

# the **COD** Line

## Win win!

The knowledge and understanding shared by the MRCCC staff over the years has encouraged and guided environmental and sustainable production management on our property, benefiting both the farm business and our local environment.



We live on the Mary River between Conondale and Kenilworth, and have been operating a dairy farm here for 25 years. Prior to that the property was used for beef grazing. Our involvement in environmental management running parallel with production management has occurred for many years. Intensification of pasture and crop management leads to more viable production systems but their activity needs to cover the sensitive bigger system attributes like riparian vegetation, small creeks, wetlands and the larger river systems.

### FENCING

Moving cattle out of water courses and associated undergrowth became excessive in the routine of a dairy. Also, the acceleration of bank degradation on gullies, creeks and rivers triggered the need to use this land resource differently. In the early 1990's fencing of watercourses and installing water troughs simplified the management of intensive grazing systems. Denying cattle access has resulted in a dramatic and rewarding response in the riparian area and these fertile wet landscapes.

Extensive plantings of native trees and understory plants along the fenced off areas quickly established green corridors that perform several roles. These corridors split up the grasslands creating sheltered pasture areas and the riparian vegetation has created a nutrient buffer between the grazing system and the watercourse. This is particularly important with the high nutrient focus of milking sheds and yards.

The 25 year old plantings along the river (2km) and the small creek (1.5km) showed great benefits in the flooding events of 2013. Slumping was evident in unprotected riverbanks on neighbouring properties. While about 300 metres of our riverbank was degraded by erosion, the remainder withstood those one in 100 year events, which we believe is directly attributable to our riparian plantings.

One problem with fertile wet areas is the maintenance, removal or control of noxious weeds, particularly in the fenced off areas. While some weeds are manageable, some of the more recent trees and creepers are less easy to manage.

These fenced off areas also provide shelter for wildlife. While we have not surveyed the population of native animals we were able to observe a build-up of feral deer (Rusa). After a few years when the population became

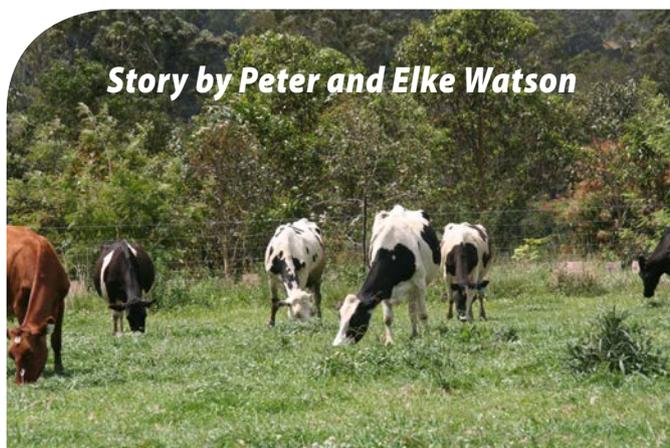
excessive a collaborative effort with Sunshine Coast Council reduced the population to negligible levels. Our biosecurity has greatly improved with this reduction. Similar proactive work by the council has helped control feral dog numbers. A more recent disturbing incursion is the movement of the aggressive Indian Myna bird into the avian population.

### SOIL MONITORING

Addressing pasture management more broadly involved assessing the nutrient removal rates of the production system with regular soil nutrient analysis. Within that area of management, the acidification rate of the soil is monitored and addressed with an application of lime as necessary to maintain a workable soil chemistry.

In more recent times access to organic carbon from sewage treatment plants has become available and is used extensively on appropriate EPA approved paddocks within a specific land form.

STORY CONTINUED ON PAGE 15



Story by Peter and Elke Watson

**NOOSA FESTIVAL OF WATER**  
**SUNDAY 24 JUNE**  
**10AM TO 3PM**  
**LAKE MACDONALD**  
**FREE - LOTS TO DO**  
**SEE PAGE 10**



## 'When Larry Met Steve'

### MRCCC aqua-friendly occupants Larry Lungfish and Steve Gudgeon.

#### The travels of Larry the Lungfish!

Late last year, the Fraser Coast Regional Council kindly donated Larry the lungfish to the MRCCC, complete with tank and stand. Larry has proven a big hit at the MRCCC Resource Centre, where he shares his tank with other native fish, including Steve, a very colourful Purple spotted gudgeon. Steve is besotted with Larry, and is usually found "snuggling" up to him, despite the size difference between the two fish.

Whilst we love having Larry and have learned so much about this ancient species during his stay at our Resource Centre, it was decided that Larry was outgrowing his tank and needed more space to move around. Sea Life at Mooloolaba (formerly Underwater World) have agreed that Larry can move in with their 4 adult lungfish in a purpose built tank. We will be sad to see Larry go, but are hopeful he will enjoy his new life in a tank with his own kind, and with a dedicated lungfish curator.

Happy travels Larry!

**Welcome to the June 2018 edition of the Codline.**

**Thank you to those who contributed articles. The articles in this issue demonstrate the diversity of activities undertaken in the name of natural resource management!**



## COMING EVENTS

**24 June, Sunday**

**Noosa Festival of Water  
Lake Macdonald Fishing Competition**

**15 September, Saturday**

**Bee Open Day @ Imbil  
Valley Bees / all day / all things bees**

**23 September to 10 November**

**Mary River Month  
Go to [www.mrccc.org.au](http://www.mrccc.org.au) for details**

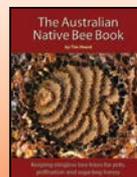
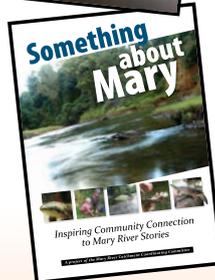
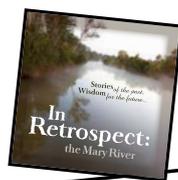
**18 October, Thursday**

**MRCCC AGM**

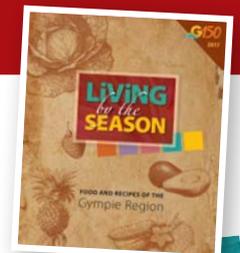
**10 November**

**Mary River Festival @ Kandanga**

## Available now



- **Living by the Season**  
Food and Recipes of the Gympie Region  
Lesa Bell + Glenbo  
Book - \$20 or \$33 INCL. POST
- **In Retrospect: the Mary River**  
DVD - \$11 or \$20 INCL. POST
- **Frogs of SEQ** Booklet  
\$8 or \$12 INCL. POST
- **Once an Endangered Species**  
DVD - \$5 or \$10 INCL. POST
- **Something About Mary** Booklet  
\$5.50 or \$10 INCL. POST
- **Nature's Gifts Bee Book** Athol Craig  
\$15 or \$22 INCL. POST
- **Aust. Native Bee Book** Tim Heard  
\$35 or \$42 INCL. POST
- **Mary River & Cod Brochures**





# Waterwatch

*Dedicated Waterwatch volunteers in Tiaro*

The MRCCC's long term citizen science Waterwatch Program has over 100 dedicated volunteers who routinely collect water quality data from 123 sites within the Mary River Catchment. Currently there are eight Waterwatch Networks: Upper Mary (Maleny), Kenilworth, Imbil to Amamoor, Gympie to Curra, Eastern Catchments, Widgee and Wide Bay, Munna Catchment and Tiaro (including Maryborough). Data collection occurs monthly and consists of using simple hand held testing equipment to measure temperature, pH, salinity, dissolved oxygen and turbidity. Volunteers also record flora and fauna species present at the time of testing.

