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Title: *Morphological and molecular evidence reveal the underestimated cydippid ctenophore species richness in the High Arctic*

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Threat of potential arrival of non-indigenous species is increasing, particularly in the High Arctic, due to ecological shifts expected from climate change and increasing shipping traffic, facilitating long-distance transport of invaders. Hence, rigorous taxonomic identification of current species is crucial to assess changes in species distribution and their ecological impact in the future. Ctenophores and other gelatinous zooplankton are generally poorly known due to identification challenges and lack of systematic monitoring programmes. However, they are known to play important roles in the world's ocean ecosystems and share physiological attributes making them exploit the changing environmental conditions compared to most other zooplankton groups. Here we report the underestimation of cydippid ctenophore species richness in the High Arctic, in the Svalbard archipelago region, and co-occurrence of Mertensia ovum, Euplokamis spp. and an unidentified mertensiid species based on a combination of morphological and molecular identification methods. This increased taxonomic knowledge is a valuable first step towards establishing a baseline for future ecological studies, monitoring of climate impacts and assessing the threat of introduced species.