



30
YEARS
1994 - 2024

BIDDIP



Newsletter of the Toodyay Friends of the River



A view of the Bird Hide on the Avon River, very dry for the end of April 2024. Image supplied by Bridget Leggett.

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**2024 is our 30 year
anniversary!**

We gratefully acknowledge the Ballardong, Yued and Whadjuk Peoples as the traditional custodians of this land and duly respect a deep and unbroken connection to their cultural, physical and spiritual existence. We pay respect to their Elders, both past and present, and emerging.

President's Pen

Welcome everyone to our 30th Anniversary year, a significant one, which we are celebrating with a number of special events being held across 2024.

We've already begun with two well-received events, the first being a First Aid practice session in February. Our new Management Committee member and St John's Volunteer and Trainer, Sharon, did a great job organizing and presenting the session in Resuscitation together with a Snake Bite refresher. There was a lot of positive feedback from participants, who found the session a valuable and stress-free learning experience. Thanks go to the local St John's for use of their premises and equipment at no cost.

Then in March, the Waterways Wisdom community forum was a huge success, attracting an audience of about 50 people. Our three speakers were Robert Miles (Chairperson of Noongar Kaartidjin Aboriginal Corporation); Associate Professor, Nik Callow (from Centre for Water and Spatial Science, UWA); and Dr Dimity Boggs (Project Manager at Wheatbelt Natural Resource Management and Landscape Ecologist). Each thoroughly engaged the audience with their presentations. Organisation of the forum was a team effort: thanks to Bethan and John, Gary for the delicious afternoon tea, and others who contributed to this very well-received event.

If you attended the forum, I hope you had the opportunity to see another 30th Anniversary offering: a series of three photo-boards displaying photo's gathered over the three decades of TFOR's activities, accompanied by explanatory information. This huge task was carried out by long-term member, Beth, with contributions from other members. It was great to have the display ready for the forum. Members will have the chance to see the display at other TFOR events throughout the year.

A welcome announcement in March was of the completion of the 'West Toodyay Wander' walking track. Greg has worked tirelessly to bring this project to fruition.



Waterways Wisdom forum, featuring speaker Robert Miles

President's Pen cont'd

At the April working bees, members will have the opportunity to test the track and make any finishing touches ready for a 30th Anniversary celebration opening. (opening date and details will be announced soon).

This month begins the working bee season. In addition to the working bees, we have a general meeting, a celebration / opening of the West Toodyay Wander (dates to be confirmed), a raffle/fundraiser in June, and an presence at the Avon Descent in August.

TFOR will have a special presence at October's Toodyay Agricultural Show. TFOR is offering a 30th Anniversary photography prize for adults and children, for photos taken at any location on the Avon River. TFOR members may enter, and please encourage your friends and families to enter also.

Working bees and special events are the visible face of TFOR. But we all know that so much of the work done by Friends is often not seen. For instance, Liz has compiled TFOR's entry into the Landcare Awards for 2024. Our Secretary, Bridget, has spent hundreds of hours, in consultation with JCAFA Steering Group, writing a Resource and Reference document for JCAFA's proposal to have Julimar Forest declared a National Park. Wayne and Melissa have made great progress with developing the website, and are encouraging TFOR members to share the writing of content. Liz and Nikkola are managing the Facebook operation, and welcome our stories and photo's.

Bethan and the Seed Group volunteers have been working since October to have seedlings ready for the coming planting season, should it rain! As of 2024, Nikkola, has taken on the role of BIDDIP Editor; congratulations, Nikki, on this, your first edition.

And apart from the names and work mentioned here, are the numerous small but vital activities of all TFOR members: taking notice of what we see happening in the river environment when we're walking and enjoying time there, keeping each other aware of events and political decisions that may impact on the health of the waterways, or simply removing that noxious weed we notice. That's what makes us Friends of the River rather than volunteers only.



I'm looking forward to seeing Friends at working bees and other TFOR events, and am hoping to see some refreshing and replenishing rains for our desperately-dry landscape.

