



WICCNews

WICC Newsletter June - July 2024



Makuru

Season of fertility
More frequent gales and storms



Farmers in focus



Photo coming soon.

An update on our local dung beetle program and interview with a beetle friendly farmer, Belinda Dufall.

After a very dry summer we're happy to report that our local winter dung beetles have emerged in good numbers. Our monitoring program shows that the winter dung beetles (*Bubas bison*) are now active on farms across the catchment – although they were a bit delayed with the later season, as they emerge after rain. We are also seeing higher levels of beetle activity on farms where we released dung beetles over the past 2 years, compared to beetle activity pre-release. This is the great sign that the beetles like it here and can survive and reproduce.

Jenny Brenton, who farms beef cattle next to Parry's Beach, has noticed more dung beetle activity since releasing the winter beetles *Bubas bison* on her property in 2022. "They're incredible... I see lots of tunneling in some of our paddocks now during winter," Jenny says. "Next I'd like to release more summer and spring beetles as I would like to boost up their numbers too." Interestingly, on Jenny's farm the beetles are tunnelling in sandy country where we didn't expect them to thrive. It just goes to show, dung beetles are full of surprises!

Belinda Dufall lives on Bastiani Rd and has joined our dung beetle program this year. WICC's Kylie Cook spoke to Belinda about her involvement.

Kylie: Belinda, can you tell us a bit about your background and why you're interested in dung beetles?

Belinda: We've been cattle farming for pretty well all my life. We've always sort of been interested in dung beetles as primary producers and understood the benefits of them. And personally, my dad was involved with dung beetles back in the 1970s. He worked for the Ag Department as a technician, and one of the projects that he was working on was introducing dung beetles back then. I remember as a little kid going off with him, wandering around looking at his little dung beetle traps, with my little gum boots on and being with him. So, when I saw all the dung beetle releases and things that were happening in the area now, I thought, that's great!

I don't want to just wait for them to arrive on our farm, I thought it'd be good to be proactive and get in there. When I went to a dung beetle workshop, I learned so much more about the benefits – I always thought they were good for getting rid of the dung. I hadn't realized all the other benefits that are going on underground, so I'm really enthusiastic about them now.

Kylie: Great! We released winter dung beetles on a neighboring farm (2 km away) last year; the beetles have voted with their wings and turned up at Belinda's place! Belinda, why do you think the winter dung beetles like it at your place?

Belinda: Well, I suppose we must have a good soil type and we have pretty good soil carbon, we try to put some plant matter back into the soil, we don't just take it all off. We do things like, when we feed hay, we do it in different areas in the paddock.

But we also don't have a routine drenching program. We do drench if we need to. We find our cows are pretty healthy most of the year round, but if we get the odd cow that is run down, we'll just go and give that one a bit of help, a dose of drench. But we'd only drench five or six cows a year, so I think that's probably helped as well. And I've gotta tell you too, I went to buy some more cattle drench yesterday, and the only criteria I was selecting on is that they were dung beetle friendly! I had a little laugh at myself, I didn't even ask the price, I just said, "Oh good. This one says it's dung beetle friendly."

Kylie: *That's always good to hear. I think what you're doing with not drenching routinely is great for the beetles, and there are beetle-friendly options available for when you do need to treat animals. As I understand it, cattle have quite a good natural resistance to worms, I'd never say that you shouldn't give your animals treatment when they need it, but just use it carefully to protect the beetles too.*

We do rotational grazing too. I'm imagining them out there following, a little herd of dung beetles flying off, following a herd of their cows, as part of their symbiotic friendship.

Now one of my favorite things is to wander around and have a little look to see if the *Bubas bison* are around, they're super active now. I'm thinking maybe because of the season as well, it hasn't been as wet. And they're into our sheep paddock as well. They're really hopping into the sheep poo, it's great.

Kylie: *Yes, I think that too, the drier winter could be helping the beetles. Belinda, you'll also be hosting a dung beetle nursery of the new spring-active species *Bubas bubalus*, this year. Can you tell us why you wanted to host a nursery and what you hope to achieve?*

Belinda: When I first put my hand up for it, we didn't realize we had any beetles except the little one we see in summer, so we thought it'd be good to get some more dung beetle species on the property and especially with the spring active ones hopefully getting there before the flies breed up.

