Audubon International

Fact Sheet

Creating a Butterfly Garden

Creating a welcome refuge for butterflies on your property is a simple and rewarding project that literally brings landscaped areas and gardens to life. Plants that attract these “flying flowers” can be added to annual beds, perennial borders, containers, hanging baskets, and general landscaping. You can also create a special garden just for butterflies by planting nectar-producing flowers for adult butterflies and host plants for caterpillars.

Many butterflies, including this Monarch, rely on specific host plants to complete their lifecycle.

Butterfly Conservation

Butterfly gardening is a conservation project that can be successfully done on nearly any site—from an urban rooftop to a suburban schoolyard, from a landscaped island at a business, to an expansive golf course garden. Imagine if we all did it? Our landscapes would not only be more beautiful, but they would provide corridors of habitat to sustain native butterfly populations across the country.

As urban populations expand and suburban sprawl increases, natural habitats are fragmented and reduced. This makes it difficult for many butterfly species to find suitable natural habitats to meet their needs. By planting a butterfly garden on your property, you increase the chances of butterfly survival. Who knows? You also may be the catalyst that encourages your friends, neighbors, and community members to join in this valuable conservation effort.

Lifecycle

All butterflies go through dramatic changes before becoming the beautiful winged creatures we recognize. Butterflies start out as eggs, most often laid on the underside of a leaf or branch. Caterpillars are born with a hearty appetite and often eat their shells as their first meal.

As caterpillars grow, they molt—that is, they shed their outer layer of skin, at least five times before they become suspended in a cocoon or chrysalis. They may remain within this waxy pupal case for weeks or months, until they finally emerge as adult butterflies.

The average life of a butterfly ranges from a couple of days to around six months. During this time they are looking for mates and places to lay their eggs. Some butterflies don’t eat at all as adults, but those who do are looking to dine on the sweet nectar that comes from flowers.

Butterfly Necessities

Like other insects, butterflies are cold blooded. They rely on the sun to raise their body temperature and metabolism so they can fly. Hence, butterflies can often be found in sunny meadows or basking on rocks or roads with their wings perpendicular to the sun for optimal solar absorption.

Butterflies probe flowers for nectar using a *proboscis*—a long, tongue-like projection on the top of their head. Caterpillars, on the other hand, simply chew their way through the world and often have strong food preferences. Indeed, while adult butterflies will feed on almost any nectar- producing plant, caterpillars usually feed on only one or a few specific plants.

Food sources for caterpillars are called *host plants* since they welcome distinct species of butterfly caterpillars. Adult butterflies lay their eggs on the host plant preferred by their young so that a convenient meal is waiting when they hatch from the egg.

Composite flowers allow butterflies like these Black and Yellow Swallowtails to balance while feeding.

Getting Started

1. Choose a sunny, sheltered location.

A butterfly garden should be located in the sun for most, if not all of the day. Adding light colored rocks to your garden will increase your chances of seeing butterflies warming themselves in the early morning, before they begin feeding and possibly breeding.

Wind is another factor to take into account before creating your garden. Butterflies use most of their energy flying to and from food and breeding sights. Placing your garden in a protected location, such as the edge of a wooded area, will make it easier for butterflies to perform their daily tasks.

Butterfly Basics

Use this checklist to ensure a successful butterfly garden.

- ❒ Sunny location
- ❒ Shelter from wind
- ❒ Rocks or stones for basking
- ❒ Nectar plants for adults
- ❒ Host plants for caterpillars
- ❒ Plants in *stair-step* formation according to height
- ❒ Accessible shallow water source
- ❒ No pesticide use

2. Provide abundant nectar sources.

Provide plants that are highly visible and easily accessible. Bright colored flowers with numerous flower heads and large petals to land on are most attractive. *Composites*-- flowers that have a center surrounded by a ray of petals, such as asters, purple coneflower, and black-eyed Susan are good choices. Stick with fragrant, old fashioned varieties of annuals including marigolds, zinnias, and cosmos. These tend to produce more nectar than double-flowered varieties. Butterflies also prefer flowers with small clusters of blossoms on strong stems, such as butterfly weed, lantana, and mints.

The best way to arrange plants in your garden is in *stair-step formation: short plants in the front* grading to taller plants in the back of the garden. A simple design that includes masses of a few nectar flowers is an attractive way to meet the needs of butterflies.

We've provided an extensive list of nectar-producing plants that are native to North America. As butterfly gardening gains in popularity, many nurseries and mail-order catalogs offer butterfly garden collections or advertise plants specifically for butterfly gardens. Use our plant list as a guide, or ask your local horticulturist for good suggestions for your area.

