



Queensland's NRM *Rumble*

2010 INTERNATIONAL YEAR OF BIODIVERSITY

## From the Chair

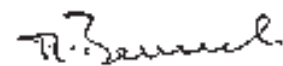
According to the Queensland Government, Queensland is home to 70 percent of Australia's native mammals (210 species), 80 percent of native birds (594 species), just over half of the nation's native reptiles (429) and native frogs (114), and 11 074 native plant species.

Queensland's 13 regional natural resource management groups are working in partnership with a wide range of organisations and individuals to enhance Queensland's biodiversity. The breadth of activity being undertaken is nearly as diverse as our biodiversity itself. Our regional groups are working on community capacity building and education around biodiversity, collecting data about rare, endangered and vulnerable plants and animals, undertaking on-ground biodiversity protection such as fencing off habitat and enhancing corridor connectivity, and planning for species recovery.

The Queensland Government is now in the process of developing its first statewide Biodiversity Strategy and the Queensland Regional NRM Groups Collective has been consulted on its development. As with any state or federal planning process, we would like to see that our regional NRM plans, developed through rigorous community consultation processes, are used to inform the strategy. Many regions have identified actions to address biodiversity decline in their communities and this work is crucial to the development of a robust Queensland Biodiversity Strategy.

This Rumble focuses on the work of seven regions in biodiversity conservation and management. From helping the Mary River Turtle in partnership with Landcare, running family oriented field days around farm ecology, planning for cassowary protection in Far North Queensland, to undertaking research around the value people place

on their natural environment, our regional groups are all making a big impact on Queensland's biodiversity.




Mike Berwick AM,  
Chair Queensland Regional NRM  
Groups Collective



*Tiara Landcare volunteers fencing off a nesting bank. Photo by Marilyn Connell*

*Mary River Turtle, photo by Cheryl List*

## Saving our Pennies

Endemic to the Mary River in south-eastern Queensland, the Mary River Turtle is listed as Endangered under both Australian and State legislation and the IUCN. The hatchlings of the Mary River Turtle were originally sold in the pet trade until the 1970's, becoming well known as the 'Penny Turtle'. However, the Mary River Turtle was formally described as a new genus and species, *Elusor macrurus*, in 1994 following the discovery of the species by John Cann in 1990.

Occurring along the main trunk of the Mary River, as well as lower reaches of major tributaries, the Mary River turtle population has declined dramatically over the past 30 years. It is estimated that there has been a 90% reduction in breeding females since the 1960s. Threats contributing to this decline include poor breeding success through predation, lack of recruitment and damaged nests; impacts on their habitat such as damage from impoundments, decline in water quality, decline in food quality and availability, loss of nest sites; and increased predation of juveniles. The limited distribution of these freshwater turtles places additional pressure on their long term survival.

In 2001 Tiara and District Landcare took on the plight of the Mary River turtle by launching a formal turtle conservation program. The program has been supported by Burnett Mary Regional Group since 2005. Projects undertaken by volunteers include predator control, in situ nest protection, monitoring nesting populations, improving habitat by fencing off stock and managing riparian vegetation. Numerous awareness raising activities, such as the production of a publication on the Mary River turtle and the creation of Mary River Turtle website, have assisted the project gain international exposure. An important part of the conservation effort is an ongoing post-graduate research project, funded through a scholarship offered by the Landcare Group.

'There is still a lot to learn about the Mary River turtle,' said Marilyn Connell, Project Officer Tiara and District Landcare. 'However, through our experiences and partnership with the University of Queensland, we are gradually learning more about the species and improving our conservation actions.'

