

Once found across much of the south-west of Western Australia, dibblers now only occur in a few scattered populations. Thankfully, in recent years, a project to create a number of strongholds using captive-bred dibblers from Perth Zoo has been undertaken with very positive results. The most recent translocation – to Gunton Island in the Recherche Archipelago – is already showing signs of success.

**BY TONY FRIEND**



# ISLAND HOME

A NEW START FOR DIBBLERS





**W**estern Australian subfossil records indicate that dibblers (*Parantechinus apicalis*) once occurred from Shark Bay to Israelite Bay and as far inland as Peak Charles. While it is thought that, like so many native Australian animals, their distribution had contracted before European arrival, the dibbler has undoubtedly fallen victim to the effects of changes to the landscape that have occurred, such as clearing habitat for agriculture and development, introduction of foxes and feral cats, altered fire regimes and changes to vegetation caused by plant disease. They were believed to be extinct until 1967, when their rediscovery near Albany sparked new interest in this elusive species. By the mid-1990s, dibblers were only known to occur on Boullanger and Whitlock islands off the mid-west coast, and in Fitzgerald River National Park. The species had earned itself the unenviable status of ‘Endangered’ – fauna that is likely to become extinct or is rare – and its future looked bleak unless effective action was taken.

In the ensuing years, the Perth Zoo – under advice from the dibbler recovery team – established a breeding program. This has seen up to 10 adult pairs at any time producing young that are released into the wild by Parks and Wildlife Service and predecessor agencies. Since 2000 all the animals have been sourced from Fitzgerald River National Park and the animals have been rotated through the program to ensure genetic diversity and maximum breeding output. In total, an impressive 841 zoo-bred individuals have been released under the program, giving the species a hefty leg-up towards its long term survival.

## TRANSLOCATIONS

The animals born into the Perth Zoo breeding program were used to create two new populations – one on Escape Island (three kilometres off Jurien Bay) and the other at Peniup proposed nature reserve to the west of Fitzgerald River National Park.

The population on Escape Island was established between 1998 and 2001 with

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**Main** The dibbler is about the size of a small quenda.

*Photo – Jiri Lochman*

**Top** Breeding enclosures are used for dibblers at Perth Zoo.

*Photo – Peter Nicholas/DBCA*

**Above left** Eight hundred and forty-one dibblers have been bred for release at Perth Zoo.

**Above** Zookeeper Lesley Shaw from Perth Zoo’s breeding program.

*Photos – Leanne O’Rourke/DBCA*

the release of 88 dibblers of Boullanger and Whitlock islands stock, of which 83 were bred at the Perth Zoo. This population has persisted since its inception and there is cause for optimism that it will endure.

The Peniup proposed nature reserve population was the first mainland reintroduction of dibblers. A number of releases since 2001 saw 243 animals bred from Fitzgerald River National Park animals, released into this area. While this



**Above** Gunton Island is home to species such as the south-western crevice-skinks.

**Left** *Leucophyta brownii* occurs on the island.  
Photos – Marie Lochman

**Below right** Dibbler young in a female pouch.  
Photo – Jiri Lochman



### *Dibblers at a glance*

About the size of a very small quenda, dibblers (*Parantechinus apicalis*) are small, stockily-built marsupials that weigh between 40 and 120 grams. They have bright white rings around their eyes and have body hairs that are tipped with silver. They also have a somewhat ‘grizzled’ appearance and are recognisable by their hairy, strongly tapering tails.

They are mostly active around dawn and dusk – between those times they shelter in nests under shrubs on the ground surface. They seek their prey in swift, short bursts, often rummaging through leaf litter in search of insects and small skinks. They also eat berries, and possibly nectar.



Dibblers breed in autumn and females produce up to eight young. Males live one to two years in the wild and females over three years in age have been recorded.

population may persist, natural fluctuations in numbers and predation by foxes, feral cats, grey currawongs and other native birds means the long-term survival of this colony is not considered secure.

Animals from the breeding program were also reintroduced to Stirling Range National Park and into a 380-hectare enclosure in Waychinicup National Park but these colonies have not survived.

### A SOUTHERN HOME

In more recent times, the recovery team has set its sights on securing a population of dibblers on an island off the south coast. Gunton Island is a 95-hectare island located within the Recherche Archipelago Nature Reserve, near Esperance. Gunton is one of more than 100 islands in the archipelago and is in a group of three significant islands to the south of Cape le Grand National Park. At its closest point, it is just over eight kilometres from the mainland.

