

MOGGILL CREEK CATCHMENT GROUP

www.moggillcreek.org.au



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NEWSLETTER

WINTER 2009



▲ Planting at Brookfield School (see p.)
Photo: Schona Fisher



▲ Shelley Moore (see p.)
Photo: Dale Borgelt



◀ A wildlife rescue (see p.)
Photo: Chris Hosking



▼ Bordered rustictail (see p.) Photo: Dale Borgelt



▲ Reservoir spillway (see Editorial p.) Photo: Malcolm Waugh

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Editorial

Your Editor is giving up weather forecasting and accepting, as we all must, what happens. It is not so long since the water level in the reservoir (our nursery supply) had fallen so low that soon it would be below the lowest outlet. What on earth were we going to do? The photo on p1 shows the spillway at a later date.

It has been a good year for us so far. Intermittent rain leading to recent heavier events has both maintained plant growth and given-at last-some soil water at depth, all this resulting in the most lush vegetation we have seen for years.

When we acquired The Cottage, some wondered what use we would have for it. Activity there is increasing at some rate. Much of our administrative work is being transferred there from members' homes. The monthly Thursday talks look like being a great success. Library material is accumulating. It has provided a convenient Meeting place. And a start has been made on developing gardens to display native plants suitable for garden use.

We added a new public display to those of past years; a photographic display of progress made by some members in restoration of vegetation on their properties. It showed what can be, and is being done, and surely will encourage others to do the same.

And membership is increasing; approaching 400 at the time of writing.

Chairman's Report

In April Shelley Moore replaced Jenny Mulchrone as Moggill Catchment Group's Creek Ranger (previously known as Coordinator). One of the many ways by which Brisbane Council supports most of the catchment groups within Brisbane is to appoint staff with experience in environmental restoration and allocate such appointees to assist in the everyday running of the groups. Already we are delighted to have Shelley working with us and we all feel confident that she will make an enormous contribution to our work.

One very important activity for our Catchment group is to help educate residents on matters relating to our local environment. During this quarter, as part of this program and thanks mainly to Dale Borgelt, Moggill Catchment Group has begun a series of Small Group Talks at our Cottage at the end of Gold Creek Road. The two held so far were a great success.

We thank Dale Borgelt, Bryan Hacker and many others who staged a very successful display at Kenmore Shopping Centre in April. It illustrated how private land owners, with advice and the provision of native plants from MCCG, had successfully restored parts of the catchment over the years. MCCG is always ready to assist land owners in their restoration work.

THECA recently held another of its annual events, a Forum entitled "Caring for our Waterways". These events are always stimulating and run very professionally. MCCG was well represented with Bryan Hacker giving an informative talk on issues relating to restoration work along McKay Brook

On Sunday August 2nd, Planet Ark is sponsoring its annual National Tree Day when thousands of trees will be planted throughout the country. For this event MCCG, together with Habitat Brisbane, is preparing a site for planting at the eastern end of Huntington Park. All are welcome so mark this date in your diaries.

Malcolm Frost

Moggill Creek Catchment Group is a volunteer action group aiming to conserve and improve the natural environment of its catchment on both private and public land.

Chairman: Malcolm Frost

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Creek Ranger's Report

Thank you to everyone in the Moggill Creek Catchment Group who has welcomed and assisted me over the last month, as I try to wrap my head around everything that the Group is involved in, and wonder how I can help you to address the environmental issues in the catchment most effectively. My background is in the environmental field, and I have a particular passion for environmental education and community engagement. I also like bushwalking, travelling, world music and trivia nights!

I am excited to be getting involved in some of the MCCG projects already, such as the release of Tingids as a biocontrol for the Cats Claw Creeper (see article on page 8), helping at the THECA forum and Brookfield Show, and working with local schools.

