



Stop the Kimberley gas fracking pipeline!



Photo: Damian Kelly

Kimberley people are calling on State Development Minister Roger Cook not to approve a pipeline from 60km outside of Fitzroy Crossing to the Pilbara, which would open up the region to the biggest gas fracking fields in the world (see story inside on page 5).

Win on the way for Walmanyjun (Cable Beach) turtles!

After years of attempts by turtle monitors and local residents to protect nesting and hatchling turtles from vehicles at Walmanyjun, these beloved reptiles are very close to having much more protection in the 2022 nesting season.



Photo: Allysha Cartledge

This comes after a community campaign to push for higher safeguards for the Flatback Turtles – an endangered species, – that nest on the beach every year. Congratulations to Rowena Strain and friends, who instigated the petition to Council, which had more than 1,000 signatures and triggered the change. We were very happy to help her along the way and it was heartening to see the outpouring of support for the turtles from a wide cross-section of the community.

The new protection measures recommended by the Yawuru Park Council (YPC) to close the beach during nesting and hatchling time in December and January are a great step in the right direction. As the YPC's report to the Broome Shire Council (18 November, 2021) says: *"This is a compromise on the best practice conservation outcome, to provide for continued vehicle access outside of peak hatchling months."* To fully protect the turtles from vehicles, the beach would be closed to vehicles from November to February. The final decision will come after the Shire has received a report from the Yawuru Park Council following its June 2022 meeting. We will let you know if support is needed.



Report From The Chair

Kate Golson

Hello all.

On 13 November we held our AGM, which I attended by video-conference from Canberra, where I am parent-sitting. During the proceedings, I stepped down as EK Chair after 12 years and the mantle passed to Nat Davey.

It's an exciting change; Nat is from Fitzroy Crossing, Kimberley born and bred, she's an educator, broadcaster, artist and, quoting from her profile on our website, 'dedicated to sharing the world around her and bringing people together through cultural understanding'. (<https://www.environskimberley.org.au/board>).

While I will continue as a Board member for another year, and there was an opportunity for me to say a few words at the event, I didn't, so I thought I would use this – my last report – to say my piece.

It has been an enriching experience, being the Chair of an organisation that is doing so much, so well.

When I joined the Board in 2012, EK had four staff and was operating out of a few tiny rooms at Lotteries House in Broome. Martin had recently taken over from EK's inaugural Director, Maria Mann, and some people were left wondering how we'd ended up with a Welshman at the helm with a dodgy accent and lily-white skin.

Back then, Lu Beames, using a six-month part-time weeds project as her launching pad, had embarked single-handedly on a mission to build the organisation's project arm, while Christine Elsasser was front of office, capably supporting the small team. The eight-year James Price Point campaign was in full swing and beginning to take EK on a new course.

It was a time when we relied predominantly on government grant funding, which exposed us to the vagaries of election cycles. EK's adaptability and agility in the face of uncertainty and change, and its organisational culture generally, were born from these early years, where no one took their work for granted and we shared a clear sense of purpose, vision and set of values.

EK illustrates well how the fortunes of organisations rise or fall because of the people who comprise them. Not only are we situated in a very special part of the world, but the organisation has been and remains filled with many wonderful, talented, knowledgeable, and creative people. It has been a privilege to be on the Board as it has transformed and grown.

Lastly, at the AGM we said goodbye to three Board members – Mon Edgar, Bec Laird and Isaiah McKenna. Thank you for your commitment and contributions through the year.

All the best,
Kate



Natalie Davey

Howdy.

Becoming chair of Environs Kimberley, I was excited and apprehensive, and am now eager to take on responsibility for one of this country's successful regional conservation organisations. EK has worked hard to protect the Kimberley over the past 25 years.

I will do my utmost to continue bringing the standard and heart Kate Golson has put into this role. Her dedication and hard work as Chair over the last 12 years has steered Environs Kimberley's growth, with strong governance and management combined with creative and innovative practices.

I came from the Fitzroy River. My jarriny (birth totem) is barramundi, the foundation of my connection and responsibility to Country.

For half my life EK has stood strongly and successfully to protect Country; it feels right to continue looking after Country by joining EK.

Wali,
Natalie Davey

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Letters To The Editor

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

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Thanks for helping
us to protect the
Kimberley environment



Director's Report

Martin Pritchard

As the climate change crisis continues to unfold and countries around the world take action to reduce emissions, Western Australia, under the leadership of Premier Mark McGowan, is going in the other direction.