The Mary River turtle is not the only freshwater turtle in the Burnett Mary

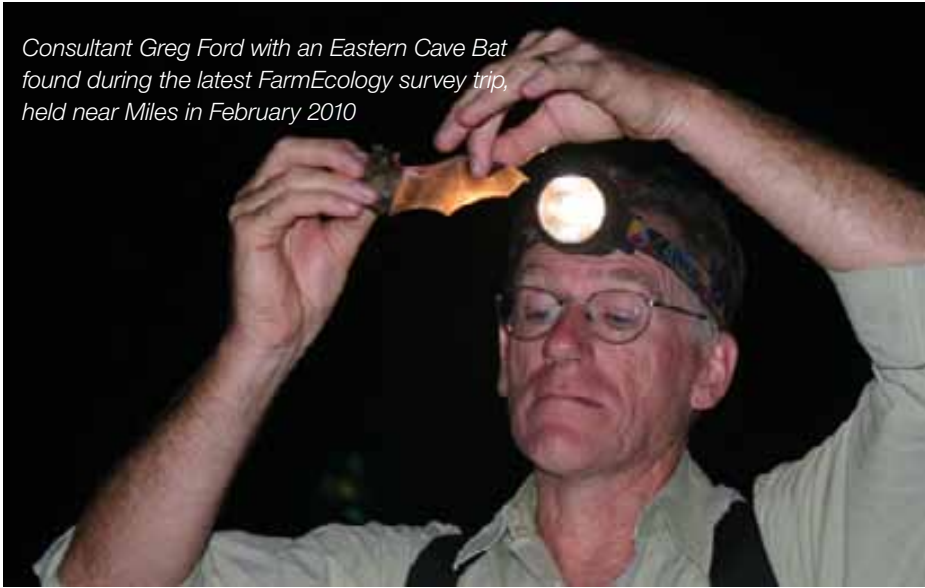
region faced with a declining population. The White Throated Snapping Turtle, *Elsya albagula*, found in the Fitzroy, Burnett and Mary Rivers, is facing similar threats. Burnett Mary Regional Group is working with State government and other organisations to protect nest sites through fox baiting, erecting fences to prevent trampling by stock, and the use of nest protection devices. The data collected from these projects assists in the development of conservation plans for the management of these species.

David Brown, CEO Burnett Mary Regional Group said 'by working in partnership with other organisations and landholders to protect these turtles and their habitat, the future of these special animals is promising.'

For more information contact Burnett Mary Regional Group on 07 4181 2999 or visit [www.bmrg.org.au](http://www.bmrg.org.au).



Consultant Greg Ford with an Eastern Cave Bat found during the latest FarmEcology survey trip, held near Miles in February 2010



## Uncovering the hidden values of local landscapes

The Queensland Murray-Darling Committee ensures the whole family is involved in biodiversity through its FarmEcology Field Days.

QMDC Vegetation and Biodiversity Regional Coordinator Holly Hanlon said the major aim of the days was to raise awareness of biodiversity among a broad audience – from managers to general community members to school students.

“Raising awareness encourages a greater uptake of improved land management approaches, while enhancing existing biodiversity values and expanding the extent of habitat within productive landscapes,” Ms Hanlon said.

In an effort to re-ignite the community's desire to protect and enhance native vegetation and biodiversity, the QMDC Vegetation and Biodiversity team runs a rolling series of field days targeting the whole family, with engaging activities presented in a relaxed atmosphere for the land managers of today and the future.

“The field days are the culmination of a week long fauna survey, with activities provided to engage all participants with at least one school-based session along with a general field walk, barbecue dinner and spotlighting session or similar,” Ms Hanlon said.

Topics covered on the days can include:

**healthy systems:** the importance of on-

farm biodiversity to healthy and productive farm ecosystems

**getting the balance right:** ensuring a healthy equilibrium exists across properties and sub-catchments by focusing on the mix of production and conservation improvements for healthy farm ecosystems

**what's in it for land managers:** while conservation and preservation may seem to be a costly exercise and an unproductive use of land, the critters found in these landscapes and systems often provide important services to production management

**managing native vegetation:** easy and cost-effective strategies

**why we care:** identifying the underlying desires to maintain, improve or conserve a land manager's natural areas whether these are favourite picnic spots, fishing holes or hold childhood memories

**the future:** protection of these iconic landscapes and biodiversity for the enjoyment of future generations, building on the ethos of the stewards of the land

**understanding what is around us:** how animals and plants interact in the landscape to form unique environments.

For more information, contact QMDC Vegetation and Biodiversity Regional Coordinator Holly Hanlon on (07) 4637 6200 or visit [www.qmdc.org.au](http://www.qmdc.org.au).

## Looking for landholders with native grasslands

Landholders on the Central Highlands can now apply for incentive funding to help protect and restore threatened native grasslands.

Elyse Riethmuller from Fitzroy Basin Association Inc (FBA) said the group wanted to support landholders who managed areas of the endangered grassland community.

