

# the D Line

• Sept 2019 • ISSUE **30**

## Lessons

I'm a fourth generation land manager on 2500 acres in the Mt Urah district west of Tiaro. My family emigrated from Ireland in the 1870's, selecting land in the district then known as Goorah, which is now the name of our family property where my wife Lynda and I graze beef cattle and produce native hardwood timber.

**Story by Owen Thompson**

Our country grows Spotted gum, Ironbark, Gum topped box and Blue gum on the flats which I harvest for saw logs and poles.

In the late 1800's, settlers cleared the land for grazing, but by the early 1900's they recognised that the regrowth was coming back quicker than it could be controlled. So by the time of the great depression in the 1930's, many farmers had given up trying to farm and had surrendered their selection.

### POTENTIAL TO GROW TIMBER

Working as a timber and cane cutter, my father recognised the potential of the country to grow timber, and gradually bought paddock after paddock from the proceeds of cutting cane. My earliest memory is from when I was four years old, following my father around with a pinch bar, to lift the bark off timber. As a young child, one of the best bits of advice I ever received was from a kindly neighbour, who I called Uncle Griff. He told me, *'Now listen lad, this country's not good enough to grow all grass or all trees. So what you gotta do is kill enough bushes to make two blades of grass grow, where one grew before. That way you'll have some grass for your cows. Just don't put too many mouths on there. And when your cows are either dyin' in the drought and you can't sell 'em or you haven't got any to sell, you'll have some trees to sell. Just don't cut 'em all at once.'*

I believe that the native forest timber industry is Australia's only self-replacing, totally sustainable industry. Our Spotted gum has the highest



tensile strength of any timber in the world and is unique in that it will self regenerate from a seedling to a millable log in less than a lifetime. I use fire as a management tool for growing timber and also for pasture renewal.

Our country is a completely different land type to the Upper Mary and even to land in the western Mary around Munna Creek which is dominated by granite. With a sandstone substrate, barely 50mm of soil in places, and highly dispersive sodic clays, our land is prone to continual erosion of gully heads. I consider myself the lucky recipient of the accumulated knowledge of those before me who had 100 years managing land with highly dispersive sodic soils, which became evident when vegetation was rapidly removed and the water table was raised, bringing mineralisation and increased salt levels, rendering water sources brackish. I do not blame them for their mistakes, rather I see it as my duty to learn from them.

In my lifetime, I have witnessed land eroding from a small gutter less than 200 m long, 3 m wide and 1 m deep to a gully 800 m long, 30-40 m wide and 5 m deep. I estimate that I've lost 8 to 9 hectares from an extensive network of gullies that has grown to an accumulated length of 2.5 km. The soil from these gullies would now be lying on the bottom of Hervey Bay.

So back in 2012, I was more than willing to step forward when the MRCCC's Brad Wedlock approached me looking for sites for gully rehabilitation works. The largest gully was advancing at around 35 metres per year, so the first step was to erect stock exclusion fencing



to keep grazing animals away from the fragile edges. With funding from the Australian Government Reef Trust, a rock chute was proposed, to stop the advance of the gully up the valley and safely convey flood flows from the 65 hectares above the gully head to the base of the gully. The engineered design included consideration of the expected flood flows, the hydraulics of the chute and the stability of the rocks placed in the structure. I was fortunate to be able to source the 2600 tonnes of rock needed for the chute from a small quarry on my property.

Soon after the works were completed, a cyclone dumped half a metre of rain on the site. This was a tough test, as there was no time for vegetation to grow on the fringes of the structure to add resistance. Despite the deluge, the structure held with the exception of a few large rocks, and the gully did not advance any further.

Over time, I've had three gullies rehabilitated on my property, saving tonnes of soil from eroding and washing into the Mary River.

**I'm always trying to improve things for us and folks down the river.**

# Welcome...

to the historical 30th edition of the **Codline!** Well done to all the teams that have assembled and contributed to the Codline over the years, and here's cheers to many many more.

Introducing the new addition in our MRCCC grounds. This huge stump (on the right) houses an active stingless bee hive, and is providing wonderful pollination, along with *inquizzical entertainment* here on the site. The stump was saved from a huge recently-felled Blue gum at the end of Yandina Creek and was collected, transported and donated by Peter Velenski. Thanks also to the Craig family, and to Valley Bees who generously provided the truck to lift into position. This was an exercise that reminds us all that the extra effort is always worth it . . . Our bees need saving!



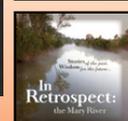
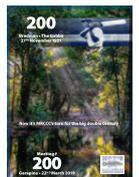
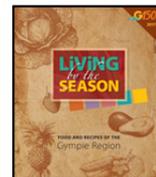
## COMING EVENTS

- Sat 21 Sep** Gympie Landcare Festival.
  - Sun 22 Sep** Big Jump and Waterbug Blitz, Traveston Crossing.
  - Sun 22 Sep** Spring in the Mary Photo Competition opens.
  - Sat 5 Oct** From 8 am - Poets Breakfast, Kenilworth Showgrounds.
  - Sun 6 Oct** Collecting cats claw for MRF weaving. Contact Glenda 0411 443 589.
  - Tue 8 & Wed 9 Oct** MRCCC Catchment Crawl from Source to Sea.
  - Wed 9 Oct** Kenilworth Hall -Turtle Info night 6 - 8 pm
  - Wed 16 Oct** MRCCC AGM, Albert Bowls Club, Gympie.
  - Sun 20 Oct** Landscape Band concert, Gheerulla Hall from 5 pm
  - Sat 26 Oct** Koala Workshop, Albert Bowls Club, Gympie.
  - Sun 27 Oct** Collecting cats claw again. Contact Glenda.
  - Mon 28 Oct** Roving Restorers visit Moy Pocket to gather cats claw. Contact Ian.
  
  - Sun 3 Nov** Free weaving workshop Kandanga (festival site) to train up weaving mentors for festival. 9am till 12noon. Contact Ian 0455 031 952
  - Fri 8 Nov** Set up at MRF site all day, contact Glenda or just come along on the day.
  - Sat 9 Nov** **Mary River Festival, Kandanga**
- CONTACTS** • Ian m: 0455 031 952 • Glenda m: 0411 443 589

**For more info** about any of the events above:  
**MRCCC** - 07 5482 4766 or [admin@mrccc.org.au](mailto:admin@mrccc.org.au)

## Available now

- **When We Were Young**  
Gympie's conversations with the past. Book  
\$25 or \$38 INCL. POST
- **Living by the Season**  
Food and Recipes of the Gympie Region  
Lesla 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**  
by Athol Craig  
\$15 or \$22 INCL. POST
- **Aust. Native Bee Book** Tim Heard - \$35 or \$42 INCL. POST
- **Mary River & Cod Brochures**





Saving an endangered species from becoming extinct is a major exercise which takes years of commitment, planning and dedication from a wide range of organisations and individuals. It was almost 50 years ago when Gerry Cook recognised that Mary River cod numbers and cod habitat were rapidly declining, and a captive breeding program for the species was pioneered. With much trial and error and the ongoing dedication of many volunteers, at last count, over 750,000 Mary River cod fingerlings have been released since the breeding program began, for both conservation stocking in the Mary River catchment, and for recreational fish stocking in specific impoundments and waterways in south east Queensland.

