



10 Years of monitoring Seagrass in Broome

Malcolm Lindsay



The Broome Community Seagrass Monitoring Project has turned 10 years old!

The project, coordinated by Environs Kimberley and supported by Seagrass-Watch HQ, has used citizen science volunteers to monitor three seagrass sites in Roebuck Bay, four times a year for 10 years, making it one of the longest-running seagrass monitoring projects in the state.

The 10 years' worth of data was analysed by Seagrass-Watch HQ and the Seagrass Project in a detailed scientific report, and summarised with project information in a 10-Year Report Card. Both reports are available from Environs Kimberley. The results were also presented to the public as part of Roebuck Bay Working Group's Science on the Broome Coast series.

Some key points from the 10 years of the project:

- The project has been supported by over 4,247 hours of volunteer time
- Project staff have conducted numerous community activities; they have given 73 public presentations, produced 32 newspaper articles, given 40 radio interviews and distributed 2,204 project brochures
- The project has received funding totalling \$371,457 over the years, in particular from Coastwest and Kimberley Ports Authority, with significant in-kind contributions including over \$200,000-worth from the volunteers and Seagrass-Watch HQ alone
- Over 95% of the collected data was of a high quality
- *Halodule uninervis* was the dominant seagrass species, and was most abundant in late-dry to early monsoon season
- Seagrass cover varied between years, being most abundant in years with seasonally low rainfalls, which means clearer water and more growth
- The seagrass health was ranked as 'good' over the majority of years, with only 3 out of 10 years dropping to a ranking of 'fair'.

EK would like to thank the many people who have been involved over the years, in particular our fantastic project coordinators and volunteers; project partners Seagrass-Watch, Nyamba Buru Yawuru and Department of Parks and Wildlife; and our longstanding funders Coastwest and Kimberley Ports Authority.

The project now looks forward to the next 10 years of seagrass monitoring, to add increasing value to our long-term dataset, to educate and inspire new volunteers and generations, to further deepen project partnerships, and to help monitor, understand and protect the ecologically and culturally significant seagrass meadows of Roebuck Bay.





Report From The Chair

Kate Golson

Hello all,

One of the best parts of being an EK Board member is our close association with a dedicated, professional team of staff who work well together. Over the years, these aspects of the organisational culture have enabled it to adapt well to changes from both within and outside.

It is with great sadness that I report the departure of three long-standing staff members, Neil Hamaguchi, Jules Rau and Steve Reynolds.

I would like to acknowledge their enormous contributions and to wish them well in the future. Neil joined EK in 2012, Jules and Steve in 2014.

From very different backgrounds, these people share a vast knowledge of, and keen and focussed interest in, the natural world. Neil, a Broome man, has brought his deep understanding of Kimberley people and country

to EK's projects — he has been, among other things, a former pearl diver and fishing charter operator; Jules, a former Berliner, has led many volunteer conservation projects throughout the Pilbara and Kimberley; and Steve, who comes from the south-west of WA, ended up here via the wet tropics of the NT, where he completed a doctorate and undertook scientific research and teaching at CDU.

Such complementarity is a great strength of the organisation.



Neil and Bilby survey team
Photo: Damian Kelly)



Jules at launch of 10 year Report Card



Steve botanising with Nyul Nyul rangers Zynal and Devina

On 22 July we held our Annual Art Auction and, once again, the night was a great success. All credit to coordinator Tess, and to Christine, and many thanks to the artists, art centres and galleries who submitted works, and to the many generous volunteers who gave their time and energy.

All the best,

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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Thanks for helping
us to protect the
Kimberley environment



Director's Report

Martin Pritchard

The failure of the Ord irrigation project as an investment of public money

The Abbott Government's 'Developing Northern Australia' White Paper, the Barnett-Grylls Government's 'Kimberley Blueprint' and the 'Broome Growth Plan' by the Shire of Broome, Department of Planning, Landcorp and Kimberley Development Commission, have a central theme of development based on the 20th century model of the old economy – mining, fossil fuel extraction and industrial agriculture. There is a reference to other industries like tourism, but primarily these documents emphasise megascale industrial projects.

The evidence that this model of development has failed Northern Australia at a huge expense to taxpayers and massive cost to the environment is glaringly obvious. Further, it has locked us in to direct dependency on the boom and bust cycles of international commodity prices – oil and gas, minerals and agricultural produce.

