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Creation of new parks progressing well

I am delighted with the outstanding progress being achieved under the State Government's *Kimberley Science and Conservation Strategy*, some of which is outlined in this newsletter.

I am particularly pleased to have recently released the indicative joint management plan for the proposed North Kimberley Marine Park, which will be the State's largest marine park covering a massive 1,845,000ha of State waters.

It will be the second largest State marine park in Australia behind the Great Barrier Reef Marine Park and will be seven times the size of Ningaloo Marine Park.

The creation of this marine park will be a significant milestone towards conserving this unique northern environment, while providing employment and management opportunities for traditional owners and supporting growth in environmentally sustainable tourism.

The three-month public comment period for a suite of

reserves in and around the world-renowned Horizontal Falls recently closed. Public submissions were received on the proposed Lalang-garram / Horizontal Falls and North Lalang-garram marine parks, and proposed Oomeday National Park. Parks and Wildlife planners and the MPRA are now working on the final management plans for these proposed parks and for the proposed Yawuru Nagulagun / Roebuck Bay Marine Park and Yawuru Birragun Conservation Park.

Creation of all of the new marine reserves proposed under the strategy will more than triple the total area of the State's marine parks and reserves from approximately 1.5 million hectares in 2008 to more than five million hectares.

The outstanding land and seascapes of the north Kimberley, along with the extraordinary cultural and wildlife values, attract increasing numbers of tourists from around the globe and underpin a valuable and expanding tourism industry.

Albert Jacob MLA
Minister for Environment



Top left: Prince Frederick Harbour in the proposed North Kimberley Marine Park. *Photo – Anna Smith*

Top right: Ornate burrowing frog. *Photo – David Bettini*

Above: Kimberley expedition cruising in the proposed North Kimberley Marine Park. *Photo – Chris Nutt/Parks and Wildlife*

Have your say on North Kimberley Marine Park

The State Government's vision to establish a Great Kimberley Marine Park is a step closer to fruition with Environment Minister Albert Jacob's release of the draft management plan for a proposed 1,845,000ha North Kimberley Marine Park for public comment.



New marine parks have already been established in the Kimberley at Camden Sound and Eighty Mile Beach, with detailed plans for important new marine parks at Horizontal Falls, Roebuck Bay and now North Kimberley released.

The existing Lalang-garram / Camden Sound Marine Park, the proposed Lalang-garram / Horizontal Falls Marine Park and the proposed North Kimberley Marine Park will together form a Great Kimberley Marine Park

"It will ultimately form one of the world's largest networks of interconnected marine and terrestrial reserves in an incredibly spectacular and ecologically diverse area," Mr Jacob said.

"Creation of all of the proposed new marine reserves will increase the total area of the State's marine parks and reserves from about 1.5 million hectares to more than five million hectares, an

increase of more than 300 per cent since 2008.

"While this expansion is significant in its own right, it is the multiple benefits that flow from the new parks that are most important. The creation of these parks not only provides an exceptional conservation outcome, it offers employment and management opportunities for traditional owners and opportunities for growth in tourism."

All of the new and proposed marine parks are important commitments under the State Government's *Kimberley Science and Conservation Strategy*.

The north Kimberley is rich in Aboriginal culture, with traditional owners continuing to practice traditional law and customs. The Wunambal Gaambera, Balangarra, Ngarinyin and Miriuwung Gajerrong people have a cultural,

spiritual and social connection to the north Kimberley sea country.

The proposed North Kimberley Marine Park is intended to be jointly managed with traditional owners.

The proposed park contains dramatic seascapes and a complex variety of marine habitats and surrounds more than 1000 islands, each providing an array of intertidal habitats.

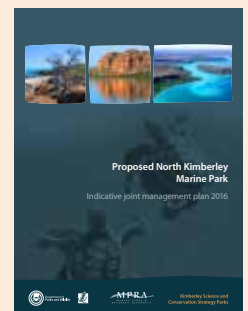
The coral reefs of the north Kimberley have the greatest diversity in Western Australia and are some of the most pristine and remarkable reefs in the world. Large estuaries, mudflats and extensive mangrove forests support many threatened, protected and culturally important species such as dugongs, turtles and sawfish.

