

RIVERVIEW



No.3

THE SWAN AND CANNING RIVERS CLEANUP PROGRAM NEWSLETTER

Sept/Oct 1995

Landcare in the Avon Valley

DECLINING water quality is one of the main problems facing the Avon and Swan Rivers. This year's Landcare Pavilion at the Royal Show (30 Sept - 7 Oct) focuses on the challenges facing Western Australians concerned about improving the health of the Avon catchment and its river system.

The Avon River Management Authority (ARMA) - the community-based management arm of the Waterways Commission - with the support of the Swan River Trust, is putting on a display within the pavilion that highlights the issues of salinity, excess nutrients entering the river and the loss of river pools through sedimentation.

The Avon River becomes the Swan River at the junction of Wooroloo Brook in Walyunga National Park about 30 kilometres north-east of central Perth. At this time of year, the river's rushing waters carry a load of salt, nutrients (mainly phosphorus) and sediments from a catchment larger than Tasmania.

Across the catchments feeding the Avon and Swan Rivers, people are getting together to battle land degradation, improve water quality and restore river habitats. The Landcare Pavilion at the 1995 Royal Show is a record of their achievements and a taste of things to come.

Last year over 100,000 people went through the Landcare

continued page two

Nutrients from the 120,000 square kilometre Avon catchment are a part of the cause of algal blooms in the Swan River. The Avon represents about 62% of the streamflow of all rivers entering the Swan and it carries 28% of the phosphorus. On average that's 362 million cubic metres of water each year carrying 26 tonnes of phosphorus either attached to sediment or dissolved in water.



Tjittl Tjittl the Willy Wagtail - the symbol of the Avon Ascent. The Landcare Pavilion at this year's Royal Show replicates the path of this self-guided drive tour through the Avon region. See story back page for more on this unique driving adventure.

SPECIAL ROYAL SHOW EDITION

working with the AVON RIVER MANAGEMENT AUTHORITY

RiverView ISSN: 1324-0404

INSIDE

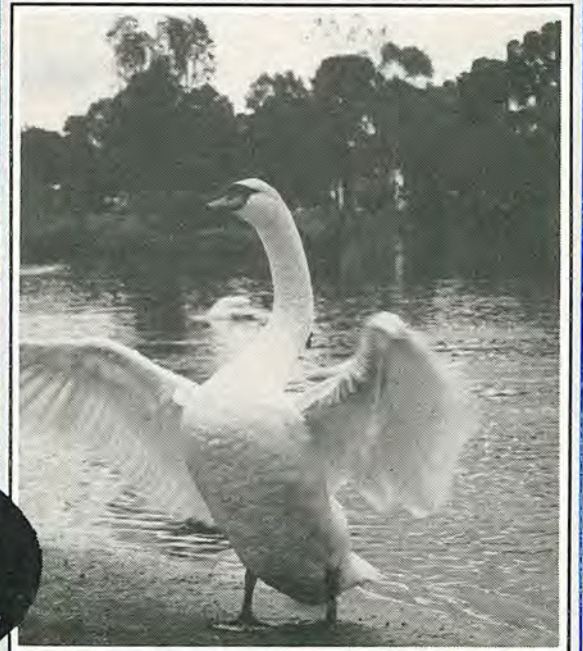
- Community action: the River Conservation Society
- Ecotourism: Avon Ascent self-drive tour
- Significant sites: Yenyening Lakes, Gwambygine Pool
- Education: Great places for schools and teachers

Saving Northam's white swans

THE Northam Town Pool is central to the identity of Northam and the white swans that live on the pool are one of the main attractions for visitors to the area. The problems now affecting the health of the pool may mean the loss of these birds from Northam unless actions underway to improve conditions are successful.

Although the swans are not

continued page three



In the Shire of York, the Avon River typically functions as the boundary between private agricultural properties. Clearing to the river's edge and stock access over many years have taken their toll on the banks.

In March 1990, the River Conservation Society (RCS) was formed in York to tackle a 38-kilometre stretch of river running through the Shire. They surveyed and mapped the river channel, banks, vegetation and fences and identified the owners of each parcel of adjoining land.

Dr Cicely Howell, one of the group's founding members, was pleasantly surprised to find the landowners very cooperative when it came to the question of fences and stock entering the stream.

"So long as the stock had access to the river there was little point in doing anything at all to stabilise the banks, revegetate and so on," Dr Howell said.

