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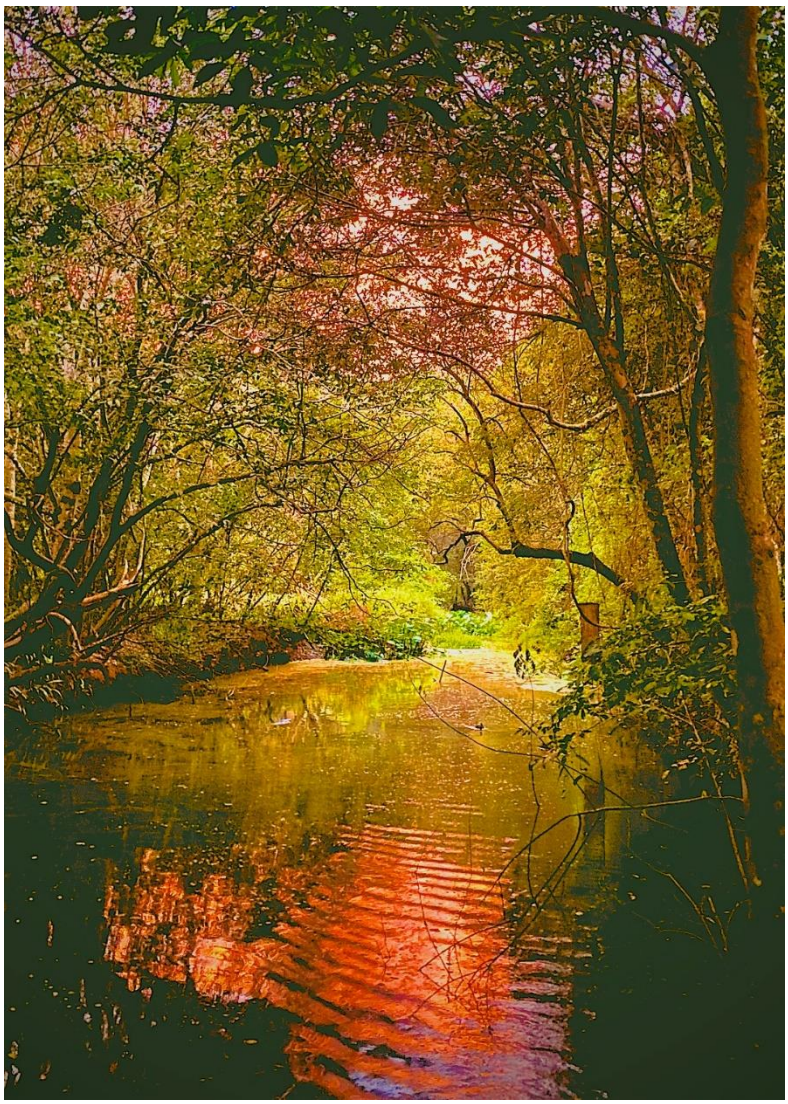
MOGGILL CREEK CATCHMENT GROUP
P.O. Box 657, Kenmore. 4069

MCCG NEWSLETTER Spring 2022

ABOVE: Connie Arthur receives the first MCCG Honorary Life Membership (picture credit: Tracey Read). *For more, turn to page 7*

RIGHT: Ed Frazer's evocative Brookfield photograph of sunrise on Gold Creek. For more about our fish in our wonderful local waterways, *turn to page 4* for Ed Frazer's latest *Bush Bite*.

BELOW: Bryan Hacker's popular *Seeds* and *Weeds* this issue include the native Purple Pea Bush (photo below by Bryan), *turn to page 8 for more.*



'A Growing Problem'
The next MCCG Public Talk will be held at Brookfield Hall on 27 September 2022 (6:30pm, for 7:pm start). *For more information, turn to page 3*

Chairman's Report

It's the end of another financial year, with the usual process of taking stock of what was achieved in the past 12 months. The MCCG reports to the Brisbane City Council annually, so we are again outlining our creek-focused activities for the 2021-22 financial year. During this time, grant expenditure was $20,445, although we have obtained several multi-year grants beyond this.

