



Stream Creatures: Clues to Stream Health

Macroinvertebrate Fact Sheet

Information based on *A Guide to Common Freshwater Invertebrates* (see Resources)

Common Name	Scientific Name	Sensitivity to Pollution	What it Eats	Interesting Adaptations	Life Cycle Notes	Importance in Ecosystem
Aquatic Worm	Kingdom <i>Animalia</i> , Phylum <i>Annelida</i> , Class <i>Oligochaeta</i>	Tolerant	Omnivore: Eats mud as it travels through and digests anything in the mud	<ul style="list-style-type: none"> Does not need much oxygen Can grow back body part if it gets cut off by a predator 	<ul style="list-style-type: none"> Lives a few weeks up to a few years Spends whole life in water 	<ul style="list-style-type: none"> Is eaten by fish
Case-Making Caddisfly	Kingdom <i>Animalia</i> , Phylum <i>Arthropoda</i> , Subphylum <i>Atelocerata</i> , Class <i>Hexapoda</i> , Subclass <i>Insecta</i> , Order <i>Trichoptera</i>	Sensitive	Omnivore: Collects particles, scrapes algae, shreds plants and decomposing plants, and eats small insects	<ul style="list-style-type: none"> Builds its own home (case) by gluing stream pebbles or sticks together with a silk it makes; named after 15th century ribbon (caddice) sellers who pinned many ribbons to coat Soaks up oxygen all over its body 	<ul style="list-style-type: none"> Lives 6 months to 2 years In water as egg, larva, and pupa Adult lives on land/air Female lays up to 800 eggs 	<ul style="list-style-type: none"> Adults are eaten by birds Larva are eaten by carnivorous stream macroinvertebrates Their shredding helps break things down and makes small pieces for smaller animals
Crayfish	Kingdom <i>Animalia</i> , Phylum <i>Arthropoda</i> , Subphylum <i>Crustacea</i> , Class <i>Malacostraca</i> , Order <i>Decapoda</i>	Somewhat Sensitive	Omnivore: Shreds plants and decomposing plants, and eats snails, insects, small fish, and fish eggs	<ul style="list-style-type: none"> Has large claws that are good for shredding food and for self defense If a leg is grabbed by a predator, the crayfish lets it fall off; it grows back Has gills to get oxygen 	<ul style="list-style-type: none"> Lives 2–8 years Spends whole life in the water Molts (sheds skin) several times as it grows to make a bigger shell 	<ul style="list-style-type: none"> Eaten by fish, snakes, raccoons, and people Their shredding helps break things down and makes small pieces for smaller animals

Sensitive = needs clean water • *Somewhat Sensitive* = needs clean or fair water • *Tolerant* = can live in clean, fair, or very polluted water
Herbivore = eats plants • *Carnivore* = eats animals • *Detritivore* = eats decomposing plants or animals • *Omnivore* = eats everything

Common Name	Scientific Name	Sensitivity to Pollution	What it Eats	Interesting Adaptations	Life Cycle Notes	Importance in Ecosystem
Dragonfly	Kingdom <i>Animalia</i> , Phylum <i>Arthropoda</i> , Subphylum <i>Atelocerata</i> , Class <i>Hexapoda</i> , Subclass <i>Insecta</i> , Order <i>Odonata</i>	Somewhat Sensitive	Carnivore: Stalks prey or lies in wait and ambushes; eats mayflies, and other insects	<ul style="list-style-type: none"> • Has a lower lip like an arm with an elbow and sharp claw, which can be stretched out quickly to grab prey and bring back to mouth • Has gills to take in oxygen 	<ul style="list-style-type: none"> • Lives 1–2 years • Spends egg, larva, and pupa stage in water • Crawls out of the water and sheds its skin to fly away as an adult 	<ul style="list-style-type: none"> • Is eaten by ducks and other shorebirds
Freshwater Clam	Kingdom <i>Animalia</i> , Phylum <i>Mollusca</i> , Class <i>Bivalvia</i>	Somewhat Sensitive	Herbivore: Uses cilia (like moving hairs) to suck water in and filter out algae to eat	<ul style="list-style-type: none"> • Has two shells hinged together and can open to eat or close tightly for protection from predators • Has gills to take in oxygen 	<ul style="list-style-type: none"> • Lives 1–4 years • Spends whole life in water • Female keeps hatched babies in her shell until they grow their own shells 	<ul style="list-style-type: none"> • Their filtering cleans the water to allow more sunlight to reach larger aquatic plants
Gilled Snail	Kingdom <i>Animalia</i> , Phylum <i>Mollusca</i> , Class <i>Gastropoda</i>	Sensitive	Herbivore: Uses a sharp tongue on its foot to scrape algae off of plants or rocks	<ul style="list-style-type: none"> • Has gills to take in oxygen • Clings to plants or rocks with its foot so it's not carried away by current 	<ul style="list-style-type: none"> • Lives 2–5 years • Spends whole life in water • Female attaches eggs to aquatic plants 	<ul style="list-style-type: none"> • Is eaten by fish, amphibians, birds, and crayfish • Scrapes algae off plants so they can get more sun
Leech	Kingdom <i>Animalia</i> , Phylum <i>Annelida</i> , Class <i>Hirudinea</i>	Tolerant	Carnivore: Sucks blood or body fluids out of prey like insect larvae, worms, snails, sometimes fish or mammals	<ul style="list-style-type: none"> • Soaks up oxygen all over its body • Has suckers to cling to rocks so it's not carried away by current 	<ul style="list-style-type: none"> • Can live up to 15 years • Spends whole life in water • Hibernates in mud in winter 	<ul style="list-style-type: none"> • Is eaten by fish, newts, salamanders, snakes, and birds

