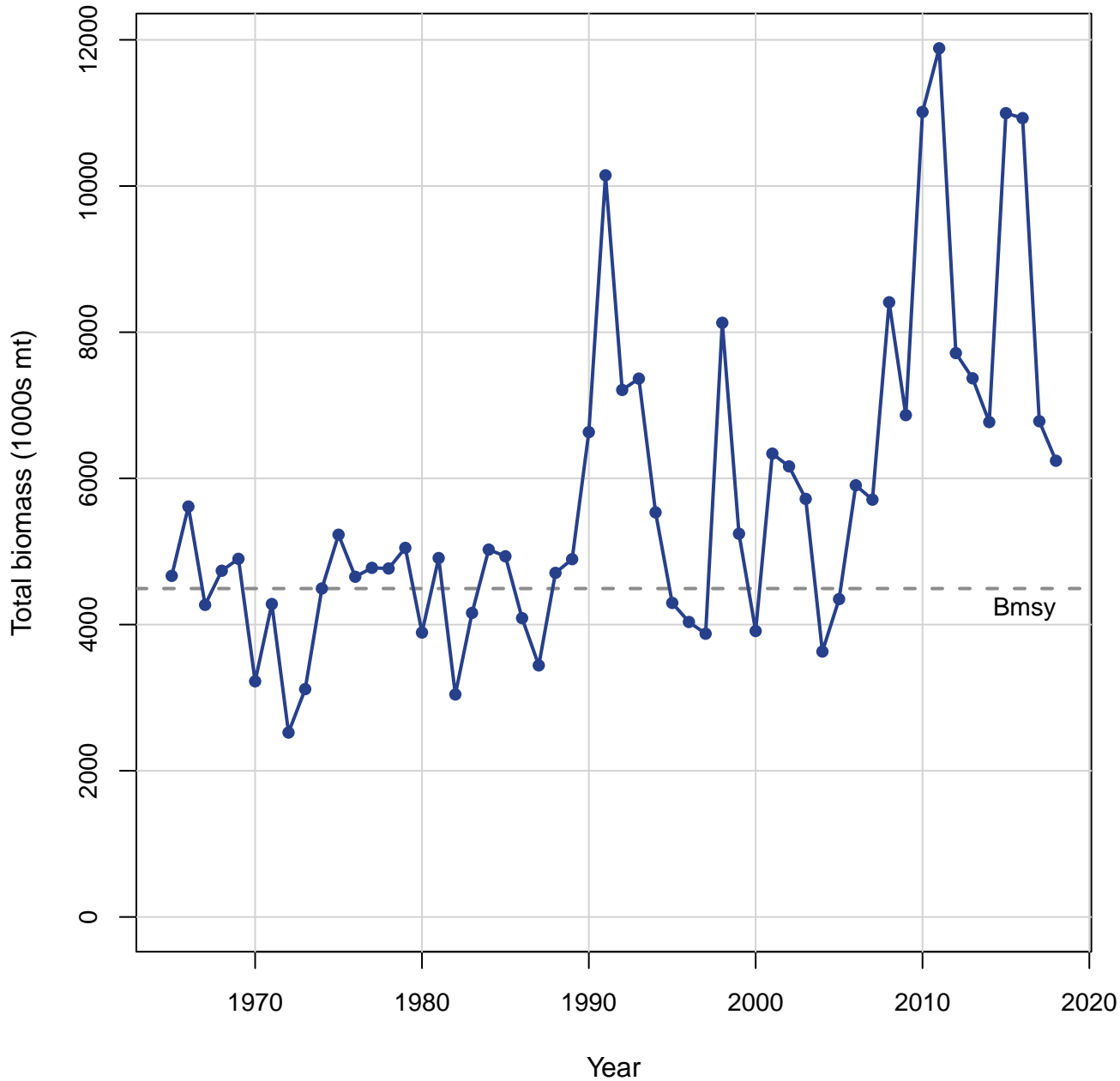
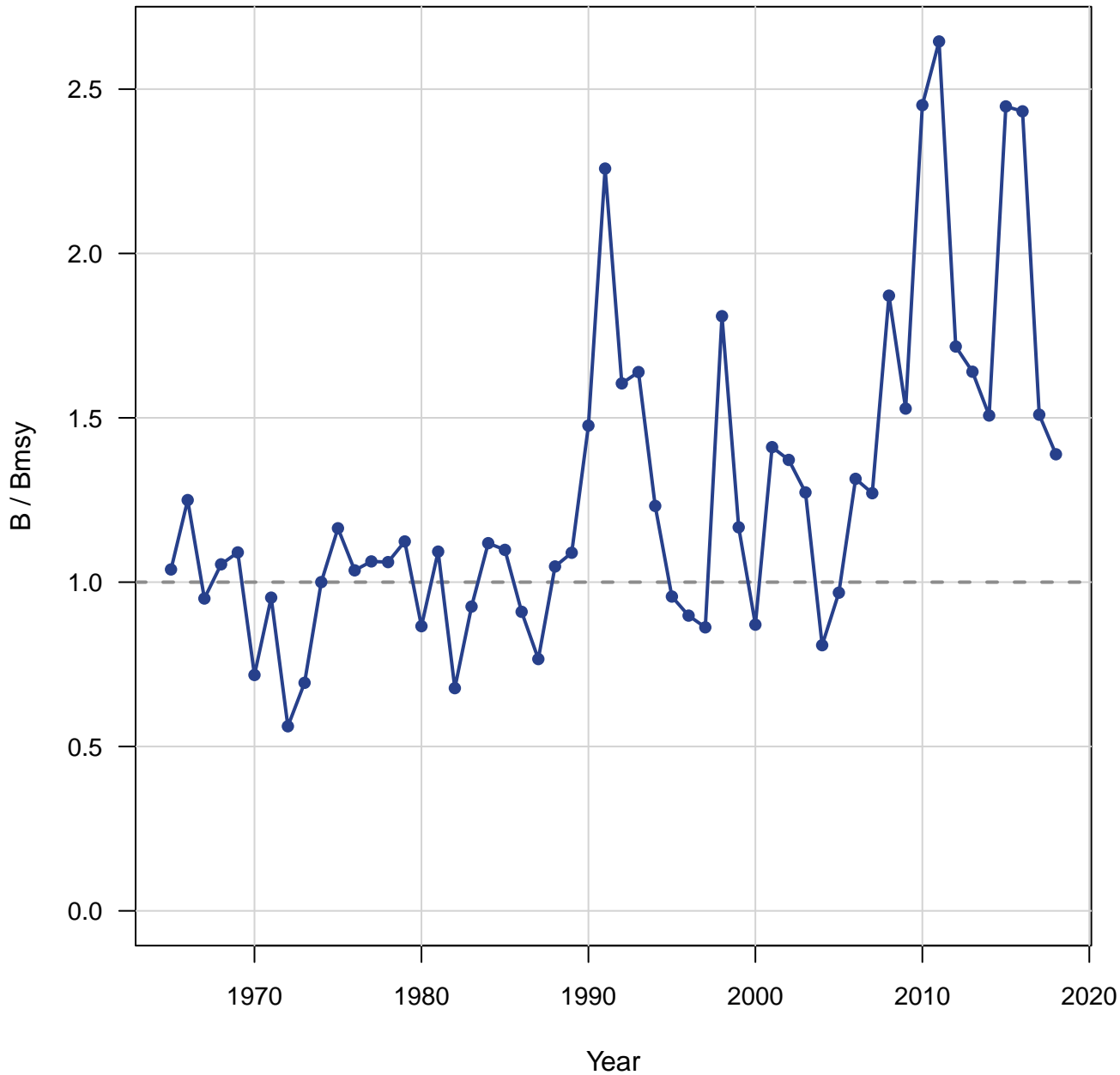


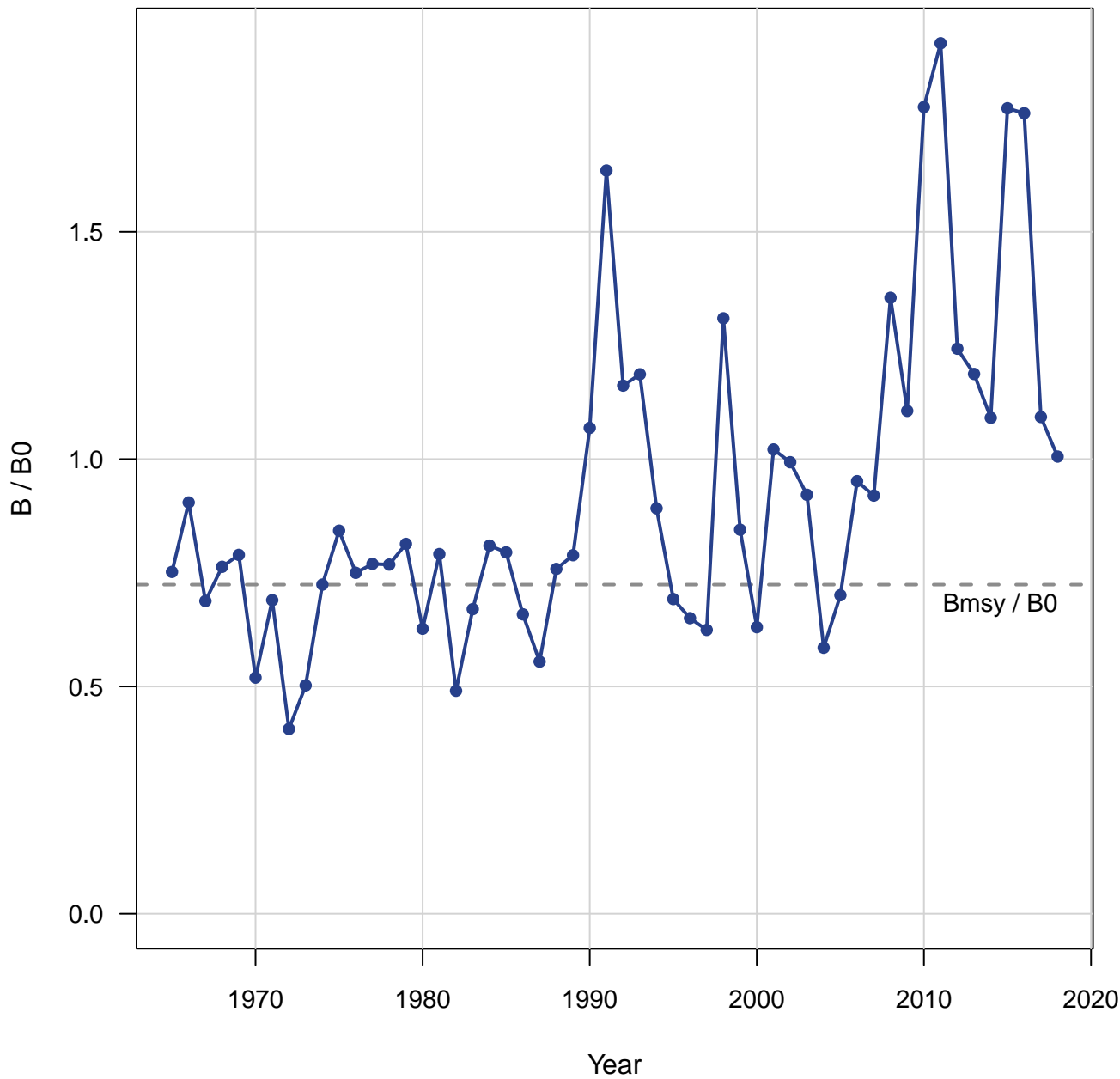
# Biomass Data: menhaden



**B / Bmsy**      **Data: menhaden**

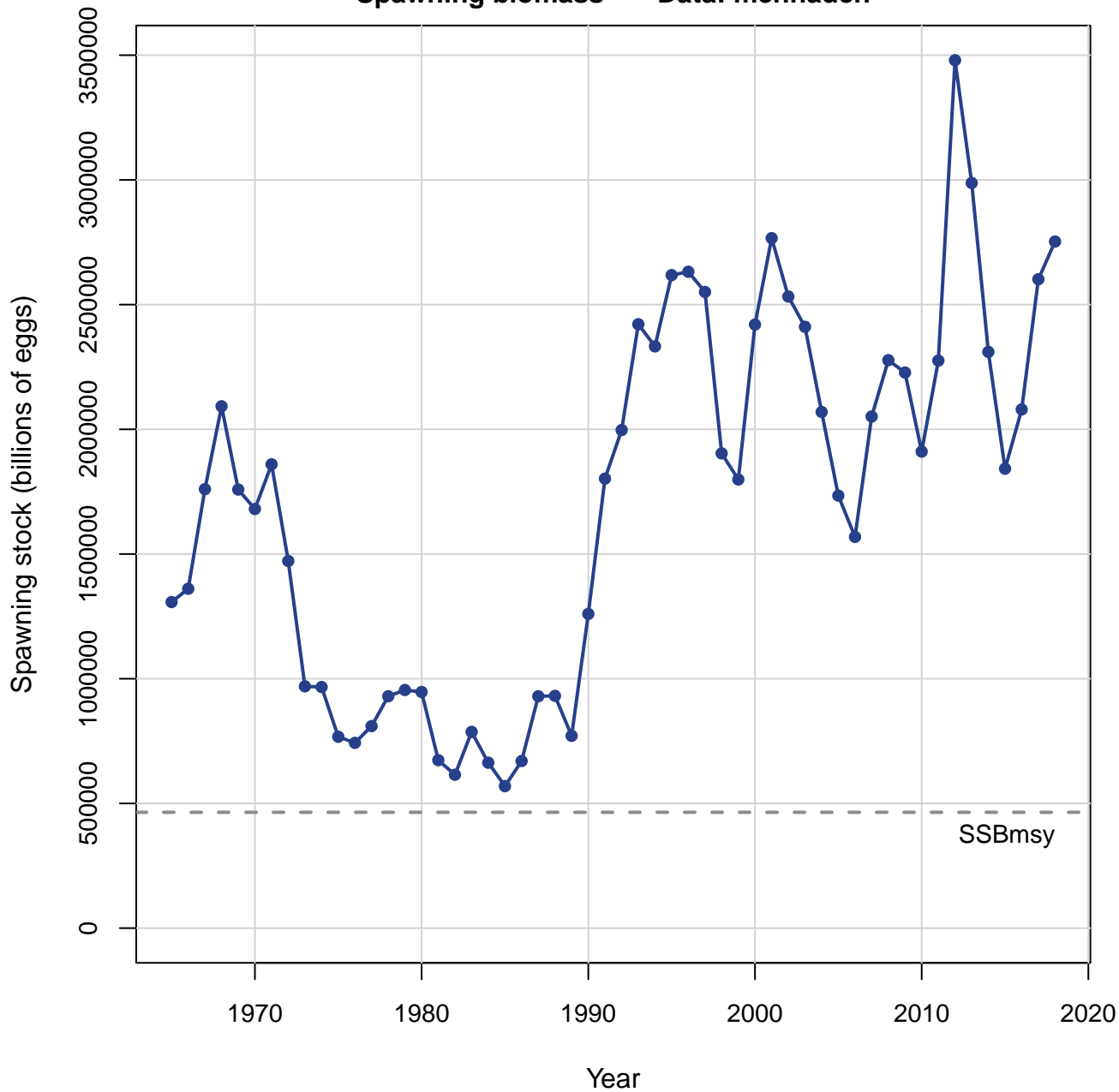


**B/B0**      **Data: menhaden**



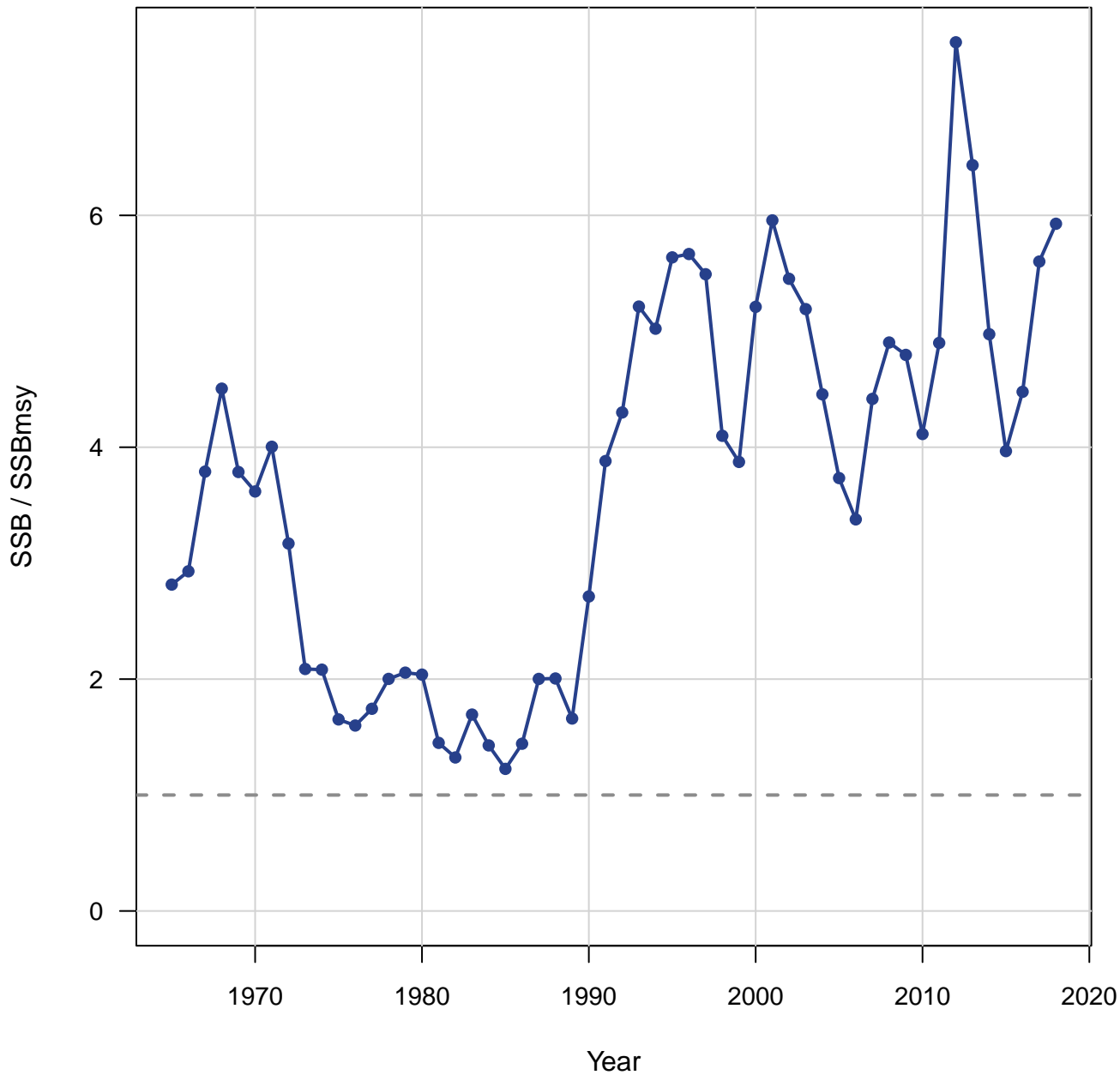
# Spawning biomass

Data: menhaden

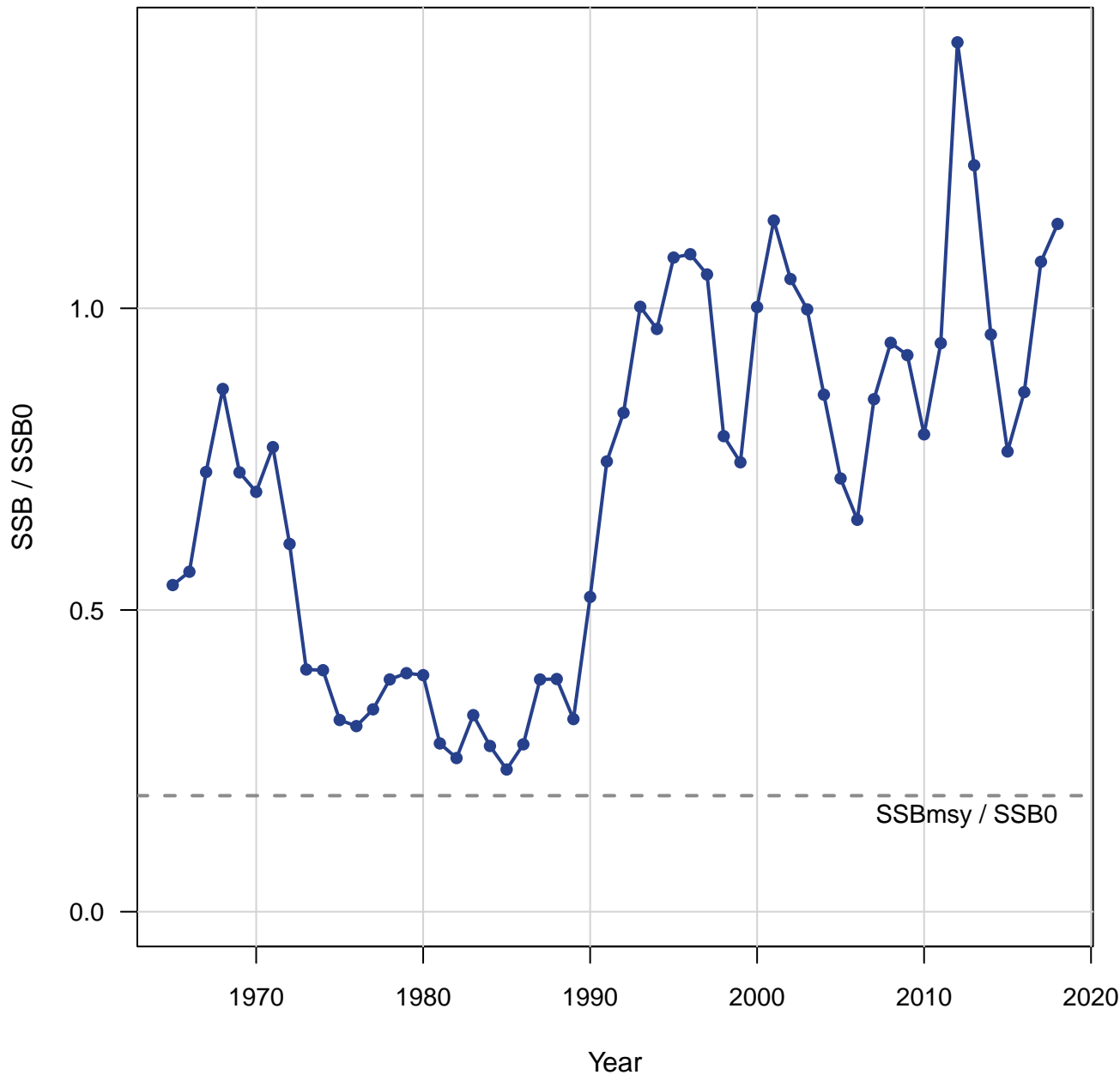


SSB / SSBmsy

Data: menhaden

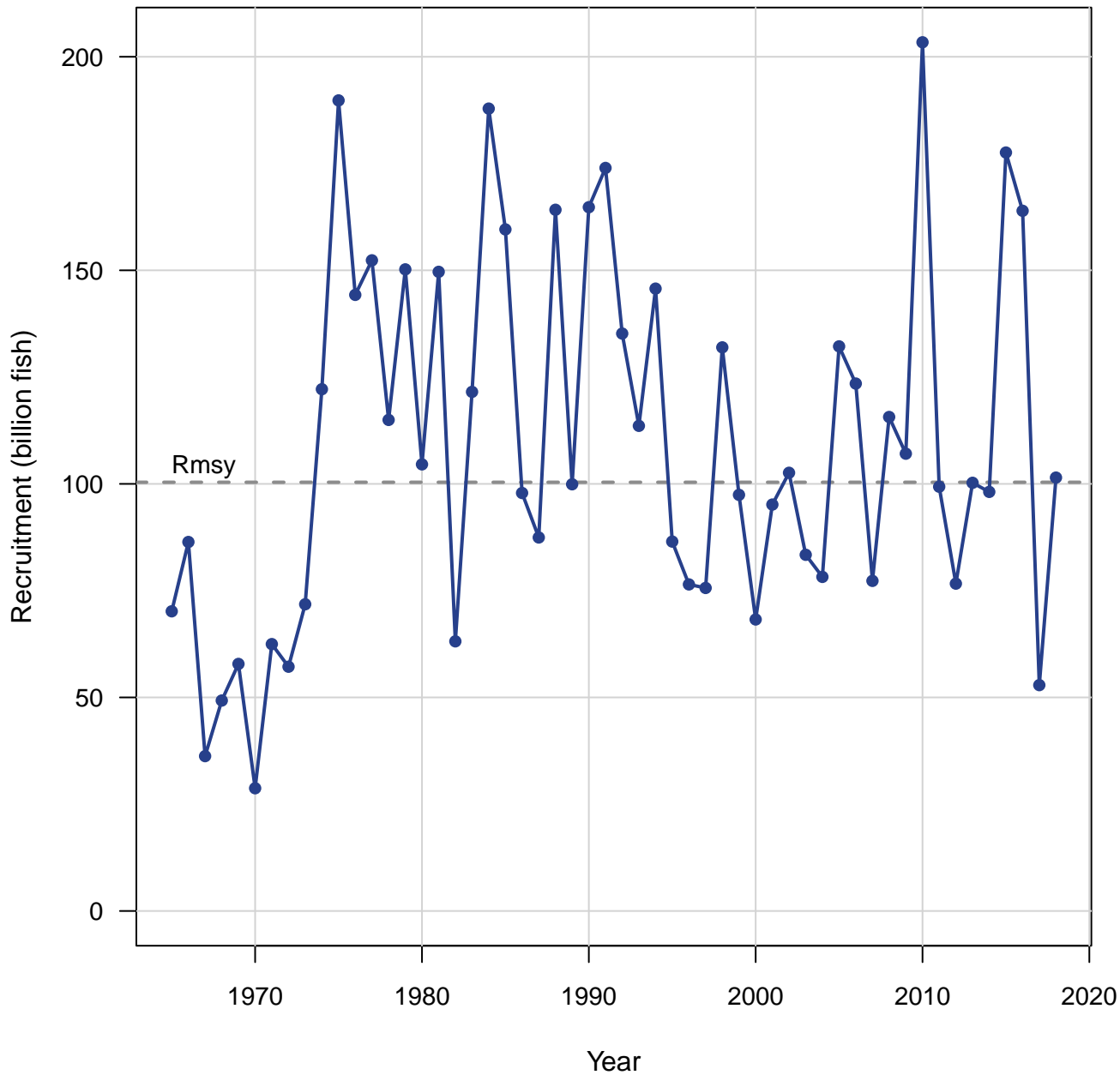


# SSB/SSB0 Data: menhaden



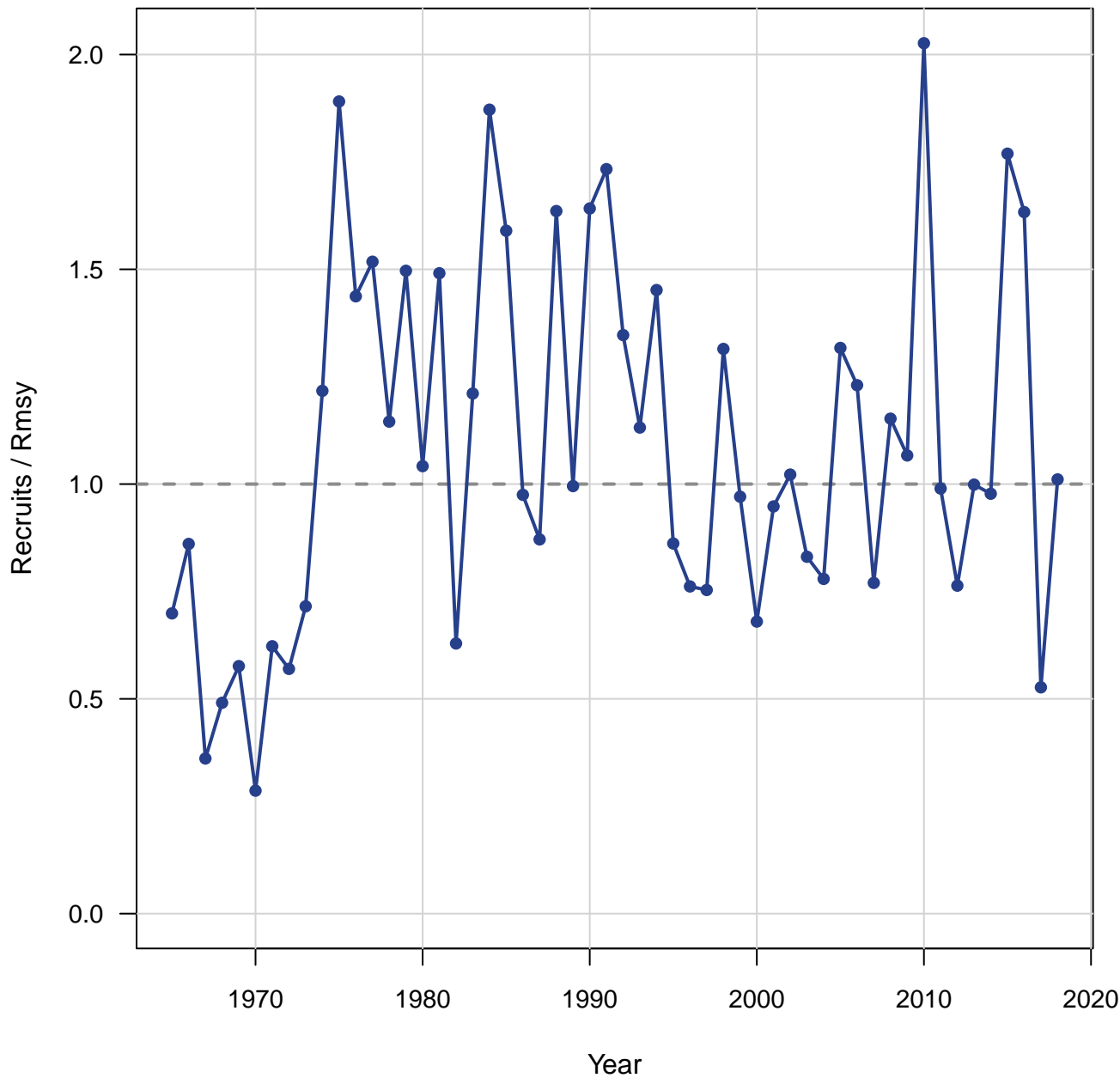
## Recruitment

Data: menhaden



Recruits / Rmsy

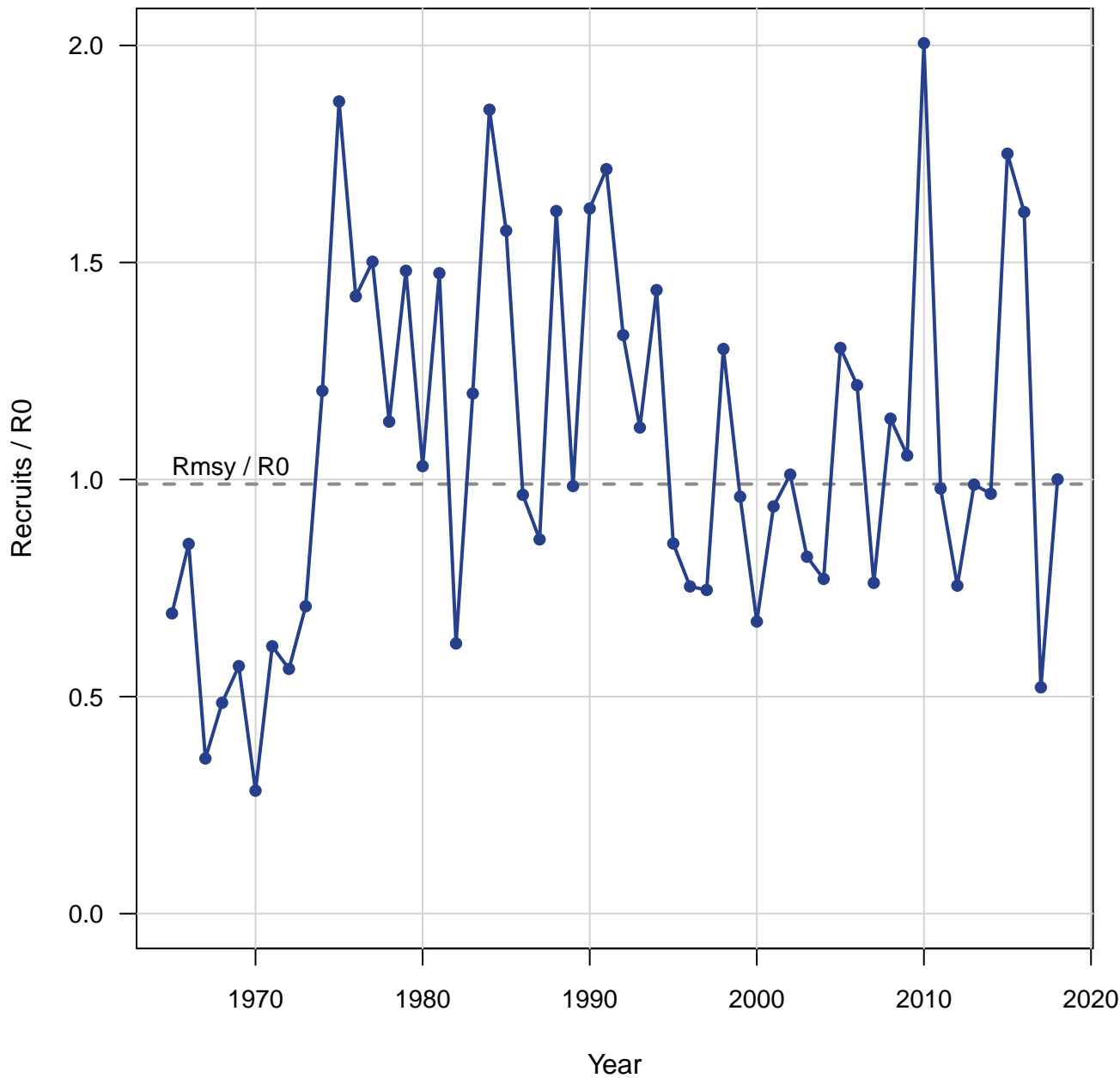
Data: menhaden





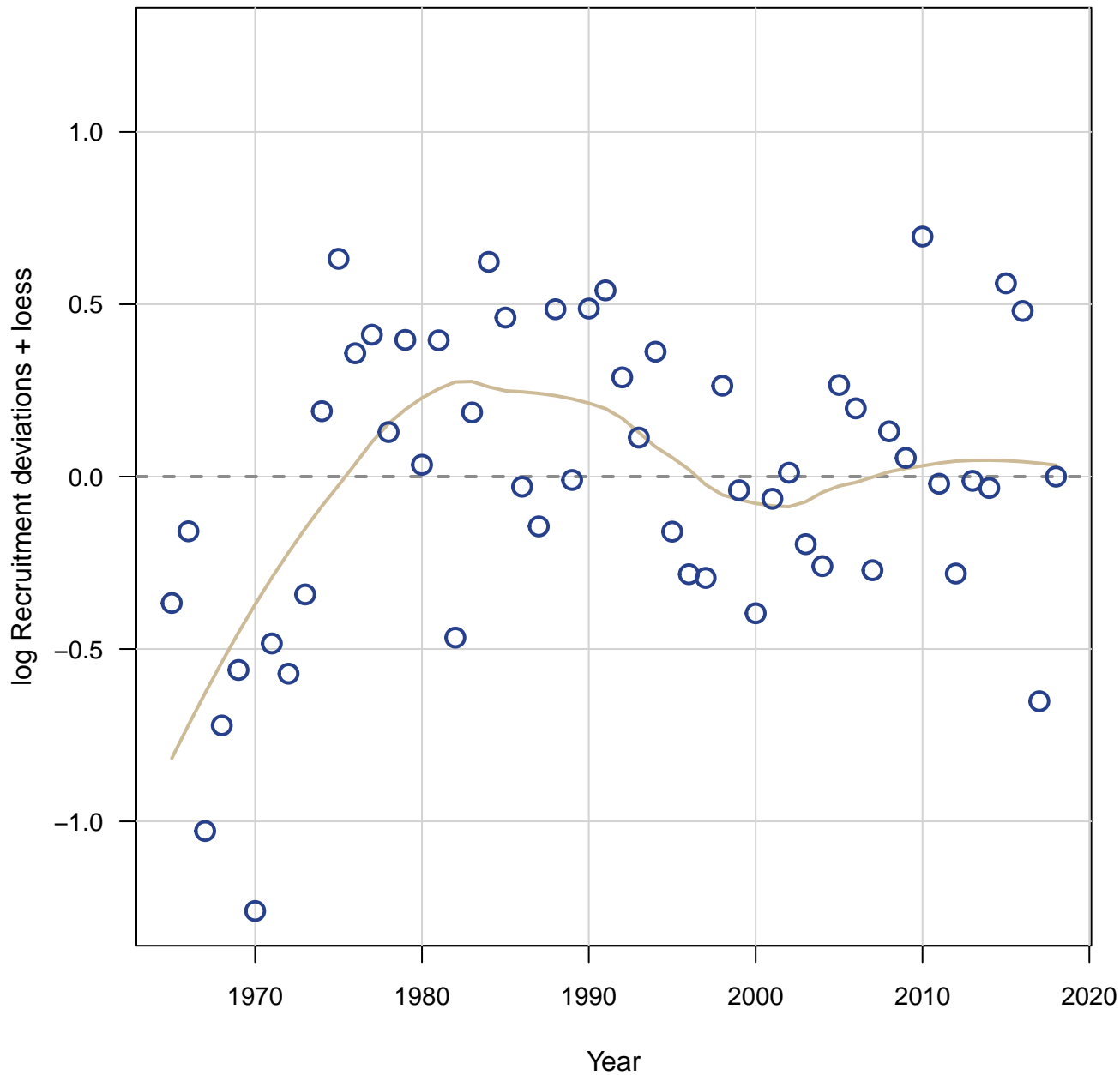
Recruits/R0

Data: menhaden

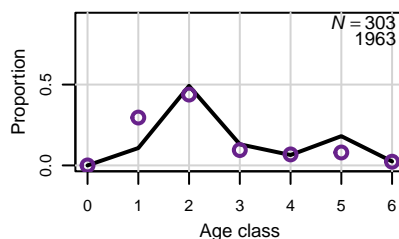
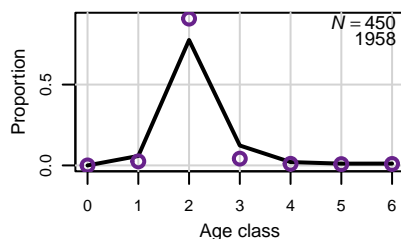
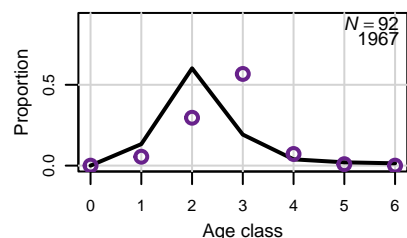
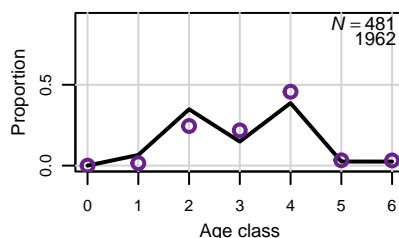
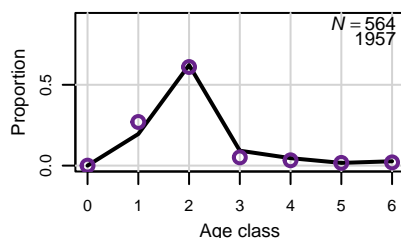
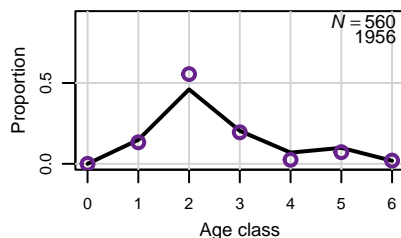
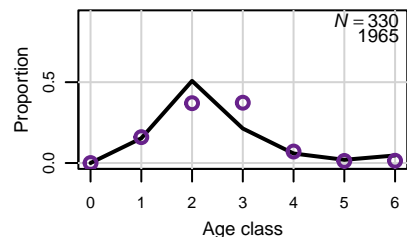
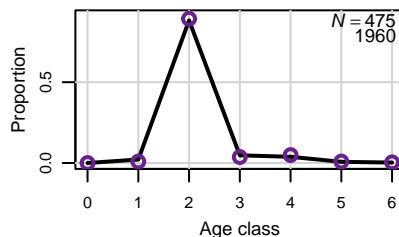
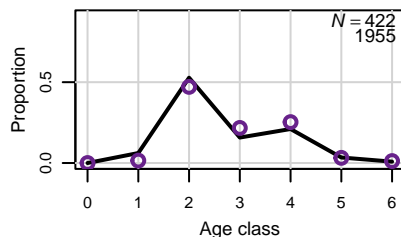
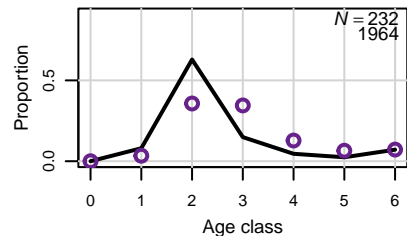


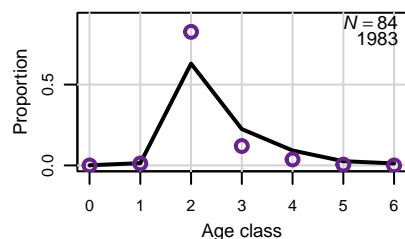
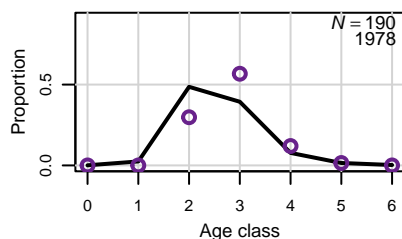
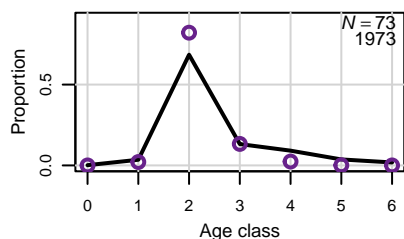
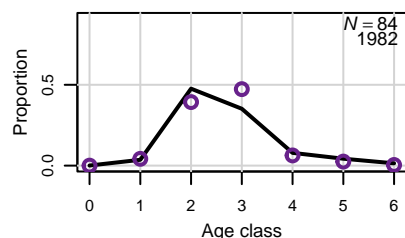
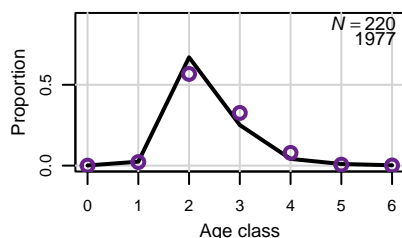
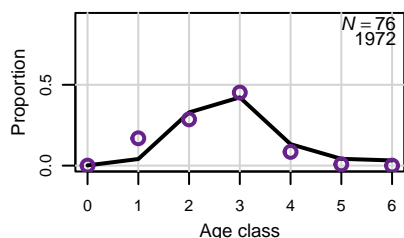
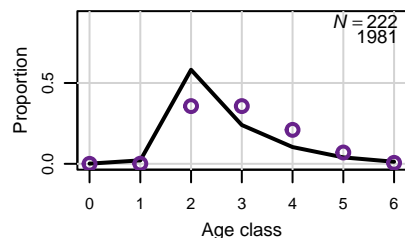
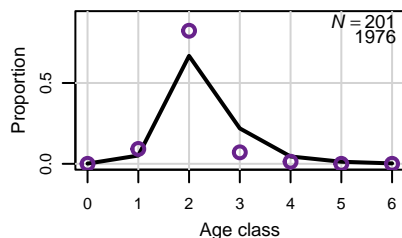
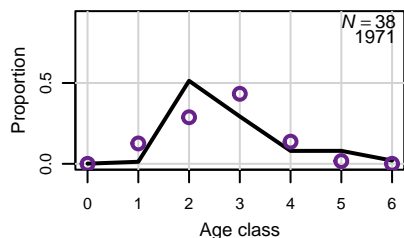
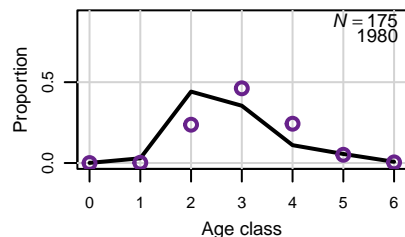
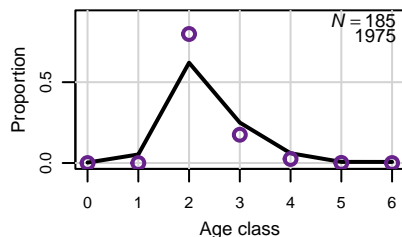
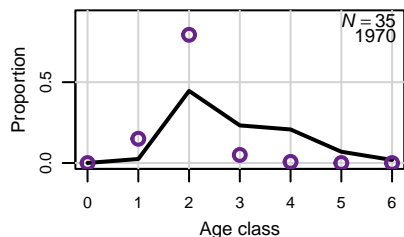
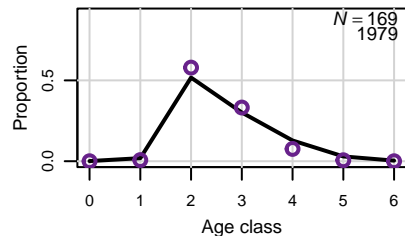
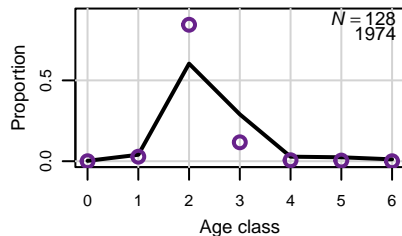
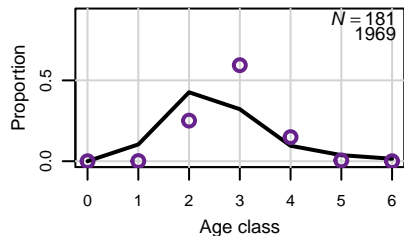
## Recruitment deviations

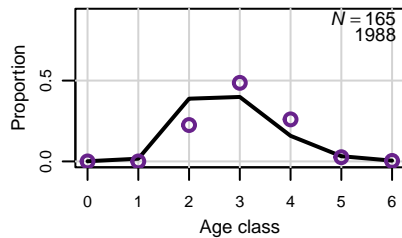
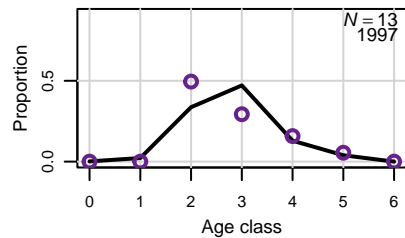
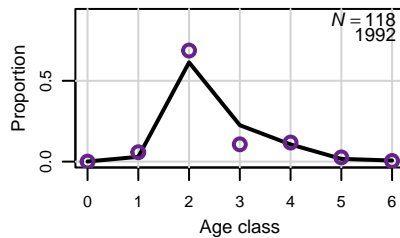
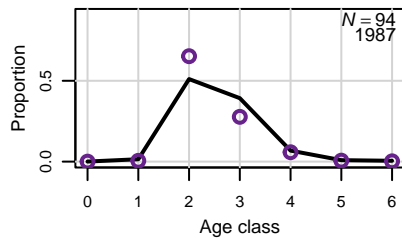
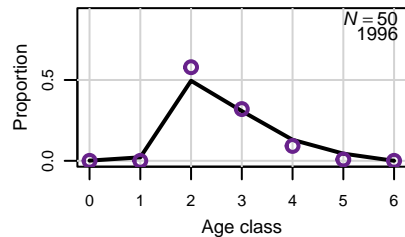
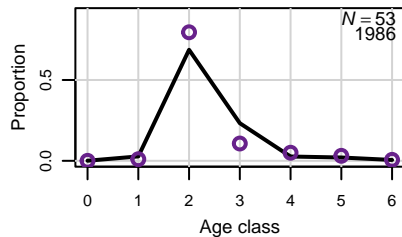
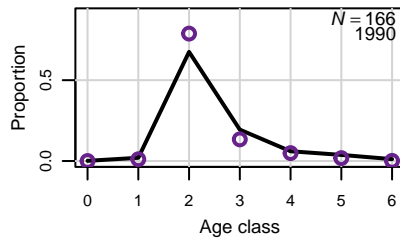
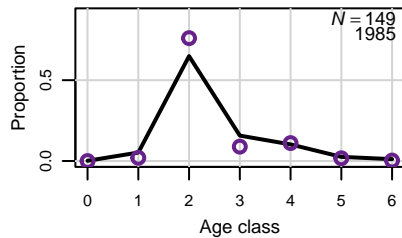
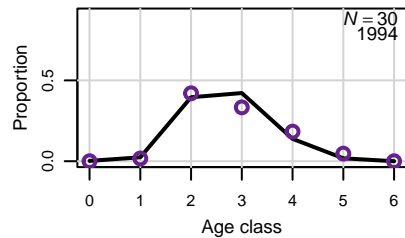
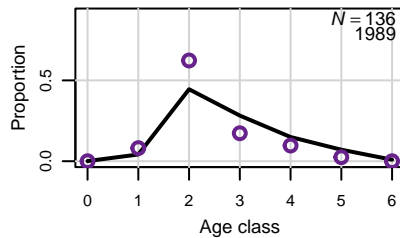
Data: menhaden

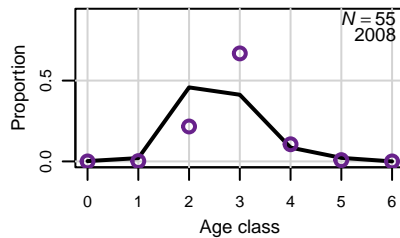
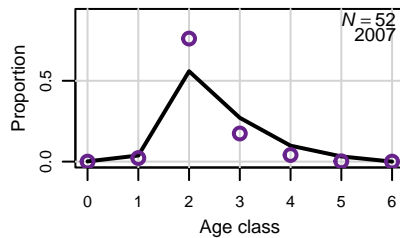
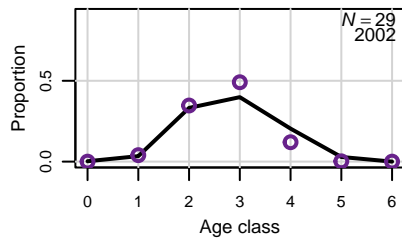
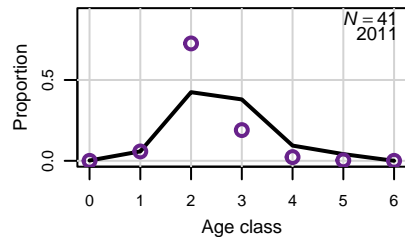
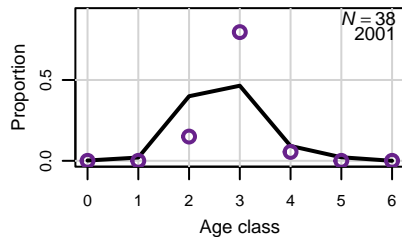
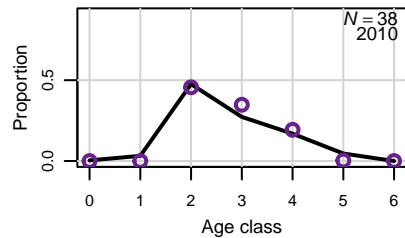
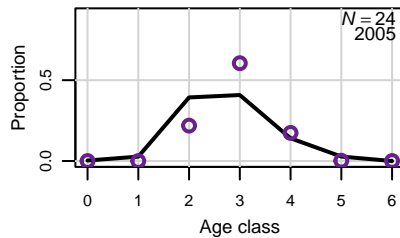
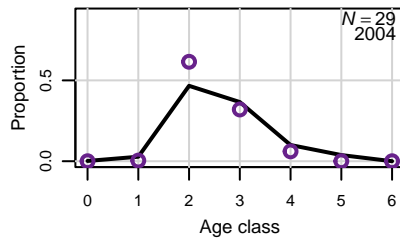
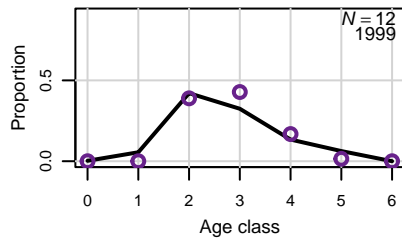


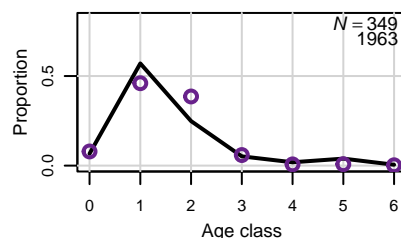
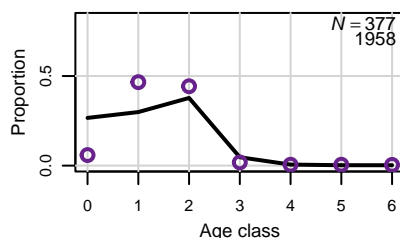
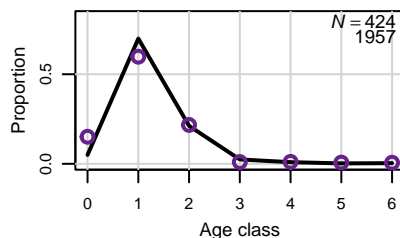
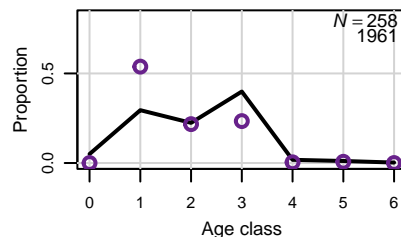
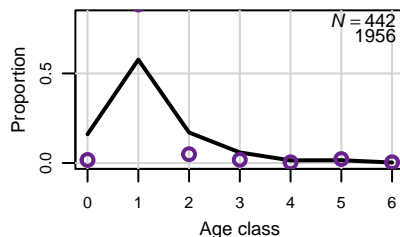
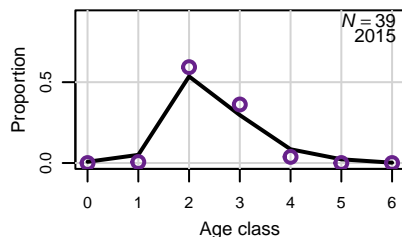
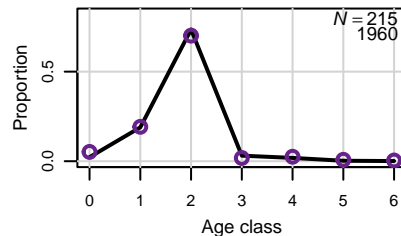
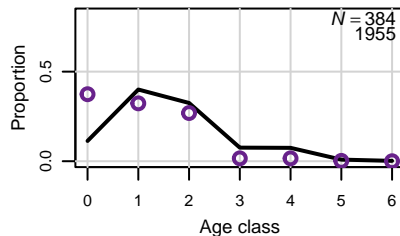
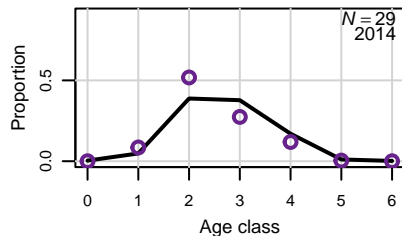
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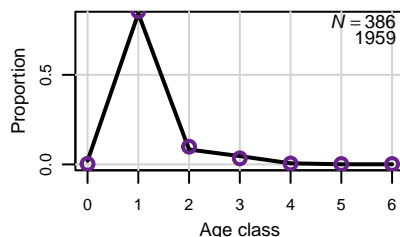


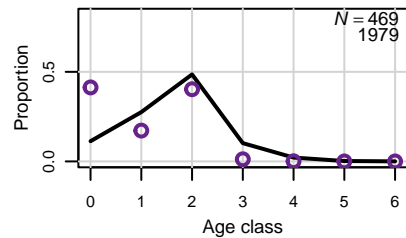
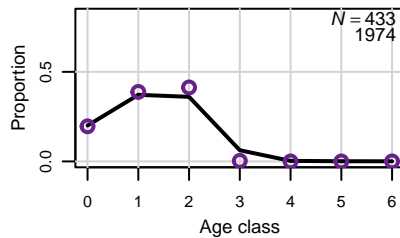
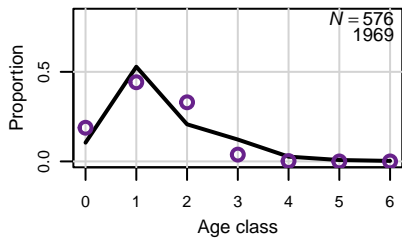
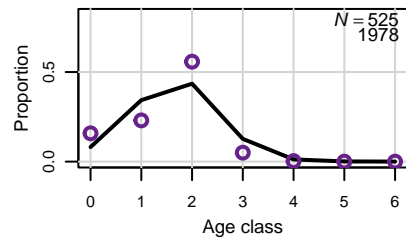
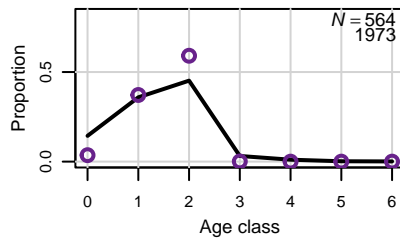
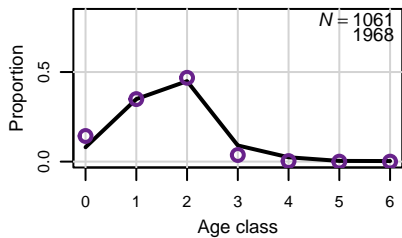
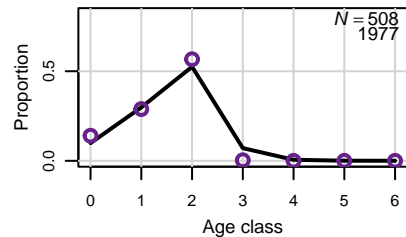
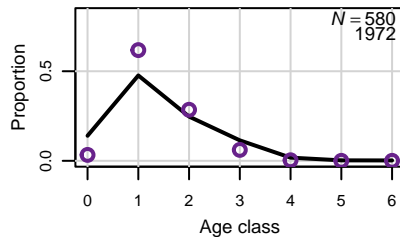
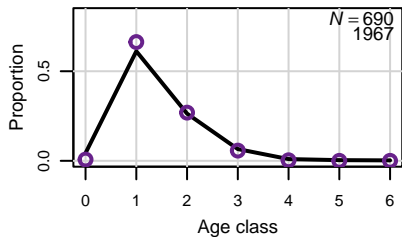
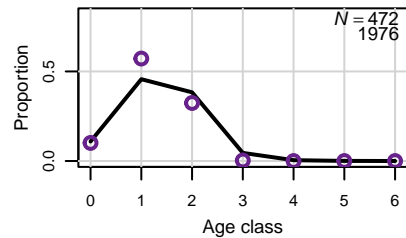
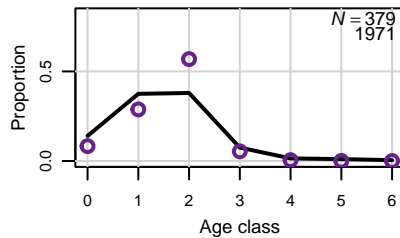
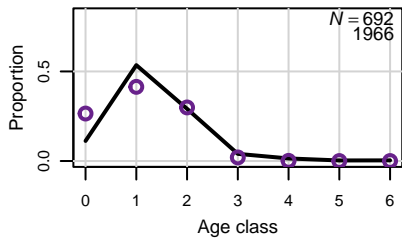
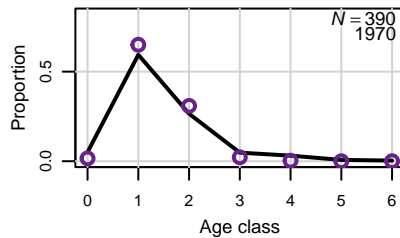
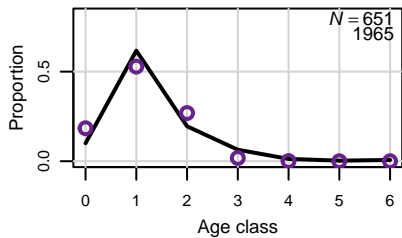




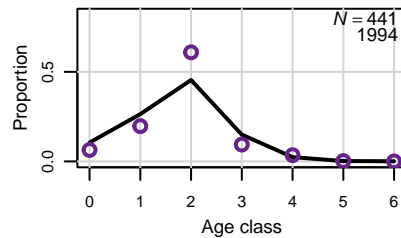
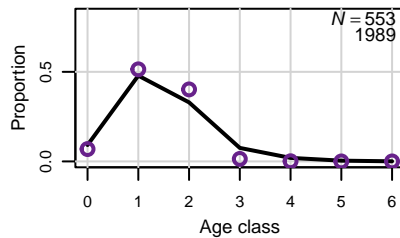
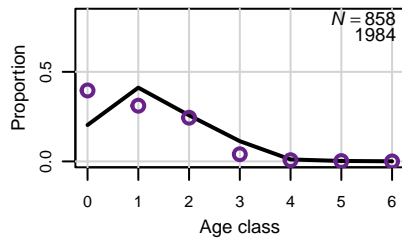
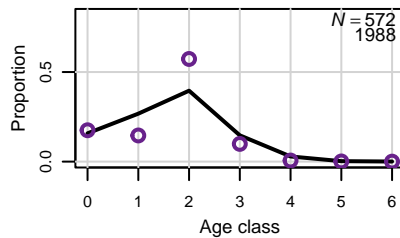
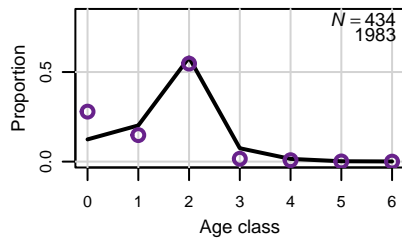
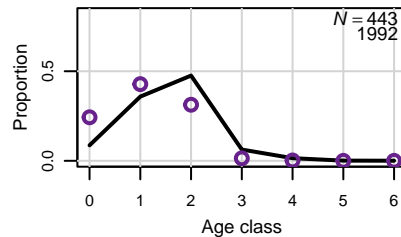
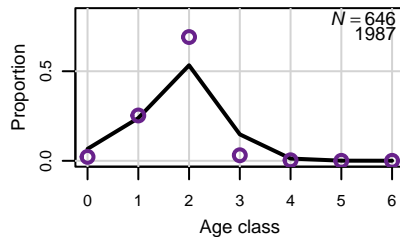
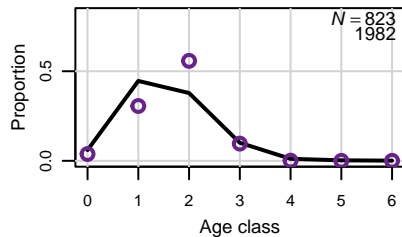
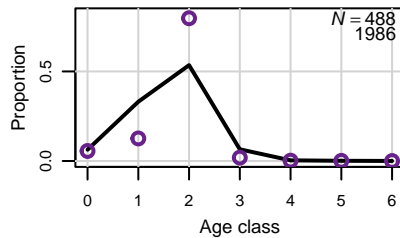
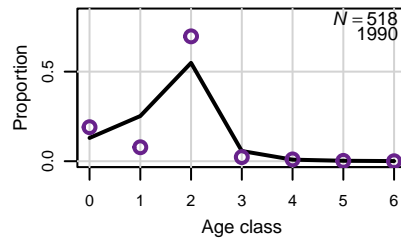
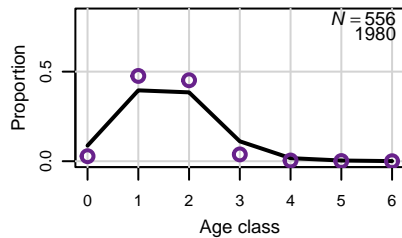


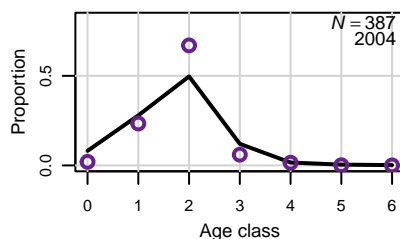
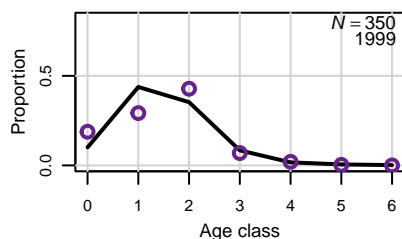
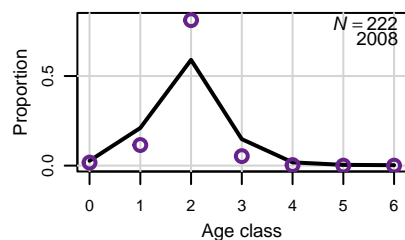
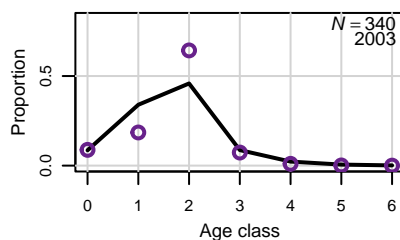
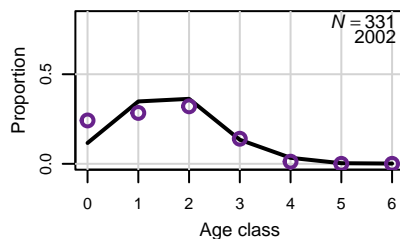
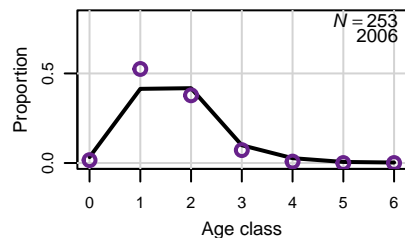
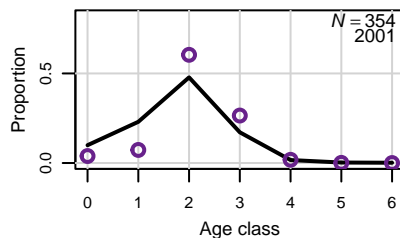
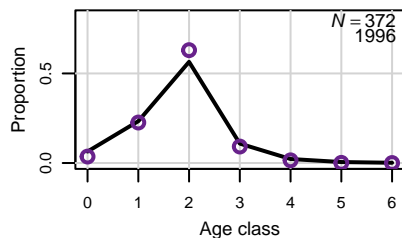
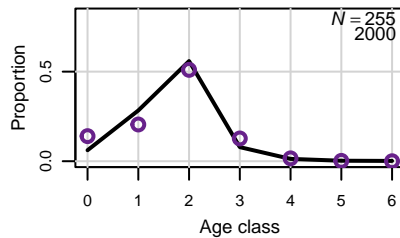
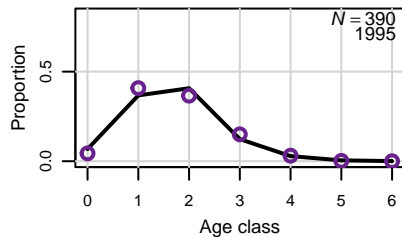
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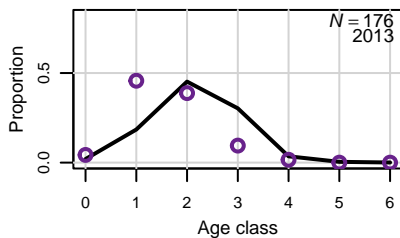
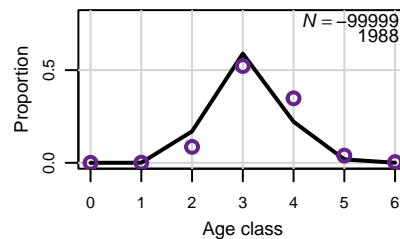
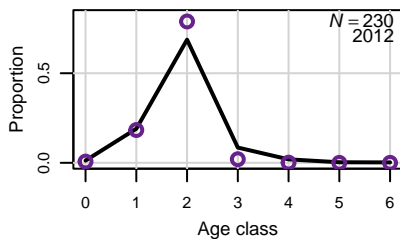
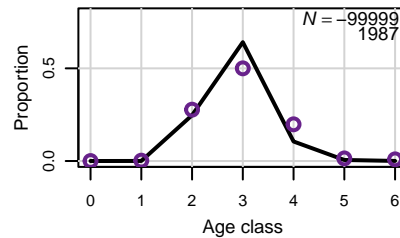
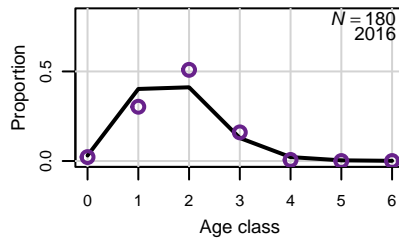
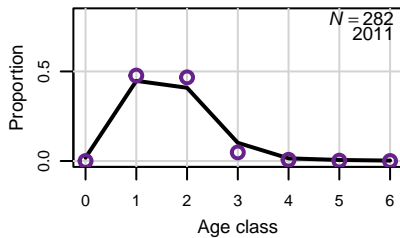
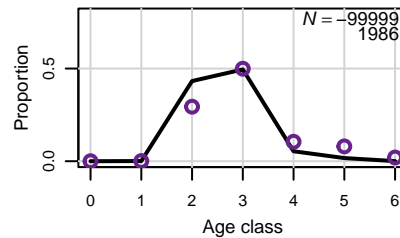
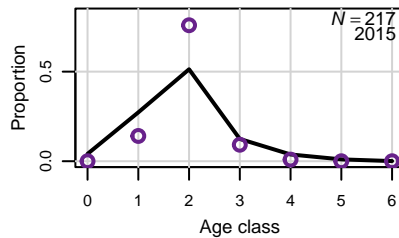
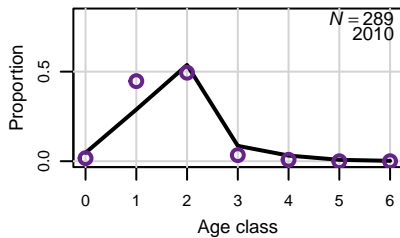




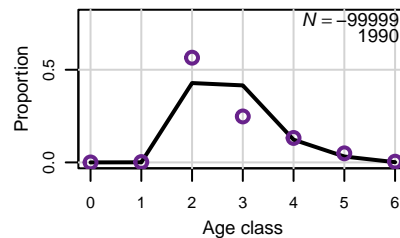
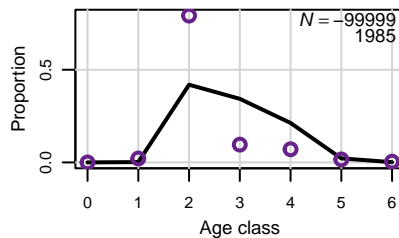
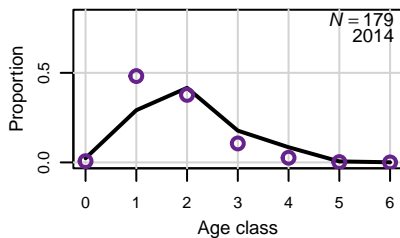


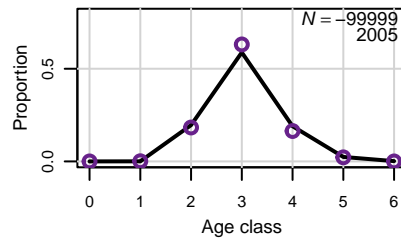
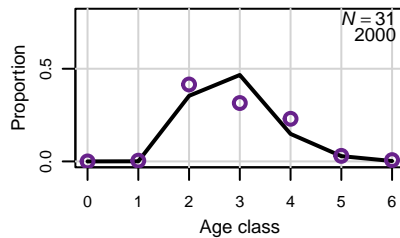
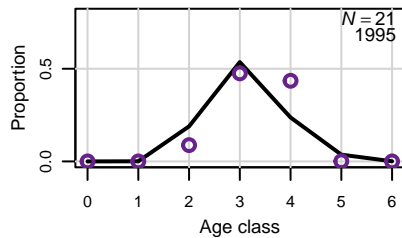
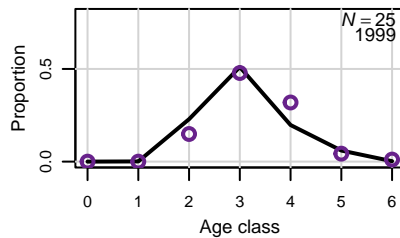
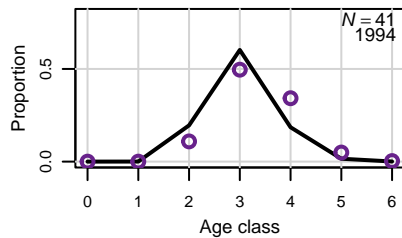
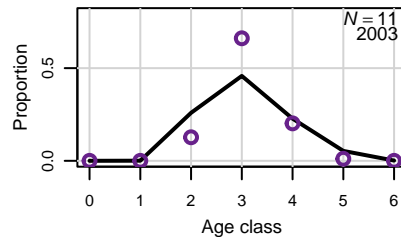
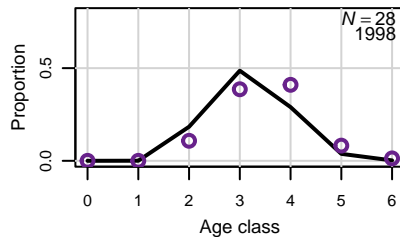
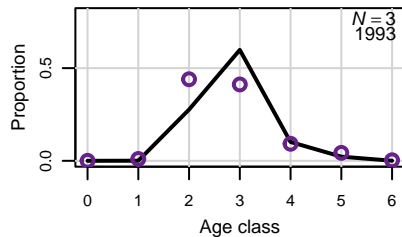
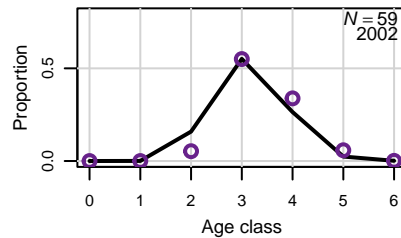
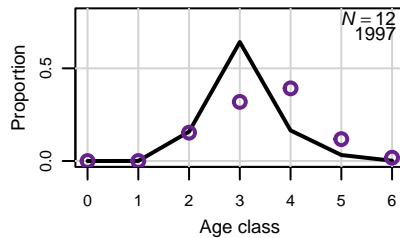
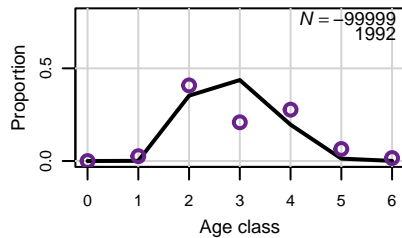
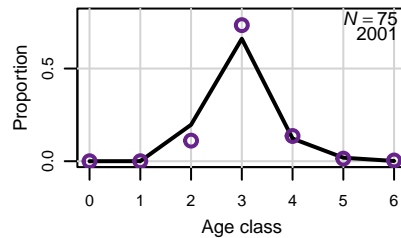
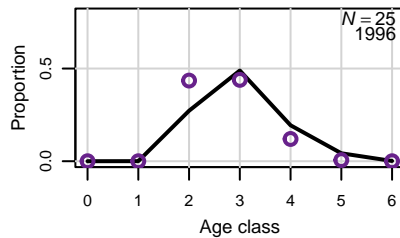
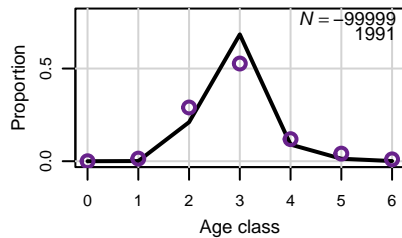


