

CLC RANGER PROGRAM REPORT



CENTRAL
LAND
COUNCIL

SUPPLEMENT TO THE CLC ANNUAL REPORT

2016–17



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CLC rangers made up a record number of Batchelor Institute graduates in 2016. Frazer Oliver, Craig LeRossignol, Farron Gorey, Shannon Lander, Christopher Ungwanaka, Obed Ratara, Preston Kelly, Ryan Raggett, Dan Pepperill, Georgina Yates, Anthony Petrick, and Malcolm and Jeremy Kenny show off their conservation and land management certificates.

FOREWORD



I am proud of our rangers' work on country. They look after it for future generations. At this year's ranger camp at Ross River I met Shadow Environment Minister Tony Burke. He said that country is only really protected when it's looked after by Aboriginal rangers. I reckon he's right and hope Labor will double ranger numbers if they win the next election.

We listened as our rangers presented what they have been up to and I noticed how their confidence is growing every year.

I was pleased to hear Minister Nigel Scullion talking strongly in support of rangers at the joint CLC–NLC council meeting at Kalkaringi and committing the federal government to funding the program until 2020. The minister also agreed for a group to be set up at Mutitjulu, giving people a chance for ranger jobs there. Rangers are doing important work and it is good that others recognise that too. I was also pleased to hear that the NT government is helping with a bit of funding to support rangers.

Keep up the good work.

Francis Kelly
CLC Chair



I am pleased to submit the *CLC Ranger Program Report 2016–17* detailing the work of the CLC rangers in natural and cultural resource management. This report supplements the *CLC Annual Report 2016–17* as we want to highlight the achievements of remote-based Aboriginal people in our region.

This year an agreement was signed to establish a new group at Mutitjulu providing more opportunities for employment for Mutitjulu residents. This group will work in collaboration with Kalkukatjara (Docker River) Rangers across the Katiiti–Petermann IPA and, where possible, with Parks Australia.

CLC rangers were instrumental in the development of a carbon project in our region's north, demonstrating the importance of the ranger program beyond their day-to-day jobs. The Karantijpa North Kurrawarra Nyura Mala Aboriginal Corporation is operating a carbon abatement project and the rangers are supporting corporation members with its implementation.

I welcome the announcement of Minister Scullion to fund the rangers until 2020; however, I am hoping for longer term agreements to ensure the security and ongoing development of Aboriginal people in Central Australia.

David Ross
CLC Director

RANGER PROGRAM OVERVIEW 2016–17



Donald Robbo prepares for an aerial incendiary operation near Highland Rocks in the Southern Tanami IPA.



North Tanami Rangers present a cultural workshop to school students.

In the seventh year of consolidated funding received from the Working on Country and Indigenous Land Corporation Real Jobs programs, the CLC continued to support 11 ranger groups who manage cultural and natural resources on Aboriginal land. Four of the ranger groups manage indigenous protected areas (IPAs) that make up more than 195,000 square kilometres of the national reserve system.

A significant body of evidence demonstrates the benefits of indigenous ranger programs. Not only do they successfully tackle broad-scale environmental issues, such as wildfires and weed infestations, they also provide demonstrable social benefits, such as improved health and wellbeing, increased individual confidence, and role models for young people. The program is also critical to the maintenance of cultural knowledge and the protection of important sites.

The CLC ranger program employs and trains people in remote communities where real jobs are scarce. The value of the program to Aboriginal communities is evidenced by the large number of applications received for the limited number of ranger jobs available.

Traditional owners are critical to the work of rangers through traditional owner ranger advisory committees (TORACs) and IPA management committees which develop work plans for rangers. This governance framework enables traditional owners to incorporate their land management aspirations into the cultural and natural resource management objectives of the ranger program. Traditional owner involvement strengthens intergenerational knowledge exchange and community engagement.

The CLC's employment model emphasises training, mentoring and building career pathways, both within the ranger program and to employment outside the organisation. The skills and capacities rangers develop are transferrable to community leadership roles (one of the program's four Aboriginal ranger coordinators began their career as a CLC ranger).

The 11 ranger groups and their areas of operation are presented in Table 1.



Kaltukatjara Rangers recover motion sensing cameras as part of surveying for the central rock rat.

Rangers hone and build their work skills at the annual ranger camp at Ross River in September 2016.