“Native grasslands are an important part of our landscape in central Queensland – they are often highly sought after by stock, and they also provide habitat to more than 340 species of plants and animals,” she said.

Ms Riethmuller said FBA was funded under the Australian Government's Caring for our Country to support a range of on-ground actions that would regenerate, or reduce threats to, native grasslands.

“We can help landholders install infrastructure, access technical advice and training, and undertake rehabilitation such as seeding,” she said.

“We may also provide financial incentives to de-stock grasslands or enter a long-term conservation agreement.”

Less than half the original native grasslands in the Central Highlands and northern Fitzroy Basin remain, and they have been listed as endangered under the Environment Protection and Biodiversity Conservation (EPBC) Act.

Ms Riethmuller said native grasslands often occurred on highly fertile soils and as such much of the community had been lost or heavily modified through cultivation.

“Other threats include poor land management such as overgrazing, weeds, pest animals, mining activities and the construction of roads and other infrastructure,” she said.

She said the implementation of recovery actions was being guided by a workshop FBA held in March to gather knowledge about native grasslands and determine the best way to support land managers to protect the community into the future.

“The workshop brought together government agencies, local council, researchers, conservation and natural resource management groups, mining bodies and landholders – and gave us a solid foundation of information on how to best manage native grasslands.

“We are now looking to work with people that are involved in the day-to-day management of native grasslands to help make some practical on-ground changes.”

For more information on how to get involved, contact FBA Biodiversity Officer Rhys Kellow on 4982 3344 or email [rhys.kellow@fba.org.au](mailto:rhys.kellow@fba.org.au).

## Enhancing Biodiversity Hotspots along Western Queensland Stock Routes

Shire councils in the South West NRM region have been supplied with the final report for the 'Enhancing Biodiversity Hotspots along Western Queensland Stock Routes' project.

Errorn Heinemann, Stock Route Supervisor from the Murweh Shire Council believes the report will be invaluable.

"I will be able to use this report in my everyday work on the Stock Routes. It will help me to recognise the threatened plants and animals in my area and I thank South West NRM very much," Mr Heinemann said.

The final report is also available from South West NRM offices in Charleville, Bollon, Quilpie and Thargomindah or on the Department of Environment and Resource Management website.

So, what is a biodiversity hotspot? A Biodiversity Hotspot is an area that supports significant biodiversity values which could be under threat. The stock routes in the South West Natural Resource Management area have 21 hotspots according to project officer Bryan Walsh who has worked with South West NRM to identify the areas. This is good news because it tells us that the region still has many species of plants and animals that are threatened. These species are also considered a priority under the Department of Environment and Resource Management's Back on Track program. The threatened species recorded during the survey include:

- Native Liquorice – *Glycyrrhiza acanthocarpa*
- Ooline – *Cadellia pentastylis*
- Womal – *Acacia maranoensis* (a tree)
- Major Mitchells Cockatoo – *Cacatua leadbeateri*
- Painted Honeyeater – *Grantiella picta*
- Yakka Skink – *Egernia rugosa*
- Yellow footed Rock Wallaby – *Petrogale xanthopus*
- Murray Cod – *Maccullochella peelii peeli*

The project has also included the other western Queensland NRM regions of Southern Gulf, Desert Channels and Queensland Murray Darling Committee

working in partnership with South West NRM. It is hoped that the recommendations from phase one can be put into action through other funding opportunities such as the Australian Governments' Caring for our Country program.

Project Coordinator Bryan Walsh said it was a privilege to work on this integrated NRM and government agency project.

"This was an innovative project concept and after twelve months and about 80,000 kilometres travelling the Stock Routes and camping out, I came to realise just how important they are from a conservation viewpoint as well as their grazing value," Mr Walsh said.

"Steeped in both Aboriginal and early settlement history, their connectivity and landscape linkage with both flora and fauna are integral to management of species on a broad scale. A knowledge base now exists on how best to attack such large scale projects, and data collected indicates that this project barely scratched the surface, I hope there is a follow up in future, as it has won me over and I will be checking out a few special interest sites in my leisure time," Mr Walsh said.

For more information contact South West NRM on 07 4656 8500 or visit [www.southwestnrm.org.au](http://www.southwestnrm.org.au).



