



## Kimberley Nature Project Surveying the Vine Thickets of the limestone ranges on Bunuba country

The Kimberley Nature Project has teamed up with the Bunuba Rangers to gather information on Monsoon Vine Thicket (MVT) patches concealed in the limestone labyrinths of the Oscar and Napier Ranges.

The MVTs are likely to be important areas for supporting biodiversity and may be threatened by fire, weeds, and cattle. They are listed as a Priority 1 Ecological Community for the Kimberley region, meaning they are poorly known and very restricted in distribution. The Bunuba Rangers and Environs Kimberley are attempting to shed some light on their ecological and cultural importance.

We felt that our experience and knowledge gained while working with Aboriginal Ranger groups on the Vine Thickets on the Dampier Peninsula would contribute to our collaboration with the Bunuba investigating this new type of Vine Thicket. However, unlike the thickets of the Dampier Peninsula, which had been investigated even before EK by the Broome Botanical Society, the limestone ranges' MVTs are largely unknown to scientists.

Ayesha and Mal mapped likely MVTs using Google Earth. Then KNP staff Steve, Malcolm and Ilse, and Bunuba Rangers, conducted two weeks of reccies through the ranges to ground-truth (confirm) the mapping and conduct preliminary ecological assessments of the patches — dominant species, vegetation structure and evidence of weeds, ferals and fire. Fieldwork was challenging; the VTs are locked away in labyrinths of limestone, terrain formidable. Valleys of ticks had to be traversed, and fortress parapets scaled. The Thickets tangle over boot-shredding limestone, hiding entrances to hidden caves. We're not in Minyirr Park anymore, Toto. The Google Earth mapping was encouragingly accurate — patches that appeared as vine thicket on satellite images generally turned out to be VTs. Mapping the boundaries of patches would be nearly impossible on foot. The MVT was dominated by species largely restricted to vine thickets across Northern Australia, such as the three-leaf Black Plum (*Vitex acuminata*), *Celtis philippinensis*, Rock Fig (*Ficus platypoda*),

Currant Bush (*Grewia breviflora*), White Currant (*Flueggea virosa*), and Snake Vine (*Tinospora smilacina*). The majority of patches surveyed were healthy, the limestone fortress protecting them from fire, cattle and weeds. The worst patches were along gullies where cattle, fire and weeds such as Passion Vine (*Passiflora*) and Rubber Bush (*Calotropis procera*) had caused moderate damage.

Like those on the Dampier Peninsula, the Limestone Ranges Vine Thickets are culturally important. Many patches are associated with formerly-inhabited caves and rock art. One archaeological study excavated a campsite older than 40,000 years near Windjana Gorge, finding that the same Vine Thicket species observed today (e.g. *Celtis* and *Vitex acuminata*) have been feeding people for thousands of years.

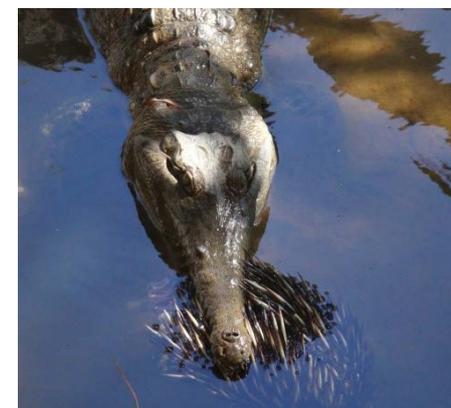
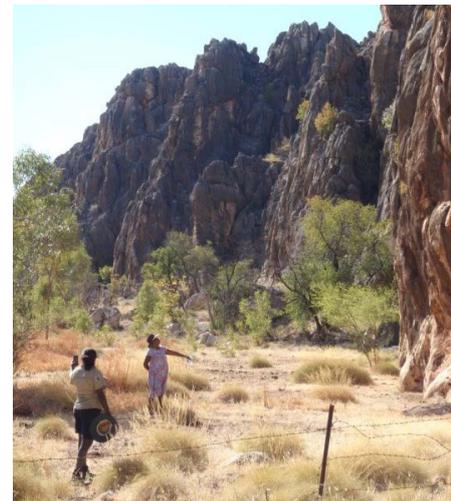
New endemic species are being found in limestone VTs, e.g. certain land snails, reptiles and plants. Dr. Paul Oliver (ANU) is describing two new species of gecko. With research assistant Tom Parkin, Paul took part in the first week of fieldwork, extending the known locations of these species whilst exchanging ecological knowledge with Bunuba Rangers and elders.

We spotted likely Purple-crowned Fairy-wren habitat at Brooking Gorge, Brooking Springs and Wire Springs, and Microbats in the endless cave systems. Also spotted were Painted Finch and Dragon Trees in Brooking Gorge, a Black Bittern at Wire Springs, Merten's Water Monitor, and a freshwater crocodile drowning an Echidna before eating it at Windjana Gorge!

Environs Kimberley will write a report documenting the ecological information of the Vine Thickets, site locations and the levels of threat. This will be submitted to DPaW, so increasing the scientific community's knowledge of this eco-cultural ecosystem.

Environs Kimberley will continue scaling the Bunuba Bastions with the Bunuba Rangers to study the Vine Thickets. The next trip is planned for closer to the wet when more plants are fruiting and flowering.

Ilse Pickerd



top: Mary Aitken and Ranger KO inspect a limestone wall for rock art and vine thicket. middle: Dr Paul Oliver sharing his knowledge about geckos. bottom: Freshwater crocodile drowning a Short-beaked Echidna in Windjana Gorge  
photos: Malcolm Lindsay

This project is managed by Environs Kimberley, through funding from the Australian Government and Rangelands NRM



Australian Government





## REPORT FROM **THE CHAIR**

Hello all.