A major question for us is, why would we continue along this development pathway if it has evidently failed? Why would anyone do that? One answer is that vested interests will continue to do this because it's easier than reimagining the economy and coming up with new development paradigms. Another is that this development pathway arises from an archaic worldview based on natural resources being there for us to exploit and take: the colonial worldview. It's clear to us that we need to look to the future in a different way if the Kimberley is to retain its incredible cultural wealth and natural environment. To do this we need to show how the current development push is not sustainable, and open up dialogue about the future.

The continued push for industrial-scale agriculture in the Kimberley, as well as being a serious threat to our region because of the environmental damage that it brings — the complete destruction of ecosystems, total loss of plants and animals, and the flow-on effects of pesticides and fertilisers



— is a very poor investment of public money. This is why we commissioned the Australia Institute to produce a report on the investment of taxpayer funding into the Ord irrigation project. While a few people have misinterpreted the report as an attack on Kununurra, it is really an assessment of the return on the investment of \$1.4 billion of public money. The findings speak for themselves: for every \$1 spent, a return of 17 cents; a total of 260 jobs in agriculture; the Barnett-Grylls investment of \$364 million of public money since 2009, resulting in 60 new jobs — a cost of \$5.5 million per job.

While the Minister for Regional Development and Agriculture, Alannah MacTiernan, defended irrigation in the Ord, she also acknowledged that the project was problematic "...critiques of the costs of the Ord investment are legitimate...".

The main messages from the report are that, if public money is going to be spent on development in Northern Australia, it should be clear what the aim is — is it for jobs? return on investment? — and a cost-benefit analysis should be done prior to any investment. The Australia Institute report "Dam the expense — *The Ord River irrigation scheme and the development of northern Australia*" shows that a much better return and benefit to communities can be gained through investing in health, education, communications and tourism.

We are keen to see that lessons from the past are learnt, and that mistakes are not repeated.

The report is available on the Australia Institute and Environs Kimberley websites.

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Save the Date

ENVIRONS KIMBERLEY'S AGM

Saturday 14th October 2017

3–4 pm EK achievements for 2017
— Presentations by Director and Staff

4–5 pm AGM
Lotteries House

More tips to improve the sustainability of our daily lives without too much effort.

THE END OF PLASTIC?

We may be about to witness the beginning of the end of the Age of Plastic. Anyone with an interest in the topic has surely seen one or more episodes of the ABC TV's War on Waste. It is reported that the sale of Keepcups shot up after the episode about disposable (but not recyclable) coffee cups.

In Australia there have been innumerable campaigns against plastic bags, plastic bottles, plastic wrap in supermarkets. In recent years we have had Ban the Bag, Scrap the Wrap, and numerous other groups working away to rid our environment of plastic. A recent change.org petition against plastic wrap got more than 230,000 signatures and was presented to Woollies and Coles in Melbourne by dancing bananas. Readers on line should click on this link for a five-minute video of the action: <http://alexsmee.com.au/video/alexandadam/> (others can copy the url onto your computer). It's a hoot, and you may recognise a banana you know.

The Barnett Government, which infamously prevented Fremantle from banning plastic bags a few years ago, set in train (just before it perished) a process to introduce a 'cash for containers' scheme next year, which the new Labor Government says will start in January 2019.

Under pressure, Coles and Woollies have announced that they will get rid of their flimsy single-use plastic bags (does that include the ones on a roll in the fruit-and-vegetable section, I wonder?). Unfortunately, they are going to replace them with thicker plastic bags, for which customers will be charged, and which they can in theory re-use. I have been assured that supermarkets in the UK have already introduced thicker bags, and that most people won't pay the few pence they cost and are learning to bring their own shopping bags, just as we used to do in the days before saturation plastic. So there is some hope for the remaining turtles, whales and dolphins.

And remember: recycling is all very well, but not creating litter in the first place is much, much better. Any so-called environmentalist buying bottled water (news: perfectly good water comes free out of the tap), or visiting Molly Bean without taking along a reusable coffee cup, deserves a good spanking.

Breaking News

Bulldozers have been seen clearing a road near Horizontal Falls. Rio Tinto is exploring for copper within ten kilometres of the Horizontal Falls National Park. Tourism operators are objecting. So is EK.

Ruminating with MAD COW



FROM THE MOUTHS OF BABES

It often strikes me that a child has a better grasp of right and wrong, sense and nonsense, than most adults do.

