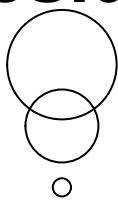


Catch residuals by fleet

-0.06

-0.04

-0.01



0.02

0.04

0.07



Offshore_Trawl

FarNorth

SC_Chile_PS

N_Chile

Residuals

1970

1980

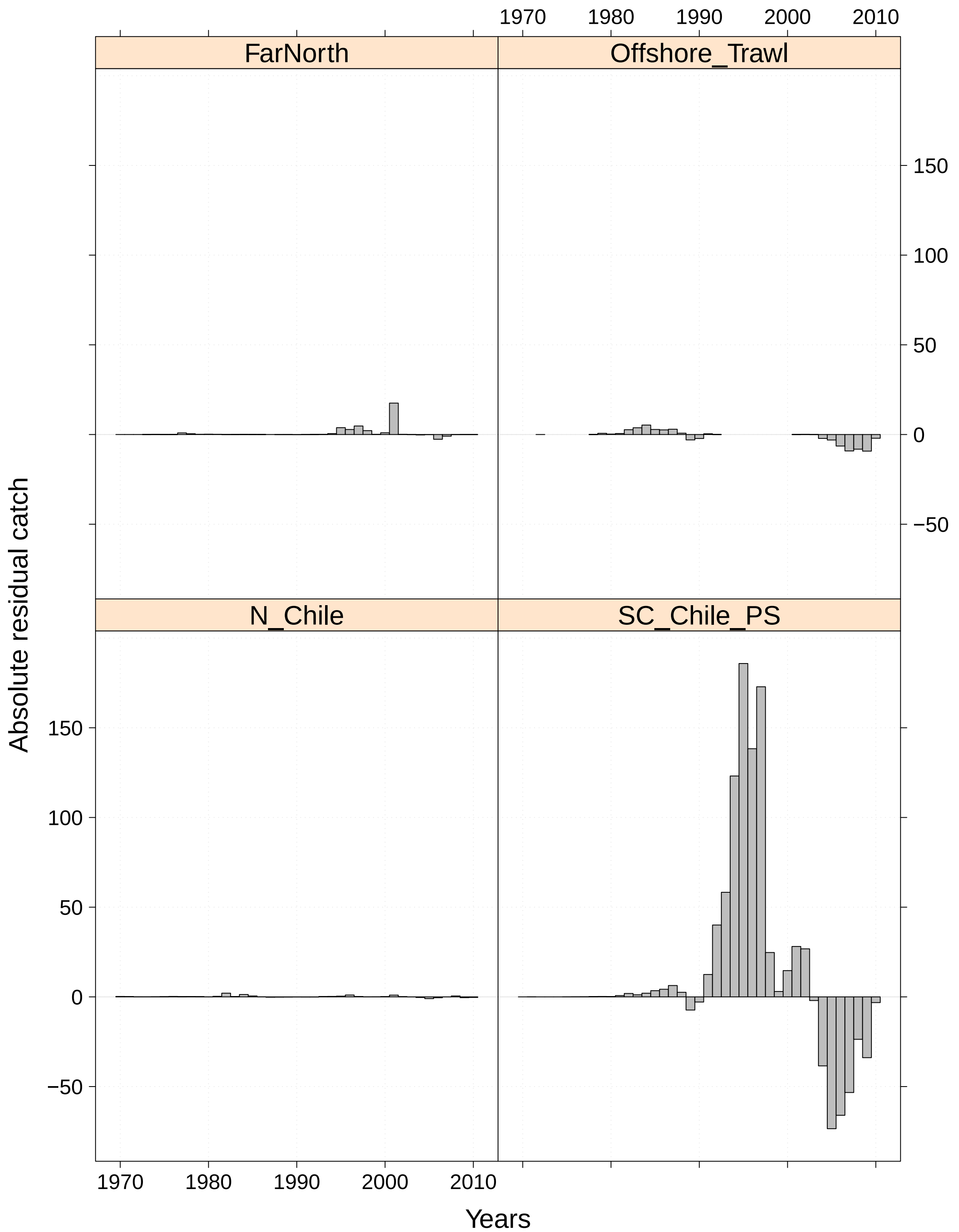
1990

2000

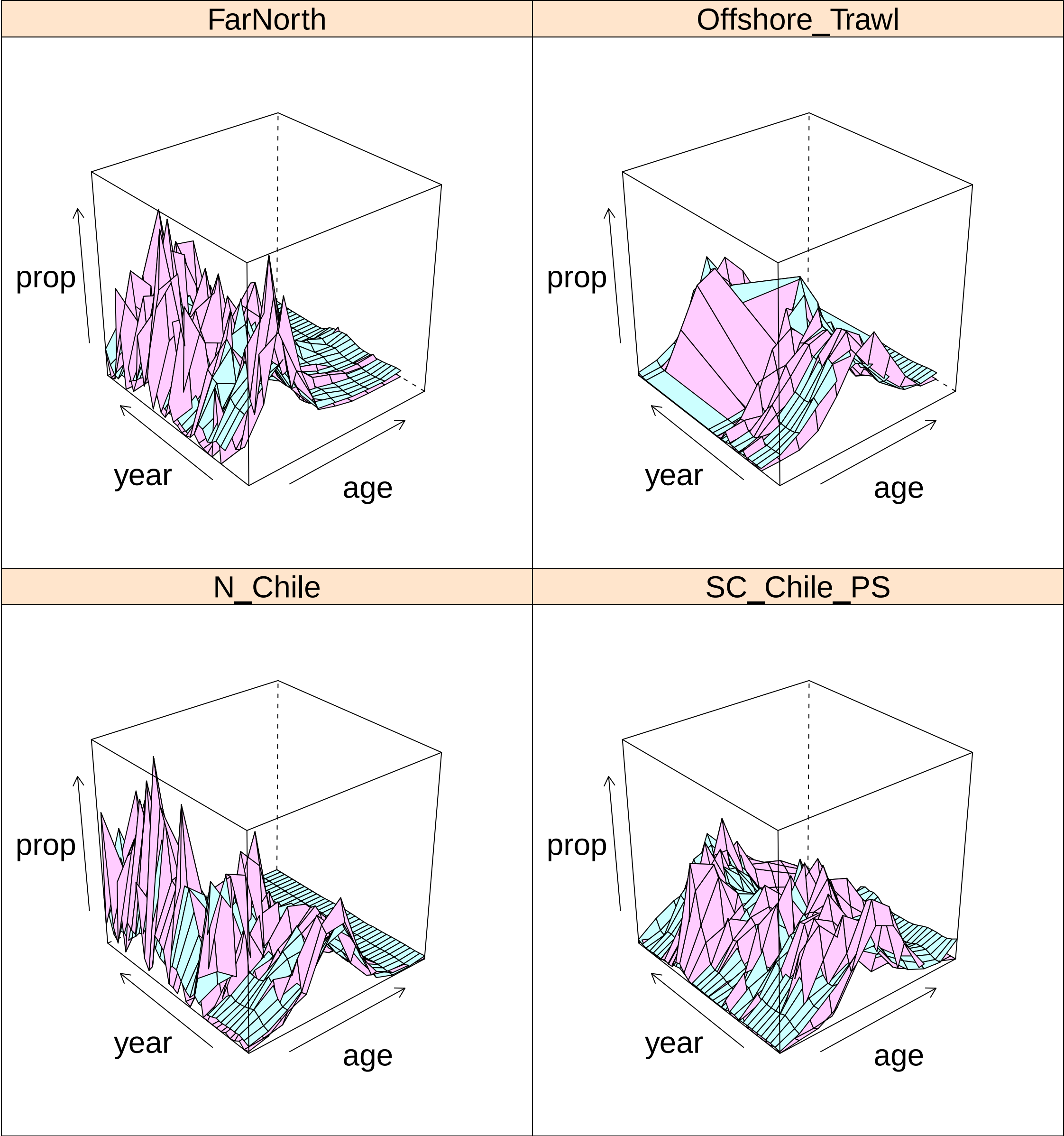
2010

Years

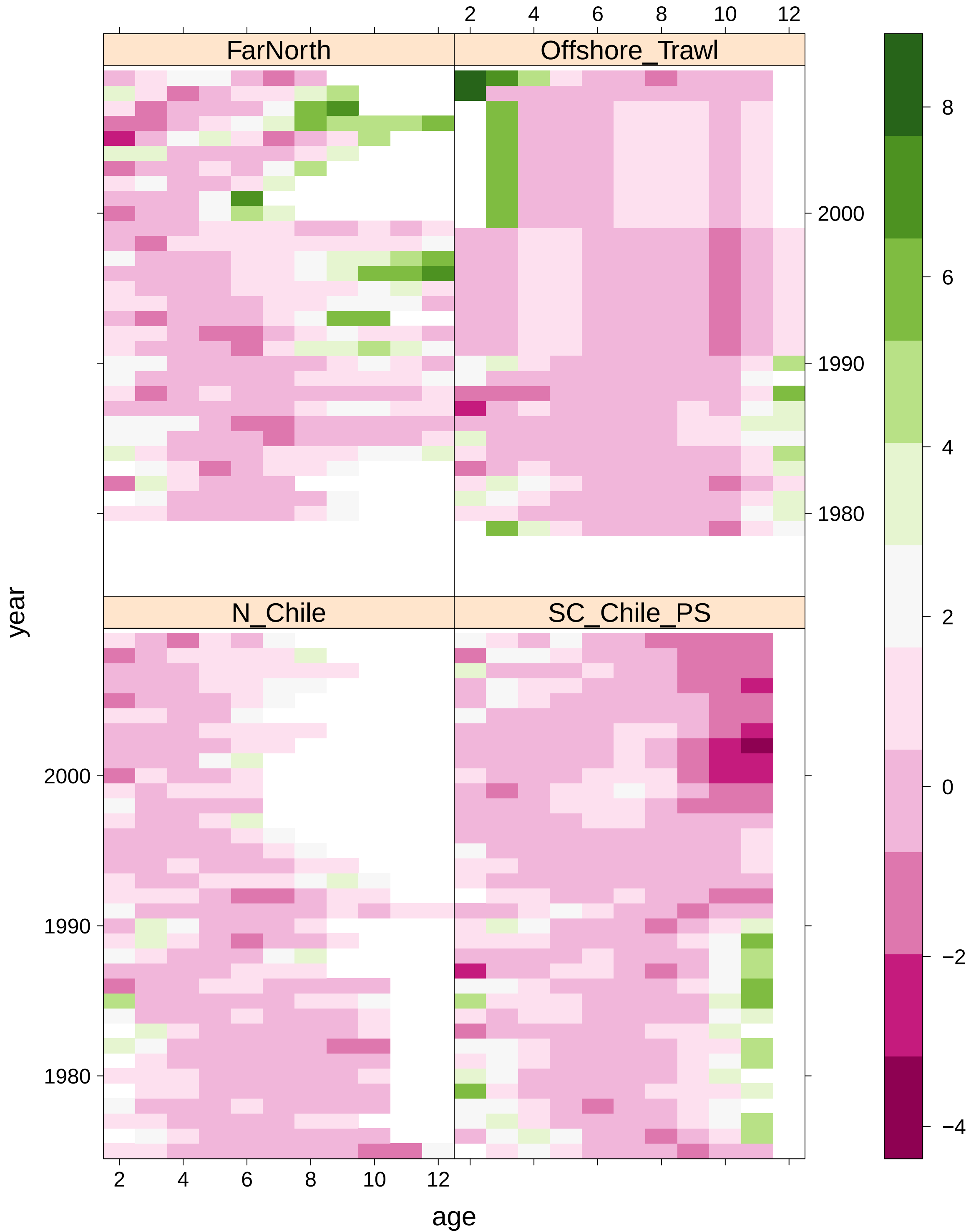
Absolute residual catch by fleet



