



BOAB BULLETIN

No. 148

October 2018

NOTICE OF GENERAL MEETINGS

commencing 7.15 for 7.30 p.m.

Dalkeith Hall, 97 Waratah Avenue, Dalkeith

Wednesday, 3 October 2018

Martin Porr (UWA)

**“The German ethnographic expeditions to the Kimberley,
Northwest Australia 1938/9, 1954/5”**

Wednesday, 7 November 2018

Adam Cross (Kings Park) & Laura Skates (UWA)

**“From carnivorous plants to rock pools: diversity and ecology
in the Kimberley”**

Wednesday, 5 December 2018

Simon Haberle (ANU)

**“Palaeoecology, biodiversity and climate change:
Recent research on Kimberley environments at ANU”**

Members and visitors are invited to stay for supper after the meeting.
The Society asks a \$2.00 hospitality fee from non-members.

FROM THE CHAIRMAN

I missed the last meeting where the story of the big Boab's transport to Perth's Kings Park 10 years ago was presented by Patrick Courtney, but I have heard it was a memorable presentation.

I missed the meeting because I was in northern Italy attending an IFRAO (International Federation of Rock Art Organisations) rock art conference in Valcamonica, a World Heritage region rich in rock art inscribed onto glacial rocks at the foot of the Alps. The region is spectacular, the people, food and wine magnificent, and the rock art ubiquitous and very interesting, extending from Mesolithic, Iron Age, Roman and Medieval times to the modern era, a period of some 8000 years. Some claim the region is the richest repository of ancient rock art with hundreds of thousands of motifs – they clearly haven't heard of our Burrup Peninsula or the Kimberley. Valcamonica was declared a World Heritage Area in 1979, and the rock art is protected in many National Parks that attract large numbers of visitors. Most sites are readily accessible and there is little sign of any vandalism.

The Kimberley region was well represented at the IFRAO conference with a full-day session chaired by Kimberley Society member Prof Peter Veth and colleagues from The University of Western Australia. This group and researchers from Melbourne University who are working on dating procedures for the Kimberley rock art are without doubt among the world leaders in rock art research.

I also had the opportunity to visit the rock art replica caves of Lascaux IV and Chauvet in France. These astounding replicas need to be seen to be believed, and it is difficult to believe they are just replicas, such is the attention to detail in recreating not just the cave interiors, but the incredible art work that dates from about 34 000 years ago (Chauvet) and 18 000 years ago (Lascaux). Each of these amazing projects cost about \$70 Million! Such is the value the French put on these priceless heritage sites.

Our Kimberley rock art is seemingly yet to be appreciated in this world heritage arena. It is certainly equally spectacular, some probably at least as old as the French cave art, and we have associated mythologies for at least some of our art sites. Yet few of our sites are available for tourist visitation.

I heard a few years ago that some 10 000 people visit Mitchell Plateau each year, probably the most-visited place in the Kimberley. Lascaux IV gets over 250 000 visitors each year, and at Chauvet they anticipate up to 350 000 visitors per year.

There is a real interest in ancient rock art, and we need better access to some of the Kimberley's great art sites.

Mike Donaldson

THUNDERBIRD MINERAL SANDS MINE

The Federal Government's Northern Australia Infrastructure Fund has committed \$95 million to a new mineral sands mine in the Kimberley. Thunderbird won the funding, which is a loan, on Sheffield Resources' promise to create "intergenerational" job opportunities, with up to 40 per cent Aboriginal employment within its first eight years of operation. The mine, situated about 60 km west of Derby, near Mt Jowlaenga, will have an estimated 40-year life; is likely to create more than 400 jobs in construction; and will need a permanent workforce of about 280 people. The cost of building the first stage has been estimated at \$260 million, while a figure of \$347 million has been forecast for the full project. The financing has yet to be finalised but, with Sheffield Resources having recently reached a co-existence term agreement with the Traditional Owners, the company is anticipating that the mine will commence production in mid-2020.

TEN YEARS ON – THE GIJA JUMULU STORY

On 5 September 2018, **Patrick T. Courtney** from the Botanic Gardens and Parks Authority, Kings Park and Botanic Garden, told a Kimberley Society audience about Gija Jumulu – The story of Kings Park's Big Boab 10 years after its first arrival at Kings Park and Botanic Garden. Patrick's summary of his presentation follows, and more of his great images from it can be seen on our website.

