

STRENGTHENING OUR KNOWLEDGE FOR COUNTRY

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HIGHLIGHTS

- Our Role in caring for Country
- The importance of listening and hearing Country
- The connection between language, songs, dance and visual arts and Country
- The role of Indigenous women in caring for Country
- Keeping ancient knowledge for the future
- Modern technology in preserving, protecting and presenting knowledge
- Unlocking the rich stories that our cultural heritage tell us about our past
- Two-ways science ensuring our kids learn and grow within two knowledge systems – Indigenous and western science

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2.1 INTRODUCTION TO CARING FOR COUNTRY

It is part of our responsibility [to be] looking after our Country. If you don't look after Country, Country won't look after you.

April Bright² (p.49)

Our caring for Country includes people, animals, plants, the dead, and the yet to be born. There is sea Country, land Country; sky Country too ... it exists both in and through time. We see caring for Country as custodial, looking after things for the next generation⁵⁸. In the words of academic Jon Altman⁹ (pp.221-222):

Indigenous people have ... spiritual connection, obligations to occupy and nurture a landscape that is perceived as sentient and dear. People have an ethic of care and custodianship and personal relationship to the land and species and sites of significance; this means the condition of Country is linked to their sense of self-worth, notions of being and well-being and happiness and sense of future hope.

Jon Altman

In Australia, our rights and responsibility for our traditional territories have been recognised over almost half the land area and some of the seas^{9,59,60}. Even where our rights are not recognised, we still have responsibilities to care for our Country. Using our knowledge *our way* is vital to everything we do in caring for Country⁵⁸. Our land and sea management includes, but is not limited to: on-ground physical actions; cultural management actions; being present on Country; engaging in research; monitoring and evaluation; and engaging in planning and decision-making processes^{33,61}.

We have a proud history of 65,000 years as active custodians of Australia's vast land and seascapes⁶². Each of our 250 Australian Indigenous language groups has their own unique and deep-time knowledge base for caring for Country (Figure 1.3). We also each have our own unique struggles in seeking legal recognition of our rights to our land and sea⁶⁰. The Mabo High Court decision of 1992 recognised that we Indigenous Peoples of Australia have rights to our ancestral lands under their customary law^{13,59}. We wish to control, direct and manage our lands and waters, including through partnerships with government and other stakeholders, to create opportunities for new and innovative livelihoods that sustain traditional connections to Country^{63,64}.

We do many different actions to manage and look after Country^{9,60,65,66}. Individuals and family groups manage their Country on a daily basis. We do this by being on Country; sharing stories and songs about Country; observing and engaging Country through conversation; maintaining sacred sites; using our knowledge to collect plant and animal resources; and in preparing resources for consumption, medicinal purposes, construction and arts and crafts. We use our locally-tailored Indigenous knowledge and practices for all of this.

Many of us started our Indigenous ranger groups years ago – for example, in the 1980s in Queensland – through community-driven action with some assistance from Aboriginal Land Councils, Aboriginal Corporations, local Aboriginal Councils, government agencies, local community organisations and NGOs⁶⁷⁻⁶⁹. Each group has a different story and had different goals when they started^{61,70}. For example, Aboriginal ranger operations were at the forefront of catchment development in Queensland, with the Kowanyama Aboriginal Land and Natural Resources Management Office instigating the Mitchell River Watershed Management Group after witnessing impacts on their Country. Today, our Indigenous land and sea management programs are strong and getting better support from governments and others⁵⁷. We are glad that recent investments in Indigenous Land Management Programs are proving to be a pathway to economic development and Closing the Gap^{71,72}. Our members of the Indigenous Advisory Committee⁹ to the Australian Minister for Environment⁹ under the *Environment Protection and Biodiversity Conservation Act 1999* have helped in promoting the benefits of these programs.

We have also worked in Indigenous heritage programs for many years. The National Indigenous Cultural Heritage Officers network, established in the 1990s, was the first peak body in Australia to advocate for Aboriginal and Torres Strait Islander Cultural Heritage⁷³. We have taken up opportunities to protect our Indigenous heritage through registering our sites as state, national and world heritage places, taking court action under state and national legislation, and establishing and being active in many heritage organisations⁷⁴. For example, the Indigenous Heritage Reference Group⁹ provides high-level advice to Australia ICOMOS (International Council on Mounuments and Sites), an organisation that works on heritage protection throughout Australia.

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- n <https://www.environment.gov.au/epbc/advisory-committees/iac>
 - o A statutory committee established in 2000 under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) [section 505A]
 - p <https://australia.icomos.org/get-involved/working-reference-groups/indigenous-heritage-reference-group/>

We are very concerned that our Country and our heritage are still being damaged. The most recent State of the Environment report recognises that Indigenous heritage is enjoying a resurgence, but remains at risk from incremental destruction and loss of knowledge and tradition⁷⁵. We are worried that there is little real support for keeping our knowledge strong, including recording and documenting Indigenous knowledge. It is hard to get resources to support Elders to engage youth in learning language and culture and maintaining connection to Country: the key foundations of strong Indigenous knowledge systems. Much Indigenous knowledge is encoded in our local languages. Our traditional custodians hold grave concerns about their knowledge being lost as they pass away, and before it is properly passed on to the next generation¹².

In this chapter, we provide information about ways to keep our knowledge strong in caring for Country, together with case studies from around Australia.

2.2 LISTENING AND TALKING WITH COUNTRY

Listening and talking to and with Country is an important part of our caring for Country. As Yolŋu people express through the concept *wetj*, translated most simply as sharing, there is a strong people-Country relationship. We care for Country and we care as Country⁷⁶. Deep listening, also called *dadirri*, a word from the Ngan'gikurunggurr and Ngen'giwumirri languages of the Aboriginal people of the Daly River region, is described by Aboriginal writer and senior Elder Miriam-Rose Ungunmerr-Baumann as an inner, quiet still awareness⁷⁷:

Dadirri is inner, deep listening and quiet, still awareness. Dadirri recognises the deep spring that is inside us. We call on it and it calls to us ... When I experience dadirri, I am made whole again. I can sit on the riverbank or walk through the trees ... A big part of dadirri is listening.

Miriam-Rose Ungunmerr-Baumann

Traditional Owners of Gumbaynggirr Country in New South Wales share their story of listening with Country (Case Study 2-1) part of their work in healing Country (Case Study 1-2)⁷⁸.

CASE STUDY 2-1



Listening, slowing down, attending to Gumbaynggirr Country, Country speaks

Authors: Aunty Shaa Smith, Neeyan Smith, Sarah Wright, Paul Hodge and Lara Daley

Gumbaynggirr and non-Gumbaynggirr, slowing down and listening on Country

- Gumbaynggirr and non-Gumbaynggirr shifting camp together
- Listening and yarning with Country, slowing down
- A new way, we experienced together and learned a lot

Country decides what will be done, how it will be done, and when. Over the 4 hours of the planting ceremony at North Farm, Aunty Shaa held the space sharing what needed to be shared; what came in for her from the Old Fellas (see Case Study 1-2, page 13). This slowing down and listening was a new experience for many of the NRM participants. A tree planting is normally a hub of activity, 'getting the job done', the primary focus. But on this day, things went at a different pace. As part of the ceremony, and before the planting, Aunty Shaa led the smoking ceremony and invited people to spend 10 minutes to attend to Country, connect and listen and see what comes in. The following exchange shows some of the learnings that came in for non-Gumbaynggirr participants:

.....
I'd like to thank you for letting it all just progress at a slow speed. My brain is always going, going, going. I'm thankful (you, Aunty Shaa) slowed it down for us. That I actually stopped and connected. It's rare that I, 'just am' (that I can) 'just be'. Briefly, for a second ...

I agree. When you did the smoking, I immediately felt really dreamy; it was almost like a meditation feeling. That's how it felt to me; giving the permission to drop down. It was good, very grounding.

To heed the call of Dunggirr, is to listen and attend in new ways. When you slow down, depth can happen, depth of movement of Country. During the yarn participants became aware of the signs from Country. Eagles circling overhead at North Farm, the winds at Scotts Head and Yarriabini – the two sisters who made the sea and sand became the wind, Aunty Shaa tells us – the sound of the ocean and tide coming in at Yarriabini! (kilometres from the ocean!). So a mixing of time/space as Country speaks.

We don't have all the answers, we are finding our way through and with Gumbaynggirr stories and Country. We're trying and making mistakes, but there is a learning in the mistakes made and Country knows. As Gumbaynggirr custodian Neeyan Smith¹⁸ (pp.18-19) says:

.....
We are doing something positive and creative. We have to find a way, not be paralyzed about doing a wrong thing or making mistakes. Our mistakes we try to learn from; we open up, move forward. Gumbaynggirr Country knows we are trying. She knows what we are doing, we trust that too. That is where the ancestors come in also, to help us make the next step. We are finally doing something ... finally.



Left: Dunggirr Ceramic, Yarriabini. Photo: Ali Buckley.

Right: Shifting camp together, Yarriabini. Photo: Yandaarra



The Dunggirr story place, Scotts Head. Photo: Yandarra

Want to know more?

Here are some useful links:

- ▶ Deep listening (dadirri)
(<https://www.creativespirits.info/aboriginalculture/education/deep-listening-dadirri>)
- ▶ Country talks back
(<https://www.youtube.com/watch?v=mGaxcVwjlwk&list=PLmWe-V9tacwEPDUHggQgzE8YPRMalnQyA&index=19&t=0s>)
- ▶ To learn your Country, start by learning its Aboriginal names
(<https://www.abc.net.au/news/2019-01-21/to-learn-your-country-start-by-learning-its-aboriginal-names/10719890>)

2.3 SINGING AND DANCING OUR COUNTRY

Our singing and dancing have kept our knowledge of our Country alive and strong from the beginning till today. As Yorta Yorta/Dja Dja Wurrung woman Lou Bennett sings in “Our Home Our Land” (p. 178)⁷⁹:

Our home is our land where we stand proud and tall

Our home is our land where we stand together

We sing our home, our home, our home

We dance our land, our land, where we stand together.

Traditional Aboriginal songs are regarded by Arrente people ... as the quintessential repository of their law and culture ... knowing songs – including the dances, narratives and visual designs that accompany them – are a significant part of Aboriginal identity.

Myf Turpin, quote in Perkins⁸⁰

Aboriginal Australia, like many cultures, had no written language, though our stories that are thousands of years old are recorded in pictorial form on rock walls in many parts of the country. We remember, recount and pass on knowledge through our traditional dances and songs. Traditional dances for bush foods, for butterflies⁸¹, for native bees⁸², emus and many other plants and animals are being passed on and renewed across Australia. Traditional songs pass on knowledge of the tides, eclipses, movements of the stars, and allow us to navigate across Country. Songlines, or song cycles, tell the story of the creation of the land, animals, plants, provide maps for the Country, and hand down the law⁸³. Songlines cross Australia⁸⁴, connecting people to Country and connecting language groups to one another, telling of our journeys today as well as in the past.

Songsprings are the essence of people in this land, the essence of every clan. We belong to the land and it belongs to us. We sing to the land, sing about the land. We are that land. It sings to us.

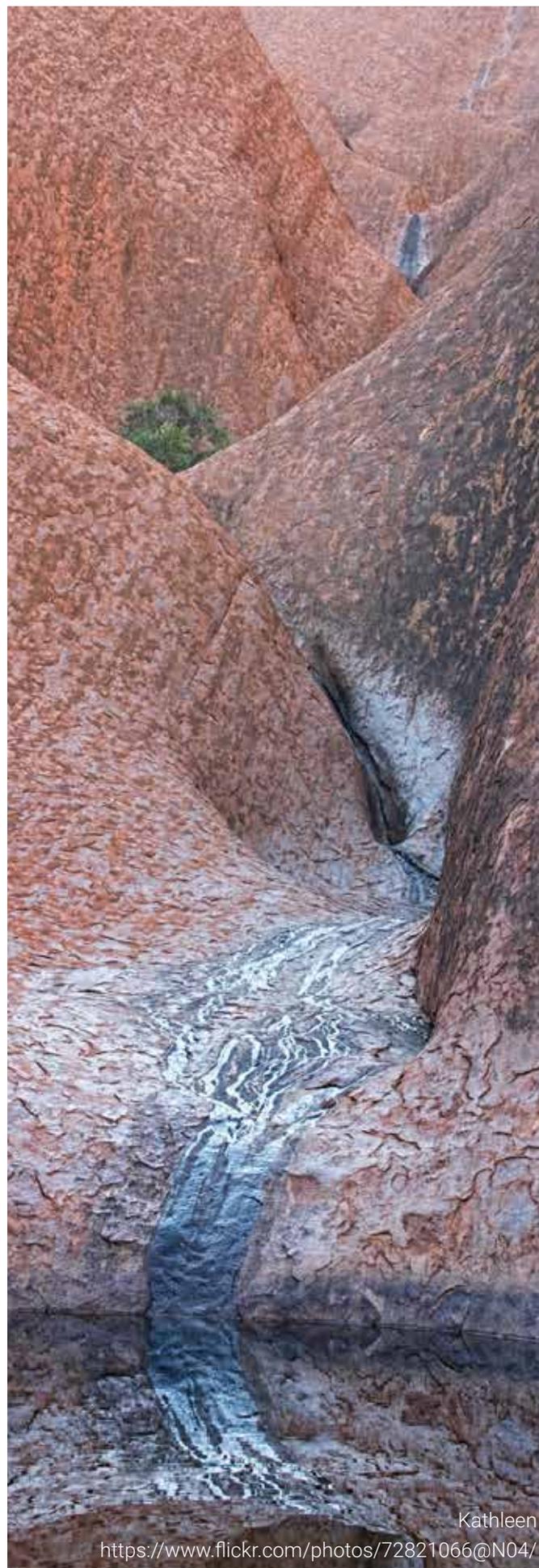
Gay'wu Group of Women⁸⁴

In Australia's arid interior, songs carry rich knowledge of the worlds of Aboriginal societies whose actions have continuously shaped the ecology of the region over many generations⁸⁵. Singing passes biocultural knowledge along through the generations, and is integral to the spiritual health of the ecosystem⁸⁵.

