

bushland news



Issue 131 **Spring** 2024 *Time of Djilba and Kambarang in the Noongar calendar.*

Honeymyrtle shrubland gains federal protection

Photo – Julia Cullity



Department of Biodiversity,
Conservation and Attractions



Bushland News is a quarterly newsletter of the Urban Nature program to support community involvement in bushland conservation.

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

Next issue

Summer *Bushland News*

Summer *Bushland News* contributions should be sent to [Urban Nature](#) by **12 November 2024**. *Bushland News* seeks original contributions. If your submission has been or may be published elsewhere please let us know. Compiled and edited by Julia Cullity.

Honeymyrtle shrubland gains federal protection

By Julia Cullity

Honeymyrtle shrubland is a rare ecological community that occurs in relatively small areas on the shallow soils of limestone ridge tops and ridge slopes north and south of Perth between Guilderton and Preston Beach. There are fewer than 100 known patches totalling 211ha in area. It is a unique assemblage of plants, animals and other organisms associated with shrubland or heath dominated by chenille honeymyrtle (*Melaleuca huegelii*), coastal honeymyrtle (*M. systema*) and, or parrot bush (*Banksia sessilis*) above a diverse ground layer of herbs, sedges, rushes, mosses and occasional grasses. It provides feeding resources for birds and mammals and the rocky and sandy substrates provide reptile basking sites with the shrub layer giving safe cover.

It is now protected by [State](#) and [federal](#) listing as a threatened ecological community.

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*Front cover: Honeymyrtle shrublands occur on skeletal soils on the top and slopes of limestone ridges on the Swan Coastal Plain. The dominant species are chenille honeymyrtle (*Melaleuca huegelii*) seen emerging above the other shrubs to the left and coastal honeymyrtle (*M. systema*) in the foreground. Photo – Julia Cullity.*



This ecological community typically has high species richness with an average of 50 species per 100m². The ground layer contains numerous herbs (including grasses) and smaller shrubs and may develop a mossy ground cover. Limestone often outcrops on the surface and may form gnamma holes which collect rainwater, important for wildlife and of cultural significance to Noongar Traditional Owners. Photo – Julia Cullity.

Legislative protection

[Honeymyrtle shrubland on limestone ridges of the Swan Coastal Plain Bioregion](#) was listed as critically endangered on 15 November 2023 under the *Environmental Protection and Biodiversity Conservation Act 1999*. This aligns with and reinforces Western Australian legislation as it mostly corresponds to [Melaleuca huegelii – M. systema shrublands of limestone ridges](#), also known as SCP26a, recently uplisted to critically endangered under the *Biodiversity Conservation Act 2016*.

The ecological community will be considered during federal development approval processes as a [matter of national environmental significance](#) to avoid or mitigate significant impacts, and it becomes a potential target for national funding for research, threat abatement and recovery.

It is also a requirement under State law to seek [authorisation](#) from the Minister for Environment for any actions which will damage or destroy ('modify') a threatened ecological community.

Why is it threatened?

Honeymyrtle shrubland has been listed as critically endangered because its distribution is very restricted, coupled with a range of major threats including clearing for quarrying, housing and road building, fire regimes causing declines in biodiversity that may increase with climate change, weed invasion, grazing, and recreational pressure.

Vegetation communities that establish on the shallow soils of limestone ridges were particularly impacted by the [vegetation die-off](#) experienced because of this year's extremely dry and hot summer and autumn.

These conditions are likely to increase with climate change. Species had different thresholds to the extreme conditions and die-off was observed progressing to different species over time. Will species resprout and recover over winter?

Key features

The [conservation advice](#) provides guidance for the conservation, management, and restoration of this critically endangered shrubland. It describes the key diagnostic characteristics.

- **Soil and terrain:** Found on shallow to skeletal soils, on the ridge slopes and tops of limestone ridges and outcrops associated with Tamala Limestone on the Swan Coastal Plain.
- **Vegetation structure:** Dominated by shrubland, heath, or thickets with less than 10 per cent canopy cover of eucalyptus species or other tall trees.
- **Dominant species:** Chenille honeymyrtle (*Melaleuca huegelii*), coastal honeymyrtle (*M. systema*), and/or parrot bush (*Banksia sessilis*), commonly over dune Moses (*Acacia lasiocarpa*), spider net grevillea (*Grevillea preissii*), and basket bush (*Spyridium globulosum*).
- **Ground layer:** Typically rich with numerous herbs (including grasses) and smaller shrubs and may develop a mossy ground cover.
- **Minimum patch size:** 100m², although the smallest known occurrence is 400m².
- **Condition threshold:** There is no condition threshold because less than 250ha remains and all areas of this ecological community are critical to its survival.



The long unburnt mature trunks of chenille honeymyrtle, below is outcropping limestone with a diverse lower native shrub and herb layer. Quarrying for limestone has been known to impact this threatened ecological community and is a potential threat to occurrences on insecure tenure. Photo – Grazyna Paczkowska.

This ecological community typically has high species richness with 50 species per 100m² found on average during the [floristic survey of the southern Swan Coastal Plain](#).

Continued next page ...



Vegetation die-off was severe in shallow soils in limestone outcrops. Manning Ridge took a battering in April. Photo – Julia Cullity.

It is important to note that not all occurrences of the federally listed honeymyrtle shrubland ecological community will correspond to the state listed *Melaleuca huegelii* – *M. systema* shrublands of limestone ridges (SCP26a) due to variations in how they are defined. The document [Methods for survey and identification of Western Australian threatened ecological communities](#) provides descriptions, key references, characteristics and survey methods to support a consistent approach to assigning State-

listed threatened ecological communities, including SCP26a. To identify whether areas of limestone ridges are SCP26a, the recommended methods described in Appendix 1 of that document must be followed. These include establishing 10x10m quadrats, compiling comprehensive species lists, and undertaking a statistical analysis to compare the new quadrat data to the original dataset in '[A floristic survey of the southern Swan Coastal Plain](#)', the report in which the community was first described.

Continued next page ...



Long unburnt sites often develop a mossy ground cover. Photo – Julia Cullity.

Conservation actions

The overarching principle is to maintain existing occurrences of this ecological community. Priority conservation and research actions include:

- preventing further clearance and construction of new trails within patches
- maintaining the condition of patches and connections between patches and buffering bushland
- acquiring more patches in formal conservation reserves
- restoring with strategic weed and fire management
- supporting regeneration to full maturity after disturbance by managing access, invasive species, and grazing
- promoting awareness and encouraging people to contribute to recovery actions
- research into community extent, fire response and impacts of climate change, restoration and management techniques.

Work has already begun on the need to raise awareness with the Urban Bushland Council hosting the Limestone Karst Ecosystems and Honeymyrtle Shrubland [symposium](#). This community will also be one of Urban Nature's focal areas in the landscape this year. If you think you have found any new patches please fill out a [threatened ecological community report form](#).

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Honeymyrtle shrubland regenerating after a hot summer bushfire in a previously long unburnt patch. There was no resprouting from the heath canopy but fantastic regeneration from seed. All the shrub canopy is the same age and height. Too frequent fires will pose serious threats to this plant community. Photo – Julia Cullity.

Urban Nature update

By Julia Cullity

I'm back from long service leave and I would like to thank Alex Hutchinson and Will Fowler for the great job they both did filling in for me. They produced two interesting, information-packed issues of *Bushland News* and began the groundwork for a number of projects that I will continue. This includes management recommendations for Port Kennedy Scientific Park and assessing potential habitat for threatened native short-tongued bees, monitoring the persistence of known populations and searching for new populations. We will also be looking at trialing new, non-destructive, sensitive and cost-effective survey methods for short-tongued bees using [eDNA](#).

Grazyna and I spent most of winter in the field assessing, mapping and producing management programs for weeds impacting priority landscape reserves in the Swan Region. Our focus in spring will continue fieldwork assessing the values and threatening processes impacting several threatened ecological communities including our covergirl the honeymyrtle shrublands, species rich banksia woodlands, clay-based wetlands and the Perth to Gingin northern ironstones.