A child typically has a strong notion of fairness. The lament 'That's not fair!' falls from the lips of most children often enough. If you ask a child if it's fair that some people are stinking, rotten rich (not that you would use such epithets with children) while others starve, you can predict that the child would say it wasn't fair, and might have some trouble believing that such a state of affairs is real. What's more, the child would expect adults to remedy such unfairness immediately.

I remember as a child, the concept of refugees, which I understood to mean people fleeing their home country in time of war, elicited in me a sense of compassion. I imagined what it must be like to be forced to run away from home, leaving everything behind, and throw yourself on the mercy of strangers. I took it for granted that everyone would feel as I did, and would open their hearts and homes to people in such distress. I was fully an adult before I started to hear disparaging references to 'reffos', and expressions of resentment towards them. I was surprised and confused — how can anyone resent other people in peril? But it has got worse: resentment today has become callous indifference or, worse, open hostility. Some of us may still open our hearts to suffering strangers — but our homes...?

Another thing a child would see with clarity is the value of wildlife. Most children love animals and are excited by images and films of big ones such as elephants, lions and giraffes. That is why zoos are so well attended by the young. If you asked a child if it was all right to shoot elephants and lions for fun, he or she would be appalled. Yet a surprising number of adults think it is fine, witness the notorious American dentist who in 2015 shot a half-tame and collared lion known as Cecil in a canned hunt (I have since learnt that Cecil's son, also collared, met the same fate as his father this year). The dentist expressed remorse because his victim was Cecil and the world came down on him for it, but he remained defiant about hunting (even canned hunting), which he said he loved. I recently saw on Facebook the vintage trophy-photo of a white-man-with-gun posing with foot planted on the head of a dead elephant. To the child in me the image evoked horror, as well as contempt for the hunter (what on Earth did he think he had achieved?), but to the enthusiasts on the site the photo epitomized the glory days of African big game hunting.

As for mining and burning coal, and opening new coal-fired power stations while promising to reduce carbon emissions: a child might not grasp all the details, but even a two-year-old knows you can't have your cake and eat it.

The Kimberley Nature Project

Malcolm Lindsay



The Kimberley Nature Project (KNP) has been tracking along as per usual... but we forget that the usual is not known to everyone. So I thought I might list the projects KNP team is working on at the moment.

First things first: what is the Kimberley Nature Project? It is all the on-ground conservation projects run through Environs Kimberley. It was started by Louise

Beames 10 years ago with a small weed project and has grown to incorporate numerous projects, staff and project partners. Here is a snapshot of what projects are keeping us busy at the moment.

Kimberley Community Seedbank

Lead KNP staff: Ayesha Moss

Funders: WA Government NRM program, WWF and the Belgiorno-Nettis Foundation.

The seedbank provides seed-storage facilities, trains Aboriginal Women Rangers in seed collection, and acts as a not-for-profit cooperative to sell sustainable plant products such as seed packets, bush tucker or seed for revegetation.

Kimberley Neem Project

Lead KNP Staff: Neil Hamaguchi

Funders: WA Government NRM program

The project has been working with Yawuru, Nyul Nyul and Karajarri Aboriginal Rangers to remove these noxious weeds from key ecological communities. It has also produced a Neem Weed Management Plan for the Kimberley.

Monsoon Vine Thicket Revegetation Project

Lead KNP Staff: Kylie Weatherall

Funders: Australian Government National Landcare Program

This project has worked with Broome Shire, Nyamba Buru Yawuru, Watercorp, Department of Parks and Wildlife, Mumabulanjin and North Regional TAFE to prepare, mulch and revegetate two Monsoon Vine Thicket sites: the old sand quarry near the Pistol Club and the old Gubinge Road crescent in Minyirr Park near De Marchi Road.

Mapping the Cable Beach Ghost Gum, *Corymbia paractia*

Lead KNP Staff: Steve Reynolds

Funders: Eucalypts Australia

This project has worked with Nyamba Buru Yawuru, SKIPA and Tim Willing to map the locally endemic white gum, *Corymbia paractia* or Gunurru, which only occurs on the Broome Peninsula and out to Crab Creek Road and Coconut Wells: nowhere else in the world!



The old KNP team. From left to right: Neil Hamaguchi, Ayesha Moss, Steve Reynolds, Kylie Weatherall, Julia Rau, Malcolm Lindsay. Photo by Damian Kelly.

