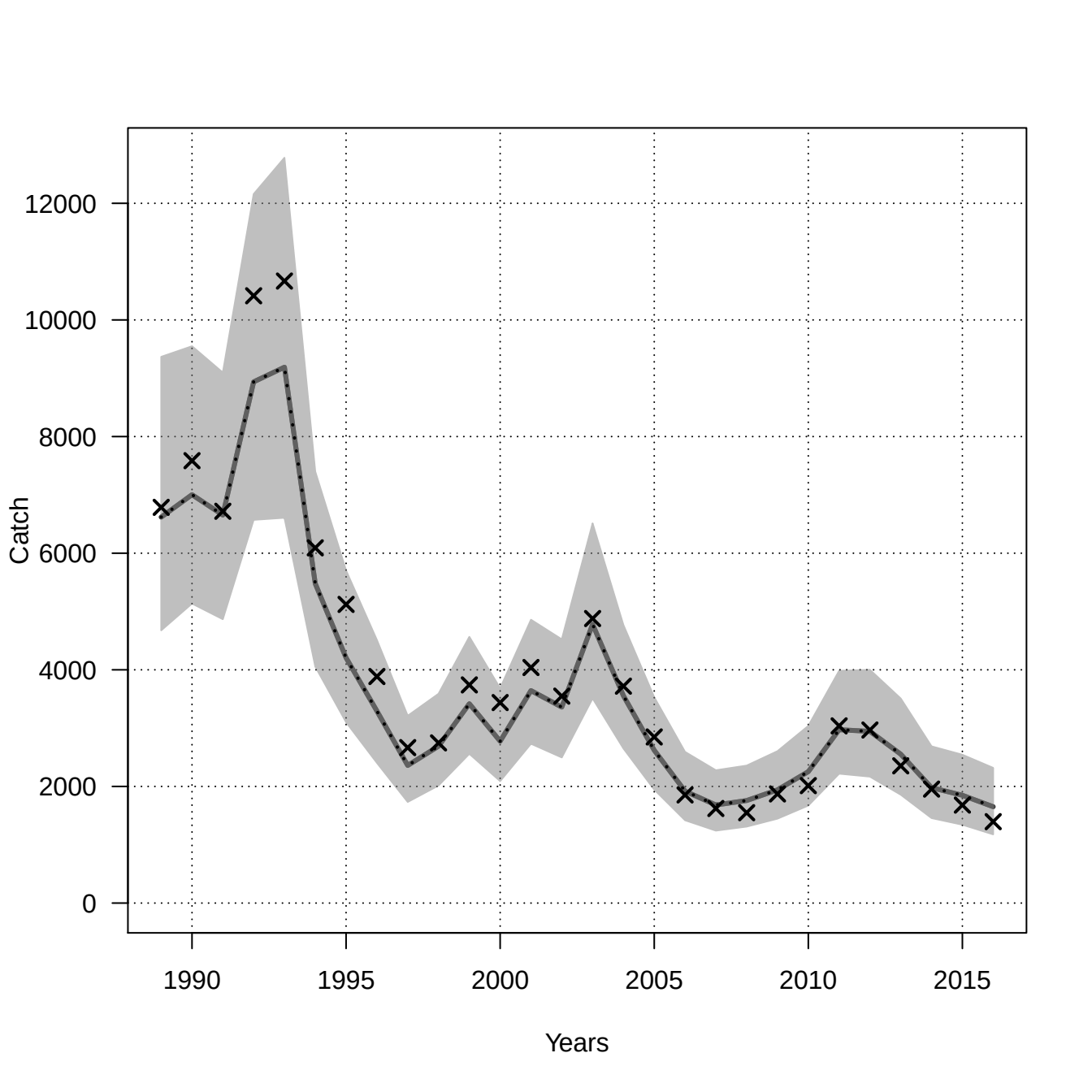
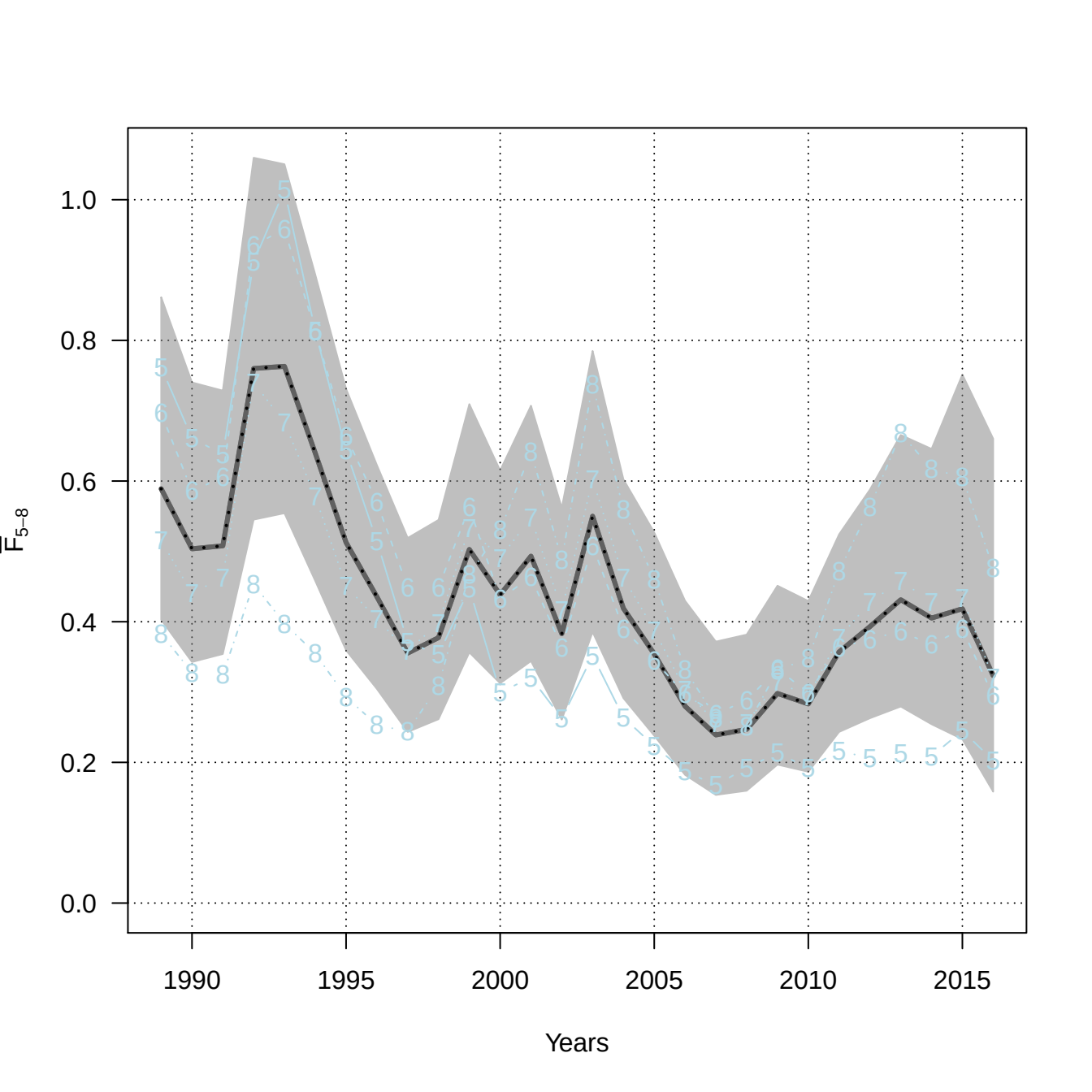
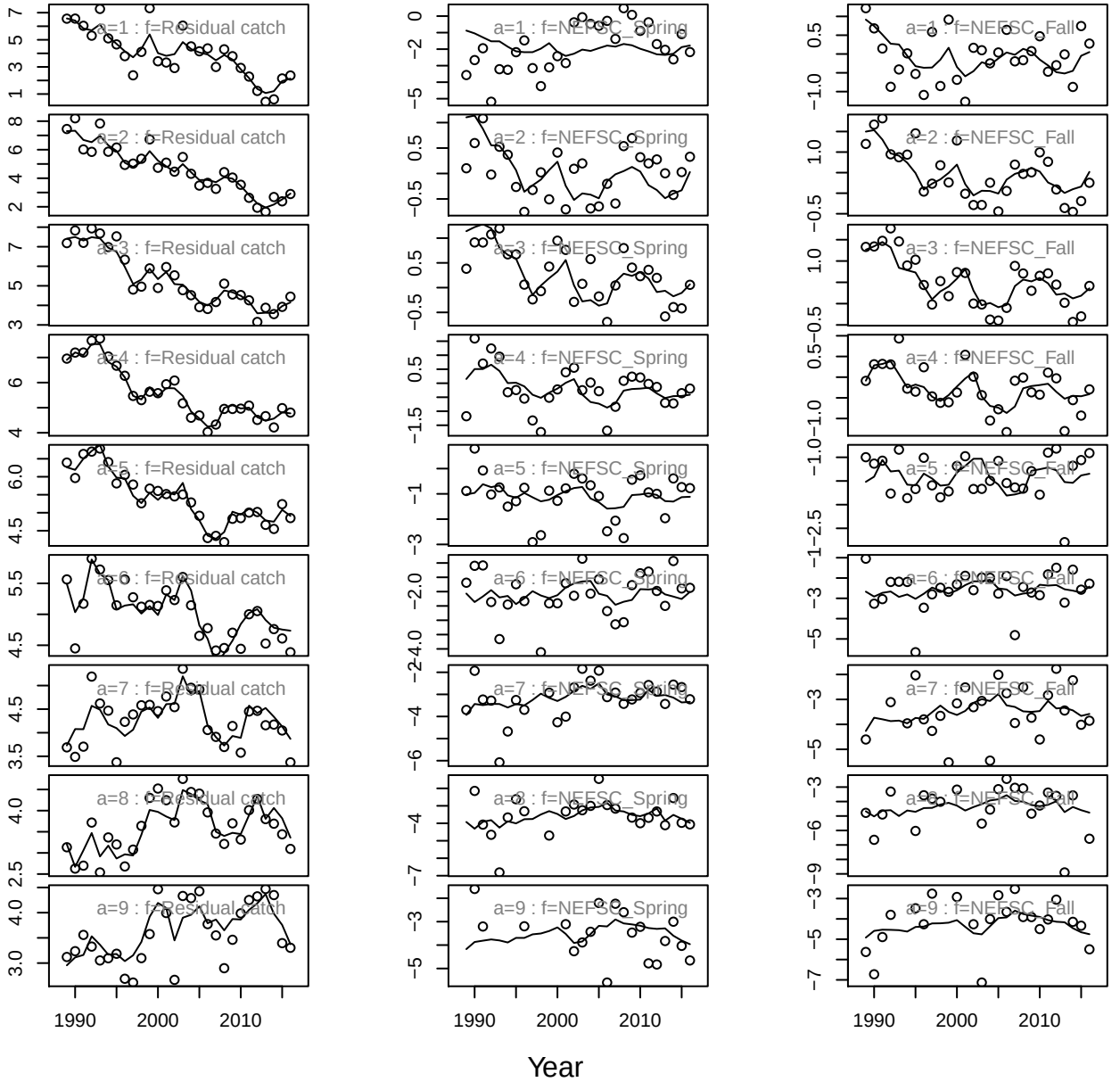
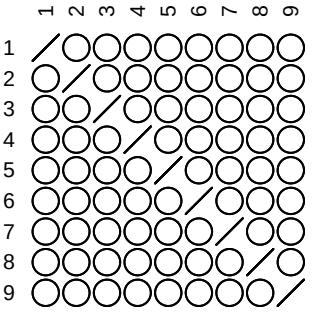

