

Figure B2.1. Statistical areas for reporting landings in the northwest Atlantic ocean.

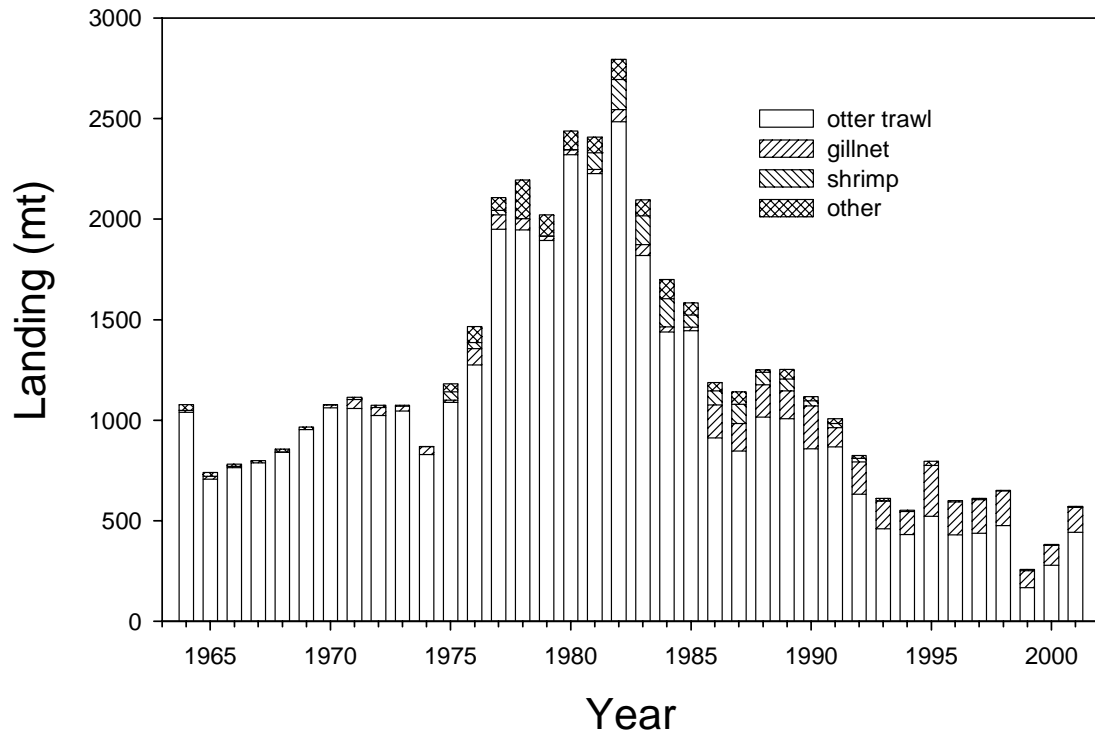


Figure B2.2. Gulf of Maine winter flounder commercial landings by gear from 1964-2001.

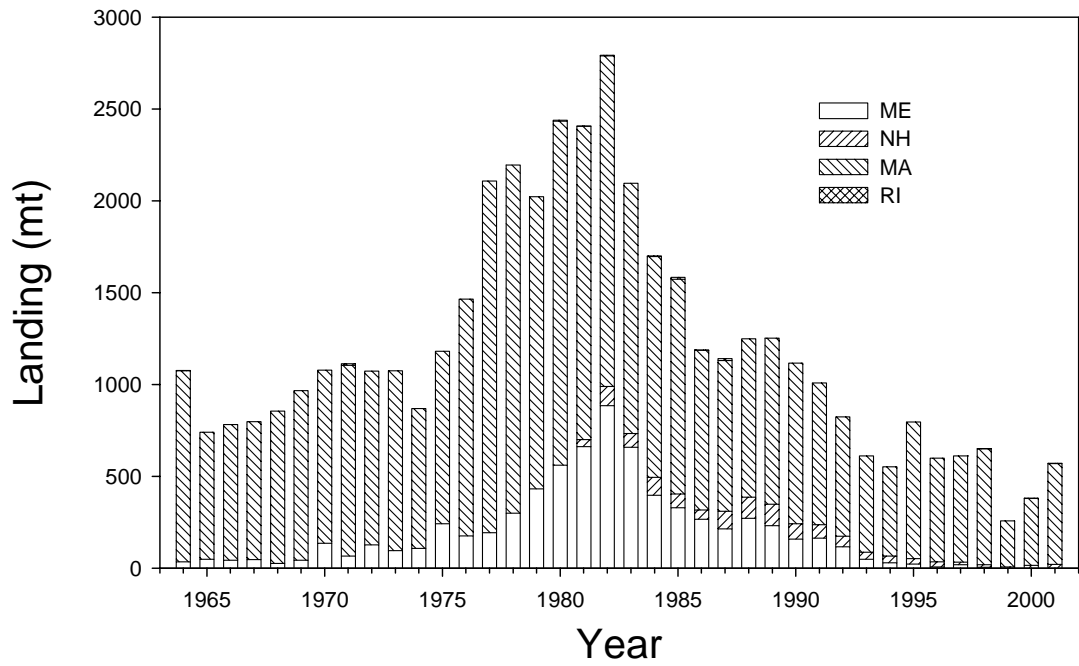


Figure B2.3. Gulf of Maine winter flounder commercial landings by state from 1964-2001.

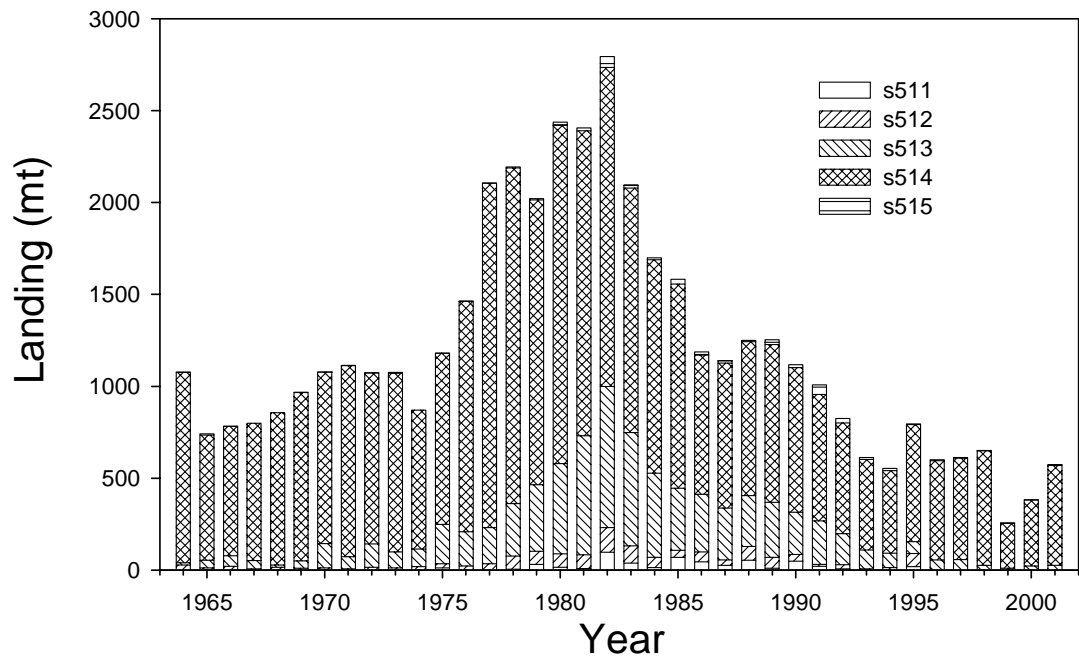


Figure B2.4. Gulf of Maine winter flounder commercial landings by statistical area from 1964-2001.

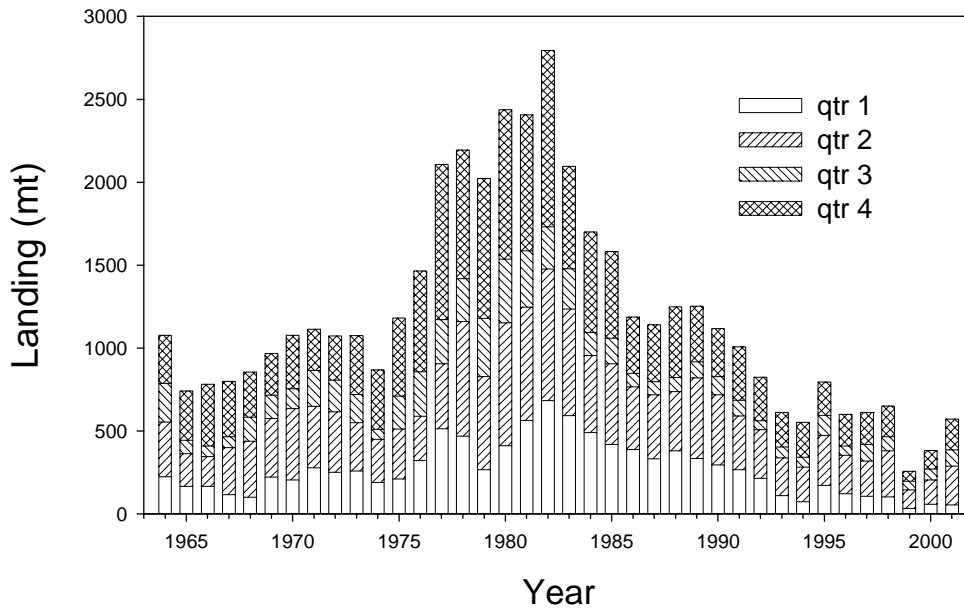


Figure B2.5. Gulf of Maine winter flounder commercial landings by quarter from 1964-2001.

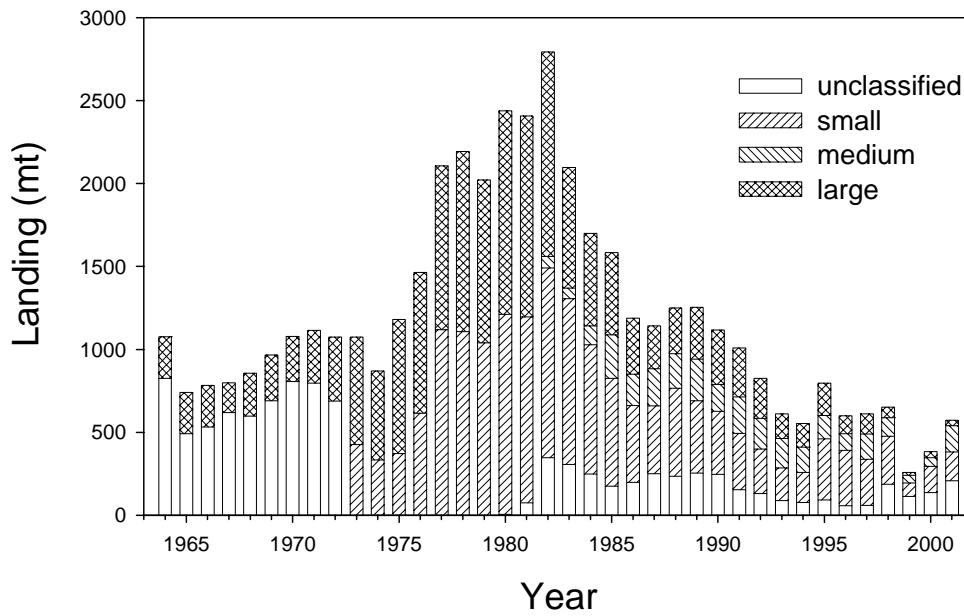


Figure B2.6. Gulf of Maine winter flounder commercial landings by market category from 1964-2001.

