

Catch residuals by fleet

-0.05

-0.03

-0.02

0

0.02

0.04

Offshore_Trawl

FarNorth

SC_Chile_PS

N_Chile

Residuals

1970

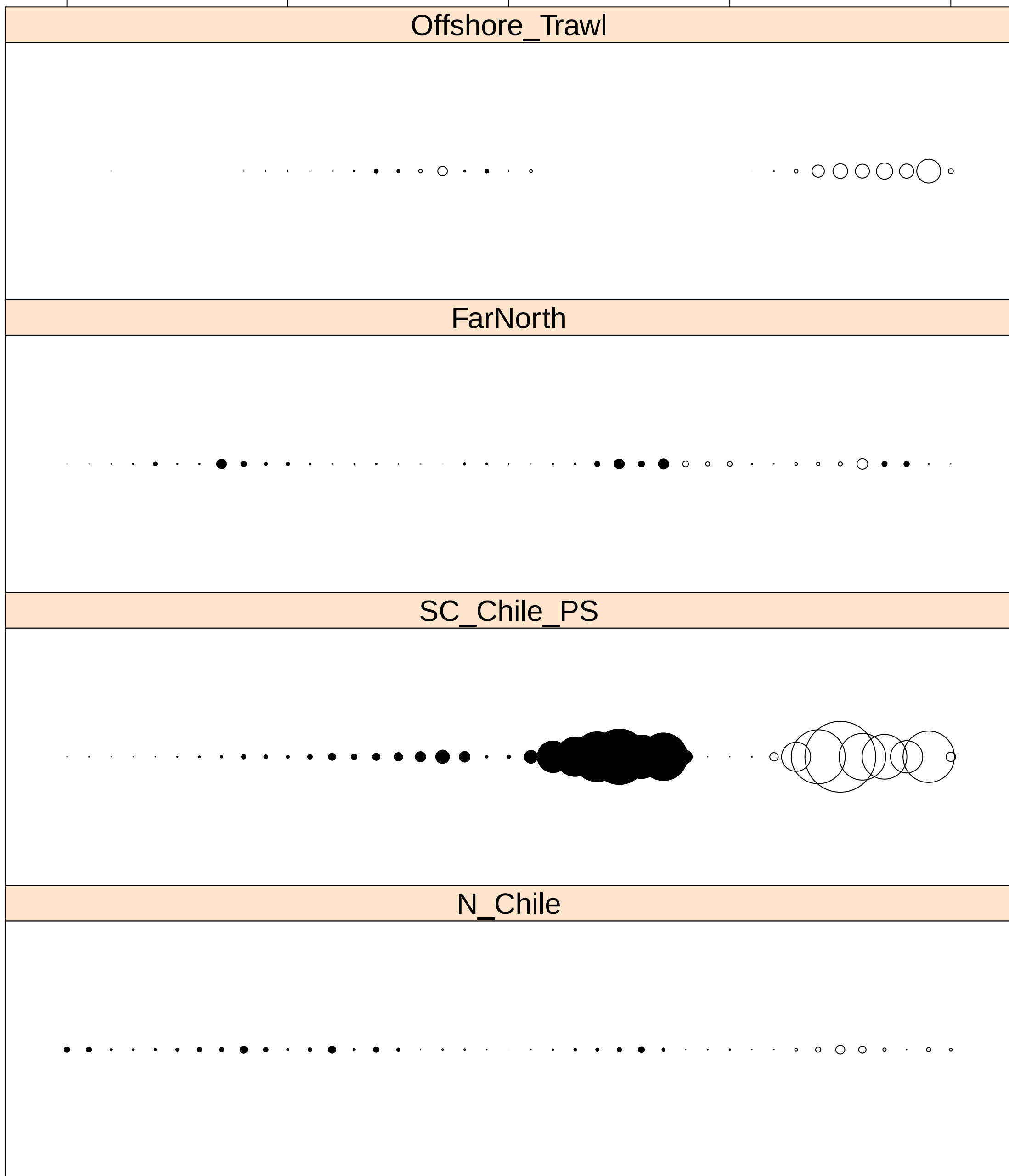
1980

1990

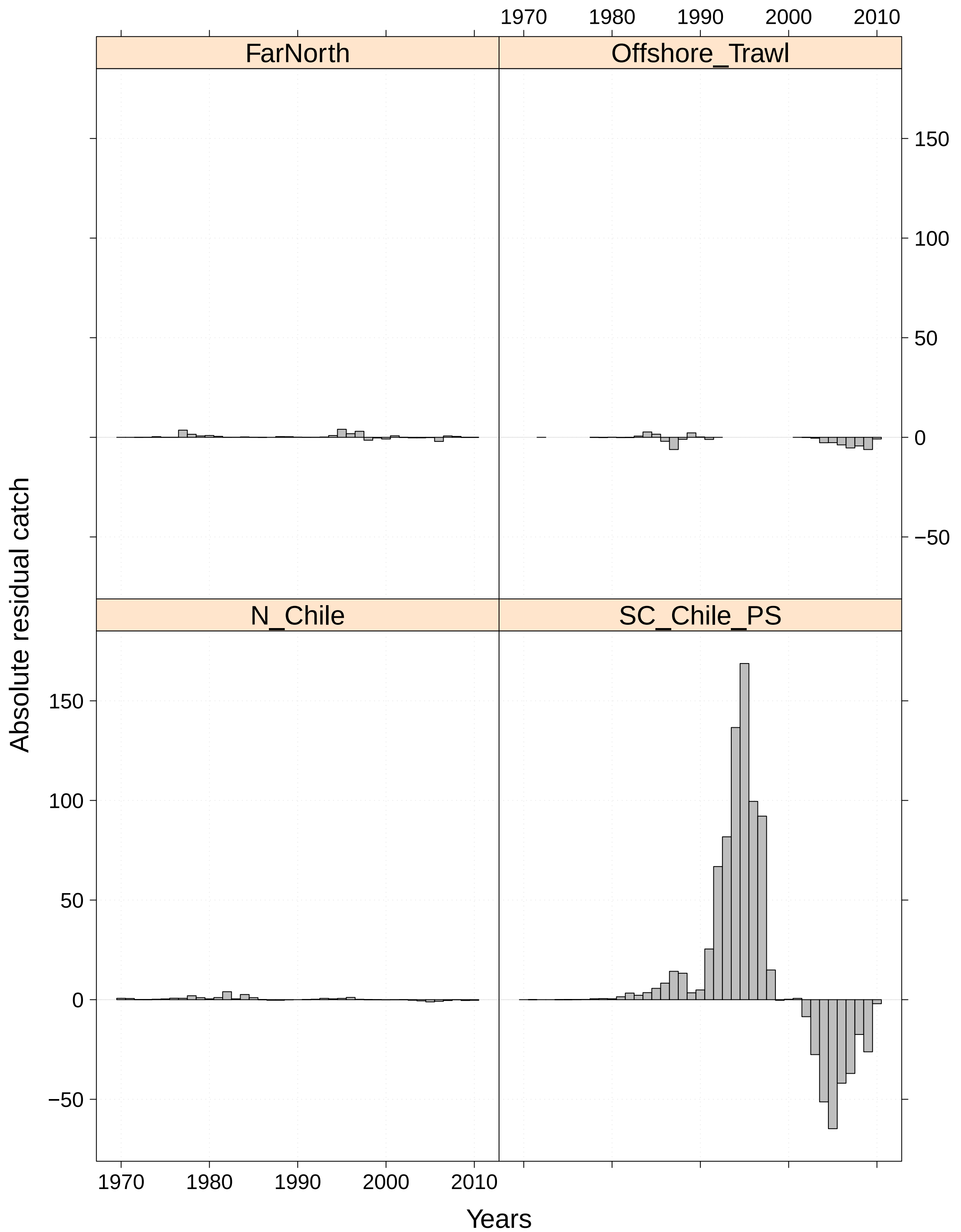
2000

2010

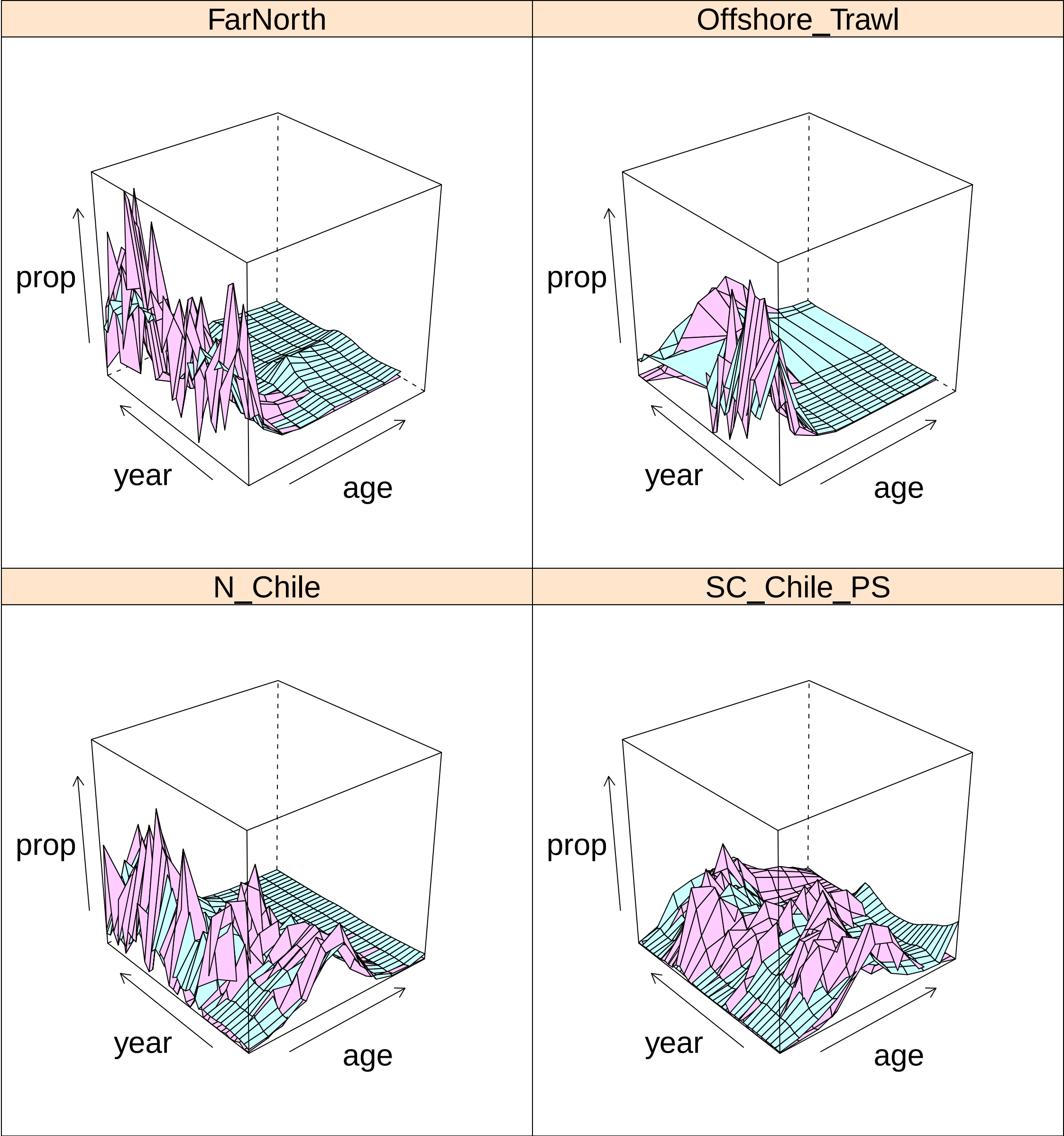
Years



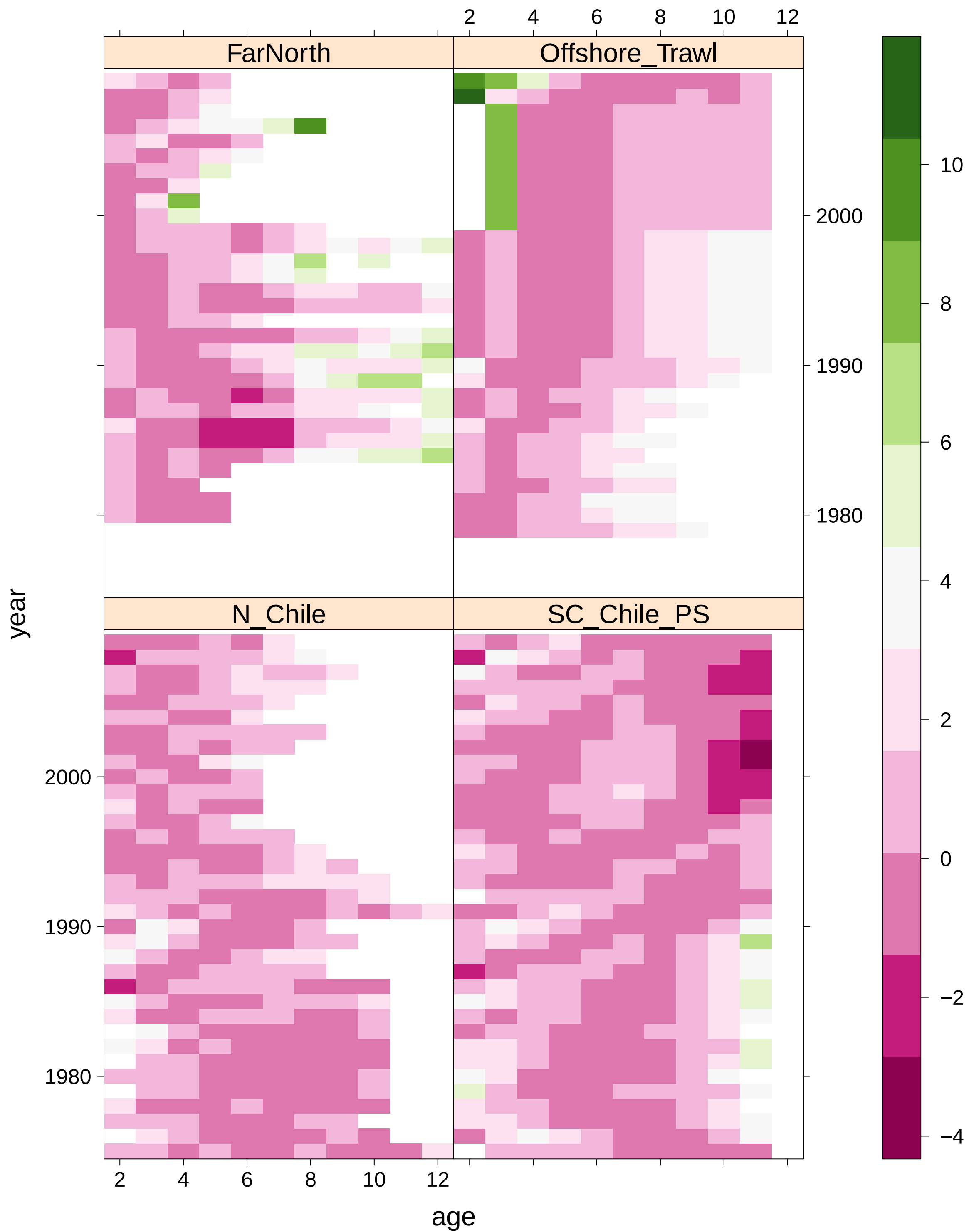
