

# bushland news



Issue 117 **Autumn** 2021 *Time of Bunuru and Djeran in the Noongar calendar.*

## Honey possums in the suburbs

Photo – Ray Lloyd.



Department of Biodiversity,  
Conservation and Attractions



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

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## Next issue

### Winter Bushland News

Winter *Bushland News* contributions should be sent to [Urban Nature](#) by **9 June 2021**. *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.

# Honey possums in the suburbs

By Glen Gaikhorst

When we think of possums within urban Perth, the common brushtail possum comes to mind particularly if you live in the hills or the older suburbs of metropolitan Perth. However, in remnant bushland areas of Perth the tiny honey possum (*Tarsipes rostratus*) can still be found. The honey possum is very small, only about the size of a small mouse, ranging from 7 to 16 grams. They are brown and distinguished by a long, pointed snout and three iconic darker brown stripes down their back. They are the only flightless mammal to solely feed on nectar and pollen of flowering plants and they are endemic to Western Australia. The preferred environment of the honey possum consists of heathlands, shrublands and even woodlands, with a rich assemblage of flowering plant species, like, but not limited to, banksias, grevilleas, eucalypts, regelias and callistemons.

Despite the species being very small, fast and mostly nocturnal, this cryptic little mammal can be observed during the day. With some reconnaissance and stalking a good patch of flowering plants (primarily banksia), earlier morning visits may harbour a sighting or two.

Cover photo: The City of Cockburn engaged FaunaTrack to conduct a vertebrate fauna survey of Rose Shanks Reserve in Treeby, where this honey possum was captured – a significant find for urban bushland where the species has a reduced and fragmented distribution due to land clearing, fire, predation, and dieback. Photo – Ray Lloyd.

I have found within half an hour of sunrise yields best results, armed with a good camera and being very quiet and still, a photo can be achieved. Others have found late afternoon equally rewarding. The best locations to spot the species is in any of the large reserves of the south coast. The species appears to be more common and readily spotted during early morning searches through banksia dominated heath and shrublands. One of my best sightings on the south coast was a group of males (suspected) chasing each other in a small clump of flowering banksias just after dawn.



With a highly specialised diet consisting of pollen and nectar, the honey possum relies on flowering plants such as this *Banksia attenuata* to survive. This honey possum was recorded at Anstey Keane Damplands. Photo – Glen Gaikhorst.



The honey possum, a tiny marsupial endemic to Western Australia, can still be found in larger remnant bushland areas of Perth, such as this one found at Forrestdale Lake Nature Reserve. Photo – Glen Gaikhorst.

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Historically the species is well known from the Swan Coastal Plain and across the south-west of Western Australia with the distribution of the species extending from just south of Shark Bay to Nuytsland Nature Reserve east of Esperance. Within this range and particularly on the Swan Coastal Plain the species now has a reduced and fragmented distribution due to land clearing, fire, predation, and dieback.

Within smaller areas of habitat (less than 100ha), it is probable the species has disappeared due to the remnants being too small to support viable populations or where they have not been able to recolonise small, fragmented remnants following local extinction events resulting from inappropriate fire regimes (too frequent and broad scale), excessive predation and other catastrophic events. Fire is more likely to impact smaller areas, leaving little suitable habitat for the species to persist, particularly a species like the honey possum that has highly specialised feeding requirements.



Honey possum receiving a sugar water drink prior to release. Photo – Nicole Willers.

Studies by Bradshaw and Bradshaw in 2017 demonstrated that long unburnt patches of remnant vegetation maintain honey possum populations while burnt habitat causes population decline and recovery can take 25.6 years post fire.

In recent years the species has been recorded by DBCA, local governments, not-for-profit organisations and researchers in some of the larger bushland areas surrounding Perth. The Friends of Forrestdale have been conducting trapping in Anstey Keane Damplands (308ha) and Forrestdale Lake Nature Reserve (245ha) since 2017 and found the species to be present in banksia woodlands and ephemeral damplands of regelia and spearwood shrubs. In Anstey Keane Damplands honey possums were recorded over a week of trapping and included pouch young and juveniles. Surveys by the City of Cockburn recorded honey possum in Rose Shanks Reserve and Denis de Young Reserve (117ha and 290ha with associated vegetation of Bush Forever Sites 390 and 344). DBCA also recorded honey possum in Anketell Road South Bushland, a part of Jandakot Regional Park (around 200ha).

North of the Swan River the species has been recorded by DBCA at Melaleuca Park (4,151ha), Yanchep National Park (2,800ha), Yeal Nature Reserve (11,000ha) and by GHD at Neerabup National Park (937ha). The species is also known from the hills in John Forrest National Park and bushlands around Bindoon. With additional surveys, it is highly likely that the honey possum may be discovered persisting in even more urban bushland reserves.

### More information

Bradshaw SD, Bradshaw FJ (2017) Long-term recovery from fire by a population of honey possums (*Tarsipes rostratus*) in the extreme south-west of Western Australia. [Australian Journal of Zoology](#) 65, 1–11.



Honey possum in a flowering *Banksia sessilis* in Neerabup Nature Reserve. Honey possums can be recognised by their long, pointed snout and three distinctive dark brown stripes running down their back. Photo – Glen Gaikhorst.

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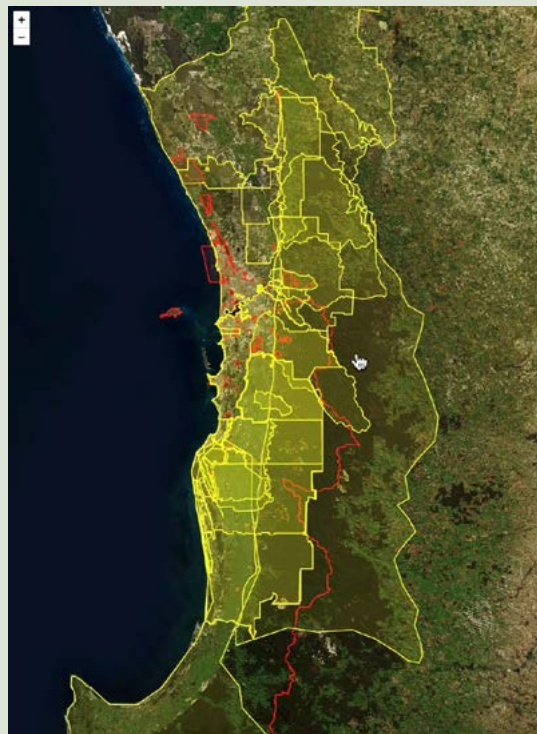
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## Has your group joined our Find a conservation group web app? *By Anna Wisolith*

Urban Nature's [Find a conservation group](#) web app aims to help people who are searching for a conservation group in their local area.

The map covers Perth and surrounds, and incorporates Lancelin through to Harvey and inland past the Perth Hills, with currently more than 200 groups listed. Users can zoom in on their local area, see outlines of sites where conservation groups are working, and click the map to get information on these groups. This includes the site name or general area, a contact name and either a phone, email, website or Facebook contact, and a little bit about the group and the work they do. We hope this encourages people who want to become actively involved in caring for their local bushland by making it easier for them to locate groups and access their contact information – as well as helping conservation groups to engage new members.

We know there are still many more groups out there not on our app yet, and we would love to include as many as possible. Is your group on the map? We list many different types of groups, small or large, including local friends groups, Landcare groups, regional conservation groups, and wildlife rescue and rehabilitation organisations.



If your group would like to be listed on our app, please [contact us](#). And if your group is already listed on the site but your details have since changed, [get in touch](#) and we will update your listing to ensure that interested community members can contact you.

## Penguin Island restoration

*By Grazyna Paczkowska*

2020 proved to be a challenging year for [restoration activities on Penguin Island](#). In addition to the COVID-19 situation, which limited volunteer access to the island, we suffered another natural setback – a pelican colony decided to set up a breeding site in the middle of our restoration area. And when we thought things couldn't get any worse, the Caspian terns, known for being very territorial when breeding, decided to claim the western section of the restoration area as well.



*We managed to set up and sow the restoration cages on Penguin Island in early 2020 before a pelican colony took up residence in June. Despite the apparent destruction the breeding colony causes to vegetation, the life cycle of species like *Malva preissiana* and *Lepidium foliosum* is linked to that of nesting seabirds as they specifically grow in their guano deposits.*

*Photo – Grazyna Paczkowska.*

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We had set up cages to protect the restoration within both these sections in March/April 2020. Most of them were sown with *Malva preissiana* and *Lepidium foliosum* seed, and freshly collected yellow fruits of *Enchylaena tomentosa*. We had to abandon the follow-up weeding and monitoring of these cages as we did not want to disturb the breeding birds. As a result, last year's restoration activities were limited to a narrow eastern coastal section.



Leonie Stubbs and Erica Dearle in the process of setting up a cage where collected *Rhagodia baccata* brush is spread.  
Photo – Grazyna Paczkowska.

We are happy to report that we are off to a good start for 2021. This February was our first reconnaissance visit to the island and to our surprise, although unweeded, lots of the sown natives not only survived but had also overgrown past the confines of their cages. We removed most cages from the established plants with minimal damage.

We held our first Penguin Island activity session with volunteers on Friday 5 March. It was a bit of an earlier start than usual (we usually kick off around April) however *Rhagodia baccata* has been fruiting profusely this year which is one of the major shrubs used for the habitat restoration. With the help of two of our amazing Penguin Island volunteers, Leonie Stubbs and Erica Dearle, we collected bags of fruiting *Rhagodia* brush and spread them under 15 or so cages. The brushing technique involves collecting ripe fruiting branches and laying them down to release their seed naturally over time. This restoration method helps reduce erosion and provides microclimate niches for seedlings to grow. It proved to be not only cheap but also a very successful way to re-establish bridal tern habitat at Penguin Island, as long as the young seedlings are weeded and protected from the disturbance caused by nesting colonies of silver gulls. We are looking for volunteers for the monthly activities on the island, so if you would like to be involved and are available to assist, please [email Grazyna](mailto:grazyna.paczowska@dbca.wa.gov.au).

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The native plants sown to help restore Penguin Island not only survived but also outgrew their cages, which were placed around the vegetation to protect them from nesting silver seagulls and trampling by pelicans. In the foreground are healthy looking *Malva preissiana* plants. This species is biennial, and we will need to wait until the plants flower and seed this spring/summer before attempting to remove the cage. Photo – Grazyna Paczkowska.

## Easter lily (*Amaryllis belladonna*) *By Anna Wisolith*

The Easter lily (*Amaryllis belladonna*), also known as the belladonna lily, puts on a showy display of large pink flowers around Easter. The species name *belladonna* means 'beautiful lady' in Italian, and although the blooms could certainly be considered beautiful in their native context or as a cut flower, like many weeds it sticks out like a sore thumb in an Australian bushland setting.

The Easter lily belongs to the Amaryllidaceae or daffodil family, which contains many species often grown as ornamental plants. Once a popular home garden plant, the Easter lily can now be found persisting as a weed around old homesteads, along roadsides, or in bushland where garden waste has been illegally dumped.

### Description

A perennial bulb 40cm high, the Easter lily flowers in late summer to autumn (February to April). The flowers can be various shades of pink which darken with age, (or rarely, pure white) with a creamy yellow throat. Each inflorescence carries two to twelve 10cm trumpet-shaped flowers held upright on leafless, purplish-red to green stems. The strongly sweet-scented flowers last two to three weeks before dying back, after which the leaves are produced. This strategy where the leaves emerge after flowering is called hysteranthly. The rather unusual appearance of the flowers standing 'naked' on stems without any leaves gave rise to another common name for the plant, naked ladies.

The leaves are dark green, strappy and channelled, measuring 30–45cm long and 1.5–3cm wide and are hairy when young but hairless once mature. They remain green throughout winter and die back in summer when the plant enters dormancy. Once dormant, only the necks of the bulbs are visible above the soil. The bulbs are large (5–10cm), brown and onion-like in appearance.

By going into dormancy over summer the Easter lily saves its resources, enabling it to tolerate drought and nutrient-poor soils, which makes it a weed well suited to the Mediterranean climate of the south-west. With its ability to survive and even thrive in hot and arid conditions for many years, the bulbs can multiply over time to create massive clumps.

