

MONKFISH IN DIVISIONS 3L, 3N, 3O AND 3Ps

Background

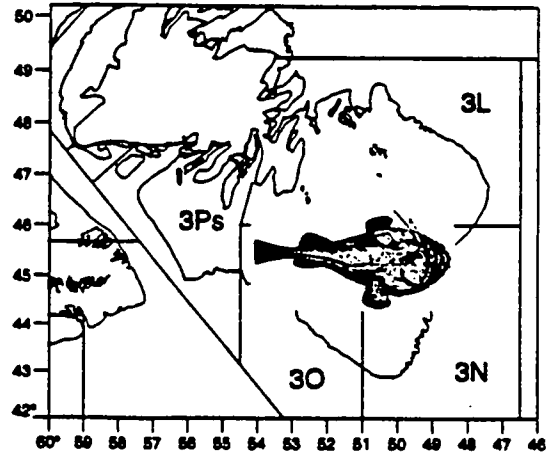
The monkfish or goosefish (*Lophius americanus*) is a bottom dwelling sluggish fish that lives in relatively warm waters. In the western Atlantic it is found around the Grand Banks, throughout the Gulf of St. Lawrence, on the Scotian Shelf and in the Bay of Fundy, and further south to northern Florida. It has been found in depths from the tideline down to about 650 meters (355 fathoms), and in temperatures from 0-21°C. Limited studies have indicated a seasonal migration to shallower water in summer and deeper water in winter.

Spawning is thought to occur from June to September in Canadian waters, with the larvae floating to the surface after hatching, the settling to the bottom as post-larvae.

Limited information on growth suggests they reach a length of about 11 cm (3 inches) at age 1, and a lengths of about 76 cm (30 inches) and 102 cm (40 inches) at ages 7 and 10 respectively.

Monkfish are voracious predators, consuming a wide variety of prey; both fish and invertebrates. The fishing 'lure' on its head serves as an attraction to prey.

Until recently, monkfish were taken only as by-catch in 3LNOPs, but with the decline in other resources, interest in a directed fishery has increased. The 1996 quota for 3LNOPs, 200 metric tons was set arbitrarily. It is allocated to fixed gear fisheries only.



The Fishery

Canadian catches, since extension of jurisdiction in 1997, remained less than 200 metric tons annually until 1991. During that period all landings were by-catch. In 1991 a directed trawl fishery began, and almost 400 metric tons were taken. Catches gradually increased with the development of this directed fishery to about 1,000 metric tons in 1994. The 1995 catch fell to only 165 metric tons under a quota restriction of 200 metric tons. A total of 213 metric tons has been taken in 1996 to August 14. The 1996 fishery is now closed because the 200 metric ton quota was reached.

Landings (thousand metric tons)

Year	77-90 Avg.	1992	1993 ¹	1994 ¹	1995 ¹	1996
TAC					.2	.2
Can.	+	.7	1	1	.2	
Others	.8	+	+	+	+	
Total	N/A	.7	1	1	.2	

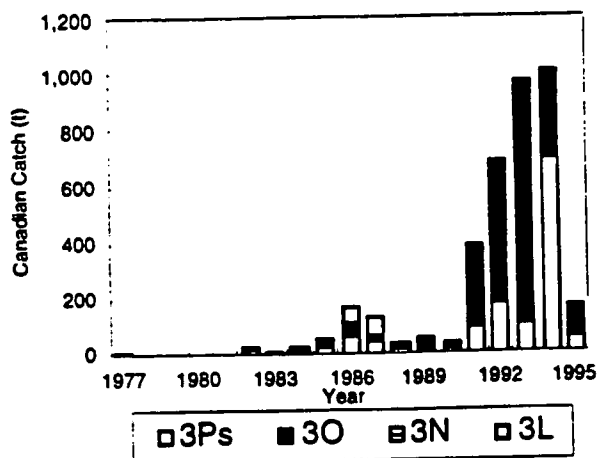
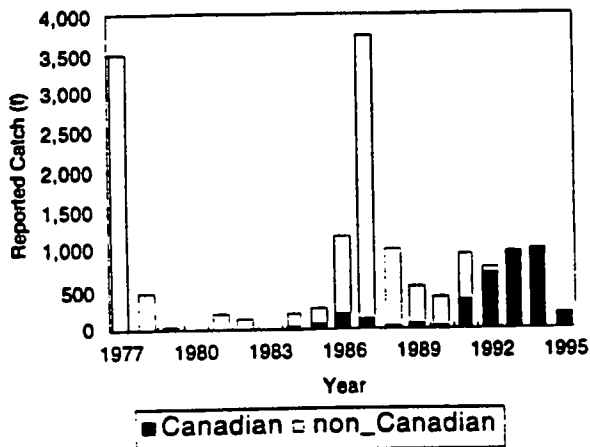
¹ Provisional

* Catch less than 500 metric tons

Canadian catches have come predominantly from Division 3O and Subdivision 3Ps. In 1993, 86% was reported from 3O, while in 1994, 70% was from 3Ps. Similar amounts were taken in total in both years.

Lengths caught during the 1996 fishery ranged between 51-114 cm (20-45 inches) with an average of about 81 cm (32 inches).

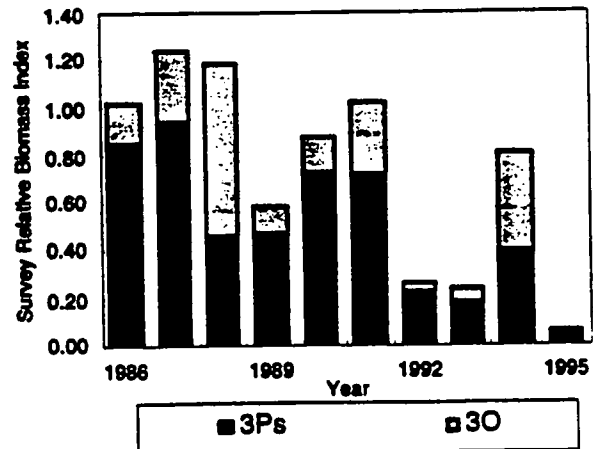
Non-Canadian catches have generally been less than 1,000 metric tons annually although it was reported that about 3,500 metric tons were taken in 1977 and again in 1987. It is possible that the 1987 figure may be inflated due to misreporting. Most of the non-Canadian catches have been from Division 3N. In some years, reported non-Canadian catches from 3L exceeded 100 metric tons.



Resource Status

The only information available for monkfish in this area comes from research surveys. The survey relative biomass indices for the different areas clearly indicate that most monkfish are found in Division 3O and

Subdivision 3Ps. Prior to 1992, the overall estimates remained fairly stable, but a decline was noted beginning in 1992, although there was a high estimate in 1994.



Although fisheries data indicate that catches have been taken in both divisions 3L and 3N, the research surveys from 1986 to the present have not found any monkfish in 3L, and very few in 3N.

Sources of Uncertainty

Monkfish are not caught in great abundance during the research surveys and have not been routinely studied. Growth rates, ages, maturity, fecundity, movements and stock structure are all unknown.

Outlook

The status of monkfish in 3LNOPs is difficult to evaluate based on current analyses of existing data. Survey information does indicate declines both in biomass and mean size of the fish. It would therefore be prudent to maintain existing precautionary TACs.

For More Information

Research Document: Kulka, D.W., E. DeBlois and B. Davis. 1996. Non-traditional groundfish species on the Labrador Shelf and Grand Banks - wolffish, monkfish, white hake and winter

(blackback) flounder. DFO Atl. Fish. Res. Doc.
96/97.

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