Proportions at age in the catch

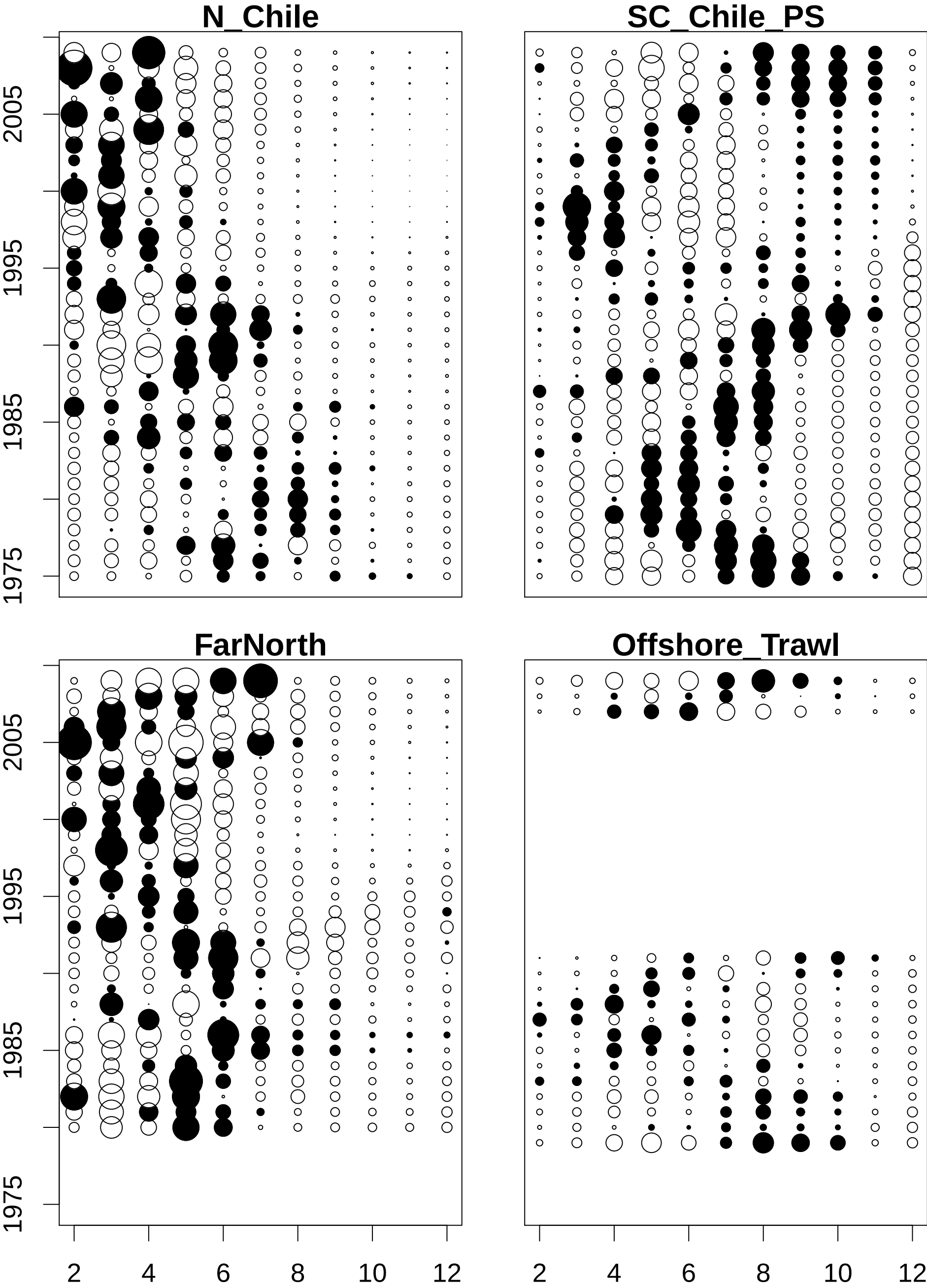


Ratio modelled vs. observed prop. age in the catch



Residual catch at age by fleet

Years



Ages

Age fits N_Chile

Observed

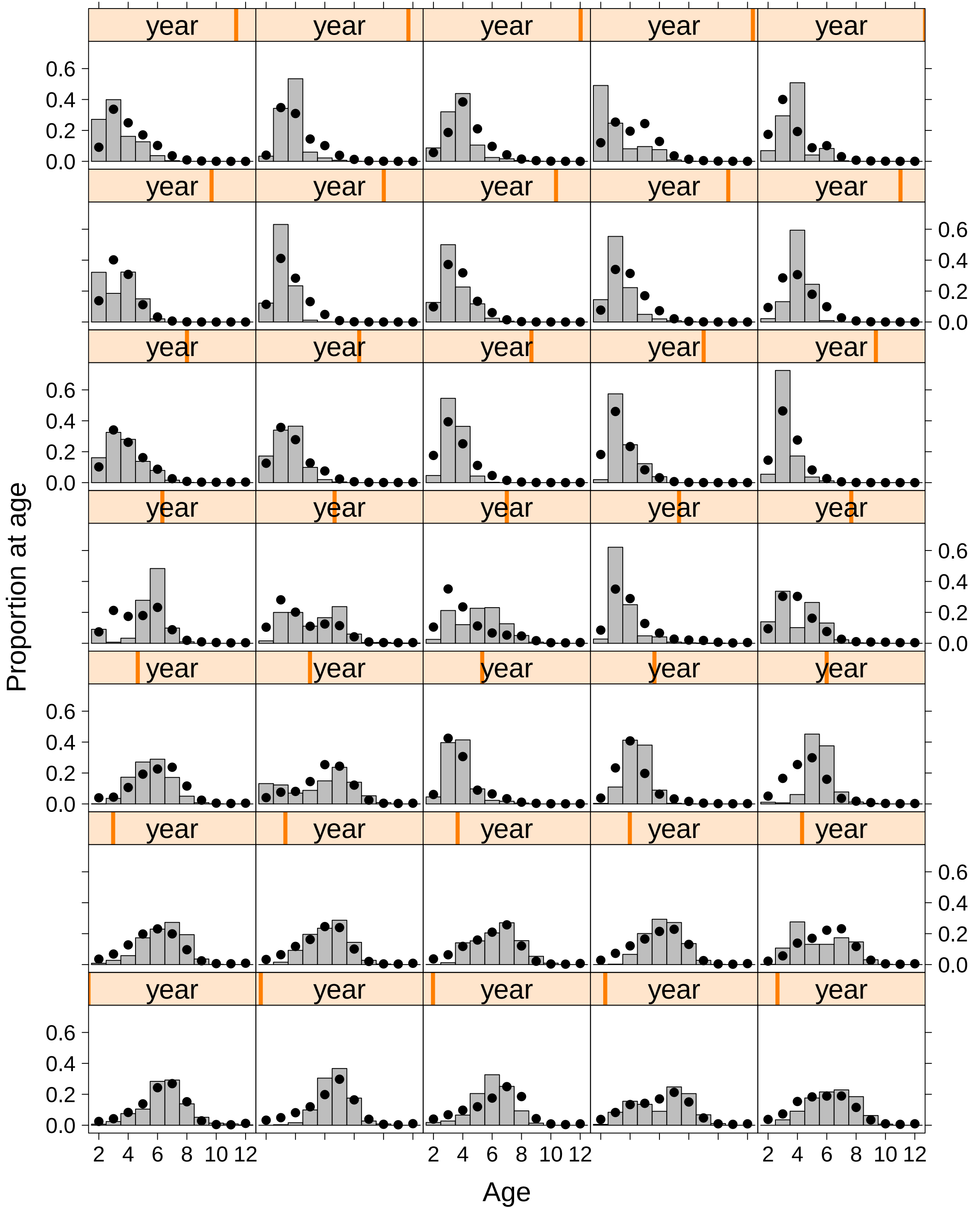


Predicted



2 4 6 8 10 12

2 4 6 8 10 12



Age fits SC_Chile_PS

Observed



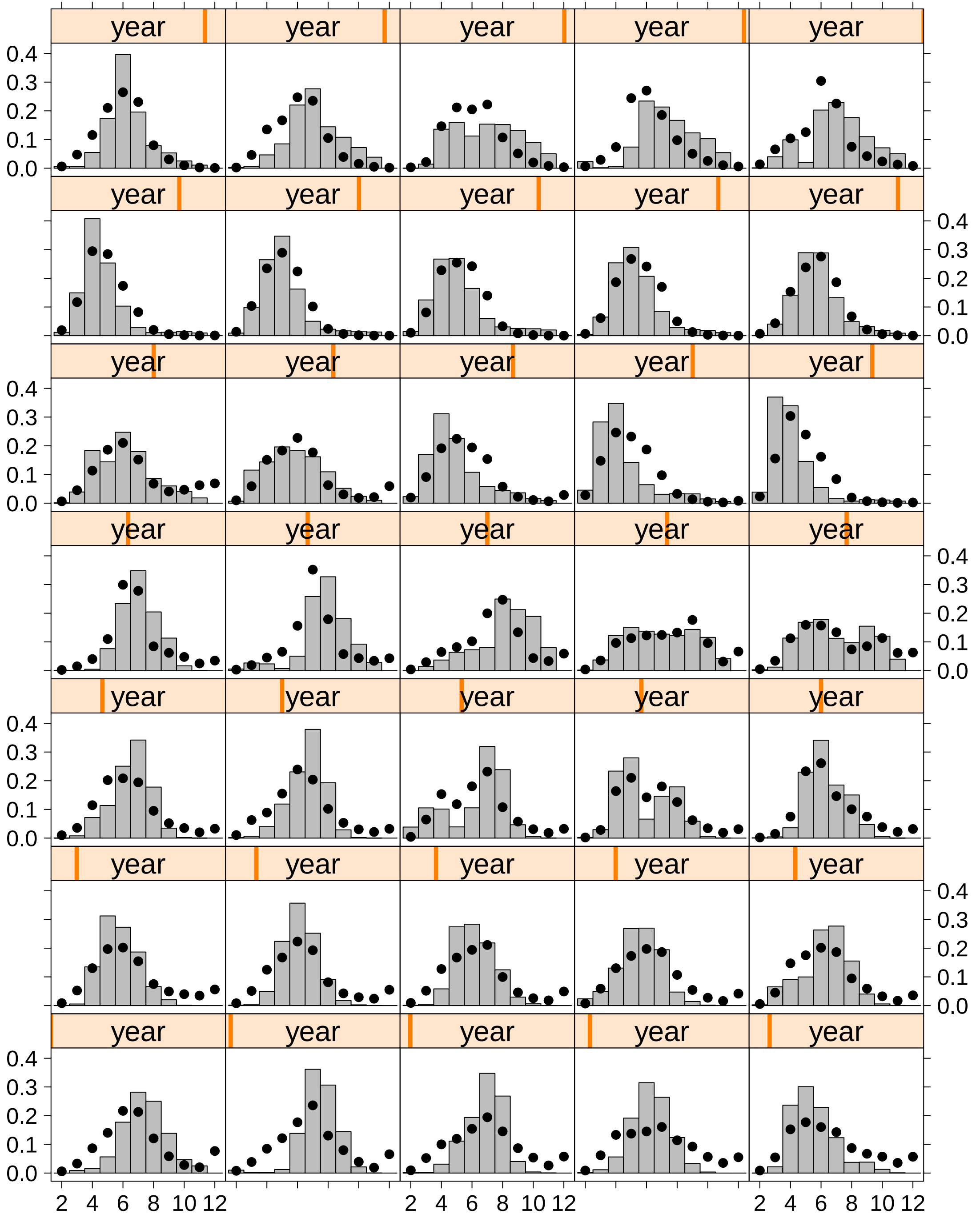
