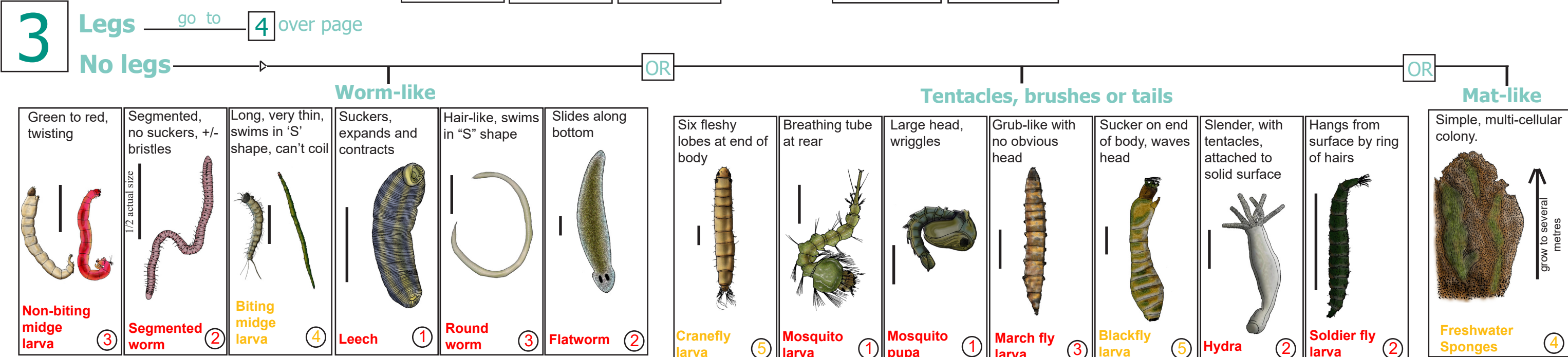
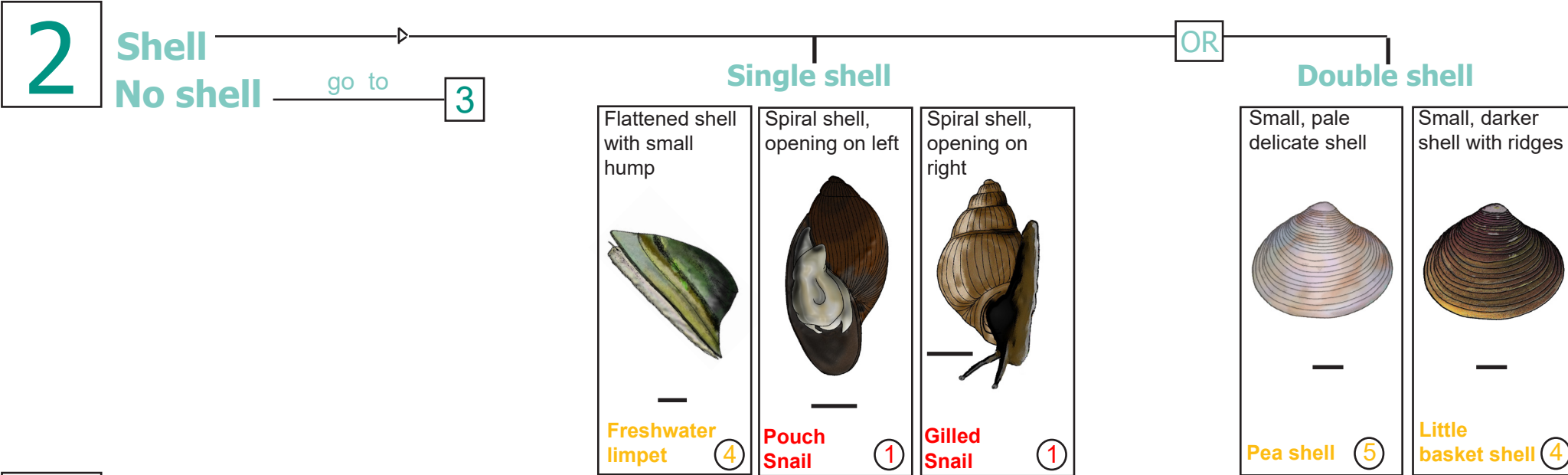
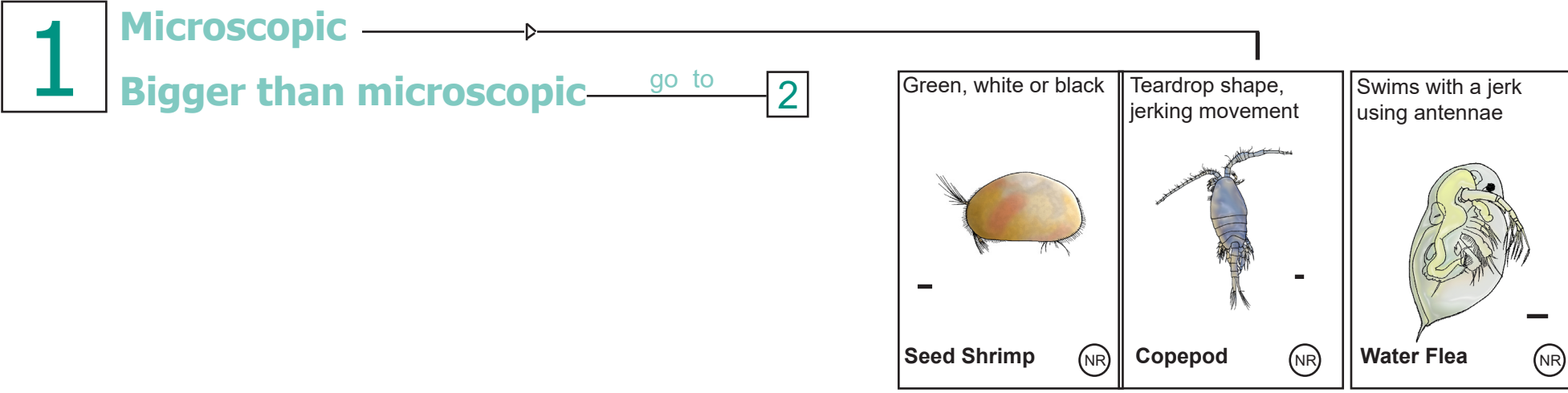


