

MOGGILL CREEK CATCHMENT GROUP

www.moggillcreek.org.au



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NEWSLETTER

SPRING 2008



▲ Tallow wood (see article p.3)
Photo: Bryan Hacker



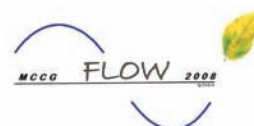
▲ Jacana (see article p.6)
Photo: Bob Inglis



▲ Orphaned possum (see Soft Release Sites, p.8)
Photo: Chris Hosking



Aseroe (see Editorial p.2) ►
Photo: Graeme Wilson



Editorial

We are always worried about the weather, and now, climate; and within that, rainfall in particular. After a series of depressingly dry years we recently approached 12 months of quite frequent rainfall events; admittedly nearly all small but sufficient to provide shallow soil moisture. The result has been exceptionally widespread flowering followed by seed production on a scale with which we are not familiar. Now, as we approach Spring, perennial plants, in at least drier situations, which have been near a standstill in vegetative growth have sprung in to action with spectacular new growth. And what a refreshing sight it is. I mention this as a reminder to those of us with an interest in Nature, and a message to those who have not developed one, how satisfying such an interest is. One is never bored. There is always something happening, often unexpectedly. I walked outside the other morning and there on the ground where it had not been the day before was the startling fruiting body of the fungus Asaroe (photo on p 1).

A couple of years ago in New Zealand I was talking with a person working in an intensive salmon producing enterprise. He was engaged in the back-breaking task of hoisting the large fish from one of the cages. He was about to go on holidays, so I asked "where" and "why"? To Alaska, to do some salmon fishing! We can match that. One of our members who probably does as much weed removal as anyone else has recently taken a holiday on Lord Howe Is. with the purpose of weed removal. Read about it on p7.

Attention is particularly drawn to the notice on p.4 of our Open Day.

Chairman's Report - August 2008

The Administration side of things now seems to be running well due to the fabulous efforts of Jenny Mulchrone, Dale Borgelt, Claire McRostie, Malcolm Frost and the rest of the Management Committee.

We are now in a position to again take on some funded projects. If you have any special projects which could be assisted by some funding then please contact our Catchment Co-Ordinator Jenny Mulchrone.

We still need more Volunteers to spread the load. If you can assist then please let us know. We will endeavour to work with you to make sure that you only take on a level of contribution which makes your role enjoyable and rewarding.

Richard Woodhead

Plant now

The main problem with planting is maintaining sufficient water supply until plants are established. We have had the best conditions for years through much of the year to date, with frequent rain. The odds are that we will soon experience high temperatures and drying winds. If you intend planting, do it as soon as possible. We have plenty of plants for you at the nursery.

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

Chairman: Richard Woodhead
Secretary: Gaynor Johnson

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Catchment Coordinator's Report

It has been a busy few months for the MCCG, with their involvement in several events, including stalls at the Brookfield Show and Opera at Brookfield, and National Tree Day planting events at Kenmore State School and Creekside Reserve at Kenmore Hills, which attracted 187 people who planted 1200 trees. The MCCG also hosted a thought provoking public talk by Hamish McGowan, Senior Lecturer in Climatology at the University of Queensland.

Now, we are busy arranging the detail for our Open Day (see notice in this issue), an event whose success is important for us.

I'm still trying to attend working bees of all the Bushcare Groups in the catchment to meet members and learn about your activities. If I haven't visited your Section or your Group yet please contact me and let me know on 3407 0052 or at Jenny.Mulchrone@brisbane.qld.gov.au when you are meeting next so that I can come along..

Jenny Mulchrone

The tallowwood, *Eucalyptus microcorys*

Much of the Moggill Creek catchment was – and continues to be – dominated by eucalypts. Excluding the North Queensland Cadaghi, *Corymbia torrelliana*, nineteen species of eucalypt are known to occur in our catchment. Four of these are now included in the genus *Corymbia*, the other nineteen remaining in the genus *Eucalyptus*.

Perhaps the most spectacular of our eucalypts is the tallowwood, *E. microcorys* (see photo of a tree near Upper Brookfield village on p. 1). This majestic species is common in wet sclerophyll woodland, where it can grow to a height of 40 m, but it also extends onto dryer ridges. It can readily be recognised by its red-brown stringy bark, its dense canopy and, in a well developed tree, its major branches at about right angles to the trunk. Flowers are white to cream, appearing from winter to early summer, and are a source of nectar for honey bees. The gum nuts are small, tapered to the base. The timber is oily – hence the tree's common name - and is yellow-brown in colour. It is used for decking and garden furniture.

