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Biddip



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Newsletter of the Toodyay Friends of the River

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The Toodyay Friends of the River are grateful to the Wheatbelt NRM for their on-going support in producing the Biddip newsletter



wheatbelt
natural resource
management

Presidents message

by Sarah Dudley

AS the welcome rain pours down at last, the recent plantings at Boyagerring Brook send out a cry of relief!

Volunteers spent four days last month planting home-grown native seedlings and weeding so as to reduce the competition and maximise water retention. In the last 12 months TFOR volunteers have completed 248 working-bee hours. Now double that figure at least to 500 hours, taking into consideration all the time spent applying for grants, liaising with the Shire and other parties, attending meetings, managing finances, collecting water samples, taking photos, completing seasonal monitoring point surveys, completing editorial tasks, maintaining tracks, overseeing bushfire mitigation work, working at the Seed Orchard, watering new plantings, completing administration tasks, learning how to manage snake bites and do effective CPR, applying for grants, travelling to meetings, maintaining and purchasing equipment, cooking for events... the list is endless! All reflective of each volunteer's passion, commitment and time available to share.

However relying on passion and commitment alone can make a volunteer group vulnerable. Plans, procedures and understandings are required, thus providing both a clear vision for the group as well as clear-cut boundaries. I recently attended a workshop run by Volunteering WA on 'Succession Planning'. One section was devoted to 'Generational Volunteering', examining the volunteering traits of 'Gen Y's', 'Gen X'ers, 'Boomers' and 'Seniors'. All quite unique and different! Which group currently has the highest rate of volunteering? The Millennials (Gen Y)! Were you correct in your guess?

Two other aspects of this workshop which were food for thought were:

When selecting or accepting a new volunteer, the importance of ensuring they are both in harmony with the group's vision and are mentored.

78% of potential volunteers want to help – but few do.....one of the reasons being they don't know what they might be expected to do, so the organisation needs to be clear as to their expectations and the new volunteer's skill set and reason for volunteering.

As my three year term as President draws to a close, I wish the new management challenging vision and much joy in achieving their goals. I thank the supportive team of all 45 TFOR volunteers which has made the last three years such an enjoyable and enlightening roller-coaster ride and wish them all well in future riverine endeavours.



Left: Sarah and Grahame Malone installing a monitoring point next to the Avon River, behind the Anglican Church.

Photographer unknown

Honorary Life Membership for Retiring Secretary Dr. Robyn Taylor



CITATION FOR HONORARY LIFE MEMBER, DR. ROBYN TAYLOR

Robyn, it is my pleasure to invite you to become an Honorary Life Member of Toodyay Friends of the River in recognition of the many years of loyal commitment to this conservation group.

You have been a member since 2002. 17 years has seen a lot of change and development yet you have always shown unwavering dedication to TFOR's aims and objectives. You were President from 2013 - 2016, Secretary from 2007 - 2012, then again from 2017 to the present.

Along the way, not only have you become a keen observer of changes to Boyagerring Brook and become an advocate for its improvement and care, you have provided in-depth professional knowledge re the important historical aspects of the Avon's environment, its culture and its tributaries.

We thank you wholeheartedly for your dedication and ask you to accept this honour in recognition of your commitment and service.

A surprised and delighted Robyn receiving her Honorary Life Membership from President Sarah.. Robyn becomes the sixth TFOR member to be given this great honour. Congratulations Robyn!

Photo Guy Boggs

Riparian restoration - a long term project

Part 1

The land alongside creeks and rivers – the riparian zone – provides a unique habitat for plants and animals. The vegetation helps to stabilise the bank and purify the water entering the river. But it can be quite a fragile environment, one that is easily degraded. This has happened to the bank of the Avon River in the centre of Toodyay, and has prompted action from Toodyay Friends of the River (TFOR).

TFOR members have started on a new, five year project to restore the riparian zone on the south side of the Avon River in the centre of Toodyay. The focus is on one hectare in the vicinity of the Pelham Brook Outlet behind the Anglican Church. We aim to re-establish a healthy, diverse and evolving ecosystem appropriate to the area by sensitive and appropriate planning and eventual revegetation. In doing so, we want to maximise the opportunities for community involvement and education.

Currently, during periods of heavy rainfall, water from the modified Pelham Brook, with run off / storm water from the town car park and neighbouring streets gushes through the outlet. This causes significant riparian erosion and degradation.