We will continue our herbicide trial to find a new selective herbicide for watsonia control in bushland, and we will begin to trial herbicide weed management in the Perth to Gingin northern ironstone threatened ecological community.

To streamline the production of *Bushland News* we are no longer collating the Resources section and we are seeking a contract editor. [Contact Julia](#) if you are an excellent writer, have good networks with Perth's bushland management community and would like to work on *Bushland News*.



Alex Hutchinson (left) took on a role at Urban Nature for the start of Julia's long service leave. Alex began some important work on mapping the known area of occupancy for threatened short-tongued bees and mapping potential habitat to search for new populations. Photo – DBCA.

Will Fowler (right) took over from Alex to keep the Urban Nature team running smoothly. Here Will and Julia, after her return from leave, are assessing honeymyrtle shrublands at the southern part of their range to see if these occurrences of the threatened ecological community were impacted by the extreme temperatures and lack of rain this summer and autumn. We were pleasantly surprised that vegetation die-off was not extreme or widespread and limited to a few species. Photo – Julia Cullity.

Above: In July, the Friends of Paganoni Swamp and DBCA spent a week mapping the weeds in a newly added area to west of Paganoni Swamp. The 60ha site has a variety of different ecosystems ranging from tuart woodlands to coastal shrublands. There might be also a new occurrence of honeymyrtle shrubland that will need further detailed spring survey to confirm if it is a threatened ecological community. Cat Williams from SERCUL (centre in red) joined us for part of the mapping. Cat, who over the years has provided outstanding support to the Friends of Paganoni Swamp and has a very productive working relationship with DBCA, has won the 2023/2024 Western Australia Landcare Awards, Woman in Landcare Award. Congratulations to Cat. Photo – Grazyna Paczkowska.

Determining our national established weed priorities By Michelle Crow

The [National Established Weed Priorities](#) (NEWP) is a collaborative initiative between community, industry and government to determine and address weed priorities through nationally coordinated actions. NEWP's objective is to reduce the further spread and impact of established weeds across Australia.

Weeds adversely impact our natural environment, agricultural productivity, cultural values, human health and community spaces. They have a major impact on Australia's agricultural productivity, imposing a cost of nearly \$4.3 billion across Australia each year.



Submit an EOI to nominate a nationally significant weed

Weed must be:

- ✓ **Not native to Australia**
- ✓ **Not under eradication**
- ✓ **Established in at least one state/territory**
- ✓ **A single species or small group of closely related species.**

Step 1 now open!

Now is your opportunity to help determine national established weed priorities.

Through this nomination process for nationally significant weeds, the Environment and Invasives Committee are seeking to identify non-native weeds that:

- cause the most significant impacts (current and potential) on Australia's natural environment, agricultural productivity, cultural values or community spaces
- have feasible management options to reduce these impacts
- have stakeholder support and clear benefits for taking a nationally coordinated approach to containing the species' spread and improving its management.

The process

Before applying, make sure you've read the [Guide to nominating a nationally significant weed](#) that explains the process. An expression of interest is the first step, and to be eligible, the weed must:

- be a single species or a small group of closely related species that are similar in life-form and management requirements
- not be native to Australia
- not be under [national eradication](#)
- established in at least one state or territory.

Prior weed nominations, such as through the Weed Biocontrol or Weed Scan projects, will not be considered for this process. Expressions of interest **close 20 September 2024.**

Nomination process: nationally significant weed



- 1 Expression of interest**
Seeks to avoid duplicate nominations and join up organisations planning to nominate the same weed/groups of weeds.
- 2 Nomination process**
Requests supporting information on the weeds/groups of weeds against the assessment criteria
- 3 Assessment**
Involves two stages: preliminary assessment and detailed assessment
- 4 Review and approval**
Supports a robust review and approval process, with oversight from the cross-sectoral NEWP steering group

Contact

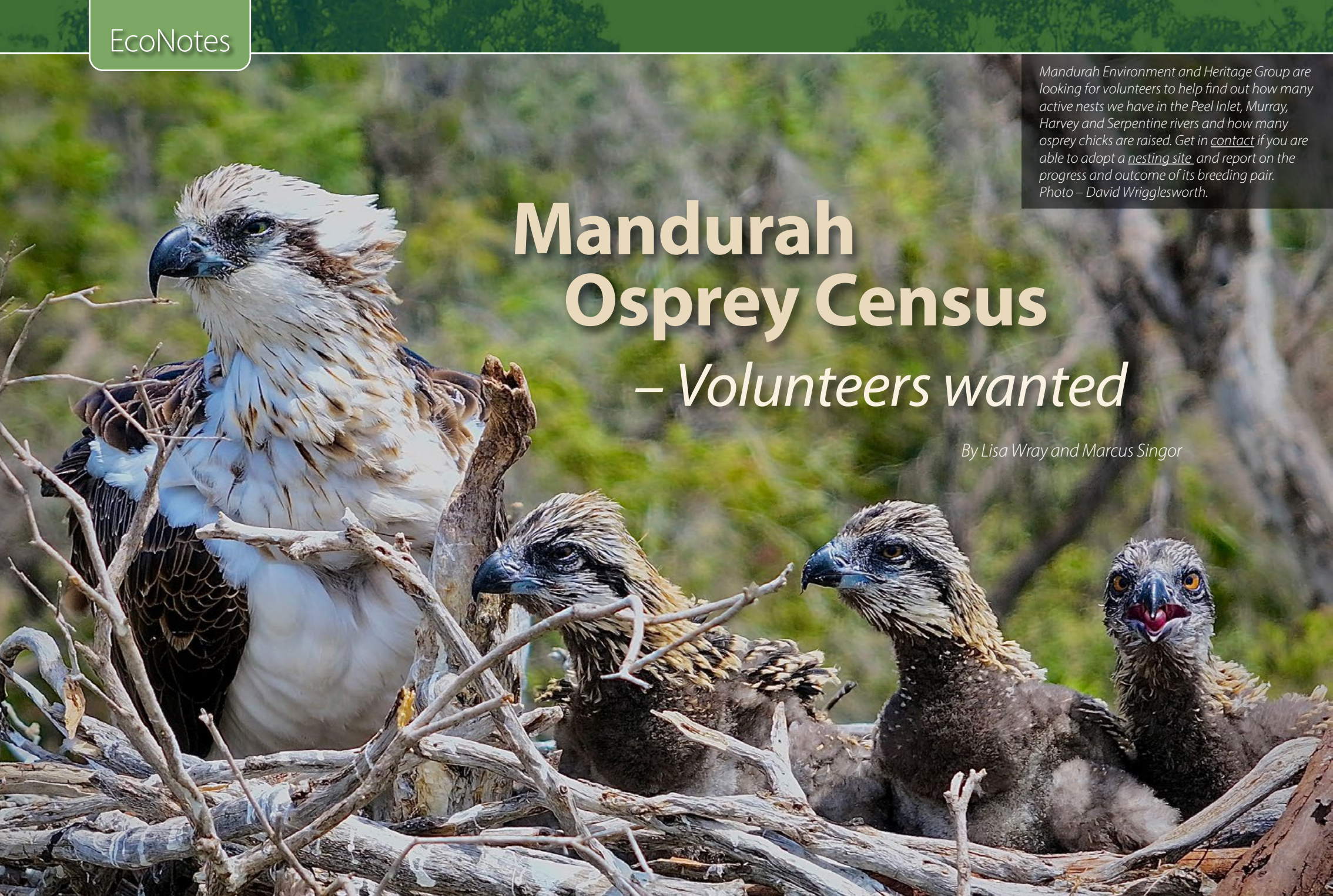
National Established Weed Priorities project team
email weedpriorities@aff.gov.au
web weeds.org.au/national-established-weed-priorities-newp

Mandurah Environment and Heritage Group are looking for volunteers to help find out how many active nests we have in the Peel Inlet, Murray, Harvey and Serpentine rivers and how many osprey chicks are raised. Get in [contact](#) if you are able to adopt a [nesting site](#) and report on the progress and outcome of its breeding pair.
Photo – David Wigglesworth.