Riding on a wave of unprecedented popularity by taking a hard line on Covid 19, the Premier and Minister for Health, Roger Cook, have kept us safe from the virus but are building a pyre that will unleash a dangerous amount of climate-busting carbon dioxide and methane emissions.

The Premier and his Cabinet are laying the foundations for a Kimberley that will be unliveable. Fitzroy Crossing already has 67 days with maximum temperatures over 40C per year on average. According to projections by CSIRO and Bureau of Meteorology, days over 40C will more than double to 154 days a year by 2050.

By 2090, the projection is for 225 days over 40C in Fitzroy Crossing. People couldn't live healthy lives in such high temperatures.

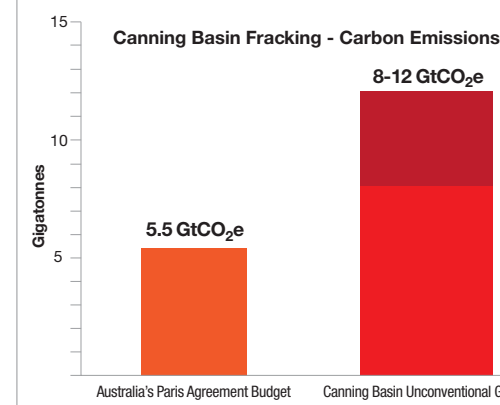
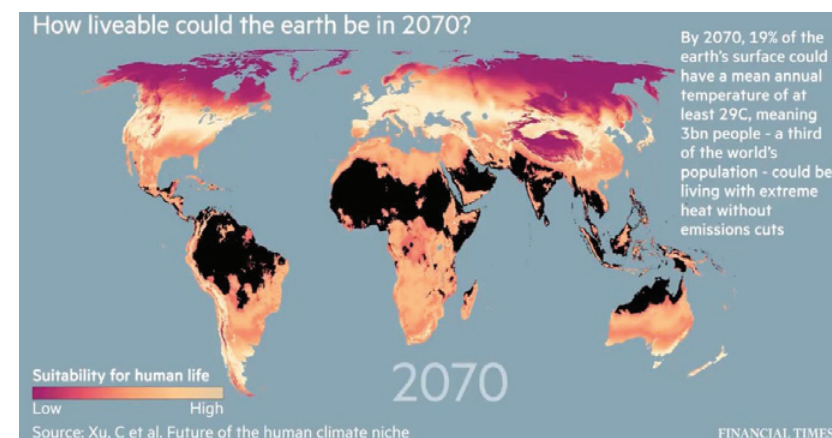
Locals would become climate refugees and would have to move to cooler places.

This situation will not be unique to the Kimberley. The Financial Times, a liberal economic UK daily, published this map of the world recently. Billions of people are facing a climate catastrophe (the areas in black will be unliveable).

Yet the McGowan Government continues to act as if the climate crisis isn't happening. The Health Minister Roger Cook, who is also the Minister for State Development, is working on a plan to allow a Texan oil and gas company to export fracked gas through a pipeline from near Fitzroy Crossing to the Pilbara.

Oil and gas experts we've spoken to have said thousands of oil and gas wells would have to be drilled and fracked to pay for such a pipeline (see article on page 5).

If all the Kimberley's onshore gas was fracked and burnt, and with methane leaking into the atmosphere, this would more than double Australia's entire carbon budget under the Paris Agreement. Please write to Roger Cook and ask him how his conscience allows him to make decisions like that.



Changing leadership

After 12 years at the helm of EK, Kate Golson has decided to step down as the Chair. Kate has been an exceptional Chairperson, instigating many changes to make the organisation more robust, and helping us attain the highest governance standards. On behalf of the organisation, I thank Kate for doing so much for EK in a voluntary capacity over such a long period of time. I also thank Kate for the frank and fearless advice she has provided me over the years, as well as for the tremendous support she has given to me personally. Thanks Kate.

We welcome Natalie Davey as our new Chair and very much look forward to working with her.

Living Green

– PAINLESSLY

RECYCLING AND RUBBISH TIPS by guest writer Diana Oliver

Serious about recycling? The Broome Shire has an A-Z of Waste document on its website; I highly recommend that you have a quick browse.

There are nearly 400 items, from Acids, via Cockroach Baits and Razors, to Ziplock bags. Specific items can be deposited at 10 locations in Broome: Cleanaway, yellow bins, green bins, the Waste Facility on Buckley's Road off Fairway Drive, the Council Chambers, the Library, Specsavers (for glasses), Charity Partners (OP Shops!), Coles and Woollies, Containers for Change (Clementson St). There is also a website address that tells you how to recycle coffee capsules.

