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MOGGILL CREEK CATCHMENT GROUP
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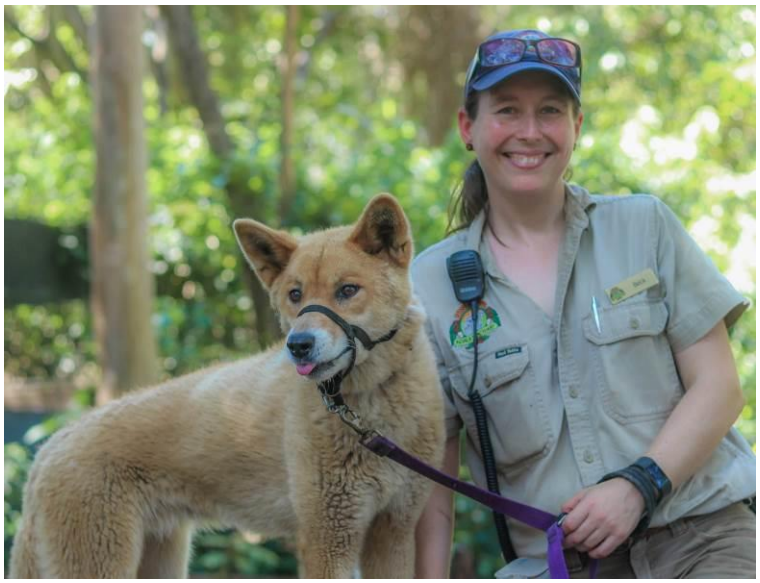
MCCG NEWSLETTER: Autumn 2019

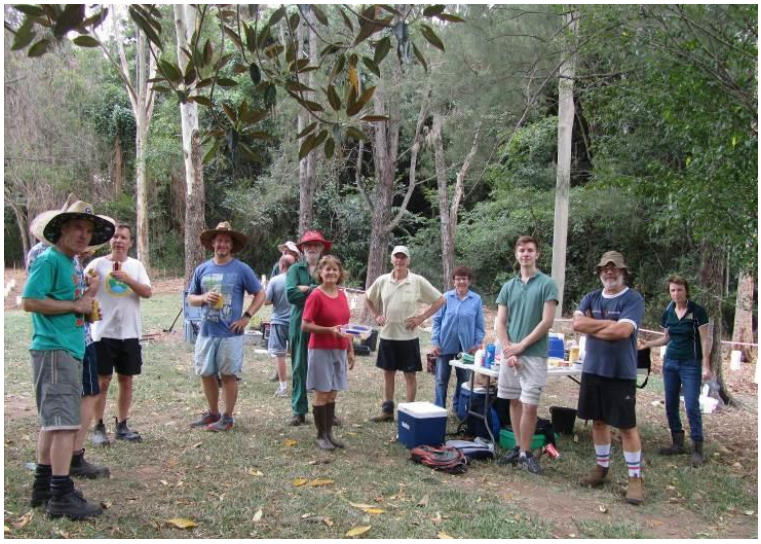
Inside your Autumn 2019 issue:

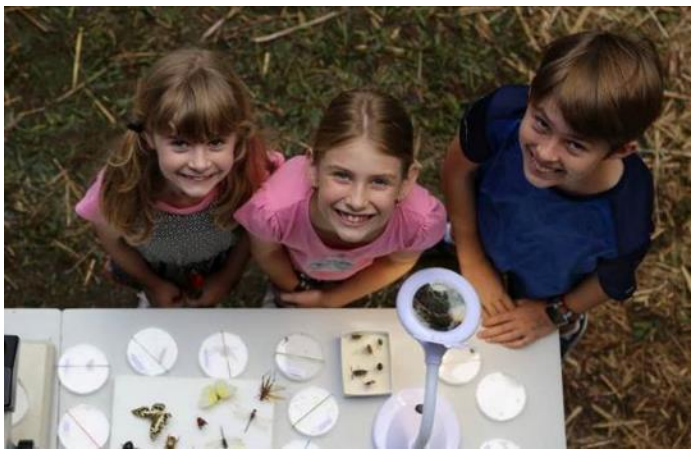
LEFT: Seedlings for the drought-tolerant and picturesque native stout bamboo grass (*Austrostipa ramosissima*) are available from the MCCG Nursery. *For Bryan Hacker's seeds and weeds, turn to page 5.*



ABOVE: Possibly the most coveted job in Brisbane? For more from Rebecca Bain, the new coordinator of the MCCG 'Photo Comp,' *turn on pages 6-7.* Picture credit: Juank Diaz.

