Figure D1. Northwest Atlantic Fisheries Organization (NAFO) Subareas 3-6 and Divisions in the Northwest Atlantic Ocean.
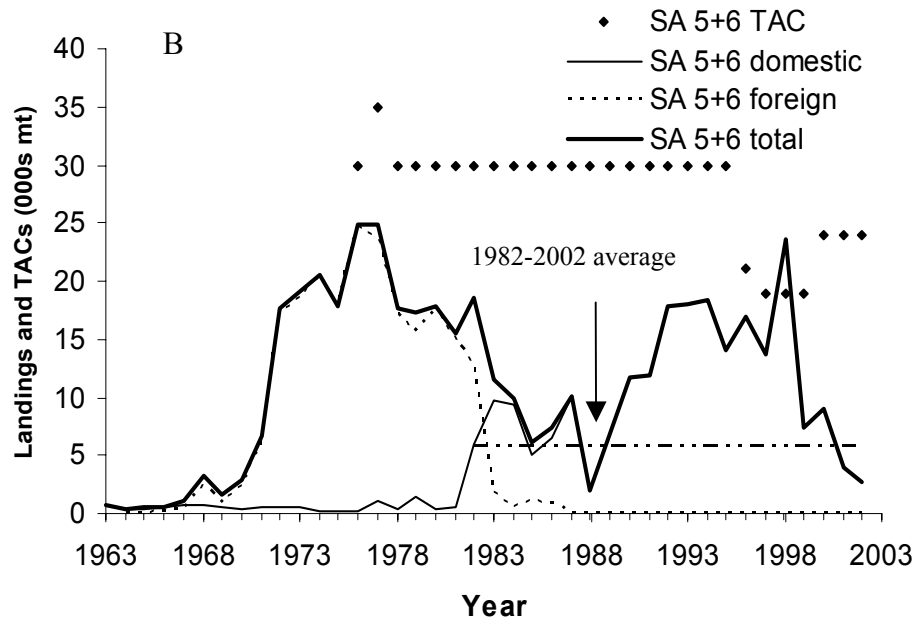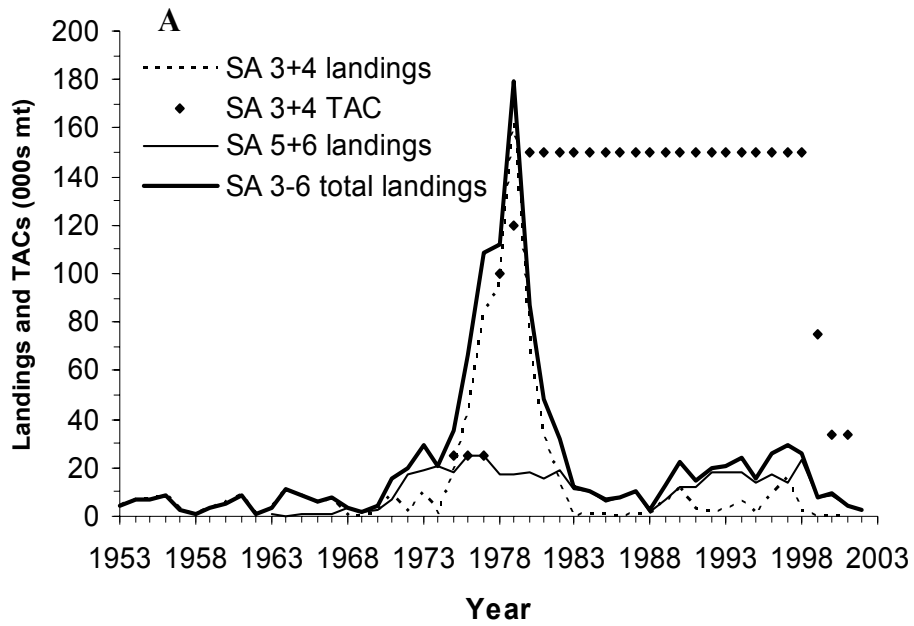
Figure D2. Landings of *Illex illecebrosus* in (A) NAFO Subareas 3-6 and (B) NAFO
Subareas 5+6 (U.S. EEZ), with respect to TAC limits, during 1963-2002.
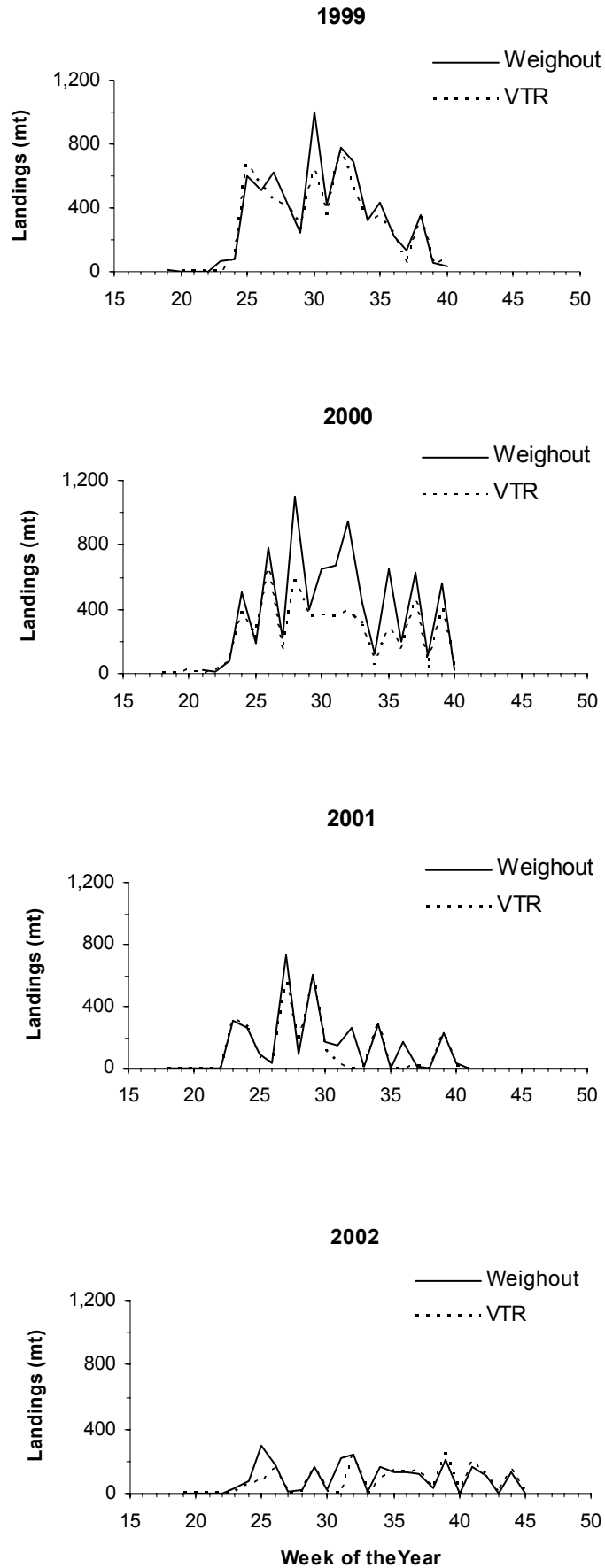
Figure D3. Trends in weekly *Illex illecebrosus* landings from the Weighout database versus the Vessel Trip Report database during 1999-2002.
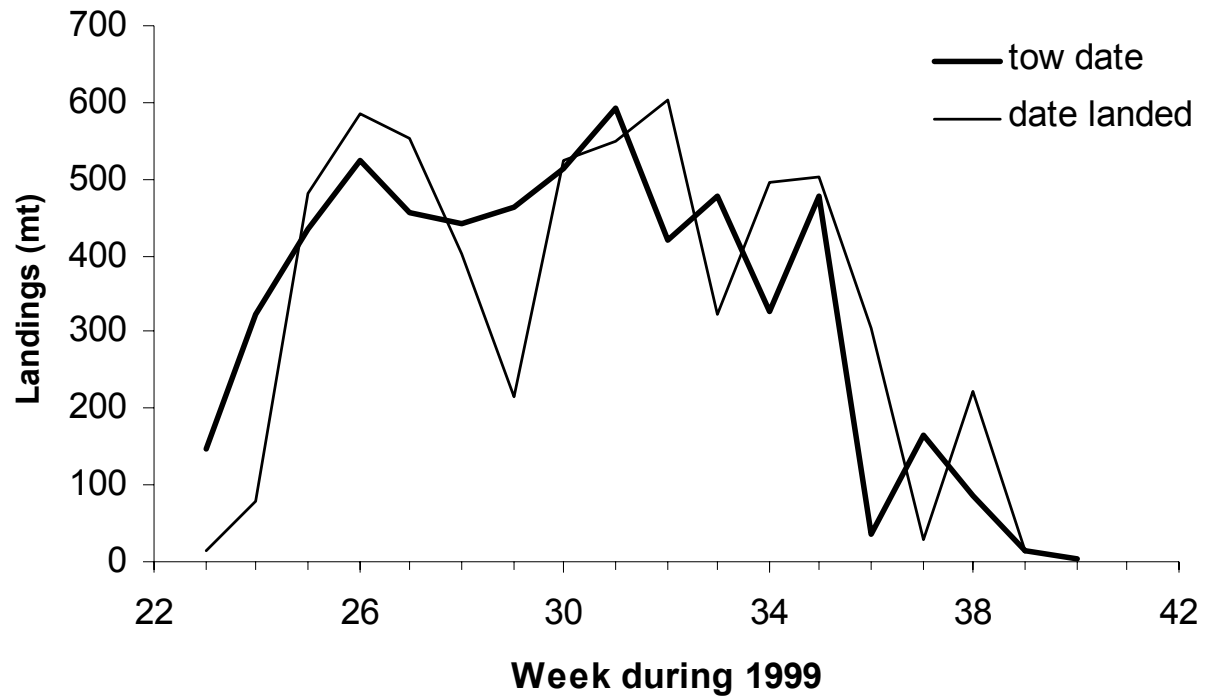
Figure D4.   Weekly trends in *Illex illecebrosus* landings (mt), during 1999, from tow-based data provided by vessel operators and assigned to a week of the year based on date landed versus tow date.
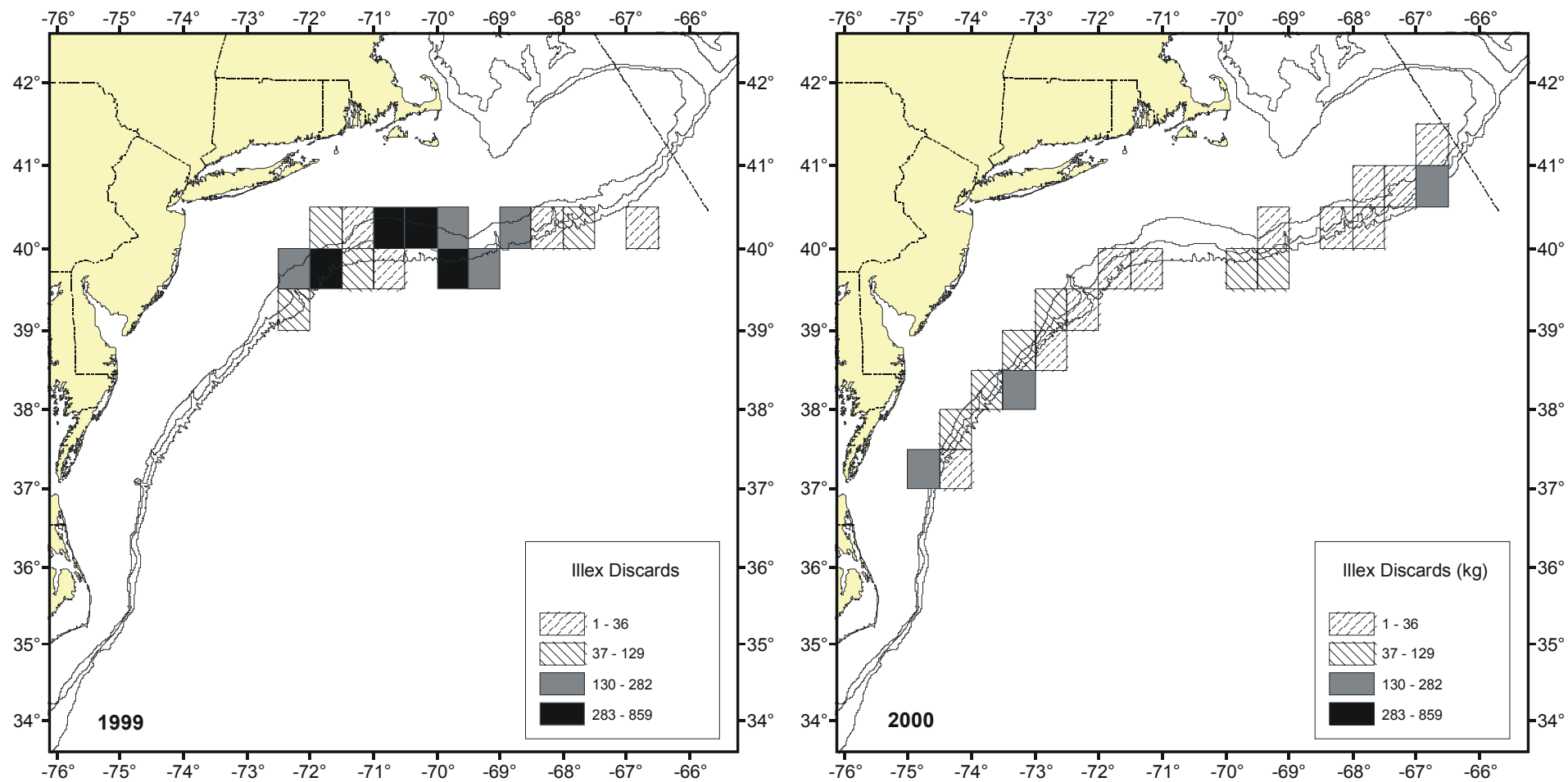
Figure D5. Spatial distribution of *Illex illecebrosus* discards (kg), by quarter-degree square, in *Loligo pealeii* trips (≥ 25 % of trip landed weight) sampled by observers from the NEFSC Observer Program during January-April and November-December, 1999-2000.