Dampier Peninsula Monsoon Vine Thicket Project

Lead KNP Staff: Malcolm Lindsay

Funders: Rangelands NRM

Our ongoing project working with Yawuru, Nyul Nyul and Bardi Jawi to manage weeds, fire and land-clearing threats to this Nationally Endangered Ecosystem — indeed, the only Nationally listed threatened ecosystem in WA to the north of Geraldton! And that's not because it is the only one that is under threat, just that the Kimberley Nature Project put all the science together to get it recognised and listed as threatened.

Supporting the Wathaurong conservation land management

Lead KNP staff: Louise Beames

Funders: Wathaurong Aboriginal Co-operative

Did you know that the Kimberley Nature Project is no longer running only in the Kimberley? Louise is working with the Wathaurong people near Geelong, Victoria, to further their conservation land management, business planning, native grass harvest and Indigenous Protected Area planning.

I think that is enough for now, and that's not even mentioning the Seagrass Project, Kimberley Bilby Project, Capability Project, our work with Bunuba to produce a Healthy Country Plan and plant book, or our consulting work for Karajarri Rangers. That's why I feel a little tired sometimes.

But while we are talking all things Kimberley Nature Project, we do have a few sad farewells to make. Firstly, Julia Rau, our fantastic seagrass project coordinator, has decided to focus fulltime on her amazing photography work (www.juliarauphotography.com). Secondly, our brilliant ecologist Steve Reynolds is moving back to Darwin with his lovely family Carla and Luka. And lastly, our bush poet Neil Hamaguchi has moved on to become the new Nyul Nyul Ranger Coordinator. They have all been wonderful staff members, bringing their own strengths and quirks, and will be missed greatly!

Zombie dams back again

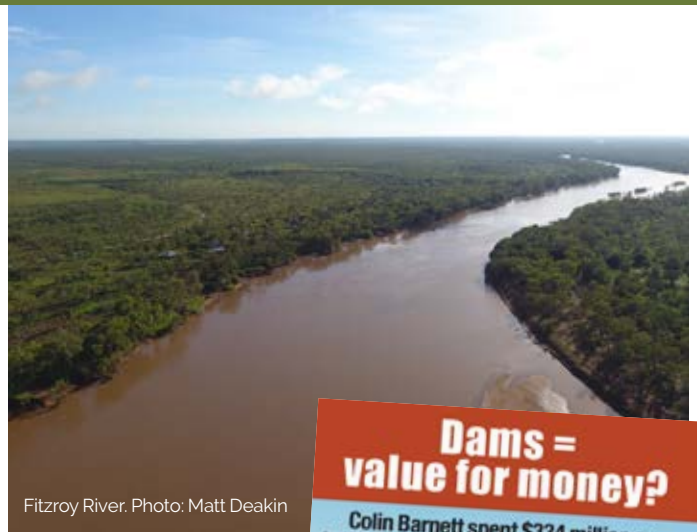
It's hard to believe, but a plan to dam the Fitzroy and Margaret Rivers has resurfaced. The company KIMCO, run by cotton farmer John Logan, has repackaged the plan from 20 years ago to turn the West Kimberley into a 'cotton powerhouse'. Dams at Dimond and Margaret Gorges are central to the plan.

Fortunately, the Labor Party promised that there would be no dams before the election in March, and it appears the new Labor Government is sticking to its plan for National Parks to ensure future protection from these kinds of damaging proposals.

Minister for Regional Development and Agriculture Alannah MacTiernan came out against the plans: "We don't believe the case has been made for the damming of the Fitzroy River", and former Federal Minister for Northern Development and Resources Matt Canavan acknowledged the opposition to such a plan: "There has been significant opposition from Indigenous and traditional owner groups in the past."

While Minister MacTiernan provided some comfort in her comments about government opposition to the dams, she flagged the potential for agricultural development using groundwater, which in itself poses major risks to the health of the Fitzroy River.

The WA Government has promised protection and a management plan for the Fitzroy River. We are calling for a legislated buffer to protect the river, floodplains and tributaries in perpetuity from large-scale mining, irrigation and fracking.



Fitzroy River. Photo: Matt Deakin

We'll be calling for your support for this very soon.

Read more about this story on ABC (see link on our website or Facebook page).

