Read the text about changes in insect populations. Then choose the correct answer (A, B, C or D) for each question (1-7). Put a cross (\boxtimes) in the correct box on the answer sheet. The first one (0) has been done for you.

Are insects disappearing?

In recent years, many of us have come to appreciate the huge importance of insects to our natural ecosystems – from the life-enhancing beauty of butterflies to the vital role that pollinating insects play in our food supply. So it's hardly surprising there is huge concern over the so-called "insectageddon".

A recent study adds to an emerging narrative of severe decline and builds on the perception that there were more insects in nature in years gone by – and that things were better in the past. One often-cited memory is that car windshields used to be splattered with insects, and this latest study uses a "splat rate" to conclude that numbers of flying insects have plunged by almost 60% in Britain between 2004 and 2021. But how reliable is this conclusion, and how worried should we be?

Understanding the severity of insect decline requires detailed and long-term records of species changes. Britain has a long history of monitoring nature going back many decades, so we can rely on one of the best datasets in the world to help us understand these changes and what might be causing them. The "splatometer" joins other established monitoring initiatives including light traps for moths and other nightflying insects, and walk-and-count transects for butterflies.

So if we have so much information, why is there still debate about the severity of decline? An important finding from recent analyses is that patterns of change are more complex than statements pointing to catastrophic declines would have you believe. We know that nature is dynamic, so there is often considerable turnover in which species occur at any given site, and a constant reshuffling of communities. One 2020 study of more than 5,000 species in Britain highlights winners and losers. Analysis of nearly 50 years of insect data reveals long-term declines in moths but not aphids, and that there is evidence of shorter-term periods of recovery – a decidedly more optimistic picture than you might imagine.

It illustrates the complexity of the landscape when reporting on the wellbeing of insect populations. Understanding why some species are losers but others are winners is key for developing action plans to help all nature thrive.

Another problem is that the types of datasets that are analysed, such as the number of species at a site or types of species present, and the measurements that are taken may not always tell the same story. Deciding which historical baselines to compare changes against is also important, given that short-term reporting may not reflect long-term trends, especially in insects whose populations can respond very quickly to their environment. This high variability of insect populations means we need gold-standard data to distinguish between long-term trends and normal year-to-year variation.

Let's be clear: most researchers are concerned about insect declines, but most will also caution against the increasingly common hyperbole of impending doom. Instead, we should be focusing our efforts to ensure the actions we are taking to combat the climate crisis are also benefiting biodiversity. Given the current focus on tree planting and increasing woodlands in the UK, it is concerning that moth declines are worst in woodlands, for instance.

Our appreciation of green spaces together with government commitments for nature recovery are cause for optimism. There are many examples where careful management and restoration of sites can hugely boost biodiversity, but we need to be doing this over much more of the landscape. The introduction of butterflies into the Cotswolds and Rockingham Forest are examples of success. For many species, we already know how to manage landscapes to ensure their success. And that, of course, may mean more insects splattered on car windscreens.

0 Some new scientific research on insects

- A used subjective belief as a starting point.
- B contradicted older studies.
- C focused on the reasons for insects disappearing.
- D proved dominant ideas wrong.



1 Being able to fully grasp developments in the insect world is

- A hardly ever possible in typical scientific settings.
- B dependent on lengthy in-depth observation.
- C only achieved by looking at international data.
- D something only scientists can do.

2 A new method of investigating the insect population

- A focuses on one particular kind of insect.
- B lacks features other methods have.
- C mainly aims to document the reasons for changes.
- D is used alongside other methods.

3 Current data on the drop in insect numbers have shown that

- A one insect species is affected more strongly than others.
- B media coverage has played down the problem.
- C developments are less straightforward than they seem.
- D the reduction in the number of insects is dramatic.

4 A study spanning several decades has shown that

- A drops in insect population mainly last for short periods.
- B there are more insects now than there used to be.
- C most insect species are affected the same way.
- D changes are probably less dramatic than assumed.

5 One critical challenge when evaluating information about insects is that

- A insects are very difficult to observe.
- B data and observation results might differ.
- C observation over a long period is hardly ever possible.
- D insects change too fast for researchers to record details.

6 With regard to one current UK measure, researchers are worried that

- A the measure fails to show an immediate positive effect.
- B people might fail to understand its importance.
- C the measure might be bad for native plants.
- D deer might be affected negatively by it in the future.

7 In cooperation with the authorities, it has been possible to

- A reintroduce insects to certain areas.
- B prevent many insects from being killed by vehicles.
- C focus on most parts of the countryside in the UK.
- D stop insect decline on a large scale.

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