Tallowwood is one of the koala trees, so for this and other good reasons, our members on acreage properties are encouraged to grow it. However, like many eucalypts, tallowwood tends to drop branches, so should not be grown too close to a house.

Bryan Hacker

Giant rat's tail – one of the WORST grassy weeds

Giant rat's tail, *Sporobolus pyramidalis*, (together with another rat's tail species) is listed No 24 on the top 200 list of invasive weeds in Queensland on the EPA listing, and, amongst the grasses, is second only to *Panicum maximum*. It is also an extremely important weed of pastures; it can reduce pasture productivity by as much as 80% and its tough leaves can even loosen the teeth of grazing cattle and horses. It is listed by the State as a Class 2 Weed, because of its serious effect on pastures, and landowners are "responsible for ... keeping these weeds under control and working towards getting rid of them completely."¹

Sadly, giant rat's tail is abundant in some pasture areas in our Catchment (see photos of an inflorescence, and a pasture in winter in our Catchment, on page 5). There are several rat's tail species, most are exotic, and they are not easy to distinguish. The giant rat's tail forms strong and dense tussocks, grows to a height of 1.7 m and has long and narrow flower heads that become pyramidal with maturity. It is not easy to control, especially as a stand can produce up to 85,000 seeds per m². Recommended control measures are to spot-spray with glyphosate (Roundup), or to treat with glyphosate using a pressurised wick wiper. Several treatments are necessary over an 18-24 month period. It is critically important (as with most weeds) that the plants not be allowed to seed. In our area, more palatable grasses, such as blue couch, also occur in the pasture, and it is desirable not to damage them too much. As these are lower growing, the wick wiper treatment can be effective. There is also some experimental evidence of an effective selective herbicide – for further information, please feel free to phone me on 3374 1468. As a general rule, herbicides are most effective when the target plants are actively growing.

Bryan Hacker

¹ Brisbane Local Government Area Pest Management Plan July 2005-June 2009, p. 80

Climate Change in southeast Queensland: Lessons from the past with a view to the future

Hamish McGowan is a Senior Lecturer in Climatology at the University of Queensland and at our mid-year Public meeting at the Brookfield Hall on 12th June he spoke to a fascinated audience of more than 40 people. He and his students have been re-constructing southeast Queensland's (SEQ) past climates, for example by examining 42,000 year old sediment cores taken from organic peat in the now dry Native Companion Lagoon on North Stradbroke Island.

Their findings have been significant, for example 20,000 years ago SEQ was in its coldest, driest period and 5,000 years ago conditions were similar to that last glacial maximum with a prolonged drought of 2.5 thousand years. Most major climatic events over the past 40,000 years have typically resulted in a drier climate in SEQ, with drought periods the norm.

Some key take-home messages from Hamish's talk:

Land clearing has enhanced the likely impacts of global warming by causing:

- A warming and drying trend in SEQ with;
- A marked increase in wind speed,
- Lowered soil moisture,
- Reduced evapotranspiration.

Predictions for Brisbane by 2070:

- Temperature increase of up to 4.5o
- Evaporation increase by 16%
- Wind increase by 20%

The already gloomy predictions of the IPCC (Intergovernmental Panel on Climate Change) have been overtaken by events and now appear rather conservative. Changing sea temperatures can affect large scale ocean circulation, which in turn has major effects on climate. Evidence from the North Stradbroke Island study shows that when this has occurred in the past, SEQ has experienced severe climate change particularly drought. In the last 50 years the temperature has warmed by 0.4o to 0.5o and sea levels are now rising by >3mm per year.

What can we do? Reduce pressure on natural environmental systems and invest in returning resilience to our natural systems. Much more political will is urgently needed.

Chris Hosking

Open Day at The Cottage

Many of our members (and indeed the public) know little of our objectives and our activities in seeking to attain them. This event is an opportunity to learn about them at our base, where things happen.

