MRCCC 2015

ANNUAL REPORT

MARY RIVER CATCHMENT COORDINATING COMMITTEE

MRCCC Annual General Meeting – Tuesday 20th October 2015

Mary River Catchment Coordinating Committee

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The MRCCC gratefully acknowledges the support of the;
Australian Government Department of Environment,
Queensland Department of Transport and Main Roads,
Queensland Department of Environment and Heritage Protection,
Queensland Department of Science, Information Technology and Innovation,
Burnett Mary Regional Group,
Sunshine Coast Council,
Gympie Regional Council,
Noosa Council,
Fraser Coast Council,
The Gympie District Beef Liaison Group,
and thousands of volunteers who consistently contribute their time and resources to ongoing sustainable natural resource management in the Mary River Catchment.

DONATIONS TO THE MARY CATCHMENT PUBLIC FUND ARE TAX DEDUCTIBLE

Front cover graphics: Glenbo Craig
Front cover images: The Mary Catchment Resource Centre at 25 Stewart Terrace, Gympie. Image courtesy of Eva Ford
Ian Mackay paddling the Mary
Six Mile Creek

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MRCCC Staff and Volunteers 2014-2015

Brad Wedlock – Operations Manager	BAppSc (Natural Systems & Wildlife Management) Specialist in grazing landscapes, sustainable grazing systems, fluvial geomorphology, riparian condition assessment and flora identification, water quality monitoring and data analysis.
Eva Ford – Catchment Officer	BSc (Australian Environmental Studies) - Specialist in threatened stream frog surveys and identification, and other threatened aquatic fauna. Extensive experience with water quality monitoring and data analysis, aquatic macroinvertebrate assessment, freshwater fish assemblage and monitoring programs.
Steve Burgess – Catchment Officer, Waterwatch Coordinator	BSc (Australian Environmental Studies) & Post Grad Maths & Science Specialist in water quality monitoring and data analysis, hydrology, statistics and agricultural and water modelling. Highly experienced educator.
Dr Tanzi Smith – Catchment Officer	BEng, BSc, PhD - Specialist in threatened aquatic species and planning. Water quality monitoring and social analysis.
Caitlin Mill – Catchment Officer	BEnvSc - BioCondition monitoring, riparian condition assessment and water quality monitoring.
Jenny Whyte – Waterwatch Coordinator	BSc, M Env Stud, MBA. Coordination of the Waterwatch networks, data entry and management
Debbie Seal – Administration and Event Coordinator	Administration, financial management, and marketing. Coordinator of the Noosa Festival of Water
Ruth Hutchison	Volunteer - Administration and Project Support
Glenbo Craig	Volunteer -Codline Editor and Project Support
Kelvin Nielsen	Volunteer - Project support
Sandra Noonan	Volunteer - Wildnet Data Entry. Administration and Project Support
Lauren McVicar	Volunteer - Environmental Planning. Volunteer Project Support.
Chris Rosin (to February 2015)	Catchment Officer Aquatic Ecology

MRCCC Current Projects

Implementing the Mary River Threatened Species Recovery Plan through the Federal Government funded Biodiversity fund
Reef Program and Flood Recovery Projects
Coordination and training of community Waterwatch networks in the Upper Mary, Kenilworth, Mary Valley, Tiaro Districts and the Tinana, Munna, Widgee, Glastonbury and Wide Bay Creeks
Living with threatened species in the Sunshine Coast, Noosa and Gympie Regional Council areas
Great Barrier Reef Sediment and Pesticide Monitoring in the Lower Mary
Supporting Valley Bees, Cooloola Nature, and the Koala Action Group, Gympie region
Supporting the Gerry Cook Hatchery at Lake Macdonald
Supporting the Land for Wildlife Program in the Gympie and Fraser Coast regions
Noosa Festival of Water
Codline newsletter

MRCCC Delegates 2014 -2015

Interest Sector	Name	Title
Beef/Grazing	Graeme Elphinstone	Delegate
Dairying	Rob Priebe	Deputy Chair
DEHP	Renae Cabrie	Delegate
QDAF	Jason Keating	Delegate
QDNRM	Vacant	
Education	Sue Gibson	Delegate
Environment	Emma-Kate Currie	Delegate
Fishing	Chris Mangold	Delegate
Forestry	Ernie Rider	Delegate
General Community Lower	Ross Smith	Delegate
General Community Middle	Ray Zerner	Delegate
General Community Upper	Dave Sands	Delegate
General Community Western	Peter Hughes	Delegate
Horticulture	Vacant	
Irrigation	Vacant	
Landcare, Lower Mary	Carol Neilson	Delegate
Landcare, Upper Mary	Phil Moran	Delegate
Landholder/Project Participant	Elke Watson	Delegate
Landholder/Project Participant	Helen Lofthouse	Secretary
Life Member	Margaret Thompson	Treasurer
Life Member	Jim Buchanan	Delegate
Fraser Coast Council	Cr James Hanson	Delegate
Gympie Regional Council	Cr Wayne Sachs	Delegate
Noosa Council	Jan Maddin	Delegate
Sunshine Coast Council	Denise Lindon	Delegate
Seqwater	Matt Skelton	Delegate
Special Member	Nai Nai Bird	Delegate
Sugar	Chris Coutts-Smith	Delegate
Waterwatch	Ian Mackay	Chairman

CHAIR'S REPORT 2015 – IAN MACKAY

This year has marked two important milestones in the life of the MRCCC.

Back in March we marked 20 years since the Mary River Catchment Coordination Association became incorporated (though our actual date of conception is rather further back than that).

And early in the year we moved into our new home at 25 Stewart Terrace in Gympie. For an organisation that had led a somewhat nomadic existence since its inception this latter milestone is enormously significant. Our ability to establish our own home is due to the foresight of earlier delegates, not to mention some very generous donations through the Mary Catchment Public Fund.

I'm often asked to explain the structure of MRCCC and, three years into the job as Chairman, you'd think I'd have a brief answer nutted out. But I haven't.

The MRCCC Executive. Deputy Chair, Rob Priebe, Chair Ian Mackay, Treasurer Margaret Thompson and Secretary Helen Lofthouse

I'd begin by pointing out the twenty something voluntary Delegates who bring a rich mix of experience and geographical diversity to our organisation. Then I'd draw attention to our staff, both full and part-time, who over the years have built our reputation for not only scientific credibility but equally importantly have worked tirelessly to develop both reputation and respect within the wider community.

Then there are the landholders who've been project participants over the years as well as groups like Noosa, Barung, Gympie and Tiaro Landcare, the Gympie and District Beef Liaison Group and the Greater Mary Association who assist enormously and with whom, over the years, we have developed great partnerships. We read from the same page.

Congratulations to Phil Moran, Noosa Landcare's long serving Operations Manager, who was the very deserving winner of this year's Queensland Individual Landcarer award.

Vital too are our links with councils, government agencies and increasingly universities and researchers.

It's an organisation that arose from community concern and enjoys strong community support.

Apart from the change of address, the past twelve months have seen MRCCC involved in a host of projects.

The Waterwatch network, funded by the Gympie and Sunshine Coast Councils involves eight networks throughout the catchment carrying out monthly water quality monitoring. That many of our waterwatchers have been carrying out the role for over a decade is a tribute to their interest, dedication and generosity.

Our involvement with BMRG in the pig project has provided a much better understanding of pig behaviour and control. Staff member Steve Burgess who has taken on this role has to be commended for dedication above and beyond the call of duty in attending the finale of the annual pig hunt. He refers to the event as the Aporkalypse.

In June we held the Festival of Water at Lake Macdonald on Six Mile Creek, with this year's event coinciding with the evaporation rather than the precipitation phase of the water cycle. It was a very well-received event.

As I write this we have just commenced Mary River Month which stretches from World Rivers Day right up to the Mary River Festival in Kandanga on November 14. It's an ambitious calendar of events, from the re-institution of the catchment crawl to bus trips, a river listening trip and even a photographic competition, and is spread throughout the catchment.

A major project during the year has been our involvement with restoration works on the riverbank behind Kenilworth. It was a great collaboration between Seqwater, Sunshine Coast Council, MRCCC, BMRG, Alluvium Consultants and involved some bank re-contouring and the establishment of a number of pile fields as well as plantings, including a very well-attended, Council-organised community tree plant on National Tree Day.

It's a particularly problematic section of the river and a detailed analysis by consultants Alluvium provided a much clearer understanding of river processes at play. It's been followed by other works on a property further upstream and a study for works immediately downstream.

We've always been keen to keep the Gerry Cook Hatchery at Lake Macdonald operational to continue its important role in raising fingerlings of Mary River Cod for release into the catchment. Thanks to some dedicated work by volunteer Hatchery Technician, Steve Poole and a productive recent meeting with state and local government representatives, the hatchery's future looks positive.

I'd like to report that the Mary River Threatened Aquatic Species Recovery Plan has passed through the hoops and been adopted, but it seems to have stalled somewhere along the way, perhaps partly due to changes in government. I hope it can soon be signed off by the Queensland government and continue into the public comment phase.

In August I had the privilege of being MC for the Sunshine Coast Council's Conservation forum, a day put on to thank their Land for Wildlife participants for the great work they do. Sunshine Coast Council recognise that environmental work carried out on one property has a positive benefit far wider than just that property. There is an active environment team to lend expertise and support as well as a Landholder Environment Grants scheme funded from their environment levy. MRCCC partners with SCC in the LEGs scheme with great mutual benefit.

On the environment levy front we were pleased when new Gympie Regional Council Mayor Mick Curran addressed one of our meetings and announced that the environment levy would no longer be used to fund green waste shredding, a decision that would see a considerable slice of the levy freed up for environmental purposes. Our meetings with both Gympie and Fraser Coast Councils about the re-introduction of Land for Wildlife schemes have yet to bear fruit although we remain optimistic. In the meantime we've held a number of Land for Wildlife field days, one of which, I'm pleased to announce, led to the formation of the Koala Action Group.

Our involvement with Gympie Regional Council, Gympie Landcare and Conservation Volunteers, as well as local member Warren Truss, has resulted in a couple of Green Army teams working principally along the riverbank in Gympie. It's been great to see all that earlier work of Paul Marshall and others continued. There are now numerous Green Army teams working throughout the catchment.

We were disappointed that some funding applications were unsuccessful. I always feel it's a tribute to the resilience of our staff that they can bounce back after such things, having invested a lot of time and optimism in planning the proposal.

Chairs of the MRCCC

Nov 1993 – July 1996	Graham Smith
Aug 1996 - July 2000	Peter Buchanan
Aug 2000 – 2003	Jim Buchanan
Sept 2003 – Sept 2008	Harry Jamieson
Sept 2008 – Sept 2009	Paul Marshall
Sept 2009 – Oct 2012	Phillip Moran
October 2012 – current	Ian Mackay

Over recent years, the MRCCC has generated great involvement by graziers in various iterations of the Reef Program. We are worried that its continuation in this region is by no means assured. Modelling data shows the Mary as a major contributor to sediments reaching the southern portion of the Great Barrier Reef and of course we're keen to address that.

Current and past Chairmen of the MRCCC – Ian Mackay, Graham Smith, Peter Buchanan, Jim Buchanan and Harry Jamieson at the MRCCC's 172nd General Meeting in March 2015. Image courtesy of Bevly Hughes

Over the past year we've been able to link with the Department of Science, Information Technology and Innovation to collect water samples during flood events to get a more accurate picture of the situation but are keen to continue to be able to provide practical assistance to landholders towards better management practices to reduce sediment runoff.

I'm delighted to see the links MRCCC is making with researchers at various universities, particularly Sunshine Coast University, the Australian Rivers Institute at Griffith University, and Marilyn Connell and her work with Mary River Turtle biology.

We've also been delighted to be able to accommodate students for work placements. There is enormous mutual benefit in this developing area.

A couple of years back, Gympie Regional Council engaged consultants to draft its cultural policy. At a public meeting we were asked what we most valued about living in the Gympie region and what came up at the top of the list was the environment and particularly the Mary River. I'm sure this wouldn't have been the case twenty years earlier and feel proud that this organisation must have played a significant role in this shift.

The Mary River Catchment currently faces a number of issues. The Mary Catchment continues to be viewed as a source of water for Brisbane although most people don't realise with the advent of the Northern Pipeline Interconnector, the Mary (through Baroon Pocket Dam) already provides a significant portion of SEQ's urban water.

We face a proposed massive coal mine at Aldershot near Maryborough and exploration in the Gundiah area, and have expressed our concerns about the enormous impact these could have on water quality. We share the apprehension of Goomboorian residents as they encounter exploration in their part of the catchment.

As we enter our third decade, working out of a Centre that is ours, and having built up a great network of supportive landholders, I feel we are well-placed to continue to support the wider catchment community.

Thank you to our great staff, our wonderful Delegates, our Waterwatchers, Glenbo Craig our Codline editor and in-house graphic artist, our media team of Peter and Bevly Hughes, and all our project participants and supporters.

Cod bless you all.

