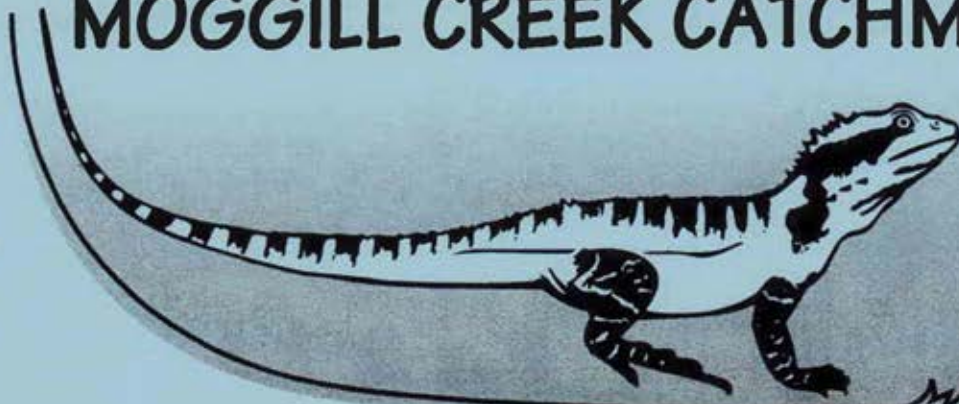


# MOGGILL CREEK CATCHMENT GROUP

P.O. Box 657, Kenmore 4069



## MOGGILL CREEK CATCHMENT NEWSLETTER

Newsletter of the Moggill Creek Catchment Group

### Winter 2004

### MOGGILL CREEK CATCHMENT GROUP PUBLIC MEETING

Thursday, 17th June, 2004

7.30 pm

**BROOKFIELD HALL**

Guest speaker from Brisbane Forest Park

**Senior Ranger Martin Fingland**

**Speaking about local native fauna with a live display of  
frogs, reptiles and mammals**

***Don't miss this informative and enjoyable evening***

Free admission with refreshments – non-members welcome

Enquiries – contact Chris Hosking on 3374 3453

#### Habitat Brisbane (Bushcare) working bees – dates and section leaders

|           |                     |                     |                   |           |
|-----------|---------------------|---------------------|-------------------|-----------|
| Section 1 | Rafting Ground      | No set times        | Claire Laycock    | 3878 5336 |
| 2         | Lower Moggill Creek | 3rd Sun 8.30-11.30  | Rob Waller        | 3378 6897 |
| 3         | Huntingdon          | Last Sun 8.30-11.30 | Malcolm Frost     | 3374 0649 |
| 4         | Showgrounds         | No set times        | Peter Nielsen     | 3374 1563 |
| 5         | Haven Road          | No set times        | Don Mumford       | 3374 1348 |
|           |                     |                     | Tina Heybroek     | 3374 1401 |
| 6         | Upper Brookfield    | 1st Sun 8.00-11.00  | Darryl O'Brien    | 3374 4964 |
| 8         | Wonga Creek         | Last Sun 9.00-12.00 | Graeme Wilson     | 3374 1218 |
| 9         | Upper Gold Creek    | Approx. 6 weekly    | Gordon Grigg      | 3374 1737 |
| 11        | McKay Brook         | 3rd Sun 8.30-11.00  | Bryan Hacker      | 3374 1468 |
|           |                     | 1st Sat 2.00-5.00   |                   |           |
| 12        | Gap Creek           | 4th Sun 8.30-11.00  | Michael Humphreys | 3374 1467 |



## Plant Families

In the Spring 2003 Newsletter there was an article on plant names, which explained that similar species are grouped in to genera and mentioned that in turn, like genera are placed in families; with the comment that a knowledge of families can be useful. One use is this: Many of us like to know more about our plants. Seeing a new species, it is difficult to remember it as an unrelated thing among many hundreds of species; but if it can be attached to a group of which one knows something, it achieves some identity. This article commences what is intended to be a series dealing with some interesting plant families hereabouts.

Before looking at the first of these however, some background may be helpful. The plant kingdom comprises some major categories, starting with bacteria as the most primitive, moving up through algae, fungi, liverworts and mosses, and ferns to the seed plants; in which latter there is a clear distinction between the Gymnosperms (cycads, conifers, yews etc.) and the more advanced Angiosperms (flowering plants). Interesting though everything below the seed plants may be, we can not contemplate the task of going in to them for the purpose of this series.

