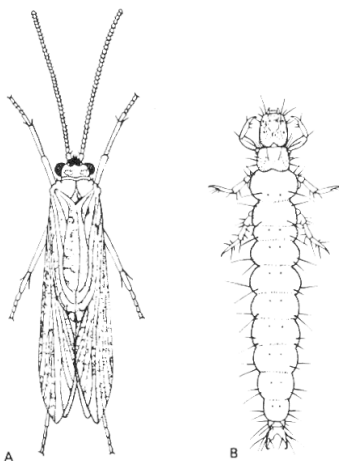


## **Creature Feature: Spring 2007**

By W. Scott Douglas

# Caddisflies

The word “caddis” is actually Latin for “tent”. It comes from the fact that caddisfly adults fold their wings together in an inverted V over their backs. The scientific name for caddisflies is Trichoptera or “hairy wings”. The adults do look like small hairy moths. Despite these two apt names, the most distinctive feature of this incredibly diverse group of organisms is the unique case that most larvae build and live in. Caddisfly larvae build cases out of sand, pebbles, sticks, leaves, diatoms, algae, almost any material available, and the case that is distinct to that species. Some are just a few pebbles stuck together, others are intricately constructed works of art. One species that lives in Cooks Creek makes a case that looks exactly like a tiny snail shell. A few years ago I met a group of people at a conference that actually give caddisfly larvae precious stones to construct cases with. When the larvae outgrow them, the cases are gathered and turned into jewelry ([www.wildscape.com](http://www.wildscape.com)).



Caddisflies are one of the most diverse groups of insects in our streams. Some filter tiny particles out of the water, others scavenge for detritus, still others are voracious predators. They can be as small as a few millimeters or as large as a few centimeters and have colonized just about every freshwater aquatic environment on Earth. Some are highly specialized and live in seeps and springs areas that most wouldn't even consider streams, while others are present almost everywhere there's freshwater. As opposed to mayflies and stoneflies, caddisflies have a complete metamorphosis, meaning that they have a resting, or pupal, stage. When a larva is ready to pupate, it usually seals up its case so that it will be safe while it is most vulnerable. The adults are short lived, existing only

to mate and lay eggs, many do not even eat.

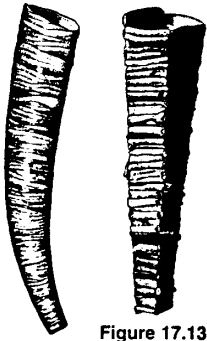


Figure 17.13

Given their diversity, it's not surprising that there is quite a lot of variability in caddisfly sensitivity to pollution. While none of these creatures can be considered pollution tolerant, some do thrive under high nutrient loading conditions where suspended organic material and algae are abundant. Still, along with mayflies and stoneflies, caddisflies are the third leg in the triumvirate of most sensitive benthic invertebrates. If you want to find caddisflies, you can look on the undersides of rocks in the stream, or sort through the sticks in quiet pools or ponds. Sometimes I just sit still, watch the bottom and wait for their slow plodding movements as they drag their house around looking for food.