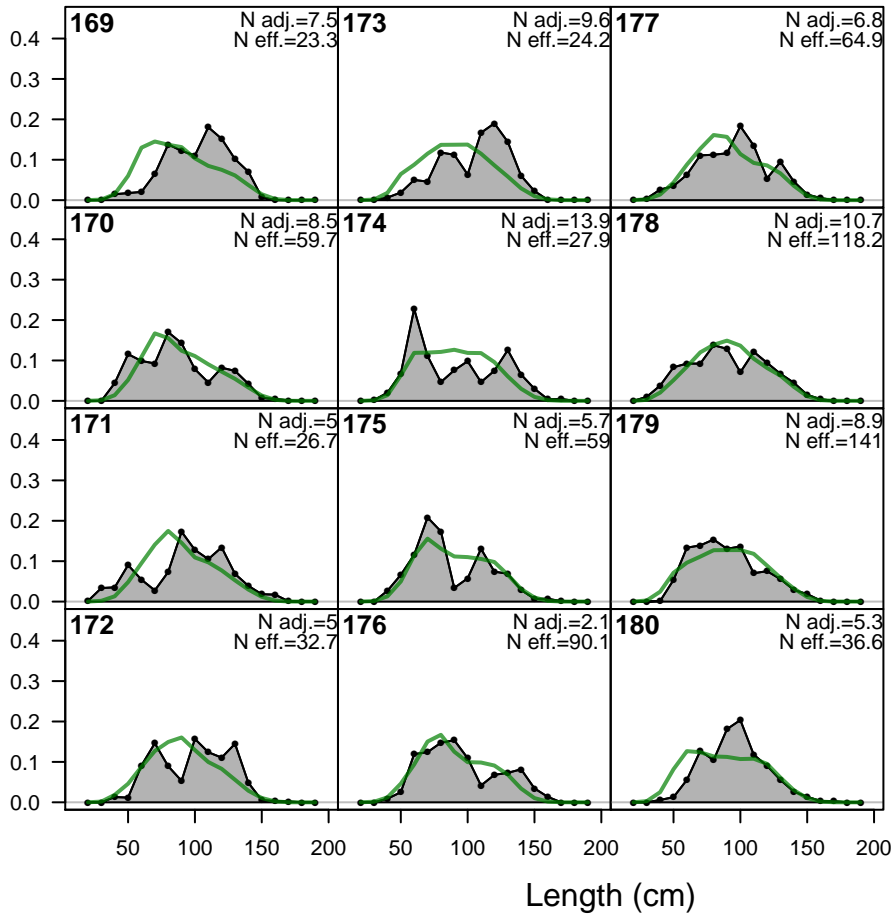


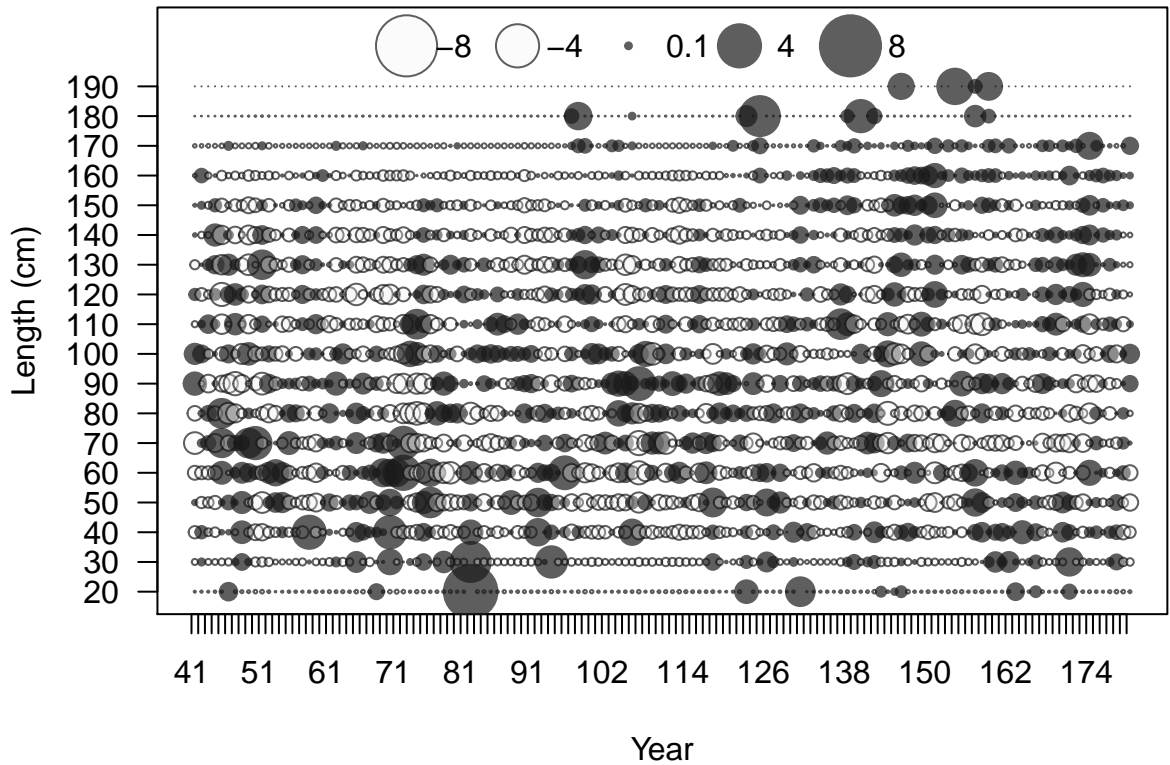
Proportion

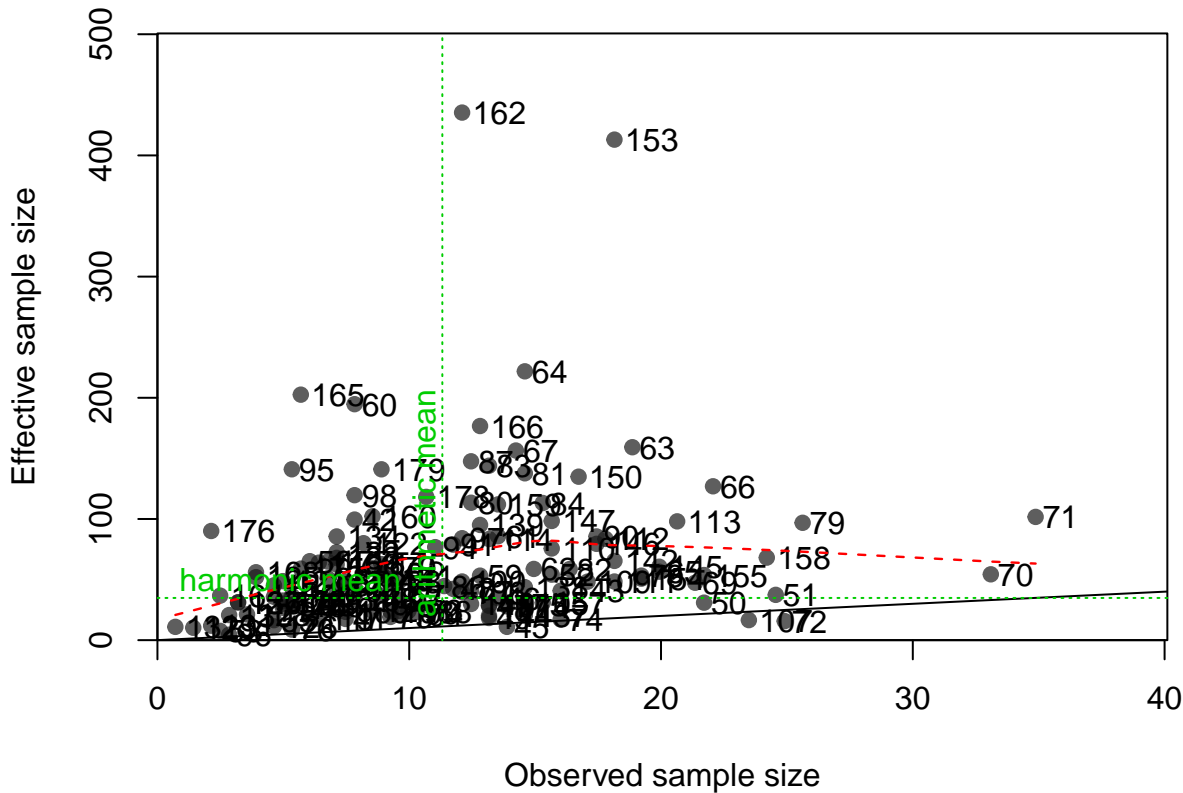




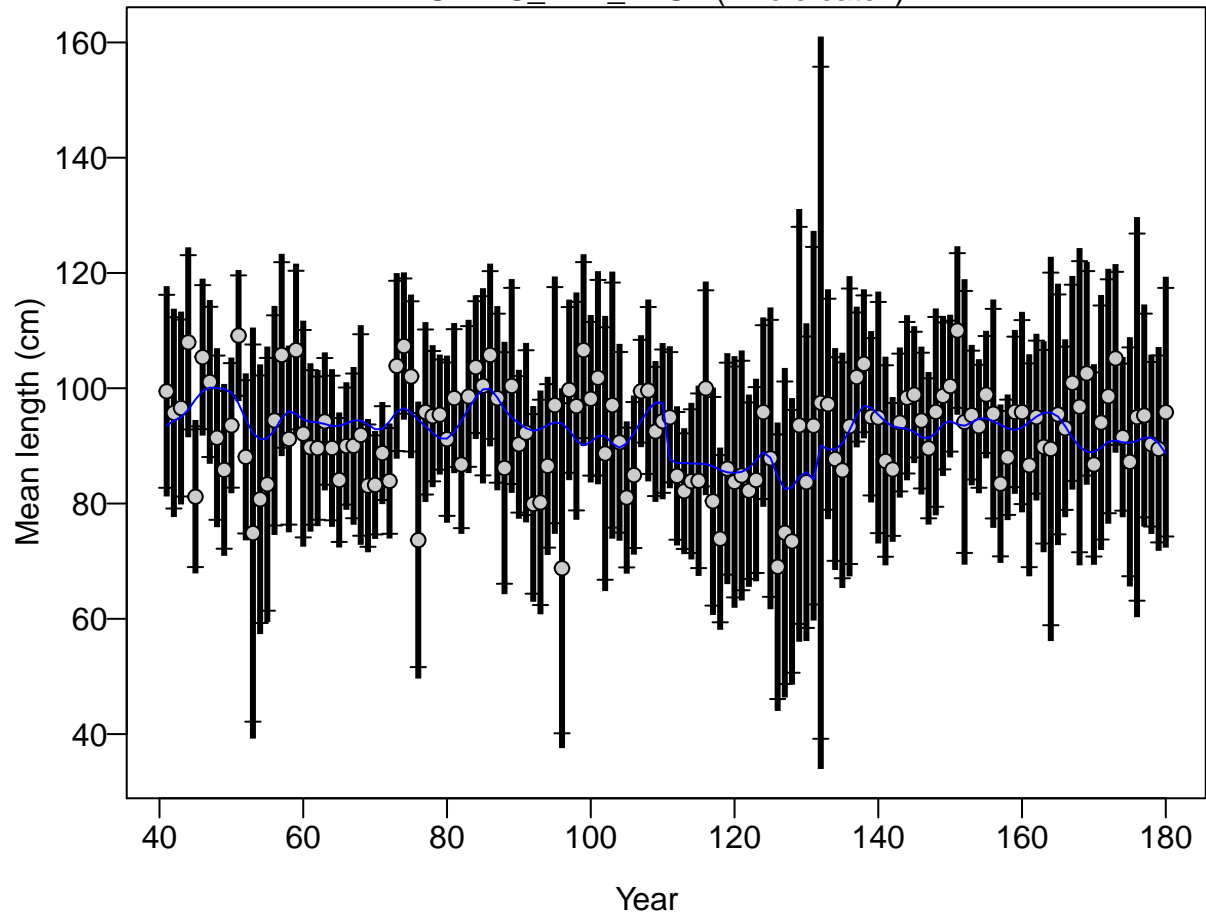
Proportion





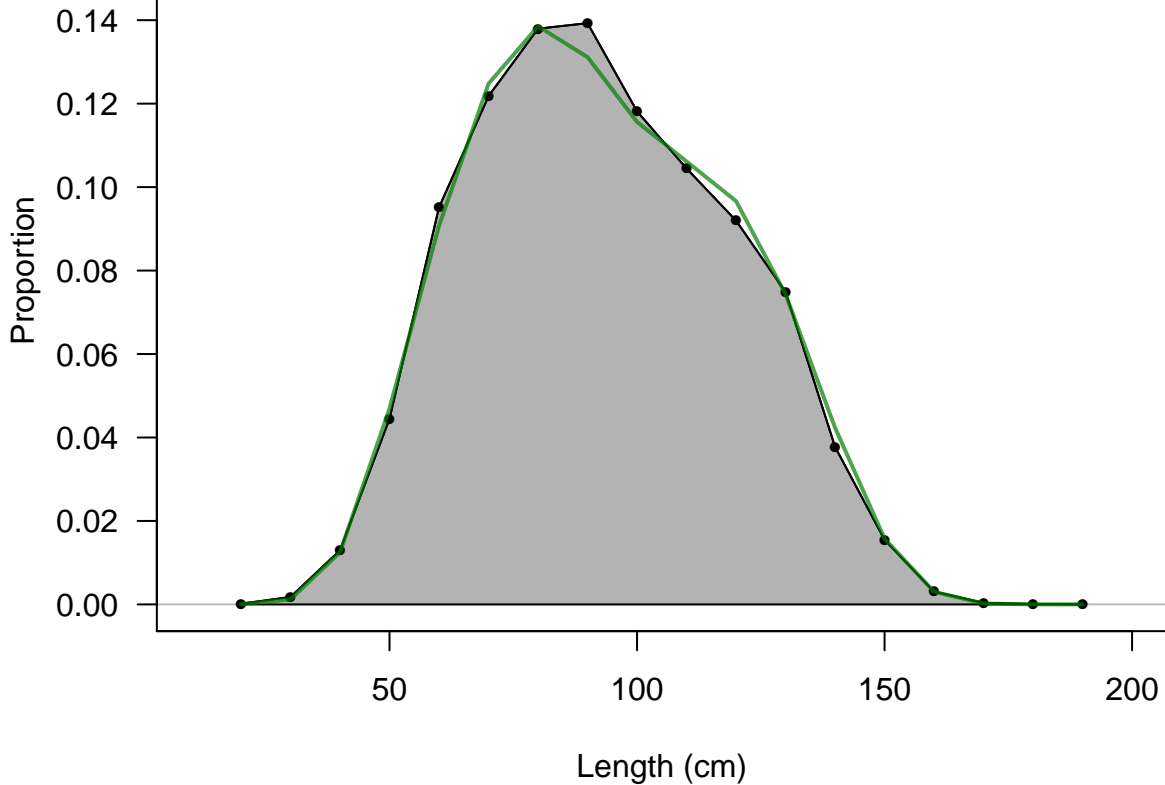


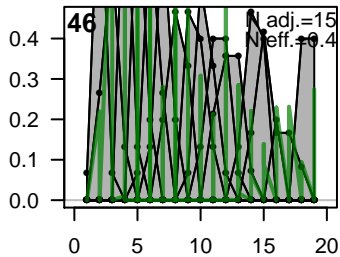
S1-PS\_DEL\_VAST (whole catch)



# S1-PS\_DEL\_VAST

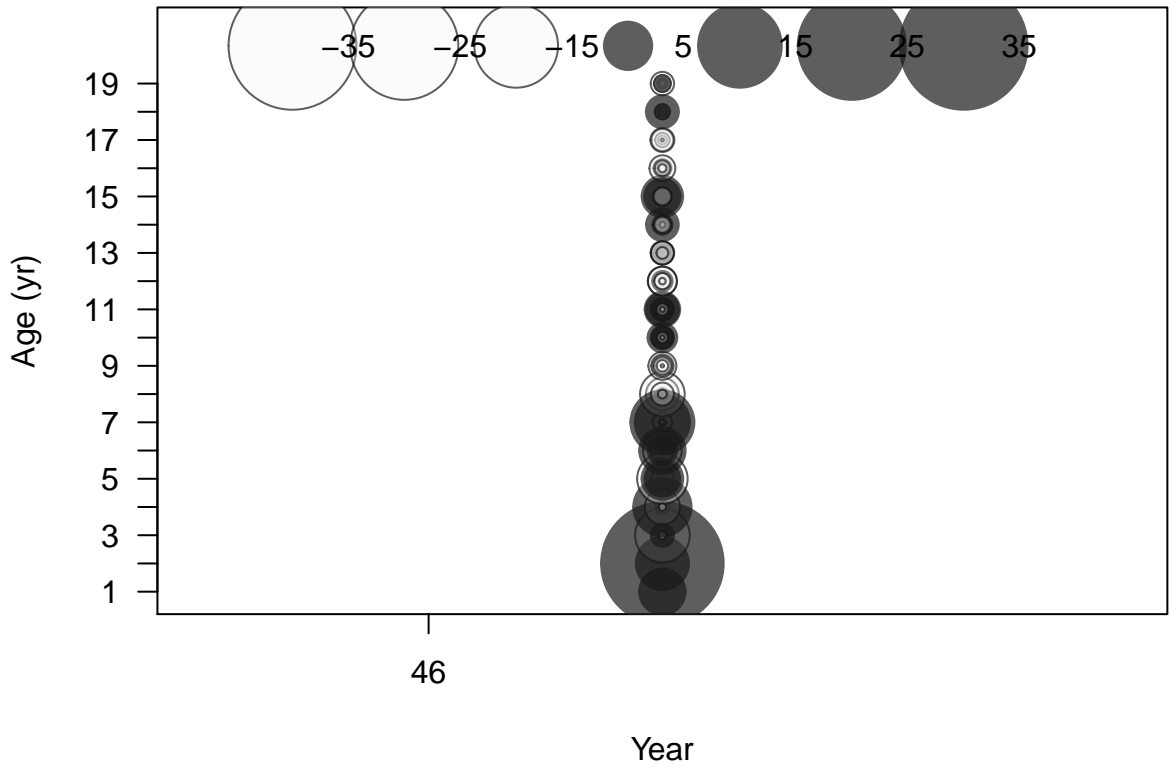
Sum of N adj.=1584.1  
Sum of N eff.=8980.4

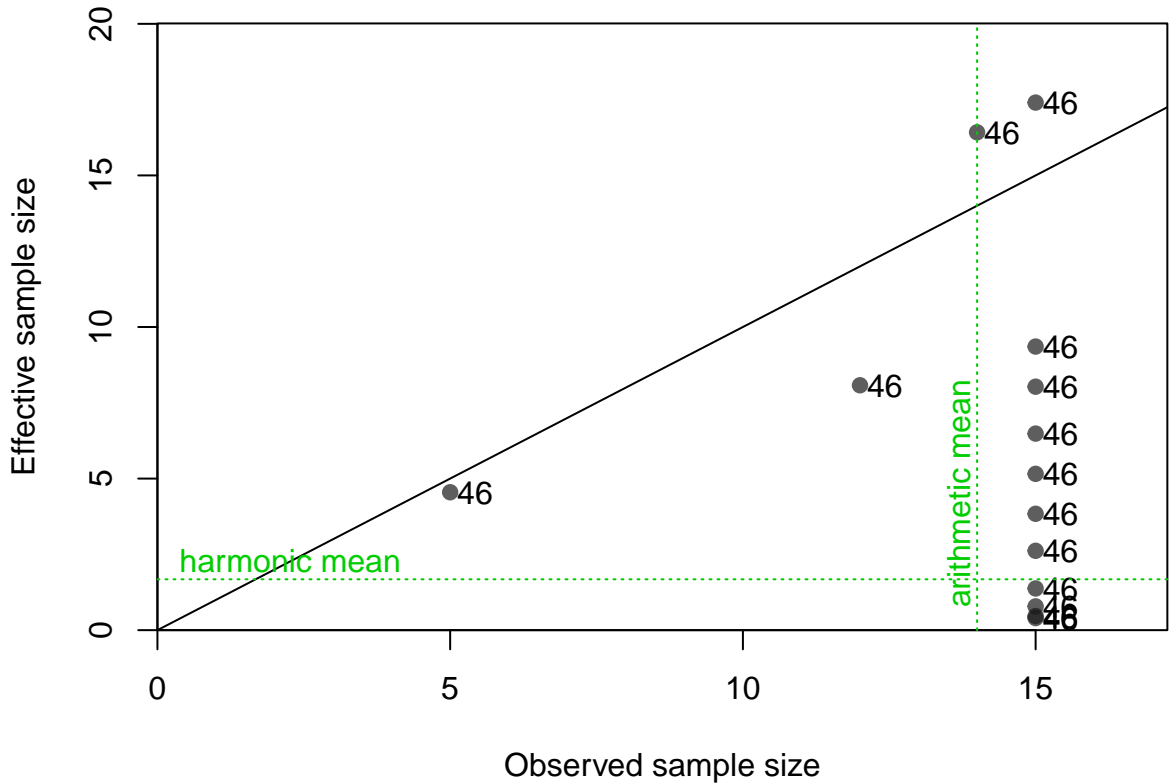




Proportion

Age (yr)

