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**Title:** *Taxonomic composition of larvacea within the Norwegian Atlantic and West Spitsbergen Current*

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Appendicularia are one of the main groups of oceanic zooplankton. They play an important role in functioning of microbial loop, energy transfer from lower trophic levels, and are also considered an important source of food for many fish species larvae. However, due to sampling difficulties there is a relatively small amount of research conducted to determine the impact and role of these organisms in the environment and our knowledge of their distribution is still very fragmented. Arctic cold waters are characterized by relatively small number of characteristic species, mainly: *Oikopleura labradoriensis*, *O. vanhoeffeni*, *Fritillaria borealis typica* and *F. Polaris*. Although due to currents activity some Atlantic species may also be present far on northern latitudes, such as *O. parva* and *O. dioica*. Biological materials used in our research were collected during June and July 2011 from eight stations, each divided in three water layers, located in region of West Spitsbergen Current. The mayor aim of these study was identification and qualitative and quantitative analysis of appendicularians common in this area and linking them to the prevalence of different water masses.