"So we approached those landholders whose fences along the river were non-existent or in poor shape and offered to apply for funding to protect their stretch."

With two exceptions the owners agreed to fence and also to pull back their fences from the high water mark in order to allow a buffer strip of vegetation between stock and riverbank.

Pulling back the fenceline kick-started the group into a revegetation program with the support of Greening Western Australia.

"It was not all plain sailing," Dr Howell said. "Many areas were not accessible to heavy machinery and hundreds of holes had to be dug by hand into rock hard soil."

"Summer found us watering at 5am, a magic hour."

"But after the excitement of fencing and planting comes the humdrum business of maintenance. Ownership of riverside properties changes, stock reappears, damage continues to be done."

The River Conservation Society's activities have grown since to include seed collecting and germination, hydrology, insect and fauna and flora studies, and the creation of a landcare centre. The RCS has three members on the Avon River Management Authority and works closely with schools through the Ribbons of Blue water monitoring program.

The group's main focus now is on saving Gwambygine Pool.

"The Avon is not just a drain for surplus salt and nutrients," Dr Howell said. "It is a superhighway teeming with microscopic life. A few pools are not entirely filled but when they are, much of that bustling life will be lost."

"The biodiversity of our rivers will be impaired even before it has been fully explored. We need a biological survey; we need to stabilise the sand in the riverbed; we need to save at least one pool from extinction." ■

River Conservation Society — making the changes count

Identifying the problems in our rivers is the easy part. We can all see the effects of erosion, salinity, siltation and excessive nutrients. Doing something about it is another thing. Putting in the on-the-ground hours to improve the condition of our rivers and wetlands takes dedication and passion - qualities which the members of York's River Conservation Society have in bucket loads.

A stitch in time for Gwambygine



Gwambygine Pool is one of the few remaining river pools along the Avon River that has not completely infilled with sediment. Between 1955 and 1972, the River Training Scheme was undertaken to combat flooding. The scheme meant bulldozers were used to remove vegetation in the stream channel and to deepen the channel bed.

The resulting increase in stream flow velocity has eroded river banks and shifted the river bed sediments downstream filling the river pools. When water levels fall in the dry season, tongues of sand are exposed where once permanent pools existed.

Half of the 20 naturally occurring pools

along the Avon River are now full.

Gwambygine Pool has become the target of a battle to save the Avon's river pool environment from extinction.

"Which pool to save was a difficult choice," said the River Conservation Society's Dr Cicely Howell. "But in the end we decided on Gwambygine because it was upstream of other surviving pools."

The project involves fencing and destocking along the banks of the river and its tributaries, revegetation, and a biological survey.

The picture above shows students from York Primary School on the tongue of sand filling Gwambygine Pool.

Landcare Pavilion

◀ from page one

Pavilion making it one of the most popular attractions at the show.

The scene inside this year's display is a replica of the Avon region and, in particular, the Avon Ascent landcare trail. Surrounded by the calls of birds and the croaking of frogs, you walk around the river and up through a lookout like the viewing tower at Gwambygine Park.

Next you walk through farm gates into an area reminiscent of the Agriculture Department's Avondale Discovery Farm. Here you can touch the different crops on display and watch school children involved in the Ribbons of Blue water monitoring program show how river water is analysed to test its health. Farmers

from Alcoa's sponsored catchment groups and Agriculture Department staff will also be there to share their experience of landcare farming.

You will also find displays of:

- * native birds of prey from the Margaret River Eagles Heritage Farm
- * CSIRO wheatbelt research
- * revegetation information from Greening Western Australia
- * interactive demonstrations of phosphorus from Scitech
- * the City Kids landcare exchange program
- * a miniature worm farm
- * and Alcoa's Frogwatch Program.

Men of the Trees will also be giving away seedlings.

With all this, plus a free showbag, the Landcare Pavilion will again be the must-see feature of the Royal Show. ■

Northam Town Pool

from page one

native to the area (they were introduced in the early 1900s), they are a good indication of water quality in the pool. If the water becomes choked with algae or the pool is lost through sedimentation, the swans will either die or depart for healthier parts.

The pool as we know it originated in 1901 with the construction of a weir, although there was a naturally occurring pool there previously. It was also dredged in the 1950s to make it deeper.