Repeating verses, accompanied by melody, helps with recalling information⁸⁰. Colonisation has severely depleted the rich and interwoven tapestry of song, that once existed in a multitude of languages and which stretched across the Australian continent and into the seas around it. The on-going loss of these cultural treasures is a major concern for us, and heightens the importance of efforts to preserve and revitalise Indigenous languages. In some cases, only older community members have a full command of the poetics of song⁸⁶. For some groups who have lost their language, songlines still exist in the natural landscape, in the formations of mountains and rivers, and they continue to express songlines through paintings and artwork⁸⁷.

Each year the Garma Festival of Traditional Cultures in eastern Arnhem Land, Northern Territory, and the Laura Dance Festival in Far North Queensland, provide important opportunities for clan and language groups to get together and celebrate traditional music, dance and song. These festivals are held on important ceremonial sites for local groups. The Garma Festival seeks to *facilitate reconciliation, education and understanding through sharing of culture and traditional practice; promoting and highlighting Yolŋu culture; and creating economic opportunities beneficial to Northeast Arnhem Land*⁸⁸. At the Laura Aboriginal Dance Festival – located near one of Australia’s most significant collections of rock art – people from communities across Cape York come together to celebrate through music, dance, song and cultural performances. These opportunities to come together to practise and share our cultural heritage are vital to their continued existence.

Over a five-week period in 2015, Arrernte women gathered near Alice Springs to record songs. Myfany Turpin, a linguist giving her time to assist the project, was the only woman from outside the Arrernte. Rachel Perkins⁸⁹ describes her as one of the few non-Indigenous Australians who understands that song is key to unlocking the original Australian knowledge systems. Songs, stories and body designs tell people who they are and where they belong. Songs are crucial to the proper management of the land because through the performance of songs, the world is made afresh.



Kathleen

<https://www.flickr.com/photos/72821066@N04/>

CASE STUDY 2-2

Arrernte Women's Project

Authors: Peter Yates with Amelia Turner, Mia Mulladad, Rachel Perkins and Myf Turpin



- Arrernte women held a five-week camp to renew and record their songs
- Project started by Rachel Perkins and supported by AIATSIS
- Bringing back old songs and keeping them safe
- Making sure the songs are only heard by the right people



Amelia Turner and Mia Mulladad participated in the Arrernte Women's Project. Photo: Peter Yates

.....
These days people are not hearing their songs, only hip hop ... not hearing what was passed down through generations
.....

The Aboriginal knowledge in this project were sacred songs that carry importance for Country and people, and they needed to be protected from being lost or forgotten. But they also needed to be protected from being heard, learned or accessed by the wrong people.

.....
Too much knowledge has been given out in the past. We need to keep control
.....

The Arrernte Women's Project was started by filmmaker Rachel Perkins (herself an Arrernte woman) with support from the Australian Institute for Aboriginal and Torres Strait Islander Studies (AIATSIS).

The project was adopted and strongly led by the Elder women. They were in turn supported by a group of more western-educated middle-aged women who were more comfortable with the contemporary world. No men were involved in the process – their exposure to women's law is not allowed and can be dangerous to them. Of all the project workers, who included film and sound recordists, only one 'outsider', Myfany Turpin, a highly respected linguist was involved.

The project began with a search for, and repatriation of the few women's songs collected in the past. Careful checks were made to ensure that these songs were returned to the correct people and families. There followed a five-week camp wherein clan groups were invited and scheduled to come to the camp to sing and record their songs on video. Some families chose not to participate, and participants reflected that some of those that initially chose not to participate *'felt sorry afterwards'*

When recording was finished, the women collectively decided on how the songs would be managed. The Elder women gave a final authority to the decisions.

Each song is assigned a Tjungayi (ceremonial manager). The recordings cannot be viewed by anyone without the permission of that Tjungayi.

.....
We all sat down and talked about where the knowledge was to be kept
.....

The decision as to where the songs should be kept was of great importance, and several locations were considered before AIATSIS was chosen as the 'keeping place'. AIATSIS was chosen because it has the expertise in Aboriginal heritage and has best practice archival facilities for electronic materials. Two representatives were sent to Canberra to view the facility at AIATSIS prior to the decision being made to keep the recordings there.

.....
Lose language, and something very special will be missing
.....

Songs, dances and stories are vital for caring for Country – and it is also vital that we follow customary laws and protocols to make sure only the right people are involved in holding the knowledge.

Want to know more?

Here are some useful links:

- ▶ Djambidj: An Aboriginal Song Series from Northern Australia
<https://aiatsis.gov.au/publications/products/djambidj-aboriginal-song-series-northern-australia>
- ▶ Mission Songs Project
<http://apraamcos.com.au/news/2016/july/exploring-modern-day-songlines-with-mission-songs-project/>
- ▶ Saltwater Freshwater Dance
<http://www.saltwaterfreshwater.com.au/program/dance/>
- ▶ Paint up – Dance
<https://australianmuseum.net.au/about/history/exhibitions/body-art/paint-up-aboriginal-dance/>

2.4 ART FOR COUNTRY

Through art and artefacts, we tell the stories of our Country. Our art about Country can be on sand, bark, in body-designs, on rocks, turtle backs, scarves and other textiles, baskets, walls, doors and more. It tells about our songlines, story places, bush medicines, our ancestors in our Country. We don't just paint anything. Only the people with the right connection to Country under our customary law can paint their stories⁸⁹.

The law painting ... is not just a painting. It is a legal document in Ngarra law. This painting is based on the honey bee (Niwuda gugu) ceremony. The black part at the top is the hole where the honey bee goes in and makes the honeycomb. The story for this painting is about that honey bee ... This Niwuda gugu landed in the Warrayngu and Bunggu clan groups. Niwuda gugu flew to different places to invite them to become peaceful tribal people and to recognise each other as being part of the Niwuda gugu law.

James Gurrwanngu Gaykamangu, 2012⁸⁹

We use art and visual expression in many of our contemporary plans for managing Country⁹⁰, and to help others understand our ways of caring for Country⁹¹. A unique eco-cultural project drawing inspiration from artistic form has emerged through a collaboration between Noongar rangers and partners around Nowanup. With an aim to both restore habitat and heal Country in Western Australia's Gondwana Link landscape, giant animals including a 300m long goanna comprised of trees and shrubs are emerging from the ground and bringing life back to the diverse landscape. The Nowanup Rangers⁹² are planting thousands of seedlings into the designs to bring the animals to life, with drones being used to document the creatures as they emerge from the ground.

Ngariniyin artist Sandra Mungulu explains the knowledge of bees and Wandjinas in her painting *Wanjina and Waanungga* (Figure 2.1)⁹² (p.292):

Waanungga is a word for various forms of bush honey, 'sugarbag', found in trees and termite mounds. The Wandjinas (ancestral beings from the Dreaming, present in the landscape today) keep the countryside fresh and healthy which allows the native bees to produce high quality honey. My mother is called 'Guduwolla', the Ngariniyin name of a particular tree which produces white pollen in early summer, and is the main source of sugar bag in the Kimberley region of north-west Australia.

Art exhibitions provide opportunities for others to understand our caring for Country. *Yiwarra Kuju: The Canning Stock Route*⁹³ has more than 100 canvases from artists telling the story of Country and the historic travel route that cuts across it. The *We don't need a map*⁹⁴ exhibition showed the inextricable connection of Martu people to the Western Desert.

Want to know more?

Here are some useful links:

- ▶ Desart: Culture First: <https://desart.com.au/>
- ▶ Association of Northern, Kimberley and Arnhem Land Aboriginal Artists: <http://ankaaa.org.au/>

q <https://www.facebook.com/GreeningAustralia/videos/484202812325609/>

r https://www.nma.gov.au/exhibitions/yiwarra_kuju/home

s <http://wedontneedamap.com.au/>

- ▶ Indigenous Art Centre Alliance: <https://iaca.com.au/>
- ▶ Rock Art is forever – Mimal Land Management <http://www.mimal.org.au/latest-news/celebrating-ipa>
- ▶ Desert, River, Sea <https://desertriversea.com.au/>

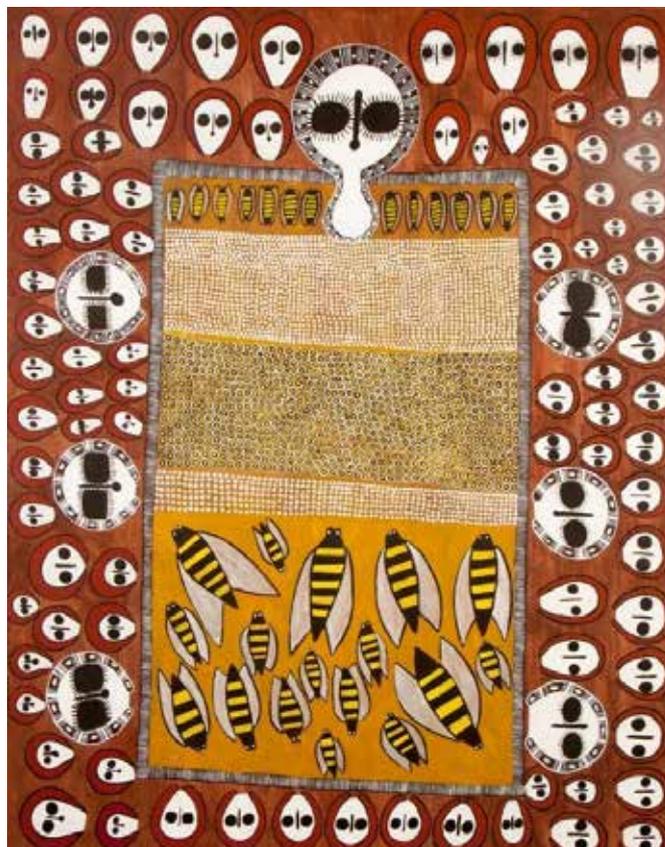


Figure 2.1. 'Wandjina and Waanungga', artist Sandra Mungulu (1960), acrylic on canvas © Sandra Mungulu/Copyright Agency, 2019.

2.5 BRINGING INDIGENOUS LANGUAGES INTO ALL ASPECTS OF LIFE

Indigenous Peoples across Australia are leading language revitalisation initiatives which are diverse and broad. It is important to note that actions for caring for Country are made more meaningful with the application of language. The simple act of applying fire to Country is made more in depth when song and language are applied. The Djabugay Rangers in the rainforest of North East Queensland are finding new meaning in old songs and phrases when on-Country burning. These songs and phrases talk to the intricate approach to fire application and burning certain Country certain ways in the right season. Many groups have also come together to

strengthen our work through our network [First Languages Australia](http://www.firstlanguages.org.au)^t.

Our language centres are as diverse as our communities and languages! They are vital places for language protection and revival: supporting language research; documentation of language; and the production of learning resources including dictionaries and guides to grammar. Our biennial [Puliima National Indigenous Language and Technology Forum](http://www.puliima.com/)^u, attracts hundreds of our language activists, and showcases the myriad of language revival programs prevalent across the country.

Some clan and language groups have created cultural hubs on Country which enable immersion of children and others in learning through language. The programs that support these cultural hubs also sustain people on Country, and build strength in knowledge. In New South Wales there are five Aboriginal Language and Culture Nests operating across the state, teaching students in over sixty schools, with learning of Gamilaraay and Wiradjuri languages available at University-level.

