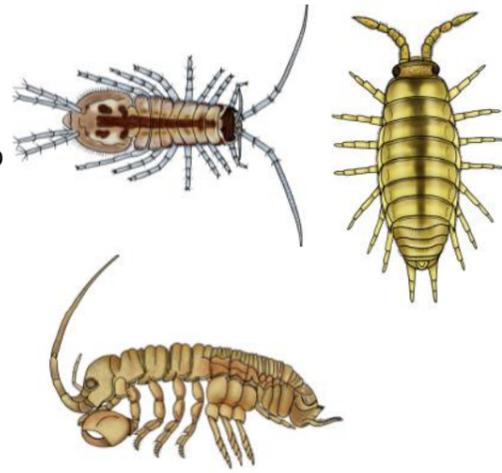


Isopoda (Freshwater slater)

Very Tolerant

Description: Flattened from top to bottom with no body carapace. Slow movement. Up to 7mm.

Habitat: Wetlands and river edges.

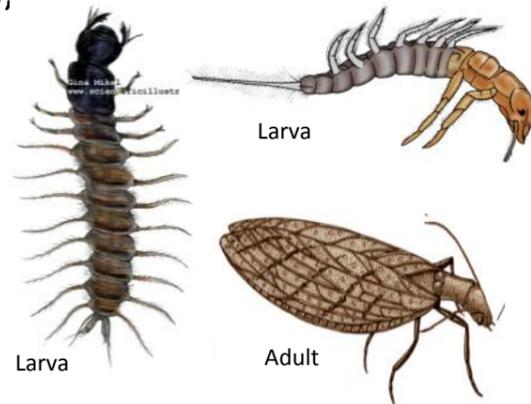


Megaloptera (Dobson fly; Alder fly; Toebiters)

Very Sensitive

Description: Slow deliberate crawl. Dark brown microspines. Up to 35mm.

Habitat: Fast flowing stony rivers.



Nematoda (roundworms)

Moderately tolerant

Description: Thin elongated worms without segments. Can be transparent. Thrashing coiling/uncoiling movement. Can be confused with Gordian worms. Up to 12mm.

Habitat: Burrow into the substrate.

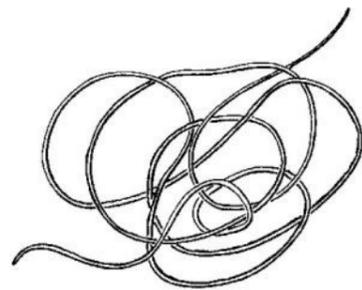


Nematomorpha (Gordian worms)

Sensitive

Description: Long thin parasitic worm up to 1 metre long.

Habitat: Adults are free living in aquatic environments.

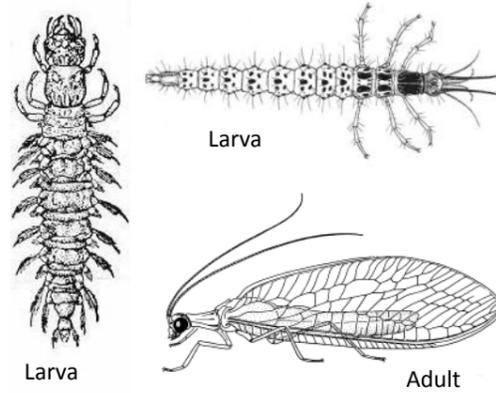


Neuroptera (Lacewings)

Sensitive

Description: Distinct neck and jaw with very fast or very slow movement. Confused with beetle larvae. Up to 20mm.

Habitat: Fast flowing streams

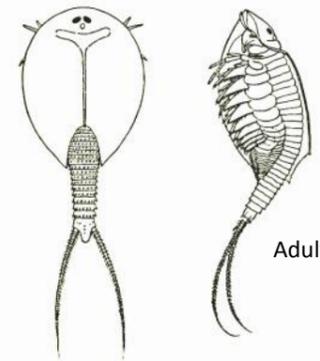


Notostraca (Tadpole shrimp; Shield shrimp)

Very Tolerant

Description: Shell-shaped dorsal shield that covers elongated body. Up to 35mm.

Habitat: Burrow into soft substrate.

