

**SEVERN SOUND
ENVIRONMENTAL ASSOCIATION**

www.severnsound.ca

GARDENING FOR POLLINATORS

**A GUIDE FOR THE
SEVERN SOUND AREA**



Gardening for Pollinators

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**FORESTS
FOR ALL
FOREVER**



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Tiny
Township of Carleton Place

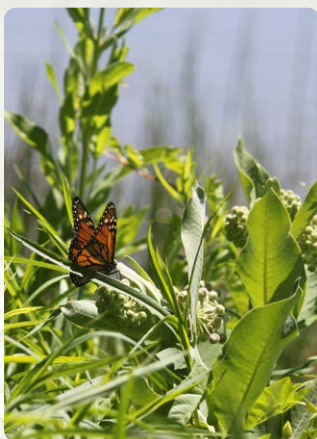


**Township of
Springwater**



INTRODUCTION

Backyards and public spaces can provide areas to connect with nature and learn about plants and animals. By incorporating native plant species in these areas, we can help to create and restore habitats that may have been negatively impacted by human development. By incorporating native plants into gardens and landscapes, landowners can help to create valuable habitat and increase local biodiversity.



Monarch butterflies are now a Species at Risk and need support by planting Milkweed and pollen-rich wildflowers

Changing the way that public and private natural spaces are managed in terms of native plants can benefit the environment. Gardening with native plants that specifically benefit pollinators helps to provide an essential habitat and food web link. According to the UN, almost 90% of the world's wild flowering plants depend on pollinators for reproduction to some extent; this includes many food crops such as berries, squashes and apples.

This guide is intended to provide information on how to create and maintain native plant gardens that will attract and support native pollinators in the Severn Sound area and provides complimentary information to SSEA's "**Native Pollinator Plants in the Severn Sound Area**" guide. It is intended to be used as a primer by property owners – the topics covered are not exhaustive. See link to resource list at the end of this guide for suggested further reading.

Why Native Species?

Native plant and animal species have evolved alongside each other for millennia, and in that time have

adapted to live together. Many native wildlife species have evolved to require certain native plants for food or shelter, and many native plants have evolved to require pollination by specific native pollinator species. Commonly encountered examples include Monarch (*Danaus plexippus*) caterpillars, which rely on Milkweed species (*Asclepias spp.*) for food, or Cardinal Flowers (*Lobelia cardinalis*) which rely heavily on hummingbirds for pollination. A food related example is the Squash Bee (*Peponapis pruinosa*), which has adapted to only feed on and pollinate pumpkins, gourds, and squashes.



Ruby Throated Hummingbird feeding on Cardinal Flowers

Without the native pollinators that fill specific roles in our local food webs, the crops they pollinate would disappear or have heavily reduced yields. Non-native plants such as ornamental species that have not evolved to live in southern Ontario and interact with the local ecosystem often do not have these positive benefits for other living things. Many non-native species also require more maintenance or have lower survival rates than native plants since they are not adapted to the local climate and growing conditions in southern Ontario.

What are Pollinators?

Pollination is the act of moving pollen from the male part of the flower, called the anther, to the female part of the flower, referred to as the stigma. This process of pollination fertilizes the flower and allows the plant to produce fruits and/or seeds. For many flowering plants, this is completed by an animal; any animal that completes the process of pollination is considered a pollinator. Pollinators include bats, birds, bees, beetles, butterflies and many other animals and insects.

KNOW YOUR GROWING CONDITIONS

The sunlight availability, soil type, moisture level, existing invasive species that may require removal, and size of the garden will all need to be considered when selecting and preparing a location for a pollinator garden and selecting the appropriate plants to introduce into that garden. Native plants can always be added to an existing garden to attract more pollinators and increase ecological benefits.

Sunlight

While all plants need sunlight to grow and survive, different species are adapted to different conditions, so considering the amount of sunlight a location gets is important. Some plants can tolerate deep shade, some require full sun, and many are adapted to partial sun. Before choosing plants for the garden, it is a good idea to time approximately how many hours of sunlight the chosen garden area gets in a day; this will help determine which plants will do best on that site.



Wild Columbine does well in full sun to partial shade

Soil

When it comes to selecting appropriate plants for a garden, the type of soil present is a big factor to consider. Soil can be broadly described as sand, loam or clay, but is often a mixture of all three in varying amounts. Loam or sandy loam is ideal for many plants, however there are many species that can tolerate dry sand or heavy clay. While it is possible to amend the soil with compost if it is of poor nutrient quality, some plants thrive in low nutrient

conditions. To maintain topsoil in place, it is helpful to cover exposed soil with mulch or to use garden barriers, particularly on slopes. This will help prevent soil erosion and smother weeds at the same time. Keep in mind that some species of ground nesting bees require patches of open soil. Avoid the use of dyed mulch that can leach chemicals into surrounding soils.

