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# Kimberley Science and Conservation News

## September 2014



Department of  
Parks and Wildlife



## Marine and national parks for Horizontal Falls

**The State Government will establish new Class A marine and national parks encompassing the world-renowned Horizontal Falls at Talbot Bay in the Kimberley.**

The parks will be jointly managed with the Worrorra traditional owners, recognising their ongoing desire to look after their sea and land country and providing increased employment and training opportunities, including on-country park ranger programs.

The marine park and the national park will provide the highest level of protection to the immense natural and cultural values of the area and the stunning coastal scenery.

The extraordinary Horizontal Falls are an internationally renowned tourist attraction and the Kimberley was recently recommended by The New York Times as one of the best places on the globe to visit. This spectacular and rugged area contains some of the most unique tourism features in the world and the growth in tourism and increased visitation provides an opportunity to further protect the region's social, economic and environmental values.

The marine park will cover nearly 3,000 square kilometres to the south of Camden Sound, including Talbot, Collier and Doubtful bays and Walcott Inlet, with their unique coral reefs, dolphins and extensive mangrove systems. The Horizontal Falls Marine Park will make the Great Kimberley Marine Park even greater, expanding it to 26,000 square kilometres, stretching from the Horizontal Falls to the Northern Territory border.



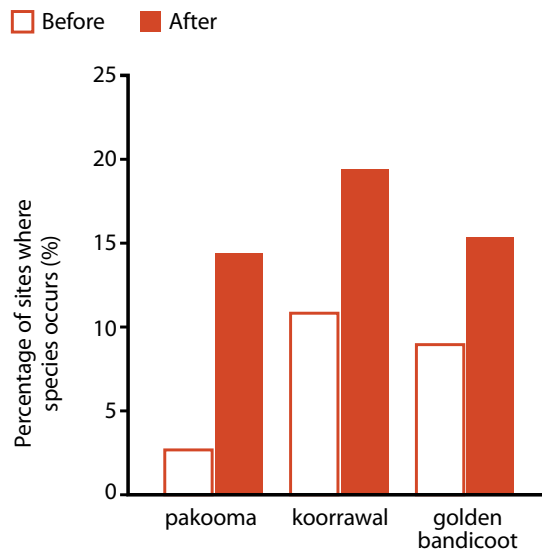
**Above:** Horizontal Falls. *Photo – Cathy Zwick*

The joint management partners, Parks and Wildlife and the Dambimangari Aboriginal Corporation, have commenced planning for the parks, and it is expected that an indicative management plan will be released for public comment later this year.

Horizontal Falls Marine Park will provide ongoing opportunities for recreational and commercial fishing, tourism and other sustainable uses.



Scaly-tailed possum. *Photo – David Bettini*



## Protecting the nature of the Kimberley

Western Australia's vast, wild and beautiful Kimberley is one of the world's last great wilderness areas and a national biodiversity hotspot. It is one of only two places in Australia with no recorded mammal extinctions.

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 and landscape values in the north Kimberley.

This visionary project is being implemented by the Department of Parks and Wildlife in collaboration with traditional owners, government agencies, non-government organisations and pastoralists across an area of more than 65,000 square kilometres of the north Kimberley.

More than 15,000 nights have been spent trapping small to medium sized mammals, across 66 sites with indigenous rangers and traditional owners.

So far, the results have been dramatic. Fire was once a major problem - but better management has already halved the amount of country burnt by destructive late dry season fires from 36% to 17%. This has improved

habitat for wildlife, such as threatened small mammals and finches that are susceptible to the catastrophic effects of late dry season fires.

More than 16,000 feral cattle have been removed, reducing cattle numbers by up to 46 per cent in areas of high biodiversity value, and improving habitat condition. Feral donkeys, horses and pigs have been kept at very low numbers in the north Kimberley.

Weed control programs have reduced infestations of serious and damaging weed species in the high biodiversity Mitchell Plateau and ensured new weeds were not introduced to the area.

The project has already been successful in increasing the number and distribution of key threatened mammals to parts of the Mitchell Plateau, including golden bandicoots, koorrawal (golden-backed tree-rats) and pakooma (brush-tailed rabbit rats). Mammal abundance in the north Kimberley is higher than in other protected areas in northern Australia.



