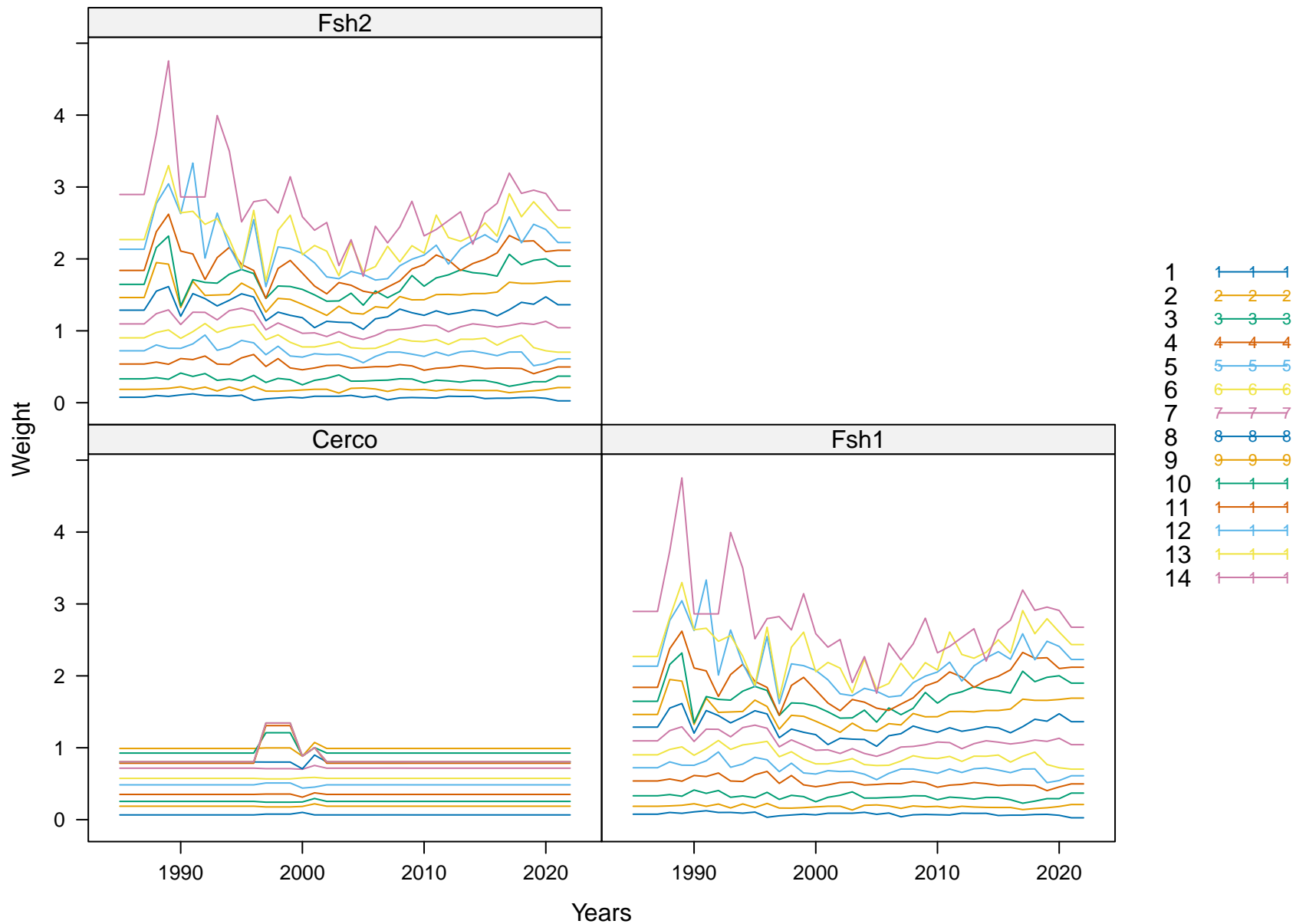
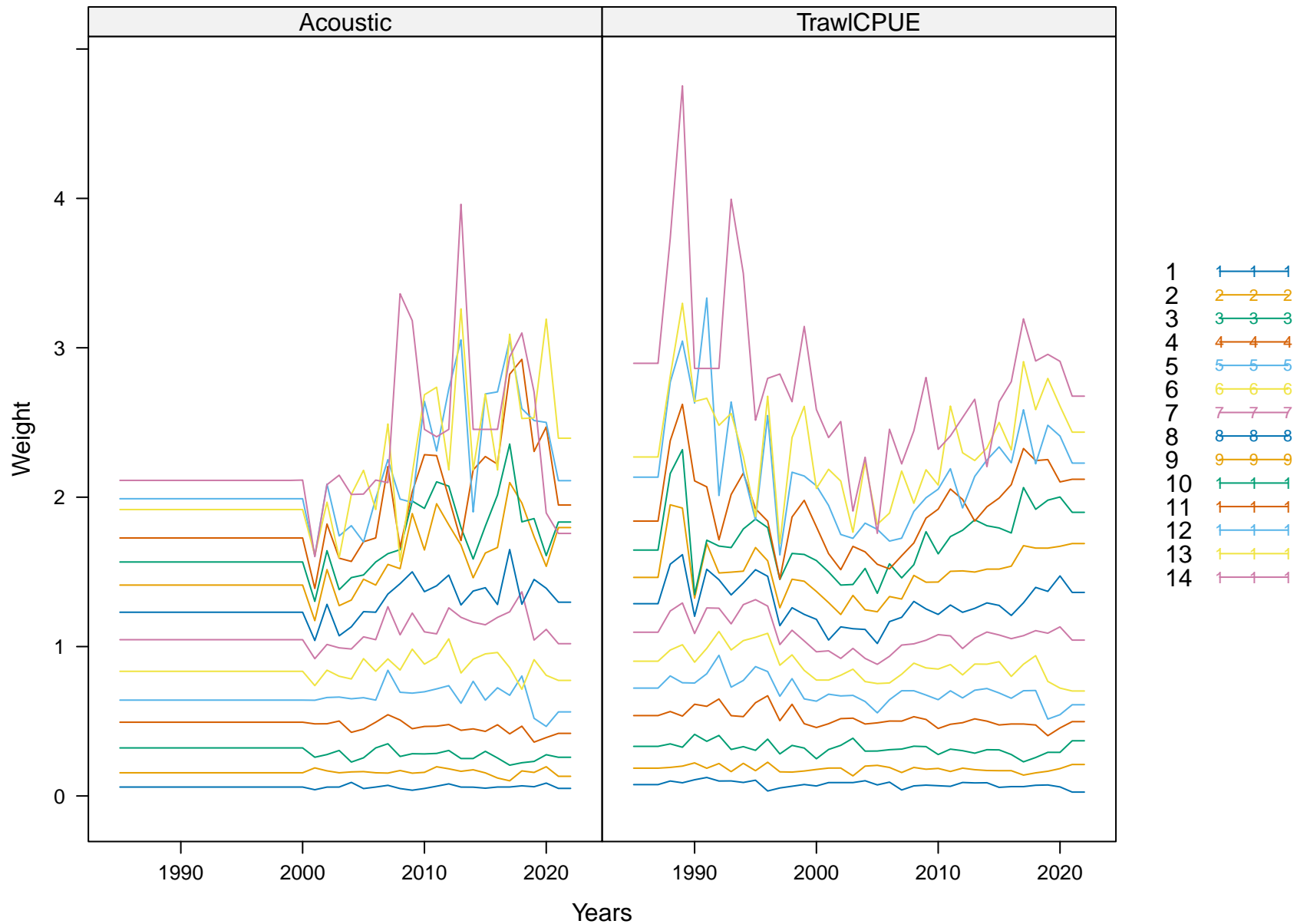


