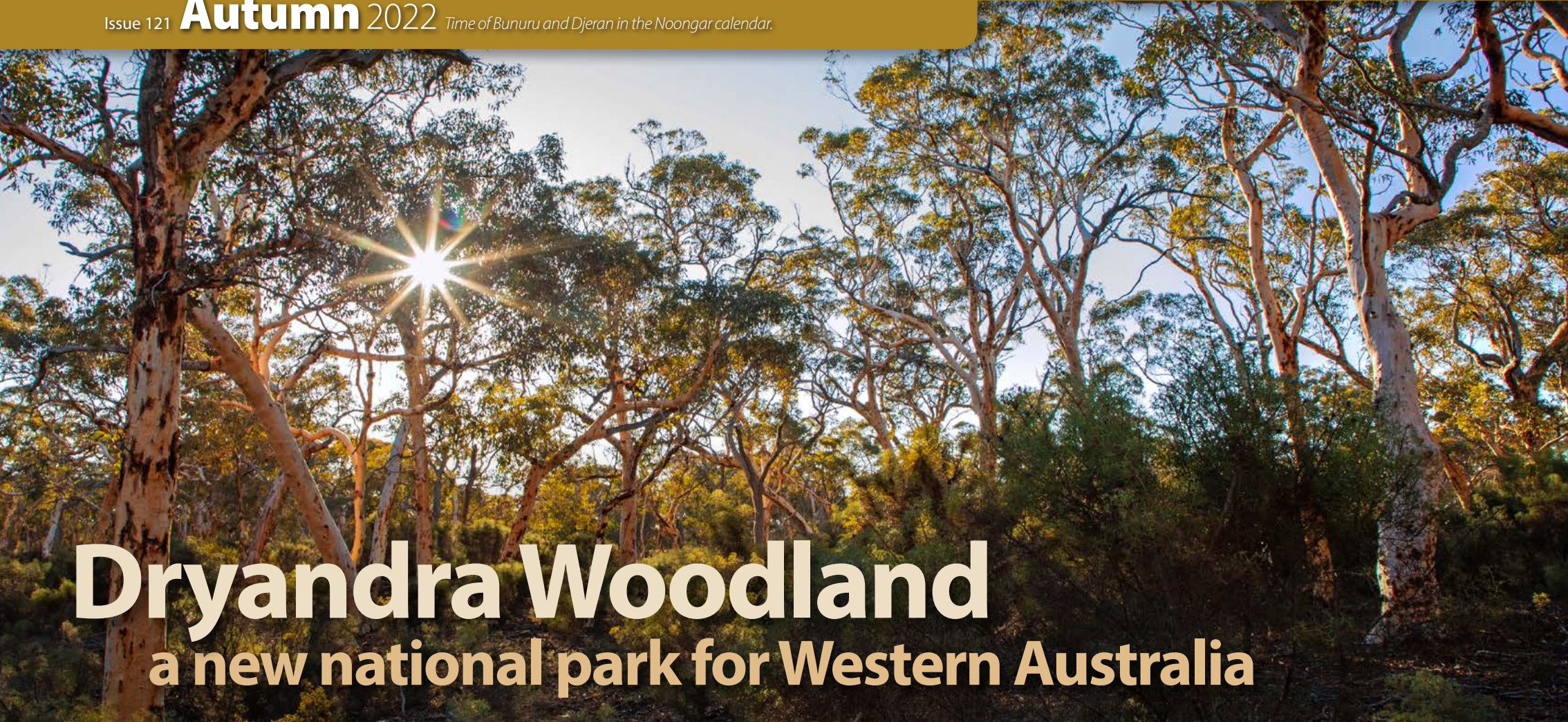


bushland news



Issue 121 **Autumn** 2022 *Time of Bunuru and Djeran in the Noongar calendar.*



Dryandra Woodland a new national park for Western Australia

Photo – John Lawson.



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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This publication is available in alternative formats on request. Current and archived issues of *Bushland News* are available at pws.dbca.wa.gov.au/bushlandnews

Next issue

Winter *Bushland News*

Winter *Bushland News* contributions should be sent to [Urban Nature](#) by **4 May 2022**. *Bushland News* seeks original contributions. If your submission has been or may be published elsewhere please let us know. Compiled and edited by Anna Wisolith and Julia Cullity.

Dryandra Woodland: a new national park for Western Australia

By Ray McKnight and Greg Durell

A new national park for Western Australia has been created at [Dryandra Woodland](#). Located near Narrogin, 15,533ha of the former State forest will now be recognised as a national park, with another 2,337ha set aside for the creation of two Class A nature reserves to provide greater security for the future of some of the State's most endangered animals. 10,384ha of State forest will be retained for [brown mallet](#) (*Eucalyptus astringens*) plantations.

A vital function of this national park and associated nature reserves is to support the continued conservation of its unique and diverse flora and fauna communities, including 10 known threatened animals. Dryandra is a key stronghold for many of Australia's rarest and most vulnerable wildlife including the numbat, woylie, western brush wallaby, chuditch, quenda and malleefowl.

Environment Minister Reece Whitby said, "The conversion of this magnificent woodland into national park demonstrates the McGowan Government's commitment to safeguarding the State's precious biodiversity in what is an area of outstanding value.

"The creation of this new national park will better protect the woodland's unique native species, while

Cover photo: Powderbark wandoo woodland at sunset. Large intact woodlands are a rarity in Western Australia's Wheatbelt, and Dryandra National Park is the largest and most diverse complex of remnant vegetation remaining in the central western Wheatbelt. Photo – John Lawson.

also offering wonderful outdoor recreational opportunities for visitors and the local community."

Dryandra has the largest and most diverse complex of remnant vegetation remaining in the central western Wheatbelt. This mosaic of vegetation types provides essential habitat for species including the numbat and woylie.

Importantly, numbers of numbats and woylies have increased at Dryandra in recent times thanks to a Department of Biodiversity, Conservation and Attractions (DBCA) conservation program. The department's [Western Shield](#) program, which has been operating for 25 years, works to protect Western Australia's native wildlife through broadscale management of introduced predators, including foxes and feral cats. It has achieved significant conservation outcomes for vulnerable native species in Dryandra.

Working with local landholders, NRM groups such as the [Peel-Harvey Catchment Council](#), [Project Numbat](#), and [Numbat Taskforce](#) have enhanced the effectiveness of feral animal control measures on farms and improved outcomes for native fauna.

In addition to its unique biodiversity values, the Dryandra area holds strong cultural significance for Noongar people, containing several important sites including an ochre quarry, artefact scatters, stone arrangements and a scarred tree, and it



It's official. Environment Minister Reece Whitby (from left), Deputy Director General Peter Dans, Regional Manager Greg Durell and Member for the Agricultural Region Shelley Payne change the sign and Dryandra Woodland is declared a new national park for Western Australia. Photo – Ray McKnight.

is likely there are other Aboriginal sites that have yet to be identified.

Dryandra Woodland is the first national park for the Wheatbelt region of Western Australia, and the department has been preparing for this announcement for some years now by adding facilities and improving existing infrastructure and sites to deliver a high standard of experience. You can enjoy the Dryandra experience for a few hours, up to a few weeks if you like, with day use sites such as [Old Mill Dam](#), forestry cabins at [Lions Dryandra Woodland Village](#), and caravan and camping sites at [Congelin](#) and [Gnaala Mia](#). Entry into the national park is free and camping fees apply to the campgrounds and for village accommodation.

Continued next page ...

The walk trails are incredible and take you through some of the varied woodlands and heath areas that make up Dryandra Woodland. There are [10 trails](#) in total ranging from 1km to 12.5km, so there is something for everyone.

A 23km [drive trail](#) takes you through the woodland, with stops and interpretative displays along the journey which highlight the complexity of the natural ecosystems including specific relationships such as the complex [relationship between woylies and sandalwood](#).



Dryandra Woodland National Park is one of two strongholds for the threatened numbat and Western Australia's animal emblem. This pouchless marsupial survives entirely on a diet of termites. Unlike most marsupials it is active during the day, seasonally adjusted for when termites are most active and come closer to the soil surface. Numbats' favoured habitat is woodland where they shelter in hollow logs and burrows. The numbat pictured here is collecting nesting material. When their young grow fur, the mother places them in a chamber lined with grass and leaves at the end of a burrow, whilst she forages for termites. Photo – John Lawson.



Barna Mia provides a unique visitor experience offering a guided nocturnal tour. Learn about the threats to our native wildlife and what we can do to promote conservation while hopefully seeing endangered animals in a natural setting. Photo – Ray McKnight.

[Barna Mia animal sanctuary](#), with its predator-proof enclosures, provides refuge for marsupial species that have been lost from the area and some from the mainland. [Guided nocturnal tours](#) through the bush at Barna Mia offer a unique opportunity to see threatened native fauna up close such as bilbies, rufous hare-wallabies, boodies, and woylies.

The department is conserving the natural assets of a unique area of Western Australia whilst providing high quality facilities for the public to enjoy. Come for a visit. You may even spot a numbat.

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A second lifeline for the critically endangered pyramid mulla-mulla, *Ptilotus pyramidatus*

By Grazyna Paczkowska and Rob Davis

Pyramid mulla-mulla (*Ptilotus pyramidatus*) is a mysterious little plant species with a fascinating track record of human discovery. The first collection of pyramid mulla-mulla was made in 1845 by James Drummond, a pioneering Western Australian botanist and naturalist. The exact location of Drummond's collection remains unknown and given only as 'in Nova Hollandia'. With no clues on its habitat or location, it was not a surprise that this species had not been seen for some 140 years and was listed as 'presumed extinct' in May 1991. However this is where good vegetation survey skills, combined with rigorous taxonomic and curatorial works, and sheer luck has led to confirming that *Ptilotus pyramidatus* is still alive.

In 2010, an unusual *Ptilotus* plant was spotted by Botanist Cate Tauss during a flora and vegetation survey of the Greater Brixton Street Wetlands, Kenwick. At the time, it was thought to be a new undescribed *Ptilotus* species. Rob Davis, a botanist at the Western Australian Herbarium with an interest in *Ptilotus*, and Cate described and named the new find as *P. christineae* in 2011.

A year later, while curating the *Ptilotus* collection at the Western Australian Herbarium, Rob came across a small line drawing of *P. pyramidatus*. It was clear from the depiction of the plant's habit that it represented an earlier name for the recently discovered *P. christineae*

at Greater Brixton Street Wetlands. And this is how the pyramid mulla-mulla, previously presumed extinct, was re-discovered some 160 years after it was first collected.

In 2018, a colleague of Rob, Tim Hammer, discovered a collection of *Ptilotus pyramidatus* in the State Herbarium of South Australia under *Ptilotus* sp. The collection by R. Bates in November of 1992 was made, according to him, south-west of Wagin. Unfortunately, Bates had a reputation for unreliable locality statements, so there was some doubt this location was correct. Rob surveyed the surrounding area around Wagin in 2019 but found the likely area somewhat degraded with a rising water table, salinity and weeds. If the location was correct, it's unlikely the pyramid mulla-mulla would have survived.

Management of the critically endangered pyramid mulla-mulla, when known only from one location at the Greater Brixton Street Wetlands, has been very challenging as little is known about its biology and the current population is at a risk from a [range of threatening processes](#).

In the event of a catastrophic incident at this location, the entire species could be wiped out. Therefore, we are always on the lookout for new populations in potentially suitable habitat around Perth and its surrounds, though without success so far.

Continued next page ...



Ptilotus pyramidatus at the Mount Barker location. "I was just out chasing [bee photos](#) when it caught my eye," said Kate. Photo – Kate Brown.



Photo – Kate Brown

Ptilotus pyramidatus are small plants that grow to only 5cm.

A second lifeline for the critically endangered pyramid mulla-mulla, *Ptilotus pyramidatus* continued ...

So we all breathed a collective sigh of relief when Kate Brown contacted Rob with a possible new location of *P. pyramidatus* west of Mount Barker.

[Kate Brown](#) is a former colleague of ours, retired from DBCA after a long and distinguished career with the Urban Nature program, and was involved in the management of Greater Brixton Street Wetlands and *Ptilotus pyramidatus* while working for the department. Mount Barker to Kenwick is a huge disjunct distribution, some 400km away from the current known location. Rob was able to confirm it was indeed the pyramid mulla-mulla.

This is exciting news! It is a relief to know that the Greater Brixton Street Wetlands' population of *P. pyramidatus* is not alone. The new find will expand our knowledge of habitat preference, genetics, and assist in management of this species.

We are still on the lookout for new populations of the pyramid mulla-mulla, but it looks like we may need to cast the net much wider!