VALE – TED DRAY

The Woolooga and Gympie communities mourned the passing of Ted Dray in January this year at the age of 90.

I was very fortunate to have interviewed Ted in 2014 for the Codline newsletter for some history on droughts in the Gympie region. Ted was an avid recorder of rainfall records and weather events for 65 years. He told me about his experiences growing up on the farm, and the effects of the terrible droughts where thousands of stock died of thirst and hunger.

He also spoke of his inspiring life on the land that he loved and cared for. Ted was a renowned story teller, a family man and farmer, a member of the Gympie & District Field Naturalists Club, a passionate advocate against weeds (he had been weeding the day that I arrived to see him), and a legend of the Woolooga community. Someone recently remarked that if Woolooga were to have a Mayor, then it would have had to have been Ted! I was honoured and privileged to have had the opportunity to meet Ted, and hear some of his wonderful life stories. Ted was a true gentleman who I will always remember for his passion, his care of the land and its wildlife, his stories, and his wry sense of humour! ! *Deb Seal*

VALE – RON DYNE

Gympie Regional Council's former highly regarded Mayor Ron Dyne, lost his battle with cancer in February 2015. A former Mayor of Kilkivan Shire, Ron was elected Mayor of the amalgamated Gympie Council in 2008, and served until he retired from the position in December 2014.

Mayor Dyne was responsible for arranging accommodation at the old Council depot in Tozer Park Rd for the MRCCC, from where we operated for several years. This gave the MRCCC time to plan and fundraise for a Centre of our own.

Mayor Dyne was one of the first visitors to 25 Stewart Terrace, having come to talk to the MRCCC about the Environment Levy and the Land for Wildlife Program. Ron said he considered the MRCCC to be the "go to" group in Gympie for river management and environmental matters.

THE MARY RIVER CATCHMENT COORDINATION ASSOCIATION INCORPORATED

CELEBRATING 20 YEARS SINCE INCORPORATION

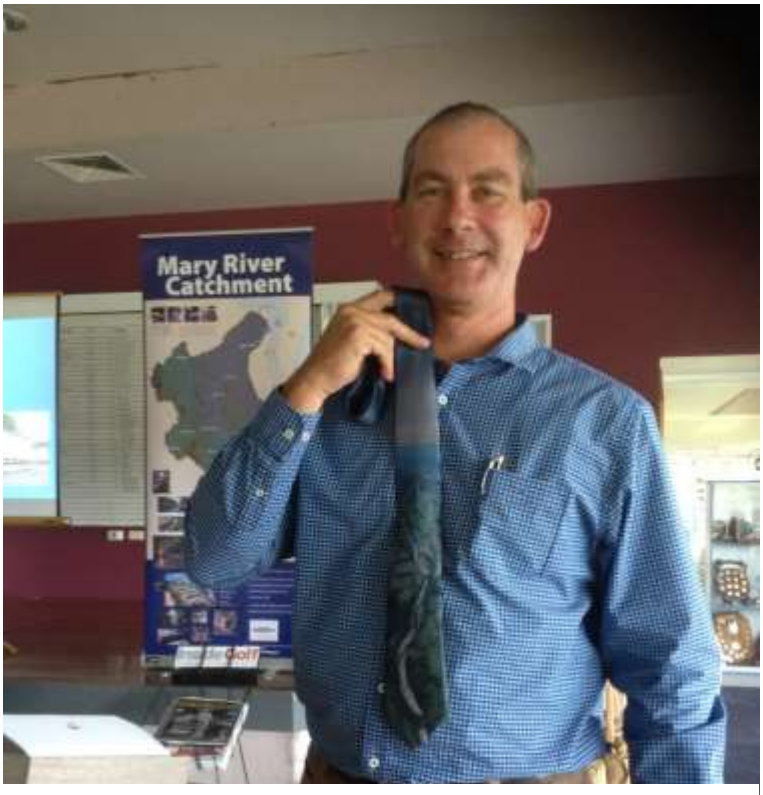
The MRCCC's 172nd General Meeting celebrated the group's 20th year since becoming an Incorporated Association on the 17th March 1995. The meeting heard how much has been achieved since the very early community meetings were held which resulted in the formation of the Integrated Catchment Management group that has since gone from strength to strength.

The actions outlined in the Mary Catchment Strategy and the Mary River and Tributaries Rehabilitation plan have continued to guide the actions of the Committee, and provide strategic direction for on ground works.

Highlights of the 172nd meeting included presentations on two decades of riparian rehabilitation works, a summary of the extraordinary collection of data by Waterwatch volunteers over 15 years, a fascinating look at how our knowledge of frogs and fauna has grown and a sneak peak at the works in progress at 25 Stewart Terrace, Gympie.

Gympie Mayor, Mick Curran, was Guest Speaker at the meeting. In a significant shift for Gympie Council, the Mayor noted that council's green waste shredding would no longer be paid for from Environment Levy funds collected from ratepayers, which would free up more of the funds for community organisations and environmental projects. The Mayor also noted that the Mary River is important to Tourism in the region.

No less than 6 former Chairmen of the MRCCC were present at the meeting, including inaugural Chair, Graham Smith. Each noted how the MRCCC had continued to evolve and grow.



Above right: Ross Smith, Eva Ford, Tanzi Smith and Caitlin Mill with Cat's Claw Biocontrol Agents
Below: Gympie Mayor Mick Curran sporting a Mary River Tie

Mary River Catchment Map

MRCCC Home At Last

Over the past 15 years the MRCCC has moved from place to place, starting at the Donga at the rear of the DPI in Gympie, then on to the old Dairy Farmers building in Tozer St, then to the Railway buildings just down the road, then into town to Monkland St, then to the old Cooloola Council Depot in Tozer Park Road for several years. Relocating an organisation like the MRCCC is a huge undertaking, so planning for a permanent home for the MRCCC became an imperative.

Credit must go to Angus Hutton for his assistance with helping the MRCCC to change the Constitution, which enabled the establishment of the Mary Catchment Public Fund, for the purpose of encouraging tax deductible donations. The fund was established in 2005 and the Mary Catchment Public Fund was entered onto the Register of Environmental Organisations in that same year. A group of long term MRCCC supporters were invited to become the Trustees of the Public Fund, managing donations and responsible for the disbursement of funds.

The proof, as they say, is in the pudding – or more correctly at 25 Stewart Terrace in Gympie, where the MRCCC purchased a 1928 Queenslander on a half acre block in February 2014. A Material Change of Use application was applied for and granted by Gympie Regional Council to enable the premises to function as office space for the MRCCC, and a set of plans was drawn up for the premises to be renovated to suit the group's purposes.

The high set home was excavated underneath to create a 140 m^2 office area for staff, whilst upstairs the rear of the house was extended to create a large meeting/function room suitable for a range of purposes. A 5 bay garage was built to house the MRCCC 's vehicles and the Waterwatch and Water Quality monitoring equipment in a purpose built "wet room". For ongoing sustainability, a 15 kva solar power system was installed, as well as two 5,000 gallon rainwater tanks, bringing the total water storage on the property to 15,000 gallons.

Although it seems to have been a long drawn out process, the works are almost complete, and the staff now have office space where we can expect great productivity and outcomes, while the MRCCC and associated organisations have space for meetings and access to a vast Resource Library. Demonstration gardens are planned which will showcase local native species, bush foods, bird and butterfly attracting plants, and plants suitable for erosion and sediment controls.

The MRCCC Resource Centre is already attracting numerous visitors seeking information about weeds and how to control them, flora and fauna identification, farm dams and water quality and best land and water management practices. State Agencies and Council constantly refer clients to the MRCCC for information and assistance.

The MRCCC will be eternally grateful to all those who donated to the Public Fund, enabling the dream to become a reality. Thanks also to Jim Buchanan for the enormous amount of time he has invested into project managing the renovations and external works. It would have been a monumental challenge without his support and vision for the project.

An official opening will take place down the track when all the works are complete. In the meantime, visitors and guests are welcome to come and visit, and see what extraordinary community support can achieve.

Before during and after – From top left: 25 Stewart Terrace as it was when purchased. Renovations underway. Ingenious relocation of essential large items with Ray Zerner, Bob and Lorraine Hood, and Graeme Elphinstone. Rainwater, a large garage and solar power. The upstairs meeting room.

Above: Long term Waterwatch Volunteer, Graham Draper monitoring Water Quality on his picturesque stretch of Eel Creek

WATERWATCH IN THE MARY RIVER CATCHMENT

Steve Burgess and Jenny Whyte

The monthly data collected through the Waterwatch program provides the MRCCC with detailed information of baseline water quality throughout the catchment. Over the past year there have been 77 individuals, families and businesses collecting data in 8 distinct network groups with 871 samples taken – a third more than over the previous year.

In addition to physical and chemical data the program records observations of Mary River aquatic species, water weeds and general river flow conditions. This information is entered into the MRCCC Information Systems and is fed into other MRCCC initiatives. In October 2015 the MRCCC held a Catchment Crawl with several staff and volunteers travelling from the headwaters to the river mouth over 2 days. (see full report Pg 13). A regular Waterwatch volunteer Kevin Jackson helped record core water quality parameters from the sites visited.

Financial support for the program comes from both Gympie Regional Council and Sunshine Coast Council. In addition a Queensland Government Everyone's Environment Grant completed during the year allowed the MRCCC to standardise data collection, equipment and sampling procedures across all the Waterwatch networks in the catchment. Over a 24 month period all Waterwatch sites were visited and supplementary training provided to Waterwatch volunteers.

HQPlantations' Steve Husband water quality monitoring on Coondoo Creek, Toolara Forestry

Top honours to Scott Woolbank for recording the most samples in the Waterwatch network

Community sampling is supplemented by data HQPlantations collect from the Toolara and Imbil forestry areas and QPWS collect from Conondale National Park. These areas include tributaries with quite unusual characteristics and draining large sections of the catchment. The information HQP and QPWS staff provide helps the MRCCC gain a holistic picture of the Mary River catchment.

Two retiring Waterwatchers are recognised for their long term commitment to the program. Graham Draper monitored a single site on Eel Creek over 10 years obtaining 99 samples and regularly reporting on the Platypus family he observed. Lorne and Ross Maitland joined the Waterwatch program early in 2003 and over the years shared monitoring of Amamoor Creek with Noo Dye. Recognition also goes to Des King and Colleen Ryan and to Ian Mackay who joined the program in 2005. All have crossed the threshold into 10 years of Waterwatching.

The logistics of moving water testing kits in and out of Gympie, and between diverse locations, on a reliable schedule would be a challenge, without the support of many local individuals and businesses. MRCCC is grateful for the assistance of Sauers Garden Produce (Gympie and Cooroy), Ian Mackay, Tanzi Smith and Vicki O'Farrell for helping with kit transport and to B & H Rural, Goomboorian Matilda Petrol Station, Ross Creek Store, Widgee Store, Amamoor Store, Barung Landcare, Mapleton Realty, Conondale Store and Kenilworth Garage for holding kits for volunteers to collect.

There will always be additional locations to be monitored and retiring volunteers to replace. If you have easy access to a section of the Mary River or one of its many tributaries and are able to contribute an hour a month there will be space for you.

Thank you to all the people who have helped out with this program over the last year; the efforts of landholders and volunteers, local businesses, councils and other organisations who support the program financially and in kind and the MRCCC staff and committee members.

Waterwatch Statistics

- 77 individuals, families and businesses volunteering time to support water quality monitoring in the Mary Catchment
- 871 water samples collected throughout the catchment
- 127 sites sampled at least once

Top Waterwatch Samplers of all time

Name	No of samples recorded
Scott Woolbank	339
Ian Mackay	265
Crossley family	211
Susan and John Bailley	176
Bob & Lorraine Hood	143
Bob Fredman	135
Des King & Colleen Ryan	134
Hughes Family, Malarga	132
Bronwyn McAdam (QP&WS)	131
Jason Buckley	124
Bill Butler (QP&WS)	117
Dom Tyrell (QP&WS)	109
David & Rosemary Burnett	115
Graeme Draper	99
Lorne & Ross Maitland/Noo Dye	99

Above: Diana O'Connor and Eric Anderson

Below: Spencer Shaw

Waterwatch volunteers during the period 1 July 2014 to 30 June 2015

Gympie to Scotchy Pocket
Alan and Tracey Petersen
Annette Bourke
Becky Watson
Bob and Lorraine Hood
Bruce McCulloch
Graeme Draper
Karen Flynn
Marija Vucak
Phil Herrington
Rob Kerle
Wendy McPherson
Recognition to Graeme Draper who retired during the year after 99 samples over 10 years

Mary Valley - Gympie to Imbil
Bob Fredman
Cath and Col Robinson
HQPlantations staff
Jason Buckley (Nick's Concrete)
Leslie and Craig Hanson
Lorne and Ross Maitland
Noo Dye
Tanzi Smith and Shawn Jarvey
Will Kingham
Amamoor Store
Tim and Amber Scott
Recognition to Ross and Lorne Maitland who retired during the year after 12 years helping with water testing at Amamoor.

