

FEBRUARY 2000



BIDDIP

Newsletter of the Toodyay Friends of the River

VOLUME 1 ISSUE 3

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President's Message

by Wayne Clarke

Hello, and welcome to the 21st century. I'm pleased to advise that the millennium bug didn't delete the river, or the *Friends*.

Unfortunately, our October issue didn't eventuate. Perhaps there may be a volunteer willing to take on the position of Editor of *Biddip*; I would be most pleased to speak to any interested person or persons.

Quite a lot of water has passed under the bridge since the last issue. As a matter of fact, while I am writing this editorial, water is still passing under the bridge—early January! Thunderstorms passing through the Avon Catchment have given the river quite a boost over the last few weeks.

Lots of activity has been happening behind Stirling House/Toodyay Traders since Christmas. Miska has been busy with his backhoe, ripping out Bridal creeper mats and Tamarisk. And we have had unexpected assistance from Green Corps. They had finished another project in the area earlier than expected, so offered the

Water and Rivers Commission assistance on river related projects to make up the balance of their time. We had them for two days in Toodyay, and they managed to cut down most of the Giant reed in the area, and assisted Miska to clean up other areas. Quite a number of loads of cuttings were taken to the tip in Miska's truck, leaving the area looking great. Next autumn, when the rains come, we will transplant some of the couch into the area, hoping to establish it as a grassed area. Seedlings will also be planted to establish native vegetation to replace the weeds.

The Water and Rivers Commission's chipper/mulcher has been used a number of times, and once we manage to master its intricacies this machine will be an asset to our operations. The resultant mulch will be great to put around our new seedlings. There has been a hold-up with the trailer, however, we should have it by our next working bee, on February 20th, 2000.

Although not successful

with our nomination for both the Rivercare and Living Streams Awards, the *Friends* were successful with our funding application to the Natural Heritage Trust for a Ribbons of Blue/Waterwatch Coordinator. Stephanie Cobb has been appointed to the position. Stephanie had been working for the Water and Rivers Commission at Northam, so is not new to the area. Congratulations Stephanie, on your appointment (an article on Stephanie appears in this edition of *Biddip*—see page 7). We have once again applied for a Community Conservation Grant, this time to have a consultant prepare a Weed Management Plan for the river through Toodyay. Let's keep our fingers crossed - again.

Enjoy this edition of *Biddip*, and we hope to see you at one of our working-bees, even if it is just for support! And remember, breakfast is held in the Park before each working-bee, and is lots of fun!!!

Wayne Clarke
President
February 2000

Bridal Creeper Leaf Hopper

Last September, the *Friends* registered their interest with the CSIRO as a Bridal creeper Leaf Hopper Site. By the start of the next Bridal creeper growing season it is hoped that we will be part of

an extensive release programme for the leaf hopper.

Bridal creeper leaf hopper (BCLH) is a South African insect (*Zygina sp.*) Adult BCLH are 2.5-2.6mm long, and yellowish-white. They

are abaxial leaf dwellers - that is, they feed from the under surface of the Bridal creeper leaves. Damage shows up as white spots on leaves, often in a zig-zag

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Infill Sewerage Programme

One of the most significant environmental programmes for the Shire of Toodyay in many years has been the installation of deep sewerage in the townsite. Until now, leach drains for the town

have been adding to the nutrient uptake of the river, with the Town Sewerage Scheme leach drains in the floodway. The project has been running fairly close to schedule, with the expected

completion date for the gravity sewer, pressure main and pump station January 20th, 2000. Once the Treatment Plant is complete, then connection to the system can be carried out.

Prisoner Work Camp Project

It was announced recently that Toodyay was a successful partner in the Prisoner Work Camp Scheme. The Scheme uses low risk prisoners nearing the end of their sentences and involves them in community projects where they can assist the community at the same time as learning new skills. In Toodyay the project will involve work on

our River Recovery Plans, including weed removal, fencing and stream stabilisation.

The camp will initially operate from Monday to Friday, with selected prisoners living in self-contained quarters within the Shire under supervision and care of a prison officer. They would return to their home base prison

on weekends. The camp will possibly operate on a seven-day-a-week basis after an initial settling in period.

Once the camp is underway (possibly September 2000) members of the *Friends* will be working side-by-side with these people to assist them with their rehabilitation and our river rehabilitation.

Bridal Creeper Leaf Hopper

(Continued from page 2)

pattern and visible from the upper leaf surface. Heavy infestations will quickly remove all green leaf material turning healthy foliage white. Eggs are laid onto the Bridal creeper leaves, with the female laying over 100 eggs in her lifetime. They have several generations a year.

