



# WA Cane Toad Update

May 2014

## New detector dog takes on quarantine role

Environment Minister Albert Jacob joined a large media throng at the Department of Parks and Wildlife head office in Perth to introduce new cane toad detector dog, Reggie.

The energetic two-year-old springer spaniel has been specially trained to sniff out the noxious pests while inspecting high priority freight.

Reggie will principally be used as a proactive quarantine measure in the Kimberley, and to help boost community awareness about cane toads.

"The most likely way cane toads will become established in the State's South-West is by arriving undetected on vehicles, so Reggie's role in sniffing them out will be a significant one," Mr Jacob said.

"He is mainly being used in Kununurra to inspect freight trucks, depots, warehouses and distribution points for fresh produce packed in the field, and other freight considered likely to carry 'hitchhiker' cane toads.

"However, if a toad is found at another location in Western Australia, such as the Canning Vale produce markets, the dog and its handler can travel to the site to lead investigations.

"A detector dog is more efficient than humans in locating one or two cane toads 'hitchhiking' in freight trucks, or hiding in a warehouse.

"Reggie will also be an effective mascot, encouraging travellers and freight companies to be vigilant and check vehicles and goods for toads."

Reggie's initial training took place in NSW with accredited dog trainer Steve Austin, who prepares dogs for specialist roles in Federal and State agencies.

Mr Austin works with Parks and Wildlife staff to prepare Reggie for the demands of the quarantine role.

"Springer spaniels were identified as an ideal breed for cane toad detection because of their acute sense of smell, high energy levels and ability to act on command," Mr Jacob said.

"Heat tolerance was also a consideration, because the dog is based in Kununurra."

Reggie replaces the department's original detector dog, Nifty, which was retired in 2011.

Below Environment Minister Albert Jacob, handler Jackie Ellis and Reggie.  
Photo - Peter Nicholas/Parks and Wildlife










### Why is he called Reggie?

Reggie was named after Reginald William Mungomery, the Queensland entomologist responsible for introducing cane toads to Australia in 1935. The name was chosen by ABC radio *Regional Drive* listeners as part of a Parks and Wildlife/ABC statewide competition.

Mungomery wanted to test whether American toads were an effective predator against insect pests in sugar cane fields. However, the experiment was not a success and the toads themselves became a pest across northern Australia.

### In this issue

-  New detector dog takes on quarantine role
-  Cane toad discovery in East Perth
-  Cane toad Front line spreads west
-  Impacts from cane toads on native species
-  Kimberley Bush Rangers get hands-on
-  Biodiversity survey results
-  New drop-off point for cane toad-busting holiday park







# Cane toad discovery in East Perth

The importance of public awareness about cane toads was highlighted in February when a toad was discovered in the backyard of an East Perth home.

The residents recognised the toad as a feral species and trapped it in a bucket with a lid, before notifying the Cane Toad Hotline on 1800 44 WILD (9453).

Parks and Wildlife officers later searched the backyard where the toad was found, knocked on doors in the near vicinity and searched properties with the owners' permission. Cane toad brochures with contact information and advice were also left at homes in the area.

It was the first time in eight months that a toad had been discovered in the Perth metropolitan area.

Wildlife officers were unable to establish exactly how the cane toad came to be in East Perth but as the home was near

East Perth railway station, where the Indian Pacific stops, it is possible the toad was transported from the Northern Territory or Queensland in a car delivered to WA via train.

Environment Minister Albert Jacob said the incident was an important reminder that cane toad awareness is a statewide issue.

"While the scourge of cane toads is mainly a problem in the Kimberley, even people in Perth need to be aware of the invasive species," he said.

"People who find a suspected cane toad need to isolate the animal and report the sighting to the department's Cane Toad Hotline as soon as possible.

"You should not try to kill a suspected cane toad because it may turn out to be a native frog.

"People can also use the free Cane Toad App that I launched last year to distinguish between cane toads and harmless native frogs."



Top left Cane toad found in East Perth. Photo – Peter Nicholas/ Parks and Wildlife  
Right Cane Toad app.