Introduction

Gija Jumulu ("Boab" in the Gija language) is the name of a giant boab (*Adansonia gregori*) that the Gija people of the East Kimberley bestowed to the people of Western Australia and visitors to Kings Park and Botanic Garden in central Perth.

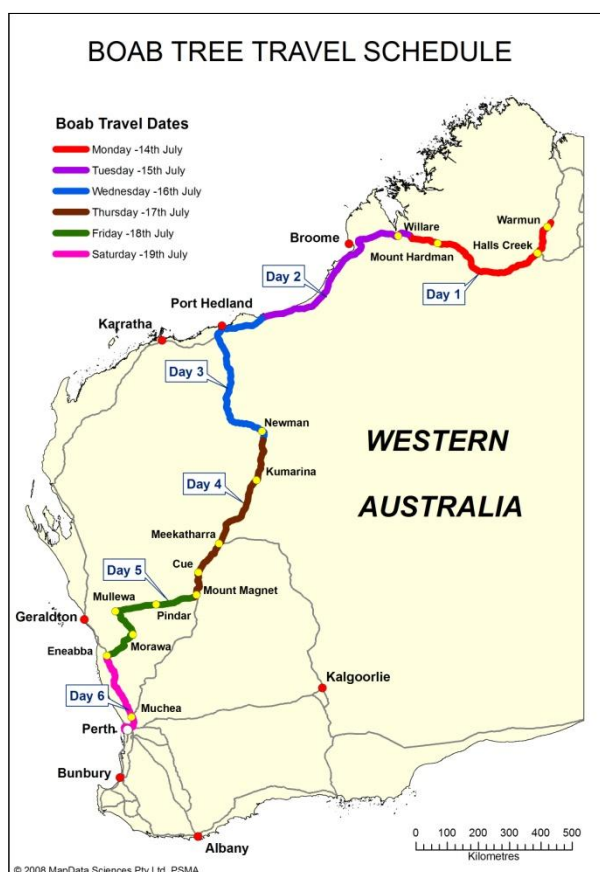


Figure 1. Planned boab journey, July 2008

The project's success was based on a number of factors, including: a strong link to traditional owners and community support; detailed logistics and project planning; a strong understanding of propagation, cultivation and physiology for boab species; and its conservation and educational aspects.

Project Development

In considering the project, one of the most important criteria for the Botanic Gardens and Parks Authority was that the project had strong conservation links and would be a salvage activity providing long term benefits to visitors of Western Australia's State Botanic Garden.

Integral to the project was the approval and involvement of the Traditional Owners. Shirley Purdie and her father (who spoke for the country the tree originated from) both agreed that it was worthy of support. Shirley took the idea to the Warmun community and so the gift was made.

The first stage of the project was to determine its feasibility via a detailed logistics and project plan and to canvas a range of individuals and organisations for support. Support for the project was phenomenal with people and organisations taking a positive position from the start.

Due to the realignment of the Great Northern Highway in the Kimberley, a large boab tree located in a flood plain at Telegraph Creek (near the Warmun Community) was destined for removal. Between March and July 2008, a community based initiative was planned to save this ancient tree. The work culminated on 19 and 20 July as the Gija Jumulu was successfully planted at Kings Park and Botanic Garden, over 3,200km from where it originally sprouted an estimated 750 years ago.

The journey is the longest land journey of a tree of this size in history. Beyond all expectations, the project received broad local, national and international media coverage with the tree even entering popular culture such as political cartoons and on morning radio. Another "boab phenomenon" occurred on the journey down as people on the road and whole towns stopped to look, wave and photograph the giant boab tree making its way through the vast Western Australian outback into metropolitan Perth.

Logistics

Logistic planning was vital in such a major tree transplant operation, which also involved a huge transport component. Some of the logistical considerations were:

- Transport 3,200 km by land including police and pilot vehicles;
- 40 power line lifts/inspections;
- Removal of road signs and traffic signals;
- Pruning of trees in metropolitan Perth;
- High/wide load licences; and
- Sourcing site equipment in the remote North West of Western Australia.