Local group wins DBCA volunteer award By Grazyna Paczkowska



The Friends of Paganoni with their well-deserved award. Norm Hodgkinson (from left), Anne Bellman, Diana Badcock, Erica Dearle and Leonie Stubbs with Hon. Klara Andric MLC, Member for the South Metropolitan Region. Photo – DBCA.

Congratulations to the [Friends of Paganoni Swamp](#) on being one of the winners of the 2021 DBCA Outstanding Service award in the community category. These awards are given each year to recognise volunteers for their commitment, dedication, and contribution to the natural environment of Western Australia. The Friends of Paganoni Swamp have been actively involved in the management and protection of Paganoni Swamp (Rockingham Lakes Regional Park) since 2004. The Friends are not only very active, but also very resourceful in attracting funding for on-ground management and conservation.

Over the last year, consistent with previous years, the Friends have made a significant contribution by volunteering over 1,400 hours to all aspects of bushland management including weed control, rubbish pickups, and restoration projects such as seed collecting and planting. They are also working on research projects with external partners such as building nest boxes for phascogales and bats. The Friends of Paganoni are also very vocal in protecting Paganoni's value through raising local community awareness about the bushland's high environmental values.

Congratulations to all other worthy recipients and thanks to all our volunteers.

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Fumitory has clusters of flowers in a raceme. The whiteflower fumitory (*F. capreolata*) has white flowers with a dark purple-red tip; older flowers droop on their stalks. [Flower colour differs](#) between the fumitory species. The flowers have four petals: two inner lateral petals and two outer petals with a narrow lower one and a broad upper petal which forms a pouch at the base of the flower. Photo – Ian Clarke © 2022 [CC BY-NC-SA 4.0](#).

Fumitory (*Fumaria* spp.) By Julia Cullity and Anna Wisolith

Don't let the soft, delicate, annual weed fumitory (*Fumaria* spp.) establish in your bushland because this persistent weed has many strategies to elude management.

DBCAs' [species-led weed prioritisation process](#) rated the ecological impact and invasiveness of weed species across the State. In the [Swan Region](#), *Fumaria capreolata* and *F. muralis* were rated as weeds with high ecological impact and rapid invasiveness. *F. densiflora* was classed as unknown for both criteria and *F. bastardii* wasn't assessed. The distribution of these weeds is widespread throughout bushlands in Perth, so our management aim is to protect priority sites from invasion and act quickly to control if the weeds move in.

What do they look like?

Fumitory is an annual with a scrambling or weak climbing habit. Depending on the species, plants can reach 0.5–3m long. The soft, hairless, bright green or blue-green foliage has deeply lobed, divided, alternate leaves. The stems contain a watery, greenish latex. Flowers are tubular with a pouch at the base and grow in racemes along the length of the stems. Flower colour ranges from white with a purplish-red tip in *F. capreolata*, through pink to mauve with a purplish-red tip in *F. densiflora*, *F. muralis* and *F. bastardii*. The plants vary greatly in their shape and form depending on the growing conditions and can lead to difficulty [identifying between species](#).

Preferred habitat

Fumitory is generally found as a weed in road verges, wastelands and agriculturally in winter cropping areas. Like many annuals they prefer to establish on disturbed soils, although *F. capreolata* has been known to invade intact bushland. We often find fumitory invading in coastal and limestone derived soils and on granite rocks in the Darling Range. Most fumitory species originate in the Mediterranean with a few species native to India and east Africa.

Biology

Fumitory can germinate over a range of temperatures, so tends to germinate opportunistically in response to rainfall events from autumn through to spring. Fumitory has self-pollinating flowers and sheds its fruiting bodies quickly, so seed is stored in the soil and rarely on the plant. The fruit has an elaiosome, a fatty deposit that attracts ants to help disperse it. One plant can produce up to [22,500 seeds](#) and seeds mature about three weeks after the first flowers are visible. The seed has a dormancy mechanism, and the embryo needs high temperatures followed by a cold, moist period to mature. Seeds less than 5cm from the soil surface are viable for 3–5 years but deeply buried seed, at 15cm, can remain [viable for up to 20 years](#). [Peak germination](#) occurs in the second year after seed shed.



There was increased germination of fumitory at Penguin Island due to soil disturbance during construction of a new toilet block. Seed buried at depth can be viable for 20 years or more and will germinate once raised closer to the surface where dormancy cues are broken in response to light exposure and moisture in the soil. Quick to establish in shady locations, the annual herb can form a dense ground cover layer. Photo – Grazyna Paczkowska.

Continued next page ...

Ecological impact

Fumitory can form a dense ground cover or when climbing/ twining, smother native vegetation in the understorey. It prefers to establish in the shade and competes with native vegetation for soil moisture during its winter and spring growing period. Clusters of plants also exude chemicals into the soil, allelopathy, that inhibit the growth or seed germination of other plants.

Management

Fumitory is easily [hand removed](#) but this needs to be repeated at least every 10 weeks during the winter-spring growing season. The soil disturbance associated with hand removal can raise seed closer to the soil surface and stimulate new germination, requiring months of follow-up weeding.

Herbicide susceptibility varies between species and herbicide resistance has been detected in populations of agricultural weeds. Suggested [herbicides for *F. capreolata*](#) are metsulfuron methyl at 0.1g/15L (2.5g/ha) + wetting agent or glyphosate 0.5%. Other post-emergence herbicides may provide control. [NSW Department of Primary Industries](#) provides a number of suggestions for controlling fumitory in winter crops, the [Murrumbidgee Catchment Management Authority](#) summarises the results from agricultural trials and the [Grains Research and Development Corporation](#) also funded research into fumitory control for cropping situations. Note that some of the herbicides recommended or trialled on crops may not be registered for use in bushlands. Always read the label and adhere to directions when using herbicides or check if the [off-label permit](#) covers the use of that herbicide for the control of environmental weeds.

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Controlling Fumaria, 10 years and still going By Leonie Stubbs

Friends of Paganoni Swamp has been managing *Fumaria* since around 2012. When we began our work on *Fumaria* its presence was particularly obvious in the wetland where it had already worked its way to the top of tall *Melaleuca raphiophylla* trees. Due to the density of the infestation, our aim was to control the weed and reduce its impact on the wetland vegetation. It just smothered everything. Our first goal was to obtain funding for herbicide control and map the infestation.

Herbicide control with metsulphuron methyl has been continuous since 2012 with an expanded range over time as we found new patches. In all cases this has been followed up with hand weeding. The timing of the herbicide control is extremely important – too early and you miss all the later germinations but too late and the initial seedlings have already flowered and set seed. It's also important to follow up with hand weeding probably two months after herbicide control has been completed as you will pick up those seedlings that were missed by the contractor. It's also necessary to continue the hand weeding until the rain stops if it's a site that has been infested for some time.

Dry conditions reduce the number of seedlings that germinate and we also found standing water kills seedlings too. The year after a long, wet spell we were able to take advantage by spraying the resulting bumper crop, which has hopefully reduced the seed load. It's also necessary when remapping areas to expand your range another



Fumaria is a soft, delicate, annual plant with deeply lobed and divided leaves. The leaves of young plants form a rosette which it grows out of as the plants elongate to scramble, twine or weakly climb. Photo – Grazyna Paczkowska.

30–50m because there will invariably be another patch of weed beyond your current control area.

You will no longer see *Fumaria* plants climbing up *Melaleuca raphiophylla* trees at Paganoni Swamp but even after 10 years of control there are still plenty of seedlings. Our goal hasn't altered though – we are well aware that we cannot eradicate this weed. However we do aim to minimise its density to the stage where it can be managed by hand weeding. We are not there yet.

The magpies of Perth

By Amanda Ridley

Magpies are ubiquitous with Australian life. They have adapted well to living in human-modified areas, and [their calls](#) are well recognised and loved by many Australians. However, not all magpies are the same! Although the magpies here in Western Australia look quite similar to those on the east coast, they are actually quite different in a number of ways. Australia has several subspecies of magpie, and here in the south-west of Western Australia, we have the subspecies *Gymnorhina tibicen dorsalis*. One feature of this subspecies is that adults can be sexed by their plumage. The back of the male is pure white, while that of the female is scalloped black and white. Sometimes juveniles and subadults can get confused for adult females, because they have not yet developed their full adult plumage (normally attained between 2–3 years of age). A good way to tell the difference between a juvenile or subadult and a female by plumage is that the black and white feathers on the back of youngsters will be irregular and speckled with grey, unlike that of adult females.

One of the main differences between our south-west magpies and other subspecies is their cooperative nature. They live in territorial cooperative groups year-round and can routinely be found in the same area year after year. While other subspecies do come together in large flocks in the non-breeding season and smaller flocks during the breeding season, they typically breed as pairs. However, the magpies here in Perth aggressively defend their territory together as a group and help to raise each other's young. They also share information



Magpies are weighed on an open scale regularly to monitor changes in body mass over time relative to heat events and breeding investment. In this photo, you can see the difference in plumage between the adult male magpies (full white back) and a juvenile in the foreground. Photo – Amanda Ridley.

with one another, such as the location of a food source or the presence of a threat. Though not all individuals contribute, each year at least 50 percent of the group help raise the young of other group members. This help primarily takes the form of directly provisioning young with food or protecting them from predators.

Cooperation can be beneficial: effectively defending a territory can give group members stable access to needed resources. In addition, on the very hot days we experience here in Perth, adults can suffer from heat stress. This starts to happen when days get above 33°C, but heat stress can become severe at about 38°C. At these temperatures, the adults are actively offsetting heat, which results in a reduction in foraging behaviour and the amount of food fed to young that cannot

forage for themselves. This depression in the adults' foraging activity adversely affects not just nestlings but also fledglings, who are still nutritionally dependent on adults for several months after leaving the nest. Young that have cooperative helpers providing extra-parental care have the potential to receive more food on those very hot days compared to young that do not. When temperatures get very hot however, it can be fatal to young. With an increasing frequency of heatwaves in Perth, there is a risk of population decline due to poor chick recruitment. Some readers may be surprised at this, since magpies breed in spring, while heatwaves mostly occur in summer. However, many of our magpie groups can breed multiple times per season.

Continued next page ...

Particularly when spring storms destroy the nests (which is not uncommon in Perth), the females will breed again, and broods can still be present in December when temperatures can reach in excess of 40°C. The evidence we have accrued suggests [high temperatures can impact population growth](#) in two ways: lethal effects of heat, as well as sub-lethal effects. These sub-lethal effects can include lower body mass gain and greater susceptibility to disease, reducing the health of an individual and suppressing reproductive activity. This year, with Perth experiencing its hottest summer on record, we have noted poor fledgling survival and below average body mass in our study population.

In addition to helping with the nutritional intake of young magpies, cooperation helps with the exchange of information – a handy thing when it comes to the discovery of food sources or detection of competitors and predators. My [research group](#) and I discovered that individuals in large groups were able to access a

food resource faster when presented with a novel task compared to individuals in small groups. In addition, this knowledge spread faster among individuals in large groups compared to small groups, confirming that group living can allow for more efficient information exchange. Magpies are really great at gaining information from their surrounding environment – our research also found that they were able to [differentiate between familiar and unfamiliar human voices](#), a pretty handy attribute to have in an urban environment!

It will probably not come as a surprise to many that magpies are quite intelligent birds. In animals, we refer to intelligence as cognition. But why do we care about cognition? We care about it because cognition refers to the way that an animal perceives and responds to stimuli in its surrounding environment. In a human-modified landscape, there are many stimuli that magpies have to adapt and respond to,

and their ability to do this can help determine their longevity and reproductive success. Our records on reproductive success have confirmed that [female annual reproductive success is related to cognition](#). Our current research is looking into how cognitive decline (such as that experienced during heat stress) affects the ability of magpies to respond to predator threats, offspring signals of need, and anthropogenic noise.

Magpies are wonderfully interactive, iconic parts of our urban landscape. However, they do face a number of threats from urban life. Some of these – such as the death of young magpies on roads – can be hard to address. Other threats however, are easier to address. Over the years I have had to rescue a number of magpies entangled in discarded fishing line or string. They can line their nests with it, and sometimes growing young cannot fledge because they are entangled in the string. Other times, adults get caught in the nesting material and die from starvation, entangled in their own nests. Outside of the breeding season, I have removed string or fishing line off the legs of magpies. This string can cut in quite deep and cause them considerable pain; it quickly becomes entangled quite tightly because this is a bird species that uses their legs a lot for ground foraging. I therefore appeal to all fishers and homeowners that use nylon and other fine string to please ensure you pick up your discards and dispose of them safely in the bin – this will help the urban magpies and their young avoid this potentially fatal hazard.



