



## Fitzroy Declaration 2016



### Kimberley Traditional Owners unite for the Fitzroy River

In response to increasing development pressure, Kimberley Traditional Owners have pledged to work together to protect and manage the Fitzroy River and its tributaries, one of the most iconic wild rivers in Western Australia.

During a two-day meeting in Fitzroy Crossing, TOs agreed upon a Fitzroy River Declaration, aiming to protect the traditional and environmental values that underpin the river's National Heritage Listing.

The historic declaration identifies eight key steps that TOs agree are needed to protect and manage the Fitzroy River, including a buffer zone for development, a joint position on fracking, development of a Fitzroy River management plan complemented by an Indigenous Protected Area, and a management body for the river.

Walmajarri Traditional Owner Anthony McLarty said the declaration aims to address concerns of TOs regarding extensive development proposals facing the river and its catchment:

"We know that there are pressures from industry and government to access and use the Fitzroy River, and these pressures have the ability to impact on its many cultural and environmental values. We are also concerned that the cumulative impacts of development along the river will not be managed or considered appropriately by the Western Australian Government.

"The Fitzroy River is one living system. The river gives life and has a right to life, and we are determined to protect it for current and future generations."

Bunuba Traditional Owner Keith Bedford said the declaration makes it clear that native title rights of TOs are central to the management and protection of the entire Fitzroy catchment:

"As native title holders and claimants, Kimberley Aboriginal people respect each other's autonomy, but we are also committed to working together to better manage and look after the river system."

Nyikina Mangala Traditional Owner Dr Anne Poelina said the Fitzroy River Declaration demonstrates that TOs are prepared to stand together for the future of this unique living water system.

Environs Kimberley congratulates the Nyikina Mangala, Bunuba, Walmajarri and Goonyandi Traditional Owners for taking this historic move to protect the Fitzroy River.

For news story and full text of the declaration visit: <http://www.klc.org.au/news-media/newsroom/news-detail/2016/11/15/kimberley-traditional-owners-unite-for-the-fitzroy-river>



BUNUBA ABORIGINAL CORPORATION



GOONIYANDI



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WALMAJARRI ABORIGINAL CORPORATION



Traditional Owners develop Fitzroy River Declaration (photo by KLC)



# Report From The Chair

Kate Golson

Hello all,

One Saturday a few weeks ago I took advantage of the warmer Broome weather (read 42.6 degrees) to catch up on several films and documentaries I'd missed through the year. Among the latter were two from Matthew Evans (of Gourmet Farmer fame and a food critic with the Sydney Morning Herald for many years), now living in Tasmania farming free-range pigs.

It's commendable that Evans manages to farm and also make compelling TV programs. He co-wrote and presents a three-part series on the Australian seafood industry, *What's the Catch*, which looks at where our seafood comes from, the environmental price we pay for it (such as overfishing and the destruction of seabeds), why stronger labelling laws are necessary for us to be able to make informed choices about what we're buying, and what makes a fishery sustainable — with Fremantle sardines near the top of the list (<http://www.sbs.com.au/programs/whats-the-catch>).

More recently, Evans presented the three-part *For the Love of Meat*, which turns the spotlight onto the Australian obsession

with meat, the ways we farm chickens, cows and pigs, and the sustainable production of meat from economic, health, environmental and animal welfare perspectives (<http://www.sbs.com.au/food/programs/for-the-love-of-meat/episode-guide>).

Both series are informative and level-headed, and unusual in achieving a balance and clarity in dealing with the complexities of how animals are and should be treated, the realities of running businesses, our dislocation from the modes of food production and so on. That both programs resulted in fast-food enterprises changing to 'greener' business models makes them truly distinctive and satisfying (see for example, [www.guzmanygoz.com/news/free-range-chicken/](http://www.guzmanygoz.com/news/free-range-chicken/)).

On another matter, this year we are holding our biennial Xmas raffle with only 200 tickets on sale. The prizes are \$5,000, \$2,000 and \$1,000 with 10 lots of \$200 for the winning. The proceeds go towards our environmental activities. No matter whether you're in the Kimberley or elsewhere, if you have the time and interest to help us spread the word, perhaps in your workplace or by forming a consortium with friends, please let Tessa or Christine in the office know.

Lastly, early next year we are planning to hold a members' get-together in Kununurra for the first time. We'll keep you posted.

All the best for your summer break.

Kate

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## Letters To The Editor

Environs Kimberley welcomes letters to the Editor. We accept comment and criticism, and print all letters that are not obscene, offensive or libellous. If you have a bone to pick, pick it with us.

