

Wildlife in My Backyard

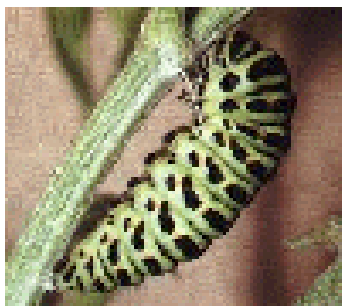
Part 3b: Attracting Butterflies

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Some people may not be enthusiastic about attracting butterflies and all of their life cycle stages to their garden, but butterflies add colour, movement and beauty to the garden. They are also beneficial pollinators for many of our favourite flowers.

Butterflies are classified under Lepidoptera in the class of insects, and are found in many different habitats throughout North America. Many butterfly species have recently expanded their ranges due to changes humans have brought on through disturbed habitats where native plants and introduced weeds now thrive. Some of the beautiful

species that have expanded include: Black Swallowtail, European Cabbage Butterfly, Clouded Sulfur, American Painted Lady, Monarch, and Silver-spotted Skipper.¹

In order to fully understand butterflies and attract them to your garden you must understand their life cycle (Figure 1). With this you can plan your garden to meet their food, shelter, and other needs at each stage of their life cycle. Butterflies begin life as an egg usually deposited singly, or in clusters up to a few hundred, on or near the host plant, usually on the leaf underside. The eggs hatch in 4 to 10 days. Larvae feed on the underside of the host plant leaves, and take from 3 to 4 weeks to turn into a chrysalis, or pupa. However, some butterfly species spend the winter as a larvae, hibernating in the crevices of trees trunks and walls, and wait until spring to pupate. Others, like the Silver-spotted Skipper, have the first eggs of the season develop directly into butterflies and the second brood winters as larvae. It may take from one to two weeks for the pupa to develop into a butterfly, but some like Swallow-tails pass the winter as pupae. Most butterflies live for 2 or 3 weeks, while some live for 10 months or longer. The early spring and summer generations of the Monarch live a few weeks, while the fall generation that migrates south will survive for 6 months before mating and returning north again (the Monarch is the only truly migratory butterfly).¹

