







From the Regional Manager, Alinytjara Wilurara



Welcome to the Summer, and final edition of Palya for 2019.

It has been an interesting year for the AW Board with changes of Presiding

Members and regional leadership, and most recently with the Landscapes SA Act 2019 being enacted in Parliament.



INVITATION

The Alinytjara Wilurara NRM
Board invite you to join us on Facebook
www.facebook.com/awnrm

AW weather stationsweather stations in the AW region
https://www.awsnetwork.com.au/

Next AW NRM Board meeting: February 2020, Ceduna

Ceduna Arts and Cultural Centre

Features genuine local Aboriginal art 2 Eyre Highway, Ceduna

Ku Arts

Ananguku Arts and Culture Corporation https://www.anangukuarts.com.au

Dates to remember

13 February - National Apology Day 20 March - National Close the Gap Day This legislative change means many administrative changes for the Board, including a new Presiding Member to be announced early in the new year.

The Board's name will also change from an NRM Board to the Alinytjara Wilurara Landscape Board.

The Board will continue its business as usual, focussing on working closely with our communities to look after country and facilitate NRM and Aborignal employment outcomes.

In 2019, the Board signed an MoU with the Eyre Peninsula NRM Board and have agreed in principle to an MoU with the Aboriginal Biodiversity Conservation Foundation.

We look forward to working with these partners, particularly as we move into a new era as the AW Landscape Board.

The AW Board is also a partner in the 10 Deserts Project which, in its second year, is truly up and running.

Our Board members and staff have been actively involved in many aspects of the 10DP, including attending the Species of the Desert Festival in May and more recently, the Indigenous Desert Alliance Conference (see page 16). In November, the Board hosted the Natural Resource Committee of Parliament in our region. I'd like to thank the Committee members for their time and curiosity and willingness to listen. The AW and APY staff that made the trip happen did an incredible job and dealt with many last minute changes to plans. You can read more about the trip on page 2.

I would also like to take this opportunity to thank all the amazing people who make up the AW team. I'm so impressed by the way they all contribute, step up and support each other to deliver outstanding results.

I feel very honoured to be working for the AW Board and region, and I look forward to continuing our work with you all in 2020.

We have so many opportunities ahead of us so in the mean time stay safe and enjoy the holiday season!





Leah Feuerherdt Regional Manager Alinytjara Wilurara Region

Where we are and what we do

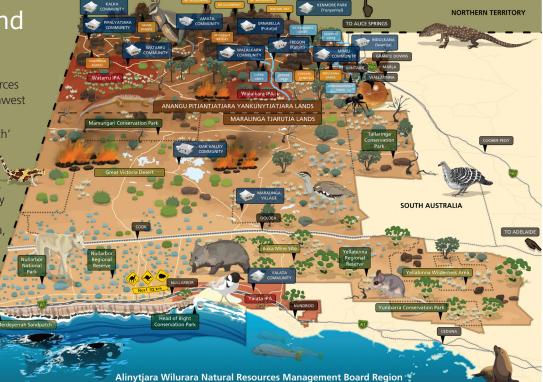
The Alinytjara Wilu<u>r</u>ara Natural Resources Management Region covers the northwest quarter of South Australia.

In Pitjantjatjara, alinytjara means 'north' and wilurara means 'west'.

The region spans more than a quarter of a million square kilometres, and has a population of approximately 2700 people, many of whom identify with the Pitjantjatjara, Yankunytjatjara, Ngaanyatjarra, Kokatha, Mirning or Wirangu peoples.

Natural Resources Management (NRM) is an approach to protecting land for the mutual benefit of people and the environment.

The AW NRM Board is the only all Aboriginal NRM Board in Australia.





02 Adelaide meeting brings results



AW and EP NRM Boards sign partnership agreement

02 Students learn fire ecology

Environmental studies in Ceduna

03 NRM talks draw a crowd

Public take an interest in local environment



04 Parliament NRC visits APY Lands

Listening and learning on Country

06 Searching for nganamara

LiDAR data shows mound formations

07 Friends of the GVD are hands on



Invaluable support for research in the Great Victoria Desert

08 Resilient future rangelands

Kristy shares AW's story at conference

09 Private Land Conference



We need to listen to Traditional Owners

10 When you can't find warru...



11 APY Lands planning water access



12 Special meeting in APY Lands

Sustainable Pastoral Development



13 Oak Valley Rangers



Recognised for their many successes

14 APY cross-cultural research

Buffel grass ecological and cultural impacts



16 Traditional lens over deserts

2019 Indigenous Desert Alliance (IDA) Conference in Yulara

18 Rebuilding Dog Fence

Repairing the Dog Fence across SA

20 Surveying our coastal regions

Far West Coast shorebirds



21 Buffel management challenges

Presenting at the 2019 National NRM Knowledge Conference

From the Presiding Member



Welcome to the 2019 Summer edition of Palya.

The Board has had a busy year and, like most of us around Christmas time, we're all

looking forward to a bit of rest and relaxation with family and friends.

The new year will bring a number of significant changes for our Board, and all NRM Boards across the state as a result of the Landscape South Australia Bill 2019 being passed by Parliament in November this year.

The new Landscape South Australia Act 2019 will replace the Natural Resources Management Act 2004. This will enable the establishment of new regional landscape boards and reform of natural resource management in South Australia.

Be assured that this will in no way impact on our continued commitment to delivering on our vision for healthy people and healthy country in the Alinytjara Wilugara region.

We will however have a name change. Once the administrative organisation is settled, expected to be by mid-2020, the name of our board will be the Alinytjara Wilurara Landscape Board.

We have established, and continue to build many important relationships across the region, the state and further afield ensuring we remain resilient and relevant.

Skills training related to caring for Country has been delivered through AW's projects for many years. In recognising that these are transferable across a range of careers, we remain committed to seeking, or creating employment opportunities that benefit the people of the region.

We wish you and your families a safe, happy and healthy New Year and look forward to the rewards of our continued relationship in the future.

Mick Haynes
Presiding Member
Alinytjara Wilurara Natural
Resources Management Board





Alinytjara Wilurara NRM Board

meets with Adelaide-based partners

The AW NRM Board met in Adelaide in mid-October providing them with the opportunity to meet with a number of key partner organisations including representatives from the Department for Environment and Water (DEW) and Primary Industries and Regions SA (PIRSA).

