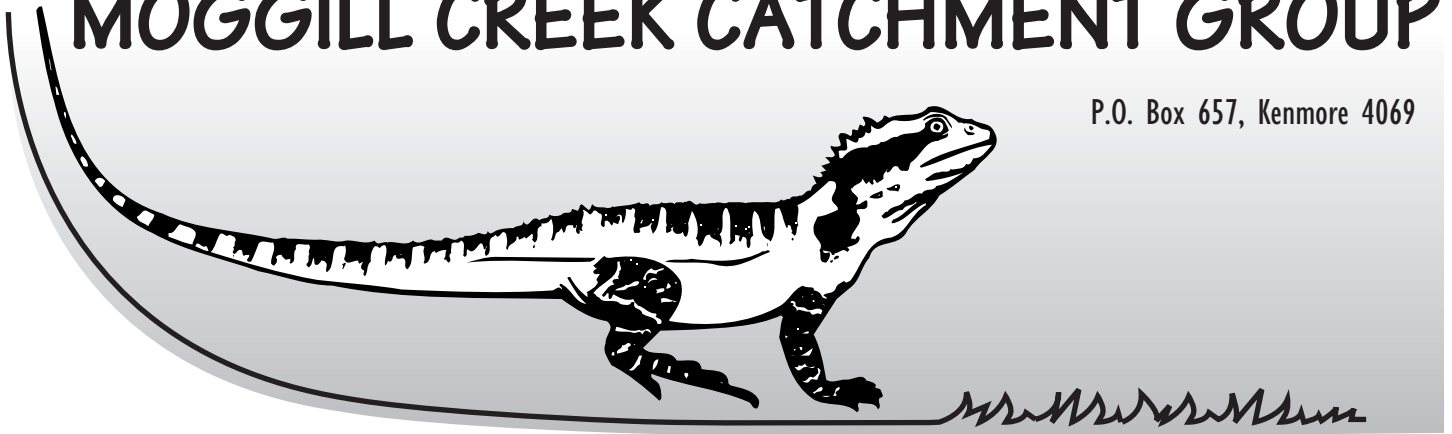


MOGGILL CREEK CATCHMENT GROUP

P.O. Box 657, Kenmore 4069



MOGGILL CREEK CATCHMENT NEWSLETTER

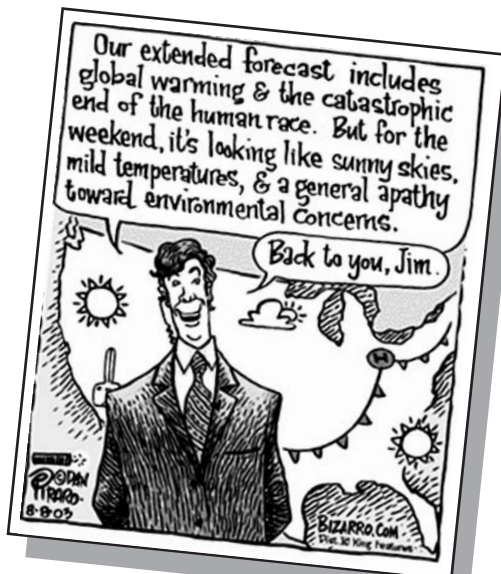
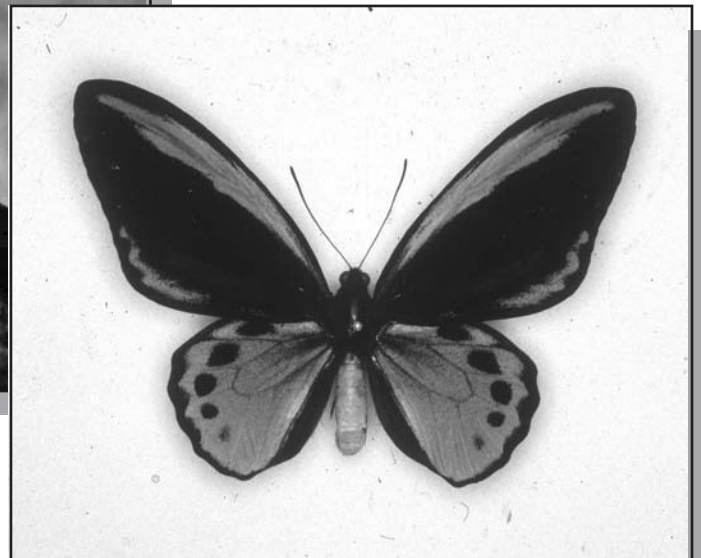
Newsletter of the Moggill Creek Catchment Group

Spring 2005



▲ A most unusual bird. See page 4.

