Concept Plan SP 2016-067

Improved fauna conservation in the wheatbelt

Animal Science

Project Core Team

Supervising Scientist	Keith Morris
Data Custodian	Keith Morris
Site Custodian	

Project status as of Aug. 9, 2017, 1:36 p.m.

New project, pending concept plan approval

Document endorsements and approvals as of Aug. 9, 2017, 1:36 p.m.

Project Team	required
Program Leader	required
Directorate	required

Improved fauna conservation in the wheatbelt

Science and Conservation Division Program

Animal Science

Parks and Wildlife Service

Service 2: Conserving Habitats, Species and Ecological Communities

Aims

Predations by introduced predators, the red fox and feral cat, are regarded as the most significant threatening processes for most of Australia's threatened mammal species. Fox control, through broadscale toxic baiting under the *Western Shield* program has contributed significantly to the conservation of many native mammal species in Western Australia. However it has now been demonstrated that where fox abundance has been reduced through baiting, activity of feral cats has increased, and many of the mammal declines observed since 2000 in Western Australia are thought to be due to increased predation by feral cats. In 2014 the *Eradicat*^{ó} cat bait was registered for operational use in the south-west of Western Australia, and an operational trial to integrate cat baiting with fox baiting is currently underway at four sites in the south-west of WA (SW Fauna Recovery Project at Kalbarri, Dryandra, Upper Warren and South Coast). Lake Magenta Nature Reserve is one of the largest wheatbelt reserves and still supports populations of threatened mammals species such as the chuditch (*Dasyurus geoffroii*), red-tailed phascogale (*Phascogale calura*) and heath mouse (*Pseudomys shortridgei*). The mesopredator research program undertaken at Lake Magenta 2006-2009 demonstrated that fox control was effective at reducing fox activity at Lake Magenta, compared to an unbaited control site (Dunn Rock nature reserve). It also showed that feral cat activity was correspondingly higher at Lake Magenta. Recent fauna surveys of Lake Magenta have detected fewer chuditch and heath mice than previously, and it is possible that predation by feral cats has replaced fox predation as a factor in these declines. This project proposes to assess the impact of introducing cat baiting to Lake Magenta nature reserve, and integrating this with the current fox baiting regime being implemented there.

Expected outcome

- A demonstration of reduced fox and feral cat activity at Lake Magenta Nature Reserve (compared to pre-cat baiting baseline) following an annual cat baiting program that is integrated into the current fox baiting program.
- A reduction in overall predation pressure on native species and an increase in abundance of threatened mammal species.
- Contribution to the SW Fauna Recovery Project in determining the appropriate fox and feral cat baiting regime(s) in the south-west of Western Australia.
- This project builds on the mesopredator research project undertaken at Lake Magenta 2006-2009 which had planned to implement feral cat baiting, but which didn't eventuate because the *Eradicat*^{ó} bait did not get registered in time.

Strategic context

- Department of Parks and Wildlife strategic goal (Wildlife): Conserve, protect and manage the State's native plants and animals, and achieve habitat, ecosystem and landscape-scale conservation and protection based on best practice science.
- Science and Conservation Strategic Plan 2014-2017: Recovery of key animal species, understand and manage threats from pest animals.
- With regards to the Department's "Framework for Fauna Conservation", this project will **manage threats** to **create secure populations**, in **conservation estate**.

Expected collaborations

- Wheatbelt Region
- Wheatbelt NRM

Proposed period of the project

Oct. 3, 2016 – Sept. 30, 2019

Staff time allocation

Role	Year 1	Year 2	Year 3
Scientist	0.10	0.10	0.10
Technical	0.05	0.05	0.05
Volunteer	0.10	0.10	0.10
Collaborator	0.10	0.10	0.10

Indicative operating budget

Source	Year 1	Year 2	Year 3
Consolidated Funds (DPaW)	11000	11200	11500
External Funding			