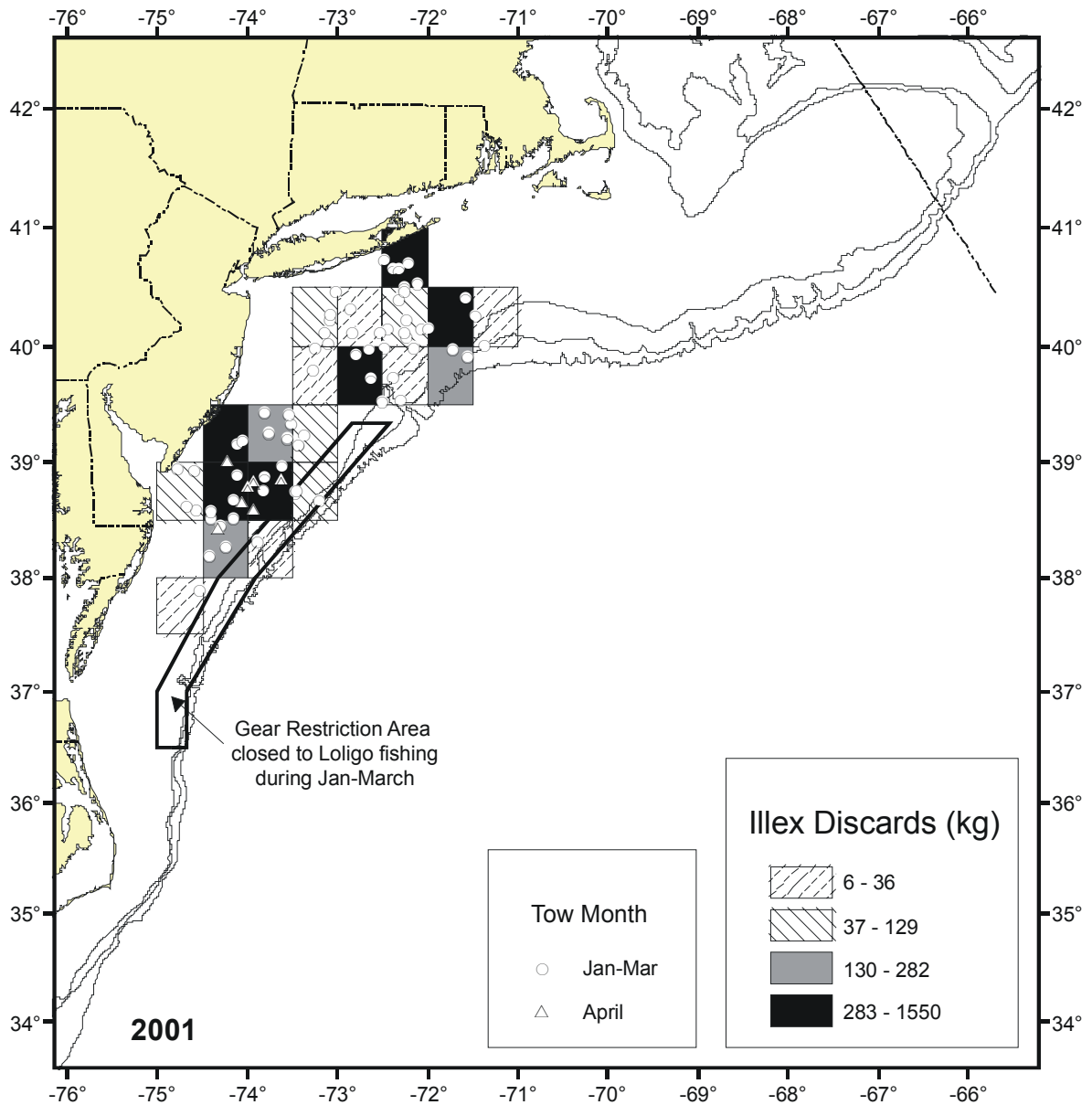
Figure D6. Spatial distribution of *Illex illecebrosus* discards (kg), by quarter-degree square, in *Loligo pealeii* trips (≥ 25 % of trip landed weight) sampled by observers from the NEFSC Observer Program during January-April and November-December, 2001. Circles and triangles indicate tow locations in relation to the small-mesh Southern Gear Restriction Area that is closed to *Loligo* and *Illex* fishing during January–March 15.
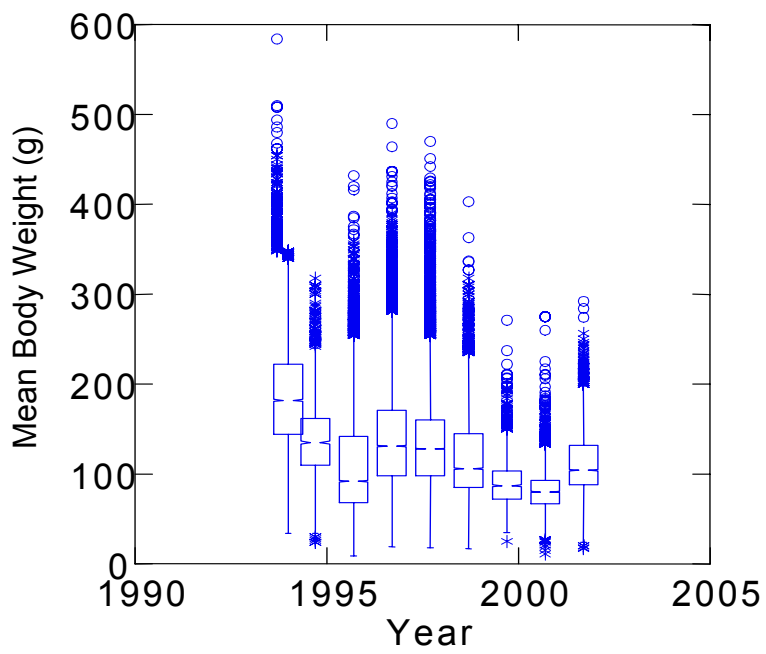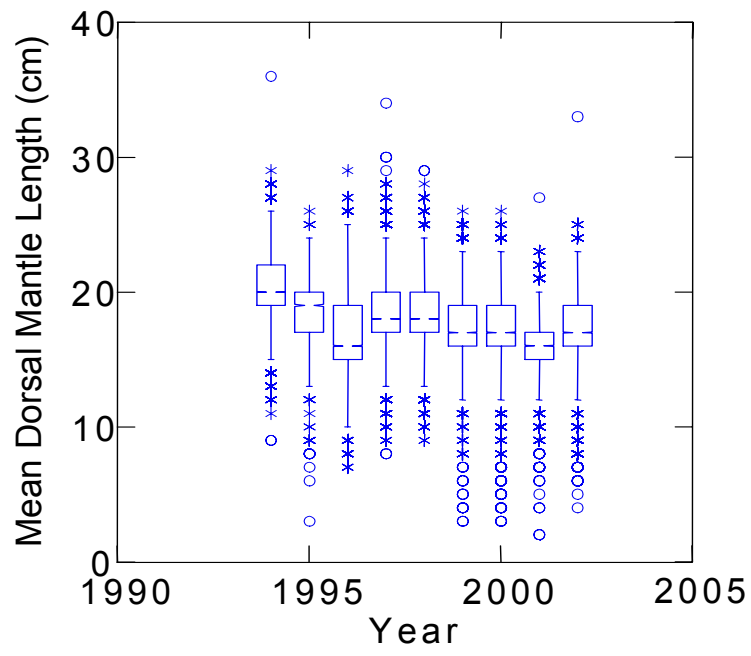
Figure D7. Annual trends in (A) mean mantle length (cm) and mean body weight (g) of *Illex illecebrosus* sampled from the landings during 1994-2002. The middle notch represents the median and the box boundaries represent the interquartile range.
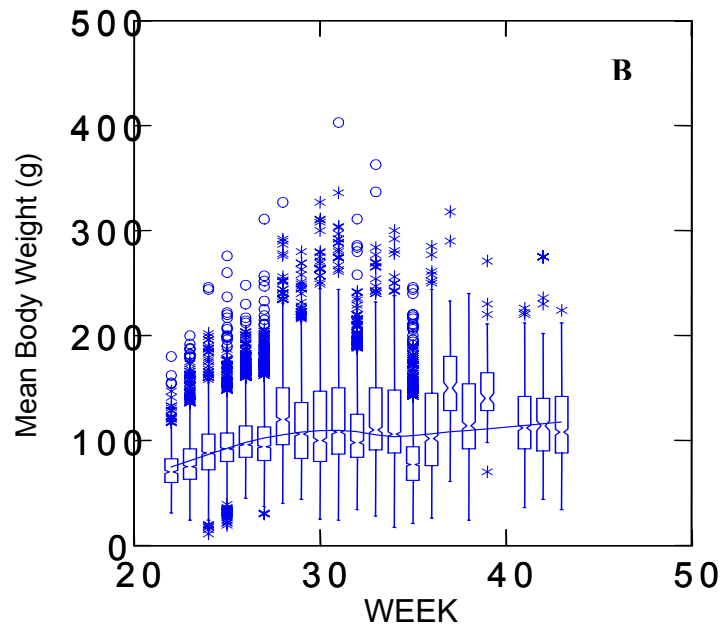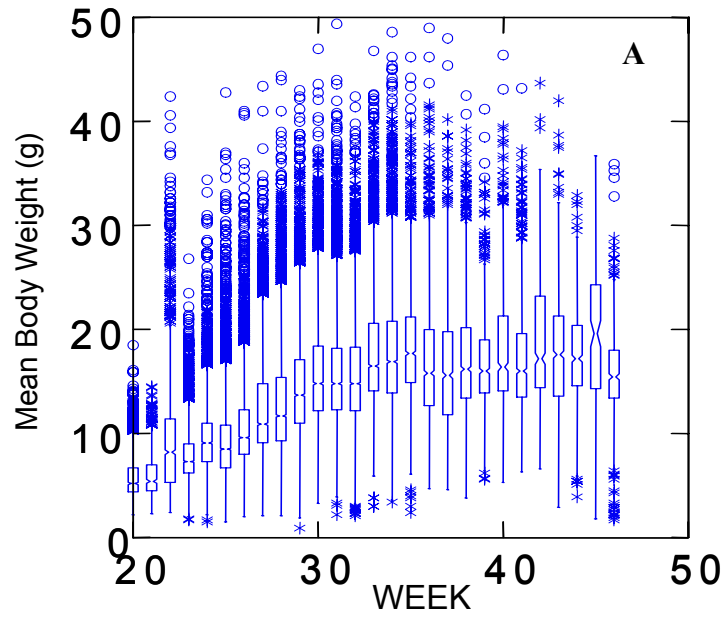
Figure D8. Weekly trends in the composite mean body weight (g) of *Illex illecebrosus* sampled from the landings during (A) 1994-1998 and (B) 1999-2002.
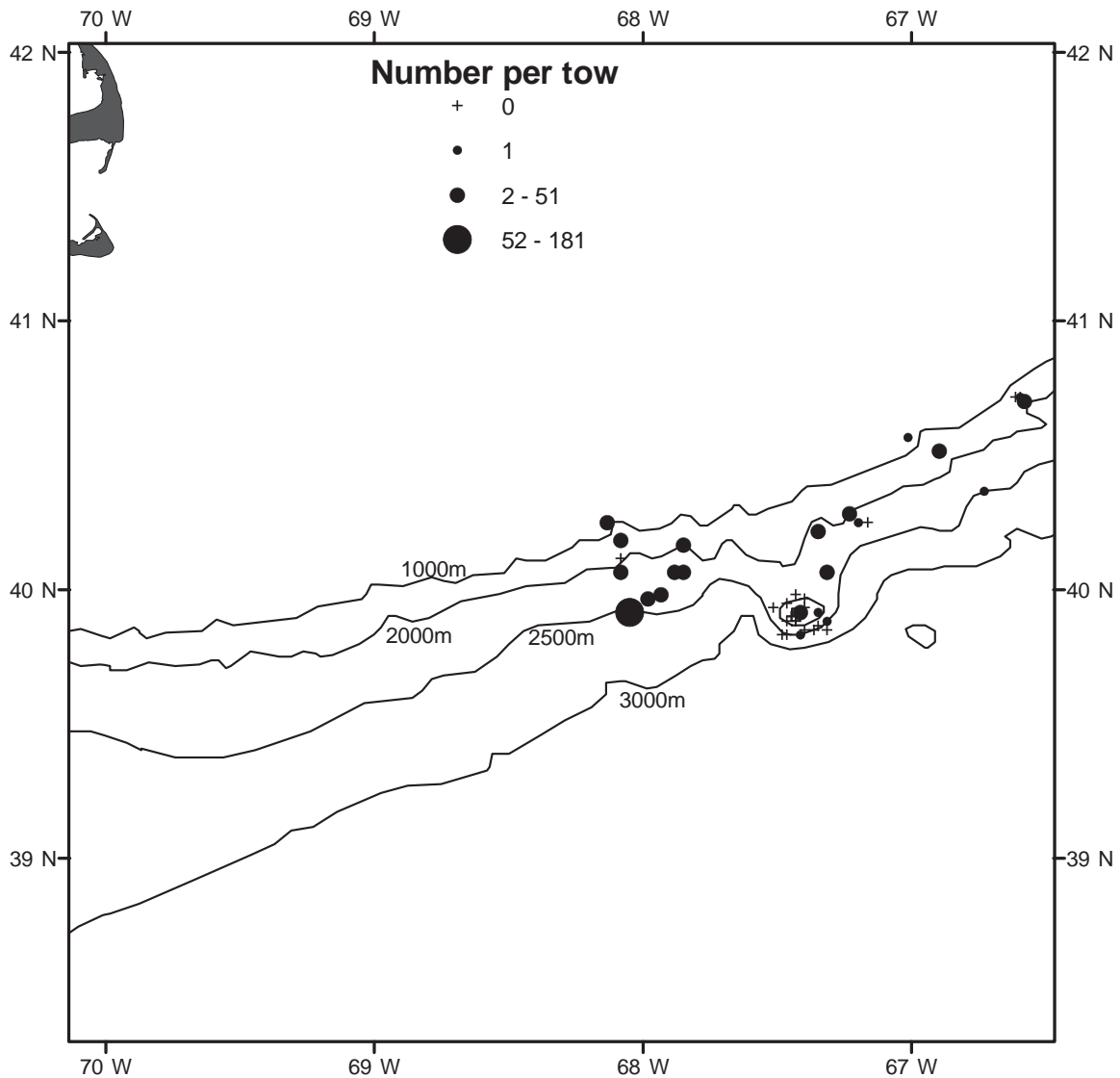
Figure D9. Distribution of *Illex illecebrosus* (number per tow) captured in a midwater trawl, by the *Delaware II*, during a research survey of the U.S. continental slope and the Bear Sea Mount during July, 2002.
