

the CODLine

• JUNE 2017 • ISSUE 28



2014

Life on the Mary River

I once stayed a couple of days at a friend's property on the Mary River at Kenilworth. From the verandah in the early morning, I could see the cattle through the mist, grazing the green river flats. I decided there and then that one day I would buy a property such as this. Ten years later in 1983 I purchased 150 acres on the Mary River at The Palms, about 5km north of Gympie, and moved there with my wife Cherie and 2 young children. I was 33 at the time and we have lived here ever since.

The property is mostly deep sandy loam (decomposed sandstone) with some forest sloping down to river flats along the ~750m frontage to the Mary. A submersible pump has been installed to supply water for irrigation, stock and home gardens. I used to enjoy walking along the river bank watching the platypus, lungfish, turtles and big schools of mullet in the moss on the sandbar. This was before the Mary River turtle had been officially identified. Now the moss is gone and there are no schools of mullet, only the occasional one jumping. Later on along the lower banks we planted what I call turtle figs (*Ficus racemosa*) that produce fruit which roll into the river when ripe to be snapped up by the turtles.

A large flood caused severe erosion and it was then I decided to revegetate the river banks which had previously been cleared, with the exception of some mature bottle brush and waterhousias right on the water's edge.

In 1993 in conjunction with the Forestry Dept and the Dept of Environment and Heritage, a plan was initiated to revegetate the river bank with 7,000 trees. Every native species that grows in the riparian zone of the Mary River was planted so that future seeds could be collected for future revegetation projects. The trees were planted in stages and could be irrigated from the river as needed until sufficient root development was achieved. Electric fencing was used to exclude cattle during establishment with strategic grazing used as a management tool to control grass and improve access for maintenance of the planting. In the most erosion prone area a high concentration of Snow in Summer (*Melaleuca linarifolia*), Mat Rush (*Lomandra longifolia*) and Black Tea Tree (*Melaleuca lanceolata*) was planted as we considered these trees would recover well after flood damage and persist. Over the last 25 years and many floods this has proven correct. I found that the She Oaks

(*Casuarina cunninghamiana*) planted high on the bank persisted but those planted lower were eventually snapped off and died without reshooting, leaving a gap in the planting. The trees I like to plant on the water's edge are the red bottlebrush (*Callistemon viminalis*) and the weeping lilly pillies (*Waterhousia floribunda*).

In 2016/17 a further 1600 trees were planted upstream of the original revegetation site. This project was done in conjunction with MRCCC and Landcare. The area includes three large landslips and has been planted with the emphasis being to stabilise the toe of the slip from the waterline up. During a flood event silt and sand is deposited in the slip and this material is then held in place by the trees as the water recedes. I have seen 2 metres of silt and sand laid down from a single flood. The earlier planted trees in this area are now up to 2 metres high at 10 months old and look a picture.

I know that the next good flood will bash and smash them and rip some out but most will persist and grow to protect this wonderful river and the wildlife that lives in and around it.

ARTICLE JOHN ANDERSON



MAY 2017

PHOTO SARAH GRIMISH



Photo Lindsay Titmarsh • Art-touch Glenbo

WELCOME...

Welcome to this June 2017 edition of the Codline and thank you to those who contributed articles. The articles in this issue certainly demonstrate the diversity of activities undertaken in the name of natural resource management!

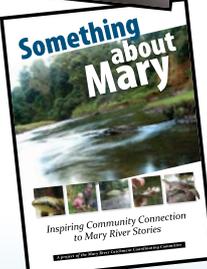
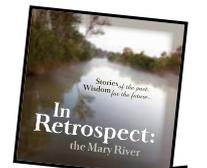
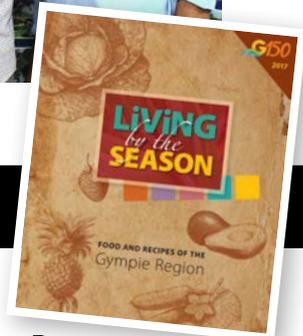


Margaret Thompson, Annette Bourke, Rob Priebe and Ian Mackay, MRCCC Executive

COMING EVENTS

- Sunday 11 June** – Land for Wildlife Field Walk, Litherland Property, Mothar Mountain
- Sunday 25 June** – Noosa Festival of Water, Noosa Botanic Gardens, Cooroy
- Sunday 25 June** – Lake Macdonald Catch and Release Bass Fishing Competition, Mary River Cod Park, Cooroy
- Sunday 3 September** – Land for Wildlife Field Walk, Benian Rd properties, The Palms
- Sunday 24 September** – The Big Jump and start of Mary River month. Entries open for the Spring in the Mary Photo competition
- Saturday 14 October** – Valley Bees “Bee Open Day.” All day event at Mary Valley College, Imbil. All welcome. \$2 entry.
- Wednesday 18 October** – MRCCC AGM
- Saturday 11 November** – Mary River Festival, Kandanga
- Sunday 3 December** – Land for Wildlife Field Walk, Mary River, Netherby
- February 2018** – Find a Frog in February

Available now



- **Living by the Season New Book** - Food and Recipes of the Gympie Region
Lesla Bell + Glenbo. See page 13.
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 Brochure**



Cod breeding hope for the future

An outpouring of widespread support enabled the MRCCC to continue the Mary River cod breeding program at the Gerry Cook Hatchery in 2016, reconfirming the extraordinary level of interest in this top order predator, which was once prevalent throughout our region.

In 2016 the hatchery produced over 30,000 fingerlings from 3 breeding pairs with around 5000 fingerlings released into the Mary River Catchment for conservation stocking and the remainder released into specific waterways in south east Queensland for recreational fish stocking. Riparian landholders from Conondale to the Wide Bay and Munna Creeks assisted with the conservation releases which are aimed at restoring wild cod populations to their former range. Sites in the upper tributaries with good riparian and instream habitat, riffles and pool sequences are ideal for the release of the 35-50 mm fingerlings, providing habitat for the little pioneers to hide, feed, grow and establish their own territory.

A small number of pit tagged fingerlings were also released, with plans for future monitoring of these releases by the Department of Natural Resources and Mines.