MARY RIVER CATCHMENT COORDINATING COMMITTEE

Kenilworth district - Brooloo to Belli
Des King and Colleen Ryan
Geoff and Marie Farr
Graeme White
Ian Mackay
John Mayze
Karen Turner
Kathleen and Steve Dennis
Mary Ann and Don Law
Matt Baxter
Nina Cox
Phil and Laney Grove - kit transfers.
David Lade, Sauers Produce, Gympie - kit transfers.

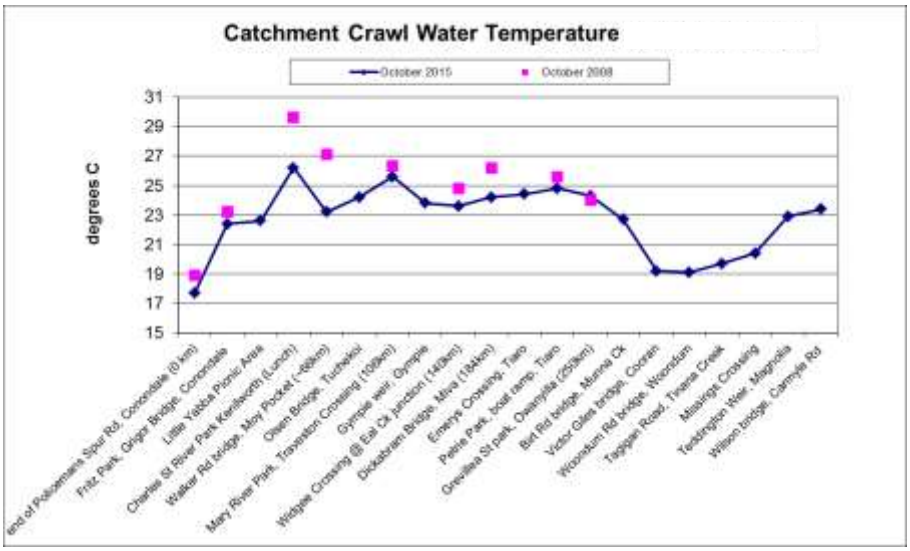
Munna Creek subcatchment
Jill Harvey
Malcolm Beresford
Ross and Michelle Kinbacher
Lesley and Spencer Innes
Cam and Lisa Hughes
Dion Williams and Carol Hinton
Helen and Kev Rogers
Brett and Tammy Marsh
Neville and Joy Turner
Iain Lewis

Upper Mary
Scott Woolbank
Chris Lee
Di Collier
Eric Anderson
Jo-anne Ferrier
Kacey Walker
QPWS Conondale staff
Roger Westcott
Susan and John Bailey
Conondale Store
Barung Landcare

Tiaro to Lower Munna
Brian and Lyn Thompson
Garth Jacobsen
Harry Jamieson
Isaac Schmidt
John Williams
Marilyn Connell
Owen and Lynda Thompson
Ras Carney
Ron Black
Ross Smith
Vicki and Rob O'Farrell
B & H Rural, Tiaro

Eastern Catchments – Goomboorian district
David Wilson
Howard Kirby
HQPlantations staff
Jeff Clifton
Kevin Jackson
Les & Inge Giegler
Ross Creek Store
Matilda Service Station, Goomboorian

Widgee and Wide Bay subcatchments
Anette Bambling
Brian Thomas
Errol Janke
Gillian Crossley
John and Yvonne Crossley
Keith and Christine Bagnall
Mick Bambling
Rob Kerle
Stephen Horseman
Widgee State School
Widgee General Store



CATCHMENT CRAWL 2015

As part of Mary River Month, a Catchment Crawl was conducted on 8th-9th October, the first since 2008. This year, we went digital, using a map Steve Burgess had published on the internet to generate interest and help people know where we would be.

Day 1 started at Policeman's Spur in the upper Mary near Conondale and concluded in Gympie. Nine sites were visited including eight sites on the Mary and two on Six Mile Creek. Eight members of the public joined us at various sites.

On Day 2 we travelled from Tiaro back to Gympie. We visited 10 sites, including two sites on Tinana Creek, one on Munna Creek, one on Wide Bay Creek and six on the Mary. All sites were tested for the parameters which are usually measured as part of the Waterwatch program (pH, dissolved oxygen, turbidity, temperature, electrical conductivity (salinity). Thanks to support from the Department of Science, Information Technology and Innovation Great Barrier Reef Research and Development program we were also able to collect samples for analysis of total suspended solids, total nutrients (nitrogen and phosphorus) and dissolved nutrients.

Catchment Crawlers sheltering from the rain at Petrie Park Tiaro. L-R Caitlin Mill, Harmony Patricio, Kevin Jackson, Steve Burgess, Bill Wilkinson, John Williams, Cecile Espigole, Bill Price

Water quality data gathered this year differed only slightly from data collected during the 2008 Catchment Crawl, although a clear pattern is not evident. One exception to this is temperature. As shown on the chart, temperature is lower at all sites than it was in 2008 (except Owanyilla where temperatures are almost identical). It is difficult to say with confidence what the cause of the lower temperatures is. It may well be a combination of ambient weather and river conditions. Whatever the cause, the river is cooler which bodes well for Mary River cod to breed.

The River Listening Tour in Maryborough 11th October 2015 (Dr Simon Linke - right) explaining the sound of snapping shrimp which we could hear in Maryborough.

The cod are believed to spawn in response to spring increases in stream water temperature to >20°C. However if the water reaches temperatures in the vicinity of 28°C the cod are likely to move on. Interestingly, Six Mile Creek, which is regarded as core cod habitat is still too cold to trigger spawning of cod (Six Mile in Cooran was 19.1°C and at Woondum Rd Bridge was 19.2 °C).

For much of day we had an entourage of people, making it a crowd of at least six people at each site. Due to the expertise amongst the group, we were able to get great bird and butterfly lists at each site and to have a lot of assistance with the sampling process. We were also fortunate to be accompanied by Harmony Patricio, PhD researcher from the Australian Rivers

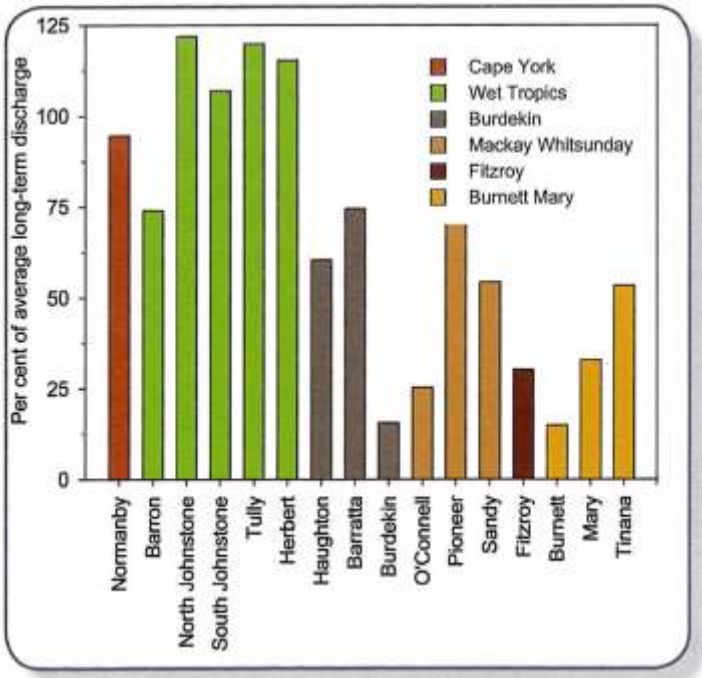
Institute at Griffith University. Harmony was collecting environmental DNA samples. These samples can be analysed to detect particular species in the water. Harmony is most interested in Lungfish, but there is also future potential for her samples to be analysed to detect the presence of Mary River turtle, Mary River cod, tilapia and other species. As part of her visit Harmony also trialled a method of environmental DNA sample collection that could be suitable for regular collection of samples by citizen scientists. Who knows - one day we might see environmental DNA collection happen as part of Waterwatch or other regular sampling activities. There is a little way to go before this is possible, but it certainly has great potential.

The catchment crawl coincided with several other research activities happening either around the same time. This included turtle survey work conducted by Marilyn Connell, and fish larval sampling being conducted by the Aquatic Ecology Team at the Queensland Department of Natural Resources and Mines. The River Listening tour, which recorded the underwater sounds at six different five different sites on the Mary and one on Tinana Creek occurred two days later. This period of concentrated sampling by numerous organisations provides an excellent opportunity to bring together a wealth of information about the state of the catchment now.

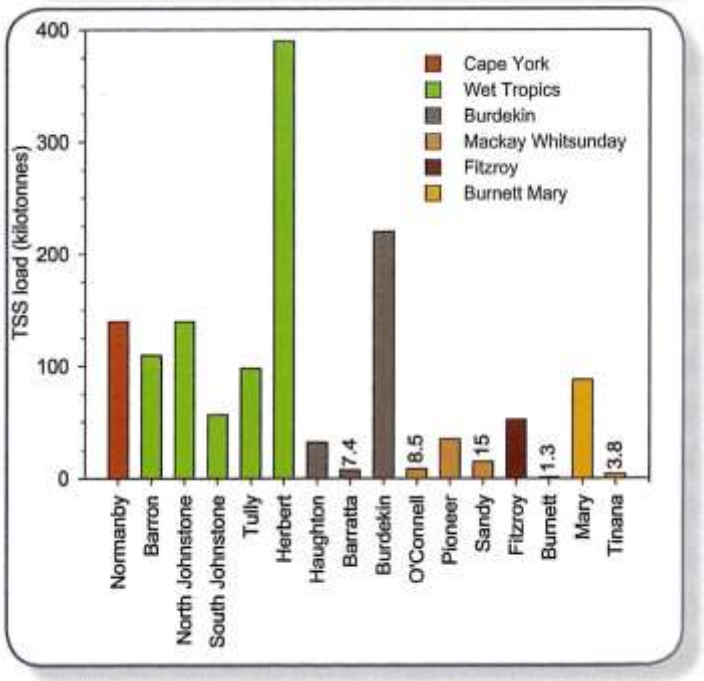
Great Barrier Reef Catchment Loads Monitoring – Tanzi Smith

MRCCC continues to play a role in the Great Barrier Reef Catchment Loads monitoring program run by the Department of Science, Information Technology and Innovation (DSITI). Our role in the program involves monthly sampling at both Home Park and the Tinana Barrage and event sampling at each of these sites. The monthly samples are collect by "grab" samples directly from the watercourse. The events samples are collected by automatic samplers and the sampling teams unload these samplers, pack and dispatch the samples. This can be an unpredictable task which requires several hours of the samplers time on each occasion.

For the first time since MRCCC became involved we have data to report from DSITI. The full report is available at http://www.reefplan.qld.gova.au/measuring-success/paddock-to-reef/catchment-loads. The graph at top right shows how the discharge of each of the rivers in the reef catchments compares to the long term average. As you can see most of the rivers to the south of Mackay, including the Mary and Tinana had discharges of less than 50% of the long term average. This is significant because the amount of pollution entering the reef is directly related to the amount of runoff and river flow.



The graph below measured loads of suspended solids (sediment) coming out of each reef catchment where actual monitoring occurs. It shows that the Mary is ranked 7th out of the fifteen sites, making the Mary Catchment a significant contributor.



In 2015 we had a change in personnel with Garry Brischke joining the team responsible for sampling the Home Park site. We welcome Garry, a qualified electrician and Bauple local, to the team. Garry replaces Marilyn Connell, who after helping with the sampling from the beginning of the program in late 2013 is now focussing on her post graduate research. We extend a big thank you to Marilyn for being part of the team.

Thanks to our sampling teams: Mary River (Home Park) - Ross Smith, Garry Brischke, Marilyn Connell. Tinana Barrage - Emma-Kate Currie and Frank Ekin. Special thanks also to Garth and Judy Jacobsen who allow the Home Park sampling team regular access to their property to take samples.

REEF WATER QUALITY GRANTS PROGRAM, GRAZING LANDS – BRAD WEDLOCK

The Reef Water Quality Grants Program offers technical advice and incentive funding to the grazing industry in the Mary River Catchment. The MRCCC delivers the Reef Program in partnership with the Gympie District Beef Liaison Group and the Burnett Mary Regional Group to assist graziers to adopt best land management practices that improve downstream water quality to meet 2013 Reef Plan targets.

Highlights of the year are:

Introduction to Grazing BMP field day, Woolooga, October 2014. Jointly organised with the Gympie District Beef Liaison Group, 70 graziers attended a morning session introducing the new Grazing BMP program at the Woolooga Hall, and an afternoon field walk to showcase a Reef Program on-ground project at Argentum near Woolooga. The project at Argentum involved grazing land type fencing and shifting cattle camps to ridgelines. During the afternoon field walk a session on how to use the Western Mary Catchments Grazing Land Type booklet was explained to participants.

Pasture plant identification field day, Ridgewood, March 2015. Jointly organised with Country Noosa, 30 graziers attended a pasture plant identification field day at the Bellbird Homestead at Ridgewood.