Gulf of Maine Winter Flounder Recreational landings and b2 Catch

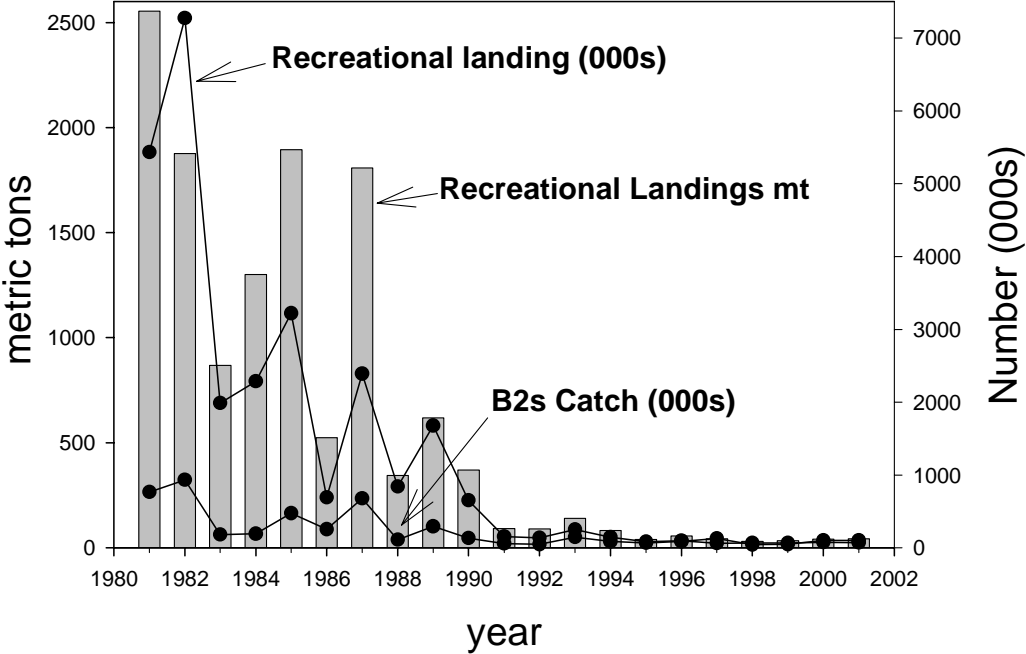


Figure B2.7. Recreational landings in numbers and metric tons for Gulf of Maine winter flounder. B2 catch in numbers is also shown.

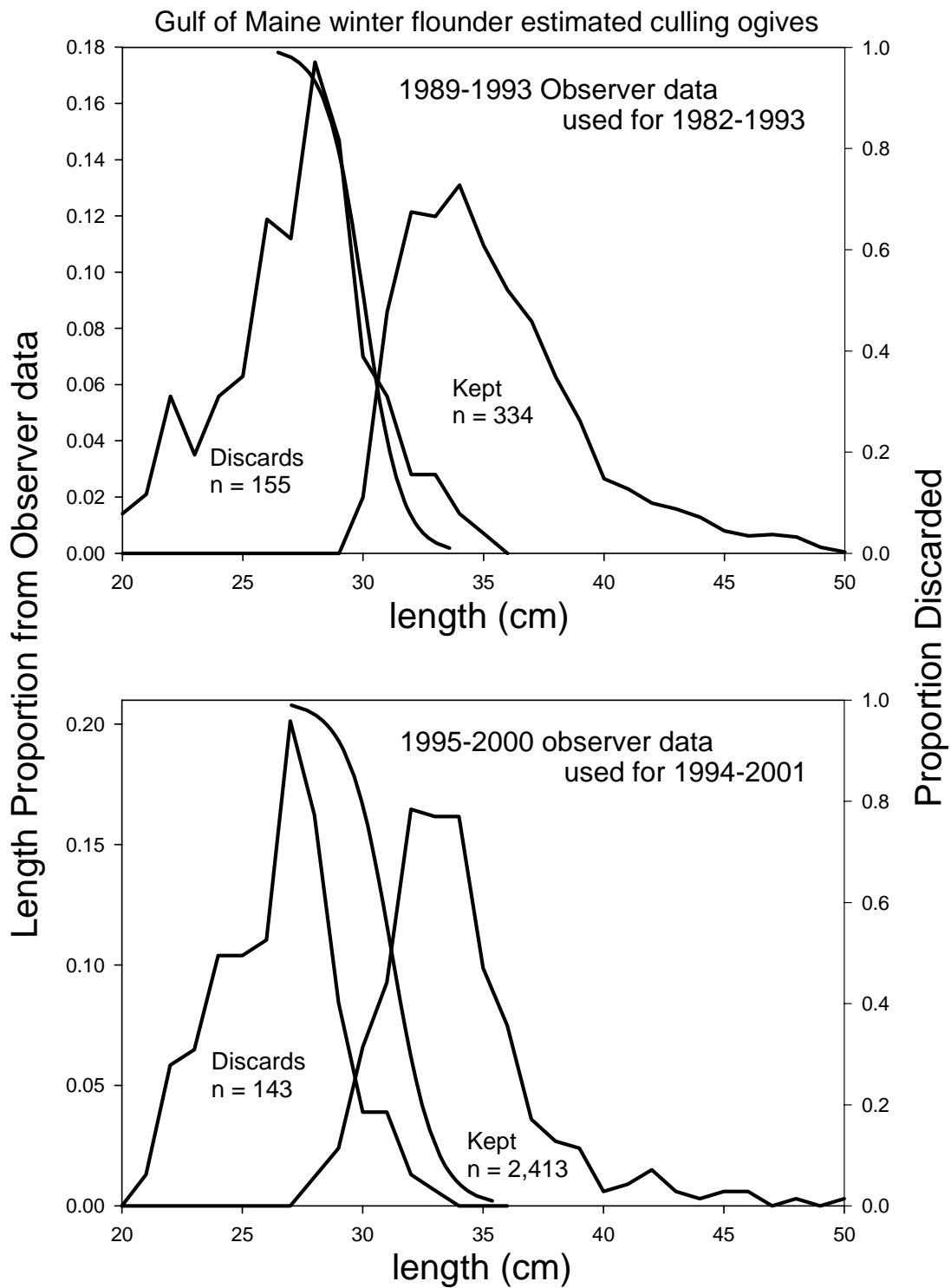


Figure B2.8. Gulf of Maine winter flounder estimated culling ogive from Observer data for estimating trawl discards in the survey method.

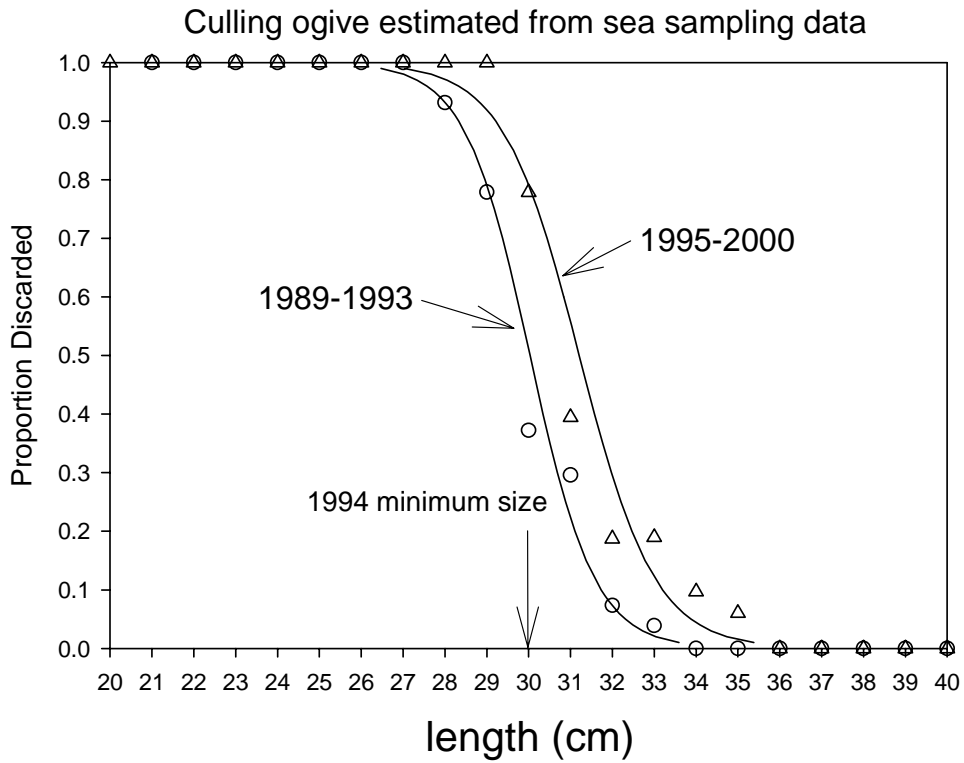


Figure B2.9. Gulf of Maine winter flounder estimated culling ogive. Observer data from 1989-1993 was used to estimate an ogive used for years 1982-1993. Observer data from 1995-2000 was used to estimate an ogive used for years 1994-2001.

Gulf of Maine winter flounder mean weights at age

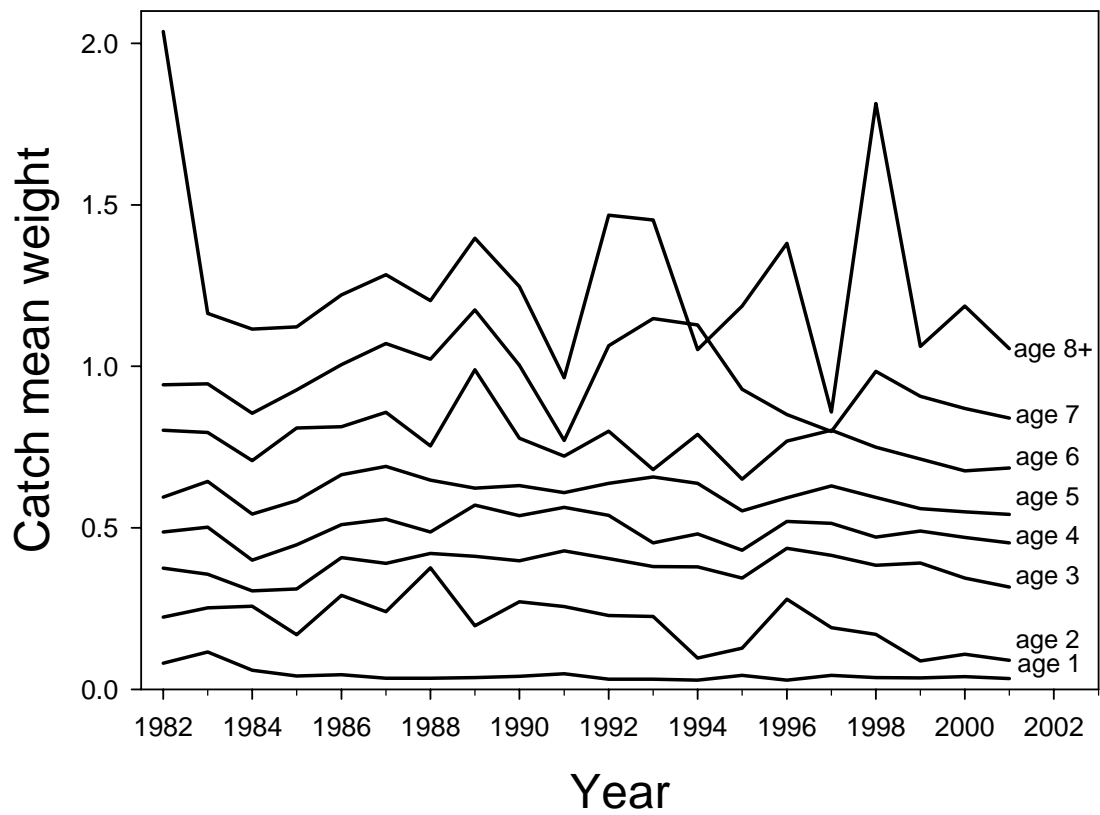


Figure B2.10. Gulf of Maine winter flounder VPA mean weights at age.