These language centres, hubs and programs are building momentum. Our actions are attracting some government and philanthropic support to centres such as Mirima Dawang Woorlab-gerring Language and Culture Centre. This centre started in the 1970s to preserve, analyse and record the language and culture of the Miriwoong and Gajirrabeng people around Kununurra. Like many of our languages, Miriwoong is classified as critically endangered.

Geoff Anderson, a Wiradjuri man contributing to language revitalisation in Parkes, NSW, explains the role that language revival can play in healing, contributing to recovery from the suppression of culture and identity experienced by Aboriginal Peoples. Anderson writes about his own personal experience of healing through learning and teaching Wiradjuri language and his observations of community healing⁹³ (p.73):

*Learning the language that belongs inside will heal you.
Learning your native language will make you feel more complete.*

The more recent rise of digital technologies is also creating new and innovative ways to engage kids in language revitalisation, including smart phone apps.

According to the Second National Indigenous Languages Survey⁹⁴, only about 13 Indigenous languages can be considered strong, and around 100 languages are described as severely or critically endangered. However, around 30 or more of these languages are seeing significant increases in levels of use as a result of our language programs.

We know there is a strong connection between language and identity, and between language and community. Participants in the Second National Indigenous Languages Survey⁹⁴ talked about keeping language strong, and about their desire for their language to have a stronger presence in their own, and wider, communities as this in turn strengthens identity and connection with Country and heritage.

The Survey also highlighted the need for more work and further funding of activities to support traditional languages. Further, committed and involved community members; adequate funding; and access to language resources, were found to be key to the successful delivery of language activities.

The Mobile Language Team (MLT)^v was established with Federal Government funding in 2009 to promote the revival and maintenance of Aboriginal languages in South Australia. There are 46 languages in South Australia and approximately a quarter of these languages are still spoken to some degree. The other three-quarters of languages have a strong community base, but currently do not have speakers.

Over the past ten years, the MLT has supported 20+ Aboriginal language groups across the length and breadth of the state. Community requests for MLT services are submitted to the MLT Aboriginal Policy and Advocacy Committee, comprising of Elders with deep community knowledge and professional standing. Individual language projects are planned in close consultation with community stakeholders, including language speakers, Elders, language learners, Aboriginal corporations and schools. Current projects include: Arabana on-Country language camps; co-curricular learning of Adnyamathanha language in Leigh Creek Area School; Yankunytjatjara oral history videography project in Uluru/Yulara; Safe Language Spaces training for medical students at the University of Adelaide; Online Learning portal development^w; language and culture museum display and trail in Oodnadatta; and Wangkangurru bilingual storybook production in Birdsville (QLD). The MLT employs linguists, language workers and media personnel with 50 percent Aboriginal staff. The MLT also runs a highly successful young Aboriginal language worker trainee program.

t www.firstlanguages.org.au

u <https://www.puliima.com/>

v <https://www.mobilelanguageteam.com.au/>

w portal.mobilelanguageteam.com.au

CASE STUDY 2-3

Language and land: Arabana on-Country language camps

Authors: Veronica Arbon and Eleanor McCall



- On-Country Arabana language camps attracted 140 attendees
- The link between language and land was explored during time on-Country
- A Kati Thanda (Lake Eyre) ranger program is being established which will incorporate Arabana language

In 2019 the Mobile Language Team (MLT) secured funding to assist the Arabana community to run two on-Country language camps. Bringing language back to traditional Country had always been one of the main goals of the Arabana community. Six years of language revival work preceded these camps, a strong foundation which ensured the success of this project.



Arabana camp attendees gathered on Kati Thanda (Lake Eyre). Photo: Mobile Language Team

The language camps were held at Finnis Springs Station, which is close to Kati Thanda (Lake Eyre) and Marree. Each camp ran for four days and three nights. Five Arabana camp leaders, who are speakers, Elders or learners of the language, were responsible for the planning and running of camp activities. The MLT staff, in addition to providing training and support in the lead up to the camps, also assisted with logistics, catering and audio-visual documentation of the camps.



Arabana camp leader singing a song in language for attendees at Kati Thanda (Lake Eyre). Photo: Mobile Language Team

The camps attracted 140 attendees in total including 70 children and teenagers. Attendees travelled from many centres across Australia including Darwin, Adelaide, Port Augusta, Broken Hill, Alice Springs, Marree, Roxby Downs and Murray Bridge. Most Arabana people live away from traditional Country, yet a deep connection to Country remains. The disparate nature of the Arabana community reflects the reality of many Aboriginal groups today. The language camps provided an opportunity for Arabana people to return to Country for the purposes of learning and preserving language in its natural context.



Arabana camp leader showing young Arabana boy how to decorate clapsticks. Photo: Mobile Language Team

Camp leaders led a variety of activities to promote learning and understanding of land, culture and language including: travelling to significant sites (native wells, rock carvings, etc.) to teach place names and stories; preparing kangaroo tails with young men at the camp; teaching children and teenagers to carve and decorate clapsticks from wood they collected themselves; listening to songs and stories around the campfire at night; running a scavenger hunt in language; and painting using traditional animal track motifs.

Arabana woman Dr Veronica Arbon, herself a language learner and advocate, reflects on the 2019 On-Country camps:

.....
The first Arabana language camp involved trips to important sites along with stories and naming Country in the Arabana language along the way. The second Arabana language camp scheduled a trip out to Kati Thanda (Lake Eyre), a walk around the old Finnis Spring Homestead and Mission and artwork, including sand drawings among other activities.

The pure wonder on a child's face when they could clearly say and understand an Arabana word or sentence, rub off the hair of a singed kangaroo tail or walk around Country or Kati Thanda (Lake Eyre) was an experience. Also, the painting of an image, sand drawings or as family playing UNO (trying to input Arabana language for colours and numbers) or sitting around the campfire listening to Elders' stories and the generations share language was brilliant. Of course, there was star gazing too with naming of some late into the night and there were scary stories that happened both out on-Country and around the campfire that moved many. So much to engage in and learn for all. Many commented on how the children were all related to each other in some way. Others commented on how some, who were noticeably disruptive during the first camp, had begun to share together with no mention of 'I'm bored', as one of the Aunties stated. 'It was good to be with Uncles and cousins all around us', as one of the grandsons said, was clearly important to some of the young boys. Many appeared to stand strong and tall on-Country with a new feel and knowing of their heritage. Thinking and talking about this and the stories told, places visited and language learning, my family group considered there were many learnings and messages around relationships, listening carefully, the importance of places and language, working together (especially the young people supporting the older people), leadership and the importance of history. There were messages too of men's roles in caring for family and taking key roles. Most noted was the quiet respect and love expressed. Some who attended have said they will join future Arabana language camps or expressed a desire to visit Country in the future and have said they will work hard on learning language too. Arabana language is clearly critical to Arabana people and to hear, speak, see and feel its emotion was important to each of us. For those who are learning, the experience on-Country with language was extremely rewarding.
.....

Language and Country

Language and Country are inexorably connected. Many attendees of the Arabana language camps reported that it was easier to use and recall language on-Country in its natural context. Arabana words, songs and conversation flowed through the landscape. Camp Leaders, many of whom grew up in Finnis Springs, taught attendees the names of places, plants, animals and features of the land during the camps. Words that had been forgotten in town were remembered again and recorded while there. 87 year old Elder and speaker Syd Strangways also spoke to attendees about changes to Country that he noticed. Food and water sources were disappearing due to drought, climate change, the introduction of feral animals to the landscape and a lack of traditional land management.

The on-Country camps sparked a new level of interest and support for Arabana language revival amongst the community. The community expressed a great desire for more opportunities to return to Country to connect to their language and culture.

As a natural extension to this success, the MLT was recently approached by the Arabana Aboriginal Corporation to assist with running on-Country language camps as one facet of their newly established Caring for Country program. The program will employ Arabana rangers in Kati Thanda (Lake Eyre) for the first time ever. In addition to the language camps, the MLT will also look to facilitate language training for the rangers and support community planning and development of the project. The Caring for Country ranger project will incorporate traditional Arabana knowledge of Country through the lens of Arabana language.



Arabana Elder Syd Strangways surrounded by dead mulga trees near camp. Photo: Mobile Language Team



Arabana camp leader demonstrating animal tracks to young girl. Photo: Mobile Language Team

Repatriation of archival material back to the communities from which they came is common amongst music research partners working with Indigenous people. Noongar researcher Dr Clint Bracknell has seen repatriation increase community access to old recordings of song performances, prompting recollections, triggering new performances and getting communities more engaged in processes of cultural revitalisation. For example, the Wirlomin family clan from the south coast of Western Australia make ongoing efforts to maintain Noongar language and culture (Case Study 2-4). Song sharing via peer-to-peer digital solutions and face-to-face gatherings has supported community priorities to control, consolidate and enhance cultural heritage. The recovery of archival songs has enlivened south coast Noongar language revitalisation efforts, and workshops focusing on singing these songs have resulted in increased feelings of confidence and connection amongst participants. Enhancing capacity for singing in the home community where recordings were originally captured has helped to open up the archive and truly mobilise the songs it holds.

CASE STUDY 2-4



Wirlomin Noongar Language and Stories

Author: Dr Clint Bracknell

- Wirlomin Noongar people have held workshops and camps to consolidate and enhance endangered language, story and song
- Combines archival information and community-based knowledge
- Re-embeds language, story and song in landscapes

Formalising the longstanding efforts of people belonging to the Wirlomin family clan from the south coast of Western Australia to maintain Noongar language and culture, Wirlomin Noongar Language and Stories (Wirlomin) was established as an incorporated organisation in 2010. Wirlomin has a cultural Elders reference group, committee and over one hundred members. Many of us formally gather a few times each year to share and build Noongar language, stories and song, reconnecting fragmented elements of intangible cultural heritage and re-uniting them with relevant landscapes.

Our intention was, and is, to claim, control and enhance our heritage. We choose to do this by starting with a focused group and progressively sharing with ever widening circles, employing the following staged process:

1. Connecting archival material with its home community of origin;
2. Interpreting and making decisions about this material as a dynamic group including the senior descendants of archival informants and contemporary language custodians;
3. Reconnecting story, language and song to Country via visits to relevant sites; and
4. Sharing with the broader local community.

As a result of this process so far, Wirlomin has produced a website and six bilingual, illustrated books of ancestral stories. Wirlomin members have developed interpretive signage for the public to engage with these stories on-Country, and presented Noongar language, story and

song at schools and various public events. As a voluntary organisation, Wirlomin has relied on a diverse range of small federal and state government grants – plus support from two separate Australian Research Council funded projects administered by universities – to continue its work.

The on-Country aspect of Wirlomin activities occasionally requires negotiation with the Department of Parks and Wildlife to gain access to restricted areas of National Parks. A number of productive Wirlomin trips to Fitzgerald River National Park were supported by the non-government organisation South Coast Natural Resource Management, an organisation that coordinates and administers funding provided by the Australian Government and the Government of Western Australia specifically allocated for natural resource management. Over the course of these trips, Wirlomin members were able to locate features in the landscape described in ancestral stories and songs, a vital step in restoring cultural values in the region. Whether engaging in analysis of archival material or collaboration with organisations and institutions, Wirlomin's success relies on good governance, collective decision making, and its members' creativity, skills and commitment.



Clint Bracknell, Roma Winmar and Iris Woods recording a Noongar story at Point Ann, WA. Photo: Amy Budrikis © Wirlomin Noongar Language and Stories

A range of national and state government policy support has been helpful for protecting and promoting our Indigenous languages. The Australian Government currently provides around \$20 million each year through the Indigenous Languages and Arts program. It supports Aboriginal and Torres Strait Islander communities to revive and maintain languages, and to develop and present art.

Want to know more?

Here are some useful links:

- ▶ First Languages Australia
<https://www.firstlanguages.org.au/>
- ▶ Mirima Dawang Woollab-gerring: Mirima Place for Talking
<http://mirima.org.au/>
- ▶ National and Film Archive of Australia: 2019 International Year of Indigenous Languages
<https://www.nfsa.gov.au/latest/2019-international-year-indigenous-languages-nfsa>

2.6 ESTABLISHING CULTURAL KNOWLEDGE DATABASES AND ARCHIVES

We have managed complex cultural information systems for thousands of years, restricting access to some knowledge on the basis of seniority, gender and other factors. There is strong demand for safe ways to store knowledge that has varying access arrangements, driven by concern that knowledge is being lost as Elders pass away. Many Indigenous groups are now working with locally-managed databases as a way to store cultural knowledge and archives with varying levels of access. Multi-layer data permissions allow for individuals to access different knowledge, dependent on language-specific cultural governance arrangements related to that knowledge. These cultural requirements add complexity to digital Indigenous knowledge databases.

The Ara Irititja project works to accommodate Anangu wishes for the delivery of regularly updated, high quality interactive multi-media databases, in Ngaanyatjarra, Pitjantjatjara, Yankunytjatjara language and English, onto their communities. The project is dedicated to maintain regular Anangu access to these databases and is accountable to Anangu in its management and delivery of this historical material.