Cleanaway trucks all Hazardous Waste, e.g. pest control chemicals, lighters, paint, solvents etc., to a processing plant in Port Hedland, where fluids and solids are refined into reusable chemicals or elements.

The Yellow Bin takes ONLY plastics numbers 1 and 2, all other types of plastic contaminate the bin and keep the recovery rate low, 40% currently in Broome. This percentage includes steel cans, aluminium cans and foil, glass jars and bottles (window glass and drinking glasses are not acceptable), paper and cardboard, egg cartons, paper towels etc. The 'windows' in envelopes need to be removed, and the waxed cardboard juice and milk cartons are ok, but NOT those lined with aluminium, e.g. soy and almond milk containers.

The aluminium, steel, paper/cardboard, and plastics are separated, compressed, baled and trucked to Perth. Processing plastic is labour intensive so plastic is exported to S.E. Asia. The rest is processed and used in Australia. It's more effective to take plastic drink bottles to Containers for Change, as their plastics are uncontaminated by other types of plastic. Having a more valuable product, they have secure contracts in S.E. Asia, with guaranteed outcomes, i.e. it won't end up in the ocean.

The Public Library and Shire Office have bins for household batteries, light bulbs, fluoro bulbs and tubes, and mobile phones. Coles and Woollies have the Redcycle bins for all soft plastics. Redcycle has processing plants in all Australian capital cities. They manufacture outdoor furniture, floorboards, bollards and more....

Containers for Change is thriving, I love getting funding for community projects by making a dent in the illegal dumping around town.

The Waste Facility on Buckley's Road off Fairway Drive (the tip!) reclaims building materials, e-waste, car batteries, electronic devices etc. (see A-Z list). E-waste's vital components are sent to Perth. The refrigerants and gasses in white goods are retrieved and used by local businesses. Steel and other metals are sent to Port Hedland. Old bricks, concrete and other materials are crushed and used in road repairs and surfacing in the Kimberley. The public area of 'old junk' helped me out sometimes with reusable bits and pieces. I'm sure everyone knows about the free mulch....

If you're really keen, visit www.breadtagsforwheelchairs.co.za. You can send tags to locations in Australia. Also, plastic bottle caps, including those from the various 'milk' cartons, can be recycled into prosthetics.

Of course, the best policy is to avoid packaging wherever possible, but I hope that you are now convinced that it IS worth the effort to relocate your no-longer-required-STUFF for TRANSFORMATION.

Ruminating with MAD COW



ON CAPITALISM

It occurred to me recently, in one of those Eureka! moments we all have from time to time, that Capitalism is a Ponzi scheme (a fraudulent investing scheme whereby early investors profit from the funds of later investors).

As usual, what I believed to be an Original Thought was not original at all — the Internet loves pricking one's balloons. It's obvious, really — like any Ponzi scheme, Capitalism depends on eternal growth, which, as Greta Thunberg pointed out when she was 15 or so, is a fairytale. Eternal growth is no more possible than perpetual motion. And look where it has got us so far: a world that is becoming less inhabitable year by year, containing more and more human beings and fewer and fewer other species. We are well and truly mired in it — in a desperately overpopulated world, countries like China, with its population of nearly 1.5 billion, and little South Korea, with a population of nearly 52 million, are bribing women, who have sensibly chosen to limit their own fertility, to have more children to keep the economy going. The Economy is the god we human beings now serve.

The question is: how to get off the Capitalist merry-go-round? Most people who benefit from modern economies are rather attached to their affluent lifestyle. Having tasted the apple, we want to keep eating it (bad luck for those left with just the core). In any case, there are too many of us now to go back to living off the land; irrigated agriculture and intensive farming have enabled us to go forth and multiply to our present unsustainable levels. And will continue to do so until we have wall-to-wall people, leaving little room for anything else. If you think I am exaggerating, consider the U.K., reported to have lost an estimated 50% of its biodiversity — its non-human species — and is well on the way to losing the other 50%. Its huge human population is still growing.

To reduce our use of the earth's resources and prevent catastrophic climate change, concerned citizens recommend cutting back our spending and consumption. This, of course, is not appreciated by governments, who want us to spend, spend, spend to keep the economy thriving. You may remember President Bush Junior's inspirational advice to the populace of the USA after the attacks on November 11th, 2001 — not 'Pause to reflect' or even 'Gird up your loins' (hard to picture nowadays), but 'Go shopping.' Thus speaketh *Homo economicus*. It's enough to turn you back to religion, which at least offered some sense of value above the mundane.