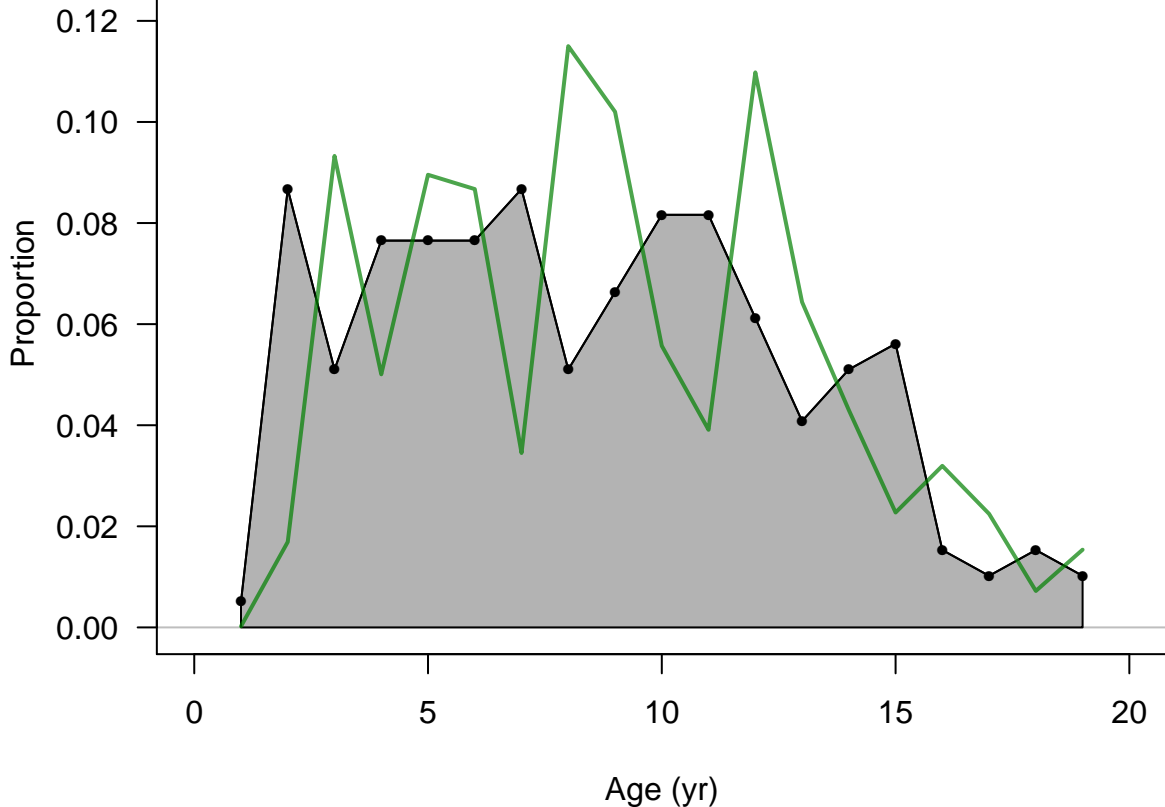


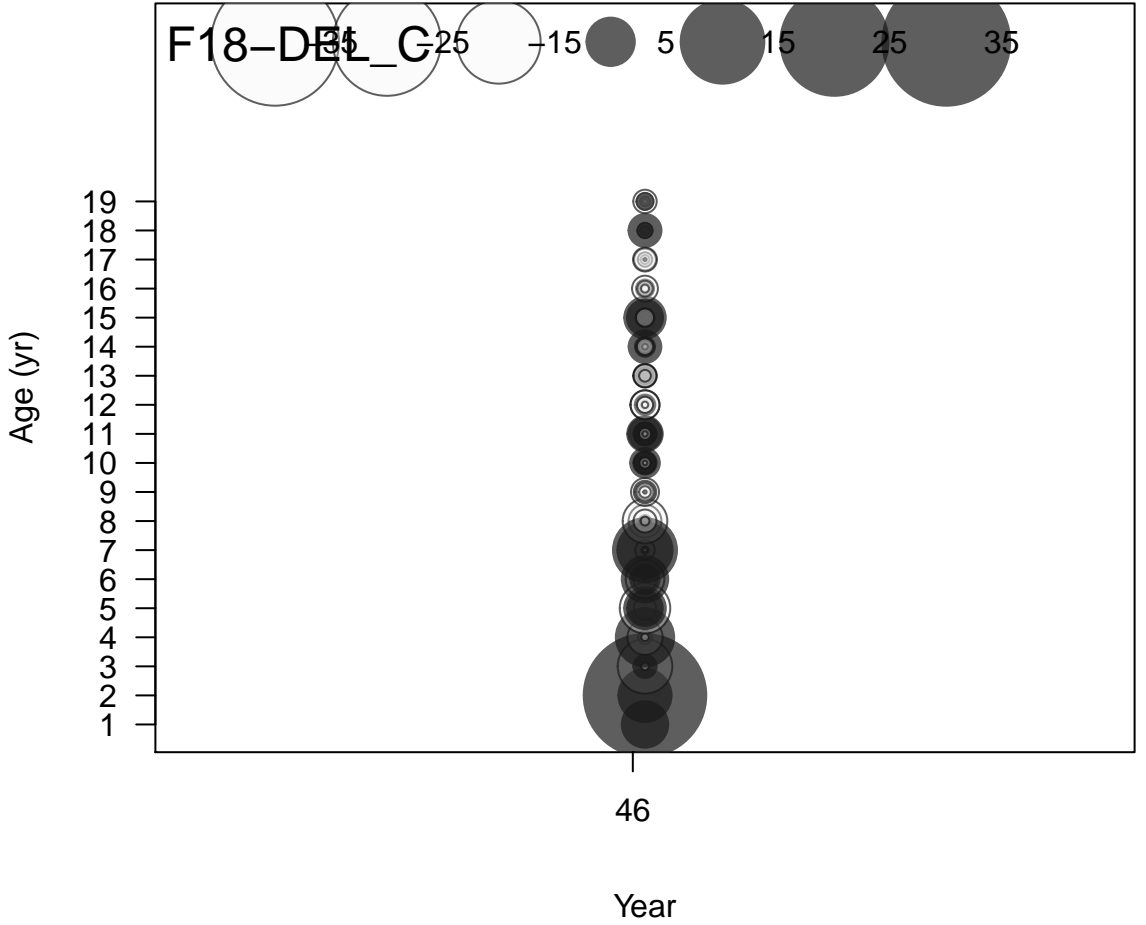


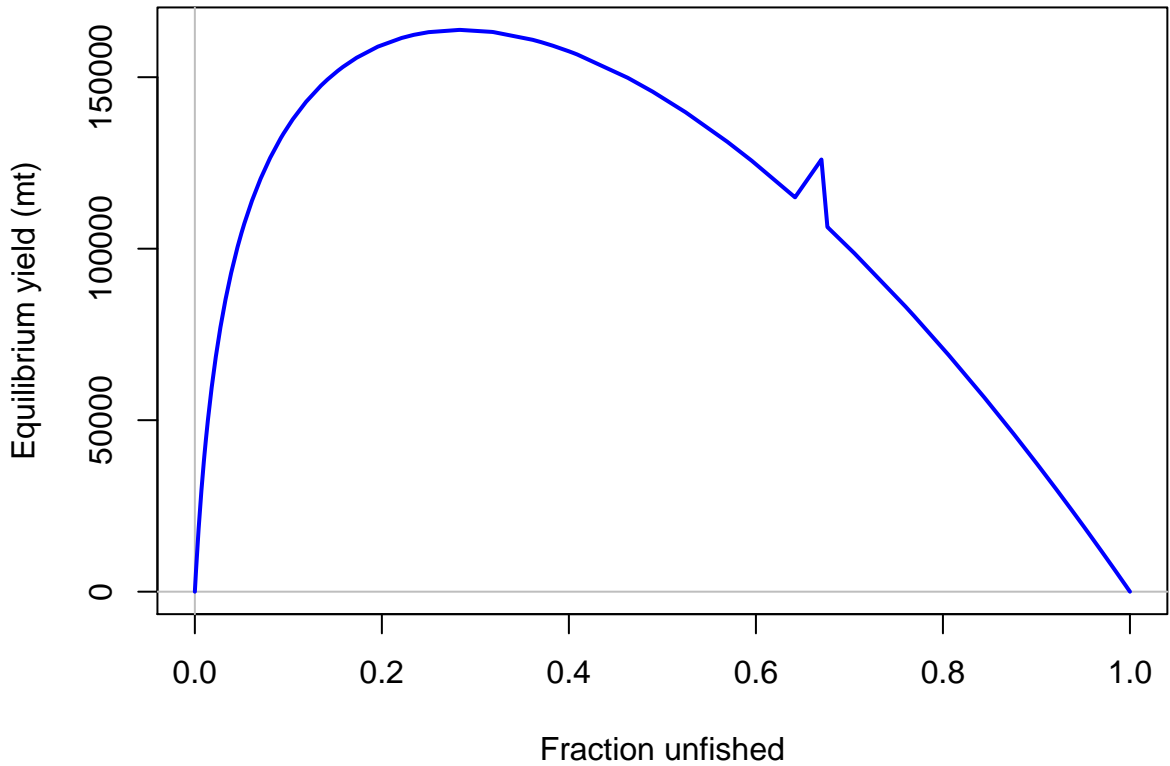


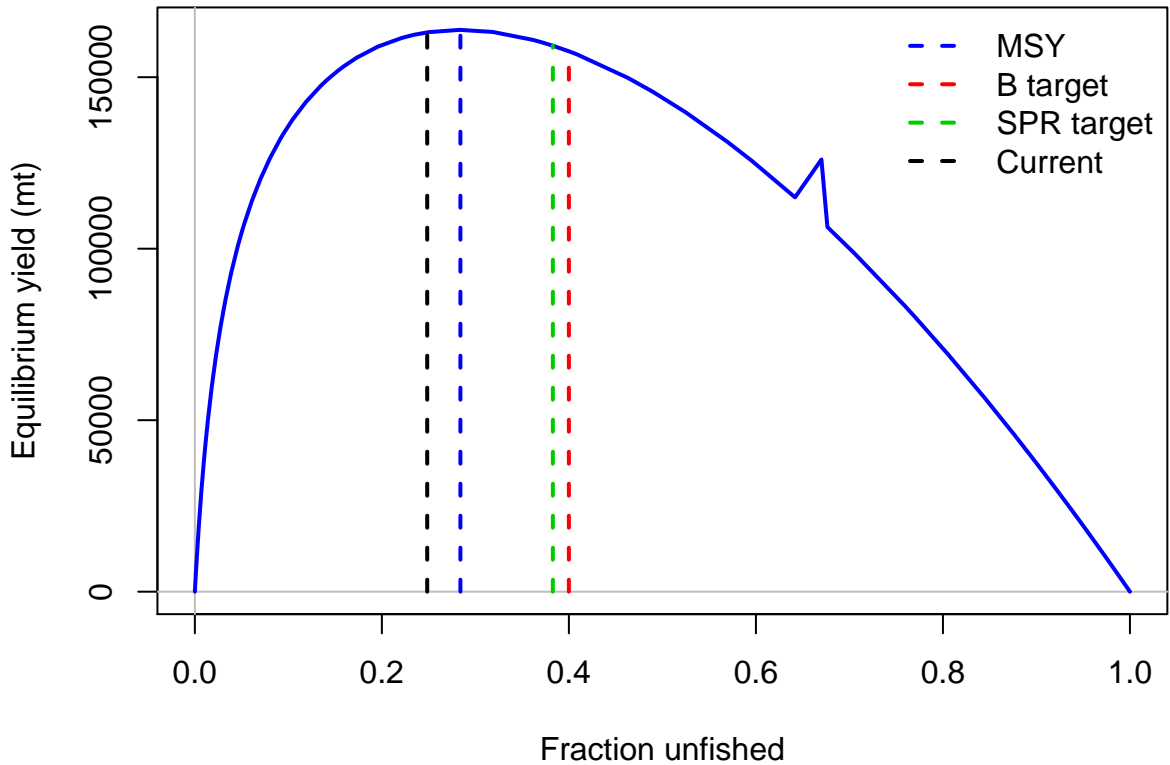
# F18-DEL\_C

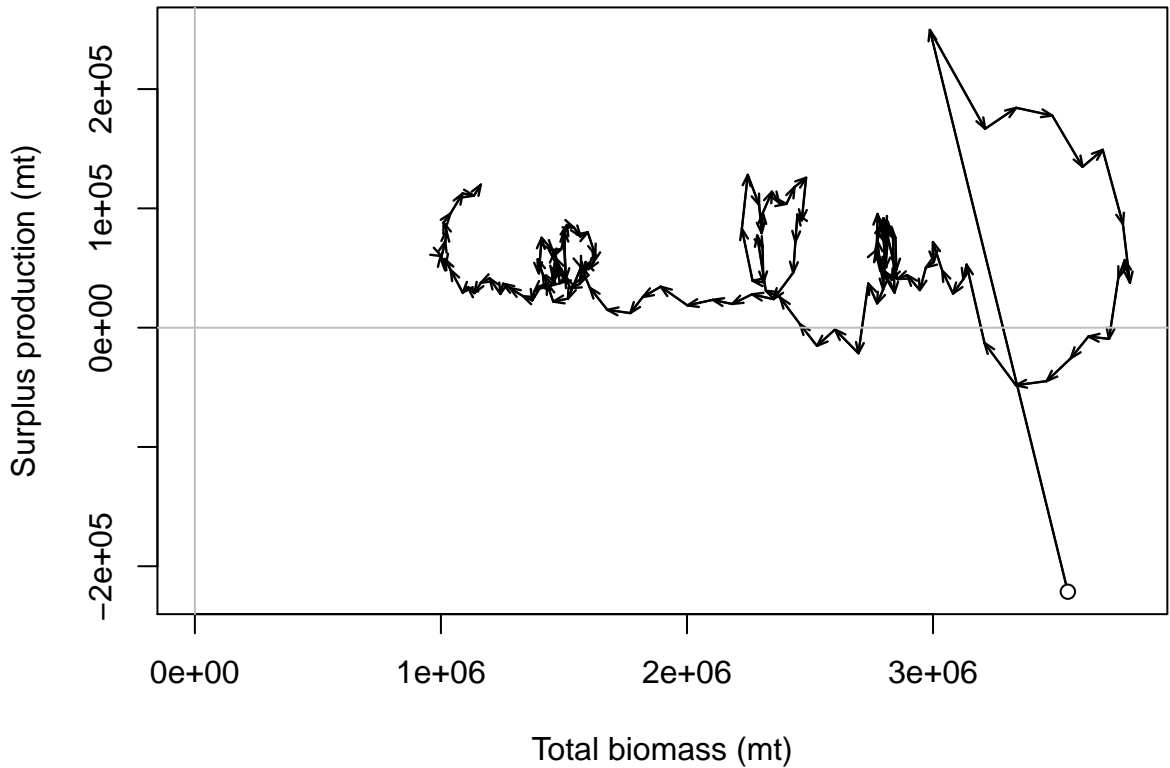
Sum of N adj.=196  
Sum of N eff.=85

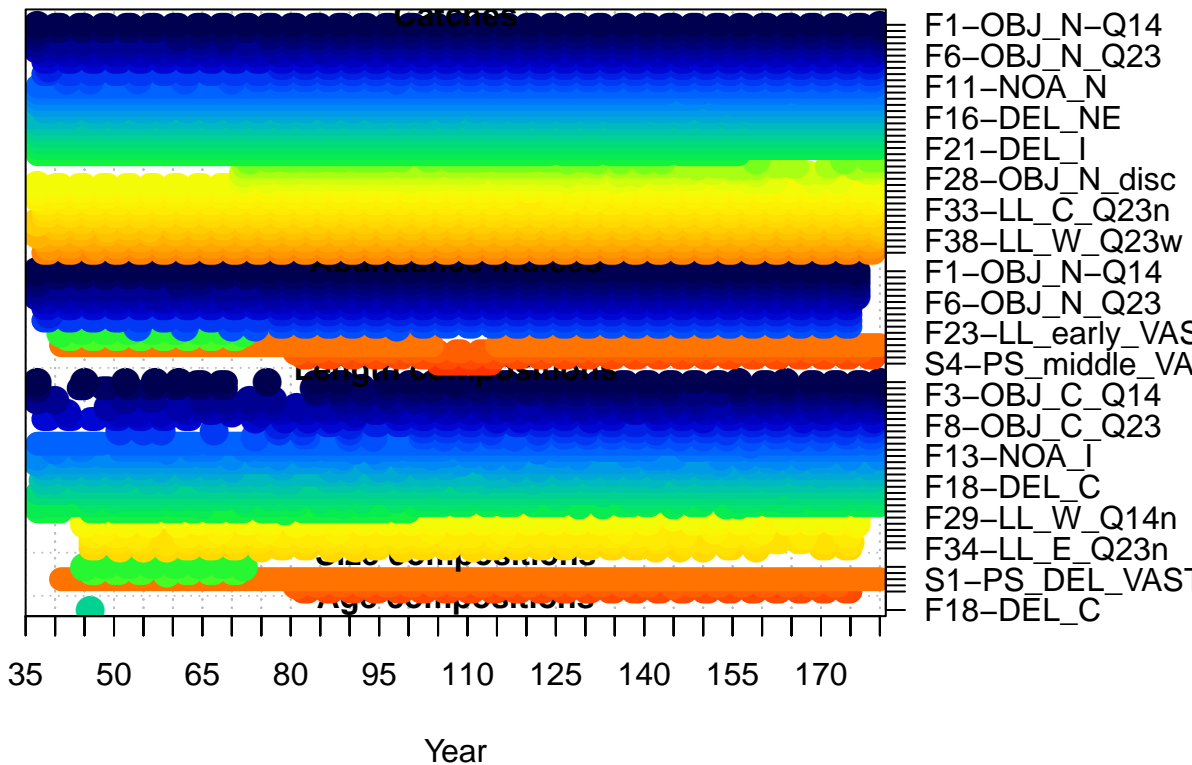


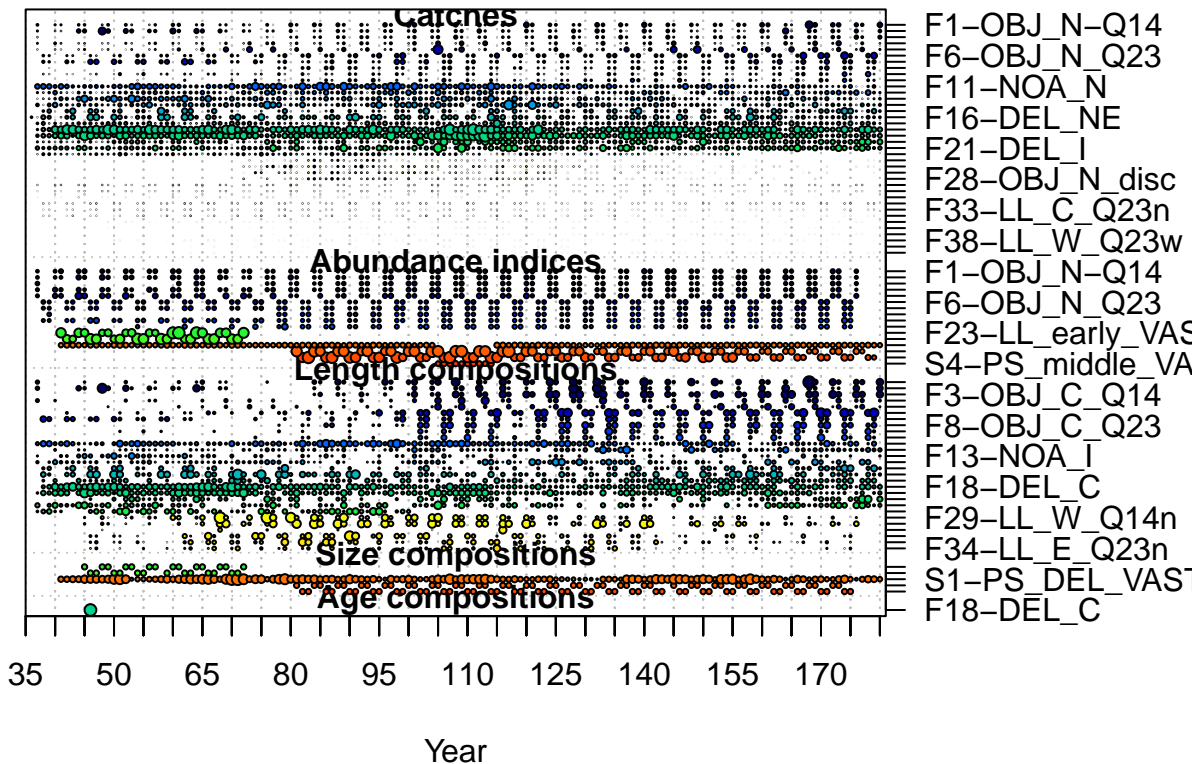




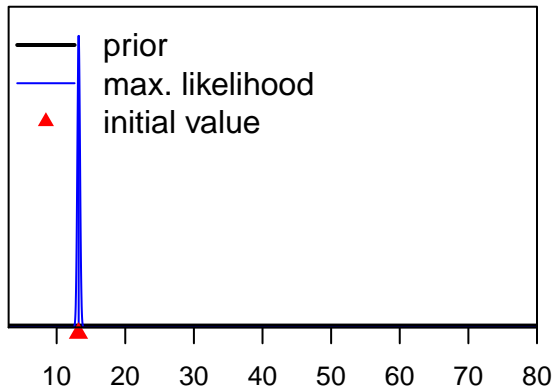




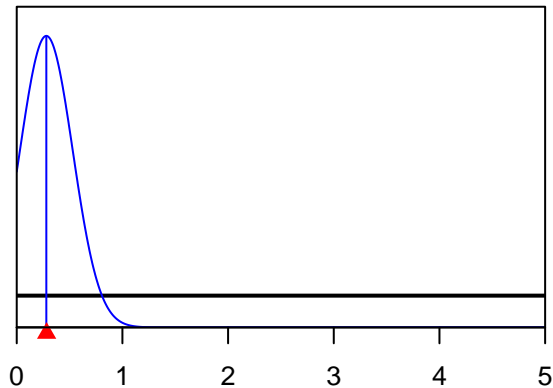




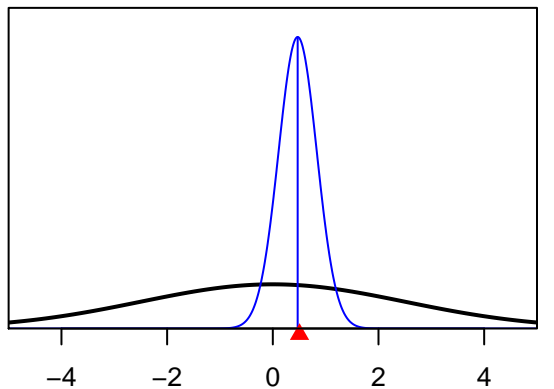
SR\_LN(R0)



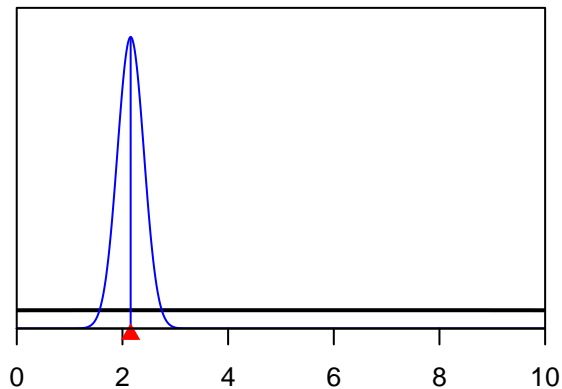
InitF\_seas\_1flt\_16F16-DEL\_NE



SR\_regime\_BLK1add\_36



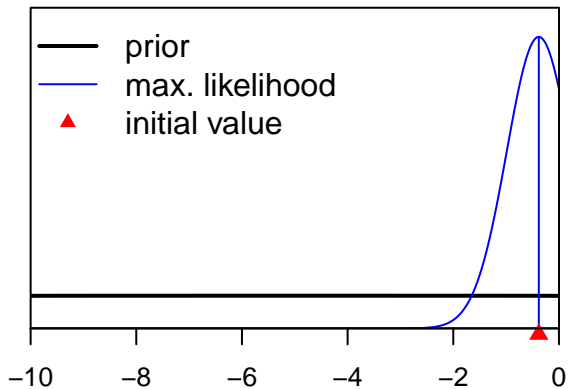
SizeSpline\_GradLo\_F1-OBJ\_N-Q14(1)