Juveniles often adopt a submissive crouching posture around adults to avoid aggression: juveniles are the main recipients of aggression within the group as they transition to independent foraging. Photo – Amanda Ridley.



The adult female plumage is distinctive from that of the male, which has a full white back, and distinctive from the juvenile, which has grey, brown and black plumage, whereas the adult female has full black plumage with a scalloped black and white back. Photo – Amanda Ridley.



The hooked beak tip is characteristic of older birds, particularly males, and may help with the capture of subterranean prey. Photo – Amanda Ridley.

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Needing owl observations By Maris Lauva

Edited reprint with thanks to BirdLife WA e-news.

There is now [clear evidence](#) that second generation rodenticides are lethal to owls and other birds that prey on rodents.

Along with this is increasing [community concern](#) about the use of these rodenticides. Recent mouse plagues across Australia have also [drawn attention](#) to the broad-scale use of rodenticides.

[BirdLife WA](#) is developing a campaign to inform community and business about these risks to vulnerable species. This builds on the excellent initiatives already taken in Western Australia and is a part of a national campaign being run by BirdLife Australia.

The campaign for Western Australia is being delivered through the [Western Australian Bird Conservation Network](#). One significant concern for this campaign is that owls are not well represented in [Birdata](#) or other bird survey data apps. Either the numbers really are low, or they are not often recorded. For example, there are only 63 observations of southern boobook recorded in the Perth/Peel regions in the last 12 months. Who hasn't heard a [boobook calling](#) near their home at some time? Yet very few of those observations have been reported through the [Birdata app](#). This is probably due to very few recorded night-time bird surveys.

To help the birds we need to know more about where they are and get a better handle on their numbers. This is a request for everyone to start reporting every observation they make of any owl – whether seen



Owls and other birds of prey are at risk of secondary poisoning when they eat rodents that have been baited. Send in your observations of owls, like this southern boobook owl in Rockingham, using the [Birdata app](#) so that BirdLife WA can help quantify the scale of this problem. Photo – Maris Lauva.

or recognised through the call. If you are unfamiliar with the Birdata app and need assistance, or might be interested in joining the campaign team to address this urgent issue, please contact [Maris Lauva](#).

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Wanted: volunteers in action to photograph

The Department of Communities is seeking to create a collection of locally based volunteering photos to capture the diversity of volunteers and volunteering activities across our State. To make this project a success, they are looking for opportunities to photograph your volunteers in action.

Resulting images will form part of a volunteering image database to draw on for a range of promotional material and participating volunteers will be provided access to their images. All participants will be required to sign a media consent detailing examples of how the department intends to utilise the associated images.

If you or your volunteer group is interested in this opportunity, please [complete the online registration form](#) to provide your organisation's details.

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Celebrating Community-Driven Conservation

By *Raphaela Raaber*

As part of the [Community Capacity Assessment](#), Perth NRM will be hosting a seminar 'Celebrating Community-Driven Conservation' on Thursday 19 May at the Western Australian Museum Boola Bardip.

Outcomes from the recent Community Capacity Assessment survey will be presented along with case studies that illustrate the crucial work and contribution of environmental volunteers in the Perth Region.

Some friends groups and environmental groups have existed for over 20 years and have contributed significantly to the restoration of natural areas and protection of wildlife. The [Community Capacity Assessment 2021](#) aims to provide a holistic understanding of community groups engaging in natural resource management by producing quantitative data to demonstrate areas of strength and areas where support is most needed.

The project has evolved in the last few months and has already started to address some of the issues environmental groups are facing. To increase networking opportunities, Perth NRM has initiated the [PRNM Enviro Network](#) Facebook group. In this group, research outcomes are presented to enable discussions and collect ideas for solutions from the environmental community.

Importantly, this project has facilitated cooperation of umbrella groups with the initiation of the Environmental Umbrella Group Collective. This collective seeks to provide the best support to environmental community groups and respond to priority issues jointly. Support for succession planning, attracting new and younger volunteers, and improved opportunities for knowledge sharing and networking are some of the major concerns.

The event 'Celebrating Community-Driven Conservation' will provide an opportunity for networking, visibility, and cross-sector engagement.

In the week leading up to the [International Day for Biological Diversity](#) (22 May), Perth NRM is seeking to make environmental groups visible within the broader community and help attract more people from different interest groups, sectors, and age groups.

You will find more information about this on the [PNRM Enviro Network](#) Facebook page or the [Community Capacity Assessment Project](#) website. This project is supported by funding from the Western Australian Government's State NRM Program.



Perth NRM supports community group knowledge sharing and capacity building through workshops and networking. Photo – Perth NRM.

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Boola Boornap 'Place of Many Trees'

By Alan Beattie

Culturally Appropriate, Commercially Sustainable – that is the motto of the [Noongar Land Enterprise Group](#) (NLE). Established in 2017, NLE was Australia's first Aboriginal grower group.

Boola Boornap, meaning 'place of many trees', is owned by NLE and started operation in its current format in November 2020.

Currently in its second year, the native tree nursery is based in Northam about 100km from Perth, and will produce over a million seedlings this year. Boola Boornap has produced over 60 species of plants and seedlings native to Noongar Boodja (the local country).

NLE acquired the nursery primarily through funding from the [COMON Foundation](#), a private charitable fund based in the Netherlands. NLE Chief Executive Officer Alan Beattie said recent additional funding from the [Indigenous Land and Sea Corporation](#), as well as the [Wheatbelt Development Commission](#), will enable NLE to replace key capital equipment and expand the capacity of the nursery.

"In our first year we produced 600,000 seedlings, but in year two that has already increased to one million which are set to be ready in the middle of the year," Mr Beattie said.

"The majority of the seedlings have already been pre-sold however we do have seedlings available for purchase. And we've had orders for the 2022/2023 season which is great. For the 2022/2023 season we are set to produce approximately two million seedlings which will be available mid-2023."

"While we are on a pathway to economic development, it is the environmental, cultural and social aspirations which provide the motivation and inspiration for our business aspirations."



Noongar Land Enterprise Group (NLE) Chairman Oral McGuire (from left), Western Australian Governor Kim Beazley and NLE Chief Executive Officer Alan Beattie at the official opening of Boola Boornap native tree nursery in April 2021. Photo – Jesse Collins.

Continued next page ...



NLE has already made headwinds on achieving those aspirations with job opportunities created for local Aboriginal people associated with the Boola Boornap native tree nursery.

We are also providing employment opportunities for prisoners at the Woorloo Prison Farm.

Woorloo is a low security prison, with inmates allowed to undertake work during the last six months of their sentence.

“Land restoration and carbon farming are significant and growing industries that Aboriginal and Torres Strait Islander people need to be leading and be a key beneficiary of,” Mr Beattie said.

“In 2022 NLE and its member organisations will be developing and implementing a workforce development plan so that this happens and Aboriginal people on Noongar country are employed in this industry, and business opportunities created.”

Since starting operations in November 2020, Boola Boornap nursery has produced seedlings for more than 60 species of plants native to Noongar Boodja. Pictured here are creeping saltbush (Atriplex semibaccata) seedlings. Photo – Jesse Collins.



Boola Boornap employs a predominately local Noongar workforce and is owned by Australia's first Aboriginal grower group, the Noongar Land Enterprise Group, which is creating opportunities for Aboriginal and Torres Strait Islander people to both lead and benefit from land restoration and carbon farming industries. Photo – Jesse Collins.

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Turning gardeners into conservationists! By Hannah Gulliver

Do you want to help conserve native wildlife right in your backyard? We have a citizen science project for you! The University of Western Australia and Perth NRM have partnered to deliver the [Turning gardeners into conservationists](#) project, supported by the Australian Government's [Inspiring Australia Science Engagement Programme](#).

This three-year project will engage with citizens to research the potential benefits of wildlife friendly gardening for both native wildlife – identifying the biodiversity benefits, and human wellbeing – identifying impacts on physical and mental health, and happiness.

The project will provide valuable new knowledge in urban ecology and create a long-term wildlife monitoring database for gardens.

Additionally, the project aims to connect residents with the biodiversity in their gardens and boost public awareness and appreciation of urban wildlife. By providing manuals, workshops and researcher support, the project will increase the community's capacity to accomplish conservation actions and support local biodiversity through wildlife friendly gardening, both throughout the life of the project and beyond.

You can take part now – the first community outreach step of the project is a short, [10-minute survey](#) to help investigate whether wildlife and wildlife friendly gardening have biodiversity and human wellbeing benefits.

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Red-tailed black cockatoos are frequent summer visitors to Perth gardens. Photo – Andrew Shaw.

Please send us your regional report (400 words) and one or two photos by Wednesday 4 May 2022. Text may be edited in response to volume of submitted reports.

Friends of Forrestdale *By Bryony Fremlin*

Forrestdale Lake cygnet rescue

At the crack of dawn on 14 January 2022, over 200 individual and agency volunteers and DBCA Parks and Wildlife Service staff assembled at Forrestdale Lake to save a record number of stranded black swan cygnets. The lake was drying fast and without a rescue mission, the cygnets, still too young to fly, would have perished either by succumbing to the elements or falling prey to foxes.

Since 2009, a cygnet rescue has occurred most years at Forrestdale Lake, but 2021 saw a bumper breeding season for black swans. Good winter and early spring rainfall meant the lake was deeper than it had been for a decade and the swans took advantage of this.

[Friends of Forrestdale](#) President David James, who assists Parks and Wildlife Service by regularly monitoring the lake, reported that there were more than 150 cygnets out on the drying lake and most would need to be rescued. A call for volunteers went out and the response was huge.

At 6am on the day of the rescue, Parks and Wildlife Service staff and volunteers spread out across the lake and herded the cygnets into a holding pen where they were caught and taken to a triage team on the lake's edge. Here the birds were given a health check, dewormed and crated for transport.

The operation went smoothly and was over by 8:30am. Thanks to the efforts of all involved, 171 cygnets were saved. Birds deemed mature enough to fend for themselves were taken to Lake Joondalup and Lake Mealup. The remainder – 141 cygnets still too young to be released – were conveyed to [Darling Range Wildlife Shelter](#) and [Kanyana Wildlife Rehabilitation Centre](#) where they are being given [dedicated care](#) until they too are able to be released.

It should be noted that owing to the high daily cost of feeding and caring for wildlife, the rehabilitation centres always appreciate donations.

Feral foxes in Jandakot Regional Park

In recent years it would appear that fox numbers in Anstey-Keane have increased significantly. While the animals themselves may not often be seen, as they are generally nocturnal and retire to their dens in the daytime, a walk anywhere in the reserve will soon reveal the extent of the problem. Foxes regularly use the trails and firebreaks to traverse the reserve and the amount of fox tracks on the sandy trails is alarming.

Fox numbers are high too in Forrestdale Lake Nature Reserve and Friends of Forrestdale have called for a regular vermin control program to be carried out in the Jandakot Regional Park.



Experienced volunteers catching cygnets in a holding pen at Forrestdale Lake. Photo – Bryony Fremlin.



Foxes in Anstey-Keane photographed early one morning. Photo – Bryony Fremlin.

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Volunteers always welcome

Volunteers provide crucial support to the work of Parks and Wildlife Service. Our [volunteer program](#) has now grown to more than 200 volunteer projects across Western Australia including scientific research, community education and maintenance of the State's fauna and flora. If you would like to get involved, visit the website to find out more about [volunteering opportunities near you](#).

In January, a cygnet rescue to relocate over 150 stranded black swan cygnets from a fast-drying Forrestdale Lake saw an amazing volunteer turnout with 191 volunteers participating in the project. Photo - Mark Griffin (Jacaranda Photography).

New Yellagonga Integrated Catchment Management Plan *By Danielle Bowler*



Waterbirds, Yellagonga Regional Park. Photo – City of Joondalup.



Aerial view of Yellagonga Regional Park. Photo – City of Joondalup.

The new [Yellagonga Integrated Catchment Management Plan 2021–2026](#) (YICM Plan) was developed by the cities of Joondalup and Wanneroo to provide a holistic and long-term strategic framework to improve catchment health and protect the diverse values of Yellagonga Regional Park.

Yellagonga Regional Park is one of eight regional parks within the Swan Coastal Plain and is located approximately 20km north of Perth in the cities of Joondalup and Wanneroo. The park consists of a wetland chain including, from north to south, Lake Joondalup, Beenyup Swamp, Walluburnup Swamp and Lake Goollelal. An area of high ecological significance, the park is a Bush Forever site which contains Conservation Category Wetlands including Lake Joondalup, a Class A Reserve.

