



WA Cane Toad Update

November 2014

Release of updated strategy

Western Australia's cane toad strategy has been updated following a five-yearly review.

Environment Minister Albert Jacob said the focus for the next five years is on preventing the establishment of new satellite populations outside of the Kimberley and managing the impact of cane toads on native wildlife.

Some of the actions from the original 2009-19 strategy are working well and have been retained in a new Plan of Action set out in the updated strategy, while others have been modified and some have been completed.

A number of proposals, such as the use of parasitic lungworms to reduce cane toad populations and fencing to exclude cane toads from important sites, have been investigated and found not to be viable long-term management options.

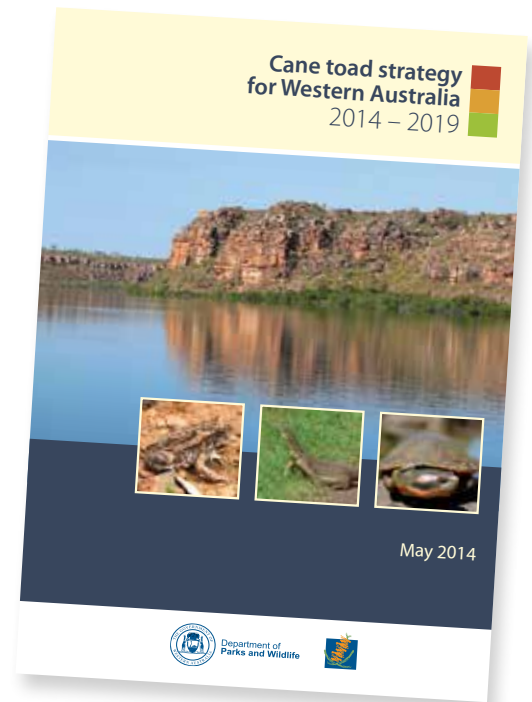
Mr Jacob said the revised document would complement initiatives under the State Government's \$81.5 million *Kimberley Science and Conservation Strategy*.

"This integrated approach will allow for more effective action to be taken," he said.











"For example, cane toad management is included in broader Aboriginal land management programs, and native animal monitoring being conducted under the Kimberley Landscape Conservation Initiative has been expanded to include the Kimberley islands, so that action can be taken to protect the diversity of plants and animals on the islands."

The *Cane Toad Strategy for Western Australia 2014-2019* will be periodically reviewed and updated as new information comes to hand.

View the strategy www.dpaw.wa.gov.au/plants-and-animals/animals/cane-toads



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Above Motorbike frog.
Photo - WA Museum

Report a sighting

Community members are taking lots of photos of suspected cane toads and texting them to the department's 0400 693 807 number.

State cane toad program coordinator Corrin Everitt said most reported "toads" were actually native frogs.

"We are really pleased so many people are sending in photos for correct identification," Ms Everitt said.

"The most commonly received images are of the motorbike frog, the moaning frog, humming frog and the western banjo frog."





Meet cane toad program trainee Andrew Rethus

After signing up as a *Bush Ranger* cadet when he moved to Kununurra from Victoria in 2012, Andrew Rethus has really taken a shine to the Kimberley environment.

When the opportunity came up for Andrew to join Parks and Wildlife's cane toad program as a school-based trainee in 2013, Andrew jumped at the chance.

As part of Kununurra District High School's *Kimberley Education For Life* program for Year 11 and 12 students, Andrew has been working two days a week with the cane toad team based at Parks and Wildlife's Kununurra office, one day completing a Certificate II in Conservation and Land Management and the remaining two days at school.

"I've really liked getting out on biodiversity surveys," Mr Rethus said.

"It's great to work with different people from Parks and Wildlife and to meet people like Paul Doughty from the WA Museum and the team from Bush Blitz."

In addition to assisting with biodiversity surveys, Andrew has gained experience

working with the cane toad detector dog Reggie, and has helped out at public events such as the Kimberley Training Institute Careers Day in Kununurra.

