



Streamlines

Newsletter of the Pullen Pullen Catchments Group Inc.

August 2015

Oops! I must begin this edition with a correction. In the last issue of Streamlines, I said that members regenerating bushland on their acreage blocks could purchase plants from the nursery maintained by the Moggill Creek Catchment Group. This is NOT correct. The nursery provides plants free of charge to financial members of the Pullen Pullen Catchments Group and not just those revegetating their acreage properties. For full information see Bryan Hacker's item on page 6.

Our Wildlife Officer, Irene Darlington, reports on the local wildlife situation and what the unusual weather conditions are doing to reproductive cycles. She also describes what we can do as individuals to take care of wildlife without actually being a carer.

We're all familiar with geological periods such as the Eocene, Oligocene and Pleistocene. Now John Ness presents a summary of evidence for the recognition of a more recent period – the Anthropocene – covering the period of man's occupation of the earth.

Anstead Bushland Reserve is the lucky recipient of a Green Army Project. Suzie Nicholls, the project supervisor, describes the project on page 8. In case members know anyone who could be interested in joining the Green Army, I have included some key points from the current recruitment drive although there will be no local projects until after January 2016.

With so many interesting articles, I've held the second instalment on recycling plastics over until the next issue.

I hope you enjoy reading the very varied items in this issue. Please remember that all members are welcome to contribute. I'm particularly keen to hear from land owners prepared to report on their efforts to restore/revegetate their land. Items are usually up to one page in length so writing is not too arduous a job. The deadline for the next issue is November 15.

Helen Ogle
Editor

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Pullen Pullen Catchments Group

Meetings

Meetings are held at 7pm on the first Wednesday of each month at Pullenvale Environmental Education Centre, 250 Grandview Road, Pullenvale.

Website

www.pullenpullencatchments.org.au

Working Bees

Pullenvale Forest Park – 2nd Sunday of the month, 8.30 – 11 am
Anstead Bushland Reserve – 4th Sunday of the month, 8.30 - 11 am.

Tools, gloves, etc are provided at Working Bees. Just wear sturdy boots, tough clothes and bring water and a hat!

Committee Members 2015

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Membership Options

Membership fees are:

- Annual Membership – \$10 per person payable on March 1 each year
- Life Membership – \$100 per person

We are delighted to accept donations.

- a) Send a cheque payable to PPCG to PO Box 1390, Kenmore, 4069 or
- b) Transfer the funds electronically to BSB 064 152, Account No.10107038 Ref: your name.

"The Pullen Pullen Catchments Group acknowledges the support of the Brisbane City Council for costs associated with the website, the printing of Streamlines and with running the working bee mornings in Anstead Bushland Reserve and Pullenvale Forest Park."

NEWS

Position Vacant Our Treasurer will be resigning at the Annual General Meeting so we are looking for a new treasurer – see advertisement on page 4. If you have skills in this area, please contact President John Ness. This is an ideal position, perhaps, for someone who wants to contribute to the activities of PPCG but cannot participate in working bees. Many thanks, Tracy, for a job well done with absolutely minimum fuss and bother.

The two major areas in which we are working offer wonderful contrasts and consequently different issues. The area along Pullen Pullen Creek is virtually rainforest and contrasts markedly with the much drier conditions at Anstead and further away from the creek at Pullenvale. Simon Fox continues to provide much-appreciated advice to coordinators of both areas.

Pullenvale Forest Park At the June working bee, there was much debate about the difference between slender grape vine (*Cayratia clematidea*) and balloon vine (*Cardiospermum grandiflorum*). Simon directed us to the Save Our Waterways Now website and the excellent image on the right. It shows that the leaves of slender grape are grey-green and have 5 leaflets while the leaves of balloon vine are a brighter, glossier green and have 9 leaflets.



