Distribution and reproduction of the Arctic ctenophore Mertensia ovum in the Baltic Sea -
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Species identification based on morphological characteristics has caused misidentifications and led to twisted views of
abundances and roles of ctenophores. Based on extensive field studies from 2007 to 2010, the occurrence of the arctic
ctenophore Mertensia ovum was genetically verified in the southern, central and northern Baltic Sea, and its egg
production, distribution and abundance were studied in relation to physical factors. Genetic analyses indicate that M. ovum
is by far the most abundant small ctenophore in the Baltic Sea. Specimens from a 20 yr old ctenophore collection were
also genetically identified as M. ovum, contrary to their previous morphological identification as another ctenophore
species, Pleurobrachia pileus. Thus, earlier reports on P. pileus in the Baltic Sea may actually refer to M. ovum. The
abundance of M. ovum was regulated by both salinity and temperature, with highest abundances found in sea areas and
water layers at temperatures 5.5 and oxygen levels >4 ml l⁻¹. During summer, the highest abundances of ctenophores
and their eggs were found near the halocline, while the distribution was more uniform throughout the water column during
winter. Only ctenophores >3.5 mm (oral-aboral length) produced eggs in the experiments, with an average rate of 2.2
eggs ind⁻¹ d⁻¹. Finally, comparison with published data from the 1980s (assuming that those data refer to M. ovum)
indicates that the present-day ctenophore abundance is ~80% lower in the north and ~55% higher in the southern parts of
the Baltic Sea, due to reasons yet to be established

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