Although the BCLH shows promise as a control of Bridal creeper, it is not known what its long-term

survival rate will be, particularly over the summer when the plant is virtually dormant. The CRC for Weed Management Systems have been conducting research into other biological control agents. Currently they are evaluating two other insect species and a rust fungus as suitable control agents. The rust fungus causes defoliation, the leaf beetle damages the shoots and the seed wasp parasitises the seeds. If approved for release in Australia,

lia, the three will complement the BCLH in successful biological control.

If you are interested in applying for the BCLH for release in your own environment contact Kathryn Batchelor at CSIRO Entomology on (08) 9333 6643, or contact Wayne Clarke for Registration of Interest forms.

Notes from a paper presented at the 1999 BankWest Landcare Conference, page 121.

cont...

Doug Morgan has been a Councillor in the Shire of Northam for over thirty four years, and is Chairman of the Avon River Management Authority. Following is the conclusion of an article printed in the June 1999 edition of **BIDDIP**, with extracts from notes and documents used by Doug to deliver a talk at Muresk in 1987.

In the June edition of **BIDDIP**, Doug's story had finished with a paragraph on flooding, and problems caused by the Training Scheme. It is appropriate that the story continues leading off with a history of flooding.

Binnie and Partners' 100 year and 25 year flood survey makes interesting reading.

The biggest recorded flood was 1872. My grandfather, William John Morgan, lived near the river in a house called 'Glenfield', and I have his 1872 diary. An entry reads:

"July 18, 1872 I tried to go to Moondyne by Newcastle [now Toodyay] and could not. Water over rails of Newcastle Bridge. This evening up to my stable.

"July 19, 1872 I went to Mr. Cooke's this morning. River in the kitchen. I went to Northam. The river on the cricket ground. The river gone down 4 feet this day.

"July 20, 1872 I went to Moondyne. I crossed the Newcastle Bridge—river three parts up the handrail."

Incidentally, we have not had a 100 year flood since 1872. On the other hand, my great grandmother, only daughter of John Morrell, used to speak of the three years in a row that the Avon did not run (1830's).

The Shire of Northam wanted to stop and re-evaluate what was happening to our river. In early 1973 the Shire made approaches to the Shire of Beverly, York and Toodyay, but they were not interested in a meeting. They [the Shire of Northam] also wrote to the Swan River Conservation Board, who replied they were interested in the Avon River but they had no problems with siltation.

Mrs. Judy Hamersley of the Country Party of WA wrote to Dr. Brien O'Brien, Director of the Department of Environmental Protection in January 1973, asking five questions, viz.

1. Is it desirable to stop the work on the remaining sections of the river?
2. What measures if any, are likely to prevent silting of the remaining pools?
3. Are there any practical steps that should be taken to restore the pools and banks already damaged?
4. What effect is this cleaning likely to have on the Swan River apart from

that already apparent viz. more rapid and more frequent flooding in the upper reaches?

5. Can you suggest appropriate policies which might prevent further damage to this river and others in the South West Land Division which may be similarly threatened in the future?

His answers confirmed what we already knew. In brief, the answers are as follows:

1. De-snagging may continue if needed to stop further flooding, but ripping of the river bed should cease.
2. Discontinuation of the practice of ripping the river bed should prevent further silting.
3. The P.W.D. [Public Works Department] would look into the matter.
4. Most of the material will be locked up between Toodyay and the coastal plain. Any siltation would be dredged by the Harbours and Rivers' Branch dredge.

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TRAINING THE RIVER (cont...)

by Doug Morgan

(Continued from page 4)

Records show that little siltation has occurred downstream from the present causeway from 1912 to the present time.

5. Dead trees, logs and debris, which impede the flow of water, should be removed from the watercourse if required for flood abatement but river beds should not be ripped.

Finally the Avon Valley Development Committee was disbanded. Over a number of years, the Northam Shire had asked the Premier of the day to disband the Committee. Finally, John Tonkin made that decision.

A fresh start was needed.

In August, 1977 the Northam Shire asked Toodyay and the Town of Northam to meet to consider erosion problems, and to form an advisory committee.

17 October, 1977 the Shire Council [Northam] requested the P.W.D. to survey high water mark in the Shire of Northam so that action to prevent the construction of buildings below that mark could be taken. The Town of Northam also agreed to this.

9 January, 1980 an Avon River Protection Committee was suggested. There were

many attempts to get it started, but nothing happened.