Sunday 2 November

- | | |
|------------|--|
| 8:30 am | Meet at The Cottage at the end of Gold Creek Rd. Join a Working Bee to remove weeds in the close vicinity of the Cottage & replace with some natives, in the course of that learning something of weed control and planting methods. |
| 10:30 am | Morning tea |
| 11:00 am | Meet the MCCG's committee, other volunteers and staff and learn what we do. |
| 11:15 am | Discover, on a guided walking tour, the nature & history of the Gold Creek Dam area & The Cottage. |
| 11:45 am | Visit the Nursery where we produce plants native to the catchment, and given to members for use in their vegetation restoration work. |
| 12:00 noon | Finish the day with a free BBQ lunch. |

All Welcome

RSVP by 27 October to: Jenny on 3407 0052 or jenny.mulchrone@brisbane.qld.gov.au



▲ Giant Rat's Tail grass - Brookfield pasture (see Giant Rat's Tail p. 3)

Photos: Bryan Hacker



▲ Giant Rat's Tail grass - Inflorescence (see Giant Rat's Tail p. 3)



◀ Cut Stump preparation (see Cut Stump article p. 8)

Photo: Graeme Wilson



▲ Mt Gower

Lord Howe Island (see article p.7)



▲ Working party

Photos: Bryan Hacker

Comb-crested Jacana (*Irediparra gallinacea*)

An interesting bird found in Moggill Creek Catchment is the Comb-crested Jacana. Of the seven or eight species of Jacana that are found throughout wetlands of the world's tropical regions, this is the only one resident in Australia. It occurs coastally from the Kimberley (WA) to Hunter R (NSW) and sometimes quite far inland in suitable habitats e.g. Mt Isa, on freshwater lakes, dams and swamps that have abundant floating vegetation.

It is a very distinctive wading bird with long legs and extraordinarily long thin toes, enabling it to walk on lily pads and other floating plants. This habit has given it several alternative names such as Lotusbird, Lilytrotter and Jesus Bird. The sexes are similar with the female usually larger. The length from tip of the bill to end of tail is 20-26cm. Apart from the distinctive feet, the most striking feature is the bright red, chicken-like comb. The top of the head, nape and hindneck are black; face and foreneck are white bordered yellow-buff; there is a broad black band on the breast and the rest of the underparts are white. Back, wings and tail are brown.

Food consists of seeds, water plants and aquatic insects that they glean from the surface of the water and among vegetation, floating or growing at the waters edge.

The family life of Jacanas is rare among birds; they are polyandrous. One female has between one and four mates. Polyandry probably evolved to compensate for the high rate of clutch loss due to predation and flooding. After laying a clutch, usually four eggs, the female leaves the incubation and the rearing of the chicks to the male. After seven days, she can lay a replacement clutch if the first one is lost or lay one for another mate; she can do this for up to four males. The breeding season is variable but mainly from September to March.

The nest is a floating structure of plant material, placed between or on floating vegetation and is built by the male alone, by tossing the material backwards onto or near the site and trampling it, often as part of courtship behaviour. The eggs are highly polished, yellow to reddish brown with a tangled maze of black lines. At first the eggs can sink but as incubation proceeds they become lighter and buoyant allowing them to be floated to a new site if the nest is damaged or flooded. They can also be carried under the wings to a new location. The male is a very devoted parent. After three to four weeks of incubation, he supervises the resulting young as they run over the foliage foraging, and whenever he senses danger calls them together and scoops them up under his wings. It is a comical sight to see a Jacana standing there with the chicks' long toes poking out like bundles of twigs. He keeps them hidden until the danger is gone and then drops them and they resume foraging. The chicks can also submerge with just the tip of their beaks poking above the water surface or hide under vegetation until the danger has passed. They depend on the male for three to four months.

In spite of polyandry, ability to move the eggs and chicks being carried under the wings; breeding success is not high. On 13 November 2006, at Gold Creek Reservoir, I found a Jacana sitting on a clutch of four eggs, these hatched sometime between 25th and 27th. I had great enjoyment observing the parent and chicks for two weeks, then suddenly, the chicks were gone. Within a week, the male built another nest and I counted at least three eggs. These did not survive. There was a third attempt at nesting, but failure again. I do not know what happened to the chicks and the eggs, but I did see a large Lace Monitor swimming near the nesting area.

Dawn Beck

Plant Families 16-Rosaceae

We have had this topic 15 times, always about a family of some interest in our catchment. It is time to point out that there are families with large numbers of species or of considerable interest for some reason or other, but of negligible consequence here. The Rosaceae is one such. It takes its name from the genus *Rosa*, the roses, but its importance goes far beyond those flowers. Its distribution is worldwide, with some 100 genera and 2000 species.

