

The pilot release of eastern quolls to the wild on the mainland

June 2018 update

Project 3.2.2.1

There have been some interesting findings since 20 pioneer eastern quolls were released into Booderee National Park in March 2018. The aim of this first release is to learn as much as possible to be able to inform future translocations, and ensure a successful reintroduction of eastern quolls to the wild on the mainland.

The project team has been busy conducting intensive monitoring to learn about quoll survival, movement and habitat preferences, and responding to issues as they arise.

Dispersal and habitat use

Quolls have not dispersed far from their initial release sites. All quolls have remained within the park and have been observed using a variety of habitats in which to forage and den. This low level of dispersal suggests that Booderee provides suitable habitat (quolls did not need to disperse to find suitable habitat).

Diet

It was expected that the captive bred animals may need time to adapt to foraging in the wild.

To support the quolls through this transition, supplementary feeding was provided initially and was gradually reduced to encourage wild foraging. Camera trap images have shown that these were used by some animals.

Monitoring did show initial weight losses which was expected, but there have subsequently been weight gains. This indicates that the quolls are able to locate enough food resources.

Quolls are feeding on a range of invertebrates and small animals. Scats are being collected for detailed analysis.



Eastern quolls are trapped to monitor their health. Photo: Natasha Robinson

KEY MESSAGES

A pilot release of 20 eastern quolls occurred at Booderee National Park in March 2018.

The objective is to learn if conditions are suitable for the release of more quolls, or if more management actions need to occur first.

The captive bred quolls have been able to forage for food adequately.

Predation and road fatalities have been the biggest problems facing the quolls.



Parks Australia staff preparing a feeding station.
Photo: Natasha Robinson



A quoll wearing a radio tracking collar.
Photo: Judy Dunlop



A quoll being re-released after a health check.
Photo: Natasha Robinson



Radio tracking. Photo: Natasha Robinson

Mortalities

In the first three months, there have been 14 mortalities, six females and eight males.

Across the world, during the first attempt to reintroduce an animal to an area losses are common, often even up to 100%. This is the reason why only a small number of animals are used in a pilot release. These animals are then intensively monitored to track their fates, to see if conditions are safe to release more animals, or if there are remaining challenges to overcome before more animals can be reintroduced.

What we learn from this pilot program to reintroduce quolls will massively improve the chance of success in future reintroductions. Each loss has provided researchers with important information on where attention is required for future reintroductions of additional quolls.

Our intensive monitoring has been able to quickly detect mortalities and this has been extremely valuable in being able to determine the cause of death in the majority of cases, and inform the team of the main risks to quolls in the park.

This will help park managers to undertake actions to minimise the risks to future quolls reintroduced to the park. It will also help to determine the optimum number of quolls that are required for a future reintroduction.

The main confirmed cause of death has been predation. Of these, a fox was likely responsible for three deaths and a dog for one. Two quolls were attacked by native diamond pythons. One was eaten, while the other escaped but later died of a bacterial infection.

Road trauma was the next most significant cause of mortalities, responsible for four deaths.

In four cases the likely cause of death has not been determined and is still under investigation.



Wreck Bay Aboriginal Community members learning about tracking quolls
Photo: Rob Brewster, Rewilding Australia



Parks Australia Indigenous Rangers bagging a quoll during monitoring. Photo: Natasha Robinson



Project team members. Photo: Natasha Robinson

Cars, foxes and quolls - addressing the threats

Road mortality has been identified as a key threat to quolls. The team has responded by relocating quolls entering high-risk collision areas, and are planning to installing quoll road signs. They are also engaging with park users and nearby residents to inform people of the need to slow down between dusk and dawn. The team is also investigating other strategies to reduce the likelihood of quolls moving onto roads.

Fox predation has also been a cause of mortality. It is a potential threat anywhere on mainland Australia, and Parks Australia has been undertaking intensive fox control within the park for 15 years to manage this threat to native wildlife. Despite the active management of foxes, there is always the potential that a new fox could move into an area and predate on native wildlife before they are detected or come into contact with a poison bait. This was an anticipated threat to quolls identified prior to the trial. As such, in preparation for the release, Rewilding Australia began off-park fox baiting on private land to provide an extra buffer to fox incursions to the park.

Since the quoll release, the team has learnt a lot about fox incursion.

Additional cameras were deployed on tracks to monitor fox activity, and a fox was successfully detected on camera triggering a Canid Pest Ejector. Since then, no prints or camera images of foxes have been identified in any areas where quolls have been released, and no further deaths have occurred. This demonstrates that park staff can effectively respond to fox incursions.

To further reduce the likelihood of fox incursion, land managed by NSW National Parks, immediately outside the park will increase baiting of foxes. Data will be collected to determine if this is effective in reducing future incursions into the park. The team has also learnt about smaller scale fox-quoll interactions. Both foxes and quolls are attracted to carrion in the environment, and both species use tracks to move through the landscape, increasing the likelihood of interaction. Future releases will improve monitoring of these tracks to identify fox incursion as quickly as possible.

We have already learnt so much from having a rigorous monitoring program in place and aim to use this knowledge to inform future quoll reintroductions.



Radio tracking quolls. Photo: Natasha Robinson



An eastern quoll from Devils@Cradle. Photo: Rewilding Australia



A camera trap used for monitoring. Photo: Natasha Robinson

Who has been involved?

The project is a collaboration between Parks Australia, The Australian National University, Rewilding Australia, Taronga Conservation Society and WWF Australia.

It has also received support from the Wreck Bay Aboriginal Community Council, Shoalhaven Landcare, and the Tasmanian Quoll Conservation Program sanctuaries Devils@Cradle and Trowunna Wildlife Sanctuary.



The newly designed quoll road signs have used a photographic image to raise awareness of the risk of collision during dusk to dawn.

Members of the project team (left to right): Dr Natasha Robinson - ANU, Dion Maple - Parks Australia, Chris MacGregor - ANU, Nick Dexter - Parks Australia, Rob Brewster - Rewilding Australia. Photo: ANU



More Information

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