

February 2023

Welcome to the first issue of Streamlines for 2023. Once again, we have a very wide range of topics.

We begin with two exciting announcements. Firstly, the recognition of a potential new Bushcare site for PPCG in Woodward Place Park, Pullenvale. Secondly, the Friends of Anstead Bushland Reserve announce their program of events for the year beginning with a butterfly survey on Saturday March 4 and a Microbat walk on Friday March 24. See the PPCG website for further details.

Then John Ness describes his efforts to eliminate Asparagus from plots in Anstead Bushland Reserve. Following John's article, I've compiled a table comparing the two species of Asparagus that John mentioned. This is followed by a very brief introduction to Microbats in preparation for the Microbats walk.

Deer have been observed damaging vegetation in Anstead Bushland Reserve and the importance of reporting sightings to the Brisbane City Council is emphasised. Then follows an article – the first of three on cane toads – about controlling both tadpoles and adult toads.

Our Wildlife Officer, Irene, tells the story of two very lucky kookaburra chicks. Finally, Trish describes a highly unexpected and very personal encounter with a koala in Pullenvale Forest Park.

All members are welcome to submit articles to Streamlines via helian@pretirementresorts.com.au. The deadline for the next issue is 15th May 2023.

Helen Ogle Editor

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A Landcare Group

Website

www.pullenpullencatchments.org.au

Meetings

Meetings are held at 6 pm on the first Wednesday of each month at Pullenvale Environmental Education Centre, 250 Grandview Road, Pullenvale unless advised otherwise.

Committee Members 2023

| President: | John Ness | 3202 7556 | john.ness@emsolutions.com.au |
|------------------------------|--------------------|--------------|---|
| Vice President | Ron Tooth | 0407129 734 | r.tooth@uq.edu.au |
| Treasurer | Kaaren Ness | 3202 7556 | john.ness@emsolutions.com.au |
| Secretary | Liz Dominguez | 0419 794 550 | contactus@pullenpullencatchments.org.au |
| Committee Members | Margaret O'Grady | 3202 5115 | m.ogrady@live.com.au |
| | Karen Roberts | 0438 458 935 | bobnbert@internode.on.net |
| | Jim Williams | | jimawilliams@hotmail.com |
| | Corinne Foster | | corinneh@tpg.com.au |
| | Lisa Gray | 0428 829 911 | lmgray72@gmail.com |
| Bushcare Coordinator, | Lynn Brown | 0417 648 050 | emmacaja@bigpond.net.au |
| Pullenvale | • | | |
| Bushcare Coordinator, | Gillian Whitehouse | | gillianmw1949@icloud.com |
| Anstead | | | |
| Website Coordinator | Emma Barrie | 0457467 562 | pullenpullencatchments@gmail.com |
| Wildlife Officer | Irene Darlington | 0409 026 883 | irene.darlington@outlook.com |
| Streamlines Editor | Helen Ogle | 3323 7407 | helian@pretirementresorts.com.au |
| Membership | Lisa Gray, | 0428 829 911 | lmgray72@gmail.com |
| | Emma Barrie | | pullenpullencatchments@gmail.com |
| Creek Catchment Officer | Brendan McIntyre | 3178 2484 | brendan.mcintyre@brisbane.qld.gov.au |

Membership Options

Membership fees are:

- Annual Membership \$10 per person payable on March 1 each year
- Life Membership \$100 per person

We are delighted to accept donations.

- Send a cheque payable to PPCG to PO Box 1390, Kenmore, 4069 or
- Transfer the funds electronically to BSB 064 152, Account No.10107038 Ref: your name. b)

Working Bees Tools, gloves, etc are provided at Working Bees. Just wear sturdy boots and sunsafe clothing and bring water and a hat!

