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POSTER ABSTRACT

Arthropod prey depletion around wild bird feeders: do garden birds earn their keep?

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Providing supplementary food for wild birds is a globally popular past-time; almost half of households in many developed countries participate and billions of US dollars are spent annually. Although the direct influence of this additional resource on bird survivorship and fecundity has been studied, there is little understanding of the wider ecological consequences of this massive perturbation to (what are often) urban ecosystems. The possible indirect effects on non-avian species in particular have received little research attention. Furthermore, whereas the great majority of wild bird feeding takes place in private domestic gardens, most research on the topic has been carried out in woodlands and scientific field stations. We therefore investigated the possible effects of wild bird feeding on the size and survivorship of experimental colonies of a widespread arthropod, the pea aphid [*Acyrthosiphon pisum* (Harris); Hemiptera: Aphididae], in suburban gardens of volunteers in Reading, a large town in southern England. The pea aphid is a common prey species of many small passerine birds in temperate regions and is also generally regarded as a pest by gardeners. We found significantly fewer aphids and shorter colony survival times in colonies exposed to avian predation compared to protected controls in gardens with a bird feeder but no such differences between exposed and protected colonies in gardens that did not feed birds. Our work therefore suggests that supplementary feeding of wild birds in gardens may indirectly influence local population sizes and survivorship of their arthropod prey and highlights the need for further research into the potential effects on other species.