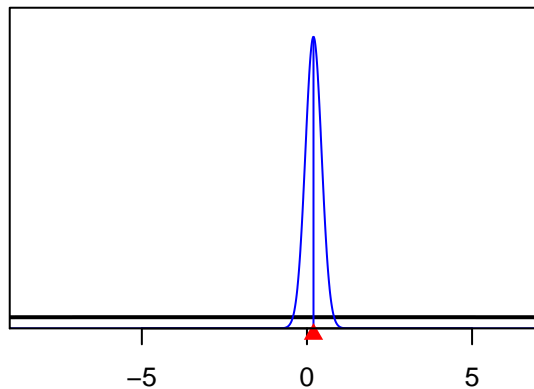
Parameter value



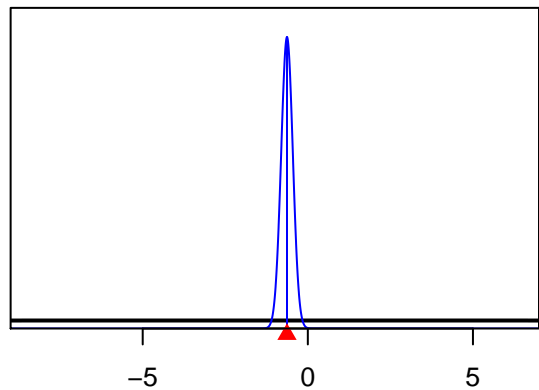
SizeSpline\_GradHi\_F1-Obj\_N-Q14(1)



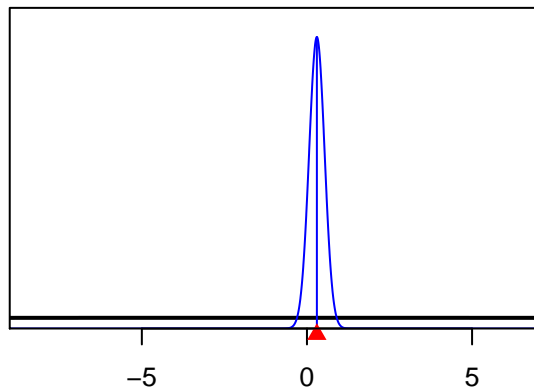
SizeSpline\_Val\_4\_F1-Obj\_N-Q14(1)



SizeSpline\_Val\_2\_F1-Obj\_N-Q14(1)

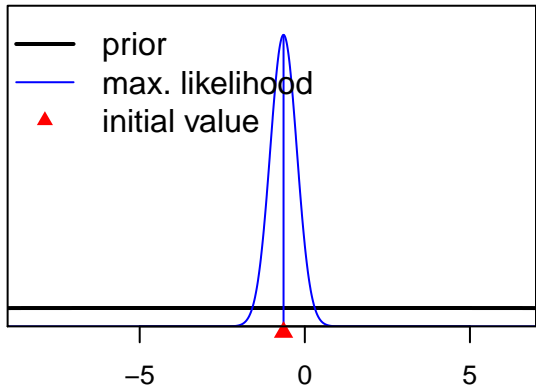


SizeSpline\_Val\_5\_F1-Obj\_N-Q14(1)

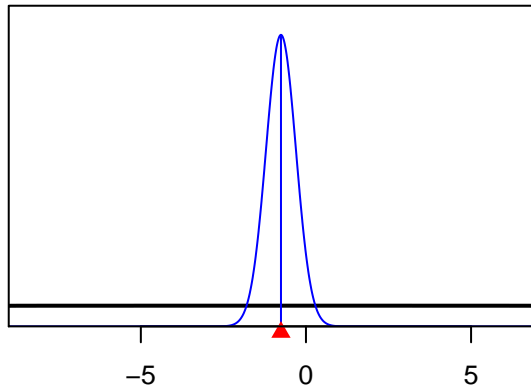


Parameter value

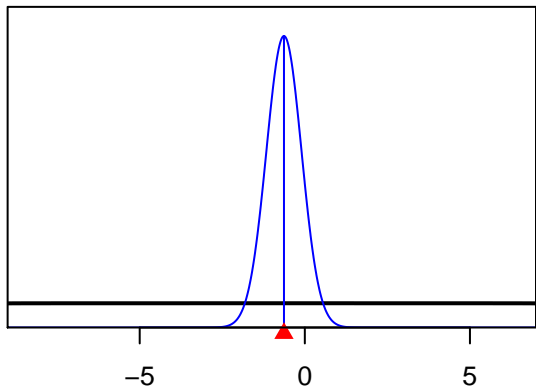
SizeSpline\_Val\_6 F1-OBJ\_N-Q14(1)



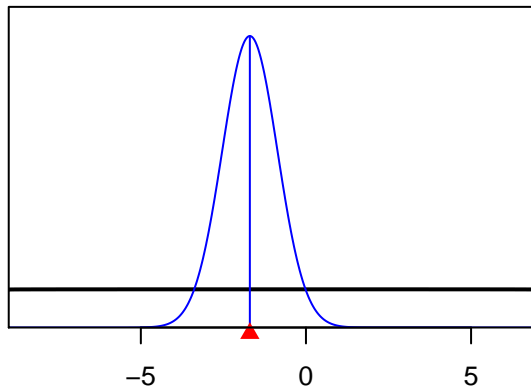
SizeSpline\_Val\_8 F1-OBJ\_N-Q14(1)



SizeSpline\_Val\_7 F1-OBJ\_N-Q14(1)

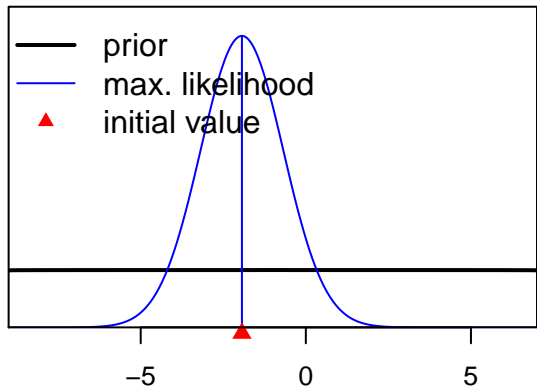


SizeSpline\_Val\_9 F1-OBJ\_N-Q14(1)

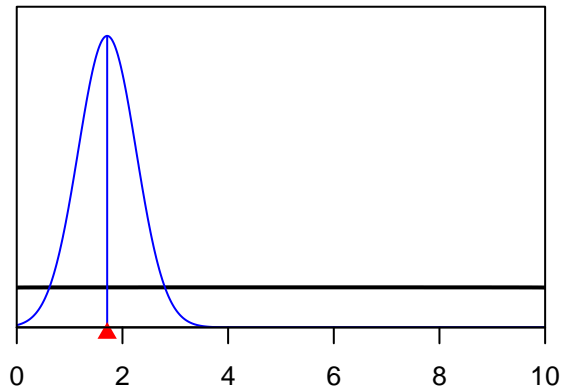


Parameter value

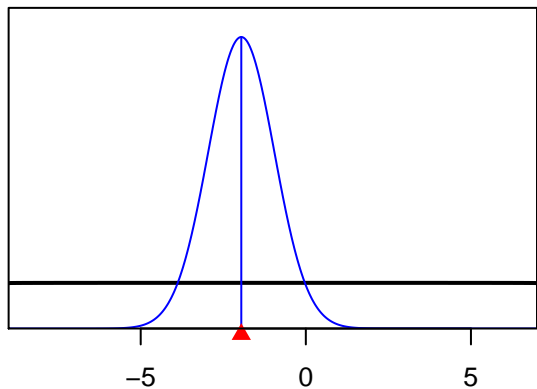
SizeSpline\_Val\_10\_F1-OBJ\_N-Q14(1)



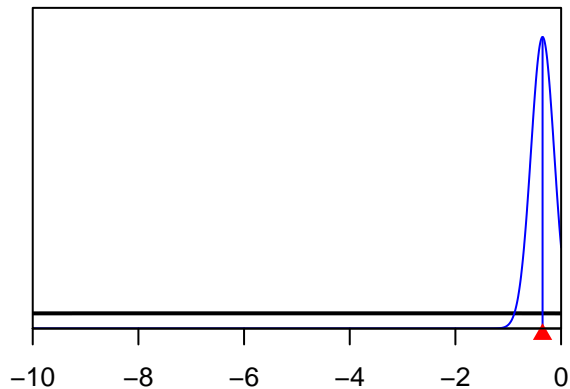
SizeSpline\_GradLo\_F2-OBJ\_Nc\_Q14(2)



SizeSpline\_Val\_11\_F1-OBJ\_N-Q14(1)

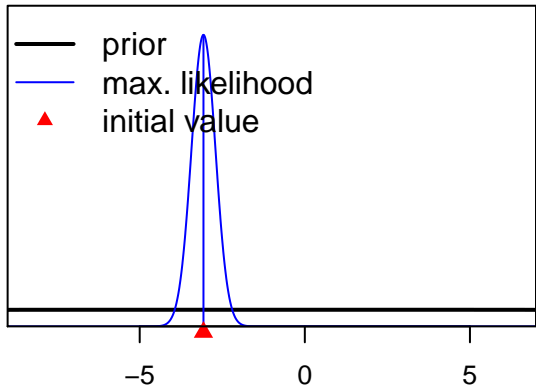


SizeSpline\_GradHi\_F2-OBJ\_Nc\_Q14(2)

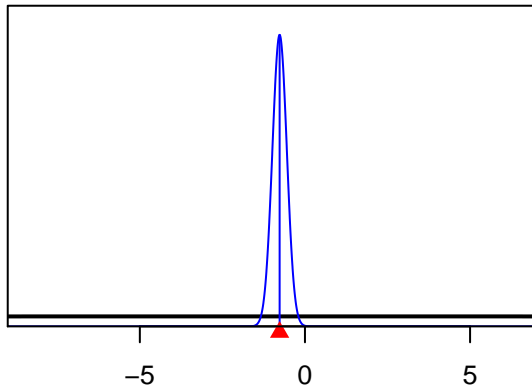


Parameter value

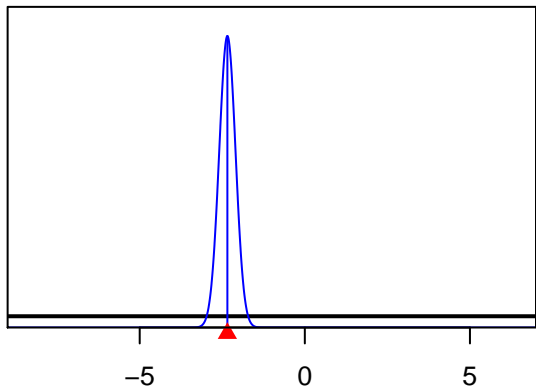
SizeSpline\_Val\_2\_F2-OBJ\_Nc\_Q14(2)



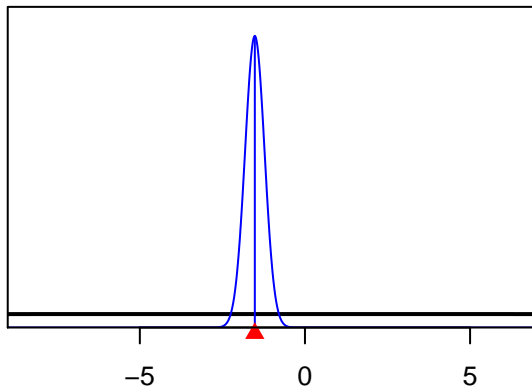
SizeSpline\_Val\_5\_F2-OBJ\_Nc\_Q14(2)



SizeSpline\_Val\_3\_F2-OBJ\_Nc\_Q14(2)

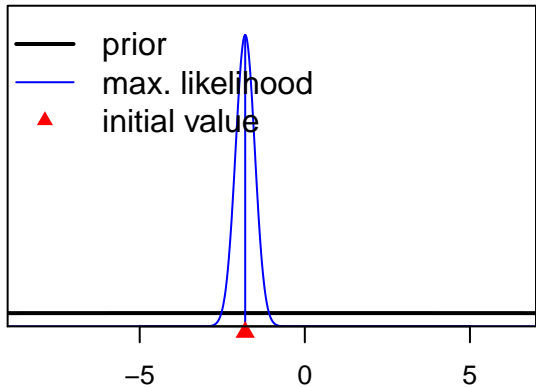


SizeSpline\_Val\_6\_F2-OBJ\_Nc\_Q14(2)

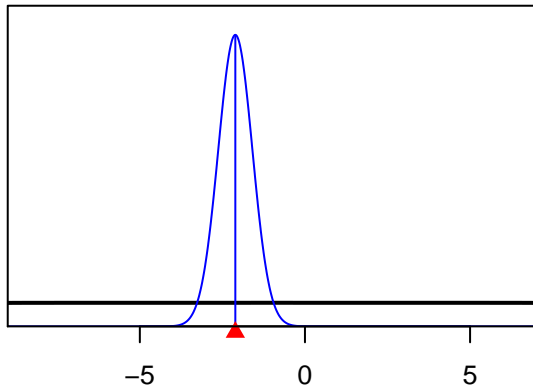


Parameter value

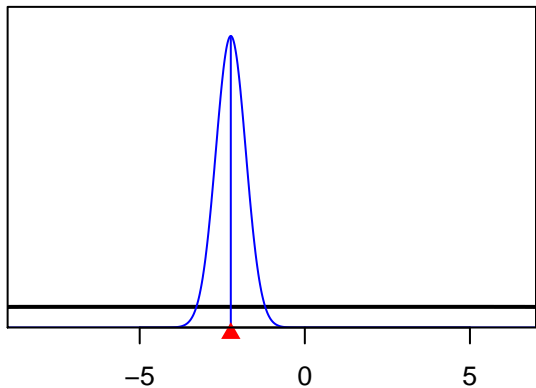
SizeSpline\_Val\_7\_F2-OBJ\_Nc\_Q14(2)



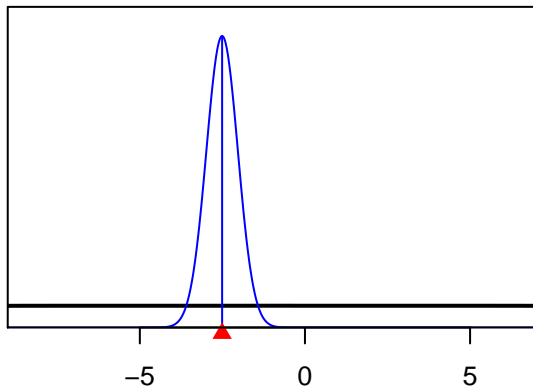
SizeSpline\_Val\_9\_F2-OBJ\_Nc\_Q14(2)



SizeSpline\_Val\_8\_F2-OBJ\_Nc\_Q14(2)

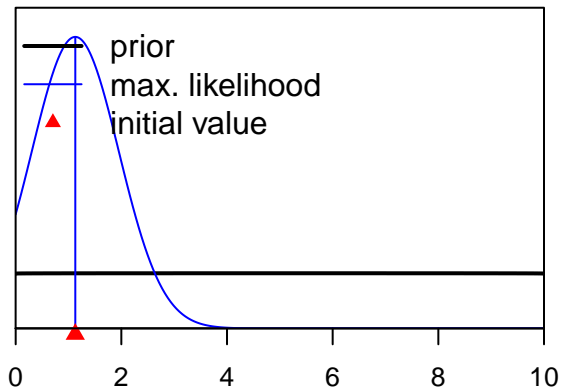


SizeSpline\_Val\_10\_F2-OBJ\_Nc\_Q14(2)

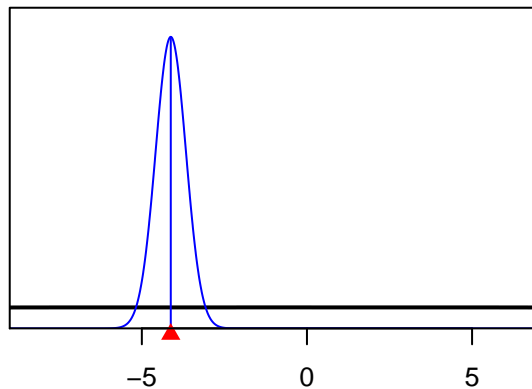


Parameter value

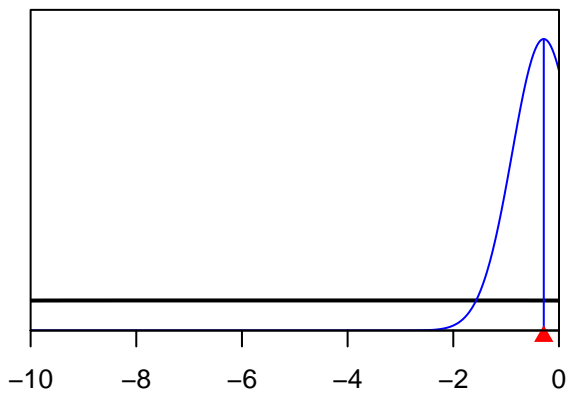
SizeSpline\_GradLo\_F3-OBJ\_C\_Q14(3)



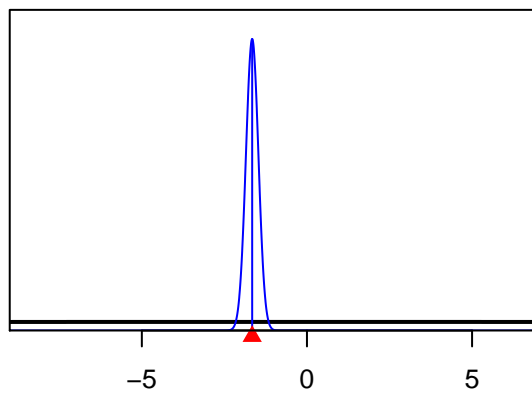
SizeSpline\_Val 2\_F3-OBJ\_C\_Q14(3)



SizeSpline\_GradHi\_F3-OBJ\_C\_Q14(3)

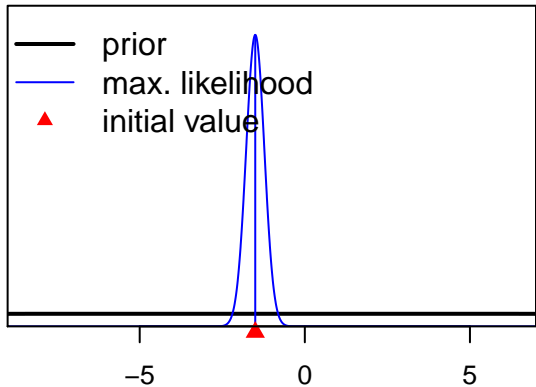


SizeSpline\_Val 4\_F3-OBJ\_C\_Q14(3)

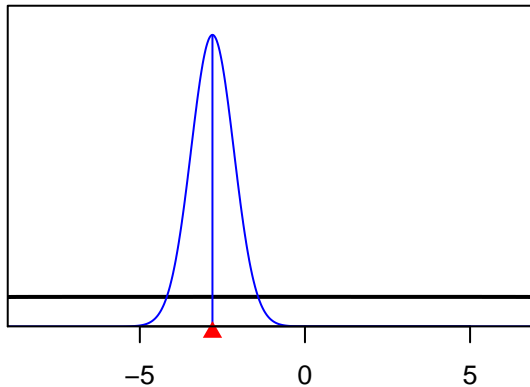


Parameter value

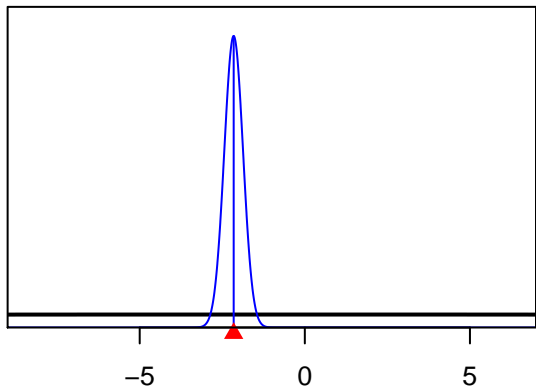
SizeSpline\_Val\_5\_F3-Obj\_C\_Q14(3)



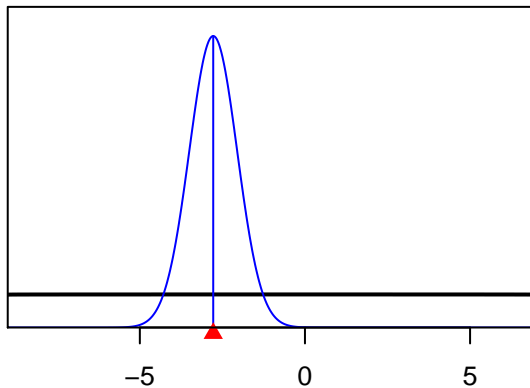
SizeSpline\_Val\_7\_F3-Obj\_C\_Q14(3)



SizeSpline\_Val\_6\_F3-Obj\_C\_Q14(3)

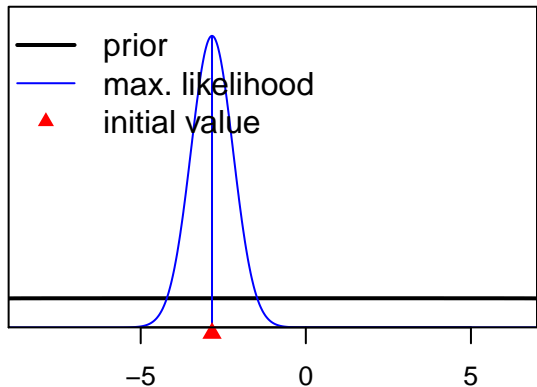


SizeSpline\_Val\_8\_F3-Obj\_C\_Q14(3)