Absolute residual catch by fleet



Proportions at age in the catch

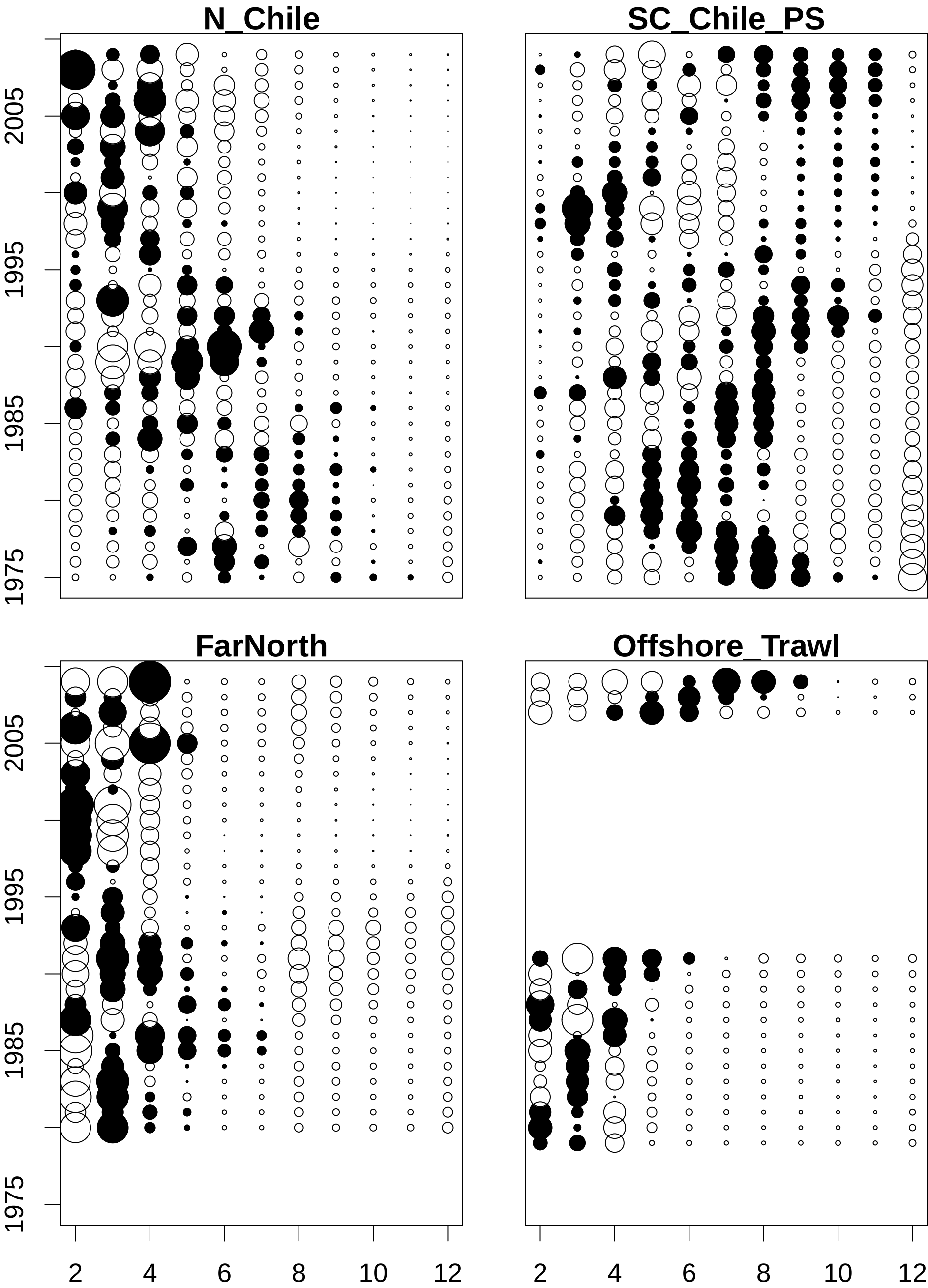


Ratio modelled vs. observed prop. age in the catch



Residual catch at age by fleet

Years



Ages

Age fits N_Chile

Observed

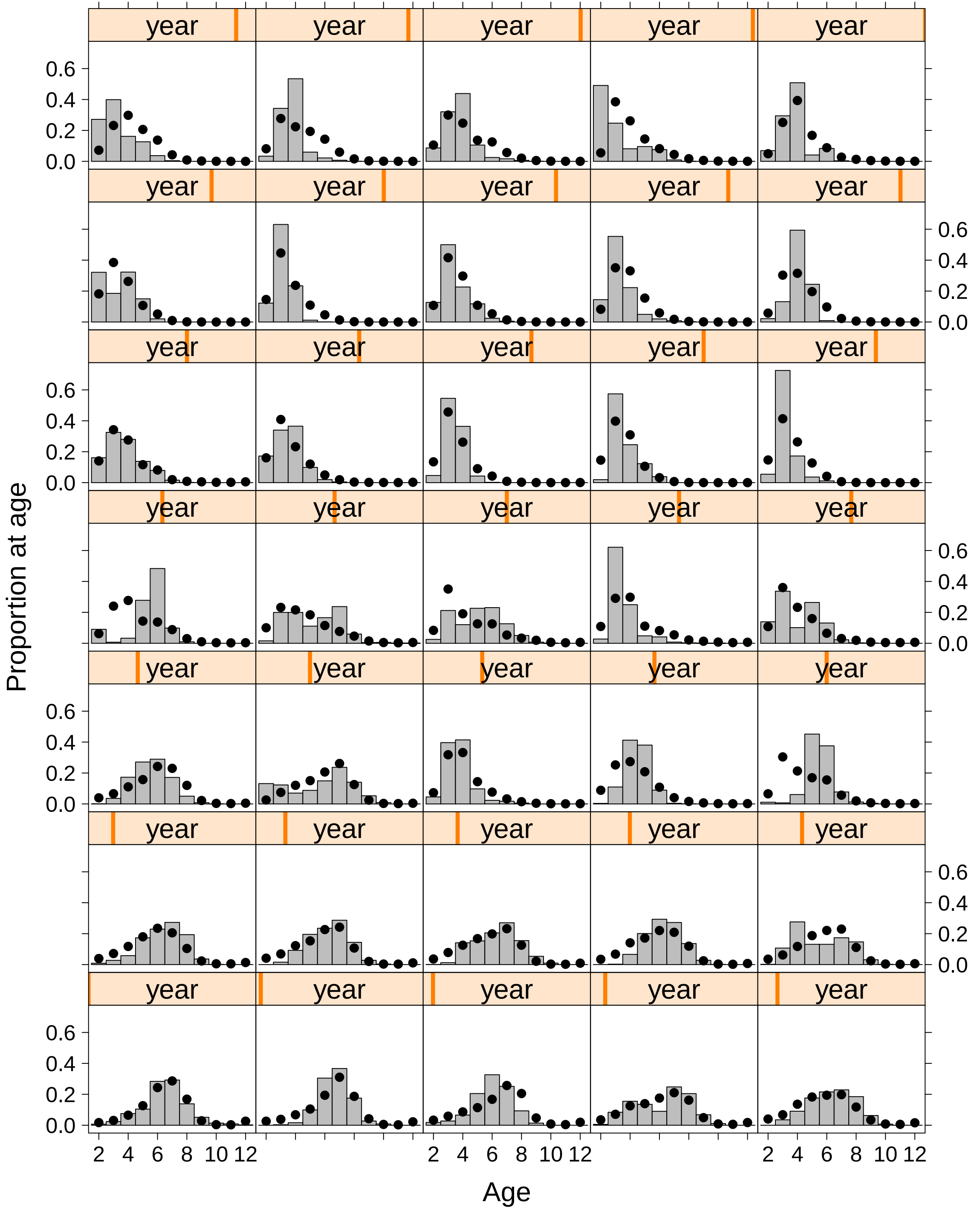


