

# MOGGILL CREEK CATCHMENT GROUP

www.moggillcreek.org.au



Print Post Approved PP 424022/2141

## NEWSLETTER

## AUTUMN 2012



◀ Photo: M. C. Sands Fiery Jewel (Where have the insects gone, see p. 6)



At The Cottage (see p. 8)

Photo: Dale Borgelt



◀ Memorial Fig ( see p. 2)

Photo: Dale Borgelt



▲ Photo: Dale Borgelt Prickly Pine Flowers (see p. 7)

# Editorial

*Everyone seems to be living in troubling times. We, with our environmental interests, have two particular concerns. One of these is that both main political parties do not include, in all their words, something meaningful and optimistic about the natural environment. Well, we don't have coal under us here!*

*The other is the weather, or is it climate change? Our grandchildren may find out. The weather has been unusual, more or less worldwide, for a couple of years. One interesting result here has been that rainfall patterns have spared us the longish dry periods leading to our forests looking a little the worse for wear. I wonder if we have ever seen them looking so lush. Go out to our Cottage and look back in to the hills. This is vegetative prosperity, but on the down side, reproductive activity has been disturbed. The widespread failure of flowering and seed production, its enhancement in a few species, and displacement in time, all this in both natives and exotics and noted in our previous issue continues, and it has to be causally associated with weather. If this goes on it will surely have consequences for us.*

*Particular attention is drawn to two articles in this issue. That on the disappearance of insects should be read in the realization that the same sort of thing could be written about any lifeforms. And it is a reminder that ecosystems are a delicate balance of so many components. Create a gap anywhere and destructive ripples spread out. We are trying to close gaps. Unfortunately, many landholders are creating new ones. The other, and more cheerful reading, is the material from our PR Officer. Read carefully through it. There may be something there more interesting for you than looking at TV.*

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.

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## FIG PLANTING CEREMONY

Late Saturday afternoon 25 February the heavy rain hesitated and in a simple ceremony a fig tree was planted near the Cottage in honour of Alan Alexander (1935-2011) in recognition of his many years of generous support of local community groups, for example serving as Honorary Auditor for MCCG and Brookfield NHW.

All 30 people there, including Elwyn Alexander, family and friends, standing on the rain-soaked hillside surrounded by bush considered it was a very suitable setting for a tribute to a man who loved hiking and nature's beauty. Elwyn thanked MCCG for their thoughtfulness.

The photo on p 1 shows some of the family watching MCCG's experts carrying out the planting.

*Dale Borgelt*

# Chairman's Report - 2011

Although our catchment has experienced above average rainfall in January (~300mm), so far this part of the Brisbane catchment has not experienced the excessively heavy rain that fell both to the north and south of us. Nor has the Brisbane River flooded, much to the relief of residents around Kilkivan Street and the nurseries along Moggill Road. January's minor flooding upset travel along Rafting Ground Road and Boscombe Road's closure caused inconvenience to school children and their parents. If the remaining months of our wet season give nothing worse, most of us will be well satisfied.

Recently I attended a SEQ Catchments Members Association (SEQCMA) Board meeting. SEQ Catchments is a community-based, not-for-profit organisation helping to build a sustainable community that cares for and values the natural resources and biodiversity of South East Queensland. SEQCMA is an advisory Board made up of members elected from different sectors of the community. Each of the members has an active interest in the environment and the Natural Resource Management Plan of South East Queensland (see [www.seqcatchments.com.au](http://www.seqcatchments.com.au) for more details). SEQC has a budget of about \$16m derived mainly from Federal and State government grants. Specifically, it provides advice and sometimes funding to MCCG. For MCCG these meetings provide an opportunity to inform SEQC of our concerns and for us to understand the wide range of environmental challenges that occur throughout this region (e.g. Did you know that Broad Leaved Privet (*Ligustrum lucidum*) is out of control in regions about Toowoomba?)

An exciting development for bird lovers is emerging. MCCG has begun discussions with QUT and the University of Queensland with a view to use their acoustic sensors which will be distributed in different habitats throughout the catchment. These sensors allow bird and frog calls to be recorded night and day. We will soon be inviting members to volunteer to help in these studies.