Cate Hart (Executive Director, Environment Heritage & Sustainability, DEW), updated the Board regarding the Landscapes Bill and reiterated that the board's NRM work will continue in line with current arrangements during the period of legislative change.

Cate also spoke about the Minister for Environment's (Hon. David Speirs MP) new strategy regarding the ban of single use plastics in South Australia.

PIRSA's Wild Dog Coordinator Heather Miller spoke to the Board about the recent review of the SA Wild Dogs Policy.

This was followed by discussions about plans to upgrade the Dog/ Dingo Fence. This 5,400 kilometre fence protects sheep grazing districts from wild dogs and dingoes (more about the dog fence on page 18).

The Board also discussed potential employment opportunities for people from the AW region related to the fence upgrade.

Partnering with the **Eyre Peninsula NRM Board**

Following up from previous discussions, on 22 November, Eyre Peninsula NRM Board's Presiding Member Mark Whitfield met with AW NRM Board's Presiding Member Mick Haynes and together signed the Pukulpa Tjungu (Working together - Memorandum of Understanding) cementing the long partnership that has informally existed between the two Boards for many years.

"We look forward to working together and making the most of the mutual benefits this partnership will bring" said Mick Haynes.

> Presiding Members Mick Haynes (left) and Mark Whitfield with signed the Pukulpa Tjungu Agreement to work together



Ceduna students learn about fire ecology

With the prospect of climate change leading to hotter and drier weather patterns, students from Ceduna Area School listened attentively to AW'S Karrena Veltman presentation on fire ecology in October this year.

The Year 5/6's students had been learning about this topic in their classes and were keen to get more information.

Karrena led discussions about fire as a natural part of the environment necessary for the regeneration of many Australian native plants. She pointed out that:

"Fire creates specific changes in the on-ground environment that are important through various stages of the life cycle of these species from seed release to germination, sprouting, and growing to maturity.

"It also impacts directly and indirectly on native fauna by changing the type and amount of food available and areas of suitable habitat.

"The students showed a real enthusiasm to learn about fire ecology with every student asking at least one question, and some asking over 10!" said Karrena.

Thank you to Jacinta Cuddeford, Primary Aboriginal Education Coordinator at Ceduna Area School for organising this opportunity.





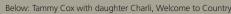


Right and below centre: DIrk Holman presented on the Great Australian Bight Marine Park

Below: Andrew Sleep presenting on threatened shorebirds













Listening and Learning in the APY Lands Travelling in South Australia's remote desert regions requires a certain tenacity, but when a howling north wind and 44 degree temperatures

don't put you off... that's serious devotion to task.

Members of the Natural Resources Committee (NRC) of Parliament undertook just such a journey in mid-November to gain an understanding of the work being done in the AW region and of the people who care for these lands.

Delayed by a minor problem with their aircraft, Committee members Josh Teague MP (Presiding Member), Nick McBride MP, Dr Susan Close MP, Hon

Terry Stephens MLC, and Hon Russel Wortley MLC, joined by support staff Philip Frensham and Dr Monika Stasiak, arrived in Umuwa in the APY Lands a little later than planned.

After being welcomed by APY Lands' General Manager Richard King the NRC were briefed on some of the major NRM projects currently underway in the area including the Warru Recovery Program and Buffel grass (and other invasive weeds) management.

Unfortunately the delay meant they were not able to visit the warru (black-flanked rock wallaby) enclosure, locally known as the 'pintji'.

Left: Michael Clinch with Walter Tjami and AW Regional Manager Leah Feuerherdt talking about cattle management

Nor were they able to attend the dinner they had planned to host for community members. It was however an opportunity for people to get together and discuss matters that were important to them which were shared with the NRC when they arrived the next day.

Before heading out of Umuwa the group was shown around the impressive TAFE Centre by long-time TAFE Manager Mark Connelly.

Then it was all aboard to drive to a cattle mustering point where Pastoral Manager Michael Clinch talked about the challenges facing the cattle business in the APY Lands, the successful steps taken already to manage them, the plans for the future and what was needed to make them reality.









Walter Tjami translating for CarolAnn Ken as she talks to the NRC about her Country

Michael described the need to consider nourishment of the Country from the ground up saying that "nourishing the earth nourishes all the things that live here including the people... the Traditional Owners of this Country need to be front and centre in caring for their land to make it healthy again".

The group then travelled along the sandy red dirt track, catching glimpses of feral donkeys and camels along the way to an area south of Fregon Community.

Here CarolAnn Ken spoke to them about the destruction of bush tucker, in this case showing examples of wayanu (quandong) trees damaged by camel browsing. Walter Tjami translated as she spoke in language about the changes that have occurred to the landscape since she was a child as a result of introduced species and climate change. Philippa (Pip) Mawby (IPA Coordinator – Walalkara) also spoke about Buffel grass in the region describing how it spreads, the reasons why it must be stopped and the ways in which the local people work to manage it.

After a quick lunch under the trees the group travelled to Victory Well where AW Ecologist Brett Backhouse and APY Land Management's Program Coordinator Neil Collins explained the aims of the Warru Recovery Program including the work and dedication of the APY Warru Rangers. With the day growing short it was off to Coober Pedy to spend the night.

Usually a four-hour drive, it took the AW team seven hours as they respectfully

The last remains of surface water at Mabel Creek Station

avoided Cultural Business in Mimili Community.

The following morning the group visited Mabel Creek Station which had been recently acquired by the Antakirinja Matu-Yankunytjatjara Aboriginal Corporation (AMYAC) to use as a training and cultural facility.

Traditional Owner and respected Elder Ian Crombie shared his knowledge of the Country including discussing the work being done on Tallaringa Conservation Park and Mabel Creek Station to halt the spread of Buffel grass into the neighbouring Great Victoria Desert.

The AW NRM Board greatly appreciated the opportunity to provide the NRC members with an insight into some of the important work being done in the region and for them to see the dedication of the people who live there to building a better future both for themselves and for the environment.

