

bushland news



Issue 105 **Autumn 2018** *Time of Bunuru and Djeran in the Noongar calendar.*



Intrepid
landcarers
get **active**

Photo – Batavia Coastcare Network.



Department of Biodiversity,
Conservation and Attractions



Bushland News is a quarterly newsletter of Urban Nature, a Department of Biodiversity, Conservation and Attractions Parks and Wildlife Service program to support community involvement in bushland conservation.

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Next issue

Winter Bushland News

Winter *Bushland News* contributions should be sent to [Urban Nature](#) by **8 June 2018**.

Bushland News seeks original contributions. If your submission has been or may be published elsewhere please let us know. Compiled and edited by Julia Cullity.

Intrepid landcarers get active

by Caroline Hughes

An exciting new approach to engaging young people has seen WA Landcare Network (WALN) recently partner with [Intrepid Landcare](#) to run the summer campaign, 'Rise Up, Roots Down', which aims to connect and support young people who are passionate about the environment. By backing three inspirational young Western Australians to bring their landcare ideas to reality, 'Rise Up Roots Down' hopes to inspire the next generation to get involved in landcare.

Intrepid Landcare co-founder Naomi Edwards said in the last few years they had seen a new generation of incredible young leaders transform their communities, land and themselves by taking action.

"WA is yet to see the full throttle of Intrepid Landcare, which is transforming the lives of young people across the eastern states, and we are excited to be partnering with WA Landcare Network to kick-start another wave of youthful enthusiasm for landcare on the west coast."

Funded by WALN, 'Rise Up Roots Down' has provided three young people with \$1000 each to cover the cost of a landcare-inspired event. Additional support also includes mentoring about branding, storytelling for change, and co-design of projects to ensure events are successful and really make a difference. Intrepid Landcare offers support and ideas to better engage with young people, check their resource [Tips & ideas to support young people to Create Change](#).



First cab off the rank in the 'Rise Up Root Down' calendar for WA was Vanessa McGuinness, who in conjunction with Batavia Coastcare Network, hosted a ['Love your beach this Valentines Day'](#) event for under 35 single locals, who joined her for a sunset beach clean-up on Pages Beach in Geraldton. Marketed as a 'mingle with like-minded beach lovers', the event inspired young people to help clean-up their local beach while enjoying a walk and talk with people passionate about their coast.

The event was a hit with a group of 20 volunteers who gathered just as the sun was setting and set off with bags and gloves, ready to tackle any plastic debris and other beach rubbish they could find. After the hard work was out of the way, the group headed back to Pollinators, a local shared space to relax with a few drinks and some well-earned pizza.

"We would like to thank everyone who came down and helped us clean-up beautiful Pages Beach," said Vanessa. "Youth involvement in landcare is so important for the future, and it was great to spend

Love your beach this Valentine's Day brought together 20 young people in Geraldton who are passionate about the coast. Our cover also features this event. Photos – Batavia Coastcare Network.

the evening with such a friendly and passionate group of people."

Planning for the further two 'Rise Up Roots Down' events are underway. Mandy Edwards from Busselton High School will be teaming up with Koomal Dreaming to tour Ngilgi Cave and learn about the importance of the cave for Indigenous culture. Jamie Lumsdaine from Margaret River is also planning an event in conjunction with the local high school with details coming soon.

"There is increasing interest in WA and around Australia from young people to act and lead in landcare. Now we need other landcare groups to 'Rise up, Roots' down and perhaps follow the Intrepid way to support young people to do stuff that matters," Naomi said

"Since the launch of 'Rise Up, Roots Down', Intrepid Landcare has received an increase in interest in WA from young people in Balingup, Perth, Geraldton, Margaret River and Busselton, which has been extremely positive."

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Showcasing the Greater Brixton Street Wetlands

by Grazyna Paczkowska

The Department of Biodiversity, Conservation and Attractions (DBCA) Wetlands Conservation and Urban Nature programs jointly presented a poster at this year's WA Wetland Management Conference held at the Cockburn Wetlands Education Centre on 2 February. The annual conference is always held on this date as it marks the signing of the Ramsar Convention on Wetlands in 1971 as well as celebrating World Wetlands Day.

This year's conference theme 'Wetlands for a Sustainable Urban Future' provided an opportunity to showcase and present the current studies and works undertaken at the Greater Brixton Street Wetlands, Kenwick – a 175ha mosaic of wetlands located in the heart of Perth's urban area. The wetlands, well known for its conservation values, contain more than 550 native plant taxa, Declared Rare and Priority Flora, and Threatened Ecological Communities and provide habitat to variety of fauna, including a rich aquatic invertebrate fauna, a critically endangered short tongue bee (*Leioproctus douglasiellus*), quendas and variety of lizards and frogs, and feeding and roosting habitat for birds, including the black cockatoos. Greater Brixton Wetlands, a Bush Forever site, is spread across multiple tenures, including more than 90ha vested in the Conservation and Parks Commission and managed by DBCA, the Alison Baird Reserve owned by The University of Western Australia, and lots vested in the Department of Planning (WA Planning Commission), City of Gosnells and freehold tenure.

The conference's recurring theme was the challenges wetlands face in the future including climate change and declining rainfall. Water and its movement underpins the existence of all wetlands and associated biota adapted to or requiring seasonal/permanent flooding for its existence. Therefore the understanding of wetland hydrology is instrumental in conservation and management of these fragile systems.

The [poster](#) titled 'Characterising the condition and function of the Greater Brixton Street Wetlands, Kenwick Western Australia, to inform conservation management'



Lindsay Bourke, DBCA Research Scientist, with the poster at the Cockburn Wetlands Centre Wetlands Conference. Photo – Grazyna Paczkowska.

Continued next page ...

Early this year Baigup Wetland Interest Group, the Swan Estuary Reserves Action Group and Urban Nature set up flora survey plots and remapped the boundaries of the Federally listed subtropical and temperate coastal saltmarsh threatened ecological community at sites on the Swan River. Threatened ecological community datasets contain both indicative and actual occurrence mapping. Ground-truthing and remapping the boundaries with the local knowledge of community groups has helped create a more robust dataset for this ecological community and will bring better data to assist with science and decision-making. Here, setting up a flora survey plot at Baigup wetlands we found a simple plant community made up of two native species and no weeds! Photo – Penny Lee.



outlined the importance of best practice management based on scientific knowledge of the key threats, including altered hydrological processes. A [hydrological study](#) led by DBCA research scientist Lindsay Bourke as part of the Perth NRM Living Landscape Grant (see page 2 [Bushland News Issue 97](#)) provided a better understanding on the local scale hydrological functioning of the wetlands, and has resulted in the implementation of on-ground actions such as track closures to restore the natural flow of surface water. The study set up a future water monitoring program that will assist in the conservation and management of the wetlands in the long term, building resilience for future climate change.

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Pyp grass (*Ehrharta villosa*)

by Hamish Longbottom

The Western Australian coastline has a long history of alien invaders but one of the worst may not be as obvious to the untrained eye. On first glance pyp grass could be mistaken for a number of native grasses. Introduced from South Africa in the 1960s for its sand-binding properties, it is now one of the worst environmental weeds in the State.

Why is it a major problem?

Pyp grass infestations reduce biodiversity, and its shallow root structure means that dunes are more susceptible to erosion. Pyp grass has a vigorous rhizomatous habit that can spread the plant up to nine metres in one year yet it has not been observed to set viable seed. Left unmanaged it will swamp native vegetation and create a monoculture displacing many of our native fauna species.

Identification and description

Pyp grass has cane like stems to 1.5m high with distinctive bends at the nodes. It produces purple-green flowers in October to January and sporadically at other times depending on the climate. New shoots are often bright green and leaves on older pyp grass tend to 'brown off' over summer. The plant has morphological adaptations to dry environments, with sunken stomata shielded by flanges and in-rolled leaves that present only upper leaf surfaces with very few stomata to the sun and wind. These adaptations help to prevent water loss from the leaf and provide a selective advantage to the plant.

Lifecycle

Pyp grass is a perennial grass that colonises sandy conditions by its fast-growing rhizome system. It is adapted to warm conditions, a range of light intensities and habitats with mobile sand. It tends to be more active in warmer months (when control is recommended). Plant growth is increased in disturbed soils and it is easily spread by earthmoving equipment.

Continued next page ...