MCCG and our Creek Rangers (presently we have two - Anna Greig and Stacey Hodge), have been active in preparing proposals for funding from the Federal Government. If successful, these grants would assist community private landowners' groups and help us to curtail the fast growing menace of the Cats Claw Vine. The competition for these grants is intense but sometimes we have been successful in the past.

Edith and John Smith of Upper Brookfield have taken another important step in adding to conservation of our natural ecosystems. Previously, 7.5 hectares of their land (the well known Smith's Scrub) was declared a Wildlife Refuge, managed under a Covenant with the Queensland Government. They have now joined Brisbane City Council in its 2 Million Trees and Wildlife Conservation Partnership Programs by making available approximately 4 hectares of old farming land which has now been planted with native species. This will be protected under a Voluntary Conservation Agreement.

*Malcolm Frost*

## Forest Floor

Here and there we see forest on which vegetational work has been (or is being) done, and which no doubt looks pleasant to some but not to us. It is where the surface under trees and perhaps taller shrubs is regularly mowed, grazed, sprayed with herbicide or mulched. There are shortcomings of several kinds.

We get about one metre of rain annually. Potential annual evaporation (surface evaporation plus loss via leaves- i.e. transpiration- of water taken up by roots from the soil) is perhaps about 1.5m. Transpirational loss is reduced under water shortage but at the expense of plant growth. But much of the 1m which fell is not even there to be lost that way; it goes to the creeks by runoff (hence creek flow, rising at times to floods). Those of us, and it is most, occupy sloping ground whence runoff occurs. We must do what we can to reduce it. Low-growing vegetation, mainly of an herbaceous kind, is very effective. All dead plant material, logs, branches, leaf litter and weeds which have been destroyed (except for seeds and vegetative parts of weeds which can grow) must not be removed, including by burning. Uneven soil surface holds pools of water which can slowly penetrate. Deliberate roughing and introduction of garden waste (if not carrying weeds) can be done. Photos on p. 1 show contrasting situations. In No, there is little beyond leaf litter which will be carried of by the next heavy rain, with little water penetration. In Yes, there is a good cover of *Ottochloa*, *Commelina* and *Dianella*, together with other odds and ends of species, fallen sticks etc.

Runoff carries soil and leaf litter whose decomposition is important for soil fertility. Small pockets of litter with underlying depth of soil water provide opportunities for successful natural regeneration. (A high proportion of seeds which germinate after rain fail to establish through lack of that.)

So much for plants, but there is much more to the biodiversity we pursue. Bacteria and fungi have an essential role in decomposition of dead material, and their activity is strongly dependent on moisture and amounts organic material. In addition, both groups of organisms have important roles in soil fertility. And then there are the animals, enormous numbers of species from small invertebrates which we rarely see, up through the insects, reptiles birds etc to the mammals. These have habitat requirements which overall, are rarely met in the bare surfaces where we started. Remember that these animals, in addition to needing appropriate food, shelter and breeding opportunities are to a large extent, indispensable in food chains. For example, do you realize that birds, while still in the nest, irrespective of their food as adults, have to be brought high protein diets?

How does your forest floor measure up?

*Graeme Wilson*

## Bird Species along Moggill Creek at Kenmore State High School

Moggill Creek runs along one side of the playing fields of Kenmore State High School. The area has been inundated by flood twice in the last three years.

In the early 1990s some teachers and students, who wanted to improve the natural environment of the school, started planting trees along the bank of the creek downstream from McKay Brook. A few years later, this work was expanded by a group of interested parents, teachers and residents with further plantings from Branton Street to the corner of the oval. The stretch from Branton St to McKay Brook inlet has been well vegetated and restored with native plants forming a dense ground cover under close plantings of shrubs and trees including eucalypts favoured by Koalas. For the last three years, Damien Egan, Mike Walker and Year 9 Health and Physical Education students have been responsible for this work. From McKay Brook to the corner of the oval, many trees are now established, with lomandras and rushes added to help stabilize the banks. Further downstream there has been no planting.

