

August 2009



Biddip

Newsletter of the Toodyay Friends of the River

BIDDIP Volume 3 Issue 3

Re-commencement has been made on the dredging of silt-laden pools along our Avon River involving work at Brookton, Beverley, York, Northam (Katrine) and Toodyay. Inclement weather initially held up work on Toodyay's Long and Cobbler's Pools; however, much work has now been accomplished in restoration of them to their former beauty.

The Hon. Grant Woodhams MLA, Member for Moore, was guest of the Friends and taken on an extensive excursion down-river from Toodyay. He saw, first hand, results of the siltation, feral pig infestation and weed invasion.

The Friends of the River now have a website. Gratitude is extended to Wayne Clarke for the great amount of work he has contributed towards it.

The Friend's history publication, 'The First Fourteen Years (1994-2008)' was launched by Patron, Viv Read, on 28th November 2008. The happy group, including members from Perth, enjoyed breakfast at Duidgee Park.

Editor: Desraé Clarke

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The Friends of the River wish to acknowledge the Department of Water for on-going support in printing our newsletter

The years of 2008 and 2009 have been years of movement and action along the Avon River, west of Toodyay township. The Toodyay Friends of the River have been involved with the Department of Water, Northam, with removal of sand from river pools and reporting any new happenings on the river.

Jimperding Pool is on private property, Deepdale Farm, situated 13 kms from Toodyay township. The Pool is one kilometre in length and full of sand. The new owners of Deepdale have removed 10,000 metres of sand from the pool at their own cost. The sand has been stock-piled above the high water level and is to be used on the farm.

Long Pool, situated 16 kms west of Toodyay is the longest pool on the river between Toodyay and the upper Swan Bridge on the Swan River. It is 1.2 kms long and is a half kilometre full of sand. In October 2008 a floating dredge was moved into Long Pool by the Department of Water, Northam, and 6,000 metres of sand was removed to a depth of between 2 and 3 metres over a 100 metre section. The sand was pumped into an old dirt pit between the river and the railway line. The soil taken from the pit originally was used for the building of the railway line; with the replacement soil from the pool the area will be revegetated. This will put the land back to its original state.

Cobbler Pool, 19 kms west of Toodyay is the overnight camp for the first leg of the Avon Descent White Water Race.

The pool was filling with sand and had a large sand bar in the middle. The Department of Water had arranged for a 'Long Reach Excavator' to remove the sand from the pool. It was to be carted away by truck to stock pile above the high water mark. On checking the pool for the sand bar Bernard Kelly, Waterways Program Manager, Northam, could not find the sand bar — it had disappeared! Bernard, in a small boat, checked every section of the pool but *the sand had gone!*

The Toodyay Friends of the River have 22 reporting sections along the Avon River. These are from Katrine, 12 kms east of Toodyay and in the Northam Shire, to the Great Northam Highway where the highway crosses the Swan River, a total of 60 kms west of Toodyay.

Members and landowners each have been allocated a section to survey and report on. Surveys were done in February 2009 and brought to the April meeting. All reports were received with great interest

At the meeting it was reported that sand had washed out of Cobbler Pool and had moved to two locations further downstream. The first was two kilometres from Cobbler Pool just below Goombawongi Crossing on the north side of the main stream canal of the river. The second deposit of

sand was in the Avon Valley National Park, 17 kms down river.

Strahan's Crossing is very important for the protection of the river environment and as a crossing for farmers, landowners and emergency vehicles. 30 ton of stone was delivered, in two loads, to maintain the crossing in good repair.

The Hon. Grant Woodhams MLA visited the Avon River travelling downstream from Toodyay to the Upper Swan, Great Northern Highway, on 25th March 2009. Grant had travelled through the Avon Gorge and the Avon valley National Park by train but this was his first trip by road. Grant took a keen interest in the history of the river and the outstanding scenery through the Avon Gorge and said he would like to do the trip again travelling west to east. I thank Bernard Kelly, Department of Water, Northam, Wayne Clarke, Toodyay Friends of the River, and Peter Robinson, a local reporter, for helping out on the trip.

In January 2009 the Toodyay Friends of the River lost a valuable member, John Pyle.

