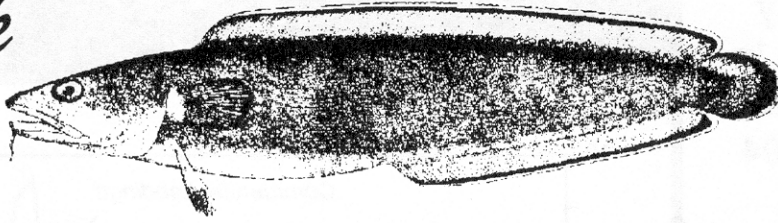
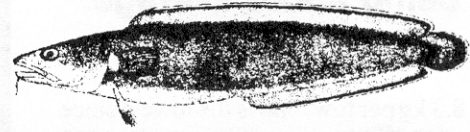


Cusk



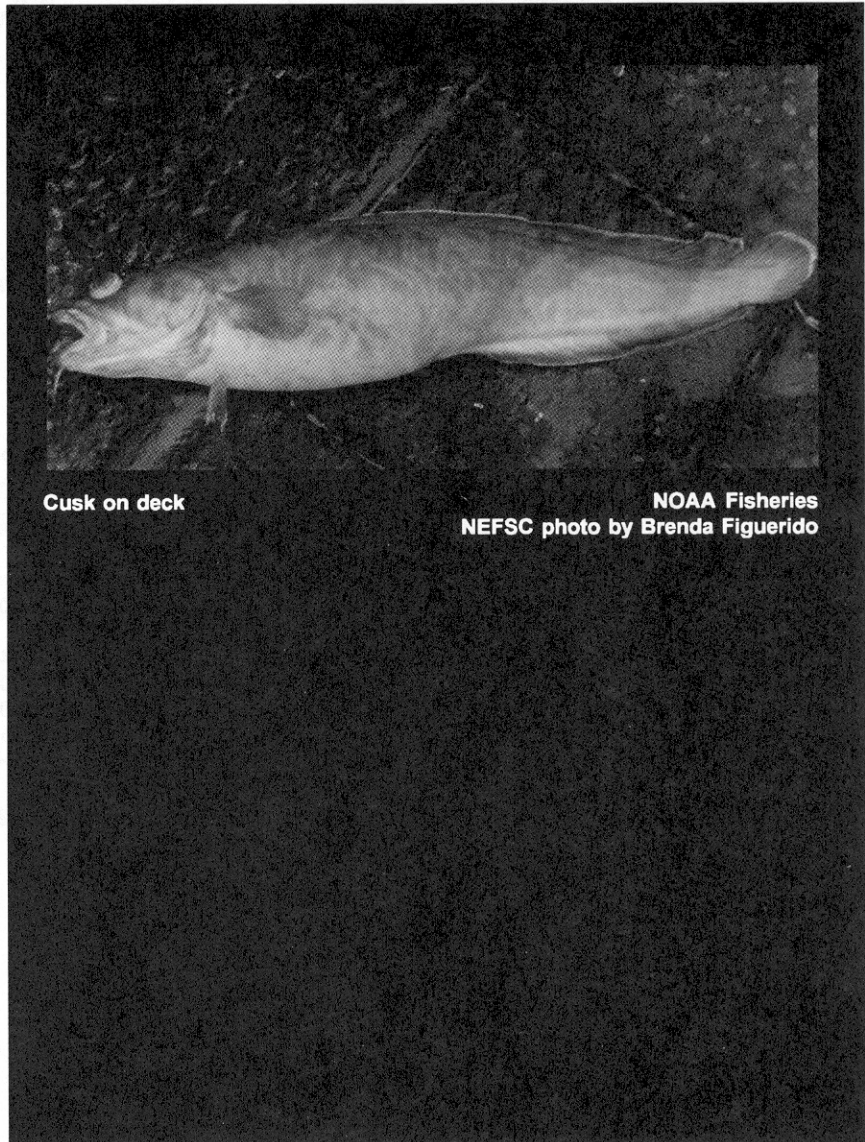
by L. O'Brien



The cusk, *Brosme brosme*, is a deepwater species that is found in rocky, hard bottom areas throughout the Gulf of Maine. Spawning occurs in spring and early summer; eggs rise to the surface where hatching and larval development occur. Juveniles move to the bottom at about 5 cm (2 in.) in length where they become sedentary and rather solitary in habit. Individuals commonly attain lengths up to 90 cm (35 in.) and weights up to 9.0 kg (20 lb). The stock structure of cusk is unknown. Although little information is available for Gulf of Maine fish, cusk from the Scotian Shelf area are relatively slow growing and late maturing. Scotian Shelf cusk reach a maximum age greater than 14 years and attain sexual maturity by ages 5 (males) and 7 (females).

The principal fishing gears used to catch cusk are line trawl, otter trawl, gill net, and longline. Fish caught by these gears range in size from 35 cm (13.8 in.) to 110 cm (43.3 in.). Recreational fishing is insignificant and foreign catches are minor. The fishery is not under management. Total catches in 1996 were 700 mt, 30% less than in 1995, and the lowest in the time series.

