

Connecting Corridors and Communities



PHCC | Working Together
Peel-Harvey Catchment Council

Edition 4
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Restoring the Serpentine River

Welcome to the fourth edition of *Connecting Corridors and Communities* - an update on the project and on Natural Resource Management (NRM) in our Peel-Harvey Catchment. NRM refers to the management of natural resources such as land, water, soils, plants and animals. It brings together landuse planning, water management, biodiversity conservation and the future sustainability of industries such as agriculture, mining, tourism, fisheries and forestry.

River Rescue: Bringing New Life To Our Estuary

More than 60 community members, stakeholders and project partners came together in July to take part in PHCC's S.H.A.R.E (Social Help, Action & Resources for the Environment) in the Shed series entitled *River Rescue: Bringing New Life to Our Estuary*. This included having a variety of presentations, providing the opportunity to share knowledge about current projects PHCC are undertaking to protect the Peel-Harvey Estuary, and the Serpentine, Murray and Harvey Rivers that drain into the estuary.

The first to present for the evening was Dr Stephen Beatty (Murdoch University) who described the surprising diversity and richness of species of native freshwater fish and crayfish he has observed in his investigations of rivers of South Western Australia, including in the Harvey River. Dr Alan Lymbery, also of Murdoch University then told us the story of

the endangered Carter's Freshwater Mussel and how as a juvenile it embeds itself into fish for transport through our river systems. He also told us about the experiments he is doing to assess the role that mussels might play in improving the water quality of our rivers through filtering out nutrients and other contaminants as they feed. Rhiannon Brown from Envirapet described the work she is doing in partnership with PHCC, Landcare SJ and Department of Communities using floating booms to control the spread of the noxious weed water hyacinth in the Serpentine River.

In what we called a speed-dating session, Ross Perrigo from Urbaqua then gave us a quick rundown of the progress on developing a River Action Plan to guide future restoration works on the Serpentine River between the estuary and Lowlands Nature Reserve. Dr Alan Cottingham (Murdoch University) described

the fragility of black bream stocks in the Murray River and how in partnership with John Tonkin College, we are lending the bream a helping hand negotiating their vulnerable early life stages through an aquaculture program culminating in the release of 10,000 juvenile bream into the river over the next two years. Cameron Craigie from Department of Biodiversity, Conservation and Attractions (DBCA) then told us about the partnership with DBCA, PHCC and the Mandurah Volunteer Rescue Group leading to the installation in early 2020 of four surveillance cameras on the lower Serpentine River to improve response and rescue time when dolphins strand in the shallows. The evening finished with a Q&A session with the panel after which we carried on the conversation over a light supper.



Dung Beetle Excitement For Primary School Students

PHCC is thrilled to be supporting North Dandalup Primary School in a Dung Beetle Breeding Program. This program aims to inspire young people's interest and involvement in the fascinating world of biological science and provide a 'hands on' experience in innovative agricultural practices. Furthermore, it aims to improve the ecological health of the Serpentine River and surrounds.

Under guidance of their teacher Denise Honeybone, North Dandalup students have been getting their hands dirty building traps and collecting and identifying dung beetles. In the classroom, students have also been learning about the benefits of dung beetles in removing

breeding habitat for pests and parasites, their behaviour and ecology and how they form an integral part of our agricultural ecosystem through recycling nutrients and aerating the soil.

The school has recently received a long awaited delivery of 50 individual *Onthophagus vacca* beetles (also known as Spring Dung Beetles) that will be reared in breeding boxes. Once the beetles have reproduced and established a healthy population, they will be released on properties that surround the Serpentine River with the aim to increase pasture health and reduce numbers of the declared pest species of bush fly.



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Restoring the Serpentine River

Planning For Our River's Future

There is no doubt that due to heavy modification, the Serpentine River is in need of rescuing. Over the past year a team of scientists from PHCC, Department of Water and Environmental Regulation (DWER) and the not-for-profit organisation Urbaqua have been working hard to deliver a River Action Plan for the Serpentine River to help guide future restoration activities to improve the overall ecosystem health of the river and the adjoining riparian zone.

