



## Appreciating Nature Pendulous Foliage

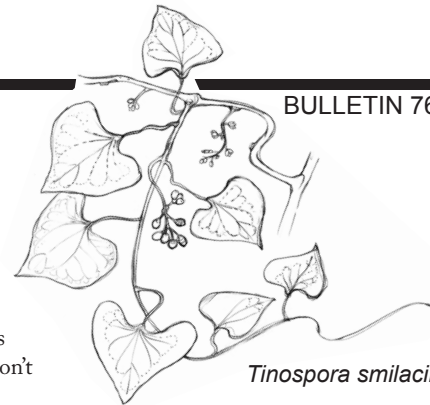
Trees adopt different forms that can be useful in identifying and appreciating them. John Brock (1993, latest reprint 2005), in *Native Plants of Northern Australia*, uses terms such as upright, spreading, sprawling, rather straggly, crooked, slender, scrambling, erect, compact, clumping, multi-stemmed and graceful. The many different shapes, hues and arrangements of foliage can also help us to differentiate plant species.

The Broome Bloodwood *Corymbia zygomphylla* is a spreading, crooked, gnarled tree with pendulous branches and foliage. Growing generally to about six metres, it has rough bark and opposite, stem-clasping leaves. It is fairly common around Broome, along with Ochre Bloodwood *Corymbia [dampieri] greeniana* and Cable Beach Ghost Gum *Corymbia paractia*. Despite the common name, the 'Broome Bloodwood' extends east of Broome nearly to Halls Creek, south to the Pilbara, and into the Great Sandy Desert a fair distance.

Many of the Broome Bloodwoods around town have had their limbs lopped off, so have not been able to take their true shape. However, a few have been allowed to express themselves fully, for example at Notre Dame and in patches of bush far from the screech of chainsaws; some in the cemetery have also been spared. These trees have long dangling foliage that in some cases reaches to the ground. The leaves form into thick tresses that wave in the wind and rub away the undergrowth and leaf litter, exposing bare patches of soil.

The Jigal Tree *Bauhinia (Lysiphyllum) cunninghamii* is also a spreading tree, and others, like the Peachwood *Ehretia saligna* and Medicine Bark or Supplejack *Ventilago viminalis*, have distinctive hanging foliage. Quite a few individuals of the other two bloodwoods in Broome also have overhanging branches that dangle. In riverine settings several of the large Paperbarks *Melaleuca* spp. possess pendulous branches; most likely this allows them

to trail their branches in the current when rivers flood, so they provide less resistance and don't break off.



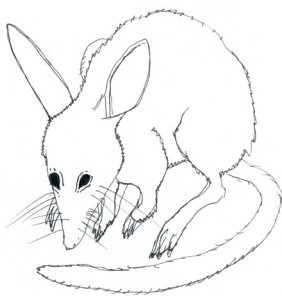
*Tinospora smilacina*

Trees with hanging branches and foliage are notable in the savannas (including the pindan), in that they provide a partially shaded and hence cooler, sheltered microclimate for other plants, including shrubs, herbs, saplings and vines. For example, Firestick Tree *Premna acuminata* and sapling Peachwood typically occur in these microhabitats, as does Snake Vine *Tinospora smilacina*. The overstorey tends to shade out the grass layer, and over time leaf litter accumulates, the humus layer develops, and moisture is retained in the soil, providing ideal conditions for seed germination.

My question is why these trees have adopted a pendulous form? The most reasonable explanation I can think of is that it is a response to the ravages of recurrent fire. The trunk is protected by a thick rough bark layer, but the limbs and foliage are exposed. I suspect that the hanging foliage acts as a kind of buffer or fire blanket. Heat from the fire goes up, but green plant matter tends not to burn, so it's possible that the foliage protects the rest of the tree, in particular the upper branches.

There is a battle going on in the savannas between the tree layer and the grass layer. One of the mediators of this competition is fire, and the responses of different plants are varied. Fire may not be the full explanation for the adoption of a pendulous form, but I suspect that it is a major factor.

SJ



**BILBY**  
by Neil Hamaguchi

Long long ago, in the time of the snake, there was a lot happening around Paruku Lake.

Nyarlku the Bilby was up late at night, planning to do things that that weren't really right.

He crept in the water and took all the shell, went back to the shore, started digging like hell.

He dug and he dug till he came to the coast, for the Walmajarri people would like him to roast.

He came to a beach in a beautiful Bay — such a wonderful place, he decided to stay.

He took all his shells, put them into the Bay: Guwan is the name they've been given today.

Now Guwan was desired when Kartiya came, and life in the Bay was never the same.

They came in their hundreds, then thousands, then more, and built all their structures along the nice shore.

The plants and the animals now live in fear, and over the years they just disappear.

The Bilby is here, still hiding away, still feeling guilty from that Dreamtime day.

Even today now he lives near the coast; he still doesn't want to be somebody's roast.

His favourite time is the dark of the night, so he rarely is seen, he's not keen on the light.

In the rest of the country his numbers are down and people report that he's not much around.

But here in the Kimberley, from west to east, we've seen quite a few of those cute little beasts.

A few local people know they are here; even old Broome town they're living quite near.

Now the Rangers on Country have been going around, looking for Bilby where he can be found.