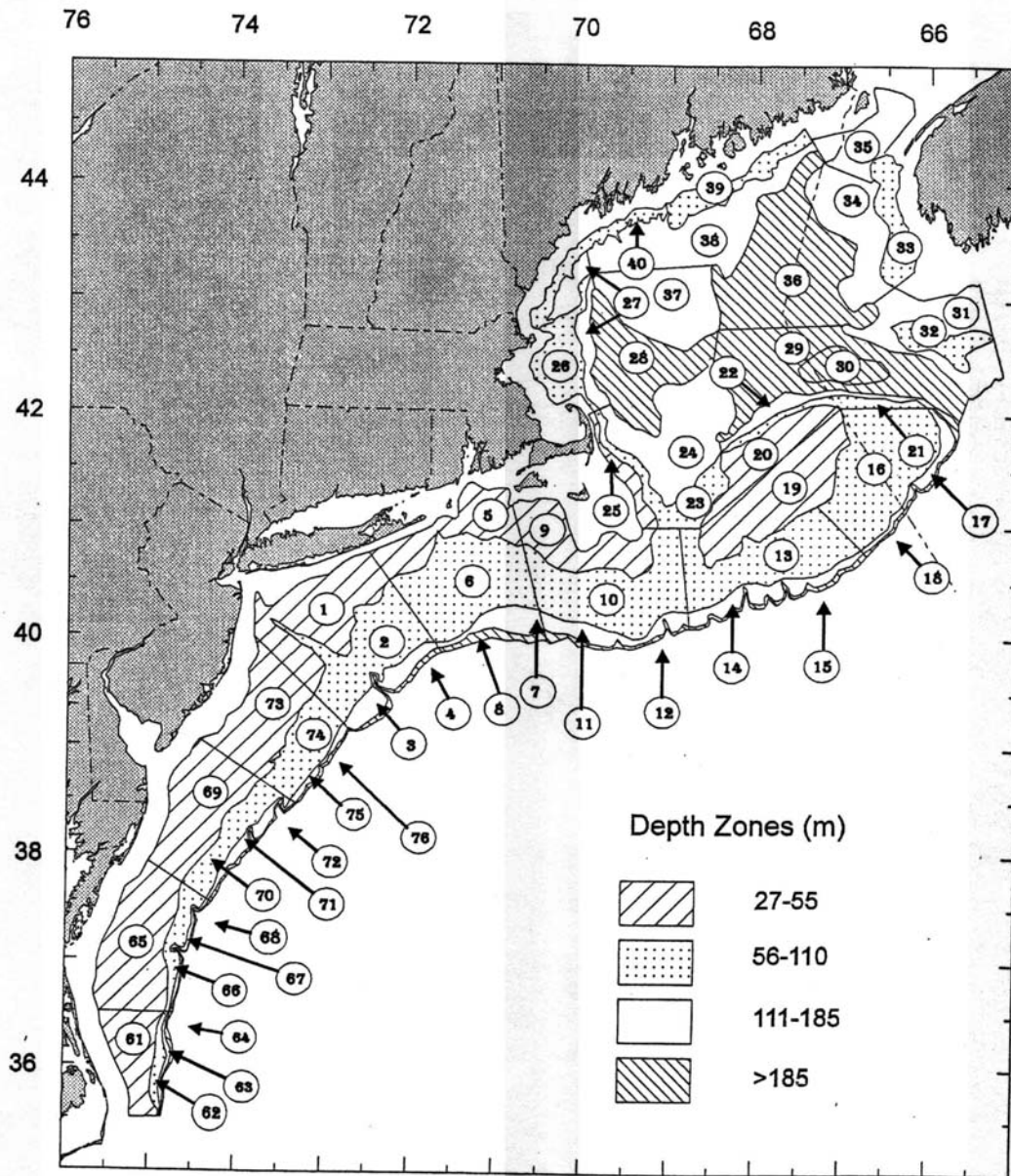
Figure D10. Offshore strata sampled during Northeast Fisheries Science Center bottom trawl research surveys.
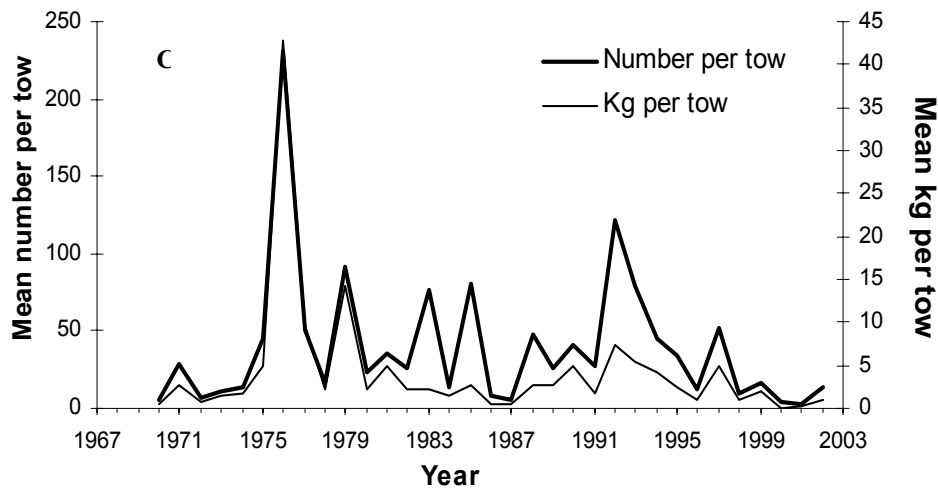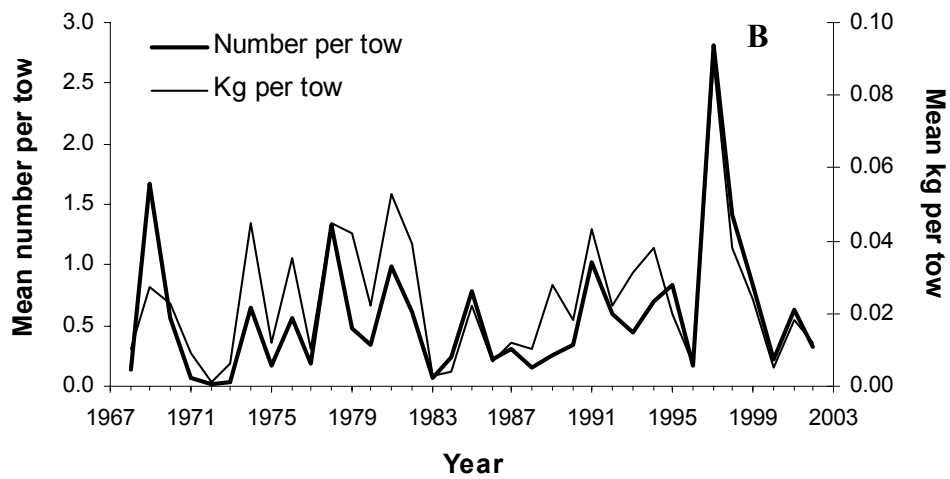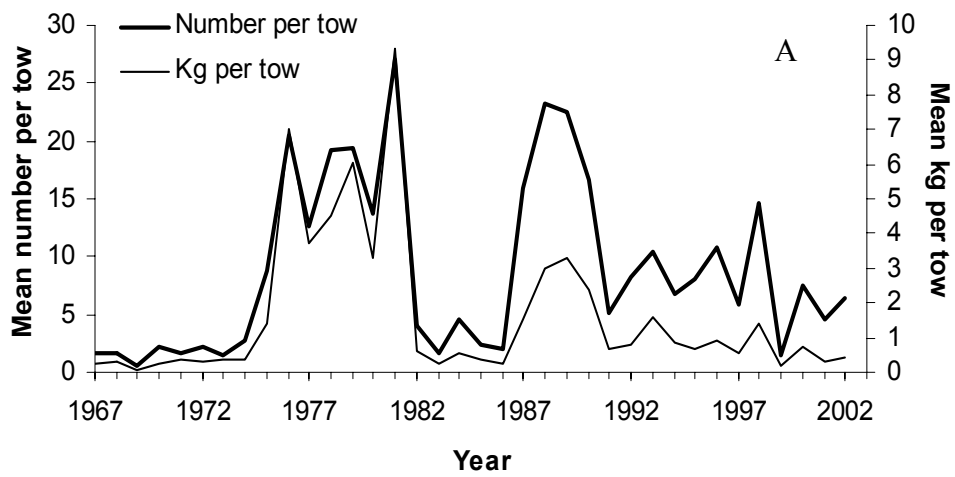
Figure D11.　　Trends in *Illex illecebrosus* indices of relative abundance (stratified mean number per tow) and biomass (stratified mean kg per tow) based on NEFSC (A) autumn (1967-2002) and (B) spring (1968-2002) research bottom trawl surveys and (C) the Canadian July bottom trawl survey on the Scotian Shelf (1970-2002).
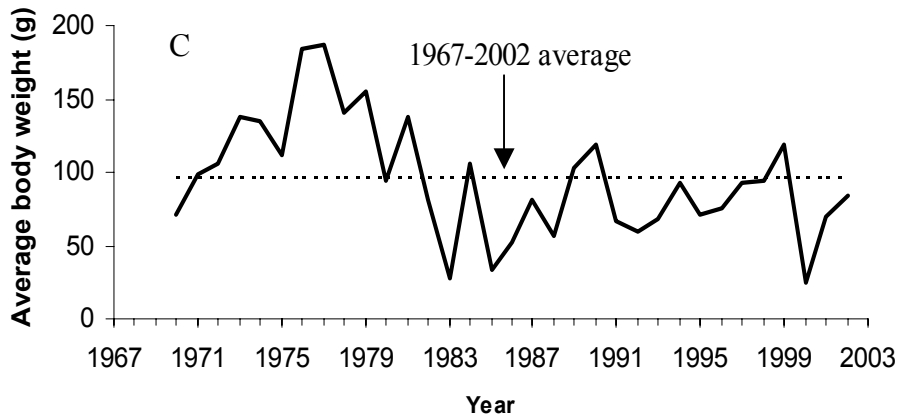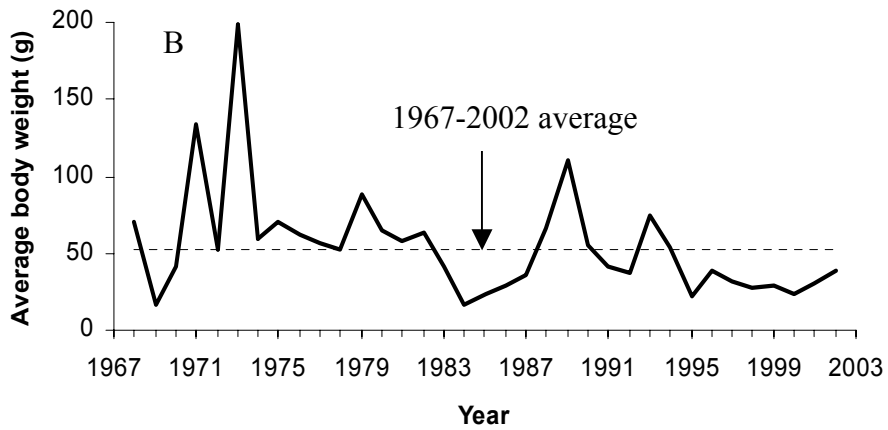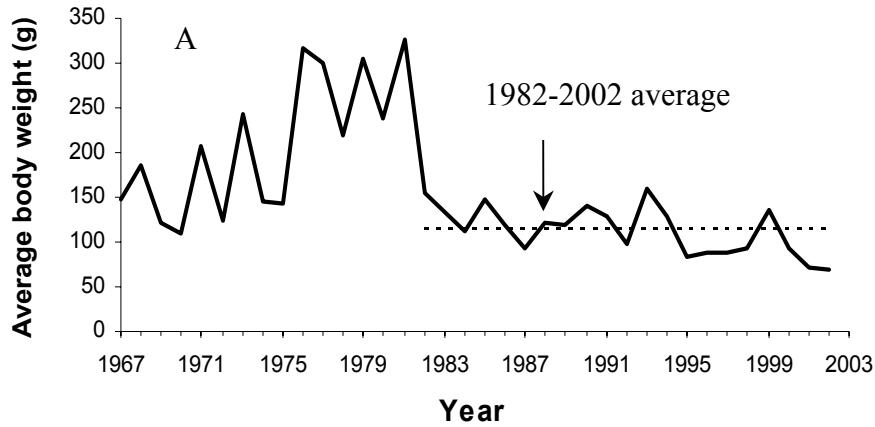
Figure D12.   Trends in average body weight (g) of *Illex illecebrosus* caught during NEFSC (A) autumn (1967-2002) and (B) spring (1968-2002) research bottom trawl surveys and (C) the Canadian research bottom trawl survey conducted in July on the Scotian Shelf (NAFO Div. 4VXW, 1970-2002).
