

Progress Report SP 2012-023

Feral cat control and numbat recovery in Dryandra woodland and other sites

Animal Science

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Project Team

granted

Program Leader

required

Directorate

required

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Context

The Dryandra numbat population showed a strong positive response to fox control during the 1980s and early 1990s, but then declined in 1993 and has since remained at low levels. Numbers dropped even further between 2006 and 2009 despite continued fox baiting. In response to evidence of cat predation on radio-collared numbats (2008-09) and Nicky Marlow's finding that cats are responsible for 60% of woylie deaths at Dryandra, an intensive study of predation on numbats and woylies there has been undertaken under this project.

This project also investigates the effect of cat baiting using *Eradicat* baits on GPS-collared cats, rates of mortality amongst woylies and numbats and their numbers in Dryandra Woodland. Cat-baiting efficacy is also being investigated at Tutanning NR. Part of this study is an assessment of the risk posed to other native mammals, particularly dasyurids, in wheatbelt reserves, by the use of *Eradicat* baits.

Aims

- To define the risks of using *Eradicat* baits to non-target species in Dryandra Woodland, particularly to threatened species like the red-tailed phascogale.
- To implement cat control by baiting at Dryandra and measure the effect on numbat, woylie, cat and fox population numbers and on causes of death in numbats and woylies.
- To determine the effect of ceasing fox control on feral cat movements and survival at Dragon Rocks NR.

Progress

- Ten numbats are currently radio-collared in Dryandra Woodland. They are checked at least once a fortnight so that predation events can be quickly verified.
- Ten cats fitted with GPS collars at Dryandra (five) and Tutanning (five) were recovered in June and July 2013 and the data retrieved. Five more cats were collared in Tutanning in April 2014, prior to baiting in May. Three more cats were collared in Dryandra in May 2014, prior to the baiting, carried out in late May.
- *Eradicat* baits were distributed in Dryandra and Tutanning in groups of 50 baits spaced on a 1 km grid, in line with aerial baiting protocols, and also along boundary firebreaks at 200 m intervals. Seven of the eight cats were still alive two weeks after the baiting, and the other had been killed by a cow.
- Sensor cameras have been deployed on the track system at Dryandra and Tutanning, and activated before and after *Eradicat* baiting events to measure changes in cat and fox activity.
- Four chuditch were collared in Dryandra, and nine red-tailed phascogales were collared in Tutanning prior to baiting at each site.
- Twelve cats were fitted with GPS collars in June 2013 at Dragon Rocks for six months while fox control was suspended in half of the reserve. The data from 10 of the collars has been retrieved. Three cats died before the end of the experimental period.
- Sensor cameras were deployed on two 3 x 6 grids with 2km spacing in Dragon Rock NR, one in the northern half and one in the south and run before and after the suspension of baiting in the north of the reserve. An array of cameras at 3 km spacing on tracks was also deployed before and after the suspension.

Management implications

This project has shown that cats are the most important predators of both woylies and Numbats in Dryandra. Cat control is essential and should be implemented in such a way as to minimise the impact on non-target species. *Eradicat* can be used safely in the presence of chuditch and red-tailed phascogales. Most cats in Dryandra,

Tutanning and Dragon Rocks spend significant time in adjacent farmland, reducing their exposure to baits laid within the reserves.

Future directions

- Cats will be fitted with GPS collars in Dryandra and Tutanning prior to an Eradicat baiting in March 2015, to determine the efficacy of baiting in early autumn.
- Monitoring of radio-collared numbats will continue in order to accumulate evidence on causes of death in this species over a longer period.
- Further non-target baiting trials with Eradicat will be implemented, aimed at other species, particularly the mardo.
- Trapping on Western Shield traplines will continue to monitor woylie numbers.
- Monitoring of known numbat populations will be continued by involving district staff and community members and handing over monitoring responsibility to districts. Regular monitoring surveys will be essential in Dragon Rocks, Dryandra, Boyagin, Tutanning and Cocanarup. Other areas will be included if possible