I don't have an answer to the question of Capitalism, though I have often wondered why we can't be satisfied with a steady-state economy rather than a growth-bound one. Eventually, we'll be forced to, but only when conditions are so bad that life will hardly be worth living for anyone but the super-rich. If you don't aspire to be one of those, then consider following Voltaire's dictum: 'Il faut cultiver son jardin.' Go on, look it up.

Converting the West Kimberley into gas fracking fields?



Shaun Clark

Pressure to exploit and frack for petroleum resources in the onshore Canning Basin isn't new. Besides there being no social licence for this polluting industry, one major factor has assisted in keeping the Kimberley landscape intact: there hasn't been a pipeline for the transmission of gas to export markets.

Recently the Deputy Premier Roger Cook, Minister for Health, Medical Research, State Development, Jobs and Trade, and Science, gave an exemption for Texan-based fracking company Bennett Resources (Black Mountain) to export gas from Karratha via a pipeline from the Kimberley. Previously the WA Government's Domestic Gas Policy, to retain a percentage of gas for domestic purposes, was put in place to ensure WA had enough gas reserves for the State's future. Black Mountain had previously described the policy as a killer to their proposal for widespread fracking in the Kimberley.

It is estimated the length of the pipeline would be approximately 1200km, travelling along the Great Northern Highway from near Fitzroy Crossing to an existing gas processing facility in Karratha. An approximate cost to build such a pipeline would be \$1.5 billion, requiring a huge volume of gas to make such an investment viable. Recent analysis has shown the number of fracked gas wells needed to underpin this investment would be close to 10,000 wells.

Given this number of wells, the threat to the Kimberley would not be contained to a single petroleum lease near Noonkanbah

but would require the inclusion of other leases across vast areas, creating a horror pockmarked landscape, like we see in the Texan fracking fields. Rhett Bennett from Bennett Resources describes the Canning Basin as a 'supergiant', and other companies have previously compared the geological characteristics of the Canning Basin to areas of the US.

Companies like Buru Energy, who are now teamed up with Origin Energy, have been sitting for years, waiting to capitalise on the tight gas of the Laurel Formation, while Theia Energy needs to capitalise on the shale gas of the Nambeet Formation to drive its program of 100,000 barrels of fracked oil per day from the Lower Goldwyer formation 150km south-east of Broome. Both tight and shale oil-and-gas scenarios require fracking for resource flow and extraction.

Bennett Resources has now put out a prospectus to raise capital and be listed on the Australian Stock Exchange as an Australian entity named Black Mountain Energy, significantly raising the stakes and providing it with an opportunity for future capital growth and development.

To keep the Kimberley biodiversity healthy from this destructive industry we need to stand strong against a pipeline which would significantly fragment the largest intact tropical savannah left on the planet. We say 'NO' to any pipeline that would assist fracking companies in their endeavour to destroy this remarkable place and release globally significant amounts of carbon dioxide and methane. Be ready to stand with us as our campaign for a frack free Kimberley gains momentum. Say NO to fracking.

Celebrating 10 years of Kylie at EK

Kylie joined us in 2011 as the sixth member of our EK team and the fourth member of the then West Kimberley Nature Project (WKNP) team.

Kylie had been working for Conservation Volunteers Australia and we had collaborated on a number of weeding and flora-monitoring projects. Rangers and SKIPA volunteers clearly loved working with Kylie, and we were excited to offer her some new challenges: monsoon vine thicket management, fire and biodiversity research, lyngbya monitoring, and occasionally holding up traffic (read bulldozers) with her 'broken-down' van on the road to Walmadany.

Kylie's happy energy and generous spirit have been such a wonderful addition to EK, and over the years we have all been through so much together as we have grown as an organisation and developed as humans.

Kylie has led many successful projects across WKNP (now KNP), including the Broome Community Seagrass Monitoring Project, SKIPA projects, revegetation and seed collection projects, as well as an ever-expanding number of monsoon vine thicket projects. She has led plant and animal surveys with rangers and community groups as well as community consultations for Traditional Knowledge documentation and eco-cultural signage projects.

Kylie is the 'heart of KNP', the one who always remembers our birthdays and organises thoughtful presents and flowers to mark special occasions and care for people during times of loss.

We have been so fortunate to have such a warm, friendly, dependable and kind-hearted person in our EK family for 10 years. We thank you Kylie for all you have contributed toward 'Saving the Nature of the Kimberley' (including your delicious cakes), and hope that we will be working together for many years to come.

With love, your EK Family



The Environs Kimberley team circa 2011.
Top L-R: Jason Roe, Kylie Weatherall, Martin Prichard
Bottom L-R: Christine Elsasser, Louise Beames, Taran Cox



Nature Projects Australia — EK's Not-for-Profit but For-Good consultancy

Louise Beames

Since 2008, EK's Nature Projects Australia has been providing occasional consultancy services in cultural natural resource management (CNRM).

