

## Butterfly Bartending: Nectar Flowers

Humans and butterflies agree: flowers belong in every garden. Of course experienced butterfly gardeners know that without caterpillar host plants, there will be no butterflies. But once the adults have emerged from their chrysalis they appreciate the occasional sip as they search for love and their caterpillar's food plant. And in the spring and fall, migrating butterflies absolutely need nectar as the power drink to fuel their journeys. However, if you offer only flowers, you are not a butterfly gardener. You are a bartender, a saloon-keeper, providing adult beverages to lonely spinster and bachelor butterflies.

### How Butterflies Choose Flowers

Flowers co-evolved with pollinating insects to maximize traffic to their blooms in order to achieve fertilization. First they entice passing insects with fragrance, color and shape. Then they reward the visitor with nectar and pollen to ensure frequent repeat business. Bees are the champion pollinators and the only insect that gathers and processes the nectar and pollen to feed their young. Butterflies are less important, but with bee populations threatened, even their minor contributions are valuable.

Although they can sip nectar from many species of flowers, butterflies are highly discriminating. Favorites will attract swarms of butterflies, while other flowers, perhaps even more beautiful and fragrant to humans, will have no visitors. Butterflies choose flowers by their color and shape. Their complex eyes detect a much broader light spectrum than human eyes, including ultraviolet and polarized light. While the caterpillar host plants should be scattered throughout the garden (butterflies find them by smell and taste, not sight), flowers are most beckoning when they are planted together in large masses for the near-sighted butterflies.

### Flowers to Avoid

Not all flowers offer equal opportunities for nectar-loving pollinators like bees and butterflies. First, be very cautious about hybrids, which are bred for humongous blossoms on dwarfed plants. Fertility is a frequent casualty, which means that flowers like Knock-out Roses and tetraploid "French" Marigolds have no nectar to attract pollinators. Avoid any plant that advertises itself as sterile. You might as well stick plastic flowers in your garden. Some fertile flowers such as members of the Carrot Family, do not have nectar because their pollinator strategy focuses on pollen feeders or carrion feeders. These too are useless to butterflies.

The flower's shape must function as a landing platform since butterflies alight and "taste" with the chemical receptors on their feet. Flat blossoms like Coneflowers, Zinnias and Mexican Sunflowers form ideal landing strips. Some of our most beautiful and fragrant flowers are physically incompatible with butterflies' relatively short tongues. The nectar of large tubular flowers like Lilies, Angel's Trumpets (*Datura*) and Moon Flower (*Ipomeas*) is inaccessible unless you have a 10 inch tongue like the Hummingbird Moth. Snapdragon nectar is also inaccessible because the passageway is too convoluted, ironic since Snapdragon foliage is a caterpillar food plant for the Common Buckeye.

### Choosing Nectar Flowers

Once we enter the world of old-fashioned, open-pollinated flowers, the list of nectar flowers is long and familiar. But which is the best? Research has identified the factors that influence a pollinator's choice of nectar flowers such as the quantity, quality and accessibility of the nectar. And the winner is...the Butterfly Bush, a non-native hybrid! Another high-value nectar source, native Milkweeds, do double duty as a caterpillar food plant for Monarch caterpillars.

Because butterflies cruise your yard from March to November, you need a variety of flowers blooming to span the nine months. The table provides examples.

Spring	Summer	Fall
Dandelions	Butterfly Bush & Butterfly Weed	Asters
Rose Verbena	Angelonia	Goldenrod
Ninebark ( <i>Physocarpus</i> )	Mexican Sunflower ( <i>Tithonia</i> )	Joe Pie Weed & Boneset
Bee Balms	Single-flowered Zinnias	Sunflowers, esp. Bur Marigold
Tropical Milkweed and Catmint ( <i>Nepeta</i> species) bloom all three seasons (Gotta have!)		

### Summary

As a saloon-keeper serving adult beverages to migrating and lovelorn butterflies, you can attract the largest number and variety of butterflies by following these simple guidelines:

- NO insecticides! Do not invite patrons to your pub and then poison them!!
- Sun-drenched garden: both butterflies and nectar-rich flowers are sun lovers
- Serve a variety of high nectar "drinks" from March through November
- Arrange the flowers in large masses, blocks of colors, to provide the visual cues