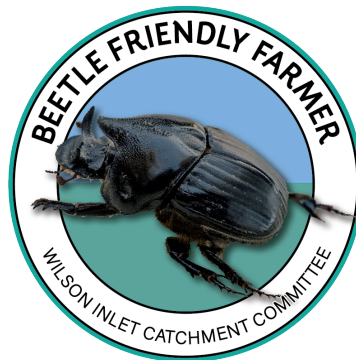
I was really sad that I missed out on the release of the *Bubas bison* and I wasn't expecting them to arrive so quickly! We are keen to help and once we get into something like this, we usually do it and hopefully have some success as well. I think just to be part of it is a good thing, maybe our kids and grandkids can look back down the track and go, our folks or grannies were part of that; it's pretty cool to know Dad was part of the release back in the seventies.

And like you were saying before, insects vote with their feet and their wings! So, I keep looking around and thinking, "Oh, that's nice. They're happy here." They wouldn't be doing this, breeding up and moving around and making little sandcastles everywhere if they weren't happy little beetles. That's quite a nice thing to know.

Kylie: *Thanks Belinda, for talking to me. Is there anything else you'd like to add?*

Belinda: Look, I think it's good to get funding for something like this from the state government, there's some common sense going on. We all hear so much about funding that goes into things that people in the country, especially farmers, we don't seem to get a lot of benefit from them. I'm sure this is small dollars compared to a lot of the big projects, there should be so many more of these small projects. I reckon you guys are doing a really good job as well.

Kylie: Thank you! I find we can do a lot with not much money in a project like this, especially when we've got so many keen people like you, keen to get involved and have beetles on their farm. Hopefully we can keep it going for many years to come!



Managing water levels at Eungedup



LIDAR drone

This historical draining of wetlands across the south coast for agriculture has drastically reduced the available habitat for waterbirds like the Endangered Australasian Bittern. This is the primary reason the Western Australian bittern population has declined by 25-50% from the 1980s – 2010. It is estimated that we now have fewer than 150 Australasian Bitterns left in WA, with Eungedup one of their last strongholds. Climate change has only added salt to the wounds, meaning our few

of their last strongholds. Climate change has only added salt to the wounds meaning our few remaining suitable wetlands struggle to maintain sufficient water for their needs.

The water levels in Eungedup have been artificially controlled for decades in order to grow potatoes. We are now working to harness the same controls to 'future proof' Eungedup so it provides optimal bittern habitat year around, irrespective of declining rainfalls.

To do this we are developing a hydrological model of Eungedup which will be used to retain the optimum water levels in the system using the existing network of drains and culverts which interconnect and drain water into the adjacent Lake Saide. During Eungedup's 'potato days' these have been used to drain the wetland in Springtime, using gravity and pumps, so the potatoes could be sewn.

To pull this all off we need to know precisely where the bitterns are breeding throughout the wetland, the water levels throughout at any given time... and how the water enters, pools and drains. With this information we can then restrict drainage when we reach specific trigger points.

WICC and volunteers has been working to address these unknowns.

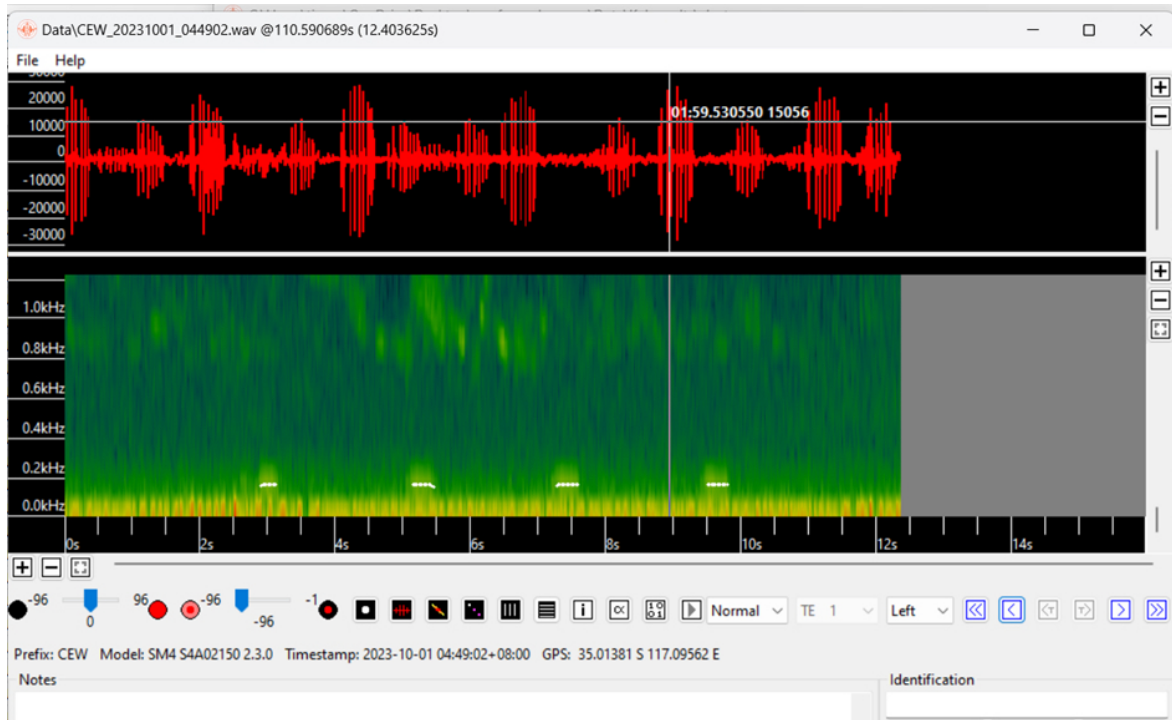
In May, surveyors from Harley Dykstra mapped Eungedup's contours using their very expensive LIDAR drone. This has provided us with 100mm contours of the entire wetland so we can develop a hydrological model.

