

## Worm-like animals

POND HEALTH  
SCORE: 1



### Midge larvae

- Red, green, brown or transparent
- Wriggling movement



### Flatworms

- Often black or grey
- Move by gliding



### Rat-tailed maggot (hoverfly larvae)

- Long thin breathing tube
- Lives in mud



### Leeches

- Suckers at either end
- Moves by stretching out body

### Worms

- Like a small earthworm

## Snails

POND HEALTH  
SCORE: 1



(a)



(b)

- Hard shell covering body
- Shell may be (a) pointed or (b) a flat coil
- Can vary greatly in size

## Other animals

Note: you may find these other animals in your survey. While they are very interesting creatures, they do not give information about pond health, so they have no score.



### Water mite

- Tiny spider-like animal

### Water flea (*Daphnia*)

- Tiny animal
- Often in very large numbers



### Water spider

- Silvery bubble over the body
- Lives under the water

# Freshwater Invertebrate Identification Guide

This guide can be used for the OPAL Water Survey



## Cased caddisfly larvae

POND HEALTH  
SCORE: 10



- Body within a case; insect hides when disturbed
- Case can be made of small stones, sand grains or plant material
- Look for sticks that crawl!

## Dragonfly larvae

POND HEALTH  
SCORE: 10



- Fat body
- Angular head
- No tails but 5 short spines at the end of the body

## Caseless caddisfly larvae

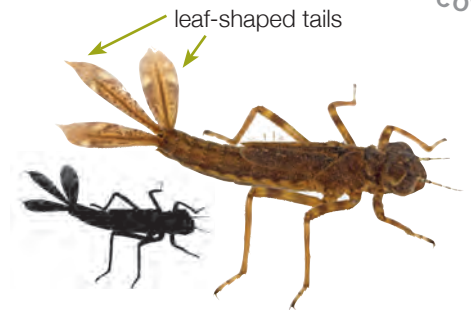
POND HEALTH  
SCORE: 10



- A bit like a thin caterpillar
- 3 pairs of legs at the front
- Hooks at the end of body
- Crawls rather than swims

## Damselfly larvae

POND HEALTH  
SCORE: 10



- Angular head
- 3 leaf-shaped tails (one or more may be lost)

Silhouettes show maximum life size. Animals may be smaller than this. If no silhouette is shown, the photograph is at life size. Larvae are the young of aquatic insects.

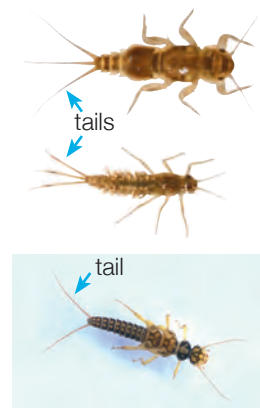
Higher scoring invertebrates  
need cleaner water to live in

## Alderfly larvae



- One tail
- Tapering body
- Pincer-like jaws
- Fine gills along the body

## Mayfly and stonefly larvae



### Mayfly larvae

- 3 thin tails
- Swim in short darting movements

### Stonefly larvae

- 2 thin tails
- Generally moves by crawling

Photographs: Cyril Bennett, Steve Cham, Niels Sloth (Biopix), Simon Pawley (FBA), Jeremy Biggs, Roberto Scherini (www.linea.it), Robert Zoralski (www.insects.pl), Alexander Grau and David Köhler (heteropterologie.de), Malcolm Storey (www.bioimages.org.uk), Simon Turner, Morten DD Hansen, Neil Rose, Roger Key, Brian Jones, Tim Apps, Michael R Clapp (nwnature.net), Frank Köhler (www.koleopterologie.de). Designed by FSC Publications. © OPAL 2015. All rights reserved.



LOTTERY FUNDED



## Water beetles



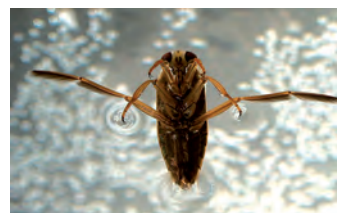
- Hard shiny wing cases covering the body
- Oval-shaped, 6 legs
- May have bubble attached to the back
- Scavenging water beetles have a less streamlined shape

### Beetle larvae



- Larvae are very varied; some have distinct heads, pincer-like jaws, tapering bodies and obvious legs
- Many have two tails (check these are not mayflies that have lost a tail)
- Others are more caterpillar-like with very short legs and fat bodies

## Water bugs



### Backswimmers

- Swim on their backs, just under the water surface
- Use long hair-fringed legs as oars



### Lesser water boatmen

- Swim the right way up
- Wing cases look black/brown but close up are speckled or striped



### Water scorpion

- Dark-coloured crawling insect
- Front legs pincer-like
- Long thin breathing tube at back of body (in adult)

body length up to 5 cm

### Water stick insect

- Long thin body
- Thin breathing tube at back

## Pond skaters



- Skate on the water surface
- 4 long skating legs and 2 short legs at the front
- Pair of antennae

## Water shrimps



- Curved, flattened bodies
- Long antennae
- May appear slightly transparent
- Swim quickly on their sides

## Water slaters



- Looks like a woodlouse
- Flattened body
- Moves by crawling



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 cm