Anstead Bushland Reserve - 1st Sunday of the month, 8.30 - 11 am (April-September), 7 - 9.30 am (October-March); 2nd and 4th Saturdays of the month when advertised, 2-4.30 pm (April-September), 3.30-6 pm (October – March) Pullenvale Forest Park – 2nd Sunday of the month, 8.30 – 11 am (April-September), 7.30 – 9.30 am (October-March)

See also the Events Calendar on the website (https://www.pullenpullencatchments.org.au/events-calendar/

"The PPCG acknowledges the support of the Lord Mayor's Community Sustainability and Environmental Grants Programs for a grant to help with administrative, bushcare and educational costs"

Dedicated to a better Brisbane

Potential New PPCG Site at Woodward Place Park

Esther O'Brien

With the success of sightings of platypus in a number of PPCG locations, Woodward Place Park with the riparian Pullen creek bushland of RE 12.3.16 corridor was identified as a potential habitat and significant biodiversity area of interest. In November 2022 Brendan McIntyre from Brisbane City Council Creek Catchments reached out to further investigate Woodward Place Park with local resident and PPCG member Esther O'Brien.

On exploration, a significant number of remnant and genetically diverse dry rainforest trees, shrubs, vines and many wildlife species were identified as well as Koala scratchings on a large stand of Eucalyptus trees. With known sightings of Squirrel gliders, Masked owls and Long nosed bandicoots previously in the area, the site was determined to be a significant biodiversity location.

A number of zones to perform rehabilitation work have been mapped out and the site was nominated as a new PPCG bush care group location and accepted at the last PPCG meeting with further approval from the council underway.

2023 Events in Anstead Bushland Reserve

Gillian Whitehouse

We have several events planned in ABR in 2023, some of which are coming up soon.

- Karen is liaising with Jutta Goodwin about a microbats* walk in ABR on Friday 24 March; also a
 butterfly survey is scheduled for Saturday 4 March.
- A 'Birds in the Reserve' event is in the Site Plan for Saturday 2 September. We have some flexibility with the date but need to start planning soon. In particular, we need to line up an expert willing to lead the walk. Deb Metters (LfW) is an initial suggestion, other suggestions welcome. We will also require approval from BCC and if we're planning early we could notify the Lord Mayor of the event (required three months beforehand). We will also need to make sure the event is promoted through all the important channels.
- The engagement of tertiary students to undertake planting and weeding is listed in the Site Plan as an activity for Autumn 2023.
- Additional nesting boxes in Zone 1 (Bradley site areas) and/or Zone 2 (Lookout/SCIP area and surrounds) is an item carried over from Year One. It has been agreed to by PPCG but needs to be planned with input and approval from BCC.
- Plant identification sessions with Daniel Rekdahl in ABR have been discussed but thus far we haven't heard back from Daniel.

*See page 7 for a very brief introduction to Microbats courtesy of Backyard Buddies website. Backyard Buddies is a free educational initiative of the Foundation for National Parks & Wildlife.

To Kill an Asparagus Vine

John Ness

About 2220 years ago, Scipio the Younger performed a sterling service, from the Roman perspective, in defeating the troublesome Carthaginians from North Africa with the result that he was given the honorific Scipio Africanus. About 50 years after his victories and reasonably fair negotiated peace settlements, the Carthaginians were again making a nuisance of themselves. The Romans invaded en masse, destroyed the main city Carthage, killed or enslaved the inhabitants and, allegedly, rubbed salt in the wounds by sowing the productive wheat fields with salt. Salt was the ancient world's equivalent of glyphosate.

It has taken about 2,200 years but the ghosts of Carthage have avenged themselves on the descendants of the Roman diaspora, namely us, by releasing asparagus vines, in particular *Asparagus africanus*, into our fields and forests. Many of the trees in Anstead Bushland Reserve (ABR) are covered in *A. africanus* which is a particularly fast grower, with large sharp thorns and the ability to sprout vigorously from a crown or prolifically from seeds. About a year ago, one such *A. africanus* in ABR was recorded as growing ~ 2.5 m long in 50 days or about 50mm/day. Recently, an *A. africanus* shoot was measured at a length of 800 mm, stem diameter of 12 mm and weight of 75 g after only 1 week of growth. This is a linear growth rate of 100-120 mm/day or 4-5 mm/hr! The volume of the shoot was ~ 60cm² giving a specific gravity of ~1.25 which is unusually dense for a young shoot. This shoot sank in water whereas shoots from all other weeds tested such as lantana, corky passion fruit, glycine etc floated.