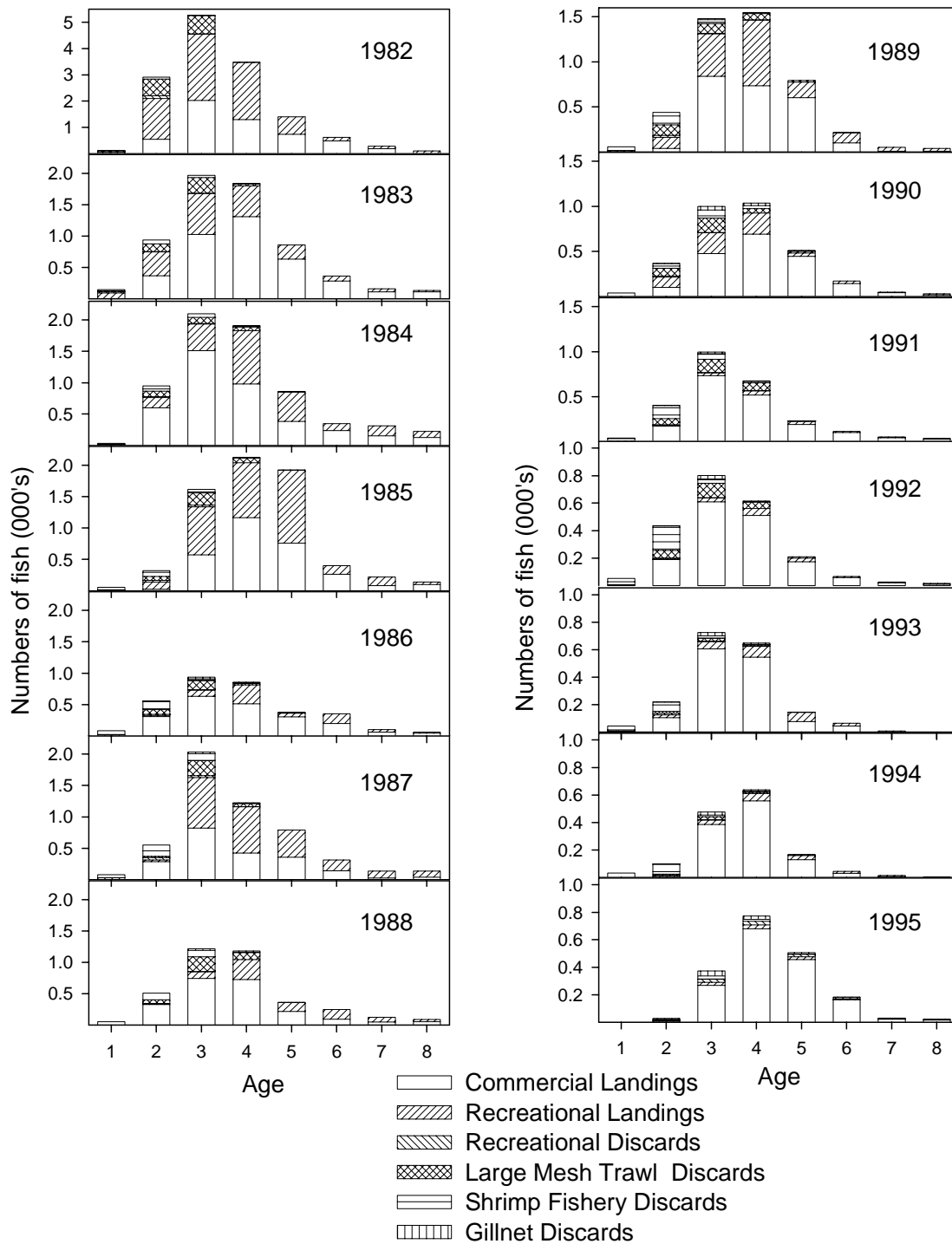


Figure B2.11. Gulf of Maine winter flounder catch at age composition in numbers from 1982-2001.

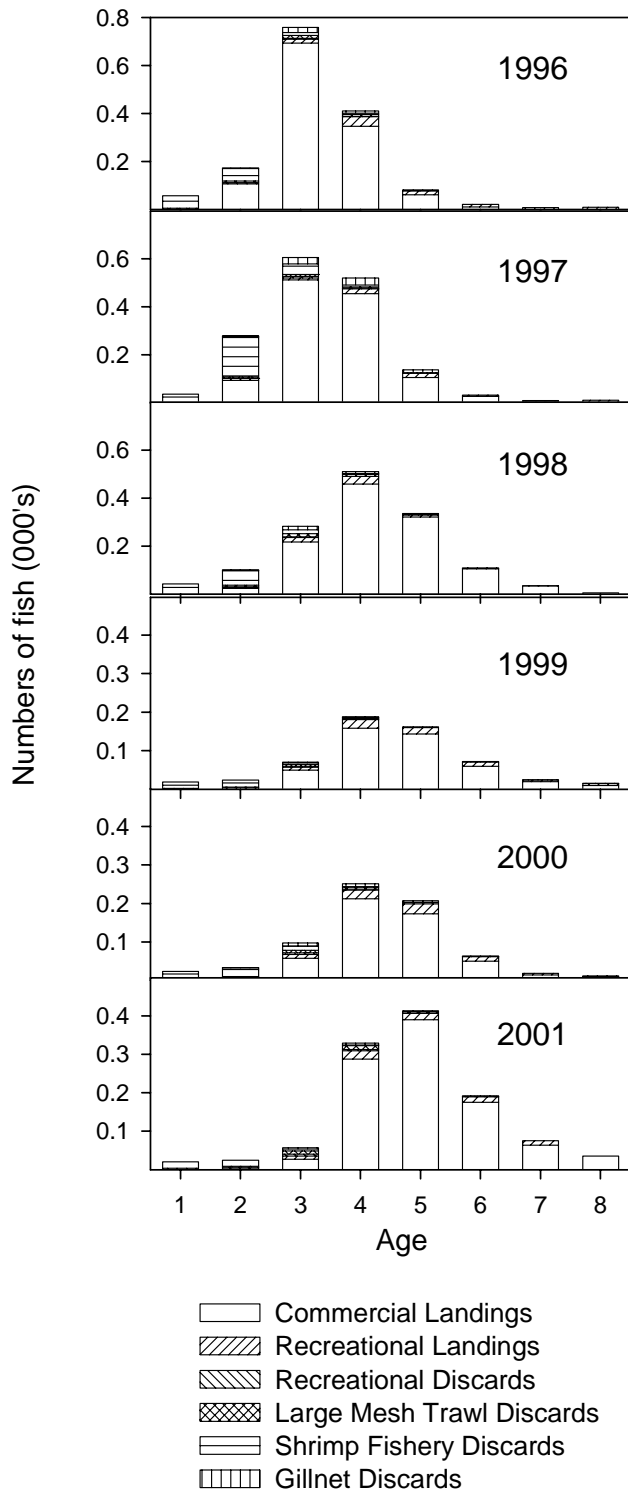


Figure B2.11. Continued.

Gulf of Maine Winter Flounder numbers of fish in the catch at age

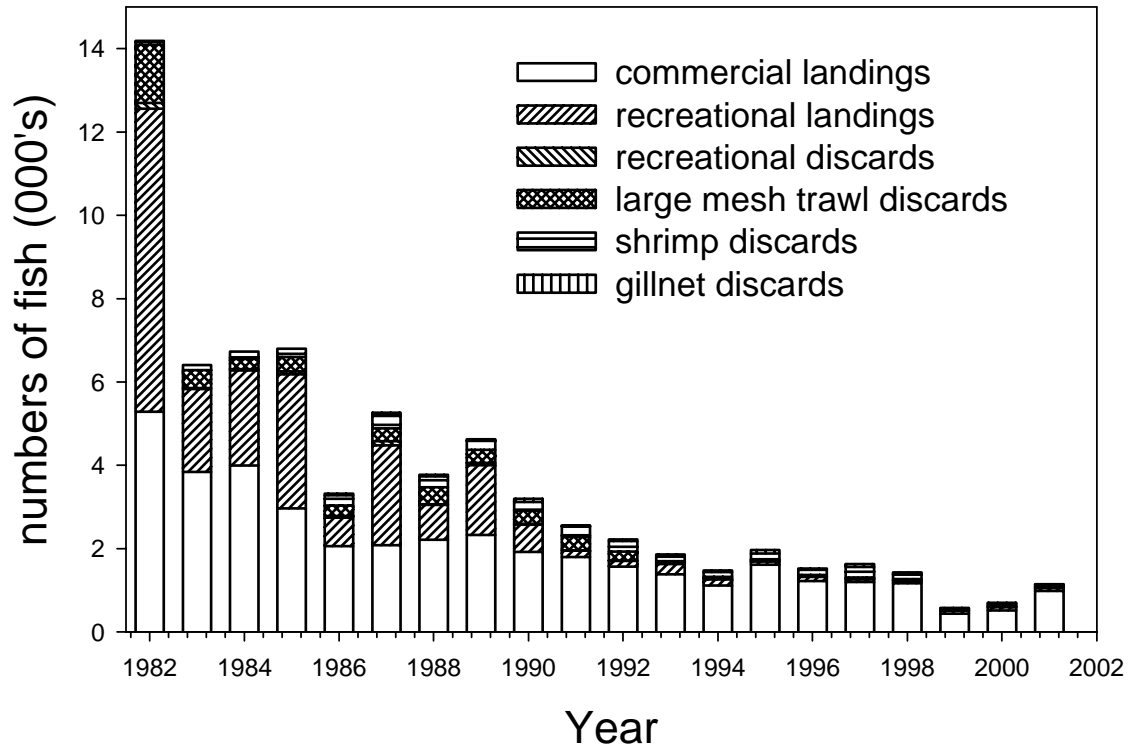


Figure B2.12. Gulf of Maine winter flounder catch composition in numbers

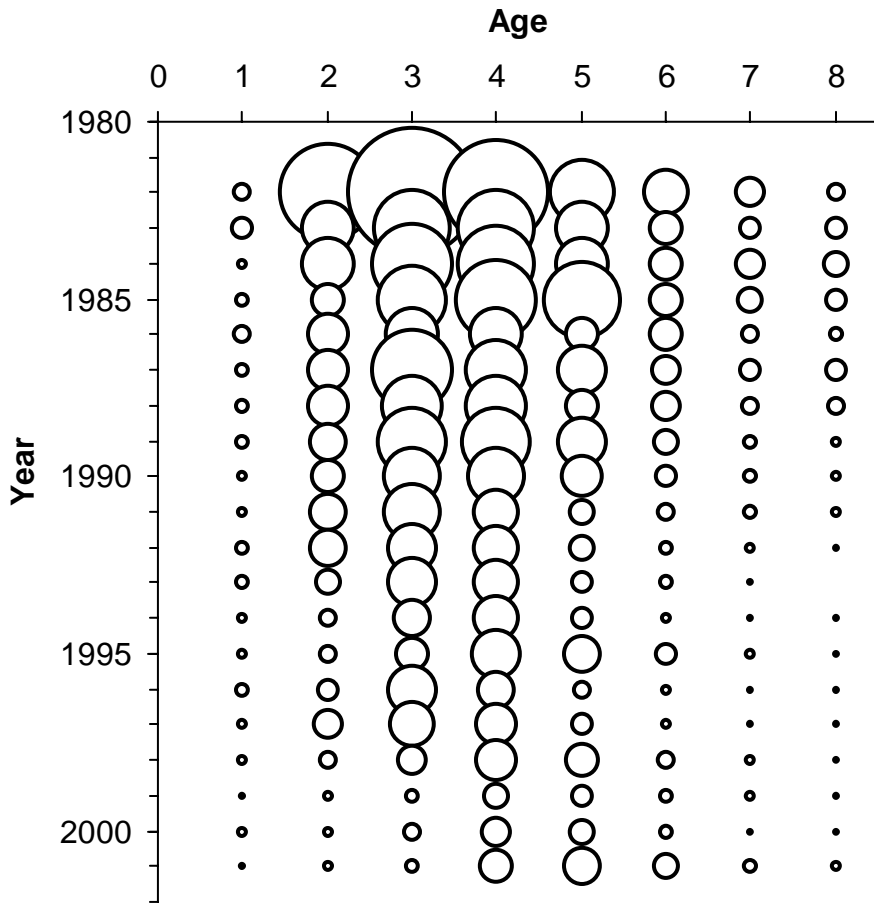


Figure B2.13. Total Gulf of Maine winter flounder catch at age.