Our volunteers (that's almost all of us) toiled away with over 7,300 hours of work—ranging from working bees at Bushcare sites along the catchment, through to work at our Gold Creek native plant nursery. This also includes our education and extension activities (producing newsletters, updating our website, organising the Kid's Day at Gold Creek cottage, photographic competition, stalls at the Brookfield Show, Brookfield Markets, Kenmore Village etc., as well as many administrative roles). We estimate we have engaged with more than 1,700 people in these locations in the last financial year.

In sum, the value of these hours of voluntary works can be costed at over $350,000. This is an impressive figure, and part of the very large, but perhaps unappreciated Australian volunteer economy, thought by the ABS to be worth over $17billion in services in 2015. While this is a significant investment, these works help maintain the natural and ecological capital of our local environment. Equally impressively, our nursery grew over 15,500 plants for distribution, free of charge, to our almost 450 members.

While the memorable March floods delayed or reduced planting and weed control opportunities, we have continued our enthusiastic work to improve the condition of parts of Moggill Creek and associated tributaries, while keeping up the flow of information about our naturally beautiful and fascinating catchment.

We are thrilled to have new members step up to help with our significant volunteer work. I especially want to thank our energetic and capable new MCCG Secretary duo, Zoe and Chris, who have risen to, and indeed exceeded, expectations in this pivotal role.

While our recent membership drive has been successful, we are still keen for new members, and those who wish to support us in the roles of I.T. (esp. website development, graphic design for promotional materials), or to assist in our important Creek Health Monitoring/Water Quality assessments, would be most welcome.

If you have suitable skills and think you can contribute to these as an enthusiastic volunteer, please contact me (chairperson@moggillcreek.org.au) or Chris/Zoe (secretary@moggillcreek.org.au). We look forward to meeting you!

Sandy Pollock

Editorial

I always love to hear from new contributors (of any age or writing experience), so I hope YOU realise that I really appreciate every email, and all offers of new features (or just quick messages with news of interest to our Members).

***The absolute deadline for the next issue is 20 November 2022**. Start now! Don't wait until the deadline to email me. I'd love to include your story or news item in our Summer issue…*

Cathi

New Email Address

Just a reminder to update your records, as the email address for the MCCG Secretary is now Secretary@moggillcreek.org.au.
For further contact details, including for our 2022 Committee, please visit our website. Thank you!

Chris Bruton

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*: Sandy Pollock**

***Secretary*: Zoe Bishop-Kinlyside (Secretary) and Chris Bruton (Assistant Secretary)**

P.O. Box 657, Kenmore 4069
Secretary@moggillcreek.org.au

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

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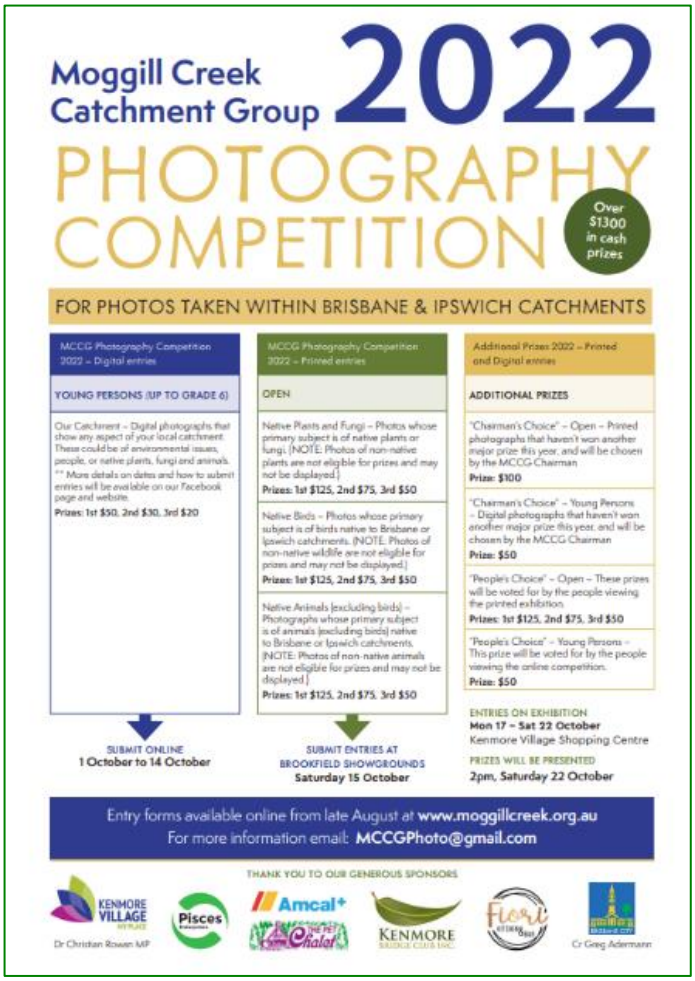
MCCG Photography Competition