Asparagus africanus will rapidly grow over and smother shrubs and small to medium sized trees and will hinder native plants from regenerating under its canopy. To help further prevent native plant regeneration, *A. africanus* enlists the aid of the lower level mercenary, *Asparagus aethiopicus* which seems to prosper quite happily and profusely in the shadow of its much bigger ally. *A. africanus* has a couple of other tricks to establish its dominance besides rapid growth. The new shoot is dark green in colour and very likely starts photosynthesising before the leaves are unfurled so returning nutrients to the corm. If the main shoot fails then the backup is the approximately 3000 seedlings per square meter about 30 mm high around the base of a large *A. africanus*, each waiting its chance to become the next leader of the pack.

What is a good strategy to win the war against *A. africanus* and its allies? Chemical methods are best avoided so various mechanical options remain.

The first option is the brute force one which is usually done in two steps. Step 1 is to cut and clear the thorn encrusted major stems to make a safe working area and then grub out the crown and associated root network with a mattock. This causes major disturbance to the soil and also fosters the growth of the hundreds to thousands of small *A. africanus* seedlings invariably associated with a large, fruiting parent and just waiting to get their quota of sunshine.

Given that the Bradley method being used in ABR is aimed at carefully helping native seedlings to compete with more vigorous weeds, it is best not to destroy the chances of native plants for both seeding and growing by major disturbance of the soil. Consequently, this brute force method has been put on hold.

A more refined method is to cut the stems from the crown at ground level and then to carefully cut around the crown under the ground using a boning knife and remove the central crown. This effectively kills the central plant but it has not yet been established if there will be any shoots from the rhizomes that may lie along the long underground stems emanating from the crown. This method is not too difficult for relatively small plants with stems say up to 5 mm in diameter but it requires considerable force to cut out the crown of a fully-fledged *A. africanus*.

A longer term approach is to cut off the stems at ground level, come back in a few weeks and repeat with any new shoots and continue to repeat. This should eventually wear out the crown and underground store of energy and material as long as the shoots are cut off before they undergo photosynthesis and so resupply the underground stores. So far, some *A. africanus* corms have been cut up to eight times over a period of 12

months so it is a test of endurance for both the weed and the weeder. There are hopeful signs that seven cuttings or a few more will finally convince the corm to surrender.

The small seedlings covering the ground under a large *A. africanus* plant can be easily pulled out by hand and cutting the parent stems will prevent any further seeding from that vine. There are, of course, a very large number of *A. africanus* mature vines in ABR which will provide a virtually unlimited supply of seeds for birds and animals to disperse. How this can be dealt with is beyond the scope of this article and possibly this cohort of *A. africanus* attackers.

Compiled from information on Wikipedia and the Brisbane City Council Weed Identification site.

Two Weed Species of Asparagus

Asparagus is a genus of flowering plants in the family Asparagaceae, It originated in Africa and comprises up to 300 species. The best-known species is *Asparagus officinalis*, the vegetable asparagus. Some members of the genus are grown as ornamental plants. Some have become naturalised in parts of Australia after being introduced as ornamental plants and are considered weeds.

Most are evergreen, long-lived plants occurring from rainforest to semi-desert habitats. Under rainforest conditions, they grow as leafy vines. In drier climates they evolved into thorny, drought-adapted plants. Many are climbing plants with long stems arising from a crown. Below ground, plants develop root tubers that are a valuable source of moisture and nutrition under drought conditions. The crown and fragments left in the ground may re-sprout, making removal difficult.