Warlpiri Rangers remove the weed, rubber bush.



Arltarpilta Inelye Rangers completed controlled burns at two sites within the Spotted Tiger outstation and campground.

Of the CLC's 72 rangers employed in 2016–17, two were fulltime, 58 were parttime and 12 were casual. Ten ranger group coordinators and nine program staff support the ranger groups.

Interest in ranger positions in communities is high and the CLC is unable to satisfy its constituents' demand for new ranger groups. There is capacity to both expand existing groups and develop new ones. The CLC continued to lobby for funding from the Australian Government's Indigenous Advancement

Strategy (IAS) and the Aboriginals Benefit Account (ABA) to meet demand and expand the program. In October 2015, the Indigenous Affairs Minister committed the Australian Government Department of the Prime Minister and Cabinet (PM&C) to work with the CLC to establish a ranger group at Muṯitjulu. Subsequent negotiations between the CLC, PM&C and Parks Australia have concluded and an agreement was signed in April 2017.

TABLE 1. CLC RANGER GROUPS AND AREA OF OPERATIONS

Ranger group	Area of operation
North Tanami Rangers	Lajamanu and Northern Tanami IPA
Warlpiri Rangers	Yuendumu, Nyirrpri, Willowra and Southern Tanami IPA
Muru-warinyi Ankkul Rangers	Tennant Creek region
Tjuwanpa Rangers	Hermannsburg ALTs and adjoining national parks
Kaltukatjara Rangers	Kaltukatjara (Docker River) and Kaṯiti–Petermann IPA
Ltyentye Apurte Rangers	Santa Teresa ALT and surrounds
Anmatyerr Rangers	Ahakeye ALT (Ti Tree) and wider Anmatyerr region
Aṅangu Luritjiku Rangers	Papunya and surrounding Haasts Bluff ALT
Murnkurrumurnkurru Rangers	Daguragu ALT and surrounds
Arltarpilta Inelye Rangers	Harts Range region, Huckitta Station and surrounds
Angas Downs Aṅangu Rangers	Angas Downs IPA, Imanpa community

RANGER PROGRAM FUNDING

Funding for 12 ranger groups, including Angas Downs and a new group at Mutitjulu, is secure under a number of arrangements until 30 June 2018. IAS funding for Angas Downs Anangu Rangers was reviewed and subsequently maintained in 2016–17 which will allow the group to resume operations in 2017–18.

A five-year Working on Country agreement (2013–18) with PM&C continues to provide salaries, capital, operational and

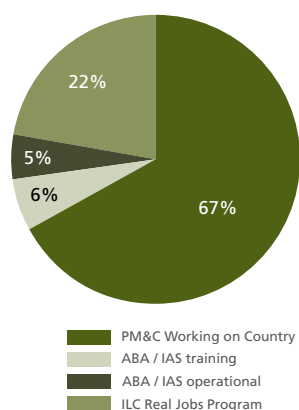
administrative resources to support 45.2 fulltime equivalent (FTE) positions across the North Tanami, Warlpiri, Muru-warinyi Ankkul, Anmatyerr, Tjuwanpa, Anangu Luritjiku and Kaltukatjara ranger groups. The ILC Real Jobs (Rangers) Program supported 18 FTE positions across the Murnkurrumurnkurru, Arltarpiita Inelye and Ltyentye Apurte ranger groups. A five-year Caring for our Country agreement with PM&C supported the operations of the Northern Tanami IPA which contributes to the wages of the North Tanami ranger coordinator.

The effectiveness, recruitment and retention of ranger groups remain heavily dependent on critical work health and safety (WHS) compliant infrastructure for coordinator housing, ranger offices and workshop facilities. Funding shortfalls leave some groups operating in substandard facilities. Attempts to secure additional funding through IAS and ABA to remedy these infrastructure shortfalls were unsuccessful.

Minister Scullion committed future funding for all ranger groups for two more years until 30 June 2020, but at 30 June 2017 consultations between the CLC and PM&C had not started.

To sustain and grow the program, the CLC also focused its efforts on partnerships and alternative sources of revenue which led to some fee-for-service ranger activities, including weed management, fencing and dust monitoring.

