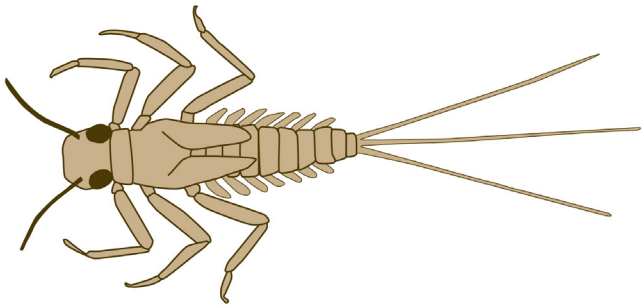
Biomonitoring with freshwater invertebrates

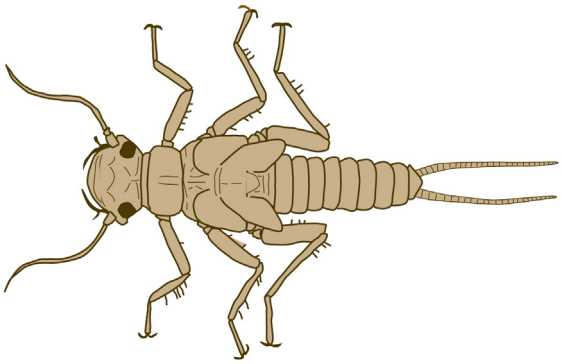
Some freshwater macroinvertebrates are able to withstand a wide range of environmental conditions, whereas others can only survive in clean water. By calculating the percentage of pollution sensitive taxa in ta sample you can get an idea of the health of a stream.

Pollution sensitive

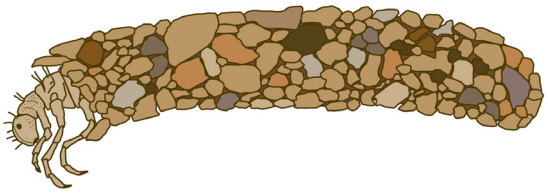
Mayflies (**E**phemeroptera)



Stoneflies (**P**lecoptera)

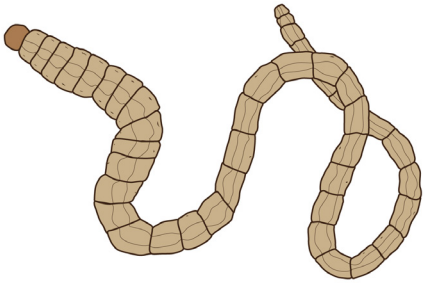


Caddisflies (**T**richoptera) -cased and non-cased species

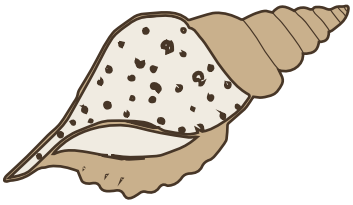


Pollution tolerant

Worms (Oligochaeta)



Snails (Mollusca)



Chironomids (Diptera)

$$\frac{\text{Number of mayfly, stonefly and caddis fly taxa in sample}}{\text{Total number of invertebrates}} \times 100 = \textbf{\%EPT}$$

A high percentage of EPT taxa usually indicates a healthy stream.
Note: some New Zealand streams are naturally low in EPT taxa.

See also:
Land Air Water Aotearoa factsheet:
www.lawa.org.nz/learn/factsheets/benthic-macroinvertebrates/

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