12000
10000
8000
6000
4000
2000
0
Catch
1990
1995
2000
2005
2010
2015
Years

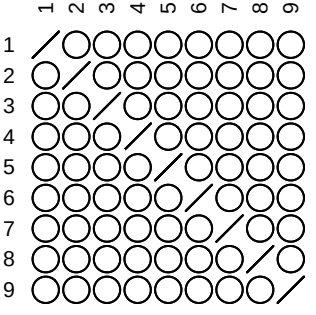

1.0
0.8
0.6
0.4
0.2
0.0
$\bar{F}_{5-8}$
1990
1995
2000
2005
2010
2015
Years


a=1 : f=Residual catch
a=2 : f=Residual catch
a=3 : f=Residual catch
a=4 : f=Residual catch
a=5 : f=Residual catch
a=6 : f=Residual catch
a=7 : f=Residual catch
a=8 : f=Residual catch
a=9 : f=Residual catch
a=1 : f=NEFSC_Spring
a=2 : f=NEFSC_Spring
a=3 : f=NEFSC_Spring
a=4 : f=NEFSC_Spring
a=5 : f=NEFSC_Spring
a=6 : f=NEFSC_Spring
a=7 : f=NEFSC_Spring
a=8 : f=NEFSC_Spring
a=9 : f=NEFSC_Spring
a=1 : f=NEFSC_Fall
a=2 : f=NEFSC_Fall
a=3 : f=NEFSC_Fall
a=4 : f=NEFSC_Fall
a=5 : f=NEFSC_Fall
a=6 : f=NEFSC_Fall
a=7 : f=NEFSC_Fall
a=8 : f=NEFSC_Fall
a=9 : f=NEFSC_Fall
1990
2000
2010
Year

