

Getting to know your **WATERBUGS**

Some waterbugs are sensitive to changes in their habitat. They can't survive if there is too much pollution, sediment or changes in temperature. These are called Sensitive or Very Sensitive waterbugs. Waterbugs that can tolerate change and pollution are called Tolerant or Very Tolerant Waterbugs.

The type and number of waterbugs found can tell us how healthy your waterway is. Identify your waterbugs and then use their SIGNAL rating to calculate the pollution level in the waterway. The SIGNAL ratings can be found in the coloured circles.

Very sensitive waterbugs

Sensitivity ratings 9-10

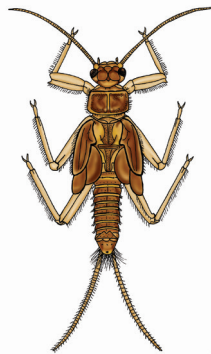
Stonefly nymph

Order: Plecoptera

10

Two thin tails extending from their abdomen. 7-12 mm.

Found among stones or plants, in fast-moving waters.



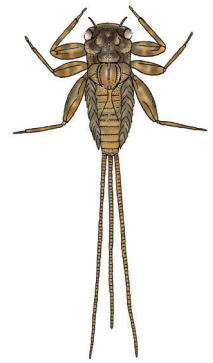
Mayfly nymph

Order: Ephemeroptera

9

Three long thin tails and gills along the sides of their bodies. Up to 15 mm.

Found on or under rocks or among plants and leaf litter in standing water and fast-flowing streams.



Sensitive waterbugs

Sensitivity ratings 6-8

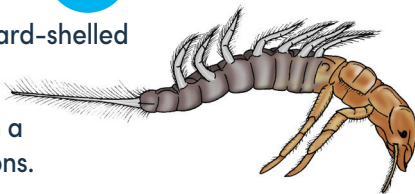
Alderfly larvae

Order: Megaloptera

8

Fleshy bodies with a hard-shelled head. Up to 20 mm.

Found among rocks, in a variety of flow conditions.



Caddisfly larvae

Order: Trichoptera

8

Often enclosed in a case of twigs and plant material or silk. Up to 20 mm.

Found among sediment and rocks in streams, ponds and lakes.



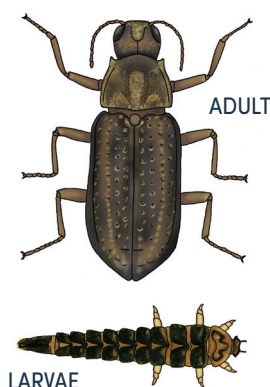
Riffle beetle and larvae

Order: Coleoptera

7

Beetle-like, tiny and usually black. Larvae have circular stripes or rings. Up to 4 mm.

Found in fast moving water.



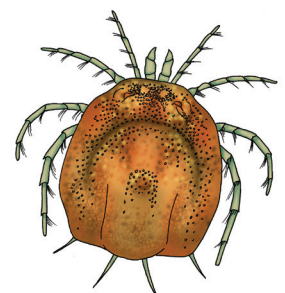
Water mite

Order: Acarina

6

Simple, rounded bodies with eight legs. Dark brown to red in colour. Up to 5 mm.

Found among plants or stones on the stream bed, in standing or slow-moving waters.



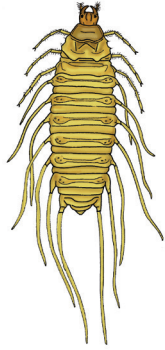
Beetle larvae

Order: Coleoptera

5

Usually elongated with well-developed legs and a large head. Up to 35 mm.

Found among still or quietly flowing waters.



Dragonfly nymph

Order: Odonata

4

Plump bodies with no external gills and extendable mouth parts. 12-50 mm.

Found among stones or plants, in fast-moving waters.



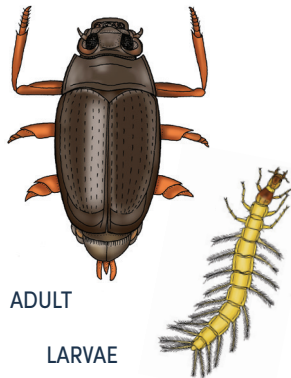
Whirligig beetle and larvae

Order: Coleoptera

4

Oval-shaped beetle that swims in circles. 5-25 mm.

Found around the edges of ponds on the water surface.



ADULT

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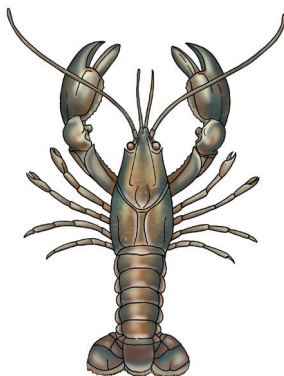
Yabby / Freshwater crayfish

Order: Decapoda

4

Dominant claws and fan-like tail. Up to 400 mm.

