

February 2009 in our Catchment

Hasn't it been dry! Quite a number of your reports came in with comments like 'no water' 'only two pools left' 'lowest water level ever' and there were enquiries from the upper Molonglo about Captains Flat dam and no flow. I spent last Wednesday at Molonglo River Park, Carwoola, with Terry Korodaj, our erstwhile Project Officer, and the film crew. There were pools, but most of the channel was dry and full of thriving emergent aquatic plants. Reports from the south are that both the Paddy's and Tidbinbilla Rivers have dried up, and there is little water in the Gudgenby system.

The drying out of the waterways has had obvious effects on the water quality data you all sent in. In the rural areas the water was very warm, there was high electrical conductivity and several sites gave alarmingly high turbidity readings. Many of the aquatic animals in our waterways are adapted to summer drought, and can go into hiding to overcome the worst of the stress. But those that remain active have to face up to depleted oxygen resources, unless they are direct air breathers; and even some of those, especially the frogs, find it challenging. The concentration of dissolved salts that lead to high electrical conductivity readings come from the combined effects of evaporation and groundwater flow without the diluting of stream flow. As lime concentration is the usual source in our catchment, there may be little effect on the invertebrates, and the vertebrates (including us) may have to tolerate the tinny taste. Turbidity is a different matter...particularly if you have gills like mayfly nymphs, tadpoles and fish – trying to breathe through mud is not satisfactory.

There are things that exploit the drying out, especially among the aquatic plants. Stoneworts and filamentous green algae, along with the freshwater shrimps, water fleas and pea animalcules (all crustaceans) go rapidly into a reproductive mode, lay down their drought resistant eggs and drop out of the game till the rains return. The sedges, rushes and many of the aquatic and fringing herbs also get right into reproduction mode. You will all have noted the river reed (*Phragmites australis*) sporting pinkish brown plumes. At Molonglo River Park, the muddy edges of several of the remaining pools were covered with blue *Isotoma*, yellow buttercups and red milfoil and all the sedges (spike-rush, river-rush and Dirty Dora being the main ones) were in flower too. All of these will seed well and the next rains will spread the seed, some will germinate at once, some will lie dormant in the seed bank for many years.

It's almost Macroinvertebrate Count Time again! Hopefully there will be some rain before then. Even so, some of the pools do appear to contain good cross-sections of macroinvertebrates. At Molonglo River Park last Wednesday we found two kinds of mayfly nymphs, damsel fly larvae, whirligigs and orange and black

beetles, river shrimps, green and black triangular backswimmers, narrow bodied backswimmers, shiny black water boatmen, pygmy water boatmen, fast moving leaf rolling caddis larvae, and slower algal covered reed caddis larvae! Numbers of everything were good, although there were only two of the colourful beetles. Only the pygmy water boatmen are very tolerant of poor water conditions, so even with the drying out the Molonglo above the gorge is fine.



There are four water striders eating the bee...can you see them.

Do let us know about your requirements for the Macroinvertebrate count, and we will endeavour to meet them. Where possible we'd like you to do your bug count and your water testing on the same day (18th April or thereabout). And don't forget to include the whirligigs and water striders, even if you don't net them.

Stephen Skinner

Waterwatch Coordinator, Molonglo Catchment Group

Waterwatch Calendar March–April 2009

Wednesday 11th March	5:30pm	2 hours	Molonglo Waterwatchers Training Session 1 - for those who would like to come after work	Queanbeyan River Park, off Trinculo Place.	Light meal and refreshments provided, children welcome	Both sessions will introduce Dissolved Oxygen and Orthophosphate sampling techniques.
Saturday 21st March	5:00pm	2 hours	Molonglo Waterwatchers Training Session 2 - a 'family friendly' session	Queanbeyan River Park, off Trinculo Place.	Light meal and refreshments provided, children welcome	
21st–22nd March	Waterwatch Data Collection Time					
Sunday 19th April	2:00pm	2 hours	ACT Waterwatch Autumn QA/QC	Discovery Centre, CSIRO Black Mountain, Clunies Ross St ACTON	includes a tour of the Entomology collection and afternoon tea.	
18th–19th April	Waterwatch Data Collection Time, and Autumn Macroinvertebrate Report.					