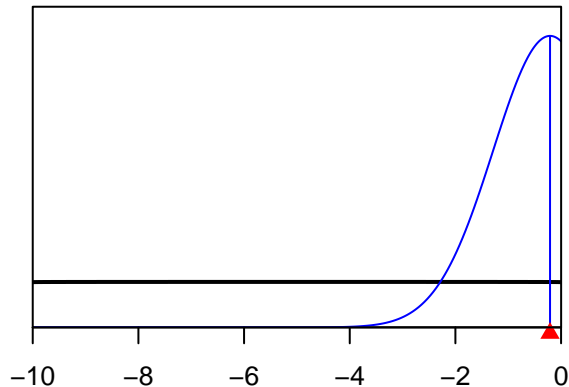


Parameter value

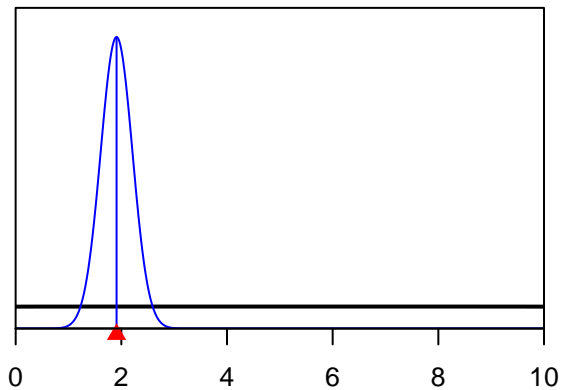
SizeSpline\_Val\_9\_F3-Obj\_C\_Q14(3)



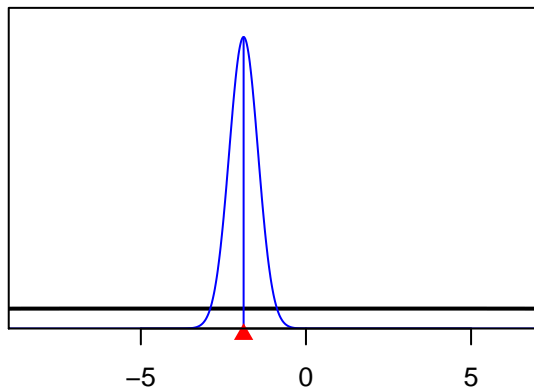
SizeSpline\_GradHi\_F4-Obj\_Cc\_Q14(4)



SizeSpline\_GradLo\_F4-Obj\_Cc\_Q14(4)



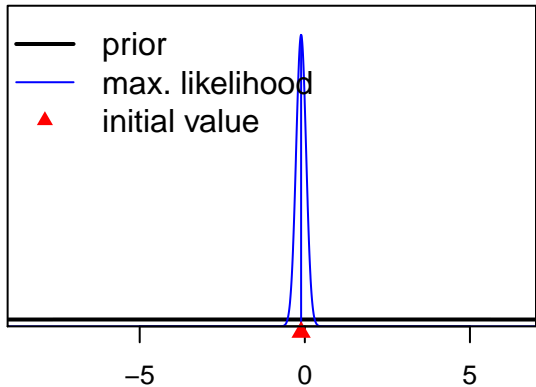
SizeSpline\_Val\_2\_F4-Obj\_Cc\_Q14(4)



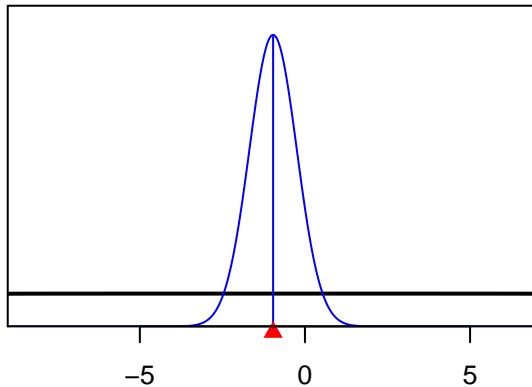
Parameter value



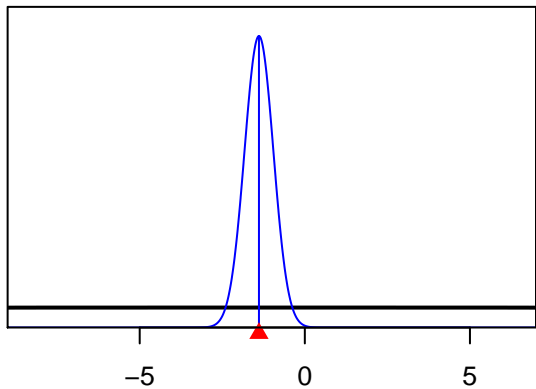
SizeSpline\_Val\_4\_F4-Obj\_Cc\_Q14(4)



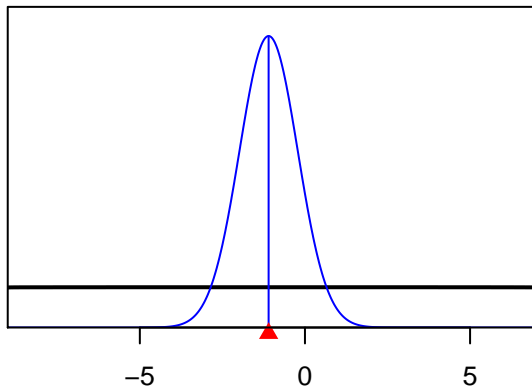
SizeSpline\_Val\_6\_F4-Obj\_Cc\_Q14(4)



SizeSpline\_Val\_5\_F4-Obj\_Cc\_Q14(4)

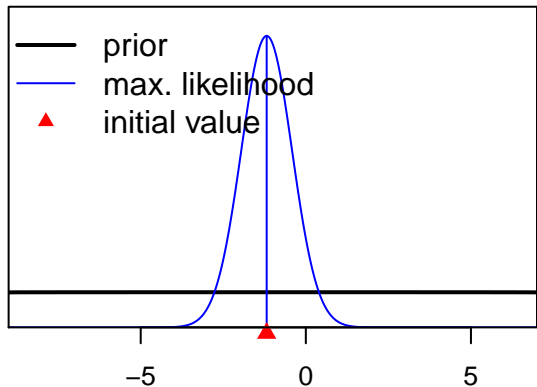


SizeSpline\_Val\_7\_F4-Obj\_Cc\_Q14(4)

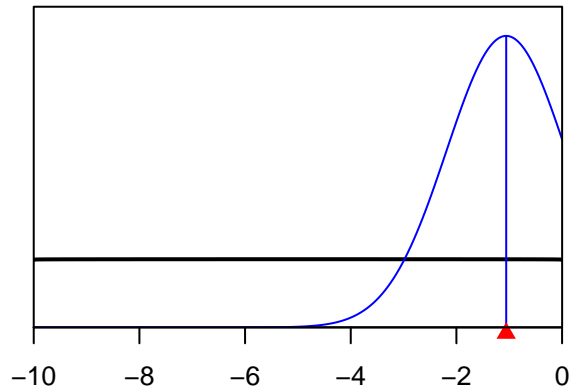


Parameter value

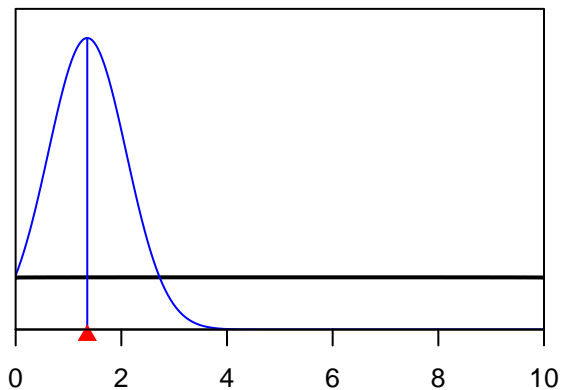
SizeSpline\_Val\_8\_F4-Obj\_Cc\_Q14(4)



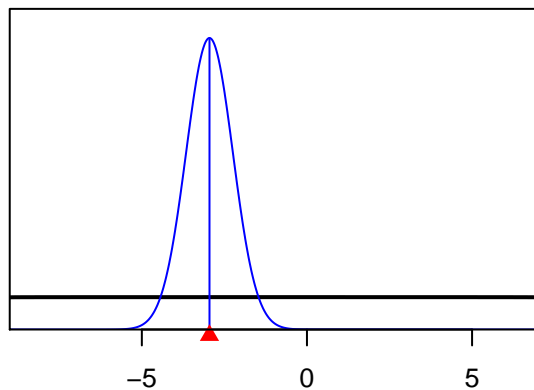
SizeSpline\_GradHi\_F5-Obj\_S\_Q14(5)



SizeSpline\_GradLo\_F5-Obj\_S\_Q14(5)

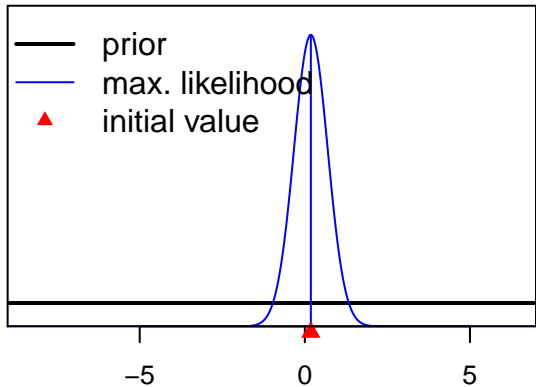


SizeSpline\_Val\_2\_F5-Obj\_S\_Q14(5)

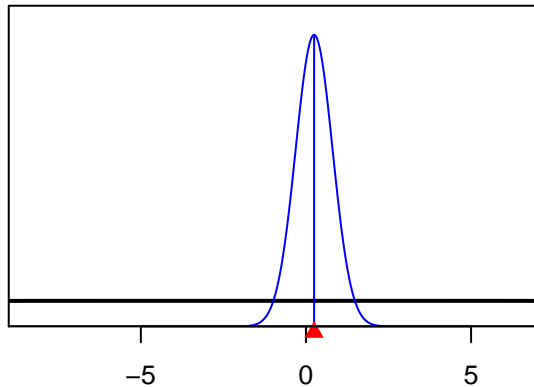


Parameter value

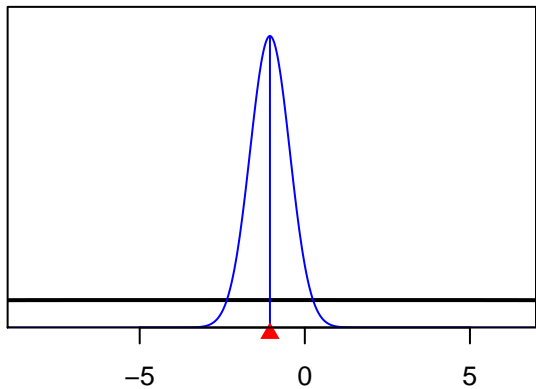
SizeSpline\_Val\_3\_F5-OBJ\_S\_Q14(5)



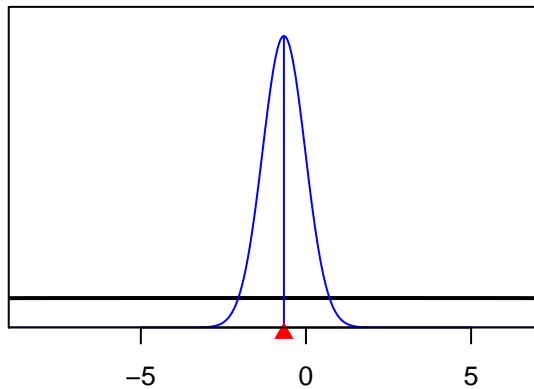
SizeSpline\_Val\_5\_F5-OBJ\_S\_Q14(5)



SizeSpline\_Val\_4\_F5-OBJ\_S\_Q14(5)

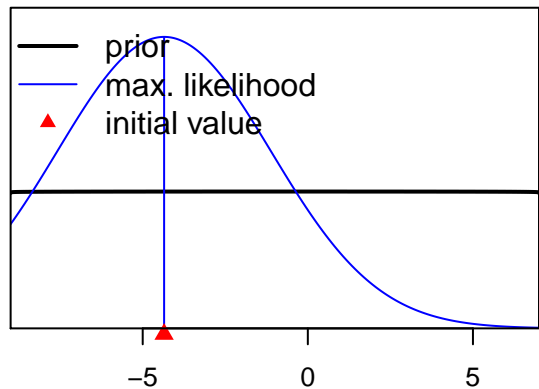


SizeSpline\_Val\_6\_F5-OBJ\_S\_Q14(5)

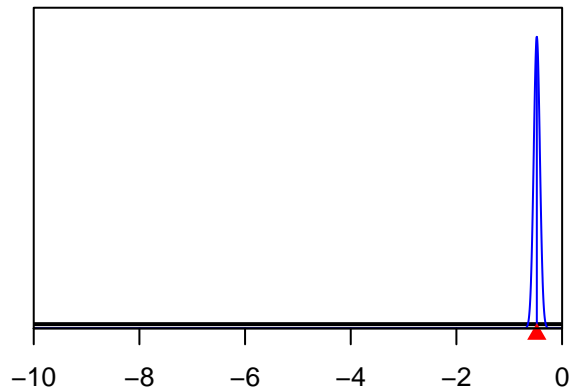


Parameter value

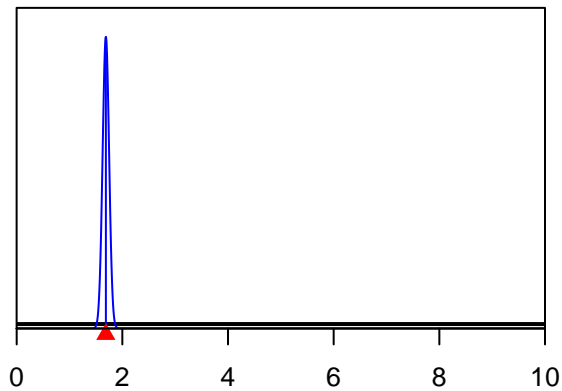
SizeSpline\_Val\_8\_F5-Obj\_S\_Q14(5)



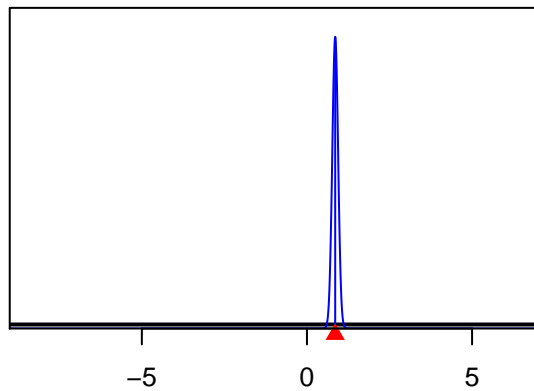
SizeSpline\_GradHi\_F6-Obj\_N\_Q23(6)



SizeSpline\_GradLo\_F6-Obj\_N\_Q23(6)



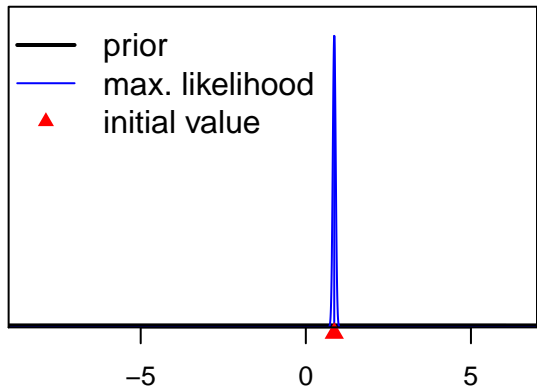
SizeSpline\_Val\_2\_F6-Obj\_N\_Q23(6)



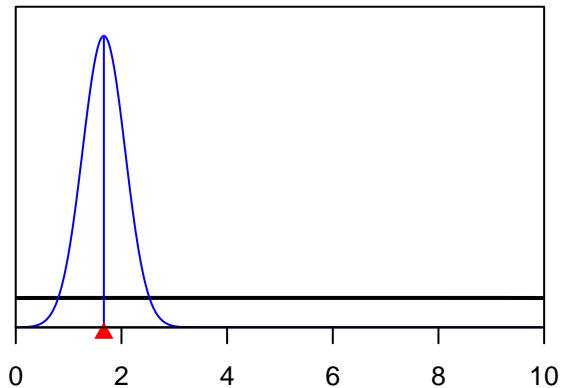
Parameter value

Density

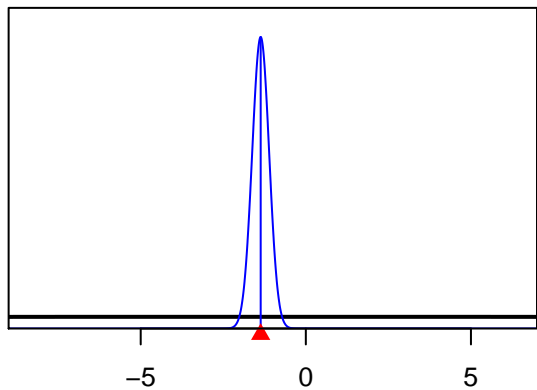
SizeSpline\_Val\_4\_F6-Obj\_N\_Q23(6)



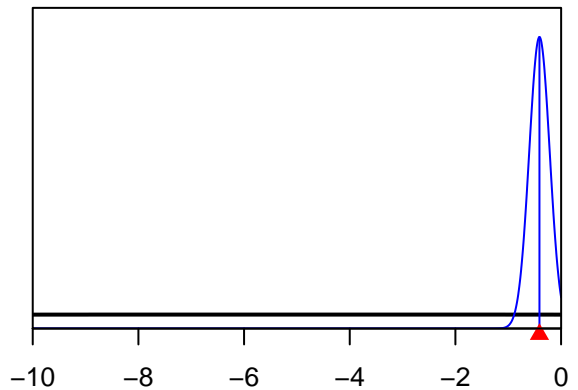
SizeSpline\_GradLo\_F7-Obj\_Nc\_Q23(7)



SizeSpline\_Val\_5\_F6-Obj\_N\_Q23(6)

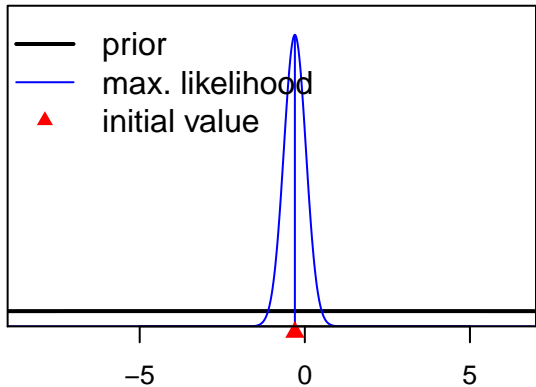


SizeSpline\_GradHi\_F7-Obj\_Nc\_Q23(7)

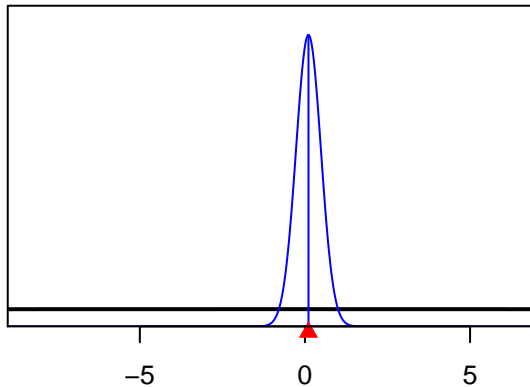


Parameter value

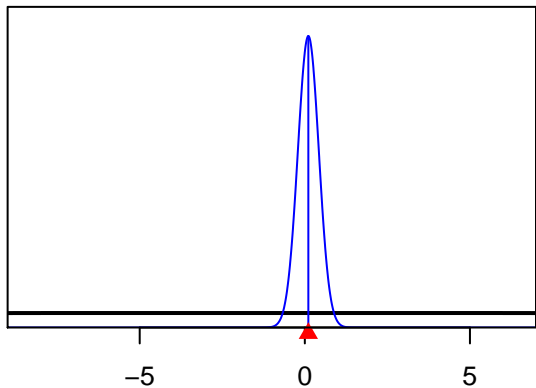
SizeSpline\_Val\_2\_F7-OBJ\_Nc\_Q23(7)



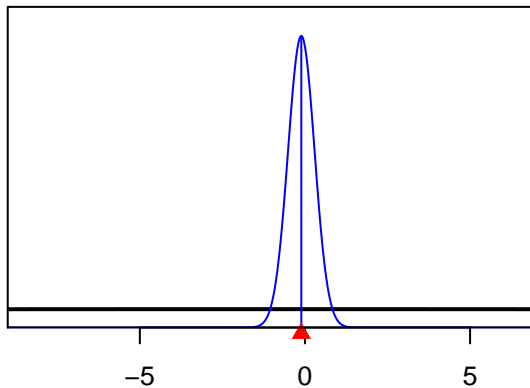
SizeSpline\_Val\_5\_F7-OBJ\_Nc\_Q23(7)



SizeSpline\_Val\_4\_F7-OBJ\_Nc\_Q23(7)

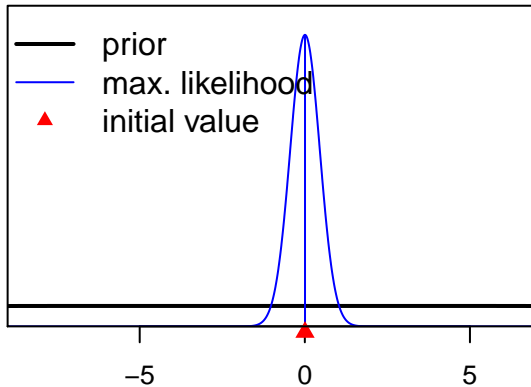


SizeSpline\_Val\_6\_F7-OBJ\_Nc\_Q23(7)

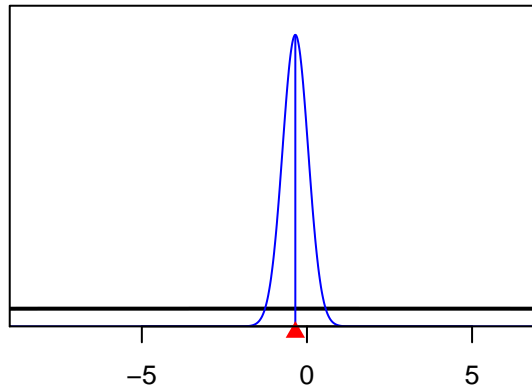


Parameter value

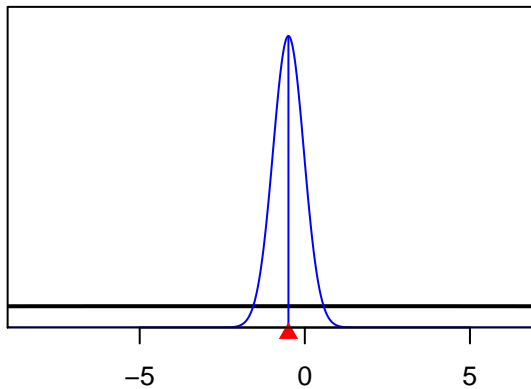
SizeSpline\_Val\_7\_F7-OBJ\_Nc\_Q23(7)



