



Sutherlands Creek – So dry... but not for long

A small group of Waterwatchers – Carolyn Edwards, Bruce Guy and I – had the pleasure of being the FoBR working party for the May activity. We visited the Sutherland gorge to monitor water quality for the quarter and were struck by how dry the landscape was.

As we walked along Stawell Street, we noticed how the undergrowth had thinned and when we reached the first creek crossing, it was an empty streambed. Further along, we were thankful for the recent track work that allowed us to easily detour a huge fallen tree on the Deadmans Track. We reached our destination and realised the only water present was in isolated refuge pools near the rocky gorge.

We did our Waterwatch activities testing physico-chemical parameters (ie dissolved oxygen levels, pH, salinity, turbidity ie the cloudiness of the water and reactive phosphorus), and we also did a water bug survey. We were surprised by the differences observed between refuge pools. Some pools were turbid and stained brown, and we observed deteriorating water quality with the aquatic fauna struggling to survive. However, the largest pool was a sanctuary with good water quality, the

presence of algae and instream vegetation, deeper water, and many insects and crustaceans present.

After lunch, we made an executive decision to spend the rest of our time walking the creek and enjoying the park. Carolyn and Bruce recognised the following birds: Sulphur-crested Cockatoo, Crimson Rosella, White-eared Honeyeater, Red Wattlebird, Spotted Pardalote, Red-browed Finch, plus a couple of raptors. We saw some Inkweed below the gorge that we resolved to remove on our next trip down Deadmans.

We are looking forward to seeing the site again in spring – after some good rainfall! If you are interested in bird watching, you should consider visiting the Eremaea Birds website <http://www.ereamaea.com/>. It is a birding atlas built from members' bird lists and includes Carolyn's observations from that day.

Deirdre Murphy



Geocaching – An outdoor family friendly activity with a techno difference!

Have you heard of this activity before? Recently I spoke with someone who enjoys this outdoor hobby. **Geocaching** is the free high-tech treasure hunt where you use your GPS receiver to find caches hidden by other players. It's a great way to be outdoors, enjoy the environment and revel in the thrill of the hunt!

Are you wondering how Geocaching relates to Friends of Brisbane Ranges? Well there is a cache stashed in the Steiglitz area so it is likely that one day you might bump into a geocacher enjoying one of the Park's tracks. One of the comments about the Steiglitz cache on the website was "We enjoyed the walk around town and then the walk to the cache. We loved the gorge on the way." For more information go to <http://geocaching.com.au/>

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In this issue

- Sutherlands Creek
- Wombats in Brissies
- World Environment Day
- For Your Diary
- A Walk to a Wall

Upcoming Events

Sunday 16 June

Burchell trail definition between Fridays Camp Ground and The Crossing picnic area.

Meet at the Anakie Depot at 10am

- Morning: Fridays camp ground to Durdidwarrah Road and return to Fridays for lunch.
- Afternoon: walk starting from The Pines carpark, Durdidwarrah road and follow Burchell trail along Yankee Gully to The Crossing Picnic ground.
- We would do a car shuffle to avoid walking back to Durdidwarrah Road.

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Wildflower Show

Sunday 13 October 2013

We hope this date is already in your diaries! Next committee meeting will be held later in June so if YOU have any ideas, suggestions or [dare we say] offers of help, please email us at friends_br@yahoo.com.au soon.

We are currently hoping for some more rain for our plants - both in the depot nursery and in the park so we can have a wonderful display this year.

Wombats in Brissies

There has been much talk about Wombats lately with some sightings in this area where they are not normally found. Unfortunately our most recent evidence is very sad with two females found on the road in just one month.

The first one was found on 10 April near the base of 'cutting' on Geelong-Ballan Road. Colin took this female to the Museum where they do testing including DNA. We have not heard anything back as yet.

We had heard from neighbours about at least one more near the Stony Creek bridge on Staughton Vale Road and some people had teased Judy Locke when she reported seeing it. Wombats prefer to dig their main shelters on slopes above creeks and gullies, and feed in grassy clearings. Sadly this female was also found on side of the road near bridge on 8 May.

