

RiverView

*The Swan Canning
Riverpark's magazine*



Features

Unusual animals of the
Swan and Canning rivers

Feral fish challenge

Rubbish threat to
river wildlife

Regulars

River Guardians
River Rangers
Events
Competitions



Welcome

to this first edition of our new look RiverView magazine.

RiverView is the Swan River Trust's exciting new online magazine. Inspired by science-based publications such as National Geographic and Landscape, it will feature articles on our key projects and people while capturing news and views from around the Swan Canning Riverpark.

As you will see from the RiverView pages that follow, it's about connection: our connection as a community to the wonderful resource represented by the Swan and Canning rivers.

This connection takes many forms, shaped by the different values held by the community in relation to the river, including ecosystem health, sense of place, community and economic benefit.

With this breadth of values, it's clear to us working at the Swan River Trust that our role is as much about managing a complex piece of social infrastructure as it is about managing a river and estuarine ecosystem.

This, in fact, is the thinking behind the notion of the "Riverpark". It is a park for the people of Perth (and beyond),

where we conduct business, interact with, enjoy and care for a special part of the landscape.

The work of the Trust and its many partners is about balancing the demands of use on the Riverpark, with the need to keep the river ecosystem healthy and resilient.

In the coming months we expect to see important steps taken in this regard with the finalisation of the River Protection Strategy, the Aquatic Use Review: Sharing our Rivers, and the development of precinct plans with local governments along key stretches of the river.

RiverView has been the Trust's flagship e-communications channel to our stakeholders since 1999. We hope you will embrace this new magazine format and take the opportunity to bring your own stories and Riverpark experiences to this forum.

Rod Hughes
General Manager
Swan River Trust

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Contributions and comments are welcomed and should be sent to riverview@swanrivertrust.wa.gov.au



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Front cover photo: Swan River seahorse by Mark Gerlach

Ngaala kaaditj Noongar moort keyen kaadak nidja boodja.

We acknowledge the Noongar people as the original custodians of the land and waters.



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Swan River Trust Communications Manager Mark Thornley, General Manager Rod Hughes and acting Strategic Programs Manager Sue Campbell with the Trust's Australian Riverprize finalist trophy



Riversymposium 2012

Trust representatives recently returned from the Riversymposium 2012 in Melbourne with a national finalists trophy and new global perspectives on river management.

More than 600 delegates from 25 countries converged on the Melbourne Convention and Exhibition Centre during October 2012 including Australian and international leading scientists, government agencies, corporate leaders and community groups. While the Trust did not win the \$200,000 cash first prize for the national award, we received extremely positive feedback from many attendees who expressed a keen interest in our wetland, soil amendments, behaviour change and asset management programs.

Trust General Manager Rod Hughes presented on our overall river management program as one of the Australian Riverprize finalists and also outlined our work to date on the Aquatic Use Review. Trust representatives Sue Campbell and Mark Thornley delivered well received papers on the Trust's Report Cards and Dolphin Watch project.

Keynote speaker highlights throughout the four day program included Dr David Molden from the International Centre for Integrated Mountain Development (ICIMOD), Nepal who offered fascinating perspectives on the Himalayan Water Towers and bordering countries managing water. Celeste Cantu from the Santa Ana Watershed Project Authority, USA was also extremely entertaining using her acerbic wit and superhero props to deliver powerful messages on integrating people, resources and policy across a diverse range of river stakeholders and religions.

Other key topics ranged from water sensitive urban design to connecting river fuel and food webs, environmental flows, fauna restocking, politics and media's influence over river management and urban waterways links to mental health. The consistent themes that emerged across the program were increased pressures from climate change and population, the urgent need for community engagement/behaviour change and exploring corporate partnering to help tap new income streams.

On the final day Trust representatives attended a highly informative study tour of the Yarra River co-ordinated by Melbourne Water. This exceptionally

organised roadtrip offered valuable insights into the key challenges facing Melbourne's urban waterways and Yarra Valley wine region. Narrated by field experts, the tour highlighted balancing the often competing demands of water supply, recreation, environment, irrigation and amenity.

We visited four sites including the heritage listed Dights Falls Weir which is currently being replaced to include a vertical slot fishway. The site provided startling similarities and comparisons to the major issues impacting our own Kent Sreet Weir in the Canning River. Other sites included the Glen Iris Wetlands, Domaine Chandon vineyard (somebody had to do it) and the pristine Maroondah Reservoir.

The Trust's support of programs delivered by Western Australian sub-regional groups, South East Regional Council Urban Landcare and Ellen Brockman Integrated Catchment Group, was also well recognised in other Symposium papers. The eventual winners of the 2012 International Riverprize Award were the Willamette River, Oregon USA while the Condamine Alliance, Queensland took out the Australian Riverprize honours for their fish restock/monitoring program. Congratulations to them both.

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River Invaders



A new threat to the Swan Canning Riverpark has emerged following the discovery of more than 70 pearl cichlids in the Swan River between Middle Swan and Ascot Waters.

Feral pearl cichlids were first detected in the Beechboro area in 2006, and surveys by Department of Fisheries determined that the feral population extended from Altone Park Lakes through Lanjus drain into Bennett Brook. Initial eradication attempts by the Department of Fisheries proved unsuccessful and were downgraded to containment efforts by 2007. Limited success and lack of ongoing resources

meant that attempts to control the population were halted in 2008. Since then, surveys by Murdoch University and the Department of Fisheries have found another smaller pearl cichlid population in lakes at The Vines.

The collection of pearl cichlids in the Swan River following the death of more than 14,000 fish due to an algal bloom between June and August 2012 was the first confirmed sighting of the fish in the Swan River, suggesting that these fish have travelled out of Bennett Brook into the river. The Trust is now investigating ways to control their spread.

The pearl cichlid has emerged as a potentially serious threat to the Swan Canning Riverpark. Photo: David Morgan/Murdoch University



Pearl cichlids appear to be thriving in the Riverpark, with Murdoch University researchers catching what is thought to be the world's largest pearl cichlid in lakes at Altone Park, Beechboro. Photo: Steve Beatty/Murdoch University

Typically considered a tropical freshwater species, studies by the Department of Fisheries, funded by the Trust under the Swan Canning Research and Innovation Program, have shown pearl cichlids can survive in full-strength seawater and appear to be coping well with Perth's climate. In fact, they seem to be thriving – in 2012 researchers from Murdoch University caught what appears to be the world's largest recorded pearl cichlid at the Altone Park Lakes.

But despite evidence of their spread into the rivers, pearl cichlids are believed to be breeding only in a few locations, and these are outside the rivers themselves.

Trust Senior Environmental Officer Jeff Cosgrove said advice from Murdoch University's Fish Health Unit is that the primary breeding population of pearl cichlids is located in the Altone Park Wetlands, Beechboro. Fish from this area are then moving downstream during periods of high flow.

"Our focus for a potential eradication attempt is the primary breeding population in the Altone Park Lakes. If we can knock out this population we substantially reduce the risk of this feral species becoming more widely established and having a negative impact on the local aquatic environment," Dr Cosgrove said.

The eradication program under investigation would use Rotenone, a plant-based piscicide, in five lakes near the Altone Park Recreation Centre. Dr Cosgrove said numbers of feral species including pearl cichlids and gambusia were so high in the lakes there weren't thought to be any native fish left, helping to ensure minimal environmental impacts from the operation.

The research reports produced by Murdoch University and the Department of Fisheries can be found on the Trust's website.

Rotenone does not harm other aquatic species such as gilgias and tortoises and only remains active in the lakes for three to five days. Advanced barrier systems are another control option being considered.