An important project. See page 7.



Annual General Meeting

The AGM will be held at the Brookfield Hall on Wednesday, 30 November, at 7.30 pm

There will be, as usual, a Guest Speaker, details as yet to be finalized.

Our membership year commences from the AGM. Facilities for renewal will be at the Meeting

Acting Chairman's Report

It is now just over six months since Martin Fingland joined Moggill Creek Catchment Group as a full time Coordinator. For those of you who might have missed it, Brisbane's Mayor Campbell Newman initiated a program whereby Brisbane City Council would fund four coordinators to work full time with the volunteers in four different Catchment Groups. We were lucky enough to be one of the four.

Martin has already made an enormous impact on MCCG's activities. A common response these days is "how did we ever manage without him!" Before joining us, Martin worked for BFP so his knowledge of the area and the challenges faced in restoration of the catchment were well founded. It's impossible to describe succinctly all that he has achieved. Working closely both with MCCG volunteers and Habitat Brisbane, who have provided considerable support, he has been active in several areas: advising land owners; organizing volunteer groups such as the Conservation Volunteers to carry out restoration work by the Showgrounds and along McKay Brook; initiating weed control in Moon Reserve, and Lower Moggill Creek and McKay Brook Sections. Martin has also organized a trust funded volunteer team to work across the Moggill and Enoggera Catchments in areas such as the Gap Creek Reserve, McKay Brook and Creekside Parks.

Martin is also a specialist in local wild life and you may well have seen him giving talks with real live snakes and animals at the Brookfield Show, at Kenmore Village or in the local schools. His part in the Gum Tree Day at Brookfield Hall in May was a real highlight.

Much more could be written if there was more space!

The Catchment Group certainly owes much to Martin for doing such a great job in so short a time. As well, the initiative of Brisbane Council in providing a full time coordinator such as Martin is to be applauded.

Malcom Frost

EDITORIAL

Again, and happily enough, the amount of copy for this issue has put a squeeze on space at the expense of this. Such is however largely because of generous response by authors to invitations for articles on particular subjects, whereas there has been no response to the invitation to readers at large to offer something which is interesting.

And, on the subject of communication: Our website became stagnant last year. It has been simply carrying background information about MCCG; nothing topical and not the Newsletter. Work is being done to bring it back to life and it is anticipated that it will be up and running in the near future. Amongst other things you will be able to see in colour some very nice photographs currently coming to you in rather depressing black-and-white in the Newsletter. This issue does a great disservice to both the Bower bird and the Richmond Birdwing Butterfly on the front page!

The first firefly of the year has just been seen. The Spring 2004 issue had an article on them. Don't miss them. And on annual reappearances, the Channel Bill Cuckoos are due later in September, with the Koels about the same time. Did you notice the exceptional flowering of wattles recently? For those fortunate to live in our environment, these and many other such things make the year interesting.

Notes from the Nursery

All's well that ends well. Work on the Gold Creek Dam wall initially threatened us with having to move the nursery, while at the end it seemed that we were going to lose our water supply from the dam. Neither happened, so we continue as usual. Actually, not quite so because we have been able to proceed with some improvements we had intended making. Thanks to Challenge Employment and Training, we have a new bench of some 10m² which we are using for raising seedlings, an operation which had been occurring off-site. That adds greatly to interest for our volunteers. In addition, Brisbane Forest Park, which had originally built the nursery, is now constructing additional benches which will give us much more space. This relieves us of a problem of overcrowding which was about to become worse as we move in to special projects to provide plant species suitable for butterflies. The result of these additions is that our total bench space will be increased by about 50 percent.

We are occasionally asked if we have a list of available tubestock. We don't. We can't keep a running record of what is there, while a list made up at any time quickly becomes out of date. Small numbers of a species run out while additions of new ones frequently occur. We simply have to walk around with "customers" and select species appropriate to their situations.