In June this year, I read a fascinating article by Jess Hill in the *Monthly* magazine, entitled *Power Corrupts*. Ever mindful of adding to email detritus, I forwarded the link to a select few friends but this exposé of “possibly one of the greatest rorts in Australian history” (I would strike out the qualifier) deserves to be shared as widely as possible.

The story has all the ingredients of the classic conspiracy thriller: political intrigue (which includes three former NSW energy ministers tarnished with corruption); Big Brother-type regulatory arrangements; little people losing out to big business; and the ‘dumbing down’ of the masses by super-efficient spin-makers. Thank God for serious investigative journalism.

The central question it sets out to answer is why the cost of power has doubled over the past several years so that Australians are now paying among the highest charges in the developed world and disconnection rates are rising alarmingly. This, at a time when the electricity industry’s profits rose by 67%.

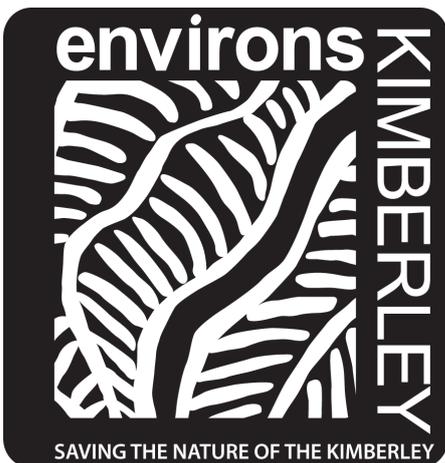
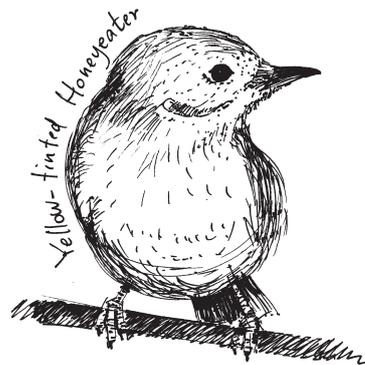
Hill reveals that the single biggest reason is that electricity companies across the country have been on a \$45 billion spending spree to build infrastructure (poles, wires etc) and then passed on the costs to us. And, if that were not startling enough, 50% of the infrastructure built is not needed!

Meanwhile, the Abbott and conservative state governments peddle the untruth that the carbon tax is to blame when, in actuality, it accounts for just 9% of the price rise. There is much more to the story than space permits here, but in my next report I will cover the consequences of these events for the solar energy sector generally and in the Kimberley. In the meantime, you can access Hill’s article on <http://www.themonthly.com.au/issue/2014/july/1404136800/jess-hill/power-corrupts> (*The Monthly* allows non-subscribers to read three articles free per month).

As part of the 2014 ‘Corrugated Lines — A Festival of Words’, EK had the pleasure of organising two events: with Nandi Chinna at Minyirr Park (discussed later in this issue) and with writer and artist Kim Mahood at University of Notre Dame campus. Kim’s choice of topic – whether the gaps in understanding between western concepts of environmental protection and Aboriginal notions of caring for country can be bridged, and her positive views on what is possible in spite of the enormous challenges — is shaped by the many years that she has been working with the desert people of the Mulan area who are the traditional owners for Paruku/Lake Gregory. The room was packed even though it was the final session of the Festival and coincided with a Paul Kelly concert, and there were plenty of stimulating questions and much subsequent discussion. We will try to lure Kim back in 2015.

Cheers, Kate.

the EK team



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### ACKNOWLEDGEMENTS

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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.

# DIRECTOR'S REPORT

*It may be hard to believe but there are quite a few large, complex proposals on foot in the Kimberley right now. Fracking in the Canning Basin, coal in the Fitzroy Valley, irrigation in the Fitzroy Valley and the Ord, offshore oil and gas in the Browse and Canning Basins, as well as the many pressures that come from weeds, feral animals and inappropriate fire regimes, mean we have a lot of work to do. There are also positive government initiatives for marine parks and a national park on land that need to be pinned down and delivered as per the promises of the last couple of elections.*

Fortunately, we have an exceptional team of people at EK, all working towards protecting our special environment here in the Kimberley and tackling these challenges. There's the Kimberley Nature Project led by Mal with advice from Louise who's on maternity leave (again – nice one Louise!) and the team of Kylie, Steve, Ilse, Ayesha, Neil (who is now on loan to the Department of Parks and Wildlife to run the Geikie Gorge tours) and Jules, who runs the Broome Community Seagrass Project. Then there's Caitlin running the Freshwater Project in the Fitzroy Valley and Jason working on the Roebuck Bay and Great Kimberley Marine Park. Tying it all together, managing the offices, accounts, volunteers and events such as the annual Art Action are Christine and Tess.

To make sure we're heading in the right direction we are steered by a dedicated Board chaired by the indefatigable Kate Golson. Craig, Carmel, Bruce, Kat, Ziggy, Peter, Jan and Kate bring an eclectic mix of skills and experience to guide our journey to a better future for all in the Kimberley. On top of that we have special advisers like Pat Lowe, who provide great wisdom and guidance.

We continue to face some extreme pressures to protect the Kimberley against what sometimes appear to be insurmountable odds. The team at EK has managed to hold it together time after time with good humour and spirit, and it's an absolute pleasure to be working in an organisation with such a dedicated group of people.

It's getting closer to that time of year when Annual General Meetings take place. If you'd like to play more of a decision-making role with EK, you may want to consider becoming a Board member. We're looking for people who can see the big picture and have wide-ranging skills. We would particularly like people who can bring any of the following skills to the organisation: governance, fund raising, accounting, strategic thinking, planning, grant writing, good community networks as well as any other talents that are important for a Board of a not-for-profit organisation. If you are interested please give Kate or me a ring to discuss further.

The EK Art Auction this year was a really high calibre event – and I can say that because I had very little to do with organising it. The feedback has been extremely positive, with many describing it as the best EK Art Auction yet. It wouldn't have been like this without Tess, Christine and an army of volunteers, fantastic artists and eager buyers. Thanks to everyone who made it such an outstanding event that's now firmly on Broome's social calendar.