Above left: Conducting drop camera surveys at Cape Talbot. *Photo – Chris Nutt/ Parks and Wildlife*

Above right: Soft corals in the proposed marine park. *Photo – John Huisman*

You can view and make comments on the plan at dpaw.wa.gov.au/northkimberley.

The plan is open for public comment for three months until 20 May 2016.





Top: Brush-tailed rabbit-rat. Photo – Pauline Meyer

Above: Rugged north Kimberley coastline. Photo – Adrian Barrett

Mammals thriving in the Prince of parks

A recent survey in the remote and stunning Prince Regent National Park in the Kimberley has revealed a wealth of thriving threatened mammal species.

Environment Minister Albert Jacob said the survey found threatened species such as the golden-backed tree rat, golden bandicoot and northern quoll were prospering in the remote north Kimberley coast.

“One of the most important finds was the discovery by remote cameras of the Kimberley sugar glider, a new animal for the park,” Mr Jacob said.

The Department of Parks and Wildlife survey was carried out on Mt Trafalgar, an escarpment surrounded by sea and rugged sandstone that can only be reached by helicopter.

Other survey sites included Cascade Creek, near the famous Kings Cascades on Prince Regent River.

“The remoteness of this country along with the fire management being undertaken by Parks and Wildlife, has kept this area almost entirely bushfire-free for eight years,” Mr Jacob said.

“Despite below average rainfall in the previous wet season, trap success at both sites was high with the Kimberley rock-rat, scaly-tailed possum and northern brown bandicoot all found at Cascade Creek and the

threatened brush-tailed rabbit-rat also recorded at Mt Trafalgar.”

Mr Jacob said these finds highlighted the importance of the *Kimberley Science and Conservation Strategy* in conserving the unique and natural values of this region.

The strategy is the largest ever targeted investment in the Kimberley, creating Western Australia’s biggest system of marine and terrestrial parks and providing opportunities for nature-based tourism and Aboriginal employment.

Under the *Kimberley Science and Conservation Strategy*, Prince Regent National Park is proposed to become a part of the new Kimberley National Park, covering more than two million hectares.

Parks and Wildlife staff were joined by Dambimangari Rangers, the park’s traditional owners for the 2012 and 2014 surveys. Parks and Wildlife and Dambimangari people have collaborated on a number of Kimberley island and mainland biodiversity survey projects since the establishment of the *Kimberley Science and Conservation Strategy*.



Above: Olive ridley turtle hatchling. Photo – Daniel Barrow/Parks and Wildlife

Rangers solve hatchling riddle

A joint patrol of Parks and Wildlife and Dambimangari Rangers in Lalang-garram / Camden Sound Marine Park discovered an olive ridley turtle nest – one of only six ever recorded in Western Australia.

Parks and Wildlife Senior Ranger Danny Barrow, Dambimangari Rangers Raphael Matos and Kiren Bangmorra and Parks and Wildlife Marine Ranger and Dambimangari traditional owner Adrian Lane were monitoring turtle nesting beaches in the marine park when they came across some bizarre little tracks in the sand that looked quite different to the flatback turtle tracks elsewhere on the beach.

“We dug up the nest to determine its hatching success rate as part of the survey requirements and found a few dead and five live olive ridley turtle hatchlings still stuck in the nest,” Danny Barrow said.

“They look quite different to most other turtles in WA but I was pretty sure they were olive ridleys from previous work carried out in East Arnhem Land but didn’t get too excited until they were positively identified.

“We recorded the hatchlings, took some DNA samples for genetic mapping and photographed them, then released them into the water,” he said.

“The DNA sample will help researchers understand the genetic relationships between WA olive ridleys and those elsewhere in Australia.”

The olive ridley (*Lepidochelys olivacea*) is the smallest of Australia’s sea turtles and only grows to about 70cm long.

It has only recently been discovered that olive ridley turtles nest in WA, at Cape Leveque and elsewhere in the Kimberley, but they are very scarce.