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# Director's Report

Martin Pritchard

## No Dam Way — again

You may think that not much has come of the Federal Government's Northern Development White Paper, which focusses on mining and large-scale agriculture as the answer to developing the Kimberley, but behind the scenes there is a big shift. The State Government's Water for Food project [see Director's Report December 2015] is also driving and encouraging irrigation projects.

We recently found a new document called *The Mid and North Western Australia Investment Portfolio 2016*, published by Regional Development Australia (RDA) Pilbara, Kimberley and Mid-West Gascoyne (available on the RDA Kimberley website). It's a wish-list of industrial development through the three regions. Of most concern are projects like a proposed dam on the Margaret River, which feeds into the Fitzroy, to irrigate 10,000 hectares of maize, soya beans, cotton or sugar cane. The proponent or lead agent is the Shire of Halls Creek. A 2004 study, *Fish fauna of the Fitzroy River* by Murdoch University, Kimberley Language Resource Centre and the KLC, stated: "The reduction in peak flow volumes if either Dimond Gorge or Margaret Gorge were dammed would be about one-third." Devastating to the Fitzroy.

Another project of concern, again by the Shire of Halls Creek, is 10,000 hectares of irrigation at Flora Valley. This would be watered by pipes from Lake Argyle to grow the aforementioned crops. The capital investment required would be \$350 million for the dam and up to \$270 million for land development and irrigation infrastructure.

Whilst we were taking all this in, another report came to our attention proposing dams at Dimond Gorge on the Fitzroy and Margaret Rivers to irrigate 350,000 hectares to grow cotton, cow fodder and horticultural crops. The proposal includes a canal to take water to La Grange, a new coastal community and 38km of light rail to Broome to export crops. The proposal is being touted by John Logan of Western Agriculture Industries fame. It is more-or-less the same project that was being pushed 20 years ago, which led to the establishment of EK.

This is what happens when Ministers such as Mia Davies says things like 'There's five million hectares suitable for irrigation in the West Kimberley'.

As all this plays out, the Federal Minister for Water, Barnaby Joyce, has put \$5 million into a study by CSIRO to find out how suitable the soil and water in the Fitzroy Valley are for irrigated agriculture. Interesting that one of Joyce's supporters, Gina Rinehart, owns several properties there, including Fossil Downs and Liveringa stations.



As if there aren't enough threats to our water, in November it was announced that Andrew Forrest had applied for more than 220,000 square kilometres of petroleum leases in the Canning Basin in the Kimberley, with a small company, Goshawk Energy. Goshawk has a petroleum lease over Broome's town-water borefield, and the Minister for Mines and Petroleum has refused to rule out fracking there.

On top of this the government has put petroleum leases which could be fracked in the future, out to tender. They cover Windjana Gorge and Tunnel Creek National Parks, Brooking Gorge and Devonian Reef Conservation Parks and the Margaret River catchment.

**Given the above pressures, the Fitzroy River Declaration by the Goonyiandi, Bunuba, Niykina Mangala and Walmajarri Traditional Owners couldn't have come at a better time.**

Have a peaceful festive season, see you in the New Year.

## Letter to the Editor

You're clearly on the money, Martin, with your report in the last edition. In a sense, we need a James Price Point-style stand directed at the economy at large. For while the outdated colonial, consumer growth system prevails, we're inevitably left to pick up the scraps. Yet there is increasing disillusionment with this system in many segments of society, and growing evidence that it is no longer improving quality of life in over-industrialised countries. What is the point of the economy, if not to improve quality of life? And not just for people, given all we know about our quality of life being bound up and dependent upon the whole life 'system' — upon Country. The consumer economy is nearing its end, one way or another, due to any number of limits. Mapping a viable way to the next economic system, and the narrative of development and progress that frames it, needs our concerted attention now.

Anthony James



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## CHRISTMAS

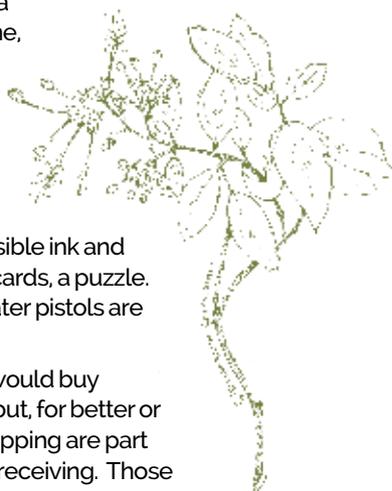
Ah, Christmas! What a time to celebrate waste! All those unwanted gifts; all that discarded wrapping paper; all that food eaten to excess or left over; all that alcohol and its containers; all those hangovers and grog-fuelled fights.