BELOW: The Huntington/Tuckett Bushcare Group at a well-deserved morning tea. *Update on page 7.*





ABOVE: **Sunday 9th June is the date for the 2019 Kids Day at the Cottage—a FREE event for the whole community**. For more on an exciting new activity taking place at the MCCG Cottage Kids Day, Gold Creek Road, Brookfield *turn to page 6 (2018 Kids Day picture courtesy Dale Borgelt).*

58.1% OF THE QUEENSLAND LAND AREA FULLY OR PARTLY DROUGHT-DECLARED (1ST JAN. 2019)
BRISBANE (FEB. 2019): 38mm total rainfall (average 138.4mm) & 31.6°C mean temperature (+1.5°C above average)
See inside for special articles, with a focus on the impact of drought, on pages 3-6.
Sources: https://data.longpaddock.qld.gov.au/Drought/2019/20190114.png; www.bom.gov.au/climate/current/month/qld/summary.shtml#recordsAvgHigh

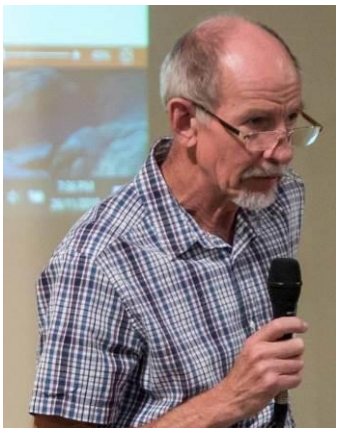
Chairman's report

Currently, we are experiencing another period of extremely high temperatures and drought. Droughts are of course not unusual in Australia, the world's driest continent. But, while many of our plant and animal species are well adapted to drought, when combined with increasing periods of unprecedented high temperatures, droughts can take a significant toll on native wildlife.

Droughts also pose significant challenges for our bushcare work, with the need to provide artificial watering for recent plantings to keep them alive, and to delay new plantings pending the arrival of significant rain. This may mean carrying out the plantings at less than optimal times of the year.

In some areas it is possible to maintain new plantings by pumping water from the creek, but this is only possible when there is significant flow.

In the catchment of Moggill Creek, as we have recently seen in spectacular fashion elsewhere in Queensland, periods of drought are often followed by major floods. While the consequences of such floods locally cannot be compared with the catastrophic damage recently experienced in Townsville and northern Queensland, they can play havoc with plantings along the riparian zone, necessitating the need to 'rescue' and re-stake many newly planted trees and shrubs.



Jim Pope, at the 2018 MCCG AGM (*Picture: Geoff Lawrence*)

Fortunately, in my experience, the majority of the plants survive with a little help from our dedicated band of bushcare workers.

Jim Pope

Get the Newsletter more quickly (and save MCCG funds—and paper). Put 'newsletter by email only' in the email subject line, and confirm your name and postal address to mccgsecretary@live.com.au

Sources (Editorial, above right):

1: https://data.longpaddock.qld.gov.au/Drought/2019/20190114.png

2. *Our wide brown land: The forgotten climate change crises', Graham Readfern,* The Guardian Online*, 4 March 2019.*

Editorial

On 1st January 2019, 58.1% of the land area of Queensland was fully or partly drought declared.[1] In a recent article in The Guardian*, about the impact of the weather on native flora and fauna, James Cook University ecologist Professor Bill Laurance commented, "There are silent crises happening all around us and it might be a few years down the track that we work out the skinks and frogs and plants that have died off."* [2]

Following Ed Frazer's excellent article, in our Summer 2018-19 Newsletter, Michelle Johnston (our Website Editor) suggested that Members might be interested to read more about issues connected with the drought. It is great to see that many of our regular authors responded to this challenge. ***Let me know YOUR thoughts on the issues.*** *I'd love to hear from other 'voices' from our membership, so why not send me your thoughts on this (or any other) subject. The absolute deadline for the next issue is 12 June 2019. So get writing* ***now****. I am sure EVERYONE has at least 100 words they could write… email me soon with your tips, thoughts and comments (mccgeditor@outlook.com.au).*

Cathi

Moggill Creek Catchment Group (MCCG) is a volunteer action group, aiming to conserve & improve the natural environment of our catchment on both private & public land.

