# Common Pond Macroinvertebrates of Utah

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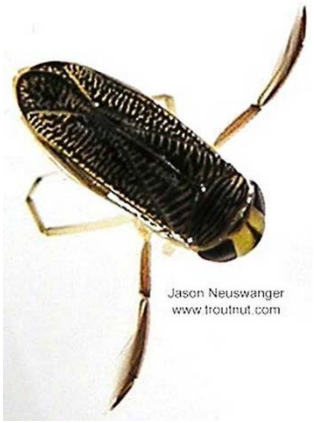
## WATER BOATMAN




Movement: Swimming. Water Boatman have long arms that they use to propel themselves through the water.

Feeding: Collecting and gathering. These macroinvertebrates stir up sediment and eat larvae or deteriorating organic material that floats up. They also sometimes slurp liquids from plants.

Interesting Facts: Water boatman breathe air from a bubble they carry under their bodies. Male water boatman rub their front legs on their heads to make a chirping sound.

## DRAGONFLY

Movement: Propulsion and burrowing. Dragonflies move through the water by jet propulsion, pumping water in and out of their abdomen. They also commonly burrow into sediment, typically burying most of their body.

Feeding: Engulfing. Dragonfly larvae have unique lower jaws, which have a hinge in the middle that allows their mouth to open wide. Dragonflies are visual predators.

Interesting facts: Dragonflies have large eyes that assist them in catching prey. Dragonflies are deadly- they catch 95% of the prey they go after (great white sharks only catch about 50%). They eat mosquitos, black flies, and other biting flies, making dragonflies an ally to humanity.

## DAMSELFLY


Movement: Climbing and crawling.

Feeding: Engulfing. Damsel flies feed very similarly to dragonflies, with a unique lower jaw.

Interesting facts: Damsel flies slowly stalk their prey and are visually predators. The three tail-like structures at the end of the damselfly are actually gills, which they spread and wave around to absorb oxygen. These gills are fragile, and tend to tear off. Damselflies compensate for this by diffusing oxygen through their body at smaller increments.

## LEECH

Movement: Inching. Like caterpillars, leeches move in a looping motion, with one part of their body always touching a surface.

Feeding: Parasite. Leeches cling to their prey and ingest nutrition directly from their host.

Interesting Facts: Leeches have 34 segments. Leeches also have two distinct sucking organs, one on their front and one on their back. Leeches absorb oxygen through their skin, and if oxygen levels are low, they attach their mouths to a surface and wiggle the rest of their body through the water.

## SNAIL

Movement: Clinging and sprawling.

Feeding: Most snails are scrapers. Snails have a tongue-like organ called the radula, which hosts up to thousands of small teeth. Snails will move their radula against algae, dead organic matter, or other plants and scrape off small layers.

Interesting Facts: Depending on the species, aquatic snails can breathe in three different ways. 1. They have tiny gills that can pull dissolved oxygen out of the water. 2. They have a cavity in their body that holds oxygen, which periodically needs to be refilled by going to the water surface. 3. The smallest lunged snail species obtain enough oxygen through lungs filled with water to live entirely below the surface of the water.

## HORSE FLY

Movement: Burrowing and sprawling. Horse fly larvae telescope their way through sediment and algae.

Feeding: Horse flies are mostly piercer predators, but some are also collector-gatherers. The mouth of the horse fly larvae contains two sharp, vertical hooks, which is used to slash holes into the body of their prey. This allows the larvae to insert its head into the incision and eat.

Interesting Facts: Adult horse flies are typically active when it is warm and humid. Horse flies do not transmit diseases in North America, but their bites can still pack a punch!

## WATER BEETLE

Movement: Climbing and crawling. A minority of water beetles are clingers or swimmers.

Feeding: Water beetles represent a group of invertebrates that exhibit many different feeding methods.

Interesting Facts: Almost all water beetles produce one generation each year, and often live more than one year (some as long as three years!). Some water management organizations use water beetles to consume invasive plants that clog canals and river channels. Water beetles store an air bubble under their wings and absorb the oxygen through their body. Most all macroinvertebrates are not aggressive towards humans, but some species of water beetle will pinch or bite.

## RAT-TAILED MAGGOT

Movement: Burrowers.

Feeding: Collecting and gathering.

Interesting Facts: Although this invertebrate resembles a rat, the tail-like structure plays a significant role. The tail of the rat-tailed Maggot acts as its respiratory system, absorbing oxygen in low-oxygen environments. Some are known to live in ponds or lagoons used to discard organic waste. Because they can survive in extreme conditions, rat-tailed maggots are useful indicators of water quality.

## MOSQUITO

Movement: Swimming. Mosquito larvae typically live near the surface of the water, but can travel downwards for protection or in search of a new home.

Feeding: Collector-filtering and collector-gathering. Brush-like mouth parts help some mosquito larvae filter small algae, bacteria, or other very fine paticles.

Interesting Facts: Adult female mosquitos require a blood meal to develop her eggs. A group of mosquito eggs are called a raft, which can be placed on the water's surface or in a moist area to develop. Some species of mosquitos thrive in brackish and saline waters, while others prefer inland fresh water. All mosquito larvae prefer to live in still water, even water stored in old tires, puddles and storage containers.

## WATER MITE

Movement: Most water mites are swimmers. Mites typically live near the settled sediment and do not travel far from the bottom of ponds and lakes.

Feeding: Mostly piercer-predators, but some are external parasites, collector-gatherers or piercer-herbivores. Their main diet consists of small larvae of other organisms.

Interesting facts: Water mites inject digestive enzymes into their food and then consumes the fluids that are created. Water mite eggs are typically red, and are deposited in groups of 20-400. Baby water mites are born in about 1-6 weeks and attach to a host, where they live their larval stage as a parasite. Water mites are thought to taste badly to larger prey and are not a significant food source for fish or other macroinvertebrates.

## WATER STRIDER

Movement: Skating. Water striders are recognized for their unique ability to "stride" across the water's surface.

Feeding: Piercer predators. Prey include terrestrial and aquatic insects. Prey is located through vibrations on the water surface as well as sight.

Interesting Facts: Water striders primarily live on top of the water, but can also dive into the water column. They can do this without getting wet because their body is covered with water repellant scales and hairs. When it rains, water striders hide under plants or other materials to stay on top of the water. Water striders also have sharp claws just above the end of their legs to pierce their prey.

## MAYFLY

Movement: Mayfly movement varies widely between species. Main methods for movement include swimming, clinging, climbing, crawling, sprawling, or burrowing.

Feeding: Collecting and gathering or scraping. Mayflies eat algae or decomposing plant material.

Interesting Facts: Mayflies are typically sensitive to pollution and warm temperatures, but some species live well in warm, still or polluted waters. Mayflies have small filaments on their abdomen that they use to breathe under water. Many species of mayflies living in warm and still water have larger filaments than their counterparts living in cold turbulent streams. Mayflies only live for about 24 hours in their adult stage, which is why their scientific name is ephemeroptera, which means "lasting a day".