# Aquatic Macroinvertebrate ID Key



### Invertebrate Size (—)

Average actual size unless stated otherwise.

### Pollution Sensitivity\*:

(NR) Not rated

⑩—⑧ Very sensitive

⑦—⑥ Sensitive

⑤—④ Tolerant

③—① Very tolerant

## Acknowledgements

This key was designed by Ron Simms and Amy Blaylock, 2002.

Adapted by Steve Walker, 2011.

Assistance was kindly provided by the following staff members of the South Australian Musuem:  
Dr. Errol Matthews, Dr. Chris Watts and Mr Robert Hamilton-Bruce.

Licensed under Creative Commons Attribution 3.0 Australia License  
[www.creativecommons.org/licenses/by/3.0/au](http://www.creativecommons.org/licenses/by/3.0/au)  
 Copyright Owner: Crown in right of the State of South Australia 2021

*\*Sensitivity ratings from SIGNAL2 system in "New sensitivity grades for Australian river macroinvertebrates. Bruce C. Chessman. Marine and Freshwater Research. 2003, 54, 95-103."*

4

>3 pairs legs

3 pairs legs

go to

5

>4 pairs of legs

OR

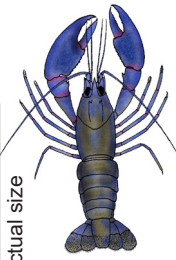
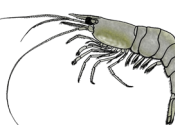

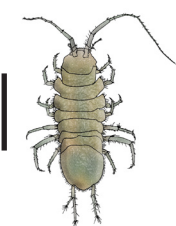



4 pairs legs

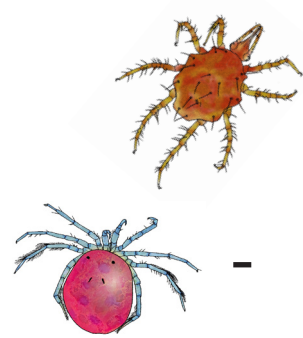

5

No wings  
Wings

go to



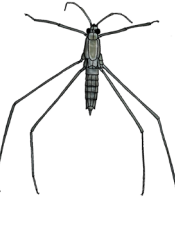
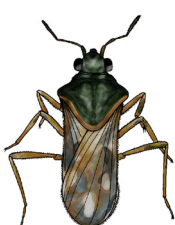
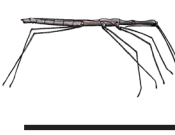
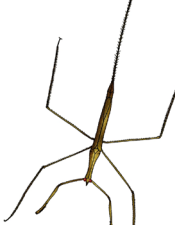

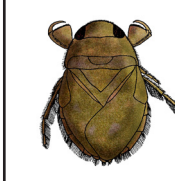
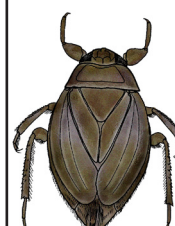
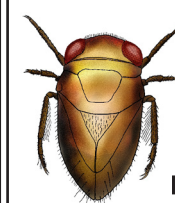
6

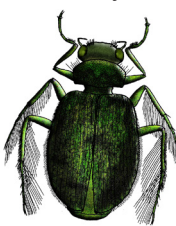



 <p>Lobster-like</p> <p>1/10 actual size</p> <p><b>Yabbie</b> ④</p>	 <p>Swims with back up</p> <p>1/2 actual size</p> <p><b>Freshwater shrimp</b> ③</p>	 <p>Shrimp-like, swims on side</p> <p><b>Scud (Side Swimmer)</b> ③</p>	 <p>Walks on bottom</p> <p><b>Freshwater Slater</b> ②</p>	 <p>Walks on bottom or swims by flicking tail</p> <p>1/3 actual size</p> <p><b>Freshwater Prawn</b> ④</p>	 <p>Rest on bottom of pool or swim with back facing up</p> <p><b>Shield Shrimp</b> ①</p>	 <p>Can swim sideways very quickly</p> <p><b>Freshwater Spider Crab</b> ③</p>
------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------