The rate of addition of plants, especially range of species, slackens off at this time of the year and for some months ahead. This is partly due to the cooler weather, rates of germination and early growth slowing, and partly to reduced availability of seed. And we seem to have had more than usual failures of satisfactory emergence. See the article on biological control in this issue. Has it been a good year for the insects?

Graeme Wilson

Tulipwood – one of the tougher rainforest trees

Tulipwood (*Harpullia pendula*) is a rainforest tree quite commonly found in the few remaining rainforest areas of Upper Brookfield. Grown on its own, it is an attractive, well-rounded tree with a dense canopy and it is increasingly favoured in Brisbane for street-side plantings. As a young tree, it is also attractive, bushing out while still quite young. In forests tulipwood can grow to a height of 20 m. It is considered to be an excellent turnery and cabinet timber; the dark centre is highly figured with dark brown bands and pale or yellowish areas (BRAIN website).



Tulipwood - flowers

Leaves are pinnate, with 4-8 light green leaflets up to 20 cm long in cultivation. Flowers appear from spring to summer and have 5 greenish-yellow petals about 7 mm long. These are followed by attractive pendulous clusters of 2-lobed fruit, orange to red in colour and about 2 cm x 1 cm x 1 cm. The lobes open each potentially to reveal a

large black seed, although normally a high proportion of fruit are empty. Ripe fruit are evident at irregular intervals over the summer months, although neighbouring trees may differ markedly in floriferousness. Another species, *Harpullia hillii*, also occurs in our Catchment. It may be distinguished by its branchlets being densely covered with dark brown hairs and its seeds being enclosed in a red aril (covering derived from the seed-stalk).

Tulipwood is a medium-fast grower. Although a rainforest tree it survives with minimal care when planted on thin skeletal soils in eucalypt woodlands and should be considered for inclusion in a planting where screening from a neighbour or the road is an additional criterion. We usually have stocks available at our nursery for members.

Bryan Hacker



Tulipwood - fruit

Bugs and Beetles Bite Seeds

Seeds are the method used by most angiosperm plants to reproduce (when they are not reproducing vegetatively). It is this stage in a plant's life cycle that is most prone to mortality from insect or fungal attack. The same applies to gymnosperm plants having seeds, ovules or ovulate cones. However, very little is known about the role of insects affecting the reproductive stages of mosses, liverworts, horsetails or ferns. Certainly some insects feed on fungal hyphae and spores (e.g. psocids or book lice) while some beetles and moth larvae are specialised to feed on the leaves or rhizomes of ferns. Failed attempts at growing seeds collected from plants in the field can be usually attributed to disease or damage by insects (ask Graeme Wilson!). Insects lay their eggs on the capsule and the larvae tunnel inside to feed on the kernel. After collecting seeds into bags, holes will often appear in the capsules and all that emerges is an insect! At other times seeds are bound into silken webbing by seed-feeding insects, usually the larvae of moths, and when the webbing is separated the seeds are seen to have been hollowed out by insects. A wealth of other insect groups are involved in destroying seeds on plants that prevent them from producing viable seeds that could otherwise easily grow into healthy seedlings or into weeds. Seeds are also attacked by insects in storage as everyone who has kept rice or other grains for any length of time will know.

Most insects that attack seeds on plants are the larvae of moths and both the larvae and adults of beetles, especially weevils and bruchids, and they are the main culprits in destroying seeds collected for plant culture. Beetles will attack seeds as they mature after flowering and also on the ground where they have fallen. In larger developing seeds butterfly larvae such as those of the beautiful red cornelian butterfly (*Deudorix diovis*) will tunnel into the pods to eat seeds of many different plants including tulipwood (*Harpullia pendula*), often resulting in empty pods and very low yields of viable seeds. But these insects are not all 'bad news' and the seed tunnelers are well known to be valuable destroyers of the seeds of exotic weeds. Several beetles have been imported into Australia to tackle invasive weeds including sensitive plant (*Mimosa pigra*) in the Northern Territory and prickly acacia (*Acacia nilotica*), both major environmental weeds and in grazing lands. Other insects not yet introduced into Australia have the potential to control camphor laurel and privet, without affecting the more 'desirable' characteristics of these woody plants, when wanted in parks or used for hedges. Even Australian plants can become weeds (for example umbrella tree & northern olive) when they are moved from one state to another without their natural seed predators. Seed predators selected for biological control of weeds need to be always very 'specific' and they have to meet rigorous outcomes of quarantine tests to ensure that they are incapable of transferring their attention to native and beneficial plants. Biological control is, and will always be in the future, the only safe and reliable method for controlling exotic weeds, aquatic or terrestrial. A great deal of time and effort is always required to ensure all aspects of safety are studied before a release is made and to make sure that no detrimental non-target effects are likely to occur.