The MRCCC appreciates the support of Seqwater, Unitywater and HQPlantations who supported the 2016 breeding program. Dallas Frazier gets a special mention for his efforts with initiating a successful crowdfunding campaign which resulted in a swag of donations and much greater exposure for the cod and the work at the hatchery. Thank you also to the Rec Fish Stocking groups who provided donations and assisted with maintaining the hatchery grounds, and to Steve Poole for his contribution to the breeding program.

Work is continuing in 2017 with former hatchery Manager Darren Knowles returning to oversee the breeding program on a voluntary basis. A recent successful Gambling Community Benefit Fund grant will provide an additional 10,000 gallon rainwater tank, a much needed new pump to transfer water from Lake Macdonald into the external ponds at the hatchery, two electric pumps to recirculate water in the fingerling troughs and funding for a video about the breeding process for use at Hatchery Open Days and for educational use. Funding to develop the eco-tourism and educational potential of the hatchery has also been applied for from Noosa Council and Seqwater. ■

The next Open Day at the Hatchery will be Sunday 25th June to coincide with the Noosa Festival of Water.

But if you can't wait that long to see a live Mary River Cod, the MRCCC has a small (but rapidly growing) specimen in a tank at the Resource Centre in Stewart Terrace, Gympie!

Left: Trevor Carbery, Keeley Thompson and Sarah Grimish releasing cod fingerlings in Elaman Creek.

Below: Cod fingerling release with David Lowry, high up on the Mary River at Conondale.



Unitywater

Unitywater is thrilled to confirm its support of the Mary River Catchment Coordinating Committee's Noosa Festival of Water!

Previously we have supported the group's Gerry Cook Fish Hatchery breeding program to help restock the Mary River Cod and release fingerlings into the catchment.

At Unitywater, we are passionate about protecting and preserving the environment and we are proud to support the Noosa Festival of Water on Sunday 25 June as part of our Community Sponsorship Program. Our team will be there on the day with our Back to Tap van helping to keep patrons hydrated with free, chilled water on tap.

We hope to see you there!



The epic achievements of the MRCCC Biodiversity Fund Project

by Sarah Grimish

The Biodiversity Fund project is finally drawing to a close after five years of hard work by the MRCCC's dedicated staff. The overarching aim of the project was to "restore riparian resilience" through the implementation of the Mary River Threatened Species Recovery Plan. The Recovery Plan is a collaborative document between the MRCCC and the Federal Department of the Environment which outlines actions for the protection of five unique threatened species that are representative of the diversity and importance of the Mary River catchment. These five species are the Mary River turtle, Mary River cod, Australian lungfish, Giant barred frog and the Freshwater mullet.

Back in 2011, the MRCCC successfully applied for funding through the Australian Government's Clean Energy Futures program, and thus the Biodiversity Fund project was born. Over 10 project stages, positive steps were taken towards improving the health of riparian zones on 239 properties situated all over the Mary River catchment.

A healthy riparian zone is vital for a healthy waterway. Riparian vegetation aids in stabilising river and creek banks during times of increased flow (such as flood events), and shades the water to keep it cool for aquatic organisms. Having good riparian vegetation cover also helps to filter runoff before it enters the waterway, preventing sediment and nutrients from affecting water quality. All five of the targeted threatened species outlined in the Recovery Plan depend on riparian zones and the benefits they provide to overall ecosystem health.

Landholders interested in improving the health and sustainability of riparian zones under their control applied for grants under the Biodiversity Fund to carry out works on their property which would enhance riparian integrity. Works carried out included revegetation, installation of off-stream watering points, fencing-off of riparian zones, and invasive species management encompassing physical, chemical and biological controls. The invasive species which were the key focus of control efforts are Cat's Claw Creeper vine and Madeira vine, which pose a serious threat to riparian



Cluster fig (Ficus racemosa) a favoured food of the Mary River turtle

vegetation. They climb to the canopy and overwhelm mature trees, causing them to collapse and eventually die. The use of biological control agents in the fight against Cat's Claw vine has been a major success story to come out of the Biodiversity Fund project, with breeding programs by Gympie and District Landcare and the Greater Mary Association producing thousands of jewel beetles and tingids for release into areas of heavy infestation. The three Biodiversity Fund case studies below provide examples of the kinds of work we have undertaken through this project.

The infographic (page 5) presented here provides a snapshot of exactly what was achieved in the first nine stages of the project. Targets set by the Australian Government have been either met or exceeded. The awareness and interest among landholders that this project has generated is extremely promising for future community engagement and riparian improvement prospects in even more areas across our beautiful catchment. The enthusiasm and generous in-kind contributions of landholders involved in the Biodiversity Fund project are gratefully acknowledged.

BIODIVERSITY FUND CASE STUDIES

Case Study 1: Fencing, Revegetation and Weed Control on the Mary River at The Palms

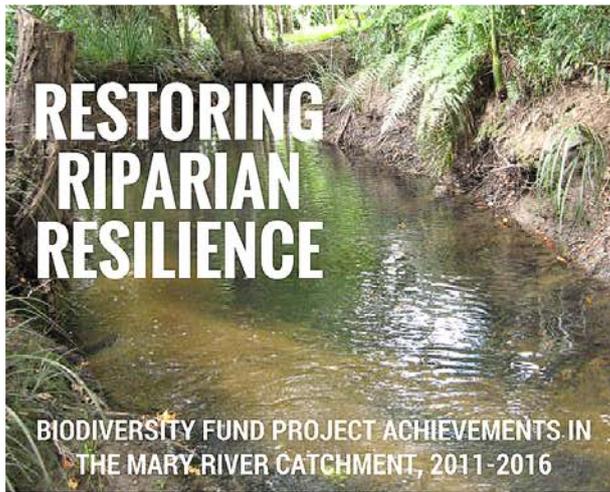
The Anderson property is a 140 acre beef grazing property with Mary River frontage at The Palms. It was the location of one of the first large scale revegetation projects in

the catchment back in 1993. Not all the river frontage was able to be revegetated in the initial project and in the areas upstream of the vegetation site where bank failure has occurred during the floods of recent years. Although the old revegetation was damaged by the floods it has remained intact and continued to protect the bank from further erosion. There is also a moderate infestation of Cat's Claw vine and balloon vine. The waterways in this reach contain significant Mary River cod habitat, Mary River turtle nesting sites, lungfish spawning sites and the landholder frequently sees pairs of platypus.