FIGURE 1. CLC RANGER PROGRAM FUNDING, 2016–17



Warlpiri ranger Preston Kelly is ready to lift off and observe a burn at Yinapaka in the Southern Tanami IPA. The dangerous work of rangers in Australia's most remote areas demands a high WHS standard and extensive training.



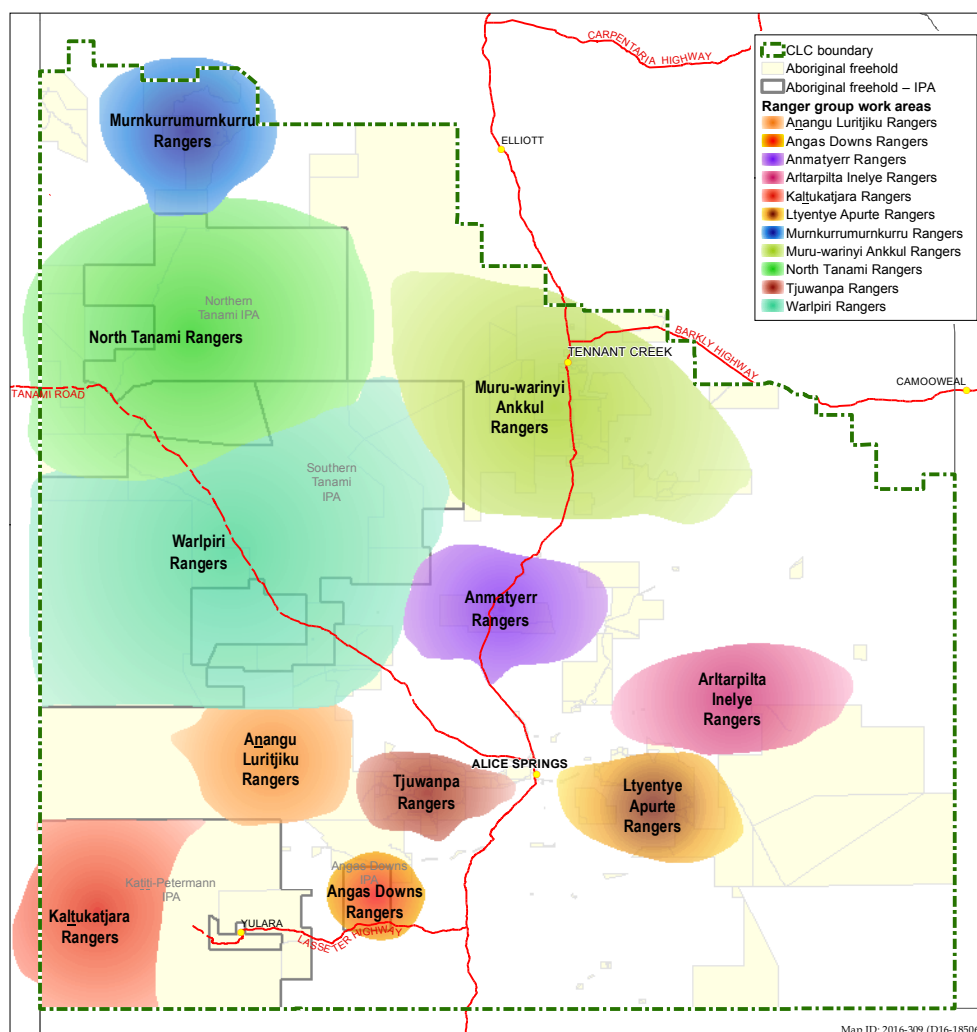
WHERE CLC RANGERS WORK

CLC rangers are the eyes and ears of the bush, responding to natural and cultural management issues across the CLC region – a large area of the Northern Territory. The work of rangers covers most of the organisation’s region; however, the CLC’s resources don’t allow management of its entire region, so traditional owners identify priority areas and develop projects that best meet their aspirations for their country.

Four ranger groups manage IPAs that contribute more than 195,000 square kilometres to the national reserve system.

Community demand for locally based rangers is high and the CLC continues to lobby for funding to meet the demand and expand its ranger program.

FIGURE 2. CLC RANGER GROUP WORK AREAS



RANGER ACTIVITIES 2016–17

ANANGU LURITJIKU RANGERS (PAPUNYA)

ACTIVITY HIGHLIGHTS

The Anangu Luritjiku Rangers are based at Papunya and work across the eastern half of the Haasts Bluff ALT. They work alongside community members from Haasts Bluff, Mount Liebig and Papunya.

