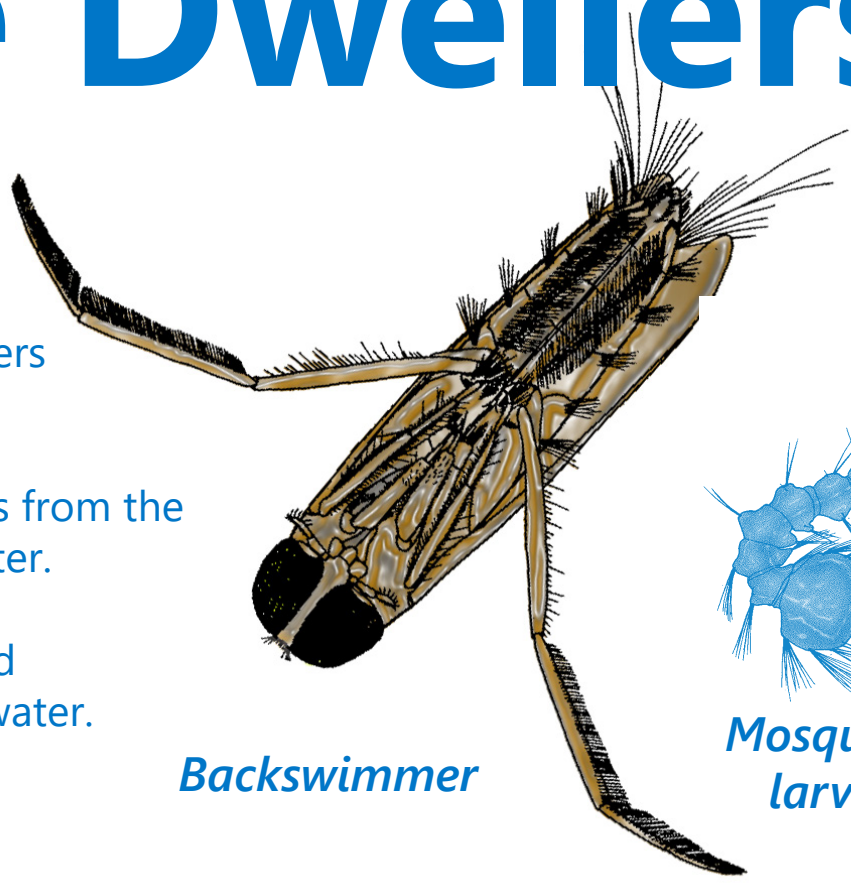
The Surface Dwellers

A water surface behaves like a skin due to a force called "surface tension".

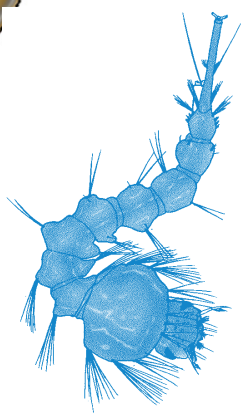
This force enables certain insects to walk on the 'skin' and others to hang beneath it.

Many of these insects are predators; much of their food comes from the constant supply of flying insects which have fallen into the water.

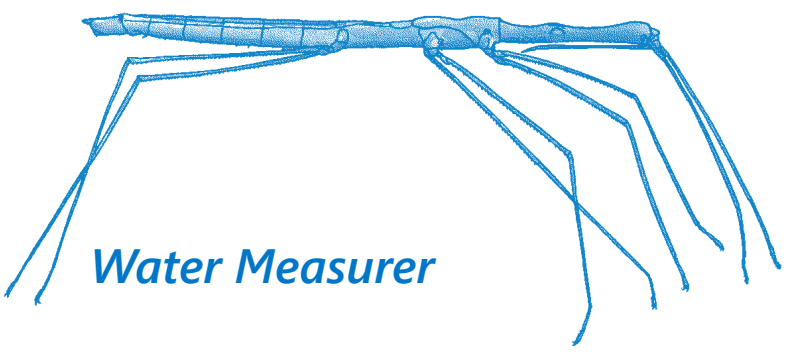
Look for Whirligig Beetles and Pond Skaters on the surface and Backswimmers and Mosquito larvae under the surface of the water.