Volunteers have installed water leveling monitoring gauge plates throughout the wetland which they are monitoring weekly. This data will allow us to better understand inflow and drainage rates and will be crucial to water level management.



WICC volunteer Tom Hitchcock installing gauge plate

To learn more about our bittern water level and habitat preferences, WICC's Biodiversity Officer has installed three Autonomous Recording Units (ARU). The ARU are strategically placed around the wetland to listen for the bittern calls. The unique digital signature of the bitterns is picked up by software and then triangulated to locate precisely where the bitterns are breeding. We can then use this to maintain the water levels and habitats which the bitterns are preferring.



Australasian Bittern call - Eungedup October 2023





100mm countours from LIDAR

By calculating evaporation rates and drainage we can then make evidence-based decisions on when and how to restrict water draining from the wetland. This will require us to replace existing culverts with ones which allow manual control.

WICC would like to thank our friends at the Department of Water and Environmental Regulation whom have been assisting with the science, Robyn Pickering of Birdlife WA and WICC's crack team of volunteers who are out there rain or shine gathering on ground data.

South Coast Biochar Forum 2024





Biochar lovers unite!

Over 100 community members attended the WICC's 'sold out' South Coast Biochar Forum on 17 June to learn how they can use biochar on their own properties. Attendees were captivated by our keynote speaker, Professor Stephen Joseph, as he walked the audience through the recently released *Farmers Guide to the production use and application of Biochar*.

The world biochar market is estimated to reach \$5 billion dollars by 2025. It has a huge potential to sequester carbon, safely remove weeds and pathogens from green wastes, improve plant and animal health, and help manage soft plastic and food organic wastes in the process of making biochar.

So what is biochar?



Biochar

Biochars are safe and stable form of carbon that has been used by farmers and gardeners for thousands of years. It is made from the controlled heating of organic materials like leaves, sticks, and even manures in a process called pyrolysis. Pyrolysis can be done at home in very basic systems but is now available from commercial well-controlled pyrolysis units. Biochars have been shown to improve plant and animal health in many ways. In farm ruminants it can increase the

shown to improve plant and animal health in many ways. In farm ruminants it can increase the efficiency of the rumen to reduce methane emissions and improve milk and liveweight productivity. Biochar can also work wonders on our plants by improving the interaction between the soil, water, and soil biology. Acting like a sponge it retains soil moisture and promotes nutrient exchange to our crops and trees.

So if biochar is so wonderful why isn't everyone using it?