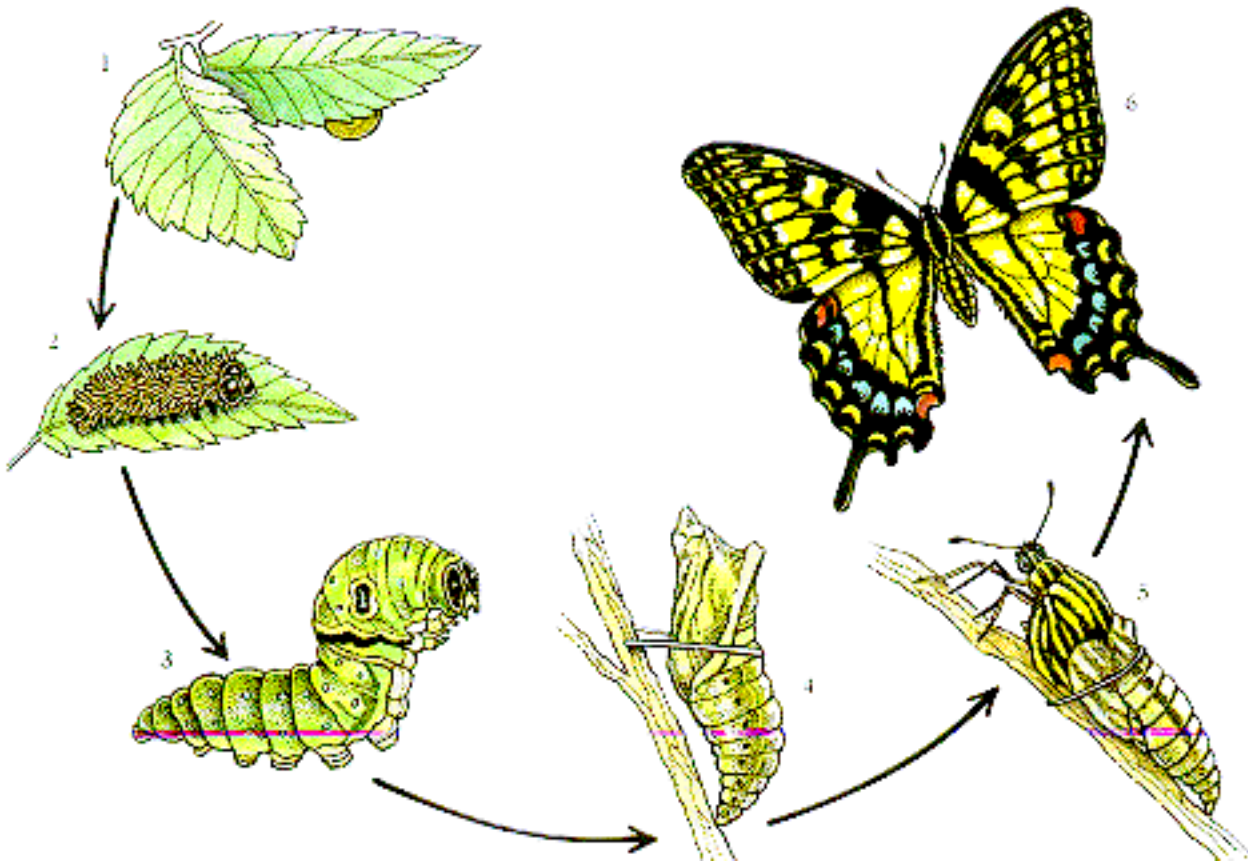


Figure 1: Butterfly Life Cycle.¹ From the egg (1), the caterpillar or larva hatches (2). When ready the caterpillar prepares to pupate (3). The pupa or chrysalis forms (4) and later, emerging from the pupal case (5) to the fully formed adult butterfly (6).

Designing a Butterfly Garden

Flower nectar is the primary food source for most butterflies and is obtained from many annuals, perennials, trees, shrubs, vines and herbs. Most of the flowers butterflies favour are ones that gardeners choose for their beauty or fragrance. Many are often recommended for attracting hummingbirds, but butterflies prefer a slightly different garden design from hummingbirds. The main difference in a butterfly garden design is that they require open, sunny gardens, since butterflies are cold-blooded and need sunlight to warm their bodies, often flying only when temperatures are at least 60°F. Butterflies need a food source, water, cover from the elements, and a place to spend the night. The environment must be stable and predictable and balancing all the components butterflies require is part of the challenge and art of butterfly gardening.

A. Flower Plantings



Sphinx Moth on a Butterfly Bush

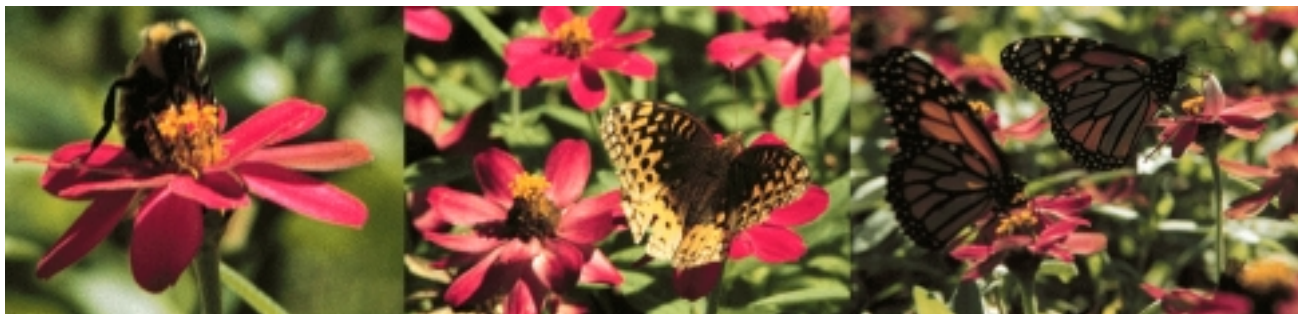
With approximately 19 butterfly species that we can attract to our gardens (Table 1), and the wide variety of nectar flower shapes and colours available one has a large choice for plantings and creative butterfly gardening (Table 2). You could try long, wide patches of Rudbeckia along a pathway, an open corner with a tall butterfly bush (truly, no garden should be without this beautiful plant!), and borders of sweet alyssum and astilbe. If you want fragrance as well as colour try lantana, butterfly bush, honeysuckle, sweet allysum, lilac, and lavender. Don't forget to consider the blooming period of the flowers that you plant in order to ensure a supply of nectar during the entire season, which will ensure that butterflies remain longer in your garden (Table 1).