Mary River cod were listed as endangered by the Commonwealth Government in 1992 and in the early 1990's, when the MRCCC first formed, the Mary River cod was adopted as the group's signature species. Since then, much of the focus of the MRCCC's work is aimed at improving cod habitat and ensuring the survival of the species. Also in the early 1990's, the Mary River Cod Recovery Team was formed with representatives from government and community, and the draft Mary River Cod Recovery Plan was produced, which estimated that as few as 600 cod remained in the wild. Around this time the Mary River Cod Community Network also formed, establishing the CodLine newsletter to spread the word about the plight of the cod.

Over 20 years later and with much changing of hats, the CodLine continues with Issue No. 30 full of articles relating to riparian land management and habitat restoration.

# The Codtinuing story...

As each issue demonstrates, land managers throughout the catchment have embraced the need to protect and conserve cod habitat and improve water quality, not just for threatened aquatic species but also to improve productivity and reduce sediment and erosion.

Despite all the work that's been done, threats to the cod's survival remain, including loss of habitat and illegal fishing. The Queensland Government recently passed new legislation aimed at protecting Mary River cod, particularly during the breeding season from August to October.

Mary River cod spawning is triggered by rising water temperature and usually occurs during August/September. The male Mary River cod guards the eggs after spawning, and is very protective of the nest. If a male cod is caught and removed or distracted by a passing lure, even for a short time, the entire season's offspring are likely to die or be eaten.

This is where the fate of the species lies squarely in the hands of anglers.

For years the cod has been classified as a no take species and it's illegal for an angler to 'target' them in the Mary River Catchment. No angler ever admits to specifically fishing for cod but many accounts and footage on social media suggest otherwise. For a number of years there has been a 'closed season' to protect cod in the breeding season, which many anglers seem to be unaware of.

The new fisheries legislation designates that the Mary River and tributaries upstream from the junction of Six Mile Creek and the Mary River, including

Six Mile Creek will be closed to all line fishing (or possession of a fishing line) from the 1st August to the 31st October to protect Mary River cod during spawning. This does not include Baroon Pocket Dam, Borumba Dam and Lake Macdonald. In addition, Tinana Creek and its tributaries upstream of Teddington Weir will be closed to all forms of fishing all year round.

To offset the closures, Fisheries are expanding the list of impoundments that stock Mary River cod for recreational fishing to include Wyaralong Dam, Ewen Maddock Dam, Caboolture River Weir, Robina Lakes, Lake Kurwongbah, Enoggera Reservoir and Lake Manchester. This allows the recreational take of one Mary River cod minimum size 60 cm all year round in the stocked impoundments.

Meanwhile, the Mary River cod breeding program will continue at the Cooroy property of Hatchery Manager Darren Knowles during Seqwater's planned reconstruction of the dam wall at Lake Macdonald. The works to relocate the Hatchery equipment and construct three new ponds is now complete and the cod are just waiting for the water to warm up so that spawning can commence. Fish stocking groups are encouraged to contact Darren on 0407 126 256 to increase the numbers of Mary River cod in impoundments for recreational fishing. Darren will also be supplying fingerlings to the MRCCC for conservation stocking, so please contact the MRCCC if you would like to be involved in fingerling releases later in the year.



...saving Mary River cod

# Reef and Beef

The Great Barrier Reef is arguably Queensland's most treasured ecosystem, but it's at threat from global climate change, and locally, from declining water quality from land-based runoff. The discharge of fine sediment loads to the Great Barrier Reef has increased approximately five-fold since European settlement. Graziers manage 31.1 million hectares of land and over 100,000 kilometres of streambank in the Great Barrier Reef catchments. 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 Mary River catchment is the fourth higher contributor of sediment loads to the Reef of the 35 Reef catchments. Streambank and gully erosion have been identified as the largest contributor of sediment and nutrients from the Mary River catchment to the southern Reef. Primary producers may therefore have the greatest influence on Reef water quality. As a result, significant investment for the protection and recovery of the Reef has been placed in the Reef catchments to enable producers to implement sustainable practices which reduce soil movement.

## Impact of sediment run-off on the Reef

Increased sediment discharge from rivers into the Great Barrier Reef has significant impacts on the ecosystem – some short term and others which the Reef might never fully recover from. Sediment in the water column reduces the amount and quality of sunlight available to corals and other marine plants, like sea grass, for photosynthesis which is essential for growth. Fine sediments, particularly clay and silt, can stay suspended for extended periods and be transported long distances away from or along the coast. As they settle, they smother the marine flora. Sediments also interfere with filter feeding organisms, such as clams. Poor water quality may also increase the risk of serious long-term effects on Reef health and decrease its resilience against climate change, disease, bleaching, ocean acidification and tropical cyclones.

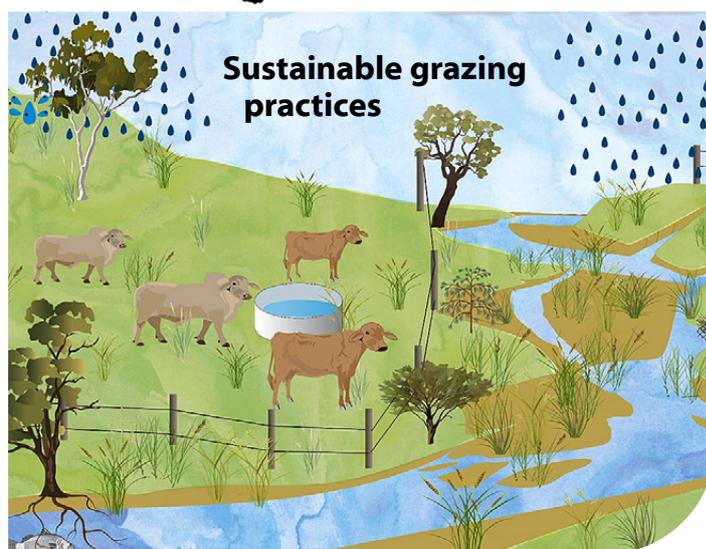
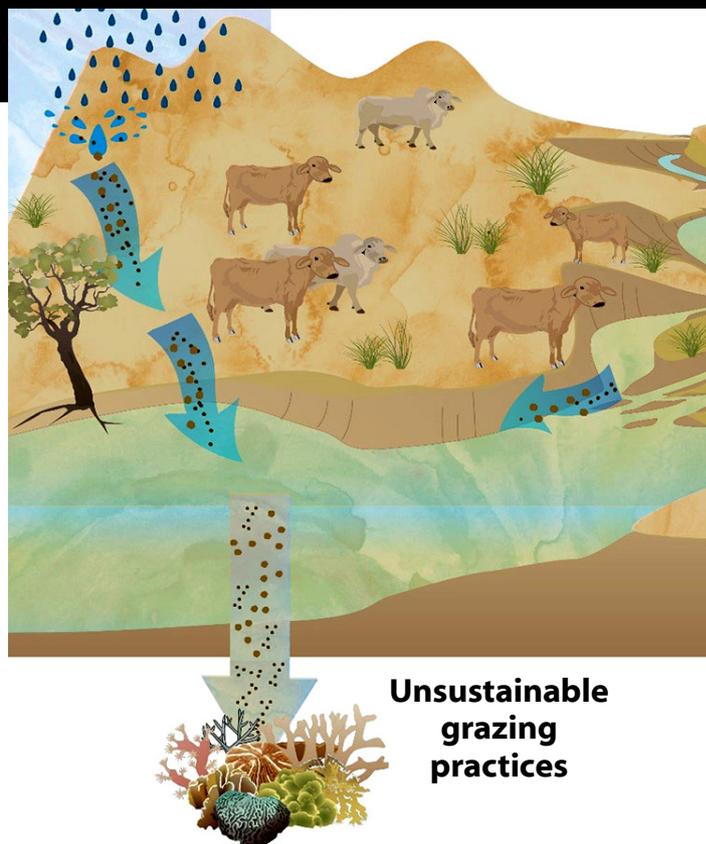
A sick reef cannot sustain the quantity and diversity of marine life it is known for.

