

# Counting butterflies reduces anxiety, study shows

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New research by leading wildlife charity, Butterfly Conservation, in collaboration with the University of Derby, reveals that counting butterflies reduces anxiety by almost 10%.

The pioneering study, [published](#) in *Biological Conservation*, involved surveying people taking part in Butterfly Conservation's Big Butterfly Count in 2022. The results demonstrate that briefly tuning into nature to count butterflies reduces anxiety by 9% on average, while also enhancing mental well-being.

Researchers also found that spending just 15 minutes observing and counting butterflies boosted participants' feeling of connectedness with nature. Noticing butterflies more often was sustained over six to seven weeks after taking part.

How connected people feel to nature, known as nature connectedness, is directly correlated to how motivated they are to protect it. The findings of this new study show that [citizen science projects](#) could play a vital role in nature's recovery.

Dr. Carly Butler, a researcher in nature connectedness at the University of Derby and lead researcher on the study, said, "Our study showed that even small periods of time spent watching and counting butterflies are beneficial, with the benefits of reduced anxiety and stronger nature connectedness being the same whether people carried out just one 15-minute count or took part multiple times.

"This is key in proving that simple, small pockets of time connecting with wildlife and nature have a profound and beneficial effect on how we feel."

Dr. Richard Fox, head of science at Butterfly Conservation, said, "While we have long known that there is a link between nature and human well-being, this study is the first to prove that the simple act of looking for and counting butterflies leads to a measurable decrease in anxiety.

"The results suggest that citizen science projects such as the Big

Butterfly Count can play a part in improving people's mental health, as well as gathering important data on how butterflies are faring to inform our conservation work."

Participants reported a range of positive and [negative emotions](#), including joy, fascination, sadness, and concern; the latter driven by not seeing as many butterflies as they expected and fear over what is happening to our planet.

Dr. Butler added, "Interestingly, the more intensely participants felt these emotions, the more their feeling of closeness to nature and noticing wildlife increased afterwards, with participants reporting they felt motivated to help butterflies and nature more, by doing things such as transforming their gardens into butterfly-friendly havens."

Dr. Richard Fox said, "In order to save wildlife and ensure nature's recovery we need people to care, and we know that being connected to nature sparks these caring feelings and a desire to do something positive. This study indisputably shows that citizen science activities, such as spending just a few minutes counting butterflies, makes people feel more connected to nature—a vital step in the battle to save wildlife.

"We're at a tipping point, nature is in crisis, but we can all do something to help. Simple acts such as creating wild spaces to provide a haven for wildlife, or planting butterfly friendly plants in pots on a patio, terrace or balcony can have a positive impact."

The Big Butterfly Count is Butterfly Conservation's flagship citizen science activity, involving tens of thousands of participants across the U.K. spending 15 minutes in any sunny spot and recording the number and type of common butterflies and day-flying moths that they see.

This year's Big Butterfly Count will take place from Friday 12 July to

Sunday 4 August. For advice on creating a Wild Space for [butterflies](#) ready for the Big Butterfly Count, visit [www.butterfly-conservation.org/wild-spaces](http://www.butterfly-conservation.org/wild-spaces).

**More information:** C.W. Butler et al, Connection for conservation: The impact of counting butterflies on nature connectedness and wellbeing in citizen scientists, *Biological Conservation* (2024). [DOI: 10.1016/j.biocon.2024.110497](#)

Provided by University of Derby

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