

Citizen science can predict butterfly population trends

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New research by the University of Kent, Butterfly Conservation and the Centre for Ecology & Hydrology shows that citizen scientists can play a role in gathering meaningful information to inform long-term

monitoring of biodiversity trends such as butterfly population change.

Although [citizen](#) scientists are increasingly engaged in gathering [biodiversity](#) information, trade-offs are often required between public engagement goals and reliable data collection.

But the new study, entitled Using citizen science butterfly counts to predict species population trends, shows that mass-participation science can serve to complement standardised biodiversity monitoring.

Researchers, led by Dr Emily Dennis, a visiting research associate at Kent's School of Mathematics, Statistics and Actuarial Science and senior ecological statistician at Butterfly Conservation, used data from the Big Butterfly Count (BBC). This is an established UK citizen science project organised annually by Butterfly Conservation to produce population change estimates for 18 common butterfly species comparable to standardised monitoring data collected by skilled recorders.

UK butterflies are well suited for citizen [science](#); they are conspicuous, popular and, in comparison to many other insects, easy to identify. In addition, the country's high human population density and tradition of amateur natural history recording provide a ready source of participants.

The results, say the researchers, show that the BBC data provide the potential for additional or improved assessments of biodiversity change. For example, there is increasing interest in the biodiversity of urban areas, both as potential refuges for species whose habitats have been degraded in intensively farmed countryside and for the opportunities it affords for human-wildlife interactions and associated human well-being.

The researchers conclude that the results 'establish BBC as an example

of a [citizen science](#) win-win; a project focused on outreach and [public engagement](#) that generates meaningful scientific output'.

More information: Emily B. Dennis et al. Using citizen science butterfly counts to predict species population trends, *Conservation Biology* (2017). [DOI: 10.1111/cobi.12956](https://doi.org/10.1111/cobi.12956)

Provided by University of Kent

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