MOGGILL CREEK CATCHMENT GROUP

P.O. Box 657, Kenmore 4069

NEWSLETTER Summer 2005-2006

▲ This little fellow became famous. See page 7.

Might this moth rid us of cat's claw creeper? See page 8.

A New Weed Has Arrived

The Senegal Tea Plant (*Gymnocoronis spilanthoides*) has been discovered in lower Gold and Moggill Creeks. It is a declared weed (Qld). If well established-as it will be if we don't eradicate it quickly- it will be very destructive of the well-being of our streams. It grows in and on the banks of streams and in wet areas. On land it grows up to about 1m tall but scrambles over the surface of water. It is best identified by its distinctive white ball-shaped flowers, produced in Spring and Summer (photograph with permission of Kurt Stueber's Library).

Eradication by spraying with herbicide is not recommended. That is not only not particularly effective but spraying in or near water can be destructive of other plants and many aquatic animals. Hand removal is the way to go. It is essential to take all plant parts including roots and leaves (all of which can regenerate new plants), place them in bags and hang up to rot.

For full information on this weed, go to
www.weeds.crc.org.au/documents/wmg-senegal-tea.pdf

Chairman's Report to the 2005 AGM

The past year has definitely been a year of growth. Thanks to Brisbane City Council, we now have a fully-funded coordinator, Martin Fingland, who has added a new dimension to our activities. Of particular importance has been his leading several groups of volunteers from outside the catchment, who have undertaken extensive work on public land as well as helping private landholders with major weed problems. These have included a group called the Resource Volunteer Trust as well as Better Earth and Church of Latter Day Saints volunteers.

Caring for Biodiversity

Fortunately moving our nursery – a sword of Damocles hanging over us late in 2004 – proved to be unnecessary and over the year we have potted 20,775 plants, distributing 16,245 to landholders free of charge (including about 1,000 we have sold to wholesale nurseries to support the nursery's function). Included in the total of 16,245 are 2607 plants given to members of the Pullen Pullen Catchments Group (PPCG). This is a truly symbiotic relationship, where they 'grow on' some of our seedlings in their 'mini-nurseries' and we provide the 'shop-front', making plants and advice available to their members. Members of both groups work twice a month at our nursery. In 2005 they contributed 798 hours of their time to the overall effort.

On public land our eight Bushcare Groups, supported by Martin and his volunteers, have planted 9,872 plants. On average, 84 people turn out each month to help the revegetation effort, contributing 3,423 hours of their time to the public good.

We continue to expand our concern for local wildlife. A platypus survey in August recorded four platypus on the one morning. We are active members of the Richmond Birdwing Recovery Network. One of the goals of this Group is to plant large numbers of butterfly vines at suitable (fertile, moist, shaded) sites along Moggill and Gold Creeks. We have considerable numbers of seedlings that we are making available to members at a price of $4 each.

Caring for Water

We have been active on the consultation committee concerned with the refurbishment of Gold Creek Dam, a task that is now completed. This has enabled us to make sure environmental flows continue to be released at critical periods down Gold Creek.

Caring for Land

With Martin and Graeme Wilson sharing the responsibility with me, 31 local properties have been visited during the year and discussions held with the landowners on land management and revegetation.

As a member of the Mount Coot-tha Forest Mountain Biking Implementation Committee, I had the opportunity to walk over a number of tracks currently off-limits to walkers. I expressed my concerns to the Committee over the seriously degraded state of some of these tracks which continue to deteriorate through mountain biking.

Understanding and Participation

At the last AGM it was resolved that we should increase our number of public meetings from two to four each year. This we have done, with the outstandingly successful 'Life in a Gum Tree' day, attended by c.300 adults and children, on 10 April, and talks on native fish on 23 June and biological control of weeds on 29 September, as well as our invited talk for the AGM. Added to these have been our autumn exhibit from 14-19 March and our annual photography competition from 29 August to 4 September in Kenmore Village. As usual, we were present at the Brookfield Show and Brookfield Country Market. Martin and others have also had several opportunities to talk to school children, University students and others about environmental and wildlife issues. Our newsletter is widely read, with a print run of around 800 copies. Our articles are frequently to be seen in the local press, with 10 printed this year. Our activities have been filmed by Channel 10 for their show "Totally Wild" three times this year.