Yellagonga Regional Park is jointly managed by the City of Joondalup, City of Wanneroo and DBCA, with DBCA responsible for the majority of land within the park.

The new YICM Plan was developed in consultation with internal and external stakeholders, including the Yellagonga Regional Park Community Advisory Committee. The plan focuses on the management of key threats to the health of the Yellagonga wetlands in response to current environmental conditions, whilst building upon knowledge gained through implementation of previous versions of the plan.

Significant progress has been achieved over the past five years through the former Yellagonga Integrated Catchment Management Plan 2015–2019 to address key threats to the park. Achievements include:

- ongoing water quality monitoring which has produced reliable, long-term water quality data for the catchment
- the delivery of wide-ranging community education activities and initiatives
- coordinated pest animal control and conservation maintenance schedules
- the completion of flora surveys for 278ha of remnant vegetation
- revegetation works in areas identified through the flora surveys.

The plan provides the park's co-managers with detailed direction required to manage the catchment in a sustainable manner to ensure the long-term protection of the park for future generations.

The new YICM Plan will be implemented by the cities of Joondalup and Wanneroo in partnership with DBCA. Key stakeholders and community groups such as the [Friends of Yellagonga Regional Park](#) and [Woodvale Waters Friends of Beenyup Channel](#) also contribute to the conservation of the park through activities such as revegetation, weed control, education, litter collection, and flora and fauna surveys.

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Numbats in the Boddington Neighbourhood

By Christine Townsend,
Peel-Harvey Catchment Council

While numbats are known to areas like Dryandra Woodland National Park and Tone-Perup Nature Reserve, [recent numbat sightings](#) in Boddington are amazing and quite unexpected, as this threatened marsupial species hadn't been seen in the Boddington area for many decades! Working to better understand where this numbat (or numbats) lives and how to protect it has been the focus ever since its discovery.

Numbats are one of Western Australia's most iconic and recognisable fauna species, but can be difficult to see in the wild given their [rarity and restricted range](#). That is why, when a local Boddington farmer spotted a numbat in early 2021 and reported it to [Peel-Harvey Catchment Council](#) (PHCC) and South32 Worsley Alumina, there was a bit of uncertainty. However, there was much excitement when the sighting was confirmed through remote camera footage. Cameras captured the amazing images and left no doubt that there was a numbat near the town of Boddington. Since then, PHCC, DBCA, and South32 Worsley Alumina have been working together with the Shire of Boddington and the local community to further assess the situation and monitor for the numbat.

Incredibly, the numbat was captured again in December 2021 on a monitoring camera set up by a recently registered [Land for Wildlife](#)

property owner on one of their hollow logs. Less exciting was subsequent footage at the same hollow showing a fox and a feral cat. PHCC has been working with the landholder and supporting them to control these predators, enhance the habitat specifically for numbats and increase camera monitoring. The landholder has already completed a number of Landcare projects supported by PHCC including stock exclusion fencing around their remnant bushland and revegetation. We are also planning to investigate corridors between this and other reserves and properties that may benefit numbats and a range of other native species.

Since the [initial sighting in March 2021](#), PHCC has been working with the Boddington community and stakeholders to protect local numbats by raising awareness of the impacts of feral and domestic predators on threatened species, as well as supporting community conservation efforts.

The interest and engagement from the Boddington community has been great to see. PHCC held a successful [Numbats in the Boddington Neighbourhood](#) event and organised for [Project Numbat's](#) education officer to visit the Boddington District High School to teach students all about numbats and their threats. A Numbat Dig ID workshop was held in Dryandra to teach local landholders and Worsley employees [how to identify numbat digs and scats](#). Dig surveys are an effective way of monitoring for the presence of numbats and PHCC hopes to conduct dig surveys in potential numbat habitat surrounding Boddington.



Dr Tony Friend (from left), Jo Drew (Project Numbat), Dr Judy Dunlop (WA Feral Cat Working Group), Christine Townsend (PHCC), Paul Bullock (South32 Worsley Alumina), Mel Durack (PHCC) and Joshua Potts (Shire of Boddington). Photo – PHCC.



The most recent numbat capture on a monitoring camera near Boddington in December 2021. Photo – PHCC.

To help the Boddington numbat, the community have been asked to report any numbat sightings, to keep pet cats indoors or in a cat run, and to control feral cats and foxes on farmland. Hopefully we haven't seen the last of the Boddington numbat!

This project is supported by PHCC's [Numbat Neighbourhood Project](#) through funding from the Australian Government's National Landcare Program, Newmont Boddington and South32 Worsley Alumina.

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Record number of volunteers join annual Peel-Yalgorup shorebird count

By Charlie Jones



Which one of these is not like the others? Waders are notoriously difficult to tell apart, especially en masse and at a distance. Here are a group of bar-tailed godwits with a red knot. The bar-tailed godwit undertakes the largest non-stop flight of any bird as it travels from its breeding grounds in the Arctic to escape winter and feed up in the mudflats of an Australian summer. Also travelling this epic journey is the red knot. Hint: the red knot is smaller, with a smaller relative bill length that is straight and doesn't turn up at the end. Photo – Lee Beavis.

Record number of volunteers join annual Peel-Yalgorup shorebird count

By Charlie Jones

Edited reprint with thanks to [PHCC E-News](#)

On Sunday 30 January, 81 volunteers across 25 teams banded together to count waterbirds across the Peel-Yalgorup System ([Ramsar Site 482](#)) making it the largest coordinated citizen science shorebird count in Australia. The count focuses on water-dependent birds including migratory shorebirds spending the summer here before returning to the northern hemisphere to breed, for example red-necked stints and critically endangered eastern curlews. The count also includes shorebirds resident in Australia year round like stilts and oystercatchers and waterbirds including terns, pelicans, swans, ducks, cormorants and egrets.

2022 marks 14 consecutive years that [Peel-Harvey Catchment Council](#) (PHCC) has worked with citizen scientists to conduct local counts as part of BirdLife's [Australian Shorebird Monitoring Program](#). PHCC coordinates the count and training through funding from the Australian Government's National Landcare Program. With 42,603 waterbirds counted this year, the site continues to meet Criterion 5 (supporting more than 20,000 waterbirds) and Criterion 6 (supporting one percent of a population of at least one species of waterbird) qualifying the site as a Ramsar [wetland of international importance](#). The site also meets other criteria relating to supporting threatened species and ecological communities, and providing refuges for aquatic species.

Each year existing volunteers, some who have been counting the same site for decades, are joined by new volunteers trained in shorebird identification via programs

run by PHCC and [BirdLife WA](#). Shorebirds are notoriously difficult to identify, requiring a high level of skill and experience.

Most count teams travel on foot from short walks to long muddy treks, however three teams counted aboard kayaks, and another aboard a boat provided by [Mandurah Cruises](#). The aim is to count and identify all the waterbirds present, aided by spotting scopes and binoculars.

Data collected by these citizen scientists help in understanding how waterbird populations are doing, especially migratory shorebirds. The data also helps in advocating to protect and restore wetlands, for example in the recent community-led protest against the proposed marina development at Point Grey.

Unfortunately, while count data demonstrate that Ramsar 482 continues to meet Ramsar criteria, numbers of migratory shorebirds are declining, and shorebirds globally are experiencing decline. Shorebirds face many threats, especially degradation or loss of their wetland habitats.

Anyone can help to look after waterbirds and migratory shorebirds by keeping their pets controlled and keeping your distance from birds while in wetland areas, advocating for protection of wetlands and getting involved in [protecting waterways](#).

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The Australian Shorebird Monitoring Program relies on volunteers to devote their time and expertise in hot and muddy conditions each January or February. These [annual counts](#) continue to demonstrate that the Peel-Yalgorup system is an internationally important wetland for waterbirds, but the decades long count is also recording declining numbers. With threats across the global flyway, it is especially important that we do all we can to protect waterbird habitat in Australia. Photo – Mike Griffiths.



A flock of red-necked stilts in a spotting scope at Lake Preston. These little guys weigh not much more than a box of matches but migrate each year between Australia and Siberia. Photo – Ada Hortle.

When international importance isn't important enough: The power of community protecting Ramsar 482

By Steve Fisher and Jane O'Malley

This is the story of a three-decade-long struggle to prevent a major threat to a [Ramsar listed wetland](#) near Mandurah in Western Australia. Our story shows that Ramsar listing alone does not protect wetlands of international importance and the real guardians of our wetlands are an engaged, empowered, persistent and well-informed community.

Our Peel-Yalgorup system covers 26,530ha, one of the largest and most diverse systems in Australia – [Ramsar Site 482](#). The system is made up of the Peel-Harvey Estuary (greater than twice the area of Sydney Harbour), the hypersaline Yalgorup Lakes and the freshwater lakes McLarty and Mealup. The site was recognised according to the Ramsar Convention as a wetland of international



The real guardians of our wetlands are an engaged, empowered, persistent and well-informed community. Sometimes it takes more than 30 years to get results. Photo – PHCC.

importance in 1991, meeting seven of the nine criteria for listing, including the habitat it provides for migratory shorebirds, crabs, fish, bottlenose dolphins and threatened ecological communities and species.

Point Grey sits at the intersection of the Peel Inlet and the Harvey Estuary opposite the Dawesville Channel. Urban development of the peninsula was first proposed in 1988, and the Environmental Protection Authority (EPA) recommended the development not proceed because of the high ecological values and fragility of the estuarine ecosystem.

In 2008, the Shire of Murray amended its Town Planning Scheme to rezone 275ha of rural land on Point Grey to enable a proposed marina development, proposing a 330-berth on-shore marina, a 2.5km long navigation channel and 3,000 residential lots.

Several organisations, including the Peel-Harvey Catchment Council (PHCC) and the wider community were vocal in expressing concerns about the likely impact of the proposed Point Grey Marina Development, in particular on the Peel-Harvey Estuary. Of greatest concern were the impacts on the aquatic environment of dredging operations to construct the navigation channel, the disposal of dredge spoil, the likely accumulation of [monosulfidic black ooze](#) in the navigation channel and marina, and the subsequent maintenance dredging and spoil disposal operations. Loss of native vegetation and habitat, including that used by migratory shorebirds was also alarming.

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Point Grey sits at the intersection of the Peel Inlet and the Harvey Estuary opposite the Dawesville Channel. Image – PHCC.

After a Public Environmental Review in 2011 and assessment by the EPA, the marina was approved by the Western Australian Environment Minister. In 2014 the Australian Government also granted approval, much to the dismay of community who hoped that the *Environment Protection and Biodiversity Conservation Act 1999* would provide sufficient protection for this significant Ramsar system.

Five years later, with no visible progress, the proponent applied to extend the time for substantial commencement. A community-led campaign influenced the Western Australian Environment Minister who instructed the EPA to undertake an inquiry to reveal new information indicating increased threats to the estuary posed by the development since approval. The community, led by PHCC, responded by submitting a comprehensive review including findings from two Australian Research Council-funded research projects and other science and monitoring programs showing the declining health of the estuary, the cumulative impacts of development and the unacceptable risks to the estuary.

The Minister granted the proponent an extension to 2022. The community were dismayed but banded together and prepared to influence the Australian Government in its review of the approvals in 2019. This opportunity never eventuated as, without any community consultation, the Minister granted a 10-year extension with modified conditions.

This was a major turning point: modified conditions included enabling commencement before publishing plans for the construction of the channel or ongoing maintenance dredging. With responsibility for maintenance dredging reverting to the Shire of Murray, PHCC focused its efforts on raising awareness with the council, presenting a series of case studies of ongoing



The Peel Harvey Estuary, twice the area of Sydney Harbour, supports migratory shorebirds such as the banded stilt each summer. The Estuary as part of the Peel-Yalgorup system has been recognised as an internationally important wetland and scientific monitoring shows that the cumulative impacts of development have led to its declining health. Photo – Bill Howard.

costs to local and State government of maintaining or redesigning marinas.

The Shire of Murray, to their credit, twice rejected proposals for the first stage of development to excavate 6ha, clear foreshore vegetation and create a stockpile of the spoil, with its decision based on this improper piece-meal approach to development, and council's inability to assess the costs and risks in the absence of the dredging plans. This decision was, thankfully, upheld by the State Administrative Tribunal (2019). Community had hope again.

In June 2020, in a heart-pounding show of community strength, more than 100 community members attended the Shire of Murray's council meeting to support a recommendation by the shire to amend the Town Planning Scheme, removing the marina as a discretionary land

use at Point Grey and effectively winding the planning clock back to 2008. After 12 impassioned deputations, the council agreed and advertised the amendment for public comment, to which they received nearly 600 submissions, with only two opposing. The amendment was referred to the Western Australian Planning Commission which recommended Ministerial approval. In December 2021, the Western Australian Minister for Planning announced her decision to approve the amendment, and the Point Grey Marina was finally sunk.

