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# REGIONAL RABBIT CONTROL IN THE NORTHERN TERRITORY

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## ABSTRACT

*The Centralian Land Management Association (CLMA), a pastoral-based Landcare group, has commenced a regional rabbit control program in the Northern Territory. The project is based on a Territory-wide strategy to commence the control of warren-dwelling rabbits at their northern edge. Two key areas have been targeted so far. More than 7,500 warrens have been destroyed by ripping in a combined area of 190 km<sup>2</sup>. Rabbit numbers have been reduced by around 98% and ongoing follow-up control is planned. The influence of rabbit control upon vegetation and wildlife is being monitored. The work is funded by the Australian Nature Conservation Agency (ANCA) component of the National Drought Landcare Program and has been strongly supported by the Northern Territory Parks and Wildlife Commission (PWC).*

## INTRODUCTION

Rabbits are a serious problem in the southern third of the Northern Territory. However, extensive rabbit control on large cattle stations (2,000-5,000 km<sup>2</sup> in size) is generally beyond the resources of individual land managers. Funding support has enabled CLMA to fill this gap, with in-kind support from pastoralists.

The aim of the project was to control rabbit populations before they could recover from drought. Key areas were targeted, these being where rabbit warrens were most dense and the residual populations had the greatest potential for increase. Rabbit populations north of the MacDonnell Ranges are more fragmented and isolated than those to the south (Low and Strong 1983). The northern limit of rabbit distribution is where large-scale rabbit control has the best chance of success.

## METHODS

Warren ripping operations were conducted north-west of Alice Springs in the Great Sandy Desert bio-geographic region from July 1995 to March 1996. Ripping has been ongoing since then in an adjoining region. A 'D6' bulldozer with three tines was used to rip the warrens. Wide-winged boots were used to collapse the warrens in a single pass. A spotter on a quad-bike directed the bulldozer operator from one warren to the next. Any re-openings were treated using diffusion fumigation or were re-ripped.

Monitoring sites were established in ripped and unripped areas to enable comparisons between the two. 'Before' and 'after' information is being examined and includes monitoring of rabbit numbers, vegetation response, predator activity, raptor activity and the abundance of small mammals.

## RESULTS

In total, 7,602 rabbit warrens have been destroyed by ripping over a combined area of 190 km<sup>2</sup>. An average warren density of 40 warrens/km<sup>2</sup> (range 1-122 warrens/km<sup>2</sup>) was found. Spotlight counts indicate that ripping has reduced rabbit numbers to minimal levels. Prior to ripping numbers were already low, but control measures have reduced numbers by a further 98%. In contrast, rabbit numbers increased where no ripping was done. A re-opening rate of 6% was recorded.

Vegetation cover (%) rose sharply from about 3% on the warren to around 20% at a distance of 20 m out from the warren edge. Further out from the warren, cover remained relatively constant. The number of small mammals captured increased at both the ripped and unripped sites. However, in the ripped area two species of *Sminthopsis* not recorded prior to ripping were captured three months after ripping.

In the ripped area, dingo activity appeared to decline one month after ripping. However, three months after ripping, dingo activity had returned to pre-ripping levels. This contrasts with the unripped area where dingo activity has shown a constant and marked decline (75% drop). Fox activity in the unripped area has shown a correspondingly dramatic increase. This compares with only a mild decrease in fox activity in the ripped area. Feral cat numbers have been very low throughout the monitoring period. Goanna activity in the ripped area peaked during mid-summer (one month post-ripping) but three months post-ripping had returned to around pre-ripping levels.

The number of wedge-tailed eagles recorded has not declined at either site. Numbers have remained fairly constant at the ripped site but increased from three to five at the unripped site. The number of small raptors counted, chiefly Australian kestrels and brown falcons, has declined in both the ripped and unripped areas. The decline has been greater where the warrens were not ripped.

## **DISCUSSION**

Results support the view that the ideal time to do rabbit control is when populations have been naturally lowered by events such as drought. Rabbit control operations have further reduced rabbit populations to minimal levels. An average warren density of 40 warrens/km<sup>2</sup> indicates the potential for population increase that existed. A re-opening rate of 6% was recorded, the majority in hard calcrete warrens which were difficult to collapse. The ultimate success of the project will depend upon ongoing follow-up control to keep the rabbit populations down.

The monitoring of vegetation and wildlife is in its early stages and is limited to two sites at the time of writing. However, the grazing impact of rabbits was evident within 20 m of a warren. Removing the impact of rabbits should enable the vegetation to recover and improve the condition of the country.

Dingo activity appears to have remained fairly stable in the ripped area. Where no ripping was done, dingo activity has dropped markedly and appears to have been replaced by fox activity. Whether this indicates an influx of foxes from the ripped area is not known.

Goanna populations appear resilient to warren ripping. Similarly, the destruction of rabbit warrens does not appear to have adversely affected small mammal populations. The wedge-tailed eagle has maintained a presence within the ripped area so far. However, whether the ripping work has caused some disruption to the hunting territories of the eagles is not known.

In conclusion, the results to date are very encouraging. The ripping program is continuing to operate, moving in an easterly direction across the northern limit of warren-dwelling rabbits. The program is very timely with Rabbit Calicivirus Disease (RCD) on the horizon. Combining the effects of RCD with warren ripping could lower rabbit populations permanently. Without ripping, the effects of RCD could be short-lived.

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## **REFERENCES**

Low, W.A. and Strong, B.W. (1983). Distribution and density of the European rabbit *Oryctolagus cuniculus* in the Northern Territory. Internal report to the Conservation Commission of the NT. Alice Springs.