Of course, I would love to meet as many MCCG members as possible, so please feel free to pop in for a cup of tea and a chat any Thursday from 9:30am to 2:30pm, at The Cottage at the end of Gold Creek Road. Otherwise, if you have any ideas, questions or comments, you can always reach me on **0408 774 631 or Shelley.moore@brisbane.qld.gov.au**. I am sure that many of you have some fantastic ideas for the Catchment group, but wouldn't necessarily want to come to meetings, so please don't be shy and give me a call! (photo on p1)

Shelley Moore

Mangroves to Mountains

Co-author and photographer is Guest Speaker

Circle **June 25** on your calendar.

Our MCCG public meeting in Brookfield Hall on Thursday 25th June will feature a very special speaker. That speaker is Glenn Leiper who will give a slide presentation of native plants of interest to our area. Glenn Leiper has bush-walked, sloshed, crawled and climbed to take most of the photographs in all three editions of *Mangroves to Mountains* to give a field guide to native plants of South-East Queensland. He does have a busy job as Principal of the Jacobs Well Environmental Education Centre, plus he is an active member of North East Albert Landcare, and he still makes more photo forays into the bush, so we are delighted he can spend an evening sharing his interests with us.

Further good news for those who haven't as yet bought the updated, revised and combined edition – Glenn has agreed to bring *Mangroves to Mountains* for sale at the special price of \$40 at the meeting.

Make it a date: THURSDAY, 25 JUNE 7.30pm BROOKFIELD HALL

Are you snapping for our Photo Competition in August–September?

We are delighted that so many of our local businesses have been able to support the ever-popular MCCG photography competition. This year we have a total of over \$1,500 in cash prizes!

Entry forms can be downloaded from our website with submission due Saturday 29th August 2009 at the Trustees' Room beside Brookfield Hall. Photos go on display in Kenmore Village Centre Court from 31 August to 5 September.

So, get snapping to have your pictures ready to enter the MCCG photography competition this year.

To further support running the event, we are raffling a number of donated prizes. Tickets can still be bought (\$1 each or 3 for \$2) at the MCCG meeting on 25th June, when the raffle will be drawn.

NEW FOR THE 2009 MCCG PHOTOGRAPHY COMPETITION

This year, local schools can compete for The Lord Mayor's Perpetual Shield. This new section is open to the 10 schools in Cr de Wit's Pullenvale Ward plus Chapel Hill SS. A school entry consists of 3 photos and is free. Each school decides on the best 3 photos from their students which depict topics in the environment of importance to young people. Photos may be accompanied by brief explanatory text (less than 100 words) but judging will be on the visual impact of the photos.

As well as being awarded The Lord Mayor's Perpetual Shield, the winning school will receive \$100 for library books or AV material about the environment, donated by Dr Bruce Flegg MLA.

A Wildlife Rescue

It was 10.30 pm on a Friday evening when the phone rang. The caller was Sarah, from the Australia Zoo's Wildlife Warriors. "Can you rescue some baby northern brown bandicoots in Brookfield?" she enquired hopefully. "Their mother has been hit by a car, but kind people have stopped to check the pouch and found some surviving pouch young". The caring rescuers and Sarah had steadfastly made phone calls until they succeeded in finding someone to take these young orphans.

It is now two months since the phone call and my three gregarious, cute, continuously hungry young bandicoots have just been released. (photo p.1) A MCCG member who is also a Land for Wildlife property owner has just the place-away from traffic and beside a rehabilitated creek zone. I wish them a happy life doing what they do best, burrowing in the leaf litter for invertebrates, fungi and fruits while aerating the soil nicely!

In addition to cars, cats and dogs are real threats to bandicoots. So the same old mantra applies: watch for wildlife when driving at night and keep your pets indoors from dusk until dawn.