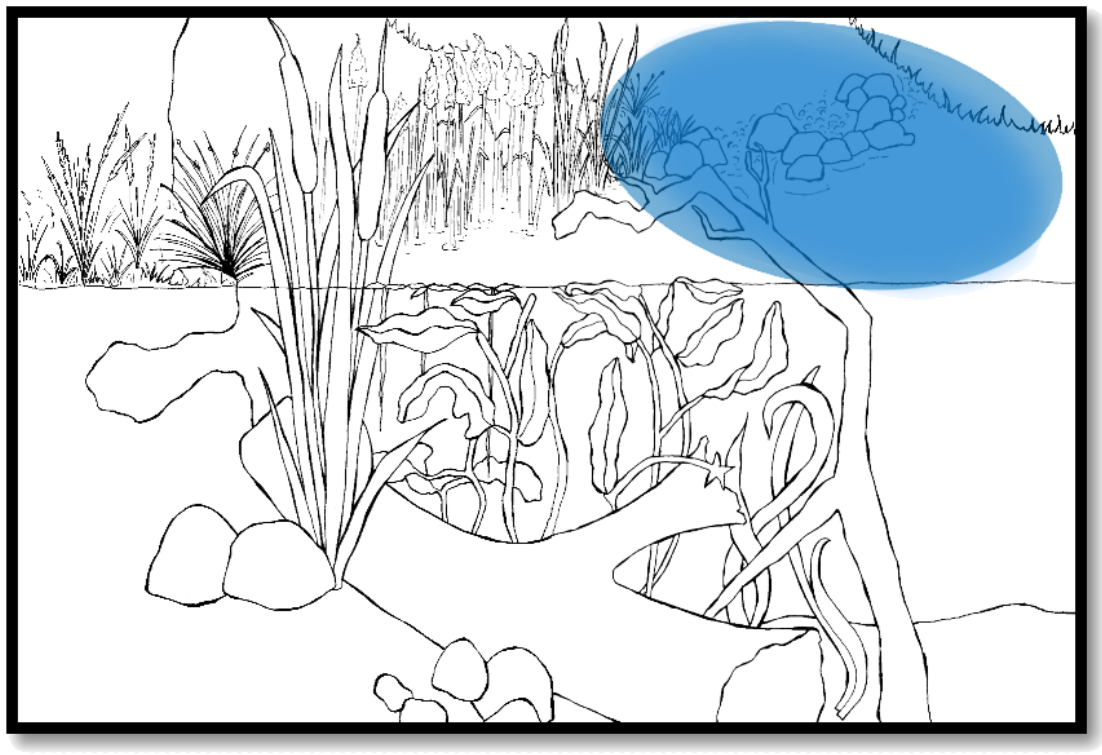
Backswimmer



Mosquito larva

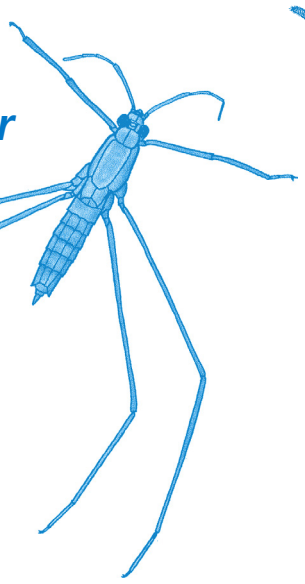


Water Measurer



The Surface Zone

Swarms of Collembolla sometimes gather on the surface of the water in sheltered ponds. They feed on organic debris that has been blown onto the water's surface.