The pearl cichlid originates from South America, and has become a popular species with fish keepers around the world due to its attractive pearl colouring. The species is also relatively hardy, making it easy to keep in captivity.

Pearl cichlids are also known to be aggressively territorial and to disturb habitat with their bottom feeding behaviour, competing with native species for food and habitat. They consume a broad range of prey including native insects, crustaceans and plant material. However, it is both their resilience and their behaviour that has made the pearl cichlid a potentially serious threat if released into the wild.

Lakes at Altone Park in Beechboro will be the focus of investigations to eradicate the Riverpark's primary breeding population of feral pearl cichlids. Photo: Steeg Hoeksema/Swan River Trust



Exotic threat to native fish

Pearl cichlids aren't the only threat to the Swan Canning Riverpark from introduced species. Other fish species, exotic plants, introduced crustaceans and even feral mammals like cats and foxes all place pressure on the Riverpark and the native plants and animals that live there.

Only about 1km from the Altone Park Wetlands in Bennett Brook, another introduced fish species threatens native fauna. The eastern mosquito fish, or gambusia, was introduced to Western Australia from the USA in the 1920s to control mosquito populations. In some parts of Bennett Brook, it is now the most prolific fish species and is found in high numbers in many parts of the Riverpark and beyond. Gambusia have had a devastating effect on many native fish populations, preying on eggs and larvae and injuring other fish through aggressive behaviour such as fin nipping. They have even been linked to the decline of native frog populations in many areas. Interestingly, it has since been demonstrated that native fish species, such as the western pygmy perch, are more effective for mosquito control.

Other exotic fish species threatening native fish in the Riverpark include koi carp, goldfish, one-spot livebearer and silver perch. The Swan River Trust sponsored a new Feral Fish category at the 2012 *SwanFish* competition to help educate metropolitan anglers how to identify these pests. Over 800 contestants participated in the event and caught a variety of goldfish and koi carp during the competition.

Below: A new Trust-sponsored feral fish category at the 2012 SwanFish competition educated anglers about feral pests in the Riverpark. Photo: Mark Thornley/Swan River Trust



One spot livebearer is another feral fish species threatening the Riverpark. Photo: David Morgan/Murdoch University

How you can help

The Swan Canning Catchment supports an array of unique native freshwater fauna and is home to six of the south-west's eight endemic freshwater fish species. Small, ornamental fish common in the freshwater aquarium trade cause big problems in our waterways as they flourish, breed and compete with native species for habitat and food.

The best way you can help is to never release exotic fish into our rivers, creeks, dams or stormwater drains. Even artificial lakes connect to our waterways through drainage networks.

Other things you can do include:

- Choose aquarium fish carefully: research and ask questions if you are not sure if a fish is suitable or may cause problems
- Keep native species such as western pygmy perch for mosquito control: these species are available from many aquarium stores and should never be collected from the wild
- Design ornamental ponds so fish can't escape
- Dispose of water from your aquarium on dry land
- If you catch feral fish while fishing, don't return them to the water and report all sightings of feral fish to FISHWATCH on 1800 815 507 – this helps track infestation and control the problem
- Return unwanted fish to an aquarium dealer or fish society or humanely euthanise

How do exotic fish affect the environment?

If released, many exotic fish common in the aquarium trade will survive and thrive in our local waterways. They can:

- establish feral populations that compete for food such as crustaceans, insects and plants, or feed directly on native fishes, causing native species to decline;
- become aggressively territorial, reducing available habitat for native fish and other water dwelling animals, and exhibit aggressive behaviours – such as fin nipping – that can seriously injure or kill native fish;
- introduce parasites and spread disease that may affect native fish and other freshwater animal life; and
- alter habitats by digging in riverbeds, uprooting plants and muddying the river, this can increase the level of nutrients in the water and may lead to excessive algae growth.

Right: The Asian paddle crab, a highly invasive marine pest, has been detected in the Swan Canning Riverpark. Photo: Department of Fisheries

Asian Paddle Crab poses new risk

The Department of Fisheries WA is asking people to report any unusual crabs they might find when fishing in the Swan River, following the recent discovery of three Asian paddle crabs – a highly invasive marine pest.

Three specimens of *Charybdis japonica* have been captured by recreational fisherman at Mosman Bay since October 2012. Biosecurity Section Leader Victoria Aitken said several follow-up surveys had not located any further crabs, although public help was now critical in reporting any further possible specimens.

“Anyone who suspects they have found this species is asked to call our FISHWATCH reporting line on 1800 815 507 or email biosecurity@fish.wa.gov.au,” Ms Aitken said.

This Asian paddle crab can carry a crustacean virus that could potentially harm native prawns, crabs and lobsters and is highly aggressive.

It is also recommended that this species of crabs not be eaten, as there have been some cases overseas of people becoming ill.

Fishers are urged to take a look at any small crabs they catch and, if they think they have caught the pest, they should retain that crab and contact FishWatch on 1800 815 507 as soon as possible.

The Asian paddle crab is smaller than the blue swimmer crab; adults have a shell width of 120 millimetres, it has six distinct sharp spines each side of its eyes, with spines also between the eyes. Its colour can vary. A fact sheet is available online at www.fish.wa.gov.au.



RiverView Interview

Keen sailor and crabbing enthusiast, Swan River Trust Chairman Mick Poole is a career agricultural scientist who has always been intrigued by natural systems and peoples interaction with them. Comfortable in our Matilda Bay surrounds, the resident CSIRO researcher reflects fondly on personal river memories and shares his vision for the Swan Canning Riverpark's future challenges.

Q: What are some of your first memories of the rivers?

A: I remember swimming in the hot pool at Dalkieth when I was about seven and seeing the flying boat hangars at Crawley Bay for the first time. I learnt to swim at Crawley and Nedlands baths and did a lot of sailing on Endeavours and half tonners in the river for many years. When I was at university we used to have bathtub races with outboards fitted to the tubs and I've done a lot of prawning and crabbing over the years

for blue swimmers around Mosman Bay. Some of my favourite spots would be Matilda Bay and Nedlands jetty simply because I grew up there.

Q: It has often been said that Perth's iconic Kings Park wouldn't have a view without the river. What are your thoughts?

A: Perth without a river would be just another small city in the world and there's plenty of them. What makes Perth special is its natural environment and public open spaces and the fact that we have large wild animals such as dolphins swimming around right on our city doorstep.

Many other cities with populations over a million are forced to turn into themselves and create internal attractions for their residents. Whereas we have public access around most of our Riverpark and we haven't built and alienated large tracts of the river so I think we're extremely lucky.

Q: What surprises you about the Riverpark?

A: The Swan River tends to get a lot of attention but recently I've found some great spots along the Canning River. It's like the undiscovered river of the Riverpark and has some wonderful locations like Kent Street Weir that people will be really amazed by if they explore a little.

Q: What are the biggest changes you have noticed around the river?

A: Well a lot more people are using the river and engaging in a greater diversity of activities. The river to me still looks basically the same. The trees along the riverbanks actually look a lot better than I remember because we've been putting a lot of resources into improving the riverbanks over the past couple of decades.

Q: What are some of the key aspects of your vision for the Swan Canning Riverpark?

A: To see the banks of the rivers alive with people exercising and relaxing around the river but looking after it at the same time. The river will be there when we're not and if we can leave it in good shape then we've done a good job. The challenge is to recognise its natural beauty while recognising that people do like living by the river and going to coffee shops etc. So there's a lot of pressure on the rivers and that will grow with population. Catering for people that like their solitude on a kayak versus others that like to roar around on boats or go to large events is a fine balance.