**Jennifer White,
President.**

TFOR First Aid Practice Session

BY SHARON BOXALL

The riverbank can be a dangerous place, but TFOR members are now more prepared to cope with snake bites and heart attacks after attending a first aid practice session. The session was held on Sunday 11 February at the St John Ambulance training centre in Stirling Terrace and facilitated by Sharon Boxall. Although not an official first aid course, attendees were given the opportunity to learn or refresh some valuable skills including the best way to manage snake bites, perform CPR and use a community defibrillator. After registering for the session, attendees were shown the St John ambulance community education video on snake bite and given an opportunity to ask questions. It was then time for practice, with the application of snakebite bandages and splints to immobilise the bitten limb. It is important that the limb is kept still as snakebite venom is transported by the lymphatic system and any muscles movement makes it travel faster.

The same format was then used to hone CPR. Members practices the DRSABCD response to a cardiac arrest. This involves checking the area for danger and the patient for response then calling for an ambulance using 000 or 112 on a mobile phone before checking the airway and breathing and starting CPR. There was also an opportunity to practice using a community defibrillator.

Afternoon tea was provided and there was a chance to purchase snake bite bandages. If you were unable to get a place in the session or just want to refresh your knowledge you can view the instructional videos on YouTube anytime at the links below. TFOR would like to thank the Toodyay St John Ambulance for generously letting us use their training facility for free.

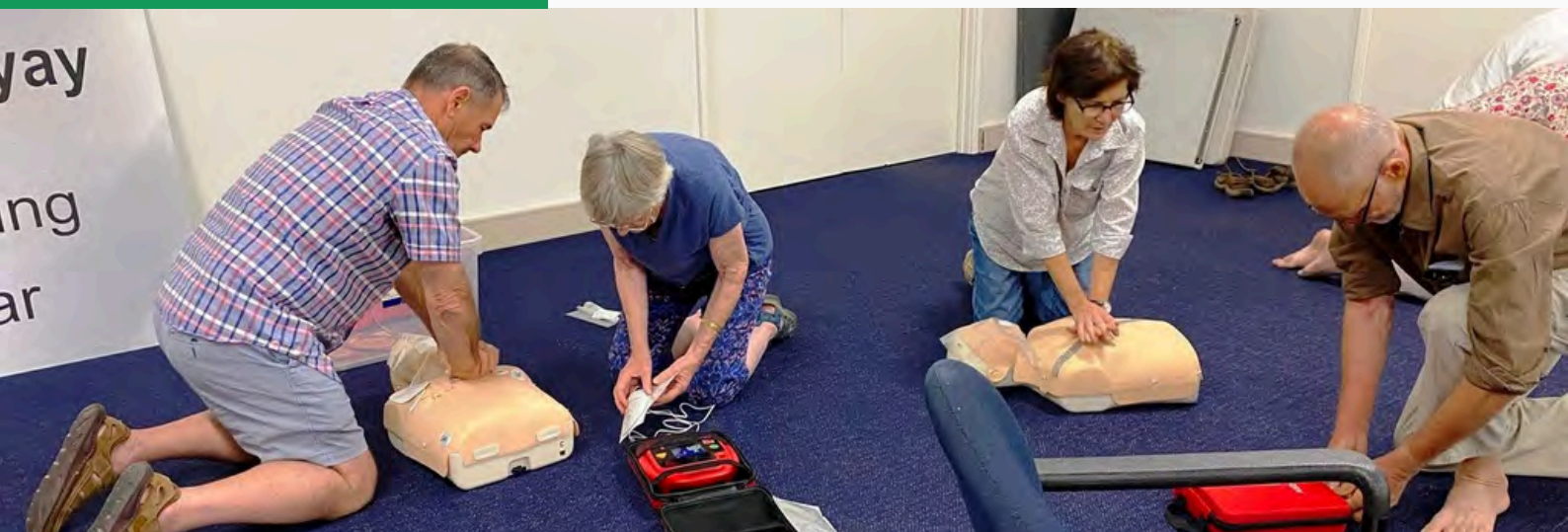
USEFUL VIDEO LINKS

Click here:

[Snake bite video link](#)

[DRSABC Action Plan](#)

[CPR Video](#)



Eager workshop participants practicing CPR

Why the West Toodyay Wander?

BY GREG WARBURTON

At the turn of last century, a group of Toodyay pioneers known as the "Railway Extension League" were lobbying to have the Clackline line extended from Newcastle (Toodyay) to Bolgart.

This they said would be a boon for the district as the Toodyay Valley had proved itself a rich agricultural area and land was being subdivided into an increasing number of farms. There was even a gold discovery near Wyening just north of Bolgart.

Finally, after nearly ten years of campaigning the then Governor, Admiral Sir Frederick Bedford turned the first sod at Newcastle in November 1908, and so commenced construction.