Pasture plant identification field day, The Dawn, March 2015. Jointly organised with Gympie District Landcare Group, 25 graziers attended a pasture plant identification field day at The Dawn, near Gympie.

Forage budgeting and pastures field day, Glastonbury, April 2015. Jointly organised with the Gympie District Beef Liaision Group, 65 graziers attended a forage budgeting field day at Tressavale, Glastonbury. Participants were shown how to prepare a dry season forage budget, with tips provided by the landholder, Jim Viner, on his approach to forage budgeting for the winter dry season.

Forage budgeting and introduction to soil nutrition field day, Ridgewood, May 2015. Jointly organised with Country Noosa, 30 graziers attended a forage budgeting field day where participants learnt how the steps required to prepare a forage budget involving pasture cuts, drying etc at Bellbird Homestead, Ridgewood. A short introduction to soil nutrition was provided, as a lead-in to a more in-depth soil nutrition workshop.

Shifting cattle camps away from riparian zones and drainage lines. A significant focus of the project is to provide financial incentives to shift cattle camps adjacent to riparian zones and drainage lines to appropriate sites higher in the landscape. This is achieved on the ground through strategic stock water management by locating troughs and tanks high in the landscape, thus creating new watering points and cattle camps distanced away from riparian zones and drainage lines. In doing so, the accumulated manure from the new cattle camp is filtered through pasture before reaching the riparian zone or drainage line.

During 2014/15, 18 grazing enterprises were assisted by the Reef Program with technical advice and incentive funding. Priority was given to on-ground projects that addressed:

- riparian zone management
- high sediment loads (districts identified by Sednet modelling)

2014/15 Reef Program grants	2014/15 inkind	Multiplier
$121,000 incentive funding	$160,000 grazier contributions	$1 grant : $1.32 inkind
$6,720 average grant	$8,888 average inkind contribution	

To date there have been 55 expressions of interest (EOI) forms received, with most carried over to 2015/16 because there was not enough incentive funding to accommodate all these projects. Of the EOI's received to date 75% are to improve grazing land riparian zone management.

% of On-ground projects targeting Reef Plan Outcomes	Reef Water Quality Grants on-ground project priority outcomes
100	Improving downstream water quality
94	Cattle camps shifted to hillslopes by moving stock away from drainage lines
66	Improved riparian zone management through fencing and watering points on hillslopes
60	Improved stock drinking water quality
51	Improved evenness of grazing; improved pasture utilisation
28	Upgrading the reliability of supply of stock water
17	Improving wetland condition

Forage budget field day at Ridgewood

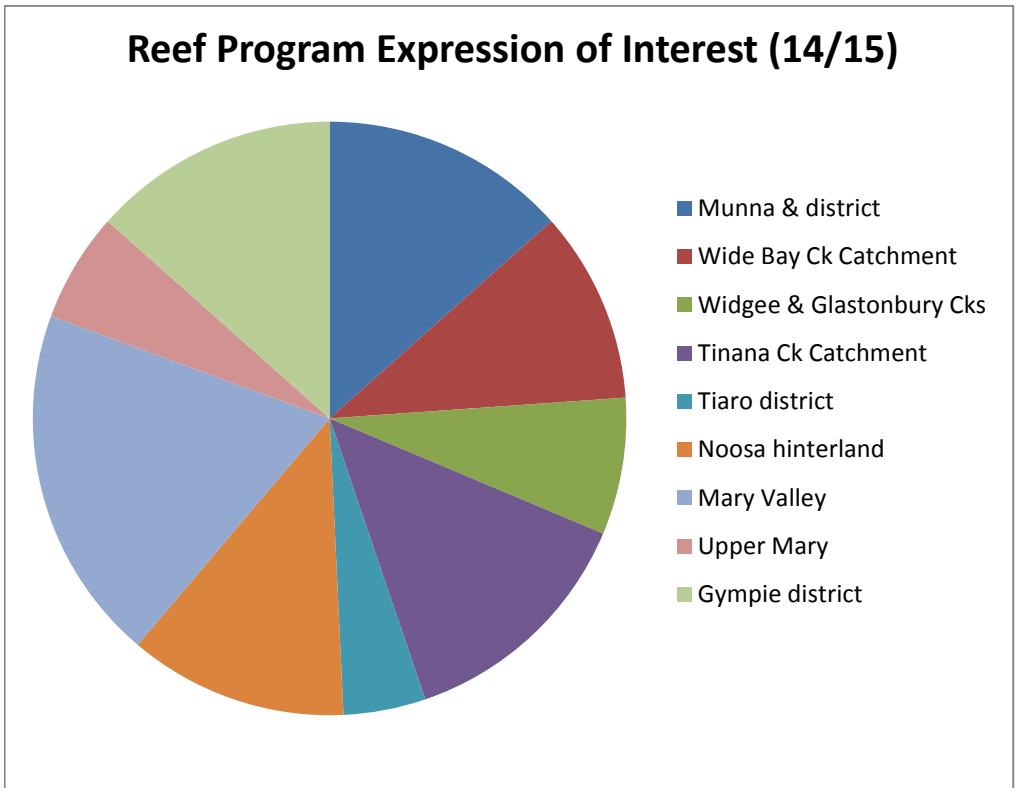
New cattle camp formed by a new tank and trough, Glenbar

The grazing lands on-ground projects were approved by an independent assessment panel comprised of representatives from the Gympie District Beef Liaison Group, Landcare and BMRG. The representatives were:

1. Wayne Carlson – Gympie District Beef Liaison Group
2. Phil Moran – Noosa & District Landcare Group
3. Mike Moller – BMRG.

Improved grazing land condition leads to greater pasture productivity and enterprise profitability, whilst reducing the loss of valuable sediments and nutrients from our grazing lands. Wetland systems such as a billabongs, marshes and riparian zones will be a particular focus due to their important function of filtering nutrients and sediments from the grazing landscape, before they reach the river systems.

The 2014/15 financial year marks the 5th year of joint Australian and Queensland Government funded Reef Program in the Mary River Catchment. The 2015/16 financial year is the final year of the program that involves a partnership of MRCCC, BMRG, Burnett Catchment Care Association, Qld Dairy Organisation, Maryborough, Isis and Bundaberg Canegrowers.



Above: George Cotter entertaining participants at the Woolooga Grazing BMP Field Day in October 2014
Below: George Mullan riparian fencing project, Yengarie

Community Landcare Grant – "Preparing the Western Mary Catchments Grazing Land Type booklet"

Australian Government Community Landcare Grant funding was obtained in 2013 to prepare a grazing land type (GLT) booklet targeting the beef grazing industry for the Munna, Wide Bay and Widgee sub-catchments, collectively known as the Western Mary Catchments.

The Western Mary Catchment accounts for approximately 30% of the Mary River Catchment, some 980,000 km^2.

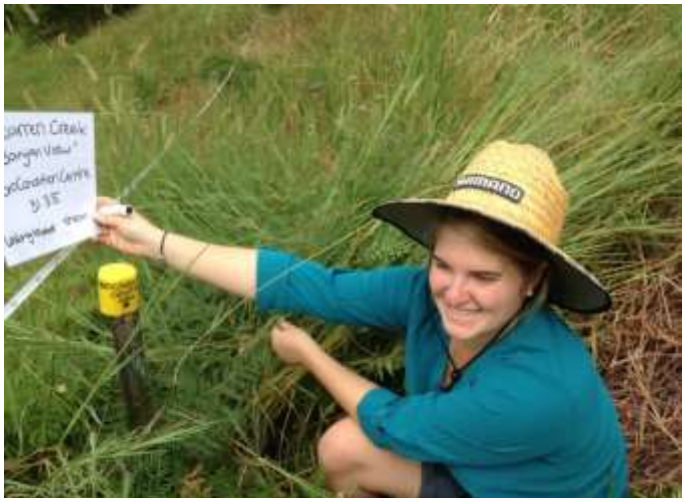
The booklet follows on from the preparation of the Gympie District Grazing Land Type booklet prepared in 2009 for the Mary Valley and east of Gympie including the Noosa River catchment. A booklet for the Western Mary Catchments was the missing link in regards to GLT booklets, with the adjoining Coastal and Inland Burnett GLT booklets prepared between 2005 and 2008.

Nine individual grazing land types were identified within the Western Mary Catchment, each representing a combination of pasture, vegetation, soil and geology that have distinctive pasture production characteristics.

By building capacity and awareness within the grazing community of the different grazing land types, their production capabilities and sustainable management, informed grazing management decisions can be made. The booklet will ensure that graziers are provided with the best available information on pasture species and sustainable grazing management for the land types represented on their property.

Conservation considerations were also incorporated in the grazing land type information provided to increase awareness within the grazing community of threatened species and ecological communities.

The draft Western Mary Catchments GLT booklet was launched for public comment in October 2014 at the Woolooga Grazing BMP field day to an audience of 80 graziers. The use of the booklet was demonstrated in the afternoon of this field day on a participating Reef Program project site. The booklet is available on the MRCCC website.



Caitlin Mill joyfully assists with photo point monitoring for bio-condition assessment

Biodiversity Fund - Caitlin Mill

"Restoring Riparian Resilience: Implementing the Mary River Threatened Aquatic Species Recovery Plan"

The MRCCC "Restoring Riparian Resilience: Implementing the Mary River Threatened Aquatic Species Recovery Plan" is funded through the Australian Government's Clean Energy Biodiversity Fund program. The MRCCC has collaborated with the Australian Government Department of Environment to develop a list of proposed actions that aim to protect the five target species of the plan as follows;

1. Mary River cod *(Maccullochella mariensis)*
2. Australian lungfish *(Neoceratodus forsteri)*
3. Mary River turtle *(Elusor macrurus)*
4. Giant Barred frog *(Mixophyes iteratus)*
5. Freshwater mullet *(Myxus petardi).*

This project works with riparian landholders who are protecting and restoring riparian zones that contain habitat for the target species. Activities of this project include riparian fencing to exclude stock from waterways, provision of off-stream watering point, riparian revegetation and riparian weed control including viney weed bio-control agent releases to encourage rainforest regeneration. An important outcome of this project is to increase community awareness of the threatened aquatic species and their habitat, and to provide community support for improving riparian resilience.

The project is targeting several demonstration reaches along the Mary River and tributaries containing threatened species habitat from Conondale to Maryborough as follows:

	Demonstration Reach	Mary River cod	Mary River turtle	Australian lungfish	Giant-barred frog	Freshwater mullet
1	Mary River, Goomong	✓	✓	✓		Likely
2	Mary River, Moy Pocket (including Oaky Creek)	✓	✓	✓		Likely
3	Belli/Cedar Creeks	Likely			✓	
4	Blackfellow's Creek, Ridgewood	Likely			✓	
5	Mary River, Kenilworth	✓	✓	✓		Likely
6	Mary River, Conondale/Cambroon (including Chinaman's Creek)	✓	✓	✓	✓	Likely
7	Mary River, Tiaro	✓	✓	✓		Likely
8	Mary River, Netherby	✓	✓	✓		Likely
9	Cooroora Creek, Pomona	✓			✓	
10	Munna Creek	Likely		✓		Likely
11	Mary River, Maryborough					Likely
12	Widgee Creek	✓	✓	✓	Likely	Likely
13	Kandanga Creek	✓		Likely		Likely
14	Glastonbury Creek	✓		✓		
15	Upper Tinana Creek	✓	✓	✓	✓	Likely
16	Six Mile/Pinbarren Creeks	✓		✓	✓	
17	Mary River, Lagoon Pocket	✓	✓	✓		Likely
18	Yabba Creek	✓	✓	✓	✓	Likely
19	Walli Creek	Likely	Likely	Likely		
20	Obi Obi Creek	✓	✓	✓		Likely
21	Mary River, Gympie	✓	✓	✓		Likely
22	Wide Bay Creek	✓	✓	✓		

In 2015, a Biodiversity Fund assessment panel was formed with the first meeting in March. Projects are collated by Project staff and presented to the panel. The Panel consists of Ian Mackay (MRCCC Chair) and Amy Gosley (Coordinator Environmental Planning – Gympie Regional Council) who assess the individual projects for approval.

Biodiversity Fund Project Highlights

Webb Park – Widgee Creek:

Gympie and District Landcare have been working hard on controlling the Cat's Claw vine infestation with a focus on the larger trees closer to the creek. This public council reserve is also a possible site for a community tree planting in the near future. Many of the larger trees are up on the high banks, buffered from the riparian zone by a wide grassy strip. A tree planting in this area would bring together the two smaller zones and create a wide riparian buffer with increased resilience.

'Bellambleon' – Belli Creek:

The McIntyre's began project work following disturbance to their riparian vegetation as a result of a tornado in the previous year. Their project commenced with weed control to help the recovery of the riparian zone as the canopy had opened up. They continued improvements with riparian fencing, followed by several revegetation projects. The projects have been aimed at rehabilitating the area and creating a wide vegetated buffer to protect the creek into the future. Adjoining properties have also been involved in rehabilitating projects.

