

Did You Know?

One out of every three mouthfuls of food we eat, and of the beverages we drink, is delivered to us by pollinators.

Pollinators, through their interactions with plants, help to produce fruits, nuts, and seeds, which are a critical part of many animals' diets.

Approximately 1,000 of the estimated 1,330 global crop plants cultivated for food, beverages, fibers, condiments, spices and medicines are pollinated by animals.

A few examples of foods and beverages produced with the help of pollinators include: almonds, apples, bananas, blueberries, chocolate, coffee, melons, peaches, pumpkins, strawberries, and tomatoes.

Bees may fly over 11 kph and beat their wings 190 times per *second*.

Honeybees are the most important managed pollinator in Canada, but they are not native, unlike more than 800 other species of bees which are native.

One pound of white clover honey represents about 17,330 foraging trips by honeybees to about 8.7 million flowers! That's 7,221 hrs of bee labour!



For More Information

For more information about Pollination Guelph, to get involved, or to join our mailing list, visit our web-site at www.pollinationguelph.ca, or send an e-mail to pollinationguelph@gmail.com.

For general information about pollinators or pollination, visit one of the web-sites below. Additional links are available from our www.pollinationguelph.ca web-site.



Pollination-Related Web-Sites to Visit

www.pollinationguelph.ca

www.pollinator.org

www.pollinationcanada.ca

www.xerces.org

www.nativeplants.msu.edu

www.fws.gov/pollinators/

<http://libraryportals.org/PCDL>

[http://nature.berkeley.edu/
urbanbeegardens/](http://nature.berkeley.edu/urbanbeegardens/)

[http://www.fs.fed.us/wildflowers/
pollinators/index](http://www.fs.fed.us/wildflowers/pollinators/index)



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What is Pollination Guelph?

Pollination Guelph is a group (soon to be a federally incorporated charity) whose mission is to promote the appreciation and understanding of the importance of pollinators; to enhance, conserve and develop pollinator habitat; and to showcase pollinator projects that can provide a model for citizens and communities throughout Canada and internationally.

Our initial project is a 45ha Pollinator Park at the decommissioned Eastview Landfill Site. The Pollinator Park will be one of the first and largest pollinator initiatives to occur in Ontario, Canada, and world-wide. It will also be an opportunity to highlight the City of Guelph's commitment to being a leader in environmental issues.

How is Pollination Guelph Organized?

Pollination Guelph is currently run by a volunteer board of directors representing educational, research, governmental, environmental and business interests. We are not a member-based organization, but do rely heavily on private donors and on volunteers, particularly for on-site work at the park and other hands-on activities.

What is Pollination? What are Pollinators?

Pollination is the movement of pollen within a flower or from one flower to



another by animals, the wind, or water. This transfer of pollen in and among flowers leads to fertilization and successful seed and fruit production for the plant, enabling the species to survive and persist over many generations.

Pollinators are the animals that pollinate over 90% of all flowering plants, and primarily include bees, flies, butterflies, moths, and other insects, although birds, bats, and other animals can also be pollinators. Together they are an indispensable natural resource, and their daily work is essential for over a billion dollars of apples, pears, cucumbers, melons, berries, and many other kinds of Canadian farm produce.





What do Pollinators Need?


Like all animals, pollinators need food, water, and shelter. Shelter in this case is nesting or egg-laying sites: hollow twigs, dead wood, underground holes, bare soil, and the undersides of plant leaves. Food is usually pollen (protein), nectar (energy), and, for some species, other plant tissues.





What can I Do?


 Make your garden and property pollinator friendly by planting native plants that provide food or nesting habitat for all life stages of bees, flies, butterflies, and other pollinators.

 Design your garden so that there is a continuous succession of plants flowering from spring through fall.

 Provide nesting sites, such as wood blocks drilled with variously sized holes for twig-nesting bees or a small sunny patch of bare ground for ground-nesting bees.

 Avoid pesticides. Be cautious of natural controls as they can also kill non-target insects. Use any controls at night when most pollinators aren't active.

 Support non-profit groups like Pollination Guelph, the Canadian Pollinator Protection Initiative, the North American Pollinator Protection Campaign (aka the Pollinator Partnership), and the Xerces Society that are working to keep pollinator populations healthy while educating the public.

 Work with your neighbourhood group or municipality to establish pollinator habitat.



Why is there Concern about Pollinators?

These beneficial insects are under pressure from loss of habitat, loss of food sources, disease, and pesticides. Studies have shown that several pollinator populations have drastically declined.

For example, in Canada, one species of bumble bee is thought to have become extinct while four other bee species are known to be in rapid decline, butterfly species richness has declined by as much as 37% in some places, and beekeepers are dealing with high honeybee losses. As insect populations are threatened, so are fruit and vegetable production, and the wild ecosystems that depend on the actions of pollinators. As important as pollinators are to agriculture and ecosystem health, surprisingly little is known about their status, or how to reverse their decline.



The Value of Pollination

The value of insect pollination to Canadian agriculture has been estimated at a minimum of \$1Billion, which underestimates the importance of native bees. Globally, pollination is responsible for \$0.4Trillion US/year worth of agricultural and forestry products.

However, these values do not consider the costs that would result from the complete or partial loss of animal pollination. The consequences of this would be catastrophic and lead to the collapse of other ecological systems.