Some butterflies, such as the Tiger Swallowtail and Spring Azure, prefer tall flowers, while others stay close to the ground in search of nectar. You should keep the feeding habitats of your favourite butterflies in mind and plan your garden around them. Butterflies are attracted to open areas of grass and wildflowers which resemble their natural habitat. A butterfly meadow can be an attractive addition to any garden. There are numerous wildflower mixes available from nurseries, but you can also harvest seeds from native plants such as thistle, dandelion, knapweed, fleabane, clover, goldenrod, and milkweed. If you are adjacent to a natural area you can extend your garden towards it with native plantings.



Monarch on Cosmos

The use of container plants can attract butterflies to small urban spaces. Plant impatiens, phlox, ageratum, cosmos (also great food source for the American Goldfinch when you let it go to seed as the butterflies like the flower nectar and the goldfinches the seeds), daylily, and primrose. A group of container plants massed in one location will attract butterflies more than scattered, individual containers.



This dwarf cherry zinnia was very attractive to many butterflies and other insects. Pictured left to right is bumblebee, fritillaria butterfly, monarch butterfly.

Table 1: Butterflies in our area and their favourite nectar flowers (modified from Arbuckle and Crocker (1991)).¹

Butterfly Species	Favoured Nectar Plant(s)	Favoured Host Plant(s)
Pipe Vine Swallowtail (<i>Battus philenor</i>)	butterfly bush, lilac, azalea, petunia	pipe vine
Black Swallowtail (<i>Papilio poluxenes</i>)	butterfly weed, phlox, clover, thistle	various carrot family members: carrot, parsley, celery, dill
Tiger Swallowtail (<i>Papilio glaucus</i>)	butterfly bush, lilac, honeysuckle, butterfly weed	wild cherry, willow, cottonwood, tulip poplar
Checkered White (<i>Pontia protodice</i>)	aster, butterfly weed, centaury	various mustard family members: mustard, turnip, cabbage
European Cabbage Butterfly (<i>Pieris rapae</i>)	lantana, impatiens, mint, dandelion	various mustard members; cultivated vegetables: cabbage, cauliflower, broccoli, radish; and nasturtium
Clouded Sulfur (<i>Colias philodice</i>)	aster, goldenrod, phlox, clover	members of the pea family, especially clover
Small (American) Copper (<i>Lycaena phlaeas</i>)	butterfly weed, goldenrod, yarrow, buttercup	sheep sorel, curled dock
Gray Hairstreak (<i>Strymon melinus</i>)	goldenrod, milkweed, clover, winter cress	many plants, including hibiscus, clover, mallow, beans, vetch
Spring Azure (<i>Celastrina ladon</i>)	rockcress, buckeye, violet, winter cress, dandelion	various trees shrubs: dogwood, viburnum, blueberry
Variegated Fritillary (<i>Euptoieta claudia</i>)	butterfly weed, clover, shepherd's-needle, milkweed	many plants, including violets, passion vine, stonecrop
Great Spangled Fritillary (<i>Speyeria cybele</i>)	gloriosa daisy, thistle, verbena, butterfly weed	various species of violet
Pearl Crescent (<i>Phycoides tharos</i>)	composites like thistle, aster, gloriosa daisy	various species of aster
American Painted Lady (<i>Vanessa virginiensis</i>)	marigold, goldenrod, aster, butterfly bush	various types of everlasting
Painted Lady (<i>Vanessa cardui</i>)	aster, cosmos, thistle, buttonbush	variety of plants like thistle, mallow, hollyhock
Buckeye (<i>Junonia coenia</i>)	aster, coreopsis, knapweed, chicory	plantain, snapdragon, toadflax
Monarch (<i>Danaus plexippus</i>)	milkweed, lantana, lilac, cosmos, goldenrod, zinnia	milkweed and milkweed family
Silver-spotted Skipper (<i>Epargyreus clarus</i>)	zinnia, honeysuckle, butterfly weed, joe-pyeweed	various species of locust
Checkered Skipper (<i>Pyrgus communis</i>)	aster, fleabane, knapweed, shepherd's-needle	various members of the mallow family and hollyhock

Table 2: Butterfly Flowers.

