

January 2014 in Our Catchment

Do five drops on the roof at 8:15 pm constitute rain? Ah, well! We are very definitely going into a dry period. We are supposed to have had 55mm of rain in December, and another 55mm this month, and we really haven't had any since Boxing Day, and that lot hardly laid the dust. In a week when we had at least five days over the old century mark, we really do need a quenching drop...but it doesn't look as if it is about. Only a week or so and we are into the shortening days of autumn (the temperature is usually about two more weeks behind) but it still feels like high summer!

Your Results

Parameter	Where it comes from	How it affects things	Local events
Temperature	Sunlight and flow give a waterbody its temperature	High temperatures allow the water to lose dissolved gases; low temperatures may upset the rhythm of water life	The river at Wickerslack Lane is a little warm!
Electrical Conductivity	The ground water and soil determine the EC	Limey soils are naturally more conductive, more dissolved CO ₂ ; waterlogging also increases mineral content.	Most of the rural creeks have both high conductivity and negligible flow.
Turbidity	This is how much light can penetrate the water.	Silt and dissolved humus change turbidity	Burra Ck and Chimney Ck are the highest, but they are not alone
Oxygen Saturation	Oxygen gets into water through flow, wave action and plants growing.	More than 120% saturation causes embolisms in animals, big or small; below 60% and it is hard for things to breathe.	Norgrove Park is low...with not much flow
Ferals	Introduced fish	Gambusia and European Carp outcompete the locals	Carp and Gambusia are thriving in East O'Malley Ponds.

Tinderry Creek and Urila Creek are both dry, Whiskers Creek and Stony Creek are at a standstill and many of the others are not moving much.

It is a delight to hear that the platypus are enjoying the Queanbeyan River at Wickerslack Lane, along with much other aquatic fauna, and if the tracks around the pools at Whiskers Creek are a good indication, life in that part of the Molonglo is going happily too.

More Queanbeyan marginals and why they matter *(continued from last month)*

Collecting a seed mix that includes the small groundcover plants from the ACT region to use at or soon after planting out in-stream and off-line wetlands may be worth pursuing. It pays to

check with both the ACT and NSW governments about any licensing or paperwork with seed collection. Here is the beginnings of a list of seed to hunt for:

Waterway Forbs	Where to find them
<i>Alternanthera denticulata</i>	Widespread, sand or mud
<i>Centipeda cunninghamii</i>	widespread
<i>Crassula helmsii</i>	widespread
<i>Damasonium minus</i>	Harrison, wetland fringe
<i>Epilobium billardierianum</i> subsp. <i>hydrophilum</i>	Widespread, prefers some gravel
<i>Gratiola peruviana</i>	Riverine habitats, sand or gravel
<i>Limosella australis</i>	Mud or gravel
<i>Lythrum hyssopifolia</i>	widespread
<i>Myriophyllum crispatum</i>	Sand or silt, riverine
<i>Myriophyllum variifolium</i>	Exposed mud, wetlands and riverine
<i>Neopaxia australasica</i>	Cooler water, silt
<i>Ranunculus papulentus</i>	Muddy sites but widespread
<i>Samolus valerandi</i>	Sandy, riverine
Graminoids	
<i>Carex gaudichaudiana</i>	Riverine, flowers spring
<i>Eleocharis acuta</i>	Wet soils
<i>Isolepis</i> spp.	Muddy riverine
<i>Schoenoplectus pungens</i>	Wetland margins

The next step is to test seed viability. Most of these plants will also grow from cuttings, especially the stonecrop and the milfoils. As they are small, planting out may present some logistic problems. So being able to broadcast the seed along the margins of recent works would be a pleasant option to have. This will require more work...



Greater complexity in the groundcover part of plantings in wetlands should provide better structure to collect runoff and protection against wind-driven wave action. The advantages at the biodiversity level may be harder to demonstrate. There is the genuine possibility that aquatic species (the milfoils and the stonecrop and *Neopaxia*) will diversify the structure of the marginal habitat and so should allow both shelter and camouflage for the aquatic small animals. There may also be better opportunities for airborne adult macroinvertebrates to thrive

where there are more food sources and greater numbers and shapes of landing platforms. The leaf litter will be more complex and so the humus fraction of the soil richer, than just tussock and emergents. It won't ever match the undisturbed natural, but we can try!



From an aesthetic view the presence of marginal plants is a way of softening the constructed look of a recently planted wetland or riparian zone. The larger emergent species, the reed, rushes and bulrushes, are structurally dramatic but may be rather severe. Bare mud or a freshly placed boulder looks like what it is... a feathery surround of milfoil can make it look as if it should belong!

Calendar

24 th January	Friday at the Fair	Friends of Mt Majura See MCG website for details
1 st February	Weeding working party	Friends of Black Mountain See MCG website for details
2 nd February	World Wetlands Day	There will be a talk on the Flora of Jerrabomberra Wetlands at the office at 10:00am, and a guided walk from 10:30am Contact: Kate Kelly < friendsofjerrawetlands@gmail.com >
4 th February	Weeding Party	Friends of Glenburn contact Col on 6288 4171 or on cvmac@grapevine.com.au
16 th and 17 th February	Sampling time	Your site

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ⁱ The operation of the Molonglo Catchment Group is assisted by the Australian Government's Caring for our Country and the ACT Government. Some administrative assistance is provided by the Australian Government's GVESH0 program.