## Sustainable vs unsustainable grazing practices

Erosion in the landscape occurs naturally but it is often accelerated by human activities and this is a key contributor to the declining health of the Great Barrier Reef. Queensland studies have shown that soil erosion increases when pasture cover is less than 70%.

Sustainable grazing of livestock relies on production and management of palatable pasture. Poor grazing land management (e.g. overstocking) may result in pasture run-down which decreases soil infiltration and increases runoff when it rains. Having unmanaged stock access to waterways (streambanks, drainage lines), particularly when stock rely on the waterway for drinking, exacerbates streambank and gully erosion thereby increasing sediment/nutrient delivery to the Reef.

Adopting sustainable management practices improves the condition of grazing land which benefits downstream water quality and cattle production. Two practices in particular which minimise sediment runoff and erosion at the paddock scale are:



- Maintaining a good cover of productive, perennial and palatable (3P) pastures year-round by setting sustainable stocking rates.
- Redistributing grazing pressure away from sensitive areas vulnerable to erosion, e.g. riparian and gullied areas and wetlands.

In the long term, (3-15 years), managing cattle in a way that maintains good land condition and improves degraded land will result in greater pasture productivity and better water quality, and is more profitable than continuous heavy stocking.

<https://www.qld.gov.au/environment/agriculture/sustainable-farming/reef/reef-regulations/reef-initiatives/grazing-impacts>  
<https://www.reefplan.qld.gov.au/land-use/grazing>  
<https://ecos.csiro.au/land-management-and-reef/>  
[https://agforceqld.org.au/?tgiPage=policies&page\\_id=31](https://agforceqld.org.au/?tgiPage=policies&page_id=31)

Illustrations: Queensland Government

# Monitoring gully recovery is a rewarding experience

Between 2016 and 2019, 44 landholders were engaged by MRCCC to undertake works to halt advancing gullies. Works ranged from soft engineered approaches involving fencing and building timber porous check dams in vulnerable landscapes then letting nature take its course to larger engineered structures such as rock chutes to armour the gully head. Over the past three years, monitoring has been undertaken every 6-8 months to assess the results, which have been encouraging. The images show examples where natural regeneration has improved the ground cover after active stock management. These areas were previously scalded landscapes with multiple cattle tracks exacerbating the recovery process. Removing stock pressure coupled with wet season spelling and introducing stoloniferous (running) grasses were the first steps to stabilising the fragile landscape. It was very rewarding for the landholder and MRCCC to witness the change, giving further incentive to continue the work in other gully sites.

The Mary River is the southern-most catchment which impacts upon the Great Barrier Reef. According to CSIRO modelling, over 70% of sediment from the Mary River reaches the Great Sandy Strait marine environment and southern Great Barrier Reef, smothering sea grass beds and corals. The Australian Government Reef programs have wide ranging objectives to reduce this sediment load including targeting gullies on rural properties which release significant sediment loads. Gully monitoring enables comparisons to be made between undertaking works and sediment saved vs not undertaking the works and sediment lost to the reef.



## Feeling a strong connection to the region

My name is Katie Johnston, and I have recently moved to Gympie to work at the MRCCC as the Queensland Farmer's Federation Agricultural Extension Trainee. I'm very excited to have the opportunity to contribute to the sustainability and productivity of the catchment. I feel a strong connection to the area from living in Maleny most of my life, and I am now based in Gympie.

I will be focusing on several projects at the MRCCC. These include 1. gully erosion control, 2. grazing land management, 3. improvement of streambank condition, and 4. soil carbon testing. Eroding gullies can reduce available productive land, threaten infrastructure, and contribute sediment to our waterways.

My role with gully erosion is to work with landholders to build Porous Check Dams (leaky weirs) and geofabric drop structures. Geofabric drop structures are one method that can be used to stabilize the most upslope point of the gully; the gully 'head.' The gully head mainly erodes during rainfall events. It tends to continue to erode and move upslope – lengthening the gully – until it reaches a high enough point in the slope that little enough water flows down the slope into the head.

Laying geofabric over the soil of the gully head can create a stable flow path for water. This prevents the splash back that causes the head to undermine. PCDs are small, simple timber structures that are placed in a series within a waterway or drainage line. They are used to slow water down, reduce soil erosion and trap sediment. Running grasses, pangola or African star grass can then be planted in trapped sediment behind the PCDs. PCDs can be constructed from a range of readily-

available materials, including logs, rocks, sticks, hay bales, and wire netting. These are placed in a compact line across the flow of the water approximately 30cm high. They can be held in place with posts and wire netting.

For anyone that is interested, a fantastic practical book on the topic is 'Gully Erosion' by John Day and Bob Shepherd. Pick up a free copy from the MRCCC.

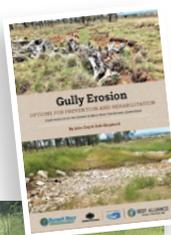


Photo right:  
Brad Wedlock  
building a Porous  
Check Dam with  
Shaun Fisher.

# Waterwatch



Waterwatch in the Mary River catchment continues to go from strength to strength, thanks to our dedicated network of 114 volunteers who currently test water quality every month at 123 sites. The MRCCC's Waterwatchers are our eyes on the catchment, reporting not just water quality data but also other observations including fauna, pollution, fish kills, weed infestations etc. We currently have two networks in the Sunshine Coast hinterland, five networks in the Gympie region and two networks in the Fraser Coast region. The data collected by volunteers is used to establish an A,B,C,D rating which is compiled into a report of water quality in the various sub-catchments every three years. The info-graphic (below) for the Gympie region demonstrates how the data is reported and the water quality rating of each subcatchment. The Waterwatch Reports are downloadable from the MRCCC's website at [www.mrccc.org.au/waterwatch](http://www.mrccc.org.au/waterwatch)

*Photo: William Connor, age 4½, at Gympie Weir, doing the 100th test!*

## Gympie Region Waterwatch Testing Sites and Report Card Grades 2016-18

All data are compared with scheduled water quality guidelines to produce report card grades. Monthly testing of pH, electrical conductivity, dissolved oxygen, temperature and turbidity is performed by trained citizen scientists.

% COMPLIANCE WITH GUIDELINES	GRADE
>80%	A
66 – 88%	B
50 – 66%	C
<50%	F

### TINANA CREEK

Big Sandy Ck	B
Coondoo Ck	B-C
Hines Ck	B
Ross Ck	B
Sandy Ck	B
Tagigan Ck	B-C
Tinana Ck	B
Ulirrah Ck	C
Yards Ck	B

### GYMPIE DISTRICT

Deep Ck	C
Glastonbury Ck	B
Mary River	B-C
Scrubby Ck	C
Six Mile	B
Three Mile Ck	C

### MARY VALLEY

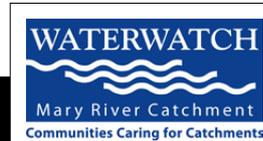
Amamoor Ck	B-C
Araucaria Ck	C
Calico Ck	C
Caseys Gully	C
Derrier Ck	C
Kandanga Ck	B
Pie Creek	F
Yabba Ck	B

### WIDGEE / KILKIVAN

Fat Hen Ck	B
Mary River	B
Wide Bay Ck	B-C
Wonga Ck	B

### GYMPIE STATISTICS

**30** citizen scientists collected **1092** samples from **50** sites at **35** streams during **2016-2018**



## 2019 is a significant year for MRCCC



Dichotomy bad

Dichotomy good

**A Waterwatcher reflects a little**

Earlier in the year we celebrated our 200th meeting, at Garapine near Kybong, overlooking the Mary River, where the very first, formative MRCCC meeting was held. As well as that milestone, this year is our 25th year of operation. Around the time of our formation, the Mary had, rightly or wrongly, acquired the reputation as being one of the most degraded rivers in South-east Queensland, an impression readily bolstered by many post-flood photographs.