Q: What are the major projects for the Trust in the next few years?

A: With lower rainfalls in recent years the Trust is more vigilant than ever in its attempts to reduce nutrient run off such as phosphorous and nitrogen into the river system.

We have been conducting weekly monitoring of water quality for 15 years and have been funding and constructing nutrient stripping wetlands in priority catchment areas while bolstering dissolved oxygen levels in key upstream areas through our four oxygenation plants.

We've been working closely with the Department of Transport to examine how the many recreational user groups utilise the Riverpark and how to best manage the waterways to improve safety, amenity and environmental outcomes.

We are also constantly working to preserve and create new public access to the Riverpark through initiatives such as our Swan Canning Trails project. We already have good bike paths and trails around the Riverpark but this is an opportunity to link them all up including diving and kayaking trails with meaningful interpretation that makes the rivers' history and culture more accessible.

Q: How does the Trust engage and educate people about the Riverpark?

A: Our River Guardians, Dolphin Watch and school education campaigns have achieved some great results and really help to deliver our key RiverWise messages. But I think it's the little day to day things that really count like the public just picking up their litter after enjoying a day on the river or riverbanks. Having good practice with moorings and boats is also really important and makes a big difference to people's enjoyment of the waterways. If we develop a community culture of protecting our rivers then the Riverpark will remain in good shape.

Q: Perth can traditionally be resistant to change. What are your feelings on the current large scale waterfront developments unfolding along the CBD?

A: As Australia's fastest growing city we are realising that change is inevitable and we need to plan for the future. Ironically my great, great grandparents the Watsons and the Elsegoods came up the river in 1829 and helped build the Esplanade that we are now reclaiming.

These projects come along once in 100 years so we need to do them properly to celebrate and protect our natural assets. I support thoughtful riverfront development and in terms of the overall riverbank areas of the Riverpark these developments are relatively small taking up just a few kilometres out of several hundred kilometres of shoreline.

How would you describe the Trust's management approach for the Riverpark?

A: I think we're very collaborative and science based. If we can get to know what makes the river tick biologically and physically then we give ourselves the chance to make informed decisions about managing the river system, algae and nutrients. This scientific approach extends to how we build river walls or deal with issues such as boat wake erosion.

Q: The Trust is a Statutory Authority. What distinguishes it from other government agency organisations?

A: We have the unique opportunity to pull together the many threads of local councils, state government agencies, industry and the community to help manage the Swan Canning Riverpark and its associated lands. It's challenging to get everybody singing from the same hymn book but that's life and I think our model is very effective to help maximise our current resources.

The Trust is a relatively small agency of about 60 people that is very productive and has built a strong science based knowledge of the river. It contains a lot of specialist staff who are very passionate about improving the rivers and I think that focus infuses into our partnerships.

Riverpark Rubbish

A dolphin entangled in fishing net has become a stark reminder of the problems litter is causing in the Swan Canning Riverpark.

Gizmo, a three-year old dolphin calf who lives in the Riverpark with his mother Tupac, was first reported in April with fishing line and netting trailing from his dorsal fin. Over the next two months, reports of the dolphin's progress showed fishing line slicing deeply into his dorsal fin.

In June, a daring rescue by three Water Police officers freed Gizmo, but the young dolphin will be forever scarred by his ordeal and now risks future entanglements around his partially severed fin.

Trust Riverpark Manager Chris Mather said the dolphin's plight was an all-too common effect of litter and other debris dumped in the rivers.

"Bridges and other popular fishing spots are among our worst hotspots, and dumped fishing gear including fishing line is one of our biggest concerns," he said.

"If line gets wrapped around a pelican's beak, or around a dolphin, that can cause real problems. We have seen deaths of seabirds and in 2009 two of the dolphins that died had fishing line entanglement which was one of the contributing factors to their deaths. One dolphin even had a fish hook lodged in its oesophagus.

"We have waterways officers cleaning up on a regular basis and it's costing us money to do that. I'd much rather direct their efforts to shoreline restoration works rather than picking up rubbish."

Earlier this year Mr Mather featured on an episode of Today Tonight discussing the impact of rubbish on the rivers and wildlife. Fourteen tonnes of rubbish was retrieved from the Riverpark in the 2010-11 financial year by Trust officers. Between July 2011 and June 2012 another 11 tonnes of rubbish, rubble and timber was dumped in the Riverpark.

Environment Minister Bill Marmion has joined condemnation of anyone treating the rivers as a dumping ground, urging the community to report offenders to the Trust.



A darter tangled in fabric at Point Fraser, East Perth. Photo: Miranda Holker/Swan River Trust

A pelican with a fish hook embedded in its beak. Photo: Halina Burmej

"We're pulling everything from couches and fridges to safes, tyres and shopping trolleys out of the river," Mr Marmion said.

"Most disturbing is the mass of plastic bags and fishing line that continues to be found, despite people knowing the terrible impacts these items have on river wildlife from pelicans to dolphins.

"This is a conversation we need to have as a community to make it clear that littering is not okay,"

And the problem continues. On a single Friday in November, Trust officers on board the new work vessel *Marli* collected a couch, eight chairs, two tyres and a mass of bottles, cans and fishing line between the Belmont ski area and Ascot Quay.

"Rubbish has a devastating impact on river wildlife and water quality and the Trust urges people to think about the consequences of their actions. Please pick up any litter and put it in a bin or take it home, and take large items to the tip," Mr Mather said.

Rubbish removed from the Swan Canning Riverpark in 2011-12

More than **6.3 tonnes** of general rubbish including plastic and foil containers, cans and bottles, food and confectionary wrappings, plastic bags, rags, styrofoam, metal objects, paper and magazines, hats, broken thongs, fishing line and bait bags

Two tonnes of old timber, such as fencing and wood offcuts

Nearly **three tonnes** of old building rubble

9 shopping trolleys, 19 vandalised signs, 16 drums, 48 tyres, 21 chairs

Background image: Gizmo, a three-year-old dolphin calf, was seriously entangled in discarded fishing line and netting for two months before his rescue. Photo: Richard Gorham/DEC

Inaugural award for Water Police rescuers

Three officers from the West Australian Water Police have been recognised for their remarkable rescue of a young river dolphin calf, *Gizmo*, who was severely entangled in discarded fishing line for more than two months.

The rescue unfolded in June 2012 near Swan Yacht Club in the Swan Canning Riverpark.

The officers – Senior Constable Bruce Rodgers, Senior Constable Glenn Bott and Constable Brody Baker – were presented with *Caring for River Dolphins* awards on 28 October 2012 in front of more than 130 of the Trust's

trained Dolphin Watch volunteers, who helped track *Gizmo*'s movements prior to the water police rescue.

Swan River Trust General Manager Rod Hughes said three-year-old *Gizmo*'s plight had become increasingly dire as his protective mother, *Tupac*, thwarted all previous attempts to help her calf.

“By the time the water police rescued him, the fishing line had become so tightly wrapped around *Gizmo*'s dorsal fin it was slowly slicing through it,” Mr Hughes said.

“Gizmo was also dragging an increasingly heavy load of seaweed and debris that had latched on to the line and it had reached the point where there was a real danger the little calf would not survive.

“The rescue conducted by these officers was extraordinary, particularly as they had to contend with *Gizmo*'s mother – a large, heavy dolphin measuring over two metres – repeatedly trying to stop them.”

Mr Hughes said the officers followed the mother and calf for some distance in a boat before Constable Baker and Senior Constable Bott were able to dive in and catch *Gizmo* in their arms and cut him free.