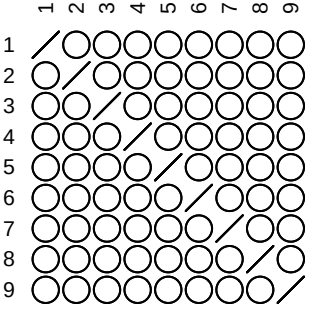
Residual catch

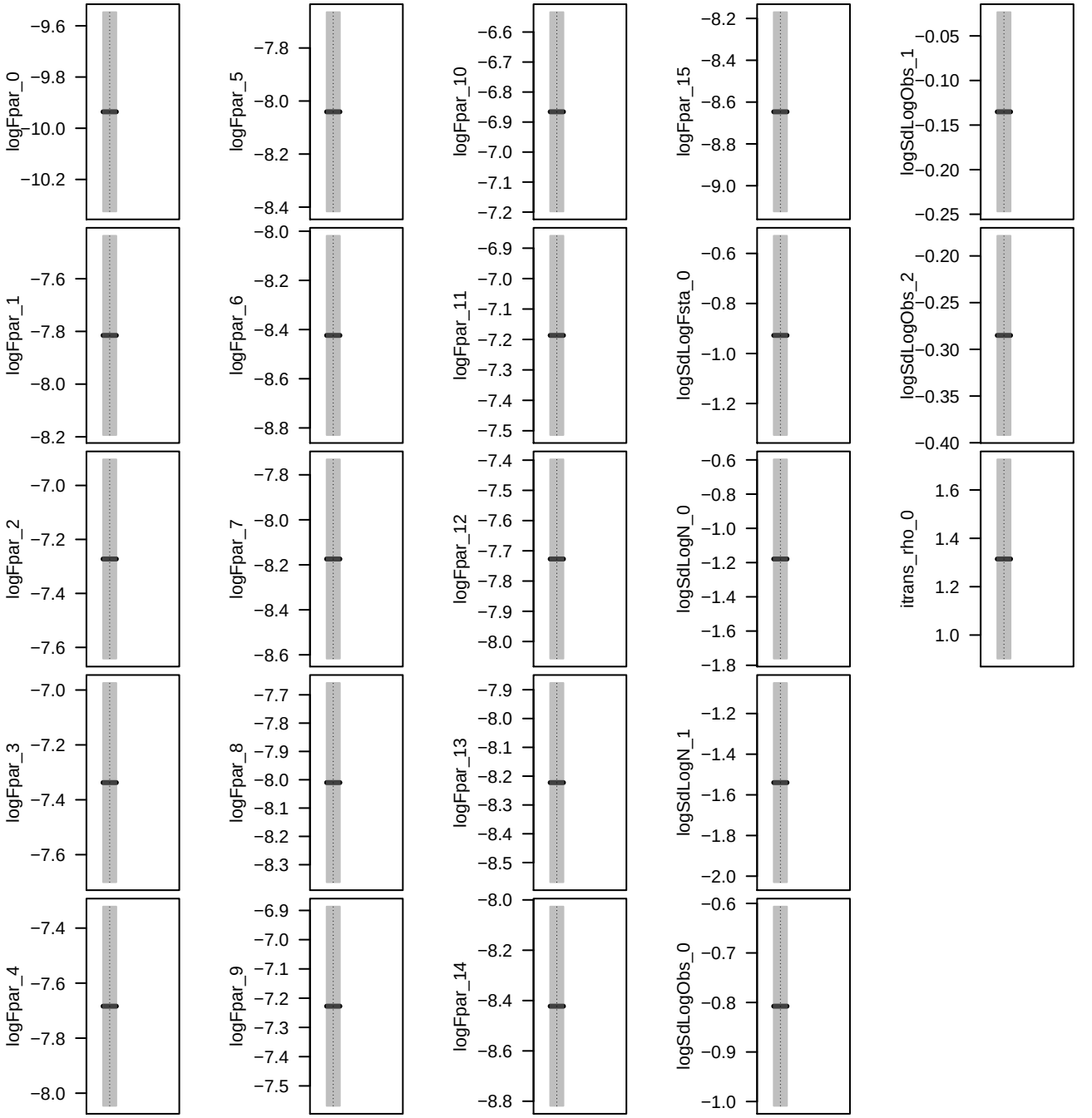


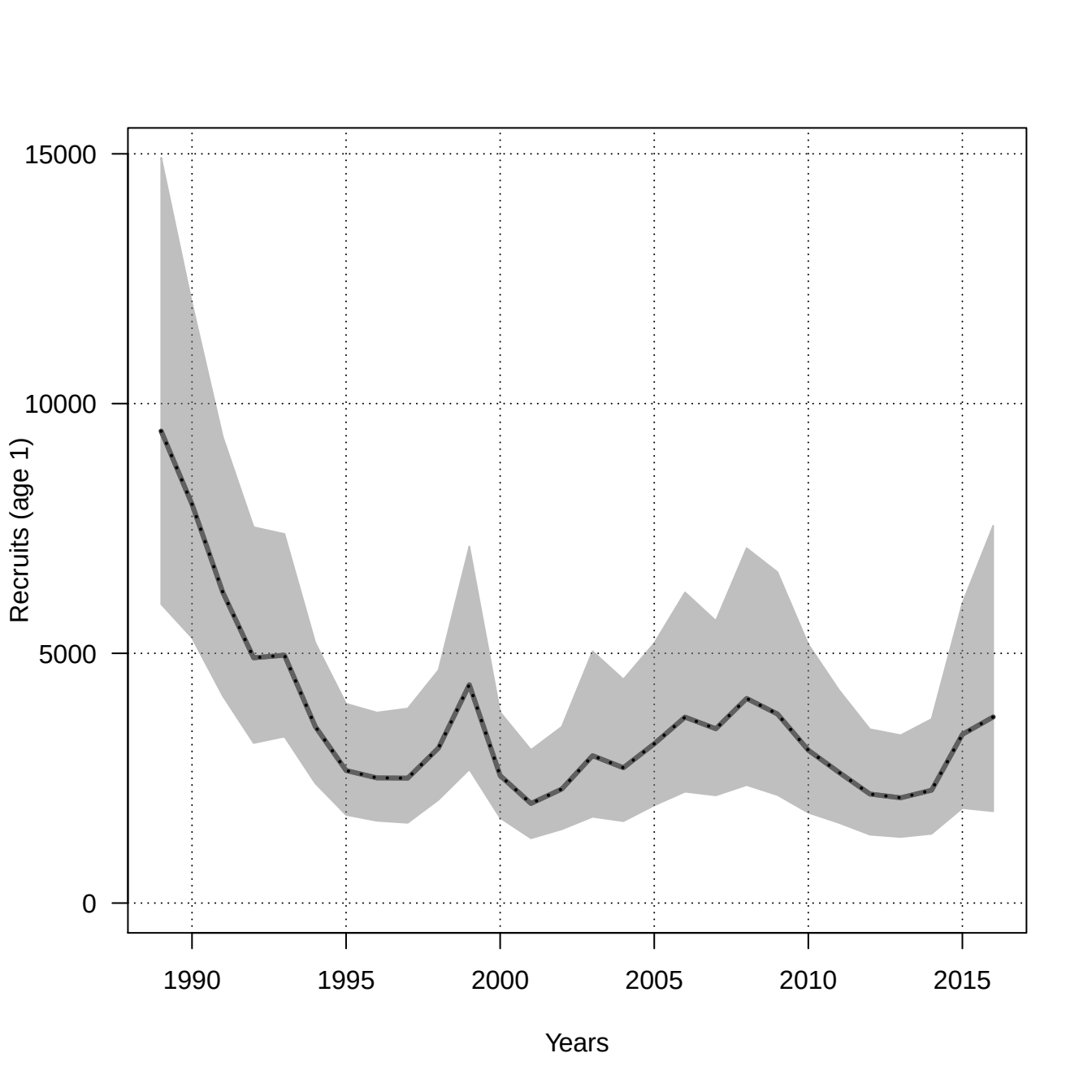
NEFSC_Spring

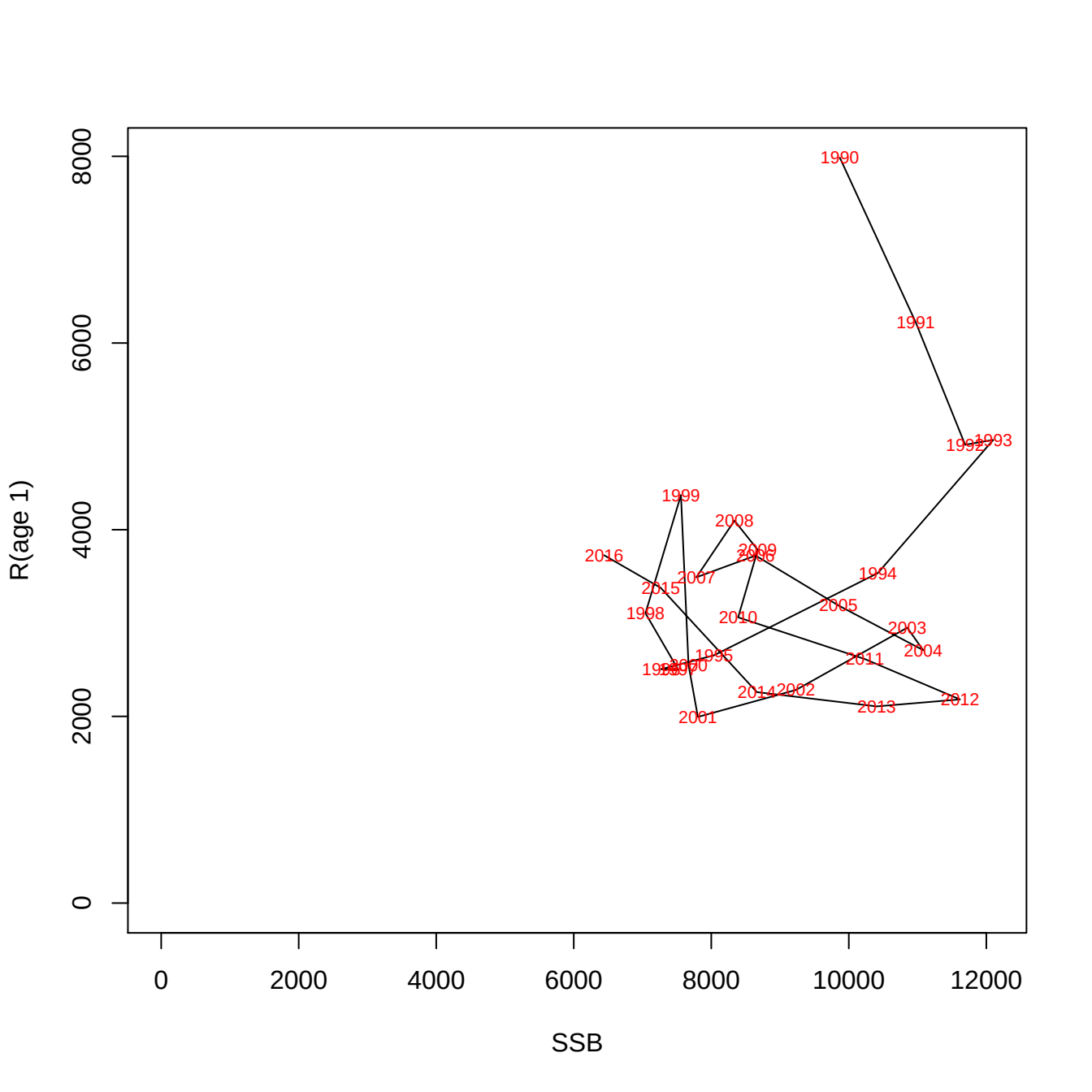


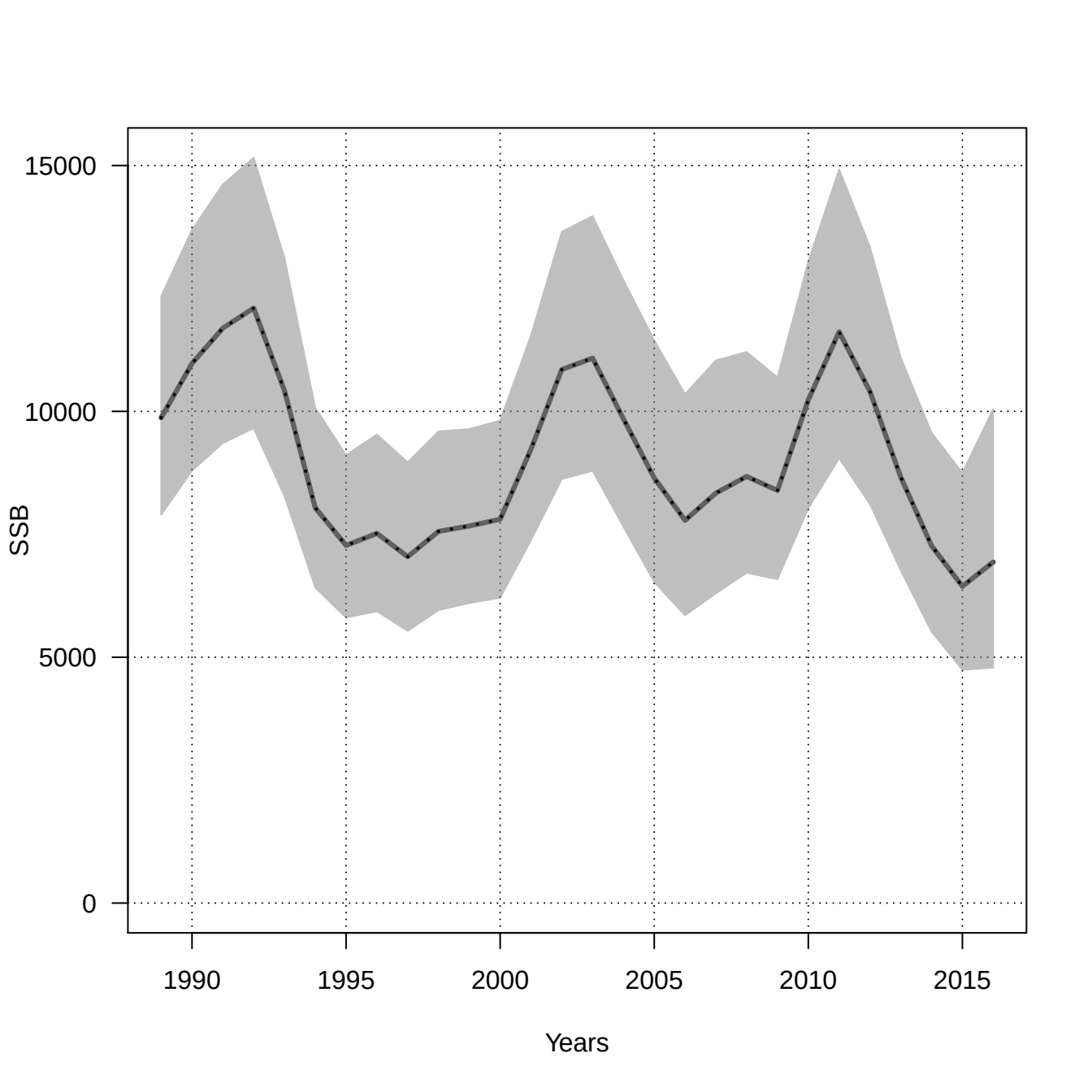
NEFSC_Fall

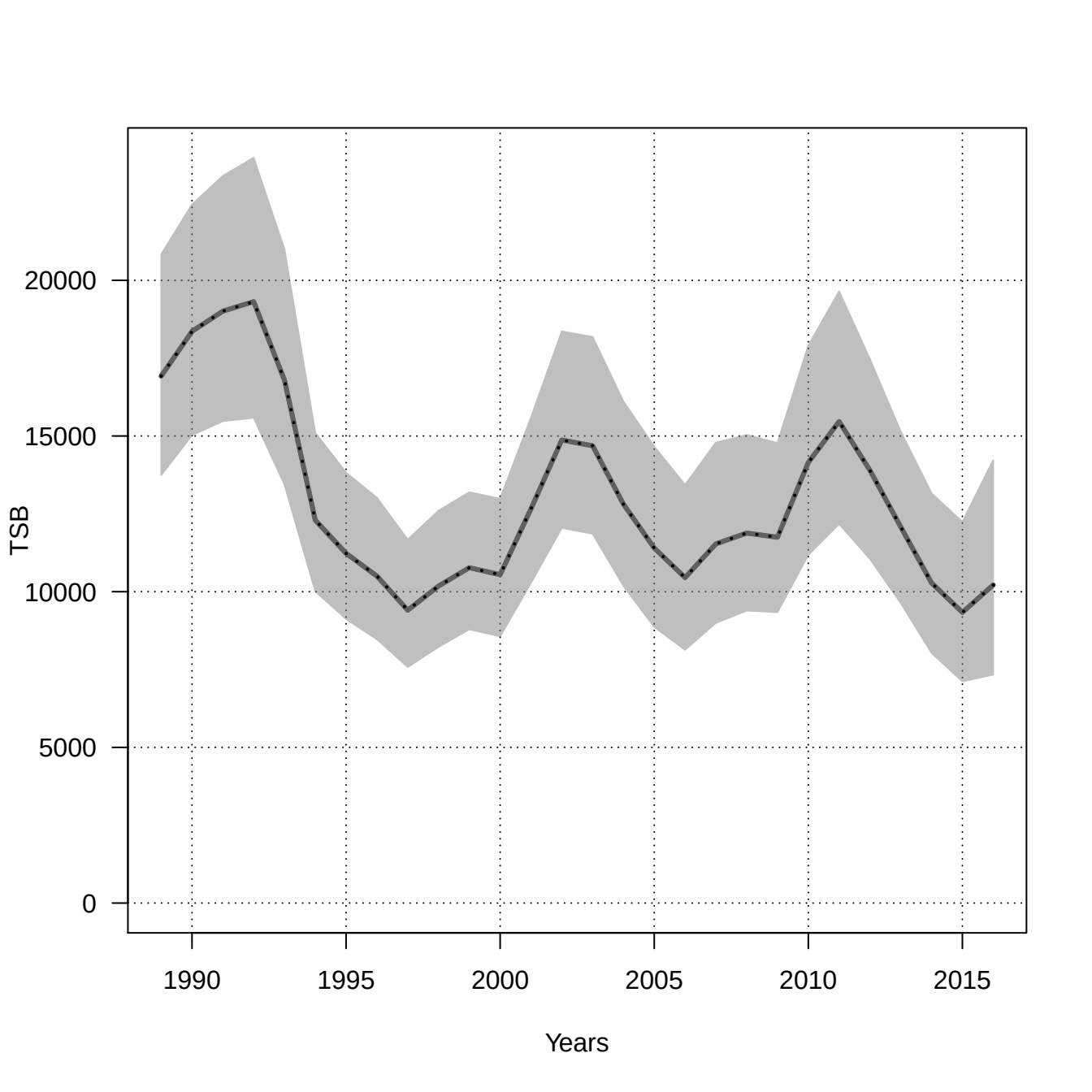


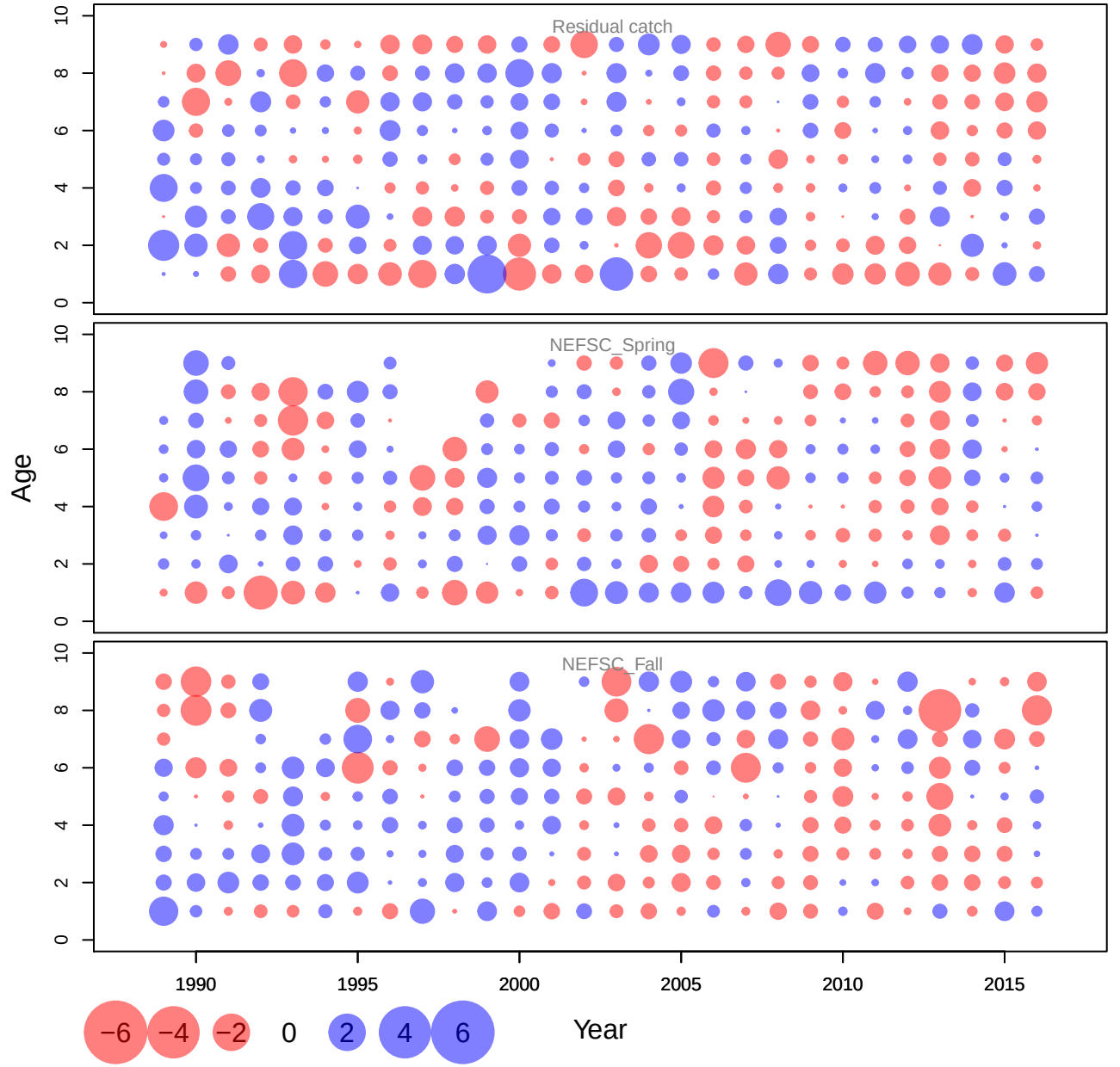

logFpar_0
logFpar_5
logFpar_10
logFpar_15
logSdLogObs_1
logFpar_1
logFpar_6
logFpar_11