<https://www.irititja.com/>

Other language groups are seeking to repatriate information about their people and their Country, and to maintain control over this archived information into the future. For example, over the last century, many visitors to the Ngaanyatjarra, Pitjantjatjara and Yankunytjatjara lands in Central Australia collected and permanently removed artefacts, photographs, film footage and sound recordings. This included Anangu people of these lands being photographed and their knowledge recorded and published without any negotiation or permission.

In 1994, Anangu Elders, together with the Pitjantjatjara Council and an archival consultant, sought funding for the development of *Ara Irititja* – a social history project of the Pitjantjatjara Council Aboriginal Corporation. *Ara Irititja* has now tracked down hundreds of thousands of historical and cultural items and makes them available to Anangu through interactive software. Today, Anangu are careful to determine how their history and culture are presented to the world-wide audience.

A range of third-party designed and hosted databases are emerging in the market, some of which are specifically targeted at Indigenous archiving. Each seeks to act as a repository of images, movies and audio recordings. Some also provide avenues for building geographical data layers (useful for overlaying cultural and natural resource management goals to assist in planning and decision making), and for compiling family trees and geneologies. A critical aspect of these databases and archives is their usability: ensuring that the interface is engaging and user friendly, so that both younger and older generations want to interact with the knowledge, to add to it, and learn from it.

We are also working with existing national databases to bring in our Indigenous knowledge. For example, senior knowledge holders from the Gamilaraay, Yuwaalaraay and Yuwaalayaay worked to collect and verify Gamilaraay, Yuwaalaraay and Yuwaalayaay language names for plants

and animals* and include these words within the Atlas of Living Australia (ALA). This has led to new standards and workflows for the ALA, and given prominence to Indigenous knowledge alongside scientific taxonomy – for example, Emu, Bagabaga, Barrgay, Dhinawan*.

Want to know more?

Here are some useful links:

- ▶ Ara Irititja Archive <https://www.irititja.com>
- ▶ Indigenous Ecological Knowledge: Atlas of Living Australia <https://www.ala.org.au/Indigenous-ecological-knowledge/>

2.7 BUILDING STRENGTH THROUGH KNOWLEDGE-RECORDING

2.7.1 Seasonal calendars

Seasonal knowledge is at the heart of our caring for Country. When we are on Country we are alert to how Country is changing with the seasons, and to different signs in the weather, plants and animals around us that signal to us to undertake different activities. For example, when we see calendar plants flowering, or the bark peeling off specific trees, or hear the call of certain insects, we know certain animals, bush tucker plants or medicines that are linked to those observations are now available for us to hunt and gather^{4,24}, and over time build to create a detailed *calendar* of seasonal understanding of Country. We start to learn about these connected events from a young age. We all have our own unique seasonal calendars across Australia⁴. Seasonal calendars, when documented, are also a successful way of communicating our Indigenous knowledge outside our Traditional Owner groups. For example, the Ngan’gi Seasons Indigenous seasonal calendar acted as a tool to communicate to government water planners the importance of Ngan’gi people’s attachment to the Daly River, Northern Territory^{12,95}. It was also incorporated in the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services’ (IPBES) Assessment Report on Land Degradation and Restoration⁹⁶ to highlight the breadth of Indigenous knowledge drawn on for ecosystem management (Figure 2.2).

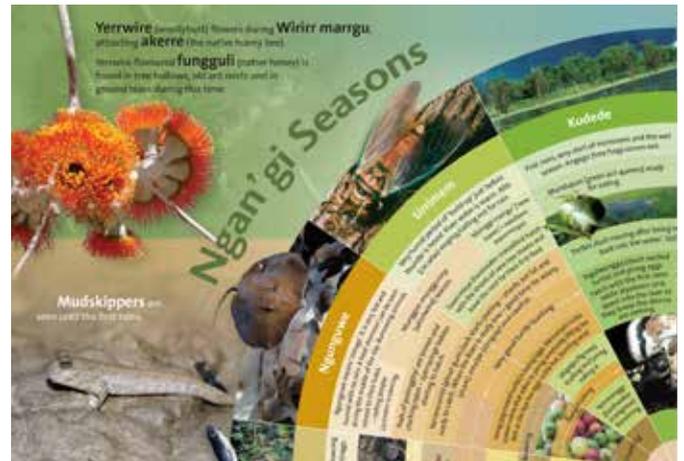


Figure 2.2. A section of the Ngan’gi Seasons Indigenous seasonal calendar

In the Torres Strait, seasonal calendars are being developed alongside traditional ecological knowledge (TEK) databases to keep knowledge strong. The Torres Strait Regional Authority (TSRA) established a TEK Project in 2011 in response to the concerns raised by many Torres Strait Islander communities around the gradual loss of their Indigenous cultural knowledge – including stories, cultural practices, and knowledge about their land, sea, plants and animals. The TEK Project involved the development of a secure database for each community to record, store, protect and, where applicable, share traditional knowledge within their own community whilst adhering to their respective community’s cultural protocols. The TSRA reviewed many traditional knowledge systems and selected consultants to develop and design a pilot database on Boigu Island in 2009.

It is important for them to know, so they can practise this way of life themselves and understand more of their cultural knowledge. This calendar is for all the children of Torres Strait, not just Kulkulgal children, to learn our language and culture. We respect our home, our knowledge and our way of life – lagal pawa. We abide by that. We need to look after our place and respect it.

Mr Moses Mene – Masigalgal Elder, delivering the gift of the Masig Seasonal Calendar to students at Tagai College, Thursday Island Primary Campus.

But it has not always been easy to run rangers’ work by seasonal calendars – they get tied in to government time frames and rhythms. Now Masigalgal Elders, the Masigalgal Rangers and the Masigalgal Registered Native Title Body Corporate (RNTBC) are building on the TEK database and bringing traditional knowledge more strongly into management.

x <https://collections.ala.org.au/public/show/dr13266>

y <https://bie.ala.org.au/species/urn:lsid:biodiversity.org.au:afd.taxon:c2714924-4fd5-456e-bb04-d23edbcf888f>

CASE STUDY 2-5

Torres Strait traditional ecological knowledge project

Authors: Melinda McLean, Vic McGrath, Masigalgal Rangers and the Masigalgal RNTBC



- TEK database systems were reviewed and Elders wanted new ways to preserve and promote Indigenous knowledge
- Masig, Mer, Erub and Saibai communities have finalised or are developing seasonal calendars
- Masigalgal Seasonal Calendar poster launched in October 2018 and accompanying booklet launched in August 2019
- Highlights Masigalgal traditional knowledge, for education



Masig Elders and RNTBC Directors launching the Masigalgal Seasonal Booklet. Photo: Melinda McLean

The Torres Strait Regional Authority (TRSA) and rangers, with guidance from Registered Native Title Bodies Corporate (RNTBCs), actively support TEK preservation by recording stories, songs, language, plants and animals, and entering in the TEK system. We have rolled out TEK database systems to eleven Torres Strait communities over ten islands between 2011 and 2019. Communities are using these TEK systems, and the technology in them, to ensure knowledge is maintained for future generations in a framework that protects culturally sensitive information. Rangers are the primary drivers of the systems, and our TSRA TEK team work with rangers to train community in the use of these systems. TEK databases are closed systems that are only accessible to members of each community and can be accessed by computer or personal smartphone.

All information in each TEK system is protected and shared via a Knowledge Guardianship system that allows communities to view, share, protect and preserve traditional knowledge in accordance with traditional considerations. RNTBCs or an agreed Council of Elders in each community approve the sharing of all knowledge in each system.

In 2016, TSRA reviewed the TEK Project to find out how much the community knew about the project, how satisfied they were with the project, the benefits of TEK to their families and community, the types of traditional knowledge that Elders wanted protected and ways to increase uses of the systems. We spoke with stakeholders in each community to find out what was working well and how TSRA can support communities to strengthen their cultural knowledge. Communities told us that the TEK systems were positive overall with many the benefits but they thought more could be done to promote knowledge that the Elders identified as being important. Our TSRA TEK team decided to work with one community at a time to improve each TEK system and at the same time work with communities on other ways to promote TEK information and knowledge preservation.

Masig, Mer, Erub and Saibai communities have now made, or are making, seasonal calendars. The Masig Seasonal Calendar and accompanying booklet started in 2017 and developed over an 18 month period with Masigalgal Elders, rangers, Masigalgal RNTBC and the TSRA working together. The RNTBC were keen to develop an educational resource that promoted and preserved public knowledge, TEK information and promoted the conservation of Kulkulgal Ya, the language of the central Torres Strait islands.

The Masigalgal Seasonal Calendar poster was launched in October 2018 and highlights Masigalgal traditional knowledge about the old customary ways of marking annual seasonal changes and events. Common knowledge from the TEK database was put into a poster that underpins the story of how the people from Masig Island in the central Torres Strait have survived and thrived off the land and sea since time immemorial. The Masig Community has also released a Masig Seasonal Calendar booklet which includes additional cultural information from within the TEK database.

Masigalgal RNTBC have strong responsibility and control distribution of the calendar and at this stage only allow its usage as an education tool. Our TSRA TEK team maintains copies, but only hand them out when RNTBC approve the distribution. To date, the calendar has been shared with key educational institutions, art galleries, the Bureau of Meteorology website and universities.

Our TSRA team is working with other Torres Strait communities to support projects that reflect community priorities for Indigenous knowledge preservation. These include cultural mapping projects, additional seasonal calendars and language resources. We are planning further work with communities to collect TEK specific to key groups in communities including women.

We are excited that the TSRA and the rangers, with permission from Elders and RNTBCs, can support and build on the expertise of Traditional Owners by utilising their traditional ecological knowledge, together with other science, to inform and guide the management of the Torres Strait land and sea Country in a holistic and sustainable manner.



Masigalgal Elder Mr Moses Mene informs Tagai Primary Students how Masigalgal used to work together to harvest from the land and seas for survival in generations past. Photo: Chris de La Rosa



Masigalgal Rangers, TSRA Environment Portfolio member and TEK team, together with the Masig PBC Deputy Chair, present Masigalgal Seasonal Calendar to students at Tagai College, Masig Campus. Photo: Melinda McLean



Masig Elders and RNTBC Directors launching the Masigalgal Seasonal Booklet. Photo: Melinda McLean

Want to know more?

Here are some useful links:

- ▶ Indigenous seasons calendars (CSIRO)
<https://www.csiro.au/en/Research/Environment/Land-management/Indigenous/Indigenous-calendars>
- ▶ Make your own seasonal calendar
<http://www.larrakia.csiro.au/pdf/make-your-own-seasonal-calendar.pdf>
- ▶ Indigenous weather knowledge (Bureau of Meteorology)
<http://www.bom.gov.au/iwk/>
- ▶ Indigenous fire and seasonal calendar (NSW)
<https://www.ala.org.au/blogs-news/banbai-nation-community-season-and-fire-calendars/>

2.7.2 Illustrated books

Indigenous- and co-authored books and texts have proven important to us in documenting and sharing our knowledge: to prevent its loss as Elders pass away; to assist learning amongst members of our own language and clan groups; and to build awareness and respect for our knowledge with outsiders.

Doris Yethun Burarrwaṅa talks about the importance of involving all relevant Yolṅu knowledge holders, to describe and document ecological and cultural knowledge of shellfish (Case study 2-6). *Maypal, Mayali' ga Wāṅa: Shellfish, Meaning and Place* required many Yolṅu people working together, to make a book, to give back to the children for free, so that Yolṅu children will come to share in the knowledge and meaning of shellfish.

CASE
STUDY
2-6



Banha ṅanapu bayiṅ birrka'yun walu maypalmi ṅanapu bayiṅ birrka'yun maypalnha bayiṅ baman'ṅuwuynha ṅalapaḷminy yolṅuny warrany

As the seasons change we think of the Old People, the ancestors, we think of gathering maypal

Authors: Doris Yethun Burarrwaṅa with Bentley James

- An illustrated book and Yolṅu bilingual identification guide to teach our children about shellfish
- Many different knowledge holders tell stories about meanings in many languages with beautiful photographs
- Dances and ceremonies and colours are the linkages that tie all the people of this place together, and to the land and shellfish
- Science is an important tool, it can help us accurately identify the shellfish, but it cannot tell us what they mean

My name is, *Yäkuny ñarra dhuwala* Doris Yethun Burarrwaña

This is the story of my chance to teach children why it's important they know their Country and the meaning of shellfish.

Dhuwanydja dhäwu ñarrakuñu nhäwiku marngithinyaraw djamarrkuliw, dhiyak djäkaw limurrukalanaw wäñaw ga maypal.

Maypal, Mayali' ga Wäña: Shellfish, Meaning and Place is a project that many Yolju people worked on together, to make a book, to give back to the children for free, so that Yolju children will come to share in the knowledge and meaning of shellfish.

