We acknowledge the Noongar people as Traditional Custodians of this land and pay our respects to all Elders past and present

Landcare matters

Lake Clifton Sub-catchment

PHCC Working Together
Peel-Harvey Catchment Council

Edition 19
December 2023

Welcome to the 19th edition of Landcare Matters: Newsletter of the Lake Clifton Stewardship Program – a program supporting landowners for healthy habitats and waterways in the Lake Clifton sub-catchment.

Be Alert for the Indian House Crow – new Biosecurity threat

Residents in Perth's southern suburbs and Mandurah are asked to keep watch and report any sightings of the invasive house crow (*Corvus splendens*), also known as the Indian, grey-necked, Ceylon or Colombo crow. It is of Asian origin, but has been transported here on several occasions via ships and was recently seen at Spearwood. The house crow has significant potential to establish populations in Australia and become a pest, so it is important to report any found in the wild. This species can make use of resources with great flexibility and appears to be associated with humans, which means it has high invasive potential.

The house crow prey on the chicks and eggs of native birds and harasses livestock and other animals. It can spread disease to humans and may attack people to steal food or shiny jewellery. Being an omnivorous scavenger, house crows eat almost anything. They can be a great nuisance, scattering rubbish, damaging electrical wiring, blocking drainpipes and interfering with power supplies.

House crows are identifiable by their glossy black plumage with a metallic greenishblue-purple sheen on the forehead, crown, throat, back, wings and tail. The bird's nape, neck and lower breast are a contrasting, paler colour. Australian native crows and ravens resemble the house crow, however, native birds have all-black plumage and white eyes as adults. The house crow is also smaller and more slender than all native crows and ravens.

If you have seen the house crow recently, please report suspected sightings to DPIRD's Pest and Disease Information Service on 9368 3080 or email (include photos if possible) padis@dpird.wa.gov.au

House Crow (Image ©Petri Pietilainen)

Biosecurity Alert - Polyphagous shot-hole borer

Polyphagous shot-hole borer (PSHB) (*Euwallacea fornicatus)* is a beetle native to Southeast Asia, and has recently been observed in the southern suburbs of Perth. The invasive beetle attacks a wide range of plants by tunnelling into trunks, stems and branches. The species is distinct from other borers as the small hole they excavate into the trunk and stems of plants is perfectly round. Another unusual characteristic is its symbiotic relationship with a Fusarium fungus. The beetle farms the fungus inside the tree as a food source for the beetle and its larvae. The fungus can be seen growing in the tracks, called 'galleries', that the beetles make as they bore through wood (see image attached). In susceptible trees, the fungus kills vascular tissue causing Fusarium dieback and tree death.

A quarantine area has been established around Perth central and southern suburbs, where DPIRD are conducting surveillance to determine its distribution and working to contain the pest to prevent further spread. Several street trees are listed as reproductive hosts and include Maple, Oak, Coral Trees, Plane Trees, Willows, Acacia and Avocado to name only a few. The PSHB was first identified in Australia only 2 years ago, so it is yet unknown which native plant species are susceptible. Establishment of this pest in WA would have significant impact on amenity trees, native vegetation, and the fruit and nut tree industries.

Please report suspected sightings (include photos if possible) to DPIRD's Pest and Disease Information Service on 9368 3080 or email padis@dpird.wa.gov.au

Above: Female polyphagous shot-hole borer (Image from DPIRD WA)

Left: The Fusarium fungus can be seen growing in the 'galleries' made by the borer (Image from Perth Zoo)

Providing freshwater for our feathered friends across summer

Summer heatwaves can be very stressful and even deadly for wildlife, particularly native birds. This was evident for the Lake Clifton area following the hottest summer on record (2021/22), when several bird deaths were reported, and in the death of about 150 Carnaby's cockatoos in Hopetoun in 2010 when access to water was shut off. Providing a safe place to drink and cool off allows birds to travel to forage and can save the lives of our feathered friends this summer.

It's relatively cheap and easy to do regardless of your property type or size and you can get a lot of enjoyment in watching the different visitors, or even set up a trail camera to record them. Some useful tips for providing bird baths across summer include:

- Drinking stations should be placed in the shade and ideally beyond the reach of cats and foxes. This can be done by having the water at a minimum height of about 1.2m either on posts, blocks or attached to fences.
- When choosing the placement, consider the species you have in your backyard – Black Cockatoos and birds of prey prefer bird baths in open areas close to large trees, Western Whistlers are shyer and prefer baths amongst dense shrubs whereas New Holland Honeyeaters will use bird baths in most locations. Perching areas near stations are also useful.
- The material of the waterer is important – stainless steel is most hygienic but needs to be in the shade. Plastic or glazed clay can be used as they are relatively easy to clean.
- Consider solutions to automatically re-fill the water station. This could include drip feeds from rainwater tanks, float valves or low flow irrigation with a timer. Slow drip keeps the surface water moving, which helps to deter mosquitos.
- Check and clean the water station frequently to prevent contamination, debris build up and lessen disease or parasitic transmission between birds. A weekly scrub with vinegar or other cleaning agents is also recommended.
- Try to keep the water shallow as birds can drown in only a few centimetres of water. If the bird bath is deep or has a smooth base, place partially submerged stones, sticks or bricks for a safe exit for small birds, insects, frogs and reptiles. Again, consider the species in your backyards – a parrot is going to need a larger and deeper bath than a honeyeater.

