

# Global warming increasing the dispersal of flora in Northern forests

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University of Helsinki researcher Anna Kuparinen headed the international research into the impact of global warming on seed and pollen dispersal. The goal was to learn whether global warming would accelerate the dispersal of plant populations in forests. The research group utilised the micrometeorological data gathered over a decade at the Hyytiälä Forestry Field Station. Carried out mainly at the University of Potsdam in Germany, the research findings were published in *Proceedings of the Royal Society B*.

Seed and pollen dispersal profoundly affects the dynamics and genetic variation of plant populations. Spreading into more favourable areas will help them survive in the warming climate. Wind conditions play a key role, as turbulent vertical streams, in particular, spread seeds very efficiently, even over long distances.

The researchers also discovered that a temperature that is only three degrees Celsius warmer increased the dispersal of seeds and the speed at which populations spread throughout the growth season. Particularly for those plants which have light seeds, the annual spreading speed increased dramatically, by approximately 30-40 meters.

On the basis of these results, it seems that global warming accelerates the spread of [plants](#), but it will not alone be sufficient to help plant populations to relocate to new vegetation zones. However, on a more local level, global warming may have a significant impact, as original and newly introduced species spread faster from one place to another and take over new patches of habitat. The combined effects of global warming are difficult to predict, and the research carried out by Kuparinen's team illustrates the complexity of ways in which increased temperatures may affect the flora in Northern forest habitats.

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