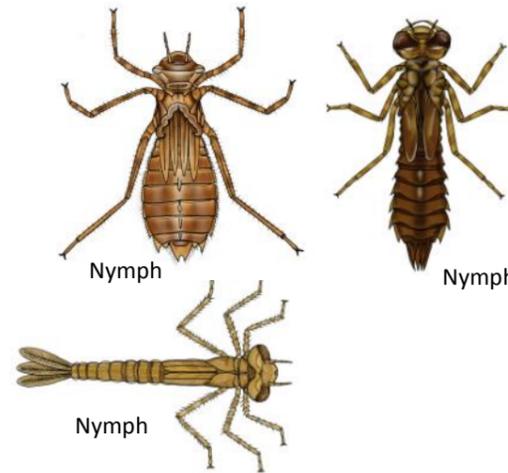


Odonata (Dragonfly nymph)

Moderately tolerant

Description: Stout bodies, no external gills and extendable mouth parts. Between 12-50mm.

Habitat: Found within the substrate and vegetation of rivers and streams.



Oligocheata (Freshwater worm)

Very Tolerant

Description: Segmented worm with rounded ends, no suckers or legs and usually red or flesh coloured. Up to 30mm.

Habitat: Found in soft sediment rich in organic matter.

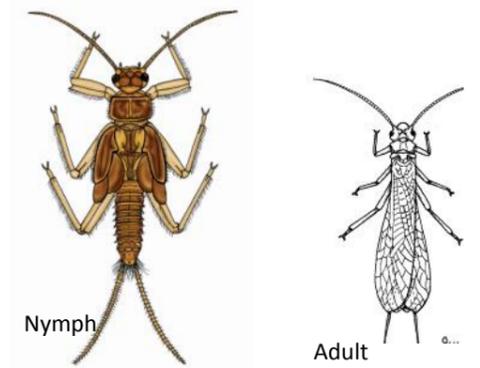


Plecoptera (Stonefly nymph)

Very Sensitive

Description: Two thin tails and gills extending from their abdomen. Shimmy from side to side. Between 7-12mm

Habitat: Found among stones or plants in fast moving waters.



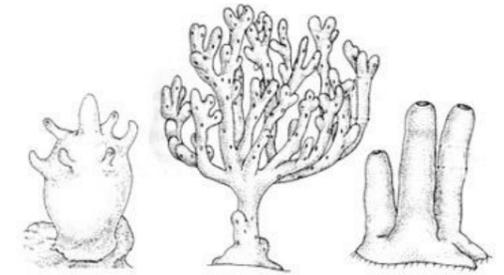
Porifera (Freshwater sponge)

Moderately tolerant

Description: Bodies filled with holes or pores for water circulation. Colour is grey, brownish or yellowish.

Individuals are 5-10mm that form large colonies.

Habitat: Form a mat-like colony on underside or edges of submerged rocks or wood.

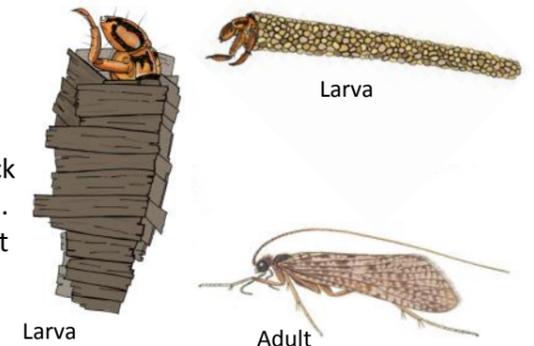


Trichoptera (Caddisfly Larva)

Very Sensitive

Description: Often enclosed within a case of twigs, plant material or silk. Rocks head back and forth to move. Up to 20mm.

Habitat: Found among sediment and rocks in streams and ponds.



Turbellaria (Flatworms)

Very Tolerant

Description: Primitive body plan. Flat with ribbon or leaf-like body. Slow moving. Between 6-20mm.

Habitat: Prefer the dark. Found in submerged leaf litter or under rocks.



Water Bug Detective Guide

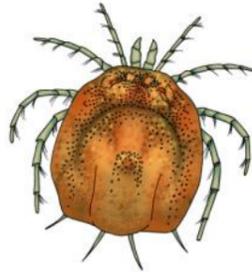
Common Water Bugs

Acarina (Water mite)

Sensitive

Description: Simple round body with eight legs. Can be confused with Ostracods. Up to 5mm.

Habitat: Plants or stones on stream bed in standing or slow moving water.

