

# Aquatic Macro Invertebrate Survey

## Jacksons Creek Organ Pipes National Park 23/10/2014

Persons conducting Survey.

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Method used in the survey - ALT method.

The Waterbug Company is currently developing the Agreed Level Taxonomy (ALT) method; a way to assess river health without microscopes, laboratories, jargon or even scientists.

Some waterbugs are impossible to separate to family level without a microscope - and in truth are quite difficult even with a microscope - while others are readily identifiable to genus or species using only a hand lens. This raises the question: could we change the levels to which we identify waterbugs, so that they reflect the morphological differences that can be readily seen, regardless of the (ultimately artificial) taxonomic hierarchy?

ALT uses features that are visible to the naked eye to identify macroinvertebrates. The animals are identified alive rather than being preserved. This means that features which are lost in ethanol preservation like colour and movement - can be used to identify the animals. ALT identifications result in data sets of mixed taxonomic levels, some at genus or species, and others at higher levels.

This method gives community groups and others without access to laboratories or microscopes the ability to produce reasonable resolution data sets that can be used to estimate the health of freshwater ecosystems. We are currently testing to see if the ALT levels retain enough taxonomic information to be used with a re-calculated SIGNAL score. Fingers crossed, the ALT method will provide a quick, simple approach to waterbug ID that is a practical alternative for people who want to assess stream health, but we are still testing it at the moment.

(The waterbug Company)

The area surveyed was at the Tessellated Pavement using a 0.25mm mesh net over 10 metres moving upstream over 10 minutes. 5 minutes were edge (vegetation) sampling and 5 minutes riffle (rocks, *benthic*) sampling. The water was flowing at a rate considered to be normal.

*Benthic* – The benthic zone is the ecological region at the lowest level of a body of water including the sediment surface and some sub-surface layers.