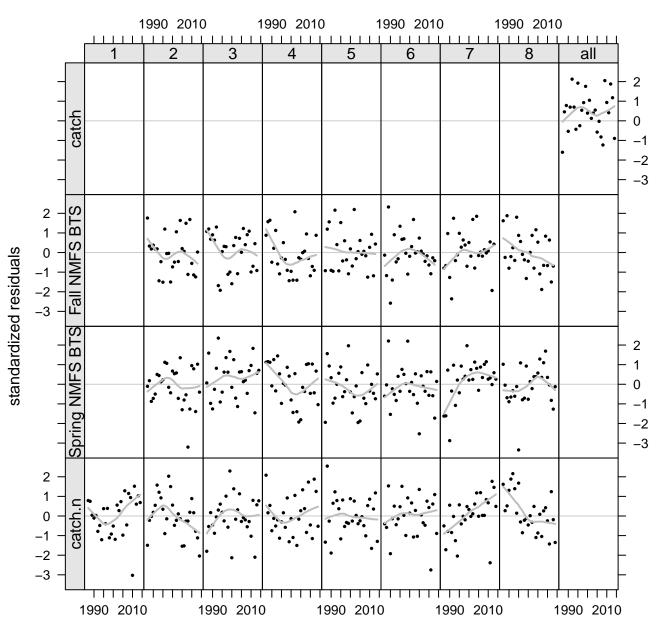
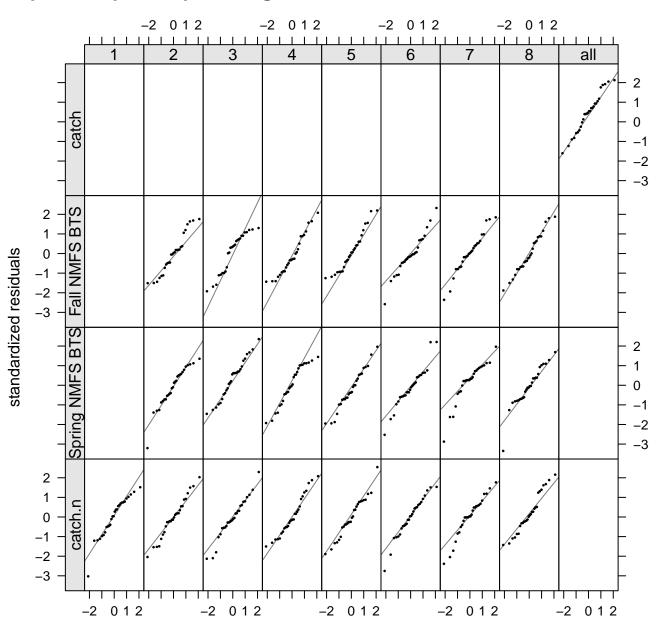
## log residuals of catch and abundance indices by age



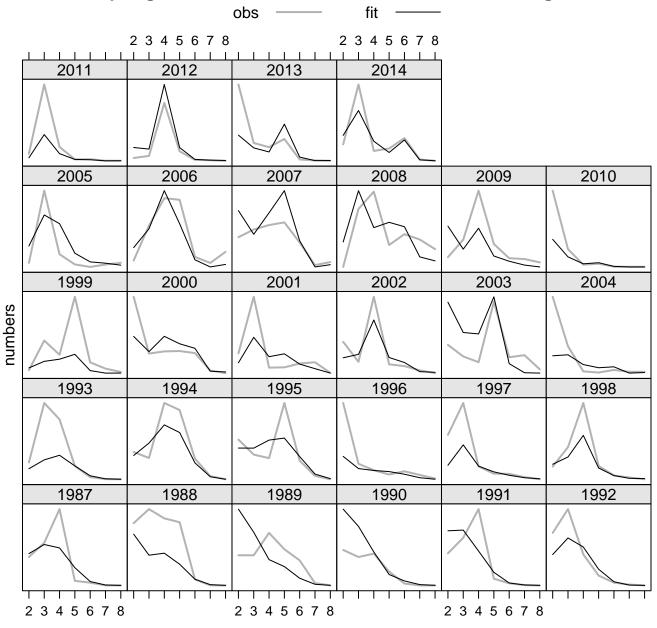
## quantile-quantile plot of log residuals of catch and abundance indices



#### fitted and observed catch-at-age obs fit numbers

age

#### Spring NMFS BTS: fitted and observed index-at-age



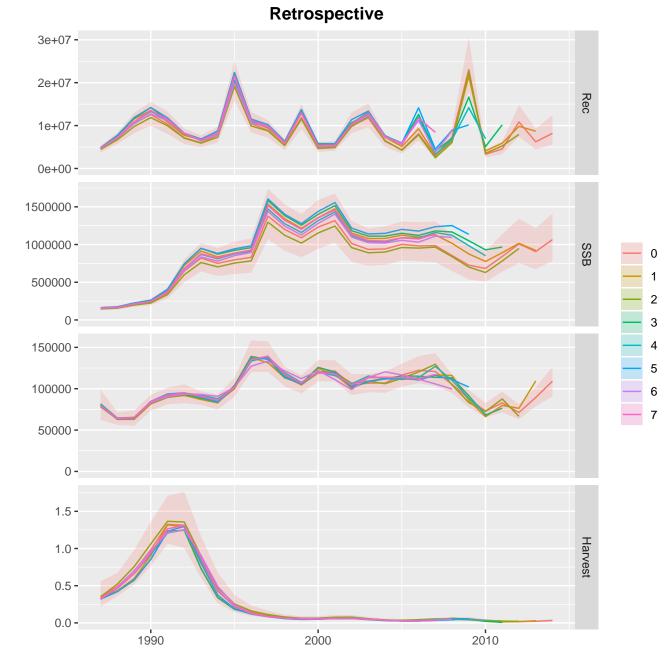
#### Fall NMFS BTS: fitted and observed index-at-age obs fit 2 3 4 5 6 7 8

2 3 4 5 6 7 8

2 3 4 5 6 7 8

numbers

2 3 4 5 6 7 8



**Stock summary** 3e+07 -2e+07 -1e+07 -0e+00 -1500000 -1000000 -SSB 500000 -0 -150000 -100000 -50000 -0 -1.5 -1.0 -0.5 -0.0 -

2000

1990

1995

2005

2010

2015

# **Abundance indices predictions**