The project is a complex one, requiring some engineering work as well as a revegetation phase. There are also multiple stakeholders whose needs must be considered. To ensure we 'get it right', we are starting with a planning phase, and will be employing a consultant to undertake this work. This has been made possible through a \$5000 grant from the Wheatbelt Natural Resource Management *Healthy Soils, Healthy Rivers* small grant scheme.

Meanwhile, TFOR members have made a start on monitoring the quality of the water coming from the outlet. Water sampling has commenced to determine the levels of the main pollutants and the quality of the water. The samples will be analysed for nitrogen, phosphorous, acidity/alkalinity (pH) and total dissolved solids. The analysis is being done by the ChemCentre in Perth, and is being paid for by TFOR.

A photographic record of the flow of water flow and its impact is being kept. The pictures below were taken during winter rain, on 27 Jun 2019.

Regular updates on the project will be provided through *Biddip*.



Left: Toodyay Friends of the River Working Bee, 16 August 1998. Photo looking towards the outlet (the green strip in the middle of the image). Heaps of false bamboo (Arundo donax) and other weeds have been cut ready for burning. From left can be seen Martin Revell from the (then) Water and Rivers Commission; Steve McCabe (Community Landcare Coordinator); Bob Frayne (bending) & Andrew Marsden. In the background are Desraé Clarke, Olivia Jones & Maggie Marsden.

Photo: Wayne Clarke

Riparian restoration



Above: Pelham Brook Outlet, behind St Stephens' Anglican Church

Photo: Bridget Leggett

...continued Page 6

Changes in the Avon River - over time

by John Masters & Sarah Dudley

GALAHs and Corellas were not recorded in Toodyay in the 1940s. Since 1969 rainfall has gradually decreased by 25 per cent. The drying factor is one factor which has led to some species of birds which were originally common in eastern and north-eastern habitats and rare in Toodyay, to move westwards - hence the current large flocks of Galahs and Corellas which followed in the 1960s. The Crested Pigeons are also east-west migrants.

The River Training Scheme (RTS)

187km of the Avon River between Toodyay and Brookton was 'trained' (River Training Scheme – RTS) in the late 1950s and 1960s post the 1955 Toodyay flood. 'Training of the river' aimed to reduce damage caused by flooding by increasing the water-carrying capacity of the river. This involved some river straightening, increasing the depth of the channel by several metres, the removal of vegetation and debris, all resulting in an increase in the water volume and rate of flow.

Sadly, the deleterious effect of this disturbance on an ancient ecosystem has led to the transport of huge quantities of sediment which filled the ancient river pools.

The effect of the destruction of these ecosystems, coupled with increasing water salinity, has led to significant changes to the bird life along the river.

The reed beds have gone which sheltered river birds such as the Bittern species and Crakes prior to the training. The thick vegetation, home to many bird species, found along relatively undisturbed banks and islands, was destroyed.



Above: Degraded section of the Avon River, full of sediment. Photo upstream from Dumbarton Road crossing.

Photo: Wayne Clarke

Changes in the Avon River - over time

The Stone Curlews, Banded Plovers, Crakes, Bitterns and Regent Parrots are gone and understory birds such as Silvereyes, Splendid Fairy Wrens, Robins, Rufous Whistlers, Fantails and Willie Wagtails, to mention just a few, are still about but in much fewer numbers than in pre-river training days.

The increasing salinity and sedimentation have both contributed to the decline of Little Black Cormorant sightings now as availability of their food has dropped.

The Great Crested Grebe is even rarer as it frequents aquatic habitats with fresh, not saline, water. Other well-known factors such as the introduction of the predators like foxes and cats have led to changes in the numbers of water birds and those that feed off them. The Whistling Kites and Brown Falcons are now rare sightings as are the Blue-billed and Freckled Ducks.

Conversely, some species have adapted well to the changing ecosystems around them, particularly those species found on freshwater farm dams such as the Australasian Little Grebe and Wood Ducks.

Teal, Shelduck, Coots and Black Ducks all seem to have been able to adapt to the post-training environment with its altered conditions.



Above photos: Australasian coot. Chicks: Jenny Isbell Adult: Wayne Clarke

Construction of railway lines, bridges, roads with man-made drainage, together with the proliferation of agriculture, has resulted in the loss of wetlands and the accompanying fauna often found alongside feeder brooks or freshwater granite hill-top run-offs which used to flow into the Avon. One of these is Broad Swamp on the south-side of Northam Toodyay Road. While the drained swamp is drastically reduced in size, some Melaleucas still survive and the swamp receives occasional good quality seasonal freshwater as in 2005 and 2018. Last year 64 species were recorded there, most of which were water birds.

The latter has seen a change in our river ecosystems over time and presents many challenges for those species which are able to adapt.

