

Darebin Creek News

Friends of Darebin Creek



October 2008

Upcoming events to look out for



- Saturday 18 October** – Drawing our Native Plants, Alphington 11:45am – 2pm (RSVP to Sean)
- Sunday 30 November** – Quarry Hills Walk – details TBA
- Saturday 6 December** – Christmas Social at Club Furlan from 7pm
- Wednesday 10 December** – Frog Census & Possum Prowl (Bundoora Park) 7:30pm-9:30pm

www.friendsofdarebincreek.org.au / seanfwalsh@internode.on.net

*"In Gowervil I e, did Robin Khan¹
a statel y chicken dome decree
where Darebin the sacred creek ran
past bike paths measurel ess to man
down to Mel ways map 31 12 E."*



¹ The Coleridge poem *Kubla Khan* refers to a mystical river named *Alph*. This version (in honour of the Darebin Creek) was penned by local historian Robin Gallagher of Preston (otherwise known as Gowerville) to mark the construction of a home for his new chickens.

Environmental Event Reports

Sunday 27th April 2008 –Weeding workshop at Electric Spur

There was a great show from the Friends of Darebin Creek at this hands-on workshop. Brian Bainbridge (Merri Creek Management Committee) took us through some warm-up exercises, which he has found helpful in getting a team ready for a day's work on the Merri Creek. We then spread out in a line and moved systematically across the southern section of Electric Spur, decimating the Montpellier broom saplings, which are the major woody weed in this remnant patch.

Once again we experienced Brian's gentle but effective leadership, encouraging everyone to work together as a team. He had even brought a marquee for the event to provide shelter in case of rain. Special thanks also to Damien and Hespera of the Banyule Bush crew, who showed up on their bikes and put in a good morning's work as well as sharing their knowledge and enthusiasm.



Whilst working on a steep section of the spur, Sean came across a fierce beastie, which he captured in a jar and later identified as a Victorian Funnel Web spider, female (body 30cm long). Not as deadly as the Sydney version, but still, she is someone you don't want to insult or offend.

Postscript: The final in this series of four "Sustaining Diversity" sessions was held on 11th June at the Darebin Environment Centre, led by Katrina Roberg. Sean gave a brief presentation on how climate change might affect weeds in future. Katrina led us in the "Weed Quiz" which got us all thinking!! A very well attended event and a good finish to a very successful series, thanks to the efforts of the Merri Creek Management Committee. There was some good follow up work at Electric Spur on 28th September with at least 12 volunteers turning up to chip away at the broom problem. It was great to see heaps of indigenous plants finding their way up with less competition from weeds. Thanks to all those who helped! Let's keep up the good work.

Sunday 25th May 2008 – Bike ride to the northern end of the shared trail

This ride was attended by Doug, Kerry and Sheryl, with Sean leading. We started at Macleod station, with Doug and Kerry having already warmed up by riding directly from home, whilst Sean had taken a leisurely train ride from Montmorency. We caught up with Sheryl just past Bundoora park, and from there we joined the Darebin Creek trail.

Once we went beyond the nicely maintained Norris banks reserve, more and more bizarre things could be seen, including

- Large sections of the creek totally abandoned to artichoke thistle, gorse, fennel and blackberry
- Residents who had expanded their gardens into public land, in some cases even fencing land that was not their own, and even worse, growing prickly pear (an invasive weed)
- One resident who had created an illegal landfill behind their fence, a disgusting sight!
- Poorly maintained trails which had been eroded by recent rains, creating in some cases 15cm deep channels, a real danger for cycling.

We paid an unintended but interesting visit to Hendersons Rd Drain, which was once a creek feeding into the Darebin Creek, but is now a concreted drain. Beyond the end of the concreted section, beautiful river red gums still exist, as can be seen in the photo of our lunch spot.

After returning to the main Darebin Creek trail, we came across an interesting section which had, only one week ago, been dominated by huge pine trees, which had all been felled and removed by Melbourne Water. A significant step forward, but let's hope enough replanting is done to replace lost habitat.