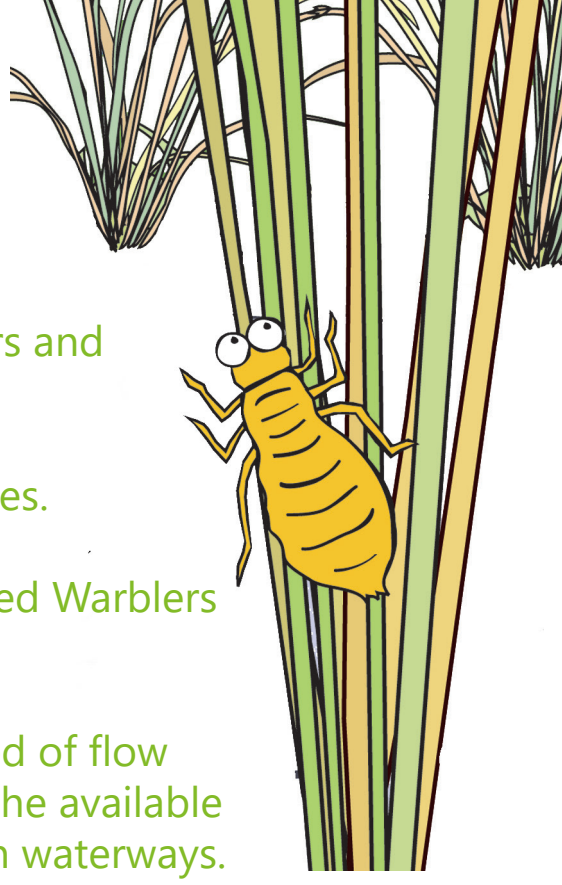
Pond Skater

Water Spider

Mosquito pupae have two horn-like breathing tubes on the top of their heads.
The pupa of the Mosquito does not feed.
Therefore, the Mosquito must eat enough as a larva to make it through the pupal stage before emerging as an adult!

Whirligig beetle

The Reed Zone

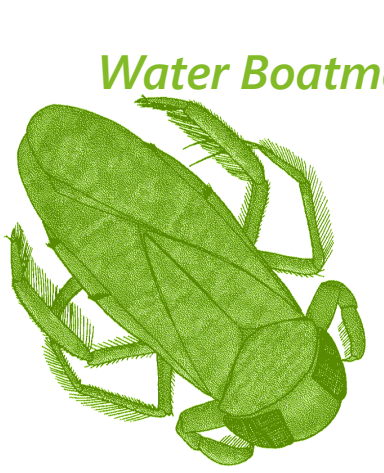


Reeds offer great places to hide, nest and feed for many animals that live around rivers and wetlands.

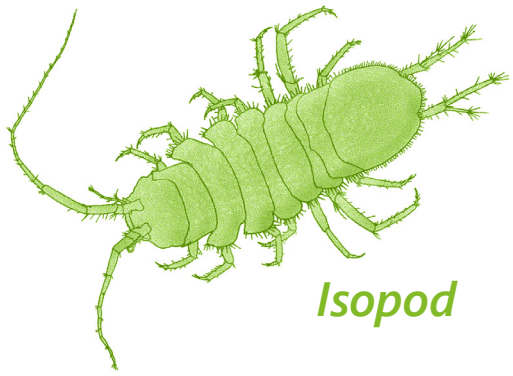
When reeds grow in dense areas (reed beds), they harbour a great diversity of creatures.

Dragonflies need reeds and sedges to emerge as adults from the water. Australian Reed Warblers use stands of the common reed to build their nests and find a mate.

Water plants also trap sediment and protect banks from erosion by reducing the speed of flow within a waterway. They remove nutrients from the water and have a direct effect on the available oxygen in the water. This in turn can affect the types of fish and other animals living in waterways.