Moisture

Like sunshine, all plants need water to grow, and different plants are adapted to different moisture levels. Areas of the garden that receive full sun or are elevated on a slope are often drier, as are those with sandy soils and/or shallow soils. Shady areas with more clay-rich soil or low-lying areas will retain more moisture and be more suitable for plants with higher water needs. Mulch can help to retain moisture, as can leaving garden debris in place in the fall to help build up a layer of organic matter.

Invasive Species

Invasive species can invade gardens and even take over entire areas, outcompeting other plant species. When selecting a site for a native plant garden, it is best



Invasive Goutweed can be very persistent

to choose an area free from invasive species. If there are already invasive species present, they should be removed. The first step in managing an invasive species is to identify it. Once it has been identified, there are resources available that provide information

on various methods and best practices for control. The **Invasive Species Program** page on SSEA's website has a list of invasive species found in the Severn Sound area with links to resources on identification and management.

CHOOSING PLANTS

Selecting which plants to incorporate into a garden or landscape is a fun and exciting task. Aside from soil light and water requirements, consideration should be given to bloom colour and timing, height, method of spread, and personal preference. The **Native Pollinator Plants in the Severn Sound Area** guide can provide information on preferred growing conditions, bloom time, colour and more for over 30 pollinator-friendly plants native to the Severn Sound area.

Bloom Timing and Duration

Plants will bloom from Spring to Fall in the Severn Sound area, and each species has its own bloom timing and duration. Pollinators need to locate new food sources as one community of plants finishes blooming and the next one begins. In order to attract pollinators to a garden for the entire growing season and provide them with a reliable food source for the year, different species with different bloom times can be planted in the same garden. This will keep the garden looking lively throughout the year and support pollinators at the same time.



The low growing Bloodroot has lovely flowers that bloom in early spring and leaves that provide texture in a shade garden all year long

Height

It may sound obvious, but considering the height and width of a mature plant will help in the garden planning process. Taller plants look best behind shorter plants for a more traditional looking garden, which also helps prevent shorter plants from getting shaded out. Keep in mind that

plants will sometimes grow taller in the ideal conditions of a tended garden compared to in the wild.

Method of Spread

Consideration should be given to the way a plant reproduces and how aggressively, along with the amount of space available in the garden. Generally, plants will spread by roots or stolons, by seeds, or sometimes by a combination. In small garden spaces, it is sometimes necessary to trim flowers before they go to seed to prevent unwanted spread, while for root-spreaders it can be helpful to lay down garden barriers. It is often more difficult to control the spread of root-spreaders compared to seed spreaders. Putting normally aggressive plants in less-than-ideal conditions can help control their spread as well.

Plant Sources

Acquiring native plants for a pollinator garden is easier than it sounds. Native plants are becoming more widely available, and many large nurseries carry some native plants or have a native plant section. In Central Ontario, there are also a number of native plant nurseries. Many nurseries also carry native plant seeds, which can also be purchased online. Be wary of plants that are advertised as “native” but are in fact cultivars of native species. Look for the scientific name - if there is an additional name that is in quotations, that indicates a hybridized or cultivated species (e.g., *Aquilegia flabellata*



The stunning flowers of Wild Columbine need no alteration!

'Blackcurrent Ice' is a Wild Columbine cultivar and not the native species).

It is generally recommended to **not dig plants or collect seed from the wild**, and to ensure that plants purchased from nurseries are not dug from the wild. Digging up plants in the wild can lead to negative impacts on populations of sensitive species, trampling and soil compaction that prevents future plant growth, and introduction of invasive species that can hitchhike on footwear.

PLANTING

Timing

When planting plants purchased from a nursery or started early indoors, it is important to wait until after the risk of frost. In the Severn Sound area, the risk of frost has normally passed by the last week of May. Plants that live longer than one growing season (trees, shrubs, many wildflowers and grasses) can be planted in the fall. When planting in the fall, it is important to plant after the hottest months of the year and before the ground freezes to prevent plants from drying out and give the roots time to get established. The ideal planting period in the fall for the Severn Sound area is typically late September to early October but some species may have wider tolerances.

If starting native flowers from seeds, the best time for planting is in the fall since many species need a period of "cold-stratification" before they will germinate in the spring. Cold-stratification is the process which seeds naturally undergo in



Asters and Goldenrods
require cold-stratification


winter when exposed to the cold. Being exposed to cold temperatures helps prepare the seeds for spring and many won't germinate without this cold weather exposure. This means that if seeds are purchased in the spring, they will need to be artificially cold-stratified. This can be done at home by placing them in a labeled sandwich bag filled with moistened sand and storing in the fridge for about 8 weeks. Grasses do not need cold-stratification treatment.

Garden Planning

Making a garden plan before planting is recommended to determine the number of plants needed for the garden, plan out colour and shape pairings, and to help remember what was planted where. Even within a small garden, the sunlight and moisture conditions can vary which will affect which species will grow best in certain areas, and a garden plan can help visualize this. Other things to consider when making a garden plan include bloom colour and timing, height, texture, depth of roots, and spacing. In terms of texture, plants that are often overlooked when choosing species are grasses. Grasses can provide structural support for tall flowers, are excellent at holding soil in place, provide food for wildlife, and give a unique look to the garden. When planting, it is a good idea to avoid planting deep-rooted plants anywhere near a septic bed or other underground infrastructure that could be damaged by roots. Garden



A well-planned garden can include many colours, heights and textures



planning is a great way to determine the space needed to accommodate all the plants desired. If there is not enough room in the ground for the desired plants, some shallow-rooted species do well in container gardens. There are many apps and websites that can help facilitate garden planning.