Andrew lists the highlights of his traineeship as learning about native animal management and trapping techniques, completing his restricted coxswain course, learning how to safely handle and remove snakes, and gaining experience working with a chainsaw.

With his schooling over and traineeship finished, Andrew is now looking forward to staying on at Parks and Wildlife and pursuing a career in native animal management.

"I've gained lots of pathways to different jobs, and have a good understanding of what working in a real job is going to be like."



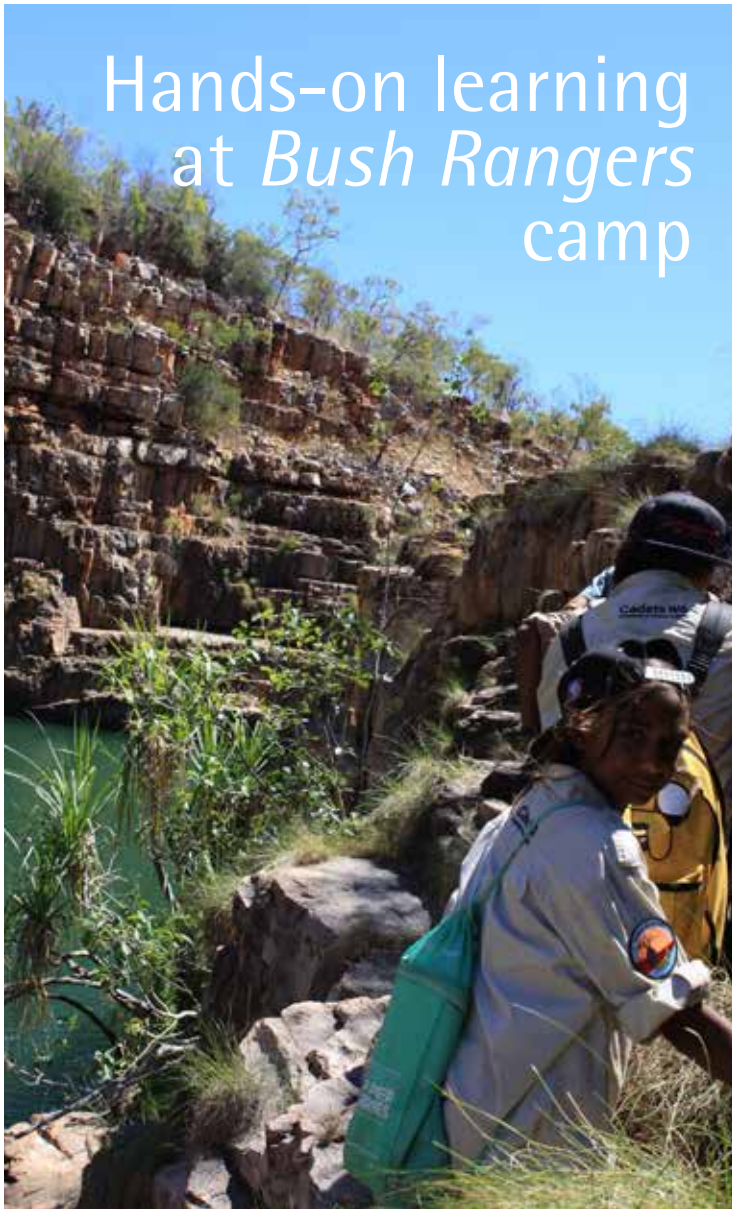
Above top Andrew with Reggie the cane toad detector dog.

Above left Paul Doughty from WA Museum, Andrew Rethus and Jasper Kruse, Parks and Wildlife technical officer, identify a reptile at a biodiversity survey.

Above Andrew Rethus.

Photo - Parks and Wildlife





Hands-on learning at *Bush Rangers* camp



Manning Gorge proved an ideal location for the 2014 *Bush Rangers* regional camp in August, with students from six schools working with their peers to complete a range of challenging and fun activities in the spectacular Kimberley landscape.