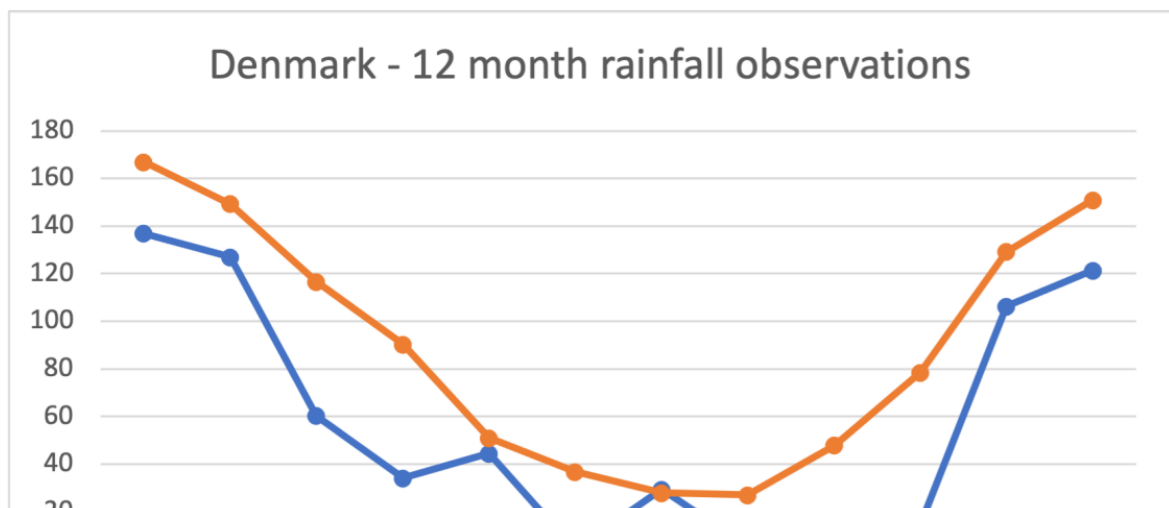
Biochar varies depending on the feedstock and how it is heated. We need to know our soils and use a biochar at a specific rate and that is made from a feedstock that is suitable. This means some people may have used a biochar without observing any benefits. Using biochar is like using fertiliser. We need to know what benefits we want, the type of biochar we have, and the rate we should use in our paddock or garden. A great place to start is getting a hold of the *Farmers Guide to the production use and application of Biochar*. You can buy a copy [HERE](#) for \$35.

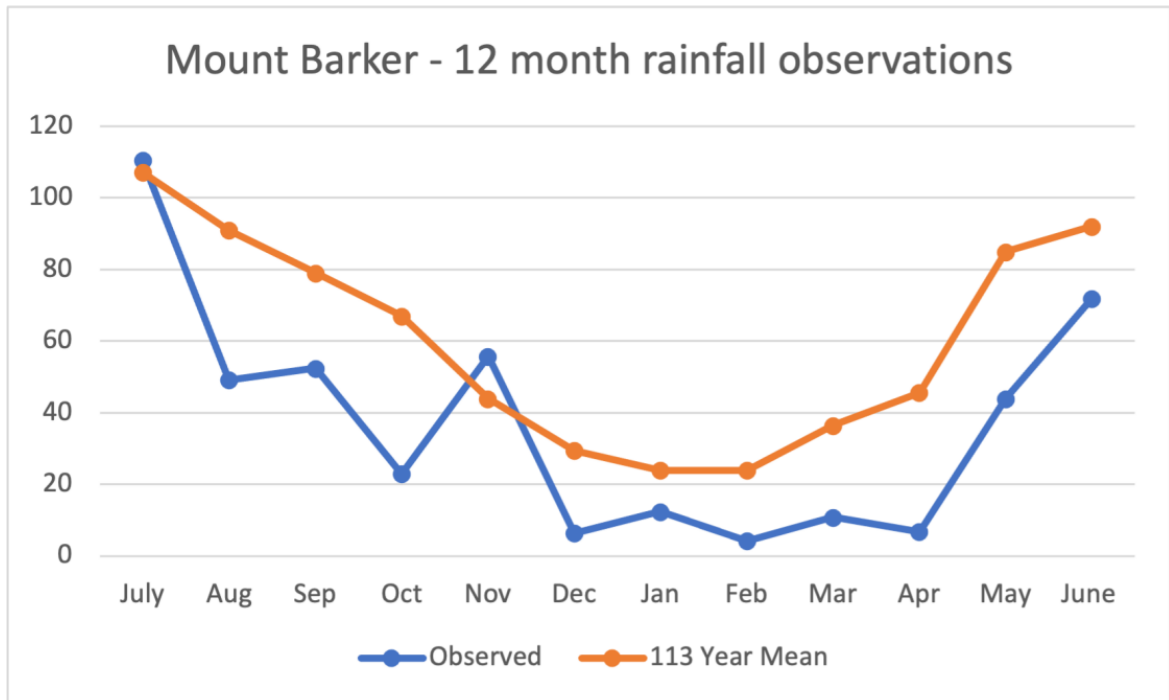
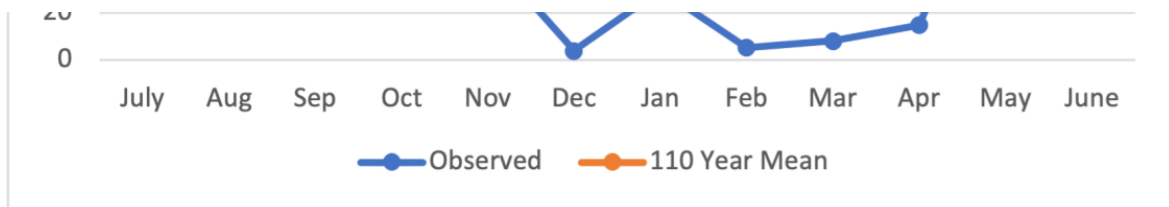
A major barrier has been accessing an affordable and sustainable biochar locally. WICC has been working hard to overcome this one. In 2022 – 23 we carried out a feasibility study in collaboration with Murdoch University called *Waste to Net Zero*. We looked at the practicalities of making safe, effective biochar from our green waste, food waste, and silage plastics. This study demonstrated that it is technically and economically feasible to do this. Independent market research showed that the local demand would far exceed biochar supplied from Denmark's wastes. All feedstock for biochar would be sourced from and sold in the shire. It is a path to a commercially viable circular bioeconomy – reducing waste, destroying plastics, safely returning food wastes to farms, **and is a carbon negative process**.

