

Kiwirrkurra and Ngururrpa Lands project

The venue for our 2016 project was the first full project within the Lands administered by Central Deserts Native Title Services. The invitation came after a successful demonstration of our skills at a location on the Canning Stock Route in 2013. The Area of Operation was set as the eastern half of the Kiwirrkurra Indigenous Protected Area and up to and around Lamanbandah in Ngururrpa Lands. Although Lamanbandah was the northern boundary, some of our teams worked further north as they exited via Balgo.



Kiwirrkurra Traditional Owners Nolia, Florrie, Mantua and Sally, with Indigenous Protected Area Coordinator Kate Crossing and Desert Discovery bird survey team leader Cheryl Gole.
Photo by Debra Saxon-Campbell.

The 2016 Project was organised differently to previous projects as there was no scope for a central base camp. It was a 'project on the move' with several temporary camps along The Track, centred on water points. It was different but it worked.

The 2016 project area straddles parts of the **Great Sandy and Gibson Desert** bioregions which comprise mostly red sand plains, dunefields and low rocky outcrops. Common vegetation types include grasses (mostly spinifex), woodlands (such as mulga, corymbia and eucalypts) and shrubs such as Acacia, Hakea and Grevillea. Wetlands include paleo (old) drainage systems, claypans, and large salt lake systems, including that of Wilkinkara (Lake Mackay). The lakes are associated with samphire and Melaleuca shrublands on the margins. Most rainfall is in the summer months.



View from dune top, Great Sandy Desert
Photo Alan Bedgood

From **18 July to 13 August 2016**, DD teams actively surveyed in the project area. In addition to project support teams and management people, the project fielded a botany team, a mammal and reptile team (including people focussing efforts on some invertebrates and also fungi), and a bird survey team. As the flora was so poorly known, there was no knowledge of threatened flora. EPBC-listed threatened fauna known or assumed to occur in the area included Greater Bilby (Vulnerable), Great Desert Skink (Vulnerable), Night Parrot (Endangered), Princess Parrot (Vulnerable) and Grey Falcon (Vulnerable).

Flora

Prior to the 2015 Bush Blitz and the 2016 DD project, the area was poorly collected for flora. During the project, two botany teams collected 312 species of flowering plants, all of which were collected under license by project participants, and then identified and vouchered by the WA Herbarium. During this project, a number of plants were collected for the first time in the Great Sandy Desert, were collected beyond known range limits, or were recorded for the first time in Western Australia.



Grevillea wickhamii
photo Judy Lumb

Birds

Previous bird records in the project region were largely represented by relatively ad hoc surveys or incidental records, most of them held in BirdLife Australia's national Birddata database. The DD project undertook 456 systematic surveys. Ninety three bird species were recorded and there were 1536 individual records of birds. While no threatened species were found, there were twelve separate records of Rufous-crowned Emu-wren, an important result for a species sometimes thought to be vulnerable to less optimal fire regimes. Significantly, despite dedicated searches by experienced observers in old growth spinifex, there were no records of Striated Grasswren, although the species has been recorded at other times in the region. Although not federally listed as threatened, this species is often regarded as declining in some arid regions.



Grey-headed Honeyeater, the second most commonly recorded bird species in the project, often recorded in sites with Eucalypt or Corymbia overstorey and flowering plants with nectar.
Photo by Andrew Tatnell.

Fungi

The ephemeral nature of fungi fruiting bodies (the visible parts of fungi) means that finding them is somewhat opportunistic and dependent on rainfall. In this project, there were 41 records of 17 fungi species in five separate groups, most of them 'puffballs' or related species, a group known from arid and semi-arid areas.



Horse Dung fungus
Two species were found in the study area, one east of Kwiirrkurra and one east of lake Mackay
Photo Mal McKinty

Invertebrates

In 2016, DD did not field a dedicated invertebrates collecting team. We did however manage to record 11 species of butterflies, a group of invertebrates sparsely represented in Australia's deserts. During this project, due to interest from the WA Museum, some DD members targeted scorpions, pseudoscorpions and the primitive group of spiders known as megalomorphs ('trapdoor' spiders). These creatures were collected opportunistically or in the pitfall traps set by the mammal and reptile team; most of the 12 specimens collected for the museum were collected from pitfall traps.

Mammal and reptile

In addition to a broad focus mammal and reptile team, there were also separate dedicated surveys by experienced people for the Greater Bilby and Marsupial Mole. The main team used a number of trapping methods under license (for example pitfall, Crouch Box, and Elliott traps) as well as utilising remote cameras and active searches. The 'general' team recorded 47 species, of which there were 32 reptiles, one amphibious toad and 14

mammals. The most common species recorded was the Central Military Dragon, a small dragon species active in many habitats during the surveys.



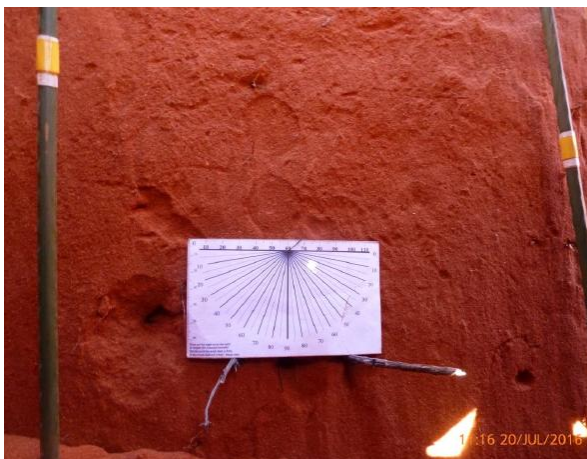
Blue-tailed Finesnout Ctenotus
Photo Josh Mills

Consultant Rachel Paltridge and some of the Traditional Owners joined a small number of experienced DD participants to specifically survey for the **Greater Bilby** (*Ninu*) but also to opportunistically record Great Desert Skink. This group used known methods of identifying foraging scrapes, burrows, scats and remote cameras in plotted sites to record Bilby activity. Of 115 plots, 23% had evidence of current, recent or old Bilby activity. In addition, other DD teams submitted a number of opportunistic records of activity. There was no evidence of Great Desert Skink activity.



Night vision of a Bilby entering a burrow

Although the previously listed Vulnerable, **Marsupial Mole** has been nationally delisted as a threatened species, DD once again used the trenching method to search a number of sand dunes in the area between Elizabeth Hills and Bibarrd. These tiny mammals are rarely seen and generally recorded by mapping the holes they produce in trenches in the sand. In this project, 52 holes were recorded in 15 trenches.



Evidence of Marsupial Mole activity
Photo Keith Johnson

Marsupial Moles are only identified to species level in the hand or by DNA in the scats of predators such as dingo, cat and fox. In 2016, DD participants once again collected predator scats, which have been submitted for DNA analysis at some point in the future.

Summary

Between July and August 2016, DD's teams undertook a range of surveys for mammals, reptiles, birds, plants, fungi and selected invertebrates. The results provide a snapshot of many, although not all, of the plants, animals and other taxa in the project region. The snapshot is an extremely valuable one for a region that is generally poorly surveyed, although it is important to realise that such snapshots vary greatly depending on rainfall from one season or year or decade to the next.