'Progress' is coming, we don't know how fast — our poor little Bilbies could well be the last.

There's clearing and fracking and fires and weeds, and foxes and cats just to finish the deed.

Now any person who's living in town would not even think that there's Bilbies around,

But we on the country, we know that they're here; we go out at night — its daylight they fear.

We only find tracks, scats and holes in the day, and we'll cover the country from the Lake to the Bay

Yawuru, Nyulnyul, Karajarri the west, Nykina, Gooniyandi, Walmajarri the rest.

Now we'll work and we'll work till our funding runs out to make you aware that there's Bilbies about.

All the way east out to Paruku Lake the Bilby's been here from the time of the Snake.



## REPORT FROM THE CHAIR

Hello all,

Recently, I participated in an interesting, useful and rather unusual (in being partly funded by the French Pacific Fund, Fonds Pacifique) workshop in Broome: *Water Futures – Water Governance in the Kimberley*. Congratulations to Anne Poelina for convening it.

Sadly, these days such inclusive discussions about water are notable for their absence. The contrast with a time not so long ago when governments were encouraging local communities to learn about and engage in water planning and management couldn't be starker.

In 2004, for about a decade, our nine governments signed up to reform the way Australia, the driest continent on earth, would use, manage and protect its water systems. The National Water Initiative (NWI) was the response to years of severe drought and the disaster of the Murray Darling basin. The governmental agreement encompassed many new and reformulated measures, including water allocations, markets and trading, participatory planning and management, Indigenous water rights and environmental flows.

This reform agenda was overseen by the National Water Commission (NWC) in regional and remote Australia as well as in urban areas. The NWC endorsed and attended the Kimberley Water Forum in Broome in 2008, which was organised by the state water and agriculture departments together with the Kimberley Land Council, EK and the Tropical Rivers and Coastal Knowledge Program, a consortium of river scientists.

At the forum, policymakers reported to representatives from traditional owner, pastoral, irrigator and recreational user groups, conservationists and others about the NWI

and what it meant for the Kimberley, the WA Government's regional water plans, and the establishment of the region's first community-based catchment group, the Fitzroy Catchment Management Group (or FitzCAM). It was an exciting time, with government and scientists supporting collaboration and cooperation in this large region with its small and widely dispersed population.

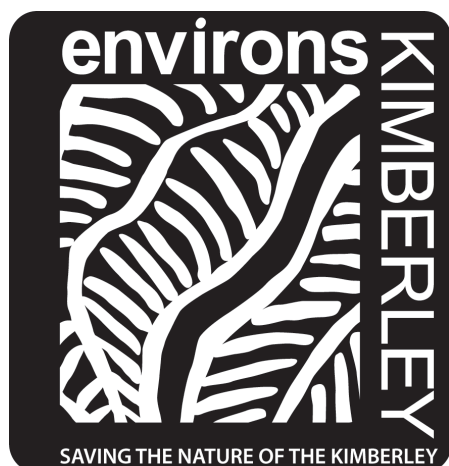
Unfortunately, it took only a few years of changes of government at both State and Federal levels for the reformist charge to slow and eventually dissipate. In the Kimberley, among the first signs of changing state government priorities was the wholesale abandonment of the state water planning process.

Then, in 2014, the Barnett Government released proposed changes to the WA water laws. EK's submission outlined our many concerns, including the lack of recognition of Aboriginal water rights and interests, the absence of participatory processes and of provisions to protect threatened ecological communities and groundwater-dependent ecosystems, or to safeguard significant waterways. That same year, the Abbott Government repealed the NWI (a move that was opposed by the ALP, Greens and some cross-benchers) and abolished the NWC.

Is it pie-in-the-sky to hope that PM Turnbull, who was responsible for water in the Howard Government following the enactment of the NWI, might reinstate water reforms as a national priority before Australia is caught again by future shortages?

No space remains but to thank our two departing staff, Ayesha and Ilse, for all their good work and will, and to give all of you festive greetings.

Kate



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*Marine Project Officer:* Jason Fowler



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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

*I'm getting a real sense of déjà vu in the Kimberley right now. Irrigation, pipelines, dams are all making a strong return into the vocabulary of government and industry. The State Minister for Water, Mia Davies, is on the public record saying that there are 5 million hectares suitable for irrigated agriculture in the West Kimberley. We have a map showing 100,000 hectares earmarked as the first stage in the Minister's masterplan.*

Interestingly, it is Minister Davies and Minister for Lands, Terry Redman, both Nationals MP's, who are driving the 'Water for Food' project. The Minister for Agriculture, Ken Baston, is nowhere to be seen.

Areas that have been identified for large-scale irrigation include La Grange (south of Broome): 40,800 hectares, Skuthorpe (outside Broome): 1,000 hectares, Curtin, Mowanjum and Knowsley near Derby: 20,000 ha, Mount Anderson: 5,000 ha, Liveringa: 5,000ha, Noonkanbah: 5,000ha, Gogo Station: 15,000ha and a further 3,500ha near Fitzroy Crossing.

