

WIRRUWANA NEWS

UPDATES FROM DIRK HARTOG ISLAND NATIONAL PARK

SPRING 2023

Another milestone reached for the Dirk Hartog Island National Park *Return to 1616* Ecological Restoration Project with the return of brush-tailed mulgara, the eighth species to join the island community.



Above Brush-tailed mulgara. Photo – Mark Cowan

June this year saw yet another milestone achieved by the Department of Biodiversity, Conservation and Attractions' (DBCA) *Return to 1616* project, with the eighth species to be returned to Dirk Hartog Island National Park – the brush-tailed mulgara (*Dasyercus blythi*).

Mulgara are the second carnivore (albeit a pint-sized one), to join the island community, their closest living relatives being the chuditch (or western quoll) and the Tasmanian devil. There are only two species of mulgara in existence, the brush-tailed and the crest-tailed mulgara, which have only relatively recently been recognised as separate species. The brush-tailed mulgara lives in the arid regions of Australia and there is limited information on its current distribution and population sizes. Though they once roamed Dirk Hartog Island, they became extinct on the island, in all likelihood as a result of the introduction of feral cats. In Western Australia they are listed as Priority 4 or 'Near Threatened'. To improve their future survival, it is important to establish new populations of this species as an environmental 'insurance policy'.

Mulgara are 'light weight' carnivores averaging between 60 and 100g in size, which is not much more than a Mars bar or two, but don't let their diminutive size fool you. They are fierce predators with sharp teeth, hunting at night for a wide range of prey including insects and other invertebrates as well as small vertebrate animals. Any beetle or a spider caught out and about on a night-time stroll would have good cause to be nervous.

Preparation for their arrival has been ongoing over the past few years including a study of the island's vegetation that has enabled the best release site to be chosen. This site contains lots of spikey spinifex that provides protection from predators including raptors and goannas and harbours a suite of invertebrates and other food for mulgara to eat.

Pint-sized predators continued...

More recently, the science team have been hard at work gathering data on brush-tailed mulgara from several locations on mainland Western Australia, providing a secure source of animals and the background knowledge needed for the translocation to go ahead.

Our newest recruits have come from a national park of over 800,000 hectares in size to an island of just 63,000 hectares (albeit Western Australia's largest island). The active feral cat reduction program in their former home, allowed mulgara to survive in numbers large enough to provide new recruits to Dirk Hartog Island. Although their new home is smaller than the one they left behind, there is one very big difference: there are absolutely no feral cats! Dirk Hartog Island National Park has been free of feral cats for more than five years now, and that's a huge advantage.

The translocation involved 100 mulgara that were released in a variety of ways to determine which method is most successful. Some were given the royal treatment being kept in small enclosures and fed for up to 10 days before being fully released. Others were allowed to leave their travel boxes at a time of their choosing with or without nearby artificial burrows. And still others were released straight into artificial burrows with their travel box located nearby to use as a retreat should they choose.

This is just the start of a more safe and secure new life for brush-tailed mulgara in Shark Bay and the science team have a big job ahead monitoring their progress along with the seven other species of native animals that have already been returned to the island.

Brush-tailed mulgara are fast and fearsome predators. Scan this QR code to watch a mulgara in slow motion.



Return to 1616 – the next generation

Endangered duffers from Boullanger and Whitlock islands off Jurien Bay have been bred at Perth Zoo for the past several years, before being released in Dirk Hartog Island National Park.

The fauna team had a very exciting moment recently when a female duffer was caught during routine monitoring on the island. Not only was she found to be the offspring of a duffer released from captive breeding at Perth Zoo, but she had a pouch full of babies. So not only have duffers released on the island been breeding, but their offspring are doing the same! One more successful outcome and key milestone reached for the project.

Above Not only have duffers released on the island been breeding, but their offspring are doing the same! Photo – Andrew Comrie



Scan this code to see the first brush-tailed mulgara released by Kathy Oakley.



Traditional Owners team up

After months of preparation, the return of the brush-tailed mulgara to the national park on Dirk Hartog Island (Wirruwana) was a finely tuned, highly organised operation achieved by the teaming up of Malgana and Martu Traditional Owners, staff from DBCA's Goldfields and Midwest Regions, the science team and volunteers.

