

# Creek health in focus

By NICK DALTON

FOUR of the most important creeks in the city's catchment area are currently under the microscope of freshwater stream science researchers.

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."

A team of 12 researchers from James Cook and Griffith Universities is gathering data along four streams in the area, including the Little Mulgrave and Behana Creek.

"Comparing these with streams that are not in such a healthy state will help us guide best practice management," said Griffith University's Profes-



CLOSE study ... Professor Richard Pearson and Professor Angela Arthington inspect plant life along the banks of Behana Creek. Picture: Nellie Pratt

or 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. 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.

Local farmer and Mulgrave catchment co-ordinator 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 Co-operative 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.