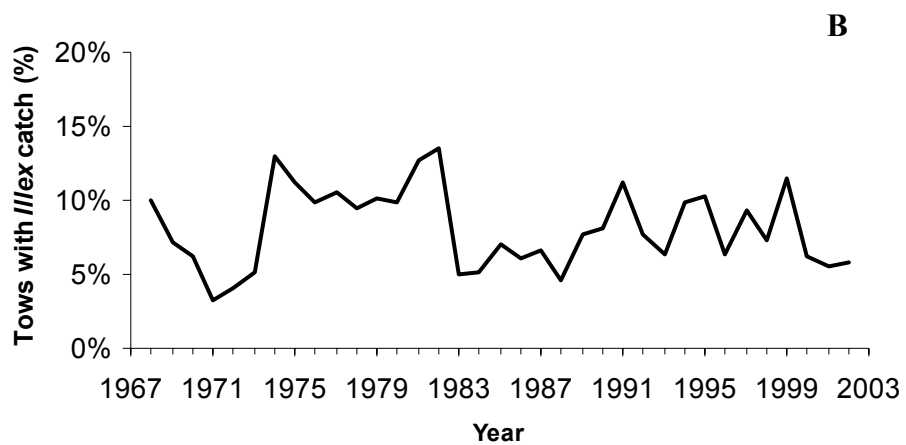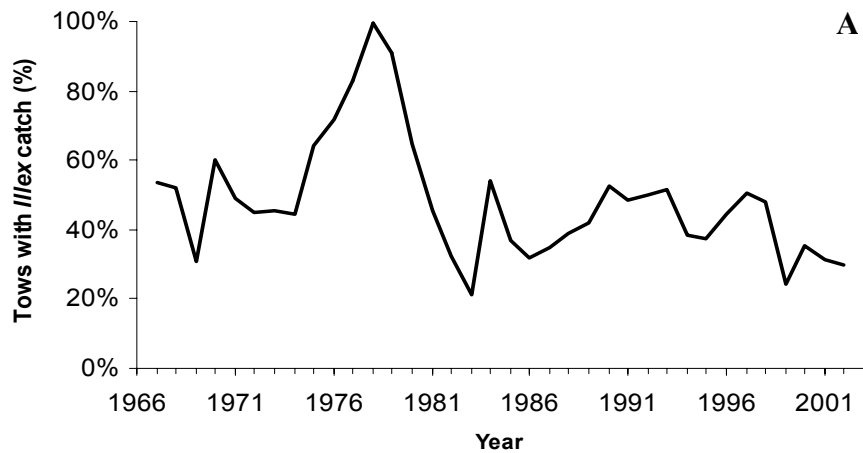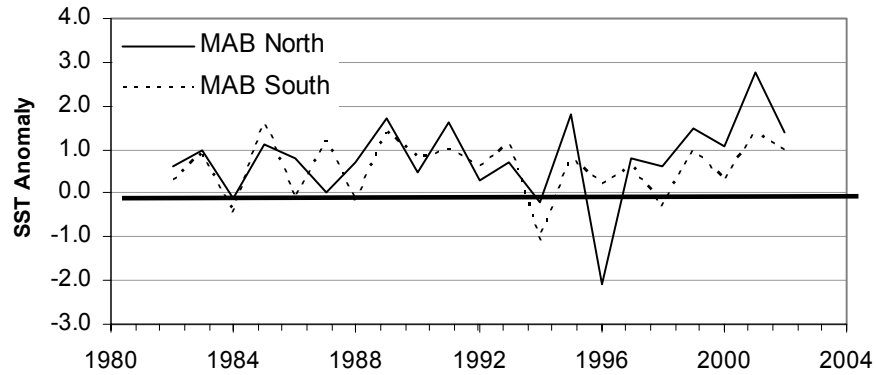
Figure D13. Trends in *Illex* dispersion indices, proportion of tows with *Illex illecebrosus* catch, from NEFSC autumn (1967-2002) and spring (1968-2002) bottom trawl surveys.
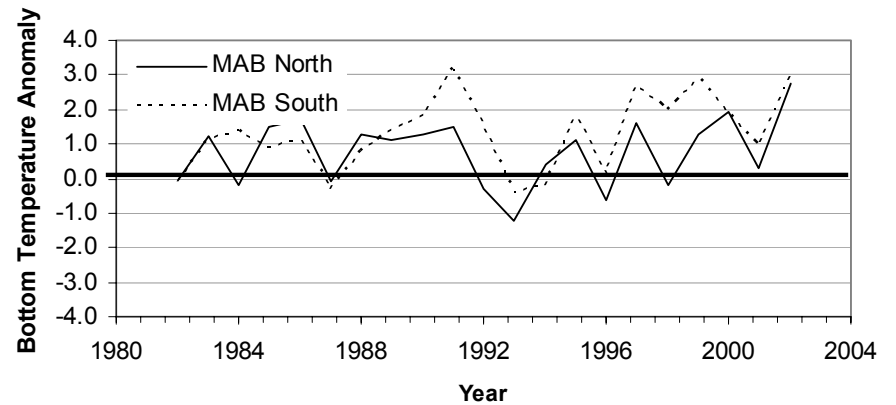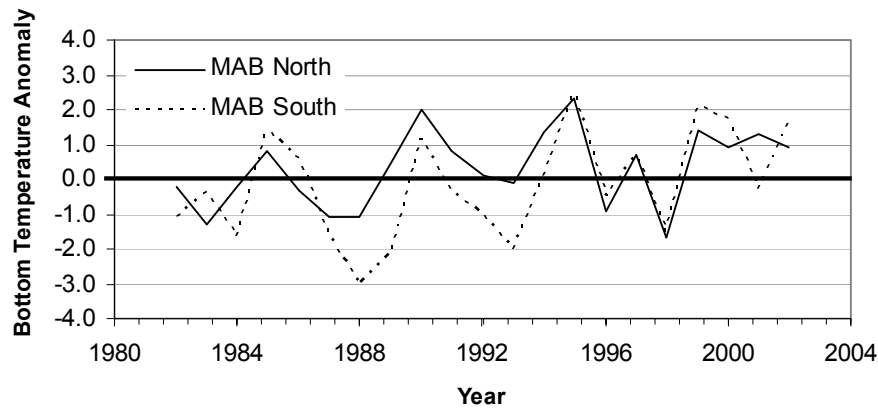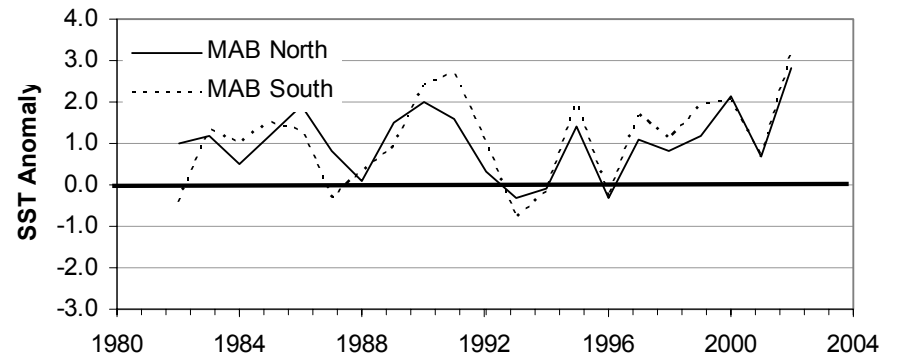
Autumn Survey

Spring Survey

Figure D14. Areal average sea surface and bottom temperature anomalies in the Mid-Atlantic Bight, north versus south, during NEFSC autumn and spring bottom trawl surveys, 1982-2002. Anomalies were computed in relation to a reference period of 1977-1987.
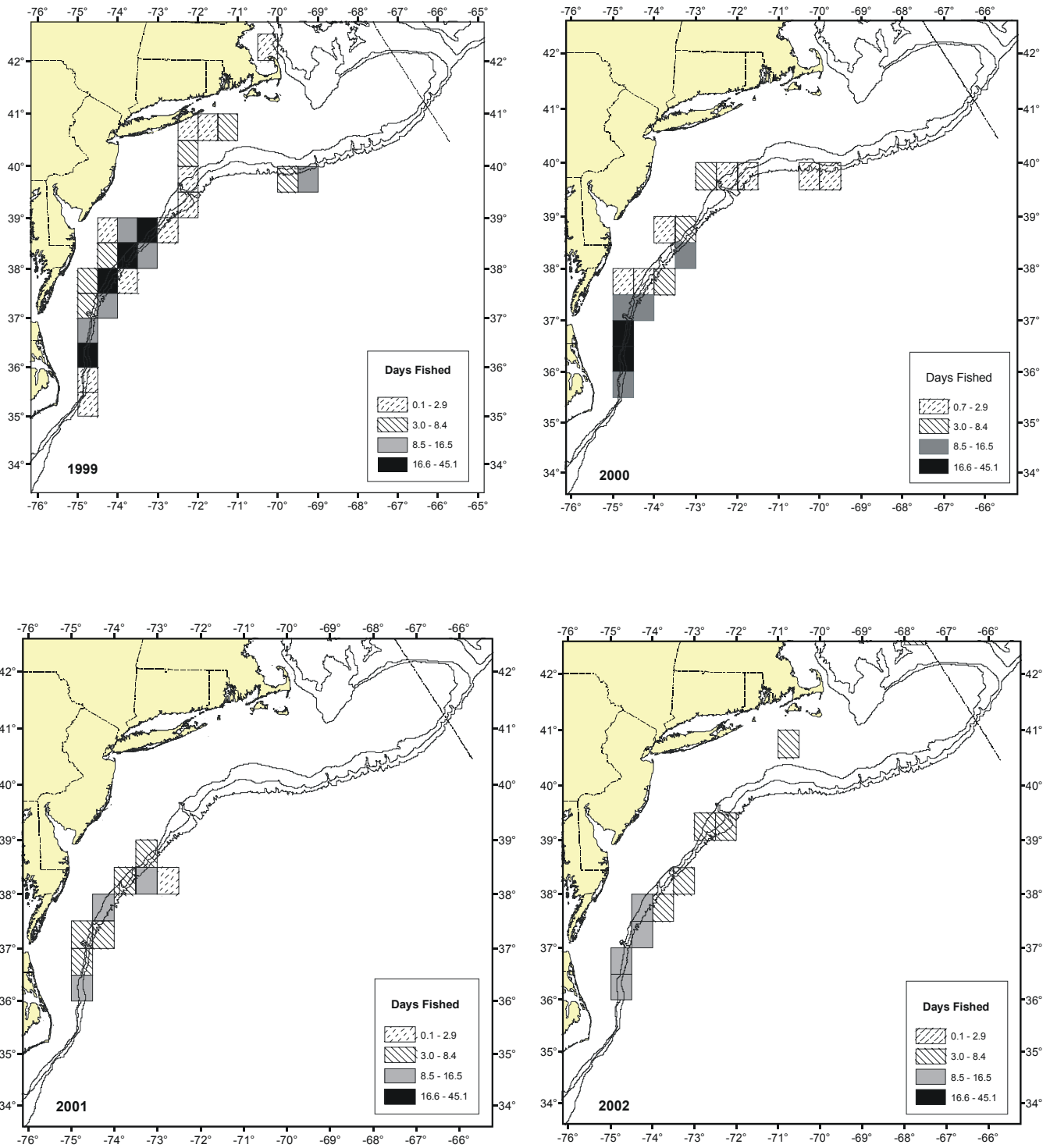
Figure D15. Distribution of fishing effort (days fished), by quarter-degree square, for otter trawlers participating in the *Illex illecebrosus* fishery during May-November, 1999-2002. Bathymetry represents 50, 100 and 500 fathoms.
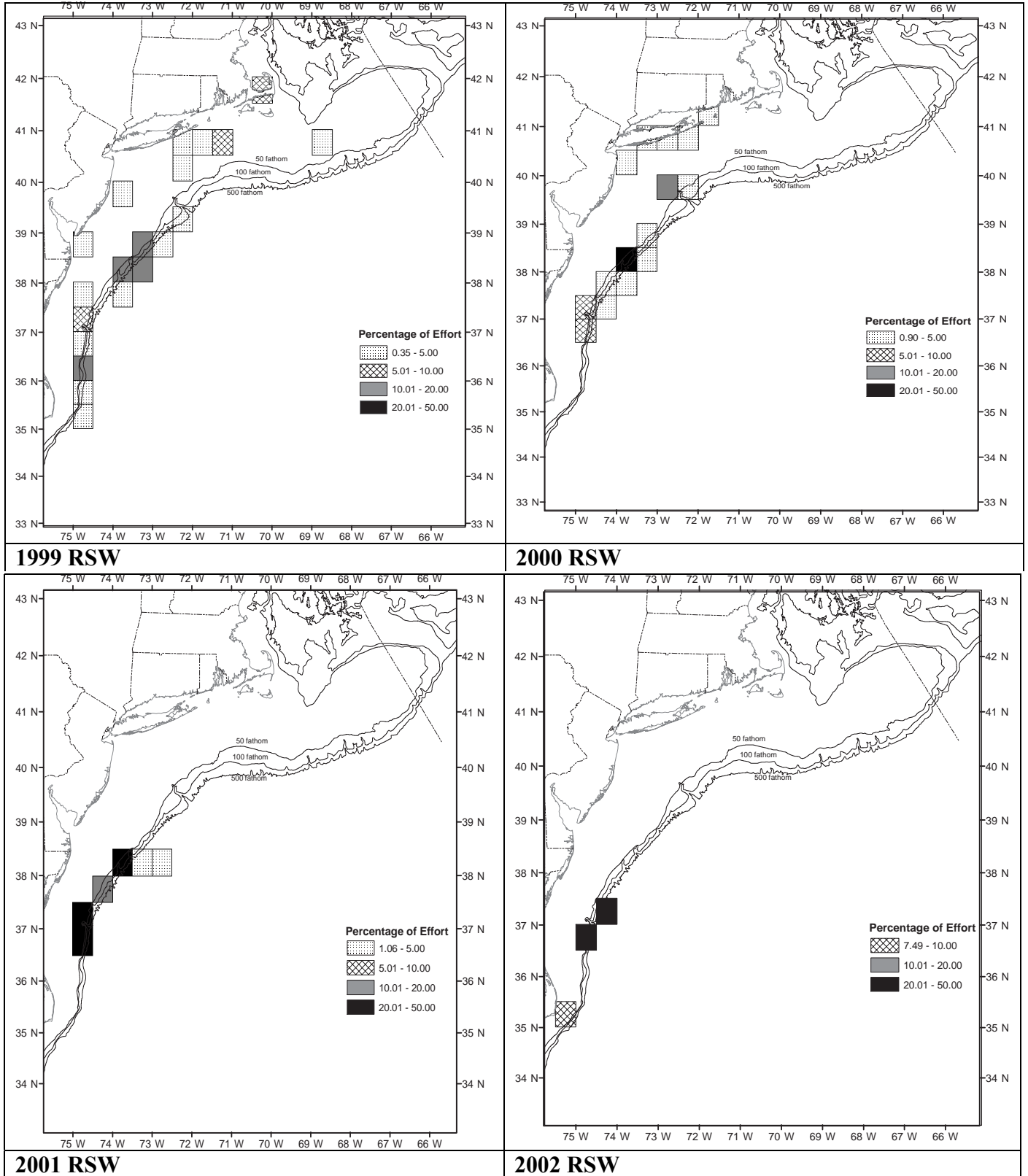
Figure D16. Percentage of fishing effort (days fished), quarter-degree square, for recirculating seawater system (RSW) trawlers participating in the *Illex illecebrosus* fishery during May-November, 1999-2002.