Data is then processed by the MRCCC and compared to the Queensland Water Quality Objectives to produce Waterwatch reports to summarise the health of Waterwatch sites. Waterwatch reports are available on the MRCCC website: [mrccc.org.au](http://mrccc.org.au). The MRCCC has long term baseline information on the health of the Mary River and its tributaries and the seasonal variations that occur.

If you would like further information or have approximately one hour spare each month and would like to contribute to the Waterwatch Program, please contact the MRCCC on 5482 4766.



*Jess Dean and Peter Watson testing at the Mary River*



*Glenda Pickersgill using the turbidity tube at the Mary River*

# Gerry Cook Hatchery update



In 2017 the breeding program at the Gerry Cook Fish Hatchery produced 16,500 Mary River cod fingerlings for release in waterways throughout the Mary River catchment. This represents the largest number of fingerlings released for conservation stocking for over a decade. A team of landholders and volunteers assisted with the releases, collecting bags of fingerlings from Hatchery Manager, Darren Knowles, then heading out to the Mary's headwaters to release the little fingerlings in areas of prime cod habitat.

The Hatchery received widespread exposure when the AFN Fishing Show produced an episode about the cod and the hatchery, which screened on national television in August 2017. The producers kindly donated the footage to the MRCCC to enable a shorter video to be produced, which is now available to view on YouTube. Search for the Endangered Mary River Cod - Respected and Protected.

The Hatchery and the cod were also featured on ABC radio in December 2017, with veteran reporter Jennifer Nichols assisting with a cod release at Belli. This story attracted widespread interest and comment.

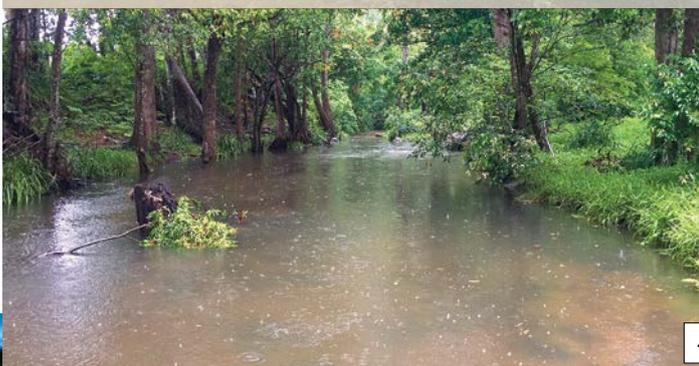
The MRCCC appreciates the financial support provided by the Burnett Mary Regional Group which will contribute to some of the cost of this year's breeding program. Avenues to raise more funding are currently being explored to ensure another successful breeding season in 2018.

Noosa Council also provided support for the cod and the breeding program with a small grant to enable the purchase of display materials and the production of 5000 brochures about the cod, which are now being widely distributed.

The MRCCC, together with the Sunshine Coast Regional Council, also supported important research for the species. New improved genetic markers have been established which will be useful for cost-effective monitoring of genetic diversity and recruitment dynamics of Mary River cod, both in the hatchery and in the wild. What is really needed now is a population survey in the Mary River catchment to determine whether cod numbers have significantly increased as a result of the captive breeding program.

Representatives of the MRCCC recently met with Seqwater to discuss relocation of some of the Hatchery facilities during the construction of the new dam wall at Lake Macdonald. Whilst it is unfortunate that the Hatchery needs to close, possibly for up to 4 years, Seqwater have offered to cover the cost of relocating some of the facilities and establishing a scaled down version of the breeding program at a local Cooroy property. Planning is currently underway to achieve this goal.

There is no doubt that the level of interest in the Mary River cod is considerable and significant. The Hatchery was visited by hundreds of people last year during the Open Day in June which coincided with the Noosa Festival of Water, as well as specialist groups including the Gympie & District Field Naturalists. Posts on the MRCCC facebook page about the cod attract thousands of views, and even Google maps has recorded thousands of people 'visiting' the site.



Top to bottom: Mary River cod; Ian Mackay releasing cod fingerlings in Cedar Creek, Belli; Bags awaiting delivery to the creek; Prime cod habitat, Kilcoy Creek, Conondale

# Creating Community Connections

## BRINGING TOGETHER THE PEOPLE AND KOALAS OF GOOMBOORIAN AND WOLVI

The Creating Community Connections project, funded through the National Landcare Programme's 20 Million Trees initiative is wrapping up on the 30th of June. Support for the project began when concerned community members met in 2015 and decided to apply for Australian Government funding in conjunction with MRCCC to plant more koala food trees in the region. The Goomboorian and Wolvi areas have been recognised as an important koala corridor in the Gympie region, which is therefore important to the endangered broader southeast Queensland koala population.

Over 11,000 trees have been planted on 11 properties as part of the Creating Community Connections project to improve habitat quality, extent and connectivity for local koalas. The project has also funded some physical cat's claw vine control and several releases of cat's claw vine biocontrol agents.

Six successful community plantings have been held on local properties, where participants have learned about koalas in their area, including how to identify koala scat and what trees to plant to entice koalas to their



*20 Million Trees - Community planting landholders Moto and Mandy (left and centre) learn the finer details of koala habitat planting from Rick Sizer.*



*Participants enjoying a guided field walk at the latest community planting.*

properties. The most recent planting was held on a property at Wolvi in early May, where 200 trees were energetically planted by volunteers and Gympie Landcare. To top it off, some fresh koala scat was found under an existing tree during a field walk of the property!

It has been a privilege to witness the passion and commitment of the landholders and community members involved – without them this project would not have been possible, nor would it have been half as successful. Thank you to Robyn and Kevin Jackson for your help in distributing flyers, providing local knowledge and drumming up support for

the project. We also appreciate the expertise provided by Landcare groups in conducting the koala food tree plantings and field days.

Last but not least, MRCCC is hosting a final end-of-project celebration at the Goomboorian Hall on Saturday the 7th of July 2018 from 8-30am. This will include a shared lunch and a tour of several "Creating Community Connections" tree planting sites - plus a whole lot of fun! If you are interested in learning more about the project don't hesitate to contact the MRCCC office and like the MRCCC and Creating Community Connections Facebook pages for future updates.

Sites with early infestations of Cat's Claw should be treated with physical control and biocontrol releases.

As a whole system, Tinana Creek is considered to have a relatively low-level infestation of the insidious, invasive Cat's Claw Creeper vine. The Tinana Creek Systems Repair project is a joint project between the MRCCC and the Burnett Mary Regional Group, with MRCCC overseeing the implementation of on-ground works throughout Tinana Creek and several of its major tributaries. The project is set to finish up at the end of June 2018.