*Pyp grass trying to "blend in" with native coastal species in Jurien Bay.
Photo – Hamish Longbottom.*

Management and control

Avoiding earthworks in pyp grass sites is the easiest strategy for minimising its spread. Where earthmoving is unavoidable, pyp grass should first be treated or contaminated soil disposed of appropriately so that it cannot spread. Spraying is the primary management strategy for pyp grass in coastal reserves using the grass selective herbicide Verdict (Haloxypop 520g/L) at the rate of 30ml/10L water plus 1% spray oil, not exceeding 1L/Ha of Verdict. In fragile foredune areas a handwiping method is applied using glyphosate 360g/L at a rate of 250ml/L. This method significantly reduces the occurrence of off-target damage to native species. In many cases it may be necessary to sacrifice native grasses which the weed grows through to successfully control pyp grass. Follow up treatment in autumn or spring is essential for long term success. Control programs can last 3–5 years.



Contractors conducting a handwiping trial at Cervantes.
Photo – Hamish Longbottom.



Timelapse of a pyp grass site in Cervantes. Once treated, native plants have an opportunity to regenerate. Photo – Alanna Smith.

More information

See [Florabase](#) and [Northern Agricultural Catchments Council](#) website.

Contact

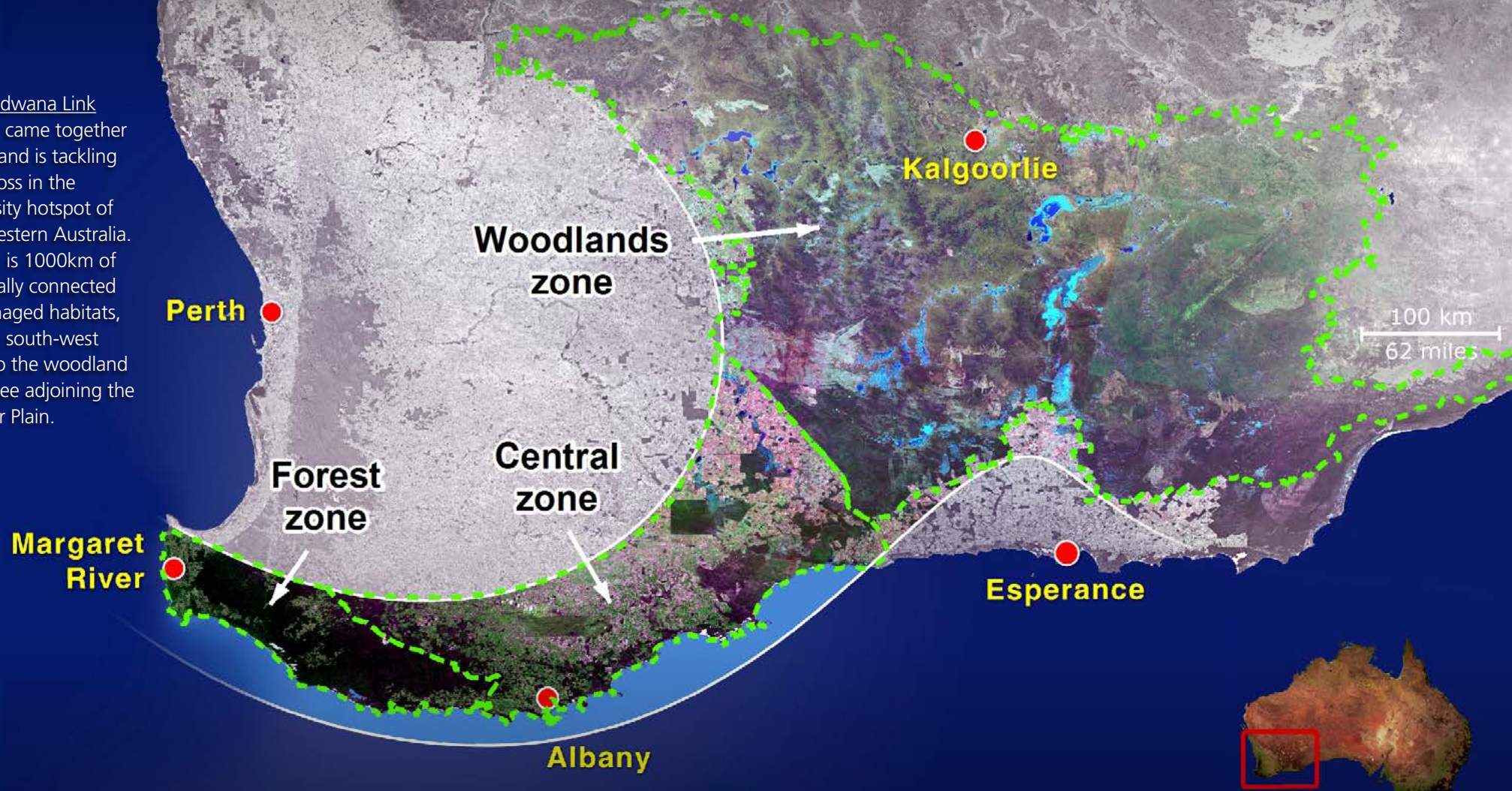
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Connecting people and nature by Keith Bradby

The Gondwana Link program came together in 2002 and is tackling habitat loss in the biodiversity hotspot of south-western Australia. Our goal is 1000km of ecologically connected and managed habitats, from the south-west forests to the woodland and mallee adjoining the Nullarbor Plain.



Gondwana Link

The 1000km long Gondwana Link program aims to achieve ecologically connected and managed habitats from the south west forests to the woodland and mallee adjoining the Nullarbor Plain. Only two main habitat gaps exist across this massive area, and work is underway in both of these.

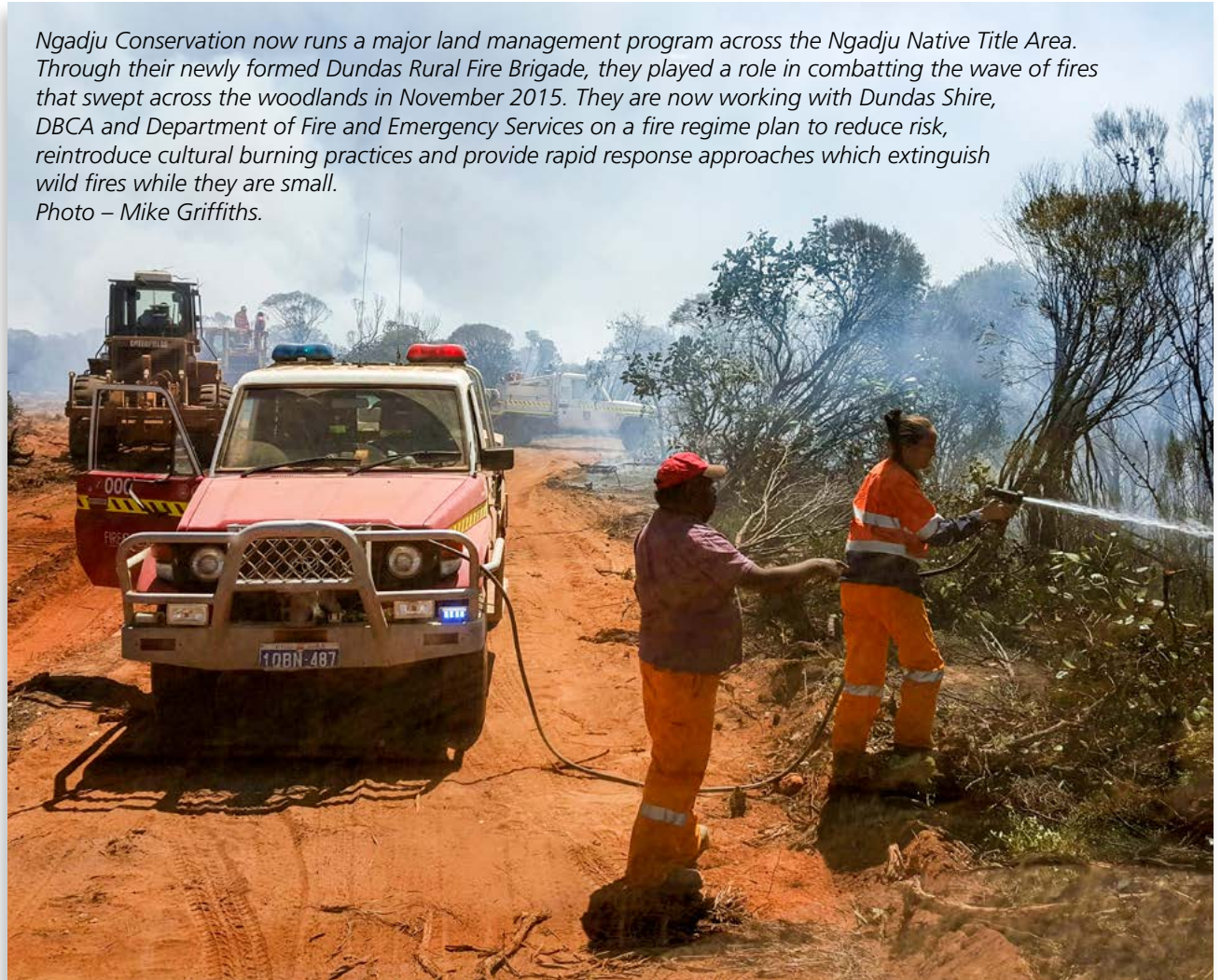
Our thinking is that we need a lot more good environmental work to happen at the local scale, and for that work to add-up wherever possible to ecological resilience at the landscape scale. We have three core aims: to increase connectivity and conservation management across and between large remaining habitats; to attract the extra funding and resources needed; and to encourage local and national groups to be more ambitious and strategic.