On 8 May (postponed from 2004 because of rain!!) we had a well-attended and informative walk around Smith's Rainforest Nature Refuge, guided by Andrew Wilson and David Moore.

Integrated Planning and Coordinated Management

Membership has remained steady at 350 members. MCCG continues to obtain funding from a number of sources. Funding from the National Heritage Trust is enabling us to make a big difference in revegetating the Huntington Section of Moggill Creek. BCC has provided several sources of funding including a Community Grant and funding from the War on Weeds section. We have also been successful in obtaining a grant from Natural Resources Management SEQ for work along Moggill Creek near Kittani Street in Upper Brookfield.

I would like to offer my sincere thanks –

- to our Committee, who have worked long hours to promote our goals of achieving an ecologically-friendly catchment,
- to Martin Fingland our coordinator, who has, sadly, resigned to devote more time to his wildlife enterprise. We all wish him well in the future. At the time of writing (mid-November) we have not appointed a replacement, but will let you know as soon as we have,
- to our Treasurer Judy Walker, who has left the Catchment,
- to Joanna Yesberg, who joined the Committee as Treasurer in August,
- to Icemedia for designing our new website (visit us at *www.moggillcreek.org.au*) and
- to David Gooding for helping us with mapping.

Bryan Hacker

Editorial

*The restoration of our website (**www.moggillcreek.org.au**) has taken place. Visit it to learn what we do and how we do it and to be up-to-date with activities which may be of particular interest to you. It includes past issues of this Newsletter which contain articles of interest, such as descriptions of weeds and how to deal with them, revegetation, management of land and waterways, and descriptions of interesting native species, both plants and animals. Moreover, at least most of the photographs will be in colour, which has been missing from the printed issues.*

And on the subject of colour, we are investigating the possibility of printing future Newsletters in colour. It can of course be done but the question at present is whether we can produce the quality we want at a price we can afford.

*We speak regularly about restoring ecosystems but it seems that many don't grasp what this means. It refers to an ideal situation in which all original species, plant and animal, are represented; and free of weeds and introduced animals. The species interact, and if one is missing, the natural balance is upset; in some cases the effect is small and does not come to our notice whereas in others it is substantial. As an ongoing reminder of such relationships, it is intended to present in each issue of this Newsletter an example, under the heading **Interactions**. We start with a very topical one.*

Asparagus – an evening treat or a rapacious weed?

The word asparagus conjures up a number of images. For many of us, thoughts are of a dish of tender green shoots, embellished by a smooth sauce and accompanied by a glass of Shiraz. This would be the species *Asparagus officianalis*, a native of Europe. It has been recorded as a naturalized species in South-East Queensland, but is not common.

The genus *Asparagus* (including species sometimes listed as *Protasparagus*) is in the lily family and includes about 160 species, all originating in the Old World. Several close relatives of the vegetable species are aggressive environmental weeds. Foremost in our area is *A. africanus*. This African species, probably intentionally introduced as an ornamental, smothers quite large trees in our area and is one of our worst weeds. Another species, *A. aethiopicus* (*A. sprengeri*) is an herbaceous weed producing lax bright green fronds to 1 m long from a central crown. Both species produce bright red fruit that are attractive to birds, which are the means by which they are spread.

Figure 1 *Asparagus africanus*

Figure 2 *Asparagus aethiopicus*

As with all weeds, the first requirement for controlling asparagus is to cut plants back before they seed, to prevent them from spreading further. According to DNR, an effective control for A. africanus is to cut the stems close to the base and treat the entire crown with undiluted diesel. Both *A. africanus* and *A. aethiopicus* may be controlled by applying 50% glyphosate to stems cut close to the base, although a second treatment may be necessary. Cutting in to the crown and applying glyphosate is more effective, although more difficult. Small plants of *A. africanus* may be dug out, but if left uncontrolled they soon develop an extensive root system and are difficult to dig out.

Two other species that are quite frequently grown in gardens are *A. meyeri* and *A. retrofracta*. The former species is very attractive and I have had one growing for about 15 years, with no evidence of it spreading. I had thought that *A. retrofracta,* which I have had growing for a similar period, was also benign. However, since digging it out two years ago, I have seen quite large numbers of seedlings appearing. Even when tiny, these have large water-storage tubers on their roots, a clear advantage when times are tough. This is a species that could become a significant weed in the future and there are good grounds for suggesting it should not be planted.