## New agreements with Nyangumarta and Ngarla people



**Left:** Traditional Owner Margaret Rose looking over the waters of Nyangumarta country at Eighty Mile Beach. *Photo – Chris Nutt/Parks and Wildlife*

**Above:** Representatives of the Ngarla people joined Parks and Wildlife officers and pastoralists to celebrate the signing of an Indigenous Land Use Agreement for Eighty Mile Beach. *Photo – Alan Byrne/Parks and Wildlife*

**The State Government has signed Indigenous Land Use Agreements (ILUAs) with native title holders, the Nyangumarta and the Ngarla people, for the creation and joint management of parks and reserves at Eighty Mile Beach under the Kimberley Science and Conservation Strategy.**

The signing provides new employment opportunities, funding for on-ground joint management works and a formal land and sea management role for the Nyangumarta and the Ngarla people.

Environment Minister Albert Jacob MLA said the agreements were two of four currently underway at Eighty Mile Beach and would provide for the creation and joint management of Eighty Mile Beach Marine Park, and Walyarta and Kujungurru Warrarn conservation reserves within Nyangumarta country and Jarrkurnpang Nature Reserve within Ngarla native title determine lands.

“This agreement highlights the successful partnerships being developed in the Kimberley between the State Government and native title groups. A key priority for the Liberal National Government is working with Aboriginal groups in the creation of conservation areas to ensure their cultural values are protected and to generate social and economic benefits for communities,” Mr Jacob said.

“The Department of Parks and Wildlife has already established good working relationships with the Eighty Mile Beach traditional owners through the marine park planning process and on-ground works such as turtle monitoring, fencing, conservation and cultural interpretive signage.

“The signing of the agreements formalises these partnerships and provides for the employment of two Nyangumarta rangers and two Ngarla rangers.

“The creation of Eighty Mile Beach Marine Park and adjacent conservation reserves will have a positive impact on regional tourism, increasing the profile of the area as well as the number and accessibility of visitor sites between Broome and Port Hedland.

“It will also create opportunities for cultural tourism products to be developed with native title groups.”

## New app for Kimberley marine areas

**A new app will help visitors appreciate the reefs and marine life of the new Kimberley marine parks being created under the Kimberley Science and Conservation Strategy.**

The app, Saltwater Tales, Stories from the Kimberley, is being developed by the Department of Fisheries and will eventually cover the vast marine and coastal environment from Broome to the Northern Territory border.

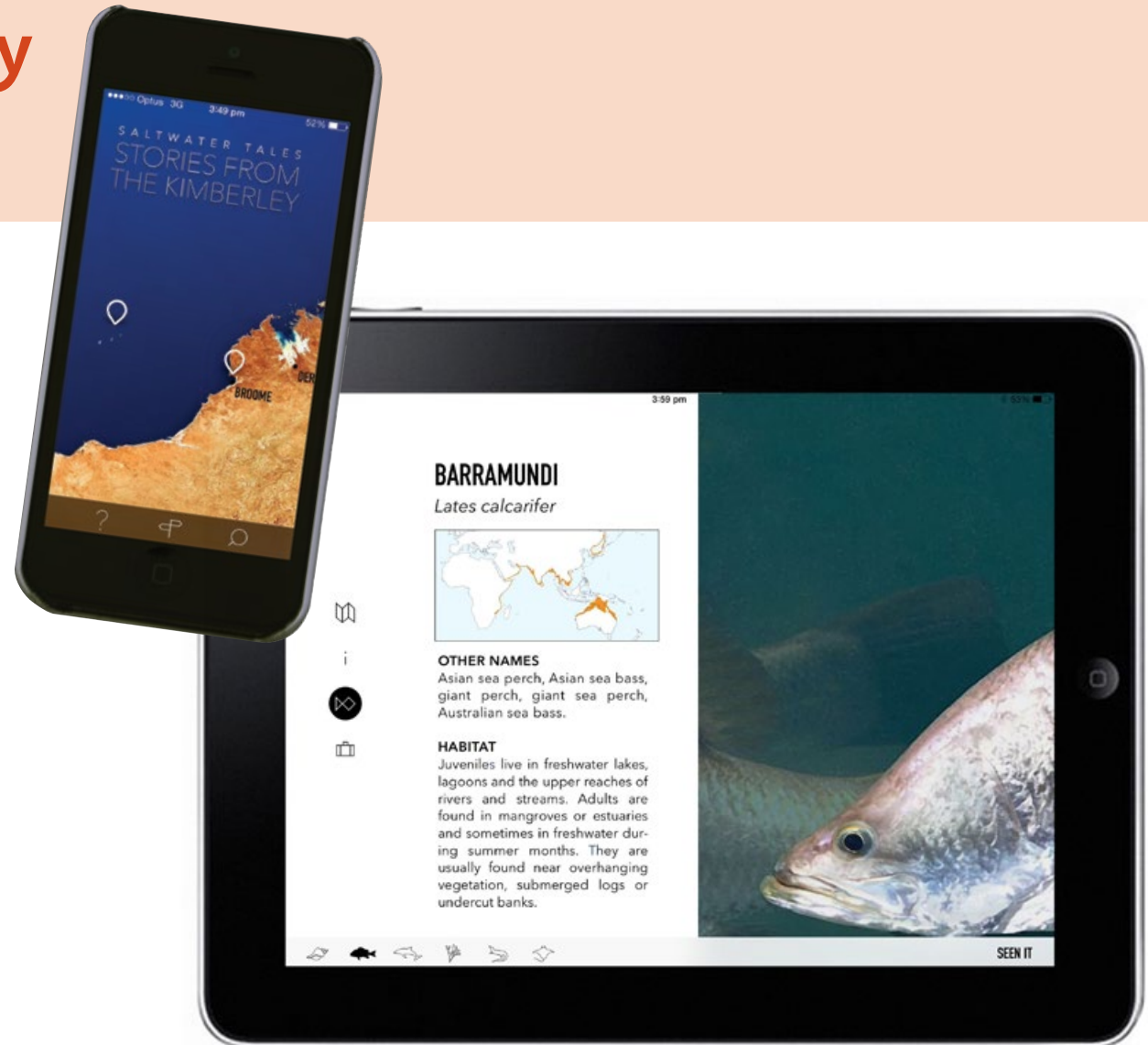
A soft launch of the app with content for two locations went live in late August and will be used as a prototype with charter and tour operators for road testing.

