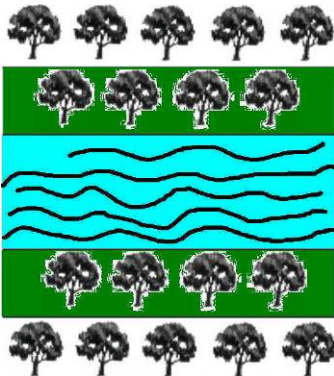


## News from Darebin Creek Dec 2011



Friends of Darebin Creek

**The Friends of Darebin Creek was formed in 1995 to protect, restore and conserve the Darebin Creek and it's adjacent parklands as a natural environment for the enjoyment of the community.**

### Creek Dates for your Diary 2012:

- 23<sup>rd</sup> Feb 2012-AGM DCMC Environment centre 7pm
- Sunday 4<sup>th</sup> March Clean up Australia Day – 10-12am (details TBA)
- April event TBA
- Sunday 27<sup>th</sup> May – weeding Electric Spur

### Xmas Party - December 2<sup>nd</sup> Fogular Furlan Club



A group of eleven friends gathered for a lovely meal to end a busy year in tending the creek!!! Thank you to all that attended we look forward to your help again next year.

Our 2012 AGM is on Thursday 23<sup>rd</sup> February

2012 at 7pm . More details early next year.

### Weeding Dougherty's Drain – Sunday 27<sup>th</sup> November

By Phillip Orth

Our final weeding event of the year - a group of about 8 hardy friends with Emma our Banyule Bushcrew member gathered together to weed a small area of remnant bushland at the side of the path near Dougherty's drain from encroaching weeds – such as the large grasses in evidence below. In the process we saved some native pelargoniums (not geraniums thanks Emma), kangaroo apples and native violet.

After the patch was much restored , Emma took us on a wildflower walk up to an enclosed remnant patch of vegetation close to the creek where various plants such as native raspberries and dianella were flourishing , in the process passing some previous friends plantings where flowering native tea trees , cassinia and wahlenbergia (native blue bells) were in evidence.



The crew start their weeding



Adrian catches a big one!!

## Nov 17<sup>th</sup> - Meeting DCMC Environment centre 7pm

By Phillip Orth

At this meeting a number of events and issues were discussed – please see below

- 1) Review of High Noon Festival. High Street Northcote  
Very successful event – 9 new members and 56 new email addresses were obtained.
- 2) Malahang Festival – West Heidelberg.  
6 new email addresses obtained.  
A number of new activities to be used to garner interest at the festivals was proposed such as giving out put plants or gum nut planting for the children.
- 3) FODC Legal Liability – Peter Grenfell confirmed that DCMC could provide coverage for friends events even if they were not physically present as long as they were associated in literature publicizing event. This would allow different events such as bushwalks and bike rides along the creek without a bush crew member of the council needing to be there.
- 4) FODC Hats and Caps – this was discussed and thought to be worth pursuing.
- 5) **Pictures and Drawings for new Cards.** If anyone has any lovely drawings or knows of anyone who would be willing to donate hand drawn pictures or paintings for cards please let us know. Email back to [Philorth@iprimus.com.au](mailto:Philorth@iprimus.com.au) with details.
- 6) **SPEAKER FOR AGM** - Again we are looking to source a speaker for our AGM in February - a number of suggestions are being pursued but if anyone knows a good speak or someone that has historical information about the creek that may like to speak to a small group – please let us know on the email above.

## October 30<sup>th</sup> – Hand weed Electric Spur, Heidelberg

By Michael Sephton

On Sunday 30<sup>th</sup> October, six friends gathered along with Damien from BCC to continue weeding work at Electric Spur. Most of the session was spent removing Broom (*Genista monspessulana*), but as it became more difficult to find Broom, we spent some time weeding around the most recent FODC planting. Some parts of the site continue to be dominated by exotic grasses such as Broom grasses (*Bromus*), Veldt grasses (*Ehrharta*), Fog grass (*Holcus*) and Hair grass (*Aira*), but in other areas, indigenous grasses such as Themeda, Danthonia & *Microlaena* and indigenous saltbushes and herbs (eg. *Acaena*, *Dichondra*) are doing well.

Most of the orchids at the site seem to have finished up for the year, but we spotted a couple of onion orchids (*Microtis* sp.). Also found a Yellow Rush Lily (*Tricoryne elatior*) in good health, expecting it will be flowering later this year.