Sixteen years on, we feel we have had some success, but have a lot more to do before we can consider the ecological side of the job to be nearing completion. The response to our 1000km vision has continued to be very encouraging, and nowadays we work in a variety of arrangements with more than 20 groups involved, who fulfil key roles across the Link. This slightly ad hoc, but generally cohesive, effort has attracted considerable private funding which then often leverages additional public funds.

Thanks in part to some great [early work](#) by the Wilderness Society, what we now know as the Great Western Woodlands is recognised as the largest remaining temperate woodland on earth. Conservation management is steadily improving. [Ngadju Conservation](#), the Traditional Owners for much of the woodlands, have developed a detailed conservation plan and set up their ranger team with help through our program. Our scientific knowledge of the area is also increasing rapidly with, as but one example, the ongoing bird surveys being undertaken by hundreds of BirdLife Australia volunteers (see page 12).

In the Link's central zone, where clearing for agriculture since the 1950s has created some significant habitat gaps, a wonderful array of national and local groups and committed individuals have [secured](#) key bushland

Ngadju Conservation now runs a major land management program across the Ngadju Native Title Area. Through their newly formed Dundas Rural Fire Brigade, they played a role in combatting the wave of fires that swept across the woodlands in November 2015. They are now working with Dundas Shire, DBCA and Department of Fire and Emergency Services on a fire regime plan to reduce risk, reintroduce cultural burning practices and provide rapid response approaches which extinguish wild fires while they are small.
Photo – Mike Griffiths.



areas and undertaken strategically placed [restoration plantings](#) covering some 6000ha. Connectivity work and associated projects are underway west, south and east of the south-west's biggest isolated remnant, the Stirling Range National Park. To see some of the work groups are undertaking visit [Bush](#)

[Heritage Australia](#), [Friends of Porongurup Range](#), [Green Skills](#) and [Greening Australia](#). We now have the 'proof of concept' that high standard [large scale ecological restoration](#) can be undertaken efficiently,

Continued next page ...

that wildlife does return to these landscapes, and that this work can strengthen rural communities. A lot more people are working on conservation in these landscapes, more visitors are arriving and there are emerging opportunities for the [Noongar community](#) to recommence management of the land they belong to.

And in the forests? It has been hard for the overall program to stretch that far, but from conversations with groups already working amongst the south-west forests, we share the understanding that it is time to shift the focus to the ecological needs of the forest. I think we can help there, in the near future.

So over the last 16 years there have been many achievements by many people, plus the inevitable few failures and some weaknesses we keep working on. But crowning all that is the simple fact that an audaciously ambitious large-scale program has survived and grown, and that the need for transformative work at such a large scale is now well recognised. Scientists and practitioners alike are increasingly aware of the importance of re-connecting fragmented habitats, at all scales. In Western Australia the rise of colleague programs like the [Yarra Yarra Biodiversity Corridor](#) and the [Cockburn Community Wildlife Corridor](#) is good evidence of this. We look forward to more.

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The strong emphasis on ecological restoration in Gondwana Link's central zone has lifted the standard and effectiveness of many plantings. Here Threshold Environmental's Justin Jonson shows DBCA scientist Mellissa Millar around three-year-old direct seeded restoration in a 400ha patch on Bush Heritage Australia's Monjebup North property. Melissa is part of a team working to analyse the genetic interactions between plantings and bushland areas. They hope to determine measures of restoration success beyond that of population survival, measures that will incorporate the long term resilience, persistence and functional integration of restored populations into broader landscapes. Photo – Amanda Keesing.

FAME: philanthropy for endangered flora and fauna

by Tracy McNamara

An overhead view of the Foundation for Australia's Most Endangered Species Ltd (FAME) work in Australia shows up as a number of patchwork quilts, small areas where good work, care and attention are saving and boosting the populations of native plants and animals under threat.

FAME and its donors believe that they help heal the planet and unfortunately, its work is unlikely ever to be done. As the FAME Board puts it: "If we can help it, no native animal species or flora that we support, will become extinct. That is our non-negotiable commitment."

Survival is the major goal in a new cooperative project to save a threatened population of numbats in WA's Wheatbelt. FAME is joining forces with the Australian Government as part of the 'Threatened Species Projects' to fund this DBCA implemented project. The initial phase will test whether the use of detector dogs can assist feral cat control. Numbats are highly vulnerable to the indiscriminate and ferocious hunting capabilities of feral cats. Subject to fine-tuning, a contracted handler and dogs will identify areas of greatest cat activity and locate individual cats. The program will also explore if the presence of a dog alters wildlife and predator activity in the region.

FAME is committed to funding on-ground conservation projects to save Australia's endangered flora and fauna with a strong focus on seed-funding and innovation.



Protecting the last wild populations of numbats is a West Australian project part-funded by philanthropic donations to FAME. Photo – Rob McLean.

[Donors](#) to the Foundation have the opportunity to provide philanthropic support in a number of ways; they are able to choose the project they would like to fund or leave it to the Board's discretion, donate monthly, through their shares return option or by way of a bequest.

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Volunteers wanted for bird surveys in the Great Western Woodlands

by Lorraine Chyne

The Great Western Woodlands is the largest, intact temperate woodland in the world. Its 16 million hectares span an area east of the Wheatbelt, north of Kalgoorlie and east to the Nullabor Plain with eucalypt woodlands, mallee and heath interspersed with salt lakes, granite outcrops and banded ironstone ranges. Birdlife Australia is coordinating a [long-term monitoring project](#) of the Great Western Woodlands to discover information about the birds in this unique region of WA and how they use and interact with this vast area. Results of the first three years of survey 2012–14 show Great Western Woodlands appears to be a healthy ecosystem, supporting stable bird populations. Ongoing surveys since then are informing studies on fire management and have been further expanded to survey remote parts of the woodlands never thoroughly explored previously.

This year we will be trialling the idea of doing two areas consecutively, provided they are near each other. These areas are fairly remote, requiring four-wheel drive vehicles and we need a minimum of two vehicles for each area surveyed. Participants must be completely self-sufficient with regards to shelter, food, water and fuel. Not all areas are suitable for caravans and camper trailers.

- April 23–29 **Anzac Day Campout to Cave Hill** followed by **Jilbadji**.
- May 14 – 20 **Fraser Range** followed by **Dundas**.
- September 24 – 28 **Karroun Hill**.
- October 8 – 11 **Transline**.

New volunteers are always welcome. We are primarily looking for people who are comfortable identifying the birds



White-browed babblers are noisy, gregarious birds which feed in a group moving through low shrubs or on the ground. This picture was taken during the Easter bird survey at Jilbardi in 2016. Photo – Maris Lauva.

of this area by sight and by call but everyone has to start somewhere. Even if you feel your ID skills would not be up to it the best way to learn is to go out with experienced people and learn “on the job”.

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CockyWatch

by Rebecca Boyland

Black-cockatoos can easily travel across the landscape, and because they range over so much of Australia’s south-west, it can be quite difficult to know how many cockatoos there are. We need better estimates of how many occur here to know how best to help them. To try to determine this, BirdLife is launching its new [CockyWatch](#) project in partnership with DBCA. We’re asking people to record numbers of black-cockatoos seen while travelling along roads or paths.