I suspect that a major reason that so many of us want to blot out our consciousness over Christmas is precisely because it has become so awful. Some people have it all well organized and seem to enjoy it, but many people dread it. To enjoy Christmas as she is celebrated in much of Australia, you have to enjoy being around lots of other people, making and hearing idiotic jokes, slaving over a hot stove if you are one of the unfortunate people with that responsibility, overeating if you are not, wearing silly paper hats and making a fool of yourself.

Family gatherings are probably the worst, since close relations seldom demand or are granted the veneer of politeness we feel we owe to friends and strangers. The philosopher Alain Botton has described families as 'well-recognised and sanctioned loci for hysteria reminiscent of scenes from the *Medea*' (it is heartening to know that Alain has a family life like most people's), and Christmas is the most likely time for an enactment of the play's climax or something similar.

To avoid murder and mayhem at Christmas, it is a good idea to plan early how to get away from it. I can recommend a camping trip with minimal yuletide paraphernalia. A bottle of evil-coloured cordial for the children, a bottle of wine for the adults, a tin of ham or a dead fish or chicken, a good fruitcake and/or a dozen fruit mince pies should be enough of a concession to the season. A small gift for each family member will be far more of a thrill in the bush than at home, where there is already so much. Gifts to keep the young occupied while the adults rest post-prandially might include a magnifying glass, a wind-up torch, a board game, a pen with invisible ink and a pad to write on, a pack of cards, a puzzle. Musical instruments and water pistols are not recommended.

No good environmentalist would buy Christmas wrapping paper but, for better or worse, wrapping and unwrapping are part of the fun of gift-giving and receiving. Those unwelcome catalogues we find rolled up in our newspapers, which proliferate over yuletide, make colourful wrapping for gifts, while more artistic souls paint salvaged paper. Brown paper bags or large used envelopes, extravagantly painted, take on a new life as gift-presentation bags. After the opening ceremony they can be used as fire-lighters at your bush camp. Wherever you spend it, here's wishing you a happy and nature-friendly yuletide.



## Ruminating with MAD COW



## LEST WE FORGET

Those of us who follow the depressing environmental news would be aware that Australia has the dubious honour of being the country with the highest number of mammal extinctions. But how many of us know what that number is? At least 29 Australian mammals are known to have become extinct since 1788, and four more are probably extinct. And it's not just the mammals; 24 birds have gone extinct since Europeans arrived on the continent, four amphibian species (all frogs) and one reptile. A handful of invertebrates are also listed as extinct, but as many invertebrates are elusive and yet to be discovered and identified, the numbers lost must also be unknown.

Meanwhile, the human species proliferates — most notably, the introduced varieties from Europe and elsewhere, along with their camp followers: the cattle, sheep, pigs, goats, horses, dogs, cats, foxes, rats, toads, cockroaches et al, all of which, with the exception of sheep, have well-established feral populations around the country. Modern *Homo sapiens* is a voracious creature, consuming so much more than he needs and taking up so much more of the country for his towns and cities, roads, crops, livestock, mines, quarries and so forth than can possibly be justified by necessity.

Most of us have never seen the mammals that have now become extinct: one, the Christmas Island Pipistrelle, a tiny bat, as recently as 2009. The Burrowing Bettong, or Boodie, remembered by people who lived in the Great Sandy Desert in the 1950s and 60s, was one of the most widespread mammals in Australia, ranging from west of the Great Dividing Range across to coastal WA. It was also a good breeder and could produce up to three successive young in a year. Burrowing Bettongs occupied a variety of habitats, including acacia woodlands, and were common in sand-dune country. Knut Dahl wrote about seeing their burrows all over the coastal dunes around Broome. Where did they all go?

Familiar story: they faced competition from rabbits; lost habitat to agriculture; were poisoned and shot when they fed on crops; were preyed on by cats and foxes. Cats and wildfire put paid to them in the arid zones beyond the reach of agriculture and pastoralism. Desert people who returned to their country in the 1980s looked in vain for tracks of familiar animals like the Boodie and grieved to find them gone.

A similar story could be told for all 29 or 33 of Australia's extinct mammals.

Western European countries like Britain and France have forgotten that their forests once hosted wolves and bears. Wolves and bears still do survive in some countries, but the Boodie has gone forever. Let's not forget her.

