

4 How to Recycle

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Earth Watch Home & Garden

Reading time: 3 mins

Going Beyond Beekeeping to Protect Pollinators



By Gemma Alexander

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It's not a stretch to say that civilization depends on pollinators. More than a third of global food production relies on animal pollinators. Birds, bees, butterflies, beetles, bats, and other small mammals all contribute to the pollination of not just food crops, but flowers and other plants with commercial and ecological value. Honeybees alone pollinate 90 species of commercially grown food crops. And there are tens of thousands of other bee species that pollinate plants in the wild. But honeybees and other pollinators are in trouble.

Pollinators in Peril

Research shows that the biomass of flying insects was reduced by 76% in the last three decades. Honeybee hives are plagued by colony collapse disorder. This mysterious sudden die-off is thought to be a symptom of larger ecological problems that affects all pollinators – pesticides, habitat loss, invasive species, and climate change. Each of these factors harms pollinators directly, and the impacts are compounded by the synergy amongst them.

When pesticides are applied to gardens, they kill pollinators just as effectively as they kill pests. It takes an acre of flowers to feed a bee colony. There simply isn't enough forage in many urban areas to feed all the would-be pollinators,

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especially when many green spaces are coated in pesticide residue. Climate change disrupts weather and temperature patterns that pollinators are adapted for. Altered seasons also disrupt the bloom times of native plants pollinators rely on, while encouraging the growth of non-native plants that are not efficient nectar producers. This further degrades the quality of habitats, creating stress for pollinator populations. Stressed populations are more vulnerable to diseases and non-native parasites.



Plums, apples, almonds, avocados, squash, broccoli, and coffee are just a few of the many food crops that rely on animal pollinators.

Habitat Help

If you want your own honey, you might want to <u>maintain your own hives</u>. But to really protect your local pollinators, you need to look beyond beekeeping. You can provide homes for native pollinators with <u>bee houses</u> and <u>birdhouses</u>, and even <u>bat houses</u>.

If you use pesticides in your landscape, the first step is to <u>dispose of them</u>. We can make habitats safer for honeybees and other pollinator populations by <u>avoiding pesticides</u> in our gardens – especially neonicotinoids. Once preferred as a safer pesticide because they are less toxic to mammals, neonicotinoids are particularly <u>harmful to bees</u>. Maintaining healthy soil and diverse plantings will reduce the risk of serious pest infestations. When problems do occur, try safer, <u>organic pest-control</u> solutions instead of toxic chemicals. And remember that perfection doesn't exist in nature – a little bit of insect damage is natural and part of a healthy ecosystem.

Honeybees are themselves an introduced species, and although not invasive, they do compete with local pollinators, who tend to be more specialized. Find out which pollinator species do belong in your area (EarthDay.org's citizen science challenge can help you track what you see) and study their needs. Plant a pollinator garden full of the native plant species that your local pollinators rely on most. Diversity in planting is key to providing food for a variety of species, as well as ensuring forage over time. Pollinators need to eat during more than just a few weeks in spring.

Think beyond plantings in the garden to include insect <u>watering stations</u> and <u>birdbaths</u>. Although <u>mulching</u> is critical for plant health, do leave some patches of bare ground to give <u>ground-nesting bees</u> access to native soil, and do create

a small brush pile to provide cover for all kinds of garden wildlife. In the fall, let leaves lie on the ground rather than raking them up. Leaf cover provides important protection for overwintering insects. Even though you may not spend much time in the garden yourself in winter, think about ways to welcome winter wildlife into the garden.



Birds will welcome the addition of a birdbath to your garden — and so will thirsty bees if you add a few rocks to give them a place to land.

Beyond the Garden

The average <u>foraging distance</u> for native pollinators ranges from 50 feet to ½ mile. Extend the benefit of your actions beyond your own garden fence. Share the <u>Pesticide Pledge</u> and encourage others to sign it. <u>Public policy</u> can help, too. Write to <u>your representatives</u> in Congress, encouraging them to call on the EPA to regulate pesticides that are harmful to beneficial insects.

The connection between how much you drive and the flowers blooming in your front yard may not be immediately obvious. But your <u>carbon footprint</u> contributes to climate change. The <u>consequences of climate change</u> – like altered weather patterns, extreme storms, and wildfires that pollute the air entire states away – have direct impacts on the ability of pollinators to survive. When you take <u>climate action</u> steps like <u>driving less</u>, you are helping much more than just reducing gridlock. You are protecting the pollinators that support civilization as we know it.



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Earth911 Quiz #69: Carbon Offset & Renewable Energy Certificate
Challenge



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