logSdLogFsta_0
logSdLogObs_2
logFpar_2
logFpar_7
logFpar_12
logSdLogN_0
itrans_rho_0
logFpar_3
logFpar_8
logFpar_13
logSdLogN_1
logFpar_4
logFpar_9
logFpar_14
logSdLogObs_0

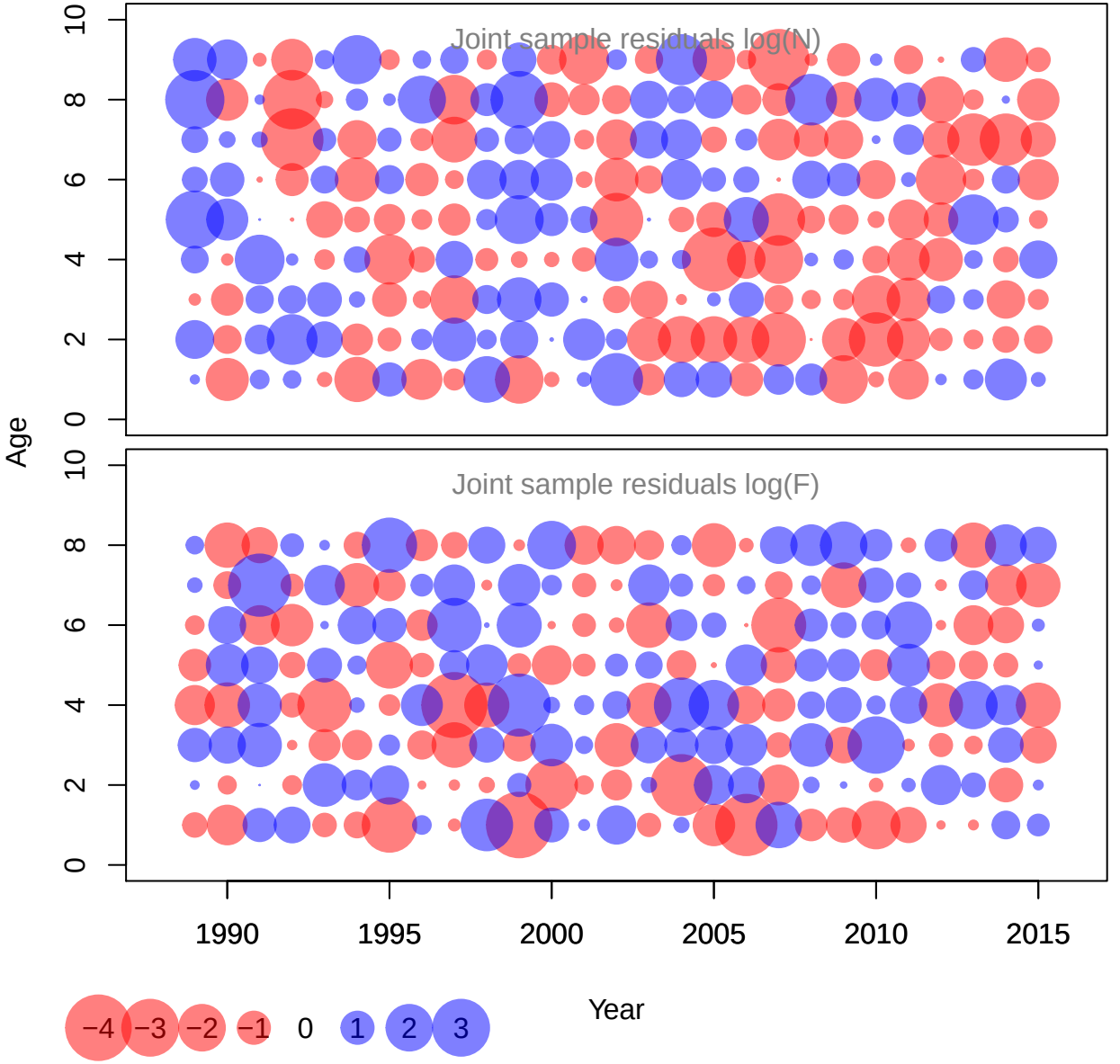

15000
10000
5000
0
Recruits (age 1)
1990
1995
2000
2005
2010
2015
Years

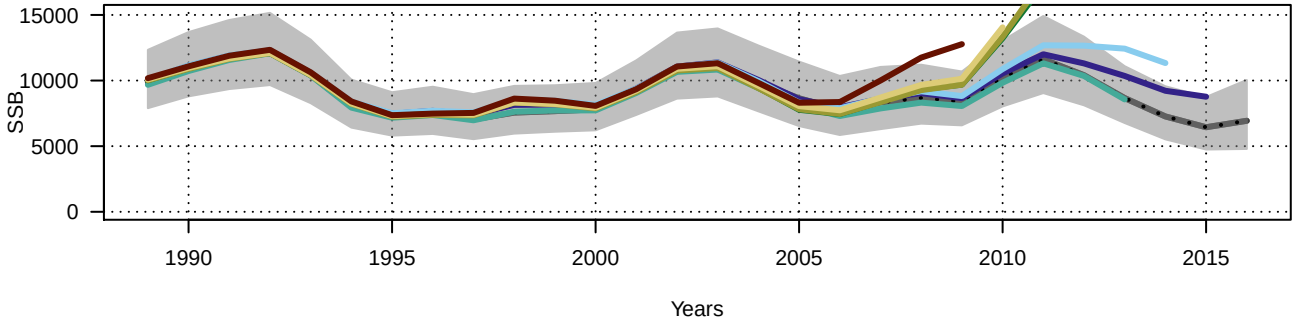

R(age 1)
SSB
0
2000
4000
6000
8000
10000
12000
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