***Chairman*: Jim Pope**

***Secretary*: Kathleen Walmsley**

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***Newsletter Editor*: Dr Catherine A. Lawrence (Cathi)**

Articles of interest to Members are always welcome. The Editor reserves the right not to publish any item submitted. Material will be edited for clarity, style and space. The decision of the Editor is final, and no correspondence will be entered into. ***Please* email your ideas direct to *mccgeditor@outlook.com.au*.**

Drought & Climate Change

When not volunteering with the MCCG, Jim Pope is also an Adjunct Professor (QUT Science and Engineering Faculty). Jim's particular area of expertise is in Physics—which may come across…

The year to July 2018 was the hottest year on record in Australia. Since the turn of the century, records have been tumbling throughout the world for high temperatures and periods of drought, interspersed in some areas by catastrophic floods. In Australia, we are experiencing more intense heatwaves, more extreme weather and extended bushfire seasons. This is not a coincidence, but the inevitable consequence of human activity, in particular greenhouse gas emissions resulting primarily from the burning of fossil fuels.

While the detailed consequences of increasing concentrations of carbon dioxide in the atmosphere are complex, the overall link between atmospheric CO_2 and global temperature rise is well established. At the root of the issue lies some simple physics. Atmospheric carbon dioxide, (and other gases, such as methane), transmit radiation from the sun, which is mainly in the visible and UV region of the electromagnetic spectrum, but they absorb the longer wavelength infra-red radiation emitted by the earth as it heats up. Consequently these 'greenhouse gases' act like the glass of a greenhouse (or your car windscreen), trapping heat in the atmosphere.

Unfortunately, too many of our political leaders have found it convenient either to deny that such a link exists or have underestimated the dire consequences of failing to take timely and appropriate action. Denying that human activity contributes substantially to global warming is tantamount to ignoring the laws of physics, something that we do at our peril. (The laws of nature are of course entirely unaffected by whether we believe in them or not!).

This failure to take appropriate steps to mitigate the effects of climate change has consequences not only for the economy and human wellbeing, but also has an increasing impact on wildlife. According to a National Academy of Sciences (US) report that was recently highlighted in *Habitat*, the Australian Conservation Foundation magazine (Vol. 46 No.2 Oct 2018), only 4% of all the mammals on earth are now wild (and 70% of the birds are domestic poultry!). It is expected that the remaining wild species will lose 50% of their geographic range by the end of the century, as the result of the impact of climate change.

It is time to stop 'fiddling while Rome burns,' and take more effective action to limit the damage done by climate change. The MCCG does its bit, growing and planting around 12,000-13,000 native trees and shrubs each year, which all help to sequester carbon. Each of us can make an individual contribution by reducing energy usage and adopting a more climate-friendly lifestyle. But much more action and commitment is needed from our politicians. How many more 'once in a hundred year' events do we need before the message sinks in?

Jim Pope

Froggin' Around: 'Drought-proofing'

Frogs have adapted to an extraordinary range of environments, and water availability. Frogs are found along river and stream edges, and wetlands, as well as man-made sites—and some can breed in ephemeral pools, or even away from water. Some frogs have the ability to withstand years of drought—such as the burrowing frogs (*Cyclorana* sp and *Neobatrachus* sp) of northern and inland Australia. The water-holding frog (*Cyclorana platycephala*) is particularly interesting. It takes advantage of a short breeding period to lay eggs in flood pools. When these pools dry up, it uses a 'spade' on its foot to burrow into the sandy ground, enclosing itself in a transparent waterproof cocoon made from layers of shed skin. It stores water in the bladder or layers of skin, and a hole near the nostrils allows the frog to breathe. Through this adaption (aestivation—a major metabolic depression), the frog can survive for years in the absence of food and water.

All frogs consume water-containing foods, but don't drink it; their intake and loss is through the skin. They breathe through their lungs, and also through their skin to regulate moisture and fluid transfer (cutaneous gas exchange). Frogs have also adapted to prevent the loss of moisture during dry periods by covering their skin in a slimy substance (mucus) or lipids to protect the skin and keep it moist. Their bodies gleam with a waxy coating to prevent dehydration. Graceful treefrogs (*Litoria gracilenta*) have a waterproof dorsal skin, so they reduce surface area, tucking in fingers and toes and protect the thinner ventral skin (and can thus reduce metabolic activity). In contrast, the green treefrog (*Litoria caerulea*) is too bulky, and has no waterproofing, relying instead on rock crevices/logs and shutting down its metabolism (M. Tyler, 1989). Incidentally, it was first assumed that the spread of cane toads in Australia would be restricted by limited water availability and high temperatures. Sadly, behavioural flexibility to remain hydrated appears to mean toads can survive with sporadically located water resources (Brusch IV et al, 2019).