Gympie's municipal water supply is also sourced from this reach. With the aid of the Biodiversity Fund, MRCCC staff worked with the landholder and Gympie and District Landcare to protect and improve this important habitat through the construction of riparian fencing, Cat's Claw vine control, and the planting of over 2000 trees. The new revegetation project closes the gap between the 1993 planting and the upstream boundary of the property. A successful field day was held at this property last year in conjunction with Gympie and District Landcare, showcasing the achievements of Biodiversity Fund activities and the efforts of the landholder. The site is also one of our revegetation monitoring sites which means we have been able to track the recovery of the old revegetation site from the floods as well as the impact of the recent completed revegetation project.

Case Study 2: Fencing and off stream stock water supply on Six Mile Creek, Cooran

Golden Gully is an equine stable on Pinbarren and Six Mile Creeks in Cooran. Mary River cod are found in Six Mile Creek, and are likely to be found in Pinbarren Creek. Giant Barred frog and Cascade treefrog habitat also exists along both creeks. The riparian vegetation in this area contains sub-tropical lowland rainforest which is an endangered ecological community. Additionally, riparian gallery rainforest (endangered) and flooded gum rainforest (of concern) are present. Riparian fencing (1.5 km) on this property has protected the riparian rainforest and wildlife corridors along the creeks; whilst



RESTORING RIPARIAN RESILIENCE

BIODIVERSITY FUND PROJECT ACHIEVEMENTS IN THE MARY RIVER CATCHMENT, 2011-2016

Case Study 3: Madeira Vine biocontrols on Obi Obi Creek

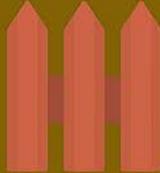
The lower reach of Obi Obi Creek below the Baroon Pocket Dam spillway was another target area for Biodiversity Fund activities. This reach contains significant Mary River cod habitat, with excellent riparian vegetation and connectivity values. Obi Obi Creek Crossing No. 2 is a public reserve area with approximately 100m of creek frontage where the riparian zone is intact but fragmented. Previously, a project was undertaken to install large woody debris in this area for habitat improvement. Madeira vine infestation is a problem in the lower reaches of Obi Obi Creek, and Biodiversity Fund activities at Crossing No. 2 were mainly concentrated on the use of biocontrols to lessen the impact of infestations. The first release of 50 Madeira vine beetles (*Plectonycha correntina*) occurred in 2012 and monitoring of the site since then has shown that the beetles have become well established.

Riparian Condition Assessment Field Walk at the Anderson's property, Mary River, The Palms



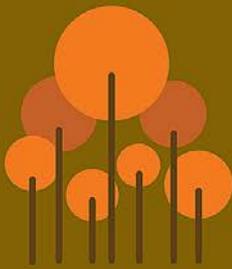
239
landholders were engaged through this project

33km of restoration fencing was constructed



Offstream watering installed servicing **559ha**

A total area of **42ha** was revegetated



107,435 trees planted

Invasive species management covering **236ha**



Release of biocontrols over **329ha**



allowing for a wide riparian buffer which opens up the possibility of future revegetation works. This buffer has been improved by the planting of 500 trees by Noosa and District Landcare through the Biodiversity Fund project. Off-stream watering points were also installed, meaning that stock no longer require access to the creeks for water; preventing damage to creek banks and protecting new vegetation.

Observing a fenced off and revegetated land slip



Reef Trust Phase III

The MRCCC will continue to work with graziers in the Mary River catchment through Reef Trust Phase III over the next 2 years. The Australian Government's Reef Trust Program in the Mary River catchment will work with grazing landholders to adopt grazing land management practices that achieve Reef Trust outcomes in terms of water quality, nutrient and sediment losses to the reef. The Mary River is the southern-most of these reef catchments, with the grazing sector being the largest single land manager i.e. about 70% of the catchment area. The project team will provide graziers with extension support, technical advice and training to implement eligible on-ground projects using best management practices (BMP) within priority areas of the Mary River catchment (see map). The MRCCC is calling for expressions of interest from interested grazing landholders.

A key selection criterion is the participation in the Grazing BMP self-assessment program which provides the opportunity for graziers to benchmark their current grazing practices against a Beef Industry-developed set of standards. Grazing BMP can be completed on-line (www.bmpgrazing.com.au) or at a local workshop.

Once the Grazing BMP is completed, the MRCCC project team will engage with participating graziers to jointly undertake detailed assessments of current grazing land practices using an A-B-C-D rating system. Additional assessments of the property's grazing land condition, including pasture condition and riparian zone condition, will also be completed. These assessments will help identify training needs, areas for further extension and technical support and identify potential for on-ground projects. This process is called the "Property Implementation Pathway". Participating graziers will receive support to implement their Property Implementation Pathway focusing on improving grazing land management and Reef Trust water quality outcomes.

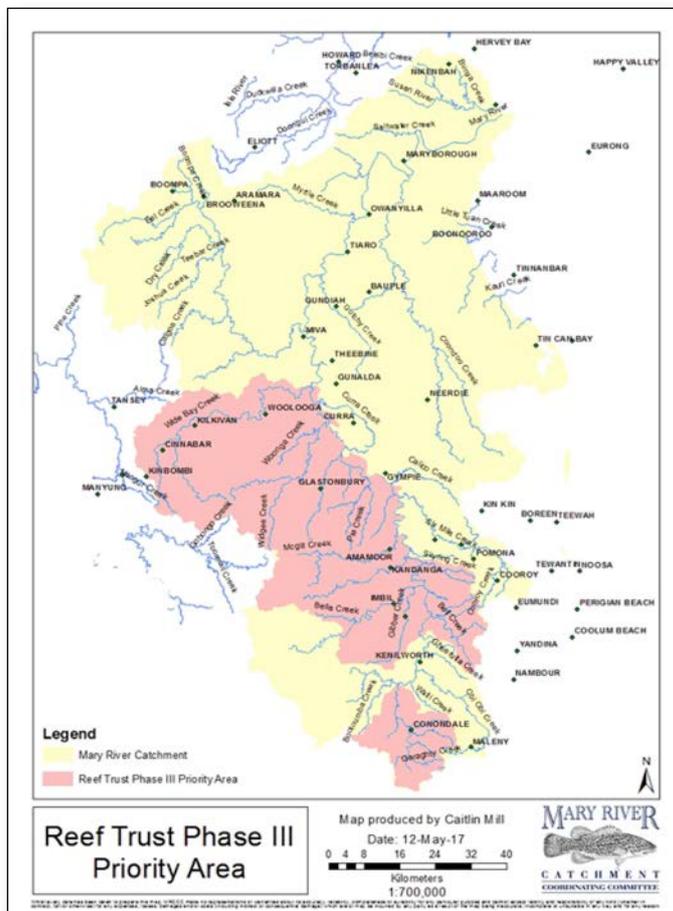
The Mary River catchment priority area includes the Yabba, Kandanga, Amamoor, Skyring, Blackfellow, Eel, Widgee, Glastonbury and Wide Bay Creek sub-catchments, plus the Kenilworth and Conondale districts sub-catchments in the Upper Mary.