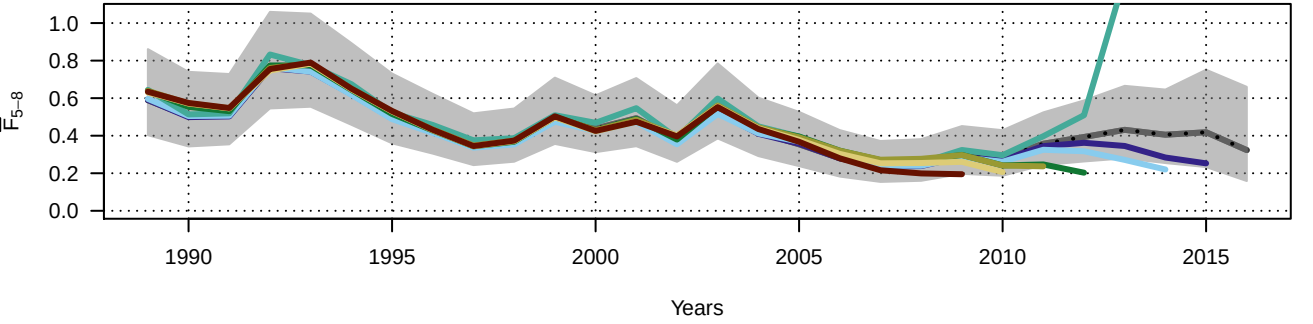

15000
10000
5000
0
SSB
1990
1995
2000
2005
2010
2015
Years

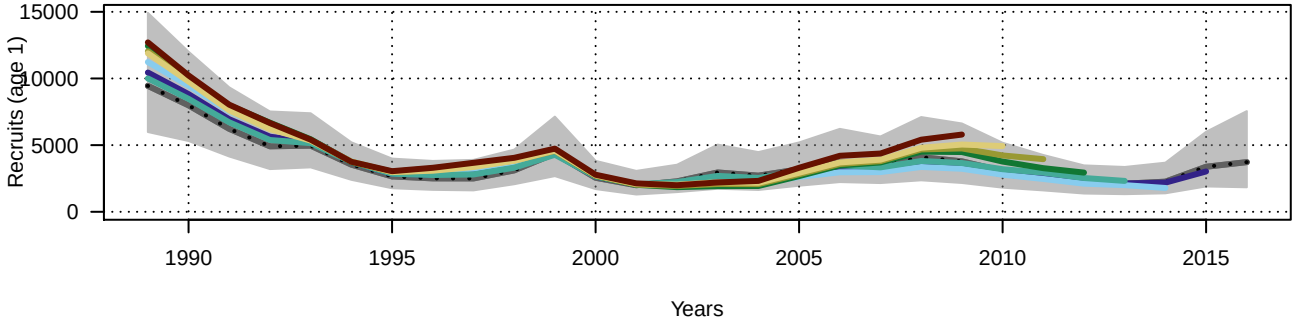

20000
15000
10000
5000
0
TSB
1990
1995
2000
2005
2010
2015
Years

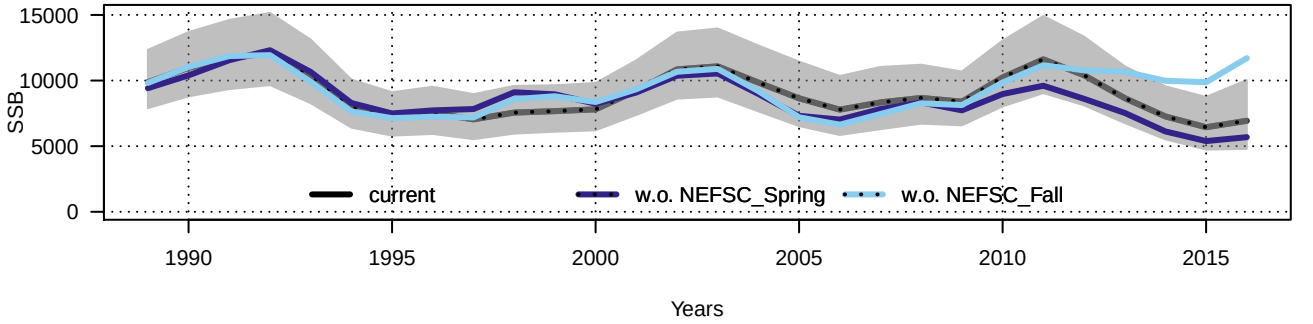

Residual catch
NEFSC_Spring
NEFSC_Fall
Age
0
2
4
6
8
10
1990
1995
2000
2005
2010
2015
Year
−6
−4
−2
0
2
4
6

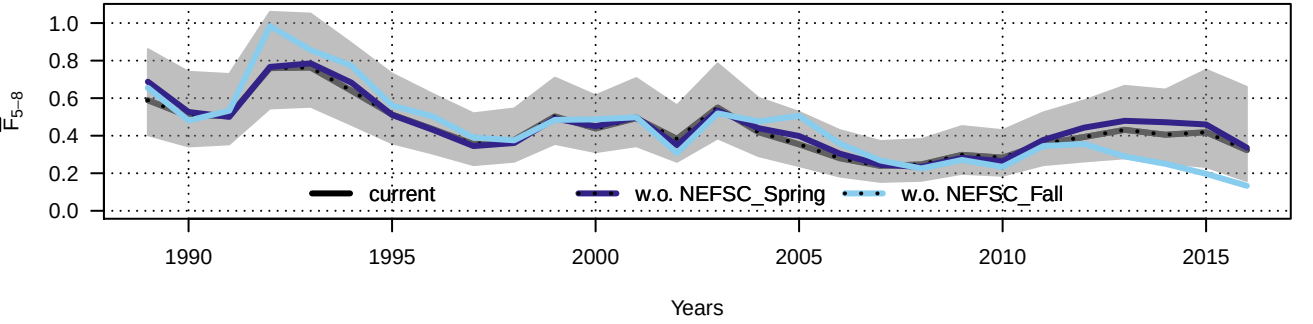

Joint sample residuals log(N)
Joint sample residuals log(F)
Age
Year
0
2
4
6
8
10
1990
1995
2000
2005
2010
2015
−4
−3
−2
−1
0
1
2
3

