



WICCNews

WICC Newsletter December 2024 - January 2025



Birak

First summer dry and hot, burning time
Season of the Young



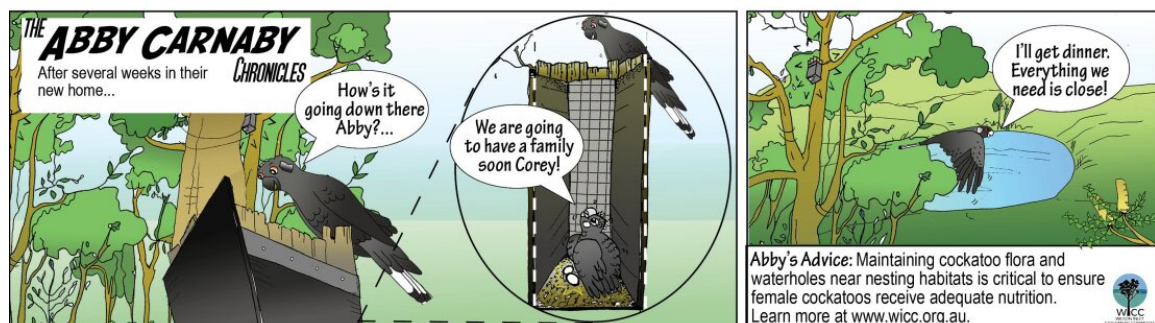
Holt's long-eared bat – Terry Reardon.

Is this edition:

- Breeding behaviour of Black-Cockatoos
- Kwoorabup Native Tree Nursery

- Bat trapping with harp nets at Langedup Wetland
- Soil sampling season for Wilson Inlet's farmers
- Inlet closure
- Rainfall Update
- Tackling *Asparagus scandens* or Asparagus fern

Breeding behavior of Black-Cockatoos



Cartoon by Claudia Simpson

Once a suitable tree hollow is found, the black-cockatoo hen invests significant time preparing it. She enters the hollow frequently, chewing its walls to create a suitable base with proper drainage for her eggs and chicks. The hen also defends the hollow from other prospecting females. Once satisfied, she signals the male to mate by lowering her body, while he displays by splaying his tail and erecting the feathers on his crown. Mating is followed by mutual grooming, and the pair mates multiple times.

After laying the first egg, the hen begins incubating, sitting on it for about a month. A second egg is laid roughly two weeks later, but the second chick rarely survives unless resources are exceptionally abundant.

The male plays a crucial role in supporting the female during this period. He flies off to forage, often joining flocks of other males. If you spot these all-male flocks, it's a good indicator of nearby breeding activity. The male returns with regurgitated food for the hen, feeding her at dawn, midmorning, and dusk. Ideally, his foraging range is within 5–7 km to conserve energy and maximize food delivery. The closer the food source, the better for the family's survival.

The nesting hollow is typically located within 2 km of water, which is easily found in the WICC Catchment due to natural waterways and farm water sources. If necessary, the male can forage up to 12 km, but distances greater than that risk insufficient food supply for the hen and chicks. Over time, populations living far from food sources are likely to weaken, move, or face local extinction.

Corridors and native vegetation islands are critical for cockatoos, as they prefer flying along these routes with safe refuges along the way or on the edges of vegetation. The hen remains in the hollow most of the time, emerging only when she hears the male's arrival call. He feeds her outside in a nearby tree, allowing her a brief respite from the stuffy hollow.

nearby tree, allowing her a brief respite from the stony hollow.

Kwoorabup Native Tree Nursery



Planting trees is unequivocally the single most important action we can take for the environment. Conservation of native animals, climate change mitigation, waterway health, erosion control, drought tolerance, rainfall, salinity control, pollination, farm productivity, mental health and more depend largely on trees. Native trees grown from local seed (local provenance) are the gold standard.

Unfortunately, the southwest of WA is losing native tree nurseries and skilled seed collectors at such a rate that we cannot meet the needs of today, let alone tomorrow. The situation is particularly dire on the south coast compared to the north. Of the 39 native tree nurseries that formed the WA Farm Tree Nurseries in the 1980s, only five remain operational. This trend continues. In 2021, Habitat Tree Farm in Denmark closed following the passing of one of its long-time owners. The Shire of Denmark nursery at the Shire Depot is inaccessible to the public and can no longer grow seedlings for WICC. Denmark's Blossums Nursery closed in early 2024. Our last experienced native seed collectors have either retired or are about to do so. The reduction in state and federal landcare funding, combined with the GFC and COVID-19, left us without a succession plan.