While the method is really simple, it is something that is best done for a route that you travel regularly. CockyWatch surveys can be undertaken at any time and any day of the year. Just note your start time, GPS point and odometer reading (if driving) and off you go. For these surveys, the distance covered while searching for cockatoos is just as important as the cockatoo sightings themselves.

We’re hoping people from across Australia’s south-west, from north of Geraldton to east of Esperance will want to take part.

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Baldivis Children's Forest looking for management committee volunteers

by Hannah Godsave

The Baldivis Children's Forest has served the local community as a centre point for environmental education since 2000. The primary focus of the organisation is 'Conservation through Education', helping children connect with and enjoy the native bushland. This 20ha public park is 50km south of Perth and has been created and maintained as a bushland reserve by children since it began. It now hosts multi-award winning educational and conservation programs.

[Baldivis Children's Forest](#) is built on community, ever since a small group of people came together with a vision to serve the local community. This year is set to be a big year as it starts building its Environment Education Centre. Now more than ever it really needs volunteers to join its management committee and help drive the forest forward. If you are passionate about conserving native bushland and encouraging kids to be out in the natural environment and learning about how to conserve it, then we would love to hear from you.

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Baldivis Children's Forest gives local children the opportunity to experience and value nature. They need some adults on the Management Committee to assist the kids in their task of managing this bushland.

Photo – Baldivis Children's Forest.

Project Numbat dig surveys: numbat numbers on the rise?

by *Eveline Masco*

Each year from October, Project Numbat organises dig surveys in collaboration with DBCA. Trained volunteers systematically scan the ground for numbat digs and scats. The information gathered helps to determine how numbats are coping in the wild.

Last season surveys were conducted at Boyagin Nature Reserve and Dryandra Woodland, with over 100 sites surveyed at each location. Approximately 25 sites at Tutanning Nature Reserve were also surveyed. The results so far at Boyagin are showing a similar trend to previous years where approximately 40 per cent of sites surveyed indicate numbat presence. Preliminary results from Dryandra Woodland, where the new predator proof fenced area was surveyed, showed an increase of digs and scats from last year due to the numbats living a predator free life from foxes and feral cats.

For the first time, all information was recorded on tough pads: sturdy tablets with touch screens funded by the Norman Wettenhall Foundation. Thanks to these tough pads no more manual data entry is needed and mapping information and spreadsheets of results can now simply be downloaded.

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*DBCA's Dr. Tony Friend & Jimmy Lamb using the tough pad to record the presence of numbat digs.
Photo – Mark Dewson.*

The demand for numbat dig surveys is growing each year. Surveys are conducted from October to February. If you are interested in volunteering please contact Project Numbat.

[Project Numbat](#) is a not for profit community group that aims to raise funds and awareness to help save the numbat from extinction.

Tending the Tracks

by Alison Goundrey

Enhancing environmental protection and conservation while maintaining responsible four-wheel drive access in an area of increasingly intense off-road activity may sound optimistic and challenging. This very challenge is being taken up by the Tending the Tracks project whose members come from State peak organisations; the WA 4WD Association, Trackcare WA, the Conservation Council of WA (CCWA), along with local coastcare, community groups and independent four-wheel drive clubs. This far-sighted collaboration is being supported by the Northern Agricultural Catchments Council (NACC) through the Australian Government's National Landcare Programme. The idea evolved when Trackcare's Treasurer Graham Weber and CCWA's Citizen Science Coordinator Dr Nic Dunlop met and found common ground at the 2017 State NRM Conference.

Initial focus is on the coastal zone from Wilbinga to Dongara. A [field trip/forum/workshop](#) (including delightfully social campout) was held in January and attracted more than 100 enthusiastic participants. It is the input from that weekend which is now informing objectives and actions.

In a two-pronged approach, specific restoration and citizen science monitoring projects are being identified using the personnel and willingness from the clubs and Trackcare. This will produce vital onground maintenance and rehabilitation to assist local coastcare groups and traditional owners while further developing mutual understanding and social networking between



Hamish Longbottom (NACC) taking a field trip group out to Edwards Island Point during the January 2018 Tending the Tracks inaugural event. Photo – Andrew Metcalf.

the groups. At a strategic level the aims are advocacy for improved planning and management of off-road recreational activity with the relevant agencies; and the development of educational products to inform current and future users of our fragile, beautiful coastal zones.

Tending the Tracks has the will and capacity to find the balance between securing ongoing off-road access for the enjoyment of the natural environment with recognition of the economic and social value of these

activities, yet firmly embedded in active, responsible environmental consciousness and management practices.

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Grass trees translocation

by Pam Agar

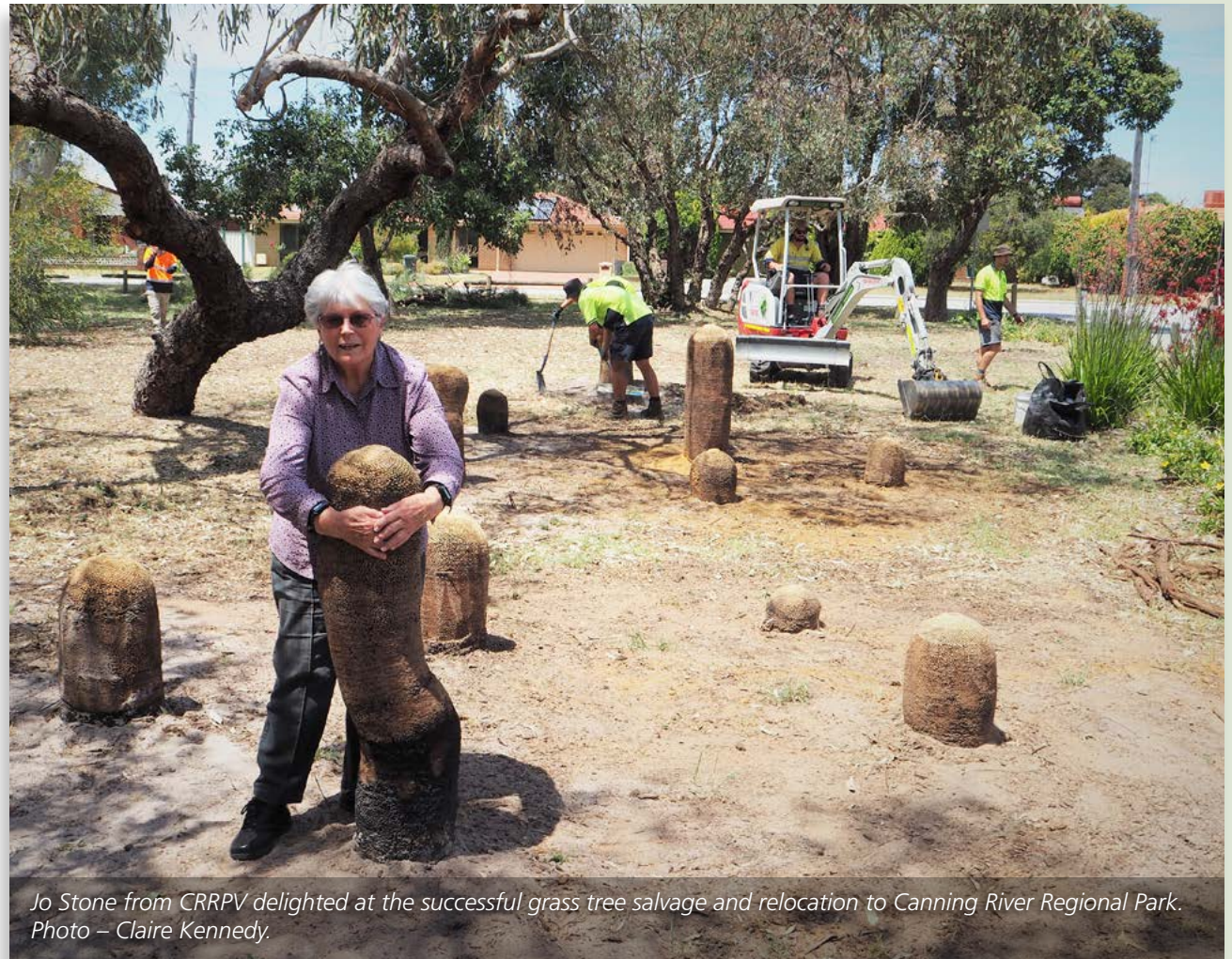
When Canning River Regional Park Volunteers (CRRPV) was involved with two plant rescue sessions at a NicheLiving development site in Willetton, it became evident that a large number of mature grass trees would be lost.