Don Sands

A most unusual bird

Some have, but many haven't, been fortunate enough to encounter the intriguing Satin Bowerbird (*Ptilinorhynchus violaceus*) in our catchment area. The satin descriptor refers to the colour of the adult males which have blue-black feathers with a glossy sheen. In certain lights, these present as a deep purple-violet colour, hence the specific name *violaceus*. The bill is greenish-yellow and appears quite short. This is because the forehead feathers extend over the base of the bill to cover the nostrils. The generic name, *Ptilinorhynchus*, derives from this feature by combining the Greek terms for feather (*ptilon*) and beak (*rhunkhos*). The eyes are a striking shade of lilac.

The females (and young males) are entirely different. The upper parts are grey-green, flight feathers are brown with pale outer edges, and the underparts are generally grey with a tinge of pale green. The eyes are also lilac and the bill has an olive tinge. It is only in their seventh year that the immature males assume the typical male plumage.

Interesting though the external differences may be between males and females, they pale into insignificance beside their behavioural differences. Male bowerbirds, and the satin is one of eight such species in Australia, build and decorate an elaborate bower, a structure that is unique in the bird world. The complexity of the bower and the types of decoration vary from species to species. These structures are used exclusively for courting females.

The bower of the male Satin Bowerbird consists of two parallel walls made of fine intertwined twigs which are frequently 'painted' by the bird with macerated plant material. The bower is located on a clear area of ground where sunlight can penetrate through an associated opening in the tree canopy. The bower walls are some 10 cm apart and form an avenue about 30 cm long. This is where the female will stand for the courtship display and where mating will occur if she is receptive.

At the northern end of the bower, the male constructs a stick platform, or arena, which he decorates with a range of very specifically coloured objects. Those objects are primarily blue feathers, blue flowers, snail shells, yellow leaves, cicada skins and snake skins. The colours coincide quite closely with the feather and bill colours of the male bird.

When the bowers are close to human habitation, that array expands to include virtually any reasonably small blue object that's not nailed down — clothes pegs, birs, bottle tops and the like. When I lived inside the Lamington National Park rainforest, words were frequently exchanged with a particularly recalcitrant Satin Bowerbird on the several occasions my blue toothbrush went missing. At least I knew where to find it, but so did he. I took solace in the knowledge that my interrupted dental hygiene may have contributed to him obtaining a mate or two by enhancing his display status.

Recent studies point to a direct relationship between the number and type of bower decorations (particularly blue feathers) and male mating success. Females visit several bowers and appear to assess the vigour of the male by the quality of his bower. During such visits, the female stands within the bower avenue while the male displays to her on the arena with a decoration in his bill. If she is suitably impressed, mating takes place in the avenue.

One male, giving all the right signals, may mate with several females during the September-January breeding season. But that's as far as his involvement in family development goes. It is then the female's job to build the nest (a shallow saucer of twigs and leaves in a tree), incubate the eggs (usually two) and rear the chicks.

All of which could suggest a fairly easy and enjoyable existence for the male. But that's not really the case. He has to expend a considerable amount of energy in finding a site with appropriate light penetration, constructing the bower, collecting decorations, attracting females and displaying. In addition, he has to defend his bower and display objects from other males. Theft of decorations is a unique form of sexual competition amongst males. Because these decorations are a major determinant of mating success, what better way to enhance his bower and status than to steal the items from a nearby bower. So, maintaining his decorations, and perhaps stealing a few, takes quite a lot of energy, but also advertises his fitness to potential mates.

