

New guidelines give hope for managing the Mitchell's finches

Guidelines published by Ray Pierce

Over the last year many Mitchell River residents will have encountered a team of finch surveyors working through different parts of the Mitchell catchment. The surveys have been generously funded by the Wettenhall Environment Trust (WET) and Landcare Australia, and supported by MRWMG, NGRMG, CYNRM and KALNRMO.

The objectives of the surveys have been to identify finch hot spots and finch habitat needs and to provide management guidelines for those landowners and managers wishing to manage populations of these sensitive and endangered birds. The surveyors were mainly volunteers from BirdLife Australia and other groups, coordinated by Drs Ray Pierce and Pamela Schultz.

Many of the 12 species of finch in the catchment have struggling populations, like the Cape York Star Finch which requires tall native grassland, now under pressure from excessive fire, livestock and ferals. But there have been some surprising and encouraging results too, including the discovery of Gouldian Finches in several areas, and fairly commonly in one or two.

Similarly, White-bellied Crimson Finches are hanging on in parts of the delta. Where these endangered species have been found the team has identified likely contributing reasons, usually amounting to combinations of lowered stocking densities, fencing off of important feeding sites, sensitive use of fire and availability of nest sites.

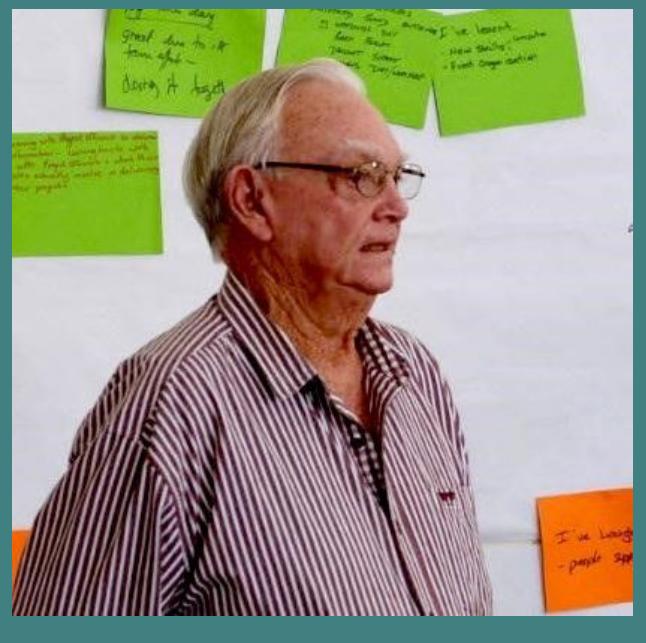
Some of these situations are being used as case studies to highlight positive approaches that could be used by other like-minded managers in the catchment and beyond.

Please register with MRWMG if you would like a copy of the final guidelines (coord@mitchell-river.com.au).



Top: Endangered Gouldian finches in the Mitchell catchment. Bottom: Survey team pausing for a moment beside iconic finch habitat. (Pictures courtesy of Patrick De Geest and Ray Pierce.)

Ian Adcock: Letter from the CHAIR



Tilapia have been found in the Walsh River. Adult and juvenile Spotted tilapia (*Tilapia mariae*) were discovered in a waterhole and main section of the Walsh River, 30 kilometres from Chillagoe.

Positive identification has been confirmed by officers from the Department of Agriculture & Fisheries. Further surveys will occur to determine the extent of infestation and the feasibility of eradication.

Tilapia has previously been eradicated in the Walsh River catchment in 2008 at Eureka Creek. In 2004 exclusion screens were inserted by

Sunwater into the Barron Main Channel to contain the fish behind.

The latest location is approximately 100 kilometres downstream of the 2008 Eureka Creek incursion. The infested waterhole is 2 kilometres long with an average depth of 2.5 metres. Access to the waterhole is over very difficult terrain and is not readily available to vehicles.

The Spotted tilapia are much more docile than their cousin Mozambique tilapia, (*Oreochromis mossambicus*) who are very aggressive and quickly dominate a waterhole and are also prolific breeders holding the eggs in their mouths. Both species can adapt to a variety of aquatic habitats, including habitats that have high salinity.