This kind of industrial agricultural development mentality has a long history in the Kimberley, but you would think it would have been tempered by the Northern Australia Land and Water Science Review 2009. This review estimated that there is approximately 600 gegalitres of water available across the whole of Northern Australia, which would be enough to irrigate 40-60,000 hectares in total. Let me repeat that: between 40 and 60,000 hectares 'across the whole of Northern Australia'.

So why has the Liberal Minister for Agriculture been sidelined by the two Nationals Ministers? Perhaps because the Department of Agriculture has undertaken a detailed analysis of water quality, quantity and depth, soil suitability, environment, Indigenous cultural heritage, infrastructure, and commercial viability in the La Grange area. The project hasn't come up with a figure for how much land is suitable for agriculture. What it has done is to get the evidence first. This work hasn't been done for the other areas targeted by the Water for Food project.

The Minister for Water and Minister for Lands are trying to bulldoze through these projects without evidence to show they are sustainable. The 'Water for Food' wishlist has been dreamed up without a detailed knowledge of what is possible and sustainable. Further, when asked about what kind of crops could be grown the answer primarily has been 'fodder for cattle'. So it's 'Water for Food for Cows'.

When the Department of Water was asked about the growth in cattle numbers doing more damage to waterways and wetlands, a responsibility of theirs, it was clear that this hadn't even entered their minds, so focussed are they on pushing the irrigation agenda. When we met the EPA to air some of our concerns, we found that they had yet to be briefed by government, despite the Water for Food project being touted to potential investors across the country.

Is this the type of development people in the West Kimberley want? The government wouldn't know because it hasn't asked. It's time to question this model and come up with our own development agenda. Does it feel like we've been here before?

Martin Pritchard



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## COMMUNITY GARDENS

This year, in the middle of Canberra suburbia, a group of residents have established an impressive community garden with the full support of the Territory Government, which provided an area of little-used Crown land. The volunteers have planted scores of fruit and nut trees as well as vegetables. By cooperating, they have access to a wide range of fruit and other produce that would have been too hard for a single household to plant and maintain.

Closer to home, our friend Wendy Albert in Derby has been telling everyone willing to listen about the magic of composting. She recently led a team of staff and managers at Derby's sobering-up shelter to prepare and grow an organic community garden on the premises. Starting off by making their own Bokashi buckets at a fraction of the cost of the ones you can buy from Bunnings, Broome's Health Food Store or New Internationalist:

([www.newint.com.au/shop/](http://www.newint.com.au/shop/)), the team has worked hard to establish the shelter's garden and plant and harvest its first crop of vegetables. See the following:

<http://permaculturenews.org/2015/11/19/garl-garl-walbu-a-community-run-shelter-in-western-australia/>

Readers of our paper-copy newsletter can find this story on our Facebook page or click on the url in our on-line edition.

We have noticed with approval the community garden at the primary school on Robinson Street, which has been growing veggies for the past few years. If you know about other efforts of this sort in your locality, please tell us about them.

## 2016 EK Membership fee increase

Dear EK Members,

After a long time we have reluctantly decided to increase our membership subscription fee to cover increasing costs.

There will be a small increase in the general membership subscription, and a new concession rate, which will be offered at the existing price.

**From 1st January 2016**

**EK membership will be:**

**1 year = \$30 (\$20 concession)**

**3 years = \$80 (\$50 concession)**

Get in and renew your membership before the end of the year if you want one last bargain; otherwise, although it costs a bit more money, we hope that you will continue to support us into the future!

**THANK YOU!**





# MAD COW

## WHY THE ARTS MATTER

Have you noticed that, when right-wing governments come into power, they tend to be hostile towards the arts?

When Colin Barnett came to power, he changed the Premier's Book Awards ceremony from a grand dinner to a breakfast. Later, he changed it from the annual event it has always been to a biennial event.

Tony Abbott's government cut funding to the arts and his Minister for the Arts, Senator Brandis, made the allocation of funding less democratic, concentrated on elite (read money-making) rather than community activities. His replacement, Senator Mitch Fifield, has clawed back some of that money. In truth, we are still a fortunate country, with the Australia Council and the various state departments providing grants to all manner of arts activities. But do the arts matter?

Both communist and fascist governments like to control the arts – to a degree not possible in a democracy like ours, even if it does seem a little fleabitten at times. Controlling the arts is the hallmark of an authoritarian regime.

Why do authoritarian governments treat the arts with suspicion? Surely artists are harmless people – minstrels, painters and poets, creating beauty but of no consequence politically? Most of them have little money and do what they do out of passion and conviction, not to acquire wealth. They are not competing with anyone else.

That's not how governments see them. They consider artists – especially artists who care more for their art than for their income – dangerous people. While some artists just practise their art for its own sake, others wield their pens, brushes or plectra to challenge the powers that be. Their very freedom from the acquisitiveness that motivates most of us increases their dangerousness. It means they can't be corrupted.

The written word has created revolutions: think of Marx's *Das Kapital*. Marx was writing in England, a country tolerant of dissidents, and so avoided persecution. Others were not so fortunate. Let us not forget Nigerian Ogoni environmental activist and playwright Ken Saro-Wiwa, whom we have mentioned before in these pages, the 20th anniversary of whose hanging, along with eight of his colleagues, fell on November 10th this year. Shell, which had trashed Ogoni land, was complicit in these executions.