Martin Pritchard



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## TREES WATER AND LIFE

On last week's Science Show (August 30), some of you may have heard a replay of part of a 1979 interview with Richard St Barbe Baker, the founder of 'Men of the Trees'. Young souls may not have heard of him (he died in 1982), but the dinosaurs amongst us will remember, as I do, the cachet that he attracted in his lifetime.

St Barbe was a forester in Kenya and Nigeria in the 1920s, during sub-Saharan Africa's colonial era, and he gained a reputation and moniker amongst the locals for his obsession for planting trees to reforest areas degraded by cropping and overgrazing. Trees were St Barbe's passion, and he and his followers are now said to have planted trillions of them. He was a man before his time, with a clear understanding, from observation and experience, of the importance of trees to the health of the earth. In 1954, in his book about erosion, *Land of Tane*, he writes:

"When the trees go, the rain goes, the climate deteriorates, the water table sinks, the land erodes and desert conditions soon appear." Australians, take note.

St Barbe had a spiritual view of nature and believed that human beings were losing their sense of wonder at the natural world. He should see us now, absorbed as we are in our laptops and pads and magic phones, androids, wifis and clouds and other things that hardly exist in the real world yet run and ruin our lives and erode our spirits.

Anyway, he was right about trees and their importance, so get out there and plant a few, and hope no bastard comes along and cuts them down.

One fascinating part of St Barbe's talk was about growing trees in arid Israel and on the fringes of the Sahara, with no top-watering at all. He and his companions put a stone or two next to each tree planted, and the stones kept the trees watered by attracting heat, which in turn draws up moisture (and worms) from the earth. Another method was to grow wild cucumbers (those small round melons, the size of cricket balls, that you sometimes come across in the bush), which themselves have damp roots and provide moisture to companion trees.

A third, less obviously appealing method was to spray fields of seedlings with 'black mulch' — a waste product of the oil industry — which, again, attracts heat and draws up water. St Barbe, a sceptic at first, was surprised to see the black-coated seedlings sending up shoots a week after being sprayed and thereafter growing faster and faster. Even more impressive was the effect of the black mulch on rainfall — as it heated it sent up convection currents, bringing rain or dew. You'd need a wide area under black mulch to do that.

To hear St Barbe Baker's talk for yourself, download the Science Show for August 30th from RN's website. It takes up the last 18+ minutes, if you are too busy with your i-phone to listen to the whole show. You won't be disappointed.

# RUMINATING WITH MAD COW



## TELLING THE BEES

An old custom among beekeepers in England and in parts of Wales and Ireland is the Telling of the Bees.

Bees were valued members of a beekeeper's household and included in family affairs. As a matter of course, the beekeeper would tell his bees about important events in the family, such as births, marriages, long absences and especially deaths. It was believed that if a family member went missing, the bees would leave the house and go looking for that person or stop producing honey, so it was important to let them know what had happened. It is said that when King George VI died in 1952, beekeepers covered their heads out of respect and went to inform their bees.

Telling bees of a death was done ceremonially, by covering the hive with a dark cloth and singing a dirge, or knocking on the hive and saying the name of the deceased person. Hives were often decorated for events such as weddings, and offerings of cake and wine were left at the hive. How well the bees held their liquor is not recorded.

If all this sounds quaint now, even superstitious, it also tells us something deeper about the respect that people felt for their family bees. Not only did they value the bees for providing them with their livelihood in honey but, unlike many of us today, they understood how much we all depend on the little insects to pollinate many of our crops and provide us with food. Without them, famine would soon be upon us.

Readers may have heard about Colony Collapse Disorder in the USA, causing bees to die in their millions or simply to disappear from their hives. Many causes of CCD have been proposed and tested: pesticides, Varroa mites, electromagnetic radiation, viruses, and GM crops — or a chain of factors, eg weakening by crop pesticides, especially neonicotinoids, making the insects vulnerable to mites and viruses. Overwork and malnutrition may also be contributing factors; because the bee shortage in the United States has become acute, beekeepers are trucking their hives from one state to another and one monoculture to another, so that bees become stressed by travel, inadequately nourished on GM pollen and exposed to climatic changes and disease.

All the above factors have been shown to be detrimental to bees' health or behaviour. Predictably, GM King Monsanto and pesticide producer Bayer blame the Varroa mite. The European Union has banned the use of neonicotinoids to protect their bees — and Bayer has sued them for their trouble.

Meanwhile, Harvard University is developing Robobee — a robotic bee capable of pollinating a field of crops. Has anyone told the bees about that?

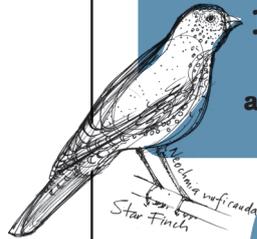


## MARKET STALL

Looking for a fun way to meet people, enjoy the Broome Courthouse markets and support the work of Environs Kimberley at the same time?

Please come and join us on the EK Saturday market stall as a volunteer. Helpers are needed for short shifts, either on the stall or assisting with set-up and pack-down and driving the market trailer. Training provided and you will be working with an experienced volunteer. This is an enjoyable, easy and rewarding way to help protect this beautiful place we live in. We would really appreciate your support!

**For information contact  
Tessa on 9192 1922 or  
admin@environskimberley.org.au**



# thank you

Thank you to Backroom Press for their contribution in bringing Kim Mahood to Broome and thereby supporting our Corrugated Lines Festival event! This was a great experience of working together to the benefit of all.

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# CONVENTION CENTRE NOT BIG ENOUGH FOR **EK ART AUCTION!**

The excitement started early in the week as the first beautiful art pieces (accompanied of course by beautiful artists) started to arrive at the Convention Centre. Stunning pieces from galleries across the Kimberley, beautiful Broome photographs, paintings and sculptures, museum quality pieces from Fitzroy Crossing, and others from across the country, all arrived ready to raise money for EK.