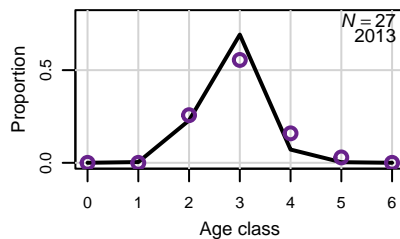
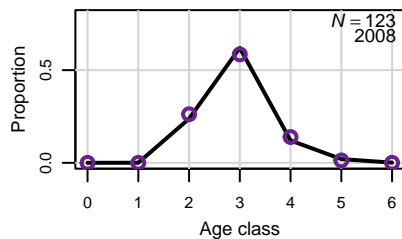
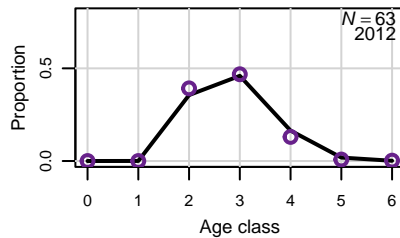
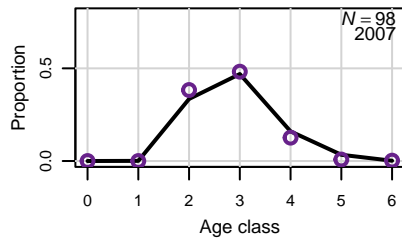
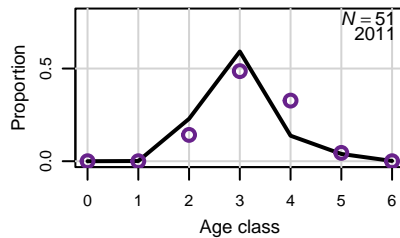
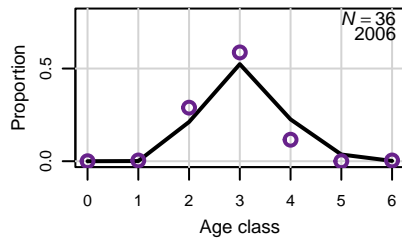




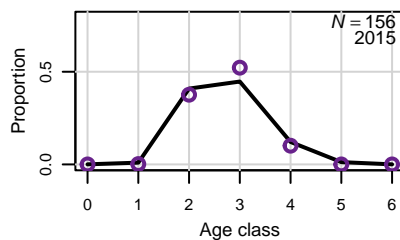
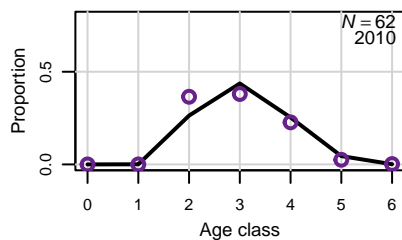
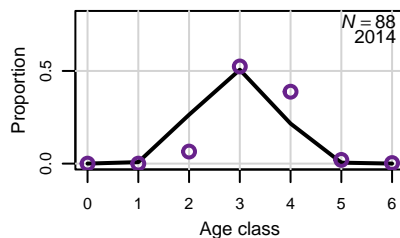
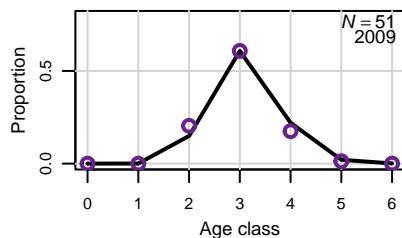
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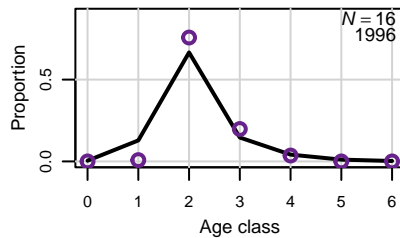
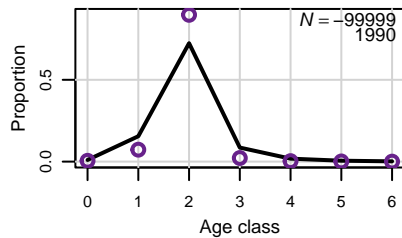
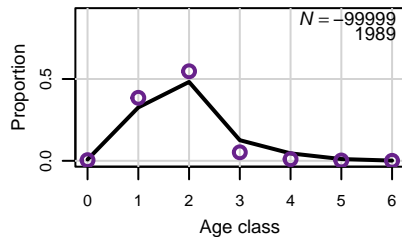
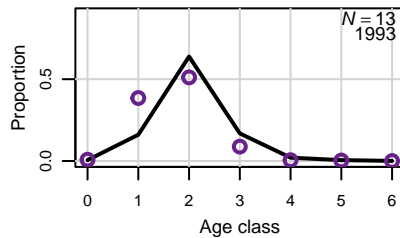
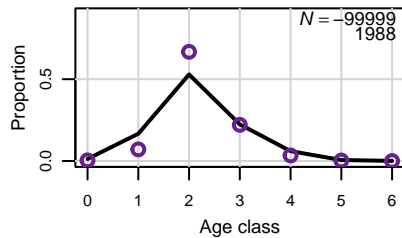
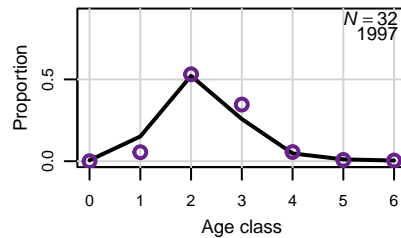
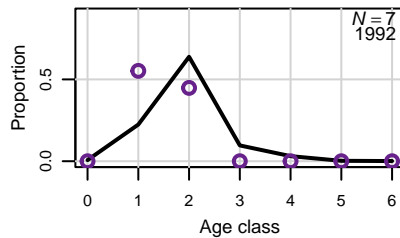
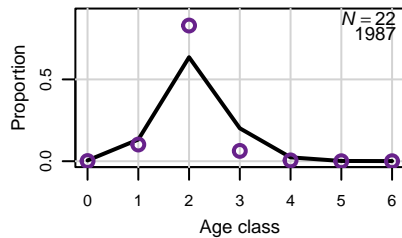


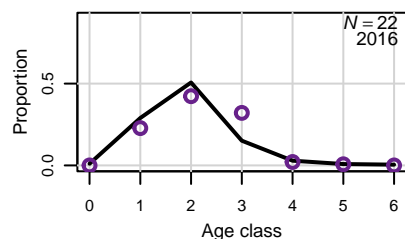
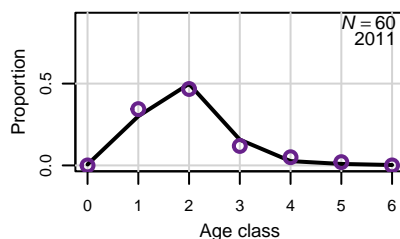
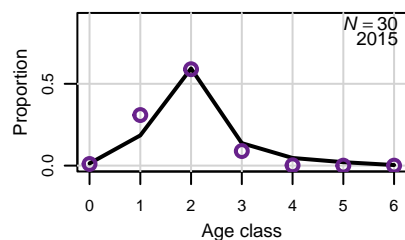
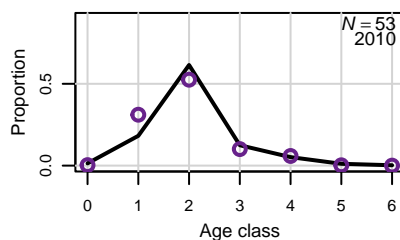
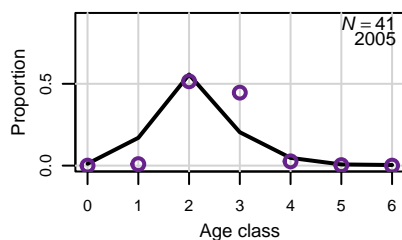
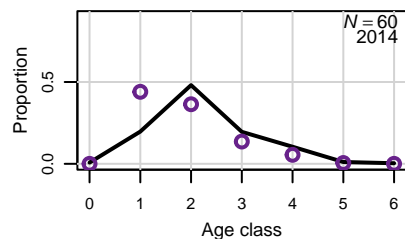
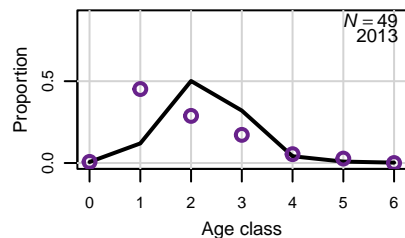
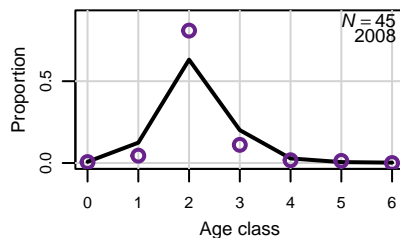
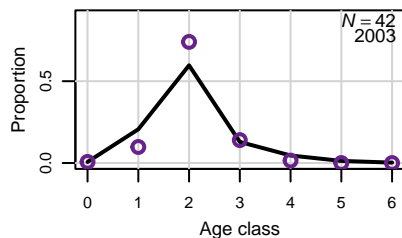
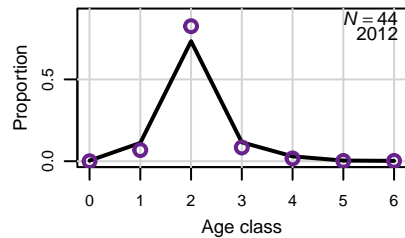
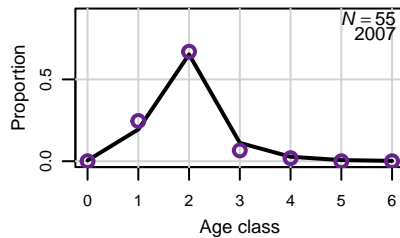
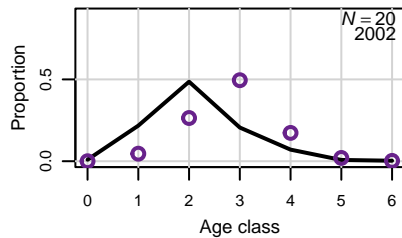


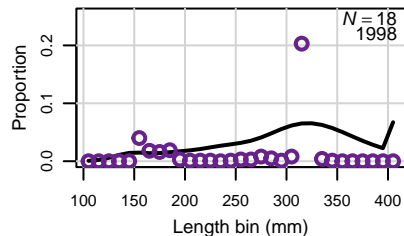
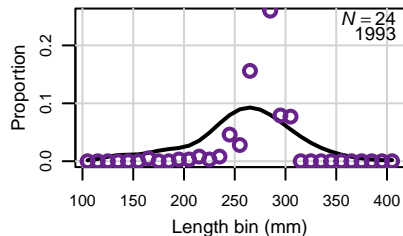
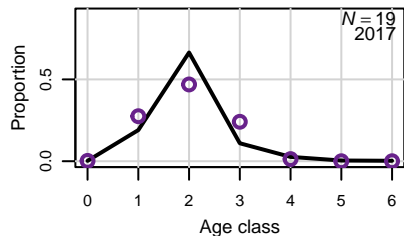


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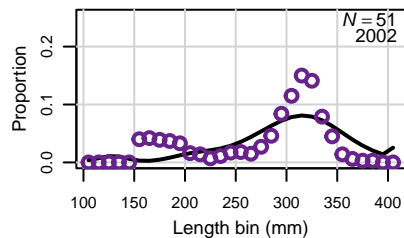
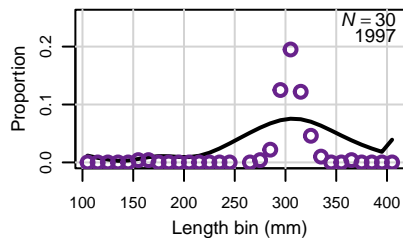
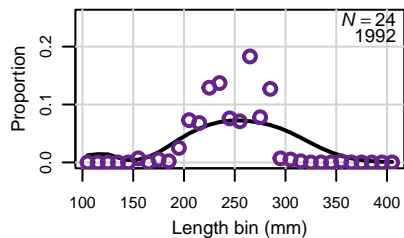
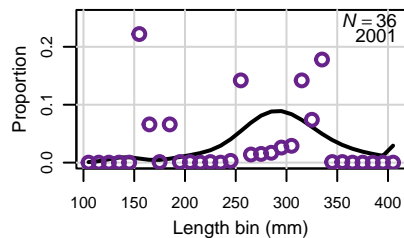
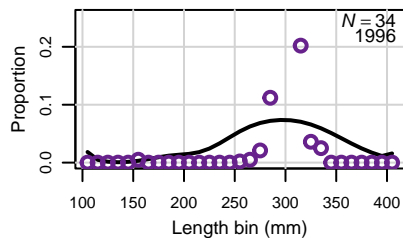
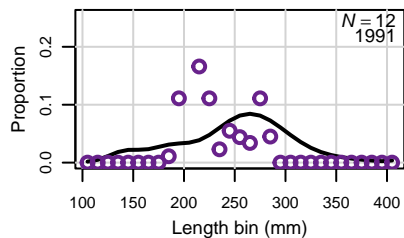
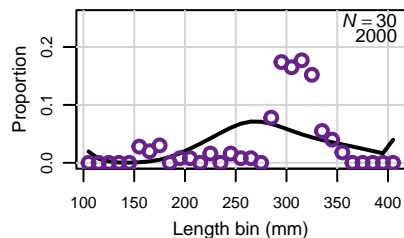
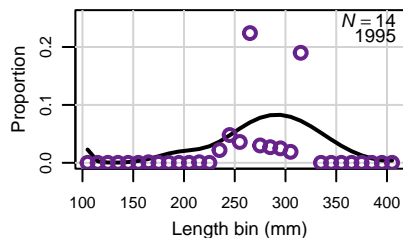
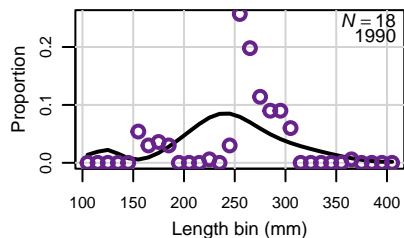
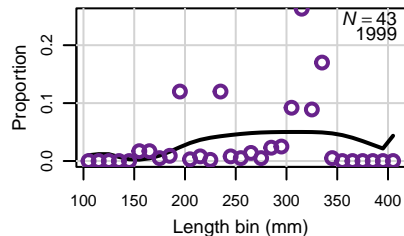
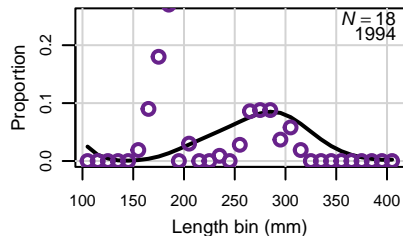




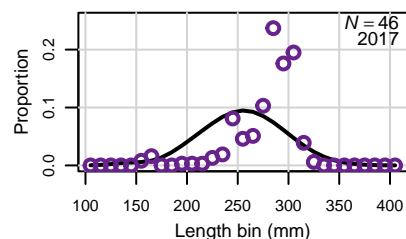
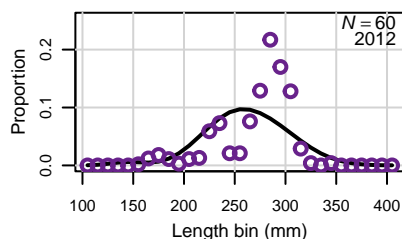
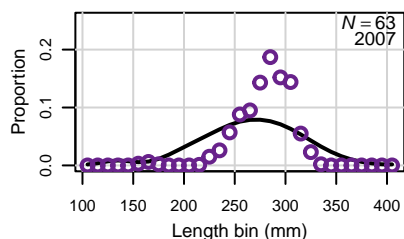
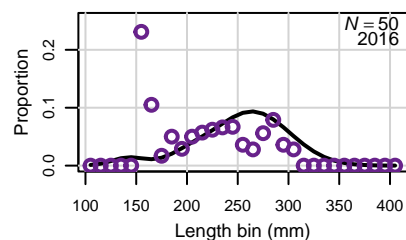
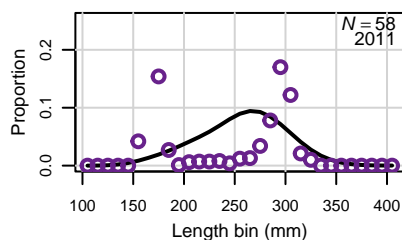
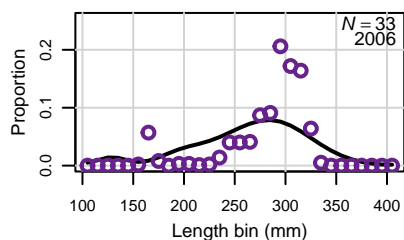
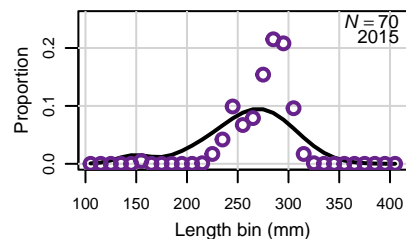
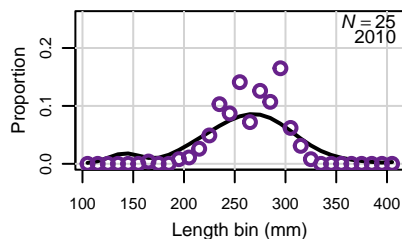
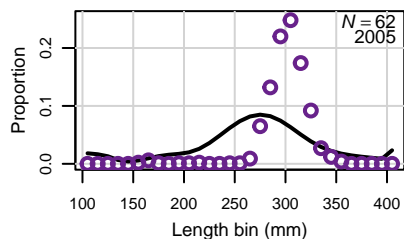
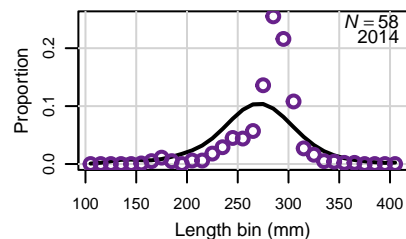
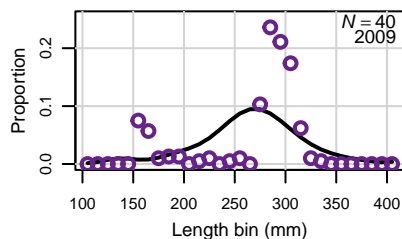
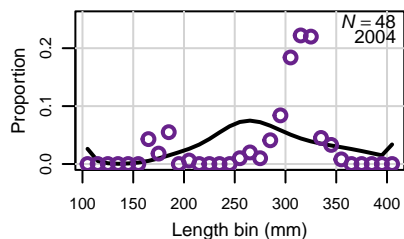
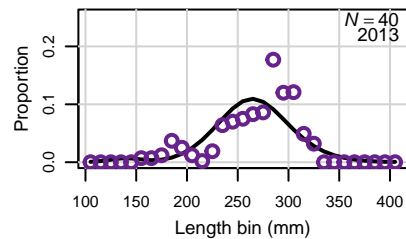
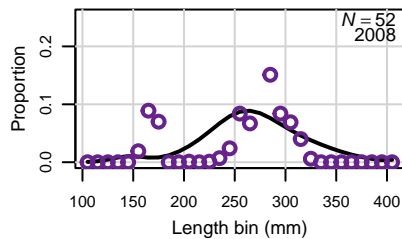
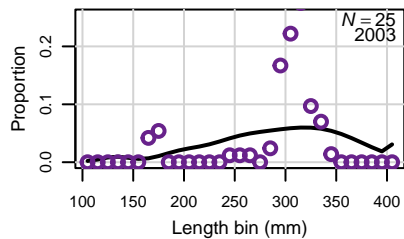


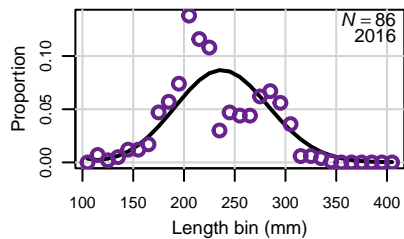
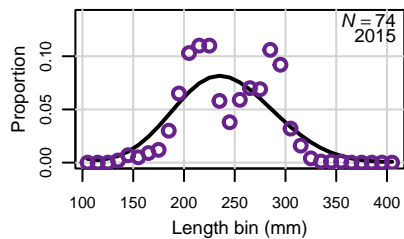
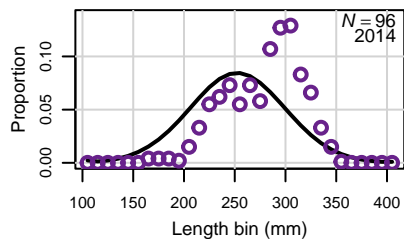
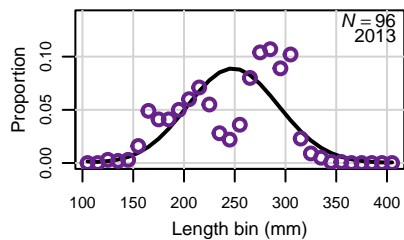
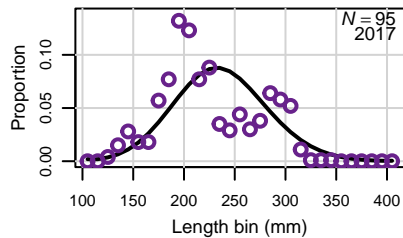
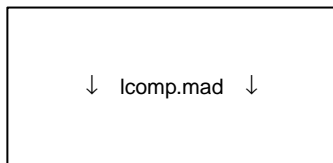


↓ lcomp.nad ↓

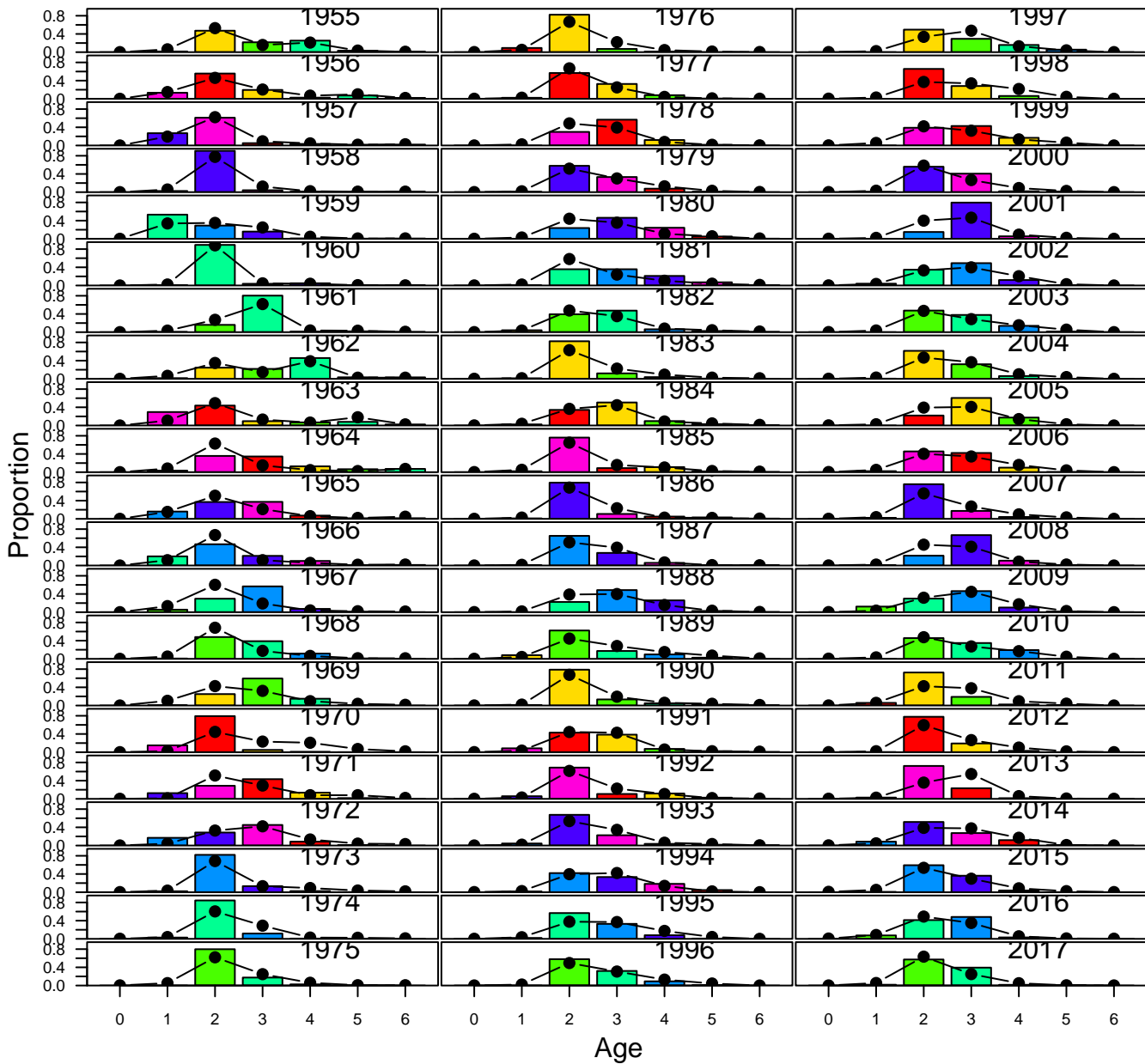




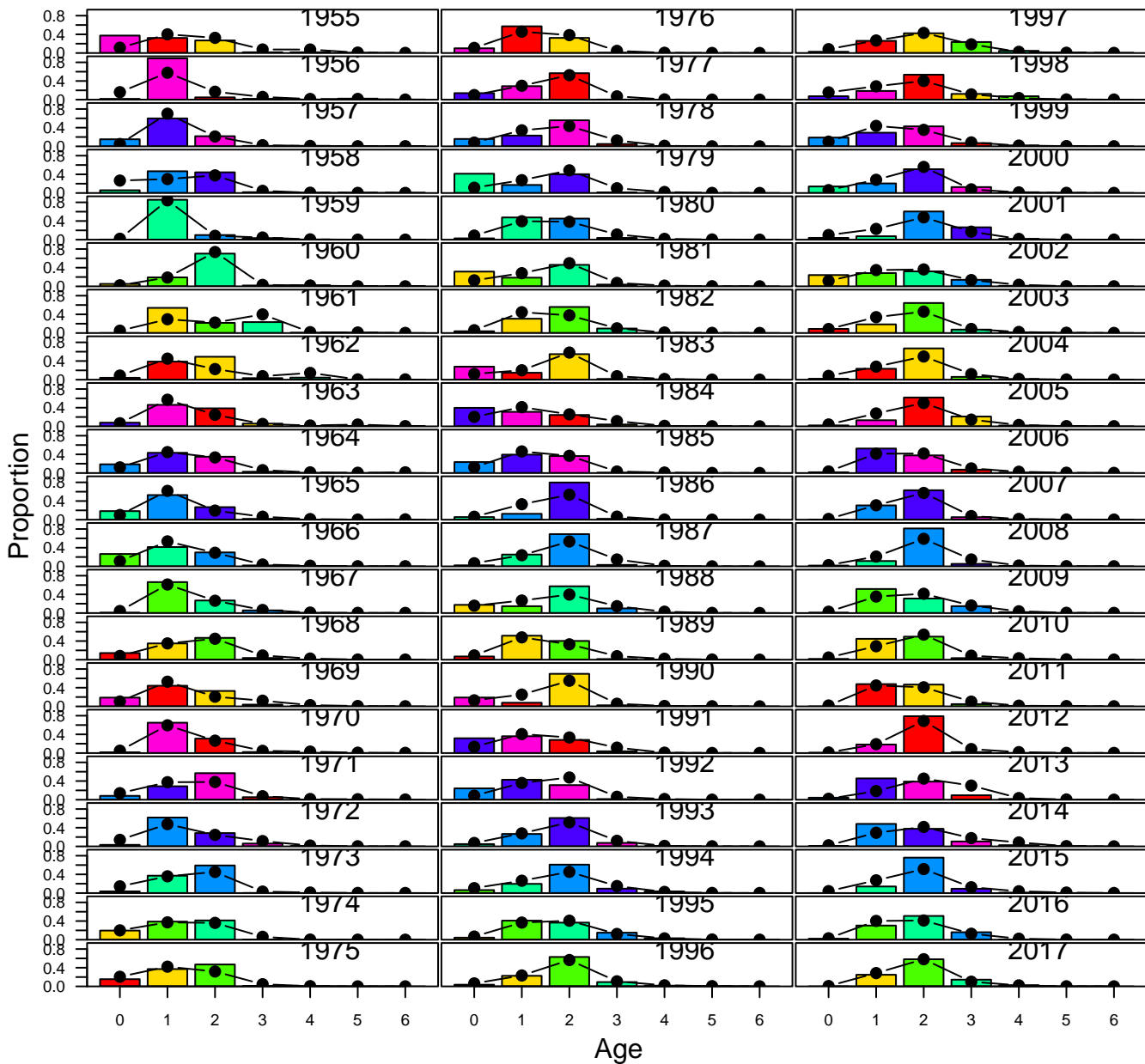




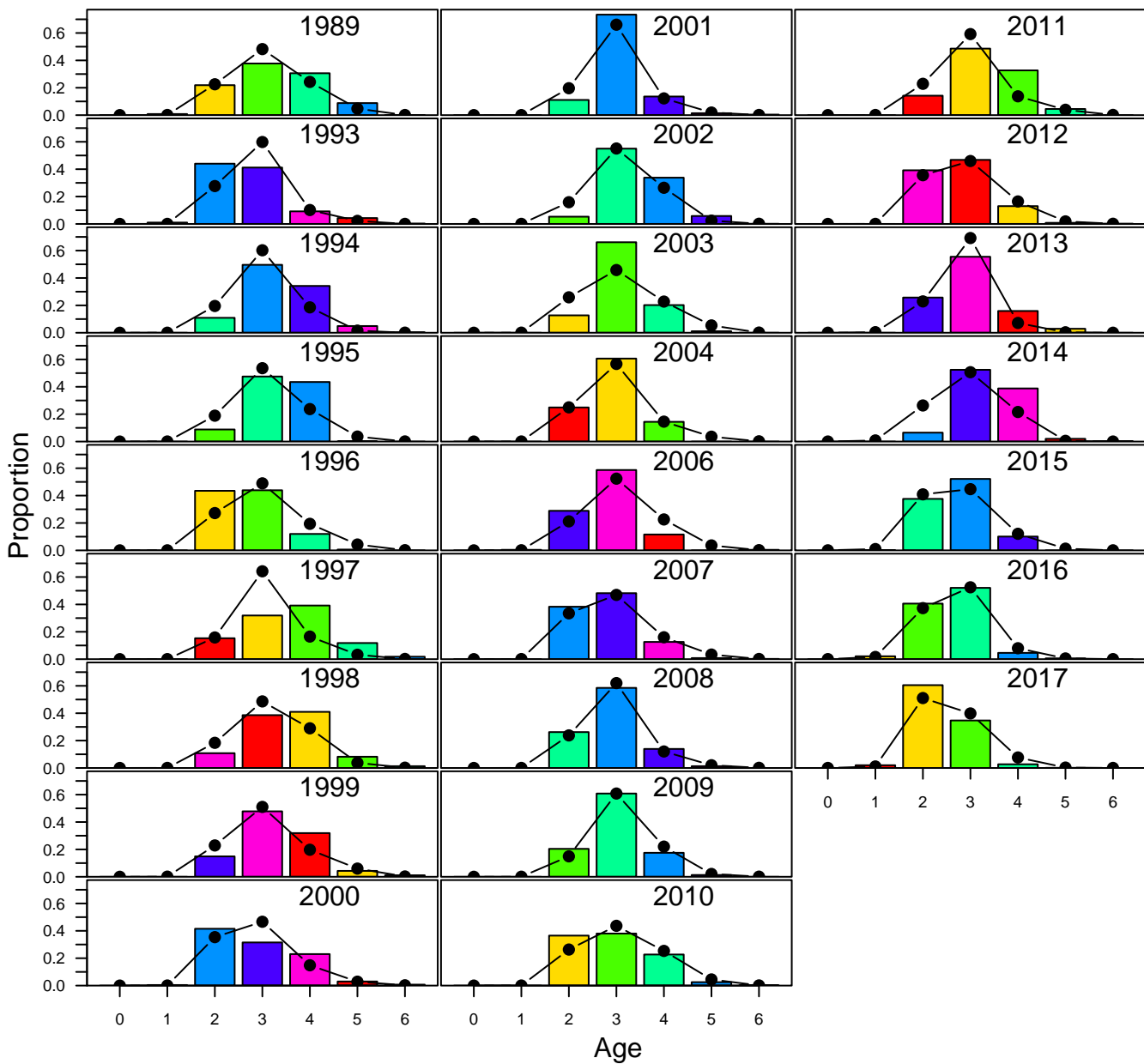
Fishery: cRn, Observed (bars), Predicted (dots)



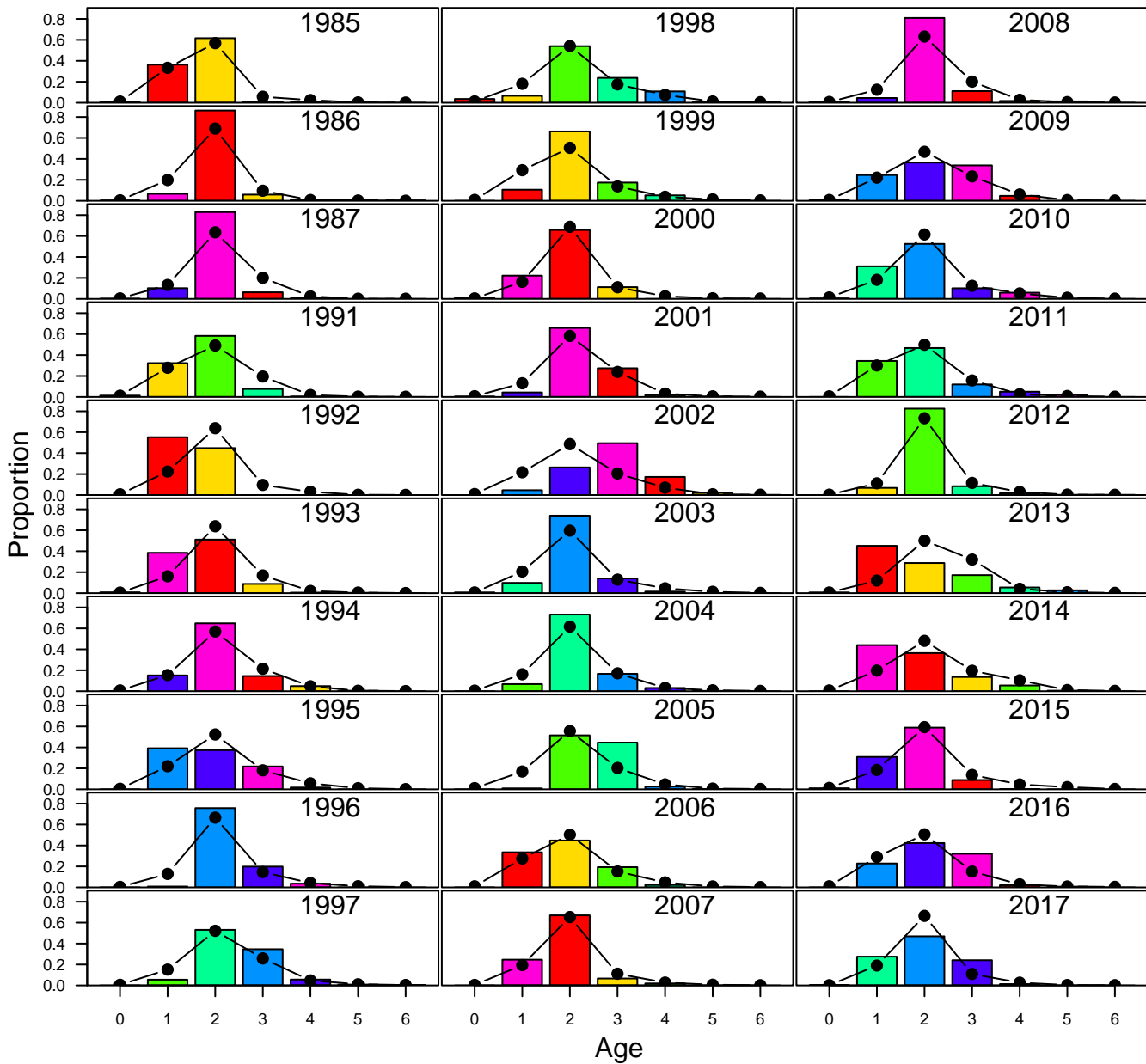
Fishery: cRs, Observed (bars), Predicted (dots)



Fishery: cBn, Observed (bars), Predicted (dots)

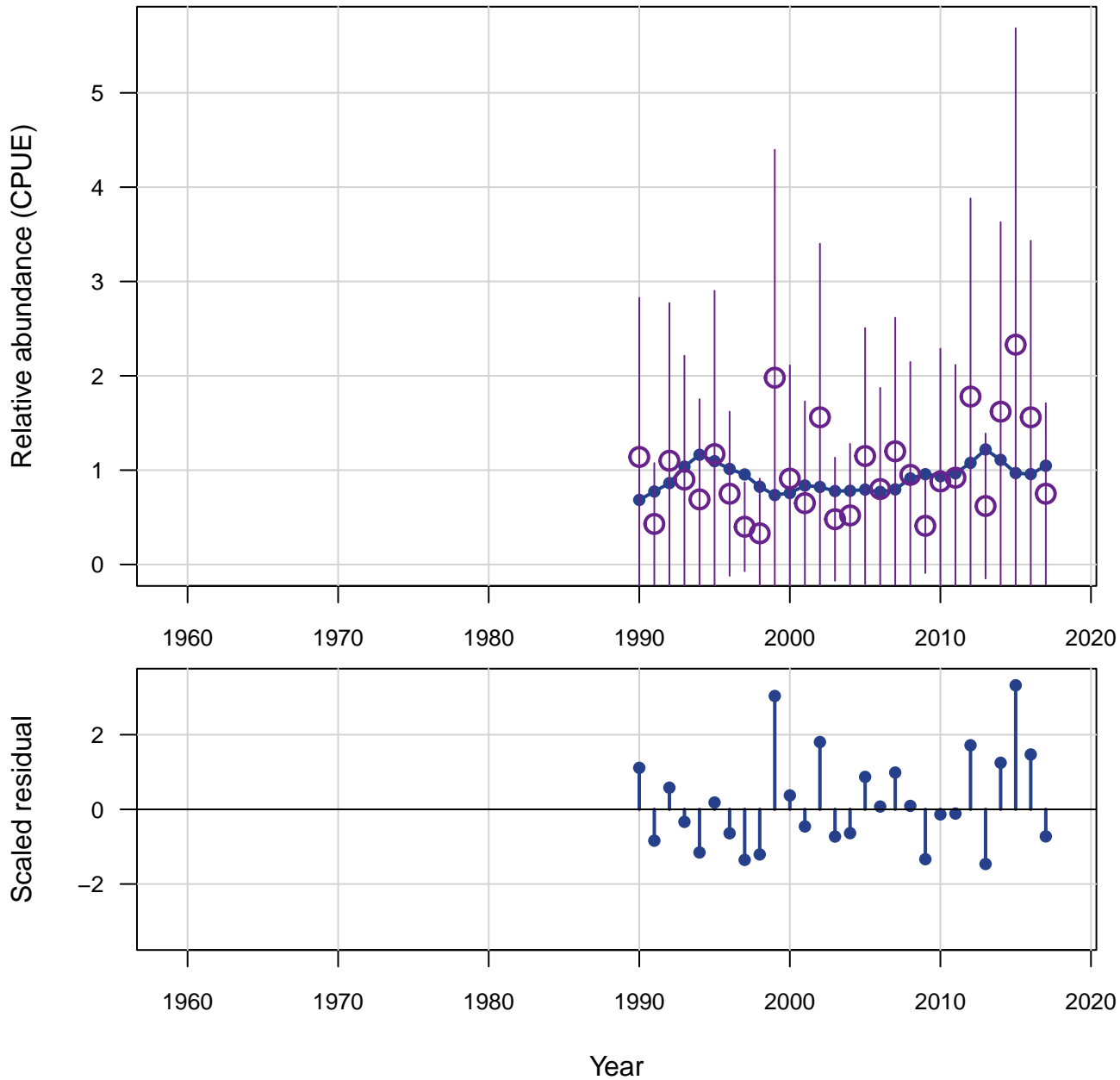


Fishery: cBs, Observed (bars), Predicted (dots)



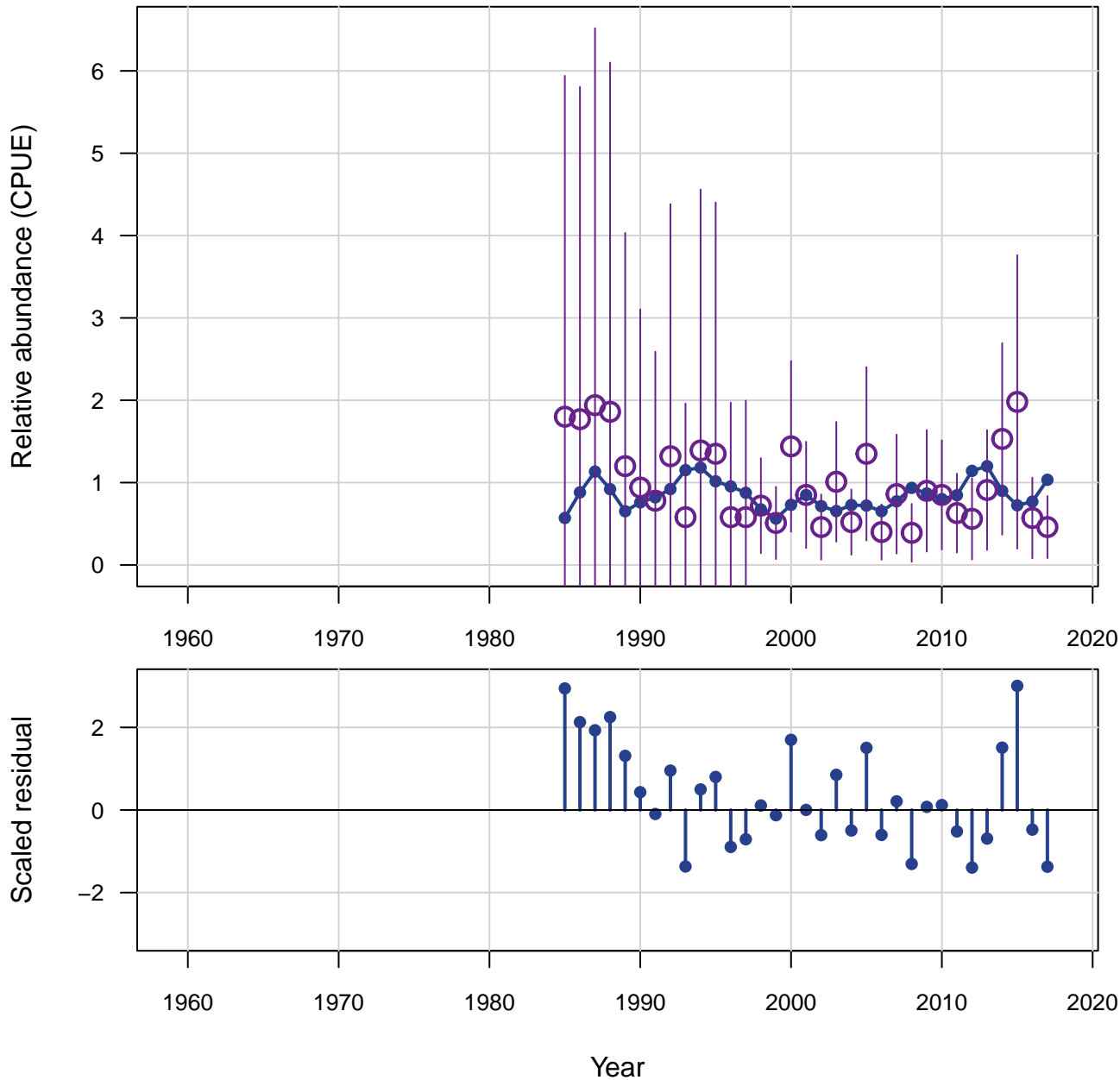
Index: nad

Data: menhaden



Index: mad

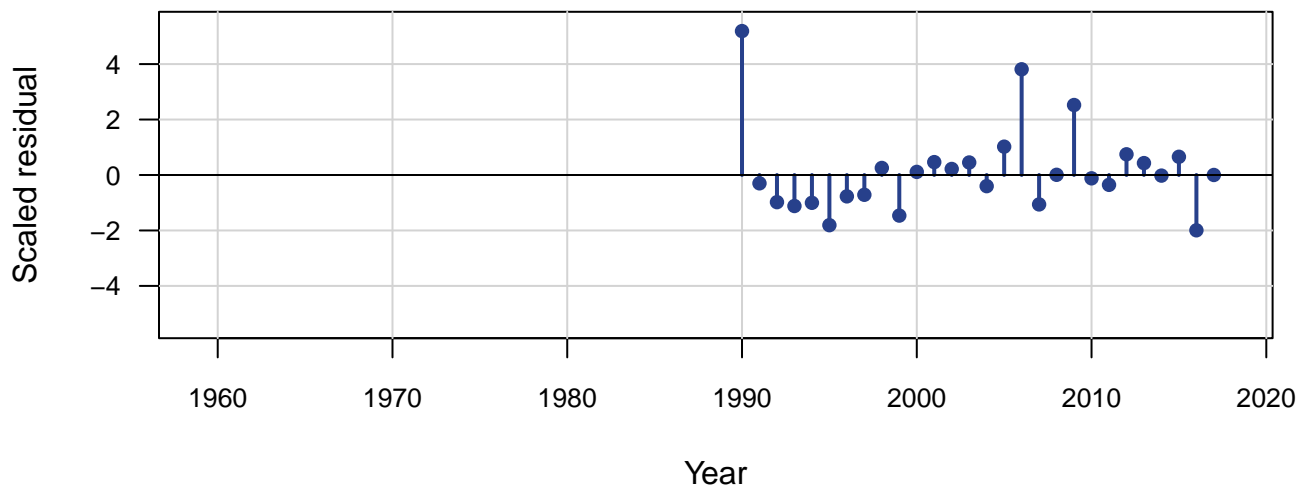
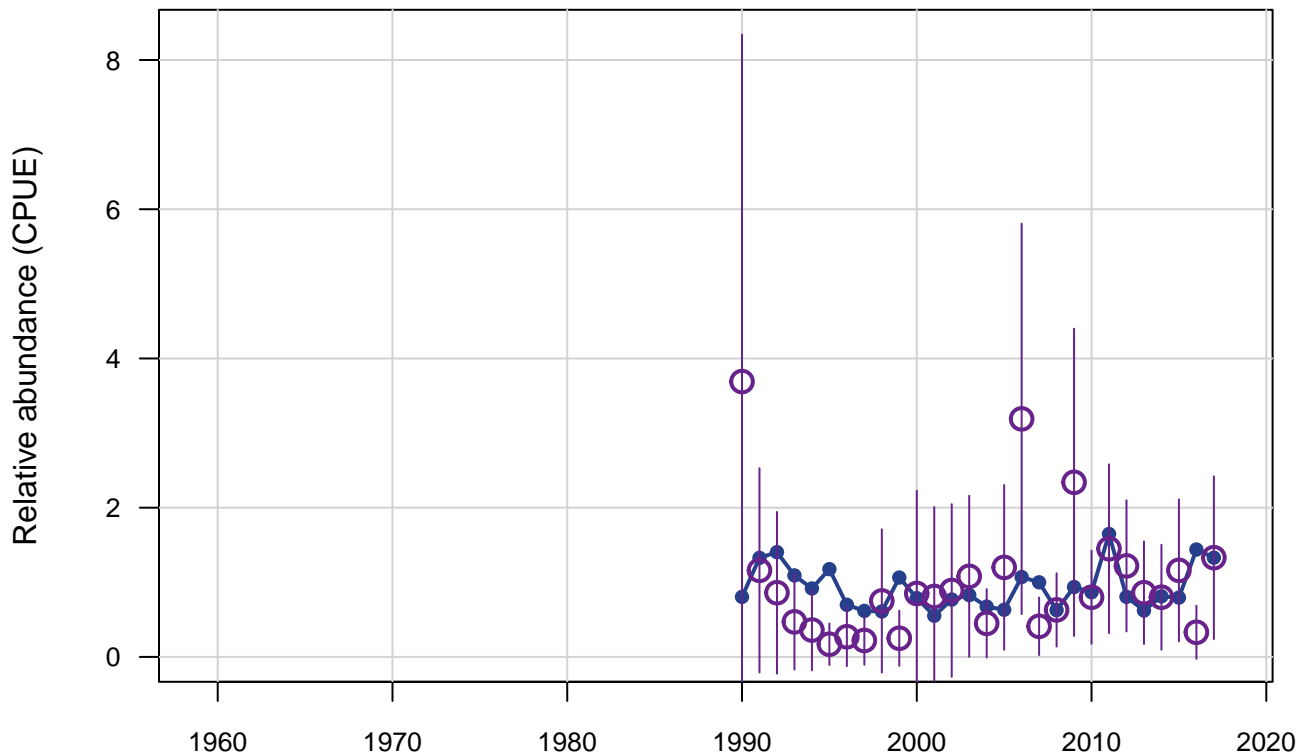
Data: menhaden





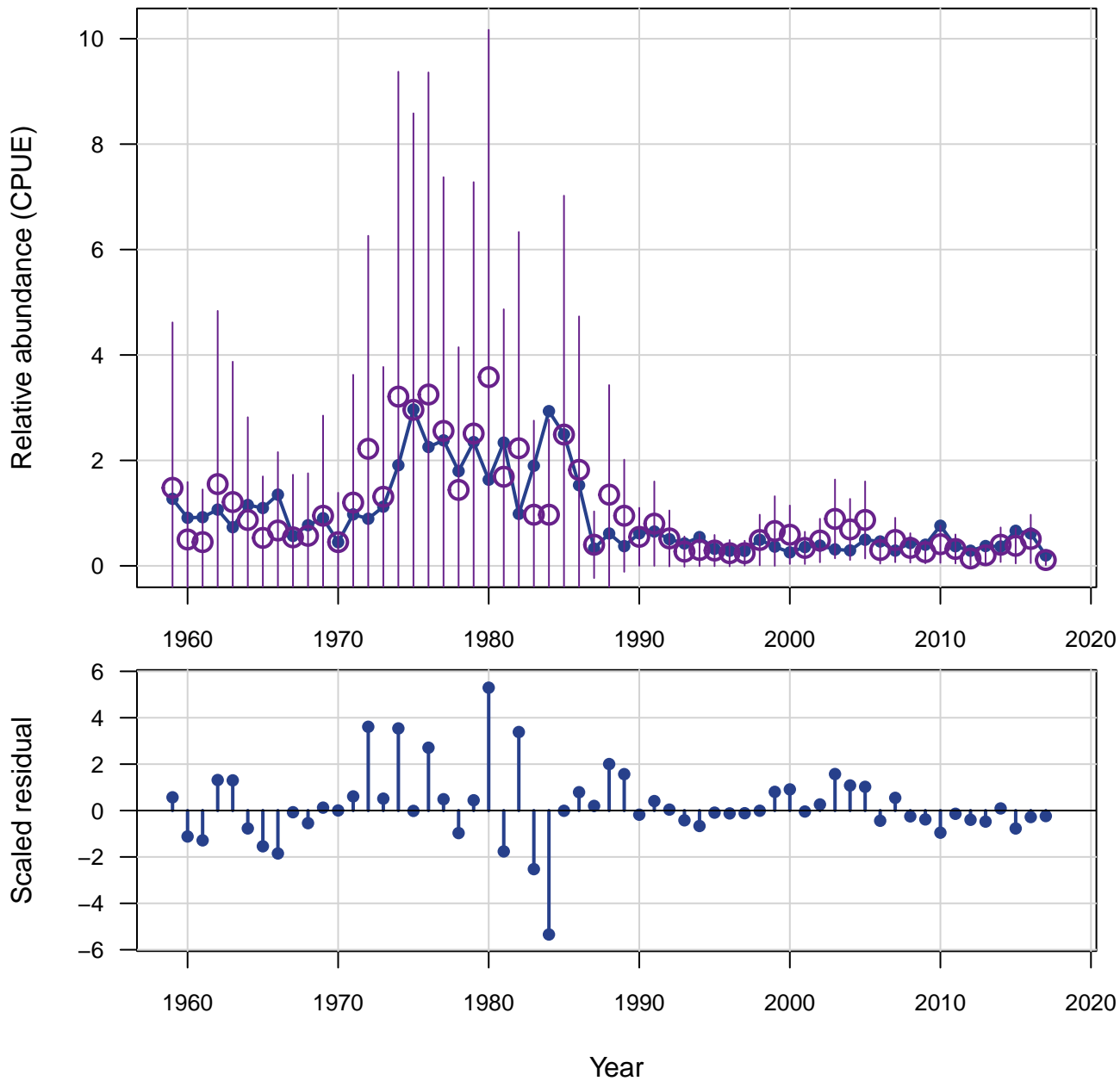
Index: sad

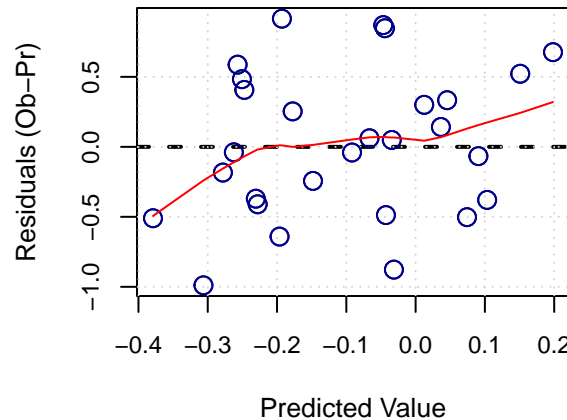
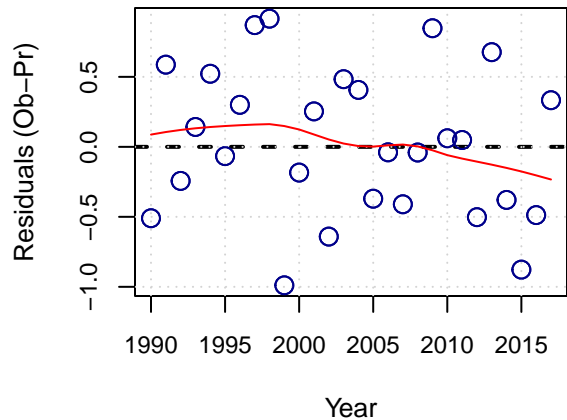
Data: menhaden



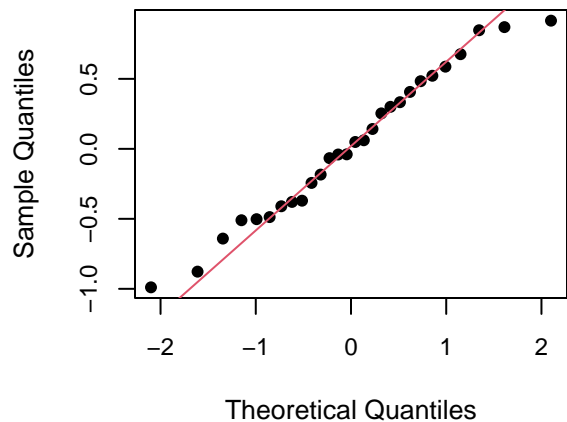
Index: jai

Data: menhaden

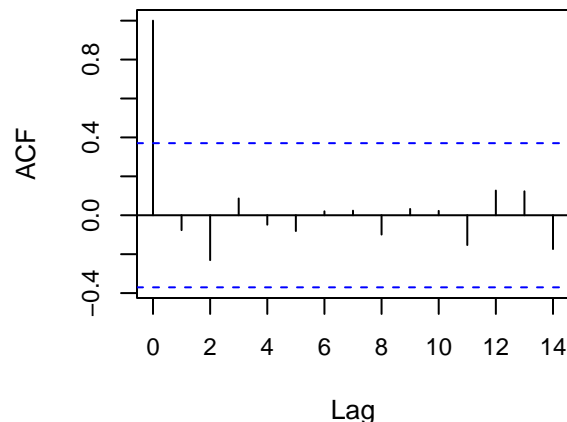




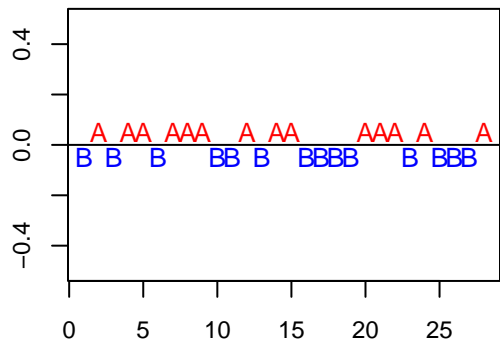
Normal Q-Q Plot



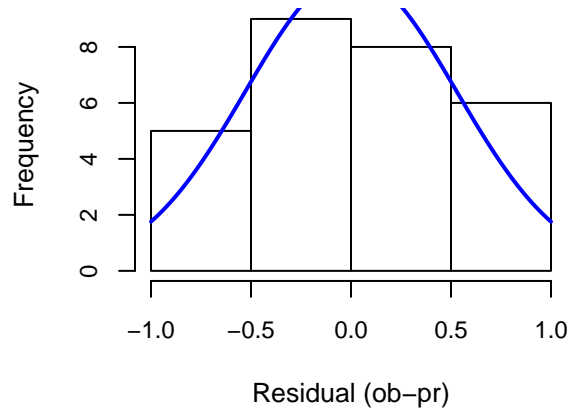
Autocorrelation Function

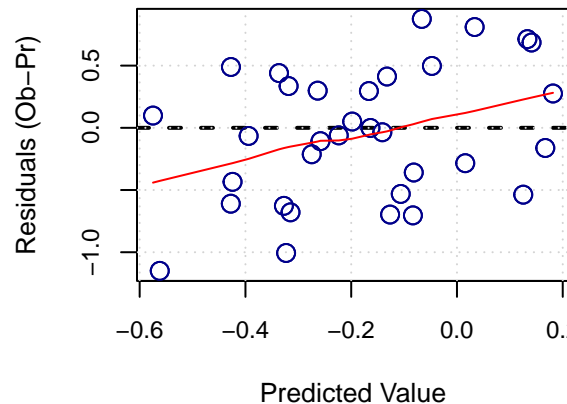
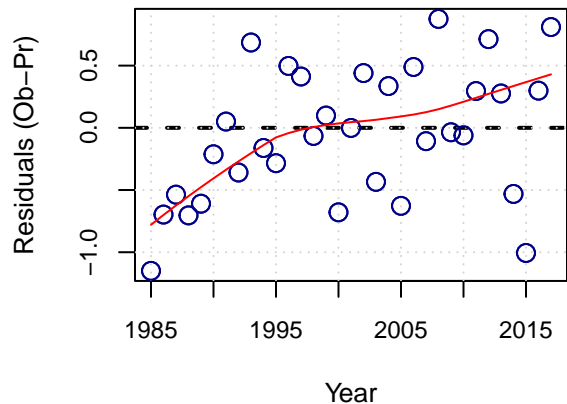


Runs Test

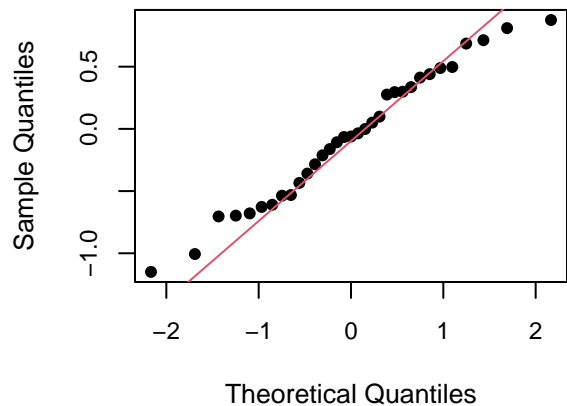


Histogram of residuals w/ normal curve

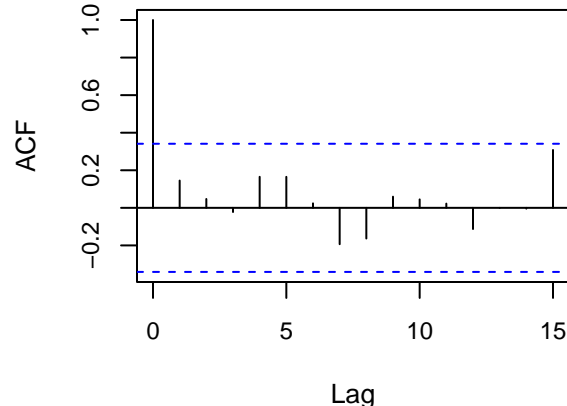




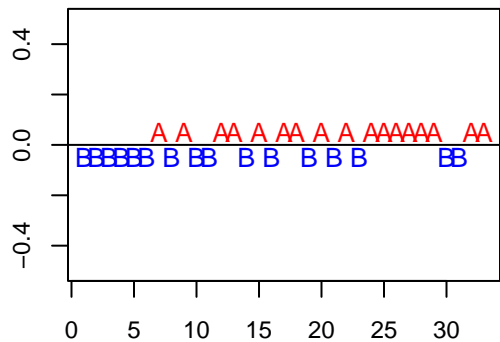
Normal Q-Q Plot



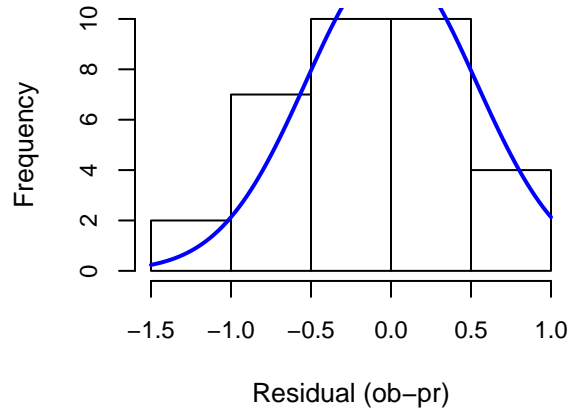
Autocorrelation Function

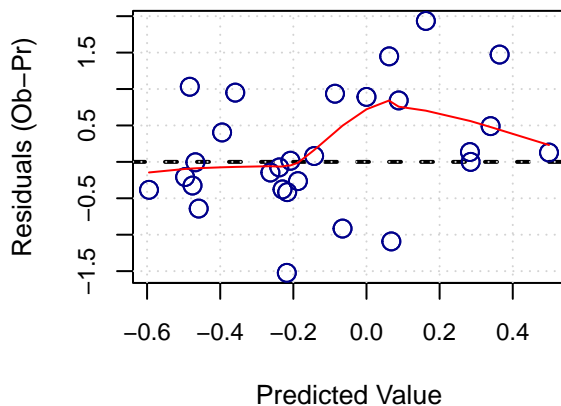
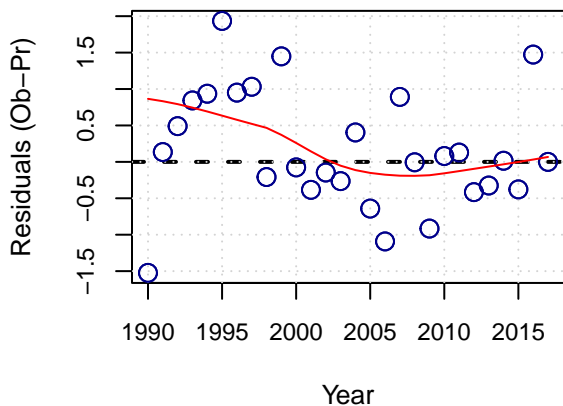


Runs Test

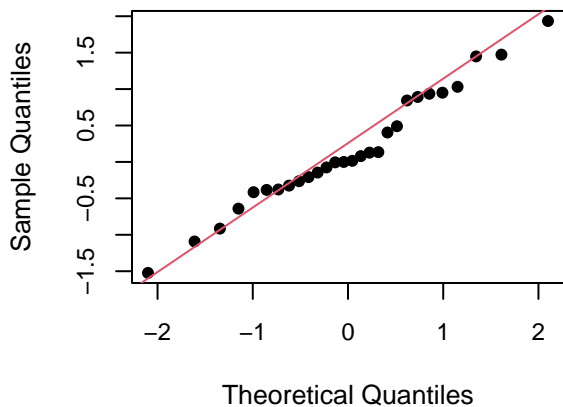


Histogram of residuals w/ normal curve

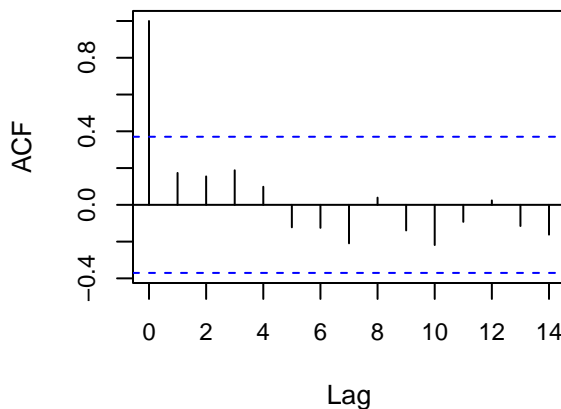




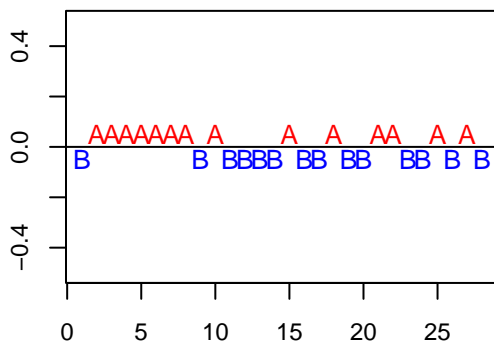
Normal Q-Q Plot



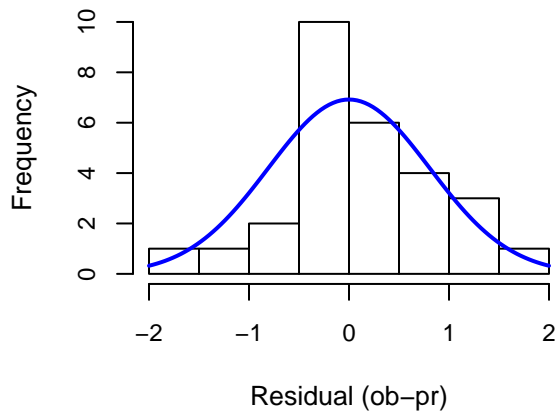
Autocorrelation Function



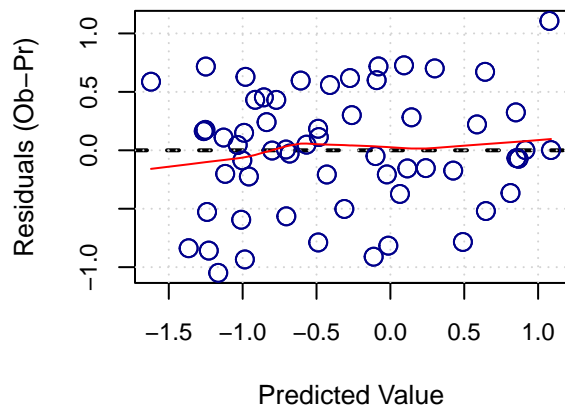
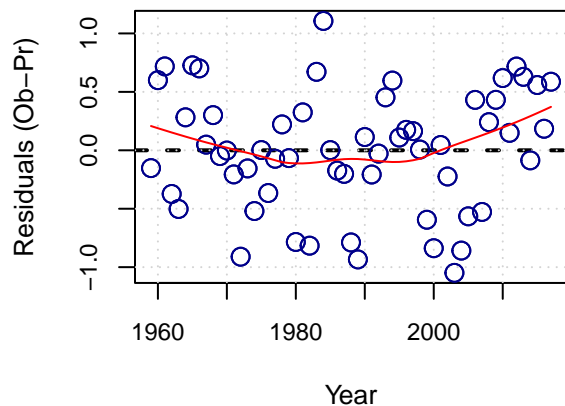
Runs Test