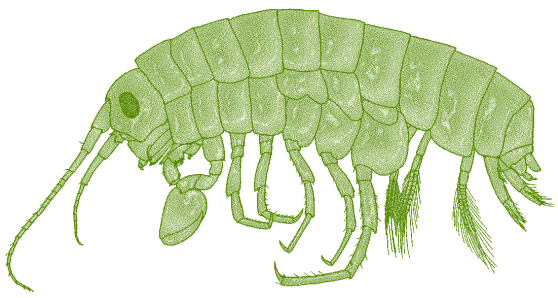
Water Boatman



Isopod

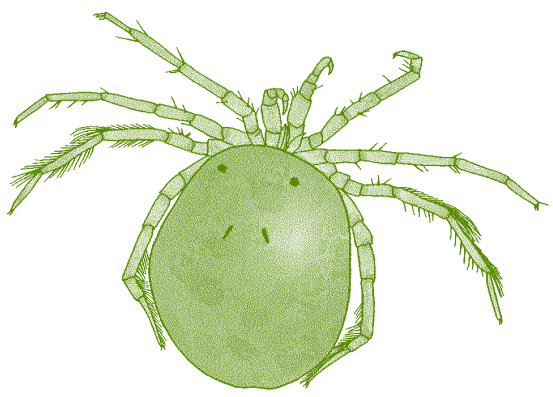
The Reed Zone

Backswimmer



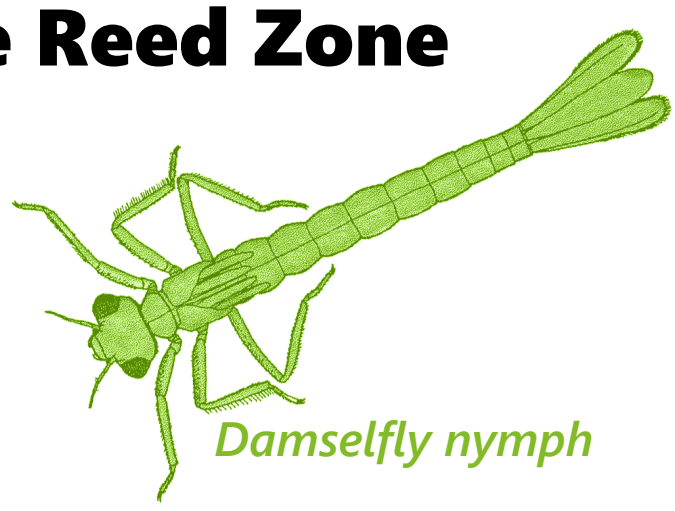
Scud

Water Mite



Water Scorpion

Damselfly nymph



The juvenile form of the Dragonfly and Damselfly is called a nymph.

Like the adults, these nymphs are predators and are very important links in food webs of watercourses.

Dragonfly nymphs crawl out of the water, secure themselves to reeds (and other structures), and the adult Dragonfly emerges from the nymph exoskeleton.

Left: Dragonfly nymph (top)/Damselfly nymph (bottom).
Right: Gills of the Damselfly nymph.

Into the Deep

The open waters of lakes, wetlands and ponds provide habitat for large fish populations.

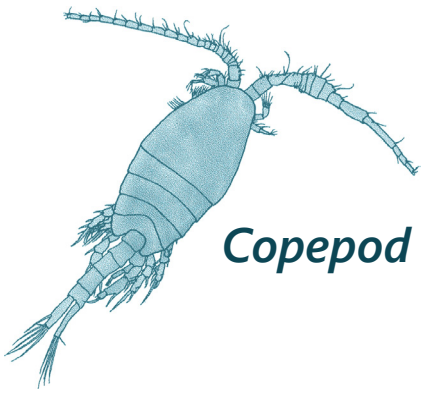
Birds also find refuge on the open waters where they can rest and moult without being disturbed.

Deep areas of water tend to have cold dense water in the bottom, and warm, less dense water nearer the surface.