## New drop-off point for toad-busting holiday park

A new cane toad drop-off point installed at Kununurra's Discovery Holiday Park is being well-used, with visitors enthusiastically participating in night time toad collecting competitions.

Park manager Kathryn Powell said a park employee started the practice several years ago and it has become so popular with holidaymakers she has started issuing 'cane toad collecting champion' certificates.

"Kids come for their glove and bucket with a lid and go out at night with their head torches, looking for toads," Ms Powell said. "Some people are actually extending their stays so they can keep toad-collecting.

"Apparently our drop-off point gets more toads than anywhere else in town."

State Cane Toad Initiative program leader Corrin Everitt said the



The Discovery Holiday Park drop-off point, Kathryn Powell, Charlise and Paige Binney, Andrew Rethus. Photo – Parks and Wildlife

cane toad collection record of the holiday park was impressive.

"It is fantastic to see how the staff and visitors at the park have really embraced the opportunity to use their drop-off point and increase awareness about cane toads," Ms Everitt said.

Parks and Wildlife has 21 toad drop-off points located throughout the east Kimberley.







# Do frogs croak when cane toads invade?

By Dr David Pearson

**Despite cane toads being loose in the Australian environment for more than 80 years, we are still learning about their impacts on native species. It seems entirely plausible that a large amphibian like a toad would have an unfair advantage over native frogs; after all, toads are known to eat native frogs.**

Laboratory studies and "small pond" experiments indicate that toads have some short term effects on frog populations during the invasion phase, but what happens over subsequent years? Do toads cause the extinction of native frog species? Or do frog populations recover after the main invasion of toads has occurred?

With these and other questions in mind, a Department of Parks and Wildlife research program began in 2008 to document changes to frog populations at 50 sites around Kununurra.

Sampling of frogs started prior to the arrival of cane toads in WA and relied on an important piece of frog biology - male frogs love to sing for sex! With the arrival of the wet season, frogs emerge from their dry season hiding places and the males begin to call to attract mates. Their calls can form deafening choruses and through the din, females are able to locate males to fertilize their eggs.

By visiting swamps and other water bodies it is possible to identify what species of frogs are present, as each species has its own distinct call. It takes time and patience to listen and identify different species from a noisy swamp

chorus, but by revisiting swamps and waterholes before toads arrive and for years after, it is possible to determine if any species have disappeared.

What if the toads cause a reduction in the size of frog populations, but not the extinction of any species?

This is much harder to determine. It might be possible to count the number of frogs before and after toads, but native frogs are typically small and hard to locate, especially as the grass grows taller in the wet season and pools increase in size.

This Parks and Wildlife research program used the number of male frogs calling during 10-minute sampling periods as its measure and then compared counts at the same sites from year to year.

You have to be dedicated and a little crazy to stand alongside swamp after swamp, being munched by mosquitoes, to record the frogs calling. Initially, surveys went right through the night. However, the advent of automatic frog call loggers has made it possible to easily record calling frogs and to scroll through and listen to calls at various times of the night.

It appears the number of species calling and the intensity of calling declines as the evening progresses, so that by midnight relatively few species are still at it (unless there is a fall of rain to renew the frogs' enthusiasm!)

The vast body of data collected during this survey is still being analysed, but it is clear that no frog species have disappeared from the study area since toads have invaded. Cane toads are present at all the sample sites, but the native frogs are hanging in there too.

Less clear is what impact toads have on frog numbers. Determining this is complicated by differences in the timing of the start of the wet season, the distribution of rainfall between years and the varied reproductive strategies of the frogs.

These range from "explosive" early wet season breeders that emerge with the first big rains and call in large noisy choruses, to other, relatively solitary species which call throughout the wet season. Repeated visits to the same swamps will hopefully allow the separation of some of this "environmental noise" to identify if there are any longer term changes to frog populations due to toads.



Main Swamp in east Kimberley.  
Top *Litoria caerulea*.  
Above *Platylpectrum ornatum*.  
Photos - David Pearson







## Mud and games for Bush Ranger instructors



Kimberley Bush Ranger instructors began the year with their annual conference in Broome, taking part in wide-ranging sessions that included bird identification workshops and mud-sampling to identify bird food availability.

