

STOP THE TOAD

KEEP WA CANE TOAD FREE

*PRELIMINARY REPORT
TRIAL DEFLECTION FENCE
March 2007*

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1 BACKGROUND

Barrier fencing has been discussed as a possible option in preventing cane toad movement but it has always been dismissed as too expensive or too difficult to maintain in the weather conditions in the tropics, especially because of the large rainfall events that cause significant water run off and stream rises.

Deflection or drift fences have been used for many years to enhance the effectiveness of traps, especially pitfall traps, in fauna surveys. The Stop the Toad Foundation (STTF) has been trialling the concept for use in the fight against cane toads near the Western Australian border and FrogWatch has been undertaking similar trials near Darwin

The concept of deflection barriers has been developed as a part of an integrated management approach to cane toad control. The segments of deflection fencing are designed to be fitted to existing fenceline infrastructure, thereby greatly reducing cost. They are designed to be used in conjunction with cane toad trapping and hand collection methods) with the aim of increasing the effectiveness of these control measures.

Trials conducted near Darwin have shown that cane toads are unable to get over a barrier made from shade cloth at 600mm height. Their reaction to such a barrier is to track along it. Field trials have shown that the placement of traps along a barrier leads to increased captures of cane toads by up to 5 times previous capture rates.

On the basis of this success the STTF (with support from the WA Department of Environment and Conservation (DEC)) has commenced the first large scale field trial of the concept by along the boundary of Gregory National Park near Timber Creek in the Northern Territory. See picture below.



STTF has designed the research project in conjunction with DEC and the Parks and Wildlife section of NRETA in the Northern Territory.

2 PROJECT DETAILS

The project is designed to test the concept of deflection fences in the field and to allow us to better understand the potential of such structures to control cane toads and prevent their migration, as well as giving us the opportunity to study any impacts of such fences on native animals in the area. The project will also allow us to get a better understanding of the management issues and costs associated with erecting, managing and maintaining such a structure.

The fence position has been chosen as it is on the eastern boundary of the STTF primary buffer zone¹, an area where we are researching the possibility of stopping the westward movement of cane toads. It is also in an area where it is accessible throughout the year and can provide us with useful data about the way cane toads are moving through the countryside.

Traps have been placed, in pairs (see picture below), at intervals along the fenceline, one trap on the Western (WA) Side and the other on the Eastern (Timber Creek) side. The capture data from these traps and the observations from the monitoring effort will give us a better understanding of toad movement. We would expect to see more toads caught on the Eastern (Timber Creek) side of the fence than we would on the Western (WA) side as the net toad movement will be East to West.



Traps being installed on the fenceline December 22 2006

The total numbers of cane toads caught along the barrier will also help us to better understand the numbers of cane toads moving through the area and reveal some information about their preferred corridors of movement.

3 PRELIMINARY RESULTS

The monitoring project commenced on 24 January 2007th immediately after the vast majority of the shade cloth was attached and the installation of the majority of the traps. At that point there was a gap of several hundred metres in the swampy section about 2/3rds of the way along the fence and a gap at the river end of the fence. Work is continuing to close these two gaps as soon as practicable.

¹ See STTF Report: Field Operations Dry Season 2006 for details about the Buffer Zone

In the first 6 days of monitoring the traps had captured 171 toads and a further 85 toads had been hand collected along the fenceline by STTF staff, volunteers and the Muyalee Women's Rangers. At this stage we are unsure of any collections along the line by DEC staff or Kimberley Toadbusters (KTB). STTF are aware that KTB has collected toads in the area since the project began and are endeavouring to source their data and involve them in the ongoing monitoring of the project.

During this period 70% of the trapped toads were caught on the eastern or Timber Creek side of the fence. If the hand collection numbers are added, 80% of the toads caught were on the eastern side of the fenceline.

Monitoring has not shown any adverse impacts on native wildlife to date, which is in line with expectations.

4 DISCUSSION

Preliminary indications are that cane toads cannot cross a barrier of this nature unaided and further that traps along the fenceline catch significant numbers of cane toads.

As the preliminary indications are supportive of the project hypotheses the STTF should begin planning to use the deflection fence technique on strategic targets such as major refuge waterholes in the dry season to deny toads access to water. STTF should also begin planning broad scale use of the deflection fencing strategy, as per the 2007 Draft Strategy document, and work with the Federal and Western Australian governments and other agencies to create large scale projects to the west of the current cane toad frontline in an attempt to stop the movement of cane toads towards WA. If large areas of the potential front can be shut down with fencing and traps it makes the amount of work remaining for hand collection much more achievable.