(If you have a wildlife emergency or would like to learn more about becoming a wildlife carer or offering your acreage property as a release site for native animals, contact Maureen on 3878 4177, mobile 0432 736929. For general information go to www.onarr.org.au)

Christine Hosking

Channel billed cuckoos

Late afternoon in early March I was feeding my horses at a large property secreted away in the Upper Brookfield hills when I heard an unfamiliar bird call. In fact there were two birds of the same kind taking turns at calling, and to me it sounded like the sort of call birds make to keep in contact with a flock or with parents. They were perched in a dead wattle tree, only 20 or so feet from the ground, but with their backs to me. All I could really see was some indistinct light greyish brown colour on the back merging into white at the back of the head. The call was a very loud raucous unchanging "kawk-awk-awk-awk" almost like a very loud cat's miaow or a hungry baby's cry.

As I watched them in the hope of being able to identify them, a crow flew across my line of sight, and the two birds in the wattle suddenly became very animated, increasing the intensity and urgency of their calls, and fluttering their wings like begging chicks. I then realised I was looking at two channel billed cuckoo chicks which were waiting for their "parent" to feed them, and in between feeds, calling to maintain contact. What an incongruous sight to see the crow feeding these two very large chicks! (photo p5) The crow also maintained calling contact as it flew off looking for more food for these voracious babies. Eventually the chicks flew off following the crow, constantly calling as they did so, perching in gum trees higher up the hill waiting for their next feed and continuing to call incessantly.

Five weeks later I continue to hear and see this crow feeding these two demanding chicks tirelessly, staying within the quite narrow confines of the Upper Brookfield valley above Galvin Road. The chicks have flown, perched, begged and called all day every day since I first saw them, although over the last ten days, I have unfortunately only heard and seen one chick. According to "A Field Guide to Australian Birds" (Peter Slater, Rigby, 1970) the channel billed cuckoo (*Scythrops novaehollandiae*) prefers steep wooded hilly country intersected with cleared valleys, a perfect description of Upper Brookfield. They are a migratory species arriving in the south in August- September, breeding and remaining until April-May when they leave to winter in New Guinea and northern islands. They lay in the nests of pied currawongs, collared sparrowhawks, Australian magpies and crows. "Every Australian Bird Illustrated" (Rigby, 1988) states that the Aborigines believed that the arrival of this bird foretold stormy weather; in this case perhaps not stormy weather, but certainly they arrived in my neck of the woods just prior to the very welcome wet weather we have recently been experiencing!

Mandy Fisher

Drynaria rigidula – basket fern

We usually think of ferns as being delicate plants, growing in moist, shaded places. The basket fern (*Drynaria rigidula*) is anything but delicate. A native to our area, it prefers rocky slopes and thrives in dry west-facing situations, forming large clumps. Forms of the species also grow in trees as epiphytes. Basket fern occurs naturally from northern NSW (where it is listed as 'endangered') to Malaysia.

Its common name basket fern refers to the fact that it has two types of frond (leaf), a short brownish one forming a 'basket' in which the larger green one, growing to 80 cm or more tall, develops. (Photo on p 5). The larger frond produces spores on the under surface, which blow in the wind, those settling on rocky surfaces in time forming new plants.

Basket fern is most easily propagated by cutting off lengths of the rhizome (a thick, furry stem at the base of the plant) and planting it in rocky crevasses with some leaf litter. Thereafter no attention is necessary – not even watering!

What a wonderful plant is the basket fern!

Bryan Hacker



◀ Madagascar periwinkle (see p.6)
Photo: Bryan Hacker

▼ Tingid release (see Madeira vine p.7)
Photo: Bryan Hacker



▼ Madeira vine (see p.7)
Photo: Bryan Hacker



Young basket fern (see Drynaria, p.4) ▶
Photo: Bryan Hacker



▲ Crow feeding channel bill (see Channel billed cuckoo, p.4)
Photo: Mandy Fisher

Madagascar periwinkle – *Catharanthus roseus*

The Madagascar periwinkle (*Catharanthus roseus*) is easily recognized with its distinctive flowers and glossy green foliage (p 5). Although a common garden plant with a number of different colour variants, it is also a plant of considerable medicinal interest.

