

# Volunteer birdwatching survey shows effects of temperatures on population of Jays

April 9 2019

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A study led by researchers at the University of Southampton has used data collected by volunteer bird watchers to study how the importance of wildlife habitat management for British birds depends on changing temperatures.

The team studied data from the British Trust for Ornithology's "Bird Atlas 2007—11" on the abundance of Eurasian jays over the whole of Great Britain. The University of Southampton researchers focused on jays for this trial as they are a species of bird known to frequent a mixture of different natural environments.

The findings, published in the journal *Methods in Ecology and Evolution*, showed that an even range of habitats—forests fields and meadows—are needed in an area of around 200m<sup>2</sup> to 1km<sup>2</sup> in order for the jays to thrive. An even spread of coniferous and broad leaved forests within this space is also necessary. The data showed that in higher temperatures it is even more important for the jays to have this mix of different surroundings in a relatively small space.

The Bird Atlas 2007—11 was one of the most ambitious volunteer projects undertaken. Volunteers for the British Trust for Ornithology were allocated squares of land around the country in which they counted every bird they spotted during winter and in the [breeding season](#).

The University researchers gathered this data and combined with satellite imagery of Great Britain to get a complete picture of the

habitats in which there was an abundance of jays and how the changing climates affected their numbers.

The success of the trial means that this method of studying wildlife numbers could be an effective way to look at the impact [climate](#) change has on habitats for other species.

Dr. Laura Graham Postdoctoral Research Associate at the University of Southampton said: "One of the key challenges in ecological climate change research is gaining an understanding of how climate interacts with changes in [habitat](#) to impact species' abundance and distributions. The method we developed for this project allows us to do this."

**More information:** Laura J. Graham et al. Incorporating fine-scale environmental heterogeneity into broad-extent models, *Methods in Ecology and Evolution* (2019). [DOI: 10.1111/2041-210X.13177](https://doi.org/10.1111/2041-210X.13177)

Provided by University of Southampton

Citation: Volunteer birdwatching survey shows effects of temperatures on population of Jays (2019, April 9) retrieved 16 May 2024 from <https://phys.org/news/2019-04-volunteer-birdwatching-survey-effects-temperatures.html>

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