The first two locations published were the Rowley Shoals and Roebuck Bay, and include information on a number of topics and species.

The app will eventually include Camden Sound, Montgomery Reef and Prince Regent River, all in in the Lalang-garram / Camden Sound Marine Park, and Horizontal Falls and Talbot Bay, both in the proposed Horizontal Falls Marine Park.

It will feature an overview of each site, along with information on habitats, uses and management (including recreational fishing opportunities), marine life, ocean processes and traditional owners. The marine life will be searchable by species.

The app is available to download for free from the iTunes app store. An android version is currently being developed.



## Fighting weeds at Mimbi Caves

Parks and Wildlife and Gooniyandi Rangers recently spent four days conducting weed management around the Mimbi Caves, 100km south of Fitzroy Crossing in a unique and special section of ancient Devonian Reef within the Indigenous-held Mount Pierre pastoral lease.

The weeds were sprayed and infestations recorded using Cybertracker. This enables rangers to record the data in a spatial way and helps track the progress of the weed management to monitor its effectiveness over time.

The weeds targeted included calotropis (*Calotropis procera*), candle bush (*Senna alata*), bindii (*Tribulus terrestris*) and stinking passion flower (*Passiflora foetida*), with the small tree candle bush which is native to Mexico being the most common.

The Gooniyandi Rangers and Parks and Wildlife staff sprayed more than 1,315 candle bush trees and approximately 515 calotropis. Larger calotropis trees were cut down then sprayed.

The four days of intensive work achieved great progress in spraying and mapping the weed infestation.

Mimbi Caves is part of the 350 million year old Devonian Reef system, which has the oldest cave systems in Western Australia. The Mimbi Caves have deep spiritual significance to the Gooniyandi people, spectacular formations and is one of the most significant Devonian fossil sites in the world.



**Above:** A Gooniyandi Ranger controls calotropis weeds at Mimbi Caves.  
*Photo – Phillip de Bruyn/Parks and Wildlife*

## Soil sampling and landform mapping

The Department of Mines and Petroleum's Geological Survey of Western Australia (GSWA) has conducted important soil and rock sampling programs in the Kimberley to better understand the geology of the area, which will in turn help to inform and complement land-use planning and conservation management.