The priority area has been identified by the

Queensland Government using a computer model called "Source" that determines which sub-catchments of the Mary River catchment are contributing the highest levels of sediment to the Great Barrier Reef.

Improved grazing land condition leads to greater pasture productivity and enterprise profitability and improved resilience to climate extremes by reducing the loss of valuable sediments and nutrients from our grazing lands. Riparian zones including wetlands e.g. marshes, billabongs etc., will be a particular focus due to their key function of filtering nutrients and sediments from the grazing landscape before they reach the river system and eventually the Great Barrier Reef.

For more information or to obtain an Expression of Interest form, please contact MRCCC. ■



Reef Plan Water Quality Monitoring

The primary objective of the 2050 Reef Plan is to improve the quality of water flowing to the Great Barrier Reef by changing land management practices and reducing the level of pesticides, sediment and nutrients that flow from the land to the reef. The Department of Science, Information, Technology and Innovation (DSITI) is collecting water quality data to inform modelling which determines whether the Reef Plan objective is being met.

DSITI have identified that the highest amounts of suspended solids flowing to the southern Great Barrier Reef emanates from the Mary River Catchment.

The MRCCC are assisting DSITI with collection of manual and automatic water quality samples from the Mary River at Home Park north of Tiaro, from Tinana Creek at the Tinana Barrage and at Fishermans Pocket downstream of Gympie. The manual samples are collected monthly to monitor ambient conditions and automatic samplers collect every few hours during high flow events.

Results from these samples will be used to create an annual report card which measures progress towards Reef Plan's goals and targets.

To find out more and to read previous report cards visit the site www.reefplan.qld.gov.au.

The MRCCC are working with landholders throughout the catchment in an effort to achieve

improvements to water quality under the Reef Plan.

For more information about work being undertaken, please visit the website at www.mrccc.org.au ■

Rohan Wallace (DSITI) and Garry Brishke reviewing sampling procedures

More, or less?

Is it more or less, what's happening to Mary River turtle populations?



Ian Mackay and Sydney Collette with male Mary River turtles

Over the past two and a half years, we have been working with researchers from Charles Darwin University to assess the population of the endangered Mary River turtle. Results so far, are surprising. Over 300 Mary River turtles have been captured, far more than we expected. This means there are more turtles in the river than we thought.

However, we have caught very few immature turtles, far less than expected. This needs to be considered in light of the life history of this species. It is slow to mature (between 15-30 years old), lives a very long time (possibly 100 years) and has a low reproduction rate. Thus, we would expect a low survival rate of juveniles and many more adults than immatures. However, all populations need young ones to replace the older generation. The question now is, what has happened to the immature turtles? Through our nest protection program, similar numbers of adult females have been laying nests for the past decade and a half, so we know eggs are being laid and successfully hatching.

It is a good thing that the population is

greater than we thought, however, the low numbers of the next generation are a cause for concern.

Tiaro Landcare is pleased to announce that the winner of the 2017 Mary River turtle support scholarship is Sydney Collett from Langshaw. She is an Honors student from Charles Darwin University and is continuing the research on the Mary River turtle and started on the white-throated snapping turtle. We look forward to working with her and increasing our knowledge of this unique species that calls the Mary River home. Sydney will be looking for volunteers to assist her field work during September/October. If you are interested, please contact Deb Seal at MRCCC who will forward your contact details onto Sydney.

It's coming up to tax time. Donations to the Mary River turtle conservation fund are tax deductible.



A poster for Tiaro Field Day. At the top, it says "Tiaro District" and "LANCARE". The main title is "Tiaro Field Day" with a green sunburst graphic. Below that, it says "SMART FARMING & LIFESTYLE". The event is on "SATURDAY 8TH JULY 2017" at "INMAN ST, TIARO" from "9AM-3PM". Entry is "ADULTS \$5" and "15 & UNDER FREE". It lists "LEO CATTLE SHOW & JUNIOR JUSTICE COMPETITION" and "EXPERT SPEAKERS & DEMOS". Contact info: "Phone 0408 115 613" and "Email tiarofieldday@gmail.com". It also says "OVER 130 EXHIBITORS". At the bottom, there are logos for various sponsors like "EziVision", "KIP-TIMBER", "AST", "L.A.", "Agriplan", "Wise Day Seedlings", "Fairy Creek", and "CCTV-TIMBER".

The Leaf Tying Moth (*Hypocosmia pyrochoma*)

With support from the MRCCC, the Greater Mary Association (GMA) has been releasing Cat's Claw Vine (CCV) bio controls in the Munna Creek sub-catchment for a few years. During inspections of the Jewel Beetle and Tingid releases in the area in May 2015 some leaves "tied" or webbed together were observed which turned out to be the work of the Leaf Tying Moth larvae.

In 2007, the Leaf Tying Moth was found to be a voracious feeder on the Cat's Claw Vine (CCV) in the rearing facilities and was released in some areas. Until recently it was assumed to be an unsuccessful release as it was believed the moth did not survive the winters.

Three infestations have now been found, two on Eel Creek and one on Munna Creek in the Boomba area. The GMA believes that there could be many more infestations than those already found so they have prepared a handout to help with identification. Go to the MRCCC's website to download a copy - www.mrccc.org.au.



Leaf tying moth; typical webbed leaves after they have dried out. (Photo J Hansen).