Gizmo, a three-year-old dolphin calf, was seriously entangled in discarded fishing line and netting for two months before his rescue. Photo: Richard Gorham/DEC

“During the rescue, *Tupac* tried repeatedly to grab *Gizmo* by the tail and pull him out of their hands, which would have been very confronting. It was a remarkable rescue and I am pleased to have the opportunity to personally thank the officers,” he said.

“Four months have now passed and I am very happy to report that *Gizmo* is doing well. While his fin is badly damaged and bent, the wound has healed cleanly and he is again swimming strongly with his mother at his side.”

Mr Hughes urged people visiting the Riverpark to be vigilant about picking up their rubbish, particularly discarded fishing line, to help protect the dolphins and other river wildlife. He also stressed that people must not approach dolphins in the wild and boats should stay at least 100 metres away.



Water Police officers Constable Brody Baker, Senior Constable Bruce Rodger and Senior Constable Glenn Bott were recognised for their daring rescue of entangled dolphin calf *Gizmo*. Photo: Miranda Holker/Swan River Trust

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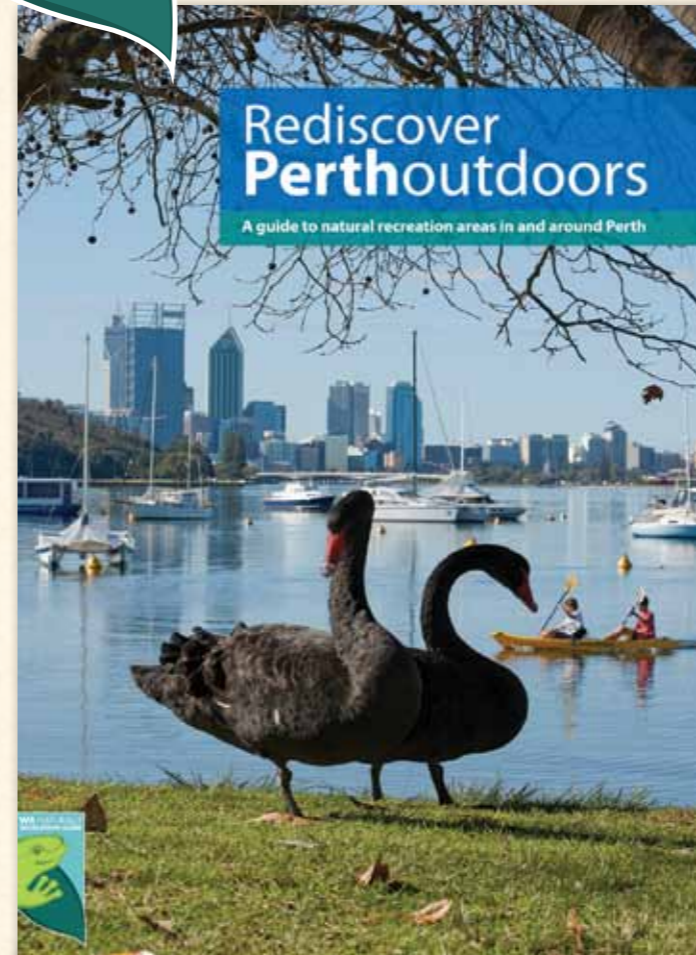
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Riverpark News



Hovercraft helps record river assets

The Swan River Trust recently used a hovercraft to help update its database of built and natural assets along the Swan and Canning rivers. The hovercraft was used to take video footage of the river shoreline at low tides to record the condition of assets such as riverwall footings and other hard and soft engineered structures.

“The information will help guide the Trust’s management policies and funding priorities in coming years.

Compiling this sort of data has traditionally been done on foot and in boats travelling the length of the river system. This is a massive and time consuming task which can take up to a year.

The combined shoreline of the Swan and Canning rivers is more than 300km. Using the hovercraft the information was collected in a single week.

New funding targets river health

The State Government has announced \$1.5million over three years for 10 new projects to help reduce nutrient loads from catchments entering the Swan and Canning rivers. The projects under the Swan Canning Water Quality Improvement Plan (SCWQIP) range from re-engineering stormwater drains and improving fertiliser management to revegetating foreshores to help filter and block nutrients.

Nearly \$600,000 will be spent on projects in the priority catchments of Ellen Brook, Bayswater Brook and Southern River, which are some of the biggest contributors of nutrients

entering the Swan and Canning rivers. Ellen Brook alone contributes more than 70 tonnes of nitrogen and 10 tonnes of phosphorus a year to the rivers – more than any other Swan Canning catchment.

Free homes for overnight boaters

Boaters in the Swan Canning Riverpark will be able to stay overnight at 32 courtesy moorings provided by the Swan River Trust to enhance public enjoyment of the Riverpark. The courtesy moorings enable boaters to stop at a range of popular sites without having to drop anchor, which reduces damage to seagrass. Boats were previously restricted to a maximum four-hour stay. The four-hour limit will remain but boats that arrive within four hours of sunset will now be able to extend their visit and stay at a courtesy mooring all night. The moorings – which are a distinctive orange/red colour with a Trust logo – are so popular that in 2009 an extra 12 were established to cater for demand. They are located at Middle Swan Bridge, Pickering Park, Sandy Beach Reserve, Ron Courtney Island, Claughton Reserve, Tranby House, Cracknell Park, Barrack Square, Blackwall Reach, Matilda Bay, Freshwater Bay, Mosman Bay, South Perth Foreshore and Fremantle Traffic Bridge.

Further details are available on the Trust’s interactive Riverpark recreation map at www.swanrivertrust.wa.gov.au



Millions invested in river care

More than two million native seedlings have been planted in the Riverpark during the first four years of the Healthy Rivers Action Plan (HRAP). The HRAP was adopted in 2008 as a five-year, \$40million plan to protect the environmental health and amenity of the Swan and Canning rivers.

In 2011-12, collaborative activities under the HRAP to reduce nutrients in the rivers included 74 on-ground projects, with more than 781,000 native seedlings planted and some 70ha of weed control.

In the first four years of the HRAP, nine local Water Quality Improvement Plans (WQIPs) were prepared and adopted in priority catchments that contribute high levels of nutrients to the Swan and Canning rivers.

Priorities this year include progressing projects in the Bannister Creek WQIP; finalising a WQIP for Bull Creek; finalising plans for a large scale wetland treatment system on the Ellen Brook in Belhus; finalising design for the Eric Singleton Bird Sanctuary constructed wetland; and building a third oxygenation plant on the Canning River while upgrading the two existing oxygenation plants.



Drainage project set to boost river health

The final phase of a \$375,000 project in Armadale to help reduce nutrient loads entering the Canning River has been completed. Revegetation and weed control at the Williams Road Main Drain (WRMD) site began in May 2011. Since then thousands of seedlings have been planted and more than 90 cubic metres of sediment and rubbish removed with the help of volunteers. This year earthmoving equipment has created a weir and widened the drain to increase capacity and reduce flow, installed riffles to help stabilise the drain and oxygenate the water, and landscaped a swale to filter silt and nutrients using native plants. The project will remove significant quantities of sediment and gross pollutants from the river system. The project was managed by the South East Regional Centre for Urban Landcare (SERCUL) in partnership with the Swan River Trust, Department of Water, Water Corporation, City of Armadale and the Armadale Gosnells Landcare Group (AGLG).

Tough response to Ashfield tree vandalism

The Swan River Trust has installed a large sign in Ashfield Parade, Ashfield advising the public that two native Acacias have been cut back in a deliberate act of vandalism to Riverpark vegetation. Foreshore vegetation is a critical part of the river ecosystem, providing foreshore stability and a habitat for wildlife while also helping to prevent erosion.