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Turtle Trackers' efforts save potentially hundreds of native turtles

By Michele Nugent

The committed efforts of professional and volunteer wildlife carers, volunteer citizen scientists and City of Cockburn staff saved potentially hundreds of [native freshwater turtles](#) from death during the 2021–22 nesting season.

Populations of the semi-aquatic southwestern snake-necked turtle, also known as the oblong turtle (*Chelodina oblonga* – previously *C. colliei*) are active throughout Cockburn including Walliabup-Bibra Lake, Yangebup Lake, Harmony Lake and Manning Park, and many other Perth lakes and wetland areas. The southwestern snake-necked turtle was classified as near threatened by the International Union for Conservation of Nature (IUCN) in 1996, however more recent surveys have revealed that many populations appear to be in decline, with a [lack of juvenile turtles at most urban wetlands](#).

City of Cockburn Environmental Education Officer Vicky Hartill said climate change, increased predation by birds, dogs, foxes and cats plus human activity was threatening their existence in areas where the turtles once flourished.

The city employed a variety of protection measures for turtles during the 2021–22 nesting season, managing the [Turtle Tracker program](#), undertaking feral animal control in conjunction with DBCA, maintaining 12 lakeside nesting refuges at Walliabup-Bibra Lake, and raising awareness through public information sessions and the installation of temporary signage – ‘turtles

on the move’, ‘keep dogs on-leash’, and ‘slow down for turtles’. The city also delays mowing during nesting season to minimise turtle deaths and provide protection from predators.

Actions undertaken by the city’s environmental team, as well as on-the-ground Turtle Tracker squads, has reduced the species’ mortality rate by protecting nesting females and their eggs from predator attack and vehicle strike.

For six weeks during peak nesting season between September and November 2021, 14 dedicated trained volunteer Turtle Trackers conducted twice daily shifts and were on call during mass movements to record turtle and nest sightings including mortality and predation, protect females on the move, and guard their egg-filled nests with temporary mesh coverings.

The Turtle Tracker program is the brainchild of the city and Murdoch University with PhD student Anthony Santoro, and is supported by Parks and Wildlife Service’s Volunteer Coordination Unit. “A pilot program was developed with the help of WA Wildlife and The Wetlands Centre Cockburn in 2019 and it has proven very effective so far,” Mrs Hartill said.

More than 100 eggs were salvaged from dead turtles and safely incubated at Murdoch University, and another 140 eggs in found nests or eggs recovered from injured turtles were protected by inground cages. At Walliabup-Bibra Lake alone, volunteers saw 124 turtles on the move, found 34 nests, 12 of which had been predated, and covered 26 nests with protective cages and four others with temporary mesh. Supporting data was logged on Australia’s citizen science [TurtleSAT](#) app to



Tiny southwestern snake-necked turtle hatchlings may be seen making the perilous journey from their nest to freshwater between mid-March to early June. If you see a turtle hatchling in immediate danger or impeded by an obstacle, you can lend a hand by taking it straight to the water. Photo – Michele Nugent.

help build a picture of the health of Cockburn’s turtle population.

Between July and October 2021, 56 turtles were admitted to WA Wildlife, some via Turtle Tracker volunteers, with a 70 percent survival rate. Of these, 17 had died or needed to be euthanised including 12 due to predation and seven as a result of vehicle strike.

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Southwestern snake-necked turtle eggs are laid in sand where they are vulnerable to predation by foxes, crows and magpies. Volunteers from the City of Cockburn's Turtle Tracker citizen science program help protect nests by tracking nesting female turtles around Walliabup-Bibra Lake and installing cages or temporary mesh over egg-filled nests. Researchers from Murdoch University in collaboration with the city are also monitoring turtle nests and eggs to investigate the factors that affect hatchling success. Photo – City of Cockburn.

A trial of underpass designs in collaboration with Murdoch University researchers is underway, with the city planning to install a custom-designed fauna underpass on Progress Drive to reduce the number of turtles killed on the road.

At Manning Lake, the city conducted an opportunistic nest cover trial during a mass turtle movement observed by parks staff onsite at the time. While Walliabup-Bibra Lake was the anticipated site for the trial, it was conducted at Manning Lake during a rain event which is a popular time for female turtles to leave the water in search of soft sand to lay their eggs. Flat mesh was staked over 21 nests and monitored daily for two weeks with minor raven disturbance noted. The covers were eventually removed in readiness for hatchlings to emerge around 220–240 days later. No interference or predation was observed and the method will be trialled and studied further this year.

Hatchlings may be seen as early as mid-March to early June when they are emerging from their nests and making their way to nearby wetlands. If you see a hatchling, you can lend a hand by taking it to the water's edge if there is any immediate hazard or obstacle preventing it from making this journey safely.

"We ask that residents continue to report observations of turtle movements and nesting using the TurtleSAT App," Mrs Hartill said.

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City of Cockburn Environmental Education Officer Rafeena Boyle and Parks Operations Supervisor Frank D'Antonio check nests for disturbance at Manning Park. Photo – City of Cockburn.

What you should do if you see a turtle on the move:

- They are not lost – if they need help such as navigating an obstacle, assist them in the direction they were heading.
- Drive slowly around wetlands.
- Protect them from predators. It is best to keep your distance, but wave off ravens and other birds if they are attacking.
- Take any injured or dead turtles to [WA Wildlife](#) (formerly Native ARC), 172 Hope Road, Bibra Lake. They can retrieve eggs from injured or dead turtles for incubation. Keep a box and towel in your car during turtle season in case you need to transport injured turtles.
- Turtle hatchlings can be taken straight to the edge of the nearest freshwater body if there is a hazard or obstacle preventing them from making this journey themselves.
- Log sightings on the [TurtleSAT app](#).

River Guardians *By Jason Menzies*

The [River Guardians](#) program was launched by the Swan River Trust in 2009 and is the vehicle used by DBCA to engage and educate all sectors of the Perth community in helping to protect our rivers, estuaries, and waterways.

River Guardians now has over 2,800 members helping to protect our rivers and keep them healthy. Members share ideas and knowledge, participate in river restoration activities, enjoy new networks, and receive training to better understand the rivers and their cultural heritage.

The program also provides training, volunteer opportunities and presentations from relevant scientific and behaviour change experts addressing the issues facing our rivers.

The objectives of the *River Guardians* program and its associated projects are to:

- engage and educate all sectors of the Perth community to directly induce greater conservation behaviour and awareness with respect to protecting and managing the Swan Canning Riverpark
- influence the commercial and industrial sectors through creating change in community expectation
- engage corporate partners in a collaborative role to meet shared objectives and achieve positive outcomes for the Swan Canning Riverpark
- establish and maintain a strong and recognisable brand that is synonymous with success and good environmental, economic, and social outcomes

- work closely with all local governments to help educate and engage the community
- impact the community sector in both the short and long term through a strong emphasis on schools throughout the program.

DBCA delivers a variety of fun and educational river and catchment-based projects through *River Guardians*, including well-known projects such as [Dolphin Watch](#), [Reel it in](#) and [RiverWise gardening workshops](#).

Dolphin Watch

Dolphin Watch is a collaborative, citizen science research and education project delivered in partnership with Murdoch and Edith Cowan universities. The project was initially launched in 2009 to learn more about the community of Indo-Pacific bottlenose dolphins residing in the Swan Canning Riverpark. *Dolphin Watch* aims to improve understanding of dolphin ecology, their interactions with human activities, and monitors the health of dolphins which can be used as an indicator of river and estuarine health.

Individual dolphins are identified by their [distinctive dorsal fins](#), and valuable information is collected about their range, habitat, behaviour, and feeding.

On the back of successfully engaging and training over 1,000 volunteers in Perth, *Dolphin Watch* was expanded to Mandurah and Roebuck Bay (Broome) in 2018.



A local fisherman disposes of discarded fishing line at a Reel it in bin at Hillarys. Photo – DBCA.



Eden with her calf, Zephyr. Dolphin Watch volunteers identify individual dolphins by their distinctive dorsal fins using [FinBook](#), an identification catalogue of the Swan Canning Riverpark dolphin community's dorsal fins. Photo – Dr Delphine Chabanne.



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To become an official Dolphin Watcher and actively participate in the project, members of the public can attend a free *Dolphin Watch* training session. These are held intermittently through the course of the year – check out our [What's on](#) page or [subscribe](#) to *River Guardians* to be informed of the latest Swan Canning Riverpark news and events.

Reel it in – Tackling a danger to wildlife

In 2012, a young dolphin entangled in fishing line became a dramatic reminder of the dangers wildlife face from discarded fishing line.

Gizmo, a three-year-old calf who lived in the Swan Canning Riverpark with his mother Tupac, suffered life-threatening injuries as fishing line cut into his dorsal fin. Fast action by the Western Australian Water Police and Parks and Wildlife Service (then Department of Environment and Conservation) officers saved his life.

His story inspired DBCA's Parks and Wildlife Service, along with project partners [Keep Australia Beautiful WA](#), [Recfishwest](#) and [Native Animal Rescue](#) to develop the *Reel it in* initiative to prevent other wildlife from suffering the same fate. The *Reel it in* project saw the development and installation of dedicated fishing line bins at popular jetties, fishing platforms, traffic bridges, and foreshores to help protect local wildlife from the dangers of discarded fishing line and bait bags.

There are now 69 *Reel it in* bins installed across the Swan Canning Riverpark and over 100 bins installed at popular coastal fishing locations including Shark Bay, Rottnest Island, Mandurah, Busselton Jetty,



RiverWise gardening workshop participants with presenter Josh Byrne. These fun, informative and interactive workshops are designed to teach Perth residents how sustainable gardening practices can save them time, money, water and angst, while also helping to attract birds and other wildlife to their gardens. Photo – DBCA.

Bunbury, Albany, and Esperance. A dedicated group of *Reel it in* volunteers empty and audit their local fishing line bin on a weekly basis. If you are keen to participate, [check the map](#) to see if there is an available bin to 'adopt' near you and [contact us](#) with your preferred fishing line bin location – equipment and training is provided.

RiverWise gardening workshops

The *RiverWise* gardening workshops are a free workshop series providing Perth residents with the ideas and inspiration to create a successful garden while doing their bit to help the Swan and Canning rivers.

Delivered by ABC TV's Gardening Australia presenter and environmental scientist Josh Byrne, workshop attendees are provided with a personalised garden plan that keeps their garden thriving and our rivers healthy.

Josh helps set the scene at the beginning of each workshop and helps participants understand the impact of excessive nutrients on the Swan Canning river system and the role that *RiverWise* gardeners can play in helping the rivers. The workshops cover garden design, soil testing and improvement, and effective and responsible fertiliser use.

Workshops are delivered each autumn and spring, with details of upcoming workshops published on the [River Guardians website](#). Members of the public can also benefit from Josh's advice in between workshop series by downloading a free copy of [Your Garden with Josh Byrne Garden Guide](#).

Contact

Jason Menzies

River Guardians

email community@dbca.wa.gov.au

phone 9278 0932

Recurrent activities

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



Saturdays 15 minutes before sunrise

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



Saturdays 8am–9am

Guided walks with Friends of **Koondoola**. Second Saturday of each month. Meet Gate 2, corner Koondoola Ave and Burbridge Ave, Koondoola. 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 8:30am–10:30am

Bushcare activities with Swan Estuary Reserves Action Group at **Alfred Cove** Nature Reserve. Fourth Saturday of each month. Contact: Margaret 9330 1791 admin@swanestuaryreserves.org



Saturdays 8:30am–10:30am

Bushcare activities with Swan Estuary Reserves Action Group at **Pelican Point**, Crawley. First Saturday of each month. Contact: Margaret 9330 1791 admin@swanestuaryreserves.org



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 and Tuesdays 9am–12 noon

Bushcare activities with Friends of **Yellagonga** Regional Park. Nursery and project work each Saturday and Tuesday morning, regular workdays on the middle and last Saturday of each month from April to November. Contact: friendsofyellagonga@bigpond.com



Saturdays, Sundays 9am–12 noon

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



Sundays 7am (summer) or 8am (winter)

Bushcare most Sundays with Friends of **Point Peron**. Look for the signs Point Peron Rd or Safety Bay Rd Rockingham. Bring your own gloves, water and dress for the bush. Contact: James 0427 229 166 jgmumme@live.com.au



Sundays 7am–9am (summer) or 8am–10am (winter)

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.bushcare.com.au)



Sundays 8am–10am

Bushcare activities every Sunday with Friends of **Shenton Park** Bushland. Contact: Dani 0420 334 601 bojel@iinet.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

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 [Facebook](https://www.facebook.com/bjsdoongin)



Sundays 9:45am–12 noon

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



Sundays 10am–10:30m

Sunday animal encounters at WA Museum Boola Bardip. \$10 standard –\$8 junior. [Bookings](http://www.wa.gov.au/visiting)



Sundays 1pm–4pm

WA Gould League's **Herdsmen Lake** Wildlife Centre holds **family nature days**. First Sunday of each month. \$5/\$20 family. Corner Selby St and Flynn St Wembley. Contact: 9387 6079 or [register](http://www.wildlife.com.au)



Sundays

Wilson Wetlands Action Group undertakes regular **work mornings** throughout the year on Sunday mornings. Contact: 0407 135 412 wilsonwetland@gmail.com



Sundays 2pm & 3pm

Aboriginal Cultural Experience at Wangi Mia Meeting Place at **Yanchep** National Park. Adults \$16, children \$8. [Bookings](http://www.wildlife.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.