Standing (L-R): Jo Sullivan (AW MERI Officer), Phil Frensham (NRC), Ben Hyde (Federal Government Facilitator), Brett Backhouse (AW Ecologist) Leah Feuerherdt (AW Regional Manager), Josh Teague MP (Presiding Member of NRC), Ian Crombie (AMYAC), Russel Wortley MLC, James Thiessen (AW Programs Manager), Helen Donald (AW Communications), Terry Stephens MLC and AW NRM Board Presiding Member Michael Haynes. Seated: Dr Susan Close MP and Nick McBride MP





Nganamara* (Malleefowl) in the Alinytjara Wilurara (AW) region have proven to be highly adaptable with the recent discovery of three nesting mounds containing pieces of old burnt railway sleepers, electrical conductors and other left items amongst their nesting material. Not ideal, but certainly gives an indication of their resolve.

Over the past 15 years, AW has monitored populations and behaviours of nganamara throughout much of Maralinga Tjarutja lands (MT), the Yellabinna parks and the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands.

In 2018, AW secured funds under the Federal Government's Regional Land Partnerships program (RLP) to undertake LiDAR (Light Detection and Ranging) surveys across sections of the known nga<u>n</u>amara habitat.

LiDAR surveys use a plane fitted with a LiDAR sensor which is able to record extremely detailed and accurate imaging of the topography of the ground.

LiDAR data is returned as a mass of points, up to many billion, which

are then analysed via sophisticated computer algorithms to identify mounds. These are then classified according to criteria aligning with the size and shape of a nganamara mound, e.g. a rating of 'A' indicates a formation on the ground that is very likely to be a mound, through to a rating of 'D' that means not likely at all. From this, ground surveys are undertaken to confirm whether forms rated 'A' or 'B' are in fact nganamara mounds.

In total, six areas were surveyed with LiDAR, resulting in a total of 21 'A' (i.e. likely to be nganamara mounds) and 42 'B' (possible mounds) identified. Ground truthing these mounds showed that all but one of the 'A' mounds and three of the 42 'B' were in fact nganamara mounds. This is a fantastic result!

Based on these survey results, 11 remote trail cameras were placed to monitor the mounds, and enable AW to determine the breeding activity. This is helpful in establishing baseline data on the mounds for studies over the next three years.

A recent inspection of mounds, and the images obtained by the trail cameras disappointingly indicated

that those that had appeared to be active earlier this year, are now dormant. This may be attributed to the lack of rain this year, with the females potentially not in the best breeding conditions due to the lack of green pick over winter. In addition, there was insufficient early spring rain to wet the internals of the mound and compost the leaf litter. Composting is necessary to create the warmth vital to successful incubation of the eggs.

Background

Previously found throughout much of semi-arid to arid Australia, the range and population of this stocky ground-dwelling bird is severely reduced. Nationally, the nganamara is now listed as Vulnerable under the Environmental Protection and Biodiversity Conservation Act (1999).

This decline is mostly attributed to land clearing for farming. Nganamara prefer the same sandy mallee habitat that is highly sought after for agriculture. In addition, the species is at threat from various introduced species such as the cat (Felis catus) and red fox (Vulpes vulpes), which prey on young nganamara and adults.

Due to the lower average rainfall in the AW region, nganamara habit is marginal compared to some other areas within Australia. Relatively low population numbers combined with the vastness of their habitat area make locating nests and birds very difficult.

Twenty one mounds were found throughout the AW region since June 2018, which greatly increases our knowledge of the species. Information obtained is used for the adaptive management of threats, particularly feral cats and foxes.

With effective threat management and a bit of rain AW Ecologist Brett Backhouse sums up "Malleefowl are crazy tough, so should survive the summer, and be back at it again next year..."

*Nganamara is Pitjantjatjara/for Malleefowl (Leipoa ocellata)





our Friends (of the GVD)

In early June, the Friends of the Great Victoria Desert (FoGVD) once again offered their invaluable support to conservation of the pristine desert and the many native species that call it home.

After meeting with Alinytjara Wilurara (AW) and Parks staff at Ceduna Natural Resources Centre, the nine "Friends", joined on this occasion by three of their sons, set off to spend the next six days gathering data.

Their tasks included: on-ground photography of vegetation sites, aerial photography of vegetation sites and assessing potential Malleefowl mounds identified by AW LiDAR surveys (see page opposite).

Below: LiDAR image indicating the position of a possible Malleefowl nesting mound



Margaret Wright, who was part of the Malleefowl ground-truthing team noted:

"None of the 26 'class B' sites visited, proved to be nests. One was a beautiful Spinifex plant that looked just the right shape and size. All the others were all either dead or live plants with sand built up around them. This may indicate that raised areas categorised as B's are unlikely to be nests.

One proven nest site we had been asked to check had recent Malleefowl prints around it but also cat prints. Two separate sightings of fresh Malleefowl prints were also seen on the track as we drove".

The Malleefowl team led by Peter James and assisted by Sandra James and Peter and Margaret Wright, inspected 26 'B' category sites, some of which were up to 850 metres from the road.

The drone team, led by Phil Prust and assisted by Jan and Pieter de Wit and Bob and Eleanor Baxter, after ensuring they had a permit to do so, flew a drone over and recorded 17 vegetation sites.

Left: The end of another long day... the Field Trip team (2019) near Mount Finke

Considering how time consuming this type of photography is, this was a great effort.

Led by Peter Facy and assisted by Nigel Facy and Bill and David Dowling, the team successfully photographed all 30 vegetation

AW NRM Board greatly appreciates the work undertaken and the advice given by this dedicated group of scientists and researchers as they continue to support the accuracy and effectiveness of research in the region.

After fireside evening reviews of their work a number of recommendations were made by the "Friends" including that:

- a sign be erected at the Southern end dog fence gate recommending/ requiring that tyres be lowered and no trailers taken beyond that point
- information boards or pamphlets on flora, fauna, culturally significant and historical facts be considered.



Above: On-ground site photography of vegetation Below: Preparing the drone for aerial photography







Rangelands Conference 2019

The 20th biennial conference of the Australian Rangeland Society held from 2-5 September 2019, in Canberra attracted over 400 delegates.

More commonly known as 'the outback', Australia's rangelands cover more than 70% of arid and semi-arid zones in the country and represent a key component of Australia's identity.

Alinytjara Wilurara (AW) NRM Board members Kristy Richards and Mima Smart along with AW's Regional Manager Leah Feuerherdt attended

to participate in various discussions and presentations focussed on this years theme: Resilient future rangelands: integrating environment and livelihoods.

