

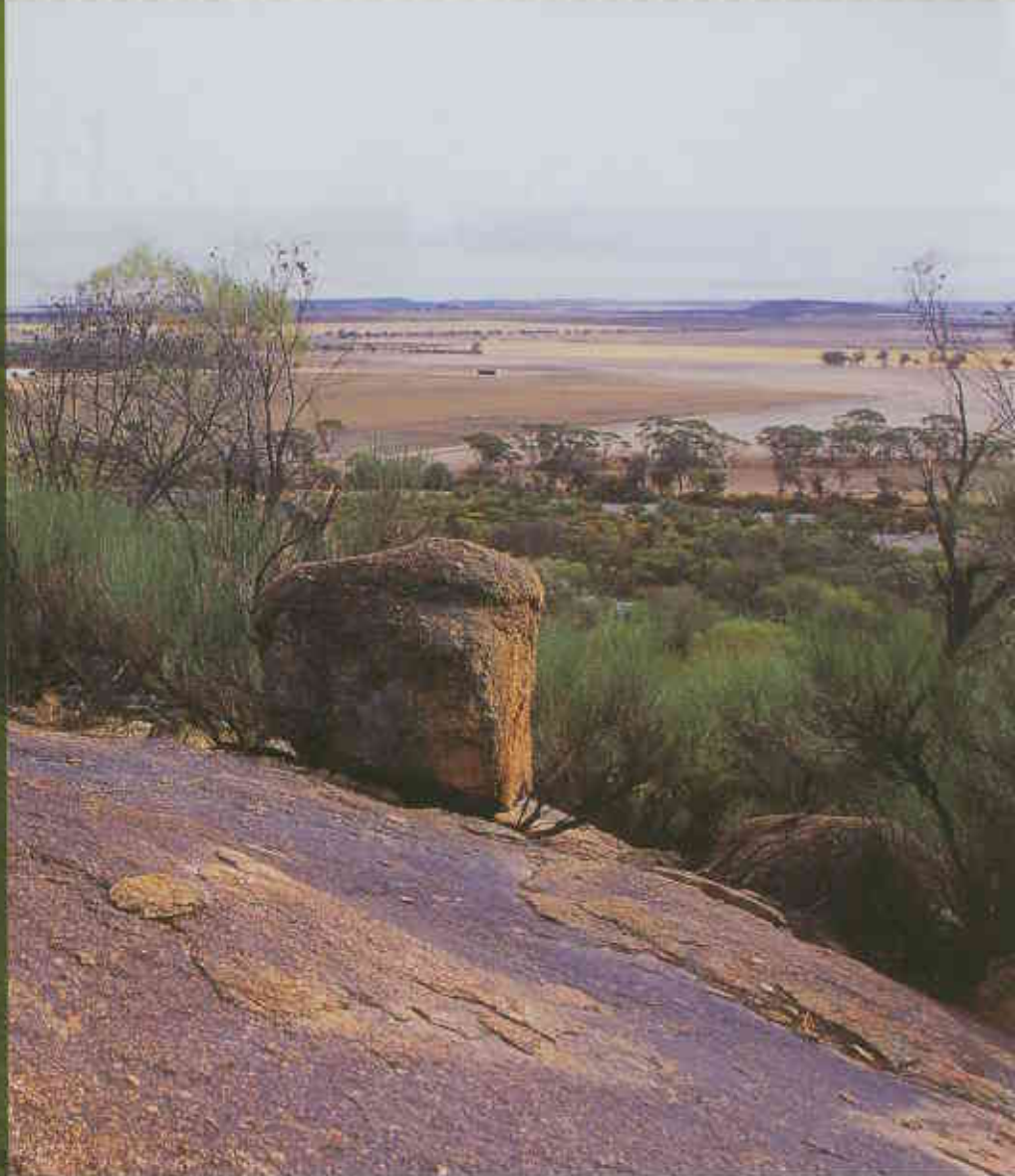
rediscovered at Kokerbin Nature Reserve

Rock-wallabies



Black-flanked rock-wallabies had not been seen at Kokerbin Nature Reserve for more than 30 years, but a spotlighting expedition in 2003 cast some light on the extraordinary ability of these special native mammals to recolonise areas against all the odds.

by Christine Freegard and Peter Orell



Until 1967–1970, the Kokerbin Nature Reserve, in the Shire of Bruce Rock in the Wheatbelt region, was inhabited by a population of black-flanked rock-wallabies. It has been used as a control research site since 1979 and was left unbaited during a study by CALM scientist Jack Kinneer on the impact of fox predation on rock-wallaby populations in the area. This was a ground-breaking study (see ‘Outfoxing the fox’, *LANDSCOPE*, Summer 1988/89) as, prior to Kinneer’s research, most scientists did not believe that fox predation could lead to native species becoming extinct. The research eventually led to the original proposal for *Operation Foxglove*, the precursor to *Western Shield* (Western Australia’s feral animal baiting program). However, rock-wallabies disappeared from Kokerbin after being eaten by foxes.

In 2002, Howard Robinson from CALM’s Narrogin district office found fresh rock-wallaby seats among

boulders at the reserve, so the area was investigated further. Spotlighting in June 2003 confirmed the presence of rock-wallabies, with the sighting of a single individual. However, it took until March 2004 to actually trap rock-wallabies at the reserve. Three animals were caught, one male and two females, both of which were carrying pouch young. Ear tissue samples were taken from these animals and sent to Mark Eldridge at the Macquarie University in New South Wales for DNA analysis to determine the origin of the population.