The behind the scenes running of the Photo Competition is in full swing, thanks to our dedicated Photo Competition committee members.

YOU can help by sharing information about the competition with any local friends, family members, neighbours, co-workers etc. Don't forget there are some awesome cash prizes (see below). All of the important dates, terms and conditions and entry forms can also be found on our website. *Rebecca Bain*



Public Talk: *A Growing Problem*

The next MCCG quarterly public meeting will be held in Brookfield Hall on Tuesday 27th September (6.30pm for 7.00pm start). Kristy Stevenson, from The University of Queensland, will speak about 'Myrtle Rust: A growing problem.'

Plants from the Myrtaceae family are iconic in the Australian native environment, with gum trees, lilly pillys, tea trees, and paper barks well-loved by gardeners and bushwalkers alike. However, over the last few years, you may have noticed a new disease on one of your favourite Myrtaceae plants, the orange/yellow spores of myrtle rust (*Austropuccinia psidii*).

This short talk will provide background on the pathogen, its history in Australia, and impacts so far. Kristy is a PhD candidate at The University of Queensland, where her research interests are in disturbance and restoration ecology in native forest systems.

We are fortunate to have Kristy join us, and look forward to hearing about some early results from research undertaken (as part of her PhD studies) in a wet sclerophyll forest that has experienced high levels of tree mortality due to myrtle rust. I look forward to seeing you all there! *Jim Pope*

Print Changes

After many years' support of the MCCG Newsletter, The Print Shoppe is no longer taking print orders. Thanks to Judy White for providing a special rate and such helpful service for the MCCG over many years.

Thank you also to all members who elect to read the Newsletter online, as e-newsletters save valuable resources(with the added benefit that the online Newsletter is in full colour throughout).

For anyone who still receives a paper copy, please note that the move to reduce the use of colour ink will assist in keeping costs down.

Freshwater Mussels of Moggill Creek

While platypus and rainbow fish get publicity as interesting freshwater animals, there are a lot of other Moggill Creek creatures that deserve our attention—including the distinctive and fascinating freshwater mussels. Large brown or black oval-shaped shellfish with two shells (or bivalved), they are sometimes found along creek margins, especially if their shells were opened by water rats. They are food for fish, water rats, platypus, and other species. But don't taste them if you find one, as there may be contaminants in the creek.

While there are four to six species within freshwater systems in the Brisbane area, only one has been officially recorded so far within the Moggill

Picture: Southern Mussel (*Velesunio ambiguus*) by rushecology is licensed under CC BY-NC 4.0.

catchment. They are more likely to be found in the mid to lower reaches of Moggill Creek.

It is not that easy for the casual observer to distinguish between the different species, but perhaps there is someone who might be interested in completing a science project to survey our freshwater mussels?

Freshwater mussels are important filter-feeding animals, that help keep freshwater clean of detritus, bacteria, and nutrients. They have been called, with some justification, the "livers of the rivers"!

Elsewhere in eastern Australia, some river systems seem to be losing their freshwater mussels, due to pollution, nutrient accumulation and changes in natural water regimes.

Keeping our freshwater mussels happy is another reason we care for our catchment!