Predicted



2 4 6 8 10 12

2 4 6 8 10 12



Age fits SC_Chile_PS

Observed



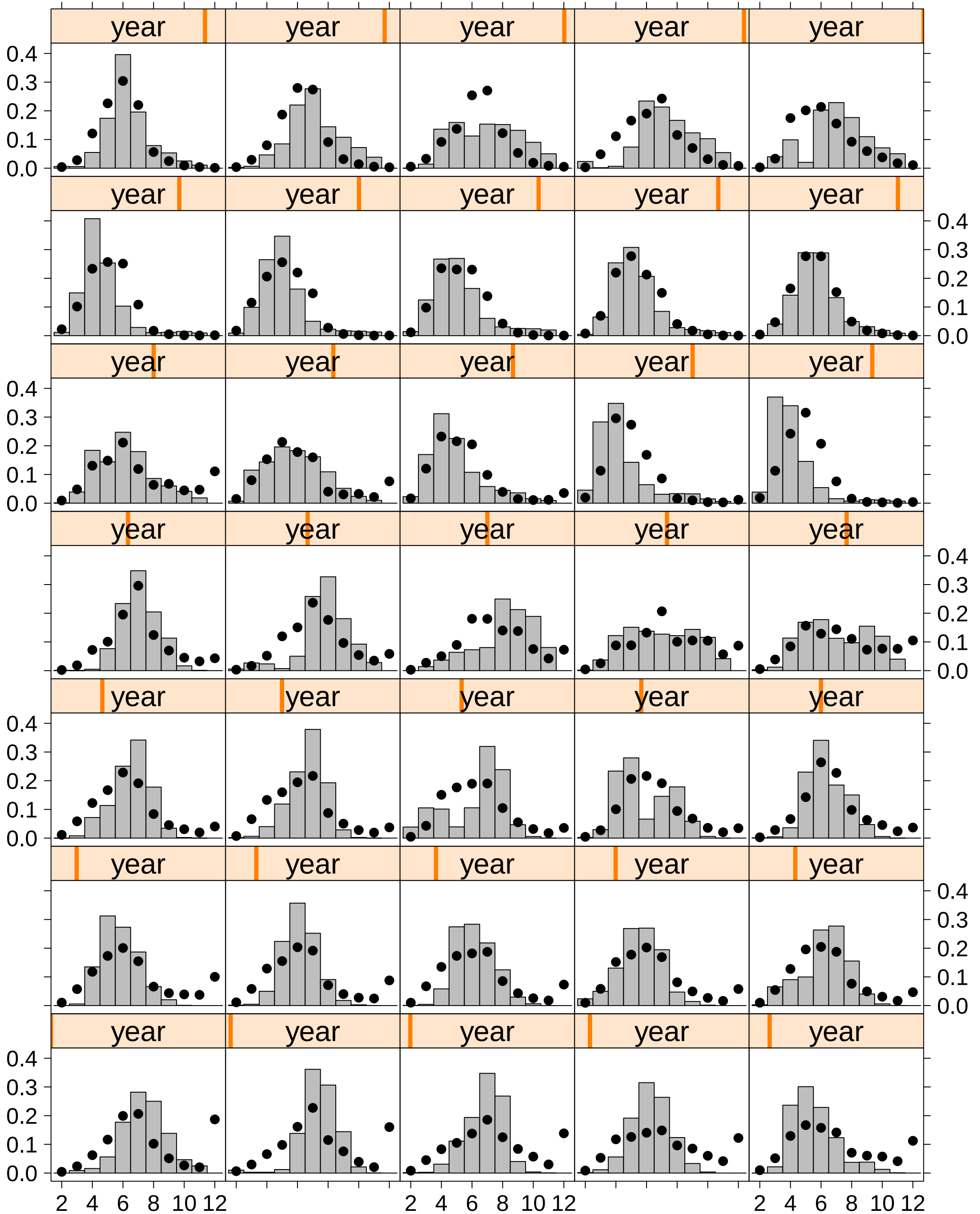
Predicted



2 4 6 8 10 12

2 4 6 8 10 12

Proportion at age



Age

Age fits FarNorth

Observed



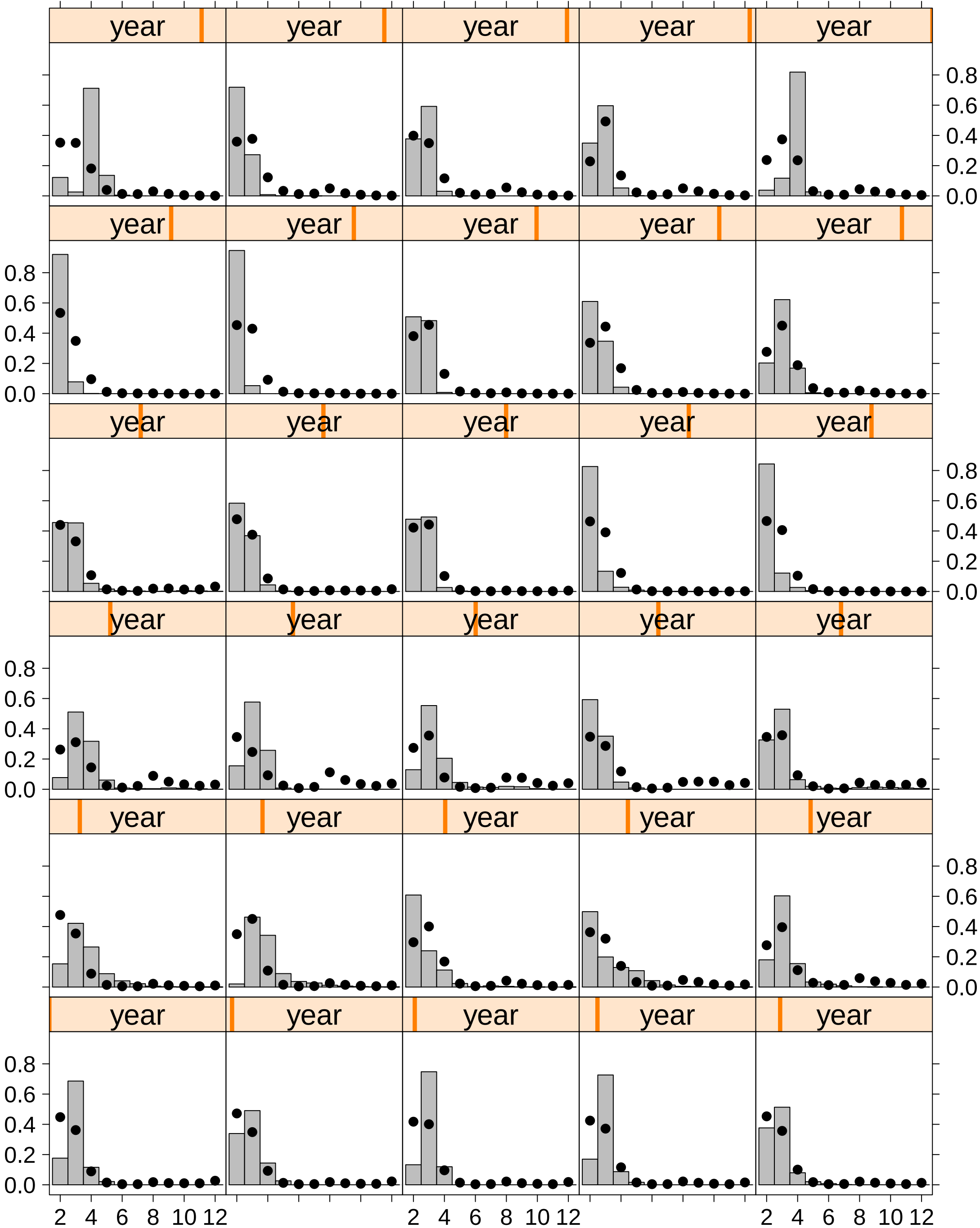
Predicted



2 4 6 8 10 12

2 4 6 8 10 12

