

MOGGILL CREEK CATCHMENT NEWSLETTER Newsletter of the Moggill Creek Catchment Group Autumn 2004

ANOTHER SUCCESSFUL BUS TRIP FOR MCCG

An event which continues to be popular with our members is MCCG's Annual Bus Tour. This year's trip was fully booked and the feedback from participants was positive. The trip was described as informative, educational, inspirational and nice day out!

We visited 4 acreage properties in Brookfield all of whom had a different approach to their revegetation projects. They were also at different stages of maturity and development, which was interesting to see. What they did have in common was the obvious commitment, dedication and hard work demonstrated by each of the owners.

Our first stop was at Brian Leahy's property in Gold Creek Rd. Twenty years ago Brian decided he liked the look of rainforest and he embarked on a planting program. He has since devoted much time and energy to revegetation and estimates that he has planted about 5,000 trees, rehabilitating 5 acres.

Marjorie Welch from Upper Gold Creek Rd, has transformed an acre of her property into a tranquil rainforest, over a period of 15 years!

Chris Simmonds, on the other hand, only started his project along Wonga Creek four years ago. During this time he has planted over 3,000 native trees and other plants, successfully restoring 2 acres of previously weed infested land.

The final stopover was at Mackay Brook were local resident Damien Egan has singlehandedly rehabilitated a section of the Councilowned parkland. Over the last six years, Damien has planted over 7,000 trees Damien work was recognised in 2001 when was awarded the covetted Volunteer Medallion by the State Government for 'outstanding contributions in the Moggill electorate.'

Our thanks to Brian, Marjorie, Chris and Damien for showing us some outstanding examples of habitat restoration !



Tom McHugh (left) of BCC's Habitat Brisbane talks with Damien Egan during the tour

Kate McVicar

Chairman's Report

What a wonderful January it has been – we had 16 rainy days during the month and a total of 365 mm in our rain gauge. They tell us this is the best since 1974. Many of our members have taken advantage of the excellent planting conditions and collected scores of free native plants from our Nursery to plant in their revegetation programmes.

Whilst the focus of MCCG continues to be on restoring habitat on acreage land, we have decided to make our offer of free local native plants available to suburban property owners too – after all, if we could discourage residents in these areas from growing potentially invasive exotics, our area as a whole would benefit. So, if you are the owner of a smaller block in the Moggill Creek Catchment, do contact us and ask for plants for your garden (no need to submit a project plan, all we ask is that you are a member of MCCG).

The Moggill Creek Catchment Group has had a continuing concern over the proliferation of trails developed by mountain bikes on Mt Coot-tha, and the erosion that frequently results. With representatives from THECA and REPA, I had an onsite visit with Alan Barton (BCC Environment & Parks Branch, Urban Management Branch) to discuss this issue. About 6 km of tracks were examined. A high level of damage was clearly evident along many tracks, with serious gully erosion. Alan Barton considered that steep downhill tracks and tracks along creek beds are unacceptable. Discussion focussed on achieving a satisfactory resolution of this issue, permitting a reasonable level of access to users of mountain bikes, repair of any environmental damage caused by their activities, and possibly restriction of mountain bikes to certain sections of the park.

Led by MCCG member Don Sands, we have been conducting a survey of the distribution of the exotic water weed Salvinia and its control agent, a weevil, in our area. Based on the results of the survey, we are hoping to provide assistance to local landholders who have dams infested with this weed. So, if you have a Salvinia problem, please contact me on 3374 1468.

While the good weather lasts and we have good soil moisture, planting conditions are near-ideal. We have stocks of a wide range of species in our nursery, and we look forward to hearing from you.

Bryan Hacker



Support for School Environment Programme

Kenmore State High School is a major landholder on Moggill Creek and McKay Brook, with the school's 10 hectare site having a 1km stretch of creek frontage. During recent years KSHS students, teachers and parents have been working with MCCG and other community groups to protect and preserve this important waterway and restore the natural habitat and ecosystems. However, the project is vast and resources have been stretched – until now. The KSHS Parents and Citizens' Association is delighted to be the recipient of two grants to assist their environmental programme.

The Commonwealth Department of Family and Community Services (FACS) has provided \$1,160 via their Volunteers Small Equipment Grant. This will be used to purchase wheelbarrows, mattocks, mulch forks and other equipment for use by the Environment Committee volunteers.

The ANZ Staff Foundation has also been generous in its support. The P&C has received \$10,092 to assist in rehabilitation of McKay Brook. Work in this area will link with that completed by MCCG, forming a significant contiguous wildlife corridor. Funds will be used to clear the area of environmental and noxious weeds, fell large Tipuana trees and purchase plants, erosion control matting, mulch and stakes. ANZ staff volunteers will also be assisting with planting and mulching at working bees – as always, extra pairs of hands are appreciated and welcomed.