The aggregation of species in to families is based on similarities of botanical significance. Whether these are apparent to the uninformed observer varies between families. Most would agree that the palms (Family Arecaceae) have much similarity among themselves, as is also the case with the grasses (Poaceae). But it is not at all immediately apparent that the strawberry, the rose and the peach should all belong in the Rosaceae.

And before proceeding, it might be noted that the names of families are usually taken from that of a genus within them, although that was originally not so. More often they were associated with common names, but changes are being progressively made. For example, the palms were once in the family Palmaceae, now changed to Arecaceae to correspond with the genus *Areca*. Likewise the grasses, Gramineae, are now Poaceae (genus *Poa*). There was no problem with the Rosaceae, named for the rose, the genus *Rosa* saving it.

Now let us get on with the task. We begin with a group, the legumes, which is in fact three families, though formerly regarded as only one (Leguminosae). It was the third largest plant family worldwide with some 13,000 species. Within it there are some distinctive characters which allowed it to be split in to three families. Botanically, the word legume refers to a fruit (pod in this case) which, when dry, splits longitudinally in to two halves revealing a row of seeds. (Anyone who has shelled peas will understand that.) Not all legumes have elongated straight pods like the pea. Some are strongly curled, as in some wattles, while others are so short as to hide at first glance the structure, e.g. *Hovea*.

The legumes have an outstanding feature, not unique to them but important in view of the number of species. All plants and animals need nitrogen which is abundant in the atmosphere as nitrogen gas but which they can use only in a chemically combined form, as in nitrates. Some bacteria can combine atmospheric nitrogen and the legumes form associations in their roots with them and are able to use the combined nitrogen, which turns up largely in protein in plant parts. Animals-including us-eating those plants (or other animals which have done so) thus get their protein supply. The grain legumes, for example, are of great importance in human diets, while pasture legumes are important for grazing animals. Further, when legumes die or shed parts, they are decomposed in the soil, releasing combined nitrogen which other plants can use. They are thus extremely important in ecosystems. It is essential that our revegetators understand that. Those who see revegetation simply as a matter of having attractive looking trees are missing out on an important part of the system, in terms of both soil fertility and food for the whole animal kingdom.

Now let us look briefly at the three families of legumes. The first is that of the peas (Fabaceae). In spite of having been excised from the original large family, this one remains the world's third largest in number of species. They have typical pea flowers (e.g. sweet pea). We have here only a few large trees, including black bean (*Castanospermum*) and coral trees (*Erythrina*). There are however numerous understory plants. *Hovea* is a larger one of those. There are many large vines such as *Derris* and *Kennedya*. Most abundant however are lowergrowing shrubs, herbaceous annuals and scramblers. Genera such as *Daviesia*, *Pultenea*, *Indigofera*, *Crotalaria*, *Hardenbergia*, *Desmodium* and *Glycine* often come to our notice. These relatively inconspicuous plants are very important ecologically, particularly in our open forests; or at least are if given the opportunity!

The Caesalpinaceae family is characterized by having flowers of the form which we see in our gardens in bauhinias, cassias and leopard trees. It is however very poorly represented among our natives here. There are *Cassia* spp. (some of which have become *Senna*) and also a benign vine, *Caesalpinia scortechinii*, unlike its most unpleasant, vigorous, thorny, exotic relative *C. decapetala*, well known to those of us who work along creeks.

The last family, Mimosaceae, has flowers very distinct from those of the previous two, having lost any apparent petals and seen only as numerous stamens. It is dominant in Australian vegetation by virtue of including the wattles (*Acacia*), of which there are some 900 species. We have about a dozen right here. Apart from the wattles, other species are rare in the catchment. *Pararchidendron pruinosum* (monkeys' ear rings) is one. For some reason(s), wattles are widely regarded as being undesirable, i.e. weeds. They are in fact amongst the most important in our revegetation efforts; as providers of combined nitrogen in all situations and particularly so in what have been cleared areas where overall soil fertility has declined; as pioneers which can establish and grow fast in the absence of vegetational cover, providing the environment for other species later in the succession; and as early bird perches whereby new species are introduced.



## The When and How of Seed collecting

Acquiring viable seed is the essential first step in the nursery production process. Hopefully this article will provide a general set of guidelines for would-be seed collectors. But first a few golden rules.