Music and singing have inspired crowds to rise against governments, and put the fear of God up oppressive regimes. Remember Victor Jara in Chile, whose guitar-playing hands were broken by rifle butts before he was shot in 1973 by a regime that feared the power of revolutionary song. Painting? Think Picasso's *Guernica*, commemorating the destruction by the Nazis of a Spanish town in 1937, during the Spanish Civil War, now hanging at the United Nations. It was covered up in 2003 during Colin Powell's speech to the UN, when he put the case for declaring war on Iraq. No room for irony at the UN.

One capital C British Conservative politician of the 1940s bucked the right-wing trend by not only funding the arts during World War II, but speaking up for them. Winston Churchill said, 'Ill fares the race which fails to salute the arts with the reverence and delight which are their due.' What lovely rhetoric. Illustrious leaders – take note.



## LETTERS

Dear EK Newsletter Editor,

I was dismayed at the last Mad Cow article in the otherwise excellent EK Newsletter. I do not have it in front of me, because I send it on to my nature-loving friend in Victoria. I like others to enjoy what is a very enjoyable newsletter.

Mad Cow is disillusioned with standing around with banners, chanting slogans, as many did in 2003 to stop the invasion of Iraq. It did not stop 'our' invasion of that country. She is right. My response is that we did not go nearly far enough. We should have made this country ungovernable. We should have occupied public buildings. A general strike would have been in order. As it is, the invasion caused a million deaths (from the Lancet study) and has caused chaos in the Middle East. A tragedy made in the West. We just did not do enough to stop it. Better that a few of us were injured, or worse, than that catastrophe was allowed to go ahead. Saying this, I went on a demonstration to protest against 'our' bombing of Syria. There were about 20 of us there, outside the 'Defence' Department in Sydney. We have again been lulled into complacency at the inevitable deaths of other people. And that's not mentioning the camps where we imprison asylum seeking people, or the NT 'Intervention' under which Indigenous people continue to suffer every indignity.

In Britain, the anger over the invasion of Iraq has meant Jeremy Corbyn is leader of the Labour Party. It is not impossible that there will be an attack of decency in this country, and the political landscape will suddenly change. Our politicians should fear the power of the people.

Brevity is the soul of wit, so I will end here. Keep up the good work at EK. Your activism has already preserved James Price Point. We will yet save central Queensland by stopping Adani's proposed Carmichael mine. No more colonial rape and pillage of this country! It has to stop.

As the famous Max Lane said when he spoke at our East Timor solidarity group many years ago: "There is only one thing that politicians understand, and that is...PRESSURE!" So, by all means, be civil. But don't depend on civility to get what you want.

Keep it up.

Stephen Langford

## Congratulations!

Congratulations to Ayesha and Sam on the birth of their little boy.



hip! hip!  
hooray!

# EK'S 2015 AGM 'entertaining'

We had a great turnout for EK's 19th AGM in November. Believe it or not one person was overheard saying it was 'the most entertaining AGM she'd ever been to'. It's not often you'll hear the words 'AGM' and 'entertaining' in the same sentence, so it must have been good.

Martin thanked the Board, especially Kate, the Chair, staff and volunteers for their hard work and dedication during the year, and outlined some of the significant pressures that we face, including fracking and large-scale landclearing, as well as the perennial challenge of fundraising. Special thanks went to EK's partners and collaborating organisations, without whom we couldn't successfully do our work. Jason outlined the successes and challenges of the marine project, which aims to ensure the best possible outcomes for marine parks along the Kimberley coast. If done well the parks have the potential to be of similar quality to the Great Barrier Reef and Ningaloo marine parks, which are global benchmarks.

The KNP team, with Mal (unfortunately, Louise couldn't make it), Ayesha, Kylie, Neil and Jules, provided fascinating and entertaining presentations in a quirky take on 'speed-dating'; they called it 'speed-updating' and the crowd loved it. People were surprised at the depth of work EK does and we obviously need to get out there a bit more to promote it.

Kevin Smith provided a report on behalf of the Treasurer, and we are always thankful for the way he is able to make financial reports digestible. His photos were good as well.

When it came to the mechanics of the AGM, the election of new Board members and selection of office-bearers, Joe Fox took the Chair and brought the house down with his cheeky wit. Seriously though, the stability of the Board continues with all members who had to sit down renominating, and one new member joining.

We are looking forward to being guided by a strong and knowledgeable Board for another year.



## MEET OUR NEW BOARD MEMBER

EK welcomes Shaun Clark as the one new member elected to our Board of Management this year.

Shaun has lived in the Kimberley for 20 years and, during this time, has dedicated himself to maintaining the cultural integrity and remarkable natural beauty of this place. Shaun has had long-term involvement with Indigenous communities of the Dampier Peninsula, and significant environmental management experience. He has worked on various environmental projects in the West Kimberley including weeding, bush regeneration and coastal protection, and as a National Park Ranger at Geikie Gorge. Shaun looks forward to bringing this wealth of experience and expertise to the EK Board.

