

Western Shield

Fauna Monitoring Snapshot 2022

Western Shield monitoring is made possible through the commitment and effort of staff from across multiple divisions of DBCA, particularly districts and regions who collect monitoring data and provide input to management strategies.



In 2022, *Western Shield* delivered fox and/or feral cat management to over 3.8 million hectares of DBCA-managed and adjoining lands in Western Australia. A total of 29 sites were monitored for native species using cage traps (*Western Shield* and district programs) and a further 22 sites for introduced predators. This document provides a summary of the 2022 monitoring results.

Overall, camera and cage monitoring has indicated that *Western Shield* baiting has helped maintain viable populations of threatened native fauna within managed areas. Activity of threatened fauna in areas not managed through *Western Shield* are either extremely low or below detectable levels.

Black-flanked rock-wallaby: Population trends of black-flanked rock-wallaby at reported sites suggest that several populations are increasing or steady, but activity on cameras continues to decline at Cape Le Grand.

Quenda: Quenda captures at *Western Shield* monitoring sites continue to be very low, however occupancy modelling indicates that quenda occupancy increased in 2021 – 2022. Camera monitoring has indicated that quenda do persist at many other additional *Western Shield* sites, including sites where foxes and feral cats are not managed.

Quokka: The single quokka population currently monitored continues to show a stable or slightly increasing trend. Camera monitoring has recorded quokkas at several other locations. Quantitative monitoring of other sites will be considered.

Woylie: Since 2015 the relative abundance of woylies has increased at five monitored sites. Higher intensity management of introduced predators at these sites and the engagement of neighbours to manage foxes and feral cats on adjacent farms is likely a contributing factor. However, the continued absence of woylies at sites they were previously recorded at is of concern. Increasing predator management at some of these sites is likely to have positive outcomes for this critically endangered species.

Chuditch: From 1996 to 2018 the number of sites where chuditch were captured increased, however from 2019 the number of sites recording the species using standard capture methods has declined substantially. Camera monitoring and chuditch specific monitoring has suggested that the species persists in some of these areas, just in low densities.

Monitoring methods designed specifically to target chuditch were expanded to 11 sites in 2022. Of these eight captured chuditch (Figure 1), improving our understanding of chuditch populations at these locations.

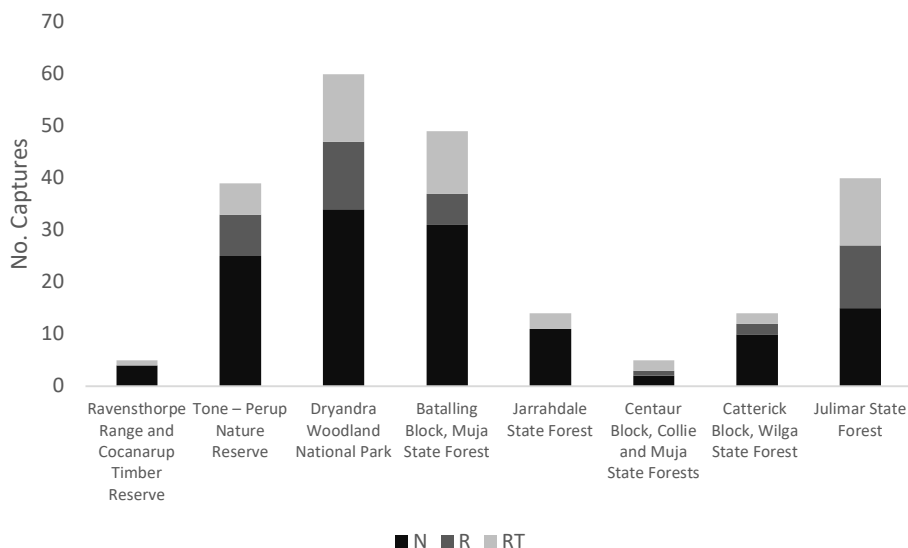


Figure 1: Number of chuditch captured at each location. New (N) = new animal, Recapture (R) = captured in a previous-session/year and Retrap (RT) retrapped same-session/year. Jarrahdale and Ravensthorpe had not been recently trapped and therefore recaptures were highly unlikely.

Koomal: Koomal (also known as common brush-tailed possum) continues to be the most frequently captured species in cage trapping and the species has maintained a similar occupancy across sites to that recorded in the early 2000s but there has been a slight decline in recent years. This species is used as an indicator of the efficacy of fox baiting (Figure 2) as the high capture rates across multiple sites enables effective comparisons between monitoring sites (spatial) and overtime at the same site (temporal).

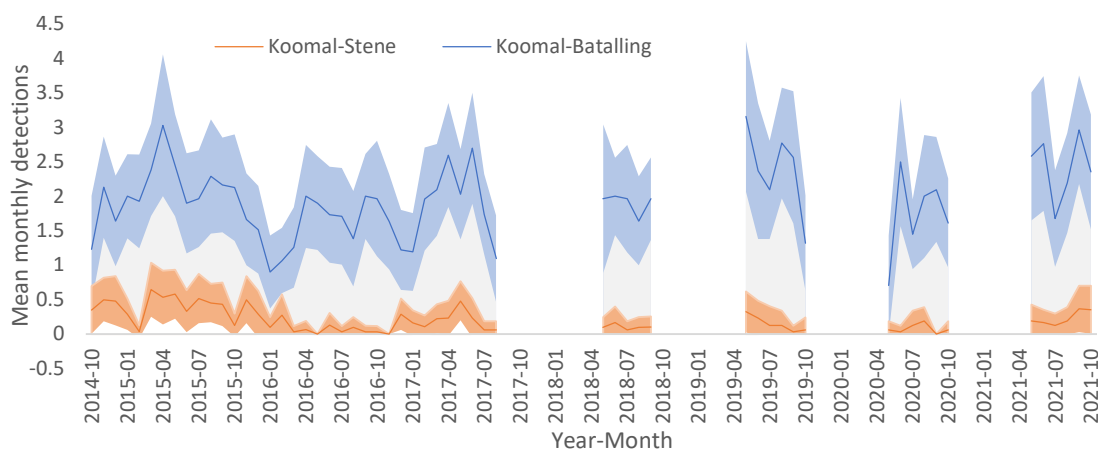


Figure 2: Mean monthly naïve detections of Koomal on camera at Batalling (4 x aerial Probait events /annum) and Stene (no current fox or feral cat management).

Predators: Annual predator monitoring using remote cameras was conducted at 22 sites in 2022 with several affiliated organisations providing access to their data.

- Data from predator monitoring indicates that fox activity is suppressed in baited areas compared to non-baited reference sites.
- Information gathered on feral cats using camera monitoring is limited. Research projects launched in 2022 will provide knowledge on how feral cat monitoring can be improved.

The full monitoring report is available on request from the DBCA library, library@dbca.wa.gov.au. For further information on Western Shield visit: <https://www.dbca.wa.gov.au/parks-and-wildlife-service/wildlife-and-ecosystems/western-shield>