Since that time though, learning a lot more about the threatened species that live in the Mary and its tributaries, a different view has emerged, encapsulated most succinctly in 2012 by Professor Tim Flannery in the ABC series *Two on the Great Divide*. Speaking of the Mary he said, *'It's not the biggest, it's not the longest, but I reckon it's one of the most important rivers in Australia.'*

For in truth as much as there are bare seriously eroded sections of the Mary, there are equally well vegetated, stable banks with shade keeping waters cool and providing suitable living and breeding habitat for a range of creatures.

*Article Ian Mackay*

# Catchment Crawl

On the 8th and 9th of October 2018 the MRCCC held its 16th annual Catchment Crawl. MRCCC representatives, Waterwatch volunteers and interested members of the public got together to test water quality in the Mary River Catchment. A variety of water quality parameters were tested, including basic physical chemistry, E. coli, total suspended solids and a suite of nutrients. In addition, riparian condition was scored and interesting wildlife sightings recorded. This allowed participants with a special knowledge or interest in fauna or flora to share their knowledge and learn from others. All up, 34 sites were sampled over the two days, including sites on the Mary River; Susan River; and Obi Obi, Six Mile, Yabba, Widgee, Wide Bay, Munna and Tinana Creeks.

The aim of holding Catchment Crawls is to develop a snapshot of water quality over the whole catchment by sampling a large number of sites within a short period of time. They are held in October each year. This timing coincides with the breeding seasons of the endangered Mary River cod, vulnerable Lungfish and endangered Mary River turtle. Since Mary River cod have a narrow temperature range for breeding success, temperature data can be helpful in figuring out which stretches of the watercourse are likely to be suitable that year.

Overall, data gathered for 2018 shows that most sites complied with guidelines. This suggests that water quality in the catchment is in reasonable condition. Temperatures were lower than those in 2017 (which were the highest ever during a Catchment Crawl). This is great news for Mary River cod, with more sites suitable for breeding. Interestingly, pH levels increased at many sites in 2018. This is unusual because water temperature decreases usually result in less photosynthesis by algae and pH levels which are more acidic.

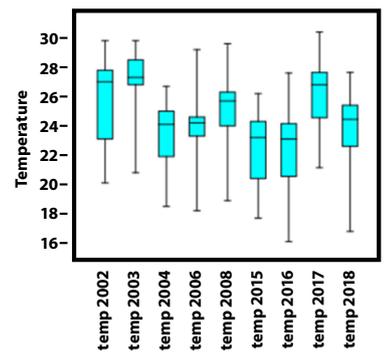
Nitrogen and phosphorus were within guideline levels for most Mary River sites, but the tributary sites all exceeded or came close to exceeding guideline nitrogen levels. One site at Six Mile Creek also exceeded the phosphorus guidelines. Keeping nitrogen and phosphorus within guideline levels is important because excessive amounts in waterways can boost algae growth. When algae blooms die off, bacteria begin to break them down, using up oxygen in the process. This can cause dissolved oxygen levels to drop too low to sustain aquatic life.



**Above** is Waterwatch volunteer Antoinette Augustinus using the FLT90 multiprobe to test water quality.

If you are interested in learning more about water quality or would like to get involved in the 2019 Catchment Crawl, 8th and 9th October, please contact the MRCCC on 5482 4766.

**On the right** is a comparison of temperature data from all sites sampled during Catchment Crawls between 2002 and 2018.



The box and whisker plot provides an indication of the spread of data for each year. The median (or middle value) is shown by the line in the middle of the box, the 25th and 75th percentiles by the lower and upper extent of the box and the highest and lowest values by the upper and lower extent of the whiskers.

## National Waterbug Blitz training workshop



*Above: Left to right; John, Katie, Ian, Sarah, Dalia, Cecil, Bec and Jess on the final day of training*

John Gooderham and Cecil Ellis from the National Waterbug Blitz Team travelled from Tasmania and Sydney to hold a two day Waterbug training workshop in collaboration with the MRCCC and Grassroots Alliance, Noosa. The introduction session was held on the first day where participants met at the Noosa Botanical Gardens to learn how to safely and effectively sample and how to identify Waterbugs. The second day was held at the Mary River, Traveston Crossing where sampling techniques were expanded upon and participants gained Agreed Level Taxonomy (ALT) accreditation.



The National Waterbug Blitz team will be making their way around Australia holding workshops to train and encourage people to get out to their local waterbody and use the Waterbug Blitz app (free to download from the app store or Google Play) to identify and records observations. Go to [www.waterbugblitz.org.au](http://www.waterbugblitz.org.au) for more information.

# Sunshine Coast hinterland activities

Over the past year there has been a great deal of input into the upper Mary River and its tributaries through several of our programs (see Reef Trust and Seqwater stories) as this a region of high biodiversity co-existing with intensive agriculture and small rural holdings. It is also an area of high bank instability. To complement our ongoing major waterway restoration programs is the Sunshine Coast Council's (SCC) grants program funded by the environment levy, in particular the Landholder Environment Grants that are available each year to assist landholders to protect and enhance waterways and significant tracts of vegetation. The MRCCC partnership with SCC enables us to work closely with landholders and to develop projects that dovetail together with other programs.