Phil Bird

Planting: Coping with Drought

Bryan Hacker gives us hope that many native plant species can survive drought conditions.

As I write this early in March, it is clear we are in an extended period of drought. Droughts are nothing unusual in southern Queensland, where they can occur at any time of the year. The total Dec.-Feb. rainfall on our Kenmore Hills property was 147mm, just 36% of Brisbane's long-term mean for this 3-month period (408.9mm; BoM 1999-2019). For January (the driest month), we received only 17.9% of the mean for the month. Temperatures have been above average, with 48 consecutive days 30°C or above in Brisbane. Those of us involved in revegetation projects are concerned. But there are at least two keys for success: establishment, and choice of species.

Establishment: When planting tubestock, many favour late summer to early autumn: a time when we hope there has been summer rain (so there is moisture in the soil), and temperatures are dropping. Watering is essential—ideally watering each plant generously, rather than just a frequent sprinkle. On sloping ground, a saucer-shaped depression around each tubestock plant makes sure the water gets down to the roots. Some members favour use of water crystals, but I have not used them myself. Mulching around planted tubestock is important, but can adversely affect natural regeneration. However, control of competition for several months is essential (in particular, controlling weed grasses and exotic vines).

Choice of species: As a generalisation, our hills and ridges were dominated by eucalypt woodland, whereas our riparian areas and more fertile soils were home to rainforest. So it is not surprising that many rainforest species planted on infertile hillsides fail during drought. We live on an infertile ridge, which would naturally be a spotted-gum woodland. But I have noticed several rainforest species establishing naturally, where seeds have been brought in by birds—notably red kamala (*Mallotus philippensis*), hairy alectryon (*Alectryon tomentosus*) and guioa (*Guioa semiglauca*). These three species are still looking good, especially the guioa (*pictured below left*).

Several species more at home in a rainforest, but which I have planted, and which receive no special attention, are showing little adverse effect from the drought. These include brown pine (*Podocarpus elatus*), tulipwood (*Harpullia pendula*) and Crow's ash (*Flindersia australis*). Two under-storey species which seem impervious to drought are spiny-headed matrush (*Lomandra longifolia*) and blueberry flax lily (*Dianella caerulea*).

Bryan Hacker

Drought: Ed's Wildlife Tips

Some great ideas from Ed Frazer on how to help our wildlife (particularly birds) survive during drought.

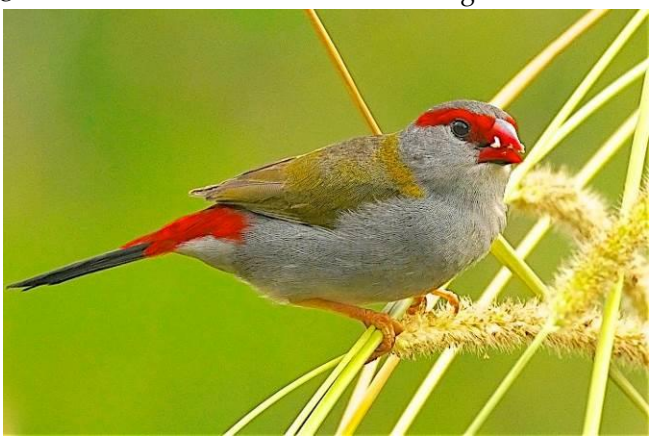
Helping wildlife during drought periods is a natural instinct, but needs to be carefully thought through. For example, putting out wild bird seed, sugar-mixture, or mince may be obvious, but are far from the best ways to support our local wildlife during drought. Mince encourages aggressive birds (at the expense of the insect-eaters), bird seed feeding isn't providing a natural diet for birds such as Rainbow Lorikeets (and there is evidence that it may affect breeding), and supplementary feeding of nectar eaters is possible but difficult (you need to do it daily, be scrupulously clean in mixture handling, and watch for aggressive birds).

However, there are many *indirect* ways of assisting wildlife during drought periods, which we can all build into our home environment—from a suburban setting in Kenmore, to Brookfield acreage.

