

The impact of sea ice regime on meiobenthic structure and function north of Svalbard

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Eight stations located in the seasonal sea ice zone north of Svalbard were investigated during 'TRANSSIZ' cruise within Arctic in Rapid Transition initiative. Nematodes were used as a key group within the meiofauna. Our study provides previously unavailable data on nematode diversity for this Arctic region during ecologically important spring to summer transition time. Phytoplankton bloom development is crucial for the Arctic marine ecosystems functioning, yet data from this time of year, particularly for the deep-sea basins north of Svalbard are still scarce. The obtained results suggest that nematode community differences are attributed to prevailing environmental conditions, ice-edge related bloom-phase. Three distinct nematode assemblages were observed and were related to bloom stage. Nematodes standing stock and diversity was the lowest at stations where pre-bloom phase occurred. Community was dominated by opportunistic genera belonging to Monhysteridae and by *Acantholaimus*. Conditions at stations with already developed bloom promoted enhanced abundance and biomass of nematodes and almost two time higher number of nematode genera in comparison to pre-bloom stations. Communities at those stations were characterized by genera of Desmoscolecidae family. Stations with early-bloom conditions appeared as transitional, with conditions in which relatively high number of genera with different life strategy can co-exist.

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