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Pine pollen is an important component of the Baltic Sea

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Every year, pine pollen occurs at the water surface and cover large areas of the Baltic waters in spring. Its concentrations in the Baltic are sometimes so large that they actually form a conspicuous yellow layer on the surface. Pine pollen is a very important source of carbon and nutrients to the Baltic Sea.

The objective of this work was to estimate the absolute and relative concentrations of pine pollen and to show the spatial differentiation of pollen levels in Baltic Sea waters.

The measurements showed that practically the whole study area was covered with pollen. substantial pollen concentrations were recorded not only in the coastal zone but also at considerable distances from the shore. Pollen levels in Baltic surface waters, measured during the 2018 pollen season, varied from 0.5 to 14.7 $\mu\text{l l}^{-1}$, which is 10–49.2% of the total suspension, ranging from 1.25 to 250 μm . To examine the biological role of pollen in the aquatic environment, the contents of carbon C, nitrogen N and phosphorus P were measured in pollen acquired from pine trees growing close to the Baltic shore. The levels of these elements were as follows: 47.66% C, 0.32% P and 2.50% N.

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