Mandurah Osprey Census

– Volunteers wanted

By Lisa Wray and Marcus Singer



Volunteers wanted for the Mandurah osprey census

By Lisa Wray and Marcus Singor

Ospreys are a majestic bird that grace our waterways and inlets as they fly overhead in search of fish. Ospreys execute a spectacular plunge to catch their prey with wings folded back and their legs extended forwards. They will partly submerge and rise out of the water with a large fish.

Ospreys build their nests close to water, in an elevated position and this can even be in a tree in someone's front yard, an artificial nesting platform, mobile phone tower or other tall structure.

One osprey nest can be found on top of the Telstra mobile phone tower on the corner of Pinjarra Road and Forrest Street in Mandurah.

The breeding season starts in May/June when nest repairs are undertaken, and pair bonds are strengthened. Incubation during August and September takes about 36 days and chicks are usually first seen in early October and leave the nest around Christmas time.

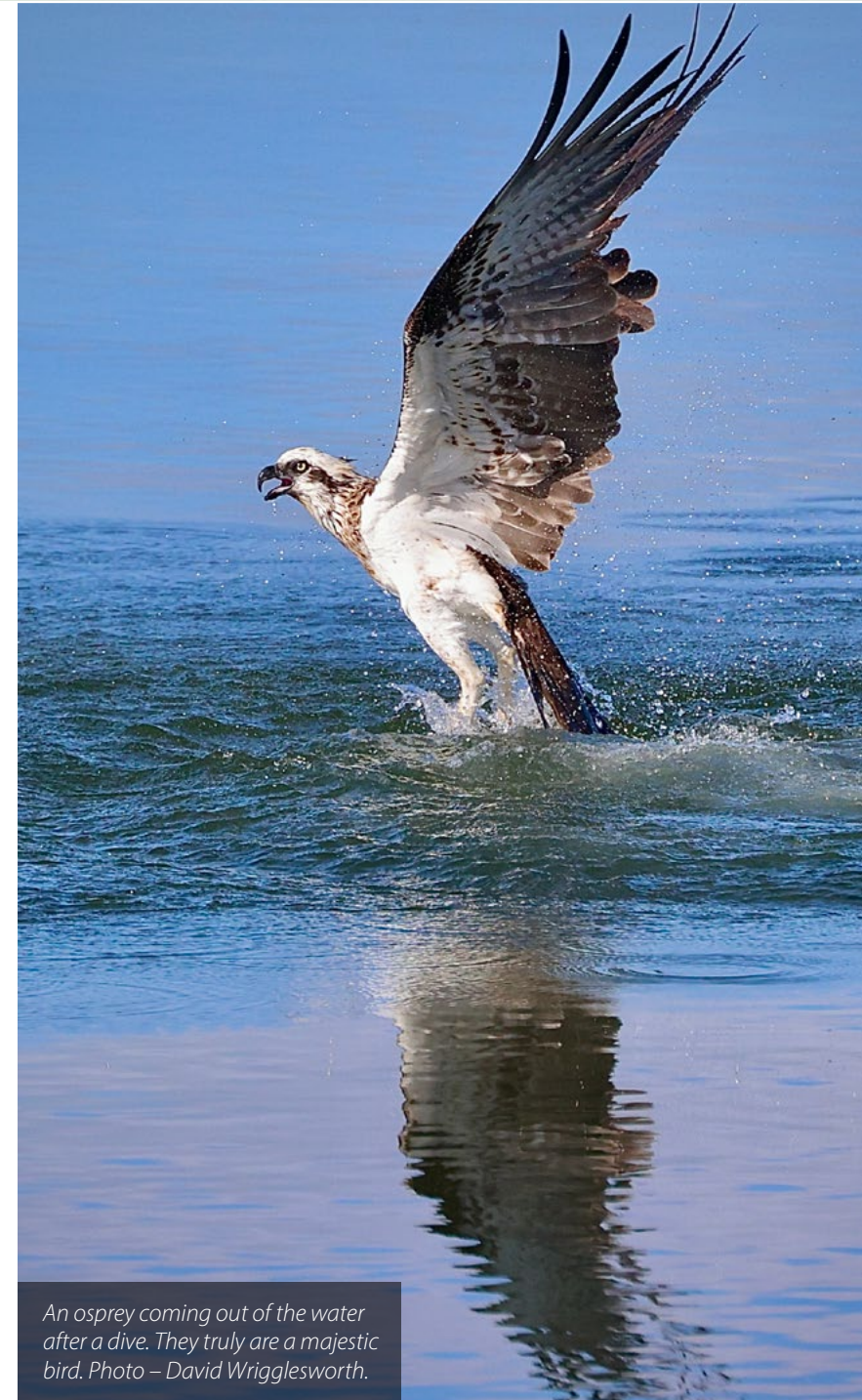
[Mandurah Environment and Heritage Group](#) are working in close conjunction with the City of Mandurah and Department of Biodiversity, Conservation and Attractions (DBCA) to census how many ospreys are breeding around the Peel-Harvey Inlet and along the Serpentine, Murray and Harvey rivers.



Ospreys are an indicator species on the health of the Peel-Harvey Inlet, fish stocks and surrounding habitats. A register of the number of breeding pairs will allow us to monitor future trends.

The Peel-Harvey Inlet has the largest osprey population in the south-west of Western Australia. Although we have surveyed around the Peel-Harvey Inlet and located about 40 Osprey nesting sites, many of these are no longer active or have fallen into disrepair. Ospreys also breed along the Serpentine and Murray rivers. This season we hope to get a better understanding of the distribution of osprey breeding sites around the inlet and we are looking for volunteers who will adopt a [nesting site](#) and report on the progress and outcome of its breeding pair. We are confident that with your help we will be able to find out how many active nests we have and how many osprey chicks are raised.

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An osprey coming out of the water after a dive. They truly are a majestic bird. Photo – David Wrigglesworth.

There are still many nest sites to be discovered and we are keen to hear about these. Some residents might have historical information about a nesting site that they have been monitoring for many years, even decades. This information is very valuable in clarifying the past distribution of ospreys. Some sites can only be surveyed by boat. At present the eastern side of the inlet is poorly surveyed as is the region around the Harvey River.

Ospreys must contend with an increasing number of boats churning up the water, removal of large nesting trees due to housing developments and discarded fishing lines with hooks. Storms will cause nests to collapse, heat waves cause mortality among chicks and Australian ravens continuously harass ospreys.

The Mandurah osprey census is a new project but an osprey census has been conducted in Perth along the Swan and Canning rivers since 2016. [The Perth region](#) has on average six breeding pairs, and they raise eight juveniles each year. Monitoring ospreys around the [Leschenault Estuary](#) near Bunbury have found on average four active nests each year and these raise on average seven juveniles.



Contact

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Ospreys execute a spectacular plunge to catch their prey with wings folded back and their legs extended forwards. They will partly submerge and rise out of the water with a large fish. Photo – David Wrigglesworth.

Listening to bats *By Kelly Sheldrick*

Bats make up about 20 per cent of mammal species and play a vital role in our ecosystem, providing services of pest suppression, seed dispersal and pollination. The [WA Museum](#) lists **42 known bat species within WA**. [IUCN Red List assessments](#), “the world’s most comprehensive information source on the global extinction risk of animal... species”, reports 55 per cent of our WA bat species’ populations are either in decline or unknown. Little is known about many of our bat species; there is a lot of misinformation about bats, and bats are still largely undervalued, under-researched, and missed from conservation management.