This humble ornamental produces (in very small amounts) alkaloids called vinblastine and vincristine. The former compound has been marketed for more than 40 years as an anti-cancer drug and the species is now one of the best studied of medicinal plants. Crude extracts have greatest activity against multi-drug resistant tumour types. Animal studies have also shown that crude extracts lower blood glucose levels, which could be relevant to cure of a form of diabetes.

Alkaloids are chemically complex and very difficult for chemists to create in the lab. However, molecular biologists have now modified a gene involved in an early stage of vinblastine synthesis, inserting it into periwinkle cells enabling them to make a whole new range of alkaloids which could have medical uses.

In our Catchment, Madagascar periwinkle is a minor weed in moist areas, although it is listed number 62 of the 200 species in the Environmental Weeds list for South-east Queensland, compiled by Batianoff and Butler (2002). It was first recorded as naturalised in South-east Queensland in 1909.

Bryan Hacker

(information from *New Scientist* 24 Jan 2009, p. 19 and various internet sources)

What are the main sorts of plants?

Taxonomy of the hoop pine

Kingdom: Plantae
Division: Pinophyta
Class: Pinopsida
Order: Pinales
Family: Araucariaceae
Genus: Araucaria
Species: *Araucaria cunninghamii*

If you were reading more botanically inclined literature of our vegetation, you might well be dismayed to see the hoop pine described as in this table. Our interest in the taxonomy of our plants usually stops at the Family. But hopefully, some of you would like to know, starting at the top (the Plant Kingdom), what its first divisions are; that is, what are the main categories of plants?

There are 12 such Divisions, although some have such small numbers of species as to make them of little consequence in our interests. For our purposes they can be put in to four groups within each of which there is some similarity which sets them apart from the others.

The first two Divisions comprise the **Green Algae**, with something over 8,000 described species. The green algae have the few features which characterize plants, such as the capacity for photosynthesis.

Then there is a group of three Divisions comprising the **Non-vascular land plants**. These do not have a vascular system to carry water to parts exposed to a dry atmosphere, nor a cuticle to reduce drying from plant surfaces. They are thus confined to wet situations. The numerically dominant Divisions here are the liverworts (6-8,000 species) and mosses (12,000 species).

The remaining Divisions are the **Vascular Land Plants** which have developed the features which allow them to expose above-ground parts to a drying atmosphere. They can however be put in to two groups because of the major distinction between the Seed Plants and those which do not produce seeds. The latter are dominated by one large Division, the ferns and horsetails (11,000 species).

Finally, there are the five Divisions of **Seed Plants** with the important evolutionary advance of producing seeds. It includes the conifers (630), cycads (160), the lone ginkgo(1) and the flowering plants (260,000). This latter huge group makes up most of the total number of all plants, of which just under 300,000 have been described.

Graeme Wilson

Scolopia brings back the Bordered Rustic Butterfly

My first sight of Bordered Rustic Butterflies fluttering about the garden for about an hour one Sunday morning in May was an unexpected delight. This butterfly has been missing from Brookfield gardens for many years because its food plant, Flintwood (*Scolopia braunii*), had become scarce in our area. How nice that years of planting Scolopia have been rewarded by at least nine Bordered Rustics flitting around my garden this past month. (Photo p1).

Dale Borgelt

Getting rid of large infestations of Madeira vine in bushland

I've been battling Madeira vine for over ten years now, and I'd like to pass on my experience with infestations on roadside vegetation bordering onto natural biodiversity habitat. These infestations are particularly important as the road runs along a ridge in high rainfall country with environmentally sensitive land on both sides. If left uncontrolled, the aerial tubers will spread downhill from the road and progressively infest the forested country below the road. But as Madeira vine does not spread from seeds, if these isolated patches can be destroyed, the whole area can be kept free of this pest.