We have provided on-ground ecological services, survey, planning and project management support to Aboriginal ranger groups, Registered Native Title Bodies Corporate, Land Councils, and other Aboriginal groups in WA, Qld and Victoria. We have also provided consultancy to WWF Australia, Bush Heritage Australia, WaterCorp, Department of Biodiversity Conservation and Attractions and Main Roads.

Since 2020 we have grown our capability in sustainable community/organisational development and executive support services. We are working with communities to achieve considerable social, cultural, environmental and sustainable economic development.

Our consultancies are helping us to develop and nurture strategic relationships, build collaborative capacity, bring resources into regions and develop sustainable economic opportunities that align with the EK vision and purpose, and one of our Strategic Goals: A Conservation Economy in the Kimberley. EK targets include: supporting economic activities that are ecologically sustainable, and advocating for (and helping to fund) economic opportunities that improve social and environmental conditions.

Consultancy has enabled EK to survive the significant reductions in Australian environmental funding programs over the past decade, maintain good workplace conditions and job security for staff, and grow our staff base.

We have made social, cultural, environmental, economic and community capacity-building achievements from the consultancy work. Since November 2020 we have brought in and managed over \$1.9 million in external project grants and donations towards language and culture revitalisation, literacy and education, alcohol and drug rehabilitation consultation, tourism and cultural enterprise development, connecting to Country, cultural and historical knowledge repatriation and cultural heritage protection.

An additional \$1.9 million in grant applications for the Kimberley is pending and more than \$800k for outside the region.

Some of our recent undertakings include:

- Providing support to Dabu Jajikal Aboriginal Corporation in their bid to secure traditional lands through the ILSC in Cairns.
- Providing support to Jalng-ga and Gurama Yani U in their successful application for, and reporting of, the Jalng-ga Therapeutic Communities project, an Aboriginal-led consultation for culturally-aligned alcohol and drug services in the Fitzroy valley.
- Working together with Bunuba Dawangarri Aboriginal Corporation (BDAC) to establish the Bunuba Cultural Conservation Institute (BCCI) as its not-for-profit projects arm. BCCI projects include language and culture revitalisation, cultural knowledge repatriation and digitization, natural resource and cultural land management and nurturing creative, conservation and cultural businesses for a sustainable local economy.
- Working with BDAC, BCCI, Australian Literacy and Numeracy Foundation, and Josephmark's the Living First Languages Platform to develop a digital roadmap for cultural enterprise:

- Stage one commenced in February 2021 where we have helped design and develop a 'Bunuba Country' website www.bunuba.com launched in November 2021. The site is to establish Bunuba Country as a tourism destination, create meaningful on-Country employment and engage visitors in authentic Aboriginal cultural experiences.
- Stage two commenced in August 2021 as the two-year Bunuba Living Language, Culture and Country Project, to create a living language database and digital platform for the preservation, revitalisation and teaching of Bunuba language and stories across the generations.

In driving NPA works I have had greater exposure across a number of industries, regions and grant processes. This has been massively rewarding, resulting in wider networks and know-how that can be applied across organisations.

KNP's newly funded Social Enterprise Project, led by Liz Jack, will focus on the development of internal and external social enterprise. Over the next 18 months we will work together on the best way to structure social enterprise and consultancy work as a stand-alone branch within the EK family tree.



BCCI directors and Bunuba community members met with the Hon. Minister Dawson and Member for Kimberley, Divina D'Anna, to launch the Living Language Culture and Country project in September 2021. Image courtesy of Penny Purdie

EK's Kimberley Nature Project Strategic Plan 2021-2023

While we are celebrating 25 years of looking after the Kimberley, the Kimberley Nature Project (KNP) team is starting its 15th year supporting and coordinating cooperative cultural-natural resource management projects in the region.

Commencing in the latter part of the 2007 dry season as a 12-month project, with one part-time staff member (Louise), the journey to KNP today has been one of collaboration through meaningful engagement, commitment and growth.

In 2021, what is now KNP is staffed by 11 wonderfully talented ecologists, field naturalists, social enterprise and community engagement professionals. We run more than 16 CNRM projects, collaborating widely with Aboriginal ranger groups, RNTBCs, Traditional Owners and remote communities, government departments, research institutions, industry, and environmental and community groups.