Lalang-garram / Camden Sound Marine Park was established as part of a huge network of Kimberley marine parks under the State Government’s *Kimberley Science and Conservation Strategy*. It is part of Dambimangari sea country and is jointly managed with Dambimangari people.

Bonus barra for Lake Kununurra

Recreational fishers are starting to reap the benefits of a \$700,000 *Kimberley Science and Conservation Strategy*-funded project to restock half a million barramundi in Lake Kununurra.



To gauge the success of the project, the Kimberley Training Institute used an electro-fishing technique to temporarily stun some Lake Kununurra barramundi so they could be netted, weighed, measured and then released back into the lake.

They found that after just three years, some of the barramundi—an iconic recreational fishing species that attracts visitors to the Kimberley from far and wide— from the initial release had reached the legal size of 55cm. Reports are also starting to come in of anglers catching and releasing barramundi in the lake.

Fisheries Minister Ken Baston (pictured far right) said the 150,000 juvenile barramundi that were released into Lake Kununurra in October 2015, each about 50mm long, were the final batch of barramundi fingerlings under the restocking program.

Mr Baston said this brought the total number of restocked barramundi to 550,000 – well above the planned 520,000 estimated when the project was announced in 2012.

The freshwater lake needed to be restocked because barramundi only breed in salt water and the fish were no longer able to migrate

upstream of the Lake Kununurra dam wall to restock naturally.

The Kimberley Training Institute bred the barramundi from locally sourced brood stock and raised juvenile fish for release into Lake Kununurra.

In the long term, the project will increase the tourism appeal of the east Kimberley as fishers are attracted to Lake Kununurra to enjoy the experience of catching a big barramundi.

The Minister said the most contemporary fish marking techniques had been used to

help monitor the success of the restocking project. All the fingerlings were 'marked' with a non-toxic fluorescent dye (Calcein) to allow non-lethal identification of restocked fish using UV light.

Left: A good-sized barramundi recently caught from Lake Kununurra. *Photo – Mathew Byers*

Above: Barramundi fingerlings before their release. *Photo – Yasmine Phillips*



Researching rock art riches

Scientists dating Kimberley rock art think some of it may have been created by some of the earliest waves of people to arrive on the Australian continent.

Initiated and sponsored by the Kimberley Foundation Australia, the ambitious and innovative Kimberley rock art dating project involves a multidisciplinary team of scientists. The \$1.4 million project was awarded an Australian Research Council grant.

Partners include University of Western Australia, Monash University, University of Melbourne, Department of Parks and Wildlife and Dunkeld Pastoral Co. The work is being done in collaboration with Balanggarra Aboriginal Corporation and the Kimberley Land Council.

Archaeologists from UWA's Centre for Rock Art Research and Management joined an expert team of scientists and visited the

remote Kimberley with the support of the Dambimangari and Balanggarra people – custodians of the rock art.

"It's good to be teaching our kids about the sacred place and the rock art and to keep track of our sacred site," Augustine Unhango, a Balanggarra elder involved in the project, said.

"When we start looking on a small scale... we start to see places where there's something we can date that has a relationship to art. Gradually we build up a picture and we come up with a whole series of things that can yield tiny little pieces and take them back to the lab," Professor Andy Gleadow, a geochronologist and project leader said.

At the University of Melbourne laboratory 3000km away, each sample undergoes several different dating processes including Uranium Series dating, accelerator mass spectrometry and



radiocarbon dating, paleoclimate isotopic studies, cosmogenic exposure age dating and landscape geomorphology.

The scientists measure the ages and start to build up a time framework that relates to the art. They unravel the geological, chemical and biological processes that have preserved some paintings for thousands of years.

"Here is one of the largest rock art galleries, probably the earliest concentration of figurative art anywhere in the world, and we're on the cusp of dating it properly with all these different techniques for the first time, so it's incredibly exciting," said Professor Peter Veth, Kimberley Foundation Ian Potter Chair in Rock Art at UWA.