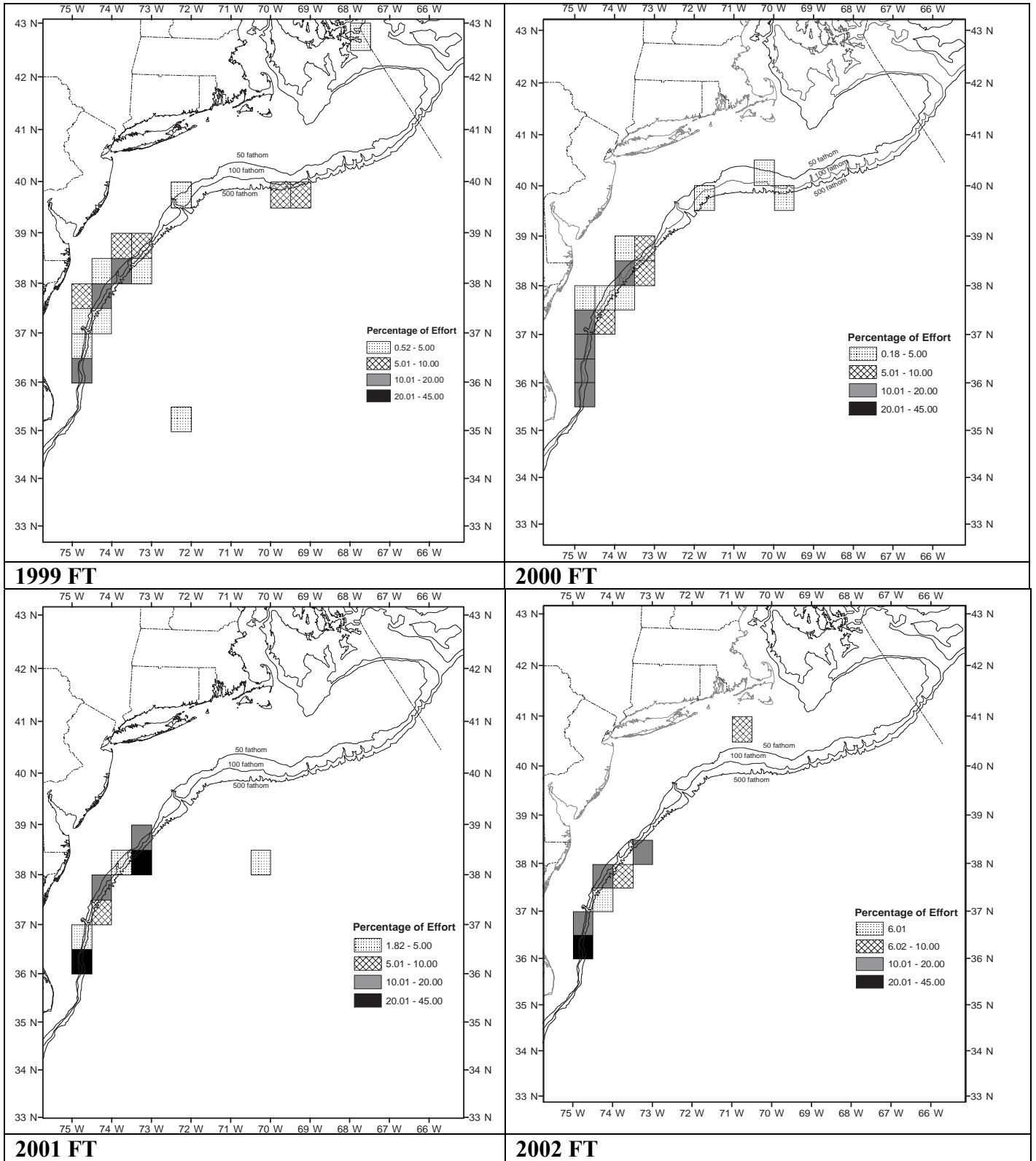
37ᵗʰ Consensus Summary

Figure D17. Percentage of fishing effort (days fished), by quarter-degree square, for freezer trawlers participating in the *Illex illecebrosus* fishery during May-November, 1999-2002.
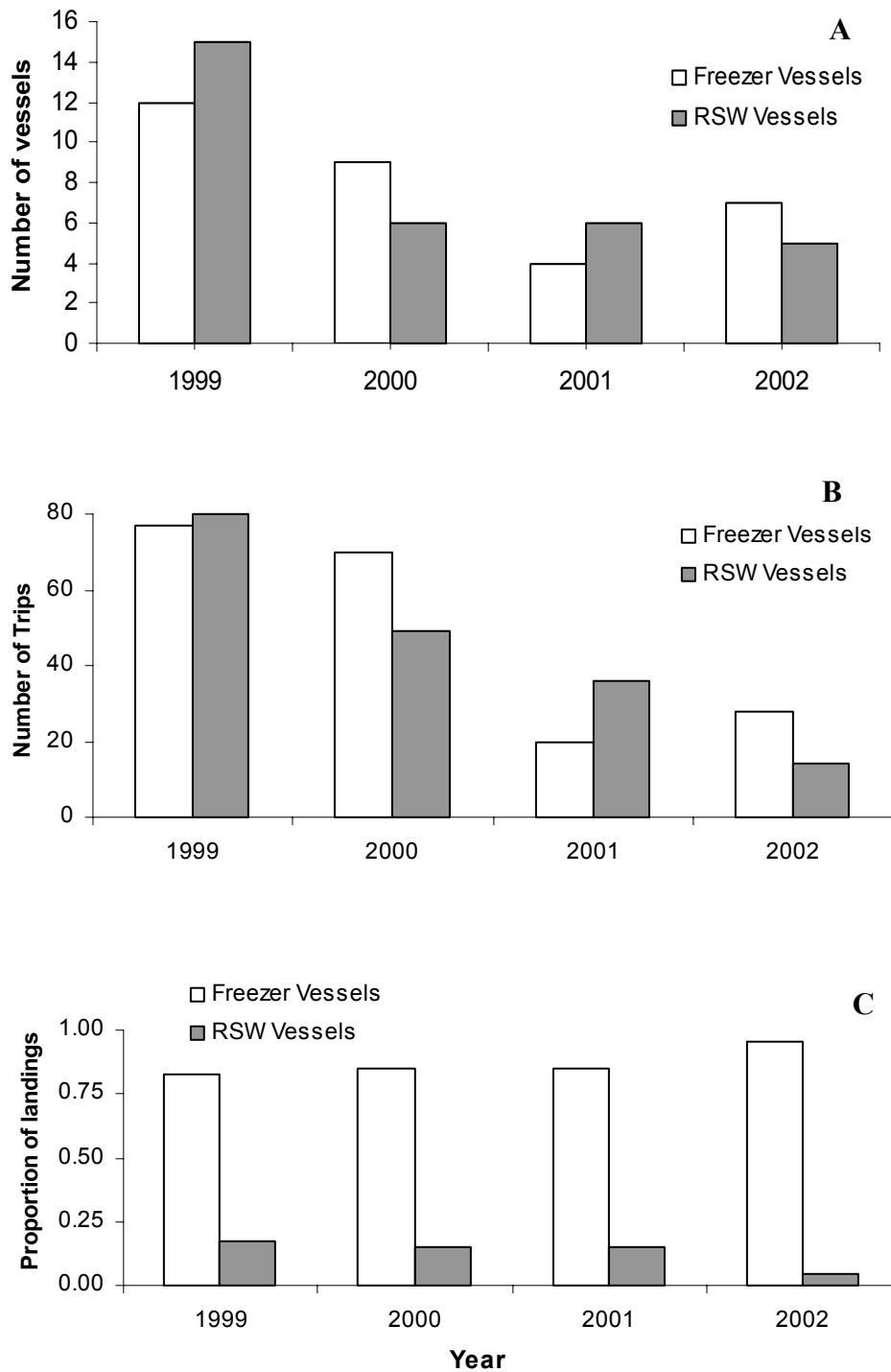
Figure D18.   Number of vessels, trips and proportion of *Illex* landings in the U.S. directed fishery, by fleet sector, during 1999-2002. Data were obtained from the Weighout database.
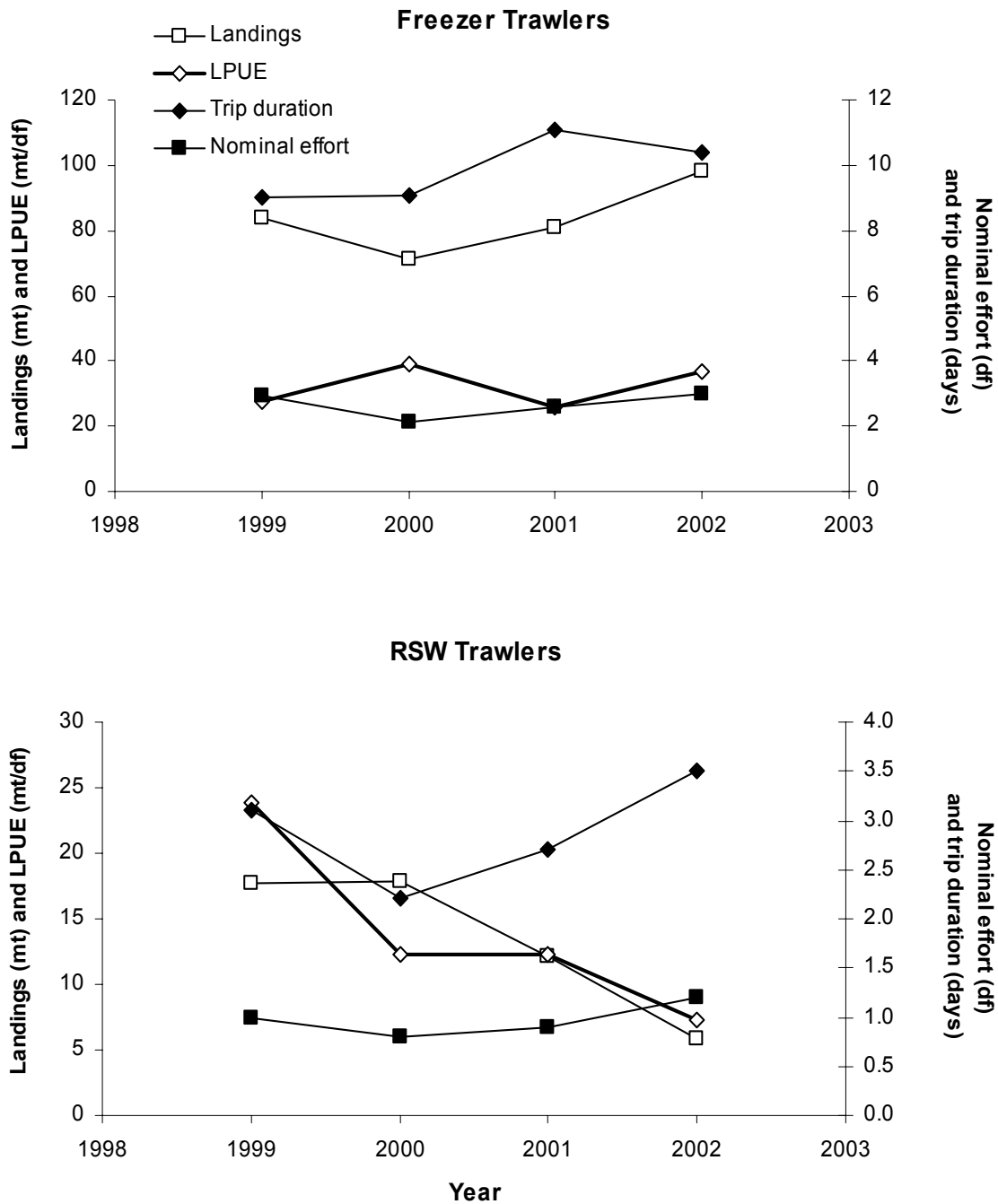
Figure D19.   Trends in average trip duration, (days), nominal effort (days fished), landings
(mt), and LPUE (mt/df), for (A) freezer trawlers and (B) RSW trawlers, during
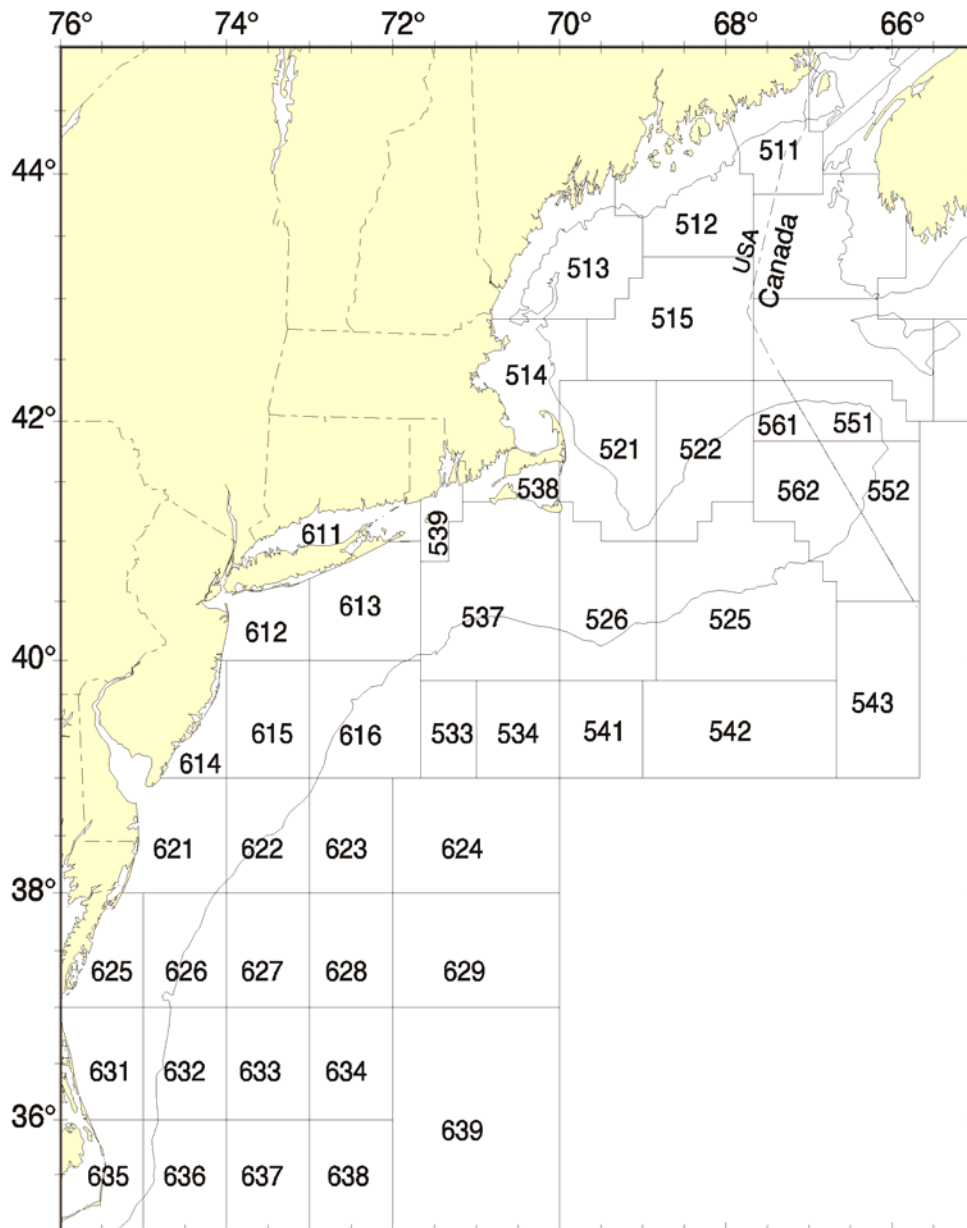1999-2002.

