

SMART

Angler's Notebook

by Rich Wood

Dobsonfly



Many people do not know what an adult dobsonfly looks like. However, many of those same people could easily identify the immature (larval) stage. It's called a hellgrammite. Dobsonflies belong to the order of insects called Megaloptera.

The fierce-looking, winged dobsonfly has a life cycle that lasts two to five years. They have complete metamorphosis. This is sometimes referred to as ELPA: Egg, Larva, Pupa, Adult. The larval stage, nicknamed a "hellgrammite," is the most familiar. These active critters are well-known by anglers and people who study aquatic life. Hellgrammites play an important role in the food chain. They are major underwater predators and are eaten by many species of fish. Dobsonflies are usually nocturnal.

Larvae

Hellgrammites are usually found in cool rivers and streams. They may also occur in lakes and ponds. They require good water quality with high amounts of dissolved oxygen. They live on the bottom and with strong legs cling to rocks and sticks. They can also swim easily forward or backward by wiggling their entire body. They may grow up to 5 inches in length. They have a strong set of mandibles (mouth parts) that can catch, hold and eat many aquatic insects and even small fish. These "pinchers" can grab anything that comes close to them, including unsuspecting fingers! Larvae breathe oxygen from the water through well-developed tufted gills on the abdomen. They may also live out of the water by using spiracles (breathing tubes) on the abdomen to breathe air. The larval stage may last one to three years.

Emergence

The larvae crawl out of the water and carefully choose a location. This site may be up to 50 feet from the water. Hellgrammites dig underground a few centimeters or may burrow under dead leaves, a rotten log or old tree stump. Here they change from larvae into pupae. The pupal stage may last from one to 14 days. Most dobsonflies in Pennsylvania emerge in spring and summer.

Adults

Adult dobsonflies live only a few days. They are large, weak fliers. Males have much longer mandibles than females. They use these "long jaws" to fight other males and grasp females for mating. Adults are eaten by many fish, birds and bats.

Mating

Using their long mandibles, males grab females around their wings. Mating usually takes place on the ground or on vegetation.

Eggs

Eggs are laid in masses, with many eggs in each mass. Females deposit their eggs out of the water. They may use bridge abutments, overhanging vegetation or rocks that stick out of the water. Hatching takes place at night as the new larvae drop into the water. Young larvae may hatch in a few days or may take up to two weeks. □

There are about 50 different species of Megaloptera found in North America. This group includes dobsonflies, fishflies and alderflies.

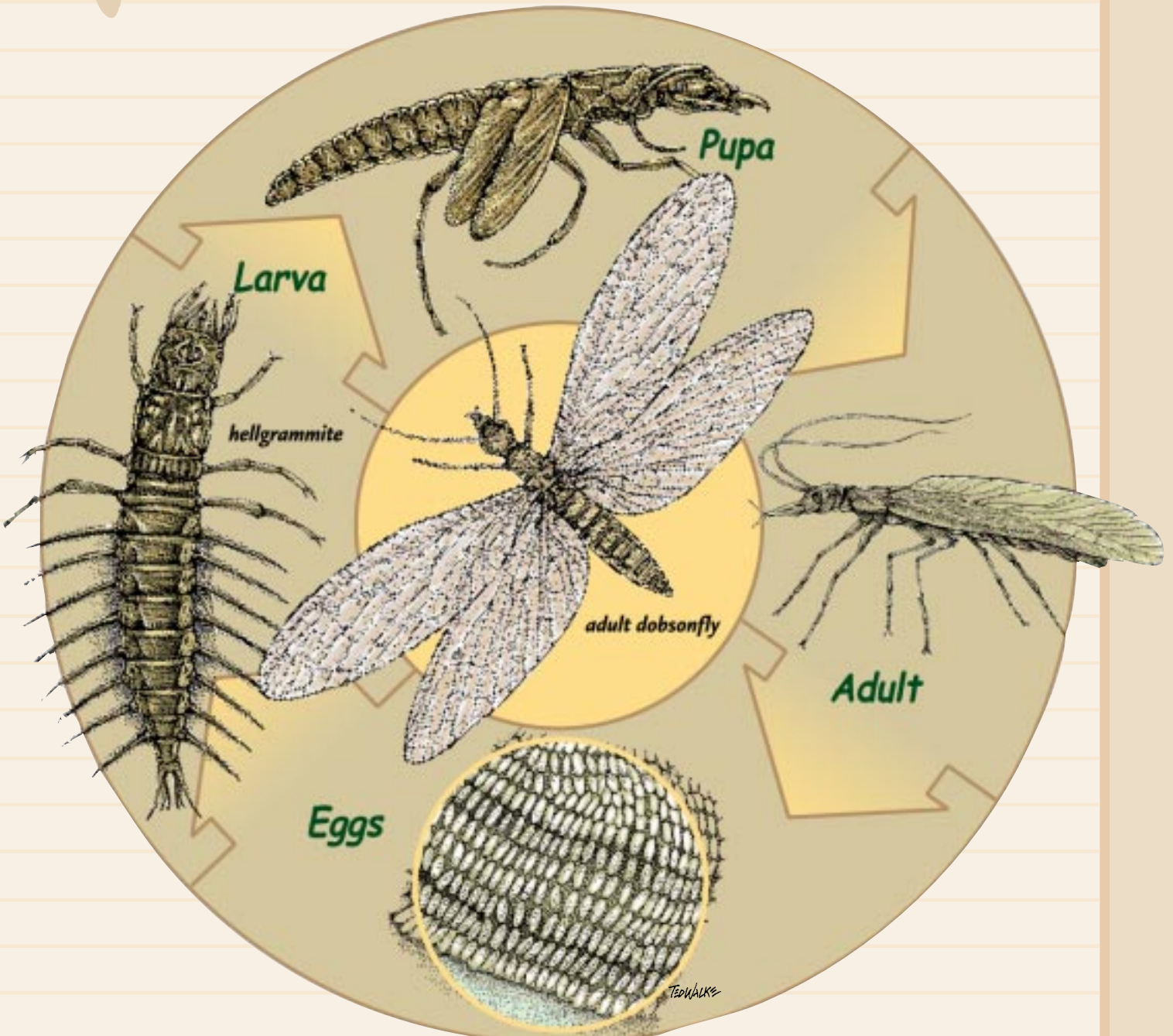


illustration-Ted Walke