Sharing information and gaining new project ideas were the aims of the weekend-long conference, but plenty of fun was had at the Bush Ranger beach games.

The highly successful Bush Rangers WA program, run by the Department of Parks and Wildlife, is now in its 16th year and is still growing.

Parks and Wildlife Kimberley Bush Rangers Coordinator Sally Johnston said there were two new schools - Kalumburu and Beagle Bay - participating in 2014.

"Bush Rangers is a voluntary nature conservation program for secondary school students aged 12 to 17 and Kimberley schools host eight of the State's 60 units," Ms Johnston said.

"Our annual conference forms an important part of the instructors' professional development, with a program of workshops, guest speakers and time for networking and planning with other Kimberley schools.

"In Broome we had presentations from each of the established units, guest presenters, a bird identification workshop with Broome Bird Observatory, mud-sampling with Parks and Wildlife staff, Bush Ranger beach games and fisheries education and projects with the Department of Fisheries."

Bush Ranger units have been active in the early part of the year, with Wyndham leading a community toad-bust and catching 81 toads in just half an hour.

The Broome Bush Rangers have been learning about crocodile surveillance and tracking with the Yawuru Rangers.

For more information about Bush Rangers WA, visit [www.dpaw.wa.gov.au/get-involved/schools-programs](http://www.dpaw.wa.gov.au/get-involved/schools-programs) or contact Sally Johnston at [sally.johnston@dpaw.wa.gov.au](mailto:sally.johnston@dpaw.wa.gov.au) or (08) 9168 4200.



Top Bush Rangers instructor Roland Stade and wildlife officer Peter Carstairs with a new crocodile trap and Broome Bush Rangers.  
Above top Broome SHS Bush Rangers Above Beach challenge at conference.  
Photos - Parks and Wildlife







## Surveys assist Aboriginal knowledge

The cane toad program has been conducting biodiversity surveys ahead of the cane toad front line since 2009.



The surveys coordinated by Parks and Wildlife provide a baseline inventory of fauna present in locations where there is little or no existing biodiversity information.

Surveys started in the new conservation reserves formed under the Ord Final Agreement and managed jointly by the Yoorrooyang Dawang Regional Park Council and Department of Parks and Wildlife. These reserves include Mijing, Barrberrm, Goomig, Ngamoowalem, Jemandi-Winningam and Darram.

All of the reserves were cane toad-free in 2009, with toads arriving in some areas during 2010 and 2011.

The survey program has now moved west to locations such as Carson River Station, Drysdale River, Wire Springs near Fitzroy Crossing and Cockburn Range.

New locations are identified through negotiations with traditional owners as part of the Kimberley Science and Conservation Strategy.

Every survey has a contingent of Aboriginal rangers to help with setting up and checking the 200 Elliott traps, 70-plus funnel traps and 12 pit lines spread across four different habitat types.

In addition to their primary purpose, the survey program has been successful in engaging with Aboriginal people to provide them with more information about the biodiversity and impacts on their country.

Mirriwung Gajerrong traditional owners have participated in surveys to gain an understanding of the different types of

Left Rainbow skink.

Above top Cane toad program coordinator Corrin Everitt, Parks and Wildlife trainee Andrew Rethus and traditional owner Renita identify animals after trapping.