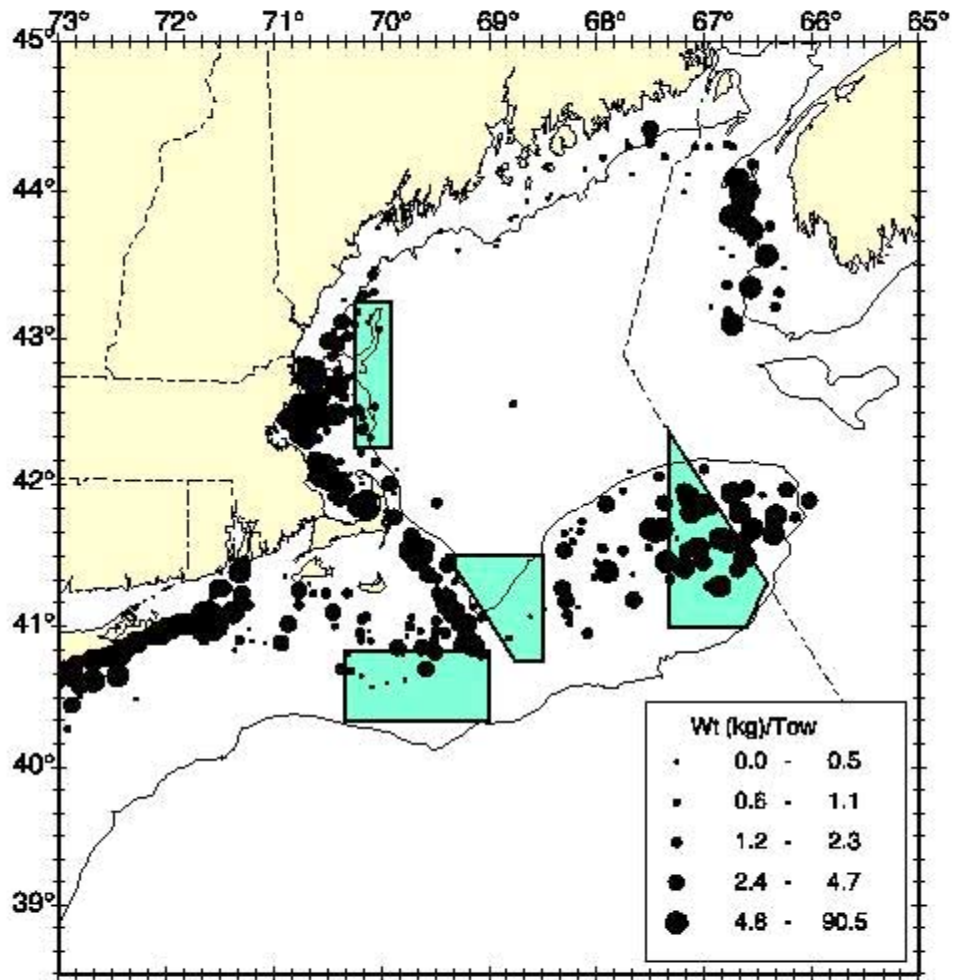


Figure B2.14. Distribution of winter flounder during the NEFSC spring bottom trawl surveys from 1995-1999.

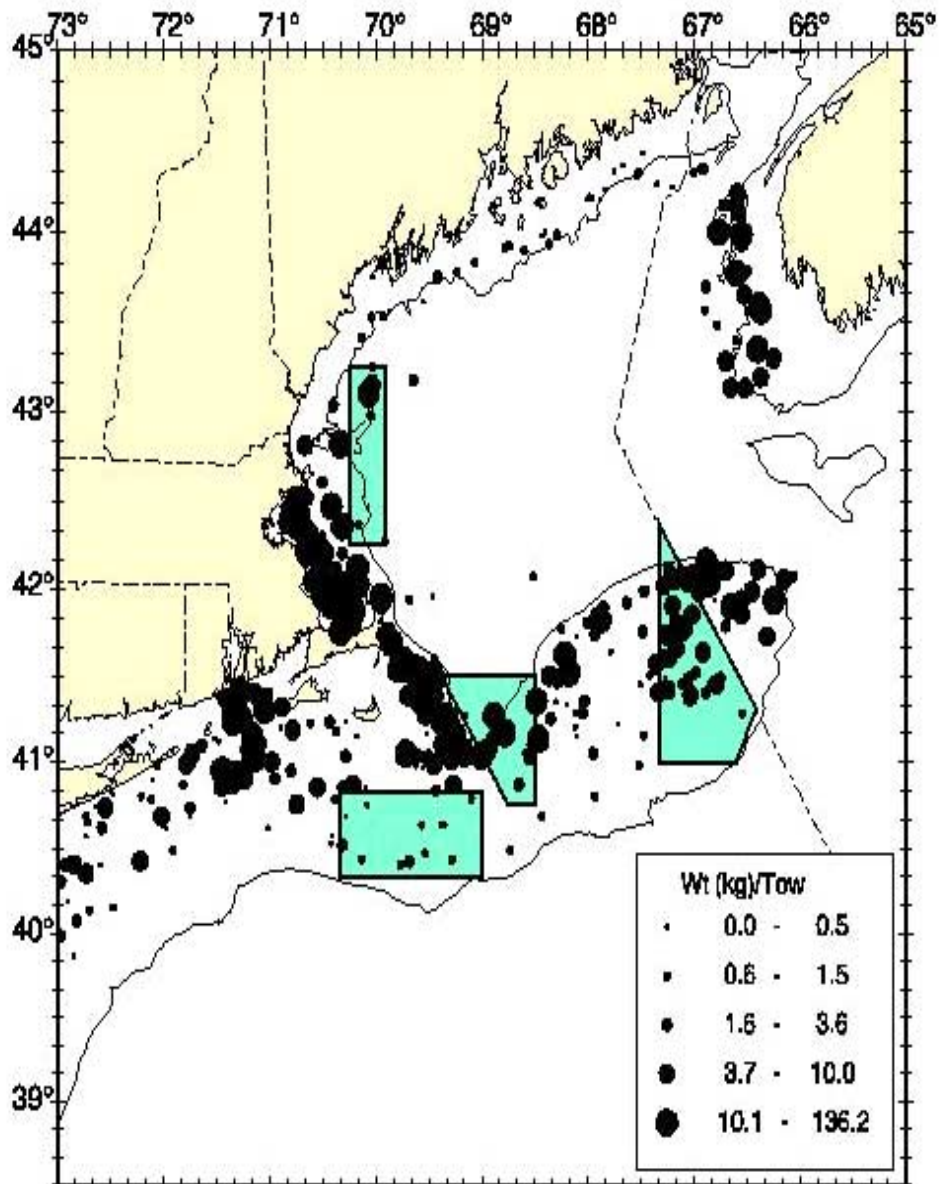


Figure B2.15. Distribution of winter flounder during the NEFSC fall bottom trawl surveys from 1995-1999.

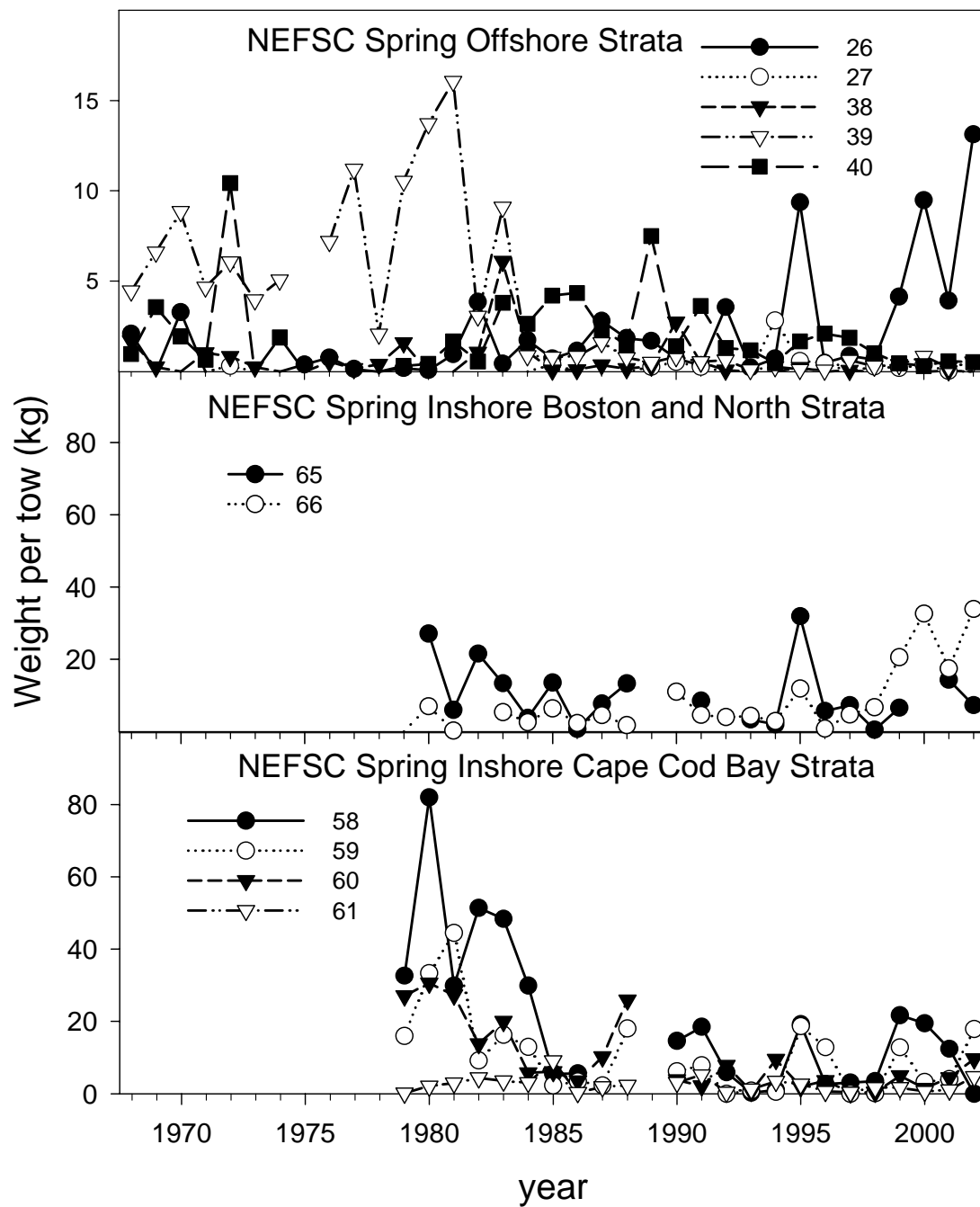


Figure B2.16. NEFCS spring Gulf of Maine winter flounder weight per tow trends among strata.

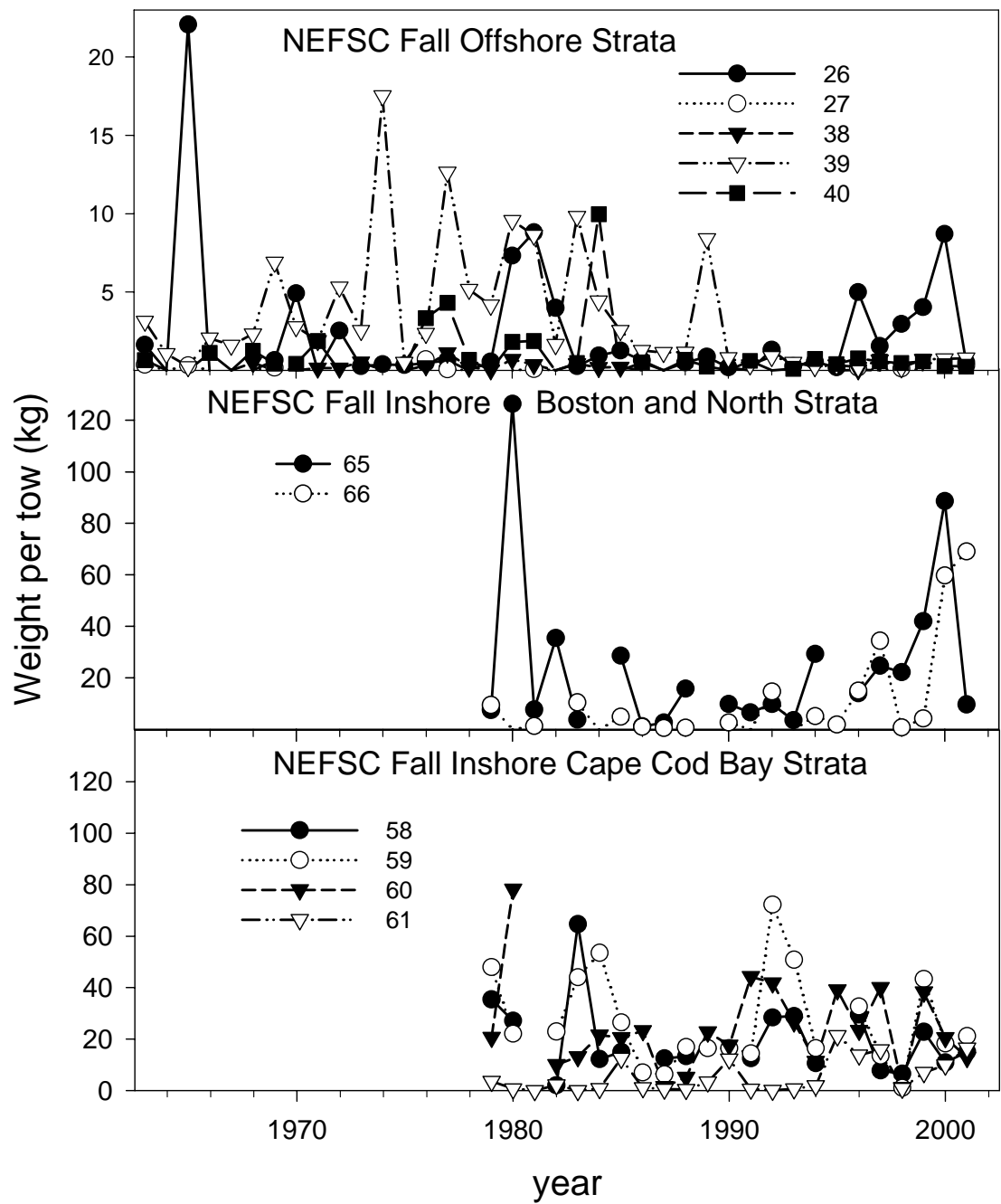


Figure B2.17. NEFCS fall Gulf of Maine winter flounder weight per tow trends among strata.

