

Will There Be Life After Cane Toads?

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ABSTRACT: There has been much publicity about the impending arrival of the cane toad in Western Australia. What does this really mean for the wildlife in our state?

Many people are unaware of the huge impact the cane toad will have on our environment, or the reasons we are trying to prevent this declared pest from reaching our beautiful state.

Cane toads pose a devastating threat to our wildlife, as EVERY stage of its lifecycle is toxic to anything that eats it. Cane toad eggs, tadpoles, metamorphs (baby toads) and adult toads are all poisonous when eaten, be it by a reptile, bird or a mammal.

The impact of the cane toad is a multilayered one, and there will be many indirect effects of their arrival. Cane toads consume a huge quantity of food from the biomass, and result in starvation of many native creatures. They compete for refuge, shelter and breeding sites in the environment, and displace wildlife from their natural habitat.

Our wildlife is already in a perilous state due to the environmental destruction caused by frequent fires, habitat clearing and predation by feral cats. The arrival of the cane toad will have a profound and fatal effect on our wildlife unless we act now to educate everyone of their potential impact.


“IF EVERYONE WAS A TOAD BUSTER, THE TOADS WOULD BE BUSTED”

Thanks to Argyle Diamonds for enabling us to be here.

Introduction

Cane toads were introduced into Queensland in 1935, in a misguided attempt to control the sugar cane beetle. It was an ill-considered exercise in biological control, which failed miserably. The now renamed *Bufo marinus* (now *Chaunus marinus*, which is SO not charming!) is a native of South America, where they are NOT a rampant menace. There, they are kept under control by the natural balance of their own ecosystem, with its own natural diseases and parasites. Our Australian conditions however, have been much to the cane toads liking, and they are now a declared threatening process.

From the 105 cane toads that were originally released, there is now an estimated population of millions, that has insidiously made its way throughout Queensland, into the Northern Territory, and which now has its sights set on Western Australia. Along its journey west, the cane toad has left a trail of wildlife death and displacement, which is soon to be visited upon the fragile environment of WA.



Indirect Effects

The devastation created by the cane toad is due to both direct toxic effects on creatures, as well as many indirect effects on our ecosystems. Cane toads compete with wildlife for food, particularly by eating insects, and are capable of removing huge quantities of food from the Biomass. This results in the starvation of native species. They feed on ground breeding and dwelling species including small mammals, reptiles, frogs and even birds, such as Rainbow Bee Eaters. Removing large amounts of food from the ecosystem can also result in “prey switching” in some species, which then start feeding on toads, and subsequently dying.


Another indirect effect of the presence of toads in an ecosystem comes from changes in the predator layer. As so many reptiles are heavy frog feeders, the loss of large reptiles (as has already happened in the Northern Territory) may result in an increase in other species, such as ground nesting birds or water rats. These imbalances in any ecosystem will always have knock on effects as other food sources are over taxed or depleted.

Cane toads compete with native fauna for breeding sites, shelter and pollute water holes. There are still many impacts of the cane toad being revealed, as we learn more about these AMAZINGLY resilient creatures. I have seen cane toads living with injuries that no other creature could possibly survive with, and it is little wonder that they have been such successful and competitive survivors. One of the issues that we have discovered whilst post-morteming toads collected in the Northern Territory is that many of them feed heavily on dung beetles. The impact that this fact alone could have on our cattle stations and grazing areas should not be underestimated.

Toxicity

Every stage in the life cycle of the cane toad is toxic. This includes the eggs, tadpoles, metamorphs (baby toads) and the adults. We know that water rats, Keelback snakes, and some turtles and frogs can eat cane toads, but as far as we know, they are toxic to most other species that consume them. They can kill mammals (Quolls, Ghost bats & dingoes), birds (ducks, raptors and Blue Winged Kookaburras) and reptiles (pythons, monitors, blue tongues, Frill necked lizards, freshwater crocodiles) as well as frogs and fish, to name but a few.