-  **Mondays 8am–10am**
Litter collection with Swan Estuary Reserves Action Group at **Milyu** Nature Reserve, South Perth. Second Monday of each month. Contact: Margaret 9330 1791 or admin@swanestuaryreserves.org
-  **Mondays**
Plant learners' group with **Eastern Hills Wildflower Society** meets twice a month in a self-learning environment to identify plants and expand knowledge. Contact: Pam eastern.hills.branch@wildflowersocietywa.org.au
-  **Mondays**
Propagation group with **Eastern Hills Wildflower Society** meets twice a month to share knowledge about propagating native plants. Contact: Sandy eastern.hills.branch@wildflowersocietywa.org.au
-  **Mondays, Wednesdays, Fridays 9am–12 noon**
Bushcare activities and wetlands walk trail maintenance with **Yanchep** National Park Volunteers. Contact: Ciara 9303 7771
-  **Tuesdays 9:30am**
Free **nature play** at **Piney Lakes** Environmental Education Centre. Alternate Tuesdays [Tales and Trails Storytime](#) for toddlers and the intergenerational [Buds n Blooms](#).
-  **Tuesdays 7am–9am**
Tremendous Tuesdays bushcare activities with Swan Estuary Reserves Action Group at **Alfred Cove** Nature Reserve each Tuesday. Contact: Margaret 9330 1791 or admin@swanestuaryreserves.org
-  **Tuesdays 9am–11am and Saturday**
Bushcare with Friends of **Allen Park** every Tuesday and first Saturday of the month. Contact: Lesley 9384 7983 Judy 9383 1501, foapbg@gmail.com or [Facebook](#)
-  **Tuesdays and Thursdays, 8am–10am**
Coastcare activities with **Stirling** Natural Environment CoastCare (SNEC). Contact: Sheldon 0488 190 651 Rae 0419 191 710 [website](#)
-  **Wednesdays**
Seed cleaning group with **Eastern Hills Wildflower Society** meets fortnightly to prepare seeds for propagation. Contact: June eastern.hills.branch@wildflowersocietywa.org.au
-  **Thursdays 7:30am–9am**
Bushcare activities with **Bicton** Environmental Action Group. Planting, weeding and foreshore clean-up. Various dates. Contact: Peter 0439 467 855 pneesham1@hotmail.com [website](#)






-  **Thursdays 7:30am–9:30am & 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, 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 education@kanyanawildlife.org.au [website](#)
-  **Thursdays and Fridays 9am–4pm**
Wetland, Bushcare and **nursery** activities with The Wetlands Centre, **Cockburn**. Contact: Danielle 9417 8460 community@thewetlandscentre.org.au
-  **Thursdays 3pm**
Bushcare most Thursdays with Friends of **Point Peron**. Look for the signs Point Peron Rd or Safety Bay Rd **Rockingham**. Bring your own gloves, water and dress for the bush. Contact: James 0427 229 166 or jgmumme@live.com.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: 0419 928 618 murdoch.secretary@wildflowersocietywa.org.au [Facebook](#)
-  **Fridays 8am**
Bushcare activities at **Piney Lakes**. Volunteers need a site induction. Contact: Jacklyn.kelly@melville.wa.gov.au
-  **Fridays and Sundays**
Bushcare with Friends of **Mosman Park** Bushland every Friday and the second Sunday of each month. Site determined the week before. Contact: mail@mosmanparkbushland.org
-  **Fridays 7pm**
Talks with Eastern Hills Branch of the Wildflower Society. Fourth Friday each month, Octagonal Hall, 52 McGlew Rd, Glen Forrest. \$2 entry, visitors welcome. Contact: eastern.hills.branch@wildflowersocietywa.org.au [Facebook](#) [website](#)
-  **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 education@kanyanawildlife.org.au [website](#)




Djeran is the time when many [red flowers bloom](#), such as this stunning *Syphelia tortifolia*. Photo – Mark Brundrett.

-  **Check calendar**
BirdLife holds regular **talks** and **excursions** each month. [View](#) their calendar.
-  **Check calendar**
WA Naturalists hold regular **excursions**, **photo groups** and **campouts** each month. [View](#) their calendar for the activities of the four branches.
-  **Check calendar**
Wildflower Society of WA holds regular talks. [View](#) their calendar.


April

-  **2 Saturday 8am–1pm**
Planting Blue Gum Lake with SERCUL and the Friends of Booragoon and Blue Gum Lakes. Meet Canning Ave and Rogerson Rd, Mount Pleasant RSVP jaysonsekhon@sercul.org.au
-  **3 Sunday 9:30am–11am**
Walk: See What We Saved at Point Peron Learn about the Friends of Point Peron's campaigns to protect Cape Peron and Lake Richmond, and how they are helping to restore the bush. [Register](#).
-  **3 Sunday 5:30pm–7pm**
Great Cocky Count for registered volunteers, this is the night to get out [counting black cockatoos](#) as they come in to roost.
-  **4 Monday 2pm–3pm**
The beauty of local wildflowers Learn about the wildflowers that bloom during the Noongar season of Djeran. Armadale Library. [Registrations](#) essential.
-  **5 Tuesday 10am–11am**
Growing your volunteering through social media Free Volunteering WA Zoom workshop facilitated by Hancock Creative. [Register](#).


6 Wednesday 8.40am–11.30am

 **Community Clean Up, Jeff Joseph Reserve Applecross.** Join Conservation Volunteers Australia to remove and catalogue litter at this hotspot for marine debris. Morning tea provided. [Bookings](#) essential, navigate to #SeatoSource – Western Australia.


6 Wednesday 9:30am–12:30pm

 **Foundation workshop: Key issue of volunteer management** Volunteering WA Zoom workshop. [Register](#) \$55 members, \$85 non-members.

7 Thursday 12:30pm–3:30pm

 **Caring for Cranbrook's lakes and shorebirds** field trip focusing on practical ways to protect salt lake foreshores for shorebird nesting habitat. [Registrations](#) essential.


8 Friday 8am–1pm

 **Planting Blue Gum Lake** with SERCUL and the Friends of Booragoon and Blue Gum Lakes. Meet Canning Ave and Rogerson Rd, Mount Pleasant. RSVP jaysonsekhon@sercul.org.au


9 Saturday 3:30pm–8pm

 **Hammerin' homes for wildlife workshop** free hands-on [workshop](#) to create nest boxes for birds and bats at Gingin Men's Shed, 3 Horan St, Gingin. Dinner provided and night walk for bats. Contact kahree.garnaut@nacc.com.au or 0448 984 899.


10 Sunday 3:30am–6:45pm

 **Dr Dolittle goes bush** a kids' walk on the **Bibbulmun Track** to meet and greet with native creatures from Kanyana Wildlife Rehabilitation Centre. Adults \$40, kids \$20. All children must be accompanied by an adult. [Bookings](#).

10 Sunday 5:40pm–7:30pm

 **Bats Fantastic** Go on a night-time adventure to spot bats and other nocturnal wildlife at **Piney Lakes** and learn about Perth microbats from expert Joe Tonga. Program aimed at families with primary-school aged children. [Tickets](#) \$7.

12 Tuesday or 21 Thursday, 10am–1pm

 **Art v Science: Creating Curios** school holiday program for children 8–12 years. Explore the various ways that art and science work together to help describe, record and preserve valuable information and stories, from taxidermy and art illustration to techniques to preserve precious items. WA Museum Boola Bardip. [Tickets](#) \$45.




A new holland honeyeater enjoys a feed from Eucalyptus kruseana flowers in a home garden. Learn how you can enhance the ability of your patch to support biodiversity at the [Caring for birds in my neighbourhood](#) workshop. Photo – Mark Brundrett.


13 Wednesday 8:40am–1:30pm

 **Thompson Lake Community Wetland Rehabilitation** hand weeding cotton bush, a declared pest for WA with Conservation Volunteers Australia. [Bookings](#) essential, navigate to Revive our Wetlands – Western Australia.


13 Wednesday 10am–11:30am

 **Nature know-how: Trees in our suburbs** An interactive session exploring the importance of trees, for children aged 8–12. Beechboro Public Library. [Free to register](#).


14 Thursday 10am–11:30am

 **Nature know-how: Gorgeous gum trees and exceptional eucalypts** Explore the amazing properties and variety of gumtrees through outdoor exploration and indoor science and art activities. For children 6–12 years. Ballajura Public Library. [Free to register](#).

19 Tuesday 6pm–7pm


 **Caring for birds in my neighbourhood** a free workshop on how we can create gardens and suburbs that make ideal bird habitats. Bull Creek Library. [Register](#).

20 Wednesday 8:25am–1:30pm

 **Bibra Lake Community Wetland Rehabilitation** with Conservation Volunteers Australia. Hand weeding around native seedlings to give them the highest chance of success. [Bookings](#) essential, navigate to Revive our Wetlands – Western Australia.

Please send us your June, July, August events by
Wednesday 4 May 2022.


21 Thursday 10:30am–11:30am

 **Make a bee hotel** a free workshop for the school holidays. Children will use recycled tin cans to create the bee hotels, filling them with bamboo, twigs and clay. Girrawheen Public Library. [Register](#).


22 Friday 2pm–3pm

 **Make a bee hotel** a free workshop for the school holidays. Children will use recycled tin cans to create the bee hotels, filling them with bamboo, twigs and clay. Yanchep/Two Rocks Library. [Register](#).


23 Saturday 10:30am–12 noon

 **Nature know-how: Meditative tree study** This relaxing session is a mix of meditation, art and science, in the observation of a tree. Bullsbrook Public Library. [Free to register](#).


24 Sunday 8:30am–1pm

 **Jarrah forest walk** A [guided walk](#) with the Jarrahdale Heritage Society to discover the wonders of **Jarrahdale's Northern Jarrah Forest** and timber milling history. Options for a 5km or 10km walk. Adults \$7.50, children \$2.50.


26 Tuesday 10:30am–12:30pm

 **Nature know-how: Gardening for wellbeing and wildlife** is a free workshop exploring practical designs for suburban gardens to increase biodiversity, be waterwise and combat urban heat. Bullsbrook Public Library. [Register](#).


28 Thursday 5:30pm–6:30pm

 **Nature know-how: How to make an 'old tree'** is a free hands-on workshop – learn how to support fauna in areas without old trees and established vegetation by adding artificial habitat and shelters onto trees. Guildford Town Hall. [Register](#).


30 Saturday 9am–10:30am

 **Nature know-how: Tree discovery dawdle** Take a stroll through the bush and discover the important relationships our Western Australian trees have with one another and other bushland plants, fungi, insects, birds and mammals. **Wandoo Heights**, Millendon. [Register](#).









30 Saturday 10am–11am










 **Nature meditation** in the gardens of **Burswood Park** – take a break from a busy brain and calm the mind and body with Parks and Wildlife Service's *Nearer to Nature*. For ages 18+. [Tickets](#) \$5.

30 Saturday 10am–4pm










 **Painting wildlife on a textured background** with Ros Blackburn. Morning tea and art materials provided, BYO lunch. Settlers Art Studios, Churchlands. [Tickets](#) \$127.69.

