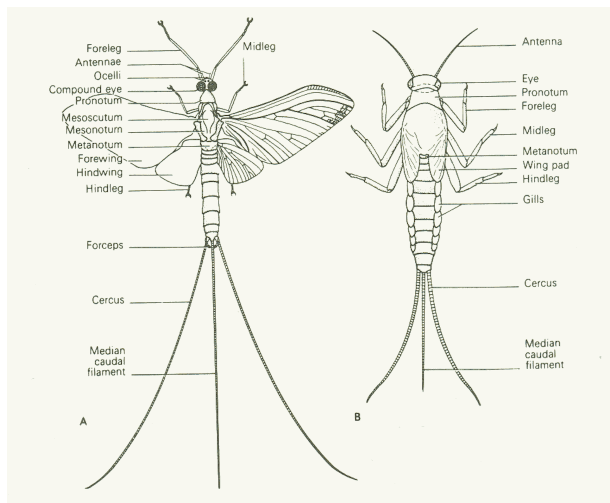


## Creature Feature: Winter 2007

By W. Scott Douglas

# Mayflies

Benjamin Franklin once wrote an essay called “Ephemera” that spoke of the stages of life from the perspective of a mayfly. Mayfly adult lives are measured in, at most, a few short days; they emerge, mate, lay eggs and die. In fact, the scientific name for the mayfly Order is Ephemeroptera (short lived flier). Franklin used the voice of an elderly (day old) mayfly to remind us that time is relative, and it matters not how long you live but what you do with the time you have.



Mayflies actually do live longer than just a few days, but most of that time is spent as a nymph grazing through algae and detritus on the stream bottom. Fly fishermen pay special attention to mayfly life cycles, as do the trout they pursue. A population of mayfly nymphs will reach maturity at the same time, all emerging within minutes of each other, in a phenomenon misleadingly named “hatching”. Trout feed greedily on the mature larvae and newly emerged winged subadults (called *subimagos*), snatching up many before they have a chance to find a rock or plant to climb out on. For those that

do escape the feeding frenzy, another molt soon follows and a sexually mature adult (*imago*) emerges and flies off to mate. Some fish have learned to leap out of the water and snatch the flying adults on the wing.

From a water quality perspective, mayflies, as a group, are the most sensitive to pollution and sedimentation of all the stream organisms. When a stream is stressed, the mayflies are the first organisms to be eliminated, followed by stoneflies and then caddisflies, making them a true “canary in the coal mine”. This surely frustrates both trout and trout fishermen alike. Look for mayflies in the same way as stoneflies, by quickly lifting rocks from the streambed. Turn the rocks over and look among the scurrying insects for the ones with three cerci or “tails”. If you *gently* place a few in some water and look at them under a magnifying glass you will notice that they have many gills along their abdomen, and they flutter them in a beautiful synchronicity.