The aim of the project is to strategically target Cat's Claw infestations in the Tinana Creek system, building on the work of the "Creating Community Connections" project in upper Tinana, and the catchment-wide 5-year Biodiversity Fund project which wrapped up in June 2017.

Due to the highly persistent nature of Cat's Claw creeper, it is imperative that strategic

control of Cat's claw infestations are undertaken on a regular basis to both lessen the chance of regrowth and stop the spread of seed. The Systems Repair project undertook an integrated approach to Cat's Claw control, which included physical control (i.e. cutting vines and swabbing with herbicide) and biocontrol releases. We were pleased to find that some sites which had been identified for physical control and biocontrol releases did not have enough Cat's Claw at that time to warrant working on the site or releasing biocontrols. Once the Cat's claw is reduced to a manageable level it is easier for the landholder to continue treating it on their own.

The Cat's Claw Creeper treatment plan developed for the Systems Repair project includes sites in upper, middle and lower Tinana. Some of these sites are classed as initial treatment sites which means that they have not been treated before as part of a MRCCC project; whilst others are re-treatment sites which may have been treated under another project in

## Cat's Claw Creeper

*Jewel beetle*



Photo Di Taylor

the past. Repeated re-treatment of Cat's Claw is essential in weakening the infestation and moving closer to eradication.

A community event is planned to mark the end of the project at Teddington in lower Tinana at the end of this financial year. The event will entail a field visit to a site treated for Cat's claw as part of the project, which has excellent remnant vegetation as well as good populations of several rare plant species.

There will also be a shared BBQ lunch. Stay tuned to the MRCCC Facebook page for more details in the near future.

# Finding frogs in February AND OTHER TIMES



November 2017 marked the start of planning for the second annual Find a Frog in February Citizen Science program as the final, necessary bucket of funding came to fruition. The area covered by this program includes all of the Mary River catchment with the addition of the Burrum River and coastal catchments south to Peregian. The Burrum River has been included as the endangered Giant barred frog (*Mixophyes iteratus*) has been recorded in this system and provides an important insight into the previous extent of this species (closest records are in Tinana Creek). The Noosa River system, including Kin Kin Creek, are information depauperate and interesting in their own right. Again, the Giant barred frog is significant except this time for its presumed absence when it is surrounded by records in neighbouring catchments.

These are just some of the gaps in knowledge that FFF seeks to fill through the collection of frog records from many locations and habitat types. Surprisingly there is a lack of fauna information from many places as sightings go unrecorded most of the time. The catchment community has many eyes and a great willingness to be involved and contribute to our collective knowledge and management. All the records go into the Queensland Government WildNet database where the data is kept in perpetuity and available to researchers, planners, land managers and members of the public.

After cutting our teeth on this new program in 2017, we were more prepared this February to reach as many people as possible and give whatever support was needed to help people with their frogging involvement.

Here's a brief summary of what went on during 2017 and 2018:

Besides being super prepared this year the weather angels with introductory rain right on cue on the 1st February and again, great, widespread deluges were experienced during the last week. We couldn't have asked for better conditions for frog action to encourage folk to take photos and recordings of frog calls.

Consequently, there were twice as many Frog Finders involved and more than four times the number of records this year! Some significant finds were the Cascade treefrog (*Litoria pearsoniana* - vulnerable) at Wootha, Wallum froglet (*Crinia tinnula* - vulnerable) at Talegalla Weir area, Tusked frogs (*Adelotus brevis* - vulnerable) from three of the four shires, explosive congregations of multi-species activity after heavy rains, development of Year 7 module on frogs by Jean Pink from James Nash State High School, and confirmation of 2002 of the 2035 records due to excellent information provided (photos, call recordings, descriptions, habitats)!

The MRCCC has been carrying out frog surveys in the Mary River catchment since 2003 collecting around 15,000 records. The addition of over 2,000 records in just one month is a mammoth increase in knowledge!

The bar is now set high for us and we will be working to increase participation next year through more awareness, more workshops and modernising the submission of records (paper forms seem to be a thing of the past but, yes, we will keep them for the old fashioned amongst us as well as an electronic method!).

The MRCCC expresses its gratitude to the four councils who funded the FFF program and to the generous provision of space for workshops at Noosa Landcare's Rural Futures Centre, Waterford Park at Kin Kin, the Goomboorian Hall and the Lower Wonga shed at Crossley's property. Fabulous venues even when we were sometimes bulging at the seams!

Major congratulations must go to the Fabulous Frog Finders who put in a huge effort to go out and look around and then to submit their frog experiences. We hope you had fun and will join with us to gather frog records again in February 2019, and any time in-between!



A BRIEF SUMMARY	2017	2018
Number of workshops and school presentations	0	7
Number of Frog Finders submitting records	79	137
Number of surveys carried out	88	223
Number of different locations surveyed	68	146
Total number of frog records submitted and positively identified	438	2,035
Number of species observed	22	23
Number of threatened species observed	3	4

# Seqwater Partnership

Seqwater MRCCC partnership is well underway with the partnership working on 10 separate projects for this financial year. Three of these projects focussed on strategic weed control of vine weeds, particularly Cats Claw and Madeira vine in both the Kenilworth and Goomong reaches of the river. The Kenilworth work in particular builds on past weed control work done by Hinterland Bushlinks, Sunshine Coast Council, Barung Landcare and MRCCC. Through this investment we feel that Cats Claw will be severely limited (we would love to say eradicated, but that would be unlikely) upstream of Kenilworth.

Other projects focus on improvements to effluent management systems, riparian fencing and reconfiguration and/or upgrades of off stream watering systems.

To improve our knowledge of dairy management we have been assisted by Dave Clark who has done a lot of work with dairies in the past on behalf of Seqwater and also Dr Simon Lott from Enviro Ag.

Seqwater also provided funds for our annual Catchment Crawl which was held in October 2017. With the additional funding we were able to sample more sites which will provide us with additional information regarding the water quality up and downstream of Seqwater project sites.

## END OF FINANCIAL YEAR?

Give a thought to a tax-deductible donation to the MRCCC Public Fund.

Some years ago MRCCC established a public fund to receive donations which are tax-deductible. Thanks to a number of private donations, both big and small, the fund has, among other things, assisted the organisation to settle in to its own premises at Stewart Terrace rather than relying on its previously nomadic existence at various locations around Gympie.

Our work, though, is ongoing and a donation to the Public Fund is a good way to help out into the future and at the same time reduce your tax burden. As well as that, you'll get a warm inner glow of having helped support the work MRCCC does throughout the catchment.

Click on the link to find out how to donate or contact the MRCCC for details.

# WHAT'S THIS 'Cane Toad Challenge'?



Most frogs find their meals by movement of their prey however, have you wondered why Cane toads descend upon the dog's evening dinner? Well, unusually, they can smell food as well as see it. Cane toads are remarkable creatures worthy of awe and respect for their toughness, fecundity and adventurous spirit! Their ever-expanding distribution south along the eastern seaboard and across the top end into Western Australia has not yet surpassed the expansion of European humans across this continent but it is very impressive for a short-legged quadruped without navigational aids.