CRRPV 's Jo Stone was determined they would be saved. Although the job was beyond the capacity of the volunteers, CRRPV supported Jo by offering \$6,000 towards the translocation costs if necessary. Thanks to negotiations by City of Canning environmental staff, it was confirmed that the grass trees would be rescued, funded by NicheLiving, but perhaps better still, they would be relocated directly into the regional park, since they did not fit in with the developer's plans.

The site chosen for replanting was easily accessed by water truck to allow critical early care. It was also out of the way of public access but clearly visible and would become an extension of an existing section of native plants.

The rescue was handled by Grass Trees Australia, in conjunction with City of Canning. Twenty-seven grass trees, ranging in age from 10 years to at least 60 years, were prepared by trimming all green foliage and injecting with hormones to reduce stress. They were then mechanically removed and planted close to Ferndale Carpark.

Initial evidence of regrowth was surprisingly fast. Three months later there is a varied rate of growth but CRRPV is hopeful they will become a future feature of the area.



Jo Stone from CRRPV delighted at the successful grass tree salvage and relocation to Canning River Regional Park. Photo – Claire Kennedy.

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Report in!

Please send us your regional report (200 words) and a photo by **Friday 8 June 2018**. Text may be edited in response to volume of submitted reports.

Explore Noongar boodja *by Julia Cullity*

Aboriginal people have a long and enduring connection to country. In the south-west of WA Noongar people come from 14 different language groups and together their boodja, or country, covers the area roughly from Jurien Bay to Esperance.



Marissa Verma leading the Six Seasons Walk for Bunuru at Burns Beach. Photo – Julia Cullity.

The revival in Noongar language and the community embracing reconciliation has seen a recent increase in opportunities to understand more of Noongar cultural heritage. These range from expensive, complex, spectacular, cross-cultural events, like last year's opening of the Perth International Arts Festival [Boorna Waanginy: The Trees Speak](#) to simpler, more local interpretive trails and resources created by organisations or community groups. They are all linked by strong consultation and partnerships giving voice to Noongar people's knowledge.

One of the closest ways to learn more is to join a tour with an Aboriginal guide. The Western Australian Indigenous Tourism Operators Council [website](#) is a great way to find cultural tours in Perth and further afield. Events are always held for [Reconciliation Week](#) and keep an eye out for workshops like the [Noongar Six Season Walks](#) led by Noongar guides who take people through the yearly cycle of travel to different sites on country to hear about culture, food and medicines.

Interpretive trails with signage can be a great way to capture stories of Noongar life for bushwalkers. [Oyster Harbour fish traps](#) near Albany highlight Noongar custodianship and history through the use of a cultural shelter, boardwalk and signage. Although costly to install and needing ongoing maintenance, signage has a great reach attracting the attention of those who pass by and needs no prior knowledge.

Audio tours give another experience. Virtual tour guides allow you to start and stop your tour at your own pace. Download the app onto your smart phone and when the GPS locates a point of interest the audio automatically begins. Noongar Elders Marie Taylor, Noel Morich and Noel Nannup have recorded a number of



With this hand-cranked audio sign at Rottnest, Kerry-Ann Winmar shares the story which celebrates the Noongar people's culture and traditional knowledge of the migration of the whale. Photo – Rottnest Island Authority.

stories of the significance of the Swan and Canning rivers which are accessed using the [Geotourist app](#). Try out the [Baigup Biddi](#), [Jenna Biddi Yorga](#) and [Kaalitj – ngort Koondaam](#) trails.

[Wadjemup Bidi](#), the 45km series of trails at Rottnest Island also uses sound recordings as well as signage and artwork to interpret the cultural and natural

values of the island. Noongar artists, Sandy and Aurora Abraham created images introducing the experience on each trail and these are used at trailhead signs to capture the visitors' attention and draw visitors in. Along the trails written history is incorporated into signs and this is complemented with audio signs

Continued next page ...



The 120km Whadjuk Trail Network through the western suburbs of Perth incorporates brochures, directional markers and fixed signage. Here at Charles Court Reserve, Nedlands you can hear Neville Collard tell the story of the Pelican by using a QR code link to audio stories on your smart phone. Photo – Julia Cullity.

with the voices of Elders sharing Noongar stories and knowledge. These WA designed and made audio signs are sealed from the weather, hand cranked for power and can hold eight re-loadable sound tracks. Another good example of an audio sign is at the [Nyungar Tourist Trail at Port Coogee](#) where you can hear the story, in Noongar and English, of how the seagull maintains a spiritual connection between the islands and the mainland.

The 120km [Whadjuk Trail Network](#) in the western suburbs also uses a number of formats. Download the route maps from the website, follow the directional markers and stop at the interpretive signs along the way. The signs also have QR codes, which you scan with your smart phone to listen to Noongar stories. [Karla yarning](#) is a low-tech approach. The brochures with a map allow you to take self-guided walks through Perth city exploring Noongar history both before and after European arrival. While in the city, also get the brochure for the [Fanny Balbuk Yoreel walking trail](#) to learn about this Whadjuk woman's resistance to the development of Perth.

Finally there are a number of resources for DIY understanding of Noongar connection to country. For Yellagonga Regional Park have a look at [Plants and People in Mooroo Country](#) and for Cockburn Sound visit the website [Derbal Nara](#). Also visit the [Noongar Language Centre](#) and [Sharing Noongar Culture](#) websites.

It's well worth visiting some of these places to hear from Noongars about their cultural heritage and custodianship of natural areas. And if you are inspired to find more about your local patch the [South West Land and Sea Council](#) is a great first point of call to help you find Elders who are custodians of your local area.

Contact

Julia Cullity

Parks and Wildlife Service

phone 9442 0320

email julia.cullity@dbca.wa.gov.au

Friends of Yellagonga Regional Park

by Kevin McLeod

Yellagonga Regional Park consists of 1,400ha of Wetland of National Significance surrounded by urban development. It has numerous land managers – City of Joondalup, City of Wanneroo, DBCA Parks and Wildlife Service and the WA Planning Commission – who we work with to increase biodiversity and visitor bush experiences. It is cut off from Neerabup National Park in the north by Joondalup Road and a future fauna underpass would provide a direct linkage under the road to that area. Some members of the [Friends of Yellagonga Regional Park](#) (FOYRP) have been involved since the inception of the park in 1990 and made submissions to its [management plan](#).

Challenges

A high proportion of the park is cleared land waiting to be rehabilitated. Transferring land to the Conservation and Parks Commission would help protect the park values into the future. A considerable effort is taken up dealing with well-meaning schemes and projects that involve alienation of the parkland contrary to the aim of providing bushland habitat and a quiet place to get away from the stress of modern living and get back to nature without having to travel miles to do so.

Recent restoration projects

Our group is fortunate to receive recent grants for rehabilitation. We have doubled the capacity of the water filtering unit at Lake Goollelal to aid midge amelioration and provided owl boxes to aid predator control of rats and mice which were shown to be active around the lakes. Rats and mice can heavily impact on breeding birds. Some results should be available in about a year.



All are welcome at our workdays. Here we are posing with our morning's weeding at our Bindaree Terrace worksite. Photo – John Chester.

Continued next page ...

We are also an approved recipient of labour from those on community work orders. This takes a lot of commitment but the benefits are potentially game changing. A portable toilet is needed to take advantage of the workers and because of a previous grant, we are in possession of one high class portable toilet on a trailer.

The Water Corporation's [Groundwater Replenishment Scheme](#) will treat wastewater to drinking water standards and then pipe it to sites in Wanneroo and Neerabup where it will be injected into the groundwater using recharge bores. The pipeline alignment is through the park and FOYRP was able to negotiate some benefits for the park including establishing new rehabilitation sites. A public meeting was held and the response was really helpful in convincing the Water Corporation that the public had a keen interest in the project. Hopefully there will be an increase in the water table which will help the banksias and the lakes. Up to two hectares of degraded land will be cleared of bracken, fenced from kangaroos and planted with marri, tuart, jarrah and banksias to begin with and later more biodiversity added. The kangaroos can have it back later.

Our group also applies for funding to increase biodiversity, reduce weed impact and generally improve the bush experience for the hundreds of visitors that access Neil Hawkins Park. Most visitors check out the only jetty on the lake looking for a glimpse of a turtle or a water bird. We strongly advocate raised walkways and bird viewing huts to cater for overseas visitors who come to experience the bushland values and photograph our birds.

