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Insect Pollinators Initiative

Linking agriculture and land use change to pollinator populations

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There is growing evidence that both domestic honeybees and wild pollinators are in trouble, and that many wildflowers that depend on them for pollination are also declining. What we do not yet know is how these trends are linked: whether pollinator declines are driving flower losses or vice versa. This project tests whether we can predict how common and diverse pollinators will be in a region from the local abundance and diversity of flowers, and similarly whether plant reproduction is affected by the pollinators available. The researchers will also test whether other factors such as pesticide usage and land use history have an impact on pollinators, and whether honeybees and wild pollinators affect one another's populations.

One part of the project will focus on re-surveying pollinators in sites where they have been studied in the past, to test whether they have been affected by changes in land use. The researchers will also survey both plants and pollinators in nearly 100 landscapes scattered around Britain, carefully chosen to represent contrasting land management. By examining how well plants and pollinators perform in these sites, we should greatly improve our understanding of how management affects them, how they affect one another, and what we can do to slow or reverse their recent declines.

This project is in partnership with Professor Jane Memmott at the University of Bristol, Dr Nigel Boatman at the Food and Environment Research Agency, Dr Richard Morton at the NERC Centre for Ecology and Hydrology and Dr Simon Potts at the University of Reading.