Onion Orchid



Adrian with barrow of weeds

## September 25<sup>th</sup> cut and paint woody weeds, Bundoora Park Grasslands

By Phillip Orth (with assistance on plant names by Michael Sephton)

On a bright sunny Sunday a number of Friends grouped together in the wildly overgrown grasslands in Bundoora park to cut and paint some fairly large broom plants in the grasslands. After two hours of extremely hard work – a full trailer of mature broom had been collected and many seedlings removed. We also had a nature walk after the weeding and enjoyed a very informative talk from the bushcrew about the native wildflowers we found.

Some of the plants identified were Common Woodruff: *Asperula conferta*  
Chocolate lily: *Arthropodium strictum*, Black anther flax-lily: *Dianella admixta*  
Milkmaids: *Burchardia umbellata*, Blue devils: *Eryngium ovinum* ( not flowering at the moment)

Other plants in the grasslands understorey included:

Kangaroo Grass: *Themeda triandra*

Wallaby Grasses: *Austrodanthonia* sp.

Sheeps burr: *Acaena* sp.

Kidney weed: *Dichondra repens*



Todd and Helen chopping weeds



Phillip with his cut broom



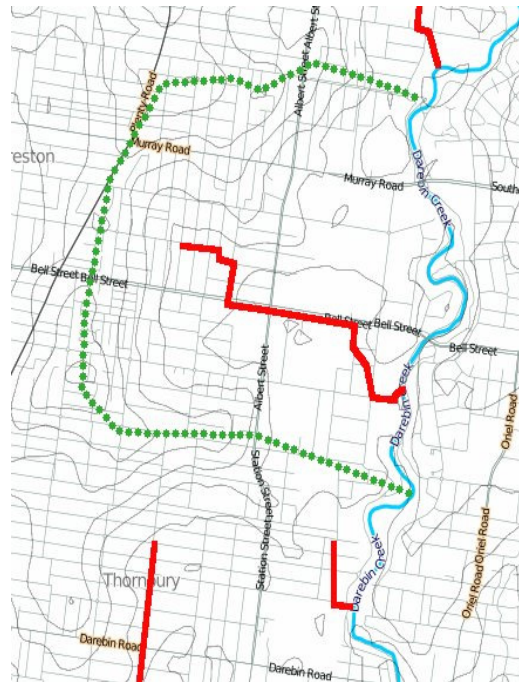
Helen and Leslie catch their breath



*Burchardia umbellata* Milkmaids

## Waterwatch at Bell St Main Drain

The Bell St Main Drain drains a catchment of around 6.6 square kilometres (see green-dotted line below) between Chifley Drive and Plenty Road in Preston. The underground section of the drain opens up into a rocky gorge through which the stormwater flows along about 40 meters before running through two large pipes and into Darebin Creek.



**Anticlockwise from top left: Outlet for underground section, Rocky gorge section, Final outlet into Darebin Ck, Map of Bell St Main Drain catchment.**

We've been monitoring water quality of Darebin Creek at the Bell St Main Drain since May 2008. We measure pH, EC (electrical conductivity), Dissolved Oxygen (DO), Phosphate as phosphorus (PO<sub>4</sub>-P) and Total Ammonia-Nitrogen (NH<sub>3</sub>-N). The table below shows typical values that we get (medians).

Site	pH	EC (uS/cm)	DO (mg/L)	PO <sub>4</sub> -P (mg/L)	NH <sub>3</sub> -N (mg/L)
Upstream	7.5	705	9.5	0.06	0.27
Drain	7.4	1035	5.9	0.16	7.11
Downstream	7.6	735	9.5	0.07	0.41

In most respects the impact of the drain on the creek appears to be small. However for total ammonia, the median concentration downstream is about 50% greater than the median concentration upstream, and the in-drain concentration is over 20 times higher than the concentration in the creek. Most of the ammonium in the drain seems to come from two



seeps within the rocky gorge (see photos below, left: seep a, right: seep b).

The levels of ammonia-nitrogen in these seeps are very high. Whereas the relevant State Environment Protection Policy suggests an objective of only 1mg/L total nitrogen, Melbourne Water tested seep a and b in May 2010 and found total ammonia of 53 mg/L and 23 mg/L respectively, Phosphorus marginally higher than in the creek at 0.23mg/L and 0.16mg/L respectively, and E coli concentrations of <10 organisms/100mL. An interesting point for comparison is that landfill leachate pumped out of the ground at Darebin Parklands has total ammonia in the range 130-670 mg/L.