By lunchtime the walls of the Convention Centre were filling up fast and, as the pieces kept coming, it became clear that there was going to be a problem – too much art and not enough space! The curators worked tirelessly into the evening and all the next day, agonising about how best to display the works and trying to fit in as many pieces as possible.

'We will be here all night if we try to auction all these pieces,' I thought; but, never fear, the tireless auctioneer assured me that he could auction each piece in 2.25 minutes flat, no worries! Phew!

While all this consternation was being expressed, behind the scenes a hive of activity was under way as well. Everywhere things were being cleaned, carried, setup, packed down, cooked, baked, heated, cooled and covered until, on the day of the auction, all of a sudden we were ready to go! As a newcomer to organising this event I was amazed at the incredible work of so many volunteers who managed to pull all this together so seamlessly and professionally.

Then on the night, the hard work organising and setting up done, it was all up to the charisma of the auctioneer and you — the most generous art-loving supporters of EK. With your help the night was a huge success. Hundreds of guests through the doors, over 80 beautiful pieces sold, and more than \$35,000 raised for the work of EK. A great job done by all!

This year we were especially privileged to have some very significant Kimberley art pieces donated, which included a Ceremonial Shield and pair of Boomerangs by late Fitzroy Artist David Downs, as well as another beautiful piece by the late Jimmy Pike. These pieces were a great drawcard for the event and we are glad to say that they have all now gone to new homes across Australia.

I would like to take this opportunity to thank everyone who made this great event possible once again. The biggest thank you to all the artists, galleries, volunteers, musicians and local businesses as well as everyone who came on the night and supported us by buying a beautiful piece of Kimberley art. It would not have been possible without you.

Can't wait to do it all again next year!

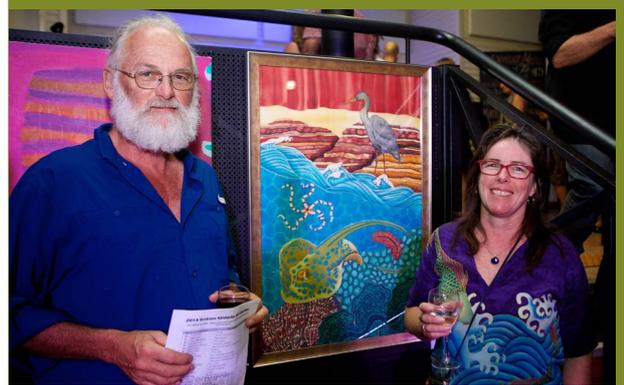
Tess

*And a special thank you to Tess, Christine, Marilyn and the stalwart team of vollies who worked so hard to make this happen - not least our indefatigable auctioneer, Chris Maher! Ed.*

1. Carmel and Kylie. 2. Christine and Tess enjoy the fruits of their labours.
3. Pampila and Laurel 4. Rod and Kerry with Kerry's silk painting.
5. Carolyn Hartness and June Oscar.



photos: Julia Rau





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For information about local plants and weeds, and landscaping your garden, go to our website: [skipas.wordpress.com](http://skipas.wordpress.com) or contact [skipas@environskimberley.org.au](mailto:skipas@environskimberley.org.au) to find out about our upcoming activities.

In July SKIPPA stepped out into the wilds of the Hahn River in the Phillips Range, to bring fun and science together in a rewarding field trip. The annual SKIPPA Kimberley Kids' Challenge morphed into a new form this year with some of the SKIPPA blokes heading off with the older teenagers on an overnight adventure. The rest went on bush walks, with a few lazy days in between spent in camp. The women members guided the bush walks, with fleet-footed teenagers leading the way. Exploring rocky gullies and magnificent escarpments, indulging in the delights of rock pools after sweaty bush walks, and revelling in evenings of warm campfires, we once again enjoyed a memorable trip.

Out and about, constant investigations of the flora & fauna along the way meant that SKIPPA members were educating each other and adding to the collective knowledge of this volunteer group. Back in camp, members pored over reference books, with samples in hand, to learn more about the local plant species. Others pursued more recreational activities, such as watching the birds around the river Pandanus (*Pandanus aquaticus*), paddling in a kayak and even jumping in for a swim when it was warm enough. It was a relaxing, creative camp filled with the tinkling of a melodic ukulele, the soft click of Scrabble tiles, the occasional splash, and the voices of bushy-tailed teenagers.

### What's flowering at this time of year?

Jigal (*Bauhinia cunninghamii*)

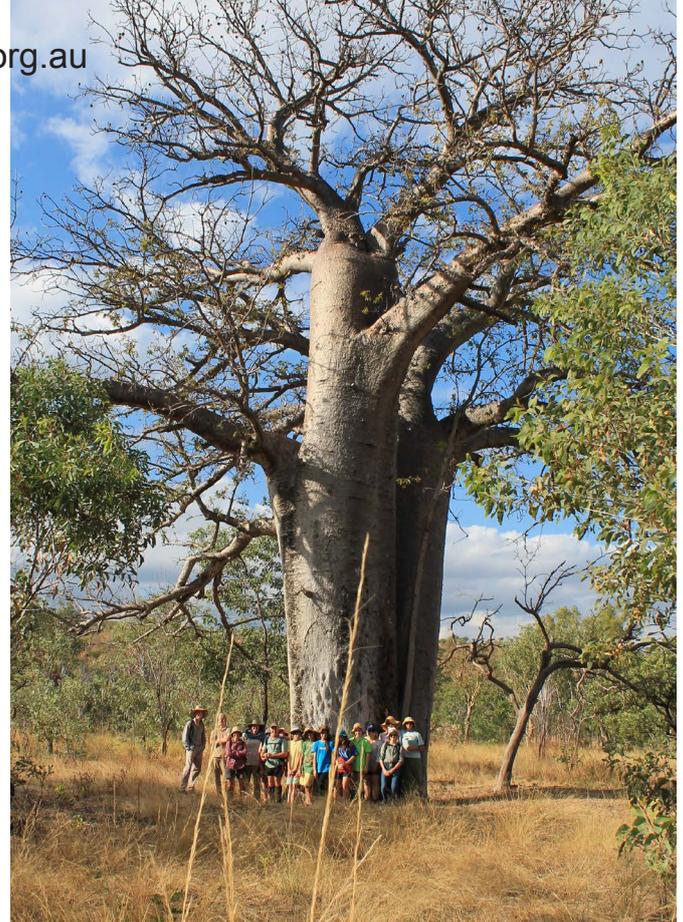
Have you taken notice of the striking Jigal tree around town? It's a small tree to 6m, often with a twisting, weeping form, dark grey bark and soft bluish/grey-green leaves that sit back to back. Dusky pink brown flower cups full of red stamens, and red leathery seedpods, are both evident now at the end of the Yawuru Barrgana season.