Above Kurrajong flower

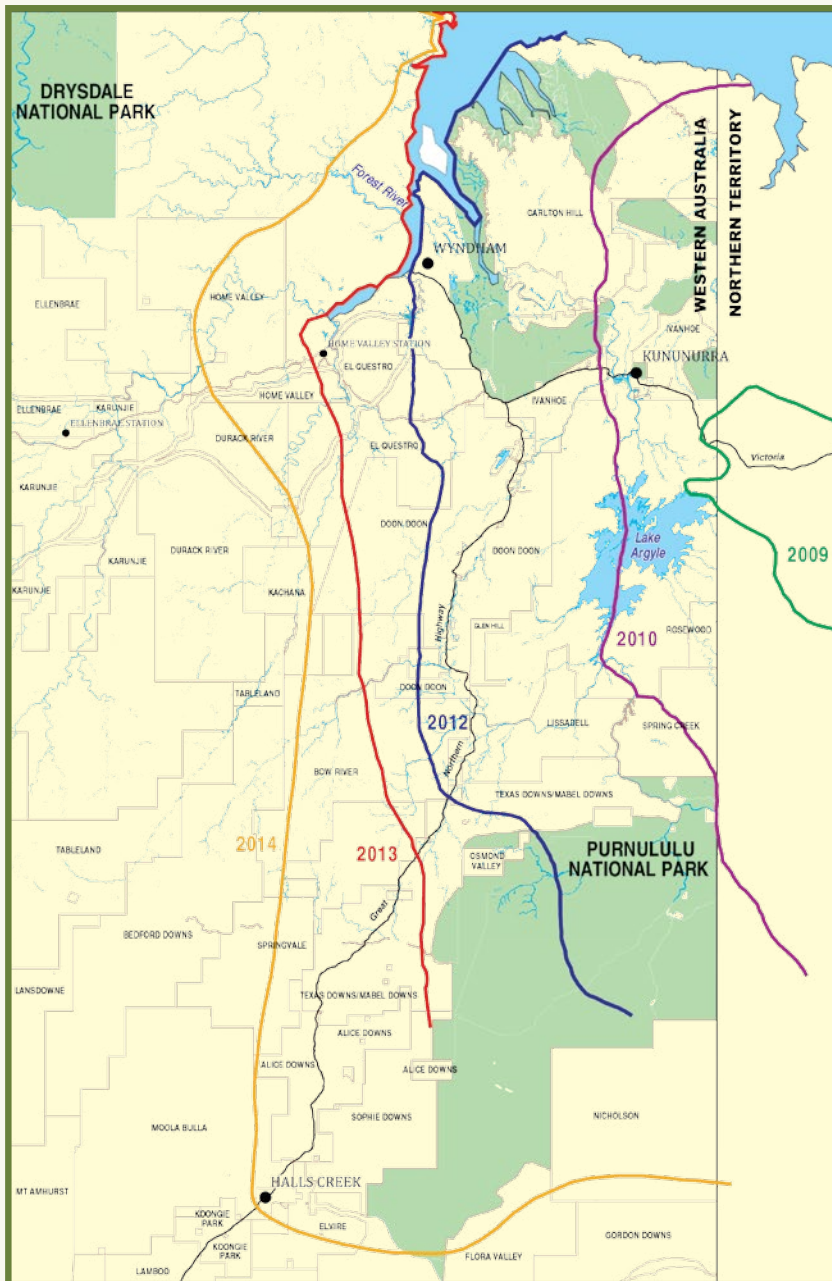
Photos - Parks and Wildlife

trapping and to help identify animals that are rarely seen.

An upcoming Kimberley research priorities workshop will help the Parks and Wildlife cane toad team determine the role of baseline surveys for the future, how monitoring can assist in understanding long term cane toad impacts on native species and identify management actions that may reduce this impact.







Above Map showing front line of cane toads in WA.

# Cane toads frontline spreads West

Cane toads are continuing to move west, with the front line now stretching from the former Oombulgurri community on the Forest River, south to Halls Creek. At the head of the front line toad numbers are very low, with the 2015 wet season expected to bring the colonising front through these areas and subsequently result in high numbers of toads.

For some areas where the terrain is very harsh and there is little water availability, cane toads will take longer to reach and this can be seen in areas to the west of the Great Northern Highway, south of Doon Doon Station.

In and around Kununurra toad numbers have been low, but have increased dramatically with higher rainfall. Community members are making good use of local drop-off points, with more than 1000 toads deposited in the first three months of the year.

Those in the south-west are continuing to use the cane toad email address, the 1800 44 WILD (9453) hotline and mobile number to report toads and unknown frog species. The majority of these have been identified as the common motorbike frog.

It is critical the public remains vigilant in reporting any unusual or unknown species, to ensure there are no outbreaks of cane toads ahead of the front line.

Don't forget to "check your load for a cane toad" before you travel to toad-free areas!

The WA Cane Toad Update is now 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](mailto:corrin.everitt@dpaw.wa.gov.au)

20140532 0514 PDF