Figure 3 *Asparagus meyeri*

Bryan Hacker

Figure 4
Asparagus retrofracta seedling

Black is the New Brown… when talking snakes!

(*Our Coordinator Martin Fingland arranged for Greg Prostamo of Queensland Museum to write for us an article about Brown Snakes-very common in this catchment-to clear up confusion in their identification. It was too long for inclusion in its entirety and has been edited to carry the main message. Nevertheless, the original will be put in our website which will not only give readers more useful information but in particular allow the use of colour photographs, so relevant to the subject.*)

The Genus *Pseudonaja* contains seven species collectively called the Brown Snakes. They are the Eastern Brown Snake (the only one in the catchment or anywhere near it, and the subject of this article), Western Brown Snake, Ringed Brown Snake, Speckled Brown Snake, Ingram's Brown Snake, The Dugite and the Peninsula Brown Snake. Note that the King Brown Snake, which does not occur here, is not a brown snake in the taxonomic sense of the foregoing but belongs in another genus known as the black snakes.

It is a bit confusing when local Brown Snakes are sometimes black, and King Brown Snakes are actually Black Snakes. Colour is where most of the confusion arises. Many snakes are named after their dominant colour or colours (e.g. the Green Tree Snake also known as the Yellow-bellied Black Snake), but often there are many colour variations within a species. This all makes identification of snakes that much harder and reliable identification of some species can require examination of other features such as the number of scales and their arrangement.

For instance, the Eastern Brown Snake can be described as having 17 rows of scales around the mid-body, a divided anal scale and 45 to 75 divided sub-caudal (underside of tail) scales. But don't try to count the scales on a live snake! However, if you live in one place long enough, sooner or later you'll find their sloughed skins which allow easy identification. Use a wildlife reference book such as Wildlife of Greater Brisbane (a Queensland Museum publication) which provides a diagram and information to identify all the local snakes using a scale count.

What is interesting about the Moggill Catchment is the range of variation in colour in the Eastern Brown Snake population, varying from dark brown through to beige and all hues in between, with some individuals even being orange-yellow and then a population of infamous black coloured specimens. Adding to the colour variation are the juveniles. Like the adult, the belly of juveniles is covered with orange blotch marks against a mother of pearl background but here the resemblance often stops. They emerge from the egg at about the length of a biro and a shade thinner. They may be any shade from rich dark chocolate to beige, typically with a distinct black bar at the back of the head followed by an orange patch followed by another black bar. The juveniles may also have many distinct black bands that ring the length of the body. Juveniles with these bands usually lose them by their second year but rare individuals may keep their bands into adulthood. These banded individuals possibly contribute to the local Tiger Snake sightings you hear about from time to time. Tiger Snakes, like King Brown Snakes, aren't known from the Moggill Catchment. Moggill Catchment is also home to the Red-naped Snake (*Furina diadema*), a delicate little snake reaching no more than 40cm at maturity and to the casual observer resembling a juvenile Eastern Brown Snake.

Close encounters with a Brown Snake are rare, sightings from a safe distance being more usual. Having said that, 'Browns' are often encountered when lifting farmyard material such as sheet iron and old timber. Other encounters may involve situations where the snake has got itself into trouble, such as

- Entry into buildings where the exit can't the found.
- Entanglement in farm devices like fruit tree netting or chicken wire
- Attempting to enter a crevice and getting stuck
- Getting their head caught in a drink can or bottle
- Injury from road trauma
- Falling into drums or tubs where exit is impossible
- Entry into cars
- Falling into swimming pools

In conclusion, be aware that Eastern Brown Snakes are not always brown and that features other than colour are often needed to enable an accurate identification. Never attempt to capture a Brown Snake even if your intentions are well meaning. The Brown Snake genus are the second most venomous group of snakes on the planet and are responsible for most of the more recent snake deaths in Australia, even with leading edge hospital management of the patient. Be cautious when lifting debris in Brown Snake territory but don't be paranoid. If you see a snake and are unsure of its identity, take a photo from a safe distance and have the animal identified at the Queensland Museum, where they are always interested in cataloguing the distribution of our local wildlife.