A major aspect of the Biodiversity Fund project is release of biological controls for Cats Claw (*Dolichandra unguis-cati*) and Madeira vine (*Anredera cordifolia*). These biological controls are sourced from Gympie and District Landcare and the Greater Mary Association. In the 2014/2015 financial year there were no releases for Madeira vine and 155 biocontrol releases for Cats Claw. Forty seven releases were on new properties that had not had biocontrols before. In total these 155 releases consisted of 5560 jewel beetles, 11,585 tingids, 44 boxes of tingid infected plants and 1000 vine trimmings from tingid infected plants. These releases have occurred in 17 of the 22 demonstration reaches which are the focus of the Biodiversity Fund projects. The highest number of releases has been in the Glastonbury Creek area, Munna Creek, Moy Pocket, Gympie and Upper Tinana Creek.

This is the third year that jewel beetles (*Hylaeogena jureceki*) have been released and in some locations they are showing signs of severe damage to Cats Claw runners, denuding them of leaves. The jewel beetles are frequently found quite a distance from where they were released. On several occasions, beetles appear to have crossed the river in search of Cats Claw, popping up at distances of around 1km from where they were released. Severe damage to Cats Claw runners has occurred in Pioneer Park in Maryborough. The Greater Mary Association had released beetles about 700m away from this site one year prior.

Tingids (*Carvalhotingis visenda*) have been around for much longer than the jewel beetles. They are also getting well established in some locations. Gympie and District Landcare's tingid release at Widgee Creek across the road from the Widgee School is a good example of where tingids are spreading over an area of several metres in diameter. Importantly this site went under water since the tingids were released there and they have continued to flourish.

This year Steve Burgess and Ross Smith found the leaf tying moth (*Hypocosmia pyrochroma*) during a monitoring visit to the Munna Creek area. This moth was released as a biological control for Cats Claw several years ago and it seemed to have disappeared. The property it was found on this year had not been a past release site for the moth, so this is a promising sign that they are out there still.

In the remaining stages of the Biodiversity Fund the MRCCC aims to release as many biological controls for Cats Claw as possible and hope to also be able to release more beetles (*Plectonycha correntina*) to attack Madeira Vine. We would like to acknowledge the important role that the biocontrol facilities of Gympie and District Landcare, Greater Mary Association and now, Noosa and District Landare will play in making these releases possible.

LIVING WITH THREATENED SPECIES PROJECT – EVA FORD

Sunshine Coast Council – Community Environment Levy Partnership Program

The Living with Threatened Species program continues to grow in the Mary River catchment with new landholders rolling up their sleeves to protect and improve habitat and connectivity for our threatened wildlife. So many landholders are seeing the value in caring for the natural attributes of waterways, both the aquatic and terrestrial components, so that habitat is provided for many species and environmental services are encouraged.

The Sunshine Coast Council continues to support landholder extension, education and biodiversity research and monitoring in the Sunshine Coast hinterland. We are one year into a three year Community Environment Levy Partnership program that helps us to assist landholders to develop and carry out on-ground projects along waterways, continue our long-term frog monitoring of two sites on Belli and Cedar Creeks, take on students to help expand their experience and skill set, and continue our Waterwatch program in the upper Mary from Kenilworth and Belli to Maleny and surrounds.

The Council's Landholder Environment Grant program enables landholders to obtain support to carry out activities that protect and improve natural areas on their land. The MRCCC has assisted 15 landholders to develop project plans and obtain funding to assist with implementation. The following is a summary of the type of projects supported and the funding provided. These projects are often co-funded by the MRCCC's Biodiversity Fund program.

		Resources		
Activity	**Number of sites**	**Landholder Environment Grant**	**Biodiversity Fund co-funding**	**In-kind**
Environmental weed control to protect and enhance riparian zones and natural areas	14	$42,089	$39,744	$68,488
Fencing to control stock around waterways	3			
Revegetation of riparian zones	5			

Belli – Cedar Creeks Catchment Care Community

The Belli – Cedar Catchment Care Community (BCCCC) formed in 2014 and consists of 36 landholders, some of which come together regularly. Supported by Sunshine Coast Council, outings have included property visits to share experiences, do some weeding and plant some trees, listen to guest speakers and visits to sites on Cedar and Belli Creeks to learn about the ecology and natural values of this wonderful sub-catchment. The group is getting to know each other and starting to form bonds around the care and protection of waterway ecosystems. All of the landholders have or are currently carrying out on-ground projects on their properties.

Kenilworth Mary River reach geomorphic assessment and rehabilitation

The Mary River is known habitat for several threatened aquatic species that are the driving force behind the development of the Mary River Threatened Aquatic Species Recovery Plan (in draft). Much of the main trunk of the Mary from Conondale to Tiaro barrage has known locations of Mary River cod (endangered), Mary river turtle (endangered), Australian lungfish (vulnerable) and occasional Giant barred frog (endangered) as well as the recently listed White-throated snapping turtle (critically endangered under federal legislation). Serious areas of river bank erosion have occurred over many years as a result of human activities (vegetation clearing, cattle access, sand and gravel extraction) as well as extreme flood events of the like witnessed over the past five years. The Kenilworth reach has been highlighted as an area where river bed lowering and bank slumping have been commonplace, to the extent that landholders have lost significant areas of flood plain. The water supply for Kenilworth has also been under threat as the gravel bar that provides primary filtration diminishes.

The MRCCC, Seqwater, Sunshine Coast Council and the Burnett Mary Regional Group have joined forces to address a public river bank site at Kenilworth. The aim of the bank restoration project, directed by the expertise of Alluvium consultants, is to protect infrastructure (parkland and water offtake as well) and nesting habitat of the Mary River turtle and to reduce sediment contribution that reduces water quality and threatens ecosystems of the Great Sandy Strait and coastal reefs. The project was co-funded by Seqwater and the BMRG's Queensland Government Flood Recovery Program.

This site is readily accessible for public viewing and, since its completion in June 2015, has proved immensely useful as a site to show options for bank restoration. The river bank at this site has been re-profiled, had log pile fields installed and revegetated with native riparian species by Sunshine Coast Council.

An adjoining landholder is a key part of the success of the work and is ready to take on riparian fencing and revegetation and a downstream neighbour has been part of their own bank restoration project for several years.

Eva Ford shows students from Hong Kong how to remove Cat's Claw Creeper Vine from trees at Kenilworth Homestead.

Higher Ground – Hong Kong students

We work closely with Higher Ground Outdoor Education to deliver environmental community units for their annual influx of 200+ Hong Kong students and Redeemer Lutheran College students that come from Brisbane. These units focus on the environmental values of the Mary River catchment, threatened species and their threats with a focus on environmental weeds and their control. Getting out amongst the weeds with tools, gloves and a new drive to make a difference is a transformative experience for many of the young people who have never experienced being within a natural environment before. Our goal is to have them carry their knowledge and respect for nature into their adult life and utilise it in whatever field they may pursue.

Healthy Habitats steering group

This year Eva nominated to be part of the Burnett Mary Regional Group's Healthy Habitats Steering Committee and was accepted. The Committee has met to discuss how to spend the 2015/2016 allocation of funds. On ground management is the focus of the program, for the protection and conservation of nationally protected species and ecological communities, significant wetlands and coastal environments through the management of pest animals, grazing pressure, fire and weeds. Our target in the Mary River catchment is to encourage the installation of multiple bio-control breeding facilities for Cat's claw and Madeira vines that pose a significant threat to riparian vegetation.

Fraser Coast Wildlife Preservation Society's Carol Bussey searching for wallum frogs with HQPlantation's Ian Last

Noosa Council frog monitoring

Noosa Council has again supported long-term monitoring of frogs along Six Mile and Cooroora Creeks. These 100 metre transects were installed in 2007 and 2005 respectively and have since been visited three times a year during the frog breeding season (September to April). Frogs are much more active and easier to find/hear when the temperature is warm and the conditions humid and damp. The Cooroora Creek site provides habitat for one of the largest populations of the federally endangered Giant barred frog *Mixophyes iteratus*. Besides enabling us to collect important data on the persistence and population status of native frog species, these visits provide a perfect opportunity for volunteers to experience life along our creeks at night. They learn that the creek they may be familiar with has more going on around it than they previously thought. It helps to foster an attitude of respect and caring for these essential ecosystems and the species that depend on them. The information gathered from the monitoring program is currently being analysed so that we can determine what is 'normal' for species richness and abundance. In this way we can be alert to changes that may become obvious in the future and may signal that conditions are becoming less favorable for some of our species.

Gympie Council frog surveys

The distribution of frogs in the Gympie Shire area is poorly known. Ecosystems are very varied from the dry western regions to the wetter, rainforested tributaries and east to the Wallum ecosystems along the coast. Given this vast array of habitat types there are many species of frogs both threatened and secure (for now!). We have been conducting surveys along some of the waterways however there are vast areas that require further investigation – particularly the west.

We have found threatened species persisting along Tinana and Six Mile Creeks to the east of the Mary however, little effort has gone into the western sub-catchments. In historical times in the Mary River catchment it is likely that the endangered Giant barred frog existed from the headwaters around Maleny all the way to the Burrum River catchment, and maybe beyond. With the help of funding from the Gympie Regional Council and support from Hancock Queensland Plantations we have been able to expand our surveys to increase knowledge about Tinana Creek and the Kandanga Creek sub-catchments. The Tinana Creek surveys showed us that the Giant barred frog extends a bit further north than we thought and confirmed the presence of vulnerable Cascade treefrogs in Mitchell Creek (Kandanga Creek system). We look forward to exploring new frontiers along Coonoon-Gibber, Glastonbury and Deep Creeks this coming season through further support from Gympie Council.

Wildnet records

The table on the right provides a summary of records collected during the past frog survey season. All of our collected records from the MRCCC staff and from our volunteers and landholders are entered into the Queensland database, WildNet. This database is accessed by other NRM groups, landholders, government agencies, regional bodies, researchers, students and any interested party that requires knowledge of what exists in any part of Queensland. It is the number one, and sometimes the only, source of information for planning and prioritisation exercises. Species lists for a chosen area can be obtained from the database via the Wildlife Online website; https://environment.ehp.qld.gov.au/report-request/species-list/. We are fortunate to have an interface that we can use for this purpose. All data is verified and confirmed when possible depending on the reliability of the record. Most records are confirmed.

2014/2015 frog survey season activities	Number
Monitoring sites	4
Monitoring visits	12
Incidental surveys	33
Acoustic monitoring sites	4
Surveys in the Sunshine Coast Council area	18
Surveys in the Noosa Council area	4
Surveys in the Gympie Council area	10
Surveys in the Fraser Coast Council area	3
Frog records	535
Threatened frog records (3 species)	127
New locations for threatened frog species	9

The number of records entered into WildNet to date by the MRCCC is around 6,300 covering 42 mammal species, 33 birds, 23 reptiles, 38 frogs and 20 fish species. The MRCCC is one of the highest contributing organisations to WildNet in Queensland. The Gympie Region Koala Action Group, formed early in the year by local residents and auspiced by the MRCCC, has encouraged landholders to send in koala sightings to the MRCCC for entry into WildNet.

In late 2014 we conducted a survey of the Mary River around Tiaro to investigate the extent of the recently reported pest fish Tilapia *Tilapia Mozambique* (pictured above). This survey, supported by the Burnett Mary Regional Group enabled us to collect important fish records from this reach of the Mary as well of the pest fish. Unfortunately Tilapia fry were found near Tiaro. A Copy of the report from the Survey can be downloaded from the MRCCC website.

Above: Jackson Bishop checks a Fyke net during Tilapia surveying in the lower Mary near Tiaro in December 2014.
Right: Many tilapia fry were found in the Mary near Tiaro.

Mary River Threatened Aquatic Species Recovery Plan -Tanzi Smith

The Mary River Threatened Aquatic Species Recovery Plan seems to have become a bit of a hot potato shunted back and forth between the state and federal government, according to the political winds associated with changes of government at both levels. Despite the MRCCC's best efforts to encourage movement, it seems we have little effect. We will keep trying. Importantly, we are able to implement aspects of the Recovery Plan through the Biodiversity Fund project.

The Recovery Plan is unique in that it takes what we've referred to as a river systems approach, meaning that it looks at the river and the estuary as a whole ecosystem and proposes actions that would benefit overall health of the river as well as the threatened species which are the target of the plan. The five species on which the plan concentrates are the Mary River cod, (*Maccullochella mariensis*), Australian lungfish (*Neoceratodus fosteri*), Mary River turtle (*Elusor macrurus*), Giant Barred frog (*Mixophyes iteratus*) and Freshwater mullet (*Trachystoma petardi*). The cod, turtle and Giant Barred frog are listed as endangered and the lungfish is listed as vulnerable under our national environmental protection law, the Environment Protection and Biodiversity Conservation Act.