Since 1935 the Cane toad (*Rhinella marina*) has been enjoying the fair shores of Australia – a new home away from its native home in Central and South America. It has been the cause of declines of many meat-eating animals and is known to compete with native frogs for space and food. Many native animals have learnt to eat Cane toads and the list is increasing all the while as evolution works its magic. These include some snakes, many birds, Spotted-tailed quoll, some frogs, and the Australian lungfish! However, most people put the Cane toad into the 'Not-in-my-back-yard' category and feel the urge to do some of their own control of numbers. Many control measures have been researched and implemented (some have not been implemented or recommended because of the risk to our native fauna or because of their cruelty) but usually with only temporary effect on numbers.

Those little metamorphs keep pouring out of dams in alarming numbers.

The small percentage that survive to adulthood are those we see on the roads at night, on our lawns and in the dog's dinner.

We at the MRCCC definitely do not support

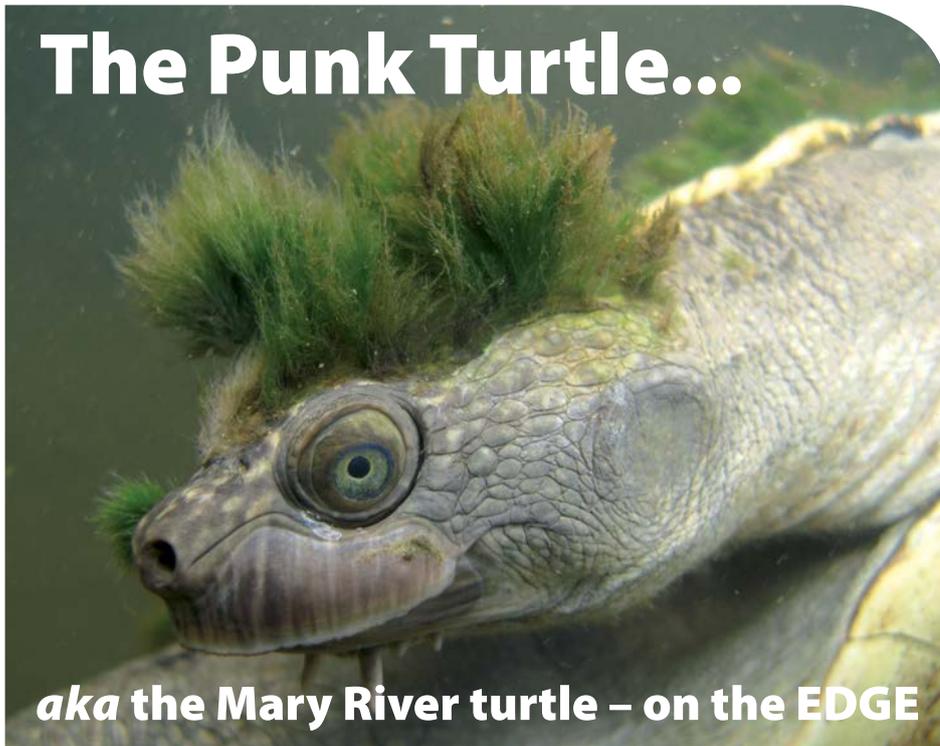
any infliction of pain or discomfort on these creatures and finding a humane way to control numbers has been a great challenge for Australians. Recently, researchers from the University of Queensland Institute for Molecular Bioscience have found that the Cane toad tadpoles are attracted to enzymes in the poison from adult Cane toads and have packaged that substance into pellet form called 'Bufo tabs'. These are used in specially designed traps that can easily be made and placed in still water bodies where Cane toad tadpoles proliferate. Once trapped they can be disposed of humanely. The UQ team call their program the 'Cane Toad Challenge' and have offered it up to the community to use as a control method and monitoring exercise.

The MRCCC is an Affiliate Member of the Cane Toad Challenge and as such we are able to disseminate the Bufo tabs. Jon Hannon is a delegate on the MRCCC and has been busy designing and making our own traps out of recycled materials. We are able to give these away with the tabs, and with a request for return information from the user as to the location and numbers of tadpoles trapped. This information is sent on to the CTC team for their research.

If you are interested in controlling Cane toads in your area and participating in this Citizen Science research program register your details with the MRCCC and we will provide you with your trap and tabs for the next summer breeding season.



# The Punk Turtle...



**aka the Mary River turtle – on the EDGE**

The London based EDGE of Existence program turned the spotlight on reptiles when they launched their Reptile EDGE list in April. This program highlights species that are Evolutionarily Distinct and Globally Endangered. Iconic species featured in this list include the Mary River turtle which sits at Number 30.

To get onto the EDGE list, each species is given a score, which combines extinction risk with how isolated (or unusual) that species is on the Tree of Life. This provides an at-a-glance guide to the evolutionary uniqueness and conservation status of a species. If the species on the List were allowed to become extinct, they would effectively take an entire branch of the Tree of Life with them. Appearing so high on this List indicates the importance and uniqueness of the Mary River turtle at a global scale and from an evolutionary perspective, with an ancient lineage reaching back to the dinosaurs.

The combination of the EDGE listing, the photo of a 'punk' turtle with mossy green 'hair' (photo taken by Chris van Wyk from the Sunshine Coast), and the fact that this turtle can breathe through its bum (cloaca), has resulted in global media interest in the conservation of the species. The publicity has extended awareness of this species right around the planet. It has also translated into practical assistance for Tiaro Landcare's Mary River turtle conservation program.

Here's a few examples:

Tiaro Landcare has launched a crowd funding platform in response to public demand:

<https://mary-river-turtle-public-fund.giveeasy.org/help-punk-today>

Chris van Wyk has created two T-shirt designs and agreed to donate proceeds of the sale to the Mary River turtle conservation program.

<https://au.tee.ninja/collections/punk-turtle>

An entertaining, but informative podcast was just released by an American (can be freely downloaded) <http://species.libsyn.com/>

Conserving the Mary River turtle continues to be one of Tiaro Landcare's key programs. It can take up to 15 to 20 years before this species reaches sexual maturity. In a recent survey, immature Mary River turtles comprised just 8% of the 268 individuals captured. This suggests that for the past couple of decades at least, young turtles have been succumbing to predation and/or poor quality habitat.

In addition, the size of captured turtles in that 2015/2016 study, had shifted towards larger individuals when compared to studies conducted between 2000 and 2010. This suggests the population is mostly comprised of ageing individuals. The combination of the ageing population and paucity of immature turtles highlights the need for recovery actions to be implemented along the entire length of the Mary River.

However, it will take more than the resources of one Landcare group to ensure this species has a future. Funds raised through donations will help fund protection of nests and new research to identify why there are so few immature individuals.