# Broome Community Seagrass Monitoring Project:

Julia Rau



Seagrass monitoring really does have a lot going for it: a breakfast of homemade blueberry muffins followed by a rejuvenating stroll across the sparkling tidal flats, a sense of wonder at the sometimes bizarre and beautiful fauna in our quadrats, and the delight of seeing healthy patches of seagrass flourish.

Twelve times a year volunteers navigate to the sites using a GPS, set up three 50-metre transects and buckle down to work, recording data from the quadrats. I am always impressed by how fast new volunteers pick up basic monitoring skills. Many of our regular seagrass volunteers have been trained by the global seagrass monitoring and assessment program, Seagrass-Watch, during a two-day workshop; their experience and expertise is vital in assisting me with training new people in the field. High five to you guys, you know who you are!

The enthusiasm and motivation of the volunteers who participated in our October beach clean-up event was another highlight this quarter. Armed with gloves and bin-liners we once again tackled Roebuck Bay's foreshore between Streeter's Jetty and Pearl Luggers. We were exhausted by the sheer amount of rubbish collected from a coastal stretch barely 400 metres long. During the two-hour operation we had 15 volunteers collecting, weighing and documenting almost half a tonne of rubbish. The collection was jointly organised by Environs Kimberley and the Broome Chamber of Commerce and Industry, following a similar event in the same place earlier this year. Local company Toxfree made a huge difference by providing a skip bin free of charge. EK's very own cake baker extraordinaire, Kylie, made sure our efforts were rewarded with sweet treats.

Another exciting activity we are working on is the 10-year report card. It will include a statistical analysis of ten years of seagrass data and inform stakeholders, government departments and the wider Broome community about long-term trends in the Roebuck Bay's seagrass beds. We're hoping to release this document in February 2017.

## December Sessions.

Friday, 16th December: Town Beach, 4:30pm

Saturday, 17th December: Demco Beach, 6:00am

Sunday, 18th December: Port Slipway, 6:00am



Clean-up volunteers collected almost half a tonne of rubbish in only 2 hours.



Seagrass monitoring volunteers Ayesha Moss (EK) and Chris Nutt (Marine Park Coordinator, DPaW). Photo Julia Rau.



The Broome Community Seagrass Monitoring Program is funded by Coastwest, the Kimberley Ports Authority, Norman Wettenhall Foundation and the Shire of Broome, co-managed by Environs Kimberley and the Department of Parks and Wildlife and supported by Seagrass-Watch.





# Paractially paractia season

Steve Reynolds

Cable Beach Ghost Gum *Corymbia paractia* is the dominant component of a Priority Ecological Community in Western Australia. These large, spreading ghost gums can be seen on the Broome Peninsula in places like Minyirr Park and also around town where there are some remnant trees.

Known as gunurru to the local Yawuru people, the characteristic blossoms are produced (sometimes prolifically) in the build-up time of November–December. This year we are mapping the distribution of the species, which is highly restricted, all known occurrences being from the immediate Broome area.

In the last few weeks we have been keeping a careful eye on *Corymbia paractia*. Most trees are producing a curtain of new leaves and new buds forming on stems. What is most interesting and at times confusing is the variation between different individuals. Just like humans, every tree is different, whether it be in the bark, leaf shape, new leaf colours or branching pattern.

In order to distinguish the Cable Beach Ghost Gum from other, closely related species (like Weeping Ghost Gum *Corymbia bella* and Wrinkle-leaf Ghost Gum *Corymbia flavescens*), we need to check them when they are in flower. And they are paractially there, with most of the mapping planned for early December.



This project is funded by Eucalypt Australia and hosted by the Kimberley Nature Project, Environs Kimberley, which receives ongoing funding from Rangelands NRM.



## Rocky Horror

In honour of our 20th anniversary, we at EK decided to let our hair down. In place of a worthy environmental film night fundraiser, as our fans may have expected, we collaborated with Sun Pictures to put on a showing of the classic original *Rocky Horror Picture Show*. We needn't have worried about shocking our supporters — they turned out en masse in a variety of costumes, some more seemly than others. It is surprising how many blokes seem to own net stockings and high-heeled shoes. Also surprising was how well-versed the audience was with the film and its special cues — I wondered at first why people were handing me things like

old newspapers and spraying me with water, and when a piece of cold toast landed in my lap I thought I was supposed to eat it. As for the streams of toilet paper...

The Good Cartel served food as people arrived, and the wonderful Broome Pearlesque Belles opened the show with a magical performance of their own.

Thanks to Louise Netts of Sun Pictures for her enthusiastic support in putting on the event, and the Belles for their delightful dancing. Thanks also to our own team for the preparation, and to everyone who turned out in force and made the evening so memorable.