The photos shown here give ideas of different set ups. Two of these were funded under our Banksia Woodlands Project, and a simpler version installed on an urban fence, designed to limit access from roaming cats.

If you would like further information on providing water for local birds, refer to the Rewild Perth website at the following link: https://rewildperth.com.au/resource/provide-water-for-local-birds/. Rewild Perth have hundreds of resources to help you built habitat for flora and fauna in your backyard – check them out!

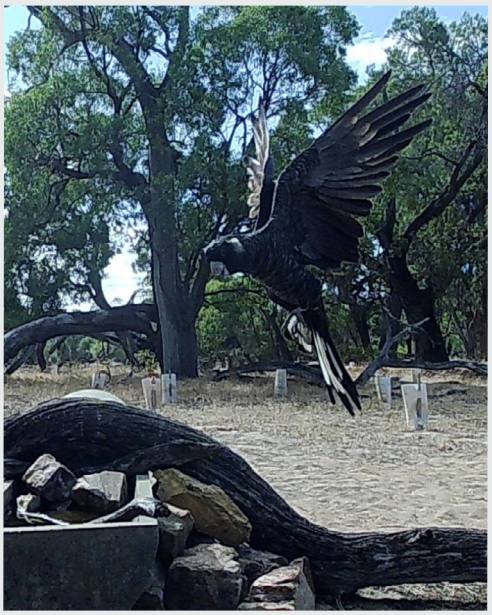


Image courtesy of Nick Stephens

Image courtesy of P&L Spight

Image courtesy of Karen Bettink

Image courtesy of Renee Barton

Summer flowering spectacle – Candlestick Banksia

Candlestick Banksia (*Banksia attenuata*) puts on a showy display in summer and is generally the most dominant summer flowering tree of Banksia Woodlands. Have you ever wondered how or why it blooms during the hottest period of the year? *Banksia attenuata* is one of the most common trees in Southwest WA and is characterised by its large, candle-like yellow flowers, hence the common name 'Candlestick Banksia'. It is one of at least four Banksia species (including *B. menziesii, B. prionotes and B. ilicifolia*) that are dominant overstorey species of our unique Banksia Woodlands, a Threatened Ecological Community on WA's Swan Coastal Plain. These Woodlands provide important habitat for more than 20 nationally threatened species, including our Black Cockatoos and Western Ringtail Possums.

If you have walked through a Banksia Woodland during summer in WA, you will have experienced the hot, baking, white sand and sweltering conditions. Yet, the canopy is alive with a spectacular display of bright yellow flower spikes reaching towards the baking sun. These flowers are important for nectar feeding birds and insects over summer when little else is in flower. There are several characteristics, or plant traits, that make *Banksia attenuata* highly adapted to hot and dry conditions, for example:

- It is drought resistant and even occurs in semi-arid shrubland. Given it occurs across relatively diverse climatic zones, it may have large potential to adapt to a drying climate.
- The leaves have a silvery underside and a leathery surface. This allows the leaves to reflect back light and heat, which reduces evaporation.
- It has the ability to close stomata during drought stress and during the hottest times of the day, which also reduces evaporation from leaves.
- It has large sinker roots, along with a tap root, that reach towards the groundwater and cooler soil layers where moisture is available during summer.
- It is moderately serotinous, as a large proportion of seeds are stored in its seed bank, with the seed generally remaining in in the follicle until successive autumn rain events.
- The fruits or follicles are hard, woody and grouped together as cones, protecting the seeds from foraging animals and fire. The fruits will generally not open until they have been completely dried.
- It is highly resilient to fire, recovering by resprouting from its trunk or base.
- It is long lived. Some may live for up to 300 years. This reduces the risk associated to reduced reproduction during extended periods of unfavourable conditions.
- It has high genetic variation, which generally means it has high potential to adapt to changing conditions, however, recent research suggests that genetic variation may be declining in response to altered fire regimes.

Candlestick Banksia is an important food source for Black Cockatoos and it has significance for Noongar people, who would place the flower spike in a lined hole filled with water to make a sweet drink that also relieved coughs and colds. If you visit a Banksia Woodland this summer, take time to absorb the sweet, light-shiraz aroma of the candlestick banksia flowers.