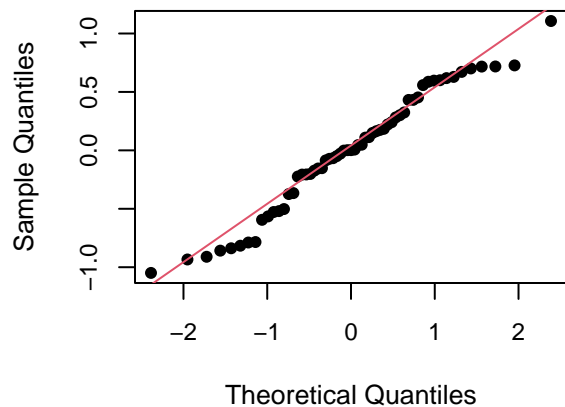
Histogram of residuals w/ normal curve



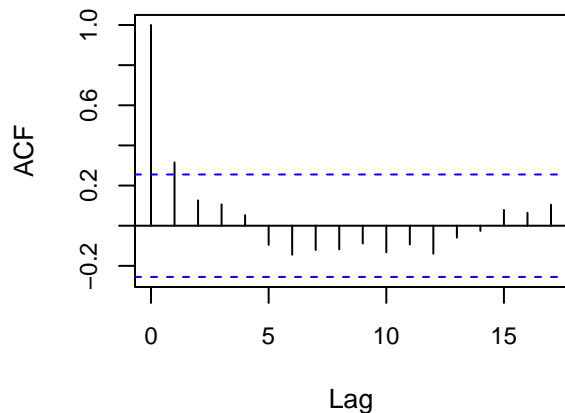




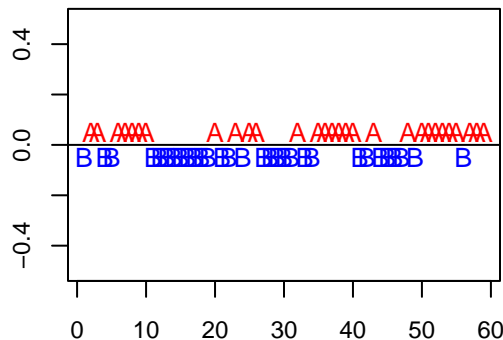
Normal Q-Q Plot



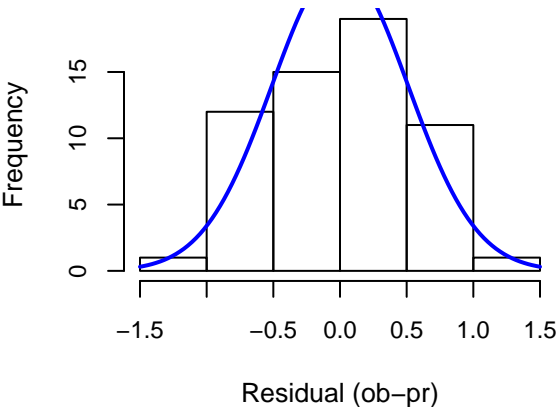
Autocorrelation Function



Runs Test

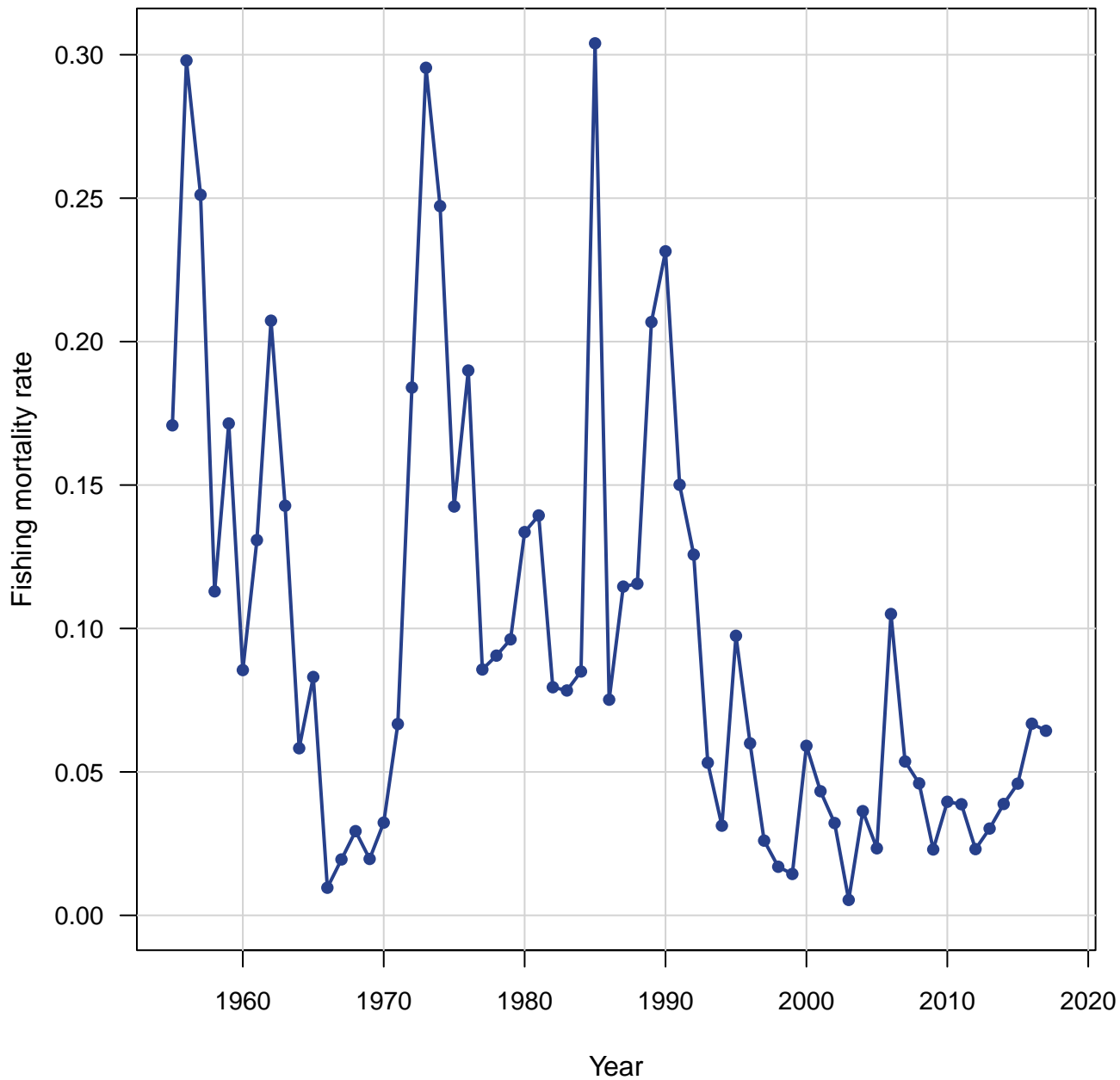


Histogram of residuals w/ normal curve



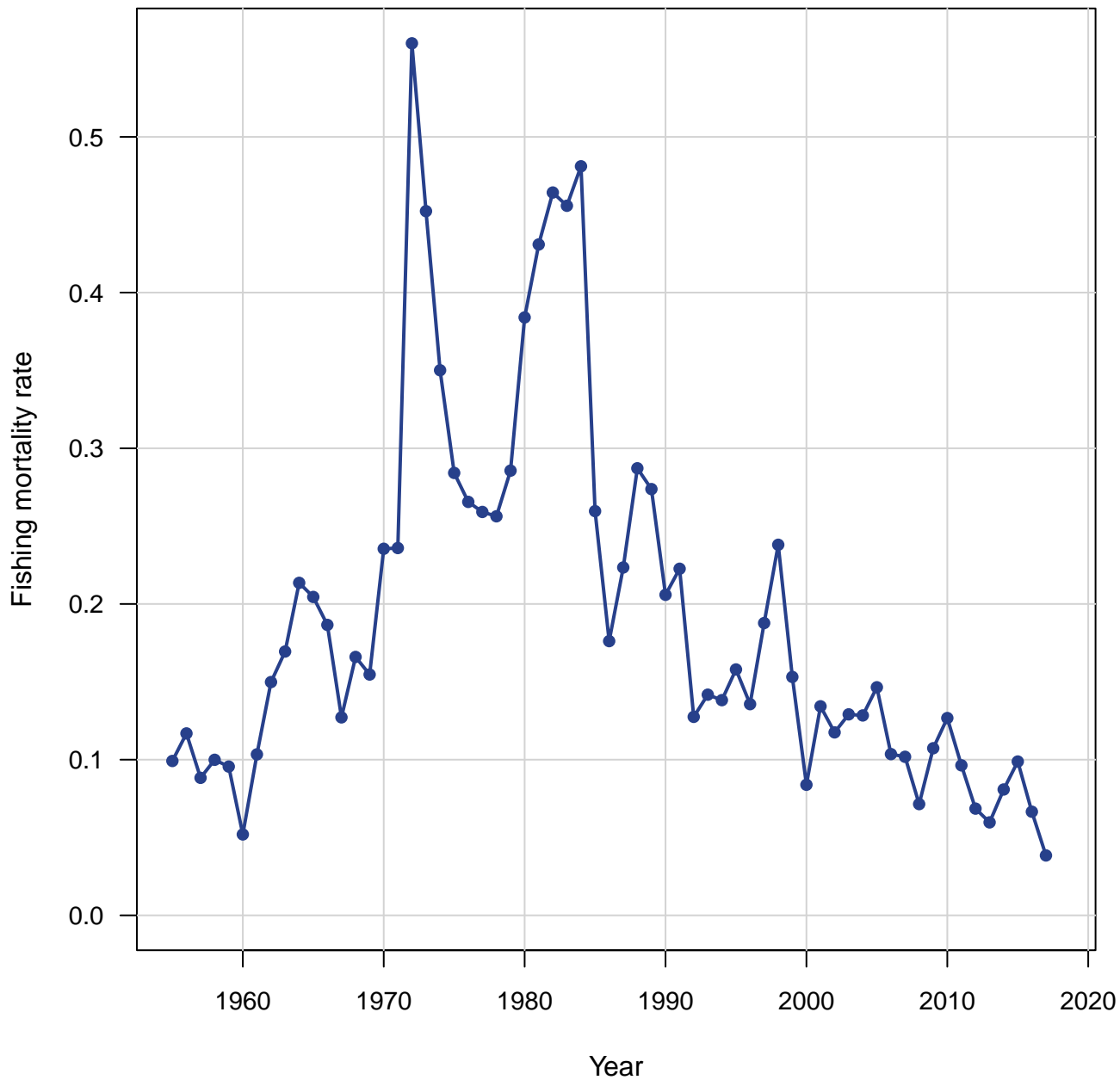
Fishery: cRn

Data: menhaden



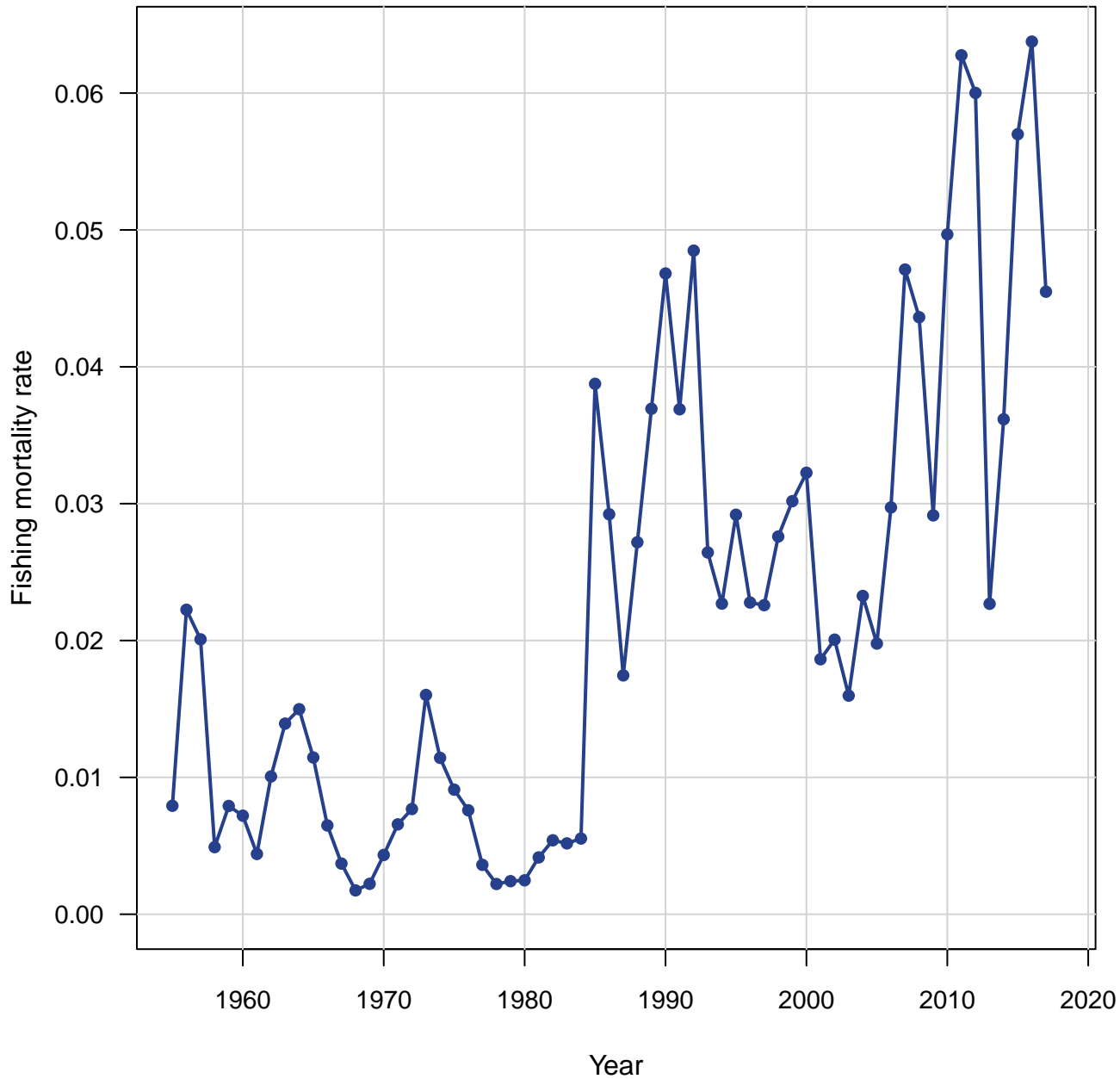
Fishery: cRs

Data: menhaden



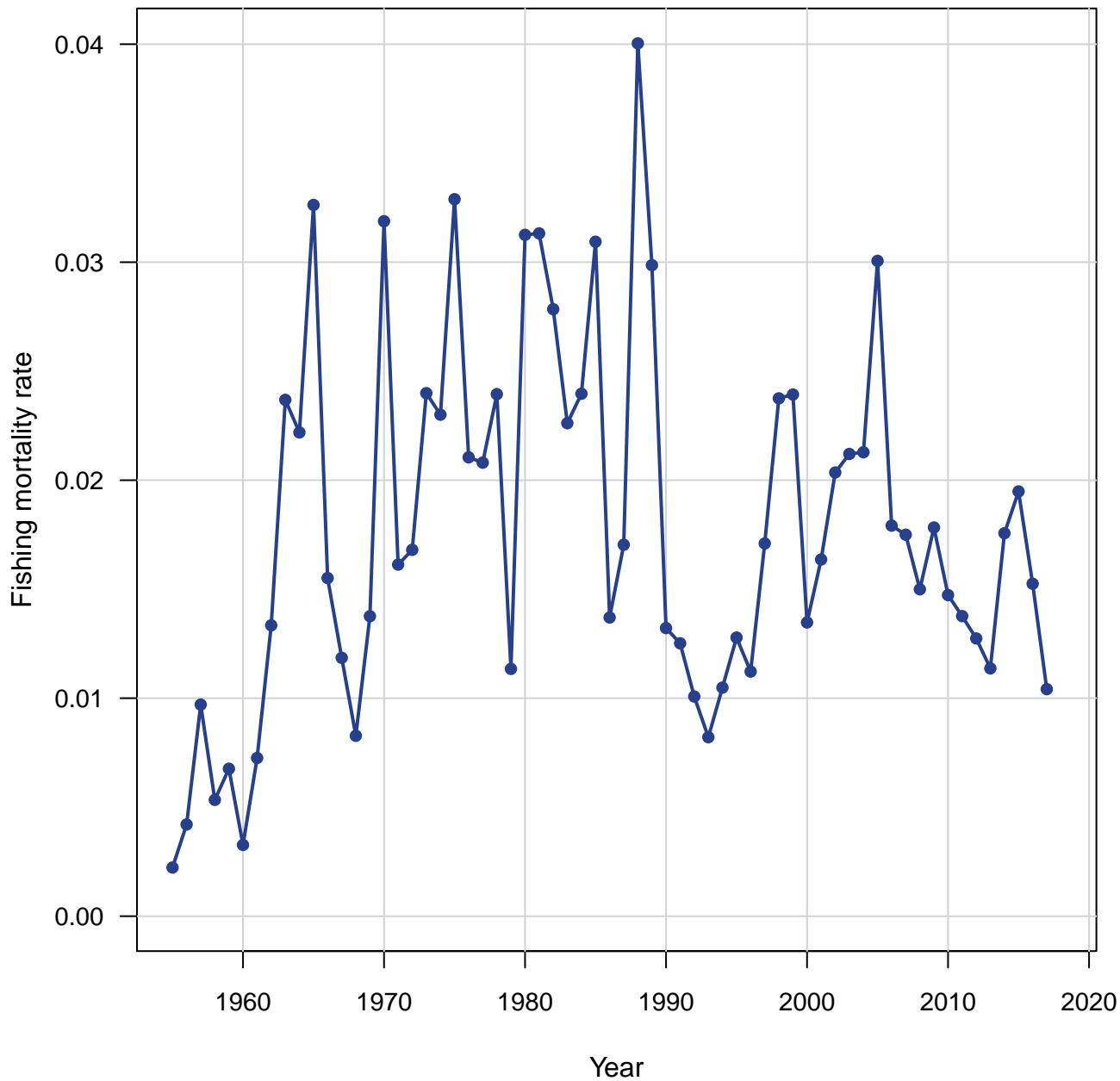
Fishery: cBn

Data: menhaden

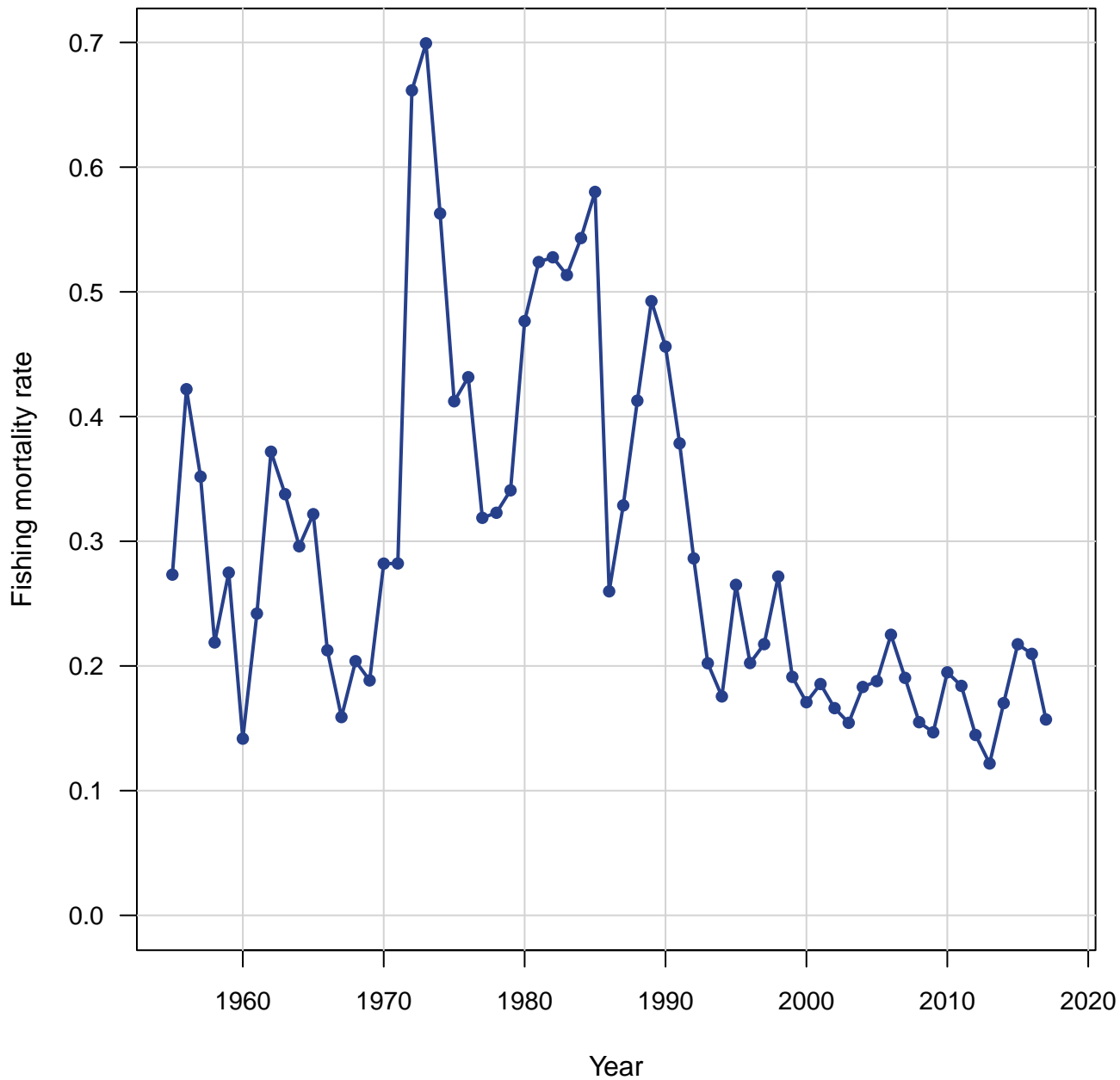


Fishery: cBs

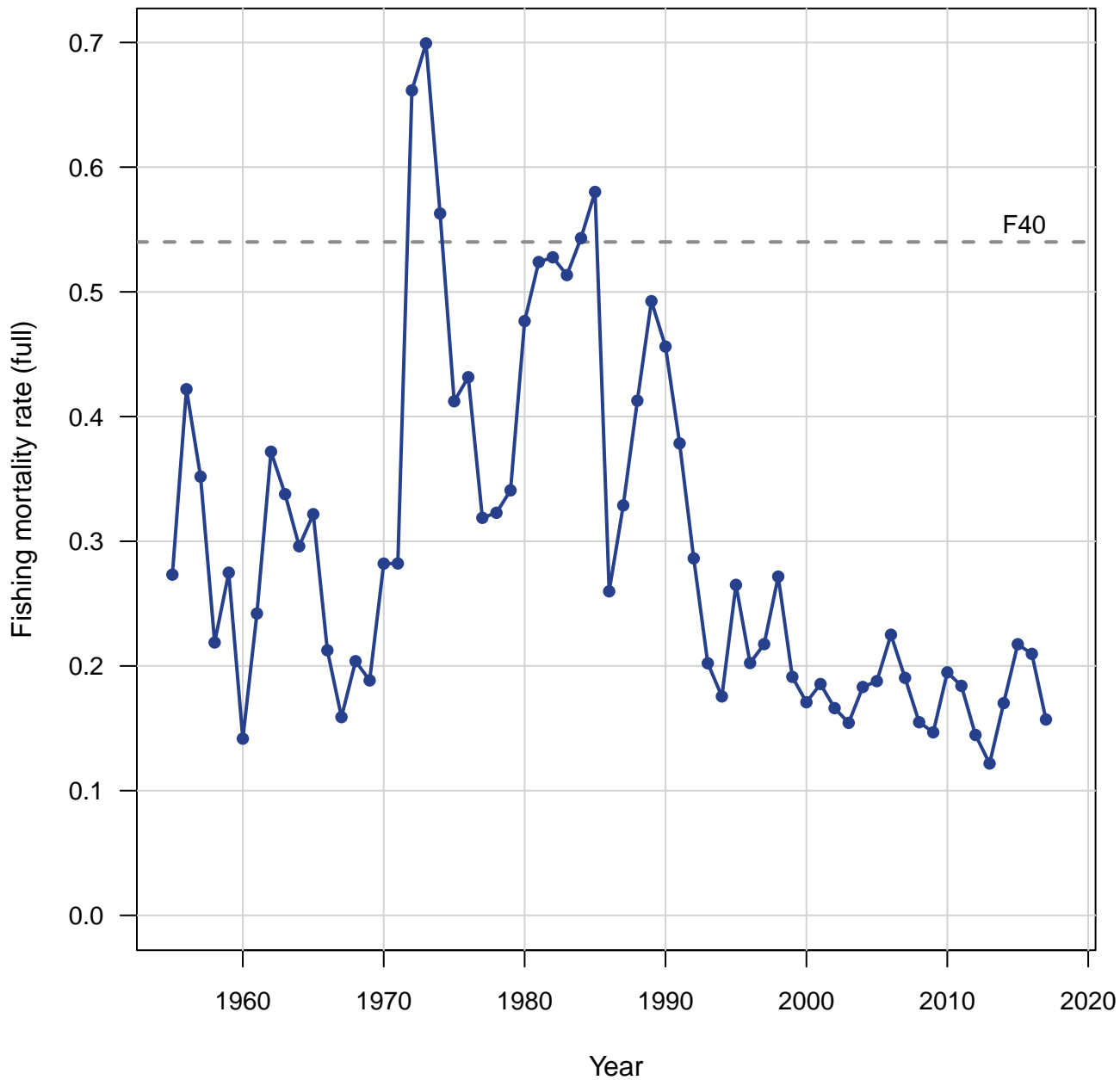
Data: menhaden



# Full F Data: menhaden

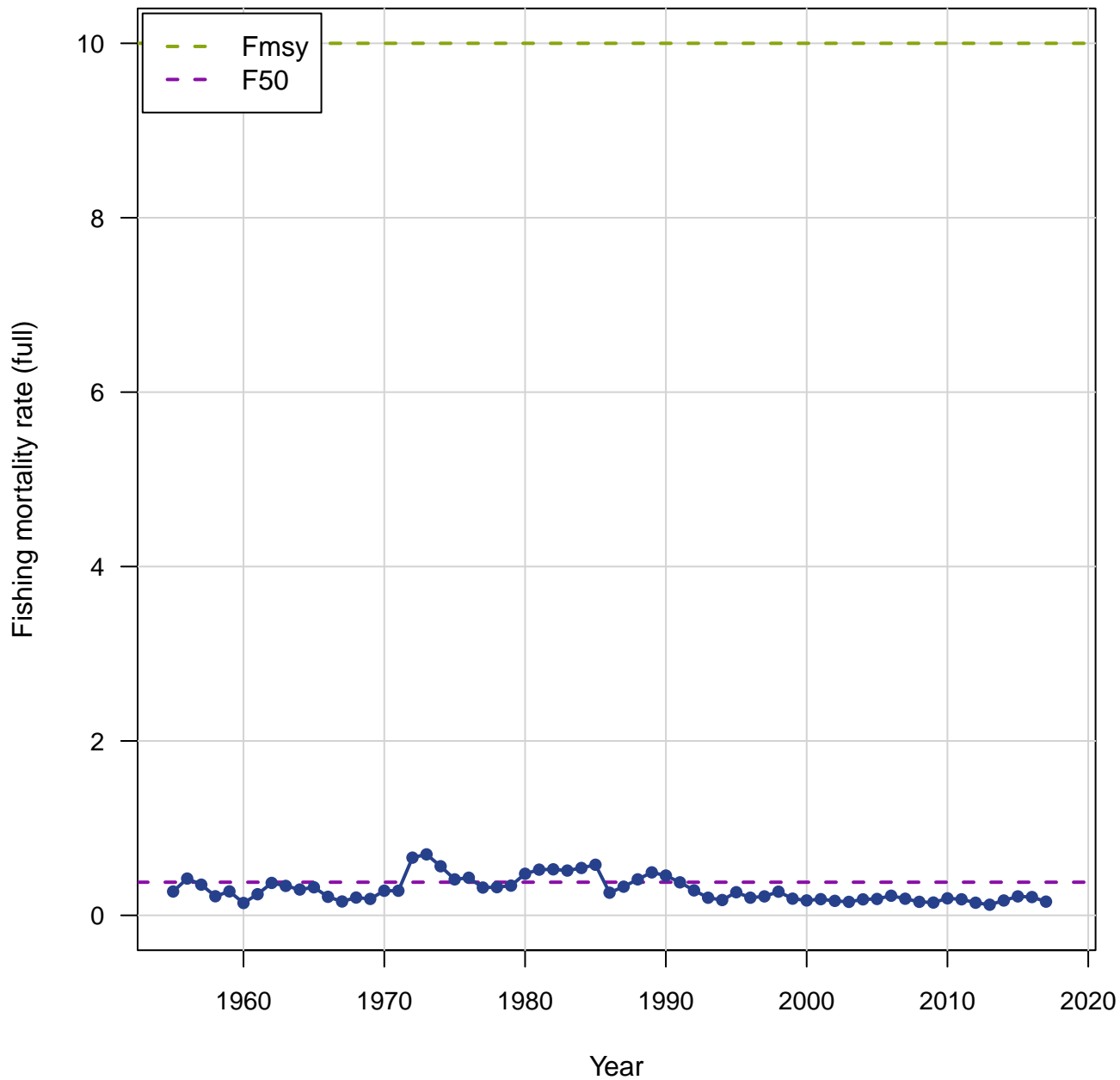


# Full F Data: menhaden



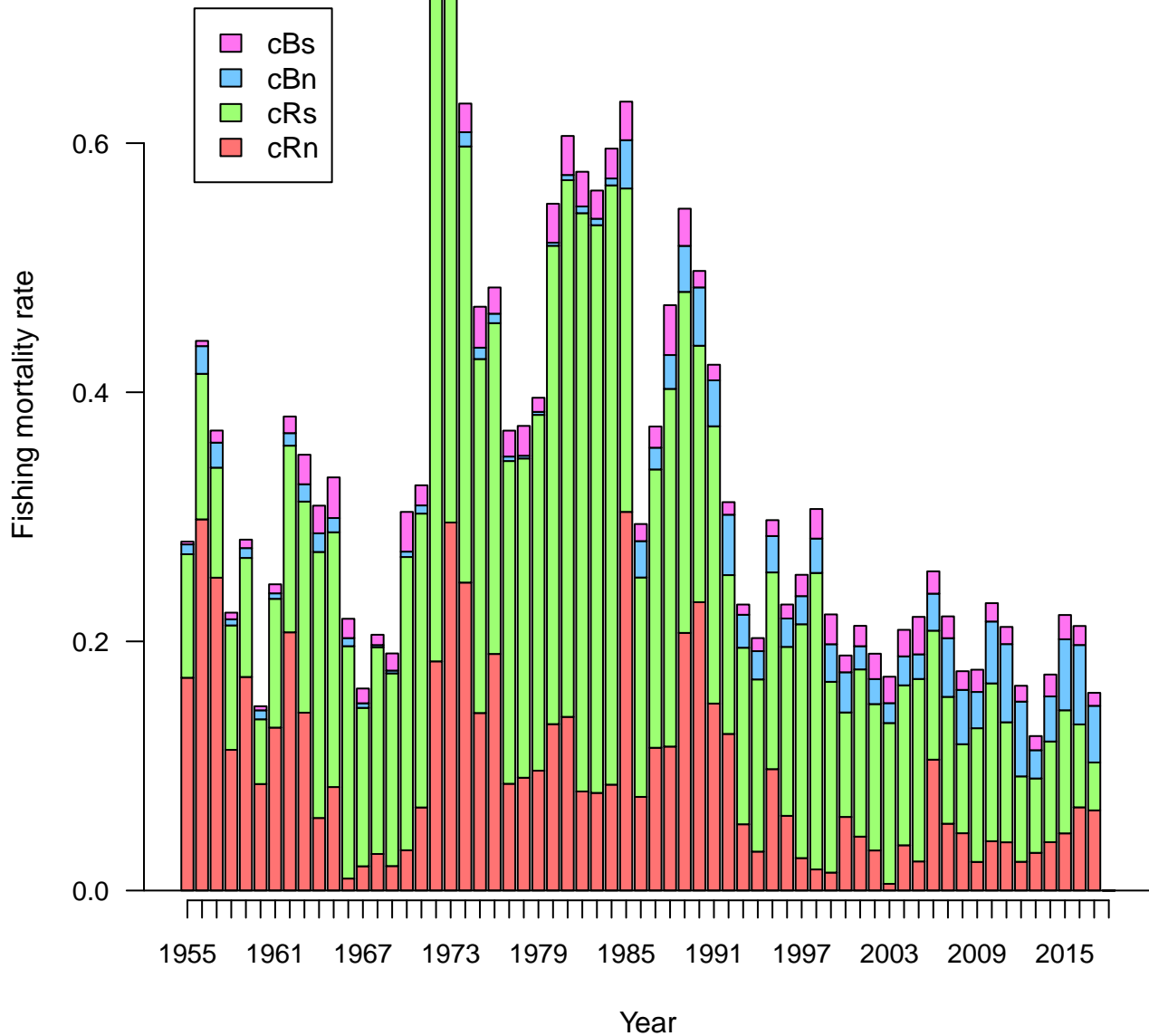


# Full F Data: menhaden



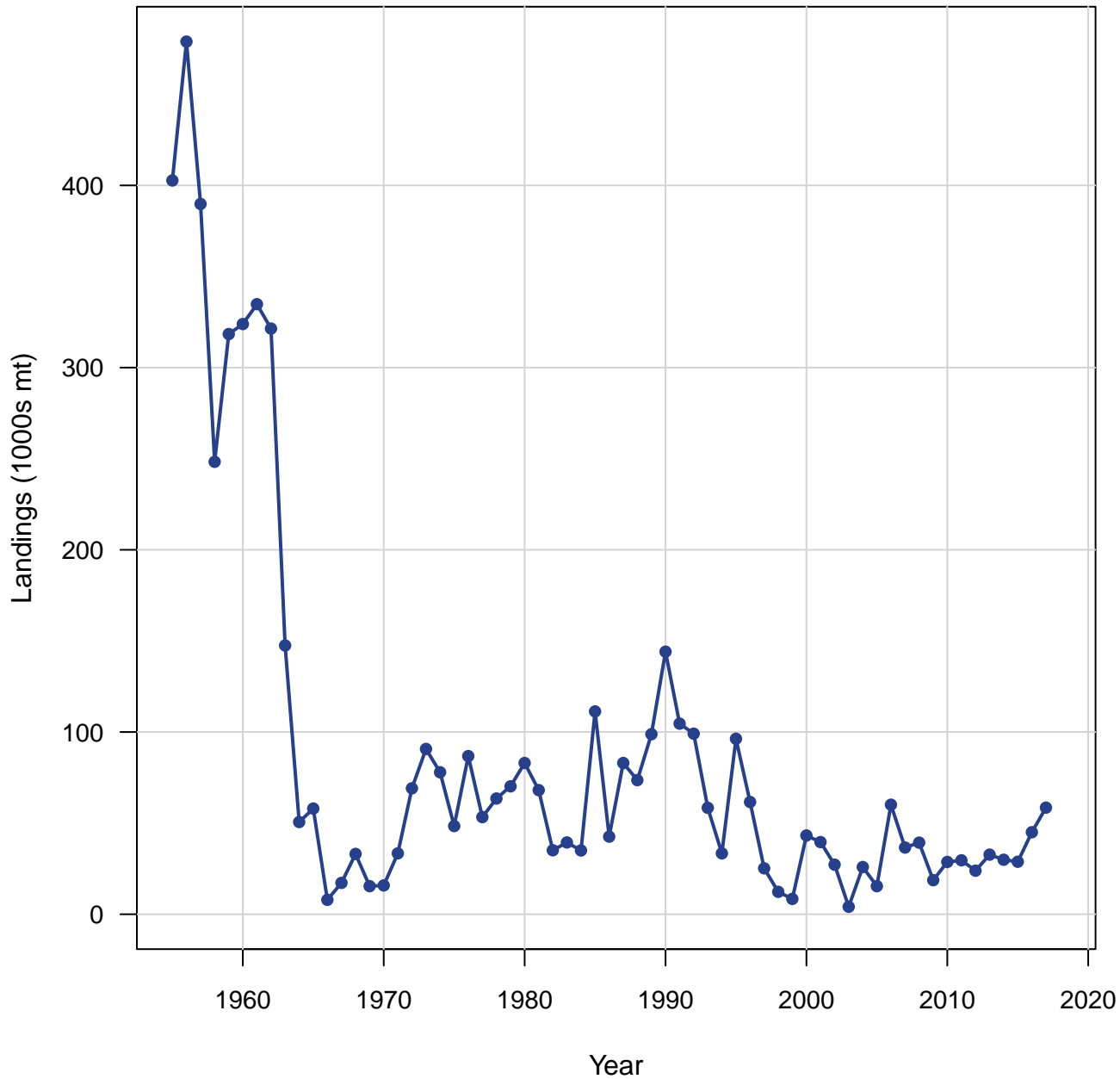
F by fishery

Data: menhaden



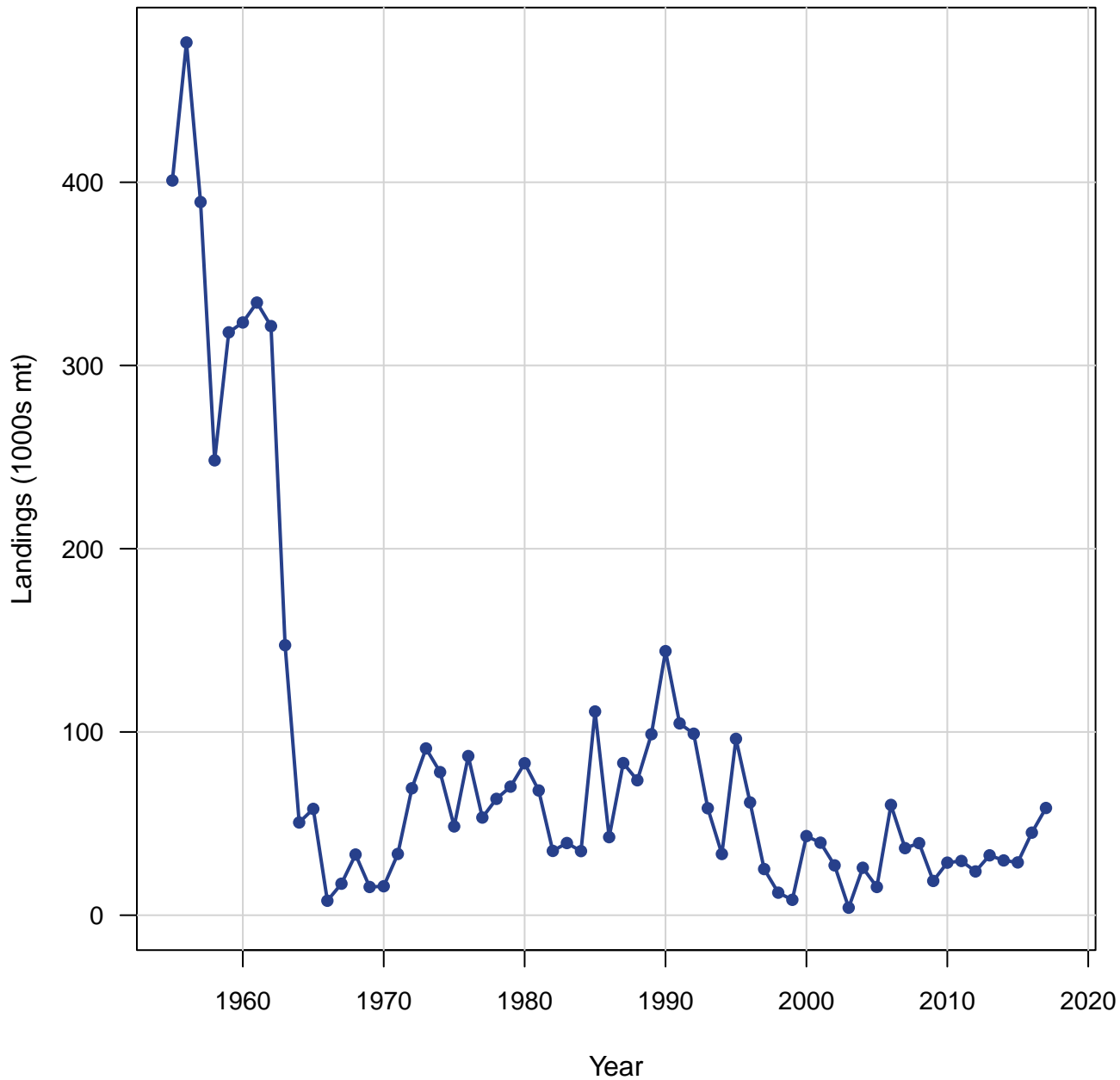
Fishery: L.cRn.ob

Data: menhaden



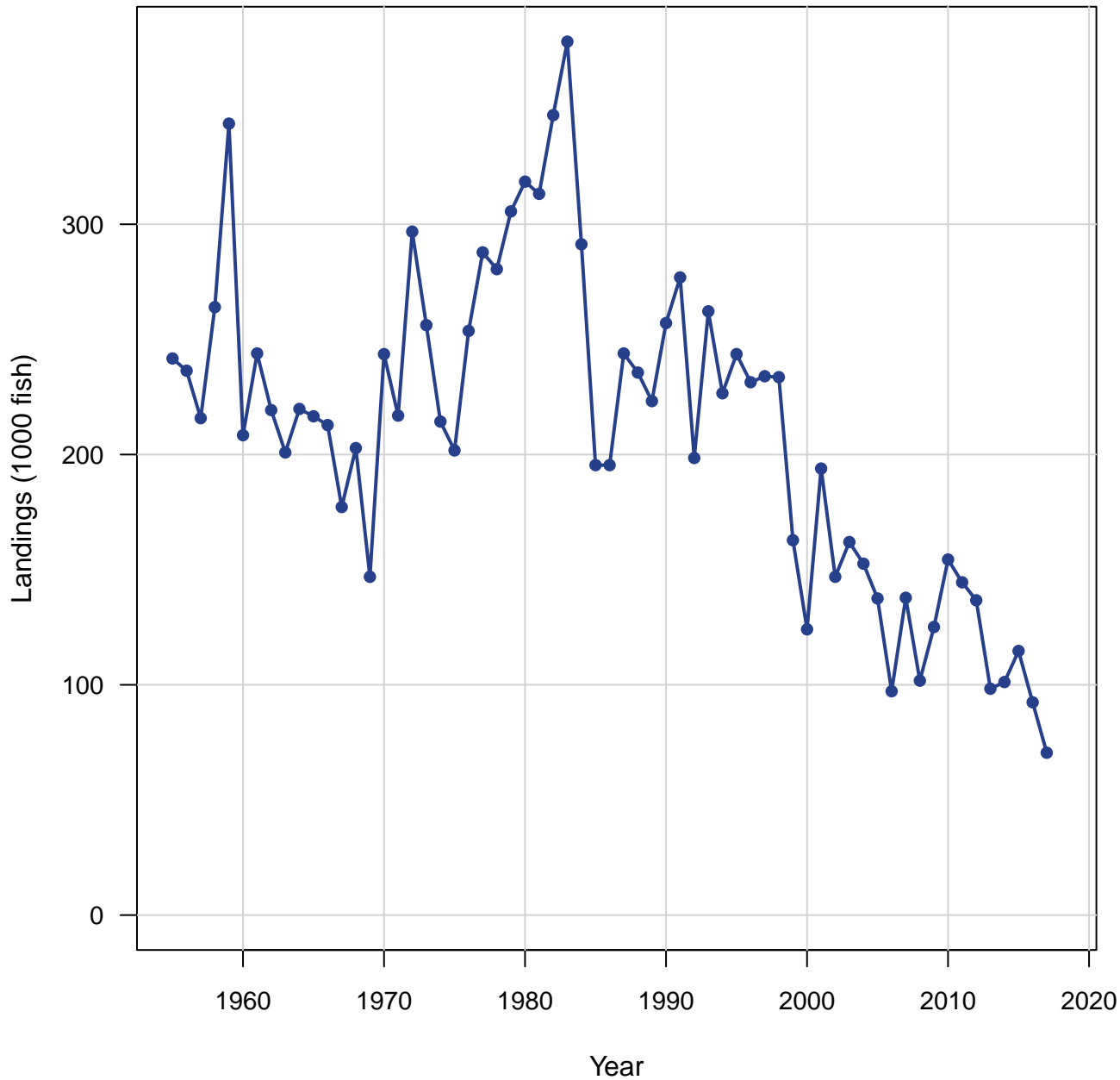
Fishery: L.cRn.pr

Data: menhaden



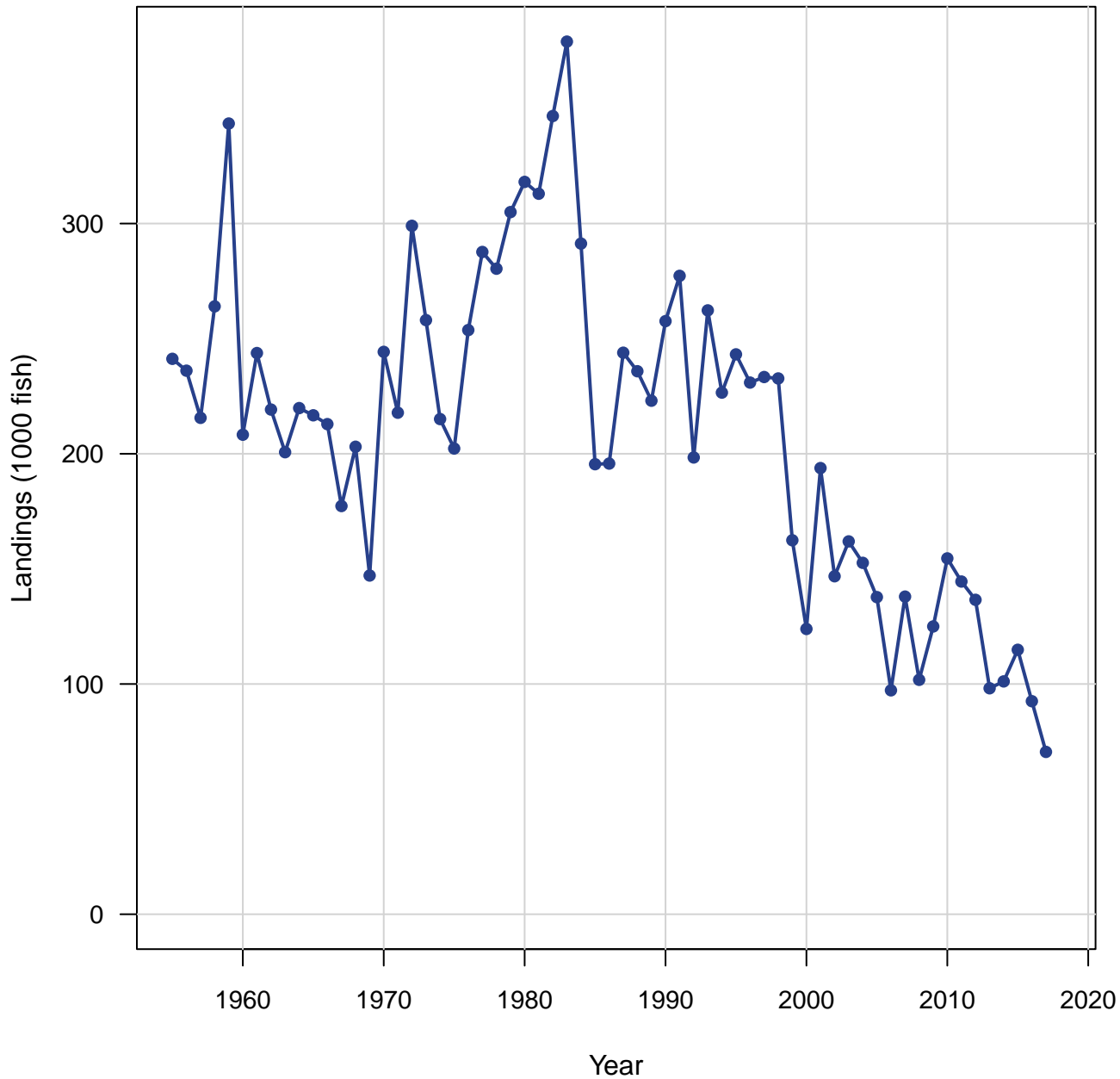
Fishery: L.cRs.ob

Data: menhaden



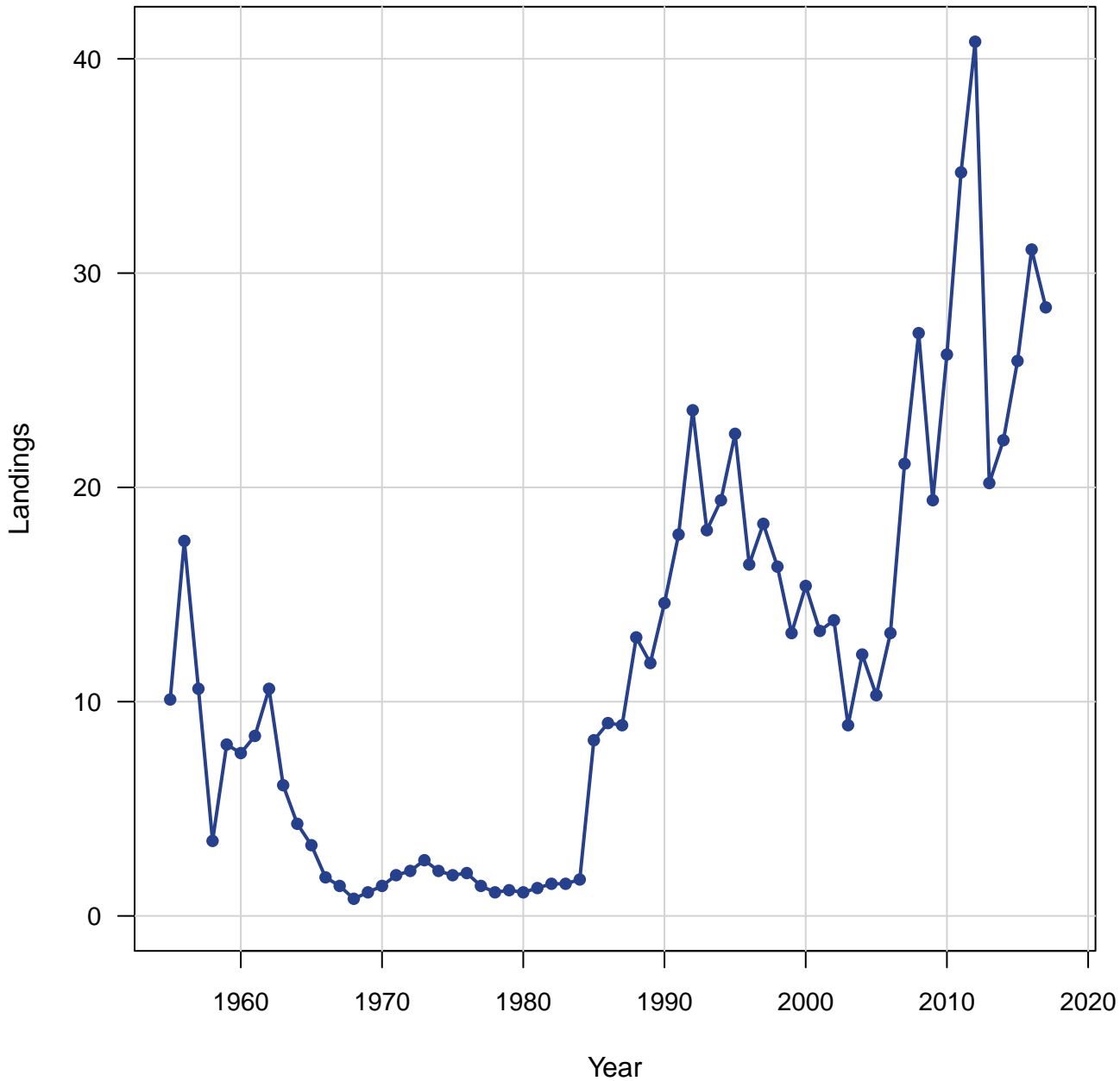
Fishery: L.cRS.pr

Data: menhaden



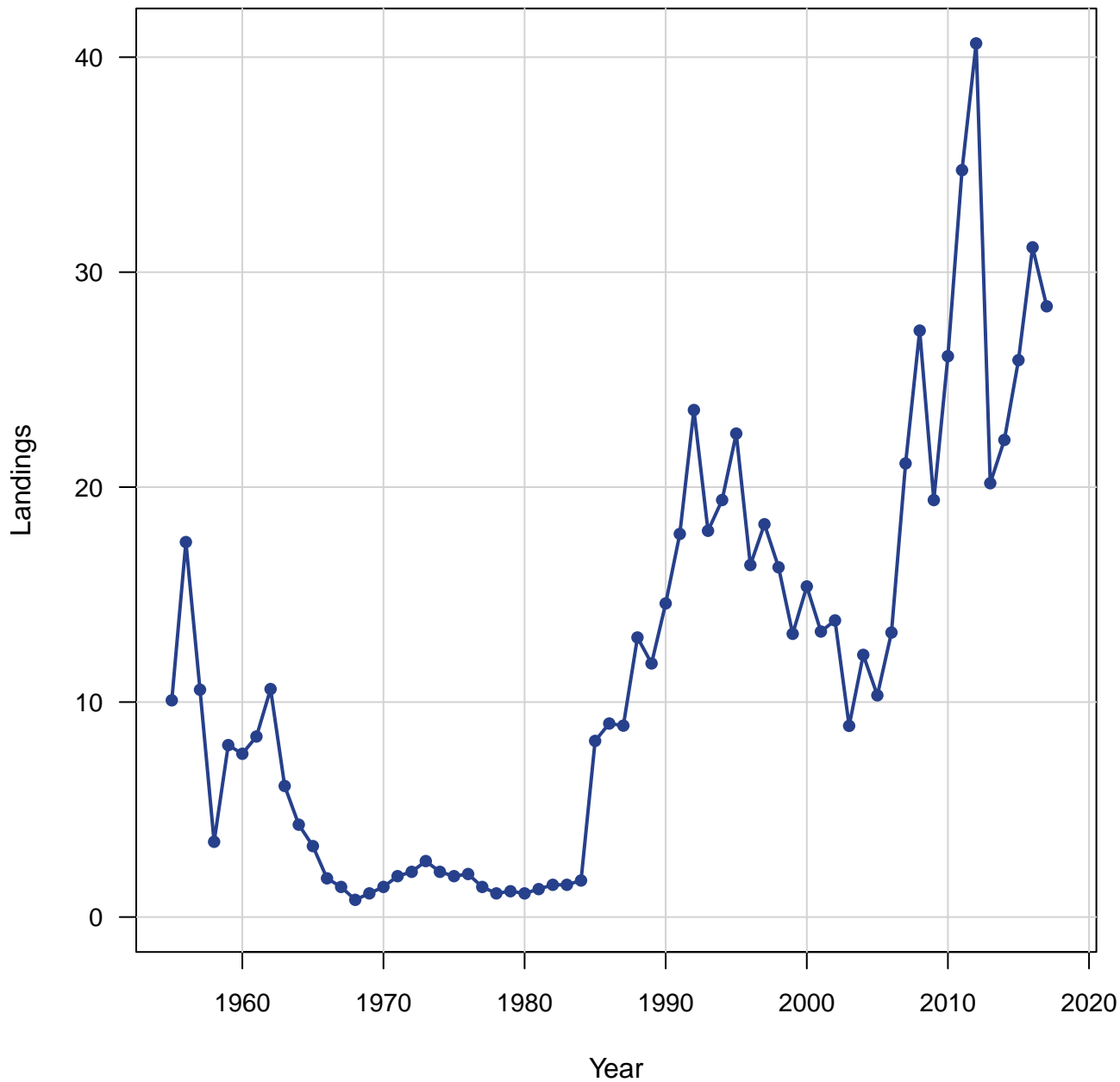
Fishery: L.cBn.ob

Data: menhaden



Fishery: L.cBn.pr

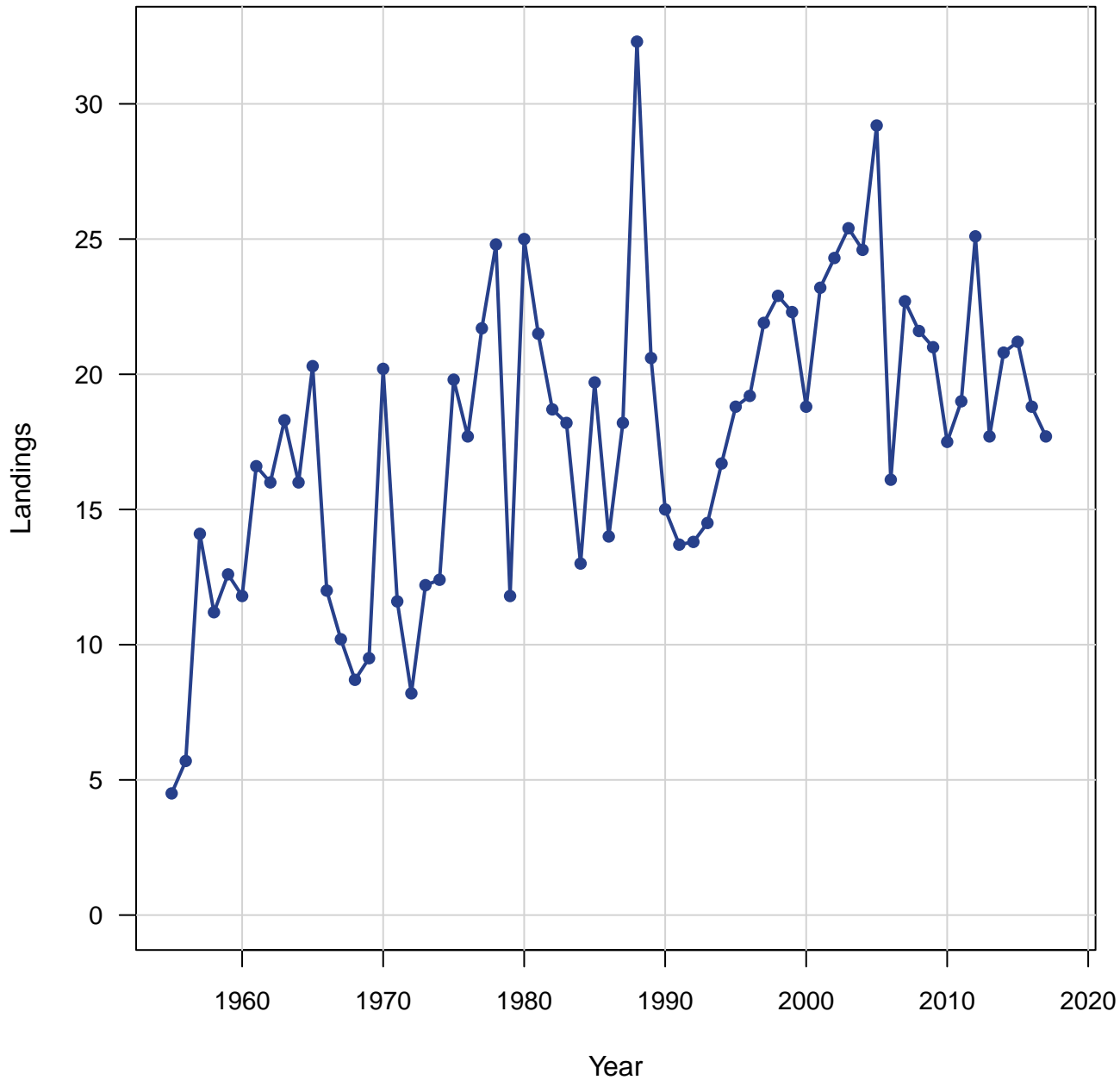
Data: menhaden





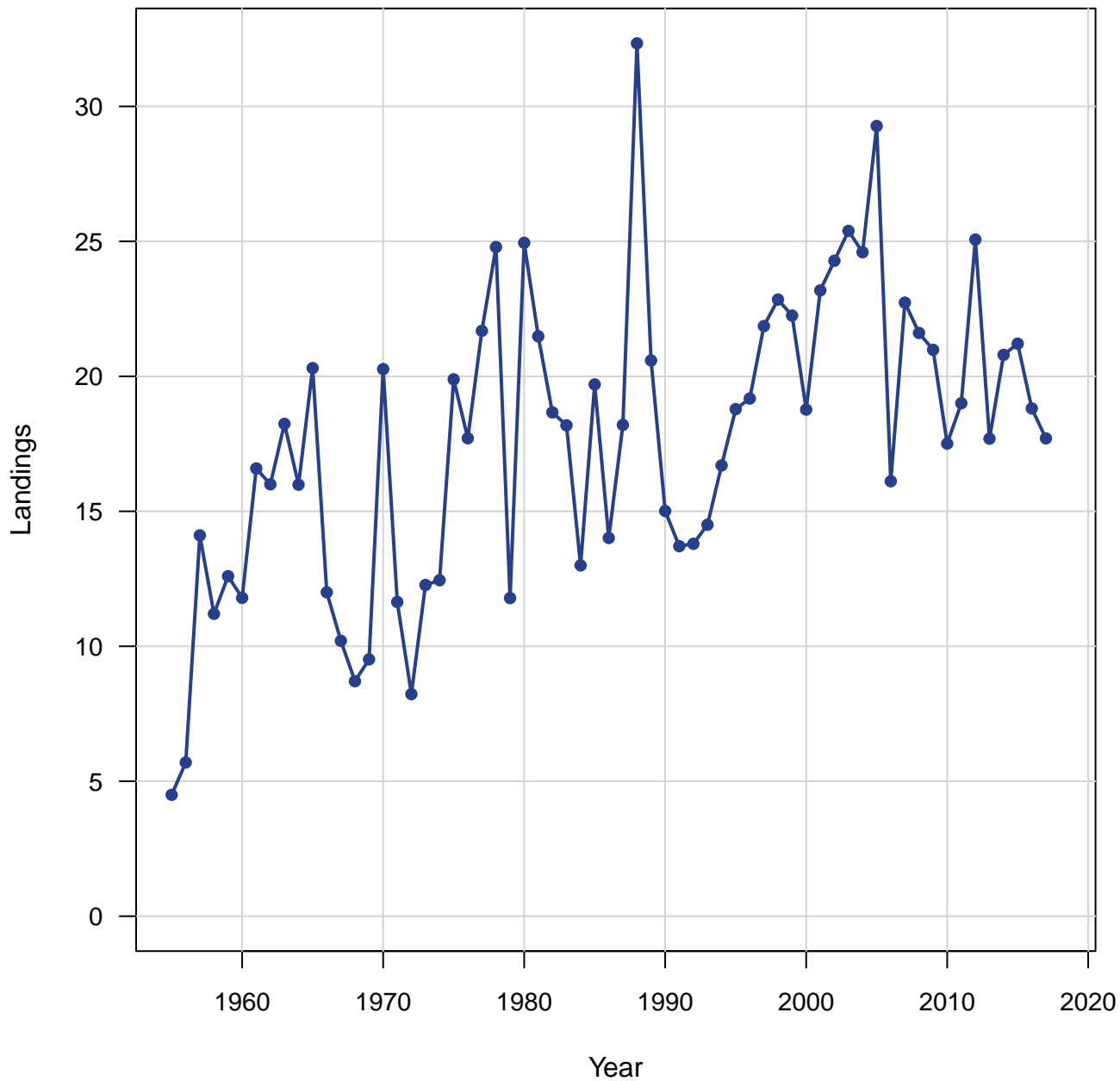
Fishery: L.cBs.ob

Data: menhaden



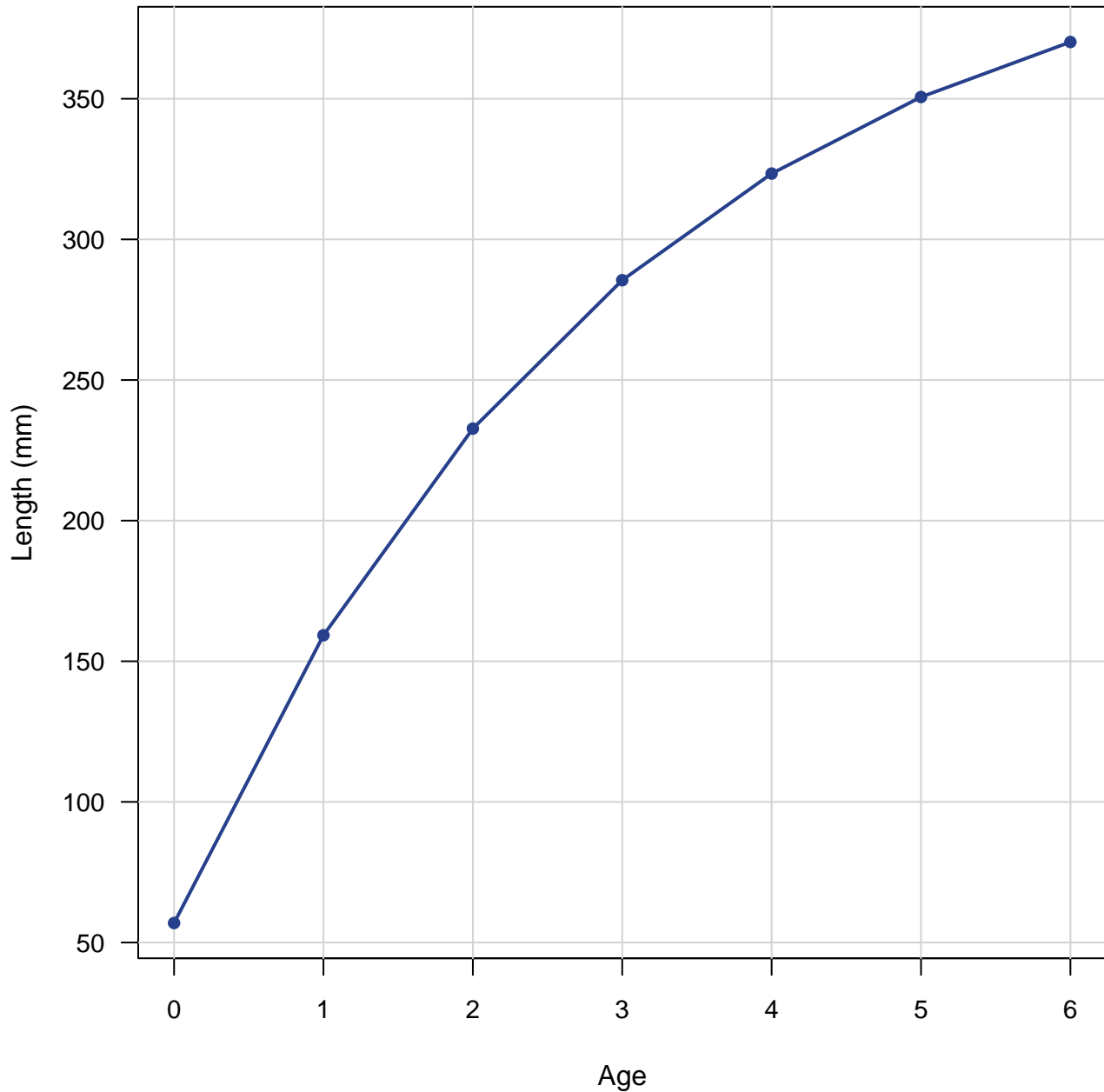
Fishery: L.cBs.pr

Data: menhaden

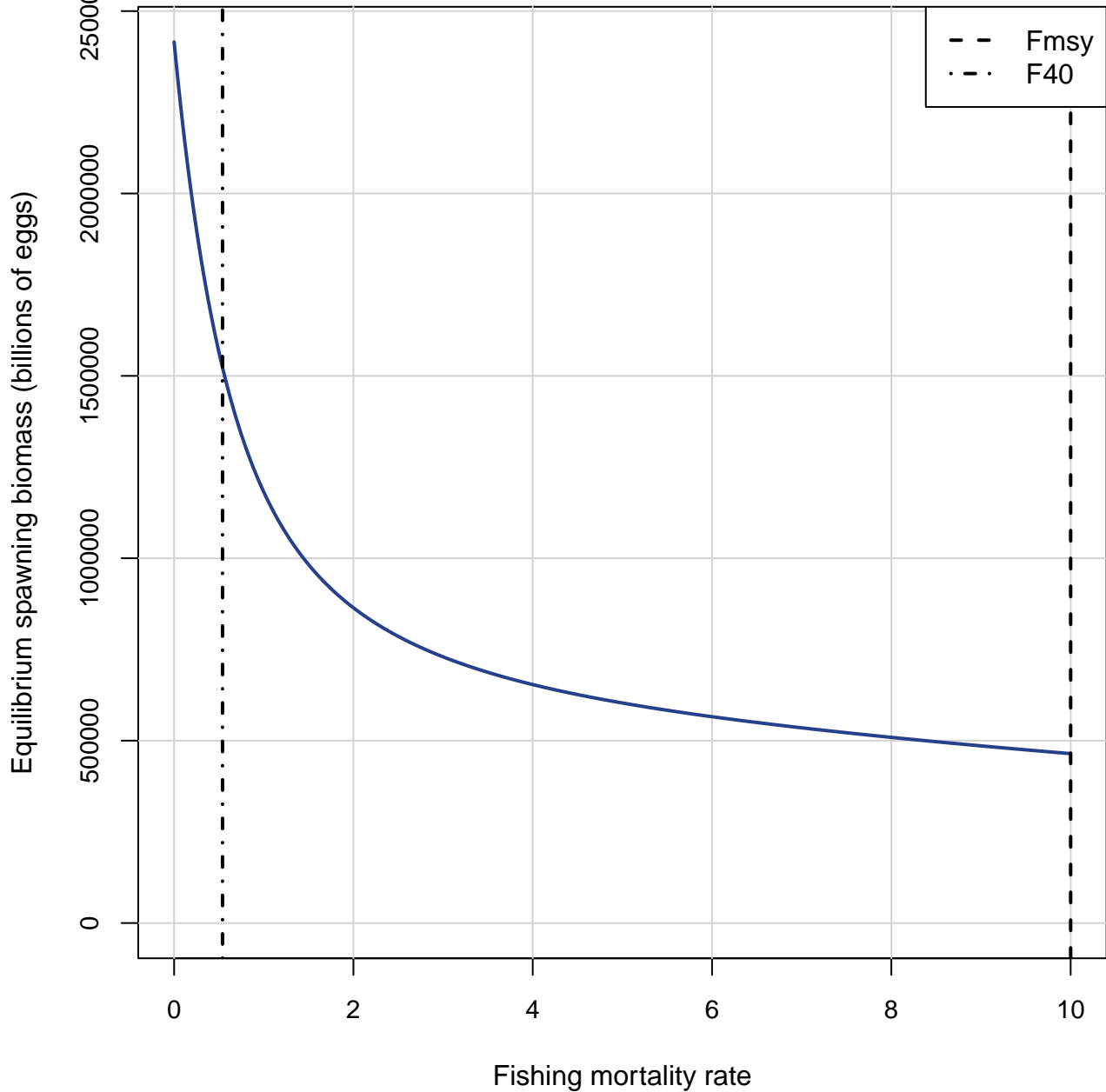


Length at age

Data: menhaden

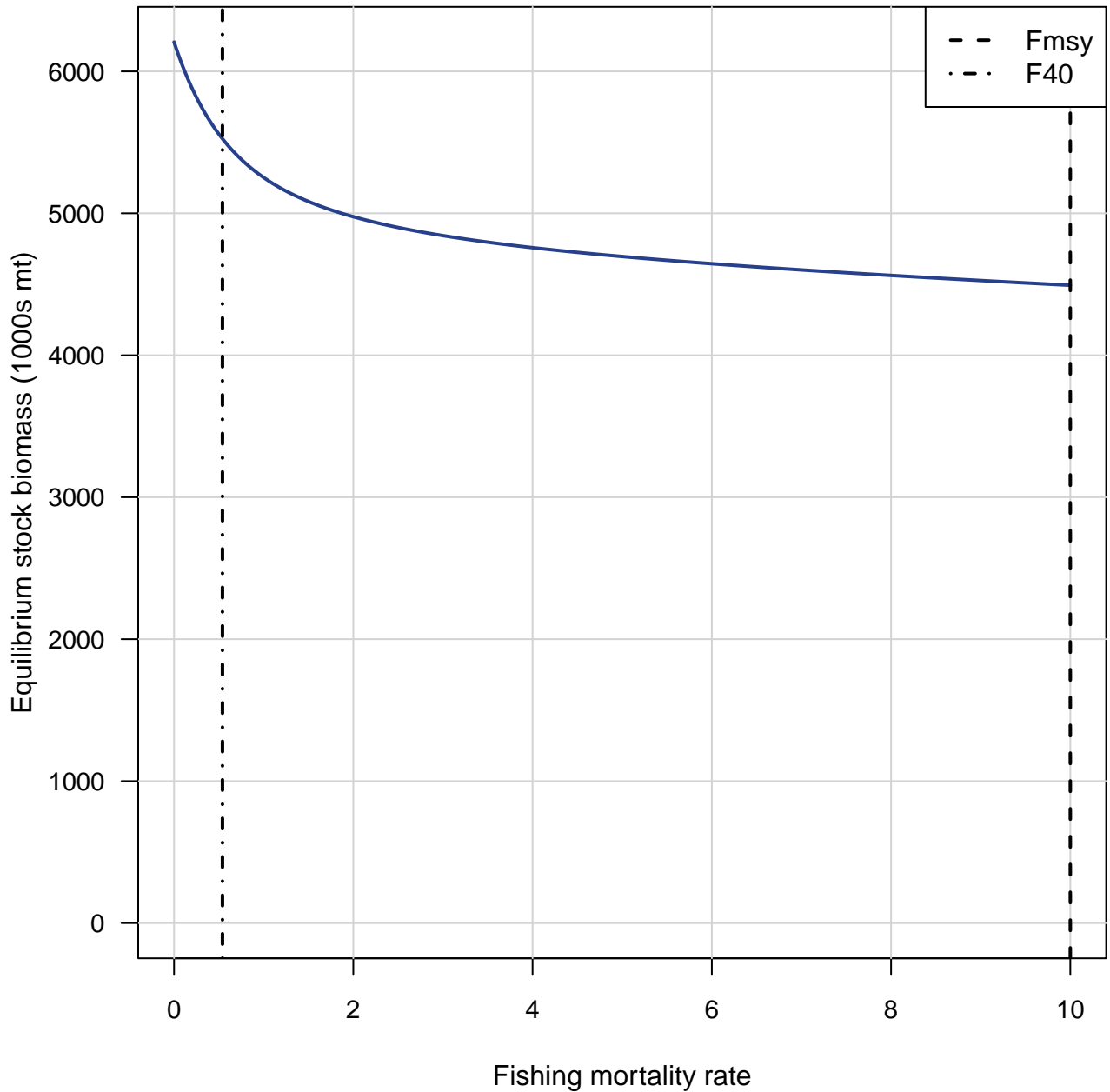


# EqSSB Data: menhaden

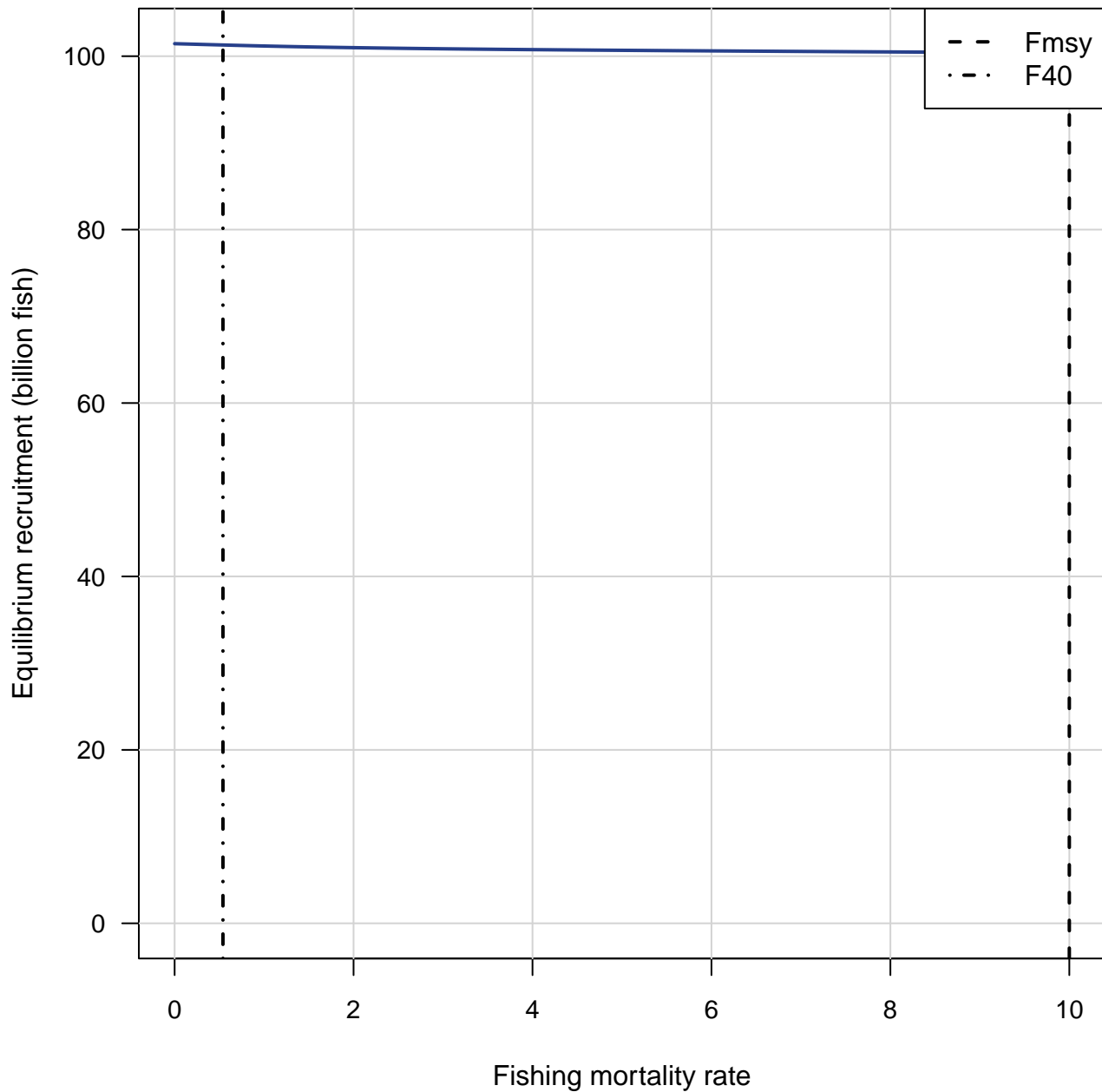


EqB

Data: menhaden

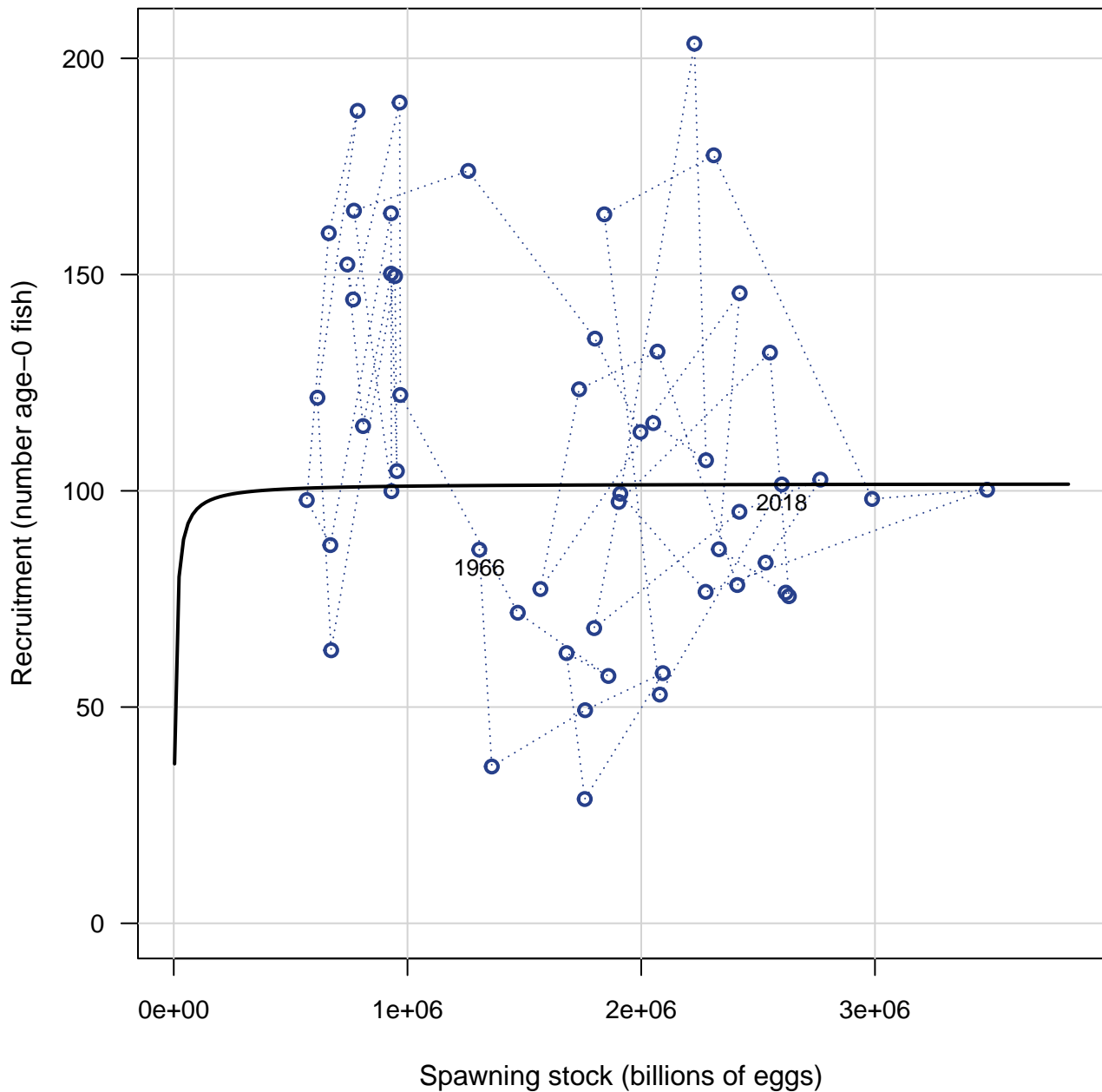


# EqRec Data: menhaden

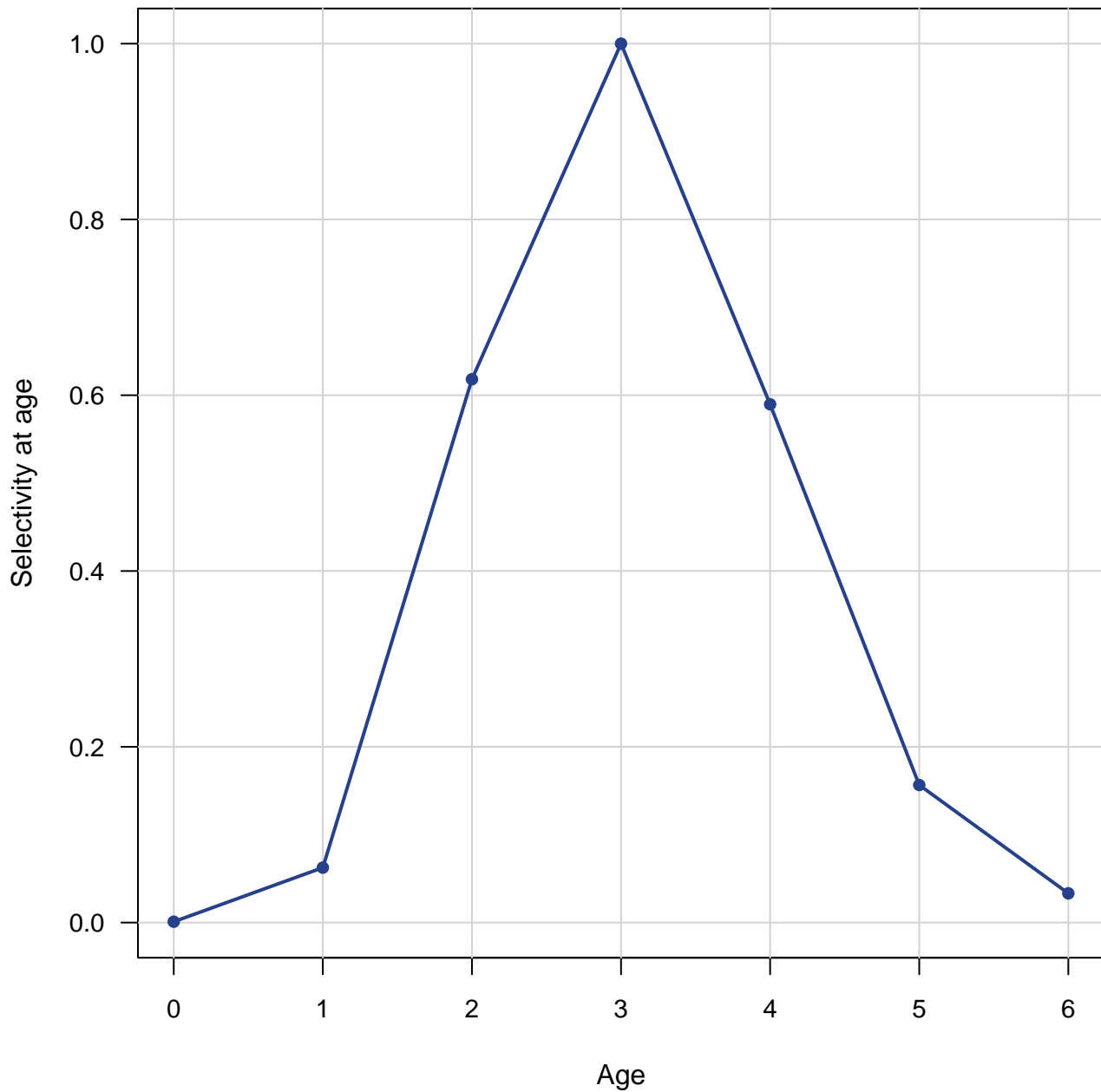


# Stock-recruitment

Data: menhaden



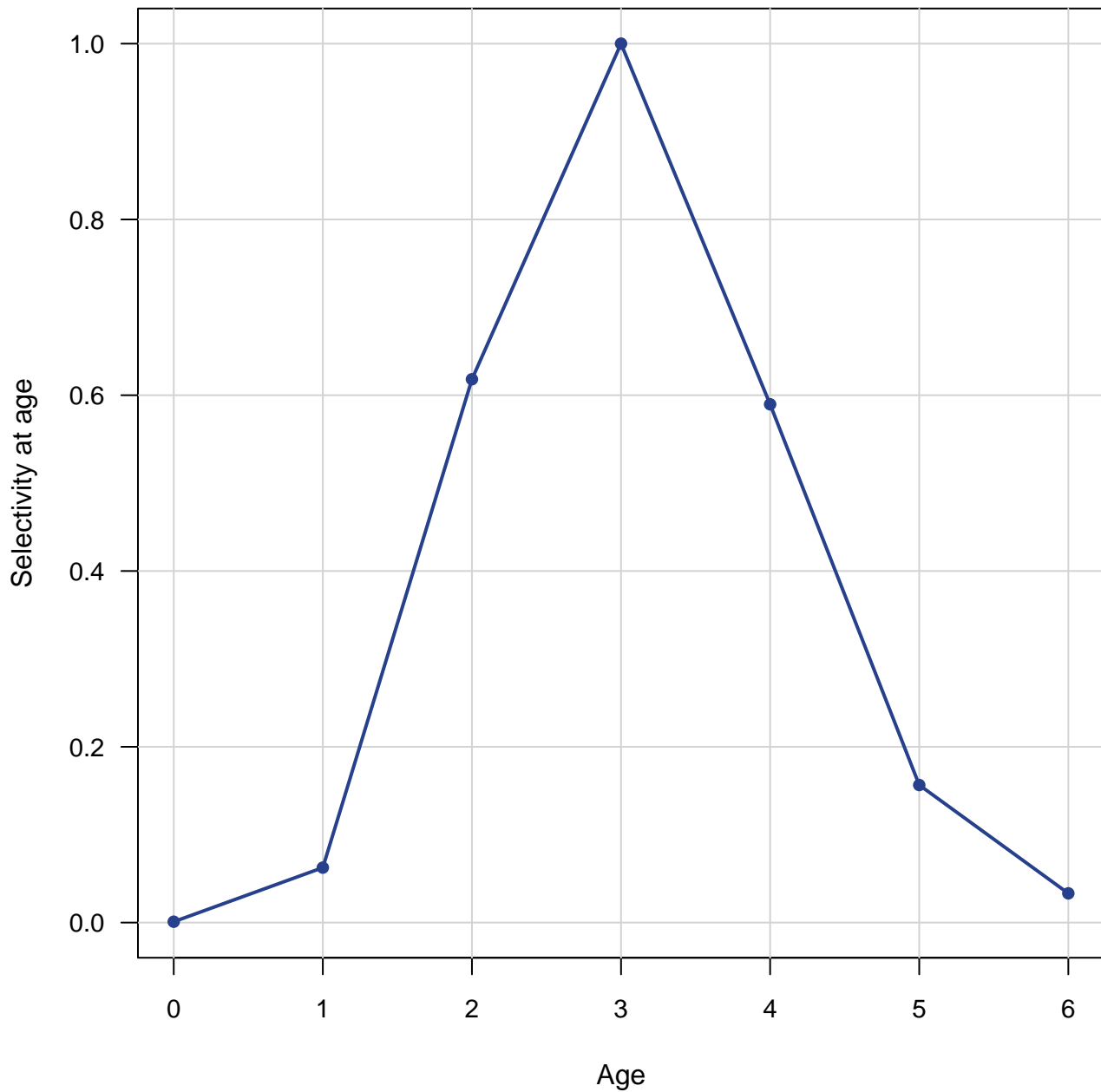
Fishery: wgtd.L      Data: menhaden





Fishery: wgted.tot

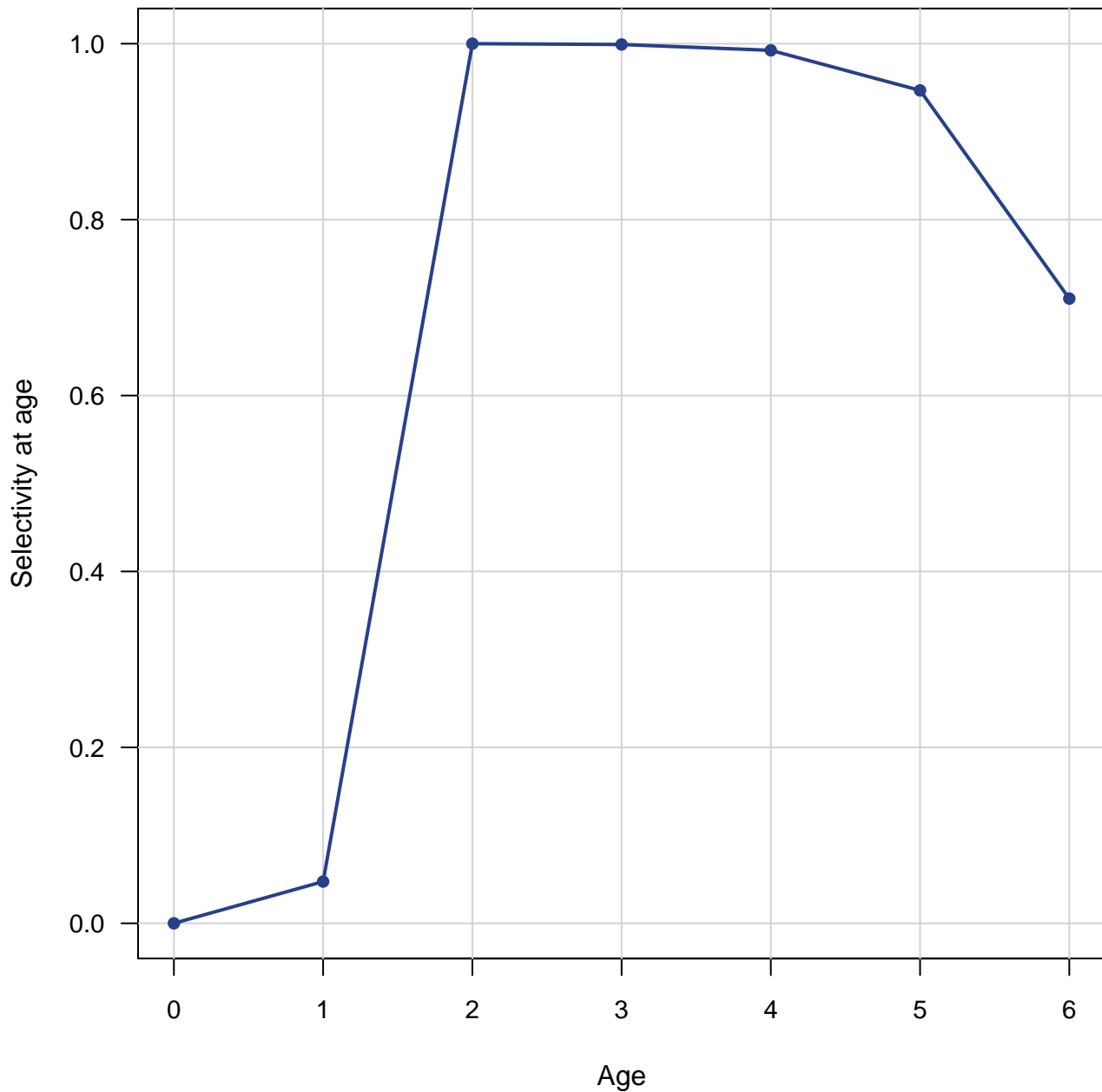
Data: menhaden



Selectivity in: cRn

Data: menhaden

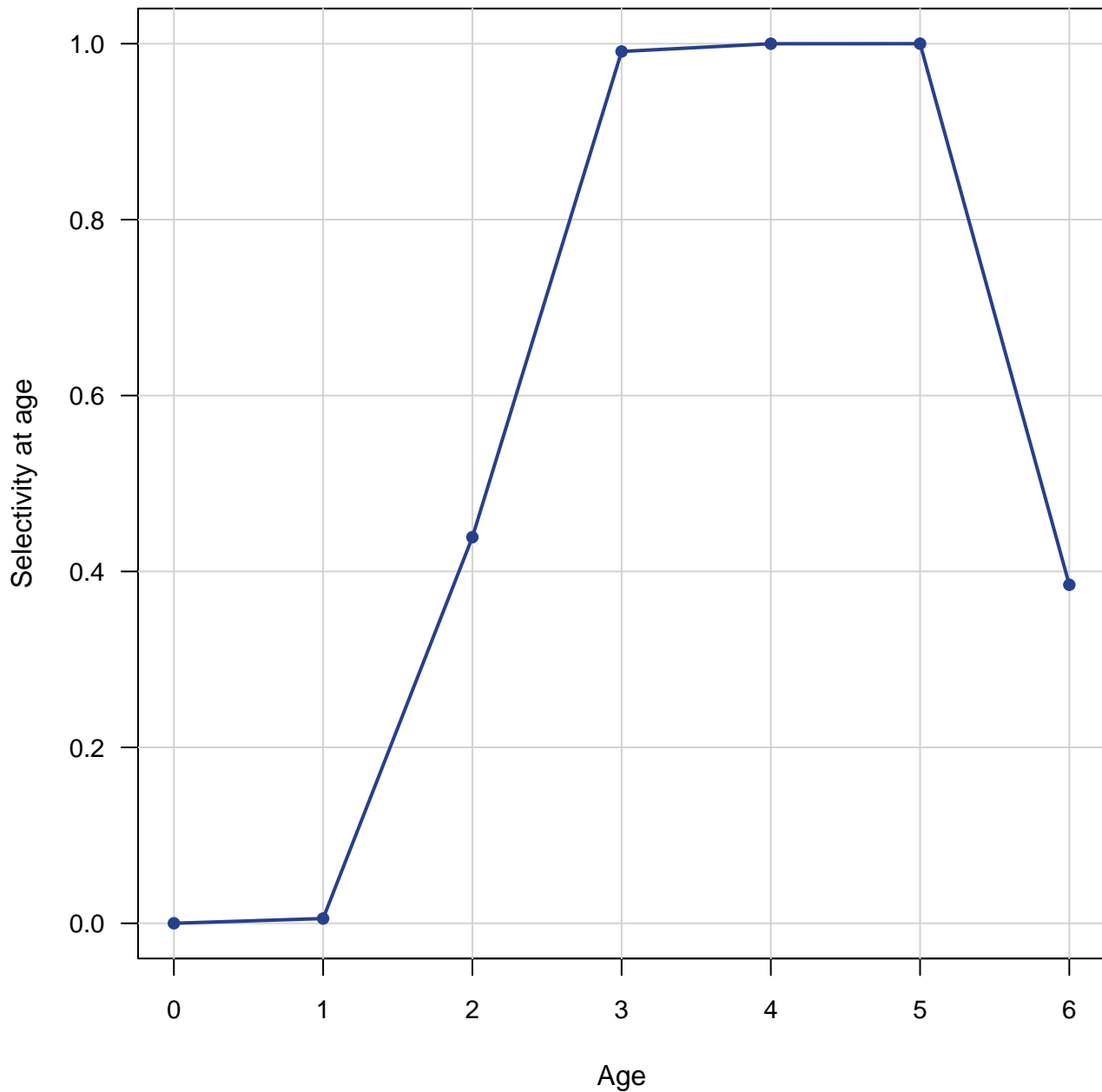
Year: 1955



Selectivity in: cRn

Data: menhaden

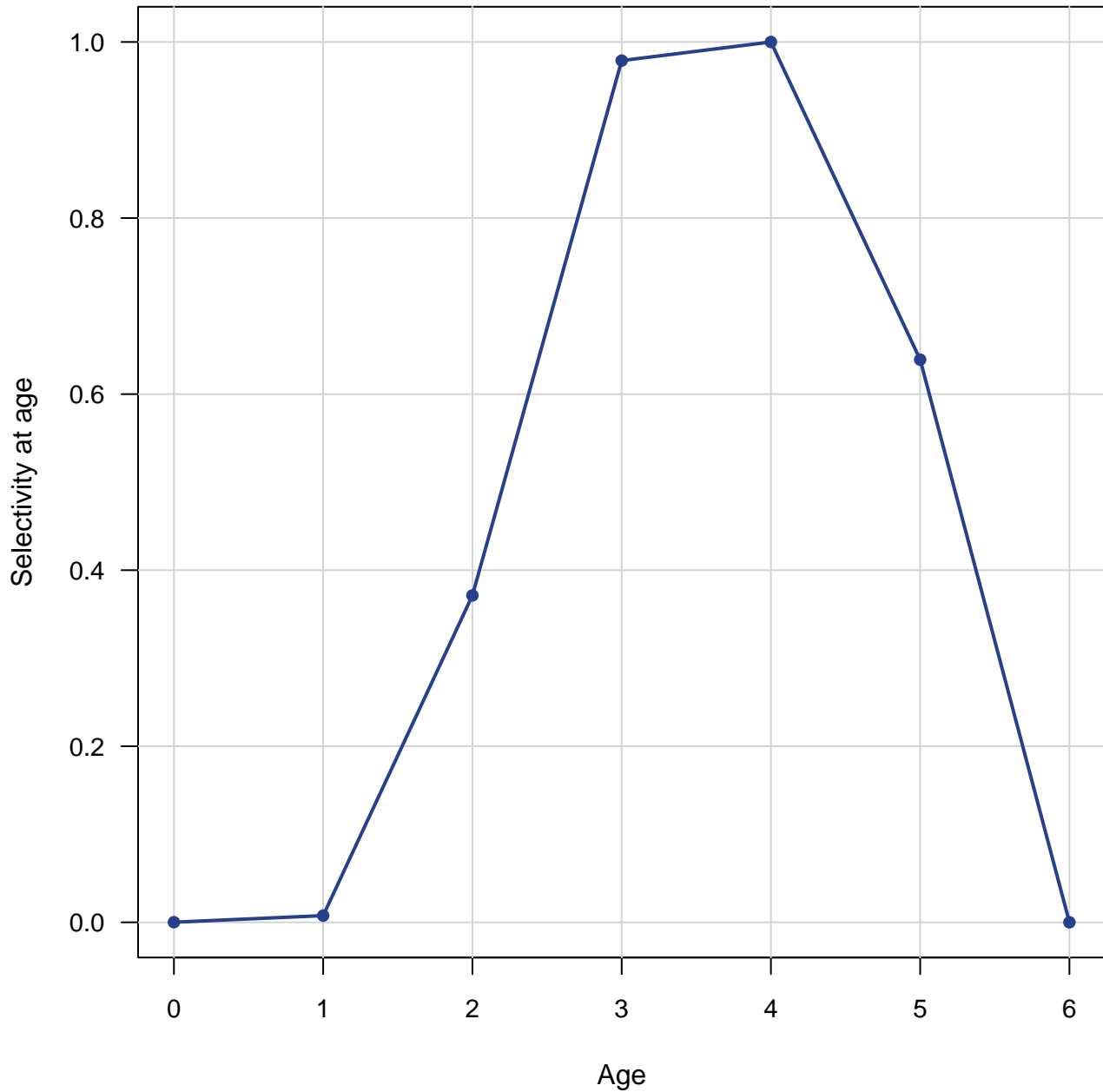
Year: 1970



Selectivity in: cRn

Data: menhaden

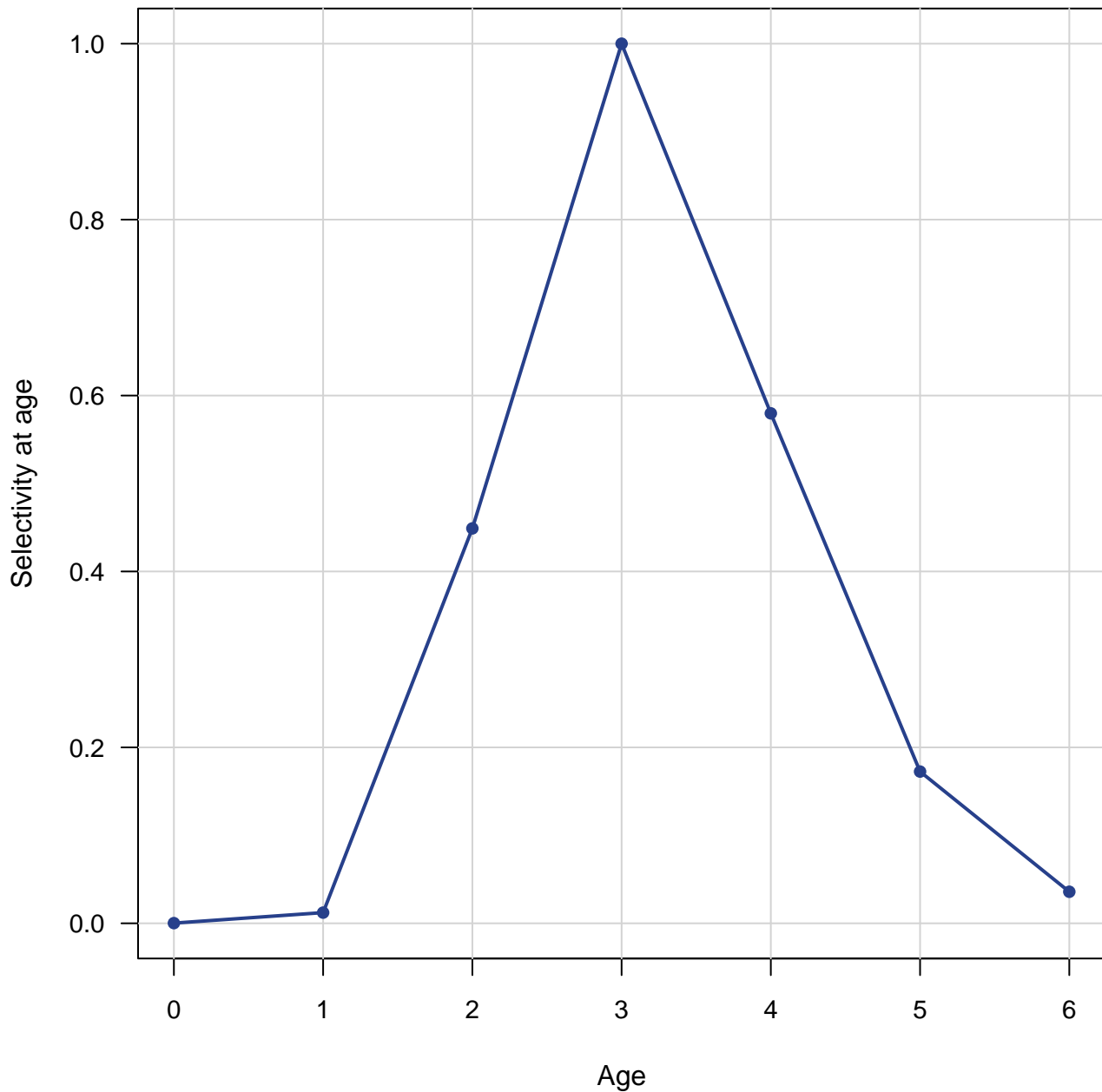
Year: 1994



Selectivity in: cRn

Data: menhaden