### Origin and distribution

Endemic to the Western Cape region of South Africa, the Easter lily was brought into cultivation in the 1700s, prized for its ornamental value. From there, it was exported to many countries as a garden plant and has since become naturalised through local escapes from abandoned gardens and cut-flower cultivations in many temperate regions worldwide.

By the 1840s, the Easter lily was present in Australia as a horticultural plant, and now has become naturalised across the southern parts of Australia within Western Australia,



*The Easter lily (*Amaryllis belladonna*) is a rather unusual plant, as it flowers before any leaves are produced. Introduced as a garden plant, it became naturalised in southern parts of Australia and other temperate regions worldwide. Now it is mainly found persisting from bulbs around old homesteads, roadsides, or places where garden waste has been dumped, though it can also spread by seed dispersal. Herbicide control of this bulbous weed should take place in April to May, when the new leaves emerge after the flowers have died back. Photo – Vanda Longman.*

South Australia, and Victoria. In New South Wales and Tasmania, it is considered a minor environmental weed but possibly not yet fully naturalised.

In Western Australia, it is found in small areas of the south-west where it has escaped into bushland particularly around older settlements.

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## Dispersal and fire response

Fortunately, the species has a slow natural rate of spread. Across its range in Western Australia this weed usually grows from bulbs but has also been recorded spreading via seed dispersal into karri and marri forest at Arumvale, north of Augusta. Seed dispersal, usually by wind, occurs in winter – but the large, fleshy seeds mostly fall close to the parent plant. The seeds have a short lifespan in the soil, only persisting for days up to one year, and plants germinated from seed do not flower for between three to six years.

Originating from the fire-prone environment of the fynbos ecoregion in South Africa, the Easter lily is well adapted to survive fires, emerging and flowering abundantly post fire.

## Management

The Easter lily is regarded as an [environmental weed in Western Australia](#), but is considered a low priority for management as it spreads slowly and does not have a large impact on ecological processes or loss of biodiversity.

Current [control recommendations](#) are to spot spray with glyphosate 1% + Pulse® after flowering just as the new leaves emerge, in April to May.

Hand removal is not recommended as the main bulbs are large which makes digging them out laborious, and it is easy to leave behind small daughter bulbs which will continue to grow. The Easter lily can form huge clumps of many bulbs over time – digging these out causes substantial soil disturbance and creates conditions favourable for further weed emergence and establishment.

**WARNING** The Easter lily (*Amaryllis belladonna*) is considered highly toxic to people and many animals including grazing livestock, with every part of the plant suspected to be poisonous. The sap and bulb are skin irritants that can cause dermatitis and allergic reactions, so wear appropriate protective gloves and clothing if handling.



The leaves of the Easter lily (*Amaryllis belladonna*) are dark green, strappy and channelled. The leaves resemble those of agapanthus, but unlike agapanthus, the Easter lily is deciduous and its leaves die back over summer. Photo – Neil Blair © 2021 Royal Botanic Gardens Board, [CC BY-NC-SA 4.0](#).

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Right: The Easter lily is a perennial bulbous plant growing to 40cm high (shown here with a 50-cent coin for scale). The bulbs are large (5–10cm diameter), brown and round to ovoid and look quite similar to onions when the bulb covering is removed, as can be seen in the two bulbs pictured on the far right. Photo – Anna Wisolith.

## More information

Johnson SD, Snijman DA (1996) *Amaryllis belladonna*: the Cape's fairest lily is adapted for life in a fire-prone environment [Veld & Flora](#) 82(3), 70–71.

Mokni RE, Pasta S, Pacifico D (2020) *Amaryllis belladonna* L. (Amaryllidaceae, Amaryllidoideae), first record as naturalized geophyte in Tunisia and continental North Africa [Hacquetia](#) 19(2), 331–336.



# Drainage for Liveability By Sarah Bennett and Jessica Smith

Stormwater drains play a vital role in keeping people and places safe from flooding. However, these important pieces of infrastructure are often a neglected space in our suburbs.

A recent collaboration between Water Corporation, Department of Water and Environmental Regulation (DWER) and a number of local government authorities is helping these unsung assets reach their full potential.

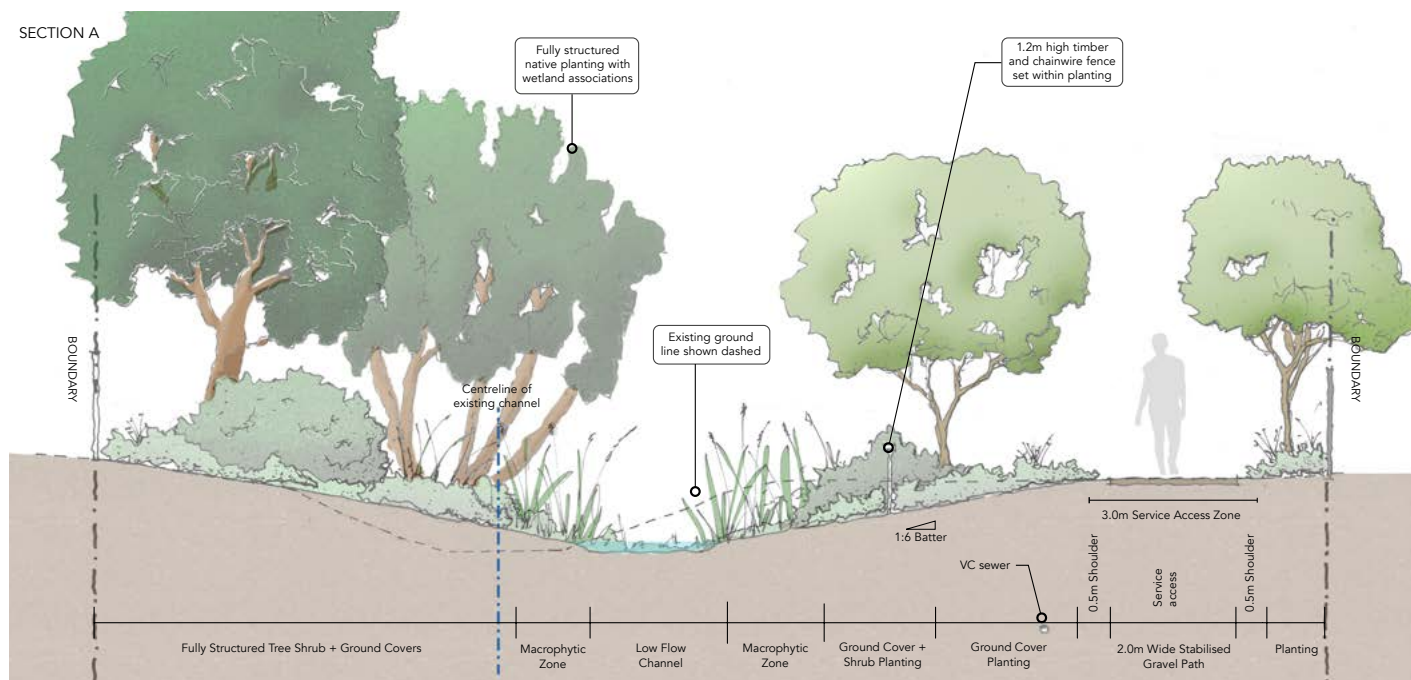
The program, appropriately named [Drainage for Liveability](#), provides support for local councils to transform stormwater drains and basins into greener, open spaces. Working closely with local government, the program seeks to support the needs of communities by enhancing drainage assets.

## Benefits to the Australian water industry

The Australian water sector is adapting to the challenges of climate change by embracing water efficiency measures, desalination, recycling, and more recently, indirect potable reuse of treated wastewater. Utilities around Australia are challenging themselves to go beyond the traditional water, wastewater and drainage service provisions, extending into more innovative activities.

The [Drainage for Liveability program](#) provides a model to make maximum use of otherwise 'sterilised' land around drainage assets. In an increasingly densified urban setting, pockets of vegetated, undevelopable land are at a premium.

Retrospectively applying water sensitive urban design principles to existing drains and adopting a contemporary approach to drainage management is a major step forward. Previously, Water Corporation has focused on achieving a hydraulic (flood protection) objective.



Concept design for a future Drainage for Liveability project courtesy of Town of Bassendean, REALM studios and Urbaqua. Image – Water Corporation.

The Drainage for Liveability program extends this to support improvements in water quality, environmental values, aesthetics and social amenity. Actively maintaining and retaining water in the landscape to increase infiltration and support groundwater dependent ecosystems is a key feature of total water cycle management.

This innovative collaboration now allows stakeholders to consider the broader context of water and drainage management as it relates to the community and natural environment. To date, the Drainage for Liveability program has enhanced 18 drainage assets across 10 local government areas in three years. Cooler, vibrant and accessible public spaces are being created which enhance biodiversity and give communities a greater appreciation of the water cycle in modern urban environments.

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## Case Study 1 – Wharf Street Basin

Located in the Canning City Centre is the [Wharf Street Basin](#), a stormwater basin which has been redeveloped into a new public Next Generation Community Park. The City of Canning and funding partners Australian Government's Smart Cities and Suburbs Program, Water Corporation, DWER, and Curtin University have worked collaboratively to deliver a new approach to stormwater management.

In a first for Western Australia, Wharf Street Basin integrates landscape design and technology to create a space for people to relax in, habitat for wildlife and an education space to learn about water while still operating as a stormwater basin. Achieving this earned the project excellence awards across five categories at the recently held Institute of Public Works Engineers Australia Awards.

The Next Generation Community Park now boasts free wifi, smart bins and irrigation, solar power, a nature playground, an informal education space with a microscope station and a bridge that connects Wharf Street to Leila Street.

The technology in the park measures water quality, weather conditions and power use in real time. Data collected from sensors in the park is [available online](#) for the public, researchers and other local governments to view and use.

An [augmented reality app](#) allows visitors to play games and learn about stormwater and local species while moving around the park.

To increase the biodiversity of the basin which is already home to motorbike frogs and oblong turtles, more than 50 different species of native plants have been planted in the park. Habitat islands for local wildlife have also been created, along with a nutrient stripping wetland system to improve water quality. Vegetation is establishing well, making the most of access to water and is already softening and enhancing what was previously a stark inaccessible site.



*Wharf Street Basin in Cannington is a stormwater basin that has been redeveloped into a new public Next Generation Community Park, integrating landscape design and technology to create a space for people to relax in, a habitat for wildlife, and an education space, while still operating as a stormwater basin. Photo – Water Corporation.*

Due to space constraints and drainage system requirements, significant engineering was required to increase opportunities for safe access to the site and create a sense of immersion in the urban green space.

Curtin University will use Wharf Street Basin as a research topic to develop a report on stormwater management and its impact on urban regeneration. The findings can then inform the transformation of similar sites in Perth.

*Continued next page ...*

## Case Study 2 – Peters Place Reserve

One year on from completion, Peters Place Reserve drainage site is unrecognisable. Where a barren patch of grass, weeds and a long drainage channel once stood, there is now a thriving wetland featuring native flora up and around the banks of the stream.

Peters Place Reserve is one of many drainage sites in the Bayswater Brook Catchment area, one of the largest catchment areas in Perth. This important catchment is the fifth highest contributor of nutrients into the Swan River.

Urban streams, like Peters Place Reserve, clean stormwater as it flows through the landscape. Just like our natural waterways, the plants surrounding urban streams absorb some of the nutrients from the stormwater. This natural process has two benefits: it supports plant growth while reducing nutrient levels.

Transforming the park from a landscape of patchy grass into a micro-ecosystem was no easy task. Significant earthworks were undertaken to recontour banks and turn the old trapezoidal drain into the wetland it is today. A dozen staff from Water Corporation and the City of Bayswater worked together to plant thousands of Australian natives such as knobby club rush (*Ficinia nodosa*), robin redbreast bush (*Melaleuca lateritia*), and swamp banksia (*Banksia littoralis*).

The plants have firmly taken root around the stream, providing sanctuary for ducks, swallows and honeyeaters which have made a home in the area.

Morley local, Gabrielle Migliore, passes Peters Place Reserve every day on her way home. Having lived in the City of Bayswater all her life, Gabrielle loves the area for its family vibe and abundant community spaces. She's glad to see that another safe and green space has popped up in her suburb where she and her family can relax and get back to nature.