Predicted



2 4 6 8 10 12

2 4 6 8 10 12

Proportion at age



Age

Age fits FarNorth

Observed



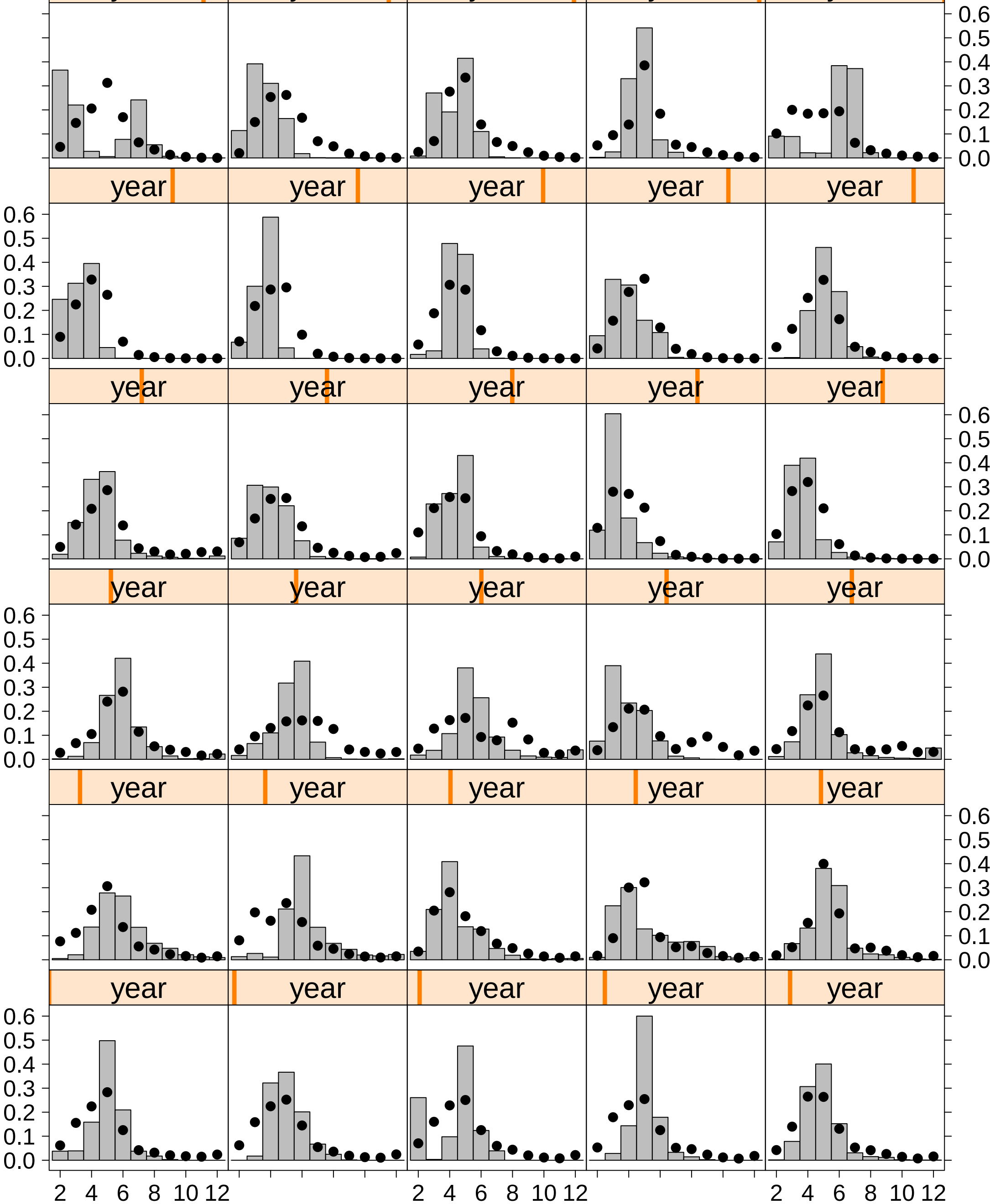
Predicted



2 4 6 8 10 12

2 4 6 8 10 12

Proportion at age

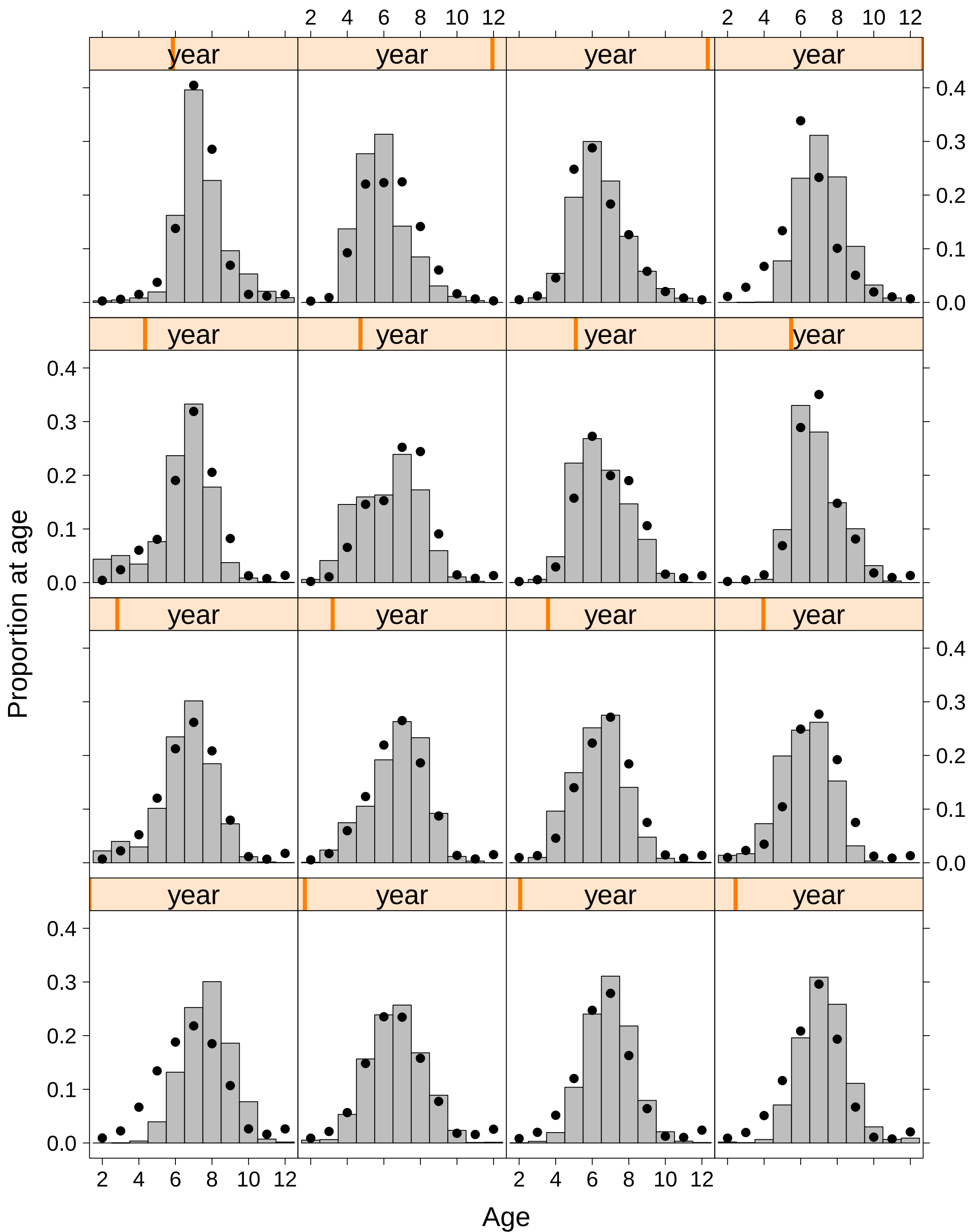


Age fits Offshore_Trawl

Observed



Predicted

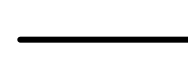


Predicted and observed catches by fleet

Observed



Predicted



1970

1980

1990

2000

2010

Offshore_Trawl

SC_Chile_PS

Tonnes

FarNorth

N_Chile

4000

3000

2000

1000

0

1970

1980

1990

2000

2010

Years

4000

3000

2000

1000

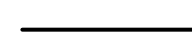
0

Predicted and observed indices

Observed



Predicted



1970 1980 1990 2000 2010

Chinese_CPUE

EU_CPUE

USSR_CPUE

1.0
0.8
0.6
0.4
0.2
0.0

DEPM

Peru_Acoustic

Peru_CPUE

Index value

1.0
0.8
0.6
0.4
0.2
0.0

Chile_AcoustCS

Chile_AcoustN

Chile_CPUE

1.0
0.8
0.6
0.4
0.2
0.0

1970 1980 1990 2000 2010

1970 1980 1990 2000 2010

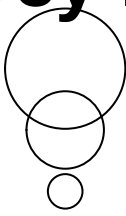
Years

Survey residuals

-2.05

-1.32

-0.59



0.14

0.87

1.6

.



USSR_CPUE

.

