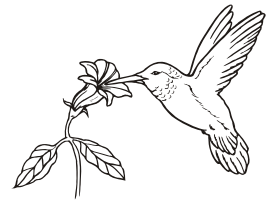


BUTTERFLY & HUMMINGBIRD GARDENING



Creating a butterfly garden is an exciting and rewarding endeavor! It is easy to invite butterflies to your area by gardening with their needs in mind. These beautiful insects will add bright colors and entertaining antics to your garden display. Use the following techniques to produce a delightful butterfly garden in your own backyard.

LOCATE THE GARDEN IN A SUNNY AREA. Butterflies and most butterfly-attracting plants require bright sunshine.

PLANT NECTAR-PROMISING FLOWERS. Butterflies visit flowers in search of nectar, a sugary fluid, to eat. Many native butterflies seem to prefer purple, yellow, orange, and red-colored blossoms. Clusters of short, tubular flowers or flat-topped blossoms provide the ideal shapes for butterflies to easily land and feed.

SELECT SINGLE FLOWERS RATHER THAN DOUBLE FLOWERS. The nectar of single flowers is more accessible and easier for butterflies to extract than the nectar of double flowers which have more petals per flower.

USE LARGE SPLASHES OF COLOR IN YOUR LANDSCAPE DESIGN. Butterflies are first attracted to flowers by their color. Groups of flowers are easier for butterflies to locate than isolated plants.

PLAN FOR CONTINUOUS BLOOM THROUGHOUT THE GROWING SEASON. Butterflies are active from early spring until late fall. Plant a selection of flowers that will provide nectar throughout the entire growing season (e.g. spring – azaleas, summer – buddleia, fall – chrysanthemums).

INCLUDE HOST PLANTS IN THE GARDEN DESIGN. Host plants provide food for caterpillars and lure female butterflies into the garden to lay eggs.

INCLUDE DAMP AREAS OR SHALLOW PUDDLES IN THE GARDEN. Some butterflies drink and extract salts from moist soil. Occasionally large numbers of male butterflies congregate around a moist area to drink, forming a "puddle club."

PLACE FLAT STONES IN THE GARDEN. Butterflies often perch on stones, bare soil or vegetation, spread their wings and bask in the sun. Basking raises their body temperature so they are able to fly and remain active.

DO NOT USE PESTICIDES IN OR NEAR A BUTTERFLY GARDEN. Most traditional garden pesticides are toxic to butterflies. Use predatory insects, insecticidal soap or hand remove the pests if problems occur.

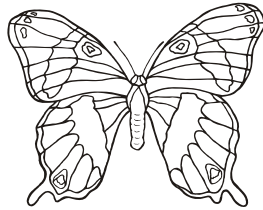
BUTTERFLIES AND PLANTS

Butterflies depend on plants in many ways. The most successful butterfly gardens include plants which meet the needs of butterflies during all four stages of their life cycle: egg, caterpillar, chrysalis, and adult. After mating, female butterflies search for a specific kind of "host plant" on which to lay eggs. For example, monarchs lay eggs on milkweed, black swallowtails on parsley, and Eastern tiger swallowtails on tulip tree or wild cherry. Some butterflies lay eggs on more than one type of plant while others only use one particular kind of host plant. In a few days caterpillars emerge from the eggs and begin to eat. Caterpillars are selective eaters and only feed on specific kinds of plants. If the desired plants aren't available, the caterpillars will starve rather than eat another type of vegetation. Usually female butterflies lay eggs on or near the plants their caterpillars prefer to eat. Most butterfly caterpillars feed on native plants and are not considered agricultural or ornamental pests. In a few weeks when the caterpillars are fully grown, they shed their skin for the final time and change into chrysalises. Inside each chrysalis the body of an adult butterfly is formed. Often chrysalises are attached to plant stems and protected by surrounding vegetation. After emerging from the chrysalis, the adult butterfly soon begins to search for nectar-rich flowers to feed. Plants are important to butterflies during each stage of their life cycle. A garden designed with this in mind attracts the largest number and greatest variety of butterfly visitors!