The Friends of the River might be a 'drop in the ocean' contribution to rectifying some of the man-made damage, often unwittingly caused, but the momentum is maintained as a volunteer group to try to repair and restore where and when it can.

BIRDS ON THE RIVER

by Desrae and Wayne Clarke

MONDAY May 27 2019 was a cool fresh autumn day and one to enjoy the bird life along the river. Despite the lack of rain the river has a number of pools, sandy spits and muddy edges ideal for both water and land birds.

As we arrived at the shelter at Millard Pool we were delighted to see a very large flock of Tree Martins flying in their twisting and turning movements obviously enjoying insect prey.

Well-known Naturalist John Dell, one of the Toodyay Naturalist Club's three patrons, has stated that the Tree Martin numbers are diminishing dramatically in the Perth suburban areas. The diet of these small birds is a variety of insect species. Could the expansion of the city boundaries and the draining of swamp areas for housing contribute to the lack of prey of insectivorous bird genus?



Above: A tree martin undertaking some acrobatic movements.

Photo: Desraé Clarke

Walking on we saw, and heard, many land birds in the paddock grasses, in the bushy vegetation edging the river and nearby trees such as the Raven, Gerygone, Willie Wagtail, Red Wattlebird, Magpie, Striated Pardalote, Silveryeye, Ringneck and Weebill. A pair of Australian Shelduck was also observed quite a way from the water.

The Little Black Cormorants flew in great numbers of fifty, plus, back and forth up and downstream; Little Pied cormorants did likewise but in smaller numbers. Ducks were plentiful with a great number of Grey Teal but only one Pacific Black Duck. Many Coots were busy paddling about and a pair of Little Grebes with three fluffy, brown youngsters nearby testing their swimming ability, were sheltering closer to the river bank.

Further along was a lovely surprise to see six Pelicans on a sandy spit sharing it with a second pair of Shelduck, two Yellow-billed Spoonbills, two Sacred Ibis, a Red-kneed Dotterel and four Black-winged Stilts. The stilts were squatting on the sand and may have been nesting.

Three Black Swans swam by with two smaller than the third. Several weeks previously we had seen two young birds of brownish colouring with a third, who was obviously a parent, at nearby Red Banks Pool. It may appear they are the same three birds as observed recently.

From the past...

Toodyay is One of the Only Two Country Locations Selected in the PRISONER WORK CAMP PROJECTS

TOODYAY was recently announced as a successful partner in the Prisoner Work Camp Scheme. This scheme takes low risk prisoners who are nearing the end of their sentences and involves them in worthwhile community work to improve their chances of integration once released.

The prisoner work camp in Toodyay will concentrate on the Avon River and will undertake works as outlined in the Water and Rivers Commission 'River Recovery Program'. Weed eradication, reinstatement of the river banks and general improvement of the river environment will be undertaken during this project. Toodyay is one of the only two country locations selected in the Prisoner Work Camp project and is a fitting reward for the efforts made by both Wayne Clarke (Friends of the River) and Kelly-Anne Charles (Community Development Officer) [for the Shire of Toodyay].

I encourage you all to take a close look at this program once underway (September - November 2000) and assist these people in helping to become a part of our community.

*Above transcript from the Shire of Toodyay Newsletter, Volume 1 Issue 3 Millennium Edition; Summer 1999.
With kind permission from the Shire of Toodyay*

WORKING with the prisoners was a unique experience. The women (from Nyandi Women's Prison located in Bentley) travelled to Toodyay by bus on a Monday, to what was then Wandoo Hills Retreat (now a private residence), where they were accommodated in dormitories until Thursday; during the day they were taken into town to undertake projects along the river, then back to Nyandi on the Friday.

Much preparation went on beforehand, with a comprehensive application submitted to the Ministry of Justice (MOJ) completed between Kelly-Anne Charles, and Wayne. The Shire endorsed the project at its July 1999 meeting and then various letters of support were obtained. A public meeting was held in November 1999 - run by the MOJ - to test community reaction, and they obtained full support.

Over the Christmas/New Year break the work plan was drafted and, on 7 March 2000, the program commenced [coincidentally, that afternoon, Gaven Donegan and Wayne went to see Oriel Lloyd, and for him to sign the subdivision application for Lloyd's Reserve to become a reality].

A copy of the Work Plan can be found on Page 10.

Introducing a newer member of the TFOR team, Bill Falconer

BILL is formerly from Girraween and had worked with the Water Corp for many, many years. He left the company for several years then returned till his retirement in 2016.