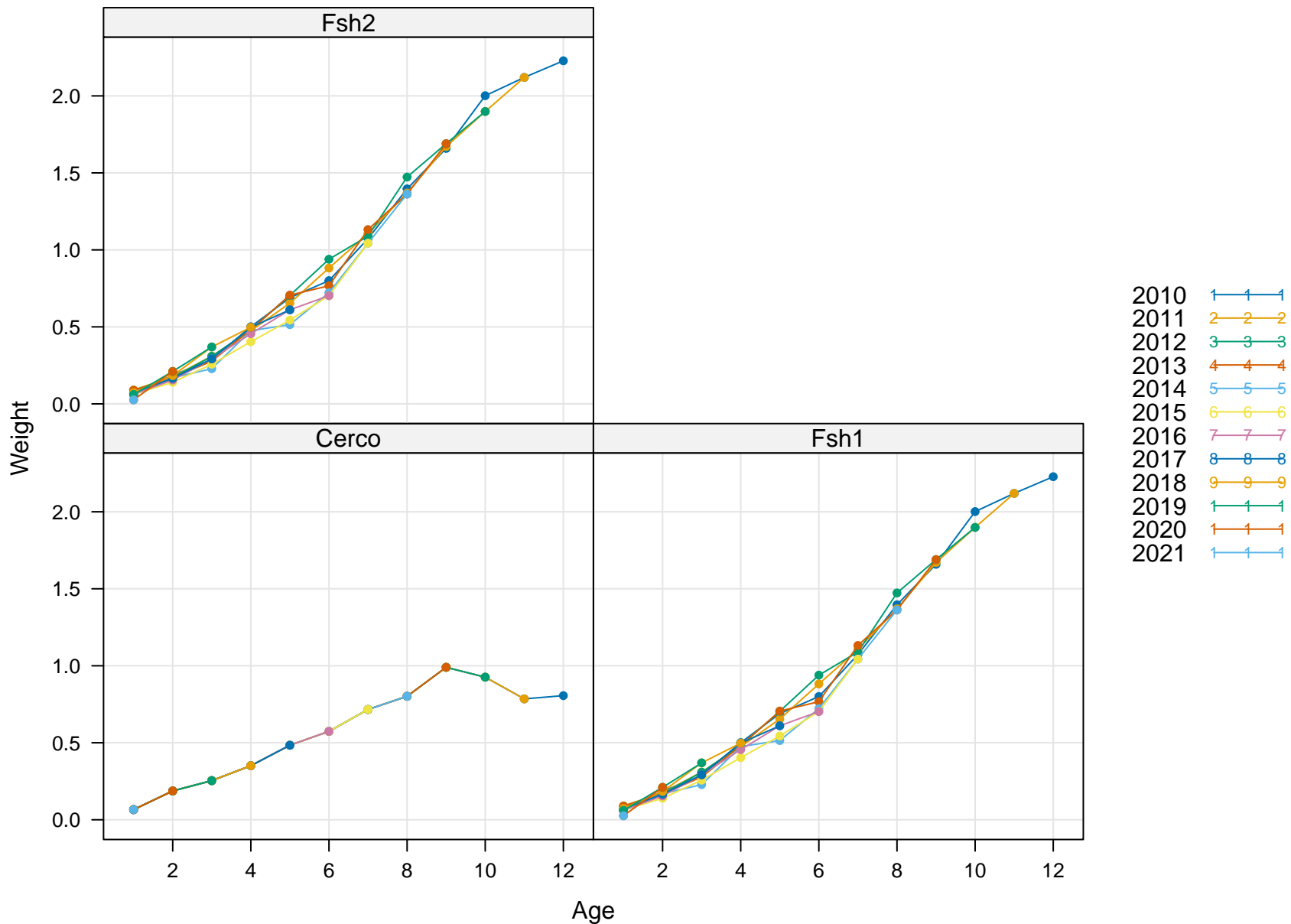
Weight at age in the fishery



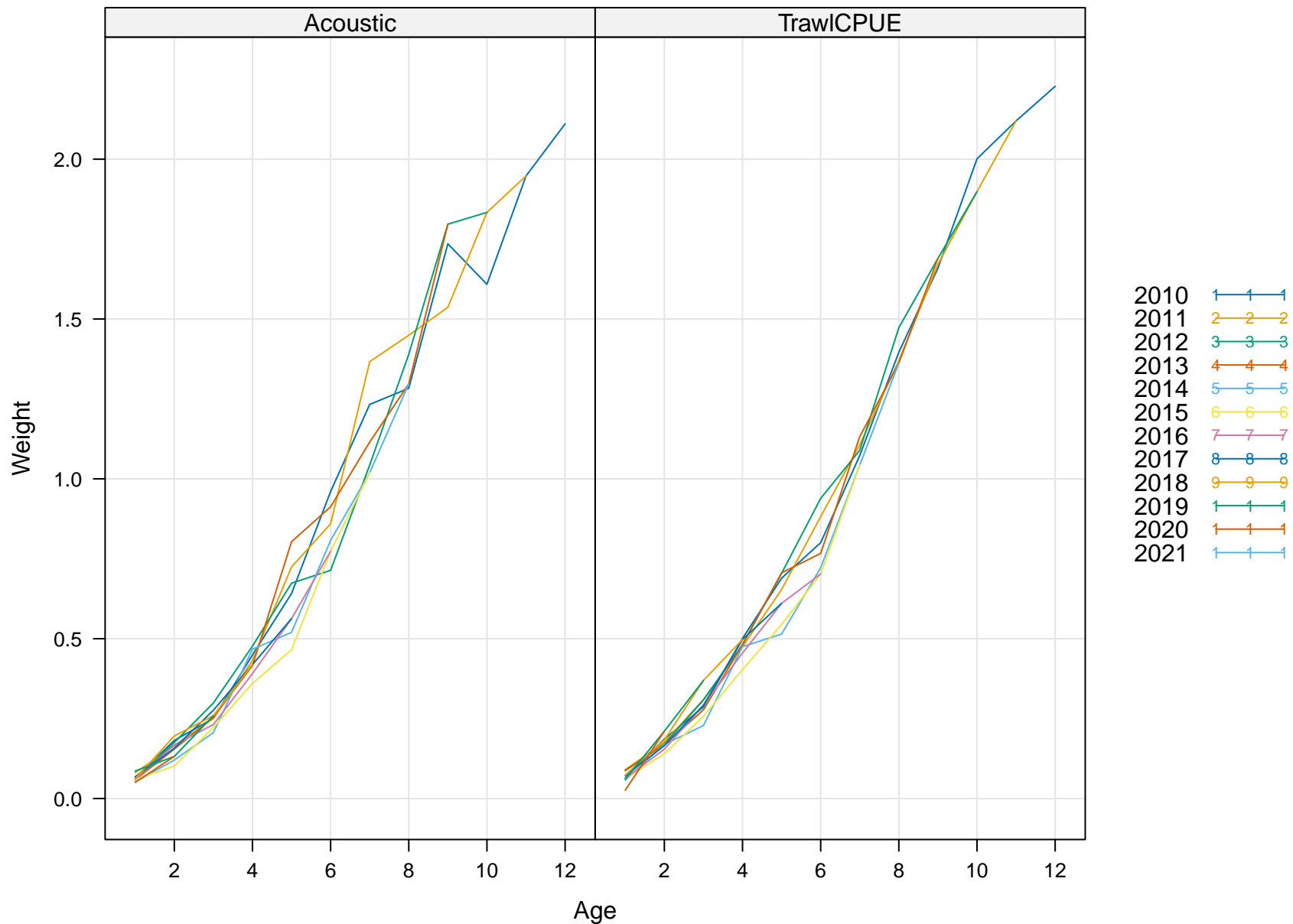
Weight at age in the survey



Weight at age by cohort in the fleet

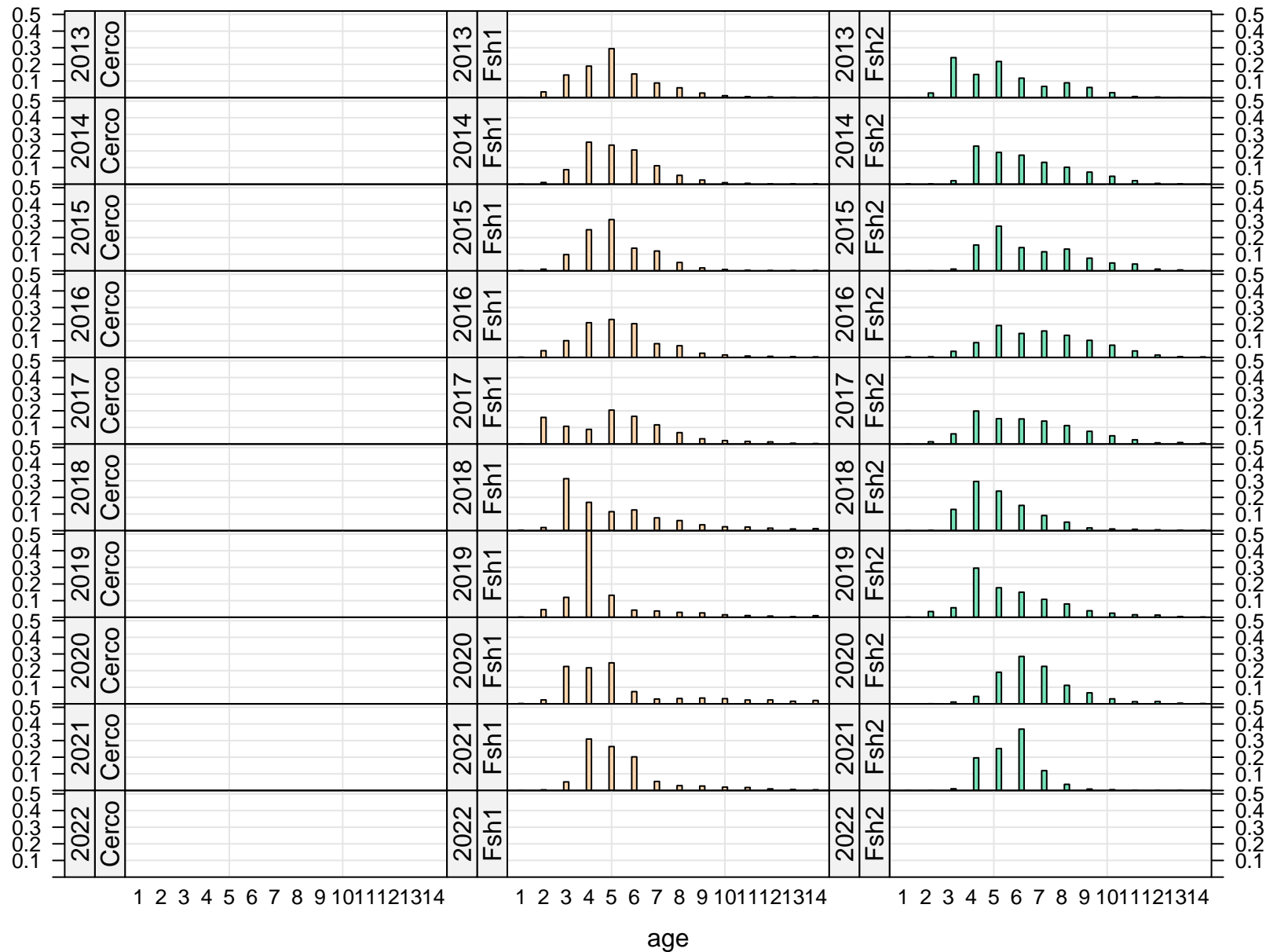


Weight at age by cohort in the survey

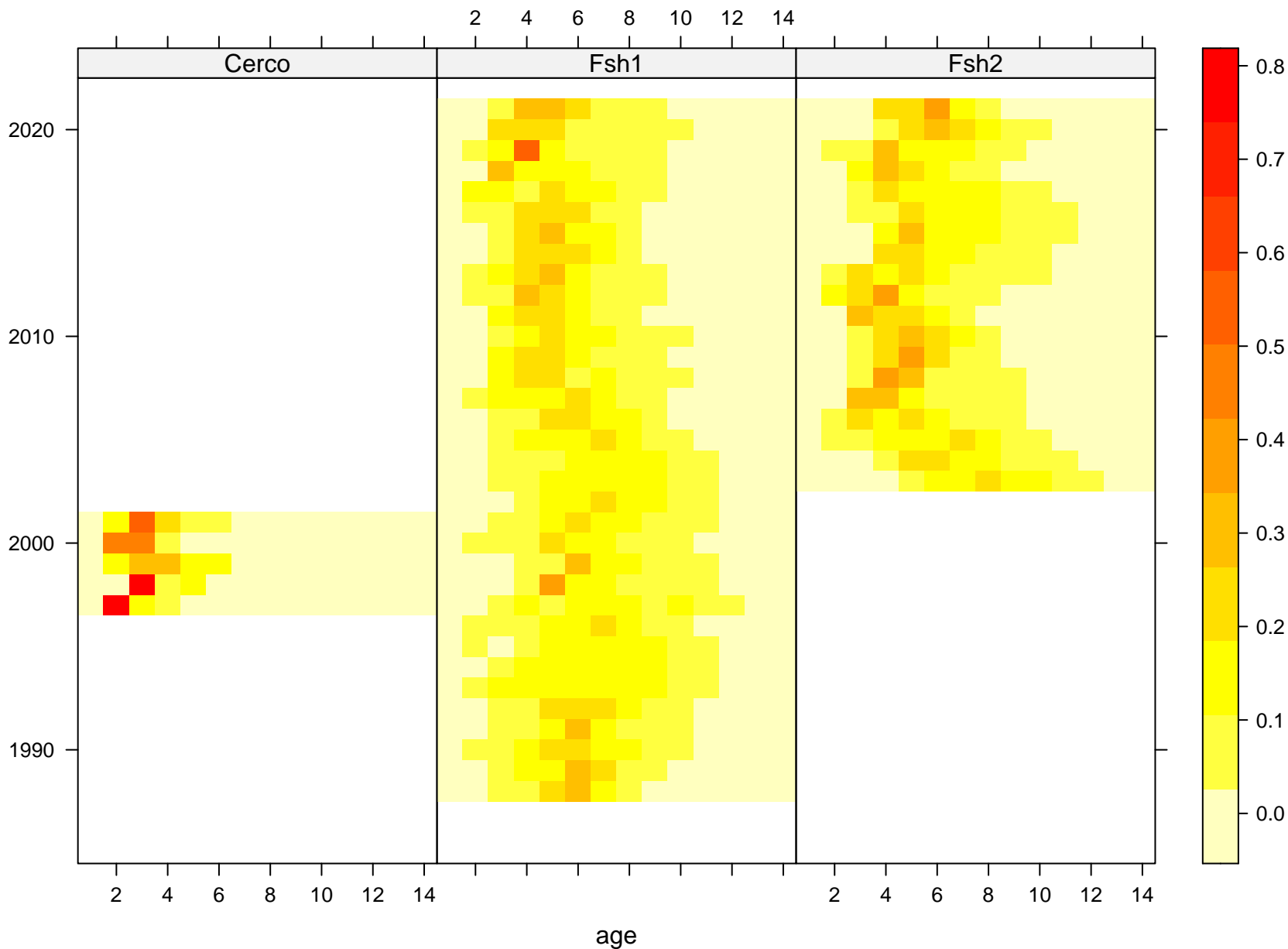


Age composition in fleets

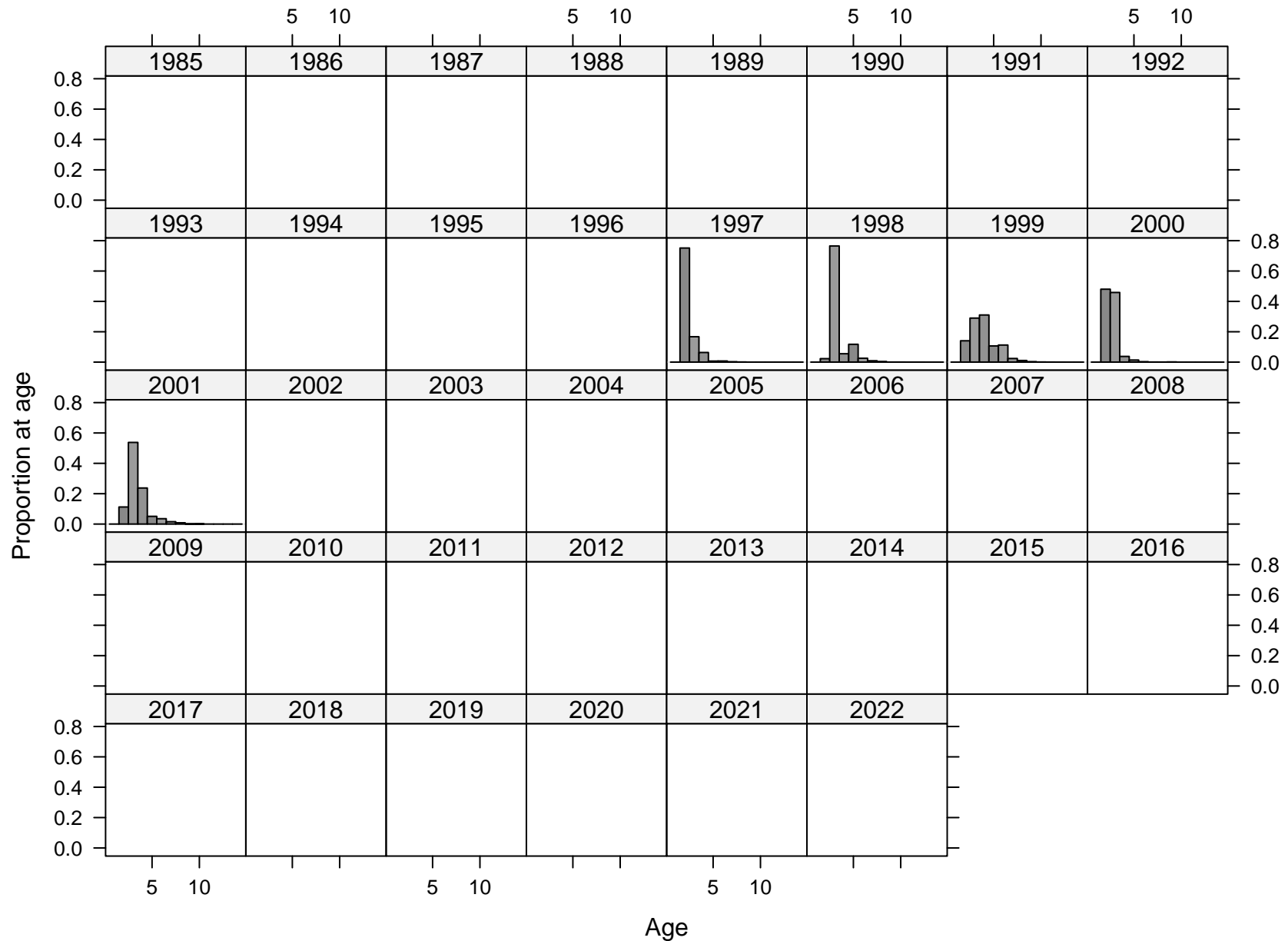
Proportion at age



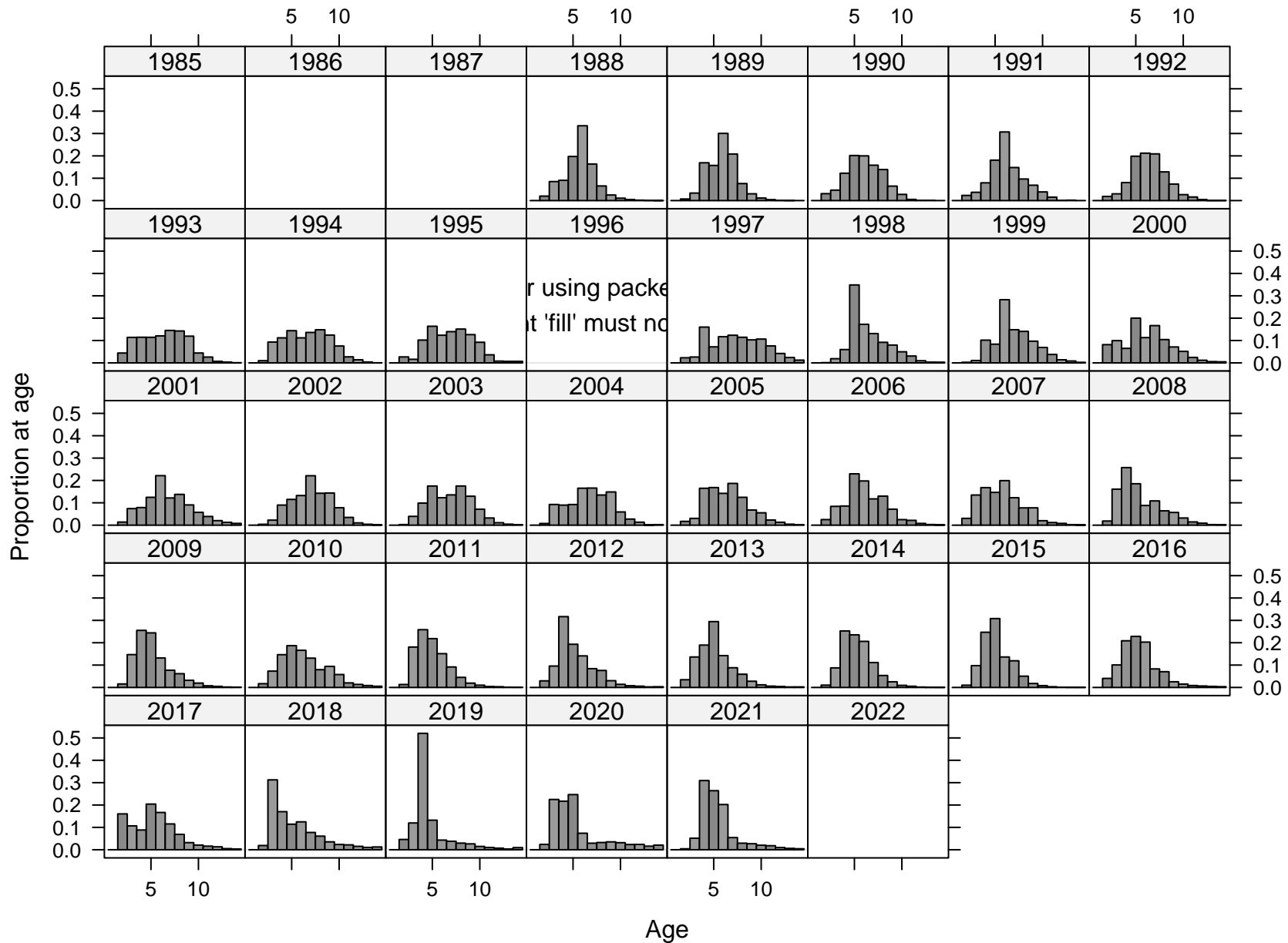