WICC has been lobbying the WA government to fund a pilot of this technology in Denmark. Trialling and analysing a working biorefinery will pave the way for local governments across Australia to economically and environmentally manage these waste streams. The resulting biochar is used to sustainably increase agricultural production and sequester an enormous amount of carbon in the process.

You can help by writing to the Hon Minister [Jackie Jarvis](#) (Agriculture and Forestry) and [Reece Whitby](#) (Environment) requesting that they fund a pilot in Denmark.

Rainfall update





The much-needed break eventuated in May. A handful of winter cold fronts tracked across the state's west and south during May and mainly June, whilst a couple of northwest cloud bands developed during the middle of the June. As of 22 July, we have only collected 196 mm of rain at the Mount Barker field gauge this calendar year, which is over 50% below average. The South West Land Division (SWLD) area-average autumn rainfall was 57.3 mm, which was 48% below the 1961–1990 average, and the driest autumn since 2019. The mean minimum and maximum temperature across the Southwest Land Division were 1.2C and 1.4C respectively above the long-term average (1961-1990) (The Bureau).

Looking ahead, both our Indian Ocean and Southern Ocean climate drivers are neutral and expected to remain so. As a result, the Bureau is anticipating average rainfall this winter for the south coast.

We would be stoked with average!

Inlet update

The dry year continues. Inflow from the main rivers into the inlet between January and June was only about 3% of the 1998-2023 January to June average. This means that dissolved nutrient concentrations and algal activity in the inlet are also low, due to little nutrient input from the soils of

the catchment by river flow.

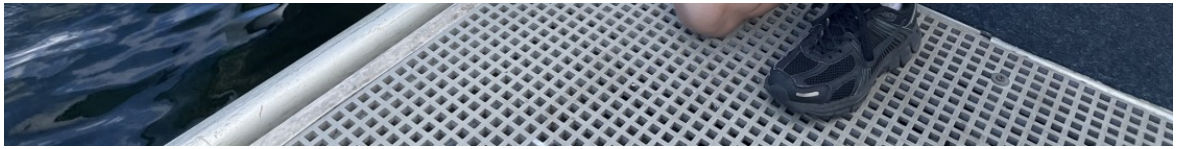
For further information, visit the Healthy Estuaries WA website where you can see the current inlet water level, and fortnightly physical profiles of salinity, dissolved oxygen and temperature across the inlet: <https://estuaries.dwer.wa.gov.au/estuary/wilson-inlet/>

Latest Inlet level from old railway bridge [HERE](#)

[Click Here](#) for latest inlet monitoring data

Healthy Estuaries WA - launches new boat





The new scientific monitoring boat has been officially named “Paarndi” by the local community! 🐟

The name, suggested by 11-year-old Leeuwin Ossinger from Denmark, is a Noongar word for Black Bream. Leeuwin pointed out that “Paarndi usually stay in the estuary for their entire lives,” making it an ideal name for a boat that will spend most of its time in our estuaries. Leeuwin is looking forward to joining the DWER crew on a sampling run out on the Wilson Inlet.