The signs, which highlight the damage that has been caused and encourage people to report acts of environmental damage they see, have also been erected in North Fremantle, Rossmoyne, Shelley, Salter Point, South Guildford and Attadale. The signs remain in place until vegetation has re-established. Anyone destroying or damaging trees or other vegetation in the Riverpark without a permit risks penalties of up to \$5,000.



Councils get more say in Riverpark

New planning regulations that came into effect on 28 August, 2012 have streamlined the approvals process for local governments to carry out low level developments such as landscaping and minor infrastructure on land in the Swan Canning Riverpark. The changes were announced by Environment Minister Bill Marmion.

Trust Stormwater Management Policy updated

The Trust’s stormwater management policy has been updated to address comments received during the 2010 public comment period. The stormwater management policy ensures land use changes are managed to protect the water quality of the Swan Canning river system. Stormwater management systems are designed to enhance the environmental quality of the river.

To view the policy, visit the policies section at the Trust’s website: www.swanrivertrust.wa.gov.au



Landcare Heroes

From an old farmhouse to a fully functioning Landcare Centre in Muchea, a team of passionate land care professionals is undertaking a herculean task.

Working with the local community, they manage more than 2200 km² of mainly agricultural, rural residential and urban land forming the catchments of the Brockman River and Ellen Brook 50 km north-east of Perth. Salinity, high nutrient levels in the waterways and biodiversity loss as new developments encroach on remaining bushland areas are the enemies they do battle with.

But, as Ellen Brockman Integrated Catchment Group (EBICG) Natural Resource Manager Bonny Dunlop explains, it is a war they are hopeful of winning.

Water quality in the catchments is beginning to stabilise after years of decline and community attitudes are changing as landholders recognise the importance of caring for the local environment.

“We try to get people involved as much as possible so we can show them there are better ways of doing things. We’ve had improved attendance at field days and workshops, more requests for assistance for revegetation and increased soil sampling by landholders.”

“And even more exciting is what we’re seeing out there in the catchment – real landscape change in areas that were once heavily degraded. Water sampling is also showing nutrient levels stabilising in many areas of the catchment.”



Ellen Brockman Integrated Catchment Group staff Bonny Dunlop, Rosanna Hindmarsh, Sue Metcalfe and Megan O’Grady. Photo: Mark Thornley/Swan River Trust

The group’s efforts are not going unnoticed. In September 2012 EBICG was awarded the Toshiba Community Group Award at the 2012 National Landcare Awards in Sydney. The accolade recognised the group’s outstanding work to enhance and protect the environment of the catchments. EBICG was previously recognised as the Community Group of the Year at the State Environment Awards in 2011.

EBICG (formerly the Ellen Brook ICG) established in 1996 and works out of the Chittering Landcare Centre. It aims to restore natural healthy ecosystems in the catchments, reverse environmental damage, promote conservation and sustainable land use and protect indigenous flora and fauna. All this while managing competing land and water uses.

Nutrient reduction is a particular focus. Ellen Brook is one of the biggest exporters of nutrients to the Swan Canning Riverpark, with an average of 71.4 tonnes of nitrogen and 10.04 tonnes of phosphorus flowing into the Swan River from the catchment each year.

Essential to the group’s work, says Bonny, is external funding such as the Swan River Trust and Alcoa Landcare Program (SALP). In its 14 year history SALP has delivered more than \$400,000 to EBICG, helping fund projects to revegetate riparian zones, restore degraded bushland, control weeds, install fencing, and map and treat dieback areas.

This year the group received more than \$20,000 for two projects, revegetating a creek line on private property in the Brockman River Catchment, and revegetating and mapping dieback areas around a golf course in the Ellen Brook Catchment.

For Bonny, a life-long member of the local community, the rewards of the job are many and EBICG has big goals for the future.

Ellen Brockman Integrated Catchment Group – A snapshot

2200 km² area of the Brockman River and Ellen Brook catchments

7 full-time and part-time staff

13 committee members

1 million+ trees planted through EBICG projects

71.4 tonnes of nitrogen flowing from Ellen Brook to the Swan River every year

10.04 tonnes of phosphorus flowing from Ellen Brook to the Swan River every year

\$448,506 SALP funding delivered to EBICG since 1998

On the Water

The Swan River Trust’s first purpose-built patrol boat has taken to the waters of the Swan and Canning rivers, boosting enforcement and compliance efforts and heralding a new era of Riverpark management.

Trust Riverpark Manager Chris Mather said the vessel marked an important step in the transition of the Trust’s operations from a logistics support role to holistic park management.

“Since the establishment of Riverpark operations, we have moved our focus to education, enforcement and compliance,” he said. “This new boat is the last piece of the puzzle, giving our guys the tools to respond to any incident, event or enforcement action required in the Riverpark. They are equipped to deal with anything.”

The new vessel, the \$201,000 *Booneenboro*, will patrol for speeding craft, attend spills and other incidents, and monitor compliance with navigational rules. The 6.8 metre NAIAD design is powered by twin 115 hp motors and has a top speed of 38 knots.

The *Marli*. Photo: Shane Hunter/Swan River Trust



Booneenboro, the Trust’s new purpose-built patrol vessel. Photo: Miranda Holker/Swan River Trust

The *Booneenboro* shares the same purpose-built features as patrol and rescue boats across Australia and New Zealand and has a soft, inflatable hull giving a smoother ride and allowing it to manoeuvre close to other vessels without damaging them. Leading-edge technology includes sonar 3D imaging to locate underwater hazards, and secure radio communication with other enforcement vessels. Mr Mather said the vessel will help consolidate strong links with Water Police and the Department of Transport.

“It’s about having a presence out there, making people aware and making sure all compliance boats are giving the same message,” Mr Mather said. “Our primary focus is changing behaviour through education, not just giving fines.”

Speaking at the launch of the *Booneenboro*, which was marked by a traditional Noongar welcome and smoking ceremony, Environment Minister Bill Marmion said the vessel would be vital in helping to protect and enhance the Swan Canning Riverpark. The *Booneenboro* was named by Noongar Elders after the body of water between Heirisson Island and the Victoria Park foreshore, where the Trust’s Work Centre is located.

The *Booneenboro* was joined on the fleet in August 2012 by the *Marli*, a new 7 metre work boat to replace the ageing *Wilma Vincent*. The *Marli*, named from the Noongar word for black swan, was purpose-built for river maintenance including a small crane with an 840kg lift capacity for rubbish collection and mooring and oxygenation plant maintenance.





Welcome to River Guardians

Welcome to the Trust's new look RiverView magazine! In an effort to reduce our environmental footprint we have combined three Trust publications into this one comprehensive publication. This means RiverView now includes the River Guardians newsletter.

Summer looks set to greet us with hot and clear weather, perfect for exploring the Swan Canning Riverpark. We hope you find a chance to get out and about and enjoy our beautiful rivers!



It's been great to see you at our events, including Dolphin Watch and RiverWise training sessions. There are now 462 Dolphin Watch volunteers monitoring the Riverpark dolphins from Fremantle as far upstream as Caversham in the Swan River and Kent Street Weir in the Canning River.

Dolphin Watch Day

In 2012 we celebrated the achievements of our Dolphin Watch volunteers at Dolphin Watch Day. More than 100 volunteers and invited guests, including Environment Minister Bill Marmion, attended the event at Matilda Bay Restaurant.

Dolphin Watch Day featured the release of data from dolphin research in the Swan Canning Riverpark. Dolphin Watch volunteers have provided valuable information to Murdoch and Curtin university researchers studying these iconic animals.