## OLD BOARD MEMBER RETURNS

**Peter Mitchell, who, in a moment of panic, resigned from the Board in May because of other commitments, missed us so much that he rejoined at our AGM. Welcome back, Peter.**

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## SKIPPA Adventures in October

Early one Sunday in October, a small group of SKIPPA members attended the launch of the new Joonjoo Botanical Trail booklet and interpretive signage, installed along the Trail (a 10 minute drive out of Derby). Although it was hot, sweaty, dry and thirsty, we enjoyed the walk through the reserve: a protected section of bushland that hasn't seen fire for over 40 years. Chris Kloss, president of the Derby Landcare Group, led the walk with about 30 people in tow, and talked about the history of the site and how the Trail came into being 15 years ago. We stopped along the trail to read the signs and hear about the various plants, catching glimpses of Red-backed Fairy-wrens darting about.

The walk finished with a welcome BBQ brekky, eaten in the mottled shade as we browsed the new guide booklets. These have been updated by the Derby Landcare Group, Shire of Derby/West Kimberley, with the help of Kimberley Nature Project (KNP), funded through Lotterywest. The booklet contains original drawings by Broome artist Chris Hill, a revised species list and colour images of the critters and plants you can see along the trail.

Five years ago, the then West Kimberley Nature Project worked with the Wungurr Rangers to remove Neem trees (*Azadirachta indica*) from the area, so we were impressed to see low numbers of juvenile Neems present. Neems are manageable! Another day of community action to cut and poison the young Neem population should keep them at bay for another 5 years.

On the drive to Broome we stopped at the Mangkajarra Wetlands, 20km out of Derby. The wetland was very dry and restricted, giving us an opportunity to get a good look at the birds confined to the remaining pools of water. Steve, our all-round plant and animal guy, put a quick bird list together:

Brolga	Sharp-tailed Sandpiper
Straw-necked Ibis	Common Greenshank
Black-fronted Dotterel	Common Sandpiper
Red-kneed Dotterel	Masked Lapwing
Black-winged Stilt	White-faced Heron
Australian Pratincole	Maggie-lark



Malcolm Lindsay showing SKIPPA volunteers a 'maternal' Bilby burrow.

The following Sunday, SKIPPA members were early to rise once again, this time to look for evidence of *Macrotis lagotis*, the Greater Bilby, in bushland close to Broome. Led by KNP coordinator Dr Malcolm Lindsay we visited recent evidence of bilby activity, including fresh footprints and burrows. We undertook several surveys, walking through the pindan woodland to seek out bilby tracks, burrows, scats and diggings. We found no new burrows but look forward to future Bilby surveys. We farewelled October with our third weeding weekend to Kooljaman over the last 13 months. With tourist season mostly over, we made our way to Kooljaman Wilderness Camp with SKIPPA volunteers and the Bardi Jawi Oorany (BJO) Rangers to review our previous weeding work and continue to improve the health of the Monsoon Vine Thicket (MVT) on site. We were delighted to see that our previous weeding efforts had made a difference. With fewer weeds in the MVT, the BJO Rangers made plans to plant out some Vine Thicket species (cultivated in their Ardyaloon nursery) in the rehabilitated areas.

With the support of the Kooljaman Resort Board and the BJO Rangers, KNP hopes to facilitate more weeding weekends with SKIPPA volunteers over the next few years. If you missed out this time, register your interest in the next event (2016) and help restore one of the most cleared and weed-infested MVT's in Bardi country.

Kylie Weatherall and Ayesha Moss

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)



# the Power & the Passion

In August, EK held a special event at the Broome Factory: a combined exhibition of photographs, alongside sculptures by Marilyn Tabatznik.

The 70 photographic prints, by talented photographers David Bettini, Jim Delios, Christian Fletcher, Nigel Gaunt, Rod Hartvigsen, Flemming Bo Jensen, Adam Monk and Ingetje Tadros, captured the power of the Kimberley coastline and told of the passion of a community to protect it.

This historic exhibition of the James Price Point/Walmadany struggle toured Australia in 2012, and in 2015, at home in Broome, the donated prints were auctioned to raise funds for EK.

Marilyn Tabatznik is a well-known Broome sculptor of extraordinary talent, and regular visitors to Broome Factory will have become familiar with some of her larger pieces. On this occasion, Marilyn was showing a series of smaller-scale works made from an always surprising assortment of natural materials.

The exhibitions were hosted by Broome Factory's very own Lachie Fraser, a long-time friend and supporter of EK.

The Event raised over \$8,500 for EK and we would like to extend a huge thank you to everyone who made it possible. A special thank you goes out to Nigel and Helen Gaunt, Rod Hartvigsen and all the photographic contributors for so generously donating these historic pieces to EK, and to Marilyn Tabatznik, whose idea it was; to Lachie Fraser and the Broome Factory; to Tonchi, George and Paul for the great music; and to all the volunteers who helped make this another successful and enjoyable EK event.



Teresa Roe — 'Get Out!'  
Photo: Rod Hartvigsen



James Price Point from the air.  
Photo: Nigel Gaunt

the Power &  
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# THREE WOMEN AND A BABY

## KIMBERLEY NATURE PROJECT STAFF GO SOUTH

In September, three KNP staff spent a week in Mandurah and Perth to attend the 'Tipping Point' State NRM Conference, make two presentations, undertake research for the new Kimberley Seedbank Project and juggle childminding for the 14-month-old Zenny.