We are concerned that these animals may be inappropriate releases into the area however we have heard of other areas where wombats are moving in. If they are moving in we sincerely hope they are able to make a good home.

If you see any signs of wombat activity, diggings etc PLEASE let us know and we may be able to use our remote sensing cameras to check it out.

Also a good time to remind everyone to please be very careful and drive slowly on the roads.

The Bare-nosed wombat was, until recently, generally referred to as the Common wombat. It is also known as the Coarse haired wombat, the Naked nosed wombat, the Forest wombat, the Island wombat, and the Tasmanian wombat. Its nickname is "The bulldozer of the bush"



World Environment Day

Wed 5th June

World Environment Day is held each year on June 5. It is one of the principal vehicles through which the United Nations (UN) stimulates worldwide awareness of the environment and enhances political attention and action

Activities to celebrate World Environment Day (WED) in our region:

This World Environment Day (WED), The Wilderness Society is holding a special event in the CBD. This event will celebrate Victoria's majestic native forests and raise awareness about the urgent need to protect them from destructive and unsustainable logging They want to make this the biggest Melbourne World Environment Day yet.

WED - Think outside the City Block!

Meet at 12.45pm, Wednesday 5 June 2013 at Melbourne CBD- Corner of Bourke and Elizabeth Streets. Show your love for our forests and come wearing a green top on the day. Hundreds of people will join hands around one of Melbourne CBD's 2 hectare city blocks. This will be a representation of the threat to our forests and also the strength of the growing community standing up to this threat. Every day, **8 city blocks** of Victoria's forests are logged, mostly to make cheap products like copy paper.

World Environment Day is also being recognised by Corangamite Waterwatch through a display of Fibre Artworks at Colac Performing Art Centre (CoPAC). Works have been sourced from schools and community addressing the theme "Anything and Everything to do with Water and the Environment". The display is open through the month of June.

For your diary! Join us

Sorry for confusion re events!

Last month we placed a deliberate mistake in the newsletter to test all our Friends out to see who would turn up on Saturday or Sunday. NO, seriously we do apologise for the mistake on the front page of the newsletter which did cause some confusion and inconvenience. We will try hard to ensure we do not mess it up again.

Following our survey last year, we gave Saturday events a try but they don't appear to be more popular than Sundays and coupled with the changes due to the public holidays early in the year, we may have confused people a bit and attendances have been down on some activities this year. Perhaps this is due to our planned program of park improvement work projects this year!?

However this has not stopped our small dedicated crews from carrying out some valuable work in our park. Thank you to each of you - you know who you are!

Again our June event will be a week later than usual so hope you can make it.

Sun 16 June Burchell trail definition between Fridays Camp Ground and The Crossing picnic area.

For the June activity, we will do some trail definition (ie trimming branches and marking edge track with branches or rocks) of the Burchell Trail between Fridays camp ground and The Crossing picnic area.

- Morning: Fridays camp ground to Durdidwarrah road and return to Fridays for lunch.
- Afternoon: walk starting from The Pines carpark, Durdidwarrah road and follow Burchell trail along Yankee Gully to The Crossing Picnic ground. We would do a car shuffle to avoid walking back to Durdidwarrah road.

Sunday 14 July Lower Stony Creek – remove suckers from Aqueduct and/or Boneseed in Lower Stony Creek area off Marshalls Road

Sunday 11 August Annual General Meeting and Waterwatch – Sutherlands creek and Anakie Gorge

Sat/Sun 7/8 Septembe Prepare plants for Wildflower Show and Watsonia removal at Ballan Rd firebreak

Sunday 13 October

FoBR WILDFLOWER SHOW

Sunday 10 November Waterwatch – Sutherlands creek and Anakie Gorge

Saturday 14 December FoBR end of year evening celebration

Heritage Walk: Colin Cook recently led a Heritage Walk to Lower Stony Creek Reservoir. The reservoir and other historical water supply structures are part of an assessment by the National Trust. Some of the history of the structure is given in the following article recently been published in the Meredith Newsletter.

A Walk to a Wall

Colin Cook

On the 28th April I conducted a guided walk to the Lower Stony Creek Reservoir as part of the National Trust Heritage Festival. The theme for this year's festival was Community Milestones and the reservoir certainly represents a significant milestone to the area.