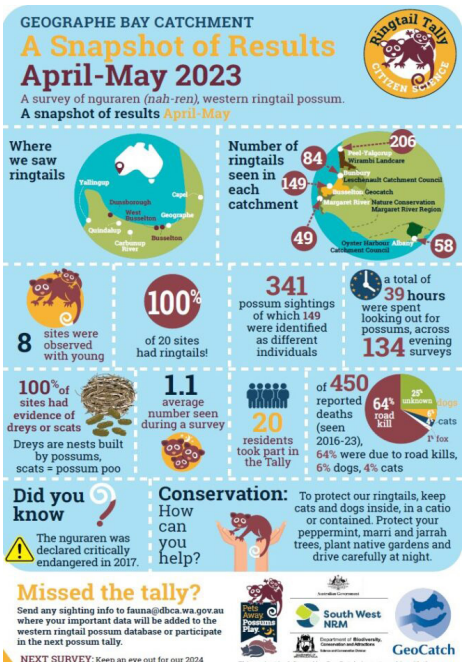
Banksia attenuata
Image courtesy of Corrine Duncan

The 2023 Ringtail Possum Tally Results are in!

Thanks to all participants in the Peel-Harvey Catchment that submitted your results, as many were from the Lake Clifton/Herron area.

The information gained from the Tally is building a reliable set of observation data that will improve our knowledge about where Western Ringtail Possums are found and in what numbers. This information is then used as a reference for population trends, future planning decisions and conservation projects.

View the 2023 Ringtail Possum Tally snapshot of results here.



PHCC wishes all Lake Clifton and Herron residents a Merry Christmas and Happy New Year

Keep up the good work and dedication to improving and protecting the local woodlands, wetlands and biodiversity.

We look forward to supporting your restoration goals in 2024!

Landcarematters

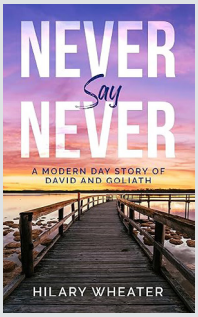
Lake Clifton Sub-catchment

Never say never

Never Say Never, by Hilary Wheater, is a remarkable story of FRAGYLE (Friends of the Ramsar Action Group of the Yalgorup Lakes Environment) during their 10 year battle to save their beach, wetland and lifestyle.

They were told they would NEVER change the attitude of the three levels of Government. But.....Never say Never.
It proves that with passion, perseverance and belief, a small group of people can achieve the seemingly impossible.

Available online and at most book stores.



Events coming up...

Jan 26 *2024 - Bird Watching Outing with Mandurah Bird Observers Group at Lake McLarty (call Bill King on 9534 9913 to register).*

Jan 31 *2024 - **Shorebird Identification Workshop** - ideal for beginners – register through the PHCC website.*

Feb 1-2 *20th Annual Wetlands Conference at Cockburn. See https://www.thewetlandscentre.org.au/conference/*

Mar 1 *2024 - Clean up Australia month starts. See https://www.cleanup.org.au/events*

May 25 *2024 - PHCC's Annual Lake Clifton Seedling Giveaway (save the tentative date).*

Want to contribute an article about your property in the next Lake Clifton Landcare Matters?
Please send your article to admin@peel-harvey.org.au

Subscribe to our e-newsletter here: https://peel-harvey.org.au/wattle-quoll/

See our website for available grants and funding opportunities: https://peel-harvey.org.au/grants/

Debt payback to save threatened species and woodlands at Lake Clifton/Herron

A new research article, by Will Fowler from DBCA, has been released that discusses our local unique environment and species and extinction debt.

The term "extinction debt" explains many environmental problems we face across the globe today. It can apply to most threatened species and ecological communities, including woodlands and waterways and relates to the delayed extinction of species due to habitat loss. It is the idea that species can initially survive habitat change but later become extinct without any further habitat modification. Like many areas in the global biodiversity hotspot in southwest WA, large areas of native vegetation around Lake Clifton/Herron has previously been cleared and fragmented, leading to the present legacy which impacts bushland, wetlands and native fauna.

One example is our Ringtail Possum: Ringtails are extremely sensitive to variation in the nutritional quality of its food source and are vulnerable to introduced predators as they rest near the ground. Although bushland areas in the Lake Clifton/Herron area have been rehabilitated thanks to a few keen conservationists and landholders, Ringtail Possum population declines are expected to continue, as the climate continues to dry and warm and other threats (i.e., fire and pests) are still present, and the longer-term effects of clearing play out.

Most of the Woodland around Lake Clifton and Herron is either Banksia or Tuart Woodland, both are threatened ecological communities. Will Fowler's recent publication found that Banksia Woodlands are sensitive to extinction debt, largely because many of the plant species in Banksia Woodlands have slow turnover rates (or long life-spans, particularly for species in the diverse understorey) – due to the longevity of plant species in Banksia Woodlands, it may be too early to predict the magnitude of debt incurred.

Extinction debt presents significant challenges for the conservation of biodiversity, however, there still is a chance to counteract future biodiversity loss through habitat restoration and conservation actions. With effective interventions, it may even be possible to restore our Woodlands before the debt is fully paid. The sooner the intervention occurs, the more likely it is to be successful in mitigating future species loss.

To read more about this research, including references, you can access the article here: https://www.publish.csiro.au/bt/pdf/BT22134

If you have Banksia or Tuart Woodlands on your property and want to help in conserving biodiversity, contact PHCC for advice and to lodge an expression of interest for future funding.

This project is supported by PHCC through funding from the Shire of Waroona

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