The orientation of the bower is important in order to make best use of limited available light in closed forest locations. In the majority of cases, the bower avenue is oriented north-south, with the display arena at the northern end. However, other orientations do occur, though they are designed to make best use of canopy gaps and the terrain slope, such that bowers are oriented upslope to enhance the frontal illumination of the male while displaying. The angle of light is crucial for many blue objects, particularly feathers. As blue is a structural colour in feathers, not a pigment colour, reflected light is essential to highlight the colour. A blue feather viewed with transmitted light (that is, with the light source behind the feather) will appear black.

Satin Bowerbirds are more likely to be seen in our area during the non-breeding winter months when they travel in small flocks in search of fruiting trees. At that time, birds from the more elevated rainforests often move down to the lower elevations.

Bowers have been found in our area, so some birds would appear to breed here. If you get the opportunity to sit near a bower and watch the activity, it can be a very rewarding experience. The male call when displaying defies written description and often contains an element of mimicry. In all respects, the Satin Bowerbird is a fascinating, beautiful and most unusual bird.

Peter Ogilvie

Two weeds to look for

Two weed species that are getting to be increasingly common in our catchment are Brazilian nightshade and leucaena. Both are from America and both were probably introduced to Australia as ornamentals, although the latter is now better known as a browse plant for cattle.

Brazilian nightshade (*Solanum seafortianum*) is a slender climber, twining up trees to a height of several metres. As its common name suggests, it is native to Brazil. *Solanum* is a very large genus, with about 1,700 species, occurring throughout the tropics and extending into temperate regions. The genus includes the common potato, which is also a South American native and has similar flowers to Brazilian nightshade. The Flora lists 45 *Solanum* species for South-east Queensland, 26 of which are native. Exotic species also include tree tobacco and giant devil's fig, both widespread in our district.

Brazilian nightshade flowers from spring to autumn and has open clusters of mauve flowers about 2 cm across. These are followed by round and shiny red fruit about 1 cm in diameter. The fruit are attractive to birds, which distribute the seeds, although both fruit and leaves are toxic to humans.

The leaves of Brazilian nightshade are distinctively lobed, with 3-11 lobes, and the species is not readily confused with other species in our Catchment. It is most readily controlled by hand-pulling.

The other American visitor to be covered in this newsletter is leucaena (*Leucaena leucocephala*). Leucaena is a woody shrub or small tree, often well-branched. The genus includes about 50 species, all American; leucaena itself is native to Mexico. Leucaena is now widely planted in Central Queensland as a browse shrub for cattle, but this only became possible in the 1970s when a rumen micro-organism for cattle was introduced to Australia and was able to de-toxify the compound mimosine. Mimosine results in hair loss and a derived compound causes goitre and low fertility. Horses, not being ruminants, do not benefit from the introduced bacterium, and should not be allowed to browse leucaena.



Leucaena pods



Brazilian nightshade flowers

Leucaena has flowers in dense, stalked heads in leaf axils or terminal clusters, appearing in summer. The heads are whitish, 2-4 cm across (the species name *leucocephala* is derived from the Greek words *leucos* (white) and *kephalē* (head)). These are followed by pendulous brown pods up to 18 cm long and about 2 cm wide, containing 10-20 or more seeds.

Leaves of leucaena are quite similar to those of jacaranda and seedling leaves can be confused with leaves of young *Acacia* spp. (although most *Acacia* spp. soon develop the characteristic flattened 'phyllodes'). Seedlings of leucaena are generally deep-rooted and quite small plants are difficult to pull out by hand. Cutting and spraying or painting the stump within 15 seconds of cutting with 50% glyphosate is an effective method of control. Plants should be prevented from seeding as seed can remain dormant in the soil for many years.

Bryan Hacker

MCCG's participation in National Tree Day

For the fourth consecutive year, the July working bee for the Huntington Section of MCCG coincided with the annual National Tree Day coordinated by Planet Ark. Sixty two adults and children came to Huntington Park and planted 825 natives plants. The site's listing on the Planet Ark web site resulted in people coming from as far as Wynnum and Morningside and about 20 AMP volunteers came to help. Again the preparatory site work carried out by Habitat Brisbane demonstrated the supportive relationship that exists between MCCG and BCC.