The AW NRM Board's former Presiding Member Parry Agius also attended to support our delegates.

Kristy presented a powerful and wellreceived presentation about the importance of the Board's partnerships, and how a bottom-up approach to planning with our communities helps to maximise environmental and social outcomes.

(L-R) Kristy Richards, Leah Feuerherdt, Mima Smart and Parry Agius at the conference in Canberra.

During the three-day conference there was a noticeable Indigenous presence with discussions throughout including a growing recognition of the value of traditional Aboriginal knowledge. One of the plenary talks by two Aboriginal men from NSW, Geoff Simpson and Mick Kelly, shared the story of the Malleefowl and how he came to be responsible for looking after fire in all landscapes. Using the outline and sections of the Malleefowl, they explained how the sections represent law, tribes, heart, elders, and connection to earth. They explained that all parts are important to form a whole, and therefore work together.

Their message was warmly received by the audience and resonated with guests and delegates alike.

Leah represented the AW region as a panellist discussing the topic 'Land of Opportunity' in the Rangelands. This interesting session drew considerable audience participation and discussion around the biggest opportunities for the rangelands, drought policy, and engaging with Aboriginal communities.

More information about the outcomes of the conference may be found at: https://www.ars2019.com.au/wpcontent/uploads/2019/09/synthesis.pdf

Predators destroy Malleefowl nest in the kitchen

Species Day this year, Brett his five-year-old daughter Matilda.

"Pavlova is one of Matilda's favourite cakes, and Malleefowl cake using a tin, and then cut away entire mound was then covered in

chamber, being the usual crushed

powder, coconut oil and almonds, coconut and small bits of icing for the feathers" said Brett.

one question... who was responsible for monitoring that nest!?

Mound cake with two 'chicks' before...



and after predation..





Private Land Conservation Conference 2019



In October AW NRM Board Member Sally Scales (also Chair of the APY Executive) and James Thiessen (AW Program Manager) attended the 2019 Private Land Conservation Conference at the National Wine Centre in Adelaide on behalf of the AW Board.

At the conference they met with Indigenous rangers from the Oak Valley ranger team, which recently won Landcare SA's Indigenous Land Management Award. They also had the opportunity to speak with a number of representatives from various APY Indigenous Protected Areas (IPAs) as well as representatives from one of our key partners, the 10 Deserts Project.

"It was really great to see so many representatives from the AW region attending the conference. It's incredibly important that people who work in remote locations, often in isolation from possible support groups, can get together to share lessons learnt and find ways to overcome the challenges this lifestyle presents" said James.

The APY mob gave an incredibly engaging presentation, mainly in language, to help celebrate and acknowledge 21 years of Indigenous Protected Areas (IPAs). Sally translated the language to the audience that were transfixed by the stories of crossgenerational work on Country.

Sally and James were part of a panel entitled Central Connections - Private Land Conservation Stories from Remote Australia which discussed indigenous organisations collaborating at scale to address environmental resilience in the desert regions.

During the presentation Sally and James discussed the importance of partnership and collaboration and spoke about the working relationship with the 10 Desert Project that breaks down state boundaries and brings together all the Indigenous community groups to share learnings and work together.

Sally also took the opportunity to highlight the importance of listening to Traditional Owners to improve management outcomes on land, saying that...

'the most important thing to do is to actively listen to **Traditional Owners. The things** you learn from books about management will never be as valuable as the knowledge held by Traditional Owners.'



When you can't find Warru, find where they've been...

Monitoring warru in the vast APY Lands is hard work but finding where they kuna (poo) is an important and useful technique.

Warru (also known as the Blackflanked rock wallaby (Petrogale lateralis (MacDonnell race)) are a small species of wallaby historically found in Western Australia, the Northern Territory and South Australia (SA).

Due to environment changes and the introduction of feral predators such as the cat (Felis catus) and Red Fox (Vulpes vulpes) they are now only found in a few core regions and isolated sub-populations.

Where once they were plentiful in the northern desert regions of SA, warru are now only found in three small distinct areas within the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands. Warru are now listed as Vulnerable under the Environment Protection and Biodiversity Conservation Act (1999).

Warru's preferred habitat is the large boulder fields that cover the hills and mountains within their range where they can shelter in the natural crevices and caves. This not only protects them from predators but also from weather

extremes. This landscape and generally nocturnal behaviour makes populations very difficult to monitor. Traps are used at many sites to monitor the species but this method is very labour intensive, as well as invasive for the animals.

This led researchers to develop alternate techniques, such as undertaking kuna (scat) monitoring, which is non-intrusive, relatively quick and a simple method of providing a snapshot of where warru are present, and to some degree, what their population is like.

The method involves establishment of set monitoring plots of approximately one square meter in either flat ground, or on suitable flat rocks. These survey plots are selected in close proximity to refuge caves, or preferred food sources such as ili (Fig (Ficus brachypoda)) and kulata (Spearbush (Pandorea doratoxylon)), as these are points which warru will visit regularly.

Each survey plot is then scanned for warru kuna, and all findings are counted and recorded. Once this is complete. the kuna is removed, to ensure that findings of the next survey does not include warru kuna that was previously recorded.



Above: Intrepid kuna hunter (and Ecologist) John Read Below: Brett Backhouse on Wamitjara

Plots are surveyed approximately every six months, with each of the three monitored warru colony containing a number of replicate plots (with up to 55 plots at each colony). The high number of plots provides more accurate data, and a better estimate of warru populations. It also provides management information for the APY Lands' Warru Ranger team.

The first kuna plot counts undertaken in the region in 1998 revealed a reduction in some known populations. Subsequent counts flagged the extinction of the species from traditional habitats including from Wamitjara, which occurred in 2005.

In 2007, prompted by these concerning findings, APY Land Management, independent ecologists, Zoos SA and the Department for Environment and Heritage (DEH) formed the Warru



As part of the Warru Recovery Program which started in 2007, scat monitoring at the translocation sites continues to be an effective, non-invasive method of informing adaptive management for the APY Lands' Warru Ranger Team.

As APY Lands General Manager Richard King pointed out...

"The Warru Recovery program is an important program for APY. The reintroduction of endangered species to this finely balanced environment not only resets the natural order, but also re-ignites culture through the cultural and spiritual connection's between Anangu and the warru which holds it's own special place in the APY landscapes.

