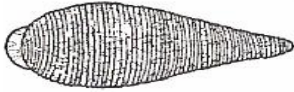


## Flat worms



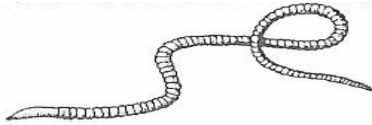
Flat worms are characterised by their flattened shape and soft bodied, worm-like form. They have an arrow-shaped head with two dorsal eyespots and are generally mottled or dark grey in colour. Flatworms move with a gliding action and are generally scavengers or carnivores.

## Leeches



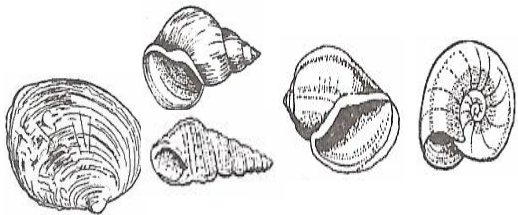
Leeches are segmented organisms that have very flexible bodies. When moving they expand to become long and thin, and then contract to become short and stubby. They have suckers on both ends of the body that are used for feeding and locomotion. Leeches are variable in colour, from grey, to red-brown and black. They swim with a fast, snaking movement and are found under stones, vegetation and debris.

## Worms



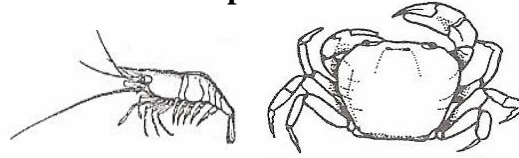
Worms are long and segmented and have a cylindrical shape much like small earth worms. Their colouring is usually pink to brown. They are usually seen writhing around in debris digesting the substrate they fed on.

## Snails



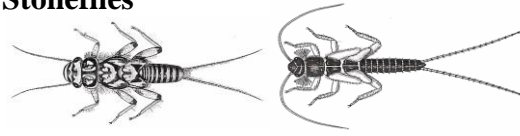
Snails are molluscs with hard shells that vary in size, shape and colour. Habitats vary, with some snails such as limpets clinging to rocks, whereas clams and muscles are found in sand. The more common snails move over stones and vegetation. Some snails are host to bilharzia, a serious health hazard for humans.

## Crabs and shrimps



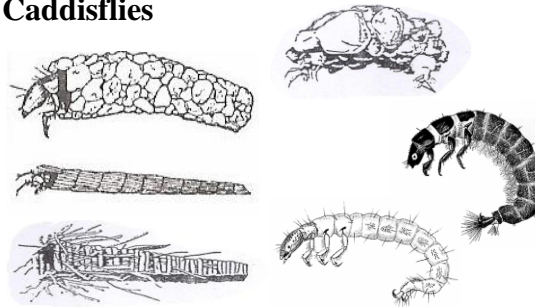
Crabs and shrimp form part of the order Decapoda (ten legs) and have bodies and legs hardened to form a tough shell. They have four or five pairs of legs and eyes that are carried on stalks and are movable. Crabs are scavengers that feed mainly on leaf litter but will feed on animals when given the chance. Shrimps are mostly scavengers or deposit feeders.

## Stoneflies



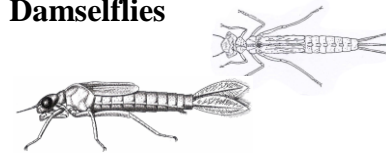
The nymphs of adult stone flies usually have two long tails and three pairs of legs each having two claws at the tip. A characteristic feature of stonefly nymphs are the tufts of gills on the side of the body as well as gills between the two tails. Wing pads on the thorax are often dark and obvious. Some species run across the substrate very efficiently and are potent predators on other invertebrates. Other species are smaller and feed on plant material. Most live in well oxygenated, clean water.

## Caddisflies



The aquatic larvae of adult caddisflies have a hard head with three pairs of legs which are attached to an elongated, soft body. Finger-like gills on the abdomen and anal appendages can be seen with the naked eye. Some caddisflies construct portable shelters/cases from sand grains, bits of vegetation and/or silk that are glued together to form a characteristic case shape. Most of the case-building types cannot swim whereas the case-less type swim freely across the substrate. Some feed on algae and detritus whereas others are predators.

## Damselflies



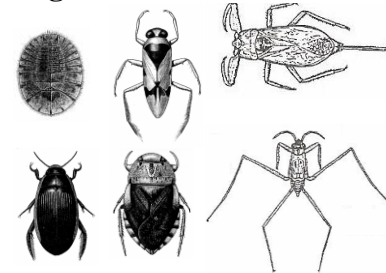
Damselflies have elongated bodies with generally three broad tails/gills on the tip of the abdomen. Damselflies are carnivorous and have a 'mask' over the lower part of the face which hinges out to reveal a pair of pincers with which they catch their prey. They are often to be found in vegetation growing on the edge of rivers.

## Dragonflies



Dragonflies are robust creatures that are stout and have a large head and protruding eyes. Some have short legs whilst others have long legs. They do not have tails, but swim using 'jet propulsion' by forcefully ejecting water from the abdomen. Dragonfly nymphs are usually the largest organisms found in a sample and are the most powerful invertebrate predators in the water.

## Bugs and Beetles



Bugs can be defined as having a piercing and sucking beak for mouthparts, and two pairs of membranous wings. Beetles on the other hand have 'jaws' and outer wings that are hardened to protect the inner wings. Some bugs and beetles are well adapted to swimming, such as water boatmen, backswimmers, pond skaters and water striders. Most bugs and beetles are carnivorous, but some feed on algae.

## Mayflies

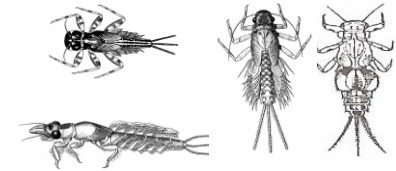
Mayfly nymphs vary greatly in shape and size and live only for a day or two. In this time they will never feed and live to mate and lay eggs in the water. Mayflies fly close to rivers and lakes, usually swarming in the early evenings.

## Minnow mayflies



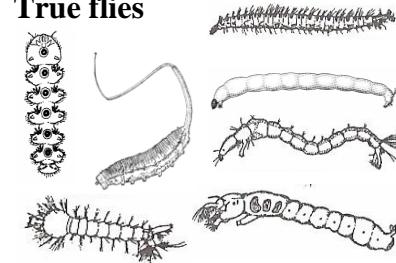
These mayflies have a narrow head and a small, slender, but not flattened body. They have leaf shaped gills on both sides of the abdomen and two but more commonly three tails, depending on the species.

## Other mayflies



Other mayflies are characterised by an elongated body, large head, well-developed mouthparts and stout legs. They live in a variety of habitats including burrowing in mud, crawling amongst decaying leaves, and scurrying over stones in fast flowing currents.

## True flies



Most fly larvae have a fairly indistinct head but elaborate tail ends. They often have small, soft legs (prolegs), segmented bodies and have the appearance of maggots. Some have bristles/spines and antennae. True flies live in a variety of habitats including sand, mud and stones in fast flowing water. They can either be carnivorous or filter feeders.