Malcolm Frost

Conservation of Fish in Brisbane Creeks

(Summary of a talk given at a MCCG Public Meeting by Dr. Kevin Warburton, University of Queensland)

There are approximately 180 species of native Australian freshwater fish, but of these over 50 are listed as endangered, vulnerable or rare. Our native fish have been hard hit by a wide variety of threats, including changes to water flow regimes, channelisation, habitat loss, artificial barriers to movement, degraded water quality, and increased competition and predation due to invasions of waterways by exotic pest fish.

Despite the diversity of potential impacts that can affect fish in urbanized environments, there have been surprisingly few studies on the effects of urbanization on the fish of freshwater streams. Community-based fish monitoring has an important part to play in helping to remedy this situation. Data collected by community members can provide valuable information on fish distribution and abundance, the impacts of introduced species, and the beneficial effects of habitat rehabilitation. They can also help to identify priority areas for conservation. Fish are good indicators of stream condition and arouse strong public interest.

Starting in 2000, "Fish Snapshot" surveys of Brisbane fish and creek habitats have been carried out using simple protocols developed by aquatic ecologists at the University of Queensland in collaboration with Brisbane Waterwatch. The surveys are resourced by the Brisbane City Council, local catchment groups and schools as well as university staff and students. An identification guide to fish of the Brisbane area has also been produced, and this is due to be published by the Queensland Museum later in the year. So far, 90 surveys of sites on 16 Brisbane creeks have been carried out, and 26 fish species have been recorded. The collected information is summarized in fish status reports and conservation action statements, and is helping the Council to develop stream rehabilitation strategies.

So far, the results indicate that the richness of native fish communities is related to factors such as the diversity of stream habitats, the number of aquatic plant species, the velocity of water flow, and the dominance of exotic fish species. Many fish studies in Australia and overseas have shown that habitat features such as woody debris and in-stream plants play a key role in providing fish with suitable areas for shelter, feeding and egg-laying. Because different species have different requirements, stream habitat diversity promotes fish diversity. Brisbane creeks still support a similar range of native fish species as south-east Qld as a whole, but some species are much rarer or are limited to the least disturbed sites.

What can be done to improve conditions for native fish in the Brisbane area? Two types of environmental rehabilitation, both being pursued and encouraged by the Brisbane City Council in collaboration with local community groups, are likely to have a significant positive impact. These approaches are riparian vegetation (planting of native bankside species) and natural channel design (re-engineering of streams to stabilize banks, create deeper and wider pools, and increase in-stream habitat structure). Both approaches are being supported by university-based research on the habitat requirements of native fish species. There are plenty of opportunities for local fish enthusiasts to provide input and support!

Plant Families 5 – Euphorbiaceae

The Family Euphorbiaceae is one of the big five among the flowering plants, with over 5000 species in some 300 genera. It is world-wide and includes species from large trees to herbaceous annuals, many of economic importance and as with many families, quite a few weeds.

It is probably easier for anyone starting to think of a group to begin with some individuals which are in some way familiar. Cassava is one of the world's major food crops, although we know it here only in the processed form of tapioca. Where would we have been in the last 100 years and more without rubber? Both tung and castor oil are important industrial products, while the latter is well known to the older of us in another use. A number have medicinal properties, particularly used in traditional medicines, our Red Kamala being one such. Some are poisonous. Many are represented in ornamental horticulture, especially for their foliage, e.g. Crotons and Acalyphas. Even Brisbane's floral emblem Poinsettia is one, in spite of the showy part not being a flower and the species exotic! And there is the astonishing array of weird and wonderful horticultural species, especially in the genus Euphorbia, which might make one wonder how such diverse plants can be regarded as close relatives. It is because the main criteria are in the reproductive parts-as with all plants- which are very uniform in this Family.

When we look at native members in our catchment, we see nothing at all startling in appearance. There are many species, ranging from shrubs to largish trees. They include *Alchornia*, *Breynia*, *Grewia*, *Homolanthus* (two species), *Mallotus*, *Croton* (this and the former each with three species), *Glochidion*, *Macaranga*, *Bologhia*, *Cleistanthus*, *Drypetes*, *Excocaria* and *Petalostigma* (two species).