During summer 2023/24 the Conservation Council of WA led a [citizen science bat acoustic pilot](#) with the aim to test acoustic methodology, gauge community interest, and identify opportunities for developing a future citizen science bat program that would address some of the challenges that exist in bat conservation and research within the state.

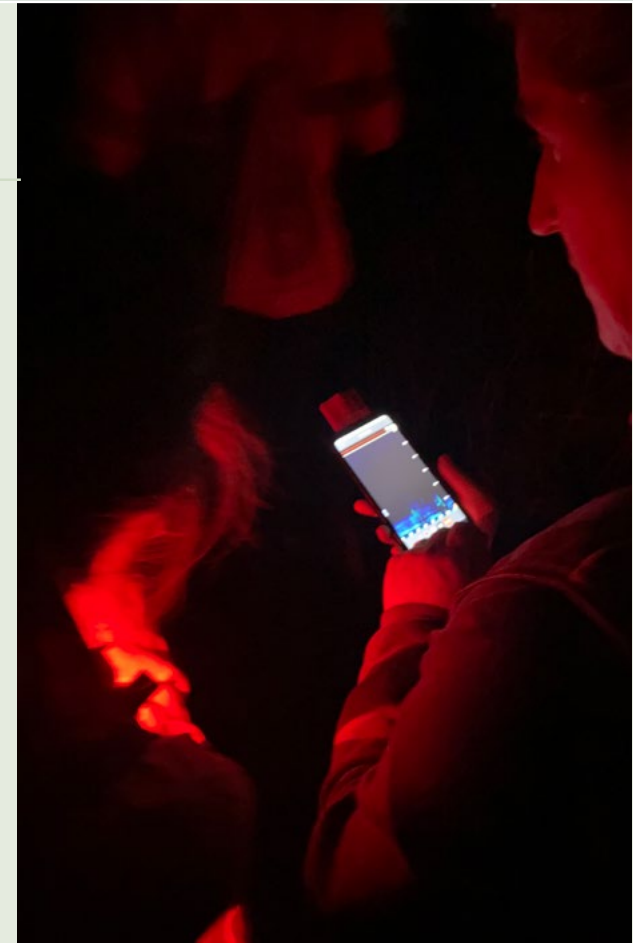
Eighty-six citizen science bat champions spent 369 hours walking 688km and recorded 2,534 bat calls across 22 transect sites established in Perth and the south-west. All acoustically identifiable bat species within the south-west were identified during the surveys except for the western falsistrelle (*Falsistrellus mackenziei*). Gould’s wattled bat (*Chalinolobus gouldii*) was most often recorded with the highest activity being in the urban sites, while the southern forest bat (*Vespadelus regulus*) was recorded more frequently in the rural sites. Additional acoustic surveys were carried out in Northcliffe where the western falsistrelle was recorded using the same methodology.

Bat presence was identified in 94 per cent of the transect surveys indicated from echolocation calls. In addition, 40 per cent of the surveys recorded foraging behaviour and 28 per cent recorded social calls. Bat species presence/activity is determined by the presence of echolocation calls. This is the most common call type picked up because bats will use it for navigating, but also for hunting when feeding buzzes are present. Foraging behaviour is determined by the presence of feeding buzzes within the echolocation call (this is when the bat detects an insect and they change the call when they approach, attack and eat the insect) and social calls are not echolocation calls, but a different type of call that bats can produce. They’re all different and are recorded separately, so you can have echolocation, foraging and social calls recorded on the same survey.

The information obtained from this pilot survey will be used to inform a future bat program.

Want to get involved in bat conservation? Misinformation and a negative perception of bats still pose a risk to bat conservation in WA. This is one of the reasons the WA Bat Network was established. This network aims to act as a platform for sharing information, provide opportunities to meet others, and help us work together to raise awareness of bat conservation in WA. Currently we have a [Facebook group](#) and we’re working on creating a mailing list, which you can join by emailing wabatnetwork@gmail.com.

Continued next page ...



Using Echo Meter Touch 2 bat detectors at Canning River Regional Park during a community bat walk. Photo credit— Jan Saunders.

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Facebook www.facebook.com/groups/wabatnetwork



CitSci Bat Pilot Results Snapshot

November 2023 - February 2024

Bat Training Hub with 5 training videos

18 training and community engagement events

86 Citizen Science Bat Champions spent 369 hours walking 688km and recorded 2,534 bat calls

10 guides, resources and training documents

5 detector kit hubs 5 WA regions surveyed

"This program helped me learn about and feel more connected to the bushland around me."

"...My knowledge of bats has improved immensely, and I look forward to learning how to identify all the WA species."

A few other sightings

Motorbike Frog (*Litoria moorei*)

Quenda (*Isodon fusciventer*)

Tawny Frogmouth (*Podargus strigoides*)

"The bat program raised the community's awareness of the urban populations of bats. It brought an animal few consider as a resident of their neighbourhood to their attention. People were enthusiastic to learn more and cheerfully walked the transects to hear and hopefully see these animals in action."

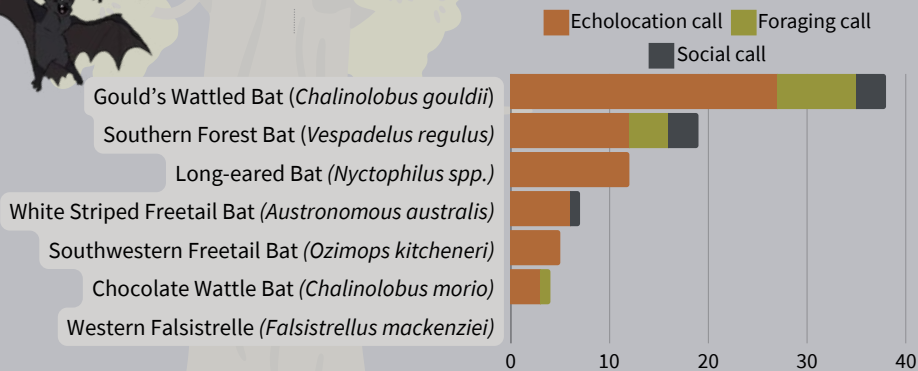


Figure: The number of times a species' echolocation, foraging and social call was recorded on an Echo Meter Touch 2 detector during the 32 acoustic surveys that took place during summer 2023-24.



Thank you to our pilot study funders and donors: Wettenhall Environment Trust, Wildlife Acoustic and Faunotech. A big thank you to our transect volunteers and supporters: City of Wanneroo, City of Canning, Shire of Mundaring, Murdoch University, Southcoast NRM, CREEC, Friends of Koondoola Bushland, Mandurah Environment and Heritage Group, Department of Biodiversity, Conservation and Activities (DBCA), Friends of Yellagonga Regional Park, Friends of Paganoni Swamp, Friends of Chancellor Park, Friends of Trigg Bushland, Friends of Beenyup Swamp, Friends of Cadogan Park, and Green Skills Denmark. And to Opal Byworth for the bat graphics.

All power to the martins By Sophie McHutchison

Tree martins (*Petrochelidon nigricans*) are from a group of small, insectivorous birds that are essential in maintaining the health of native tree species. Unfortunately, the martin population is declining due to the clearing of native woodlands and the large, old trees they nest in. The good news is that tree martins have adapted to nesting in the crossbeams of street power-poles! So, while they will still nest in natural hollows (where they can find them), their persistence in the Perth suburbs now depends on them finding artificial structures to nest in.

A [Wirambi Landcare](#) citizen science survey is underway. Taking place during the martin nesting season, July–January, it aims to find out exactly where they are nesting around Perth, and also estimate the proportion of street power-poles occupied by breeding martins.

We would welcome more participants and eyes in the sky.



Tree martins naturally nest in hollows in large old trees and in Perth are adapting to nest in the cross-beams of street power-poles. The nesting season extends from July through to January and [Wirambi Landcare](#) would love more help in surveying where tree martins are nesting. Photo – Ian Wallace.