Our Solution for the South Coast:

If supported by the Shire, we will build a 300,000-stem, community native tree nursery in the heart of Denmark, setting a new benchmark for Western Australia. This universally accessible, fully certified nursery will be adjacent to Denmark High School, the WA College of Agriculture, and the Denmark TAFE, with three primary schools within a 3km radius. The nursery will be run by WICC with community volunteer support.

In anticipation of building the nursery, WICC began working with local Aboriginal ranger groups on seed collection in 2022. The rangers will collect local provenance seed from our revegetation sites (or nearby), enabling best practice revegetation and building up our local seed bank.

But we need more than just trees; we need the next generation to have the capacity and passion to collect seeds and grow them. This is where the schools come in. The benefit of this location is that schools can attend the nursery within a single class period (walking distance). WICC met with local

schools in late 2024, and all are on board. The nursery will feature an indoor and outdoor classroom where schools can deliver practical components of their existing programs (e.g., Cert III in Conservation Land Management), work alongside Aboriginal rangers, and learn to source seeds and grow seedlings. This will provide another local career pathway for our youth.

The nursery will not only be a training center for our schools but also a community volunteer hub. Universal access pathways and seedling benches will allow people of all abilities (and heights) to come together, propagate seedlings, and learn about native flora and revegetation. Local elders will work alongside schoolchildren in this whole-community nursery.

In early 2025, WICC will seek community support for the nursery. We will survey the community to pledge their time to work alongside WICC staff, rangers, and students. We will use this volunteer support to lobby for financial assistance from government and philanthropic organizations to construct the nursery. Stay tuned!

Bat trapping at Eungedup Wetland

by Tim Gamblin

In early December 2024, Kelly Sheldrick and Professor David Hill visited Eungedup Wetland (EW) to conduct bat trapping and research. Kelly is the manager of the Citizen Science Program at the Conservation Council of Western Australia, and David is a visiting researcher from the UK. David undertook this research during his personal time, driven by his interest in the region's unique bat species.

After coordinating with Kelly, we included EW on their list of survey sites to establish baseline data on bat species in the area. Historically, the wetland has seen minimal intensive bat surveying, making this project particularly valuable.

To support the project, local volunteer citizen scientists Alan Bewsher and Brad and Jill Kneebone joined the effort. They played key roles in setting up harp traps and assisting with bat processing.

Bats can be surveyed either through the use of bat detectors or by physically trapping them. Bat detectors pick up ultrasonic sounds produced by bats, which are typically outside the range of human hearing. These devices convert high-frequency sounds into audible sounds or visual data that can be analyzed. EW employs a similar system for monitoring bittern calls, converting their low-frequency booms into visual hertz bars. While detectors are excellent for determining species presence, they are less effective for obtaining detailed information, as some bat species have very similar calls that are difficult to differentiate.

For this project, physical trapping was necessary to collect a range of data points, including gender, reproductive condition, forearm length, ear length (occasionally), weight, and age. The bats were processed under red light whenever possible, as this wavelength is less detectable by microbats, minimizing disturbance.

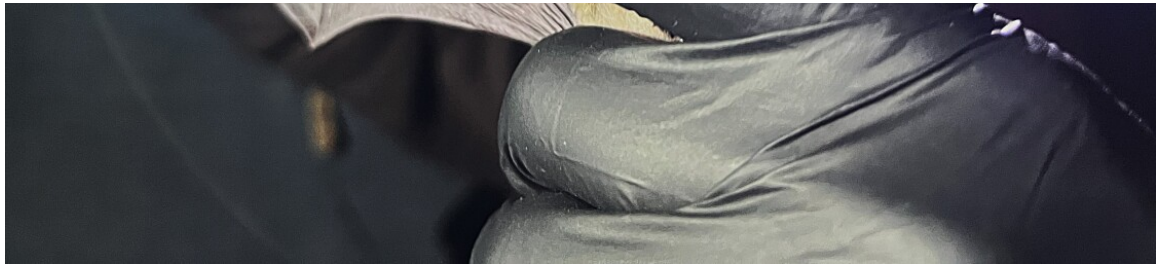
The delicate work of measuring and recording metrics could become quite hectic when multiple bats were caught simultaneously. As expected, the research was conducted at night, with Kelly and David working in the field from dusk until 1 a.m. or later.

This collaborative effort not only contributes to our understanding of the bat species inhabiting EW but also highlights the value of citizen science in supporting conservation research.