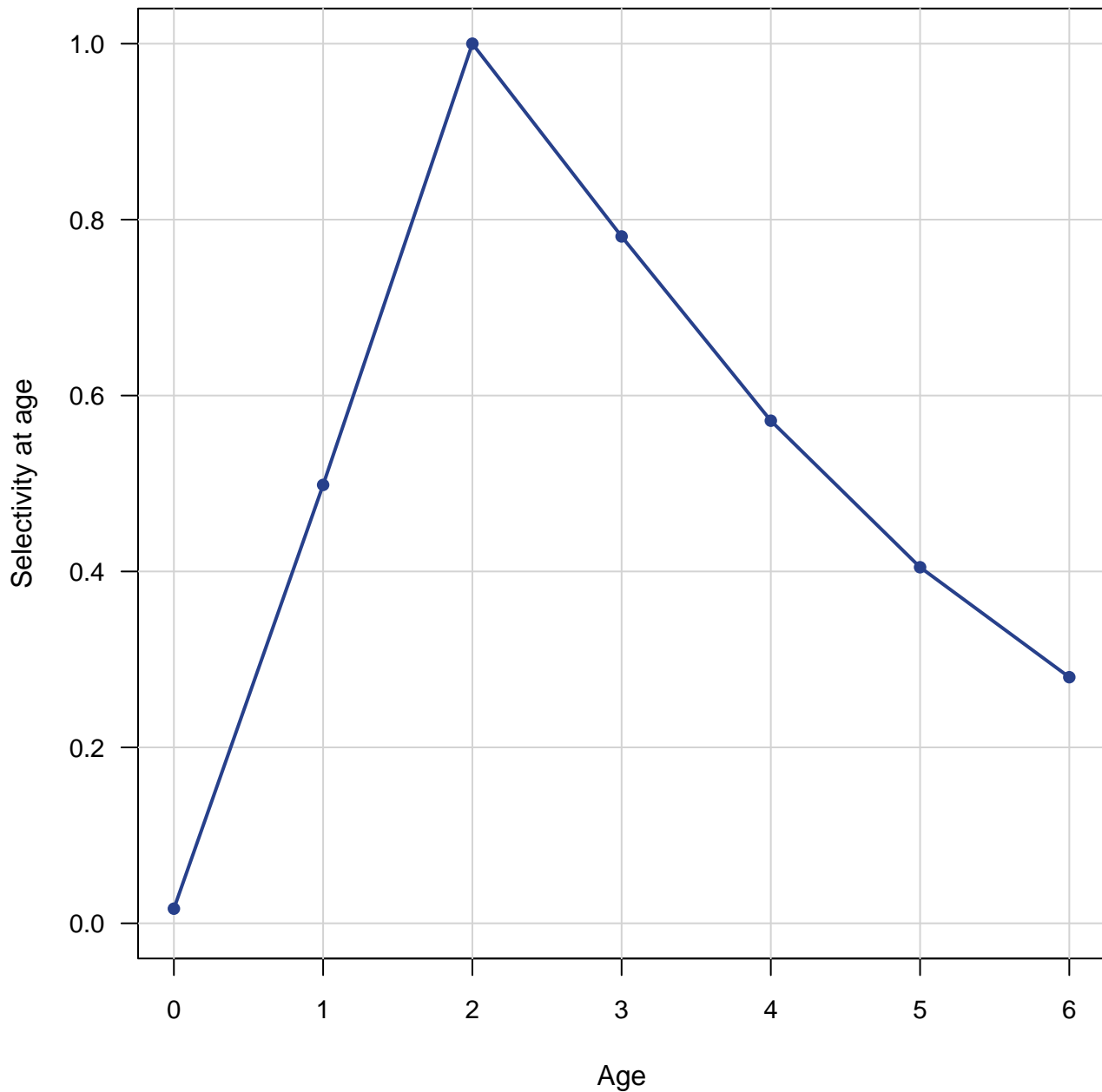
Year: 2013



Selectivity in: cRs

Data: menhaden

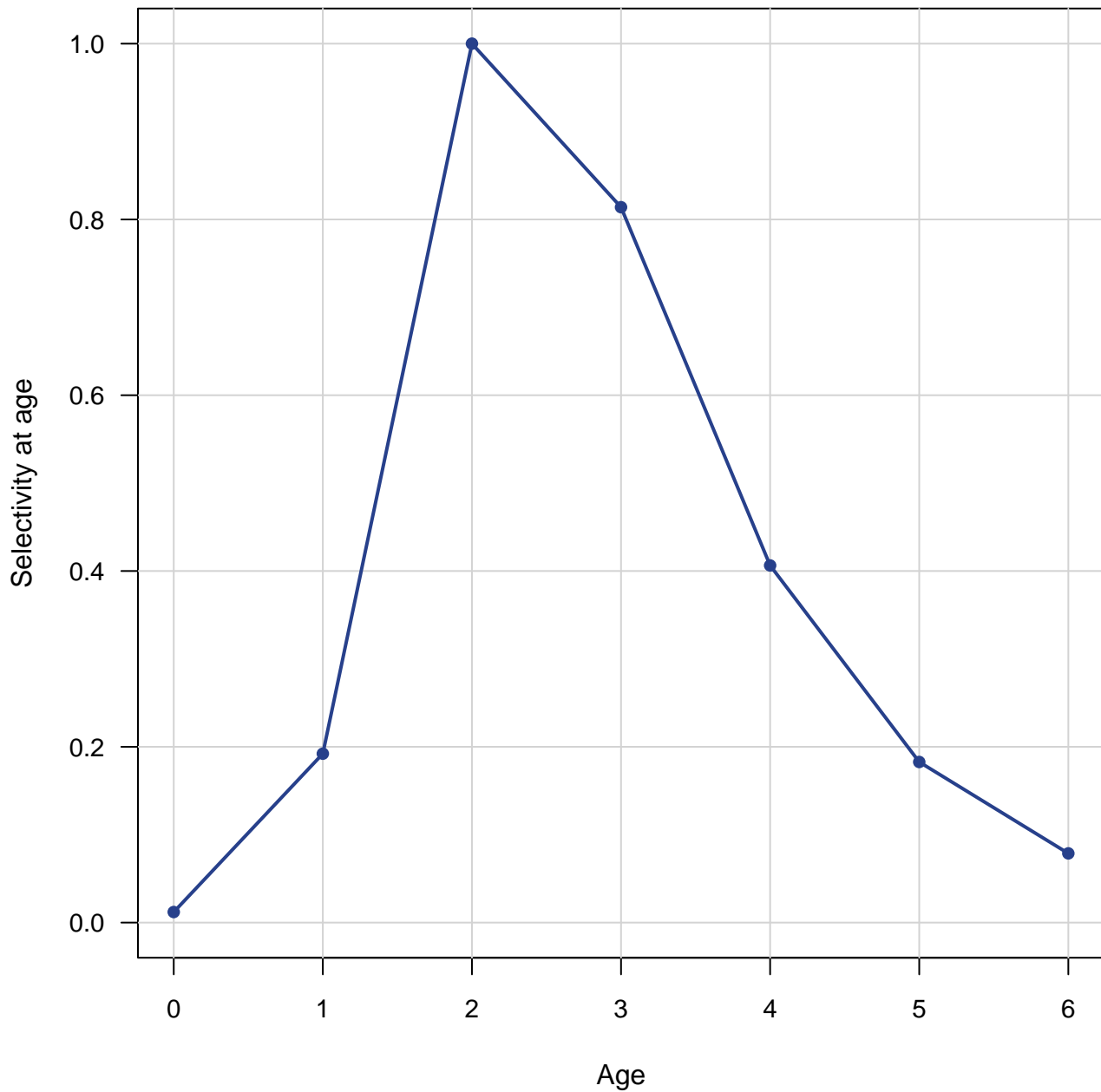
Year: 1955



Selectivity in: cRs

Data: menhaden

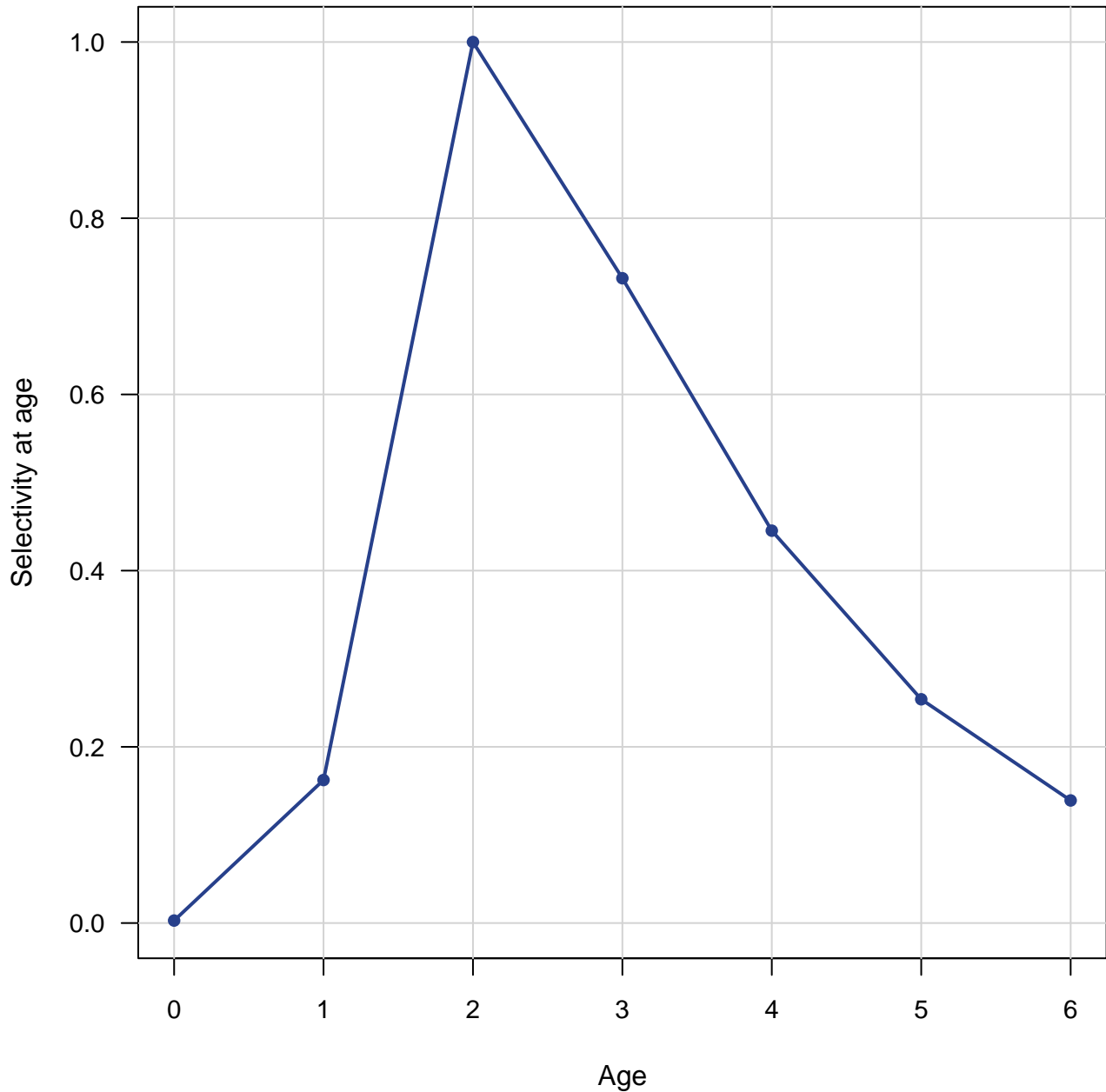
Year: 1972



Selectivity in: cRs

Data: menhaden

Year: 2005

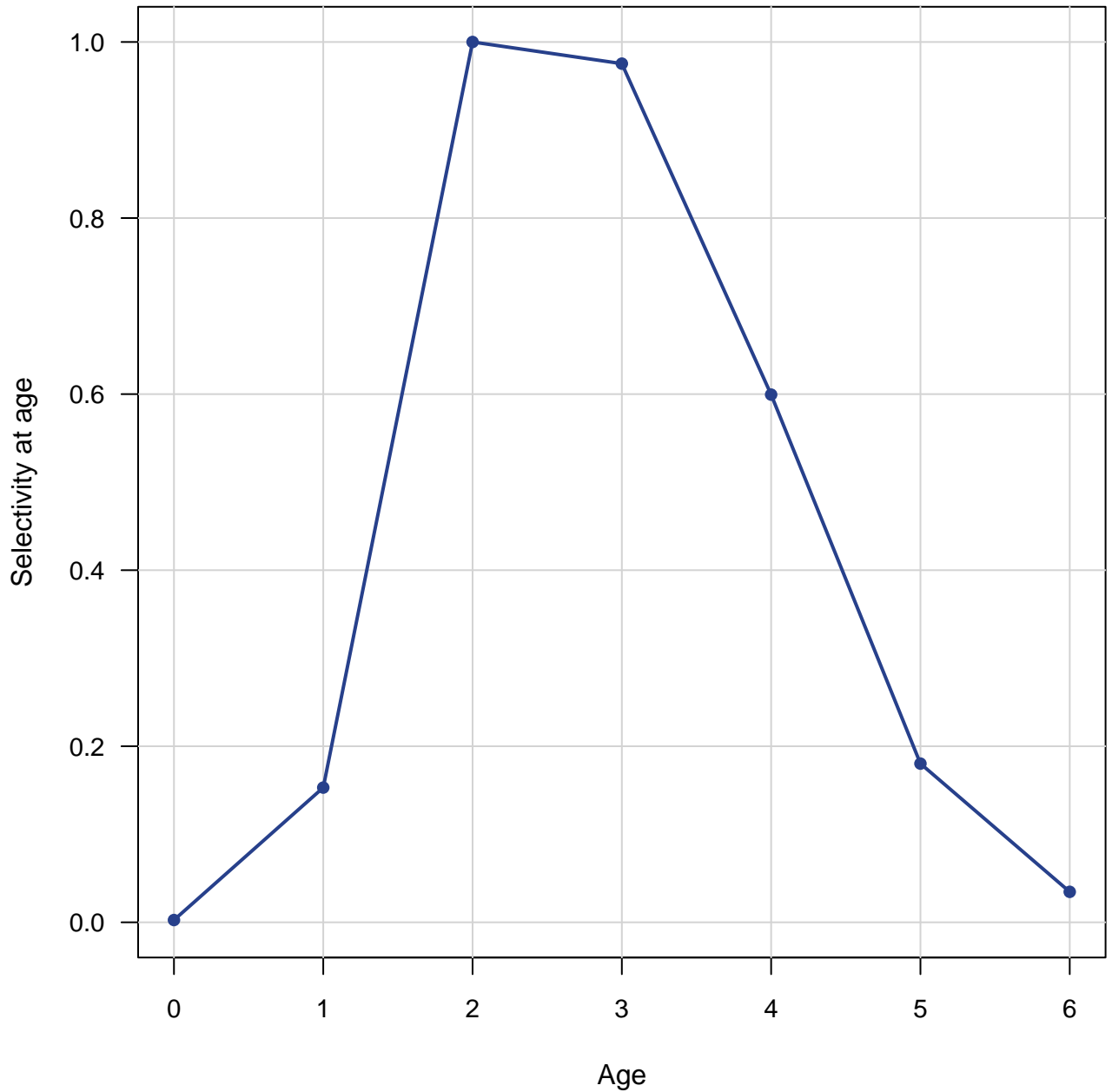




Selectivity in: cRs

Data: menhaden

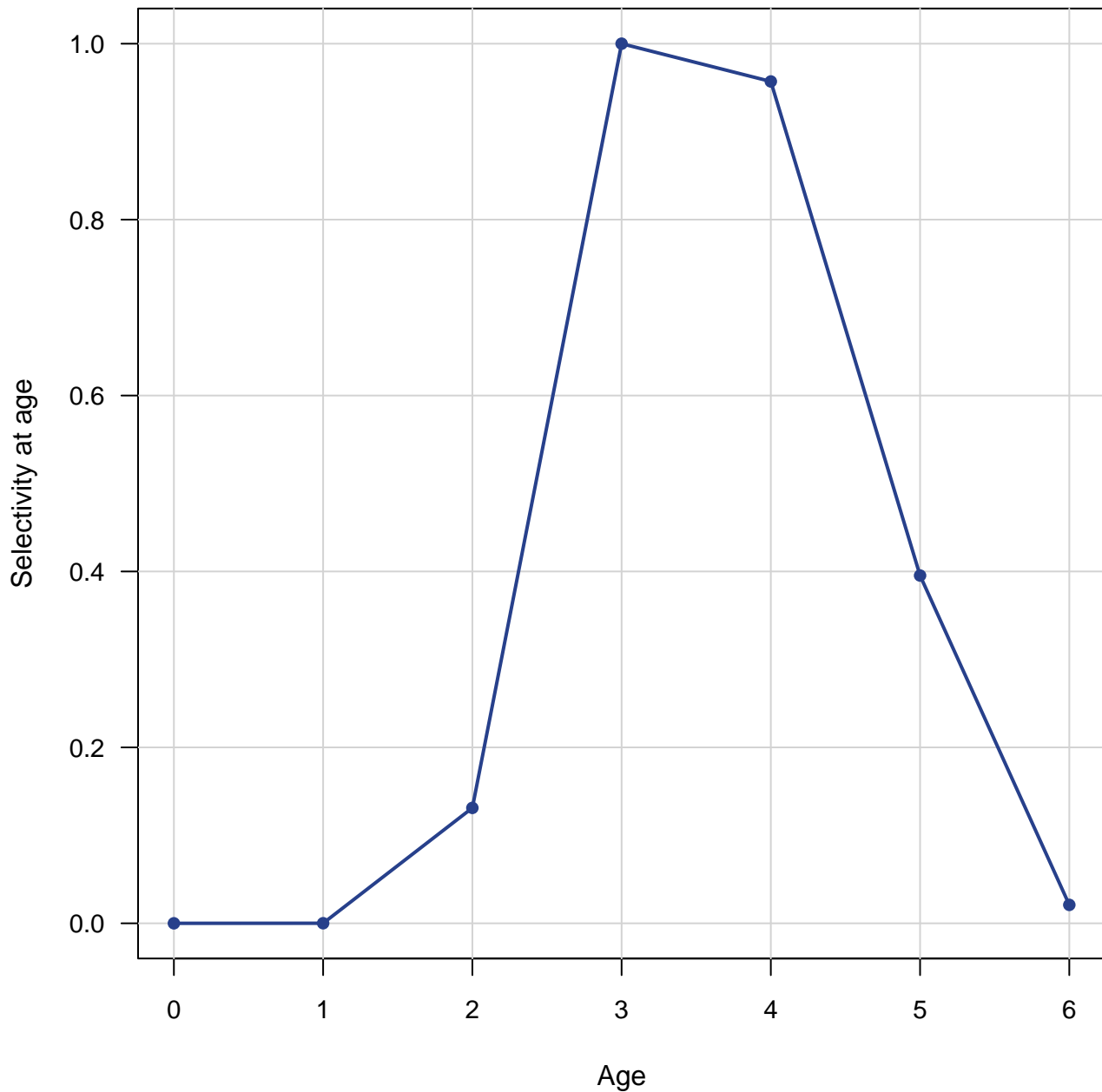
Year: 2013



Selectivity in: cBn

Data: menhaden

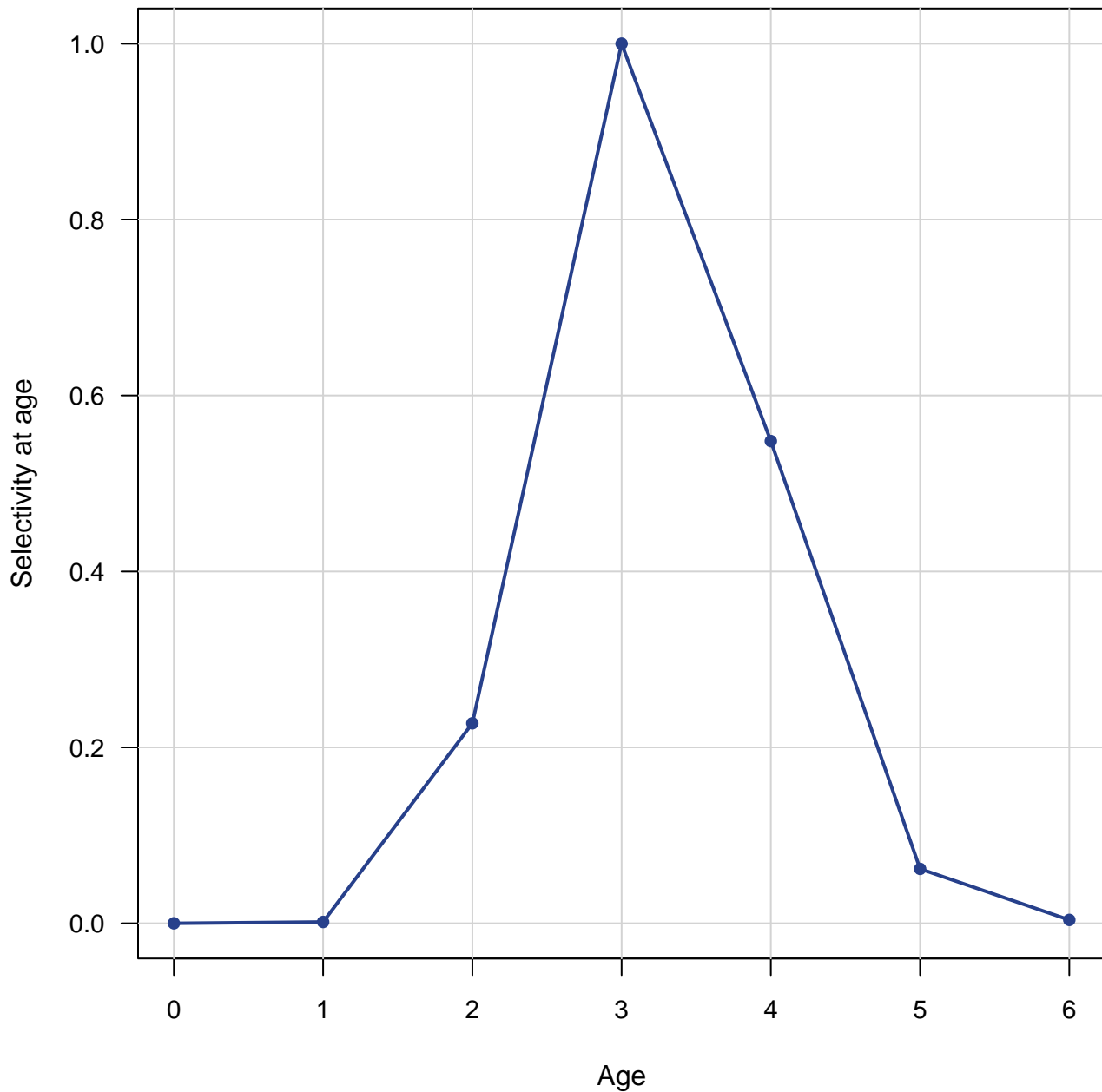
Year: 1955



Selectivity in: cBn

Data: menhaden

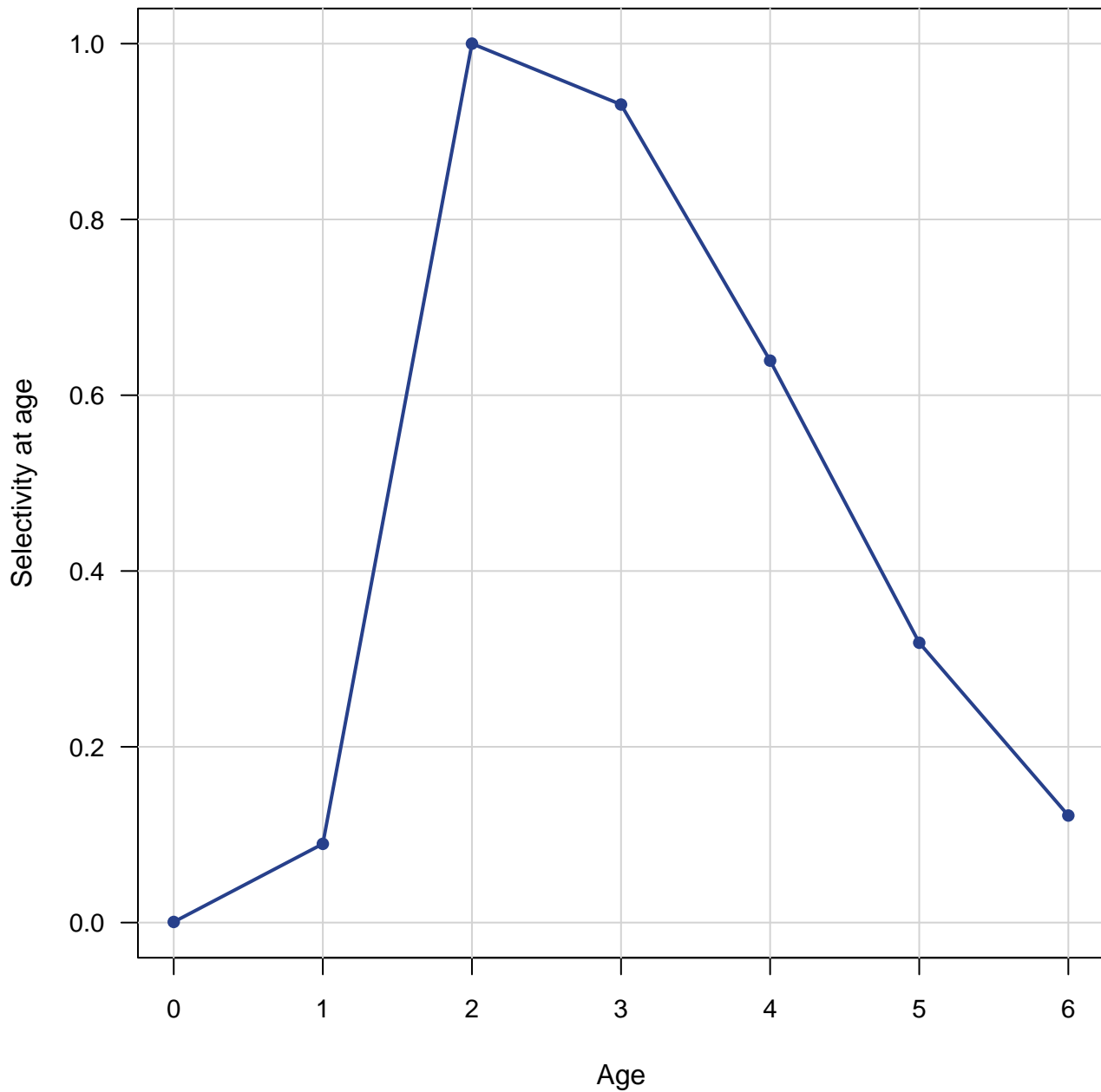
Year: 2013



Selectivity in: cBs

Data: menhaden

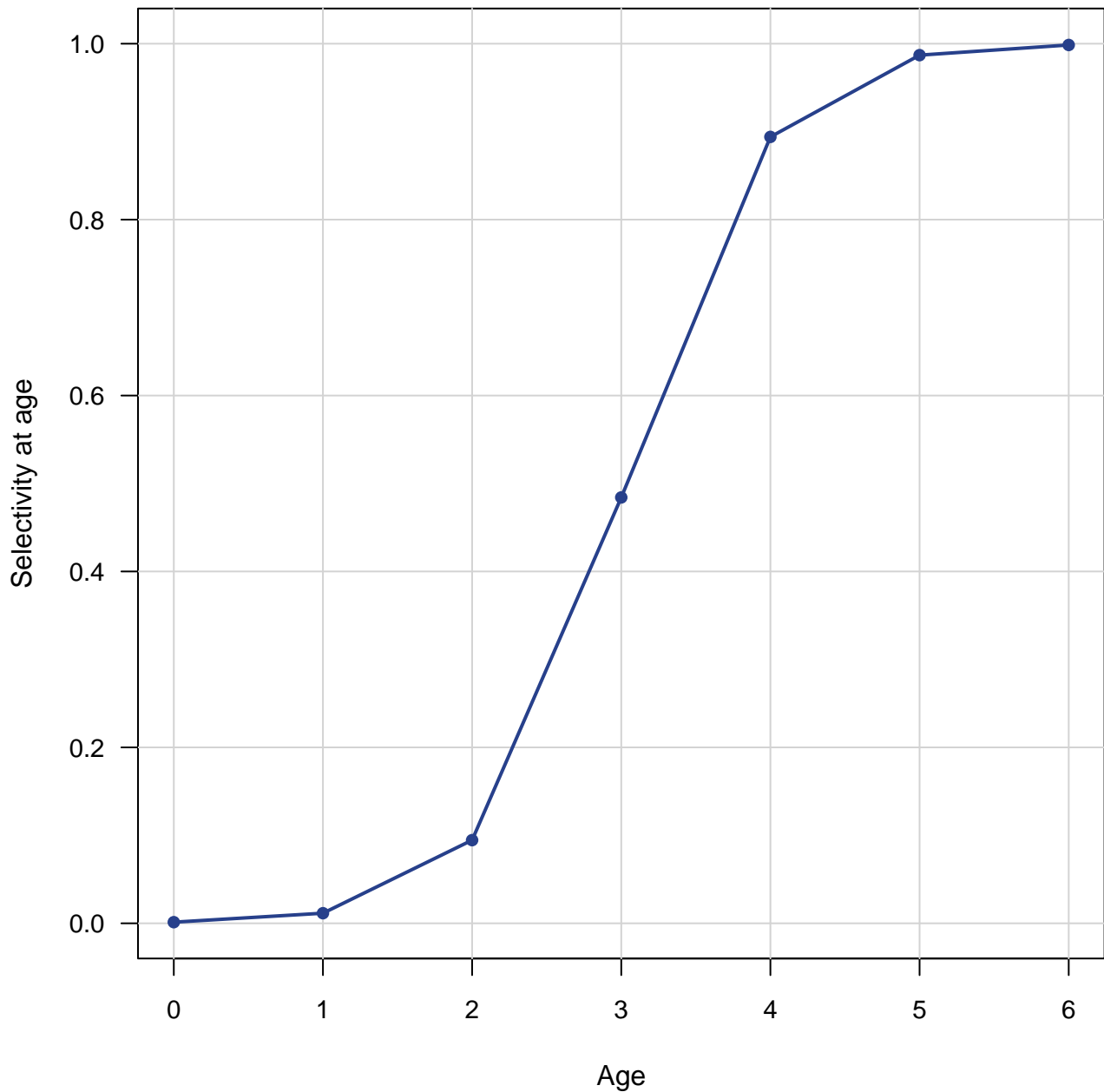
Year: 1955



Selectivity in: nad

Data: menhaden

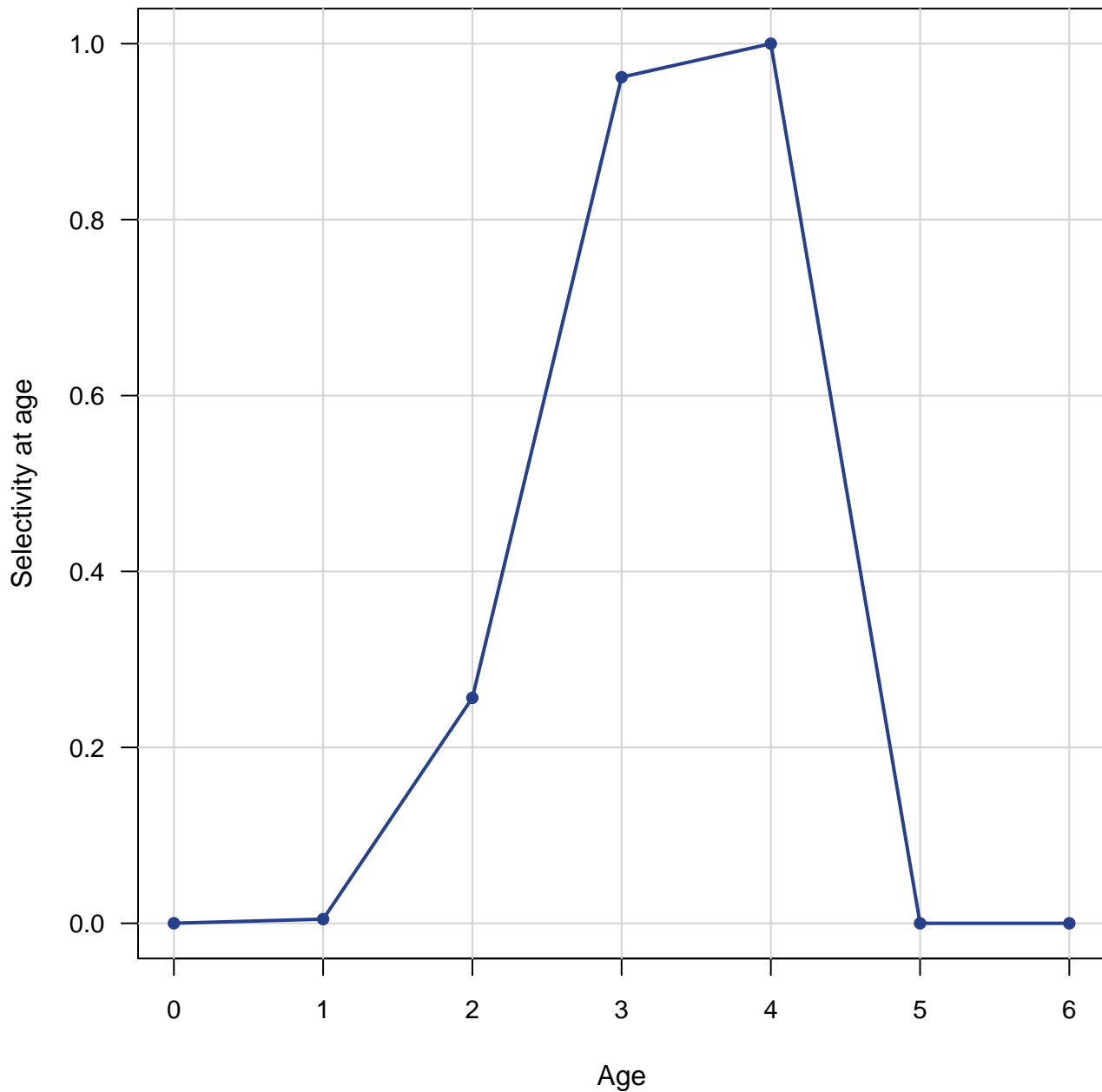
Year: 1990



Selectivity in: mad

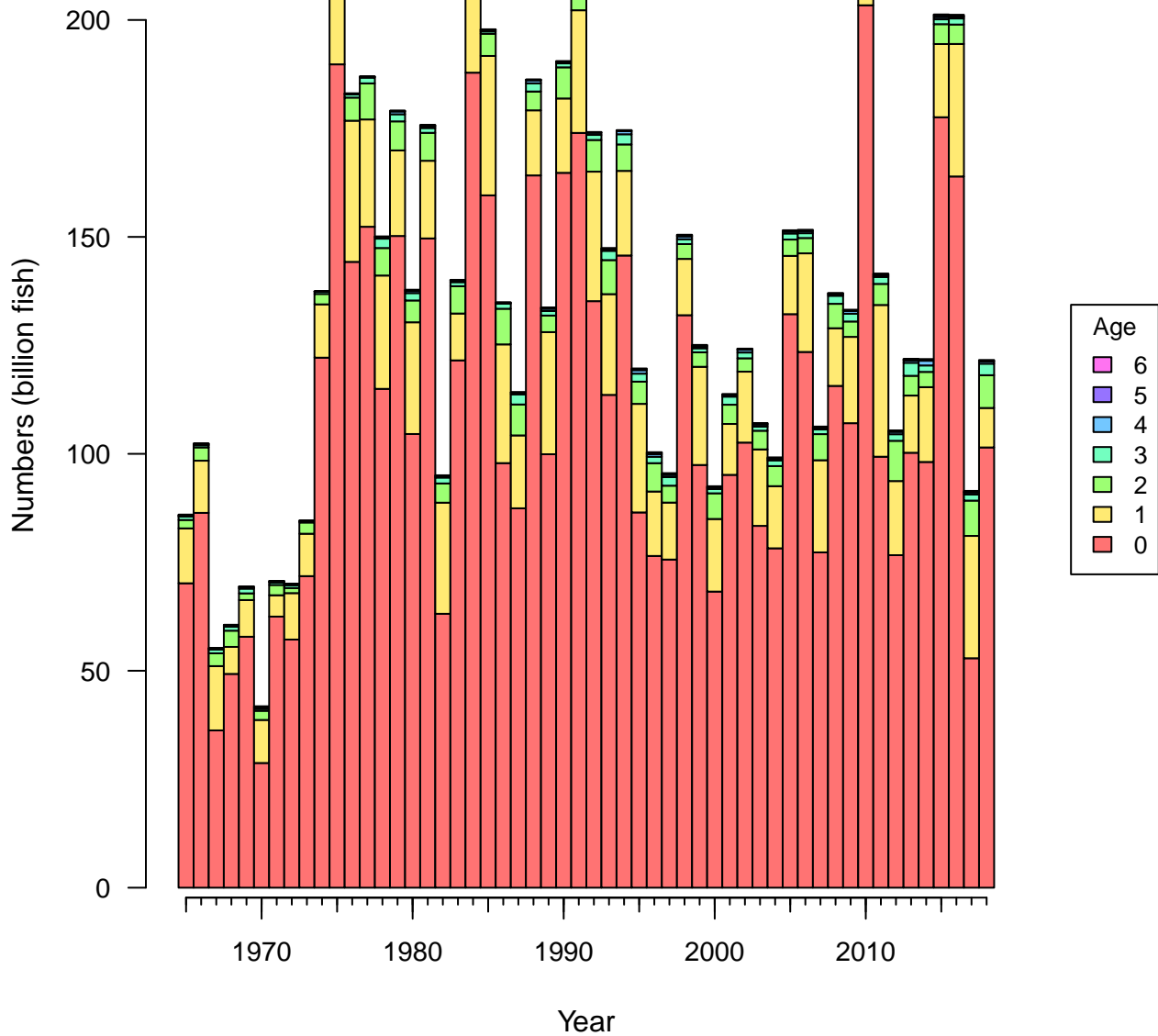
Data: menhaden

Year: 1985

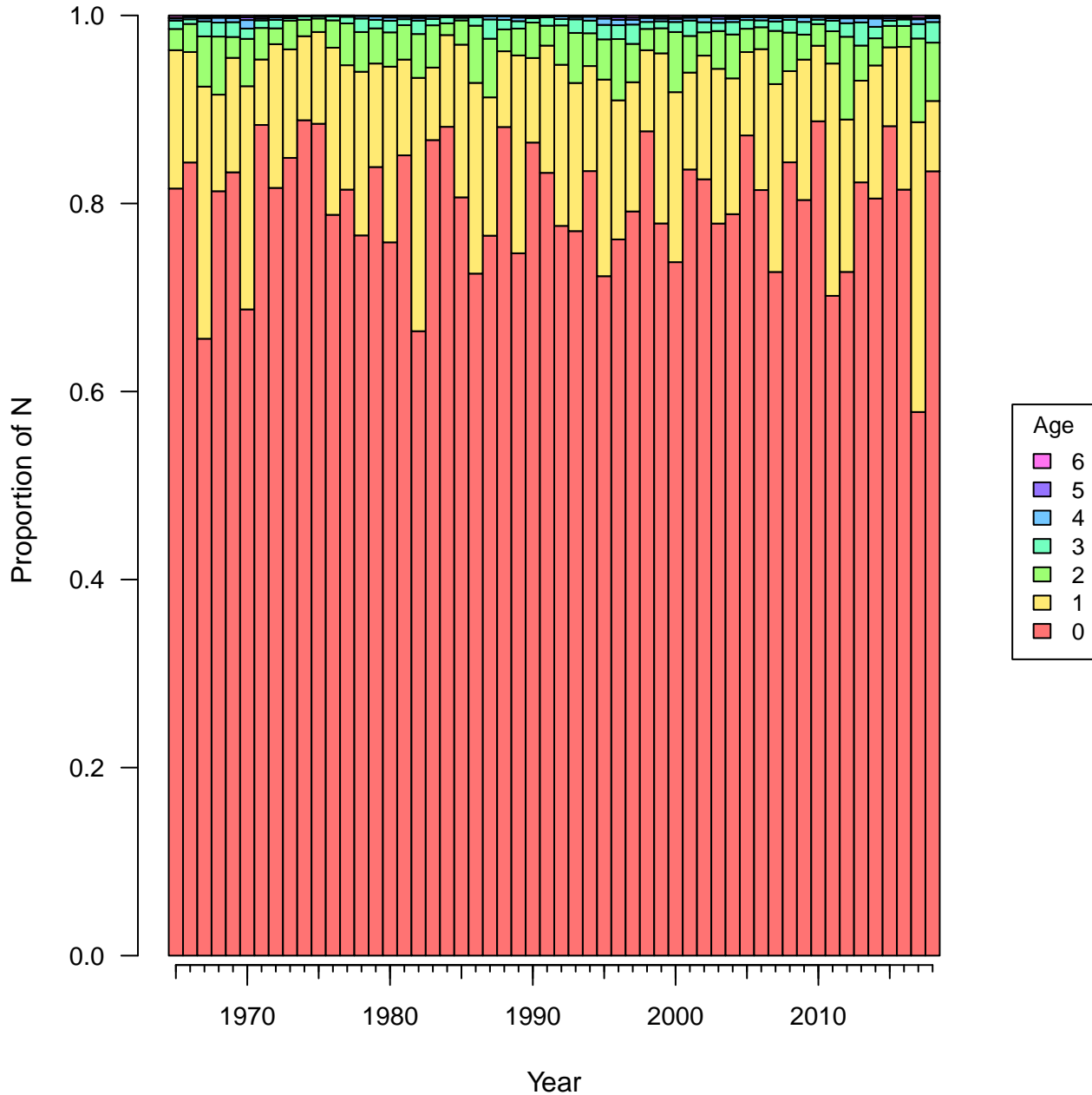


N at age

Data: menhaden



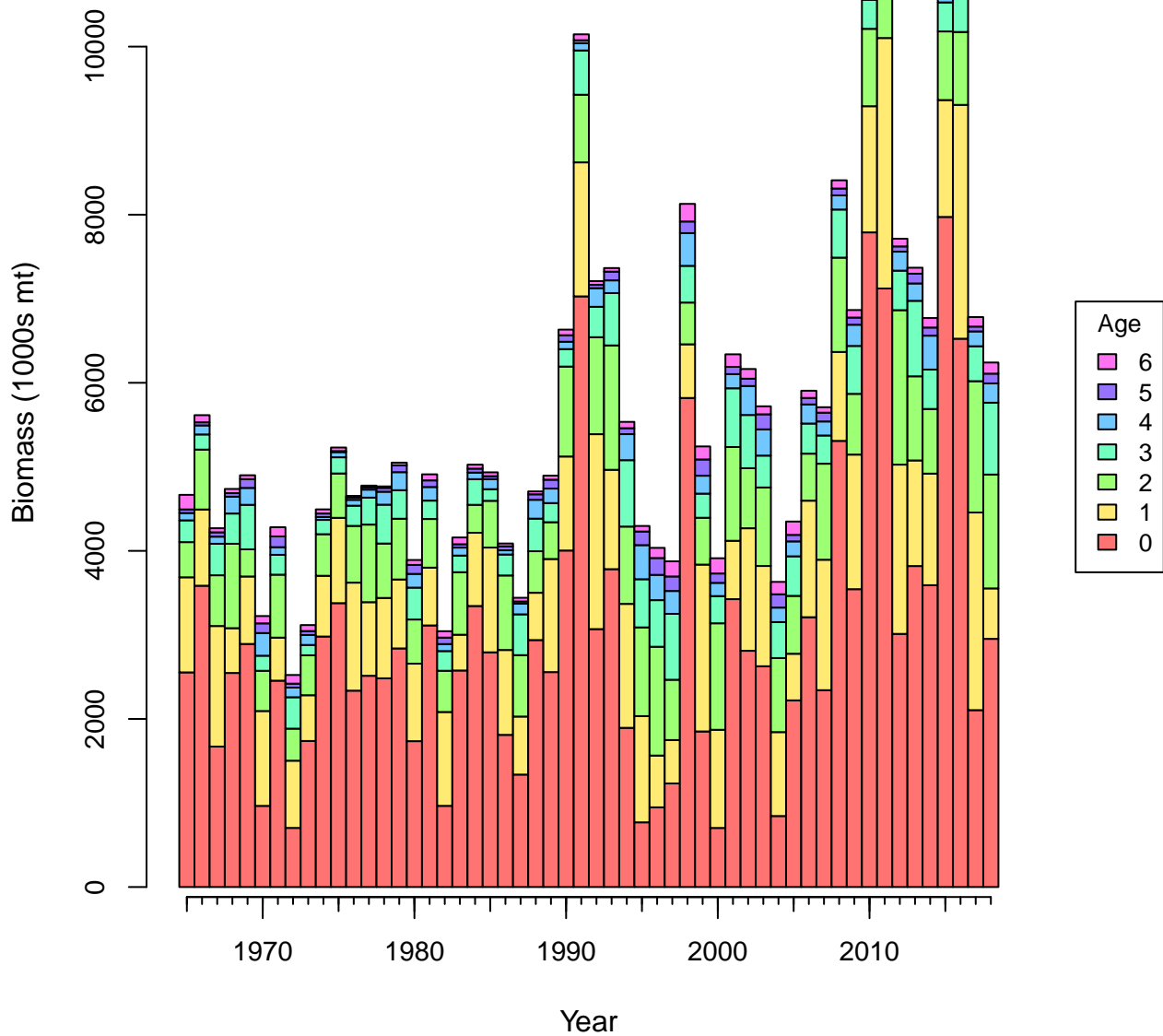
Proportion N at age      Data: menhaden



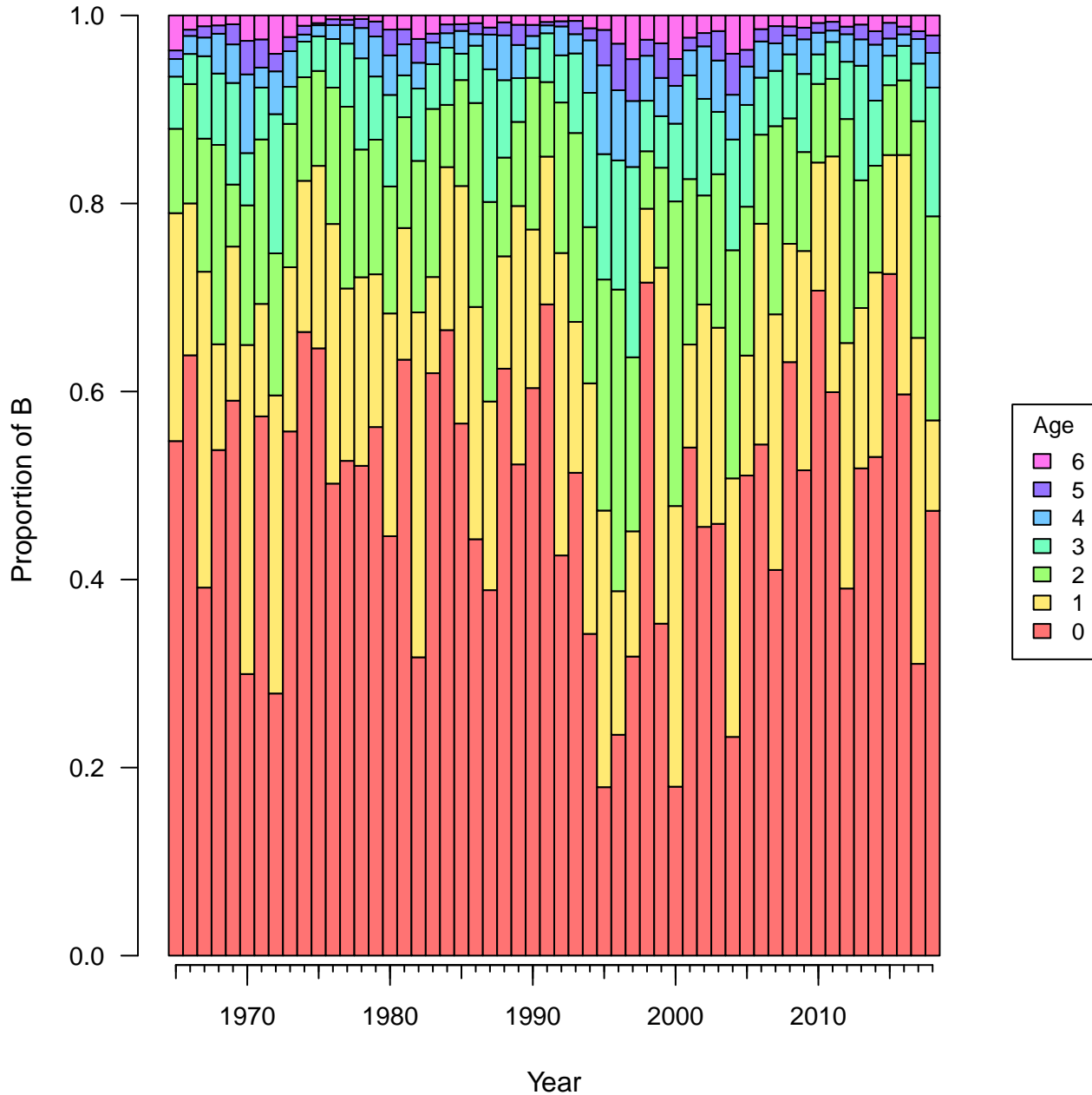


Biomass at age

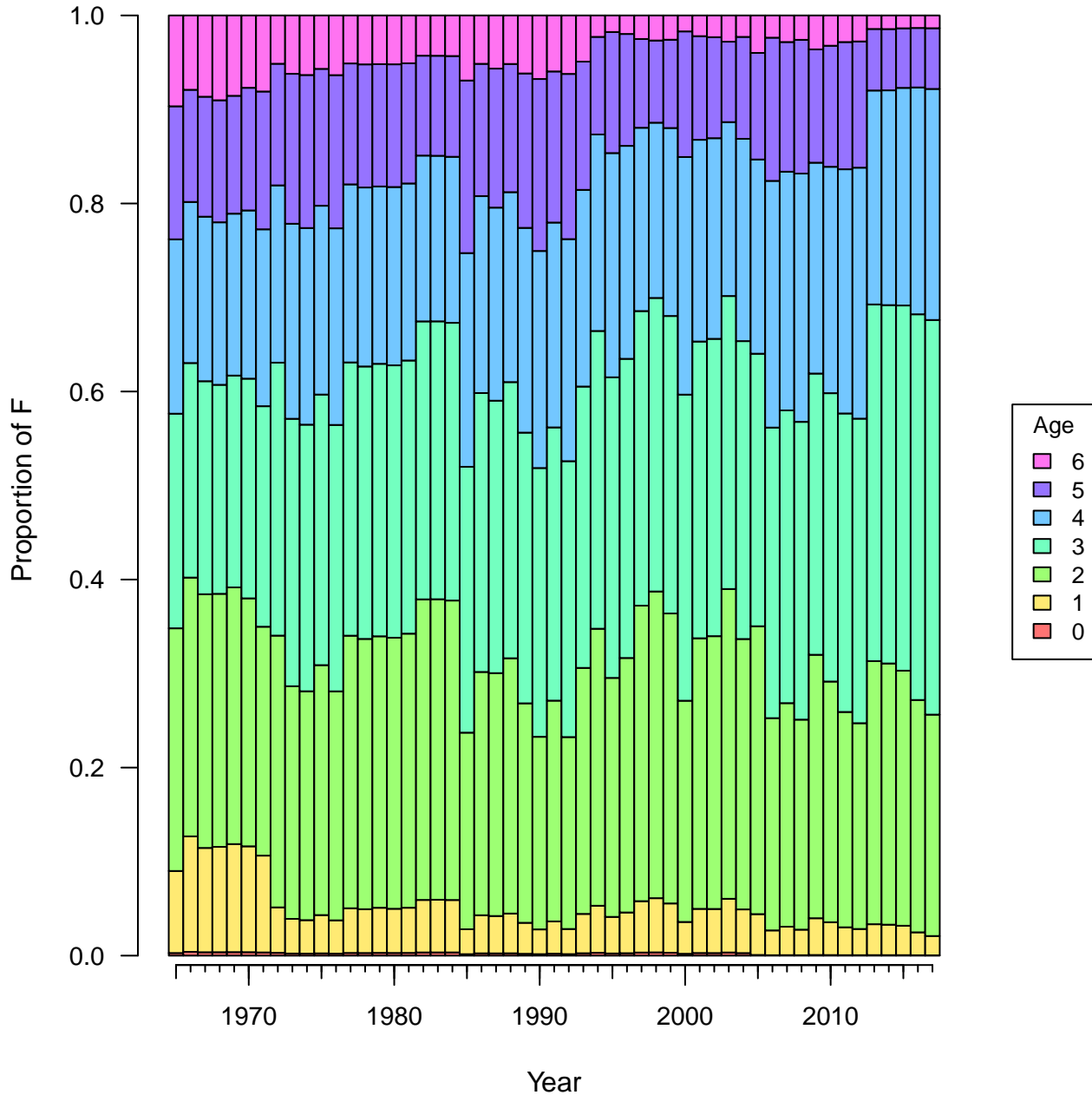
Data: menhaden



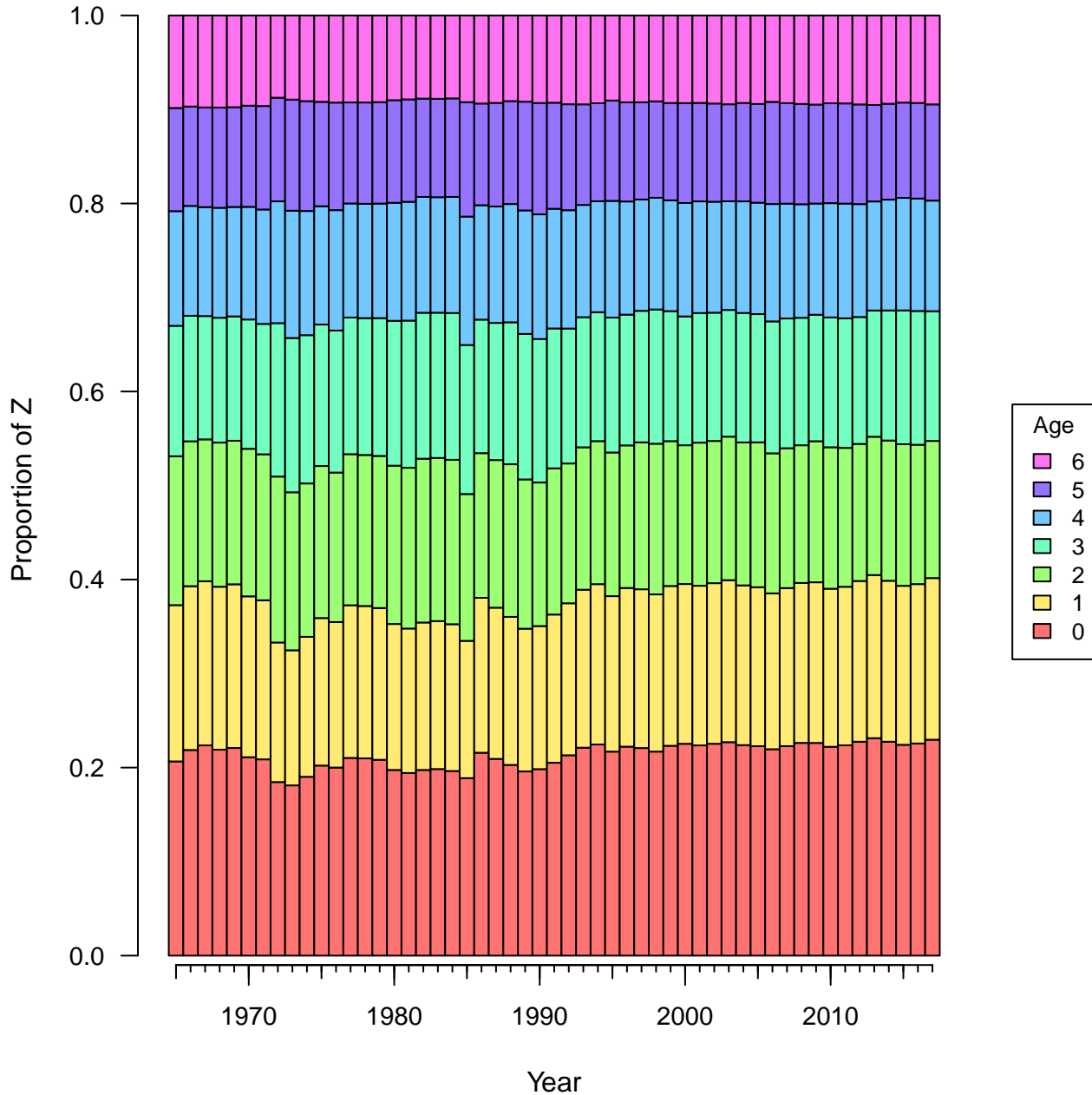
Proportion B at age      Data: menhaden



Proportion F at age      Data: menhaden



Proportion Z at age      Data: menhaden



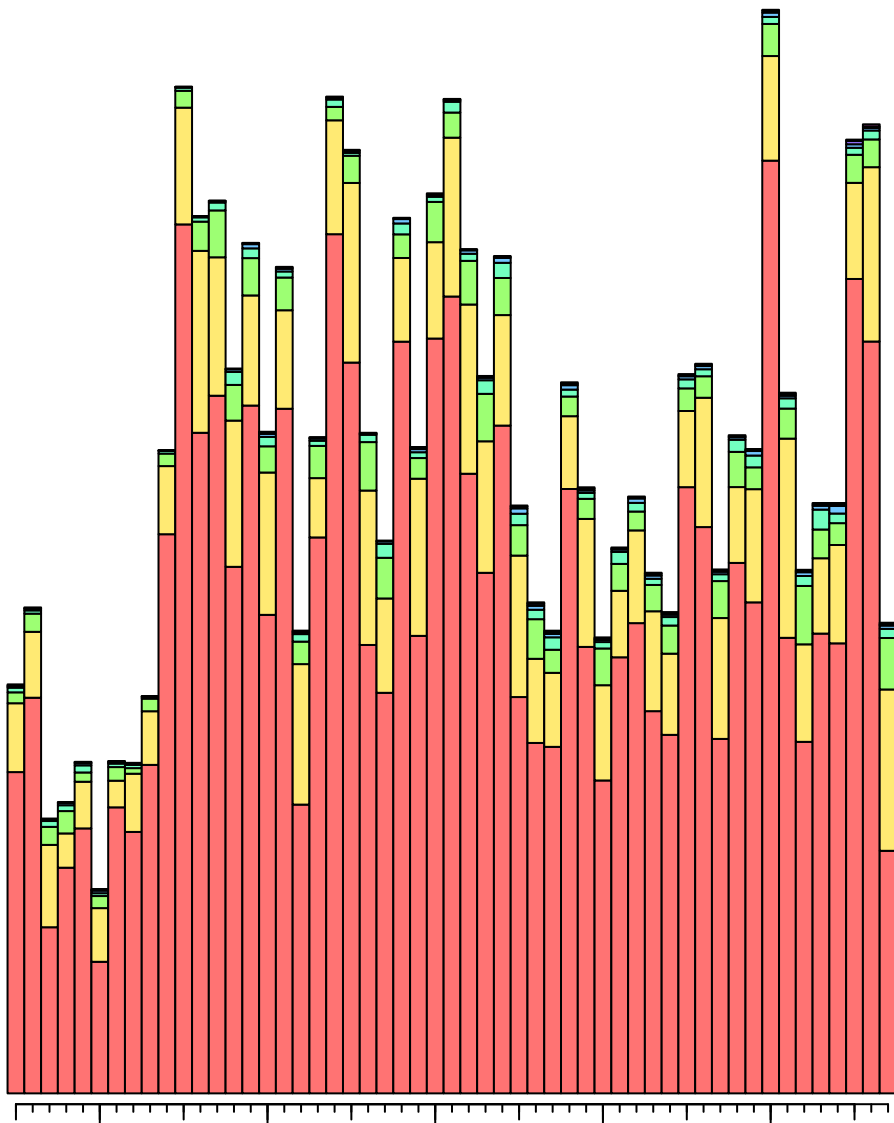
N.age.mdyr

Data: menhaden

N.age.mdyr at age



80  
60  
40  
20  
0



Year

N.age.mdyr

Data: menhaden

Proportion of N.age.mdyr

1.0  
0.8  
0.6  
0.4  
0.2  
0.0

1970

1980

1990

2000

2010

Year

Age

6

5

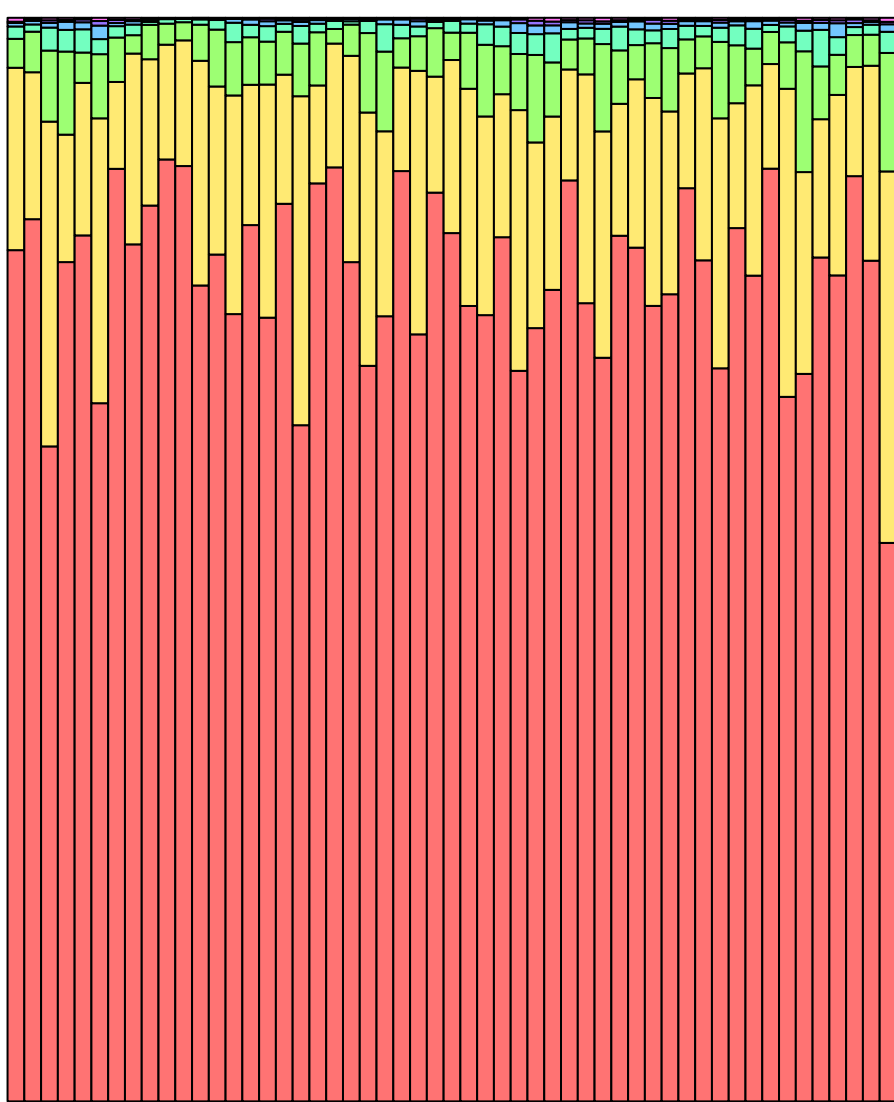
4

3

2

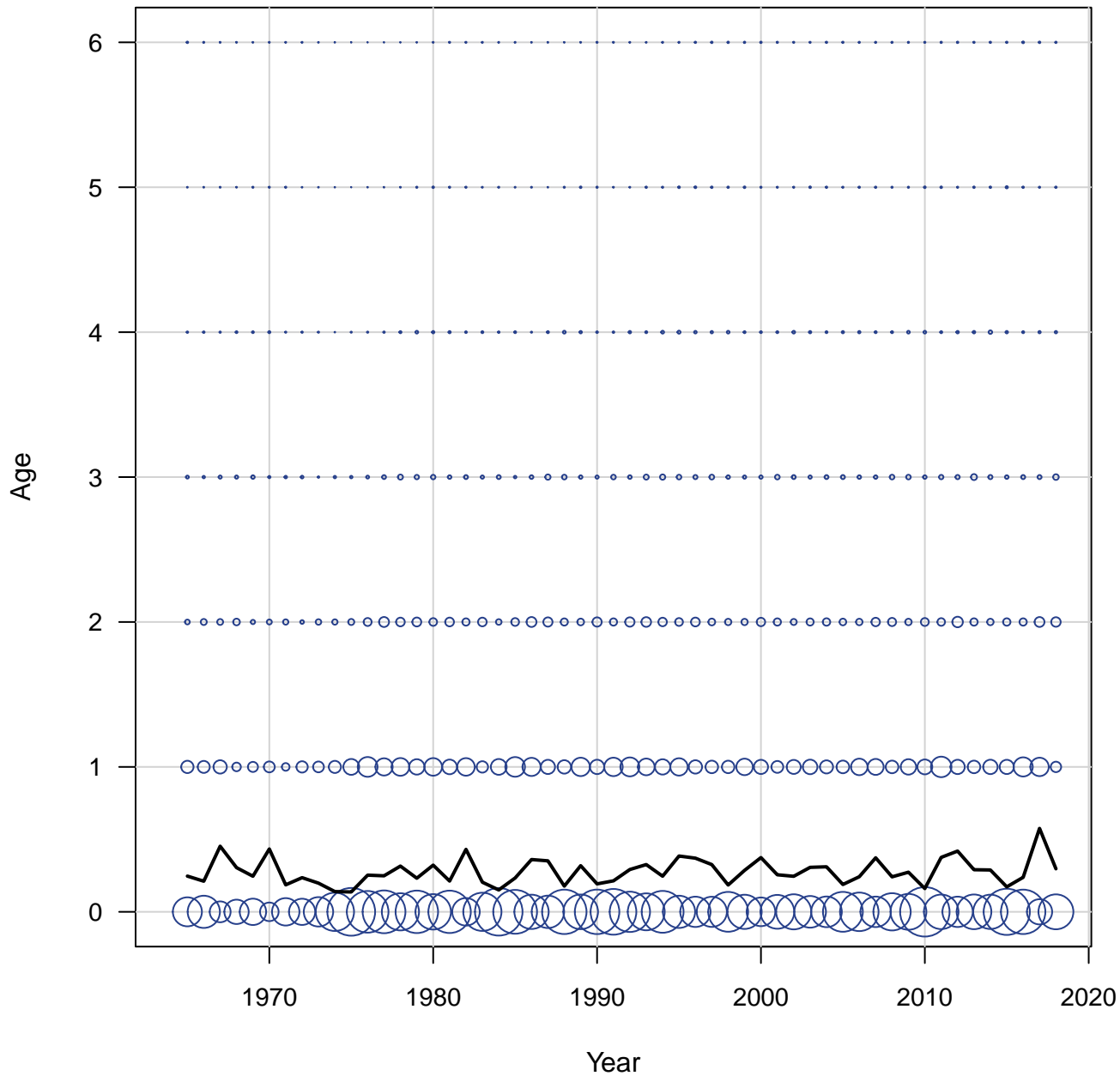
1

0

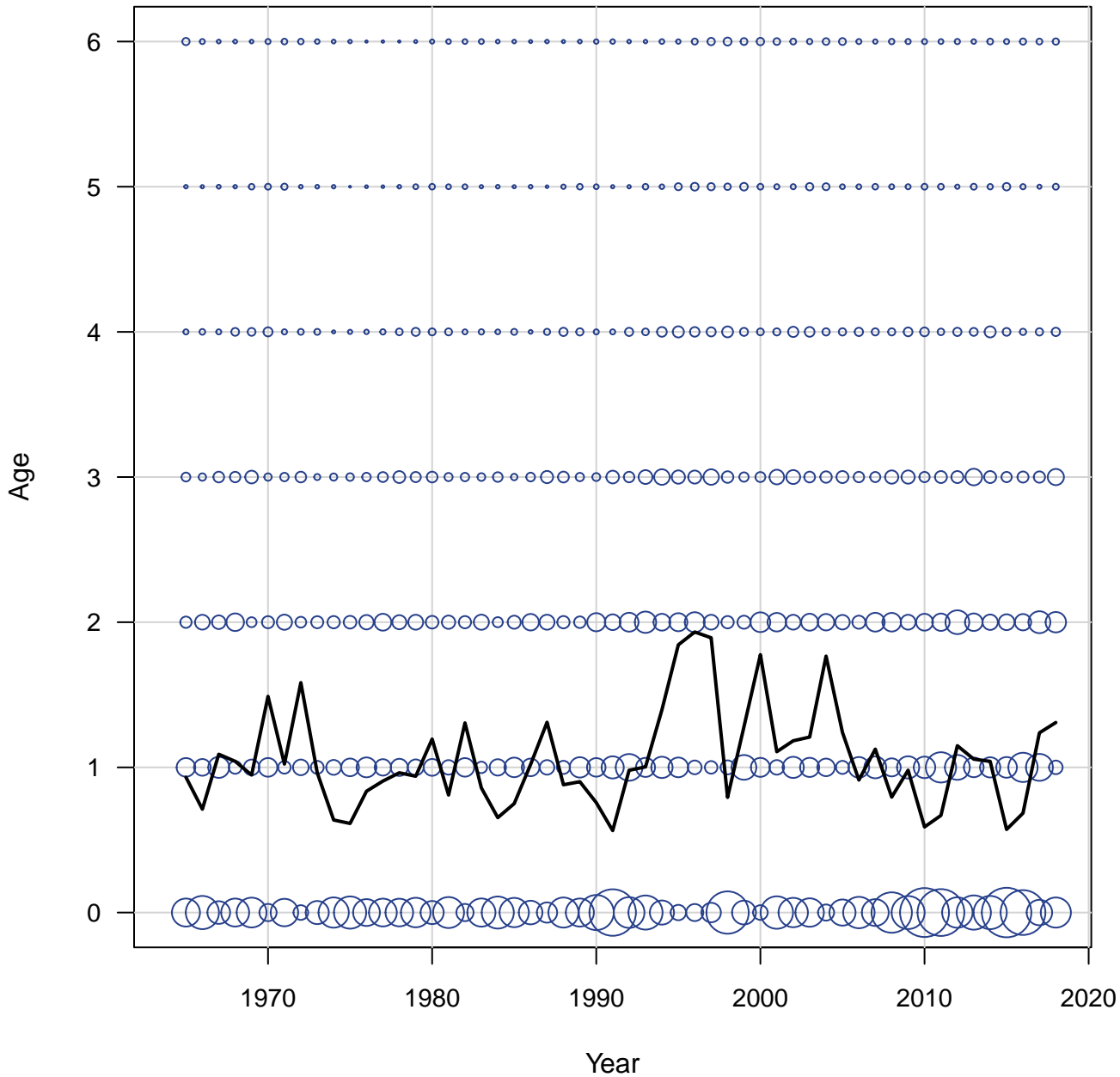


**N at age      Data: menhaden**

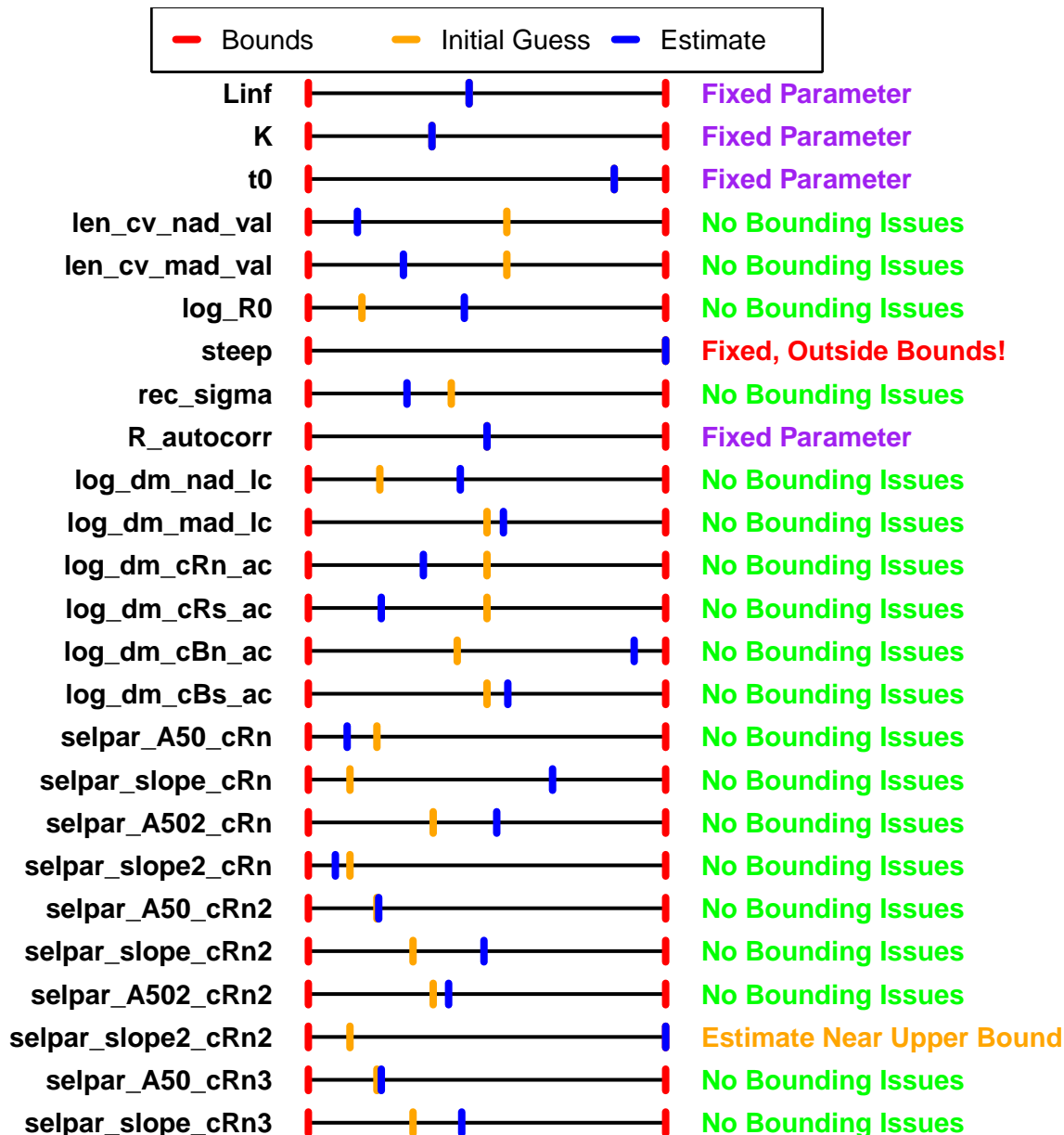
## Data: menhaden

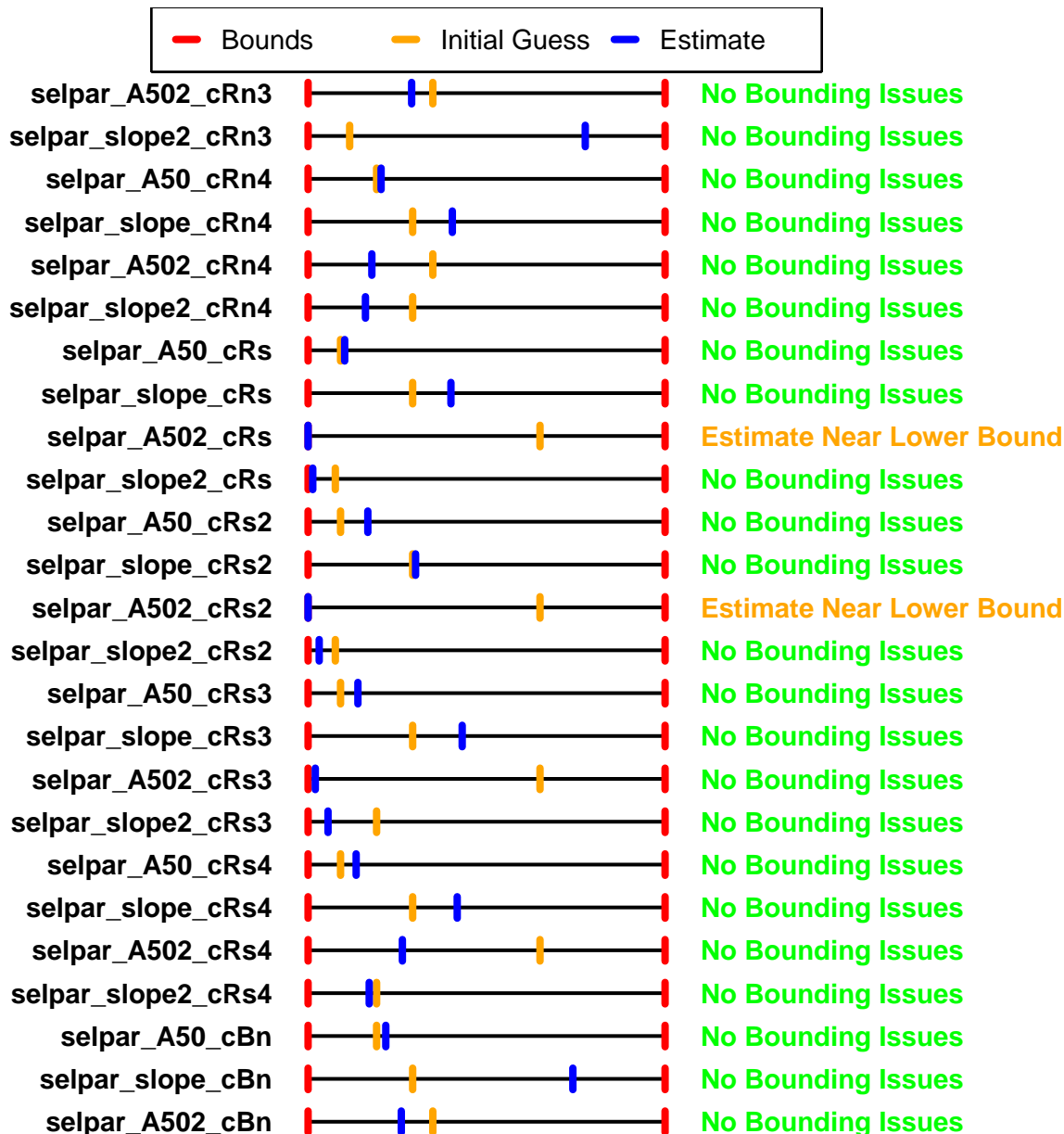


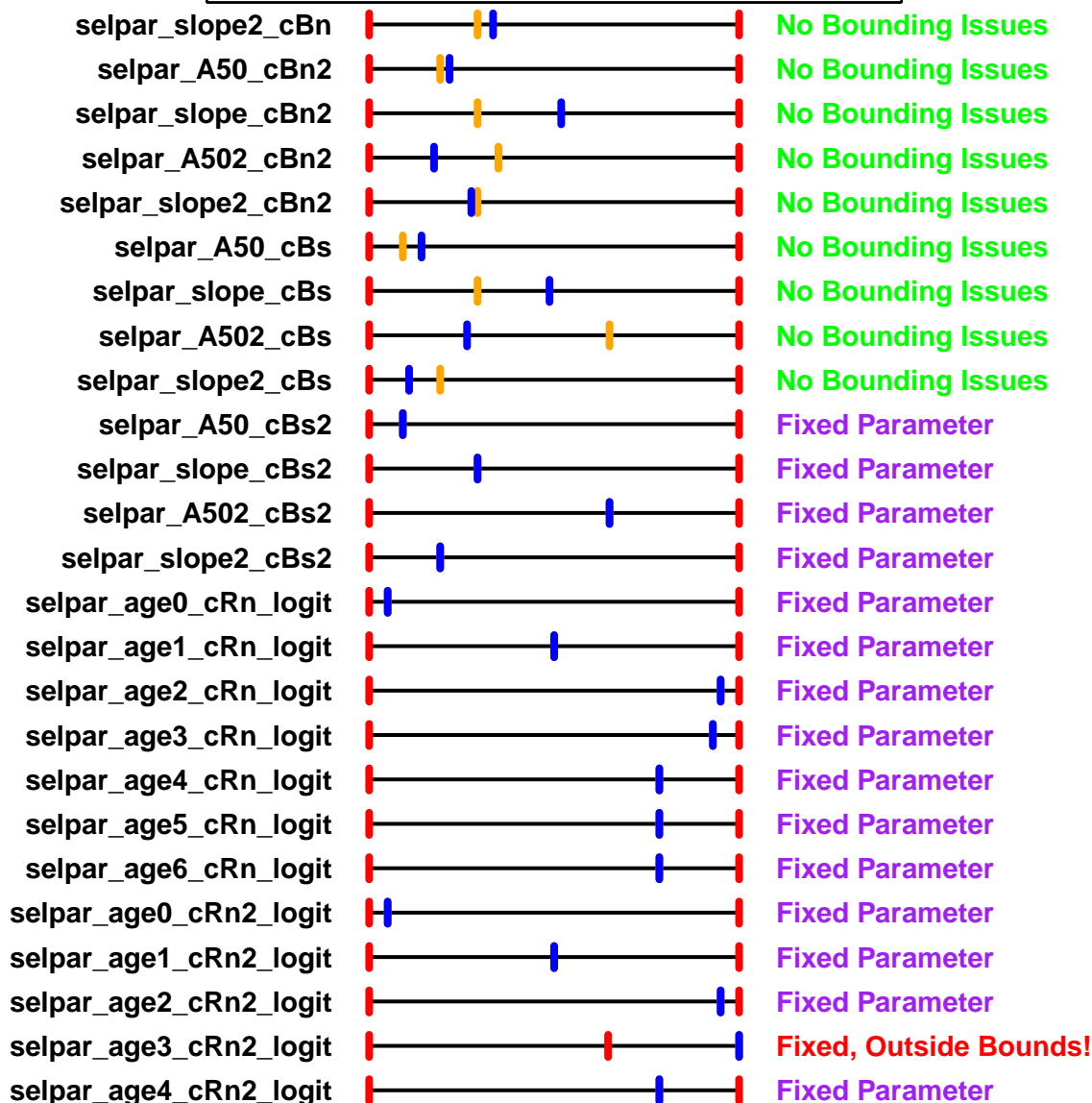
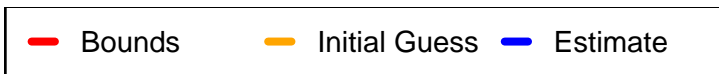
# B at age      Data: menhaden

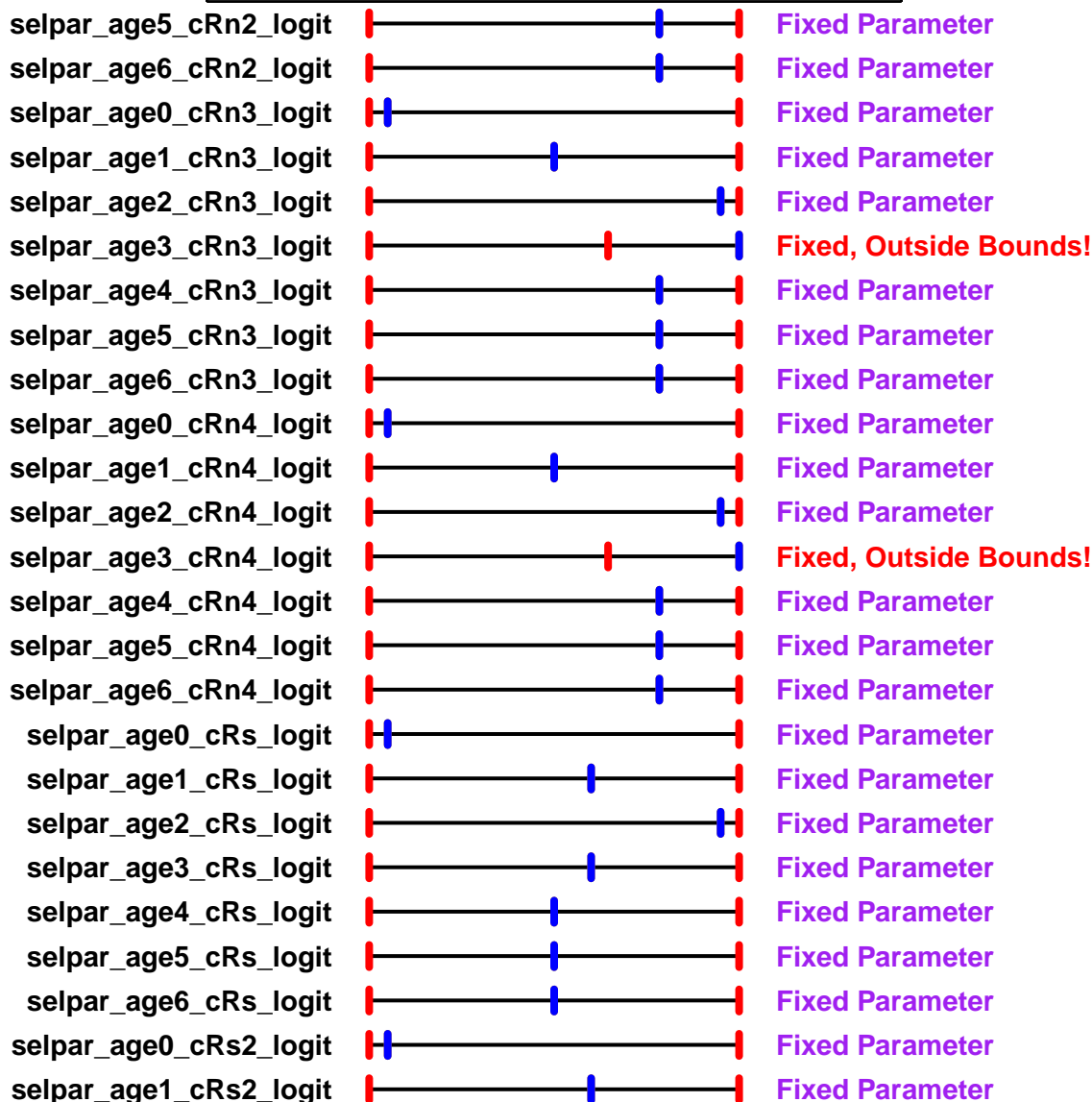
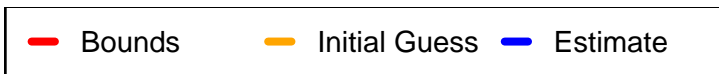


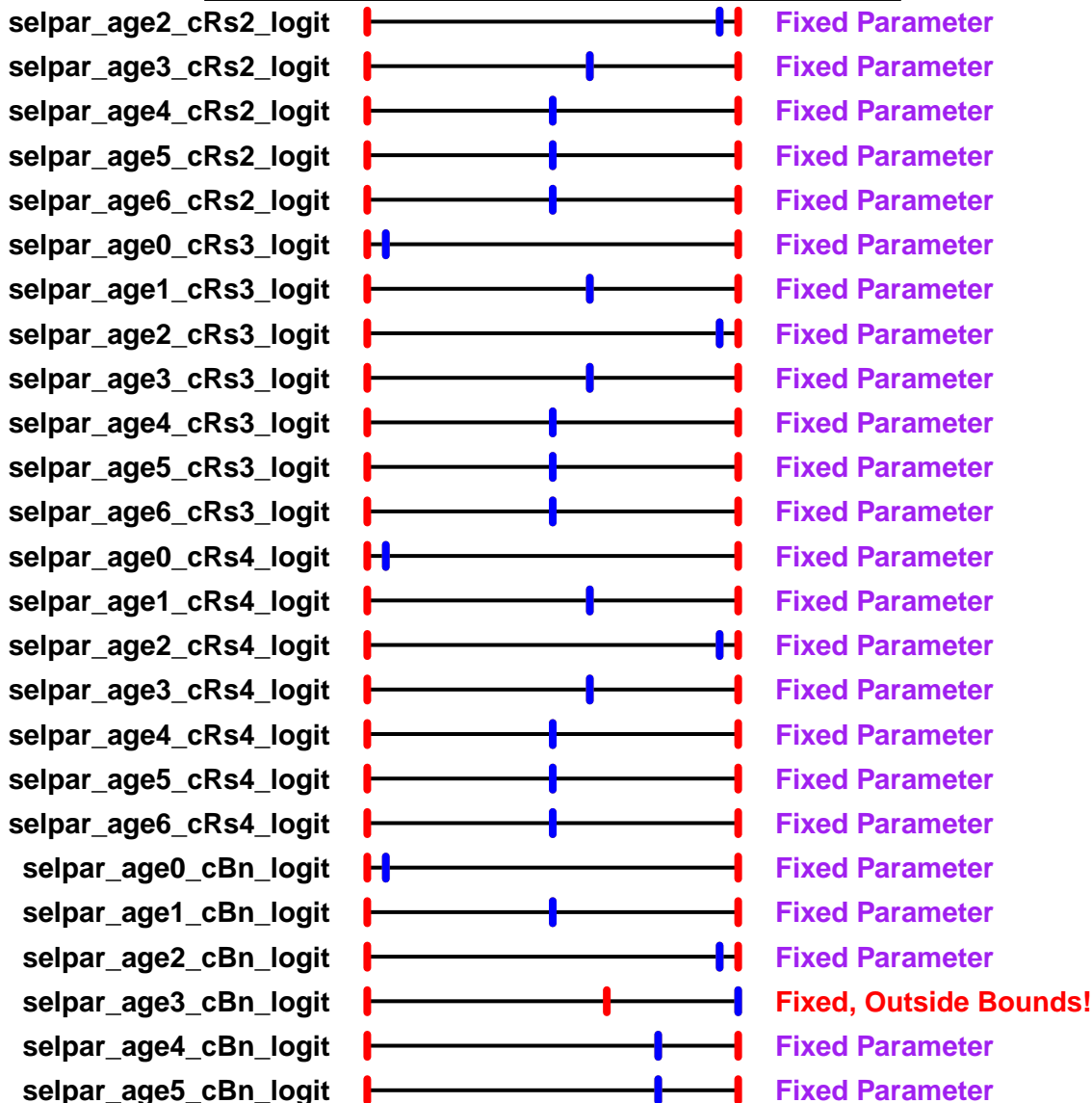
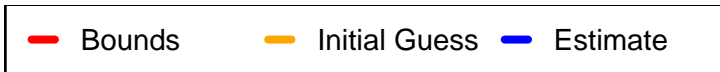


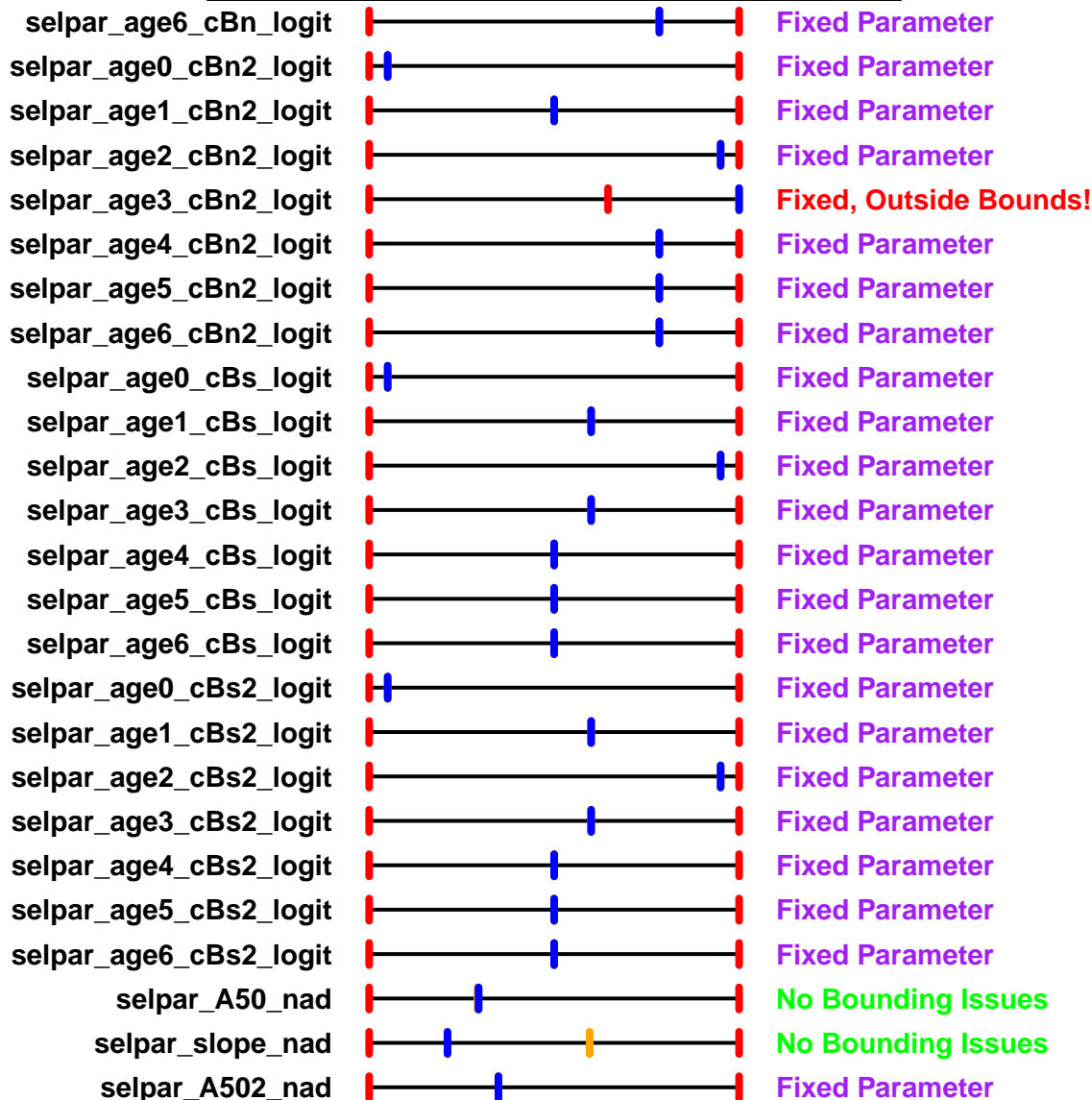
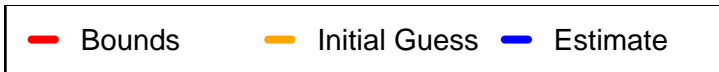


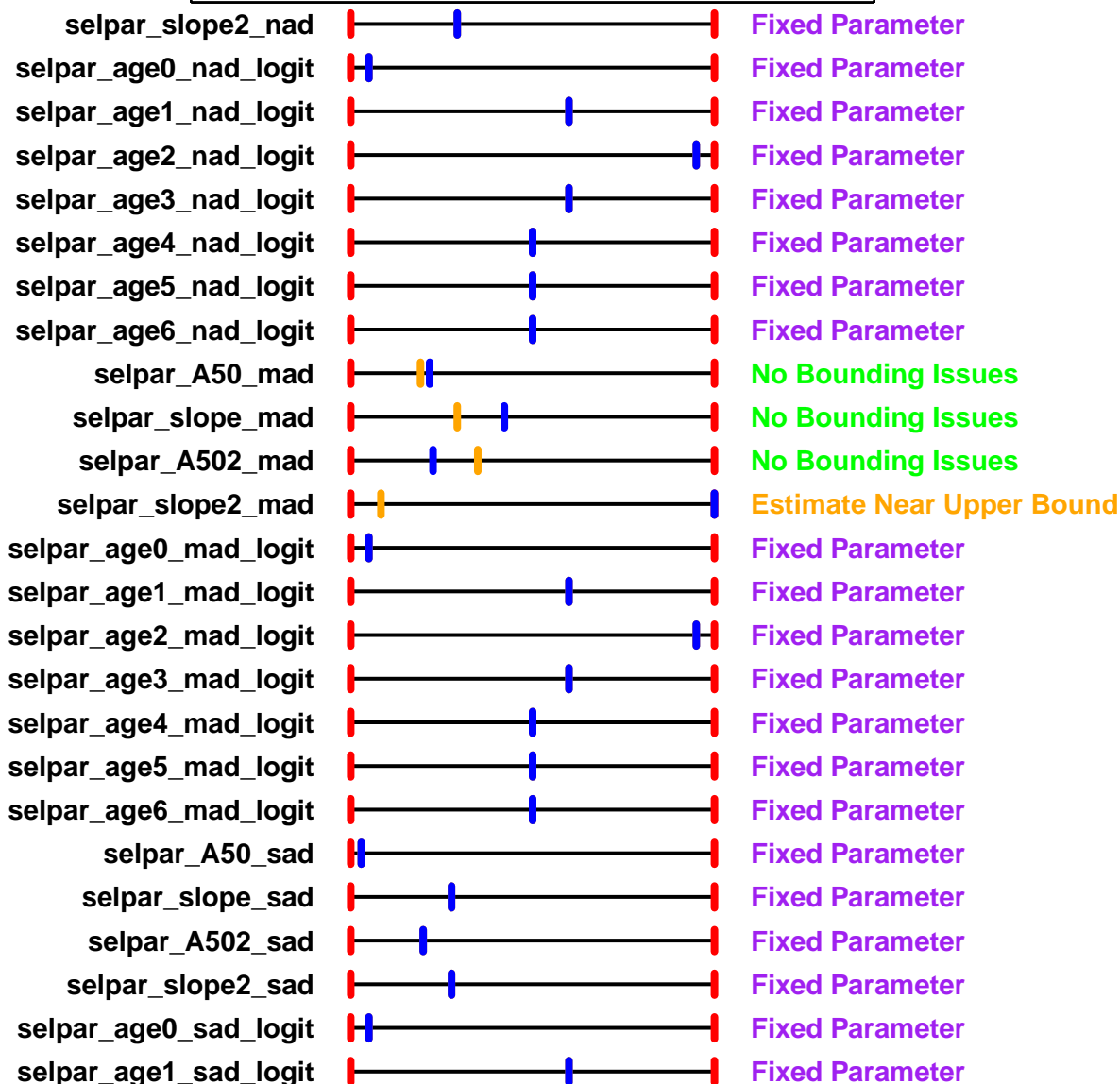
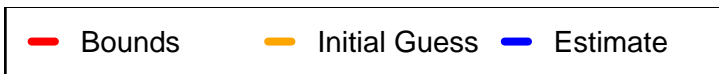


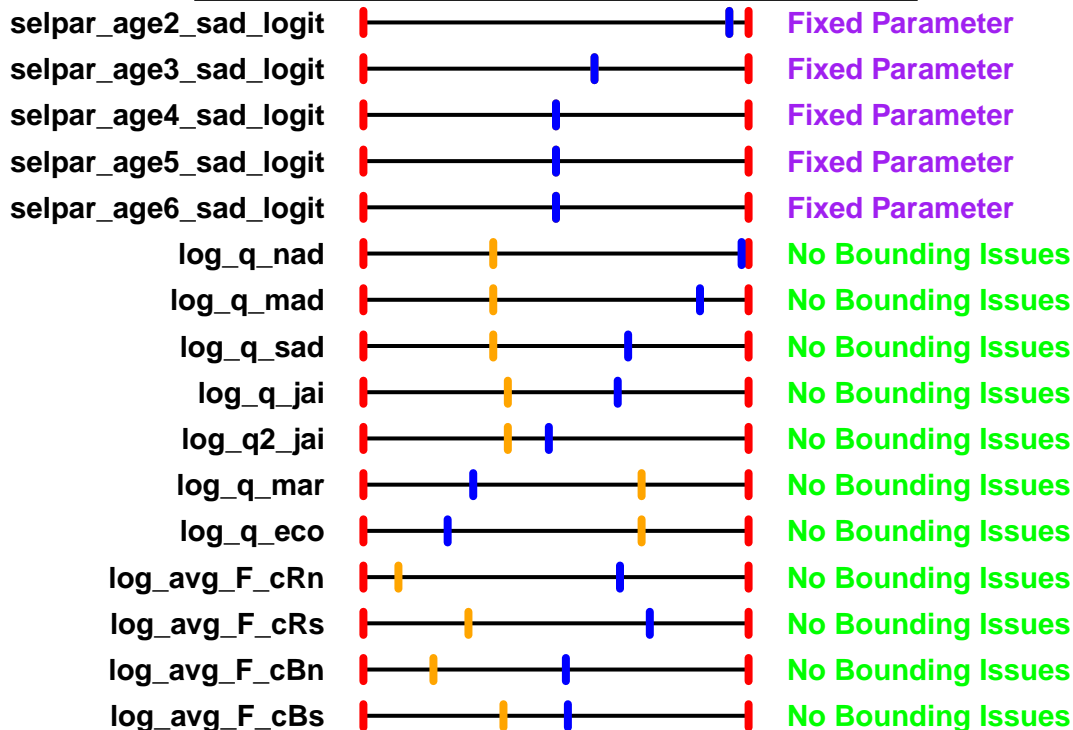
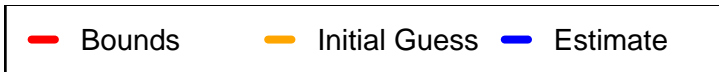