The group which started the project was interested to know if the work had been beneficial to the fauna of the area and asked Birds Queensland to do some bird walks to monitor any changes in the bird population. In 2004, four surveys were conducted at three monthly intervals. On 27.11.2011, seven years to the day, a bird walk, replicating the time and route of the November 2004 survey was done.

There was a small increase in the number of species recorded. In 2004, 29 species were seen and 5 heard; whilst in 2011, 34 were seen and 7 heard. Birds that were recorded in 2011 but not in 2004, were Pacific Black Duck, Spotted Turtle Dove, Bar-shouldered Dove, Little Pied Cormorant, Pale-vented Bush-hen, Pheasant Coucal, Azure Kingfisher, Black-faced Cuckoo-shrike, Cicadabird, Grey Shrike-thrush, Pied Currawong and Spangled Drongo. Conversely birds recorded in 2004 but not in 2011 were, Dusky Moorhen, Long-billed Corella, White-browed Scrubwren, Striated Pardalote, Brown Honeyeater, Noisy Friarbird and Mistletoebird.

The small 2011 increase in number indicates that there was little effect on the bird fauna; however the increase in water species, duck, cormorant, bush-hen and kingfisher, points to a healthy creek. In addition, this stretch of creek is home to platypus, turtles, water dragons and many species of fish.

The continuing project has been constructive in providing habitat for wildlife, helping to combat erosion and maintaining the health of the creek.

Thanks to Damien Egan and Bruce Dymock for information on the project and to Paul and Vicki for helping with the bird walk.

*Dawn Beck*

## Pacey Road on a Roll

I am pleased to report that the Pacey Road Conservation Project is steaming ahead. With a strong nucleus of committed property owners it is steadily growing and metamorphosing into a wonderful model for land-holder engagement.

The Project commenced in mid 2011 as a result of interest from local property environmental weeds. Through a community workshop with local residents facilitated by the former Moggill Creek Ranger, Emma Maltby, a vision was born for residents and MCCG to come together and participate in the restoration of the entire un-named creek that runs adjacent to Pacey Rd into Moggill creek near Upper Brookfield State School.

Currently, residents from 14 properties get together once a month to participate in a 'roving' working bee that visits properties of participants to help restore bushland (with a tasty BBQ afterwards!). Also taking part are members from MCCG and the Creek Ranger. The work completed during the working bees is generally that advised following assessments by the Land for Wildlife Officer and an MCCG member. Funds from South East Queensland Catchments (SEQC) successfully acquired through a recent round of their small grants program will be used to purchase a 'working bee kit' of hand tools and a first aid kit.

Aside from the working bees, funding is being sought to help financially assist the efforts of property owners through bush regeneration contractor support and for materials and equipment. A grant application to the federal government Biodiversity Fund was made in January, which, if successful, will fund a part-time project offer to work with residents from Pacey Rd and two other priority areas in Upper Moggill Catchment and provide on-ground support.

In addition, SEQC have agreed to fund a series of workshops during 2012 aiming to equip private land-holders with knowledge and skills pertaining to management of bushland on their properties, and bush regeneration principles. These workshops are a joint initiative of MCCG and the Pullen Pullen Catchment Group and will be open to anyone with an interest in making their home a habitat!

With approximately 50% of Moggill Catchment privately owned and with high environmental values, this project is an important step forward in addressing corridor connectivity (the functional aspect of species being able to move through the landscape) and weed and waterway management.

If you are interested in finding out more about this project, contact Moggill Creek Ranger, Anna Greig, by email [anna.greig@brisbane.qld.gov.au](mailto:anna.greig@brisbane.qld.gov.au) or 3407 0052.

