

Pollinators & Native Plants

The natural world is full of connections between living and nonliving things. Pollination is a mutually-beneficial relationship where the plant and pollinator both gain something: pollinators receive food in the form of nectar or pollen, and when pollen gets transferred from flower to flower, the plant benefits from being able to then produce fruit and seeds. Bees and butterflies get most of the credit for pollination but a wider array of species pollinate flowers throughout the Midwestern United States.

This guide is all about relationships between native plants and their pollinators in the Chicago region. Here we illustrate two examples of native plants that interact with each pollinator group, but there are so many more. Flowers come in all shapes, sizes, colors, and smells, and those characteristics all matter to the different pollinators they attract. We hope this guide sparks curiosity and inspires you to observe these interactions in your backyard or local park.

Illustrations are not to scale. If you would like to find more examples of specific pollinators you could try other guides at fieldguides.fieldmuseum.org/ or take a picture and upload it to iNaturalist.

Promoting Our Native Pollinators

At the Field Museum, we encourage planting species that are native to your region. Native plants have co-evolved with local pollinators over thousands of years, creating strong, interdependent relationships. Diverse ecosystems built on these native species are more resilient to climate change. Without pollinators, most plants would not be able to produce beautiful flowers people love or food that we rely on. To start a native plant garden, your local native plant society is a great resource.

More Resources:

1. Holm, Heather. *Pollinators of Native Plants: Attract, Observe and Identify Pollinators and Beneficial Insects With Native Plants* Pollination Press LLC, 2014.
2. <https://illinoisplants.org/>

This is a companion guide to the Beginner's Field Guide to Pollinators in Chicagoland. To learn more about groups of pollinators and see more beautiful illustrations, scan this QR code ▶



Bees

Have you ever heard a bumble bee buzzing on a flower? It might be performing buzz pollination, where the vibration from the bee causes the flower to release its pollen. Native plants like shooting star and prairie smoke require a strong pollinator to pry into the flower and bumble bees, like Eastern bumble bees, are up to the task. Food crops such as blueberries, tomatoes, and peppers are also buzz-pollinated. Many native bees are much more effective pollinators of these plants than non-native honey bees, which cannot buzz-pollinate.

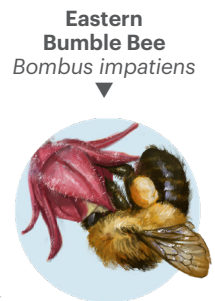
Buzz-Pollinated Plants



Eastern Shooting Star
Dodecatheon meadia



Prairie Smoke
Geum triflorum



Eastern Bumble Bee
Bombus impatiens

Butterflies

All butterflies and moths begin life as caterpillars and many caterpillars rely on specific plants, called a host plant, for food and shelter. Without hosts, butterflies and moths would no longer be able to reproduce. Milkweeds are the only plants monarchs can lay eggs on; common milkweed and rose milkweed are the most preferred. Monarch caterpillars only eat milkweed leaves, which contain a chemical poisonous to most animals, protecting them against predators. Black swallowtail butterflies are less picky and will use any plant in the carrot family as a host, such as golden Alexanders.

Host Plants



Common Milkweed
Asclepias syriaca

**Black Swallowtail
Caterpillar**
Papilio polyxenes

**Monarch
Caterpillar**
Danaus plexippus



More about
butterflies!



Golden Alexanders
Zizia aurea

Moths

Moths get less attention due to their nocturnal habits and plain looks, but they provide vital pollination services. Their fuzzy bodies make them more efficient at collecting pollen than butterflies. Similar to butterflies, moths need host plants at the beginning of their lives. Oak trees host over 900 species of caterpillars. If you want to support many creatures, plant an oak! Both host and nectar plants are important for our pollinators and many native plants serve both purposes. For example, blazing stars host flower moths and provide nectar to the hummingbird clearwing moth.

