



Branching Out

Summer 2014

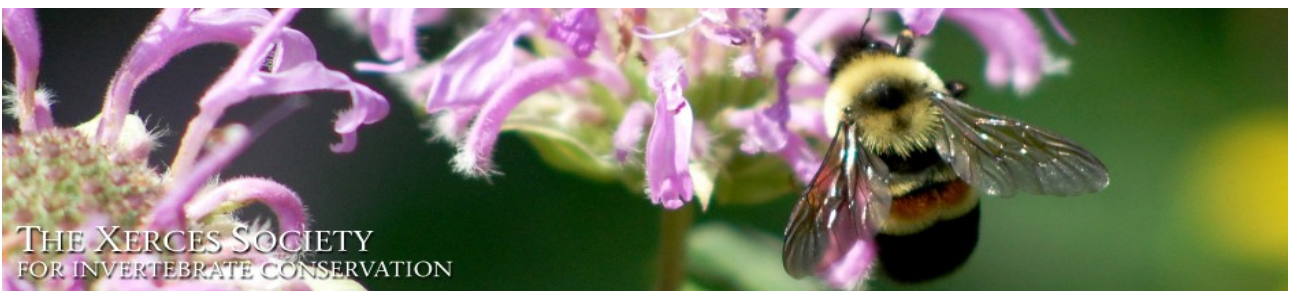
Bees - canaries in the coalmine



- 3500 bee species in North America, 500 in Canada
- bee pollination accounts for one out of every three mouthfuls of food we humans consume; it is estimated that, if all insects disappeared, we would have enough food to last us 9 months
- bees turn over soil more effectively than earthworms
- are found on every continent except Antarctica
- are the only insect to produce food for humans; honey found in Egyptian tombs was still edible due to its antibacterial properties

Species at Risk

- over 95% of corn acreage and 55-60% of soybean acreage in Ontario is planted with **neonicotinoid treated seeds** While intended to eliminate pest insects, these pesticides result in widespread insect decline. Bees fail to remember how to return to their hives
- **the varroa mite**, a parasite affecting American and European honey bees slips into hives to transmit dangerous viruses and bacteria resulting in large scale hive collapses
- drought, in large part caused by global **climate change**, contributes to insect declines
- **habitat loss**-bees need biodiverse native flowering plants throughout the growing season



The Rusty-patched Bumble bee, now endangered, has declined by 90% since the 1980's. The last known population was observed at Pinery Provincial Park. To report a sighting of this insect in our area, please give information to: www.xerces.org or www.wildlifepreservation.ca.

What We Can Do to Help

- **refrain from using 'bug zappers' which kill many insect species indiscriminately**
- **preserve and introduce native species in your garden**
- **support organic agriculture which avoids pesticide use**
- **leave insect nests alone unless there is a direct danger to humans**
- **use Raid and other insect poisons only when absolutely necessary**



Western Honey Bee-non- native



Yellow Banded Bumble Bee-native species of concern

The Buzz on Bees

- four stage in its life cycle: egg, larva, pupa and adult
- 2 compound eyes with 6 sided facets plus 3 simple eyes, but can focus only within 1 metre
- use ultraviolet light, invisible to humans, for navigation; also use the sun for navigation
- have two stomachs, one for digestion, the other to store nectar and water for the hive
- all worker bees are females, and die when they use their stingers
- males (drones) have only one job, to mate with the queen
- produce honey, beeswax, propolis (a sticky substance for waterproofing the hive), pollen mash to feed baby bees and royal jelly, the only food of the queen
- bees communicate with each other using scents (pheromones) and waggle dances
- have 2 pairs of wings, moving at 12,000 beats per minute, which lock together for flight; bees also use wings to remove excess moisture from processed nectar to create honey
- have 6 legs with pollen baskets on the hind legs; pollen, high in protein, is fed to baby bees
- have probosci for sucking nectar and mandibles for chewing
- specialized stomach glands create beeswax which is chewed and fashioned into honeycomb
- have an average life span of 3-6 weeks
- it takes 556 bees to make one pound of honey

A Word About Wasps and Ants

- Wasps keep other insects under control and are largely beneficial to the environment
- contrary to popular opinion, most wasps are beneficial to humans by helping to keep insect pests in our gardens and forests under control.
- Ants clean up plant debris and dead insects, keep pests under control and serve as food for some species of birds.
- rid your home of ants naturally: mix 1 part baking soda with three parts powdered sugar to create bait which ants take back to the nest ; ingestion causes ants to explode
- clean pathways where ants invade to erase the chemical “highway markers” they leave

Coming Events

Alistair MacKenzie, Pinery Park Naturalist, Dragon and Damselflies-July 26 at 1:30
Huron Woods Clubhouse

Stargazing Beach Party- August 11th at 10:30 p.m. middle beach entrance, bring nibbles and drinks, beach blankets and cameras

Brenda Kulon- The Butterfly Whisperer- Sept 6th at 1:30 Huron Woods Clubhouse

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