"It's great to see APY's Anangu Rangers and our Land management team leading the charge in this very important work."



Above: Derek Lewis and Sherada Stanley carrying a Felixer up the hill at Wamitjara

Below: Cousins Brendan and Quentin Lewis preparing signs to erect near Felixer sites





Regional Agriculture Landcare Facilitator Walter Tjami's ever increasing skills using FarmMap4D in the vast pastoral regions of the APY Lands has seen him map another 5 paddocks covering 202,295 hectares over the past five months.

This is in addition to the 17 paddocks (350,249 hectares) already mapped.

Although most of FarmMap4D work is done on a desktop, getting out on Country to "ground truth" the data calls on a whole different set of skills.

Checking bore locations and the placements of water troughs, yards, gates and grids to confirm the maps are correct over these vast areas is time consuming and requires planning and knowledge of Country.

FarmMap4D is also used to map out proposed infrastructure and grazing circle scenarios making it an important planning and investment tool.

This ensures that water points with infrastructure such as pipelines and tanks, as well as proposed fences and gates, will be most effectively placed.

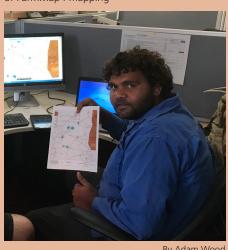
WaterConnect is the South Australian water information portal managed by the Department for Environment and Water. It contains a wide range of information and data relating to ground water and surface water and is available to the public.

As part of planning, information is sourced from WaterConnect regarding potential, existing or old bores that could be located and possibly accessed in the APY Lands.

APY Pastoral is particularly interested in examining information about drill holes, wells and bores.

The map on the WaterConnect's website allows the user to pan/zoom to their area of interest and use the map to find bores/wells in the vicinity. Each bore on the map has records of water quality (salt levels) and yields (supply) that can be downloaded. This helps to identify potential watering points and informs investment options. https://www.waterconnect.sa.gov.au/ Pages/Home.aspx

Below: Walter Tjami is pleased with the results of FarmMap4 mapping



By Adam Wood





special meeting called in the APY Lands

In late September a special meeting was held in Umuwa, (in the APY Lands) with over 70 people attending including Alinytjara Wilurara's Regional Manager Leah Feuerherdt.

The main purpose of this meeting was to inform Anangu of the objectives and recommendations of the APY Sustainable Pastoral Development Plan (SPDP) and to provide the opportunity for discussion and clarification.

The SPDP outlines key steps needed for the APY's cattle business to be both profitable and sustainable; making money for all Anangu while caring for the country.

Anangu support for the SPDP is critical for the success of the APY's cattle business.

Willie Pompey Chaired the meeting with former AW NRM Board member Gary Lewis translating.

APY Lands General Manager Richard King and Pastoral Manager Michael Clinch introduced the meeting and context of plan.

Respected agricultural economist Steve Petty who authored the plan explained the objectives and recommendations of the SPDP and the benefits the plan will deliver to the APY community and health of Country.

Support for APY Management to progress with the recommendations of the SPDP was sought which prompted considerable discussion. Anangu took the opportunity to ask questions and share their views on cattle business in APY. Anangu discussed their views on the benefits of the proposed adoption of the SPDP, in which concerns were raised and questions asked to gain greater understanding.

"Important progress was made through this community consultation, clarifying the objectives and recommendations of the SPDP and in recognising the benefits to the APY community and health of Country of adopting the plan.

"Although there was already good support for the plan from many of the older men, this meeting

provided increased awareness and understanding of sustainable grazing practices for all Anangu and others who attended" said Michael Clinch.

Anangu wanted more time to discuss what was proposed and decide what they want, so no resolutions were passed on the day.

Michael, with support from PIRSA and AW NRM, will visit communities to talk about the SPDP and how it can work for them.

"This meeting represented an important step toward progressing the SPDP. The AW NRM Board, (with funds from the Australian Government's National Landcare Program), will continue to support its future development and implementation" said Leah Feuerherdt.









Oak Valley Rangers

Recognised for excellence in Indigenous Land Management

And the award for Indigenous Land Management in South Australia goes to... the Oak Valley Ranger team!

AW NRM Board and staff congratulate the Oak Valley Ranger Team on winning the 2019 State Landcare Award for Indigenous Land Management. Nominated by the AW team, the award was accepted on behalf of the Ranger team by Stephen Rapp (Land Management Coordinator), Juanita Thorpe (Women's Ranger Coordinator), and Sylvia Boogar (Ranger) at a ceremony held in Bordertown SA on 29 October 2019.

The award is recognition of onground works completed since the appointment of the Oak Valley Ranger Team in October 2018, including traditional burning, tourist access management, and multiple surveys to assess the overall health of the country, with a focus on the presence of threatened and introduced species.

The appointment of the Ranger Team was a huge achievement for all the people of Oak Valley and realised their vision of having Traditional Owners return to Country and manage the land that has always belonged to them.

Maralinga Tja<u>r</u>utja put in a tremendous effort over several years to seek funding to establish an Oak Valley Ranger team on the Maralinga Tjarutja Lands.

This resulted in sufficient funding being received from the National Indigenous Australians Agency (NIAA) for wages and from the Mamungari Board to set up the Ranger station.

The Oak Valley (OV) Rangers, are all members of the Oak Valley community located on Maralinga Tjarutja (MT) Lands within the AW region of South Australia.

Although caring for country is traditionally an on-going cultural practice across the MT Lands, members of the OV Ranger team were selected from the broader community to engage in specific land management activities identified by Traditional Owners and field ecologists as priorities for the MT



Lands. Skills training combined with their extensive knowledge of County means the Rangers are ideally placed to contribute to the care and broader understanding of their lands.

The ranger team is supported by the Department of Premier and Cabinet with support from Alinytjara Wilurara NRM Board with funds from the Australian Government's National Landcare Program and 10 Deserts Project for on-ground projects.



Oak Valley's first Women's Ranger Coordinator

Congratulations to Ms Juanita Thorpe who was recently appointed as the first Women's Ranger coordinator in Oak Valley. This is an exciting development for the women of Oak Valley and the Oak Valley Ranger Team as a whole.