Sensitive = needs clean water • *Somewhat Sensitive* = needs clean or fair water • *Tolerant* = can live in clean, fair, or very polluted water
Herbivore = eats plants • *Carnivore* = eats animals • *Detritivore* = eats decomposing plants or animals • *Omnivore* = eats everything

Common Name	Scientific Name	Sensitivity to Pollution	What it Eats	Interesting Adaptations	Life Cycle Notes	Importance in Ecosystem
Lunged Snail	Kingdom <i>Animalia</i> , Phylum <i>Mollusca</i> , Class <i>Gastropoda</i> , Subclass <i>Pulmonata</i>	Tolerant	Herbivore & Detritivore: Scrapes algae from plants and collects decomposing plant particles	<ul style="list-style-type: none"> • Has lungs instead of gills, so it comes to the surface and carries a bubble of air back down in its shell to breathe 	<ul style="list-style-type: none"> • Lives 1 year • Spends whole life in water 	<ul style="list-style-type: none"> • Is eaten by fish, amphibians, birds, and crayfish • Scrapes algae off plants so they can get more sun
Mayfly	Kingdom <i>Animalia</i> , Phylum <i>Arthropoda</i> , Subphylum <i>Atelocerata</i> , Class <i>Hexapoda</i> , Subclass <i>Insecta</i> , Order <i>Ephemeroptera</i>	Sensitive	Herbivore & Detritivore: Scrapes algae, collects and filters decomposing plant particles and algae	<ul style="list-style-type: none"> • Has gills to get oxygen • After last molt in the water, it uses its shed skin as a raft to float on while its wings dry to fly 	<ul style="list-style-type: none"> • Lives for 1 year • Spends egg, larva, and pupa stage in water • Sheds skin (molts) many times—up to 27 times before it leaves the water 	<ul style="list-style-type: none"> • Is a favorite food of fish • Is also eaten by carnivorous stream macro-invertebrates
Stonefly	Kingdom <i>Animalia</i> , Phylum <i>Arthropoda</i> , Subphylum <i>Atelocerata</i> , Class <i>Hexapoda</i> , Subclass <i>Insecta</i> , Order <i>Plecoptera</i>	Sensitive	Carnivore: Prey include midges, mayflies, blackflies, caddis flies, beetles, moths, crustaceans, and other stoneflies	<ul style="list-style-type: none"> • Can do pushups to move water across its gills when it needs more oxygen 	<ul style="list-style-type: none"> • Lives 1–3 years • Spends egg, larva, and pupa stage in water 	<ul style="list-style-type: none"> • Is eaten by ducks, fish, and carnivorous stream macro-invertebrates

Sensitive = needs clean water • *Somewhat Sensitive* = needs clean or fair water • *Tolerant* = can live in clean, fair, or very polluted water
Herbivore = eats plants • *Carnivore* = eats animals • *Detritivore* = eats decomposing plants or animals • *Omnivore* = eats everything