



Newfoundland and Labrador Region

Stock Status Report A2-17(2002)

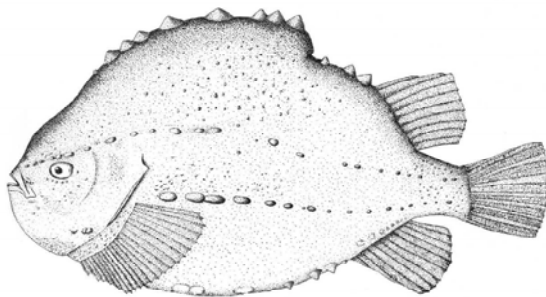


Photo Credit: R. Blundon, Fisheries and Oceans Canada

Lumpfish in NAFO Division 3P

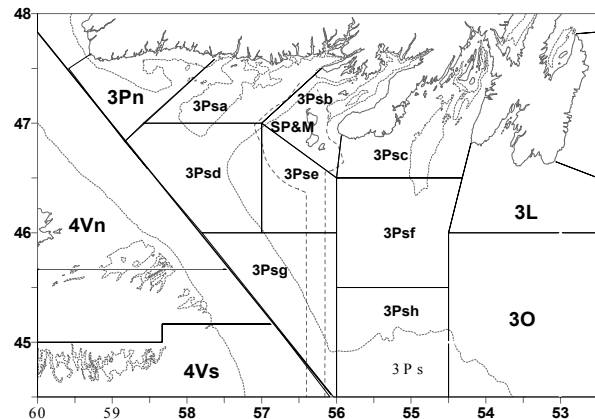
Background

Lumpfish are found on both sides of the North Atlantic in cold to temperate coastal waters. They are primarily a bottom dwelling species but have been reported to be semi-pelagic during early life stages.

Spawning takes place during the spring in Newfoundland waters and continues into the summer. The preferred spawning grounds are shallow water rocky shores with abundant seaweed growth. After the egg masses have been deposited, females leave and the smaller, now reddish colored males, are left to guard them. Initially growth is relatively fast, with the fish doubling in length within one month. Length can range between 50 and 75 mm (2 to 3 inches) by the first year of age. Some data have shown that females continue to grow quickly up to age 5 where they can reach a size of 30 cm (12 inches). After age 5 growth slows. Large females have been reported up to 60 cm (24 inches) in length and weighing almost 10 kg (18 pounds).

Lumpfish feed on a wide variety of invertebrates such as euphausiids, pelagic amphipods, copepods, other small crustaceans, jellyfish and some small fish such as herring and sand lance. Lumpfish are readily eaten by seals, and other marine mammals. They have also been found in stomachs of Greenland sharks.

The Canadian fishery for lumpfish started in the late 1960s and is primarily based on roe, the unfertilized eggs. Eighty percent of the landings are reported by vessels less than 35 feet.



Summary

- Landing trends are influenced by economics factors (roe prices and supply management) and may not reflect trends in lumpfish abundance.
- Due to an overall lack of data it is impossible to assess the status of the lumpfish stock at present.

The Fishery

Roe Landings (000s t)

Year	78-96 Avg.	1997	1998	1999	2000 [†]	2001 [†]
Can.	0.7	1.6	1	1.6	0.9	0.3

[†] Provisional

The commercial fishery for lumpfish roe in Newfoundland began in 1969. It developed slowly for the first number of years. Landings increased to around 500 t through 1984 and averaged 750 t

for the remainder of the 1980's (Fig.1). Landings fluctuated between 300 t in 1990 to 1600 t in 1997 and 1999. Since 1999 landings have declined to less than 300 t annually.

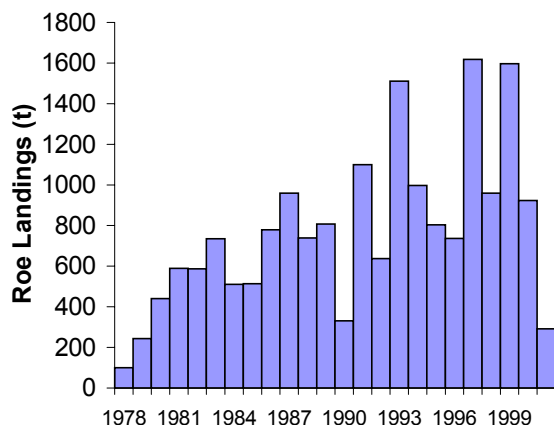


Figure 1. Lumpfish roe landings from NAFO Division 3P from 1978 to 2001.

There is no apparent change in size of lumpfish based on sampling of the fishery in 1998-2001 and fish sampled in the late 1980's.

This fishery has been managed by effort controls since 1992. In 2001 and 2002 fish harvesters were limited to a three week fishery using a maximum of fifty 10 ½ " mesh nets.

Industry perspective

The recent decline in landings may not be fully reflective of the state of the stock. The 3 week season for this fishery may not be synchronized with the arrival of lumpfish in the inshore area. Also, effort has been diverted to the more lucrative crab fishery which is prosecuted at the same time.

Resource Status

There is very little directed research ongoing for this species. DFO research survey **indices of abundance** have been calculated for NAFO Subdivision 3Ps for 1983-2002 from the annual multi-species surveys (Fig. 2). The timing of the surveys has varied from January to June. Abundance estimates have declined an order of magnitude from the mid 1980's to the present. This decline maybe attributed to changing the timing of the surveys to later in the year, after the seasonal shoreward migration of the lumpfish. Thus the spring portion of the survey time series is not considered reflective of this stock.

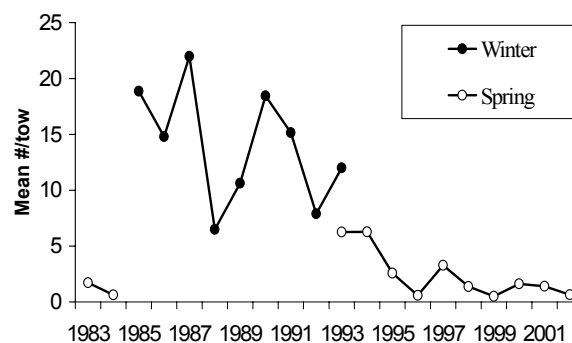


Figure 2. Mean numbers/tow index from multi-species surveys conducted in NAFO Subdivision 3Ps. Winter = January to March. Spring = April to June.

An analysis of **Catch per unit effort** (CPUE) data from index fish harvesters involved in a DFO seal monitoring program was conducted. This analysis was considered too preliminary to use as an index for this stock.

Outlook

Due to an overall lack of data it is impossible to assess the status of the lumpfish stock at present.

For more Information

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