



WA cane toad update



Department of
Environment and Conservation



July 2011

Baby crocodiles learn to avoid toxic invaders

Researchers from the University of Sydney have found that baby freshwater crocodiles are quickly learning not to attack toxic cane toads.

Ruchira Somaweera—a graduate student based in the east Kimberley who works closely with DEC officers and community groups—staged encounters in a laboratory between small toads and crocodile hatchlings from Lake Argyle.

“I found that while every hatchling attacked the toxic pest during their first encounter, none showed signs of overt illness after consuming the toad,” he said.

“Moreover, the crocodiles rapidly learnt to avoid toads as prey, and only four out of the 10 crocodiles attacked a toad during subsequent encounters in the laboratory.

“These results are reassuring as they show that hatchling freshwater crocodiles can rapidly learn to avoid cane toads as prey and even if toads cause mortality of larger crocodiles (as happens in some areas), populations may recover via hatchling recruitment.”

Ruchira said his research had also found that cane toads have not yet decreased crocodile populations at Lake Argyle.

“Obviously at Lake Argyle you do get dead crocodiles but the number of deaths is not enough to have a population level impact,” he said.



A cane toad sits beside a crocodile skeleton.

“I will be carrying out further survey work in the east Kimberley in August but the research program I have been undertaking in the area over the past two years (to determine which native species can resist toads and which are most at risk) is beginning to wrap up.”

He said his findings would be published in scientific papers in 2012.



A freshwater crocodile in Lake Argyle. Photos courtesy Ruchira Somaweera.

Kimberley islands – a safe haven for fauna facing the cane toad threat

As cane toads continue to push further into the Kimberley Region, the islands off the coast will become increasingly important for maintaining populations of species susceptible to cane toads.

Island populations have been protected from many of the threatening processes common to the mainland, for example, the islands have very few introduced animals, fewer fires and less weeds. Consequently, they provide an opportunity to conserve examples of ecosystems that are in relatively good condition.

Under the Kimberley Science and Conservation Strategy released last month by Premier Colin Barnett and Environment Minister Bill Marmion, new reserves will be created on Kimberley islands with the highest conservation significance.

These reserves will form part of the new 3.5 million hectare Kimberley Wilderness Parks, the State's largest interconnected system of marine and terrestrial reserves.

The conservation of the islands is important because some of them may act as future safe havens for translocated species threatened on the mainland by the advancement of cane toads.

To date, the north Kimberley is only one of two places on mainland Australia that has experienced no known mammal extinctions. However, any establishment of cane toad breeding populations would place increasing pressure on biodiversity in the region.

Between 2006 and 2010, DEC undertook a biological survey of 22 of the largest islands in the Kimberley, and sampled groups of mammals, reptiles, land snails, birds and plants at most risk from threats such as cane toads.

The four-year survey, a collaboration between DEC, the Kimberley Land Council, WA Museum and Australian Museum, helped researchers gain a better understanding of the biodiversity of many of the islands along the Kimberley coastline. The survey revealed the presence of additional island populations of many vertebrates (particularly snakes and frogs), and more than doubled the species lists for most of the islands visited.

Among the mammals, the red-cheeked dunnart, western chestnut mouse and agile wallaby were new to the Kimberley islands. Northern quolls, which are known from several islands, but have nearly disappeared from the east Kimberley, were discovered on Adolphus Island in the mouth of the Ord River.

Other discoveries included the first record of a taipan from Middle Osborn Island, new records of a black-headed python on Boongaree and Uwins islands and dozens of new species of endemic land snails.



Western chestnut mouse.
Photo by Lauren Brown.



Talbot Bay. Photo by Tricia Handasyde.

Many of the Kimberley islands also contain important turtle nesting beaches and seabird breeding areas, and are also culturally significant to Indigenous communities.