Age composition in fleets



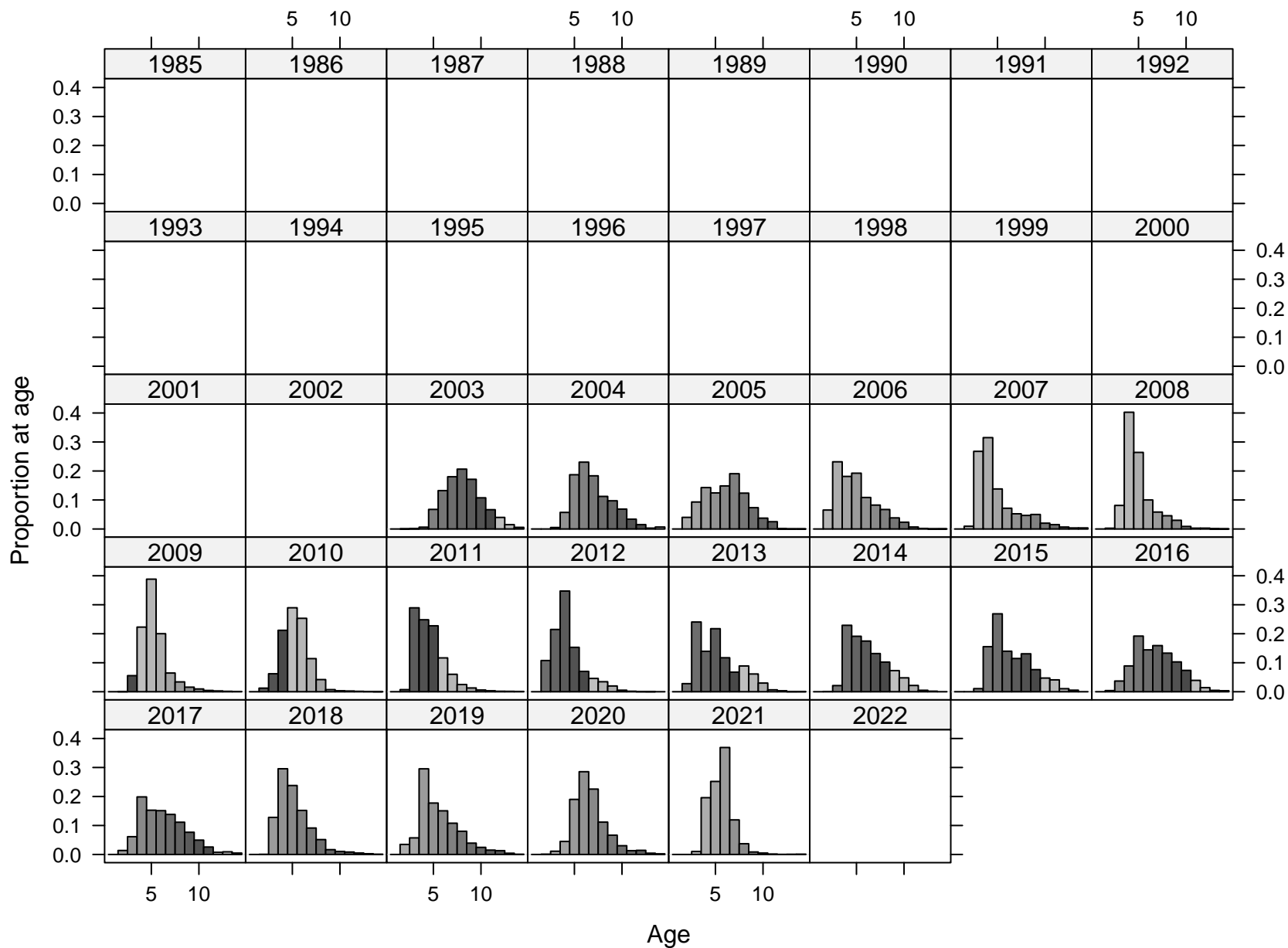
Age composition in fleets Cerco



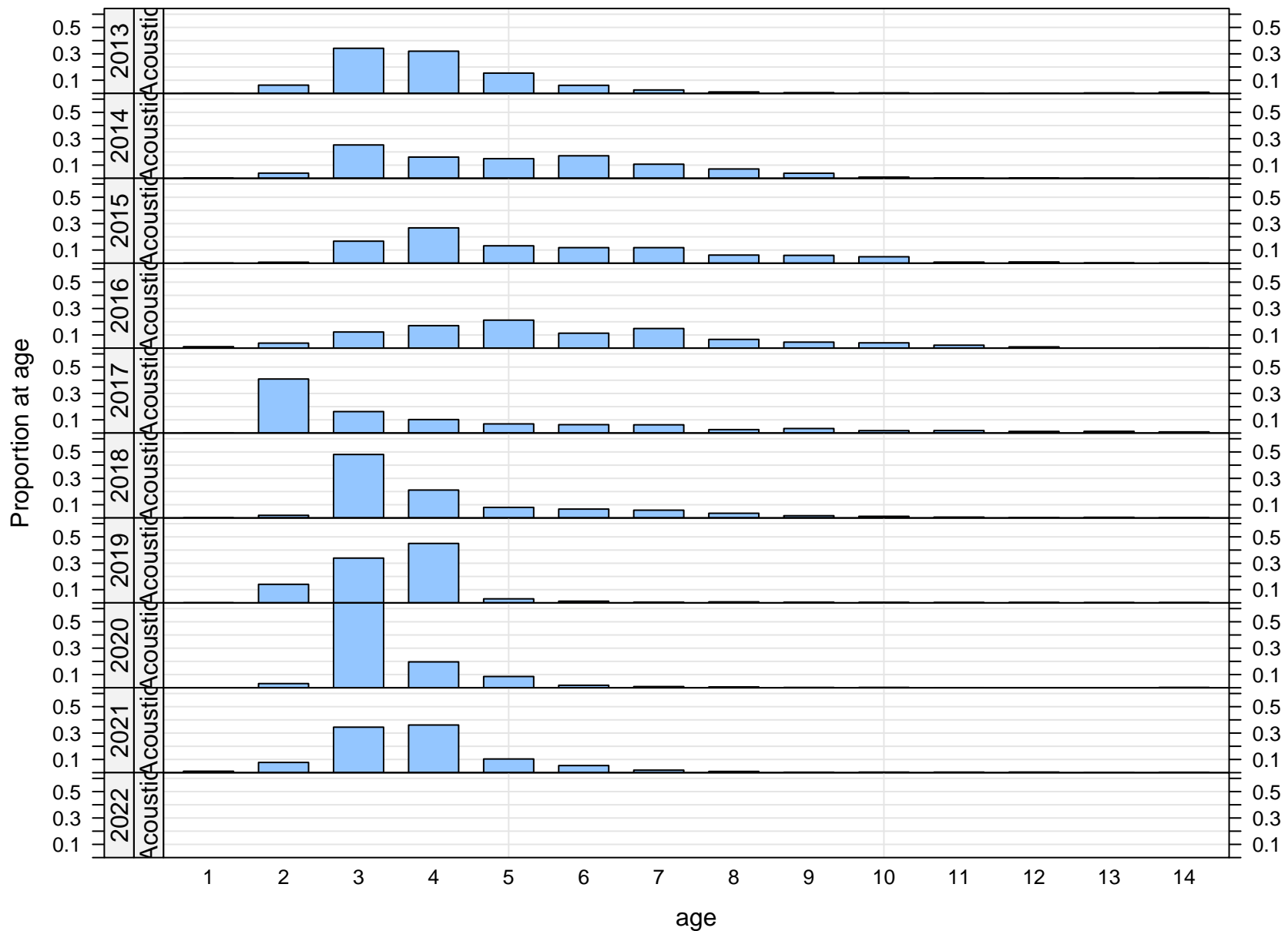
Age composition in fleets Fsh1



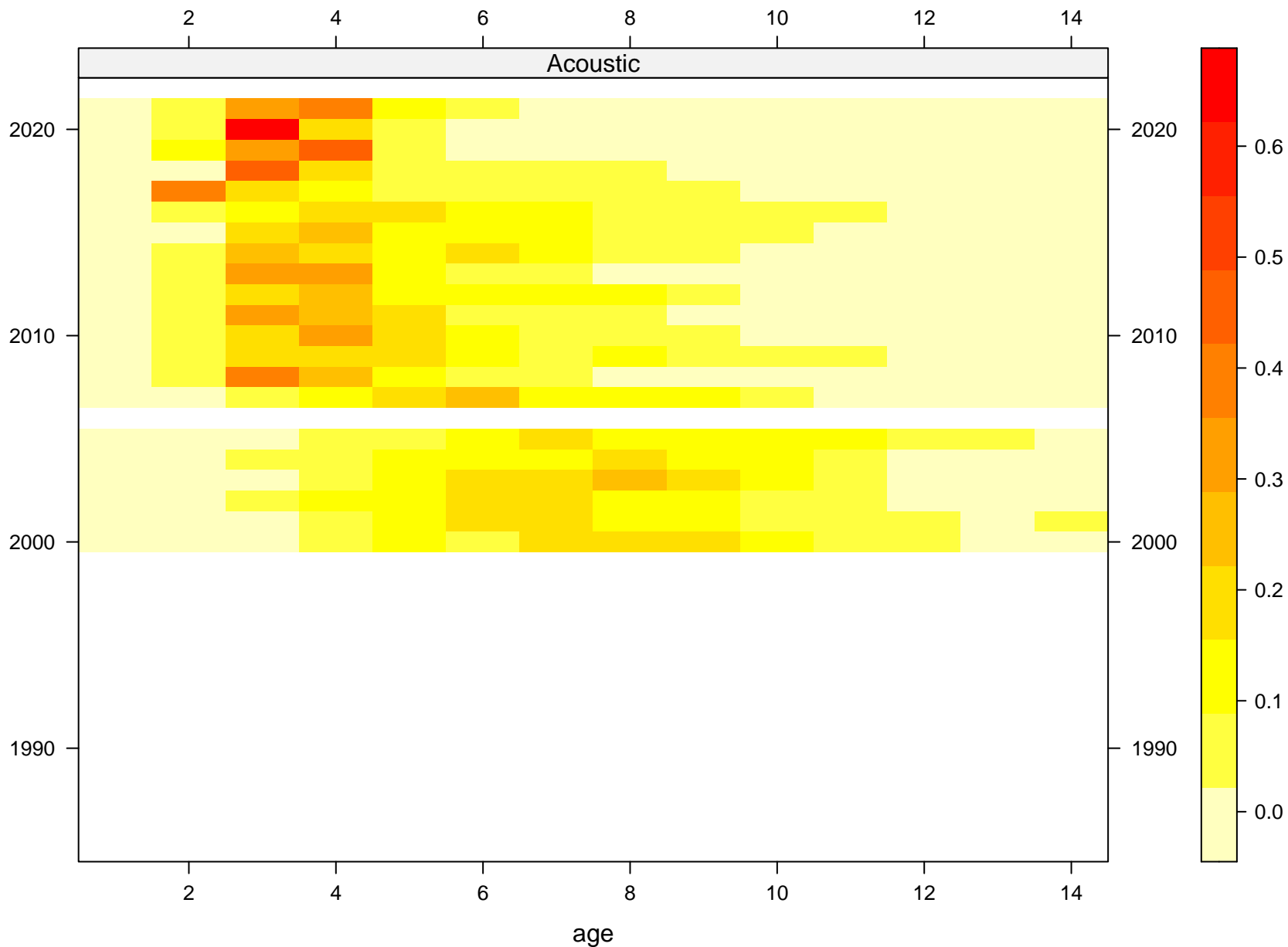
Age composition in fleets Fsh2



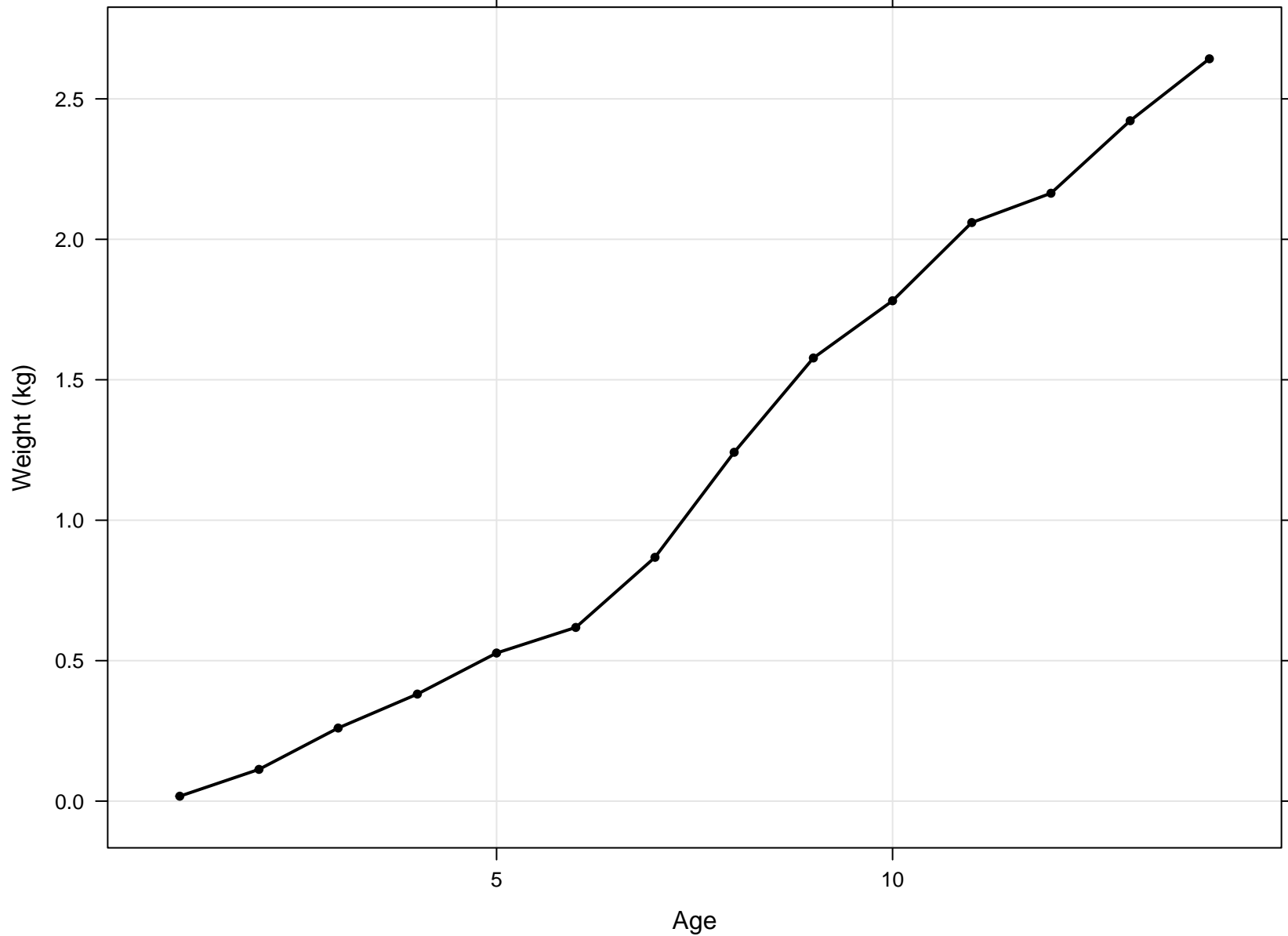
Age composition in surveys



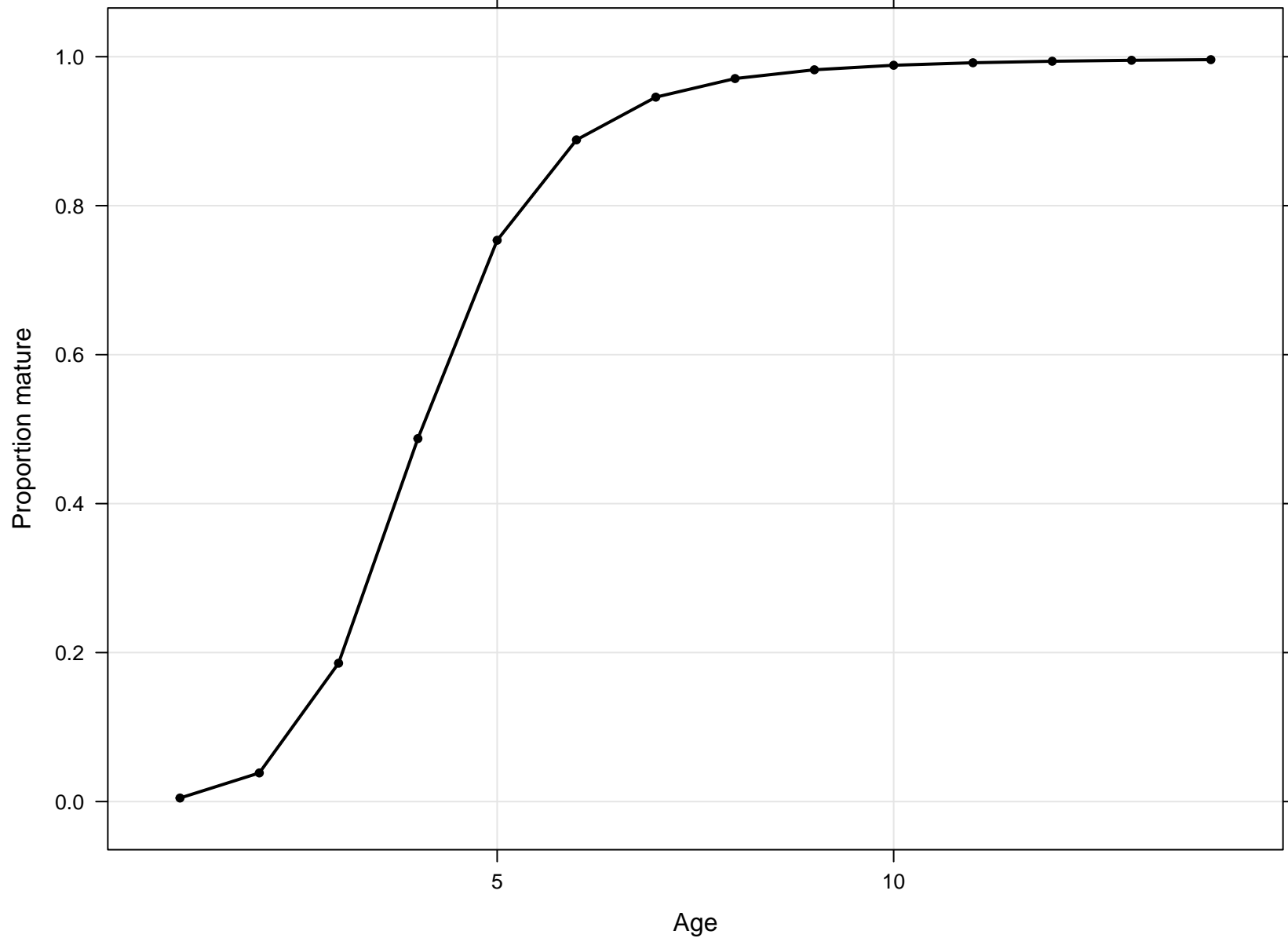
Age composition in surveys



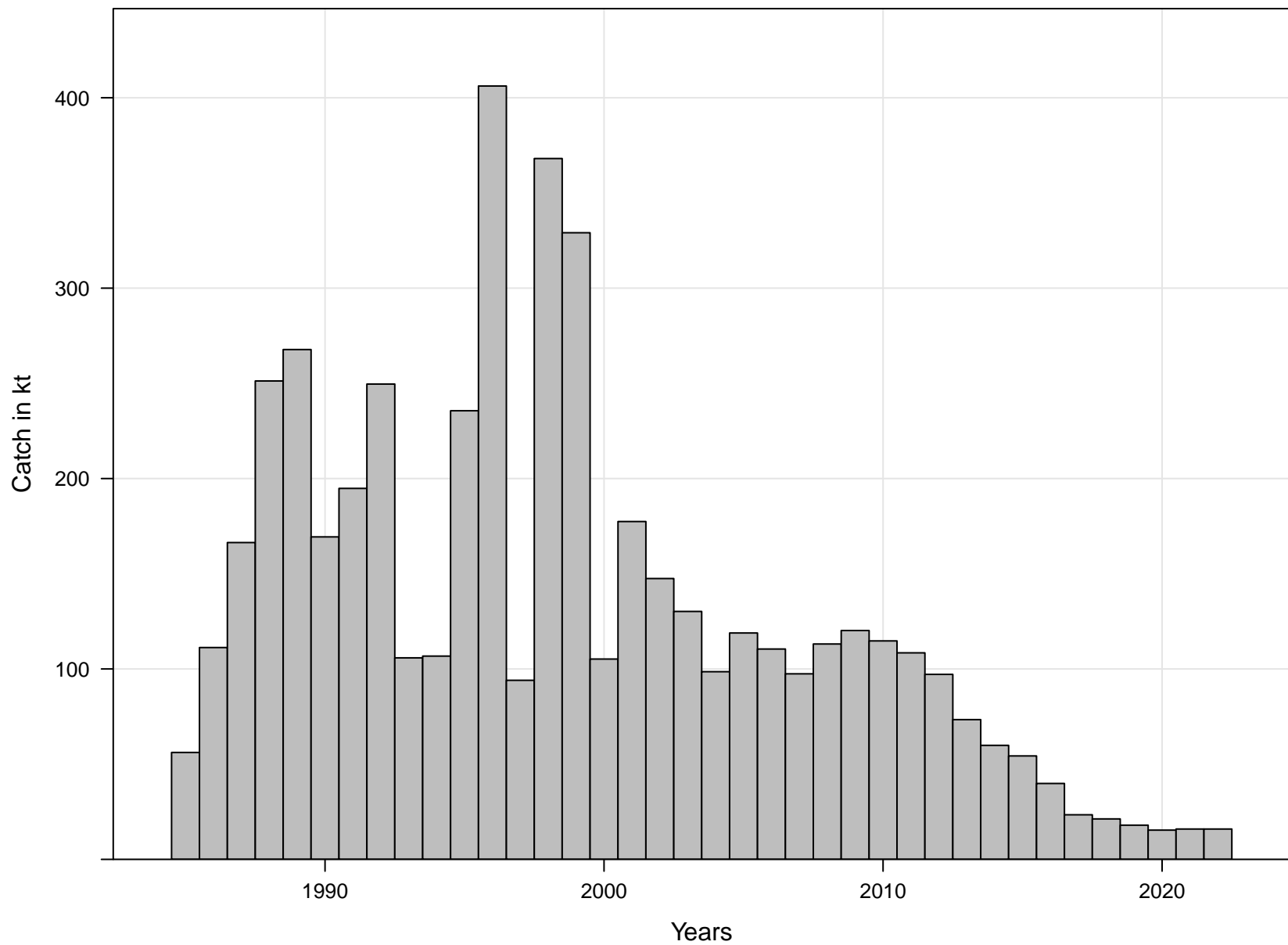