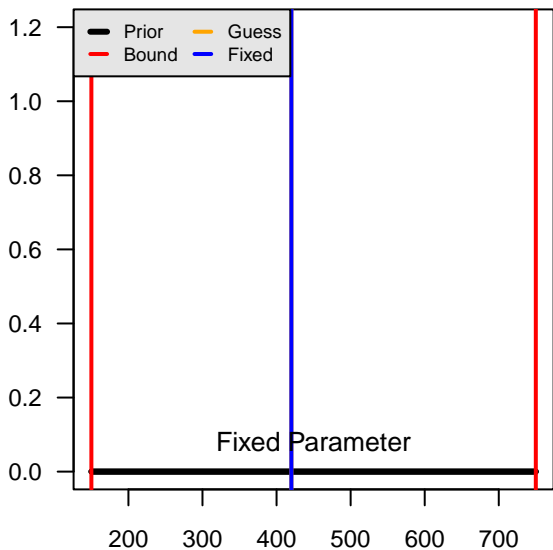






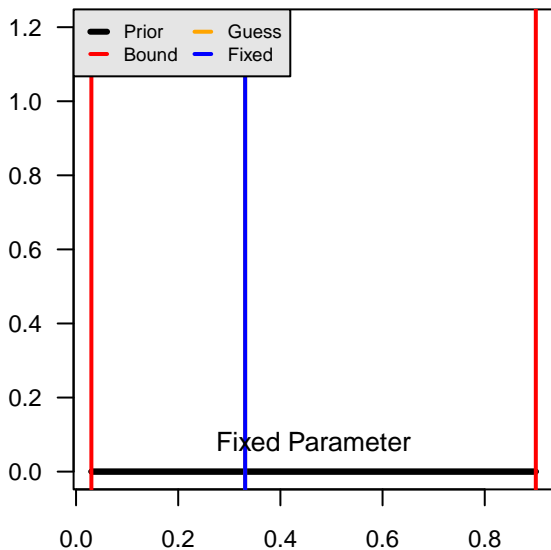


Likelihood



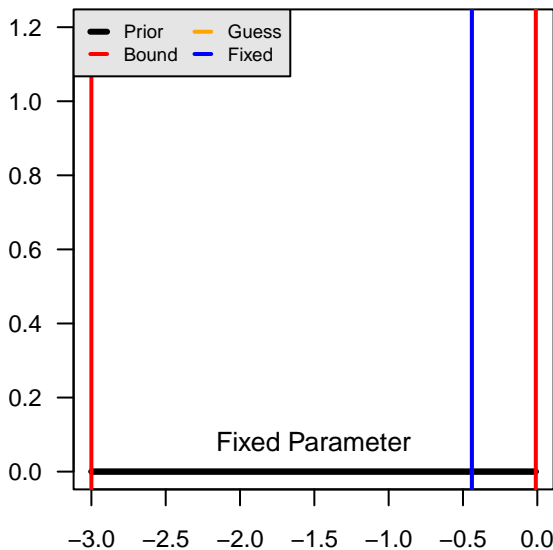
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Likelihood



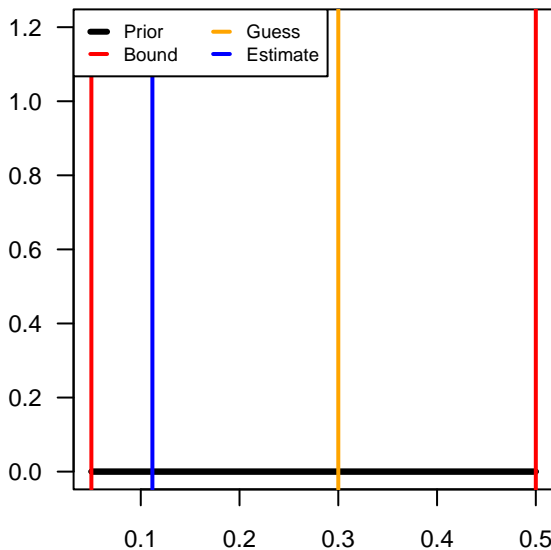
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Likelihood



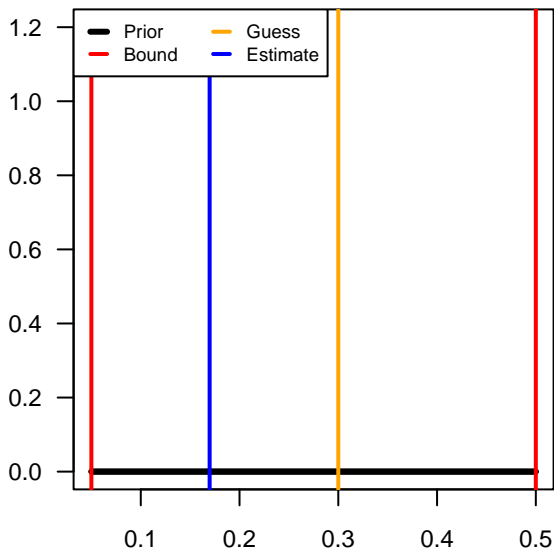
t0

Likelihood



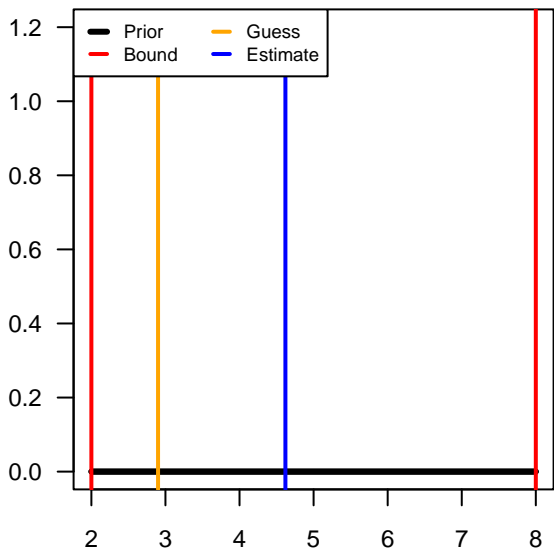
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Likelihood



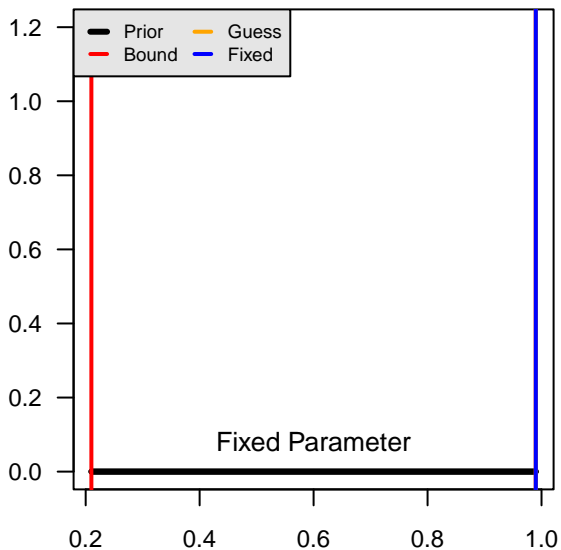
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Likelihood



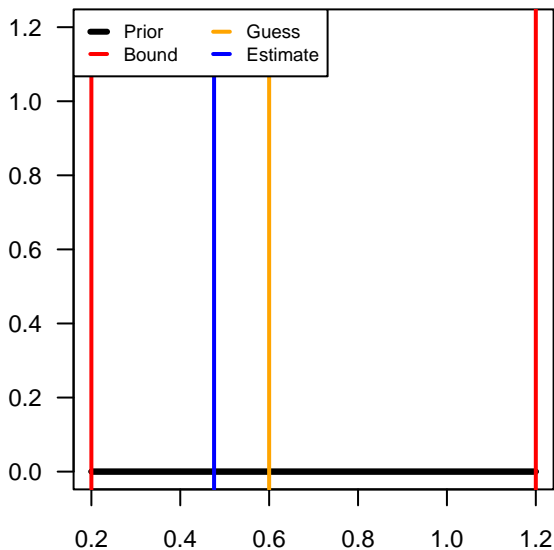
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Likelihood



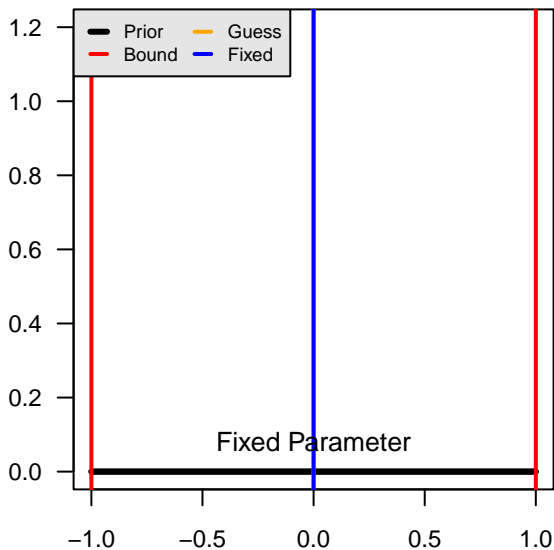
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Likelihood



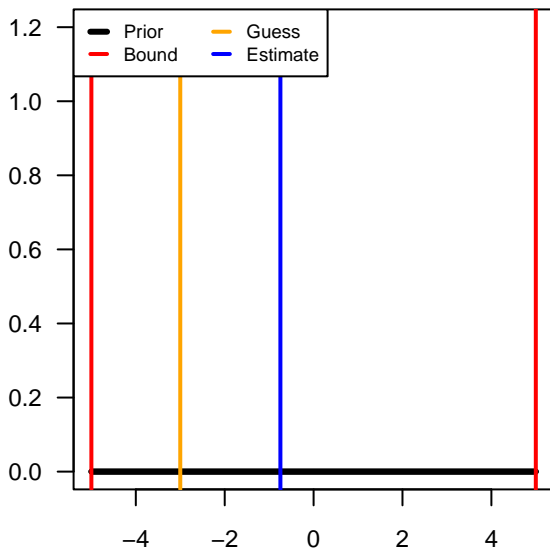
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Likelihood



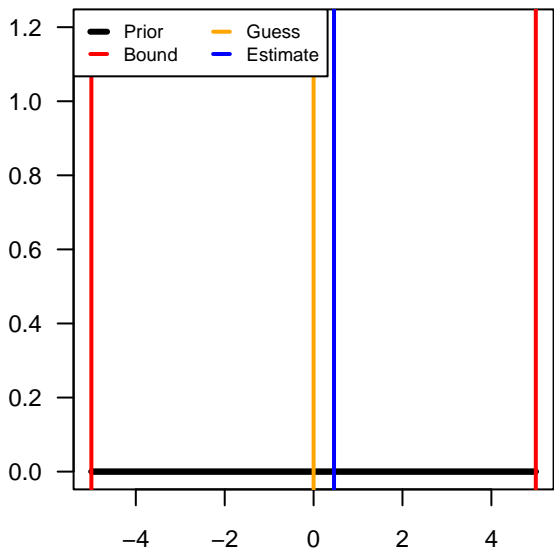
$R_{\text{autocorr}}$

Likelihood



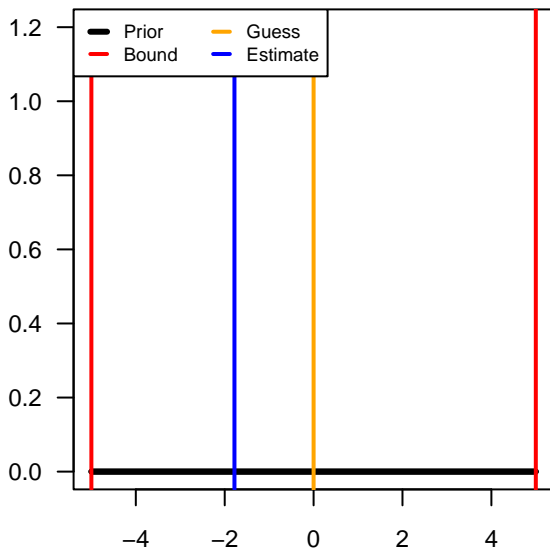
$\log_{\text{dm\_nad\_lc}}$

Likelihood



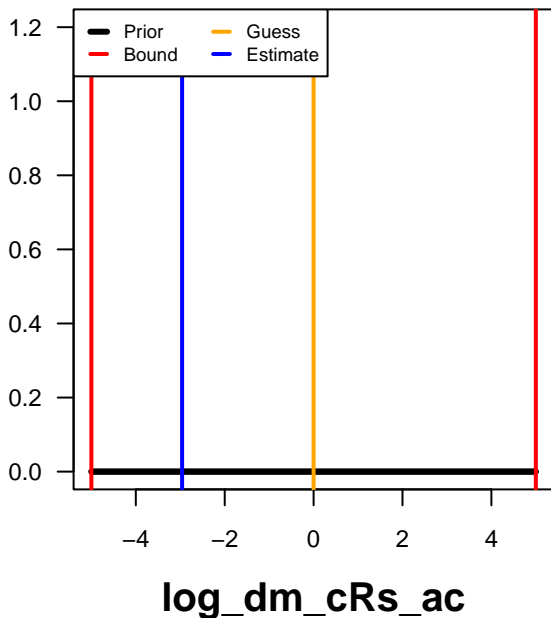
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Likelihood

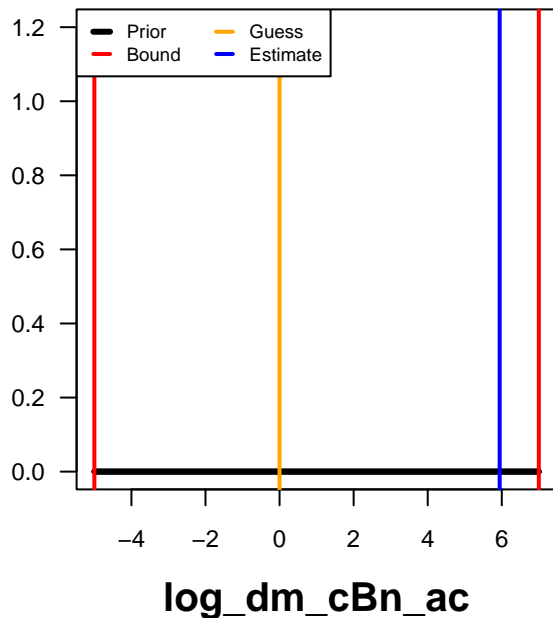


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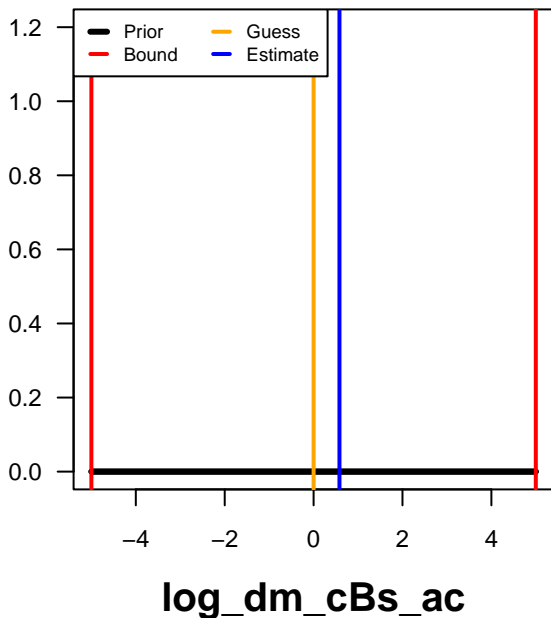
Likelihood



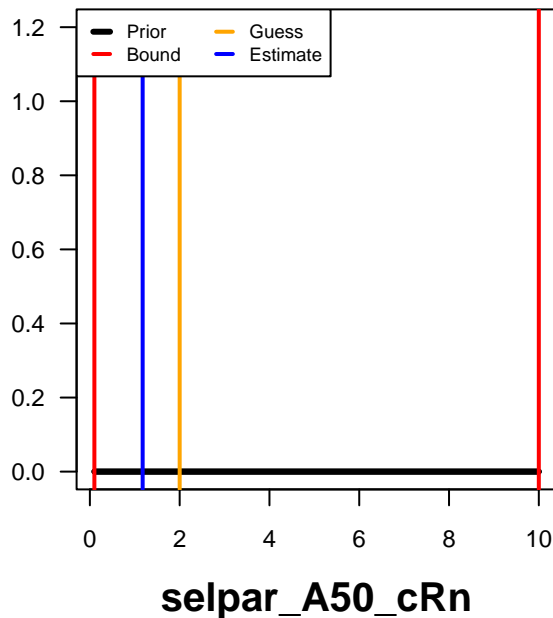
Likelihood



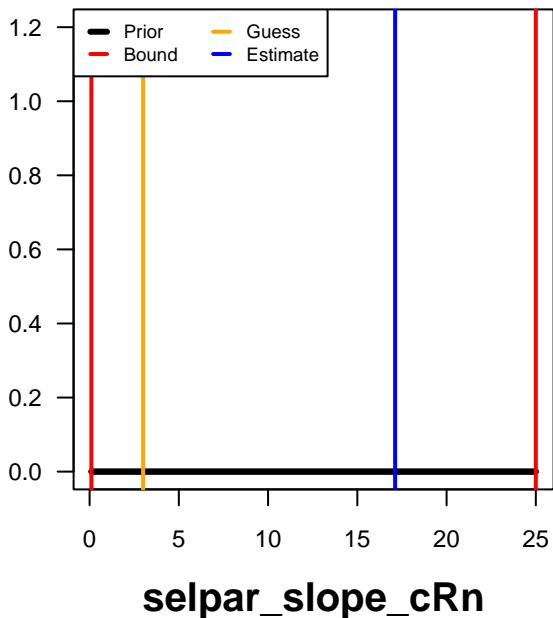
Likelihood



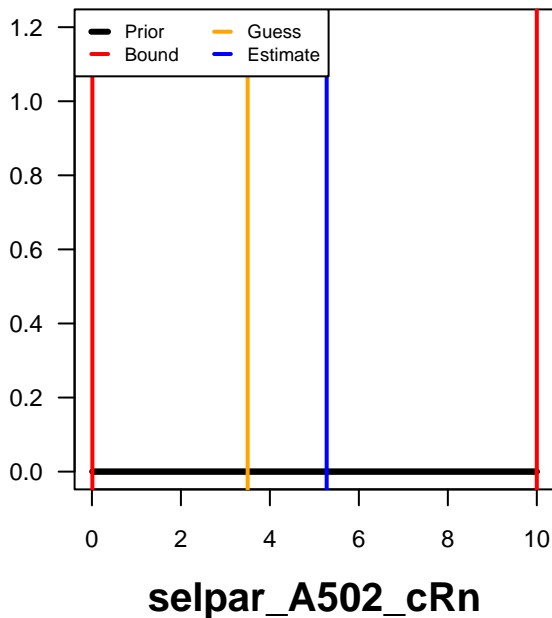
Likelihood



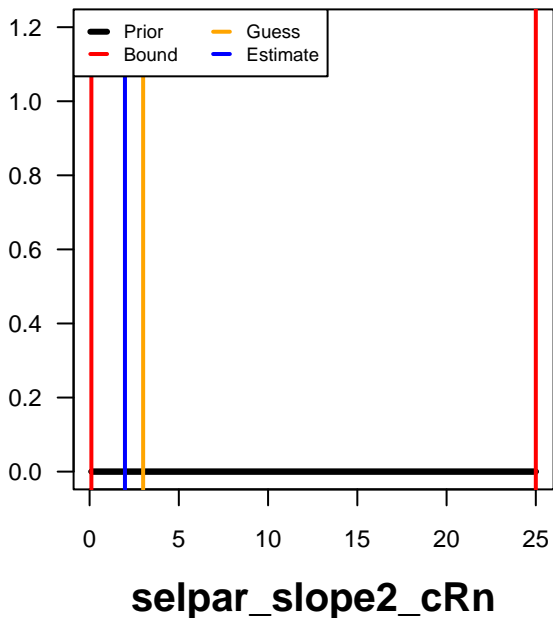
**Likelihood**



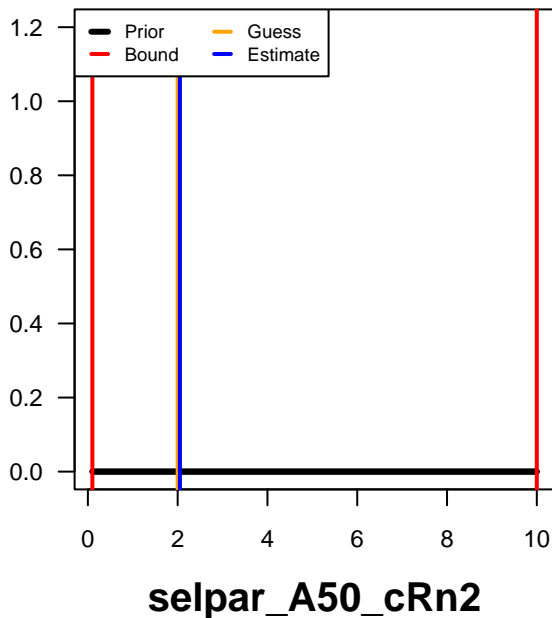
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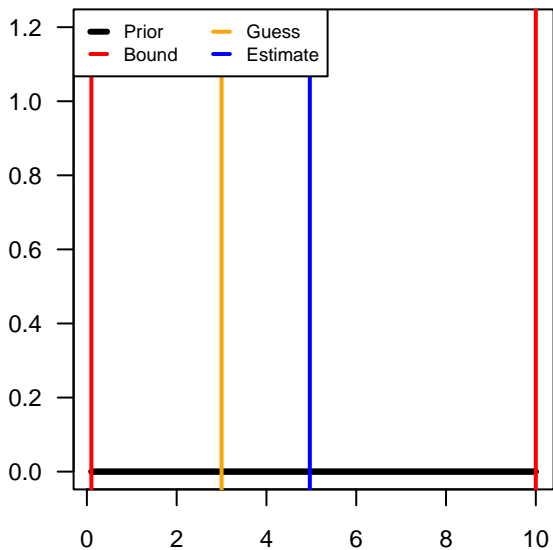
**Likelihood**



**Likelihood**

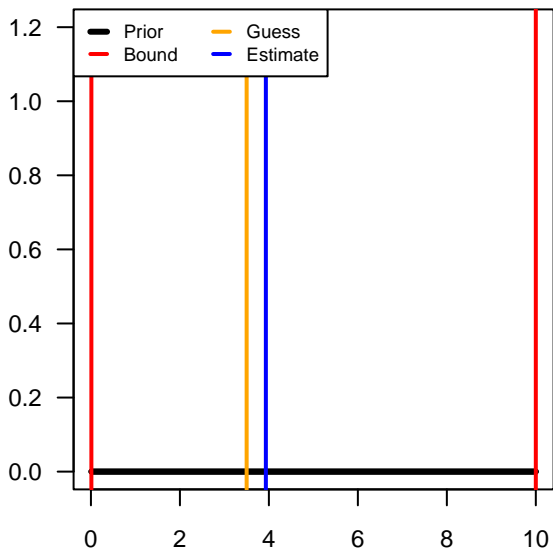


Likelihood



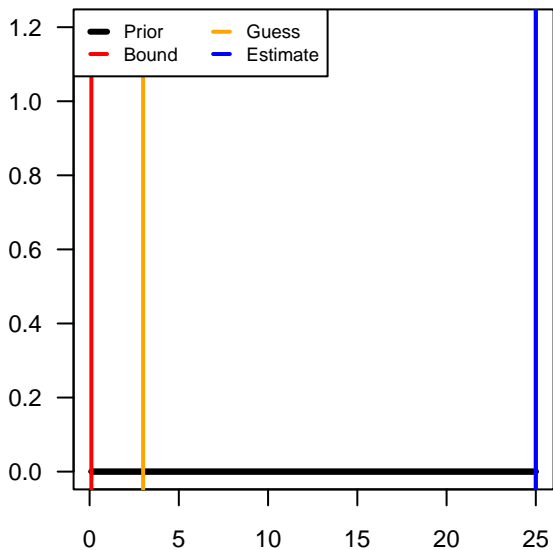
selpar\_slope\_cRn2

Likelihood



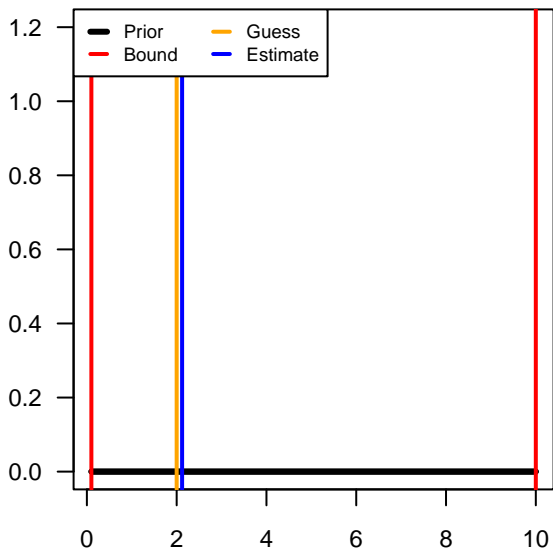
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Likelihood



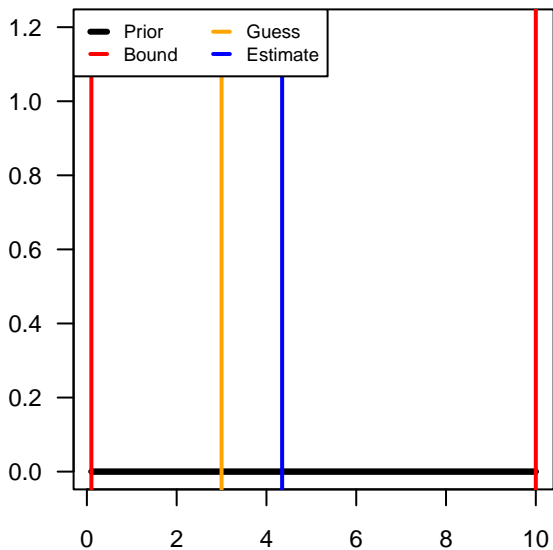
selpar\_slope2\_cRn2

Likelihood



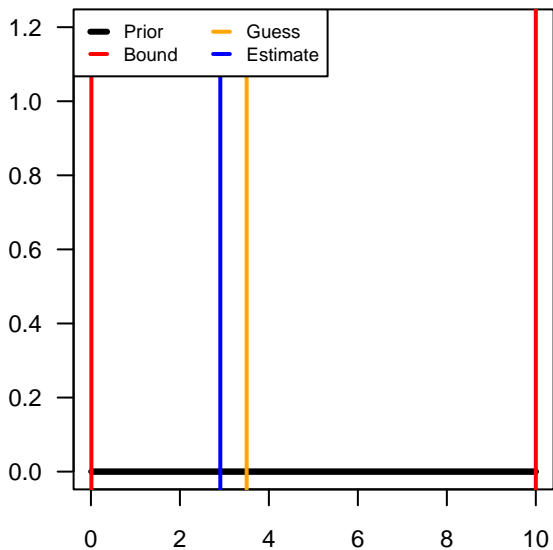
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Likelihood



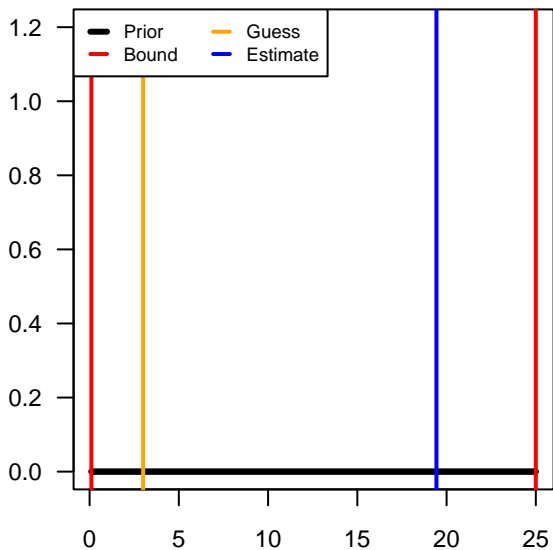
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Likelihood



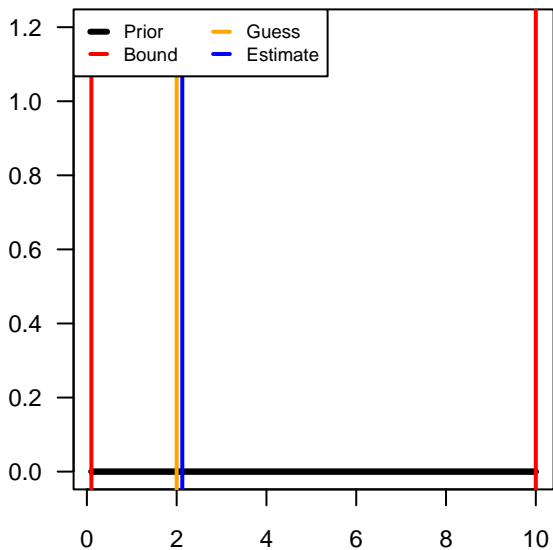
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Likelihood