*Peters Place Reserve drainage site prior to works (top), and a year on from being transformed by earthworks and planting of vegetation (above). Where once a barren patch of grass, weeds and a long drainage channel stood, there is now a thriving wetland planted with thousands of native plants. Photos – Water Corporation.*

“The new wetland is gorgeous and to see the birds there in the beautiful water just makes me so happy. Being so close to the primary school as well, the local kids enjoy the area, learn about the wetland and how important it is to the environment.”

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## Creating better places for the environment and people

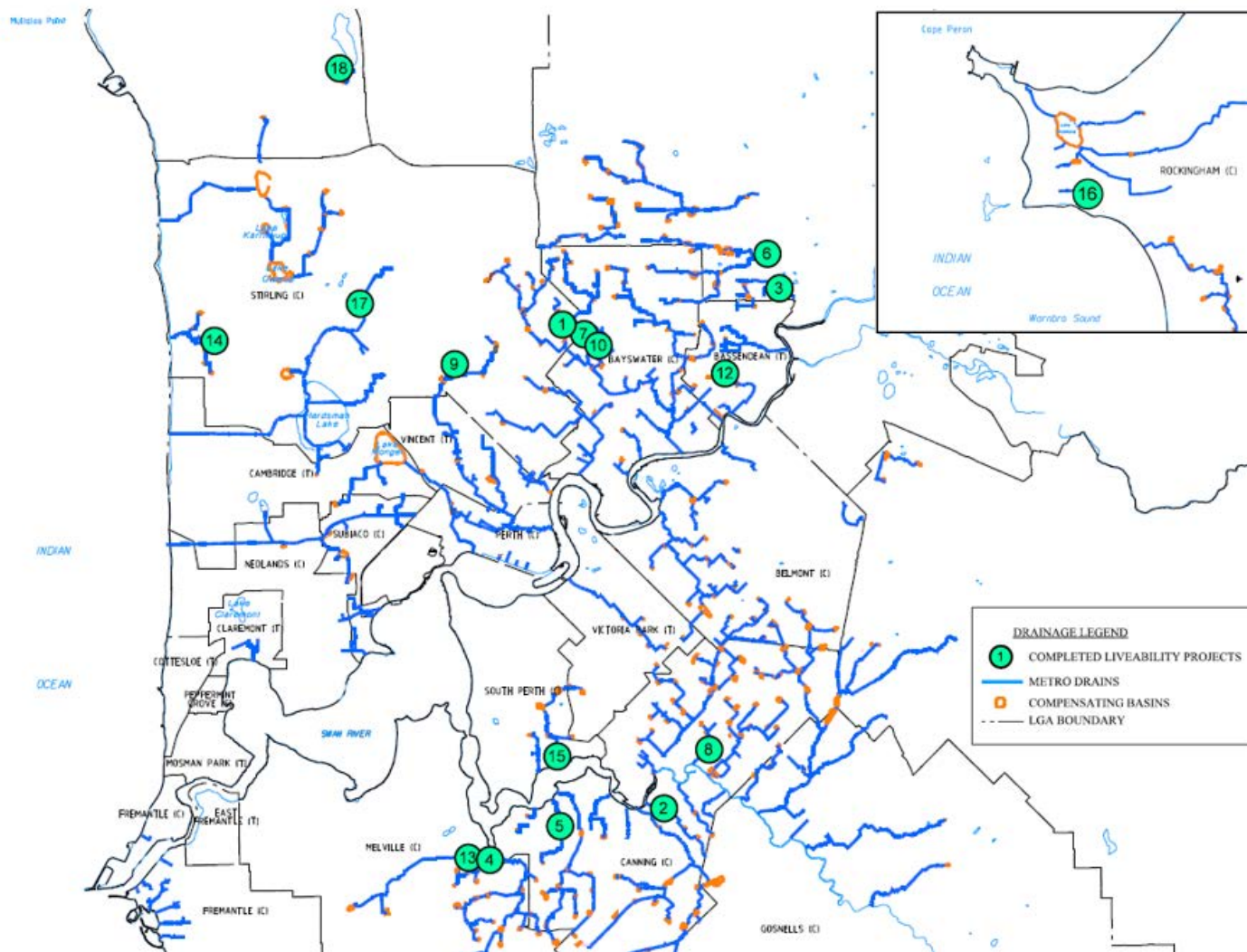
Multiple community benefits come from greening and reimagining assets such as increased habitat for wildlife, urban cooling, and more attractive public spaces.

Where possible, Drainage for Liveability projects attempt to mimic natural waterways creating wider, more gently sloped banks. This allows the establishment of a carefully selected variety of plants to enhance the aesthetics, habitat and environmental values of the area. Drain-friendly plant species put down shallow roots in banks and in areas close to the drain to provide erosion and sediment control. The roots of these water-loving shrubs and sedges also promote natural processes to enhance water quality.

In addition to providing habitat refuges, thriving wetlands also promote greater retention time in the catchment and mimic a number of natural processes that support water quality outcomes for the local area and receiving water bodies.

Making these changes to a drain can also create a safer landscape. Where appropriate, old fences are removed or modified to create greater connection for the community to natural areas. As housing density increases here in Western Australia, additional public green space is highly desirable. Many local councils are looking at innovative ways to create more of it and existing spaces typically reserved for drains seem to be an obvious choice.

Upgraded drains attract more animals and humans alike! By making drains more attractive places to visit, we're also creating a greater awareness of how water moves through our cities and suburbs and how important the role it plays really is.



Map showing the locations of completed Drainage for Liveability projects across Perth. Image – Water Corporation.

## Contact

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# South West Group Councils promote responsible cat ownership

By Peter Nash

The member Councils of the South West Group (SWG) have been collaborating over the past three years to develop the [Happy At Home](#) campaign, which launched in September 2020 to encourage cat owners to keep their cats safe, happy and well behaved at home. Coordinated and managed by the SWG and supported by funding from the State NRM Program, this project involved six adjoining local governments (the Cities of Canning, Cockburn, Fremantle, Kwinana, Melville and the Town of East Fremantle) that are concerned about the welfare of free roaming cats and the impact they have on our wildlife.

The SWG Councils collaborated with a team from Murdoch University led by Professor Mike Calver, researchers from the National Cat Tracker Project, and a team of creative media and marketing specialists to research what factors influence cat owner behaviour and to produce the campaign materials. These include a short, humorous, animated [call to action video](#) which points out that we don't let our dogs roam freely, so why do we allow our cats to roam?

An [11-minute educational video](#) was produced for the project by Murdoch University that highlights how far cats roam, the dangers they face when they do, the impact they have on wildlife, cat owners' legal responsibilities, and practical ways to keep cats safe, happy and well behaved at home. Six short, standalone, topic specific videos have also been produced from this video, and a version has also been made, supported by teaching notes, for use in the national secondary school curriculum.



The project also developed a [webpage](#) featuring lots of information for cat owners, together with posters and social media materials to support the campaign.

All these materials have been shared with a wide range of organisations that are similarly interested in improving cat management, including veterinarians, the RSPCA, the Cat Haven, other local governments, State agencies, regional NRM organisations, The Western Australian Biodiversity Science Institute (WABSI), Zoos Victoria, Perth Zoo and the Centre for Invasive Species Solutions.

To help manage cats, the City of Canning has an existing local law which prohibits cats from being in its natural areas. The City of Fremantle introduced a similar law in 2020 and the Cities of Cockburn and Kwinana are on track to implement local laws in 2021. Subject to the State Government approving their proposed local laws, the Cities of Cockburn and Kwinana are seeking to restrict cats to their owners' properties at all times. The City of Melville is also currently exploring options to improve cat management.

Visit the [Happy at Home](#) website for tips on how to keep your cat happy, healthy and safe at home, while helping to protect our native fauna.



**YOU WOULDN'T LET YOUR DOG...**

- Run around cars & busy streets
- Fight with other dogs
- Attack local wildlife
- Drink from a random puddle

**It's time to keep our CATS SAFE & HAPPY AT HOME**

[southwestgroup.com.au/happyathome](https://southwestgroup.com.au/happyathome)

Happy at Home

Logos for: Kwinana, City of Canning, Fremantle, Cockburn, Melville, and South West Group.

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# Community Advisory Committees advocating for wildlife protection from cats *By Lori-Ann Shibish*

Since 1788 cats have played a leading role in most of Australia's 34 mammal extinctions and are a major contributor to the declines in population of at least 123 other threatened native species. In Western Australia 36 mammal, 22 bird and 11 reptile species are vulnerable to predation by roaming cats, along with a wide range of other native animals that may be adversely affected through disturbance.

In 2011 the Parliament of Western Australia enacted the [Cat Act](#) to promote and encourage the responsible ownership of cats and provide for the control and management of domestic cats. Studies found that on average, pet cats can kill 186 animals per year, and because of their high urban density they kill 30 to 50 times more animals per square kilometre than feral cats. In 2019, over the course of a few weeks, [a domestic cat managed to drive off an entire nesting colony](#) of 220 fairy terns in Mandurah. The cat was directly or indirectly responsible for the death of six adults and 40 chicks. Once it became clear the sanctuary was no longer safe, the entire colony abandoned their nesting site.

In June 2019 the State Government strengthened measures to protect vulnerable and threatened native wildlife by [declaring feral cats a pest animal](#) in Western Australia. This announcement

prompted discussion at Regional Parks Community Advisory Committees (CACs) meetings in early 2020 regarding what mechanisms can be used to better protect fauna in regional parks from impacts of both feral and domestic cats. Regional park management plans identify cats as a threat to conservation and recommend implementation of local laws across all local government areas near conservation reserves. It was noted that the City of Stirling was innovative in creating [The Keeping and Control of Cats Local Law 1999](#), which includes Cat Prohibited Areas and Fauna Protected Buffer Zones. This mechanism allows the city to act to protect native species from roaming cats. Based on this example, the CACs began writing to their local councils within the metropolitan area to request consideration for the development of stronger local cat laws to provide protection for native fauna. Many local governments have responded positively by initiating the drafting of new local cat laws with consideration for providing Cat Prohibited Area designations for regional parks and bushland reserves.

The CACs feel more should and can be done to broaden the *Cat Act 2011* to create consistent statewide laws for the control and restriction of roaming cats.



*Domestic cat stalking in Yellagonga Regional Park. Photo – Gary Tate.*

## Contact

**L-A Shibish**

Parks and Wildlife Service

email [lori-ann.shibish@dbca.wa.gov.au](mailto:lori-ann.shibish@dbca.wa.gov.au)

# Snap ferals for a chance to win!

Take action photos or video footage of invasive species in Australia and submit them for the chance to win prizes in the [Feral Photos and Video Competition](#) held by the Centre for Invasive Species Solutions.

Photos can feature pest animals, weed infestations, exotic insects, or the damage these species have caused. Images and footage from remote cameras are also eligible for entry. With free entry, you can enter as many times as you like. Share your entry via social media or email to get as many votes as you can!

The winners are decided by a popular people's vote, with prizes on offer including trail cameras, animal trap devices and ecology themed books.

The competition and [audience voting is open now](#), with entries closing Friday 30 April and voting closing Friday 14 May. Prize winners will be notified in the week beginning Monday 17 May.



**THE 2021 FERAL PHOTOS AND VIDEO COMPETITION IS NOW OPEN!**

Enter and vote today at  
[feralphotos.invasives.com.au](http://feralphotos.invasives.com.au)

# Fire ant quarantine area lifted for Fremantle residential area *By Jodie Gysen*

The [red imported fire ant](#) (RIFA) quarantine area has been lifted for residential properties and businesses outside of Fremantle Ports. Only the northern side of the port remains within the quarantine area, where restrictions still apply to limit the movement of high-risk materials that could contain ants, such as soil.

Boundary changes coincide with 12 months of Department of Primary Industries and Regional Development (DPIRD) surveillance, which has revealed no presence of RIFA in residential areas. Surveillance will continue for another 12 months on some residential properties and at Fremantle Ports, to ensure eradication and area freedom from RIFA.

Look out for unusual ants or ant behaviour, even if you are not in the Fremantle area.

Report anything seen immediately via DPIRD's [MyPestGuide™ Reporter app](#) or [online](#), or contact DPIRD's Pest and Disease Information Service by [email](#) or phone (9368 3080).