Jigal is a local indigenous name, referring to the mother-in-law, son-in-law relationship. By custom, a mother-in-law and son-in-law must not interact directly or face each other. On the Jigal tree the leaves are positioned back to back, like the in-law pair.

The whimsical Jigal makes an enchanting addition to any garden.

### Reference

Kenneally, K.F., Edinger, D.C. and Willing, T. 1996. *Broome and Beyond, Plants and People of the Dampier Peninsula, Kimberley, Western Australia*. Department of Conservation and Land Management, Broome Botanical Society, Perth.



top: A giant baobab tree (*Adansonia gregorii*) with SKIPPA bushwalkers on a floodplain of the Hahn River. bottom: Jigal in flower.



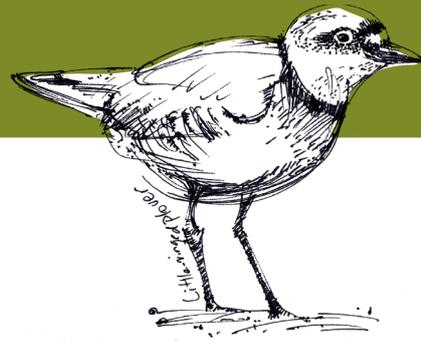
**SKIPPA is an enthusiastic group of Broome-based naturalists who meet weekly to undertake a variety of activities such as nursery work, cultivating Kimberley plant species and landcare (working on the invasive species at Minyirr Park), as well as regular field trips. Everyone is welcome to join.**

*If you would like to become a member email [skipas@environskimberley.org.au](mailto:skipas@environskimberley.org.au) or phone Environs Kimberley.*

SKIPPA receives funding through Community Environment Grant (Federal Government), a DPaW Community Grant and is supported by Environs Kimberley through Kimberley Nature Project, which is funded by Rangelands NRM and Targeted Area Grant (Federal Government)



# ANOTHER wetland UNDER THREAT



Taylor's Lagoon is small freshwater wetland on Yawuru country approximately 75 km from Broome. It's the most north-easterly of a chain of wetlands on Roebuck Plains pastoral lease, which link to Roebuck Bay. The lagoon area was a borrow pit for gravel for sealing the Great Northern Highway between Broome and Derby in the 1960s. While the main lake dries up most years, the deep channel that was dug out for gravel retains water.

The lagoon is one of the few places in the district where Beagle Bay Marshwort, *Nymphoides beaglesensis*, a species listed as Sensitive under the WA Wildlife Conservation Act, occurs.

Taylor's Lagoon is a locally significant wetland. Between Oct 1995 and May 1996, 71 bird species were recorded including 38 species of waterbirds. It's a good place for Wood Sandpiper, Sharp-tailed Sandpipers and Long-toed Stints. Species that breed there include Australian Pratincole, Black-fronted Dotterels, Black-winged Stilts, Masked Lapwings, Whiskered Terns, Australasian Grebes and several species of duck. When all other lakes on Roebuck Plains have dried up, the Lagoon provides a refuge for birds such as Brolga and Bustards, and a place for finches and doves to drink. Before the wet season brings rain and the insect proliferation that encourages migrating birds to disperse inland, two species of shorebirds, Little Curlew and Oriental Pratincole, have been known to frequent the lagoon area in high numbers. The wetland habitat has proved suitable for the Painted Snipe (*Rostratula australis*), once considered extinct in the Kimberley and now nationally-listed as Endangered, which was recorded breeding there in 1999. Other species rarely sighted at other West Kimberley wetlands have been recorded here, including Grey Falcon, Swinhoe's Snipe, Grey Wagtail, Black-tailed Native Hen, Little Ringed Plover and Flock Bronzewing.

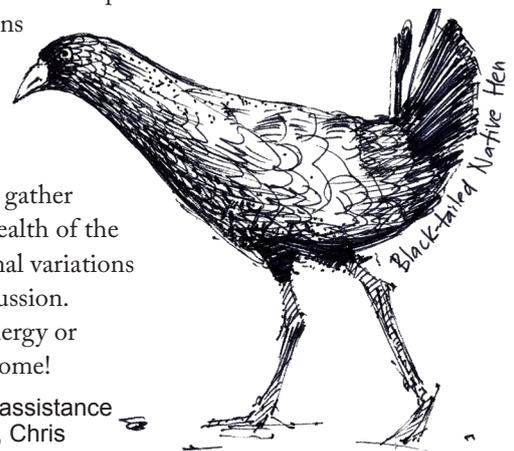
Why write about a healthy wetland that has previously only been disturbed by the trampling of a few cows? Well, only a few kilometres from Taylor's Lagoon is Buru Energy's Yulleroo fracking site. Y2 was fracked in 2010, Y3 and Y4 are planned for fracking next year. Y4 is only 5 km from Taylor's Lagoon. Maps produced by the Dept. of Water show that groundwater flows in this part of the Peninsula are from the NE towards Roebuck Bay.