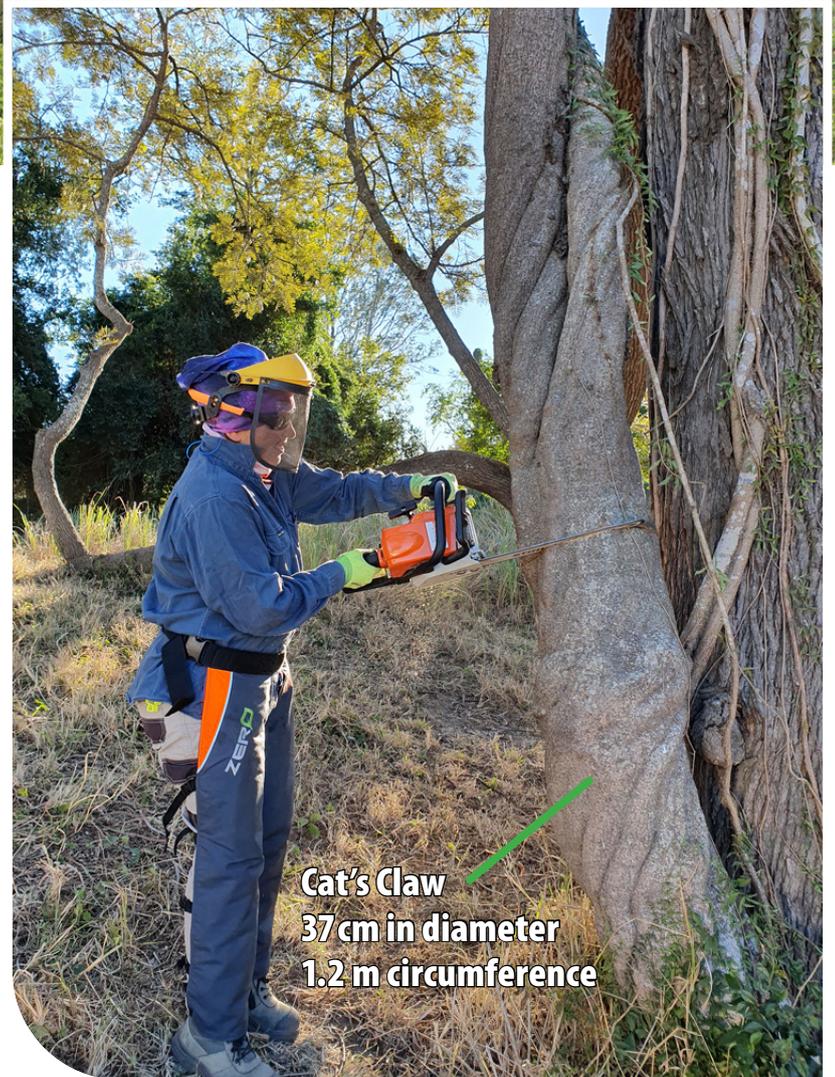
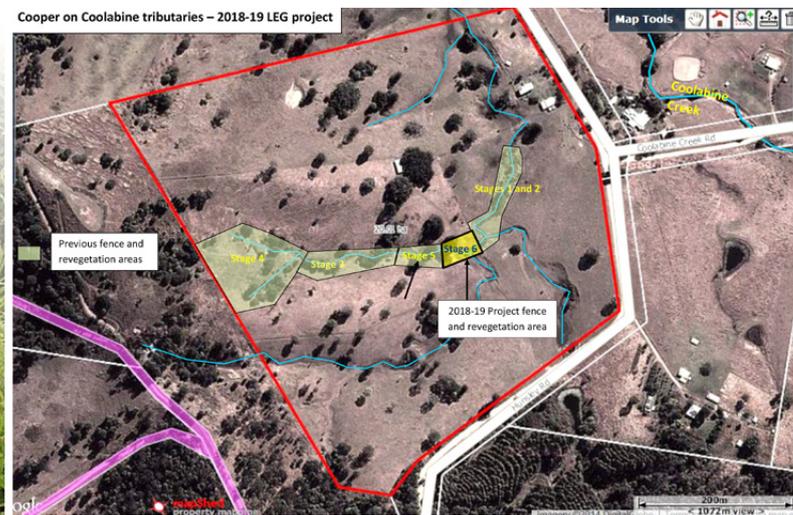
During the past 12 months we have communicated with and assisted 95 landholders in the area regarding project possibilities that include fencing and off-stream stock watering, environmental weed control, revegetation and erosion control measures. Of these 10 were assisted with project development and funding applications with 95% success rate.

Funding from SCC and inkind support from landholders has enabled

- 1540 trees to be planted in riparian zones to help restore and protect 750 metres of stream bank
- 9.65 hectares of environmental weed control in riparian zones (2.6 kilometres of waterway)
- 1720 metres of riparian fence to be installed protecting over 13 hectares of stream bank from cattle access
- Two off-stream watering points

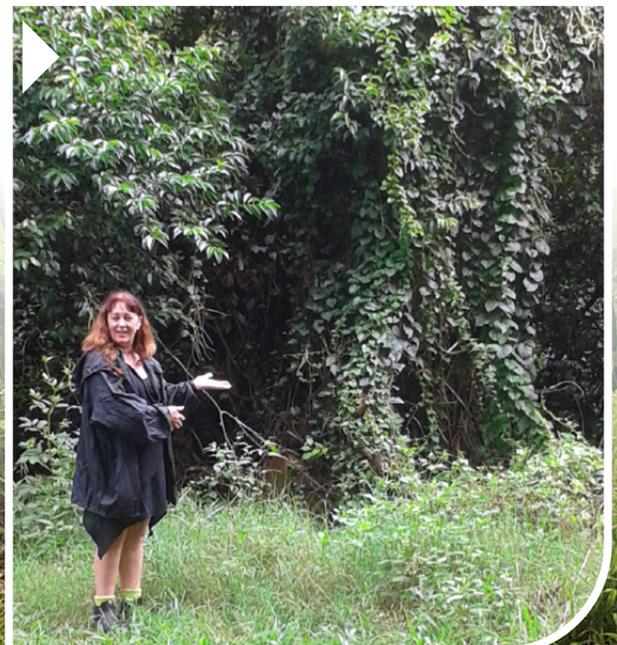
Sunshine Coast Council have provided the Landholder Environment Grant Program for the past 10 years, partnering with the MRCCC in the Upper Mary. The input from Council and Landholders has led to improved riparian zone health and habitat for threatened aquatic species.

*(Photo below) Property planning showing several stages of creek restoration.*



*(By Rachelle Hughes) My friends know how much I love killing Cat's Claw, and I always get them to keep me a sample of anything big. Above is a great example of something that was kept for me! It was not easy cutting her down, the way she was twisted changed the compression on the chainsaw. It took longer than anticipated to cut through due to the sheer size and weight of the section. The trophy piece is going to be sealed and displayed in the Cedar Grove Landcare Center once it is constructed. Image courtesy of Michelle Pearson.*

*Sylvia Hood with Madeira on Obi.*



# Biological controls for Cat's Claw vine and Madeira vine ... it's a numbers game

Introduced pest species Cat's Claw Vine (*Dolichandra unguis-cati*) and Madeira vine (*Anredera cordifolia*) are a scourge to the riparian landscape. The vines reach the canopy and smother large trees which are likely to ultimately die. The river banks then become undermined as the root zone is no longer able to hold the bank together. Cat's Claw Vine (CCV) in particular is located throughout the catchment while Madeira vine is more likely to be found in the upper to mid catchment. A long-term approach to controlling these vines involves releasing biological controls which feed exclusively on the vine weeds. Over time, when

populations reach critical numbers and become naturalised to the external environment, vine weed health is severely compromised by the feeding insects. Funding sources including Seqwater and the federally funded Reef Trust Program have recognized the importance of biocontrols as a critical tool for vine weed control and remain generous funders of the project. MRCCC in conjunction with the Greater Mary Association have been involved with releasing CCV biocontrols since January 2008. During this time, 240,000 insects targeting CCV and Madeira have been released across the catchment.

Insects released to control CCV include the Jewel Beetle (*Julodimorpha bakewelli*) and Tingid (*Carvalhotingis visenda*). More recently there have been encouraging observations undertaken by the Greater Mary Association surrounding the increase in sightings of the Leaf Tying Moth (*Hypocosmia pyrochoma*), also a biological control agent to CCV. Madeira beetle (*Plectonycha correntina*) is released for control of Madeira vine.

If you are interested in finding out more and how you can be involved in this project, please contact the MRCCC office on phone 5482 4766 or email [bec.watson@mrccc.org.au](mailto:bec.watson@mrccc.org.au)

## River Restoration Projects

The Kenilworth reach of the Mary River has undergone severe erosion over a number of successive flood events. The river restoration work at Charles Street Park near the showgrounds is now three years old and plantings there are well-established. The site today looks a far cry from the steep eroded banks left after flooding in both 2011 and 2013.

Another pile field project is underway, just upstream, at Carter's, to stabilise similar steep, cliff-like banks.