The freshwater mullet is recognised locally as being in decline. It was important to include because these fish provide a reminder of the importance of connectivity throughout a whole river system, and particularly between the fresh and the saltwater. They are also believed to play an important role in the food web of the river, eating algae that grow on the rocks and other surfaces, making nutrients and organic carbon accessible to more of the food chain. If barriers don't prevent their movement, the freshwater mullet travels very long distances between their breeding ground in the estuary and the upper reaches of the freshwater. During the course of developing the plan we realised that there was little known about this species which seems to be disappearing before our eyes.

As reported in the 2014 Annual Report, the status of this fish prompted MRCCC to submit a nomination for the freshwater mullet to be listed as vulnerable under the Environment Protection and Biodiversity Conservation Act. In 2014 we received word from the Department of Environment in Canberra that they were delaying the decision on the listing due to the lack of sufficient quantitative data. In August 2015 we were notified that the freshwater mullet is now included in the "Final Priority Assessment List". This means that we will now enter a consultation phase during which the Department will prepare a consultation document and seek further input before making a recommendation to the Minister regarding whether or not the fish should be listed (the final deadline for this decision is September 2017).

The Mary River is home to six species of turtle and this year another species joined the threatened species list along with the Mary River turtle. The White Throated Snapping turtle *(Elseya albagula)*, which occurs in the Mary, Burnett and Fitzroy Rivers was listed as critically endangered under the Environment Protection and Biodiversity Conservation Act. The MRCCC provided comment as part of the listing process. Interestingly the White Throated Snapping turtle is also a "bum breather" like the Mary River turtle. It is also a river specialist, which means it prefers free flowing sections of the river and is very unlikely to be found in farm dams. Unlike the Mary River turtle which breeds in spring and summer, it breeds during winter. It digs holes in grassy areas on the river bank to lay its eggs. Predation of the eggs is a big threat to this turtle. Although the White Throated snapping turtle is not one of the five species that are the focus of the recovery plan, many of the actions that have been identified in the plan will also benefit this species.

Feral Pig Monitoring and Trapping

In 2014/15 Chris Rosin and Steve Burgess delivered a project for the Burnett Mary Regional Group, "Feral Pig Control in the Mary Valley", the first part of which was completed in July 2015. Two areas under heavy economic and environmental pressure from feral pigs were chosen for the project; Wolvi/Wilsons Pocket and Dagun-Amamoor. Both areas had landholders experienced in feral pig control willing to be part of the project, and were supported with cooperative action from the Australian Macadamia Society, QPWS, HQPlantations and Gympie Regional Council. A continuation of the project has been negotiated until December 2015 which continues control efforts throughout the dry season and sets up a small library of monitoring, feeding and trapping equipment for use by landholders in the Mary Catchment.

The project concentrated on getting landholders in target areas to share information about pig activity and cooperate in the control methods they choose to employ, as well as testing a range of promising monitoring, trapping and feeding equipment. A full report of the project, which includes links to online mapping of pig activity, monitoring and trapping sites, as well as a short YouTube summary of some of the interesting observations from the video surveillance taken during the project is available on the MRCCC website. Perhaps the most important guiding principle that needs to be adopted by landholders is that effective population control is best achieved by persistent efforts over many years concentrated on reducing the number of breeding sows.

In addition to the many organisations and individuals which co-operated and shared information with the project, the MRCCC would specifically like to thank Gary Sheppard, John Tidy, Wolfgang Lanz, Malcolm Leadbeater and Bob Hood. These people put many hours of physical work into building and experimenting with traps and video surveillance equipment during this project, as

well as dealing with the unpleasant task of disposing of carcasses, often at inconvenient places and times.

Left: Work experience student Chris Buckland setting up remote video surveillance and telemetry equipment at Wilson's Pocket.

Below: Large pen trap with automated feeder and telemetry control

MRCCC Research Project Collaboration

Project title	Lead researcher and organisation	Funding Source/outcome
Science - community partnership to maximise effectiveness of threatened species management in the Mary River catchment	Dr Mark Kennard, Australian River Institute, Griffith University	Everyone's Environment Grant
Delivering threatened species priorities and plans in practice	Professor Hugh Possingham, Dr Anna Renwick, University of Queensland	National Environmental Science Program – Threatened species hub (TBA)
Advancing cost-effective techniques for large-scale koala health mapping	Dr Celine Frere and Dr Romane Cristescu, University of Sunshine Coast	Australian Research Council Grant
Identifying and communicating the benefits of best management practices for grazing enterprises	Professor Helen Ross, University of Queensland, & Dr Make Kennard Australian Rivers Institute, Griffith University	National Environmental Science Program – Tropical Water Quality Hub small grants Unsuccessful
Multi-objective optimization for catchment rehabilitation planning	Dr Simon Linke, Australian River Institute, Griffith University	National Environmental Science Program – Tropical Water Quality Hub small grants Unsuccessful
Improving regional adaptive coastal management	Dr Chris Jacobsen, Sustainability Research Centre, University of Sunshine Coast	Qld Government Accelerate Fellowship Unsuccessful

The MRCCC through Eva Ford has also collaborated with the Queensland University of Technology for the last 2 years on the acoustic detection of frogs using the 'Songmeter' recording unit. These units are programmable to record at chosen intervals. We set them to record for several hours during the night then set them up along tributaries where we are hopeful of picking up on our threatened frog species; Giant barred frog, Cascade treefrog and Tusked frog. Staff from the Faculty of Science and Engineering; Electrical Engineering, Computer Science unit, have assisted with setup and training in the use of the Songmeter and with developing an automated recogniser for some of our frog species.

We have used the Songmeters in Obi Obi and Kin Kin Creek sub-catchments during the 2014/2015 frog breeding season, recording for up to 3 weeks at each of four sites. It was exciting to hear two Giant barred frogs on the recordings from one of the sites on Obi Obi Creek; extending our knowledge of their distribution in this system by a few kilometres. When the recognition software is available we will be able to process the recordings much faster than at present. Appreciation goes to our student volunteer, Jackson Bishop, who spent some days listening intently to recordings. Sunshine Coast Council and Noosa Council both supported the work with the recorders this year.

MRCCC Representations

Mary River Kenilworth stakeholder group	Jul 2014
Noosa Council Pest Management Plan	Aug 2014
Tinana Creek BMRG Systems Repair steering group	Dec 2014
NRM & Climate Change Plan, Freshwater ecosystem expert panel	Feb 2015
Great Sandy Strait Interactive Management Plan	Mar 2015
Gympie Council Community Grants Environment Levy focus group	Jun 2015
BMRG Healthy Habitats assessment panel	Jun 2015
BMRG Reef Water Quality stakeholder group	Jul 2015
Gympie Weir SEQW fishway upgrade community reference group	Jul 2015
NRM & Climate Change Plan, Freshwater ecosystem expert panel	Aug 2015
Lake Macdonald dam spillway upgrade community reference group	Aug 2015
Upper Tinana Creek Cats Claw Vine Control Consortium	Aug 2015

MRCCC Policy and project submissions

Policy or submission	Date
Mary River Threatened Aquatic Species Recovery Plan development (Dept of Env)	On-going
Burnett-Mary Water Quality Improvement Plan development	Jun 2014
Section C upgrade of Bruce Highway EPBC referral assessment submission	Dec 2014
Section C upgrade of Bruce Highway EPBC referral Koala assessment submission	Jul 2015
Biodiversity Conservation Strategy mid-term review (Dept of Env)	Sept 2015

Workshops, Festivals and Field days

Riparian revegetation bus-trip, Maleny, Kenilworth	July 2014
Grazing land type & Grazing BMP field day, Woolooga	Oct 2014
Frog and fish workshop for Noosa and District Landcare volunteers	Nov 2014
Belli/Cedar Catchment Care Community outing at Belli Park – tree planting	Nov 2014
Mary River Festival, Kandanga	Nov 2014
Dry season grazing land management workshop, Country Noosa	Nov 2014
Land for Wildlife Workshop at Gympie Landcare with Sunshine Coast Koala Rescue	Dec 2014
Habitat workshop for Gympie and District Landcare ('Your Rural Block - Landcaring course')	Feb 2015
Clean up Australia Day, Mary River Town Reach, Gympie	Mar 2015
Pasture plant identification field walk, Country Noosa	Mar 2015
Pasture plant identification field walk, Gympie & District Landcare Group	Mar 2015
Get to know your creek field day, Kandanga	Apr 2015
Forage budgeting & pasture field day, Gympie District Beef Liaison Group	Apr 2015
Belli/Cedar Catchment Care Community outing on Cedar Creek – 'Discover your creek'	May 2015
Land for Wildlife field day, Gympie	June 2015
Noosa Festival of Water, Lake Macdonald	June 2015
Educational activities with International Student Volunteers along Belli Creek	July 2015
Noosa Landcare seminar program – Frogs in Noosa Shire	Sept 2015
Mary River Month activities including the Big Jump, River Listening, Land for Wildlife Field Day, Indigenous Women's Business Workshop, Catchment Crawl, Spring in the Mary Photo Competition, Cod Hatchery Open Day, Upper and Lower Mary Heritage Bus Tours. Culminates with the Mary River Festival in November 2015	Sept/Oct/Nov 2015

Conference Presentations

7th Australian Stream Management Conference, Townsville – July 2014
Reef, Range and Red Dust Conference, Caloundra, September 2015
18th International Riversymposium September 2015
Pechu Kucha 2014

SCHOOLS AND KIDS ACTIVITIES

Sunshine Coast kids teaching kids	Maleny	Aug 2014
Kids big day out	Maryborough	Jan 2015
Totally Wild filming – River health and frogs in the environment	Kenilworth and Pomona	March 2015
Little kids day out	Gympie	March 2015
Gympie Landcare schools activity	Gympie	June 2015
Annual Hong Kong student outdoor education program for Higher Ground Outdoor Education at Kenilworth Homestead at Tuchekoi and Mary Valley	Kenilworth and Tuchekoi	July 2015
Outdoor frog and water education activity on Coonoon-Gibber Creek with Mary Valley College		July 2015
Mary Valley College – creek activity	Imbil	July 2015
Careers expo	Gympie	Aug 2015
Environmental weeds education day , Higher Ground Outdoor Education	Tuchekoi	Oct 2015

Giant Barred Frogs in the Curriculum

During Term 3 (July till September) 2015, 22 Year 7 and 8 students at Mary Valley State College (MVSC) studied a local area unit based on the endangered Giant Barred Frog. The unit was developed by Science Teacher Zela Bissett in consultation with Eva Ford of the MRCCC.

The plan involved inspecting two sites near Imbil around the MVSC and comparing their usefulness as habitat for the Giant Barred Frog. Students met Eva on site at the property of Graham and Vicki Waller at Brooloo, where Eva facilitated macro-invertebrate testing and gave a talk about the endangered species of the Mary River.

Students were engaged and interested in the unit and as several come from families owning property in the remaining GBF habitat along Coonoon Gibber Creek, this has to be a good indicator of future responsible custodianship of this rare species. A further flow-on effect was generated on MVSC's annual Sustainable Futures Forum on Friday September 12, when students from MVSC taught a visiting class from Amamoor State School, and their teacher, the new Principal of Amamoor SS, about macro-invertebrate analysis and its implications for water quality.

The MRCCC congratulates Education sector delegate Sue Gibson, the Principal of Barambah Environmental Education Centre, and local teachers Robyn Yates (Tinana School) and Zela Bissett (Mary Valley College) who have been developing an "Ed Studio" focussed on Mary River Curriculum.

An Ed Studio is an Education Queensland intranet page which teachers from anywhere in Queensland can access. Called "Get to know the Mary" the Ed Studio has focused on year 3/4 history curriculum using the MRCCC's Looking Forward, Looking Back project as a basis. Sue invites other teachers in the catchment to get involved in developing more material for other year levels and subjects. MRCCC will continue to play a support role in this project.

Progress at the Gerry Cook Fish Hatchery

The breeding program for the endangered Mary River Cod at the Gerry Cook Hatchery in Cooroy is looking good for the species this year, with round the clock volunteer Steve Poole currently dedicating most of his current life to producing cod fingerlings. And it's paid off. To date, three successful spawnings from two breeding pairs have taken place, resulting in around 10,000 fingerlings destined for release into impoundments in the Mary River Catchment, and to yet to be determined locations for conservation stocking. Thanks also to members of various fish stocking groups and a couple of friendly goats which helped to clean up the area round the ponds, a magnet for frogs and snakes.

The breeding process begins in July, when the broodstock are relocated from tanks within the hatchery to the ponds outside to enable them to spawn naturally. There they lurk, in their created habitat, until the water temperature hits around 20^0 C, which is the trigger for the cod to spawn. In the wild, the male cod guards the eggs, fanning them to keep them oxygenated, and most importantly, protecting them from predators. In an artificial breeding situation, the eggs adhere to mesh in the spawning habitat, which needs to be checked to determine the presence of eggs. This requires a chilly dive into the pond, and a potentially cranky dad when his babies are removed. The egg infused mesh is very carefully transferred to smaller tanks inside the hatchery and monitored until hatching occurs. The hatchlings are initially fed a diet of plankton followed by black worms from about 3 -4 weeks.

