



Butterfly Garden

Points to Ponder

- Planting a wide variety of plants increases biodiversity, creates a healthier garden and attracts more kinds of butterflies and pollinators.
- Planting flowers in masses allows butterflies to locate them more easily.
- Most butterflies prefer sunny places. If you have lots of trees creating shade, pruning may be beneficial.
- Do you have a sunny front lawn? It's the perfect place for creating your butterfly paradise and that front yard makes an awesome billboard for educating the public.
- Most adult butterflies feed on the nectar (sugary liquid) from flowers. Flowers offer the nectar as a reward for pollination!
- It's important to provide nectar sources through the seasons. Plants flowering from spring to fall provide a continuous source of pollen and nectar.
- Monarchs are an example of a butterfly that really benefits from having those nectar sources available during its long migration in late spring and fall.
- Choose open, single petalled, flat or clustered flowers that butterflies can land on easily; avoid 'double' flowers which make access to nectar difficult.
- Choose native plants wherever possible. Avoid fancy cultivars of native plants. i.e. *Echinacea purpurea* is a great native plant but a cultivar like *Echinacea* 'Tomato Soup' is not recommended. The nectar source may not be as beneficial and such hybrids don't last as long in the garden.
- Most people are aware of planting flowers for butterflies, but butterflies also need host and shelter plants.
- Many butterfly caterpillars (larvae) feed on a very limited number of specific host plants; i.e. monarch caterpillars only feed on milkweed (*Asclepias* spp.).
- Add unique larval host plant varieties to your garden for a variety of butterflies. (see chart below)
- Butterflies also need plants to use as shelter from the wind, rain and sun; choose a variety of shrubs or trees for shelter; native trees and shrubs are especially beneficial.
- Provide a shallow pan with damp mud or sand for butterflies who like to 'mudpuddle' (drink moisture/nutrients) in a sunny area of your garden.
- Don't use pesticides and if purchasing plants at nurseries, ask if they've been treated with a systemic pesticide!



Planning & Preparing Your Garden

- Determine the garden area (existing garden or newly developed area).
- Remove undesired plant material and/or weeds from the area. Some of the options to prepare a new butterfly garden are:
 - **Hand weeding** to removing undesired plants and weeds
 - **Smothering** the garden area with organic material (newspaper, cardboard, leaves, compost, garden soil) - this option can be done anytime during the growing season. It is best to use transplants for planting if you're smothering the soil.
 - **Solarizing** the area by using clear UV plastic film to cover the garden area at the beginning of summer to produce heat and kill weeds and dormant seeds. The area should be mown first at a low level prior to solarizing. Once the area is clear of plant material the area can be seeded or planted with chosen materials.

Seeding

- Fall is the best time, but early spring is also a good time to seed a new garden area.
- Ensure that the area is free of weeds and soil is moist.
- Plant large masses of single species or create your own mixtures of preferred flowers.
- Mix the seed with coarse sand or sawdust so that it can be evenly distributed and so that you can see where the seed has fallen. If seed sizes are dramatically different, seed them separately.
- Press the seeds into the soil by hand or by lightly walking over the entire area.
- Consider the use of a 'row cover' to protect seeds from birds and other predators.

Transplants

- Consider the size and dimensions of mature plants - try staging the pots in your garden area.
- Transplanting can be done at any time, however, avoid long periods of hot, dry or windy weather.
- Fall is generally the best time to place transplants so that they can become established before a hot summer season.
- Water transplants immediately after installing them.
- Apply an organic mulch to prevent competition from weeds and retain soil moisture.
- During dry spells the plants may need 2 cm of water each week during the first season.
- Mulch around transplants to reduce weed competition.

Maintenance

- Prevent competition from weeds by hand weeding or using garden tools, until the desired plants become established and have filled in the area.
- Use an organic mulch to help retain soil moisture and reduce competition from weeds.
- Avoid cleaning up the area at the end of the growing season as many species may overwinter as eggs, caterpillars, adults, or pupae in plant material.
- Leave a layer of leaf litter or stem thatch on the ground to provide refuge for insects.
- If it's absolutely necessary to clean and prune an area, reduce the impact by storing branches and stems in a brush pile at the back of the garden.



Plants for your Butterfly Garden



- Choose native plants where possible e.g., Joe-Pye-Weed (*Eupatorium maculatum*), Black-eyed Susan (*Rudbeckia hirta*), coneflowers (*Echinacea spp.*), Milkweed (*Asclepias spp.*), native thistles (*Cirsium spp.*), Bee balm (*Monarda spp.*), Rough blazing star (*Liatris aspera*), Goldenrod (*Solidago spp.*), *Aster spp.*
- The most productive perennial plant groups for lepidoptera are asters (*Symphyotrichum spp.*) goldenrods (*Solidago spp.*) and sunflowers (*Helianthus spp.*).
- The most productive woody plants are oak (*Quercus*), cherry (*Prunus*), willow (*Salix*), poplar (*Populus*), maple (*Acer*) and birch (*Betulla*).