MAINTENANCE

While native plant gardens generally require less maintenance than traditional gardens, some attention, especially during the first year or two of growth, can go a long way in the successful establishment a new garden.

Physical Supports

Some wildflowers may require supports like stakes to prop them up during the growing season. Taller wildflowers may end up growing across the ground instead of upwards due to the weight of the flower heads. Planting grasses amongst wildflowers can help to alleviate this, as can leaving some of the stiff stalks from the previous year's growth. Small stakes found at garden centres also work for most wildflower species. Trees and shrubs may require support until they become established. Before winter, newly planted trees and shrubs should be staked to prevent them from being damaged from heavy snow loads or freezing rain.

Watering

Too much or too little watering can be detrimental to a new garden. When it comes to establishing a new garden or adding new plants to an existing garden, plants should be watered regularly for the first season during dry periods. Plants that are considered suitable to the site should not need supplemental watering after the first year. If the plants selected for the garden prefer wetter habitats than the site provides, they should be watered regularly even after the first season.

Pruning

Dead or dying limbs on shrubs and trees should be pruned to prevent any disease or rot from infecting the rest of the plant. When pruning it is important to make any cuts as close to the base of the stem or trunk as possible as this helps prevent rot and infection. Be sure to use a sharp trimmer and make single clean cuts. For plants that die back each fall, leaf material can be left in place to create a natural mulch and stalks can be left to give vertical interest in the winter. Some species of miner bees burrow into wildflower stalks so leaving some of these standing provides valuable habitat and should be left until late spring. Do not pull the dead plants at the end of the season as this can damage the roots.

Weeding

Invasive and non-invasive non-native plant species can reduce the growth of desired native plants through competition; these are considered weeds. Weeds should be pulled regularly to prevent them from spreading. Remove weeds as close to the ground as possible and pull out all roots. Some weed or invasive species may require specific tools or methods for removal. There are many online resources for removing weeds, including on the SSEA invasive species website.



Weeds like Narrow Leaved Plantain can look similar to young Coneflower species

Mowing

No-mow May is a maintenance practice that encourages people to not mow or minimize mowing of their lawns during the month of May. This is because many pollinators begin to emerge from hibernation at this time

of the year, and many wildflowers are not yet in bloom. Many of the wildflower species (native and non-native) that bloom early are commonly found on lawns, so if lawns are not mown during the month of May, there will be a much larger supply of food for the pollinators when they need it most. This practice should be balanced with the need to manage invasive species.

ADDITIONAL CONSIDERATIONS

Other Garden Elements

There are many other garden elements that can be included to help attract wildlife or add additional interest to the garden. Water features like bird or bee baths and other elements such as rocks, logs, bird feeders and bat boxes can be added to support local wildlife by providing water, habitat and food sources. Some of these features may already be present and can be left in the garden or sourced from elsewhere on the property. If there are no trees nearby, bird feeders or bat boxes can be hung from hooks that are staked into the ground and are found at more hardware stores.



A bee bath provides water for all manner of insects and small animals

Springtime Gardening

After a long winter, it's easy to get excited and want to start working in the garden as soon as the snow melts. However, this can cause soil compaction on soggy ground and can disturb pollinator species before they are ready to wake up. It is best practice to wait until the air temperature is consistently above 10°C before removing or disturbing leaves and dead plant material. Many pollinators and other insects and wildlife species hibernate in the leaf litter and other debris that cover gardens in the fall and winter and their survival may be threatened if

it is removed too early. Also keep in mind that some plants look dead in the spring but just take longer to come up. This is also the most important time of year for watering especially if it is a dry spring since most new plants need lots of water to lay down their roots. Adding mulch and compost is also best done in the springtime.

Preparing for Winter

When preparing a garden for winter it is best to leave the leaves and other dead organic material to help insulate the plants and creatures hibernating in the garden and on the lawn. This material can be removed in the spring without damaging the garden. For young trees and shrubs, it is recommended to stake them and wrap them in burlap. This will help protect them from being damaged by snow or eaten by rabbits or deer.



Leaving select flower stalks standing will provide shelter for pollinators over the winter and support for top heavy flowers



Standing wildflower stems can provide interest and important pollinator food and habitat over the long winter months

ADDITIONAL RESOURCES

Visit SSEA’s Pollinator Habitat webpage by using your smart device to scan the QR code below:



Or visit:

<https://www.severnsound.ca/programs-projects/wildlife-habitat-2/pollinators/>

Included is a list of resources for further reading, such as native plant identification guides, resources on managing invasive species, and detailed information on establishing native gardens.



Foamflower in a woodland garden



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