Representatives of the Queensland Department of Fisheries, Seqwater, Noosa and Sunshine Coast Councils, the Lake Macdonald, Lake Baroon and Lake Borumba Fish Stocking Associations and the MRCCC met recently to discuss the future of the Hatchery, which is situated on land now managed by Seqwater. Arrangements for the ongoing management of the Hatchery and the breeding program will be determined in the months ahead, and a management plan for the Hatchery developed which will look at maximising the potential of the Hatchery through using it as an Educational facility, with a focus on all freshwater species endemic to the Mary River Catchment. In the interim, the MRCCC has agreed to auspice the operation of the Hatchery, with Steve Poole at the helm for the current breeding season.

Currently, only one commercial hatchery in the Mary River Catchment has an active permit to breed Mary River Cod fingerlings. Another commercial hatchery outside the catchment has also been granted a permit to breed Mary River Cod, with the limitation that their broodstock not come from the Mary Catchment.

Knowledge about the extent and genetic viability of wild populations of the Mary River Cod in the Mary River Catchment is limited. Ongoing research is needed to ensure that the breeding program maximises conservation outcomes. Greater community awareness and education is also needed to ensure protection and conservation of the Mary River Cod and it's habitat, particularly in the Mary River Catchment where the Cod is a "no take" species for recreational anglers.

From top left:
Steve Poole water testing. Water in the tanks is regularly tested and changed to ensure optimum water quality;
4 week old Mary River Cod fry, already showing aggressive behaviour;
If you must handle a cod, please do it like this? Hatchery volunteer Darren Knowles demonstrates.
Hatchlings huddle closely together for protection, this batch almost forming the shape of a Mary River Cod!
In weeks to come, it will be survival of the fittest when these top order predators are released.

NOOSA FESTIVAL OF WATER

The eleventh annual Noosa Festival of Water was held at the Noosa Botanic Gardens and Lake Macdonald Amphitheatre on Sunday 28th of June 2015. This year's festival attracted a record crowd with an estimated 2000 + people enjoying the beautiful weather, activities, displays and entertainment in the magnificent Grecian style Amphitheatre overlooking Lake Macdonald.

The Mary River Catchment Coordinating Committee stages the Noosa Festival of Water to raise awareness and improve understanding of biodiversity and ecological issues in the Lake Macdonald subcatchment and Noosa Biosphere region, and to promote sustainable natural resource management in the Noosa hinterland. Activities, presentations and displays organised for the Festival are mostly associated with environmental care, sustainability and ecological issues.

The Festival also showcases Lake Macdonald and the Noosa Botanic Gardens as a recreational destination with a wide range of facilities suitable for all age groups. Partnerships with Noosa Council and Seqwater facilitate the success of the Festival each year. Unity Water participated in 2015 through provision of their Hydration Station to enable patrons to fill their own water bottles, reinforcing the Festival's move away from plastic water bottles.

Additional support for coordination and staging the event was provided by the Noosa Landcare Group, Noosa Council's Bushcare team, staff at the Noosa Botanic Gardens, The Tewantin – Noosa Lions and the staff and Committee of the Mary River Catchment Coordinating Committee.

The Lake Macdonald Catch and Release Bass Fishing Competition, held on the same day, attracted over 30 entries from across south east Queensland. Sponsored and coordinated by Hooked on Angling and Outdoors, the competition promotes sustainable fishing practices and care of our waterways.

CODLINE NEWSLETTER

Editor Glenbo Craig produced another stunning edition of the CodLine newsletter in 2015. This year's edition featured the ongoing rehabilitation and revegetation works at Belli Park. Peter Turner is very proud of his achievements to date, and is totally committed to improving the environment and water quality around his property. CodLine provides readers with up to date information about a range of issues relative to natural resource management in the Mary River Catchment.

Sunshine Coast Council and the MRCCC continue to fund publication of the CodLine, which is sent to over 2000 catchment residents by email, hard copy and also distributed to produce stores throughout the Mary Catchment. At this stage, funds are only available to print one copy per year, although there is usually a great deal more material available than room to publish it. Copies of the CodLine can be downloaded from the MRCCC's website at www.mrccc.org.au

KOALA ACTION GROUP, GYMPIE REGION

The Koala Action Group evolved from the Land for Wildlife Day held on 7th December 2014 jointly hosted by MRCCC and Gympie and District Landcare group. The theme was ''Spotlight on Koalas''. Guest Speaker Ray Chambers from Sunshine Coast Koala Rescue spoke of their battle to save injured and orphaned koalas, galvanising those in attendance to form an action group which could help with protection of koalas and their habitat.

The first Koala Action Group meeting was held on the 6th February 2015. Members identified a mission statement, and aims and objectives for the group. Michelle Daly, a Tandur resident living in koala habitat, and ready in retirement to pursue a passion for koala conservation issues, took on the role of Coordinator. The MRCCC agreed to auspice the group and have since provided much needed ongoing support, including a great meeting venue at Stewart Terrace.

An important first step was to gather data on koalas in the region, their location and numbers, their habitat and threatening processes. A koala sighting form was developed and within weeks a Facebook page was live. Posters calling for koala sightings to be reported to the MRCCC were placed in key koala habitat areas in country shops, service stations and halls.

The Gympie Regional Council's decision to update their Koala Habitat mapping in March 2015 was welcome news, given that broad swathes of land previously zoned rural in and around Gympie were now rezoned "residential living", potentially spelling disaster for existing koala populations.

Koala locations were quickly determined by a specially trained koala scat detection dog, Maya and owner Dr Romane Cristescu, who has been researching koalas for a number of years. Some members of the Koala Action Group were fortunate to have had Maya visit their properties and demonstrate her skill with quickly finding koala scats. The Council's completed report is due at the end of October 2015. Although the current planning scheme is in place until 2016, the Group will continue to lobby council to closely monitor and assess development applications in areas containing koala habitat. We have recently written to Council regarding community concern about urban expansion into koala habitat, and requesting a strategic approach to vital corridors and that developments incorporate koala-friendly design principles.

Since the formation of the group, the Koala is now declared "vulnerable" throughout Queensland, which should ensure more protection for the species across the state. To date, over 150 sightings have been entered into the Queensland Government Wildnet database through the MRCCC. Thanks to Eva Ford and Koala Action Group member Sandra Noonan, we are finally getting Gympie's koalas on the map.

Wildlife Carer, Paula Rowlands, weighs a koala brought to her for care and release. The Rowlands are creating a sanctuary for koalas and other wildlife on their Glastonbury property

During the year, we have worked on various activities and actions around key threats, such as habitat loss, vehicle strike, and disease and dog attacks. To increase community awareness we have had information displays at Clean up Australia Day, the Library, Gympie Central Shopping Centre and at Widgee Markets. The group also plan to have a profile at key local events such as the upcoming Mary River Festival.

The MRCCC has submitted a funding application to the Federal Government 20 Million Trees program, for the Goomboorian Koala corridor in collaboration with landholders in the area. If successful, this funding will augment and help to protect existing koala habitat.

We have become informed about legislation through an excellent presentation by Rachel Lyons. The group is very concerned about the many ways in which legislation is failing to protect habitat, and this will be an ongoing area of learning and action.

Many group members live in key areas of quality koala habitat in the region, and initiate conversations and activities in their own localities. The main challenge has been to not just put the spotlight on koalas, but to keep it there. A strong focus on habitat, its protection and enhancement including consideration of climate change is needed. It is commendable to see how much the group has achieved in under one year. We need, and welcome, new members.

COOLOOLA NATURE

As is usual, Cooloola Nature have been very active over the past year through their Environmental Education activities, and their on-going "Bird Trails of Cooloola" project. Kelvin and Amelia Nielsen are the brains trust of Cooloola Nature, offering a wide range of educational experiences and activities for bird and butterfly enthusiasts, as well as regularly monitoring migratory shorebirds and flying-foxes in collaboration with Queensland Parks and Wildlife.

In association with Gympie and District Landcare, Cooloola Nature participated in an activity morning at Gympie Central State School, delivering their presentation "Adaptations", focusing on birds' adaptation to their environment explained through beak shape and colouration.

They have had displays at the Noosa Festival of Water in June 2015 and at the "Bee Open Day" at Imbil in September 2015 with numerous new contacts made, and parents taking the time to point out to their young children features of the displays.

Scarlet honeyeater on grevillea flower.
Image courtesy of Amelia Nielsen

Cooloola Nature's "Bird Trails of Cooloola" project is breaking new ground, offering numerous options for birdwatchers including The Doggerel Trail and Glastonbury Creek. They have established a comprehensive set of guides tailored to avid "twitchers", and an interactive website on species local to specific areas, accommodation options, and even road conditions, all aimed at providing the ultimate birding experience. This information can be accessed via the Cooloola Nature website at www.birdingcooloola.org.au/bird-trails-of-cooloola.html

Increasing numbers of birding groups and individuals are contacting Cooloola Nature through their website, with queries as to the "best birding spots" in our region, resulting in Kelvin and Amelia leading groups from Port Macquarie, the Brisbane region, Caloundra and Noosa on birding excursions along the Cooloola Coast and through the Mary Valley. These visiting groups have numbered thirty to forty individuals, staying at caravan parks and motels, which could only have been of benefit to the local economy.

Since late last year, the Nielsen's have been working with Gympie Regional Council on an upgrade of signage along the Tin Can Bay Foreshore Birdwalk. This is an exciting project, which will include a new brochure listing all the species in the area.

They have received fantastic feedback for their efforts, including from an American tourist who stated that his tour with Cooloola Nature was the best experience he had whilst in Australia!

LANDCARE IN THE MARY RIVER CATCHMENT

Lower Mary River Land and Catchment Care group

The Lower Mary River Land and Catchment Care group, with Don and Lesley Bradley at the helm, continue to tackle weeds and pests in and around Hervey Bay and on Fraser Island. The group works in collaboration with Fraser Coast Council, Conservation Volunteers Australia and the Green Army to address weed control of Rag Weed in an area where the Green Turtle forages, with funding support from the BMRG. Funding from a State Government's Everyone's Environment Grant has also enabled weeding to be carried out on Round Island and Big Woody Island, where the native species are now starting to recover.

Don and Lesley have long been involved with protection and conservation of sea turtles, assisting with relocation of 38 Loggerhead turtle nests - some 4,120 eggs at Sandy Cape on Fraser Island, where weeding activities have also been undertaken.

Also on Fraser, the group has been working to stem an infestation of *Jamella australiae* (Pandanus Planthopper) on pandanus plants at Kingfisher Resort and Beachfront, with funding from the BMRG and support from Fraser Coast Council and Kingfisher Bay resort.

The group has also been involved in a Cane Toad toxin trial using tadpole traps, based on research by Sydney University's Rick Shine. The theory behind the function of the traps is that cane toad tadpoles will try to eat any eggs that have just been laid to reduce competition. The female Cane Toad coats her eggs with some toxin to prevent anything else from eating them. A small amount of toxin (5 grams) extracted from the adult is placed in the trap to lure tadpoles in. The tadpoles are attracted by the smell of this toxin, and come in to the trap for the kill. In February 2015, 10 traps set about 2 metres apart caught around 12,000 tadpoles. The group will continue to control cane toads using the traps, as well as catching adults using traps and hand picking, and the use of fences.

Steve Burgess with the largest male Mary River Turtle ever recorded in the Mary River Catchment

Tiaro & District Landcare

Mary River turtle conservation project

The aim of our turtle conservation project is to ensure that enough clutches of turtle eggs survive the incubation stage, develop into hatchlings and thus increase the population of this endangered species. This can be achieved by minimising the impact of predators who love eating turtle eggs. While some of their predators are native species and would have always dined on turtle eggs, researchers have found that without protecting nests, at least 90% would be predated. Unfortunately, today, not all predators are native species. Just before the nesting season gets underway, Landcare members fence off nesting banks to reduce impact of cattle. Last season clutches were protected in the Tiaro and Kandanga reaches with the help of volunteers and landholders.

This project continues to attract international attention. Rosanne Beukeboom a Masters student from Utrecht University Netherlands volunteered with our project for 5 months. Her research focused on threats to the early life stages of the Mary River turtle. People from 45 countries connect with the Mary River turtle facebook page. The Stockholm Herpetology Society intends to raise funds for our project.

Mary River turtle Research

During this season four specialized wildlife cameras were installed on one nesting bank. Rosanne analysed over 200,000 images. Mary River turtles and 19 other wildlife species were captured by the cameras. The only animals recorded predating nests were foxes and two species of goannas, the lace monitor and the yellow spotted monitor.

In one instance a fox predated a nest just four minutes after it was laid.

Until this year, very little was known about Mary River turtles in Tinana Creek. For the first time, a Mary River turtle was captured, photographed and released in Tinana Creek by Tiaro Landcare members and DNRM Bundaberg staff.

These projects were supported by donations or grants from Australian Geographic, Wildlife Preservation Society of Qld, Everyone's Environment Grant and Burnett Mary Regional Group plus many volunteers and supportive landholders.

