



Protecting the nature of the
Kimberley



The *Landscape Conservation Initiative* – the largest conservation project ever undertaken in Western Australia – was established in 2011 as part of the State Government’s \$81.5 million *Kimberley Science and Conservation Strategy*, to retain and enhance current natural biodiversity and landscape values in the north Kimberley. WA’s vast, wild and beautiful Kimberley is one of the world’s last great wilderness areas and a national biodiversity hotspot.

By Ben Corey, Ed Hatherley, Amanda Moncrieff, Ian Radford and Carolyn Thomson-Dans

Since its inception in 2011, the *Landscape Conservation Initiative* has been guiding a range of measures to protect biodiversity values across property boundaries in the north and central Kimberley. This bold project is being implemented by Parks and Wildlife in collaboration with native title holders and Aboriginal ranger groups, government agencies, non-government organisations and pastoralists. Together, these partners are managing fire, the impacts of introduced animals, and the impacts of invasive plants over an area of more than 65,000km² (6.5 million hectares) which includes pastoral properties, lands held under native title, private conservation areas and parks and reserves managed by the department.

PROTECTING NATURE THROUGH FIRE

Parks and Wildlife has been working closely with traditional owners and Indigenous rangers from four native title claim groups, the Kimberley Land Council and the Australian Wildlife Conservancy to undertake prescribed burning in the early dry season across the north Kimberley.

Each year since 2011 an average of 24,000km has been flown over the central and north Kimberley, involving (on average) 273 hours in fixed-wing aircraft and helicopters, to drop 60,000 incendiaries, creating mosaics of burnt and unburnt vegetation that mimic fire practices employed by Aboriginal land managers for millennia.

The expanded early dry season prescribed burning programs have created mosaics of burnt and unburnt patches of vegetation which provide refuges for wildlife and have greatly reduced the destructive effects of late (hot and extensive) dry season fires.

FERAL ANIMALS

Since 2011, almost 20,000 feral cattle have been removed from areas with high biodiversity values in the north Kimberley thanks to a collaboration between Parks and Wildlife and surrounding pastoralists. Feral pigs, cats and horses have also been



“... these partners are managing fire, the impacts of introduced animals, and the impacts of invasive plants over an area of more than 65,000km²...”

removed opportunistically as part of the program. Monitoring plots have been established in high priority areas to measure the effects of cattle removal on habitat.

More than 860 donkeys were removed from 2010 to 2013 from the north Kimberley as part of the Department of Agriculture and Food Western Australia’s Judas animal program. This program has successfully maintained feral donkeys at very low numbers across the north Kimberley.

A cane toad quarantine strategy for the Kimberley islands is being prepared by Parks and Wildlife to help prevent cane toads establishing on any Kimberley islands. Working with traditional owners will be critical to the success of keeping islands free from toads.

WEEDS

Since 2012, Parks and Wildlife has engaged traditional owners on a fee-for-service arrangement to map and treat weed infestations in the Mitchell River area. This has included the use of CyberTracker technology to map nearly 430 separate infestations.

More than 13ha of isolated patches of grader grass (*Themeda quadrivalvis*) – a Weed of National Significance – were treated before it set seed.

El Questro Station, the Wunggurr Rangers and Parks and Wildlife staff are



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Main King Leopold Ranges Conservation Park.
Photo – David Bettini

Top Aerial view of mosaic burning.
Photo – Ed Hatherley/Parks and Wildlife

Above Aerial ignition is carried out using helicopters and fixed-wing aircraft.
Photo – Geological Survey of Western Australia

working together to eradicate a 100ha infestation of gamba grass (*Andropogon gayanus*), a Weed of National Significance with the potential to transform landscapes into a monoculture and fundamentally alter fire patterns.

Parks and Wildlife engaged the Bunuba Rangers in Fitzroy Crossing to undertake conservation work on their country, including the implementation of



Above left Scaly-tailed possum (*Wyulda squamicaudata*).
 Photo – David Bettini

Above Aboriginal ranger groups conduct aerial burning with Parks and Wildlife staff.
 Photo – Ed Hatherley/Parks and Wildlife

Left Buckle Head.
 Photo – David Chemello/Parks and Wildlife

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susceptible to the catastrophic effects of late dry-season fires.

Reducing feral cattle numbers by up to 46 per cent in areas of high biodiversity value has improved habitat condition by reducing soil compaction and trampling of vegetation, particularly around sensitive wetlands and rainforest patches. Feral donkeys, horses and pigs have been kept at very low numbers in the north Kimberley.

Threatened mammals such as golden bandicoots (*Isodon auratus*), koorrawal or golden-backed tree-rats (*Mesembriomys macrurus*) and pakooma or brush-tailed rabbit rats (*Conilurus penicillatus*) have been increasing in numbers and distribution across the Mitchell Plateau, as a result of better management of fire. The north Kimberley is now a stronghold for mammals threatened by fire and

a weed control program in Geikie Gorge National Park and King Leopold Ranges Conservation Park.