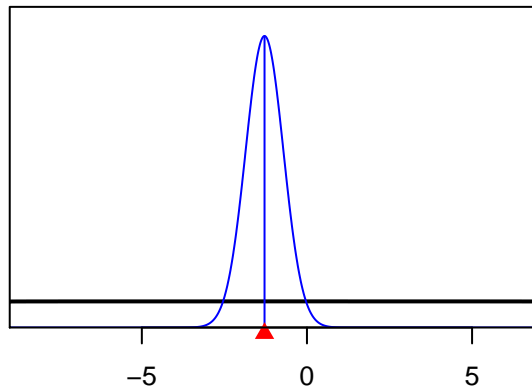
SizeSpline\_Val\_9\_F7-OBJ\_Nc\_Q23(7)



SizeSpline\_Val\_8\_F7-OBJ\_Nc\_Q23(7)

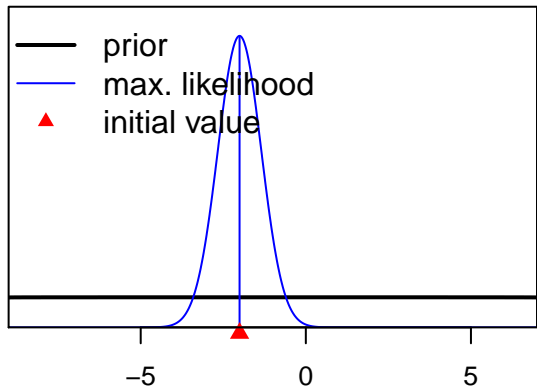


SizeSpline\_Val\_10\_F7-OBJ\_Nc\_Q23(7)

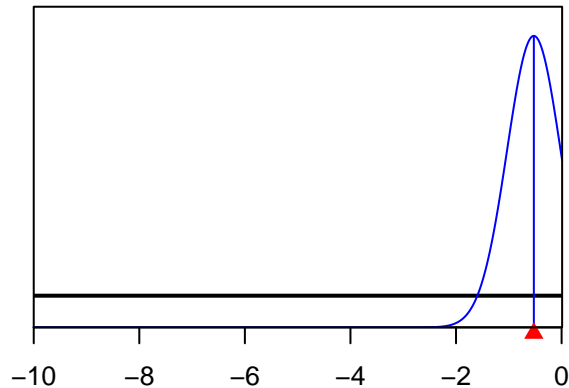


Parameter value

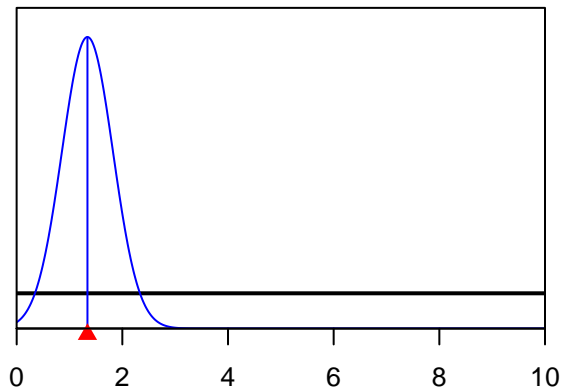
SizeSpline\_Val\_11\_F7-OBJ\_Nc\_Q23(7)



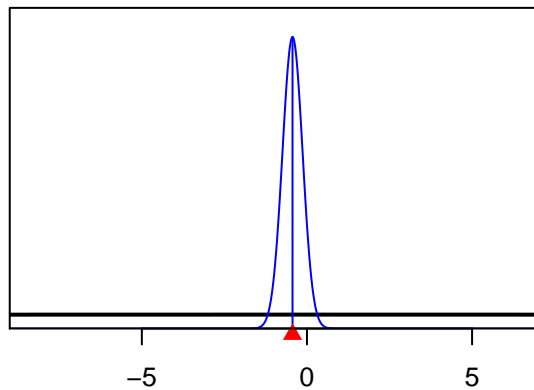
SizeSpline\_GradHi\_F8-OBJ\_C\_Q23(8)



SizeSpline\_GradLo\_F8-OBJ\_C\_Q23(8)



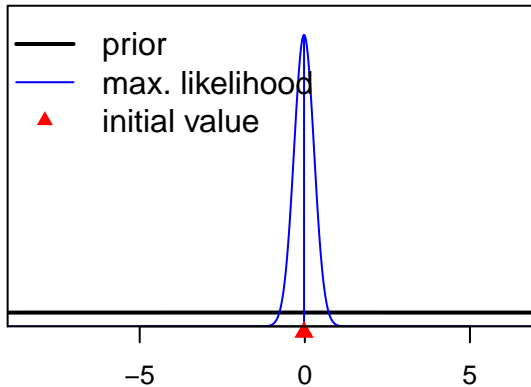
SizeSpline\_Val\_2\_F8-OBJ\_C\_Q23(8)



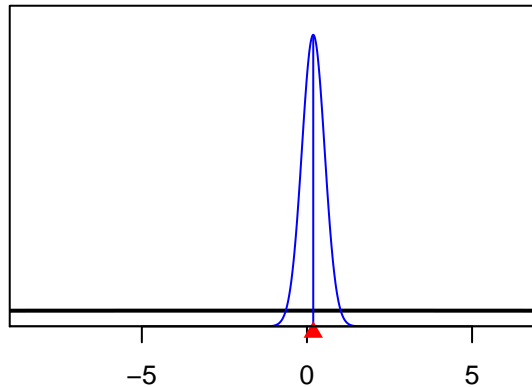
Parameter value



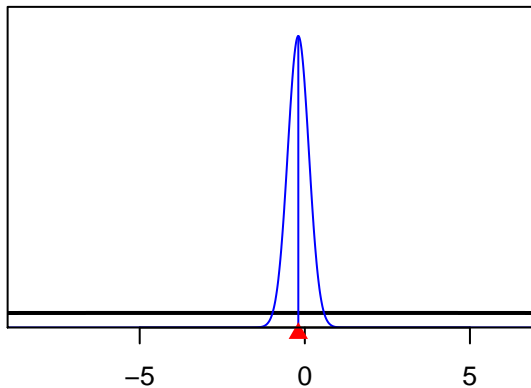
SizeSpline\_Val\_3\_F8-Obj\_C\_Q23(8)



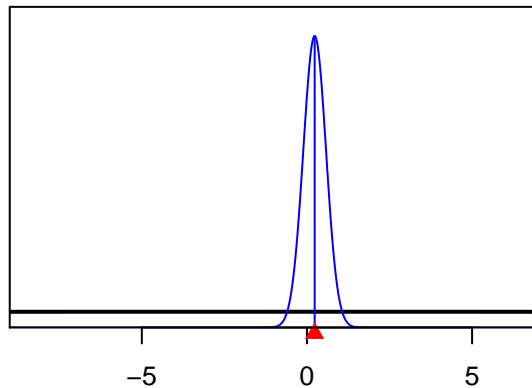
SizeSpline\_Val\_6\_F8-Obj\_C\_Q23(8)



SizeSpline\_Val\_4\_F8-Obj\_C\_Q23(8)

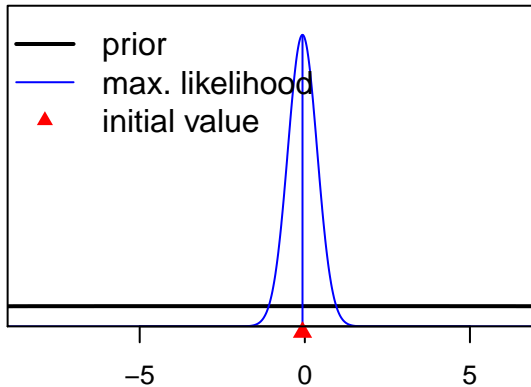


SizeSpline\_Val\_7\_F8-Obj\_C\_Q23(8)

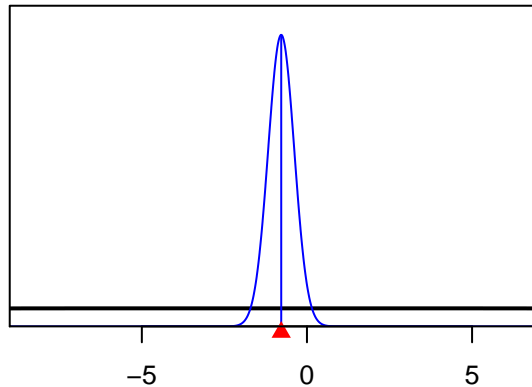


Parameter value

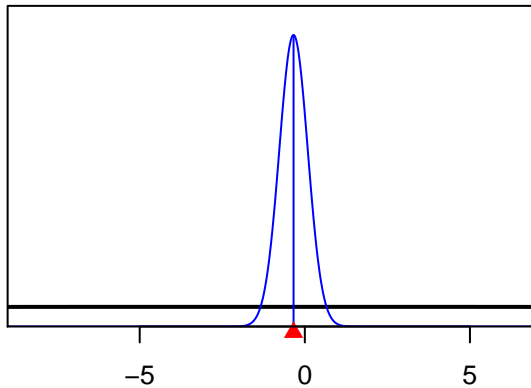
SizeSpline\_Val\_8\_F8-Obj\_C\_Q23(8)



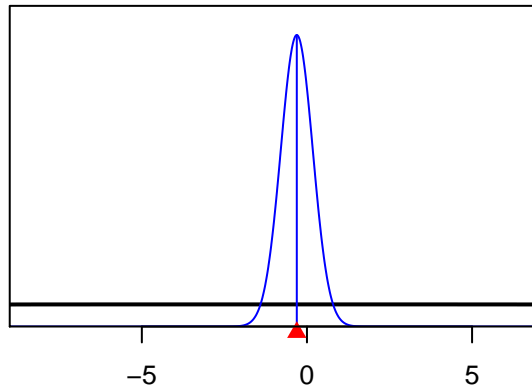
SizeSpline\_Val\_10\_F8-Obj\_C\_Q23(8)



SizeSpline\_Val\_9\_F8-Obj\_C\_Q23(8)

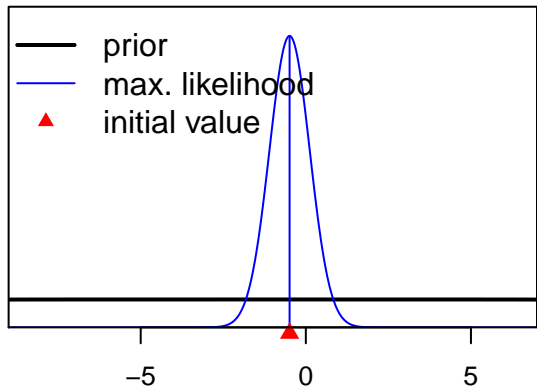


SizeSpline\_Val\_11\_F8-Obj\_C\_Q23(8)

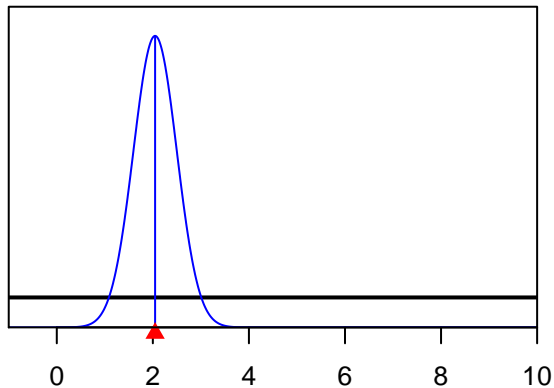


Parameter value

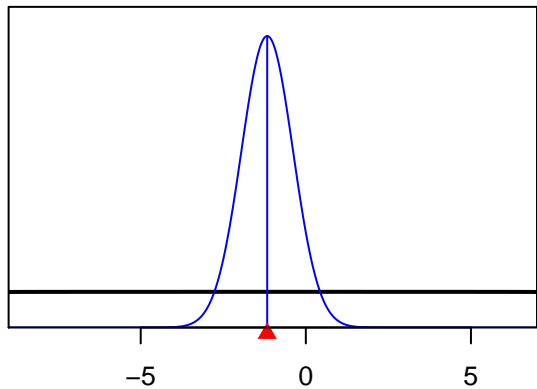
SizeSpline\_Val\_12\_F8-OBJ\_C\_Q23(8)



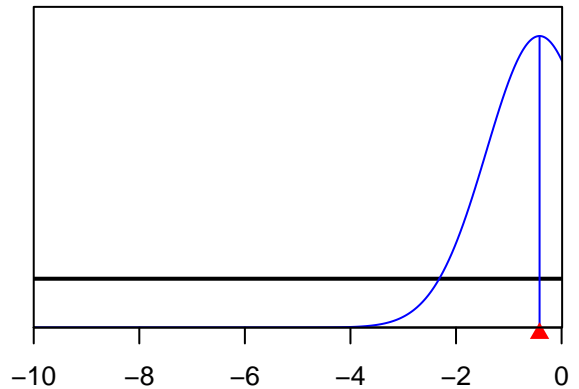
SizeSpline\_GradLo\_F9-OBJ\_Cc\_Q23(9)



SizeSpline\_Val\_13\_F8-OBJ\_C\_Q23(8)

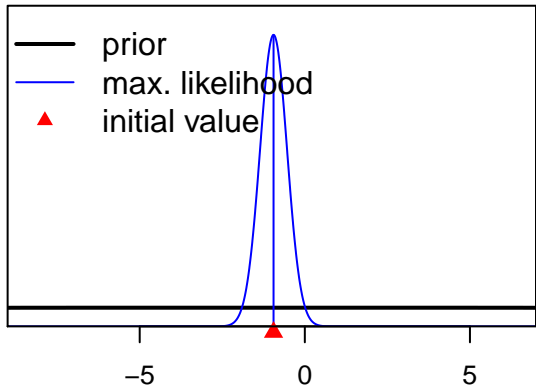


SizeSpline\_GradHi\_F9-OBJ\_Cc\_Q23(9)

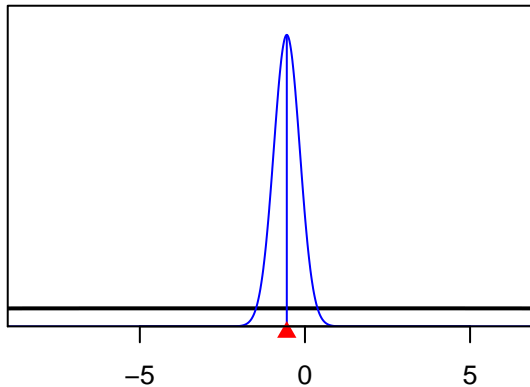


Parameter value

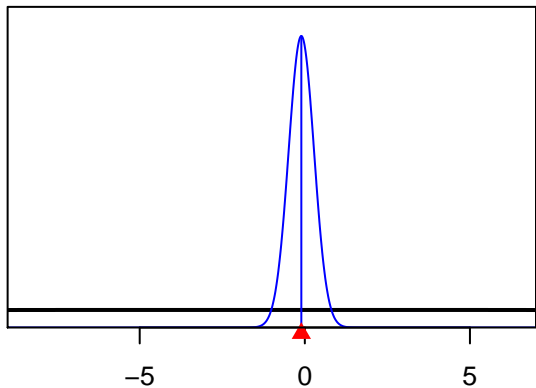
SizeSpline\_Val\_2\_F9-Obj\_Cc\_Q23(9)



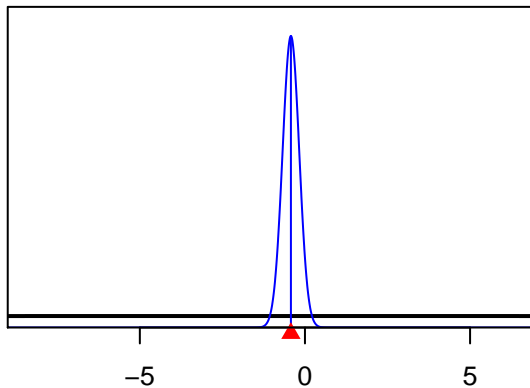
SizeSpline\_Val\_4\_F9-Obj\_Cc\_Q23(9)



SizeSpline\_Val\_3\_F9-Obj\_Cc\_Q23(9)

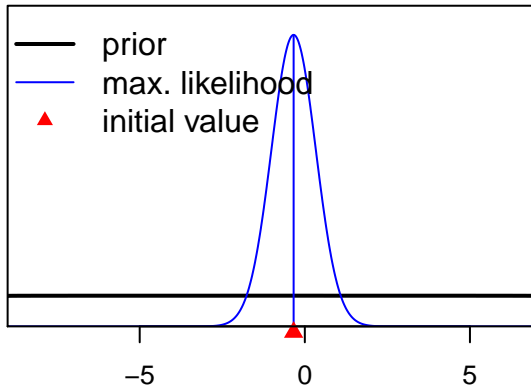


SizeSpline\_Val\_6\_F9-Obj\_Cc\_Q23(9)

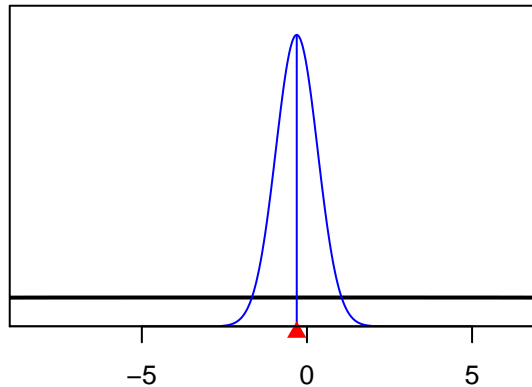


Parameter value

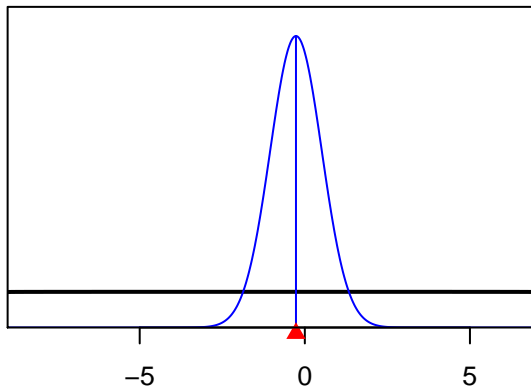
SizeSpline\_Val\_7\_F9-Obj\_Cc\_Q23(9)



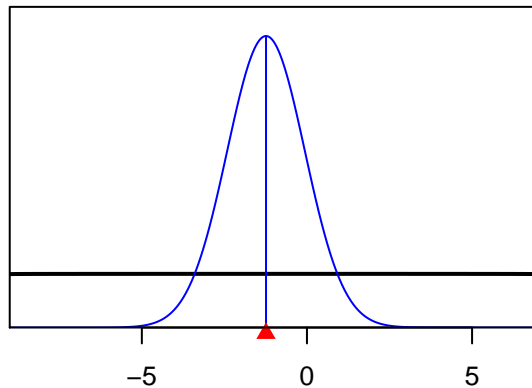
SizeSpline\_Val\_9\_F9-Obj\_Cc\_Q23(9)



SizeSpline\_Val\_8\_F9-Obj\_Cc\_Q23(9)

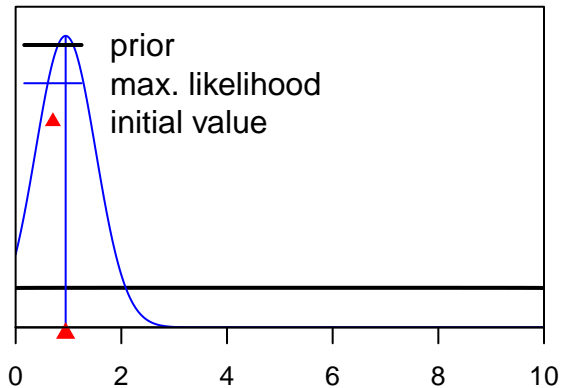


SizeSpline\_Val\_10\_F9-Obj\_Cc\_Q23(9)

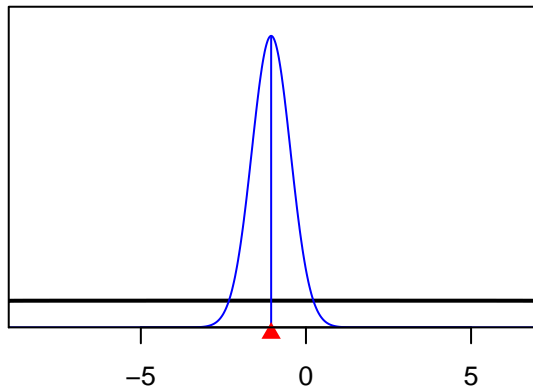


Parameter value

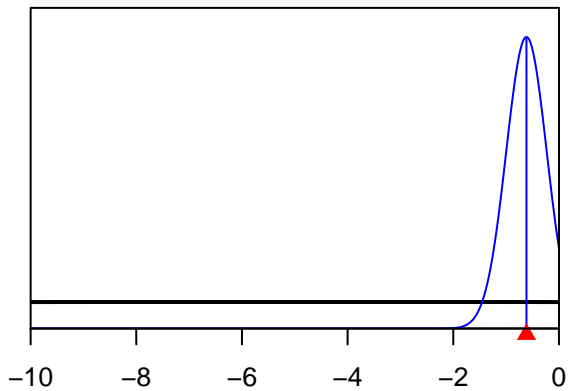
SizeSpline\_GradLo\_F10-OBJ\_S\_Q23(10)



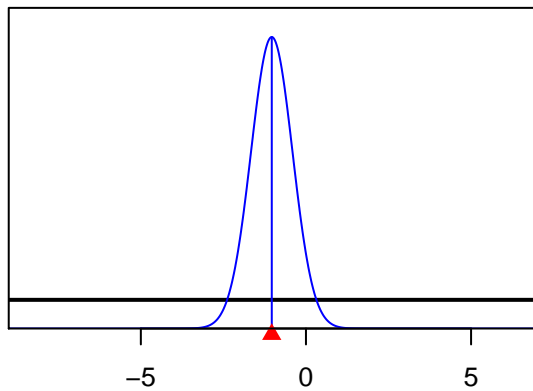
SizeSpline\_Val\_2\_F10-OBJ\_S\_Q23(10)



SizeSpline\_GradHi\_F10-OBJ\_S\_Q23(10)

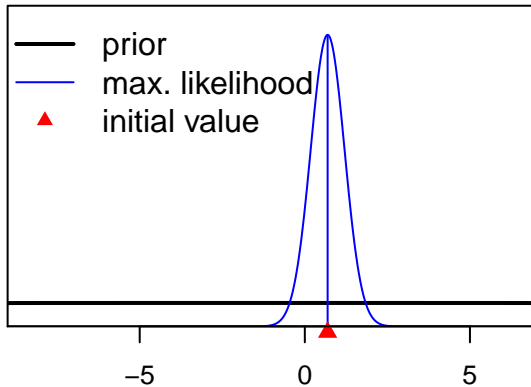


SizeSpline\_Val\_3\_F10-OBJ\_S\_Q23(10)