The pile fields, bank battering and grassing have been completed and further plantings are now well underway. The work is the result of collaboration between BMRG, MRCCC, Seqwater, the Sunshine Coast Council and Alluvium Consulting.

Another project, a little further downstream, is planned for next year, between Charles Street Park and the Kenilworth bridge and a public information night will be held in the near future.

### Photos

1. Looking downstream towards Kenilworth before works commenced.
2. Similar view after earth moving, pile field construction and grass establishment. Further plantings of suitable trees, shrubs and lomandra have now been planted.





# Finding frogs in February

**The MRCCC's third 'Find a Frog in February' program was a great success this year with 18 workshops, field days presentation and school visits attracting over 800 participants.**

February 2019 wasn't the wet month we hoped for (and were almost promised by the sidling of Cyclone Oma against the Queensland Coast) but, some localised rain was felt that legitimised the regular forecast of "10% chance of 2-5mm precipitation" that epitomised the general feeling that times could be tough in the area. Luckily however, it wasn't as dry as the inaugural FFF in 2017; the driest February on record!

The table provides some summary statistics from the three years of frog surveying by the citizens of the study area (Mary, Noosa, Burrum and coastal catchments). The incoming records over the past three years show up interesting trends. The number of frog records submitted shows that rainfall certainly appears to be a strong driver of detectability, as anyone who lives with a dam or billabong can attest! This is also reflected in the number of people contributing; again driven by frog activity and calling, and therefore detectability. However, the number of species encountered is very similar each year despite the conditions; 22 and 23 species of the 43 known to the area. Numbers of frogs varies with the conditions as one would expect.

Of great interest has been records of *Mixophyes iteratus* (Giant barred frog – endangered) from west of Cooroy

and along Tinana Creek to the east of Gympie. It was great to hear from HQP staff that made the effort to go to remote parts of their estate at night to see who's inhabiting their waterways. Several *Adelotus brevis* (Tusked frog – vulnerable) records were sent in from across the study area. We are so lucky to have good populations and broad geographical spread of this species here.

If conditions had been better, we may have found a few more than two *Litoria wilcoxii* (Stony creek frog) along a section of Bridge Creek at the Maleny River School during a school community outing. Very likely there were more inhabitants out foraging but having 80 people along one small section would be enough to have any sensible amphibian hopping away under some very secure cover! What an enthusiastic crowd of students and parents that was!

The FFF program is starting to evolve as a monitoring program that will, in time, show trends in frog presence at sites that are surveyed year after year. It's important to keep running programs such as this to keep an eye on our frog distributions, both common and threatened, as they are very susceptible to changes in all components of the environment. Any one of them could, like our healthy populations of montane stream-dependant frog species that disappeared over a couple of short years, become negatively affected.

The shortening of the spring/summer breeding window that has occurred over the past several years is a prime example of additional pressure on a species that may unknowingly already be at risk. The FFF program helps to increase the community's observation skills and promotes conservation and expansion of habitat to increase the resilience of frog species. People really enjoy seeing frogs around their place and love the opportunity to make a difference as best they can. We love making FFF happen and look forward to 2020.

The MRCCC is hugely grateful to the people we interact with in the 4 Councils that cover this amazing Mary River catchment and all the smaller systems from Perigean to Burrum; Sunshine Coast, Noosa, Gympie and Fraser Coast. All Councils have again supported FFF this year; a delightful collaboration.

Year	2017 Very dry	2018 Very wet	2019 Low rainfall
Frog Finders	79	142	94
Number of surveys	88	218	142
Number of locations	68	128	101
Frog records	438	2,358	1,309
Species	22	23	22
Threatened species	3	4	2



Proudly supported by:



# Creating Community Connections – Continuing improvements to important koala habitat at Goomboorian and Wolvi

Following on from the positive outcomes of the 20 Million Trees koala corridor project in the area around Goomboorian and Wolvi, the MRCCC were successful in obtaining an environment levy grant from Gympie Regional Council to conduct two community tree plantings in this area in 2018/19. This funding allowed for the planting of 600 koala food trees (300 per planting), and workshops in conjunction with the plantings to raise awareness about the threatened species that inhabit this special area of the Mary River Catchment.

Since the conclusion of the 20 Million Trees project in June last year, koalas have been spotted in planted trees at three different properties. Only two and a half to three years old! This is a great outcome which highlights the need for more koala food trees and more good quality habitat to feed and shelter.

The first Gympie Council-funded community planting, *Sunset, Seedlings and Sedgefrogs*, was held on the 5<sup>th</sup> of December 2018 at a property on Tagigan Road at Wolvi. This property is mapped as high value remnant and high value rehabilitation area. The planting began in the afternoon with 18 volunteers planting 300 koala food trees on the banks of Tagigan Creek. After supper, attendees were treated to a frog workshop run by Eva Ford. Miraculously, the skies cleared just in time to do a frog survey of Tagigan Creek. Froggers were not disappointed, as one of the first frogs spotted was a healthy endangered Giant Barred frog! Two more Giant Barred frogs were spotted, along with the promised eastern sedgefrogs, green tree frogs, stoney creek frogs and striped marsh frogs. Emerald spotted tree frogs and Great barred frogs were also heard calling. The trees planted have grown fast; at a recent visit many were over one metre tall.

The second community planting, *Gums at Goomboorian*, was held in April 2019, at a unique property at Goomboorian. This property is essentially separated into two halves by Tin Can Bay Road, with excellent eucalypt forest on the eastern



Over 30 people attended *Gums at Goomboorian*, making light work of the 300 trees planted. This planting was complemented by a short koala workshop conducted by highly experienced wildlife carer Rachel Lyons. Participants also enjoyed a guided walk with Rick Sizer from Gympie Landcare, where we were lucky enough to spot a koala.

side of the road, and mature riparian rainforest habitat along Tinana Creek on the western side of the road. This area was well traversed by koalas before the road was constructed, so unfortunately this stretch of Tin Can Bay Road is a hotspot for vehicle strikes resulting in koala deaths. The recent installation of flashing signs alerting motorists to the presence of koalas and urging them to slow down is a great initiative from local landholders and the Department of Transport and Main Roads.



If you are interested in learning more about the project don't hesitate to contact the MRCCC office and like the Mary River Catchment Coordinating Committee and Creating Connections Facebook pages for future updates.

# Dairies on the Mary



Seqwater has several water offtakes on the Mary River, found at Goomong, Kenilworth and Jimna, and is responsible for the delivery of a safe, reliable and resilient water supply to South-east Queensland.

MRCCC staff member Kath Nash is working with dairy farmers upstream of these offtakes overseeing the implementation of our Seqwater partnership.

Seqwater provide funding to landholders to implement sustainable catchment management initiatives within the Mary River catchment, with the aim of improved water quality for drinking water supply and improved farm management outcomes.

The program has been well received, with over a dozen farmers already involved.

*The types of projects being delivered under the partnership include;*

- Improved effluent and organic matter management on dairies
- Dairy laneway restoration
- Dairy shed water and runoff management
- Riparian fencing to prevent stock access
- Installation of troughs to allow off-stream watering
- Weed control, with a particular interest in Madeira and Cats Claw Vine
- Revegetation
- Appropriate grazing in sensitive zones
- Property and land management planning
- Community engagement, awareness and education

If you are a dairy farmer on the Mary River and would like to know more, please contact Kath at the MRCCC on 5482 4766 or [kath.nash@mrccc.org.au](mailto:kath.nash@mrccc.org.au)



*Photo at top: Off-stream watering troughs on the Barwood Dairy in Cambroon with Sarah Grimish – Project Officer MRCCC and George Walker – dairy farmer*

# Fishy stuff

Watching fish swimming in a pond or an aquarium can be infinitely fascinating and relaxing, and there are schools of thought that it's also therapeutic! One of the many questions we are frequently asked at the Mary River Catchment Coordinating Committee (MRCCC) is 'what native fish can I put in my dam or pond?' The answer to that question depends on what outcome you are expecting from any fish you release. Are you looking for something ornamental? Do you want to control mosquitos? Or do you want to grow fish in your farm dam?