Using grant funding we were able to purchase a number of motion sensitive cameras revealing the



*Friends of Yellagonga Regional Park planting in conjunction with Greening Australia at Lake Goollelal.
Photo – John Chester.*

active night life going on around the lake – foxes, quenda, cats, goannas, rats, mice and of course the many varieties of water birds during the day, and night herons after dark. Results collected help to make good decisions on how to reduce feral impacts and promote the interests of the original native animals.

2017 was the fourth year of [monitoring the turtle populations](#) of lakes Joondalup and Goollelal. The turtles are surviving but will need help to be viable in the long term. Dogs specially trained to find fox dens is one suggestion – 100 per cent protection of nesting sites with fencing is another. Continued fox

trapping effort is important but unless it's maintained year round, our monitoring shows it can't guarantee success.

FOYRP welcomes new members and it's up to the individual how much they want to do – a little or a lot.

Contact

Kevin McLeod

FOYRP

phone 9401 7938

email friendsofyellagonga@bigpond.com

Opportunities for you to participate! Visitors always welcome but please confirm activities with contact person. Most activities are FREE!

Recurrent activities



Saturdays 15 minutes before sunrise

Research into bird populations with the **Herdsmen Lake** Bird Banding Group.
Contact: Bill 0438 910 252 calidris@inet.net.au



Saturdays 8am–9am

Guided walks with Friends of **Koondoola**.
Second Saturday of each month. Meet Gate 2, corner Koondoola and Burbridge Ave, Alexander Heights.
Contact: David 9448 9192



Saturdays 8am–9am

Guided walks with Friends of **Lake Gwelup** naturalist David Pike. Third Saturday of each month. Meet at Scout Hall Carpark (near the tennis courts), Huntriss Rd, Gwelup.
Contact: friendsoflakegwelup@gmail.com



Saturdays 8am–9am

Guided walks and meeting with Friends of **Landsdale**.
First Saturday of each month. Meet at third gate Landsdale Rd, east of Landsdale Farm School, Darch.
Contact: David 9448 9192



Saturdays 8am–9am

Guided walks with Friends of **Star Swamp**.
Fourth Saturday of each month. Meet at the Henderson Environment Centre in Groat St, North Beach.
Contact: Christine 0430 013 364



Saturdays 8am–9am

Guided walks with Friends of **Trigg Bushland**.
Fifth Saturday of each month. Meet in St Mary's School carpark, off Elliot Rd Karrinyup.
Contact: David 9448 9192



Saturdays 8.00am–10.00am

Bushcare activities with Swan Estuary Reserves Action Group at **Alfred Cove** Nature Reserve.
Fourth Saturday of each month.
Contact: Cathie 9339 2439 oneillc@westnet.com.au



Saturdays 8.30am–10.30am

Bushcare activities with the Friends of **Booragoon** and **Blue Gum Lakes**. First Saturday of each month.
Meet at the boardwalk into Booragoon Lake on Alridge Rd, Booragoon. **Weeds course** third Saturday of each month at Blue Gum Lake.
Contact: Mary-Ann 9316 9716 molly.olly1@bigpond.com



Saturdays 8.30am–10.30am

Bushcare activities with Swan Estuary Reserves Action Group at **Pelican Point, Crawley**.
First Saturday of each month.
Contact: Cathie 9339 2439 oneillc@westnet.com.au



Saturdays 9am

Bushcare activities with Friends of **Brixton Street** Wetlands.
Third Saturday of each month. Meet Alton St, Kenwick.
Contact: Regina 9459 2964 tjdrd@bigpond.net.au



Saturdays

Bushcare activities with Friends of **John Forrest National Park**. Equipment, instruction and morning tea provided.
Starting times and tasks change according to the season.
Contact: Jan 0409 299 861 joejanking1@bigpond.com



Saturdays, Sundays 9am–12 noon

Koala maintenance at **Yanchep** National Park.
Contact: Ciara 9303 7771



Sundays 8am–10am

Bushcare activities every Sunday with Friends of **Shenton Park** Bushland.
Contact: Dani 9381 3470 bojel@inet.net.au



Sundays 8.30am

Bushcare activities with Friends of **Wireless Hill**.
Second and fourth Sunday of each month.
Meet at main carpark.
Contact: Margaret 0402 105 649
s3mmatthews@hotmail.com



Sundays 9am–11am

Friends of **Lake Claremont** busy bee and morning tea, second Sunday of each month. Meet at the south end of Strickland St, Swanbourne. Gloves and tools provided.
Contact: 0416 614 696 [website](http://www.lakeclaremont.org.au)



Sundays 9am–11am

Bushcare activities with **Cottesloe** Coastcare.
First Sunday of each month.
Contact: Robyn 9384 7668 info@cottesloecoastcare.org
[website](http://www.cottesloecoastcare.org)



Sundays 9am–12 noon

Bushcare activities with the Friends of the **Spectacles** (Kwinana). Third Sunday of each month.
Contact: Lynda 0419 983 956 fotsmail@gmail.com



Sundays 9am

Bushcare activities with the Friends of **Samphire Cove** Nature Reserve, Halls Head. Last Sunday of each month.
Contact: Barry bjsdoongin@gmail.com [website](http://www.samphirecove.org.au)



Sundays 9.45am–12 noon

Bushcare activities with the Friends of **Piesse Brook**.
Third Sunday of each month.
Contact: Ken 9293 3159 0402 243 351
bibbulman@hotmail.com



Sundays 1pm–4pm

WA Gould League's **Herdsmen Lake Wildlife Centre** holds **birdwalks, centre viewing** and **scooping**. First Sunday of each month. \$2 adults, \$1 kids & seniors, \$5 family.
Corner Selby St and Flynn St Wembley.
Contact: 9387 6079 admin@wagouldleague.com.au

Activities Key



Hands on – bushland and wetland management activities.



Walks and tours – look, listen and enjoy guided walks and excursions


















Skills development activities – talks, presentations, training courses and workshops.








Meetings and events – group meetings, expos, festivals and conferences.



Recurrent activities ... *continued*

-  **Sundays**
Wilson Wetlands Action Group undertakes regular work mornings throughout the year on Sunday mornings.
Contact: 0407 135 412 wilsonwetland@gmail.com
-  **Mondays 8am–10am**
Litter collection with Swan Estuary Reserves Action Group at **Milyu Nature Reserve, South Perth**. Second Monday of each month.
Contact: Cathie 9339 2439 oneillc@westnet.com.au
-  **Mondays, Wednesdays, Fridays 9am–12 noon**
Bushcare activities and wetlands walk trail maintenance with **Yanchep National Park** Volunteers.
Contact: Ciara 9303 7771
-  **Tuesdays 7am–9am**
Bushcare activities with Swan Estuary Reserves Action Group at **Alfred Cove Nature Reserve** each Tuesday.
Contact: Margaret 9330 1791
-  **Tuesdays and Thursdays, 8am–10am**
Coastcare activities with **Stirling** Natural Environment CoastCare (SNEC).
Contact: Sheldon 0488 190 651 or Rae 0419 191 710
[website](#)
-  **Wednesdays and Saturdays 7.30am–9.30am**
Bushcare activities with **Bicton** Environmental Action Group. Planting, weeding and foreshore cleanup. Various dates.
Contact: Peter 0439 467 855 pneesham1@hotmail.com
[website](#)
-  **Thursdays 7.30am–9.30am and some Saturdays 8.30am–12 noon**
-  **Coastcare activities** with Friends of **Sorrento Beach** and **Marmion Foreshore** followed by morning tea.
Contact: Mike 0438 710 527