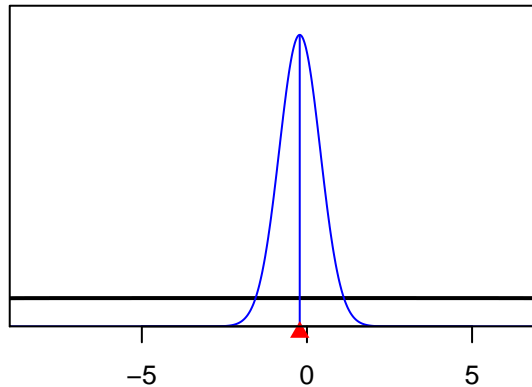


Parameter value

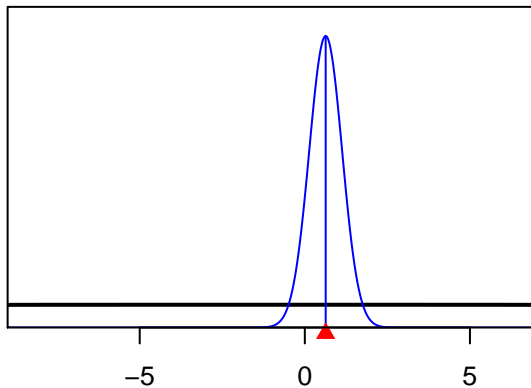
SizeSpline\_Val\_4\_F10-Obj\_S\_Q23(10)



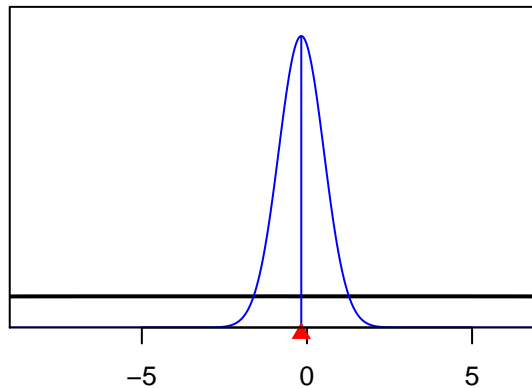
SizeSpline\_Val\_6\_F10-Obj\_S\_Q23(10)



SizeSpline\_Val\_5\_F10-Obj\_S\_Q23(10)

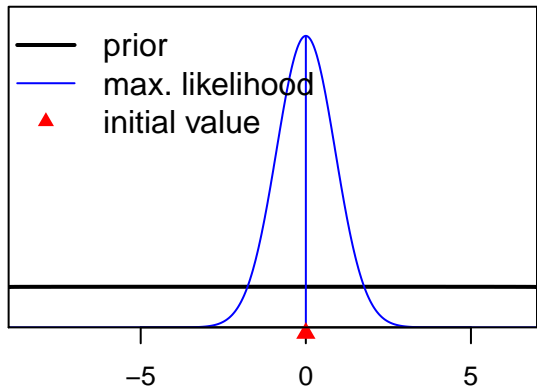


SizeSpline\_Val\_7\_F10-Obj\_S\_Q23(10)

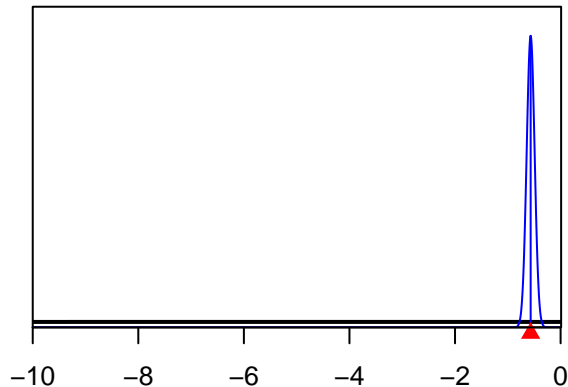


Parameter value

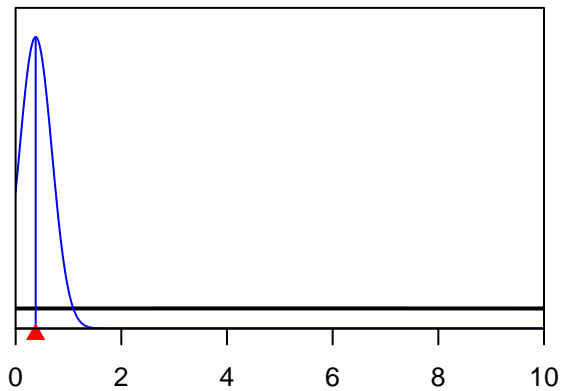
SizeSpline\_Val\_9\_F10-Obj\_S\_Q23(10)



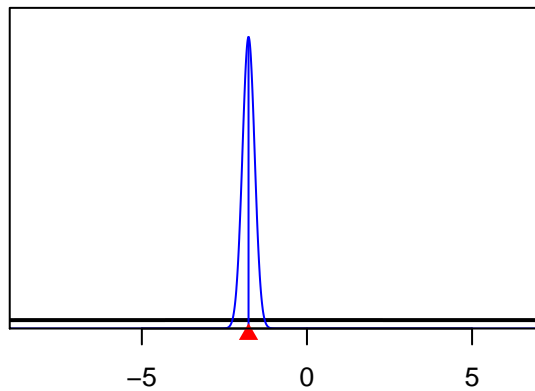
SizeSpline\_GradHi\_F11-NOA\_N(11)



SizeSpline\_GradLo\_F11-NOA\_N(11)



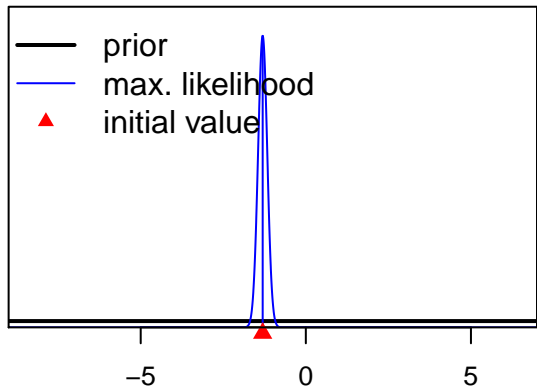
SizeSpline\_Val\_2\_F11-NOA\_N(11)



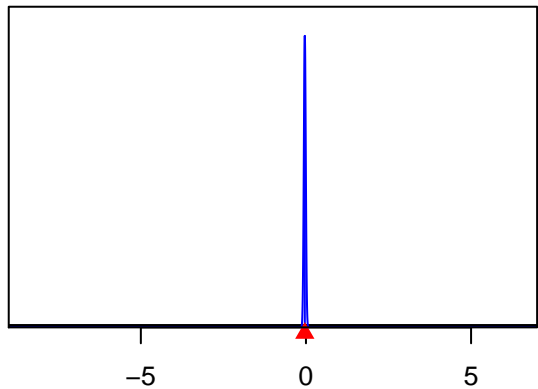
Parameter value



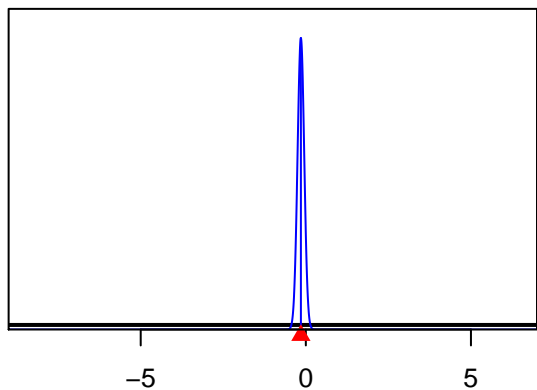
SizeSpline\_Val\_3\_F11-NOA\_N(11)



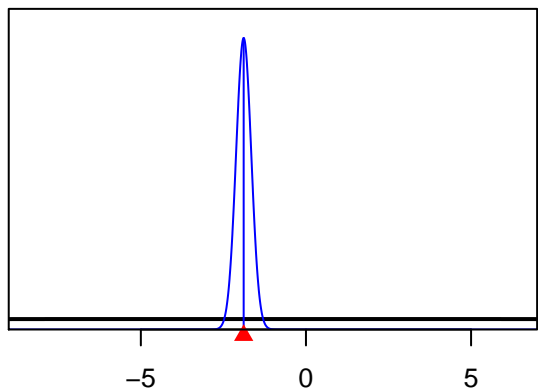
SizeSpline\_Val\_6\_F11-NOA\_N(11)



SizeSpline\_Val\_4\_F11-NOA\_N(11)

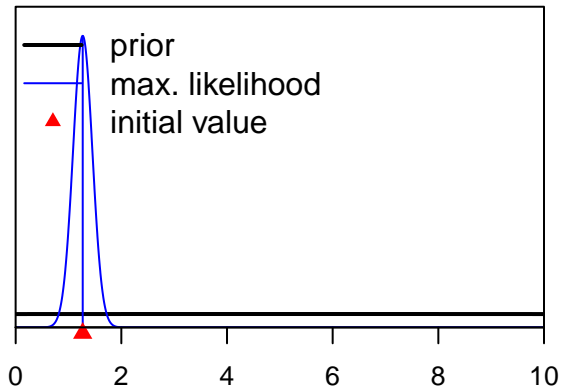


SizeSpline\_Val\_7\_F11-NOA\_N(11)

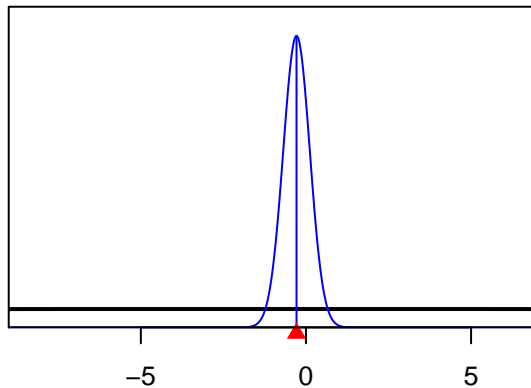


Parameter value

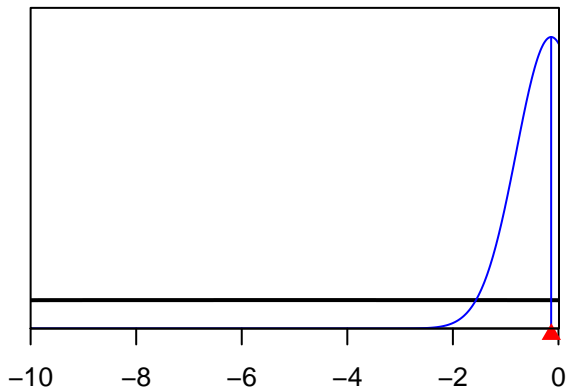
SizeSpline\_GradLo\_F12-NOA\_C(12)



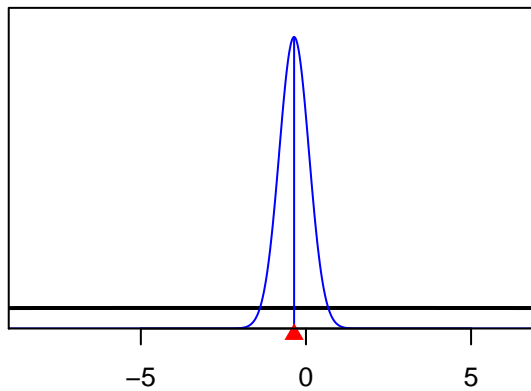
SizeSpline\_Val\_2\_F12-NOA\_C(12)



SizeSpline\_GradHi\_F12-NOA\_C(12)

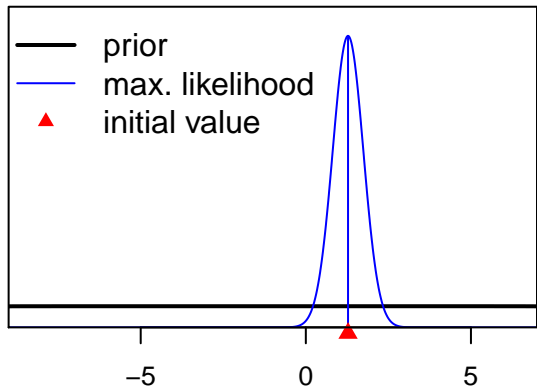


SizeSpline\_Val\_3\_F12-NOA\_C(12)

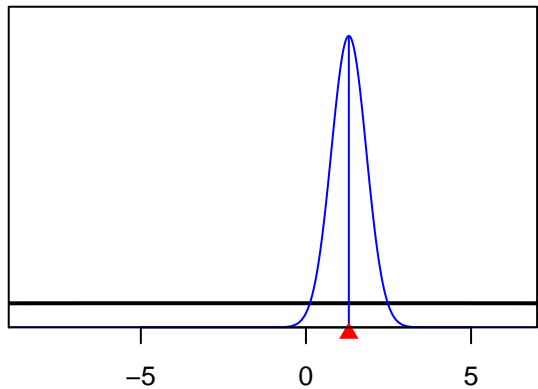


Parameter value

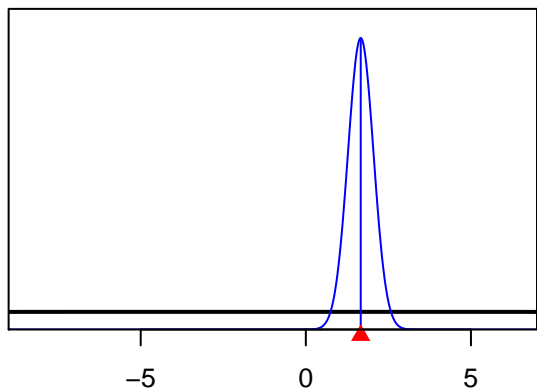
SizeSpline\_Val\_5\_F12-NOA\_C(12)



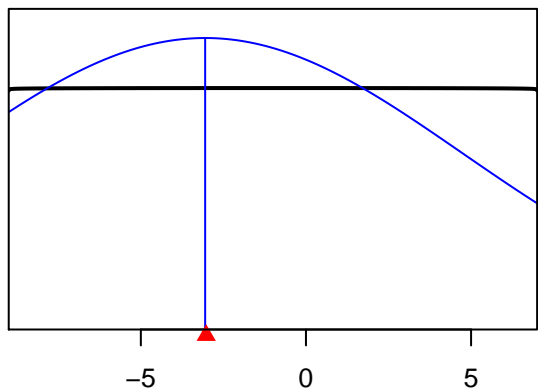
SizeSpline\_Val\_7\_F12-NOA\_C(12)



SizeSpline\_Val\_6\_F12-NOA\_C(12)



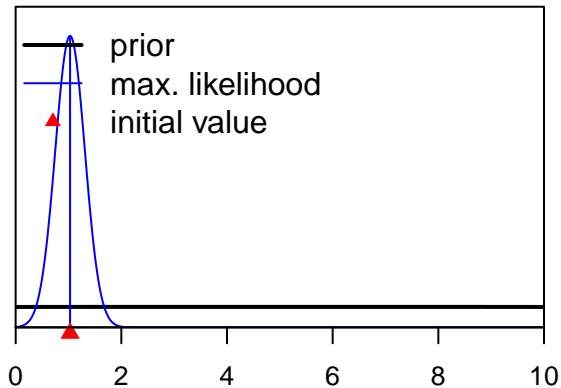
SizeSpline\_Val\_8\_F12-NOA\_C(12)



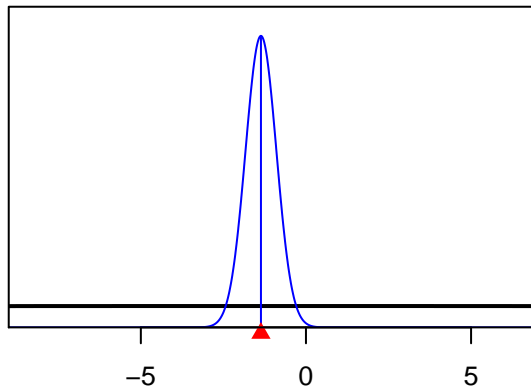
Density

Parameter value

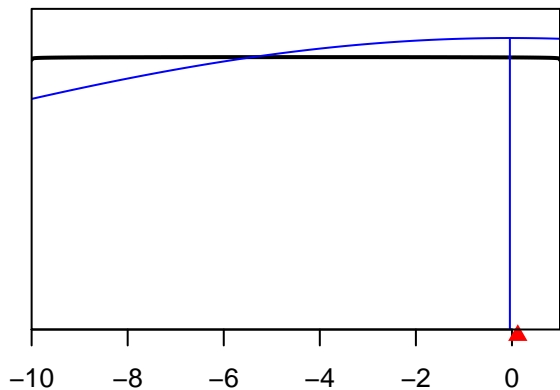
SizeSpline\_GradLo\_F13-NOA\_I(13)



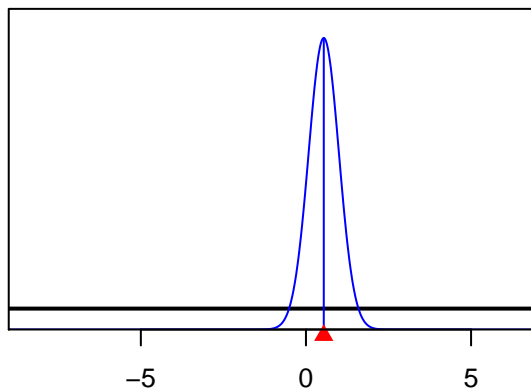
SizeSpline\_Val\_2\_F13-NOA\_I(13)



SizeSpline\_GradHi\_F13-NOA\_I(13)

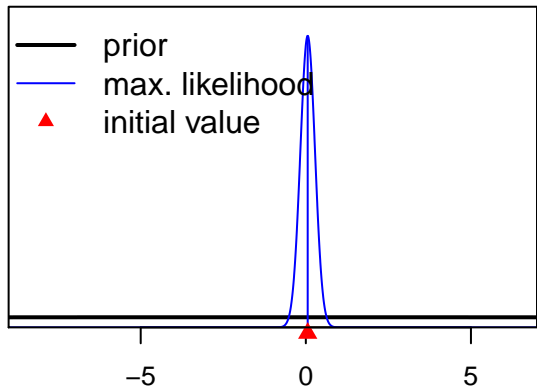


SizeSpline\_Val\_3\_F13-NOA\_I(13)

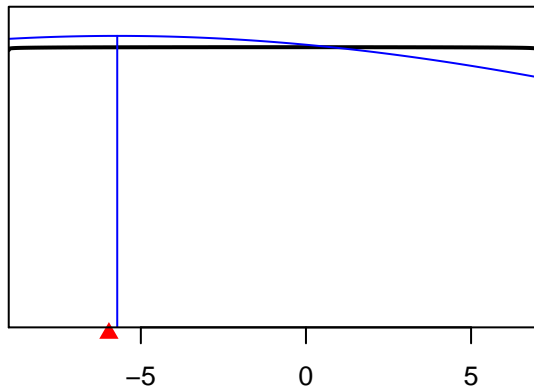


Parameter value

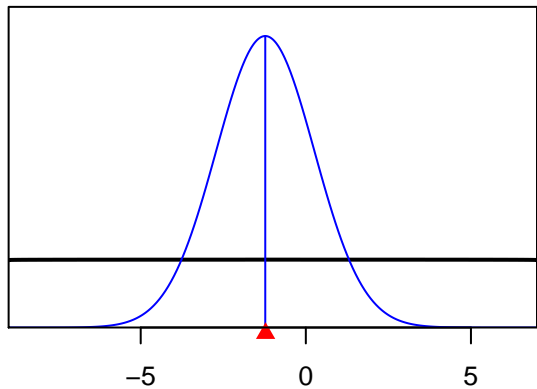
SizeSpline\_Val\_5\_F13-NOA\_I(13)



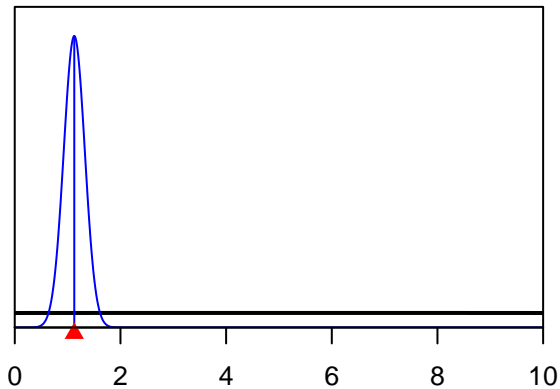
SizeSpline\_Val\_7\_F13-NOA\_I(13)



SizeSpline\_Val\_6\_F13-NOA\_I(13)



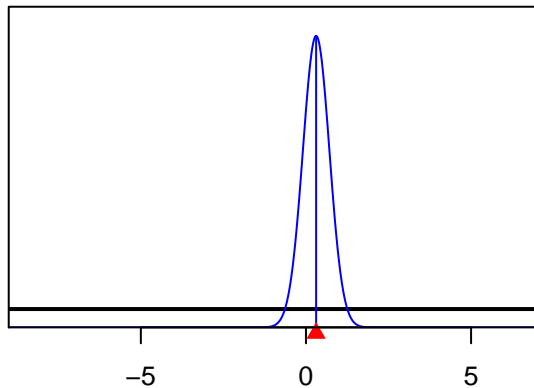
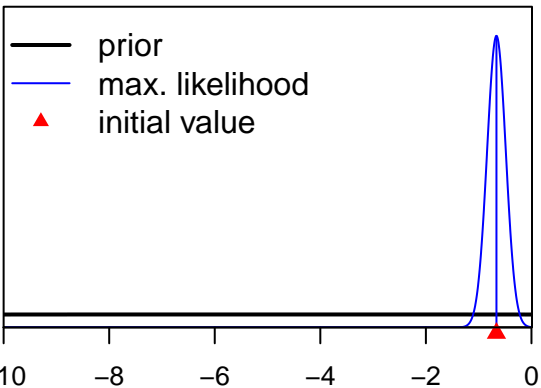
SizeSpline\_GradLo\_F14-NOA\_S(14)



Parameter value

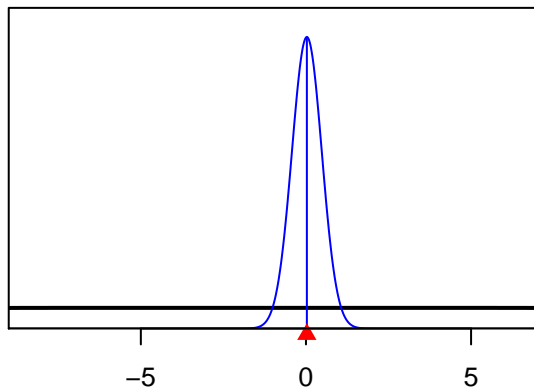
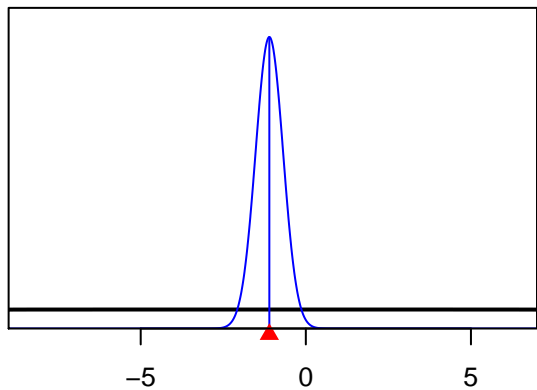
SizeSpline\_GradHi\_F14-NOA\_S(14)