Sandy Pollock

Bush Bites: Wonderful Waterways

Do visit the MCCG Website for more of Ed Frazer's marvellous *Bush Bites* and accompanying photographs. This is a 'taster' of Ed's article about Moggill Creek Catchment's fish and wonderful waterways.

The Moggill Creek Catchment is dominated by Moggill Creek, which combines the flows from Gold Creek (and Gold Creek Reservoir) and from a few smaller, mainly ephemeral, tributaries.

Where Moggill Creek joins the Brisbane River, as it flows through Casuarina Park, it is tidal. The water has varying levels of brackishness, depending on the creek flows and on the salinity of the water being pushed back from the river with each tide—which means that there is practically no aquatic vegetation, the banks of the creek are heavily eroded, and the water is constantly turbid. Local Section volunteers are assisting in stabilising the banks, with appropriate trees and plantings of Lomandra.

There are many fish that can be easily seen in this part of the creek—including Mullet and Fork-tailed Catfish. The Mullet feed on the surface scum, which contains pollen and a few micro-organisms, whereas Catfish are scavengers, and eat both plant and animal scraps washed down the creek. Because of the lack of suitable habitat there are only a few small species of fish, but shoals of the young of several salt-water and brackish species are often present.

Further up the creek, as it winds through the urban area and around Kenmore State High School, the tidal affect is lost and the habitat improves. Several native and exotic aquatic plants are established here. The bottom of the creek is stony, snagging decayed vegetative matter (mulm) which offers an excellent habitat (both providing food, and acting as a suitable spawning medium for several species).

Platypus can be seen here. The range of fish species is much wider, including the Fresh-water Eel, which grow to 1.5metres. These large eels are somewhat territorial, and will travel overland in damp weather to find new territory in farm dams. We have had them arrive in our nursery ponds and, in past years, our production manager caught them and produced jellied eel (a delicacy in his youth in England!).

Another common fish in this reach of the Moggill Creek is the Eel-tailed Catfish, which grows to 80cm and can weigh up to 8kg, although I have never seen one that size in Gold Creek.

ABOVE: Eel-tailed Catfish (*Picture credit Ed Frazer*).

While not a schooling fish, a large number can be attracted with bread (or a suitable fish food) when they will come to the surface in a feeding frenzy. They mainly feed at dusk and through the night, aided by their sensitive long whiskers. They have a spectacular breeding method, involving building a circular nest up to two metres in diameter where they expose and clean the stones on the bottom of the creek. Here they lay about 1,000 eggs, which the male fans for seven days until they hatch.

As you go further up Moggill Creek, to the junction with Gold Creek, the increase in aquatic vegetation provides a habitat suitable for many smaller fish species. While much of this vegetation is exotic, it supports a substantial population of fish. This is vital as, unfortunately, most native aquatic plants cannot tolerate the elevated phosphorus levels that are a feature of settled areas. Although our local creeks are some of the most pristine in Brisbane, the creek picks up enough phosphorus from septic systems and horse manure to reduce its suitability for the few native aquatic plant species, such as *Myriophyllum* species and *Limnophilla indica*, that provide excellent habitat for the breeding of many native fish.

Some of the best suited fish species in this part of the creek come from the Gudgeon family. These are mainly about 4-5cm long fish that breed by laying eggs on stones or submerged wood. Eggs are attended constantly for the short time they take to hatch. In good conditions these fish can breed several times a year, and stay around the edges of the creeks (often hiding in the vegetation before darting out to catch any small prey as it passes by).

Another group in this reach of the creeks are the Ornate Rainbowfish (5cm) and their allied Australian Blue-eyes. The Rainbowfish is a prized aquarium fish that has all the colours of the rainbow in tiny reflective scales. It is a mainly mid-water to surface dwelling fish that feeds on micro-organisms and algae which are scraped off the plants and stones. They are unusual in their breeding as they lay just a few eggs a time, over several days, so there are always fry of different ages present. They deposit sticky eggs among fine leaves of aquatic plants or on the fine roots of trees, such as weeping willows, which grow prolifically on the edges of creeks. The Blue-eyes (3cm) are noted for their brilliant eyes and yellow flag-like dorsal fins. They used to be common in the creek.

