

4-H STREAM TEAM: DISSOLVED OXYGEN

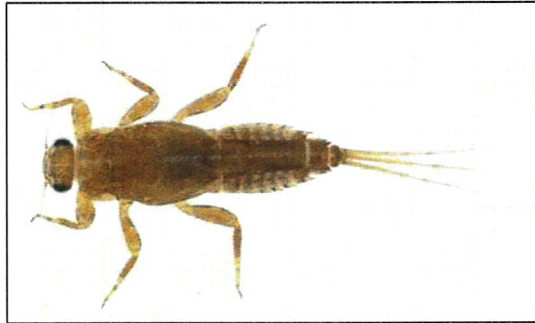
Background Information (continued)

Habitat: Mayfly nymphs are most commonly found clinging to the undersides of rocks in fast-flowing streams, but a few species are found in ponds and lakes.

Feeding: Mayfly adults do not have functional mouthparts. Unlike adults, mayfly nymphs have chewing mouthparts. Most mayfly nymphs are omnivores, feeding on algae, underwater plants, debris, and tiny aquatic animals.

Stress Tolerance: Very intolerant to pollution.

Distinguishing Features: Mayfly Nymphs have visible, feathery gills along the side of each abdomen. These gills can be seen moving in the water in live specimens captured in local streams. Because they are so dependent on DO, mayfly nymphs are a key indicator species for stream health. When their populations are at a low level in Kentucky streams, there is usually an impairment, and the impairment is often a lack of adequate oxygen.



Mayfly Nymph Image: Macroinvertebrates.org

Macro Mascots: Pouch Snails

Appearance: The hole on a pouch snail opens to the left when the snail shell is pointed upward into the air; the hole of most gilled snails opens on the right.

Life Cycle: Adults lay eggs. Eggs are placed in gelatinous masses and on the surfaces of plants and rocks underwater.

Habitat: Pouch snails can be found in all types of aquatic habitats, including streams, ponds, and lakes, and also are found on land.

Feeding: Pouch snails use their rasping mouthparts to feed on aquatic plants or dead animal material.

Stress Tolerance: Tolerant to pollution.

Distinguishing Features: Pouch snails (also called “lung snails” and “left-handed snails”) are macroinvertebrates that can survive low DO levels because they have pouches inside their bodies which can store oxygen that they gather from the surface. Many other kinds of aquatic snails in Kentucky have gills, and are (like the mayfly nymph) found only in relatively high DO situations.



Pouch Snail Image: Alexander Mrkvicka, [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/)