My technique has been to use fluroxypyr, available from produce stores as Starane and registered for Madeira vine control. There are other chemicals registered but don't use glyphosate (Zero or Round-up). This kills the leaves but does so too quickly, so that little is translocated into the tubers, underground or aerial. The result is a rain of aerial tubers from infested trees and a massive regrowth problem. Glyphosate also kills everything, leaving bare ground and no competition for regrowth Madeira vine.

For large vines over trees, I prepare a solution of Starane, 5ml concentrate in 1 litre water, to fill two small containers which I tie onto the trunk of the infested tree or other support at about chest height. I then cut through the vines and dip both ends into the containers. Sometimes one container is enough, but it is easier to have two, one tied slightly higher up for the upper end. Leave the ends in for 20 to 30 minutes, then remove. The stems absorb the chemical which progressively kills the tubers both high in the canopy and below ground. There is no damage at all to surrounding vegetation or to the supporting trees. The left-over liquid can be kept for later use, but must not be used for foliar spraying, as the plant sap forms lumps in the liquid which block spray nozzles. Diluted Starane is not particularly toxic to humans and not easily absorbed, but use normal precautions and wash your hands well after using the product. In a month's time, the treated vines will be yellow and dying. Any missed vines are clearly visible and can be treated on a second visit.

An alternative technique for large plants is to use Vigilant gel, purchased through a produce store or direct from MacSpred at Acacia Ridge. Vigilant gel comes in a tube applicator rather like some shoe polishes, and is applied to both upper and lower cut ends of the vines. It is not quite as effective as Starane but is much easier to apply, especially in steep or difficult terrain.

For small plants and the inevitable regrowth, or for dense Madeira vine among grass or low vegetation, I use Starane in water as a foliar spray, applied with a small Hills pump-up sprayer with a trigger control, which allows me to spray only the Madeira vine leaves. Starane used this way kills Madeira vine very effectively, translocating down into the underground tubers and preventing the formation of aerial tubers from the leaves. It does not kill grasses, and is not picked up by the roots of other plants, so the only non-target damage is to broad-leaf plants growing among the Madeira vine. At all my sites the native vegetation is thriving, less than 6 months after spraying against Madeira vine.

With these two techniques, using 4 treatments over 12 months I have been able to reduce dense infestations down to scattered regrowth plants. The largest infestation consisted of 100m² of dense Madeira vine with heavy canopy cover over three trees, plus scattered plants over about 1000m². Each treatment took about 1 hour in inspection and treatment time, and I used 3 litres spray mixture on the first visit but only 0.3 l on the last. I anticipate complete eradication over the next 3 years, with 2 to 3 visits each year, as I have achieved eradication of smaller infestations over 3 years. And there have been no tubers able to spread downhill since the first major treatment 12 months ago!

So don't despair! Get in there with Starane or other registered products containing fluroxypyr; kill the vines first by dipping the cut ends in the mixture, then control low-growing plants and regrowth by spraying the leaves. Repeat the foliar spray 3 or 4 times during the growing season, and you will have the main infestation under control in one year, with the native vegetation undamaged and free to grow without Madeira vine.

Rachel McFadyen

(Photo on p5 shows flowering vine covering trees which will be killed by shading.)

Local provenance revisited

(The following is the Abstract-Summary of a publication* authored by a group of scientists from CSIRO, two universities and two Government Departments.)*

Restoring degraded land to combat environmental degradation requires the collection of vast quantities of germplasm (seed). Sourcing this material raises questions related to provenance selection, seed quality and harvest sustainability. Restoration guidelines strongly recommend using local sources to maximize local adaptation and prevent outbreeding depression, but in highly modified landscapes this restricts collection to small remnants where limited, poor quality seed is available, and where harvesting impacts may be high. We review three principles guiding the sourcing of restoration germplasm: (i) the appropriateness of using 'local' seed, (ii) sample sizes and population characteristics required to capture sufficient genetic diversity to establish self-sustaining populations and (iii) the impact of over-harvesting source populations. We review these topics by examining current collection guidelines and the evidence supporting these, then we consider if the guidelines can be improved and the consequences of not doing so. We find that the emphasis on local seed sourcing will, in many cases, lead to poor restoration outcomes, particularly at broad geographic scales. We suggest that seed sourcing should concentrate less on local collection and more on capturing high quality and genetically diverse seed to maximize the adaptive potential of restoration efforts to current and future environmental change.