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Calling for new quenda counters

By Amanda Kristancic

Thanks to all our keen volunteers, the WWF-Australia Spring Quenda Count has now collected 10 years of data to go towards monitoring populations of the iconic quenda (*Isodon fusciventer*), a species of bandicoot endemic to south-west Western Australia. Although not currently threatened, the quenda is susceptible to threats associated with development, including vehicle strike, introduced predators (including pet cats and dogs), habitat loss and fragmentation. It is therefore listed by DBCA as a Priority 4 species that requires ongoing monitoring.

Each year in spring (beginning of September to end of November), volunteers are asked to look for quenda in their backyard or other accessible sites and simply report the number of quenda they saw and how long they spent looking. On average over the last 10 years, participants have spent between 30-40 minutes each day 'looking for quenda', often while gardening or having a cup of tea on the verandah! This citizen science monitoring project, comprising almost 7,000 surveys over 10 years, has provided invaluable data to help DBCA understand the status of quenda in the Perth metropolitan area.

Data show that the reporting rate of quenda has stayed relatively stable over the last 10 years, which is wonderful news for the conservation status of this species. Despite the threats it faces, quenda is doing well, with strongholds in the Perth Hills, particularly around Kalamunda, Roleystone and Glen Forrest.

In recent years, the number of participants in the Spring Quenda Count has decreased, so we would love to invite new counters to join the fold and let current and previous volunteers know how valuable their contributions are. It's especially important to capture data from areas where quenda might be declining, or where they are no longer seen regularly, as without these observations, scientists may not know that a population is in trouble until it is too late. To those who have taken part and continue to submit data each year, the quenda of Perth say THANK YOU!

[Get in touch](#) if you have any questions or would like to register to take part this year.

Contact

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Quenda or southwestern brown bandicoot are found in the south-west of Western Australia. WWF-Australia are [seeking](#) citizen science volunteers to help monitor population trends in and around Perth. Many quenda are quite familiar with humans and bold like this critter contributing to science on Murdoch University campus. And many quenda counters can take part simply by spending half an hour each day whilst gardening, having a cup of tea on the verandah or a walk in the local park. Photo – Janine Kuehs.

Please send us your regional report (400 words) and one or two photos by Tuesday 12 November 2024. Text may be edited in response to volume of submitted reports.

Owl friendly Cockburn *By Michele Nugent*



Boobook Owl at the City of Cockburn Operations Centre. Second generation rodenticides are [lethal to owls](#) and other birds that prey on rodents. As an owl friendly council the City of Cockburn will no longer use SGARs, will educate about the dangers of these rodent poisons to wildlife, and will encourage all residents and commercial leaseholders to adopt safer rodent control practices.

The City of Cockburn is increasing protection for birds of prey and domestic pets from secondary poisoning caused by eating animals affected by a certain kind of deadly rat poison.

The City of Cockburn is one of Perth's first suburban local governments to declare its owl friendly status, endorsing a [BirdLife Australia Action Kit for Councils](#) to phase out the use of deadly second-generation anticoagulant rodenticides (SGARs). Other councils such as the shires of Augusta-Margaret River, Denmark, Nannup, Fremantle and Mundaring have declared themselves owl friendly.

The city began restricting the use of SGARs in 2023. The recent declaration now enables the city to formally improve rodent pest control, which also includes adding specific actions to its [Natural Area Management Strategy](#).

City of Cockburn Environmental Officer, Lauren Andrews, said the City would develop procedures requiring the use of safer rodent control products, such as rat and mouse traps and first-generation anticoagulant rodenticides (FGARs).

"FGAR rat and mouse bait contains toxins that break down much faster, which means when predatory animals, such as owls and other raptors, eat rats and mice affected by these poisons, they have a lower risk of death because much of the toxic content would have already broken down," Lauren said.

"In comparison, SGARs break down slowly and can build up in rodent tissue for months. This allows more time and opportunity for predators like owls, or even domestic cats and dogs, to consume multiple poisoned rodents and then become subject to secondary poisoning, which can be fatal".

The city will now ensure all commercial pest operators at its own facilities use safer rodent control practices. Lessees of city facilities will be provided advice about the dangers associated with the use of SGARs and will be encouraged to use safer products. "The owl friendly declaration provides recognition that native owls and other raptor species are a crucial part of our ecosystem and help to control pest species," Lauren said. "It's important to know that the use of certain rodent baits around our workplaces, homes and businesses can have a serious impact on our native wildlife and even our own pet cats and dogs."

Becoming owl friendly aligns with the [city's Climate Strategy](#) which aims to conserve biodiversity by implementing the Natural Area Management Strategy.

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Restoration of banksia woodland – a huge commitment for local government *By Sophie Marshall*

The sandpit in the 18ha Jirdarup Precinct in Victoria Park has seen many uses over the last 80 years, but in the past decade it has remained vacant and fenced off. Following calls from the local community, its restoration is now firmly on the agenda.

The Friends of Jirdarup Bushland have called on the Town of Victoria Park for this restoration for some 20 years, and now the preliminary stages are underway, shaped by the vision and expertise of Professor Kingsley Dixon AO and his team from Curtin University. Professor Dixon is acclaimed internationally for his work in ecological restoration. He created the [International Network for Seed-based Restoration](#) and was foundation Chair of the [Society for Ecological Restoration Australasia](#).

The town's restoration plan is built upon and will continue to rely on involvement from Traditional Owners of the land, the Whadjuk Noongar people, as well as scientists, university students, a wide range of other experts and the community. Formally adopted in 2021 by the Town of Victoria Park, the staged plan includes weed control, seed and planting trials, monitoring the emergence of seedlings, installation of infrastructure followed by ongoing development and maintenance.

The overall goal is the achievement of 5-star restoration, and for the sandpit to be a flourishing jarrah/banksia woodland by 2043.

Dr Shane Turner and Dr Michael Just are two of the Curtin University scientists involved in the restoration process. "No shires or towns have tried to do this kind of restoration at this level," Michael said.

The Jirdarup Precinct contains the 9ha Kensington Bushland [Bush Forever site](#), which is one of the most diverse areas of banksia woodland remaining in the inner Perth district. Almost 70 bird species and 200 native plant species have been seen there, and the expected outcome of complete restoration of the sandpit is a world first for bushland of such a diverse make-up.

Restoration of such a complex area of bushland requires extensive planning and research. The sandpit's contents are a significant challenge for restoration, with industrial waste such as metals and paint particles still present from its previous operation as a heavy vehicle storage site and disposal site for construction materials. The restoration plan will tackle such obstacles and address planting methods for its disturbed soil. "A lot of the revegetation will be challenging for one reason or another, but while the bushland might seem relatively small, it's actually more biodiverse than Kings Park! It's a unique project," Shane said.

In 2024, the focus is on weed control and seed testing, with the Town of Victoria Park beginning a program of seed collection. Seeding trials commenced this winter. For regular updates on the progress of the sandpit restoration, visit our [website](#).

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Doctors Shane Turner (left) and Michael Just from Curtin University are part of the team collaborating with the Town of Victoria Park and the Friends of Jirdarup Bushland to work towards turning an old sandpit into a flourishing jarrah/banksia woodland. Photo – Sophie Marshall.



Local provenance seed collected from Kensington Bushland, an intact, biodiverse bushland adjacent to the sandpit in the Jirdarup Precinct is being assessed and undergoing germination trials for restoration plantings in the sandpit. Photo – Sophie Marshall.

Revisiting our efforts to connect canopies for western ringtail possums

By Kristy Hitchens

Edited reprint with thanks from [South West NRM](#)

Conservation work to benefit the critically endangered western ringtail possum has arrested its decline, but helping them thrive again means creating greater areas of safe habitat, particularly within our urban environments.

That was the aim of South West NRM's \$44,000 [western ringtail possum project](#) carried out between 2019 and 2022. We recruited more than 1,000 community volunteers to help us plant seedlings at specially selected sites across the Bunbury and Busselton-Margaret River regions with a long-term plan to help reconnect tree canopies and improve habitat for western ringtail possums.