Button-quail in the Moggill Creek Catchment Area

Button-quail vie with other ground-dwellers or marsh inhabitants for the title of most inconspicuous birds. Those unfamiliar with their habits are likely to overlook them.

But what are Button-quail? They are an ornithologist's conundrum. Studies show them not closely related to birds we generally call quail. Brown Quail and Stubble Quail do occur in Moggill Creek Catchment area, and the little King Quail can be found. Quail are also cryptic ground dwellers — often flushed as we stumble over them — but if not relatives of the Button-quail, then who is? Some have suggested an affinity with cranes. Currently placed in a unique taxonomic Order, the Turniciformes, their DNA shows no relationship with any other group of living birds.

Button-quail are difficult to study because they are so cryptic. The browns, greys and blacks of their plumage camouflage them. They are small, weighing only 35 to 110 grams (females heavier than males). They tend to remain stationary when approached. Come too close and the Button-quail slowly and silently fades away — on foot.

The female Button-quail is more colourful than the male. She advertises with territorial vocalizations, lays a clutch of 3 to 7 eggs, and leaves her mate to incubate them. She possibly takes more than one mate in any breeding season. The male may show some parental care to the newly hatched young. With such difficult birds to study, much of what we know comes from the aviary — not always a reflection of what happens in the wild.

With these complications, it is hard to generalise even within an area as small as Moggill Creek Catchment. I've found the most common here to be the Painted Button-quail. I frequently encountered it off Haven Road in the early 1970s. And around Gold Creek and Moggill Creek, I usually found single birds, sometimes two, but never in groups of more than three. In 2002 I had to report to Birds Queensland that the Painted Button-quail was a species declining greatly in numbers.

Earlier this year, I flushed a covey of about ten at my front gate, but they were not Painted Button-quail. A fortnight later another group — or was it the same — were lower down the driveway. These were Red-backed Button-quail, the first I had ever seen in Upper Brookfield. Twice I saw them feeding close to the house. Their only other occurrence in our area seems to have been at Moons Lane in 1985.

But why had I never seen this species between 1973 and 2005? I have minimized clearing and my block remains heavily wooded: mainly spotted gum and ironbarks, with brush box on southern slopes. Since the 1970s, development has continued its random march along Haven Road, culminating in the density of houses and increased pastureland that we see today. Residential development cannot be solely related to losses in local bird populations. The concomitant curtailing of hazard-reduction burns, and indeed drought and other weather changes in the same period, may have had a greater effect.

The Painted Button-quail frequents open dry forest; the Red-backed Button-quail more open country, usually breeding in dense grass near water. In my 32 years of occupancy at Haven Road, there has been ingress of exotic grasses and other plants. Could this explain the influx of the Red-backed Button-quail? Exotic vegetation seems to have followed the road — a typical habit of weed species. Traffic and stormwater on my driveway have led to luxuriant incursion of Green Panic and Signal Grass. These, and the lantana that was there earlier, provide some useful shelter for small birds. It was among the tufts of Green Panic close to my house that the Red-backed Button-quail foraged on the two occasions that I watched them.

All Button-quail feed on the ground, taking seeds, grain, green shoots, insects and other small invertebrates, but very few data exist on other aspects of their life histories. Population dynamics are poorly known, and distribution maps are not easy to come by.
Two other species of Button-quail may be seen in our catchment area. I have found the Little Button-quail high up on the grassy edge of Haven Road. There are unconfirmed reports at Pacey Road and Gold Creek Road of the Black-breasted Button-quail, a species generally to be found in rainforest edge or wet vine scrub with dense understorey. It may be more widespread than we suspect.

A clue to the presence of Button-quail is an array of small circular scrapes or "platelets" in the ground formed by a crouching bird scratching with its feet and rotating while feeding. Sound provides another clue. Both Painted and Red-backed Button-quail utter a low booming call, which can be elusive as it does not carry far and is rather ventriloquial. The booming calls and indeed the peculiar platelets may function in advertising territory and alerting passing males of a nearby female.

So, next time you are in the bush and hear a deep repeated "oom-oom-oom" of the quality of Tawny Frogmouth, try and track it down. It could be a Button-quail. Check any identifying marks against pictures in your field guide. This is one group of birds where almost any information is a contribution to our understanding of distribution, movements, or behaviour.

