ICES/PICES 6ZPS 2016/S7

The spatial distribution of meroplankton in an arctic fjord

Helena Kling Michelsen, Camilla Svensen
UiT The Arctic University of Norway, Breivika, N-9037 Tromsø, Norway

Many benthic organisms produce pelagic larvae, meroplankton, which spend anywhere from hours to months in the pelagic before settling on the sea floor. The role of larvae in the zooplankton community is complex and varies on a spatial and temporal scale. However, primary production, hydrography, current systems, and distribution of the adult population are thought to be strong drivers. Despite being an important life stage for benthic invertebrates and periodically dominating in the zooplankton community, they are poorly described in arctic and subarctic regions. In this survey, we examined the spatial distribution and relative importance of meroplankton within the spring zooplankton community of the arctic Porsangerfjord, northern Norway. This was done by collecting zooplankton samples and CTD-profiles at five transects across the fjord in April 2013. Meroplankton were present in all samples and there appeared to be a correlation between larval abundance and chlorophyll *a*, temperature and depth at the different stations. Their highest abundance was found in shallow protected bays, where they were also the dominant group within the zooplankton community. The lowest abundance and contribution occurred at the cold and deep stations at the inner and outer part of the fjord. Cirripede nauplii and polychaete larvae were the dominant taxa in the meroplanktonic composition. Our investigation indicates that meroplankton may play a role in pelagic ecosystems of coastal waters at high-latitudes. Particularly in protected bays and larger retention areas.

Keywords: marine invertebrate larvae; meroplankton; spatial

Contac author: Helena Kling Michelsen, UiT The Arctic University of Norway, Breivika, N-9037 Tromsø, Norway Helena.k.michelsen@uit.no