

MOGGILL CREEK CATCHMENT NEWSLETTER Autumn 2005

Newsletter of the Moggill Creek Catchment Group



Chairman's Report

A happy new year to all. We have had some quite useful rain over the last couple of months and a number of our members who live in the Catchment have been coming to our nursery for free local plants. Thanks to Graeme and his loyal band of helpers, we are continuing to pot up about 2,000 seedlings each month. So if you want local plants to improve the habitat value of your property, whether it's an acreage block or a suburban garden, just give me a call (3374 1468).

There has been a lot going on since our last newsletter went to press. Foremost is that Martin Fingland joined MCCG as our new coordinator late in January. Members will get an opportunity to meet Martin at working bees and when seeking advice on property management. Arrangements are also well in hand for our week-long display at Kenmore Village Shopping Centre (14-19 March, topic 'Caring for our Creeks'), a 'Gum Tree Wildlife Information Day' at the Brookfield Hall on Sunday 10 April, and, of course, we will have our display alongside other environmental groups at the Brookfield Show over the weekend 20-22 May. We are also planning a guided walk in John Smith's rainforest on Sunday 8 May – a similar event planned for last spring was washed out. Other ideas in the pipeline are a Property Planning event for acreage landholders and developing butterfly-gardening kits, with the aim of providing a food source for caterpillars of some of our more unusual butterflies.

Bryan Hacker

EDITORIAL

This newsletter goes out to the 350 or so members and a larger number of people who pick up copies from our distribution points. It is important to us that as many people as possible read it; our members for obvious reasons, and the others because it may generate interest which leads to their joining our Group.

That leads to the question of how interesting the content is. There are three types of things there. One is notices of events and suchlike. No opinion is sought on these.

Next we have, as perhaps the majority of items, articles of a generally technical kind about plants, animals, soils, climate etc., together with those on techniques. These, we hope, vary from interesting to useful, although we would like some feedback about what we cover and how it is written. It would be depressing to think that we toil over such material which readers don't like!

The third type of article, and the one of particular concern here, is that based on personal observation. In this issue are three such: the bats, the darter and the python. These are probably for many the most readable things in the newsletter. Our problem is to get them. It depends on individuals seeing something and telling us about it. We have over 300 members, most of whom are presumably interested enough to look at what is happening in the natural environment, and therefore between them in any three month period (between issues of the newsletter), there must be many observations which might be of interest to others. But rarely does anyone come forward to tell us about it.

Perhaps the main reason for that is that the observers are not sure of what they have seen or are reluctant to write about it. Do tell us; it can be the basis of an article, even if written by someone else. What we want is to get the message through that interesting things happen right here, and the better we look after the natural environment, the more likely they are to happen. So, if you have something, contact the editor, whose phone number and E-mail address are at the bottom of the last page.

Martin Fingland – our new coordinator

Thanks to the Brisbane City Council, Martin Fingland has been appointed as our new MCCG coordinator. Martin's responsibilities will be largely similar to those of Liz Gould, who finished working with us a couple of years ago, but he will also be providing support for our Bushcare groups.

Many members will already have met Martin, who gave a talk on local wildlife to MCCG at the Brookfield Hall in June last year. Martin has a degree in Protected Area Management as well as a diploma in Wilderness Reserves and Wildlife Management and has personal interests in bush regeneration, particularly on his acreage property near Samford. He has worked as a senior ranger and contact for the public at Brisbane Forest Park for more than ten years and for five years managed the Gondwana Rainforest Sanctuary on Southbank. Martin has a keen interest in native wildlife and together with his wife runs a small wildlife education business as well as a threatened species breeding program.

We welcome Martin to our Group. With his credentials and enthusiasm, we can look forward to even further development of environmental awareness in our Catchment. "I'm very much looking forward to meeting members at working bees or on their properties", said Martin. Amongst his first tasks will be following up with some of our landholders whom we have helped in the past. He may be contacted on 0408 774 631.

Bryan Hacker

Notes from the Nursery

The long-standing threat that the nursery would have to be moved because of the dam repair work came to nothing. Our site was not required after all! It has allowed us to start on some overdue improvements. We have already installed a better overhead sprinkler system and are moving towards adding a propagation bench. Hitherto we did not have space for that on existing benches. Thus we will be able to raise most of our seedlings on site, which will save some inconvenient transport from elsewhere. Also, it will add variety for our volunteers, and the interest of seeing our product right through from seed to potted plants ready to go.