When collecting plants for Kings Park, only small plastic bags and wet newspaper are generally required. In this case the equipment list included a 75 tonne truck, 100 tonne crane, 30 tonne excavator, two dozers, an elevated work platform, rollers and water trucks.

In order to fit in with the road works master project in the Kimberley, and comply with licensed times to bring the high/wide load into Metropolitan Perth, a precise schedule for mobilisation was also vital.

Site Works

The first step was to confirm the extent of the underground component of tree. This was the main unknown factor in the planning process. It was discovered that the soil level had been artificially raised around the base of the trunk by up to 1.5m due to sand mining and other activities at Telegraph Creek. In addition, a massive root ball below the surface, which had compounded itself into decomposing granite subsoil was also found.

These factors combined to dramatically elevate the estimated weight from the pre-estimate of 14-20 tonne. A new site plan was developed and the team built a hard pad next to the tree to allow a closer crane setup and the ability to lift more weight. This eventually freed the remaining anchored roots and successfully lifted the 37 tonne tree. Once new transport (appropriate for the weight) had been sourced, the project was back on schedule with the tree ready to mobilise within three days. The main site processes were:

- Excavation of roots;
- Cutting root system and applying rooting hormone (Auxinone® -standard rate);
- Canopy pruning;
- Releasing tree;
- Double lift onto prime mover; and
- Securing load and further canopy manipulation.



Figure 2. Lift stage 2 (E). Group photo – tree prepared for travel July 2008 (F). The other pieces of the panel of images for this figure, shown in full online, were: Excavating root system (A). Pruning root system (B). Seed collection (C). Lift stage1 (D).

With the tree successfully lifted and packed onto the prime mover and low loader trailer, Shirley Purdie and another five elders performed a smoking ceremony to allow the tree to leave the Kimberley for a safe journey to Perth (Figure 3). That was a great way to end the project phase at Telegraph Creek.



Figure 3. Gija Elders prepare a smoking fire for the traditional smoking ceremony (Left). Shirley Purdie (far right of image) and other Traditional Owners - group photo with the Gija Jumulu (Right).

Transport

On the road we soon discovered that the “Boab story” had spread. People waved and photographed the scene as they stopped to allow the convoy, which was wider than the two lanes, to pass by.

This phenomenon followed the tree all the way to Perth with all the towns and residents on the way coming out to see the mighty the tree pass.