Proportion at age

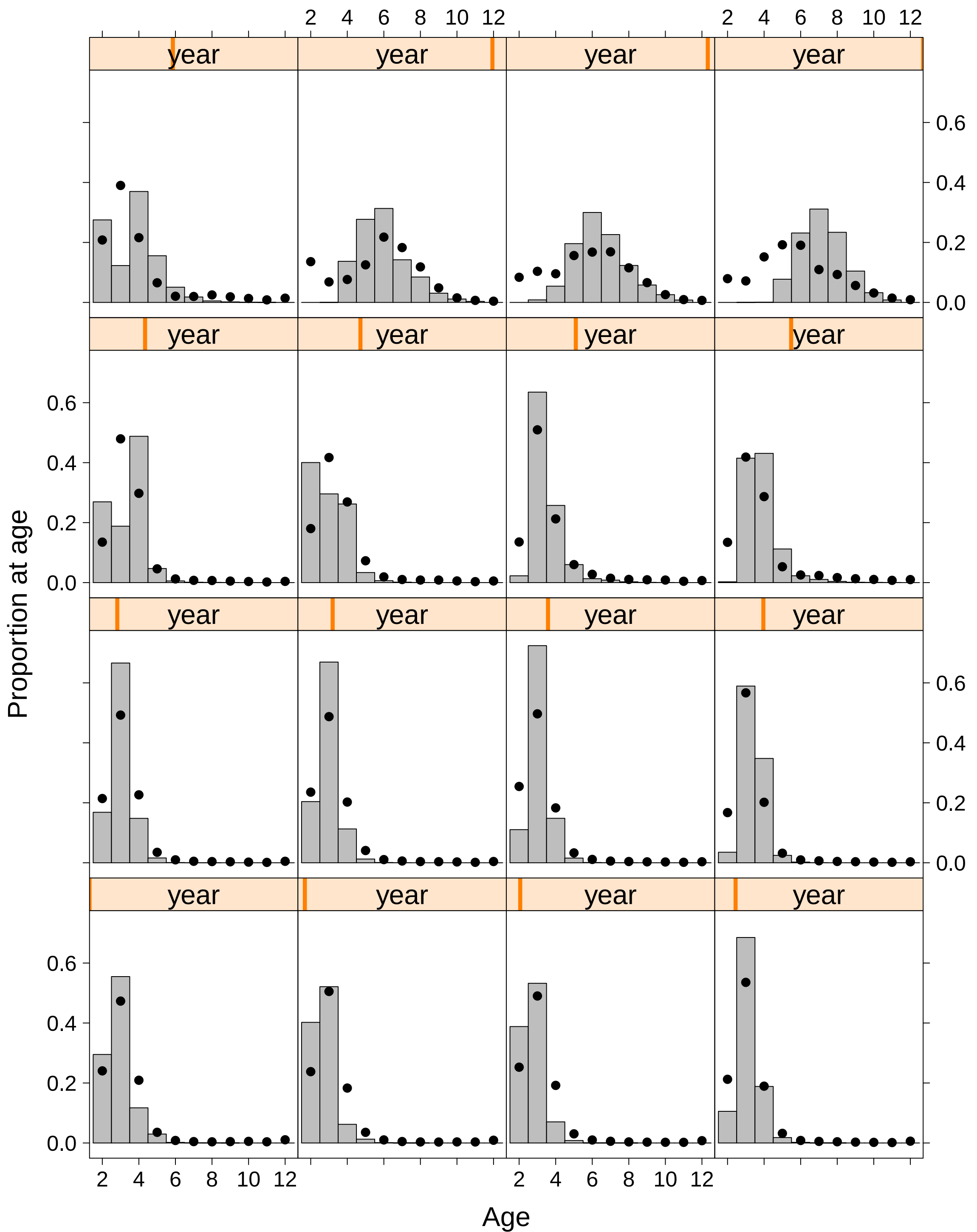


Age fits Offshore_Trawl

Observed



Predicted

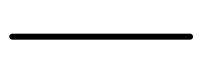


Predicted and observed catches by fleet

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

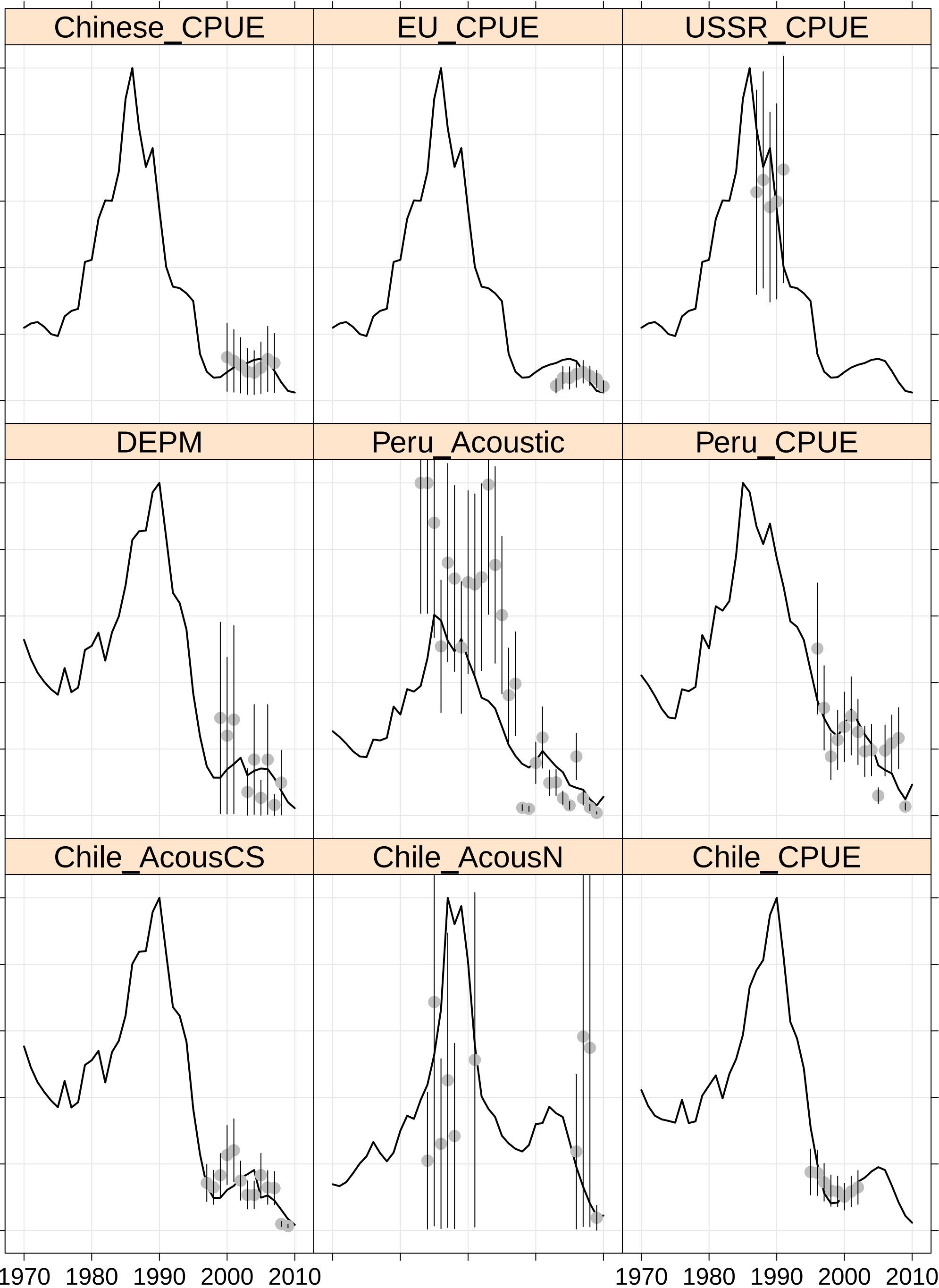
Chile_CPUE

1.0
0.8
