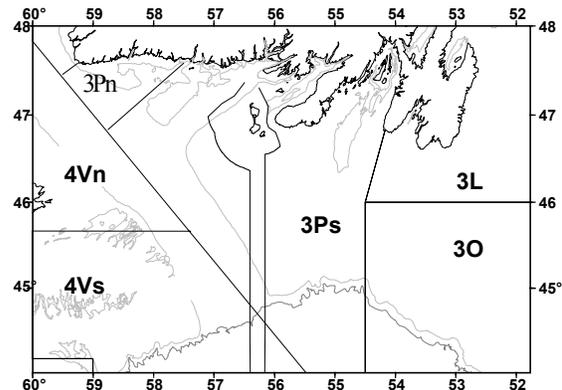


Subdivision 3Ps Pollock

Background

Pollock occur on both sides of the North Atlantic. On the North American side it occurs from southern Labrador around Newfoundland into the Gulf of St. Lawrence, and south to Cape Hatteras. Pollock is a member of the cod family (*Gadidae*), but unlike most members spends little time near the bottom. They are voracious eaters and often congregate in large numbers. As pelagic larvae they feed mainly on copepods, but as they settle and move inshore, crustacea, mainly amphipods, are the preferred food. As they increase in size euphausiids, shrimp and small fish become part of the diet. In the offshore areas sand lance, herring, silver hake, redfish and lanternfish become more important in the diet.

Pollock are a cold water fish preferring waters from 0°C to 10°C, however maturation of sex organs and incubation of eggs requires temperatures in the upper range. This fact places Newfoundland waters at the northern end of pollock range. Research on pollock in the Newfoundland area shows that mature fish occur along the slopes of St. Pierre Bank and the slopes of the southern Grand bank. In summer schools of young pollock are occasionally found in harbours along Newfoundland's south coast. Pollock do not generally occur in Newfoundland waters in sufficient numbers to support a major commercial fishery.



Summary

- Pollock do not generally occur in Newfoundland waters in sufficient numbers to support a major fishery.
- Distribution is restricted mainly to the slope waters of Burgeo and St. Pierre Banks and inshore waters.
- Overall abundance and biomass indices increased slightly from 1999-2002 but this increase is almost entirely due to increases in the inshore areas.

The Fishery

The pollock fishery in NAFO Subdivision 3Ps has generally been a bycatch fishery with substantial catches being taken in the ottertrawl, gillnet and trap fisheries for cod. Pollock are currently managed by bycatch restrictions. Catches of pollock declined from 4500 t in 1960 to low levels of less than 1000 t for the 1967-1982 period. Catches gradually increased thereafter, peaking at 7500 t in 1986, but have since

declined to pre-1980 levels. Catches since the cod fishery reopened in 1997 have increased slightly, but remain less than 1000 t annually.

Landings (thousand metric tons)

Year	60-76	77-96	1997	1998	1999	2000 ¹	2001 ¹	2002 ³
	Avg.	Avg.						
TAC	-	-	1500 ²	1500 ²	2	2	2	2
Can.	.2	.8	.6	.6	.5	.8	.8	.5
Others	.6	.6	+	+	+	0	0	0
Totals	.8	1.4	.6	.6	.5	.8	.8	.5

¹ Provisional

² bycatch only

³ catch to October 1, 2002

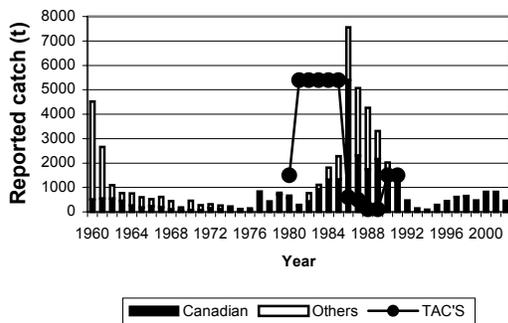


Figure 1. Reported catch and Total Allowable Catch for Pollock in NAFO Subdivision 3Ps.

Resource Status

Research Surveys

Canada has conducted research vessel surveys in NAFO Subdivision 3Ps using the stratified random design since 1972. Surveys were conducted mainly in February to March prior to 1993 but since then have been conducted in April.

The vessels and gears used to conduct the surveys have changed over time. The A. T. Cameron conducted surveys from 1972-1983 using the Yankee 41.5 ottertrawl. From 1983 to 1995 the Wilfred Templeman or it's sister ship the Alfred Needler conducted the surveys using the Engel 145 hi-rise ottertrawl. Since 1996 the Wilfred Templeman has

conducted the survey using the Campelen 1800 shrimp trawl. Changes in gear mean the abundance and biomass estimates derived during the various periods are not comparable. Insufficient data were available from comparative fishing experiments to provide conversion factors for pollock. The pelagic nature of pollock means that research vessel surveys using bottom trawls may not give a reliable index of biomass.