Located in the Brisbane Ranges, the Lower Stony Creek reservoir was built between February 1873 and June 1874 to supply water to the growing city of Geelong. It has the distinction of not only being the first concrete dam built in Australia, but only the third such dam in the world. Its successful completion gave Geelong its first reliable water supply which was essential for its industrial and commercial growth, for public health and protection from fire.

A troubled history

Construction of the Upper Stony Creek storages 6 kilometers upstream and of the reticulation system to Geelong commenced in 1866, but water was not supplied from this system until 1873. The Upper Stony Creek reservoir was an earthen wall with a clay puddle core. Design and location faults led to the slumping of the dam wall as soon as it began to fill. Major leaks also occurred in the brick-lined aqueduct intended to carry water from the reservoir to a pipe-head reservoir at Anakie. The failure of the Upper Stony Creek dam wall and the subsequent loss of any water storage capability until it could be repaired, resulted in the decision to construct a second water storage in the area.

A new dam

This site was chosen for the new dam with the decision based on the size of storage which could be achieved, the ease with which a dam wall could be constructed, and the nature of the ground on which the dam wall was to sit, as poor choice in this last matter had contributed to the failure of the Upper Stony Creek dam wall.

Novel design

The design of the dam wall was undertaken by George Gordon, the newly appointed Chief Engineer for Water Supply. Gordon applied recently developed principles for dam wall stability to achieve the desired wall strength without excessive construction costs. At the time, civil engineers relied more on rules of thumb than on sound mathematical principles. Gordon's design represented a significant contribution to dam design, and served as an example to other engineers around the world.

Innovative construction

The engineer selected to carry out construction of the dam wall, Edward Dobson, made a brave decision in light of the scrutiny his works would have been under: the dam wall would be constructed with concrete. Standard British practice at the time was to build earth embankment dams, and all the dams built up to that time in Victoria followed this practice, so the use of a concrete structure represented a significant innovation. At the time, Portland Cement concrete was only beginning to be used as a major construction material. The alternative material, masonry, was ruled out due to the cost and the length of time required to construct a strong enough dam wall. The wall was constructed of a mixture of cement, sand and metal screenings mixed on site and carted to the dam wall by hand barrow. The dam wall was built up layer by layer, with each course being thoroughly rammed down to ensure complete bonding to the layer below. At completion, the total volume of concrete mixed, barrowed and poured was 5096 cubic yards (3900 cubic metres).

Pipeline history

The reservoir required a pipeline to connect to the existing pipe-head reservoir at Anakie, from where it would flow to Geelong. However, laying a cast-iron pipe through Anakie Gorge presented numerous obstacles for such a short distance. There were six tunnels with a total length of 1915 metres, twenty-one creek crossings with sixteen stone weirs, two heavy rock side cuttings and two retaining walls across gullies. A considerable amount of road-making was required before the pipes could be distributed along the pipe-track. The pipes, weighing up to ½ ton each, were initially brought by horse teams to the summits of the leading spurs. Transport was then undertaken by bullock teams, with the drays being hauled into the gorge with trees lashed behind them to check the speed of the descent. The main tunnel from the end of the gorge to the pipe-head reservoir ran through the Anakie Gap and is 1733 metres long, but only 2 metres high and 1 metre wide. When laying the mains through this tunnel, the pipes were lowered down vertical access shafts and then hauled to position on a temporary tramway. Dobson, the engineer, drily reported that the confined space made this work "somewhat troublesome".

Graceful retirement

The dam was completed in 1874, with no delays due to strikes, accidents or construction failures. It served as an important, though relatively small, part of Geelong's water supply for over a century. In 1998, upgrades to the water supply system meant that the Lower Stony Creek reservoir was no longer required. Barwon Water began negotiations with Parks Victoria for transfer of the reservoir and its catchment land to the Brisbane Ranges National Park. Formal hand-over of the land and the reservoir occurred in 2010.



A view of some of the construction team, and below, the Lower Stony Creek Reservoir. Australia's first and the world's third concrete dam wall.