Only a year later the line reached Bolgart with the official opening taking place in that town on the 6th of December with celebrations and official events aplenty. In 1966, with the opening of the standard gauge the Clackline - Toodyay section was decommissioned. The Bolgart line (now extended to Miling) was realigned to junction with the standard gauge at West Toodyay.

Today you can still trace the original route across the Show Grounds and along Toodyay Street. The new foot path has been marked with lengths of railway line embedded in the concrete to denote the point it crossed there. The old formation is particularly obvious where it runs parallel to Toodyay Street to the railway bridge. Here, the railway reserve contains the original cutting which is still largely intact. It was almost impossible to walk along this cutting as it was heavily overgrown. In 2022 state government funding allowed the Shire to clear the old line to form an effective and strategic fire break and access. Thus, a great opportunity arose for a walk trail. Toodyay's walk track aficionados, the Friends of the River began working with the Shire Reserve Management Officer to create the "West Toodyay Wander". Steps were installed where required and track markers affixed. An attractive information sign and shelter was located near Reserve Street. At the same time the Shire fortuitously extended the concrete footpath all the way to Harcourt Street.

Now, a pleasant 3.6 km walk circuit takes in the Show Grounds and Aboriginal burial site, the old railway cutting and Bolgart line bridge along with north bank river access points. This walk track adds value and a variety to Toodyay's already impressive walking trail network and opportunities.

The completion of the "West Toodyay Wander" is one of several Toodyay Friends of the River 30th Anniversary projects.



New sign with map of the West Toodyay Wander walking trail, by Greg Warburton



Join the Friends of the River on Sunday 26th May at 11.30am to walk along the wander together! Contact us via info@toodyayfor.org.au for further details.

Robyn Taylor

Member Profile

It was a Sunday in 2001 when Richard brought me to Toodyay to look at a house. Real estate agent Neville Tanner had seen Richard looking in the window on the Saturday. We had no intention of moving from Perth. 'What are you interested in?' asked Neville. 'Nothing actually, I'm just looking.' 'But if you were looking for something, what would it be?' 'An old place with lots of character, wrap- round verandahs with views over the town'. 'Hop in the car, it will only take two minutes.'

The place ticked all the boxes which didn't include 'requires a lot of work'. Richard was full of enthusiasm when I arrived home from a job checking out an old church needing a new roof and a building history. Working as a consultant historian in the heritage industry I was very familiar with old 19th century houses, and a sucker for 'charm and character'. Next day Neville took us to No.6 Mt Anderson Street. The place had been on the market for some time, so others probably saw what we chose to overlook. A drive around town impressed me with Neville's local knowledge, and it turned out he was a member of the Toodyay Friends of the River, the Historical Society and the Naturalists' Club. Since childhood I loved nature studies, so over coffee we checked out the groups in the Toodyay Herald. Richard chose TFOR because he could simply take instructions about which weed to pull out. No stress. I joined all three. Eventually Richard went from weeds to President, and at various times I served terms as Secretary and President of TFOR, President of THS, and Patron since last year's AGM.

My curiosity about nature began early with the back garden being the focus of interest. One night while looking at the stars, before TV kept most children indoors, I recorded seeing Russia's Sputnik that had been launched in 1957. I'm sure childhood experiences influence how we see the world and what we do later in life.

Our home in Sydney was minutes from the beach at Brighton-le-Sands on the western side of Botany Bay (south of Sydney Harbour). It was paradise for beachcombers, and before the damaging effects of the new runway at Mascot airport in the 1960s, this pristine beach was bountiful in its variety of seashells and sea life that washed up on its shores.

Robyn Taylor

Member Profile

While in primary school I was thrilled when my parents gave me 'The World We Live In', a wonderful book about the history of the Earth, the oceans, evolution, and the universe. According to an article on Google, it 'used majestic illustrations painted by the best natural scientists of the day'. I was entranced. From wanting to be a naturalist when I grew up, I decided I was going to be an artist. When I was 16, I won two First Prizes in the Junior section of the Rockdale Chamber of Commerce Art Awards. As Overall Winner I took home the Shield, for a limited time, and my moment of glory was immortalised in a photo



Robyn pictured with her chosen words on why the Avon River is important at a forum in 2023, by Nikkola Palmer

taken against the backdrop of a bedsheet slung over the clothes-line. The paintings were sent to Japan in a high-school student art exchange. I never saw them again.