A common smaller fish along this part of the creeks, that has prospered from increased fertility, is the Australian Smelt (7.5cm). It is an elongated schooling fish that is fast growing, and it matures in 12 months. It scatters eggs on the stony floor of the creek, and they take ten days to hatch.

While Moggill Creek peters out to a small headwater in the Upper Brookfield Valley, Gold Creek starts from the Gold Creek Reservoir. Here the water conditions are different; static water, which is pretty much pristine without the elevated phosphorus levels of the creeks below. These conditions are excellent for Gudgeons, and for several other small natives, but the overall fertility is much less than in the lower reaches of the creek. The dam does provide a reservoir of fish that is important for repopulating the creeks after prolonged drought. Under flood conditions some fish, fry or eggs are washed out of the dam, which means that—as all the creeks are interconnected in flood times—the fish can work around the edges of the flood water and repopulate depleted areas.

It is during times of flooding that the fish also swim up the edges of the water to populate farm dams. For those who haven't been fortunate to have their dams populated naturally by this method, direct stocking with Firetail and Empire Gudgeons, and Rainbows, will keep the dams free of mosquitos and midges. It is best to avoid stocking with Spangled Perch (20cm) as they are very aggressive and eat all the smaller species (they also breed exceptionally rapidly, which leads to overstocking with a lot of stunted fish).

The best way to help maintain our beautiful watercourses is to ensure the margins of the creeks are planted with trees that will shade the water. This reduces weed growth, and ensures that mats of algae do not form. If horses and other livestock are kept near the creek, leave a substantial margin (planted with shrubs and herbage) that will take up fertility from the horse manure before it gets washed into the creek. We have a wonderful asset with our waterways which support an amazing amount of interesting wildlife from insects, frogs, birds and mammals. The efforts of the property owners, and the work of the MCCG restoration groups, are vital in keeping it this way.

Ed Frazer

Were *You* Affected by 2022 Floods?

Bethany Patch has been in touch with a request for assistance with a research project.

If you were affected by 2022 flooding in South-East Queensland, or in NSW, we invite you to take part in an independent social research project that is investigating community experiences of the floods. The research is being conducted for Natural Hazards Research Australia by researchers at Macquarie University, the University of Southern Queensland and Queensland University of Technology. It is supported by the NSW State Emergency Service and Queensland Fire and Emergency Services.

Help us learn from what happened before, during, and after the floods. By contributing your personal experience to this research, you can improve community safety strategies and influence future policy, to help communities adapt and reduce their risks from floods. Every story is important. We are interested in hearing a range of stories and views from residents or temporary residents in NSW and Queensland who were impacted or threatened by flooding in 2022. You may be asked about your awareness of the floods, actions taken to plan and prepare for them, how you responded to any warnings, and how you were affected by the flooding.

We began with interviews in August (using Zoom, over the phone or in person), and there will also be an online survey from mid-September onwards. Visit www.naturalhazards.com.au/floods2022 for more information, or to participate. If you have any questions or can't access the link, please contact the lead researcher (Macquarie University's A/Prof Mel Taylor at floods2022@mq.edu.au, or call 02 9850 9955).

Thank you.

Bethany Patch

Why the Mess on the Ground?

In late June, I was in my local Carinya Park when I noticed a mess of broken twigs and leaves below a Corymbia tree (*see Bruce's picture, below*). Looking up, I was readily able to identify the culprits; there were two Sulphur-crested Cockatoos in the tree, busily working away at chewing through small branches before dropping them onto the ground.

I asked BCC Land for Wildlife Officer, Cody Hochen, if there was any reason known for this apparently destructive behaviour. Cody replied with the suggestion that "they do get grubs out of larger tree branches, but being cockatoos they also like to sharpen their beaks and I think they also do it out of boredom and destructiveness. Not sure why they would select a particular tree. Just being Cockatoos."