Find a Frog in February – it's a wrap



Conversations with landholders hold many gems of experience, wisdom and ideas. This was the case during an interlude with Teresa Cronin from Cooonon Gibber during 2015 when she suggested that we start a program where the community can contribute knowledge of frog locations. What a great idea! And so the Find a Frog in February Citizen Science concept was born.

As we move on now from the first FFF I reflect on the excitement I had at running a program that would cover the whole Mary River catchment, and more (Burrum, coastal catchments and Noosa River). And one that brought together the support of local councils (Sunshine Coast, Noosa and Gympie) and our regional body; the Burnett Mary Regional Group. With a swift hand across the keyboard and a crossing of fingers, one by one these funding providers came through with support for a new program, never tested in this part of the world before. We acknowledge their trust in us.

In those heady days, only optimism and planning were in my field of view. That the weather should be included with animals and children as items not to be relied upon did not occur as a possibility. It always (well, nearly so) rains by the end of February and besides, how could we call it anything else?

January 2017 was spent frantically designing a logo, creating material and an interactive web page, advertising throughout the media world, groups, agencies, networks, schools and developing systems for handling the thousands of records we expected to come in. Someone who shall not be named (me) decided it would be a fun idea to produce a video of instructions for frog finders. Yes it was fun, lots of fun! But it was very time consuming. However, all can enjoy Jess and me sending our reputations into ruination in "Finest, Fantasticist, Flippin' Frog Finder in this Fair Land" at the 'video' link on our website; <http://mrcc.org.au/find-a-frog-in-february-citizen-science/>.

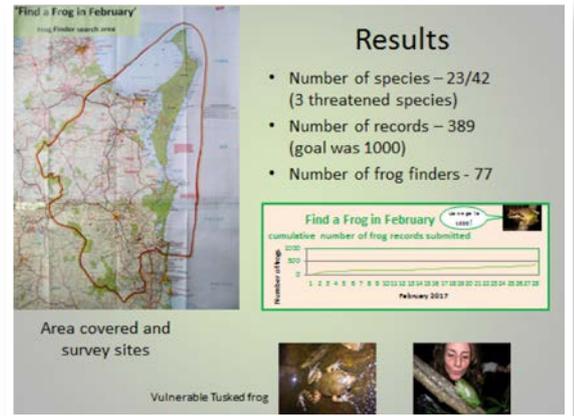
So February 1 came along, we spoke and wrote to the world as we know it and started to see frog records coming in. And, despite

the record-breaking heat and dry of February, here's what the wonderful catchment community contributed to our knowledge of frogs.

We can only imagine how many records would have come in should we have had just a whiff of water from the sky! It came in early March, a cruel blow, however, we have discussed broadening the time period for the next FFF in 2018 as the 'wet' season is not so predictable as it maybe once was. New name suggestions for January to March frog searching are most welcome.

Huge thanks to the many supporters: Sunshine Coast Council, Noosa Shire Council, Gympie Regional Council, Burnett Mary Regional Group. Also to our technical advisors, film crew,

ARTICLE **EVA FORD**



media and groups who passed on the word and of course to all the schools and other participants who joined in the night-time adventure. Look out for 2018 with the promise of rain!



Shaun Fisher, and friendly Giant Barred frog

On Cane Toads

There would be very few people who have grown up along the Queensland coast who can remember a time when Cane toads were not a part of our summer nightlife, or one of the creatures, along with centipedes, ants and spiders that would be blinking indignantly back at us for illuminating their dark and safe hideaway under a piece of scrap tin.

It seems to be a given in my work that conversations about the natural history of native frogs precede stories and questions about the much vilified Cane toad. I may have spent too long with headphones pumping Buddhist-style ideals into my brain or maybe I earnestly accept the animal treatment conditions placed on us (the MRCCC) by the Animal Ethics Committee under which our fauna survey and monitoring work is guided, but regardless, I have developed an enormous respect for the Cane toad over recent years.

To the creature itself. Successful in a foreign land? - I hear a resounding 'Yes' as we watch with nervousness the path of its spread and the ability, or otherwise, of the native inhabitants to cope with this new, poisonous morsel. I believe that no species has become extinct due to Cane toad introduction although of course many species have suffered declines and local disappearances. However, we are witness to evolution in action as the list of CTEAS (Cane Toad-Eat-And-Survive) natives grows; Crow, Ibis, Egret, Purple swamp hen, Kookaburra, Water rat, Saw-shelled turtle, Lungfish, Keelback snake, some spiders (tarantulas, giant water spiders and wolf spiders) and meat ants, and fierce aquatic invertebrates that feast on eggs and tadpoles. 'Teenage' Cane toads delight in eating juveniles of their own kind, toad tadpoles feast on the toad eggs from other clutches and they are affected by diseases just like any species. Of the thousands of eggs laid and resultant metamorphs that jump out of dams and billabongs, only a tiny percentage survive for very long.

Back for a moment to the ethical guidance we, the MRCCC, receive to carry out our fauna work. There is no distinction between cute, ugly, pest, native, useful, noisy, edible, poisonous etc. All vertebrate animals are considered according to their ability to feel stimuli. This is done through rigorous brain activity measurements and accordingly, the appropriateness of any activity that involves an animal is determined, including its death. Our work does not involve killing animals however, if we decide that an animal is in a bad way and it needs to be euthanised, then

we are off to the vet with it for a sleep-forever injection. In the case of amphibians there is an anaesthetic bath that can be used by a licensed holder. Nowhere do our conditions say that we can send an animal to kingdom come with a speedy side swipe of a golf club, administration of Dettol or bleach to the skin and eyes, or a 'leap-into-the-freezer' treatment. All of these commonly accepted methods of Cane toad demise are completely off limits when animal welfare is considered. Cane toads are not protected by Australian wildlife regulations but they ARE covered by animal-welfare laws - so if you do decide to kill a toad you need to do it humanely. I am quite prepared to leave them well alone these days despite being party to childhood practices I am now apologetic of, and culling as an adult in ways that I thought were acceptable at the time. I realise that my actions have had very little long-term effect on local and broad populations and that natural processes are far more successful in bring about a new and preferable balance. No, not eradication.

Control of the spread of toads has not been successful in Australia. We have tried to curtail it using many methods. Some as mentioned above are hopefully now viewed differently to the reader. Recent developments in training quolls of the Northern Territory to avoid anything that has a whiff of Cane toad seem to be a great success for this one species.