Key achievements of 2016–17 included:

Consultation and planning

- Held three TORAC meetings where rangers presented updates of their work, reviewed the current work plan, and commenced planning for next year. Held three other TORAC meetings at Mount Liebig, Papunya and Haasts Bluff communities which discussed fire management planning.

Cultural heritage management

- Completed a site assessment of a rockhole in the Yarripi region. Elders passed on knowledge about the area to young people and rangers.
- Removed buffel grass (*Cenchrus ciliaris*) at Putati Spring with traditional owners.
- Cleaned Warumpi rockhole.
- Completed maintenance works at an old gravesite near Puritjarra.
- Undertook fire management at Cleland Hills to reduce threat to vulnerable vegetation, rock art and artefacts.

- Monitored illegal visitor activity several times, and installed a sign at the south-east entry to the ALT.
- Made a long trip to Kintore with traditional owners and discussed rehabilitation work at a site at Ilpili.
- Constructed a panel fence at West Spring.
- Made eight trips to Ilpili. On four of the trips, rangers repaired and maintained a turkey nest (a type of dam) and alternative water source infrastructure, including repairs to a tank and pipes, cleaning out a pump, repairing a leaky trough, and maintaining solar panels. Tested water quality with an NT government scientist.

Indigenous knowledge transfer

- Located a rockhole as part of a trip with Yarripi senior women, and taught younger women the stories for that special place.

Biodiversity monitoring and threatened species

- Surveyed for central rock rat (*Zyomys pedunculatus*); found none at Karinyarra and nine at Ulamparru.



Camilla Young (pictured during a cool season burn near Tjukurla) would like to become a ranger at Kintore, a community that has long wanted to establish its own ranger group.



Tjukurla traditional owners plan site visits in September 2016.

- Visited Utili Creek with NT government scientist Pete McDonald and confirmed the presence of Slater's skink.

Fire management

- As a result of ground-based fire-planning discussions for the Yarripi area, rangers learnt how to communicate with local authorities.
- Conducted burns in the Yarripi area supervised by traditional owners.
- Reduced fuel load in Alkipi waterhole region.
- Conducted burns to create multi-age fuel layers in the west Mount Liebig region.
- Traditional owners supervised cultural ground-based burns at Kalipinpa.
- Undertook successful burns of low undergrowth in the cool fire season: two west of Mount Liebig and two north-west of Mount Liebig.
- Marked out bore burn plot, and surveyed animal tracks and weeds at Kakili. A buffel grass burn helped restore food plants in the region. Completed small burns of buffel grass in a popular mulga area south of Papunya.

Feral animal management

- Maintained exclusion fence and recovered camera trap on a quarterly visit to Putati Spring.
- Monitored the impact of feral animals in the Ulamparru area.
- Supported a fencing project to exclude feral animals around Aturu outstation.

Weed management

- Monitored the effectiveness of past control measures against buffel grass, rubber bush (*Calotropis procera*), cactus and

Mossman grass (*Cenchrus echinatus*) across the ALT.

- Controlled buffel grass and other weeds at Ilpili, Muruntji-Purijarra and Aturu, and controlled rubber bush at Aturu.
- Removed *Typha* sp. at Ilpili and Kumalpa Springs.
- Removed mistletoe and buffel grass on and around vulnerable *mangata* (quandong) trees on the Haasts Bluff road near Utili Creek.
- Successfully eradicated cactus around Ikuntji.

Freshwater management

- Visited and recorded two new rockholes west of Mount Liebig.

Community education and development

- Conducted a school trip to Ilpili involving three schools — approximately 45 children and their teachers — and Tangentyere Council's land and learning officer. Rangers described their work, demonstrated a water-monitoring exercise, and visited a honey-ant site.
- Held a community open day.
- Presented (supported by a NT government scientist) on the Ilpili restoration project at a national Australian Society for Limnology Conference, 26–30 September 2016, at Ballarat, Victoria.
- Produced and distributed two newsletters to three communities. Produced two photo storybooks: one on the history of princess parrot protection work; and the other on the history of the central rock rat project.
- Undertook a joint buffel grass control project with Warlpiri Rangers at Watulpunyu on the Ngalurtju ALT.
- Twenty-five primary school children from Yuendumu school visited the CLC ranger office and the rangers gave a presentation on central rock rats.