*Colonies of red imported fire ants contain ants of varying sizes. Do not touch or disturb the ants or their nest as they may aggressively defend it. Be sure to report any unfamiliar ants to DPIRD's Pest and Disease Information Service. Photo – National Red Imported Fire Ant Eradication Program.*

## Contact

**DPIRD Pest and Disease Information Service**  
email [padis@dpird.wa.gov.au](mailto:padis@dpird.wa.gov.au)  
phone 9368 3080

# European wasp season gets underway *By Jodie Gysen*

As the 2020–21 [European wasp](#) season gets underway, DPIRD is working towards localised eradication in Perth's foothills.

Thanks to two years of additional DPIRD resourcing and support from a number of local governments and State Government agencies, the European wasp has been driven out of Perth's almost inaccessible bushland areas, and numbers across the Perth metropolitan area dropped from 166 nests in 2018–19 to 118 nests in 2019–20.

In 2020–21, an important focus will be the Swan Valley, due to four nests in this area located and killed last season.

Other hotspots include: Banyowla Regional Park, Ellis Brook Valley Reserve, Korung National Park, the Victoria Reservoir, Canning River Regional Park, Malaga, Martin, Middle Swan, Kewdale, Belmont, Thornlie, Maddington, Welshpool, Kalamunda, Mundaring, Canning Vale, Gosnells, Orange Grove, Aubin Grove, Burswood and Banjup, Hyden and Geraldton.

A full summary of nests found in 2019–20 is [available online](#). Contact DPIRD by [email](#) or phone (9368 3080) if you are interested in participating in this season's European wasp surveillance and eradication program.



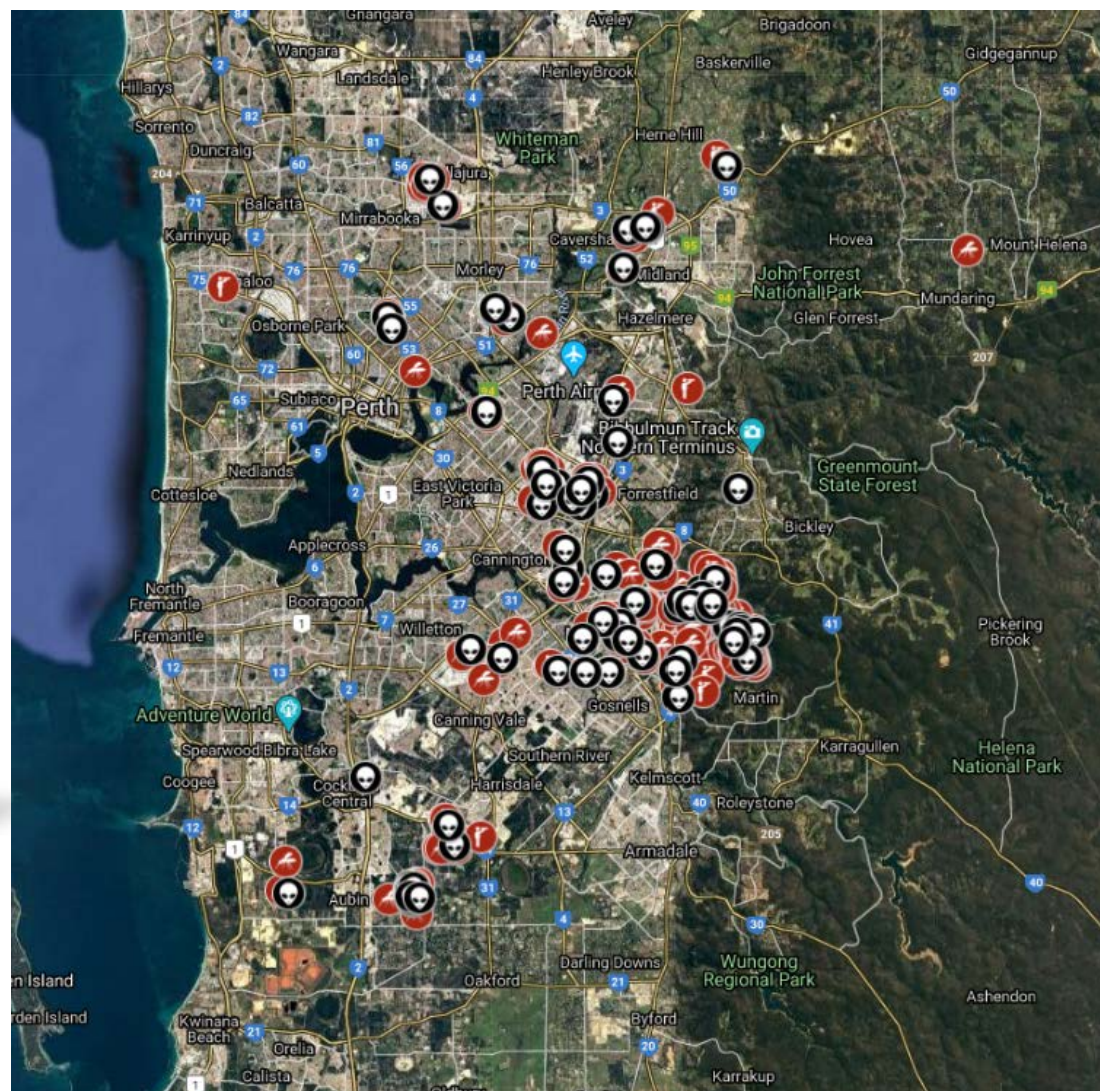
## Contact

### DPIRD Pest and Disease Information Service

email [padis@dpird.wa.gov.au](mailto:padis@dpird.wa.gov.au)

phone 9368 3080

*The European wasp, a declared pest in Western Australia. Photo – Fir0002/Flagstaffotos.*



Map showing the 2019–20 location of nests (black symbols) and confirmed sightings (red symbols) of European wasp across the Perth metropolitan area. Image – DPIRD.



Please send us your regional report (400 words) and one or two photos by Wednesday 9 June 2021. Text may be edited in response to volume of submitted reports.

## Recovery from fire *By Christine Curry*

It is now 14 years since a devastating fire swept through the Star Swamp Bushland Reserve in March 2007, burning two-thirds of the land area and most of the melaleucas in the waterbody. Since then, there have been no major fires and the bushland has made a remarkable recovery, with hundreds of tuart tree seedlings and grass trees emerging and growing on to become substantial plants.

Weeds have now become the major issue in the reserve. The [Friends of Star Swamp Bushland](#) has an ongoing bushcare and weeding program, with monthly public bushcare sessions to hand-pull some weeds, such as *Carpobrotus*, fleabane and blue lupins, and weekly attacks by a few intrepid volunteers on more woody weeds like olives and Geraldton wax. Chemical spraying of more difficult species such as veldt grass and black flag is a more contentious issue, with the local council reluctant to undertake widespread chemical control, resulting in a large build-up of these weeds and the subsequent fuel load as they dry off.

But the reserve is doing well overall, with a beautiful display of spring orchids and other flora last year, stunning stands of *Nuytsia floribunda* at Christmas and many bird species, including splendid and purple-backed fairy wrens and, at the moment, a pair of nesting collared sparrowhawks and a family of tawny frogmouths with two chicks just emerged from the nest.

Urban bushlands have many issues and Star Swamp Bushland Reserve is no exception, but the Friends group continues to maintain a positive outlook, doing our best with ongoing bushcare and ground-water monitoring projects and a focus on building as healthy a habitat as we can for the flora and fauna that call Star Swamp Bushland home.

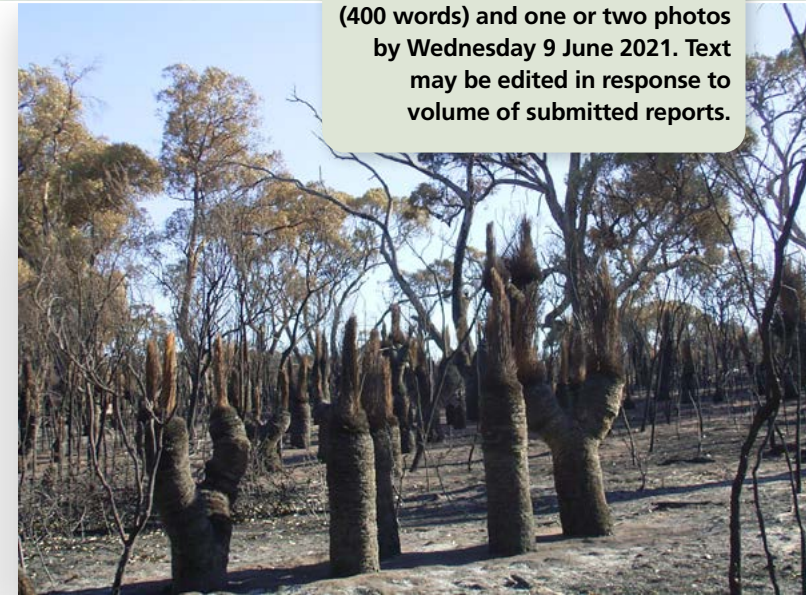


*Star Swamp Bushland Reserve in 2021 – 14 years after the devastating 2007 fire, the bushland has made a remarkable recovery. Photo – Christine Curry.*

### Contact

#### **Christine Curry**

Friends of Star Swamp Bushland Reserve  
email [starswamp@hotmail.com](mailto:starswamp@hotmail.com)  
phone 0430 013 364



*Grass trees in Star Swamp Bushland after the 2007 fire. Photo – Christine Curry.*



*Parent and chick – two of Star Swamp's tawny frogmouth family. Photo – Punch Flemmer.*

## Friends of Reg Seal Reserve *By David Jefferies*

Reg Seal Reserve is a small piece of remnant native bushland situated in Mount Pleasant, within the City of Melville. Adjoining it is a playground and parkland area. The bush is Bassendean Vegetation Complex and despite its small size, has a wealth of plant diversity including orchid species. Initially, the bush section was badly degraded and heavily infested with veldt grass and was not being maintained by any party.

The [Friends of Reg Seal Reserve](#) was established in 2013. Since then, the reserve has been fenced, had a central path and boxes for microbats installed thanks to the city (infrastructure) and the Bicton Men's Shed (microbat boxes). Both flora and fauna inventories have been undertaken.



*Bushland under rehabilitation inside Reg Seal Reserve.  
Photo – David Jefferies.*

The main focus of the Friends group has been to improve the canopy and understorey cover as well as weed eradication. To this end, we host planting days in winter and weeding days throughout the cooler months. The city provides 250 local provenance native plants for our annual planting day which is held on a Sunday morning. In addition, last year we received a grant of 200 plants from Plantrite under its Grown For Purpose scheme, with all plants dedicated to building the understorey to assist with weed suppression.

The planting and weeding days are well attended community events with both adults and children helping out and are finished with a morning tea or barbecue in the adjoining park. Many of the volunteers live close by and have young families who use the park for recreation, therefore they are keen to enhance and beautify the whole area. In this regard, we were given approval by the city to revegetate a barren strip of land adjacent to the fenced bushland. Whilst this area has been revegetated with local species, last year we took the opportunity to add some colour in the form of everlastings to make a special display for the park users and passers-by, which helped in attracting attention to our underlying regeneration work.

We have recently been contacted by a Landcare organisation who is seeking grants on our behalf for funding of additional plants and more help with weeding, as weed succession has become a problem after the veldt grass was largely eliminated. The Friends group looks forward to working with this organisation in the future as an aid to our ongoing rehabilitation work.



*This rehabilitated area outside the bush reserve was previously a barren area covered by woodchips. Photo – David Jefferies.*

### Contact

**David Jefferies**

Friends of Reg Seal Reserve  
email [cdgardencity@bigpond.com](mailto:cdgardencity@bigpond.com)

## A boost for Banyowla *By Merise Blackburn and Justine Mingo*

On the eve of the [Friends of Banyowla Regional Park Clifton Hills](#)' second anniversary, as coordinators we have reflected on how the group has helped to 'flip the switch' on a number of degrading processes to achieve some substantial wins for bushland restoration. Ongoing rubbish dumping, weed infestations, historical degradation, and deteriorating fence lines are some of the major issues facing the bushland which the local community wanted to address.

With support from DBCA, Armadale Gosnells Landcare Group, and the City of Armadale, the Friends group was established in 2019 and has engaged in collaborative conservation activities ever since.

Rubbish collection within the bushland and road verge is one of the most regular activities organised by the group. The road verge supports a high diversity of local flora whilst buffering the bushland from edge effects. Anti-litter signage and increased community engagement are thought to have contributed to a steady decline in rubbish in the bushland, thrown out of cars and dumped on the road verge. However, a dead skink found drowned in a bottle at the group's latest Clean Up Australia Day event was a reminder that the issue is far from over.