### MINIMISE LOCAL IMPACT

Every time we go into the bush to collect, we have some effect.

- Physical effects : walk lightly – shoes are like hard hooves
- Weed delivery : humans are often the best dispersers of weed seed
- Food removal : leave enough for the beasts and bugs to eat.

### KEEP THE GENE POOL BIG

To acquire the largest sample possible from the gene pool of a species, collect from as many different trees in as many different areas as your resources and patience will allow.

Usually we collect seed while it is still carried inside its fruit, so the crucial question is - when is the fruit ripe? There are many different types of fruit, but all fruits will change in some way when they ripen. Here are the basic fruit types and some changes that may indicate ripeness

**Berries, drupes** – soft fleshed, wet, contain one or many seeds, (e.g. plum, watermelon). Usually they will change colour from green, become soft and moist, and be easy to remove.

**Pods, capsules, cones** – dry, hard, contain one or many seeds, (e.g. pea). The key change is splitting, but usually they will become harder and drier, and their colour may change.

**Nuts, grains** – dry, hard, contain only one seed, (e.g. grasses, sedges). Ease of removal, size and changes in colour, hardness and size are all possible indicators.

We also need to assess the viability of the seed itself. In general, a healthy mature seed will be firm and plump, its flesh white, with an intact and often dark skin. Possible reasons for unviable seed include – being unfertilised, aborting while immature, or damage from hungry invertebrates.

So, once we find our fruiting plant/s, what to do?

- **INSPECT** – Is the fruit uniformly mature? Is it falling? Is it being eaten?
- **SAMPLE** – Open a fruit and find the seeds. Do they look healthy and mature? Are they being eaten?
- **MONITOR** – If the fruit don't seem ripe yet, keep on checking until you see a sign.
- **COLLECT AND STORE** – Keep dry fruit in paper in a cool dry place. Wet fruit can be soaked overnight if invertebrates are feasting on them, then stored in plastic in the fridge.

For specific information, try these books:

*Seed Collection of Australian Plants*. RALPH, Murray. Bushland Horticulture. 1994.

*Fragments of Green*. 2nd Ed. HAUSER, Janet and BLOK, Jan. Aust. Rainforest Conservation Society. 2002..

*Australian Rainforest Plants Vol 5*. NICHOLSON, Nan & Hugh. Terrania Rainforest. 2000.

*Ornamental Rainforest Plants in Australia*. JONES, David. Reed Books. 1986.

David Moore

## MCCG 7th Photography Competition 2004 13 - 19 September

Display at Kenmore Village Shopping Centre – Entry forms available at Kodak, Kenmore

### Categories

1. **Environmental Issues** Photographs that make a visual statement about environmental issues such as environmental conservation, degradation, rehabilitation, pollution, weed infestation, erosion etc.
2. **Native Flora and Fauna:** Photos of flora and fauna native to Moggill Creek Catchment.  
Call 3374 0649 to check on appropriate species.
3. **People:** Images of individuals or groups working to restore Moggill Creek Catchment
4. **School Photo Essay** Document one or more of the above categories

### Prizes

| Amateur (prizes in each category)    | 1st        | 2nd        | 3rd        |
|--------------------------------------|------------|------------|------------|
| Adults                               | \$150      | \$75       | \$50       |
| Young Photographer (to age 17)       | \$50       | \$35       | \$25       |
| <b>Professional</b>                  | <b>1st</b> | <b>2nd</b> | <b>3rd</b> |
| (prizes awarded across 3 categories) | \$150      | \$75       | \$50       |
| <b>School Photo Essay</b>            | \$275      | -          | -          |
| (prizes awarded across 3 categories) |            |            |            |



## Dispersal of seeds and fruit

Several times we have been asked "How and when do you collect seed?" In another article in this issue, David Moore gives some useful hints. With some, there is also confusion between "seed" and "fruit". An understanding of seed and fruit and their dispersal is helpful when seed collecting.

With the fruit one buys at the local vegie shop, the distinction between seed and fruit is clear. Fruit are quite large, fleshy and brightly coloured when ripe, and (usually) contain one (e.g. mango), several (e.g. apple) or numerous (e.g. papaw) seeds. These fruit have evolved to attract animals that disperse the seeds, having enjoyed eating the succulent flesh of the fruit. Subsequent breeding has resulted in even tastier fruit (and reduced the proportion of inedible seed). In the flowering plants (Angiosperms- literally, seeds in vessels) the seeds are formed in fruits. In the Gymnosperms (naked seeds) e.g. conifers and cycads, the seeds are exposed. In many species, notably the grasses (e.g. wheat), the fruit is comprised almost entirely of a single seed.