*Anna Greig*



◀ Yes + No (see Forest floor, p. 3)  
▼ Photos: Graeme Wilson



◀ Purple succulent  
(See Two Naughty Sisters, p. 7)  
Photo: Bryan Hacker



◀ Creeping inchplant vegetative + flowering stalk  
(see Two Naughty Sisters, p. 7)  
▼ Photos: Bryan Hacker



## Where Have all the Insects Gone?

People living in Brisbane's Western Suburbs have memories of hoards of moths that once came in to lights, screen doors and windows, and the tiny smelling bugs that crawled in their hair! These and most insects have gone (species + numbers) from urban, farming and disturbed bushlands, along with other native animals. With their dependence on temperature regimes and certain plant communities, changes have exceeded the environmental adaptability of most insects that has taken millions of years to evolve. Exceptions might include increases in biting midges and mosquitoes, and some of the diseases they carry, most well adapted to people and tropical climates. The common insects, including the butterflies most easily seen, have been declining and many rarer species have disappeared altogether.

Humans are the main cause of declines in Australian insects. Many indigenous species are primitive with an inability to adapt to new habitats or feed on the introduced plants in our gardens. Most have trouble moving through settled areas from one habitat to another but there are exceptions, such as the Orchard Swallowtail which has adapted to feeding on cultivated Citrus. Many of the common natives grown in Queensland gardens, often cultivars, or from other States, cannot be used by the immature stages of many local insects. Habitats and food requirements are often "specific" for an insect, including important "beneficials" living in gardens and on farmlands. Those predators and parasites need native insects to keep them going, and undisturbed refuges, where they are "ready and waiting" to feed on intrusive pests. Even the correct food plants grown in gardens may not stop the declines as the numbers of food plants and surrounding vegetation may be totally unsuitable for rehabilitating a species in suburbia.

Detrimental impacts on Australian insects have resulted from: (i) *loss* of habitats and from clearing bushland, (ii) *displacement* of shrub and ground-layer native plants, by invasive weeds, particularly grasses, (iii) *loss of natural diversity* following declines in densities of plants and animals, (iv) *population isolation* and loss of natural refuges and corridors, and (v) *inappropriate fire regimes*. In our region's "protected" areas, fires have changed the natural landscapes dramatically, occurring too frequently over a wide scale, and occurring during un-natural burning seasons. The photo on p. 1 is of the Fiery Jewel butterfly, once common but now rare in the western suburbs, a victim of such fires. The fires always reduce pollinator activity and seed set, often change plant architecture, prevent natural senescence and destroy leaf litter habitats and logs. Insects need all these to maintain their biodiversity and unfortunately, most species of insects live in the shrub layers, leaf litter or fallen timber – all targeted for destruction by "fuel reduction" burning programmes. Very few species of insects (e.g. some ants) can hide underground, or escape from fires by crawling or flight. Some are able to re-colonise afterwards from unburnt refuges but only if there is sufficient food remaining or regenerating in burnt areas.

For those interested in growing sedges and lomadras as examples, who is interested in growing rare sedges and sword grasses for the range of „skipper“ butterflies? Who is willing to keep leaf litter under their gum trees for larvae of the oecophorid decomposer moth whose larvae are the most important local food for some of our rare and a wide range of insectivorous birds and small animals that feed on the ground? Senescing trees (especially wattles) are important for a wide range of insects including the beetle and moth borers (food for black cockatoos), and old wattles are habitats for larvae of the beautiful Moonlight Jewel butterfly. Lost to Western Suburbs has been the Regent Skipper that only feeds here on *Wilkiea macrophylla*, a very slow-growing shrub, once common (until 1980) in wet eucalypt forest and rainforests of the Western Suburbs.

Major recent and increasing detrimental effects on insects have arisen since the 1990's as prolonged drought and extensive flooding has increased in frequency, extent and persistence. Our subtropical insects have evolved (many 30 + million years ago and much longer than most vertebrate animals), alongside the plants and animals they depend on. Habitat and food plant dependence is a stress for certain insects but many of the food plants also have limited niches, adapted to specific soil types, temperatures, water, drainage, shading, fire adaptation and soil microbes. Take the group of plants, Boronias, with several species once common and limited in distribution to south-eastern Queensland. Now many have disappeared from vast areas, or declined to such an extent that a rare butterfly, the Satin Blue, with larvae that feed only on boronia flowers, has retreated to one or two reserves where the plants persist with little disturbance.

