

Predator diet as an indicator of comb jellyfish (*Ctenophora*) abundance dynamics in the Barents Sea

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Abstract

During the Barents Sea surveys a range of methods and gears have been used from water sampling, to plankton nets, pelagic and demersal trawls, and echo sounders. Even though the use of modern research vessels, equipment and methods there are still limitations regarding to gear: small plankton nets underestimate *Ctenophora* due to avoidance, while pelagic trawls underestimated *Ctenophora* due to escapement or damage of fragile ctenophores in the cod-end. We propose using fish stomach content data to acquire insight in to the *Ctenophora* fluctuations and increase our understanding of species interactions in the Barents Sea. *Ctenophora* can be prey for many marine organisms such as cnidaria, various fish such as cod, lumpfish and mackerels, seabirds, and other *Ctenophora*, but their importance considerably varied among predators.

The stomach content quantitative data for the period 1984-2014 (cod, haddock) as well as qualitative data for 1949-2014 (cod, haddock) were used to evaluate the role of *Ctenophora* in the fish diet. Cod mainly prey on *Ctenophora* in the eastern and southern part of the Barents Sea in the winter period, and the proportion of *Ctenophora* in cod diet increases with increasing cod size.