Juanita has strong family ties to the Maralinga Tjarutja Lands, and a background in land management in both traditional and western methods.

She is also already familiar with the Oak Valley Ranger team members as she has worked within the organisation.

We look forward to working with her on caring for this remote landscape and its threatened species.

All the best to Juanita and all the Oak Valley Ranger team!

Left: OV Ranger team representatives, Stephen Rapp, Juanita Thorpe, and Sylvia Boogar with AW team members in Adelaide





Buffel grass impacts on APY Lands Landscape

In October this year, over 30 people took part in cross-cultural biological surveys in the APY Lands. The week-long survey was part of a larger research project looking at the impacts of Buffel grass on Country and culture, on this occasion in the area between Ernabella and Ngarutjara homeland.

Anangu Pitjantjatjara Yankunytjatjara (APY) partnered with Charles Darwin University PhD student Ellen Ryan-Colton to set up a research project that follows the aspirations of Anangu

Above: Survey team investigating a site not yet invaded by Buffel grass Photo by Peter Canty



to find out exactly what the introduced species Buffel grass, is doing to their Country.

Buffel grass is a large, tough grass that is not native to Australia. It has become highly invasive and was officially declared a Weed in South Australia in 2015.

Anangu have observed this major landscape change occurring over the last 20 years, where Buffel grass has overtaken karu (creeklines) and pila (flat country) and eventually dominates the landscape, pushing out native plants.

Buffel grass is now climbing up puli tjuta (hills) presenting a greater risk of large

hot and very destructive wildfires that burn very hot, very close under trees, and regrows quickly afterwards.

Senior Traditional Owners are concerned about these changes and have requested more information about how Buffel grass is affecting native plants, animals and Country.

Traditional Owners worked together with APY organisation and Ellen Ryan-Colton for 2 years to plan these surveys, choose the sites and get the right people involved.



"Together we selected two types of study sites - areas that are still native compared to areas fully infested with Buffel grass," said Ellen Ryan-Colton.

"We wanted to survey for all plants, birds, small mammals and reptiles and smaller insects like ants, and it was very important to Anangu to also look at cultural values like animal tracking and specific bush foods in these two types of sites."

Traditional Owners, APY Land Management ranger teams and Pastoral staff, scientists and volunteers worked side-by-side for six days setting up animal traps then carefully checking them for small mammals, reptiles and insects early each morning.

"It was a really exciting to have senior Anangu Traditional Owners working alongside scientists who had visited the APY Lands 25 years ago, with both sharing knowledge about how the land has changed since Buffel grass has invaded" said Ellen Ryan-Colton.

"The scientists were honoured to be told the traditional names for some rare reptiles. Senior lady Tjulkiwa Atira Atira described the Patiny-patinyapa Burton's legless lizard, and the Mulyapurkutitja

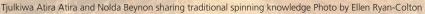
Southern shovel-nosed snake, that were caught in the traps.

"At Spinifex sites we found patinypatinypa, as well as different types of tjati dragons and mutinka – skinks and small blue tongue lizards, however at sites where buffel grass has invaded and replaced spinifex, these types of animals were no longer there.

"We found that the native sites still had important mai (food) plants - like wangunu, the main grass used to traditionally make damper from its seeds. We also found tjaulnguru growing on the Ironwoods, which is a toffee-like sap growing out of the bark.

"In areas where Buffel grass was growing however, there was significantly less tjampi wiru (native grasses). After looking at the list of plants found in the same area 25 years ago, most Solanum (bush tomato) plants like kampurarpa have also been replaced by buffel grass.

"Working together with senior Traditional Owners, younger Indigenous ranger groups and community members is an essential part of passing on knowledge, including sharing knowledge about recent changes to Country.







Tjariya Stanley and Inpiti Winton, two of the senior Traditional Owners guiding the survey team

APY Pastoral also helped out during the survey week and delivered a workshop in which they listened to Anangu and discussed options for managing Buffel grass, fire and cattle in a trial project in the same area as the surveys.

Anangu have been involved in this research since 2017. This survey was the second in a series of extensive field trips that demonstrate true partnerships between Anangu tjuta (many people) and research, NRM and land management organisations. These partnerships are essential to effectively tackling the expansion of Buffel grass across the APY Lands and other parts of central Australia.

Indigenous and non-Indigenous people are all calling for more action to effectively manage the threat of Buffel grass to Country and culture.

"Without research and action, Buffel grass is predicted to continue to expand across much of semi-arid and arid Australia, however with APY, AW and other organisations taking the lead, we can make progress and protect our significant culture and biodiversity of the AW region" said Ellen.

The project was supported with funds and in-kind support from the AW NRM Board, 10 Deserts Project, Anangu Pitjantjatjara Yankunytjatara, Charles Darwin University, the Jill Landsberg Trust Scholarship and Holsworth Wildlife Research Endowment through the Ecological Society of Australia, and SA Herbarium (Department for Environment and Water).

Seeing Australia's deserts through a Traditional lens

Indigenous Desert Alliance Conference 2019

The 6th Annual Indigenous Desert Alliance (IDA) Conference 2019 held in Yulara, (near Uluru in the Northern Territory) over three days in November attracted over 300 delegates from across Australia.

The IDA conference which has been held annually since 2014, provided an opportunity for Indigenous desert rangers and various partner organisations to share their successes, challenges and opportunities aimed at developing the Indigenous land management industry in the desert.

Alinytjara Wilurara NRM Board was represented by Board member Debbie Hansen, along with AW Regional Manager, Leah Feuerherdt, AW A/Program Manager James Thiessen, AW Regional Planning Coordinator Tatia Currie, and Walter Tjami, APY Lands' Regional Agriculture Landcare Facilitator.

The IDA conference is well-known for providing an interactive program that enables ranger teams from across the deserts to participate in discussions, workshops, quizzes and tours on

a wide range of topics including fire management, threatened species, traditional ecological knowledge, and management of introduced species.

Ranger groups and land holding authorities from across the AW region showed a high level of engagement and participation over the three days of the conference program.

These included presentations by:

- Oak Valley (OV) Rangers on fire management
- APY Lands and OV Rangers on Warru and threatened species
- APY Land Management on managing introduced species: camels, cats, foxes
- Far West Coast's Wanda Miller on sustainable kuka (meat)
- Debbie Hansen spoke in the Traditional Ecological Knowledge session about quandong seed collection and propagation

OV Rangers also contributed to the conference session on Fire presenting their group report back about fire management across the desert in 2019.

