

# Bumblebees make bee line for gardens

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Britain's gardens are vital habitats for nesting bumblebees, new research has found. The results come from the National Bumblebee Nest Survey, which are published online in the British Ecological Society's Journal of Applied Ecology, and the findings will help conservationists understand – and hopefully address – the factors responsible for declining bumblebee populations.

During the National Bumblebee Nest Survey, more than 700 volunteers surveyed their own gardens plus one of six different countryside habitats for bumblebee nests. They found that gardens contain the highest densities of bumblebee nests (36 nests per ha), followed by hedgerows, fence lines and woodland edges (20-37 nests/ha). Nest densities were lower in woodland and grassland (11-15 nests/ha). Until now, little has been known about which habitats are best for bumblebee nests.

According to the study's lead author, Dr Juliet Osborne of Rothamsted Research: “Gardens clearly provide an important habitat for bumblebees and, although in the countryside the total area occupied by field margins and hedgerows is relatively small, sympathetic management – as encouraged by current environmental stewardship schemes – could improve bumblebee nesting opportunities in farmland.”

As well as providing important information on which habitats are the most important for bumblebee nests, the study also shows what a valuable contribution members of the public can make to ecological research. “We were delighted that people volunteered to do the survey. The success of the survey shows that public participation is very useful

for monitoring bumblebees,” says Osborne.

Bumblebees are important pollinators of our crops and wild plants, but their populations have declined dramatically over the past 50 years. The decline is thought to be linked to the impact of modern farming methods on bumblebees' food plants. But as well as food, bumblebees need nesting sites for queens to start new colonies in spring.

Gardens are attractive nest sites for bumblebees for many reasons. Osborne says: “The diversity of garden features and gardening styles provide a large variety of potential nesting sites compared to more uniform countryside habitats. Areas with gardens have a high concentration of boundary features, such as hedges, fences, and garden buildings, which are suitable for nesting. Bumblebees also like nesting in compost heaps, bird boxes and flower beds. Gardeners like to see flowers almost all year round, so this ensures continuity of nectar and pollen sources for the bees throughout spring and summer at a density rarely encountered in the countryside.”

Bumblebees' penchant for nesting in linear habitats in the countryside is less easy to explain. It could simply be because bees are confined to these habitats in heavily cultivated areas, or relate to the fact that bees use landmarks like hedges for navigation. “Bumblebees are known to use linear features such as hedgerows to guide their foraging activity and queen bumblebees may find more nests in or near linear features because they could act as conspicuous linear landmarks to help them get back home,” Osborne says.

Source: Blackwell Publishing Ltd.

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