Bugs **Matter**

SUMMARY OF THE 2022 REPORT

The Bugs Matter Citizen Science Survey

The national citizen science survey of 'bug splats' on vehicle number plates to monitor flying insect abundance.

Address for correspondence: info@bugsmatter.app

buglife

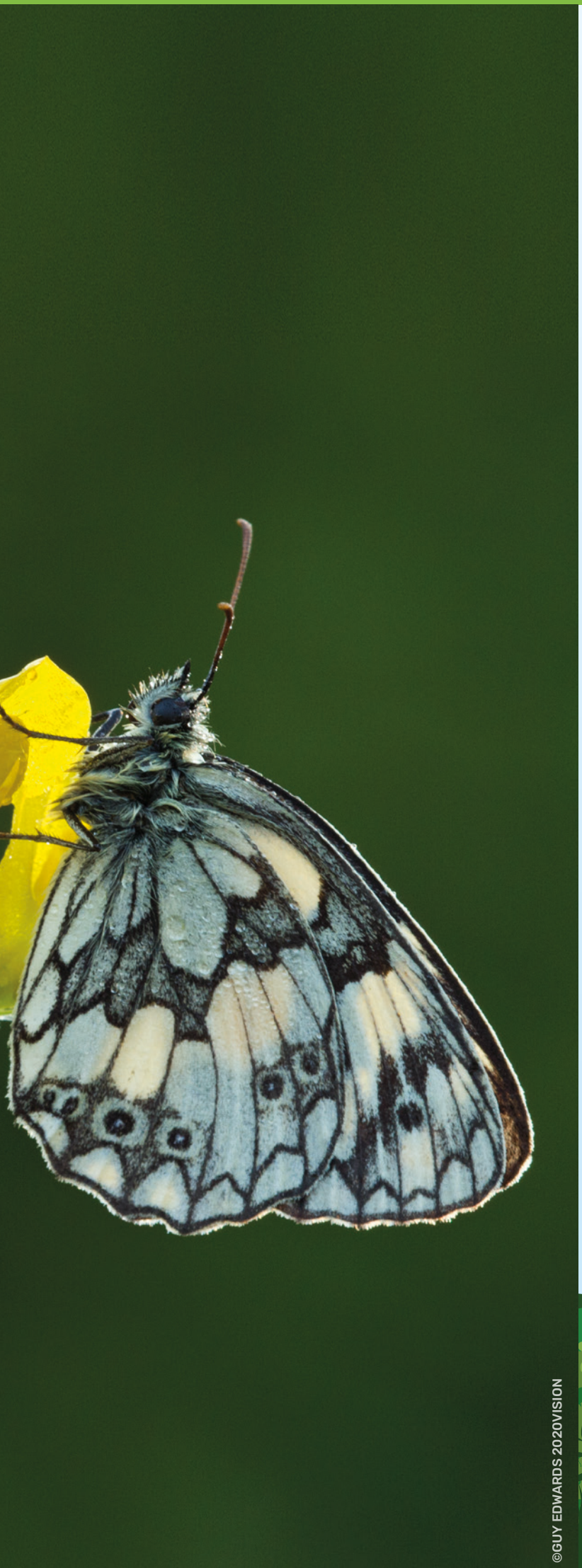
Kent wildlife Trust

Find more information about the Bugs Matter project here:
kentwildlifetrust.org.uk/bugs-matter

Headlines and Key Findings

The 2022 Bugs Matter Citizen Science Survey has found further reductions in the number of insects sampled on vehicle number plates in the UK in 2022.

The number of flying insects recorded by the survey fell by 63.7% between 2004 and 2022. Continuing the Bugs Matter survey is essential to determine if this is the long-term trend, the result of record-breaking summer temperatures, or both.