Clifton Hills Bushland is part of the Banyowla Regional Park in Kelmscott, including the 19.9ha Bush Forever Site 61 and a section of Wright Brook, which meanders through the area and connects with the Djarlgarro Beiliar (Canning River). Operating in 30ha of bushland, the group aims to protect flora and fauna, and to improve vegetation condition through protection from disturbance, seed collection, weed control and revegetation.



*Volunteers from the Friends of Banyowla Regional Park Clifton Hills at last year's Clean Up Australia Day event. Rubbish collection events are one of the most regular activities organised by the group, with a steady decline in litter seen thanks to increased community engagement and anti-litter signage (pictured), although the issue is far from over. Photo – Tony Mingo.*



*Clifton Hills Bushland is part of the Banyowla Regional Park in Kelmscott and comprises many vegetation types, influenced by the array of transitional soil types from the foothills to the Darling Scarp. The Friends group aims to protect flora and fauna in the 30ha of bushland, and to improve vegetation condition through seed collection, weed control and revegetation. Photo – Merise Blackburn.*

The bushland comprises many vegetation types, dominated by the overstorey species *Banksia attenuata*, *Corymbia calophylla*, *Eucalyptus marginata*, *Allocasuarina fraseriana*, *Eucalyptus rudis* and *Eucalyptus wandoo*.


These vegetation communities are influenced by colluvial deposits encompassing an array of transitional soil types from the foothills to the Darling Scarp. Clifton Hills Bushland is special in many aspects including the rich history of multiple land uses now vested for conservation, and the diversity of splendid orchids seasonally on show.

2021 is an exciting year for the group, with plans to renew large sections of perimeter fencing and planting of 4,000 tubestock for National Tree Day. These activities will continue to enhance the biological and recreational value of the area for a healthier future.

### Contact

#### **Merise Blackburn**

Friends of Banyowla Regional Park Clifton Hills  
email [banyowlacliftonhills@outlook.com](mailto:banyowlacliftonhills@outlook.com)



City of Joondalup's  
**Hazard Reduction**  
**Grass Tree**  
**Burning**  
**Program**

*By Tonia Tardivel-Jones*

*Grass trees in the final burn stage,  
with adjacent unburnt areas.  
Photo – Tonia Tardivel-Jones.*

# City of Joondalup's Hazard Reduction Grass Tree Burning Program

By Tonia Tardivel-Jones

## Reducing the risk of bushfire to the City's community

The City of Joondalup is very fortunate to be home to many valuable flora species, vegetation communities and native fauna, including banksia and tuart woodlands, Carnaby's cockatoos and quenda.

The city is the first local government to voluntarily develop a Bushfire Risk Management Plan under the Department of Fire and Emergency Services' (DFES) Bushfire Risk Management Planning Program. After receiving endorsement in February 2018 by the Office of Bushfire Risk Management, the city was eligible to apply for funding through the DFES Mitigation Activity Fund to treat extreme, very high and high bushfire risks. The city has utilised this funding opportunity since it commenced in late 2018, carrying out manual fuel load reduction and firebreak improvements.

Over the past few years, the city has welcomed the ongoing support of DFES officers who have assisted in the management and mitigation of bushfire risk. The introduction of hazard reduction grass tree burning was recommended by DFES to reduce bushfire risk in appropriate bushland areas with very high fuel loads and as a result, the city now includes hazard reduction grass tree burning as a bushfire mitigation strategy.

In April 2019 the city's [Hazard Reduction Grass Tree Burning Program](#) was approved by council, with an emphasis on community engagement to ensure the community, friends groups and other stakeholders were informed of its objectives and benefits.

## Grass trees and fire

Grass trees are common in the city's reserves, many with long unburnt, dead, and highly flammable skirts. The introduction of hazard reduction grass tree burning (including surrounding leaf litter and grasses) as an additional bushfire mitigation strategy was well supported.

Grass trees respond well to fire, resprouting quickly and flowering the following spring. While flowering can occur without fire, the large amount of seed released into open areas fertilised by ash after fire provides an excellent opportunity for new grass trees to spread. Fuel reduction needs to be undertaken carefully as [grass trees provide important habitat](#) for a wide range of fauna such as bandicoots, wrens, lizards, and numerous invertebrates.

The city's controlled low intensity burns targeted around 60% of grass trees over small areas in a mosaic pattern, leaving burnt and unburnt areas. This helps to reduce any negative impact on the bushland, with pockets of native vegetation remaining as habitat for native fauna, as opposed to the severe consequences of a high intensity wildfire on flora and fauna, and the many years of regeneration and management to get the bushland back to its previous state. These types of fires are undertaken in appropriate weather conditions so that the fire burns slowly at low intensity and water is used to protect tree canopies if required. Grass tree skirts are gently disturbed prior to being lit to encourage fauna to relocate. Grass trees are then lit individually using matches to start the fire at the top on the leeward side so that the fire starts slowly to give fauna more time to find refuge in an unburnt area.



Grass tree skirts targeted during the burn. Photo – Mark Brundrett.



Very good condition bushland 18 months post burn. Grass tree skirts have been reduced, and vegetation, leaf litter and habitat niches are recovering well. Photo – Mark Brundrett.

*Continued next page ...*

### Post-fire weed control

Weed control and its timing post fire is very important. Many weed species respond positively to fire, germinating quicker and growing faster than native plants if left uncontrolled. Whilst the weeds are actively growing after fire, they take in herbicides very effectively and can be targeted more easily without surrounding dense vegetation, providing the opportunity for effective weed control to be undertaken.

### DFES in action

In autumn 2019, DFES successfully completed a hazard reduction burn within bushland at Warwick Senior High School. This was shortly followed by a joint DFES and DBCA hazard reduction burn within Yellagonga Regional Park with support from Wanneroo Bushfire Brigade.



DFES officers, State Wide Operational Response Division (SWORD) volunteers, and Friends of Warwick Bushland: Karen Clarke, Stephanie Murphy and Mark Brundrett (centre) before the burn at Warwick Senior High School. Photo – Tonia Tardivel-Jones.

In late autumn 2019, with much anticipation, the city and DFES carried out the first hazard reduction grass tree burn within 0.54ha of city managed land at Warwick Open Space Bushland. This site was chosen due to numerous arson attacks in the area, very high fuel loads and adjacent vulnerable assets, such as Warwick Senior High School.

During the burn planning phase many factors were considered, including keeping environmental impacts to a minimum (such as mapping areas of vegetation to be avoided), suitable weather conditions, and ensuring strong interaction and communication with stakeholders, such as the Friends of Warwick Bushland (FWB).

In winter 2020 a second burn was carried out at Warwick Open Space Bushland within 1.5ha, close to the new Whitfords Hockey Centre at Warwick. The city continued to liaise with FWB, who advised the area contained key orchid populations that should be avoided as it wasn't an optimal time of year for orchids to be burnt. These areas were taped off and remained mostly unburnt and preserved.



Taped off area to protect selected orchids from the burn. Photo – Tonia Tardivel-Jones.



DFES officers Shaun Champ, Tyron McMahon (left), Mellanie Culhane (right) and City of Joondalup's Tonia Tardivel-Jones (centre) ready to burn at Warwick Open Space Bushland. Photo – Tonia Tardivel-Jones.

Continued next page ...

FWB monitored the recovery of burnt areas by taking photos at fixed locations over time. While such monitoring is not quantitative it provides a useful tool to communicate outcomes. Although early in the recovery process, there are promising findings from the FWB. Both burns were cool and well controlled, successfully creating a mosaic of burnt and unburnt areas, although the winter 2020 fire did scorch some of the tree canopy. Importantly, a range of ages of grass tree skirts were left unburnt to provide a range of habitats for fauna of various sizes and needs, and no fauna was observed that needed rescue. Many native plant species readily resprouted after the fire, while others recruited successfully from seed. New populations of fire-responsive species, the rabbit orchid (*Leptoceras menziesii*) and golden spear grass (*Austrostipa compressa*) appeared.

Many weed species proliferated after the fire, in particular, bulbous species stimulated by fire, such as the pink gladioli (*Gladiolus caryophyllaceus*). The FWB hand removed these in spring to prevent a massive release of seed. Seed of weedy acacias stored in the soil germinated in large numbers post fire, requiring ongoing removal for several years. Weedy grasses such as perennial veldt grass (*Ehrharta calycina*) established in the poorer condition areas and along disturbed edges requiring control by the city.

A large amount of new leaf litter has already accumulated in some areas, and FWB have requested that pre- and post-burn fuel load assessments be undertaken to determine whether this mitigation strategy does successfully reduce fire risk and for how long.

### Where to next?

The city and DFES are looking to carry out a small hazard reduction grass tree burn within Craigie Open Space Bushland this winter 2021. This must be done carefully since there are numerous quenda living within the fenced area who use grass trees for shelter and nesting.



DFES officer Shaun Champ controlling the extent of the burn. Photo – Tonia Tardivel-Jones.

To minimise impact to the quenda and other fauna, the skirts of grass trees to be burnt will be gently disturbed to encourage the quenda to move to a safe area. Officers will also be monitoring for fauna that need to be relocated outside of the burn site.

### Contact

**Tonia Tardivel-Jones**

City of Joondalup

email [antonia.tardivel-jones@joondalup.wa.gov.au](mailto:antonia.tardivel-jones@joondalup.wa.gov.au)

# WA Wildlife: streamlining wildlife recovery for disaster events

By Dean Huxley and Anna Bailey-Thiele



Bushfires are a part of life in Australia although the impact that they have on wildlife is often never fully appreciated by the wider community. Since the devastating 2019–20 fires in the eastern states, the public eye has been more drawn to the effect these fires have on our native animals. Whilst the situation is different in Western Australia in terms of the scale of impact, previously there has been little coordination concerning the recovery and treatment of animals during and post bushfire responses. However, steps are now being made to fix this gap and improve welfare outcomes for injured and displaced wildlife.

In early February 2021, staff and volunteers from [WA Wildlife](#) (trading name for Native ARC Incorporated) assisted the Australian Veterinary Association (AVA) and the Department of Primary Industries and Regional Development (DPIRD) as part of the State Support Plan – Animal Welfare in Emergencies, which was activated for the first time at the Wooroloo bushfire. The activation of an Animal Welfare Plan can be requested by the Incident Controller and allows the wildlife response to be integrated into the formal Incident Control response during a major incident.

Veterinarians, experienced wildlife rescuers and veterinary nurses volunteered their time in the field, sweeping the area for injured animals and providing on-site treatment. Previously it would have been weeks before these animals would be recovered and treated, and by that point it is too late. WA Wildlife assisted the AVA by providing specialised wildlife recovery teams

and coordinated the veterinary teams volunteering out in the field, triaging cases as they were phoned in and ensuring animals received help as soon as possible.

The majority of animals that were recovered by WA Wildlife were kangaroo joeys with a small number of other species recovered including two bobtail lizards, a spotted dove, a common brushtail possum and a boobook owl. Several adult kangaroos were euthanised in the field with assistance from local rangers. Treating burns is a long process with the joeys now undergoing bandage changes every two days. Whilst it will be a long journey for them, they are doing well and should make a full recovery for release into the wild when older.

WA Wildlife is working with local and State government on continuous improvement for the recovery and treatment of wildlife affected by disasters. They have recently launched a wildlife ambulance which is on the road rescuing wildlife 365 days a year and are in the process of moving into a state-of-the-art wildlife hospital in March 2021. The ambulance will be prioritised during emergencies to serve as a veterinary triage vehicle. In addition, they are developing software to help wildlife rehabilitators and veterinarians communicate during emergencies, locate resources and coordinate patient transfers. The system will also assist researchers seeking to obtain data on wildlife affected by disasters.

*Continued next page ...*



*Hard at work in the command centre at WA Wildlife.  
Photo – WA Wildlife.*



*This common brushtail possum with burns was rescued by WA Wildlife from the Wooroloo bushfire. Photo – WA Wildlife.*



For those who want to help, volunteering at your local wildlife rehabilitation centre and providing financial donations are invaluable. Wildlife rehabilitation centres play a vital role in conserving and protecting wildlife during and post bushfires. Several wildlife rehabilitation groups in Perth have also been working hard in the aftermath of the recent fires and have played a vital role in recovering and treating injured wildlife.