I didn't get to go to art school, that came later, so at 17 I found myself a job as a junior clerk with the Colonial Sugar Refinery's head office in Sydney - anything to escape the boredom of being at home. CSR trained me to be a stenographer and the shorthand/typing skills proved invaluable.

Following marriage, Richard enrolled at the University of NSW that happened to need stenographers. I landed a job with the inducement of time off to study for a Bachelor of Arts. I enrolled in History, but my favourite was History & Philosophy of Science. Then I discovered Fine Arts was taught at Sydney Uni, so my lenient boss gave me time off to study the subject as part of my degree. The final year included a trip to Italy and Richard was invited to tag along. Studies completed, we left for Europe with our camping gear. Post-graduate studies followed in England. It was a fantastic time, but we needed to return to Oz and find work. Richard was accepted for a position as a Clinical Psychologist with the WA Dept of Health, while I taught art history at various art departments, including the University of WA where I embarked on a doctorate on Perth's inter-war architecture. Involvement with heritage issues led to being on the inaugural Heritage Council of WA. Leaving academe, I set up my own consultancy in the heritage field including curating art exhibitions.

With the wonders of the internet, our move to Toodyay didn't affect my work, while Richard continues working as a Clinical Psychologist.

Lockhart River Catchment

BY WAYNE CLARKE

The Lake King branch is the most eastern catchment of the Lockhart system, where a chain of salt lakes wend their way westward. They include Lake Pallarup, Lake Milarup, Lake King, Lake Camm (and Lake Kathleen), Lake Fox, Lake Gulson, Lake Varley, Lake Hurlstone and Lake Carmody.

When approaching Lake King, the Newdegate/ Ravensthorpe Road crosses a spectacular 10km long salt lake causeway, the longest road in WA built across salt lakes (see photo).

The Camm River drains west from Lake Carmody, past Hyden then makes a slight turn South-South-West, where it joins up with the Lockhart River, downstream of Jilakin Lake.

Studies in 2008/2009 indicate salinity in the Lockhart River to be similar to that of sea water and is the highest in Western Australia.

The Lake Grace branch originates south of Lake Grace and Newdegate. Within this sub-catchment the Pingrup River rises in the salt lake chain south of Chinocup Lake. As it flows north it picks up Minelup and Deep Creeks before flowing into Lake Grace South and Lake Grace North, then passing the town of Lake Grace. At this point Pinchin Gully enters before crossing the North Lake Grace - Karlgarin Road.

Continuing further north, the Pingrup River enters the southern part of the Lockhart River, just east of Jilikin Lake.

The Lake Grace sub-catchment is separated from the Lake King sub-catchment by the Magenta Internal Catchment, all within the Zone of Ancient Drainage', described below.

THE Avon River is one of the great rivers of Australia with a catchment area over 120,000km². To put that into perspective it is almost double the land mass of Tasmania (68,401km²).

The Avon catchment (often referred to as the watershed) comprises four sub-catchments – the Yilgarn, the Lockhart, the Mortlock and the Avon Toodyay is situated at the bottom of the catchment, close to its outlet into the Swan River. This is the second of a series of short papers describing each of the sub-catchments and their impact on the river.

The Yilgarn River sub-catchment (55,9002 km) was described in Biddip Volume 17 Issue 3. Recent studies (2008/2009) show it contributes around 4GL of flow into the Avon River system, whereas the smaller Lockhart catchment (32,4002 km) contributes over three times that amount, at around 13GL.

The gradient or fall in the Lockhart River has been calculated at 24cm/km from the top to the bottom; over a distance of 170km - the fall is 41m.

(Lake King Causeway pictured below, image by Wayne Clarke)



Lockhart River Catchment cont'd



(Lake Grace North panorama by Wayne Clarke)

The southern leg of the Lockhart River has its own story. Originating in the Magenta Internal Catchment this 1102 km ephemeral salt lake is located in the A Class Lake Magenta Nature Reserve. In large flood events it may drain south into the Fitzgerald River catchment and in extreme events can drain north into Lake Noonan and Lake Stubbs, and the Lockhart River in the Lake Grace sub-catchment. It is internally draining in most years.