To find out more about these plants, look them up at theTime Life Virtual Plant Encyclopedia. (<http://www.vg.com/cgi-bin/v2/gemag/PID=69909435783844571407023,07023&s=4393>)

Perennials	
<i>Achillea</i> , yarrow	<i>Hemerocallis</i> , daylily
<i>Arabis</i> , rockcress	<i>Iberis</i> , candytuft
<i>Asclepias tuberosa</i> , butterfly weed, milkweed	<i>Impatiens</i> , impatiens, touch-me-not
<i>Aster</i> , aster	<i>Lobelia</i> , lobelia
<i>Astilbe</i> , astilbe, false-spiraea, meadowsweet	<i>Phlox</i> , phlox
<i>Chrysanthemum</i> , chrysanthemum	<i>Primula</i> , primrose
<i>Coreopsis</i> , coreopsis	<i>Rudbeckia hirta</i> , black-eyed Susan, gloriosa daisy
<i>Dahlia</i> , dahlia	<i>Scabiosa</i> , pincushion, scabious
<i>Dianthus</i>	<i>Sedum spectabile</i> , showy stonecrop
<i>Echinops exaltatus</i> , globethistle	<i>Solidago</i> , goldenrod
<i>Gaillardia</i> , gaillardia	<i>Verbena</i> , verbena
Annuals	
<i>Ageratum houstonianum</i> , ageratum, floss flower	<i>Lobelia</i> , lobelia
<i>Centaurea cyanus</i> , cornflower, bachelor's button	<i>Lobularia maritima</i> , sweet alyssum
<i>Chrysanthemum</i> , chrysanthemum	<i>Petunia</i> , petunia
<i>Coreopsis</i> , coreopsis	<i>Phlox</i> , phlox
<i>Cosmos</i> , cosmos	<i>Scabiosa</i> , pincushion, scabious
<i>Dianthus</i>	<i>Tagetes</i> , marigold
<i>Helianthus</i> , sunflower	<i>Verbena</i> , verbena
<i>Iberis</i> , candytuft	<i>Zinnia</i> , zinnia
<i>Impatiens</i> , impatiens, touch-me-not	
Trees, Shrubs or Vines	
<i>Lonicera</i> , honeysuckle	<i>Syringa</i> , lilac
<i>Buddleia davidii</i> , butterfly bush	<i>Viburnum</i> , viburnum
<i>Rhododendron</i> , rhododendron, azalea	<i>Wisteria</i> , wisteria

B. Providing Host Plants

You will want to provide the proper host plants once you have adult butterflies frequenting your garden. You can provide enough host plants for the butterfly larvae and still have enough plants for your enjoyment. See Table 3 for a list of host plants.

To protect host vegetables and herbs, such as cabbage, parsley, and dill from being eaten by the larvae of butterflies, put netting over one area of the crop and leave the other area exposed for butterflies. The netting, available at most garden centres, will prevent the female from laying her eggs on the plants.

C. Butterfly Shelter

Butterflies thrive best in a sheltered garden, and you can plant tall shrubs, vines or trees around the perimeter to provide a windbreak. Try to select plants that will provide shelter as well as nectar: pink or white viburnum bushes to line the perimeter; a wall or trellis of yellow or white honeysuckle, or purple wisteria; plant cherry, chestnut, pear or plum trees along the perimeter.