Slender grape at top right, balloon vine lower left

In July, we waged war on Ochna plants along the creek bank to give the native plants underneath room to grow. It was very rewarding to remove the ochna and reveal the wealth and variety of ferns and mosses beneath. While young plants/seedlings were removed completely, the stems of larger plants were cut close to the ground. They will be allowed to sprout and will be sprayed in spring/summer when the fresh new will absorb spray more readily and effectively. Spraying now would simply stunt growth without killing the plants.

At the August working bee, part of the bank from the parking area to the picnic area was stabilised and mulched while other volunteers cleared weeds from plantings along the creek. An application for a grant to remove vines overgrowing native vegetation along the creek has been submitted to Council.

The next working bees at Pullenvale Forest Park will be September 13, October 11 and November 8 and everyone is welcome.

At **Anstead Bushland Reserve**, the plantings in the Fig Tree Garden are doing well. Two highlights of the June Working Bee were the numerous birds nest fungi growing on the latest batch of mulch and a wonga wonga vine (*Pandorea pandorana*) completely covered in flowers. Our efforts since then have concentrated on weeding – mainly LOTS of Cobblers Pegs – from the area to the west of the Quarry Lookout in preparation for the installation of **informative signage** about some of the plants. The signs will have the plant's common and scientific names and comments about its growth habit, size, uses, etc.



Birds nest fungi with coin approximately life size

The **Green Army** under the able supervision of Suzie Nicholls is currently restoring 7.3 hectares of land within the Reserve – see Suzie's report on page 8. Brian Dean has produced an **illustrated brochure** on the Reserve. It briefly covers the history of the site and includes a map showing the major features as well as walking and riding tracks. The brochure will be available at strategic locations in the Reserve.



Wonga wonga vine

Working bees at Anstead Bushland Reserve will be on September 27, October 25 and November 22 and, once again, everyone is welcome.

In the **Airlie Road Park** contractors have cleared vines from along the creek. Some areas have been cleared and planted. We will be contributing to this development some time in the future. Many plants from previous plantings died during the drought. Others were eaten by a neighbours' goats!

PPCG Website is progressing well with new photos added continually. As well as Ed Frazer's bird photos, Jim Butler, who writes a column for The Local Bulletin, is also providing bird photos. However, more photos of local wildlife other than birds are needed. If anyone can help, please contact Nola Dean.



Two **Wildlife Survey Reports** have come in during the quarter. One reports the results of surveys of **microbats** at 20 sites in catchments in Brisbane's inner west. Fifteen species were found, representing over half the number of microbat species known to occur in south-east Queensland. The total number of species in the survey area may be even higher as other bats have been recorded in adjoining catchments. The report suggests that the high bat diversity in these inner city suburbs reflects the success of catchment and landcare groups in protecting, enhancing and managing their local environments to keep, sustain and, hopefully, attract back a wide range of species of flora and fauna.

The second report, from the Urban Bush Stone-curlew Research Project, discusses the issue of disappearing chicks. Observers of breeding pairs frequently report that one of the two chicks that hatch disappears and generally attribute this loss to cats or foxes, although this predation has never been observed. In captive breeding programs in Victoria, breeding birds lose one of two chicks despite being housed in predator-proof pens. Video-surveillance shows that one chick always seem less capable of finding food. It weighs less, too. By about the 10th day after hatching, the less robust chick usually succumbs. This could account for many of the disappearances blamed on cats and foxes. This phenomenon also occurs in Australian Pelicans but why do they produce two chicks if only one will survive?

Two **events** are planned at Pullenvale Forest Park before the end of the year. On Saturday October 17, Daniel Rekdahl will lead a plants walk which will be followed by morning tea and on Saturday December 5, Damian White will lead a night walk. Further details will be made available closer to time.

Honorary Treasurer Required

Tracey Barrie, the PPCG long term treasurer, will retire from this role after the 2015 AGM. Tracey has done an excellent job in this position and has set up the accounts system to be fully computerised with on line banking and payments. The role involves the following:

1. Preparing a short report for each committee meeting and attending the meetings. These are held on the first Wednesday of each month, well usually from February through to November. The meetings start at 7pm and are held in the PEEC centre on Grandview Road. They finish before 8.30pm.
2. Operating the PPCG financial accounts, making payments to suppliers, submitting a quarterly BAS to the ATO and occasionally assisting with grant acquittals.
3. Organising the yearly financial accounts.