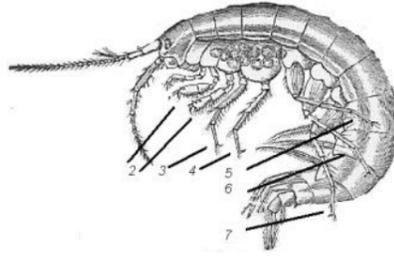


Amphipoda (Side-swimmers, scuds)

Moderately tolerant

Description: Rests on its side and swims in swift bursts. Up to 15mm.

Habitat: Wetlands and edges of slow moving water.



Coleoptera (Beetles; eg. Riffle beetles, Whirligigs)

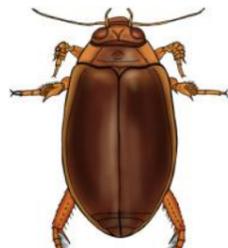
Moderately tolerant

Description: Small head, rounded back, smooth swimming action. Between 5-40mm.

Habitat: Flowing waters, found on detritus, river edge.



Beetle Larvae



Diving Beetle Adult



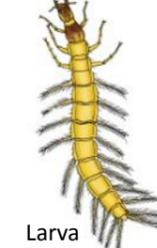
Whirligig Beetle Adult



Riffle Beetle Adult



Larva



Larva



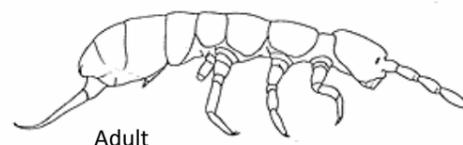
Larva

Collembola (Springtails)

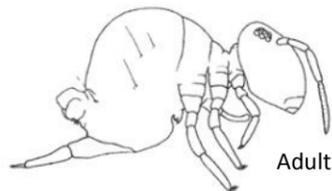
Very Tolerant

Description: Either compact or elongated body shape. Sudden jumping action. Up to 10mm.

Habitat: Surface of still waters and on terrestrial vegetation.



Adult



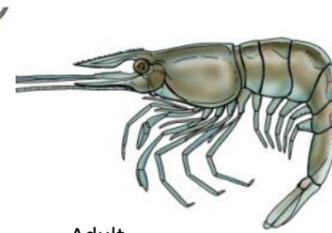
Adult

Decapoda (Yabbies, shrimp, crayfish)

Moderately tolerant

Description: Walk with sudden movement when disturbed. Hard shell, fan tail. Up to 30cm.

Habitat: Between plants and rocks in pools and rivers.



Adult

Diplopoda (Aquatic millipedes)

Moderately tolerant

Description: Worm-like with two pairs of legs per body segment.

Habitat: avoids light; hides under debris on waters edge.



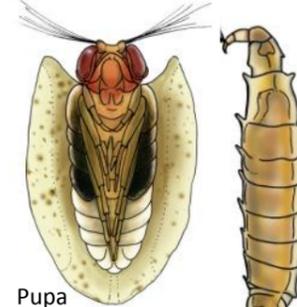
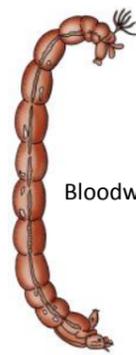
Bloodworm

Diptera (Fly larva; eg. mosquito larvae and bloodworm)

Moderately tolerant

Description: Elongated body with no true legs. Worm-like and C-shaped. Bend and unbend, sometimes thrashing to move. Between 20-50mm.

Habitat: Still shallow water amongst mud and detritus.

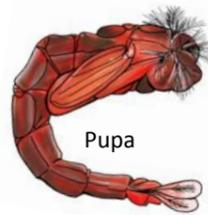


Pupa

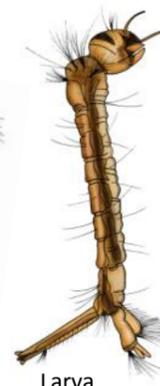
Larva



Larva



Pupa



Larva



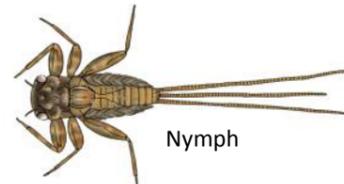
Pupa

Ephemeroptera (Mayflies)

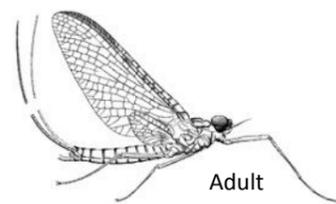
Very Sensitive

Description: Three long thin tails. Movement like a rocking horse. Up to 15mm.