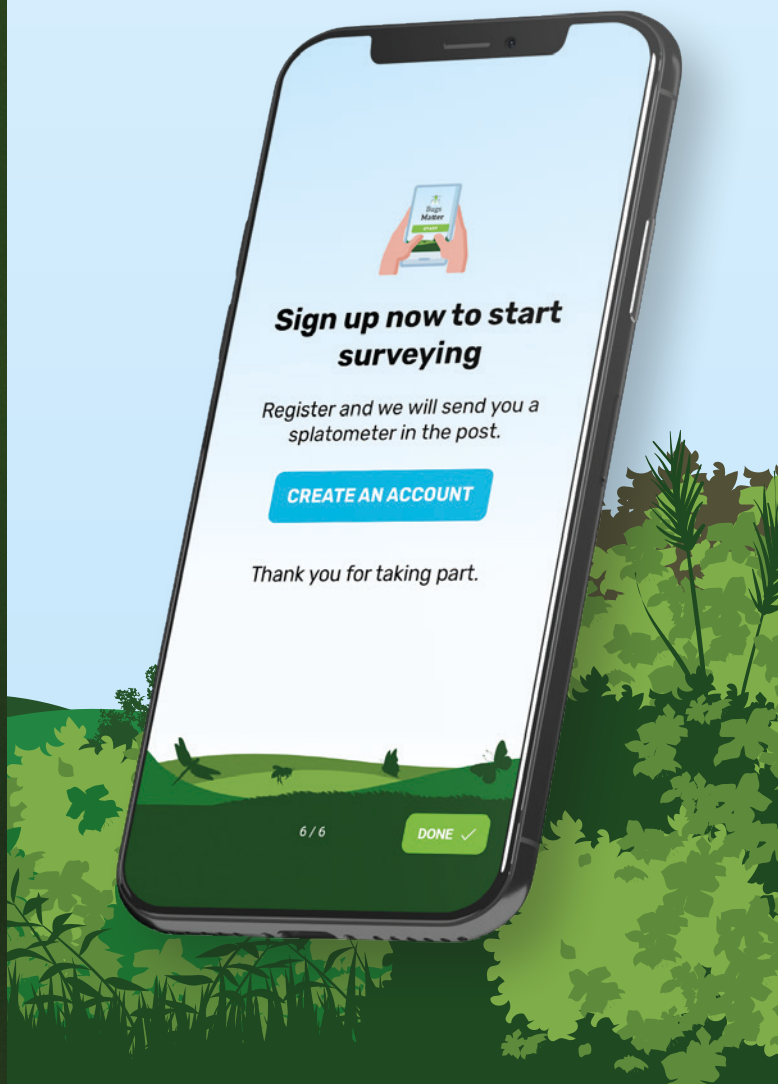
Background

Evidence is growing of widespread insect population decline. These declines could have catastrophic impacts on the Earth and human survivability. Bugs Matter demonstrates an innovative method using vehicle number plates for the widespread monitoring of insect numbers in the UK.

What is the Bugs Matter survey?

Bugs Matter enlists the help of volunteer citizen scientists to monitor the health of the UK's insect populations by recording the number of insect splats on their vehicle number plates after completing a journey using the official Bugs Matter app.

The Bugs Matter survey takes place every year from the start of June to the end of August. It was first run by the RSPB in 2004, repeated by Kent Wildlife Trust in Kent in 2019, and has since been carried out nationally in 2021 and 2022 by Kent Wildlife Trust and Buglife.



