

### **3.18 Ocean Pout**

#### **Catch and Survey Indices**

Commercial interest in ocean pout has fluctuated widely. Ocean pout were marketed as a food fish during World War II, and landings peaked at 2,000 mt in 1944. However, an outbreak of a protozoan parasite that caused lesions on ocean pout eliminated consumer demand for this species. From 1964 to 1974, an industrial fishery developed, and nominal catches by the U.S. fleet averaged 4,700 mt. Distant-water fleets began harvesting ocean pout in large quantities in 1966, and total nominal catches peaked at 27,000 mt in 1969. Foreign catches declined substantially afterward, and none have been reported since 1974. United States landings declined to an average of 600 mt annually during 1975 to 1983. In the mid-1980s, landings increased to about 1,400 mt due to the development of a small directed fishery in Cape Cod Bay supplying the fresh fillet market. Landings have declined more or less continually since 1987, and remain at record low levels (Figure 3.18.1).

Commercial landings and the NEFSC spring research vessel survey biomass index followed similar trends during 1968 to 1975 (encompassing peak levels of foreign fishing and the domestic industrial fishery); both declined from very high values in 1968-1969 to lows of 300 mt and 1.3 kg per tow, respectively, in 1975. Between 1975 and 1985, survey indices increased to record high levels, peaking in 1981 and 1985. Since 1985, survey catch per tow indices have generally declined, and are presently less than the long-term survey average (3.9 kg per tow; Figure 3.18.1).

#### **Stock Assessment**

Ocean pout is assessed as a unit stock from Cape Cod Bay south to Delaware. An index assessment for this species was conducted and reviewed at SAW 11 in 1990 (NEFSC 1990). The status of this stock was most recently evaluated in 2000 (NEFSC 2001a). At that time, the three year average spring biomass index (1997-1999 average = 1.98 kg/tow) was approximately 40% of the current Bmsy proxy (1980-1991 median = 4.9 kg/tow) and below the biomass threshold ( $1/2B_{msy} = 2.4$  kg/tow). Since 1991, the exploitation ratios (landings/three year average spring survey biomass) have declined. The 1999 exploitation index (0.009) was the lowest in the time series and well below the Fmsy proxy (0.31), derived as the MSY proxy (1,500 mt) divided by the Bmsy proxy. Since discards have not been estimated, and landings, not catch, were used to derive exploitation ratios, the exploitation ratios may be underestimated.

#### **Relative Exploitation Rate Analyses**

The replacement ratio analysis suggest that the input data for this stock may be imprecise given the weak relationship between the replacement ratio and the relative F as indicated by the circular shape of the ellipse (Figure 3.18.2). The relative F where replacement ratio = 1.0 was estimated to be 0.01 (SE 0.03) and the relative F where replacement ratio = 1.1 was estimated to be 0.00 (SE 0.01; Table 4.1.1). Given that the randomization test for this analysis was not significant (0.118; Table 4.1.1) and that the precision of the relative F was three times larger than

the point estimate, it was concluded that, for this stock, these analyses were not informative upon which to base recommendations for Bmsy, Fmsy, and MSY.

