

LANARK COUNTY SCHOOL POLLINATOR HABITATS

RESOURCE GUIDE



LANARK
COUNTY

SCHOOL POLLINATOR HABITAT



Lanark County would like to partner with our local schools to provide learning opportunities and support the creation of pollinator habitat. Pollinators, like all wildlife, need four things to survive: food, water, cover, and places to raise young. By creating pollinator patches in the outdoor spaces of local schools, we can support our local pollinator populations by providing them with their basic necessities.

Learning about pollinators is an experience that has the potential to captivate people of all ages. Whether drawn to the beauty of watching a butterfly float delicately through a garden or observing a bumblebee efficiently collecting pollen, there is a pollinator to capture the interest of everyone.

Interdisciplinary Learning

Pollinator habitats provide opportunities for meaningful learning experiences in a variety of disciplines.

Science

A pollinator patch serves as a living laboratory where students engage in hands-on learning with the natural world. Creating a pollinator patch can help students understand concepts of ecology and expand their knowledge of the natural world.

Geography and Social Studies

Use your pollinator patch to introduce your students to butterfly migration, or explore the social use of gardens around the world.

Math

Whether estimating numbers of plants or looking for shapes and patterns in nature, a pollinator patch is full of opportunities to teach and learn math.



English

Pollinator patches provides a space for creative writing about nature or develop research, writing, and communication skills.

Arts

Flower, leaves, insects, and wildlife are all great sources of inspiration for your next art project.

TEACHING RESOURCES

WILD Spaces - Canadian Wildlife Federation



WILD Spaces aims to connect educators and children to nature and helps protect pollinators through meaningful learning experiences. This program guides teachers to empower elementary students to learn about pollinators, adapt school or community gardens to create pollinator habitat, observe and document pollinators in the garden and share their experiences with others in the program across Canada.

This platform provides a wealth of educational materials for children of all ages, including lesson plans, activities, and quizzes.

To register, visit: <https://cwf-fcf.org/en/explore/wild-spaces/?src=EL>

The Monarch Mission - National Wildlife Federation



The National Wildlife Federation is a American organization committed to increasing fish and wildlife populations and enhance their capacity to thrive in a rapidly changing world. Through their Monarch Mission program, the National Wildlife Federation provides learning resources comprised of three key components: project-based learning, green STEM, and interdisciplinary teaching.

To view the teaching resources, visit:

<https://www.nwf.org/Eco-Schools-US/Join-The-Movement/School-Resources/Monarch-Mission>

PLANNING YOUR PATCH

Food Throughout the Seasons

When planning a pollinator garden, it's important to ensure you are providing an array of flowers that bloom at different times of the season. This ensures that pollinators have access to food throughout the growing season. Even though pollinators are resting through the winter months, there are still grasses and fruiting shrubs that can be planted to feed wildlife through the harsh winters. Luckily, the Lanark County native seed mix has taken this into consideration, which is why you'll be able to enjoy the blooming species all growing season!

Adding Native Plants to your Patch

Native plants occur naturally in a region and provide important ecological services to ecosystems. Adapted to our local environment, native plants and pollinators have co-evolved and rely on one another to host their lifecycles and provide nutritional forage and shelter.

In terms of climate change, native plants are champions of carbon sequestration. Their deep root systems allow them to capture a significant amount of carbon relative to turf grass, non-native species, and annual plants. Consider planting native plants in your pollinator patch while you wait for the seeds to grow! For a list of native plants with photos, see the appendix of this guide.

What Pollinators Want

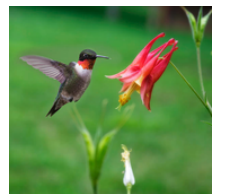
Pollinators have influenced the way plants have evolved. Over generations, flowers have evolved different colours, scents, and structures that entice pollinators to visit. These traits are called pollinator syndromes. Most pollinators will visit a variety of flowers, but some will have preference towards certain colours or shapes.