EU_CPUE



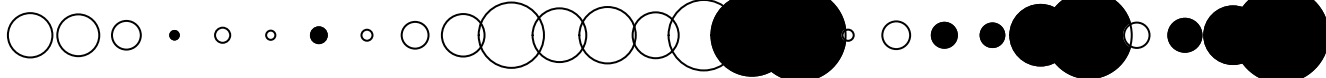
Chinese_CPUE



Peru_CPUE



Peru_Acoustic



DEPM



Chile_CPUE



Chile_AcousN



Chile_AcousCS



Residuals

1970

1980

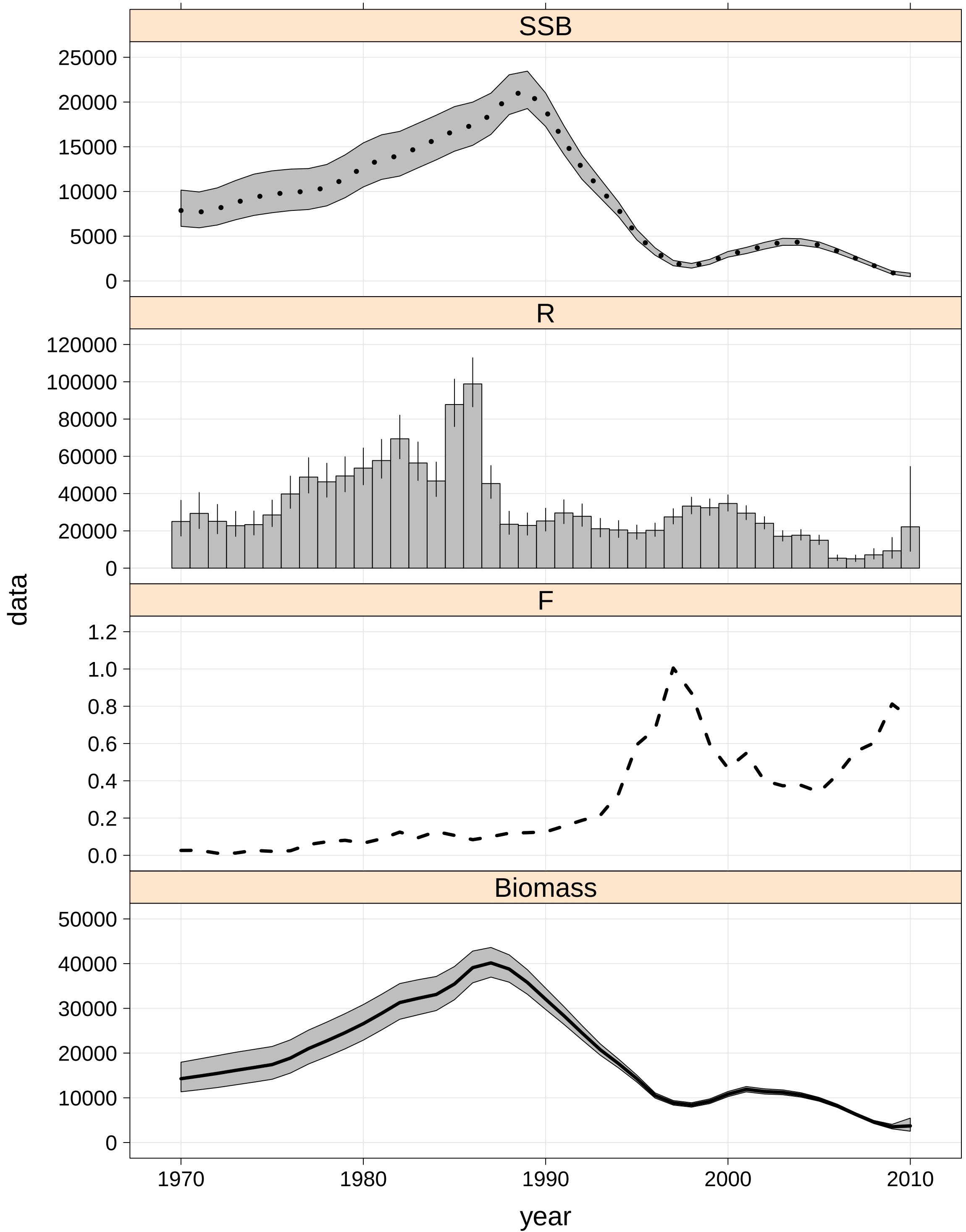
1990

2000