From there we made our way to the end of the shared trail at Porsche court, Epping, for some well earned play time:



Photo by Doug Morffew



Photo by Sean Walsh

Sunday 29th June 2008 – Planting near the source of the Darebin (Woodstock)

Several brave Friends of Darebin Creek members joined Darebin Parklands Association members for a planting day at Woodstock. The extreme wind and cold made for difficult working conditions for the 20 volunteers. Despite this 400 indigenous plants were planted as part of the Northern Nature Creek Connections project funded by Natural Heritage Trust. Landowner David was very happy to have the work done on the day and thanks all volunteers for their help. The morning's planting along the Darebin Creek concluded with a BBQ lunch. The plantings will add to the biodiversity of the Darebin Creek in the upper catchment. The Darebin Creek Management Committee would like to thank David and the volunteers for their commitment to improving the endangered Grassy Woodlands plant community.



*Text & Photo by Therese Grinter,
Darebin Creek Management Committee*

National Tree Day – 27th July 2008

This event began with a cold drizzly day, and ended up with a good number of plants in the ground. Eleven hardy volunteers turned up along with two Darebin Bushcrew staff. This part of the Darebin Creek is quite attractive, with some very old River Red Gums and gentle rocky slopes on the eastern side. In places the ground was so hard we could barely get the bamboo stakes in the ground. Persistence paid off and the photo below shows the result. The BBQ lunch was very welcome afterwards. Thanks to Michelle Perry, who is our new team leader for the Darebin Creek on the Darebin Council side, for organising this event.



The result... [Photo by Michael Sephton]



Volunteers packing up for lunch (Michael Sephton in the foreground) [Photo by Sean Walsh]

Planting Day : 31st August – Dougharty Rd

by Sean Walsh

This day was organised by Banyule Council bushcrew. Damien and Hespera had undertaken a major cleanup of the small drain leading into the Darebin Creek from Dougharty Rd, removing large amounts of *Tradescantia* and litter, and laying down mulch mats. I had travelled past this section of the Darebin Creek literally a thousand times on my bike, and the change was fantastic - I barely recognised the place.

Thirteen volunteers helped on the day, putting in hundreds of tubestock including grasses, mat-rushes, river-mints, hemp bushes and others. We were exceptionally fortunate on this day to see two **Spotted Pardalotes**, who are actually nesting in the muddy banks of the Dougharty Rd drain, and a **Golden Whistler**, which I had only once seen before on the Darebin Creek, in April 2006, in almost exactly the same place. Hespera photographed a Pardalote and I captured the Whistler.



In the background were flowering wattles from our 2003 planting day. We relaxed afterwards with a cuppa and biscuits and some neenish tarts from Fay's mum Gill Loveland.



A very successful day and a big thank you to Damien and Hespera for making this event possible.

Spotted Pardalote:
photo by Hespera
(Emma)

Waterwatch Wrap by Julia Vanderoord

The Darebin Council Bush Crew have been busy this year monitoring stormwater outlets and the Darebin Creek at two sites in Reservoir. Their aims for monitoring are *“to monitor the effects of pollution coming from the industrial and residential areas at Reservoir and Preston which is entering the creek through storm water outlets. The data collected can be used to monitor the water quality downstream from the stormwater outlets”*

Other new groups include Heather and Trevor Howes sampling the Donaldson Creek (a tributary of the Darebin Creek) in Ivanhoe, which some days doesn't look great (see picture below). The Howe's are monitoring because, as explained by Heather:

“It is thought that during low flows in Donaldsons Creek, water with high turbidity may be passing through Donaldsons Creek and contributing sediment to Darebin Creek. Melbourne Water plan to build a settlement pond at the end of the drainpipe on Donaldsons Creek, so that during low flow events, sediment falls to the bottom of the sediment pond and the sediment contribution of Donaldsons Creek to Darebin Creek are reduced. We plan to monitor the water quality of Donaldsons Creek before the works planned by Melbourne Water commence, so that data is available for comparison before, during and after the completion of the works. There is also concern that, on occasions, other pollutants may be evident in the water in the storm water drain. Data obtained from monitoring the water quality may also provide more information on the quality of the water flowing at this point. There are some major pollution incidents on Donaldsons Creek, which need to be reported regularly to the EPA. Hopefully this new sediment traps will reduce sediment loads, but the pollution coming from other sources other than sediment is still a concern.”