Water: Many mammals get their water from their food, so foods may lack sufficient moisture content. Equally, birds can suffer the effect of drought in a variety of ways. Water is vital in supporting the nectar eaters, and in drought they regularly drink from our dams. Normally, many smaller birds get water from dew droplets on the leaves. With little or no condensation during dry periods, they can move away or seek larger sources of water. But creeks and dams are popular spots, and smaller birds often waste much energy avoiding more aggressive species. Insect-eating birds and flies also suffer during drought—both with drinking water and their food. A large number of insect-eaters rely on prey that has larval stages in water: dragonflies, damselflies, caddisflies, mayflies, and a number of other prey insects have their larval stages under water. Welcome Swallows skim over dams to catch the hatching midge larvae.

Fruit: Drought can be particularly severe for fruit eaters, particularly during widespread drought. Numbers plummet, with birds dying or failing to breed. At a local level, most of our fruit eating birds, bats and small mammals (I suggest perhaps 80%?) are supported by exotic fruiting trees and shrubs—including Camphor Laurels and *Ficus* species, particularly *F. benjamina*. Many of the plants supporting a wide range of fruitivores are weeds, particularly lantana and privet. Privet fruits during the winter months, and lantana has an extended fruiting season. I'm sure the dried lantana fruits, which look like tiny sultanas, are a drought life-saver (even if not the first choice of doves and rosellas).

Nectar: In severe drought, eucalypts will hold off flowering, and then often flower together after rain. In two of the past four years we have had an almost complete failure of the winter migration of millions of Yellow-faced Honeyeaters, because of the eucalyptus flowering failure. At times like this, domestic gardens come into their own. Attractive and showy plantings of hybrid grevilleas and selections of *Callistemon* (now *Melaleuca*) have extended flowering periods, producing prodigious amounts of nectar. Grevilleas are particularly drought-resistant, although they do need moisture to flower, and Silky Oak (*Grevillea robusta*) is fast growing and a reliable source of nectar.



Seeds: Many of the small seed-eating birds suffer in droughts. Finches eat mainly grass seeds, and they miss out if the grass isn't growing (or the horses have eaten it before seeding). Finches are relatively short-lived, and if they don't breed during a food shortage their numbers decline quickly.

So…my *Top Tips* are:

1. **Providing water** is much more effective than feeding with mince or grain. Even running a sprinkler over the garden shrubs for a few minutes helps—particularly if timed to spray at daybreak, when the birds are most active.
2. **Plant trees and shrubs near to dams and ponds**, to give the birds security as they come to drink.
3. If space allows, **create earthen dams**, as they provide the ideal environment for breeding food sources (e.g. midges, dragonflies and caddisflies).
4. **Plant native fruiting trees and shrubs**: Our Nursery has a wide selection of fruiting native trees and shrubs, and Bryan Hacker can advise what would be most suitable for supporting the wildlife around your property. For example, native *Syzygium* are great producers of fruit, and when densely planted the smaller species produce suitable habitat.
5. **Create alternative food supplies and substitute habitat before you clear lantana**: Remember the small birds and mammals who rely on them.
6. **Planting good, hardy nectar-providing** plants is a great solution. Consider plating nectar-rich flowering *Eucalyptus* trees.
7. **Allow some grass to go to seed** and fall to the ground. It will last until the drought is over, and the finches, like the Red-browed Finch (*picture below, by Ed Frazer*), and other birds, such as Peaceful Doves, will survive on it until the drought breaks.
8. **Fence off a wild, grassy area**: Pick an area adjacent to some shrubbery, providing seed-eaters with protection when ground-feeding.
9. **Sow cleared areas with annual grasses**, such as millet or canary seed, which are far better and cheaper than mulching with bark. When they have seeded, they can be left to die down—or brush cut to produce mulch in rehabilitation areas/ when establishing trees and shrubs in a new garden.

Implementing of these strategies throughout the year assists wildlife during drought, and will be much more effective than direct feeding (which has little overall benefit, and will probably only assist those that already can look after themselves). Ed Frazer

Seeds: Stout Bamboo Grass

Stout bamboo grass (*Austrostipa ramosissima*, previously *Stipa ramosissima*) is the only grass native to our catchment which grows to a height of 2.5m (*see cover picture*). It mainly occurs along margins of rainforests and is not common in our area, although several members in the upper catchment have seen this species.

Stout bamboo grass is a shortly rhizomatous species, with new shoots appearing 2-3cm from the older stem. The stems are bamboo-like, with as many as 15

internodes, each node bearing several branches. Leaf blades are 2-10mm wide, up to 40cm long and gracefully arching. The flowerhead (panicle) is usually up to 20cm long and has branches in whorls, the spikelets 2.3-5mm long. Spikelets have a single floret bearing a slender awn 14-30mm long.