Strange behaviour, indeed; if only they could talk and explain what they are up to!! Bruce Dymock

MCCG Nursery 2021-22

Our much-valued Gold Creek Nursery, managed by Andrew Wilson and Bryan Hacker, benefits from the hard work of very many volunteers. Our thanks also to Bruce Siemon, who not only volunteers at the Nursery, but also produces valuable statistics and annual reports.

During the financial year 2021-22, the MCCG nursery distributed 15,782 plants. These plants were provided free to MCCG Members, as well as to Pullen Pullen Catchment Group (PPCG) Members, in recognition of the support of several PPCG Members at nursery working bees. MCCG Members are often returning visitors, as they progress in their work on restoring native vegetation, and often report their success with earlier plantings of MCCG-grown plants.

Some plants were also sold by MCCG volunteers at public events. Limited numbers of advanced plants of the Richmond Birdwing Butterfly vines continued to be sold ($8 each).

Seed collection is a limiting factor. However, there were 154 different species of plants potted during 2021-22. Seeds from 113 different plant species were collected by 23 members for germination at the nursery. Vegetative propagation of certain species difficult to propagate by other means continued during the year.

Nursery: Plants issued, 2021-22

Pullenvale Rd Moons Lane	156
Lower Moggill	223
Huntington	332
Showgrounds	623
Haven Road	87
Upper Brookfield	1,672
Gold Creek Reserve	0
Wonga Creek	1,010
Upper Gold Creek	1,035
Lower Gold Creek	90
McKay Brook	836
Gap Creek	1,093
Pullen Pullen	4,290
Cubberla Witton	740
Other destinations	3,595
TOTAL	**15,782**

Nursery volunteers contributed 1,211 hours during the year, working on the first and third Monday mornings of each month (during the year, an average of 16 volunteers attended each working bee).

This information does not include volunteering by Andrew Wilson and Bryan Hacker. For example, Bryan Hacker continues to be the main point of contact for nursery plants, often responding to individual customer requests several times a week.

In addition, MCCG's Landcare Adviser, Bryan Hacker, visited five properties, when invited to provide expert advice on revegetation, weed control and species Identification (1 July 2021- 30 June 2022).

Properties visited generally ranged from 1ha to 4ha, varying from being 'largely cleared' to some with native vegetation mainly intact. Landowners are encouraged to seek advice before undertaking extensive clearing work. Without advice, clearing work can have undesirable consequences. Landcare property visits were often followed by Member visits to the nursery to make an appropriate selection of species for revegetation projects. Bruce Siemon

Honorary Life Membership

It is with great pleasure that we have honoured Mrs Connie Arthur with the MCCG's first Lifetime Membership (*see front cover photo*).

Connie has been a member since MCCG was formed in 1997, leaving her mark at Brookfield School with Moreton Bay Figs that were replanted from her paddocks over the years. Connie also reminisces about enjoyable night-time events, hunting for frogs with other MCCG members.

Connie recently moved out of the catchment, and is now living with her daughter in Newstead. Her Lifetime Membership will still keep her updated with all the happenings in the catchment (through reading our MCCG Newsletter). Connie misses her community and Brookfield neighbours who regularly stopped in for a chat and cup of tea.

Connie will celebrate her 100th birthday in September with several get-togethers with friends and family. When asked what her secret for long life is, she responded …with a very hearty laugh… "breathing!"

Tracey Read

Froggin' Around: Spring 2022

At winter's end, few frogs are active. The eastern sedge frogs, striped marsh frogs and tusked frogs are calling from the dam, and young tadpoles (possibly stony creek frogs) were observed in the creek.

Schools of toad tadpoles were observed in my much-altered area of the creek. Wider and shallower in profile, all vegetation appears to have gone from the creek bed. Waterholes are filled with sediment, and trees that have managed to remain often have exposed roots. Quite depressing. However, you learn that Mother Nature 'takes no prisoners.' I therefore decided to leave the lower part of the creek to Mother Nature, and I am concentrating on the mid- to higher-bank riparian zones (*see Phil Bird's photo, below*).