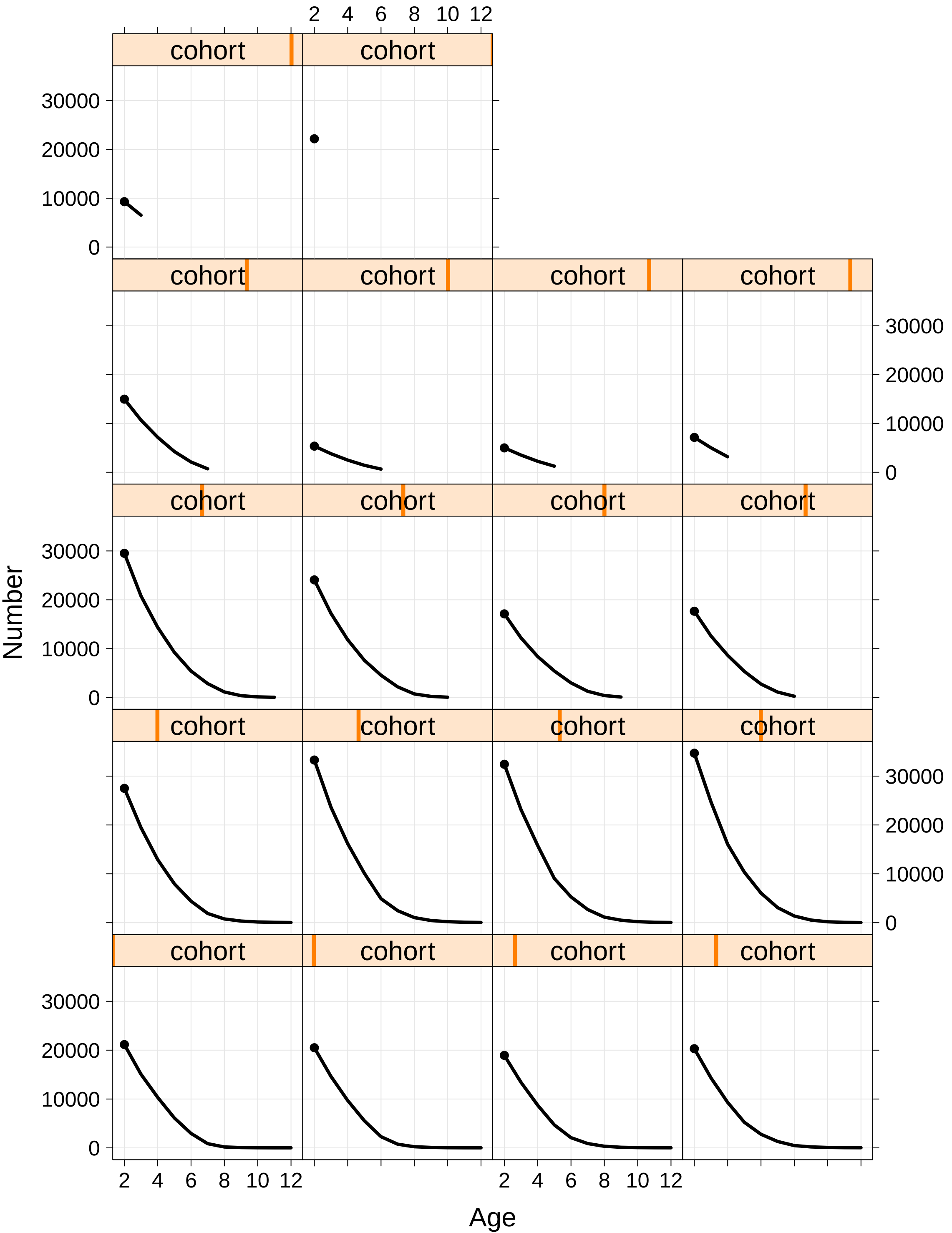
2010

Years

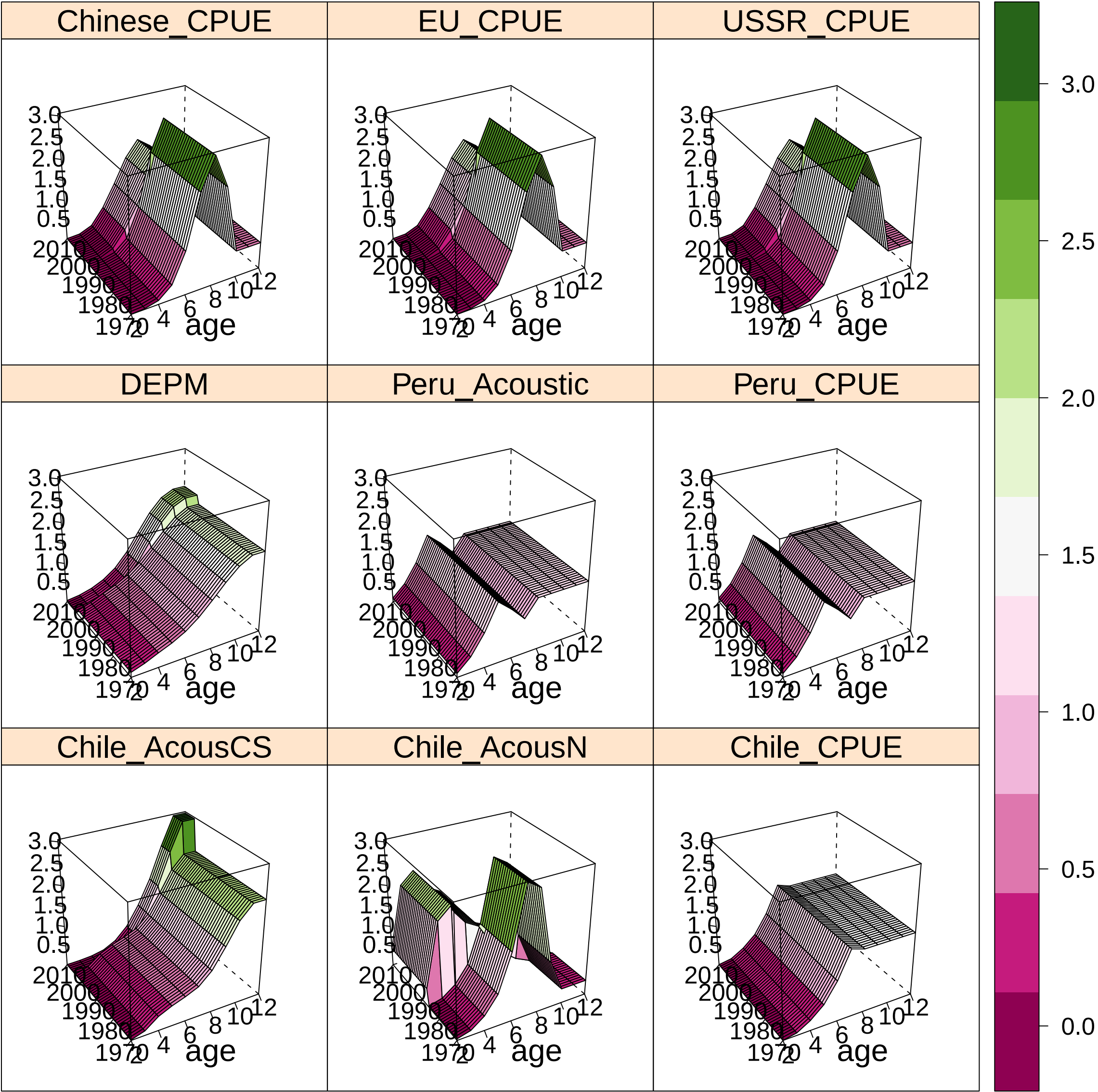
Summary sheet



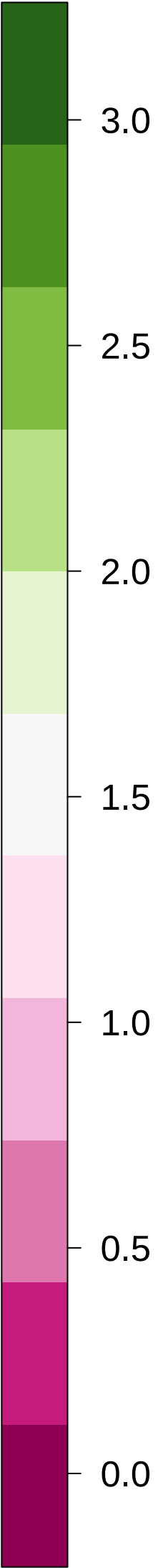
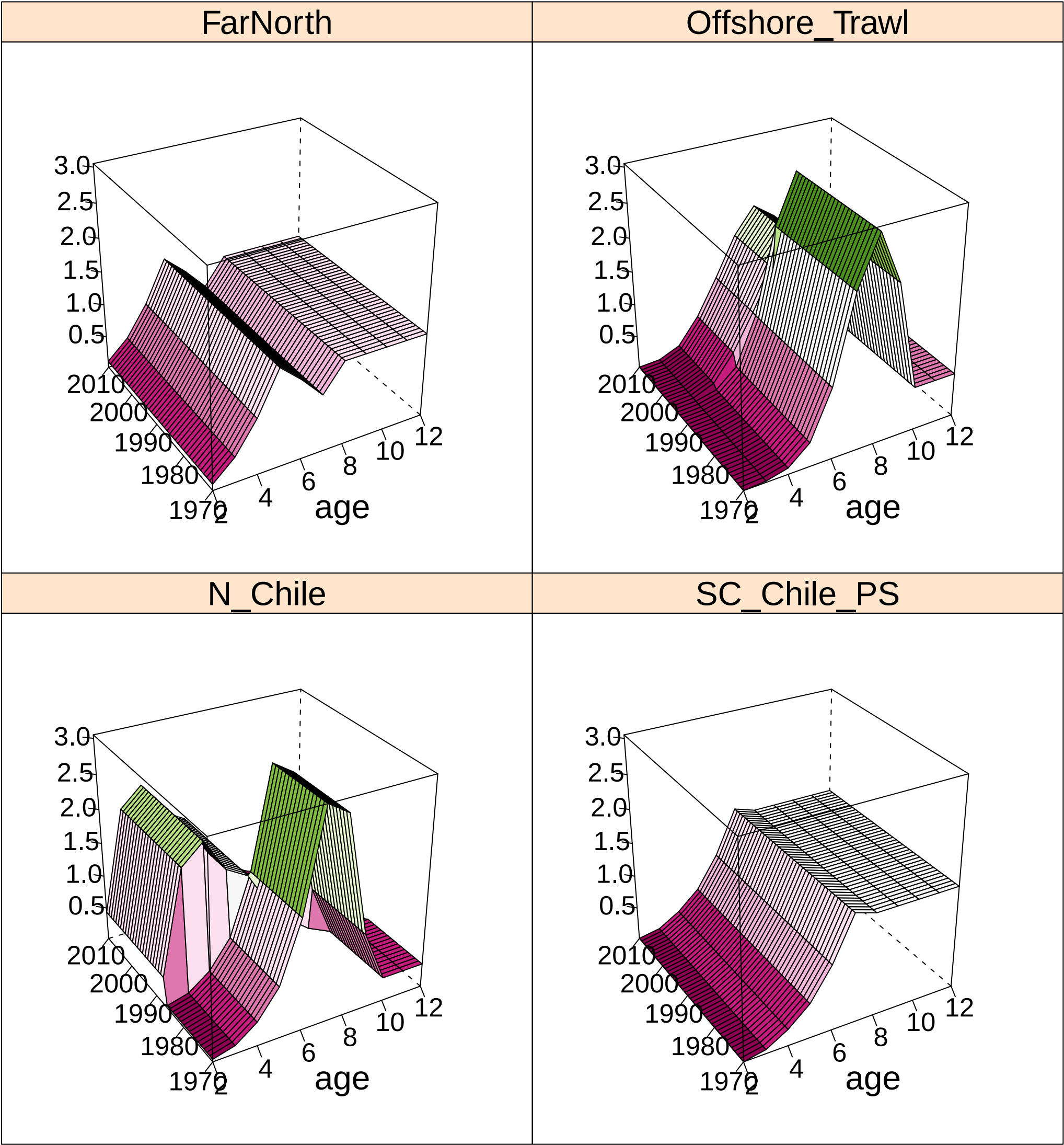
Cohort at age in year (1991 – 2010)