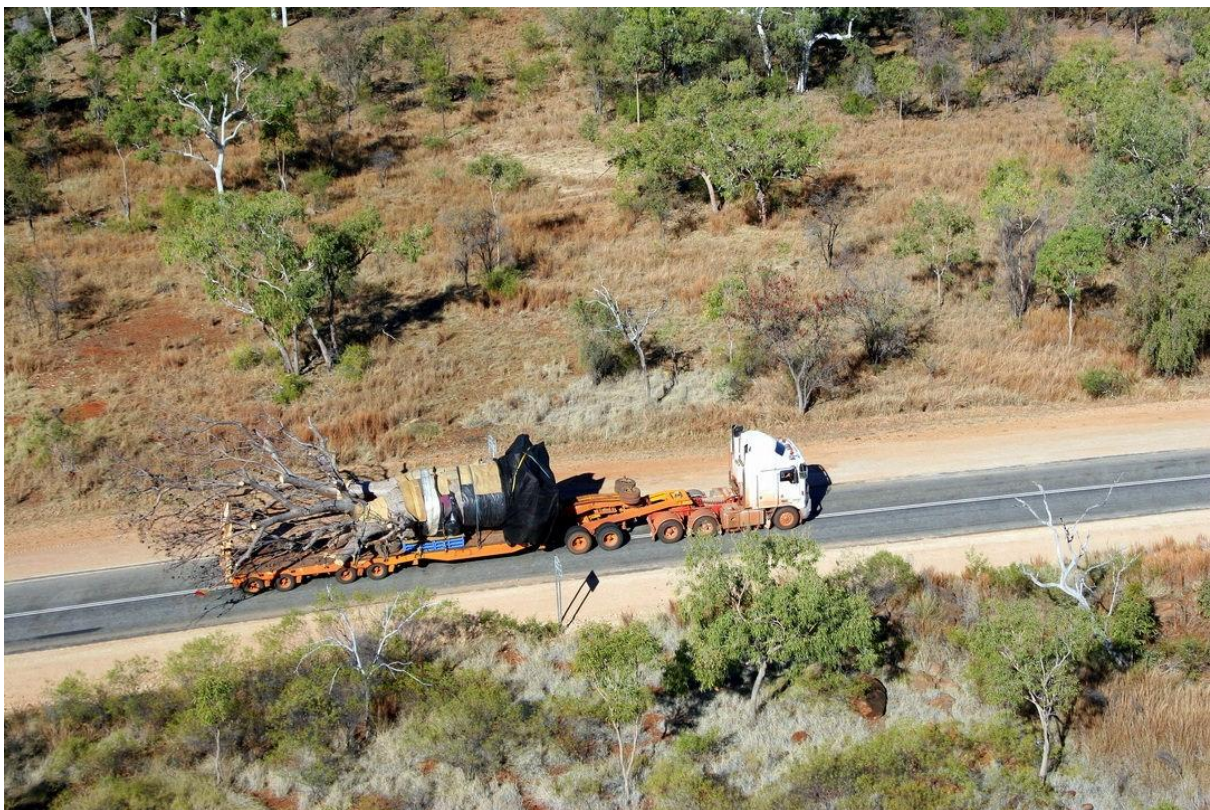


Figure 4. Gija Jumulu travels down the Great Northern Highway, Photo: P. Stain.

Six days later in Perth, the convoy followed a complicated route through the metropolitan area, which involved a pre-approved series of roads and many power line lifts. Pre-planned works, including tree pruning and the removal of road/bus signs and traffic signals, made the journey through the city much easier.

The procession, involving a 75 tonne rated truck, two police escorts, three pilot vehicles, power line lifters, various media vehicles and helicopters, finally arrived in Kings Park and Botanic Garden to a great reception.

Transplanting and Techniques

The following day the Gija Jumulu was successfully transplanted at the Two Rivers Lookout, and a welcoming and smoking ceremony was performed by local Nyoongar people to receive the gift from the Gija people and to commemorate the day.

Although every transplant has its own specific requirements, the general technique for *Adansonia gregorii* and most likely other *Adansonia* species are:

- Transplant when dormant;
- Minimise the diameter of cut roots;
- Try using rooting hormone;
- Early preparation to develop a fibrous root system around base could be beneficial (we have never had the time to do this due to salvage activities);
- Do not change the soil level of the tree when transplanting;
- Some people say to keep the same alignment i.e. north south etc.;
- Avoid crown damage;
- Do not mulch with organic mulches;
- Try to mimic the condition of the original environment;
- Be careful of watering regimes in the first couple of years (risk of rotting);
- Use wide slings to lift the trees, double lifts for big trees;
- Protect the trunk when moving; scars take a long time to go (if ever);
- Use very coarse river sand to transplant into and provide excellent drainage;
- Where cold wet winters occur exclusion of winter rains; and
- Consider use of a fungicide drench for very valuable specimens.

Progress

Ten years on and the Gija Jumulu has made excellent progress towards full establishment. Indications of the tree's good health have included shooting and canopy extension in the correct season and most importantly the ancient roots (which had developed in the East Kimberley for over 700 years) have formed new growth and extended a new root system. The tree has flowered but no fruit has set – due to the lack of a correct pollinator.

Important signs of life indicate that the tree has stabilized after its dramatic upheaval and is acclimatising to its new environment. Recent root examinations have also revealed that cut root surfaces are healing, with important callusing starting to take effect. Where pressure wounds occurred on the trunk during lifting, callusing from secondary xylem (a reported feature of this genera (Fisher 1981) appears to be occurring due to proliferation of cells in the parenchyma of the pith and the secondary xylem.



Figure 5. New root formation off cut end of original root, May 2010.



Figure 6. Gija Jumulu at the Two Rivers Lookout, showing full leaf, season 2018, Photo: D Blumer.

Finally the story of the Gija Jumulu comes full circle. Over 200 seedlings from the Boab that were successfully grown by Kings Park and Botanic Garden have journeyed back to the East Kimberly and were planted at the Warmun Community and surrounding areas. *Adansonia* is an important resource to traditional peoples wherever the genera is found. Like *A. digitata* in Africa (Gebauer, J, 2002) *A. gregorii* is an important food and resource for the Traditional People of the East Kimberley.