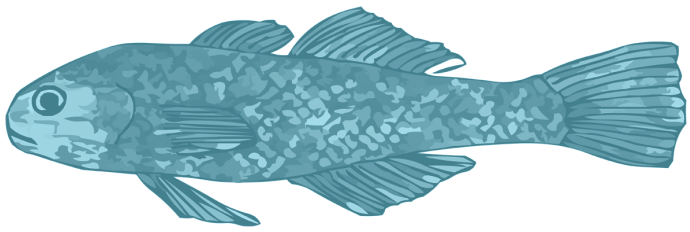
Different animals will prefer to live at different depths of water due to temperature.

Freshwater Copepods grow up to 4mm long, but usually are much smaller. They are among the most abundant animals on earth; with over 14,000 species.

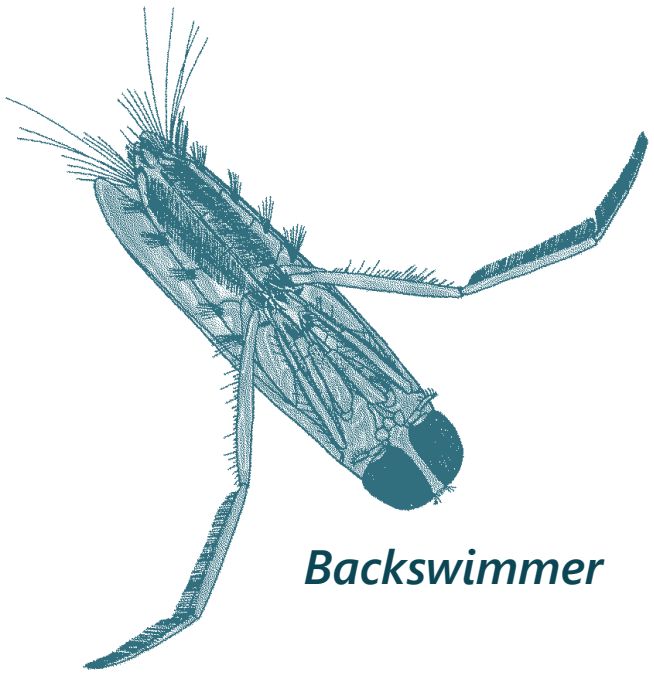
Females frequently carry their egg sacs around attached to the abdomen. A feature which can be a useful guide in their identification.