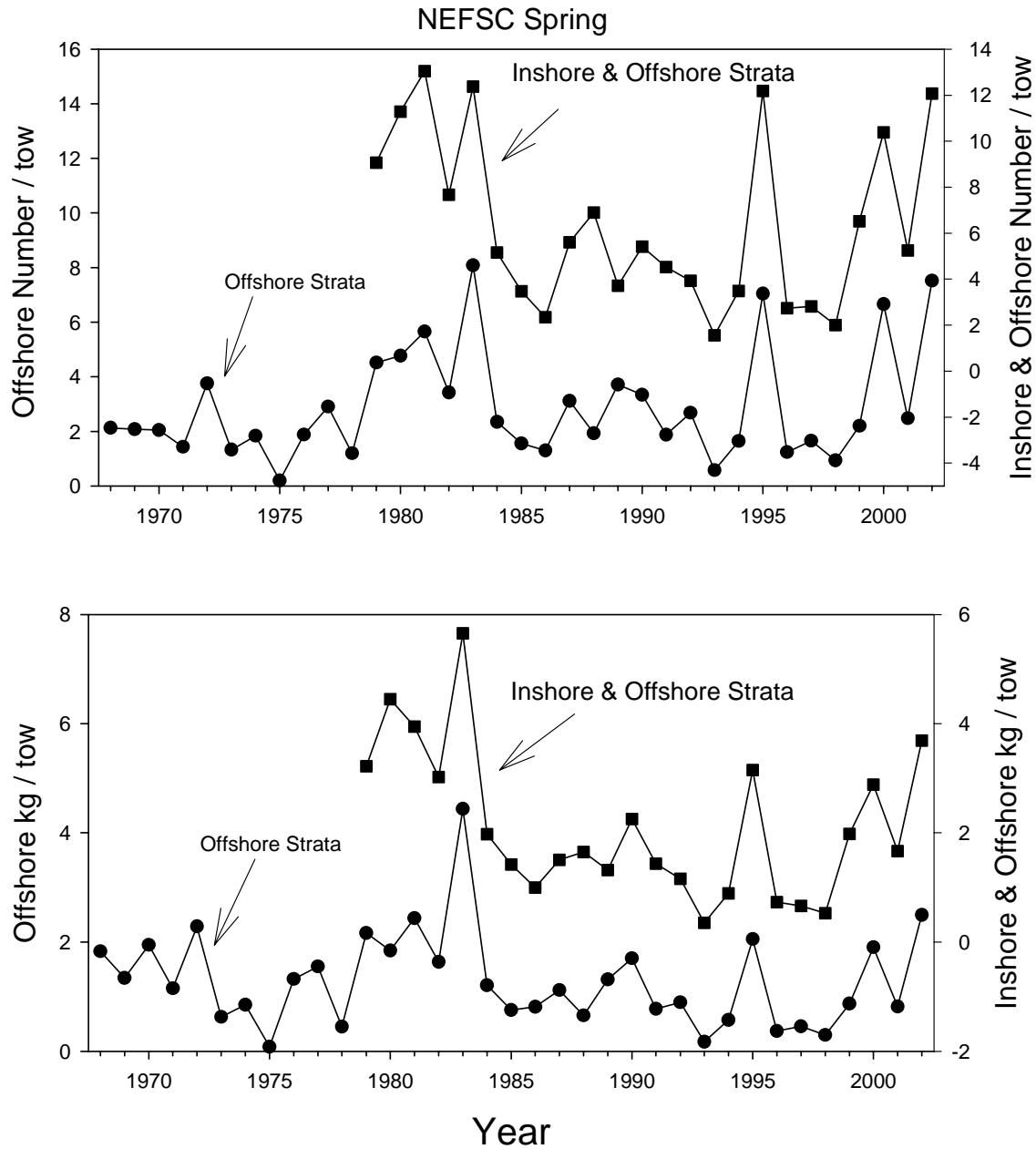


Figure B2.18. NEFSC spring offshore and inshore/offshore survey stratified mean number and mean weight (kg) per tow for Gulf of Maine winter flounder. Trawl door conversion factors are use where appropriate.

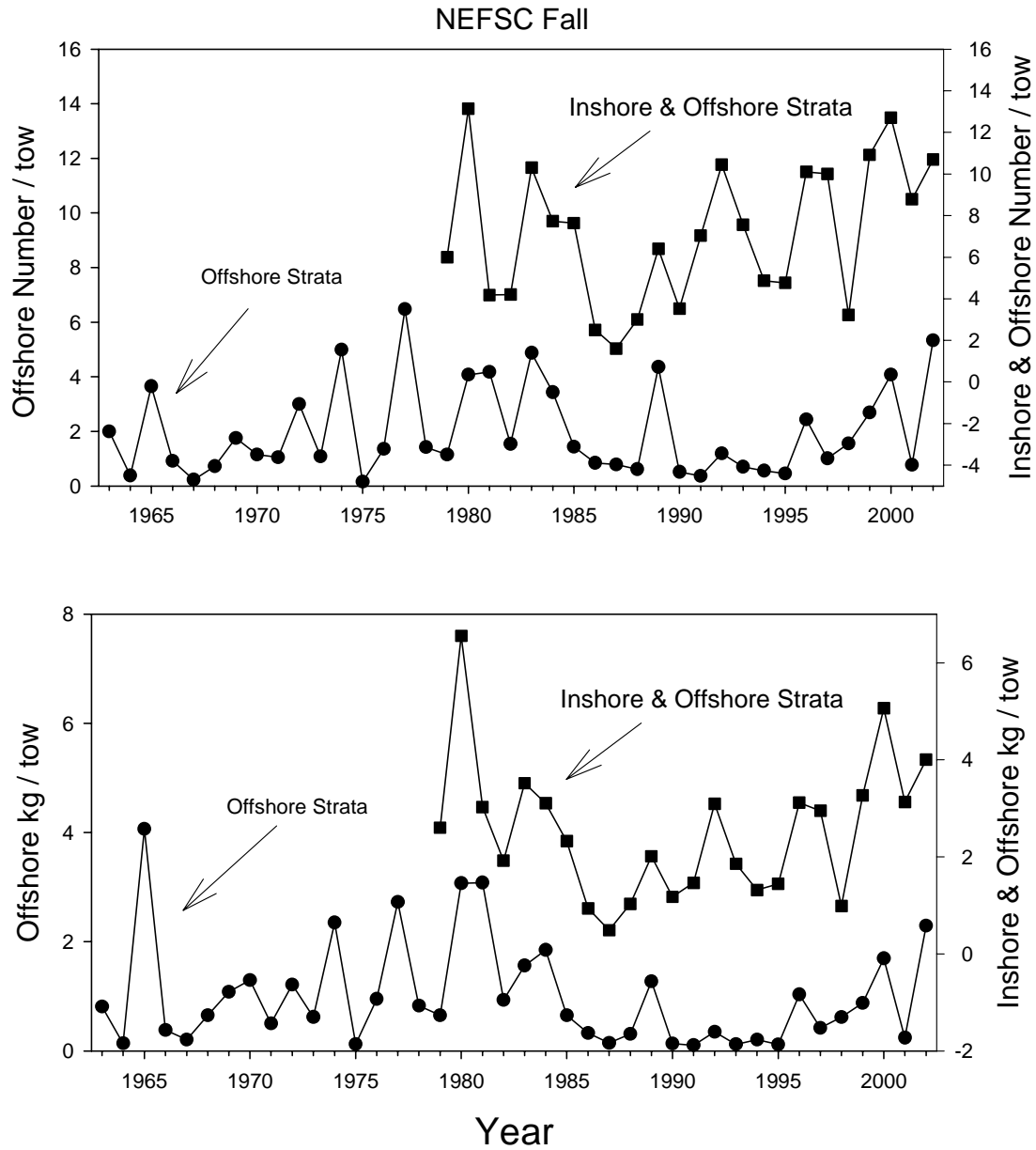


Figure B2.19. NEFSC Fall offshore and inshore/offshore survey stratified mean numbers and mean weight (kg) per tow for Gulf of Maine winter flounder. Trawl door conversion factors are use where appropriate. Data for 2002 is preliminary.

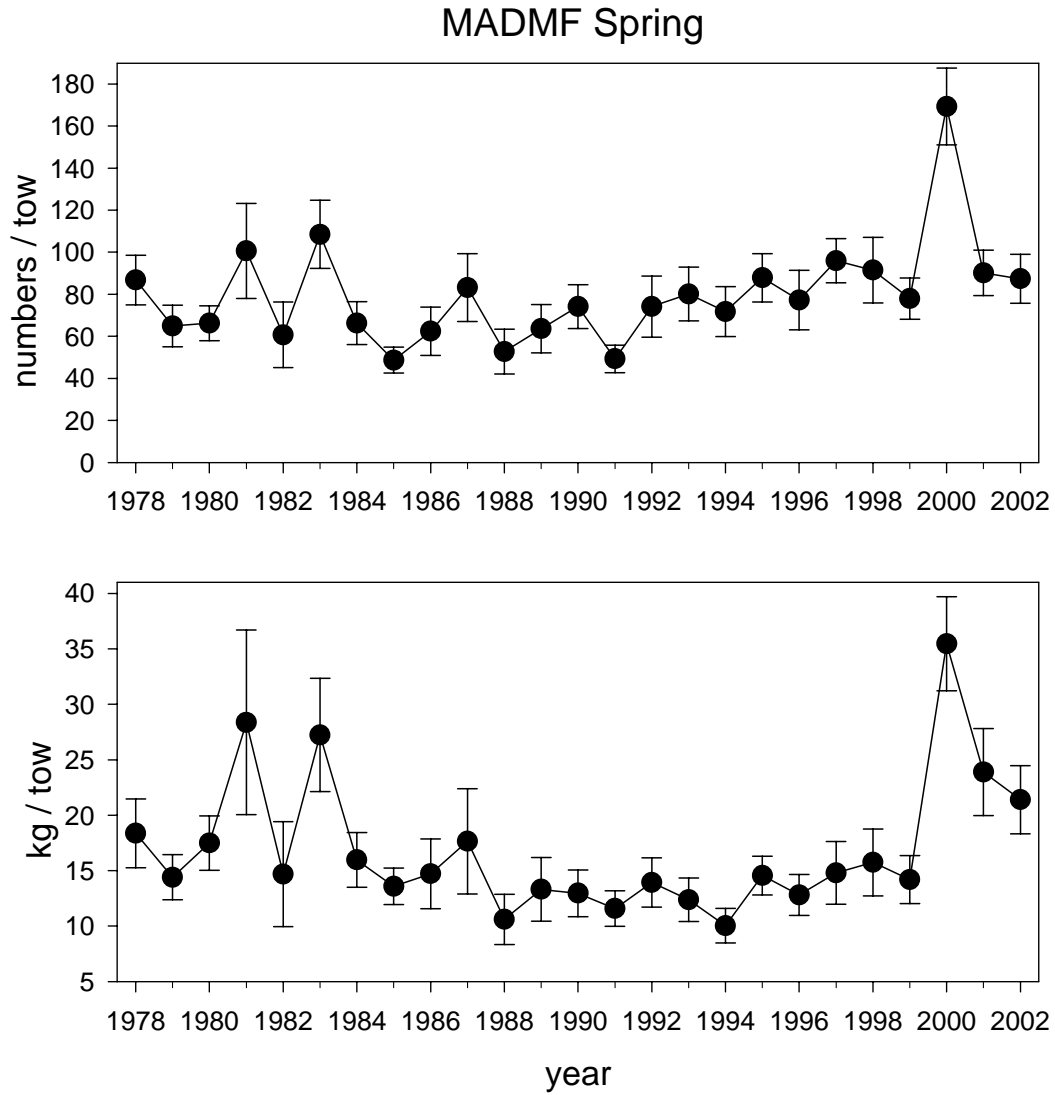


Figure B2.20. Massachusetts Division of Marine Fisheries (MADMF) spring survey stratified mean numbers and mean weight (kg) per tow for Gulf of Maine winter flounder.