It all started when NAILSMA, the Galiwin'ku Learning on Country program and Yolju Traditional Owners asked me to work with them to pass on local knowledge about shellfish. We used rangers (Marthakal, Crocodile Islands, Dhimurru, Djelk and Yirralka) and schools (Shepherdson, Yirralka and Homelands) and *Buku-larrngay mulka* and *Yälu-marngikunnamirr* to get many Yolju involved in the right way.

We had two challenges: Firstly, knowledge of maypal live in the seven Yolju languages of North East Arnhem Land. To understand maypal, you have to understand this. So, we had to talk to everybody in their language.

Second, we needed a scientifically correct method for identifying shellfish, because people growing-up don't know the detail and all the special names for it, so they're losing the connections.

NAILSMA suggested noted North East Arnhem Land beachcomber Bentley James of Crocodile Islands fame. Bentley is my classificatory brother. We have worked on the homelands together since 1993. Together we drew up a plan to create a multilingual shellfish guide for children. First, we needed to get a lot of permissions. Then we took a lot of pictures.



Doris cooking Maypal. Photo: Angie Gray



Top: Mitawara, *Lunella Cinerea*.
Bottom: Barawara-bunybu, *Terebralia sulcata*. Photos: D. Hancock and T. Richie



Doris and Bentley at Galiwin'ku Yalu. Photo: David Hancock



Goŋiya-ŋkaliya, *Clibanaris taeniatus*.
Photo: D. Hancock and T. Ritchie

For the next 18 months we visited some 40 homelands and six communities many times. It is a really good thing that our project is based on talking to kin through kinship relations. When we visited our kin they were happy to share their stories about maypal.

Old People remember the songs of the shellfish. My brother Dhawa, tells us in the Warramiri language that: *Njurrunangal ŋätjil djanal banha maypalyu bili bilanyamiyu waluyu ŋungurrrmayu*. The north wind tells of the ancestors and the time of maypal.

When I spoke to the Australian Geographic magazine I said “We sing for them. We care for them ... We eat them and celebrate them and, in return, they give us life.” Maypal are a crucial part of life by the sea for Aboriginal kids, not just as a supplement to their diet, but also because they provide a spiritual link and a physical and nutritious reconnection with Country and kin.’



Top: Dhun’ku-dhukuray, *Nerita balteata*.
Bottom: ñiyamu-rirriyin-warrapal, *Venerupis aspera*. Photos: D. Hancock and T. Ritchie

.....
Djäma limurr dhu marr ga limurr dhu guyaŋa rom ga dhäwu maypalwalaŋuwuy.

We must work to remember the law and stories of the shellfish.

.....
It is so important to hold onto this work for ourselves and our kids. We linked all the different Yolŋu names to the photos. North Australian shellfish scientist Richard Willan identified all the shellfish and their exact Latin and English common names. The Old People know all the stories of the maypal, but there are not many Old People left now – that is nearly lost . . . all that knowledge, all that connection and law. Our book brings together all the maypal from seven Yolŋu languages, English and science, as a resource for ‘two-ways’ education in schools on homelands, in communities and for those who want to know more about our kinship and care for the seas. We returned this gift to the kids for free.

.....
Nhä dhuwal mirithirnydja manymak limurr dhu ga marŋgikum ga dhäwu märram’ dhiyak wäŋaw, bukmak dhuwal mala dhäruk, minytji’, buŋgul ga ŋula-nha mala ga ŋayadham. Ga dhiyaŋ mala buŋgulyu ga manikayu ga dhäruk ga maypal dhu ga wäŋay ga waŋgany manapan yolŋuny malany. Dhuwandja nhäkun balanya rulwanŋdhunawaynha walalaŋuŋ ŋalapalmirriwuŋ ŋäthilyunawuy bitjarr walal gan wäŋan ga dhiŋgaŋal walal.

What is most important are the stories of the Country. All of the different Countries have stories and languages and colours and dances and ceremonies. These dances and ceremonies and colours are the linkages that tie all the people of this place together, and to the land and shellfish. It is a network of links to our ancestors and their stories and their creations that make us all one people.

.....

.....
Dhuwandja nhäkun dharajanaraw nha yuwalk, dhiyak napurruṅ yolṅuw mala dharajanharaw bāpurruw malaṅuw bala ga balandany buna bala ga gulumaraman ga yakayuna dhiyak malaw bala ga Djawyuna ga djäma mala ga gurrupan ga wiripun djäma mala Balanya mala ṅarra ṅuli ga djäma dhiyal wukirriṅur dharajan ga manapan balayi wāṅalil.

It is these understandings about the importance of our myths, about our languages, that are so critical at this time when the balanda (non-Indigenous people) are taking over our Country. This is the work that I do, that I love, because I understand how important it is to be related to Country, and to know the stories and language of my Country.

.....

My mother, Michelle Barraṭawuy says: *Yalalaṅumirrinydja walalany dhu ṅathan dhiyakidhi maypalgu wiripu yäku mala ga marṅithirr.* Later as they grow they will learn the many names of shellfish.

This project makes us strong, linking us all together, visiting, re-visiting, re-linking, re-viewing, re-living and re-searching, with pictures and science, with poetry, our names, our homelands, our winds, our knowledge. Our ideas, our Old People, Dilak (Elders) and Wäṅa (land) and Riṅgitj (ancestral connections).

This is a story for the children. This is a story about shellfish and the places that they live.

.....

Billi yaka limurr dhu moma dhäwu ṅaraka ga mayali' maypalgu bamanpuy ga dhärruk ṅurruṅaṅgalgu. Dhiyaṅ bala ga yuṭa miyalkthu ga dirrimuw walal dhu ga moma ṅaraka ga mayali' maypalgu, ga bayṅu walal gi guyaṅi dhäwu ga rom maypalgu.

Old People say we must not forget the meaning and place of maypal in our words, in the songs of place and the spirit of land and sea.

.....

Maypal celebrates the embeddedness of people in Country, law and languages and values thoughtful collaboration across knowledge systems. We know the future, like the past, relies on knowledge and nurture of Country. Keeping young people interested in ceremony, listening to Country, by visiting Country – Old-fashioned stories about Country giving a new generation of young people strength in Country like the Old People.

Maypal, Mayali' ga Wäṅa: Shellfish, Meaning and Place, A Yolṅu Bilingual Identification Guide to Shellfish of North East Arnhem Land honours the differences of our two knowledge systems. Science is an important tool, it can help us accurately identify the shellfish, but it cannot tell us what they mean. The Yolṅu bilingual identification guide to shellfish tells stories about meanings in many languages with beautiful photographs. It is a gift to children walking in the footsteps of the ancestors.



Top: Dhuṅ'ku-dhukuray, *Nerita balteata*.
Bottom: ṅoṅḁawaḁawuny, *Telescopium telescopium*. Photos: D. Hancock and T. Ritchie



Doris with ṅonda at Gäwa.
Photo: David Hancock

Want to know more?

Here are some useful links:

- ▶ Aboriginal knowledge: plants and animals
<https://nt.gov.au/environment/native-plants/aboriginal-knowledge-plants-and-animals>
- ▶ Australian Indigenous Astronomy (books)
<http://www.aboriginalastronomy.com.au/research/books/>
- ▶ Australian Institute of Aboriginal and Torres Strait Islander Studies (books)
<https://aiatsis.gov.au/publications/books>

2.8 WORKING WITH OUR CULTURAL HERITAGE, OBJECTS AND SITES

Indigenous cultural heritage is found across Australia. Our Indigenous heritage includes many different objects, sites and our Indigenous knowledge, which has been passed from generation to generation, and connects us to our people and our Country. Our heritage also includes books, art, dance, songs which are created now based on our heritage⁹⁷. Our songs, stories and dances are often called intangible cultural heritage. Our material cultural heritage includes artefacts, rock art, artefact scatters, occupation sites, shell middens, stone arrangements, scarred trees, rock wells, carved rocks, and burial sites. Looking after and keeping our connections strong with these objects, sites and places is very important to us.

We have established many cultural heritage centres throughout Australia to support our work, and to connect with government-mandated heritage work, such as the Gunditjmara Cultural Heritage Network^z established by the Gunditj Mirring Traditional Owners Aboriginal Corporation. Some of our centres are also language centres (see section 2.5). In NSW, for example, the Aboriginal Culture, Heritage and Arts Association Inc^{aa} is our network of Aboriginal cultural centres, Keeping Places, knowledge centres, language centres and artist-run studios, established because:

z <https://www.gunditjmirring.com/cultural-heritage-network>

aa <https://mgns.org.au/sector/aboriginal/>

Our Keeping Places and cultural centres are our grass roots portals for the continuance of our cultural practices, our stories and spirituality. They are the contemporary gathering places and trading sites between Indigenous nations.

Alison Williams, Inaugural ACHAA Chairperson⁹⁸

The key to working effectively with our cultural heritage is for us to be in the driving seat – so any of our projects and our partners' projects always must start with identifying the Traditional Owners and other Indigenous people with rights and interests in the place⁹⁹. We see our heritage places as very strongly connected to the stories and songs that go with them – two rock art shelters (which are visible in the landscape) might be connected by an *invisible* songline, but all of it is part of our Indigenous heritage, part of an overall *cultural landscape*^{75,100}. Recently through collaboration with scientists we showed that one of our traditional foods, blackbean, was moved by us along a songline – genomics make the cultural imprint visible!¹⁰¹ Through Virtual Songlines^{ab}, we are working in a team that uses the technology of augmented reality to make our heritage more visible.

Listing of our heritage places on Country as a cultural landscape helps protect sites, objects and the knowledge that goes with them. For example, the Guringai Tribal Link Aboriginal Corporation and Darkinjung Local Aboriginal Land Council, recently celebrated listing of the Calga Aboriginal Cultural Landscape^{ac} almost 16 years after a proposal to expand a sandstone mine threatened the heritage¹⁰² This heritage landscape includes many sites of exceptional social and spiritual importance and is known as the sacred birthplace of the creation deities, Baiame, Bootha and Daramulan. Many of the engravings, stone arrangements, landforms and vegetation relate to sacred women's business, and are key resources for teaching future generations of Aboriginal girls and women about their culture and spirituality.

ab <https://www.virtualsonglines.org/>

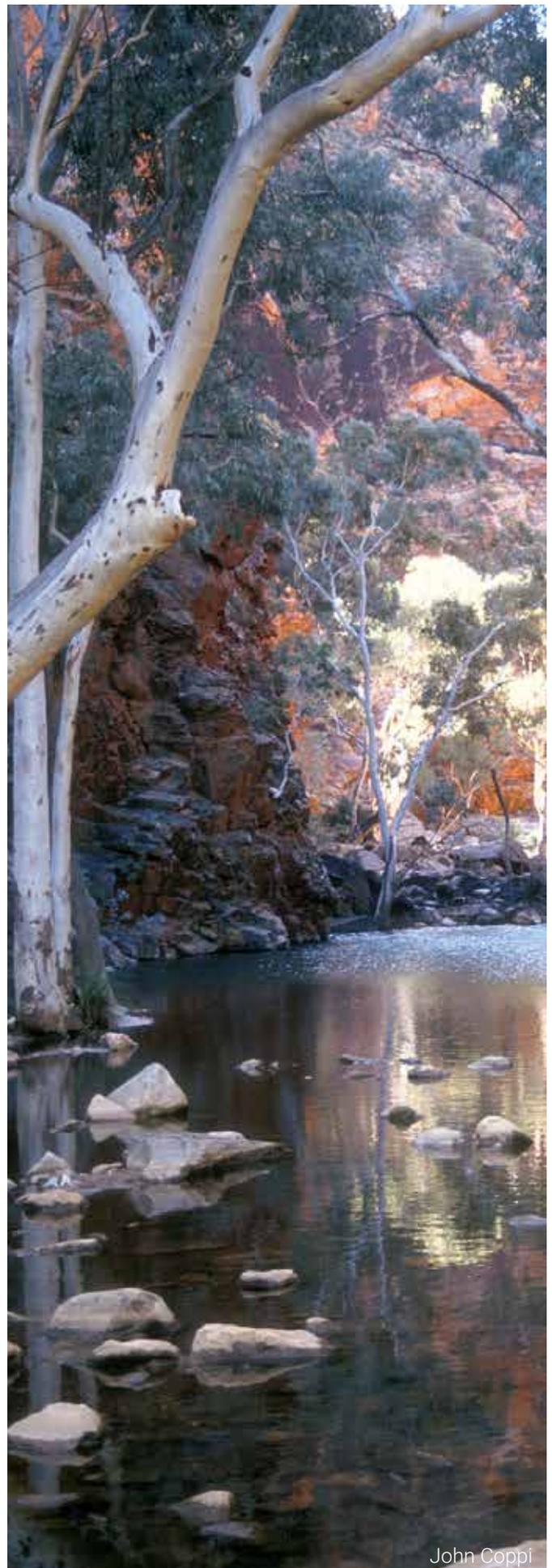
ac <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5064142>

We work out on Country to manage and protect our cultural heritage places and their stories¹⁰³. We have collaborated for many years with archaeologists on our cultural heritage sites, and with increasing emphasis on social justice in these partnerships. Indigenous archaeologists, with western scientific qualifications, find it challenging to balance the sometimes-conflicting expectations of our community and our profession – for example, to obtain ethical clearance from committees who have no local people on them! We are working to shift these practices towards greater Indigenous leadership. The shift for non-Indigenous archaeologists is from working *with* us to working *for* us¹⁰⁴.