If you're thinking of adding native plants to you pollinator patch, consider what pollinators you want to attract!

Bees prefer blue, purple, and yellow. These flowers are often fragrant, tubular in shape and/or have a nectar guide visible to bees. A nectar guide is a pattern on the flower petals that directs bees to the nectar.



Hummingbirds have a preference for red and orange flowers. These plants usually have a curved, funnel like flower with nectar spurs, allowing access for the hummingbirds' beak.



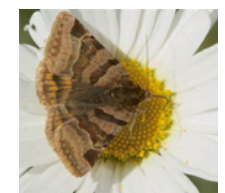
Butterflies prefer flowers that are in clusters, flat, and offer a place to land. They prefer brightly coloured flowers such as white, pink, orange, blue, purple, yellow.



Beetles prefer white and green flowers that occur on their own or in clusters.

Flies are attracted to brown or purple flowers that have a rotten smell.

Moths prefer white or pale coloured flowers that are in clusters, flat, and provide a place to land.



GARDEN RESOURCES

Making the Perfect Pollinator Garden

A great pollinator garden not only provides food to pollinators but also water and shelter. See the examples below to learn about how you can take your pollinator garden to the next level and promote wildlife and insect habitat.

Water

Providing water to pollinators is a valuable addition to any pollinator garden. Adding a water source to your pollinator garden will attract more insects and wildlife and allow them to hydrate.

You can easily create an **insect watering dish** by adding rocks and water to a saucer. For butterflies, add sand and a small amount of water to the saucer to create a place to drink.

Adding a **bird bath** is a great addition to attract birds to your patch. Make sure to provide fresh water and frequently rinse your bird bath, especially in the hot summer months.

For more information on providing water in your pollinator patch visit: <https://cwf-fcf.org/en/explore/gardening-for-wildlife/how/water.html>



Shelter

Creating areas of shelter in your pollinator patch is an important part of survival for insects because they need safe spaces to hide from predators, rest, eat, and reproduce.

Providing shelter is easy and can be as simple as leaving leaves and hollow stems of dead plants in the fall, leaving bare spaces for pollinators and other insects, adding logs or small brush piles. or even planting coniferous trees nearby to provide annual coverage year round.

Creating an insect house is a fun and interactive way to provide shelter to insects. For instructions on how to build your own insect house, visit <https://cwf-fcf.org/en/resources/DIY/outside/create-shelter-for-the-smallest-creatures.html>



GARDEN RESOURCES

Maintenance and Upkeep

While pollinator gardens are designed to be lower maintenance than typical gardens, they still require a bit of work to reduce competition from weeds, create shelter for insects, and foster healthy plants.



Weeds

Multiple factors influence the decline of pollinators, including loss of habitat and food sources, diseases, viruses and pests, and pesticide exposure. When controlling weeds in your pollinator patch, stay away from the use of pesticides including herbicides, insecticides, and fungicides.

It is recommended that you manually remove weeds regularly. A list of weeds you might encounter is provided in the appendix.

Removal of Debris

A pollinator patch should be viewed as a working ecosystem. As part of the ecosystem, insects and other creatures rely on things like hollow stems, dead leaves, and plant materials for protection and food. In the spring, hold off on cleaning up debris to ensure nesting insects and eggs are sheltered until their emergence.



Watering

Watering your pollinator patch and keeping the soil moist for a few weeks after seeding will help your seeds germinate. Make sure to use a low flow hose setting to prevent the seeds from being washed away. It is also important to make sure that transplanted native plants are watered as they establish. Once established, the garden will require little to no watering.

QUESTIONS?