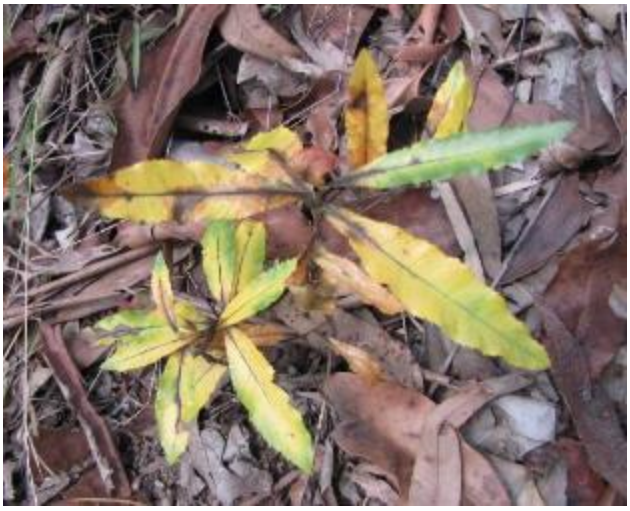
Stout bamboo grass is endemic to southern Queensland and NSW. Plants at our nursery are derived from seed collected in Moggill, and have proved to be very popular with members. They have survived the recent drought very well and, when fully grown, should provide good wildlife cover.

Bryan Hacker

Weeds: Controlling Ochna

Ochna (*Ochna serrulata*), otherwise known as Mickey Mouse plant, is arguably one of our most invasive weedy shrubs (see also the spring 2003 issue of the MCCG Newsletter, which included the report of a survey conducted by the MCCG and neighbouring catchment groups).

Ochna is extremely drought tolerant, and even tiny seedlings have the capacity to survive for weeks with no rainfall. It is a well-branched shrub growing to a height of about 2m, with simple dark green and shiny alternate leaves which are narrow and up to c.6cm long, somewhat undulate and with minutely toothed margins. Flowers have five yellow petals which turn to red with maturity, when they include up to six shiny black fruit.



Ochna is very difficult to kill, and is a significant weed on my own property. Following a Community Conservation Assistance (CCA) grant from Brisbane City Council, we worked with two neighbours with the result that it was largely brought under control. However, it soon started to re-appear, mainly through seedling regeneration.

Following advice from Cody Hochen (Land for Wildlife Officer), I sprayed individual plants in December 2018 with Starane Advanced, 100ml per 15 litres (spraying the weeds on two occasions, a couple of weeks apart). The picture, *below left*, shows that the treatment was generally effective, although follow-up will certainly be required. **Note**: Starane Advanced is also recommended for this species in the Weed Society of Queensland Inc. book *Weeds of Southern Queensland*, and the Biosecurity Queensland website (as fluroxypyr).

Bryan Hacker

Kids Day: 9th June 2019

Mark your diary now, and make sure you come along to experience a new, exciting *Kids Day at the Cottage* activity. Imagine weaving with nature. Kids, of all ages, are welcome to come and learn about the ancient art of loom weaving—but with a twist of nature. Loom weaving is an ancient craft, and at our Kids Day we'll be weaving with nature's own truly *green* fibres.

Kids Day at the Cottage is well known for offering environmentally-themed activities to engage and entertain the young, encouraging everyone to learn more about the natural world and the wonderful biodiversity of our catchment. There is so much to make, do, and see... and it is FREE. See you there: *The Cottage* at the very end of Gold Creek Rd, Brookfield.

Look out for Kids Day at the Cottage photos, posters and flyers, especially at MCCG displays in Kenmore Village Centre (26-27 April), and at the Brookfield Show (17-19 May). Or contact daleborgelt@gmail.com.

MCCG is grateful for the support of Seqwater Water for Life Community Grant, the Lord Mayor's Suburban Initiative Fund and Pullenvale Ward Councillor Kate Richards, and the Brisbane City Council Creek Catchment Program. This support, plus the immeasurable contribution from expert presenters and volunteers, enables us to offer this very popular community event FREE. Dale Borgelt

New MCCG 'Photo Comp' Leader

Great to hear that Rebecca Bain has agreed to take on responsibility for leading the MCCG Photography Competition Committee. By way of introduction, Rebecca sent us the wonderful picture, shown on page one. Here's more …

My name is Rebecca Bain. I've been a zookeeper at Lone Pine Koala Sanctuary for 15 years. I've always loved animals and observing them in the wild is a privilege. I've lived at Anstead for just over 3 years, and love exploring my nearby bushland areas and reserves. I've been fortunate enough to observe both

platypuses and a water rat within the Moggill Creek Catchment.