Hosted by Parks and Wildlife, the cadets put their navigation skills to the test with an orienteering course at Barnett River Gorge and developed leadership skills during an exploratory hike along the Manning River.

They enhanced teamwork skills by splitting into groups to take responsibility for camp duties including cooking for the 86 participants!

There were bushcraft and survival workshops, night games and an evening presentation on fire and conservation management.

The knowledge and experiences in native animal monitoring shared by staff, along with a slideshow presentation projected onto a huge boab, was a highlight for all campers.

For more information about *Bush Rangers WA*, visit www.dpaw.wa.gov.au/get-involved/schools-programs

Top left Hiking in the Manning Gorge.

Top right Planning an orienteering route at Barnett River.



Above Massed cane toads. Photo – Parks and Wildlife

Cane toads on the move

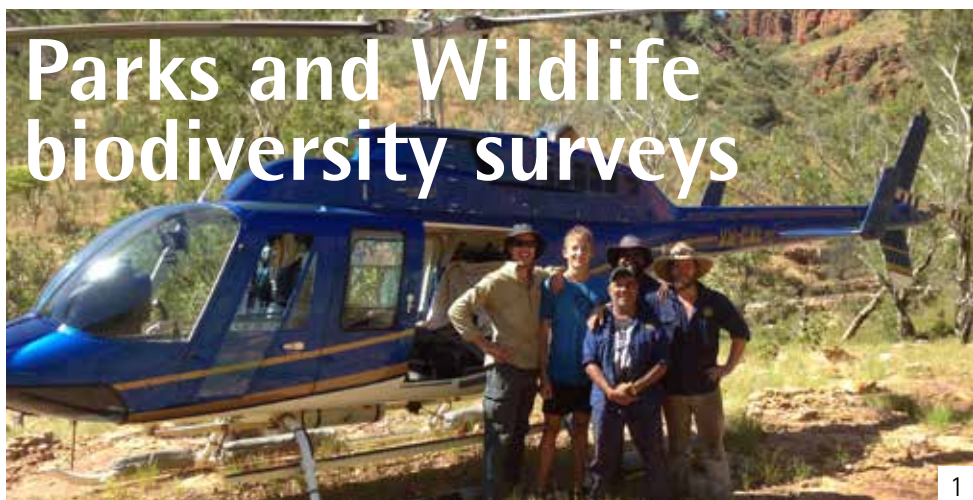
Cane toads are on the hop again and Parks and Wildlife is expecting them to be moving another 50km this wet season. If you live between Halls Creek and Fitzroy Crossing, make sure you give the department's cane toad team a call on 9168 4200 and the education officer will come out and "talk toads" with you.

Remember if you, too, are on the move: "Check your load for a cane toad". Toads love hiding in small places including among luggage, pallets, camping gear and caravans.





Parks and Wildlife biodiversity surveys



Each year, Parks and Wildlife staff work with local Aboriginal ranger groups to carry out biodiversity surveys.

The surveys are a combination of animal trapping projects and vegetation studies that record as much information as possible about species found in distinct locations across the Kimberley.

The information gathered from these surveys is used to shape management plans for each area.

By following a standard survey procedure, Parks and Wildlife can return to these sites in the future to look for any changes in plant and animal populations and evaluate the success of management strategies.

This year survey locations have included Wire Springs near Fitzroy Crossing, Windjana Gorge National Park, Drysdale River, Walcott Inlet and Carson River Station, along with various Kimberley islands.

Parks and Wildlife staff Jasper Kruse and Andrew Rethus along with Thomas Grounds, Wesley Alberts and James Birch from the Balangarra Rangers also conducted the second year of surveys at Cockburn Range, which lies at the far eastern end of the iconic Gibb River Road.

The trip was challenging and showed a large diversity of frogs and reptiles in four different habitat types.