Douglas Dow

Notes from the Nursery

In addition to MCCG's involvement, as a member of the Birdwing Butterfly Recovery Network, in promoting and giving hands-on assistance in planting and maintenance of the food vines, the nursery has a special role.

Plants will be sourced from wherever available, much of that being commercial nurseries, of which we are not one. Nevertheless, in anticipation of the demand, we started earlier this year to propagate vines. (We have been carrying some stock in the ordinary course of our operations.) We now have hundreds of young seedlings which we have begun potting up. These will be grown in larger pots than we normally use and staked. They will also carry the label which shows that they have been grown under permit from Environment Protection Agency, as required for propagation of vulnerable species.

We will give half of the plants to the Network program, to be used in what is expected to be the greater part of the planting, on public land. Private landholders with suitable planting sites (the vines can not be satisfactorily grown at all locations) are being encouraged to put in a few plants to add to the continuity. The remaining half of our stock will be available to our members, but not free as is the case with all other species we hold. We have to recover some of our propagation costs. The price will be $4.00 per plant, which is less-often much less- than the commercial nursery price.

The unusual good rain of October has allowed many of our native plant species to flower well and so far there is progress towards excellent seed production, something which has unfortunately not been the case in recent dry years. The plants we propagate for distribution to members come largely from seed collected by them. The range of species and often the numbers of plants in each depend on such collection which is not, on the whole, sufficient. Please do what you can to help. An article in the Winter 2004 Newsletter (get it from our website-see information in the *Editorial* in this one you are reading), The When and How of Seed Collecting, gives useful advice. And remember to include with the seeds a good sample of the foliage so that we can be sure of the species. If you don't know how to get them to us, phone me (3374 1218).

We are having great support from members at our twice-monthly working- bees, with a recent record attendance of 17, and it didn't lead to people standing around with nothing to do. You are most welcome to join us. Meet interesting people, learn something, help us in our work and enjoy yourself.

Graeme Wilson

Moggill Creek Platypus Monitoring

(*This is a slightly edited version of a report from Dr. Scott Burnett, Wildlife Projects Officer for Wildlife Preservation Society of Queensland.*)

In the pre-dawn hours of August 20th, 24 enthusiastic platypus spotters met at various locations around the Moggill Creek catchment for what we hope will become a model for platypus monitoring around the state. The team had assembled during the previous week at a training evening, in which WPSQ President Alan Barton presented a talk on how to be a platypus spotter, and most importantly, how to recognize a platypus from other aquatic fauna that might be encountered on the morning. At this meeting, the group was split into three teams, members of which were responsible for different stretches of the catchment.

Each area had been visited by the team leaders in the previous week and vantage points identified, georeferenced and marked. This was to prove an important part of the process as the survey sites could be difficult to locate in the dark, at which time spotters had to be in position for the coming daylight. This was also critical for our data analysis in which we had to work out from the time and place of sightings whether people were seeing the same or different platypuses.

After sitting quietly at allotted stretches of creek bank until about 7:30 – 8am, all met for a much needed breakfast and coffee. Then survey sheets were collected and results summarized. Interestingly, many of the survey sites at which platypus are frequently sighted at other times returned a nil result, with the exception of Gold Creek at the Jones Rd culvert leading into Mt. Coot-tha Forest Park. The other area that revealed activity was Creekside Park. A minimum of two individual platypuses were sighted by five observers in this area. In total there were three confirmed sightings for the morning.

There were some hiccups with this survey, as would be expected given that it was the first to be conducted. The Enoggera Ck survey the following week went really smoothly, thanks in part to the lessons learnt during this survey, although no platypus were seen. This latter part of the year is probably not a great time for surveying platypus, as many may be ensconced away with their young, and therefore not so visible. We hope to repeat the survey in about March next year, when hopefully the creek will be full of water and full of newly emerged young platypus, and their parents.

Watch Out For Sunbaking Dragons!

Dragonflies are perhaps the most familiar insects associated with the creeks and pools of the Moggill Creek catchment. Brightly coloured, active, and obvious on warm sunny days, they are unmistakeable to any visitor along Moggill Creek in spring to autumn. Dragonflies have been called "creatures of the sun" by some overseas cultures – a lot like Queenslanders really! These colourful and spirited insects are intimately associated with running or still waters, as this is where the eggs are laid and the larval stage completed.