Their presentation showcased Below: APY Lands' Rangers presenting about their work on Country



Tatia Currie, Deb Hansen, Leah Feuerherdt, James Thiessen and Walter Tjami at Uluru

activities across the Maralinga Tjarutja Lands and the important role that Traditional Ecological Knowledge plays in the ongoing management of the land.

They spoke about a trip taken earlier in the year with Elders from Tjuntjuntjara whose knowledge of Country assisted the Rangers and community members from Maralinga Tjarutja to identifying key rock holes and sacred sites, important for fire and land management.

With support from the 10 Deserts Project (10DP) a helicopter enabled rangers to work effectively with Traditional Owners across large areas of land.

As testament to their success, in October 2019, the OV Rangers were awarded the South Australian Landcare Award for Indigenous Land Management. AW NRM Board with funds from 10DP, support training and development of the OV Rangers.

Below: map painting created at the IDA Conference showing features of Country











On the second day of the conference, Threatened Species Commissioner, Dr Sally Box provided an update on progress on the Threatened Species Strategy. She was joined by Professor Sarah Legge, from the Threatened Species Research Hub, who presented on how partners can support threatened species work.

To demonstrate this, Oak Valley Rangers were one of the groups who presented on their success and challenges with implementing threatened species strategies across the deserts.

The OV Rangers presented on their Nganamara (Malleefowl) monitoring activities across Maralinga Tjarutja lands over the past twelve months.

In collaboration with AW's Ecologist Brett Backhouse, the OV Rangers undertake Malleefowl surveys to identify the locations of mounds and monitoring their behaviour. This informs fire and feral predators management planning.

The Malleefowl program is supported by the AW NRM Board with funds from the Australian Government's National Landcare Program.

A number of Indigenous ranger groups from across the desert regions also presented on how they manage protection of threatened species in their regions. These included:

- Nyikina Mangala Rangers on the Black-flanked rock wallaby
- Blackstone Rangers on threatened species fee-for-service activities
- Ngururrpa Rangers on two-way science surveys with environment consultants
- Kiwirrkurra Rangers on Bilby project
- Ltyentye Apurte Rangers on the Slaters Skink monitoring.

the AW team and the Spinifex Rangers On the last day of the conference a group report back session was held on Managing Introduced Species, where a number of Ranger groups shared their experiences

with managing feral herbivores,

predators and weeds.

The OV Rangers also presented on their experiences in using FULCRUM as a support technology for gathering data on feral species, monitoring threatened species and fire management.

The APY Lands Rangers, located in the far north of the AW Region, reported on the impact of cats and foxes on the Warru (Black-footed rock wallaby) population using camera and baiting methods.

The success of the Conference in bringing together so many people whose common goal is to care for Australia's desert country and to share in each others knowledge was unquestionably outstanding.



SEASONAL FIRE MANAGEMENT TRAINING PRESCRIBED BURNS REVIEW & PLANNING

Below: One of the maps used to discuss fire management

Rebuilding the Dog

Fence

The AW NRM Board's discussions about the rebuild of the Dog Fence at the October 2019 Board meeting, brought to light many interesting aspects about this ambitious project.

AW NRM Board member Kristy Richards, who is also a member of PIRSA's Wild Dog Advisory Group was particularly pleased to have PIRSA representative Heather Miller share news about the Dog Fence plans.

"Rebuilding the dog fence will need coordination of a huge number of resources and the skills of many workers from across SA and all along it length. AW NRM Board will look to give what ever support we can to ensure the people of our region have access to this opportunty" said Kristy.

Australia's Dog Fence is the longest continuous fence in the world.

It stretches across South Australia (SA), in part through the Alinytjara Wilurara region, and across Queensland to the Darling Downs.

The Dog Fence was established under the Dog Fence Act 1946.



Dog Fence rebuild progressing

The South Australian Dog Fence rebuild is progressing, with tenders now closed for businesses seeking to participate in the project, requiring up to 71,000 timber posts, 127,500 steel droppers and more than 7,000 kilometres of wire.

More than two-thirds of the South Australian Dog Fence is more than 100 years old. Many sections have been degraded by kangaroos, emus, feral camels, wild dogs, weather events and sand erosion.

The Dog Fence stops dingoes that are outside the Fence (where they are treated as a wildlife species) from migrating inside the Fence, where the South Australian sheep industry is located (also known as the sheep zone of South Australia).

Stretching from the Great
Australian Bight to the
New South Wales border,
1600 km of the fence
will be rebuilt to limit
the damage caused

by wild dogs to the state's \$4.3 billion livestock industry.

The once-in-a-generation rebuild of the fence is expected to create up to 63 full-time jobs by the third year of the project. Tender applications were sought from suppliers and contractors for two elements of the work:

- supply of materials required to rebuild the Dog Fence (including delivery to depots)
- a panel of fencing contractors to rebuild the Dog Fence (including earthworks).

The rebuild of the Dog Fence is being funded by the Commonwealth Government (\$10 million), the State Government (\$10 million) and the livestock industry (\$5 million).

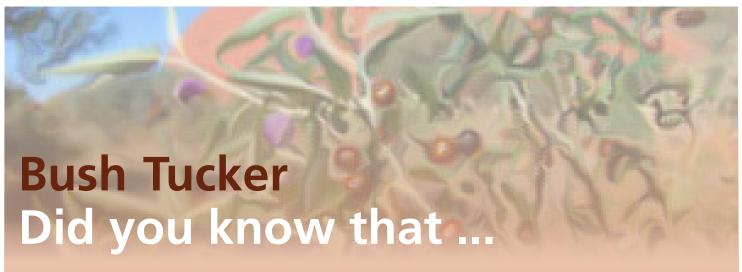
Construction work to complete the project is expected to take up to five years.

For any issues or queries relating to the South Australian Dog Fence please contact:

Marty Bower
State Wild Dog Coordinator
Phone: (08) 8429 3459
Email: marty.bower@sa.gov.au
Or visit pir.sa.gov.au/dogfence







Known as kumpurar in Pitjantjatjara, the desert raisin, (Solanum centrale) is a stand out in Australia's wild bush tomato family. It is highly nutritious and a great favorite with Aboriginal people particularly those who continue traditional foraging.