Selectivity at age in surveys

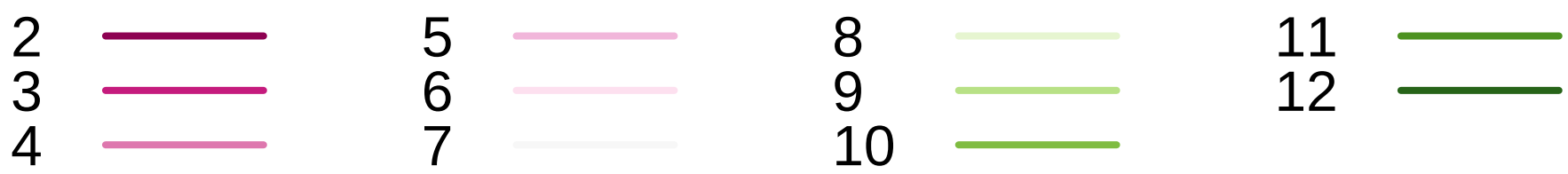


Selectivity at age in fleets



Weight at age in the fishery

Ages



1970 1980 1990 2000 2010

FarNorth

Offshore_Trawl

Weight

N_Chile

SC_Chile_PS

2.0
1.5
1.0
0.5
0.0

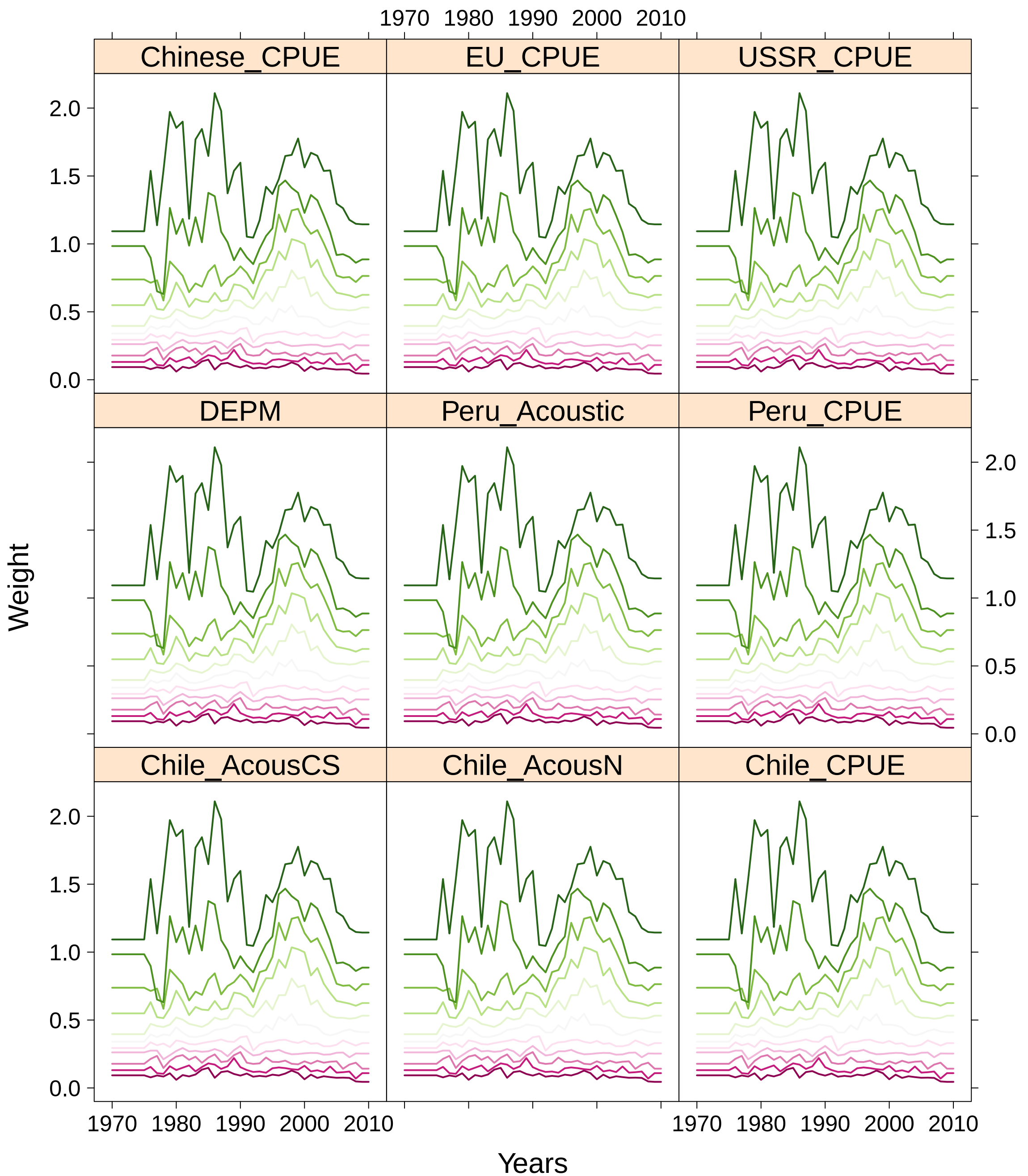
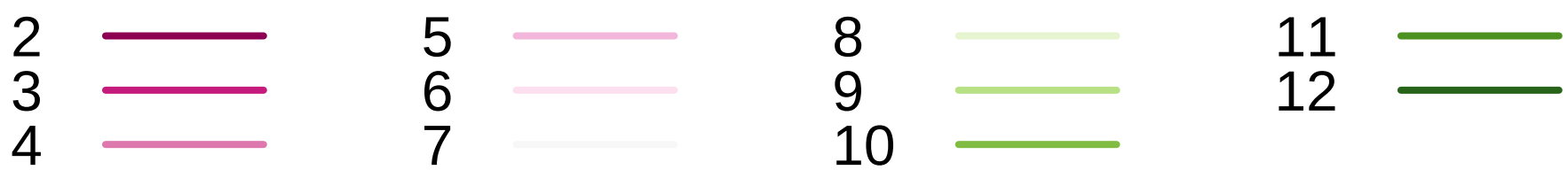
2.0
1.5
1.0
0.5
0.0

1970 1980 1990 2000 2010

Years

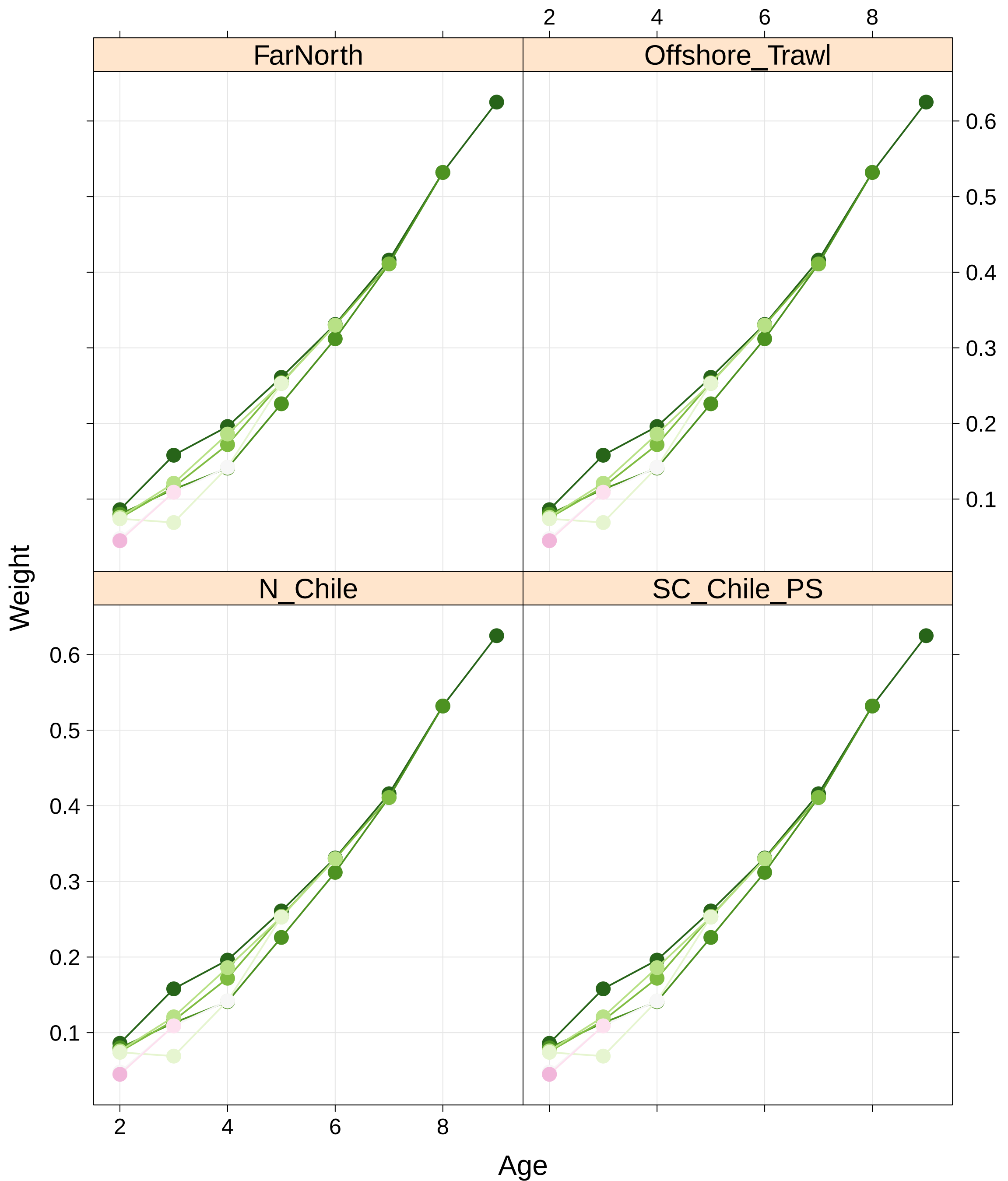
Weight at age in the survey

Ages



Weight at age by cohort in the fleet

Cohort



Weight at age by cohort in the survey

Cohort