This is great news given that cane toads have been in the area since 2011.



Pic 1. Survey crew Jasper Kruse Et Andrew Rethus, Wesley Alberts, James Birch and Thomas Grounds from the Balangarra Rangers prepare for the chopper flight to the sites in the Cockburn Range. **2.** Bunuba Rangers with Phil De Bruyn, Jasper Kruse, Sally Johnston and Tracy Sonneman from Parks and Wildlife ready for a hard day's work at Wire Springs survey. **3.** Rock rat caught at Walcott Inlet survey **4.** Northern knob tail gecko caught at Wire Springs. **5.** Jasper Kruse holding a black headed python **6.** Corrin Everitt, David Pearson and Richard Tunnicliffe at Adolphus Island after surveying for northern quolls and cane toads. **7.** Ambangardi rangers assisting Parks and Wildlife staff to set up the Carson River survey. **8.** Balangarra Ranger coordinator Thomas Grounds enjoying the sunset on his way to spotlighting at Curran Point in the Drysdale River. *Photos – Parks and Wildlife*





Toads reach Adolphus Island



Left Extensive salt flats at Adolphus Island.
Below Dr David Pearson investigating a creekline on Adolphus Island.
Photos – Parks and Wildlife



Parks and Wildlife officers have carried out a series of surveys at Adolphus Island in the Ord River north of Wyndham, which was recently colonised by cane toads rafting there during flood events.

Adolphus is less than 2km from the mainland at its nearest point and is about 10km in length. It has been identified as a high priority for conservation due to its population of the endangered northern quoll and the yellow-spotted goanna.

Both species are susceptible to poisoning and death if they attempt to eat cane toads.

Investigations have shown that although cane toads are present in almost all of the island's creeklines – even occupying

burrows up to 15m away from small pools of water – goannas and other reptiles are still found in high numbers.

The number of quolls appears to have declined when compared with previous surveys, however, a small population remains.

From these results a number of management techniques will be trialled to shape the future management of other islands in the toads' path:

- survey quoll, snake, and goanna numbers and trial if they can be taught not to eat toads;
- test toad pheromones that are thought to reduce breeding success and attract tadpoles into traps (see more on this below);
- develop remote monitoring techniques using cameras and toad calls for early detection of new toad populations on other islands at risk.

Pheromones research

University of Sydney Professor Rick Shine and his team are conducting research into a chemical, or pheromone, produced by cane toad tadpoles, which has enormous potential for toad control.

Honours student Greg Clarke, supervised by Dr Michael Crossland, followed up the team's earlier discovery that cane toad tadpoles produce chemicals which are lethal to developing cane toad eggs.

So far, in trials with 20 clutches of toad eggs, they have recorded a 95 to 100 per cent death rate of tadpoles from eggs that were exposed to the chemical.

"The biological explanation for the evolution of this toad-killing chemical is competition between toads: by killing any newly-laid eggs, older toad tadpoles avoid having tens of thousands of additional hungry mouths competing for food in their home pond," Prof Shine said.

"Clearly, we might be able to turn the toad's own weapons against it."

In trials to date, the chemical has had no effect on the eggs of native frogs or other native species. It also appears effective in very low concentrations.

"The next step is to identify the specific chemical responsible for this effect, so that we can develop a method for preventing toad-breeding in the wild," Prof Shine said.



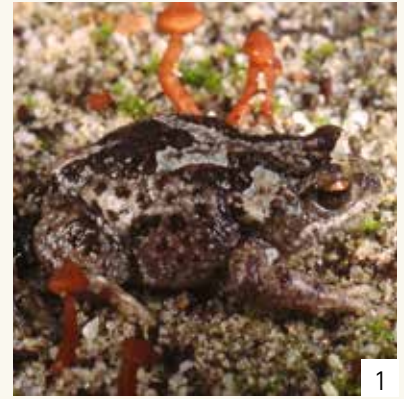


Cane toad app updated

The cane toad app has been updated to include images of native frogs found in the south-west, as well as the Kimberley.