Despite assurances that there will be no negative impacts on groundwater quality or water table from test fracks (which remind me of the tobacco industry's assurances that smoking doesn't cause cancer), I can find no evidence of long-term studies of water quality or bird use of this habitat by the proponent, DPAW, the Dept. of Mines and Petroleum (DMP) or anyone else.

In May 2014, Buru applied to DMP for permits to construct the Ungani-Highway pipeline, which will pass approximately 12 km from Taylor's Lagoon, increasing the possibility of detrimental disturbance (see [http://www.dmp.wa.gov.au/documents/STP-PLA-0021-Gazette\\_Notice\\_Signed\\_-\\_Map\\_attached\\_-\\_20140506115327.pdf](http://www.dmp.wa.gov.au/documents/STP-PLA-0021-Gazette_Notice_Signed_-_Map_attached_-_20140506115327.pdf)). Where will the water to dampen the ground while the pipeline is constructed come from? At several other Kimberley construction sites, the nearest wetland has been used for roadworks.

None of the grasslands, lakes and claypans of Roebuck Plains are protected by legislation. Despite the connectivity between the Plains and intertidal Roebuck Bay, the Plains lie outside the Ramsar site and the proposed Marine Park. A community science project to gather historical data, monitor the health of the wetland and document seasonal variations in birds present, is under discussion. Anyone who has expertise, energy or historical data to offer is welcome!

Jan Lewis (with considerable assistance from local bird experts Adrian, Chris and George)



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'Poepatetics' creative writing workshop

# poepatetics



Art & science joined forces recently at the Corrugated Lines creative writing workshop 'Writing in the wild' at Minyirr Park, Broome's coastal park within the Yawuru conservation estate.

Walking around through the shady vine thickets and adjacent savannah grassland of Minyirr Park, workshop participants recorded their responses to the environment by 'tuning in' to the sensory elements. Creative writing pieces followed, through combining observed responses and chosen character of place, as well through 'inscapes' – the intrinsic characteristics of an object or subject, the describing of something without naming it.

As explained by Nandi Chinna (poet and workshop facilitator), 'Allowing people to express themselves helps them convey the meaning of place, of their experience of that place to others. It is an important aspect of taking care of the park as it allows others to understand why we want to protect things. It is how the artist adds to the discussion around the scientific conservation of places: the poetics of the experience.'

Science categorises, names, measures, experiments and observes. Art can express the human experience – the encounter with the wild. The artist or writer shares their impressions and how they feel about a place, which in turn allows others to look at a place with new eyes.

Minyirr Park has long been valued by Aboriginal people of the region – culturally, economically and socially. Contained within are special pockets of remnant rainforest, described by scientists as Monsoon Vine Thickets (MVTs). The ones on the Peninsula have no duplicate anywhere else. They contain many edible plants and animals, accounting for nearly 25% of the plant species of this area,

though they take up less than 0.01% of its land mass. Rigorous scientific observation and reporting resulted in the federal listing of MVTs in 2013 as 'Endangered' under the Environmental Protection Biodiversity Act of 1999.

Many ecosystems (such as MVTs) are facing unprecedented pressures, with burgeoning human populations and climate change contributing to biodiversity loss. Nandi continues, 'With such pressure on wild places we need people with different skill sets. We need to bring science and art together. How do we express what is important to us? A table of species is one way, relationship to a place is another way – 'poepatetics' help to express the feeling for and relationship to place, in the hope that when others read about it, they will come to appreciate it and one day go there too. In a way, bringing science and art together is a bit like Aboriginal culture: making art about plants & animals and about place, having intimate knowledge about what particular species do within the land and seasons, all mixed in with spirituality as well. And Aboriginal people have been a lot better at looking after country than we have.'

Both science and art are creative human activities using observation, experimentation, reflection and expression. Ultimately, it will be the manifestation of human relationship to place that will determine whether we are going to allow places to be saved or lost.

This workshop was sponsored by Environs Kimberley and supported by SKIPA. Nandi Chinna is a poet and independent researcher. [www.swampwalking.com.au](http://www.swampwalking.com.au)

## Inscape

Singing & chattering the calling birds surround me.

I hide, nestled in thick leaf wreathes.

I wait. My flesh growing round, swollen in bursting purple blackness.

Lush.

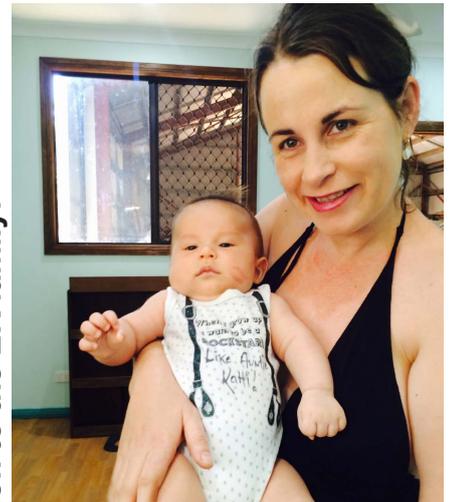
I flirt. Waiting

To be consumed.

Kylie Weatherall



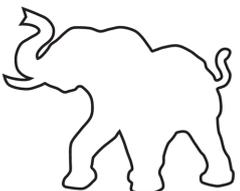
What am I? See page 11.



Another addition to the EK family!

Congratulations to Louise and Craig on the birth of their second child, Zenjiro Finlay Hamaguchi, born on June 28. We miss Louise's dynamism and creativity at EK as the Projects Co-coordinator and we look forward to her return from maternity leave.

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## WATER NEWS FROM OUR FRESHWATER OFFICER

### KIMBERLEY WATER FOR FOOD PROJECT

In July, the WA Government launched its Water for Food (W4F) program — \$15m over four projects for the West Kimberley: Mowanjum irrigation and intensive grazing trial (Derby), Knowsley Agricultural Area water investigation (Derby), a land tenure project to look at options for land tenure to support development and approvals, and a groundwater investigation along the Fitzroy River.