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# Environs Kimberley AGM 2016

EK held its annual AGM on 29th October this year. As is our wont, we spent the first 'hour' (which extended rather beyond the allocated 60 minutes) to presentations on our activities during the year. Director Martin Pritchard gave his usual inspirational illustrated talk, followed by Malcolm Lindsay, intrepid leader of the Kimberley Nature Project and his team, each of whom talked about his or her field of work. Once again we missed the sparkling presence of Louise Beames, the KNP's founder and Assistant Coordinator, who now lives in Melbourne with her two small children, but continues to buoy us with her extensive knowledge and enthusiasm.

For the full account of our work, please see our colourful Annual Report, soon to go online.

The opening segment from our teams is always well attended, after which there is an exodus of admirers who came for the story and refreshments but don't need to stay for the election. In the event, we lost one Board member, Jeremy Cussens who, like Louise, has moved to Melbourne, and gained two new ones: Ben and Alex (q.v.).

Thanks to Nik Wevers for taking over as the independent Chair for the election from Joe Fox, who carried out the task for many years and has headed south. Thanks to Joe for all his past work for EK.

Heartfelt thanks to Jeremy for his valuable contributions to the work of the Board. We wish him well and hope to see him back in the Kimberley one day.

## Christmas presents for the Kimberley

Why not buy great gifts, and support the work of EK at the same time this year? We have a range of perfect Christmas gifts for sale, including books, EK hats, t-shirts and singlets, Bio cups, raffle tickets, gift memberships, cards, and beaded birds and keyrings.

You can drop into the office (44 Blackman Street, Broome), visit us at the Broome Saturday Courthouse markets (fortnightly up until Christmas) or give us a call (08 9192 1922).

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a photographic essay by DAMIAN KELLY  
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## Thank you to all our volunteers

EK would like to say a big thank you to all our volunteers: to everyone who has helped us out on the EK Market stall, seagrass monitoring, with SKIPA, at EK events such as the Art Auction and the 20th anniversary celebrations, folding newsletters, and to everyone else who has so generously lent us a hand this year.

Volunteers are vital to the success of EK and we appreciate your support more than we can say.

We wish all our volunteers a happy and safe wet season and we hope to see you all again in the New Year!

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# EK and Friends go to the Ninu Festival at Kiwirrkurra

Neil Hamaguchi



It was supposed to be an early start: meet at 7am at the truck stop. It was a lot closer to 8 by the time myself, Albert and Zynal turned up. Sorry everyone. After a quick group photo we were on our way to one of the remotest communities in Australia: Kiwirrkurra, in the Gibson Desert near the NT

border. It's Pintubi Country near Lake MacKay, where the last two known desert people were brought in to 'civilization' in 1984.

We head east to Fitzroy Crossing and Halls Creek, in a convoy of four cars, fuel up and run south on the Tanami Road to Balgo and Mulan, arriving at about 11pm. Thanks to the Gooniyandi mob for cooking us all a feed.

Everybody was up early next morning, packing tents, rolling swags, refuelling vehicles and bodies for the 550km journey south on the Balgo-to-Kiwirrkurra track. Our convoy had grown to 10 with Paruku, Gooniyandi, and Kiwirrkurra Rangers, who led us down the track, which gets little use and less repair. We were all excited about this leg of the journey, from the Tanami through the Great Sandy into the Gibson: three deserts in one day.

The track was much as I expected: overgrown in some places, washed away in others, with side-tracks and rocky bits and lots of dust, but country and the scenery more than made up for that. The desert country was looking good at this time of year, with trees, shrubs, herbs and grasses beginning to flower or already flowering. There wasn't a weed, a fence or a cow to be seen — just a few camels.

After crossing three deserts, being given a welcome to country on a rising full moon by Kiwirrkurra elder Robert at a beautiful

rockhole full of clear fresh water, then driving around Lake MacKay (the second largest salt-lake in Australia), we arrived at Kiwirrkurra at about midnight. We unrolled tents and swags and were soon tucked away.

Each day of the Ninu Festival was broken into two. The morning session was held in a large marquee, where ideas, experiences and stories were shared by many people, including Rangers from about 20 different areas that have or once had Ninu (the Greater Bilby) on their country. There were scientists; fox and cat killers; drone, mapping, fire and weed people; Save the Bilby, PEW, CLC, Ten Deserts and EK; Melbourne, Darwin, and Murdoch Universities; DPAW, WWF, Federal Government, and even a Threatened Species Commissioner dressed as a Bilby.