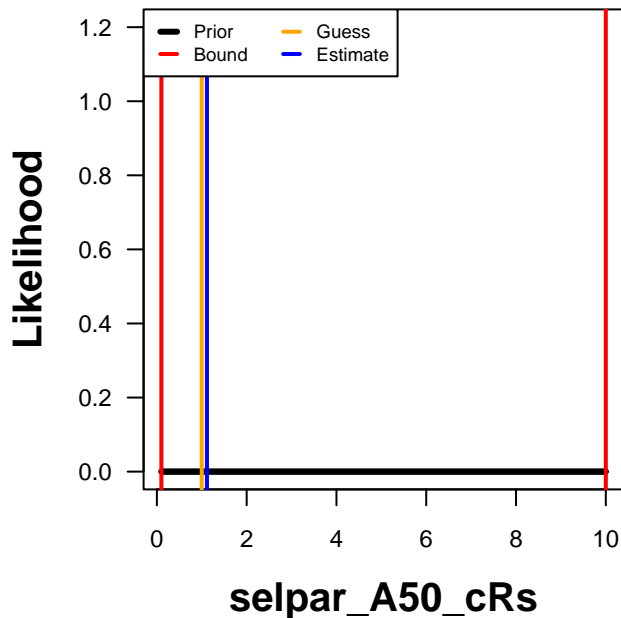
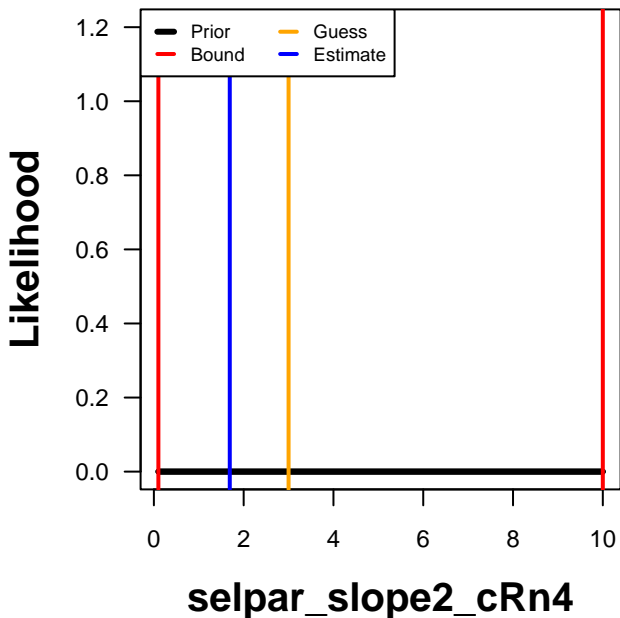
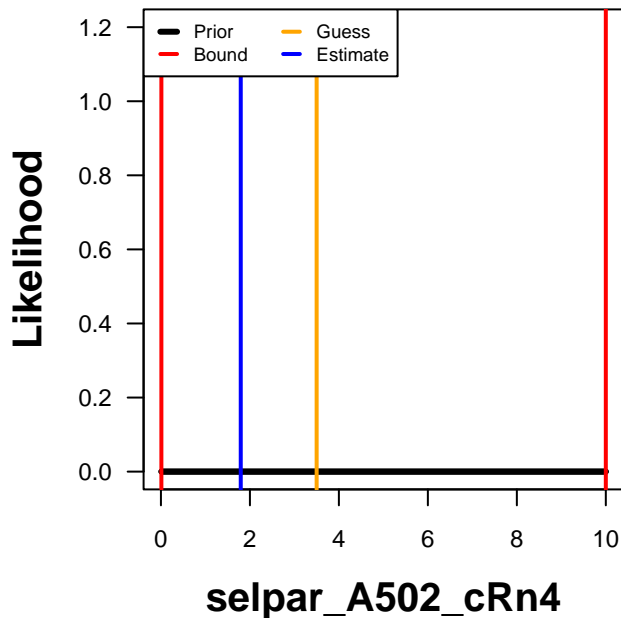
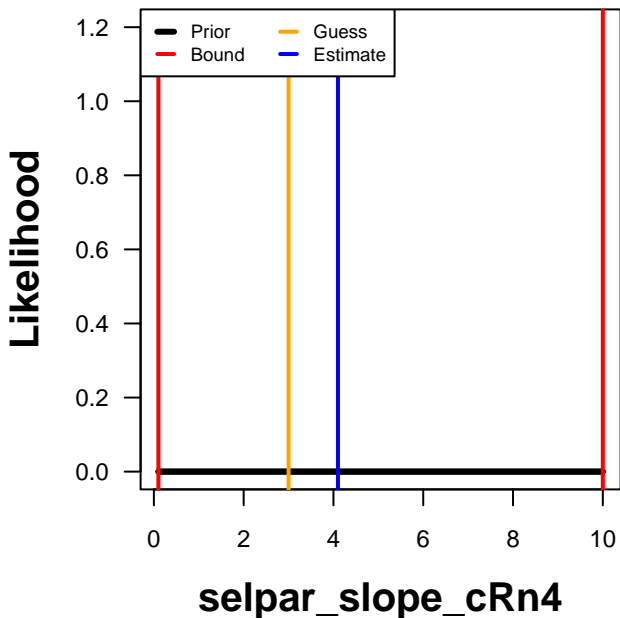


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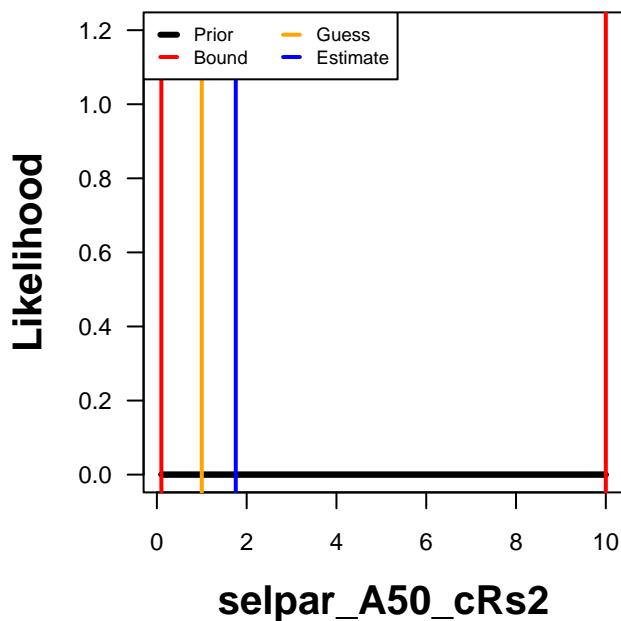
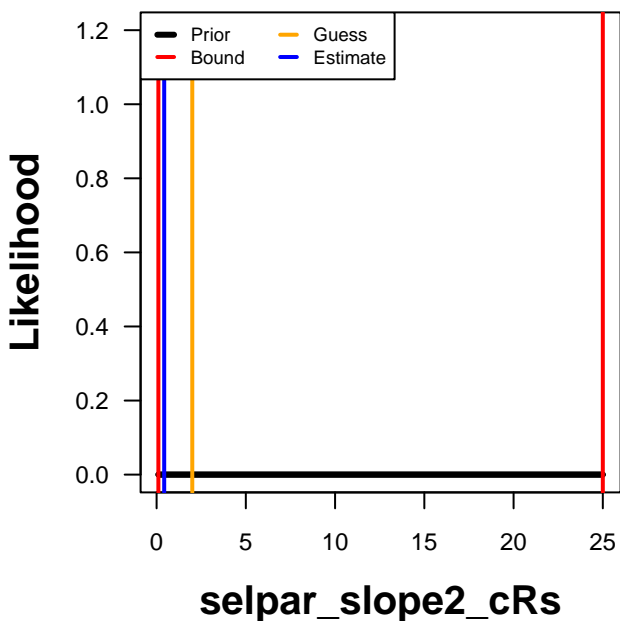
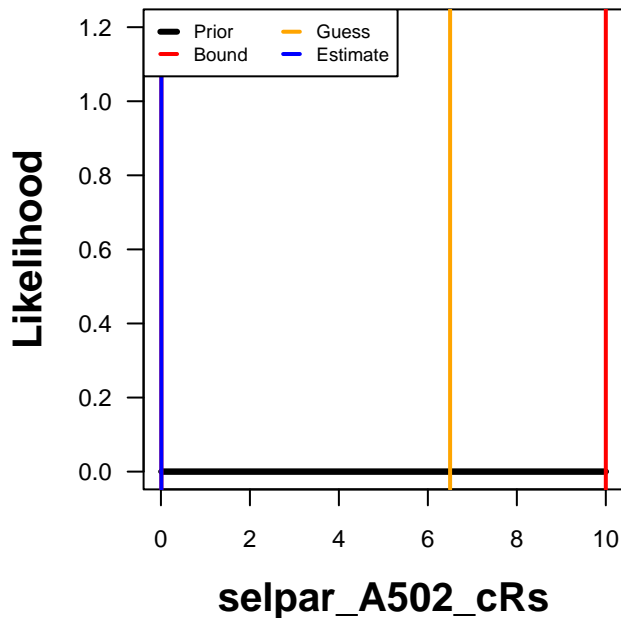
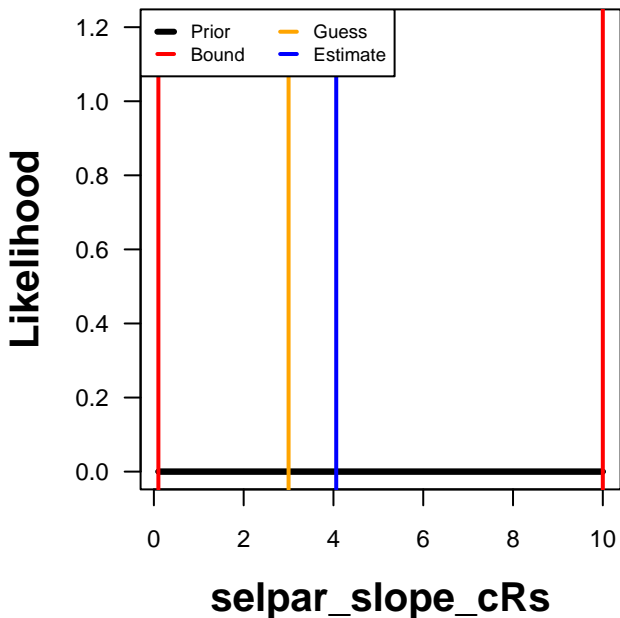
Likelihood



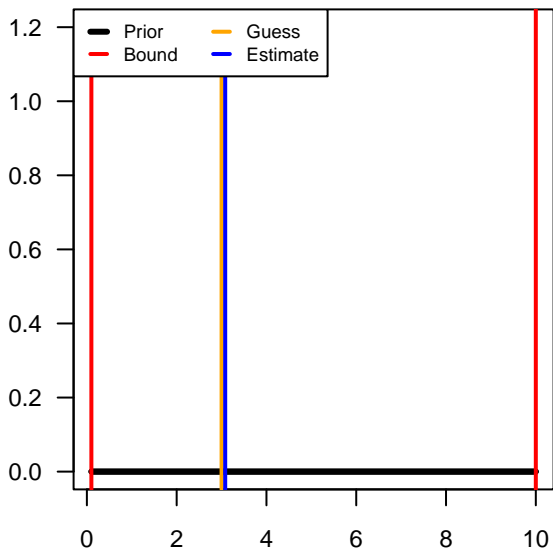
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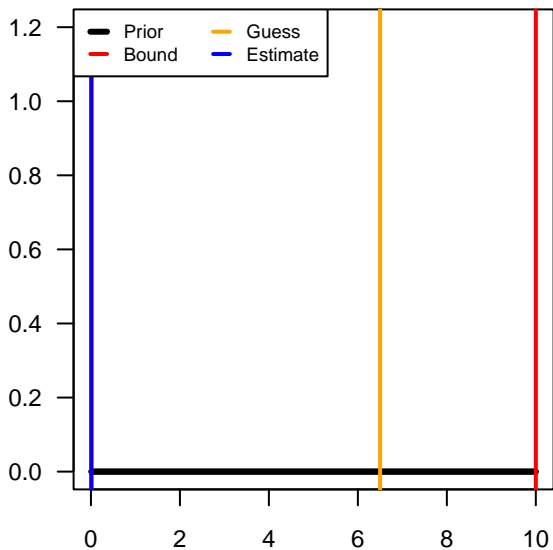


Likelihood



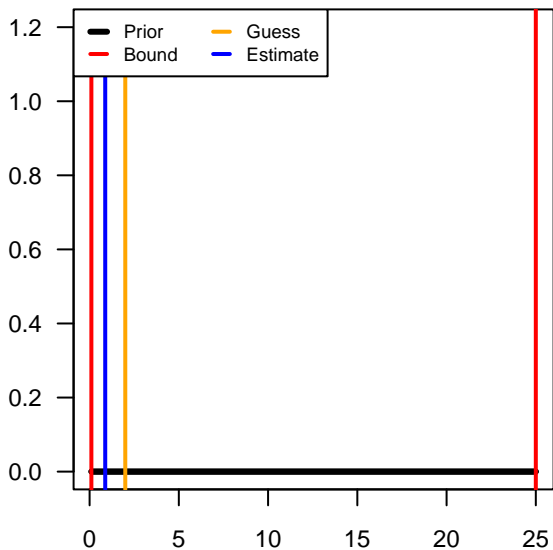
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Likelihood



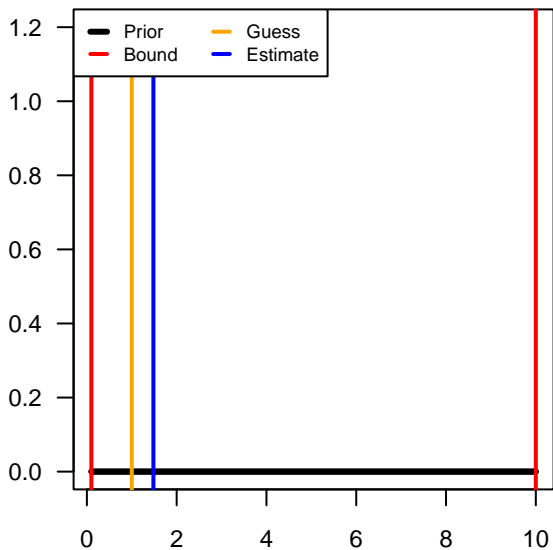
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Likelihood

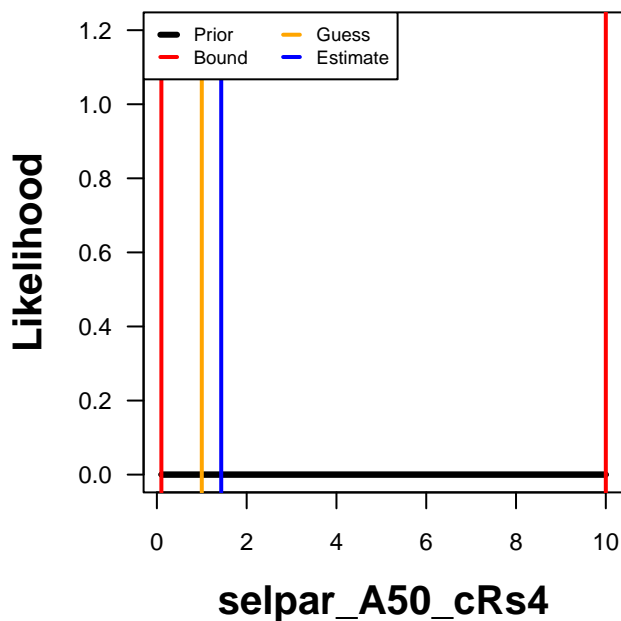
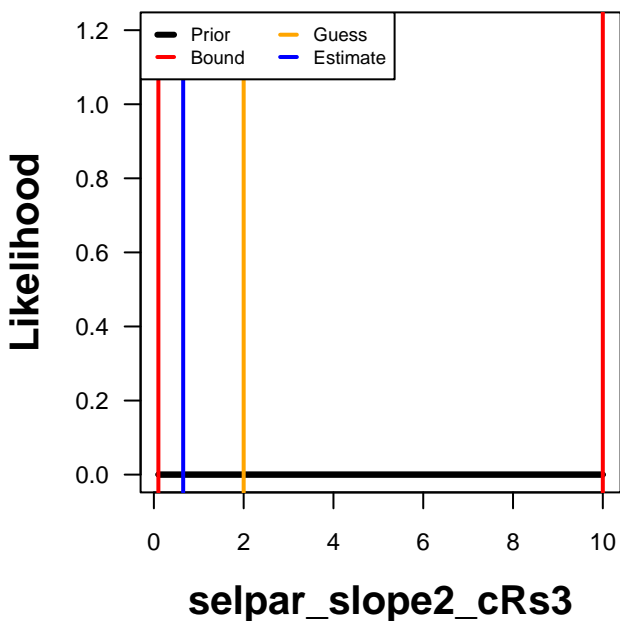
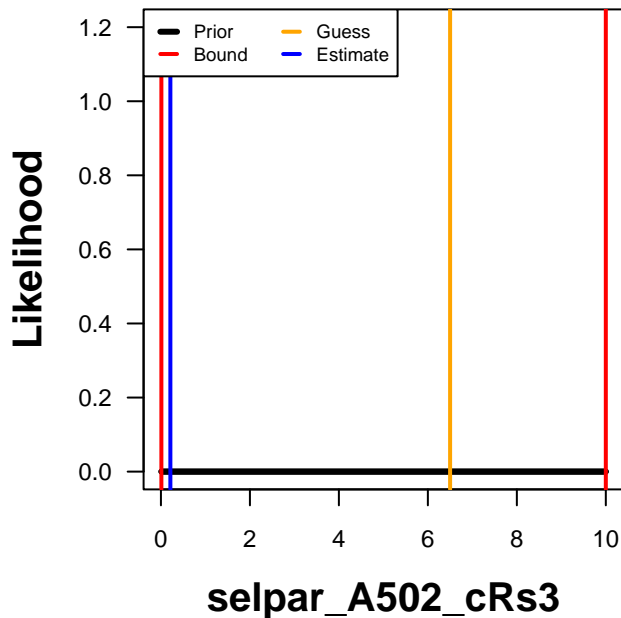
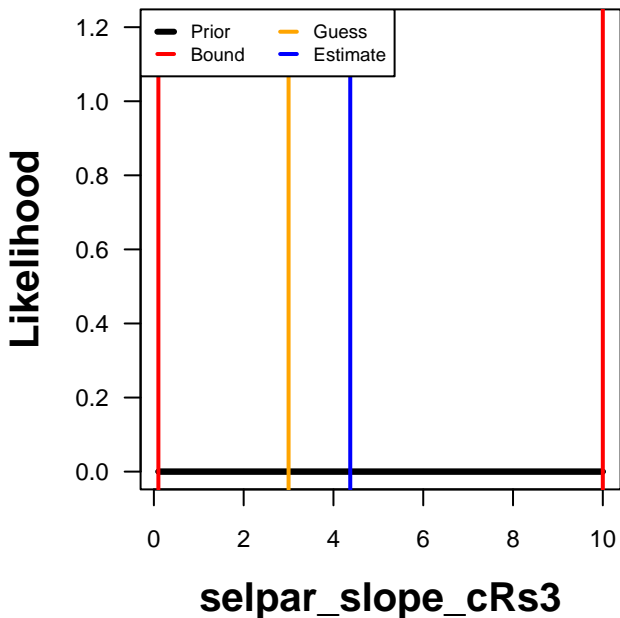


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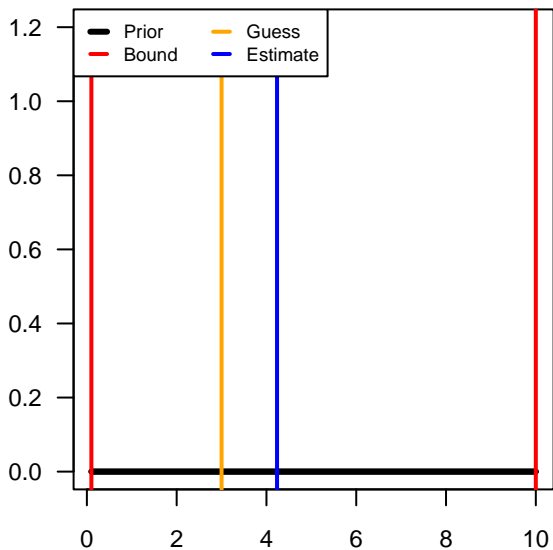
Likelihood



selpar\_A50\_cRs3

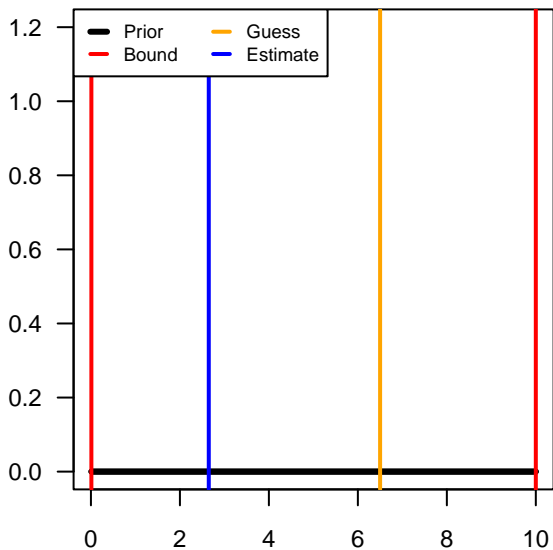


Likelihood



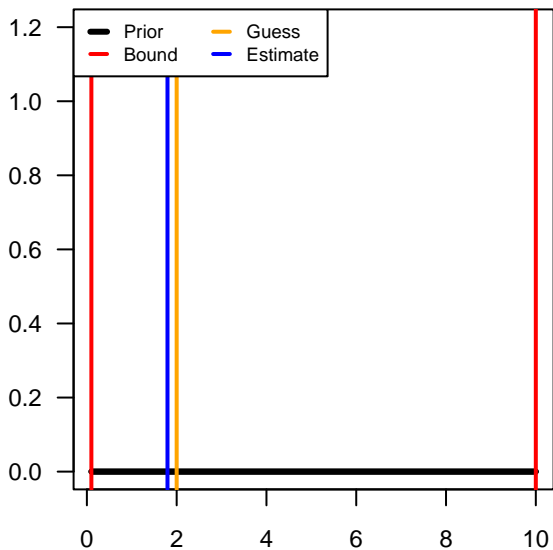
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Likelihood



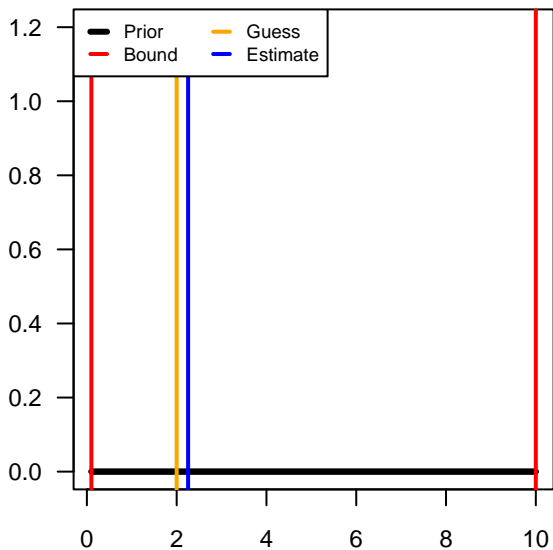
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Likelihood



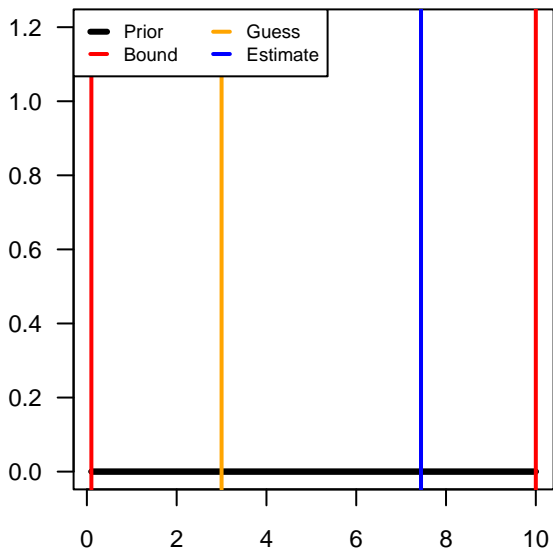
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Likelihood



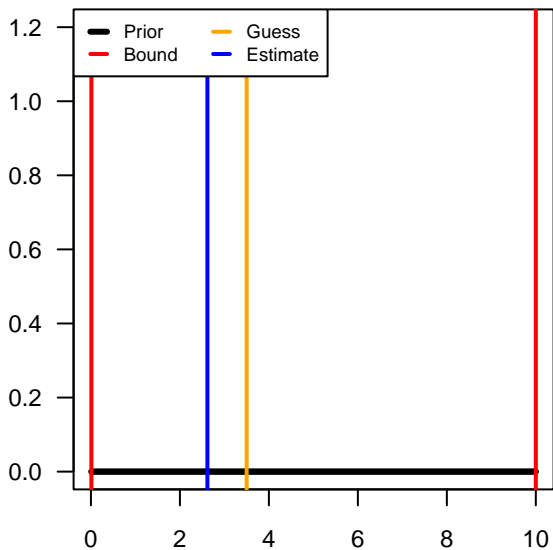
selpar\_A50\_cBn

Likelihood



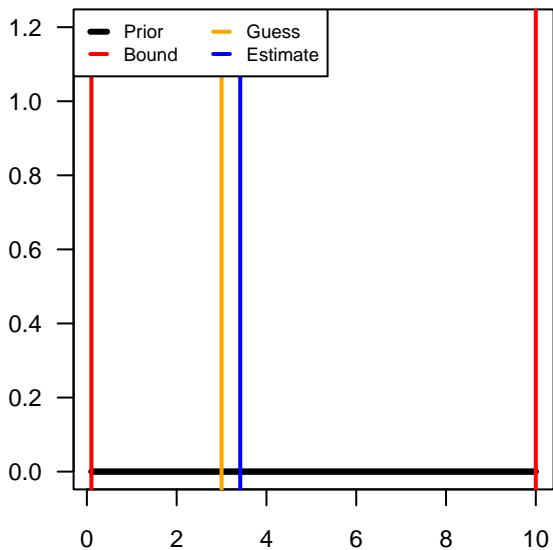
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Likelihood



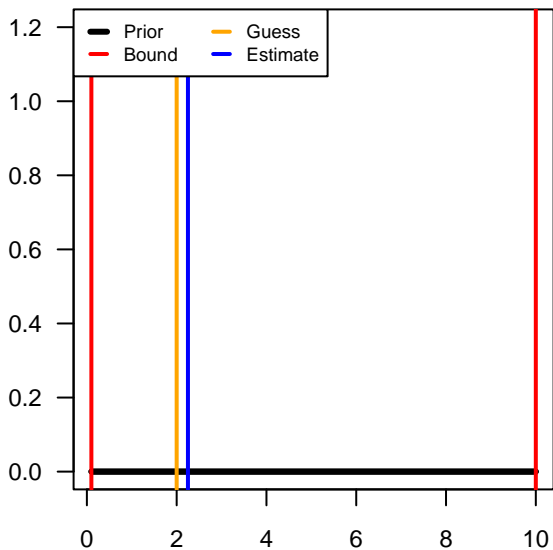
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Likelihood



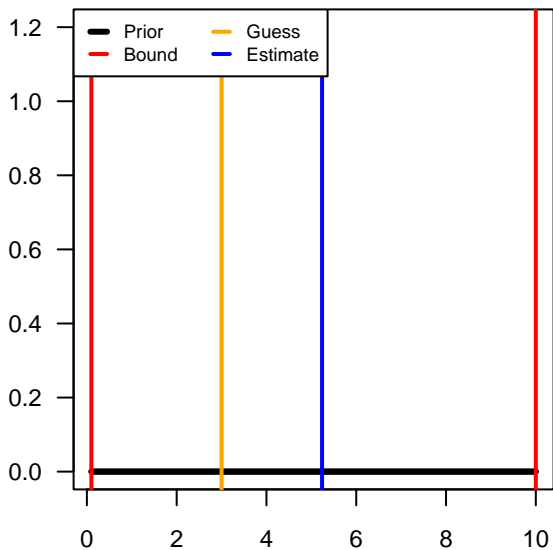
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Likelihood



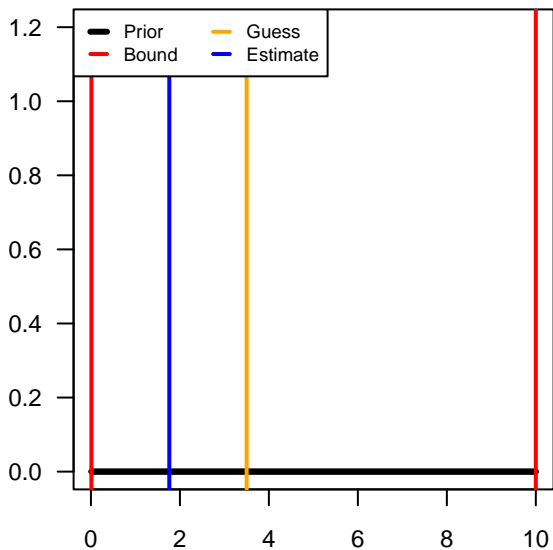
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Likelihood



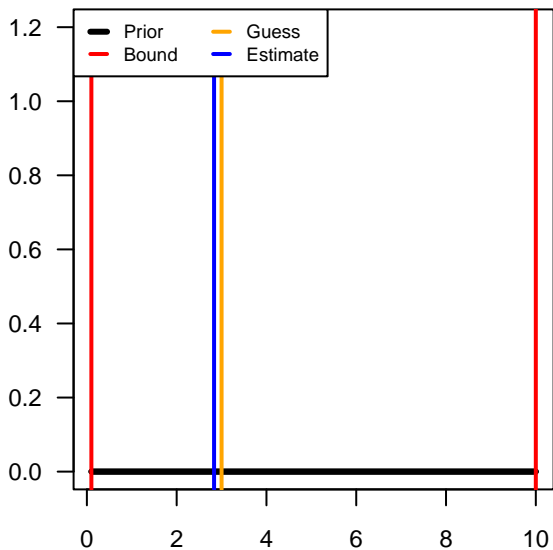
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Likelihood



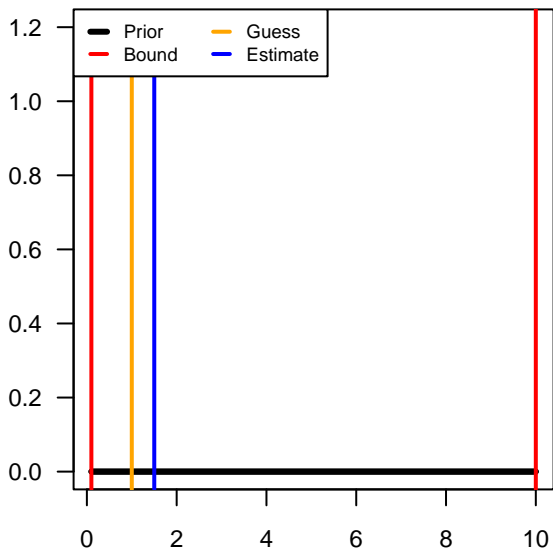
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Likelihood

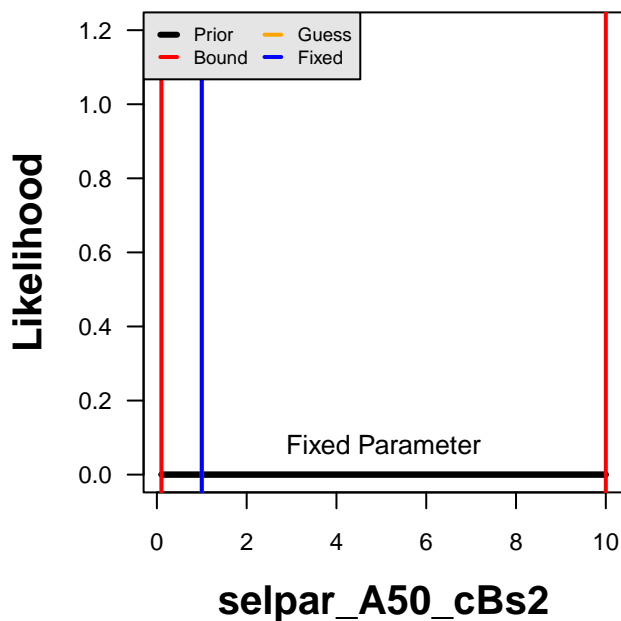
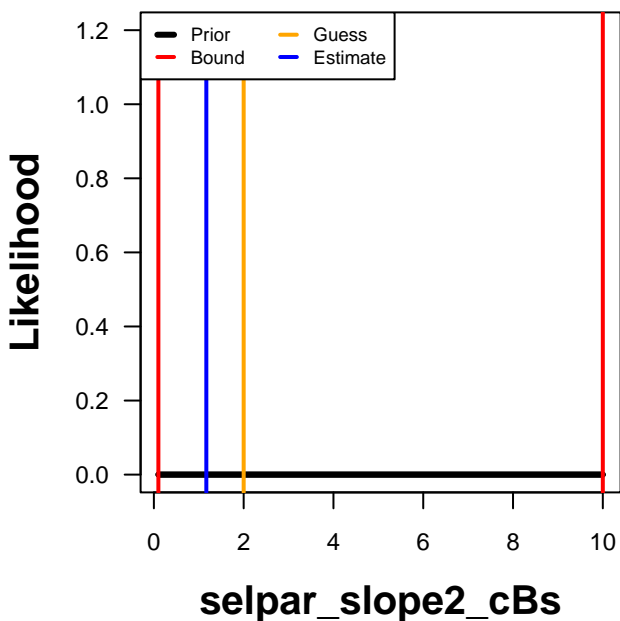
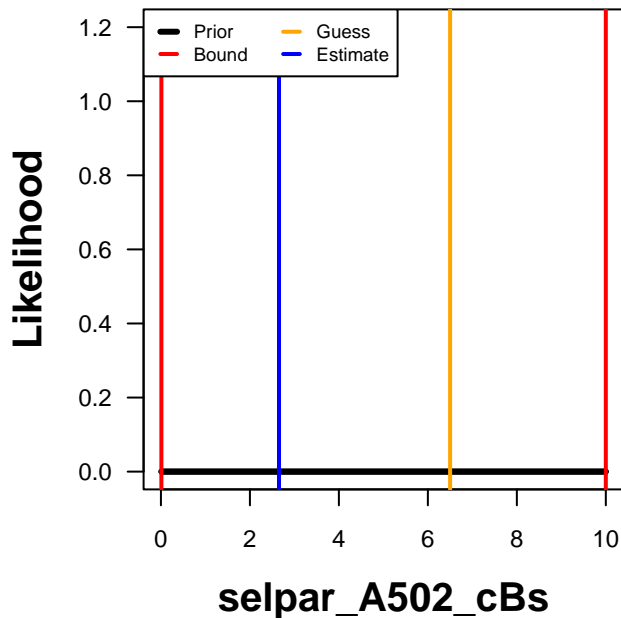
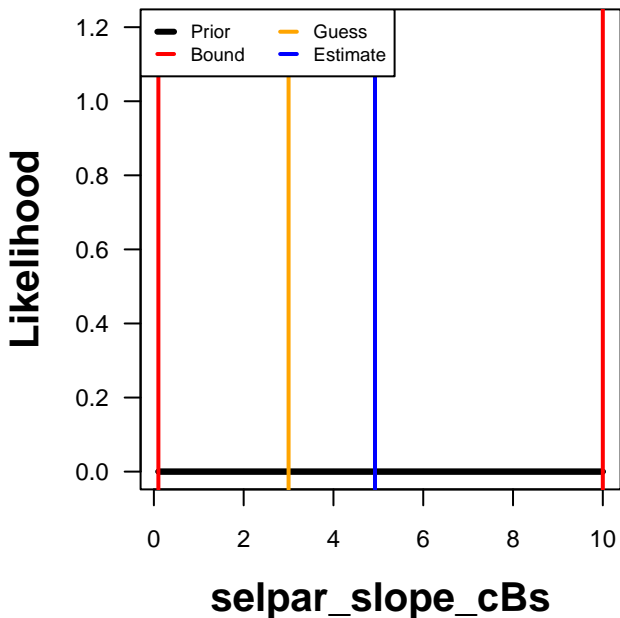


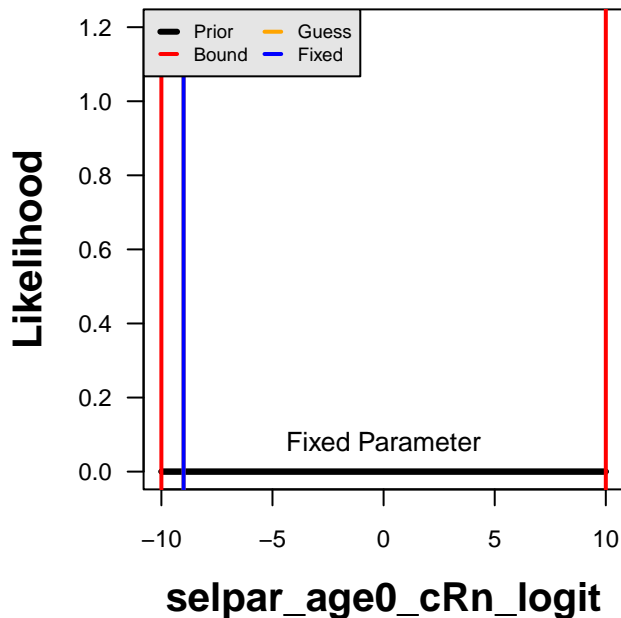
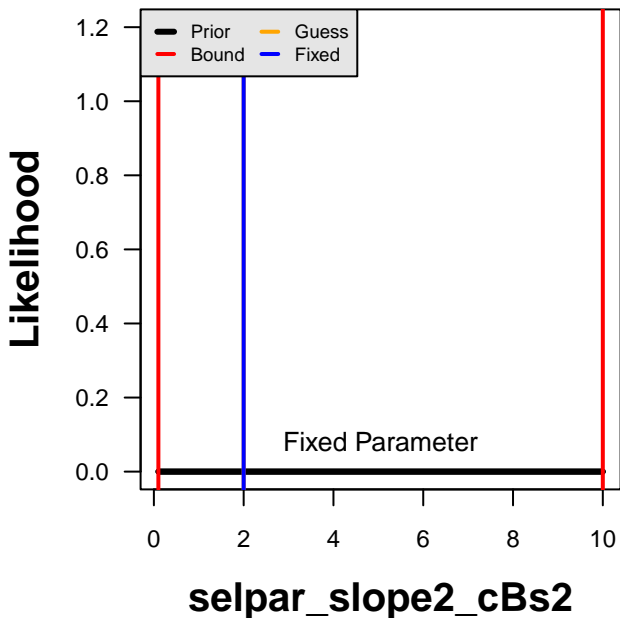
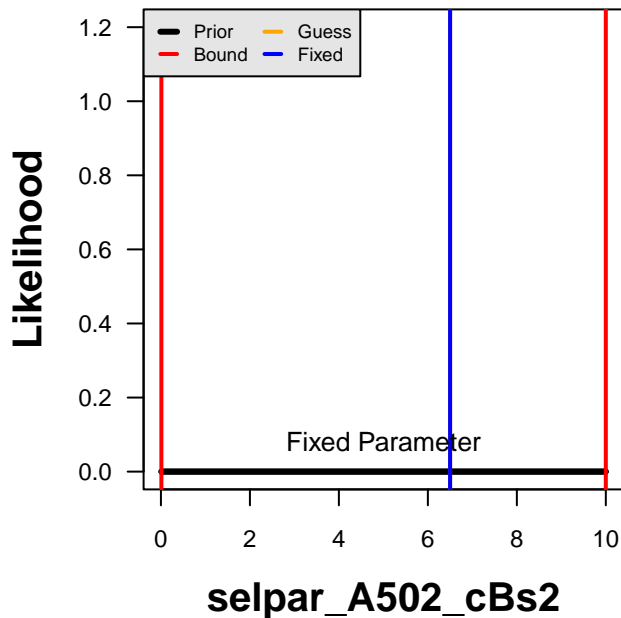
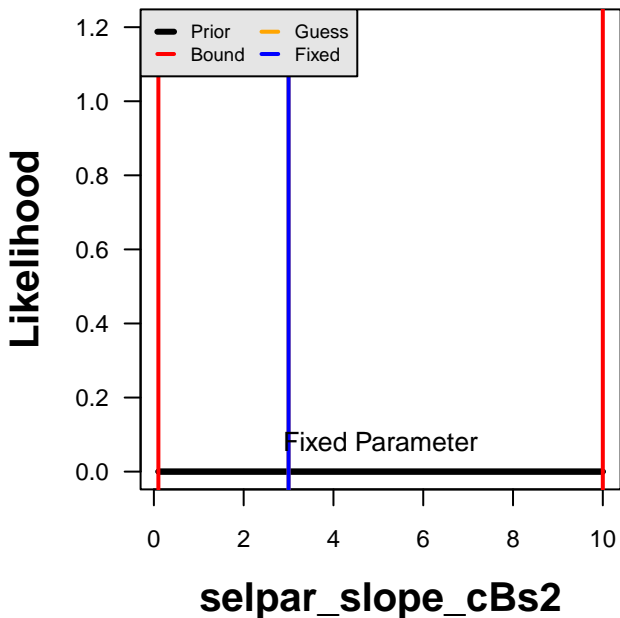
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Likelihood



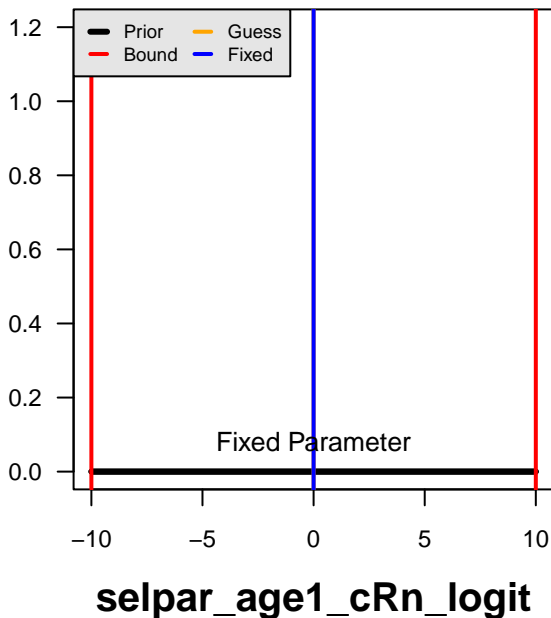
selpar\_A50\_cBs



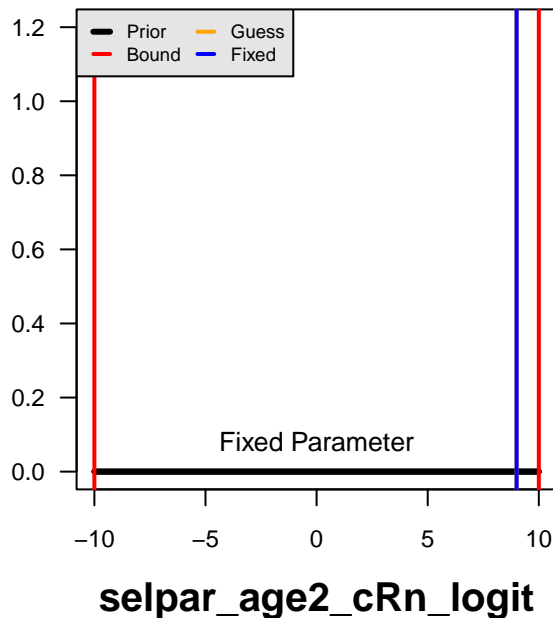




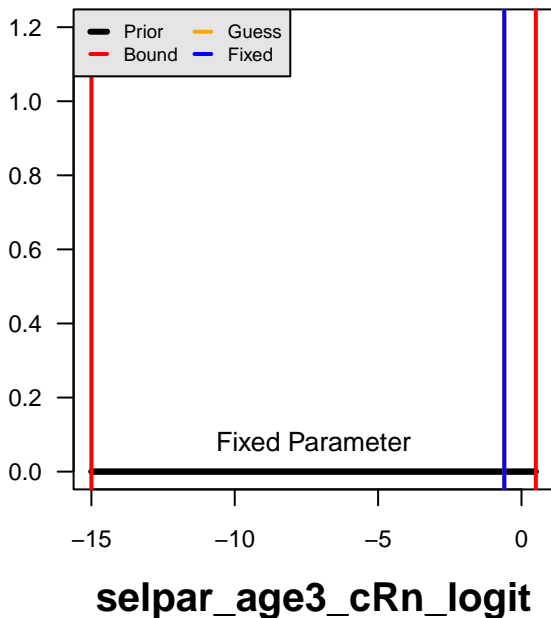
Likelihood



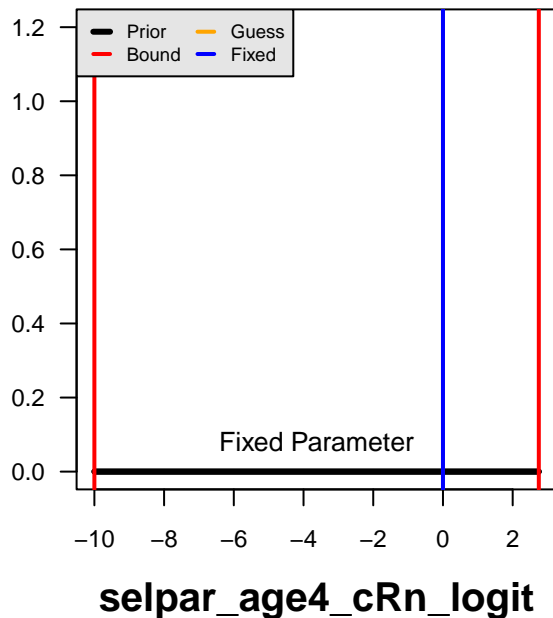
Likelihood



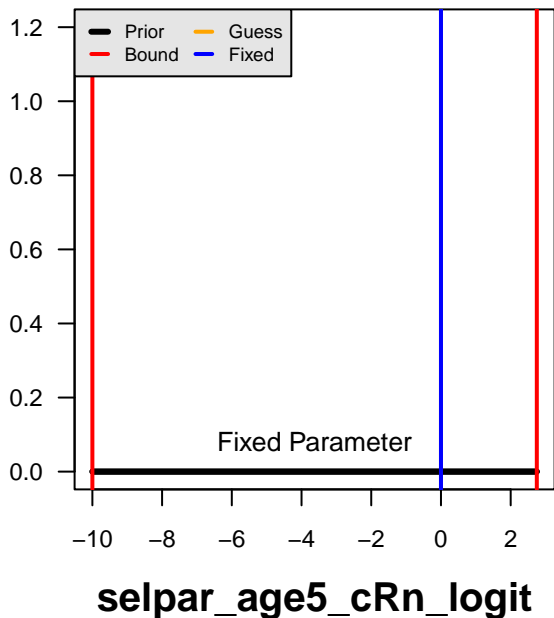
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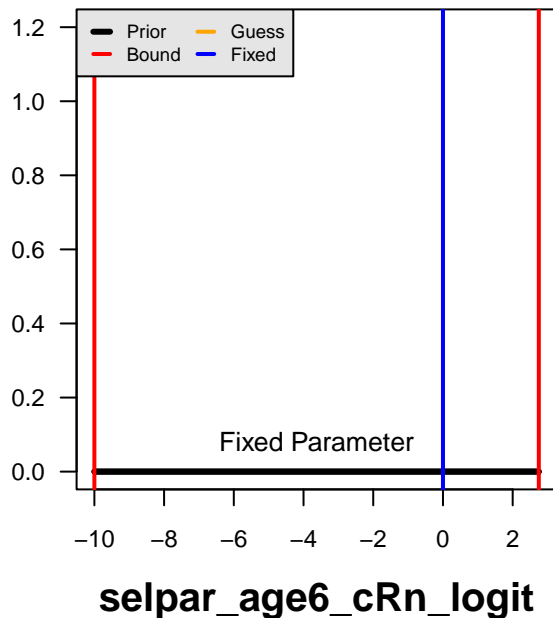
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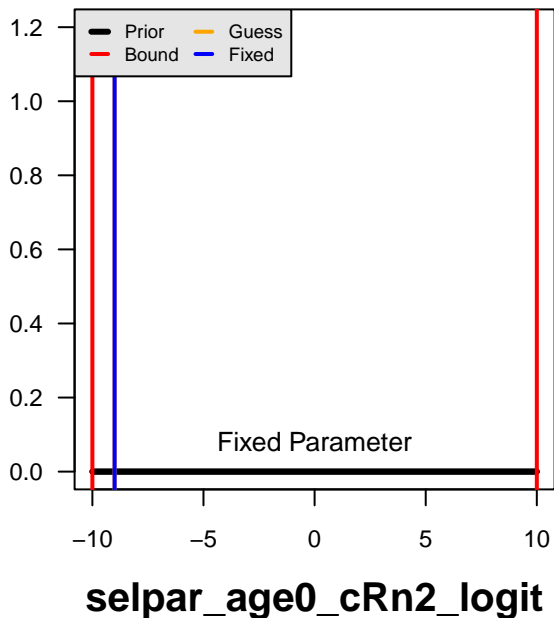
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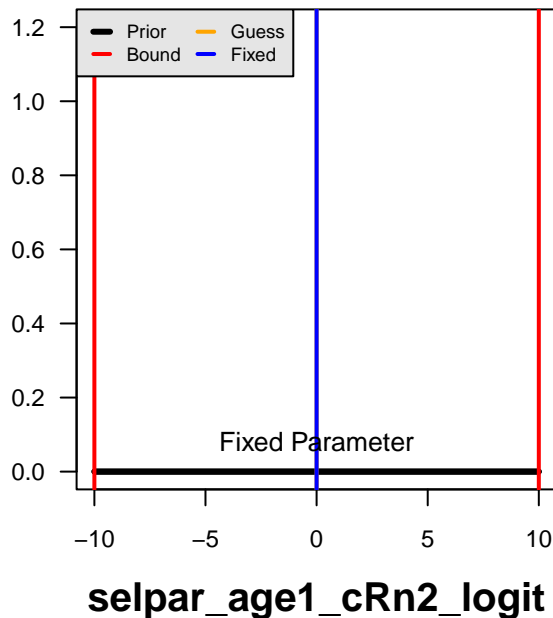
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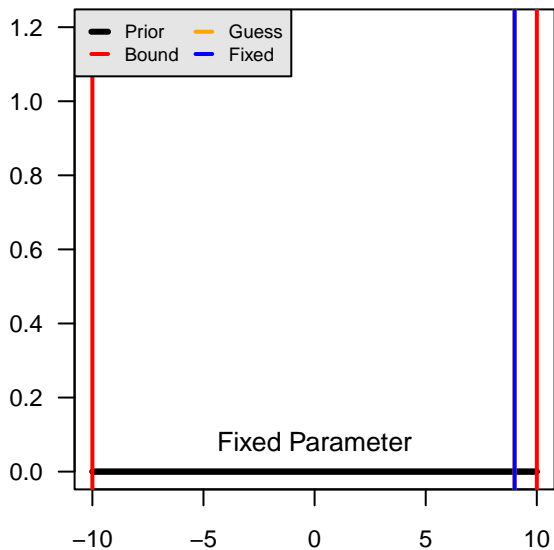
Likelihood



Likelihood

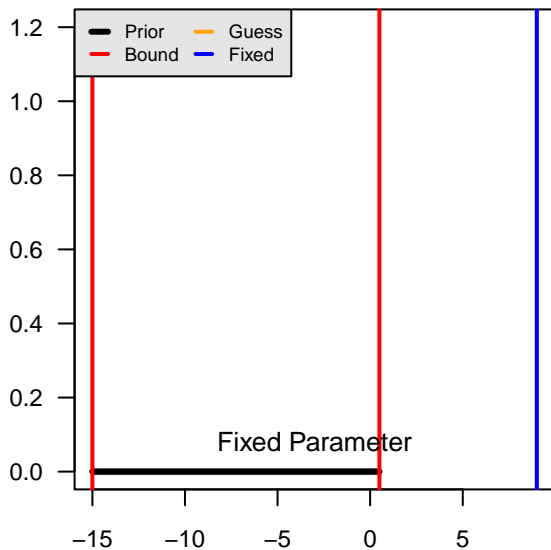


Likelihood



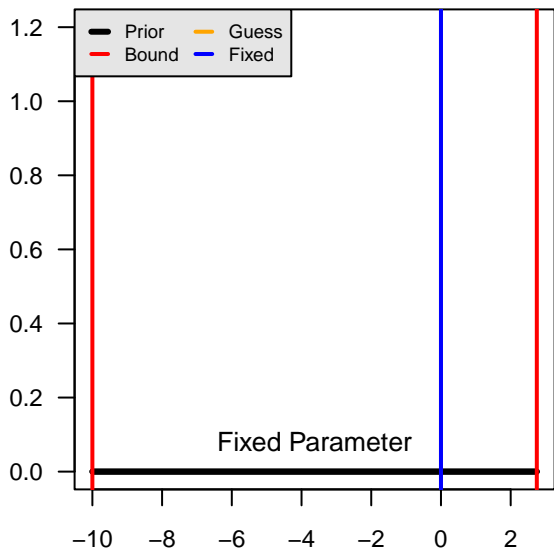
selpar\_age2\_cRn2\_logit

Likelihood



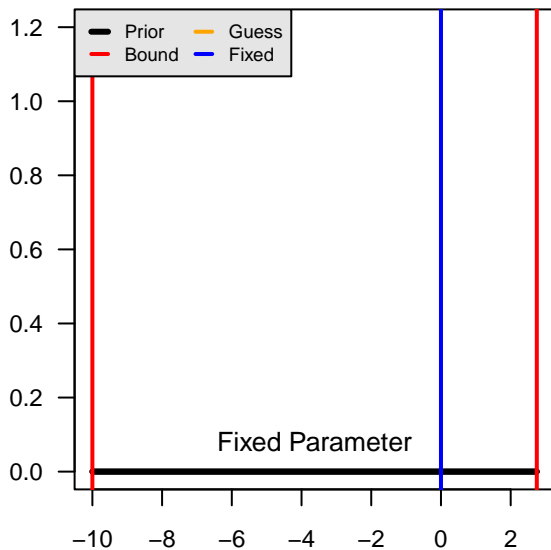
selpar\_age3\_cRn2\_logit

Likelihood



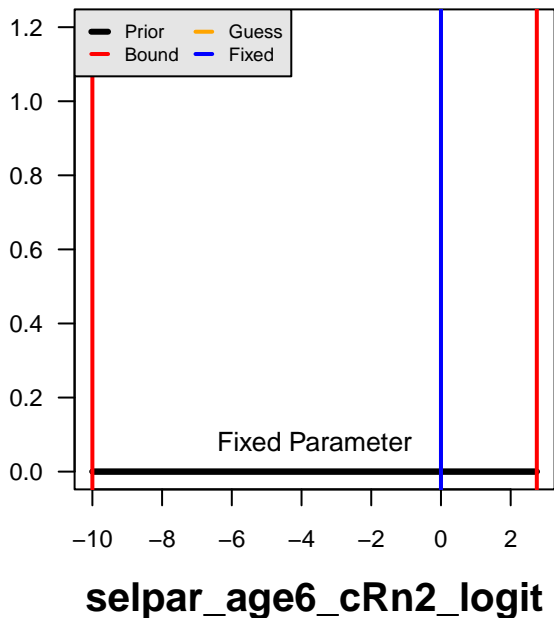
selpar\_age4\_cRn2\_logit

Likelihood

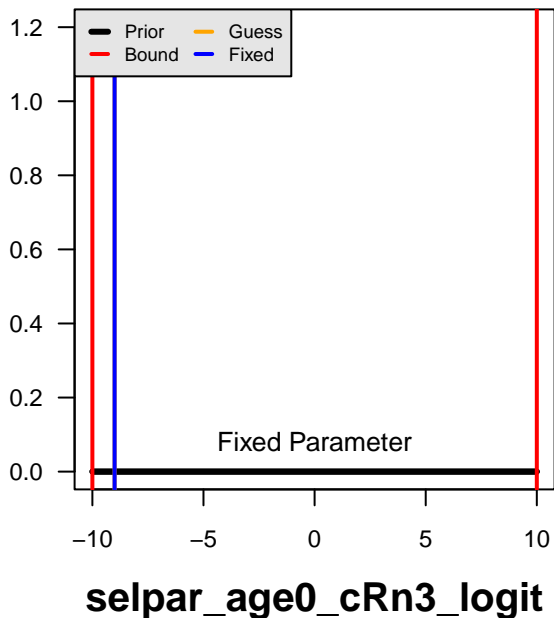


selpar\_age5\_cRn2\_logit

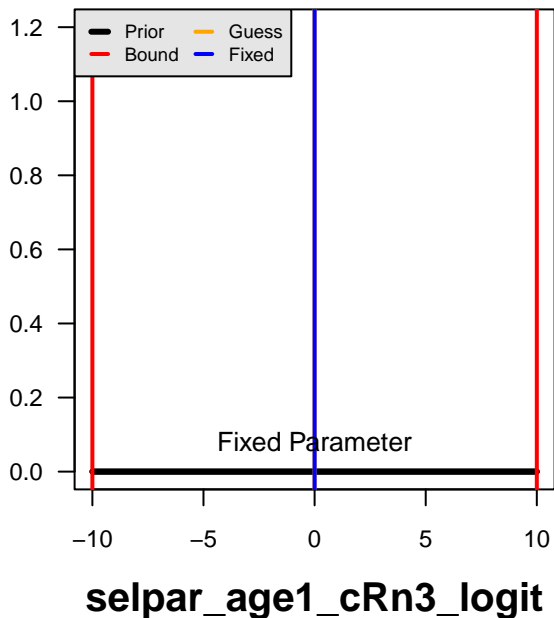
Likelihood



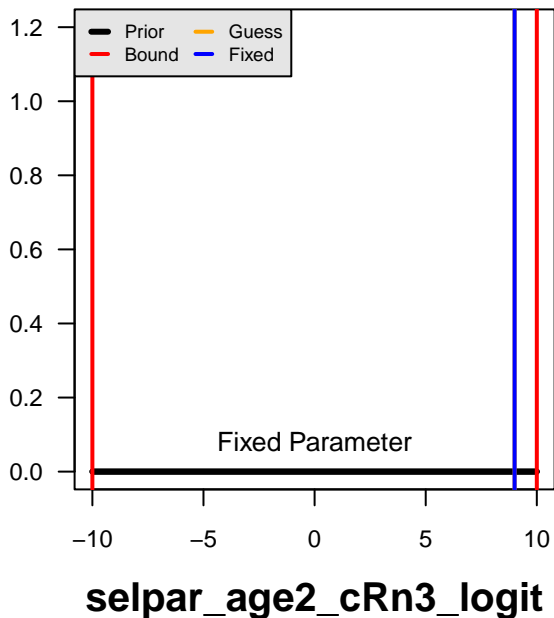
Likelihood



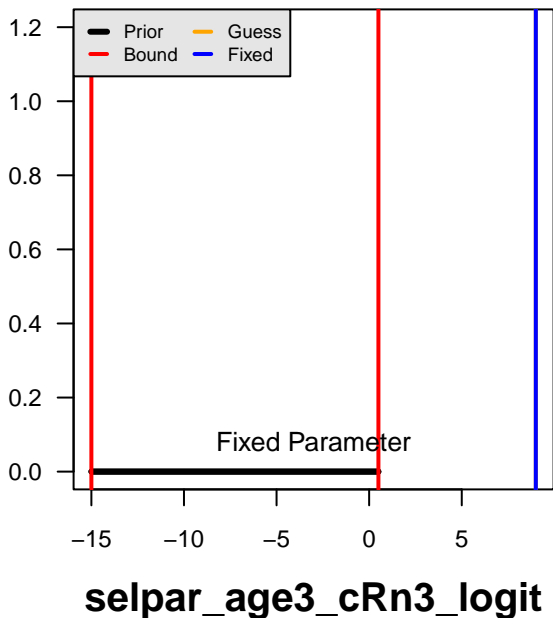
Likelihood



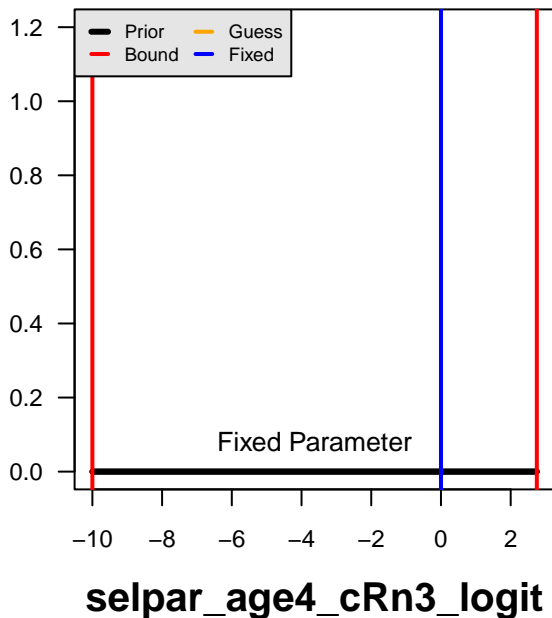
Likelihood



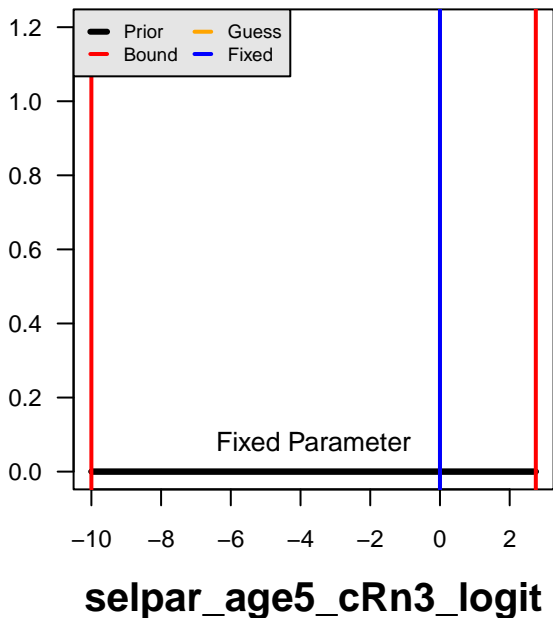
Likelihood



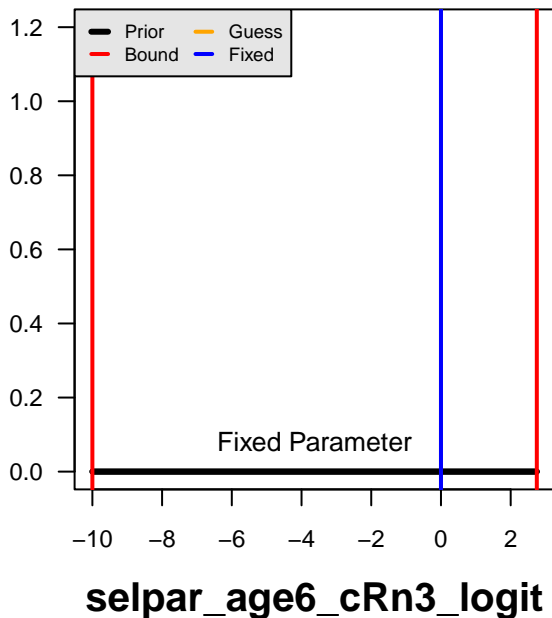
Likelihood

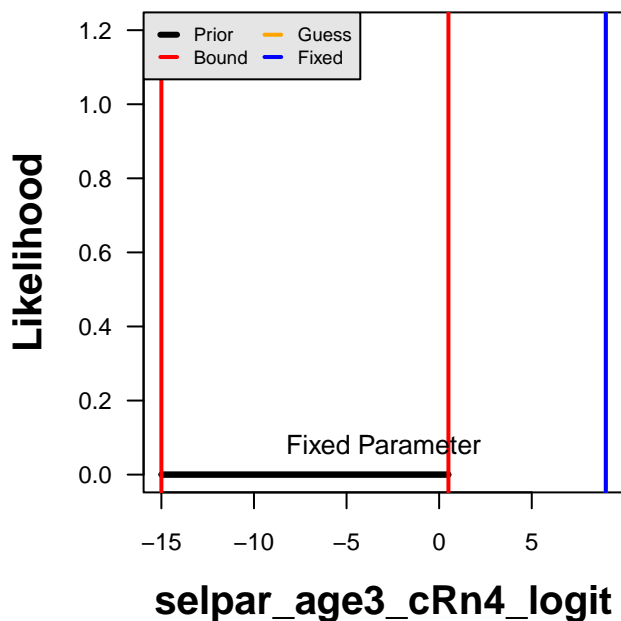
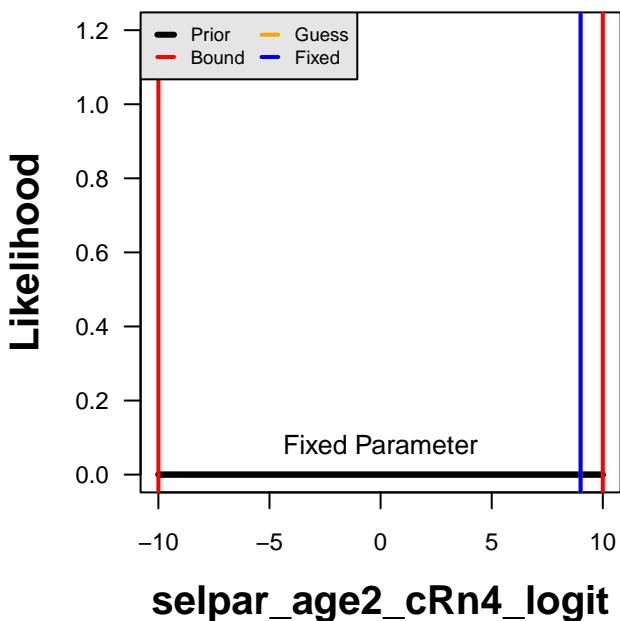
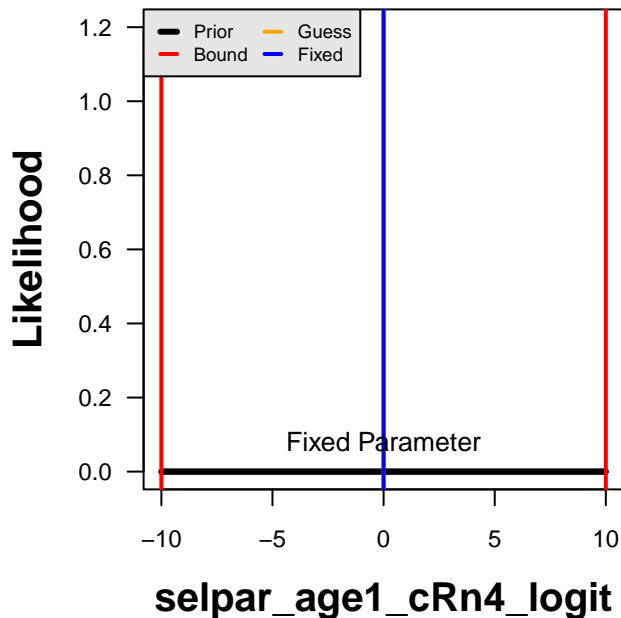
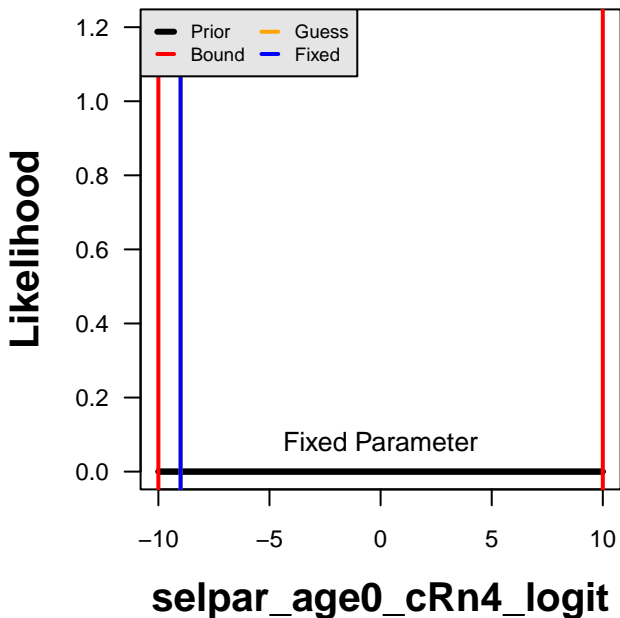


Likelihood

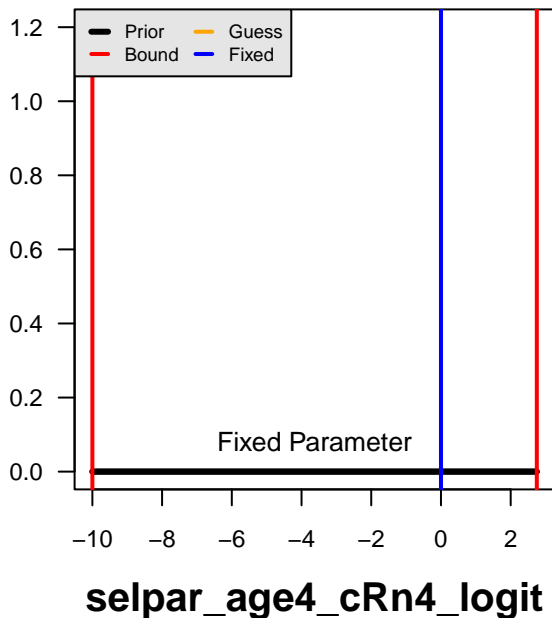


Likelihood

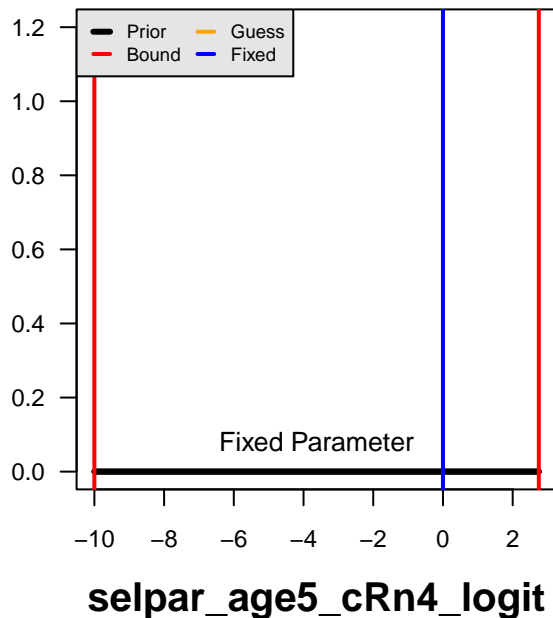




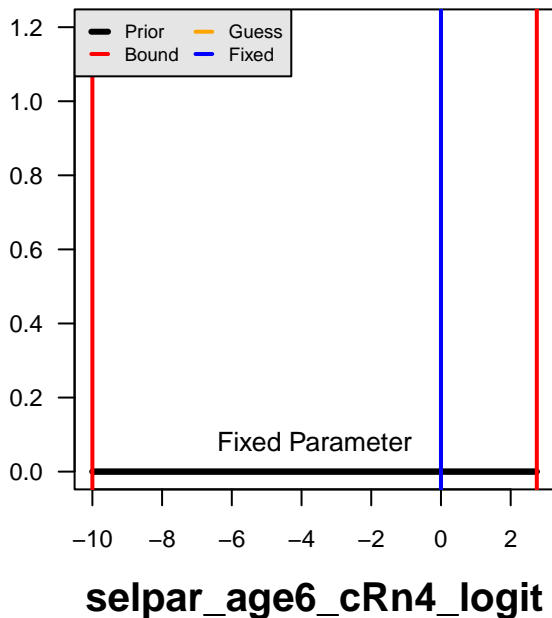
Likelihood



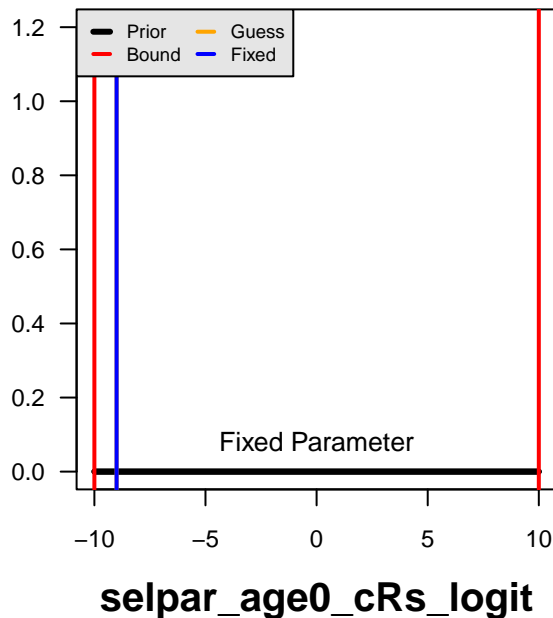
Likelihood

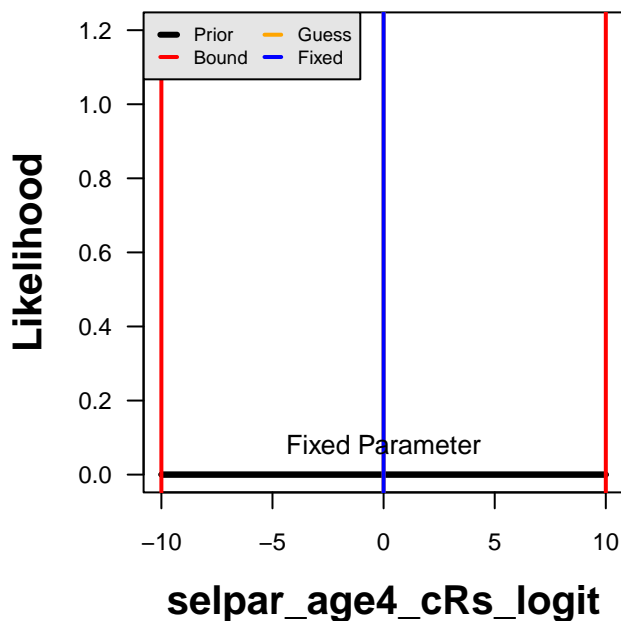
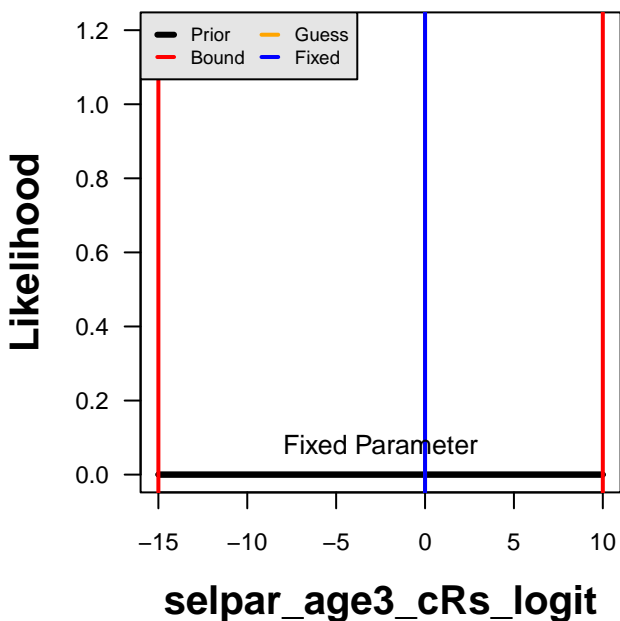
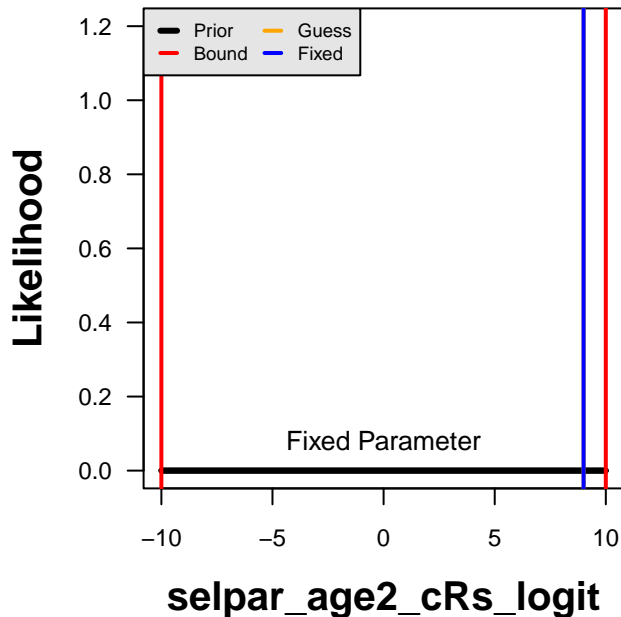
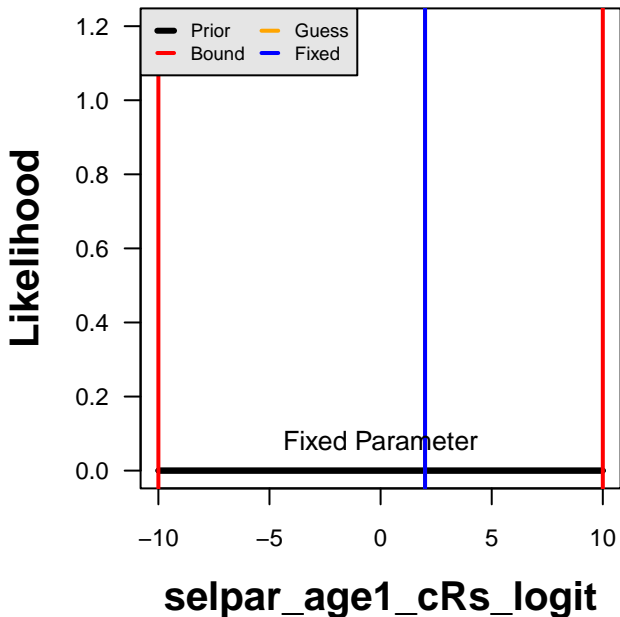


