

CANE TOADS

On 4 June 2008, Kimberley Toad Buster (KTB) campaigner and volunteer Sandy Boulter enthralled her fellow Kimberley Society members and their visitors with a fast-paced delivery of toadbusting tales. A retired solicitor who specialised in environmental law, Sandy underpinned her tales with a PowerPoint presentation packed full of statistics and photos. She also put two dead specimens on display, and provided attractive KTB bookmarks with images of cane toads, their eggs and tadpoles, native frogs, and the KTB motto "If everyone was a toadbuster the toads would be busted".

The feral toad was imported at the behest of Queensland sugar cane growers more than 73 years ago. Cane toads, in all stages of their life cycle, are poisonous to nearly all Australian birds, fish and animals by a cardio toxin secreted from their skin. Their victims include freshwater crocodiles, freshwater turtles, water monitors, birdlife and other animals and reptiles, some of which are the traditional foods of the local indigenous people. Death sometimes comes too swiftly for a crocodile victim to leave the water. One KTB photo shows three virtually unblemished toads in the stomach of a freshwater crocodile, stark evidence of the power of the cardio toxin.

Such photos come from the scientific work the KTBs do on toadbusts. As well as measuring and weighing the captured toads, some volunteers undertake autopsies on wildlife found dead in or near toad-infested waters. As part of learning everything possible about toads before they get to the Kimberley, the KTBs also note and photograph any abnormalities seen on the toads. That information is passed to interested scientists and researchers in case it points to trends or perhaps proves interesting for other reasons. KTB is also supporting the research of Jordy Groffen, a Dutch student who is investigating the impact of Lungworm *Rhabdias cf hylae* in cane toads at the western front.

The astounding scale of the KTBs' work became clear as Sandy told how this amazing campaign – covering over 240,000 sq kms of the Northern Territory – started through Kununurra-based Lee Scott-Virtue reacting to the horrific sight of toads making uninhibited progress from Queensland across the Territory to her beloved Kimberley. Lee is part of the team at Kimberley Specialists in Research and is well-known for her environmental work in the East Kimberley.

The KTB story is about much more than just the physical efforts made to stem the progress of the toads. Lee, her partner Dean Goodgame, and others donated and raised the funds that enabled Kimberley Specialists in Research to establish the KTBs and toad bust for over a year without government support. Every weekend

since September 2005 they have been toadbusting in the Northern Territory, and that involves undertaking round trips from home of up to 900 km. Their commitment and enthusiasm is such that it has resulted in more than one third of the entire Kununurra population taking turns to toadbust, with teams of 10 to 90 volunteers in the field every weekend.

KTB is the only fully volunteer group currently fighting the toad, and it is the only group that is at the front every week. Their demonstration of what can be done has encouraged numerous locals and outsiders to participate. Groups of Vietnam Veterans are only some of those who travel to the region at their own expense to go toadbusting. Even passing tourists are provided with KTB toadbusting kits that will enable them to identify, capture, and humanely dispose of any toads they see while travelling east of the Kimberley.

A range of features helps to distinguish cane toads from our native frogs.

The adult cane toad:

- Has a dry warty skin (males' skin feels rough if you run a finger down their spine, females' skin feel smooth down the spine).
- Is generally larger than our native frogs and the average-sized adult is 10-15 cm long.
- Is coloured grey, yellowish, olive-brown or reddish-brown, and their bellies are pale often with dark mottling.
- Does NOT have discs or suckers on the end of its fingers.
- Does NOT have webbing between its front feet (but there may be leathery webbing between toes of its hind feet).
- Has a clearly visible ear drum.
- Has an obvious round smooth but bulging gland on its shoulder area behind the eardrum, which may exude (or more rarely squirt) white thick opaque poison if the gland is squeezed or the toad is stressed.
- Has eyes with a bony ridge (brows) that start at nose tip and meet above the nose.
- Has a sitting up on its haunches posture.
- Has a male mating call that is a long loud purring trill, and the males have dark lumps (which are nuptial pads) on their two first fingers in the breeding season (to help grip on the female during Amplexing).
- And, a female toad can lay up to 35,000 eggs, twice a year.