Thank-you FACS and ANZ.

The school and P&C also thank MCCG, in particular Bryan Hacker and Damien Egan, for their continued support. Their knowledge and expert advice helped considerably with the completion of the grant applications and their support continues as we approach the implementation of the grant projects.

Queries regarding these projects can be made to Kenmore State High School on 3327 1555.

Mini-Rainforest

Careful planning is required when disturbing land with the purpose of building a home. There are many tales of woe out there from those who simply bulldozed a site without consideration of existing drainage lines and the proper disposal of household wastewater and storm water. This is part of our concern with damage to the overall natural environment.

Having recently contributed to the increase in residential development myself (we built on a 10 acre block), I would like to comment on an aspect of the project that may be helpful and of interest to others.

The requirement was to dispose of household wastewater in two ways; human waste by way of a septic tank system and grey water (showers, kitchen sink etc) by distribution to a transpiration area. By separating the two it would be less likely that the septic system would become overloaded and result in unwanted waste entering and polluting our waterways.

The requirement to have a transpiration area for the grey water came as a bit of a shock at the time as it would seemingly need an unsightly area close to the dwelling, not fitting in with the overall landscaping. Council required this area to be roughly 15mx20m and gently terraced for drainage. The grey water would then be distributed evenly over it via polypipe lines laid on the surface and covered with mulch. It would then be planted with suitable native trees and shrubs. The plants would take up the water and release it to the atmosphere rather than allowing it to make its way into natural drainage lines and then into waterways, causing pollution.

From my experience the system works very well and has resulted in a thriving mini--rainforest. The area was originally planted with about six species of trees: callistemons, lillypillys etc. There are now, six years on, approximately 12 new species present with the new species occurring by natural regeneration, thanks to the suitability of the area for rainforest regeneration. The area is very attractive to birds, providing cover and food for wrens, finches and honeyeaters, which are normally quickly displaced by the more aggressive noisy miners, butcherbirds and magpies which tend to dominate after the disturbance of bushland caused by clearing a house site.

Birds are the direct cause of the natural regeneration, bringing in seeds from surrounding bushland. The trees seem unaffected by the fact that the grey water contains detergents, soap etc.

As the clearing of bushland continues for development we need to plan with the environment in mind and a wellpositioned transpiration area is undoubtedly an environmentally friendly multi-purpose facet of a residential development. You very quickly achieve a mini-rainforest with the aesthetics and enhanced biodiversity that go with it, not to mention helping to prevent our creeks from becoming open sewers. Maintenance requirements are slight; nothing more than occasional removal of weed species which come in.

Chris Simmonds

Control of weeds along our Creeks

Living next to a creek can be a lot of fun, but can cause problems too, as one of our members along Gold Creek has been finding out. Flooding creeks bring weed seeds and vegetative material from upstream and also carry aquatic weeds. Some of these weeds can be very serious pests indeed. The questions then arise 'Who owns the creek?' and 'Whose responsibility is it to get rid of the weeds?'

We took these questions to the Water Resources branch of Brisbane City Council. It appears that the section of Gold Creek in question is Crown Land but even so, weed infestation in this watercourse is the responsibility of the adjacent / riparian property owners. Under the Land Protection Act 2002, Part 8 (Obligation to keep land free of pests). Section 77, Subsection 1, it is the obligation of the property owners to keep lands free of pests (especially Class 1 and 2 pests which include Salvinia and Senegal tea), to the centre-line of the creek where the creek forms the property boundary. Class 1 and Class 2 weeds listed under state legislation both have or could have an adverse economic, environmental or social impact; Class 1 weeds are not commonly present in Queensland whereas Class 2 weeds are well-established



Weeds reinfesting Gold Creek after January rains.

BCC does have the right to serve notices on property owners who have Class 1 and Class 2 pest plants in such waterways but Council is primarily concerned with tracking down the sources of infestation and liaising with property owners. Class 1 and 2 weeds to look out for are alligator weed, water hyacinth, salvinia, water soldiers, cabomba, hymenachne, pond apple and water lettuce. For more information, contact the DNR&M website (www.nrm.qld.gov.au).

Bryan Hacker



EXPECTATIONS

Some of you are disappointed with the results of your restoration efforts. The exceptionally dry conditions of the last few years will certainly be a major cause, but that is not your fault. There are however two areas in which you may have attempted things which lead to trouble. One is where having decided on the correct vegetation type for your site, you made some mistakes in how to achieve it. The other is attempting to establish a vegetation type unsuitable to the site.