Red lights showing bats under clear plastic in the collection area, awaiting processing.





Kelly and Alan measuring forearm length of a Southern Forest bat.



David Hill at Eungedup with a harp net.

Harp nets are set up at dusk. They're a relatively simple trap consisting of a frame with vertically set parallel fishing lines, which gives the impression of a musical harp. The bats fly into these lines, which are difficult for them to detect, and slide down into a pocket. They then climb up the inside of a clear plastic sheet and feel secure until they are collected for processing. The harp nets at EW were set up on narrow flyways on kangaroo tracks and roads between the peppermint groves as well as near melaleuca thickets and tracks between the bulrush. Open areas were also used for the processing and release.



Kelly Sheldrick and Alan Bewsher





Local Citizen Scientist Alan Bewsher being shown how to install harp nets by Kelly and David.

Bats display diverse behaviors—some fly high, others low, with preferences for open spaces or dense vegetation. Most microbats in the southwest are insectivores, feeding on flying insects like moths, beetles, and mozzies, though they occasionally eat ants, termites, spiders, and even small vertebrates like frogs. Their role in controlling insect populations is vital to the ecosystem.

Unlike microbats, macro or megabats rely on sight and smell, often living in tropical regions and feeding on fruit and nectar. The Ghost Bat, a large carnivorous species from inland northern WA, is an exception to this pattern.

While caves are often associated with bats, local species more commonly roost in old tree hollows, beneath bark, rock crevices, and even roofs. At Eungedup Wetland, Kelly Sheldrick and Professor David Hill, along with volunteers, trapped 224 bats during their December survey, representing eight of the nine southwest species. The elusive White Striped Free-tailed Bat, which flies high and emits a call audible to humans (like coins clinking together), was detected acoustically but not trapped.

An acoustic lure—playing pre-recorded calls near harp traps—helped capture and study the bats. Key metrics, such as gender, age, and reproductive status, were recorded before the bats were released, enabling the collection of echolocation reference calls.

At EW, three species were trapped:

- **Chocolate Wattled Bat** (*Chalinolobus morio*): 9 individuals.
- **Holt's Long-eared Bat** (*Nyctophilus holtorum*): 13 individuals, an endemic species to southwest WA.
- **Southern Forest Bat** (*Vespadelus regulus*): 61 individuals, predominantly females, likely due to a nearby maternity roost.

Maternity roosts, located near freshwater and abundant food sources, house females and their

pups. Lactating females were particularly active, feeding and teaching their pups to fly. Male bats, being more solitary and dispersed, were less commonly caught.

This project wouldn't have been possible without our dedicated volunteers and the expertise of Kelly and David, who plan to return for future surveys.

Fertiliser Management Program



Eric Dobbe from DPIRD shows off a batch of soil samples, ready to be sent to the lab for analysis

Summer is soil sampling season for Wilson Inlet's farmers

While you're at the beach or inlet this summer, spare a thought for our local farmers, who have been busy soil sampling over 400 paddocks to keep nutrients on farms and out of waterways. This year, we have 30 keen farmers testing nutrient levels on 50 farms with the support of our Healthy Estuaries WA program, which has been running since 2016.

Healthy Estuaries' Fertiliser Management Program gives training and support to farmers in high

Healthy Estuaries Fertiliser Management Program gives training and support to farmers in high-priority catchments across south-west WA, including Wilson Inlet. Farmers who join us receive training, equipment and support to soil test their farm at a discounted rate, followed up with independent advice and assistance to interpret the results and develop a fertilizer plan for the following growing season. Since the program began, over 70% of paddocks tested across south-west WA have been found to have excess amounts of Phosphorus, but plant growth is being limited by another element (commonly sulphur or potassium), or pH. By addressing the limiting factor rather than applying “the usual” fertiliser, we can improve productivity and profitability, while also preventing excess fertiliser run-off into our waterways. A win-win!

All this years' samples have now been sent to the lab for analysis, and everyone in the program will get together at the end of February to receive, interpret and apply their results at action-packed workshops at the Denmark Riverside Club.

Farmers joining the soil sampling program can also take plant tissue samples from their paddocks in spring, testing for any deficiencies in trace elements. Trace elements are found in tiny amounts but can have important implications for plant growth and animal health. We recommend testing for trace elements in the plant itself, rather than in the soil, as it's much more reliable.

The Healthy Estuaries WA program will be running for the next 4 years. Expressions of interest to join us for next year's Fertiliser Management Program will open in May. In the meantime, you can contact Kylie (ag@wicc.org.au) to find out more.