We also work with museums across Australia, and across the world, who have taken our cultural heritage objects. In some cases this has resulted in returns of hundreds of human remains and artefacts, and in new partnerships that have produced very positive collaborative exhibitions and mobile apps¹⁰⁵. For example, an Indigenous Reference Group guided the collaboration between the National Museum of Australia, the British Museum and Aboriginal and Torres Strait Islander communities that resulted in 150 items being returned to Australia. All the objects put on display were first taken back to their original place of collection, where Indigenous people's stories and representations of these objects then were recorded. The resulting exhibition told stories of unique Country and cultures, of the complexities of relationships and shared history between First Peoples and colonisers, and their consequences now and into the future. We displayed our pride, cultural authority, and resilience as the oldest continuous living culture on the planet¹⁰⁶.

Some of our cultural heritage sites are places where our people were violently removed from their Country or killed¹⁰⁷. Historical research is now producing maps of many such places across Australia – for example of Colonial Frontier Massacres in Central and Eastern Australia 1788-1930^{ad}. We hold these places and seek to heal ourselves, our Country and our cultures through our management actions¹⁰⁸ (Case Study 2-7).

^{ad} <https://c21ch.newcastle.edu.au/colonialmassacres/map.php>



John Coppi

CASE STUDY 2-7

Dhelkunya Wi (healing fire): Healing massacre sites, Djaara (people) and Djandak (Country)

Authors: Mick Bourke and Nathan Wong



- Djandak Wi (Country fire) for Djandak (Country) and Djaara (people)
- Djandak Wi is the first Aboriginal fire practice to be part of the Victorian State Government's planned burning program
- Wi is part of our Joint Management Plan for our Dja Dja Wurrung Parks, showing our responsibility and connection between Djandak and Djaara
- Wi is a way to cleanse and heal the areas where our people have been massacred, to start the healing of Djandak and Djaara
- Interwoven with our Dreaming stories, our Lore and our martinga kuli murrupi (ancestral spirits)

We are bringing back Djandak Wi (Country fire) onto our Djandak (Country). The Dja Dja Wurrung are the original people of West Central Victoria, Australia. This Djandak was part of the world's first organic super farm, because of the way Djaara (people) used wi (fire) and waanyarra (flowing water) to manage Djandak. With the landscape modified for over 60,000 thousand years, Djandak was like the Garden of Eden and some early invaders said exactly this in their journals. In the 1830s, Central Victoria was invaded by a foreign nation, changing the landscape dramatically with the hunting and massacring of Dja Dja Wurrung and displacing them onto missions.

This is our job: to tell this story and heal Djandak and Djaara, as Djaara still walk these stolen bloody lands. We have massacre sites that have never been cleansed; sites where there has never been any sort of acknowledgement of the Djaara murdered in cold blood for the theft of their Djandak. Evidence of brutality to the original people was hidden. When there are records of massacres, they are dulled down to make the murderers sound as if they were protecting their livestock.

Mick Bourke says:

.....
I am the descendantt of NGARRUGUM Djandak (a clan group of the Dja Dja Wurrung). Through my work bringing back wi to heal Djandak I have been lucky to look over Country and show people the real story. Once, out on Country with a researcher looking at massacres in my grandfather's Country, we came across a massacre site that my family was involved in and when we arrived in that place I had a bad feeling in my stomach and could feel a lot of bad energy in the area. As we walked, it was like someone trying to tell me something. We kept going over the written records of the massacre and walking it out, as the record spoke of a little rock house, owned by the invading thieves, next to a hill and close to a water way. We were in the exact spot of the massacre when something drew my cousin and I to the little rock house. Then, when we began walking away, we came across a greenstone axe, most likely made by NGARRUGUM Djaara. Rather than leave it there in harm's way, we noted the location on GPS, took the axe to Dja Dja Wurrung Corporation and registered it with the Cultural Heritage Unit.

We spoke to our Elders about some of these cold cases and from these conversations we came up with a way to cleanse this massacre site of NGARRUGUM, a way of Djaara, acknowledging and remembering our ancestors. One of the methods we chose is to use wi and gatgin (water) to cleanse the area and then to come in afterwards, followed by a big ceremony for all living descendants, friends and supporters of the Dja Dja Wurrung community to help heal Djandak and Djaara.
.....

We started bringing back Djandak as soon as we could, after working for years to have our rights recognised. In 2013 our Recognition and Settlement Agreement, was successfully negotiated between the State Government of Victoria and Dja Dja Wurrung through the Traditional Owner Entity – the Dja Dja Wurrung Clans Aboriginal Corporation of Central Victoria.

Djandak is interwoven with our Dreaming stories, our Lore and our martinga kuli murrupi (ancestral spirits). Djandak gave birth to our ancestors and nourished and sheltered them. In return they were the guardians of Djandak, in the care of the waterways and woodlands, ensuring the health and future of both Djandak and Djaara (Dja Dja Wurrung people). Djaara continue to carry that responsibility to look after Djandak today.

In May 2019, our Djandak Wi became the first Aboriginal fire practice to be part of the Victorian State Government's planned burning program. We have been bringing back Djandak Wi onto our Country through partnerships with government agencies, particularly Forest Fire Management Victoria, Loddon Mallee and Parks Victoria. Most importantly we do it and we do it our way as we have been taught. We let our ancestors know we are on Country through smoking ceremonies, and the work with agencies to burn Country our way. We are setting up Djandak Wi sites across Country including Greater Bendigo National Park. Wi means fire in our language.

We can read the landscape using a wide range of indicators we have been taught such as colour. Wi is lit at the right time of year, so it burns gently, finding its own course. We make a cool, gentle, creeping fire that takes a natural path through the bush.



We do a cleansing with our Elders first. Photo: R. Hill © Dhekkunya Dja Land Management Board.



Dja Dja Wurrung fireworkers. From left: Trent Nichols, Andrew Murray, Mick Bourke, Amos Atkinson. Photo: DELWP



Our monitoring site looking at how Wi is changing our Country in Greater Bendigo National Park. Photo: R. Hill
© Dhelkunya Dja Land Management Board.

Now we have a monitoring site looking at how the Country is changing. When we burn, we start with dead leaves and place them in a circle and make it go outwards. We don't use lighters or accelerants. We just hand light the fire with our sticks. We do a cleansing with the Elders first.

Wi is good for Country and good for Djaara, showing connections to land, to each other, and Creation time. Making decisions about Country including Fire regimes without Dja Dja Wurrung threatens our cultural obligations, and will continue to stop the healing of our Country and people. Wi is as much Dja Dja Wurrung culture as it is about how the Country burns.

Wi has dramatically changed since colonisation. Fire management has not considered cultural outcomes, impacts on our food and fibre plants and animals, cultural connections and obligations have been little considered. The natural heritage of Djandak is of great cultural importance and Dja Dja Wurrung see the natural environment as their cultural heritage. Impacts of this from too little fire, intense wildfires or wrong way fires damage our cultural heritage through damaging the environment.

Djandak Wi, in our partnerships, gives us opportunities to restore the health of Country, and to pass knowledge on to our youth. Our Joint Management Plan for our Dja Dja Wurrung Parks sets our goal to re-establish Wi across all our Parks. We are showing the wider community how cultural fire in the landscape promotes ecosystem health and protects property and life.

Want to know more?

Here are some useful links:

- ▶ Return Cultural Heritage Project (AIATSIS)
<https://aiatsis.gov.au/publications/books>
- ▶ Australia ICOMOS Indigenous Heritage Reference Group
<https://australia.icomos.org/get-involved/working-reference-groups/indigenous-heritage-reference-group/>

2.9 STRENGTHENING KNOWLEDGE WITH OUR KIDS IN SCHOOLS

2.9.1 Bilingual Education

We are gradually bringing Indigenous knowledge into schools, where the national curriculum sets consistent standards, which don't always include Aboriginal and Torres Strait Islander perspectives. The Australian Curriculum Assessment and Reporting Authority in 2019 released a lot of new resources to support Indigenous knowledge in the science curriculum, including through the Inquiry for Indigenous Science Students program^{ae}.

ae <https://www.csiro.au/en/Education/Programs/Indigenous-STEM/Programs/I2S2>

Bilingual schools, using both the local Aboriginal language and English, were introduced in the Northern Territory by Former Prime Minister Gough Whitlam in December 1972 with the Northern Territory Bilingual Education Program. Aboriginal-run independent schools are very strong in putting Indigenous language, culture and knowledge upfront. Yiyili Aboriginal Community School, in the Kimberley region of Western Australia, is a good example of this.

Yiyili was started in the 1980s by Norman Cox, a Gooniyandi leader who had the vision to return to his traditional lands – many Aboriginal families were crowded in towns like Fitzroy Crossing after being moved from pastoral properties after the equal pay decision. Norman set up a camp beside the Yiyili reach of the Margaret River. He knew that if you want a real community, not just a holiday camp, there had to be a school for the kids. Norman drew inspiration from the Aboriginal-run Strelley and Noonkanbah schools – if they could do it so could he! A couple of years ago Norman passed on, and Yiyili honoured him with a mural on the basketball court (Figure 2.3).

Yiyili school started with a qualified school teacher and the WA Education Department assessed and registered the school, in a spinifex bough shed at the time. Back then, 37 years ago, the education authorities knew it wasn't about buildings, it was about education and kids being there. They helped a lot, so did Steve Hawke and many other Kartiya (non-Indigenous people) over the years. Norman was the oldest of nine brothers and sisters, so his siblings joined him and today we have 70 students at the school.

Figure 2.3. Mural of Norman Cox, founder of Yiyili community and school



CASE STUDY 2-8

Yiyili mawoolyi roowa wardbirri Goinayandigarri – Yiyili kids out on Gooniyandi Country

Authors: Yiyili Aboriginal Community School Board and John Hill



- Yiyili Aboriginal Community School is run by Gooniyandi people
- Gooniyandi language, culture and knowledge are front and centre
- Kids learn Gooniyandi knowledge on our Country
- Bush to Belly Food Company and Laarri Art Gallery



Our beautiful Gooniyandi Country. Photo: Yiyili Aboriginal Community School

Every year Gooniyandi kids and adults go out on our Country with Yiyili Aboriginal Community School. In 2018, around 40 bush trips happened, passing on Gooniyandi knowledge and culture about hunting, fishing, gathering and preparing bush foods, bush medicines, singing and story-telling, looking after rock art sites, and keeping alive Gooniyandi, our language which is critically endangered. We made books in Gooniyandi for our language program, which is compulsory in our school up to Grade 10. Our Hip-Hop video-song Yiyili Mawoolie, made to celebrate culture, language and the proud history of Gooniyandi people on the 35-year anniversary of our school, was a finalist in the National Indigenous Music Awards.

Yiyili Aboriginal Community School runs along Gooniyandi culture and family lines. We discuss things and make decisions together. Our School Board includes 14 people from each of the 7 local groups. Our first School Chairperson was Mervyn Street, now a famous artist, he was always in the school to teach language and culture, make beautiful posters, season calendars, art-work. He still comes today. We had Penny Mudeling, the purest Gooniyandi speaker in the world, to get our language program strong, and her grand-daughter is our teacher today. Four generations of Yiyili people are involved in the School today.

Being on our Country, together with our important places, bush-tucker sites, is fantastic for finding ways of linking Gooniyandi knowledge to economic development. Our School started our Laarri Art Gallery in 1999. People love to paint, now it brings in money through the grey nomads and other tourism. Lots of tourists come to the gallery, out of interest in the paintings and in us, our Community and our School. So we had another idea, and started the “Bush to Belly Food Company”, with an instructional kitchen in our School, supporting students to learn and offer a café with coffee and delicious healthy food for the tourists



Left: Adults pass on Gooniyandi knowledge to children on Country. Right: Kids love being on Country.
Photos: Yiyili Aboriginal Community School

and the Community. We have a music room with good equipment, and so many great musicians, the kids love it.