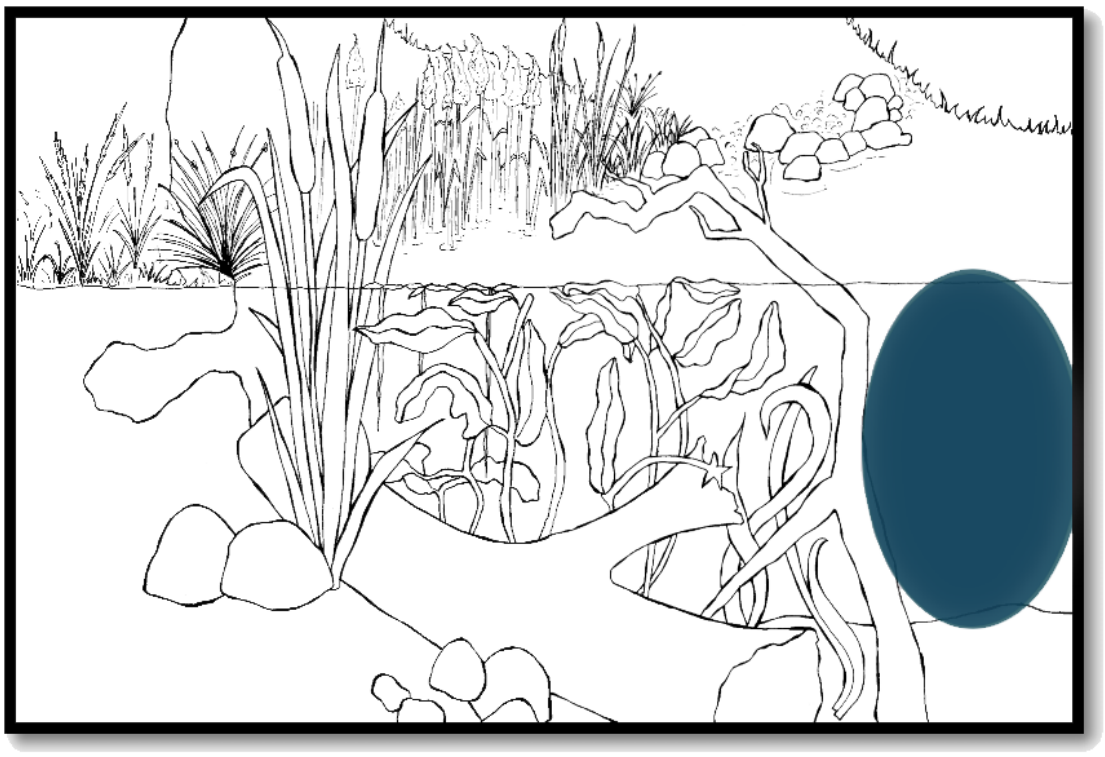
Copepod



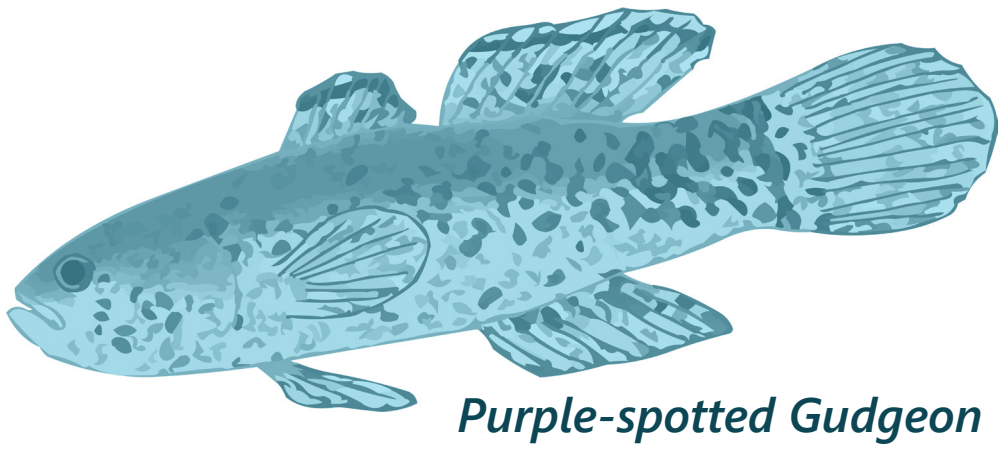
Western Carp Gudgeon



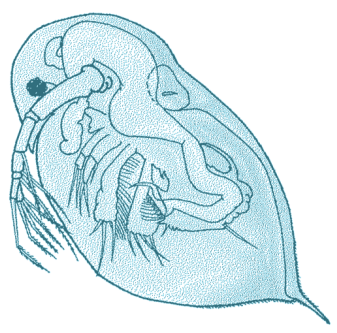
Backswimmer



The Deep Zone



Purple-spotted Gudgeon



Water Flea

Water Boatman

Life on the Substrate

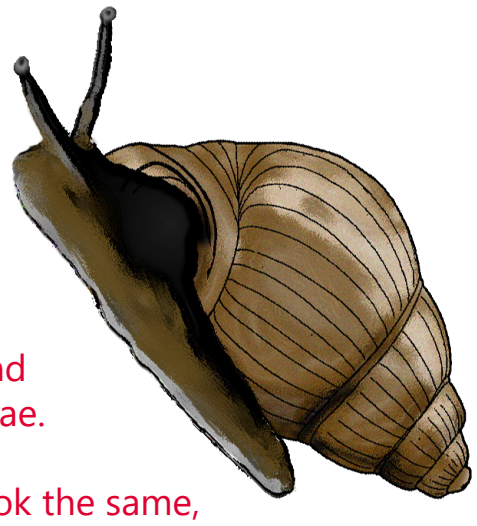
Fish and other aquatic animals, including aquatic invertebrates, require snags, logs and rocks, where they can take shelter from predators and the current, and where they can reproduce.

