UPPER THAMES RIVER
CONSERVATION AUTHORITY

Introducing Native Insect Pollinators

Insect pollinators are essential in natural and agricultural ecosystems. Most flowering plants, trees, and shrubs rely on them to reproduce. The production of many food crops such as apples, blueberries, squash, and tomatoes depends on pollinators.

The loss of these insects would have far-reaching effects on native plant communities and organisms that depend on them for shelter and sustenance.

MEET THE POLLINATORS

- Solitary bees and bumblebees
- Hoverflies and flies
- Wasps
- Butterflies and moths
- Beetles

WIND VERSUS INSECT POLLINATION

Generally, pollination is achieved by two means: wind and insects.

Plants that are wind pollinated have inconspicuous flowers (often greenish) and very light pollen that floats in the air.

Only about 10-20% of the world's plants are wind pollinated (e.g., many trees and grasses including wheat and corn). These pollens are the source of seasonal allergies in some people.

The other 80-90% of the world's plants are pollinated by insects. These plants have adapted to insect pollination by producing showy blooms and heavy, sticky pollen (not carried in the wind).

HOW DO FLOWERS ATTRACT INSECTS?

Flowers attract insects through their:

- pollen (high in protein),
- nectar (high in sugar),
- fragrance, and
- bright colours and shape.

HOW DO INSECTS POLLINATE PLANTS?

As insects crawl on flowers to collect pollen and/or nectar to eat, the pollen from the male part (stamen) sticks to their bodies. When the insect moves to another flower, the pollen is deposited onto the female parts (pistil) of the next bloom.

Successful pollination results in fertilization and the development of a fruit, nut, or seed.

POLLINATOR POPULATIONS ARE IN TROUBLE!

Native insect pollinator numbers have been declining due to habitat loss from urban and agricultural development, increase use of pesticides, competition from European Honeybees, and the loss of native plant diversity due to invasive species and climate change.

As honeybees face their own declines through 'colony collapse disorder', scientists and farmers are hoping that native pollinators can fill the gap.

Common Eastern Bumble Bee

YOU CAN HELP!

To provide natural foraging and nesting areas, below are some actions you can take.

- Convert large or small parcels of your property into patches of flowers.
- Plant a variety of locally native plants.
- Plant spring, summer, and fall blooming plants to ensure that food is available all year long.
- Reduce or avoid pesticide use.
- Provide a water source for insects in the hot summer months.
- Protect meadows, thickets, and buffer strips that provide habitat for insects.
- Support community pollinator gardens and naturalization projects.

WHERE DO INSECTS GO IN THE WINTER?

Many native bees nest and overwinter in the pithy stems of old plants, hollow twigs, bunching grasses, holes in standing trees, rotting logs, and underground in bare patches of soil or dirt mounds.

It is important to leave some open soil in your garden (i.e., not covered with wood mulch) for insects. Also, leave standing, dead garden plants over the winter and remove them in mid-spring once the insects have emerged.

Monarch Butterfly

DID YOU KNOW?

- As few as 250 Orchard Mason Bees can pollinate an acre of apple trees, a job that could require 40,000 European Honeybees.
- All flowers produce pollen but not all flowers have nectar.
- Native bees are not aggressive. They sting only when they are personally threatened.
- One out of every three bites of your food would not exist without pollinators.

ADDITIONAL FACTSHEETS AVAILABLE AT THAMESRIVER.ON.CA/WATERSHED-HEALTH

- Attracting Butterflies to Your Garden
- Butterfly Larvae Host Food Plants
- Recommended Native Wildflowers and Grasses
- Nurseries that Sell Native Plants
- Tallgrass Prairie Plants

Monarda Dufourea

Photos courtesy of Hugh Casbourn: Common Eastern Bumble Bee, Bicoloured Striped-sweat Bee (front page header), Monarda Dufourea.

UPPER THAMES RIVER
CONSERVATION AUTHORITY

thamesriver.on.ca
Upper Thames River Conservation Authority