John loved the river. He was always available to help out along the river banks, carrying a plastic bag to collect rubbish when he and his wife, Theone, went for their walks. His favourite walk track was between Duidgee Park and the Avonbanks Caravan Park.

Past memories will not be forgotten.



Above: Gaven Donegan explaining the sediment issues to Hon Grant Woodhams MLA. L to R: Bernard Kelly (DoW), Gaven Donegan, Hon. Grant Woodhams, rear Peter Robinson. Photo: Wayne Clarke

“If the example of the Avon serves only to create more concern for the fate of the rivers in the region, its destruction will not have been completely in vain.”

(George Kendrick 1976, Page 9 of this issue of Biddip)

Local MLA visits

Familiarising State politicians with the plight of the upper reaches of the Avon River has been the three-year aspiration of President, Gaven Donegan.

On 25 March 2009 the Member for Moore, Hon. Grant Woodhams MLA, was guest of Gaven, Wayne Clarke, Treasurer of the Friends, Bernard Kelly, Program Manager, Waterway Assessment and Restoration, Department of Water, and community member, Peter Robinson. Grant was taken downstream from Toodyay, through the Avon Valley and Walyunga National Parks to the exit at Ellenbrook via the railway reserve (these areas are not open to public access).

Gaven presented a history of the Avon River as he has known it throughout his life - as a youngster growing up, working with his Father on properties in the vicinity of the River, droving sheep, riding horses along the banks and fighting fires in the nearby hills.

Grant was given an explanation of the movement of sediment along the Avon from Brookton through Beverley, York, Northam and Toodyay and beyond together with an account of the River Training Scheme (RTS) of the 1950's and 1970's. Most early settlements were founded on a water course and, with the River frequently flooding, the local governing bodies urged the authorities to 'train' the River. 187kms of straightening, deepening and ripping of the river bed has rendered it unstable resulting in constant movement of silt that has filled most of the river pools along its length. In the past, there were 26 beautiful, deep pools downstream of Northam - there are now only two downstream of Toodyay. These pools, Long and Cobbler Pools, are both experiencing sedimentation resulting in their gradual destruction. It has been observed that silt, in the form of fine sand, has been passing into the Swan River over the past 6 years!

Also, as a result of the RTS, the Avon River and its tributaries are now predominantly saline. Salinity has

Below: Hon Grant Woodhams MLA and Bernard Kelly looking at a pig trap in the Avon Valley National Park.



drastically altered the ecosystem with the loss of fresh-water mullet and cobbler, reduced numbers of turtles and fewer areas for water birds to feed.

Dredging work on Long Pool, originally 1.2kms in length, was shown to Grant but time limited inspection of progress at Cobblers Pool. Weed invasion and feral pig destruction of the riverine environment were noted. Feral pig traps, installed by the Department of Conservation and Environment, were also inspected.

Grant found the trip downstream one of knowledge and enlightening of the plight of the Avon River and the grave consequences to the health of the Swan River. He was presented with a history of the Toodyay Friends of the River, 'The First Fourteen Years (1994-2008)' and a copy of their newsletter 'Biddip'. Comprehensive documentation of works along the River from Brookton and downstream, describing the attempt to rehabilitate the riverine environment and its tributaries, was presented to him by the Department of Water. All voted the day one of success.

Desraé Clarke

Web Page Operational by Wayne Clarke, Webmaster

The Toodyay Friends of the River Website development has now been completed to Stage One - becoming operational. This has been quite a challenge for me, and I have had to learn how to wend my way through masses of on-line tutorials and software guides. However, the site is now completely operational, interesting, and hopefully of assistance to both members and 'visitors' alike.

The first challenge was to understand some of the terms that go together to make up what is called '*Java Script*', language that sits behind the scene (or screen) that when applied to a web '*program*' (another term I am getting used to, rather than programme), a web page appears. There are a host of other terms (like '*cascading style sheets*', '*Spry elements*' and '*meta tags*') that need to be understood, and applied, that go together to make a web page operational.

Unless you are interested in web design, all you really need to know is what our site offers. Currently it has all our '*Biddips*' loaded, information on membership (including an application form), our sponsors (including the Bendigo Bank, who sponsor our site), our Projects, the Seed Orchard, River Recovery Plans, our Constitution and Code of Conduct, and a Privacy Statement.