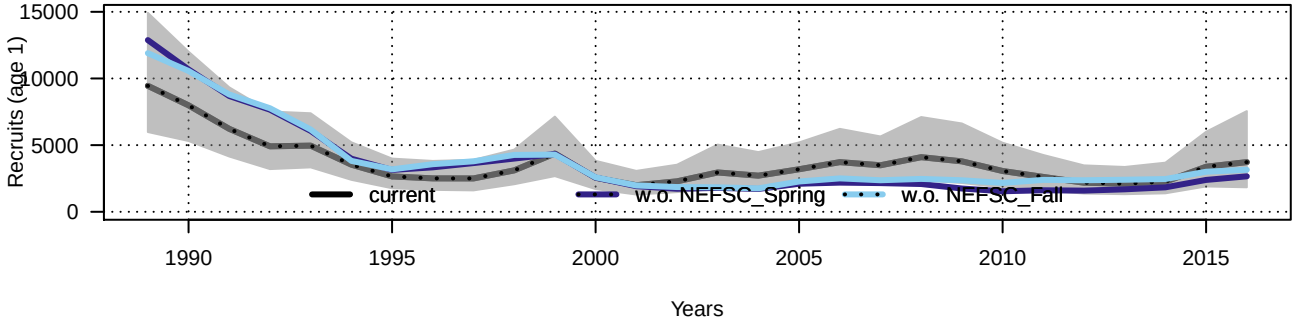

SSB
15000
10000
5000
0
1990
1995
2000
2005
2010
2015
Years

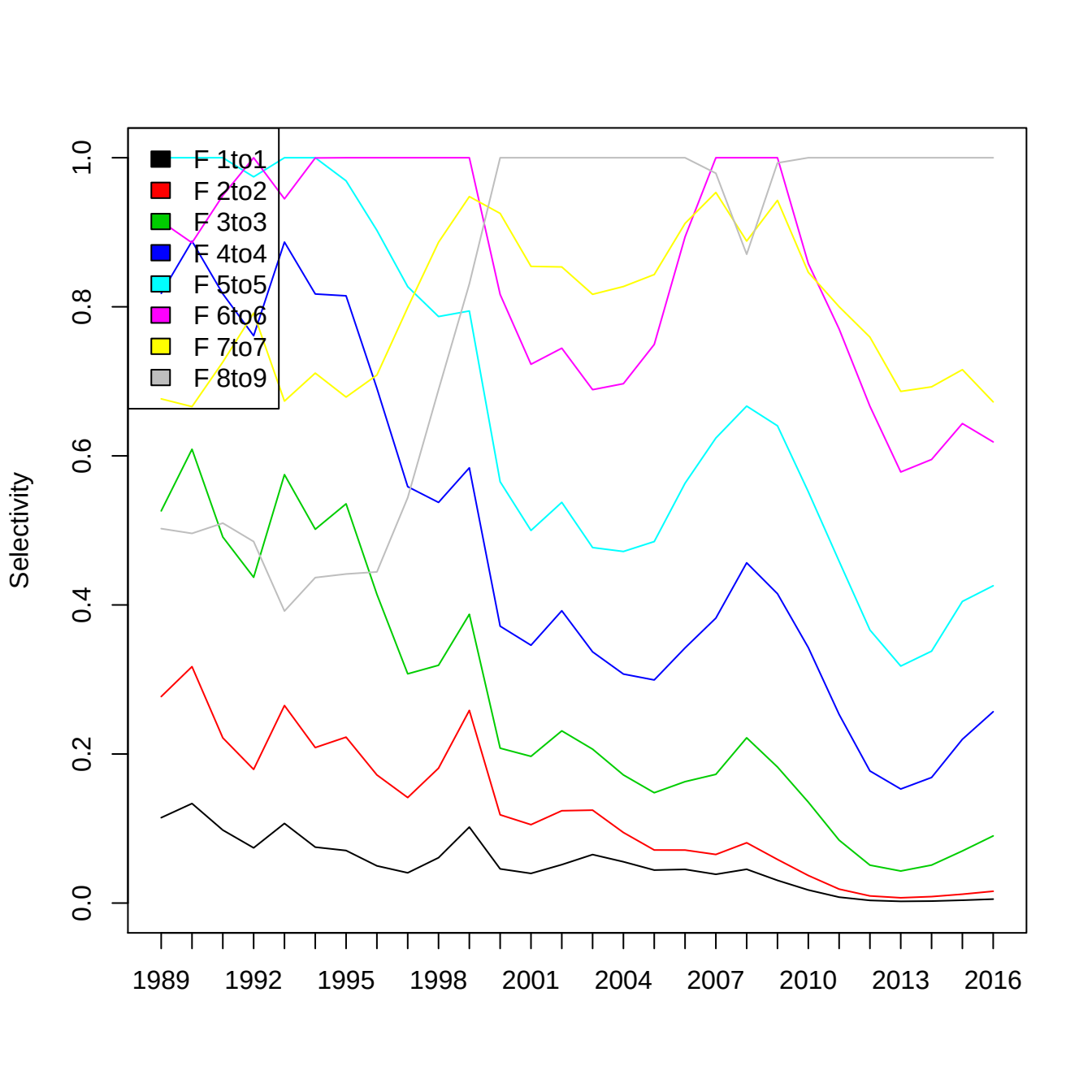

F_{5-8}
1.0
0.8
0.6
0.4
0.2
0.0
1990
1995
2000
2005
2010
2015
Years

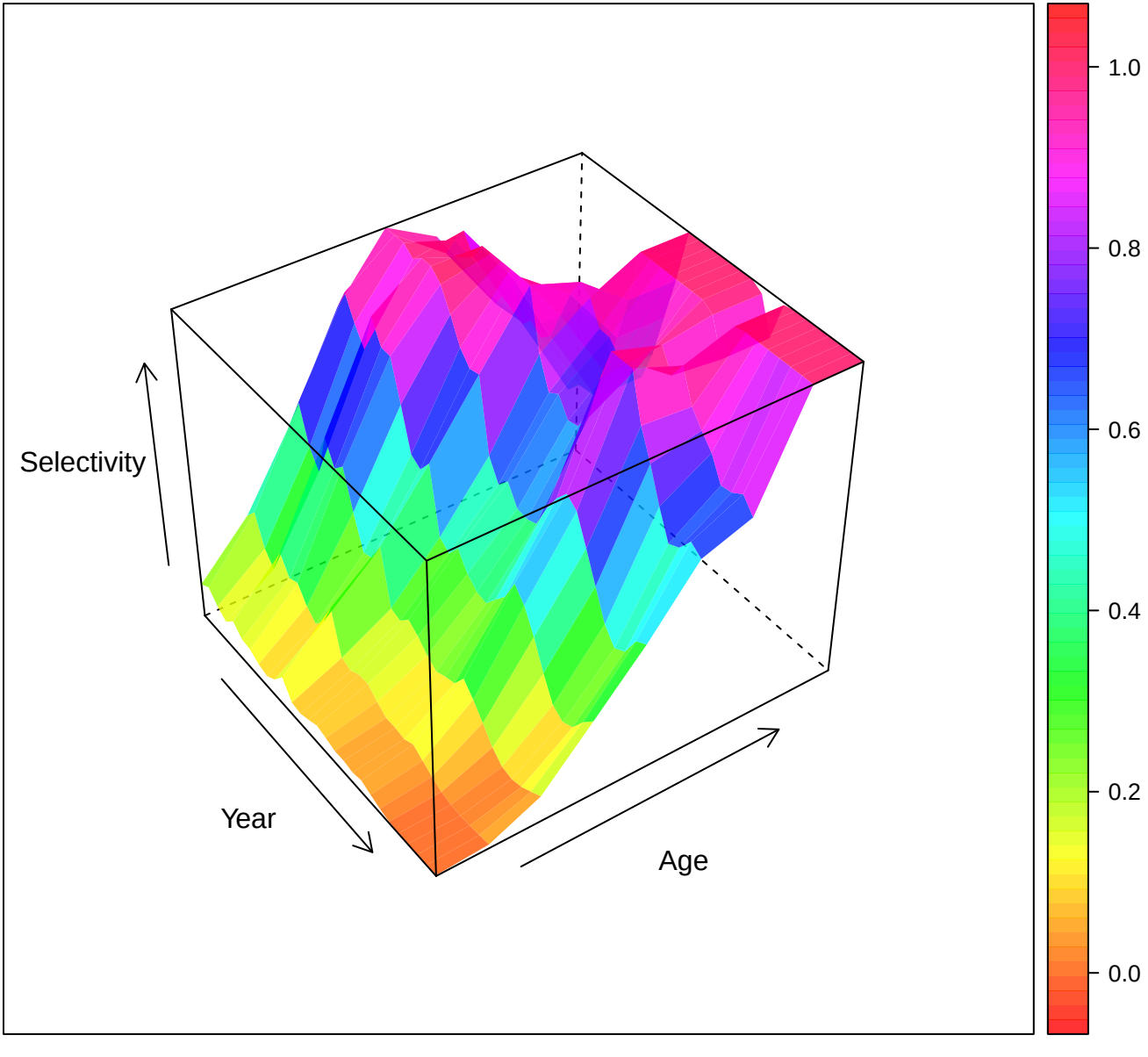

Recruits (age 1)
15000
10000
5000
0
1990
1995
2000
2005
2010
2015
Years

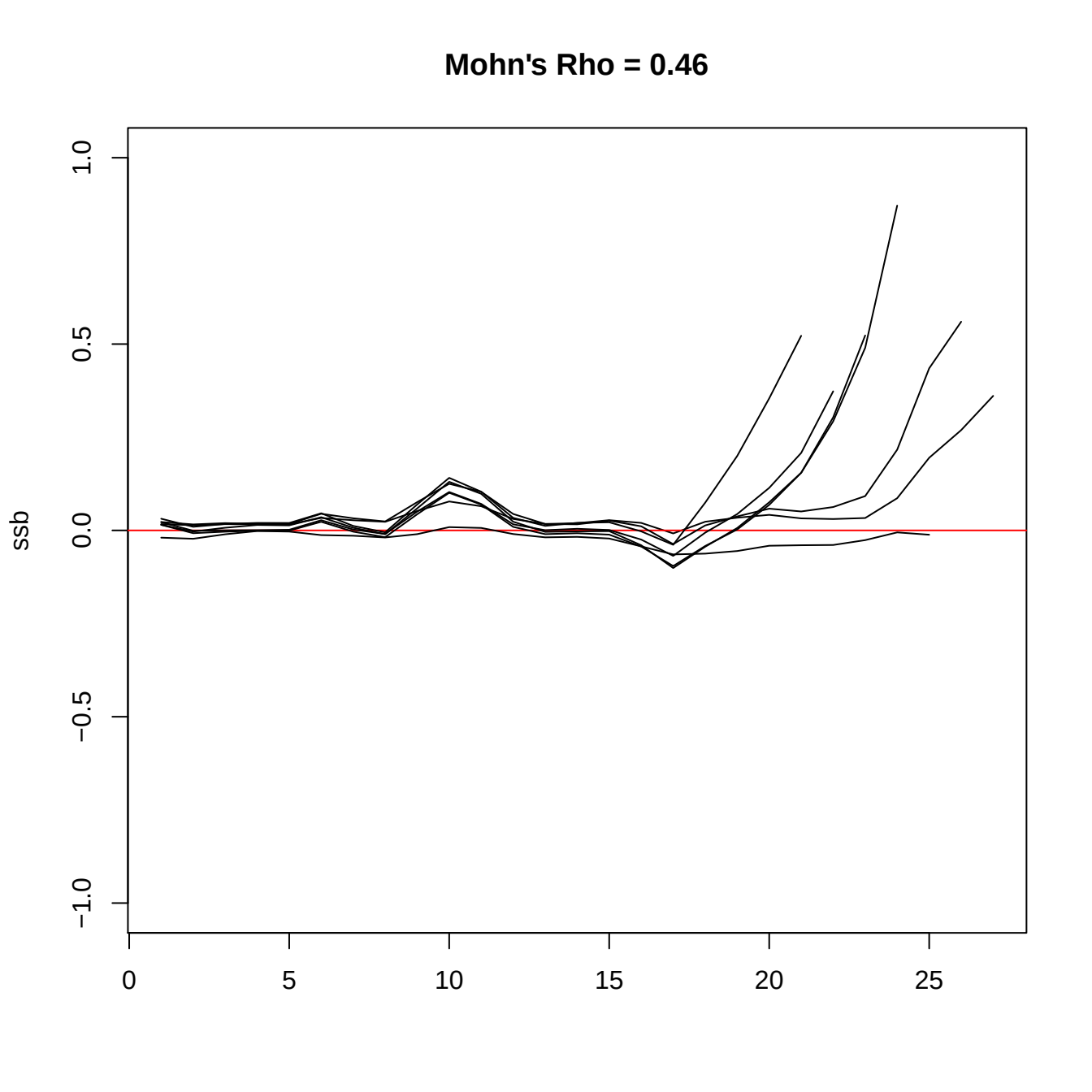

SSB
15000
10000
5000
0
current
w.o. NEFSC_Spring
w.o. NEFSC_Fall
1990
1995
2000
2005
2010
2015
Years

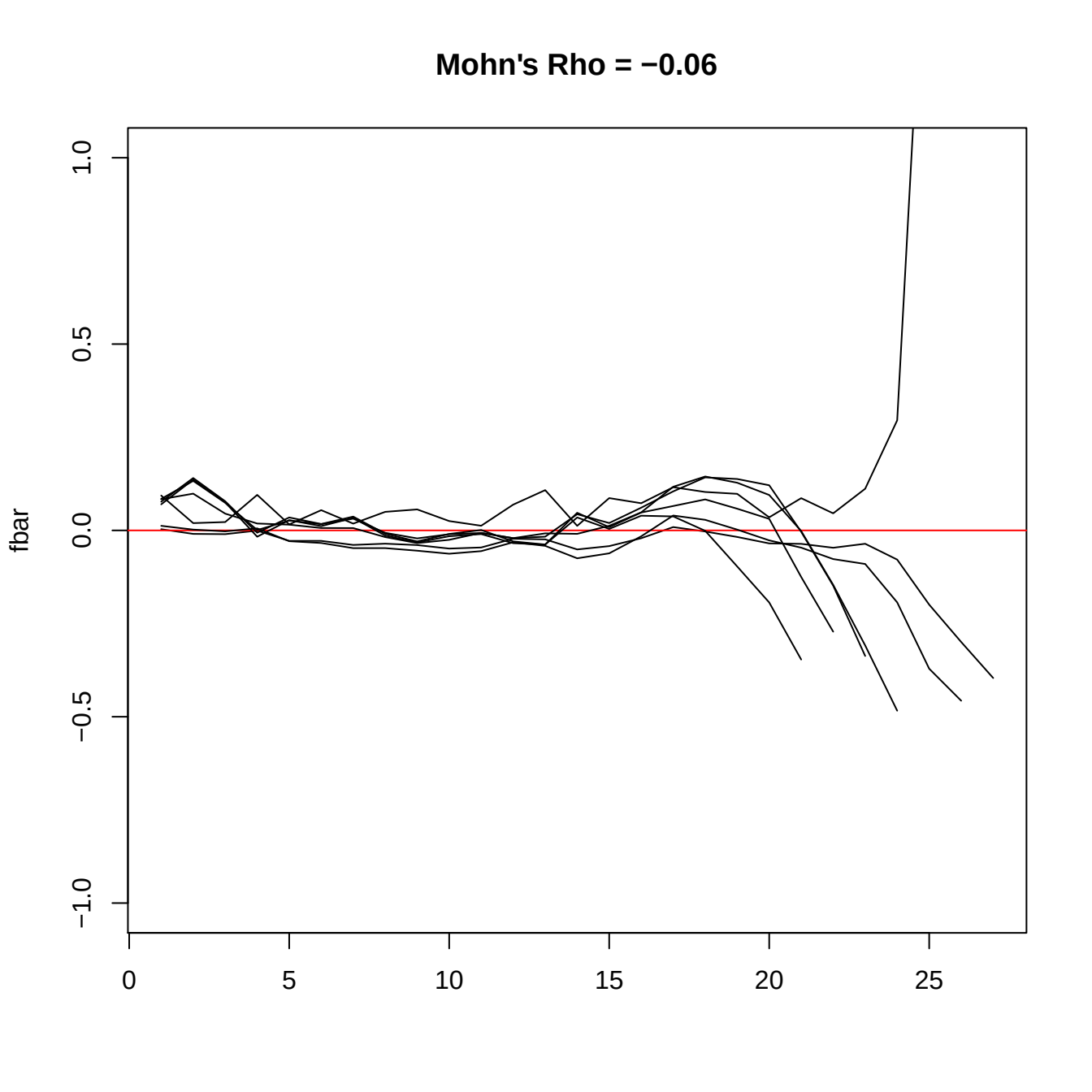

F_{5-8}
1.0
0.8
0.6
0.4
0.2
0.0
current
w.o. NEFSC_Spring
w.o. NEFSC_Fall
1990
1995
2000
2005
2010
2015
Years

