

Pollinator Garden

Slice an apple across its middle and you'll find the shape of a five-pointed star. If the apple has two seeds inside each point of the star – ten all together – it was completely pollinated. If there are fewer than ten, not enough pollen reached the flower's stigmas to develop all the seeds. A poorly pollinated flower will develop into an apple that's small and lopsided. An unpollinated flower won't develop into an apple at all. According to the National Academy of Sciences, close to 75 percent of the flowering plants on earth, at least partly, rely on some pollinator in order to set fruit or seeds.

Pollination is the act of transferring pollen grains from the male anther of a flower to the female stigma. This transfer of pollen is, in large part, accomplished by bees, and also wasps, butterflies, moths, bugs, flies, birds, and even bats as they move from flower to flower, carrying pollen with them and then dropping it into neighboring flowers.

According to the U.S. Fish and Wildlife Service, the main threats facing pollinators are habitat loss, degradation, and fragmentation. **Habitat loss** comes about as natural habitats are replaced by roadways, manicured lawns, and non-native gardens which cause pollinators to lose the food and nesting sites that are necessary for survival. **Habitat degradation** is what happens when a habitat is changed so dramatically that it no longer supports native plants, animals, and insects as it once did; biodiversity is lost. **Habitat fragmentation** happens when the distance between suitable habitat patches along a migration route is too great, causing smaller, weaker individuals to die during their journey. Migratory pollinators, such as bats, hummingbirds, and monarch butterflies, could be affected by habitat fragmentation.

Another problem affecting pollinators is the increased use of pesticides and neonicotinoids in our gardens and farms. These toxic chemicals, while intended to control pests, is indirectly being transferred to beneficial insects such as bees. When these toxic chemicals kill the Queen Bee of a colony for example, the entire colony is decimated because the Queen is vital to the entire colony. By strategically planting a diverse variety of plants that attract beneficial insects, combined with eliminating the use of pesticides, we can attract a greater number of beneficial insects that can out compete the detrimental ones. In this way, we can partner with the power of nature to keep our farms and gardens in balance.

The Pollinator Garden has different areas for you to explore. The beginner garden is designed to show the first-time gardener how affordable, simple, and straightforward planting a pollinator garden can be. Using seeds and plants that are readily available from the home improvement store and the grocery store, you can grow plants that add color and beauty to your space while also supporting bees and other pollinators. The hügelkultur is in the Pollinator Garden as well. This is planted with many springtime bulbs to attract those earliest pollinators looking for food. Pollinator-attracting perennials, annuals, and seed are in this space. You can look to the Hügelkultur Virtual Tour in this website to learn about this unique planting bed.

A perennial bed is being added to the garden to each year. Perennial plants will winter over and continue growing the next year. This bed will eventually be filled with perennial pollinator-attracting plants which will come back year after year.

The last bed in this Garden is the Xeric garden. Again, perennials, annuals, and seeds will be planted here. This garden demonstrates how beautiful and productive a garden space can be in attracting pollinators while using Xeriscape principles. If you want to learn more about Xeriscape gardening, look at the Xeric Virtual Tour in this website.

Though the Pollinator Garden is focused on attracting bees, butterflies, hummingbirds and a wide variety of other pollinators, you will see pollinators throughout the entire garden. Anywhere there are flowers blooming, pollinators will be attracted. We plant flowers that bloom throughout the earliest spring season until the latest fall season. Pollinators need food throughout the entire season so planting a wide variety of blooming plants with a wide variety of colored blooms is essential to pollinator habitat. Beds which attract pollinators not only feed the pollinators, they also give habitat so that pollinators can nest in our gardens. The key to attracting lots of beneficial insects is DIVERSITY.

By growing this garden in downtown Grand Junction, the Discovery Garden is pushing back some of the threats facing pollinators. We are creating habitat, encouraging native plant growth, and giving a spot for migratory pollinators to do what they do best. By planting a pollinator garden at your home, you can do the same thing - supporting pollinators in your own space!

Website Resources

General Information:

<http://nativepollinator.com/>

https://plants.usda.gov/pollinators/Native_Pollinators.pdf

Attract pollinators to your garden using native plants.

<https://www.fs.fed.us/wildflowers/pollinators/documents/AttractingPollinatorsV5.pdf>

<https://www.spearheadmhas.org/information-on-native-plants-for-birds--pollinators.html>

Video Resources

<https://libguides.wccnet.edu/c.php?g=484394&p=3313214>

<https://www.spearheadmhas.org/information-on-native-plants-for-birds--pollinators.html>

Recommended Reading in MCPLD collection:

The Xerces Society Guide. Attracting Native Pollinators, protecting North America's Bees and Butterflies

Vanishing of the bees

The backyard beekeeper: an absolute beginner's guide to keeping bees in your yard and garden

Bees: a natural history

Children's Books in MCPLD collection:

Flower talk: how plants use color to communicate

The thing about bees: A love letter

Flight of the honeybee

Jungle

The hive detectives: chronicle of a honeybee catastrophe

Bees: a honeyed history