Watching wildlife has been a great way to improve on my bird identification and photography skills. I've been a member of the MCCG for two years, having joined as a direct result of the Photo Competition! I look forward to supporting the MCCG by taking on the Photography Competition coordination from 2019, and am grateful to the committee for agreeing to support me (and to Geoff Lawrence for helping with an extended handover process).

More information to come in future newsletters, and via our Website and Facebook page. And if anyone else would like to join in—to assist us with organising the competition, and perhaps even sponsoring a category—then please get in touch (mccgphoto@gmail.com). Rebecca Bain

More Help Urgently Needed

The MCCG is seeking volunteers for two vital roles:
Quartermaster/Equipment Supervisor: A person with some mechanical skills and knowledge of light machinery (ride-on mower, brush cutters, posthole diggers/augers, petrol water pumps, trailers etc.) is needed to provide advice and assistance with ongoing maintenance and repairs.
IT support person: To support members of the MCCG Committee with computer software and hardware issues. Requires familiarity with PCs running Windows, MS Office, email and internet security.
It is anticipated that both of the above roles might involve on average a few hours of work per month, although demand is likely to fluctuate considerably. Involvement would be very flexible and at times convenient to the people involved.
If any of you can assist us by taking on one of the above roles, please contact me via telephone (3374 4181) or email (j.pope@qut.edu.au). Any assistance will be very much appreciated! Jim Pope

Trials and Tribulations of Bushcare

Following the article in the last issue, an update on the Tuckett Street Park replanting.

Once most of the Chinese Elms were finally removed from the Tuckett Street Park, the ground was prepared for planting (see more about these invasive trees in our Winter 2017 Newsletter, and look at the Summer 2018-19 Newsletter for more on the project delays).

Unfortunately, conditions this summer have been much less favourable for planting than in 2018, due to the exceptionally hot weather and drought conditions.

The plantings were carried out over two working bees, assisted by about two dozen volunteers who contributed over 100 hours of work and planted around 750 trees and shrubs. For the second working bee we trialled the use of 'water crystals,' added to the soil around the roots of the tubestock when planting, in an attempt to counter the very dry conditions. It will be interesting to see whether this has any significant effect on survival and growth rates.

Unfortunately scrub turkeys proceeded to pull a number of the plants clean out of the ground, roots and all, within days of planting—presumably attracted by the moist soil beneath.

Many thanks to all those who assisted (*see front cover picture of the working bee team*), and special thanks to Paul Devine and his team from Habitat Brisbane, who supported us throughout, despite some trying circumstances along the way!

Jim Pope

MCCG TV

The ABC's *Gardening Australia* feature on the impact of Cat's Claw Creeper went to 'air' on 8th March 2019, and was repeated on 10th March (also online, and see our November 2018 Newsletter for a photo from the filming,). Feedback on the performance of our 'TV stars' is anxiously awaited! More importantly, it would be wonderful to hear of any comments from Members who saw the piece on television. Do you agree that such programs encourage others to be careful about what they decide to introduce to our landscape?

Bringing Back the Birdwing

Bright news from the Richmond Birdwing Butterfly Project: a beautiful photograph, and a great update on the work to address population decline, fragmentation and inbreeding. Thanks to Michelle Johnston for collecting this story.

The plight and recovery of the Richmond Birdwing Butterfly is well known among Wildlife Conservation Partnerships Program (WCPP) and MCCG members. From being common in Brisbane, to becoming locally extinct in just over 100 years, the butterfly is now a flagship South East Queensland (SEQ) species.

Most MCCG members would know someone who has been involved—most notably, Dr Don Sands and Dale Borgelt, who have been there from the start. Dr Sands has taught me a lot, and has been the driving force behind the recovery and mass planting of *Pararistolochia praevenosa* (Richmond Birdwing

Butterfly Vine). These plantings have led to a marked recovery of existing populations on the southern Sunshine Coast and the Gold Coast and its hinterland ranges. Despite similar plantings in Brisbane, Richmond Birdwing Butterflies are yet to recover.

In March 2017, WCPP started the *Bringing back the Richmond Birdwing Butterfly to Brisbane* project. As over 50% of Brisbane bushland is on private properties, we are in an ideal position to work with some of the 700 WCPP Brisbane properties to achieve our goal.

