

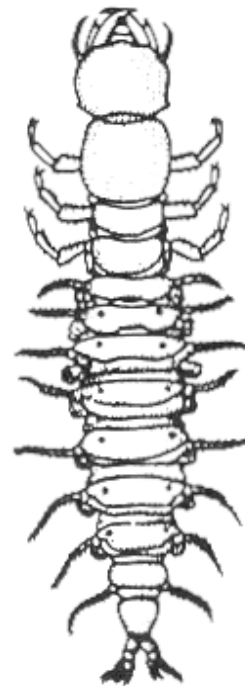
Creature Feature: Winter 2007

By W. Scott Douglas

Dobsonflies

Dobsonflies are not one of those insects that the average person thinks about when they think about aquatic bugs. However, most people who frequent streams, particularly fishermen, know the larva of the dobsonfly by their common name, hellgrammite. Hellgrammites are large, sometimes the largest, free living predators that frequent very high quality streams with fast flowing water. Dobsonflies, and their smaller relative the alderfly, are members of the order Megaloptera. This name, meaning big winged insect, is appropriate for the adults of many dobsonflies are quite large, about the size of a praying mantis. Most people never see them, unless they happen to take frequent early morning walks where there are lights that remain on all night. Another reason for their apparent rarity is that despite their size, the adults do not eat, so once they have mated and/or laid eggs, they die.

The hellgrammite frequents clear cold, fast moving streams that have both abundant insect life and plenty of cracks and crevices between the rocks. They move about the substrate like a ferocious tank, capturing and tearing apart their prey with powerful sharp mandibles for one, two or even three years. Their body is dorso-ventrally flattened and muscular for getting into tight spaces and holding onto rocks to avoid being swept away by the current. Some genera have fingerlike gills all along their sides making them look like giant centipedes. All are rather dull brown or black in color, some have patterns on their heads and thorax. Once a hellgrammite has reached maturity, it crawls out on land to pupate under a rock or log. There it remains quietly for several weeks, where they can easily be found in late May or early June. But beware, unlike most pupae, the hellgrammite retains its ability to bite and they can actually draw blood. When the adult emerges, it will climb out onto vegetation until its wings harden.



Due to their need for lots of food, high dissolved oxygen and high quality substrate, it is not surprising that most members of the Megaloptera are indicators of excellent water quality. Some families, like the alderfly, can tolerate more sedimentation than others, but all require very clean water. The Cooks Creek has several species of both types to observe. Finding hellgrammites will usually require a net, placed firmly on the stream bottom in fast moving water to catch what floats away when the substrate above is disturbed. Watch out, they bite!