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The capelin fishery – one more time

Birds I View

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A bucket of male capein – the ones we like to eat (photo: Janet Montevecchi).

The Department of Fisheries and Oceans (DFO) recently concluded its review of the scientific evidence regarding the condition of the capelin population. Emphasis was aimed at influencing factors, including ocean climate change, predation and the fishery. Participants included DFO scientists, university scientists, fishers, and representatives of the Food and Fisheries Allied Workers (FFAW), the World Wildlife Fund (WWF) and of indigenous groups.

The take-home messages from the assessment were that capelin abundance is very low and that the stock has not exhibited any sustained growth over the past 30 years. Low larval production and recruitment, late spawning, early maturation, and changing feeding conditions

were all associated with low capelin productivity during the last five years. The projections for 2021 and 2022 are poor. DFO is recommending that removals from all sources be kept at the lowest possible level. For the fishery that level would be zero.

The importance of capelin for the marine food web

Capelin occupy a central role in the marine food web of the Newfoundland-Labrador region. Capelin are referred to as forage fish because they are the primary food base of larger marine animals including cod, turbot, seabirds, seals and whales. Capelin are essential for growth and well-being of these species.

Closing the fishery

In 2020, capelin fetched very high prices for fishers. Perhaps because the Icelandic and Norwegian capelin fisheries were closed, and the Newfoundland fishery was the only game on. High prices are a powerful motivation for fishers to continue fishing capelin. Were the capelin fishery closed on a temporary or trial basis, the only fair way to do this would be to compensate the fishers' restraint. The payback would come elsewhere. Temporary closures of the Icelandic and Norwegian capelin fisheries have been followed by recoveries of cod.

In 2021 Iceland reopened its capelin fishery. The quota is large at more than 125,000 tonnes. Some quota has been allocated to Norway The high capelin quota will presumably temper capelin prices in Newfoundland.

Comparing the capelin fishery with seal predation

Every time that a possible temporary closure or quota reduction of the capelin fishery or any fishery is raised, a first reaction is that seals eat much more than the fishery catches. DFO invited this reaction by recommending that removals from all sources be kept at the lowest possible level.

Cod, whales, seals and even seabirds consume more capelin than the fishery. That is how the food web functions. Fisheries often disrupt those circumstances. Natural predators cannot of their own accord overexploit their prey sources. Predator populations adjust to

fluctuations in their food base. Interestingly, the Iceland fishery considers the resource needs of whales and seabirds when they set capelin quotas. Canada does not.

Critical differences between the capelin fishery and natural predation by seals (or cod, whales, seabirds) are targets and timing. The capelin fishery aims directly at the initial waves of pre-spawning large egg-bearing females – the big mothers. These females create survival and population growth.

Capelin genetics associated with the timing spawning are not known, though targeted fisheries can indeed have genetic consequences for fish populations. As the fishery targets eggs, it is fishing the next generation of capelin. Fisheries for egg-bearing females have a legacy of destruction and collapse. The sturgeon fisheries and locally the lumpfish fishery are telling cases. In this ecological context, comparing a 40,000 tonne capelin quota to much larger predation levels by predators is a failed comparison of apples to oranges.

Of even greater concern, capelin catches are always underestimated. Processors only accept catches of large female capelin and high female to male ratios. So fishers have to assess the fish captured in their purse-seines and if the criteria are not met the fish are released with very substantial numbers being crushed and killed in the process.

The purse seiners frequently net more capelin than they are allowed to land. When they do and if they cannot share these catches with other fishers, many of the excess fish are killed and go uncounted in the quotas. Hence DFO quotas based solely on landings at the wharf allow the killing of many more fish than indicated in the total allowable catch.

These circumstances beg the question of fishery observers on capelin vessels. DFO managers could use this option to fill important information gaps about the capelin fishery. Other reasons for observers in the capelin fishery include direct illegal interference with whale and seabird feeding aggregations and bycatch mortality, including salmon. Iceland uses observers and coast guard to monitor their capelin fishery. Canada does not.

Research options

DFO needs to continue the fall as well as the spring capelin surveys for improved assessments and projections. Lack of a modern research vessel with adequate capability compromises DFO science. The federal minister has promised to support and enhance science capability. We are waiting.

Birds in the area

Ruffed grouse and cooing mourning doves have had multiple sightings near Neary's Pond (Katie Parnum, Rose Smart, Janet Montevecchi), where pine grosbeaks have been visiting the Mayo's feeders.

Two red crossbills stopped at Sonya Rideout's feeder following the icing of 10 April. If you have been feeding birds, it essential clear ice off feeders and provision the birds well after ice storms. Otherwise birds will die.

The robins are back, pairs of bald eagles engaged in aerial courtship (watch for the larger females and smaller males) and trilling juncos are everywhere – spring has sprung. Rain, rain, rain go away.

Hats off to the PCSP council and ACE

It is encouraging and reassuring to acknowledge the constructive and flexible responses and actions of the council and the advisory committee for the environment (ACE) to residents' reactions to recent developmental proposals. Open dialogue, information exchange and adaptive responses are the best means for the residents and the council to work together to ensure the rural nature of the community. Let's keep it going.

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