WICC welcomes Nat, our new waterways officer



Natalie working alongside volunteers

WICC would like to welcome our newest member of the team, Natalie. Nat has jumped in and seized the reveg program by the horns. 56 community members have expressed an interest now in joining our community planting days. Nat has had help from several of these vollies, hand-planting about 29,000 seedlings across riparian areas on our local farms. These farmers have also fenced off their local waterways which are getting revegetated. This program is funded by the Department of Water and Environmental Regulation's Healthy Estuaries WA program. If you are interested in getting involved as a landholder, or just want to come plant trees with Nat, contact us at waterways@wicc.org.au. You can also express your interest in fencing and revegetation online [HERE](#).



DONATIONS NEEDED!

GIVE A LITTLE, HELP A LOT

Join the conservation movement with WICC!

Your donation today will fuel our ongoing efforts to preserve the Eungedup Wetlands. Help us construct a new low-impact wetland center & nurture the next generation of wetland custodians. Support our mission to install nesting boxes & plant vital food sources for cockatoos. Together, we can make a lasting impact on our precious ecosystems. **DONATE NOW**



SCAN TO DONATE



OR VISIT

wicc.org.au/donate.html



Wetlands Initiative

WICC has raised funds to purchase & manage Eungedup Wetlands. Nestled between Denmark and Albany on the south coast of Western Australia, these remarkable wetlands provide a unique opportunity to preserve endangered wildlife.



Biodiversity Initiative

Work with landowners to restore and maintain the natural biodiversity in the catchment through invasive species controls, preservation of remnant native revegetation and weed control.



Waterways Initiative

We implement work programs in coastal waterways to further establish native vegetation, minimise erosion and strip nutrients.



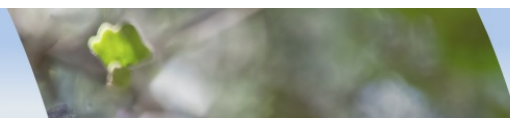
Sustainable Agriculture Initiative

We source and distribute funds and expertise to assist landowners to implement environmentally sustainable practices that reduce nutrient loads in the catchment.

DONATE

Upcoming Events

For the
Love

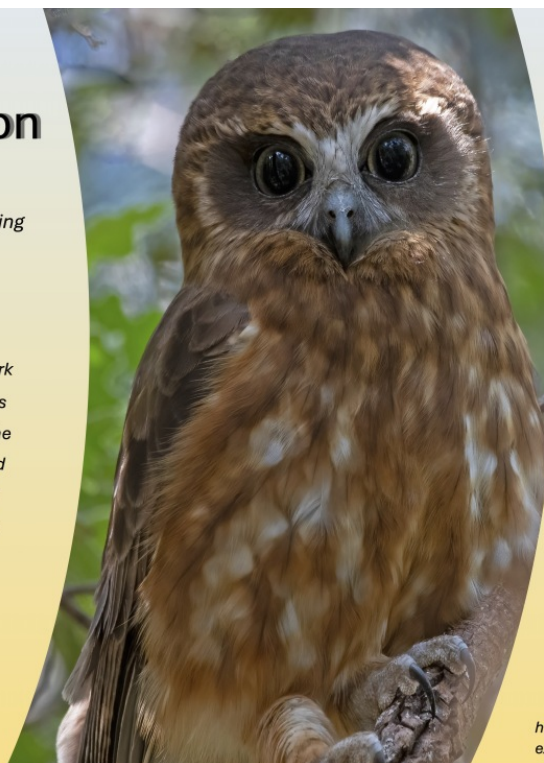


Saturday 3rd
August 1.30pm

Love of Owls Art Exhibition

See the works of our amazing artists as we celebrate everything 'owls'

Brought to you by the Denmark Bird Group to raise awareness amongst the community of the lethal effects on our Owls and Raptors caused by the use of Second Generation rat/mice Poisons



Grand Opening

Running for 3 weeks

Community Resource Centre (CRC) Art Gallery
2 Strickland St
Denmark

All artwork for sale

Enter our raffle for fabulous prizes



Scan the code for ongoing updates

<https://www.denmarkbirdgroup.org/owl-art-exhibition/>

CLOSING SUNDAY 28TH JULY

EARL'S ADVENTURE

What's the farmer up to now?

He's joining this year's soil testing program, Earl.

He's deciding which paddocks to sample & preparing a map.

Good news Daisy, soil testing means good feed this year!

Scan the code

Earls Pearls: Apply by 28 July for soil testing this summer.
Visit estuaries.dwer.wa.gov.au or scan the QR code with your camera.

Apply for soil testing 2024