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TAKE A CLOSER LOOK! TOOLS FOR LEARNING MORE

Great tools that will help you learn more about *Odenates* a.k.a Dragonflies

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1. **The Dragonflies and Damselflies of Algonquin Provincial Park and the Surrounding Area.** *Colin D. Jones, Andrea Kingsley, Peter Burke, Matt Holder. Published by the Friends of Algonquin Park. 2008.*

Ontario Odonata is published on an annual basis by the Toronto Entomologists' Association.

Odenate Counts. Spend a day with scientists and other enthusiasts! Visit your local Field Naturalist Club website to find community count dates. Learn how to document proper. Early July.

Sit outside and watch the dragonflies.



FRIENDS OF ECOLOGICAL AND ENVIRONMENTAL LEARNING

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THE SPRITE



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MEET THE DRAGON HUNTER

Dragonflies are fierce carnivores right out of the egg! As some of the larger benthic macroinvertebrates in our watersheds, dragonfly larvae stalk their prey - smaller macroinvertebrates, within the littoral zone of our lakes and rivers. The Littoral Zone is the shallows where sunlight can still hit the substrate and where aquatic plants grow.

Dragonfly larvae (nymphs) start their lives under the water, and spend the majority of their existence there. They have lightning-quick lower jaws with strong mandibles, which jut out to snatch prey while the body, which is slightly buried or camouflaged among silt, rocks or reeds, remains still and calm.



Figure 1. The skin of a dragonfly nymph is left behind on fern spores.

R. Krawczyk

Some species of dragonfly nymphs can eat small crustaceans, from snails and crayfish, to minnows - and even tadpoles! Aren't you glad you are a big ol' human who walks on land?!

Once an Odonate larva has matured, it makes its way towards the surface to find a warm, dry and sunny rock or log, or a piece of vegetation, or even a dock, to begin the emerging process.

The larvae's skin cracks as it dries in the wind and the sun (Figure 1), and the adult crawls out with crumpled wings and abdomen. The process takes about 30 minutes or so, and if you are patient enough you can watch the dragonfly fill up with insect blood (Haemolymph) which fills and expands the creature's wings and abdomen.

It is during this fresh stage that these 'New Guys' stay protected amongst vegetation to gain strength and rest. Consider yourself very lucky if you see a new emergent. Freshly emerged dragonflies appear less vibrant than their mature counterparts.

After about a week or so, the dragonfly will have hardened its new skin and will begin to feed more aggressively. It is ready to return to the water's edge to spend the last weeks of its life seeking a mate and laying eggs, or to be eaten by a bird, bat, fish, or frog.

Did you know that some species of odonate larvae morph into a dragonfly which hunts other dragonflies while they're cruising in the sky?!

When you take a closer look at the Dragonfly family (aka *Odenata*) you will notice that they come in a wide variety of shapes and sizes. The Darner and Club-tail are larger species, while the Meadowhawk Damselfly, and Sprite are compact to quite fragile. Sprites are so delicate they often remain hidden, until their wings sparkle in a ray of light.

To scale, a Dragonhunter can be 73-90mm long, whereas a Sedge Sprite (*Nehalennia irene*) is a mere 22-31mm (Jones. 2008¹).

The Dragonhunter (*Hagenius brevistylus*) is a massive dragonfly! It has large rear legs that are disproportionate to the rest of the body, and the head is very small in comparison to the thorax (Figure 2). The large rear legs of the Dragonhunter have evolved specifically for snatching and holding large insects (dragonflies) at high speeds from the summer sky.

It cruises above the other odonates and plucks them out of the air while they are occupied hunting insects themselves; such as Deer flies, Black flies, Mosquitoes, and other benthic insects.



Figure 2. A scientist holds a Dragonhunter to document the anatomy. Note the size of the Thorax in comparison to the head, as well as the large rear legs.

Critter Safety Protocol:

When researching dragonflies in any way that requires touching, be certain your hands are washed free from oils, sunscreens, insect repellents, and other possible contaminants.

It is always best to have help and guidance from a scientist.

B.T.W., dragonflies enjoy eating their prey head-first. Delicious!

Now that we know more about dragonflies we know why it is so important for us, as humans living and playing along the shorelines of our watersheds, to keep the dragonfly life-cycle in mind. Think of the adults needing vegetation to lay their eggs, and the larvae hiding among plants and hunting in the littoral zone.

Remember the emerging nymphs and their fragile state between emerging and hardening off. Remember that they love the summer sun and oxygenated water.

Please let your friends and family know as often as you can how very important it is to keep woody debris and vegetation along the water's edge for dragonflies and their dynamic ecological communities.

R.K.