Likelihood



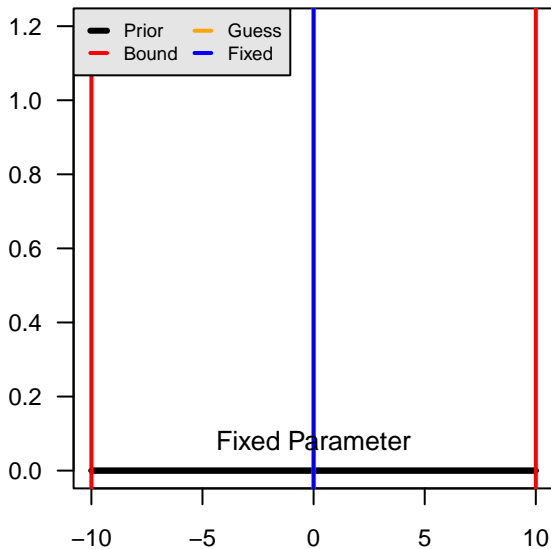
Likelihood





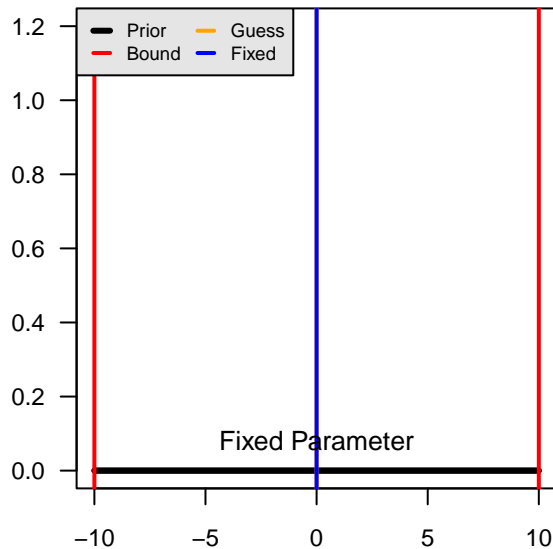


Likelihood



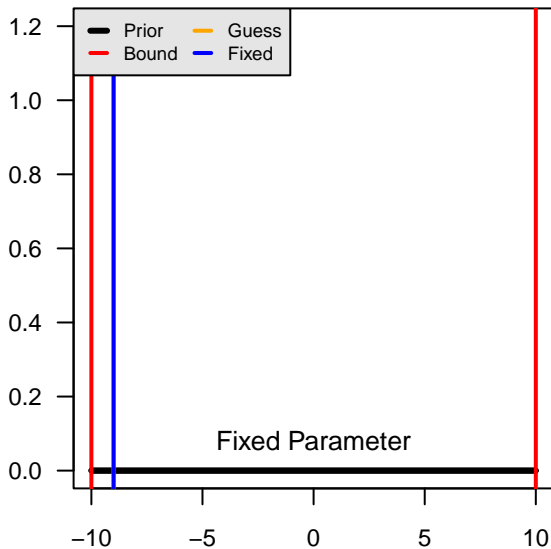
selpar\_age5\_cRs\_logit

Likelihood



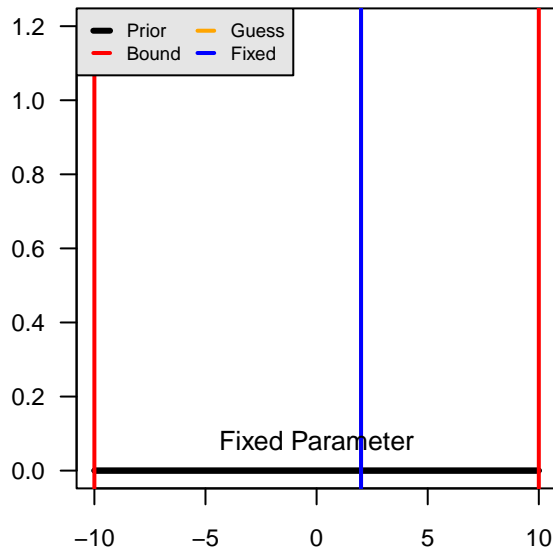
selpar\_age6\_cRs\_logit

Likelihood

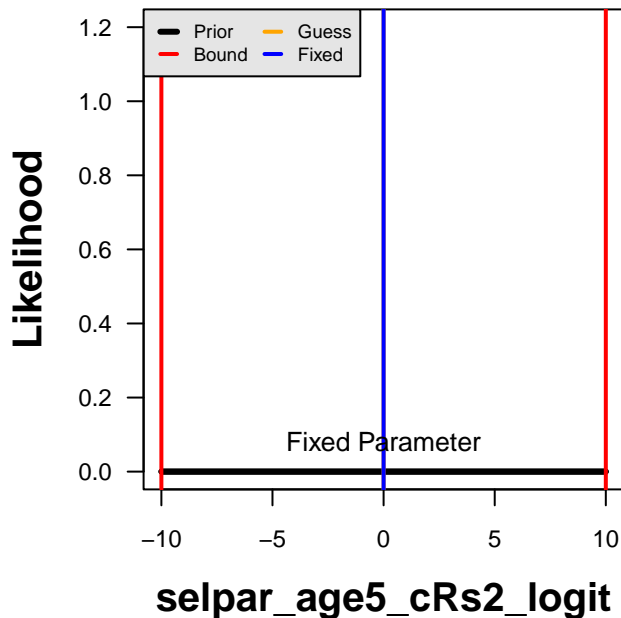
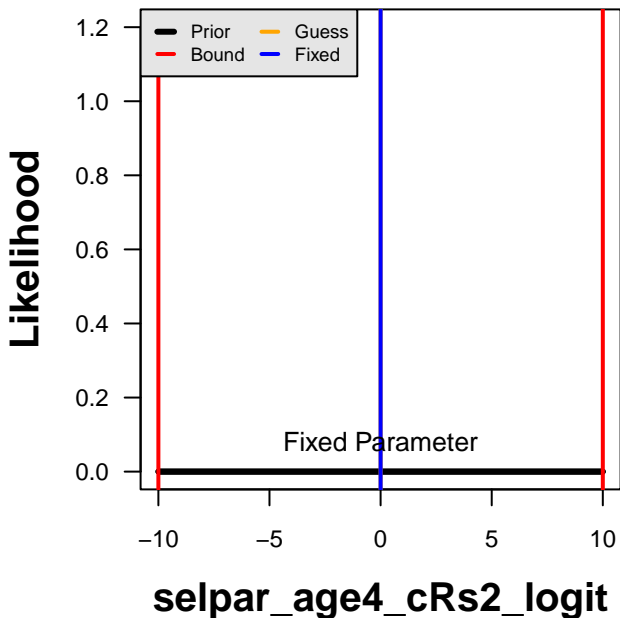
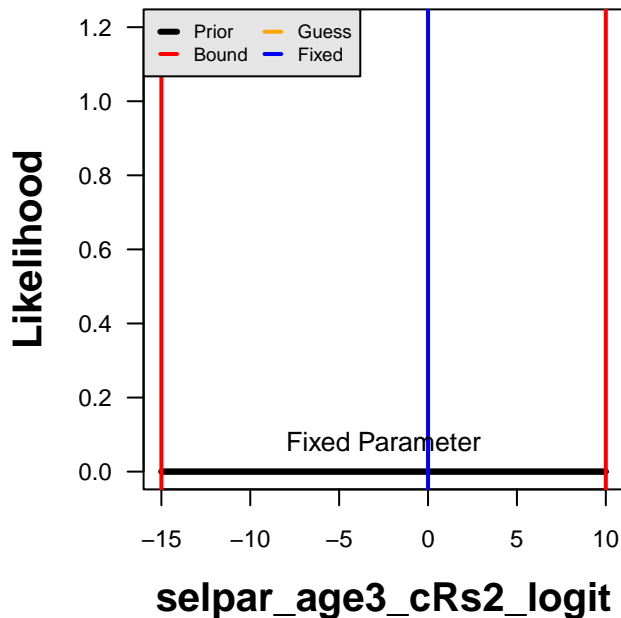
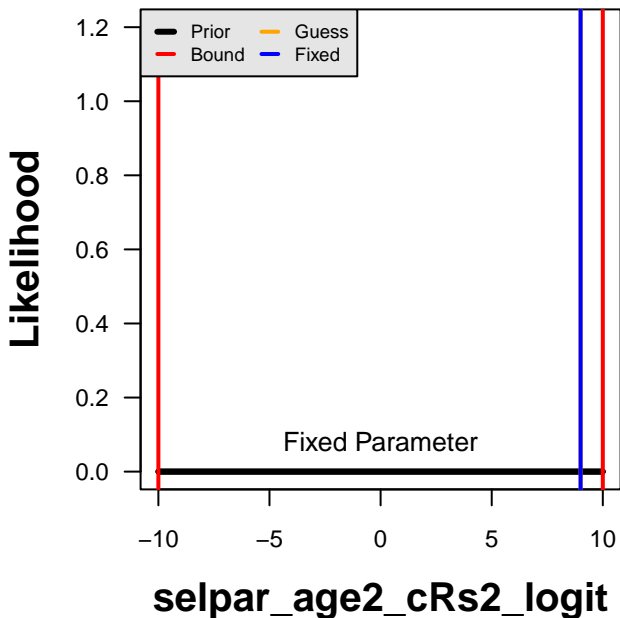


selpar\_age0\_cRs2\_logit

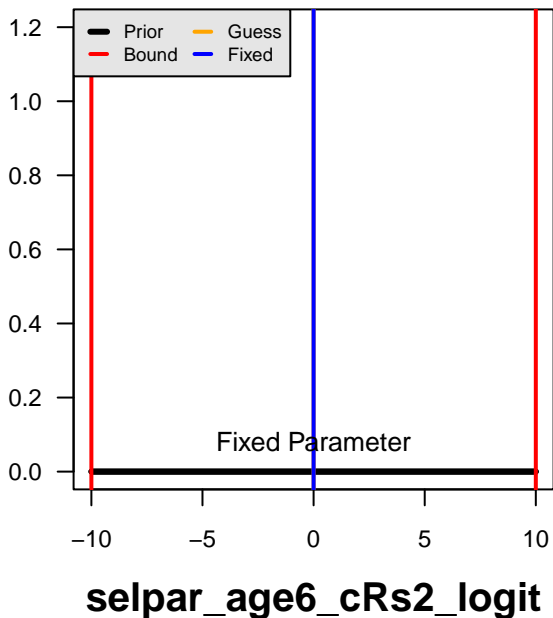
Likelihood



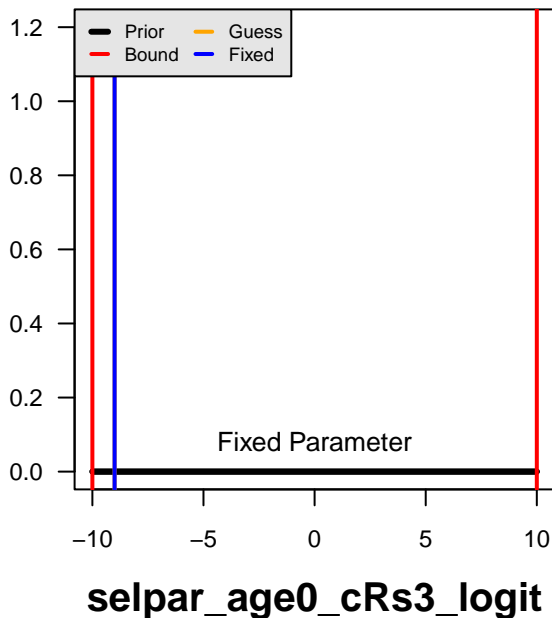
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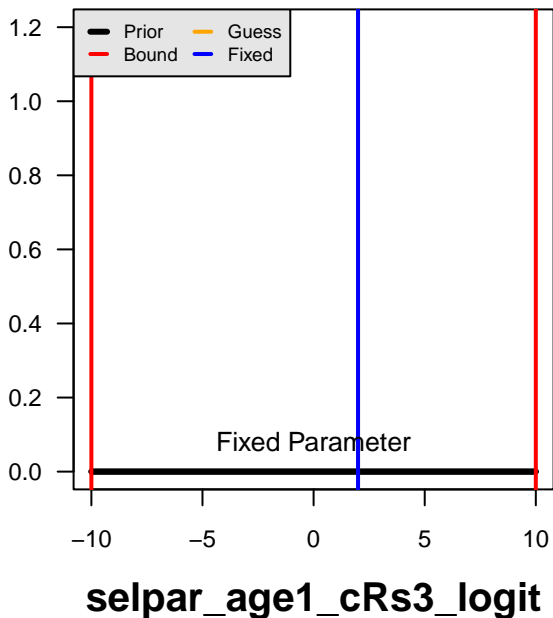
Likelihood



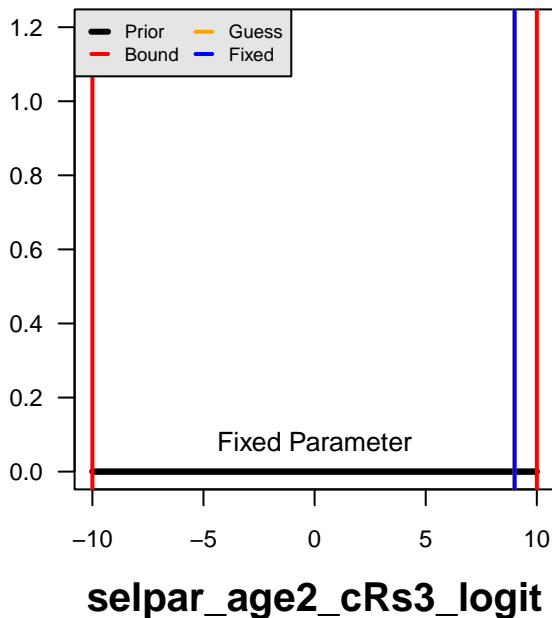
Likelihood

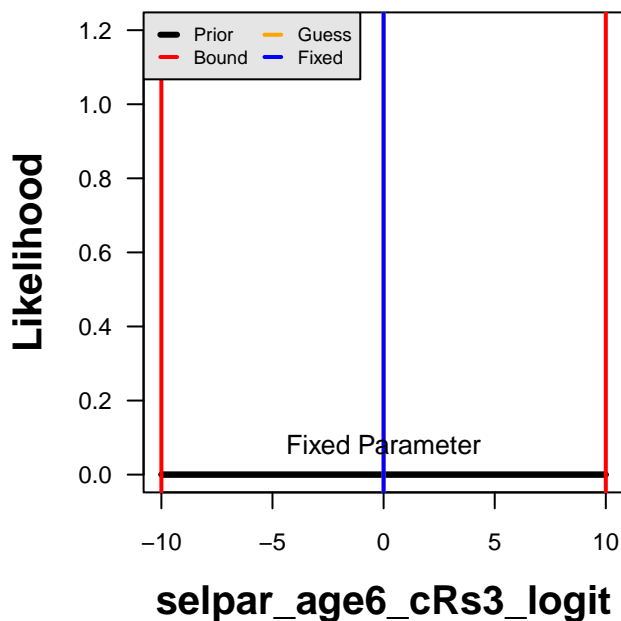
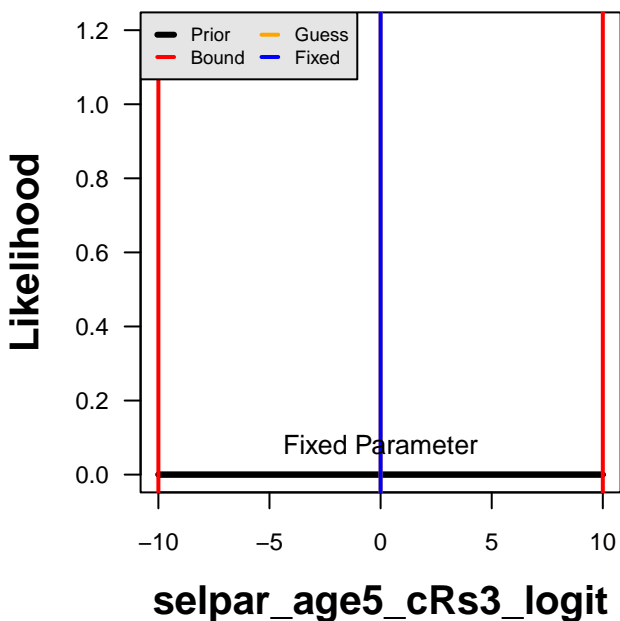
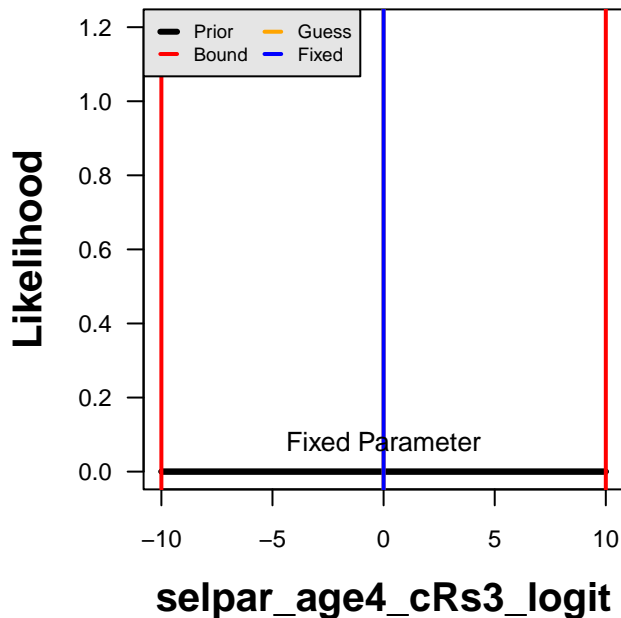
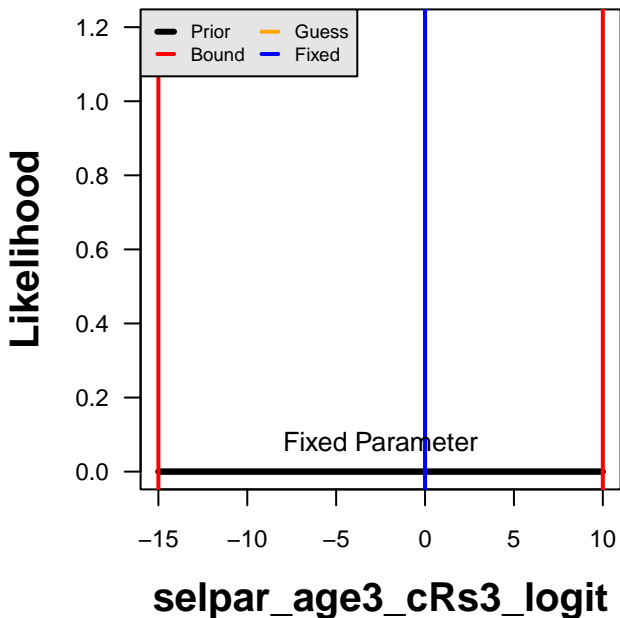


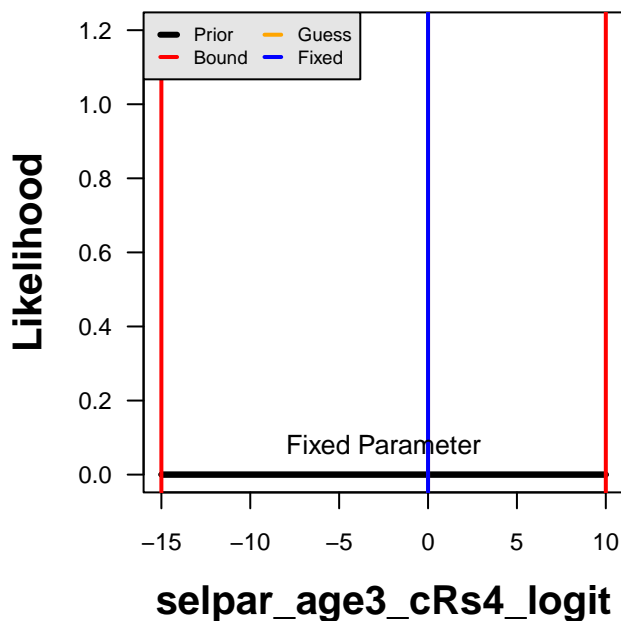
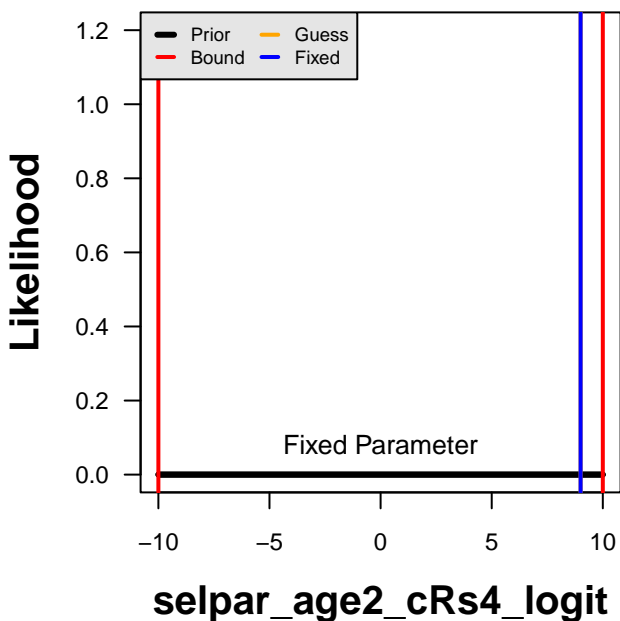
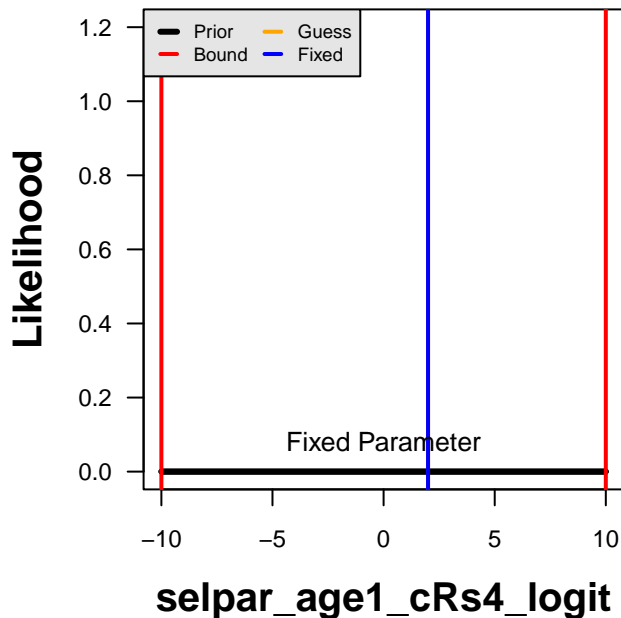
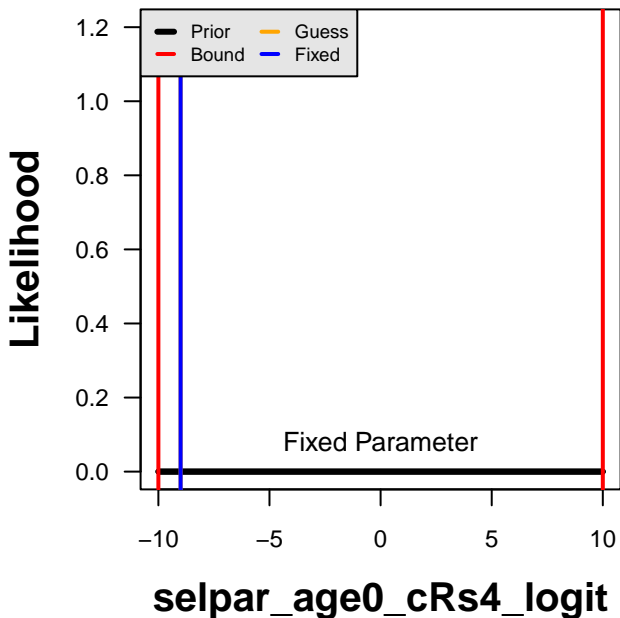
Likelihood



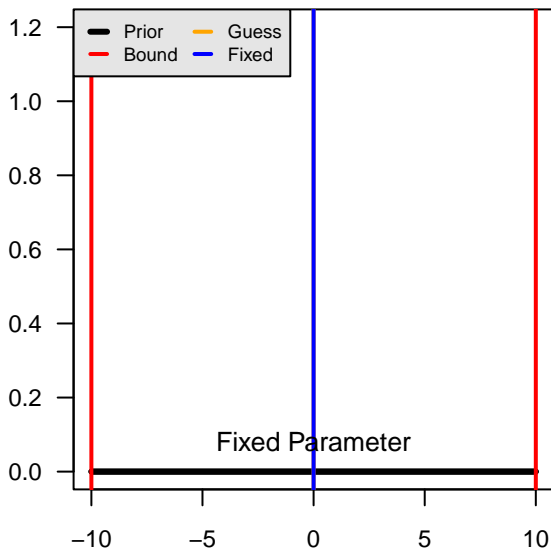
Likelihood





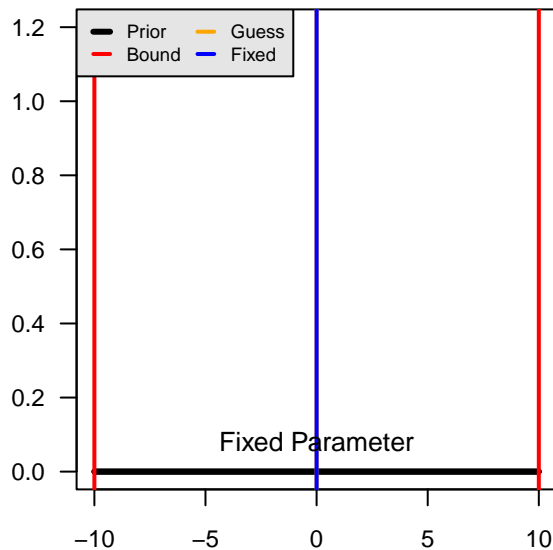


Likelihood



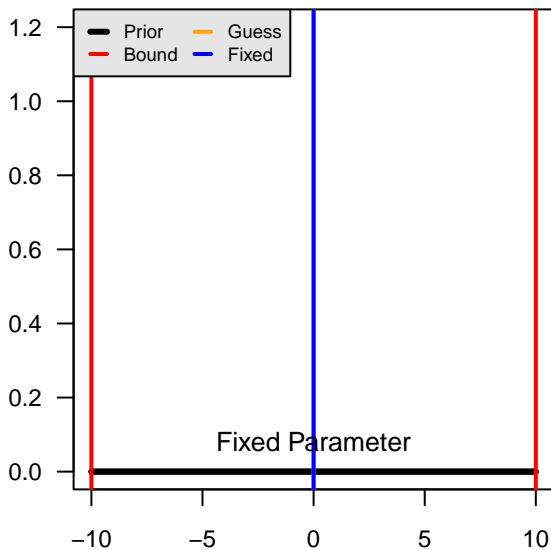
selpar\_age4\_cRs4\_logit

Likelihood



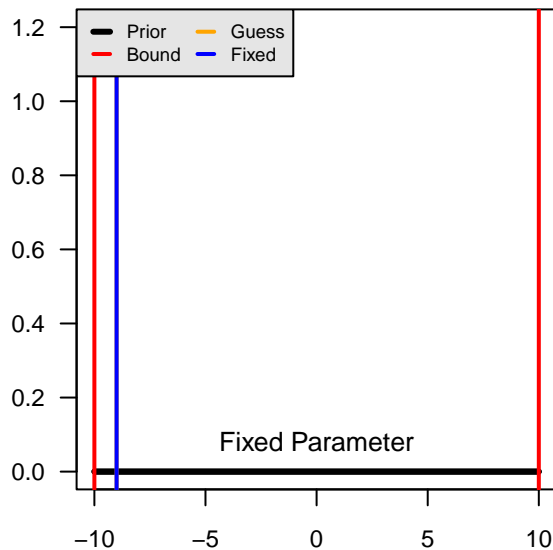
selpar\_age5\_cRs4\_logit

Likelihood



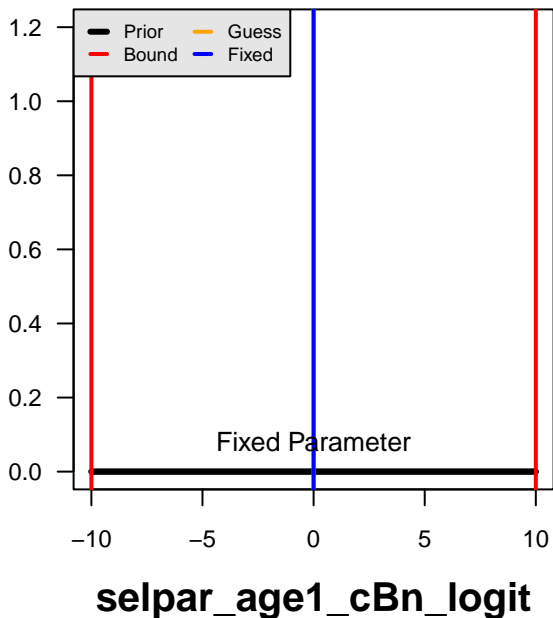
selpar\_age6\_cRs4\_logit

Likelihood

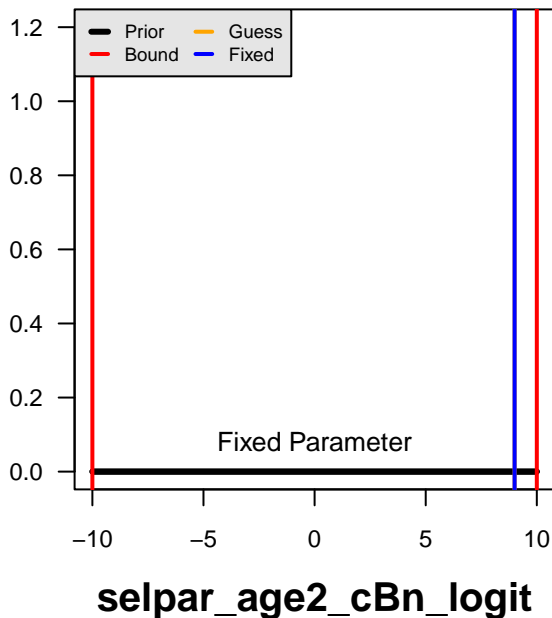


selpar\_age0\_cBn\_logit

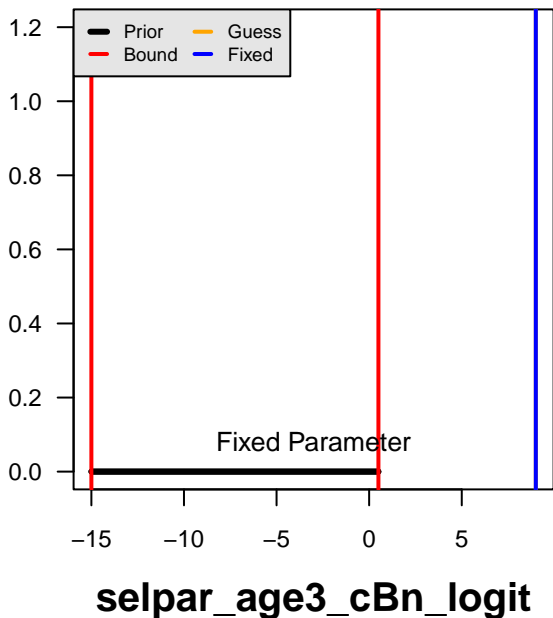
Likelihood



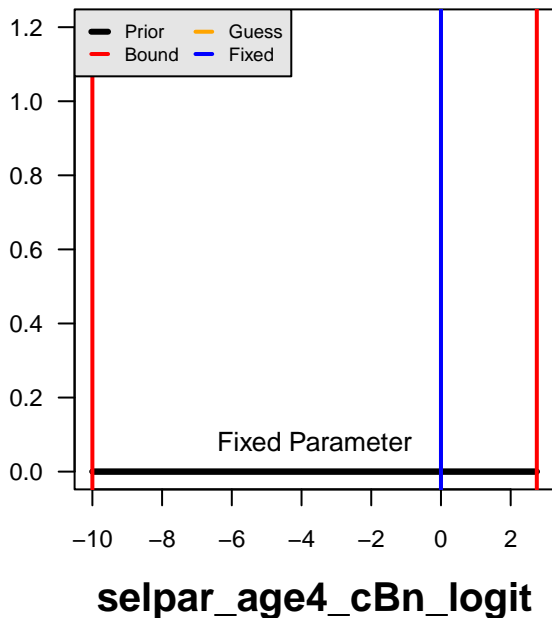
Likelihood



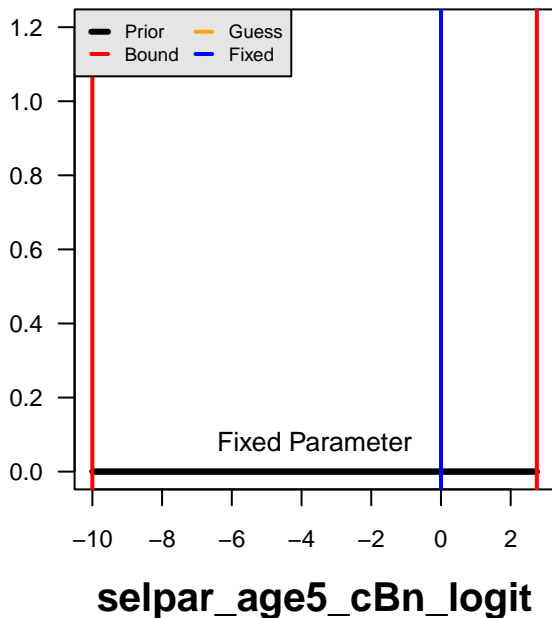
Likelihood



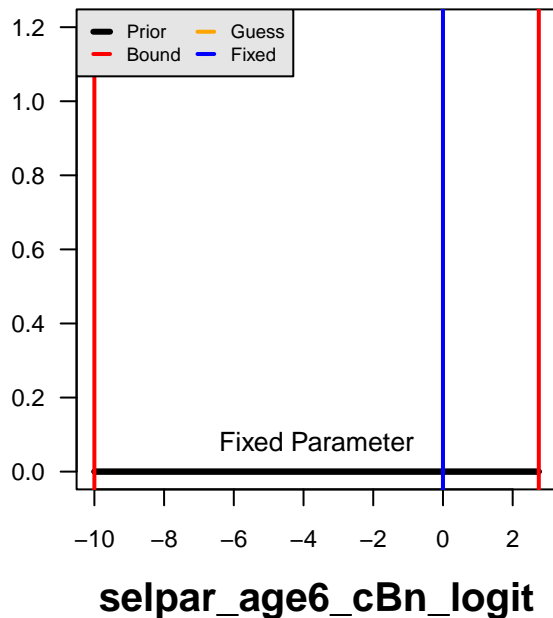
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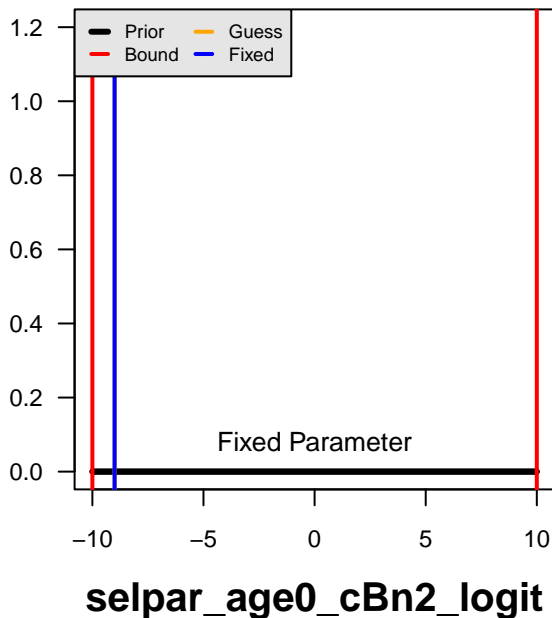
Likelihood



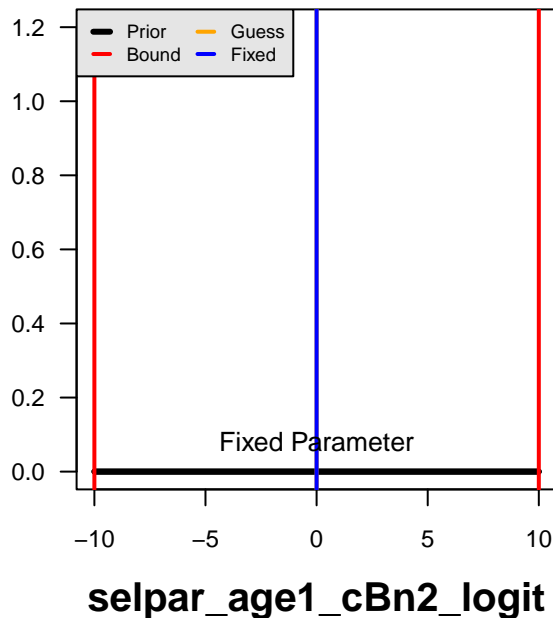
Likelihood



Likelihood

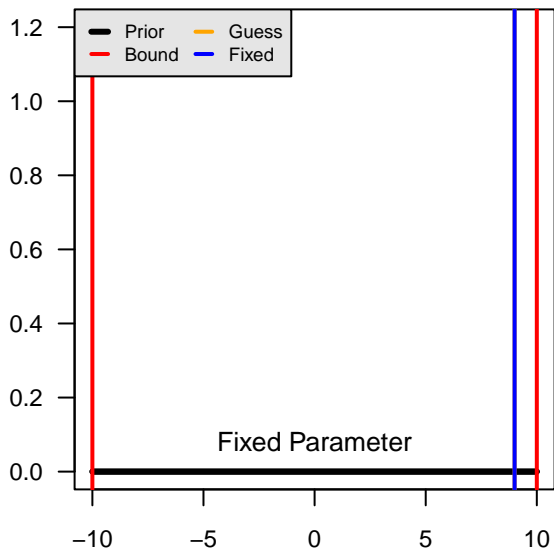


Likelihood



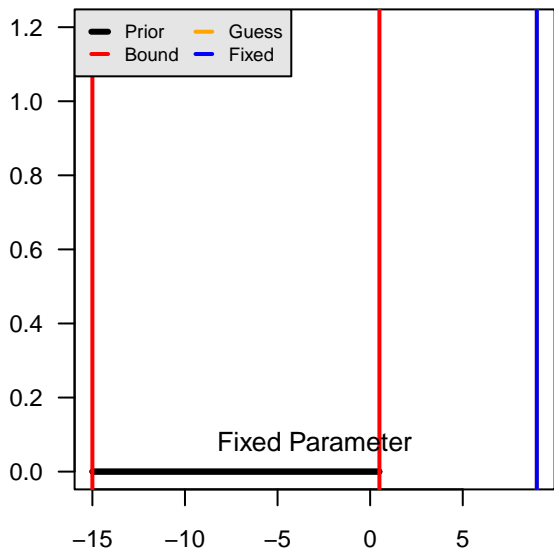


Likelihood



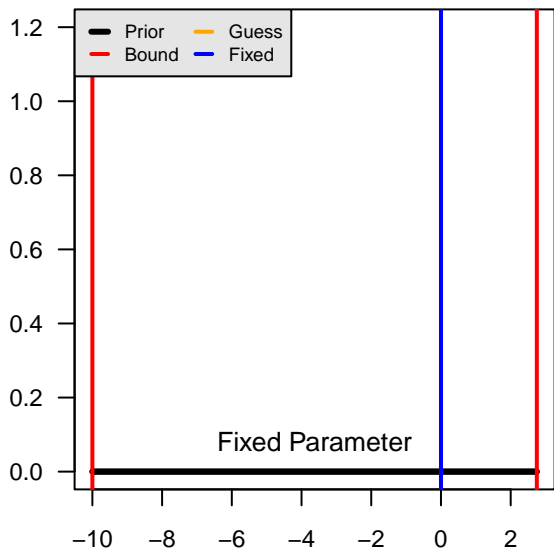
selpar\_age2\_cBn2\_logit

Likelihood



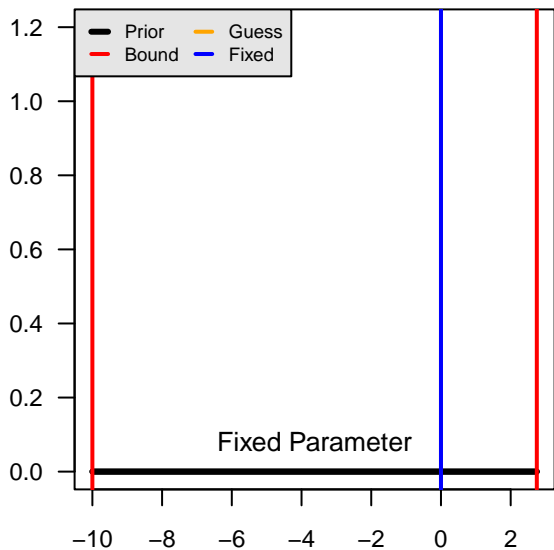
selpar\_age3\_cBn2\_logit

Likelihood



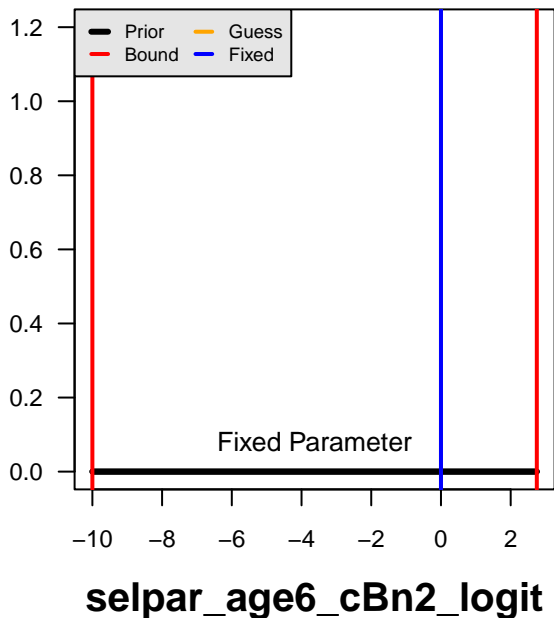
selpar\_age4\_cBn2\_logit

Likelihood

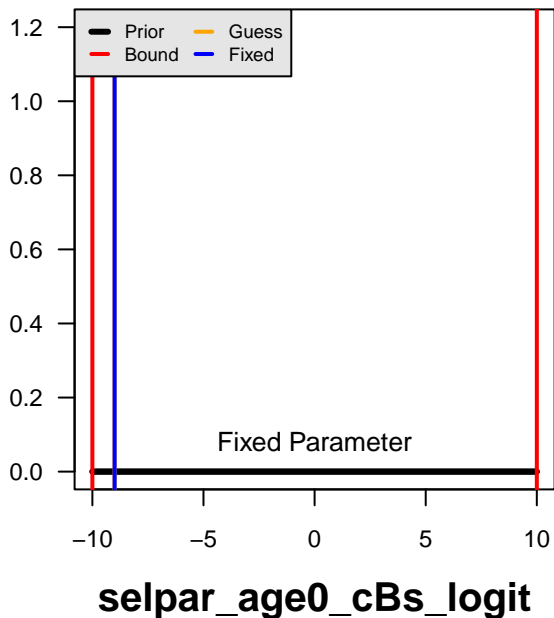


selpar\_age5\_cBn2\_logit

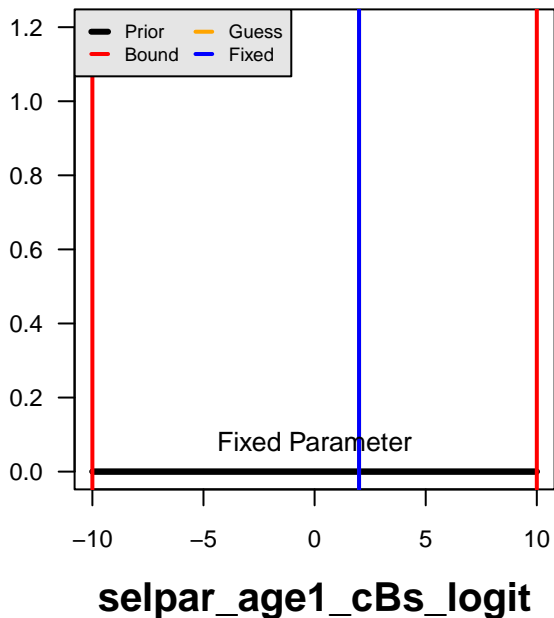
Likelihood



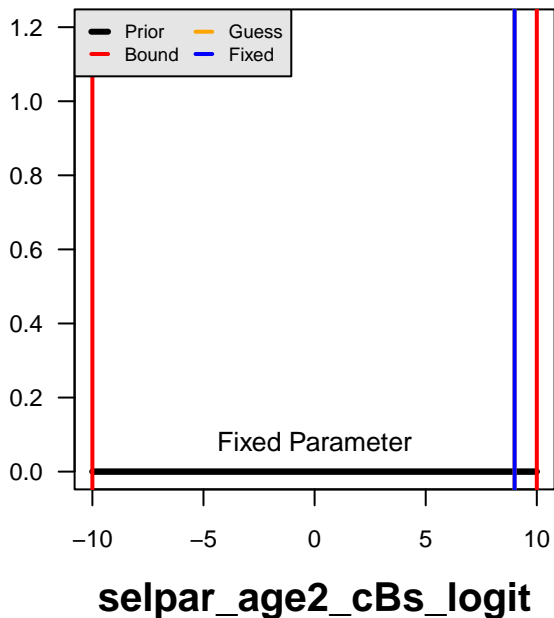
Likelihood

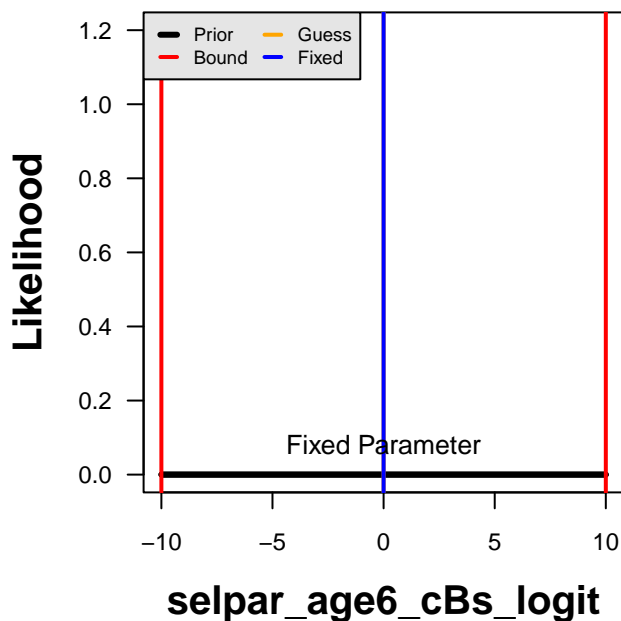
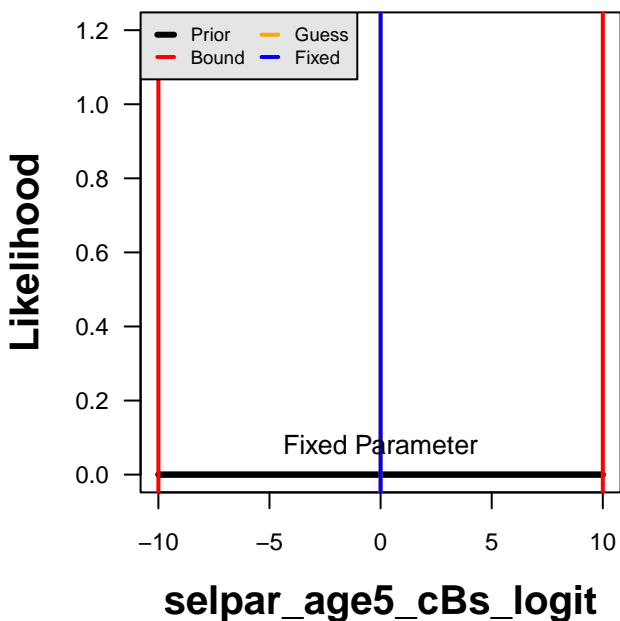
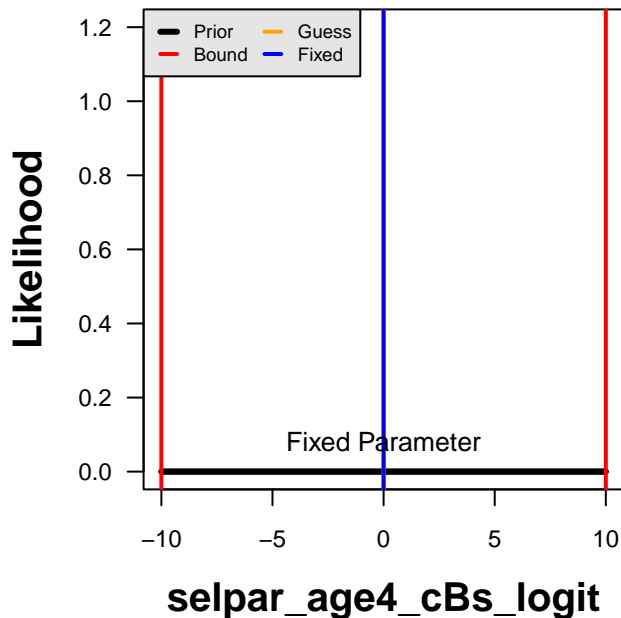
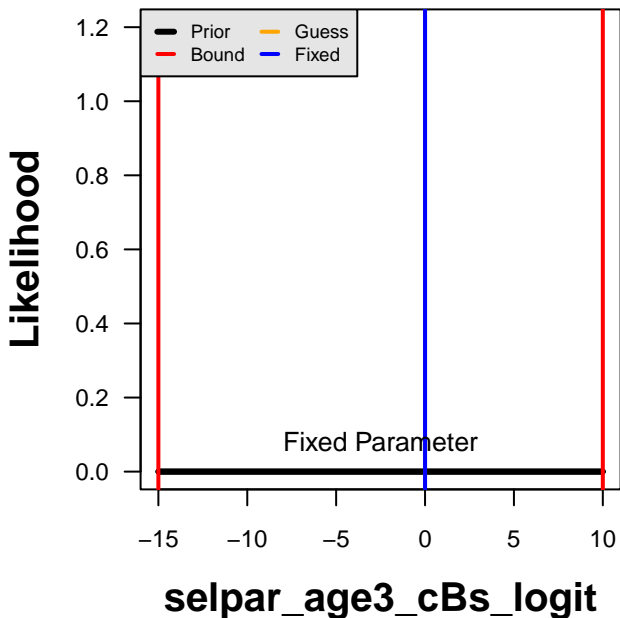


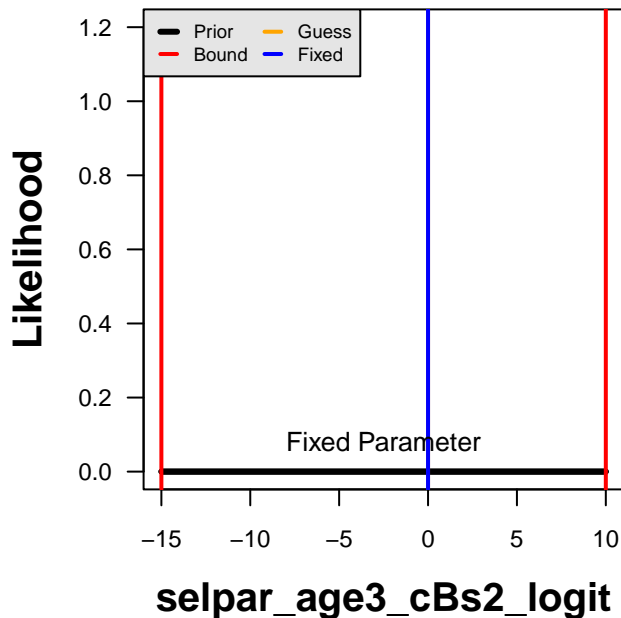
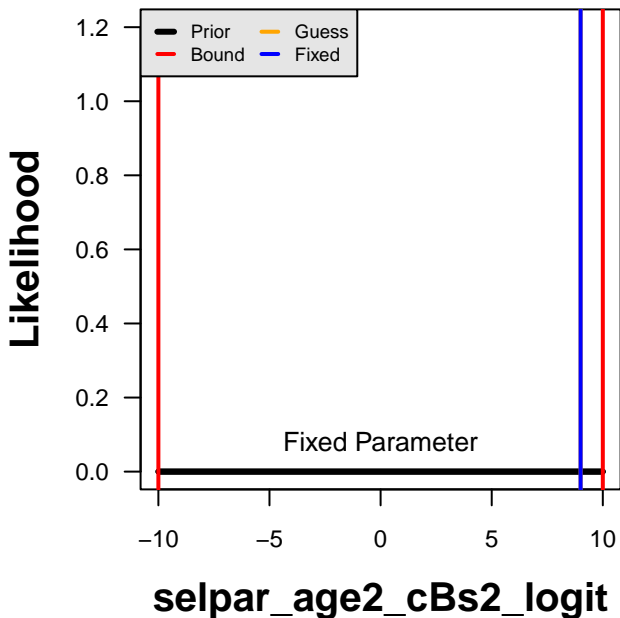
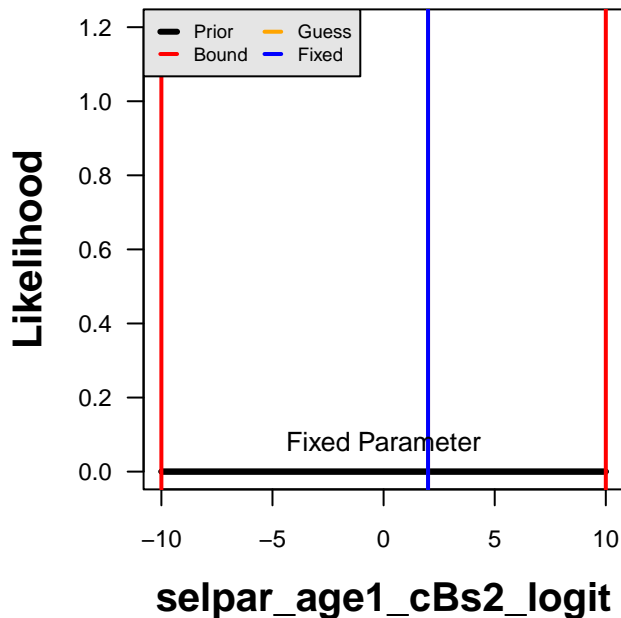
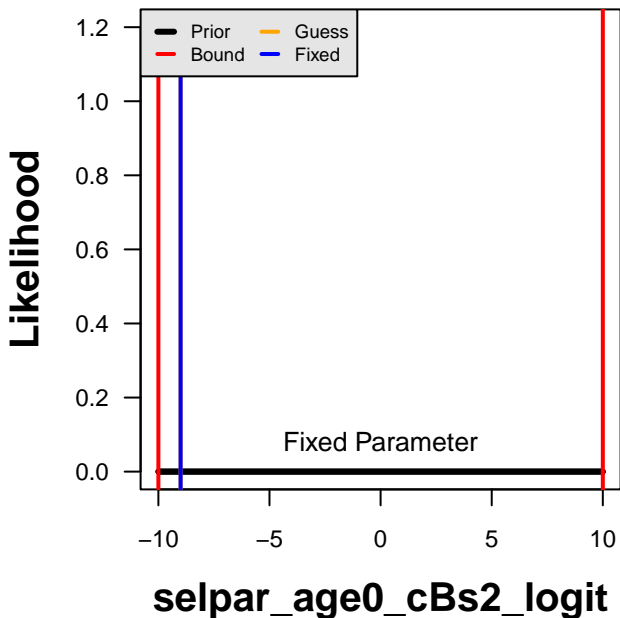
Likelihood



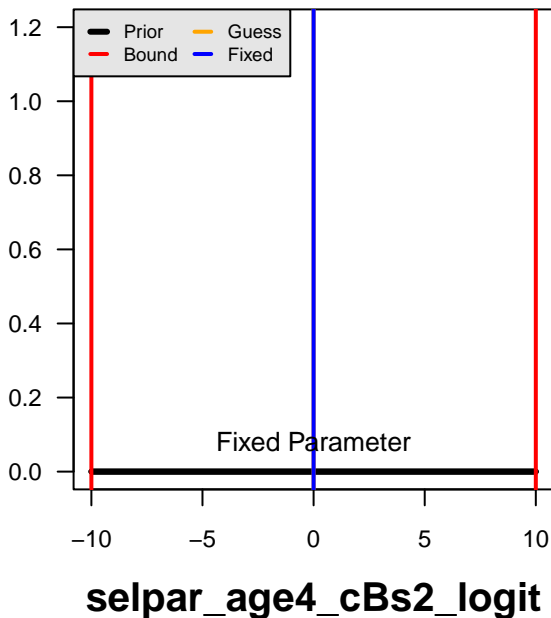
Likelihood



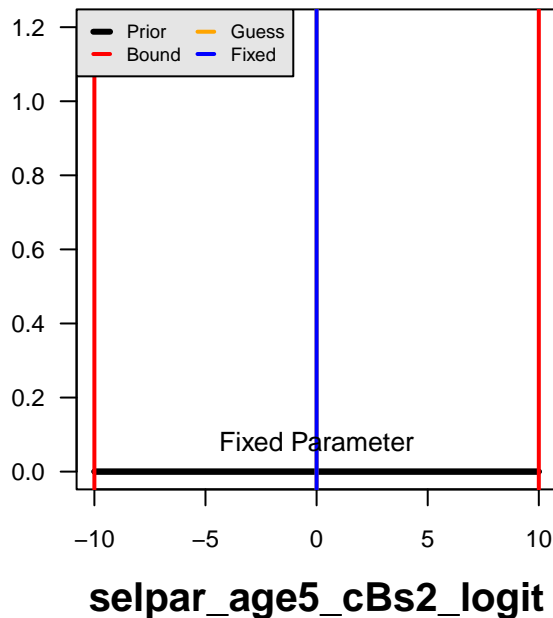




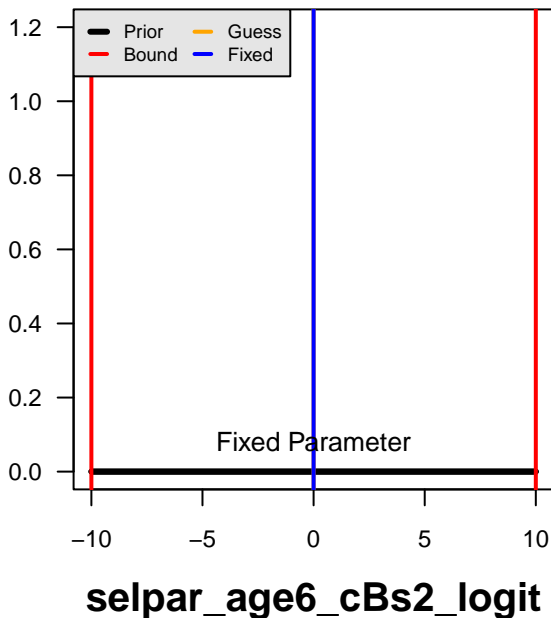
Likelihood



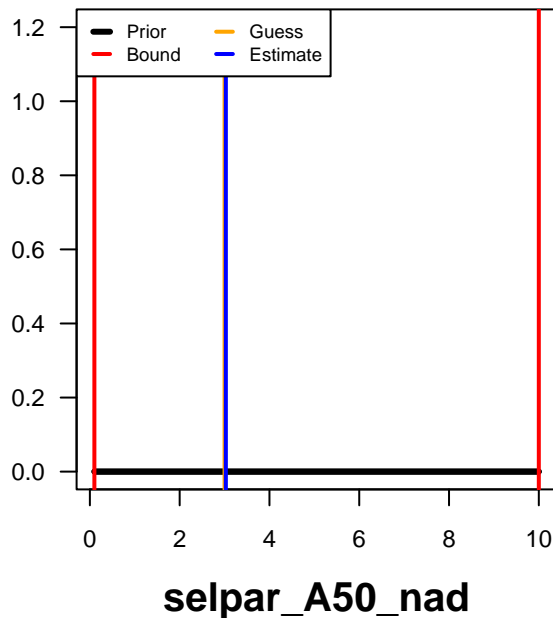
Likelihood

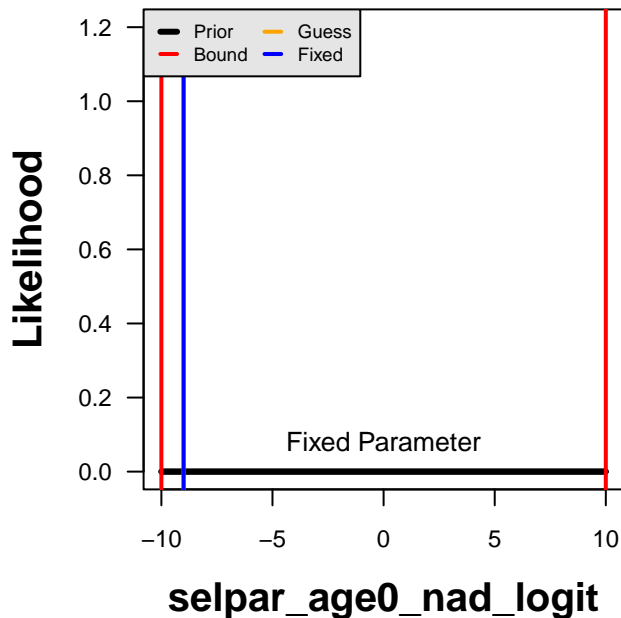
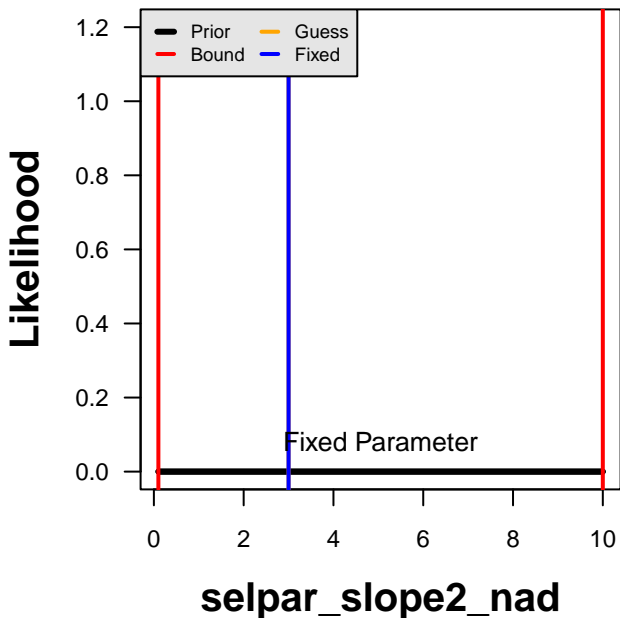
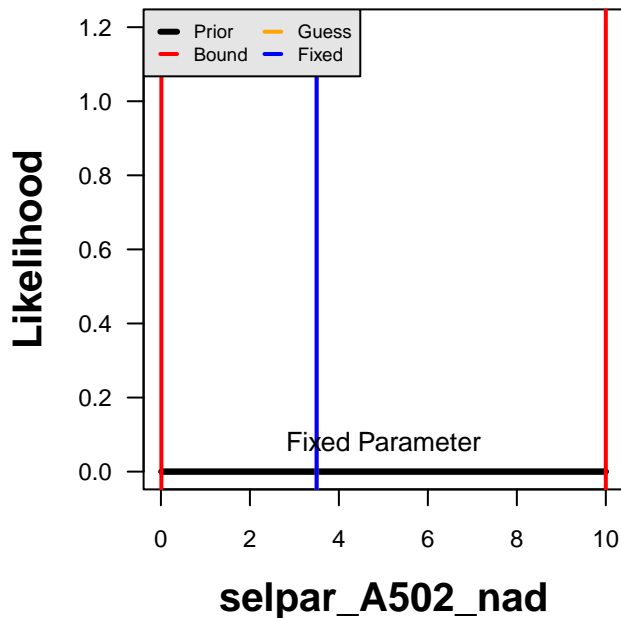
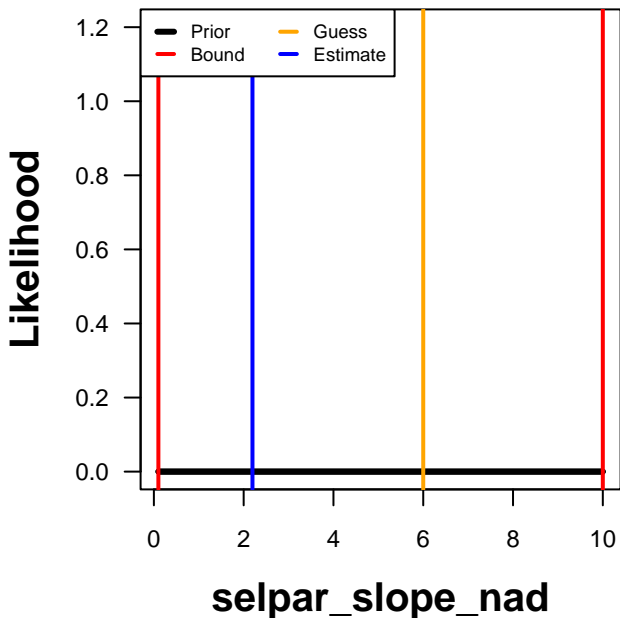


Likelihood

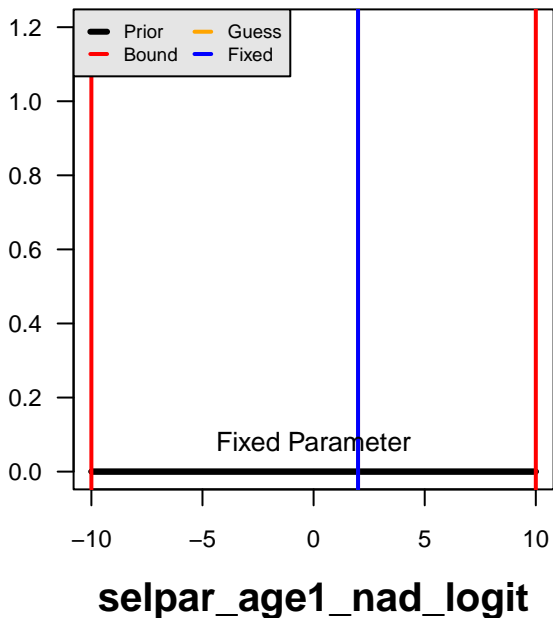


Likelihood

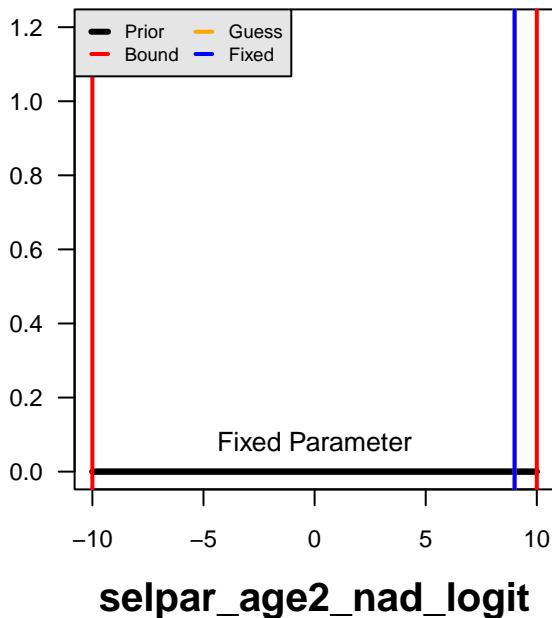




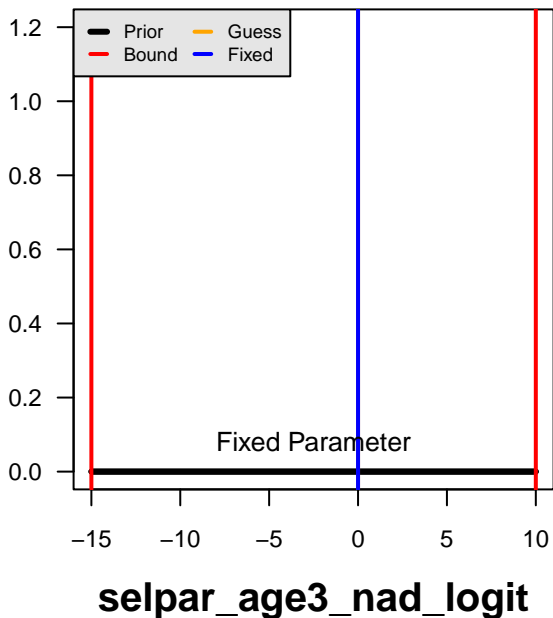
Likelihood



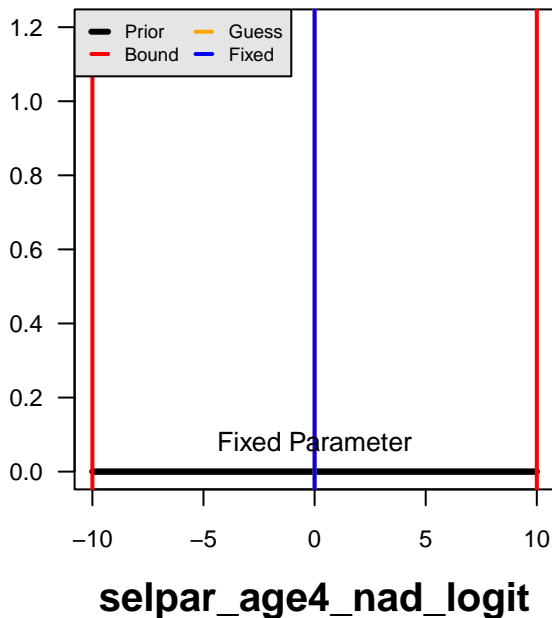
Likelihood



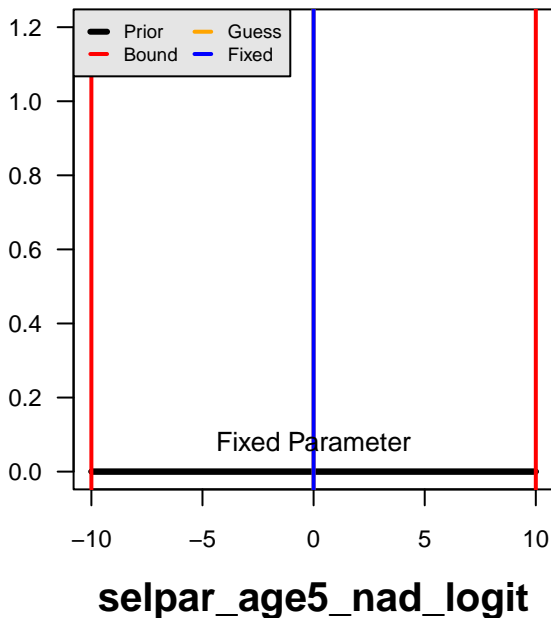
Likelihood



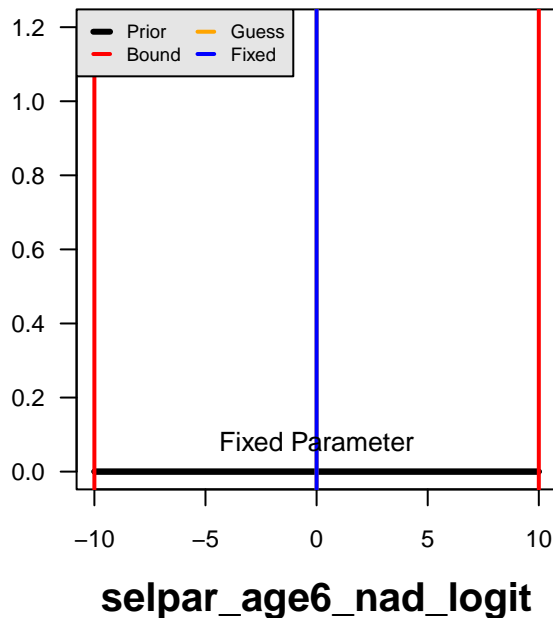
Likelihood



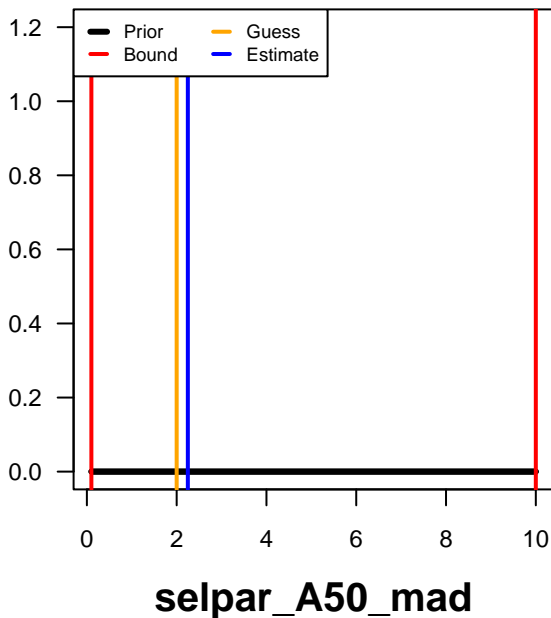
Likelihood



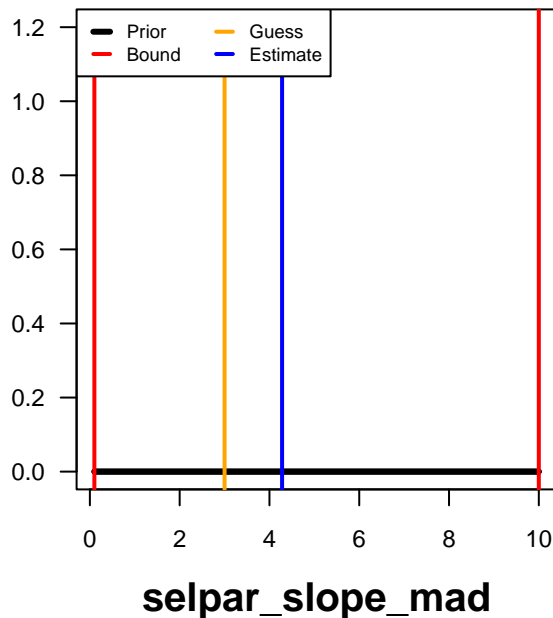
Likelihood



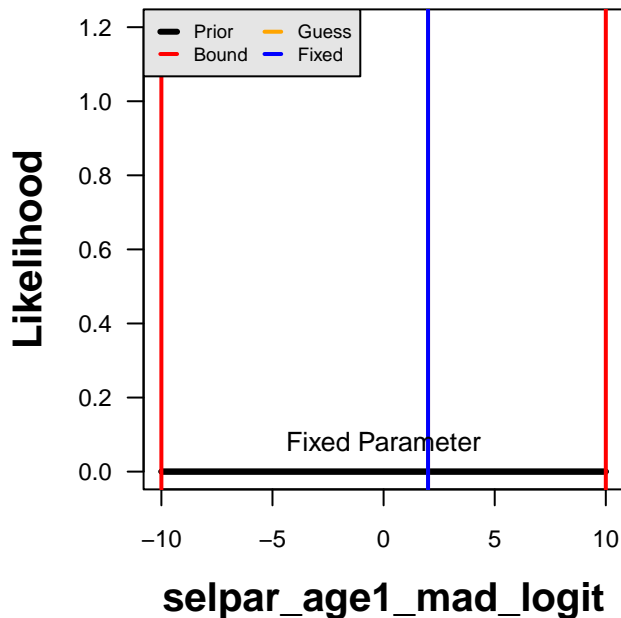
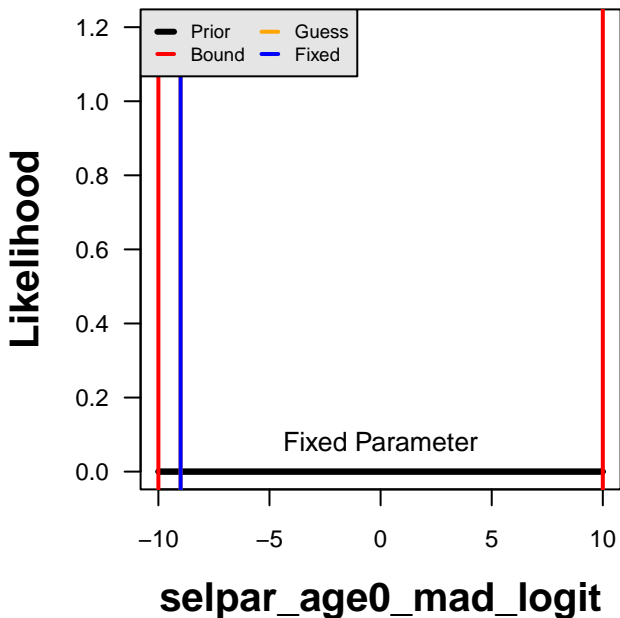
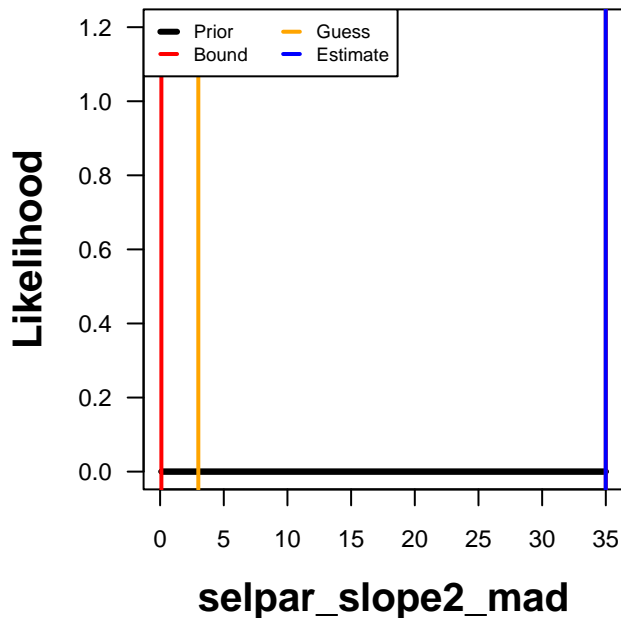
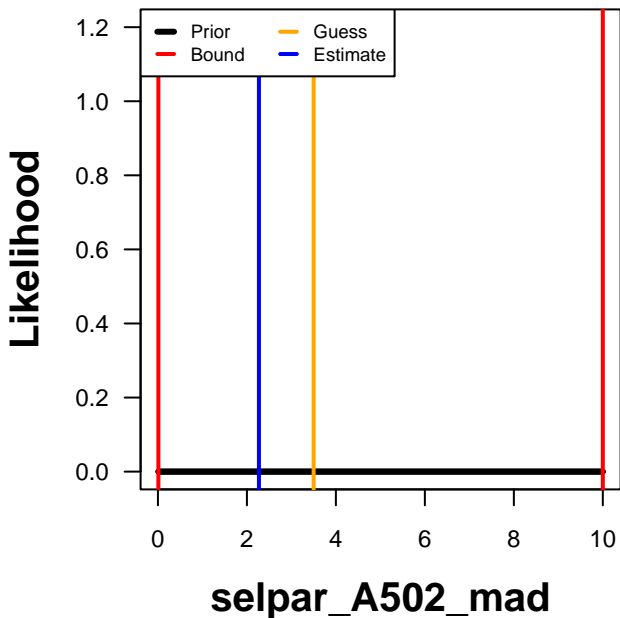
Likelihood