It grows in sandy arid regions where almost no other domesticated plants survive. This makes this species worthy of consideration for remote Aboriginal communities as an enterprise opportunity.

The fruit from this plant has been a staple food in desert communities for thousands of years.

It resembles a raisin but tastes like a smoky sun-dried tomato, and because it dries on the plant it has a long storage life relative to other fruit, important in remote regions where fresh fruit is not always readily available.

A typical desert raisin plant in the wild seems pretty unimpressive from the surface often looking scrawny with greeny-grey hairy leaves and growing no taller than knee high.

What makes the desert raisin unique?

Like an iceberg which is much bigger under the surface than appears from above, the desert raisin plant's root system under the surface of the ground is extensive. A single plant in the wild can span dozens of metres through hardy underground connections.

The largest confirmed SINGLE plant was about a quarter of a hectare.

It expands in multiple directions from the seed plant over successive rains via roots which grow roughly parallel to the surface, producing new shoots as it expands.

Root sprouting allows a plant to grow a new shoot many metres away from the previous shoot while avoiding a vulnerable seedling stage. This feature is common among many unrelated desert plant families.



Desert raisins are known to grow vigorously following a disturbance, either natural or man-made. It is quite common, for instance, when driving through Australia's arid interior to find that the sand beside freshly-graded roads are covered in bush tomato shoots after rain.

This is because the grader, used to smooth the road surface, cuts dormant roots and throws them, mixed with sand, onto the side of the road. The roots are ready to re-sprout as soon as they get wet.

it's not only chopping the roots that appears to stimulate growth – targeted fires, fruit collection by Indigenous groups and grazing by desert marsupials have all been known to increase the vigour of patches of wild bush tomatoes over the long term.

The Traditional Custodians of this country knew how to manage this species for sustainable production, and people from Aboriginal nations which span the large range of edible bush tomato species have passed this knowledge down for centuries.

By listening, and working together with Aboriginal and Torres Strait Islander people, we may just see the amazing fruits of this land return to their rightful place in human diets and landscapes.

Based on article published in The Conversation, and written by Dr Angela Pattison, University of Sydney for Beating around the Bush, May 2019





Although the Alinytjara Wilurara region is mostly vast desert country it also has an extensive southern coastline that stretches from the Western Australian border to 'Dog Fence Beach', the official boundary of the region.

East of Bunda Cliffs, the beautiful Yalata coastal region is an important habitat for resident and migratory shorebirds.

In mid-December 2019 as with every December since 2008, AW staff surveyed shorebirds along Yalata coastline, providing long-term valuable data on the species that frequent the shoreline.

This data informs the national data base as well as local management actions such as the 2018 installation of beach signage, (supported by the AW NRM Board with funds from the Australian Government's National Landcare Program).

Results show that the beach is not only home to four beach nesting species, i.e. the Hooded Plover, Red capped Plover, and Sooty and Pied Oystercatchers, but also a diverse number of migratory species. These migratory species travel from the northern hemisphere's arctic circle, with some travelling up to 9000 km in only a couple of days. A huge effort for species such as the diminutive Red-necked Stint, which only weights around 30 grams.

Identification of some shorebirds can be quite difficult. Sanderlings for example look very similar to Red-necked Stint, though tend to be slightly larger, more white and with darker shoulder patches. To the untrained eye, these subtle differences can be very hard to spot!

In addition, just to keep everyone on their toes, other easily confused species were encountered. These include:

- Curlew Sandpiper (similar size to the Red-necked Stint but with a larger, down-curved bill)
- Sharp-tailed Sandpiper (reddish crown and slightly taller) and the Common Sandpiper (almost constant tail flicking and bobbing)



 Red Knot (visible white-eye line) and the similar but slightly smaller Great Knot (heavy very slightly down curved bill).



Lucky we had good binoculars and spotting scopes!





The challenge of managing Buffel grass presented at...

2019 National NRM Knowledge Conference

Adam Wood and Tatia Currie problem-solving session entitled:

'Buffel is in remote areas, how do we deal with it?'

Resilience through Natural

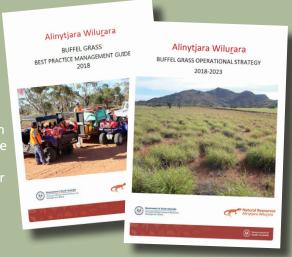
Catchment Management Authority in Wodonga (NSW), delegates attended from across the Country.

Organised by NRM Regions Australia, the National NRM Knowledge Conferences have been knowledge and build national

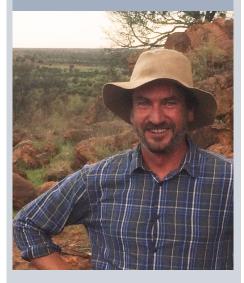
As a member of NRM Alinytjara Wilurara NRM Board was represented by the APY Lands with the SA The conference was opened by the Hon Sussan Ley MP, Minister **Threatened Species Commissioner** Australia presented on direct Sustainable Development Goals.

The conference program enabled delegates to attend Plenary sessions,

were invited to contribute to the Management – how do we do it?



Jo Sullivan



When Jo quietly told his mates in the AW team that he was leaving to set up home on Kangaroo Island the first reaction across the board was "oh no" before regaining enough composure to say "well good for you, Kangaroo Island is beautiful".

Jo has done a fantastic job of picking up and running with the position of MERI Officer since he took it up just over 12 months ago.

Not only has he proven to be skilled at deciphering and producing top notch reports he has also been a great asset in the field, most recently on the SA Natural Resources Committee of Parliament's trip in the APY Lands.

We all know how much Jo has enjoyed having the opportunity to work in the Alinytjara Wilurara Region and working with the incredible people who live there but... there comes a time when the longterm plan has to be kicked off and for Jo that time is December 2019.

Building a house on the south coast of the island with his wife Enya and two young sons has been on Jo's mind ever since he worked on the island 5 years ago as Kangaroo Island NRM's Water Officer.

We'll miss you Jo, and thank you for the contribution you made to helping us continue to raise the bar in the way we work and the outcomes we achieve.



Mima Smart Board Member, Yalata

Serving the PEOPLE, COUNTRY, WATER of the Alinytjara Wilurara Region



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