Program Manager— Environment Robyn Nicholas, Project Manager Derani Sullivan and Project Officer Jane Putland spent a back-breaking day removing stakes and tree guards recently at Treendale, ensuring established seedlings will continue to thrive. Photo – South West NRM.

The loss and fragmentation of habitat is one of the primary threatening processes for nearly all of Australia's threatened species. As our CEO Dr Manda Page explained in a radio interview with ABC South West, dense habitats where possums can jump across the treetops, reducing their need to come down onto the ground where they become vulnerable to threats like predators and cars, needed to be one of the key conservation efforts. "We get to live in this amazing natural environment that's around us and therefore we are responsible for making sure they don't go extinct and making it as friendly for wildlife as we possibly can," Manda said.

In the wake of record-breaking dry spells over the past year and confronting images of mature [native trees dying en masse](#) in response to the lack of soil moisture, we've nervously started revisiting some of our previous tree planting sites to assess survival rates. So far, we've been pleasantly surprised by the growth of our little seedlings with attrition no higher than the generally expected average for revegetation projects of about 30 per cent.

And what's even more heartening is that [annual citizen science possum tallies](#) throughout the region over the past eight years appear to show the decline of this iconic species has been halted. We believe that our efforts combined with those of government, researchers and local landcare and wildlife groups have played a part in this.

The possum habitat project formed part of a broader investment by the Australian Government's [National Landcare Program](#) in restoring threatened species of the South West region delivered by South West NRM from 2018–2023.



The western ringtail possum is a critically endangered marsupial that are found in only about 10 per cent of their original range. There are three main possum populations left, with the one near Busselton being the largest. Photo – South West NRM.

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Landholders team up to battle weeds

By Trevor Paddenburg

Winter is the perfect time to tackle environmental weeds and people all around the Margaret River area have been working in a team effort. [Nature Conservation Margaret River](#) have received two grants from WA Government's [State NRM](#) to coordinate region-wide programs on arum lily and woody weeds.

For landholders on larger properties who cannot deal with weed infestations on their own, Nature Conservation's [Bush Regeneration Team](#) are available for fee-for-service contract, with all profits going directly back into funding the conservation group's work protecting our environment.

Nature Conservation's [Arum Lily Blitz](#) has almost 2,000 landholders signed with arum lily being controlled across 23,000-plus hectares in the Margaret River region. Their stories highlight how the combined efforts of government agencies, community groups and landholders against the threat of arum lilies is making a real difference. [Register](#) for the Blitz, and receive free [herbicide information](#) and [resources](#).

Augusta local, Jenny Kikeros, coordinates arum lily control for the [Friends of the Cape to Cape Track](#) and says the invasive weed species is now "impacting agricultural land, riparian zones, reserves, residential homes, small land holdings and natural bushland" around Augusta.

But there is good news too thanks to everyone doing their bit. "Farmers, small landholders, residents, the Augusta Margaret River Shire, DBCA, Nature Conservation Margaret River Region, Lower Blackwood



Catchment, Friends Cape to Cape Track, Coastal Care Augusta, Environmental Research Group Augusta, and Augusta Community Development Association are all tackling the problem," she says. "The support from Nigel and the team at Nutrien Ag Solutions Karridale and Bob and his team at Augusta True Value Hardware, where free arum lily control herbicide can be collected, is greatly appreciated. Here's to another blitzing year!"

The worst weedy trees in the region are in the firing line thanks a new two-year Woody Weeds campaign launched by Nature Conservation targeting some of our most problematic weedy trees. Most are from eastern Australia but don't belong in our region, where they can dominate entire areas of bushland. They include three 'weedy wattles'—the Sydney golden wattle, Flinders Range wattle and Australian blackwood—as well as Victorian teatree, sweet pittosporum and olives.

Nature Conservation have produced [videos](#) that put the spotlight on how to identify woody weeds, how to tell them apart from similar native trees that belong in the region, and how to eradicate these woody weeds.

The sun was out and it was fantastic to see nearly 30 local landholders coming together to learn about woody weeds at our "Wattles and Wine" workshop. With Sydney Golden Wattle in full flower, it was the perfect time to be spotting these weeds in the landscape. Some big takeaways for participants were the value in minimising disturbance to soil and understorey plants when undertaking woody weed control and that it pays to be careful and considered in our actions to ensure we aren't facilitating seed spread or damaging native plants and potential habitat in the process. Photo – Obelia Walker.

The Woody Weeds campaign includes funding to be spent on a 50–50 cost sharing basis with landholders located close to high priority bushland, reserves or national parks. "If your property has a woody weed problem and is close to large areas of bushland or a national park, [get in touch](#) because you could be eligible for funding to bring in contractors to remove the shrubs or trees," says Peta Lierich.

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High pathogenicity avian influenza (HPAI): *Know the signs and how to report*

By Dr. Nicole Brook

Not all avian influenza is the same

Avian influenza is an infectious disease primarily affecting birds caused by strains of influenza A virus. Avian influenza strains are classified as low pathogenicity (LPAI) or high pathogenicity (HPAI) based on the severity of the disease the infection causes in poultry.

LPAI strains are commonly found in wild birds and do not usually cause disease. Anseriformes (waterfowl: ducks, swans and geese) and Charadriiformes (gulls, terns and shorebirds) are the main reservoirs for avian influenza A viruses. Occasionally, these LPAI strains can infect poultry when they have contact with wild birds or contaminated food or water sources.

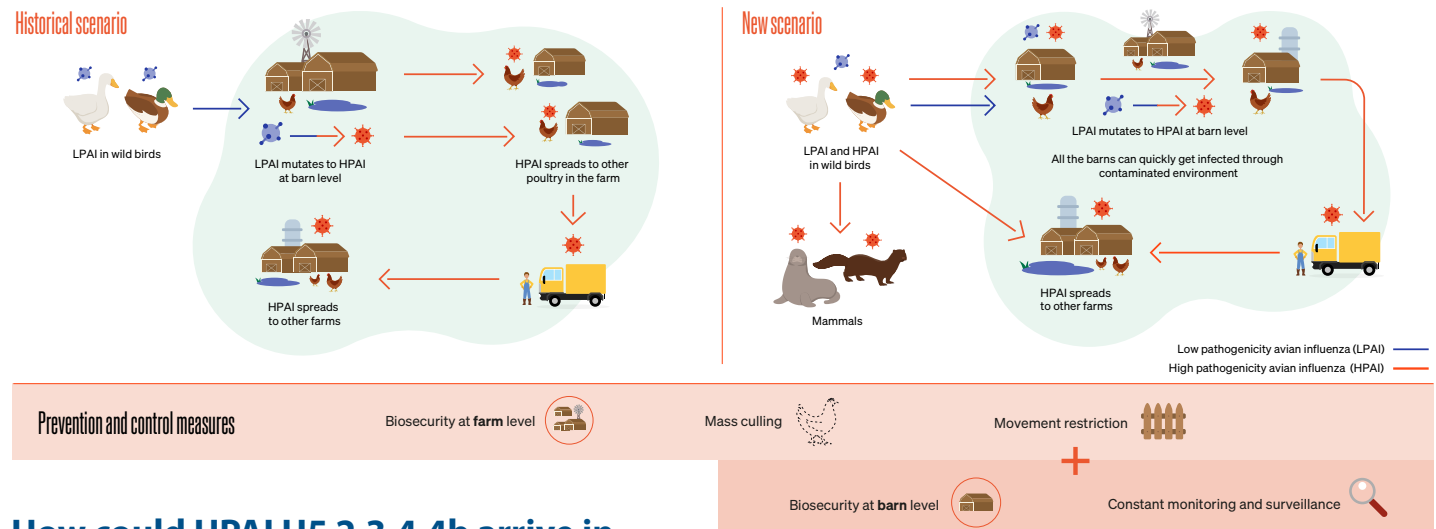
Certain strains of LPAI can cause disease and evolve into HPAI forms in poultry. The most recent outbreaks in Australia occurring in Victoria, New South Wales and the ACT in 2024 were examples of wild bird spillovers to poultry. These outbreaks have been quickly contained on the affected poultry premises and controlled through control and eradication programs.