Stage Two will be developed over the next few months, when I get more adept at development. It will include a section for members, where they can log in via a password, and load their section reports or view previous reports. Meanwhile, enjoy our website at:

www.toodyayfor.org.au

The Toodyay Friends of the River, and the community at large, have suffered at the loss of John, an avid community member in many areas of Toodyay.

John, born in Rotterdam, Holland, immigrated to Australia as a young man following the completion of his university studies in Agricultural Science. His first posting was in Canberra followed by many work moves around Australia.

John and Theone met in Kununurra, they married and continued with a number of location changes with John's work to finally settle in Western Australia.

With the shift to live in Toodyay John became very interested in the Toodyay Friends of the River group. He took on the position of inaugural treasurer and assisted with this position till his illness in 2008. John contributed an article entitled 'Ten Years On' on page ten of the previous edition of 'Biddip', Volume 3, Issue 2 writing of observations and aspirations of the pathway along the River he and Theone enjoyed to walk.

John's great love of his wife, Theone, his son, Dirk, daughter-in-law, Karen and darling granddaughter, Olivia, (Olivia called him Opah, Dutch for grandfather) was so evident.

John worked incessantly in his garden, growing beautiful flowers, vegetables and fruit trees, was ruled by his little cat, Missy, and gave endlessly of his time to a number of Toodyay community organisations.

The members of the Toodyay Friends of the River enjoyed John's company and will greatly miss his smiling face, his ready chuckle, (or deep-throated laugh!), his love of the Avon River and his ready willingness to always 'help out'.

Deepest sympathy is extended to Theone and her Family.

Right:
John Pyle
on the
causeway
at Long
Pool in
February
2005. It
was taken
in the heat
of summer.

Photo:
Bethan Lloyd



This house was built in 1890 by brothers Henry and James Hasell and occupied by Henry and his wife, Annie (nee Wood). They brought up seven children. The eldest, Percy, was killed in action at Ypres, France in 1917. Two of his sisters (Gertrude and Stella) taught at the Ten Mile State School. I have been told that two of the girls became nuns. The house passed to the youngest boy, James, who lived with his wife, Alice, in the city and conducted a very successful hardware business in Wellington Street.

The Toodyay house was occupied by a succession of tenants including some US military personnel. There have been stories of chooks living in the undercroft. The structure was both mutilated and neglected. After the death of her husband, Alice sold the house, in a ruinous condition, to a local builder who did a lot of work to improve it, and installed tenants. I brought the property in 1987.

At that time there was a large accumulation of builder's rubble and assorted detritus at the bottom of the garden and overflowing onto the river bank. One of my earlier projects was to hire a backhoe and loader to clear and level the bottom of the garden so I could build a back fence. In the process I removed five trailer loads of assorted rubbish, but a lot more was pushed over the bank. I disregarded this for many years whilst I got on with developing the garden. Eventually I turned my attention to planting behind the back fence and this practice has slowly accelerated by trial and error. As in the garden, there were a lot of failures and there are many gaps to be filled, but at the same time, I have recently removed another two trailer loads of iron, glass and masonry. Some rubbish will remain buried where, together with my planting, helps stabilize the steep bank.

I plan to extend my revegetation laterally behind the neighbouring properties. My plants include *Eucalyptus loxophleba* and *E. rudis*, totalling 36, *Acacia microbotrya*, *A. saligna*, *A. acuminata*, totalling 36, *Callistemon phoeniceus*, *Calothamnus asper*, totaling 9, *Malaleuca adnata*, *M. viminea*, *M. raphiophylla*, *M. bracteata*, totaling 25, *Hakea priessii*, totaling 7, *Casuarina obesa*, *Allocasuarina heugeliana*, *A. campestris*, totalling 37. Many of these have been donated by Beth and Robert Boase (Arinya Tree Farm), and some are from the Toodyay Seed Orchard. Others have germinated naturally in my garden and I have potted them up progressively through the summer and planted out in the autumn.

Weeds are beyond my power to control adequately, so I ignore them. All my successful plantings (approximately 100) have overcome the competition and should grow to a minimum height of 1.5 metres.

High water events in January 2006 and August 2008 have inundated many of the small trees but they all survived. I have driven permanent stakes to record high water levels.