Today it is under threat from excess nutrients that cause algal blooms and from sediment being deposited within the pool. Surveys have shown that 32,000 cubic metres of sediment has been added to the pool in the last eleven years. In places these sediments are exposed when water levels fall over summer.

The Northam Town Council and the Avon River Management Authority are in partnership to manage the pool in a sustainable way. One option being investigated is to remove the sediments from some parts of the pool. The construction of additional islands to enhance habitat for water birds, including the colony of around 40 white swans, is also being investigated.

The Northam Town Council is developing a Visitor and Heritage Centre and rehabilitation of the river pool banks is being undertaken as part of a Regional Employment Environment Program (REEP) initiative. Viewing platforms will be constructed and signage provided to emphasise the ecological significance of the pool.

The council and ARMA will also be preparing a nutrient management plan for the town and a management plan for the upstream section of the Avon River.

Yenyenning: a system in demand

THE Yenyenning Lakes are an extensive chain of lakes east of Beverley. They are particularly important because they receive water from the outer catchment of the Avon River Basin.

During winter, this water often discharges into the southern branch of the Avon River. The lakes are naturally saline but have become more so since extensive clearing of the natural vegetation from the adjacent catchment. The salinity in the lakes can be up to nine times greater than sea water. For this reason it is important the lakes are managed to ensure the saline water does not adversely affect the river downstream.

For many years the lakes have also been a popular place for waterskiing - an all-year-round activity since the water level was permanently raised when a culvert crossing was installed at Qualandry Crossing in the 1960s. The raised water level has caused concern among adjacent landholders who believe salination of their agricultural land has worsened as a result.

The varying demands on the lake have led to conflict within the community.

A recent initiative has been the formation of the Yenyenning Lakes Management Group.

This community-based group has the job of balancing all interests in the area. The first task is to prepare a lakes management strategy. Funding has been received from the Gordon Reid Foundation for Conservation and the National Landcare Program.

It is expected the outcome will be the creation of a management approach that will accommodate all community interests including new developments in farm stay and ecotourism. For more information contact Viv Read at ARMA on 096 226119.



Education for landcare

EDUCATING the next generation to care for their land and water resources is the key to the future. In the Avon region, several education opportunities are available for school children and teachers.

The Tammin Alcoa Landcare Education Centre has accommodation for 44 and features hands on landcare activities for all ages. Since 1992 more than 3000 school students have attended landcare courses at the Centre. In preparation, nearly 500 teachers attended inservice training courses. For more info contact the Shire of Tammin on 096 371 101.

The interactive Landcare Centre at Avondale Discovery Farm welcomes school visits, and activity worksheets have been prepared to support use of the Avon Ascent sites by school groups. For more info contact the Department of Agriculture on 096 226 100.

Ribbons of Blue, a school and community water monitoring and action program, has over 20 schools involved in the Avon catchment, and is working with the Swan River Trust to develop education action sites along the river. For more info call Ribbons of Blue coordinator Paul Reiffer on 327 9777.

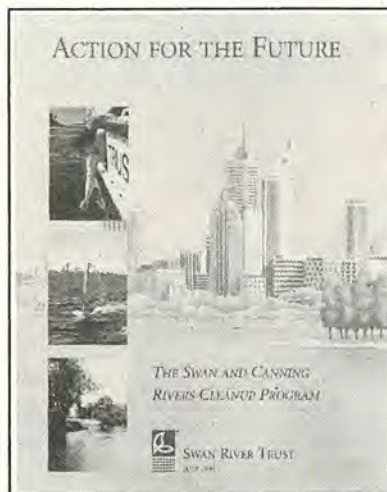
OCM launches into Cyberspace

THE Office of Catchment Management (OCM) has launched itself into the 21st Century. *Catchment Matters*, the OCM newsletter, can now be found on the Internet - at E-mail address ocm@iinet.net.au.

In another big move, OCM has been shifted from the Waterways Commission to the Dept.

of Environmental Protection.

OCM will be incorporated into the proposed Environmental Systems Division but in the interim will remain at its present location at 25 Irwin Street, Perth. See *Catchment Matters* for more info or call Mary Gray on 221 3840.



Action for the Future

... is the title of a booklet now available from the Swan River Trust outlining the steps currently being taken - as part of the Swan and Canning Rivers Cleanup Program - to clean and protect the river system from the excess nutrients that cause algal blooms.