ANMATYERR RANGERS (TI-TREE)

ACTIVITY HIGHLIGHTS

The Anmatyerr Rangers work predominantly across the Ahakeye ALT.

Key achievements of 2016–17 included:

Consultation and planning

- Held one TORAC meeting and a broader community meeting to discuss ranger resignations. Consequently, the community confirmed its commitment to its ranger group.
- Supported a Native Title consultation and planning meeting at Anningie Station.
- Gathered GPS points for a site clearance to allow erosion remediation planning work.
- Held a meeting with an anthropologist to plan and organise a cultural trip.
- Met with traditional owners to plan the construction of boundary fencing at Ampilatwatja to protect important cultural sites.

Cultural heritage management

- Monitored and undertook maintenance work at six sites: Yanginj, Lherepwerle, Mulga Bore, Adelaide Bore, Nganju and Arremerl.
- Installed remote sensing cameras at Lherepwerle waterhole on the Angarapa ALT.
- Travelled with traditional owners and younger family members to Alkwert. Traditional owners shared their knowledge of water sites associated with Goanna and Honey Ant story lines.

Indigenous knowledge transfer

- Supported two cultural knowledge trips to the Lander River area; one was a three-day trip and the other was a four-day trip. On the trips senior women taught rangers and younger women from Willowra about culture and ecology.
- Knowledge sharing continued on other trips: in July 2016 three rangers and two Willowra casual rangers worked with

four traditional owners and four younger women; and in August 2016 six casual rangers (four from Anmatyerr and two from Willowra) assisted the same traditional owners to visit several rockholes, share stories of work in the early days with prospectors, and burn several areas to reduce fuel loads and increase accessibility of sites.



Biodiversity and threatened species monitoring

- Monitored the extent and health of the critically endangered lily *Typhonium* sp.
- Maintained exclusion fencing and installed a sensor camera as part of a Territory Natural Resource Management project managed by the CLC.

Fire management

- Completed two fire activities as part of cultural trips to the Munyapunji area; approximately 10 hectares were burnt in total.
- Completed asset protection works at Adelaide Bore: installed firebreaks, removed weeds and reduced fuel loads.

Weed management

- Monitored weed sites for weeds of national significance (WONS). Most are located close to the ranger base or near outstations and are monitored as part of other field work. Rangers reported that apart from a known large Athel pine in the community, all other sites had little regrowth subsequent to earlier control treatments.

Soil management

- Undertook erosion remediation works at three main sites around Anningie Station and Western Bore.
- Prioritised work on erosion sites in an operational plan for the Ahakeye Land Trust. Western Ahakeye sites have been addressed and next will be eastern Ahakeye sites.

Freshwater management

- Checked and maintained exclusion measures for feral horses at rockholes at Arremerl and Mulga Bore.
- Maintained Yanginj waterholes with fence repairs, general checks and rubbish removal on three visits.

Visitor management

- Checked and maintained visitor infrastructure at Yanginj waterhole, including rubbish removal.

Staff training and skills development

- Two rangers attended a digital knowledge group workshop in Alice Springs and completed intermediate level *CyberTracker* training.



Acting coordinator of the Anmatyerr Rangers Josephine Grant (right) relaxes in Tennant Creek with the Muru-warinyi Ankkul Rangers' Gladys Brown.

ARLTARPILTA INELYE RANGERS (ATITJERE)

ACTIVITY HIGHLIGHTS

The Arltarpilta Inelye Rangers are based at Atitjere (Harts Range) community on the Plenty Highway.

Key achievements of 2016–17 included:

Consultation and planning

- Held TORAC meetings in December 2016 and April 2017.

Cultural heritage management

- Checked and maintained fencing at Painted Canyon, Spinifex Bore, Old Italian Camp, Old Police Station, Old Army Camp, Dnieper Station, Mount Riddock Station and Spotted Tiger.
- Initial works at Arwaperre rockhole, including marking out a fence line in *CyberTracker*, securing materials, posting, and picketing the fence line. Unseasonal rains slowed progress of the project, but it is now completed.
- Fenced and marked graves at Mount Riddock Station. Cleaned two bush gravesites, installed pickets, and strung wire to protect graves from cattle. A wet summer meant extra time and effort were required to complete the work.
- Reflected on past cultural trips and collated ideas to improve and strengthen future trips at a workshop.
- Planned, promoted and attended the five-day regional women's law and culture camp.
- Made a cultural day trip to Spotted Tiger rockhole with junior rangers and passed on knowledge.



