

The habitat of important wild pollinators is under threat

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Honeybees are common pollinators, but wild bees, including bumble bees, and other insects such as hoverflies, beetles and butterflies, are also needed for pollination and are important in many different ways. With

simple measures, we can help these insects thrive so they can contribute to a diversity of wild flowers, crops and rich nature experiences.

Oilseed rape, apples, strawberries and field beans are some examples of important crops that are dependent on, or benefit from, pollination by insects and other animals. It is to a large extent honeybees that contribute to this in agriculture. However, wild bees and other pollinators are also important for agriculture and the whole ecosystem.

"There is a great interest in pollinators, but knowledge about them is not as widespread," says Henrik Smith, professor of animal ecology and coordinator of BECC, a research environment at Lund University, focusing on biodiversity, ecosystem services and [climate change](#).

What do pollinators do?

Pollinators contribute not only by pollinating flowering crops in fields and in fruit orchards, but also by pollinating wild fruits and berries, and flowering plants in general. It is one of many, mainly invisible, ecosystem services in the form of natural ecological processes contributed by animals and plants, and one of significance to human environment and wellbeing.

"The crops provide us with great economic benefit, while a diversity of wild plants contributes to different functions in ecosystems. They also provide us with unique experiences," explains Henrik Smith.

Well-functioning ecosystems are also crucial in the fight against climate change and the preservation of biodiversity.

"We would miss these values if they ceased to exist. However, it is difficult and sometimes impossible to put a monetary value on them. There is also an ethical consideration, i.e. a moral obligation to preserve

biodiversity for [future generations](#)."

Importance of species richness

Different kinds of plants provide resources in the form of food and shelter for a diversity of different insects and other animals. This increases opportunities to manage environmental changes such as climate change. The reason for this being that when a particular species is disadvantaged, another species can entirely or partially compensate for this.

It is therefore crucial to preserve the diversity of pollinators, both for their own sake and for the plants they pollinate, given that they are mutually dependent. As it is difficult or impossible to predict which pollinators may survive in a future climate or which pollinators will be needed to pollinate future crops, it is important to preserve a diversity of pollinator.

Henrik Smith emphasizes how serious the situation is:

"Different species contribute to pollination in different ways. However, they also have different habitat requirements. A loss of wild pollinators in particular is today seen as an increasing threat to the diversity of wild plants."

Other methods and behaviors

Modern efficient agriculture has reduced the access of pollinators to floral resources, both in the form of natural grasslands and out in the fields in the form of weeds. The management of many environments, such as well mown lawns or well-maintained road verges, also reduces the access of pollinators to floral resources.

Researchers in biodiversity and conservation science are working closely with the County Administrative Board and the Swedish Board of Agriculture to contribute their knowledge to new conservation programs and to the development of new policies and guidelines. This includes new methods for the management of urban green areas and ways to integrate [nature conservation](#) into agricultural production.

"Urban environments can be important for threatened species, particularly in Skåne's exploited landscape. Urban nature is also an issue of fairness; people who have fewer opportunities to travel to nature areas are able to experience nature in their immediate surroundings."

When species and environments are under threat, some nature areas must be completely protected. In other cases, it is about including consideration for biodiversity in more sustainable production systems and conscious actions. Semi-natural pastures support pollinators, but one dilemma is that these pastures are dependent on grazing animals, which contribute to climate change.

"It is possible to at the same time reduce climate impact with the conservation of semi-natural pastures," says Henrik Smith. "We have more than just two cards to play; it is possible to reduce our consumption of animal products and ensure that what we consume is sustainably produced."

Conscious sustainable decisions

For Henrik Smith, who became interested in animals and nature at an early age, it was clear that he would dedicate himself to the preservation of biodiversity. He believes it is important that young people today are given the chance to discover how exciting and fun biology can be—to know more about different organisms and species, but also how they are connected in nature. He says:

"Our experience of nature is dependent on our knowledge of it. If I recognize different plants or bird calls, I am able to understand and interpret nature in a richer way."

More knowledge and increased awareness can be a significant part of the solution. It is therefore important to collaborate closely with interested stakeholders and those who can have an influence.

"What we buy has an impact. Supermarket chains can contribute by including effects on biodiversity as a condition in their procurement process."

Many people are committed to influencing their immediate surroundings to support wild [pollinators](#) and to collect data about them. One way to contribute to an increase in biodiversity in your own neighborhood is to create habitats for wild bees, e.g. by drilling holes in bits of wood or old logs, which can become homes for them.

"When the ecosystem services are made more visible, we also become aware of their value. It can help us to take more conscious and sustainable decisions. This applies to us as individuals, but also to politicians, public authorities, municipalities and organizations," concludes Henrik Smith.

Provided by Lund University

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