The afternoons were for activities like tracking, cat hunting, visiting Ninu burrows; setting camera traps, foothold traps, the new grooming trap; collecting and analysing scats — and others. There was plenty of good food and drink provided by our hosts.

By the end of the three days the place was buzzing with Bilby vibes, which I'm sure could be felt throughout the country. A lot of good, like-minded people with good ideas and intentions met and made connections that will surely spread across this country, as the Bilby once did.

This project is funded by the Western Australian Government's Natural Resource Management Program and hosted by the Kimberley Nature Project, Environs Kimberley, which receives ongoing funding from Rangelands NRM.



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# Speed Dating — Spanish Mackerel

Jason Fowler

Have you ever flirted at 70kph with hundreds of likely partners, underwater, at sunset? Spanish Mackerel do everything really fast, including dating and lovemaking.

During the Kimberley dry season Spanish Mackerel come in close to the coast, school up and pig out. By September the frenzied mauling of baitfish slows down and the gently warming sea inspires romantic thoughts amongst the school. The ladies all school together and synchronised egg production begins in earnest. Their ovaries swell enormously, reaching 7% of their body weight as they prepare for the intense spawning season to follow. A 10 kg female can release 750,000 eggs a day and 30 million eggs for the season; no wonder they are known as serial spawners.

The gentlemen also school up together and prepare for the flurry of speed dating to follow. They have the freaky ability to store lots of sperm and their testes grow to 5% of their body weight. Competition is fierce amongst the males so they need plenty of sperm ready to drown out their competitors' attempts at fatherhood.

The ladies control how and when spawning occurs, as they want the best chances of success for their new oocytes; the gents cannot be trusted, blinded by lust with their hard-packed testes. Only after a new moon, when the tide slows, the ladies recognise the time is right and gather on one particularly juicy bit of reef known as a spawning aggregation site.

Those balmy golden evenings along the outer Kimberley reefs appear calm above the surface but beneath the waves, tensions are explosive. Hundreds of running ripe females buzzing on oestrogen and bulging with eggs crash into the sperm-packed males. Introductions, dating and love-making all happen in a blur of high-speed chaos. By nightfall the water above the reef is cloudy, thicker than before, buzzing with new embryos developing before your eyes. Calm descends, and the ladies and gents retreat into their respective schools, exhausted but ecstatic, preparing for the next evening's frenzy. Genetic research has shown that Western Australian Spaniards



are true West Aussies, with very little mixing with NT and east-coast stocks. Strangely for a pelagic fish, adult Kimberley Spaniards don't move more than 100km along the coast.

Spawning Spaniards are not found south of Exmouth, so how can there be a productive Spanish Mackerel fishery that extends all the way down to Augusta? The Leeuwin current joyride probably sweeps millions of juveniles south and fuels an entire fishery. The Kimberley reefs appear to be the most important spawning sites as Spaniards spawn earlier and for longer here than anywhere else. Commercial fishermen often target these spawning aggregations, with most of the 300 tonnes taken per year coming from the Kimberley. Luckily large spawning females lose their appetite and are rarely caught by fishermen. Males on the other hand...

Spanish Mackerel are an endangered species in the Arabian Gulf. In India 10% remain, Torres Strait 50% and on the east coast of Australia 40% have vanished. How do we prevent Kimberley Spaniards from suffering the same fate?

The Commonwealth Government is preparing plans for Australia's network of marine reserves. A good plan would protect the important Kimberley spawning sites and guarantee that the huge gathering of speed daters continues without disruption. Then the Leeuwin-current joyride could continue sharing the love with our southern neighbours.

## New Kimberley Weed Cards

Kimberley weed warriors will now have access to an enhanced weed identification and control field guide with the production of the third edition of Kimberley Weeds. First developed by Environs Kimberley in 2007 and a dashboard staple of many a dusty Toyota, the weed cards are now a handy and hardy plasticised pocket guide that contains pictures, descriptions and methods to identify and manage 65 Kimberley weeds. Species include 14 creepers, 19 trees, 17 herbs, 10 grasses and five waterweeds identified as threats to environmental, cultural and agricultural assets across the region.

The classification of each of the weeds under the Biosecurity and Agriculture Management Act (2007) is provided, while 12 Weeds of National Significance and two National Alert Weeds are highlighted as concerns to the region.

The field guide explains that many environmental and cultural weeds are not afforded a legal control status. It uses the ranking of Kimberley weeds by the Department of Parks and Wildlife in 2014 as a guide for the description of weed extent, impact and invasiveness. Eight weeds identified in the 2014 ranking as Kimberley Priority ALERT weeds are included in the guide.