WA Wildlife is working towards changing cultural empathy towards wildlife and the natural world, a vision reflected daily in the organisation's tagline, 'Helping Wild Lives Live'. WA Wildlife's new ambulance and communication portal has been made possible thanks to sponsorship from the Society for the Prevention of Cruelty to Animals International and the Foundation for National Parks and Wildlife.



WA Wildlife Hospital veterinarian and veterinarian nurse treating the injuries of a sedated joey in the field.  
Photo – WA Wildlife.



Kangaroo joeys were the most common animal recovered by WA Wildlife following the Wooroloo bushfire.  
Photo – WA Wildlife.

## Contact

### WA Wildlife

email [info@nativearc.org.au](mailto:info@nativearc.org.au)

phone 9417 7105



[The Wildcare Helpline](#) is a telephone referral service operated by volunteers on behalf of DBCA and is based at the Kensington headquarters.

The Wildcare Helpline provides a service for the public who find **sick or injured native wildlife** and are seeking **advice on where to find care** for the animal.

**If you've found injured wildlife, call the Wildcare Helpline on (08) 9474 9055.**

The wildlife volunteers answering your call will be able to put you in touch with your nearest registered wildlife rehabilitator, wherever you are in Western Australia.

## Friends of Trigg Bushland *By Melanie Davies*

Trigg Bushland Reserve is a beautiful sanctuary of bushland within the city area, and is much loved by locals and visitors for its scenic outlooks and as a place to relax and unwind in nature. The Class A Reserve and Bush Forever site covers 170ha and is rich in flora and fauna. The unique dune structure results in 15 different vegetation communities being present.

Our volunteer organisation, the [Friends of Trigg Bushland Inc](#) (FoTB), has been an active group for over 30 years! Many long-term members are still involved in our activities, which include on-ground restoration works, research and community engagement. We have a membership of over 100 supporters and volunteers.

### Conservation projects

Generally, vegetation condition in the reserve is classified as 'good' to 'very good' and our conservation projects focus on weed control rather than supplementary planting, to encourage natural regeneration of the bushland. We have had good results over time, with lupins largely eliminated from areas of the reserve, and pink fairy orchids emerging where they were previously absent following the removal of weeds.

Trigg Bushland also contains a number of highly restricted communities, one being the Rottnest Island Pine (*Callitris preissii*) Threatened Ecological Community (TEC). Once common along the coast, frequent fire means that only isolated pockets of the

TEC remain. In 2019, a partnership between FoTB and the City of Stirling secured \$20,000 from the Australian Government's Communities Environment Program to restore the Rottnest Island Pine TEC. Each summer, it is a highlight to see the [rainbow bee-eater](#) return to the TEC area, characterised by its vibrating trill and wonderful colours.

### Community engagement and outreach

Our organisation has a strong focus on community engagement and outreach through our work with local schools, community guided bushwalks, and partnerships with other organisations.

Last year, we secured funding under the City of Stirling's Special Projects Program to build and install wildlife nest boxes in Trigg Bushland Reserve with St Mary's Anglican Girls' Junior School. Wildlife specialists Simon Cherriman and Joe Tonga led workshops with the students, which started with educational talks about the importance of preserving bushland and natural tree hollows. Each nest box was designed to attract specific species, including endangered black cockatoos, boobook owls, parrots, pardalotes, and microbats. St Mary's found the project to be a valuable experience for the students, who will be involved in the ongoing monitoring of the wildlife that take up residence.

*Continued next page ...*

*Guided nature walk with Year 1 Students from St Mary's and Hale Schools. Photo – St Mary's Anglican Girls' School.*



Our organisation provides quarterly guided walks for the wider community, which attract a wide audience including local councillors, wildflower enthusiasts, entomologists and families. We are also developing our partnerships with other community groups on conservation projects, including Scarborough Beach Tuart Girl Guides and Karrinyup Rotary Club.

## Sharing knowledge

Last year, our organisation participated in a training day for local government staff, organised by the Western Australian Local Government Association (WALGA). The training shared the practical knowledge needed for natural area conservation, including revegetation techniques, conducting surveys, and species identification. The day was a great example of collaboration, with WALGA, the City of Stirling, Perth NRM, Stirling Natural Environment Coastcare, the Wildflower Society of Western Australia, and FoTB all sharing their expertise.

## Research

Since 2012, our organisation has undertaken quarterly monitoring of six groundwater bores to investigate changes in groundwater levels over time. The data will also be useful to analyse the long-term effect of Perth's drying climate on groundwater levels and the health of vegetation.

## Future priorities

A key challenge for our organisation has been targeting weed control efforts over such a large area and prioritising locations to ensure volunteer effort leads to sustained weed reduction over time. It is important that ecological linkages between Trigg Bushland and nearby reserves are a focus of revegetation efforts,



Painted bat boxes ready for installation. Photo – St Mary's Anglican Girls' School.

to ensure that biodiversity is maintained and species can move between bushland remnants in our urbanised landscape. In addition, succession planning for our organisation is important. Like many friends groups, we are keen to progress volunteers from ad hoc participation to ongoing involvement and uptake of committee positions.

New members are most welcome, and there is a variety of work to be involved in. Whether you can help with weeding, school activities, social media, ground water monitoring, or just want to keep up to date with what is happening in the reserve, please get in touch!



Nest box workshop. Melanie Davies and Mitch Polain from Friends of Trigg Bushland with St Mary's students Chloe Detata, Amelie Weekly, and Marla Fiore. Photo – Friends of Trigg Bushland.



Field training day for local government in Trigg Bushland Reserve. Photo – WALGA.

## Contact

### Friends of Trigg Bushland


Mitch Polain  
phone 0488 561 583

Melanie Davies  
phone 0427 655 588


## 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@inet.net.au](mailto:calidris@inet.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](mailto: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 8am–10am

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


### Saturdays 8:30am–10.30am

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

### Saturdays 9am–11am

 **Bushcare activities** with the Friends of **Booragoon** and **Blue Gum Lakes**. First Saturday of each month. Meet at the boardwalk into Booragoon Lake on Aldridge Rd, Booragoon. Contact: Mary-Ann 0456 357 799 [molly.olly1@bigpond.com](mailto:molly.olly1@bigpond.com)


### Saturdays 9am

 **Bushcare activities** with Friends of **Brixton Street** Wetlands. Third Saturday of each month. Meet Alton St, Kenwick. Contact: Regina 9459 2964 [tjdr@bigpond.net.au](mailto:tjdr@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](mailto: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 last Saturday of each month. Contact: [friendsofyellagonga@bigpond.com](mailto:friendsofyellagonga@bigpond.com)

### Saturdays, Sundays 9am–12 noon

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


### Sundays 7am

**Bushcare activities** every Sunday with Friends of **Point Peron**. Look for the signs Safety Bay Rd or Memorial Dr Rockingham. Bring your own gloves, water and dress for the bush. Contact: James 0455 157 547 [jgmumme@live.com.au](mailto:jgmumme@live.com.au)

### Sundays 8am–10am

 **Bushcare activities** every Sunday with Friends of **Shenton Park** Bushland. Contact: Dani 0420 334 601 [bojel@inet.net.au](mailto:bojel@inet.net.au)


### Sundays 8:30am

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


### Sundays 9am–11am

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


### Sundays 9am–11am

 **Bushcare activities** with **Cottesloe** Coastcare. First Sunday of each month. Contact: Robyn 9384 7668, [info@cottesloecoastcare.org](mailto: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](mailto:fotsmail@gmail.com)


### Sundays 9am

 **Bushcare activities** with the Friends of **Samphire Cove** Nature Reserve, Halls Head. Last Sunday of each month. Contact: Barry [bjdoongin@gmail.com](mailto:bjdoongin@gmail.com) [Facebook](https://www.facebook.com/bjdoongin)


### Sundays 9:45am–12 noon

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

### 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.register.com.au)

### Sundays

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

### Registration/contact details

**Birdlife WA** All walks are free, no need to book. Call 9383 7749 Monday–Friday 9.30am–12.30pm.

**AGLG Armadale Gosnells Landcare Group.** Look for the AGLG sign at the meeting point, BYO gloves and dress for the weather. Morning tea provided. Call 0413 883 565 or check [Facebook](https://www.facebook.com/aglg)

### Activities Key



**Hands on** – bushland and wetland management activities.



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



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



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

## Recurrent activities ... continued

### Mondays 7am–8am

Norma's Monday Morning **Weeding Group**. Friends of **Lake Claremont** weekly hand weeding. Learn basic weeding techniques and identification. Meet at south end of Strickland St. Contact: 0413 282 515

### Mondays 8am–10am

**Litter collection** with Swan Estuary Reserves Action Group at **Milyu Nature Reserve**, South Perth. Second Monday of each month. Contact: Cathie 9339 2439 [oneillc@westnet.com.au](mailto:oneillc@westnet.com.au)

### 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](mailto: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](mailto: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 7am–9am

**Bushcare activities** with Swan Estuary Reserves Action Group at **Alfred Cove Nature Reserve** each Tuesday. Contact: Margaret 9330 1791

### 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](mailto:foapbg@gmail.com) or [Facebook](#)



### Tuesdays and Thursdays, 8am–10am

**Coastcare activities** with **Stirling Natural Environment CoastCare (SNEC)** resume 28 January 2020. 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](mailto:eastern.hills.branch@wildflowersocietywa.org.au)



### Wednesdays and Saturdays 7:30am–9:30am

**Bushcare activities** with **Bicton Environmental Action Group**. Planting, weeding and foreshore clean-up. Various dates. Contact: Peter 0439 467 855 [pneesham1@hotmail.com](mailto:pneesham1@hotmail.com) [website](#)



### Thursdays 7:30am–9:30am and some Saturdays 8:30am–12 noon

**Coastcare activities** with Friends of **Sorrento Beach** and **Marmion Foreshore** followed by morning tea. Contact: Mike 0438 710 527



### Thursdays 8am–9am

**Bushcare activities** every Thursday with **Byford Enviro-Link**. Contact: Kristy 9526 0199



### Thursdays, Saturdays and Sundays 9am

**Morning walks** with Friends of **Bold Park** Bushland Volunteer Guides. Various dates. Contact: 9480 3996 [friendsbp@bgpa.wa.gov.au](mailto: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. \$20 or less. Bookings essential. Contact: 9291 3900 [info@kanyanawildlife.org.au](mailto:info@kanyanawildlife.org.au) [website](#)



### Thursdays and Fridays 9am–4pm

**Wetland, Bushcare and nursery activities** with The **Wetlands Centre, Cockburn**. Contact: Denise 0412 081 540 [community@thewetlandscentre.org.au](mailto:community@thewetlandscentre.org.au)



### Thursdays 7.30pm

**Talks** with **Murdoch Branch of the Wildflower Society** to share passion and knowledge of nature. First Thursday each month. Cockburn Wetlands Education Centre. Contact: Christine 0468 676 933 [murdoch.branch@wildflowersociety.org.au](mailto:murdoch.branch@wildflowersociety.org.au) [Facebook](#)



### Fridays 8am

**Bushcare activities** at **Piney Lakes**. Volunteers need a site induction. Contact: [Jacklyn.kelly@melville.wa.gov.au](mailto: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](mailto:mail@mosmanparkbushland.org)



### Fridays 7.30pm

**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: [Facebook](#) [website](#) [eastern.hills.branch@wildflowersocietywa.org.au](mailto:eastern.hills.branch@wildflowersocietywa.org.au)



### Fridays and Saturdays 7pm–9pm

First Friday and second Saturday every month, **Nocturnal Tours, Kanyana Wildlife Centre**. Meet nocturnal native wildlife and hear about endangered species breeding programs. \$20 or less. Bookings essential. Contact: 9291 3900 [info@kanyanawildlife.org.au](mailto:info@kanyanawildlife.org.au) [website](#)



### 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.

## Activities Key



**Hands on** – bushland and wetland management activities.



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




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



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

## April


### 3 Saturday 8am–11am

 **Birdwalk at Lake Coogee**, Munster. Meet Fawcett Road. [BirdLife](#)


### 6 Tuesday 6pm–7pm

 **Kids Nocturnal Woylie Walk** for the school holidays. Woodland Reserve, **Whiteman Park**. [Bookings](#) \$22 adults, \$18 children/concession, family (2 adults + 2 children) \$70.