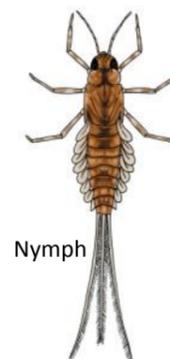
Habitat: Cool flowing upland streams.



Nymph



Adult



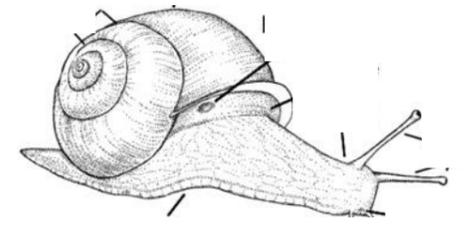
Nymph

Gastropoda (Freshwater snails)

Very Tolerant

Description: Soft bodied animals enclosed in hard, protective, coiled shell. Up to 25mm.

Habitat: Found on plants and rocks in slow flowing or standing water.



Hemiptera (True Bugs; eg. Back swimmers, water boatman, needle bug)

Very Tolerant

Description: Flat backs, head as wide as body. Jerky swimming action. No wings when young. Up to 10mm.

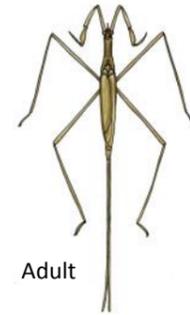
Habitat: Wetlands and river edges.



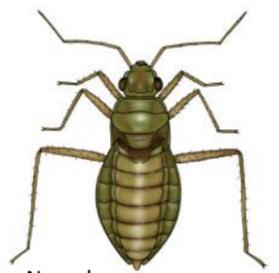
Adult



Adult



Adult



Nymph



Adult



Adult



Adult

Hirudinea (Leech)

Very Tolerant

Description: Flattened soft bodied annelid with suckers for creeping. 10-20mm.

Habitat: Standing or slow moving water and moist edge areas.

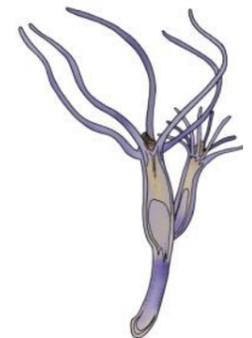


Hydrozoa (freshwater jellyfish)

Very Tolerant

Description: simple sack-like body with a mouth encircled by tentacles. Up to 30mm.

Habitat: Attached to rocks, plants or twigs in fast flowing water.

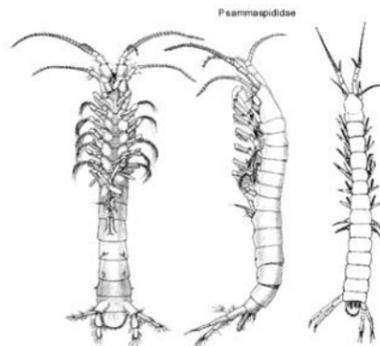


Anaspidacea (Cave shrimp)

Sensitive

Description: True carapace and compound eyes. Not strong swimmers.

Habitat: Found in crayfish burrows; or mats of algae on the bottom.

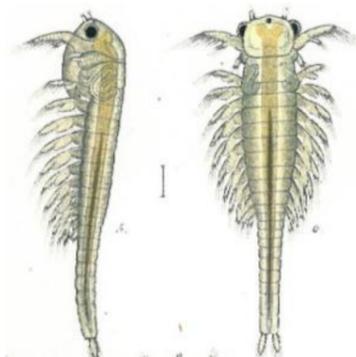


Anostraca (Brine shrimps; Fairy shrimps)

Very Tolerant

Description: Pale colour with constant pulsing rows of legs.

Habitat: Can live in fresh or salty waters.

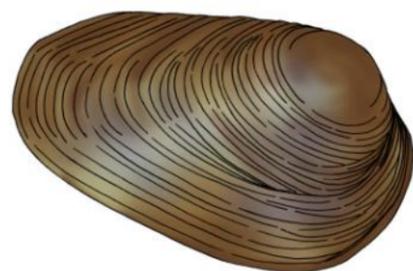


Bivalvia (Freshwater mussels; Clams)

Moderately tolerant

Description: Paired hard shells with fleshy body between them. Up to 150mm.

Habitat: Found on sandy or muddy stream beds.