Found in slow moving or still waters among sediment or in burrows.



Water strider

Order: Hemiptera

4

Spider-like appearance with long middle and hind legs. 8-12 mm.

Found 'skating' on the surface of slow moving water.



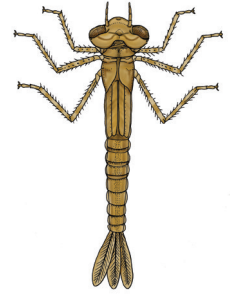
Damselfly nymph

Order: Odonata

3

Three gill structures extend from the tail. 16-33 mm.

Found on or under rocks or among plants and leaf litter in standing water and fast-flowing streams.



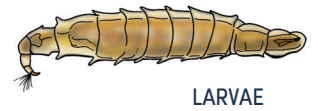
Fly larvae and pupa

Order: Diptera

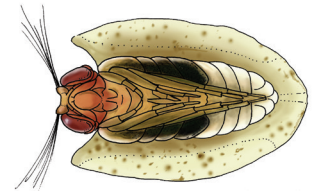
3

Larvae have an elongated body, small head and not true legs. Up to 30 mm.

Found in shallow water among debris and mud.



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Midge larvae and pupa

Order: Diptera

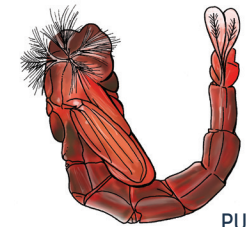
3

Small segmented worm-like bodies with hairs on the final segment. Up to 50 mm.

Found in shallow water clinging to debris.



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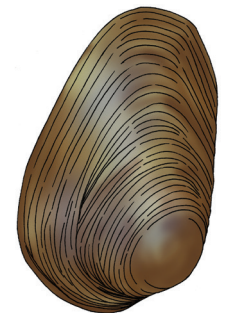
Freshwater mussel

Order: Bivalvia

3

Paired hard-shells (bi-valve) with a soft body inside. Up to 150 mm.

Found in or on sandy or muddy stream beds.



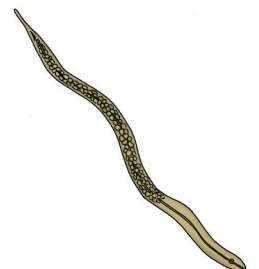
Nematode

Order: Nematoda

3

Long, thin worm without segments, often translucent and hard to see. Up to 12 mm.

Burrows into stream beds.



Tolerant bugs

Sensitivity ratings 3-5

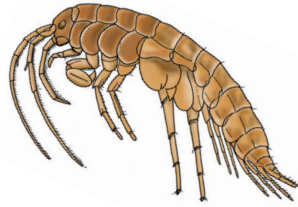
Freshwater sandhopper

3

Order: Amphipoda

Slightly curved and flattened with hard body segment each with a pair of legs. 6-20 mm.

Found along the edges of slow waters among plants and stones.



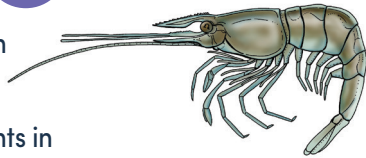
Freshwater shrimp

3

Order: Decapoda

Shelled body with fanned tail that flaps to propel them backward. Up to 35 mm.

Found among stones or plants in slow-moving waters.



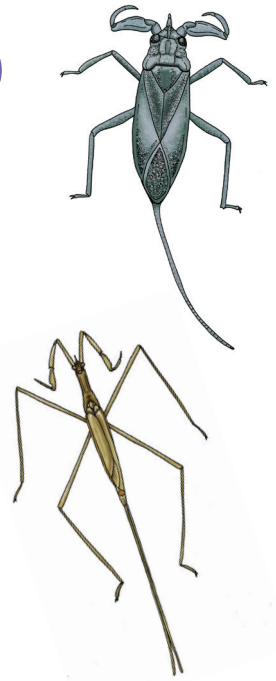
Water scorpion/ Needle bug

3

Order: Hemiptera

Breathing tube extends from the end of the abdomen and have large grasping forearms. Up to 50 mm.

Found among plants and leaf litter or on the surface of slow-moving waters.



Very tolerant bugs

Sensitivity ratings 1-2

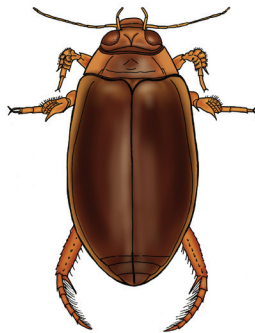
Diving beetle

2

Order: Coleoptera

Hard-shelled, sleek beetles with paddle-like rear legs. Up to 40 mm.