The study area is situated in the middle and lower reaches of the Serpentine River between Lowlands Nature Reserve and the Peel-Harvey Estuary (covering a total of eight reaches of the river). The team, along with community volunteers and Alcoa Environmental Graduates, worked their way along approximately 40km

of the river on foot identifying key assets and attributes as well as observing issues impacting the health of the river. This was to ground-truth the already captured aerial footage, desktop assessments and consultation with private landholders and the local Noongar people we had already done.

The assessments undertaken followed the South West Index of River Condition (SWIRC) standards and protocols developed by DWER to allow for consistency and the comparison of data between each site. Geomorphology, vegetation condition, aquatic habitat and water quality were assessed over a total of 105 sub-reaches. A total of 5,000 photographs and 40 water quality assessments were taken across the entire study site.



Reeling it in with Tangaroa Blue

The Mandurah community rallied together recently to help clean-up the Dawesville Cut and Creery Wetlands as part of the DBCA's *Reel it in with Tangaroa Blue* Clean-Up event. Over 200 dedicated volunteers including 20 scuba divers took to the water and foreshores to remove an enormous 635kg of rubbish which consisted mostly of cigarette butts, fishing line, fishing tackle and glass bottles. The event was held to commemorate the 18 month old dolphin calf Luca who died from becoming entangled in fishing line for the third and unfortunately final time. A detailed description of the rubbish collected will be uploaded to the Tangaroa Blue Australian Marine Debris Database, so keep watch on <http://amdi.tangaroablue.org/>

Information booths from a variety of community groups were also on display including PHCC's interactive Healthy Waterways stall. This included a model of the catchment showing the importance of good catchment management practices in maintaining the health of the estuary and an exhibition of preserved marine animals to showcase what lives in our estuary and ocean, which caught the eye of many community members.

This event would not have been possible without the ongoing dedication from Estuary Guardians Mandurah, John Tonkin College, Mandurah Cruises and Coastal Waste Warriors.



Helping Protect Our Wildlife



We couldn't be more excited to be part of the *Reel it in* campaign that has now been extended to the Mandurah region by the DBCA's Parks and Wildlife Service. The purpose of this campaign is to reduce the impact of discarded fishing line and tackle on dolphins, water birds and other animals that we see in and around our estuary and rivers. Twenty specially marked bins, made of 100 per cent recycled material, have been deployed in recreational fishing hotspots around our waterways so please keep an eye out for these yellow bins and use them to dispose of your unwanted fishing line and tackle appropriately.

Revegetation Time For the Serpentine



An impressive 650 volunteers planted 4000 trees in this year's National Tree Day within the Frasers Landing Core Conservation area on the Serpentine River foreshore. Revegetation plays an important role both structurally and functionally within our riparian zones. Planting a diversity of species each year at this particular site promotes shading, sediment stabilisation, wind protection and enhancement of biodiversity.

Through the Restoring the Serpentine River and Australian Government funded Ramsar project, PHCC was proud to support the City of Mandurah and Frasers Property Group to host this event by providing the funding to purchase 3000 biodegradable tree guards. The aim of us using this type of guard was to help phase out the use of plastics fitting in with the theme of Plastic Free July. The use of these biodegradable tree guards will help reduce the seven million pieces of plastic that enter waterways throughout the world each day.

The following day, 12 Environmental Managers from Alcoa's global operations planted 500 seedlings along the foreshore reserve at Fraser's Landing. Through this event, our visitors from as far away as Brazil and the USA gained an understanding of what makes our Ramsar listed Wetlands so special and the role PHCC's Alcoa Foundation funded project *Connecting Corridors and Communities: Restoring the Serpentine River*, plays in protecting these wetlands.

This project is supported by the Peel-Harvey Catchment Council through funding from the Alcoa Foundation's *Three Rivers, One Estuary Initiative*.

Alcoa Foundation: *Investing where Alcoa has a presence, partnering with communities to address local needs in a sustainable manner. With our nonprofit partners, we contribute to environmental excellence, economic success and social responsibility around the globe.*



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