Two special volunteers were recognised, with Eleanor Bollam receiving the Chief Scientist's 2012 Citizen Scientist Award on behalf of WA Chief Scientist Professor Lyn Beazley. Eleanor won the prestigious prize for her outstanding and detailed comments on her monitoring reports.

Wayne Kerslake was named the 2012 River Guardians Outstanding Dolphin Watcher after completing a remarkable 951 hours of dolphin monitoring in the 11 months.

Zari remembered

The event also included a heartwarming tribute to a young Perth girl who loved dolphins.



Zari Ryan, 12, lost her battle with leukaemia in 2009 before she could fulfil her Make a Wish request to swim with dolphins. Zari's love of dolphins was recognised at the event by naming a calf after her. The Ryan family attended to collect an image of the calf. Zari's name has been given to the last unnamed dolphin calf in the Swan Canning Riverpark.

High hope for newly named dolphin calf

Another dolphin calf was named in 2012 when we gave the Perth community the rare chance to come up with a name. Hundreds of entries were received from the general community. *Highhope* was selected from more than 1000 suggestions and was submitted by 25-year-old dolphin enthusiast William Ross, a keen kayaker and jogger who loves watching the dolphins at play. He said he considered it a privilege to name the calf and he was very excited to be chosen.



River Guardians launched a display at Scitech's Think Tank exhibition space highlighting the Dolphin Watch project and the Riverpark's dolphins.

Don't forget to keep an eye on our events calendar on the *River Guardians* website www.riverguardians.com for all the latest opportunities to help the Swan and Canning rivers.

See you around the Riverpark.

Marnie Giroud
River Guardians
Program Manager



Become RiverWise in 2013



Being RiverWise in the garden and at home will be the focus of a new series of free RiverWise training events planned for 2013. The River Guardians RiverWise program is your chance to learn how to help the rivers. Training focuses on:

River science – Learn from the experts about the Swan Canning Riverpark, how it works, what are the problems and how can we fix them.

RiverWise out there – What's going on out there to help the rivers? Find out when we travel down the river on the MV James Stirling vessel from Captain Cook Cruises. Hear from Trust scientists about what is being done by government and local community and how you can get involved.

RiverWise at home – Find out how you can be river friendly at home by creating your own natural cleaners and polishes that

won't harm your family or the environment with Amy Krupa and Deb Taborda from SERCUL.

RiverWise in the garden – Become a sustainable gardener and save water, time and money by learning some amazing tips with gardening expert Chris Ferreira from Landcare Solutions. Win fabulous gardening prizes to help your river friendly garden grow!

A RiverWise workshop in September 2012 saw 51 people complete a full day of training in river friendly gardening techniques, environmentally friendly cleaning alternatives and the science of the Riverpark and its challenges. Starting at the Bells Function Centre at Barrack Square, participants then moved to the Captain Cook vessel the *Lady Devine* for a two-hour cruise to try their hand at dolphin watching and water quality monitoring.

The next training session will be held in May 2013. Register your interest by emailing guardians@swanrivertrust.wa.gov.au or by calling the River Guardians team on **9278 0900**

New skills for volunteers at Dolphin Watch training event

More than 130 Dolphin Watch volunteers enjoyed a morning on the Swan River and a spectacular display by its resident dolphins in October 2012 when the Trust held its major Dolphin Watch training event for the year. The event provided an opportunity for existing Dolphin Watch volunteers to learn new skills as well as meet researchers studying dolphins in the Swan Canning Riverpark.

Leading scientists and experts conducted a series of workshops on dolphin behaviour, acoustic studies, data analysis, photography and using Flickr and Twitter to upload dolphin images, as the Captain Cook vessel motored between Perth and Fremantle. The event also featured presentations of the inaugural *Caring for River Dolphins* award to the Water Police officers who rescued the young river dolphin Gizmo, who was severely entangled in fishing line and netting for more than two months.

"It's opportunities like these that enable our dedicated Dolphin Watchers to understand more about these special creatures," said River Guardians Program Manager Marnie Giroud.

"The volunteers' support in monitoring the river dolphins is valuable, as we learn about incidents quickly through the eyes and ears of almost 500 volunteers."

The event followed two training sessions for new volunteers earlier in 2012. Another upskilling session for Dolphin Watchers is planned for August 2013 and training for new volunteers is planned in March 2013.



New edition of Finbook launched



The latest catalogue of dolphins living in the Swan Canning river system shows a number of dependent dolphin calves among more than 20 bottlenose dolphins regularly seen in the Riverpark.

The new edition of *FinBook*, which was launched in May 2012, features photos of each dolphin's unique 'fin prints' to help Riverpark users recognise individual

dolphins, while also offering insights into their alliances or 'friendships' with other dolphins. *Finbook*, a joint initiative of the Trust and Murdoch University, is a valuable resource for Dolphin Watch volunteers, helping them to identify the dolphins they record. The 2013 edition will be updated with a new section on common dolphin behaviours. *Finbook* was launched at a reception for hundreds of Dolphin Watch volunteers at the Royal Perth Yacht Club in Matilda Bay. Download *FinBook* free at www.riverguardians.com

Want to become a River Guardian?

River Guardians are friends of the Swan and Canning rivers. Becoming a River Guardian gives members the opportunity to connect with the Swan and Canning rivers and the people and projects protecting them. Free events, subscription to the Trust's online newsletter *RiverView*, networking, volunteering

and training opportunities are all provided to members at no cost. River Guardians membership is open to all ages. More information is available on the River Guardians website, www.riverguardians.com, including an online application form.

River Guardians Education

Young people protecting the rivers for the future

Hi everyone!

2012 has been a huge year for the River Rangers program. River Rangers cadets have been out in force around the Swan Canning Riverpark showing that young people can make great changes to the world.

The River Rangers program offers students the chance to get involved in field trips, exciting events, and real-life projects to protect our rivers. River Rangers is a partnership between the Swan River Trust and Department for Communities.

Some of the highlights of the year include:

- The two-year River Rangers pilot trial was successful and the program will now grow to involve 15 schools by 2015.
- The Swan Canning Riverpark Youth Forum held in partnership with Millenium Kids saw 55 students from five local schools spend two days thinking, researching and taking part in practical activities ranging from bird watching, fishing and water testing to art and storytelling including dreamtime creation. School teams created a plan for an action-based river project and took the ideas back to their school. Students have now adopted a river location and are making their ideas happen.
- Sense of Place Explorers Project gave 19 young people from high schools in the Melville District the opportunity to participate in a three-day series of cross-curricular field workshops focusing on the Swan and Canning rivers. The students will continue to develop ways they can make the City of Melville a better place for them and the plants and animals that live in the area. This fantastic event was held in partnership with Regional Centre for Expertise UWA, Department of Environment and Conservation (DEC), Swan Estuary Reserves Action Group (SERAG) and Millennium Kids.

- An incredible **26,616** plants were planted at planting days by students from Dale Christian College, Ellenbrook Christian College, Trinity College, Santa Maria, St Mary's Anglican School for Girls, and Bullsbrook DHS in partnership with Chittering Landcare Centre, Armadale Gosnells Landcare Group, SERCUL, SERAG and City of Perth.
- RiverWise Activity Days were held in the City of Bayswater, City of Perth, City of Canning and in Southern River. These one-day events provided a great opportunity for young people to learn more about their local environment and what they can do to help protect it.
- Popular teacher Professional Learning sessions included Ribbons of Blue field activities at Canning River Eco Education Centre and Herdsman Wildlife Centre plus a Cultural Experience Day at Walyunga with DEC's Aboriginal Heritage Unit.