Weight in the stock



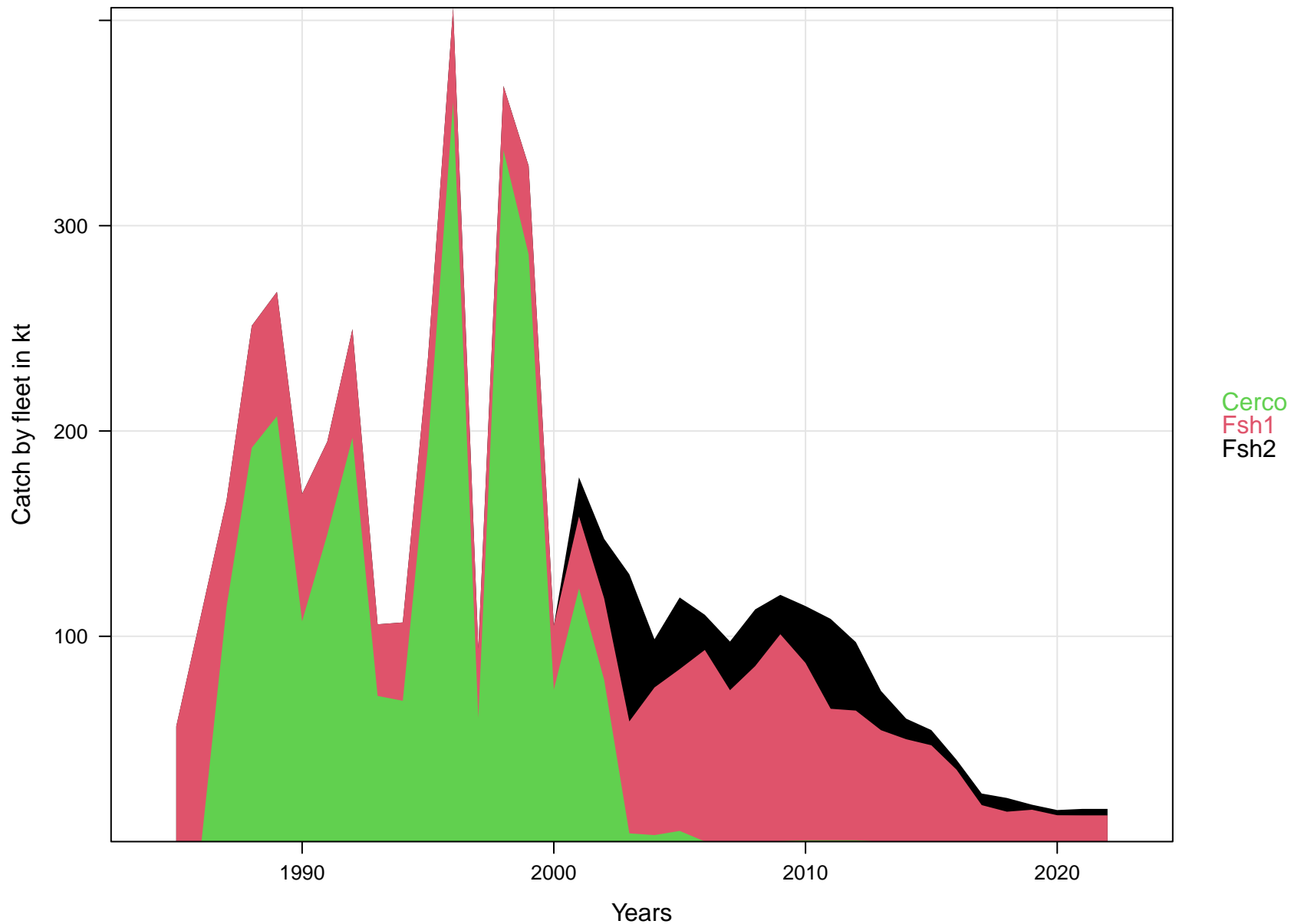
Maturity in the stock



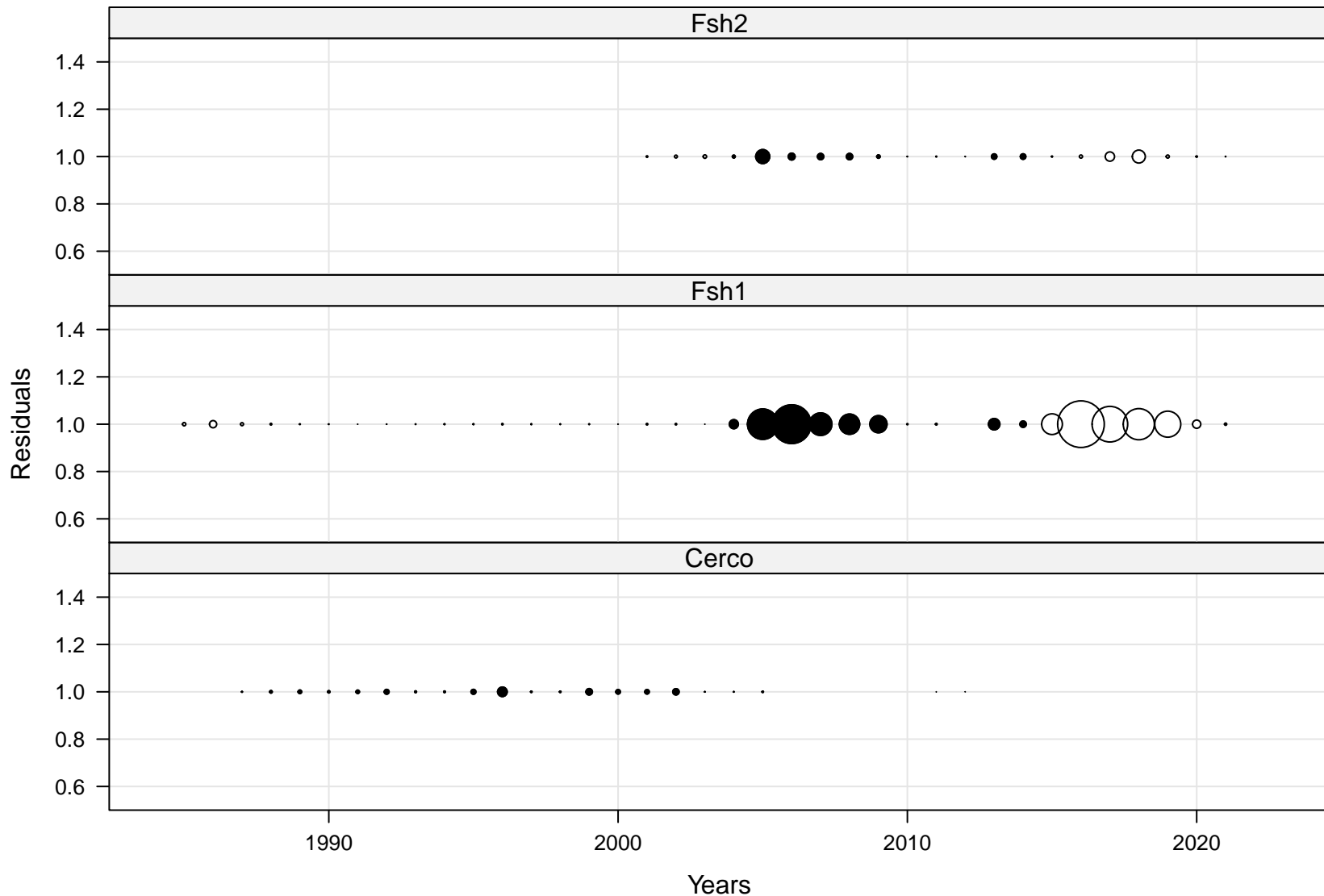
Total catch



Total catch by fleet



Catch residuals by fleet



1990 2000 2010 2020

Fsh2

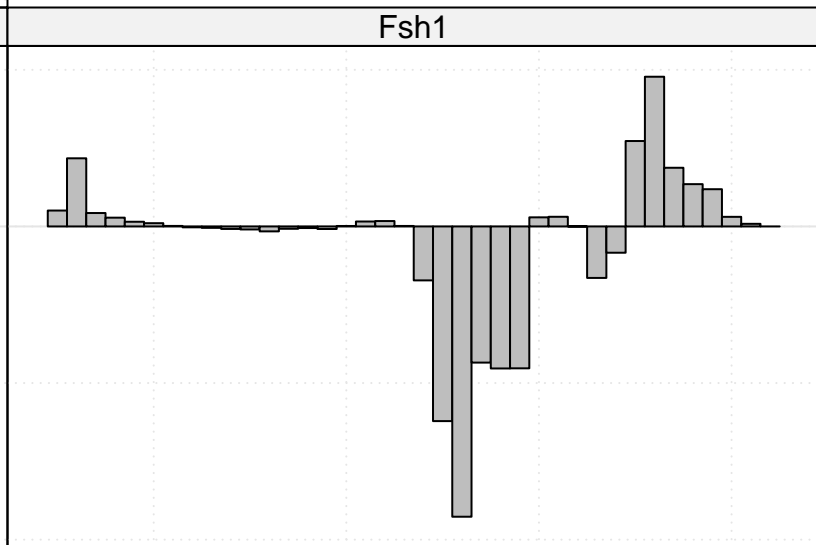
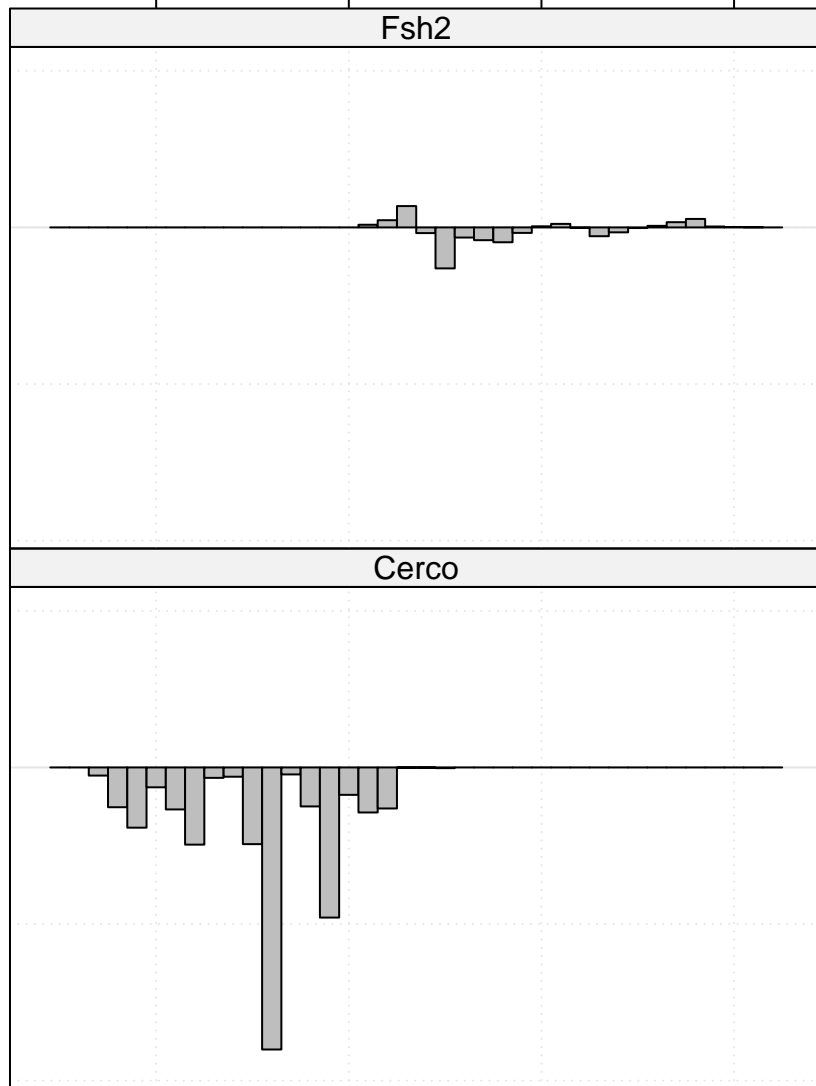
model - obs

Cerco

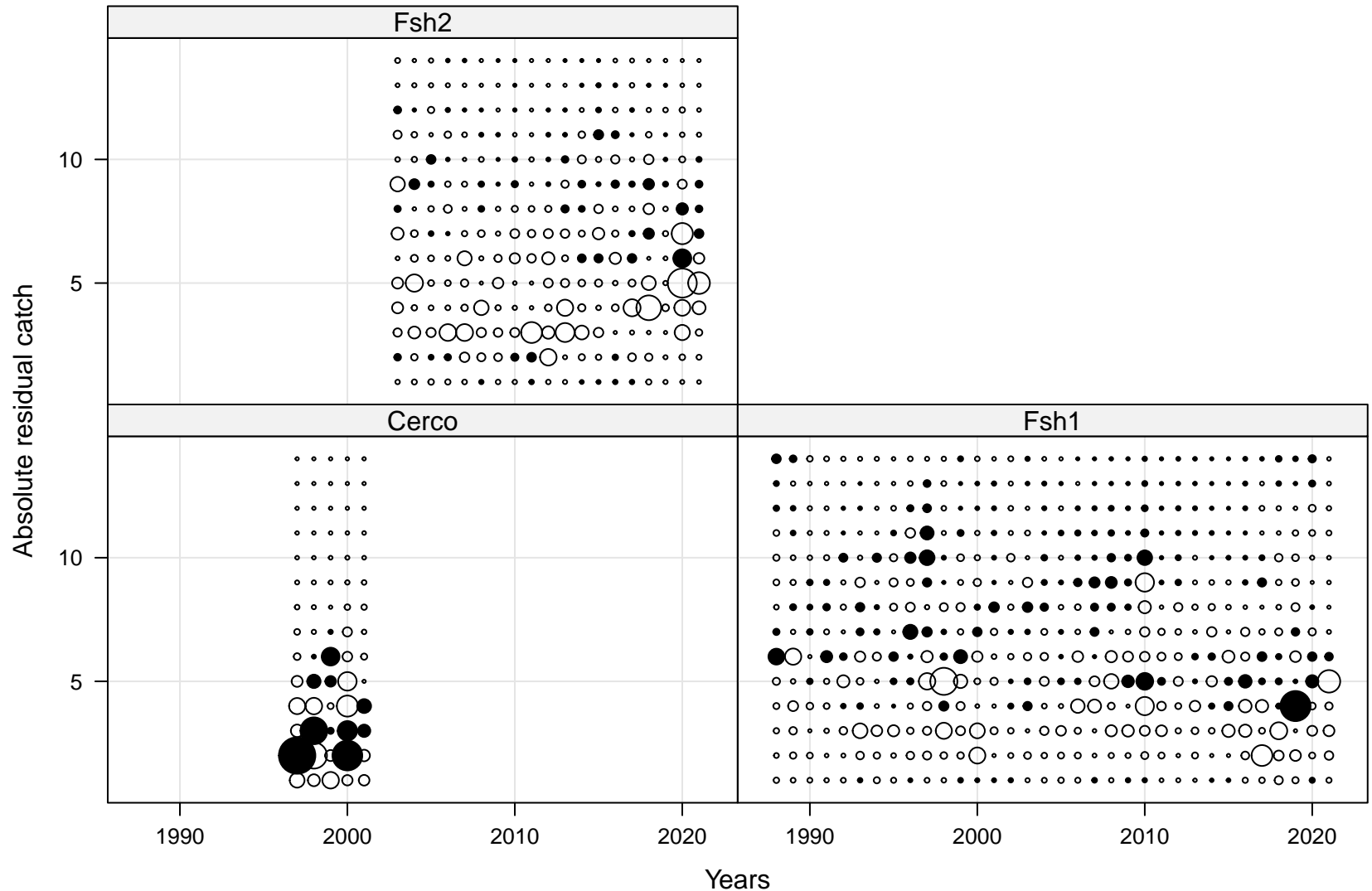
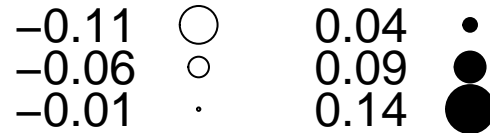
Fsh1