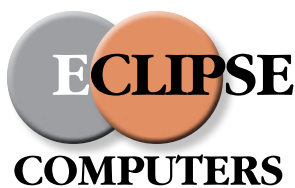


Plant of the Month Steve Reynolds

The Yellow Ball Flower *Mallotus nesophilus* on the Dampier Peninsula is generally confined to Monsoon Vine Thickets behind coastal dunes. It extends to the northern Kimberley but in recent surveys of swale thickets at Gourdon Bay with the Karajarri Rangers, we encountered this tree at the base of the dunes. Quite a number of the trees were in flower, with characteristic dangling yellow flowers and fruit.

This tree, which grows to six metres, is in the family Euphorbiaceae, one of the 'difficult' families, which can lead to a condition in botanists called euphorbiaphobia (thanks Malcolm). The family (including the recently separated members of the Phyllanthaceae) has many members that look similar to each other, including the shrubs *Breyenia cernua*, Snowball Bush *Flueggea virosa* and *Bridelia tomentosa* in the Broome region.

In the northern part of the Dampier Peninsula this plant is called badarrbadarr and the fruits are quite tasty. They are eaten when they are pearly and translucent, and should be forming fairly soon.



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EK's Premier art event — fun for everyone

This year's 14th annual Environs Kimberley Art Auction was, once again, a great success.

Over 70 artists contributed and we displayed more than 100 pieces of art — 74 of which went under the hammer of the indefatigable auctioneer Chris Maher. The live auction generated some fierce bidding, especially for a framed original linocut print by the late Jimmy Pike, the fine papercutting works of Jacky Cheng and a striking piece by Sonia Kurarra from Mangkaja Arts in Fitzroy Crossing.

There was also lively competition for the pieces offered in the silent auction, while the raffle for a stunning pair of paintings by Warmun artist Phyllis Thomas gave everyone an opportunity to get involved in the action.

This year's event was attended by 500 people from across Australia, many of whom have now gone home with a little piece of the Kimberley to call their own.

Each year the EK Auction provides a great opportunity for artists from across the Kimberley to display their work and sell pieces to a crowd of enthusiastic art buyers, and the standard at this year's event was exceptional.

The annual Art Auction is EK's major fundraising event and preliminary estimates show that this year over \$30,000 was raised for EK's work. We really appreciate everyone who has supported this event over the years and we would like to send a huge thank you to all the artists, galleries, volunteers and local businesses who made this great occasion possible once more.



Artists Paul Boon and Lloyd Kwilla. Photo: Kevin Smith



Mick Connolly bids, artist Steve Cutts watches. Photo: Kevin Smith

Concert for the Kimberley

EK's 21st Birthday was a big one – but what else would you expect when you have friends like John Butler, Steve Pigram, The Mexicans, Tanya Ransom, Elwood and Albert Grey, Paul Boon and Wil Thomas?



John Butler. Photo: Damian Kelly

People flocked from all over the Kimberley for this very special opportunity to celebrate the Kimberley with John Butler, and a host of top quality local musicians, right here in Broome.

With over 800 people attending, and over \$30,000 raised for the ongoing work of EK, this second-ever Concert for the Kimberley was so successful that we hope to make it an annual EK event.

EK would like to send the biggest thank-you to John Butler, for making the trip all the way to Broome to put on this concert for us, as well as to all the other musicians, and to everyone else who helped out to make this great night possible.



John Butler and Paul Boon. Photo: Damian Kelly

Monsoon Vine Thicket Weeding Guide — Broome and the Dampier

A Weeding Guide has been developed to support Aboriginal ranger groups, community groups and other organisations working in Broome and the Dampier Peninsula to protect and manage the Endangered monsoon vine thicket. The Guide provides these groups with a resource to identify the most commonly occurring weeds in MVT and strategically manage them using an ecologically sensitive method adapted for the North-west.

Monsoon Vine Thickets (MVTs) are a dry rainforest-type ecosystem on the Dampier Peninsula and one of the Kimberley's most endangered plant communities. MVTs are culturally important to Aboriginal groups and contain a rich variety of plants, animals and cultural resources, including bush fruit, medicines and water sites. Weeds threaten the fragile ecology of MVTs by smothering trees and shrubs, often promoting wildfire and further weed invasion.

