

Science for Environment Policy

Bees in the city: urban environments could help support pollinators

Urban areas may support higher levels of bee diversity than expected, new research has shown. The UK-wide study compared three different habitat types — nature reserves, farmland, and urban areas — and found a higher number of different bee species in urban areas than farmland. However, the overall pollinator diversity, which included species of bees, flies, hoverflies and butterflies, did not differ significantly between all three landscape types. The researchers call for more attention to be paid to the role of green spaces in cities which can be important habitats for pollinators.

Around 76% of leading global [food crops](#) are assisted in some way by animal pollination, an ecosystem service which has been valued at €153 billion worldwide. The problem we face is that pollinators are declining globally, due to a variety of causes that centre on agricultural practices and development. As a growing proportion of the EU population choose to live in urban areas, it is important to know what impact our [urban environments](#) may have on these important insect.

In this study, researchers sampled 36 locations in and around 12 different towns and cities across the UK between May and September 2011. The key findings of the research were:

- The diversity of pollinators in all three landscape types was found to be surprisingly similar.
- Significantly more bee species were found in urban sites compared to farmland sites.
- The abundance of hoverflies, a key pollinator, was lower in urban sites than either nature reserves or farmland.
- The mix of pollinator species was more similar across all urban sites than across nature reserve or farmland sites.

Cities are not often thought of as havens of [biodiversity](#), but they should be when it comes to flowering plants. Selective planting in people's gardens and public spaces creates a diverse network of flowering plant species that can support a wide range of pollinators. This study found pollinators visited a greater variety of plants in urban environments due to the high number of non-native species that exist in cities compared to rural sites. However, this also means the insects could be acting as poorer pollinators, as they carry mixed loads of pollen between unrelated species.

The research provides a different outlook from previous studies, which have generally found urban environments to have a significantly negative impact on pollinator abundance and species richness. However, it is the largest study of its kind comparing pollinators in urban and rural areas, and the first to collect data simultaneously from different geographical regions.

As urbanisation is expected to increase in Europe over this decade, managing urban environments as important habitat for pollinators will become ever more relevant. Although the researchers appreciate that attention has been directed towards benefiting pollinators in agricultural environments in recent years, they suggest that more should be done to improve the quality of urban spaces for pollinators as well — this could include such measures as more trees and wildflower meadows in cities, leaving grass areas uncut, and pesticide-free small-scale urban agriculture.



8 May 2015
Issue 413

**[Subscribe](#) to free
weekly News Alert**

Source: Baldock, K.C.R.,
Goddard, M.A., Hicks, D.M.,
Kunin, W.E., Mitschunas, N.,
Osgathorpe, L.M., Potts,
S.G., Robertson, K.M.,
Scott, A.V., Stone, G.N.,
Vaughan, I.P. & Memmot, J.
(2015). Where is the UK's
pollinator biodiversity? The
importance of urban areas
for flower-visiting insects
*Proceedings. of the Royal
Society B: Biological
Sciences*. 282: 20142849.
DOI:
[10.1098/rspb.2014.2849](https://doi.org/10.1098/rspb.2014.2849)

Contact:
K.baldock@bristol.ac.uk

Read more about:
[Biodiversity](#), [Urban
environment](#), [Green
infrastructure](#)

The contents and views
included in *Science for
Environment Policy* are
based on independent,
peer-reviewed research
and do not necessarily
reflect the position of the
European Commission.

To cite this
article/service: "[Science
for Environment Policy](#)":
European Commission DG
Environment News Alert
Service, edited by
SCU, The University of the
West of England, Bristol.