Snags, logs and rocks can also help aquatic animals establish territories and provide markers that help them navigate.

Protruding snags also provide roosting and preening sites for birds.

Snags grow coatings of algae that many animals such as Freshwater Snails and tadpoles graze upon.

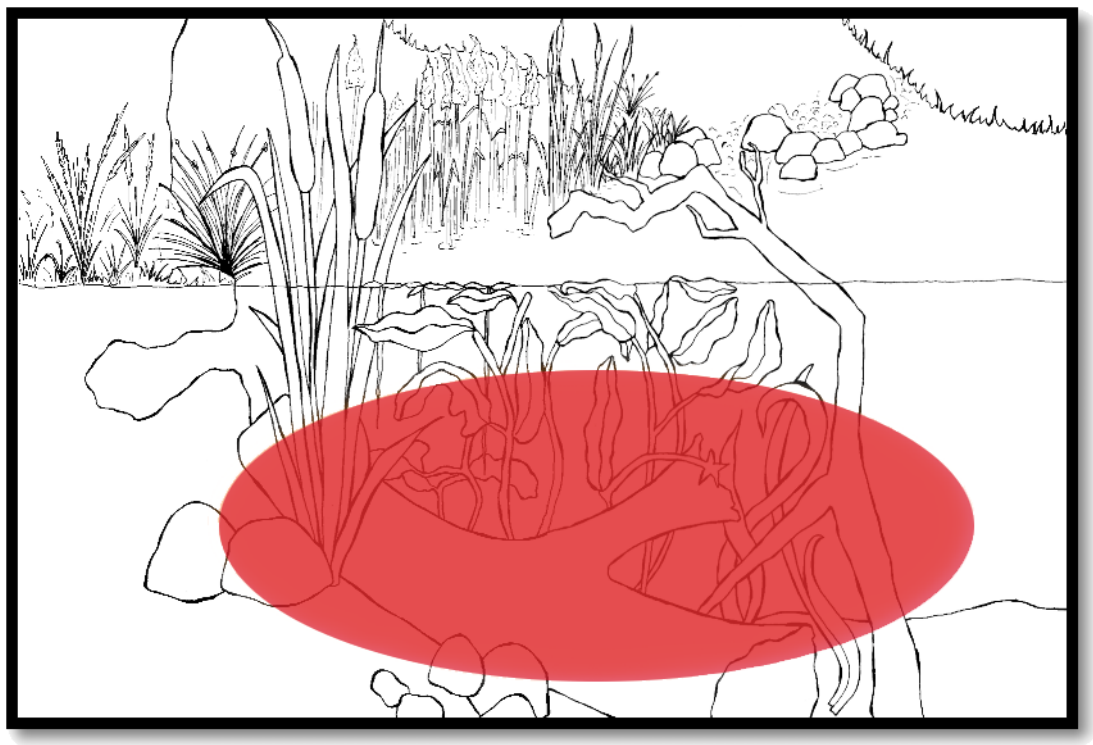
Leech!



Freshwater Snails are often found feeding on water plants and algae.

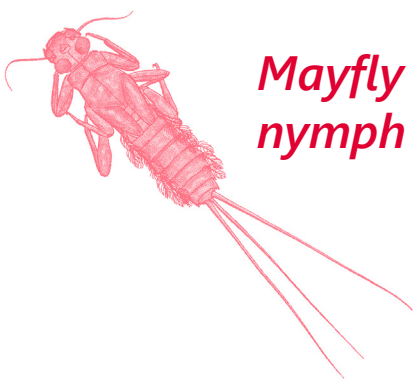
At first, water snails might all look the same, but take a closer look at the shape of their shells. Some of the freshwater snails found in Adelaide are actually introduced, but they are all great food for birds, aquatic invertebrates and fish such as catfish.