Kings Park and Botanic Garden staff continue to monitor the progress of the tree and provide the very best in cultural care. At this point the Gija Jumulu has responded remarkably to the conditions in Perth and will hopefully continue on its path to its long term success.

References

- Fisher, J.B. 1981. Wound healing by exposed secondary xylem in *Adansonia* (Bombacaceae). IAWA Bulletin n.s., Vol. 2(4).
- Gebauer, J., K. El-Siddig, and G. Ebert. 2002. Baobab (*Adansonia digitata* L.): a review on a multipurpose tree with a promising future in Sudan. *Gartenbauwissenschaft*, 67(4)S. 1555-160.

MINUTES OF THE 25th ANNUAL GENERAL MEETING OF THE KIMBERLEY SOCIETY

held in the Dalkeith Hall on Wednesday 4 April 2018

The President, Mike Donaldson, declared the meeting open at 7:30 pm and welcomed 64 members, guests, and visitors. Apologies were noted for Jeff & Elizabeth Gresham, Sven Ouzman, Jeff Murray, and Hamish McGlashan.

Minutes of the previous AGM held on 5 April 2017 were circulated and approved without further comment. *Moved* Bryan Smith, *Seconded* Roger Passmore

There were no matters arising from the minutes.

President's Report

I am pleased to present the 2017-2018 annual report of the Kimberley Society. It has been another interesting and successful year.

Our monthly meetings continue to be very well attended, attracting members and many visitors to hear Kimberley talks on:

- GSWA activities in the Kimberley
- Remote back-packing in the Kimberley
- Japanese non-invasion of Australia
- Community edible gardens in the Kimberley
- Wit & wisdom of Geoffrey Bolton
- Development of Kimberley roads
- Offshore oil & gas projects
- Stuart's coastal expedition 1917
- Native title claims to land & sea
- Members adventures in walking, driving, & helicopters
- Kimberley coast - naturally

Our website continues to promote the Society's activities and provides access to information on the Kimberley region with talk summaries and book notes. It remains a valuable link to members and the public.

The Boab Bulletin, prepared by Cathie Clement, continues to be an important part of the Society. More than half our members now elect to receive copies by email, which means they get access to live links to articles and websites and get images in the newsletter in full colour.

In the 2017 year the Council approved donations totalling over \$7000 as detailed in the attached Treasurer's Report.

A high-quality book resulting from the Society's Natural World of the Kimberley seminar held at the University Club, UWA, in October 2016, is expected to go to the printer within weeks.

The Society's previous publication on Kimberley History has been very successful and is highly regarded, with some 700 copies still available for sale.

In conclusion, thanks for being part of the Society, now in its 26th year. The speakers program for 2018 again addresses the varied interests of our members.

Mike Donaldson
President

Treasurer's Report

The Treasurer's report was circulated and the President presented the report on behalf of Treasurer Jeff Gresham who was overseas on family matters.

The Society incurred a loss of \$3052.75 for 2017. The loss reflects the considerable and generous donations made by the Society during the year. Despite this small loss the Society remains in a strong financial position and has enough cash reserves to cover the costs that

will be incurred in producing the book, *The Natural World of the Kimberley*, the outcome of the seminar held in 2016.

Income for the year totalled \$16 503.40 of which \$7221.00 came from member subscriptions and \$6169.92 from continuing sales of the Society's book *Kimberley History: People, Exploration and Development*. As at the end of the year 2341 copies of the book had been sold and distributed with 201 copies being sold during the year. A stocktake at the end of the year indicated 739 copies remain to be sold.

Expenses totalled \$19 556.15 of which \$7293.90 were donations made to the following:

- \$1501.50 for artwork on Sandy Scott's new edition of his book on the geology and geomorphology of the Kimberley coastline.
- \$1868.90 to the Broome Bird Observatory to offset costs incurred by them in establishing a new resource centre at the bird observatory.
- \$3060.00 to Adam Cross and Laura Skate to fund travel to and from the Kimberley in the course of their research into carnivorous plants in the north Kimberley.
- \$1000 to the Community Adult Literary Foundation in Broome to promote literacy among Aboriginal women in the Kimberley.