During the late 1960s and early 1970s, annual landings were relatively stable at about 1,700 mt per year, but increased in the late 1970s - early 1980s, peaking at 3,800 mt in 1981. Landings subsequently declined to 1,500 mt in 1988 and then increased to 2,400 mt in 1992 before again declining to only 700 mt in 1996, a record low. Historically, 60% to 80% of the U.S. catch has been taken from the Gulf of Maine, but since 1993,



Cusk on deck

NOAA Fisheries
NEFSC photo by Brenda Figuerido

landings from the Gulf of Maine and Georges Bank have been nearly equal. Almost all Canadian landings have been taken on Georges Bank.

The 1996 U.S. total was 500 mt and accounted for 71% of the total

harvest. Canadian landings in 1996 were 200 mt. Historically, otter trawls have accounted for between 50 and 87% of annual U.S. cusk landings. During 1992-1994, the majority of the landings were by bottom long line

“Annual landings have generally declined since 1981, while survey indices of abundance have generally declined since 1985.”



gear, also known as line trawls. Otter trawls and line trawls together accounted for most of the landings during 1995-1996.

Although the NEFSC autumn bottom trawl survey biomass index has fluctuated considerably, a declining trend has been evident since the late 1960s. The index fell to a record low in 1995 and has since increased only slightly. The mean length of cusk caught on the survey has also declined, from a long-term average of 61 cm during 1964-1993 to 38 cm during 1994-1996.

Annual landings have generally declined since 1981, while survey indices of abundance have generally declined since 1985. The ratio of landings to survey indices has been increasing since 1986, implying increased exploitation. The stock appears to be overexploited and at a low biomass level.

For further information

Bigelow, H.B., and W.C. Schroeder, 1953. Fishes of the Gulf of Maine. *Fish. Bull., U.S. Fish. Wildl. Serv.* 74:53.
 Oldham, W.S. 1972. Biology of Scotian Shelf cusk, *Brosme brosme*. *ICNAF Res. Bull.* 9: 85-98.

Gulf of Maine-Georges Bank Cusk

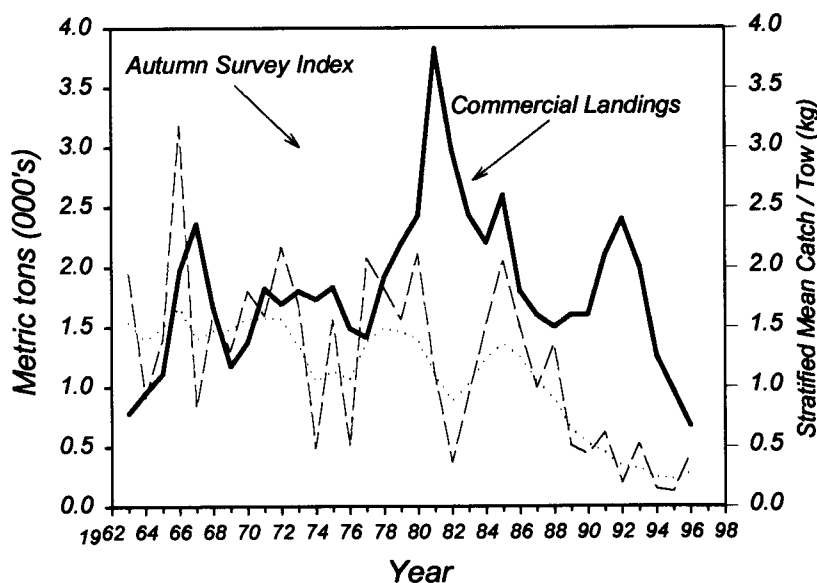


Table 18.1 Recreational catches and commercial landings (thousand metric tons)

Category	Year										
	1977-86 Average	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
U.S. recreational	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Commercial											
United States	1.7	1.4	1.1	0.9	1.2	1.5	1.6	1.4	1.1	0.8	0.5
Canada	0.6	0.3	0.4	0.7	0.5	0.6	0.8	0.6	0.2	0.2	0.2
Other	-	-	-	-	-	-	-	-	-	-	-
Total nominal catch	2.3	1.7	1.5	1.6	1.7	2.1	2.4	2.0	1.3	1.0	0.7

Summary Status

- Long-term potential catch = Unknown
- SSB for long-term potential catch = Unknown
- Importance of recreational fishery = Insignificant
- Management = None
- Status of exploitation = Overexploited
- Age at 50% maturity = 4.7 years, males
6.6 years, females
- Size at 50% maturity = 43.5 cm (17.1 in.), males
50.7 cm (19.9 in.), females
- Assessment level = Index
- Overfishing definition = N/A

M = Unknown F_{0.1} = Unknown F_{max} = Unknown F₁₉₉₆ = Unknown