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Improved fauna recovery in the Pilbara – benefitting the endangered northern quoll through broad-scale feral cat baiting

Animal Science

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Project Team	granted
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Improved fauna recovery in the Pilbara – benefitting the endangered northern quoll through broad-scale feral cat baiting

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Context

The northern quoll (*Dasyurus hallucatus*) is one of a suite of terrestrial mammal species that has declined in the Pilbara over the last 100 years. Predation by feral cats is a key threat to this endangered species. The development of the *Eradicat*® feral cat bait has provided the opportunity to control this invasive predator at a landscape scale in the south-west of Western Australia but questions remain as to the potential risks of broad-scale feral cat baiting programs on northern quolls and other native carnivores in the Pilbara. A trial baiting program undertaken on the Yarraloola pastoral lease in 2015 demonstrated that the *Eradicat*® bait presents no detectable risk to northern quolls. Based on this evidence, annual winter baiting of feral cats with *Eradicat*® over 145,000 hectares of Yarraloola will occur from 2016 to 2019. Monitoring programs will measure its success in reducing cat numbers and the response by northern quolls.

Aims

- Conduct a broad-scale aerial baiting program using *Eradicat*® to target feral cats on Yarraloola.
- Assess the effectiveness of broad-scale aerial baiting program using *Eradicat*® to target feral cats on Yarraloola.
- Assess the potential benefits of broad-scale cat baiting on northern quoll populations by comparing their abundance and demographics over time within the baited Yarraloola site with the neighbouring unbaited reference site on Red Hill pastoral lease.

Progress

- Another year of camera monitoring was undertaken on Yarraloola (baited) and Red Hill (reference site) before and after aerial baiting using *Eradicat*® to monitor changes in feral cat occupancy.
- Detection rate of feral cats on camera traps declined by 34 percent following baiting and 33 percent of radio-collared feral cats died. Two collared feral cats that survived baiting in 2018 when conditions were good, died following baiting in 2019 when conditions were much drier.
- Monitoring of northern quoll populations at both Yarraloola and Red Hill showed that capture rates of quolls continued to be higher in the feral cat-baited cell, but were lower than 2018.
- Increased detection of quolls on camera trap arrays used for feral cat monitoring indicate an ongoing expansion of their habitat occupancy in response to feral cat control. However, predation rates by feral cats were high with 20% of feral cat scats containing quoll remains. A collapse in rodent populations due to the dry conditions was the likely cause of this dietary shift by feral cats.

Management implications

- There is no evidence that *Eradicat*® baiting has any harmful impact to northern quolls. This study indicates that quolls benefit both directly and indirectly from landscape level control of feral cats and that future operational use of the *Eradicat*® feral cat bait in the Pilbara to help protect northern quolls and other native fauna from feral cat predation is possible.

Future directions

- Finalise the project and publish the outcomes.
- Provide recommendations regarding the registration of *Eradicat*® feral cat baits for operational use in areas where northern quolls are present.