The PPCG committee would welcome any nominations from members who feel they would be willing to take on this role. No formal qualifications are required and Tracey has set up a good system that is easy to use although attention to detail is necessary.

Wildlife Report

Irene Darlington

Hello everyone.

Spring has sprung. Yes, I know not officially, but I am certain most of you would have already seen the mom and dad duck crossing the roads with a dozen or so newly hatched babies following behind. Or perhaps watched the couples of birds carefully selecting little twigs and branches to line their nests with. And our beautiful possums? So what I would like to ask is that you are vigilant as a normal citizen who cares about their environment and the animals they share their neighbourhood with. That is without actually being a wildlife carer, there are basic things you CAN do.

Checking on an animal you come across is most important. If you see an animal on the lawn of a house, or the side of a road, please don't assume they are dead. Most animal attacked by domestic pets, electrocuted, hit by cars, poisoned etc, do not die immediately and can still be helped if you take the time to check on them. You may not see any injuries, but not seeing blood and visible trauma doesn't mean the animal is OK. For example, finding a possum alive sleeping on the ground under a tree or walking around in daytime on the ground or up in the trees is definitely a sign of problems. A nocturnal animal (sleep

during the day and active at night time) should NEVER be out awake and in sight during the daytime. You know we find possums people ring us about that are injured, or may be blind, that are burnt or have internal injuries and are thus unable to climb trees to shelter or to forage for food. They can often be helped with the correct medical care, but even if they are beyond help it is far kinder to have the animal euthanised humanely than to leave it to die a cruel, painful and often a slow death.

The other issue is that many Australian mammals you find in your yards have pouches! Yes, its baby time. Even though mum may be an old matriarch with cataracts and no teeth, she may be weak and ill as she has not been able to properly feed herself and to find shelter and safety. This time of the year, there is still most likely a baby in the vicinity if not in her pouch, then lying under her or beside her on the ground.

This week my lovely friend Alisson and I spent over an hour in one sitting picking maggots out of wounds of a baby brushtail which was in the pouch of its dead mother on the front lawn of a yard the 'caller' had been walking past daily. This caller, a woman on her daily walks, had observed the brushtail mother in trouble lying there on the lawn moving slightly three days earlier. This woman caller said she "didn't want to get involved.". She told me she just can't stand dealing with wounds and injuries, so she just left this struggling mother brushtail on the lawn to die. The woman was unaware that this possum was injured and had severe wounds on her head. The poor baby in her pouch was oblivious to the problems, that is until the baby started being affected by the maggots which were feasting on the dying mother. Maggots will attack healthy tissue quite readily, and so they did with this poor little soul. Mother was by day three very dead, dying a slow and painful death which could have been made much shorter had she had been helped and we could have picked her up and taken her to our vets.

Well, day three, this woman caller, observed more movement on the brushtail on the lawn, and actually investigated. That was when she found this small barely furred baby on top of its dead mum half frozen out of the pouch and covered in small maggots. We organized help straight away and baby possum came into our care immediately. Medicated baths, careful elimination of the bothersome insect larvae and many hours of labour for human foster carer, Alisson, later, and baby is hopefully maggot free and on the road to full recovery and a healthy life. In the short 24 hr period or so this possum baby was at the mercy of the maggots, they had managed to excavate 3 wounds into its body and eat healthy tissue. We just have our fingers crossed we picked every one of those larvae and didn't leave a single one behind in the wounds. How needless this was. Just because a person who could see something was wrong but just didn't find it palatable to do something about it. That is until her conscience got the better of her and she had to investigate the movement on the possum by the third day.

So very often we see this as wildlife carers. How someone can walk away from that situation is just beyond my comprehension and unjustifiable. People, I ask of you, as a carer and helper of animals: get involved! Do something. Even if you just ring us and get help. I know the RSPCA call line is a pain to get through sometimes and you are on hold for a while, but it's worthwhile. Even if you don't touch the animal but stay with it, covering it with newspaper or a Tshirt or something in your car. Just do something, don't just leave the poor animal there.