The Balance Sheet as at December 31, 2017 indicates net assets of \$44 030.64 with cash of \$28 034.21 being held in the account. The other major asset is the carried value (\$10 944.59) of the 739 copies of the history book held in stock at the end of the year. The Society has no significant liabilities and there were no unpresented cheques as at the end of the year.

P & L for the year and Balance Sheet statements were prepared as at December 31, 2017 and are appended to this report.

Jeffrey J Gresham

Treasurer

Kimberley Society (Inc) <i>PO Box 8471 Perth Business Centre Perth Western Australia 6849</i>	
Profit & Loss Statement 1/01/2017 through 31/12/2017	
22/02/2018 4:57:46 PM	
Income	
Subscriptions	\$7,221.00
Postage Collected	\$21.00
Miscellaneous Income	\$1,898.00
Kimberley History Bk Sales	\$6,169.92
Donations	\$713.00
Other Income	\$477.36
Bank Interest	\$3.12
Total Income	<u>\$16,503.40</u>
Cost Of Sales	
Gross Profit	<u>\$16,503.40</u>
Expenses	
PO Box	\$269.09
Hall Hire	\$1,309.09
Insurances	\$562.58
Speaker Costs	\$716.36
Supper Costs	\$1,170.10
Newsletter	\$4,365.81
Website	\$413.00
Natural History Seminar	\$712.72
Office Supplies	\$31.18
Equipment	\$1,180.91
Donations	\$7,293.90
Postage	\$1,149.87
Miscellaneous	\$381.54
Total Expenses	<u>\$19,556.15</u>
Net Profit/(Loss)	<u>-\$3,052.75</u>

Kimberley Society (Inc)

PO Box 8471
Perth Business Centre
Perth Western Australia 6849

Balance Sheet

As of December 2017

23/02/2018
8:54:12 AM

Assets	
Cheque a/c No 1	\$28,034.21
Hall Hire in advance	\$1.00
Kimberley History Stock @ cost	\$10,944.59
Projector	\$556.31
Laptop	\$885.64
Total Assets	\$40,421.75
Liabilities	
GST Liabilities	
GST Collected	\$17,800.70
GST Paid	-\$23,690.73
Total GST Liabilities	-\$5,890.03
Sundry Creditors	\$99.36
Advanced Subs	\$2,181.78
Total Liabilities	-\$3,608.89
Net Assets	\$44,030.64
Equity	
Retained Earnings	-\$6,455.96
Current Earnings	-\$3,052.75
Historical Balancing Account	\$53,539.35
Total Equity	\$44,030.64

Membership Secretary's Report

The Society has 220 members with some yet to renew for 2018.

Membership categories were changed to reflect the new Associations Incorporation Act, with Family Membership now replaced by Individual Membership and associated discounts

Election of Office Bearers

The following nominations for Office Bearers were received:

Chairperson	: Mike Donaldson
Deputy Chairperson	: Hamish McGlashan
Treasurer	: Jeff Gresham
Secretary	: Geoff Owen
Membership Secretary	: Elizabeth Gresham
Committee	: Roger Passmore
	: Michael Cusack
	: Margaret Shugg
	: Sven Ouzman
	: Tim Griffin

As no other nominations were received from the meeting all positions were filled as nominated. *Moved* Margaret Shugg, *Seconded* Peter Buck

General Business

As there was no other business it was noted that the next Kimberley Society AGM will be held on Wednesday 3 April 2019.

The meeting closed at 7:40 pm, followed by Sam Lovell's scheduled presentation.

Mike Donaldson
Chairperson

SAWFISH STORIES

On 4 July 2018, the Kimberley Society heard from **Monique Barker** and **Karissa Lear** who presented an overview of the findings of a group called Team Sawfish. We had noticed that Monique (campaign coordinator for [The Kimberley - Like Nowhere Else](#)) was the event organiser behind an interactive evening on 7 June featuring the fascinating sawfish of the Fitzroy River at Perth's State Library Theatre. When we approached her, she kindly agreed to organise a second presentation for our Society.