Louise Beames presented 'A Peninsula of competing Priorities —Threatened and Priority One Ecosystems (TECS and PECS) on the Broome Peninsula', co-authored by Tim Willing (independent ecological consultant and member of the Broome Botanical Society). Louise explained how the Broome Peninsula contains a wealth of biological diversity, with Threatened and Priority Ecological Communities and significant cultural heritage, yet continues to be affected by developmental and other pressures. Louise described Tim Willing's survey work of the Minyjuru (*Sersalisia sericea*) and the Cable Beach Ghost Gum (*Corymbia paractia*) Communities (both PEC), to measure their extent and assess the need for greater protection of these special and restricted communities. Both plant communities are facing land clearing, industrial development and increased weed incursions. During the course of the survey, both these communities experienced loss through clearing. The studies resulted in several recommendations to work towards better protection, including: to create buffer zones by making small changes in development zones and conservation areas; to list individual trees on a local Tree Register; and for land managers and local authorities to work to protect registered Threatened and Priority Ecological Communities such as these. The presentation was well received, with many in the audience surprised that local planning authorities had not yet acted upon the strong scientific evidence.

KNP featured again when Ayesha Moss and Louise Beames co-presented 'Growing community Capacity and Banking with Kimberley Seed'. This new Kimberley

Seedbank Project is being established with State NRM funding, and is designed on not-for-profit social enterprise principles. The project will see Kimberley indigenous Rangers and Traditional Owner groups collect seed, to be stored on consignment within the seedbank for either sale or future use as determined by the seed owners. The seedbank is intended to help improve revegetation practices, support conservation and management activities, supply horticultural enterprises and provide economic returns to local collectors.

Between babysitting and presenting, the team of three took turns to go to a variety of other presentations about great NRM work being undertaken in this state. Of note was some interesting work in the Great Southern region on prioritising conservation work, based on climate change modelling. Using GIS mapping, a variety of scientific information maps were produced to highlight areas with better resilience to climate change, making them candidates for priority conservation and protection works.

The rest of the week we spent visiting agencies to learn about seed collection, storage techniques, latest research, nursery operations and mechanical harvesting aids. We visited Kings Park's research facility, the commercial not-for-profit community nursery Apace and the Department of Parks and Wildlife's threatened species seedbank, and Greening Australia, who skyped in Keith, a seed collector for Nindethana Seed in Albany.

It was a full week of learning, sharing and playing with the baby, and a great example of a family friendly workplace.

Ayesha Moss



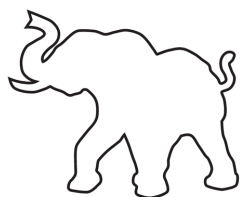
Minyjuru (*Sersalisia sericea*), one of the plants on the Broome Peninsula that are part of an important ecological community.



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



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## DIRTY SOCKS & BROKEN THONGS

It's the time of year when EK sifts through the deeds of the many unworthy contestants to choose the lucky winners of our awards for outstanding disservice to the environment. We try hard to be fair and not to give the awards to the same people year after year. This year we have excluded politicians, certain ones of whom are always amongst our top contenders.

### DIRTY SOCK AWARD

The Dirty Sock Award this year goes to Buru Energy for persisting with its fracking programme in the West Kimberley and for springing leaks.

For those who haven't kept up with the story, it seems that the valve on one of Buru's wells has been leaking gas into the environment for some time. A leak was first reported to the Department of Mines and Petroleum, not by their own inspectors, who seem to be thin on the ground, but by the Department of Environment Regulation, in April 2013 after a complaint by a member of the public. Following that report, a contractor visited the well to carry out repairs.

Another leak was detected at the same site in 2015, again not by DMP inspectors, but by a member of the public. The DMP sent up a team of inspectors, who confirmed the leak. However, the Minister claimed that the leak was the result of deliberate damage, which he implied was caused by 'activists'. The Minister has failed to provide any evidence to back up his claim.

Latest news is that Buru is clearing land ready for oil and gas exploration within a few kilometres of Lake Eda. This is prime Bilby country.

### BROKEN THONG AWARD

The prestigious Broken Thong award for 2015 goes to the Department of Housing (a previous winner of the Dirty Sock) for clearing all living things, including beautiful old trees, from the residential blocks it is developing, for putting up monstrous solid fences that block out any wind, and for using dark material for some roofs. Further award-winning criteria include the absence of solar panels from the roofs of new 'transition housing' in Halls Creek, apart from solar water heaters. The solid fences have advanced all across the Kimberley, even to remote communities where most people are related to one another and where sociability and conviviality are usually valued much more highly than secluded privacy.

### BOUQUETS

We throw our first virtual bouquet to Derby's Garl Garl sobering-up shelter for transforming some of its land into an organic garden (see Living Green). Congratulations, Garl Garl.

Our second bouquet goes to Allan Wedderburn in Kununurra for his tireless one-man battle against Neem trees.

EARLIER THIS YEAR ENVIRONS KIMBERLEY GOT ITS FIRST VEHICLE, OUR FIELD-READY BLUE HILUX, WHICH HAS BEEN FANTASTIC (STILL WAITING FOR A NAME THAT FITS: ERIC OR BRUCE?). NOW WE ADD TO THE EK FLEET OUR FIRST AIRCRAFT! WELL, **A DRONE**. OVER THE PAST YEARS DRONES, OR UNPERSONNED AERIAL VEHICLES (UAVS), HAVE BECOME LIGHTER AND CHEAPER AND ARE NOW BEING USED MORE AND MORE FOR CONSERVATION, BE IT MAPPING WEEDS, DROPPING SEEDS OR TRACKING TAGGED ANIMALS' DEEDS.