SizeSpline\_Val\_3\_F14-NOA\_S(14)



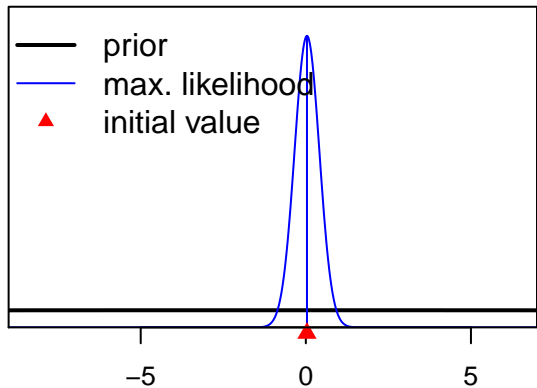
SizeSpline\_Val\_2\_F14-NOA\_S(14)

SizeSpline\_Val\_4\_F14-NOA\_S(14)

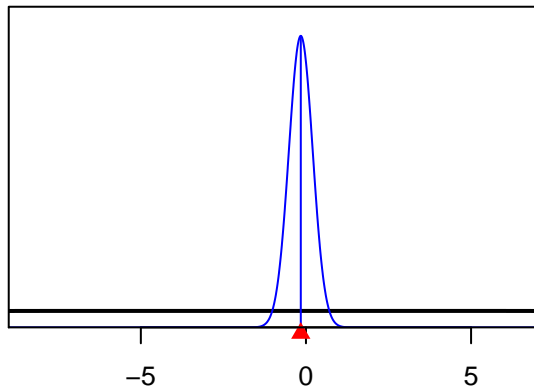


Parameter value

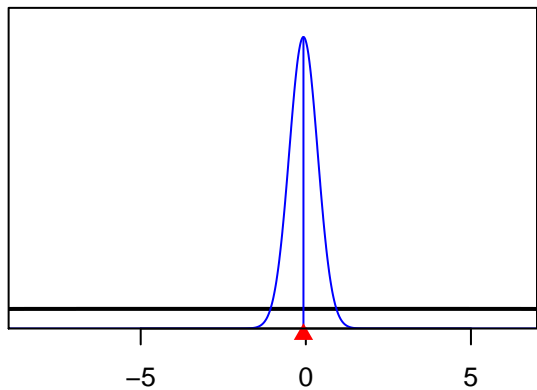
SizeSpline\_Val\_5\_F14-NOA\_S(14)



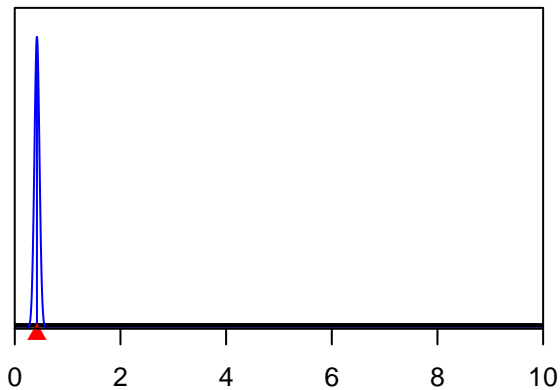
SizeSpline\_Val\_8\_F14-NOA\_S(14)



SizeSpline\_Val\_6\_F14-NOA\_S(14)

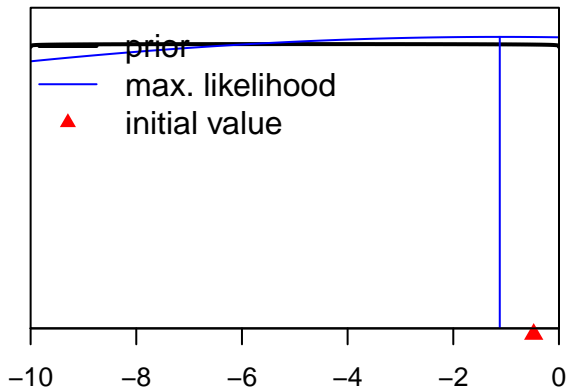


SizeSpline\_GradLo\_F15-DEL\_N(15)

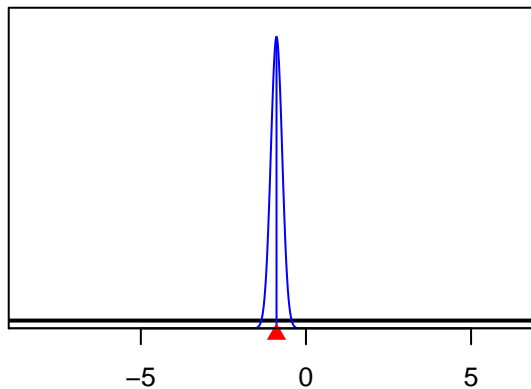


Parameter value

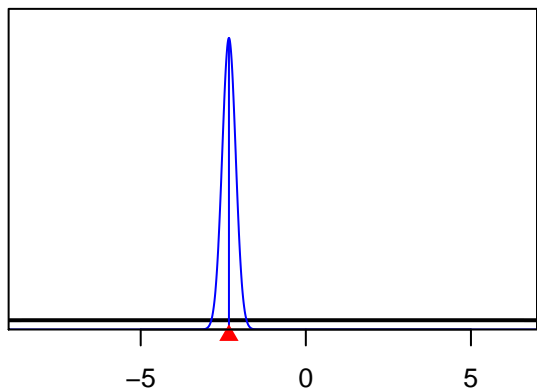
SizeSpline\_GradHi\_F15-DEL\_N(15)



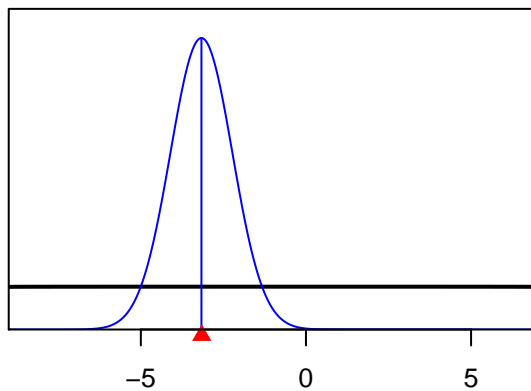
SizeSpline\_Val\_3\_F15-DEL\_N(15)



SizeSpline\_Val\_2\_F15-DEL\_N(15)



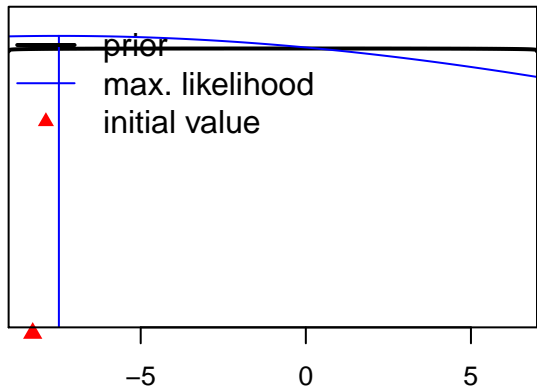
SizeSpline\_Val\_5\_F15-DEL\_N(15)



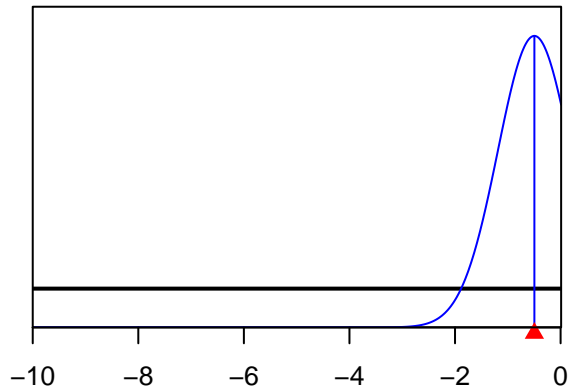
Parameter value



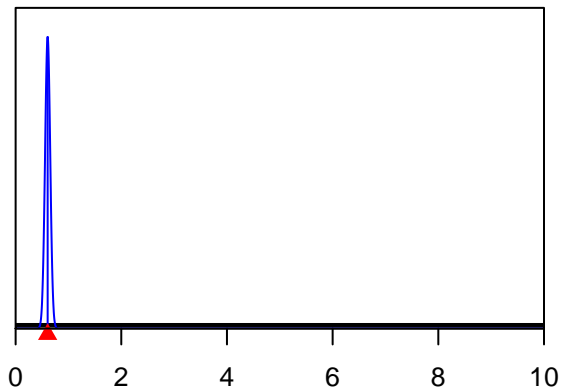
SizeSpline\_Val\_6\_F15-DEL\_N(15)



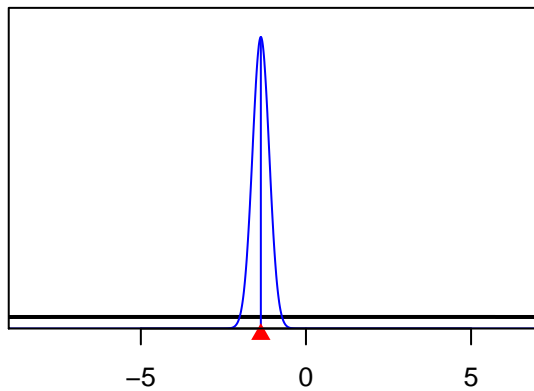
SizeSpline\_GradHi\_F16-DEL\_NE(16)



SizeSpline\_GradLo\_F16-DEL\_NE(16)

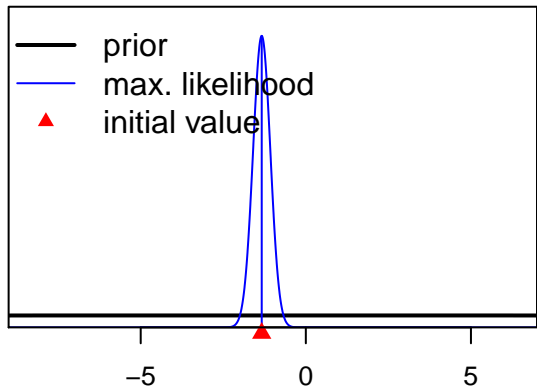


SizeSpline\_Val\_2\_F16-DEL\_NE(16)

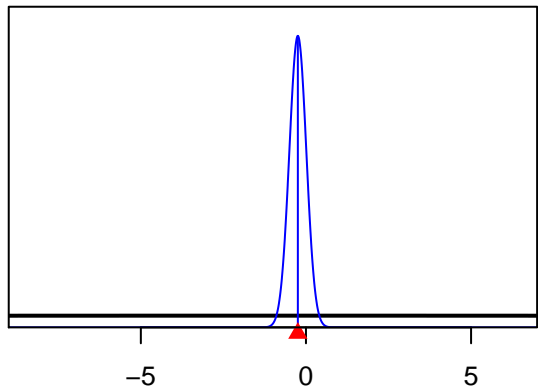


Parameter value

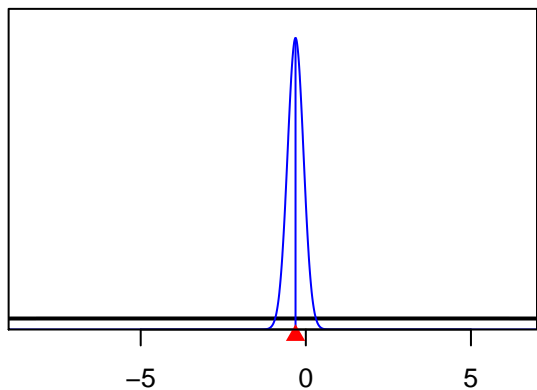
SizeSpline\_Val\_3\_F16-DEL\_NE(16)



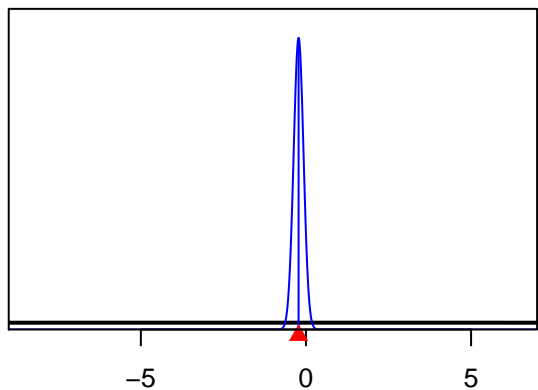
SizeSpline\_Val\_5\_F16-DEL\_NE(16)



SizeSpline\_Val\_4\_F16-DEL\_NE(16)

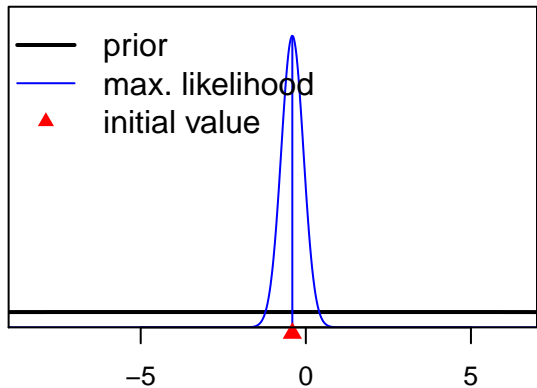


SizeSpline\_Val\_7\_F16-DEL\_NE(16)

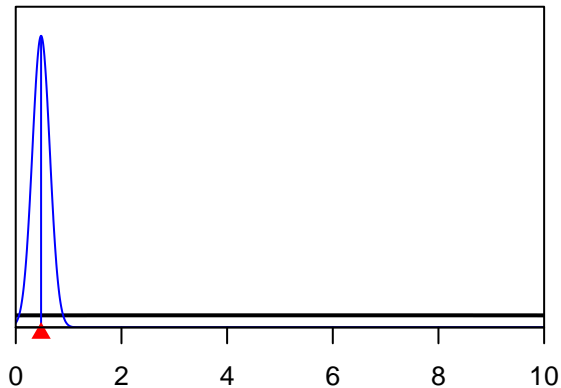


Parameter value

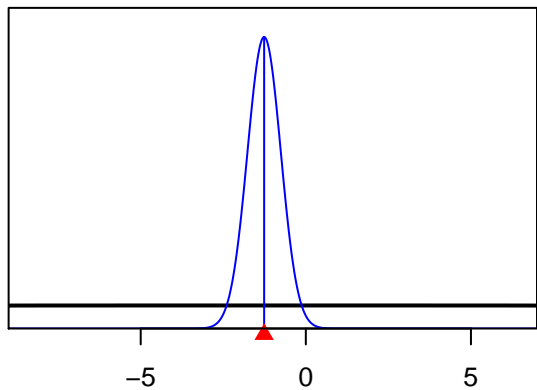
SizeSpline\_Val\_8\_F16-DEL\_NE(16)



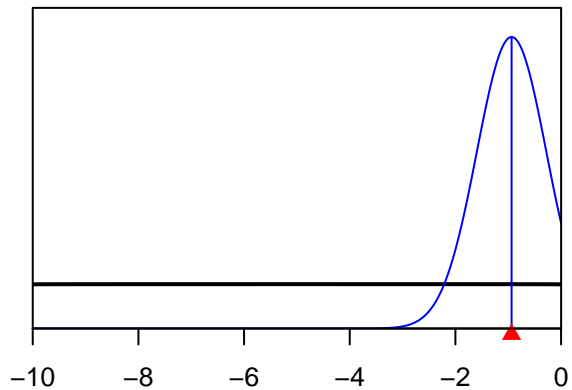
SizeSpline\_GradLo\_F17-DEL\_M(17)



SizeSpline\_Val\_9\_F16-DEL\_NE(16)

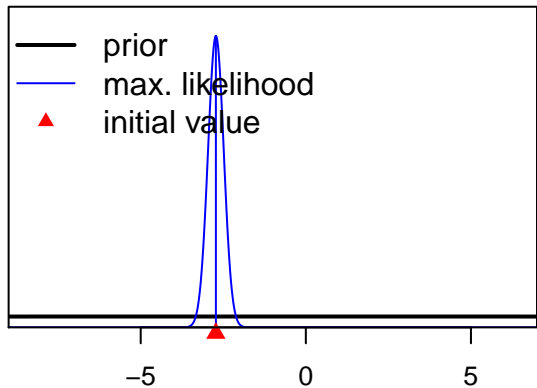


SizeSpline\_GradHi\_F17-DEL\_M(17)

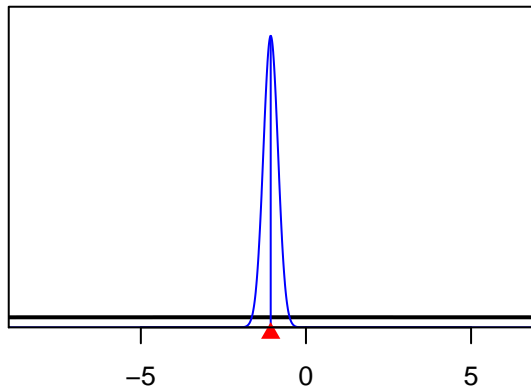


Parameter value

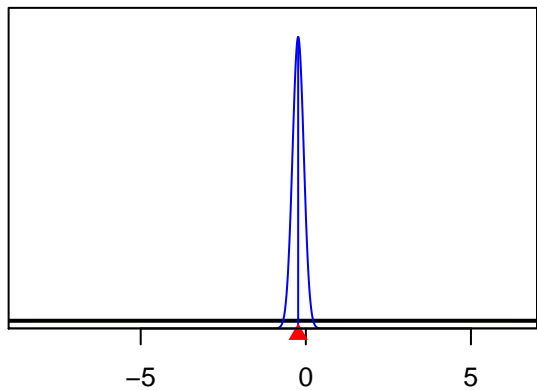
SizeSpline\_Val\_2\_F17-DEL\_M(17)



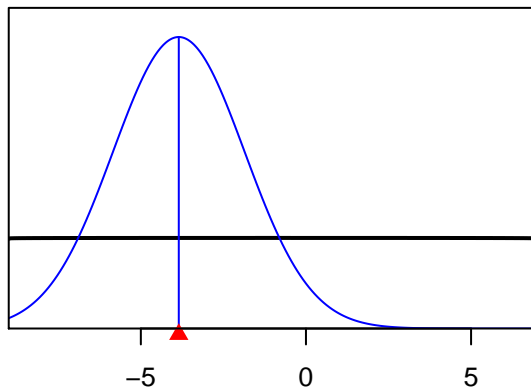
SizeSpline\_Val\_5\_F17-DEL\_M(17)



SizeSpline\_Val\_4\_F17-DEL\_M(17)

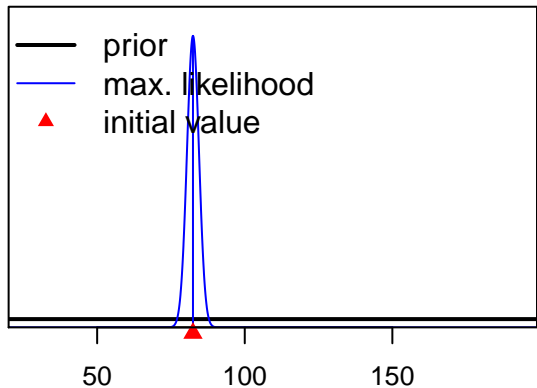


SizeSpline\_Val\_6\_F17-DEL\_M(17)

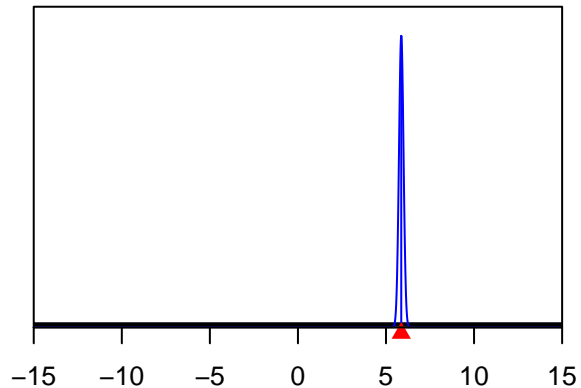


Parameter value

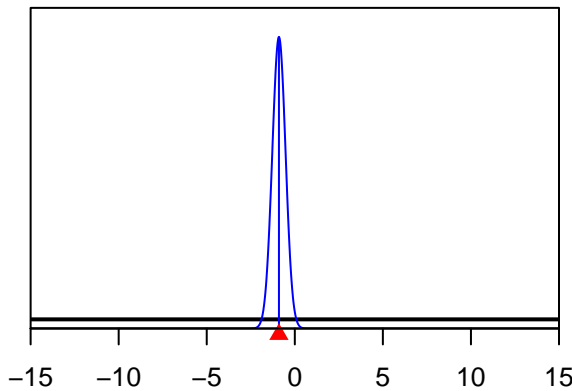
Size\_DbIN\_peak\_F18-DEL\_C(18)



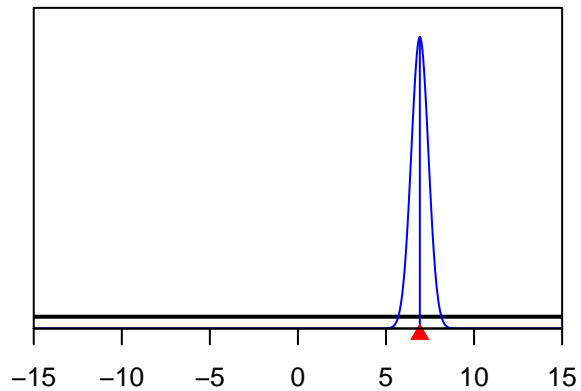
Size\_DbIN\_ascend\_se\_F18-DEL\_C(18)



Size\_DbIN\_top\_logit\_F18-DEL\_C(18)

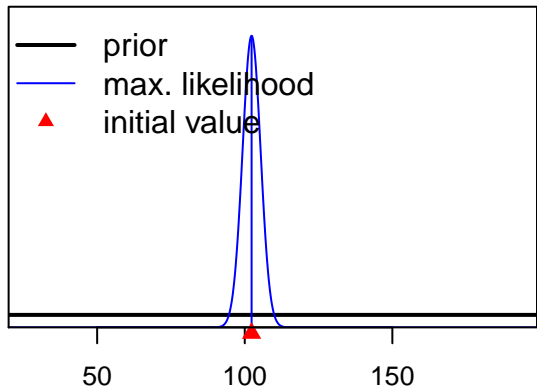


Size\_DbIN\_descend\_se\_F18-DEL\_C(18)

