



Little Wetland Critters



The hardest working inhabitants of any of the City of Salisbury’s wetlands are its macroinvertebrates.

These tiny critters include insects, crustaceans, worms, snails, shrimp and small bivalves and play very important roles in wetland food chains.



Top The presence of dragonflies often indicates good water quality.
Photo: Luke Simon

Above Caddisflies are sensitive to nutrients and pollution, so their presence indicates relatively clean water.
Photo: Wikipedia Commons

Some aquatic macroinvertebrates feed on other macroinvertebrates; some gather or filter deposited materials; some graze on organic matter. Some use a combination of these feeding strategies. By eating plants, algae and other organic matter, these tiny animals change these things into animal tissue.

When they are in turn eaten by vertebrates such as fish, frogs and birds, energy is transferred up the food chain. All this ‘eating’ helps to clean water by removing nutrients from the water column.

Some macroinvertebrates also help to suppress prolific plant growth, such as algal blooms, and remove debris from the water. Benthic macroinvertebrates - macroinvertebrates that inhabit the mud and soil at the bottom of the ponds - gently aerate these sediments in a way that doesn’t create turbid (cloudy) water. Worms are perhaps the best known of this group.

The kinds of macroinvertebrate present in a wetland will depend on the geographic location of the wetland, its wetting and drying cycles, the quality of water entering the wetland and the climate.



The quantity, variety and health of macroinvertebrates can give an indication of the condition of the wetland. Some, such as many snails and worms, can tolerate highly polluted water. These are the macroinvertebrates likely to be found in the first ponds of a wetland. Others, such as Mayflies, Stoneflies and Caddisflies are extremely sensitive to nutrients and other pollution, so their presence in a wetland indicates the water is relatively clean at that location.

In many constructed wetlands, macroinvertebrates are monitored. This may be done by the Council, a natural resource management board or by local Waterwatch volunteers. The health of wetlands and the quality of water in them is assessed using a method called Stream Invertebrate Grade Number - Average Level (SIGNAL 2) a pollution sensitivity scale developed for Australian conditions.

Learn more

For more information on related topics, see the other fact sheets in the Wetlands series. You may also like to visit the following websites for more information:

Australian freshwater invertebrates guide

www.mdfrc.org.au/bugguide

A guide to using SIGNAL 2 to determine the health of freshwater systems

www.waterwatch.org.au/publications

Other useful publications

www.sa.waterwatch.org.au



Top Anyone can get involved in the monitoring of macroinvertebrates.

Photo: Waterwatch SA

Above The Water Flea (Daphnia species) is mainly a filter feeder, eating algae and bacteria.

Photo: Micropolitan

Contact the Watershed

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