Bob Frayne, 18 May 2009

FERAL PIGS AND ANCAC

Feral pig infestation is an age-old problem especially in areas that have availability of moist terrain such as river, creek and swamplands. They are resilient animals and with the production of large litters their numbers are difficult to control especially in hilly terrain.

The Avon Nature Conservation Advisory Committee (ANCAC) took a bus trip on the 6th March 2009 downstream from Toodyay along the railway reserve, for approximately 40kms, to gain knowledge on the control of feral pigs by the Department of Environment and Conservation. John Snowden, a Park Manager with his base at Jarrahdale, manages a large area including Walyunga National Park, Dwellingup, Jarrahdale and Mundaring; John gave an excellent presentation of his work in the control of feral pigs.

Throughout the lower portion of the State in wetland areas, along waterways used as corridors, in forest and water catchment areas feral pigs are a problem. They cause extensive erosion with their diggings, are a danger to small livestock, spread weeds as they root for *Watsonia* and Guildford grass bulbs and are a dangerous animal to confront.

With State Government funding of the Biodiversity Conservation Initiative (BCI), much success has been recognised with the purchase of a variety of traps, food, night cameras and assistance given to farmers surrounding areas of invasion. Unfortunately, this particular funding concludes 2009.

Trapping of the animals is from November to April when there are concentrations around water holes; pigs can tolerate water containing only 250 -300 grains of salt (much less than sheep). Traps are sited where there is known pig activity such as beside resting pads, near feeding areas in crops and pastures or close to waterways or wallows.

Although some fixed traps are utilised it has been found that the smaller mobile traps are more convenient to be assembled, disassembled and moved by one person. There are a variety of models of traps used with the first priority being strength; steel mesh and the use of star-pickets are materials of choice. Even so, the traps have to be well made as the pig is both extremely strong and very intelligent!

Three basic trap designs are in common use with the pig entering through one-way gates; however, the 'box trap', a 1.2m cube that will hold up to 5 pigs, is a popular choice. It is a small, transportable cage that is able to be carried in the tray of a utility.

Free-feeding is essential to attract pigs to the traps and begins before the trap is constructed. A variety of food is used including grain, apples, molasses, feed pellets and, if dry conditions, water.

The traps **must** be checked every 24 hours – a humane guide line and if the trap is in the open, shade must be provided. A stressed animal is both aggressive

and dangerous.

Murdoch University has been involved in research in the feral pig problem with the use of 'water resistant' radio tracking collars that are placed firmly around the animals' neck.

- a) Blood and gut samples are checked for carcass disease. Results have shown relatively clean carcasses except for ticks that carry their own microbes.
- b) Radio tracking collars have been applied to six animals including a 90kg boar. As a solitary animal, the boar was found to have a range of 4kms while the five remaining animals, a mix of smaller boars and sows, had a range within that of the 90kg animal.
- c) A temperature apparatus was surgically inserted into the groin of one of the five smaller animals to note the area range, type of feed, etc. Unfortunately, the radio tracking device became problematic so the data was lost.
- d) Genetic studies of trapped animals were attended by the University with results showing that groups 'kept apart' with the animals remaining quite individual.

The other interesting observation was that most animals are black with an occasional black and white, few white, ginger or brown colourings and a couple with white socks.

Statistics of trappings with animal weights from 5kgs to 95kgs:

06/07	Dwellingup	115
	Jarrahdale	64
	Mundaring Weir	82
	Mundaring/Walyunga NP	120
07/08	Dwellingup	83
	Jarrahdale	118
	Mundaring Weir	116
	Mundaring/Walyunga NP	26
To date 08/09	Dwellingup	65
	Jarrahdale	86
	Mundaring Weir	20
	Mundaring/Walyunga NP	0

In conclusion, John believes the programme is a valuable one having made a dent in the feral pig population. It is unlikely that feral pigs will be completely eradicated as the terrain prevents this. However, it would be a bonus if the numbers could be controlled.

