



Importance of insects

- Wild pollinators such as butterflies and bees are crucial to human survival. Climate change, development and widespread pesticide use are compromising their habitat and food sources.
- Overall, invertebrate species have declined **45%** over the past four decades. The 3 prime drivers of this insect loss are habitat loss, pesticides and climate change.
- Insects are irreplaceable in the natural world they are a key food source for birds and fish, and are vital in forests and fields as decomposers. Not to mention that over three-quarters of wild flowering plants and one-third of the foods we eat depend on insect pollination.
- It is estimated that wild insects provide ecological services worth \$57 billion each year.

Native Bees in Ontario

- There are approximately 850 different bee species in Canada
 - 350 species of bee live in Southern Ontario



leafcutter bees, cellophane bees

- Most native bees in Ontario:
 - Don't live in hives
 - Are not black and yellow
 - Do not sting

None of Ontario's native bees make honey. Ontario (and Canada's native bees) are more
effective pollinators than the European honeybee, which is an introduced species that is
managed like livestock and has complicated the plight of bees and other pollinators.









- There are over 300 species of butterfly in Canada and over 100 of those are likely at risk
- There is a growing number of butterflies of limited North American range that are considered endangered in Canada
- Common butterflies in Eastern Canada include: Painted ladies, Black swallowtails, Monarchs, Cabbage white, Red Admiral
- Butterflies often congregate on wet sand and mud to "puddle"
- Placing flat stones in your garden provides places for butterflies to rest and bask in the sun



What is The Butterflyway Project?

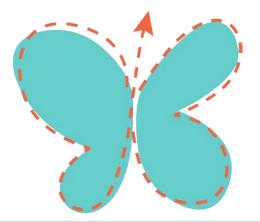
The Butterflyway Project aims to help people step up efforts to help pollinators find food and shelter.

- Established by The David Suzuki Foundation (DSF)
- Based on the DSF Homegrown National Park Project an award-winning initiative project that created butterfly-friendly corridors in three Toronto neighbourhoods
- Started in 2017 in five Canadian cities
- Volunteer Butterflyway Rangers were recruited in each city
- The mission: plant native wildflowers to support bees and butterflies
- The goal: establish local "Butterflyways"

Over the past four years, the DSF has recruited and trained 1,008 Butterflyway Rangers from over 100 communities. They've connected with neighbours, schools, city agencies, businesses and community groups.

To date, they've helped:

- Get 54,000 butterfly-friendly wildflowers into the ground.
- Create 1000+ pollinator patches.
- Establish official Butterflyways in 15 communities.



What's a Butterflyway?

Butterflyway = a network of at least 12 native wildflower-filled plantings (a.k.a. "pollinator patches") in a neighbourhood or community Butterflyways create habitat corridors for pollinators.



What is a pollinator patch?

Pollinator patch = native plant-filled habitat that supports local bees, butterflies and other beneficial insects.

- Pollinator patches can be established in any new or existing garden, lawn balcony or even windowsill
- Plant native wildflowers and shrubs
- Possible locations:
 - Private lands (yards, balconies, coporate grounds)
 - Public lands (parks, schools, medians)
- There is NO minimum or maximum size





More about pollinator patches

- Suggestions for a successful pollinator patch:
 - Native plants: Find locally sourced native plants and shrubs that support pollinators
 - Floral bull's eyes: Plant each species in clumps of 3 to 5 plants
 - All-season buffet: Choose combinations of species that bloom from spring to fall
 - Host plants: Provide species local caterpillars eat
 - Diversity: Provide a diversity of plant species to promote biodiversity
 - Water source: Provide a shallow water source with rocks or other perches for bees and butterflies
 - No pesticides, insecticides or herbicides
- Pollinators need plants for:
 - Food
 - Laying eggs
 - Overwintering



What can you do to help pollinators

around your yard?

- Fall & Winter:
 - Leave stems and dead stalks on plants
 - Leave the leaves
- Spring:
 - Wait until there have been 2 or 3 weeks of warm daytime temperatures (above 10°C) before cutting back stalks or raking leaves
- If you remove stems/stalks, bundle them up and put in aside (whether removed in fall or spring)
- Don't use pesticides
- Leave small areas of bare soil for ground-nesting bees
- Provide a shallow water source with perches or landing pads

How can Rotary help with the Butterflyway Project?

- Town of Pelham Garden Bed Competition
- EarlyAct & Interact—school butterfly gardens
- Plant a pollinator patch or "do a pollinator renovation" with a garden space on your property
- Try some of the "What can you do to help pollinators" tips
- Tell people about The Butterflyway Project, and about pollinators and their vital role in our ecosystem and food systems

Thank you!





If you are interested in learning more and/or being a part of The Butterflyway Project

- Great, the more the merrier! Tell your friends.
- Please contact me at <u>michelle_killick@yahoo.com</u> (I am located in Fonthill)
- The goal for Fonthill is to plant at least 12 pollinator patches signs will be available to denote official Butterflyway pollinator patches
- If you are located in another part of the Niagara region, I can help put you in contact with a Ranger in your area (there are several throughout Niagara)
- Please see the next slide for some resources about planting your own pollinator patch
- Even adding a few native plants to your garden can make an impact so let's get planting!

Resources for planting your own pollinator patch

<u>Attract butterflies with native plants — Eastern Canada - David Suzuki Foundation</u>

<u>LakeErieLowlands.2016.ver15.pdf</u> (pollinator.org) – Great charts about attracting pollinators on p.10-11 & about plants that work well in the Niagara region p.16-19

How to create a butterfly garden - David Suzuki Foundation

Southern-Grow-Me-Instead-1.pdf (ontarioinvasiveplants.ca)

Sourcing native plants in Niagara:

- Vineland Nurseries <u>Home (vinelandnurseries.com)</u>
- Sassafras Farms <u>Sassafras Farms</u>
- For help sourcing plants and possible plant sharing events to come (email michelle_killick@yahoo.com, if interested)



Further reading

Websites

How to tell bees from wasps and flies - David Suzuki Foundation

Rotarians pledge to restore the monarch butterflys disappearing habitat | Rotary International

Books

100 Easy-To-Grow Native Plants: For Canadian Gardeners by Lorraine Johnson

A Flower Patch for the Rusty-Patched Bumblebee: Creating Habitat Gardens for Native Pollinators in the Greater Toronto Area - Friends of the Earth Canada (foecanada.org) This book is available for download when you visit the website. It has a lot of great information about pollinators, pollinator gardens and the plight of native bees in Ontario.

For anyone who is interested in delving deeper, I am happy to share resources provided by DSF, including webinars from this year's Butterflyway Project.