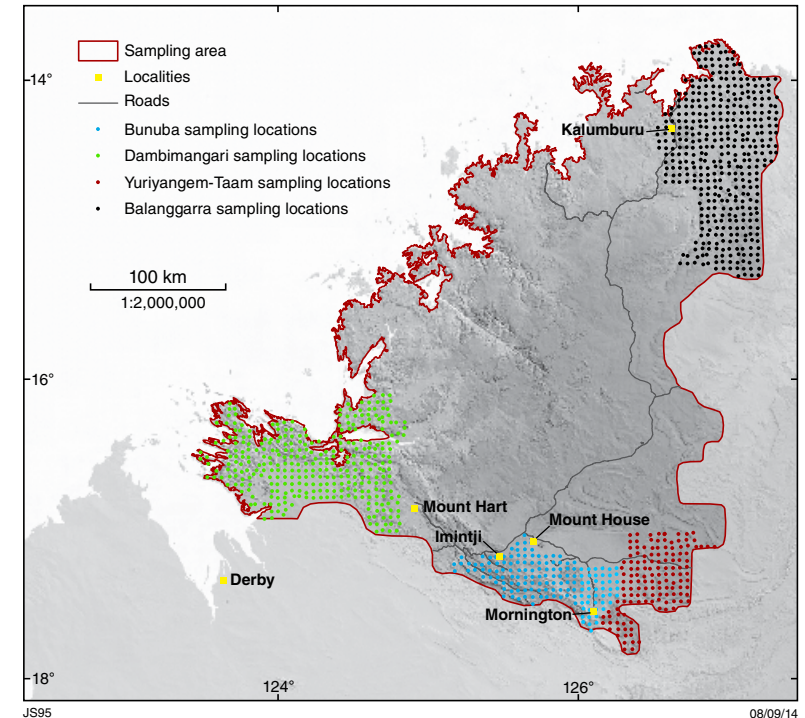


More than 1,000 samples were collected during the 2013 and 2014 dry seasons, at a density of about one sample every 25 square kilometres (see map) as part of the Kimberley Science and Conservation Strategy.

Sampling was done with the support and advice of traditional owners, and helicopters used to access rugged terrain. Once chemical analysis of the samples is completed, it will provide information on the composition and distribution of different soil types, and how they relate to the rocks from which they were derived.

The data can also be used by the pastoral industry. The results will be presented in a series of GSWA Explanatory Notes by the end of June 2015 and the chemical data will be published on the web.

**Above:** A sampling location about 20 km west of Secure Bay on Dambimangari Country. *Photo – Geological Survey of Western Australia*



A map has been compiled showing the distribution of different soil types in relation to landforms. In conjunction with soil chemistry, this map will help us to understand the geological history and landform development of the Kimberley region.

The soil-landform map layer is available as part of the GSWA Kimberley geographical information system (GIS) package 2014 update available from the Department of Mines and Petroleum. These and many other existing datasets of the Kimberley region can be viewed in GeoVIEW.WA, the online portal on the Department of Mines and Petroleum website.



## Island life unearthed



Above: Northern quoll. Photo – Corrin Everitt/Parks and Wildlife

**A recent wildlife survey of two islands in the Kimberley has revealed new populations of native animals, including a number of threatened species.**

Environment Minister Albert Jacob MLA said Department of Parks and Wildlife and Balangarra Rangers conducted an 18-day wildlife survey on Lacrosse Island, Buckle Head and a mainland site adjacent to these islands.

“This was the first time these areas had been surveyed systematically and included the use of traps and remote cameras,” Mr Jacob said.

“Parks and Wildlife scientists and Balangarra Rangers found a wide range of native species, including the threatened golden-backed tree rat on Buckle Head. This species is currently only known to occur on nine other islands in the Kimberley.

“A healthy population of the endangered northern quoll was also found on Buckle Head and follows the discovery late last year of a new population of the northern quoll on Molema Island. A bandicoot was also detected by camera on Buckle Head, although whether it was the threatened golden bandicoot or the more common northern brown bandicoot is yet to be determined.”

Other animals recorded included the common rock rat on both islands and the water rat on Lacrosse Island. All three sites had a similar diversity of reptile species, including the giant slender blue tongue skink on Buckle Head, which is found only in the northern Kimberley.

“Scientists also uncovered a collection of chewed Owenia nuts that they suspected had been deposited by the endemic scaly-tailed possum,” the Minister said.

“The possums managed to elude their traps but a scaly-tailed possum was later identified on camera.”

The survey was carried out to complement the Kimberley Islands Biological Survey (2006-2013) on 24 of the largest islands along the Kimberley coastline in north-west Western Australia. The recent additional survey of Buckle Head and Lacrosse Island was funded by the Kimberley Science and Conservation Strategy, a bold vision for the Kimberley's long-term conservation.

