

North American weed poses hay fever problem for Europe

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Ambrosia psilostachya. Credit: Krzysztof Ziarnek Kenraiz/Wikipedia

Itchy eyes, sneezing and wheezing are likely to spread in Europe in coming decades as a notorious allergy-causing North American weed goes on the rampage, scientists said on Monday.

Introduced to Europe in the late 19th century, common [ragweed](#) (*Ambrosia artemisiifolia*) is a plant with reddish stalks whose tassel flowers are massive producers of pollen.

Today, the plant is firmly established in northern Italy and southeastern France, and is spreading elsewhere in niche habitats such as farmland, roadside verges and railway embankments.

On present trends, northern continental Europe and southern Britain will be badly exposed to the invader, according to the new research.

Scientists in France, Britain and Austria built a computer model factoring in ragweed's [seed dispersal](#) and [pollen production](#), prevailing winds in Europe and likely scenarios for global warming.

"Climate change and ragweed seed dispersal in current and future suitable areas will increase airborne pollen concentrations, which may consequently heighten the incidence and prevalence of ragweed allergy," the paper said.

By 2050, airborne concentration of ragweed pollen will on average be four times greater than current levels, the scientists found.

Northern-central Europe, northern France and southern Britain, where pollen loads from ragweed are negligible at the moment, will see substantial increases, and concentrations will increase in many areas that are already ragweed-affected.

About a third of the [pollen](#) increase will occur because of the weed's highly effective seed dispersal.

The remaining two-thirds will come from higher levels of carbon dioxide, which encourages vegetation growth, and changes to land use that will open up ragweed habitat in northern and eastern Europe.

The study, led by Lynda Hamaoui-Laguel of France's Laboratory for Climate and Environmental Science, appears in the journal *Nature Climate Change*.

Also called bitterweed, blackweed or American wormwood, the plant has also invaded parts of Australia, South America and Japan.

More information: *Nature Climate Change*,
[nature.com/articles/doi:10.1038/nclimate2652](https://www.nature.com/articles/doi:10.1038/nclimate2652)

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