The thrust is for irrigated agriculture to produce cattle fodder and other crops. Small scale, mosaic irrigation was found by the Northern Australia Land and Water Taskforce to be an appropriate model for agriculture in the North — we've yet to see if W4F will be set up along these lines, or on a grander scale. What we do know is that the government views water as the key to unlocking the development potential of the Kimberley. We know what bad development looks like — consider the Murray Darling Basin: over-allocation, environmental degradation, salinity and a loss of fish species. There needs to be a thorough and transparent examination of the options, as well as strong community participation in decisions about water.

### FEDERAL GOVERNMENT JUST KEEPS ON SLASHING

From funding cuts, to 'streamlining' approvals, to the culling of independent expert advice, the way things are heading for our water systems is alarming.

The Federal Government announced in April that it will axe the National Water Commission (NWC). The NWC was set up 10 years ago to help roll out national water reforms for managing our water better, and to provide expert, independent water policy advice to governments. Amongst other things, the NWC promotes sustainable water management, supports Aboriginal rights and interests in water management, and audits States on how they are tracking against their water reform obligations.

An independent, expert voice on sustainable water management? That sounds like a threat to open-slathe development. So, unsurprisingly, the Abbott Government has announced its intention to ditch the NWC — saving taxpayers a measly \$30M over 4 years.

Likewise, with the handing down of EPBC powers to the States under the Abbott Government's proposed 'One-Stop-Shop', the Feds are trying to palm off the Water Trigger to the states along with other environmental powers. The Water Trigger makes sure there is an independent scientific assessment of impacts on water of large coal mining and CSG proposals at the Federal level.

The Palmer United Party (PUP) has said it will seek to keep the Water Trigger in Federal hands. With PUP holding the balance of power, Clive might just save the day on this one!

Caitlin Pilkington

## MORE ON THE HOLLOW 'PRISON' BOAB TREE AT DERBY

*The story so far: In 2002/3, EK had its own history war — well, a heated but civilised discussion between anthropologist Kim Akerman and historian Cathy Clement — about the well-known 'Derby Prison Tree' and its interpretive sign. While Kim maintained that the tree had never been used as a prison, Cathy pointed out that the interpretive sign, for which she had provided the information, did not claim that it had been, but only that it was reputed have been, so used. Kim now offers further support for his point of view:*

During a quiz show on television on 7/8, one question was along the lines of 'Which town has a hollow tree used as a prison close to it?' The answer supplied was 'Wyndham', but the picture illustrating the question was an image of the hollow tree at Myalls Bore, Derby. More confusion for the viewers!

In 2002 I wrote to this Newsletter pointing out that there was little evidence for Derby's claim that their hollow boab tree, impressive as it is, was ever used as any sort of prison or lockup.

Recently, re-reading noted naturalist Vincent Serventy's book, *Nature Walkabout* (A.H. and A.W. Reed, 1967), I found the following paragraphs, which may be of interest to those who follow Kimberley history:

The whites copied the blacks in using the boab as food but turned the shelter to other purposes. One notorious tree some twenty miles from Wyndham was used as an overnight prison. The police, one day's ride from home, did not want to lose their native captives on the very night when the most desperate attempts to escape would be made, so they improvised a secure gaol in the hollowed trunk of the large boab. There is also a so-called prison tree near Derby, a great favourite with tourists, but it was never used for this purpose. How the legend arose is doubtful but at an early morning chat with Harry Scrivener, a station manager in the north, and Jim Coleman, a stock inspector, I was told that a slightly unstable local character spent a night hiding in this tree and later accused the police of locking him inside it.

It says much for the power of travel literature that most of the people were quite unaware they had the real prison tree near by, but knew only of the so-called prison tree at Derby.

I stopped and enquired at one of the Offices whether they could tell where the prison tree was. "You're in the wrong town, mate. The prison tree's at Derby," was the answer. Everyone tried to convince me that I had my facts mixed. Eventually a lady who knew her town put me on the right track and the police confirmed it. Following their directions we had a pleasant drive of some twenty miles along the estuary and finally reached the famous boab. It was not as big as the Derby tree but equally fascinating. Officials in Derby were well aware that theirs was not the true prison tree but no doubt appreciated its tourist value (p. 42).

Serventy was writing about a trip that took him through the Kimberley in 1965. My own information, which I drew upon in my earlier correspondence with *Environs Kimberley*, was gathered in the following year, when I was first residing in Derby, and later through the 1970s, when I again lived in Derby and worked throughout the Kimberley.

Kim Akerman

# the wonders of seagrass



*Wrapped in winter woollies an enthusiastic group of volunteers braved the cold easterly July winds to participate in seagrass monitoring at the Port, Demco and Town Beach sites on Roebuck Bay. Volunteers navigated to the monitoring sites using the GPS, constructed three 50m transects, learned marine fauna taxonomy and how to identify the different species of seagrass, then buckled down to work, recording data from the quadrats. A big thank you goes to them all for their efforts.*

*Come along next time in October to learn how our Roebuck Bay seagrass grows! You might even see one of the fascinating creatures described below out on the seagrass meadows.*



## Creatures of the Bay

**Sea cucumbers** love living in shallow (<20m), sheltered tropical waters, in areas where nutrient levels are high, such as seagrass beds and muddy substrates. Roebuck Bay is a favourite environment for a few sea cucumber species. Feeding on decaying matter in the mud, sea cucumbers use mouth tentacles to shovel sand through their digestive system, leaving behind a trail of sausage-like lumps of processed sediments. Did you know that some sea cucumbers process an estimated 130kg of sediments per year?