-  **Thursdays 8am–9am**
Bushcare activities every Thursday with **Byford** Enviro-Link.
Contact: Kristy 9526 0199
-  **Thursdays, Saturdays and Sundays 9am**
Morning walks with Friends of **Bold Park** Bushland Volunteer Guides. Various dates.
Contact: 9480 3996 friendsbp@bgpa.wa.gov.au
[website](#)
-  **Thursdays and Sundays 10am–12 noon**
Kanyana Wildlife Centre, Discovery Centre **Tours**. Close encounters with native animals and interactive Discovery Centre. \$15 or less. Bookings essential.
Contact: 9291 3900 info@kanyanawildlife.org.au
[website](#)
-  **Thursdays or Fridays 9am–4pm**
Wetland, bushcare and nursery activities with **Cockburn Wetlands** Centre.
Contact: Denise 0412 081 540
denise@cockburnwetlands.org.au
-  **Thursdays 7.30pm**
Talks with **Murdoch** Branch of the **Wildflower Society** to share passion and knowledge of nature. First Thursday each month. Cockburn Wetlands Education Centre.
Contact: Christine 0468 676 933
murdoch.branch@wildflowersociety.org.au
[facebook](#)
-  **Friday 8am**
Norma's Friday Morning **Weeding Group**. Friends of **Lake Claremont** weekly hand weeding. Meet at the old shed.
Contact: 0413 282 515
-  **Fridays 8am**
Bushcare activities at **Piney Lakes**. Volunteers need a site induction.
Contact: brian.walker@melville.wa.gov.au

-  **Fridays 7.30pm**
Talks with **Eastern Hills** Branch of the **Wildflower Society**. Fourth Friday each month, not December/January. Octagonal Hall, 52 McGlew St, Glen Forrest. \$2 entry, visitors welcome. Also propagation, seed preparation, excursions, open gardens and library. Annual plant sale in May.
Contact: eastern.hills.branch@wildflowersocietywa.org.au
[website](#)
[facebook](#)
-  **Fridays and Saturdays 7pm–9pm**
First Friday and second Saturday every month, **Nocturnal Tours, Kanyana Wildlife Centre**. Meet nocturnal native wildlife and hear about endangered species breeding programs. \$20 or less. Bookings essential.
Contact: 9291 3900 info@kanyanawildlife.org.au
[website](#)
-  **Birdlife Australia – check calendar**
Holds regular **talks** and **excursions** each month.
[View](#) their calendar.
-  **WA Naturalists – check calendar**
Holds regular **excursions, photo groups** and **campouts** each month. [View](#) their calendar for activities of four branches.
-  **Wildflower Society of WA – check calendar**
Holds regular **talks**. [View](#) their calendar.

April

-  **5 Thursday 1pm–4pm**
Fire recovery and resilience [workshop](#) to learn how to protect your landholding from threats of fire, Granville Civic Centre, Gingin. RSVP stanley.yorkwe@nacc.com.au or 0428 649 775.
-  **5 Thursday 7.30pm–10.30pm**
Plants of Prey talk Dr Adam Cross with Murdoch Branch of Wildflower Society, Cockburn Wetlands Education Centre, 184 Hope Rd, Bibra Lake. \$3 entry.

Activities Key



Hands on – bushland and wetland management activities.



Walks and tours – look, listen and enjoy guided walks and excursions















Skills development activities – talks, presentations, training courses and workshops.



Meetings and events – group meetings, expos, festivals and conferences.

April ... continued

-  **7 Saturday 3.30pm–7.30pm**
Going Batty a bat box building workshop followed by a walk on dusk to see which bats live in **Maralla Road** Nature Reserve, Malvern Springs Community Centre, Wyara Link, Ellenbrook. Barbeque provided. RSVP essential SHummerston@wvf.org.au
-  **8 Sunday 5.30pm–6.30pm**
Great Cocky Count [annual citizen science survey](#) that counts black cockatoos across WA as they come in to roost at sunset. Registrations have closed; if you have registered please remember to do the count.
-  **10 Tuesday 9.30am–2.30pm**
Using Digital Technology in Natural Resource Management [seminar](#) with Perth NRM at Perth Zoo. [Registrations](#) \$35 includes light lunch.
-  **11 Wednesday 10am–12 noon**
Mum and Bubs Nature Hike pram friendly guided bushwalk Banksia Eucalypt Woodland Park, Aubin Grove. Register [online](#) or call 9411 3444.
-  **12 Thursday 9.30am–10.30am**
Noongar Six Season Walks learning about the yearly cycle of travel and resource collection for Noongar people. Djeran, the first rains takes you to Herdsman Lake, Churchlands. [Register](#).
-  **13 Friday 5.30pm–7.30pm**
Birds of prey talk and animal interaction, Batavia Coast Maritime Institute Willcock Dr, Geraldton. RSVP 0427 989 112 vanessa.brown@nacc.com.au.
-  **13 Friday 7pm–9pm**
Frogs of the Perth Hills: their calls, identification and life-cycles **talk** by Johnny Prefumo with the Darling Range Branch of WA Naturalists. Jorgensen Park, Crescent Rd, Kalamunda. \$5 donation.



-  **14 Saturday 9am–12 noon**
Birdata Masterclass Learn how your everyday bird sightings can contribute to BirdLife Australia's citizen science portal. Includes discussion of how everyday birders are helping bird conservation in Australia and an interactive practical demonstration of web portal and smart phone app in Bold Park. WA Ecology Centre 165 Perry Lakes Dr, City Beach. Free contact 9383 7749 (Mon–Fri 9.30am–12.30pm) or wa@birdlife.org to register.
-  **21 Saturday 9am–11am**
Creating Cockatoo Friendly Spaces workshop with Dr Christine Groom, Bibra Lake Community Centre, 132 Parkway Rd, Bibra Lake. Register [online](#) or call 9411 3444.
-  **23 Monday 9.30am–12.30pm**
Seed Bombing for Bush Regeneration. Join BS4Y and the Friends of Nyaania Creek to explore the forest and make seed bombs to help the forest grow. Suitable for families with children aged 7-12, includes morning tea. Glen Forrest Superblock, Sealey Road, Glen Forrest. To register [email](#) with parent name/s and contact number and children/s names (including surname), age/s, postcode and any dietary requirements or relevant health issues.
-  **27 Friday 7.30pm**
Eastern Suburbs Wildflower Society talk Ken Atkins (DBCA), **Conservation of Threatened Flora – Legislation, Policy and Practice**, Octagonal Hall 52 McGlew Road, Glen Forest. Contact: eastern.hills.branch@wildflowersocietywa.org.au
-  **28 Saturday**
Annual plant sale from \$3 [Northern Suburbs branch](#) of Wildflower Society WA, Landsdale Farm School, Landsdale Rd, Darch.

Please send us your July, August and September activities and events by 8 June 2018.

May

-  **10 Thursday 7.30pm**
Busselton Naturalists Club talk Simon Cherriman **Eagles in sight:** the latest research on wedge-tailed eagle movement ecology, Senior Citizens Centre, 22 Peel Tce, Busselton.
-  **12 Saturday 9am–2pm**
The Eastern Hills Branch of the wildflower Society **annual native plant sale** Octagonal Hall, 52 McGlew St Glen Forrest. Hundreds of plants from \$3. [Catalogue](#) available the week before.
-  **17 Thursday May 4pm**
SHARE Social Help, Action and Resources for Environment are held by the Peel Harvey Catchment Council four times per year. The SHARE in May will focus on the causes and response to fish kills in Peel-Harvey waterways, 58 Sutton St, Mandurah. [Bookings](#) essential.
-  **25 Friday 7.30pm**
Eastern Suburbs Wildflower Society talk Neville Marchant on his journey to Sumatra to see the *Rafflesia arnoldii* and some of WA parasitic plants, Octagonal Hall 52 McGlew Road, Glen Forest. Contact: eastern.hills.branch@wildflowersocietywa.org.au

June

-  **14 Thursday 10.00am–11.00am**
Noongar Six Season Walks learning about the yearly cycle of travel and resource collection for Noongar people. Makuru, the cold and wet takes you to Herrisson Island, East Perth. [Register](#).
-  **14 Thursday 7.30pm**
Busselton Naturalists' Club talk Mike Butcher Changing fox size – can reducing fox and cat numbers lead to younger and less animals in future, Senior Citizens Centre, 22 Peel Tce, Busselton.

Activities Key



Hands on – bushland and wetland management activities.



Walks and tours – look, listen and enjoy guided walks and excursions



Skills development activities – talks, presentations, training courses and workshops.



Meetings and events – group meetings, expos, festivals and conferences.

Highlights

7 Saturday 12.30pm–4pm

Flora symposium: Challenges Facing Sustainability of plants in WA Today, Lawrence Wilson Art Gallery, University of Western Australia. Current WA research in plant science and conservation biology, traditional uses of plants and environmental issues that challenge our future. Free [registrations](#).

15 Sunday April 10am – 12 noon

Celebrating 25 Years of Urban Bushland Council morning tea. Bring a small plate to share and your own cup/mug. Vietnam Memorial Pavilion (near Zamia Café), May Drive, Kings Park. Visit [website](#).