3. Include host plants for caterpillars.
To ensure a close-up look at the butterfly life cycle, include a variety of host plants for eggs and caterpillars. You can simply select several host plants from the list provided, or identify the butterflies you see in your area and provide their preferred host plants.

Watching and identifying butterflies will help you learn which flowers they frequent. By adding those plants to your garden you will ensure a future home for that species.

The Monarch-Milkweed Connection: Monarch caterpillars feed only on milkweed. Milkweed contains chemical compounds known as cardiac glycosides, which makes the caterpillar unpleasant tasting to predators, thus ensuring a higher survival rate.

4. Avoid pesticide use in and around your garden.
Since butterflies are insects, they are susceptible to pesticide exposure. Use organic gardening techniques to control pest problems. An integrated pest management program (IPM) should be standard practice on larger properties to reduce the need for pesticides.

BEES VS. BUTTERFLIES

The nectar of flowers in your butterfly garden may also attract a variety of bees. While not all species of bees sting, people who are hypersensitive to bees should plant flowers that are slowly and continually producing small amounts of nectar.

Bees tend to prefer flowers that produce large amounts of pollen and nectar in spurts. Some low nectar–producing shrubs that tend to attract mainly butterflies are lantanas (*Viburnum* spp.).

5. Add finishing touches.
In addition to nectar flowers and host plants, you can include a few flourishes to set a welcoming table for butterflies. A small patch of mud or wet sand will provide needed water, amino acids, and salts. Children may enjoy leaving a few pieces of rotting fruit on a tray off the ground— though if other creatures become a problem, you may opt to omit this enticement.

If you have space, leave several wild patches of taller grasses and wildflowers, as well as shrubby undergrowth in wooded areas. These will provide needed protection from predators and adverse weather.

Several mail-order companies and wildlife specialty stores even offer a *butterfly shelter—a wooden structure about the size of a bird house with slatted* openings that allow butterflies to enter. While we have seen no definitive research on the value of butterfly boxes, they may make an attractive addition to your garden.

Planting butterfly gardens provide an excellent way to partner with local youth groups.

Annuals				
Scientific Name	Species Example, Common Name	Color	Height	Bloom Time
Cosmos spp.	Cosmos	W, Pi	2'- 4'	SU - F
Calendula officinalis	Calendula	Y, O	12"-18"	SU – F
Impatiens spp.	Impatiens	Pi, R, W	6"-12"	SP - F
Antirrhinum majus	Snapdragon	W, Y, Pi, R	1'- 2'	SP - SU
Helianthus annuus	Sunflower	Y	3'- 8'	SU – F
Zinnia spp.	Zinnia	Y, R, O, Pi	2'	SU – F