When attacked by a predator a sea cucumber can eject its entire digestive system, (a sticky network of strands) to distract the predator with an alternative offering — and hope to get away in the meantime, burying itself in the mud. It then regrows its digestive system over the next few months. Predators include sea turtles, crustaceans, fish and humans.

This cylindrical creature has leathery skin with small, chalky platelets called spicules. It lives between five and ten years, some species growing to up to 300g in weight. It has tiny feet with suction cups on its underside, which, along with muscular movement from the body wall, propel it along the sand. Its muscular body wall makes up half its weight and is the part humans eat, known as 'bêche de mer'. Macassan people from Indonesia have been interacting with Australian Aboriginal people, fishing off the Australian coast for sea cucumbers, for hundreds of years. In the Northern Territory at present there are six fishing licenses for a sea cucumber species known as Sandfish (*Holothuria scabra*), and research into sea cucumber ranching is taking place.

Modern **featherstars** (crinoids) look almost exactly like their 250-million-year-old ancestors. Their ancestry stretches way back 450 million years. Crinoids have no brain or eyes but their well-developed nervous system allows them to sense movement, light and food.

They have multiple feather-like arms (in sets of five), which they use to filter-feed the currents for plankton, algae, small crustaceans and other organic materials. They have cilia that move the food down the arm into the mouth. During the day they keep all their arms bound tightly together in a snug ball. At night they crawl slowly from their daytime hiding spots to unfurl, positioned their arms at right angles to the current to maximise feeding opportunities. Swaying gently while feeding, feather stars appear as delicate dancing ocean decorations.

Kylie Weatherall

[seagrass@environskimberley.org.au](mailto:seagrass@environskimberley.org.au)



photos: Julia Rau

top: July seagrass team. middle: sea cucumber. bottom: featherstar.

## OCT sessions

### MON 27 OCT: TOWN BEACH

5.15 am coffee+muffins  
5.30 am start

### TUE 28 OCT: DEMCO BEACH

5.30 am coffee+muffins  
5.45 am start

### WED 29 OCT: PORT SLIPWAY

6.00 am coffee+muffins  
6.15 am start



The Broome Community Seagrass Monitoring Project is funded by Coastwest, co-managed by Environs Kimberley and the Department of Parks and Wildlife and supported by Seagrass-Watch and the Port of Broome.



# queen of the flats

King Threadfin Salmon have a somewhat misleading name, as all the largest Salmon are females and perhaps deserve the royal title of Queen Threadfin. These First Ladies are the true rulers of Roebuck Bay, highly adapted predators of the mudflats, scooping up prawns and fish with incredible speed and acrobatic finesse.

Underneath this veneer of battle-hardened supreme queen, this fish is also a generous mother, producing millions of eggs. Over the early dry season she feasts mainly on prawns, which thrive on the rich organic matter of the mudflats. This feasting enables her to build up a nice layer of belly fat, fuelling the long spawning period ahead. By September her ovaries swell to bursting point, taking up two thirds of her body cavity and changing colour from yellow to bright orange. This is when the queen goes into an egg producing frenzy, spawning repeatedly until Christmas. By Australia Day her ovaries are spent and shrink to a dark red colour. This is when her appetite builds again and the prawn feasting commences at the same time as the explosion of life brought on by the rains.

All Threadfin are born male and mature after their first birthday. By four years of age they begin a remarkable transformation into females. This is where it gets confusing. Some fish change to female quickly, others slowly, having both ovaries and testes, while still others remain male for years, reaching over a metre in length before they decide to make the change. That is why only the enormous fish of up to 1.4 metres and 45 kg can be crowned Queens of the Flats.

In the Gulf of Carpentaria, researchers are finding that Threadfin are changing sex from male to female at a smaller size and a younger age to compensate for the shortage of large females, which are overfished. This is a big problem. Less energy is spent on growth and instead it's used for reproduction, therefore we end up with smaller, slower-growing fish that produce fewer eggs — and the effect

is irreversible. Not what we want to see in Broome!

With the removal of commercial gillnets from Roebuck Bay, recreational fishers are predicting bumper years for Salmon fishing into the future. Will this always be the case?

Fishing pressure is constantly growing, and expanding development is placing more and more pressure on Roebuck Bay's ecosystem. Fisheries managers are running out of options to control fishing pressure; we are already down to a bag limit of two per day for Giant Threadfin. Seasonal closures and maximum size limits are both painful restrictions, likely to be ineffective over time.

Perhaps the best way to maintain great fishing for big Salmon is to introduce a marine sanctuary (no-take zone) within the upcoming Roebuck Bay Marine Park. The ideal area would be pristine, have healthy numbers of Threadfin, and be isolated enough not to restrict the average angler. A sanctuary zone would keep this area in its untouched state, allowing our mudflat queens to feast and spawn many times without getting caught. The real benefit is that the big queens produce the greatest number of eggs, and the eggs are larger and of better quality than those produced by smaller fish.

The King Threadfin from southern India grow up to two metres long and live over twenty years. If we could allow some of our mudflat queens to be generous mothers, perhaps we too could continue to enjoy the benefits into an uncertain future.

Jason Fowler



## Ilse Pickerd

**Meet Ilse, who has recently joined EK. Welcome to the team, Ilse!**

Born in coastal Victoria, Ilse completed a Bachelor of Science at Monash University. She then pursued a career in zookeeping, which took her from Melbourne to Peru, Bolivia, India and Alice Springs. In Alice Springs, Ilse took to land management, working as Regional Coordinator for the Barkly Tablelands with Territory Natural Resource Management, as Coordinator of the local Land for Wildlife program, and as an ecologist for Bill Low Ecological Services. She explored the Simpson Desert with Australian Desert Expeditions as a cameleer and ecologist. Her interest in birds and a need for salt water brought her often to Broome and the Kimberley, until she finally made the move to Broome. Ilse has happily taken a role with EK as Project Officer for the Kimberley Nature Project.



INSCAPE ANSWER

Mangarr fruit (*Sersalisia sericea*).

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