

# **Predation on capelin larvae (*Mallotus villosus*) and prey preferences of potential fish predators in the Barents Sea.**

Extended abstract.

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Variability in the capelin stock biomass in the Barents Sea has been hypothesised to be linked to climatic variability, through periodic predation on capelin larvae by strong herring year classes born in warm years. It has also been suggested that other fish predators may influence predatory mortality in capelin larvae. In order to investigate sources of predation mortality on capelin larvae, the prey preferences (size and taxon) and the per capita consumption of capelin larvae by different fish predator were estimated. Surveys were carried out in the Barents Sea during early August 2001 and June/July 2002. Fish predators were mostly sampled by trawl, but handlines were used supplementary to collect larger saithe. Capelin larvae and other zooplankton were sampled by GULF III. Stomachs from herring, 0-group cod and saithe were analysed in the laboratory. There was a significant spatial overlap in distribution of the capelin larvae and the investigated potential predators (ex. figure 1).

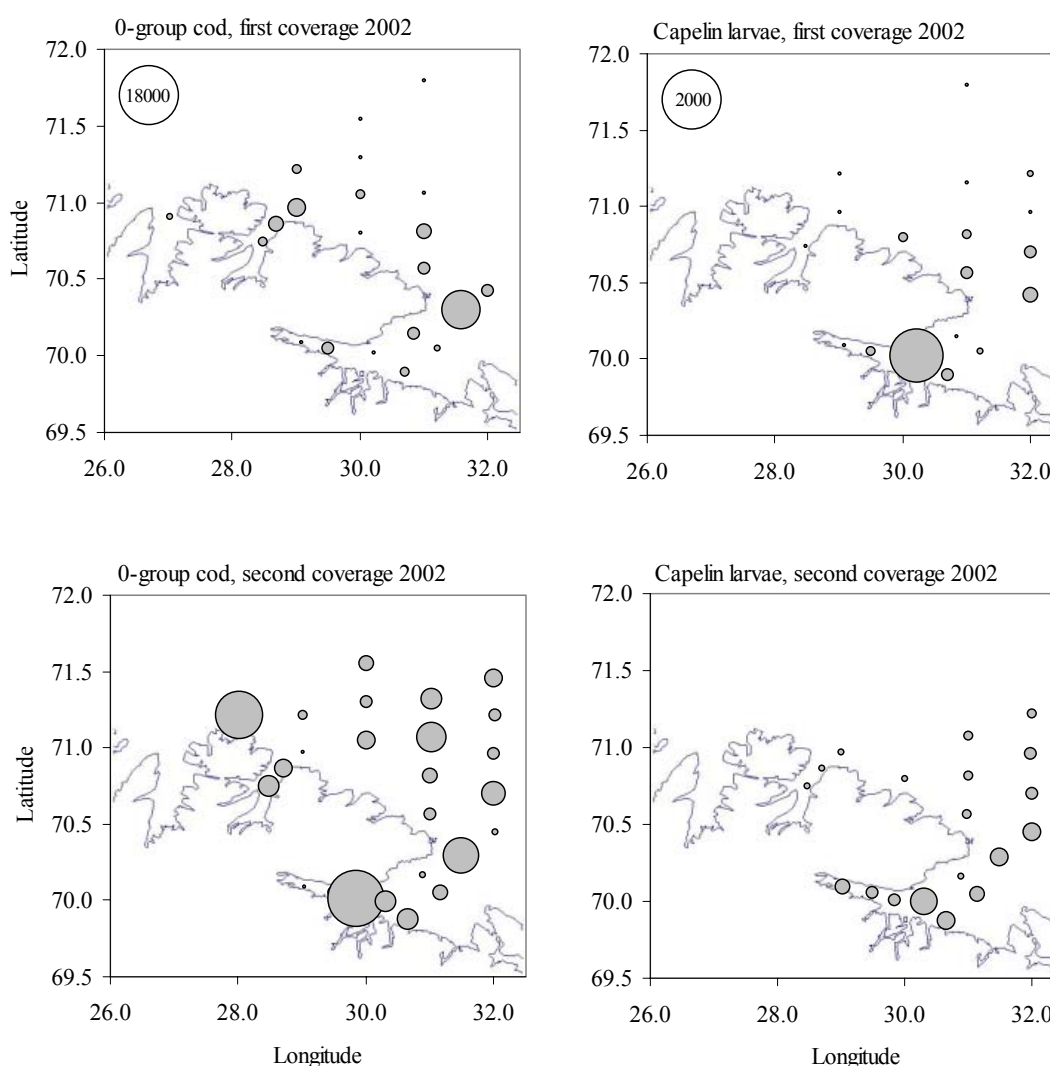


Figure 1. Number of 0-group cod in the pelagic trawl and number of capelin larvae per m<sup>2</sup> in the 2002 survey. First coverage 25/6 – 29/6, second coverage 30/6 – 4/7.

The potential roles of the different fish predators for predation mortality of capelin larvae were evaluated based on the estimated size and taxonomic preferences of the potential predators, the spatial overlap and the numerical abundance of capelin larvae and predators.

Our results show substantial predation on the capelin larvae by both 0-group cod and saithe. Even relatively large saithe (ca. 40cm in length) had eaten capelin larvae. This shows that other predators than juvenile herring are also of interest when investigating the effects of larval predation on the recruitment variability in the capelin stock.

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