 <p>Tiny, swims in water</p> <p><b>Water Mite</b> ⑦</p>	 <p>Runs on top of water</p> <p>1/2 actual size</p> <p><b>Fishing Spider</b> ②</p>
--------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------

Soft wings, piercing mouth parts (bug)

Hard wings, jaws (beetle)

 <p>Swims fast, right side up, black back</p> <p><b>Water boatman</b> ②</p>	 <p>Swims on back</p> <p><b>Back swimmer</b> ①</p>	 <p>Runs on surface of water, black</p> <p><b>Water strider</b> ④</p>	 <p>On water surface and grass edges</p> <p><b>Small water strider</b> ③</p>	 <p>Long, stick-like lives on surface</p> <p><b>Water measurer</b> ③</p>	 <p>Long breathing tube, grasping front legs</p> <p>1/3 actual size</p> <p><b>Needle bug</b> ③</p>	 <p>Long breathing tube, grasping front legs</p> <p>1/3 actual size</p> <p><b>Water scorpion</b> ③</p>	 <p>Swims quickly using two hind pairs of legs</p> <p><b>Creeping Water Bug</b> ①</p>	 <p>Swims swiftly through the water</p> <p><b>Giant Water Bug</b> ①</p>	 <p>Climb or crawl across plants, poor swimmers</p> <p><b>Pygmy Back Swimmer</b> ②</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------

 <p>Swims moving hind legs alternately</p> <p><b>Water scavenger beetle</b> ②</p>	 <p>Back legs move at same time</p> <p><b>Predacious diving beetle</b> ②</p>	 <p>Swims on surface, often in fast circles</p> <p><b>Whirligig beetle</b> ④</p>	 <p>Crawls through water plants</p> <p><b>Crawling water beetle</b> ③</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------

6

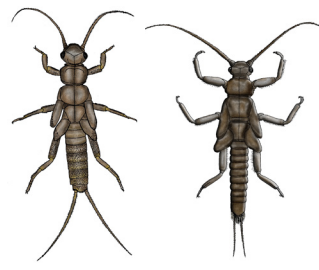
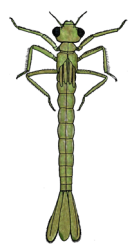
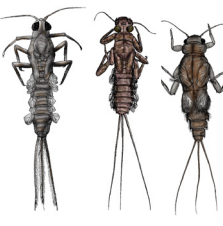
No obvious tail






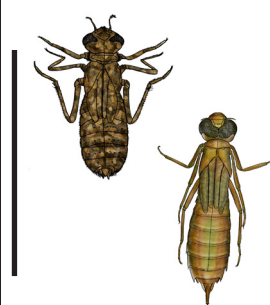


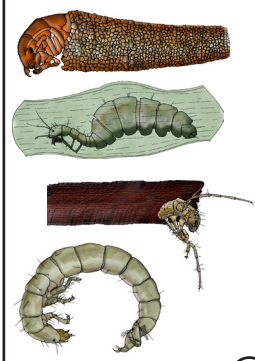
Tails

OR

Two tails

Three tails

 <p>Fast water and stream edges</p> <p><b>Stonefly nymph</b> ⑩</p>	 <p>Plate-like tails, no gills on abdomen</p> <p><b>Damselfly nymph</b> ③</p>	 <p>Long tails, gills on abdomen</p> <p><b>Mayfly nymph</b> ⑨</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------

 <p>Crawls along rocks</p> <p><b>Water Penny</b> ⑥</p>	 <p>Can't swim, can only crawl</p> <p><b>Riffle beetle larva</b> ⑦</p>	 <p>Usually brown, prefer to crawl rather than swim</p> <p><b>Marsh beetle larva</b> ⑥</p>	 <p>Large mouthparts, may have 7 pairs gills on side</p> <p><b>Water scavenger beetle larva</b> ②</p>	 <p>Spines on side, large mouthparts,</p> <p><b>Whirligig beetle larva</b> ④</p>	 <p>Large body, hinged mouth</p> <p><b>Dragonfly nymph</b> ③</p>	 <p>Hangs from surface, large mouthparts</p> <p><b>Predacious diving beetle larva</b> ②</p>	 <p>Small and hops on surface and in edge plants</p> <p><b>Springtail</b> ①</p>	 <p>In tube, case or free-living</p> <p><b>Caddisfly larva</b> ⑧</p>
---------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------

All images on this ID Key are adapted by Steve Walker (2006) from the B&W images in 'Critic Catalogue: a guide to the aquatic invertebrates of South Australian inland waters (2004 EPA)' except for the crawling water beetle (Steve Walker 2006).