In the past, small Birdwing populations in Brisbane have relied on one or two isolated sites to survive. This has resulted in 'in-breeding depressions,' which has led to local extinction. Having vines spread throughout a corridor allows female butterflies to travel, and lay eggs, throughout Brisbane.

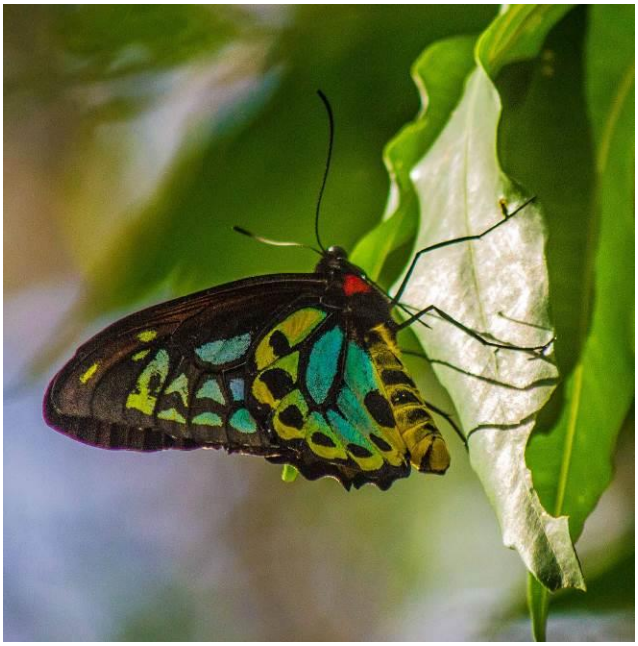
With the help of WCPP members, Richmond Birdwing Conservation Network (RBCN), MCCG, Habitat Brisbane Groups, and Dr Sands, our first goal was to find and 'ground truth' the planted vines. Over 6 months, we located 1,100 *Pararistolochia praevenosa* on private and public land, mostly in the western suburbs of Brisbane (including spread in a corridor from Chelmer to the Gold Creek Reservoir).

From our database, we mapped existing vines (in Atlas of Living Australia). We were then able to identify areas where we needed suitable properties to help fill gaps (our aim is to have a core site every 2-3kms, within an identified corridor). So far, we have planted a further 330 vines on WCPP properties—bulking-up smaller existing patches, or creating new 'core sites' in corridor gaps. Being a specialised vine, that likes constant moisture and small doses of sun, it has been a difficult task finding appropriate sites. After plenty of research, and working with property owners to plant the vine, we now have 1,430 vines, spread across 52 WCPP properties, 7 Habitat Brisbane sites, *and* 1 Brisbane City Council Reserve in Brisbane.

Our hope is to join up with current and future plantings in adjacent councils, and discussions are already underway. Like Brisbane, these plantings are to boost numbers, add to naturally-occurring populations, and help existing butterfly populations to move from isolated areas and spread throughout SEQ.

Another threat to Richmond Birdwing Butterflies is the introduced Dutchman's Pipe (*Aristolochia elegans*), which is a close relative of *Pararistolochia praevenosa*. Dutchman's Pipe is deadly to Richmond Birdwing Butterflies—tricking females to lay eggs on them, and poisoning the young larvae. A key part of the project is collecting information on Dutchman's Pipe sites, and working to control this invasive vine.

After a long dry spell, we are waiting for summer rains in order to 'gap-fill' with another 100 vines. We hope to continue to plant 100 vines a year, as well as to work with WCPP members to maintain their existing vines and tackle the ghastly Dutchman's Pipe. Maintenance involves fertilising, initial watering, and continual watering during dry spells.



Richmond Birdwing Butterfly. ***Picture: Paul Wright***

We are privileged to be in a position to help build on 30 years of the recovery of the Richmond Birdwing Butterfly in Brisbane. It is positive to be working to a plan and we feel confident that this stunning butterfly will once again call Brisbane home in the near future.

Cody Hochen

PS: Bindii

In my opinion, Bindii is probably the top "nuisance" weed in the Catchment, especially for bare-footed children. Weirdly, the Council don't seem to include it as a weed.

I'm not an expert; other Members might have more information or advice. What I know is:

- It becomes a major problem when drought thins out lawns, allowing it space to grow.
- It needs spray treatment, specifically in May-June-July, to get a good kill (so start working now!).
- Hand control is usually not effective.
- If you water and fertilise the lawn it helps.
- There are plenty of effective sprays at the produce store and at the local nurseries.

Does anyone else have any tips?

Ed Fraser