

**Taxonomical and functional diversity in zooplankton communities
from boreal and arctic waters**

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The advection of warm Atlantic water into the Arctic influences not only the thermal and sea ice conditions in the Arctic Ocean and the adjacent seas but also the Arctic marine biota. Earlier efforts to characterize the response of zooplankton communities to the increasing influence of warm AW were focused mostly on changes in taxonomic diversity and community structure, but how the zooplankton functional role will evolve under future global warming scenarios remains largely unknown.

Based on the zooplankton collection gathered along a thermal gradient from temperate to Arctic marine domains (76-79°N) and an extensive functional trait matrix, we assessed the zooplankton taxonomical and functional structure and diversity under different temperature regimes.

The results suggest that the temperature effects zooplankton community structure, taking into account not only the taxonomic, but also functional features. The findings can be used in predicting changes in the pelagic realm in the warming Arctic Ocean, and in constructing and tuning plankton components of ecosystem models.

Keywords: Arctic, Biodiversity, Functional traits, Zooplankton

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