### 6 Tuesday 6pm–7:30pm

 **Megafauna Nightstalk at Mammoth Cave** Visit giant replicas of extinct megafauna species and tour Mammoth Cave to discover how fossils were uncovered there in the early 1900s. Finish with a night walk by torchlight through the trees. BYO head-torch, warm clothes and raincoat if needed (will run regardless of the weather). Suitable for adults and children over 7 years. Adults \$25, children \$12.50. [Bookings essential](#).


### 7 Wednesday 6pm–7pm

 **Kids Nocturnal Woylie Walk** for the school holidays. Woodland Reserve, **Whiteman Park**. [Bookings](#) \$22 adults, \$18 children/concession, family (2 adults + 2 children) \$70.


### 7 Wednesday 6:30pm–8pm

 **Get energy smart at home workshop**. Bill Hicks Hall, Byford. Suitable for adults and children 14 and over. Free to [register](#).

### 8 Thursday 7:30pm–10pm

 **What's so special about hakeas?** [a talk by Byron Lamont](#) at the Armadale Environmental Centre, 8 Triton Crescent, Bedfordale. Entry \$3.

### 11 Sunday 8:30am–11:30am

 **Birdwalk at Ellis Brook**, Gosnells. Meet at the corner of Gosnells Road and Bygum Lane, Martin. The walk will follow a steep path to the top of the falls providing great views and a variety of birds not often seen near Perth. [BirdLife](#)


### 13 Tuesday 6pm–7pm

 **Kids Nocturnal Woylie Walk** for the school holidays. Woodland Reserve, **Whiteman Park**. [Bookings](#) \$22 adults, \$18 children/concession, family (2 adults + 2 children) \$70.


### 14 Wednesday 6pm–7pm

 **Kids Nocturnal Woylie Walk** for the school holidays. Woodland Reserve, **Whiteman Park**. [Bookings](#) \$22 adults, \$18 children/concession, family (2 adults + 2 children) \$70.


### 15 Thursday 8am–11am

 **Birdwalk at Tomato Lake**, Kewdale. Meet near the small tearooms at Tomato Lake off Oats Street, Kewdale. BYO morning tea. [BirdLife](#)


### 18 Sunday 8am–11am

 **Birdwalk at Ashfield Flats**, Bassendean. Meet at the car park at the southern end of West Road, Bassendean. [BirdLife](#)

### 24 Saturday 8am–11am

 **Birdwalk at Woodman Point**, Coogee. Meet in the car park at Woodman Point on Jervoise Bay. This excursion has been timed to coincide with the northward jaeger migration. [BirdLife](#)

### 26 Monday 4:30pm–7pm


 **Celebrate Seasonal Wetland**, an event celebrating water, wetlands and life at **Mary Carroll Park** with the Friends group and AGLG. Featuring activities for all ages, an informative walk, spot prizes, displays and a quiz. [Registration](#) required for catering purposes.

## May


### 2 Sunday 8am–11am

 **Birdwalk at Ray Marshall Park**, Viveash. Meet in the car park off Ray Marshall Park. [BirdLife](#)

### 8 Saturday 9am–2pm

 **Plant sale** by the Eastern Hills Branch of the Wildflower Society. The [annual hills plant sale](#) offers hundreds of local plants grown by local enthusiasts who will be on hand to offer advice. Octagonal Hall, McGlew Road, **Glen Forrest**.


### 13 Thursday 7:30pm–10pm

 **War on Weeds at Wireless Hill**, [a talk by Margaret Matthews](#). **Armadale Environmental Centre**, 8 Triton Crescent, Bedfordale. Tickets \$3.


### 15 Saturday 8am–11am

 **Birdwalk at Lake Goollellal**, Kingsley. Meet at the car park on Woodlake Retreat. [BirdLife](#)

### 16 Sunday 1pm–3pm

 **Autumn walk at Warwick Conservation Reserve**. Meet at the Warwick Bowling Club car park on Lloyd Drive. Look for the banners. [Friends of Warwick Bushland](#)

### 20 Thursday 8am–11am

 **Birdwalk at Lake Monger**, Cambridge. Meet at the car park opposite the Speech and Hearing Centre off Dodd Street. [BirdLife](#)


### 22 Saturday 9am–12 noon

 **Planting** along the **Southern River** at **Southernwood Park**, Gosnells. Park off Anaconda Drive near Cue Court, look out for the signs and follow the footpath to the planting site. [AGLG](#)

### 23 Sunday 7pm–9:30pm

 **From Red Box and Beyond – Western Australian Herbarium Collections and their use in biodiversity science** [a talk by Shelley James](#). Octagonal Hall, McGlew Road, Glen Forrest.

### 29 Saturday 8:30am–11:30am

 **Birdwalk at Victoria Reservoir**, Canning Mills. Meet in the car park beside the information board at the entrance to the dam. [BirdLife](#)











### 30 Sunday 9am–12:30pm

 **Friends of Kings Park Native Plant Sale** – choose from a huge range of native plants on sale including rare species not often found in commercial nurseries. A list of the species on sale will be available on the Friends of Kings Park [website](#) a few weeks before the event. [Exhibition Ground, Kings Park](#). No registration required.



*Snap up some native plants for your garden at the next [Friends of Kings Park Native Plant Sale](#) on Sunday 30 May. Photo – BGPA.*

## June

- 5 Saturday 9am–12 noon**  
 **Planting at Astley Street Riverpark**, Gosnells. Park off Astley Street near Verna Street intersection, look for the signs pointing the way to the planting site. [AGLG](#).
- 5 Saturday 9am–12 noon**  
 **Planting at Ranford Stream**, Kelmscott. Meet near Kevin Street and Ranford Street, look out for the signs and planting site. [AGLG](#).
- 10 Thursday 8am–11am**  
 **Birdwalk at Baigup Wetlands**, Bayswater. Meet at the car park near the Rowing Club at the end of Milne Street, Bayswater. [BirdLife](#)
- 13 Sunday 9am–12 noon**  
 **City of Gosnells – Bushcare's Big Day Out – Planting at Mills Park**, Beckenham. Meet at the back of the sports oval. [AGLG](#).
- 13 Sunday 1pm–3pm**  
 **Community planting event at Warwick Conservation Reserve**. Meet at the Warwick Bowling Club car park on Lloyd Drive. Look for the banners. [Friends of Warwick Bushland](#)
- 19 Saturday 9am–12 noon**  
 **Planting at Brixton Street Wetlands**, Kenwick. Meet near the intersection of Alton and Brixton Streets Kenwick, near the shelter. [AGLG](#).
- 20 Sunday 9am–12 noon**  
 **Planting at Banyowla Regional Park along Wright Brook** in Kelmscott. Meet off Turner Road in Kelmscott, look for the signs pointing the way to the planting site. [AGLG](#).
- 26 Saturday 830am–11:30am**  
 **Birdwalk at Wungong Gorge**. Meet at the first car park for Wungong Dam at the end of Admiral Road, off Albany Highway. [BirdLife](#)
- 26 Saturday 9am–12 noon**  
 **Planting at along the Canning River at Homestead Park**, Thornlie. Park off Parkside Drive and look for the signs pointing the way to the planting site. [AGLG](#).
- 27 Sunday 9am–12 noon**  
 **Planting along the Wungong River at Cam Clay Reserve**, Seville Grove. Meet off Riverside Lane, look for the signs pointing the way to the planting site. [AGLG](#).

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.**

**Wettenhall Environmental Trust** small environmental grants scheme funding research and educational projects on flora and fauna conservation. [Applications open 1 April.](#)

The State NRM Program's **Community Collaboration Grants** support collaborative projects targeting regenerative practices, conservation of biodiversity, biosecurity, invasive species management, and management plan development for grants of up to \$500,000. [Submissions close 6 April.](#)

**Australian Bird Environment Foundation Community Grants** aim to support practical community-based projects which deliver bird and habitat conservation impacts. Grants of up to \$5,000 are available for hands-on community projects, supporting support participation in BirdLife Australia's core programs. [Applications close 30 April.](#)

**Australian Geographic Society** has Project [Sponsorships](#) available for up to \$5,000, with funding available for community conservation initiatives including wildlife rescue and rehabilitation, plant and animal education programs, and bush conservation. [Applications close 30 April.](#)



The State NRM Program's **Community Stewardship Grants** are available for projects which help conserve a local natural area, protect Western Australia's biodiversity, promote regenerative practices and support the capability of NRM community groups across the State. [Small grants](#) of \$1,000–\$35,000 and [large grants](#) of \$35,001–\$450,000 are available, with applications **closing 17 May.**

**Impact100 WA's 2021 Grant Round** is now open, with their environment focus area funding grants of \$100,000 to initiatives that restore, preserve, revitalise or enhance the natural or recreational surroundings of Western Australia. [Book a place](#) to attend a workshop to guide and answer questions for potential applicants, held at 10am Wednesday 7 April in the Perth CBD. Initial grant applications **close 28 May.**

**NAB Foundation Community Grants offers funding** for projects that help prepare the community to deal with natural disasters, support long-term recovery, and build resilience. Grants of up to \$10,000 are available to fund local projects aiming to strengthen the environment through initiatives such as urban greening. [Applications close 30 July.](#)

**Local government community grants** These local governments provide small grants to their communities which fund environmental groups' management and restoration projects. Eligibility varies. [Augusta-Margaret River closes 20 April](#), [Broome closes 6 April](#), [Canning closes 28 May](#), [Cottesloe closes 30 April](#), [Geraldton closes 26 May](#), [Gosnells closes 16 April](#), [Rockingham closes 7 May](#), [Subiaco closes 6 July](#), [Wanneroo open year round.](#)

## Highlights

### On now – 26 April

**Songlines: Tracking the Seven Sisters** is an [exhibition](#) featuring paintings, sculptures, ceramics and multimedia, where visitors 'walk' the Seven Sisters songlines. The project was initiated by Aboriginal elders, who wanted to preserve the Seven Sisters stories and promote a broader understanding of songlines, which are both complex spiritual pathways and vehicles for naming and locating waterholes and food sources critical for desert survival. Special Exhibitions Gallery, Western Australian Museum Boola Bardip. Free entry.

### April – June

**Nearer to Nature** is offering free excursions for students to learn about healthy waterways to Waterwise Schools that book before 30 June 2021. There are 10 great Waterwise programs and three locations to choose from: Perth Hills Discovery Centre, Canning River Eco Education Centre (CREEC) and Bunbury. To find out more [email](#) or call 9295 2244.

### 5–16 April

**Nearer to Nature Autumn's Aura program** offers hands-on nature-based activities for kids and families over the school holidays. With locations across the Perth metro area and a variety of different themes, there is something for everyone to enjoy. Head to the [website](#) or call 9295 2244 for more information or to book.

### 9 April, 14 May, 9 August, or 6 September 8:30am–4pm

**Aquatic weed management training** at the Canning River Eco Education Centre, Wilson. Bookings \$55 for paid employees or free for volunteers of community environment groups (maximum two volunteers per group per year). Monday 9 August will be a Decision Makers Training day, tailored for staff in organisations that make operational and financial decisions regarding management of aquatic weeds. Contact Amy Krupa 9458 5664 or [email](#) to register.

### 11–18 April

[Take part](#) in the **Autumn Wild Pollinator Count** and help build the database of Australian wild pollinators by watching a flowering plant for ten minutes and counting native insects.

### 20 April 7:30pm–9pm

**The 2021 Serventy Memorial Lecture** will be [presented by Sabrina Hahn](#) on creating habitat corridors for wildlife in urban areas. Social Sciences Lecture Theatre, UWA. [Tickets](#) \$20, students \$15.

### 21 April 6:15pm–8:30pm

**Fire Climate Interactions: What Does the Future Look Like for Our Biodiversity?** an interactive presentation by Joe Fontaine about fire disturbance, its interaction with climate change, and how bushfire and climate is impacting natural bushland and biodiversity. City of Armadale Function Room, 7 Orchard Avenue, Armadale. Bookings essential. RSVP by 14 April by phone (9394 5862) or [email](#).

### 28 April, registration from 7:30am

**Making Higher Density Development & Green Infrastructure Integration Happen Conference** This [conference](#) aims to tackle the integration of urban greening with below ground services, and trees into living spaces. State Government Ministers and experts join force to provide perspectives and practical recommendations for local government and commercial organisations alike. [Tickets](#) \$174.34 (includes GST and booking fee).