Key findings

The number of insects sampled on vehicle number plates **declined** by

↓ 63.7%

in the UK
between 2004 - 2022

The number of insects sampled on vehicle number plates **declined** by

↓ 67.5%

in England
between 2004 - 2022

The number of insects sampled on vehicle number plates **declined** by

↓ 74.8%

in Wales
between 2004 - 2022

The number of insects sampled on vehicle number plates **declined** by

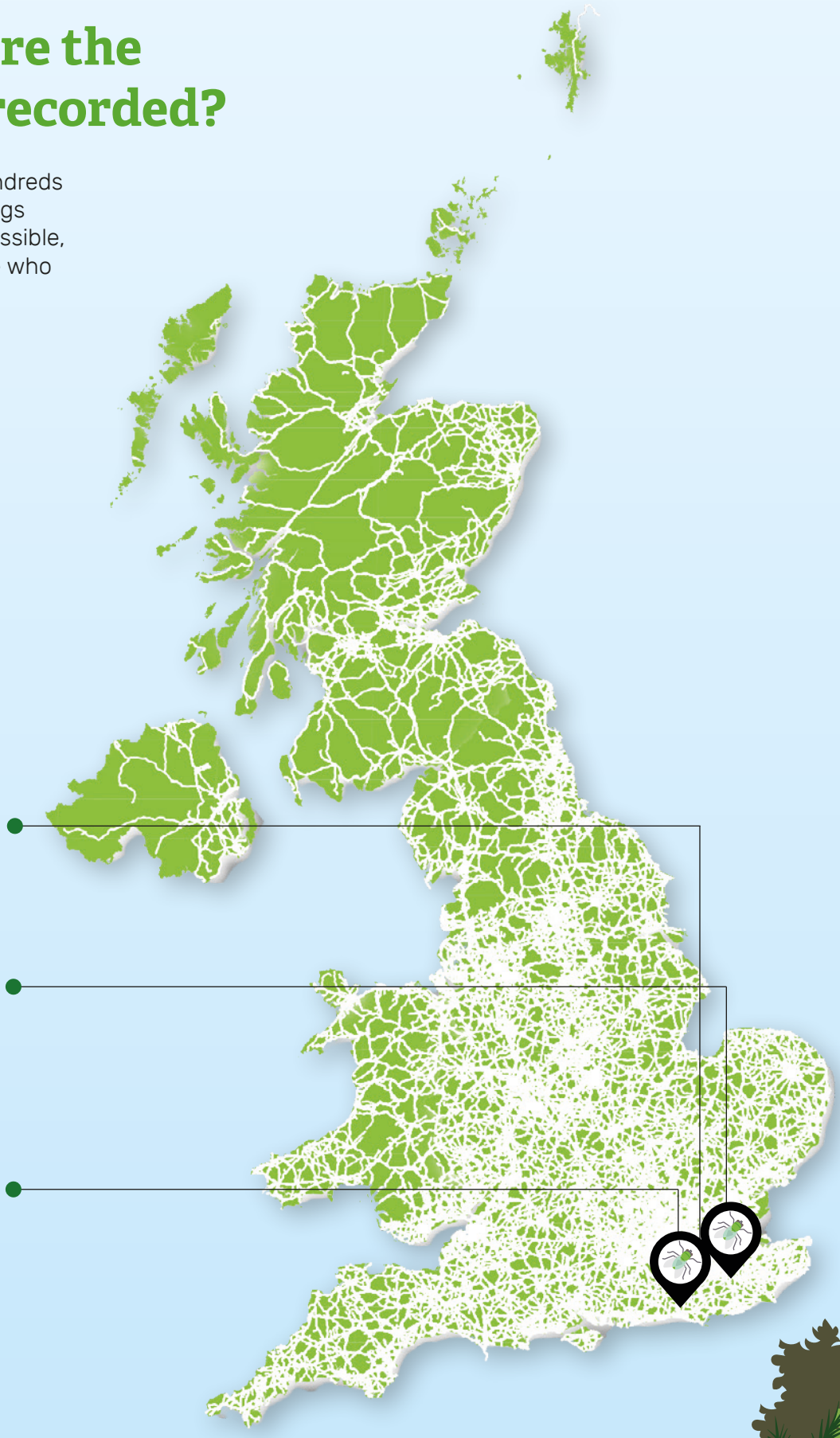
↓ 40.3%

in Scotland
between 2004 - 2022

There were no journeys recorded in Northern Ireland in 2004 to compare this year's data with.

Where were the journeys recorded?

Without the help of hundreds of citizen scientists, Bugs Matter would not be possible, and we thank everyone who has taken part.



The region with the lowest number of journeys recorded was **London**

The most journeys were recorded in the counties of **Kent (934), Gwent (522)** and then **Essex (519)**

The region with the highest number of journeys recorded was the **South East: 973 journeys**

Taking action

What do the results mean?

Similar declining insect trends have been reported by many other scientific studies around the world. In addition to habitat fragmentation, pesticide use, light pollution and other drivers of insect population decline, it is likely that climate change is a significant contributor to the observed changes in insect numbers. The weather in 2022 was particularly hot and dry and this may have contributed to low numbers of insects in many areas.

The Bugs Matter survey is relatively new. Insect populations and activity fluctuate from year to year for many reasons, so we must treat our results with some caution. There is not yet enough data from the Bugs Matter survey to establish a long-term trend, however, our analysis adds weight to concerns that populations of flying insects are disappearing at an alarming rate.

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What needs to happen?

- Insects make up over half the species on Earth and our planet's health depends on them
- There is an urgent need for an intense and global effort to avert these declining trends in insect numbers
- Local extinction rate for insects is eight times higher than any other animal group, such as birds and mammals
- We need to reverse habitat loss and degradation, prevent and mitigate climate change, reconnect flower-rich habitats, clean up polluted waters and replace pesticide dependence with sustainable farming methods
- Importantly, we need to continue to monitor the health of our insect populations.

Together, we can restore nature, and we can reverse the declines in our insects, but we must all work together, we must work at scale, and we must work with urgency. Bugs Matter will continue in 2023, so we hope that those who took part in previous surveys will be joined by hundreds more citizen scientists next year! The Bugs Matter team are working hard to improve the survey by making updates to the Bugs Matter app and trialling the use of Artificial Intelligence to auto-count insect splats.

Support the survey

The Bugs Matter citizen science survey will continue to generate crucial data. If you would like to support the Bugs Matter survey please visit:

Kent Wildlife Trust
kentwildlifetrust.org.uk/bugs-matter

Bug Life
buglife.org.uk/get-involved/surveys/bugs-matter/

You can also get in touch via info@bugsmatter.app
if you would like to support the project through technological innovations, partnerships, or if you have feedback on the survey.

Read the full report

The full technical report for the 2022 Bugs Matter survey containing detailed analyses and references to other studies is available and enquiries can be directed to **info@bugsmatter.app**

Read the full report