



SMART

Angler's Notebook

by Carl Richardson

Caddis Flies

Caddis flies are aquatic insects found in nearly all of Pennsylvania's waters. Some caddis species are at home in small mountain streams, while others prefer the depths of our large rivers and lakes. Like butterflies and moths, caddises go through complete metamorphosis. Use the letters *ELPA* to help remember the four stages in complete metamorphosis: Egg, larva, pupa and adult.

EGG

Each egg is very small and round. One egg is about the size of the period at the end of this sentence. Depending on species, the female lays the eggs in clusters of 30 to 300 eggs. The clumps stick to the bottom and hatch in two to four weeks.

LARVA

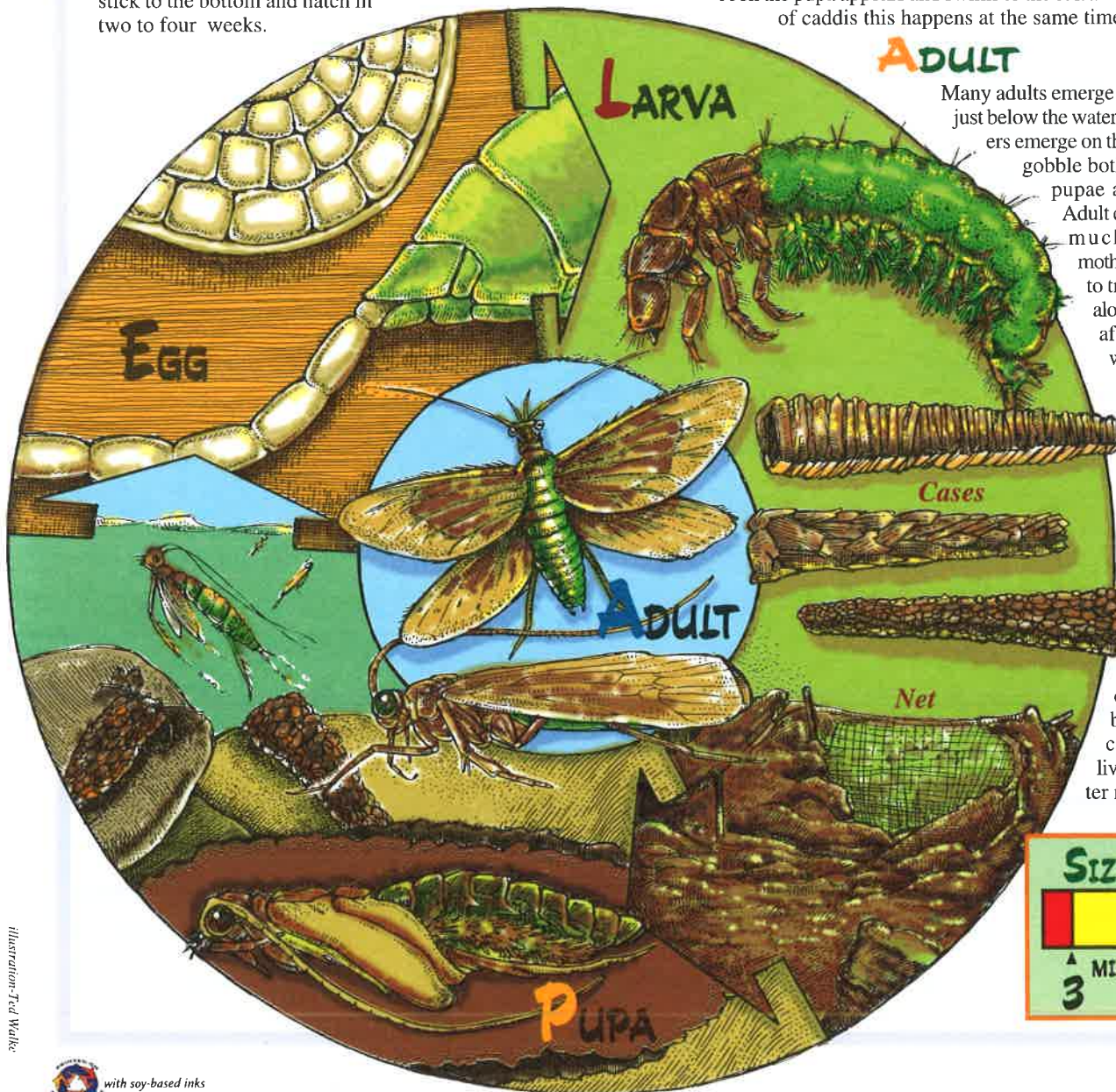
Caddis larvae look much like worms with six legs. The larvae produce silk, and many use it to build protective cases. They make tube or purse-shaped cases out of grains of sand, sticks and other vegetation. One species makes a case that looks like a snail shell. Some species carry the case. Others attach it to rocks. Larvae crawl on the rocks eating algae and other plants. A few species build silken nets to filter food out of the water. In many Pennsylvania streams there is a green-colored caddis larva that is a predator. It does not build a case.

PUPA

Nearly a year after it hatches, the larva constructs a cocoon. The larva enters the cocoon and becomes a pupa. A pair of wings develops while inside the cocoon. After about two weeks in the cocoon the pupa appears and swims to the surface. For each kind of caddis this happens at the same time each year.

ADULT

Many adults emerge from the pupae just below the water's surface. Others emerge on the surface. Fish gobble both the emerging pupae and the adults. Adult caddis flies look much like small moths. The adults fly to trees and bushes along the water and after several days will mate there. After mating, the female flies her fertilized eggs to the water. Depending on the species, the egg clusters are deposited on the surface or the female swims the clusters to the bottom. Adult caddis flies often live for months after mating.



SIZE RANGE

3 MILLIMETER 25