Butterfly Nectar Sources

Cultivated Flowers - Annuals

Ageratum	Nicotiana
Cosmos	Pentas
Lantana	Petunia
Marigold	Scabiosa
Mexican Sunflower	Verbena



Wild flowers (For An Informal Garden)

Clover	Wild Bergamot
Dandelion	Yarrow
Hawkweed	Aster
Winter Cress	Beggar Ticks
Oxeye Daisy	Boneset
Dogbane	Goldenrod
Milkweed	Ironweed
Queen Anne's Lace	Joe-Pye Weed
Thistle	

Cultivated Flowers- Perennials

Allium, including Chives (*Allium* spp.)
 Forget-me-not (*Myosotis sylvatica*)
 Bee Balm (*Monarda didyma*)
 Butterfly Weed (*Asclepias tuberosa*)
 Coreopsis (*Coreopsis* spp.)
 Daisy or Shasta Daisy (*Chrysanthemum maximum*
C. x superbum)
 Daylily (*Hemerocallis* spp.)
 Gaillardia (*Gaillardia x grandiflora*)
 Liatris or Blazing Star or Gay Feather (*Liatris* spp.)
 Mint (*Mentha* spp.)
 Phlox (*Phlox* spp.)
 Purple Coneflower (*Echinacea purpurea*)
 Sunflower (*Helianthus* spp.)
 Yarrow (*Achillea filipendulina*), 'Coronation Gold'
 Aster or Michaelmas Daisy (*Aster* spp.)

Shrubs

Butterfly Bush (*Buddleia* spp.)
 New Jersey Tea (*Ceanothus americanus*)
 Privet or Amur Privet (*Ligustrum amurense*)
 Tartarian Honeysuckle (*Lonicera tatarica*)
 Glossy Abelia (*Abelia x grandiflora*)
 Littleleaf Lilac (*Syringa microphylla*) 'Superba'
 Common Lilac (*Syringa vulgaris*)

Larval Food Plants

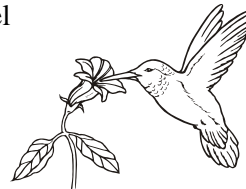
Herbaceous

Alfalfa
 Clovers
 Dock and Sorrel
 Aster
 Cabbage and Broccoli
 Everlasting
 False Nettle
 Grasses and Sedges of various genera
 Milkweed
 Nettle
 Plantain
 Queen Anne's Lace
 Senna
 Sweet Fennel
 Thistle
 Turtlehead

Vetch
 Violets
 Mustards, such as Winter Cress
 Parsley

Shrubs and Trees

Poplars
 Birch
 Cherry
 Dogwood
 Elm
 Hackberry
 Locust
 Hawthorn
 Honeysuckle
 Tuliptree or Tulip Poplar
 Willow



Hummingbird Feeders

- pet water bottles (paint some part(s) red with fingernail polish, or use red ribbon)
- commercial hummingbird feeders
 - should display some red on them (if not use red fingernail polish or red ribbon)
 - Durable
 - easy to clean- every 3 days (hot weather), every 6-7 days (cool weather)
 - easy to fill
 - easy for hummingbirds to feed from
- feeder location
 - near cover within 10-15 feet
 - until eventually visited, place in sun and near flowers, eventually move to partial sun to shade
- the sugar solution
 - 1 part white sugar to 4 parts water
 - to prepare: stir in sugar, bring solution to low boil, low boil for 2 minutes, allow to cool
 - store leftovers in refrigerator
 - unnecessary to add red food coloring to solution (may be harmful to the birds)
 - do not use honey in the solution
- detering insect pests such as bees and wasps
 - get bee "guards", or smear surfaces around feeder openings with Vaseline, salad or mineral oil

HUMMINGBIRD GARDENING

The Garden

- Nectar sources - flowers should be tubular, rich in nectar, lack fragrance, designed to be accessible to hummingbirds and inaccessible to other nectar feeders, usually red but also orange, pink
- Cover/shelter - need trees/shrubs for perching (4/5 of day spent perching quietly near food source)
- Water

Nectar Sources

Butterfly Bush (*Buddleia* spp.)
 Trumpet Creeper or Trumpet Vine (*Campsis radicans*)
 Indian-paintbrush (*Castilleja radicans*)
 Flowering Quince (*Chaenomeles* spp.)
 Fuchsia (*Fuchsia* spp.)
 Coralbells (*Heuchera sanguinea*)
 Impatiens/Jewelweed (*Impatiens* spp.)
 Cardinal Flower (*Lobelia cardinalis*)
 Trumpet Honeysuckle (*Lonicera sempervirens*)
 Lupine (*Lupinus* spp.)
 Beebalm (*Monarda didyma*)
 Petunia (*Petunia x hybrida*)
 Scarlet Sage (*Salvia splendens*)
 Nasturtium (*Tropaeolum majus*)