The **biomass** index was low in the 1970s (<1 kg. per tow), gradually increased to 6 kg. per tow in 1987, but has since declined again to low levels (less than 0.5 kg. per tow).

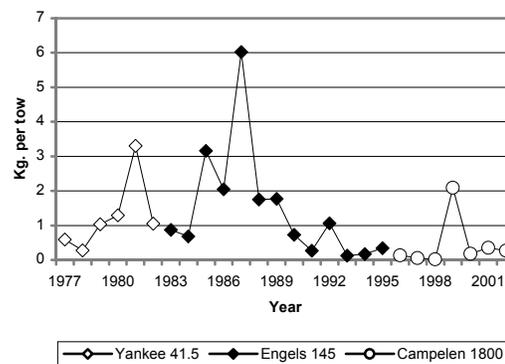
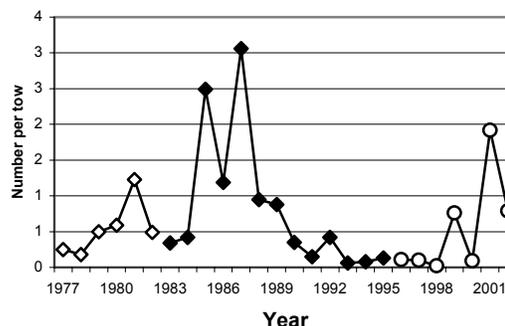


Figure 2. Numbers and weight estimates per tow of pollock for NAFO Subdivision 3Ps.

Survey coverage was extended into Placentia Bay in 1994, and into Fortune Bay and inshore areas west of Fortune Bay in 1997; however, no significant

concentrations of pollock were observed in these areas until 1999. Overall abundance and biomass indices increased slightly from 1999-2002 but these increases are almost entirely due to increases in the inshore strata.

The length compositions of these surveys were dominated by larger pollock (mean length 60 cm) in 1999 and by smaller pollock in 2001 and 2002 (mean length 22 and 29 cm respectively).

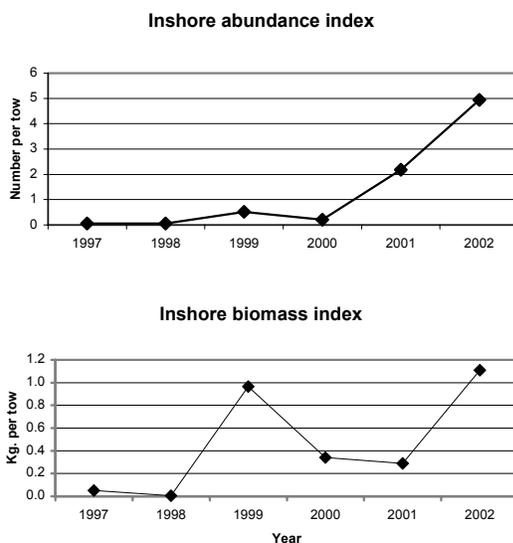


Figure 3. Abundance and biomass from inshore strata.

Ecological and Biological Factors

Pollock in Newfoundland waters are at the northern extent of their range in the Northwest Atlantic. However, they are not incidental visitors to these waters. Surveys indicate that their distribution is restricted to the slopes of Burgeo and St. Pierre Banks and the inshore areas. Pollock are reported in the catch statistics in every month. They are found in surveys in both winter and spring.

Pollock at various stages of maturity are encountered during surveys, indicating

pollock are probably spawning in the area.

Outlook

Pollock have never been a major component of the commercial fishery in NAFO Subdivision 3Ps. Their contribution is based on the infrequent occurrence, and survival of year-classes in the extreme north of their range. Surveys in 2001 and 2002 have shown significant numbers of young pollock in the inshore strata. If these are allowed to mature and spawn a moderate fishery may be possible in the future. However chances of survival are not good under bycatch regulations employed in current groundfish fisheries.

For more Information

Contact: Eugene Murphy
Fisheries and Oceans
Canada
PO Box 5667
St. John's NL A1C 5X1

Tel: 709-772-5479
Fax: 709-772-4105
E-Mail: murphye@dfo-mpo.gc.ca

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Murphy, E.F. 2002. The Distribution of Pollock in NAFO Subdivision 3Ps. DFO Can. Science Advis. Sec. Res. Doc. 2003/004.

This report is available from the:

Newfoundland and Labrador Region
Science, Oceans and Environment
Branch
Fisheries and Oceans Canada
PO Box 5667
St. John's NL A1C 5X1
Phone Number (709) 772-2027/8892
Fax Number (709) 772-6100
e-mail address richardsed@dfo-
mpo.gc.ca
www.dfo-mpo.gc.ca/csas

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