Over the past few months, MRCCC staff and volunteers Helena Scanlon and Glenbo Craig have been working on a brochure that will answer that very question! The brochure provides information about species suitable for small ponds and larger farm dams and is available free of charge from the MRCCC at 25 Stewart Terrace, Gympie. If you are trying to control mosquitoes, small native fish like the Crimson-spotted rainbowfish and the Firetail gudgeon are an excellent choice. For farm dams or larger ponds, Australian bass, Silver Perch and Yellowbelly are suitable species. These species can be purchased from commercial hatcheries located around the Wide Bay and Sunshine Coast region. A list of these hatcheries is available from the Queensland Government's website at <https://www.qld.gov.au/recreation/activities/boating-fishing/rec-fishing/dams/stocking>

We also get many calls from people wanting to buy fingerlings of the endangered Mary River cod. The Hinternoosa hatchery in Cooroy produces these fingerlings with broodstock from the Mary River Catchment but you will have to wait until November/December for the fingerlings to be available as the cod breed on a seasonal basis. Visit them on Facebook or contact Darren on 0407 126 256 for more information.

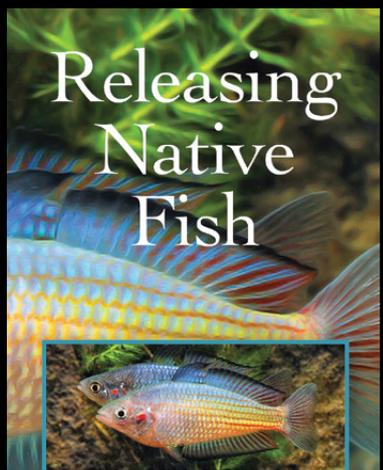
If your pond or dam is on a watercourse, you might need to consider a vegetation barrier on the spillway to stop your fish escaping when the dam overflows. Common riverbank species like Lomandra (Matt rush) and Dianella (Flax lily) are an excellent choice for dam walls as they allow water to flow through whilst capturing silt and reducing erosion.

Good water quality is important for most native aquatic species. Water quality in dams can be improved by planting native vegetation around the edges to provide shade, helping to reduce the water temperature and the likelihood of algae growth.

Native vegetation also provides habitat for wildlife like frogs and birds. There's many native water plants, grasses and water lillies that can also be grown in ponds and dams which will provide habitat for more aquatic species.

For more information: email [admin@mrccc.org.au](mailto:admin@mrccc.org.au) or phone 5482 3637

## Releasing Native Fish



in South-east Queensland  
for dams, ponds  
and mosquito control

Information compiled from DAFF brochures



# It's the Mary, darling

It would be hard not to notice the recent media coverage and political controversy surrounding fishkills and water management in the Murray-Darling Basin and towns like Stanthorpe running out of water. Those of us living in the Mary River Basin might feel fortunate that we are not in the same dire straits. However, we are facing exactly the same challenges here, and it has only been the fortunate timing of some local weather events that has kept the Mary River out of the news for the last few years. It would only take one failed wet season for the problems in the way the water resources of the Mary are allocated between competing interests to become apparent. What follows is a brief outline sketch of the way the water resources of the Mary are managed, and what the competing interests are.

There is a Mary Basin water plan that lays out in law how water is allocated and traded between users, who is responsible for running the various dams and pipelines used to regulate the river, and what everyone needs to do to maintain the health of the river. It considers the entire Mary River system, from the wet southern headwaters of the Maleny plateau and the dry North Western headwaters near Biggenden down to the northern barrages separating the freshwater of the Mary from the ocean near Tiara and Tinana.

The big commercial players in the Mary are Seqwater who control the water resources and infrastructure in the wet southern end of the catchment (upstream of Gympie weir) and SunWater who control most of the water at the dry (northern) end of the catchment, downstream of Gympie Weir. Wide Bay Water manages the water for urban use (Maryborough and Hervey Bay) taken from the barrages on the lower Mary and Tinana Creek. In simple terms, SunWater and WideBay water are trying to provide for an increasing demand for water for agriculture, industry and rapid urban growth in a part of the catchment that is becoming drier with climate change, and Seqwater is trying to find enough water for the massive urban growth that the state has locked in for the region between Brisbane and the Sunshine coast. Seqwater has connected its Mary River water resources to the

SEQ water grid via the Northern Interconnector Pipelines. This means that this water is removed from the catchment altogether, none of it ever comes back in any form, none of it flows downstream.

This is the crux of the problem for the Mary Water Plan. While the water plan considers the river system as a whole – the infrastructure, growth and development planning which drives the demand for water from the Mary is split across two competing regions that are screaming out for water to go in different directions. Legally, the water plan is relatively weak compared to state infrastructure, growth and development plans, and can easily be overridden or corrupted by electoral politics, as demonstrated by the Traveston Crossing Dam debacle.

The Mary Basin Water Plan was due to be replaced in 2016, but instead was extended till 2021. In the meantime, the 2017 SEQ regional plan identified that the State is looking to export more water from the Mary into the Seqwater grid to provide for its urban development plans. To do this, Seqwater identified that it is investigating 3 possible dam projects in the Mary involving Borumba Dam, and either an offstream storage or a new weir on the Mary in the Gympie region.

This month, the water planners at the department of Natural Resources,

Minerals and Energy published their ministerial review of the Mary Basin Water Plan which clearly identified that the hydrological modelling used to create the original water plan needs to be redone and a new plan needs to be created because of the high risks that the existing plan cannot fulfil several of its stated purposes around providing water security and environmental protection. This didn't seem to hit the news anywhere, but I believe that as a community it is in our interest to be aware of what is going on behind the scenes.

My personal belief is that the government water planners and scientists involved are doing what they can, but they cannot provide the political energy needed to get us a new water plan in time for it do some practical good. That is up to us. We need to lobby for a plan that puts the best current information and science into law **BEFORE** the flawed existing plan is used to support whatever political strategies surrounding water infrastructure come out of the woodwork at the next State election. Otherwise, we could get a repeat of the Traveston Crossing Dam political debacle, sooner than we had imagined.

## Good link to resources:

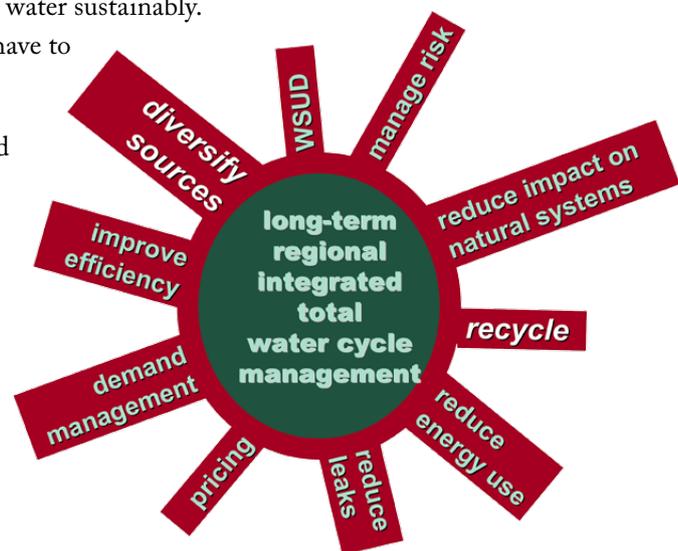
<https://www.business.qld.gov.au/industries/mining-energy-water/water/catchments-planning/water-plan-areas/mary-basin>

**Story by Steve Burgess**

## Senate Inquiry into Urban Water Management 2002

- We do not use water sustainably.
- We know we have to change.
- We have the technology and expertise.