## Ocean Pout

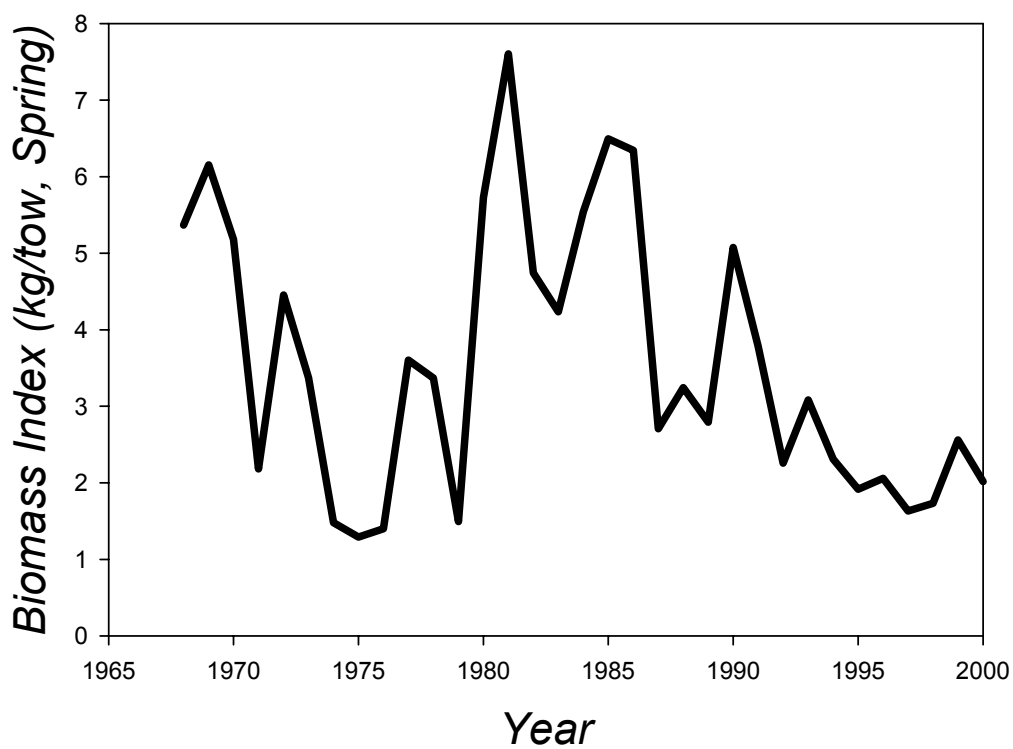
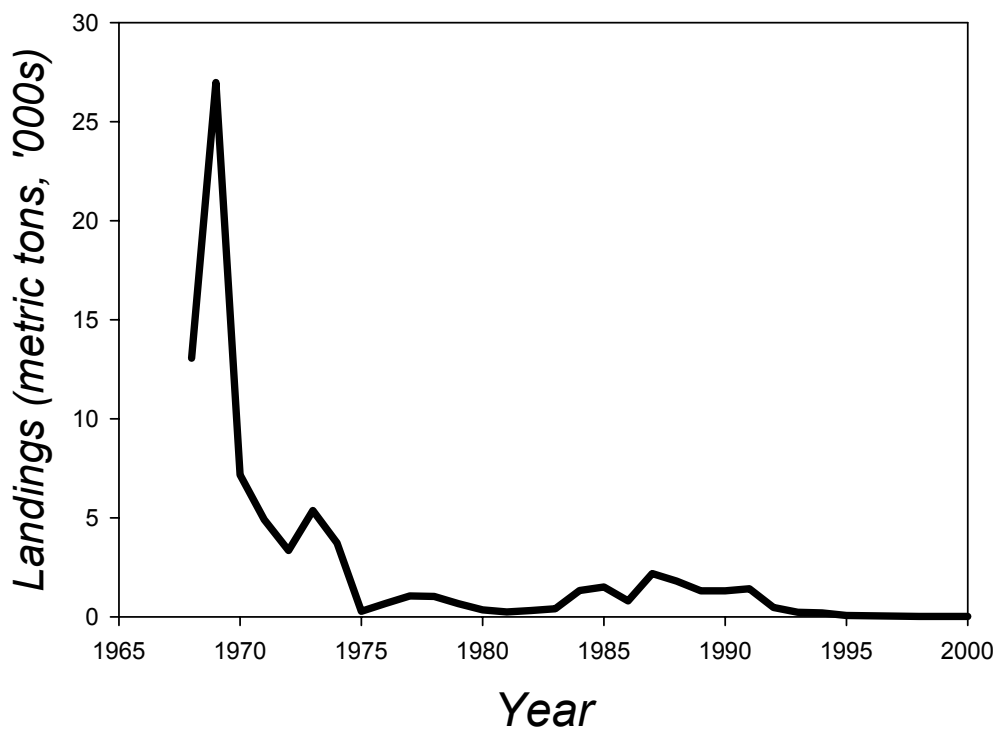


Figure 3.18.1. Landings and research vessel survey abundance indices for Ocean pout.