Our greatest challenges are mostly about different parts of resourcing our School. Also, formal schooling is a Kartiya idea and we have to fit it with our Community life, which doesn't match up perfectly. We have always been mobile and today we move for social, cultural, medical reasons so the kids move with us. We need more resources because for significant health issues – physical and mental – no professional help is on hand, so we have to try to up-skill teachers as much as possible. We always need those good Kartiya teachers, as well as our Gooniyandi teachers, and sympathetic, skilled management.

We know it would be very hard to start a new Community or a Community School today – we mostly hear about the government trying to close down our communities. But we'd like to encourage other Indigenous people to talk strongly with whatever school your kids go to. Tell them you want to make your traditional culture and language at the centre. Be bold. Be strong. Tell the system that Aboriginal culture and language is the most important thing.



We are building a strong future for our Gooniyandi kids. Photo: Yiyili Aboriginal Community School

2.9.2 Two-way Science

Science Pathways for Indigenous Communities^{af,ag} supports Two-way Science in remote Indigenous schools and communities through integrated learning programs. A Two-way Science approach promotes Indigenous leadership in education, and fosters partnerships between schools, communities, Indigenous ranger programs and scientists. The *Two-Way Science* book presents curriculum-linked activities to support teachers and students¹⁰⁹. Illustrations of practice^{ah} videos, made together with the Australian Curriculum Assessment and Reporting Authority, tell some of our great stories.

Wiluna Remote Community School has been working with the Science Pathways program to develop an integrated Two-way Science learning program and build connections between the school and community since 2016. A partnership between the school, Wiluna Martu Rangers and Desert Support Services coordinated activities on Country and in the classroom to support transfer of Martu knowledge alongside western science activities related to the cultural heritage and land management work of the rangers.

Wiluna is situated in the northern Goldfields region of Western Australia on the western margins of Martu traditional lands in the Little Sandy and Gibson Deserts. The last Martu bush families settled in Wiluna in 1976 and 1977. Wiluna Remote Community School has between 80 and 115 students from four year olds to year 12. Most students are Martu children, however the school also has students of Fijian, Tongan and European ethnic origins. Most Martu people in Wiluna speak Aboriginal English as well as Martu Wangka.

A 'Two-way Science Week' in May 2019 involved the whole school featuring Martu Rangers, Elders and community leading the learning on Country and in the classroom (Case Study 2-9).

af Science Pathways for Indigenous Communities program is part of the Indigenous STEM Education project delivered by the CSIRO and funded by the BHP Foundation.

ag <https://www.csiro.au/en/Education/Programs/Indigenous-STEM/Programs/Science-Pathways>

ah <https://www.australiancurriculum.edu.au/resources/aboriginal-and-torres-strait-islander-histories-and-cultures/illustrations-of-practice/>

CASE STUDY 2-9

Science Pathways for Indigenous Communities

Authors: Wiluna Martu Rangers, Birriliburu Rangers and Kate Cherry (Indigenous STEM Education Project CSIRO).



Key learnings from Two-way Science week at Wiluna

- Martu Elders see cultural education as an important part of the school program and want opportunities to take their families on Country to teach them
- Taking students out on Country is another opportunity for Elders and families to talk to the young ones about their responsibilities for each other and the respectful ways they should be with each other. Elders say they have less worries and see less bullying and trouble between the kids when they are doing two-way learning at school
- Students talk about 'being happy' and 'connecting to culture and the old days' when they are learning Two-way Science on-Country with the Elders and rangers. Teachers observe them to be more engaged, self-directed in their learning and describe them as active learners
- Multiple stakeholders have key roles that contribute to the success of the week – Elders are an integral and active part of knowledge transfer and leading on-Country learning; rangers and Desert Support Services (DSS) staff play a coordinating and facilitating role and Science Pathways staff have an oversight and support role to all participants
- The school fosters a positive community and family engagement – the principal welcomes families and culture into school, promotes 'best practice' to less experienced staff, listens to families and creates a safe space for their feedback and contribution to learning
- Teachers (non-Indigenous) take on a 'give it a go' approach and become the students – teachers get out of the classroom and onto Country to learn from Elders, rangers and families. This enhances their relationships and allows them to share and discuss Two-way Science learning ideas for the students

.....
Yeah, I do, I look forward to it [coming to the school]. I'm happy because the kids are there and it makes them happy, and they see parents and guardians and nannas and pops and – Of course before it wasn't like this. They never used to come to the school and – No, never used to – Now it's open door for us. Parents will come in

Rita Cutter, Nanna, Ranger, Elder

.....

At Wiluna Remote Community School, it's easy to see how Two-way Science brings students, Elders, rangers and school staff together to put the community's goals into action and support learning outcomes for their young ones.

In Two-Way Science Week, the school classes take turns spending time with the Elders, Desert Support Services staff, Indigenous rangers, parents and teachers. They prepare for learning on Country field trips, to go out bush and coming back to class to reflect and build on what they did, saw and heard.

Activities for the week:

- Track animals in parata (spinifex sand plain) and yapul yapul (rocky) Country, especially Tjilkamarta (Echidna)
- Set up motion sensor camera around the tracks to find evidence of animals
- Learn about Martu Country types
- Collect materials to build a wiltja (shelter)
- Learn how to pick a site and build a wiltja
- Investigate habitats, especially burrows
- Cook Marlu (kangaroo) tail and make damper
- Community day, Two-way Science assembly and student science awards.

In this community, Wiluna Martu are recognised for their leadership of and contribution to two-way learning in school.

Well who else going to teach them the Two-way Science later on when we all gone? Nobody else to teach them. They won't get it off younger people, because they wouldn't go out of their way to go and teach them. So, it's a chance with us Elders to go out and teach Two-way Science. For us we learnt a lot with our Old People when they was there with us, the bush life. For me now I'm proud that I did learn from mum, now I want to pass it to these young people

Rita Cutter and Lena Long together, Elders/ Rangers

When Science Pathways for Indigenous Communities was invited to the community; program staff wanted to engage community members and families with the program and find out what they wanted for their young ones.

At the beginning, it was very much about seeing what the community wanted, and then what schools wanted from our project ... that was really important and a really useful part of the process that we didn't come in with an agenda, particularly when it came to working with Aboriginal people. And from that emerged the themes really, from those initial kinds of consultation and discussions

David Broun, Senior Coordinator
Science Pathways for Indigenous Communities.

Desert Support Services staff acknowledged that Martu have clear intentions for student learning: *'the Martu have always pushed for education and getting more young people out on Country'* (Mo Pawero, Ranger Coordinator). One DSS staff member talked about how this long-standing community goal is reflected in their land management and conservation work, as well as their involvement in the Science Pathways program

To quote [the Elders], – they said: 'we've got a classroom, too, out there.' And it is, and one of the big aspirations for the Matuwa Kurrara Kurrara Indigenous Protected Area and Mutawa research centre itself is for it to be a Two-way Science hub. It is like a bush university out there, and that's been the plan from the start, from 2015/16 when it was first an IPA and they wrote that plan, and that's in here. That's part of the IPA plan and then we brought it into this Two-way Science plan

Jessica Chapman, Ranger Coordinator

Desert Support Services also recognised how Science Pathways for Indigenous Communities has built on the community's strengths.



Elder and Ranger Lena Long teaches tracking skills to students. Photo: Kate Cherry, CSIRO.



Students testing their Wiltja built under instruction by Wiluna Martu Elders. Photo: Kate Cherry, CSIRO.



Making damper for lunch during Learning on Country. Photo: Kate Cherry, CSIRO.



Investigating a scorpion burrow revealed after recent fire. Photo: Kate Cherry, CSIRO.

.....

[CSIRO's role is] definitely pretty integral to kickstarting some of this stuff [Two-way Science], Maybe some of it was already happening, but actually taking the time to really facilitate it, to create education materials, to go in and physically work with the schools over a number of years to help them do it, to show them the way, to coordinate it – it's actually having someone in that role to bring people together, to bring the rangers and the schools together. We were already doing it, but it helps structure it. And we would never have produced all those activities. The school might have done one here or one there, we might have done one here or one there, but the amount of effort and time that has gone into that – yeah, that's extremely valuable to have someone who is actually on that.

Jessica Chapman, Ranger Coordinator

.....



A student completes a tracking data sheet to record evidence of animals in an investigation of parata country (spinifex sand plain). Photo: Kate Cherry, CSIRO.

The teachers at Wiluna Remote Community School acknowledge the benefits of Science Pathways, and the contribution that the Elders, and Indigenous rangers are making to the program. The school principal reported that through the knowledge that Elders, and other families share with students and staff – staff at the school are given the opportunity to be more culturally aware of the Country that they are working on. The staff are also able to use this knowledge and integrate it into the Australian Curriculum. Using local knowledge in this way is a valuable tool that helps students reach their learning outcomes in all areas of the curriculum.

One of the teachers talked about how their on-Country learning translates to the classroom.

.....

We usually take the iPads and we might collect some things, we'll take photos, and then we'll link it back up in a digital technology lesson, we'd make a pic collage or a little movie, and then review what we found. Especially weather and seasons.

Lauren Richards, Teacher

.....



Rangers and students followed tracks to Tjilkamarta ku ngurra (home of the Echidna). They set a motion sensor camera which recorded an image the next day.

Another teacher talked about how important Two-way Science is across the whole curriculum and for student learning outcomes.

.....

I think Two-way Science is like the crux of engaging curriculum here. It's from that, literacy becomes engaging, history becomes engaging ... particularly the bush trips and learning on Country, that makes everything more engaging ... In terms of achievement, I think that because it's very hands on, it's building on the knowledge they already have. The depth of the learning is a lot more and so therefore it's almost like naturally a higher expectation because it's more achievable.

Sandy Chambers, Teacher

.....

In 2018 Wiluna Remote Community School won the national Indigenous Science Technology Engineering and Maths (STEM) School Award for their work with engaging with the Martu Rangers and the Wiluna community to use traditional knowledge to teach science to students.

Want to know more?

Here are some useful links:

- ▶ Martu knowledge and western science coming together in learning at Wiluna Remote Community School, Western Australia
<https://www.australiancurriculum.edu.au/resources/aboriginal-and-torres-strait-islander-histories-and-cultures/illustrations-of-practice/learning-together-through-two-way-science-at-wiluna-remote-community-school/>
- ▶ Teaching from Country, Charles Darwin University
http://learnline.cdu.edu.au/inc/tfc/yolngu_resources.html
- ▶ Contested Knowledges, Charles Darwin University
<http://learnline.cdu.edu.au/units/contestedknowledges/>
- ▶ Living Knowledge: Indigenous knowledge in science education
<http://livingknowledge.anu.edu.au/index.htm>
- ▶ Indigenous STEM Education Project (CSIRO)
<https://www.csiro.au/en/Education/Programs/Indigenous-STEM>
- ▶ Indigenous knowledge in the national science curriculum
https://www.youtube.com/watch?time_continue=8&v=dPWd4wz5fGE
- ▶ The Orb, Tasmanian Government
<https://www.theorb.tas.gov.au/>

2.10 WALKING OUR COUNTRY

Walking our Country resonates with aspects of our traditional life, and we are reviving walking as part of our caring for Country. A survey of *walks in Country* over the last twenty-five years in northern and central Australia showed lots of different motivations. We walk to foster connection to Country, for land and fire management, to hunt and gather bush foods, for reconciliation, health promotion, juvenile corrections, intergenerational teaching, for tourism business, and to protest¹¹⁰. The Wave Hill Walk-off by Gurindji in 1966 is one of the most famous protest walks, but there are many others – for example the Cumeragunja Walk-Off by mostly Yorta Yorta people in 1939. Walking is good for practical parts of caring for Country because it allow greater flexibility of movement, detailed observation, nuanced decision-making and highly-targeted actions¹¹⁰.

Walking is part of the caring for Country work of a research collaboration that supports efforts to nurture Darug Ngurra, Darug Country in western Sydney, NSW. The collaboration comes together as Darug custodians, NSW National Parks and Wildlife Service, and university researchers and students develop, model and advocate greater environmental stewardship at Yellomundee/Yarramundi Regional Park. As senior Darug man Uncle Lex Dadd explains: “We’re walking our Dreaming together now.”

[If you fail to] walk on Country, to learn names of places: billabongs, creeks, hills, the history of that place, what happened there, names of all the plants and animals ... [the ancestors will say to you] you're not welcome here any more because you haven't visited me. Something bad will happen to you if you come back. I won't give you any food, no fruit for you' ... Country is their home. They'll turn their back on you, won't have anything to do with you.

Patricia Marrfurra McTaggart,
senior Ngen'giwumirri Elder,
personal comment, 2018.