So EK's Kimberley Nature Project found enough project justifications to treat our inner child. We plan to use the drone to document the habitats and activities associated with our projects for reporting and social media, but will also trial its effectiveness in mapping weeds and Monsoon Vine Thicket edges, and surveying bilby burrows.

Our drone has already come in handy. On a recent weekend Environs Kimberley, the Bardi Jawi Oorany Rangers and SKIPA conducted their latest weeding weekend amongst the Monsoon Vine Thickets of the Kooljaman Resort. To document this great collaborative project we had a crew running around filming the work and getting interviews for a small documentary. This gave me the excuse to get some scene-setting aerial footage of the Bardi coast and its Monsoon Vine Thickets.

Keep an eye on the Environs Kimberley Facebook page or website for the release of this Kooljaman Weeding Project film!

Malcolm Lindsay



KNP staff taking a portrait from the hovering drone. Left to right, Neil Hamaguchi, Kylie Weatherall, Malcolm Lindsay, Steve Reynolds and Ayesha Moss.

# BROOME VOLUNTEERS SLOW THE TIDE OF RUBBISH

On 11 October, 20 dedicated volunteers tackled the litter on the foreshore of Roebuck Bay. We met at Streeter's Jetty, with the intention of reaching Town Beach two hours later, but the quantity of litter was more than we had bargained for.

The effort in Broome was part of the annual Australian Marine Debris Initiative, started by a small group of concerned individuals in southern WA, which snowballed across the whole state and eventually the whole country. Every year in October, volunteers along the entire WA coast come together, grab some bags and gloves to collect rubbish from our beautiful coastline, to help maintain its glorious reputation around the world. The initiative is coordinated by the Tangaroa Blue Foundation, a not-for-profit organisation focused on the health of our marine environment.

Environs Kimberley and Conservation Volunteers Australia joined forces for this year's clean-up. The enthusiasm from the group was strong, and only an hour into the collection all our bags and vessels were overflowing. The group filled around 40 bags with rubbish in the first 400 metres of the clean-up. The array of litter collected included fishing lines, thongs, cans, broken glass and even a shopping trolley. We travelled no further than the mangroves and beach adjacent to Streeter's Jetty. Despite the heat, the group said they hoped that another clean-up date would not be too far away.

I would like to thank all volunteers for their great effort. Every little bit helps, not just to keep our beaches clean, but to protect our wildlife. An estimated 18,000 pieces of plastic are floating in every square kilometre of ocean. This debris causes harm to 276 marine species worldwide, including 77 Australian species.

We have confirmed some funding from Coastwest again for the 2016/17 funding period, which is fantastic. Environs Kimberley, which manages the Broome Community Seagrass Monitoring Project, is one of the 24 community organisations that were successful applicants for the Community & Philanthropy Partnership Week grant program. Community and Philanthropy Partnerships Week is a three-year initiative to celebrate the ways in which partnerships between grassroots community groups and philanthropy build strong and vibrant places to live and work, and is funded by the Australian Government's Department of Social Services. Environs Kimberley hosted a thank-you event at the Mangrove Resort in December to celebrate the success of the Broome Community Seagrass Monitoring Project and all that has been achieved with our donors and supporters.

Seagrass presentations were delivered to year 4 & 5 students from Broome Primary School, another fish survey is in the pipeline and more seagrass monitoring volunteer opportunities are coming up in 2016.

Julia Rau

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



*A great team effort. Photos: Julia Rau*

## The Fat Ladies of the Sea

The most beautiful lady of the Australian seas has to be mother Dugong. She has a large buxom figure, tipping the scales at 450kg. Add to this exquisite feminine form a pair of juicy lips and sultry eyes and we have a lady irresistible to men and male Dugong alike. That is, if you don't mind a lady with a bristly moustache guarding those lips and sharp tusks for use when things get rough. She can't see well so even the ugliest of males stands a chance with her, although she does have excellent hearing. Her prominent nose gives her an exceptional sense of smell, to sniff out the juiciest seagrass and the smelliest male.

She chooses which males she will mate with, and often selects a few, guaranteeing conception, but seems unperturbed as to who the father is. Male Dugong are always eager to mate but have to wait until she is ready, which can be a long time, as pregnancy lasts 14 months and she only becomes pregnant once every 3–7 years.

Before mating, male Dugong in Shark Bay exhibit 'lekking' behaviour. Imagine a group of rowdy men outside the pub, fighting and posturing, vying for the right to mate with one female — this is lekking behaviour. The lucky male swims upside down underneath her to mate, and fights off the other contenders at the same time.

Few creatures come close to her in dedication and care for her young. Baby Dugong are born pale brown, one metre long, and weigh around 35kg. They immediately start swimming, although the mother must push the young calf to the surface to get its first breath. From that moment the two are inseparable, the calf suckling her mother's milk for 18 months and learning how to find the juiciest seagrass. They communicate constantly with bird-like chirps, squeaks and trills, and the calf swims very close to Mum, often reaching out a flipper for that reassuring touch.