Using the data we've collected over these few years, it's possible to estimate the nitrogen load by estimating the flow in the Bell St Main drain as follows:

$$Q_d * C_d = Q_u * C_u + Q_{drain} * C_{drain}$$

$$Q_u = Q_d - Q_{drain}$$

$$\therefore Q_d * C_d = Q_d * C_u - Q_{drain} * C_u + Q_{drain} * C_{drain}$$

$$\therefore Q_{drain} = Q_d \frac{(C_d - C_u)}{(C_{drain} - C_u)}$$

Where: Qd, Qu and Qdrain are flows downstream, upstream and in drain respectively, and Cd, Cu and Cdrain are concentrations of total ammonia-nitrogen downstream, upstream and in drain respectively.

In this way we estimate the drain contributes about somewhere around 1.9- 4.0 tonnes per year of nitrogen in the form of total ammonia.

Source	Median Nitrogen (mg/L)	Mean flow (ML/day)	Approximate Nitrogen Load (tonnes/year)
Bell St Main Drain (NH3-N)	7.11	0.76- 2.48	1.9-4.0
Darebin Creek (2010)	1.5	69	37
Yarra River (2010)	2.9	1500	1587

**Note: For Darebin Ck and Yarra River, flow data is from September 2010- September 2011 and N concentration data for 2010. Both from Melbourne Water.**

By these ball-park calculations the Bell St MD appears to contribute somewhere between 5-10% of the total Nitrogen load of the Darebin Creek catchment. So far the source of the seeps has not been found. Aerial photographs from 1945 and geological maps indicate there were quarries right where the seeps are (see photo: below left), but we haven't yet discovered if these quarries were used as rubbish tips and if so what might have been buried in them.



**Macroinvertebrate surveys:** We've done two macroinvertebrates survey each year at Bell St over the last few years. We've found aquatic worms and snails, leeches, glass shrimps, water boatmen and backswimmers in pool sections, damselfly nymphs, stick case and bandit caddisflies, false spider crabs and the occasional dragonfly nymph (see photo: above right), yabby (see photo: above middle), needle bug or water penny. Although this list might seem

quite diverse, our samples sometimes rate quite poorly due to low abundance, low diversity of sensitive taxa or both.

If you would like to help us monitor the creek, can offer any insights or would like any more information , contact Michael at [msephton81@hotmail.com](mailto:msephton81@hotmail.com).

## Friends Photos

Friends Member Margot Hitchcock sent us this amazing photo of a brown snake sitting serenely in her garden in West Heidelberg..... it may look serene but keep the kiddies away from it. We welcome any interesting photos from our members – just email to [Philorth@iprimus.com.au](mailto:Philorth@iprimus.com.au)



## Get Involved in Darebin Creek Events in 2012 ☺

- 23<sup>rd</sup> Feb 2012-AGM DCMC Environment centre 7pm
- Sunday 4<sup>th</sup> March Clean up Australia Day – 10-12am (details TBA)
- April event TBA
- Sunday 27<sup>th</sup> May – weeding Electric Spur

Got anything to say? Contributions to the FODC newsletter always welcome. Please forward to [fodc.articles@dcmc.org.au](mailto:fodc.articles@dcmc.org.au) or [philorth@iprimus.com.au](mailto:philorth@iprimus.com.au)

## Contact Numbers

Convenor/ Membership Officer	Sheryl Sibbison	9467 1370 (h)	<b>Water Pollution? (quote drain sign's number)</b> Melb Wildlife Sanctuary & Indigenous Nursery	<b>9695 2777</b> 9479 1206
Adrian Hotchin	Events	0409 133 049	Shopping Trolley Hotline	1800 245 022
Phillip Orth	Newsletter	0419376244	Litter Report Hotline	1800 352 555
<b>Darebin Creek Management Committee</b>		9499 4454	<b>Wildlife Rescue Hotline</b> <b>Vic Police Motorcycle Squad</b>	<b>0500 540 000</b> <b>9380 7283</b>

NOTE: The Friends of Darebin Creek **Membership Brochure** comes complete with map and information in seven languages. Call Sheryl (tel no above) for copies to distribute to neighbours, schools and clubs, and other centres.

Visit our website at [www.friendsofdarebincreek.org.au](http://www.friendsofdarebincreek.org.au)