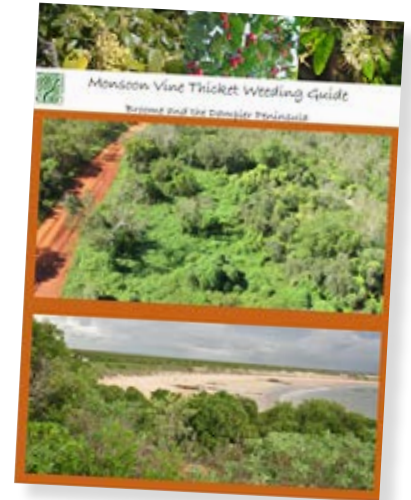
The Weeding Guide provides safety tips and strategies for reducing risks and keeping people and Country safe when doing weed works. Descriptions, invasiveness, seasonality and control methods are detailed for nine of the main weeds encountered in MVTs, including the Neem tree, voted No.1 Kimberley pest in the 2015 Kimberley Weed Forum, and Bellyache Bush, a Weed of National Significance. Mug shots of a further 18 tree, shrub, herb and vine weed species are also provided for ready identification and control.

The Monsoon Vine Thicket Weeding Guide was developed by EK's Kimberley Nature Project with funds from the Australian Government National Landcare Programme and Rangelands NRM WA.

Hard copies will be distributed to working groups and digital copies can be downloaded from our website.

Contact: knp@environskimberley.org.au

Louise Beames



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



Water Corp's 'Plant a Local Community' coming to you soon

SKIPA, through the tireless efforts of Kylie Weatherall and Louise Beames, have been lucky enough to obtain a grant to promote Kimberley plants and LandCorp's Broome North Botanic Park. The grant has been made available through the generous support of Water Corporation and Lions Australia.

The theme of the grant is 'Plant a Local Community', and it aims to involve interested people through activities as diverse as looking at ways to recycle grey water, identifying weeds and indigenous plants, helping to improve one of the plant communities in the park, and learning about Aboriginal plant usage.

The open morning will be held at the Broome North Botanical Park in mid- to late September and SKIPA is looking for volunteers to assist in planning and preparation. Please contact Anne McCosh on 0400 669 990 if you're interested in helping out.

SKIPA will be raffling off a copy of *Broome and Beyond* (kindly donated by Gary Lienert) at the open day. Keep an eye out for flyers advertising the event, and please come along and make the day a success.



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Appreciating Nature: Feral Animals

Steve Reynolds



In a previous newsletter I discussed some issues associated with weeds in northern Australia. This time I would like to focus on invasive animals or FERALS!

These come in a variety of forms, whether it be predators (cat and fox), herbivores (rabbit, goat, camel and cattle), omnivores (feral pig), toads

hopping their way west, carp in the Murray Basin, or the ants in your kitchen. Some ferals go more-or-less unnoticed, like the House Mouse which is widespread and at times highly abundant across the inland. Others are a bit more obvious, for example the estimated one million camels now roaming the deserts of central Australia.

One question that needs to be asked, and which rarely has a definitive answer, is — what are the effects of introduced species? The point of managing introduced animals is to minimise their impact on the 'fragile' environment and its native inhabitants. For many species we are fairly sure that they have dreadful effects on native animals, but there is rarely the research to demonstrate these effects with conviction. In many cases we need solid evidence that will help sway politicians to do something (or at least announce something).

A seemingly clear example is that of feral cats, which have been a disastrous introduction to Australia. In the last two hundred years, in combination with other factors (cattle, altered fire regimes etc.), they have probably pushed a few mammals over the brink. They certainly eat lizards and small mammals, not to mention birds, and there are enough of them to do plenty of damage. Although, like all predators, they are at low densities, the latest estimates suggest that not only are they everywhere (99% of the continent), but there are several million cats in Australia. Cat numbers are between 1.4 and 5.6 million, depending on whether there has been a period of drought or good rainfall.

In order to fight the cat scourge, it is necessary to understand thy enemy. Researchers in the Kimberley have come up with some novel techniques to find out what feral cats are up to. Cats are searched out by sniffer dogs, tranquilised and collared, and then followed using radio tracking.

One of the most interesting findings has been the interaction between cats and fire. It is now clear that cats will travel outside their normal home ranges to areas that have recently been burnt. Here they pick off the native animals, which have nowhere to hide. This phenomenon has recently been demonstrated also in Cape York (north Queensland), suggesting that it is happening from coast to coast, right across the savanna country. It may partially explain the recent declines of mammals in the north. Other studies have shown the importance of cover in protecting natives from feral predators; cats are more successful hunters in open habitats. It seems that cats by themselves are bad enough, but the double whammy of cats and fire is wiping out the native fauna.

Art Raffle – thanks to everyone for taking part

Ahead of this year's EK Art Auction, we raffled two beautiful works by the senior Warmun artist, Phyllis Thomas. With only 150 tickets on sale at \$50 each, this was a rare opportunity to win two paintings by a renowned Kimberley artist, who is represented in major public and private collections across Australia.