The weed guide was compiled by Louise Beames, with input and photo contributions from many other passionate weedos wanting to apply enhanced weed control in the Kimberley.

Those acknowledged include: Tracey Vinnicombe, Gary Lienert, Beau Bibby, Phil Docherty, Noel Wilson, Dick Passfield, Steve Reynolds, Kylie Weatherall, Tim Willing, John Westaway, Kandy Curran, Andrew Mitchell, the Department of Parks and Wildlife and RG & FG Richardson. Partial funding for the publication was obtained through the Kimberley Nature Project with contributions from the Australian Government National Landcare Program, Rangelands NRM WA and the State NRM WA.

The 2016 Kimberley Weed Cards are now available through the Environs Kimberley office and market stall and may be purchased through our website in December.

The Kimberley Nature Project is managed by Environs Kimberley and funded by Rangelands NRM and the Australian Government's National Landcare Program.





# Mud, Mud, Glorious Mud!

Jan Lewis (Volunteer team member)

Hippopotami may love mud in all its glory but verses written at the conclusion of the recent AnnRoeBIM16 expedition to

Roebuck Bay and 80 Mile Beach suggest that, on occasions, team members were less enthusiastic about the challenges of mud-bashing.

*I flew up to Broome on the Qantas flight  
And now here I am, naught but mud in my sight  
Marc glides ahead and I follow his track  
I know I will die here and be food for the snails.  
With enthusiasm, smiles and a spring in our stride  
We board the hovercraft in pursuit of low tide  
But at One Tree we sink, our limbs are so sore  
My bright plum shorts are pink no more.*

The expedition conducted repeat surveys of benthic invertebrates at these two internationally important intertidal mudflats to discover if and how benthos abundance, diversity, and distribution have changed. In October 1999 almost the entire intertidal area of Eighty Mile Beach had been 'benthically' mapped. The benthos of the northern mudflats of Roebuck Bay was mapped in 1997, 2000, 2002, and 2006.

The information is essential for many aspects of management planning. From a birder's perspective, how to conserve the immense international values of these shorebird sites, given the use of the foreshore by the ever-increasing human population in the Broome area, is crucial. Many of the world's Great Knots (*Calidris tenuirostris*) depend on specific portions of Roebuck Bay for moulting, survival, and fuelling for migration. This is perhaps true for all the subspecies of Red and Bar-tailed Godwits (*Limosa lapponica*) found at these sites.

The expedition team of close to 100 included scientists, landowners, DPAW ranger groups (Yawuru, Karajarri and Nyangumarta) and volunteers. The young and the brave ventured onto the mud to collect samples, supported in the muddiest places by a hovercraft and, in Roebuck Bay, by the DPAW boat. Others sorted the samples. The scientists identified all animals to the level of species, ably guided by experienced mudbasher/taxonomist Dr Marc Lavaleye from NIOZ. Catering, logistical support and GIS expertise helped to keep everything running smoothly.

The work plan was built on methods developed on previous expeditions. At Eighty Mile Beach 816 sampling stations

were used along 75 km of beach. In the northern part of Roebuck Bay, 534 stations were sampled. Notes were made of surface features on the mud, including the presence or absence of seagrass and various macrofauna. In both areas the biodiversity of benthic animals was much higher than on other intertidal soft-sediment areas across in the world. From all stations, 32,500 individual invertebrates were identified and measured. 368 species were found in Roebuck Bay and 156 at Eighty Mile Beach, representing 433 taxa.

The authors of the Field Report (Piersma, Pearson et al) recommend that the WA Government consider applying for World Heritage Status for the joint marine reserves of Eighty Mile Beach and Roebuck Bay. Yeah! The Field Report begins the process of identifying changes in species' prevalence. The next step is analyses of the data, which will inform ways that these communities can be efficiently monitored over the long term.

*The expedition was organised and led by Grant Pearson and Andrew Storey, and funded by the Department of Parks and Wildlife partnership with BHP Billiton: 'Eighty Mile Beach and Walyarta Conservation Program', with in-kind support from NIOZ and Wetland Research & Management.*

## The Neem Tree

Standing tall and bright and green, I have not been long in this scene.

I come from way across the sea — India is home for me. I have some things that humans see, that makes me quite a useful tree.

From my wood nice things are made, or left alone I give good shade.

Insecticides and natural cures are present in my bits, but here in North Australia, no one gives a shit

I've been ignored and left alone for many decades now; I've gone to many places and shaded many cows.