The roses must be almost the leaders in popular appreciation of flowers. There are a number of species involved, with much hybridization. And there are many other genera in the family appreciated as ornamentals. It is however the vast array of fruits which establishes the importance of the family. Strangely, at least to those of us with botanical interests, the fruits comprise a number with differing anatomical features rather than being variations on a theme.

First, there are apples, pears, quinces and a few others less well known. Their flesh is formed by the proliferation of a basal part of the flowers. Then there are the stone fruits; peaches, apricots, plums, cherries and so on. Their fruits are of a common botanical kind with a single seed, surrounded by the carpel, the middle layer of which becomes fleshy. (The inner one becomes the stone which is not part of the seed while the outer is the skin.)

Next there are the raspberries, blackberries etc. In these, there is not the single carpel but multiple carpels borne on a central stalk, becoming individual fruitlets, each with a single seed. And finally, the strawberries, something like the raspberries in structure, but it is the central stalk which proliferates, while the fruitlets remain dry, becoming the "seeds" on the surface.

So what have we got here to match that wonderful lot? Not much; just three species of raspberries (*Rubus*). The fruits of two go nowhere near being useful as food for us, while the third (*R. rosifolius*) is not too bad if borne on plants growing well, but far short of the commercial species. Still, it is our business here to appreciate all native plant species for their contribution to biodiversity, irrespective of how they look to us or taste.

Graeme Wilson

Weeding Lord Howe Island – A holiday with a difference

Lord Howe Island is perhaps one of Australia's best-kept secrets. We had been there before, many years ago, and had always intended to return some time. Seeing an article by Ian Hutton in *Australian Plant Conservation*, promoting the concept of a seven day "holiday" with three hours each morning weeding, followed by guided walks and evening talks, we soon sent off our deposit.

Lord Howe Island is spectacular, and well deserves its World Heritage listing. Just 11 km long, it rises to an altitude of 942m. Only the middle section is populated (sparsely), the northern and southern end vegetated with heavy forest, comprising many endemic species. Feral pigs and goats have been eliminated and the keeping of domestic cats banned, in the interest of conserving the numerous nesting sea and land birds, including the Providence Petrel, and the Lord Howe Woodhen. This latter bird was brought back from near-extinction in the 1980s and is now frequently to be seen around the settled area. Amongst the invertebrates, there are about 130 species of snail, although – surprisingly – just 12 butterfly species. Several endemic bird species became extinct following the accidental introduction of rats when the ship SS *Makambo* ran aground in 1918, and for some years there has been an active program to eliminate rats from the Island.

Weeds have become a major problem on the Island, although "The Board", thanks to the island's World Heritage status, is working to address the problem. Ian Hutton's band of volunteers is making a real contribution, currently working on Transit Hill, close to the Pine Trees guest house. Visits are over the winter-early spring period, and we had 28 enthusiastic weeders in our group. For many, it was their third or fourth weeding visit, and one weeder was given an award for his tenth week of weeding. The main weed we were working on was *Asparagus plumosus* (similar to our *Asparagus africanus*, but with black fruit), with less frequent *A. aethiopicus*.

Weeding was painstaking, but not arduous (see photograph on page 5). Rampant vines were cut back, cut to near ground level and stems poisoned with a drop of glyphosate. Smaller plants were dug out and tiny seedlings too. These were so numerous that it took about an hour, on average, to cover 2m²! The company was great, and we soon made new friends. There was no obligation to join the weeding group, and some people chose to do other things or to weed other areas, although most persisted with the main group – weeding can be quite addictive! We all stayed at the 100 year old "Pinetrees", a comfortable establishment (with excellent meals) managed by fifth generation islanders.

It was a great experience and we will probably return another time. Those interested in a "holiday with a difference" should contact Ian Hutton at ianhutton@clearmail.com.au.

Bryan Hacker

Learning from failures

In over 50 years of restoring vegetation on my property, I continue to learn things the hard way. I select three things which did not turn out the way I hoped. This is a reminder to those starting out that there are some disappointments; but we learn from them.

The first was a trap for beginners. Much of my land was old cultivation, covered only with grazed grass. I was not aiming at revegetation of the kind we pursue now, but was aware that the area would have once been forest and should have trees again. I sought advice from a forester, who recommended planting spotted gums, that being what was then *Eucalyptus maculata* (now *Corymbia citriodora*), which I did. Few remain. Much later, having become involved in replacement of what might have been original species, I looked at remnant vegetation, to find that *C. citriodora* is not normally here but *C. henryi* is. The moral of that is: Take your advice from someone familiar with local vegetation.