Stem of Aspaaragus aethiopicus showing spines



Stem of Asparagus africanus showing numerous spines



Asparagus root tubers



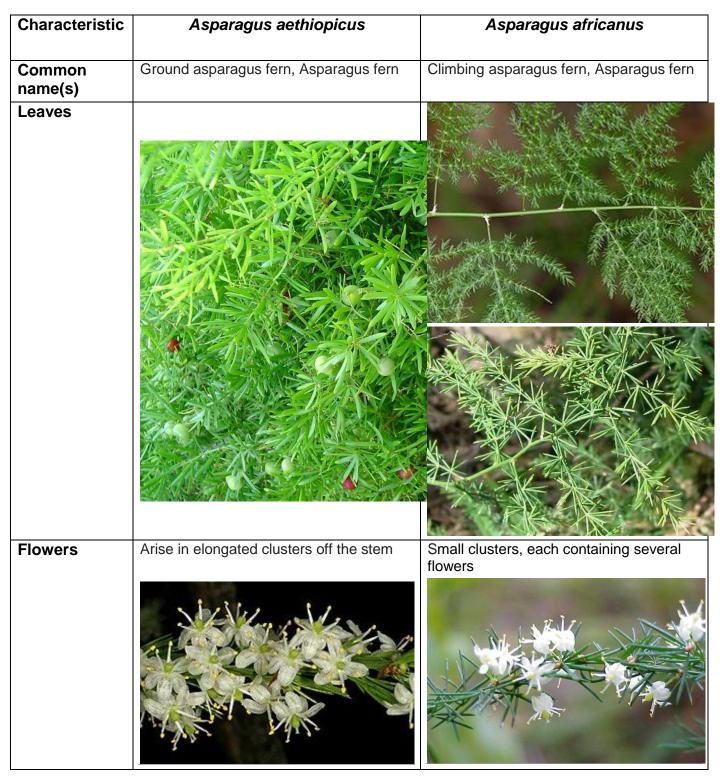
Asparagus flowers

Most species have flattened photosynthetic stems, called cladodes or phylloclades, instead of true leaves. These grow in clusters and may be finely branched leading to the misleading common name 'asparagus fern'.

In spring, the plant produces white flowers, which, like the leaves, grow in clusters. They have three sepals and three petals, which are similar in appearance. The six white filaments have yellow anthers. The colour and the scent of these flowers attract insects, which pollinate the flowers.

In summer, the flowers are followed by berries which ripen from green to bright glossy red by winter. Each berry contains a single black seed. They are eaten and distributed by birds and mammals.

Two local weed species are compared below:-



Microbats

Microbats are tiny flying mammals found all across the world except for Antarctica and the Arctic. There are more than 60 different types of microbats in Australia. They usually have large ears, small eyes and wings. The smallest microbat weighs only 3 grams. The largest is the carnivorous ghost bat (*Macroderma gigas*) which weighs just 150 grams.

Microbats see with their ears rather than their eyes. They produce a sound and 'listen' for it as it bounces back from surrounding objects. When cruising, microbats emit about 10 pulses per second. When an insect is detected the pulses go up to over 100 per second.

Microbats move fast and are rarely seen or heard. You may be lucky to hear a White-striped Freetail Bat (*Tadarida australis*) as it sends out its high pitched echo-location. It is one of the few bats that can be heard by humans.

Microbats can eat as much as 40% of their own body weight in a single night or several hundred insects per hour.

Many of our microbat species are hollow dependent which means they live during the daylight hours inside the hollows of trees or branches. If they cannot find a suitable hollow, they can fit into very small gaps and utilise your roof and walls.







Yellow-bellied sheath-tailed bat

Cubberla Witten Catchments Network's survey in 2015 identified 15 species of microbat in Brisbane's inner west http://www.cwcn.org.au/images/Microbats_Inner_West_Survey_Report_b.pdf. In addition, many species have been reported in surveys of Hawkesbury Road Nature Reserve and Moggill Conservation Park. Anstead Bushland Reserve is right next to Moggill Conservation Park and the Brisbane River and has a great deal of 'bat feeding highway' potential. CWCN's survey showed that the number of bat species identified was higher close to well-forested areas and well-vegetated creeks. Lowest bat diversity was recorded in areas of denser housing where the creeks were less vegetated and heavily modified through diversions.

Feral Deer in Anstead Bushland Reserve

Feral deer – deer not kept in a deer proof enclosure – have recently been recorded in the Reserve. Three types of deer are common around Brisbane – Rusa deer, Red deer and Fallow deer (see Streamlines May 2014 or Brisbane City Council website for descriptions).