People can use the images and information to help identify a frog or cane toad. Positive identification helps minimise the number of native frogs that are mistaken for toads and killed.

Download the cane toad app to your mobile device from the iTunes store.



Above Cane toad app.

Right top These frogs from the south-west are sometimes confused with cane toads – 1. Crawling toadlet 2. Hoating frog 3. Moaning frog. Photos – WA Museum



Goannas in training

A number of Kimberley reptiles are threatened by the westward expansion of cane toads.

A research project by the University of Sydney, in conjunction with Parks and Wildlife and the Balangarra Rangers, is examining whether or not goannas can be trained not to eat the poisonous toads.

The study, being co-ordinated by PhD student Georgia Ward-Fear, is based on the Forrest River floodplain to the west of Wyndham and involves trapping around 70 yellow-spotted monitors (*Varanus panoptes*) and sand goannas (*Varanus gouldii*). They have been fitted with tail-transmitters so researchers can locate them regularly.

Once released, the goannas are offered cane toad metamorphs - tiny juvenile toads that are much less toxic than adults.

When the goannas eat the metamorphs they typically feel ill and it is hoped they will learn to associate toads with nausea and avoid them in the future. The use of 'teacher toads' by Dr Jono Webb and colleagues in the Northern Territory has resulted in increased survival of northern quolls.

Preliminary results show that most goannas that have eaten the teacher toads are reluctant to take toads offered to them on subsequent occasions.

However, the true test of the value of teacher toads will occur this wet season when the main invasion front of toads is expected to arrive on the Forrest River floodplain.

Above University of Sydney PhD student Georgia Ward-Fear and Balangarra rangers with a yellow-spotted monitor. Photos – Parks and Wildlife





Cane toads in mango plants

Nine cane toads were found in a consignment of mango plants at a Perth Airport transport depot earlier this year – the largest number to reach the metropolitan area in a single incident.



Parks and Wildlife officers retrieved seven live and two dead cane toads from a Toll Express truck, along with eight native frogs.

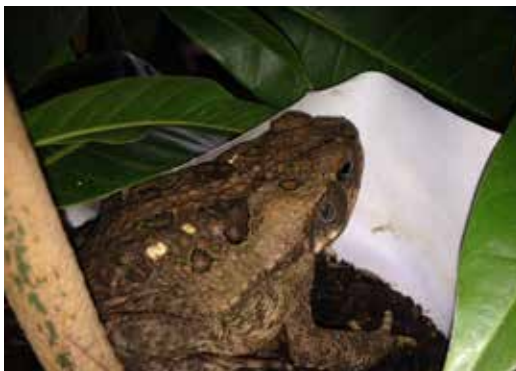
Wildlife officer Teagan Johnston described the find as concerning.

"There were male and female toads hidden within the plants and if they had escaped from the truck and found a water source, it is possible they may have begun breeding," Ms Johnston said.

The incident reinforced calls from the department for individuals and companies travelling from toad-infested areas to check their vehicles and equipment carefully for "hitchhiker" toads.

"They can hide in small spaces so inspect your vehicles, luggage, pallets, camping gear and caravans," Ms Johnston said.

If you find a suspected cane toad, isolate the animal and report the sighting to the Parks and Wildlife cane toad hotline immediately on 1800 44 WILD (9453).



Above right Seven live toads found in mango plants.

Above left The plastic-wrapped plants where the cane toads were discovered.

Left Cane toad in a plant pot.

Photos – Parks and Wildlife

The WA Cane Toad Update is released on a biannual basis to coincide with the end of the dry season and the start of the wet season. **If you wish to subscribe [click here](#).**

For more information contact the Parks and Wildlife cane toad team on (08) 9168 4200 or email corrin.everitt@dpaw.wa.gov.au

