



## Spotted surprise: the chuditch comeback

The recent discovery of a chuditch near Perth has renewed hopes that this threatened animal is making a comeback. New sightings reveal the mammal may not only be returning to the Perth area but also to other parts of the State.

by Brent Johnson  
and Samille Mitchell



Department of Environment and Conservation (DEC) wildlife officer Rick Dawson often receives calls from people who think they've seen threatened wildlife. So when he received a call from a resident of Wandi, Kwinana, to report a chuditch (*Dasyurus geoffroyi*) sighting, Rick advised that it was probably a bandicoot. After all, there had been no officially recorded captures of live chuditch in the Perth metropolitan area for years. Clearing for urban expansion and pressure from introduced predators had long wiped out any significant populations of this species on the Swan Coastal Plain.

But the resident was persistent, saying the small animal looked a bit like a cat and had white spots. Now this was more promising. Rick asked the resident to video the animal and send in the footage. By encouraging the animal with mince each night (which replaced the cat food that had initially lured the animal to the backyard), the resident was able to capture video footage. And sure enough, the mystery animal was a chuditch, though it bore a terrible leg wound.

Rick provided a trap and the resident soon caught the wounded animal. Rick was there first thing in the morning to collect it and took it straight to the vets at Perth Zoo. Unfortunately the

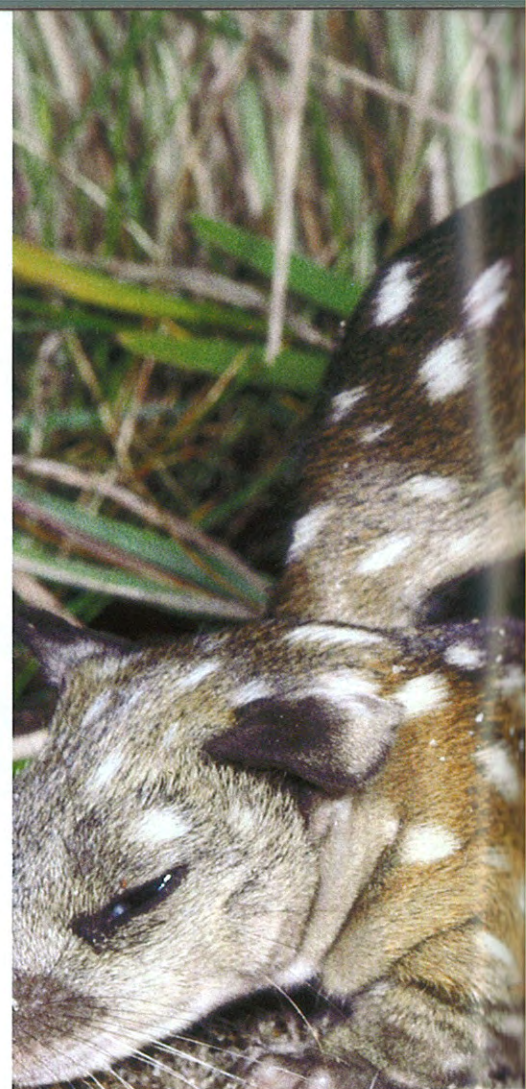
chuditch's wound was so badly infected that the animal had to be euthanased. The vets suspected that a rabbit trap had caused the injury.

While disappointing to lose the animal, this find and several others have sparked new hope that chuditch populations may be returning to former haunts in Western Australian bushland.

### What's a chuditch?

The chuditch is a nocturnal native carnivorous marsupial with soft, white-spotted brown fur, large rounded ears, a pointed muzzle and large dark eyes. Its tail is about three-quarters of the head and body length and is black towards the end. Females are smaller than males, weighing 900 grams on average compared to 1,300 grams for males. Chuditch live for about two to three years in the wild.

Chuditch once occurred over nearly 70 per cent of Australia but land clearing, changes to fire regimes, predation, persecution (due to their liking for chooks) and possibly disease had reduced its range to the forests of south-west Australia with low numbers in the woodland and mallee areas of the Wheatbelt and south coast. This equates to about five per cent of the former range—a very significant reduction.



They are mostly solitary animals, which live in hollow logs, bird nests, rock crevices and burrows. Studies have revealed chuditch will use about 180 refuge sites within their home range during a year.

Chuditch eat a big range of invertebrates, small mammals, birds, lizards and occasionally fruits of forest plants. They also scavenge carrion such as road kill and seek food scraps from campsites and rubbish bins. After a very short pregnancy of about 18 days, females give birth to between two and six young, which remain in the pouch for about 60 days and then live in the den. They are fully weaned by four to five months of age when they then leave the den to seek out unoccupied territory. Juvenile mortality is thought to be very high at this early stage as they are susceptible to factors such as predation and starvation.



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Main Chuditch.  
Photo - Jiri Lochman

Left Hollow logs provide chuditch habitat.  
Photo - Len Stewart/Lochman  
Transparencies



**Above** Chuditch young.  
Photo – Jiri Lochman

### Return of the chuditch

In some areas, chuditch are one of the big winners from DEC's *Western Shield* project. This ambitious and wide-ranging project has involved ongoing fox baiting in national parks and reserves across the State, as well as the translocation of native animals back to their former range in some places. Chuditch translocations have been particularly successful with more than 300 captive-bred individuals released into selected parts of their former distribution (see 'Those spotted things', *LANDSCOPE*, Spring 1999).