*Right: Members of ANCAC inspecting a pig trap in the Avon Valley National Park.
Photo: Wayne Clarke*



THE AVON - PAST AND PRESENT FOR THE FUTURE



1

- Photographs:*
1. Editor, President and Patron at History Book Launch, 2008.
 2. Friends AGM, August 2008
 3. Dredge on Long Pool, 2008
 4. Sediment stockpile from Long Pool
 5. Millard's Pool 2008
 6. 'Avon River Belles' on a 'Dry Stone Wall' after a dip (in the 1940's, courtesy Belle Rowe, far left).
 7. Swimming at Extracts, c. 1960 courtesy Derek Donegan
 8. Friends of the River work trailer, purchased with assistance of the Lottery Commission.

Photos 1-5, and 8 by Wayne Clarke



6



2



3



4



5



7



8

THE AVON - PAST AND PRESENT FOR THE FUTURE



9

Photographs:

9. Doreen Geary with her dog Paddy
courtesy Doreen Watson

10. Jimperding Footbridge, early
1900's, photo by Bill Srahan (courtesy
David and Viv Street)

11. Training Scheme mishap, 1959
courtesy Mildred Heath

12. Part of 30,000 tone removed from
Katrine Pool 2009 courtesy
Greg Warburton

13. Katrine Pool after dredging 2009
courtesy Greg Warburton

12. Jimperding Footbridge remains
2009, courtesy David and Viv Street

15. West Toodyay Bridge in 2000 flood
courtesy unkn.

16. Strahan's Crossing, 200x flood
courtesy unkn.



(d) *A River of Sand*

In its mature middle section the bed of the Avon originally comprised alternate deeps and shallows which, in the dry season, took the form of stable, permanent pools separated by dry sandy channels. The latter supported a substantial growth of trees, bushes and other vegetation, notably

Species of *Casuarina*, *Melaleuca* and *Eucalyptus*, the roots of which, together with a great quantity of surficial and buried woody debris, served to stabilize the substrate. Though no data are available on which to base precise comparisons, there can be little doubt that the near-total clearing of the catchment has substantially increased the concentration and probably also the volume of surface runoff after rain. These factors have probably intensified the erosion of sediment, particularly from higher land, and contributed significantly to the accumulation of sand in the bed. The continual access of livestock to the banks, channels and tributaries is likely to have aggravated this process.

The Avon towns were initially laid out at a time when the discharge characteristics of the river, unmodified by man, were poorly understood. Old Toodyay, located in close proximity to the Avon, had to be abandoned in favour of the present site following a sequence of floods of growing severity through the 1840s and 50s (Erickson, 1974). Buildings were flooded in Northam as early as 1862, but the example of Old Toodyay, based on recognition of the need to give the river adequate room, seems not to have been followed and the town centre was allowed to develop with the protection of a levee on flood-prone land. The inevitable crisis arrived in 1955, when much of central Northam was inundated following heavy cyclonic rain. This seems to have been the last occasion on which some relatively inexpensive reorganisation of the town to accommodate the river might have been entertained. Regrettably, however, an opposite policy was adopted.

In 1956, the government of the day (the Premier being the Member for Northam) initiated the "Avon River Training Scheme", which sought to improve the river's flood discharge capacity by the mechanical removal of sediment and vegetation from the channel between Toodyay and Brookton. This operation, seemingly of indefinite duration, has been confined to the main channel, that is, the area where the symptoms of hydrologic and sedimentologic instability are most concentrated and without regard for those parts of the catchment where the underlying problems of concentrated runoff and erosion are generated. Whatever the reasons, it is evident that the channel substrate has become less rather than more stabilized and this has given rise to public misgivings as to the merits of the scheme.

Over its 20 years of operation, no official evaluation of the "training scheme" has been released but it is clear that one major negative consequence has been the creation of a large

body of unstable sand in the channel between York and Toodyay. Some once-permanent pools have been buried by this sand, and others partly so, including the once extensive Burlong Pool (see newspaper references, Daily News and West Australian). Without some new initiative, it seems that the obliteration of most if not all the pools in the Northam district is only a matter of time. In the past, the pools served as the summer refugia for aquatic life. Now not only the fauna but the very existence of the pools, once regarded as among the district's greatest assets, is in jeopardy. Their loss would constitute a further major step in the degradation of the initially fragile riverine environment of the region. If the aim of the "training scheme" was to convert the central Avon into a mere agricultural storm-water drain, then by this narrow engineering premise it could be regarded as a qualified (as yet untested) success, apart from being financially wasteful and unnecessary. But as an operation aimed at river conservation, its effect has been disastrous. The scheme was initiated and pursued without regard for the need of any biological investigation of the Avon and its probable that part of the biota has now been irrevocably lost as a direct consequence.