The team surveyed for *ingwelp* (bush tobacco) at Atula Station on Atnetye ALT and in the Quartz Hill region.



Rangers used the *CyberTracker* app to assist them when they marked out a new fence line at Arwaperre rockhole.

Biodiversity monitoring and threatened species

- Completed surveys for *ingwelp* (bush tobacco, *Duboisia hopwoodii*) at sites across Atula Station on Atnetye ALT and in the Quartz Hill region where good supplies of the plants were evident.



Fire management

- Undertook pre-burn preparations, including brushcutting of buffel grass close to infrastructure. Conducted controlled burns at two sites within the Spotted Tiger outstation and campground.
- Worked with Bushfires NT to complete controlled burns to the east and south of Atitjere community.

Feral animal management

- Continued discussions with NT Parks and Wildlife, traditional owners and rangers regarding whether an exclusion fence along the Huckitta Station – Dulcie Ranges boundary is the best option to protect sites in the area.
- Inspected and repaired exclusion fences at five water sites in the Dulcie Ranges.

Weed management

- Monitored previously treated Athel pine and reapplied chemical at Huckitta Station. Removed coral and organ-pipe cactus (*Stenocereus thurberi*) from two sites within close proximity to homestead and disposed of them. Cacti were sprayed at two sites.
- Sprayed approximately 10 rubber bush on Alkerte ALT.

Freshwater management

- Checked and repaired fences to exclude feral animals at three sites, which has resulted in good water quality.

Visitor management

- Identified three sites for visitor impact assessment. Visitor access to Dulcie Ranges National Park needs to be negotiated with Huckitta Station.

Community education and development

- Discussed junior ranger project ideas with the Atitjere (Harts Range) school. Undertook a day trip instead of an earlier caterpillar storyline project, and completed maintenance work at a heritage site.
- Presented to nearly all the community about trips made with junior rangers, and presented certificates.
- Presented information to the Huckitta Station board and manager.
- Published two photo reports and two newsletters.
- Showcased ranger work at a presentation at the annual ranger camp in May 2017.

KALTUKATJARA RANGERS (DOCKER RIVER)

ACTIVITY HIGHLIGHTS

The Kaltukatjara Rangers work across the Kaṭiṭi–Petermann IPA.

Key achievements of 2016–17 included:

Consultation and planning

- Coordinated support for TORAC members to participate in Kaṭiṭi–Petermann IPA committee meetings which plan and review the annual ranger work plan.

Cultural heritage management

- Recorded stories and discussed ongoing management with Petalu's senior traditional owners.
- Cleared out and hand weeded Warupunti's waterholes.
- Developed a map with traditional owners to prioritise search areas for rarely visited sites. Subsequently, rangers and traditional owners visited the Wankari region and rediscovered the Two Sisters site.
- Completed site protection and maintenance of rock art at Walka, Kungka Kutjara and Kaltukatjara sites. Work included preservation of rock art, and removal of buffel grass and other weeds.

Indigenous knowledge transfer

- Reviewed archival photos, films and interviews about fire and bush foods, and selected material for further discussion with traditional owners. Video recorded and photographed evidence of fire ecology which will be edited into short knowledge sharing films.
- Visited Petalu and Mulga Green with senior traditional owners. Over two days, plants were collected and traditional owners showed young women how to make a medicine from *irmangka-irmangka* (emu bush, *Eremophila alternifolia*).

Biodiversity monitoring and threatened species

- Surveyed black footed rock wallabies at two sites and installed remote sensor cameras. Data was recorded in *CyberTracker*.

Fire management

- Attended a tri-state fire meeting at Kalka with 42 traditional owners from the Kaṭiṭi–Petermann IPA.
- Assisted traditional owners undertake three cultural burns at Kalya Yjunta, Puta Puta and Alkata which cover a large area of the western section of the Kaṭiṭi–Petermann IPA.
- Completed asset protection works, including burning and slashing at Titjingati, Tjuntianta, Amputjuro, Karu Kali, Eagle Valley and Kunapula.