Found in still to slow-moving waters, in open water and among plants and rocks.



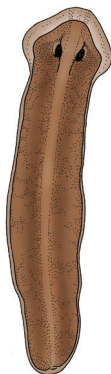
Flatworm

2

Order: Turbellaria

Flat, simple, slow-moving worms with two eye spots. Up to 20 mm.

Found among rocks and plants in fast and slow-moving waters.



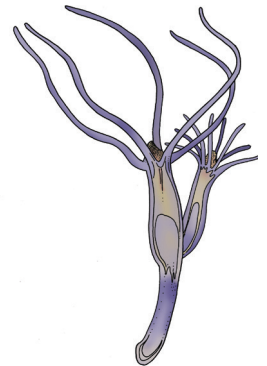
Hydra

2

Order: Hydrozoa

Translucent sac-like body with tentacles extending from the mouth. Up to 30 mm.

Found attached to rocks and plants in fast-moving waters.



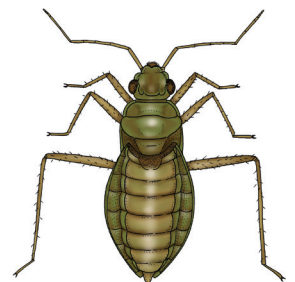
Water treader

2

Order: Hemiptera

Thick body with long middle and back legs. Up to 5 mm.

Found on the surface of slow-moving waters near banks and plants.



Freshwater worm

Order: Oligochaeta

2

Segmented worm with no suckers or legs and usually pinkish in colour. Up to 30 mm.

Found among soft sediment that is rich in organic matter.



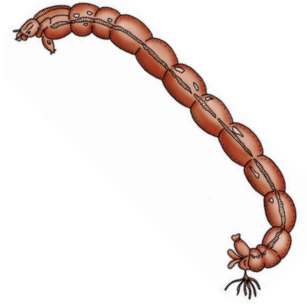
Bloodworm

Order: Diptera

1

C-shaped reddish worms. Also, known as non-biting midges. Up to 20 mm.

Found 'skating' on the surface of slow moving water.



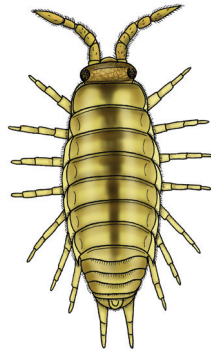
Freshwater slater

Order: Isopoda

2

Flattened bodies, no hard/outer shield. Pair of legs for each body segment. Up to 20 mm.

Found in still to slow-moving waters.



Leech

Order: Hirudinea

1

Soft-bodied segmented worm-like animals that 'walk' using suckers on both ends of the body. Feeds on blood. 7-80 mm.

Found in still to slow-moving waters.



Waterboatman

Order: Hemiptera

2

Boat-shaped appearance with long paddle-like arms for fast swimming. Up to 10 mm.

Found around the surface in still to slow-moving waters.



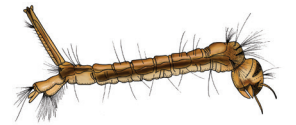
Mosquito larvae and pupa

Order: Diptera

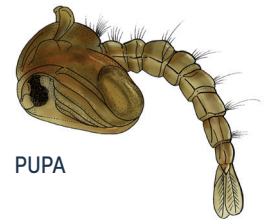
1

Breathes through a tube-like structure at the end of the abdomen. Up to 25 mm.

Found in still water.



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Backswimmer

Order: Hemiptera

2

Curved back, large eyes, long hairy hind legs and swim on their backs. Up to 11 mm.

Found around the surface in still to slow-moving waters.



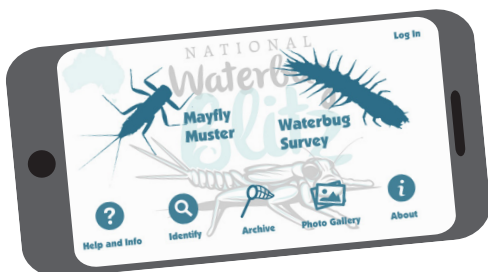
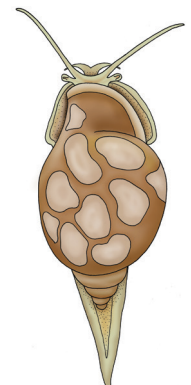
Freshwater snail

Order: Gastropoda

1

Soft-bodied slug that is enclosed in a hard, protective, coiled shell. Up to 25 mm.

Found on plants and rocks in and around the edges of slow-moving or still waters.



THE WATERBUG APP

Identify more waterbugs and learn about them using the Waterbug App. Free to download from the App Store or Google Play.