The raffle was drawn at the Art Auction on 22 July 2017 and the winner was Ron Richards (ticket #29).

EK would like to send a huge thank you to everyone who bought a ticket in this year's Environs Kimberley fundraising Art Raffle, and a big congratulations to the lucky winner.

The sale of these raffle tickets has raised much-needed funds for the work of EK this year.

Using your Will to protect the Kimberley

One of the most significant ways to leave a lasting legacy for the nature of the Kimberley is to leave a gift in your Will to Environs Kimberley.

Large or small, when you make a bequest you are helping to provide for the future of the Kimberley. You are giving Environs Kimberley the power to speak out and act for our region and ensure its protection for future generations.

Please contact us if you'd like advice on making a bequest to EK.

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Sawfish – Do-it-yourself conception

Jason Fowler

The dark, muddy bottom of King Sound is a fearsome place, swirling with raging tides and shadowed by Bull Sharks and Crocodiles. Sawfish

love this dangerous habitat, wielding their deadly mediaeval-looking saw with all the finesse of a Jedi Knight. The rostrum or saw is highly sensitive and can detect tiny vibrations in the water, enhancing its Jedi-like abilities. It is also used to answer one of the oldest questions in the animal kingdom: what is going on in the mind of the opposite sex?

Romance for Sawfish is likely to be a rough and unpleasant affair, particularly for females. Firstly, the male tries to get close and cosy with his lady without slicing her eyes out or tearing huge gouges down her flanks. Then he tries to get a good grip on her, which is difficult when you are seven metres long and 40 years old, and are being flung around by the raging tide with a less than enthusiastic lady. He usually achieves this by biting her pectoral fin hard, ensuring she can't get away. Then out comes not one, but two penises or claspers so that he can ensure success no matter what side of the bed he is on. It gets worse... The claspers are rough and barbed so that when he withdraws the female's bits are grated and torn. This selfishly ensures he is the only father.



Freshwater Sawfish. Photo: D Morgan

Now imagine the pain of trying to give birth to eight baby Sawfish! It's not as bad as it sounds. Baby Sawfish are kind to their mum as their rostra are softer and coated with a thick goo that protects the mother's womb during birth. Once the baby Sawfish hit the water the goo falls off, the rostrum hardens up and the real journey begins. Achieving a 500-km swim upstream in the wet season floodwaters results in an indulgent four-year holiday in luxurious freshwater pools, where the young grow fast and reach over two metres long. It's not until they migrate back to the sea that they become mature and complete the life cycle.

Perhaps the brutal nature of heterosexuality for female Sawfish led to a remarkable new ability – parthenogenesis, or do-it-yourself procreation. Recently, researchers in Florida have proven that female Sawfish can become pregnant in the complete absence of males, a first for large vertebrates. Was the mother just bored of rough, violent sex and decided to try doing it herself? Or did she decide to do the parthenogenesis thing because there simply were no males around to have sex with?

Globally, Sawfish populations have been devastated, with all five species listed as endangered or critically endangered. The Fitzroy River and King Sound remain as the most important stronghold for Sawfish, and particularly Freshwater Sawfish, left in the world. This is because it is one of the very last big tropical rivers that has not been dammed, overfished, sucked dry or polluted. Even the Ord River used to have healthy populations of Freshwater Sawfish but the construction of the two dams put a swift end to that. Today, the Camballin barrage is the only major obstacle for migrating Freshwater Sawfish. Researchers net juvenile Sawfish every year and carry them above the barrage and release them to ensure some migration upstream still occurs.

If the large cotton irrigators and cattle tycoons ever succeeded in damming the Fitzroy River they could squarely be blamed for signing the death warrant of one of our most easily recognisable and charismatic species. Should we let it come to that?

Mount Jowlaenga — Mineral Sands Mine

You might be wondering what is happening with the Sheffield Resources mineral sands mine proposed for Mount Jowlaenga, 100km from Broome? The proposal is to strip-mine 1,635 hectares of land to extract heavy mineral sands — zircon, ilmenite and titanium — and bulldoze another 645 hectares for infrastructure. These minerals are used to make white paint (for white goods), ceramics, prosthetics and weapons-grade metals. Radioactive materials, uranium and thorium, are a by-product of the mining.