Figure D20.   Statistical reporting areas for U.S. fisheries in the northwest Atlantic Ocean.
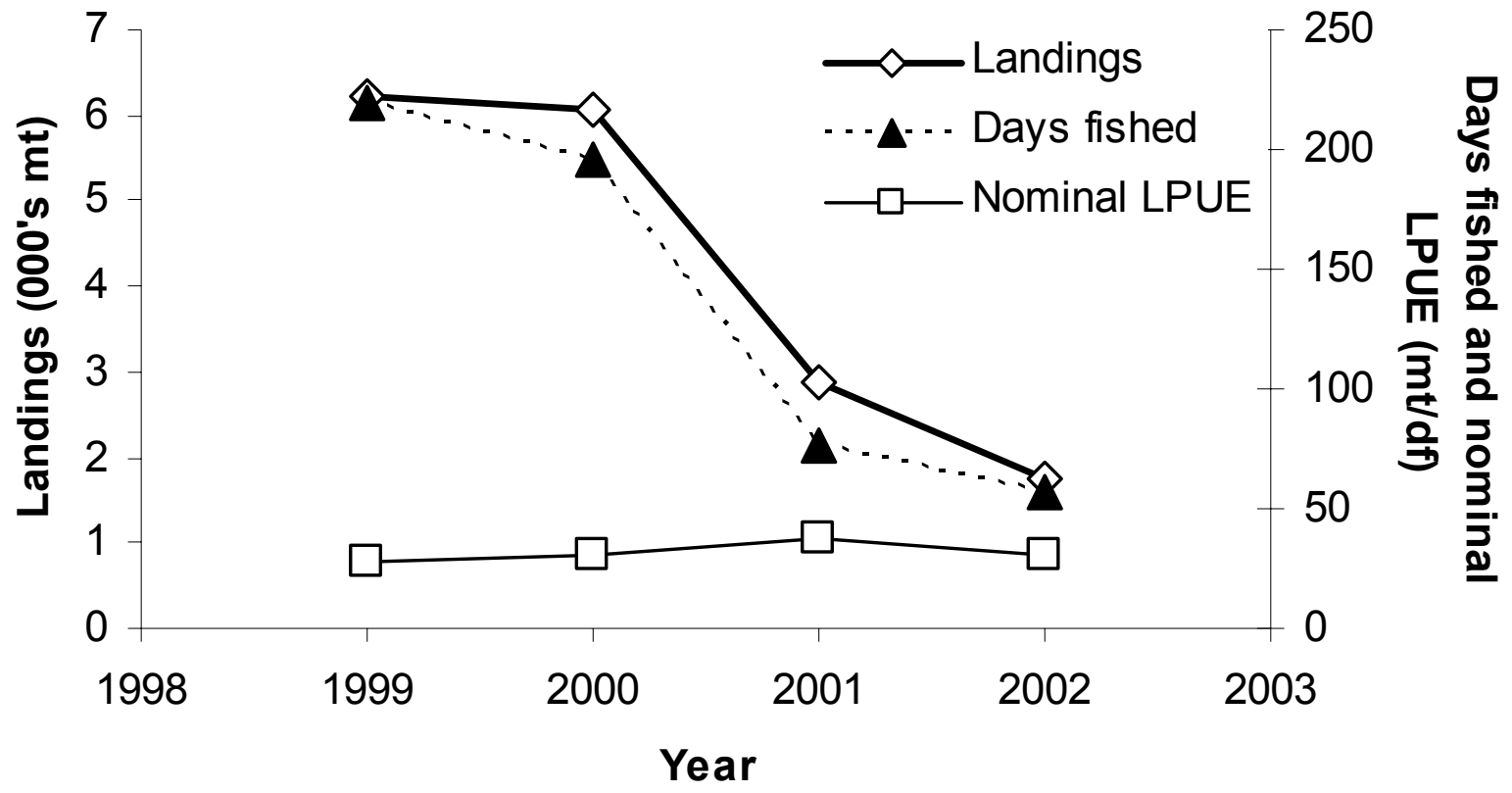
Figure D21. Trends in total landings (mt), effort (days fished) and nominal LPUE (mt per day fished) in the *Illex illecebrosus* fishery, during 1999-2002, based on Vessel Trip Reports.
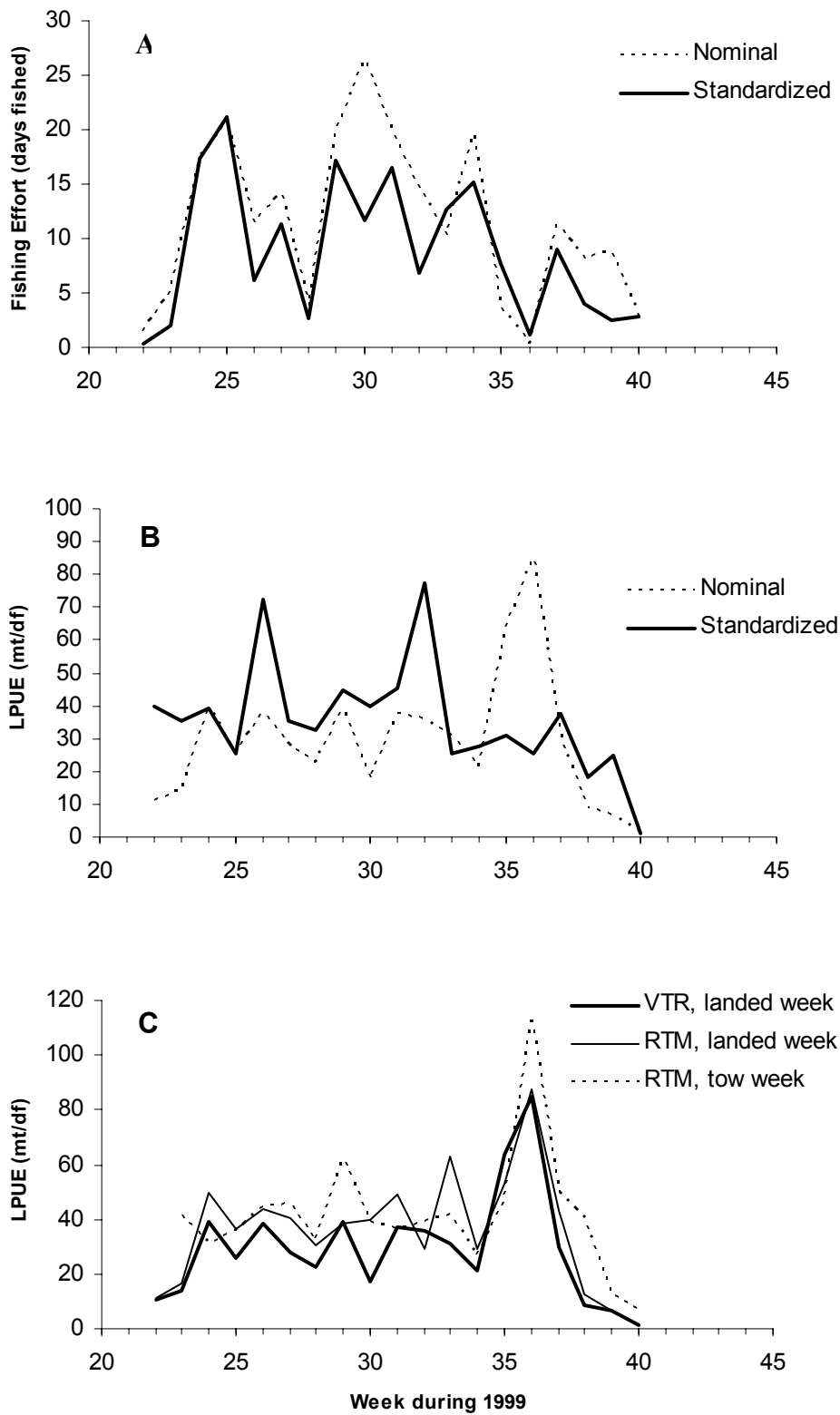
Figure D22.   Seasonal trends in (A) *Illex* fishing effort (df) and (B) LPUE (mt/df) reported in
the Vessel Trip Reports (VTR), and (C) nominal LPUE reported in the VTR and
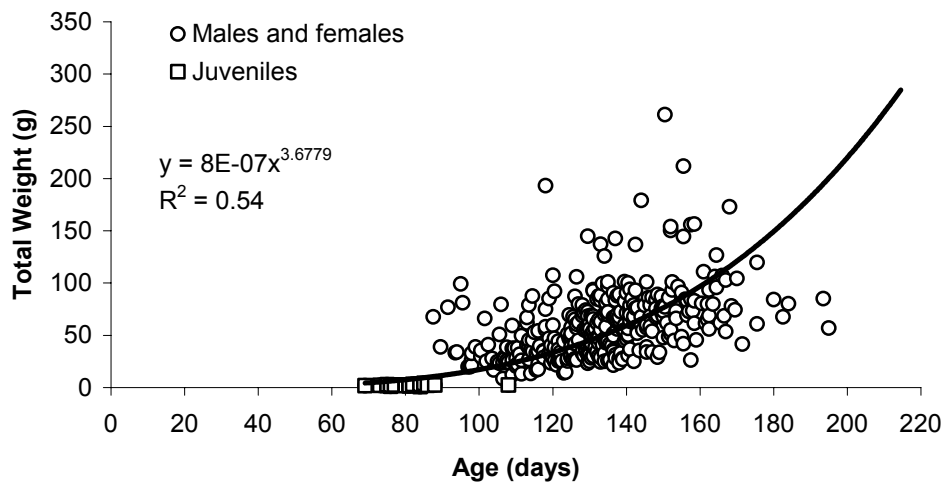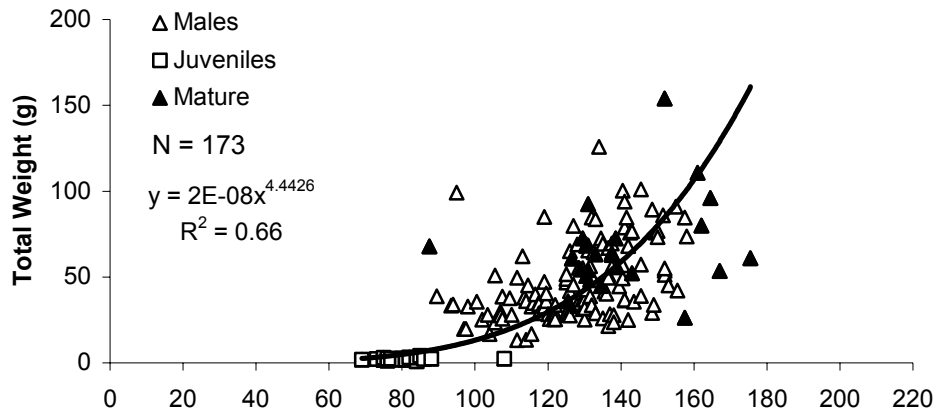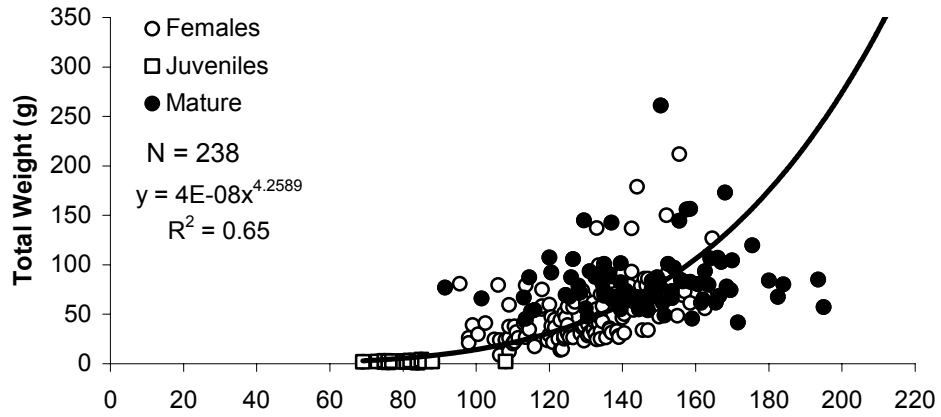RTM databases during 1999.