May

-  **5 Thursday 6pm–8pm**
Nature know-how: Gardening for wellbeing and wildlife Free workshop exploring practical designs for suburban gardens to increase biodiversity, be waterwise and combat urban heat. Dayton Community Centre. [Register](#).
-  **5 Thursday 11am–12 noon**
Walyalup cultural walk Join Noongar guide Yorga Kaya around the Walyalup (Fremantle) precinct. Learn about the traditional way of life of the Nyoongar people, their spiritual connection to the country, the river and the animals that inhabit Nyoongar Boodja. Walyalup Aboriginal Cultural Centre, Fremantle. [Tickets](#) \$20.
-  **6 Friday 9:30am–12:30pm**
How to retain great volunteers (part 1) Free Volunteering WA online workshop facilitated by Penny York. [Register](#).
-  **7 Saturday 8:30am–10:30am**
Nature know-how: Tree discovery dawdle Take a stroll through the bush and discover the important relationships our Western Australian trees have with one another and other bushland plants, fungi, insects, birds and mammals. **FR Berry Reserve Gidgegannup**. [Register](#).
-  **9 Monday 3:30pm–4:30pm**
Nature know-how: How to make an 'Old Tree' is a free hands-on workshop – learn how to support fauna in areas without old trees and established vegetation by adding artificial habitat and shelters onto trees. Ellenbrook Community Library. [Register](#).
-  **12 Thursday 11am–12 noon**
Walyalup cultural walk Join Noongar guide Yorga Kaya around the Walyalup (Fremantle) precinct. Learn about the traditional way of life of the Nyoongar people, their spiritual connection to the country, the river and the animals that inhabit Nyoongar Boodja. Walyalup Aboriginal Cultural Centre, Fremantle. [Tickets](#) \$20.
-  **14 Saturday 8:30am–11:30am**
Free native plants for City of Armadale Residents up to 10 plants per household. Speak to an expert about the best native plants for your garden and how to care for them. City of Armadale's Administration Building Carpark, 7 Orchard Avenue, Armadale.
-  **14 Saturday 10:30am–12 noon**
Nature know-how: Meditative tree study This relaxing session is a mix of meditation, art and science, in the observation of a tree. Beechboro Public Library. Free to [register](#).

-  **17 Tuesday 9am–4:30pm**
Subtleties of the City: Djeran – A Journey on Whadjuk Boodja Bus tour between the City of Perth and Fremantle, visiting various local sites and learning about the culture and country of the Whadjuk people. Morning tea and lunch provided. [Tickets](#) \$209.79 or \$188.69 concession.
-  **17 Tuesday 9:30am–12:30pm**
Recruiting the right volunteers for your volunteer involving organisation (part 2) Free Volunteering WA online workshop facilitated by Penny York. [Register](#).
-  **17 Tuesday 5:45pm–7:45pm**
Volunteer engagement plan workshop free online event with Volunteering WA. [Register](#).
-  **19 Thursday 9:30am–2pm**
Celebrating Community-Driven Conservation a Perth NRM seminar presenting outcomes of the Community Capacity Assessment, with speakers and case studies illustrating the crucial work of environmental volunteers in the Perth Region. WA Museum Boola Bardip. Entry by donation. [Register](#).
-  **19 Thursday 11am–12 noon**
Walyalup cultural walk Join Noongar guide Yorga Kaya around the Walyalup (Fremantle) precinct. Learn about the traditional way of life of the Nyoongar people, their spiritual connection to the country, the river and the animals that inhabit Nyoongar Boodja. Walyalup Aboriginal Cultural Centre, Fremantle. [Tickets](#) \$20.
-  **21 Saturday 9am–12 noon**
Planting Southernwood Park with [Armadale Gosnells Landcare Group](#).
-  **25 Wednesday 8:25am–1:30pm**
Bibra Lake Community Wetland Rehabilitation with Conservation Volunteers Australia. Hand weeding around native seedlings to give them the highest chance of success. [Bookings essential](#), navigate to Revive our Wetlands – Western Australia.
-  **26 Thursday 11am–12 noon**
Cultural Awareness Training for Reconciliation Week. Join Kaya and learn about the history of the world's oldest living cultures. Walyalup Aboriginal Cultural Centre, Fremantle. [Free event](#).
-  **29 Sunday 10:30am–12 noon or 1:30pm–3pm**
What's in a name: Discover the secrets of WA flora names Join the Kings Park team on a guided walk through the botanic garden exploring the numerous names of our special WA flora and learn how they came to be named. Wildflower Pavilion, Kings Park. [Tickets](#) \$29.

June

-  **1 Wednesday 2pm–3pm**
The beauty of local wildflowers Learn about the wildflowers that bloom during the Noongar season of Makuru. Seville Grove Library. [Registrations](#) essential.
-  **2 Thursday 9am–4:30pm**
Subtleties of the City: Makaru – A Journey on Whadjuk Boodja Bus tour between the City of Perth and Fremantle, visiting various local sites and learning about the culture and country of the Whadjuk people. Morning tea and lunch provided. [Tickets](#) \$209.79 or \$188.69 concession.
-  **2 Thursday 11am–12 noon**
Cultural Awareness Training for Reconciliation Week. Join Kaya and learn about the history of the world's oldest living cultures. Walyalup Aboriginal Cultural Centre, Fremantle. [Free event](#).
-  **5 Sunday 9am–12 noon**
Planting Astley Street River Park with [Armadale Gosnells Landcare Group](#).
-  **12 Sunday 9am–12 noon**
Bushcare's Big Day Out Planting Edencourt Reserve with [Armadale Gosnells Landcare Group](#).
-  **15 Wednesday 8:25am–1:30pm**
Bibra Lake Community Wetland Rehabilitation with Conservation Volunteers Australia. Hand weeding around native seedlings to give them the highest chance of success. [Bookings essential](#), navigate to Revive our Wetlands – Western Australia.
-  **15 Wednesday 9:30am–12:30pm**
See me, see you – multicultural responsiveness training free online opportunity with Volunteering WA to check your intercultural readiness. [Register](#).
-  **18 Saturday 9am–12 noon**
Planting Wright Brook with Friends of Banyowla Regional Park – Clifton Hills and [Armadale Gosnells Landcare Group](#).
-  **26 Sunday 9am–12 noon**
Planting Homestead Park Thornlie with [Armadale Gosnells Landcare Group](#).

Highlights

On now

River is a [documentary film](#) which reflects on how rivers have shaped both the planet's elaborate landscapes and all human existence. Spanning six continents, the film shows rivers on scales and from perspectives never seen before, drawing on contemporary cinematography including satellite filming. Visit the [website](#) for information on screening locations and times.

On now – 21 August

Thalassa: Pertaining to the Sea is a [free exhibition](#) on at the WA Museum Boola Bardip. Displaying spectacular still and moving imagery from our State's underwater seascapes, this exhibit documents marine animal biodiversity and reveals fresh insight into intricate details of anatomy, associations, ecology and behaviour.

3–7 April

Australasian Plant Conservation Conference [Seeds to recovery](#). Albury, NSW. [Registration](#) \$200 for online attendance.

6 April 7:30pm–10pm

2022 Serventy Memorial Lecture [presented by socio-ecologist Dr Judith Fisher](#). With knowledge from over 30 years' experience working with communities across many of WA's natural habitats, Judy will share solutions being taken up globally to advance relationships of people with nature to prevent biodiversity loss. Social Sciences Lecture Theatre, UWA. [Tickets](#) \$20, \$15 students.

9 April – 9 May

WA Tree Festival A [community celebration](#) of trees in our urban areas and beyond, featuring a variety of workshops, school holiday activities, art installations, trails, talks, free plants, and wellness activities. Browse through the [calendar](#) to find events in your local area.



9–22 April

Parks and Wildlife Service's Know Your Patch, *Nearer to Nature* and *River Guardians* have come together to provide an engaging, hands-on nature-based school holiday program for kids and families. With locations across the Perth metro area and a variety of different themes, there is something for everyone to enjoy. Head to the [website](#) for more information or to book.

3–5 May

Australian Biosecurity Symposium [A decade of biosecurity: turning a moment into a movement](#) Gold Coast, Queensland. Check [website](#) for registration pricing.

9–11 May

Pint of Science [hybrid festival](#) delivers science engagement with interesting talks on the latest science research made accessible to all. Events are grouped into categories with a Planet Earth category that covers geosciences, plant sciences and zoology.

10–12 May

Ozwater22: *Our Water Journey* Brisbane Convention & Exhibition Centre Queensland and online. Covers a diverse range of sub-themes including environmental health. Check website for [registration](#) pricing.

11–13 May

Changing Your World Conference – *Owning Our Impacts* is hosted by the City of Canning and will be held fully online for 2022. This virtual showcase of innovation in the broader sustainability space aims to connect community, innovators, industry, researchers, and government to co-create solutions and celebrate successes. Three-day virtual conference [tickets](#) \$60. Visit the [website](#) for up-to-date information on the evolving program, speakers, and events.

13 May 7pm–9:30pm

Talking About Numbat Behaviour, a [talk by Tamara Wilkes-Jones](#) sharing her insights on numbat behaviour from over 10 years of [wild observations](#). Kalamunda Community Centre. Entry \$5 cash donations.

19–23 May

2022 BirdLife Photography Biennial Conference [Inspiring Bird Photographers](#). The conference will be held on 21–22 May with pre- and post-conference [tours](#) available to a variety of birdwatching locations. Gold Coast, Queensland. [Tickets](#) \$310.

23–27 May

Great Western Woodlands bird surveys with BirdLife Australia at **Frank Hann/Peak Charles**. Now in its eighth year the project aims to assess distribution, population status movements and ecology of bird species of the Great Western Woodlands. Volunteers required with birding skills and self-contained 4WD vehicles for camping. [Email](#) to express your interest.

3 June, 13 August, 17 September

Koolbardi wer Wardong is a musical production which tells a creation narrative of two vain, jealous brothers, Koolbardi the magpie and Wardong the crow. Sung in Noongar with English surtitles. At the Albany Entertainment Centre (Friday 3 June), Goldfields Art Centre (Saturday 13 August), and Esperance Civic Centre (Saturday 17 September). [Book or register](#) for ticket announcements.

3–10 July

National NAIDOC Week is held across Australia each July to celebrate the history, culture and achievements of Aboriginal and Torres Strait Islander peoples. The 2022 theme is [Get up! Stand up! Show up!](#) Find a [community event](#) taking place near you and share in the celebrations.

11–14 July

Australian Society of Herpetologists 2022 Conference will be held at Mylor Adventure Camp, South Australia. Visit the [website](#) for more details as they are released.

28 July – 2 August

International Society for Behavioural Ecology Congress Stockholm, Sweden. Visit the [website](#) for the latest information, or [register your interest](#) to be notified when registration opens.

23–25 August

2022 National Landcare Conference International Convention Centre, Darling Harbour, Sydney NSW and online. Early bird tickets will go on sale in May. Registrations to be a virtual conference delegate are free. Visit the [website](#) for more details.

20–22 September

WA State NRM & Coastal Conference [Building Resilience Through Innovation](#). An engaging program including field trips, conference sessions and a variety of session styles with something to suit everyone. Mandurah Performing Arts Centre. [Registrations](#).

various dates

Zippy's Kings Park Adventurers connects pre-school nature lovers to structured activities in bushland at Rio Tinto Naturescape Kings Park. Enjoy an [eight-week program](#) of 45-minute sessions each term as early learners explore nature and gain a deeper understanding of the world around them. \$96 per term.

various dates

CCWA 2022 Citizen Science Program has a diverse range of projects on offer across Western Australia, including bush and seabird research and monitoring, small vertebrate trapping and acoustic bat surveys. Experienced volunteers are required to assist with these projects, but CCWA also welcomes those keen to learn new skills and expand their knowledge. Visit the [program website](#) for more details. To register your interest or for further information, contact [Claire Greenwell](#).

Swan Alcoa Landcare Program is funding the community to enhance and restore critical habitat and ecological linkages within the Swan Region. [Applications close 29 April 2022.](#)

State NRM Community Stewardship Grants funding \$7 million for projects to conserve natural areas, protect biodiversity, promote regenerative practices and support capability of NRM community groups. Grant writing Zoom webinars and Q&A sessions April – early May, [visit timetable.](#) [Applications close 9 May.](#)

Riverbank funding foreshore managers around the Swan and Canning rivers are invited to apply for a share of \$1.5 million in [funding](#) for projects that rehabilitate and protect the river foreshores. [Applications close 13 May.](#)

Lotterywest Grassroots Community-Led Grants are available for proposals big or small that work towards sustainable ecosystems including restoration, care for natural heritage, protection of endangered species, and reduction of the community's impact on the environment. [Applications open year round.](#)



Riverbank funding is available for projects that protect the Swan and Canning river foreshores. Photo – DBCA.