Weeds, especially introduced African grasses, are invading the bushlands, displacing the insects' food plants, or reducing their density so that there are no longer sufficient to support our native insects. The introduced cane toad must be targeted as one of the worst pests ever introduced into Australia. It is responsible for the loss of native small animals across tropical Australia, where the decline can be easily attributed to poisoning, but what about our other "small animals", the beetles, moths and butterfly larvae that have been in decline from this wretched introduction? All ground dwelling insects are suffering including most valued dung beetles!

Invertebrates are *the* foundation group of organisms without which the remainder of our indigenous biodiversity, plants and vertebrates, cannot survive or be sustained.

Don Sands

## Looked in the Cottage Garden Lately?

There is often something worth looking at in the Cottage Garden. At present the *Callicarpa pedunculata* bushes are coming in to an exceptionally heavy fruiting and should remain so for a good while (unless some hungry fruit eaters get to find out!). We will give them a pruning after they finish to keep them in manageable shape for garden use.

The name? Greek *callos*=beautiful, *carpa*=fruit. Very apt.

## Prickly Pine

*Bursaria spinosa* (prickly pine or blackthorn) is a small tree with an open habit, up to 5 m tall. Although prickly as a young plant, older plants are less spiny and upper branches may lack spines. It occurs naturally in our district in eucalypt woodlands and is recorded in coastal districts from North Queensland south to Victoria and Tasmania, also extending into South Australia.

Leaves are quite densely arranged along branches and are up to 45 mm long and 18 mm wide, variable in size and shape, more or less oblong to somewhat wedge-shaped, and may be hairless or hairy on the underside. The creamy-white flowers are born in quite dense terminal flower heads. They are sweetly scented, have 5 petals and are 6-10 mm in diameter. These are followed by purse-shaped fruit about 10 mm wide.

The flowers of prickly pine (photo p 1) are considered to be an important source of nectar for butterflies. The species is also considered to be useful as a refuge for small birds escaping from predators because of its „dense prickly branches“ although my plants, growing in some shade, are anything but dense.

I have found prickly pine to be remarkably tough and it has survived, albeit growing only slowly, on my infertile soils on a west-facing slope with little attention. It is a useful local species to include when working towards re-creating an understorey in eucalypt woodland.

Bryan Hacker

## Two Naughty Sisters

Their generic name is *Callisia*, which (according to Wikipedia) is derived from the Greek word κάλλιον (kallos), meaning "beauty." One of the sisters is quite grown up – and wears scent – her name is *Callisia fragrans*. The other is much younger and still at the crawling stage – her name is *Callisia repens* (repens meaning creeping). Both are to be seen about town and not where they should be. The „grown up“ sister is well known and commonly seen along roadsides and steep banks. The „little sister“ is hardly to be noticed and in fact I was not aware of her until quite recently, but now I see her everywhere – sneaking through the grassy layer, invading bushcare sites and generally being an obnoxious – and uncontrollable - child.

Back to reality. Both species are extremely invasive and what may truly be called groundcover plants – they have the potential to cover the ground to the exclusion of everything else. The common name of the „big sister“ is purple succulent and of the „little sister“, creeping inchplant or sometimes baby“s tears ( photo p 5). They are in the same family as wandering Jew, Commelinaceae, a family well known for invasive species.

Purple succulent has fleshy stems and leaves, and spreads by runners which can be over 1m long. Leaves are crowded, somewhat similar to those of some bromeliads, and up to 25cm long; they may be purplish in colour when plants are stressed (photo p. 5). Flower heads are 80-100 cm long, bearing small, scented flowers. Small infestations are best controlled by hand (taking care to pick up stem bases), piled up and covered for a few weeks with black plastic.

Leaves and stems are much shorter in creeping inchplant and the flower heads just a few centimetres long. Leaves vary in shape, blunt and very crowded as in the photo on page 5 to somewhat pointed and 1-2 cm long.