This project is part of Healthy Estuaries WA – a State Government initiative to improve the health of our south-west estuaries.



Farmers have received training from DPIRD scientists on how to collect accurate soil samples in their paddocks

Inlet update



Wilson Inlet bar - January 2025

The sandbar closed on the 8th of January 2025. While ocean water will still overflow the bar during high tide for some time after that, the inlet is now mostly disconnected from the ocean. This also means that the inlet's water level has already started to decrease due to evaporation, which is the normal pattern for the inlet in summer. Water quality has been good in Kambarang and Birak so far, with low nutrient concentrations and microalgae activity.

At the beginning of January, a fish kill of more than 100 fish, mostly silver bream, was observed near Prawn Rock Channel. It was likely due to the fish swimming up onto the shallow delta at high tide, and becoming trapped in small pools in the sand as the tide receded.

The busy summer holiday season is also a time when recreational fishers flock to Prawn Rock channel and the delta area. There is some evidence that some fish deaths observed during this time of the year are fish that become stressed after being caught and released back into the water.

Community members can report sightings or evidence of fish kills to FishWatch via 1800 815 507.

Anyone interested in the water level of Wilson Inlet, which is measured at the Old Railway bridge (site 603032) can check the department's webpage:

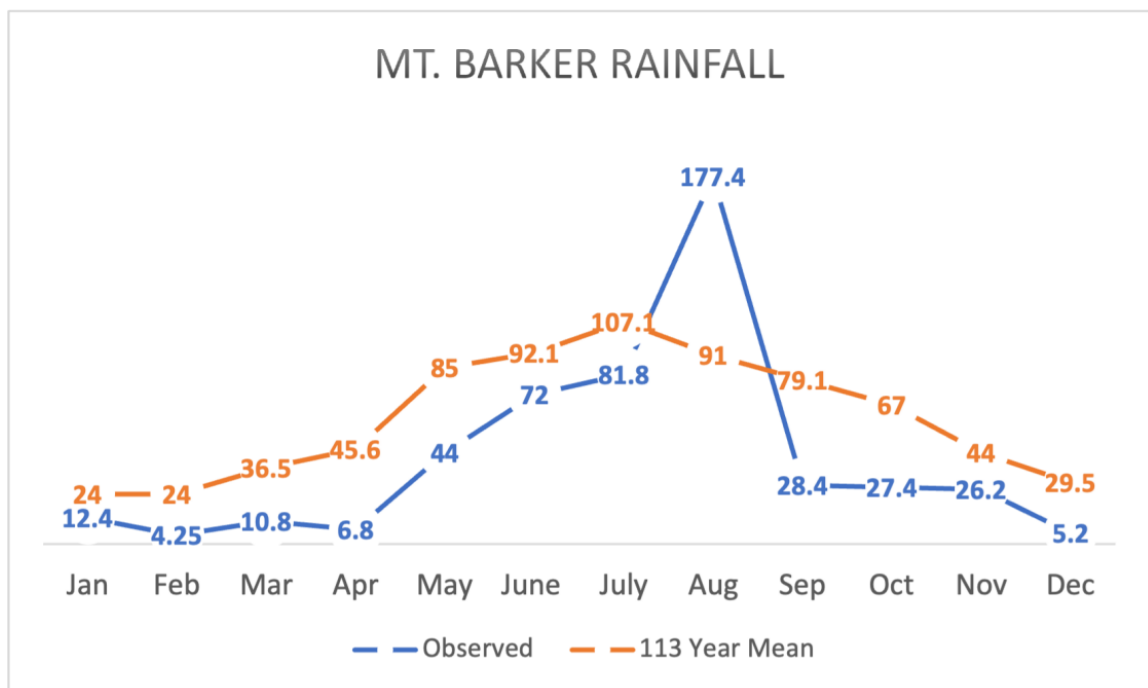
WILSON INLET WATER LEVEL

If you are interested in temperature, salinity and dissolved oxygen profiles of the inlet, check the Healthy Estuaries WA webpage:

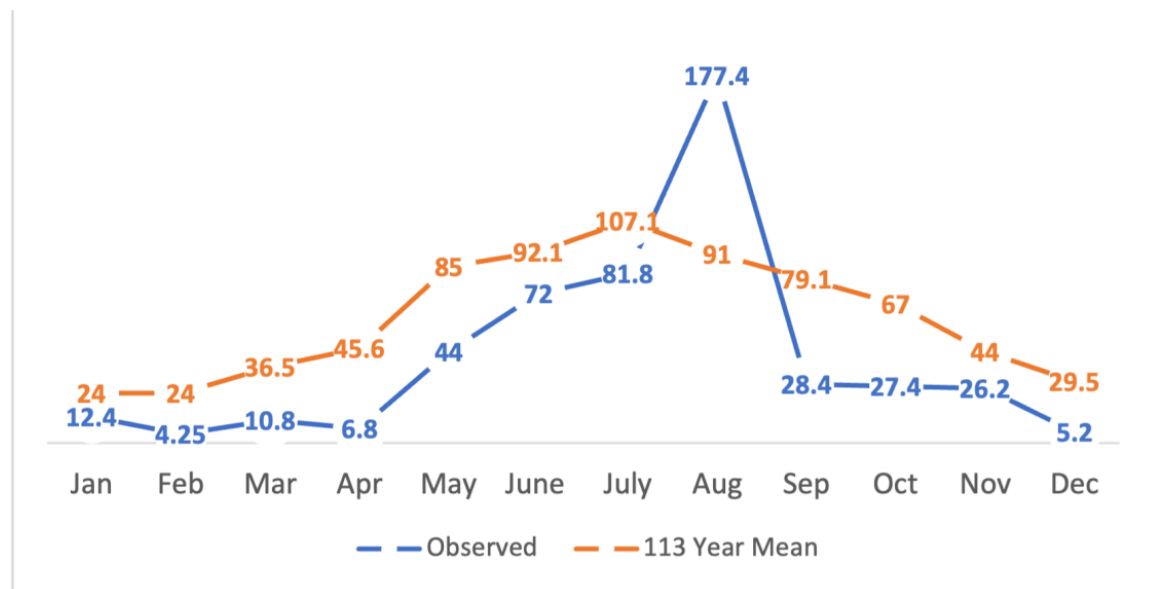
PHYSICAL PROFILES

Rainfall update

We have had another dry November / December. Farmers were fortunate to get some late rains at the right time in September / October allowing them to grow better hay and silage compared to 2023's shocker. Looking ahead the Bureau is predicting around a 60-70% chance of above median rainfall for February and March and a return to median in April with our main climate drivers trending towards neutral. Mind you they also predicted above median rainfall for November and December and the graphs below tell you how that turned out.



MT. BARKER RAINFALL



Weeds in focus



Asparagus scandens Common name: Climbing asparagus, Snake feather or Asparagus fern.

Asparagus scandens is a perennial twining vine with delicate feathery leaves. Although it has a fern like appearance, it is not related to ferns. This vine is thornless.

like appearance, it is not related to ferns. This vine is thornless.

With a tuberous root system that grows vigorously within winter, it can also actively grow all throughout the year in suitable conditions. The vine forms a thick matted groundcover that prevents native seedlings from germinating and can climb up to a height of 2 metres, strangling small understory plants with its wiry stem. The flowers are small, white to pinkish in colour, with red to orange egg shaped berries approx. 5-7 mm across when ripe. These are a very attractive food for birds to feed on, making it a primary form of seed dispersal, as well as through water and soil, as the uneaten berries fall to the ground.

Being a native to Southern Africa, this plant has become an invasive weed across Australia and New Zealand. It invades the bushland, roadsides and creek lines. Control of the plant is difficult. Manual removal requires all the rhizomes above the tubers to be removed to prevent reshooting. Control can be gained through grazing or persistent removal of tubers/rhizomes. It can generally survive fire, although intense fire can kill some rhizomes allowing time to spray the area and allow other native species to germinate.

Applying a mix of 100 mL glyphosate (450g/L) plus 1 g metsulfuron (600g/kg) in 10 L water is effective but will kill companion plants around the vine if sprayed. Alternatively, painting on a mix of 1 L glyphosate (450g/L) with 2 L water applied to leaves and stems is a slower process but can be more selective. Whenever using chemicals, ALWAYS read the label of instructions prior to use and use only as directed. For further detailed information about the safe use of a chemical, seek manufacturer advice or refer to the Safety Data Sheet (SDS).

Donate

Our collaboration between farmers, scientists, volunteers, graduates, students and community groups enables us to achieve amazing things.

Donate to support our initiatives

WICC needs your support to continue working on our initiatives.

Your generosity will support a range of programs.

Make a tax deductible donation via our website, scan QR code or through our campaign link below.



SCAN TO DONATE



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 TODAY



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This email was sent to you by Wilson Inlet Catchment Committee Inc.

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