

Components of butterfly habitat may be found in spaces ranging from a large meadow to a sunny backyard deck. A deck might include flowering potted plants and a container of mud to which water is added periodically. The ideal area includes multiple components of butterfly habitat and is typically several acres in size. However, smaller, well-designed sites also may be successful at supporting butterflies. In addition, small efforts geared toward specific parts of the butterfly life cycle are worthwhile. Something as simple as replacing a sunny lawn area with nectar-rich flowering plants may provide valuable habitat for butterflies en route to egg-laying sites.



Goldenrods massed in nature.

Two important components of butterfly habitat are food



Dandelions are a good source of early spring nectar.

and shelter. Some forms of shelter may be incorporated into the site design (see *Site Inventory Procedures*). Butterfly boxes are not mentioned because many people have reported they fail to attract butterflies.

Caterpillars and adult butterflies need different types of food. Caterpillars chew plants while butterflies drink nectar. The caterpillars of many butterfly species feed on specific plants or groups of plants. Caterpillar *host* plants include certain native forest, meadow, and wetland plants as well as some introduced plants of meadows, roadsides, and other open areas. Caterpillar

Butterfly Habitat Components

host plants are required for the next generation of butterflies to develop. Host plants may help attract butterflies.

Some gardeners do not like to have caterpillar host plants in the garden because of the damage done to the plants. However, unlike moth caterpillar pests, butterfly caterpillars generally do not defoliate large areas or entire plants because the eggs are laid only a few per plant. (Black Swallowtail caterpillars are an exception.)

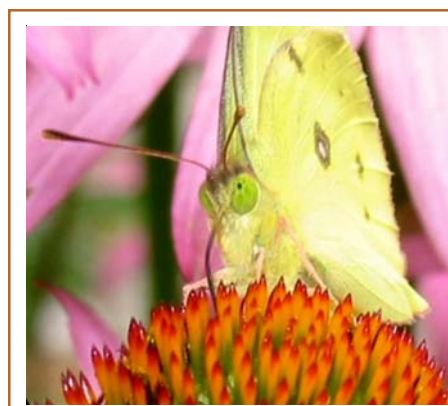
An adult butterfly uses its long tube-like proboscis to take food in liquid form. Flower nectar is the most important food for many (but not all) butterfly species.

Another source of liquid nourishment is found in puddles where evaporation has concentrated minerals.

In a garden, a hose may be used to keep puddles wet during dry periods. Puddles may be as simple as a low spot in bare soil on, or adjacent to, a garden path. If cats are a problem in the garden, artificial mud puddles may be created in containers inaccessible to cats.



Milkweed flowers provide nectar for many butterfly species.



Clouded Sulphur using its long proboscis to sip nectar from a Purple Coneflower.



This puddle has added mineral value from decomposing deer scat. Note that (as with many species of butterflies) the markings on these White Admirals differ on the top side and the underside of the wings.

Site Inventory Procedures

Before committing to a site, examine the setting to ensure that it does not include factors that would make it an unreasonable place for butterflies.

- Does the surrounding area lack vegetation?
 - ◆ *Butterflies tend to avoid large areas lacking vegetation.*
- Is there frequent or widespread use of insecticides in the surrounding area?
 - ◆ *Butterflies are very sensitive to insecticides. (NOTE: Bt (Bacillus thuringiensis) used in organic gardening is lethal for the caterpillars of all butterflies, moths, and skippers, not just the target pest species.)*
- Does the site lack sun?
 - ◆ *A butterfly garden should get at least 5-6 hours of sun per day.*
- Is there an excessive human presence that would frighten butterflies?

Assuming there are no major drawbacks to using the area, begin the planning process by asking whether the existing physical elements or plants may be used to help define the boundaries of a garden site. For example:

- Are there adjacent plants or buildings that serve as a windbreak from prevailing winds?
- Does the line of an existing fence seem like a good boundary?

Examine the area and its surroundings for existing components of habitat that may be included in the site design and for habitat components whose presence should be encouraged in the surrounding area. For example:

- Caterpillar food sources.
- Butterfly nectar sources.
- Areas where water puddles naturally.
 - ◆ *If outside a garden site, consider how to provide a view from the garden to the puddled water area.*
- Flat rocks that will warm in the sun (especially morning sun).
 - ◆ *In order to be used by butterflies, flat rocks also need shelter from wind.*
 - ◆ *Warm, flat rocks offer opportunities to observe butterflies.*
- Fences or tall shrubs close to (or within) the planting area that could serve as butterfly perching sites.
 - ◆ *Note: unsightly fences also may be transformed into support for flowering vines.*
- Existing plants that provide shelter from wind in the butterfly area.
- Overwintering habitat:
 - Large trees with deep bark crevices.
 - Hollow logs.
 - Rocks with crevices.

Butterfly Observations:

- Take note of what species are in the area.
- Is the proposed butterfly site on or near a hilltop?
 - ◆ Look for congregations of males waiting on hilltops for females seeking mates.
- If the caterpillar host plants* of the observed species are not already in the area, consider cultivating them in or near the planned butterfly site.