Information from the survey is being used to build on existing knowledge of targeted components of biodiversity, identify locations of species susceptible to mainland threats, provide baseline information for future monitoring/surveys and to inform future conservation management decisions. This in turn will help the north Kimberley retain its place as being one of Australia's biodiversity hot spots.



Augustus Island. Photo by Tricia Handasyde.



Mertens water monitor. Photo by Lauren Brown.

Environment Minister on toad front line



Environment Minister Bill Marmion (left) and KTB's Ben Scott-Virtue holding the cane toad they caught during evening toad hunting activities.

Environment Minister Bill Marmion recently ventured into cane toad territory to experience first-hand the art of catching toads on the front line.

During the two-day trip, the Minister trekked out to the Sandalwood Factory dams with members of the Kimberley Toad Busters (KTB) to see how they conduct their toad busts.

He also visited Point Springs Nature Reserve, where a cane toad fencing trial is being led by Stop the Toad Foundation in collaboration with DEC.

Mr Marmion said the trip gave him an insight into cane toad numbers in the Kimberley and the establishment of breeding populations in the area.

"On the evening that I went out with KTB I saw plenty of cane toads and even caught some," he said.

"Unfortunately toads are extremely adaptable creatures and they can learn to thrive in a range of environments and climates, which is why they are one of the world's most invasive species.

"It is essential that we all continue to work together to minimise the impact of cane toads in WA, as this is not an issue that can be effectively managed without community support."



Fencing trial being undertaken by Stop the Toad Foundation at Point Springs Nature Reserve.

Hitchhiking cane toad found in Rockingham

DEC officers have commended the quick actions of a homeowner in Rockingham, south of Perth, in capturing and reporting a 'hitchhiking' cane toad.

The homeowners had recently moved to Rockingham from Queensland.

The rogue cane toad, which was spotted in the front yard of their property in late April, is believed to have 'hitched' a lift in the back of a furniture removal van from Queensland.

DEC Wildlife Officer Allan Madgwick said the furniture removal company had packed and unpacked the container and the owners had had little to do with it.

"The house was near a drain so it was critical that we monitored the area to ensure there were no other toads," he said.

"We doorknocked the area to inform neighbours about the find and cane toad traps were set around the property for several weeks as a precautionary measure."

He said no further toads were located in the traps that were set up at the house.

DEC encourages people not to kill suspected cane toads in case the animal turns out to be a harmless native frog.

In WA, cane toads are now in and around Kununurra, with breeding occurring in irrigation areas.

Anyone who suspects they may have found a cane toad should isolate the live animal and report the sighting to the cane toad hotline on 1800 084 881 (free call).



The captured toad and Wildlife Officer Allan Madgwick setting up a cane toad trap on the property.

Fishermen urged to check their boats

Kimberley boaties are being urged to check their gear for cane toads before venturing out on their trips.

DEC State Cane Toad Initiative Program Coordinator Corrin Everitt said while it was widely known that toads could hitch rides by hiding in freight trucks, camping equipment and underneath vehicles, boaties were now also at risk of transporting the invasive pest.

"We encourage boaties to check their gear before travelling to the remote Kimberley coast as we don't want cane toads spreading ahead of the front line," she said.

"This means boaties need to be on the lookout for toads which could easily be transported to other areas by hiding in fishing gear and boats."

Introducing Jasper Kruse



Jasper Kruse is the newest Education and Interpretation Officer to join the State Cane Toad Initiative team at DEC in Kununurra.

Jasper's role is to help inform the wider community about toads through presentations and engaging with the general public. In his short time with DEC he has already assisted with several initiatives such as the instalment of hitchhiker signage between Kununurra and Broome, visited local tourist venues to inform them about toads and

worked on the Kimberley Education Manual. Jasper will also be rolling out the Kimberley EcoEducation program which is run through schools.

Originally from Holland, Jasper has been living in Australia for the past five years. He travelled to Kununurra 18 months after his arrival and immediately fell in love with the Kimberley.