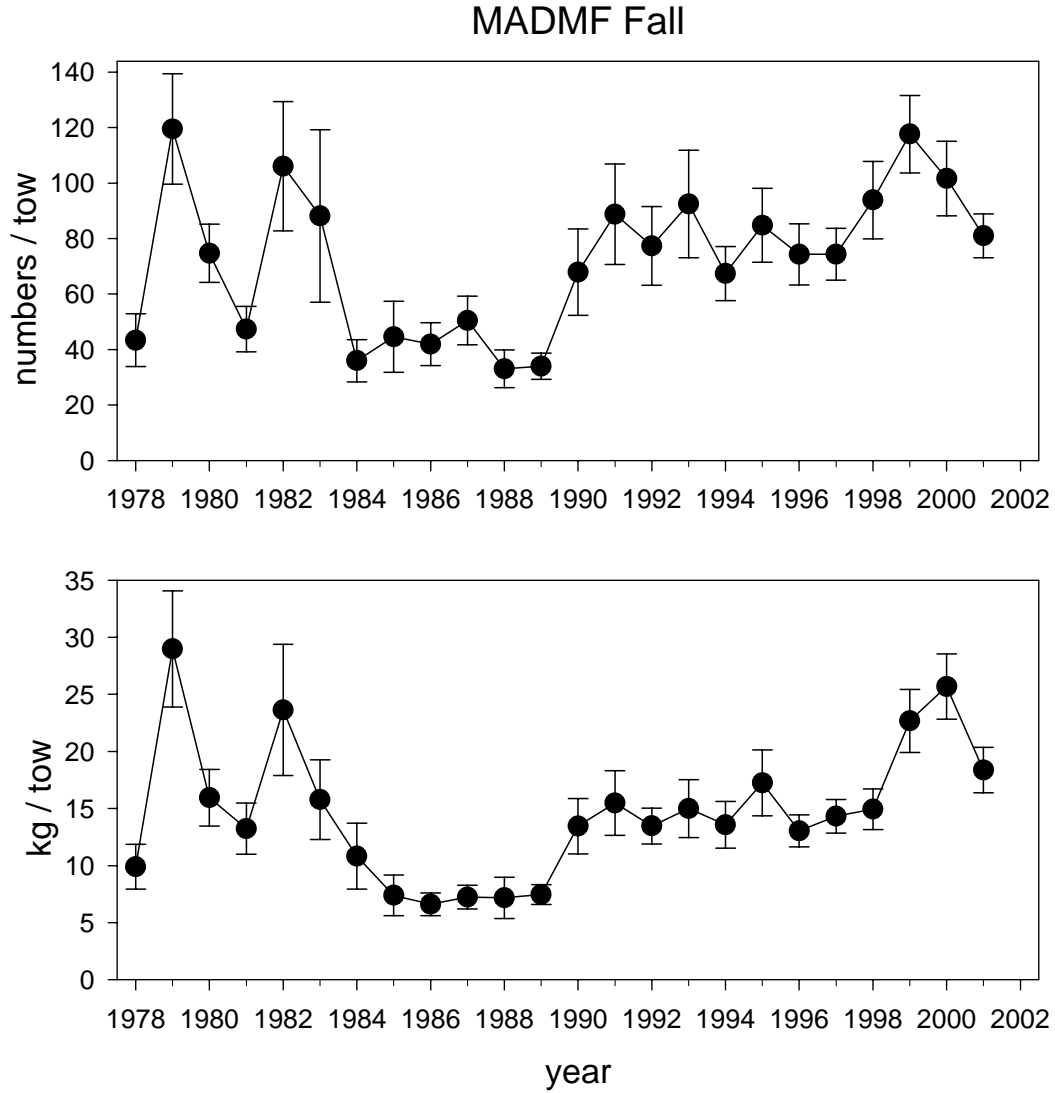


Figure B2.21. Massachusetts Division of Marine Fisheries (MDMF) fall survey stratified mean numbers and mean weight (kg) per tow for Gulf of Maine winter flounder.

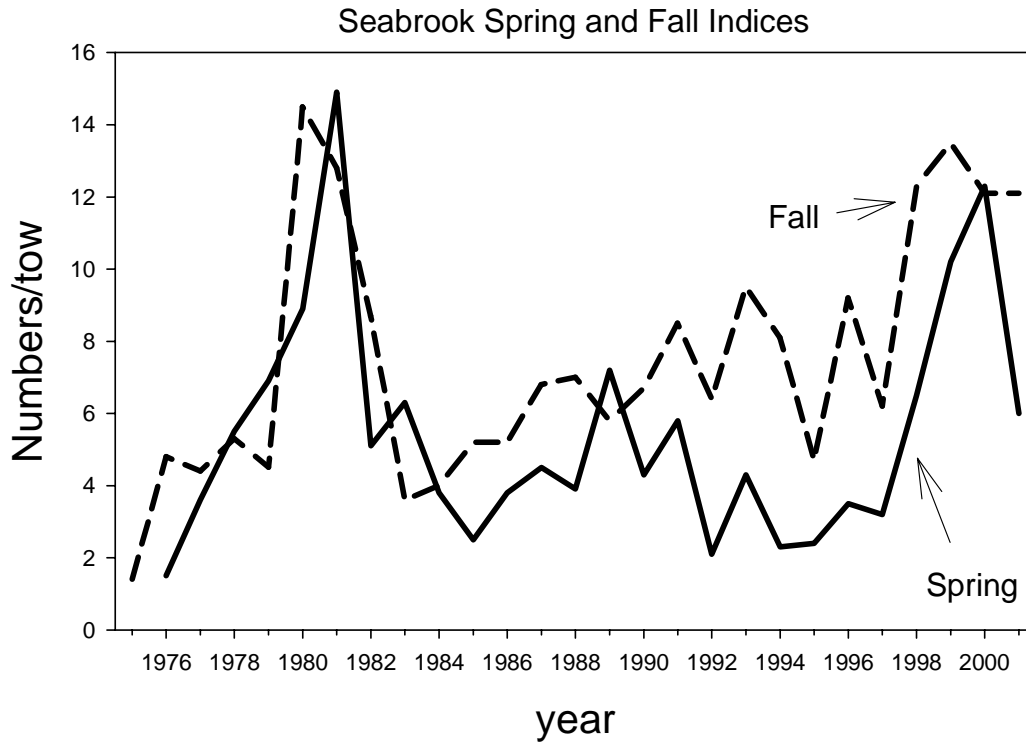


Figure B2.22. Seabrook Nuclear Power Plant in New Hampshire spring and fall survey mean numbers per tow for Gulf of Maine winter flounder. No length data exists from 1975 to 1984 and 1993.

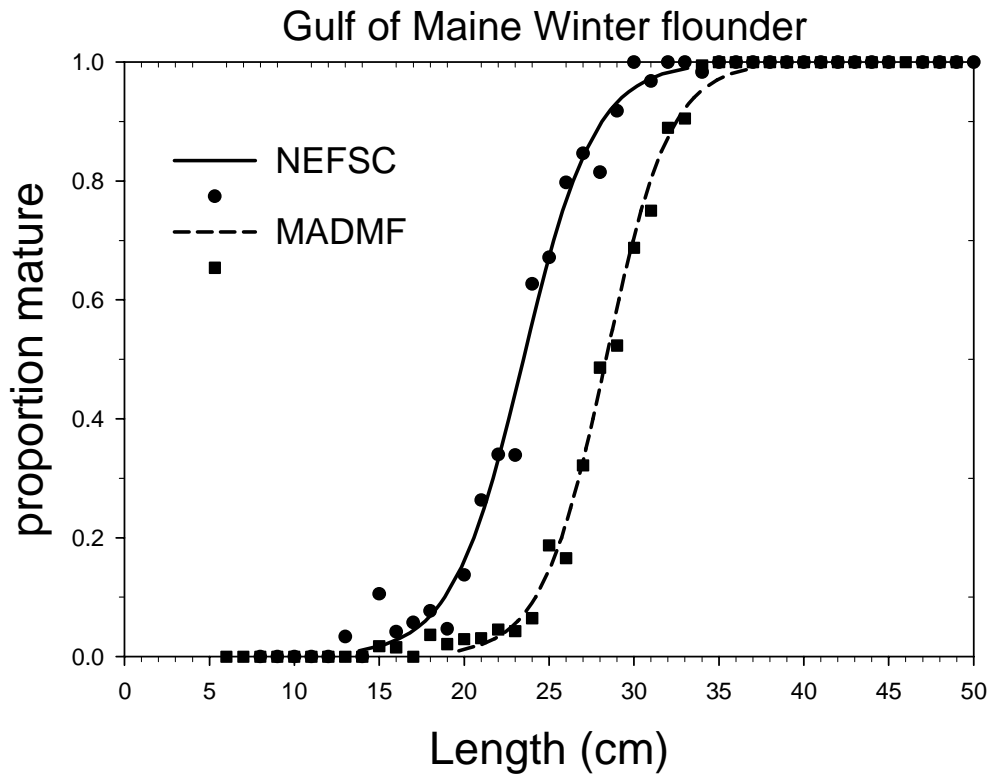


Figure B2.23. Comparison of Gulf of Maine winter flounder maturity ogives (sexes combined) estimated from the MADMF spring survey (strata 25-36) and the spring NEFSC survey data limited in inshore MA strata 58-66.

Gulf of Maine Winter Flounder Total Catch and Fishing Mortality

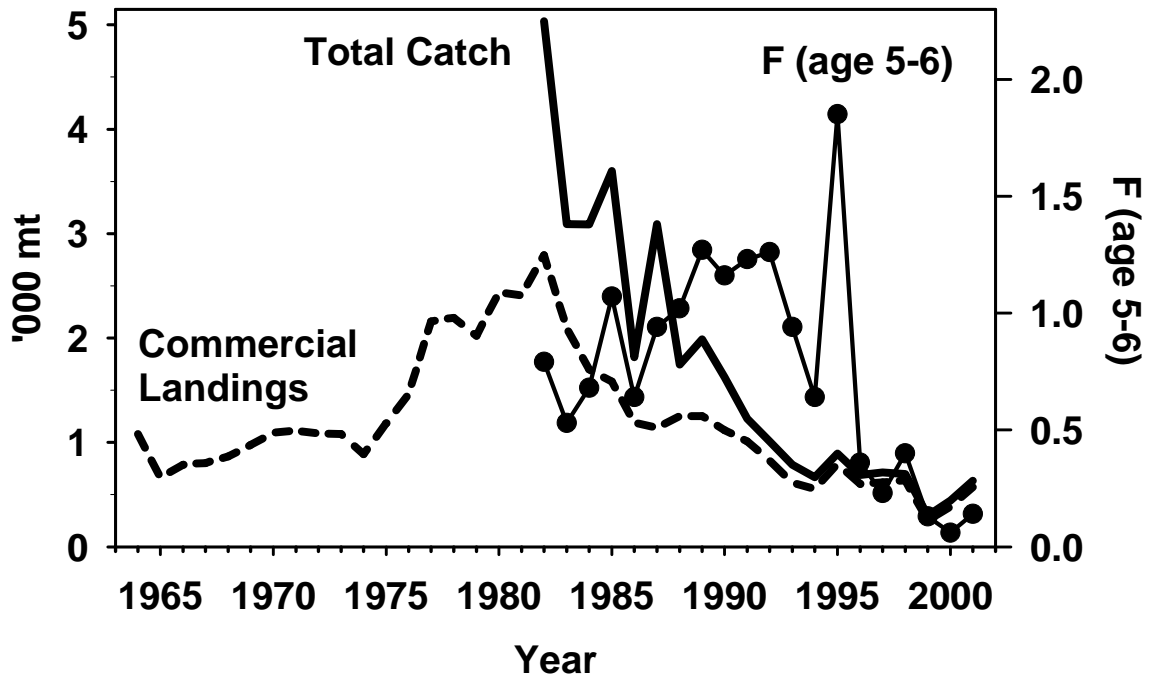


Figure B2.24. Total catch (landings and discards, '000 mt), commercial landings ('000 mt), and fishing mortality rate (F, ages 5-6, unweighted) for Gulf of Maine winter flounder.