1990 2000 2010 2020

year



Absolute residual catch by fleet

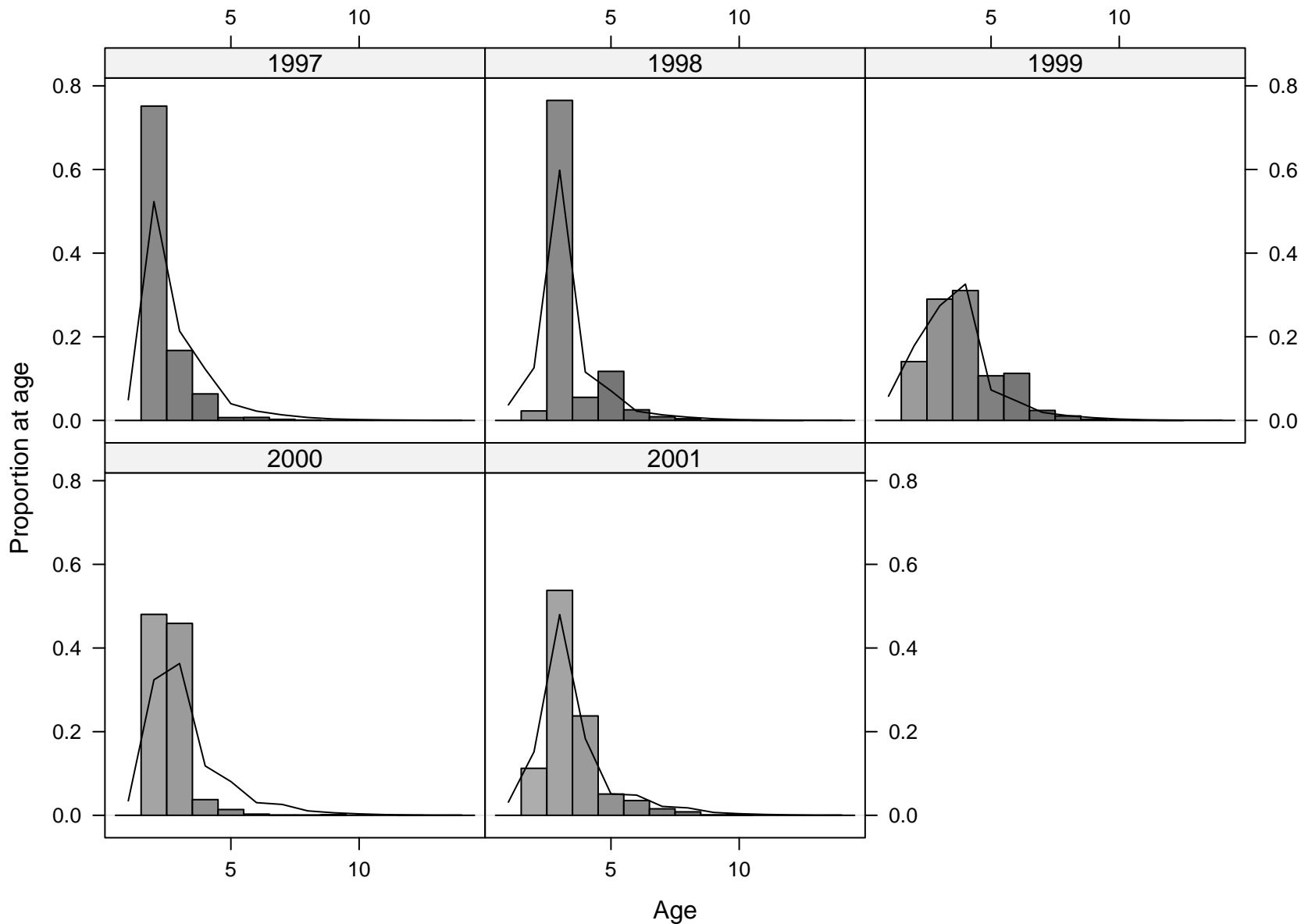


Age fits Cerco

Observed



Predicted

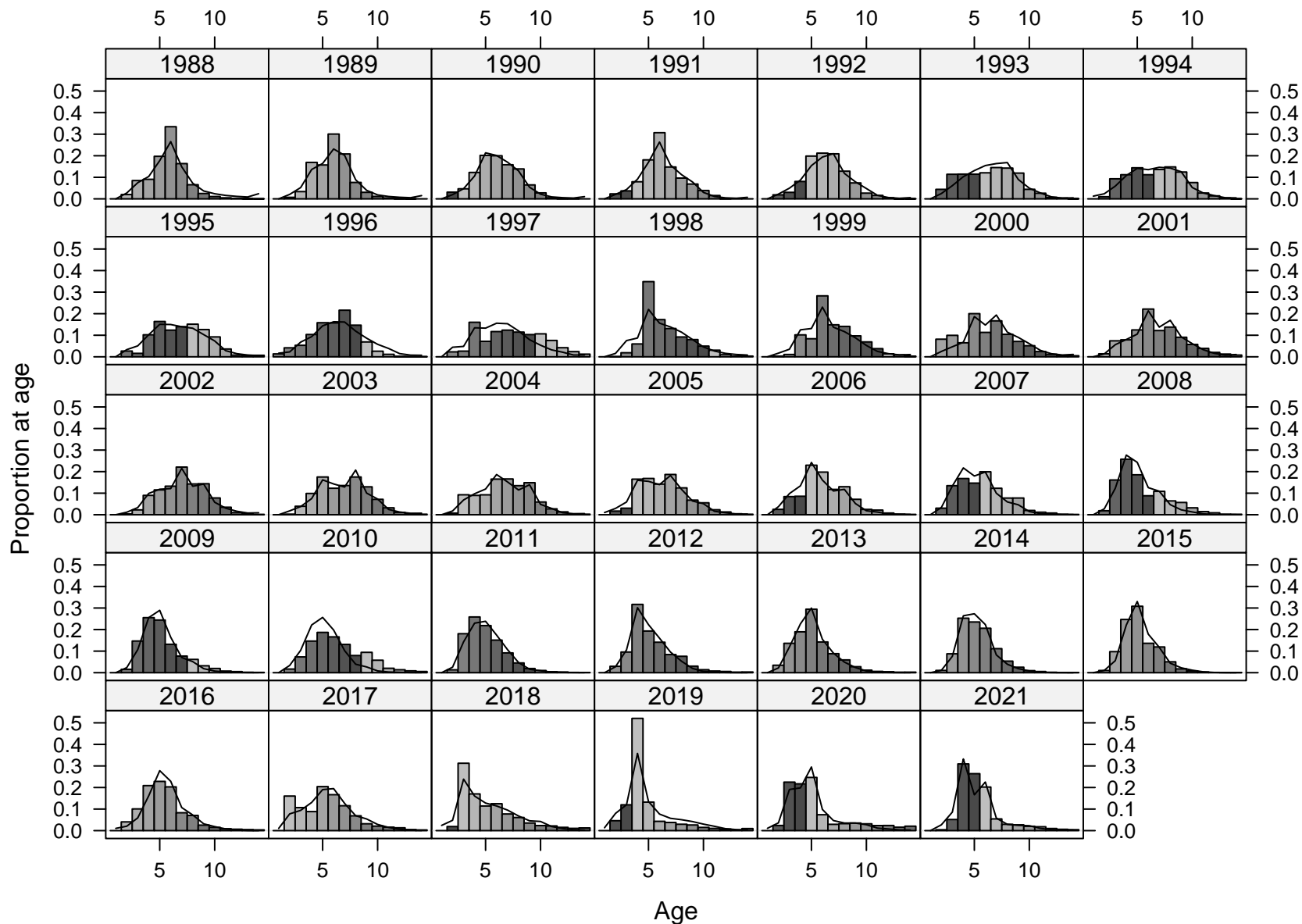


Age fits Fsh1

Observed



Predicted

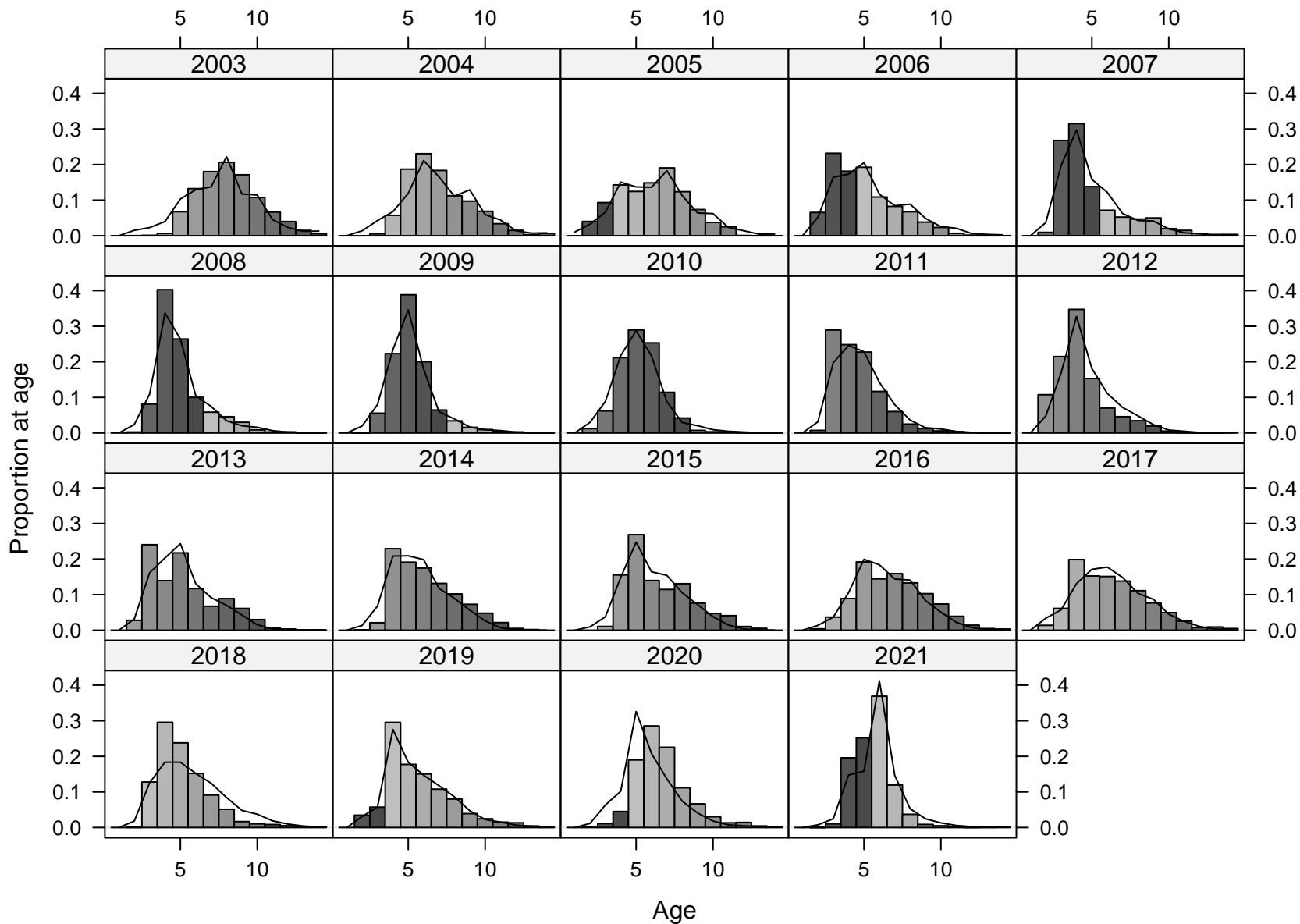


Age fits Fsh2

Observed



Predicted

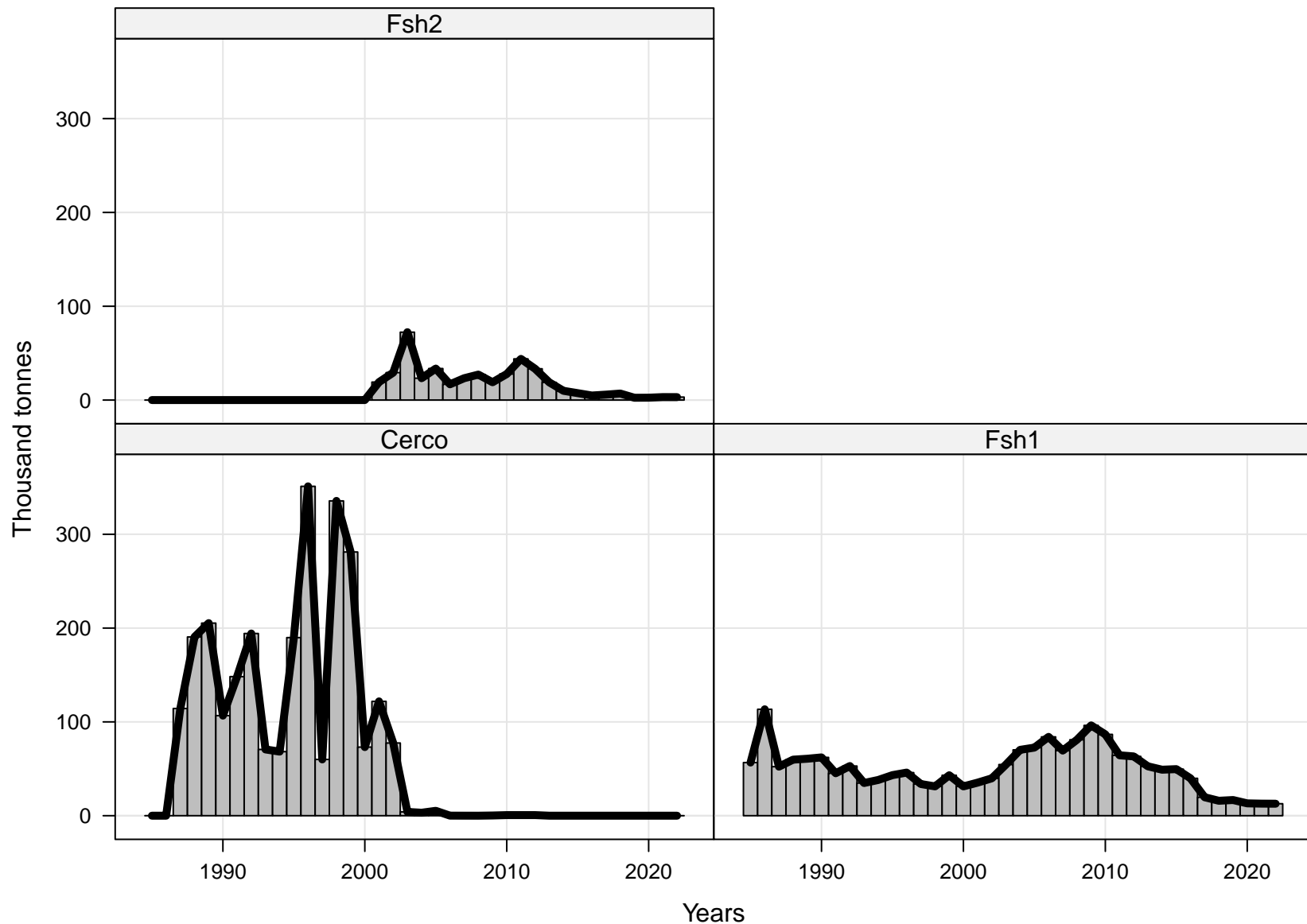


Predicted and observed catches by fleet

Observed



Predicted



Predicted and observed indices

Observed



Predicted



1990

2000

2010

2020

1990

2000

2010