Waterwatching Darebin Creek by Michael Sephton

Since December 2007 I have been monitoring water quality at a number of sites near Darebin Creek mostly on a monthly basis in order to learn about the health of the creek. During this time a number of other Waterwatch monitors have joined me, namely Phillip Diver, Yuta Noguchi, Linda Odgers and Averil. We began monitoring just one site on Darebin Creek, a short distance upstream from the Darebin Rd Bridge.



Since May 2008, I have been monitoring 2 additional sites further upstream of the first site. One is a small pond a short walk upstream from a footbridge at the end of Dundas St in Thornbury, and the other is a stormwater drain outlet feeding the Creek several hundred meters further upstream from the pond.

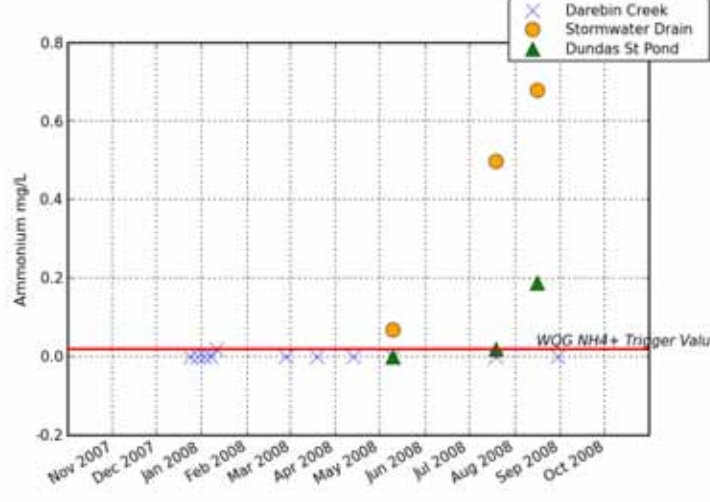
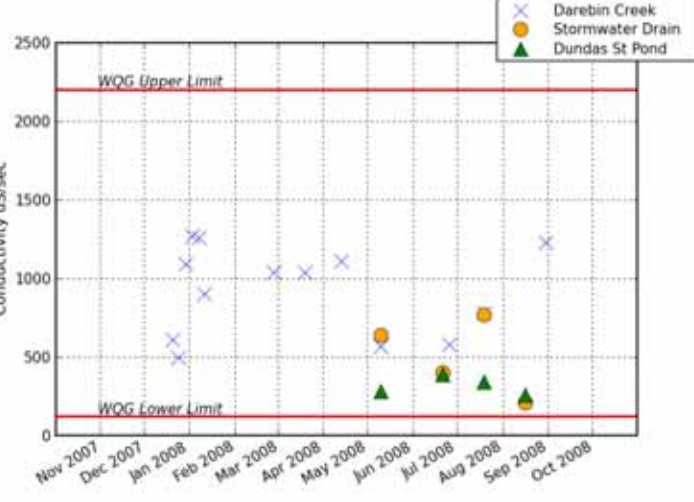
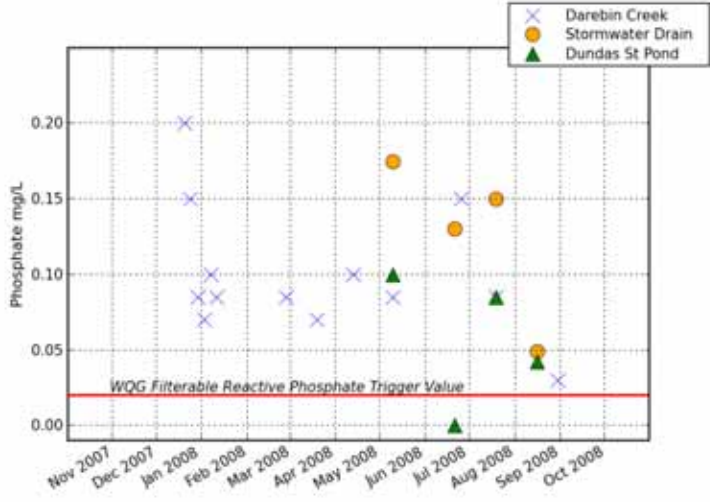
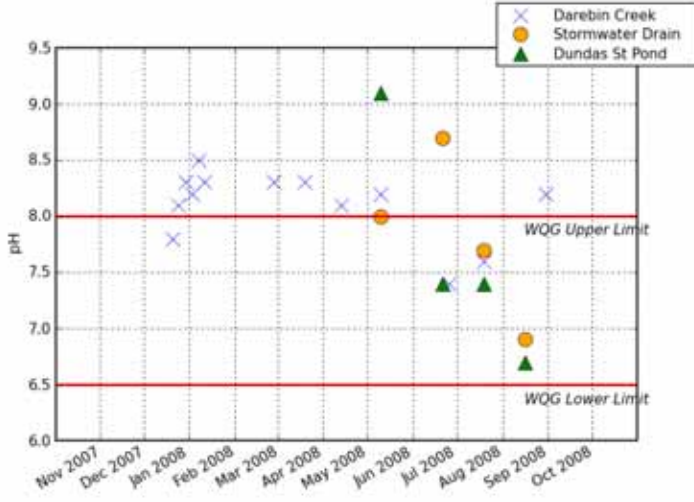
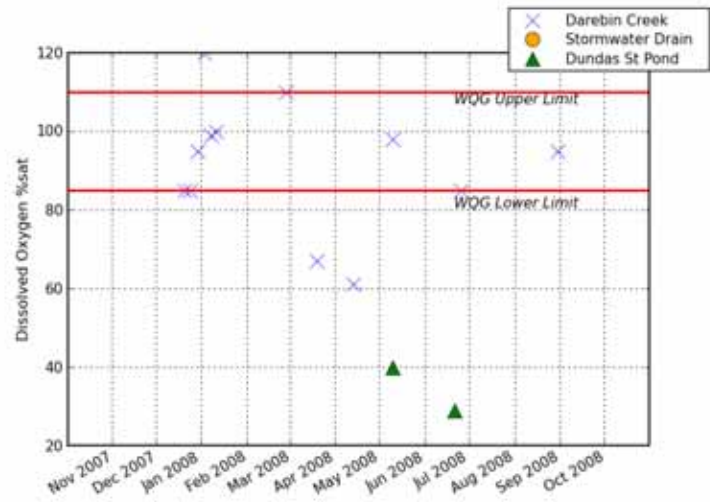
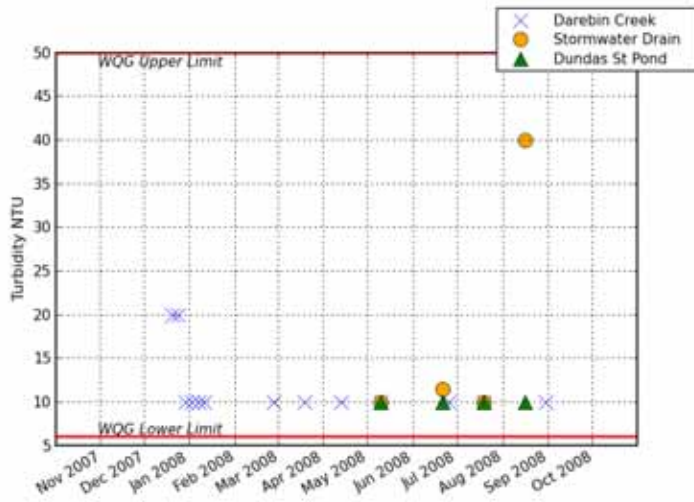
There have been two components to the monitoring so far: physical and chemical indicators and macroinvertebrate sampling.