Congratulations to all our River Rangers for their work, bright ideas and commitment to conserve and restore Perth's beautiful Swan Canning Riverpark. The future is in your hands – you can make a difference.

Joselyn Fissioli
Swan River Trust Education Manager



Yusra Fahmy, Nawal Elar and Aalia Ashraf from Al-Hidaya Islamic School with some of the thousands of seedlings planted by students this year.



Bird expert Simon Cherriman takes students bird spotting at the Canning River Eco-Education Centre RiverWise Activity Day.



Maylands Peninsula Primary School students Russell Two, Edwin Nathan, Joe Gerus and Felix McAndrew with Bluey the bluetongue at the Bayswater Catchment Activity Day.



Learning about indigenous heritage was a highlight of the Southern River Catchment Activity Day.

DID YOU KNOW???

... some types of fish that have been introduced by people into the Swan Canning Riverpark are now harming native fish? These include koi carp and goldfish which are often kept as pets but have been released into the rivers, and the eastern mosquito fish, or gambusia, which was introduced to Western Australia from the USA to eat mosquitoes!

WIN...

Can you pick a feral fish? Take a look at these pictures and tell us which is the native fish and which one has been introduced to our rivers. You can find the answer in the pages of this magazine. Email your answer to guardians@swanrivertrust.wa.gov.au and you could win a family pass to Scitech!



Maylands Peninsula Primary School students Alice Chang and Precious Mugwagwa at the Bayswater Catchment Activity Day.

Around the Riverpark

Colours of Science

The Colours of Science National Science Week Community Expo in August attracted more than 2000 people to the Canning River Eco Education Centre. Organised by SERCUL, the Australian Association for Environmental Education and the City of Canning.

Below left: Oliver Beasley. Right: Maya Jones and Maddi Asquith.



Autumn River Festival

Autumn River Festival 2012 was a big success, attracting thousands of people to the shores of the Swan River in Bayswater. The Trust marquee was a definite highlight, featuring feral and native fish, Swan River prawns, lots of kids' activities, and a mammoth Dolphin Watch display which showcased at Scitech for six months.

Top: Melissa, Thomas and Julie Cugley. Right: Jake and Sonya Kelly with Jon the Swan.



Riverwise training

September's RiverWise event saw 51 participants learn how to be RiverWise in the garden and around the Riverpark. Starting the day at Bells Function Centre at Barrack Square, they then moved to the Captain Cook vessel the *Lady Devine* for a two-hour cruise to try their hand at dolphin watching and water quality monitoring.

Left: Elizabeth Asche. Top: Wade Harrison and Patricia Farat.



Dolphin Watch training

Budding Dolphin Watchers attended training sessions at Royal Perth Yacht Club in Crawley and at Scitech last year, hearing from leading research scientists about the Riverpark's dolphins and how to monitor them.

Top left and clockwise: Jennie Hunt and Alan Reith, Helen Gloyne and Maria Scarfone, Louise Hingley and Jenny Morris.



Wild Life – Books, dvds, music

Spotlight on freshwater fauna of the south west



A new field guide to the iconic, yet often unnoticed species of fish, crayfish and mussels inhabiting the fresh waters of south-western Australia

has been released by South East Regional Centre for Urban Landcare and Murdoch University. *A Field Guide to the Freshwater Fishes, Crayfishes and Mussels of South-western Australia* offers tips on recognising and identifying these animals. **The guide costs \$10 per copy (incl. GST) plus \$2 postage. Available from SERCUL by phoning (08) 9458 5664 or online at www.sercul.org.au/ffp.html**

Endangered cockatoos captured on film

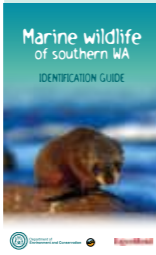


The critically acclaimed documentary *On a Wing and a Prayer* follows the incredible life cycle of the Carnaby's cockatoo. Filmed in

Western Australia's wheatbelt, *On a Wing and a Prayer* features Department of Environment and Conservation Rick Dawson as he fights to ensure the survival of a pair of Carnaby's cockatoos and their chick. The documentary is available at ABC shops and online at <http://shop.abc.net.au>.

WIN one of five copies of On A Wing and A Prayer. To enter, email miranda.holker@swanrivertrust.wa.gov.au by 1 February, 2013 with On A Wing and A Prayer in the subject line.

Marine wildlife guide launched



People enjoying Western Australia's marine areas will be able to identify and report threatened and unusual marine wildlife with the help of an informative new guide. *Marine wildlife of southern WA* provides information on key marine animals, including seals, whales, dolphins, turtles, penguins and some fish and waterbirds of conservation significance. A durable, waterproof publication designed for boaters to use at sea and a paper version has been produced for schools and public education programs. The guide was produced by the Department of Environment and Conservation (DEC) and covers the waters from Shark Bay Marine Park to the South Australian border, including the newly-created Ngari Capes Marine Park, between Busselton and Augusta. **Copies of the guide are available from selected DEC offices or download the publication at www.marineparks.wa.gov.au.**

Perth's rivers flow through pages of new book



Award-winning artist Brian Simmonds brings Perth's waterways to life in *The River*, a beautiful book featuring more than 90 original oil

and mixed media colour paintings and sketches. His illustrations are accompanied by uniquely local poetry and prose from well-known writers such as John Kinsella, T A G Hungerford and Elizabeth Jolley. Simmonds is a full-time artist who has studied many mediums and subjects for over 30 years, and holds a Bachelor of Arts degree in fine art from Curtin University. He has exhibited in and won numerous prizes and awards for drawing, oil painting and mixed media works. His work can be found in many private and public collections throughout Australia.

WIN a copy of Brian Simmonds' *The River*. To enter, email miranda.holker@swanrivertrust.wa.gov.au by 1 February, 2013 and tell us what you love about Perth's rivers.



River Guardians 2013 photo competition

The Swan River Trust will once again celebrate the diversity and beauty of the Swan Canning Riverpark with the River Guardians photography competition. Open to all amateur photographers, the competition offers \$4000 worth of prizes, including superb digital cameras, Finn kayaks, Captain Cook river cruises and Scitech family passes. A partnership between the Swan River Trust and the Community Newspaper Group, this year's theme is *Life above and below the Riverpark*. Entries open on 3 January, 2013 and close on 8 March, 2013.

Salt Water Tears

Author and River Guardians member Len Varley has made waves with his latest book *Salt Water Tears* a heart wrenching first hand account of dolphin drive hunts in the tiny coastal town of Taiji, Japan.



Previously working as a volunteer for marine conservation organizations in New South Wales, Len was moved and inspired by the 2009 movie 'The Cove' which exposed

the dolphin slaughter and captivity trade in the Japan. The infamous documentary was his motivation for travelling to Taiji in January 2011 to investigate dolphin drive hunts. While in Japan, Len was honoured to work with the star of *The Cove* movie Ric O'Barry. O'Barry was the dolphin trainer who captured and trained bottlenose dolphins for the 60s TV

show "Flipper". Ric later realised the damage that keeping these highly intelligent creatures in captivity was doing and has been championing the anti-captivity movement for the past three decades.

At home Len reconnects with nature by kayaking the upper reaches of the Swan River and he often watches the reactions of onlookers along the banks of river, enthralled at the sight of dolphins on their doorstep.

Len believes there is a great deal we can learn from dolphins, and that they have a strong claim to a right of protection under law. He is committed to fighting for their rights, and working to educate others and raise awareness for the anti-captivity cause.