Since 2021, a new strain of HPAI known as HPAI H5 2.3.4.4b has resulted in severe and widespread disease outbreaks in poultry, wild birds, and wild mammals globally. HPAI H5 2.3.4.4b is different to other HPAI strains. It can cause more severe disease, infect more species including causing significant disease in wild birds and a wide range of mammals, has increased replication and shedding, and persists for longer in the environment.

Thankfully, this strain of avian influenza has not yet reached Australia or New Zealand.

Avian influenza: understanding new dynamics to better combat the disease

The spread patterns of high pathogenicity avian influenza (HPAI) have recently evolved from a historically known scenario to a new one. Both scenarios coexist in the current epidemiological situation



How could HPAI H5 2.3.4.4b arrive in Australia?

In addition to the avian influenza viruses that are already circulating in wild birds in Australia, including Western Australia, there are several pathways that exist for migratory birds carrying influenza virus to enter Australia and introduce exotic strains of the virus.

Australia is closely monitoring the HPAI H5 2.3.4.4b outbreaks overseas. To date, no strains of HPAI virus (including highly pathogenic H5 virus) have ever been detected in any wild birds through current surveillance activities.



The new HPAI H5 2.3.4.4b strain behaves in a very different way to the strains of Avian influenza that have been encountered previously. Historically, LPAI strains would spillover from wild birds into poultry and mutate into HPAI forms leading to outbreaks. The new scenario is very different with HPAI H5 2.3.4.4b being able to infect and cause disease in wild birds and mammals as well as directly infect poultry. Image – World Organisation for Animal Health.

Continued next page ...

Clinical signs

The clinical signs of HPAI can vary between different species of birds and are often non-specific signs of illness and in wild birds can include:

- neurological signs (ataxia, paralysis, seizures, tremors, abnormal posture)
- nasal discharge
- swelling of the head
- laboured breathing
- diarrhoea
- conjunctivitis
- sudden death without prior signs.

Wild mammals infected with the new HPAI H5 2.3.4.4.b may show neurological or respiratory signs as described above or die suddenly without signs.

People who regularly work with or encounter wildlife on a regular basis should become familiar with the [clinical signs](#) associated with avian influenza in wild birds and mammals.

AVOID contact with sick or dead wildlife and their environment. RECORD what you see, the location the animal(s) was found and take photos or video. REPORT to the Emergency Animal Disease Hotline or Wildcare Helpline depending on what you observe.



What to do if you encounter sick or dead birds

Sick and/or dead birds can carry diseases that can infect humans, including avian influenza, and therefore it is recommended you do not touch, handle or remove sick or dead birds. Once you have reported the event, if samples are required, a trained person will submit the bird for testing or collect samples, wearing appropriate personal protective equipment (PPE).

For unusual signs of disease or deaths involving five or more wild birds of any species OR if the disease/death event involves less than five sick or dead wild birds from the following species: seabirds, waterbirds, shorebirds or birds of prey (e.g. eagles, hawks) **Report** to the **24-hour Emergency Animal Disease Hotline** on **1800 675 888**

For signs of disease or deaths in wild birds that DO NOT meet the above criteria **Report** to **WildCare Helpline** on **9474 9055**

For any unusual signs of disease or mass deaths in wildlife, including marine mammals **Report** to the **24-hour Emergency Animal Disease Hotline** on 1800 675 888



A pink foot goose is found dead on a beach in Dumfries, UK. Humans can be infected with HPAI H5 2.3.4.4b so it is important to contact your relevant authorities prior to handling sick or dead birds so they can provide you with appropriate advice about personal protective equipment and sample collection. Photo – Brian Matthews, Solent News, Shutterstock.

Additional resources

We encourage people who work with wildlife or spend time in areas where wildlife is frequently encountered to inform themselves about avian influenza and what to do if they are concerned about something they see or hear. Further information on the current disease situation and preparedness activities can be found at the [World Organisation for Animal Health](#), [Wildlife Health Australia](#) and [OFFLU](#) websites, and the [Biodiversity Council webinar](#).

Contact

Emergency Animal Disease Hotline

phone 1800 675 888

WildCare Helpline

phone 9474 9055

Friends of Quenda Wetland – MUEnSA *By Joshua Burke*

Quenda Wetland Reserve is located approximately 12km south of Perth in the suburb of Murdoch, and occupies 4.2ha, with the wetland and its vegetation taking up 2.9ha of this area. Quenda Wetland, a City of Melville Priority 1 reserve, is situated within the Beeliar Wetland chain that forms a series of lakes running parallel to the coast including Piney, Booragoon and Blue Gum lakes, which form part of [Beeliar Regional Park](#).

Quenda Wetland has an incredibly important pre-colonial history, serving as a critical source of food, shelter, and resources for the Beeliar Noongar people, as well as acting as a vital transport route. Post-colonialism, the surrounding area was transformed for pine plantations, a practice that significantly altered the landscape and ecosystem, leaving lasting impacts that continue to define the wetland's environment today. On top of this, the wetland is now heavily fragmented, due to its location between St John of God and Fiona Stanley hospitals and the Murdoch Drive and South Street intersection. These land use changes necessitate ongoing and continued conservation efforts to restore and protect the wetland's makeup.

The Friends of Quenda Wetland is comprised entirely of student volunteers from the [Murdoch University Environmental Science Association](#) (MUEnSA). We hold an annual event usually consisting of revegetation, weeding, surveys or other bush care techniques.



Ryan Forbister and Madeline Copcutt conducting their tree density survey with Wirambi Landcare at Quenda Wetland Reserve. Photo – MUEnSA



Joshua Burke (left) and Ryan Forbister conducting a flora survey on the tree species found present at Quenda Wetland Reserve. Photo – MUEnSA.

Continued next page ...

MUEnSA, first created in 1997, is a student run club at Murdoch University with a rich history and over 650 active members. Over the past couple of years, events have included flora and fauna surveys in collaboration with [Wirambi Land Care](#), planting days with the [City Of Melville](#), and full weeding days with student volunteers.

The main objectives for Quenda Wetland are to increase education for both the student community and broader local community about the importance of the area for local biodiversity and ecosystem rehabilitation, its revegetation, and also an increased engagement with the annual events at the wetland itself. By fostering a deeper connection between the community and the wetland, we hope to create a lasting connection with the wetland, and therefore, environmental stewardship. The aim is that we can increase the amount of people interested in the conservation of the wetland and the species it houses, helping create the ideal conditions for continued community involvement and succession.

Lessons we've learnt (and are still continuing to learn) during the almost 30 years we have been established and running are centred around community engagement and education, as well as working, communicating, and learning closely with local landcare groups. Over the years, we've cultivated knowledge in student and community volunteers about the local flora and fauna, the threats that face Quenda Wetland, and the consequences we face if the wetland

is not properly cared for. Creating this shared collective knowledge within the community has enabled us to develop strategies that not only address current challenges but also anticipate future needs, helping ensure the long-term sustainability of the wetland.

The future of both MUEnSA and the Quenda Wetland includes recreating our past successes with native propagation. We plan to start a seed collection and native propagation program in order to help both rehabilitate and revegetate Quenda Wetland and other surrounding areas so that the native ecological makeup of the area can be preserved. On top of this, there are ideas to do more flora and fauna surveys in the area, as well as collecting and keeping more data on the populations of species within Quenda Wetland. This resource will not only help us conserve Quenda Wetland better and perceive the major ecological threats, but also help student volunteers learn more about the environment generally, and the ecology of the Swan Coastal Plain specifically, through a local reserve with student stewardship.