Then, at the instigation of the Toodyay Lions Club, and Dr. Hayden Dyer, a local medical practitioner, the Toodyay Shire called a meeting to consider the need to establish a river care committee. The meeting, on May 26 1983, was chaired by Cr. Geoff Ludemann, President of the Toodyay Shire Council. There were representatives from ten Shires, the Toodyay Lions Club and other interested individuals.

At that meeting, an Avon Mortlock River Systems Steering Committee was formed, comprising Councilors JP Marshall (Pingelly), AD Morgan (Northam, V Ottaway (Northam Town), F Bremner (Beverley - subject to acceptance) and Dr. H Dyer (Toodyay Lions Club). The Shire of Toodyay were to attend to secretarial duties.

A resolution was passed that the following be the aims of the committee:

1. To restore a natural functioning balance to the Avon River System for social, economic and environmental reasons.

2. To reduce the rate of water discharge into the river system by actively en-

couraging all recognised methods of soil conservation on rural land and to extend these concepts to the beds of the river systems.

3. To encourage improvement of the quality of water flowing into the river system.

4. To collect, collate and make available to the public all existing information on the river system.

5. To seek financial and scientific assistance with which to further these aims.

The Steering Committee met on three occasions and had consultations with various bodies and government departments.

The recommendation that an Avon River Systems Management Committee (ARSMC) be formed was put to a meeting of sixteen local authorities in the Northam Lesser Hall on March 14 1984. Their recommendation was carried unanimously. Included at the meeting were Hon. Arthur Tonkin MLA, Minister for Water Resources and the Hon. Ken McIver MLA, Minister for Works.

Mr. Jim Masters addressed the meeting with a report on Flood Control and Conservation of the River

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Basin. Highlights of this report are worth repeating here.

Principles of River Basin Stabilisation:-

- (a) Control the rate of water discharge throughout the basin by all recognised soil conservation and engineering practices.
- (b) Positive methods already being used in the river basin to gain stabilisation are:-
 1. Engineering ways, being contour and grade banks, and dams on farms. Weirs on lakes and Avon River (water harvesting)
 2. On some farms the recognition and practice of known soil conservation measures and farm husbandry.
- (c) Negative methods being used which make difficult or impossible stabilisation are:-
 1. River Training Schemes
 2. Drainage of swamps or lakes
 3. Cutting channels through salted lowlands and aquifers

Already the consequences of such actions are being felt in lower river areas at

Northam, at points along the upper end of former pool reaches, now silted [in January 2000, most of these pools have been completely silted], and the upper Swan.

Very rapidly the siltation is developing to the point that it is quite fair to say and nearly hydraulically accurate, *“That the same old floods of the past are probable in half the time, running at twice the speed, with four times as much energy available to do what it will in damage.”*

And you don't necessarily need farmers' actions to achieve this result, anybody can do it due to the nature and topography of the Avon River Basin.

At the second meeting of the ARSMC on 13 April 1984 it was resolved that a representative of the Waterways Commission be invited to attend. At the third meeting on 31 May 1984, Mr R Banyard (PWD), Mr C Larke (Corrigin), Mr C [Colin] Liddle and Mr R Atkins from the Waterways Commission (WWC) attended [Colin Liddle was the Secretary of the Waterways Commission, and a former member of the *Friends*, now living in Perth].

At the fifth meeting on 30 April 1985, Mr C Liddle an-

nounced the employment of one person for one year to prepare a plan for the Avon River System 1985-1986, the person to work under the direction of Mrs B Thurlow of the WWC. In the matter of control of the river, Mr R Banyard advised that responsibility was the Minister for Water Rights under the Rights in Water and Irrigation Act. Mr P Stallwood from the Agriculture Department was seconded to the Committee.

The sixth meeting was held on 19 July 1985, where the draft constitution was circulated to members. A \$50 levy per member was recommended. At the seventh meeting, on 18 October 1985, the Constitution was formally adopted and the \$50 levy passed. Mr Paul Hansen, the Research Officer, was introduced. During the eighth meeting, on 24 February 1986, publishing the report was discussed—1,000 copies at \$1,500 total. At the ninth meeting, on the 6 March 1986, an address on floodplain management was given by Mr R Banyard, giving the 100 and the 25 year flood levels for Beverley, York, Northam and Toodyay. Mr Paul Hansen also addressed the meeting.