Had these animals travelled five kilometres across open farmland from the nearest population at Nangeen Hill Nature Reserve? Or had they always remained present at Kokerbin Nature Reserve but eluded detection for more than 30 years? Both alternatives seemed unlikely, but surprising DNA results showed that the DNA of Kokerbin rock-wallabies closely matched that of rock-wallabies from

Facing page
Black-flanked rock-wallaby.
Photo – Jiri Lochman

Above View of Nangeen Nature Reserve from Kokerbin Nature Reserve.
Photo – Christine Freegard

Gundaring Nature Reserve (also known as Tutakin). This indicated that they had most likely travelled about eight kilometres across farmland to recolonise the vacant habitat at Kokerbin. These far-wandering animals probably used roadside vegetation for shelter during their journey across land, largely cleared for crop production and sheep grazing. The DNA also showed that the animals were closely related, suggesting that the population may have established from a single female carrying a male pouch young or a small group of related individuals.

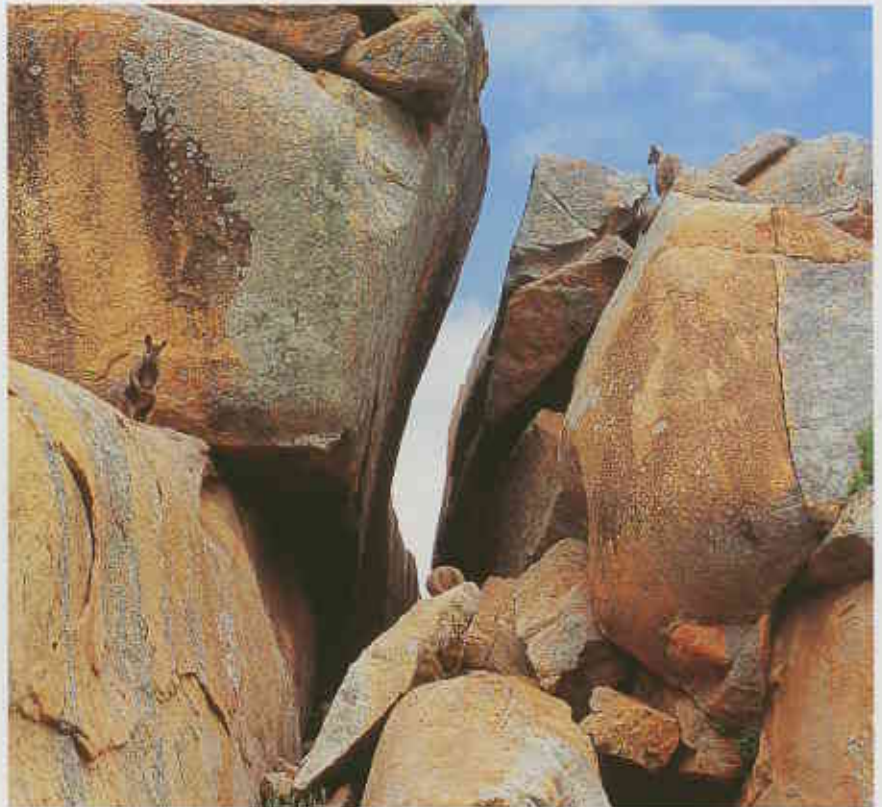
A similar event was recorded in 1995, when a population of rock-



Above Black-flanked rock-wallaby.

Above right Black-flanked rock-wallabies on Querekin Rock.

Right Black-flanked rock-wallaby joey.
Photos – Christine Freegard



wallabies was discovered at a rocky outcrop on private property. DNA analysis of samples taken from the six known individuals in the population showed that the likely source of the population was the eastern end of Mount Caroline Nature Reserve, about eight kilometres away. Fox baiting at the outcrop since the population's discovery has resulted in an increase in the population size and the population has now persisted for almost 10 years.

These recorded dispersal events are encouraging for the long-term survival of rock-wallabies on outcrops isolated by farmland, because it indicates that occasional exchange of individuals between outcrops is possible. It also means that release sites chosen for translocations of rock-wallabies will hopefully form nucleus colonies from which animals will disperse to colonise

other areas. This is already happening in the Avon Valley and in Cape Le Grand National Park. Founder animals from the release of rock-wallabies at Cape Le Grand National Park, for example, have been found more than eight kilometres from the release site in less than two years.

Kokerbin Nature Reserve, characterised by a giant boulder often referred to as 'the rock', provides excellent habitat for rock-wallabies. The complex rocky outcrop provides both shelter and vantage points from which curious rock-wallabies can observe the world.

Managing the population at Kokerbin is going to be challenging, given the close proximity of a very popular camping area to the rock. Kokerbin Nature Reserve is currently not baited to control foxes. Options for managing the population are being considered. The 1st Pingelly Scout Group is helping by removing rubbish and broken glass from the reserve.

While the future of these black-flanked rock-wallabies might contain challenges, their ability to recolonise areas and their adaptability has scientists viewing the success of this population with optimism.



Christine Freegard is a project officer involved in fauna conservation planning based at CALM's Wildlife Branch in Kensington and can be contacted on (08) 9334 6579 or by email (christinef@calm.wa.gov.au).

Peter Drell is the Western Shield zoologist also based at CALM's Wildlife Branch in Kensington. He can be contacted on (08) 9334 0454 or by email (petero@calm.wa.gov.au).

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Executive editor Caris Bailey.
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Scientific/technical advice Kevin Kenneally, Paul Jones, Chris Simpson, Keith Morris.
Design and production Tiffany Aberin, Maria Duthie, Natalie Jolakoski, Gooitzen van der Meer.
Illustration Gooitzen van der Meer.
Cartography Promaco Geodraft.
Marketing Estelle de San Miguel
Phone (08) 9334 0296 *Fax* (08) 9334 0432.
Subscription enquiries
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