*Glenda Pickersgill with a young female*

## The punk turtle connects Tiaro and Arabian Royalty

*'Surreal' was how Marilyn Connell from Tiaro Landcare described her experience of being one of three honoured guests at an event at the Abu Dhabi Al Bateen Palace.*

The event was hosted by His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the Armed Forces. Caleb Ofori who protects the Togo slippery frog that is found in a single stream in Ghana and Dimitry Dorofeev who is banding migrating birds in the Kamchatka Peninsula in Far East Russia, were the other honoured guests.

At this event at the Palace, Razan Khalifa Al Mubarak, Secretary General, Environment Agency – Abu Dhabi delivered a lecture, 'For the Love of Nature: Innovative Philanthropy for Species Conservation Worldwide'.

Species conservation has been a priority of the Crown Prince and the UAE government. *'We in the UAE make a significant difference to preserve the life of threatened plants and animals not only at the local level but globally,'* Razan said, adding that this is the outcome of UAE Founding Father Sheikh Zayed's vision.

Razan praised Tiaro Landcare's 'punk' turtle conservation program as an example of a *'Boots-on-the-ground, get-your-hands-dirty conservation project endeavouring to save a species from extinction.'* She then invited Marilyn to speak briefly of Landcare's turtle program.

After congratulating Razan on her lecture, the Crown Prince requested that Marilyn join them at the front of the crowd.

Rather than accept thanks for his generosity, the Crown Prince said *'We trust and believe in you and we believe your work is very important, keep doing what you are doing. You are the first line of defence against species extinction.'*

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Tiaro Landcare has, in the past, been a beneficiary of funding from the Mohammed bin Zayed Species Conservation Fund which has contributed towards saving the endangered Mary River turtle.

The philosophy of the MBZ Fund is totally unique in the world of species conservation. It recognizes all species, everywhere, are important - not only the biggest, fuzziest, most beautiful and charismatic of species, but all species including fish, insects, plants, birds and even fungi.

Among the 300 government officials and dignitaries who attended were: Sheikh Saud bin Rashid Al Mualla, Ruler of Umm Al Quwain; Sheikh Ammar bin Humaid Al Nuaimi, Crown Prince of Ajman; Sheikh Saif bin Zayed, Deputy Prime Minister and Minister of Interior; Dr Amal Al Qubaisi, Speaker of the Federal National Council; Sheikh Abdul Aziz bin Humaid Al Nuaimi, and Sheikha Salama bint Mohammed.

Later, Marilyn joined the dignitaries at the Iftar dinner in the Palace Banquet Hall where the Crown Prince's daughter was thrilled to receive a packet of Landcare's legendary chocolate turtles.



*'Australia is an isolated country that strongly guards its borders. Yet here, an Arabian community, halfway around the globe, has reached out to our little community in Tiaro, in recognition that we share the one planet and can work together to protect it for future generations' said Marilyn.*

**MARILYN CONNELL**

*Marilyn Connell, Project Leader Mary River turtle conservation project Tiaro Landcare, with His Highness Sheikh Mohamed bin Zayed Al Nahyan.*



## Gympie & District Landcare 2018

The past year has seen an increase in activities throughout Gympie Landcare starting with the 2018 "Caring for your Rural Block" course which involved more than 20 people enthusiastically turning up every Tuesday morning for 9 weeks to learn from local experts about soils, dams, pest animals etc. Field trips and visits from other groups to explain their roles in the region contributed to the learning. These courses are proving extremely popular with more planned for the future.

At the April AGM, foundation member Graeme Elphinstone took us down memory lane with some details of the start of Gympie Landcare 30 years ago. The AGM saw Ernie Rider elected as ongoing President of the group and a number of old and new members elected to the Management Committee.

The nursery is benefiting from a specially designed solar pump affectionately known as

the "Dalek", a labour of love for Serge Douw, innovator and solar contractor. The futuristic pump has garnered a lot of interest in the region and even featured as a Gympie Times cartoon.

Gympie Landcare's contract services are growing with new staff recently welcomed. Riparian restoration of the town reach of the Mary River is an ongoing project, together with a number of other revegetation sites.

The Cat's Claw and Madeira vine Biocontrol facility overseen by Yvonne Hennel is in full production and is now recognised as a major regional supplier of the jewel beetles and the tingid bugs.

To celebrate the formation of Gympie & District Landcare in October 1988, a mere 30 years ago, several events are planned for the remainder of 2018. A new interactive web site and social media platform is being launched and other events are planned including fun

family days, workshops, a charity golf day and even a Barn Dance.

For more information, visit our new website and like our Facebook page.



# NOOSA Festival of Water 2018

**Family Festival Fun** Once again the Noosa Festival of Water, at Cooroy's stunning Lake Macdonald and the Noosa Botanic Gardens, provides something for all ages to enjoy. Everyone is invited to come along from 10 am to 3 pm on Sunday 24th June 2018 to enjoy local entertainers and learn more about how to protect and care for the unique ecological and environmental attributes which make Noosa such a special place to live and visit.

Bring along your boardies and a towel if you want to make use of the calm waters of Lake Macdonald to learn to kayak and standup paddleboard. The Creative Kids Marquee with activities focussed on caring for our land and water in the Noosa Biosphere is a great place for kids and parents to spend an hour or more.

For a chance to win a prize, keen anglers of all ages should register now for the Catch and Release Bass Fishing Competition which kicks off at 6.30 am on the day at Mary River Cod Park in Collwood Road. Download entry form: [www.noosafestivalofwater.org](http://www.noosafestivalofwater.org)

The Festival offers a rare opportunity to visit the Gerry Cook Hatchery and learn how wild populations of the Mary River cod, one of Australia's most endangered freshwater fish, are being restored. You can reach the hatchery by road or take a free boat trip across the Lake from the Botanic Gardens to Mary River Cod Park and back.

Be entertained throughout the day by fantastic local artists and experts in the Grecian style Amphitheatre. Highlights include storytelling and dance from Lyndon Davis and the Gubbi Gubbi Dancers, the wonderful sounds of Andrea Kirwin, the incredible musical talent of Phenix, the original sounds of the Strangest Dreamers and Festival favourite Geckoes Wildlife's Martin Fingland with his collection of furry, feathered and slithery native wildlife.

Bring along your current Noosa Rates notice if you want your two free trees from Noosa Landcare and take advantage of the Mary River Catchment Committee's (MRCCC) free water testing available for anyone wanting their creek, dam or bore water sample tested. Once again the Noosa Community Biosphere group will be offering heavily discounted stainless steel water bottles which can be filled at Unitywater's "Back to Tap" refill station at the Festival, so you can be a part of our commitment to move away from the sale of single use, plastic water bottles.

A diverse range of community groups will be in attendance with information and displays, and throughout the day you will be able to enjoy kids face painting, a jumping castle, Snake and Reptile shows and a great selection of food and drink.

A courtesy bus operates all day to bring people to the Festival from the parking areas along Lake Macdonald Drive.

To be in the running for a fantastic accommodation package at Peppers Resort Noosa, everyone is encouraged to pick up a copy of the Festival program and lodge their feedback form at the Festival.