Tiaro Farming & Lifestyle Field Day

A hugely successful biennial event was held on 18th July with over 100 stalls and approx. 4,000 attendees. The theme of the day was Farm Safely, Live Healthy. Thanks to sponsorship from Hyne & Son everyone entered for free. Many of the workshops were well attended with Australian cattle experts John Bertram and Geoff Neithe discussing improving breeding performance and bull selection, gardening guru Tom Wyatt and local soil expert, Peter Wilson plus many more shared their knowledge. This event is an initiative of Tiaro Chamber of Commerce and Tiaro Landcare and is reliant on the support from numerous local businesses and community groups. *Marilyn Connell, Secretary, Tiaro & District Landcare Group.*

Barung Landcare

Barung Landcare's 'Gardens for Wildlife' was launched in May 2014. Adapted from Tasmania's successful program, GfW caters particularly for people who have less than 1ha of native vegetation and so don't qualify for Land for Wildlife assistance. The program, funded through the Queensland Government's Everyone's Environment Grants, encourages and recognises wildlife-friendly gardens and environment-friendly practices in urban gardens. Gardens for Wildlife promotes better understanding of needs of wildlife, facilitates the linking of habitats and the creation of wildlife corridors and engages a new sector of landholders.

Members pay a one-off joining fee and receive an attractive gate sign, ten plants from Barung's nursery, a set of informative notes and invitations to workshops.

Interest and participation far exceeded expectations. All aspects of the program have proved a success, from well-attended activity days and workshops such as 'Butterfly gardening' and 'Birds in backyards' to popular information packs. Gardens for Wildlife continues to engage, inform and connect landholders in the region.

Greater Mary Association

The Greater Mary Association Inc continues to be active in the lower Mary catchment. This year Glenda Pitman took on the role of President, Ross Smith continued as Treasurer, Lawrie Wilson as Vice President and Juanita Johnston was assistant Secretary until she became too ill. Tanzi Smith took on the Secretary role toward the end of the year. Much of GMA's activities have focused on the operation of the Tiaro Tunnelhouse – a Cats Claw biological control facility set up with funding from the Burnett Mary Regional Group in 2012. Since then GMA has been undertaking our own releases and also doing releases that are funded by the MRCCC's Biodiversity Fund project. Details of these activities have been documented in reports prepared for MRCCC in 2014 and 2015. Since the facility was set up more than 11,000 jewel beetles and 15,000 tingids have been released into the Mary River catchment. It is pleasing to see that in some locations the tingids and jewel beetles are becoming well established and are definitely inhibiting the growth of the Cats Claw. Sharing of knowledge and experience is so important to improve the success of the biological controls.

We greatly appreciate and acknowledge the leading role that Gympie and District Landcare has played in organising and facilitating knowledge sharing events and documentation of experiences. We also look forward to working with Noosa Landcare as they get their new facility up and running.

GMA's other focus has been on continued maintenance of the Tiaro Koala Corridor Project, which involves six adjacent properties along the Mary River, either side of Petrie Park in Tiaro. Planting for this project started in 2012. A Community Action Grant from the Australian Government funded revegetation, weed control and fencing at the beginning of this project. Planting and weed control has continued with support of MRCCC's Biodiversity Fund project. It's very pleasing to see the trees planted in 2012 reach heights above 2-3m.

In the last year, GMA has also had a presence at the Wide Bay Burnett Environment Council's Mary River Kids Day out, the Tiaro Landcare's Tiaro Lifestyle and Farming field day, National Tree Day planting at Pioneer Park in Maryborough, Fraser Coast Wildlife Preservation Society's National Threatened Species Day kids activity, MRCCC's Land for Wildlife day in Tiaro and the Maryborough Horticultural Society's Spring Show.

This year the catchment lost a wonderful advocate, Juanita Johnston. Juanita was involved in many groups and she was incredibly passionate about our Mary River and caring for the environment. Through her passion, she spurred GMA on to produce a publication about our Koala Corridor Project which now provides a record of many aspects of the project. We miss Juanita greatly. In honour of her commitment and contribution we will be naming the koala corridor the Juanita Johnston Koala Corridor.

Top right:- Participants at the Land for Wildlife Field day were treated to a boat trip along the Mary River
Centre: - Maintenance in the koala corridor
Below: - Leaf tying moth damage to Cat's Claw Creeper Vine

Noosa & District Landcare

Noosa & District Landcare Group [NDLG] works primarily in the Noosa and Mary catchments', although we have done work as far north as Baffle Creek and south to Caloundra. This financial year has seen an increase in on ground contracting work via our work crews. Before the end of the financial year, we had 24 staff on the contract crew. The majority of their work is planting and weed treatment. The team is experienced in recognising the good ones, and killing the bad ones. We have 9 x 4WD vehicles, 2 x Quickspray units and many backpacks, brush cutters and other equipment. We have worked closely with the MRCCC particularly on sites associated with the Biodiversity fund. The pleasing thing about a long term program such as this is that our staff get to go back to sites a number of times. This gives us knowledge of what is likely to need treatment and when. The staff also feel a pride and 'ownership' of the site, which always leads to better results on ground. We continue to operate our Waterwatch network with over 30 volunteers monitoring 60 sites both in the Noosa & Mary catchments.

We operate two production nurseries which this financial year produced 110,000 endemic tubestock for sale and for revegetation projects. We also operate a retail nursery opposite the pub in Pomona, the Resource Centre. Through the Resource Centre we also field many questions each day. These range from plant and weed identification, treatment methods, where to plant what and many other queries.

This year we have continued our Environment Series of workshops which are always very popular. Topics last year included Property planning, Wattle and Eucalypt Identification, Snake [with real live snakes], Bush fire awareness to name a few.

NDLG also conducts property visits which has been very popular this last year. Residents new to our region enjoy finding out what they have on their properties and what to worry about!

We continue to do talks for Libraries, schools, garden clubs and community groups. This year we have worked with many partners such as Country Noosa, Seqwater, Burnett Mary Regional Group and SEQ Catchments as well as our local councils. Our partnership with MRCCC, Seqwater and Noosa Council combines to stage the popular Festival of Water each year at the Noosa Botanic gardens. At NDLG we have a policy of buying and spending locally. With over 30 staff we can help the environment, whilst also contributing to the local economy and providing meaningful employment to locals.

We have also hosted a Federal Government Green Army program, giving training and skills to young people. We look forward to working closely with the MRCCC over this financial year.

University of Georgia (USA) students visiting Noosa

Gympie and District Landcare Group

Landcare in Gympie is thriving, largely due to the level of support provided by the Gympie community and volunteers. The group operates from premises leased from Gympie Regional Council, which include a large native plant nursery, demonstration gardens and a purpose built facility for raising bio-control agents to fight Cat's Claw Creeper and Madeira vine.

Members actively work with neighbourhood groups to support Bushcare at Messmate Park, Kia Ora, weed removal and revegetation of the town reach of the Mary River in Gympie and revegetation of Madill Park on Gympie's southside.

Services offered include revegetation planning and planting, plant propagation, plant and pest identification, weed spraying and pest control, contract growing of tube stock and conservation and land management surveys.

The Gympie Landcare nursery sells a wide range of local native species, much of the seed being collected by volunteers. The Landcare nursery is also a distributor of Gympie Council's free tree program, which attracts numerous ratepayers.

Over the past year, a series of workshops helped landholders learn about various aspects of best practice natural resource management. The high level of attendance at all workshops indicates that Landcare is filling a need in the Gympie region.

The Biocontrol Facility operated by Gympie and District Landcare provides bio-control agents to landholders wanting to control Cat's Claw Creeper and Madeira vine. Cat's Claw biocontrol agents include the tingid bug and the jewel beetle, both of which have been trialled extensively with promising results. A beetle for control of Madeira vine is also being raised at Gympie Landcare. Landholders can order these insects through Landcare.

Clearing a massive Cat's Claw Creeper vine infestation by cutting the stems from the trunk to stop flowering.

One of the biggest challenges facing Gympie Landcare is a reliable water source for their nursery and bio-control facility. Although the facility includes a dam and rainwater tanks, these don't work if it doesn't rain!

Chelodina longicollis (Eastern snake-necked turtle)

Description in life:
Long neck which completely retracts when required for protection or sleep (except hatchlings). Upper neck surface covered with small, distinct small lumps (tubercles). Small fleshy projections (barbels) may be present under chin. Four claws on all limbs. Prefers wetlands and dams, also found in rivers and creeks. Occasionally seen basking on logs or rocks. May travel overland between water bodies. Emits strong odour when threatened.

Shell description:
Carapace to 260mm, oval in shape, broad at front and flared at rear. Vertebral scutes may be depressed to form a groove. Marginal scutes immediately over tail are raised. Front of plastron extends beyond inner edges of marginal scutes of carapace. Gular shields in contact, completely enclosing the intergular shields. Deep 'V' shaped rear notch in plastron (males very sharp, females more rounded). Plastron scutes usually heavily outlined with black.

Chelodina expansa (Broad-shelled river turtle)

Description in life:
Long, thick neck which partially retracts when required for protection or sleep. No small lumps (tubercles) on neck but skin surface granulated. Head strongly depressed. No fleshy projections (barbels) present under chin. Four claws on all limbs. Occasionally seen basking on logs or rocks. May travel overland to a nesting site or to a different water hole.

Photo M. Connell

Shell description:
Carapace to 480mm, oval in shape with expanded rear edges. Marginal scutes immediately over tail are not raised. Rear of plastron does not extend beyond inner edges of marginal scutes of carapace. Gular shields in contact with each other. 'U' shaped notch at rear of plastron.

Elseya albagula (White-throated snapping turtle)

Description in life:
Short, thick neck (creamy-white on females and typically grey on males). Robust head with well-developed head shield that does NOT extend down the sides of the head. Two prominent fleshy projections (barbels) on chin. Five claws on forelimbs, four on hindlimbs. Basks on logs and rocks. Preference for sheltering under log tangles and shaded sections of waterways.

Shell description:
Males distinctly smaller than females; female carapace to 450mm, males to 300mm. Carapace broadly oval. Nuchal scute absent. Intergular shield separates gular shields and is longer than broad. Serrated margin of carapace prominent in juveniles, persisting into early adulthood. Shallow 'U' shaped notch at rear of plastron.

Wollumbinia latisternum (Saw-shelled turtle)

Description in life:
Short neck; upper surface covered with low, rounded small lumps (tubercules) and a variable number of higher more erect tapering tubercles. Heavy head shield extends downwards to the upper margin of the external ear surface. Normally two or four small fleshy projections (barbels) under chin. Five claws on forelimbs, four on hindlimbs. Prefers lagoons, billabongs and river headwaters. Resistant to cane toad toxin.

Shell description:
Carapace to 300mm, oval, widening slightly at the rear. Nuchal shield mostly absent but if present is usually narrow. Serrated rear edge of carapace prominent in juveniles, prominent to weak in adults. Intergular shield separates gular shields and is longer than broad. Plastron shields may have darker outline. Shallow 'V' or 'U' shaped notch at rear of plastron.

Emydura macquarii krefftii (Krefft's turtle)

Description in life:
Short neck with many small, rounded lumps (tubercles) on upper surface. Head shield well developed and smooth and does NOT extend down the sides of the head. Distinctive yellow facial stripe extending from the eye to the ear covering (less obvious in old turtles). Two rounded wart-like fleshy projections (barbels) on chin. Five claws on forelimbs, four on hindlimbs. Found in rivers, swamps, and lagoons. Regularly basks. May be found moving across land between water bodies.

Shell description:
Carapace to 350mm, oval with slight widening towards the rear. Shell can become extremely dome-shaped with age. Mostly has a nuchal scute. No serrations on edges of adult shells. Rear of plastron extends beyond inner edges of marginal scutes of carapace. Intergular shield similar width to each gular shield. Shallow 'U' or 'V' shaped notch at rear of plastron.

Note: *Emydura macquarii nigra* (Fraser Island turtle) is smaller with dark skin and carapace and no facial stripe. This species is only found on Fraser Island.

Elusor macrurus (Mary River turtle) Endangered

Description in life:
Short neck with distinctive blunt lumps (tubercles) on upper surface. Heavy head shield extends downwards to the upper margin of the external ear surface. Usually two large and two smaller fleshy projections (barbels) on chin. Five claws on forelimbs, four on hindlimbs. May have pinkish tinges on hindlimbs. Female tail short and thick, male tail long and thick, up to 70% of carapace length. One of two Australian species where males are notably larger than females. Regularly basks.

Shell description:
Females distinctly smaller than males; female carapace to 340mm, males to 420mm. Carapace low and streamlined, slightly wider towards rear. Nuchal scute present. Juveniles have serrated marginal scutes along rear edge of carapace, which disappear when they reach about 200mm. Front of plastron extends beyond inner edges of marginal scutes of carapace. Intergular shield as wide as or wider than gulars. Shallow 'V' shaped notch at rear of plastron.

Photo M. Connell

LANDCARE Tiaro & District

MARY RIVER CATCHMENT

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MARY RIVER

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COORDINATING COMMITTEE