Local controls through use of attractants and trapping of toad tadpoles looks like it may provide a level of control that has some effect. Disposal of the trapped toad tadpoles is best carried out through gross trauma; crushing, or an anaesthetic bath. Leaving the animals out to dehydrate or freezing them is likely to cause discomfort.

I am resigned to living with Cane toads, and am not unhappy with the part they are playing in helping our native species to exercise their evolutionary potential. I am uncomfortable with the opinion that Cane toads are fair game for acts of cruelty and wanton aggression. I may not be comfortable with the effects this one species has on other species but I trust the powerful processes of nature's eternal quest for 'balance' in an ever-changing environment, as I see it in action all around me. ■

Waterwatch

With some Waterwatch sites monitored continuously for over 15 years this simple low tech program provides remarkable insight into the catchment and how it changes with the seasons. There are now 8 Waterwatch networks within the Mary River Catchment. Two Waterwatch reports have been produced, one for the Upper Mary to Kenilworth region and one covering Mary Valley, Gympie-Curra, Wide Bay-Widgee Creeks and Eastern Mary Catchments. You can find a copy of the reports on our website: mrccc.org.au

Waterwatch volunteers test water at their site monthly, gathering information on salinity, turbidity, dissolved oxygen, pH and temperature using simple handheld probes. Electronic equipment passed between volunteers gives a simple digital reading. Volunteers also record general observations on their stretch of river. MRCCC routinely looks for people who have an hour or so to contribute each month to maintain the Waterwatch program. Incoming volunteers may replace previous monitors or establish new sites that improve coverage of the catchment. Training and followup support is provided. For more information on becoming involved with the Waterwatch Program or to obtain a hard copy of the latest Waterwatch reports get in touch with Jess Dean at the MRCCC ph: (07) 5482 4766. And stay tuned, more Waterwatch reports are on the way! ■



Caitlin Mill water testing, Upper Mary

Project in flight: the search for the

Coxen's fig parrot



*EHP's Dr Ian Gynther with
Noosa Landcare's Rae
O'Flynn and Ilana Kelly*

In 2004 in a tucked away corner of the Noosa Hinterland, a distinct and unmistakable nest of Australia's most elusive bird was located by scientists. With an estimated 50 - 250 individuals predicted to remain across its entire range, the existence of the Coxen's Fig Parrot (*Cyclopsitta diophthalma coxeni*) hangs precariously in the balance. The fragmentation of the parrot's rainforest habitat and its vulnerability to natural processes as well as human impacts, like land use change, the spread of invasive weeds and land clearing, continues to threaten the existence of current populations. However, to what extent this occurs is essentially unknown.

Many locals have occasionally spotted this quiet and fast flying Peachface sized parrot darting around the area, but as hard as it is to believe, as yet no call recording or photo of the bird exists. Consequently, knowledge of its behaviour, movements and habitat requirements is also largely unknown. This information is essential in order to appropriately protect and manage this critically endangered species and its habitat to stop its potential silent slip into extinction. As a result, Noosa & District Landcare is teaming up with Currumbin Wildlife Sanctuary, the Dept. of Environment & Heritage Protection (EHP), the June Canavan Foundation and the Gambling Community Benefit Fund to undertake the biggest survey effort to date in order to formally locate the Coxen's fig parrot within the Noosa Hinterland.

Food tree surveys within the region are already underway. Specialised acoustic and photographic equipment have been placed in native fruiting fig trees, in hope of capturing the flight or resting call of the parrot or even

a photograph as it feeds. Previous attempts to find the Coxen's Fig Parrot has been restricted to on-site visual surveys. This can be extremely labour intensive, requiring a high skill level and the spatial and temporal scale at which these are conducted can be limited. However, with recent advancements in technology and its application, the use of automated sound recorders and bioacoustics has become increasingly important in the conservation of fauna and ecosystems. Ultimately, allowing for more efficient and accurate data collection. Among all methods, bird sound is the most efficient means for surveying birds and given the parrot's flight style and small size, acoustics surveys provides us with the best chance of validating its presence in the region.

Fig tree sites were selected with the much valued assistance of Dr Ian Gynther, the Senior Conservation Officer of the Department of Environment and Heritage Protection (EHP). Ongoing consultation with Ian and his team, has ensured that this project aligns with the on ground work currently conducted by the Coxen's Fig-Parrot Recovery Team. Additionally, Landcare is working closely with bioacoustics guru and biologist Ted Pedersen from Central Queensland University, with Ted providing staff and volunteers with technical training on bioacoustics equipment and analytical software and ongoing support during the course of the project.

The team at Noosa and District Landcare are beyond excited and grateful of the amount of support Landcare members and the wider community has shown and the momentum the Coxen's Fig Parrot Project has taken. Many thanks to the local landowners for allowing the project to be conducted on their properties and

the community for donating towards our recent fundraising endeavor. Additional thanks to the June Canavan Foundation and the Gambling Community Benefit Fund, whom have also supported the purchase of equipment and the management of this project. Funding has been secured for four sets of audio and photographic equipment and the development of automated recognition software. Funds will be allocated to Dr Ian Gynther and Ted Pedersen to undertake audio recording of the full call repertoire of the North Queensland Macleay's Fig Parrot, with the assumption that the Coxen's Fig Parrot calls are similar to its sister species. This data will then be used in the development of the automated acoustic recognition software to assist with the processing time and accuracy of the audio data collected.

Everyone involved in this project hope very soon to be able to report hearing the distinctive "zit-zit" call! ■



Expected feeding fig species, Ficus watkinsiana. Tree form and fruit.



Dr Ian Gynther, Rae O'Flynn and Ilana Kelly assessing fig tree sites for survey equipment.

NOOSA Festival of Water 2017

The Noosa Festival of Water has been a highly successful annual event at the Noosa Botanic Gardens and Lake Macdonald Amphitheatre since 2005 and it's on again on Sunday June 25.

The initial impetus for the Festival was water quality and environmental care around Lake Macdonald, which supplies Noosa's town water.

Today the Festival has evolved to become an annual showcase of our region's ecological attributes with a primary aim of improving community awareness of how each of us can play a part protecting and preserving our environment in our day to day lives. The Festival provides great opportunities to connect with experts involved with land, water and wildlife management.