16 Monday– 27 Friday April

Check out the **school holiday activities** with Nearer to Nature's [Autumn's Aura](#) and Cockburn Wetlands Education Centre's [Get Wild About Wetlands](#) programs.

18 April – 20 May

Australian Heritage Festival supports [events](#) incorporating Australia's natural, Aboriginal and historic heritage.



16-20 April

Coast to Coast 2018 Meeting on the Margin Hotel Grand Chancellor Hobart. Australia's biennial national coast management conference. [website](#).

27 May – 3 June

National Reconciliation Week celebrating and building on [respectful relationships](#) shared by Aboriginal and Torres Strait Islander peoples and other Australians.

27–28 July

Landscapes, Seascapes and Biota: Unique Western Australia – Past, Present and Future Royal Society of WA Symposium, University Club, The University of Western Australia. [website](#).

8–11 September

Birdlife Australia **Congress and Campout**, Mangrove Hotel and Broome Bird Observatory, Broome. [Bookings](#) essential.

9-12 September

21st Australasian Weeds Conference (21AWC), Novotel Manly Pacific Hotel, Sydney, NSW. [website](#).

25–29 November

2018 Annual Conference of the Ecological Society of Australia Ecology in the Anthropocene, Royal International Convention Centre, Brisbane. [website](#).

A poster celebrating the 25th anniversary of Urban Bushland Council WA Inc. The background is a photograph of a lush bushland area with various trees and plants. The text 'Celebrating 25 Years of' is in large, bold, black letters. To the right is the Urban Bushland Council WA Inc. logo. Below the main text, it says 'Sunday 15th April 10 - 12 KINGS PARK Vietnam Memorial Pavilion May Drive (near Zamia Café)'. At the bottom, there is a small icon of a cupcake and a mug, with the text 'Hot water, tea, coffee, sugar, milk provided. Please bring a small plate to share & your own cup/mug!'. On the right side of the poster, there is a vertical credit line: 'Rockingham Regional Park | John Baas'.

Coastwest 2018/19 providing grants of \$5,000–\$50,000 for West Australians to learn about, conserve and protect our coast. [Applications close Monday 9 April 2018.](#)

Swan Alcoa Landcare Program provides funding for Perth revegetation and rehabilitation activities in 2019. [Applications close on Monday 23 April 2018.](#)

2018 NAIDOC local grants supports activities in NAIDOC week 8–15 July that celebrate Aboriginal and Torres Strait Islander histories, cultures, achievements and their continuing contributions. [Applications close 3 April 2018.](#)

Alcoa Sustainability Fund providing grants over \$10,000 delivering sustainable community benefits in Harvey. [Applications close 13 April.](#)

Impact 100 WA provides large \$100,000 and minor \$10,000 grants to charities. [Applications close 25 May.](#)

National Science Week Small Grants up to \$2,000 for community activities. [Applications close 26 April.](#)

Clean Communities offers \$500 to groups or individuals who [collect and separate waste](#) including weeds for recycling.

AMP Tomorrow Fund seeking amazing Australians doing great things to share in \$1million in grants. [Applications open 5 April.](#)

FAME seeks to fund on-ground conservation with a focus on seed-funding and innovation for Australian species most at risk of extinction. [Applications close June 2018.](#)

Aurizon Community Giving Fund up to \$20,000 for environmental projects in Geraldton, Perth, Kalgoorlie and Esperance. [Applications open 19 March.](#)

Australian Bird Environment Foundation grants up to \$5,000 for on-ground conservation activities for Australian birds. [Applications close 31 May.](#)

Australian Geographic Society sponsors Australian adventurers, scientific and environmental research and community projects up to \$10,000. [Applications close 30 April.](#)

Churchill Trust for overseas travel to investigate inspiring practices to benefit Australian communities. [Applications close 27 April.](#)

Wettenhall Environment Trust small environmental grant scheme funds research, education and conservation projects. [Applications close 19 June.](#)

Local government community grants

These local governments provide small grants to their communities which can fund environmental groups' management and restoration projects. Eligibility varies.

- [Busselton](#) closes 13 April.
- [Canning](#) closes 2 April.
- [Cottesloe](#) closes 15 May.
- [Kwinana](#) closes early April.
- [Rockingham](#) closes 4 May.
- [Subiaco](#) closes 2 July.

New publications

Identifying Numbat Digs *Project Numbat* 2017. \$5. If you are passionate about detecting the signs of numbats in our woodlands then this is the book for you. This easy to follow A5 booklet provides an insight into the numbat and the kind of digs they leave in the soil when foraging for termites. Images of numbat digs and scats are provided and the methodology of participating in a survey is also detailed. *'Identifying Numbat Digs'*: now in the Project Numbat [Webshop](#) for just \$5.



Never Again: Reflections on Environmental Responsibility After Roe 8 Gaynor A, Newman P and Jennings P *UWA Press*, 2017 \$29.99. Traces the history of Roe 8 and the Perth Freight Link.

Continued next page ...

New publications ... continued

Field Guide to the Flora and Fauna of Hollywood Reserve by the Children of Hollywood Primary School and their teacher Celia Elissegaray, *Hollywood Primary School* (2017). Available for \$20 from the school front office. Hollywood Primary School has contributed to the planting and maintenance of Hollywood Reserve over a number of years. Year 4 and 5 students have published this book based on artworks created in an environmental science art workshop with artist and biodiversity educator Angela Rossen. Student's paintings are included along with interesting information and, of course, the correct scientific name!



Biodiversity Art Workshop. Photo – Angela Rossen.



Reimagining Perth's Lost Wetlands.

Website watch

Flora of Australia [new website](#) is a synthesis of taxonomic knowledge of the country's flora. The digital platform integrates a wide range of botanical information from many sources such as names, characteristics, distribution maps, images, habitat and identification keys for Australian plants. For many years *Flora of Australia* was produced as a hard copy book series. The digital platform enables direct contributions, faster publication and updates, greater collaboration and open access to data. About 14,000 taxon profiles are available including treatments previously published in the hardcopy series with more in draft form to be progressively published.

Fungi of the Perth Region and Beyond by Neale Bougher was published in 2009 by the WA Naturalists'

Club. Now a **2017 revised version** is available on their [website](#).

Darling Range NatureBase: A reference Guide to the Flora and Fauna of the Perth Hills by Lesley Brooker. 2017. Members of the Darling Range Branch of the Wildflower Society of WA and the Naturalists' Club co-ordinated with Lesley Brooker to produce this [free downloadable interactive guide](#) for the non-professional nature lover. The guide is an ongoing project which is updated as more species come to hand.

Reimagining Perth's Lost Wetlands A collaborative project between Edith Cowan University, Landgate and the City of Perth aimed to raise awareness of the cultural and environmental importance of Perth's wetlands by [reimagining what Perth may have looked like](#) when it was first settled by Europeans. The Claise Brook catchment would have been dramatically different.

Nitre bush

by Kate Brown

Forming dense stands on the cliffs around the edge of Penguin Island nitre bush or wild grape (*Nitraria billardieri*) is an important component of the island's vegetation providing habitat for nesting cormorants and other seabirds as well as for king skinks, often seen feeding on the purple fruits in late summer. The dense nature of the shrub also makes it particularly successful at displacing weeds. It is an ideal species to use in coastal restoration projects and, as part of a project aimed at restoring native shrublands across Penguin Island, attempts have been made to collect and germinate seed.

Interestingly close observations of shrubs around Penguin Island over 2015 and 2016 revealed little or no fruit set. However, 2017 and 2018 were excellent years for flowering and fruit production and in February 2017 we direct sowed the purple berries in a series of plots across our restoration site. The woody seeds have physical and physiological dormancies that need to be overcome before germination can occur. With no germination over the winter/spring of 2017 there is some hope that aging and leaching in the guano enriched soil might bring about germination over 2018. Leaching for 15 days in purified water is one suggested method for overcoming dormancy. A coastal restoration group in Geraldton has also suggested that dormancy is overcome once the seed has passed through the gut of silver gulls.



*Nitre bush flowering, fruiting and used for nesting by pied cormorants.
Photos – Kate Brown.*



Meanwhile nursery based germination trials are underway with some of the Penguin Island material. The species is often an important component of coastal vegetation around the southern coastlines of Western Australia

as well as our off shore Islands and we would be very interested in any nitre bush restoration stories you'd like to share.