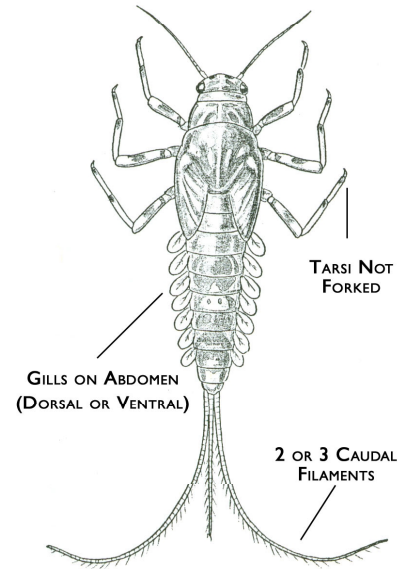


Basic Characteristics of Key Benthic Macro-Invertebrate Larvae

Order: Ephemeroptera (Mayflies)

- 3 pairs of legs with non-forked tarsi.
- Gills on the dorsal or ventral side of the abdominal segments, being either ovate or lancelet in shape.
- 2 or 3 caudal filaments, with the terminal (center) filament being either absent, reduced, or present.

EXAMPLE EPHEMEROPTERA
(BAETIDAE)



(Picture Adapted from Voshell 2002)

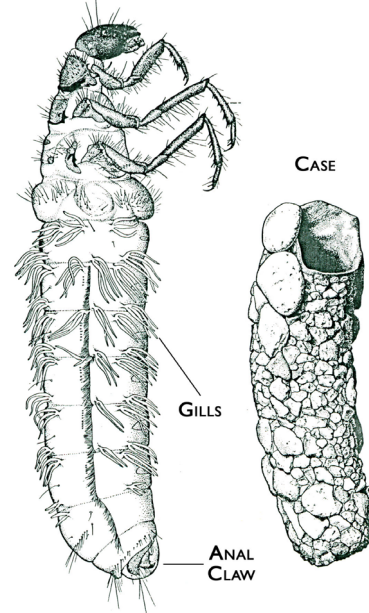
Order: Plecoptera (Stoneflies)

- 3 pairs of legs with forked tarsi.
- Filamentous gills on ventral side of the thoracic segments.
- 2 caudal filaments, never 3.

Order: Trichoptera (Caddisflies)

- Grub-like body enclosed in a case constructed of sand, small rocks, pine needles, and other detritus.
- Filamentous gills on abdominal segments.
- 2 claws on the posterior most segment.

EXAMPLE TRICHOPTERA
(LIMNEPHILIDAE: *DICOSMOECUS*)

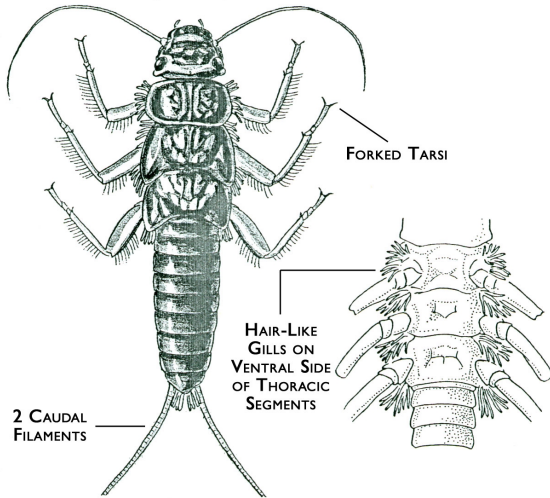


(Picture Adapted from Wiggins 2000)

Order: Diptera; Family: Chironomidae (Midges)

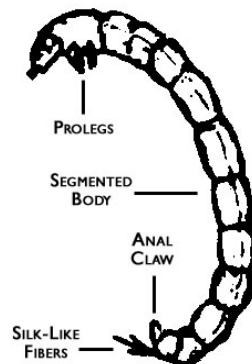
- Very small, segmented worm-like body.
- Pro-legs present on anterior most segment.
- Silk-like fibers extruded from posterior segment.

EXAMPLE PLECOPTERA
(PERLIDAE)



(Picture Adapted from Voshell 2002)

EXAMPLE CHIRONOMIDAE



(Picture Adapted from Kentucky 1997)

Literature Cited:

- Kentucky Division of Water. 1997. A Macroinvertebrate Bioassessment Index for headwater Streams of the Eastern Coalfield Region, Kentucky. Available: <http://www.state.ky.us/nrepc/water/midge.htm>. April 16, 2003.
- Voshell, J.R. 2002. A Guide to Common Freshwater Invertebrates of North America. McDonald and Woodward, Blacksburg, Virginia. 447 pp.
- Wiggins, G.B. 2000. Larvae of the North American Caddisfly Genera (Trichoptera). 2 ed. University of Toronto Press, Toronto. 457 pp.