We are working on a proposal to produce a range of plant species important for butterflies. These plants will come through our existing operations, but there will have to be a special small management group for some aspects.



There are occasionally questions about why we do not have a complete list of species native to the catchment, this list going further to group them according to site adaptation. It is an easy question to ask! This is no place to explain why we don't have this. The background to the wish seems to be mainly that our "customers" could then ask for particular species appropriate to their situation. The catch is that we do not stock the huge number of species involved. Nothing like! We can only give out what we have and judge to be suitable.

Readers are reminded of Putting Back the Forest, written for this area and listing many species appropriate to sites, in addition to providing much valuable information of various kinds for those interested in revegetation.

On the subject of species range: There seems to be a shift towards revegetators willingly taking a wider range of species. This is encouraging, suggesting that a better appreciation of our objectives is developing.

Graeme Wilson

Bats in a Beach Umbrella - Blimey!

'Bats in the belfry' are part of old English culture, surrounded in the mysteries of vampires and 'things that go bump in the night'. Bats have been maligned since those early times by misinformation but recent studies have begun to unravel the important role they play in our environment. Fruit bats were only seen as pests and were shot or electrocuted while the smaller bats were seen as scary – they might be carriers of disease or some may even be vampires!

A reminder of the life styles of insectivorous bats occurred about 18 months ago when our folded beach umbrella at Upper Brookfield became home to about six individuals. (See photo on p.1). Our family noticed them while swimming at dusk on hot, sweaty evenings, swooping out from the bottom fold of the umbrella next to the swimming pool. Within 12 months their numbers had built up to at least 17 individuals and the latest count (January 2005) reached 23 bats. Were they breeding there? Of course the umbrella became redundant and we have since missed the shade intended for our pool!

The feeding strategies of these bats are curious – as they emerge at dusk they often seem to skim the pool surface to collect a mouthful of water (+ salt + chlorine!) before ascending to dart among the trees. If we sit quietly they will fly about our heads, picking off the mossies and midges. It is no wonder that we have never had a problem with mosquitoes here – they don't stand a chance! Only two bats have misjudged their swoop over the pool. One bat came to grief – it must have drowned and was found dead floating in the pool. Another missed its ascent and was found hanging on the overhanging lip of the pool next morning. I carried it back to the umbrella amid much noisy squeaks and bearing of teeth. I was very careful not to be bitten and handled the bat with a large cloth.

One morning I was shocked to see a large female brown goshawk hanging from the upper skirt of the beach umbrella, tearing at the stitching and trying to get into the top of the umbrella until it left after my frantic waving of hands.... Much as I have made these nesting birds welcome they have outdone this lately and I will be glad when their chick has left the nest in a hoop pine near our house. These birds have been tolerated despite seen eating whip birds, finches, brown pigeons, doves and owls. Most welcome when eating rats, the brown goshawk is not at all popular with our household when they try to eat birds or the bat colony.

Insectivorous bats are much neglected for the important role they fill in our environment. As pollinators and predators their beneficial interactions with plants and animals cannot be underestimated. Their vital role in preying on insect parasites and pests of crops has rarely been applied to benefit humans. For example, only recently has their role in cotton pest management been realised – bats eat insect pests in crops and their sonar disrupts egg lay and mating by moths that are the most important pests of cotton. Research will someday show that insectivorous bats can be attracted to roosts on farms, ready and waiting for dusk to help the farmers achieve much-needed 'clean and green' pest control in their crops.

Eventually we would like to know what species of bat is living in our beach umbrella. In the meantime we hope someone can tell us how to coax the colony to roost happily somewhere else nearby so that the mass of faecal pellets will not accumulate very close to the pool's edge.

Don Sands

The Lonely Darter

Two closely related families of water birds live along the quiet creeks and dams of Moggill Creek Catchment. One family, Anhingidae, consists of just one species, the Darter, *Anhinga melanogaster*. The other, Phalacrocoracidae or Cormorants has three species relatively common in MCC. Little Black Cormorant *Phalacrocorax sulcirostris* and Little Pied Cormorant *P. melanoleucos* are to be found near waterholes along the creeks and in dams. The Large Black or Great Cormorant *P. carbo* prefers large bodies of water and may be seen on Gold Creek Reservoir.