Yellow footed rock Wallaby (*Petrogale xanthopus*) near Adavale in South West Queensland.

## 2009 floods wipe out biodiversity in the Norman River catchment

Dr Noel Preece, Senior Ecologist, Biome5 Pty Ltd, for Northern Gulf Resource Management Group

Ten million hectares under water for a month or more is bound to have a negative effect on biodiversity, anyone could guess. But if you don't know what biodiversity you have, how do you know what the effects are? This was a challenge we faced after the wet season of 2009 when some 95,000 km<sup>2</sup> of the lower Gulf of Carpentaria catchments of the Norman, Flinders, Staaten, Gilbert, Mitchell and Leichhardt Rivers experienced significant flooding for several months. Combined losses of stock, infrastructure and livelihoods ran into the tens of millions of dollars.

The floods covered extensive areas of the country south of Normanton and west of Croydon. Around 1,000,000 hectares of the Norman River and its tributaries were subjected to serious long-term flooding.

Before the floods, there had been no systematic surveys of fauna of these areas, although some studies had been done in adjacent areas recently. Northern Gulf Resource Management Group

commissioned a rapid study of the fauna to find out just what happened. The surveys produced some very interesting results.

Species present in the 37 sites surveyed were nearly all tree-dwellers, although few in numbers. The most abundant and frequent were tree-skinks *Cryptoblepharus plagiocephalus*, and geckoes of the *Gehyra* genus. Most sites contained *Cryptoblepharus*.

Other arboreal and semi-arboreal species found included tree-dragons of *Amphibolurus* and *Diporiphora* genera, the gecko *Heteronotia binocoi* and the Spotted Tree-monitor *Varanus scalaris*.

None of the expected common ground-dwelling lizards (skinks, geckoes and dragons) were found on most sites which had been flooded for extended periods. Only three of the sites had one of the common species (*Carlia munda*, a very common skink normally), and only one of these was subject to extended flooding.

From the results of these surveys, we see that the floods appear to have killed most of the ground-dwelling fauna. Only fauna which can survive in trees survived, because of their ability to climb above the flood-waters and survive for weeks on the minimal amount of food available to them. Ground-dwelling fauna, even if they can climb, are unable to survive for any length of time as they starve or get eaten. They are particularly vulnerable to predation because they have no skill at surviving in trees.

Recovery to pre-flood levels of the vegetation may take at least 4 to 5 years as it did after the 1974 floods, depending on a number of factors including grass and herb recovery. But how long it will take for the fauna to recover is anyone's guess. The Northern Gulf Resource Management Group is currently seeking funding to continue work in this area.

For more information contact Northern Gulf Resource Management Group on 07 4062 1330 or visit [www.northerngulf.com.au](http://www.northerngulf.com.au).





Cassowary, image courtesy WTMA

The Action Plan

## Cassowary calling ...

In August 2009 some eighty people gathered where the rainforest meets the sea at Mission Beach for the launch of the Draft Mission Beach Habitat Network Action Plan.

Now in the International Year of Biodiversity, Terrain and partners - CSIRO, Reef & Rainforest Research Centre, James Cook University, and the Australian Government's Department of the Environment, Water, Heritage and the Arts - are releasing the Final Plan after receiving more than 50 submissions from local residents and stakeholders.

This project began in 2007 with the aim of protecting an ecologically viable habitat network for the area's outstanding natural resources, particularly the endangered Cassowary. The Final Plan seeks to maintain the village atmosphere, agriculture, Aboriginal culture and community values of Mission Beach, and it reflects input from local residents, tourism, agriculture, developers, environmental groups, traditional owners and government.

An important partnership was established by Terrain with the Marine and Tropical Research Centre and CSIRO which ensured the process was underpinned by rigorous science. The Research Centre team brought ecological, planning and

social science expertise, and effectively linked the social and ecological dimensions of conservation, identifying the Cassowary as a collaborative focal species. The team then developed a tool to prioritise site selection for on-ground activities, considering biodiversity significance, threats and levels of protection.

Much of the habitat at Mission Beach is on working farms. Many landholders are prepared to retain their habitat if the right incentives are made available. Thirteen local revegetation projects were funded by Terrain in 2008-2009. There is assistance with feral pig and weed control, fact sheets for property owners interested in protecting habitat on their property are available, and there is increased awareness of the cassowary and the unique rainforest corridor which links Mission Beach to the mountains of the southern Atherton Tablelands.

