

Study shows urban habitats provide haven for UK bees

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ees, which play a vital role in pollinating some of the UK's most important crops, have been declining in recent years. Credit: Nadine Mitschunas

Urban environments might not seem the best habitat for pollinators at first glance but a new study, led by the University of Bristol, suggests that bees and other pollinating bugs actually thrive as well in towns and cities as they do in farms and nature reserves.

The study, published today in *Proceedings of the Royal Society B*, has for the first time compared the suitability of different landscapes for pollinating insects across the UK.

Bees, which play a vital role in pollinating some of the UK's most important crops, have been declining in recent years, but the effects of urbanisation on pollinating insects is poorly understood.

This new research, from the Universities of Bristol, Edinburgh, Leeds and Reading in collaboration with the University of Cardiff, found that bee abundance did not differ between three studied landscapes (urban, farmland and [nature reserves](#)) but bee diversity was higher in [urban areas](#) than farmland. They also found that while hoverfly abundance was higher in farmland and nature reserves than urban sites, overall pollinator diversity did not differ significantly.

Lead researcher Dr Katherine Baldock of the University of Bristol's School of Biological Sciences said: "Bees are driven by the availability of food and suitable nesting sites. We found that there were equivalent numbers of bees in the three landscapes studied. In urban areas pollinators foraged on a wide variety of plant species, including many non-native garden plants, but visited a smaller proportion of the available plant species than those in other landscapes. This could be explained by the high diversity of [plant species](#) in urban areas."

The team compared flower visiting pollinator communities in 36 sites in and around some of the UK's largest towns and cities, recording a total of 7,412 insects visiting flowers. In the study, 11 rare or scarce species were recorded, four of which were also found in urban habitats.

The findings have important implications for pollinator conservation as urban areas in the UK continue to increase in size. The study concluded that 'urban areas growing and improving their value for pollinators should be part of any national strategy to conserve and restore pollinators'.

Professor Jane Memmott of the University of Bristol added: "Insect

pollination has been valued at around £690million per year for UK crop production and many of these urban bees are essential for pollinating some of the fruits and vegetables which are grown in gardens and allotments. These findings offer incentives for policy makers to improve the quality of existing green spaces in urban areas, as urban habitats can contain remarkably high pollinator species richness."

More information: Where is the UK's pollinator biodiversity? The importance of urban areas for flower-visiting insects, rspb.royalsocietypublishing.org/doi/10.1098/rspb.2014.2849

Provided by University of Bristol

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