Gulf of Maine Winter Flounder Precision of 2001 Estimates for SSB and F

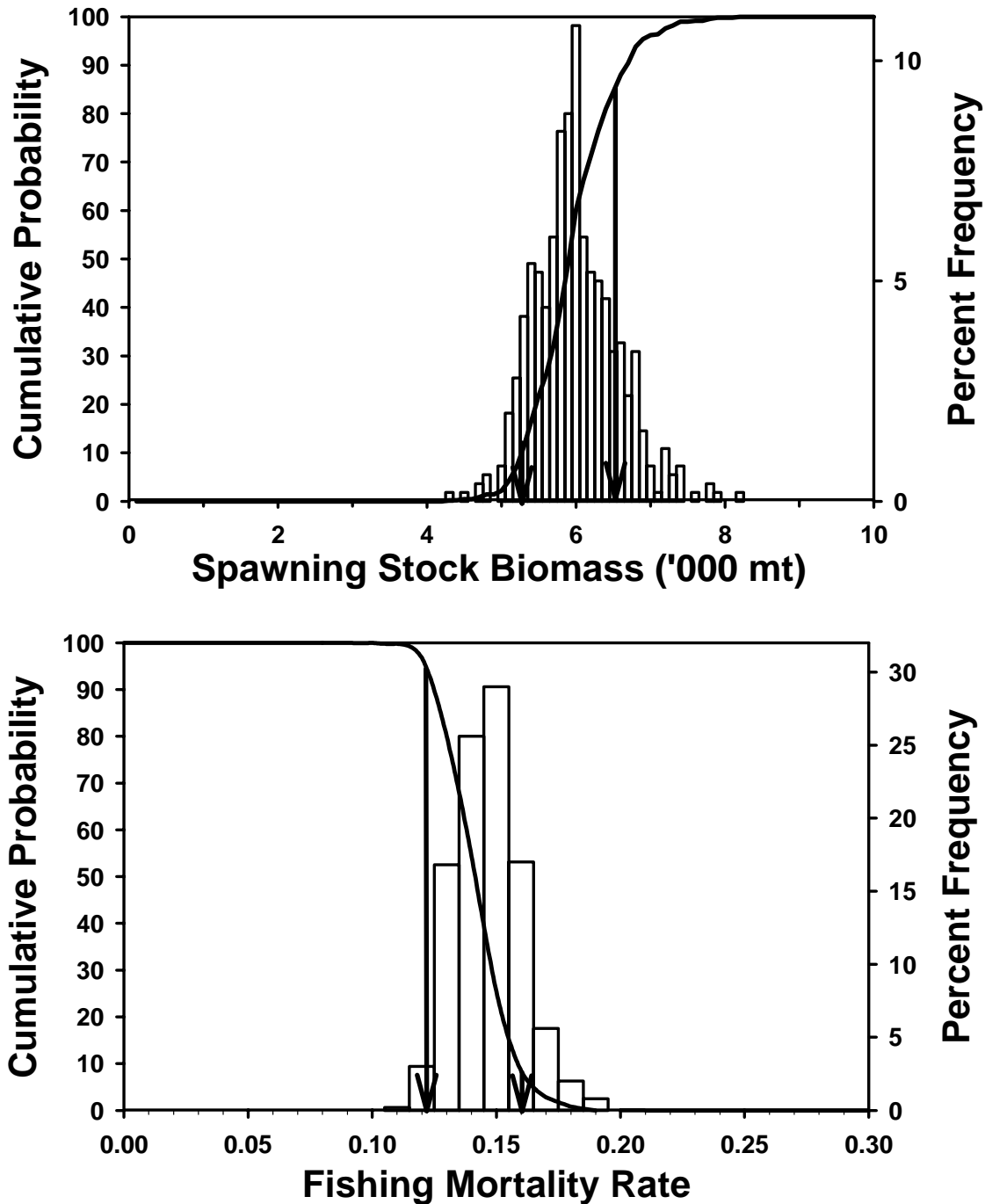


Figure B2.25. Precision of estimates of spawning stock biomass ('000 mt) and fishing mortality rate (F, ages 5-6, unweighted) in 2001 for Gulf of Maine winter flounder. Vertical bars display the range of the bootstrap estimates and the probability of individual values in the range. The solid curve gives the probability of SSB that is less or fishing mortality that is greater than any value along the X axis.

Gulf of Maine Winter Flounder SSB and Recruitment

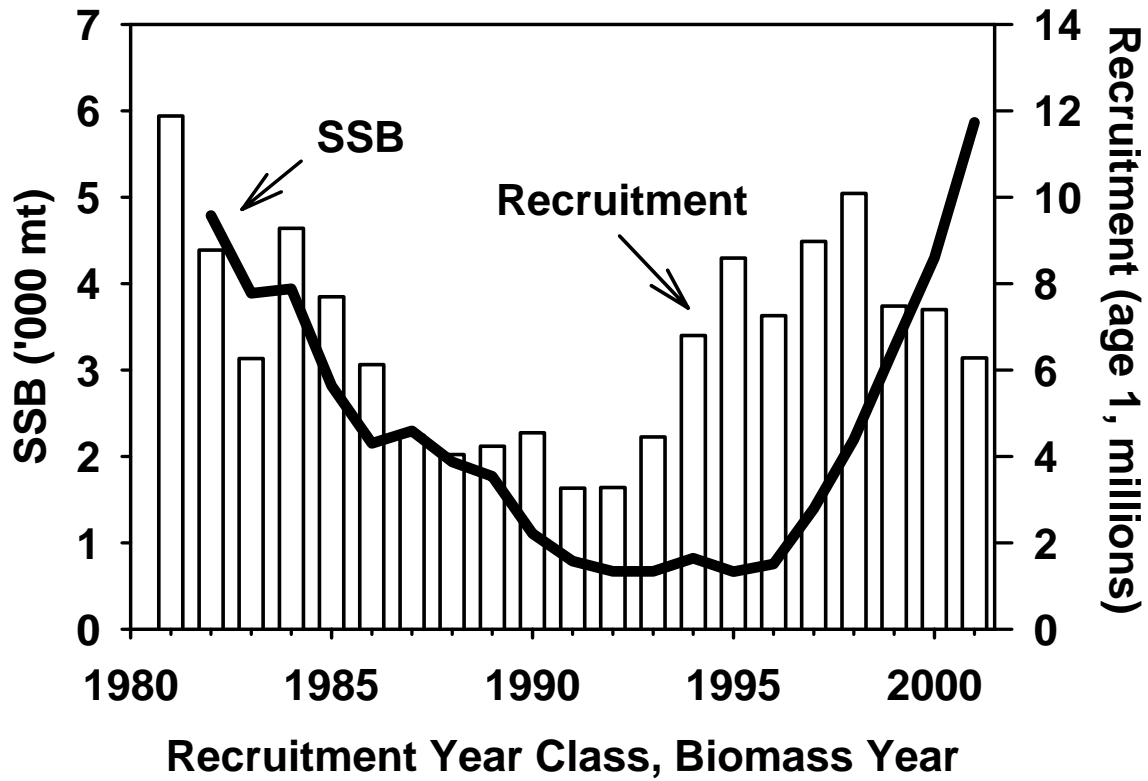


Figure B2.26. Spawning stock biomass (SSB, '000 mt) and recruitment (millions of fish at age-1) for Gulf of Maine winter flounder.

Gulf of Maine winter flounder retrospective VPAs

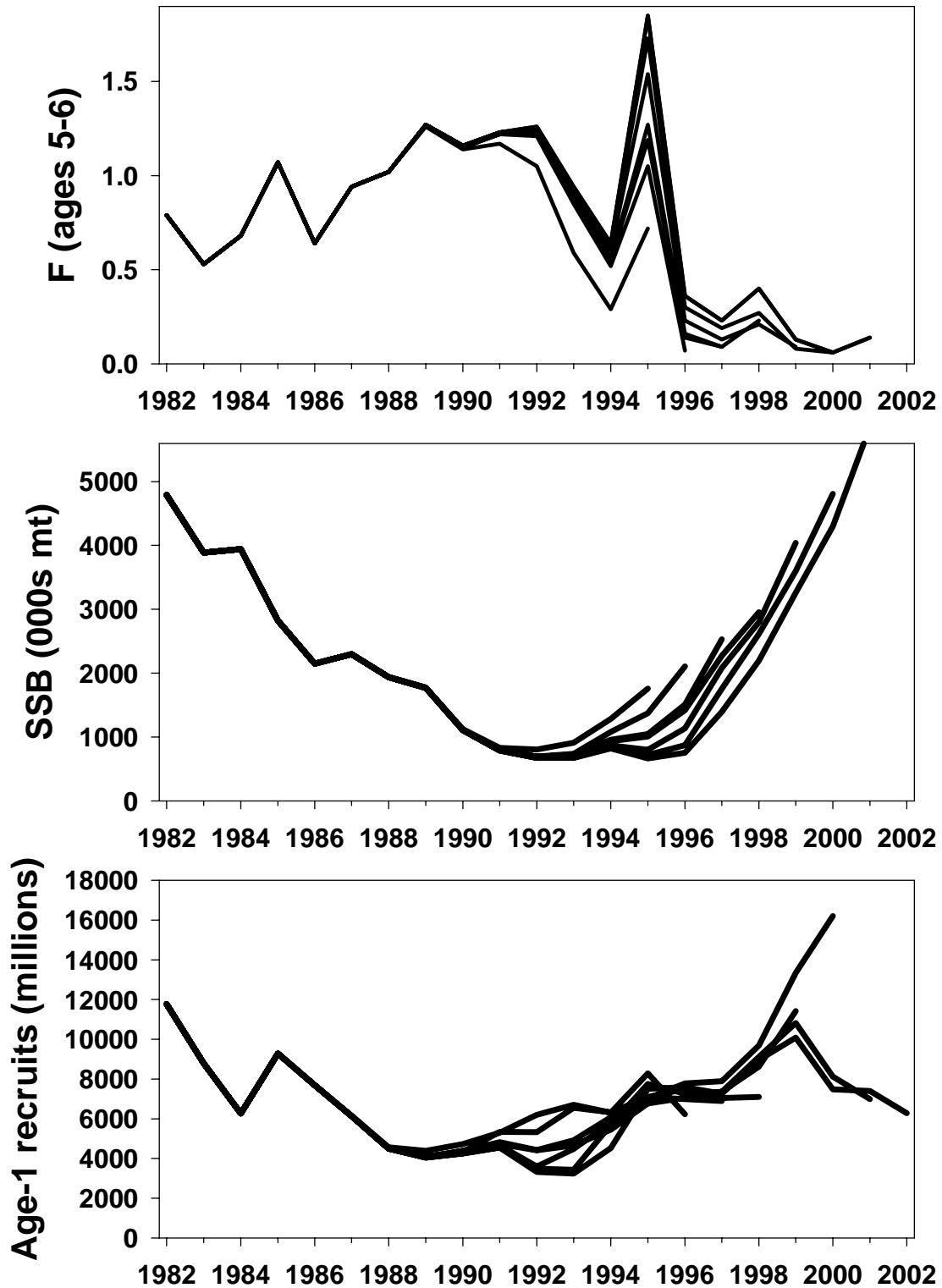


Figure B2.27. Retrospective VPAs for Gulf of Maine winter flounder.