Figure D23. Observed weights-at-age and growth curves, by separate and combined sexes, for *Illex illecebrosus* caught in a bottom trawl survey conducted off the east coast of the U.S. during May, 2000 (Hendrickson *In Review*).
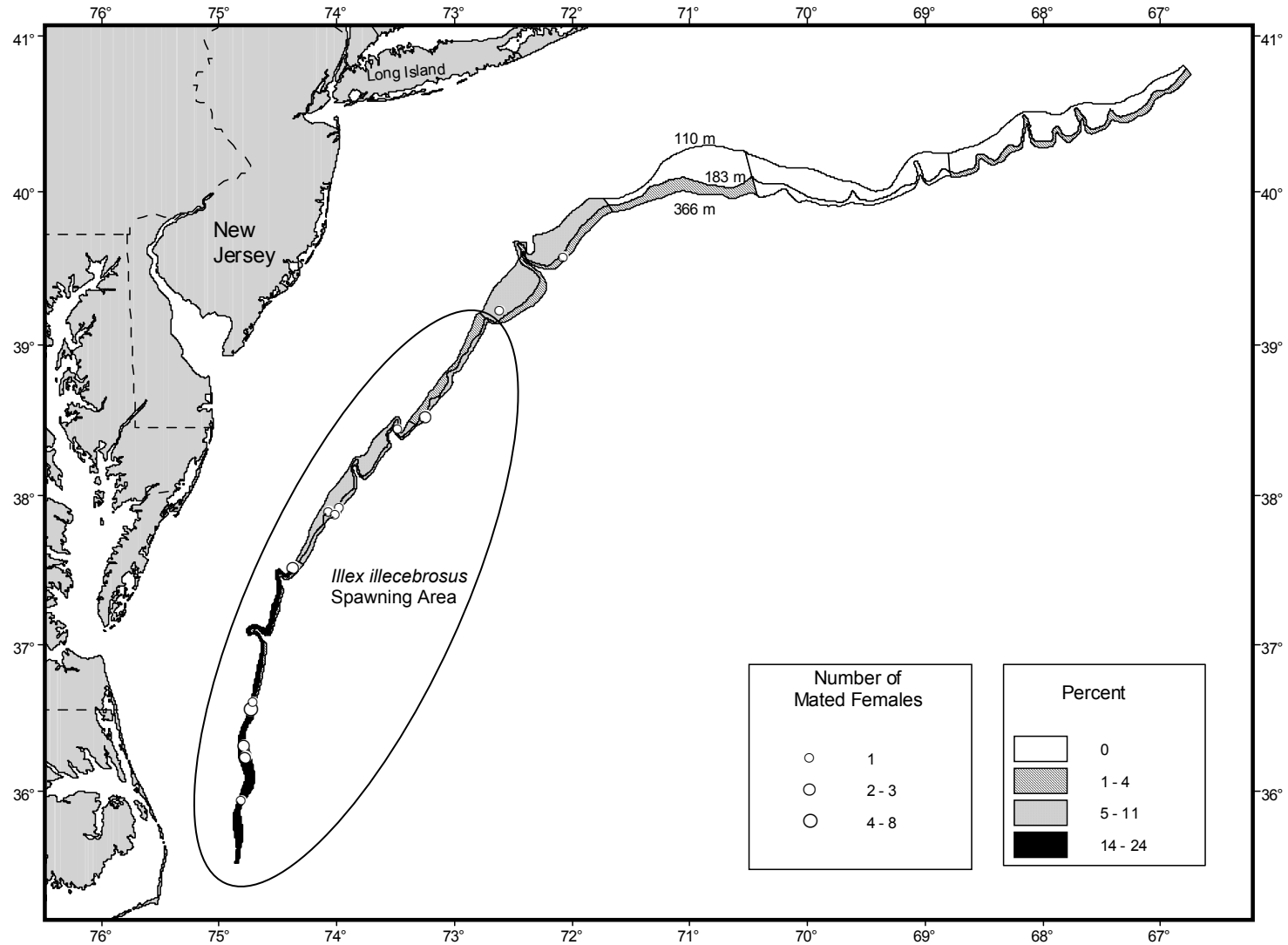
Figure D24. *Illex illecebrosus* spawning area defined as strata within which the majority of mated females and highest percentage of mature females were caught during a bottom trawl survey conducted off the east coast of the U.S. during May, 2000 (Hendrickson *In Review*).
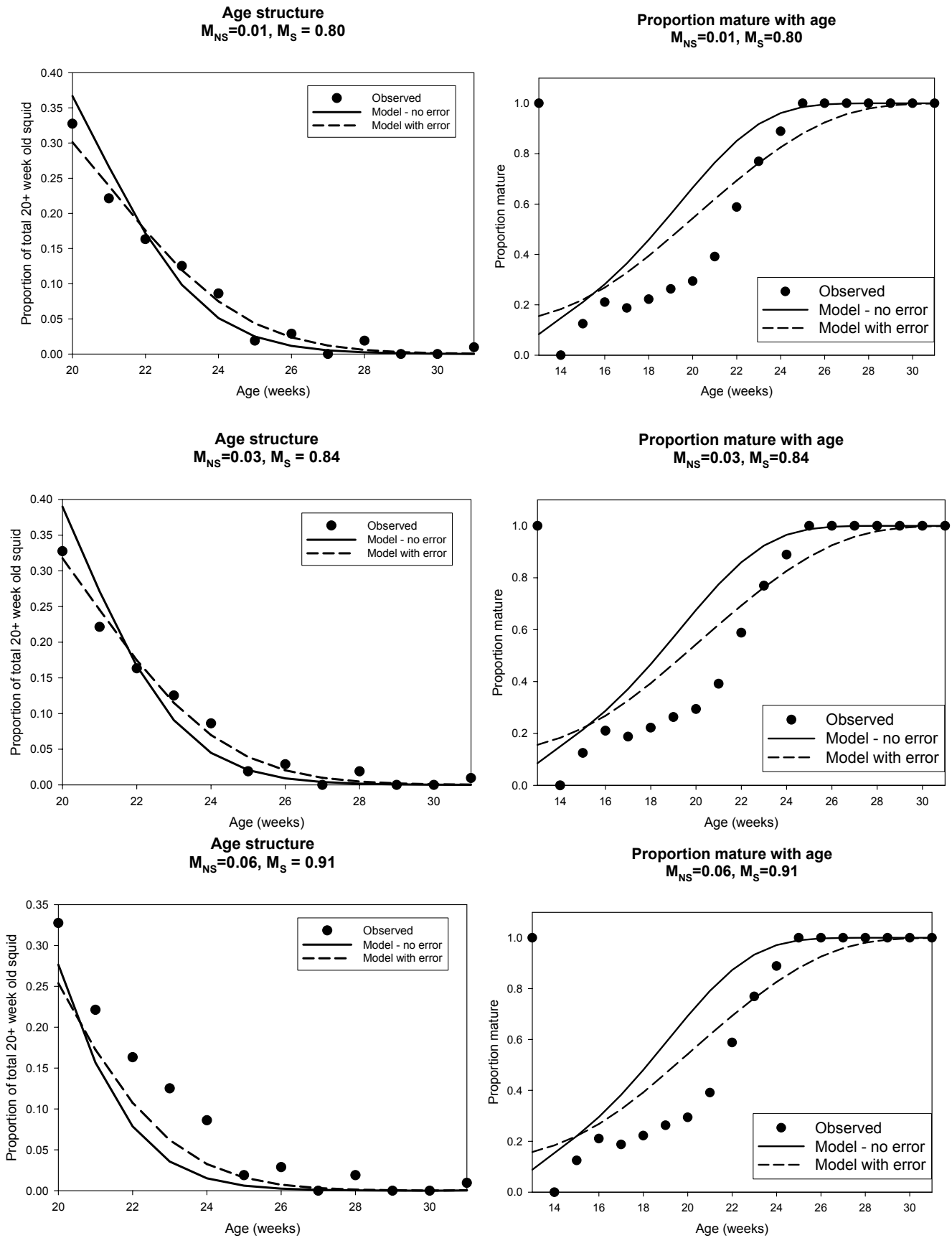
Figure D25. Observed and predicted proportions at age and proportions mature at age, for *Illex illecebrosus* sampled during May 2000, for non-spawning natural mortality rates (M_{NS}) of 0.01, 0.03, and 0.06 and spawning mortality rates (MSP) of 0.80, 0.84 and 0.90. Model results are shown with and without the incorporation of age estimation error.
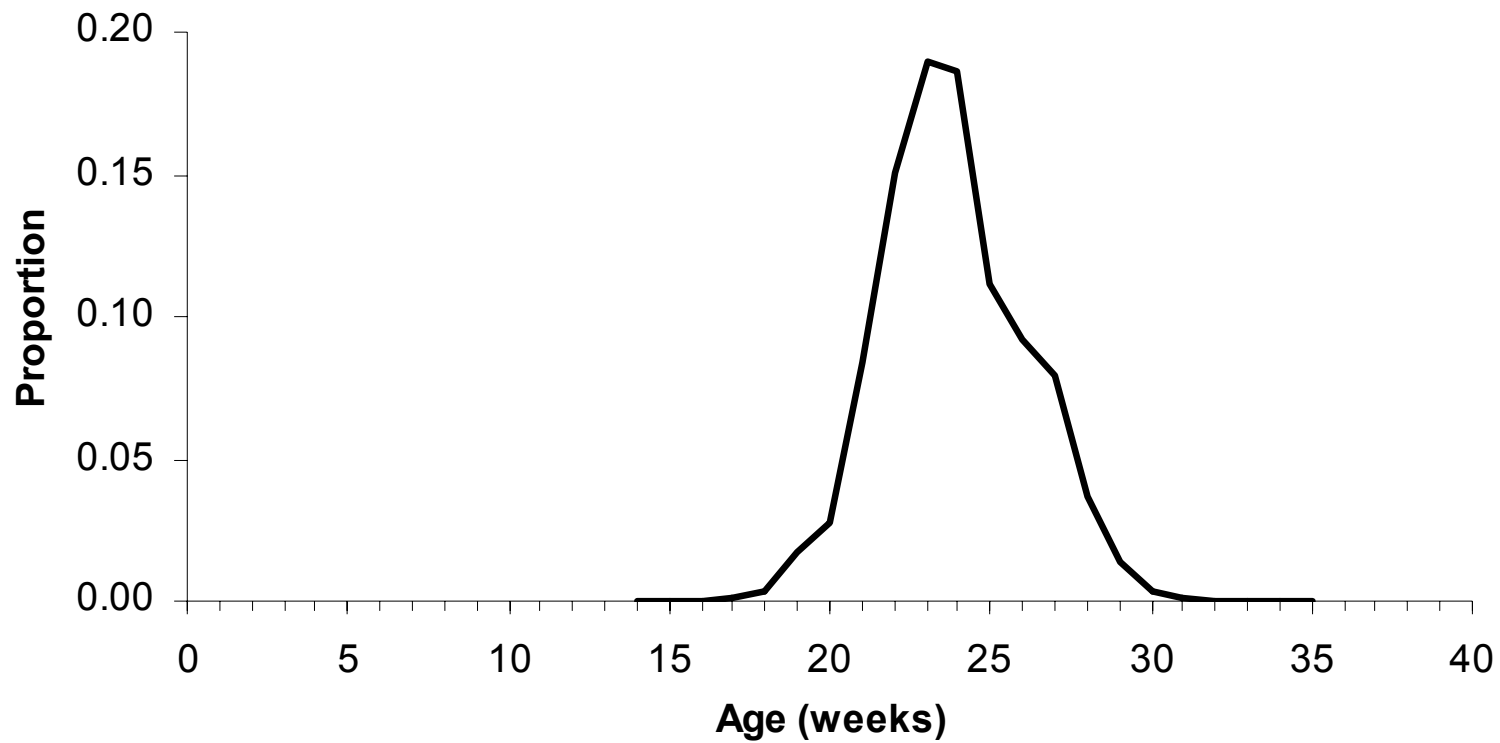
Figure D26. Composite age composition of *Illex illecebrosus* landed in the directed fishery during 1999-2002.