Correct vegetation type, wrong methods

Most people know something about gardening, but this is not gardening in the bush. In our gardens we plant, in well prepared soil, species well adapted to the purpose and provide careful ongoing maintenance. We have, in MCCG activities, given prominence to the BushCare program that concentrates on creekside alluvial soils and is backed up with expertise, plentiful labour, water and maintenance. It approaches bush gardening and has led some landholders to see it as guidelines for work on their own properties. Back there, however, the usual situation is one in which there are realities which should be factored in to procedures.

Much of our work there comprises replacing what we believe to be original vegetation where little if anything of it remains. In that original situation there were mixes of species of plants greatly varying in age and size. There would be little change in composition over periods far longer than our lifetimes. In some years there would be substantial seed production and in some of those, germination and early establishment. But that did not lead to increased numbers of plants, including species diversity. Competition for light, water and mineral nutrients suppressed the newcomers, many dying and some remaining in suppressed condition for many years. These latter tended to develop extensive root systems with out-of-balance sparse foliage. Very small trees on the forest floor could be decades old. Their opportunity came when local competition decreased, often the result of an old plant dying or a tree falling. Then there was a fierce race between suppressed plants to achieve a more dominant place. Only a few would succeed, resulting in little if any change to the vegetation balance.

This has lessons for us.

The various species are adapted to establishment in the environment of the established forest. It is one of low light, protection from wind and frost, cool soil surface, reduced moisture evaporation from the soil surface, reduced runoff of rain, higher fertility resulting from decay of leaf litter, superior soil biological activity, and perhaps other things of which we know little. And when replacements get their chance they do so on the basis of a superior root system but small leaf surface, from which water loss occurs. It is surely obvious how far we can depart from that in our planting operations.

It is difficult for us to supply plants from our nursery without some tendency towards restricted root systems out of balance with foliage and the latter prone to sun damage. And when they are planted out, their roots are not in good contact with the soil in which they are placed nor nearly deep enough. (The November 2002 edition of this Newsletter gave advice on planting.) Moreover, unless we are planting in to what is merely a somewhat depleted forest, providing something of the forest environment described above, we have to create an alternative. We do this by starting with pioneer species, those which are adapted to establishing in exposed places. Some of these are relatively short-lived and do not regenerate in the forest type which follows them. But there are some species which do persist beyond their pioneer role. After the pioneers have established we can wait for wanted species to arrive by natural processes such as bird or wind dispersal and regeneration from seed banks in the soil. That is however slow and may not bring in the required species range, especially where that range is small, as is the case in our much depleted vegetation. On the other hand we can interplant with what we want. But a word of warning. That puts the new plants in to somewhat suitable environments along the lines discussed above; but it also puts them in to disadvantageous competition with the already established pioneers. Thus they need special care, especially in deep watering, until they are established.

Wrong vegetation type for site

We all recognize at least the main vegetation types in this catchment; open forest, dry rainforest and riparian forest, and are aware that they are associated with particular terrain. There are a number of features involved. Soils vary greatly in fertility, depth and waterholding capacity. Aspect determines the amount of incident sunlight and thus temperatures and evaporation, and also exposure to wind. Topography varies from flat land through run-on areas (which get more water and with deeper soil) to run-off areas (with the opposite consequences). In addition, low elevation is more frost-prone. The various combinations of these factors result in much variation in the vegetation which can be supported. Some of the failures experienced are doubtless the result of unawareness of these constraints.

It should be noted that within what appear, on topographical grounds, to be uniform sites, there can be major soil variability resulting from geological complexity. As a result, a species which does well at one point may fail 10 metres away. We have to deal with that simply by planting (if that is our revegetation strategy) a wide species range, accepting that some will not be successful. Where we depend on natural regeneration the problem solves itself; at least to the extent that we don't waste time planting and looking after something which is going to fail.

So what?

What then should you do to minimize disappointment? Firstly, reassess your expectations and approach the task with what general understanding you may have gleaned from the foregoing. For many of you it is best get some advice appropriate to your particular situation. We don't claim to be all-knowing but have a few years of hard experience in what we are all trying to achieve.

MCGG NURSERY

The Upper Gold Creek and thus Resevoir catchment is part of both Brisbane Forest Park (BFP) and the Moggill Creek catchment, and becomes Section 7 of MCCG. As a contribution to our activities, BFP provided a plant nursery for our use. It is located just beyond the gate at the end of Gold Creek Rd. (and thus in BFP). We stock it with plants which are given free to members with approved programs for their use.