The changes to parts of the Avon associated with the "training scheme" are drastic and visibly conspicuous and therefore disturbing to those who knew the river in better times. However it should be realised that these changes are only the most recent episode in a process of accelerating multiple disturbance to the river's ecosystem that has been operating since before the turn of the century.

3. *Wanted: A new approach*

The old Avon, together with the woodlands that sustained it, is gone for ever; agricultural development of the catchment has brought permanent, irreversible changes to the region. The river's present and future need seems to be for informed, conservation-management policy that will progressively establish a degree of stability and harmony with its man-made environment and at the same time conserve and restore as much as possible of the original riverine flora and fauna. Any further change would need to be of a kind beneficial to the river environment. (Indeed a cynic might argue that little more could now be done to harm the river, intentionally or otherwise). Our readiness to see it in such a way should be helped by the realisation that the Avon, once an economic and recreational asset, has been transformed into a financial and environmental liability; a stabilized, restored Avon would mean, in time, a better human environment for the district. A new approach is indicated, but in practical terms are there any real alternatives to present practices and policies? There is little cause for optimism in official and community attitudes; beyond the need to protect the towns from flooding, no aims have been defined, no expectations fostered.

A listing of facile “solutions” to the problems of the Avon is not called for here. Before they could be considered, attitudes and values among all concerned parties would have to be established and clarified, the problems recognised and defined. However I propose to mention briefly some possibly useful ideas on the subject in support of the view that there are alternatives to the present policy of attrition.

Initially, data would need to be gathered on all aspects of hydrology, sedimentology and biology of the Avon, its tributaries and the catchment generally, including land-use practices in the region. In particular, the system’s net rate of salt discharge (Peck and Hurle, 1973) could be assessed, as could the totality of factors that contribute to flooding. Innovations regarding salination and flood control, such as revegetation, could be devised. Soil erosion in the district is currently judged solely on agricultural criteria; whether these are also adequate to protect the Avon from excessive long-term sand accumulation may be relevant. Further implementation of the “training scheme” should be stopped and the effort thus saved diverted into the search for more enlightened and comprehensive policies of river management. At the same time, the Northam levee system should be improved. Flood-prone areas of this and other towns could be proclaimed and all new building in them prohibited, a measure that is at least a century overdue.

In the past, the Avon pools were important for the watering of livestock, but now this is often no longer feasible and in general no longer necessary. Most farms in the district now have access to reticulated water from the Darling Range and with this alternative source available, or potentially so, it may be time to propose the future exclusion of livestock from the river and major tributaries. Studies of the effect of livestock trampling on the sedimentologic stability of channels and banks, as well as the effects of animal waste pollution on aquatic life seem to be desirable. An attempt at a comprehensive biological survey of the Avon could be made and a policy adopted for a regular monitoring of the biota.

In the wheatbelt communities of Western Australia there is now some recognition, even with regret, that the region was cleared to excess. With regard to this sediment and to the conservation needs of the Avon, a case could be made for a study of ways and means whereby a special Avon River Reserve or even National Park could be established, comprising the channel, banks and a generous width of land on both sides. This could comprise both public and privately owned land, the former created by purchase, the latter by voluntary concession; for the loss of productive land in the latter case, compensation borne by the State would be justified. Such a reserve, a long-term project, would need to be fenced to exclude livestock; channel sands could be re-stabilized and pool formation assisted where possible. Native vegetation could be restored. Animal vermin would need to be controlled and noxious and aggressive weeds excluded. The reserve could be extended progressively out from the main channel and along the larger tributaries.

The Avon’s problems are complex and regional in scope; their amelioration in ways that would lead to the restoration of the river, rather than its further degradation, would seem to require the combined resources of private individuals and

organisations as well as governments at all levels. A managerial body with an overview of the total situation, on which local communities would be directly represented, would be essential for continuity and effective action.