Both species may be controlled using 3ml of Starane Advanced/ L water; this herbicide is not harmful to most grasses. However, creeping inchplant also spreads through seeding, so watch out for further infestations.

Bryan Hacker

## Weeds of Southern Queensland – 3rd Edition

This 65 page booklet has just been published by the Weed Society of Queensland Inc. It is attractively produced and is a „must have“ for those with acreage properties in our district.

132 weed species are illustrated with excellent colour photographs with adequate detail for confident identification. A useful list of approved control measures for each species is included. Although the book covers the whole of southern Queensland, a high proportion of the species are well known – too well known – in our district. A few native species are also included (such as *Pimelea* spp.) which would not be considered weedy in a revegetation context but could be in agricultural or grazing lands.

Species include State-declared Class 1, 2 and 3 pest plants as well as „Weeds of National Significance“. A total of 69 of the illustrated species are non-declared by the State but, where they occur in our district, should certainly be controlled (many of these will be listed by the Council). Readers should be aware, though, that Brisbane City Council has a further list, currently under revision, of species considered to be weeds locally and which landowners are encouraged to control.

Owners of Land for Wildlife properties will have received free copies of this booklet; copies may also be purchased from the Queensland Herbarium, Mt Coot-tha Botanic Gardens, Toowong, price \$3.

Bryan Hacker

## VISIT THE COTTAGE, OUR MCCG ENVIRONMENT CENTRE AT THE VERY END OF GOLD CREEK ROAD

The Cottage is open to visitors on Thursdays 10am - 1pm. Come and see us. We will be continuing our popular 3rd Thursday of the Month Cottage Talks.

### SPECIAL INVITATIONS TO NOTE ON YOUR CALENDAR

**MARCH 15 Thursday 10am TALK AT THE COTTAGE:** Steve Parish will give a presentation on **CREATING AND USING NATURE PHOTOGRAPHS**. Steve's talk will include points on capturing photos, processing on computer and using online, PLUS he invites you to bring your questions with you. How good is that?

Booking essential: Contact Dale 3374 1035 or daleborgelt@gmail.com

**MAY 27 Sunday 10am- 1pm : KIDS' DAY.** Once again we invite children (and their parents) to the Cottage at the very end of Gold Creek Road on the Gold Creek Dam reserve to enjoy the displays and participate in the activities. Have fun and find out more about your Catchment. It is free.

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### IN 2012 ALL MCCG PUBLIC MEETINGS AT BROOKFIELD HALL will be on a MONDAY night.

The first of these will be on Monday 26 MARCH at 7.30pm BROOKFIELD HALL: The guest speaker will be Dr Don Sands, Hon. Research Fellow, CSIRO Ecosystem Scientist.

Don's presentation will be **Insects that benefit animals: dung beetles take the cake.**

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### A MORNING WITH AUTHORS AND THEIR BOOKS

On Sunday 27th November last year we enjoyed having authors Glenn Leiper (*Mangroves to Mountains*), Roger Kitching (*Butterflies of Australia*) and Steve Parish (*50 Years of Photographing Australia*) at our Brunch and Books morning. Janet Hauser (*Fragments of Green*) and Jan Sked (*Growing Australian Plants in Subtropical Gardens*) were unable to come in person, but they too supplied their books at a very special price. The photo on p.1 shows Glenn addressing the visitors in our very pleasant outdoors "auditorium".

**Note to members:** Did you miss out on the wonderful Brunch and Books morning? We have been able to re-order a few books, so contact Dale for details if you are interested. Ph 3374 1035 or email daleborgelt@gmail.com

## Keep your fingers crossed

Most of us who are attempting to increase numbers of native plant species are in fact spending most of our time getting rid of weeds. If only a few biocontrols would come to our aid! Well, there is news which may deserve cautious optimism. Madeira vine is near the top of our list of horrors. The January issue of the *Land for Wildlife* Newsletter has an article telling of a leaf-eating beetle which is now being released in field trials.

If you don't receive this newsletter, go to LFW's web site where you can read it. [www.seqcatchments.com.au/LFW.html](http://www.seqcatchments.com.au/LFW.html)