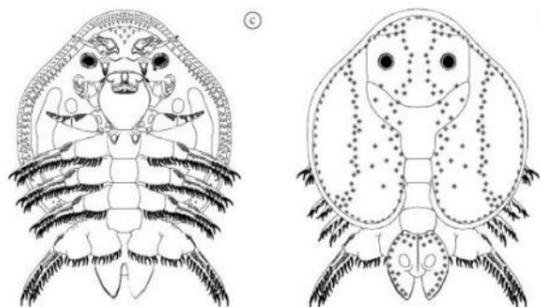


Branchiura (Fish lice)

Very Tolerant

Description: Flat oval body covered by carapace with prominent eyes. Fast swimmer. Between 5-10mm.

Habitat: Spend most of their time on a host except when moving between hosts or laying eggs.

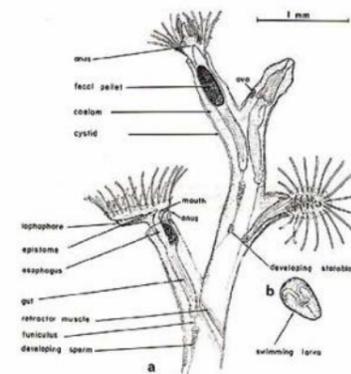


Bryozoa (Pipe mosses)

Moderately tolerant

Description: Form large colonies of several square meters that look like moss. Filter feeders with tentacles. Colouring brownish or opaque.

Habitat: Shaded littoral areas on the underside of rocks, logs or submerged debris.

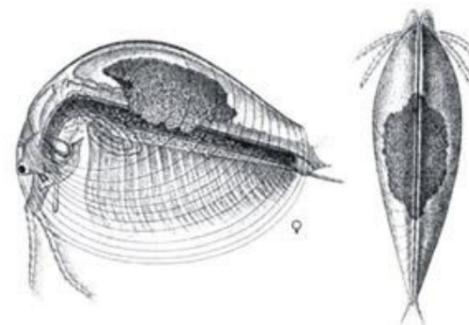


Conchostraca (Clam Shrimp)

Very Tolerant

Description: Bivalved carapace, enclosing whole animal. Slow swimmers. Up to 25mm.

Habitat: Turbid freshwater systems.

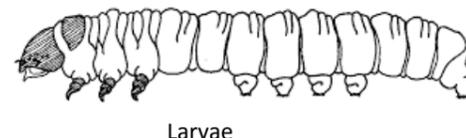


Lepidoptera (Moth Larvae)

Very Tolerant

Description: Caterpillar with soft segmented body, short legs and hair-like projections. Length 10-20mm.

Habitat: Pupate attach to vegetation and are found in moist soil and litter.



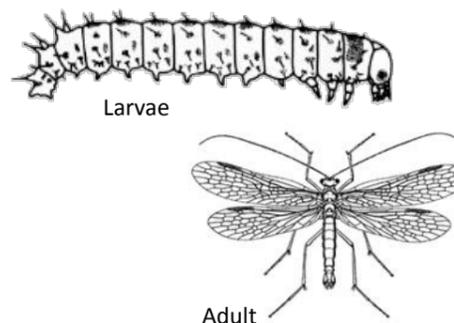
Larvae

Mecoptera (Scorpion flies)

Very Sensitive

Description: Larvae are smooth and look like caterpillars with short clawed true legs and suction hook at the end of the abdomen. Length 10mm.

Habitat: Larvae live in leaf litter and moist soil.



Larvae

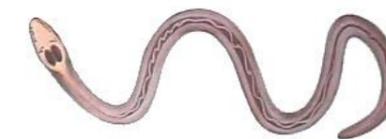
Adult

Nemertea (Proboscis worms)

Moderately tolerant

Description: Unsegmented thin body with no differentiated head. Less than 20cm.

Habitat: Brackish waters in and around rocks and substrate.

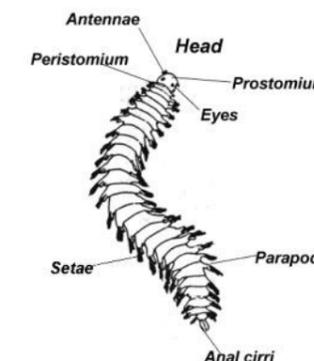


Polychaeta (Bristle worms)

Very Tolerant

Description: Segmented worm with bristles on their many leg-like parapodia. Slow movement. Max size 4cm.

Habitat: Marine systems in mud and sand habitats.



Water Bug Detective Guide

Uncommon Water Bugs