**But we are not doing it!**



# Land for Wildlife gems

Two outstanding properties in the Gympie region will be changing hands in the near future. Both are Land for Wildlife registered. Renowned Koala Crusader, Don Sinclair, recently passed away, leaving a 6.1 acre paradise at Pie Creek. Known as the 'Yellow House', Don's long term commitment to the preservation of Koalas is well known throughout Gympie and the koala community. It's hardly surprising therefore that Don established a koala tree plantation on his property, which is fully fenced and has a large permanent dam with an island in the middle. The property features mature eucalypts and melaleucas, and extensive bee and bird friendly native tree/shrub plantings which have attracted over 50+ bird species. With solar power and large rainwater tanks, Don dedicated his life to revegetating this property for the benefit of our local wildlife. Enquiries phone 0431 085 239.

On five acres at The Palms, a passionate landcarer and land for wildlifer has established a wildlife wonderland in Araucarian vine forest adjoining other LFW properties of similar environmental values. Surveys have recorded 250 plus plants including old growth forest giants, orchids and ferns, 104 bird species, 11 frogs and five species of gliders and possums. Contact Wendy on 0428 236 102 to enquire about this magical property. We are keen to ensure both these properties continue to be loved and appreciated by people seeking to preserve and protect habitat for wildlife, so please get in touch if you would like more information.



Vale  
**Don  
Sinclair**

...  
Koala  
Crusader  
...



**BioBlitz**

*Joolie Gibbs  
and Dr. Geoff  
Monteith in  
Cooloola  
National Park,  
hug a forest  
giant at the 2019  
Cooloola BioBlitz*

*Learning about  
Robotics at  
STEAMzone 2019*



**STEAMzone**

# Mary River Month

The MRCCC is preparing for our fourth consecutive year hosting Mary River Month, starting with the Big Jump World River's Day on Sunday the 22nd on September 2019 and finishing with the Mary River Festival at Kandanga on Saturday 9th November. If you'd like to join in the Big Jump, we're encouraging everyone to grab your swimmers and jump into one of the many beautiful local watering holes around the Mary River Catchment at 3 pm, and demonstrate your commitment to healthy waterways. Send a photo of your Big Jump to the MRCCC to be in the running for a great prize.

On the 8th and 9th of October the MRCCC's Waterwatch Coordinator Jess Dean and the MRCCC team will be leading the annual Catchment Crawl. This two-day excursion samples water quality at numerous locations along the Mary River, from the headwaters in the Conondales, to the estuary at River Heads. Contact the MRCCC for a copy of the itinerary if you would like to be involved.

The MRCCC AGM will be held on Wednesday 16th October in Gympie, with Guest Speaker Associate Professor Ron Johnstone presenting his research on water quality in the Great Sandy Strait. The AGM will also hear reports from our Chairman and Project Officers on the work of the MRCCC over the past year. For more information or to RSVP, contact the MRCCC on 5482 4766 or [admin@mrccc.org.au](mailto:admin@mrccc.org.au)

The Mary River Festival at Kandanga on the 9th of November wraps up Mary River month. This year's Mary River Festival commemorates the 10 year anniversary of that fateful day when former Federal Environment Minister, Peter Garrett, said no to the Traveston Crossing dam proposal, and the Festival Organising Committee are working hard to ensure there will be ample opportunity to celebrate! The Festival features fantastic entertainment, community group displays, Cat's Claw Creeper vine weaving, Speakers tent, lots of good food, and plenty of activities that the whole family will love.

Visit [www.maryriverfestival.org](http://www.maryriverfestival.org) or find them on Facebook!

If you are planning an event that you would like to include in the Mary River Month 2019 calendar please send an email to [Mackenzi.Finger@mrccc.org.au](mailto:Mackenzi.Finger@mrccc.org.au).

A copy of the calendar will be available on the MRCCC's website .

**[www.mrccc.org.au](http://www.mrccc.org.au)**



## Decade of Reflections

**10th Anniversary of No Dam**

**Saturday 9th November • 2019**

**Kandanga • Mary Valley**

**11-30am to 7-30pm**



.....  
**Adults**  
**\$5**  
.....

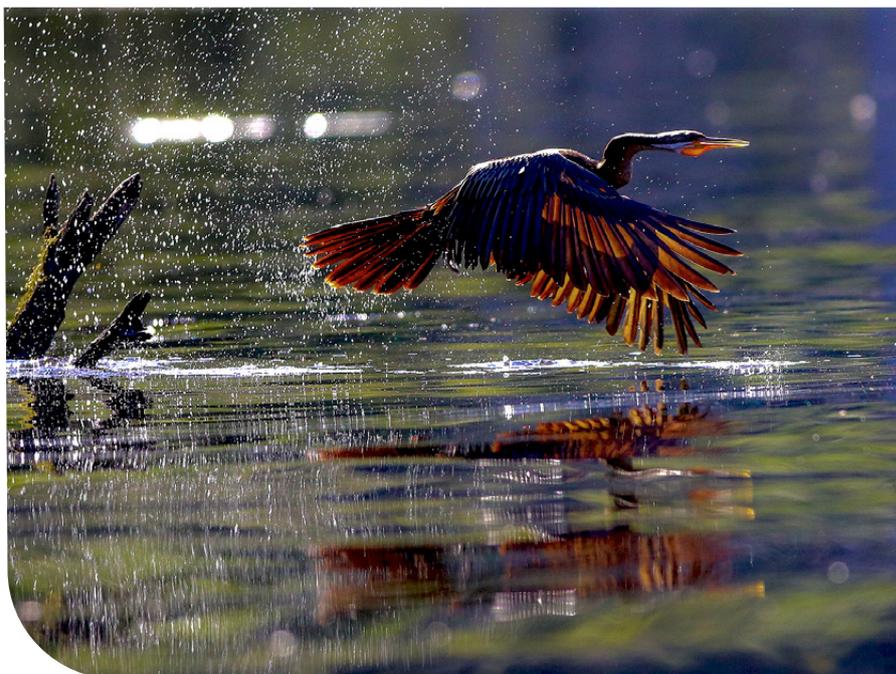
.....  
**16**  
**and under**  
**\$2**  
.....

.....  
**Workshops**  
**Activities**  
**Music**  
**Performers**  
**Food**  
.....

**Tickets Humanitix or cash at gate**

**[www.maryriverfestival.org.au](http://www.maryriverfestival.org.au)**

## Spring in the Mary Photo Competition



*One of the highlights of Mary River Month is the MRCCC's popular Spring in the Mary Photo Competition, with cash prizes courtesy of Murray Views, Gympie Landcare, the Burnett Mary Regional Group, Bos Rural and HQPlantations. Categories include the Open section, Junior, Wildlife, Rural and People's Choice. Contact the MRCCC or visit our website for a copy of the entry form and get your entries in by Friday 1st November.*

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.
- Lower Mary River Land & Catchment Care Group

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

### For an online 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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