Dragonflies are fierce and active predators, both in their larval and adult forms. It's thought that they help reduce some populations of insects harmful to man, such as mosquitoes and sandflies, although they prey on a wide range of insects (even other dragonflies).

The presence of large numbers of different dragonfly larval species within particular reaches of stream is thought to indicate creeks and rivers of high environmental integrity. Such waterbodies often have structural features such as submerged logs, and emergent waterplants that dragonfly larvae need for protection from predators, and to emerge from the water into adults.

There are several obvious species readily seen along the larger ponds and deeper reaches of Moggill Creek. I have ordered these by colour:

Reds
Fiery Skimmer (*Orthetrum villosivittatum*) Large species with dark red body and eyes, and flattened red abdomen.
Scarlet Percher (*Diplacodes haematodes*) Moderate-sized to small species, scarlet red all over (including red wing venation). Likes to perch, wings flattened, on logs and rocks close to creeks.

Blues
Blue Skimmer (*Orthetrum caledonicum*) A large, light sky-blue to powder-blue dragonfly that can be approached very closely.
Black-headed Skimmer (*Crocothemis nigrifrons*) Similar to the Blue Skimmer, but with a prominently dark head and abdomen.

Spotted Wings
Graphic Flutterer (*Rhyothemis graphiptera*) This fairly slow-flying dragonfly is unmistakeable, with large black spots on an iridescent brown pair of wings.
Yellow-striped Flutterer (*Rhyothemis phyllis*) Slightly larger than the previous species, this beautiful creature has a single large spot near the wing base, with a central yellow stripe.


Yellow-striped Flutterer
(*Rhyothemis phyllis*)

As skilful fliers with excellent vision from large compound eyes, dragonflies evade capture by the cleverest predators. So how does one observe and identify them? One method is by close, careful observation – sitting in a sunny spot close to a free flowing or clear water section of Moggill Creek rewards the patient observer (a good excuse to return to your childhood). Binoculars with very wide depth of field may assist in getting closer to the detail. Another is the use of digital photography, such as digital or video-camera. These popular modern gadgets have the ability to "zoom-in" very close, with the images able to be subsequently identified. Such methods will not identify all dragonflies – specialists in dragonfly taxonomy can only identify some species. It may provide a guide to the more common species along "your" section of creek or pond, such as the six listed above. There are a number of guides available, but perhaps matching up the photos in "Wildlife of Greater Brisbane" (1995) would be the easiest method to begin with.


Graphic Flutterer
(*Rhyothemis graphiptera*)

Lastly, what can one do to attract more dragonflies into the catchment? Providing or improving habitat of the riparian zone of Moggill Creek (as contributed to by every member of the MCCG in some form) is a very good start. The removal of weeds that alter or degrade such habitat (esp. water weeds) is useful. The planting of shrubs or emergent waterplants (such as rushes, reeds) seems to provide perching sites that some species need for temporary hunting or mating "home-ranges".

Sandy Pollock

Photography Competition

An impressive array of photographs featuring wildlife, people, native flora and environmental issues were on display in August at Kenmore Village Shopping Centre for the Moggill Creek Catchment Group's annual Photographic Competition. The 'Peoples' Choice' award went to Penelope Hacker for her moment with an antechinus (pictured on front page) beautifully captured. Kate Lamb, a student in Year 9 at Kenmore State High School scooped the pool, winning the Supreme Exhibit Award ahead of all the adult entries with her superb photograph entitled "Feather on Burnt Stump". Winners in the several categories were Margaret Hastie, Eric Metzdorf, Ross Barber, Ray Wilson and John May.

MCCG is grateful to local sponsors who provided the prizes: Centenary Hire; Water Solutions; Moggill Constructions; Brookfield Produce; Mitre 10; Pool Mart; Kenmore Fruit Bowl; Columbine Hair; Kenmore Deli; Mark McCarthy Auto; Cafe Bliss; Darryl Mappin Nursery; Kenmore Veterinary Clinic; Orrum Jewellers and Kenmore Centre for Health.
Thanks also go to Kenmore Village Management for hosting the event.