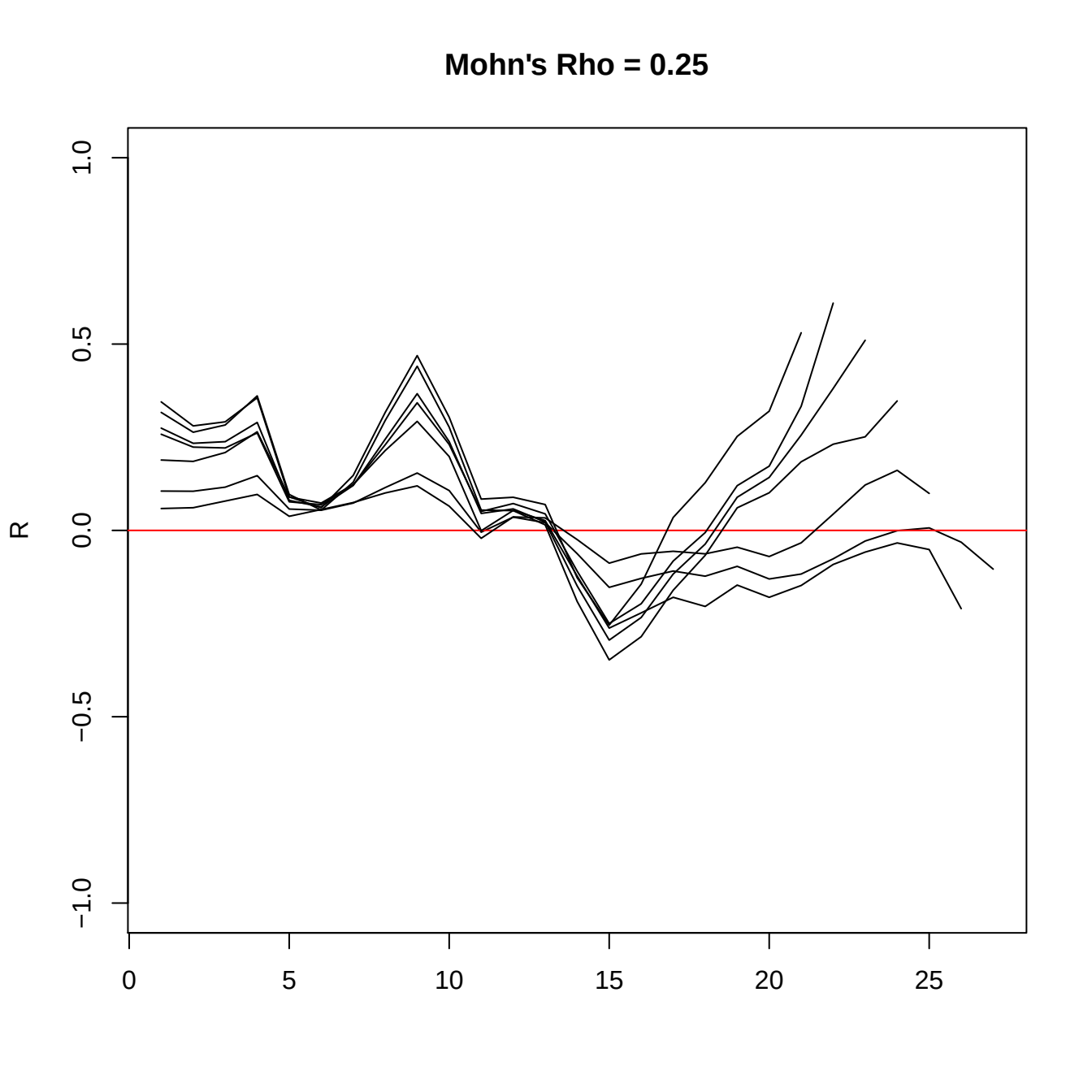

Recruits (age 1)
15000
10000
5000
0
current
w.o. NEFSC_Spring
w.o. NEFSC_Fall
1990
1995
2000
2005
2010
2015
Years

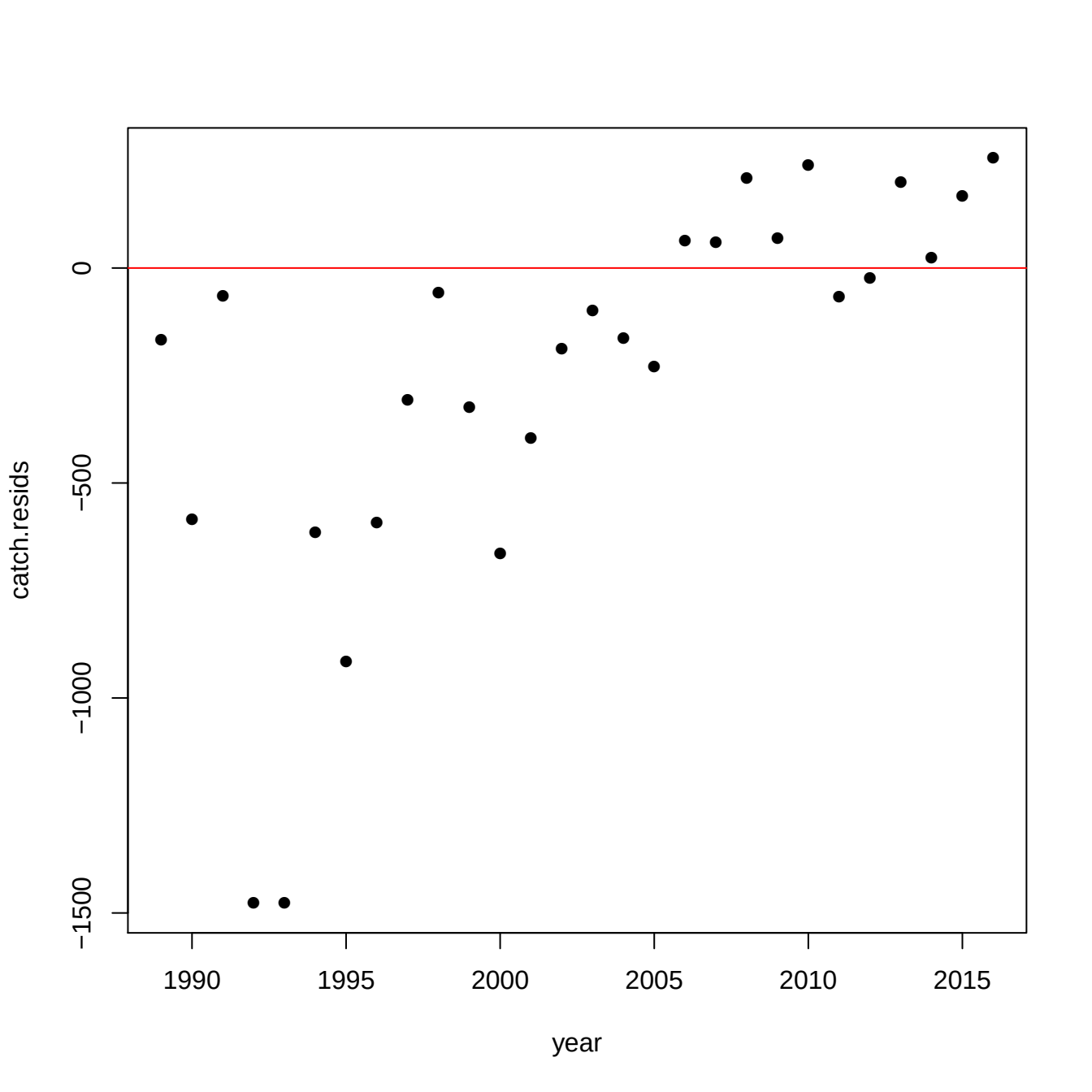

F 1to1
F 2to2
F 3to3
F 4to4
F 5to5
F 6to6
F 7to7
F 8to9
Selectivity
0.0
0.2
0.4
0.6
0.8
1.0
1989
1992
1995
1998
2001
2004
2007
2010
2013
2016

