Ozone can reduce a flower's scent that's critical for attracting pollinators

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Honeybee (Apis mellifera) landing on a milk thistle flower (Silybum marianum). Credit: Fir0002/Flagstaffotos/ Wikipedia/GFDL v1.2

New research shows that high levels of ozone, which are predicted to increase in the atmosphere in the future, can dampen the scents of flowers that attract bees and other pollinators.

High ozone concentrations in ambient air caused fast degradation of the

scent emitted from Brassica nigra flowers, reducing the range over which flowers could be identified by pollinators. Behavioral tests conducted with the buff-tailed bumblebee confirmed that ozone concentrations commonly occurring near large urban areas can strongly inhibit pollinators' attraction to flowers.

?"The volatile chemicals that constitute flower scents are critical signals for the successful pollination of most insect pollinated plants," said Dr. Gerard Farré-Armengol, lead author of the *New Phytologist* study. "Due to high ozone concentrations like those caused by urban pollution, flower scents can be quickly degraded and lose their biological function as a long- or middle-distance signal for pollinator attraction."

More information: Farré-Armengol, G., Peñuelas, J., Li, T., Yli-Pirilä, P., Filella, I., Llusia, J. and Blande, J. D. (2015), Ozone degrades floral scent and reduces pollinator attraction to flowers. *New Phytologist*. DOI: 10.1111/nph.13620

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