## Sunday 24 June



The MRCCC (Mary River Catchment Coordinating Committee) hosts this free annual event with support from Noosa Council, Seqwater, Unitywater, the Burnett Mary Regional Group and Queensland Water and Landcarers.

The Festival is also supported by Noosa Landcare, the staff at the Noosa Botanic Gardens and hundreds of volunteers dedicated to caring for our natural environment.

For more information about the Noosa Festival of Water:

- Check out the Facebook page
- Visit [www.noosafestivalofwater.org](http://www.noosafestivalofwater.org)
- Call the MRCCC on 07 5482 4766





©GUNTHER SCHMIDA

Freshwater mullet



©AUSTRALIAN MUSEUM

Sea mullet

# Mullet in the Mary

## What is the difference between freshwater mullet and sea mullet?

Both Freshwater mullet (also known as pinkeye mullet) and sea mullet (also known as bully, striped or mangrove mullet) migrate considerable distances up the river and tributaries of the Mary River.

Freshwater mullet are in decline throughout the northern end of their range here in the Mary River catchment. Freshwater mullet are omnivores. They feed mainly on algae and other plants and consume decaying organic material and invertebrates. They are usually found in deep slow-flowing pools and are typically 400mm long, but can grow up to 800mm in size.

Sea mullet have a much wider distribution and more stable populations and are more abundant.

Freshwater mullet are one of the priority species in the Mary River Threatened (Aquatic) Species Recovery plan because they need connectivity within the entire river system, which is an important characteristic of a healthy river, and because they are disappearing in other river systems.

### How to tell Freshwater Mullet and Sea Mullet apart:

#### 1. They look different:

One way to tell the difference between the two species is the shape of their snout and head – the Sea mullet has a short, round snout and broad flattened head, the freshwater mullet has a long and pointed snout.

The freshwater mullet may have a pinkish eye and are also more olive green in colour, compared to silvery bluish colour of the sea mullet.

If you actually catch the fish there are two identifying features – the sea mullet has an eyelid and an axillary process (like an extra piece of scale) at the base of the pectoral fin. Freshwater mullet has no eyelid and no axillary process.

#### 2. They are on the move at different times:

**Freshwater mullet** (*Trachystoma petardi*)  
Mature adults move downstream to spawn in estuaries and the sea from summer to autumn.

**Sea mullet** (*Mugil cephalus*)  
Spawning happens in winter and involves adults moving back from the freshwater to the marine waters. Juvenile sea mullet tend to migrate back up into the river system through summer and autumn (roughly). Juvenile mullet may also return to the estuary before they are mature enough to breed and later return to the river system. They mature at about 2 years old and are then about 240mm long.

## Mary River Month



2017 was the third year we have held Mary River Month. We were lucky to have Julie Spencer assist with the planning and delivery of the events. As a result we were able to secure some terrific sponsors for the Spring in the Mary Photo competition.

Thank you to Murray Views and the Burnett Mary Regional Group for offering ongoing sponsorship for the open and runner up prizes. Thanks also to BOS Rural, HQPlantations and Noosa and District Landcare for providing prizes in the Rural, Junior and People's Choice Categories.

2017 was the first year that we held a "Tell Mary's Tales" poetry and prose sharing.



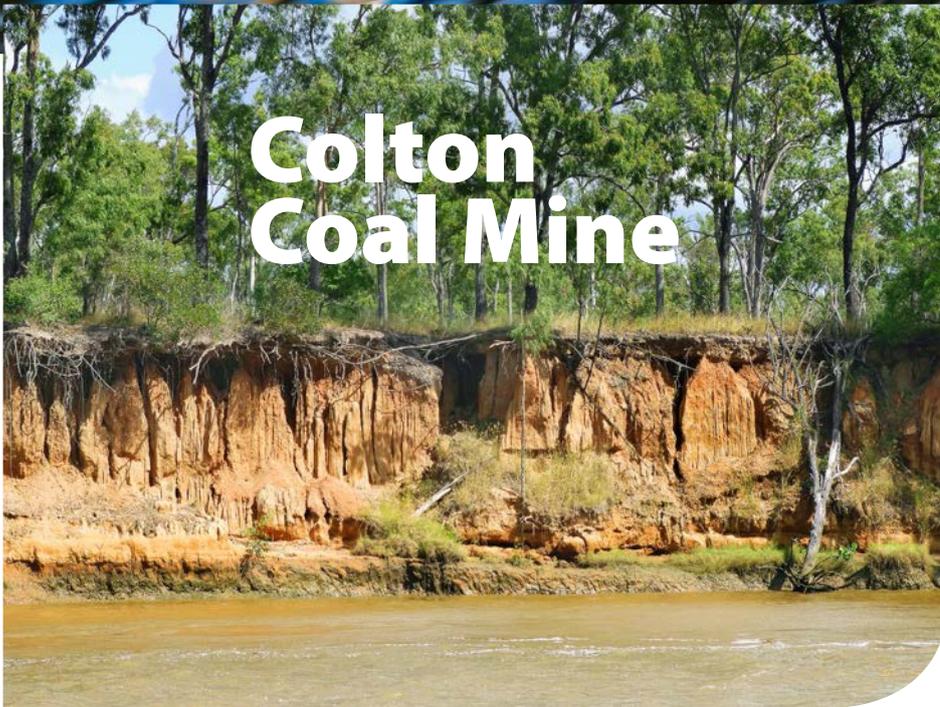
Mary River Month 2018 kicks off with the Big Jump on World Rivers Day on Sunday 23 September 2018 and ends with the Mary River Festival on 10 November.

Events which MRCCC already has planned include the Catchment Water Quality Crawl on 8-9 October and Waterwatch presentation and BBQ on 27 October. The Spring in the Mary Photo competition will be on again.

If you are planning an event you would like to include in the Mary River Month 2018 calendar please send an email to:

[maryrivermonth@mrccc.org.au](mailto:maryrivermonth@mrccc.org.au)

- A. Open Winner**  
*Early morning rowers on the Mary River*  
- Debbie Polley (sponsored by Murray Views)
- B. Junior Winner**  
- Levi Vella (sponsored by HQPlantations)
- C. People's Choice**  
- Dave Rowlands (sponsored by Noosa & District Landcare)
- D. Runner Up Open Category**  
- Sydney Collett (sponsored by Burnett Mary Regional Group)
- E. Rural Award**  
*Making Hay in the Valley* - Jillian Turner (sponsored by BOS Rural supplies)



# Colton Coal Mine

Just to the north of the road which joins Maryborough to Hervey Bay, and less than ten kilometres from Maryborough itself, lies the site for the proposed Colton open cut coal mine. It lies in the Susan River catchment which empties into the lower end of the Mary.

Given the high environmental value of the Susan River, we were confident when the plan was first mooted that it would never gain government approval. The proximity of the site to not only the Susan River but particularly to Great Sandy Strait with its RAMSAR wetland listing, not to mention World Heritage status only served to back up this confidence.