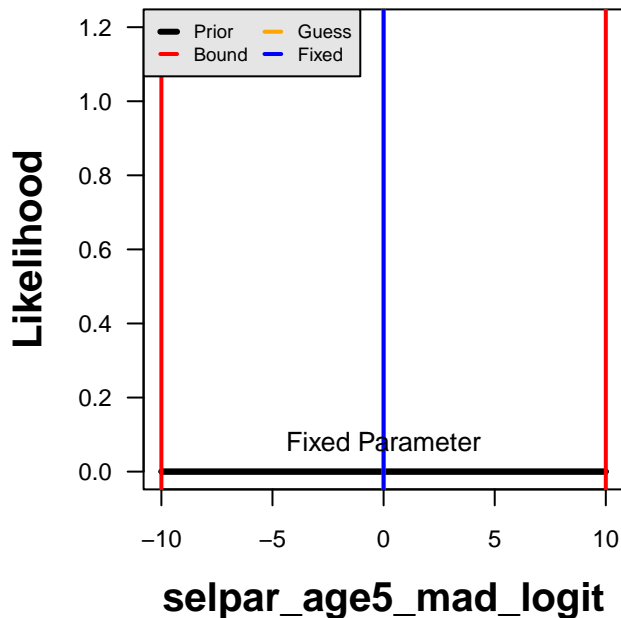
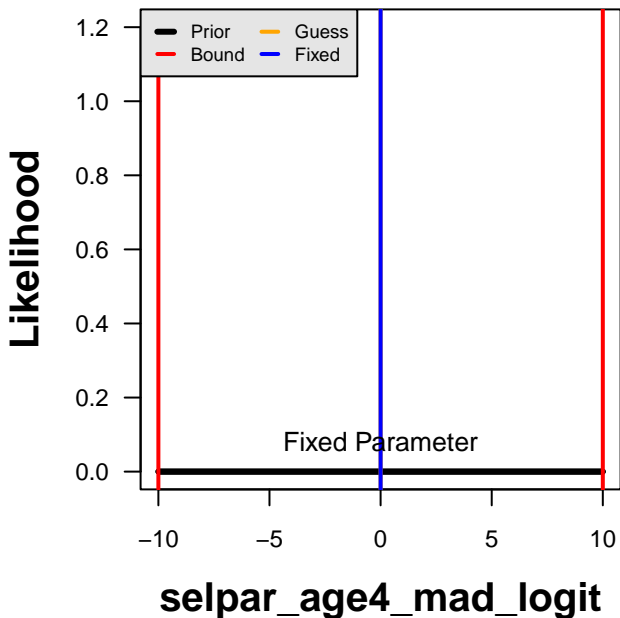
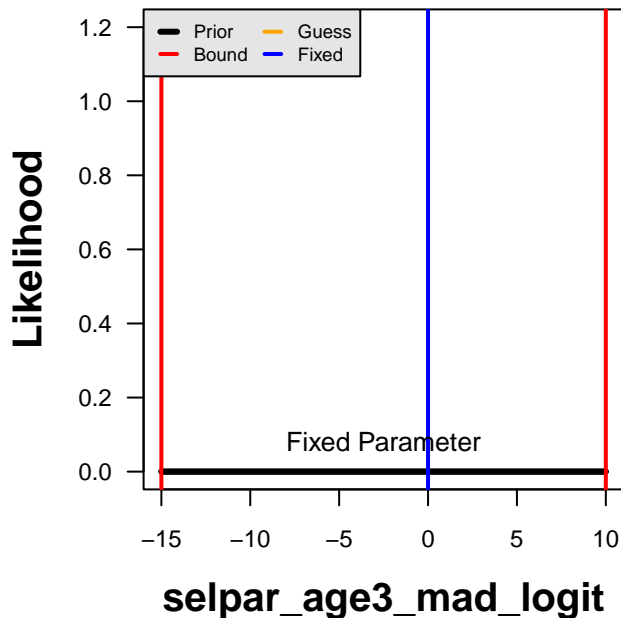
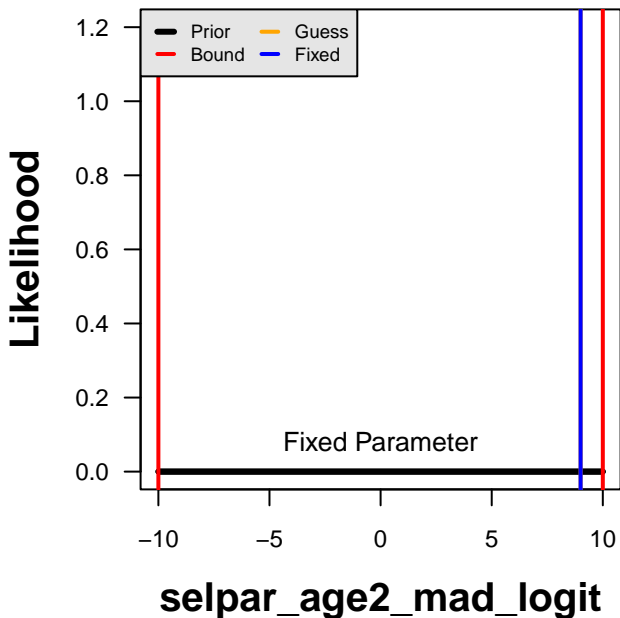


Likelihood

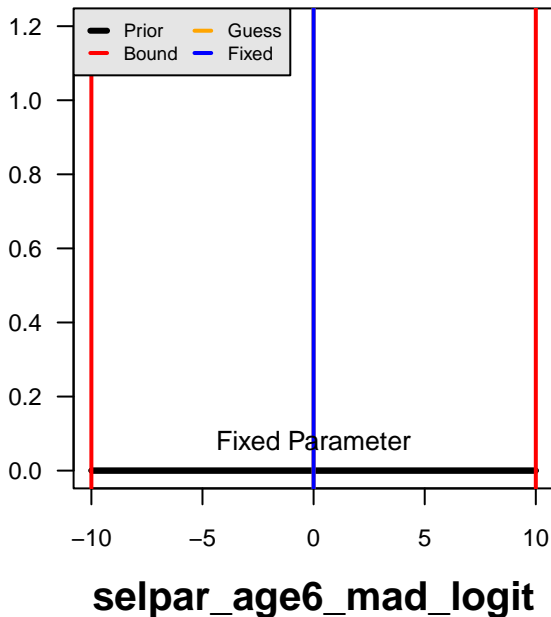




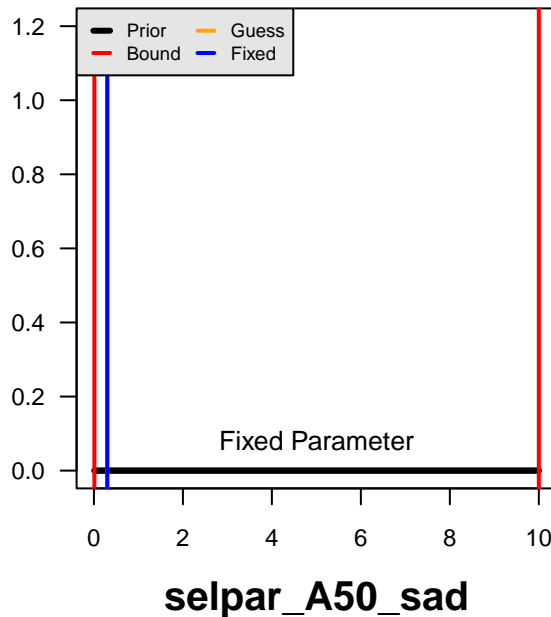




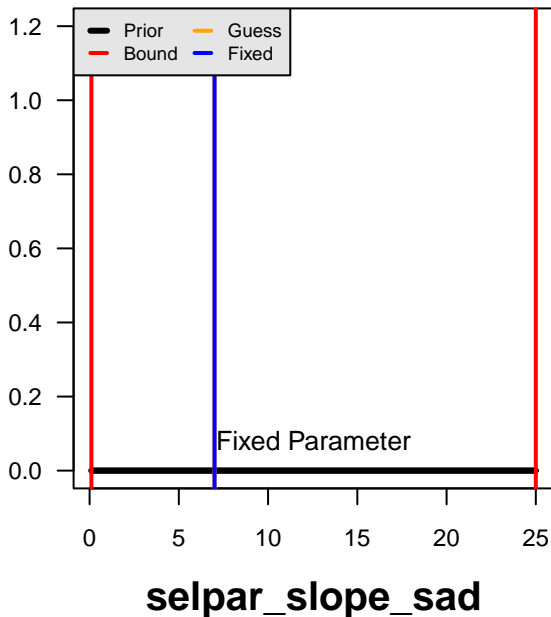
Likelihood



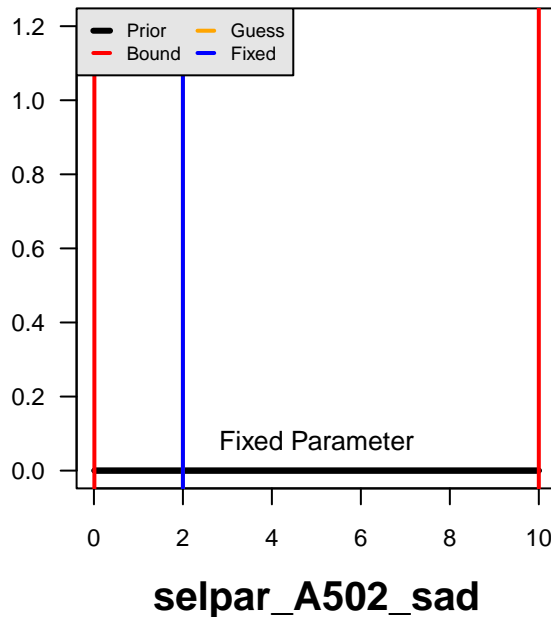
Likelihood



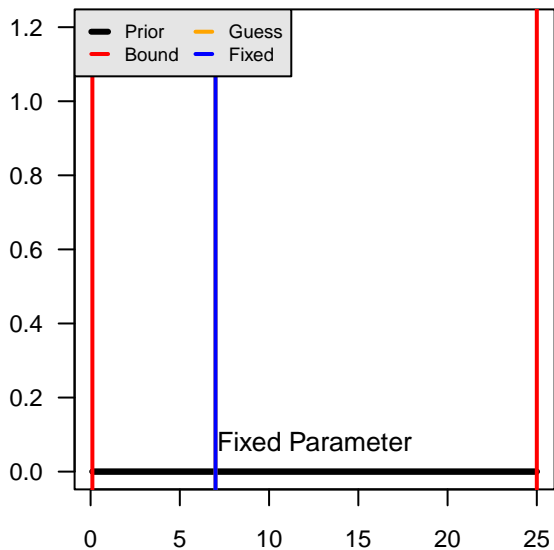
Likelihood



Likelihood

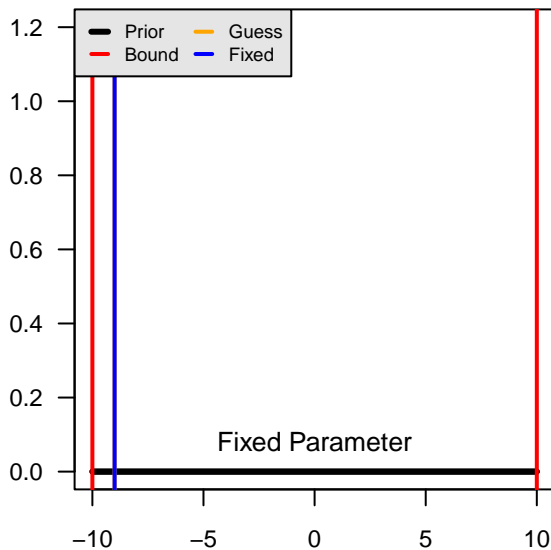


Likelihood



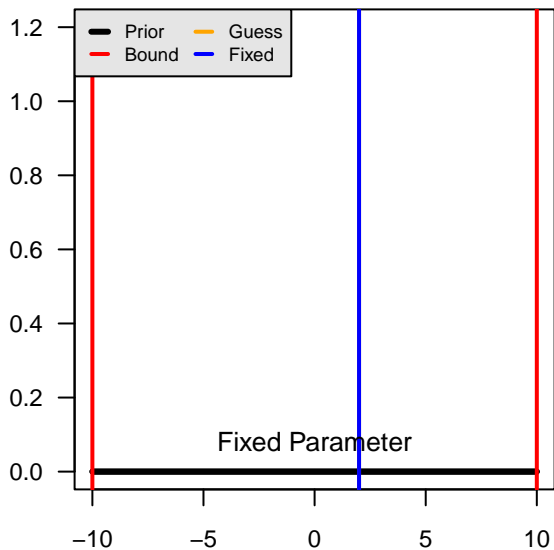
`selpar_slope2_sad`

Likelihood



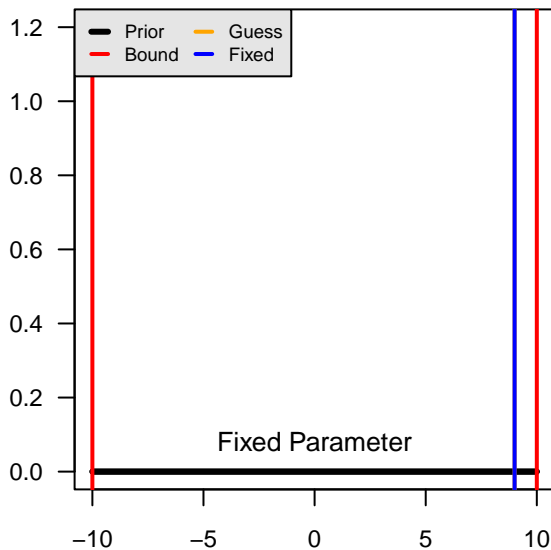
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Likelihood

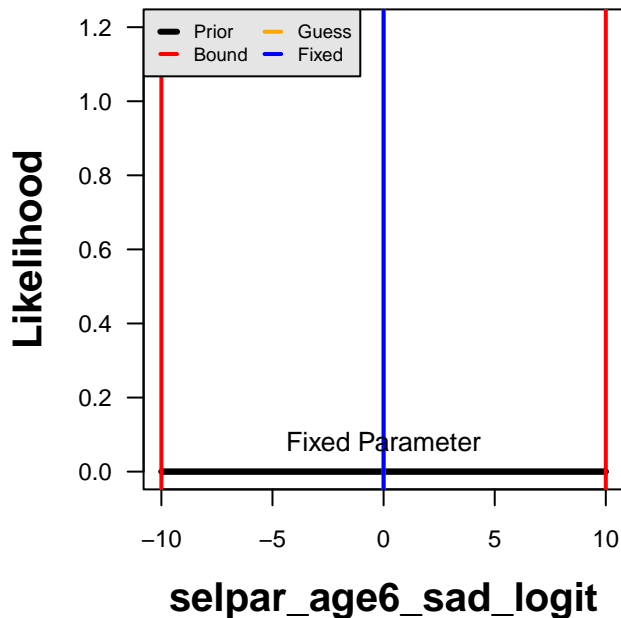
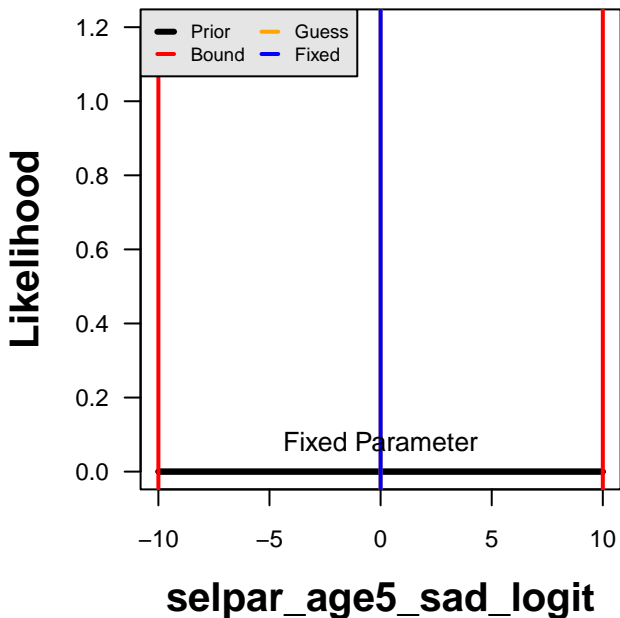
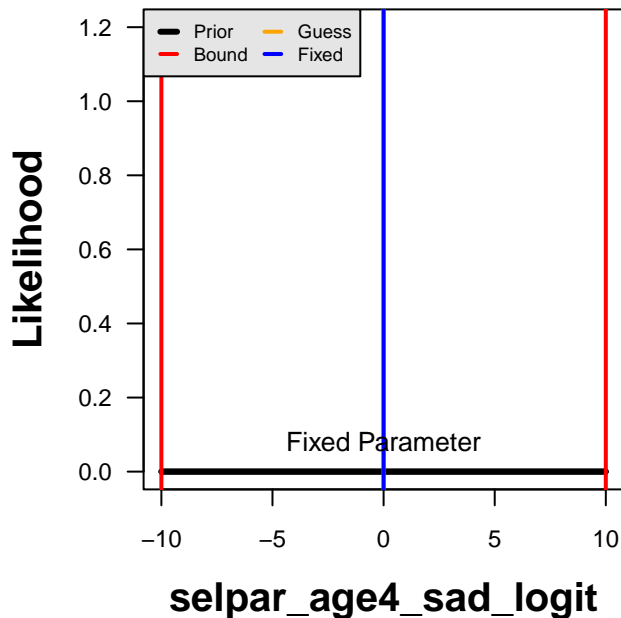
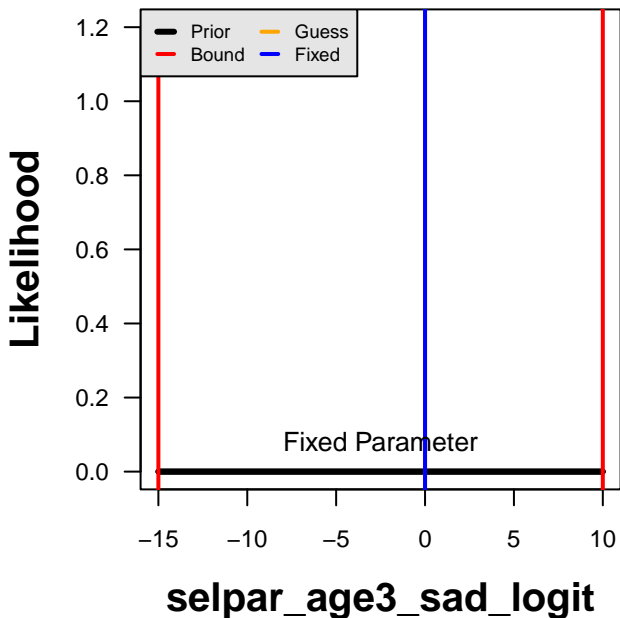


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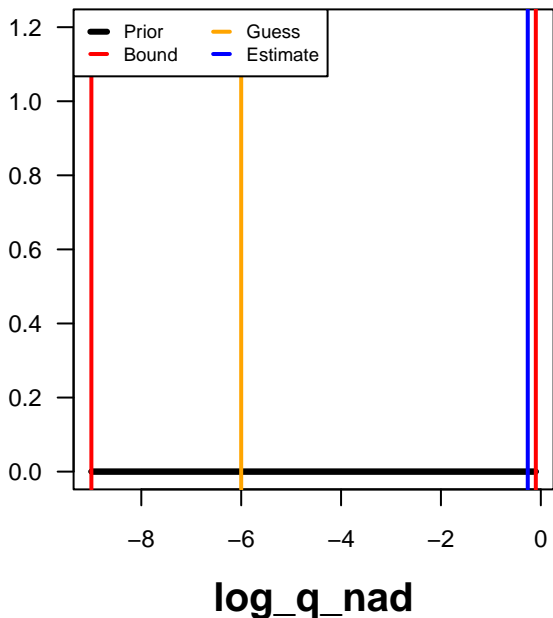
Likelihood



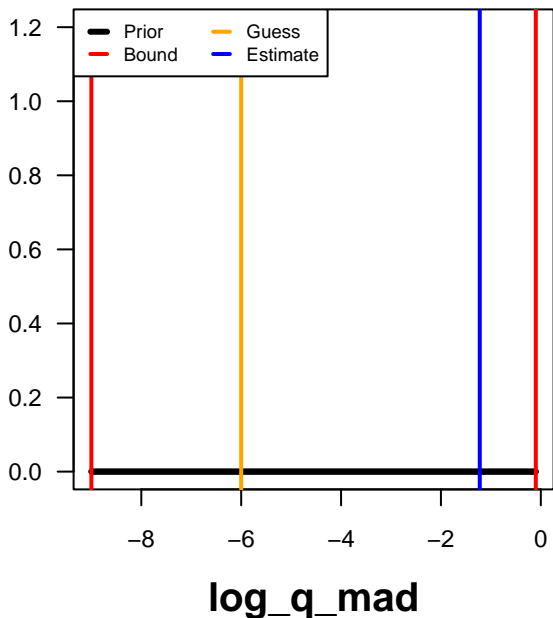
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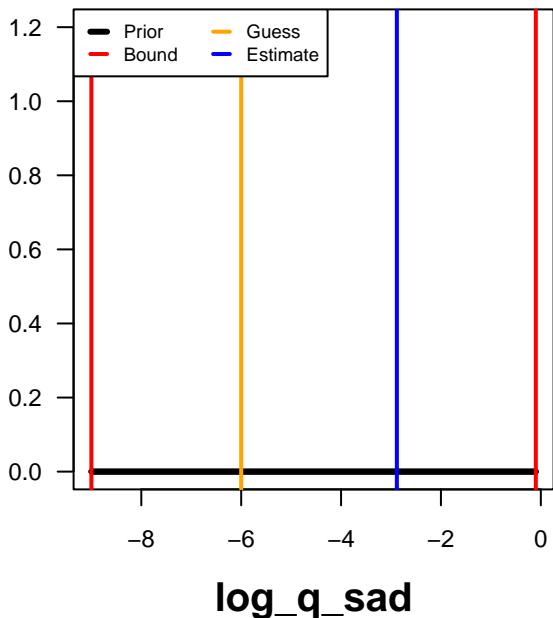
Likelihood



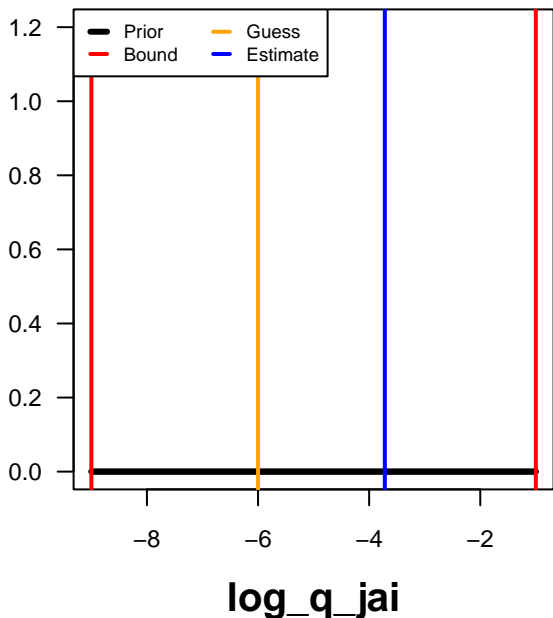
Likelihood



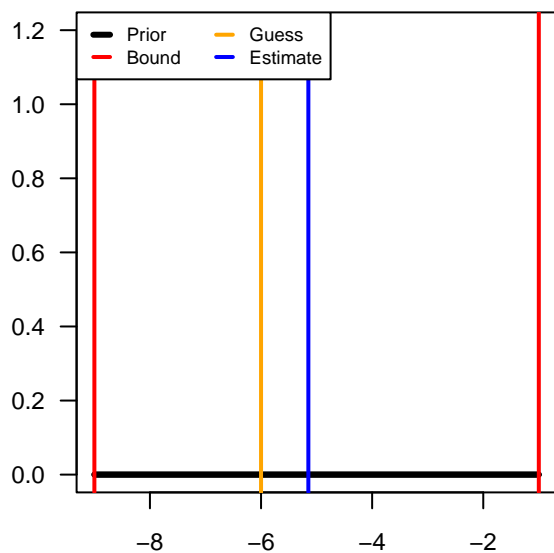
Likelihood



Likelihood

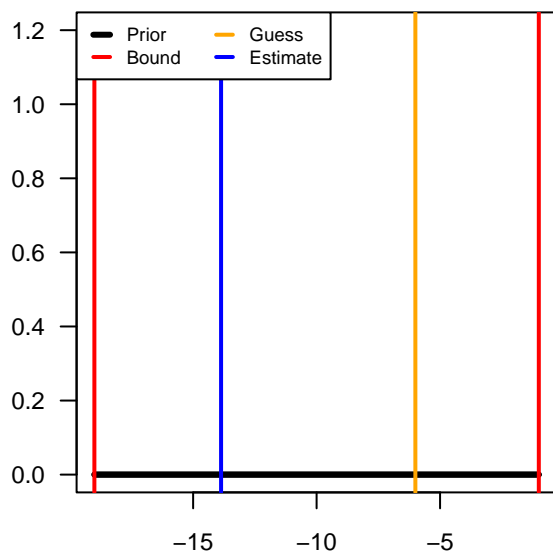


Likelihood



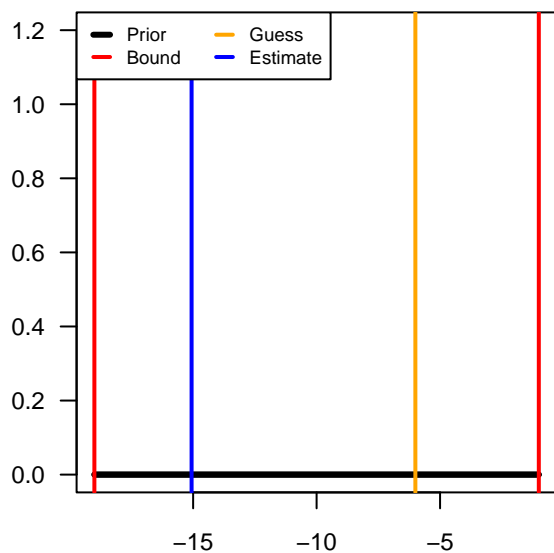
$\log_{q2\_jai}$

Likelihood



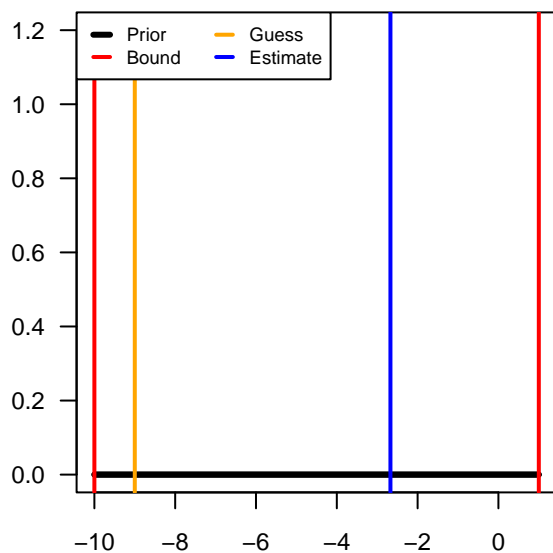
$\log_{q\_mar}$

Likelihood



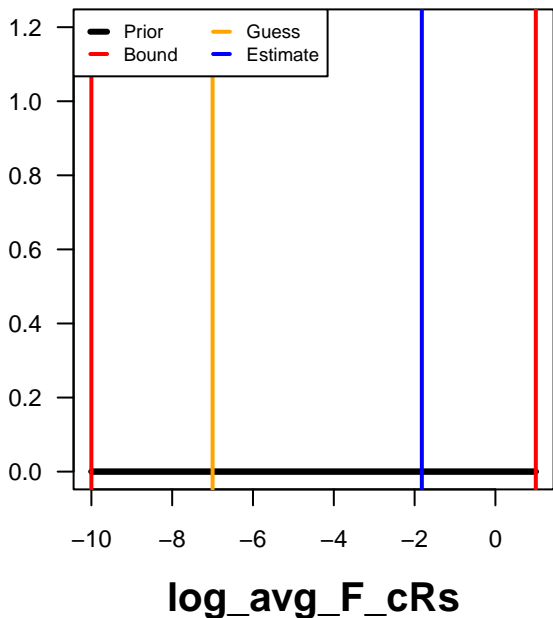
$\log_{q\_eco}$

Likelihood

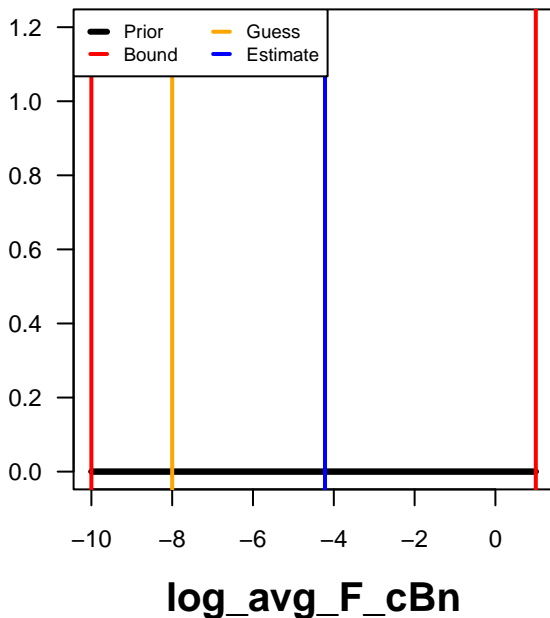


$\log_{avg\_F\_cRn}$

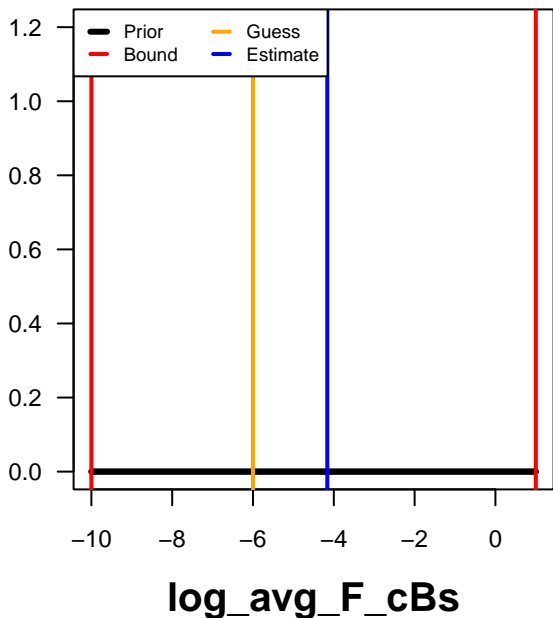
**Likelihood**



**Likelihood**



**Likelihood**

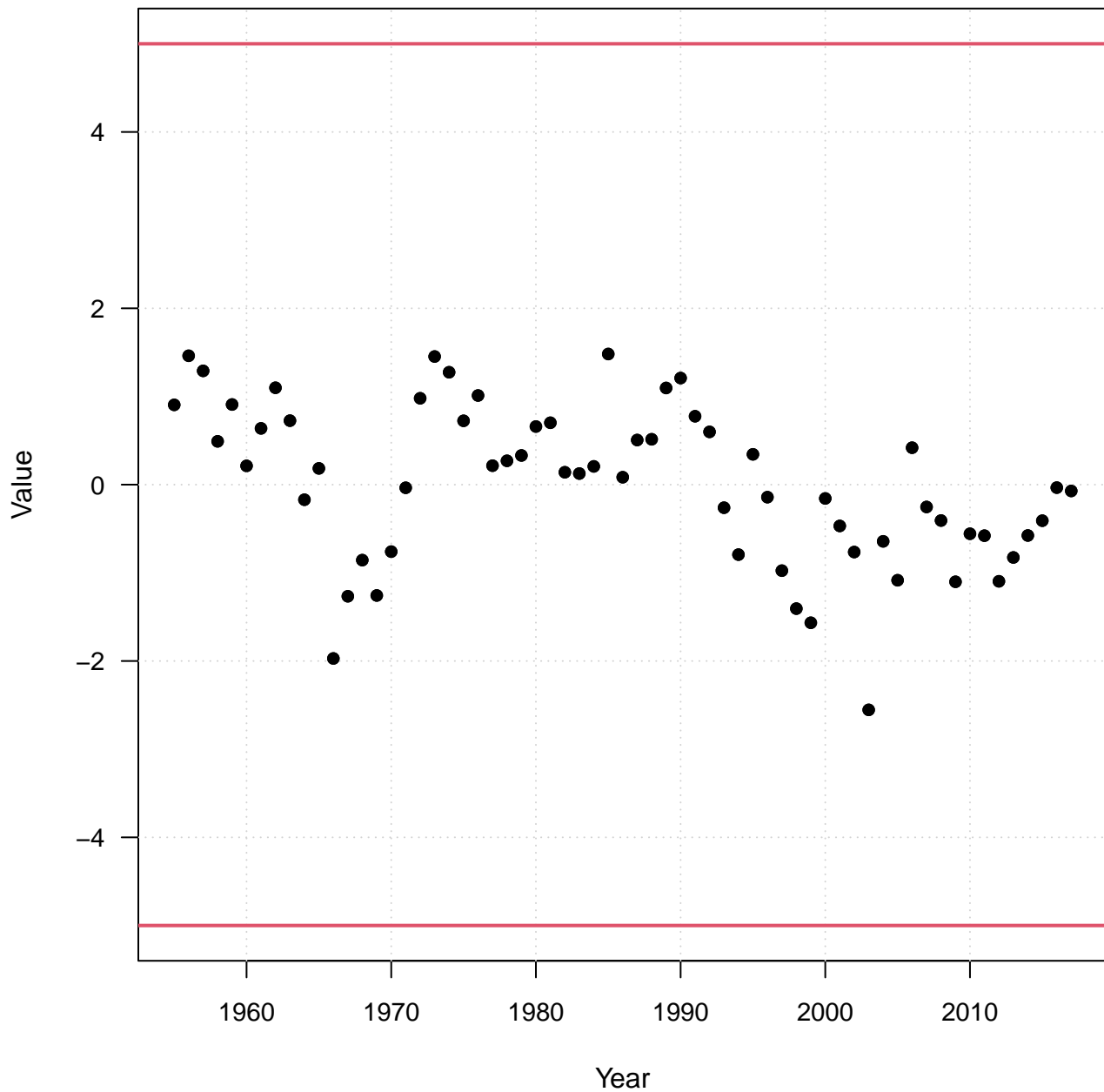




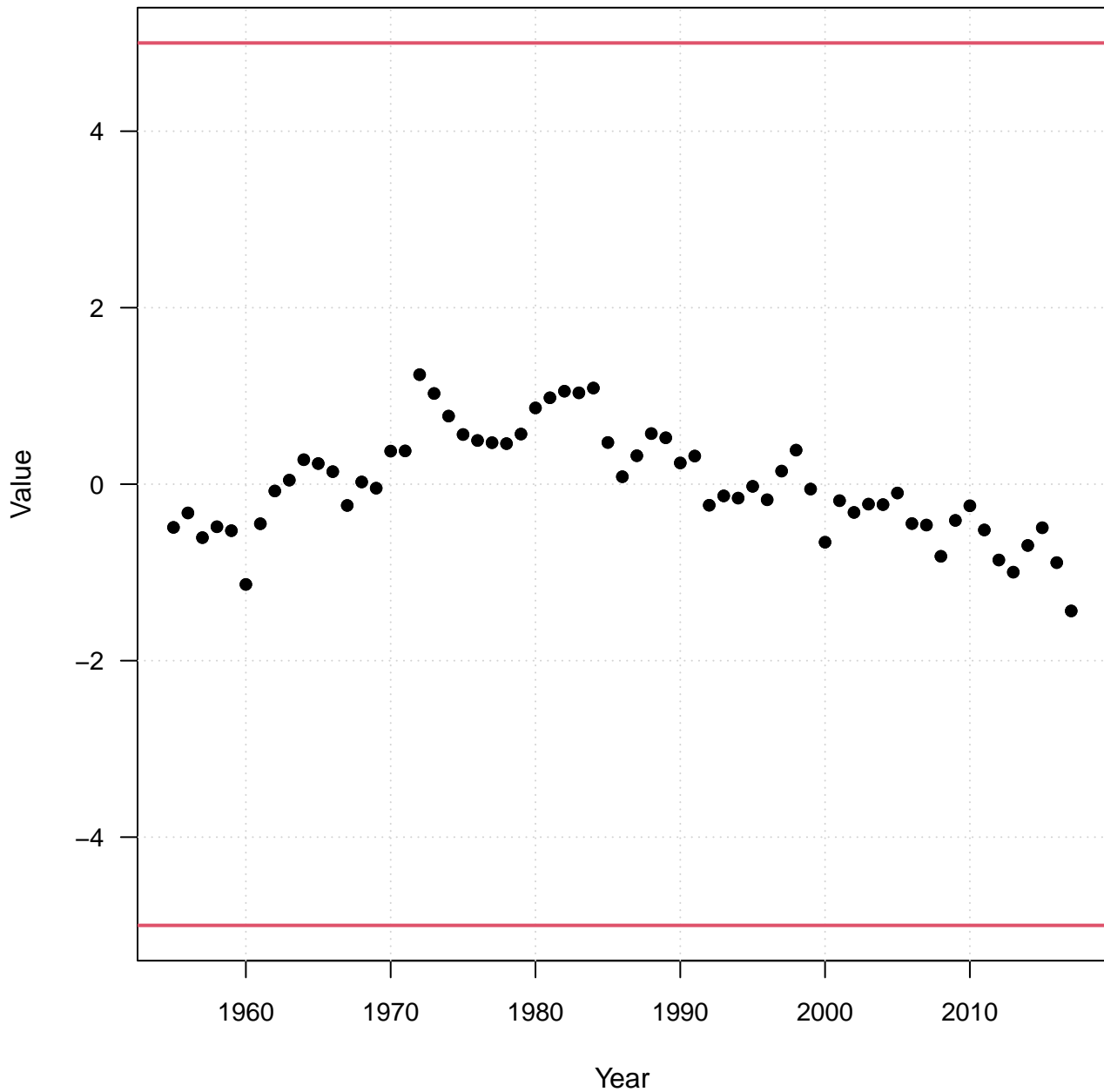
Vector: log.rec.dev



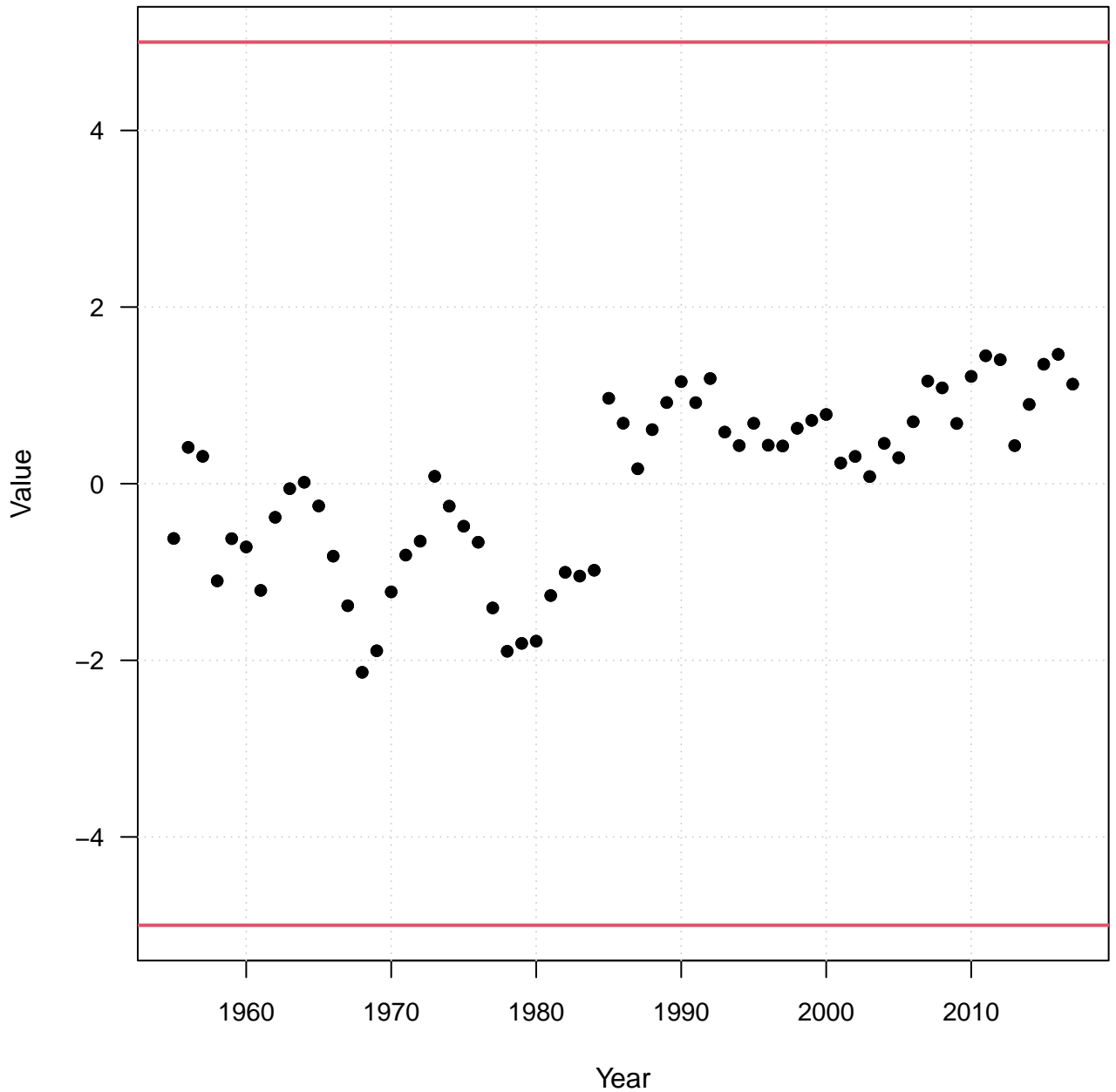
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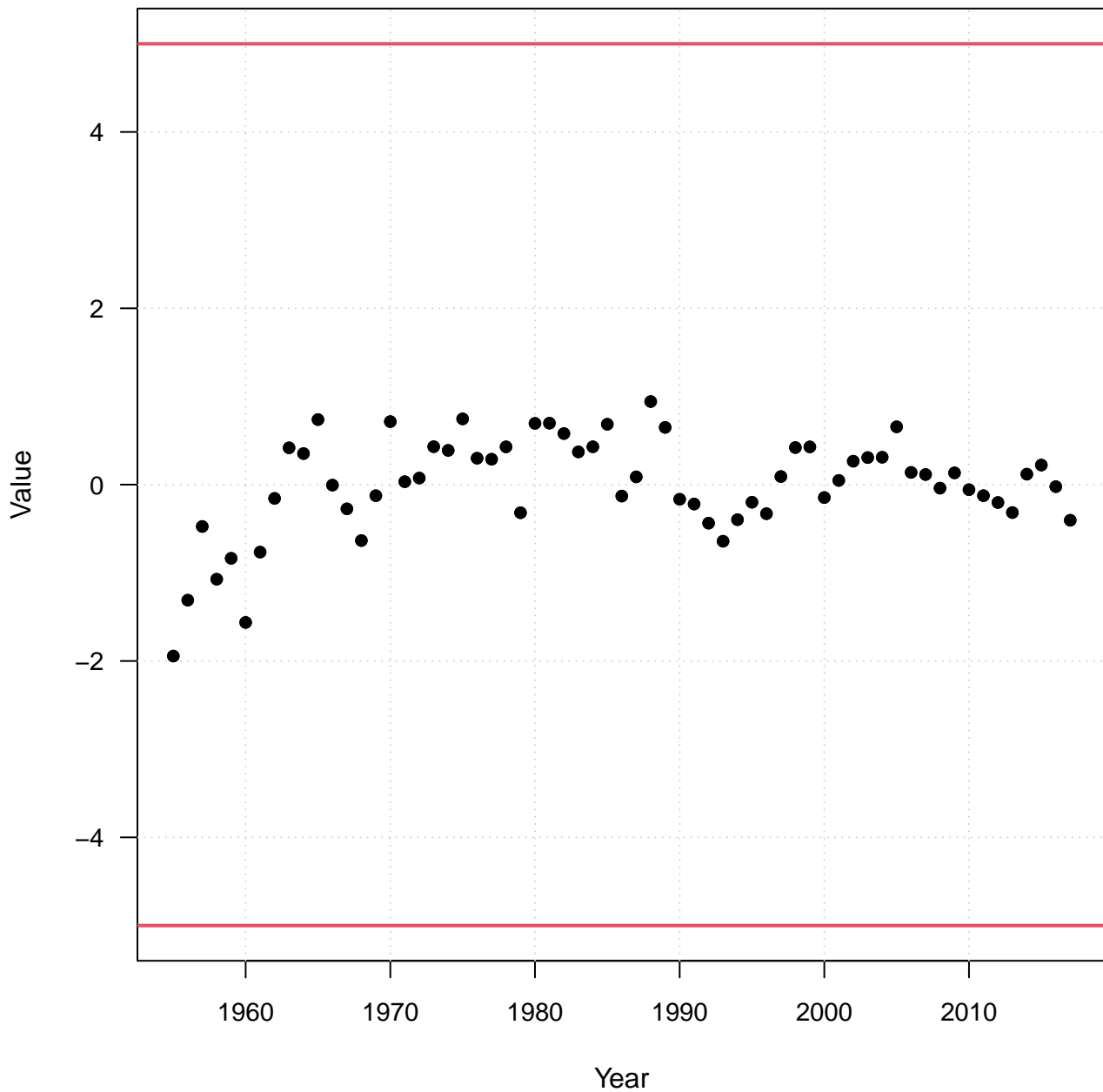
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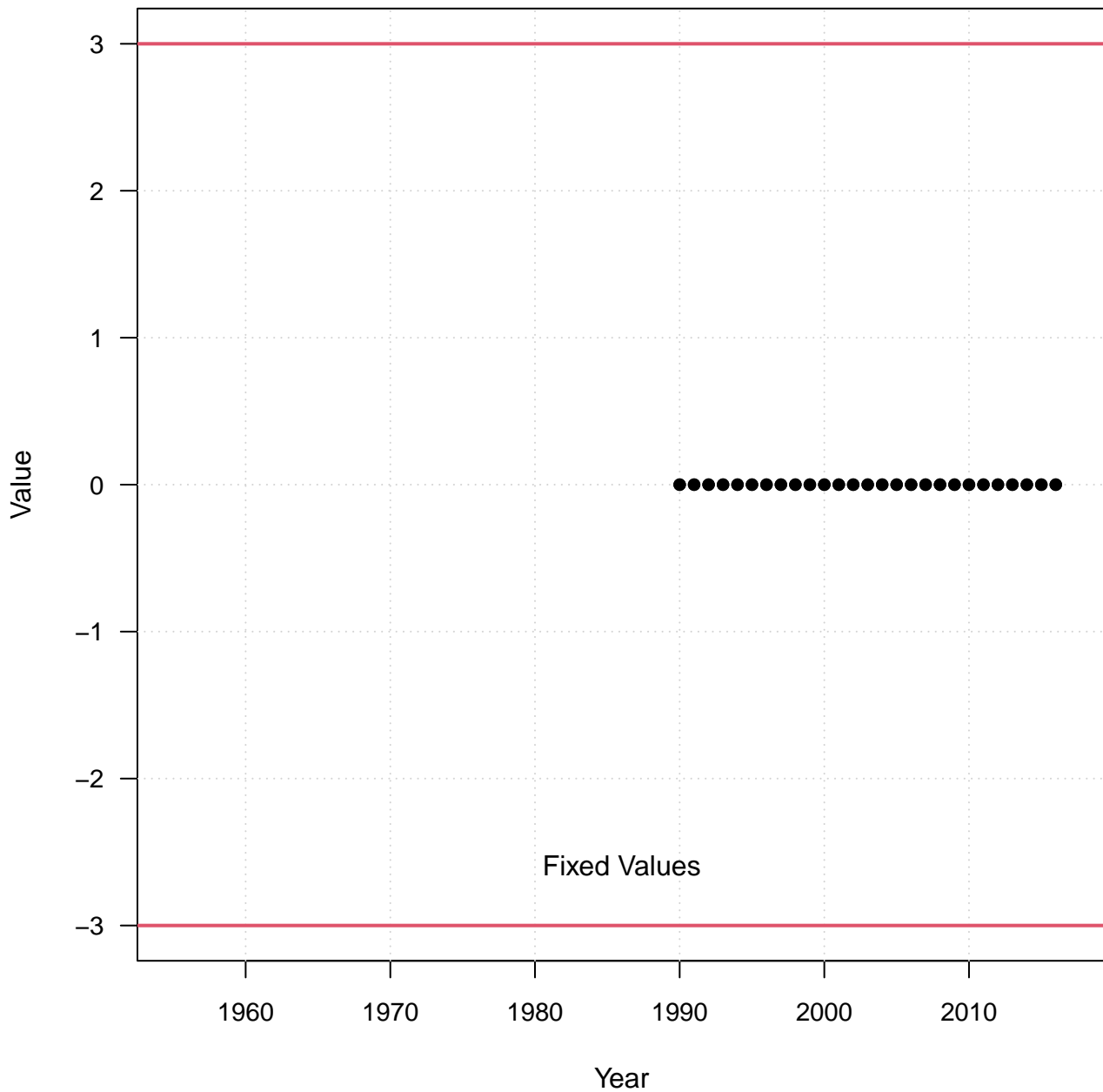
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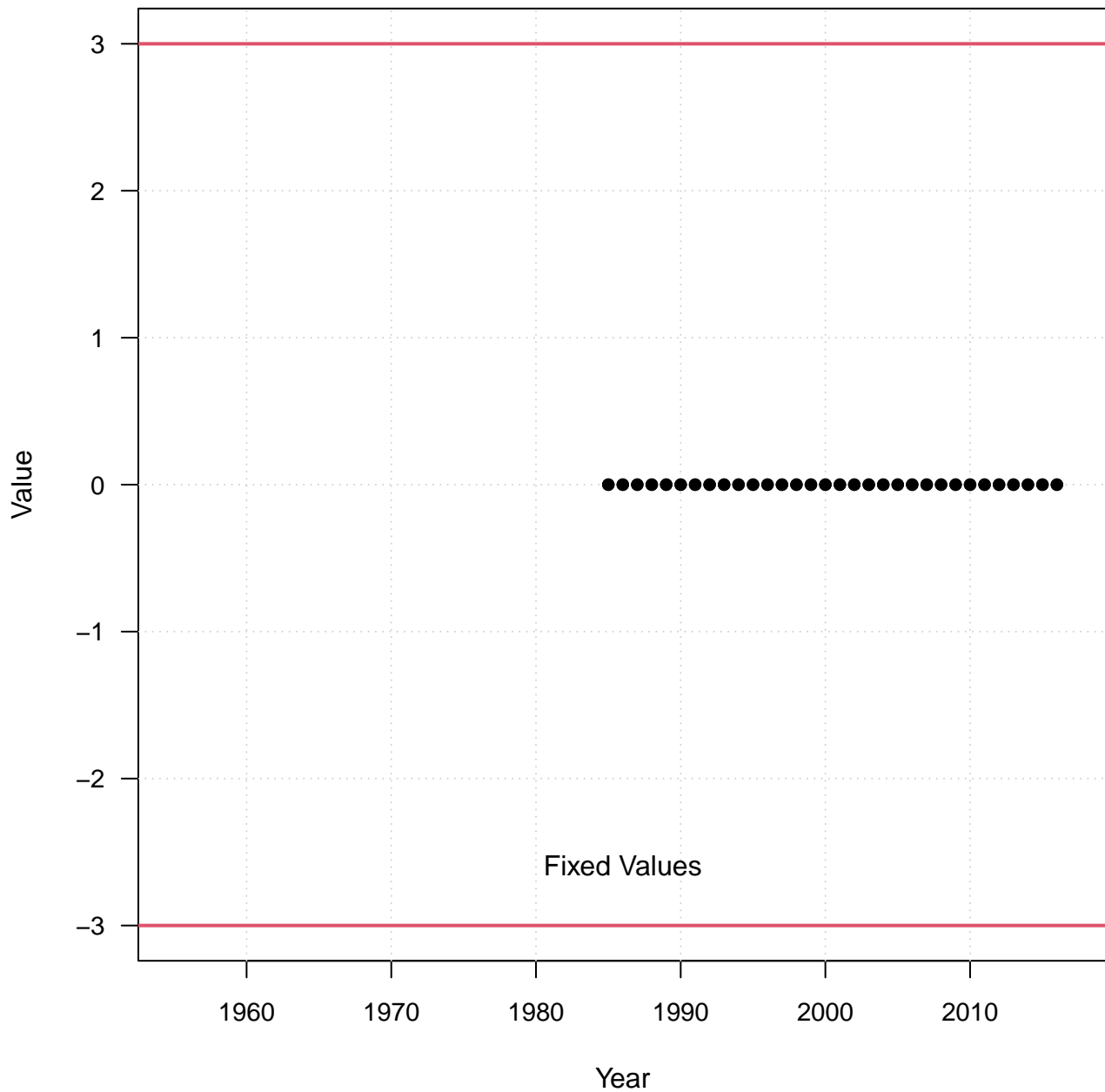
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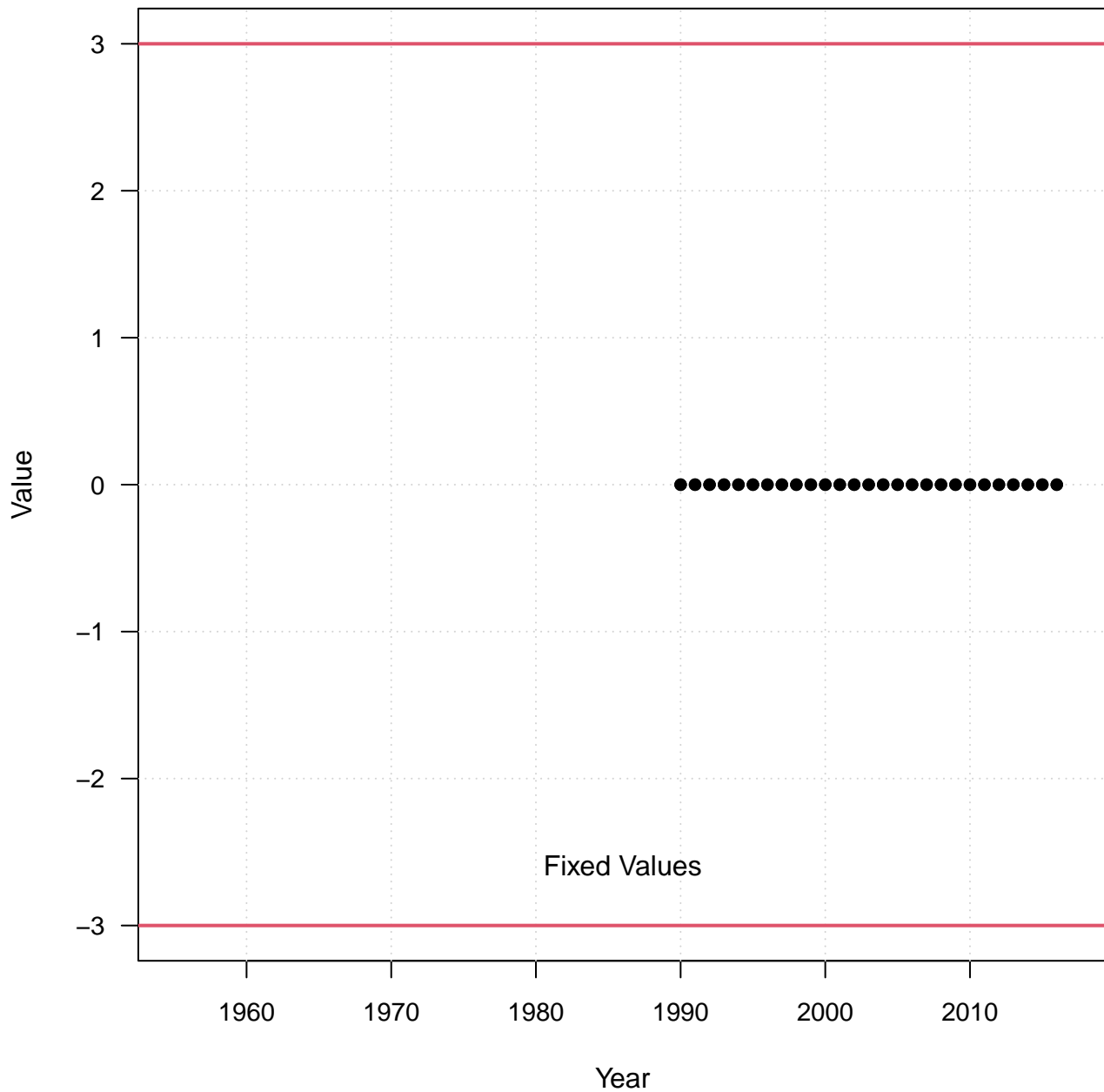
# Vector: log.q.dev.nad.RWq



# Vector: log.q.dev.mad.RWq

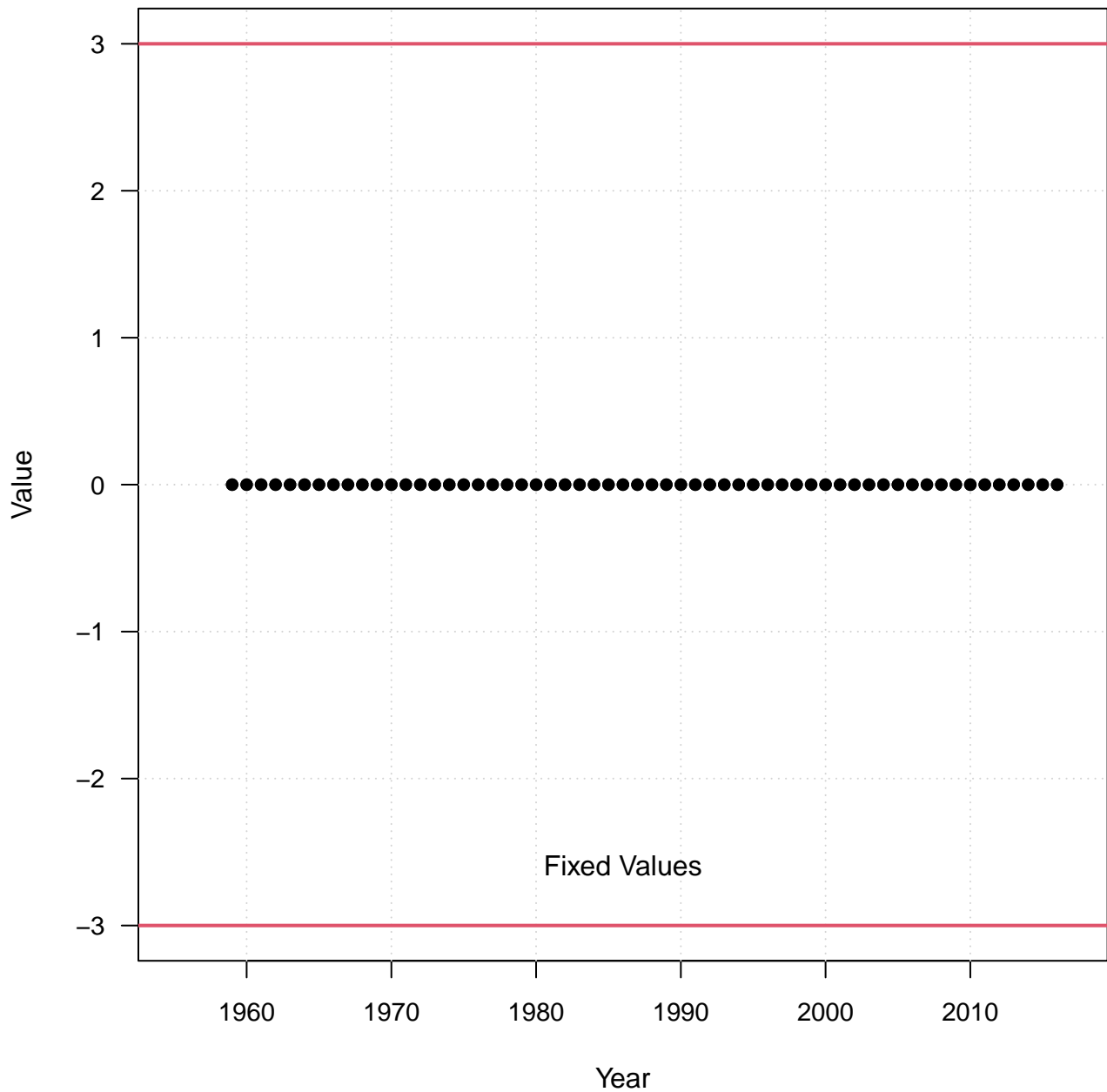


# Vector: log.q.dev.sad.RWq

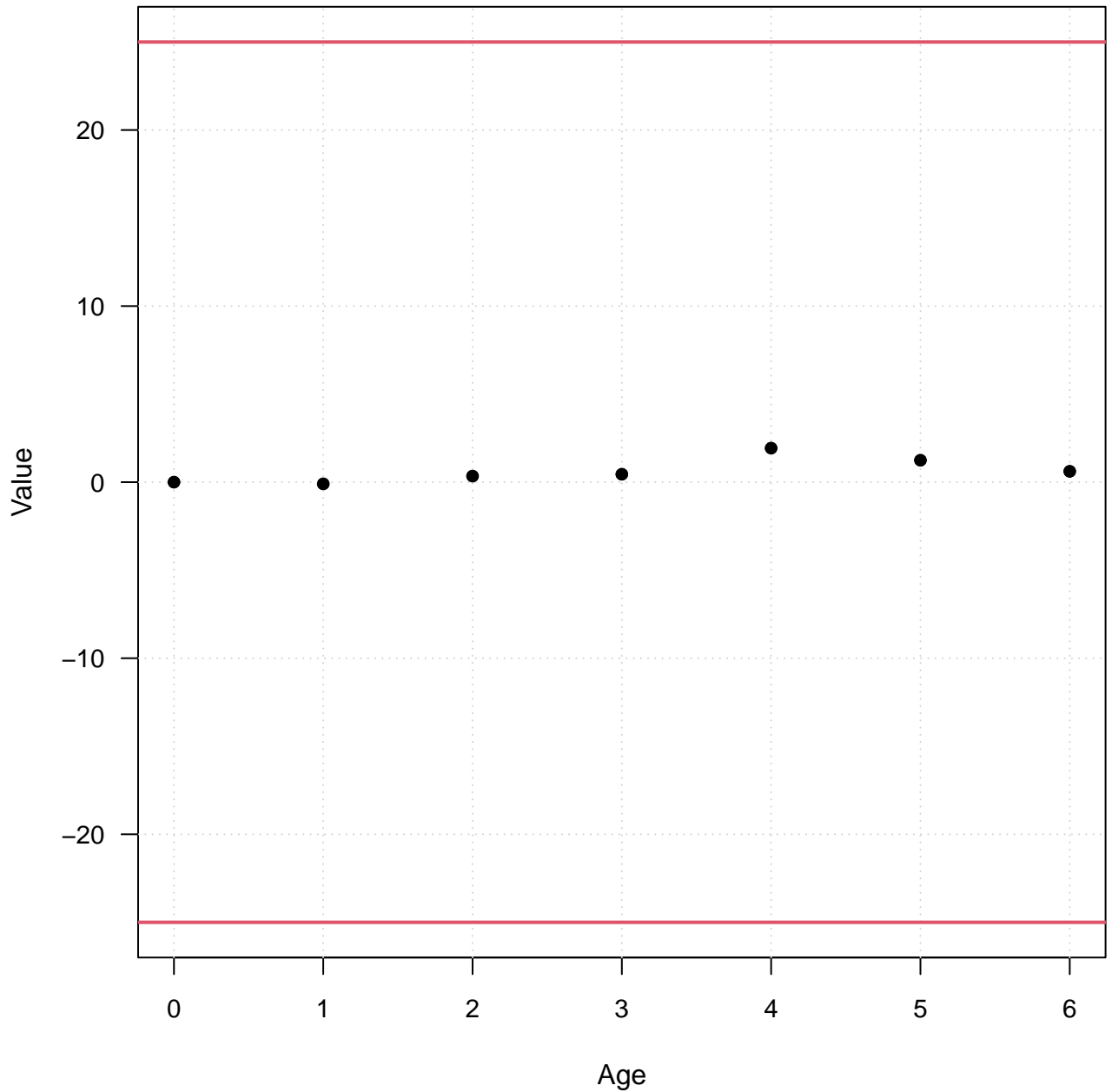




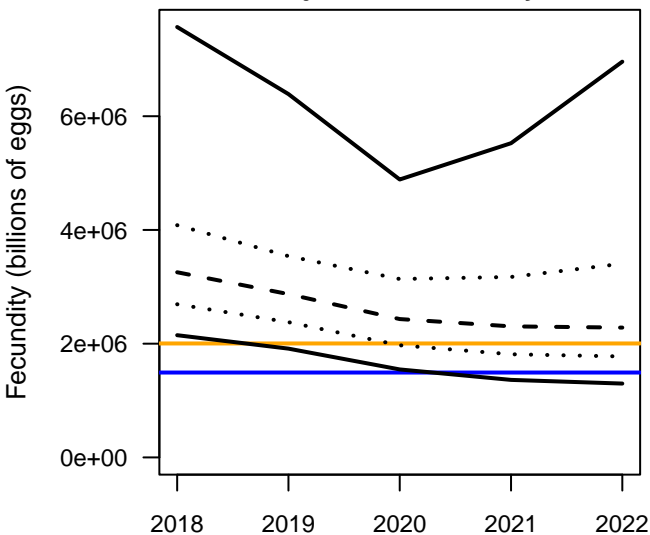
# Vector: log.q.dev.jai.RWq



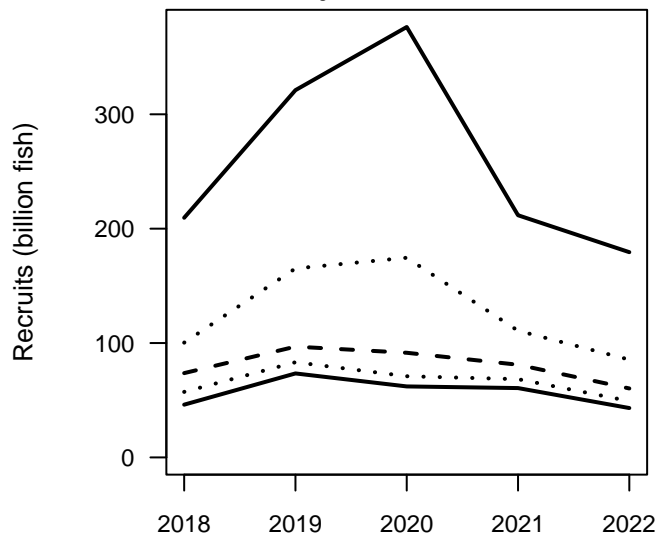
Vector: log.Nage.dev



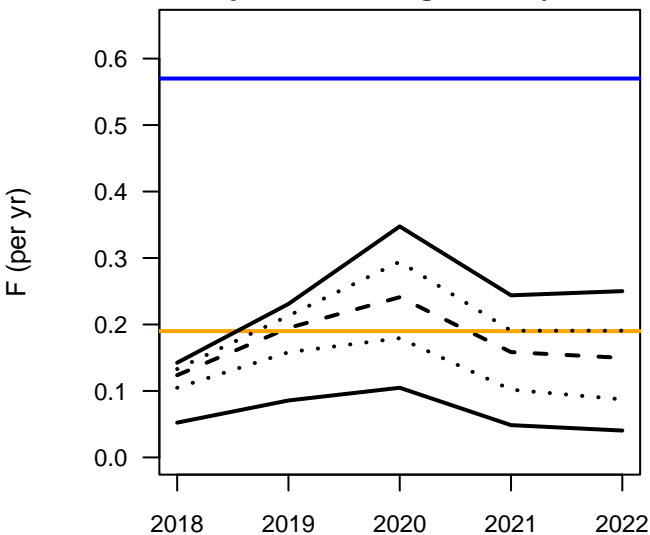
**Projection: Fecundity**



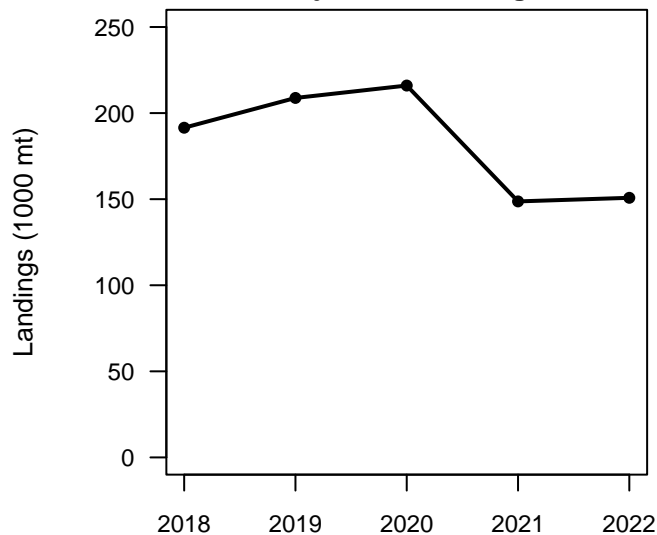
**Projection: Recruits**



**Projection: Fishing mortality rate**

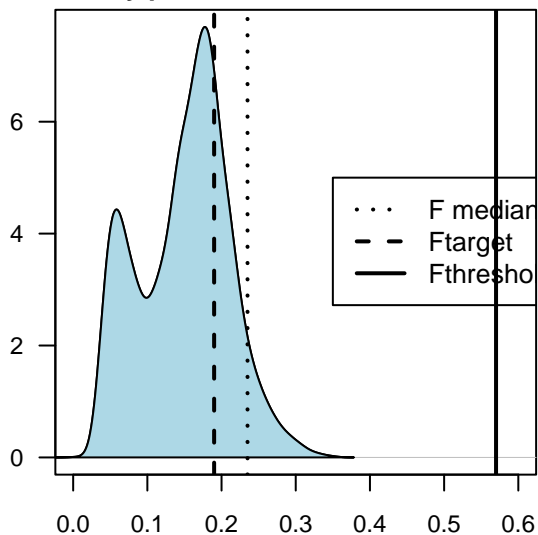


**Projection: Landings**



Density plot of 2021 F at TAC of 216,000

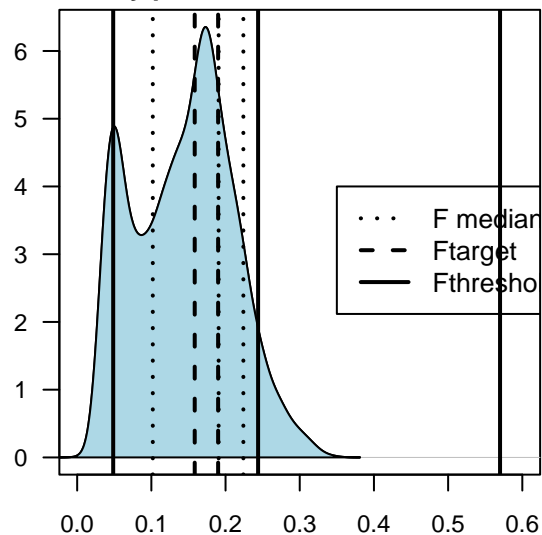
Density



F (per yr)

Density plot of 2022 F at TAC of 216,000

Density



F (per yr)