These two families have many similarities; and are well adapted to life in water where they hunt aquatic animals, mainly fish. They are long, slender and streamlined, with long flexible necks and long stiff tails. For efficient swimming, their short legs are set well back on the body and the feet are webbed. To enable them to hunt in water they must reduce the natural buoyancy of their feathers. Birds' plumage has evolved to be light for flying and to entrap air to act as an insulator to keep them warm. Both families have plumage that becomes quickly saturated on entering water reducing their buoyancy so that they swim low, body submerged with only their long necks visible, quite a contrast to grebes, ducks and other swimming birds. A common name for the Darter is Snake bird. This low buoyancy allows them to be very successful at catching fish and other prey at depth. When out of water, it is necessary for darters and cormorants to dry their feathers quickly to regain warmth and are often seen in a distinctive drying pose with wings outstretched.

The main difference between the two families is the adaptation to different methods of "hooking" the fish. Cormorants have larger heads and the bill is hooked at the tip; they catch fish by a pursuit and grab method securing the fish with hook of upper mandible, it is brought to the surface, turned and swallowed head first. Small prey is swallowed under water. Darters have a smaller head, stiletto-like bill and a snake-like neck. The neck has a distinct kink with a trigger process between the 8th and 9th vertebrae that allows a sudden thrust of the slightly opened bill to impale fish while swimming underwater. Fish are stabbed just behind the gills, the bird then surfaces, the fish is flicked off the bill on to the water, retrieved and swallowed head first. Occasionally the fish is tossed into the air and caught before hitting water.

Darters are usually solitary or in pairs, cormorants are more gregarious and whilst sometimes alone may roost in small groups. It is common to see mixed flocks of different species of cormorants, with a darter or two included. When not hunting they loaf about on their favourite roosts, dead branches overhanging water. logs and rocks or other suitable perch, either in the drying pose or the characteristic upright stance required by the backward position of their short legs.

Now for the story of one particular Darter, a resident for at least five years of a large pool on Moggill Creek in Rafting Ground Reserve. This male (males are black with a white stripe on the neck and rusty patch on the throat, females are greyish-brown above, white or buff below, white stripe on neck edged black) shared his quiet pool and roosting tree with a few cormorants, mainly Little Blacks. For all those years this serene existence of feeding in a productive pool,

an ideal roost site and good company appeared to satisfy him. But, in the spring of 2004, after some good rains, our Darter realised there was more to life than loafing about with a few cormorants, and he started to build a nest. The courtship technique of an eligible darter is for him to select a site, start the nest and decorate it with leafy twigs, then he begins displaying to attract a female. She selects her mate and together they finish the nest and live together happily ever after or at least till the end of the breeding season. I first noticed the nest, an untidy mess of twigs and leaves firmly placed in a fork of his roosting branch over the pool, and the Darter lying prostrate and still upon it. I thought it was dead and announced to all interested that the Darter had died. However, a few days later on I saw that he wasn't dead but sitting up in his partial nest looking quite forlorn. He stayed like this for weeks, looking exhausted (too much displaying?) and sad, waiting for the "chick" of his dreams. Three little black cormorants shared this vigil with him but no female Darter ever came. Then one day he was gone. I hope he found another nest site with many female darters competing for him and one day he will return with a mate and move back onto his old roost.

Dawn Beck

(See photo., courtesy of Valdamay Jones, on p.1)



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CONGRATULATIONS TO Graeme Wilson! Winner of a 2004 Ryan Recognition Award

Congratulations to Graeme for achieving recognition when he recently won the above award for his services to the community. He was specifically nominated for his work with the Moggill Creek Catchment Group. He is a foundation member of MCCG and his achievements and contributions are remarkable, especially in view of the fact that he is 87 years old and still showing remarkable energy and determination to get the job done.

Here is a summary of his contribution.

