

Attracting Butterflies to Your Garden



North American Butterfly Association

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**Virginia
Cooperative
Extension**



What is Butterfly Gardening?

Creating an environmental sanctuary for pollinators to thrive with nourishment, shelter, and a place to provide for their offspring.



Benefits of Attracting Butterflies to Your Garden

Bees, butterflies, and hummingbirds play a vital role in the ecosystem by fertilizing plants and ensuring the production of seeds.

Pollinator gardens add interest and color to landscapes by using a combination of flowering perennials, annuals, shrubs, herbs, vines and trees.

They are good for the environment -



North American Butterfly Association

Scientific Classification of Butterflies

→ Kingdom: Animalia

→ Phylum: Arthropoda

→ Class: Insecta

→ Order: Lepidoptera
(LEP+DOP-ter-e)

Animal Kingdom

All living organism (living and extinct)

Phylum: Arthropoda

Invertebrate animals with segmented bodies, external skeleton, and jointed limbs

Class: Insecta

As adults, insects have a single pair of antennae, compound eyes, a 3-segmented thorax where each segment of which bears a pair of jointed legs



Scientific Classification of Butterflies

The order Lepidoptera includes both butterflies and moths.

Its meaning originates from the Greek *lepis* meaning scales and *pteron* meaning wing. Hence “scaled winged” is the characteristic of Lepidopteras.

Butterflies and moths have four scaled wings. Scales are what give them their color. Each scale has a single color which are produced by pigments.

Of the Lepidoptera order, moths make up 89-94% of the species while butterflies only represent 6-11%.

According to the Butterfly Society of Virginia –
Worldwide there are 28,000 species of butterflies
US + Canada there are 725 species of butterflies
Virginia has 236 butterfly (and moth) species



Is it a Butterfly or Moth?

Butterflies

Moths

Behavior



Diurnal – active during daylight hours

Nocturnal – active at night



Chrysalis/
Cocoon



Chrysalis is a hard shell-like protection

Cocoon is wrapped in silk covering

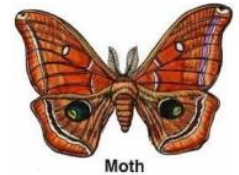


Antenna



Shaped like a golf club with a long shaft and bulb at the end

Simple tapering to a point or complicated with many cross filaments



Is it a Butterfly or Moth?

Butterflies

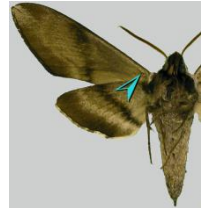
Moths

Anatomy



No frenulums

Frenulums - wing-coupling device that joins the forewing to hindwing, so wings can work in unison



Wings



Fold their wings vertically up over their backs

Hold their wings in a Tent-like fashion

Larger, more colorful

Smaller, with drab colors



Butterfly Behaviors

Basking – Butterflies are cold blooded. They do not generate enough heat and energy required to fly. A butterfly must warm its body to approximately 68 degrees to be able to fly.



Nectaring – Butterflies sip nectar through their proboscis. Their proboscis stays neatly rolled up under their head until they are ready for nourishment. The butterfly simply unrolls their proboscis and inserts it into the tubes of a flower (similar to how we use a straw).

Puddling – Butterflies sip water from standing moisture. The male butterflies also benefit from the salt in water to increase their fertility.



Mating – The lifespan of most butterflies is very short. Their main objective is to reproduce.



Butterfly Life Cycle Metamorphosis

Egg – laid on specific leaves to provide immediate nourishment to hatched caterpillar. A newly hatched caterpillar cannot travel very far. The mother butterfly selectively chooses where to lay the egg so that the larva is born in an optimal environment to survive. Host plants “host” the butterfly egg and then acts as a food source to the young caterpillar.



Butterfly Life Cycle Metamorphosis

Larva— just hatched caterpillar are “born to eat”

Many species will eat their egg shell for nutrients and go on to eat the leaf their egg was laid on.

They will eat constantly and grow by shedding their skin four times.



Butterfly Life Cycle Metamorphosis

Chrysalis (or pupa) – where the transformation takes place

As the caterpillar sheds its skin for the fifth time, the new skin forms the chrysalis. The chrysalis stage lasts 10-14 days where the wings and antennae are formed.



Butterfly Life Cycle Metamorphosis

Butterfly – emerges from the chrysalis with soft, wet wings. The butterfly pumps fluids into its wings for several hours enabling wings to expand to full size. The butterfly will then exercise their flight muscles while its wings are drying prior to attempting flight.



Once in flight, adult butterflies are searching for a mate to reproduce.