Bill's son had bought property within the Toodyay Shire and Bill was a frequent visitor to enjoy both his family and grandchildren and also the peace of the country life. So, on retirement, where did Bill decide to live? - in the peace and quiet of Toodyay!

Although retired Bill decided he would involve himself in some aspect of volunteerism. He was passing by Drummond House and when reading the notice board of the TFOR was approached by one of the members of the joint group manning the shopfront to come into the building and have a chat. He was impressed with the idea of rehabilitation work on the river and decided it was 'his scene' and joined.

Bill is a willing worker on the Sunday working bees and, when possible, is also often amongst the members on the Monday working group.

Bill really enjoys the volunteering aspect of the group and gives a valuable contribution to the various physical works carried out by the members. Welcome and thank you for your enthusiasm, Bill.

Ministry of Justice

Toodyay Prisoner Work Camp - Program

Commencing at Duidgee Park, leading south towards Newcastle Park..

3 main plant types targeted for removal:

- Tamerisk
- Castor Oil Plant
- Bamboo

Tamerisk

- Cut plants/trees as far as possible, use spray cans to mark roots, trees will be removed by backhoe following identification.
- Cuttings to be stockpiled

Castor Oil Plant

- Pullout small plants (30cm and lower), larger plants cut to ground level, remove roots with Mattock.
- Seeds need to be placed in bag to stop germination
- Cuttings to be stockpiled.

Bamboo

- Cut plants to ground level, use mattock to remove root system
- Cuttings to be stockpiled

Stockpiles

Two different stockpile points

- Green Waste
- Other Waste

Brush-cut areas for green waste collection. Waste will be removed by loader once collected. Use rear of Anglican Church as collection point for other waste.

Trees

Trees will be marked with surveyors tape. These trees must not be removed and areas around them cleaned to assist their long term growth.

Long Term

Revegetation of the cleaned areas with river grass and opening of this area to establish a walkway between Duidgee Park and Newcastle Park.



Left: A baby Gould's Monitor found hiding at Rick and Rebecca's

*Photo:
Rebecca Meegan-Lowe*

FUN FINDING FUNGI

by Rebecca Meegan-Lowe



Above: *Gymnopilus purpuratus*



Right: *Mycena* sp.

Photos: Rebecca Meegan-Lowe

Cyclone Joyce, in January 2017, affected the Avon River in ways that are still very evident over 2½ years later. Fast flowing floodwater eroded river banks in many places and swept away both trees and understorey. Although there has been some regrowth, many trees did not survive. Along the riverbank adjacent to our property, large patches of Soursob (*Oxalis pes-caprae*) are now flourishing in areas that were previously shaded.

While exploring the riverbank in late July this year, I was surprised to find a diversity of fungi growing in nooks and crannies on dead trees, particularly Paperbarks (*Melaleuca*). Since the flood, fungi have gone to work, helping to break down dead wood and return nutrients to the soil.

Mycologist Prue Anderson kindly identified five different species among the photos I sent her. They are *Gymnopilus purpuratus*, *Mycena* sp., *Pycnoporus coccineus* ('Scarlet bracket fungus'), *Piptoporus australiensis* and *Fomitopsis lilacinogilva*. The abbreviation "sp." after some names indicates that the species has not necessarily been identified or even named yet. There is clearly an enormous amount of taxonomical work still needed in the world of mycology. I read that *Mycena* is a large genus and that some species can be distinguished only by examination of microscopic features.

I was curious to read that *Piptoporus australiensis* is commonly called 'Curry Punk' on account of the curry aroma that develops as the species ages. I also learnt that some species of *Mycena* smell of chlorine and there are reports of at least one *Mycena* species being bioluminescent.

I was keen to revisit the fungi as soon as possible and to search for ones that I may have missed. There are sure to be other fungi, perhaps very small, hidden in deeper layers of rotting wood, or even underground. There had been some warm days, however, and I wonder if this accounts for the apparent disappearance of most of the fungi by the following week.

It hadn't occurred to me to look for fungi in the period following the floods of 2017. As the dead trees continue to rot away, I'm keen to keep exploring and learning about it each year.

**Newsletter of the
Toodyay Fiends of the River (Inc.)**

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Above: Some of the participants in the 2019 Annual General Meeting are (back left) Beth Frayne; Wayne Clarke; Maurie Jackson; Sarah Dudley; Bill Falconer; John White; Edna & Andrew Carr.

Seated are: Grahame Malone; Bethan Lloyd; Robyn Taylor; Bridget Leggett & Desraé Clarke

Photo: Guy Boggs