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TRAINING THE RIVER (cont...)

by Doug Morgan

(Continued from page 6)

At the tenth meeting of the ARSMC, on 30 April 1986, Mr DN (Noel) Robins, Commissioner of the Waterways Commission, launched the report by Paul Hansen. On 22 October 1986, during the eleventh meeting, there was an inspection of local points. Comments on the fact finding study came from Mr N Halse (Dept. Agriculture), Mr G Robertson from Soil Conservation and from the Northam Soil Conservation District [now Land Conservation District]. Other matters dealt with were Muresk Trials on the Avon River and the Yenyenning Lakes, pollution from Shire rubbish tips - most were in low lying areas draining into the river.

Dr Bruce Hamilton, Director of the Waterways Commission, addressed the twelfth meeting on 9 April 1987. He spoke about the catchment areas of WA. Three Waterway Management Schemes are in existence - Peel, Swan and Leschenault. Possibly the Avon being included in the next 18 months. A large in-

put is needed from Local Government Authorities (LGA's). A working party of five to draw up potential programmes for submission to the State Government for assistance. The party consisted of Professor Bennett, Dr. H Dyer, and Cr. D Morgan with representatives from Department of Agriculture and the Waterways Commission. Other matters referred to were the disposal of chemical containers and a survey of the siltation of the Avon Weir by R Pearce.

At the second Annual General Meeting on 8 May 1987, it was agreed that more publicity was needed to raise public awareness.

So the ARSMC has been running since 14 March 1984. It is very pleasing to me because I have been fighting for nineteen years for a new committee to have an overall view of the Avon River Catchment area.

We have had an interest expressed by over twenty Shires. Areas of concern cover pollution, siltation and an understanding of floods. As the river flows through Perth it will affect the envi-

ronment of the people with the votes. The committee believes it's beyond the resources of local government and should be contributed to by the State Government.

It is apparent that any proposed action should be well researched beforehand - past experience has shown that once the river has been interfered with, the conditions that formed it can never be re-established.

There is a divergence of opinion on the overall condition of the catchment (both scientific and layman). A lot of the ARSMC's time has been spent listening to these opinions. This brings about an interchange of ideas and understanding by all parties.

As Chairman I have always been aware that diplomacy is needed to get agreement on what should be done with the river. The best plan will involve compromise to satisfy divergent needs.

The overall plan must keep in mind that the river is to be maintained for future generations.

Doug Morgan
Muresk, 1987

The Avon River Systems Management Committee approached the State Government in May 1990 to initiate a study. A draft Management Strategy was prepared and released for public comment by the then Minister for the Environment, the Hon. Bob Pearce in August 1991. Public submissions were open until 31 January 1992. These were analysed and amendments

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made to the draft document accordingly. The Draft Strategy explored five options for the future management of the Avon River Basin. The Committee, after much consultation, recommended the establishment of a waterways management authority and formally recommended this option to the State Government in 1992. After considering the recommendations of the Committee the State Government decided to establish an Avon River Management Authority (ARMA) in December 1992, with powers and responsibilities under the Waterways Conservation Act of 1976-1982. The Avon River System Management Strategy was launched on January 13 1993, in Duidgee Park.

The Avon River Management Authority met for the first time in December 1993, with Doug Morgan as Chairman, a position he still holds.

WELCOME BACK RIBBONS OF BLUE

Water and Rivers Commission Environmental Officer, Stephanie Cobb, is no less than ecstatic to be the most recent of coordinators to embrace the Ribbons of Blue programme in the Avon Catchment.

“Prior to the timely funding developments generated by the *Friends* in October 1999, a coordinated Ribbons of Blue programme had been vacant in the Avon Catchment for over a year. This new financial support now sustains my position as Ribbons of Blue Coordinator for 2½ days a week. Funding has also ensured that the programme will continue to grow well into 2001. I thank the *Friends* for their support!”

So what is Ribbons of Blue?

Ribbons of Blue is part of the Natural Heritage Trust funded Waterwatch programme and is coordinated by the Water and Rivers Commission, the lead

agency for Waterwatch in Western Australia. It is an environmental education programme aimed at increasing community awareness about local water quality and taking remedial action towards a healthy environment.

Since its inception in 1989, Ribbons of Blue in the Avon has grown from its early origins in water sampling and data collection. Today, with land and rivercare applications in social studies, science, art and English, Ribbons of Blue versatility both in and out of the classroom is really limited only by imagination.

Ribbons of Blue is all about “environmental awareness to action”

The programme seeks to involve school students, community groups, agencies and local government in water quality monitoring and rivercare. Stephanie aims to encourage resource

sharing across the community and collaboration on action projects.