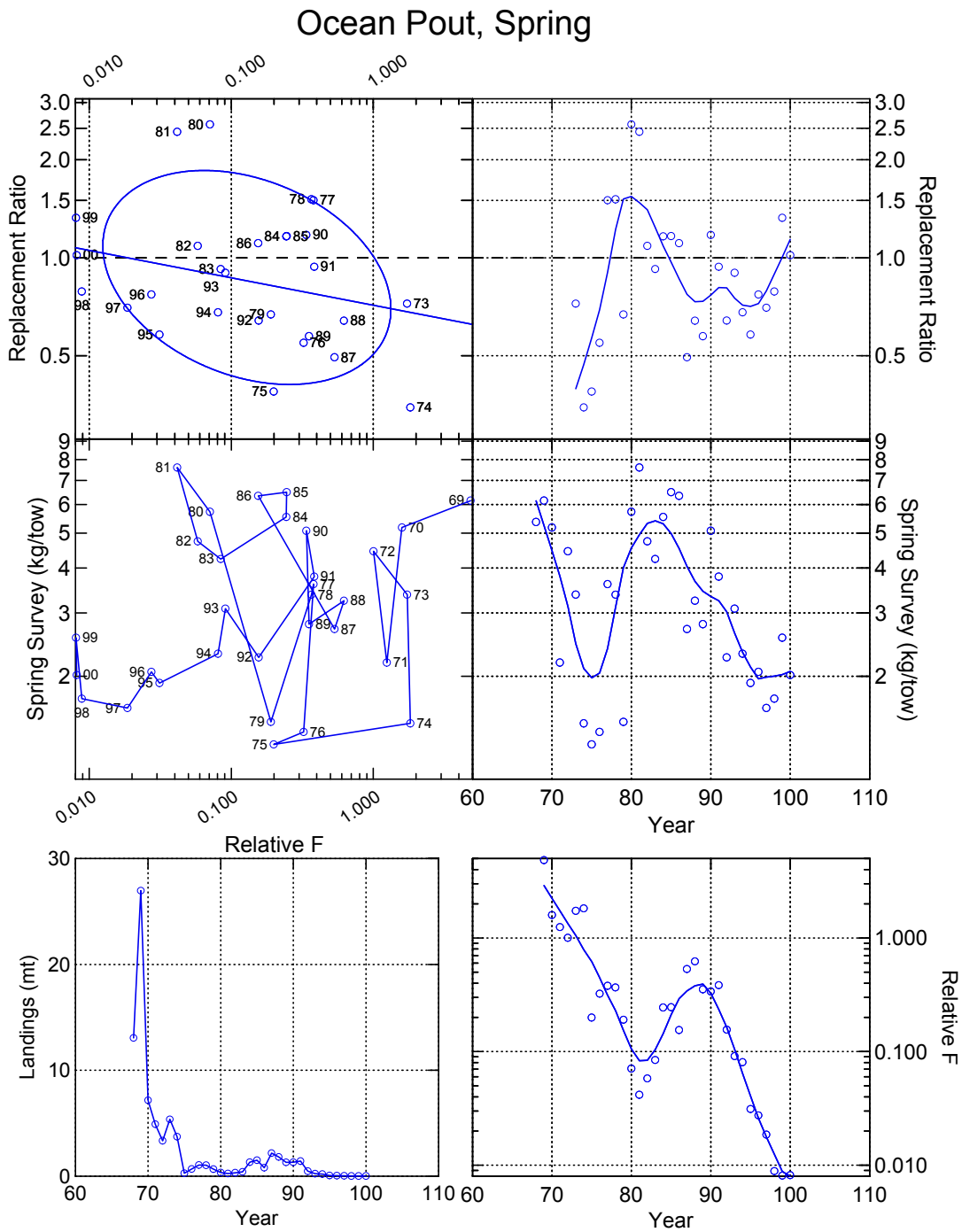


Figure 3.18.2. Trends in relative biomass, landings, fishing rate mortality rate indices (landings/survey index) and replacement ratios for ocean pout. Dashed lines indicate current biomass and fishing mortality rate proxies of  $B_{msy}$  and  $F_{msy}$ .