Our projects include the management-planning (and management of) fire and weeds; revegetation and seed collection; ecological surveying, monitoring and documentation; hosting knowledge sharing and planning networks; managing and documenting threatened species and ecosystems; supporting the development of social and sustainable enterprises; facilitating cultural knowledge recording; and developing community and educational products.



Funding from Lotterywest through the 'sector support for resilient organisations' stream has enabled our KNP team to workshop and develop the KNP Strategic Plan and align it with our changed capacity and modern partnerships. We have been able to bring all the knowledge, experience and input from the team to the table and reflect this in our amended Focus Areas and Goals.

Our plan sits under and within the broader EK Purpose and EK Vision and identifies 7 Focus Areas and 8 Goals that define our team and our plans for achievement, 2021-2023.

We proudly share this with you here and on our website. The KNP team is very excited to continue its development and growth over the next two years, and the plan will assist us to focus on and measure our tremendous positive impacts on the nature of the Kimberley over the coming years.



Our Vision

The natural environment of the Kimberley is protected and well managed. Environmental and social sustainability are guiding principles for development.

Our Purpose

To protect the nature of the Kimberley

We Value

- Informed decision making
- Community-based conservation
- Best-practice scientific research
- The power of people to effect change
- Recognition of the rights & interests of Traditional Owners
- Indigenous ecological knowledge
- Collaborations and partnerships
- Organisational independence & integrity

Kimberley Nature Project Focus Areas and Goals

Focus Areas	Goals
1) On-ground Cultural Natural Resource Management	To improve the health of species, ecosystems and cultural heritage, by building resilience and reducing threats.
2) Research	Increase understanding of Kimberley ecosystems through scientific research, integrated with traditional knowledge, to improve management and protection.
3) Partnerships	Build strong collaborative long-term partnerships with Aboriginal people to protect country and culture. Collaborate with community groups, government and industry to protect country and culture.
4) Community Understanding and Participation	Increase the public's understanding of nature and culture, and capacity to protect them.
5) Conservation Economy	Support the development of economic opportunities that enhance the health of communities and landscapes
6) Strategic Conservation Planning and Protection	Improve regional strategic planning, networks, resourcing and legal protections for species and ecosystems
7) Healthy Workplace	We are an inclusive, family-friendly workplace valuing collaboration, diversity, flexibility, growth and baking.

Into the desert

Hamsini Bijlani



Bugura led us across the sandplain towards a lush green patch of vegetation that stood out from the surrounding, comparatively dry landscape. She was taking us to Tangi, an extremely remote jila or desert waterhole that she used to camp at often when she was a young girl living in the desert.

We comprised a party of forty: the Ngurrara Rangers, Traditional Owners and Elders, anthropologists, and staff from Mangkaja Arts and Environs Kimberley. This was a significant trip since we were visiting two important, deep-desert jila, which some elders had not seen in decades. It had taken us four long days to drive to the waterhole from Fitzroy Crossing, making our own track through the difficult, sandy terrain.

EK staff were there with the Ngurrara Rangers to collect data as part of a new Jila Health Project. This project supports the rangers in monitoring and managing jila on their Country, protecting these waterholes from threats such as weeds and camels. The project also facilitates trips for rangers and Traditional Owners to go back to these significant places so that they can continue to practise culture and look after jila.

We spent four days monitoring biodiversity around the jila and recording the stories and traditional names of all the important plants and animals observed, as told by the Elders. We found a Bilby burrow with fresh tracks just near Tangi, recorded zebra finches flying into the jila once it filled up with water and caught several species of lizards which lived in the green jila vegetation.

The highlights of the trip were watching the old girls paint their Country using bright colours, and the men perform traditional dance by firelight, and listening to Bugura and the other Elders tell stories about life in the desert before they walked out onto cattle stations and communities.



Convoy of cars on the way to Tangi



Bugura looking through a field guide of birds to provide stories and language names.

Environs Kimberley is working with the Ngurrara Rangers to deliver the Ngurrara Jila and Jumu Health Project, funded through the Western Australian Government's State Natural Resource Management Program.





EK shop

Maddie Edwards

It's been a big year for the **Environs Kimberley** online shop with some very popular new items.

Our supporters have loved our Protect the Fitzroy River hats, available in a variety of new colours. Many have bundled these hats with our Protect the Fitzroy River t-shirts.

The brand new Frack Free Kimberley t-shirts have already sold out once. But don't worry, we are restocking in mid-December, so you still have an opportunity to own one. All our t-shirts will be available in kids' sizes in the new year, as requested by many supporters.

Our personalised donation gift cards and EK membership gift cards are always popular as a simple and meaningful gift for nature lovers.

