



Butts in the Burdekin Dry Tropics

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Fishways

By Terry Butts

An ambitious, unique and expensive project to have millions of Barramundi and other fresh water fish swimming the boundaries of the Bountiful Burdekin is at an advanced stage, and according to experts, the signs are promising to say the least.

Environmental Scientist, Jason Carter of Alluvium Consultants, and his Team, have lived and breathed the Burdekin for the past five months, painstakingly identifying 76 species of freshwater fish currently in the catchment areas of the Burdekin, Black, Ross, Haughton and Don Rivers. The reason being that, due to man made barriers, these fish are unable to move freely into the myriad of creeks and streams of the greater Burdekin that they once called home.

Their movement has been severely reduced by a myriad of barriers both big and small. The fish are unable to get back upstream and each year many thousands perish trying to reach their once natural habitat and breeding areas.

It isn't just the dams and weirs that inhibit or prohibit their access to the upstream environment. The velocity of the water passing through the man made rail and road crossing culverts are also a severe impediment, except during big floods when they can sometimes swim around them.

Our fish, it seems, except for a couple of species of eel, lack the strong climbing, jumping and swimming abilities of freshwater fish in other countries and cannot, or will not, swim against fast flowing water.

"They can get past some barriers and rest beside the culverts and the bridges and are sitting prey for birds and other predators," said Jason.

The Burdekin region is 135,000 square kilometers, roughly 60 per cent of the size of Victoria, and of the 76 varieties of fish identified in this Burdekin Dry Tropics Natural Resource Management (BDTNRM) funded project, 53 are native. Two, the yellowbelly and the eel-tailed cat fish have been introduced from other river basins and there are 17 exotic fish identified. Unfortunately the invasive African Tilapia is one that is causing most concern. They were introduced to the Burdekin system by careless and or inconsiderate anglers or people emptying their fish tanks into the river or creek.

Jason said that before the advent of the weirs and other barriers, many of the fish came down to the sea for breeding every year, like the barramundi, whilst others swam from the sea deep into the Burdekin and its tributaries.

"They still try but often don't get past the weirs or the culverts. And those that come down simply don't get back. Only a few eels have been known to get over the Burdekin Falls Dam."

A couple of years ago a hydraulic lift, built expressly for the purpose of lifting fish over the Clare weir was installed. And according to Jason Carter it has been known to lift 60,000 fish to freedom in one day. And continues to do so, though there have been a few mechanical problems. The fish are attracted to the lift by an artificial noise of running water. They are then trapped into a section and a door closes and they are lifted to the top of the weir where the door springs open and the fish are released. The lift cost more than \$1 million and of course it's impractical to install them on all the weirs and barriers in the area.

But there are other, cheaper models, and some are already in place. The JCU engineering department devised a rock ramp that is currently in place at University Creek, and another all concrete fishway, designed by the Department of Primary Industries is also being used at Sheep Station Creek in Ayr. These devices don't use hydraulics instead they work on the principal of fish moving up from one section to another, like a ladder, until they reach the top and freedom.

The signs are good. Members of the public have come forward and told of seeing particular types of fish they hadn't spotted since childhood. In some cases 40 years.

"That's just what we want to hear," he said "because in the coming years it will help us to gauge how successful the project is."

Jason, who, also consults to the mining giants managing rivers around central Queensland coal mines has identified more than 8,500 potential barriers that the fish would encounter in their journey from the sea to the Burdekin River boundaries. This also includes weeds that are often impenetrable and after flooding extract oxygen from the water thereby killing fish life. He reduced the total down to 1000 and now down to a final 50 key areas for which he, and BDTRNM project manager Dianna O'Donnell, will concentrate on, providing assistance for the fish to move on in the interest of recreation as well as biodiversity.

They are quaintly known as fishways. Nemo would be proud.