Plants are mainly propagated by us from seed collected by members although we do sometimes buy in plants when we are short of particular species. We have recently begun to sell, to a nursery, surplus from a large yield of seedlings from a sowing. (The success of a sowing is quite unpredictable.) The result of this is that we can widen our species holding at no cost. We do not acquire anything like a full species range of seed for propagation.

There is bench space for some 15,000 plants, the number determined by pot size. We have to use rather small pots to allow for numbers. The space is presently fully occupied. There is an automatic sprinkler system which avoids our having to hand- water daily. A building provides both an office and a store-room, plus an outdoor covered large potting bench.

Originally we had funding which allowed the appointment of a Field Officer several days a week, whose duties included management of the nursery. Now, however, that has to be done by members. The main work is pricking out seedlings. We have a team of volunteers with an attendance of about 12 on the first and third Mondays of the month, for about three hours. You are invited to join the list, and are not expected to turn up regularly. In addition to the working-bee people, there are usually a few other members who have come to collect plants for their projects. It is a great meeting place for like-minded people in an agreeable environment of both activity and bushland setting.

Graeme Wilson



Members get plants free from our nursery. That is not because we have funds to buy them but because we produce them at no cost, and that thanks to volunteer labour from within.

There are four steps in getting plants to members; seed collection, seedling production, potting up, and making up orders (that often associated with visits to landholders to advise on what is suitable).

Seed collection is reasonably adequate, particularly so because of the efforts of one person although a few others contribute much between them. Doing better is difficult because it requires some expertise to find seed of many species and to harvest them at the correct stage.

Potting up is well cared for because of the volunteers who come to the nursery.

Making up orders and advising is something of a strain on the few who do it because we are short of people with sufficient knowledge to do the job; but they do manage to get it done!

Seedling raising has however become a problem. We urgently need more people to share the task. For example, in the last three months about 70 lots of seed have come in. Six of these were taken by one member and I was left with the rest. Meanwhile, a very large number of seed boxes remain on my benches from earlier plantings because many native species take months or years to germinate. Going back over some six months, only three other persons have taken seeds. (It is true that a few other members occasionally collect seed and raise seedlings, sending them on to us, but that is no help in the problem I describe.)

It requires no particular skill, just some reliable care. There are surely a few people among our now large membership who could help. If you think you could, phone me (3374 1218) and discuss what is involved.

Graeme Wilson

Volunteers at work in the Nursery

BUTTERFLY CHECKLIST for Moggill Creek

MCCG member Don Sands has compiled a list of 133 species of butterfly that he has observed in our Catchment, together with their food plants. MCCG has published this as a booklet; for your copy, phone 3374 1468. Price: 50c.



Section 8 - Wonga Creek Subcatchment

Wonga Creek arises in Brisbane Forest Park, not far beyond the upper end of Savages Rd., and joins Moggill Creek less than 1 km from the start of the road. The junction is only a short distance above where Gold Creek enters Moggill Creek in the once well-known swimming spot, the Junction Hole. The upper slopes extend to the ridge lines separating it from Upper Moggill Creek to the south and Gold Creek to the north.

Forest of all kinds was worked over for timber in early days. The open forest has been largely left to regrowth (more recently including copious weeds). Creeks were cleared for no apparent good reason and have become home to weeds, meanwhile suffering in the several ways which follow from the loss of appropriate vegetation and access by livestock. The dry rainforest was, except for gullies and steep areas, largely given over to farming- fruit and vegetable production-because of better soils; but such has now ceased. Meanwhile, those soils have been badly damaged by erosion. Correspondingly, native plants were decimated so that there is insufficient seed source for ready natural regeneration. Indeed, it is likely that some species have disappeared, although we do not have the time to search less disturbed sites. A further feature is that the geology is such that the better soils are mainly on the southern side and thus with a northern aspect, that exacerbating the difficulties of replacing forest, especially dry rainforest.

The valley has good gullies running to the top of ridges on both sides, providing the opportunity for development of effective ecological corridors between sub-catchments. Achieving that is one of the major problems in the MCCG program.

On the brighter side, there are five VCA landholders, four of whom are aggregated at the top of the valley. There are about 15 MCCG members from some 70 landholders; less than we would like. In addition to the VCA people, there are perhaps 10 occupiers doing something towards restoration although several are on small holdings. Does this mean that people with large properties are daunted by the size of the task ahead?