0.6
0.4
0.2
0.0

1970 1980 1990 2000 2010

1970 1980 1990 2000 2010

Years

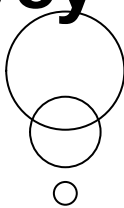


Survey residuals

-1.91

-1.14

-0.37



0.4

1.17

1.94



Residuals

USSR_CPUE



EU_CPUE



Chinese_CPUE



Peru_CPUE



Peru_Acoustic



DEPM



Chile_CPUE



Chile_AcousN



Chile_AcousCS



1970

1980

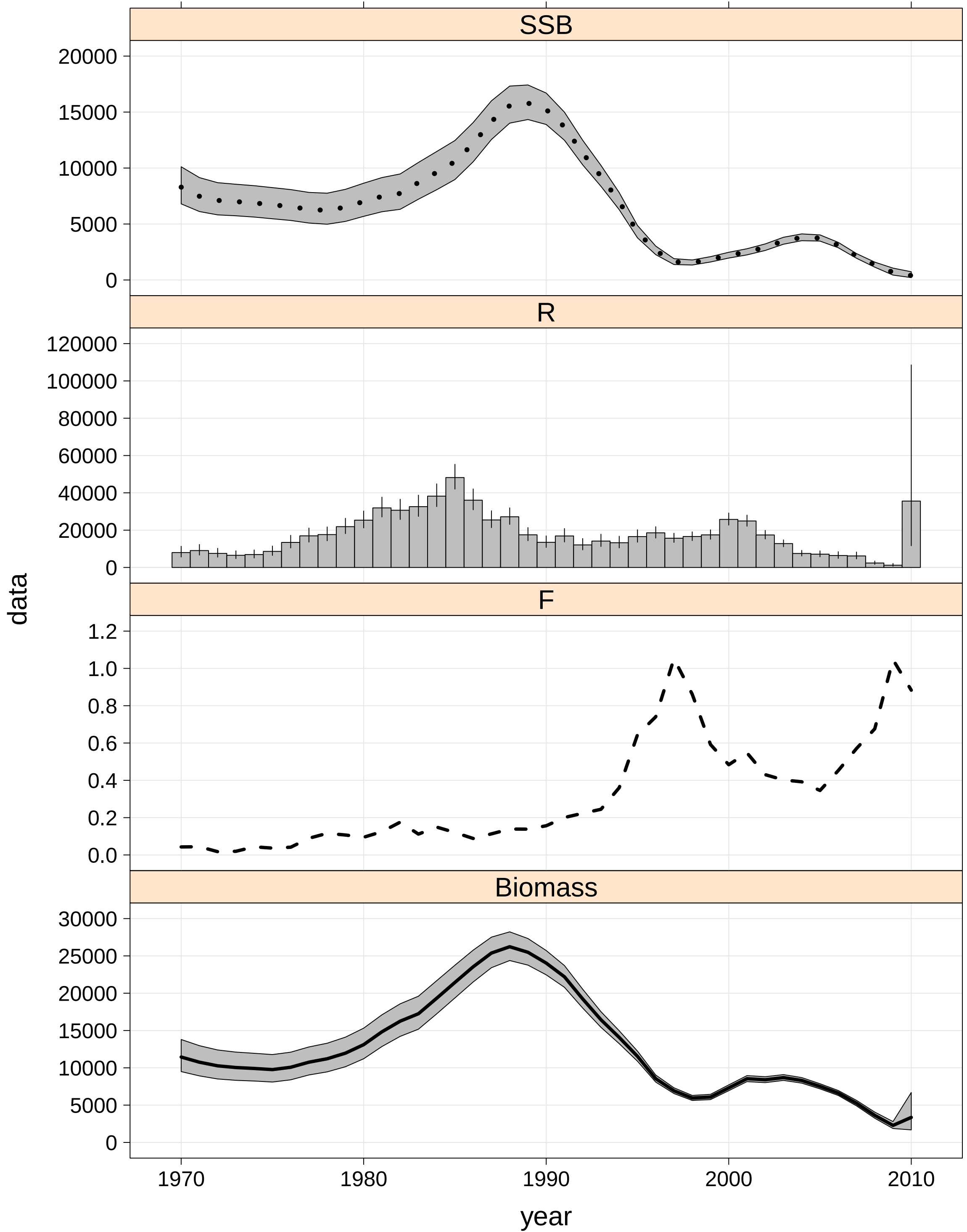
1990

2000

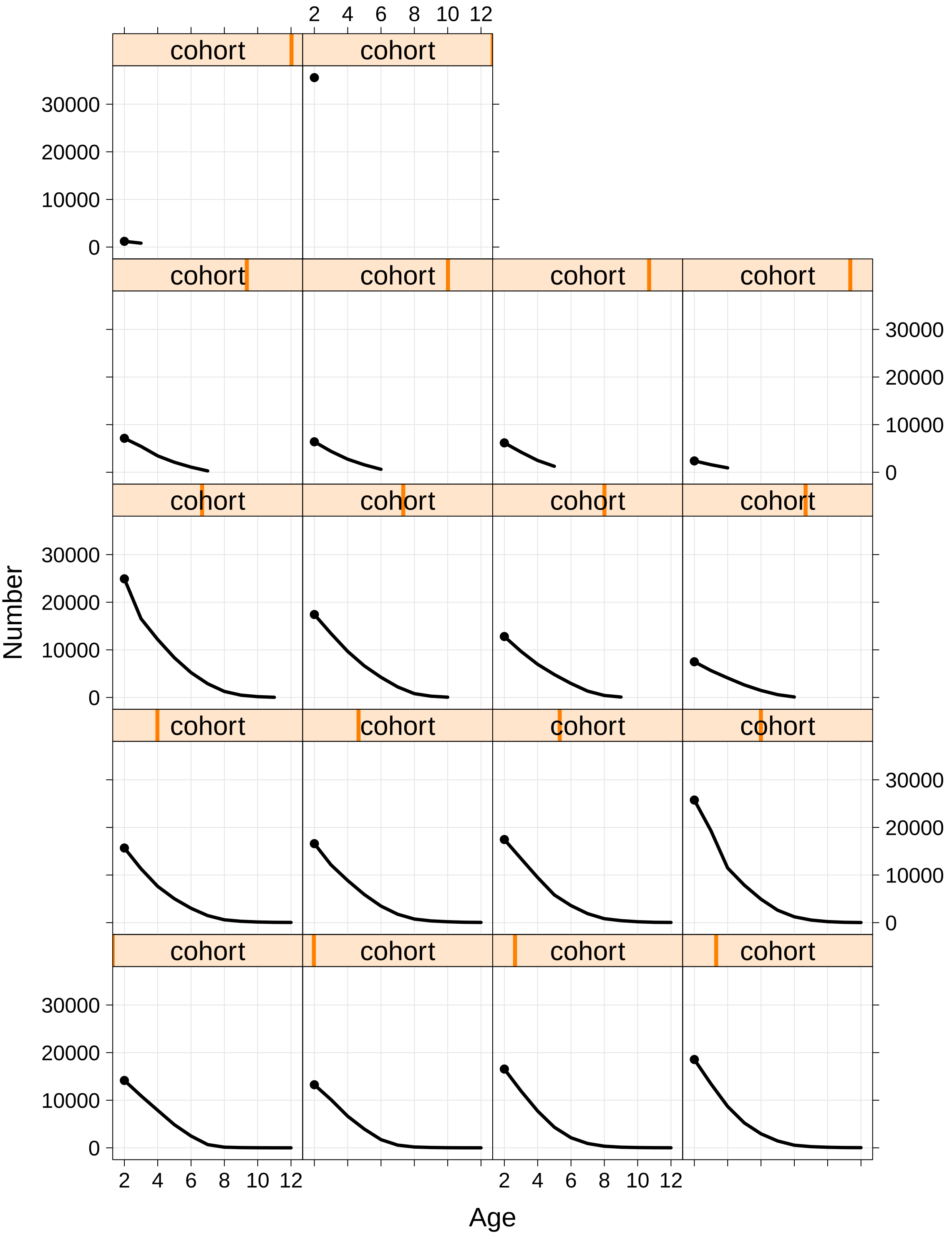
2010

Years

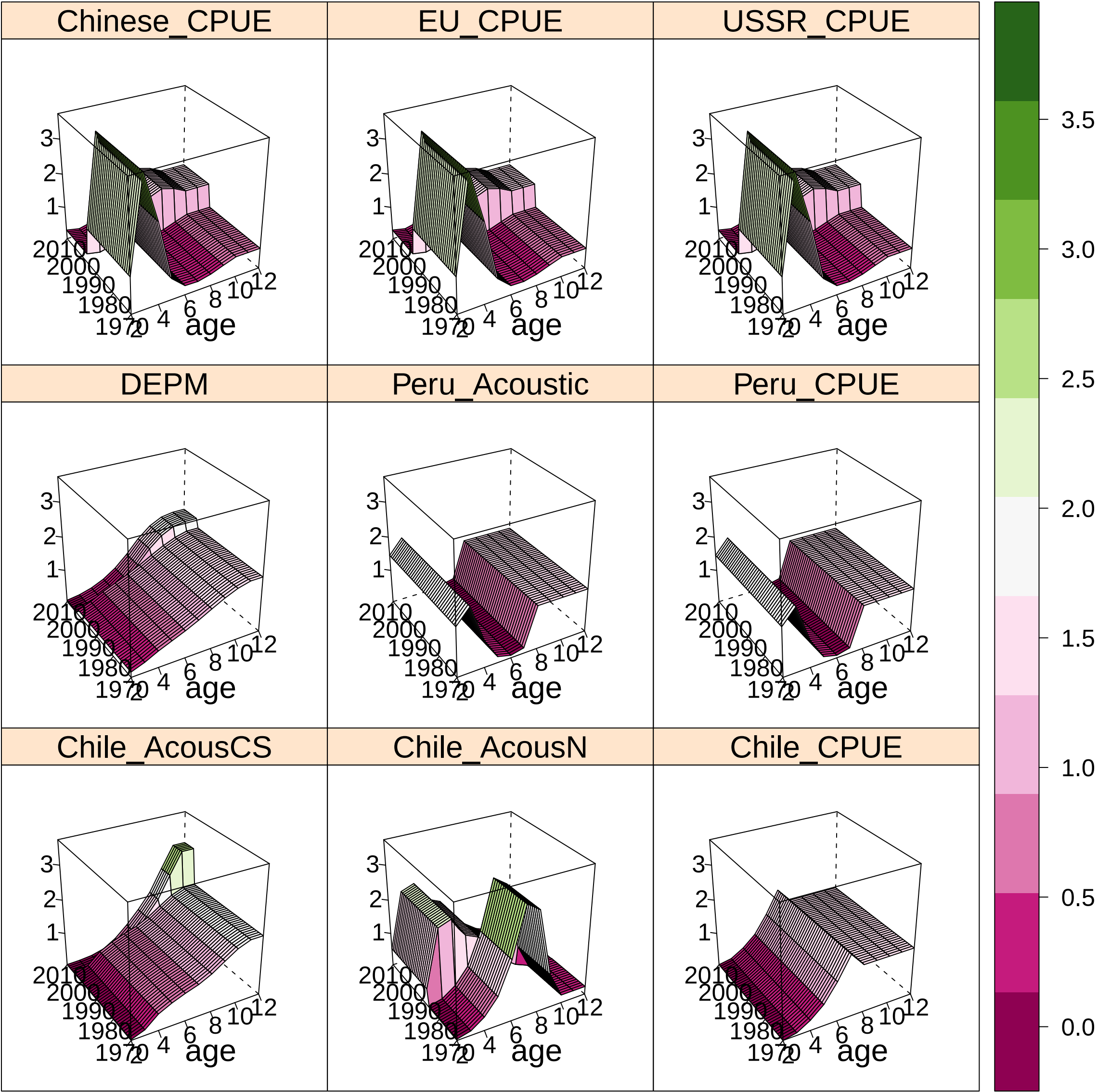
Summary sheet



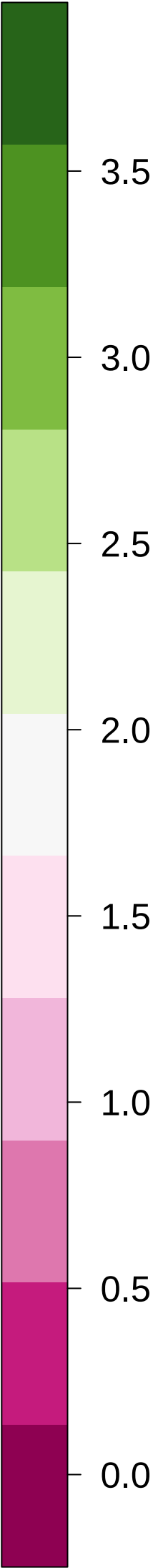
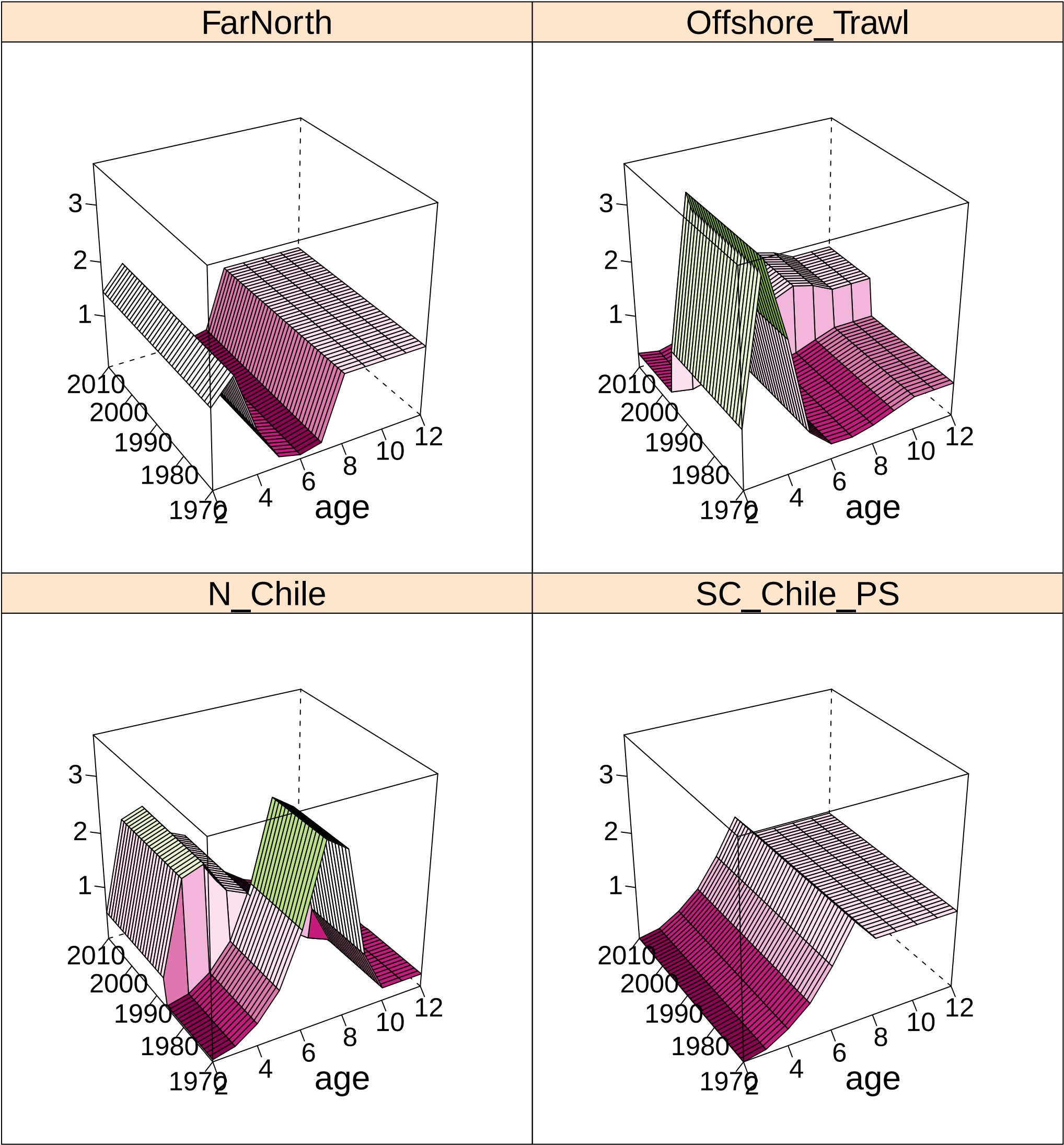
Cohort at age in year (1991 – 2010)