If you would like more information, please email egallant@lanarkcounty.ca and mseward@lanarkcounty.ca or call (613) 267-1353 ext. 3114

APPENDIX: NATIVE PLANT LIST

Bloom Period	Common Name	Scientific Name	Life Cycle*	Flower Color	Max. Height† (feet)	Water Needs	Notes
	Forbs					Life Cycle abbreviations: A: annual; P: perennial; B: biennial. †Max. Height is an average. Individual plants may vary.	
Early	1 Lanceleaf coreopsis	<i>Coreopsis lanceolata</i>	P	yellow	2	L	This early bloomer can hold its own among grasses and taller species; bees and syrphid flies are common visitors
	2 Smooth penstemon	<i>Penstemon digitalis</i>	P	white	2	M	Semi-evergreen; prolific nectar producer; visited by a huge diversity of butterflies, moths, and bees, including honey bees
	3 Wild lupine	<i>Lupinus perennis</i>	P	blue	2	L	Larval host plant for the endangered Karner blue butterfly (<i>Lycotides melissa samuelis</i> ; shown), and various other blue butterflies
Mid	4 Butterfly milkweed	<i>Asclepias tuberosa</i>	P	orange	3	L	Milkweeds (<i>Asclepias</i> spp.) are host plants for the monarch butterfly (<i>Danaus plexippus</i>), and nectar sources for many bees
	5 Dotted mint	<i>Monarda punctata</i>	A, B, P	purple	3	M	Tolerates dry, sandy soils; blooms prolifically; highly attractive to beneficial wasps and bees, including honey bees
	6 Great blue lobelia	<i>Lobelia siphilitica</i>	P	blue	3	H	Great blue lobelia is an exceptional bumble bee plant, and is excellent for rain gardens
	7 Purple coneflower	<i>Echinacea purpurea</i>	P	purple	4	M	Visitors include bees in the genera <i>Bombus</i> , <i>Melissodes</i> , and <i>Svastra</i> , and the leafcutter bee (<i>Megachile pugniata</i>)
	8 Purple prairie clover	<i>Dalea purpurea</i>	P	purple	2	L	Honey bees and bumble bees are voracious visitors, as well as several specialist polyester bees (<i>Colletes</i> spp.)
	9 Virginia mountain mint	<i>Pycnanthemum virginianum</i>	P	white	3	M	This and related species have fragrant foliage, and are visited by blue and copper butterflies, honey bees, and more
Mid-Late	10 Wild bergamot	<i>Monarda fistulosa</i>	P	purple	4	M	Hawk moths, hummingbirds, and long-tongued bumble bees (such as <i>Bombus pensylvanicus</i>) are common visitors
	11 Cup plant	<i>Silphium perfoliatum</i>	P	yellow	8	M	Attracts many bees and butterflies; thick hollow stems make excellent nests for leafcutter bees and small carpenter bees (<i>Ceratina</i> spp.)
	12 Prairie blazing star	<i>Liatris pycnostachya</i>	P	purple	5	M	Blazingstars (<i>Liatris</i> spp.) support a broad community of butterflies including monarchs, swallowtails, skippers, and sulfurs
	13 Purple giant hyssop	<i>Agastache scrophulariifolia</i>	P	purple	6	M	This and other wild hyssops (<i>Agastache</i> spp.) provide long-lasting, nectar-rich flowers and mint-like foliage
	14 Rattlesnake master	<i>Eryngium yuccifolium</i>	P	white	5	M	Attracts incredible insect diversity and is the host plant for the rattlesnake master borer moth (<i>Papaipema erygii</i>)
	15 Joe Pye weed	<i>Eutrochium fistulosum</i>	P	pink	7	H	Primarily known as a butterfly plant, Joe Pye weed also attracts bees; tolerant of partial shade and wet soils
	16 Wingsstem	<i>Verbesina alternifolia</i>	P	yellow	6	H	A major honey producer; great as a shade-tolerant rain garden or wetland edge plant; may be hard to find in nurseries
	17 Bottle gentian	<i>Gentiana andrewsii</i>	P	blue	2	M	Its flower petals never open; almost exclusively pollinated by bumble bees, which pry the petals apart to climb inside
	18 Calico aster	<i>Symphoricarpos lateriflorum</i>	P	white	3	M	Its shallow nectaries attract more insect diversity than some related species; is also tolerant of partial shade
	19 Field thistle	<i>Cirsium discolor</i>	B, P	purple	6	M	Not to be confused with non-native thistles; a now uncommon but important plant for butterflies and bumble bees
	20 New England aster	<i>Symphoricarpos novae-angliae</i>	P	purple	6	M	One of the latest fall-blooming plants; frequented by honey bees and pre-hibernation bumble bee queens
21 Showy goldenrod	<i>Solidago speciosa</i>	P	yellow	5	M	Goldenrods (<i>Solidago</i> spp.) are frequented by beneficial solitary wasps, pollen-eating soldier beetles, honey bees, and much more	
	Shrubs and Trees						
Early-Mid	22 Cockspur hawthorn	<i>Crataegus crus-galli</i>	P	white	35	L	Tough native tree that attracts bumble bees, honey bees, species of mining bees (<i>Andrena</i> spp.), as well as songbirds
Mid	23 Leadplant	<i>Amorpha canescens</i>	P	purple	3	L	Leadplant is generally tolerant of disturbed soils; readily visited by leafcutter bees, honey bees, and other beneficial insects
	24 New Jersey tea	<i>Ceanothus americanus</i>	P	white	4	M	Pollinator magnet that attracts species of flies, wasps, bees, and butterflies; slow growing and prone to deer browsing