Terrain has now mapped the wildlife corridors in the area between Mission Beach and South Mission Beach, and wildlife crossing infrastructure is being installed by the Department of Transport and Main Roads with community support.

An eco-tourism strategy is also being developed.

The Mission Beach Habitat Network Action Plan reflects a global shift from seeing protected areas as islands with a command and control approach, to assets managed as a natural resource in a collaborative, landscape-scale process, with flexible, adaptive management involving all stakeholders.

Terrain is currently applying for \$1.5M Commonwealth Government Caring for our Country funding to implement one of the highest priorities identified in the Action Plan, that being to provide incentives to landholders to restore strategic habitat.

The Mayor of the Cassowary Coast Regional Council, Councillor Bill Shannon said "the Habitat Network Action Plan is critical for saving the iconic cassowary in the Mission Beach area."

Professor Steve Turton, Executive Director of the JCU/CSIRO Tropical Landscapes Joint Venture described the project as "an outstanding example of a successful partnership between researchers, Traditional Owners, government, non government organizations and the Mission Beach community."

For more information contact Terrain on 07 4043 8000 or visit [www.terrain.org.au](http://www.terrain.org.au).



## Managing What Matters – the cost of environmental decline in South East Queensland.

The vision of SEQ Catchments is that of a sustainable future for our community, and according to research commissioned by the organisation, 90% of those who took part believe that protecting the environment is equal to or more important than economic growth.

The research, the largest of its type undertaken with 941 SEQ households taking part, showed that declining resource conditions from current levels has the potential to cost the community \$7.1 billion in social benefits through not implementing the targets in the SEQ Natural Resource Management Plan.

SEQ Catchments CEO, Simon Warner, said that planning for future growth and development in SEQ presents a “set of challenges, including balancing population growth and continued economic development with the need to preserve our diverse natural resource assets as a priority.”

A major achievement towards managing this challenge was the completion in 2009 of the SEQ Natural Resource Management Plan.

Mr. Warner said: “The Plan provides a basis for good policy decision making so that funding is directed to projects that help achieve the desired regional outcomes in the SEQ Regional Plan. To further inform this process, we commissioned the Managing What Matters research and report.

“The key concerns of people were the condition of our waterways and bays, the critical habitat for plant and wildlife, maintaining our current levels of vegetation coverage, and having adequate facilities for nature based recreational use.

“According to the report, a ‘do nothing more’ scenario where we don’t do more to protect and improve our natural resource assets will put at risk up to \$8 billion in potential turnover for the tourism industry in South East Queensland over the next 20 years.”

Mr. Warner went on: “Survey results also show an 80% endorsement for all future housing and other development to be required to compensate for negative environmental impacts, through actions such as offsets.”

“Overall, the research concluded that the loss of natural habitat and critical regional ecosystems, along with increasing pollutant loads, is threatening the region’s biodiversity and the loss of open space is impacting on the community’s ability to enjoy an outdoor lifestyle,” he said.

“An investment now of up to an additional \$150 million a year in today’s terms is justified, based on avoiding the social costs alone of the deterioration of our natural assets. It also provides an opportunity for the government to work with SEQ

Catchments and coordinate investment into the SEQ Natural Resource Management Plan.

“As shown in the research, the community would be prepared to pay \$300 a year via higher rates, taxes and costs for goods and services to maintain the current extent and condition of our natural assets. This clearly shows the community wants to avoid further declines in natural resource condition from current levels.”

The quality of the SEQ natural resource base is expected to decline in the next 20 years, driven by factors such as population growth, climate change, uncoordinated planning and investment, increasing household consumption and waste. This is despite the current efforts to protect our natural assets by governments at all levels, industry and the community.

A summary of the report, Managing What Matters – the cost of environmental decline in South East Queensland, is available on the SEQ Catchments’ web site, [www.seqcatchments.com.au](http://www.seqcatchments.com.au).

For more information contact SEQ Catchments on 07 3211 4404.



To find out more about natural resource management projects or contact details for your regional natural resource management group, visit the

Queensland Regional NRM Groups Collective website - [www.rgc.org.au](http://www.rgc.org.au) or ph 07 4699 5000.

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