Like most other Sections, we formed a Bushcare group. Unlike them, we chose initially not to work on more or less entirely riparian land with its better soil but a site selected for diversity of terrain and problems. That was seen to have better training value for people intending to work on their own properties. In the event, it lacked the value of conspicuous roadside revegetation as seen, for example, along Gold Creek Rd. And the small band of volunteers were mainly people with serious programs on their own land, thus already well informed- and with little time to spare for BushCare. We have, however subsequently started on a road-/creekside strip which is away to a good start.

Our volunteer group has also looked at activity beyond public land and our Section. We started on a serious cat's claw infestation on a private property and with BCC assistance. This is ongoing. We have planned two projects which should be under way by the time this is printed, both in a neighbouring Section and with its support. In one, a very conspicuous (from the road) area of private riparian land with massive weed infestation is to be cleared and planted. The other is to revegetate an area of roadside along lower Gold Creek, which Council had slashed last year. And we have worked with a landholder in starting to clear and plant a gully which is potentially a valuable corridor between our sub-catchment and a neighbouring one. The experience confirmed the difficulty of achieving such important objectives.

The main limitations to progress are numbers of landholders apparently interested in MCCG, and number of volunteers in group activity. Of the latter, we lost three in the last couple of years while gaining two.

Graeme Wilson

Recommended Reading

Those wishing to delve into the technical aspects of riparian land management will gain considerable insights by reading the Land & Water Australia publication "*Riparian Management Technical Guidelines*" (Lovett, S. & Price, P. (eds) 1999). The easiest way to obtain it is to go to http://www.rivers.gov.au/publicat/guidemanual.htm and follow the links to the technical guidelines and a range of updates. One of the new updates is on managing wood in streams. They are excellent publications, and will be very useful for practitioners as well as students.

In a more general vein, many of you will have heard about the National Land & Water Resources Audit that has been examining the condition of our land and water resources nationally. There is a wealth of information in the various theme reports and specific project reports which can be accessed through the Australian Natural Resources Atlas (http://audit.ea.gov.au/ANRA/atlas_home.cfm).

Adrian Webb

Don't forget the Grasses!

Grasses are so widespread that many of us do not even notice them. Many landholders in our Catchment are doing a great job planting trees native to our area but are quite unaware that, on many properties, almost all the understorey is exotic i.e. non-native. This frequently comprises exotic grasses, some of which are very invasive and crowd out native grasses and other herbaceous plants that provide habitat and a food resource for many small animals, including butterflies and other insects.



Kangaroo grass

Barb-wire grass

Wiry panic

Three of the commoner native grasses in our area are kangaroo grass (*Themeda triandra*), barb-wire grass (*Cymbopogon refractus*) and wiry panic (*Entolasia stricta*). These are all tussock-grasses, and (in common with most native grasses) tend to disappear with mowing. They occur in eucalypt woodland. Before settlement, the slopes in much of our area would have been eucalypt woodland, with the understorey dominated by kangaroo grass. Also present would have been barb-wire grass, a common pioneer grass. Kangaroo grass is still abundant in less disturbed parts of our catchment. Where soils are less fertile, on the ridge-tops, wiry panic is still frequently found.

Two exotic grasses that are starting to cause real problems are molasses grass (Melinis minutiflora) and signal grass (Brachiaria decumbens). Both of these African grasses have the capacity to crowd out all other herbaceous species. They



are both tolerant of infertile soils and moderate shade. I have had a real problem with signal grass on my own block, but have now eliminated it.

Seed of kangaroo grass is commercially available but is expensive and not always easy to germinate. Plants or seed of most native grasses are not commercially available. We are growing some of the native grasses at our nursery and will expand the range if there is sufficient interest. Do let us know if you are interested.

Bryan Hacker

Molasses grass - an invasive grass from Africa

PUTTING BACK THE FOREST - changes to plant names

This book, covering revegetation techniques and species native to our district, was first published in 1994. Since then, there have been quite a few changes to botanical names and these will be included in the next printing. If you have a copy from an earlier printing and would like an update of these new species names, phone 3374 1468. The list may be either posted or emailed to your address.

DON'T MISS MOGGILL CREEK CATCHMENT GROUP'S UPCOMING EVENTS DURING 2004!

March 27th	'Plant Sale' at Brookfield Produce
May 14-16th	Display at Brookfield Show
June 5th	World Environment Day
June 17th	MCCG Public Meeting/Guest Speaker
July	Photography Competition
September 13-18th	Theme Display at Kenmore Village
October	World Habitat Day/National Weedbuster Week
November	MCCG AGM/Public Meeting/Guest Speaker

For further information contact Christine Hosking (PR Coordinator MCCG) on 3374 3453.

> Editor: Graeme Wilson, Ph 3374 1218 Formatting: Margaret Hastie Printing: John Gower