

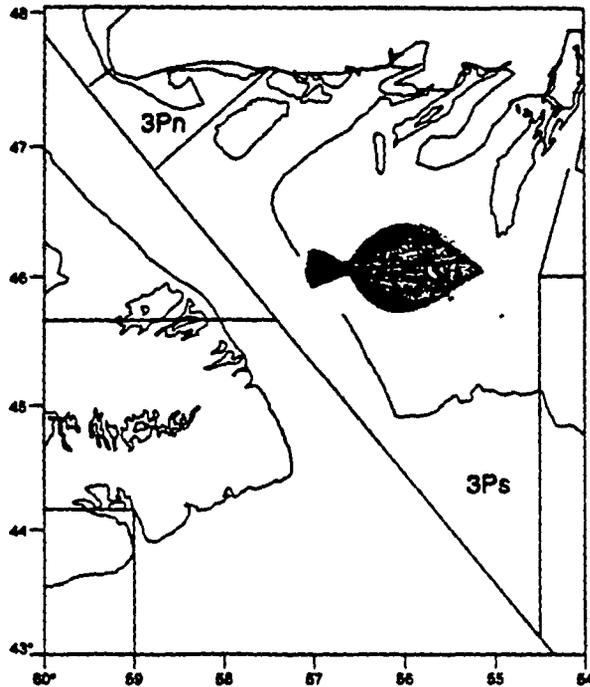
## SUBDIVISION 3Ps AMERICAN PLAICE

**Background**

American plaice, which occurs on both sides of the North Atlantic, is a bottom dwelling flatfish. In the western Atlantic, the species ranges from U.S.A. waters to the Arctic, with the largest population historically occurring on the Grand Bank off Newfoundland. American plaice in Subdivision 3Ps were usually found to be most abundant at depths of from 100 to 200 meters (55-109 fathoms) but there has been a shift to deeper waters since the late 1980s.

American plaice in NAFO Subdivision 3Ps enter the otter trawl fishery at age 5. The bulk of the fishery is comprised of fish aged 8 to 12 with some fish up to age 18 being caught even in the most recent years. Female American plaice in 3Ps mature at about age 9 (37 cm (15 inches)) while males mature at about age 4.5 (20 cm (8 inches)).

Catches from this stock were highest from 1968 to 1973, during which time they averaged over 10,000 metric tons. Since 1980, catches have exceeded 5000 metric tons only twice. There have been both offshore and inshore fisheries but in most years the majority of the catch has been taken by the offshore otter trawl fleet. The first quota was put in place in 1974 at 11,000 metric tons. The quota was 5,000 metric tons through the 1980s, then reduced to 4,000 metric tons for 3 years before being set at 3,000 metric tons for 1993. Since that time this stock has been under moratorium with total allowable catches restricted to by-catch only.



### The Fishery

Catches from this stock were highest from 1968 to 1973, exceeding 12,000 metric tons on three occasions in this period. Catches by foreign vessels peaked at about 8800 metric tons in 1968, due mainly to the USSR catch, and have not exceeded 800 metric tons since 1973. The total reported catch in 1993 was 751 metric tons, the lowest since the early 1960s.

Landings (thousand metric tons)

Year	60-76 Avg.	77-90 Avg.	1992	1993 <sup>1</sup>	1994 <sup>1</sup>	1995 <sup>1</sup>	1996
TAC	-	-	4	3	.5 <sup>2</sup>	.1 <sup>2</sup>	.09 <sup>2</sup>
Can	4	3	2	.8	.1	+	
Others	1	.3	+	0	0	0	
Totals	5	6	2	.8	.1	+	

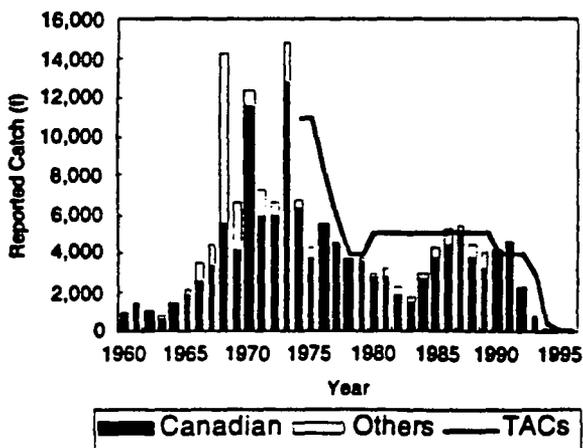
<sup>1</sup> Provisional

<sup>2</sup> By-catch Only

+ Catch less than 500 metric tons

Based on a recommendation by the FRCC the fishery was closed in September of 1993 for the remainder of that year. Since then the TAC has been for by-catch only. In 1995 the TAC was set at 100 metric tons and the catch was 76

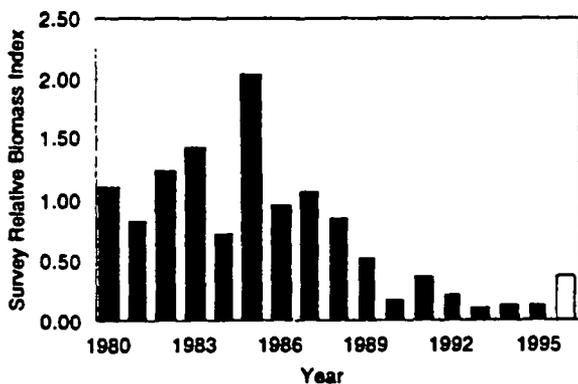
metric tons. There is a 90 metric ton by-catch quota for 1996.



