



Sources:

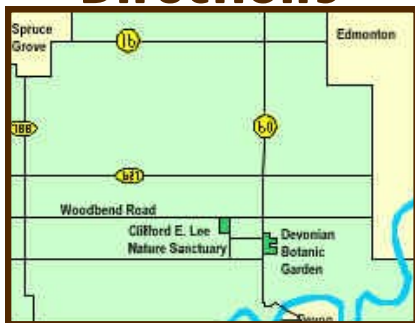
Acorn. J.2000. Bugs of Alberta. Lone Pine Publishing.
Acorn.J.1993. Butterflies of Alberta. Lone Pine Publishing.

Photo Credit:

<http://www.flickr.com/creativecommons/>
<http://www.insectimages.org>
<http://www.forestryimages.org>



Directions



33km SW of Edmonton city centre. Take highway 16 W to highway 60, go S for 13.2 km to Woodbend Rd. and turn W for 1.6km then S for 1.4 km.

The Sanctuary is open to the public year round free of charge. Donations are encouraged on site or they can be sent to:

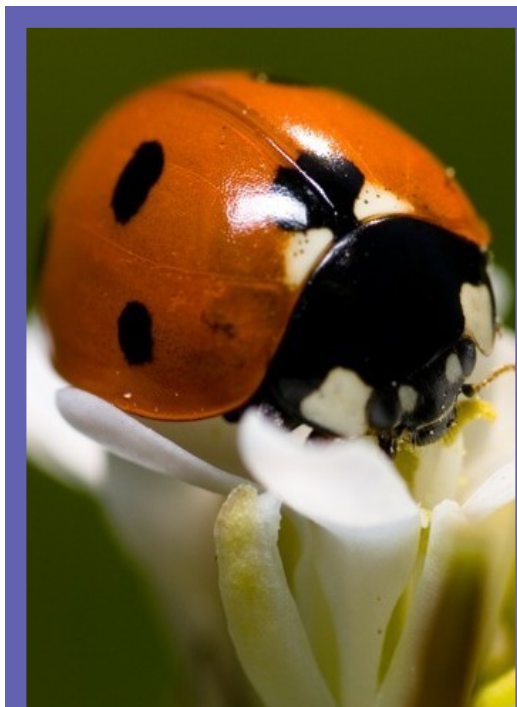
51306 Range Road 264
Spruce Grove, Alberta
T7Y 1E7



Clifford E. Lee Nature Sanctuary



Clifford E. Lee Nature Sanctuary



Insects

Become an Amateur Entomologist!

Insect Species at the Sanctuary

Introduction

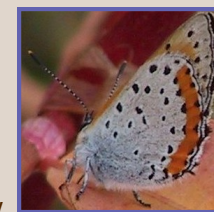
Insects are the most diverse creatures on the planet and can be found in almost any environment. In fact 80% of all existing species are insects. The majority of bugs are harmless, but many are key for sustaining the delicate balance of nature. Their responsibilities include pollination, decomposition, soil formation, population control of weeds and other bug species, and provision of food for their predators. Unfortunately, over the years our society has developed an aversion toward the "creepy crawlies," which has deterred people from discovering the fascinating world of bugs. Those who aspire to becoming amateur entomologists soon realize that all insects are worthy of a second look.

For a Successful Bug Watch

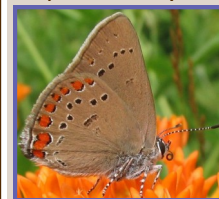
- ✂ Search from late March to October
- ✂ Choose a warm day
- ✂ Tip up rocks to look underneath
- ✂ Look on flowers and under leaves
- ✂ Look for sandy ground far from water

Butterflies

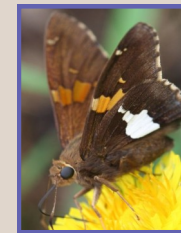
You distinguish butterflies from moths by looking at their antennae. Butterflies tend to have clubbed or hooked antennae, while moths have thin or feathery ones. Butterflies also tend to be more graceful than their moth cousins, who are prone to crash landings. If frightened, a moth will hide in the nearest vegetative covering, while a butterfly will gracefully find a new perch.



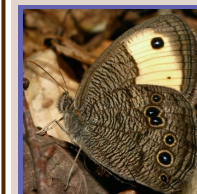
Bronze Copper



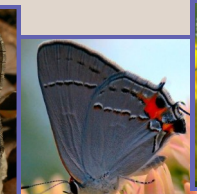
Coral Hairstreak



Silver Spotted Skipper



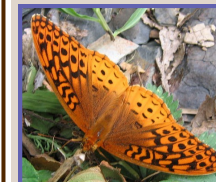
Wood Nymph



Striped Hairstreak



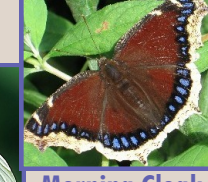
Silvery Blue



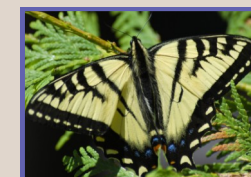
Atlantis Fritillary



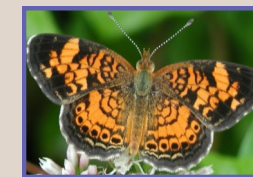
Cabbage White



Morning Cloak



Canadian Tiger Swallowtail



Pearl Crescent

Lacewings

The Green Lacewings, a "gardener's friend," are often seen amongst the vegetables as they are avid Aphid hunters. Their scientific name "Chrysopa" means golden eyes, which is the colour of their protruding eyes. If handled, these small predators will emit a foul "coffee-like" odor in hopes of deterring you from making them your next meal. Female Lacewings lay their eggs far apart from one another because the first born has a tendency to eat its unborn siblings. This is one of the reasons why Green Lacewings have the reputation of being a tad vicious.