Selectivity at age in surveys

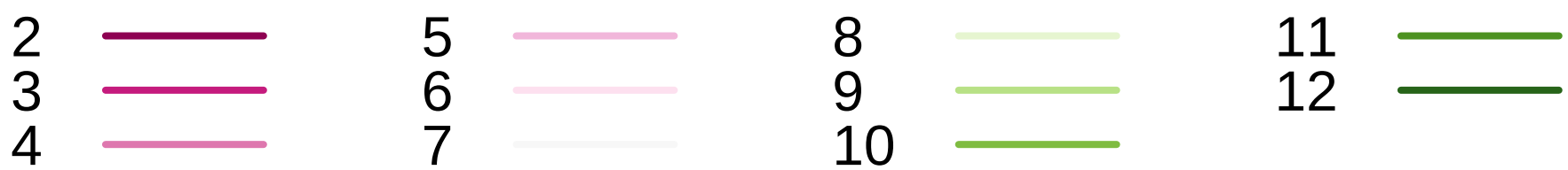


Selectivity at age in fleets



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

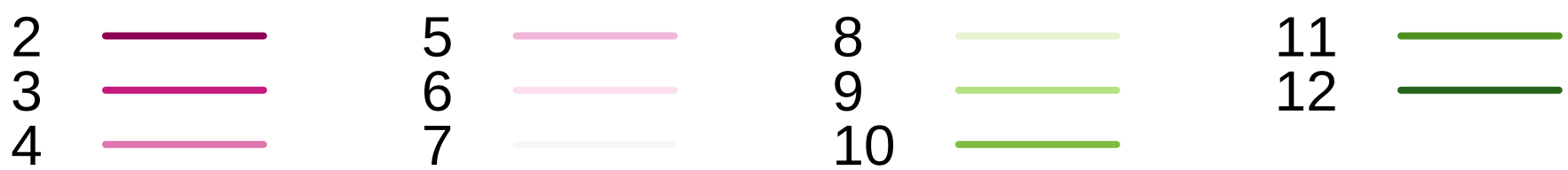
2.0
1.5
1.0
0.5
0.0

1970 1980 1990 2000 2010

Years

Weight at age in the survey

Ages



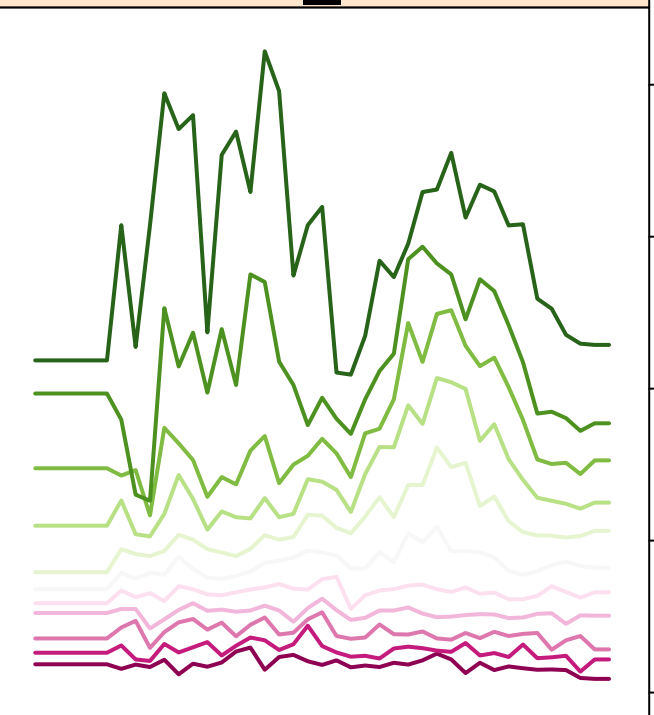
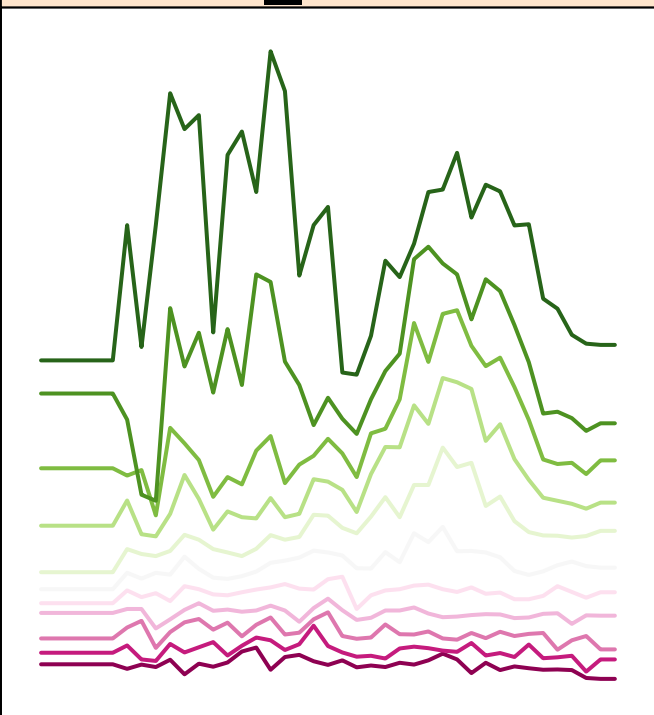
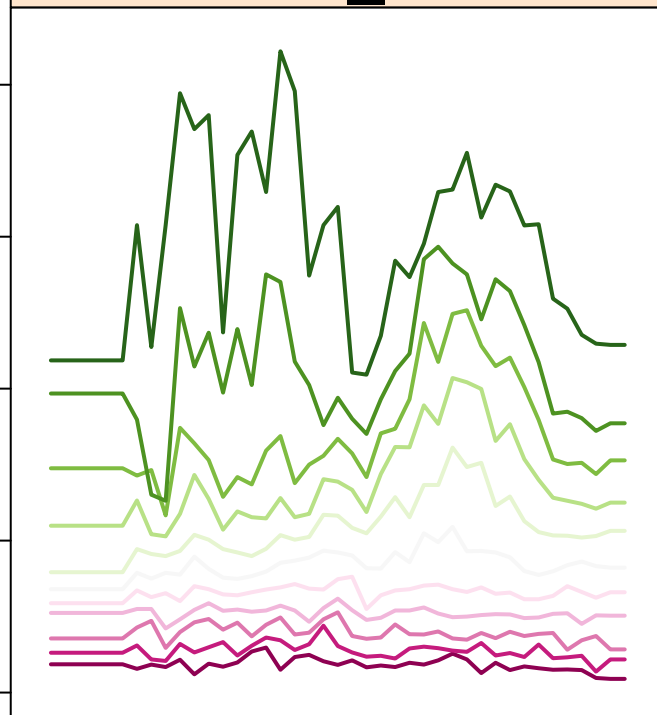
1970 1980 1990 2000 2010

Chinese_CPUE

EU_CPUE

USSR_CPUE

2.0
1.5
1.0
0.5
0.0



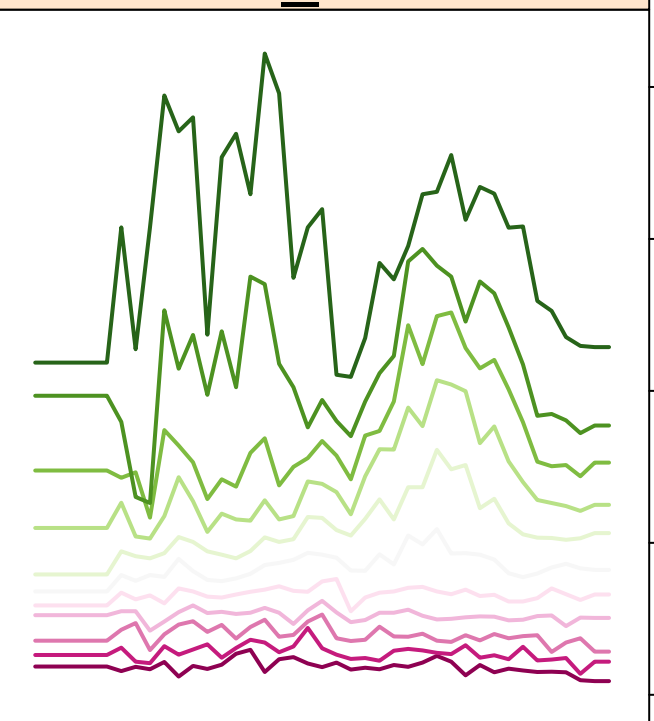
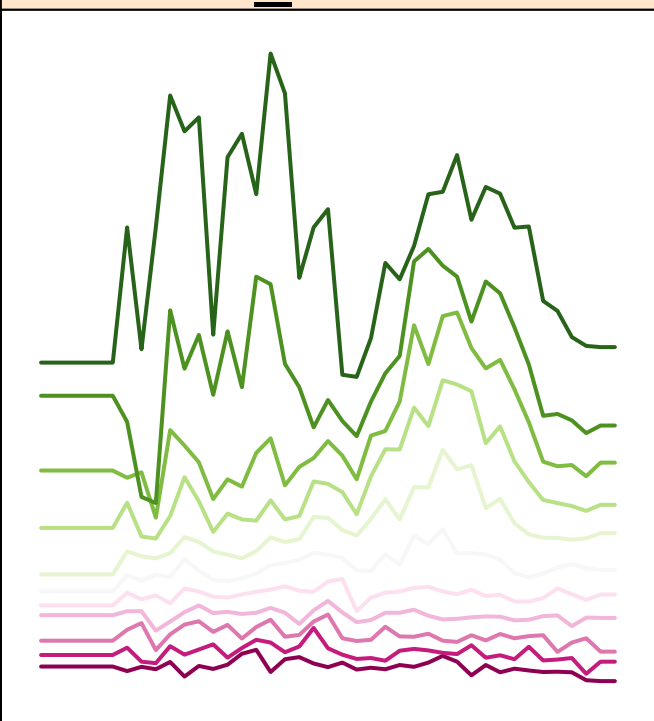
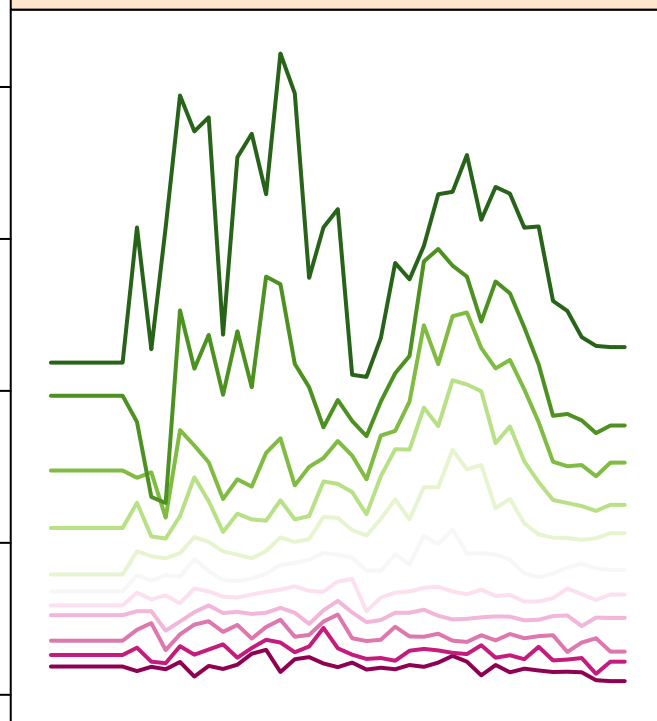
DEPM