If the mine goes ahead, 13 billion litres of water would be used every year: twice Broome's consumption. The electricity use would equal approximately 75% of Broome's use, and it is our understanding that the possibility of using gas fracked from the Valhalla 2 well area as the energy source has been discussed.

The Environment Protection Authority has set the level of assessment at the 'Public Environment Review' level and we have objected to the proposal in our submission because of the unacceptable negative impacts to the environment, the

lack of evidence to show that rehabilitation can be successful, and the scale of the project. We are very concerned that if this mine goes ahead, it will open up the west Kimberley as a global-scale mineral sands province. Sheffield and other companies, such as Iluka, have thousands of square kilometres of tenements across the region.

Despite not yet having EPA approval, Sheffield has applied to undertake what it describes as 'preliminary works' to further assess the tenement area for minerals. It is applying to mine 150,000 tonnes of mineral sands for this 'assessment'. EK has also objected to this, on the grounds that it pre-empts the EPA's decision.

Sheffield is pushing very hard for approvals and a social licence. It has said that it has set up a team of Aboriginal Rangers and employed a number of local people for the project. Despite this, the traditional owner claimants for the mining tenement area are currently (August 11, 2017) objecting to the granting of the mining tenement in the Federal Court.

Our submissions to the EPA are available on our website, or email director@environskimberley.org.au for a copy.

Sad Day Happy Times

I'm sad to say today's the day I'm gonna leave EK, for the funding's at a minimum, there's not much left for pay, so on this coming Monday I start at Beagle Bay.

Now working with EK has been a joy to me, all those lovely people with cake and cuppa tea, working out on country the kind of life for me.

The work was often hard and hot, especially killing weeds, but if we didn't do it they'd just drop lots more seeds.

Listening to the birds each day and seeing some quite rare, and having many moments of wishing you all there.

Like finding all the Bilbies when we thought they weren't around; the Dreaming Story told us they came first to this town.

Gouldians and Fairy-wrens: well we know where they are, and take care of their habitats, we don't leave a scar.

MVTs are safe today because we really care; without EK and Rangers I don't know how they'd fare.

I met so many people, some countrymen of mine, and no matter where I travelled I was welcomed all the time.

From coastal dunes to ancient reef to rugged sandstone range, to rivers deep and full of life and endless desert plains.

I'd gladly turn the clock right back and do it all again.

Neil Hamaguchi



EK Needs You —

We are desperate for market stall volunteers

Frequenter of the Saturday morning Courthouse Market will have noticed the absence of the EK stall on a few occasions this year. We have simply run low on volunteers. Some good souls have remained stall volunteers year after year — some have grown old minding the stall. Eventually, there comes a time when they leave town or have to retire. But where are their replacements?

Being a volunteer on the stall is not onerous, especially if we have a full complement of volunteers to call on. Most volunteers do it in pairs once a month (the more vollies we have, the less often they are called on to do it) for two-and-a-half hours: the early shift from 7.30 to 10.00 am, or the second shift from 10.00 am to 12.30 pm. The early shift includes setting up: mainly putting up the stand and arranging our merchandise and information on the table. The later shift includes packing up — putting merchandise and petitions etc back in their boxes and folding tables, shade etc. ready for the trailer.

The stall runs from Easter to Christmas, with a three-month break during the Wet. Where else do you get a three-month holiday every year? What's more, in the last couple of months before Christmas, the stall only runs once a fortnight, halving the number of shifts required from volunteers.

The market stall is our main contact point with the public. Besides selling merchandise such as T-shirts and bags, volunteers talk to people interested in what we do, who may become members, volunteers or donors. You never know who you will meet.

Newbies will not be left to your own devices, but will work with an experienced volunteer who will show you the ropes. You'll have a chance to learn about our work and campaigns. Volunteers find the shift enjoyable, playing shop and talking to people, and the two vollies can take turns to look around the market, buy coffee and get their veggies for the week.

We also need drivers willing and able to take the EK trailer to the market at 7am on Saturdays and pick it up again at 12.30, to give a spell to the dedicated drivers who have been doing it for us so faithfully. Drivers help unload and reload the gear for the stallholders.

If you have been feeling the need to 'do something' for EK to help out, one of these jobs could be for you. We will be hugely grateful.



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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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More members and friends are choosing to give an automatic monthly donation to EK. This means you don't have to think about it and we have the security of knowing how much you want to give us through the year.

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Please ring Christine if you have any queries on (08) 9192 1922.