At a site north east of Wiluna in the Matuwa Kurrara Kurrara National Park, Wiluna Martu Rangers from the Tarlka Matuwa Piarku Aboriginal Corporation, and DBCA staff caught 100 brush-tailed mulgara. Accompanied by Martu Rangers, the mulgara were flown from their remote outback location to Denham, where they were loaded onto a waiting helicopter for their final flight to the national park on Wirruwana. The entire 800 km journey for our newest island recruits, took place in the space of only four and a half hours!

Martu Rangers followed the mulgara to the island by air and by sea. Those that made the crossing by boat were accompanied on their journey by a plethora of marine wildlife that seemed to be very keen on joining the celebration. Dolphins, dugongs, turtles and even an enthusiastic humpback whale put on a spectacular display, making it a unique trip.

Once on the island, the mulgara and the Martu Rangers were met by Malgana Elders and Traditional Owners from Shark Bay. A very special welcome was given in Malgana language by Elder Kathy Oakley and Neilisha Oakley.

As brush-tailed mulgara are nocturnal, it was important that they be introduced to their new environment under the cover

of darkness to allow them the best chance to settle in. So as darkness fell, the mulgara, Martu, Malgana and the DBCA science team headed to the release site. Malgana Elder Kathy Oakley released the first brush-tailed mulgara to set foot on the island in generations. The remaining mulgara were released by both Malgana and Martu Traditional Owners. After so many months of hard work and preparation, returning brush-tailed mulgara to Wirruwana, was a truly special moment for both Martu Rangers and Malgana Traditional Owners.



Top (left to right) Neilisha Oakley (DBCA), Vickie Oakley (Malgana representative), Kathy Oakley (Malgana Elder), Margaret and Lucia Anderson (Wiluna Martu Rangers) Laetitia Wear-Jones (DBCA) and Fiona Oakley (Malgana representative). *Photo – Josh Woods (DBCA)*

Above right Wiluna Martu Ranger Renae Jackman and Tiana Jones (DBCA Goldfields Region) holding precious cargo bound for Wirruwana. *Photo – Tiana Jones*

Heath Mouse playing Hide-and-Seek

Many of the native animal species being returned to Dirk Hartog Island National Park have disappeared from much of their former range and are threatened with extinction. Their ability to persist in small but healthy populations has allowed them to be sustainably 'harvested' for translocation efforts to improve their future prospects. This means translocation work is achieved with great care to ensure the ongoing viability of the populations that are providing animals for reintroduction elsewhere. However, for some species that formerly occurred on the island, such as the heath mouse (*Pseudomys shortridgei*), it's not so straightforward as they have always been challenging to find.

The heath mouse occurs in Victoria, South Australia and Western Australia and is listed as Endangered on a national level. It appears to need mosaics of long-unburnt and floristically diverse heathland that can be in short supply in some areas. When you throw in the risks from feral cats and foxes, along with the giant question-mark of climate change, this is one species that depends on careful management to ensure its future in this state.

Once thought to be extinct in WA, the heath mouse was rediscovered in 1987 near Ravensthorpe in the vicinity of the Fitzgerald River National Park. Whilst some new populations were found after this, by 2011, this enigmatic native rodent had again become difficult to find.

Subsequent intensive surveys across the south coast and Southern Wheatbelt resulted in the capture of three animals, but no more were found until recently.

In May this year, a DBCA survey team visited the Lake Magenta Nature Reserve, near Newdegate which had been a former stronghold of the heath mouse. After two years of good winter rain and at the end of a recent house mouse plague, the team had high hopes. On only the second morning's



Above Heath mouse recently caught at Lake Magenta Nature Reserve.
Photo – Merryn Pryor

trapping, their optimism was rewarded with the capture of an adult male. This was the first capture at this site for 14 years. Although no others were captured, this very exciting result showed that the heath mouse is still at this location.

Ongoing work is occurring to understand the habitat requirements and population dynamics of this special mammal.

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