The example of the Wandii chuditch is one of several exciting records of this animal returning to unpredicted locations. In recent times, chuditch have been recorded at Herne Hill, Midland, Ellenbrook, Gnaragarra and near Perth Airport, suggesting that they may once again be returning to the coastal plain. Sadly, most of these urban records involve chuditch killed by motor vehicles, yet they are still good records of chuditch presence.

Recently on Mount Gibson station, some 400 kilometres north-

east of Perth, a DEC employee was undertaking an early morning feral cat survey when an animal raced across the track. Dismounting from his quad bike, technical officer Neil Hamilton followed the animal to a nearby hollow log and was able to confirm the presence of a chuditch. This sighting represented a significant expansion from the core population in the south-west corner of the State.

In recent years, researchers have also recorded a number of chuditch sightings and captures on the eastern edge of the Wheatbelt, in a line from Mukinbudin to Ravensthorpe. The Ravensthorpe population appears quite sizable. Several captures of individuals from the northern Ravensthorpe Range and Fitzgerald River National Park indicate that they may exist throughout the south-eastern Wheatbelt zone. Further east, large tracts of bushland including the Jaurdi and Jilbadji conservation areas and several other reserves in the Goldfields may yield chuditch records if they are surveyed in the future.

The western woodlands to the east of the vermin-proof fence may also

contain good numbers of chuditch. Recently, University of Western Australia student Kelly Rayner completed an ecological study on chuditch found within an active nickel mining lease at Forrestania approximately 450 kilometres east of Perth. With support from DEC and Western Areas Nickel, Kelly has tracked a number of radio-collared chuditch and investigated their movement and habitat use within the mining lease. They appear quite able to co-exist with the mining infrastructure and some individuals have been found living under accommodation units and within drill core sample storage areas. The chuditch may well be attracted by the presence of prey items like house mice and abundant invertebrates also drawn to the mine camp.

The most recent easternmost record was a chuditch found dead on the road near Salmon Gums north of



**Above** Measuring a chuditch in Kalbarri National Park.

*Photo - Brent Johnson/DEC*

**Left** Chuditch in a cage at Perth Zoo.

*Photo - Jiri Lochman*



Esperance in 2008. This also confirms their presence in the south-east of Western Australia although an intensive search of the nearby unbaited Dundas Nature Reserve east of Norseman in 2009 failed to record any chuditch.

To the north, chuditch were translocated into Kalbarri National Park in 2000 and monitoring since has revealed that they have migrated into the rugged gorge country along the Murchison River. (See 'High hopes for Kalbarri wildlife', *LANDSCOPE*, Spring 2006). Captures and sightings from the outskirts of the Kalbarri township have also confirmed the movement of animals to the west. This population expansion was confirmed in June 2009 when a DEC team captured chuditch in traps set along the river

toward the eastern edge of the gorge country, away from the original release sites near Z Bend and The Loop. This translocated population now appears to be well established throughout this rocky habitat despite enduring serious drought conditions.

Regular monitoring of the southwest forests during the past decade has shown the populations there to be relatively stable. There are some 'hotspots' that have clearly benefited from fox baiting while other areas that would appear suitable have not shown such a positive response. Interestingly, Dryandra Woodland and Boyagin Nature Reserve have only recently recorded chuditch captures after many years of fauna monitoring. Both these conservation areas have been long-

term sanctuaries for many other species and it is surprising that chuditch have not been detected earlier.

Genetic comparison of natural and translocated chuditch populations has also recently been undertaken by PhD student Maria Cardoso. Maria's results suggest that this species is doing well with high levels of genetic variation and healthy population sizes being maintained in translocated populations.

Chuditch are mobile, adaptable and resilient creatures. Their former Australia-wide range indicates the diverse habitats they once occupied. Human perception of what is good country for chuditch may be derived from recent history and we now realise that we should never underestimate their capabilities. For example, one tagged individual was found to have moved 180 kilometres in 10 weeks. Chuditch from the Forrestania study have been recorded as travelling up to 10 kilometres in a single night on a regular basis.

**Right** Chuditch have successfully established from translocated populations in the Murchison River gorges in Kalbarri National Park.