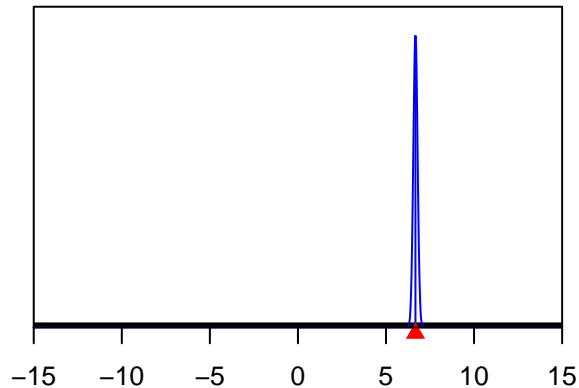


Parameter value

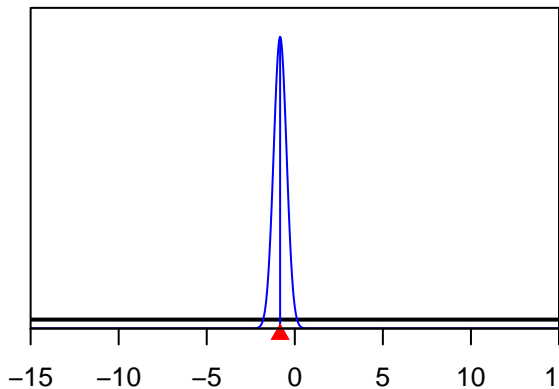
Size\_DbIN\_peak\_F19-DEL\_P(19)



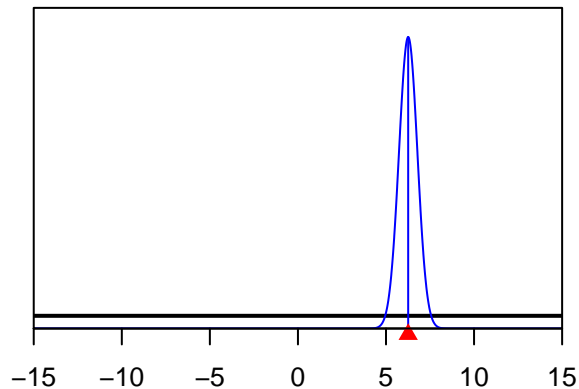
Size\_DbIN\_ascend\_se\_F19-DEL\_P(19)



Size\_DbIN\_top\_logit\_F19-DEL\_P(19)

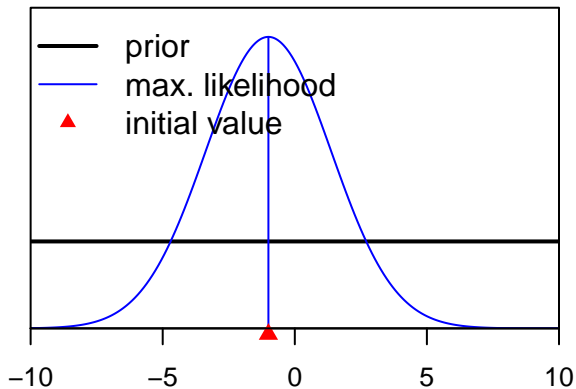


Size\_DbIN\_descend\_se\_F19-DEL\_P(19)

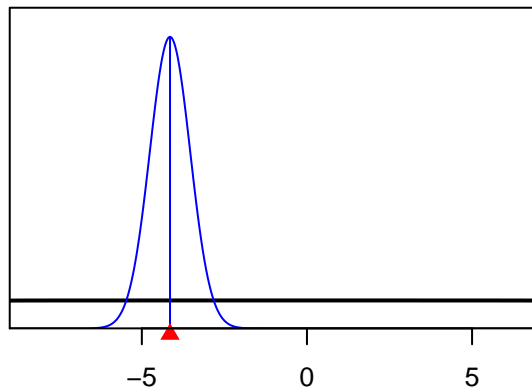


Parameter value

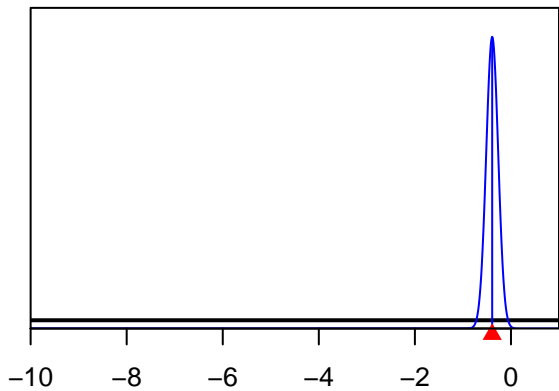
SizeSpline\_GradLo\_F22-BB(22)



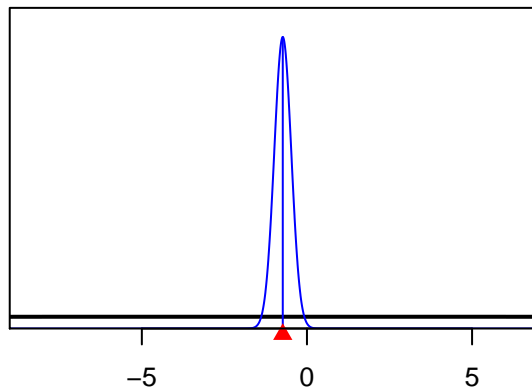
SizeSpline\_Val\_2\_F22-BB(22)



SizeSpline\_GradHi\_F22-BB(22)

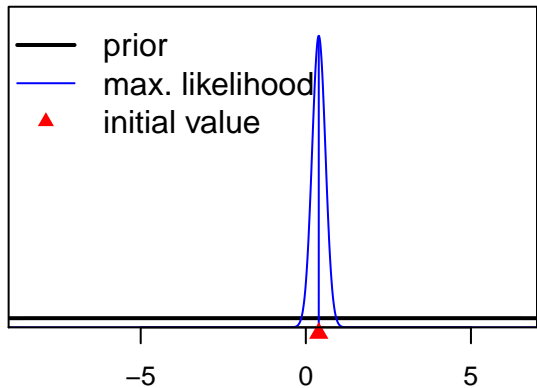


SizeSpline\_Val\_3\_F22-BB(22)

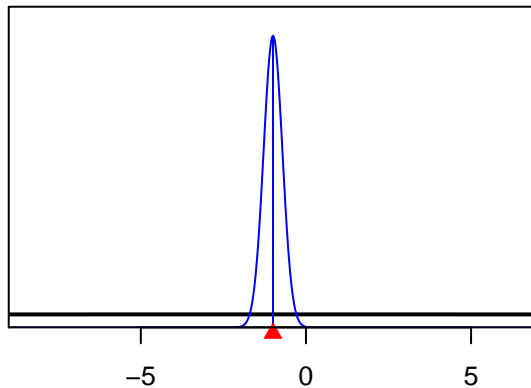


Parameter value

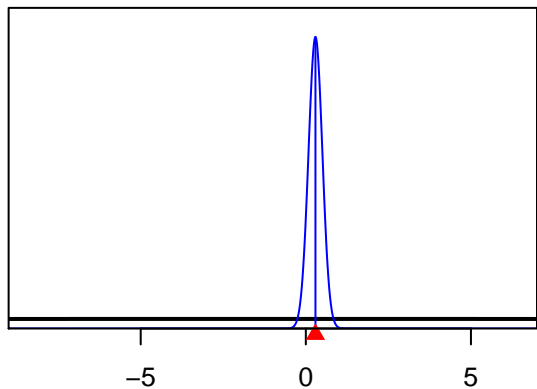
SizeSpline\_Val\_5\_F22-BB(22)



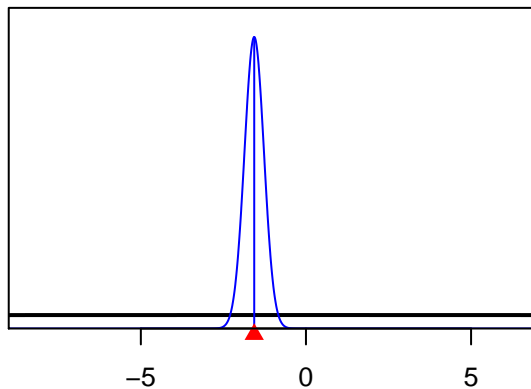
SizeSpline\_Val\_7\_F22-BB(22)



SizeSpline\_Val\_6\_F22-BB(22)

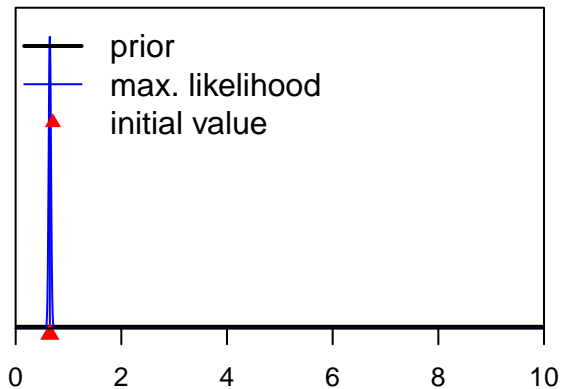
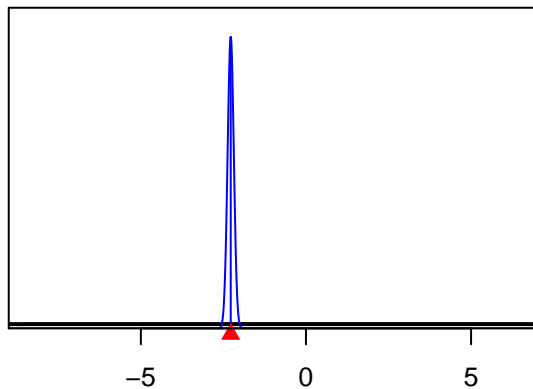
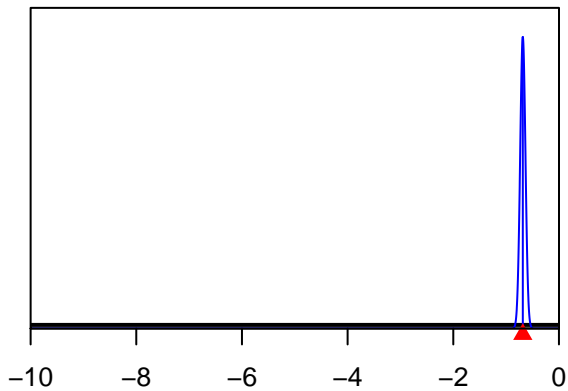
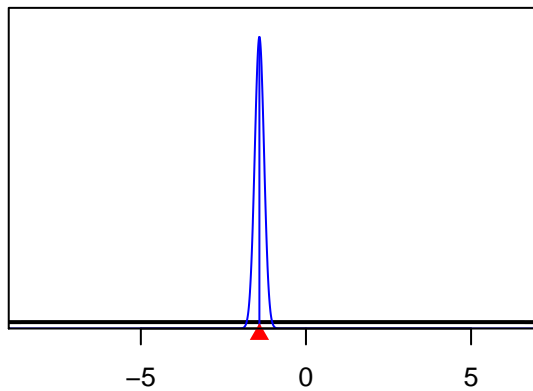


SizeSpline\_Val\_8\_F22-BB(22)



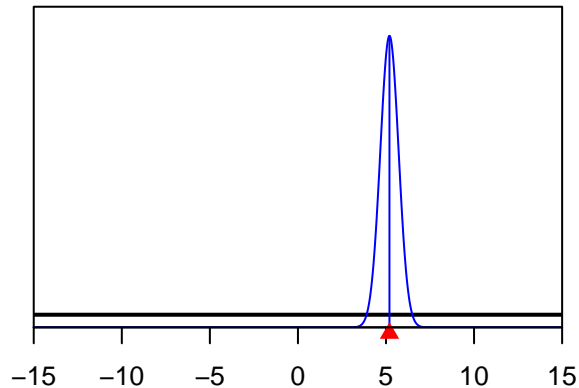
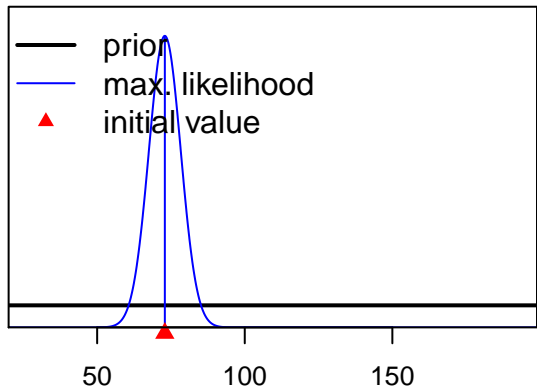
Parameter value



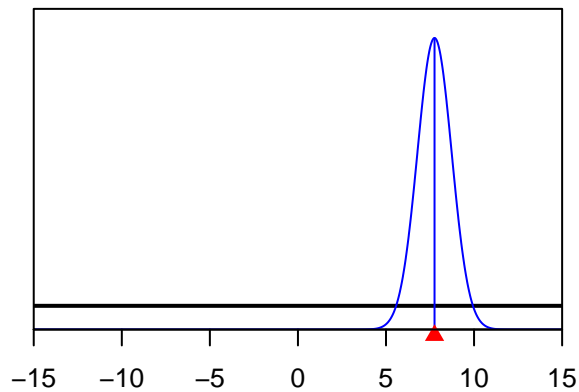
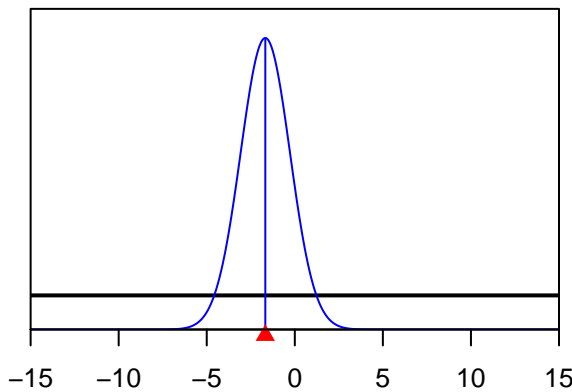
**SizeSpline\_GradLo\_S1-PS\_DEL\_VAST(41)****SizeSpline\_Val\_2\_S1-PS\_DEL\_VAST(41)****SizeSpline\_GradHi\_S1-PS\_DEL\_VAST(41)****SizeSpline\_Val\_4\_S1-PS\_DEL\_VAST(41)**

Parameter value

size\_DbIN\_peak\_F18-DEL\_C(18)\_BLK2repl\_11; DbIN\_ascend\_se\_F18-DEL\_C(18)\_BLK2repl\_1

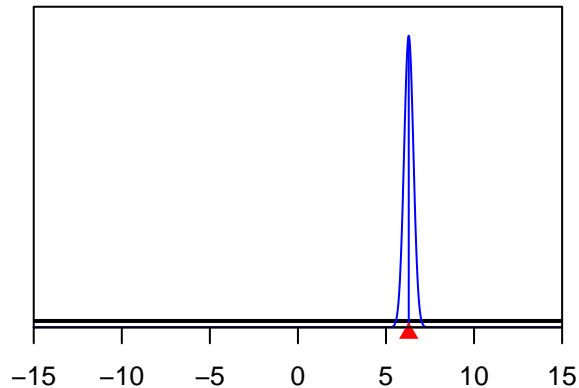
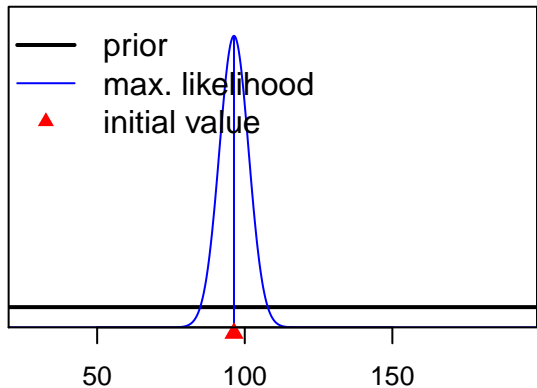


size\_DbIN\_top\_logit\_F18-DEL\_C(18)\_BLK2repl\_1; DbIN\_descend\_se\_F18-DEL\_C(18)\_BLK2repl\_1

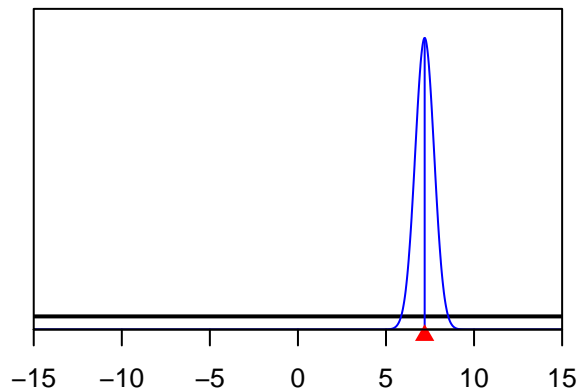
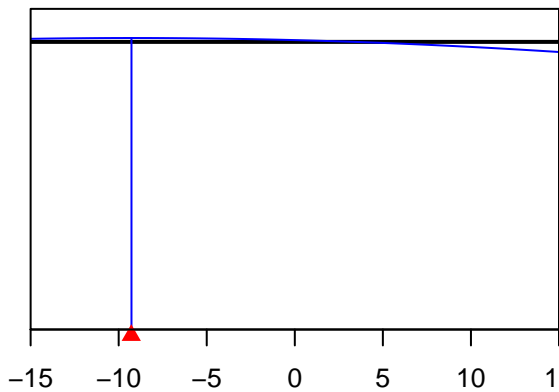


Parameter value

size\_DbIN\_peak\_F19-DEL\_P(19)\_BLK2repl\_11 DbIN\_ascend\_se\_F19-DEL\_P(19)\_BLK2repl\_11

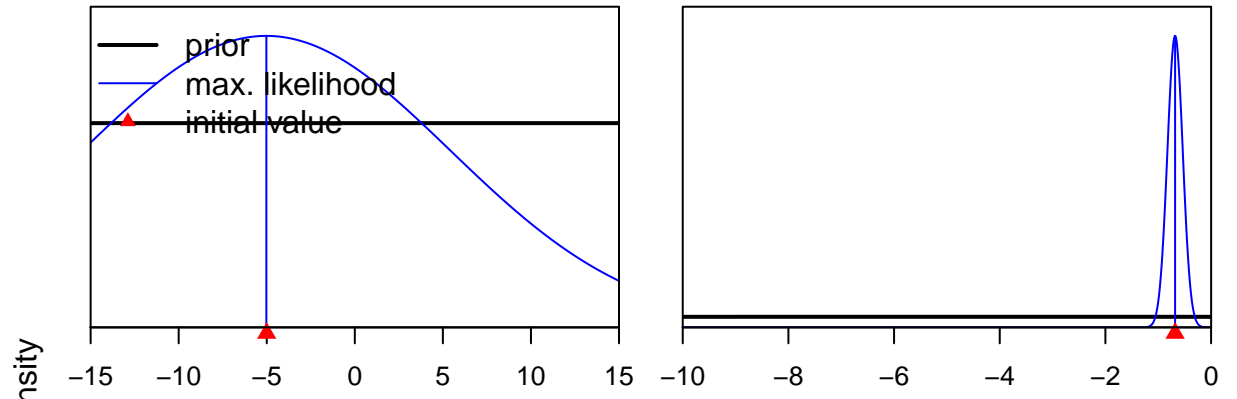


size\_DbIN\_top\_logit\_F19-DEL\_P(19)\_BLK2repl\_1 DbIN\_descend\_se\_F19-DEL\_P(19)\_BLK2repl\_11

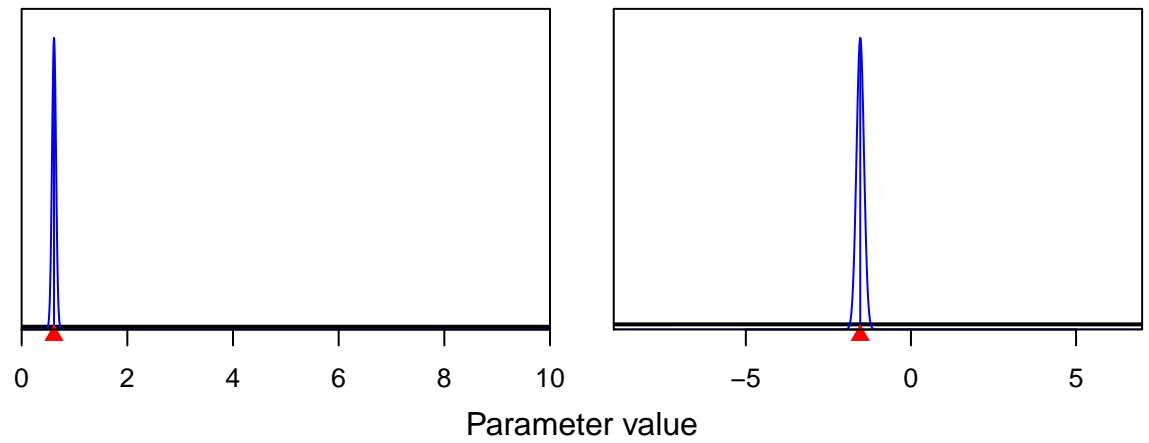


Parameter value

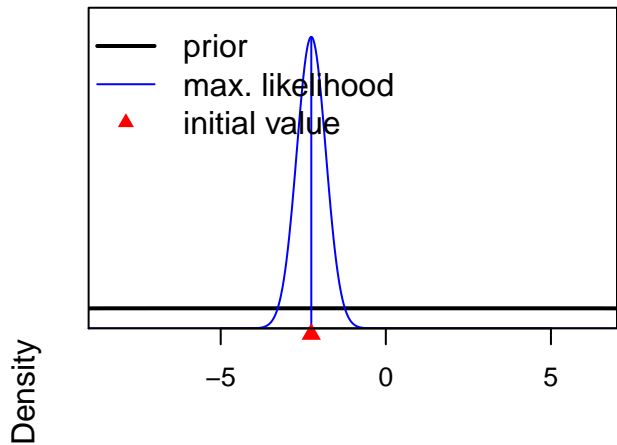
e\_DbIN\_end\_logit\_F19-DEL\_P(19)\_BLK2repl\_↑pline\_GradHi\_S1-PS\_DEL\_VAST(41)\_BLK2rep



pline\_GradLo\_S1-PS\_DEL\_VAST(41)\_BLK2repSpline\_Val\_3\_S1-PS\_DEL\_VAST(41)\_BLK2rep



# Spline\_Val\_4\_S1-PS\_DEL\_VAST(41)\_BLK2repl.



Parameter value