Our principal concern with the proposal was its potential to impact on water quality. Test bores at the site showed a number of heavy metals already present along with the presence of acid forming soils around the coal itself. The mine, in low-lying country, would require continual de-watering and this, along with other site water, would be discharged, into the Mary River just eight kilometres upstream of Great Sandy Strait. While the levels of several heavy metals are anticipated to exceed water quality guidelines, the proponents argue they will be diluted and mixed before reaching Great Sandy Strait.

The release point is in a tidal reach of the Mary and given that there is often very little fresh flow over the barrage further upstream, the discharge water, along with its dissolved heavy metals, would simply move to and fro with the tide, over an estimated 10 kilometre tidal excursion, accumulating all the while and with the potential to be laid down in the river's fine sediments.

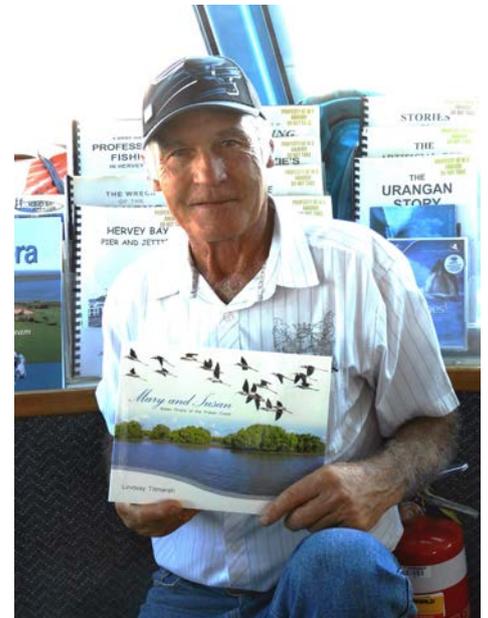
There seemed to be ample opportunity for 'unacceptable environmental risk'. The locals thought so too.

In November 2016, a reader poll in the Fraser Coast Chronicle not long after the Information sessions about the proposal showed only 34% were in favour, while 61% were against. Some six months later, in May 2017, and clearly after a cooling off period and time for reflection, the number in favour had plummeted to just 11% while those against had climbed to a pretty decisive 87%. Nonetheless the state government granted the necessary approvals for an open cut mine with an anticipated life of some eight years. Some in the industry have expressed the view that the half million tonne per annum output scarcely makes the project viable but the proponent's website speaks of the opportunity to expand it more than threefold.

There's been concern expressed also about mercury in the discharge water. Coal typically contains one to two parts per million of mercury and its difficult to imagine that half a million tonnes of coal can be removed without at least some of this mercury finding its way into the water.

MRCCC has joined with Fraser Island Defenders Organisation and the Greater Mary Association to establish a research fund to enable researchers to further explore probable impacts and gather background data.

MRCCC stands squarely with those 87% of Fraser Coast Chronicle readers who, when asked if they supported the proposal, voted 'no, it's too risky'.



## River Cruise

Delegates and associates of the MRCCC recently cruised the Mary River from River Heads to Maryborough and back. The cruise departed from the boat harbour at Urangan, and featured Tandora grazier Lindsay Titmarsh providing much detailed information about the river he knows so well. Notable points of interest included the location where the Colton Coal mine intends to pump untreated mine waste water into the Mary. As well as being an educational and informative experience, the cruise provided a rare opportunity for MRCCC delegates and staff to socialise.

A wonderful day was had by all.



# Activities of the GMA

## ACTIVITIES OF THE GREATER MARY ASSOCIATION 2017/18

- Had stall at Tiaro Field Day, with biocontrol and Tilapia information.
- Had a pull-up banner printed for our future outings.
- Continued to rear and supply Tingid Bugs and Jewel Beetles as biocontrol for Cats Claw Vine. Trying to establish some breeding of a leaf-tying moth which is another biocontrol for CCV. Ross Smith very active in this facility.
- Continued to pursue sediment testing for the Mary River, resulting in a consortium with MRCCC and FIDO, to which GMA contributed \$5000. This consortium has now advertised to researchers that there is funding assistance for targeted research on the Mary River and Great Sandy Strait.
- Participated in Walk for Life in Maryborough.
- Had bi-monthly working bees which mainly helped in the biocontrol facility, potting up CCV and weeding, and preparation for our other activities.
- Had Seed ball making activity at Tinana School STEAM day.
- Participated in fun day at the Maryborough Library.
- Members participated in Wildlife talks at Hervey Bay Library.
- Guest speaker Peter McAdam at AGM spoke on the river processes.
- Participated in Festive Heart activities for children at Maryborough City Hall over the school holidays - with help from local artists to make the frames, we had children helping paper mache a Lungfish and a Koala, which were then painted. They are now wonderful articles to be used in future promotion/events. We had several other activities at this event which ran for 9 days before Christmas and 9 days before Australia Day. The two 'mascots' made their first public appearance in the Australia Day mini parade.
- Had a stall at Australia Day event in Maryborough.
- Requested by the Riverside Christian College to have class 9 students visit to see what the Greater Mary Association had achieved in revegetating the Koala corridor over 6 adjacent properties. This day was successful, as we could show the sizes achieved by trees planted at different times, the effect that fencing had had on some areas, explain the method of preparation and planting and need for follow-up maintenance and watering, and show the measures taken to induce fauna back to the area.
- QWaLC survey - 496 volunteer hours, and 378 people engaged over the year with our activities.

We thank MRCCC for the assistance and guidance they have shown us through the year, and it is wonderful to have expert help so readily accessible.



# Let's Keep it in KIN KIN

Kin Kin (Indigenous word for 'little black ant') is a picturesque township in the Noosa Hinterland. This area was once home to some of the most magnificent rainforest trees in Australia, as documented in W.D. Francis' seminal work 'Rainforest Trees of Australia'. The Kin Kin catchment feeds into the iconic Noosa River which has one of the highest water quality ratings in Queensland. However due to its historical land use, geological characteristics and high rainfall, the Kin Kin catchment is the major contributor of sediment to the Noosa catchment.

Noosa & District Landcare Group (NDLG) has been working with a variety of partners to identify areas of highest erosion and to develop plans to reduce sediment movement in the catchment. We are indebted to our partners including Noosa Biosphere Reserve Foundation, Noosa Parks Association, The Thomas Foundation, Healthy Land and Water, Noosa Integrated Catchment Association, Noosa Council, Country Noosa, and the Kin Kin Community Group.

The project has a number of activities:-

## 1 LIDAR Change Analysis & Area Prioritisation

To identify areas within the catchment that are impacted by soil loss and deposition, including hill slopes and creek lines. This was undertaken by LIDAR (Light Detection and Ranging) which uses a near-infrared laser to map the land from aircraft. The project compared imagery from 2008 to 2015 to identify active erosion and deposition areas. A prioritization exercise is occurring to inform the priority sites in greatest need of remediation in the Catchment.

This part of the project had some significant results-

*Analysis indicated that 2.4 million cubic tonnes of soil had been mobilized in recent years, or the equivalent of almost 191,284 large dual axil soil delivery trucks or 765 Olympic sized swimming pools filled with soil.*

## 2 Riparian restoration demonstration site

On-ground demonstration site for remediation of active hill-slope and riparian erosion. Over 850m of fencing and 2300 trees (1/2 ha) will be planted as part of this project on the Glasby's property in Kin Kin.