Seed dispersal by plants may be by animals (as above or on animals fur), wind, water, or some explosive mechanism. This sounds all rather esoteric, but it has a considerable relevance to the way in which we tell whether a fruit is ripe. In almost all fruit, there is some observable change as it approaches ripeness, but the fruit may remain green for many months on the tree before becoming ripe. Under-ripe fruit is almost invariably green so, having identified a tree with green fruit, it is a good idea to check it at intervals, looking for a change.

Fruit of different species ripens at different times of the year, in some cases at a well-defined time, at others, depending on the timing of rainfall events that result in flowering. Fruit that has fallen to the ground is likely to be ripe – but may have been damaged by seed-eating fauna of one sort or another. Where a plant has a number of fruit in a cluster (inflorescence), and one or more is evidently ripe, the other fruit in the cluster are likely to be close to ripeness too, and can be picked.

### Seed dispersed by animals

Plants that rely on animals to disperse their seed have fruit that attract the target animal when the seed is 'mature', that is, when it had developed sufficiently to be taken from the parent plant and in due course, germinate. Because there are no large fruit eating animals (such as monkeys) in our region, fruit are small, to attract birds, smaller mammals and flying foxes. Attraction is frequently by a change in colour. For example, *Sygygium australe* fruit become red in colour when ripe and *Acmena smithii* fruit are often mauve. *Ficus coronata* fruit, initially hard and green, soften and change through dark red to black when ripe. The fruit of the native mulberry (*Pipturus argenteus*), initially green turn white.

Some species have seeds with fleshy stalks (arils) that attract birds. In these cases, the fruit must open to expose the seed and its fleshy aril. Many *Acacia* spp. have arillate seeds that are likely to help in seed dispersal. In *A. melanoxylon*, blackwood, it is large and brightly coloured.

Some species have coloured fruit that remain hard, but open up at maturity. The tulipwood (*Harpullia pendula*) and red kamala (*Mallotus philipensis*) both have brightly coloured fruit that open to reveal black seed that remain attached for some time. The former species has large, shiny, black seeds, but many fruit of that species lack seeds, perhaps because of insect attack early in their development.

Plants that rely on animals to disperse seeds in their fur are generally low-growing, for obvious reasons. In these, the seed is often fused with the wall of the fruit and there is some adaptation

enabling the fruit to attach to a passing animal. When these fruit are ripe, they detach very readily from the parent plant. Many grasses disperse their seeds in this manner, e.g. black speargrass (*Heteropogon contortus*) and wire grasses (*Aristida* spp.). A look at one's socks after an autumn-walk through native grassland shows just how efficient this means of seed dispersal is! When ripe, 'fruit' of many grasses becomes dry and biscuit-coloured.

### Seed dispersal by wind

Species that rely on wind to disperse their seed do not need to waste resources on fleshy fruit and do not need to advertise by a change in colour. Plants have worked out various ingenious ways to use wind to spread their seed.