Often when a mother is dead in the wild, her baby or babies are fair game for hungry mouths and beaks such as kookaburras, crows, magpies, butcherbirds, then our domestic cats and dogs not to mention further hits by cars driving over it. The injured animal needs our help and we should provide it. As a 'caller' it costs you nothing but the phone call. But you know you will achieve providing help and pain relief for an injury or if the injury is too severe, a peaceful and painless death to that injured animal. But very importantly, you save a life in providing the hope and care for the animals baby or babies when they come into our care.

So next time you see a nocturnal or tree-dwelling animal such as a possum, bandicoot or echidna curled up on the ground out in the open or under a tree. Or you see a little duckling on its own or cheeping from inside a storm water drain it fell into on the side of the road. Or you hear calling magpie babies from a nest when you observe an adult magpie just near by, hit by a car dead on the road.... Think. Bypass your own comfort zone and do a good deed. Your actions will help that animal, even if it means a more pleasant and painless death at a vet surgery with us rather than dying out there slowly and in agony.

And my last words on a cheerful note: the baby brushie boy is doing well with my lovely friend Alisson and gets lots of kisses and formula and cuddles daily being raised by her with other baby orphans. The woman 'caller'? I think that her redeeming act was to save this little baby's life and get past her discomfort to save this tiny little life, if not his mother's.

Contact numbers: Irene (Wildlife Rescue and Care) 0409 026 883
RSPCA 1300 ANIMAL (that is 1300 264 625) Listen to the options. You need the wildlife rescue connection.

Free Local Native Plants for PPCG Members

Bryan Hacker

The Moggill Creek Catchment Group's Nursery provides free local native plants to MCGG members – and to PPCG members as well. Several PPCG volunteers work at our Nursery and so that is only fair! Our aim is to support landholders in their aim to restore local native vegetation. Over so much of our area the original forests have been destroyed for farming or grazing purposes but now many landholders are seeking to plant local trees and understorey plants for their habitat value and for their attractiveness.

Each year we give away 12,000 – 15,000 plants in about 200 species and there is no limit to the number of plants that can be taken by 'customers' – just so long as there is the likelihood that they will be looked after in the period to establishment. For the most part, plants are 'tubestock', in small pots. Given the right conditions, these can be planted straight from their tubes, although some growers prefer to pot them on, feeling they improve their chances of successful establishment.

The Nursery is located at the end of Gold Creek Road and has been active for the last 16 years. If you would like free plants – whether for restoring a patch of native forest, providing a native screen between your property and your neighbour, or simply for including in a garden – this Nursery is a possibility. Currently we have considerable numbers of hoop pine, whale bone tree and creek mat rush seedlings available, but the species available change from month to month. Except for 'potting bees' on the first and third Monday mornings of each month, the Nursery is only open by appointment – just phone Bryan Hacker on 3374 1468 or email jbhacker@powerup.com.au.

Nursery work is an activity much enjoyed by our volunteers and something you might enjoy too. Another important way to help is by seed collecting – do contact Bryan if you would like to help in this way.



The nursery



Potting seedlings



Another happy customer

The Human Footprint

John Ness

The evidence of recent human existence and its effects on the earth are now so marked that there is a move to call this epoch the Anthropocene. In fact, guidelines are already being debated in academic circles about how to define this and arrive at an agreed position. One feature is that any effect should be detected on a global basis, be long lasting and be unambiguous in human attribution. However, on a continental or regional basis the human footprint on the earth has been significant for at least 50,000 years. The first clear case was the absence of other footprints, initially here in Australia where about 90% of the marsupial megafauna was wiped out shortly after humans made their way to Australia from Asia about 60,000 years ago. In geological terms the abrupt change in the fossil record represents a clear epoch delineation but it was local, not global.