Host Plants for Eggs and Caterpillars



Butterfly (click on the link for more information)	Host plant
Monarch	<ul style="list-style-type: none"> • a <u>variety of different Milkweed</u> plants (<i>Asclepias spp</i>) with different flowering times is ideal: <ul style="list-style-type: none"> • butterfly weed (<i>A. tuberosa</i>) - Sun • common milkweed (<i>A. syriaca</i>) -Sun/part shade • swamp milkweed (<i>A. incarnata</i>) – Sun/part sun • blue stem milkweed (<i>A. caesia</i>) - Sun/part shade • zig zag milkweed (<i>A. flexicaulis</i>) - Shade • Note: <u>Dog strangling vine</u>, is an invasive plant that is a threat to monarchs. Monarchs will mistakenly lay their eggs on it and all <u>larva will die</u> as the plant cannot sustain them.
Black Swallowtail (<i>Papilio polyxenes</i>)	<ul style="list-style-type: none"> • Native Golden Alexander (<i>Zizia aurea</i>) • Parsley family, e.g. dill, parsley, carrot
Painted Lady and Red Admiral (<i>Vanessa spp.</i>) Anglewings (<i>Polygonia spp.</i>)	<ul style="list-style-type: none"> • Thistles or nettles
Lycaenid butterflies i.e. Hairstreaks (<i>Satyrium spp.</i>) & Azures (<i>Celastrina spp.</i>)	<ul style="list-style-type: none"> • Willows, oaks, aspens and cherries
Karner blue , frosted elfin	<ul style="list-style-type: none"> • Wild lupine (<i>Lupinus perennis</i>)
Mourning cloak	<ul style="list-style-type: none"> • Poplar (<i>Populus</i>), ash (<i>Fraxinus</i>) • Elm (<i>Ulmus</i>), willow (<i>Salix</i>)



<u>Baltimore Butterfly</u>	<ul style="list-style-type: none"> • Turtlehead (<i>Chelone glabra</i>)
<u>Spicebush swallowtail</u>	<ul style="list-style-type: none"> • Sassafras (<i>Sassafras albidum</i>) • Spice bush (<i>Lindera benzoin</i>)
<u>Fritillaries</u>	<ul style="list-style-type: none"> • Violet (<i>Viola spp.</i>)
<u>Spring azure</u>	<ul style="list-style-type: none"> • Dogwood (<i>Cornus</i>), • Sumac (<i>Rhus</i>) • New Jersey tea <i>Ceanothus americanus</i>
<u>Pearl crescent</u>	<ul style="list-style-type: none"> • Aster (<i>Aster spp.</i>)
<u>Eastern-tailed blue & Hoary edge</u>	<ul style="list-style-type: none"> • Showy tick trefoil (<i>Desmodium canadense</i>)
<u>Buckeye</u>	<ul style="list-style-type: none"> • Blue vervain (<i>Verbena hastate</i>)

Shelter Plants

- Choose a variety of native shrubs and trees whenever possible
- Choose plants that are also host plants to maximize positive results (i.e. willows, oaks, aspens and cherries)
- Angelwing butterflies, including commas and the Question Mark (*Polygonia spp.*), tortoiseshells, and the Mourning Cloak (*Nymphalis spp.*) need overwintering sites for the adult such as hollow logs or the eaves of houses and garages. You can buy or build a large box with slits along the side to offer shelter during the winter.



Useful Links and Resources

- Butterflies of Ontario
- Butterfly ID by group
- Photo ID of Caterpillars
- Butterfly Gardens – Credit Valley Conservation Authority
- Native Plants for Pollinators - Credit Valley Conservation Authority
- Halton Region Butterfly and Host Plant List
- Create Habitat for Monarchs, (Monarch Joint Venture)
- Monarch Waystation Sign – order form
- Selecting Plants for Pollinators: The Greater Toronto Area, The Golden Horseshoe, Sarnia, London, Windsor & Niagara Falls region, (Pollinator.org)
- The Butterfly Website (List of specific host/nectar plants-Pennsylvania)
- North American Butterfly Association (U.S.) www.naba.org
- Management practices for Dog Strangling Vine www.invadingspecies.com/
- Gardening for Butterflies: How you can attract and protect beautiful, beneficial insects, The Xerces Society, Black, S. et al, Timber Press, Portland, Ore., 2016 (book)