While translocating dibblers to the island is viewed as an introduction, live specimen records and subfossil evidence

indicate that dibblers probably extended to the east of Esperance, indicating that they most likely occurred on the island when the sea level was lower and the Recherche Archipelago was part of the mainland.

The island was selected for the project based on its size, accessibility, security, suitable vegetation type and cover, lack of introduced predators and likely lack of competitors. It also supports an abundance of invertebrates, which provide a food source for dibblers. Half the island is covered in vegetation, with a low woodland of Rottneest tea tree (*Melaleuca lanceolata*), *Acacia conniana* and berry saltbush (*Rhagodia baccata*), and a shrubland of blueberry tree (*Myoporum insulare*), coastal daisybush (*Olearia axillaris*) and *Leucophyta brownii* – which is the most extensive plant community on the island. Seabird burrows have been recorded under the *Myoporum* canopy.

The island supports Cape Barren geese, singing and brown honeyeaters, rock parrots, welcome swallows, red-eared firetails, stubble quail, silvereyes, Australian ravens, white-bellied sea-eagles



Hear more about the translocation project

Scan this QR code or visit Parks and Wildlife’s ‘LANDSCOPE’ playlist on YouTube.







**Above** DBCA's Tony Friend (left) and Tim Button monitoring the new dibbler population on Gunton Island.

**Right** Gunton Island is one of more than 100 islands that make up the Recherche Archipelago.

Photos – Rob Blok/DBCA



and Pacific gulls. It is also home to three species of skink – south-west crevice skinks (*Egernia napoleonis*), the common south-west ctenotus (*Ctenotus labillardieri*) and the lowlands earless skink (*Hemiergis peronii*).

## MAKING MOVES

In 2015, with the blessing of the recovery team, a plan was developed to translocate dibblers from the breeding colony at Perth Zoo to Gunton Island, starting with a group of 30 in October 2015 as part of a two-year release program. These animals were caught by Perth Zoo staff on the morning of their planned release, assessed for fitness and viability and placed individually into boxes for transport. Then they were flown from Perth to Esperance and transported by department staff to the Bandy Creek marina. Then staff and the dibblers boarded onto the vessel *Eclipse* for the next leg of their journey.

Getting the dibblers onto Gunton Island had its own set of challenges, as landing ashore requires alighting from a boat onto rocks, which can only safely be done in favourable weather conditions. This is a double edged sword – it means that people visiting the island (and therefore disturbing the dibblers) occurs rarely, but it also makes operations such as translocations a bit tricky.

Once safely onto the island, department staff carried the dibblers

in their crates about 500 metres to each of the two release sites, both at the top of the southern slope of Gunton Island. Then, during the late afternoon, in their normal activity period, the dibblers were released. This process was repeated in April and October of 2016, with the final release in April 2017. By this time 80 captive-bred dibblers and two wild-caught animals had been released on the island.

## FACT FINDING

In order to measure the success of the translocation, 11 sensor cameras were installed on the island. Initially, sealed Elliott traps containing peanut butter baits were positioned in front of the cameras to attract dibblers into view. Unfortunately, ravens were also attracted, often breaking the traps free to remove the bait. Not only did this result in the baits being moved out of view of the camera, it also triggered the camera, rapidly filling the memory cards with images of ravens. In April 2016, the Elliott traps were replaced by PVC bait canisters, which were much more resistant to interference, so the ravens lost interest and from then on most cameras functioned for the entire period of their deployment.

The cameras recorded an increased rate of dibbler activity from April 2016, perhaps in part due to the change of bait container. It's very likely, however, that

an important factor was the release of six mated pairs of dibblers from Perth Zoo during the same trip. Juvenile dibblers were spotted from late August visiting a nest box monitored by a camera and images collected on all the cameras between October 2016 and January 2017 indicate that the high level of activity has continued. This sustained activity across all the cameras indicates that the translocations to Gunton Island have been a success, and the population there is thriving. Monitoring on the island will continue and will involve trapping at least once a year to census the new colony.

By creating new dibbler populations, we are offering security to a species that would otherwise only have been able to rely on five populations, of which three are very small. This action will increase the number of populations and individuals and the geographic range of the species. At least for now, the future of the dibbler is more secure. Going forward, there are plans to reintroduce dibblers to Dirk Hartog Island in Shark Bay as part of the *Return to 1616* fauna restoration project.

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