Planning a Butterfly Garden

Identify which butterflies are in your geographic area:

- Observe which butterflies are visiting your yard
- Visit local gardens and identify the butterfly species
- Research field guides



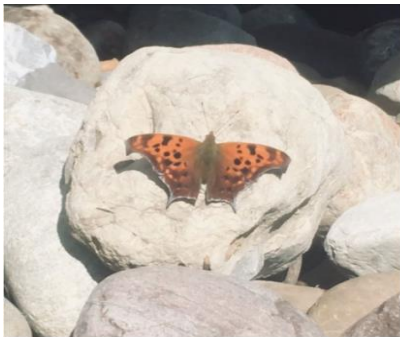
Select plants that will feed butterflies while also encouraging them to inhabit your garden, lay eggs and create a new generation of butterflies. Attracting adults butterflies is only part of the goal.

A successful butterfly garden will meet the needs of all butterfly life stages.



Creating a Butterfly Garden

- ✓ Plant your butterfly garden in a sunny location (at least 5-6 hours of full sun a day)
- ✓ Remove weeds to allow your nectar rich plants to thrive
- ✓ Provide shelter from wind and rain
- ✓ Strategically place flat rocks in the area for butterflies to have a landing spot to help regulate their temperature by either warming in sun or cool down in the shade
- ✓ Add water for hydration and nutrients (possibly a birdbath)



Selecting Plants for your Garden

- Select a variety of plants with different bloom times to provide continuous blooms and nourishment all season
- Choose plants that grow to different heights, with a variety of flower shapes and colors
- Select plants with bright colors; butterflies prefer red, orange, yellow, purple and dark pink
- Choose plants with flat-topped or clustered blooms and have short flower tubes
- Fragrant, strong aromas



Lewis Ginter Botanical Garden

Two Plant Types for Butterflies

Butterflies look for two different types of plants

- ❖ nectar source – attracts adult butterflies for nourishment
- ❖ host plants - provide location to lay eggs and food for their offspring



Butterfly milkweed (*Asclepias incarnata*)

Black-Eyed Susan (*Rudbeckia hirta*)

Cardinal flower (*Lobelia cardinalis*)

Eastern blazing star (*Liatris scariosa*)

Golden alexander (*Zizia aurea*)

Hollyhock (*Alcea rosea*)

Joe Pye weed (*Eupatorium phantom*)

New England aster (*Symphotrichum novae*)

Purple Coneflower (*Echinacea purpurea*)

Shasta Daisy (*Leucanthemum spp.*)

Summer Phlox (Phlox paniculata)

Tickseed (*Coreopsis grandiflora*)

Verbena (*Gladnulara canadensis*)



Selecting Plants for your Garden

Nectar Plants for Butterflies

Alyssum
Aster
Bee Balm
Butterfly Bush
Cosmos
Daylily
Delphinium
Dianthus
Globe Thistle
Marigold



Host Plants for Caterpillars

Borage
Fennel
Grasses
Hollyhocks
Lupine
Milkweed
Nettle
Salvia
Thistle



Butterflies *Native Plants*

- Plant native flowers when ever possible

 - Native plants and butterflies from a specific region have co-evolved together and depend on each other for survival and reproduction

- Use native plants to attract the butterflies you want to see. Most butterflies and caterpillars feed on a very limited number of plants.

 - Monarch butterflies - Goldenrod (nectar) Milkweed (host)

 - Eastern Tiger Swallowtail – Lantana (nectar) Lilac (host)

- Native plants require less maintenance

 - Being “native” to a specific area, plants develop a resistance to certain diseases and pests

- Native plants require less water

 - Native plants have very extensive root systems that grow much deeper than non-native plants



Protect the Pollinators

Do not use pesticides or insecticides in your garden or the surrounding areas. These chemicals kill butterflies, caterpillars, and other beneficial insects. Instead use nature friendly ways to discourage pests.

Alternatives to chemicals-

Plant marigolds, petunias, mint and other herbs that naturally repel pests

Great reason to use native plants as many native plants do not attract “pests”

Encourage ladybugs and dragonflies to visit your garden

Wash away pests with insecticidal soap



*Wishing You Successful
Butterfly Gardening!*



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Sit back, enjoy nature and your visitors! - It is very relaxing!

Resources

Butterfly Conservation

<https://butterfly-conservation.org/>

Butterfly School

<http://www.butterflyschool.org/>

Butterfly Society of Virginia

<https://www.butterflysocietyofva.org/Butterflies+Links>

Library of Congress

<https://www.loc.gov/rr/scitech/mysteries/butterflymoth.html>

National Wildlife Federation

<https://www.nwf.org/Garden-for-Wildlife/Wildlife/Attracting-Butterflies>

North American Butterfly Association

<https://www.naba.org/>

Student Conservation Association

<https://www.thesca.org/butterflygarden/>

Virginia Cooperative Extension Publication HORT-59NP

<https://ext.vt.edu/search-results.html?q=nectar+plants>
