



# Native Pollinators



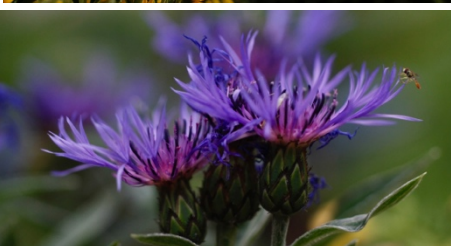
## Pollinator Insect Orders

- Lepidoptera (Butterflies)
- Hymenoptera (bees, wasps, ants)
- Coleoptera (Beetles)
- Diptera (flies)

## Species in North America

- Butterflies: 800
- Moths: 11,000
- Bees: 4,000
- Wasps: 18,000
- Flies: 16,000

**\$10 billion** annual economic value from pollinators' role in US food and fiber production



Crane Trust provides and protects habitat shared by a rich diversity of species. Native prairie is home to a vast pollinator community that includes bees, ants, wasps, butterflies, moths, beetles, flies, and other prairie dwellers. Pollinators are responsible for more than 70% of the world's plant reproduction. Sufficient pollination means higher yields of fruits and seeds. Pollinators are essential to produce food eaten by both humans and wildlife.

## Global Scale Declines

Across the world, pollinators are in peril. Study after study has shown large scale declines in global biodiversity and insect numbers. This widespread phenomenon is a worrisome signal that it is time for us all to become conservationists. We must work every day to practice habits that are friendlier to native wildlife and insects.

## Why are Pollinators in Peril?

Habitat loss is likely responsible for much of the decline in wildlife biodiversity on all continents. Tallgrass prairie once covered more than 170 million acres in North America. Due to the fertile nature of these soils, much has been converted to agriculture. Fertile habitats around the world face the same fate. Conversion of these acres forces out native pollinators and other wildlife.

Loss of habitat has a profound effect. Some species of bumble bee have declined by 90% since 1995. In addition to competing with the honeybee for resources, the bumble bee is affected by diseases introduced by non-native bees used in commercial operations (such as honey production). Habitat loss, competition, and diseases affect all pollinator species. Ground-nesting bees are especially susceptible to the use of pesticides on lawns, parks, and fields.

## Recognizing Native Pollinator Habitat

One of the first steps to protecting any species is to get a general idea of the kinds of habitats necessary to its life cycle. Pollinators and bees especially need brush piles and bare ground to overwinter and create nests. Many butterflies will find shelter under bark, in stems, shrubs, and trees to survive cold temperatures. Leaving stems and leaves undisturbed in your yard until nighttime temperatures are consistently above 50 degrees.

Pollinators need food and water throughout their flight season (typically April through October depending on region and weather). For water, this means a shallow plate where insects can stop for a sip, just like a bird bath. Food components may be a "nectaring" station, hummingbird feeder, or a diverse pocket prairie where a few species of flower are blooming throughout the warmer months. These resources are necessary for some species to survive to adulthood and lay their eggs.

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## You Can Help Pollinators!

### Plant a Pollinator-Friendly Yard

Pollinator species depend on a diverse variety of blooming plants. Cities full of lawns can become sinks, areas where individual pollinators might make their way in, but perish because of habitat lack. Different insects also rely on specific colors and shapes of blooms. By planting a variety of flower species that bloom at different times of the year, you can help pollinators thrive.

You can also consider the needs of the caterpillars. Each larva needs a host plant on which to feed to survive to adulthood. If you love a particular species of butterfly, plant its host plant and watch the cycle from caterpillar to adulthood.



Photos: Amy Sandeen



### Make your own Pocket Prairie

A pocket prairie is a small, pollinator-friendly planting or “pocket” of native plants. Any planted area under one acre can be considered a pocket prairie. Whether it’s a container garden, a portion of your lawn, or just a designated area, any intentional native planting area that supports a few different species of native plants is a pocket prairie. The best pocket prairies include diversity of plant type, species type, colors, stature, and bloom times so that it can support different pollinator species throughout the entire growing season.

### Build Nests for Bees

You can create tunnel nests for mason and miner bees as well as other kinds of nest boxes. These bees are solitary and do not sting. It’s easy to line boxes or wooden houses with bamboo tubes, or drill holes into spare lumber. These bee houses do need some maintenance to keep prevent diseases in the bee population. Maintained correctly, they can be well worth it next to a fruit tree to help increase the yields.

### Practice Citizen Science

Anyone can help monitor pollinator populations. With the help of individuals and communities, scientists can better determine large-scale changes and concerns. Many people track the monarch migration by raising and tagging monarchs through Monarch Watch. At monarch waystations, counts of monarch caterpillars are carefully logged.

More projects and apps are developed all the time where individuals simply take pictures or identify species of the pollinators in their own backyards and neighborhoods (see iNaturalist). These efforts are an important part of the recovery and maintenance of pollinators and their habitat, possible only with the help of many individuals.



### Use Responsible Weed and Pest Control Practices

The widespread use of pesticides in yards, parks, and food production is affecting all insects. Pesticides can be an important tool in protecting crops and controlling invasive species and pests, but only if used safely and correctly. Many lawn and garden pest problems can be solved without chemicals. Even “organic-approved” chemicals kill pollinators and can hurt other wildlife, and most pesticides are general chemicals that damage anything that is alive (including people and pets).

Herbicides are not generally directly lethal to insects, but they do decrease plant diversity. Even the weeds in a lawn can be a vital food source for pollinators. For example, dandelions are one of the earliest blooming plants. When pollinators reappear in the spring, dandelions may be their only food source!

## LEARN MORE! Visit our Pollinator Garden and Crane Trust Nature and Visitor Center