As you will have read in our last EK News, Environs Kimberley has reached a magnificent milestone. With your support, we've been protecting the Kimberley for 25 years. Stay tuned for our special 25th Anniversary merchandise – including fabulous Keep Cups!

All proceeds raised through the EK Shop go towards our work to protect the Kimberley.



Environs Kimberley Art Raffle - Tickets \$30 each

'Nyinmi' by Warlayirti artist Ann (Frances) Nowee. In this piece, Ann has depicted her mother's Country Nyinmi, on the Canning Stock Route in the Great Sandy Desert.

This online raffle will be drawn on 15 February 2022. Proceeds go to the artist, art centre and EK's work to protect the Kimberley.



Exploring habitat complexity with drones – from stockpiles to reptiles

To understand more about ecological effects of fire in the Great Sandy Desert, EK ecologists have teamed up with Karajarri and Ngurrara Rangers to survey reptiles and mammals under different fire regimes (see EK Newsletter Issue 91, December 2020, How does right-way fire help animals in the desert?).

However, a missing piece of the puzzle is finding a way to accurately measure how habitat complexity changes with fire. Animal habitats are often thought of in structural terms; the height and density of vegetation are key structural components of such habitats, but quickly and accurately measuring habitat complexity is, well, complex!

By creating three-dimensional models of the vegetation at our biodiversity monitoring sites using photogrammetry (stitching together a series of overlapping photographs, captured in this case by EK's drone), we can describe the vegetation structure much more quickly and accurately than with conventional on-ground techniques. Humans are pretty good at recognising different types of plants, but notoriously inaccurate at estimating the area of irregular shapes, like the percentage cover of vegetation at a site, and even worse at estimating volume, like guessing the number of jellybeans in a jar. By taking a bird's-eye view, photogrammetry from drones uses multiple images to triangulate the position of individual pixels matched from different images to generate a three-dimensional model (see EK Newsletter Issue 90, August 2020,



Danielle Bain & Matt Macdonald

New tech for conservation). This works in much the same way as seeing with two eyes gives us better depth perception. With advances in computing technology, the millions of calculations required can now be completed in the time it takes to have a cup of tea.

We have taken technology that is now used routinely to calculate stockpiles in the mining industry and are applying it to better understand the ecological complexity of the Great Sandy Desert.

By combining information on the animals and plants with a three-dimensional model of the site, we are piecing together a more complete picture of the full complexity and ecological benefits of reintroducing traditional fire management by Aboriginal rangers to desert landscapes.



In the figure left, you can see the two trap lines used for animal capture, running perpendicular to the vehicle track, either side of the pink 50 x 50m square. This site was part of the Yilpi (Edgar Range) survey with the Karajarri Rangers in September 2021. The habitat is relatively complex, with old, hollow-bearing trees, moderate shrub cover, established hummock grasses, and substantial amounts of coarse woody debris (fallen timber). We caught three species of native mammal and ten reptile species at this site. We have also undertaken botanical surveys at each trapping site, recording all plant species occurring within the pink 50 x 50m quadrat.

Using your will to protect the Kimberley

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

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

Please contact us on (08) 9192 1922 or finance@environskimberley.org.au for advice on making a bequest to EK.

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Environs Kimberley Board



Natalie Davey, Chairperson

Natalie Davey comes from Fitzroy Crossing. She is a content creator working with local organisations. For Baya Gawi, the Children and Parenting Centre (CPC) and Early Childhood Learning Unit (ECLU), she is creating an educators' resource system based around the local Aboriginal seasons. Natalie is a broadcaster at Wangki Radio, the local station, and with her father, presents a morning language program called 'Danggujarra'. With Mangkaja Arts, Natalie is developing a jewellery collection inspired by country. As part of the 2019 NAIDOC Week Speaker Series: *Voice. Treaty. Truth*, Natalie travelled with the Australian Consulate General and the founder and General Manager of Miromaa Aboriginal Language & Technology Centre (MALTC) to share knowledge about the conservation of language with many First Nations people of the United States. Natalie is dedicated to sharing the world around her and bringing people together through cultural understanding.



Craig Phillips, Vice Chairperson

Craig moved his young family from Perth to the Kimberley in 1994 and started his own IT business. His previous roles include Victorian sales manager of Columbus Mufflers, and West Australian sales manager of Lukey Mufflers. In Broome, Craig runs an IT consulting company. He is currently on the Committee of the Community Resource Centre and has served on the boards of the Broome Chamber of Commerce and the Small Business Centre West Kimberley. Craig has been an EK member since 1996 and joined the EK committee in 1999.