2020

Acoustic

TrawlCPUE

1990

2000

2010

2020

1990

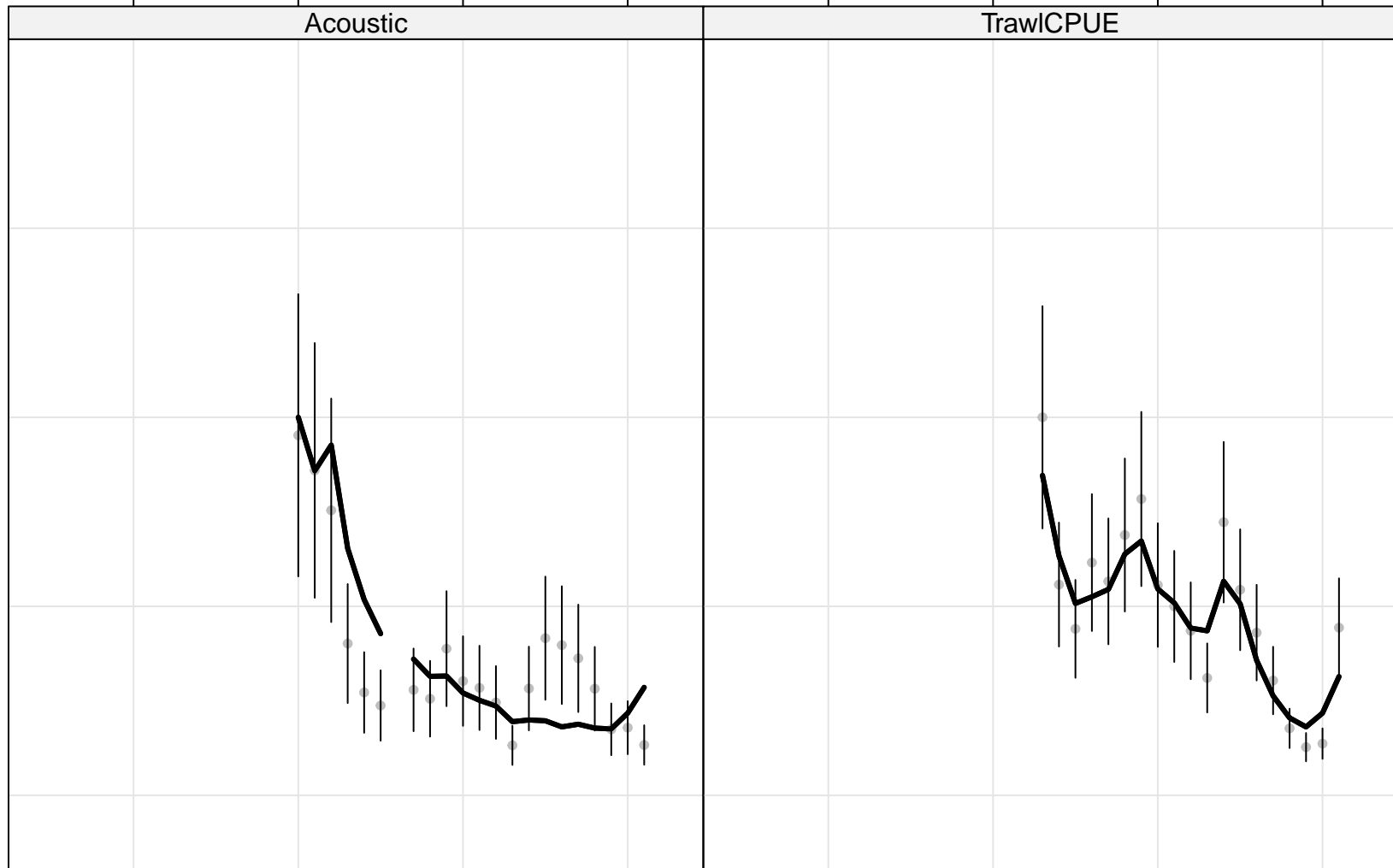
2000

2010

2020

Normalized index value

Years

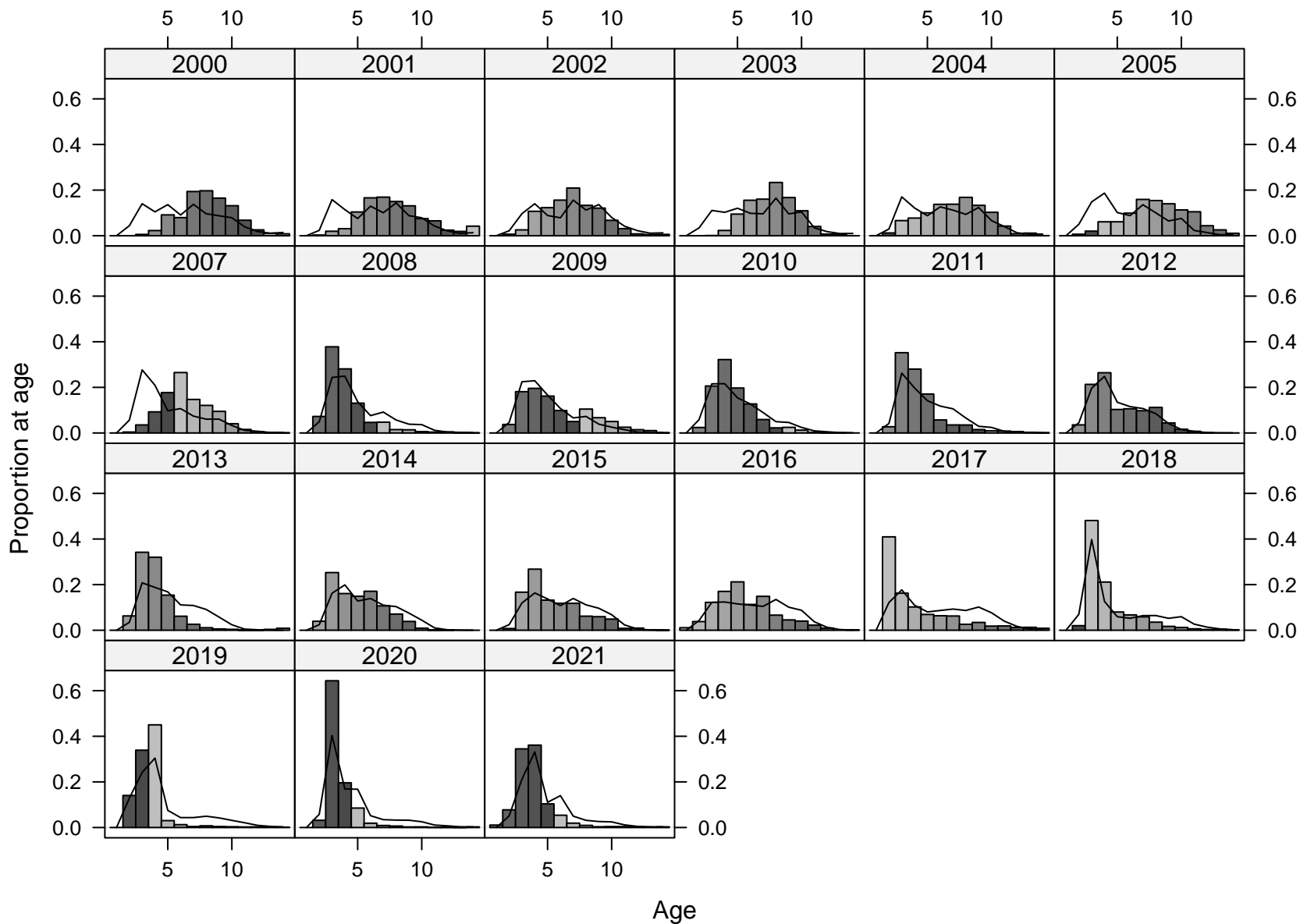


Age fits Acoustic

Observed



Predicted

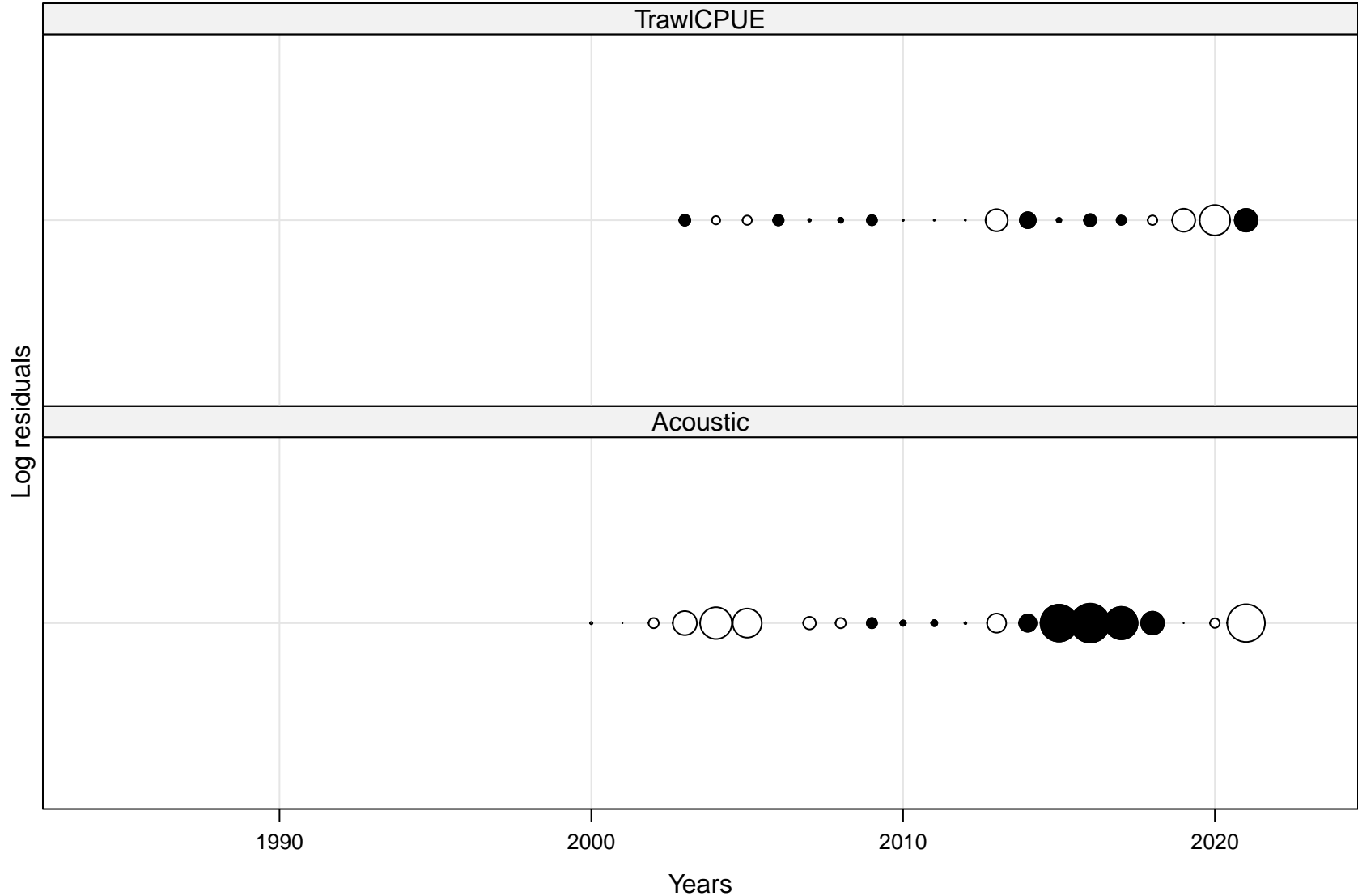


Standardized survey residuals

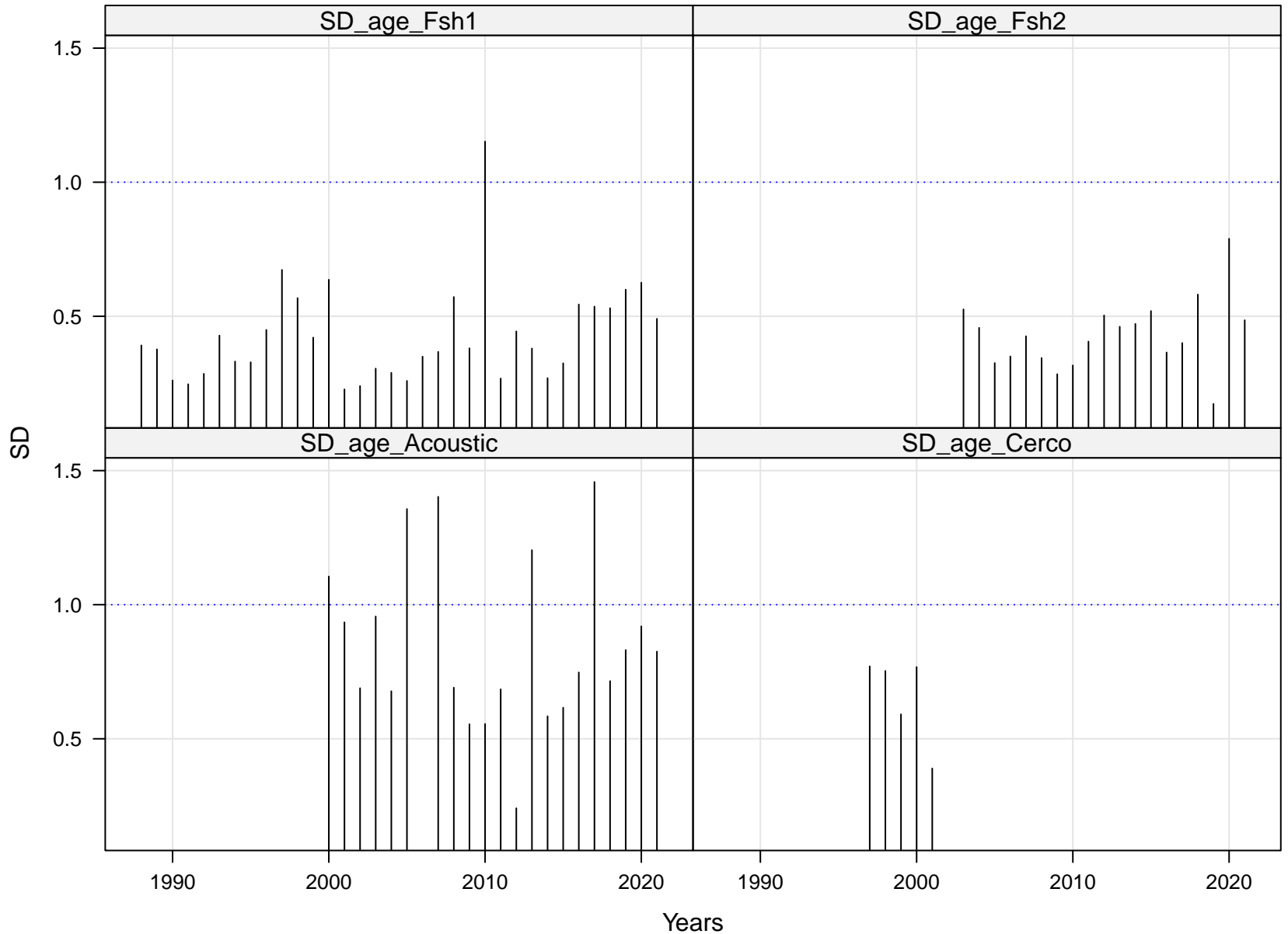
-3.85
-2.29
-0.73



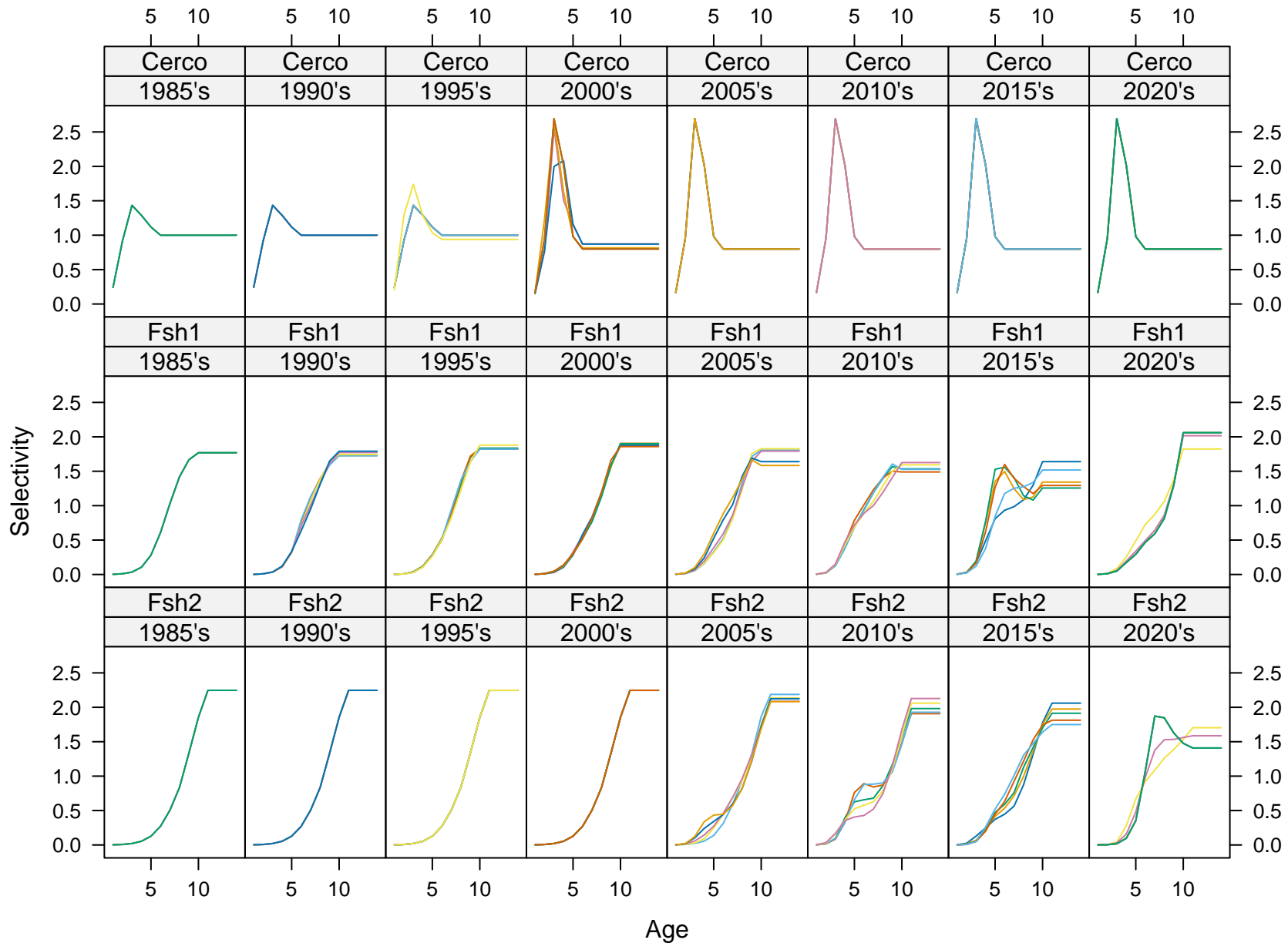
0.84
2.4
3.96



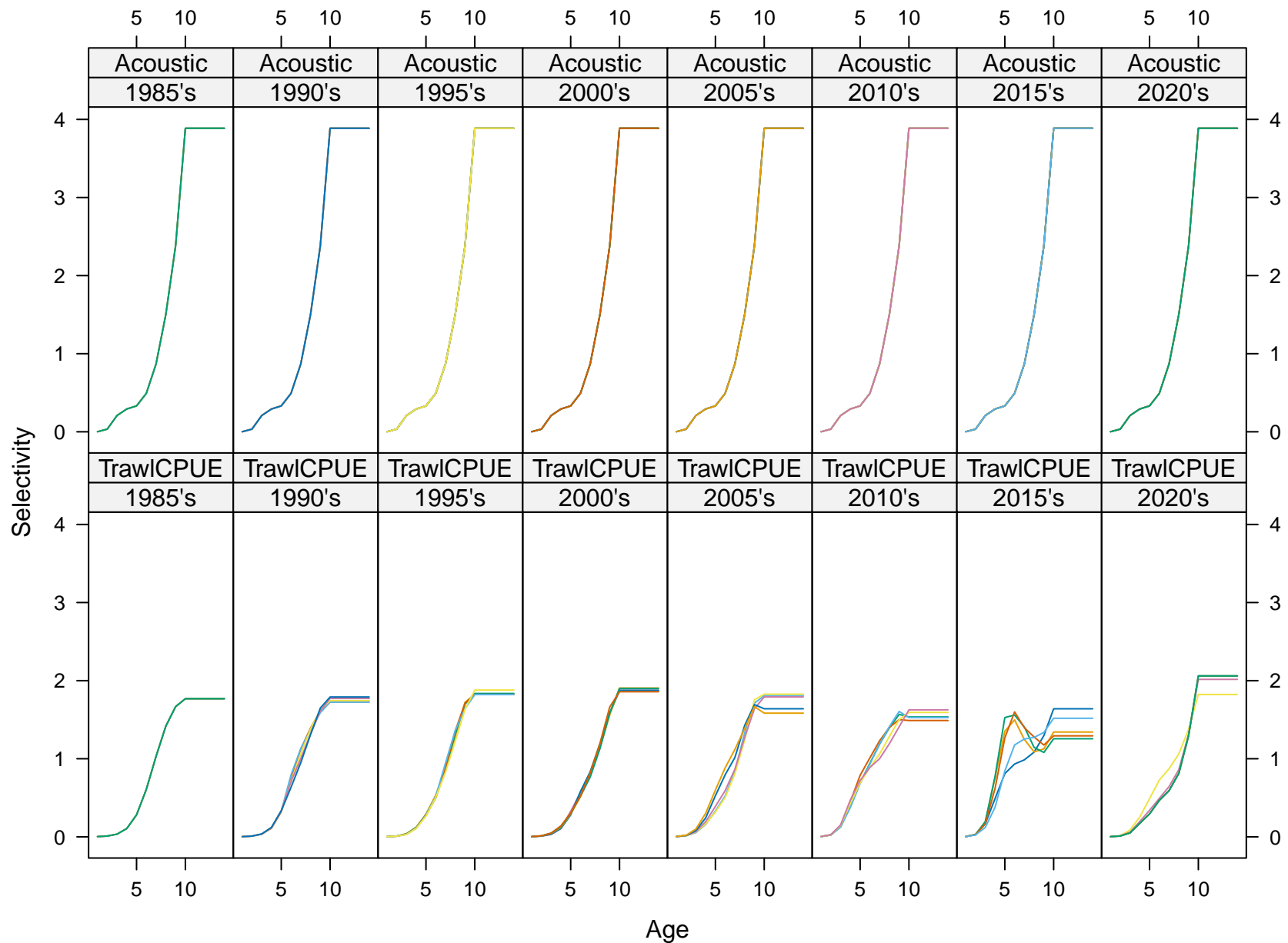
SD per input series



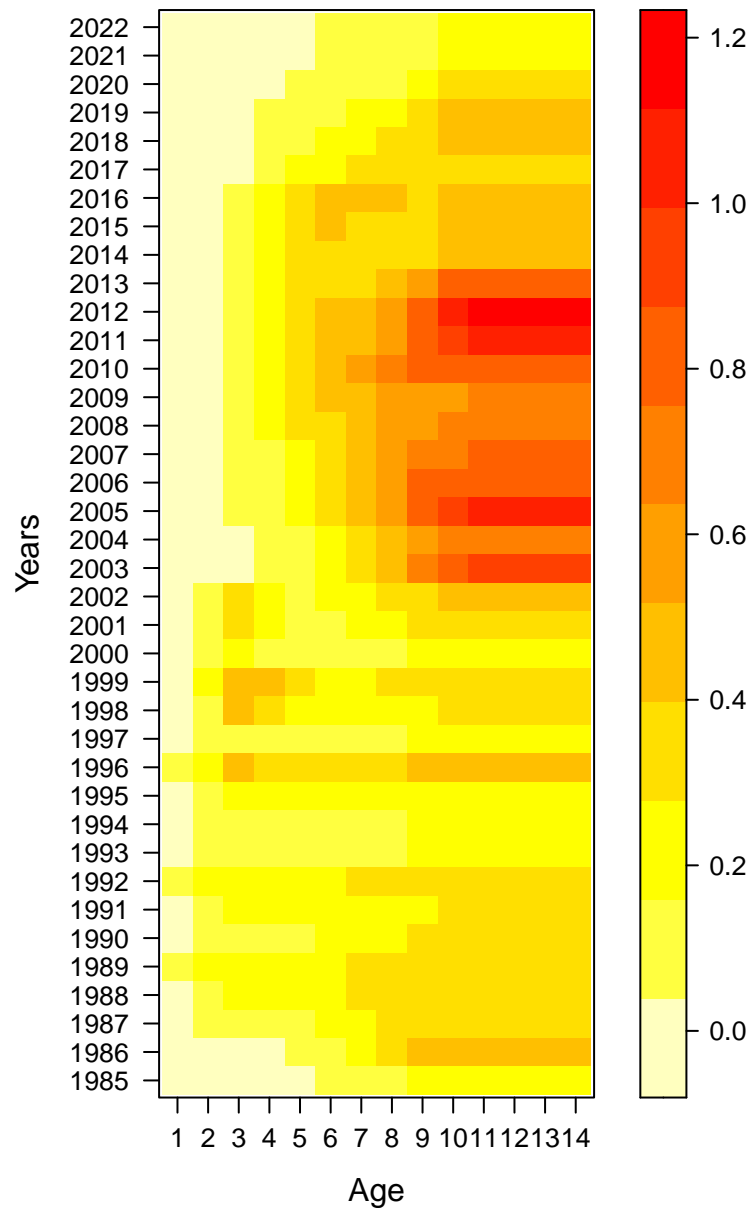
