

Kimberley Toad Buster's

News Letters



The aim of this website is to document the Kimberley Toad Busters fight to stop the cane toad crossing into Western Australia and to provide the Western Australian Community some understanding of the enormous efforts (and contributions) that can be made by unpaid volunteers!



IMBERLEY TOAD BUSTERS NEWSLETTER 49:

16/02/2012

The Cane Toad is a *Key Threatening Process* to the Australian Nation

Declared by the Federal Government 12 April 2005

KTB Newsletter

This 49th Kimberley Toad Busters' Newsletter is produced by Kimberley Specialists In Research Inc in conjunction with Kimberley Toad Busters Inc. Kimberley Specialists, a founding member of the Kimberley Toad Busters, continues to support the campaign against the cane toad by supporting www.canetoads.com.au raising funds and supporting cane toad scientific research.

Prepared by Jordy Groffen and Leonie Jacobs – KTB Scientists; in association with Gary Rethus, KTB Biodiversity Coordinator. Edited by Lee Scott-Virtue KTB President & founder.

KTBs are a tax deductible entity. Please see our website for our direct donation facility or how to sponsor toad busting or one of our research or educational projects.

**IF EVERYONE WAS A TOADBUSTER
THE TOADS WOULD BE BUSTED!**

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Red-faced turtle at Marella Gorge, WA

The survey conducted in Marella Gorge on Nicholson Station, the KTB southern depot and research station, undertaken in October and November, showed species richness and population size for freshwater crocodiles and turtles.

Two species of freshwater turtles were found; the sandstone snake-necked turtle (*Chelodina burrungandjii*) and the red-faced turtle (*Emydura victoriae*). In addition the survey recorded an estimate of the freshwater crocodile (*Crocodylus johnsoni*) population.

KTB Biodiversity Coordinator Gary Rethus, with KTB animal scientists Jordy Groffen and Leonie Jacobs recorded a total of 58 turtles. Only two species were recorded. These included six sandstone snake-necked turtles and 52 red-faced turtles.

A total of 177 freshwater crocodiles were also recorded. The large number of turtles for such a small gorge system was a surprise.

"It is unusual to find such a large turtle population number in a small waterhole, particularly as an adjacent water hole, larger in size, inhabited very few turtles" commented Gary Rethus.

KTB volunteers have noted that the Ringers Soak Community does visit the large waterhole

regularly for swimming and fishing. It was hypothesised that the larger waterhole may have felt the impact of regular Indigenous fishing which might have accounted for the reduced number of turtles. KTB will resume monitoring this area after the 2012/13 wet season to see if there is any change in population numbers of turtles. Marella Gorge is rarely visited during the wet season so will have had some respite.

Marella Gorge is quite a confined system of approx. 2 km long located 150km east from Halls Creek, Western Australia. It contains a rich biodiversity and, as shown, many freshwater crocodiles.

The Nicholson River flows in the gorge and ends in the Ord River. It has deep permanent waterholes, steep escarpments, and has an arid rocky spinifex country as habitat. "What is special about this gorge system is that it is very hard for aquatic animals to leave the gorge once they migrate into the system during the wet season.



Gary Rethus, biodiversity officer at KTB, with a red-faced turtle

Then being confined to the system until the following wet season will almost certainly mean that cane toad impact is much greater than in other, more open water systems".



Jordy Groffen, researcher at KTB with a sandstone snake-necked turtle

Cane toads are known to have a negative effect on the freshwater crocodile populations. The freshwater crocodiles, like other large predators, lack resistance to cane toad toxins, and could die after ingesting cane toads. KTB scientist Jordy Groffen commented. "I expect a great drop in freshwater crocodile populations in this area when cane toads arrive. It could result in losses up to 100%, which is devastating news".

Crocodile populations in Victoria River Gorge and the Victoria River-Wickham River Junction in the Northern Territory dropped 70% and almost 80% respectively after cane toad arrival. These systems are considerably larger than the Marella Gorge system, and with a larger food system, 'buy' a little more time before food resources become majorly impacted.

This food resource impact will be felt very quickly at Marella Gorge and freshwater crocodiles will begin feeding on the toads with devastating effects.



A Google Earth view from the survey area above the waterfall with the GPS markings where the turtles were captured (trapped and caught by hand) and where crocodiles were spotted.

It is shown under experimental conditions that at least 8 fish species and the sandstone snake-necked turtle could die from ingesting cane toad tadpoles or eggs. However, some indirect benefits were found for pig-nosed turtles (*Carettochelys insculpta*) after the cane toad arrived. Due to the cane-toad-induced declines in lizard densities there was an increased survival rate of turtle eggs, which were previously at risk from varanid predation. KTB scientist, Leonie Jacobs stated that "Cane toads will most likely have a negative effect on turtle populations". She added "We expect decreased survival of the red-faced turtle and sandstone snake-necked turtle, due to





A large freshwater crocodile at Marella Gorge

possible deaths caused by the ingestion of cane toad tadpoles, which is shown in experimental studies”.

Leonie Jacobs, researcher at KTB with a red-faced turtle

During this KTB study, turtles were caught by hand or trapped in opera house traps, which were placed in shallow water so that turtles could still breathe. Fish was used to attract turtles to the traps. Caught turtles were measured and notched for identification.

The survey will be repeated after cane toads have settled in the gorge system to investigate cane toad influence on crocodile and turtle populations. “Ideally, this should be repeated yearly to get a better insight in cane toad impact” Lee Scott-Virtue, President and founder of KTB stated. “However funding for this research is hard to come by, particularly when it is being undertaken by a volunteer group. However if we waited for the government and universities to complete this work we will never understand the full impact of toads. Over 80 years after arrival, this information is still poorly understood”.



Red-faced turtle

Comments

This is the second part of a turtle and crocodile count facilitated by KTB and KSR. The initial survey was conducted from 24-10-12 until 1-11-12. Turtle species identified were said to be the North-Western red faced turtle and the Northern Long-necked turtle. Identification was done using the latest published material however after communication with Dr. Nancy FitzSimmons we were informed that the common names for the two species are now the red- faced turtle and sandstone snake-necked turtle. Dr Fitzsimmons informed us that this information is yet to be published and is a result of several years of study undertaken by her and her team in the Kimberley.

For more information and/or data from this survey please go to our website www.canetoads.com.au

Or contact us on kimberleytoadbusters@canetoads.com.au

Or 08 91682576.



Kimberley Toad Busters awards!

For more information on any of the articles contact:
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