Action For The Future

... provides all the details you need to become better informed about the Swan and Canning Rivers Cleanup Program.

Call our Community Relations Officer on 327 9730 for a free copy

Avon Ascent self-guided drive tour

VISITORS venturing into the Avon Valley by car now have a unique path through which to travel. The Avon Ascent - a finalist in this year's Sir David Brand Awards for Environmental Tourism - is a self-drive tour which takes you through Perth's scenic hinterland up the Avon River via places of historical and environmental interest.

The drive from Perth to the town of York takes about 1.5 hours. The landcare theatre at historic Balladong Farm in York is your first Avon Ascent stop, where you will experience *The Spirit of the Land*, a 14 minute audiovisual that leads you back to nature, to the days of pioneer endeavour, and tells the modern story of the community coming together to restore the damaged land. While there, explore historical Balladong Farm

The next site is Gwambygine Park - 10kms south of York on the Great Southern Highway - a great place for lunch and a rest while the young ones explore. Follow the highway 22kms on to Beverley and you'll find the Avondale Discovery Farm - a working research farm operated by the Department of Agriculture. A "drivetrail" will take you through the many activities on this model landcare farm and the Landcare Centre will help you find out about agriculture in the wheatbelt. At Avondale you can also visit the historic settler's cottage, stables and machinery museum.

An Avon Ascent booklet is available from tourist offices in Beverley and York and from the Swan River Trust. ■

The Avon Ascent is managed by the Avon River Management Authority, sponsored by Alcoa of Australia Ltd, and supported by the Waterways Commission, Department of Agriculture, Shire of Beverley and Shire of York.



At Gwambygine Park, set on a permanent pool of the Avon River, you'll find gas BBQs and picnic facilities, children's playground, and a boardwalk and viewing tower to take you right into the river environment.

WHAT'S ON

1995 Landcare conference

Managing Change. Conference on Landcare and Integrated Catchment Management. Radisson Observation City, 27-29 Sept. For more info call 322 2666.

Canning River Regional Park Guides

Native Orchids, Sunday 23 Sept, 1pm, meet at Bannister Creek pedestrian bridge (orchid expert Eric Swarts). *Nature's Treasure Hunt*, Sunday 22 Oct, 9am, Kent Street Weir (fun activity for the whole family). Call Stephen Faulds on 457 6707 for details.

Ribbons of Blue

Remaining sampling dates for this year ... 23 Oct to 10 Nov. Call Susan Worley on 327 9741.

Ecoplan

Presenting your ideas. Workshop on info displays for community groups, Saturday 24 Sept. *Getting the message across*. Media skills workshop for community groups, Saturday 21 Oct. Call Margo O'Byrne on 222 7054.

Water Week

To celebrate Water Week, the Swan River Trust is joining forces with the Water

Authority to run another series of free river cruises on Sunday October 22. Cruises leave from Hinds Park Jetty (Bayswater) to Ron Courtney Island and back. The focus this time is on water quality monitoring and sediments. For more info call Les at Impact Communications on 388 1279.

FIND OUT MORE

Available from the Avon River Management Authority and the Swan River Trust unless otherwise stated.

* *Avon River Management Strategy*. Government of Western Australia, 1993.

* *Action for the Future: The Swan and Canning Rivers Cleanup Program*. Swan River Trust, July 1995

* *The People of the Swan and Integrated Catchment Management: The report on a community consultation project to determine the needs and opportunities for supporting community involvement in ICM for the Swan and Canning Catchment*. Report to the Swan River Trust

by Chambers and Galloway & Associates, June 1995.

* *How Do You Do It? Water Sensitive Urban Design*, eds. Marino Evangelisti and Mike Mauritz. Seminar proceedings, from Institute of Engineers, ph. 321 3340.

* *Integrated Catchment Management: What it is and how to do it*. Office of Catchment Management and Waterways Commission, 1994.

* *Swan-Avon ICM: Introducing a new program for sustainable management of the Swan-Avon River Catchment*, March 1995.

* *Weeds: Controlling weeds in waterways and wetlands*. Information poster, Swan River Trust and Department of Environmental Protection, June 1995.



SWAN
RIVER
TRUST

For more information contact:

SWAN RIVER TRUST
16TH FLOOR
216 ST GEORGES TERRACE
PERTH 6000

PHONE: 327 9700 FAX: 327 9770

Protecting the Swan-Canning River system for the future