References:

- *Waterway assessment for the Lockhart River: Lake Kurrencutten to the Camm River confluence. Department of Water Water Resource Management Series. Report No. WRM 55 December 2008. ISSN 1326-6934 [pub] or ISSN: 1835-3592 [pdf] Ecoscape (Australia) Pty Ltd*
- *Waterway assessment of the Camm River Lockhart River confluence to Hyden Department of Water Water Resource Management Series. Report No. WRM 57, December 2009. ISSN 1326-6934 [pub] or ISSN: 1835-3592 [pdf] Ecoscape(Australia) Pty Ltd.*
- *Zone of Ancient Drainage is the area east of the Darling Fault Line in a semi-arid to arid climate with an annual rainfall less than 450mm*
- *TNC Patron John Dell wrote a paper for the WA Museum on The Birds of Lake Magenta Wildlife Sanctuary in 1976. This can be sourced online: <https://museum.wa.gov.au/research/records-supplements/records/birds-lake-magenta-wildlife-sanctuary-western-australia>*

*N.B. Research for these articles relies heavily on the Department of Water series of publications titled Water resources management (WRM) series. These publications are invaluable and provide a wealth of information for anyone wanting to get a greater understanding of this unique Avon catchment. They have been written so the layman can understand them and provide references to more detailed and technical information. Most are readily available in the TFOR Library in Drummond House and/or on the DWER website.

Go to <https://www.wa.gov.au/government/document-collections/avon-catchment-document-collection>

Waterways Wisdom Forum

By NIKKOLA PALMER

Our March forum allowed us to hear from three wonderful speakers **Robert Miles**, Chairperson Noongar Kaartidjin Aboriginal Corporation who shared about Bilya Kaartidjin (River Knowledge); **Nik Callow**, Associate Professor UWA speaking on the challenges of managing the Avon River with a changing climate; and **Dr Dimity Boggs**, Project Manager at Wheatbelt NRM, Landscape Ecologist Waterways Restoration who shared with us detail and outcomes from the most recent Wheatbelt NRM projects.

These varied perspectives on the cultural importance of the river, restoration and rehabilitation, and the positive impact local residents can have on the river were deeply insightful.



Speaker Nik Callow presenting at Waterways Wisdom



Speaker Dr Dimity Boggs presenting at Waterways Wisdom

Birthday Bushwalkers

By BRIDGET LEGGETT



Perth Bushwalkers enjoying the Bilya track by Bridget Leggett

A small group of the Perth Bushwalkers celebrated one of our member's 80th birthday with a walk along the Bilya Walk Track and a picnic at the Bird Hide recently. Watching the Spoonbills, a black swan, different species of ducks and other water birds at Red Banks and Millard's Pools slowed us down considerably.

We took time to read the new interpretive signage at Millard's Pool and the headstones at the recently tidied Nardie cemetery. The visitors got new insights into the challenges faced by Avon Descent competitors when they saw Extracts Weir without any water. The John Masters bird hide provided a perfect place for a picnic lunch, and rounded out the celebration. A great time was had by all and there are plans to come back again next year.

The Back Page

River-talk

Understanding river terminology

By WAYNE CLARKE

AUSTRALIAN HEIGHT DATUM (AHD)

The Australian Height Datum is the official vertical height above the sea. It uses as a basis the mean sea level of 30 tide gauges around the coast of Australia. It was established by the Australian Government Agency Geoscience Australia (GA) using the mean sea level between the years 1966 and 1968 at these gauging stations, allocating a value of 0.000m. AHD is an important tool for estimating river height during floods. Toodyay township is around 230 m AHD.

AVULSION

The diversion of a river channel to a new course

BANK

The steeper part of a waterway channel cross-section, which is usually considered to lie above the normal water level

BANK-FULL

A river channel that is filled to the top of the bank without spilling over to the floodplain

BANK-FULL CHANNEL DIMENSIONS & FLOOD FREQUENCIES

The width and depth of a stream channel reflects flow magnitudes and sediment load over time. Channel size is established by the smaller, more frequent flood events that over time accomplish the greatest volume of sediment transport. While a 100-year recurrence interval flood moves more material than a two-year recurring flood, the cumulative sediment movement from fifty two-year floods over 100 years is usually far greater than the one 100-year flood.

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Photo Comp!



We are hosting a photography competition at the 2024 Toodyay Ag Show to celebrate our 30th Anniversary. Prize details to come, but you can get snapping along the Avon River now!

Thank you

We would like to express our appreciation and thanks for all the Toodyay Friends of the River members, for your participation, encouragement and support in all our activities.

Sponsors



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