Water Scavenger Beetle

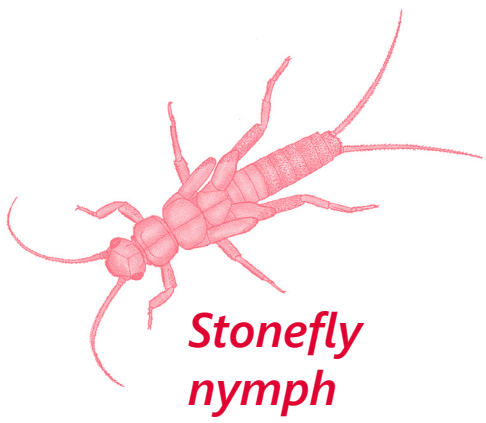


The Snag Zone

Pygmy backswimmer



Mayfly nymph



Stonefly nymph

Caddisfly larvae are quite diverse and can live just about anywhere in a waterbody; including in the sediment, on rocks or branches, amongst algae and leaf litter and on aquatic plants.

They are often nick-named 'walking sticks'.

Freshwater shrimp

Mud, Mud, Glorious MUD!

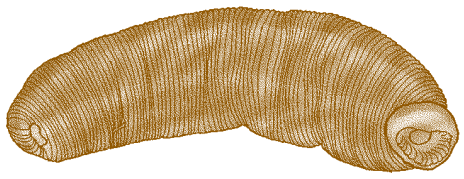
The benthic zone includes the mud and rotting leaf litter on the bottom of the waterbody, and the water just above it.

Inhabitants of the benthic zone are mostly molluscs and snails, some insect larvae, worms and crustaceans.

Benthic algae are attached to the surface of substrates and are an important source of food for benthic animals.

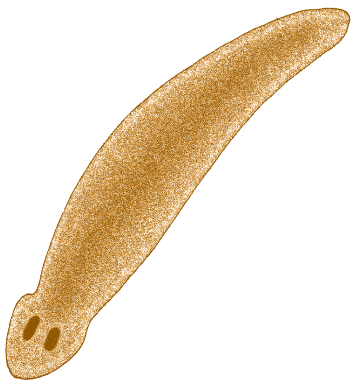
Benthic fish such as catfish are often present in natural and artificial wetlands.

Leech

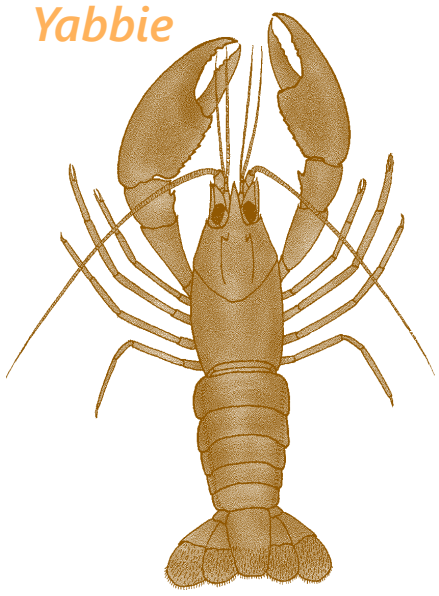


Segmented Worm

Flatworm



Yabbie



Freshwater Mussel

Midge larvae are a common sight amongst the mud and debris of creeks and wetlands.

The red colour is due to haemoglobins, which allow them to carry oxygen around their body more efficiently!

This is why they are so great at surviving in environments with very low oxygen levels.

Flatworms glide along the bottom of streams and ponds using tiny, moving hairs on their undersides.

The Benthic Zone