*Left: Get up close to a range of animals on many of [Nearer to Nature's programs](#), including incredible birds of prey on Whoo's Who and Seize and Capture. Photo – DBCA.*

*Right: Nearer to Nature offers 10 great [Waterwise programs](#) for schools at three locations. The Testing Testing H<sub>2</sub>O program is held at Kent Street Weir, an ideal place to compare two river systems. Students assess pH, salinity, turbidity, dissolved oxygen and nutrient levels up and downstream of the weir and water quality data is compared and discussed in terms of impacts on aquatic life and the long-term management of the Canning River. Photo – DBCA.*

### 17–19 May

**Pint of Science Festival** is forgoing their usual in-person pub events and going [online](#) for 2021. Pint of Science Australia 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.

### 25–27 May

**18th Australasian Vertebrate Pest Conference [Feral Futures 2051](#)** will be held virtually for 2021. Looking 30 years into the future, the conference is looking to promote the knowledge, new technologies and innovations that may shape vertebrate pest management in 2051 and beyond. [Register online](#).

### 4–5 June

**Fire and Biodiversity Forum** Shire of Augusta – Margaret River. Presentations on Friday 4 June with optional field trips and workshops on the following day Saturday 5 June. Contact Carole Peters (convenor) by [email](#) for further information.

### 14–15 June

**Online EcoSummit 2021** will be a prelude to the live EcoSummit event planned for 30 May – 4 June 2022 at the Gold Coast. The theme of the summit is 'Building a sustainable and desirable future: adapting to a changing land and sea-scape'. The [Online EcoSummit 2021](#) will be focused on the co-production of papers and special issues with an opportunity for participants to present current work and formulate new works in collaboration with colleagues worldwide.

### 22–23 June

The **Orchid Conservation Symposium** is a [free online event](#) by the Australian Network for Plant Conservation in collaboration with La Trobe University. Held over two days, the symposium will provide a forum to increase awareness of the ecology and conservation of orchids amongst practitioners. Subscribe to the [symposium mailing list](#) to receive updates.

### 4–6 August

**2021 National Landcare Conference** will be held at the International Convention Centre, Sydney. Visit the [website](#) or [email](#) for more information.

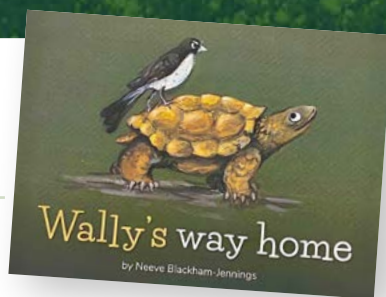
### 5–9 September

**Australasian Seed Science Conference** has [confirmed new dates](#) for the conference to be held at the Australian National Botanic Gardens, Canberra.



## New publications

**Wally's Way Home** Blackham-Jennings, Neeve. [Western Australian Naturalists Club](#), 2020. \$15. Written and illustrated by 15-year-old Neeve Blackham-Jennings, who wrote this children's book as part of a class project at Perth Waldorf School, which aimed to challenge students to make the world a better place. Neeve chose to write and illustrate a children's book to raise awareness, funds and support for the protection of the western swamp tortoise, a Critically Endangered local species. With funds from the WA Naturalists' Club donated to help publish the book, Neeve is selling Wally's Way Home to raise funds for the Friends of the Western Swamp Tortoise.



**Environmental Offsets** Burgin, Shelley, Tor Hundloe (Editors). *CSIRO Publishing*, 2021. \$70. Currently, the world is facing significant challenges in environmental management that we must address in order to maintain the health of our planet and population. Few countries have fully legislated carbon offsetting or put into operation other offset policies. This book aims to fill the knowledge gap on environmental offsets, from theory to practice, illustrating what works, what doesn't, and guiding a way forward for the future.

**Photographing our brilliant West Australian Birds & Wildflowers** Tate, Chris. *Have a Go News*, 2020. \$25. Award-winning Western Australian nature photographer Chris Tate offers useful photography tips, without being too technical, on how to take better photos of flowers and wildlife on your camera, phones, tablets and other devices. Learn how to compose images, what to leave out, and how to approach native birds without scaring them away. To purchase the book, call the Have a Go News office on 9227 8283 or fill in an [order form](#).



**Flames of Extinction: The Race to Save Australia's Threatened Wildlife** Pickrell, John. *NewSouth Publishing*, 2021. \$32. Scientists estimate more than three billion native animals were killed or displaced during Australia's 2019–20 Black Summer bushfire season. Many species are on the path to extinction, threatened by mega-blazes and the changing climate. This book investigates the effects of the 2019–20 bushfires on Australian wildlife and ecosystems, explores stories of creatures that escaped the flames, the wildlife workers who rescued them, and the conservationists, land managers, Aboriginal rangers, ecologists and firefighters on the front line. Pickrell also reveals new conservation methods being trialled to save as many species from extinction as possible.



## Recent Research

Crawford A, Cuneo P, Phillips G, Duval D, Guerin J, Wood J, Wrigley D (2020) News from the Australian seed bank partnership: Seed banks respond to the bushfires with collecting, research and restoration [Australasian Plant Conservation: Journal of the Australian Network for Plant Conservation](#) 29 (1), 35–37.

Dziminski MA, Carpenter FM, Morris F. (2021) Monitoring the abundance of wild and reintroduced bilby populations [The Journal of Wildlife Management](#) 85: 240-253.

Foreman-Worsley R, Finka LR, Ward SJ, Farnworth MJ (2021) Indoors or Outdoors? An International Exploration of Owner Demographics and Decision Making Associated with Lifestyle of Pet Cats [Animals](#) 11 (2): 253.

Kildisheva OA, Dixon KW, Silveira FAO, Chapman T, Di Sacco A, Mondoni A, Turner SR, Cross AT (2020) Dormancy and germination: making every seed count in restoration [Restoration Ecology](#) 28, S256–S265.

Lohr MT, Krauss SL, Spencer PBS, Anthony JM, Burbidge AH, Davis RA (2020) Widespread genetic connectivity in Australia's most common owl, despite extensive habitat fragmentation [Emu: Austral Ornithology](#) 120, 249–259.

Prendergast, KS, Ollerton J (2021) Plant-pollinator networks in Australian urban bushland remnants are not structurally equivalent to those in residential gardens [Urban Ecosystems](#).

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## Website watch

**Final Report of the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)** by Professor Graeme Samuel AC is available to [read online](#). The report concludes that the EPBC Act as it stands is complex and cumbersome, and does not serve the interests of the environment, which is in a state of decline and under increasing threat. The review indicates that fundamental reform to the EPBC Act is required to deliver adequate protection of the environment and to accommodate sustainable development for Australia's future, with [38 recommendations](#) given for reforms needed to reverse the current state of environmental decline.

**How the waters came to be** [Binjareb Gabi Wonga](#), our water story for the Bindjareb Boodja in Western Australia by Franklyn Nannup and George Walley, Bindjareb Elders and community leaders.

**Plants Grow Here** [podcast](#): enter a hidden world of ecological, horticultural and landscape gardening knowledge with featured experts, industry professionals and enthusiasts.

**Perth Urban Greening Retrofit: A Case Study for Planning Urban Greening Projects** This [NatureLink Perth intern project](#) explores a case study of a small urban greening retrofit project, 'Greening Greenslade' in Hamilton Hill. With increasing recognition for the value of urban greenspace, the report aims to put academic theory to practice, and provide insight to help others in implementing their own urban greening projects.

**Introduction to Sustainability** is a one-hour [visual webinar](#) for early childhood educators by Little Green Steps. Learn starting points for actions and infrastructure changes you can make to early years settings, with two videos of sample activities and links to resources included. [Access the webinar](#) for \$33.



**Quoll Farm** is a documentary following a family of charismatic quolls living on an abandoned farm in Tasmania, and one man's devotion to saving them. Available to watch on [ABC iView](#) until 14 June.

**Glyphosate: a chemical to understand** is a [report](#) by Tim Low and [produced by the Invasive Species Council](#) in an effort to reconcile divergent findings on the safety concerns of glyphosate and to consider the potential effects of a ban in Australia.

**Mayakeniny** showcases **Djert**, videos where you can [learn bird names in Noongar](#) with Dr. Roma Yibiyung Winmar, Kylie Bracknell, and Rubeun Yorkshire. The webisodes are in Noongar only, to give you practice listening to spoken Noongar. Look up any words you don't know in the [wordlist provided](#).



[Learn the names of birds in Noongar](#) with Kylie Bracknell, Rubeun Yorkshire (pictured), and Dr. Roma Yibiyung Winmar. Here is one Noongar bird name you might already be familiar with – the djidi djidi (willy wagtail)!

**Landcare Checks In** is an informal [online Zoom chat](#) where you can talk with other landcarers about current issues, concerns and stories. [Register](#) to receive the fortnightly zoom meeting link on Mondays from 2–3pm, or [visit the website](#) to catch up on previous recorded sessions.

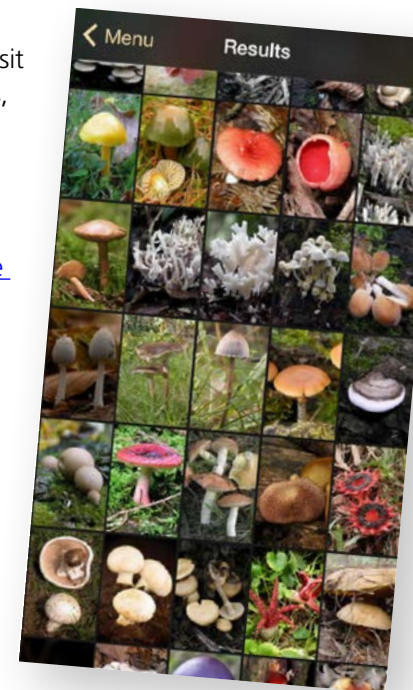
**The Council of Australasian Weed Societies** has complete proceedings from [all past conferences](#) available online, right back to 1954!

## Apps

**Snap Send Solve** [app](#) Spotted an issue in your community like dumped rubbish? Take a photo and report community issues to your local council quickly and easily while you're out and about via this app. Available for free from the [App Store](#) or [Google Play](#).

**Play Trails** [app](#) takes traditional scavenger hunt games to another level. Using the app, players can visit trail locations to unlock challenges, solve quiz questions and score points. With new trails launched regularly, keep checking back for the latest updates. Available for free from the [App Store](#) or [Google Play](#).

**iFungi Au** is a [phone app](#) for identifying Australian fungi. It helps you with fast identification of around 500 species based on shape and colour features. View photos, illustrated tables, detailed information and fun facts. Available for \$4.99 from the [App Store](#) or \$3.49 from [Google Play](#).





# bunny orchids

By Karen Clarke

Photo – John Anderson.

One of the earliest orchids to flower, bunny orchids have charming little faces and conspicuous downward pointing bunny ears. They have small, delicate flowers only a few centimetres big that can look like furry-bodied little gnomes. Endemic to Australia, most species occur only in the south-west of Western Australia. There are nine species, six with white flowers and three that are pink. Most flower through autumn and winter with a few species flowering in spring. The genus name, *Eriochilus*, means 'woolly lip' in Greek and refers to the highly modified petal that creates a furry lip at the centre of the flower.

In the Perth area, the white bunny orchid (*Eriochilus dilatatus*) pictured here is most common. It can be found in good condition shrublands, woodlands and forests on our sandy coastal soils but they can be elusive as you usually only find single plants here and there. Look downwards about 10 to 30cm above the ground for the flash of white bunny ears among the green undergrowth.

The flower is specialised for pollination by native bees. The bunny ears are formed by two sepals that extend below either side of the flower's centre. They act as flags and runway markers guiding native bees into the flower. The furry lip acts as an easy to grip landing pad for the bees and has two maroon stripes to guide them towards the narrow chamber at the base containing nectar. To get the nectar the bee has to push its way into the chamber, and these specific movements release the pollen bundles from above and stick them to the bee's body. At the next bunny orchid, if it is ready to be pollinated, the female part of the flower will be sticky, and the pollen will detach from the bee's body and fertilise the flower. Other insects visiting the flowers are unlikely to remove or deposit the pollen bundles as they are not the right size and shape.

Are there bunny orchids hiding in your local bushland?