Peru_Acoustic

Peru_CPUE

Weight

2.0
1.5
1.0
0.5
0.0



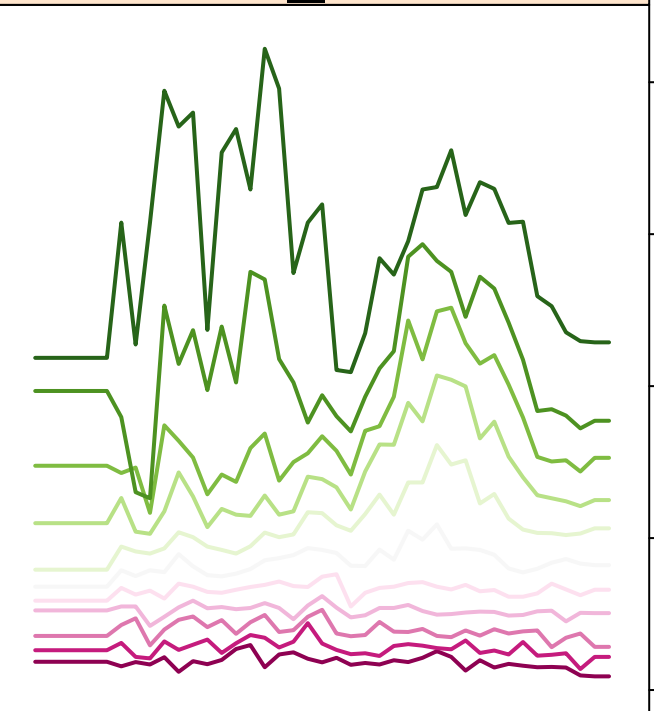
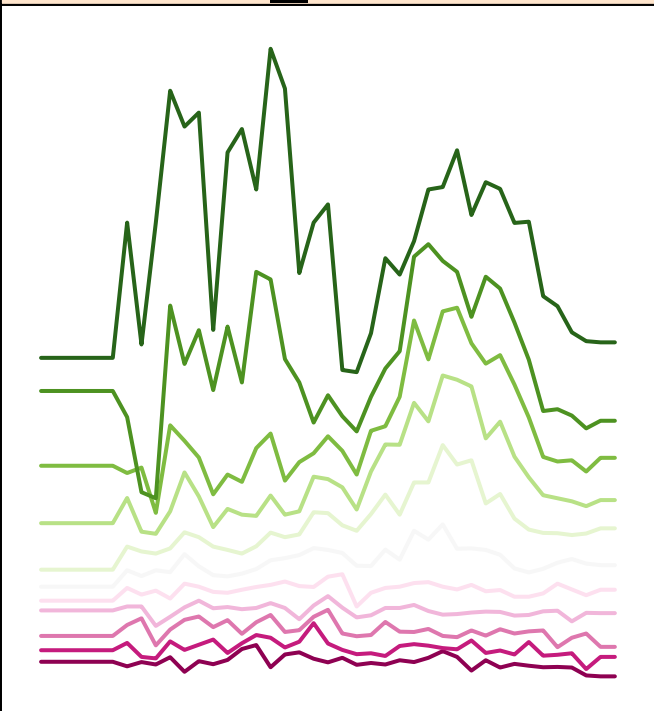
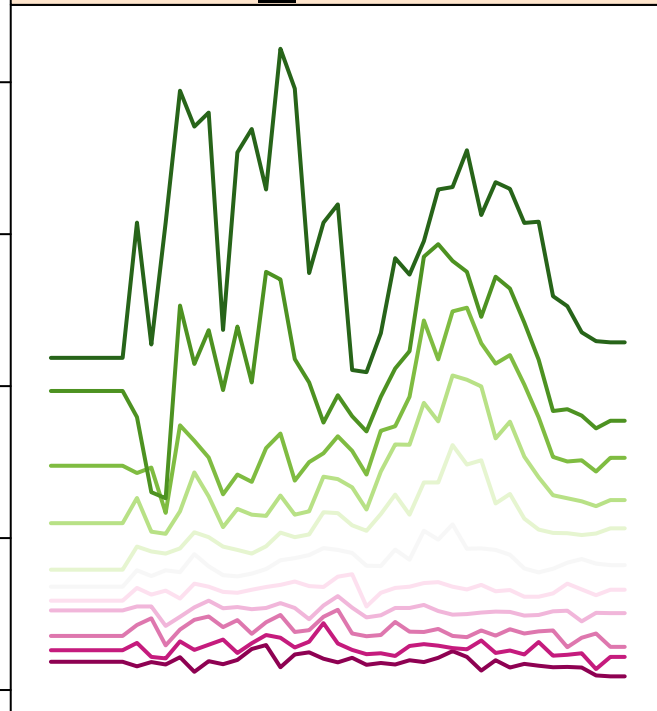
Chile_AcoustCS

Chile_AcoustN

Chile_CPUE

2.0
1.5
1.0
0.5
0.0

2.0
1.5
1.0
0.5
0.0



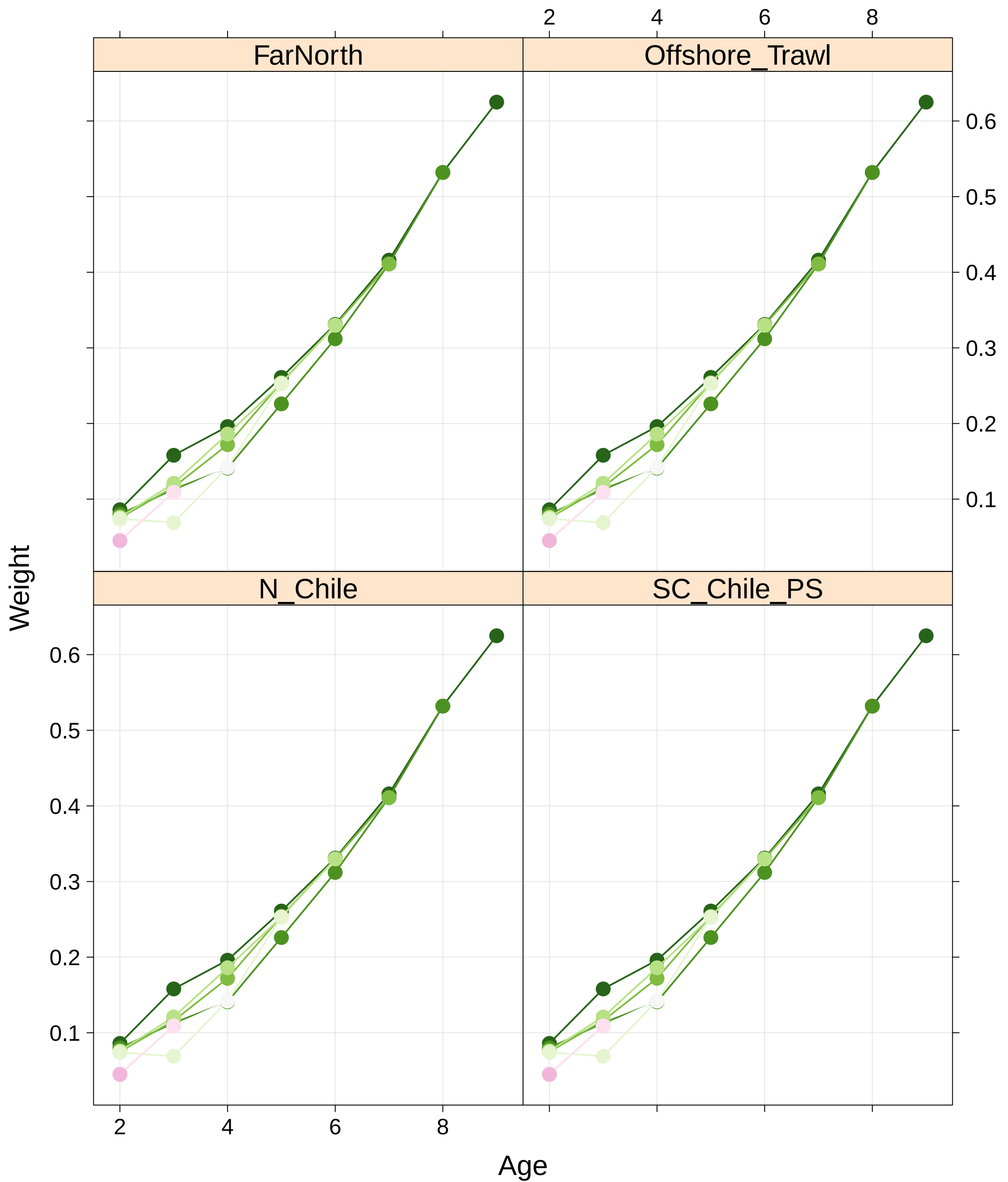
1970 1980 1990 2000 2010

1970 1980 1990 2000 2010

Years

Weight at age by cohort in the fleet

Cohort



Weight at age by cohort in the survey

Cohort

2001
2002

2003
2004

2005
2006

2007
2008

2002

2004

2006

2008