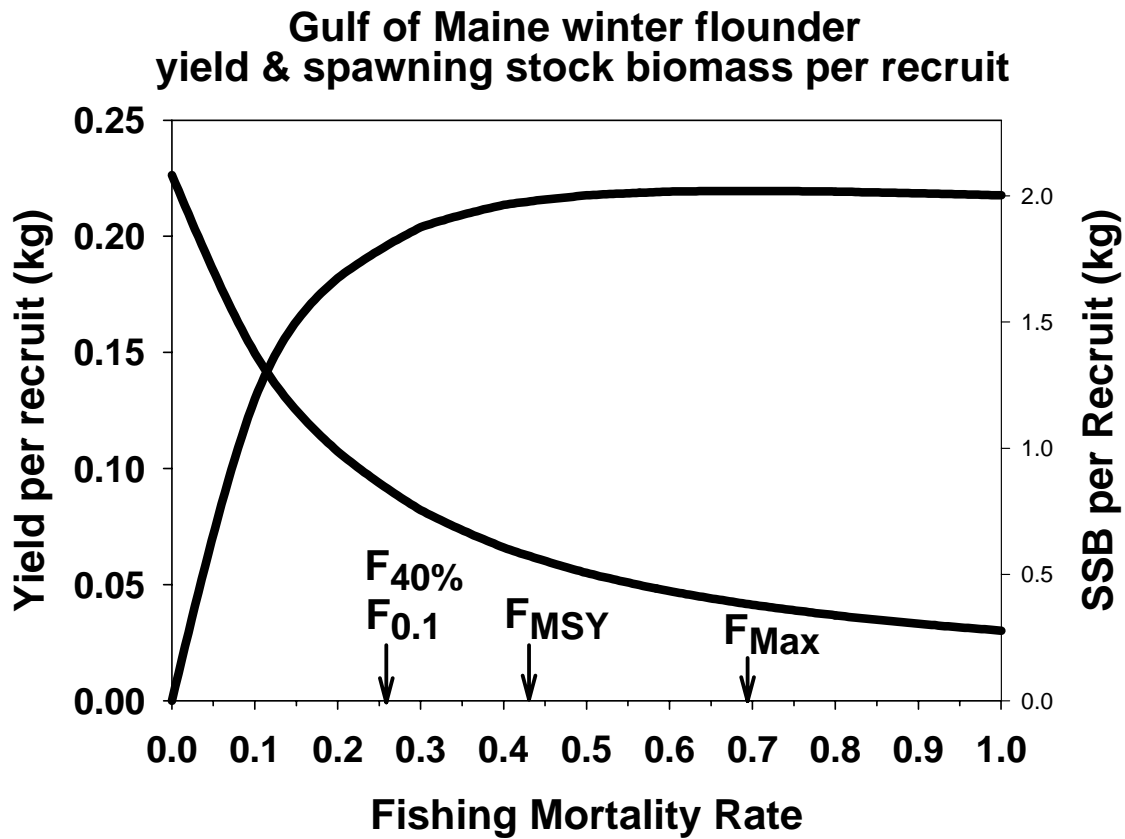


Figure B2.28. Yield and spawning stock biomass per recruit estimates for Gulf of Maine winter flounder.

Gulf of Maine Winter Flounder Beverton-Holt Model

SSB - RECRUIT DATA FOR 1982-2001 YEAR CLASSES

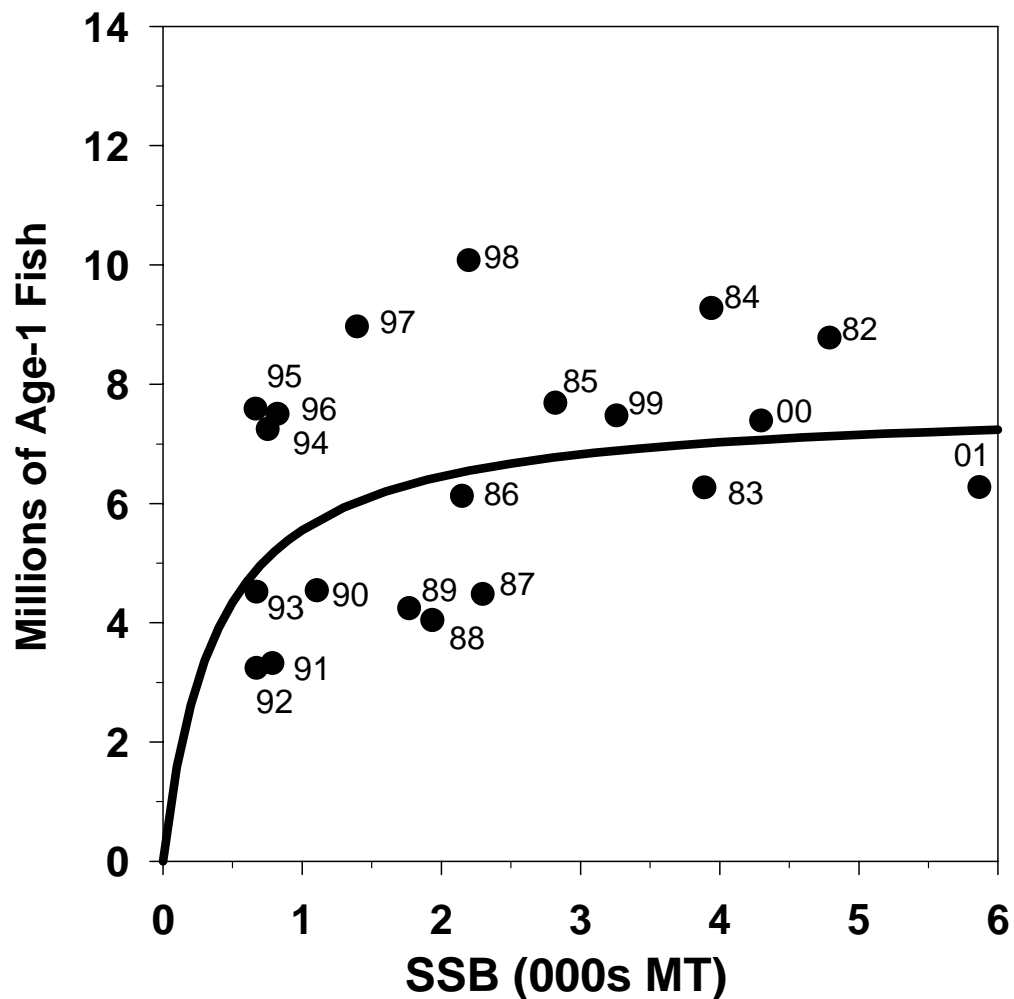


Figure B2.29. Beverton-Holt stock-recruitment model for Gulf of Maine winter flounder.

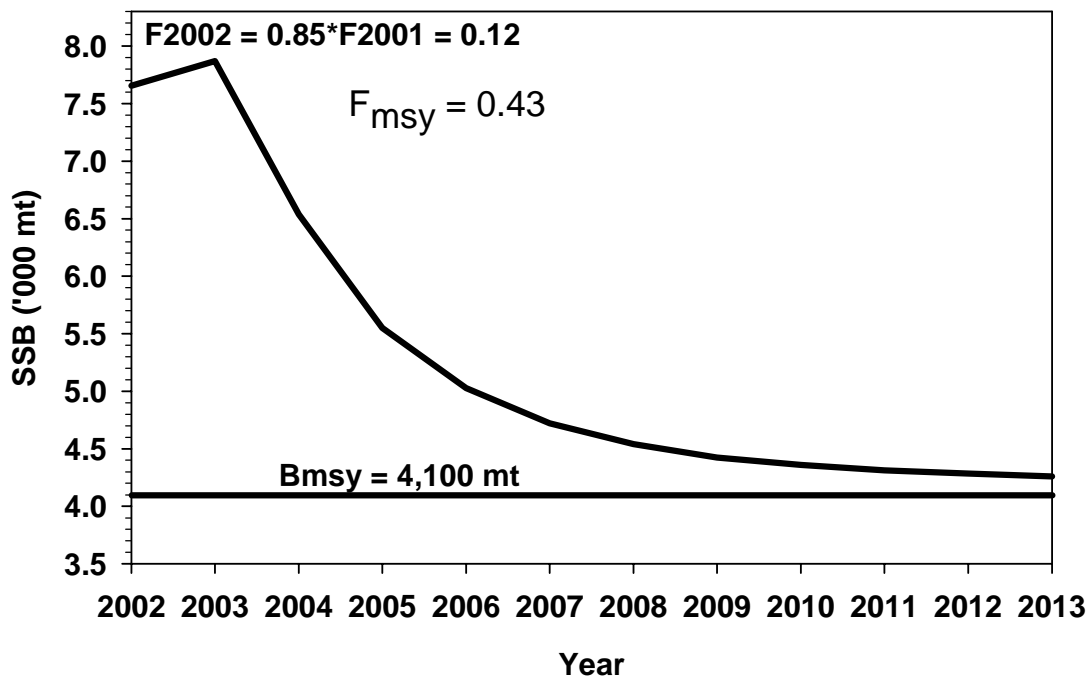


Figure B2.30. Median (50% probability) of forecast spawning stock biomass (SSB, mt) for Gulf of Maine winter flounder assuming $F_{2002} = 0.85 * F_{2001} = 0.12$ and F_{msy} fishing mortality rates during 2003-2013.

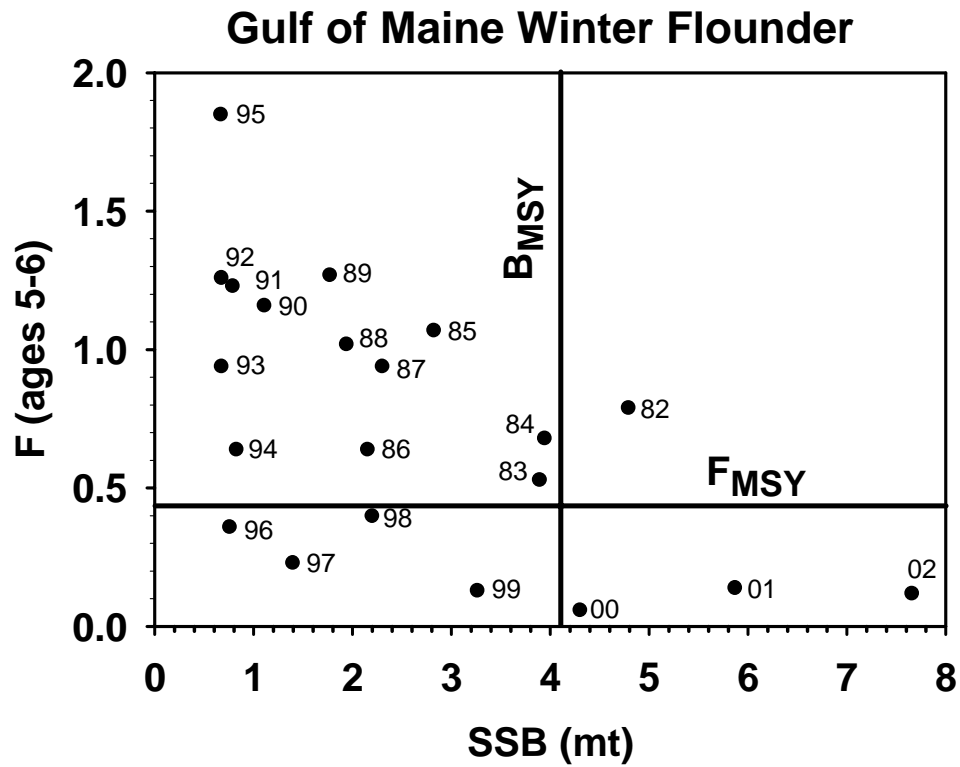


Figure B2.31. SSB and F (ages 5-6) for Gulf of Maine winter flounder. Biological reference points calculated from the Beverton-Holt model are also shown.