

Wildflowers increasingly doing without insect pollinators

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Field pansies from a 'resurrected' lineage monitored during this study. Credit: © Samson Acocha-Pidolle

Scientists at the CNRS and the University of Montpellier have discovered that flowering plants growing in farmland are increasingly doing without insect pollinators. As reproduction becomes more difficult for them in an environment depleted of pollinating insects, the plants are evolving towards self-fertilization. These findings are published in [a paper](#) in the journal *New Phytologist*.

By comparing field pansies growing in the Paris region today with pansies from the same localities resurrected in the laboratory from seeds collected between 1992 and 2001, the research team found that today's flowers are 10% smaller, produce 20% less nectar, and are less visited by pollinators than their ancestors.



Bumblebee on a field pansy during an experiment carried out for this study.
Credit: © Samson Acoca-Pidolle

This [rapid evolution](#) is thought to be due to the decline in pollinator populations in Europe. Indeed, a study conducted in Germany showed that over 75% of the biomass of flying insects has vanished from protected areas in the last thirty years.

The study identified a vicious circle in which the decline in pollinators leads to reduced nectar production by flowers, which could in turn exacerbate the decline of these insects. It underlines the importance of implementing measures to counter this phenomenon as quickly as possible and thus safeguard the interactions between [plants](#) and pollinators, which have existed for millions of years.

More information: Samson Acoca-Pidolle et al, Ongoing convergent evolution of a selfing syndrome threatens plant–pollinator interactions, *New Phytologist* (2023). [DOI: 10.1111/nph.19422](https://doi.org/10.1111/nph.19422)

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