Based in West Perth, The Kimberley - Like Nowhere Else is an alliance of leading conservation organisations working to protect one of the last great unspoilt landscapes on earth. The alliance recognises the Kimberley coast as one of our continent's most important regions for conservation. Few of the world's marine and coastal environments are as biologically diverse, stunningly beautiful, and physically remote from destructive pressures as those in the Kimberley region.

[Team Sawfish](#) is a collaboration between scientists from Murdoch University and Indigenous Rangers (from [Nyikina-Mangala](#)) working together to study sawfish in the Fitzroy River. The research has been running since 2003, and involves catching, tagging and recording biological data from sawfish. Recently, a newly developed [tagging program](#) has given scientists insight into the behaviour of elusive sawfish – attaching little tags called accelerometers (the same technology that's in a Fitbit) to sawfish pups to record data in ground-breaking detail. The project is a joint collaboration between Murdoch University, the Forrest Research Foundation, the Australian Research Council, and Chevron.

Karissa Lear is the PhD researcher who developed this tagging program. She said the tags can tell her whether the fish is feeding, swimming or resting, and then how much energy each of those behaviours costs.

Sawfish have lived since the time of the dinosaurs, 60 million year ago, but now face extinction. That's where Team Sawfish comes in, and the support from The Kimberley - Like Nowhere Else, which regularly engages with the Perth community by hosting events such as film festivals, science presentations and art exhibitions.

At the State Library, and at our meeting, the audience heard the amazing survival story of the sawfish of the Fitzroy and learnt about the research carried out by Team Sawfish. There was also discussion of the threats the sawfish face and how their future is dependent on long-term protection for the Fitzroy River catchment. During the talk, Monique and Karissa showed some short videos and provided some take-home materials (bumper stickers and brochures).

Monique and Karissa presented Sawfish Stories in the context of the need to look after the Fitzroy River and its catchment area. In that way, while learning how the Fitzroy River is the world's last stronghold for the critically endangered Freshwater Sawfish, we also heard how fragile the river is with regard to water extraction.

Several sawfish saws (called 'rostrums') were on display.



The Kimberley - Like Nowhere Else was formed in 2008, as the in-coming Liberal Government committed to create a marine park at Camden Sound, and to deliver a *Kimberley Science and Conservation Strategy*. From 2008 to 2016 the alliance worked to progressively increase the scale of the pledges for conservation. The major achievement and outcome has been the [Great Kimberley Marine Park](#), which has been established in coastal waters along 500 miles of Kimberley coastline, which is considered the last remaining tropical coastline in the world. The total area of the GKMP is 8.1 million acres with 1.7 million acres of no-take sanctuary zones.

The new conservation regions on which the alliance focuses are aligned with recent (2017) election commitments from the Labor Government. This includes extending the Great Kimberley Marine Park to include the thousand islands of the [Buccaneer Archipelago](#) and the fringing coral reefs that surround them. WA Labor has committed to the creation of a new [Fitzroy River National Park](#) by extending the [Danngu \(Geikie Gorge\) National Park](#) and to putting in a protective management plan for the Fitzroy River. The Fitzroy is Western Australia's largest river and a key habitat for freshwater and estuarine wildlife in the Kimberley. The Fitzroy is also of great cultural significance, and has been [National Heritage](#) listed for its cultural values. Fitzroy River Traditional Owners expressed their concern for the river and their desire to be involved in its protection in the [2016 Fitzroy River Declaration](#). They are keen to ensure that proposals for dams and emerging industrial irrigation projects do not threaten the health and flow of the Fitzroy River. Considerable publicity has been given to these proposals and the Traditional Owners have established the [Martuwarra Fitzroy River Council](#) and called for the implementation of the 2016 Fitzroy River Declaration, immediate design and implementation of a Martuwarra Fitzroy River Catchment Management Plan, and a moratorium on all future water allocations in the Fitzroy River catchment until the plan is in place.

Cathie Clement

COUNCIL 2018-2019

President:	Mike Donaldson
Vice-Presidents:	Hamish McGlashan
Secretary:	Geoff Owen
Membership Secretary:	Elizabeth Gresham
Treasurer:	Jeffrey Gresham
Councillors:	Michael Cusack, Tim Griffin, Sven Ouzman, Roger Passmore and Margaret Shugg

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