Identification: Spotted tilapia's colour ranges from dark olive to light yellow. Most fish have dark bars or spots on their sides. Their dorsal fin is continuous with an extended point.

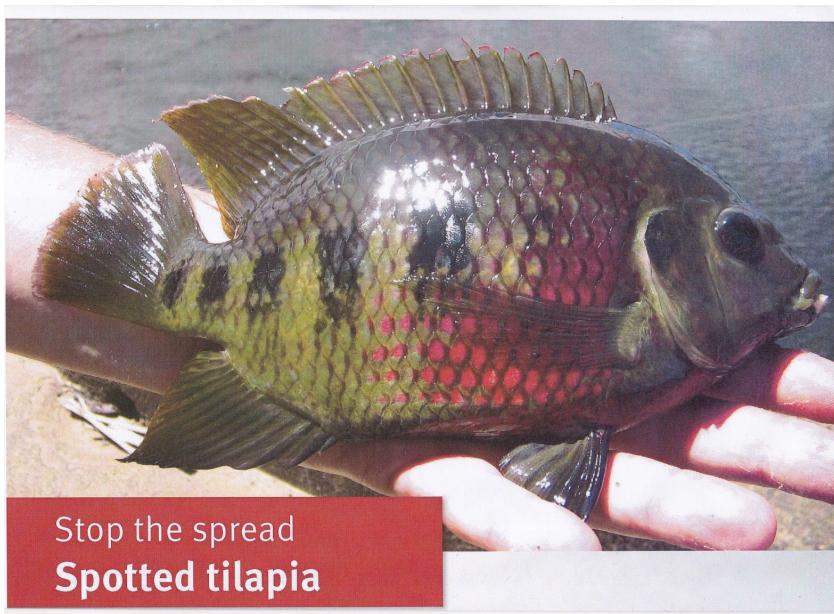
Mozambique tilapia's colour can vary from dark grey to silver, mature males can become almost black with red edging on their fins.

Tilapia are restricted noxious fish under the Biosecurity Act 2014. They must not be kept, fed, given away, sold or released in to the environment without a permit. If caught, tilapia must be humanely destroyed and disposed of as soon as practicable by burying a suitable distance from the waterway where it was caught.

How did the tilapia escape in to the Walsh River? As somebody commented on what could be the sad truth: "sounds like migration by bucket".

If you catch a fish and cannot identify it, please bring it in to DAF in Mareeba or contact the Mitchell River office for identification.

Ian Adcock, Chairman
iansyl@bigpond.net.au



Incoming KALNRMO facilitator ready to burn for carbon

Congratulations to Gavin Enever on his new appointment with Kowanyama Aboriginal Land and Natural Resource Management Office (KALNRMO).

KALNRMO is taking part in a Carbon Farming Initiative program, Savanna burning methodology, being coordinated through the Aboriginal Carbon Fund.

Gavin notes that savanna burning is about reducing emissions from fire by burning in the early dry season when fires are cooler and patchy.

There are 74 savanna projects up and running

around the country,

nearly half of them run by Indigenous interests.

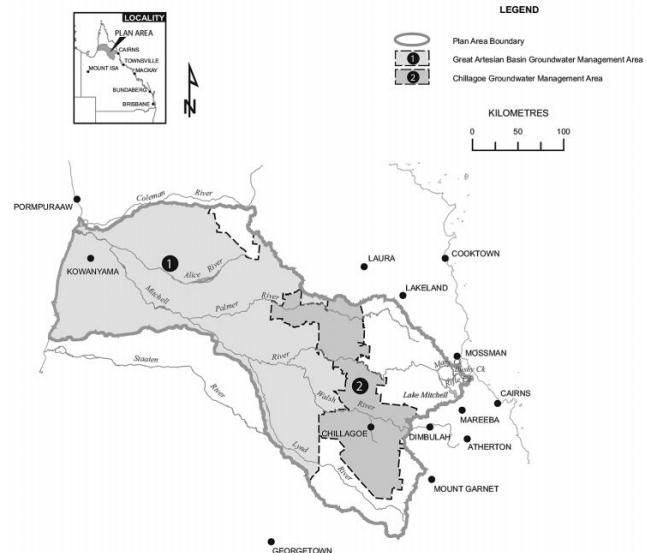
Contact:

Land and Sea Management Facilitator,
Kowanyama Aboriginal Shire Council

Mob: 0427 094 765

Ph: 07 4083 7153

<http://www.kowanyama.qld.gov.au/our-environment/land-natural-resource-management-office>



Mitchell River Water Plan update

Shannon Dempster, Manager of Water Planning North Region, provided MRWMG with an update regarding the review of the Mitchell Water Plan .

The Mitchell Water Plan risk assessment is currently underway and a Performance Assessment Report will be released by the Minister in the coming months.

This report will signal what future water planning activities might occur in response to the risks identified.

The Minister may decide to set a period of time for postponing the expiry of the Plan in order to address any risks to the Plan outcomes, which could ultimately lead to a Plan amendment.

The Northern Australia Water Resource Assessment being undertaken by CSIRO may have some influence on this, but this will not be clear until CSIRO releases its findings.

MRWMG will be sent a copy of the Report once it has been finalised.

Contact: shannon.dempster@dnrme.qld.gov.au
Website: www.dnrme.qld.gov.au

Lakeland irrigation and water supply feasibility study

An \$825,000 feasibility study funded by the Federal Government's Water Infrastructure Program started last April. The study is focussed on expanding irrigated agriculture in Lakeland.

The work is being carried out by SMEC, a professional engineering and development consultancy firm. Project management has been handled by Cape York Sustainable Futures (CYSF), based in Cairns. Tony Potter, Project Director for CYSF advised MRWMG that the study is looking at:

- potential cropping areas specifically suited to irrigation;
- potential demand and sources of water;
- economic viability of a reliable water supply; and
- for an expansion of current operations.

The Land Suitability analysis is essentially complete.

Water supply options being assessed have included existing and augmented dams within the potential agricultural area as well as sources external to Lakeland (i.e. outside the Laura River catchment). These alternatives have included potential dams on the Normanby River tributaries and the Palmer River catchment.

All Normanby options would require significant pumping to service the Lakeland area. All

options would require extensive distribution networks to service farms located across the growing district.

The study was scheduled for draft submission to the State Government in mid-May. The final report, after review and comment by government agencies, is due at the end of June/early July.

The study prioritises potential solutions based on meeting the water demand and on the most attractive financial benefit/cost ratio, however at this stage there is no solution approved by the State government or any indication that further studies will proceed.

MRWMG has requested the Steering Committee to give us a briefing on the study since the headwaters of the Palmer River are being investigated as a potential supply which would require a dam built.

Stakeholders in the proposed area (including Byerstown, Bonny Glen, and Maitland Downs) expect to be closely involved as the planning process progresses.

Allan Dale, independent chair of the committee, has advised that MRWMG will be included in a future stakeholder's meeting around the draft report.

Massive irrigation pipes up to 250m long can be produced on-site using cost-effective manufacturing techniques.



Heavy metals found in the Walsh River

A Northern Gulf project officer doing routine heavy metal testing along Cattle Creek and the Walsh recently found two separate locations where arsenic concentrations are significantly above safe levels.

Peter Harrison was measuring water quality and taking soil samples when he discovered the concentrated arsenic.

His investigation suggests that this is either naturally occurring or could be amplified by leaching from an old mine site. So there's (probably) not an issue of a current operator causing problems.

However, anyone using those waters for stock/domestic purposes should know about the hazard and it would probably be a good idea to do more extensive testing to map the problem.

Peter notes: "Soils in this area are notorious for leaching out heavy metals, so it is not surprising that we've come across the problem. Our concern is that people need to be aware of the risk. Old-timers probably know better, and never use this water for stock or domestic purposes, but newcomers might not be aware of the problems."

Notice was provided to the QLD Pollution Hotline and the Mareeba Shire Council was alerted to the test results.



Researcher surveying fish in the Mitchell (Photo: Michael Douglas)

Environmental water needs for the Mitchell River

A lack of information on the environmental water needs of the Mitchell River has led to the initiation of another NESP/Northern Australia Environmental Resource Hub project to address this knowledge gap. Information from their Portal states:

"This research will improve our understanding of the critical flow needed to sustain freshwater ecosystems in the Mitchell River catchment. In particular, the project aims to predict the impacts of future development on important ecosystem linkages between the river and its floodplain wetlands, and to better understand other potential risks associated with changes to flow regimes.

This information is vital to help inform decision makers about water allocation that both enables agricultural development and protects environmental assets."

An update is scheduled to be published by June 2018. For further information:

<http://www.nespnorthern.edu.au/wp-content/uploads/2017/08/Environmental-water-needs-for-the-Mitchell-River.pdf>

<http://www.nespnorthern.edu.au/projects/nesp/environmental-water-needs-mitchell-river/>





Fire Management on Brooklyn Station

Attendees at last year's joint workshop at Chillagoe were treated to a slide show of the Brooklyn fire strategy by manager Andrew Francis. Their strategy has been written up in a document by the owners Australian Wildlife Conservancy, Fire Management Strategy – Brooklyn Sanctuary.

The overarching aim of fire management on Brooklyn is to re-establish ecologically appropriate fire regimes on the sanctuary: that is, fire regimes that promote the conservation of species, ecological communities and ecosystem processes.

Current fire management strategies are outlined in the most recent Brooklyn fire plan which includes:

- protection of fire sensitive-vegetation (e.g. rainforests) from fire;
- implementation of a fine-scale mosaic of burnt and unburnt vegetation, of a range of ages since fire, in eucalypt forests and woodlands across the sanctuary;
- restoration of a regular fire regime in wet sclerophyll forest to maintain structure and composition;
- protection of life and property, including the settlements of Mary Farms and Mount Carbine which are embedded in the sanctuary;

- weed control, in particular infestations of rubber vine and lantana, are managed with targeted late dry season fire.

Burning for weed control

Experience has shown that for two weeds, rubber vine and lantana, control can be achieved by the use of hot fires, either as single events, or by up to three repetitive hot burns.

Management, therefore, has concentrated on creating firebreaks or reduced fuel conditions in areas surrounding infestations of these weeds so that they can be targeted by late season fires.

Where fires are unable to penetrate however, the use of chemicals, either as sprays or cut stump treatments, is the only alternative.

For other weeds, which are so widespread that they cannot be controlled by chemicals, the use of fire offers some prospect of control. But the precise recipe for a successful approach is still being refined in the field.

Research, currently being undertaken through the use of monitoring plots, is being directed at providing answers to these questions.

The fire management strategies are directed at maintaining or restoring healthy habitats, and for most sclerophyll habitats this involves the establishment of vigorous ground cover which will resist invasion by exotic species or, where weeds have already established, the provision of conditions under which they will find it difficult to continue competing against the native species.



NESP commences mangrove dieback study

During the summer of 2015–16, one of the worst mangrove dieback events ever recorded devastated around 7,400 hectares of mangrove forests along more than 1000 km of Gulf of Carpentaria coastline.

In response, the Northern Australia Environmental Resource Hub, a division of the National Environment and Science Program (NESP) commenced a study to determine causes and assess risks.

The study, *Assessing mangrove dieback in the Gulf*, anticipates a wide range of investigation and analysis, including:

- a map and report assessing the extent of the dieback, its condition, the patterns of processes across the full range of the dieback in detail;
- contributions to an online, interactive portal for displaying the dieback imagery

collected by rangers, scientists and others, including a baseline dataset and associated condition metrics for each assessment location for monitoring change and recovery into the future;

- an evaluation of risks to shorelines and recommendations for the on-going standardised monitoring of tidal wetland vegetation bordering Gulf dieback areas;
- an assessment of the amount of carbon lost from dead and rotting trees, and the likely consequences;
- a review of mangrove habitat recovery and whether mitigation interventions might facilitate shoreline restoration;
- fact sheets, peer-reviewed scientific publications and other products.

For further information:

<http://www.nespnorthern.edu.au/projects/nesp/gulf-mangrove-dieback/>

<http://www.mangrovewatch.org.au/>

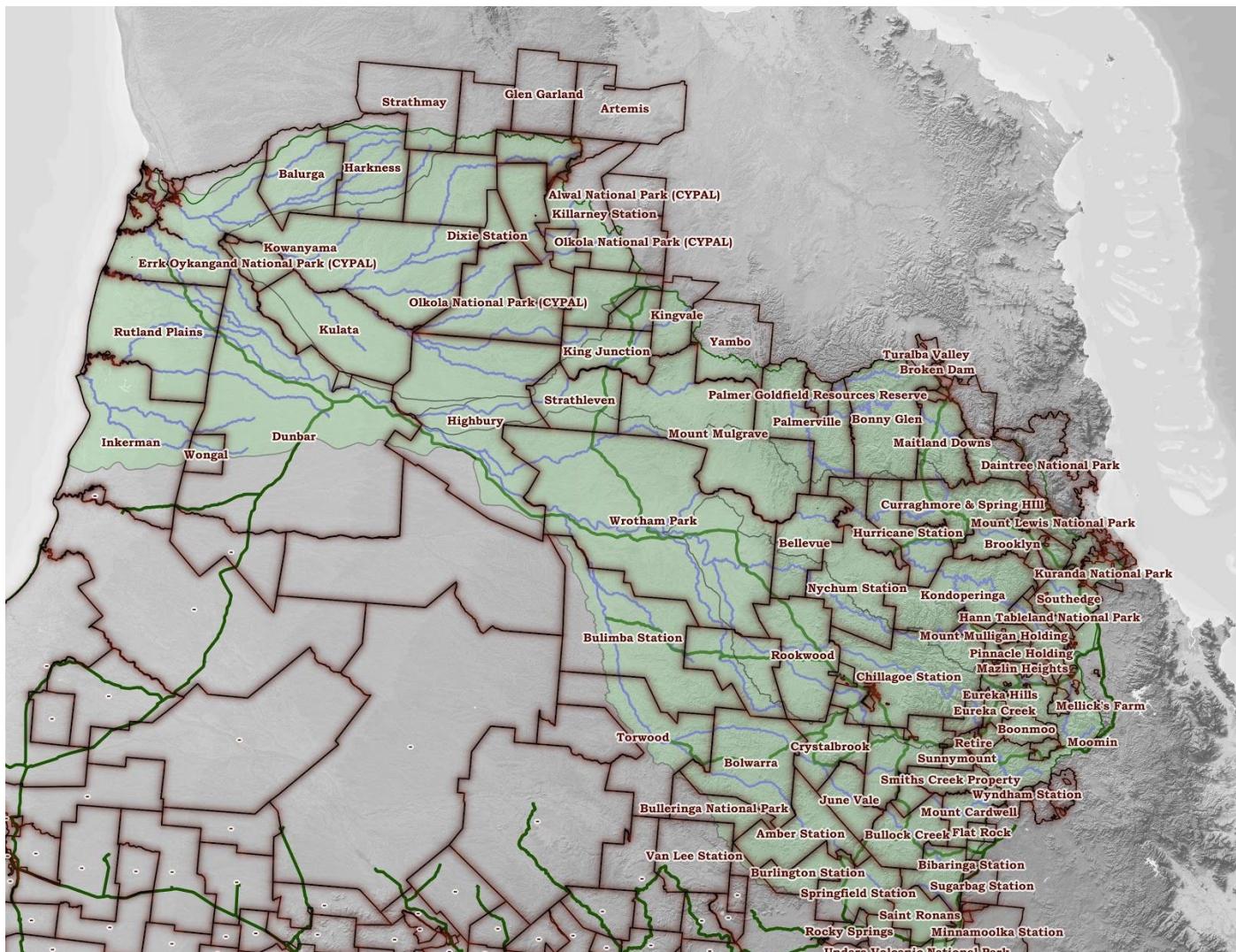
<http://www.nespnorthern.edu.au/2017/11/24/assessing-mangrove-dieback-gulf/>

Researchers flew over the affected area to gauge the scale of mangrove death (photo courtesy of Norm Duke)



Know your catchment

Alice - Palmer - Mitchell - Walsh - Lynd



Mitchell River Watershed Management Group was founded in 1990 by the elders of Kowanyama to serve as the "cockatoo at the top of the catchment".

The Mitchell River Catchment nourishes the lands of Australia's First Peoples, including the clans of Kowanyama, Olkola, Wokamin, Djungan, Western Yalanji, Koko Muluridji, Mbar Barrum, and Ewamian.



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\$10/yr

www.mitchell-river.com.au

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Mitchell River
the cockatoo at the top
of the catchment
since 1990