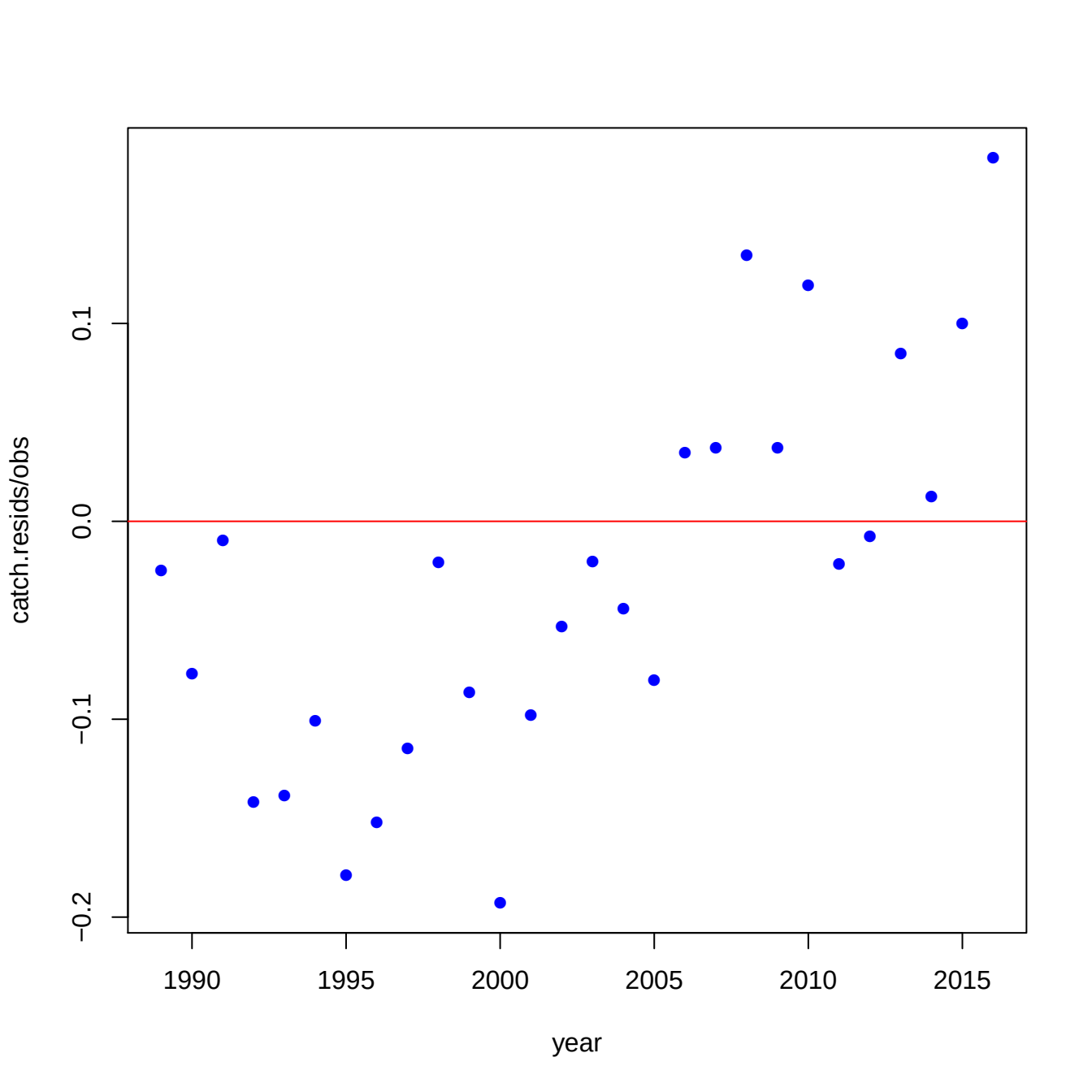

Selectivity
Year
Age
1.0
0.8
0.6
0.4
0.2
0.0

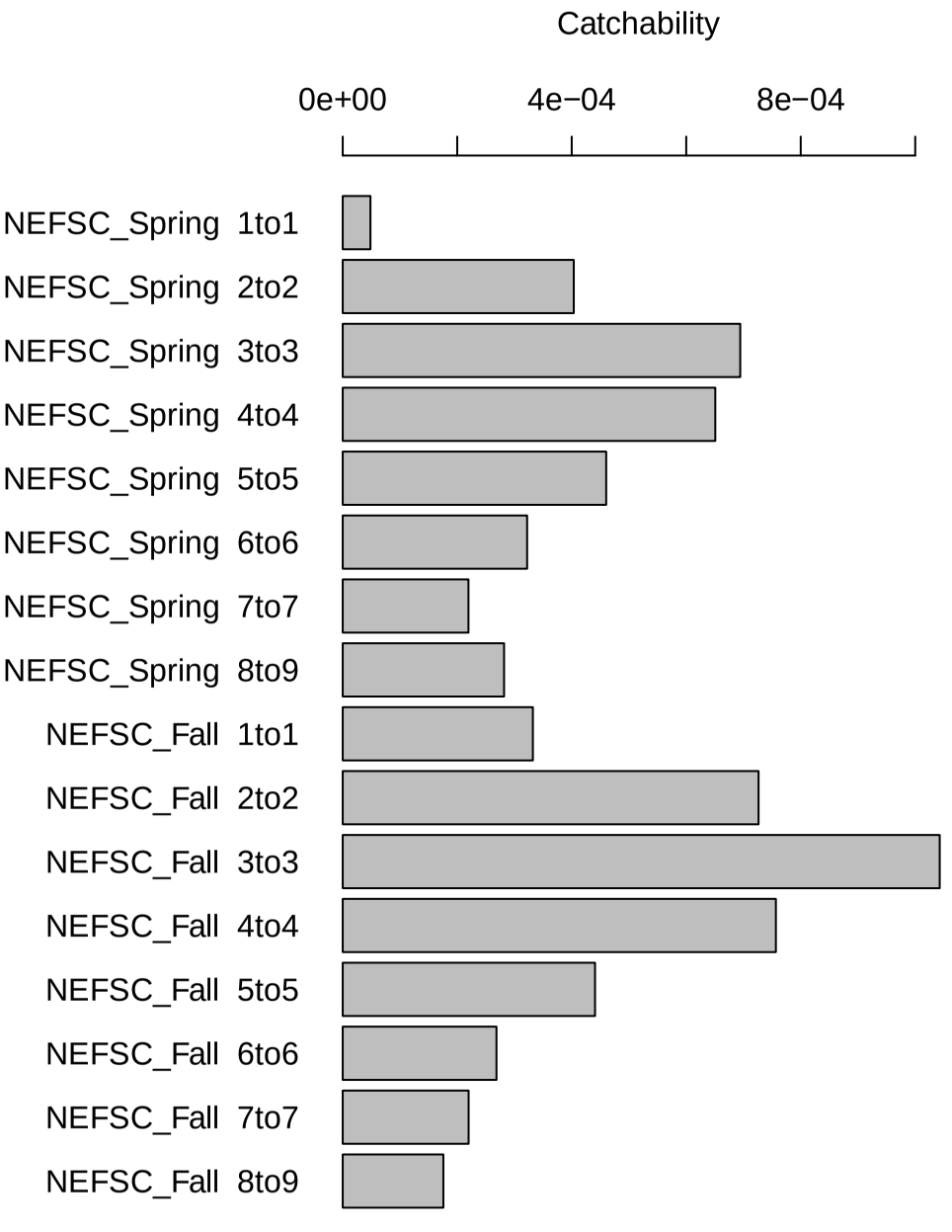

Mohn's Rho = 0.46
ssb
1.0
0.5
0.0
−0.5
−1.0
0
5
10
15
20
25

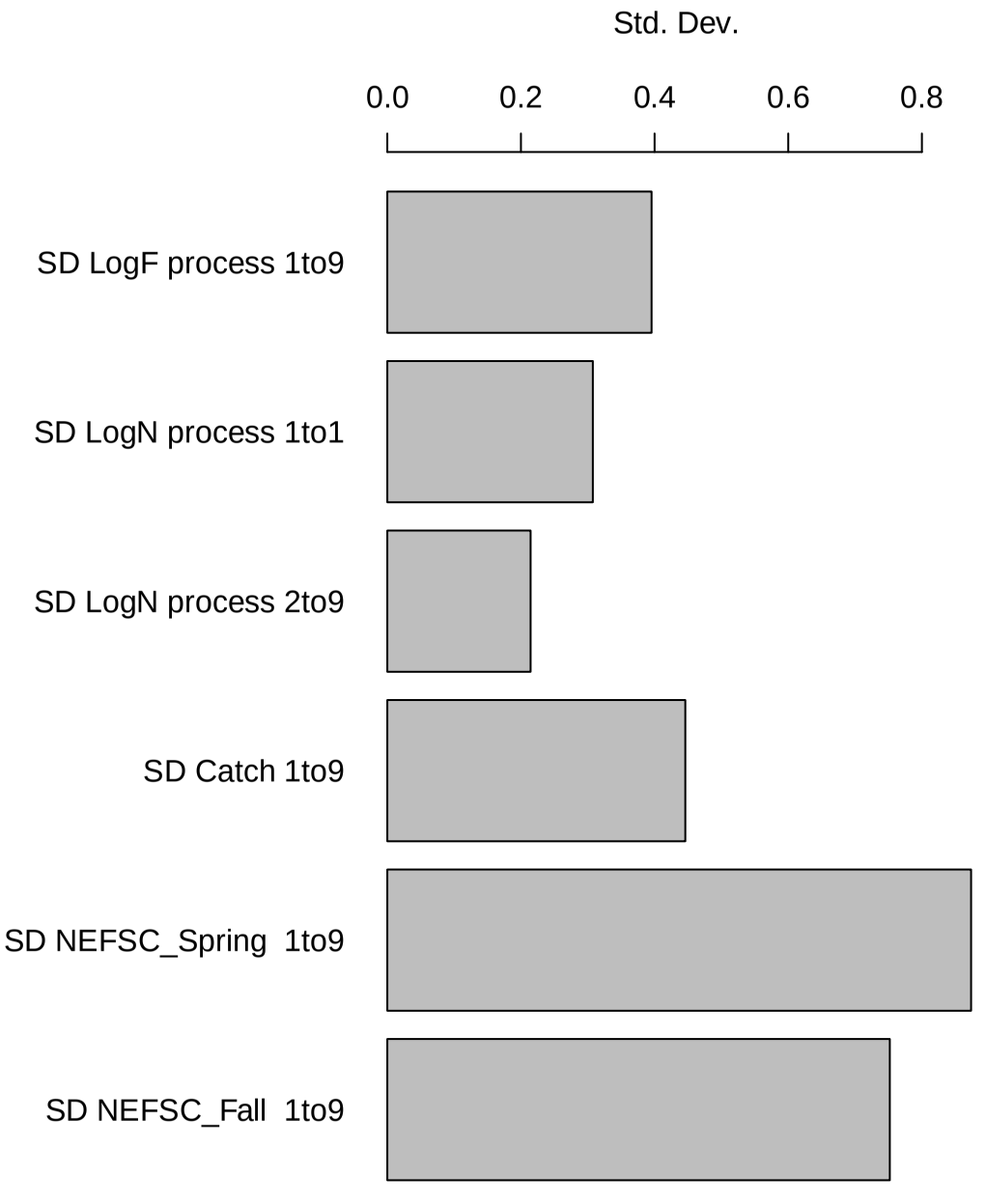

Mohn's Rho = −0.06
fbar
1.0
0.5
0.0
−0.5
−1.0
0
5
10
15
20
25


Mohn's Rho = 0.25
R
1.0
0.5
0.0
−0.5
−1.0
0
5
10
15
20
25


catch.resids
0
−500
−1000
−1500
1990
1995
2000
2005
2010
2015
year


catch.resids/obs
0.1
0.0
−0.1
−0.2
1990
1995
2000
2005
2010
2015
year


Catchability
0e+00
4e−04
8e−04
NEFSC_Spring 1to1
NEFSC_Spring 2to2
NEFSC_Spring 3to3
NEFSC_Spring 4to4
NEFSC_Spring 5to5
NEFSC_Spring 6to6
NEFSC_Spring 7to7
NEFSC_Spring 8to9
NEFSC_Fall 1to1
NEFSC_Fall 2to2
NEFSC_Fall 3to3
NEFSC_Fall 4to4
NEFSC_Fall 5to5
NEFSC_Fall 6to6
NEFSC_Fall 7to7
NEFSC_Fall 8to9


Std. Dev.
0.0
0.2
0.4
0.6
0.8
SD LogF process 1to9
SD LogN process 1to1
SD LogN process 2to9
SD Catch 1to9
SD NEFSC_Spring 1to9
SD NEFSC_Fall 1to9