Selectivity of the Fishery by Pentad



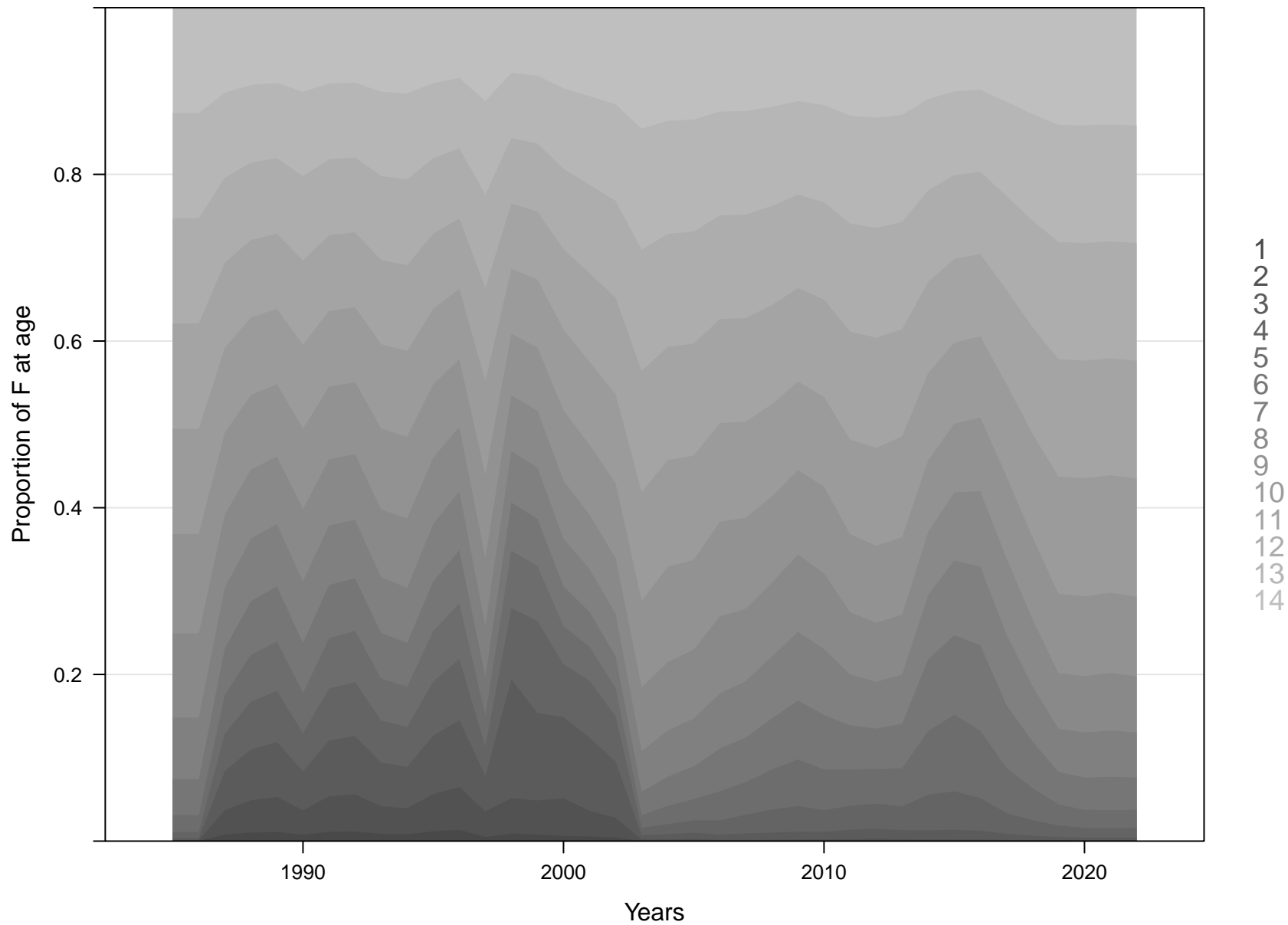
Selectivity of the survey by Pentad



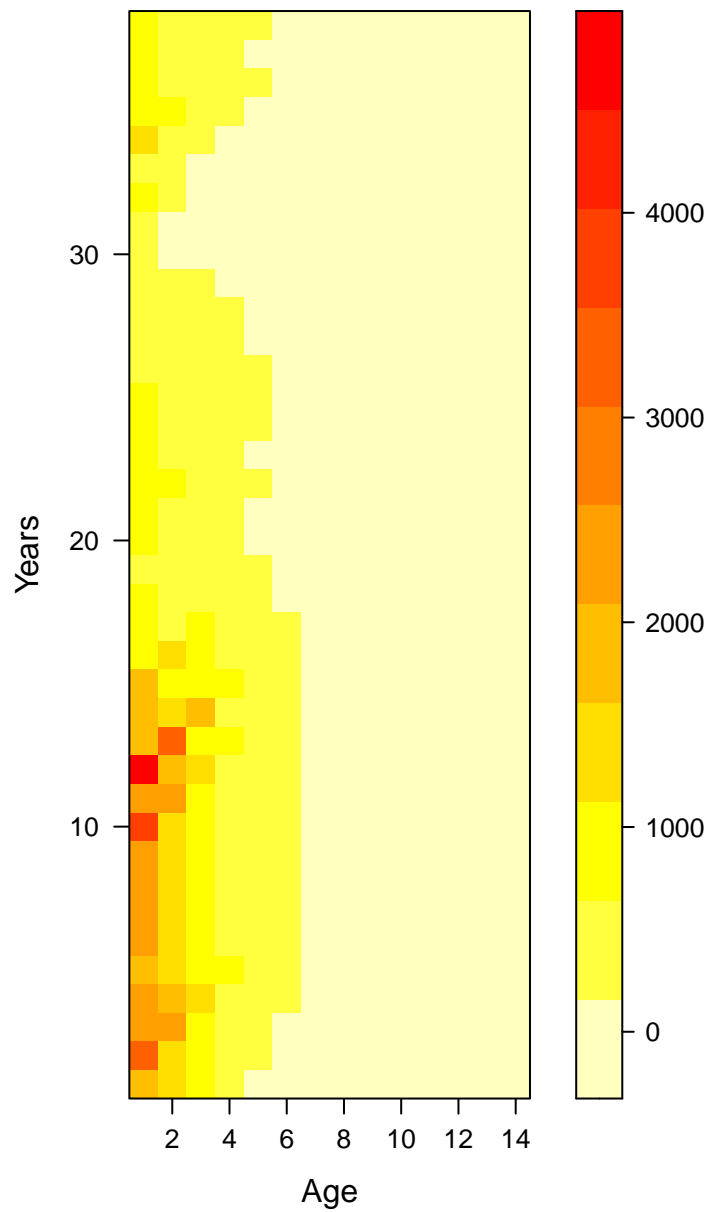
F at age



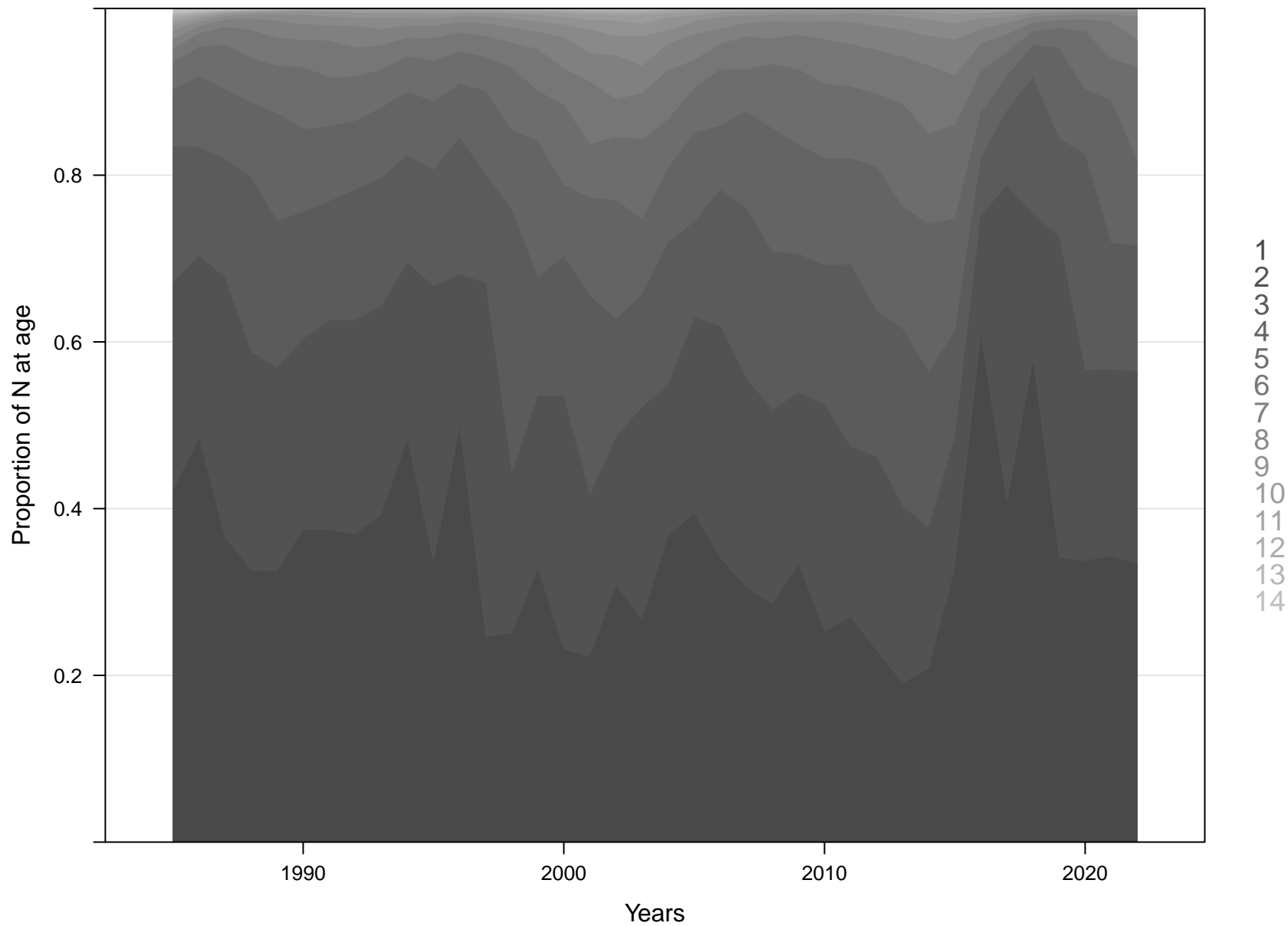
F proportion at age



N at age



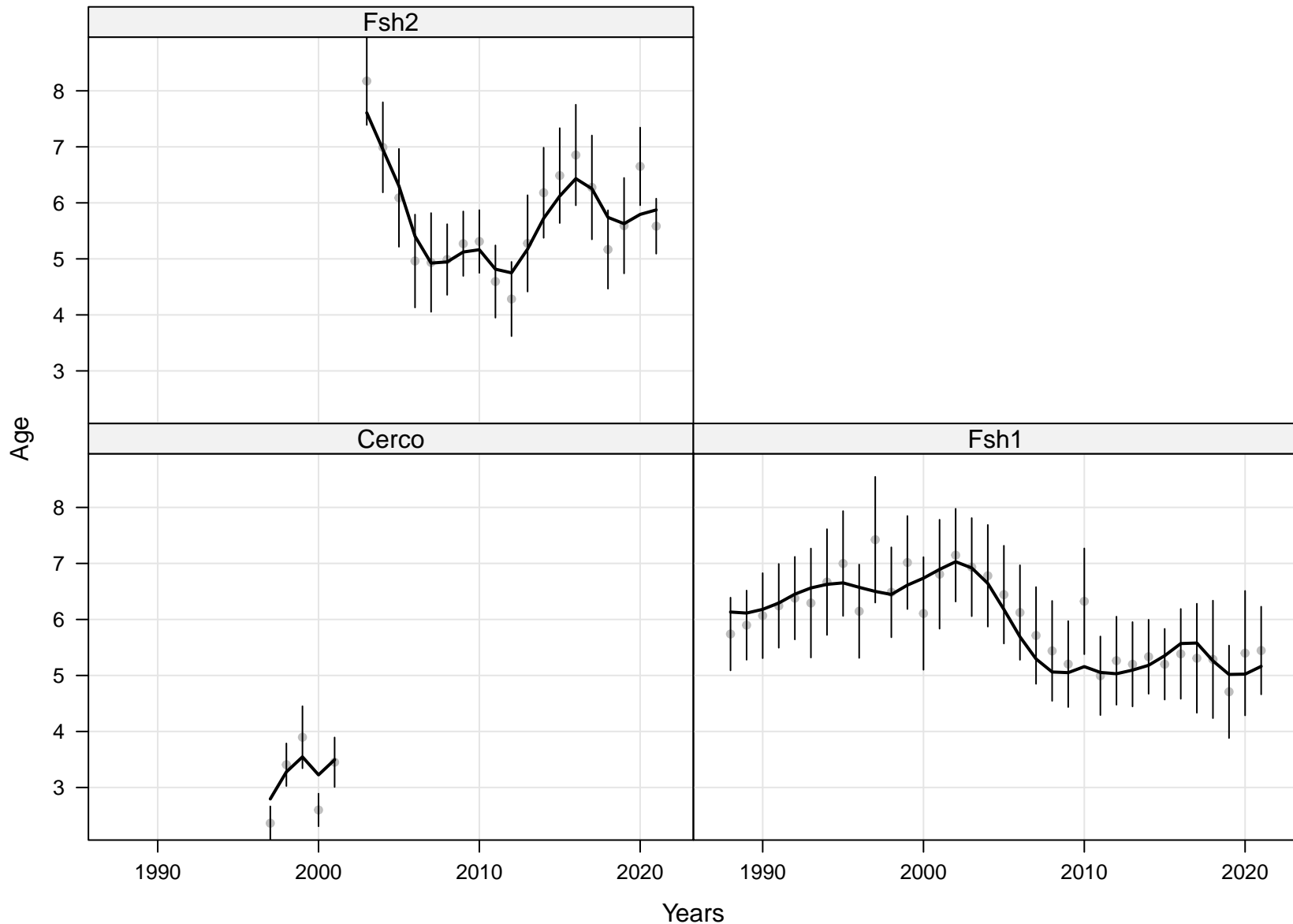
Proportion at age



Fishery mean age

Observed •

Modelled —

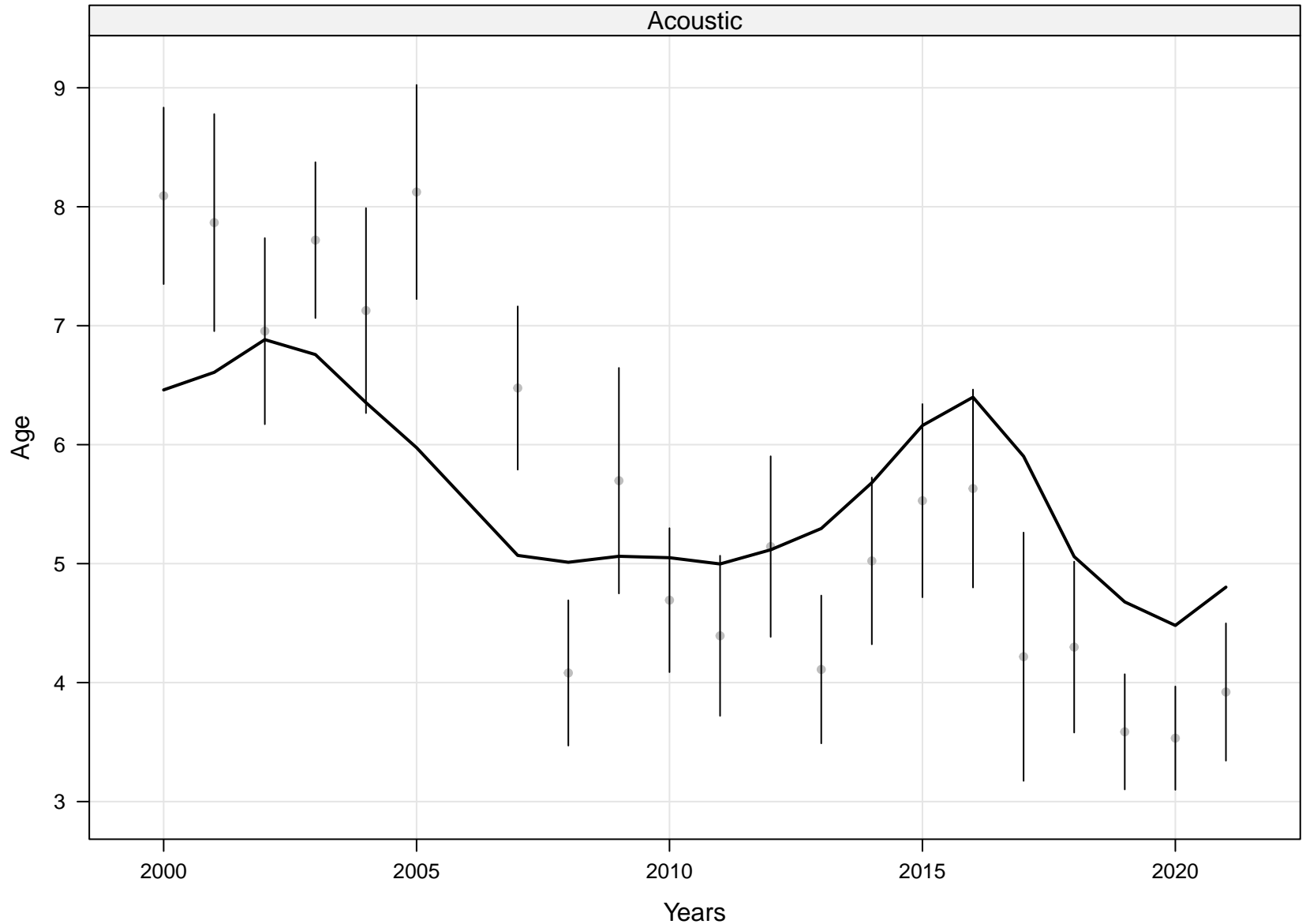


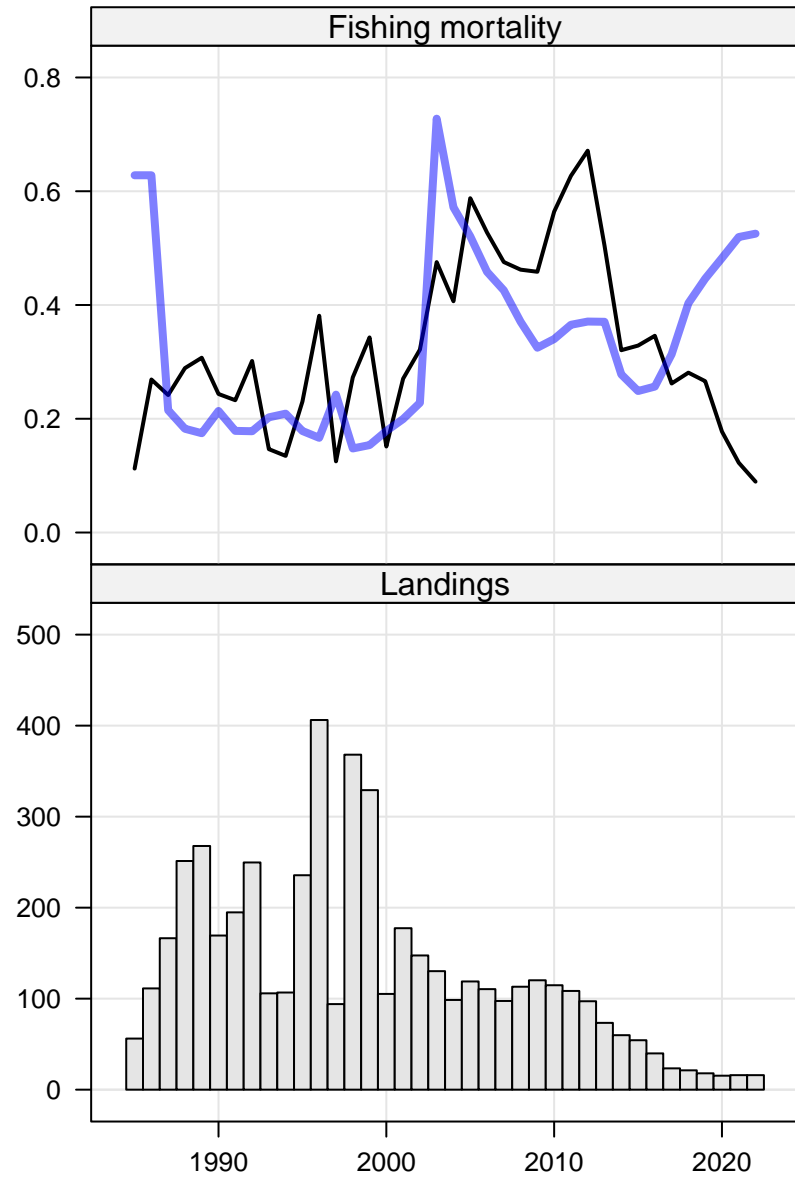
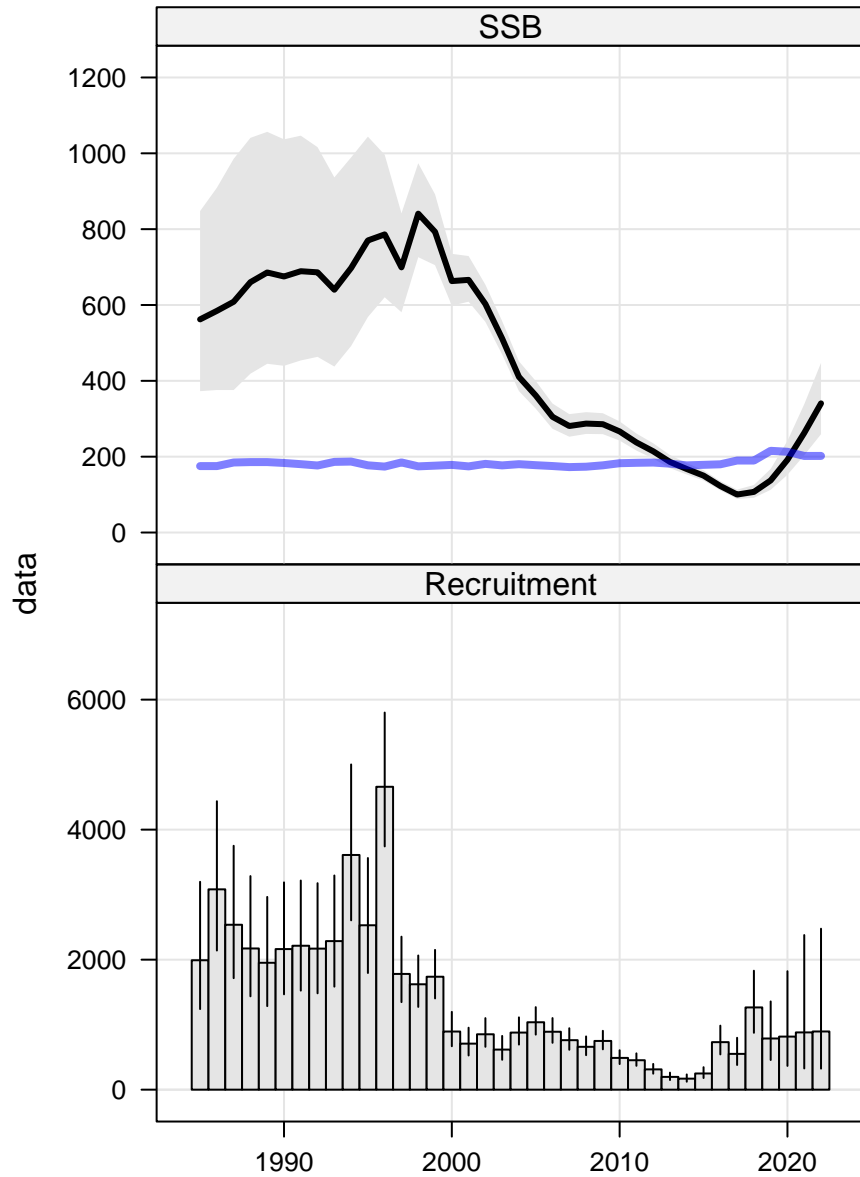
Survey mean age