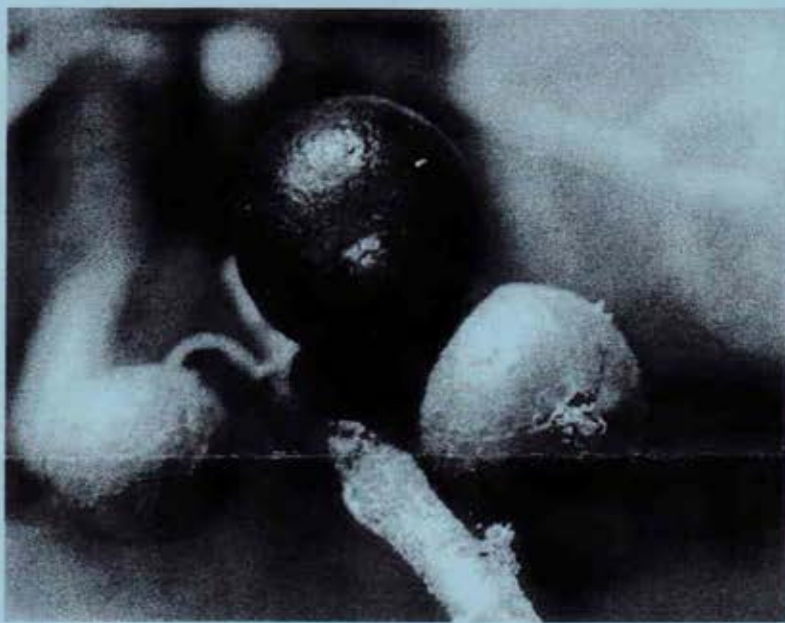


Fig 1. Fruit of *Ficus opposita* go black when ripe, attracting birds



## Dispersal of seeds and fruit

continued

Some species have a fruit that is carried by the wind. The common weed tree *Tipuana tipu* (tipuana) has a fruit with a long wing that helps to carry it in the wind. The native *Argyrodendron trifoliolatum* (white booyong) has a similar adaptation. When ripe, fruit of both species detaches readily from the parent plant.



Fig 2. The winged fruit of the weed *Tipuana tipu* is carried by wind

In some other species the fruit remains attached to the plant but the seed itself becomes airborne. The fruit of *Toona ciliata* (red cedar) is egg-shaped and pendulous. When ripe, the wall of the fruit splits open to release the many papery seeds, which float away on the wind. The fruit of this species are particularly subject to insect attack, and most fruit are infested with grubs. The fruit should not be picked before the case starts to split open. The tree genus *Casuarina* has fruit that are clustered in a cone like a small pineapple; this goes brown when ripe, and each fruit within the cone splits open to release the winged nut.

Some species such as *Eucalyptus* spp. and *Callistemon* spp. have tiny seed that is readily carried by the wind. The fruit is a capsule, cup-like in *Eucalyptus*. Initially it has a cover that falls off before flowering. The developing seed is covered by 3-6 valves (flaps) that open to release the seed

### Explosive seed dispersal

This method of seed dispersal also does not require fleshy fruit or bright colours. The fruit coat dries unevenly, resulting in the covering splitting violently, throwing the seed a couple of metres. Some plants in the pea family disperse their seed in this way, the two sides of the pod spiralling as they separate. Amongst rainforest plants, *Alchornea ilicifolia* (native holly) and *Cleistanthus cunninghamii* (omega) disperse their seed explosively. For some species in this group, the fruit becomes dry and brown; in other cases (such as omega) there is little warning and the best bet is to harvest fruit when some have started to 'explode'.

Bryan Hacker

## Nursery Stock: What Species and Whence?

### Original species

We want original species but there is no record of what was here. European occupation cleared land, particularly that carrying dry rainforest (DRF) and many species could survive only in areas where damage was not done. Records of DRF species were made in the 1900s for a couple of less disturbed sites, insufficient to ensure a complete record for our catchment. To that can be added the numerous identifications of species brought in from scattered locations. It leaves us wondering what may be here but not identified, and what was here but no longer exists. For open forest, there have probably been fewer surveys but also less damage, so more original species may remain.

These questions are raised because we see, just over the watersheds which are our catchment boundaries, species which are apparently not recorded here. Have they never occurred here or were they here but are now lost? Surely bird-dispersed, and to a lesser extent wind-dispersed seed moved readily between catchments. Do we assume that they did and that we should bring them back? Personally, I believe that we could try them. If they fail, it is surely due to some environmental differences, which both explains their absence and ensures that they will not become weeds here. The position is complicated by the substantial absence of original forest, something of a requirement for establishment of its species. All this is not to say that we should be looking for species which we have not seen here. Our nursery activity is strongly based on growing and distributing what we know to be or has been native to this catchment.

### Source of planting material

There will be some genetic variation between the members of a species in different, and thus to some extent isolated, populations, because of reduced interbreeding. Further, it is fairly certain that the populations are better adapted to their own environments. It is therefore often held that seed for replanting should be taken from the environment where it is to be used. In practice, we do not adhere strictly to that. There are a number of factors involved.

One is that genetic variation in a population is necessary. When we are down to few plants of a species in our area, it is probably useful to bring in some variation from elsewhere. Another reason for accepting seed from adjacent areas is that it is difficult to believe that, with the environmental similarities and the relative ease of migration, there can be marked differences from our material. Further, when we need planting material, it is better to get it from elsewhere than not to have the species at all. In fact, in order to have stocks of some of the more important species available at our nursery, we have to buy in plants of whose origin we know nothing.