**Resource Status**

In 1993 the catch was comprised mainly of fish aged 8-12, similar to most years. No recent catch rate or catch-at-age data are available from offshore otter trawlers due to very low catches and closure of the fishery in 1993. Reports from the fishing industry indicated very poor catch rates in this fishery in 1993.

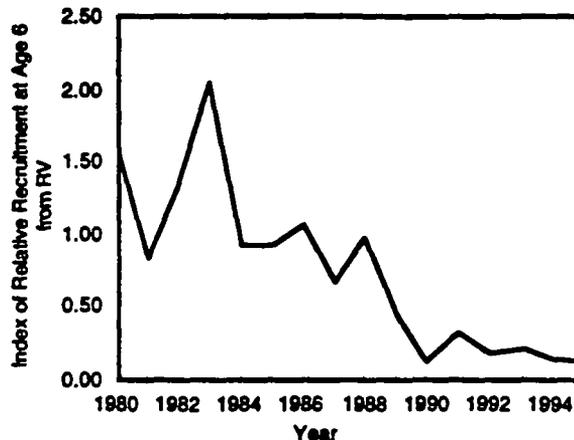
Research vessel survey information shows that the stock is at a very low level. The 1995 survey estimate was only 10% of those of the mid-1980s. During recent surveys, most of the biomass was found in deeper areas than usual.



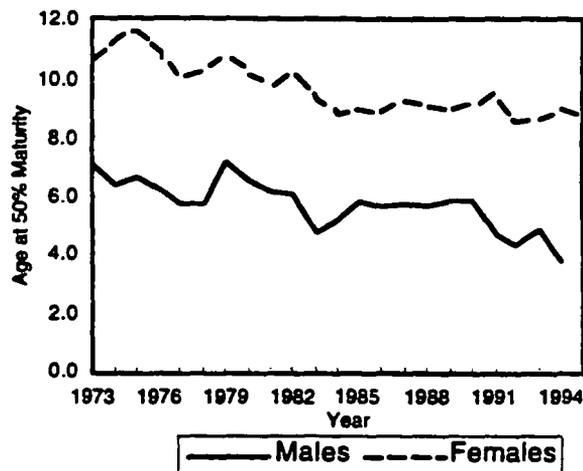
The 1996 survey was conducted with a different trawl gear which is known to be more efficient at catching small fish. Therefore the most recent

survey estimate is not directly comparable with those of previous years until it can be put into proper context based on the results of comparative fishing experiments. However, even with the change in survey gear, the 1996 estimate is low compared to peak values for this stock.

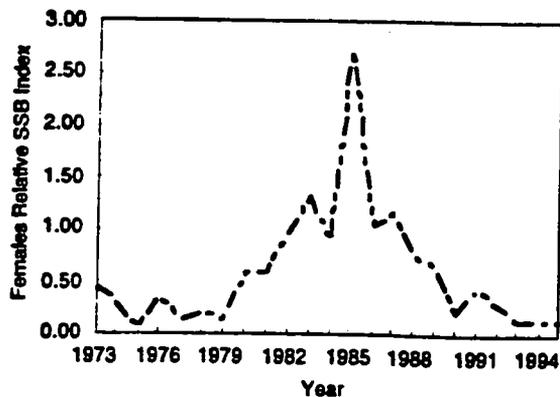
Age specific data from the 1996 survey are not yet available. The abundance of all age groups has declined and recruitment since 1990 has been very low; only about 20% of the 1977-1989 average.



For both males and females there has been a dramatic decline in age at 50% maturity since the early 1970s.



Female spawning stock biomass (from which production comes) has been declining since 1985. The estimates for the last 3 years have been the lowest since 1979.



### Ecological Factors

Water temperatures have been below normal in Div. 3Ps since the mid-1980s. Bottom temperatures along the western side of the St. Pierre Bank were near normal in 1995 while temperatures over the central and eastern portions of the Bank were well below normal.

### Outlook

The outlook is very pessimistic, given the current low stock size, and the lack of recruitment indicated by the surveys. In the short to medium term, there is no prospect for stock rebuilding. Any fishery in 1997 could be detrimental to the stock.

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### For More Information

**Research Document:** Morgan, M.J., W.B. Brodie and G.T. Evans. 1995. Assessment of the American plaice stock in NAFO Subdiv. 3Ps. DFO Atl. Fish. Res. Doc. 95/36.

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