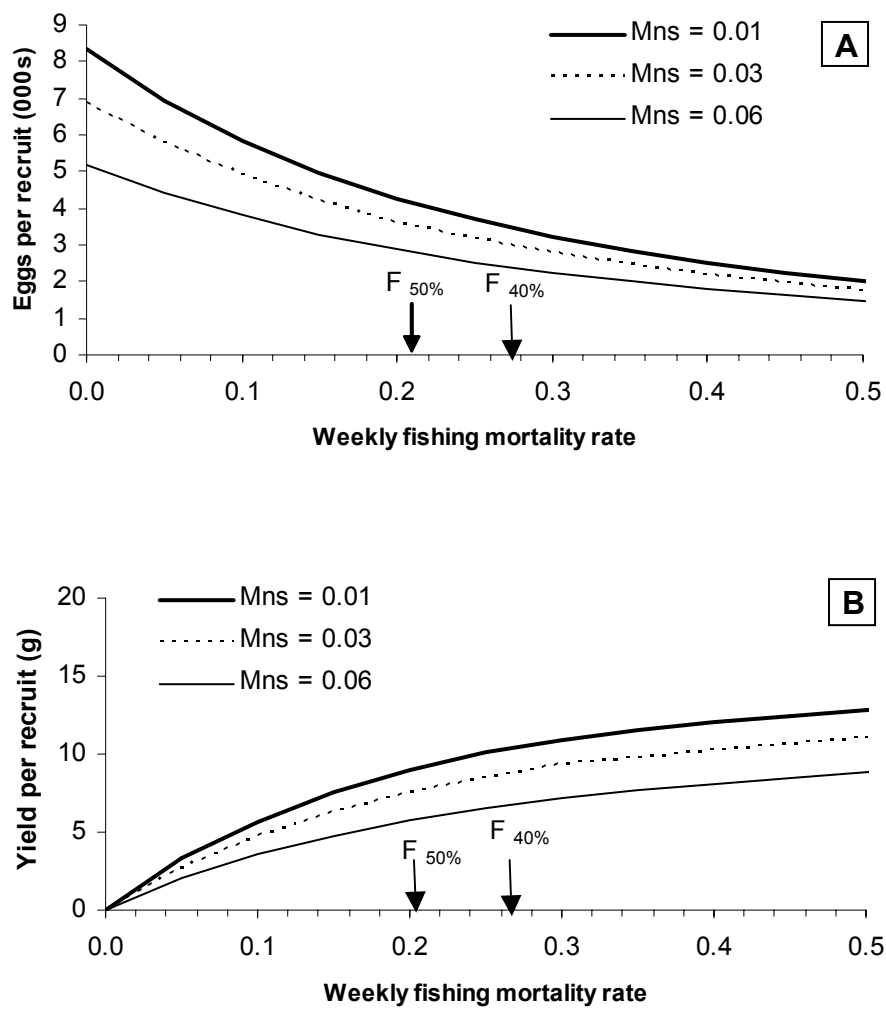
Figure D27. Estimated (A) number of eggs per recruit (000s) and (B) yield per recruit (g) versus fishing mortality rate, for non-spawning mortality rates of 0.01, 0.03 and 0.06, and biological reference point estimates for a non-spawning natural mortality rate of 0.01 and a spawning natural mortality rate of 0.80.
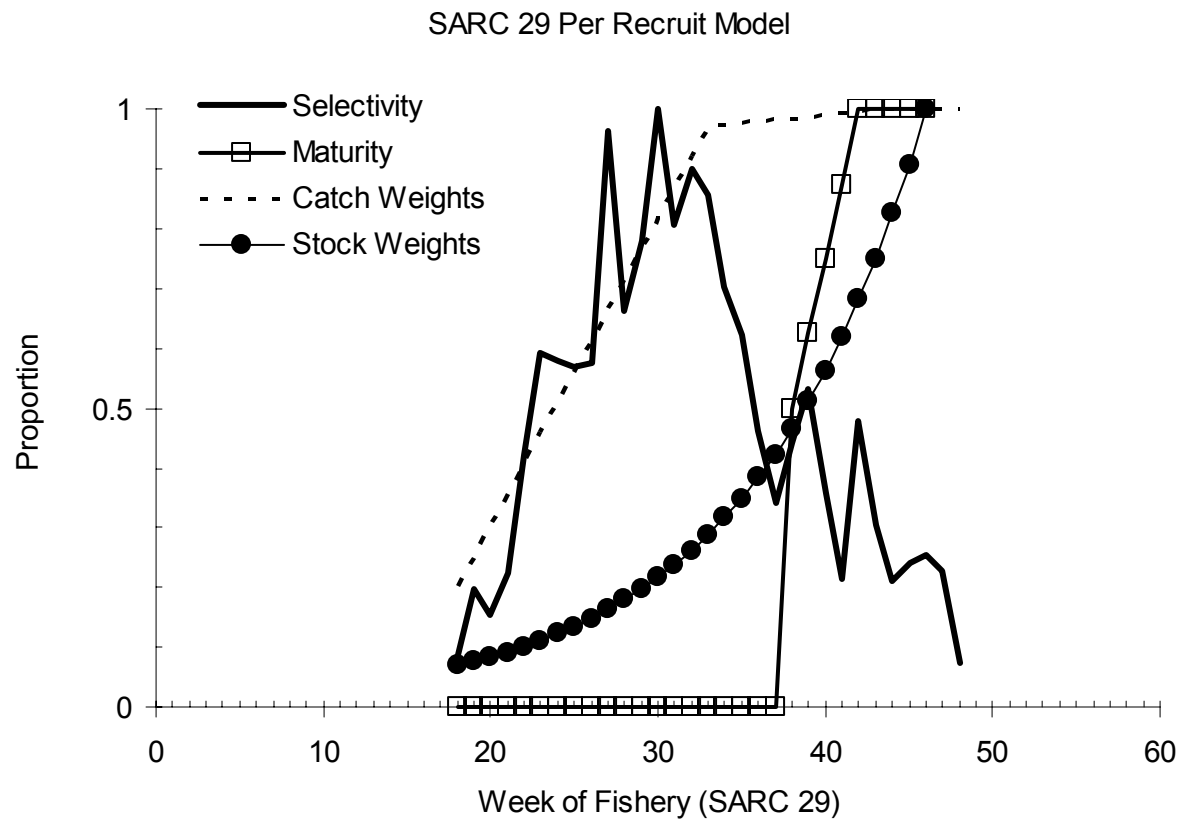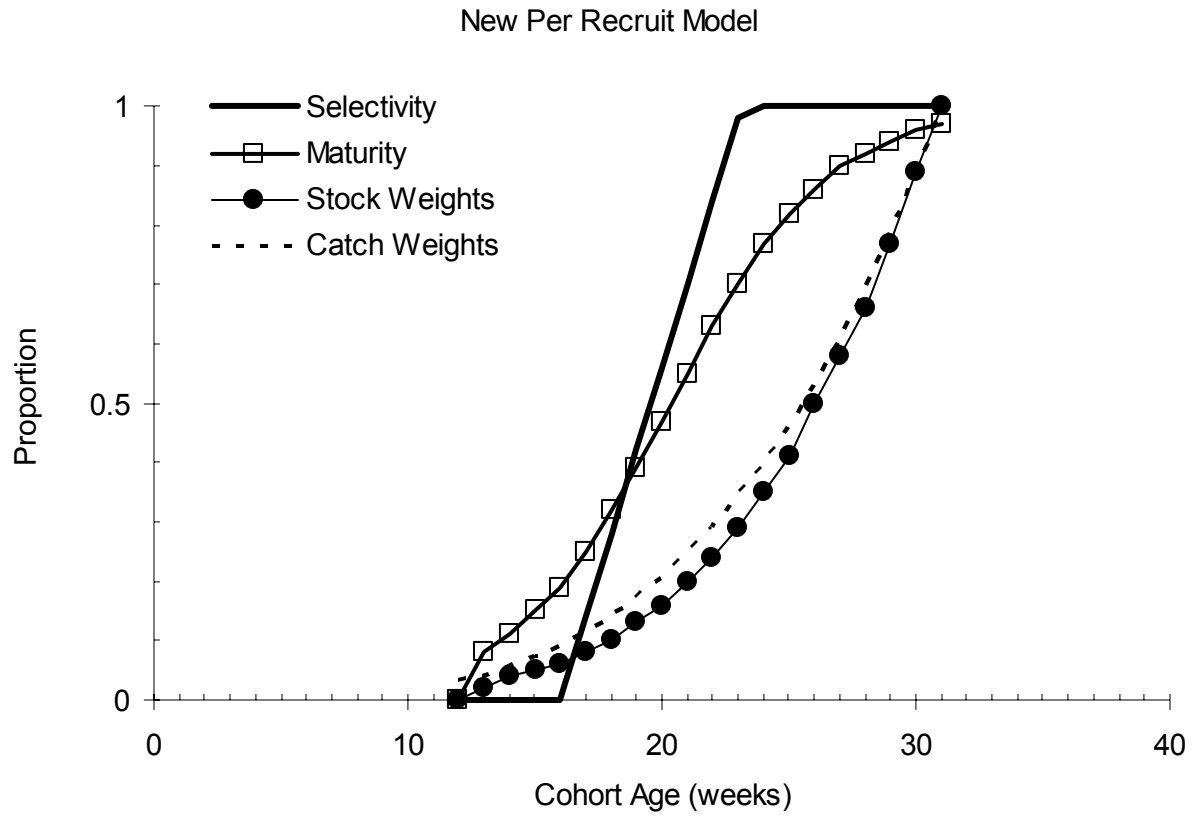
Figure D28.   Input data to new *Illex illecebrosus* per-recruit models and the SARC 29 per-recruit model.
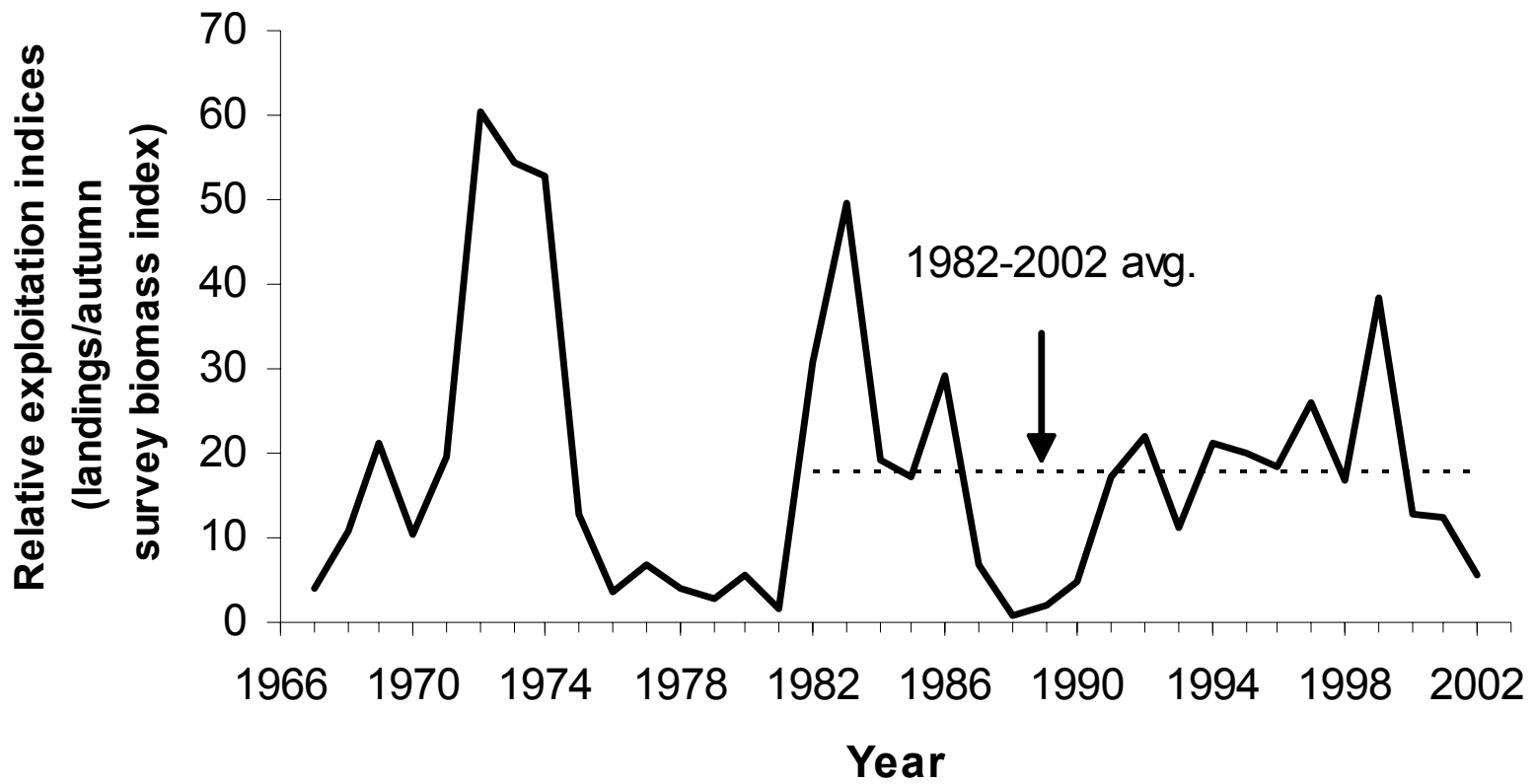
Figure D29.   Relative exploitation indices (landings/NEFSC autumn survey biomass index) for the U.S. *Illex illecebrosus* fishery, during 1967-2002, in relation to the 1982-2002 mean.