Graeme Wilson

Do you want to know what MCCG is and what it does, to have information on revegetation, to read previous newsletters and be aware of events? Then visit our website:

[www.moggillcreek.org.au](http://www.moggillcreek.org.au)



## Attracting Birds to Your Garden

It is harder for those of us living on a typical suburban block to attract birds than it is for those living on acreage. Also, if you do not have a large variety visiting your property now, and you are surrounded by gardens similar to your own, there is probably little hope of enticing new birds into your garden. However, if there is a good wildlife corridor, for instance, adjacent bushland or a boundary with a well-vegetated creek, there are several things you can do. Another influence is your neighbours; problems can arise if they own a cat or dog, use a lot of insecticides in their garden, prefer exotic plants to native species, or have large areas of lawns or grazing paddocks.

Before suggesting some positive things one can do, it is necessary to cover what not to do.

- Do not feed birds. Talk to your neighbours and persuade them not to put out food. Explain that this will only build up numbers of dominating species like crows, butcherbirds, cockatoos, Magpies, Rainbow Lorikeets and Noisy Miners. These will cause a reduction in or even eliminate other birds by predation or taking over their nesting sites and feeding niches.
- Do not own a cat and preferably live where none of your neighbours have cats. Dogs are less of a problem, but if you want ground dwelling birds, such as the Bush Stone Curlew, dogs must be well trained and controlled and preferably kept in at night.
- Do not use insecticides, snail baits or other poisons.
- Do not be a tidy gardener. Leave a good covering of leaf litter, fallen bark, twigs etc on the ground. Insects can breed and hide amongst ground cover and small birds can forage through it. Logs and rocks placed in the garden may also attract various invertebrates as well as small vertebrates such as lizards and frogs.
- Manage your composting system well so that it is not an attraction for crows.

When planning or modifying your garden, be aware that birds have four main requirements, food, water, shelter and nesting sites. Some trees and shrubs can provide all of these needs except water. It is best to grow plants native to the local ecosystem so that the natural balance of wildlife species is not adversely affected. Carry out a survey of the local birds and their food sources.

For shelter and roosting sites, plant a good range of trees and shrubs. Plan for tall and medium sized trees with a dense under-storey of shrubs. The canopies of tall trees attract numerous birds, including pardalotes, honeyeaters and sitellas that forage along the branches and among the foliage. Tall trees also provide a launching place from which birds chase insects. Bee-eaters and dollarbirds are good examples. Others prefer the intermediate level of the forest. These include thornbills, silvereyes and flycatchers. A thick shrubby layer with some spiky plants will be home and refuge to species like fairy-wrens, scrub-wrens, whipbirds and finches.

Birds nest at all levels in the bush. Tall trees that are relatively open will be used by some species whilst others will be attracted to those with dense foliage. Old trees may have some hollows that parrots, kingfishers and owls can use. A nesting box or hollow log can be provided if there are no natural hollows. Some birds prefer nesting in pendulous foliage. Most nest in the middle-storey and under-storey. Plant closely spaced shrubs to form a tangled interlocking refuge; include prickly shrubs. Others nest on the ground or very low in the shrub layer. Provide an area with clumps of grass that is not mown.

Birds depend on trees and shrubs for food in various ways; they may feed on nectar in flowers, or eat seeds and soft fruit. Others are insectivorous, seeking insects in flowers, leaves, on the branches and trunks and in the airspace between trees. To attract a range of birds to your garden plant a diversity of trees, for example bottlebrushes, black ti-tree, silky oak, eucalypts, wattles, figs and lillipillies. Try to find species that flower and fruit at different times of the year. A rough area of native grasses (not a lawn) may attract finches. In considering what trees to grow, select ones with different kinds of bark and foliage to provide diverse ecological niches for invertebrate and small vertebrate animals for the birds to prey on.

Provide water, either a pond or birdbath. Place it in a position near suitable cover where birds can retreat in an emergency.