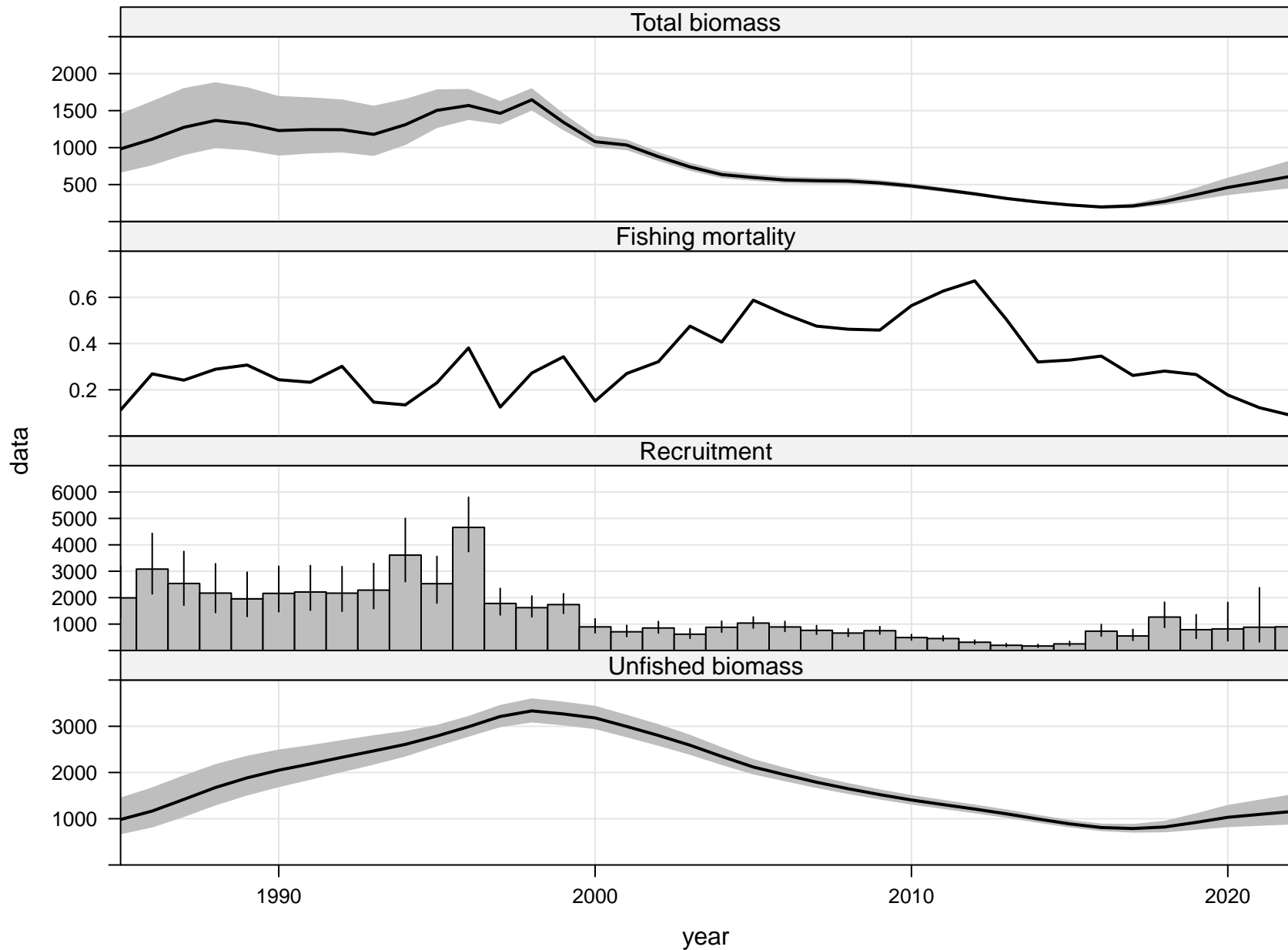
Observed



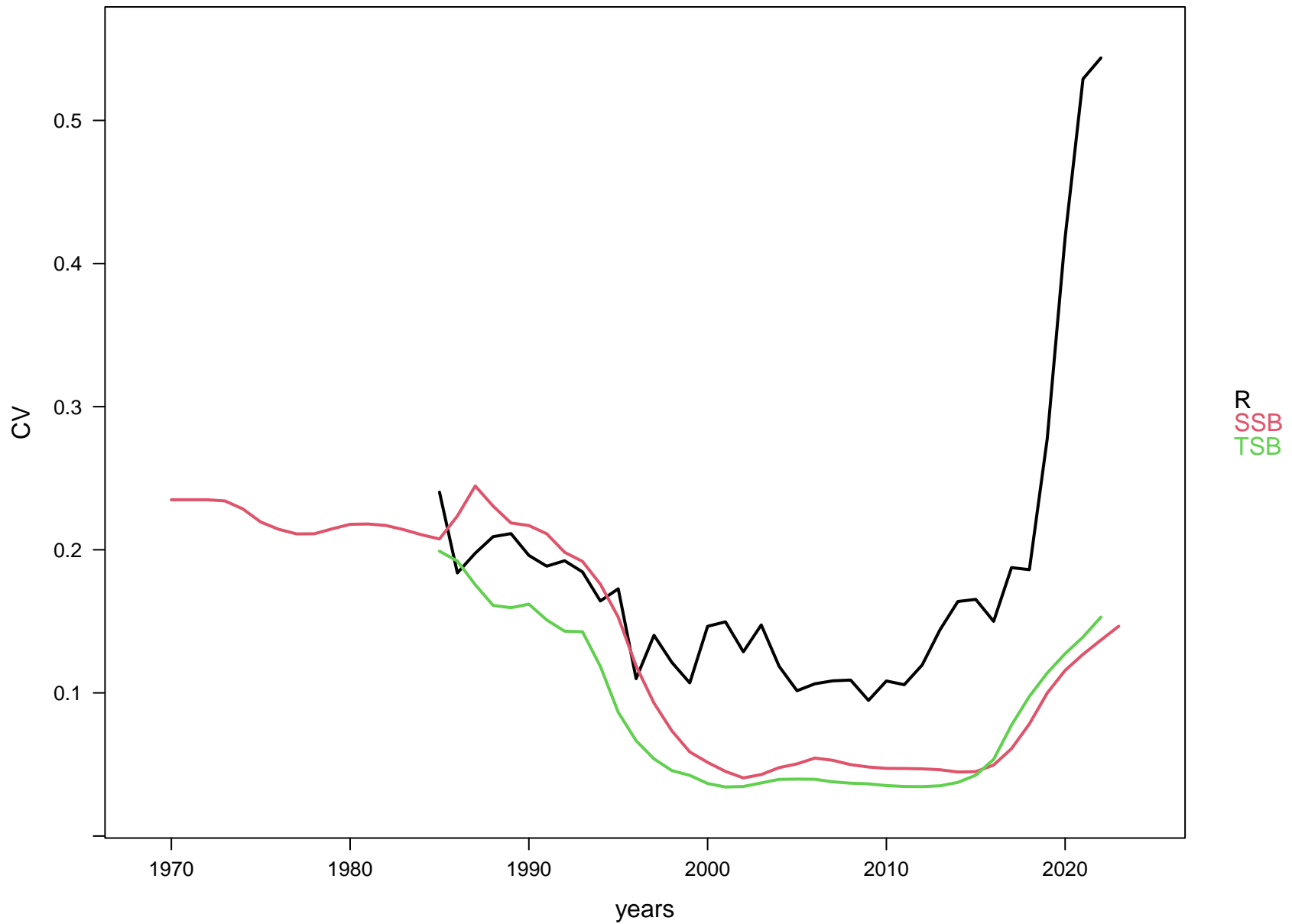
Modelled



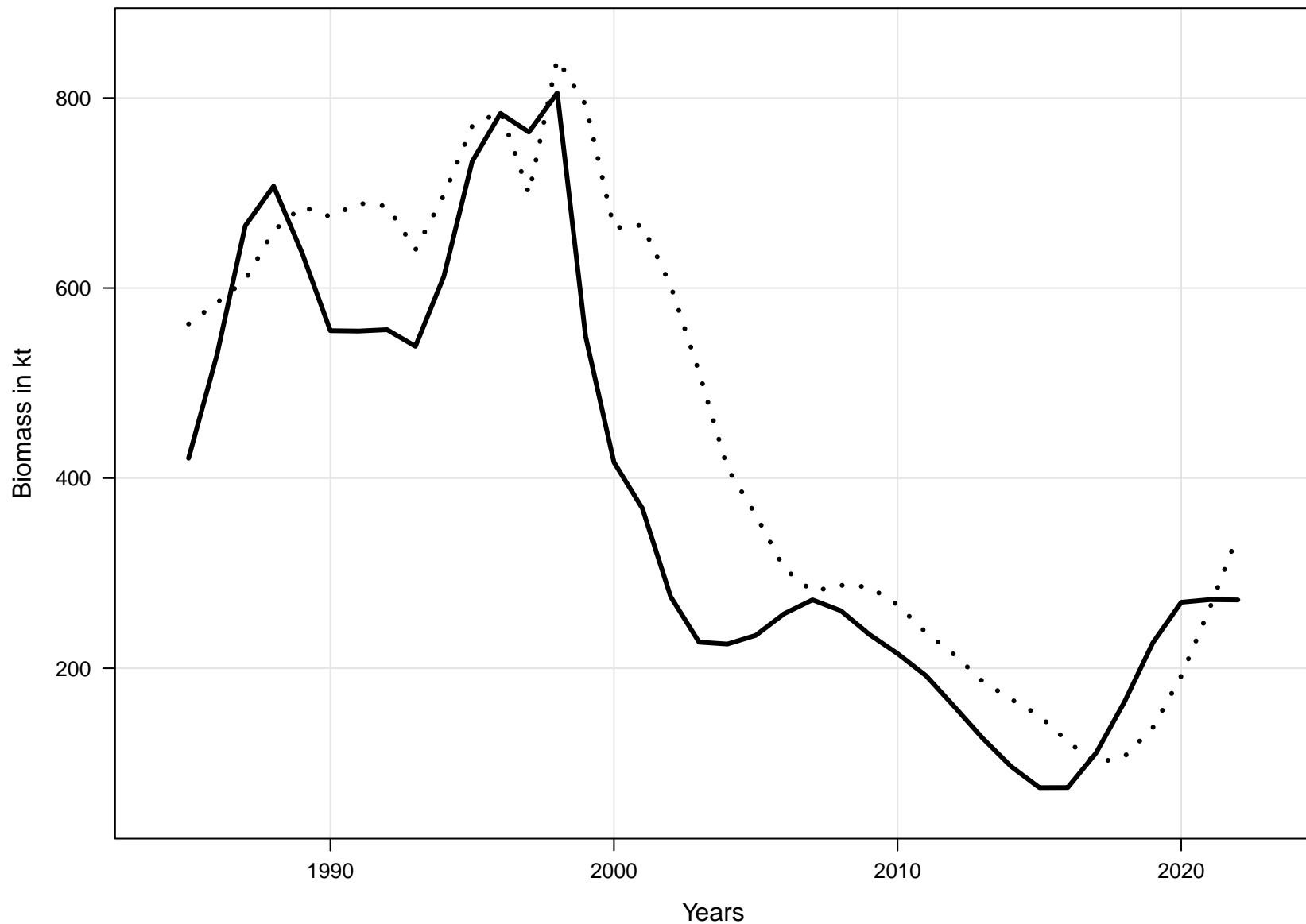




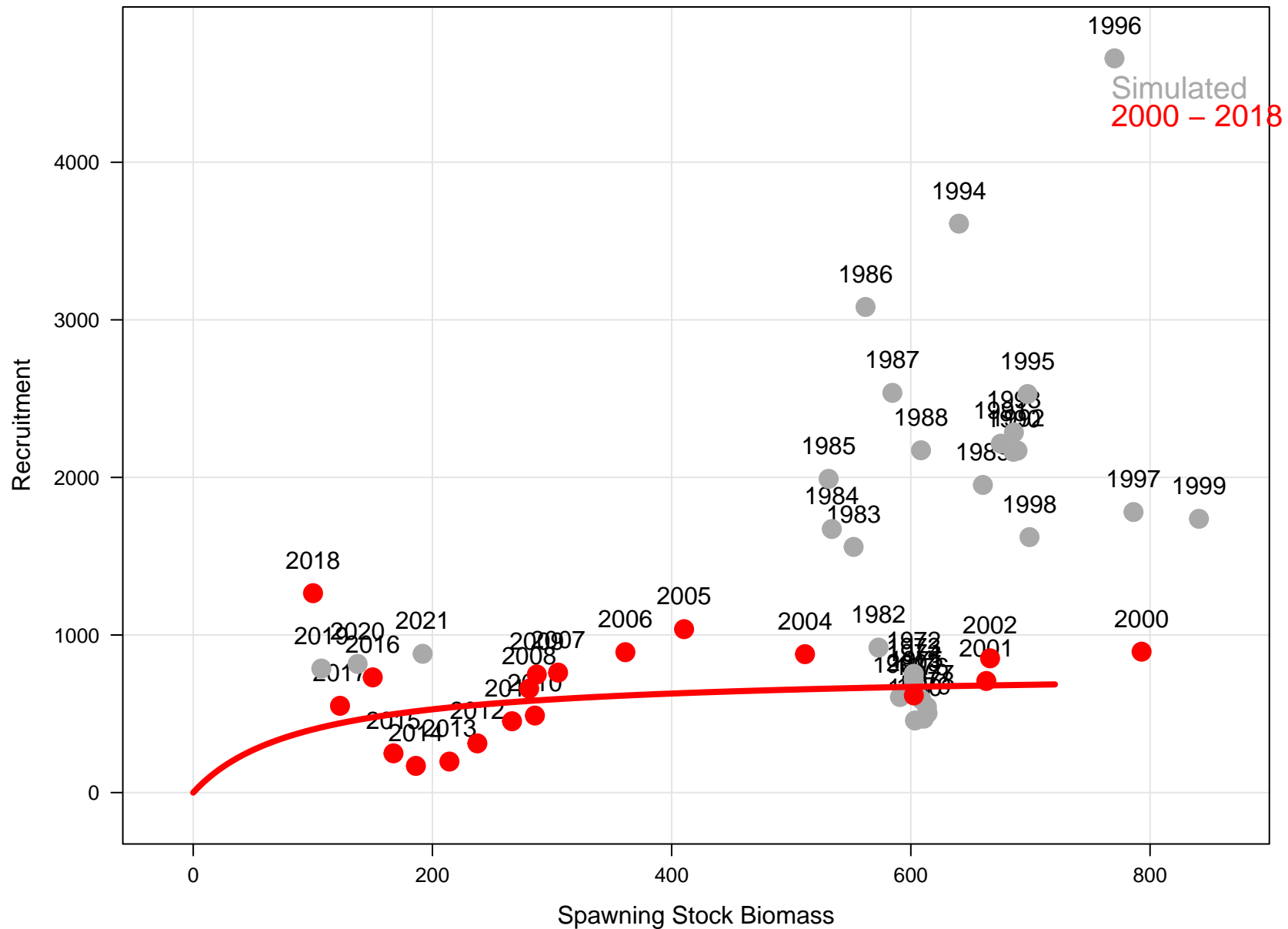
Uncertainty of key parameters



Mature – Immature fish
Mature Immature —

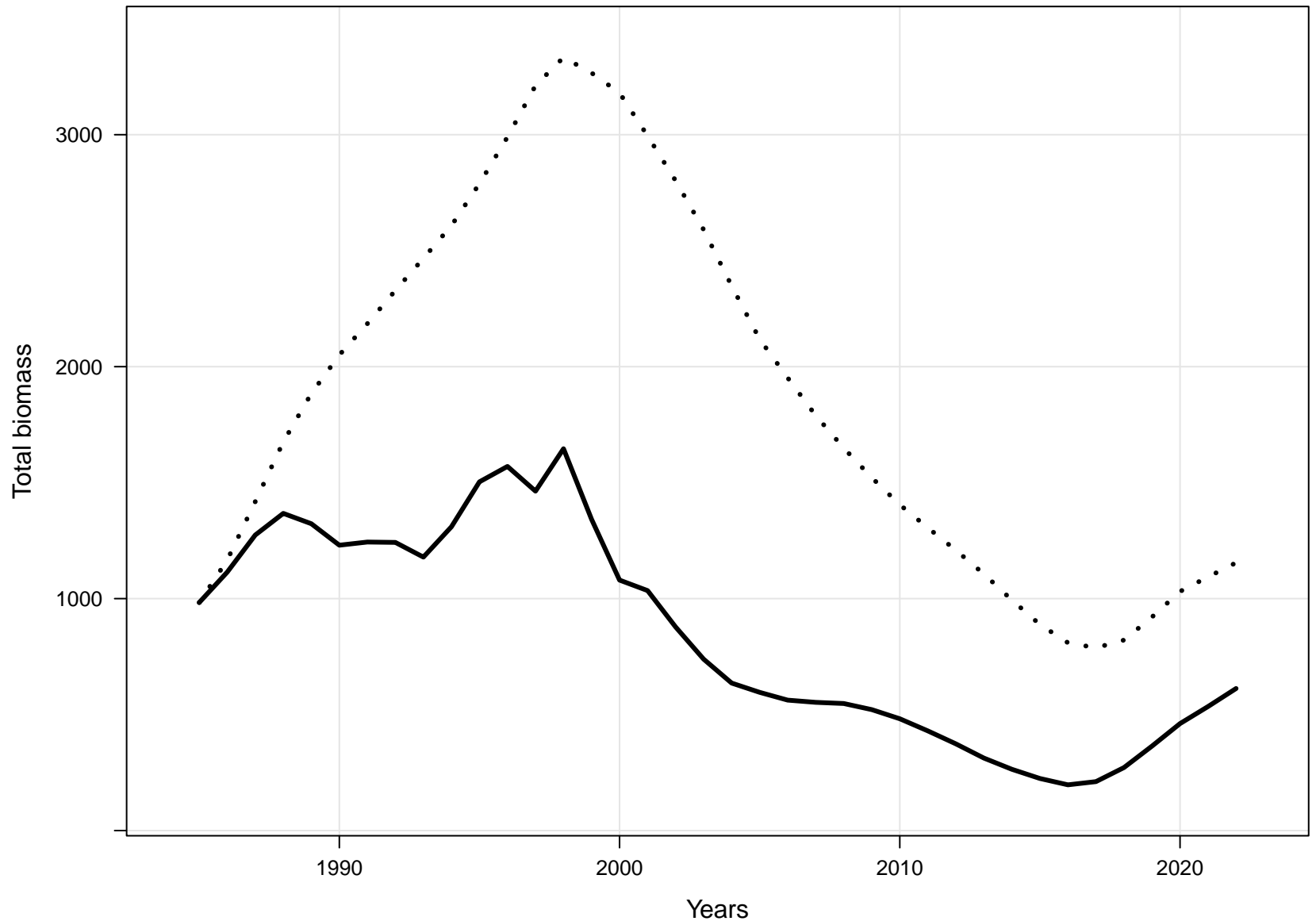


Stock Recruitment



Comparing fished with unfished biomass

Fished — Unfished



SSB prediction

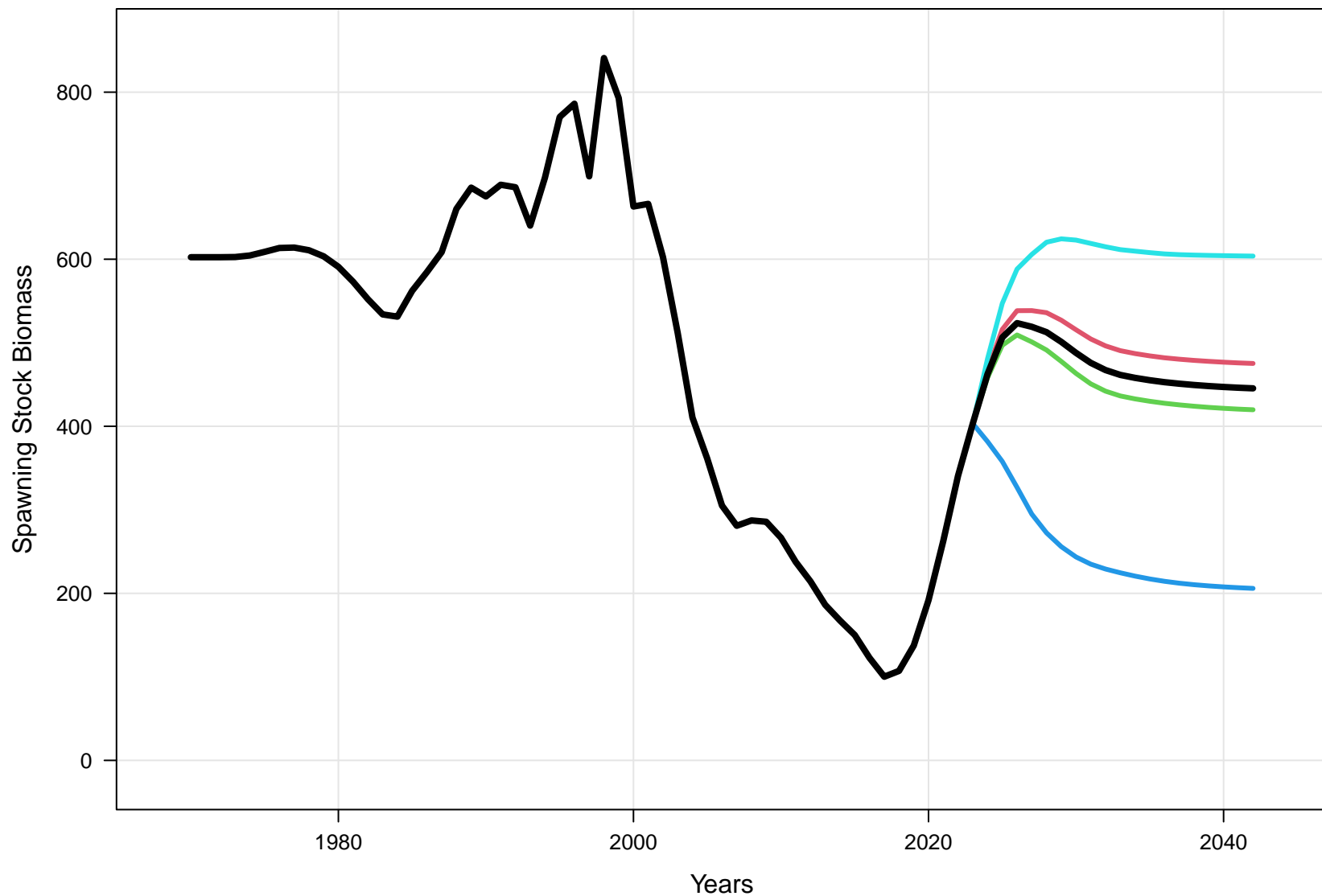
F2022 SQ

F2022 0.75x

F2022 1.25x

FMSY

F2022 0x



Catch prediction

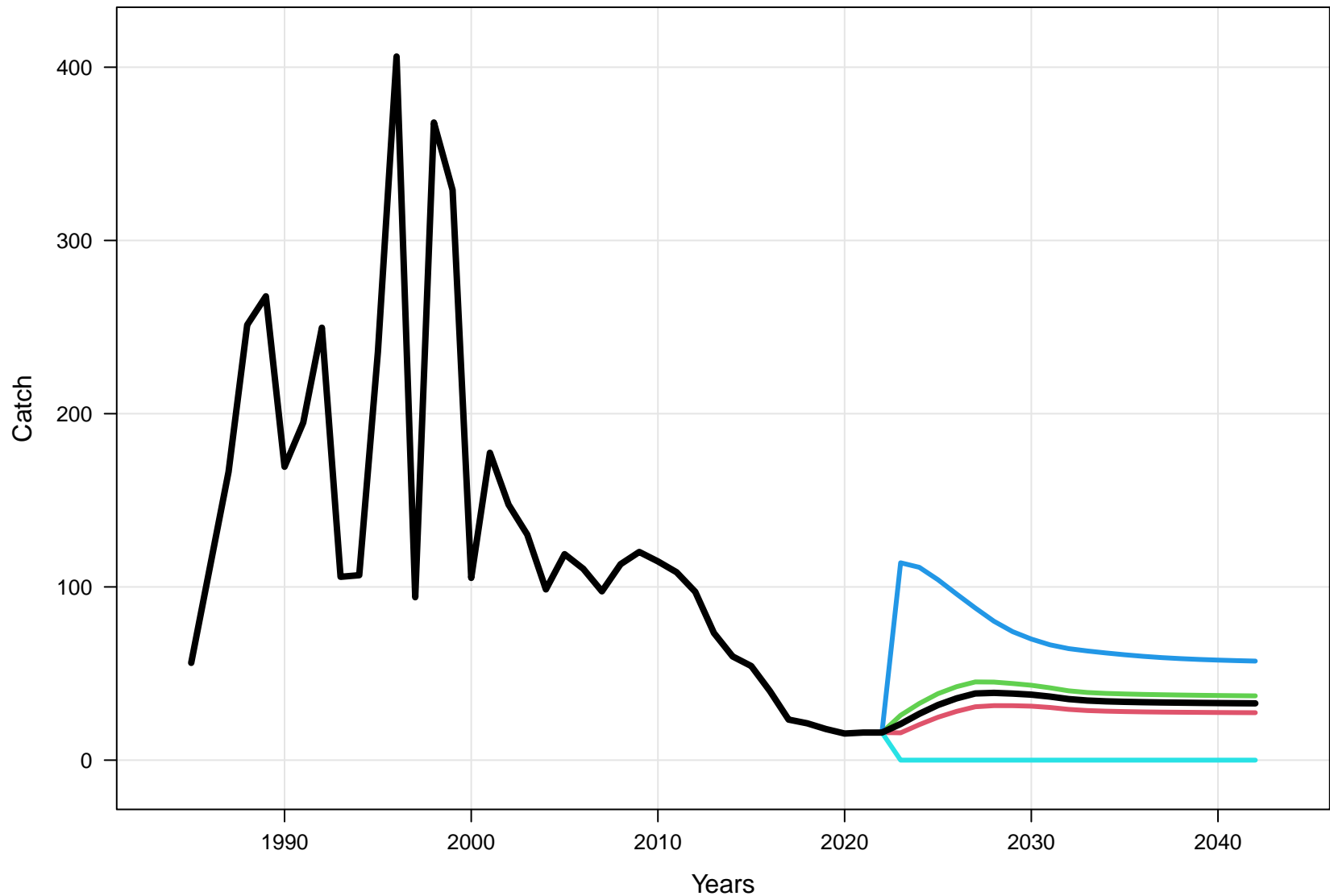
F2022 SQ

F2022 0.75x

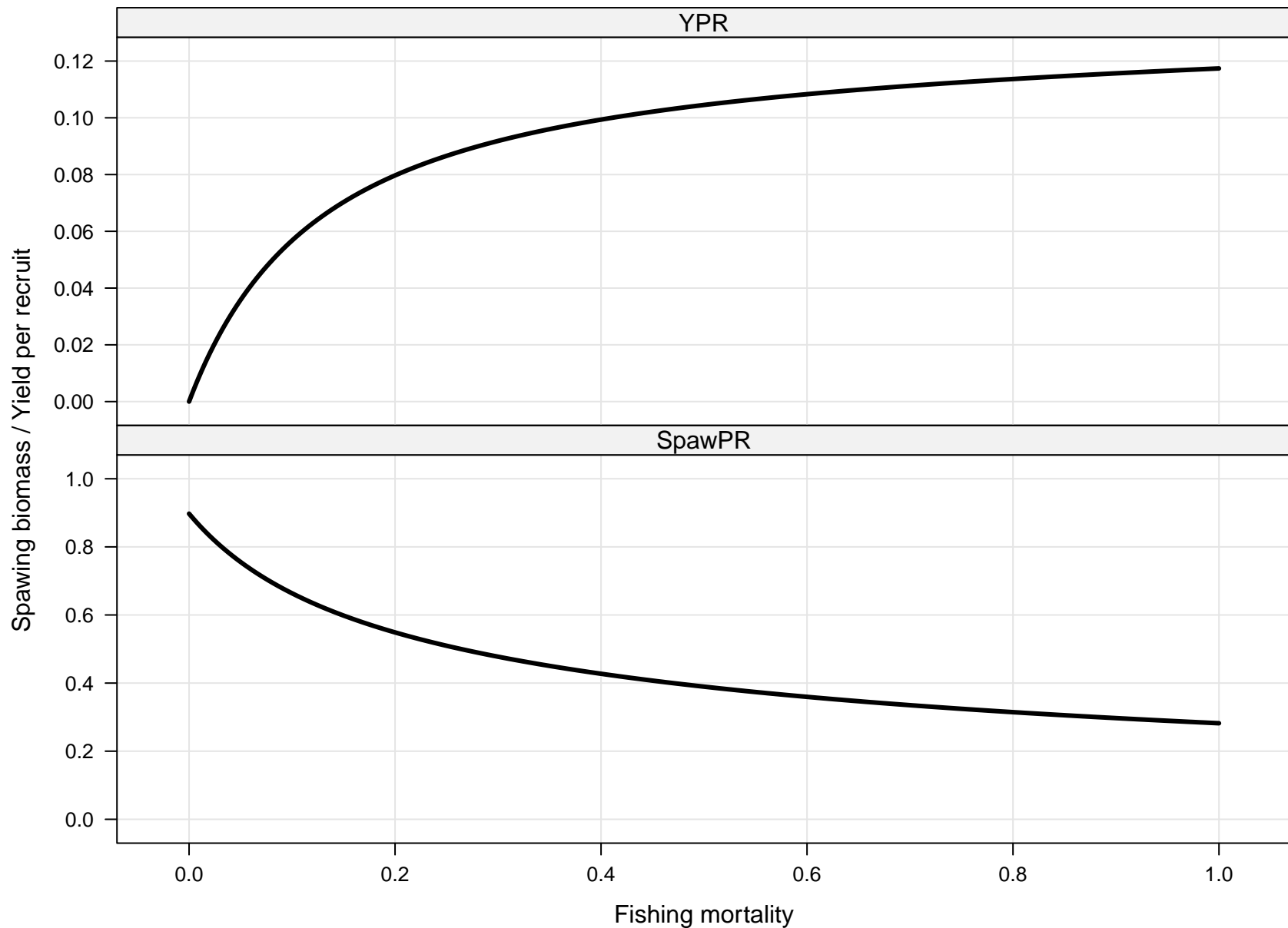
F2022 1.25x

FMSY

F2022 0x



Yield and spawning stock biomass per recruit



Kobe plot