A similar extinction of about 75% of mammalian megafauna in the Americas occurred around 10,000 years ago as humans from Siberia moved south down the American continent wiping out anything big that had not coevolved with humans and so learnt appropriate survival or avoidance techniques. In contrast to the obvious damage humans can inflict on the land, Lord Byron once waxed lyrical about the oceans defying man's ambitions, viz:

*'Roll on, thou deep and dark blue Ocean, roll!
Man marks the earth with ruin; his control
Stops with the shore.'*

He was right about the ruin bit but overly optimistic regarding the control constraint as while he was writing this very verse, humans were already working on the third major extinction, that of marine megafauna, namely the whales, walrus and large seals. In an almost incredible display of waste and economic



inefficiency, these animals were hunted all around the world and their fat boiled down to make liquid energy, that is, oil. This third wave of megafauna extinction was halted not for environmental reasons but by the discovery and processing of much lower cost fossil fuel oil. Somewhat prior to this, the use of coal rather than timber to power the industrial revolution helped save the temperate forests of Europe and North America. There is a certain irony in that the industry that inadvertently saved the forests and whales is now embarked on a crusade to make the whole planet unsuitable for any large animals, marine and terrestrial, including humans: the final megafauna solution indeed.

Perhaps the earliest global signature of humans was the sudden surge in global methane (CH₄) levels as recorded in ice cores. This started around 5000 years ago and was associated with the widespread shift to farming, especially rice paddies throughout Asia, which released large quantities of methane. However, it has not proven possible to be absolutely unambiguous about this as there could be other factors involved. Around this period, the slow increase in carbon dioxide (CO₂) levels associated with forest clearing and burnings as humans world wide moved from hunter gatherer to farming communities appears. However, the effect is small and easily masked by natural cycles except perhaps for a curious dip in CO₂ levels of about 7 to 10ppm from around 280ppm to 270ppm that occurred in the 1600-1800 period. This drop in CO₂ was almost certainly the driver of the Little Ice Age that hit Europe at that time. People were able to skate on the Thames and poets like Wordsworth had a good time skating on thick ice and waxing lyrical about it.

This Little Ice Age anomaly driven by the drop in atmospheric CO₂ level, did not have a pleasant origin. It was the result of the first major genocide and probably still the largest one in human history. Of the 60 million or so inhabitants of the Americas that were alive when Columbus first stepped ashore on the islands off the east coast of North America, only about 5 million of their descendants were alive 200 years later. This dramatic decline in population due to introduced diseases, starvation and war led to a major regrowth of forests as the vast areas once cleared and kept clear for agricultural production returned to forest. The estimated area of forest regrowth (about 650,000sq km) and the amount of carbon (about 10,000 megatonnes) locked up in trees over that 200 year period correspond reasonably well to the amount of CO₂ extracted from the atmosphere. A CO₂ change of 7ppm in the atmosphere is a mass of around 35,000 megatonnes of CO₂ which would result from storing an extra 10,000 megatonnes of carbon in trees. The CO₂ minimum was short lived in geological terms and by 1850, the levels had returned to the longer term mean of 280ppm before the sudden acceleration starting around 1880. This acceleration has continued unabated so that CO₂ levels are now at an eye watering and unprecedented level of 400ppm.

The extinction of megafauna, the changes in soil due to farming and the sharp rise in methane levels are all strong indications of human activities but since the middle of the last century, the clues have become indelible marks and we are spoilt for choice. Prior to the 1940s, humans essentially rearranged elements and materials that already occurred in nature. Spurred on by the demands of WWII, humans began to produce molecules of wonderful shapes that nature never designed. We see these everywhere and we do not, in truth, know if they are bounded in time or effectively eternal. These molecules are the ones that make up the vast array of plastics, the detritus of which now cover the land and the oceans – there is no mistaking this in the present soil, ice and marine sediments layers. At about the same time as the plastic deluge started, humans began exploding nuclear bombs and adding novel radioactive isotopes to the atmosphere. The resultant carbon isotopes which peaked in 1964 after atmospheric nuclear bomb testing was banned along with the plutonium, caesium and iodine isotopes – some with half lives of 20 million years – which are now in trees, stratigraphic layers, ice cores and marine sediments are strong contenders for, and enduring markers of, the age of the Anthropocene.