Kids' activities have a Biosphere focus, are free and include a fishing clinic, water sports, wildlife exhibits, art activities and boat trips across Lake Macdonald with an opportunity to learn about the Mary River cod breeding program.

Each year local artists provide entertainment in the Amphitheatre and attendees can avail themselves of refreshments from food vendors as they walk around the stunning lakeside and Botanic Gardens setting. This year there will be a chance to win a weekend at Peppers Resort, Noosa courtesy of Noosa Tourism.

For the early risers there is the Catch and Release Bass Fishing Competition hosted by the Lake Macdonald Fish Stocking group starting at 6.30 am at Mary River Cod Park. Registration forms are available from the Mary River Catchment Coordinating Committee (MRCCC) and the Noosa Festival of Water websites with some fantastic prizes on offer from Hooked on Angling and Outdoors.

The Noosa Festival of Water gives a wide range of groups and agencies an opportunity to connect with locals and visitors to our region to generate the interest and commitment to environmental initiatives needed to make a genuine difference.

The MRCCC and Noosa Landcare organise the Noosa Festival of Water with a legion of community organisations and volunteers working together behind the scenes to stage the event.

The event is supported by Noosa Council through Community Partnership Alliance Signature Event funding. Seqwater,

Sunday 25 June



Unitywater, the Cooroy Branch of the Bendigo Community Bank and the Burnett Mary Regional Group also sponsor the event.

For more information and a full list of the day's activities, visit the Noosa Festival of Water website and Facebook page or call the MRCCC on 07 5482 4766



Koala news

The Koala Action Group celebrated its second anniversary with the birth of a sub branch in Widgee. Last year, our group decided that we would take some of our meetings out to regional communities. About 30 locals attended our first meeting in January 2017 held in Widgee, where koalas are very much a part of that district's natural landscape.

After the presentations and discussion, they decided to form a local branch, chaired by long-term group member and Widgee local Kath O'Donnell. This enthusiastic group is working on local action and awareness. They arranged for the koala scat detection dog Maya to visit the Widgee School and they are producing Widgee welcome bags with community information, including the Koala Brochure. A local group is better positioned to monitor, help and record the local koalas. This is important in Widgee as the number of sick and underweight koalas and mortalities from disease (koala retrovirus) in reproductive age koalas is significant in that locality.

Our next meeting will be held in Imbil starting at 9.30 am on Sunday 18th June at the RSL Hall. We urge Mary Valley residents to come along and share knowledge about local koalas, as well as learning about koalas in the wild, their needs and threats, and importantly, ideas to ensure their future.

The recent news that the Tiaro koala population appears to have crashed is a salutary reminder that we need to be proactive so koalas do not disappear from localities without us noticing until it is too late. This is why the KAG have encouraged residents to report sightings, points of impact and causes of death and injury in our region. To date, our group has collected 437 records of koala sightings in the Gympie region.

The KAG's Coordinator Michelle Daly, and Gympie wildlife rescue champion Paula Rowlands are attending the 2nd National Koala Conference in Port Macquarie from 2-4 June and will hopefully gain valuable knowledge and ideas that can be locally applied, as well as forming some good links with other groups. The group had a display at the Gympie Garden Expo, with a lot of community interest and the Koala Action Group Facebook page has



close to 600 followers. Our page on MRCCC's webpage includes links to many brochures and handouts and a membership form. The Koala Action Group is keenly awaiting the release of the Gympie Council's draft Koala Conservation Plan, and the mapping it has undertaken of koalas and their habitat in the region. The State Government's Expert Panel report on SEQ Koalas is also due soon, and we hope and expect it will make some recommendations in respect of considering koala declines in the rest of the State.

KOALA ACTION GROUP

KAG is a small group of residents, many who live in koala habitat, working on local actions to help ensure the sustainability of koalas in our landscape. We welcome anyone interested, and would really appreciate help from people with expertise, as we are not experts - just passionate and on a steep learning curve. The Coordinator can be contacted on 0437 549 252 or koalas@mrccc.org.au and on the Facebook page.

Top:
Tandur koala 'Phoebe' with Joey #5.

Right:
Nonie Metzler and Marc Russell at the Gympie Garden Expo.



Valley Bees



Queen spotting for fun!

VALLEY BEES continues to inspire and be proactive in running free information and practical sessions on a regular basis, at the following venues and times.

BEE OPEN DAY

- Our hugely successful Annual Community Bee Open Day is on again this year at Imbil (Mary Valley College) - all day, \$2 entry, all things bees and more, Saturday 14 October.

MONTHLY MEETINGS:

- Our monthly meetings are held at Honeybee Farm on the 2nd Sunday of each month, at 1pm for a 1-30pm start. \$2 entry, and please bring a plate to share.

HONEY BEE SESSIONS:

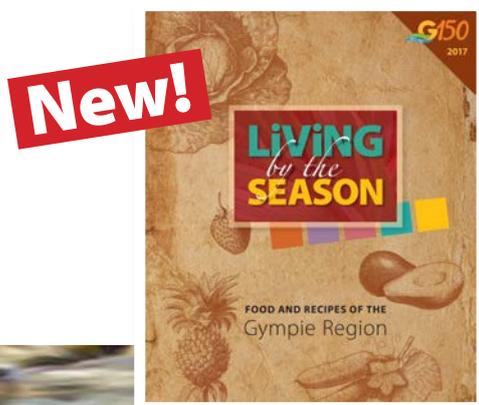
- 1st Saturday of every month @ Gympie Landcare Nursery.
- 3rd Saturday of every month @ Honeybee Farm, Kandanga.
- 9am Summer start. 10am Winter start (May Jun Jul Aug). 2 to 3 hours, flexible.

NATIVE BEE SESSIONS:

- Held every 2nd month, on the morning before the monthly meeting. Check our Bee-Inspired Calendar for venues, we will hold the event alternatively at the Honeybee Farm, and at the Gympie Landcare Nursery. 10am to 12noon. Free.

These bee sessions are free, and anybody with an interest in honey bees, native bees, bee gardens and habitat, are all welcome to attend. No bookings required. ■

New Seasonal+ Regional Book



CYCLES OF SEASONS

The cycles are so much more than the Four Seasons we all know and love: summer, autumn, winter and spring. Food itself is seasonal. It flowers and it fruits, it ebbs and flows, it comes and goes. It's here, then it's not.