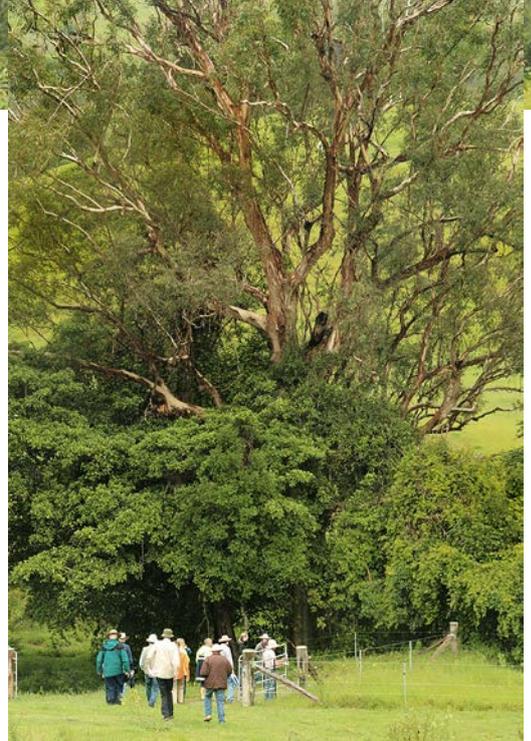
## 3 Cats Claw Creeper Vine (Canopy Weed) Treatment, Survey and Action Plan Development

Cat's claw creeper (*Macfadyena unguis-cati*) is a Weed of National Significance, and can completely transform a landscape. This project mapped the infestations, undertook targeted and strategic manual and chemical control and to assist landholders with advice on control of this nefarious weed.

## 4 Awareness Raising Initiatives

A series of events and communication actions will occur to complement the actions occurring on the ground, including extension and property visits with landholders identified in the LIDAR analysis as being focus areas for remediation.

With support from the Noosa Biosphere Reserve foundation, and partners we are about to embark on Phase 2 of the project—remediation and extension services to landholders in the Kin Kin catchment.



# The MRCCC's Backyard

A principal MRCCC activity is to assist in the revegetation of riparian areas throughout the Mary River catchment, with our operational base in Gympie. The MRCCC has operated here for 4 years now from our renovated premises at 25 Stewart Terrace.

The grounds surrounding the office have been planted with hundreds of native plants donated from Gympie, Noosa and Barung Landcare, from Cath and Col Robinson of Windy Ridge Nursery at Amamoor, and from community members. The gardens are starting to become well established, providing a valuable resource to show landholders how various species grow, and which species are suitable for revegetation projects.

Some Cat's Claw Creeper biocontrol agents were released on a small infestation escaping from a neighbour's property. Their presence and impact is noticeable, also providing a great education resource.

Two species of stoloniferous pasture grasses have also been planted. Pangola and African Star Grass are suitable for planting into gully erosion sites, dam bywashes and bare areas. Both are palatable for stock and can be

rapidly established from vegetative plantings. Graziers are welcome to take runners of these grasses for establishment on their property.

A small herb rockery has been established courtesy of Gympie's Craig family, with lime, bay-leaf and banana trees ready to be planted, and fence lines and spare spaces are being made useful with greens and vegies.

Down in the back corner, a large metal sculpture like object is now in place to support our Davis weather station. This project was made possible by a generous donation from a member of the catchment community. The solar powered weather station combines a rain collector, temperature and humidity sensors and an anemometer to record wind speed into one package. The weather station will relay weather data through to a console installed in the office, and should be capable of providing weather data to anyone with the login details. Details will be made widely available when the weather station is operational.

Thank you to our resident grounds person Ross, who has been instrumental in setting some direction in our gardens.

*Story continued from front cover 'Win win!'*

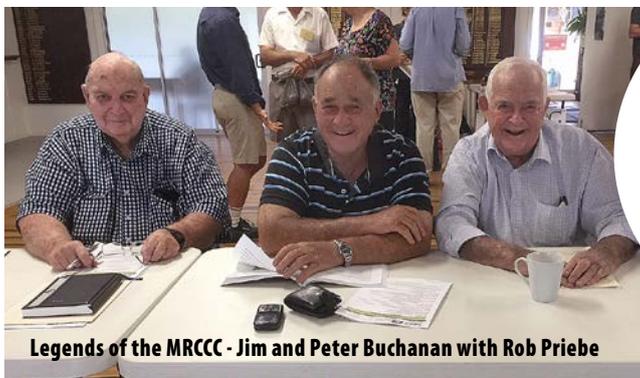
## EFFLUENT SYSTEM

It is the maintenance of organic carbon levels in the soil along with pH, that drives the fertility of the soils for pastures. Unmonitored soil can lead to low organic carbon levels and pH, and the correction to the ideal status can be expensive.

The central focus of a dairy farm is the dairy, yards and near laneways. The water and nutrients from these areas is captured in a large solids and liquid trap where the solids are separated from the liquid. The solids are stocked on a mound and composted before being spread onto pasture. The liquids from the trap are pumped on nearby pastures with a travelling effluent irrigator.

Because the nutrient build up in these nearby pastures could be excessive, a solid set irrigation system allows this pasture to be driven hard to capture and utilize the nutrients applied. These nearby paddocks can also be grazed easily and quickly by the cows as part of driving the pasture hard to capture the recycled nutrients.

**PETER AND ELKE WATSON**



**Legends of the MRCCC - Jim and Peter Buchanan with Rob Priebe**



**Anyone out there know this little beauty? Let us know if you do.**



## Athol steps down from Valley Bees chair

Athol Craig, who was one of the key founding members of the successful Valley Bees Group, this month stepped down from the position of Chair that he has held since the very beginnings of the group (they formed in Kandanga in January 2011).

He has been elected Patron of Valley Bees.

Photo above shows Athol with Honeybee Cottages owner Allan Rainbow, at the recent opening of the brand new on-site Bee Workshop Room, named after Athol.

Athol leaves a wonderful legacy for his time and commitment to bees, to the group, and to mentoring newcomers, and has vowed to retain contact and involvement, both as an advisor and as a friend.



**Rick Sizer sharing his tree planting knowledge**



**Where would MRCCC be without Jullie Liddell, cleaner of our mess for over a decade!**

is hosted and supported by the Mary River Catchment Coordinating Committee with funding support from the Sunshine Coast Council gratefully acknowledged.



### Mary Landcare on Facebook

- Mary River Catchment Coordinating Committee
- Gympie Landcare
- Noosa and District Landcare
- Mary River Turtle Project - Tiaro Landcare
- Noosa Festival of Water
- The Greater Mary Association Inc.

'Like' the pages to keep in touch with information and events relating to natural resource management in the Mary River catchment.

### For a luscious full colour version

of CODLine please go to [www.mrccc.org.au](http://www.mrccc.org.au) and download our free PDF, either in a low-resolution or high-resolution format.

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