I've fed so many birds and bats and other Aussie beasts— well, they do me a favour and disperse all my seeds.

Now I've spread to many places where I really shouldn't be; there's no competition, I'll outgrow any tree.

Boabs, gums and Jigal trees, to smother them's a breeze. What takes them an age to grow, I can do with ease.

Now over many decades I've spread from East to West, and of this sunburnt country I pick the very best.

I can survive the drier parts or even through a drought, but I don't like to feel the cold — you won't find me in the South.

I love it where it's warm and green and seasonal rains come down. The seeds can't wait to germinate when they fall on the ground.

From riverbanks to seasonal streams or any water place, I make myself well known, and take up all the space.

From TECs<sup>1</sup> and desert springs to the edge of coastal plains, across the northern landscape I'll be the one to reign.

N. Hama

<sup>1</sup>Threatened ecological communities



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# EK Annual Awards



## Dirty Socks and Broken Thongs

It's that time of year again when we announce our annual awards for notable disservice to the environment. We dream of a time when there are no worthy contestants, but that happy day seems to be a long way off.

Our **Dirty Sock Award (DSA)** for 2016 goes to South African Western Australian Pastoral Company (SAWA) for illegally clearing 825 hectares of vegetation at Beefwood Park Station, near Halls Creek. The company, owned by Nico Botha, was fined a paltry \$40,000, with \$6,596 costs.

It seems that SAWA may be a serial offender, having been charged with unauthorized clearing at Moola Bulla Station in 2012 and Shamrock Station, south of Broome, in 2014. The Shamrock charge was dropped because of 'insufficient evidence', but the Moola Bulla charge is still to be heard, along with charges of animal cruelty. We are not sorry to hear that Mr Botha has now sold his four cattle properties. The price was close to \$100 million, against which a fine of a few tens of thousands of dollars is chickenfeed.

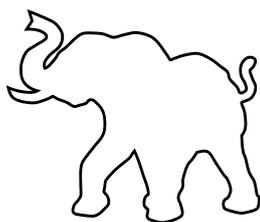
Our hotly contested **Broken Thong Award** goes to Federal Minister for the Environment and Energy, Josh Frydenberg, and our Prime Minister, Malcolm Turnbull, for blaming South Australia's commitment to renewable energy for the state's energy blackout in September, following an unprecedented storm that took out no fewer than nine transmission towers. Instead of extending a hand of help to Premier Jay Weatherill, as might have been expected at such a time, the feds delivered a kick in the ribs. It didn't seem to occur to anyone in federal parliament to point out that such exceptional storms are in all probability the result of decades of chain-dragging by our parliamentarians on both sides, whose close association with the fossil fuel industry is exposed in November's *Monthly* magazine, in an essay by economist Richard Denniss titled 'Feeding the Beast'. You can read the essay online at: <https://www.themonthly.com.au/issue/2016/november/1477918800/richard-denniss/feeding-beast>

## Bouquets

We are delighted this year to be able to present a **bouquet** to WA Premier Colin Barnett, a former DSA laureate, and his Environment Minister, Albert Jacob, for at last introducing a cash-for-containers scheme for WA, even though it won't come into effect until mid-2018.

In an unusual turnaround, our second bouquet also goes to the WA Government, this one for declaring marine parks over around 60% of the Kimberley Coast. EK is still lobbying for world-class sanctuaries within the parks.

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## New Board Members

### Alex

Born and raised in Melbourne, Alex completed a Bachelor of Arts/Bachelor of Commerce at the University of Melbourne before sidestepping office life to become a teacher, undertaking a Graduate Diploma of Education (Primary) at La Trobe University.



In the Kimberley she quickly came to appreciate the spectacular and untouched environment. Alex lives in Yiyili Community, working as a classroom and literacy specialist teacher. Alex loves community life, and watches her very busy toddler Lucy delight in her surrounds. On a steep learning curve concerning environmental matters in the Kimberley and further afield, Alex is passionate about understanding and contributing to the community beyond Yiyili Aboriginal Community School, where she will become principal in 2017.

### Ben Cavuoto

Ben comes to the EK committee well qualified for the role. He is an ecologist who has worked for two decades in Natural Resource Management, with a special interest in nature and culture conservation. He is experienced in running projects and on-ground activities and writing submissions. His other interests and skills are in wildlife and conservation biology, ecology, botany, field surveys, seed collection, banking and storage, revegetation and bushcare.

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The EK gift fund is a public fund and is listed in the register of Environmental Organisations under item 6.1.1 subsection 30-35 (1) of the income Tax Assessment Act 1997.



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