

# Fewer insects hitting your car windscreen? Here's why

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Wasps play an essential role as pollinators. Credit: [Richard Bartz / Wikimedia Commons](#), [CC BY-SA](#)

Every summer for almost the last 20 years, volunteers from the [Kent](#)

[Wildlife Trust](#) and [Buglife](#), both in the UK, have been tracking car number plates. But not in the the way you might think. Their inspections aim to register the numbers of flying insects hit by vehicles.

Though this may seem insignificant, the scale of this citizen science project makes it important. With nearly 700 participants, the 2023 Bugs Matter campaign has taken data from 6,358 journeys, which can help to draw much wider conclusions.

The results of the [2022](#) campaign showed a reduction, over fewer than 20 years, of 64% in the number of insects hit by cars. These results back up a thesis that is worrying scientists: this massive loss of insect life demonstrates that we are moving ever closer to the sixth mass extinction.

## **The sixth mass extinction**

Unfortunately, studies show that the UK is not the only place where insect populations are declining; studies have been done across Europe that draw similar conclusions. In order to gain realistic measurements, the most rigorous research uses historical studies that track insect populations over decades.

In Germany, a [27 year-long study was published in 2017](#) showing that 76% of flying insect biomass has been lost within a wide network of natural spaces.

In Denmark, [a reduction in the number of insects has been documented](#) alongside shrinking numbers of birds, such as the barn swallow, who feed on them.

The Spanish and Portuguese scientific societies of entomologists met in June of this year in Alicante for the [Twentieth Iberian Congress of Entomology](#). Alarmed by the decline of insect populations, they

published a [manifesto](#) that aims to raise social awareness of this unprecedented situation, and to put a stop to it.

However, the situation is not only causing alarm in Europe, which is very densely populated and exposed to the pressures of human activity. Studies [from tropical forests in Puerto Rico](#) have compared current insect numbers with those of 36 years ago, with similarly catastrophic results: a reduction of over 78% in ground-dwelling insect biomass. This study also showed a parallel decline in animals that eat insects, such as lizards, frogs and birds.

## **Why are there fewer insects?**

There are many causes, all stemming from the continuous, increasing deterioration of soil, vegetation, water and air due to human activities.

Insects have various needs. They need the ground that we cover with cement, the increasingly scarce water that we pollute or divert, and the plants that we treat with pesticides. What is more, we interrupt the means of communication that insects need to survive: light, chemical and air pollution all cause insects to become disoriented. Among other things, the number of airborne microscopic particles, which [block their sensory organs and ways of communicating](#), are on the rise.

These are all occurring alongside [climate change](#), which is considered to be an important factor in declining [insect populations](#) in and of itself.

The loss of insect biodiversity leads to homogenization. This weakens the vital biological relationships between all living things, and in turn threatens our very existence as a species.

## **Why are they so important?**

Insects make up over 80% of the known animals in the world. It is therefore clear that they play many essential roles in sustaining life on Earth, most importantly that of pollinating plants.

35% of the world's food supply [comes from plants that are pollinated by insects](#). [The UN Food and Agriculture Organization warns](#) that if they were to disappear, food security would be at risk.

Another irreplaceable role that insects play in ecology is that of decomposing organic matter and recycling nutrients. Insects act as natural garbage collectors and gardeners. In this way, they contribute to soil health and formation, a process essential to maintaining food chains and life cycles.

Another ecological function of insects—which often goes unnoticed—is their contribution to [pest control](#) in natural ecosystems, as they prevent or reduce pest damage.

Pest control by predators and parasitic insects in natural environments can actually teach us how to improve biological control in agriculture.

## **What can we do to protect them?**

Large scale environmental problems cannot be solved by the actions of individuals. However, experience shows us that lots of small gestures can add up to achieve big results. Some of the things we can do are:

- Support or work with projects that aim to raise awareness and protections for insects both in rural and [urban areas](#). The aforementioned Kent Wildlife Trust and Buglife are good examples in the UK. In Spain we have the [SPIOLL project](#), the [uBMS Citizens' Butterfly Observatory](#) and the [Spanish Network of Biosphere Reserves' Phenological Monitoring Program](#).

- Ensure that urban green spaces—as well as verges, roundabouts and other undeveloped areas—contain animal habitats and native flora which can provide breeding sites and refuge for insect species.
- Refrain from using pesticides in private gardens or vegetable patches, and where possible in public green spaces. Limit the removal of "weeds" growing around ornamental plants, especially during flowering periods.
- Consume food products made following good agricultural practices that value and promote organic farming and biological or integrated pest control.
- Replace livestock pest control treatments with products that are not harmful to insects that help in the decomposition process.
- Avoid introducing invasive plant or animal species, both in agriculture and gardening.

All of us, in particular educators, have an important responsibility to show both children and adults that [insects](#) are noble, vital and beautiful. Their declining numbers are an unprecedented problem, and our very survival as a species is at stake if we cannot reverse this trend.

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