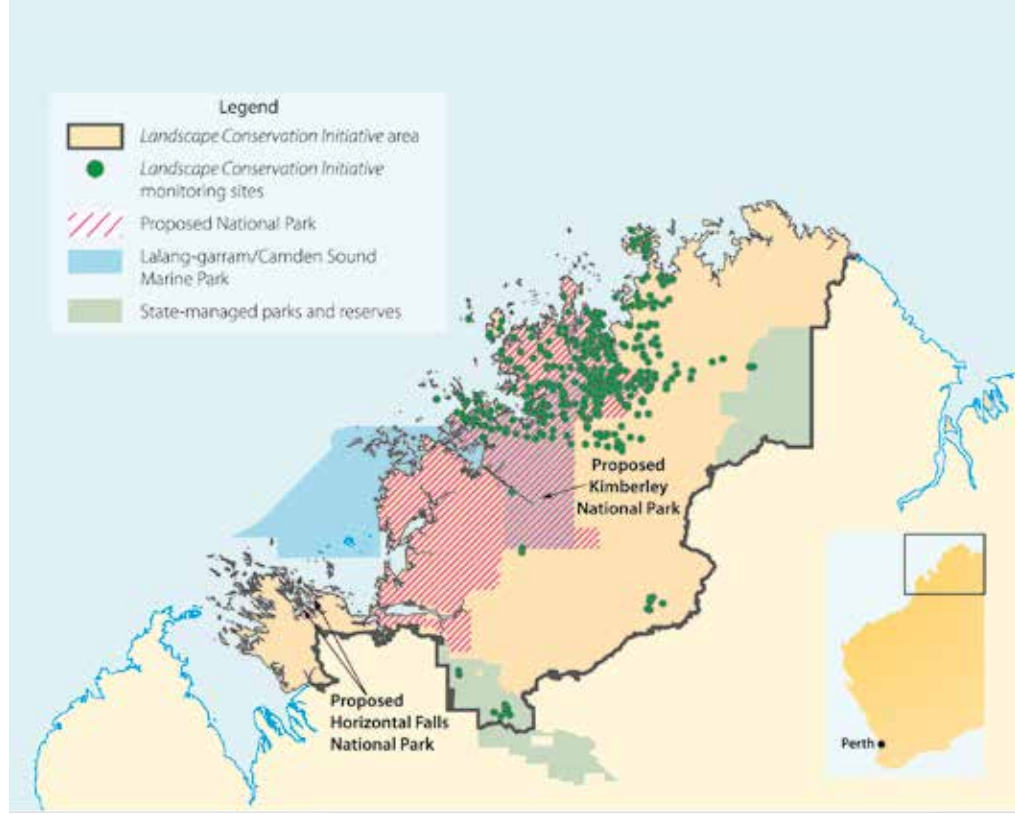
MEASURING SUCCESS

Parks and Wildlife is monitoring the success of the *Landscape Conservation Initiative*. Since 2011, nearly 600 monitoring plots have been established across the north Kimberley to evaluate and improve land management programs. This has included mapping nearly 100 rainforest patches that provide vital habitat for threatened wildlife and quantifying vegetation condition at almost 400 sites.

Trapping for small-to-medium-sized mammals has been carried out over an equivalent of more than 15,000 trapping nights across 86 sites with Aboriginal rangers and traditional owners.

MEASURABLE CONSERVATION IMPROVEMENTS

So far, the results have been dramatic. Better management of fire has already halved the amount of country burnt by destructive late dry-season fires from 36 per cent to 17 per cent and improved habitat for wildlife, such as threatened small mammals and finches, that are



feral animals elsewhere across northern Australia.

Weed control programs have reduced infestations of serious and damaging weeds in the high biodiversity Mitchell Plateau and ensured new populations of high-priority weeds do not become established.

ABORIGINAL PARTNERSHIPS AND EMPLOYMENT

More than 200 traditional owners from groups including Dambimangari, Wunambal Gaambera, Wilinggin, Bunuba and Balanggarra were engaged in activities with Parks and Wildlife to help protect country and manage threats such as fire and weeds.

Under the *Landscape Conservation Initiative* there were more than 50 fee-for-service contracts for feral animal and weed control programs since 2011, involving the Dambimangari, Uunguu, Wilinggin, Balanggarra, Gooniyandi and Bunuba native title groups.

The Kalumburu Aboriginal Corporation has entered into an agreement with Parks and Wildlife that will provide conservation, tourism and cultural management outcomes and employment opportunities for traditional owners on the 313,155ha Carson River Station, WA's northern most pastoral property. Works to date have included

Above left Quade Martin with a native mouse.
Photo – Ben Corey/Parks and Wildlife

Right Installing funnel traps.
Photo – Corrin Everitt/Parks and Wildlife



biodiversity surveys, re-establishing fences and fire management.

The *Landscape Conservation Initiative* supports partners in meeting specific targets set out in their Healthy Country plans by developing more capacity and providing resources for traditional owners to look after country.

The success of the program was recognised when it recently won the 2014 Premier's Award in the Environment Category. This award honoured the scale and scope of the project which sets the benchmark for new approaches to conservation worldwide where conservation is being achieved across the landscape, not just in WA's precious parks.

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**Landscape Conservation Initiative
Kimberley Science and
Conservation Strategy**