CASE STUDY 2-10

Yanama budyari gumada: walking with good spirit at Yarramundi, western Sydney

Authors: Darug Ngurra including Uncle Lex Dadd, Aunty Corina Norman-Dadd, Paul Glass, Paul Hodge, Sandie Suchet-Pearson, Marnie Graham, Rebecca Scott, Jessica Lemire and Harriet Narwal



- Yanama budyari gumada – walking with good spirit
- Culture camps at Yarramundi – practising patience, humility and respect
- Caring as Country through ceremonies, hand-painting, carving, weaving, weeding
- Commitments and responsibilities to care

Walking, listening carefully to Darug Ngurra, so that we might heal Country, is an important process of reconnecting with the ancestors, with Mother Earth, Father Sky, with each other, with ourselves, and with all the sentient beings which make up Country. Supported by a NSW Environmental Trust grant, and building on the important work that people involved with Yarramundi have been doing for decades, we are facilitating important connections between Darug custodians and other people who connect with Yarramundi, including other Aboriginal people, local communities, environmental experts, management authorities, and recreational users. We hold Darug culture camps to connect people with Darug Ngurra and culture, and initiate Caring-as-Country projects, like weed removal and maintaining cultural sites. Of fundamental importance, our grant covers appropriate payments to Darug custodians for their time, efforts, and knowledges to Care-as-Country.

Signing into Darug Ngurra

Ceremony is important within our collective. We regularly hold smoking ceremonies when we do our Caring-as-Country activities, and we also invite visitors to sign-in to Country. As Uncle Lex explains: “Our Old People would put their hand prints on Country when they were travelling to ceremony, indicative of upholding the LORE by following the LAW of how to behave, and obligations of responsibility to Country and each other. We put the LORE/LAW into practice by signing into Country at Yarramundi by crushing up white ochre, a neutral colour, and showing visitors how to blow the ochre out of their mouths and putting a hand print on the casuarina trees.” The hand prints eventually wash off and we do new ones, and through this process we talk about how everyone belongs, everyone deserves to learn culture. Through Uncle Lex’s ideals of Yanama budyari gumada – walking with good spirit – people are encouraged to show a commitment to Country and are reminded of their responsibility to care-as-Country, including caring for each other.



Connecting with Darug Ngurra. Photo: Yanama budyari gumada



Yarning together. Photo: Yanama budyari gumada

Making our stringy bark bracelets

Our Indigenous-led collaboration is guided by the vital lesson that Uncle Lex shares with camp participants and which is emergent from the making of stringybark rope. The fragile strands of the stringybark bark, when entwined, come together as a strong rope, and this lesson of strength through togetherness provides the framework for our collaboration. Even though we might have difficulties in working with each other, we use patience, humility and respect to come together and become strong, far stronger than we are when we work by ourselves.

To take action, make plans, make decisions and reflect, we take the time to sit and yarn together. As Uncle Lex says, "When we have our yarns we really come together with that respect. We never have any competition of egos, we come to each other as equals. We each have different expertise in different fields, in the framework of our old ways." We learn from and about each other and about Country by yarning. Yarning entails sitting and talking together – on, with and as Country – to check in, to understand, to sort out our differences. Yarning enables connection between us, but it also requires us to listen deeply and to have difficult conversations in order to move forwards.

We also follow a set of protocols that we iteratively developed, which guide how we relate to each other, to our project, and to Country. Our protocols include things like ensuring that visitors to Country are aware of their obligations and the processes we must follow to ensure we are being safe on Country.

As a research collective we are led by Darug custodians, and together we walk this good spirited walk with patience, humility and respect, always trying our best to listen deeply, walk softly, lead with love, and leave our egos behind. We know these research protocols are essential for the health of our collective, enabling us to learn from and with each other always.

We also invite many people to come and see what we do and to work with us – we invite them to be strands within our stringybark rope. This includes local Indigenous groups, individuals and cultural experts; university academics, researchers and students; school groups; local community groups and individuals; environmental and conservation groups; local and state government representatives; and recreational groups who use Yarramundi reserve. Sometimes we call on specific knowledges and expertise that we don't currently hold within our group. We therefore scope out, for example, ecologists, firestick specialists, water quality specialists, dance teachers and cultural leaders who may be able to help us.



Uncle Lex shows us how to weave stringy bark bracelets.
Photos: Yanama budyari gumada

We nonetheless think carefully about who we invite to collaborate with us, how we might interact, and what knowledges we want to share. Together, we think and talk through whom might be good collaborators, and then we go from there and see if they fit with our ways of knowing and doing. In doing so, we have learnt that not all collaborations work out for us. We have learned we need to respectfully 'let go' of those partnerships with good grace. It is not their time.

We have come to learn that taking the time to know each other, to be together on Country is both necessary and generative. It is through taking the time, learning slowly together that we are able to create strong bonds, generate new knowledges, and produce beneficial outcomes in our Caring-as-Country work.

2.11 WALKING COUNTRY WITH WAANYI GARAWA

Authors: Peter Yates, Waanyi Garawa

2.11.1 NAILSMA and Waanyi Garawa research

Walking in Country offers a powerful way of drawing together some of the many threads of Aboriginal people's past, present and future. Waanyi Garawa and NAILSMA are undertaking research that shows that walking in Country can play a valuable role far beyond immediate land management objectives. Walking may not be the most efficient way to 'get the work done', but it is valuable work in itself.

Thoughtful physical engagement with the land is possible through walking in Country.

The walks in our research project explored the range of benefits – health, social, psychological and land management-related – that might derive from the type of slow, thoughtful physical engagement with the land that is only possible through walking on Country. A specific aim was to explore the benefits of walking in Country for showing and sharing knowledge for Country planning.

In northern Australia we are lucky that for most areas there are senior people who grew up on or near their estates and who have the knowledge, interest and commitment to see that land looked after. These senior people have been able to partner with Government land management programs to develop Indigenous ranger groups and other programs such as Indigenous Protected Areas. These Indigenous land and sea management programs have generally sought to combine traditional and scientific knowledge to look after land and sea Country, and these partnerships continue to be highly effective and productive.

The Walking in Country project run by Waanyi Garawa and NAILSMA at Jilundari was a project where the focus was on emphasizing the more traditional values and experiences of being in, and connected to, Country (Figure 2.4). The project grew out of the realisation that the time rich, visceral experiences of Country common in the past, were being replaced by modern values such as efficiency. Government funding, (and quite reasonable expectations of payment for work), bring with them objectives and metrics that favour one cultural way of being and doing in Country over another. Vehicles enable better access but restrict people to roads; helicopters make fire management possible over huge areas, but favour efficiency over subtlety; remote sensing stands in for actually visiting Country. The result, NAILSMA feared¹¹⁰, has been a steady decline in the quality of engagement with Country from an Indigenous viewpoint, even as overall engagement has increased.



Figure 2.4. Approximate location of the Walking in Country project near Robinson River, Northern Territory

2.11.2 Jilundarina walk

The Walking in Country project set out to create opportunities to be on Country and to walk to different places as chosen by the senior people – places perhaps remembered from childhood or those that are significant in Dreaming stories. For the Waanyi Garawa people of Jilundari, in the remote northern part of the Waanyi Garawa Aboriginal Land Trust in the Northern Territory, the opportunity to visit their homeland and surrounding lands was seized upon. The people connected to the area live scattered across a vast area, including the gulf townships of Borroloola, Doomadgee, Burketown and Normanton and Mornington Island, as well as the more distant cities of Mount Isa and Townsville. For most, the difficulty in getting there makes visits very rare indeed. Many children connected to the area – even teenagers – had never been there.

In July 2018, a camp was held at Jilundarina/Seigal Creek to explore with Traditional Owners the value of walking in Country for the purposes of land management and Country planning. Over the course of ten days in the bush, participants settled into a relaxed and thoughtful frame of mind, thinking about what they want from life and what their aspirations were for their Country. Young people were taken, on foot, to visit places that the older people had themselves visited on foot in their childhood (Figures 2.5 and 2.6).

A filmmaker was present throughout, capturing footage of Country and people's reflections on the Country and their lives, both good and bad. The result was a film *Getting back to Jilundarina* that gives a prominent place to Indigenous voices as they express their frustrations with community life and their wish for a better future that is more connected to their homeland and to the past.



Figure 2.5. Walking in the Northern Territory. Photo: NAILSMA



Figure 2.6. Walking in the Northern Territory. Photo: NAILSMA

When Jilundari people talk of knowledge, and the sharing of knowledge, they are not particularly interested in sharing with outsiders. Their preoccupation is with sharing knowledge with their own young people.

The younger people are a generation who have grown up in town, away from Country, learning town skills, speaking English, driving around in cars, maybe hoping for, if not actually expecting careers in a big, wide world. To the young, the special skills and knowledges of Country may seem distant and unattainable. This is a body of knowledge that is already fragmented and weakened, and which now can seem irrelevant to everyday life. Desirable, but not essential, to the lives the young know.

In the first instance, it was about bringing the young people 'home', which was about more than a physical visit. It was certainly about showing the waterfall and the swimming spots and the wrecked car by the track that their grandparents owned, but it was also about allowing the spirits to know the *smell* of those children, so that they would always know them as Countrymen and so they would be safe in that Country. The young people needed to drink that water of that place, to eat the fish of that place, to thus become in some way *of* that place. The young people needed to know the layout of the Country so that they could never stumble into dangerous places where special knowledge is required. They needed to begin the lifelong journey to knowledge that would enable them to be as one with the Country and to look after it. The songs, stories and dances that make that Country, and the various numerous beings that inhabit that place and can help or harm a person.

The senior people were acutely aware that a huge amount of knowledge has already been lost and continues to be lost, through the colonial past and present – to violence, to disease, to alcohol, to road trauma, to incarceration, to



depression. These senior people themselves feel that they have inherited only a fragment of the knowledge that was their birthright, and they know too well that their generation is not living as long as they should and that they have to make every effort to pass on what they can.

Throughout the visit, Traditional Owners strongly expressed the desire to return to their Country to live. Towards the end of the camp, a session was held to workshop the many reasons why people have been consistently unable to make the change from the community of Doomadgee to the Jilundari outstation. Many reasons were put forward, some of which were deemed 'under people's control', whilst others were 'things they would need help with'. This first workshop produced a significant list, and was valuable in itself, but there would be great value in returning to the task and considering a selection of 'reasons' in detail, with the objective of better understanding these obstacles. The process may also provide a means of 're-setting' the prevailing mindset, from a sense of powerlessness, to a way of thinking wherein a determined people acting in concert can forge their own future.

The Jilundari people are happy to work in partnerships with outsiders to look after the land. But they are in no doubt that it is their children and grandchildren that are the first priority.

Want to know more?

Here are some useful links:

- ▶ Getting Back to Jilundarina (film)
<https://vimeo.com/298072798>
- ▶ Waanyi Garawa Case Study
<https://www.nespnorthern.edu.au/wp-content/uploads/2018/05/Waanyi-Garawa-case-study-update-Apr-2018-1-1.pdf>
- ▶ Walking in Country: A Medium for protecting and transmitting culture and managing the land
<https://www.nespnorthern.edu.au/wp-content/uploads/2018/09/Walking-in-Country-research-essay.pdf>

2.12 LESSONS TOWARDS BEST PRACTICE FROM THIS CHAPTER

Important ideas and guidance from Indigenous Peoples:

- Listening and talking with Country through songs, stories, songlines, dances and ceremonies, are vital ways we use our Indigenous knowledge to care for, navigate and connect with Country
- Language links us to Country and our people, and language revitalisation heals both Country and people
- Looking after our Indigenous heritage places and objects, and the stories, songs and histories that go with them, is part of caring for Country
- We hold massacre sites as heritage and seek healing of both people and Country in these places through smoking and other ceremonies
- Digital databases, seasonal calendars, and illustrated books, created with attention to our cultural protocols, are good ways to document and share our knowledge and keep it strong for the future
- Science is an important tool for us, for example it can provide accurate identification of shellfish, but it cannot tell us what they mean, the laws and stories of the shellfish
- Working with our school children to keep their knowledge of language and culture strong is vital
- Walking with good spirit on our Country – in cities, farms, rural and remote places – reconnects us with our ancestors, our cultures, with ourselves, and with all beings on Country.

Resources and guidance for partners:

- Support for cultural festivals and exhibitions enables strengthening of Indigenous song, dance, art, and stories and increases understanding of how these shape caring for Country
- Language and cultural heritage programs, including repatriation, work well where community members are involved and committed and where there is access to adequate funding and resources
- Putting together an Indigenous knowledge resource according to cultural protocols – such as a book about shellfish – requires extensive involvement of knowledge holders, and enough time to work with community rhythms, customs and languages
- The shift required for non-Indigenous partners in cultural heritage management is moving from working with Indigenous Peoples to working for Indigenous Peoples.

Actions and issues for Indigenous people and partners in working towards best practice:

- Programs focused on keeping Indigenous knowledge strong, through diverse activities including dance, art, language and ceremony, are vital to support caring for Country
- Two-way Science can bring the best of Indigenous and non-Indigenous knowledge and learning approaches into programs that link school curriculum and community.