Returning to the real world, there can be few who would be surprised if the future of the Avon turned out to have little or no resemblance to the scenario lightly sketched above. However the central issue of the protection of the integrity of the river environments in south-western Australia cannot be concealed much longer, for although the Avon is the most degraded of our rivers, it is not the only one so affected. There is faunal and other evidence that the Moore has been overtaken by a hydrologic crisis since the 1960s; others, such as the Murray, Collie and Blackwood are becoming increasingly affected by salination. The conflicting interests of water conservation, nature conservation, agriculture, bauxite mining and wood-chipping, aggravated by the spread of die-back disease, will not be easily resolved and constitute a problem of unprecedented magnitude. Recognition that our freshwater faunas are threatened has been late in coming; that their preservation is directly linked with the stability of our water catchments and hence with the future basic needs of urban and rural communities in south-western Australia may yet swing the balance in favour of more effective conservation measures on behalf of our limited freshwater resources. **If the example of the Avon serves only to create more concern for the fate of the rivers in the region, its destruction will not have been completely in vain.**

One of the contributors to the article was the late Jim Masters OAM, a foundation member of the ‘Friends’.

The article is reprinted from “*The Western Australian Naturalist*,” Vol. 13, No. 5, April 14, 1976, pp 97-114.

“THE AVON: FAUNAL AND OTHER NOTES ON A DYING RIVER IN SOUTH-WESTERN AUSTRALIA”

By George W. Kendrick, Greenwood.

Reproduced in the Toodyay Friends of the River newsletter “*Biddip*” with kind permission of the W.A. Naturalists’ Club (newsletter editor John Dell).

The full publication is available from the W.A. Naturalists’ Club.

Email address for the Club is: wanats@inet.net.au

To complete the article by George Kendrick, in the next edition of Biddip, the Molluscs of the Avon River, and how its changing habitat has effected them, will feature.

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Department of Water Bernard Kelly Reports

Sedimentation and in-filling of river pools is a significant problem in the Avon river system with

- mobilisation of bedload sediments because of increased streamflow velocity due to river training works;
- past land use practices that involved de-snagging, clearing and channelising the river; and
- increasing sediment loads from stream channel erosion and soil loss within the catchment being conducted via tributaries.

River pools are highly valued by the general community and also have special cultural significance to local Aboriginal communities. Filling of river pools reduces the opportunity for use of the river for social amenities and recreation and may lead to management problems such as poor water quality, algal blooms and odour generation. The ecology of river pools is also significantly degraded as a consequence of being filled with sediment.

During the past twelve months, Department of Water Northam has been continuing with its sediment removal from river pools program. Last year, sediment was extracted by either excavator or dredging means from several pools upstream of Beverley (Dwarlacking, Kokeby, Eyres and Beverley Town Pool and York (Railway Pool) before shifting focus to downstream pools.

In late 2008, approximately 8000m³ of sediment was removed by dredge from Long Pool. The spoil from the pool was stockpiled in an old borrow pit adjacent to the pool which had been excavated when the railway line through the Avon Valley was constructed in the 1960's. This area has now been earmarked for rehabilitation by TFOR and Department of Water.

Following mobilisation of equipment to Cobblers Pool sediment levels were re-evaluated and the primary sediment slug previously identified appears to have been dispersed.

Excavation at Katrine Pool commenced in mid-January 2009 and continued until mid February. At this time work ceased due to a complaint being received by Department of Indigenous Affairs concerning the indigenous consultation process for the project. Up to this point ~ 4,000m³ of sediment had been removed. These issues were subsequently resolved and the excavation works have now been completed. 25 000 m³ of coarse sand has been stockpiled on a Shire of Northam reserve next to the pool, rip lines have been completed, and planting of native species is scheduled for this winter.

Work will commence mid-July at Reserve Pool on the Dale River where a further 7500 m³ is expected to be lifted from the pool and stockpiled on high ground in a nearby reserve vested in the Shire of Beverley.

Bernard Kelly, Program Manager,
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2009 RIVER SECTIONS REVIEW

Reports of a systematic 'health of the Avon' project, undertaken by the Friends, were given on Saturday 2nd May 2009. The 'Avon River Review' commenced at 'Glen Avon' (just over the joint boundary of the Shires of Toodyay and Northam) to continue downstream to the Great Northern Highway. Members gave an overview of their allotted section with the twice-yearly data collected to develop a baseline of 'Avon River Health'. Reports were of sand movement, water health, bank stability, fauna numbers, riverine vegetation health, condition of river crossings, feral animal activity, livestock movement, rubbish distribution and illegal vehicular access.