FOOD SEASONS...

- depend on the **VARIETY**. Is it an early fruiter when the days warm up, or a late bloomer as the cold snap moves in?
- depend on the **WEATHER**. Rainfall, conditions, humidity, heat, frosts, soil, microclimates.
- depend on the **FARMER**. Growers have to adapt to these changing conditions. When to plant, when to fertilise, how to nurture, when to pick, to get the best outcomes and food on our tables.
- depend on **YOU**. You need to be aware and tune into these cycles of seasons and be willing to try new products, best suited to our region, and our seasons.

With rich volcanic soil, rolling hills, clean waters and a temperate / sub-tropical climate, our region allows us to grow an extraordinary diversity of produce. **ENJOY THIS NEW BOOK!** ■

2016 Spring in the Mary Photo Competition winners



Far left: Photo Competition Winner, by Daryl Dodt

Left: Photo by Dallas Frazier, 2nd in the People's Choice

MARY RIVER MONTH will start on Sunday 24 September 2017 with the big jump where the MRCCC encourages everyone to enjoy their favourite waterway.

The Spring In The Mary Photo Competition will also be on again. Visit the MRCCC Facebook page or website. ■

Mary's Famous Five in print

Mary River turtle



Mary River cod



Australian lungfish



Giant Barred frog



Freshwater mullet



Seqwater and MRCCC partner on water quality improvement

Seqwater and MRCCC have had a close working relationship for many years and this year this relationship has been formalised as a partnership focused on improving drinking water quality in parts of the Mary River catchment. The partnership targets four Seqwater offtakes – Mary River (Goomong), Mary River at Kenilworth, Lake Macdonald and Jimna. Actions that reduce the loads of pathogens, sediment and nutrients entering reaches upstream of these offtakes will be considered for funding by Seqwater under this partnership.

In early 2017, the first stage of the partnership involved identifying priority locations to focus on within each of these reaches. Prioritisation is based on water quality hazard, readiness for the project and current practices. To enable prioritisation of the large area upstream of these offtakes, MRCCC staff, especially Caitlin Mill, undertook some exhaustive mapping and analysis, breaking new ground for the “MRCCC GIS department”. Once the mapping and prioritisation was completed engagement of landholders began and two onground projects will be completed in the 2016/2017 financial year.

Through this project we will be working with dairies and grazing operations to assist them in identifying and implementing strategies that improve water quality and contribute to resilience and sustainability of their operations. This project links well with our current Biodiversity Fund project which is coming to an end in 2017 and the Reef Trust IV project that kicked off in mid 2017.

The partnership is initially over two years with a possible extension of three years. ■

Later this year, the Mary River and her threatened species will feature in a book published by the CSIRO called “Book of Hope: Recovery of Australian threatened species”. One chapter of the book, title “Mary’s Famous Five: a story of connection, commitment and community in the recovery of threatened aquatic species in the Mary River catchment, Queensland” has been written by MRCCC’s Dr Tanzi Smith and Marilyn Connell from Tiaro and District Landcare and Charles Darwin University. The chapter tells the story of recovery planning in the Mary River Catchment starting with the Mary River Cod Recovery Plan in the mid 1990s and concluding with the multi-species approach that is the basis of the Mary River Threatened Aquatic Species Recovery Plan. The chapter features insights from Bob Simpson, Eve Whitney and Glenda Pickersgill who played key roles in the development and implementation of the Mary River Cod Recovery Plan. ■



Tilapia **INVASIVE SPECIES**



Tilapia is a highly invasive predatory fish species which is known to be established in the lower Mary, having been previously caught near Tiaro in October 2014. Since then, tilapia have been caught in the Mary River at Widgee Crossing in April 2016, and recent sightings have been confirmed at the Gympie Weir and also near the mouth of Obi Obi Creek.

Native fish are often displaced or outcompeted for resources by tilapia, which are generalist feeders and can tolerate a wide range of environmental conditions. For example, tilapia are able to retreat to highly saline waters during drought periods before moving back upstream when conditions improve. In comparison, many native freshwater fish have a low tolerance for saline water.

Both Mozambique tilapia (*Oreochromis mossambicus*) and Spotted tilapia (*Tilapia mariae*) are classified as restricted noxious fish in Queensland. If you catch a tilapia, you are required to kill it humanely. Remains are **NOT** to be returned to the water. Females carry eggs and juveniles in their mouths, which are able to survive for a considerable time even after the adult fish is dead. Tilapia are also capable of producing abundant offspring, laying up to 4 broods per year for a maximum total of 1200 eggs.

Many recreational fishermen are united in the active eradication of tilapia, as many of their favourite fishing locations have been invaded and destroyed by tilapia. If you see or catch a tilapia, do not return it to the water and notify the MRCCC on 07 5482 4766 or Boating and Fisheries on 13 25 23. It is useful to track the spread of tilapia throughout our waterways to raise awareness and coordinate eradication efforts.

Tilapia come in a range of different colours. The easiest way to identify tilapia is by their continuous, unbroken dorsal fin which all tilapia have.

There is a tilapia fact sheet available on the MRCCC website, or further information is available from the Department of Agriculture, Fisheries and Forestry website: www.daff.qld.gov.au/fisheries/pest-fish/noxious-fish/tilapia



Last frogging for the year (just before Xmas by the look of it!)
L to R: Jason Coolen, Stacey Fahey, Shaun Fisher, Jess Dean.



Obi in his new big tank at the Hatchery.
Photo by Cleo Frazier.

the CODLine

Good News for the Mary River Cod and the Mary River Turtle is hosted and supported by the Mary River Catchment Coordinating Committee with funding support from the Sunshine Coast Council and Noosa Council gratefully acknowledged.



Mary Landcare on Facebook

- Mary River Catchment Coordinating Committee
- Gympie Landcare
- Noosa and District Landcare
- Mary River Turtle Project - Tiaro Landcare
- Mary River Threatened Species Recovery Plan
- 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 and download our free PDF, either in a low-resolution or high-resolution format.

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the CODLineTeam

PO Box 1027
Gympie Qld 4570
Phone 5482 4766
Email admin@mrccc.org.au

the CODLine

PO Box 1027, Gympie Qld 4570

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