The data collected from water sampling can provide valuable information for identifying environmental problems and directing on-ground action and management.

And “embrace the Ribbons of Blue programme” she has.

This year, Stephanie aims to prioritize promoting awareness of the programme in the Avon Catchment. Environmental education within schools is an important strategy in promoting environmental awareness throughout the community. This year, the Ribbons of Blue programme seeks to involve students in ‘hands-on’ monitoring and assessment of waterways, with programme activities that can be woven throughout the entire

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WELCOME BACK RIBBONS OF BLUE (CONT...)

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school curriculum.

Education about the environment, in the environment, for the environment

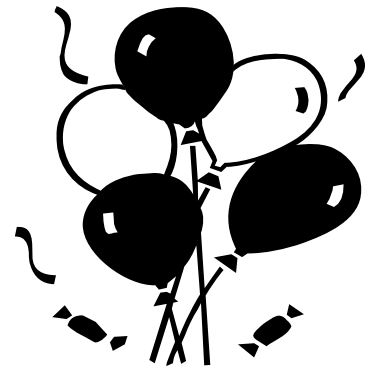
If you are seeking further information on the Ribbons of Blue programme, please do not hesitate to contact Stephanie Cobb at the Water and Rivers Commission office at 254 Fitzgerald Street Northam, or phone 9690 2824. The Ribbons of Blue website is:

www.wrc.wa.gov.au/ribbons

Ribbons of Blue celebrate 10 years

The Ribbons of Blue programme began in the Avon in 1990. Toodyay District High Schools became involved with the programme that year, supported by the Shire of Toodyay. Suzanne Keay, a teacher at the school, and David Lansdown from the Shire are both acknowledged for their dedication and enthu-

siasm in initiating the programme. The Shire of Toodyay must also be sincerely thanked for their generous contribution to the programme during those ten years.



Recognise where the above photograph was taken?
See the back page for details.

THE BACK PAGE

FLOOD FORECASTING

Widespread thunderstorms and heavy rainfall in the Avon catchment on the weekend of January 22/23rd 2000, resulted in flooding of a number of wheatbelt Shires and the Middle Swan area. Although less than a 1-in-10 year event, low lying areas experienced flooding for the first time in many years.

A summary of water levels in Beverley (Vincent Street Bridge), York (Balladong Street Bridge), Northam (Weir), Toodyay (Goomalling Road Bridge), and the Great Northern Highway in Middle Swan is reproduced here, courtesy of the Water and Rivers Commission Surface Water Hydrology Branch.

DATE/TIME	BEVERLEY	YORK	NORTHAM	TOODYAY	SWAN
25/01/2000	1.6m	3.5m	0.6m	2.4m	6.2m
4PM	rising 15mm/hour	rising 15mm/hour	steady	falling slowly	falling slowly
26/01/2000	1.8m	3.7m	0.6m	2.5m	5.3m
9AM	rising 15mm/hour	rising 15mm/hour	rising slowly	rising slowly	falling slowly
26/01/2000	1.89m	3.76m	0.7m	2.52m	5.33m
1PM	rising 15mm/hour	rising 10mm/hour	rising slowly	rising slowly	steady
27/01/2000	2.0m	4.0m	0.78m	2.65m	5.49m
8AM	rising slowly	rising 10mm/hour	rising slowly	rising slowly	rising 10mm/hour
27/01/2000	2.0m	4.05m	0.81m	2.72m	5.53m
3PM	steady	rising 15mm/hour	rising slowly	rising 10mm/hour	rising slowly
28/01/2000	1.85m	4.07m	0.85m	2.91m	5.67m
4AM	falling slowly	steady	rising slowly	rising 10mm/hour	rising 10mm/hour
28/01/2000	1.74m	3.97m	0.85m	2.94m	5.86m
3PM	falling slowly	falling slowly	steady	steady	rising 20mm/hour

The flow from the Yenyenning Lakes system has peaked and a gradual decline in river level has been observed at Beverley, York and Northam. A similar decline in river levels is expected at Toodyay overnight. No further significant rises are expected at Beverley, York, Northam or Toodyay.

The above figures were obtained from measuring equipment installed throughout the Avon Catchment. In the event of a flood, the Water and Rivers Commission can obtain data instantly from their gauging stations, predict flood heights, and give warnings to the various communities along the Avon River.

The article has been prepared with the assistance of Bernie Kelly from the Water and Rivers Commission in Northam. The picture on page 9 is of the Anglican Church during an earlier flood, taken from the old Newcastle Road bridge.