

Bilby Spotting: What you Need to Know!

Written by Kandy Curran for ScienceNetwork WA on Monday, 05 October 2015.



Bilbies are known as 'ecosystem engineers' because they dig burrows several metres long.

IT was looking dire for the greater bilby (*Macrotis lagotis*), whose populations have decreased significantly in recent times, but increased efforts by Indigenous ranger groups have uncovered bilby populations across the Kimberley.

Due to fox and feral cat predation, bilby numbers are on the decline in the Pilbara. As the marsupial is solitary, nocturnal and spending a lot of time digging burrows that spiral down several metres, the likelihood of a layperson finding them is low.

At a recent Science on the Broome Coast presentation, Department of Parks and Wildlife bilby researcher Dr Martin Dziminsky discussed some key signs that indicate their presence.

"Bilbies construct large burrows that have a high arch or dome shape and they leave a large spoil of sand around the opening, so they are quite obvious. Their front foot tracks are distinct too, with three parallel toe or claw marks." Dr Dziminsky says.

To improve the efficiency of monitoring bilbies in the vast desert areas of Western Australia, Dr Dziminsky has adopted alternate methods; genetic testing of scats and surveys for burrows and diggings using camera drones.

"We found small populations of between two and ten individuals and they were quite isolated – sometimes you wouldn't find another population for another 100 km which made them vulnerable to threats." Dr Dziminsky says.

The discovery of the importance of bilby burrows for other species has led to another ground breaking research project, with practical applications for management of bilby habitat.

Using remote cameras that detect changes in heat, researchers have found that 21 species interact with bilby burrows, with four species; echidnas, mulgaras, spinifex hopping mice and sand goannas using the burrows regularly.

This means that bilby burrows, old and new, can provide shelter for a wide range of species and access to invertebrates in loose soil.

Rangers have identified and mapped previously unknown populations of bilbies and are building an impressive picture of what is going on. A key lesson learned is that while bilbies can be found, they don't stay in the same area for long and move over large areas.

A brief presentation was also provided by ecologist Dr Malcolm Lindsay, on a collaborative study by Environs Kimberley, the Kimberley Land Council and WWF Australia.

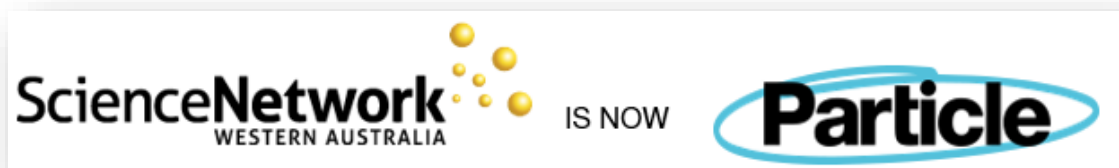
“The broad aims are to document bilby distribution, abundance and ecology in the Kimberley, utilising rigorous field surveys in combination with anecdotal and traditional indigenous knowledge.” Dr Lindsay says.

This information will be used to inform on-country management by Rangers and other land managers of processes impacting on bilby populations across the Kimberley and to educate and build community capacity in bilby ecology, survey methodology and conservation.”

These land management practices of Indigenous Rangers are having big benefits for bilbies.

Use of fire history and bilby distribution maps to determine what fire regimes are appropriate, is a huge step forward for the conservation of bilby populations.

The Science on the Broome Coast series is organised by Roebuck Bay Working Group, and funded by Inspiring Australia, Rangelands NRM, Department of Parks and Wildlife, Broome Shire Council and the WA Marine Science Institution.



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