Fast forward 20 years. Natural regeneration led to an area with a good closed canopy dominated by red kamalas and foam barks. There was no understory, that, I supposed to be the result of no seed of appropriate species having come in. I set out to put that right by doing a substantial interplanting, which involved much carrying of water over a long distance, for months. Again, there is nothing much now to show for it. The tree stand was in equilibrium with the particular environment and there was little to spare for the newcomers. Also, I failed to select species adapted to shade. (That did not prevent the eventual arrival of ochra and climbing asparagus which have the capacity of many exotic weeds to contest space with our natives.) The lesson here is to select species appropriate to the situation and to try something first on a small scale.

The third is from recent months. I am an enthusiast for natural regeneration, and the way that frequent rain was occurring at the start of Summer suggested that this was a good opportunity. First, the herbaceous weeds (abundant, exploiting the good growing conditions) had to be removed and kept out. I went through a large area, painstakingly marking the numerous natives which had appeared, followed by spraying of weeds. By the end of February, intermittent light rain had kept my natives going, but there had been no rain heavy enough to give soil moisture at depth. They were surviving on surface moisture. Then there was a two-week dry period and practically all died. The only message from that is that significant natural regeneration depends on the rather rare occurrence of sustained surface moisture for a long period together with occasional rainfalls adequate to wet the soil to depth. We can do little but wait for that. But we can offset to some extent the situation I encountered by management practice. Do not remove fallen plant material, and place larger pieces across the slope, this holding water which may have run off, so resulting in penetration. A rough surface, with depressions does the same thing. Thus there will be some spots which provide a better opportunity for seed which falls there.

Graeme Wilson

Soft Release Sites for Native Wildlife

Wildlife carers are continually faced with the challenging problem of where to release their native animal once it has been either hand-raised or rehabilitated. The caring is the easy part; much more difficult is ensuring the animal's successful release back into the wild.

This is where land holders play a part and I am delighted to be able to report that numerous MCCG members are now assisting wildlife carers by volunteering their property as 'soft release' sites. This is an enjoyable and rewarding experience. It involves 'support feeding' the animal for usually a short time in an aviary or enclosure and helping it to gradually become free again.

Soft-release is essential. It allows the animal to become familiar with its new surrounds including the local food sources (a variety of native foliage picked fresh and kindly provided by the landholder). Finally, the aviary is left open and the animal comes and goes as it pleases until it is fully independent. Ideally a nest box for the animal is placed in a suitable nearby tree to serve as a 'staging post'.

Is this technique successful? I can only report on my own experiences:

- Some animals disappear on the first night that the door is opened, never to be seen again. I know that some have been taken by foxes.
- Some use the 'staging posts' for sometimes up to a year and one female possum I released went on to use the box with her young (she took a fancy to a young male I had released who was occupying my shed).
- I have now lost track of who is who and whose offspring belongs to whom, but 80% of the dozen nest boxes that I have erected around my property show evidence of use or have been observed with possums in them.
- At least one possum has successfully dispersed into adjoining forest. I know this because he was returned to me months later, strong and healthy (except for his horrendous injuries) after being attacked by an off-leash dog.
- A female red-necked wallaby I hand-raised was soft- released on the property where she was originally rescued in Upper Brookfield. She now returns to visit the landholder with her offspring.

Conclusions

Soft release is often successful if done correctly.

Nest boxes do get used by possums. Boxes not only provide habitat for a variety of wildlife, but are a very useful solution for people who do not wish to have possums occupying their roofs.

- Further enquires, contact Chris on 3374 3453 or if you think you can help local carer Irene with caring or soft release, call 3202 6883.
- Various nest boxes are available for purchase at Brookfield Produce, or
- Build your own simple nest box (Google for instructions), erect as high as possible, tilt forward slightly for rain run-off, out of direct sun.

Chris Hosking

Cut-stump herbicide application

We have found that herbicide application to clean-cut stumps is not reliably effective, particularly with some species. Failure can lead to multiple-shoot regrowth at ground level, which is much worse than where we started. We suspect that the problem is insufficient area of application, combined with runoff.

We have been far more successful by doing this: Cut the stem only sufficiently to allow its being bent over to cause as much splitting as possible below (see photo p 5) followed by herbicide application to damaged surfaces. This process is effective with not only small plants but also larger trees which have to be sawn.

And another thing when using such point-application of herbicide: Avoid excess (and wasteful) usage by adding Spray Marker Dye to show when sufficient has been applied.

Graeme Wilson