Above: Kimberley rock art dating at Freshwater Cove in Dambimangari country. *Photos – Sven Ouzman/Kimberley Foundation Australia*

Bush Rangers reward camp

Five Year Eight girls and two instructors from the Fitzroy Valley District High Bush Ranger unit were the lucky participants in the inaugural Eighty Mile Beach Turtle Reward Camp last November.

Below: Sara McAllister and the Bush Rangers examine turtle tracks on Eighty Mile Beach.
Photo – Sally Johnston



The cadets saw dozens of turtles arriving on the beach at sunset to nest, and, under the guidance of Parks and Wildlife Marine Interpretation Officer, Sara McAllister, watched the eggs being laid into the nest's egg chamber.

The cadets assisted Sara and Marine Park Ranger Erina Young to mark new nests with stakes so they could be monitored for signs of predators until the hatchlings emerge, and recorded nesting data using a tablet-based data collection process.

As the camp coincided with the launch of Parks and Wildlife's annual Eighty Mile Beach volunteer turtle monitoring program, the cadets accompanied Sara and Erina while they made evening visits around the caravan park to invite visitors to take part in the project, to inform beachgoers of the rules for safe turtle watching, and to answer questions visitors had about both the turtles and the marine park in general.

In their free time, the *Bush Rangers* learnt how Eighty Mile Beach Marine Park is managed with a presentation from Sara that included an introduction to other species found in the park, and painted reusable shopping bags as a reminder that litter remains one of the biggest threats to marine turtles.

The first of its kind to be offered in the Kimberley, Reward Camps provide *Bush Ranger* cadet units with the opportunity to engage committed cadets in conservation projects working alongside Parks and Wildlife staff. In 2016, two Kimberley Rewards will be offered, with the addition of a Purnululu Reward Camp to be held in Term One or Two.

The Parks and Wildlife *Bush Ranger* program is run in high schools throughout the state and gives young people opportunities to undertake personal development training while developing their conservation skills and knowledge through involvement in practical nature conservation projects. Projects undertaken can be school-based, within the local community, while others take them to some amazing locations and landscapes across the state.



Reggie continues his cane toad detection work

Since 2006, the Department of Parks and Wildlife has used a cane toad detector dog to inspect trucks, freight and caravan parks in the Kimberley for 'hitchhiker' cane toads as a proactive quarantine measure to stem the spread of this noxious pest.

In the last few months, Reggie the cane toad detector dog, his trainer Andrew Rethus and school based trainee Colen Nulgit have been implementing new training techniques and visiting more than 95 business premises, freight yards and tourism hot spots in search of stowaway cane toads.

They have spoken to many Kimberley visitors at caravan parks and 24 hour rest stops about cane toad awareness to ensure cane toads aren't inadvertently carried into cane toad free areas, and Reggie has been regularly working at Tropical Forestry Services in Kununurra inspecting sandalwood consignments.

Reggie was a guest at the recent Wananami Remote Community School's 25th anniversary, where Reggie and Andrew demonstrated Reggie's superb detection skills, and talked about cane toads and Reggie's work.

Cane toads, introduced to Queensland in 1935, are major environmental pests in Western Australia, having arrived here in February 2009.

The Liberal National Government released a 10-year *Cane Toad Strategy for Western Australia* in 2009 and revised it in 2014 and has invested more than \$7.8 million in on-ground activities and research to help control the spread of cane toads.

With a range of stakeholders, the State Government has implemented many new cane toad management programs including a field-based cane toad surveillance and response team, strengthened quarantine measures,

a free-call hotline to report cane toad sightings and cane toad drop off points.

Major biological survey work on Kimberley islands, which are arks for our wildlife, is providing benchmark information on important island wildlife populations that need priority protection from the cane toad. At the same time, scientists have been researching the feasibility of biological control, taste aversion testing and other methods that provide hope for the survival of native wildlife species in the short and medium terms and management of cane toads in the longer term.

Much has been achieved in educating the community about cane toads, and as a result a number of 'hitchhiker' cane toads have been located and removed from areas south of the Kimberley, preventing new populations from establishing in Perth and elsewhere.

Above: Searching freight before it is loaded onto trucks.
Photo – Sally Johnston