In my work to re-establish the creek, I am aiming to provide refuges for frogs and other animals that live nearby. In order to do this, I am concentrating on managing the invading weeds, in order to allow natives to grow (leaving rocks, branches, and logs in place). I am amazed at what has come from upstream and is growing—including all the weed nasties, as well as small patches of succulents, vines, and grasses. From small patches big ones grow, which is a worry as there are many unmanaged areas.

A study in *The Conversation* by Jodi Rowley and Karrie Rose last winter reported that thousands of dead and dying frogs were found across Australia. Instead of hibernating during winter, frogs were out in the day, often in the sun. Frogs were thin, slow moving, and with dark patches on their back or red bellies—and often found seeking water in pet bowls or pot plants, before dying in a matter of hours.

Reports of sick or dead frogs slowed as the weather got warmer, and by the end of last year such reports had all but ceased. But now, it is happening again. In the last few weeks of July 2022, similar reports of sick and dead frogs came from people across Australia—including SEQ reports of green tree frogs (*Litoria caerulea)*, found discoloured and hunched up, sitting in the open.

A crash in frog populations can have real consequences. Many species are already threatened, and any demise of frogs in both freshwater and land systems can affect entire ecosystems. Please send any reports of sick or dead frogs to the Australian Museum's citizen science project FrogID (email calls@frogid.net.au).

Phil Bird

Help Needed

The MCCG Management Committee is seeking expressions of interest from our catchment community for individuals who have specialist skills and/or who are willing to volunteer their time to lend a hand in bolstering our catchment management efforts. Whilst the committee welcomes any interested helpers, we currently have a particular need for assistance in the following areas:

1. Information Technology (MailChimp, WordPress, SharePoint, MS Access)
2. Website Development
3. Corporate Governance/Revisions to MCCG Constitution
4. Health & Safety Risk Assessments
5. Creek Health Monitoring/Water Quality
6. Event Coordination and Management

If you are interested, or able to volunteer some time or support (a little or a lot, short term, long term or just a

one-off), then we would love to hear from you! Please get in touch via secretary@moggillcreek.org.au

And, as always, we are also keen to hear from anyone who may be interested in volunteering at one of our many Bushcare Group Working Bees or in our Native Plant Nursery.

Zoe Bishop-Kinlyside & Chris Bruton

Weeds: Balloon Vine

Our MCCG Section team has been working along McKay Brook for more than 20 years and now, with available land along the circa 1km course along the creek almost all planted and flourishing, our focus is on the never-ending task of weed control! At our last working bee, in August 2022, we concentrated on balloon vine (*Cardiospermum grandiflorum*).

Picture: Balloon Vine seeds *(Credit: Bryan Hacker)*

Balloon vine "flowers and fruits summer to winter" according to the *Flora of SEQ*. My photo (*below*) was taken in May, and shows flowers as well as fruit. During our August working bee, both flowers and green to ripe fruit were also present. Thanks to forethought by one of our team we had plastic tarpaulins to hand, and were able to catch and remove many of the fruits (which broke up and released their seeds when the vine was pulled down from the trees, *as shown in my top left photograph*).

Hopefully, as a result of this effort, there will be fewer balloon vine seedlings in future. Bryan Hacker

e-newsletter? Just email the MCCG Secretary with 'email newsletter' in the subject line, and add your name and address in the message. *Thank you*.

Seeds: Purple Pea Bush

Did you notice attractive understorey bushes densely covered with purple flowers early in August? If so, this could have been Purple Pea Bush, *Hovea acutifolia*.

Purple Pea Bush is one of the more spectacular native bushes in our district. In some parts of Upper Brookfield, it can form a dominant component of the understorey. The flowers are typical of those of the pea family (Fabaceae), with banner, keel, and wings (*see Bryan's front cover photograph, and also the photograph by Chris Bruton, below*).

Purple Bea Bush is endemic to Australia, and grows on rainforest margins in north-east NSW and south-east Queensland. This year we had quite a good germination of seed of this species at our Nursery, and many of the seedlings have already gone to good homes. Bryan Hacker