Feral deer should be reported to the Brisbane Council either by submitting a feral animal sighting report or by calling the Council help line 3403 8888.

This information is printed from Watergum's website with permission. Watergum is a not-for-profit organisation and registered charity that helps the community engage in real, on-ground work to restore, maintain and protect the natural environment. It is based in Burleigh Heads and has a very helpful and easy-to-read website.

Controlling Cane Toads

Background

In 1935, 102 cane toads were brought to Queensland in an attempt to control cane beetles which were decimating crops. The toads proved completely ineffective at controlling cane beetles but their enormous appetites and staggering breeding capabilities meant they quickly monopolised habitat and food resources to the detriment of native species. They are now well established in 4 states and their numbers exceed 2 billion.

Cane toads present a serious threat to native species and to pets and it is important that we band together as a community and start impacting cane toads before they spread any further.

Two control methods are described below – one for tadpoles and one for adult toads.

Tadpole trapping

Watergum Cane Toads targets cane toad tadpoles by tempting them into traps using lures made from cane toad pheromones. Lab processing ensure that the lures are safe to use in waterways and don't harm other wildlife. Frog tadpoles have no interest in the scent of the lure, but cane toad tadpoles find them irresistible because they smell exactly like cane toad spawn, which they would usually eat!

Just place a trap in the pond, dam or waterway on your property and leave it to work its magic. When you come back later you'll find your trap full of cane toad tadpoles!

You can then count your catch using standard scientific counting methods and upload your data to our database. Help us to better understand cane toad populations by contributing your data!

Toad busting

Toad busting is the hand-collection and removal of adult toads from the environment. It is just as important as tadpole trapping and still remains one of the most successful methods of cane toad control.

Female cane toads can lay up to 70,000 eggs per year, so removing fertile adults from the environment prevents hundreds of thousands of future toads.

Do you have some frozen toads for us? Email us at canetoads@watergum.org to arrange collection/delivery.

Here at Watergum, we only believe in the humane and ethical treatment of animals, even if they are an invasive species. Cane toads deserve to be treated kindly and humanely, after all it is not their fault they are on the wrong continent, they were put here by US!

Watergum requires everyone to follow our code of ethics with regard to cane toad euthanasia which requires cane toads to be euthanised in the most humane way currently recognised which is available to the general public – **the cooling and freezing method.**

The cooling and freezing method involves refrigerating toads for up to 24 hours before transferring them to the freezer. The period of refrigeration causes the toads to slip peacefully into a coma, rendering them braindead. This means that they suffer no pain when they are later frozen. Toads that are frozen straight away experience great pain as ice crystals form in their veins.

Toads that have been euthanised in any other way cannot be used for tadpole lure production.

Is it a toad or a frog?

When you start your cane toad control measures, it is so important that your ID skills are up to scratch. One of the reasons we are doing this is to protect and reclaim habitat for native species, especially frogs! So it's super important that you don't accidentally cull any frog spawn, frog tadpoles or frogs.

An article describing the differences between toads and frogs will appear in the next issue of Streamlines.

The Tale of Two Lucky Kookaburra Babies

Irene Darlington

This is a story of two Kookaburra babies. These two siblings, called Alpha and Beta, hatched into the world in a termite nest on a dead tree in bushland off Gap Creek Road.

Their saving grace was twofold: one that the dead tree their termite nest home was attached to, was positioned next to a mountain biking track. A violent storm during the night had resulted in the dead tree falling over, smashing the termite nest containing Alpha and Beta, 'my boys', on the ground. The two kookaburra babies were exposed on the ground. Vulnerable, with only pin quills and eyes still closed. The babies were shivering on the ground, waiting for their fate.



Then enters their second stroke of sheer good fortune: a female bike rider returning to her car parked several kilometres away. This lovely woman saw the uprooted dead tree and the vulnerable kookaburra babies sitting on the ground amongst their smashed termite nest. She decided she couldn't just leave the babies there. She took off her helmet and a top shirt and snuggled the babies into her helmet. Then she commenced a long slow walk with her bike, holding the babies, back to her car. She ended up calling me and bringing the babies to me.

