The secret life of grasswrens

The charismatic but elusive western grasswren are locally extinct on Dirk Hartog Island. Now with a translocation plan in preparation, scientists are taking the time to learn a little more about the secretive, mouse-like birds before the big move.

by Aline Gibson Vega and Kelly Rayner

Distribution of western grasswrens

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Main Perched female western grasswren (*Amytornis textilis*) at Hamelin Station Reserve.

Above left Male western grasswren having caught an insect at Francois Peron National Park.
Photos – Aline Gibson Vega

Above Coastal *Acacia* shrubland can also be suitable grasswren habitat.
Photo – Kelly Rayner

The cryptic cousins of the better known fairywrens, grasswrens have long been an obsession for serious birdwatchers. Lacking the vibrant hues of fairywrens, these birds have been described as drab in colour, and as a result they seamlessly blend in with their arid environment. Australia is home to 13 species of grasswren, which are not only hard to spot, but often only found in the most isolated parts of the country. The joy of spotting a grasswren is not just from the bird itself, but also the adventure that it brings from travelling to these remote, arid locations.

While charismatic, grasswrens are extremely secretive. They prefer to stick close to the ground, hopping from shrub to shrub, and are sometimes seen scuttling in the undergrowth. It's no wonder these birds have often been described as 'mouse-like'. Nests are hidden in the thickest of shrubs and the birds will flee into the vegetation at any sign of danger. Their secretive lifestyle means the species requires habitats containing dense shrubland but this necessity is thought to be one of the downfalls for grasswrens across Australia. Many species are now threatened or are thought to have declining populations due to land degradation, which has resulted in the deterioration of the dense vegetation required by grasswrens.

DISAPPEARING GRASSWRENS

One particular grasswren, the western grasswren (*Amytornis textilis*) was previously found throughout much of the semi-arid rangelands of southern Australia but is now restricted to a small area of South Australia and Shark Bay in Western Australia. Their decline has primarily been attributed to the degradation of suitable habitat caused by heavy grazing from sheep, goats, cattle and rabbits. However, feral cats are also thought to have played a role in this decline, potentially preying upon these ground-dwelling birds, particularly in areas lacking the thick vegetation providing shelter from predators.

MANAGING THREATS

In Shark Bay, grazing pressure is being controlled in multiple areas. DBCA's Parks and Wildlife Service has removed goats and sheep from within Francois Peron National Park. The result is a thick Acacia shrubland on the peninsula. At the southern end of Hamelin Pool lies Hamelin Station Reserve, managed by Bush Heritage Australia. This property is also in the process of being destocked

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to ease grazing pressure and help restore habitat. Introduced predators are also being controlled.

In addition to in-situ conservation actions, a translocation of the birds to Dirk Hartog Island is planned. This island in Shark Bay once had western grasswrens but they became locally extinct during the island's time as a pastoral lease. This is part of the broader Dirk Hartog Island National Park Ecological Restoration Project, *Return to 1616*, which aims to return the island to a state similar to that when first discovered by Europeans 400 years ago.

A translocation is proposed but before that takes place, ecological and biological research is being conducted to inform management actions. DBCA Biodiversity and Conservation Science staff, in collaboration with researchers from The University of Western Australia (UWA) and Bush Heritage are taking time to learn more about the western grasswren before the big move, to ensure the highest possible likelihood of a successful outcome.

LEARNING ABOUT THE SNEAKY BIRDS

PhD candidate Aline Gibson Vega from UWA is researching key pillars of the western grasswren's ecology. One component of her research has been a colour banding project, allowing her to follow individuals over multiple years. Aline has been documenting every territorial dispute and carefully finding

Top Aline Gibson Vega (left) and Kelly Rayner (right) carrying two birds in bags, and the netting equipment. Landscape is the typical chenopod shrubland in which they can be found.
Photo – Michelle Hall

Above Aline Gibson Vega measuring the head-bill length of a western grasswren.
Photo – Kelly Rayner

hidden nests (often found in the prickliest of shrubs) and has already gained valuable insight into the social structure of this species, as well as key nesting preferences. In addition, Aline has been conducting behavioural experiments to better understand how western grasswrens perceive unknown intruders in their territories.

A second component to inform decision making for the translocation to Dirk Hartog Island is the genetic structure of the source populations. Aline and collaborators from DBCA and Bush Heritage have successfully collected enough genetic samples over the last two years to investigate where best to source western grasswrens to establish the most genetically viable population on Dirk Hartog Island.

FUTURE PLANS

All the information gathered from the research into western grasswrens in Shark Bay will directly inform the translocation plan for the *Return to 1616* project, hopefully resulting in a successful translocation.

Above left Western grasswren perched in *Acacia tetragonophylla* at Monkey Mia Reserve.

Above Banded female western grasswren, part of our study population at Hamelin Station Reserve.

Left A female western grasswren where it most feels at home, within shrubs.
Photos – Aline Gibson Vega

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