As a Bushcare Group Leader and MCCG Section Leader

Graeme joined MCCG in 1997 and, as a retired Professor of Agriculture from University of Queensland, his knowledge and interest led to his appointment as Section Leader and Bushcare Leader in the Wonga Creek Section of the catchment. Activity in that has involved leading a group of volunteers at monthly working bees, rehabilitating significant stretches of weed infested public land.

As a MCCG Committee Member

As a Bushcare Leader, Graeme joined MCCG's Committee. He is a regular attendee at the Committee Meetings where he actively participates in the decision making and the management of MCCG affairs. He has a keen



understanding of biological issues and his opinion is respected by other Committee members. He is also a regular volunteer at MCCG public events. In 2003 he was part of a working group which developed MCCG's current Strategic Plan. This involved many hours of planning and discussion, and he also did the final editing of the Plan.

As the Co-ordinator of MCCG's Nursery

MCCG has a nursery in Brisbane Forest Park at the end of Gold Creek Road, and which provides free native plants, mulch and herbicide to landholders with approved restoration programs. It is one of MCCG's greatest successes and is considered to be a great service to the community. In 2002, NHT funding to MCCG was terminated which resulted in the loss of the MCCG Co-ordinator. Graeme willingly took over the responsibility of managing the Nursery, a huge task to which he devotes many hours. A team of 12-16 volunteers comes twice a month to pot up seedlings, a large proportion of which he has raised in his home nursery. The result is a large stock of native plants, over 20,000 added last year.

As Editor of the MCCG Newsletter.

The 8-page MCCG newsletter is published four times a year. Graeme edits it, also writing many of the articles. His deal mainly with botanical aspects as a matter of interest, and some with techniques. The last issue comprised 800 copies, 350 going to MCCG members with the remainder placed where the public may take them, which they do.

As Advisor in Land Management.

The MCCG area of 57 km2 is divided into two sections for the purpose of advising landholders in land management, conservation and revegetation. Graeme has responsibility for one of these, providing assistance based on his knowledge and experience.

Our congratulations go to Graeme for this well deserved honour !

Kate McVicar

Do you want to know what MCCG is and what it does, read previous newsletters, and more? Then visit our website: www.moggillcreek.org.au

Dianella – pretty but tough

Dianella caerulea, the blue flax lily, is a plant that exhibits a wide range of forms, but all are remarkably tough. Despite the severity of the recent drought, plants of this species on my block are thriving in a native grassland situation, retaining their green leaves while surrounding grasses were to all appearance dead.

There are eight species of *Dianella* in south-eastern Queensland, with *D. caerulea* being the commonest in our area. Six varieties of *D. careulea* have been described, which differ in adaptation and form. In our area, there are two common varieties, *D. caerulea* var. vannata, and var petasmatoides and also a third, *D. caerulea* var. assera.¹



var assera

var. vannata

The table below shows some of their differences.

Some differences between varieties of Dianella caerulea

	var. vannata	var. assera	var. petasmatoides
Habitat	Eucalypt woodland	Rainforest margins	Rainforest margins
Foliage colour	Dark green	Light green	Dark green
Habit	Tufted	Tufted	Long ehizomes, plants forming mats to many metres across
Stems	Short, true leaves almost to base	Tall, with many scale leaves	Short, true leaves almost to base
Leaf length	Leaves progressively longer up the stem	Leaves short, spreading fan-like	Leaves much the same length, not longer further up the stem

Some very different forms are also being planted in Habitat Brisbane Bushcare sites. It is likely that these will spread progressively into nearby native vegetation.

¹I am grateful to Sandy Pollock, Queensland Herbarium, for identifying specimens.

Bryan Hacker

var. petasmatoides

Annual Ragweed

This plant is a significant weed in our catchment, mainly on better soils and moist conditions. Its botanical name is Ambrosia artemisiifolia. How it obtained its generic name, we do not know. Perhaps it is because some Latin authors use the word in the sense of 'immortal'. In mythology, 'ambrosia' is the food of the gods, which could hardly apply to annual ragweed. Nor is it immortal, although it seeds prolifically and can be difficult to control.

In Queensland annual ragweed is a declared Class 2 plant under the Land Protection Act 2002. It is regarded as a serious pest and by law, all landholders are required to try to keep their land free of annual ragweed.