Photo - Samille Mitchell/DEC

## The future

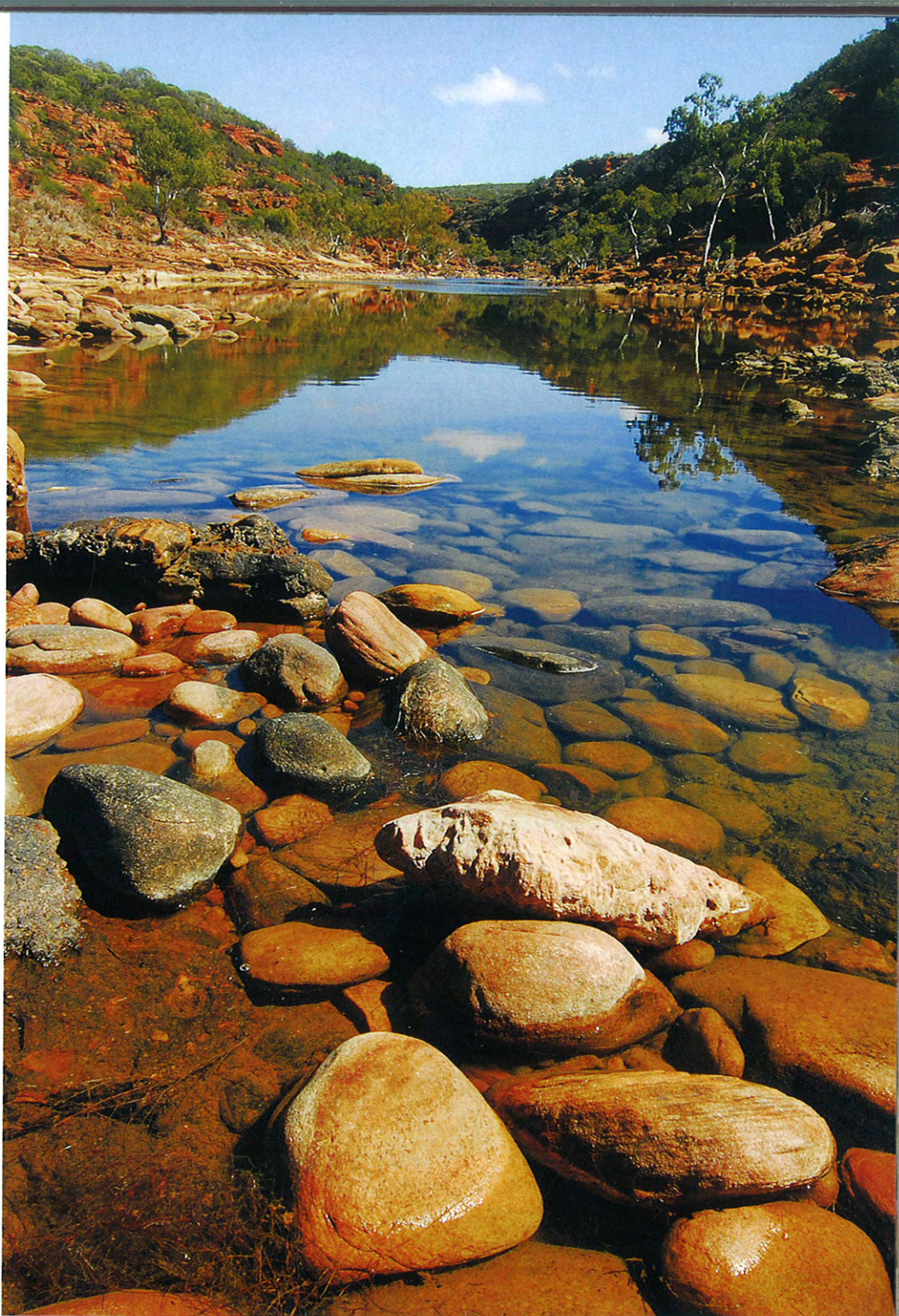
Some of the chuditch's population growth and range expansion may be a result of movement from translocation sites while others may be using corridors of bushland to move from established chuditch localities to colonise new areas. From the examples here we can see just how easily this migration can be achieved. Existing remote populations may well have increased as a result of predator control and juvenile animals may now be dispersing into nearby habitat. For example, the successful translocation site at Lake Magenta may provide dispersing individuals to surrounding reserves. The Forrestania, Ravensthorpe and Fitzgerald River National Park populations may also be linked to Lake Magenta via road reserves and other bushland corridors. The prime requirements are a good food source and adequate shelter opportunities to protect themselves and their young from the elements and predation. Dispersing chuditch may find temporary 'lodgings' as they move through the landscape until a suitable territory is found.

The chuditch is ranked as 'vulnerable' in both State and federal legislation and, while many of the indicators mentioned are very positive, the criteria for de-listing the species from conservation ranking have been closely examined and are yet to be met. A very thorough review was undertaken in 2006 and, from this, it was recommended that the current listing was appropriate for the time being.

The very successful captive chuditch breeding program at the Perth Zoo closed down in 2000. However, proposals to reintroduce chuditch to rangeland areas such as Lorna Glen Conservation Reserve and Dirk Hartog Island would rely on this program starting again. In the meantime, future population increases must be through natural means which, in today's altered and fragmented environment, may be a

slow process. The possible population expansion will need to be supported by ongoing introduced predator control and good habitat management policies. More research into improving the effectiveness of fox baiting and the development of cat control techniques are essential requirements to assist this recovery.

From a once very uncertain future, this species is now undergoing a steady revival and is offering researchers many revelations about just how mobile and adaptable chuditch really are. More surprises are expected. Who knows, one day you may spot a chuditch in your own backyard.



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