* Linda M. Broadhurst et al. (2008). Seed supply for broadscale restoration: maximizing evolutionary potential. *Evolutionary Applications* 155N 1752-4571

(A very readable, brief presentation of this subject has just appeared in the May issue of *Land for Wildlife South East Queensland*.)

Cat's claw creeper biological control release

Many of us wage a continual battle with cat's claw creeper, and so you may be interested to hear that a new control method is being trialled in the catchment. MCCG has been rearing the biological control agent *Carvalhotingis visenda* (better known as "the tingid") at the nursery over the last few months. Carol and Alan Clague of Upper Brookfield have a large cat's claw creeper infestation at their property and are the first catchment group members to take away several pots of plants infested with the tingid for release. (see photo p5.) It is hoped that over time, the tingid will spread onto the weed infestation and reduce the rate of shoot growth, thus limiting the vines ability to climb and smother native vegetation.

Tingids will be available to members to take away to their infestations in the next few months. We are also looking for members with cat's claw infestation who are willing to donate some tubers, or would be happy to allow people on their land to collect specimens so that more infested plants can be grown. If you are interested in receiving tingids or you have some cat's claw you would like to donate, please contact me on **3407 0052** or shelley.moore@brisbane.qld.gov.au

Shelley Moore

Planting at Brookfield School

Early on a sunny Sunday on the May Day Long Weekend, an enthusiastic group of almost 100 parents and children from Brookfield State School assembled to put in native plants around the new netball courts. They quickly got down to digging and planting. Don Steel soon followed with his water truck to water in the new plants.

A large area was planted with over 400 trees and understorey plants which had been grown in the MCCG Nursery at Gold Creek. The species selected grow naturally in the Brookfield area and should be able to survive the local conditions. In addition, thousands of *Acacia fimbriata* (Brisbane wattle) seeds were broadcast over the rocky bank on the other side of the netball courts.

Helen Kenworthy, Principal of Brookfield State School said "We are very grateful for the support of both Malcolm Frost and Bryan Hacker. They worked hard to ensure that we had the right plants and equipment and showed the parents and children the most effective way to plant."

Other locals who gave sterling support were Peter Woods, who also advised on planting techniques, and who supported Charles Fisher in feeding the assembled multitude with a sausage sizzle.

The school Parents & Citizen Association has donated \$1000 to the MCCG in return for the plants and ongoing advice. As a member of the MCCG, the school is keen to improve the native vegetation around its grounds whilst getting rid of invasive introduced species.

Shona Fisher

(Photo on p1 shows Elliot and Jeremy Hunt helping.)

It's that time again **Annual platypus survey**

SUNDAY MORNING, SEPTEMBER 13, 2009

Last year we saw 15 platypuses in Moggill Creek from Kenmore to upper Brookfield.
and Gold Creek.

That result was exciting. This ongoing community monitoring, now in its 5th year, is very important.

To Register and receive further information on how to participate, contact:

Chris Hosking: cjmhosk@optusnet.com.au, 3374 3453

MCCG CALENDAR NOTES

June 18	Cottage small group 10am - 12noon: Micro-bats with Judit Kibedi
June 25	Brookfield Hall public meeting: Guest Speaker Glenn Leiper
July 16	Cottage small group 10am - 12noon: Focus on Figs with Graeme Wilson
August 29	Photo competition entries due at Brookfield Hall Trustees Room
August 30	Environment Day, Brookfield Hall
Aug 31– Sept 6	Photo competition displayed Kenmore Village Centre Court
Sep 13	Platypus survey early morning
November	AGM - Brookfield Hall