Green Lacewing

Design by: Sacha Mulholland 2007

Short-Horned Grasshoppers

Grasshoppers are interesting creatures that can jump 40 times their body length. Their ears, which look like tiny moveable drum heads, are located on the sides of their abdomens just behind the base of their hind legs. Unfortunately the ears can only be seen with the aid



Two-Striped

of a microscope. Grasshoppers each have their own unique song, which is produced by rubbing the base of their forewings against the inner edge of their hind legs. Their acoustic songs are mainly performed at night.



Red-Legged



Packard

Leaf Miners

A Leaf Miner is a larva that lives and feeds for part or all of its life between the outer layers of a leaf.



Leaf Miner

Some leaf-mining species also make galls on young tender leaves, but mine on mature leaves. When eggs are laid on the leaf surface, the larvae must cut into the leaf. Sometimes the female



Choke-cherry Gall

cuts holes in the leaf to deposit her eggs. Larvae usually spend their entire existence in the leaf. Their heads are often wedge shaped to help separate the outer layers of the leaf.



Evidence of Leaf Miners

Beetles

If you manage to spot one of the 19 species of highly energetic and flighty Alberta Tiger beetles, you are in for a rare display. These handsome beetles have long legs, large eyes and powerful jaws, which make them extremely successful predators.



Tiger Beetle



Seven-Spot Ladybug

Their watchful eyes keep them ready for any close encounter, whether it be to run down prey, catch a mate or stay away from humans. These confident beetles never flee too far, so keep an eye on their flight path, to get a second glance.

There are 35 different species of “biological pesticides,” commonly known as Ladybugs, that live throughout Alberta. The most common is the Seven-Spot Ladybug, which was introduced to Canada in the 1950’s by entomologists hoping to eradicate aphids. Unfortunately, the only significant outcome was the loss of a few native ladybug species. Ladybugs tend to be found



Two-Spot Ladybug



Ladybug Larva

Metallic Wood-Boring beetles, also known as the “Jewel Beetles,” can be identified by their shiny iridescent colours. They are the largest family among beetles with 15,000 existing species. Most prefer to live on dying or dead branches on healthy trees, where they create their “gnawed” works of art.



Beetle Gallery



Metallic Wood Boring Beetle

Arachnids

Your classic spider, the Orb Weaver, is known for its stereotypically beautiful spiral webs that photographers love to capture. The 25 species of Orb Weavers in Alberta tend to go unnoticed until they are full grown and can no longer stay inconspicuous.



Orb-Weaver Spider

Thin-Legged Wolf spiders are the nomadic hunters of the Alberta spider populations. You won’t catch them spinning a web as they spend most of their time wandering through grassy places in search of prey. A female



Thin-Legged Wolf Spider

will wrap her eggs in a silky pouch and carry it on her back until they hatch. Newly hatched Thin-Legged Wolf spiders cling to their mother’s back, holding onto special “handle-like” hairs.

The Crab Spider, known for its ability to ambush prey, uses flowers to camouflage itself. Most of these bulbous spiders like to hide inside new flower blossoms, knowing the sweet smell of nectar will soon bring the next meal. There are around 30 species of Crab Spiders in Alberta.



Crab Spider

Ants

The largest ant in Alberta is the Carpenter ant, which is often mistaken for a termite due to its destructive lifestyle of chew-

ing through wood. The only menacing characteristic of the Carpenter ant is its powerful jaws, which are used for defense. Otherwise Carpenter ants have a fairly passive nature coupled with a laid back approach to traveling. The biggest indicator of the presence of Carpenter ants is sawdust. The entrance to their tree trunk homes is usually paved with it.



Carpenter Ant

Bees & Wasps



Solitary Bee

Female Solitary bees lay their eggs in the nests of other bees, usually Diggers and Andrenids, making them parasites. Solitary bees are also said to be “kleptoparasites,” meaning they steal honey and pollen collected by others. Solitary bees can be found flying low over the ground and foliage, hunting for their next victim.

Digger wasps are serious predators known for leaving their prey paralyzed by their wasp toxins, but still alive. They dig nests in the ground to fill with prey for their larva to eat when they hatch. Over the course of a summer, a female may build as many as half a dozen nests. The Digger wasps’ genetically programmed behaviours are so intense that even the threat of a predator does not stop them from carrying out their duties. A Digger wasp caught by a predator while eating its own prey will continue to chomp away until it can no longer do so.



Digger Wasp

Bug watching can teach us so much about the mysterious little creatures that lurk within our natural areas.

Happy Searching!