To summarise: If you want birds to live on your property, it is necessary to landscape it to suit them. This may conflict with other uses, for example, providing grazing for animals. Open areas of grass with scattered trees are sought by Noisy Miners which will colonise the area and probably chase other birds away. Douglas Dow, a long-time resident of Upper Brookfield was the first Australian ornithologist to study extensively the habits of the Noisy Miner. In the 1970s he described the habitat requirements of this highly aggressive species, pointing out that as humans altered their landscape to have more parkland features, Miners would be attracted to do what they do best; eliminate small songbirds by driving them from areas where no refuge vegetation was left. A solution to this is to fence off part of your property where a diversity of trees, some densely planted, with a thick under-storey of shrubs can be maintained. Plant various pollen, nectar, seed and fruit producing plants for food. And for shelter and nesting grow trees and shrubs ranging in height from the over-storey to ground level. Include some grasses. Have an area that is planted very densely and use some spiky plants. Be untidy, leave areas of native grasses and allow leaf litter to accumulate; use logs and rocks to provide more ecological niches. Try to keep some old trees for nesting, or put up nesting boxes or hollow logs. Provide water.

Remember MCGG's nursery has a wide range of local trees and shrubs available and someone to advise on what to plant.

Thanks to Douglas Dow for providing assistance with this article.

*Dawn Beck*



## A spectacular frog which might benefit from our revegetation work

We all love rain out this way, and I vividly remember one night revelling in the drive home from a late dinner in the city as I splashed through puddles all the way up Gold Creek Road after heavy rain during the day and evening. As I turned into the driveway, there was a large smug-looking coppery-brown frog with a cream underbelly sitting up tall and staring into my headlights with big round dark eyes. What a welcome home! It was the first Great Barred Frog I'd seen actually on our place, although we often hear the males calling out on still nights after rain. Their call is 'wahk', usually repeated, although sometimes only two or three times a minute, and it seems to carry for quite a distance. [You can hear a recording of the call at <http://www.geocities.com/gem3007/mixfasci.htm>] The name comes from their size (i.e. great, females grow to 10 cm, males to 6.5 cm) and the slender, tapering dark bars which they have across their thighs. The scientific name is *Mixophyes fasciolatus* and they occur in rain forests and wet sclerophyll forests from about Bundaberg to Sydney. I had got to know the first of their relatives when we lived in Sydney and were writing the first edition of our field guide to Australian Frogs. On warm wet nights we used to drive up the freeway to Ourimbah and take the road along the creek there. We often saw Giant Barred Frogs, *Mixophyes iteratus*, which grow to 11 cm (males 7 cm), and which are unfortunately now considered to be endangered as a result of their habitat being cleared, even though they occur from about Maleny down to Sydney.

Upon moving to upper Gold Creek in 1988 I was delighted to hear calls of *M. fasciolatus* echoing up from the valley. Their mating call is a common feature of the spring and summer evenings in the upper reaches of the tributaries of Moggill Creek where a lot of the native vegetation is still intact. Not everything is yet known about their reproduction, but it goes something like this. Males go to a stream and call from the bank when they are ready to breed. They mate in the water, close to the bank, and the female is said to then use her back feet to scoop the fertilized eggs up onto the bank where they stick while the tadpoles develop. Hatching occurs after about 11-18 days. Sometimes the tadpoles are washed into the stream by heavy rain, sometimes they wriggle down to the water by themselves.

Tadpoles feed on the bottom of the stream and have a suctional mouth to stop them from being washed away in swiftly flowing water. They get to be quite large, 8-9 cm, and it may be 12 months from when they are laid as an egg until when they metamorphose into a small froglet.



Australia has six species of *Mixophyes* (Family Myobatrachidae), and they occur nowhere else. They are among the largest frogs we have. They all have different but sometimes overlapping distributions, and live around and mate in streams and sometimes small dams and large ponds in rainforest or wet sclerophyll forest, less commonly in dry sclerophyll forest and woodland. *M. fasciolatus* would once have lived throughout the Moggill Creek Catchment and, quite possibly, one and maybe two others of the six species might have lived here as well. *M. fasciolatus* survives now where there is a flow of clean water at least during the breeding season, and where there is still sufficient riparian forest along and back from the creek to provide forest floor with lots of leaf litter to bury in and plenty of insects for them to eat.

One of the aims of the MCCG is to work towards restoring and rehabilitating riparian vegetation, and it is quite probable that successful bush regeneration will lead to a gradual expansion of the range of these beautiful frogs back into areas they once occupied. And because the males call, their re-colonisation should be noticeable.