New drop-off point at Kimberley school

A cane toad drop-off point has been installed at Kununurra District High School, as part of an ongoing initiative to educate students about the importance of mitigating the impact of cane toads.

Since the drop-off point was installed at the school on 15 April, more than 30 toads have already been dropped in by community members and students.

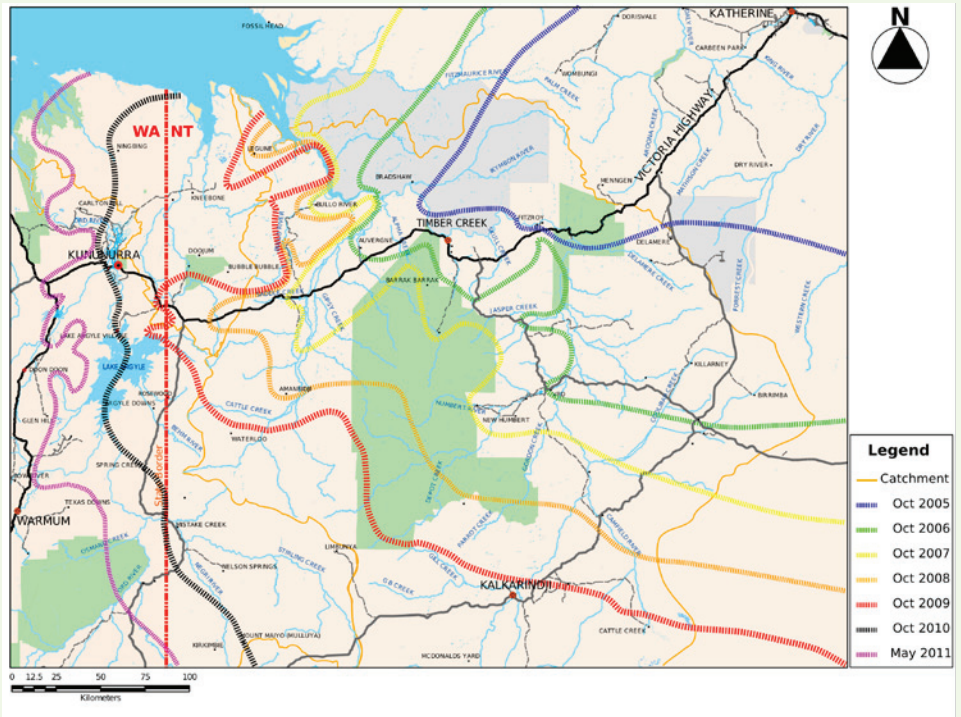
Six drop-off points have now been established in the Kimberley—at Doon Doon, Wyndham, the shire depot in Kununurra, the Kununurra vet centre, DEC's Kununurra office and the local school.

The drop-off points and toad disposal pit at the shire depot are part of a range of State Government measures to help the local community deal with the invasive species.

DEC officers are also preparing to install smaller drop-off points at several caravan parks in the region. DEC staff will assist in clearing them out regularly.

Where are they?

Frontline location of cane toads as at May 2011. Compiled by DEC from data made available from DEC and KTB on-ground operations.



WA cane toad packs on display in New York

DEC's cane toad packs and information materials are being used in an exhibition to educate people on the other side of the world.

It comes after the department was contacted by an officer at Staten Island Zoo in New York who requested educational materials for a series of invasive species displays.

The zoo's Fred Hartmann said the purpose of the displays was to tell the story about the arrival and establishment of cane toads in Australia.

After receiving the educational materials, which included brochures, newsletters and native frog stickers, Mr Hartmann commented that they were "excellent".

"The display came together quickly and it came out very well, in no small part because of all your assistance. I just wanted to thank you one more time for all your help in making it special," he said.

For more information contact the DEC cane toad team on 9168 4200 or email corrin.everitt@dec.wa.gov.au.