In Connecticut, nectar-consuming adult butterflies are most common during July and August. However, several species are found as early as May or as late as October (some are seen still earlier or later). Providing a source of early-blooming plants is often a good strategy to attract butterflies to a garden because there are fewer sources available in nature in early spring. Similarly, late-blooming nectar-rich flowers, such as Chrysanthemums, may attract a large number of butterflies to a garden in the fall.

Butterfly Gardens

Plants for Caterpillars and Butterflies

Nectar plants recommended for butterfly plantings vary depending on space available, soil type, and the degree of formality desired. In general, it is desirable to plant flowers that are nectar-rich in a combination of species that provide nectar from spring to fall. Butterflies benefit

from plants that provide good landing platforms because, unlike hummingbirds, they do not remain suspended in the air while sipping nectar. *Regardless of what flowers are planted, large numbers of the same species, rather than a sampler of many species, should be planted because butterflies are attracted by the massed color (which also may be created by planting together a variety of species of a single color that bloom at approximately the same time).*

Some plants of open areas used by butterflies for nectar, and/or as caterpillar host plants, are considered weeds in pastures, lawns, and elsewhere. Furthermore, many may not be desired in a formal garden because of their size, weedy form, or aggressiveness. Yet, allowing them to exist near formal gardens may be part of an overall design for managing backyard butterfly habitat. In addition, native plants that are too weedy for a formal garden may be encouraged or planted in grasslands managed for butterfly habitat.

Site Planning

If you're not sure you're ready for a butterfly garden in your yard ...

Try one of these ideas:

- Start informally and see what happens:
 - ◆ stop mowing a section of lawn for 2 years (best done where neighbors will not consider it unsightly)
 - ◆ plant nectar-producing flowers in containers in wind-protected areas of a sunny deck or back porch
 - ◆ plant a section of your vegetable garden to nectar-producing flowers
 - ◆ plant extra parsley or dill to share with Black Swallowtail caterpillars
- Get involved in the Connecticut Butterfly Atlas Project
- Visit a butterfly garden

Other Sources of Information:

- General
 - ◆ *Butterflies Through Binoculars: the East* by Jeffrey Glassberg
 - ◆ *Peterson's First Guide to Caterpillars of North America*
 - ◆ Butterflies of North America (www.npwrc.usgs.gov/resource/distr/lepid/bflyusa/ct/toc.htm)
- Connecticut-Based Organizations and Gardens
 - ◆ Connecticut Butterfly Association (www.ctbutterfly.org/)
 - ◆ Connecticut Butterfly Atlas Project (<http://george.peabody.yale.edu/cbap/>)
 - ◆ Connecticut Agricultural Experiment Station Butterfly Garden (www.acorn-online.com/hmonthly/home852c.htm)
 - ◆ Roaring Brook Nature Center Native Plant Butterfly Garden (www.sciencecenterct.org/rbncpage/events/butterfly.html)
- USDA Natural Resource Conservation Service-Connecticut (www.ct.nrcs.usda.gov/)

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

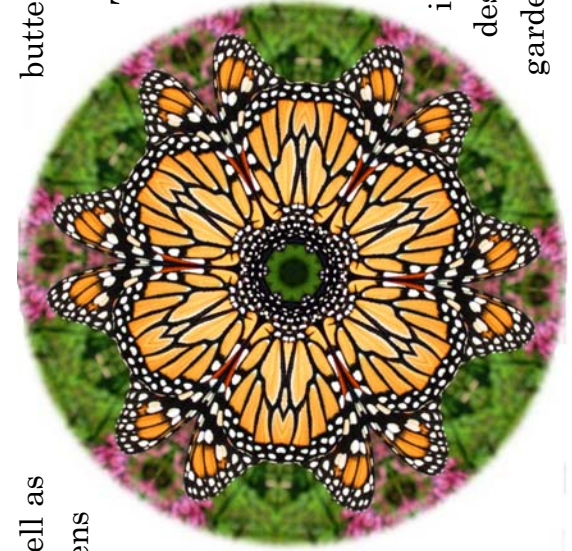
To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

People find butterflies a joy to watch, their brightly colored wings catching the sunlight as they flutter purposefully, yet unpredictably, from flower to flower. Often children enjoy raising caterpillars as well as watching butterflies. Butterfly gardens offer great rewards for a relatively small amount of effort.

Butterflies have a four-stage life cycle beginning with three non-adult forms including egg, larva (caterpillar), and chrysalis (or chrysalid). A

chrysalis is the form the caterpillar takes when it is pupating. (Pupation is the process of re-organizing a larval insect body into adult form). The fourth stage is the adult butterfly.

The different life cycle stages of butterflies require different types of habitat. Understanding the habitat components required for the different stages of a butterfly's life cycle is important in designing butterfly gardens.



Site Planning

Butterfly Gardens

U.S. Department of Agriculture
 Natural Resources Conservation Service
 344 Merrow Road, Suite A, Tolland, CT 06084 * (860) 871-4011