Physical and Chemical Indicators

The graphs below present the data for Turbidity, pH, Conductivity, Dissolved Oxygen, Phosphate and Ammonium for the 3 sites over the course of the project. The lines marked WQG Upper Limit, Lower Limit and Trigger Values are for 'slightly-moderately disturbed' lowland rivers from a report by the Australian and New Zealand Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) titled "Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)" (WQG).

The direct applicability of these guideline values to Darebin Creek may be limited due to the fact that much of its catchment is urban. In terms of the WQG, Darebin Creek may be closer to 'a highly disturbed ecosystem' than a 'slightly-moderately disturbed ecosystem'. Indeed the WQG state that 'The physical and chemical trigger values are not designed to be used as... threshold values at which an environmental problem is inferred if they are exceeded'. The trigger values are defined by the guidelines as 'concentrations... below which there is a low risk that adverse biological effects will occur'.

The guidelines also note that if measured values exceed the trigger values, often site specific investigations may be useful to determine if there is a problem.



It is clear that turbidity measured in the stormwater drain has been higher than that measured in both Darebin Creek and the Pond. The graph of pH is interesting because unlike for Turbidity and Conductivity, the measured values for the Creek frequently exceed the WQG upper limit. It's interesting that the WQG state that the pH is '*naturally very variable among and within ecosystem types and seasonally, and natural biological communities are adapted to the site specific conditions.*'

Looking at the graphs of Dissolved Oxygen (DO), it's clear that the Pond has much lower DO values, probably due to the fact that the water is relatively stagnant. The DO values measured at the Creek were mostly within the range specified in the WQG. There are no values for the stormwater drain, since DO was not measured at that site.

Phosphate values have been found to regularly exceed the trigger value specified in the WQG at all 3 sites. Ammonium values in the Creek have been lower than the WQG trigger value, while higher values have been measured in the pond, and much higher values of ammonium have been measured in the stormwater drain.

Macroinvertebrate Sampling

So far we have collected samples of macroinvertebrates on three occasions at the Creek site, the table below shows our results.

Name of Bug	Bug Score	Abundance		
		31 December 2007	5 May 2008	19 July 2008
Caddisfly nymph	7	70	50	15
Damselfly nymph	6	25	18	1
Dragonfly nymph	6	0	8	0
Water Boatman	4	0	45	1
Snails	3	0	4	10
Aquatic Beetles	3	0	1	1
Round Worms	3	1	2	10
Leech	3	3	0	1
Bloodworms	1	43	0	0
Total Abundance		142	128	53
Total Bug Score		20	32	27
Stream Condition		Fair	Fair	Poor

Without describing in detail the method used to determine the stream condition ratings shown in the table above, the basic idea is that two parameters of a macroinvertebrate sample reflect the stream condition- abundance and bug score. Bug score reflects both diversity and the presence of organisms believed to be more sensitive to pollution.

The applicability of this method to our data is limited, since it does not take into account seasonal variation in macroinvertebrate populations. The recommended times for macroinvertebrate sampling are Autumn and Spring. Thus the significance of the ratings determined for July (Winter) and December (Summer) are probably limited. Nevertheless like the WQG trigger values for physical and chemical parameters, the stream condition ratings provide an interesting point of reference.

Often we have accidentally caught mosquito fish in our net, and on one occasion, what seemed to be a very small eel (~7 cm long).

For More Information

About this project: Michael Sephton, email msephton81@hotmail.com or phone 0403 238 525

About Waterwatch:

<http://www.banyule.vic.gov.au/Page.aspx?ID=290>

<http://www.vic.waterwatch.org.au/index.php>

Water Quality Guidelines:

http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality