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Local creeks under the microscope

Australia's top researchers in freshwater stream science will be working together in the Cairns region over the next month.

Scientists from James Cook and Griffith Universities are using some of our local creeks as a case study of the ecological health of the streams of the Wet Tropics.

"We've chosen four creeks in the Russell and Mulgrave catchments to study," said Professor Richard Pearson, Head of JCU's School of Tropical Biology. "Streams in this area are in reasonably good shape ecologically, with high biodiversity, so they'll give us an insight into the streams of the Wet Tropics."

Over the next month a team of 12 researchers from James Cook and Griffith Universities will be gathering data along four streams in the area, including the Little Mulgrave and Behana Creek.

"Comparing these creeks with streams that are not in such a healthy state will help us guide best practice management," said Griffith University's Professor Angela Arthington.

The researchers plan to build a detailed picture by collecting data at 10 to 15 sites along the length of each stream.

"We will be comparing our findings at each site along each stream, as well as comparing the four creeks, and different landscapes and land uses," said Professor Pearson.

At each site members of the team will gather data: sampling water quality; collecting native and exotic fish, insect larvae and other creek life; studying vegetation in and alongside the creek; examining the condition of the banks and the overall health of the stream.

The team of freshwater specialists includes Dr Brad Pusey and Dr Mark Kennard who, with Professor Arthington, have published *Freshwater Fishes of North-Eastern Australia*.

Dr Pusey said the Russell and Mulgrave catchments were particularly significant, because of the number of endemic species found there, and as the stronghold for the Cairns Rainbow fish.

"This is a rare opportunity to gather together Australia's freshwater experts, working towards a holistic view of the health of the region's streams and related landscape," Professor Arthington said.

The scientists are working closely with local farmers and communities, and are seeking access to study sites on farms, as well as local knowledge of the creeks.

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“Local residents have been very helpful in sharing their knowledge of the sites, telling us the local flood history, what changes they’ve observed over the years, and useful details such as what species of fish they’ve caught there over time,” said freshwater biologist Niall Connolly.

“Farmers in the region clearly value their creeks, and are taking a keen interest in the research. Erosion control and water quality are important issues for farmers everywhere, but they’re particularly challenging in an area blessed by such high rainfall.”

Local farmer and Mulgrave Catchment Coordinator Bruce Corcoran said the study of Behana Creek was of particular practical interest. “Having such a high-value stream in the midst of an intensely farmed area shows that agriculture and environment can coexist very well if landowners have good attitudes, as they do here,” he said.

“We expect this research to highlight both the special nature of the creek and the essential requirements to maintain and improve it. It will also help our community in our efforts to bring other local watercourses up to a similar standard.”

The Russell and Mulgrave study is part of a broader Catchment to Reef research project, involving the Cooperative Research Centres for both Reef and Rainforest.

“In this region, where we have tremendous biodiversity in land and at sea, it’s critical that we build an understanding of the links between the two,” Professor Pearson said.

“The data we’re collecting along these local creeks will help us find ways to monitor and protect our natural assets, alongside thriving primary industries.”

10.30am

Thursday 30 June

Behana Creek Causeway, just south of Gordonvale

How to get there:

The causeway is near Aloomba. Allow 30-35 minutes for the trip from Cairns CBD. The road is sealed all the way. If you don’t know the area, the best way to find it (and avoid getting lost in a maze of back roads) is:

- Zero your meter as you pass the big Marlin at Stockland Earlville.
- Don’t take the early turnoffs to Aloomba. Take the last turnoff, which is signposted as *Aloomba* and *Moller Rd* and is 29.1km from the big Marlin.
- Turn left from the highway, cross the railway line and turn left again. This turnoff is also signposted as *Aloomba* and *Moller Rd*.
- Follow Moller Rd for 2.4km and you’ll be at the causeway.

Telephone interviews: participants can be contacted from 10.00am to 12.00 noon on Thursday on **0413 607 987**.