

## Dragonflies and Damselflies: An introduction

Dragonflies and Damselflies appeared on Earth over 300 million years ago, i.e. even before the dinosaurs! They are known as *Odonata* in Latin, which means toothed jaws. As insects, they follow the typical body pattern: head-thorax-abdomen, have two pairs of wings and six pairs of legs. They have reduced antennae since their use is limited. Their eyes, however, are well developed: they are huge and multifaceted, thus providing excellent eyesight. Odonates are experts at detecting movement and colour (including UV and polarised light).

**Damselflies** (Zygoptera) close their wings along the abdomen when at rest. Their four wings have similar shape. Damselflies are slender insects and tend to be weak flyers. Their big eyes are clearly separated and located either side of their head (a bit like hammerhead sharks?!).

**Dragonflies** (Anisoptera) keep their wings open when at rest. Their front and hind wings have different shapes. Dragonflies tend to be larger insects and stronger flyers than their cousins. Their eyes are so huge they often touch at the top of their head.

**Life cycle** – Odonates only have three life stages: egg-larva-adult (as opposed to butterflies, for instance, there is no pupa stage here). Eggs hatch within a few weeks into dull, brownish larvae, which can live underwater for several months to several years depending on species. During “emergence”, larvae climb out of the water onto a leaf or twig. Their skin splits at the back of their head and thorax, allowing the young adult to emerge, unfold its wings and its abdomen. Young adults will mature over several days away from water. They head back to rivers and ponds/lakes at maturity. Adult males often keep a territory and will be on the lookout for females. Mating is often brief. Females will either lay their eggs directly into the water, or insert individual eggs inside the leaves and stems of emergent or floating vegetation.

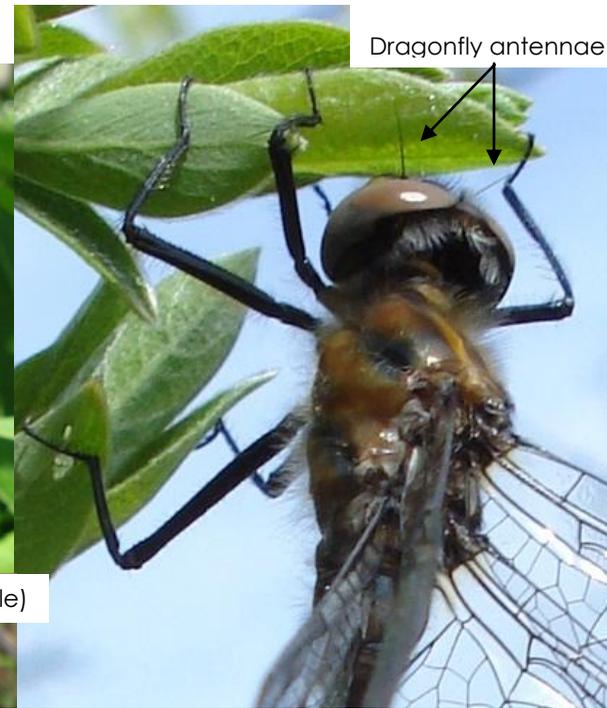
**Preys** – As larvae, Odonates will eat larvae of other insects, worms, tadpoles, etc. As adults, they eat pretty much anything they can catch that is smaller than them, including flies, midges, mosquitoes, butterflies, etc. The larger dragonfly species will even prey on damselflies and smaller dragonflies! Both as larvae and adults, Odonates are top predators of the insect food chain. As such, they are valuable indicators of the health of their habitats.

**Predators** – As larvae, Odonates are mostly eaten on by fish, newts and salamanders. As adults, they can be preyed on by frogs and toads, spiders, birds, and sometimes even otters and cats!

Damselfly (immature male)



Dragonfly antennae



Dragonfly (Common Whitetail, female)

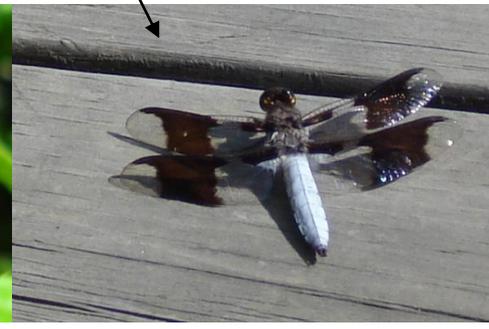


Four-spotted Skimmer - *Libellula quadrimaculata*



Ebony Jewelwing (male) *Calopteryx maculata*

Common Whitetail (male) *Libellula lydia*



**This initiative was made possible thanks to funding from the Fondation Hydro-Québec pour l'environnement and the Ruiter Valley Land Trust.**



