Progress Report SP 2016-068

South West Threatened Fauna Recovery Project: Southern Jarrah Forest

Animal Science

Project Core Team

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Project Team	granted
Program Leader	granted
Directorate	granted

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Context

The primary goal of the South West Threatened Fauna Recovery Project (SWTFRP) is to contribute to the recovery of key threatened mammal and bird species at four key sites in south-western Western Australia, through integrating feral cat baiting with existing introduced predator control programs, undertaking monitoring of threatened species and translocations to supplement and establish new, secure populations where necessary. The key sites selected were South Coast reserves, Upper Warren reserves, Dryandra Woodland and Kalbarri National Park.

This project is a component of the SWTFRP, focussing on the southern jarrah forest, which is an important area for the conservation of several mammal and bird species threatened by introduced predators. To date there has been no effective cat control within the southern jarrah forest, including the priority conservation areas within the Upper Warren region. *Eradicat*® presents an opportunity for developing an important tool within an effective cat control program that is essential to the long-term conservation of imperilled fauna threatened by introduced predators.

Aims

- To recover wild populations of western ringtail possums, woylies and numbats in the Upper Warren area, through developing effective integration of feral cat control with existing fox control in the southern jarrah forest.
- Identification of the efficacy of *Eradicat*® baiting according to current operational delivery methods (aerial and ground) and time of year.
- Quantification of the risk to potentially vulnerable non-target native mammals in the southern jarrah forest to operational use of *Eradicat*®.
- Improve live capture of feral cats in the southern jarrah forest by minimising non-target captures.
- Engaging effectively with neighbours about the control of introduced predators and the recovery of native species.

Progress

- A paper describing some of the results from the stage 1 study was submitted to *Wildlife Research* and is currently in review. This work provides recommendations for improvements within an integrated and holistic invasive animals management framework to deliver better biodiversity conservation outcomes.
- There were no significant differences in encounter rates or bait removals by cats or foxes immediately after autumn burns compared with unburnt reference sites. However, having the baits on forest tracks compared with 5-20 m off track can substantially improve cat and fox encounter rates and baiting opportunities.

Management implications

- Controlling feral cats in the southern jarrah forest is challenging. The effectiveness of *Eradicat*® baiting using existing protocols has been demonstrated and provides clear direction on how further improvements can be made.
- The *Eradicat*® baits can be effective at controlling foxes, and are a low risk to vulnerable species, such that they can complement other methods.
- Feral cat baiting is most effective when conducted within an integrated and holistic invasive animal management system.
- Improved understanding of the distribution, occupancy, species richness, and spatial and temporal activity patterns can directly inform management and conservation planning and operations. For instance, it helps

identify areas of high conservation value and hotspots of introduced species to be considered during planning for timber harvesting, burning, introduced predator control, and other disturbance activities.
- This study demonstrates the substantial benefits of having a regional-scale survey and monitoring program that is appropriately designed to identify fauna responses to management and conservation activities and spatio-temporal, environmental and population changes.

Future directions

- Complete bait uptake trial data analysis and manuscripts for publication, including bait longevity, non-target bait interactions, and spatial ecology of feral cats.