Laurel Sutcliffe, Treasurer

From Victoria, Laurel gained a Bachelor of Arts (BA) and a Diploma in Education from Melbourne University and taught at schools in Victoria and Papua New Guinea before moving to the Kimberley in 1986 to work in Aboriginal education. She lived at Yakanarra community near Fitzroy Crossing for 20 years as the school administrator and principal, while raising a young family. In 2006, she moved to Broome and teaches at Broome Senior High School.



Kate Golson

Born in Canberra, Kate first arrived in the Kimberley in 1992. She has worked with many community organisations as well as universities and government on activities ranging from community development and sustainable development through to native title, heritage protection and cultural and natural resource management. Kate has extensive experience in social research, community engagement, communications, and monitoring and evaluation. She holds a BA and Master of Arts in Anthropology from Sydney University.



Carmel Leahy, Secretary

Born in central western NSW, Carmel is a teacher, linguist and literacy specialist who has worked at various schools and institutions, including Yakanarra Community School in the 1990s, Broome Senior High School, Mabu Yawuru Ngan-ga language centre and Nyikina Mangala Community School. She is currently in a support role with Yiyili Aboriginal Community School. Carmel is an active member of the Society for Kimberley Indigenous Plants and Animals (SKIPA). She has a Bachelor of Education in Multicultural Education from Edith Cowan University, a Master's degree in Applied Linguistics from Charles Darwin University and Cert III in Conservation and Land Management.



Alexis Harper

Lexi is passionate about health in a holistic sense and values local environments, food systems and communities and the roles they each play in individual wellbeing. Her academic background includes a BA in Naturopathy and a Master's in Public Health. She has been a resident of northern Australia for over 10 years, having lived in Darwin for several years before moving to Fitzroy Crossing in 2016. Lexi recently decided to call Broome home. She is interested in creating local, sustainable food systems as well as ensuring the wild spaces of the Kimberley are preserved for future generations.



Peter Mitchell

Peter grew up in the South West of WA and holds a BA degree from Curtin University. His early work was in the mining and surveying industries in outback WA. In 1988 he settled in Broome, where he has worked in various roles including the Telecentre Coordinator, and for the Department of Child Protection and Kullarri Employment Services. Peter was a Broome Shire Councillor for six years and is a founding member and former Chair of EK. He also spent several years living and working in Halls Creek, where his first child was born. He is the CEO of the Men's Outreach Service in Broome, and a former board member of the Australian Men's Health Forum. Peter received the 2017 Kullarri NAIDOC Person of the Year Award.



Kat Taylor

Kat arrived in the Kimberley in 2010. She is a researcher at the Water Justice Hub, based at the Australian National University (ANU), and is an adjunct with the Nulungu Research Institute at Notre Dame University. Kat completed a PhD in water policy at ANU in 2020 and holds a Bachelor of Science (BSc) in Environmental Science (Hons) and a BSc in Conservation Biology from Murdoch University.

New staff



Adrian Boyle, Project Officer, Kimberley Nature Project

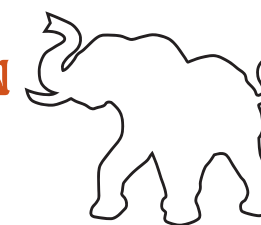
Adrian grew up in the south-east of South Australia. He moved to Broome in 1998 to follow his passion for birds by working at the Broome Bird Observatory while studying migratory shorebirds with the Australasian Wader Studies Group and the Global Flyway Network. Adrian has travelled extensively around the world while conducting shorebird research and as a tour guide in the Kimberley and polar regions. In March 2017, Adrian was a member of the four-person team that rediscovered the endangered Night Parrot in Western Australia – after an absence of confirmed records for over 100 years. Adrian is a keen photographer with a deep regard for all wildlife, who loves sharing his knowledge with others. Adrian has now joined EK to work on the Night Parrot project, supporting Aboriginal ranger groups from the Northern Deserts to better understand the birds' distribution, abundance, threats and needs.



Samuel Younis, Project Officer, Kimberley Nature Project

Sam grew up on Kirrae Whurrung country on the Great Ocean Road in Victoria and moved to Naarm (Melbourne) on Wurundjeri Woi Wurrung country to complete a BSc and a Masters of Environment. Sam recently completed a year-long research project looking at the effects changing fire regimes can have on the temperate rainforests in the central highlands of Victoria. Sam first joined EK as an intern to help conduct research into how fires and fire regimes are affecting the savannahs and woodlands of the Dampier Peninsula and to look at the individual species responses of plants in the Peninsula to fire. Sam is now employed at EK to support the development of project management systems and bilby conservation projects in the Fitzroy Valley.

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