Green Frog

Cane toad tadpoles:

- Have a shiny black top and have plain dark belly with short thin tail.

Cane toad eggs:

- Are found in long strings of gelatinous transparent jelly enclosing double rows of black eggs, which hang in ropey strands that are easily picked up within two days of deposition.



Cane toad *Bufo marinus*



Burrowing Frog

All images courtesy of the Kimberley Toad Busters.

All told, KTBs have removed more than 250,000 mature adult toads from the already threatened ecosystems adjacent to the Kimberley. The largest toad they found weighed 1.7kg. Add to that their take of millions of tadpoles and metamorphs, and you have more than 100,000kg of toad biomass. It is impossible to visualise the size (or smell) of such a haul but photos of mature toads stacked in a plastic rubbish bin, and in large bags hung from a vehicle bull bar, gave some sense of how quickly the catch mounts. One of Sandy's accounts involved the KTBs taking 40,000 toads out of a single lagoon over eight weekends. She spoke graphically of the water pollution caused by such numbers, and of their incredibly negative impact on the location.

All of this work inevitably takes an enormous amount of time. The KTBs' tally of volunteer hours so far is more than 900,000 in two and a half years. That tally includes the time spent organising trips, campaigning, and providing advice, as well as the actual work of toadbusting. Much of the work is undertaken east of the Duncan Highway in rugged country, where the KTBs have mapped the pockets of

waters that survive the Dry. Toads need to be hydrated, unlike some native frogs that bury themselves during dry periods, and the remnant water holes enable the toads to stay alive on their march towards the Kimberley. When the water fails, some keep going by hydrating themselves in cow pats! There are also cane toads that hitchhike. Some have been found as far from “home” as Perth, in banana boxes. The risk therefore exists that toads will make it into the Kimberley and as far south as Perth in the vehicles or camping gear of unsuspecting travellers.

Unfortunately, it seems to be a case of asking when, not if, the toads will reach the Kimberley. Yet, thanks to remarkable campaign waged by the KTBs, and the work done by all the other volunteers and paid professionals who are tackling this issue, the toads will trickle in rather than arrive in a surging invasion. When that happens, the Kununurra community will be ready. The locals are, to quote Sandy, “expert, educated and prepared”.

The change that has taken place in the Kununurra community is part of the intriguing social dividend yielded by the fight against the cane toads. Indigenous and non-indigenous men, women, teenagers and children from towns and remote communities, and from TAFE and local prison camps, work together as KTB volunteers. Uniting against a common enemy has broken down some of the barriers that once kept many locals from mixing with, or even talking to, people outside their own group. With tourists (domestic and overseas), travellers and the Vietnam vets added to that mix, a wide variety of people are learning from one another and making a difference not just in the environment but also in their own lives.

Toadbusting is costing the KTBs over \$20,000 a month in recurrent field costs. They have received insufficient government funding for these costs, and no funding for paid coordinators or employees. The campaign desperately needs paid employees to help administer it, undertake equipment and vehicle maintenance, and take KTB cane toad education into remote communities that are unaware of the threats posed by the rapidly approaching toads. An application made to the WA State government last year for these positions remains unanswered. Donations to the KTBs are tax deductible, and should be made directly through their website to ensure donations go to on ground toadbusting. Sandy is available to talk to any Perth schools and community groups about toadbusting on 0427 508 582. You, your family or friends can also join the KTBs for a toadbust and see the remarkable, remote landscape up close. In the meantime, you can visit the KTB website (www.canetoads.com.au) to keep up to date with the campaign—by reading the bulletins and newsletters posted there—as well as learning more about cane toads and native frogs.

Cathie Clement, with input from Sandy Boulter and KTB