Sand movement, of varying degrees, was observed in most sections with significant movement at the confluence of several tributaries.

Water health was mainly satisfactory with several pools of clear, clean water containing fish measuring 4cms to 5cms in length. There were three separate, small areas of algae.

Bank stability was generally satisfactory. Revegetation has been attended along the tributary, Boyagerring Brook, and is pending in the vicinity of Barracks Pool. Toodyay Brook was reported to be "straightening" in the area of the confluence of the Avon. High waters and the deposition of huge amounts of driftwood have obviously contributed to reports of "changing the River about" in the area of Markey's Pool. Some meanderings and erosion were noted at the confluence of Wooroloo Brook.

The river water has continued to flow, albeit very gently, throughout the year maintaining pools and muddy spits. There were signs of kangaroo activity, frogs were heard and bird life has been prolific. A Freckled Duck, with a status of 'rare – possibly endangered', was observed at 'Glen Avon'. Forty five Mountain Ducks, plus a great variety of other species of water birds, were counted at one time on muddy spits and small pools upstream of Dumbarton Bridge. A variety of water birds has been constantly observed at the confluence of Toodyay Brook and the Avon, including Black Swans and a Pelican; many land birds utilise the Avon's fringing vegetation.

Upgrading work is practically complete on one crossing and the remainder of the crossings are in satisfactory condition.

Unfortunately, many areas of riverine vegetation are competing with feral plant growth and spread that include Bridal Creeper, Tamarisk and Fat Hen; the latter plant is rapidly moving downstream as it produces thousands of tiny seeds carried by the waters. One member has worked extremely hard, in his area, in the removal of Fat Hen only to find this resilient, invasive plant continues to thrive.

Activity of feral pigs was observed in a number of ar-

reas along the River from the beginning of the Avon Valley National Park through to the Great Northern Highway. Some diggings were old but there was evidence of current activity. Several fox lairs were discovered and two participants saw an extremely large cat carrying off a duck!

Considerable cattle activity was noted on several river banks causing severe degradation.

Rubbish build up was found in the townsite area of the Newcastle Bridge and the small bridge behind the Tavern. Another rubbish problem area was Weatherall Reserve.

Off-road vehicle movement was 'minimal' with trail-bike activity closer to the town site.

In summary, the formation of a baseline of 'Avon River health' by the Toodyay Friends of the River will be a tool to be used for annual comparisons and future river restoration activities that are supported by photographic records.



Above: The deposition of a huge amount of driftwood found on the river bed in the area of Markey's Pool. Photo Di Andrich and Beverley O'Connor.

Below: Mountain Ducks, Yellow Spoonbills, White-faced Herons and others feeding upstream of Dumbarton Bridge. Photo Wayne Clarke.



Newsletter of the
Toodyay Friends of the River

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*"Make Friends with
our Avon River"*



The objects of the *Toodyay Friends of the River* are to *work towards the conservation and rehabilitation of the Avon River and its environs. In the bigger picture of natural resource management, we are committed to implementing the Avon River Management Program and its associated River Recovery Plans for each of the four sections of river that pass through Toodyay.*

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**Visit our website at
www.toodyayfor.org.au**

Toodyay Friends of the River

The Back Page

On 3rd March 2009, the Friends of the River joined forces with the Toodyay Naturalists' Club and Historical Society on 'Clean Up Australia Day', collecting rubbish from around the Toodyay townsite. This was followed with what we hope to be a regular event - looking after Railway Road, out to the Waste

Transfer Station. We undertook this on 17th May 2009.

The Friends of the River applied to the Keep Australia Beautiful - Western Australia 'Adopt-a-Spot' program to continue to keep Railway Road looking neat and tidy on an on-going basis. They have since been provided with the tools to carry out this on-going project towards again making Toodyay a Tidy Town. Your help to keep it that way will be appreciated.

Members of the Toodyay Friends of the River would like to acknowledge the continuous support of our sponsors:

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Left: Waste Warriors Robyn Taylor, Greg and Vicki Warburton, Beth Frayne, Eva and Don Smith and Renee D'Herville with some of the rubbish collected. Photo Wayne Clarke