Additional shelter for overwintering butterflies in your garden can be provided by a log pile at least 3 to 5 feet high and 3 to 6 feet long (Figure 5). A suggested alternative to the log pile is the use of a butterfly hibernation house which can be purchased at many garden and nature stores. While this has been suggested to be attractive to butterflies, recent reports state that none have been seen using them. One of the most credible statements about butterfly box use is found on the "Frequently Asked Questions" page of the National American Butterfly Association web site [<http://www.naba.org/qanda.html>], where the NABA is asked if butterfly boxes work, and answer "Unfortunately, no. While so-called butterfly boxes can be attractive, and do little harm, studies have shown that butterflies do not use them in any way." View an article about this at http://www.suite101.com/article.cfm/butterfly_gardening/16477, and another at <http://butterflywebsite.com/articles/showarticle.cfm?ID=27>. But if you want to build a butterfly house and try it for yourself, building plans are available at <http://butterflywebsite.com/articles/house/plans.htm>.

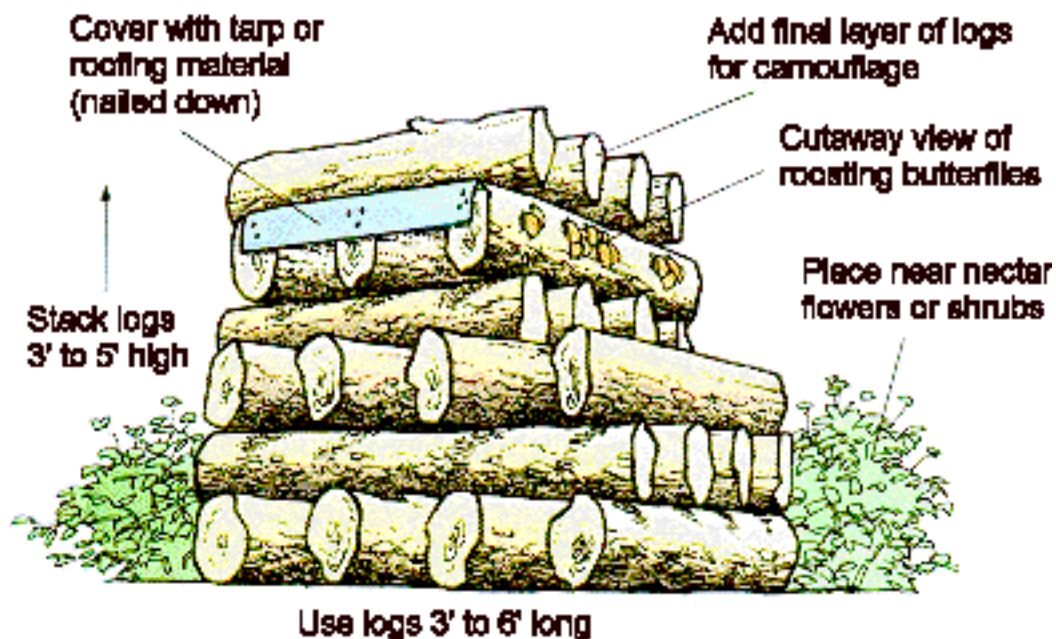


Figure 2 Butterfly log pile.¹






Final Note: Pesticide Usage

As butterflies and hummingbirds frequent your flowers the use of pesticide is highly discouraged. Therefore, if you prefer to have perfect flowers and are a heavy pesticide user, I would recommend trying not to attract hummingbirds and butterflies. There are many natural and low-toxicity pesticides available and I would suggest using those but only during the leaf stage of the plant. Once the plant is in flower and the hummingbirds and butterflies are visiting, I would discontinue pesticide usage.

References

Arbuckle, N. and C. Crocker (eds.). 1991. How to Attract Hummingbirds and Butterflies. California: Ortho Books. 112 pp.

Other Web Pages on Butterflies:

-  Backyard Wildlife: Making It Come Alive [<http://www.ianr.unl.edu/pubs/Wildlife/g672.htm>]
-  The Butterfly Website [<http://butterflywebsite.com/>]
-  Butterflies and their Larval food source [<http://butterflywebsite.com/Articles/ShowArticle.cfm?ID=317>]
-  Butterfly Gardening [<http://www.studyweb.com/links/3816.html>]
-  Butterflies and Moths [<http://birding.about.com/hobbies/birding/msub10.htm?once=true&>]