His first book *Salt Water Tears* will reduce you to just that ... when Varley explores the changing face of whaling in Japan from subsistence living for a small town into the shameful, cruel and lucrative industry of dolphin hunting that it is today.

23,000 dolphins are slaughtered in Japan annually and Taiji will sell approximately 100 live specimens

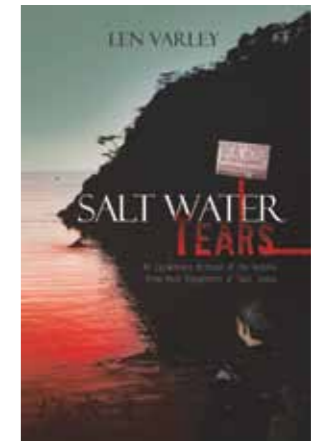
each year to the world's marine parks. Varley's shocking facts of animal cruelty are juxtaposed by his description of the gentle and silent beauty of Japan's graceful countryside.

Salt Water Tears will reduce you to just that ...

Salt Water Tears explores both sides of the coin of dolphin conservation and Japanese tradition and

trade through the eyes of a foreigner and the Japanese people themselves. It is a must read for anyone concerned about the environment.

Len's second book, which addresses the deeper issue of dolphin captivity and the human/dolphin connection, will be released soon.



River Guardians Photography Competition

The Swan River Trust and Community Newspaper Group are asking amateur photographers to capture their favourite places, people and wildlife of Perth's rivers for entry into the River Guardians' 3rd annual photography competition.

There are more than **\$4000 worth of great prizes** to be won including digital cameras from Camera Electronic, fabulous Finn Kayaks, Captain Cook Cruises and Scitech family passes, across open and kid's categories.

Community Newspaper Group will run selections of photos across their publications and on a public online gallery. The public can also vote online or at the Autumn River Festival 2013 for the People's Choice award.

The photography competition will focus on *Life above and below the Swan Canning Riverpark* and is open to all ages from **3 January 2013**. Submissions close **8 March 2013**.

For more information and to submit your entry, visit www.riverguardians.com.



Creature Feature

Strange and unusual animals of the Swan and Canning Riverpark.

The Swan Canning Riverpark is home to over 130 species of fish, 80 species of waterbirds and an eclectic variety of mammals, turtles, snakes, reptiles, frogs and macro invertebrates. Each issue RiverView will showcase a selection of these amazing animals equipped with their own survival mechanisms and visual peculiarities.



Tube Anemone (Cerianthus membranaceus)

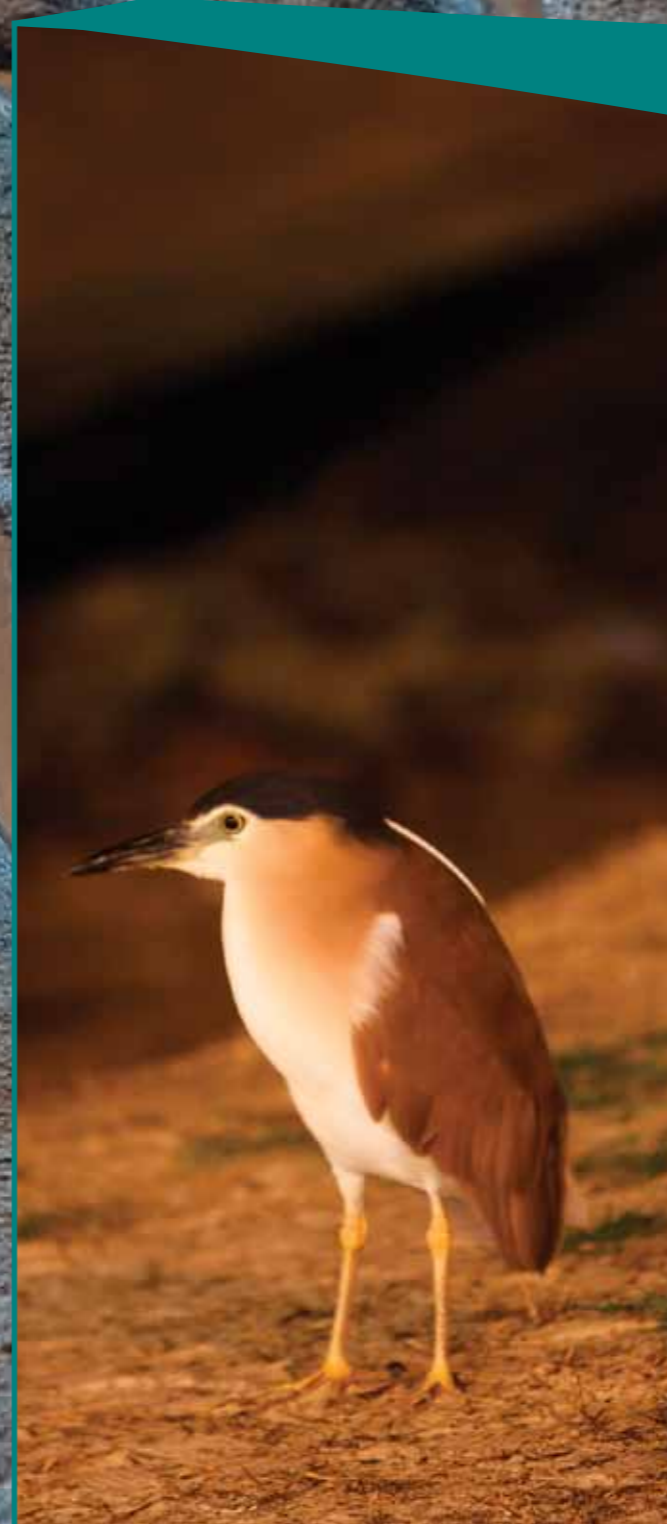
Photo John Huisman

Tube-dwelling anemones or *cerianthids* look very similar to sea anemones, but belong to an entirely different subclass of anthozoans. The anemones build their own protective tube coverings from materials they find in the surrounding habitat and are usually found in the lower reaches of the Swan River.

Small Toothed Flounder (Pseudorhombus jenynsii)

Photo John Huisman

Growing to 55cm the small toothed flounder is a master of disguise and can rapidly change the colouration of its upper body to camouflage itself to its surroundings. Early in its development the fish begins with eyes on both sides of its head. But once the tiny larvae settles on the bottom the the right eye migrates across to the left side of its head until the fish can lie flat but with both eyes looking upward.



Rufous Night Heron (Nycticorax caledonicus)

Photo Matt Kleczkowski

The Rufous Night Heron frequents well-vegetated Riverpark wetlands and shallow mudflats of the Swan Canning Riverpark. A solitary forager, the Night Heron feeds in shallow water on a wide variety of insects, crustaceans, fish and amphibians. These birds help control invasive Riverpark fish species such as mosquito fish (*Gambusia*) and carp (*Carassius*).



Brown Jellyfish (Phyllorhiza punctata)

Photo Matt Kleczkowski

Brown Jellyfish feed on microscopic plankton and larval fish by filtering thousands of litres of water per day. This jellyfish is believed to have been introduced into the Swan Canning Riverpark by ships that serviced the Swan River colony between 1829 and 1872.¹ However, the southward movement of jellyfish with the Leeuwin Current is also a plausible explanation for their presence in the river system.

¹ Rippingale, R.J. and Kelly, S.J. (1995). *Reproduction and survival of Phyllorhiza punctata (Cnidaria Rhizostomeae) in a seasonally fluctuating salinity regime in Western Australia. Marine and Freshwater Research: 46, 1145-51.*

Mudflat sunset background. Photo: Matt Kleczkowski



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For more information go to:
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