Interactions 1

A century ago this catchment was home to the vine *Pararistolochia praevenosa* which is the sole food for larvae of the Richmond Birdwing Butterfly. The butterflies were abundant. European land-use practices led to the loss of the vine and therefore the butterflies. We are attempting to restore the situation by planting vines. If this is to be successful on a long-term basis, the vines must reproduce, which requires seed production, that in turn depending on pollination of flowers. This is carried out by a midge but we are not sure that the species has survived the substantial damage done to the ecosystem. If fruit is formed, it is believed that seed needs to be buried for germination and growth, and that this is aided by scrub turkeys in the course of their eating flesh of the fruits. (At least we are not presently short of them!) Human activity has other negative effects. The vines require good soil fertility but we have lowered that on soils appropriate to the vine. And we have introduced an exotic relative of the vine which attracts the female butterfly to deposit eggs on its leaves which are toxic to the larvae.

Plant Families 6-Arecaceae

Previously we have given brief accounts of plant families which are well represented by species in this catchment. There are however some large families with either very few indigenous species or those which are rather inconspicuous here; perhaps not represented at all. Readers who are interested in but not particularly knowledgeable about these things should really be aware of such families, which include many important species, widely cultivated.

Arecaceae is the family of the palms, previously called Palmae but changed to the current name to correspond with the genus *Areca*. Depending on which taxonomists one follows, there are 2,500 to 3,500 species in 200 or more genera. While we (correctly) associate palms strongly with tropical and subtropical climates, a few species occur in much higher latitudes in both hemispheres. For the most part they are single stemmed and often tall trees, but a few (very few) branch, many sucker often leading to large clumps, some have no aboveground stem while others are vines. They include species with extreme characteristics among plants; one with the largest leaves; another with the largest fruits; one having the largest inflorescence; while some of the vines have stems over 150m long, which if they were erect and straight would make them the tallest plants.

This is not the place to write about the incredible range and total value of usefulness of palms. Other Families like the grasses may compete in value but it is doubtful if any have anything like the range.

So what palms are native to our catchment? There are four species fairly widespread in SE Qld; Bangalow (*Archontophoenix cunninghamiana*),Cabbage (*Livistona australis*) and Walking-stick (*Linospadix monostachya*) Palms, and Lawyer Vine (*Calamus muelleri*). The first and last of these have been seen in our catchment in situations which indicate that they may occur naturally. Cabbage Palms are abundant just over the hills to the west but apparently not here while the Walking-stick Palm seems to be confined to moister conditions to the north. Like so many species of plants, we don't know for sure what may have been here but eliminated by the European newcomers, nor whether some species may have been brought in by them.

Graeme Wilson

MCCG's September Talk

Testing carried out in quarantine conditions over several years, and then approval from various organisations such as AQIS is necessary before a biocontrol agent is ready to be released onto a target weed. Biocontrol projects are long term, and aim to provide a successful long-term solution.

This was some of the information that MCCG member Liz Snow, an experimentalist with the Department of Natural Resources and Mines, gave in her excellent talk on biocontrol of Cat's Claw Creeper.

She provided information on two potential biological control agents, the leaf-tying moth *Hypocosmia pyrochroma* and the leaf-sucking tingid bug *Carvalhotingis visenda*, that she is testing as possible controllers of cat's claw creeper which is one of the most serious environmental weed threats to Queensland's and indeed our own local environment. It is hoped that at least one of these will cause sufficient damage to the plant to greatly reduce seed production. She also provided an update on the biological control agents that have been released on lantana. While many have been released, lantana remains a very prevalent weed.

Carl Gosper, who has a Post Doctoral Fellowship with DNR&M and Weeds CRC, talked about the various techniques that he is studying to curb the spread of serious weeds such as Camphor-Laurel, Mock Orange and Mickey Mouse Bush (Ochna) because figbirds enjoy feasting on their fruits. He is investigating:

- Using biological control agents to affect fruit choice by birds
- Capturing weed seeds by installing perches for birds
- Targeting sites with higher seed dispersal success for weed control
- Providing suitable replacement fruits for fruit-eating birds

The MCCG is most grateful to these two speakers for giving up their time to provide such interesting information to our local community.

(*A photograph of the leaf-tying moth on the front page is courtesy of Alan Fletcher Research Station.*)

(*Thanks to Chris Hosking for providing this report.*)

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