Additional rag weed is native it all the second sec

Annual ragweed is native to eastern North America and was introduced to Queensland in the 19th Century. Already by 1900 its weed potential was appreciated. Seed germinates in spring and growth is rapid. Leaves are up to about 20 cm long, fem-like and deeply divided. Growth is erect and it can achieve a height of 2 m. It flowers late in summer, producing numerous pale flowers along spikes up to 20 cm long.

As well as being a weed of poorly managed pastures, annual ragweed is potentially a serious human health problem, causing hay fever and aggravating asthma. On small areas, annual ragweed is best controlled by hand-pulling before flowering. There are no similar native plants in our catchment, although annual ragweed can be confused with parthenium, an even more serious weed! For further information, see DNR&M website pest series No PP7.

Plant Families 4 - Poaceae

The last couple of families discussed here were of medium size in terms of number of species, 2-3000. Now we are looking at one of the largest with about 620 genera and 10,000 species. Grasses worldwide include rice, wheat, oats, barley, rye, maize, sorghum, the millets, sugar cane and some other food plants less well known here. Beef and lamb are raised on pastures (grasses), while chicken and pork are largely produced in enclosures, the animals fed diets based mainly on some of the cereals. Many people, especially in Asia, depend on bamboos (yes, grasses again) for building materials and other things. And what about our lawns?

We originally had many grasses appropriate to particular ecosystems. Grasses are generally more abundant the more open the forest, ranging from pure grassland in some regions where trees do not occur, to little in rainforest. Our catchment did not include much of those extremes but grasses would have been plentiful in our extensive open forests and well enough represented in the gradations through to dry rainforest. Land management since arrival of Europeans has had important consequences for our grasses, being at the expense of many natives. Then there has been large scale introduction of pasture grasses which have increased the pressure on natives; many having become serious weeds from our viewpoint.

Of course the humblest of plant species have equal priority with all others in ecosystems, and thus the grasses deserve recognition and understanding. To that end we are putting some in to our nursery. Fortunately, a small number of plants can, given favourable weather, soon increase because of the early and abundant seeding of grasses. And once established they are as a general rule very hardy.

All the foregoing says nothing about particular species in the way we did in previous writing about plant families. We hope that an interest in the grasses will increase and that there is an attempt to know some of them. For those interested in doing so, Bryan Hacker has produced a CD, Common Grasses of Moreton and Wide Bays, a fairly simple-to-use key to the identification of 100 species. It does not distinguish between native and exotic species. It is available from him. I suggest that you learn to recognize a few common ones, thereafter adding others as you feel comfortable with the characteristics of grasses. Ask someone who knows them to show you some

Graeme Wilson

Weed Spraying - Take Care

From Federal Government down to our Bushcare Groups, numbers of trees planted is proudly announced. We never hear of casualties or of selfsown plants destroyed in the course of revegetation activities. And yet, the main way ahead in the restoration of vegetation is natural regeneration. There are two related problems in achieving that. One is exotic weeds, which are overrunning our forests. The other is direct destruction of natives in the course of attempting to destroy those weeds, and in that, the careless use of herbicides is a major contributor.

The herbicides we use are usually of the broad spectrum kind. They kill or at least damage all species, weeds and natives, they contact. The spray is most likely to have a wider angle coverage than the operator realizes, and that increases with the pressure. Of particular concern is finer (smaller) droplets, not often visible and readily moved by wind. If there are no natives among the weeds, the foregoing is irrelevant. The problem is to know that there are no natives there. Self-sown plants are extremely valuable. They have done what you otherwise have to do in planting and long term maintenance. Most native plants are not easy to recognize. The problem here is that if plants are to be saved, much extra work is required, and there is a point at which there are so few that it is better to sacrifice them and use the saved time to replant.

The next decision, if there are plants to be saved, is how to proceed. Hand-weeding around them before or after spraying will be necessary. Then you have to identify them as you go along which is not easy. I find that in spite of long experience and a better eye for species than most, I see some too late. Therefore I do a preliminary job of marking the plants with pieces of coloured tape or pots put on the ground. That operation usually takes longer than the spraying, although the time "lost" is substantially made up by the much faster spraying. And I don't lose plants, my main concern.