Adult toads produce poison in their parotid gland, which is the gland behind the eye. Creatures do not even have to swallow the toad to be killed. Many snakes and lizards are found dead with a toad in their mouth, though we have found crocs with a number of toads in their stomach on post-mortem. We have seen waterholes with large numbers of dead fish in them, though whether they are from toxin in the water, or from eating eggs or taddies, we are not entirely sure.



Areas of impact of the cane toads


1. Economic -overgrowth of species resulting in crop destruction and damage
 - costs of control
 - costs of saving endangered species
2. Tourism: loss of wildlife species reducing tourist appeal and interest
3. Agricultural- loss of dung beetles creating changes in faeces breakdown and subsequent changes (flies, pasture changes) as well as large numbers in irrigation areas such as the Kimberley (permanent water) reducing useful insects and frogs.
4. Cultural: massive losses of bush tucker species (great reduction in numbers of large reptiles behind the toad frontline in the NT, some communities reporting none remaining)
5. Social: deaths of domestic pets
6. Biodiversity: loss of species already reduced by fragile environments (small mammals, reptiles, amphibians and birds in the Kimberley)

It is this last point that really frightens me. I have lived in the Kimberley for 16 years now, and the numbers of creatures I see, as well as the diversity of species I see as a vet, is reducing year by year. I see virtually no small lizards anymore, far less Owls and Tawny Frogmouths, far fewer Green Tree Frogs, less Magpie Geese and few Antilopine Wallaroos. This is but the tip of the iceberg. The country is changing. The fires are so frequent, and so hot now, that the land has no chance of recovering. Whereas the ranges previously used to remain unburnt, in the last five years, the fires burn right to the tops of the ranges. This means that there are no refuge sites for the wildlife during these fires.

I truly believe that our wildlife is disappearing and we need to make this known. I also believe that the cane toad could be the final straw for many of our wildlife species, or it could indirectly be their saviour. We can use this issue to raise awareness about the plight of our wildlife and bring their threatened state to public attention.

There has been comment made that the wildlife in Queensland has recovered, and that we should not bother trying to control the toad. I believe that the environment in Queensland when the cane toad was introduced was an essentially strong one, compared to the Kimberley of today. Our loss of refuge sites will make it FAR more difficult for our species to survive and repopulate areas which cane toads have devastated. Most population damage occurs in the first few years of cane toad invasion, so our efforts need to be swift, as it is quite possible that the toad will reach the Kimberley in the next Wet season.

What do we (Kimberley Toad Busters) do?

- Harm minimisation efforts: removing toad mass from the ecosystem, reducing the amount of food removed from the biomass thus sparing food for native fauna. "Toadbusting" adult toads, and removing eggs, tadpoles and metamorphs can do this... ..come and join the Kimberley Toad Busters Inc (KTB) in the field!
 - KTB share behavioural information and data collected from toad busting with scientists, to help further current research in biological control.
 - KTB strategically use traps to monitor toad presence in remote regions, at roadhouses, caravan parks, travel stops, freight depots & other transport sites, as well as eventually in town back yards.
 - Encourage people to control cane toads in their own area (as do Frogwatch in the Northern Territory)
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- National public education of the potential impact of toads and the current threatened status of Australian Wildlife (radio, media, TV etc)
- Teach people to identify native frogs from cane toads (in order to stop mistaken destruction of native frogs, as is already happening with Burrowing frogs, especially in Halls Creek with the desert frogs).
- Run education programs for people on Aboriginal Communities (some by Aboriginal people) to inform of the issues surrounding cane toads, wildlife and bush tucker.

What can you do? Become wildlife workers:

- Create frog friendly environments, pools and ponds.
- Support land reclamation for wildlife.
- Tell others about the threats of the cane toad
- Join your local wildlife group, work with threatened species, or donate to others doing it.

ANY action taken to protect our wildlife serves this fight and will help raise awareness of their needs. I personally believe that educating our children is the best hope we have of preserving wildlife for the future, and education programs in our schools will be critical. I have written a story that I would like to publish to use as an education tool Australia wide.

We can all teach others by our actions, and let our efforts speak for themselves.

Will there be life after cane toads? That is entirely up to us.

And remember, if everyone was a toadbuster the toads WOULD be busted.

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