

# RESEARCH DIRECTIONS

## Controlling Cane Toads

**Dr Mike Letnic from the UWS Hawkesbury Institute for the Environment, together with Dr Tim Dempster and Dr Jonathan Webb from the University of Sydney will be testing a new approach for controlling the impacts of cane toads on native predators. This research is being funded by The Hermon Slade Foundation. PhD Student, Ben Feit, will be concurrently investigating the indirect effects of toad exclusion on reptiles and small mammals.**

'The invasion of cane toads across northern Australia has been an ecological tragedy,' says Dr Mike Letnic. 'Cane toads contain toxic substances that are absent from Australian frogs and consequently many predators die after attacking or consuming toads. Populations of goannas, snakes and northern quolls have severely declined following the arrival of toads. And unlike native arid-adapted frogs, cane toads require regular access to water to survive the long-dry periods, so sites with bore-fed dams act as invasion hubs for toads, allowing them to survive dry spells and move further into arid areas after rain. Toads are now expanding their range and pose a serious threat to the carnivorous reptiles in these semi-arid areas.'

This study will build on recent research which showed that by excluding toads from artificial water sources they could be eradicated from large areas. The team will compare the survival rates of goannas on two adjacent cattle stations, one with open bore-fed dams and the other where dams have been replaced with polytanks and determine if excluding toads from water provides benefits for these reptilian predators. Measuring how far toads disperse during a wet season by aerial radio-tracking, the team will ascertain the area of water exclusion that is necessary to prevent re-invasion of toads in water-free properties and further invasion into semi-arid areas.



This project will provide new knowledge and tools to help wildlife managers control cane toads and contribute to the protection of Australia's biodiversity. It will also protect sources of bush-tucker which have been adversely affected by cane toad invasion by sustaining both goanna populations and the traditional hunting practices of indigenous communities.

**Project Title:** Can excluding toads from water provide biodiversity benefits for arid Australia?

**Funding has been set at:** \$54,580

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