Perhaps though we should give the honour of ringing in the Anthropocene to the ice skaters since they welcomed the first Little Ice Age brought on by humans about 400 years ago. The new generation of ice skaters is now heralding the second Little Ice Age also ushered in by humans. The Rideau Canal in Ottawa is the largest natural outdoor ice rink in the world but since 1970 the number of days available for skating has been dropping at around 5 days per decade from 75 in 1970 to 50 days or fewer now. The skaters are on increasingly thin ice and before this century is out will have to replace skates with skis, water, not snow ones. This second Little Ice Age will, of course, be noteworthy for the precious little ice that will exist, not for the extra cold winters as was the first.

The historical record verifies Byron's claim that humans have marked the earth (and the oceans and the atmosphere) with ruin but also shows that it is possible for humans to repair such damage and reverse what may seem as inexorable trends. There is enough information, knowledge and analytical processing power to measure, understand and predict the consequences of human numbers and our activities on the earth. There is adequate enough technology available now to start reversing the process of destruction and subsequently to greatly improve on these technologies to accelerate the repair process. Whether the human brain and its economic/cultural expression, which determine the human footprint, can adjust in time are the major unknown.



Green Army at Anstead Bushland Reserve

Suzie Nicholls

Just half way through the 21 week program and the Green Army Team at Anstead Bushlands are kicking goals and having fun! The area they work in was a tree planting under the Brisbane City Council's 2 Million Tree project, but now 1565 plants have been added. This will improve the understory and ground cover to reduce weeds and increase habitat value for local wildlife.

The team can often be seen throughout the week moving mulch to improve the soil and smother the weeds and so far, 170 cubic metres of forest mulch has been moved with one wheelbarrow. This is only one half of the project. Within the next few weeks another 80 cubic metres will be brought in to complete the opposite side of the fire trail, and prepare for a few thousand more plants.

Between studying on the computer, pulling weeds and watering plants, participants are already preparing their resumés and refining their job search skills and looking for their next step in life. It is hoped the skills they gain in this project will assist in making them more employable and job ready, in addition to increasing their passion for the environment. Two valued members of the team have already gained experience and found full time employment and left the team.

Not only have participants learnt whipper-snipping, back pack weed spraying and bush regeneration skills, as part of the program, they have completed a First Aid and CPR certificate and four units of the Conservation and Land Management certificate IV which included Workplace Health and Safety, chemical use and small machinery.

If you haven't been to Anstead lately, please drop in and enjoy the bushlands and take a look at the Green Army team's site.



Green Army at work at Anstead Bushland Reserve

Joining the Green Army

The Green Army is open to school leavers, gap year students, graduates, and job seekers aged between 17 and 24 and interested in gaining practical training and experience while being paid to work in your local environment. Participants

- are paid an allowance during their placement in the Green Army. From 1 July 2015, the allowance ranges from \$10.24 to \$16.61 an hour.
- will be trained in first aid and work health and safety before starting a project.
- have the opportunity to do accredited training modules to help them prepare for the workforce or improve their career opportunities.
- can meet people who are as interested in helping the environment as they are.
- will help a nationwide effort to clean up and protect Australia's environment and lend a hand to their local community.
- will help deliver real benefits for the environment, such as restoring native vegetation, rejuvenating wetlands and rivers, protecting animal habitats and conserving Indigenous heritage places.
- will be involved in a project for up to 30 hours a week for a period of 20-26 weeks.
- will be given appropriate clothing and safety gear, including boots, trousers, hat, gloves, and shirts. Wet weather gear and jumpers or jackets for cold climates will be provided.
- will be picked up at a selected pick up point to get you to and from site and training activities.

The Green Army can be contacted by phone (1800 780 730), email, on Facebook, twitter, etc.

