Spotted-tailed quoll

Dasyurus maculatus
Vulnerable

Target: manage critical threats and monitor the population at priority management sites

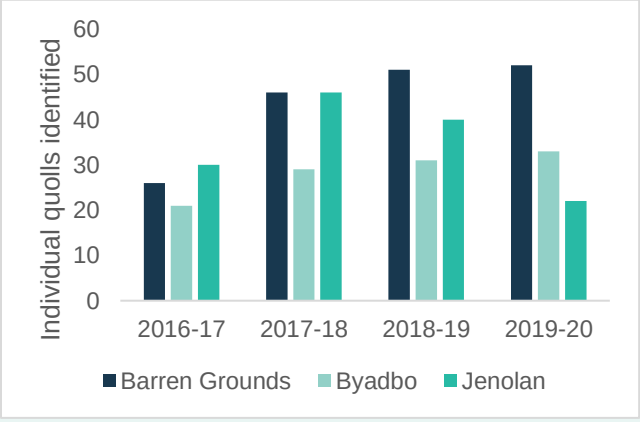
Over the past five years, *Saving our Species* (SoS) has established consistent landscape-scale monitoring and management of populations of spotted-tailed quolls (*Dasyurus maculatus*) in four key regions of New South Wales. The project has undertaken research on the effect of 1080 baiting, developed community awareness-raising resources to mitigate unlawful killing of quolls around chicken coops, undertaken intensive and extensive landscape-scale fox control at priority management sites, and established landscape-scale monitoring that shows there are stable and increasing populations of spotted-tailed quolls at these sites. The monitoring program also provides strong baseline data against which the impact of the 2019–20 wildfires can be assessed at both the site and statewide scale.

As a cryptic species requiring a truly landscape-scale approach to management and monitoring, the project required a high level of collaboration and cooperation across the State. Priority management sites were selected in places with existing landscape-scale predator control programs and knowledge of extant quoll populations, including Kosciuszko National Park, Illawarra Highlands, southern Blue Mountains and a suite of national parks in the eastern parts of the Northern Tablelands. Development and implementation of a consistent camera-trap monitoring program across New South Wales provides comparable population-level data for the species across much of its range in the State. Notable outcomes to date include:

- evidence of **stable and increasing populations** at three of the four priority management sites
- coordinated, intensive landscape-scale fox control over **more than 80,000 hectares** of habitat, including on national park estate and private land.

Trajectory: stable

Camera-trap monitoring identifies the number of individual quolls recorded at each priority management site each year between 1 September to 31 August. Data is only complete until 2020 and not available for the Northern Tableland site. Stable to increasing trends are evident for the Byadbo and Barren Grounds sites. 2019–20 data at Jenolan shows what is anticipated to be a short-term effect of the 2019–20 wildfires that affected the entire site.



Supported by the NSW Environmental Trust

Partners

The spotted-tailed quoll project is being delivered by the SoS program in partnership with several stakeholders.

All priority management sites are on lands managed by the NSW National Parks and Wildlife Service.

The Northern Tableland site is managed by the Department of Primary Industries and University of New England, and fox control is done in conjunction with Northern Tablelands Local Land Services.

South East Local Land Services delivers fox control on private properties surrounding Barren Grounds Nature Reserve and Budderoo National Park through the 'Quollidor' program. Additional research contributions have been provided by the University of Wollongong.

In 2019–20 an additional investigation site was established with the Foundation for National Parks and Wildlife in the Central Tablelands, around Razorback and Gillindich nature reserves. This work was funded by the NSW Environmental Trust.

What did we find?

Extensive populations of spotted-tailed quolls are present in all four priority management sites across New South Wales. Prior to the 2019–20 wildfires, monitoring showed that three of these four sites contained populations that were stable to increasing, with data yet to be collated from the large fourth site in the Northern Tablelands.

The Jenolan Caves site was completely burnt in the fires and this population has decreased in the short term. Monitoring will continue at this site to build on our existing understanding of the species' response to fire, which is in part based on previous studies on wildfires from 2003 in Kosciuszko National Park. After that fire, a short-term decline was followed by a return to pre-fire population levels within 18 months.

Research into the potential effects of aerial 1080 baiting during spring on females and their young was completed as part of the SoS project in the Northern Tablelands, Jenolan and Byadbo priority management sites. Completion and publication of this research confirmed no observable effect of 1080 baiting on female quolls and their young in the breeding season.

Community engagement has been an important part of this project, including the production and distribution of the *Protect your chooks and save our quolls* brochure that includes designs for poultry pens to keep predators out.

Spotted-tailed quoll at a camera-trap monitoring site, Barren Grounds Nature Reserve. Photo: James Dawson/DPIE

Spots to identify quolls?

Remote monitoring cameras are used extensively across all our sites for the spotted-tailed quoll.

Individual spotted-tailed quolls are identifiable by their unique spot patterns.

Being able to identify individuals is helpful because this enables us to more accurately monitor trends in population numbers over time.

An individual, spotted-tailed quoll profile, based on the unique spot patterns. Photos: James Dawson/DPIE

Saving our Species is a NSW Government flagship program delivered by the Environment, Energy and Science Group in the Department of Planning, Industry and Environment. To find out more about threatened species in New South Wales and the *Saving our Species* program, visit the Saving our Species Program webpage.

Department of Planning, Industry and Environment, www.environment.nsw.gov.au. Cover photo: James Evans/DPIE
ISBN 978-1-922715-62-3; EES 2021/0454; October 2021