That was the beginning of a long trek of raising my kookaburra babies. It was an early morning rise and feeding the noisy, demanding babies, at dawn. Then a feed every couple of hours, at least. Expensive beef strips with a special calcium and vitamin/mineral rich supplement with parsley and oat bran. Close to \$13 a day for the two babies. But there were other kookaburra babies in care, so my kookaburra feed bill escalated to \$22 daily. Well that is what it takes to look after wildlife: don't skimp on the nourishing food and supplements.

The babies grew very quickly. Changing the pads in their baby basket, cleaning up their projectile pooping every couple of hours off my floors and whatever was in the line of fire. Their escalating loudness as they learned to crow like adult kookaburras soon became deafening inside the house with both of them 'laughing'.

I watched these adorable, clumsy, skin and quills, blind babies open their eyes, open their quills to reveal beautiful kookaburra feathers, and savagely compete with each other for pieces of meat. Their growth and development was fast. Little Alpha and Beta were becoming boys who now needed me less but importantly needed to be adopted by a family of kookaburras somewhere.

You see, the trick to raising baby kookaburras is getting them adopted by a resident family hierarchy of adult kookaburras. Many foster carers of wildlife make the mistake of not learning about wildlife behaviour or ignoring the better-known facts. Facts such as releasing an adult kookaburra into another's territory is surely a death sentence for the new 'intruder' kookaburra.

Adult kookaburras pose a threat to established family groups of kookaburras as competitors for food, mates, housing and territory. They go to the point of killing another adult kookaburra who strays into their territory.

The ONLY way to raise and release kookaburra babies is to have them 'adopted' by an established kookaburra family whilst they are still vulnerable babies. It's a tricky, stressful time.

Fortunately, I recalled a conversation I had a few months earlier with a lady who had found three dead kookaburra babies on her acreage property in Anstead. I kept her details on file for the future of my babies. I hoped that when it came time to reintroduce my babies to the wild, this lady's property would be ideal. That is unless her kookaburras had already started to breed again ... then they'd give preference to their own offspring and kill or leave my babies to starve.

My two big babies, eyes wide open, lovely cover of feathers, but still unable to hunt for themselves were taken to this property. The babies were in a cage on an exposed table. I knew from 40 years practice of fostering, that if the adult kookaburras would fly down to the babies and start feeding them through the bars of the cage, they had adopted my babies and I could open the cage and set the babies free.

This is exactly what happened. The wild adult kookaburras started to appear at the cage by day 3 trying to feed the babies dead lizards, butterflies and a little snake, through the bars of their cage. The cage was opened and the babies released, flying high up on a branch and the resident adult kookaburras followed, sitting next to Alpha and Beta on the branch and continuing to feed them with a dead frog and a baby snake.

It was such a lovely ending to a stressful time for me. Did my kookaburra babies have a chance at an adult life or their own? Will they be left to starve? Will they be killed by my attempt to have them adopted by an established kookaburra family? It worked!

Koala Sighted in Pullenvale Forest Park

Trish Roderick

I am 55 years old and have lived in South East Queensland my whole life. I remember, as a primary school child growing up outside Harrisville in the Fassifern Valley, hearing first, and then seeing the koalas that made their way across our dairy farm from one tree-filled area to the next. I thought as a child that they would always be around, that I would just have to stop and take the time to gaze up into their favourite gum trees.

I moved to Pullenvale in 2013 and started to gaze, actually glare very hard, into the trees around us. Surely these beautiful trees should make wonderful habitats for koalas. It has taken me 10 years of tree gazing, to have experienced that joyful moment that I took for granted as a child and it did not happen looking up.

On the 3rd January 2023 I was jogging slowly along the wonderful Pullen Pullen Creek track just after



5 am when there it was, crossing the track in front of me. It took me a moment to register exactly what I was looking at and by that time the koala had made its way up a tree to the right of the track. There it patiently waited for me to take a couple of photos so I could gleefully show my husband. It was a moment I will treasure. I apologised out loud to the koala for disturbing its morning journey and with an overwhelming feeling of gratitude I turned and jogged on.