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Taylor Duncan (left) and Rosie Atkinson discussing the details of their tree density survey at Quenda Wetland Reserve with a member of Wirambi Landcare. Photo – MUEnSA

Wongan Hills BioBlitz

By Daniel Heald

From Friday 20 to Monday 23 September members of the WA Naturalists Club, WA Insect Studies Society, and other keen naturalists will descend on the Wongan Hills area for the [Great Southern BioBlitz 2024](#) – an international effort by iNaturalist users to record every species they can find, anywhere in the southern hemisphere during this four-day survey period. The [Wongan Hills project](#) focuses on reserves in the Wongan-Ballidu Shire, but any weed, backyard insect, and passing bird are all fair game. On Saturday 21 September participants will search the reserves closest to town and, if weather permits, set up a light trap that evening to attract nocturnal insects for photographs.

Once sightings are uploaded to the iNaturalist website, biologists all over the world will identify them—admittedly a difficult task with some species that have never been photographed before or might even be new to science.

Get in contact if you would like to join us and get details on times, locations and how to use iNaturalist to record your sightings. No experience is necessary apart from access to a camera, good observation skills and a love of nature. You needn't even be at Wongan-Ballidu, since sightings made anywhere in the southern hemisphere on those four days qualify for the [GSB2024 Umbrella Project](#).

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On past visits to Wongan Hills the WA Naturalists have uncovered insects previously unknown from the Wheatbelt such as this *Antissa* soldier fly. The genus wasn't even known from WA before this photo was taken at Dingo Rock. Photo – Daniel Heald.



This scarab beetle *Prochelyna heterodoxa* was also found by WA Naturalists at Reynoldson Reserve many hundred kilometres east of the known populations in the Perth area. Very little is known about this beetle – the elaborate antennae probably help them locate a mate. Photo – Colin Prickett.



Education and learning

The Nearer to Nature Perth and Southwest education team. Mariah fourth from left in the front row and Michelle on the far right in the back row. Photo – DBCA.

Introducing Michelle Sharp and Mariah Lumley as the new Schools Program Coordinators for the [Nearer to Nature](#) programs that you know and love. Mr C recently retired from this position after almost 17 years in the role, and the baton has been handed to Michelle and Mariah—our new N2N dream team—who are reviewing existing programs, updated some oldies but goodies and developing new exciting offerings that are aligned with version nine of the curriculum to meet your every need.

Nearer to Nature Schools offers a [variety of activities](#), including curriculum-linked school incursions, excursions and professional development for primary and secondary students. Nearer to Nature Schools programs focus on key themes including fire in the landscape, threatened species/wildlife recovery, rivers and wetlands, forest and bush ecosystems. We partner with experts in the field including our DBCA scientists, Murdoch University and the Dieback Working Group to bring real world science into our programs.

Students can inject trees with phosphite in the Beelu National Park to prevent them from dying from dieback disease. It's real-world conservation and science embedded in a curriculum linked program. [Dieback - bulldozing our biodiversity](#) program is run from the Perth Hills Discovery Centre.

We have some updated forest programs coming soon! [Subscribe](#) to our newsletter so you don't miss out on new opportunities. If you have suggestions for programs, [let us know](#).

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Landcare Australia Community Grants for projects up to \$20,000. [Applications close 20 September](#).



Ian Potter Foundation supports large \$100,000, multi-year ambitious and transformative environmental initiatives. [Expressions of interest open November 2024](#).

PHCC: Fencing and revegetation of rural drains and waterways is for property owners in the Peel-Harvey Catchment to aid with fencing (up to \$4,500/km) and revegetation (up to \$15,000/ha) to improve water quality of the Peel-Harvey Estuary. Send your [expression of interest](#).

Hamer Sprout Fund up to \$5,000 to promote innovation in environmental education, facilitate engagement in environmental action, advocate for environmental sustainability and foster collaboration between young people engaged in environmental leadership. [Applications close 30 September](#).

Strengthening Rural Communities up to \$10,000 for initiatives that directly and clearly benefit local rural communities. [Applications close 5 September](#).

Wettenhall Environment Trust small environment grants funds fauna and flora conservation around Australia. [Applications open 9 September](#).

Synergy's Community Giving Fund up to \$10,000 for initiatives that deliver positive outcomes for people and the environment across our four key themes; committed to community, environment for the future, inclusivity and empowerment, and energy leadership. [Applications open 19 August](#).

Swan Canning Riverpark Urban Forest Program offers a total \$3 million to public land managers to improve their urban forests in the Swan Canning catchment. Approach your public land manager to partner in projects. **Open year-round**.

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). [Applications open on an ongoing basis](#).

Connecting to Country up to \$25,000 for Aboriginal People to foster intergenerational knowledge transfer, preservation of culture and strengthening communities. [Applications open 3 September](#).



Purves Environmental Fund offers up to \$50,000 for projects addressing the focus areas of habitat degradation, unsustainable management of natural resource and pollution. [Applications are open year-round](#).

Holdsworth Wildlife Research Endowment funds post-graduate research in ecology, wildlife management and natural history studies. [Applications close 30 September](#).

Lotterywest Grassroots community-led grants are for proposals that work towards sustainable ecosystems and reduction of the community's impact on the environment. [Applications are open year-round](#).

Aurizon Community Giving Fund offers up to \$20,000 for not-for-profits in the areas of community health and wellbeing, safety, environment and education. [Applications likely open in September](#).

Alinta Community Grants Program up to \$20,000 for projects addressing social disadvantage or environmental sustainability. [Applications close 11 October](#).

Rio Tinto Community Giving up to \$5,000 for WA communities neighbouring operations. Environmental stewardship is a focus area. [Applications open February–November each year](#).

Local government and place-based community grants These local governments and groups provide small grants to their communities which may fund environmental management and restoration projects. Eligibility varies. [Armadale Habitat Links open year-round](#) for rural residents, [Bayswater close 31 October](#), [Belmont close 20 October](#), [Bunbury open November](#), [Busselton close 4 October](#), [Cockburn Sustainability open year-round](#), [Derby/West Kimberley open year-round](#), [Fremantle close 30 September](#), [Gosnells close 30 September](#), [Harvey Water open year-round](#), [IGA Community Chest open year-round](#), [Kwinana Placemaking Grant open year-round](#), [Mandurah close 14 October](#), [Melville close 31 March 2025](#), [Northam open September](#), [Rockingham close 6 September](#), [Serpentine Jarrahdale open October](#), [South Perth open year-round](#), [Subiaco close 27 September](#), [Swan open year-round](#), [Wanneroo open year-round](#).

Bladderworts

By Julia Cullity



Photo – Mark Brundrett

Small, delicate, with often brightly coloured flowers and an intriguing life history are bladderworts (*Utricularia* spp.); look out for them in a wetland near you!

These fascinating carnivorous plants thrive in wet, nutrient-poor environments. With more than 230 species they are found on every continent except Antarctica. Fifteen species occur in the south-west of Western Australia, with quite different lifeforms as free-floating aquatic, affixed aquatic or terrestrial plants. These plants are unique due to their small bladder-like traps on modified stems, which they use to capture and digest tiny aquatic organisms. The bladders create a vacuum by pumping out water, and when tiny prey triggers the trapdoor, it snaps open, sucking in water and the prey in less than one hundredth of a second, making them the fastest predatory plants in the world. The bladders also support a diverse community of organisms including algae, protozoa and bacteria which may help digest the prey. This efficient method allows them to supplement their nutrient intake in environments where other plants might struggle.

Redcoats (*Utricularia menziesii*) are one example of the terrestrial lifeform. You will need to look down as they grow 4–8cm tall, but often en masse. And you won't see the bladders as they are underground in the seasonally waterlogged soils. This tiny plant produces the largest floral spur of any bladderwort and is thought to be bird pollinated by the western spinebill.

Photo – © Boaz Ng.