Dugong conservation is complex. Throughout the Indo-Pacific region Dugong numbers have been decimated by over-hunting and coastal development. Northern Australia is the last stronghold for the species; Shark Bay alone contains 10% of the remaining population. Dugong populations do not rebound quickly because of the low reproduction rate. If every female bred at full potential the maximum rate the population could increase by is only 5% per year. Dugongs' life cycle is similar to that of humans; they live to 70 — but they must survive the dangers of the sea and don't have access to Medicare. And Dugongs move, sometimes a very long way. A tagged female crossed the Gulf of Carpentaria (600 km) in only 5 days. Males have been tracked from Beagle Bay to Port Hedland and back. Perhaps the greatest nomad is a tough, lone male who swims from Shark Bay to Cocos island. He survives the long swim without feeding, in water 4 km deep, surrounded by packs of sharks.

Glimmers of hope for Dugong can be seen in marine parks around Northern Australia. The Great Barrier Reef marine park has dedicated Dugong sanctuary zones in areas with abundant seagrass in shallow water. Traditional owners in Queensland have agreed not to hunt Dugong in these zones to give them some chance of recovery. Shark Bay marine park also has special zones to protect seagrass meadows and Dugong populations. If enough of these zones are dotted along the coastline, Dugong will have sanctuaries during their long-distance movements.

Kimberley Dugongs face ever-increasing pressure and are at the crossroads of effective conservation. If the new Great Kimberley marine park contains zones that protect calving areas and rich seagrass meadows, these animals stand a chance of recovery. Support from traditional owners will be essential to ensure the success of the most beautiful fat ladies of the sea.



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.



# MONSOON VINE THICKETS

## ENDEMIC, RESTRICTED — A PLANNING PRIORITY?

The Broome Peninsula is a wealth of diversity and ecological and cultural heritage, and a refuge for rare species. It contains the Kimberley's only Nationally Endangered ecosystem, Monsoon Vine Thicket, and three state-listed Priority Ecological Communities (PECs): Minyjuru (*Sersalisia sericea*) — a revered local bush fruit — on relict dunes, Dwarf Pindan Heath and Cable Beach Ghost Gum (*Corymbia paractia*) community (CBGG). CBGG is an endemic species and only known between Crab Creek Road and the Broome Port. The Peninsula also contains the Critically Endangered Keraudrenia exastia.

The extent, location and ecology of these PECs were poorly understood. Our knowledge of CBGG and Minyjuru PECs has been greatly improved by surveys conducted by Tim Willing in 2013/14, and reports Tim wrote with Louise Beames (EK) in 2015<sup>1</sup>. Most of the survey work was undertaken voluntarily and we were able to support the documentation through the Kimberley Nature Project. More than 90% of these PECs has now been mapped throughout the Broome Peninsula and subjected to a condition assessment and threat identification. We made recommendations for the PEC communities, individual patches and remnant trees.

Clearing for urban and industrial development is one of the greatest threats. During the time we collated the survey work and wrote the reports, both PECs experienced losses through clearing, just as unmapped Broome MVT did in 2012/3. Of the 260.1ha of CBGG community located during the survey, 8.75ha was cleared in 2014, as was 2.83ha of the 231.73ha of Minyjuru PEC within the township.

Fifteen patches of Minyjuru community and 63 patches of CBGG community were identified. We found that almost 75% of the Minyjuru community within the township

lies outside designated conservation reserves and almost half of the CBGG community remains exposed to development. Only 3 CBGG patches and no Minyjuru patches are fully protected. 31 of 63 CBGG patches and 8 of 19 Minyjuru patches remain unprotected. Small changes to conservation areas could go a long way to remedying this. Significant numbers of remnant Minyjuru and CBGG trees occur throughout Broome township. We recommended that the Shire activate its 'Protected Tree Register' to improve cooperation by the public and reduce losses.

If efforts are not made to avoid clearing PECs and TECs, development will seriously reduce the extent, connectivity and ecological processes within and around the communities. Road-widening, reduced nature strips, housing redevelopment and weed infestations will also contribute to the attrition of aged remnant trees.

Weed invasion and fire were also identified as threats to PEC patches. We recommended management planning and conservation works for a number of priority areas.

The areas of PEC/TEC are limited, as is the space for urban and industrial expansion on the Broome Peninsula. A balance needs to be struck between conserving the integrity of these ecosystems and carefully planning for sustainable development.

The reports have been sent to local and state authorities and will be made available for download on our website.<sup>2</sup>

Louise Beames



1. Tim's work was initiated as an independent consultant; however, he made an exhaustive voluntary contribution in his role as Secretary to the Broome Botanical Society.
2. Despite the survey work occurring in 2013/14, the compilation of the final reports was delayed till 2015 owing to the sheer volume of datapoints and information, and Louise's two babies, born in quick succession (2013 and 2014), slowing things down a little!



*Minyjuru provides a much coveted sweet fruit, a traditional Yawuru mayi. Photo: Louise Beames*



top: Cable Beach Ghost Gum  
bottom: In full flower. Photo: Louise Beames

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