

## PLANTING A POLLINATOR GARDEN PART II

By the Master Gardeners of Frederick County

Last month, we discussed why you might want to plant a pollinator garden. Now we'd like to take a look at the elements essential to a successful pollinator garden: appropriate food sources, water, year-round shelter, and an environment that is free from poisons, invasive plants, and other hazards.

### Food

Flowers should bloom in your garden from early spring through late fall, especially since food is critical during these early and late seasons. You can supplement native perennials with annuals such as Mexican sunflowers (*Tithonia*) and zinnias. A list of Maryland native plants is available at <https://extension.umd.edu/resource/recommended-native-plants-maryland>.

Be sure to include some plants that will serve as host plants for butterfly and moth larvae, such as those listed at <https://dnr.maryland.gov/wildlife/pages/habitat/wahumbutbee.aspx>. If you don't encourage butterflies to breed in your garden, you will likely see fewer adult butterflies. Monarchs, by the way, lay eggs only on milkweed plants.

Once you have selected your plants, cluster multiples of each plant type. Insects are selective feeders and prefer to forage from one species at a time. They expend considerable energy if they have to travel very far to reach similar plants. It is therefore recommended that a garden contain at least five plants or three square feet of each species.

### Water

Water is essential for life. This is true of insects just as it is of humans. Although insects may obtain water from raindrops or dew, these are often not available during stretches of hot dry weather. A shallow pie pan containing a layer of stones and filled with water allows parched insects to perch safely while drinking. Refresh the water daily to prevent mosquitoes from breeding.

Some butterflies will gather in muddy areas to drink water and extract minerals from damp soil. This behavior, known as puddling, can be encouraged by placing a shallow pan of moist sand in the soil of your garden. Make sure to keep the sand moist.

### Shelter

Insects require shelter throughout the year. Depending on the species, the ideal shelter may be soil, fallen leaves, plant stems or dead tree branches. About 70 percent of native bees are ground nesters. Leaving bare patches of soil throughout the garden will make it easier for these essential insects to reproduce. Instead of thick layers of wood mulch, plant short, spreading, perennial groundcovers between your larger garden plants. Like wood mulch, these plants will help conserve soil moisture and block out weeds. They will also provide a natural space where insects can find shelter, flowers on which to feed, and host plants for their larvae.

In the fall, go easy on garden cleanup. Allow leaves to remain where they fall (mulch them into the lawn with a mower), or rake them into the flowerbeds. Many insects use hollow stems, such as those produced by goldenrod and Joe Pye weed, to overwinter their young. Many butterflies and moths overwinter in fallen leaves. Fireflies lay their eggs on the soil, and the nymphs live in leaf litter and eat unwelcome slugs for over a year before becoming adults.

Fallen branches or sections of logs also make an excellent shelter. As the bark loosens, some insects burrow under the bark layer to lay eggs and to shelter over the winter.

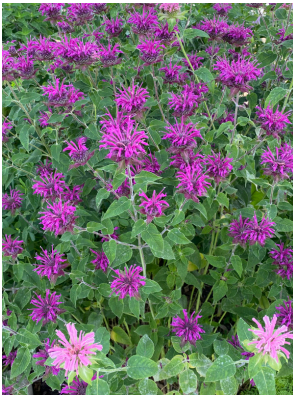
## Safe Habitat

Avoid using insecticides in or near your pollinator garden. These are toxic compounds that are intended to kill insects. Reduce or eliminate the use of fertilizer by selecting plants, especially natives, that are adapted to your garden conditions. Any chemicals added to the garden may have unintended consequences.

Remove invasive plants such as garlic mustard, Asian bush honeysuckle and butterfly bush. Although attractive to insects, these plants provide little or no nutrition and can quickly take over your garden.

Finally, avoid garden practices that may harm delicate insects and fragile baby birds. Bug zappers kill many more beneficial insects than harmful ones. The outflow from a leaf blower may reach a speed of over 150 mph, which can blow insect eggs and larvae off the plants. Bright outdoor yard lights disrupt the behavior of moths, fireflies, and other night creatures, and may disturb nesting birds.

Many resources are available to help you design and maintain a pollinator garden. Your local Frederick County Master Gardeners are always available to answer your questions. Visit <http://extension.umd.edu/locations/frederick-county/home-gardening>, or call us at 301-600-1596.



**BEE BALM:** Placing several pollinator plants close together enables bees, butterflies and others to pollinate more flowers, as they don't have to fly far between their favored plants. Pictured in a local garden is monarda, or bee balm, a native perennial. *(Photo courtesy of Frederick County Master Gardeners)*

**BEE ON MILKWEED:** Don't be too quick to remove milkweed from your garden. Both bees and monarch butterflies like milkweed; the species pictured here is, in fact, commonly called butterfly weed. Milkweed is the only plant on which the endangered monarch butterfly lays its eggs. *(Photo courtesy of Suzanne Hill, Frederick County Master Gardeners)*



**POLLINATOR GARDEN:** Offers bees, butterflies, moths, hummingbirds and others a smorgasbord of plants from which to choose. The sign in front indicates that this county garden has been certified as "pollinator-friendly." *(Photo courtesy of Frederick County Master Gardeners)*



**POLLINATOR GARDEN:** A pollinator garden does not have to be huge to offer a variety of plants. This county garden has been certified as “pollinator-friendly.” *(Photo courtesy of Wiley Horsley, Frederick County Master Gardener)*

*For more information about the Frederick County Master Gardener/Horticulture Program, visit: <http://extension.umd.edu/locations/frederick-county/home-gardening> or call Susan Trice at the University of Maryland Extension Frederick County office, 301-600-1596. Find us on Facebook at <http://www.facebook.com/mastergardenersfrederickcountymaryland>*

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