Gordon Grigg

**Footnote 1:** These frogs are about the same size as Cane Toads, but are smooth, coppery brown, and not at all angular like toads. Underneath, toads are quite marbled, while *M. fasciolatus* is immaculate creamy white.

**Footnote 2:** Because the detergent in glyphosate sprays kills frogs, we need to be reminded that spraying needs to be done thoughtfully, particularly around creeks.

### References:

Anstis, M. (2002) *Tadpoles of South-eastern Australia, a Guide with Keys*. 281pp. Reed-New Holland, Sydney.

Barker J, Grigg GC and MJ Tyler (1995) *A Field Guide to Australian Frogs*. 407pp. Surrey Beatty and Sons, Sydney.



## Chairman's Report

Our Envirofund Project, entitled 'Focussed Habitat Restoration between Brisbane and the d'Aguilar Range' was successfully completed in May. This project, which involved a fruitful partnership between ourselves and neighbouring groups Pullen Pullen, Cubberla-Witton, Save our Waterways Now (Enoggera Creek) as well as THECA (The Hut Environmental and Community Association) enabled us to target some particularly nasty weed outbreaks. One of the worst was a 'new weed' called *Barleria lupulina* (see Moggill News Autumn 2003) that we have almost entirely eliminated. The project also enabled us to provide support for landholders in their continuing battle against environmental weeds. We are hopeful that the partnerships that have been formed through this project will continue, as further opportunities arise for neighbouring groups to complement one another.

Late in April I received a letter from Cr de Wit informing me of major Energex activities to be initiated in our district. These will involve 'extensive vegetation management and improvements to the system'. Residents will be consulted 'if there is need to trim a tree on private property' and qualified arborists will be on hand. Whilst we will all be grateful for fewer interruptions in our electricity supply, it is to be hoped that damage to native vegetation will be minimal. I have been discussing options with Energex officer Peter Judge for protection of some critical areas of forest.

A new MCCG initiative, being championed by Chris Hosking, is seeking funding to determine whether the Quoll is still living in Brookfield. The last confirmed sighting was in the 1960s, but there are strong suspicions that tracks seen recently on Chris's land belonged to a Quoll! More recently, in the late '80s, a Quoll was seen at Mt Nebo. If we are successful in obtaining support, we will be conducting workshops with the help of the Environmental Protection Agency and looking for strong community support for the project.

We have recently been trying to increase our efforts at revegetating along Moggill Creek near the Showground. This must surely be the most visible part of our Catchment, so we would appreciate as much help as we can get! Those who would like to help can contact Peter Nielsen, who leads this Section, on 3374 1145.

Over the last few days I have received two really nice letters. One was from Dianne Dickson, Pullenvale Environmental Education Centre. Several months ago we gave the Centre about 80 plants for revegetating a steep bank and it seems almost all have done very well. The other was from Rev. Bev Bell, Church of the Good Shepherd, Brookfield, thanking us for our contribution to landscaping the church grounds with local natives. It is encouraging to know that the hard work being done at nursery working bees is bringing benefits throughout the district.

Kenmore State High School P&C have been successful in gaining Green Corps support for a major revegetation project along a 1 km length of Moggill Creek. We have been interacting closely with the School on this project, with Damien Egan and myself both on the Steering Committee. The Project will last for 26 weeks. As well as restoring the Creek, the 12 young Green Corps people will be developing a range of skills, and will be spending a few days at our Nursery learning about plant propagation.

Bryan Hacker

## GreenCorps Project Starts at Kenmore High

Kenmore High has sponsored a GreenCorps project to assist in the regeneration of the Moggill Creek section which flows through the school. The school is the largest single landowner along the creek. The project was officially launched on Tuesday 4 May by Michael Johnson, our Federal member.

The ten participants have started to clear 50m sections of the creek ready for planting and mulching. Their team leader, Steve Milner, is organizing training for the participants in plant/ weed recognition and land regeneration in a riparian environment. They will complete the practical aspects of a six month program of clearing and replanting and complete a Certificate I in Conservation as well.

The program will help participants obtain future employment as well as achieve valuable outcomes for Moggill Creek. The group has visited the MCCG nursery once already and planned other visits. MCCG is one of the bodies providing expert assistance to the program. We are also providing plants. (Thanks again to our nursery volunteers.) The Parents and Citizens body of the High School have expressed their appreciation of MCCG support. The ANZ bank has also supported the project and will provide more teams over weekends to support the project.

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