Graeme Wilson

Hot Snakes

The appearance of a beautifully marked carpet python coiled up in a milk crate at the MCCG Nursery this spring generated some interest (See photo on p.1). This interest was racked up a couple of notches very soon; when she came out in the mornings to bask in the sun, a neat pile of eggs was revealed! She was a brooding, mother python. As a zoologist living nearby, I was asked what would be best to do about her and, in consultation with staff from Brisbane Forest Park (shei's their snake, after all!), we agreed that she could stay where she was. A sign was erected, volunteers at the nursery took an interest, and she was left to continue her snakey mothering business.

But there's something very special about this habit carpet snakes have of coiling themselves tightly around their eggs; they shiver as well, producing heat, and warm their body and, thus, the eggs. This makes the eggs develop faster. It also enables carpet snakes and their cousins the diamond pythons in NSW to live and breed further south than they otherwise could.

So what's unusual about shivering to stay warm? Well, it wouldn't be unusual for mammals like you and me, or for marsupials, monotremes like platypus and echidnas, or birds. We all shiver whenever we get cold, and the heat produced by the muscle contractions warms us up. But carpet pythons and some of the other pythons are the

ONLY reptiles which are known to do this and, whatis more, ONLY females do it and ONLY when they are brooding a clutch of eggs. For the rest of the year they are like all other reptiles, with a low metabolism and regulating body temperature only by basking in the sun when they want to be warm. Mostly they hunt at night, so their body temperature is often similar to the environment. Warming up by basking in the sun, of course, helps them digest last nightis meal more quickly.

My first brush with a brooding, shivering python came in 1983 when I was working at the University of Sydney. My good friend and colleague Peter Harlow, who is now the Curator of Reptiles at Taronga Zoo, had a large diamond python as a pet. He bred her to another of his pythons and in due course she laid eggs and coiled around them in a very beautiful and tidy way (see photo). It was not particularly easy to watch her shivering because she was very sensitive to our presence and would stop if she heard

or saw us. But we learned to be quiet, got some nice cine film and, later on, moved her to the university where we could set up a more controlled habitat for her, and measure her shivering rates and oxygen consumption at different times of the day. We found that she seemed happy to be cool in the mornings but would start shivering as the day warmed up and then maintain the warmth by shivering more vigorously as the ambient temperature fell towards the afternoon and evening. She would keep herself warm, 32-34oC, until midnight or a bit later, then stop shivering and cool down during the early morning hours. Interestingly, if we allowed her to escape through a hole to get access to a heat lamp, she would leave the eggs and raise the body temperature each day by basking, then return warm to the eggs and keep the temperature up by shivering. So she was quite able to ëintegrateí two different ways to heat herself when she had them, always choosing the energetically cheaper way when she had a heat lamp available. Smart snake!

But is this than just a cute ecuriosity about a special group of snakes, or is there a bigger message? I think there might be. It is also a reminder that warm blooded mammals and birds, after all, evolved from reptiles, and it may provide some pointers about how this happened. Indeed the brooding female python shows striking similarities to our own warm bloodedness. The part of the snake's brain



which tells it to bask in the sun, or shiver more when temperature falls is the hypothalamus, just as our hypothalamus own manages the regulation of our own body temperature. And just as you and I increase our shivering and our metabolism when the temperature falls and if we donít have a jacket or a blanket, so does the snake. It is a reminder of how many common elements there are among creatures.

that we usually think of as being very different.

And what of the snake at our nursery? Sadly, the eggs have not yet hatched, and they should have by now. But she is still coiled around them looking hopeful. Maybe they werenit fertile. She is not a large snake, so maybe she is an inexperienced Mum. Maybe next year sheill have grown a bit, and will come back to our nursery again and lay a clutch which will be successful. Weill keep an eye out.

Gordon Grigg

Join us for a guided walk through

Smith's Rainforest Nature Refuge

Sunday 8 May 2005 11am - 3 pm

Bring your own lunch – BBQ facilities available. Come for the morning or afternoon or stay for the whole day!

Numbers limited: Please phone 3374 1468 if you would like to come Toilet facilities available Editor: Graeme Wilson, Ph 3374 1218 email: glwilson@uqconnect.net Formatting: Margaret Hastie Printing: John Gower

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