Mallotus philippensis perhaps deserves special mention, being prominent in dry rainforest. It is very hardy, adapted to a wide range of conditions, when growing well is a handsome tree, and seems to be better adapted than most to natural regeneration.

A Richmond Birdwing Recovery Network to - 'Bring back the Birdwing Butterfly'



A new phase of the Richmond Birdwing butterfly conservation project is commencing in 2005. The Richmond Birdwing Recovery Network (RBRN) is being formed as a non-profit community project to develop further community recovery for the threatened Richmond Birdwing Butterfly (*Ornithoptera richmondia*). Community members, conservation groups and representatives from local, state and federal agencies can become members of the RBRN.

The RBRN will closely involve members of MCCG who will be invited to participate with planting Richmond Birdwing vines on their own and Council land to strengthen the corridors for the butterfly to breed and move back into Brisbane. The Richmond Birdwing Recovery Network has already received support from Brisbane City Council towards the Project and its first Newsletter, due for publication in September 2005.

The aims of the network include:

- a) **Planning and re-establishment of food plant corridors** – Planting Richmond Birdwing Vines (*Pararistolochia praevenosa*) along watercourses from the D'Aguilar Ranges to the Brisbane River and beyond;
- b) **Propagating, planting out and caring for Richmond Birdwing Vines** - (*Pararistolochia praevenosa*) on private and public land;
- c) **Strengthening outlying populations and re-establishing new corridors to the east and south of Brisbane**, and along **Kin Kin Creek** to connect the northern outlying populations east and south of Gympie;
- d) **Continued information sessions, workshops and newsletters** - to raise public awareness about conservation of the birdwing and the associated sub-tropical flora and fauna.

Anyone interested in conservation of the birdwing butterfly is invited to the following events:

A **Planning Workshop** will be hosted by Queensland Parks & Wildlife Service on Saturday, 8th October from 9.00 am at Brisbane Forest Park (BFP) Headquarters, The Gap. Speakers will include Drs Don Sands and Ian Gynther, on the butterfly corridors and networks, and Sue Scott and Martin Fingland (BCC Catchment co-ordinators) will discuss networking, newsletters, school and other community projects. Contact BFP on 3300 - 4855 for more details and bookings, and a free copy of the *Bush Telegraph*.

Cr Helen Abrahams, Chairperson of Brisbane City Council's Environment & Sustainability Committee will be the official guest at the **Launch for the Network** to be held on Saturday, 29th October from 9.00 am at BFP Headquarters, The Gap (admission free with a contribution to morning tea: \$5.00 per person).

Dr Don Sands and Ms Sue Scott will be the RBRN Co-ordinators (email- Susanne.Scott@bigpond.com.) Telephone enquiries: Sue Scott (07 3200-7432; fax. 07 3805-3589). Correspondence to: *The Richmond Birdwing Recovery Network*, 2 Emily Street, Marsden, QLD, 4132.

Weed identification

Those interested should really have useful guides to weed identification. One perhaps not well known is available on the internet. It is interesting as much as anything for its simplicity. It includes Australia wide weeds but presumably only those which are officially declared. Thus many which are to us clearly, from an operational viewpoint, weeds and may in the future be listed as such, are not there.

So, try out some well known species such as lantana and morning glory on <http://www.weeds.org.au/weedident.htm>

Would you like to find out what is involved in being a MCCG section leader?

There are presently three sections in our catchment that are in need of a Leader:

- Section 1 (Pullenvale/Moon's Lane)
- Section 4 (Showgrounds)
- ° Section 10 (Lower Gold Creek).

Please contact the MCCG coordinator Martin Fingland for more information about this enjoyable, worthwhile and not onerous volunteer position on 34070095 or 0408774631

Fruit

If when shopping you regard cucumbers and beans as vegetables, not fruit, and consider strawberries and raspberries to be berries, that's alright. If you want to speak to a botanist about these items, change your terminology if you can but don't argue because the words are now wrong. The first two are fruits while the last two are not berries. You may even have regarded tomatoes as vegetables rather than fruit, but they are; and to make matters worse they are, botanically, berries!