Perennials				
Scientific Name	**Example Species, Common Names**	**Color**	**Height**	**Bloom Time**
Allium cernuum	Nodding Pink Onion	W, Pi	1' – 4'	SU
Anemone spp.	Anemone: Canada, Virginia	W	1' – 2'	SP- SU
Aquilegia canadensis	Columbine	R-Y	1' – 3'	SP-SU
Asclepias spp.	Red Milkweed *, Common Milkweed*, Butterfly-weed*	Pi-R, L, O	3' – 5'	SU
Aster spp.	Aster: Health*, Smooth*, New England, Silky	W, B, Pi, Pu,	2' –6'	SU-F
Baptisia spp.	Wild Indigo	Pu, B	3' – 6'	SP-SU
Cacalia atriplicifolia	Pale Indian Plantain	W	4' – 8'	SU
Campanula rotundifolia	Harebell	B, W	1' – 2'	SU-F
Chelone glabra	White Turtlehead	W	2' – 4'	SU-F
Coreopsis spp.	Coreopsis: Lanceleaf, Stiff	Y	2' – 4'	SP-SU
Echinacea purpurea	Purple Cone Flower	Pu, Pi	2' – 5'	SP, SU, F
Eupatorium spp.	Joe Pye Weed, Boneset, Mist-flower	Pi, W	3' – 6'	SU - F
Gentiania andrewsii	Bottle Gentian	B, W	1' – 2'	SU-F
Helianthus spp.	Sunflowers: Sawtooth, Downy, Western, Woodland	Y	2' – 12'	SU-F
Heliopsis helianthoides	Ox Eye Sunflower	Y	2' – 5'	SP-SU
Iris versicolor	Blue Flag Iris	B	2' – 3'	SU
Liatris spp.	Blazingstar: Rough, Dotted, Prairie, Dense	Pu-Pi, R	1' – 6'	SP, SU, F
Lilium superbum	Turks Cap Lilly	O, R	3' – 5'	SU
Lobelia cardinalis	Cardinal Flower	R	2' – 4'	SU-F
Lupinus spp.	Lupine	B, Pu	1' – 2'	SP-SU
Monarda spp.	Scarlet Beebalm, Bergamot, Dotted Mint	Pu, R, L	1' – 4'	SU-F
Penstemon spp.	Penstemon: Smooth, Slender	W, L	1' – 5'	SU
Ratibida spp.	Yellow Coneflower, Prairie Coneflower	Y	3' – 6'	SU
Rudbeckia spp.	Black Eyed Susan*, Green Headed Coneflower	Y	1' – 6'	SU-F
Silene virginica	Fire-Pink	R	< 2'	SP-SU
Silene regia	Royal Catchfly	R	2' – 4'	SU
Silphium spp.	Rosinweed, Compassplant, Prairie Dock	Y	2' – 10'	SU
Solidago spp.	Goldenrod	Y	1' – 5'	SU-F
Thalictrum dasycarpum	Meadow Rue	W, Y-G	3' – 6'	SU
Tradescantia ohiensis	Spiderwort	B, Pi	2' – 4'	SU
Veronia spp.	Ironweed	Pu	4' – 8'	SU-F
Veronicastrum virginicum	Culver's Root	W, Pi	3' – 6'	SU
Viola spp.	Violets: Bird's-Foot Violet*, Twin-Flower Violet, Labrador Violet, Western Dog Violet	B-Pu	<1'	SP

Shrubs, Trees, and Vines				
Scientific Name	**Common Name**	**Color**	**Height**	**Bloom Time**
Amorpha canescens	Leadplant	B-Pu	<6’	SP-SU
Calycanthys floridus	Carolina Allspice, Sweetshrub	Brown-R	6’ – 12’	SP-SU
Cornus florida	Flowering Dogwood	W, Y	35’-50’	SP
Lantana involucrate	Button Sage	L, evergreen	6’ – 12’	W, SP, SU, F
LIndera benzoin	Northern Spicebush*	Y	6’ – 12’	SP
Rhododendron spp.	Flame, Clammy or Pink Azalea	O, W, P	6’ – 12’	SP
Sassafras albidum	Sassafras	Y	35’-50’	SP
Spiraea alba	Meadowsweet	W	<6’	SU
Viburnum spp.	Squashberry, Hobblebush	W	<6’ –12‘	SP-SU
Aristolochia serpentoria	Virginia Snakeroot	Pu, R	Vine	SU-F
Campsis radicans	Trumpet Vine	R, O, Y	Vine	SU-F

Host Plants	**Larvae/Caterpillar Species They Attract**
Flowers and grasses	
Beardtongue, *Penstemon* spp.	Checkerspots
Black-eyed Susans, *Rudbeckia* spp.	Silver Crescentspot
Butterfly Weed, *Asclepias tuberosa*	Monarch, Queen
Clovers, *Trifolium* spp.	Dogface, Cloudywing, Sulphurs, Eastern Tailed Blue
Grasses, any native spp.	Yellow, White, and Sulphurs
Hibiscus, *Hibiscus,* spp.	Hairstreaks
Indian Plant Brush, *Castilleja coccinea*	Checkerspots
Milkweed, *Asclepias* spp.	Monarchs, Queens
Mustards, *Cruciferae* spp.	White, Sulphurs, and True Skippers
Nettles, *Urtica* spp.	Comma, Tortoiseshell, Satyr Anglewing
Thistles, *Cirsium* or *Carduus* spp.	Crescentspot, Painted Lady, Metalmark
Violets, *Viola* spp.	Brush-footed and Fritillaries
Wild Senna, *Cassia hebecarpa*	White, Yellow, Sulphurs, and Skippers
Shrubs and Trees	
Cherry, *Prunus serotina*	Swallowtails, Elfins, Hairstreaks, Viceroy, Red Spotted Purples, Metalmarks
Elm, *Ulmus* spp.	Brush-footed
Yellow Popular*, Liriodendron tulipifera*	Tiger Swallowtail
Willows, *Salix* family	Sulphurs, Whites, Yellows, Fritillaries, Anglewing, Tortoiseshell, Morning Cloak, White Admiral, Red Spotted Purple, Viceroy, Duskywing