



Cane River Conservation Park Bush Blitz

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Background



Bush Blitz is a partnership between the Australian Government through the Australian Biological Resources Study (ABRS), BHP Billiton and Earthwatch Australia. It is the world's first continent-scale biodiversity survey, providing the knowledge needed to help us protect Australia's unique animals and plants. The program brings together scientists, stakeholders and community groups to undertake biological surveys in selected reserves across Australia. The objectives of these surveys are to discover new species, find new records of species and report on biodiversity values in these reserves. In June 2011, scientists from the Department of Parks and Wildlife participated in a biological survey of Cane River Conservation Park, including the Mt Minnie Station proposed addition, c. 75 km east of Onslow.

Most of the reserve (120 000 ha) occurs within the south-western margin of the Pilbara bioregion. The north-west portion extends into the Carnarvon bioregion. A wide range of landforms occur in the survey area, including ranges, isolated hills and mesas, creeks and rivers, granite outcrops and domes, gibber plains and sandplains.

Findings

Fauna

This was the first formal survey of the southern Nanutarra Block of the Cane River Conservation Park, where vertebrate fauna records were collated from pitfall, funnel, Elliott and camera traps and observations. The area was found to have a rich native vertebrate fauna, with 10 mammal, two frog and 45 reptile species detected. Despite previous surveys at other locations within the Cane River Conservation Park (Cowan 2011, Kendrick *et al.* 1999), new species records were obtained. Five of the 45 reptiles species recorded during this survey were new records for the reserve. Mammal detections were few compared to the reptiles and trapping results indicate that at least seven nights of continuous trapping is required to better maximise the chances of detecting species. At least 76 reptile, five frog and 26 mammal species are now known from Cane River Conservation Park.

No threatened fauna species (listed under the *Environment Protection and Biodiversity Conservation Act 1999*) were detected during this survey, despite a targeted survey for the Northern Quoll (*Dasyurus hallucatus*). As well as the Northern Quoll, two other Federally listed mammals have also been previously recorded from Cane River: the Ghost Bat (*Macroderma gigas*) and the Pebble-mound Mouse (*Pseudomys chapmani*). Introduced species recorded included cats, cattle and house mice.



The diverse range of habitats and geological features within the Cane River Conservation Park support a relatively high number of plant species for an arid region. A total of 331 taxa (species, subspecies, varieties and forms) from 52 families and 138 genera were recorded from c. 700 field collections (Markey & Dillon 2011). Of these collections, 288 were lodged as specimens at the Western Australia Herbarium. Eighty seven taxa were new records for the survey area. Seventeen of these records were notable range extensions (>100 km) and two of these were significant (>350 km). Six species had not been collected in the survey area for more than 100 years. These new records fill a gap in the distributions of nineteen taxa. The discovery of two taxa of State conservation significance, *Eremophila forrestii* subsp. *viridis* (Priority 1) and *Ptilotus mollis* (Priority 4), were new records for the survey area. A new species, *Solanum pycnotrichum* described by Bean (2013), was also discovered, and has been classified a Priority 2 conservation listed species.



Solanum pycnotrichum, a newly described species of conservation significance (P2) was found on the Bush Blitz

Twelve non-native species were located in the Conservation Park. Most are environmental weeds but only one (*Cylindropuntia* sp) is a Weed of National Significance. Buffel grass (*Cenchrus ciliaris*) was the most frequently encountered species, followed by Mimosa Bush (*Vachellia farnesiana*) and Kapok Bush (*Aerva javanica*). Buffel grass formed dense infestations in a wide range of habitats, notably riparian vegetation, dunefields and disturbed areas. When abundant, buffel grass displaced native species.



Ptilotus mollis, a Priority 3 conservation listed species. A new population was discovered in the Cane River Conservation Park.

Management Implications

The Bush Blitz survey was a valuable opportunity to discover new species, build on Cane River Conservation Park flora and fauna records, and acquire a significant number of collections (particularly herbarium specimens) from a relatively remote reserve. This updated information improves the knowledge base that will help to inform conservation management decisions regarding the Cane River Conservation Park.

Baseline data on exotic and pest species acquired during this survey highlights the need for a weed monitoring and management plan for the Conservation Park. Additional surveys across the Conservation Park to detect Weeds of National Significance (notably *Parkinsonia*, *Prosopis* and *Cylindropuntia*) should be considered in the weed monitoring and management plan.



A dense buffel grass infestation in an ephemeral creekline in the Parry Range.

Given that the current survey failed to detect three threatened mammal species previously recorded in the reserve, further survey is warranted to determine their current status in the Cane River Conservation Park.

References and further reading:

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