Fruit is the mature ovary of a flower and contains the seed(s). (The ovary is part of the female structure in the flower, comprising the base of the carpel or carpels, which in turn contain the ovules which, following pollination and fertilization, become the seeds.) A very simple example is the peach; a single carpel with a single ovule giving rise to a single seed. Many fruits are not quite so obvious. It is easier to give examples from commercial fruits with which we are familiar, although the vast majority of species have fruits which are in no way palatable or edible, with many even being poisonous.

Many species have more than one carpel in the one ovary (e.g. the segments in oranges) while others have several independent carpels. Thus in the raspberry, they are arranged in a cluster, giving rise to obvious small "fruitlets" while in the strawberry the fleshy structure on which they are arranged is the succulent part we prize, with the carpels becoming what we view as seeds on the surface. They enclose the seeds but are botanically the same structures as the juicy globules of the raspberry.

There is further complexity in those species where what we perceive to be a single fruit is a structure derived from more than one flower. It is obvious in the pineapple where we see in an early stage, numerous flowers spirally arranged around the reproductive structure. It is less apparent in the fig where numerous tiny flowers occur on the internal surface of an almost totally enclosed, more or less spherical structure which when mature, we regard as a fruit. In the same family as the fig there are species with a cluster of tiny flowers visible on an external surface, e.g. the mulberry and coming at last to native examples, cocksbur and whalebone tree.

Botanically, fruits are classified on various features of structure and seed release. A few examples follow:

A berry is a succulent fruit with a skin and pulp, containing a number of seeds and not splitting open when mature. (Which describes the tomato).

A drupe is also a succulent fruit and not splitting open when ripe, with a skin, a fleshy layer and a stony layer enclosing the seed. The stone fruits are here (and note that the peach seed you discard is more than the seed).

A capsule is a dry fruit, opening when ripe to release the seed; e.g. the eucalypts.

A nut is a single seeded dry fruit that does not open at maturity. (Thus the macadamia nut you eat is not a nut but the seed of one, while peanuts, almonds and many others have nothing to do with nuts)

A pod is a fruit which opens at maturity along two sides to release the seeds.

Graeme Wilson

ARE YOU DRIVEN MAD BY LANTANA AND/OR CAT'S CLAW CREEPER?

ARE YOU INTERESTED IN HEARING ABOUT THE BIOLOGICAL CONTROL OF THESE PEST WEEDS THAT THREATEN OUR NATIVE FLORA AND FAUNA?

Then Mark it in your diaries!

THE MCCG SEPTEMBER TALK.

Guest speaker Elizabeth Snow (BSc Hons) is an Experimentalist with the Department of Natural Resources and Mines Alan Fletcher Research Station. Her talk will focus on the biological control of Cat's Claw Creeper and the two new agents being studied as potential controls. Elizabeth will also talk about existing and potential biological control agents for Lantana.

When Thursday 29th September 2005

Where Brookfield Hall, Brookfield Rd, Brookfield.

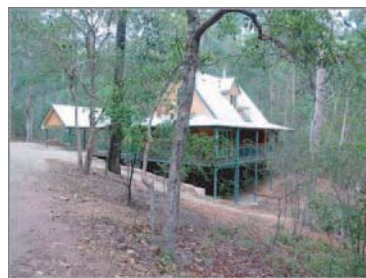
Time 7.30 pm.

Enquiries Chris Hosking on 3374 3453.

All members of the public are welcome.
refreshments will be served.

Grey Gum Cottage

Nestled amongst the bush at the end of a private road and adjoining Brisbane Forest Park, Grey Gum Cottage, off Gap Creek Road, offers you a beautiful place to stay in western Brisbane. Completed in 2005, architect designed Grey Gum Cottage is fully furnished, self-contained and includes two bedrooms; it is ideal for up to four people.



Only 20 minutes from the CBD and The University of Queensland, Grey Gum Cottage is a desirable place for Short to Medium Stay for your environmentally aware visitors from interstate or overseas.

Visit

www.gapcreekhideaway.com.au or

www.seqrents.com.au/greygumcottage

Or contact Geoff & Marlene on
3407 4512 or 3374 2618 for further details.

Editor: Graeme Wilson, Ph 3374 1218

email: glwilson@uqconnect.net

Formatting: Margaret Hastie

Printing: John Gower