Host Plants



White Oak
Quercus alba



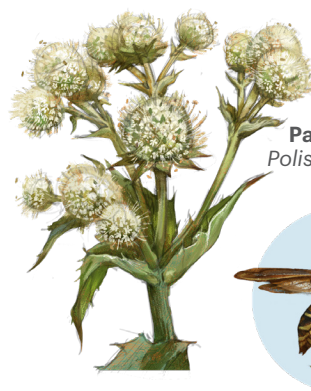
Prairie Blazing Star
Liatriis pycnostachya

**Bleeding Flower Moth
and Caterpillar**
Schinia sanguinea

Wasps

Wasps pollinate as they move between flowers drinking nectar. While away from their nests and visiting flowers, wasps are not aggressive; they become defensive when they feel threatened. They are often seen on clusters of small white flowers that are shallow so these short-tongued insects can reach the nectar. Wasps are the most common visitors to the flowers of rattlesnake master, a striking prairie plant with spiky flower heads. You may see paper wasps among them in the summer. New Jersey tea, a small shrub, provides nectar to wasps and many other insects with its fragrant white flowers.

Plants With Many Small White Flowers



Rattlesnake Master
Eryngium yuccifolium

Paper Wasp
Polistes fuscatus



New Jersey Tea
Ceanothus americanus

Flies

Many species of flies drink nectar from a diverse array of flowers. Some plants have evolved to be pollinated exclusively by flies that are attracted to waste and stinky smells. These plants have flowers that are the color of rotting meat and smell unpleasant. Pawpaws are visited by flies, such as the blue blow fly. Their maroon flowers open in early spring and after pollination, develop into delicious fruits in the fall. In late winter, even with snow present, skunk cabbage blooms. This plant can generate its own heat inside the hood-like spathe that is protecting the flowers. Flies are drawn to the warmth and putrid odor.

Plants With a Rotten Smell and Flesh Color

Blue Blow Fly
Calliphora vicina



Common Pawpaw
Asimina triloba

Leaves appear
after flowering



Skunk Cabbage
Symplocarpus foetidus

Beetles

Beetles are the most diverse group of insects, and many of them are pollinators. They are attracted to groupings of many small flowers, as well as fragrant, bowl-shaped flowers. In early spring, you may see them on the tiny spicebush blooms. In the fall, they are impossible to miss on goldenrods. Longhorn beetles are a common visitor. Beetles were around when dinosaurs roamed the Earth, so some of the earliest flowering plants like magnolias evolved to be pollinated by beetles. Tulip tree and cucumber magnolia are the closest magnolia species to Chicagoland; both are native to southern Illinois.

Plants With Clusters of Small Flowers

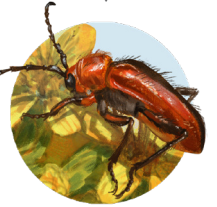


Leaves appear
after flowering



Spicebush
Lindera benzoin

Longhorn Beetle
Batyle suturalis



Showy Goldenrod
Solidago speciosa

Birds

Birds may not come to mind when thinking about pollinators, but ruby-throated hummingbirds are particularly adapted to feed on nectar, with long bills, tubular tongues and the ability to hover. They are a major pollinator of plants with red or orange tubular flowers, like the royal catchfly. When insects and fruits aren't plentiful in the spring, trees with large floral displays are an important food source for many birds, even if they aren't specialized to visit flowers. Orioles, for example, drink nectar from spring-flowering trees, such as Ohio buckeyes, transferring pollen along the way.

Plants With Long Tubular Flowers



Ruby Throated
Hummingbird
Archilochus colubris

Royal Catchfly
Silene regia



Ohio Buckeye
Aesculus glabra

Author: Catherine Hu.

Acknowledgments: Aster Hasle, Douglas Stotz, Maureen Turcatel, & Bruno de Medeiros.

Artwork: Rika Mizoguchi. Design: Alicia Diaz.

The Field Museum acknowledges that it was built on the traditional homelands of the Council of the Three Fires: The Potawatomi, Odawa, and Ojibwe Nations, as well as the Ho'Chunk, Meskwaki, Sauk, and Miami Nations. The Museum recognizes that the region we now call Chicago was the traditional homeland of many Indigenous nations, and remains home to diverse Native people today. The land we walk was and remains Native land.