The Indigenous Land and Sea Corporation's Our Country Our Future program [funds](#) land acquisition or management projects that deliver benefits to Indigenous Australians. This includes on-ground activities to maintain or improve the condition of Country (land, water, biodiversity, and cultural heritage). [Open on an ongoing basis.](#)

Peel Harvey Catchment Council Fencing and Revegetation of Foreshore Areas [funds](#) landholders in the [Healthy Estuaries WA footprint](#) to fence and revegetate streamlines on their properties to exclude stock and reduce nutrient flow. [Open grant round.](#)

NACC Biodiversity Community Grants of up to \$5,000 are available for community groups working to improve the management and protection of threatened malleefowl and black-flanked rock wallaby in the Northern Agricultural Region. [Applications](#) assessed on a **first in, first served basis.**

Wettenhall Environment Trust small environmental grants scheme funds research and education projects on flora and fauna conservation. [Applications open 1 April.](#)

AMP Tomorrow Fund awards grants of \$5,000–\$100,000 to individuals working towards making a positive community impact. Grants can be used for a range of activities including travel, equipment, study costs, research and more. [Applications close 4 April.](#)

Coastwest 2022/23 provides grants of \$5,000–\$60,000 to support coastal land managers and community organisations to rehabilitate, restore and enhance the Western Australian coast. [Applications close 4 April.](#)

The Ian Potter Foundation Sustainable – Environment Program supports ambitious and transformative environmental initiatives with grants of over \$100,000 to support on-ground conservation of natural environment projects. [Expressions of interest close 7 April.](#)

Aboriginal Ranger Program Expansion Fund up to \$22 million to support eligible Aboriginal organisations with established ranger programs for next four years. [Applications close 8 April.](#)

Animal Welfare Grant Program offers grants of up to \$50,000 for wildlife rehabilitation, open to eligible organisations including wildlife carers, rescue groups and rehabilitation centres. [Applications close 30 April.](#)

Australian Bird Environment Foundation community grants of up to \$5,000 are available to support practical, community-based projects which deliver bird and habitat conservation impacts. [Applications close 30 April.](#)

Planting Trees for The Queen's Jubilee gives recipients funding of between \$2,500–\$20,000 for community-based tree planting events. Expressions of Interest are made to [your local Federal Government MP.](#) [Applications close 2 May.](#)

Impact100 WA provides Primary Grants of \$100,000 for projects including initiatives that restore, preserve, revitalise or enhance the natural and recreational surroundings of WA. [Applications close 27 May.](#)

Belmont Forum's Giving Back Program [offers small grants](#) of \$500 to local not-for-profit organisations. Grant winners are selected at the end of each quarter – **June, September, December and March.**

Dahl Fellowships of up to \$25,000 are awarded to individuals for projects that contribute to eucalypt conservation, appreciation, research, or education. [Applications open 20 June and close 14 August.](#)

The Foundation for National Parks & Wildlife's Community Conservation Grants offer funding of up to \$10,000 to assist in the protection of our native species, habitats, landscapes and cultural heritage. Grants are available for both field projects and education programs. [Applications open 6 December.](#)

Wheatbelt NRM's Where the Wild Things Are grants provide funding of up to \$15,000 to support protection of the eucalypt woodlands of the Western Australian Wheatbelt. [Applications close 31 December.](#)

Local government community grants These local governments provide small grants to their communities which fund environmental groups' management and restoration projects. Eligibility varies. [Armadale's Habitat Links](#) program offers free native seedlings and technical support for rural residents with or adjacent to bushland and waterways **open now**, [Busselton closes 31 May](#), [Canning closes 27 May](#), [Cottesloe closes 29 April](#), [Gosnells closes 14 April](#), [Melville open year round](#), [Rockingham closes 6 May](#), [South Perth open year round](#), [Subiaco closes 7 July](#), [Wanneroo open year round](#).

New publications

Action Plan for Australia's Imperilled Plants

Silcock J, Collingwood T, Llorens T, Fensham R, *NESP Threatened Species Recovery Hub*, 2021. This [Action Plan](#) aims to highlight the plight of Australia's most threatened plant species and outline research and management actions required to prevent extinctions. Imperilled species are concentrated where centres of endemism correspond with highly-modified agricultural and urban landscapes. Fifty species are identified with 15 species from Western Australia, all found in the Southwest Australian Floristic Region.



Plants and People in Mooro Country: Noongar Plant Use in Yellagonga Regional Park (Fourth Edition)

City of Joondalup, 2020. [Free download](#). First published in 2010, this fourth edition documents the Noongar plant use, names and images of common plants found in Yellagonga Regional Park and beyond.

Rewilding Kids Australia Mylchreest, Melissa. *Hardie Grant Explore*, 2022. \$19.99. A mindful activity book with fun facts, nature-based activities and colouring-in

for kids aged 7–12 years. Slow down, open your eyes to your natural surrounds and take a trip around Australia! Organised into state and territory sections, you will find green turtles in the Great Barrier Reef, lyrebirds in the Blue Mountains, Tassie devils from the Apple Isle and quokkas in Western Australia. With weird and wonderful facts, place names in First languages, illustrations and maps, and activities that encourage you to step outside and explore your own backyard – it's time to explore!



Plant Germplasm Conservation in Australia: Strategies and guidelines for developing, managing and utilising ex situ collections in Australia (Third Edition)

Eds Martyn Yenson AJ, CA Offord, PF Meagher et al. *Australian Network for Plant Conservation*, 2021. [Free download](#) or \$35 (print version). This joint publication by the Australian Network for Plant Conservation and the Australian Seed Bank Partnership is a practical, science-based handbook for ex situ (off site) conservation of plant material (germplasm). Includes 50 case studies to highlight the processes and outcomes of ex situ plant conservation in action.

Apps

Dolphin Watch has taken a leap forward! The old *Dolphin Watch* app has been replaced by the new and improved [Marine Fauna sightings app](#) which is now the tool we're using to instantly record observations of dolphins and share these reports with scientists. [Watch our video tutorial](#) for step-by-step instructions on how to download, set up and use the new app for [Dolphin Watch surveys](#) and to report your dolphin sightings. Available free from the [App Store](#) or [Google Play](#).



Smartreka maps make it easier to navigate our national parks even in areas with little or no mobile reception. The maps use the built-in GPS on your smartphone or tablet to plot your location onto the Smartreka app. This can be done without a network connection and without roaming charges. Learn [how to use](#) the free, interactive Smartreka maps, which can be accessed via the free Avenza app from the [App Store](#) or [Google Play](#).



Recent Research

Brown VS, Erickson TE, Merritt DJ, Madsen MD, Hobbs RJ, Ritchie AL (2021) A global review of seed enhancement technology use to inform improved applications in restoration [Science of The Total Environment](#) 798, 149096.

Crampton J, Frère CH, Potvin DA (2022) Australian Magpies *Gymnorhina tibicen* cooperate to remove tracking devices [Australian Field Ornithology](#) 39.

Ens E (Ed.) (2022) Special Issue: Indigenous and cross-cultural ecology – perspectives from Australia [Ecological Management & Restoration](#) 23 (S1), 1–149.

McNeely JA (2021) Nature and COVID-19: The pandemic, the environment, and the way ahead [Ambio](#) 50, 767–781.

NESP Threatened Species Recovery Hub (2021) More than just diggers: Quenda and woylie disperse viable seed. [Project 4.1.7 research findings factsheet](#).

Seidlitz A, Bryant KA, Armstrong NJ, Calver MC, Wayne AF (2021) Sign surveys can be more efficient and cost effective than driven transects and camera trapping: a comparison of detection methods for a small elusive mammal, the numbat (*Myrmecobius fasciatus*) [Wildlife Research](#) 48, 491–500.

Stobo-Wilson AM, Murphy BP, Crawford HM, Dawson SJ, Dickman CR, Doherty TS, Fleming PA, Gentle MN, Legge SM, Newsome TM, Palmer R, Rees MW, Ritchie EG, Speed J, Stuart J-M, Thompson E, Turpin J, Woinarski JCZ (2021) Sharing meals: Predation on Australian mammals by the introduced European red fox compounds and complements predation by feral cats [Biological Conservation](#) 261, 109284.

Urzedo D, Pedrini S, Vieira DLM, Sampaio AB, Souza BDF, Malta Campos-Filho E, Piña-Rodrigues FCM, Schmidt IB, Junqueira RGP, Dixon K (2022) Indigenous and local communities can boost seed supply in the UN decade on ecosystem restoration [Ambio](#) 51, 557–568.

Website watch

Threatened Species Strategy 2021–2031 sets the Australian Government's [forward plan](#) for action to protect and recover Australia's threatened plants, animals and ecological communities. The strategy includes high level objectives to improve the trajectory or condition of priority species and places by 2031 with six prioritisation principles and eight key action areas. It is underpinned by the first [five-year action plan](#), the **Threatened Species Strategy Action Plan 2021–2026** which sets 15 targets to be achieved in the next five years.

Towards A Feral Free Future Feral animals and invasive plants, fish and birds impose a heavy burden on the environment and cost Australia billions of dollars in management and lost production. In this [podcast series](#) by the [Centre for Invasive Species Solutions](#), host Prue Adams talks with a range of researchers at the forefront of the fight against ferals.

WA Parks Foundation's Park Guide has [up-to-date information](#) on access, amenities, campsites trails, tours and attractions for you to discover when exploring Western Australia's national, regional and marine parks.

Strong On Country: Sustaining Success in Indigenous Land and Sea Management in Australia is a [new report](#) from [Country Needs People](#). The report sets out key areas for creating a successful working environment for Indigenous rangers, Indigenous Protected Areas, and related caring for country work, and analyses the common themes and elements of success across the sector, making clear recommendations for sector improvement.

Bush Heritage Australia webinars Catch up with [recent presentations](#) on a variety of conservation topics and projects from around Australia.



Earth to Humans! podcast is a bi-weekly interview series featuring conversations with top experts in the fields of conservation, wildlife and environmental justice.



My Garden Path interviews on Gardening Australia.

An interview with [Phillipa Nikulinsky](#), Western Australian botanical and wildlife artist, details her 50-year botanical art practice with husband and fellow artist Alex. [Dr Sapphire McMullan-Fisher](#), a fungal ecologist, talks about the importance of fungi in creating healthy ecosystems.

Urban Bushland Council WA holds at least four talks each year on a variety of interesting and valuable subjects, and have now made presentations, video recordings, and resources from these talks available [online](#). Presentations include *National standards for ecological restoration* and *Burning our bushland* by Professor Kingsley Dixon; *Protecting our bushland and enhancing biodiversity* by Dr Judy Fisher, and *Help protect our urban bushland quendas* by Dr Geoff Barrett.

WALGA mapping data [Eleven datasets](#) generated by WALGA including vegetation extent and ecological linkages mapping are now available to download from [DataWA](#). These datasets are used to support environmental impact assessments and local biodiversity conservation planning by local government. Ten datasets with supporting resources are available, with five covering the whole State.

Australian BirdLife is BirdLife Australia's [quarterly digital magazine](#) with great stories such as [Second chance](#): First ever wild-to-wild translocation of the Western Ground Parrot.

Communicating the Value of Biodiversity is a [free online course](#) offered by the Convention on Biological Diversity and the United Nations Development Programme. The ability to effectively communicate the importance of nature for humanity and the health of the planet is a critical skill as we face accelerating biodiversity and climate change crises. This self-paced course consists of five lessons designed to help people who are not experts in communication to advocate and raise awareness, engage with stakeholders, promote behaviour change, identify collaborators and build a network.

swamp cypress By Julia Cullity

It would be easy to forgive anyone for thinking the swamp cypress *Callitris pyramidalis* was not a native plant, but it is one of the few native conifers in the South West. It has the similar compact, pointy shape, colouring and smell to many of our garden conifers like the pencil pine, but will grow much smaller, 1–4m tall. They might be small, but they can grow old. In the 1980s some plants at Brixton Street Wetlands were aged by studying the growth ring structures of side branches and were found to be 180 years old. Not bad for a plant that is killed by fire!

These non-flowering plants have male and female cones instead of flowers.

The cones are held all year round and the seeds are eaten by cockatoos. Seeds are held on the plant until that branch or the whole plant dies. As the cones dry out they open up and release all their winged seed, such as after a bushfire. The sap from green cones is an antiseptic and was used by Noongar people as bush medicine. The timber is resistant to termite infestation.

Like its common name suggests, swamp cypress is restricted to vegetated wetlands. Around Perth you will find it in damplands with clay-based soils on the eastern side of the coastal plain, like this photo from Greater Brixton Street Wetlands.

Photo – Karen Clarke.