This list of pollinator plants for the Great Lakes Region was produced by the Xerces® Society. For more information about pollinator conservation, please visit www.xerces.org.



APPENDIX: NATIVE SEED MIX PLANTS

Anise Hyssop



Black-eyed Susan



Blue Vervain



Boneset



Calico Aster



Canada (Showy) Tick Trefoil



Common Evening-primrose



Common Milkweed



Gray Goldenrod



Hairy Penstemon



Spotted Joe Pye Weed



White Flat Top Aster



Upland White Aster



New England Aster



Wild Bergamont



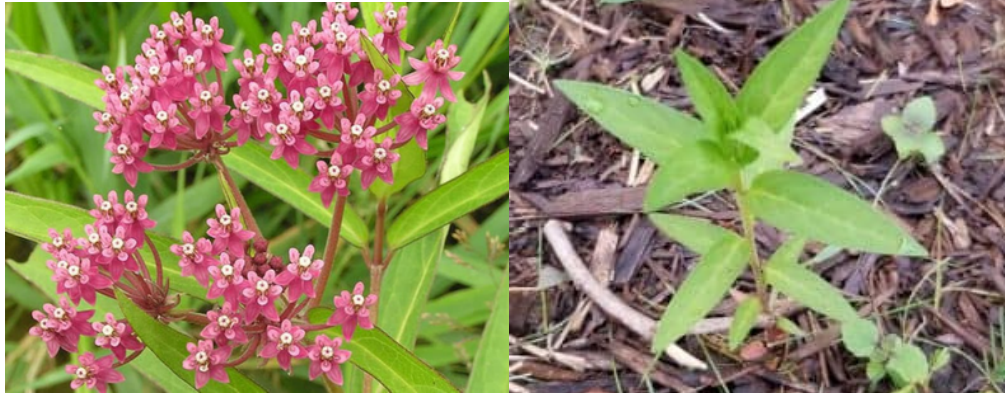
Virginia Mountain Mint



Wild Columbine



Red Swamp Milkweed



Grasses and Sedges

Canada Wild Rye



Fox Sedge



Fringed Sedge



Slender Wheatgrass



Bottle Brush Grass



Virginia Wild Rye



APPENDIX: WEEDS

Smooth Bedstraw



Wild Chervil



Garlic Mustard



Dog-strangling vine



Canada Thistle



Wild Parsnip



Spotted/Brown Knapweed



Sow Thistle



Ragweed spp.