Feral animal management

- Checked and maintained an alternative watering point at Puntitjata.

Weed management

- Continued weed control of Mossman River grass and couch grass at Tjipulka, Urruru and Wangkari waterholes.
- Reduced buffel grass at five sites to protect the sites from fire.

Soil management

- Assessed access tracks and recorded erosion with a consultant at Walka, Lasseter's Grave and Kulpitjata. Made recommendations for remediation.

Freshwater management

- Completed water monitoring at three waterholes within the western Kaṭiṭi–Petermann IPA and a waterhole in the eastern portion with NT government biologists and traditional owners. Waterholes included Warupunti, Piyltjara, Utjutju and Wala.

Visitor management

- Completed tourism infrastructure work at Walka with help of Ltyentye Apurte and Tjuwanpa Rangers. Installed a toilet and tank, appropriate fencing, foot gates, a graded road and a new carpark. Weeds in future will be hand pulled to protect re-emerging *yalka* (bush onions, *Cyperus bulbosus*).
- Installed two IPA signs at illegal campsites.

Community education and development

- Published two newsletters and a photobook about the work of Kaltukatjara Rangers.

Staff training and skills development

- Presented about indigenous fire management at a bushfires conference in Brisbane and the 2017 waru committee meeting.



Kaltukatjara rangers and traditional owners plan a burning trip at Tjunti (Lasseter's Cave) in May 2017.

LTYENTYE APURTE RANGERS (SANTA TERESA)

ACTIVITY HIGHLIGHTS

The Ltyentye Apurte Rangers work on the Santa Teresa ALT surrounding the Santa Teresa (Ltyentye Apurte) community about 80 km south-east of Alice Springs.

Key achievements of 2016–17 included:

Consultation and planning

- Held two TORAC meetings. Seven rangers attended both meetings, with four traditional owners at the first meeting and three at the second.

Cultural heritage management

- Held this year's youth cultural knowledge, learning camp at Pantharrpilenhe outstation. Six rangers attended with six traditional owners and approximately 30 children.
- Made four day-trips with elders from the aged care centre. Collected plants with medicinal properties which were made into medicines. Elders shared their knowledge with younger women.
- Hosted an indigenous ecological knowledge learning camp at the Gemtree campground in June 2017. Five rangers took part with five traditional owners.

Biodiversity monitoring and threatened species

- Completed a survey of Slater's skink.
- Monitored the impact of grazing on Loves Creek Station.
- Attended, with other ranger groups, a workshop at the Alice Springs Desert Park in February 2017 to learn about threatened and culturally significant species.

Fire management

- Undertook fuel reduction works at various locations with three traditional owners.
- Undertook fire hazard reduction works at Pantharrpilenhe and Ulupata outstations with five rangers and one traditional owner. Work included brushcutting in and around the compounds. A wet summer increased the fuel load and work took longer than anticipated.

Feral animal management

- Assisted contractors to muster, trap and remove 690 horses as part of the feral animal management plan for the Santa Teresa ALT. The horse population is now manageable, and landscape degradation will be reduced.
- Installed an alternative water point at Yam Bore, and repaired a fence and stock rails at Phillipson Bore.

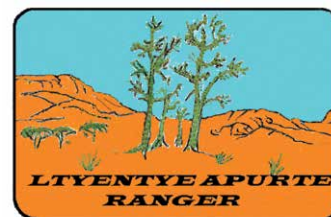
Weed management

- Controlled the weeds *Parkinsonia aculeata*, Athel pine and Mexican poppy (*Argemone ochroleuca*) at Mission Dam, the dump area, the eastside and other sites close to communities.

Soil management

- Assess the condition of erosion banks and fence lines at 10 sites across the ALT.
- Repaired whoa-boys (soil humps that direct water flows

across dirt roads to reduce erosion) and erosion on the access roads of Yam Bore to Case Hill, Snow Bore to Phillipson, and at Tooka Plains.



Freshwater management

- Removed bulrush weeds at Hayes and Salt Springs.
- Surveyed Salt Springs to assess the possibility of installing an alternative water point to protect the springs from further damage by feral animals. Cleared Salt Springs area of weeds.

Community education and development

- Made a school visit to country with seven students and three teachers. Identified local native plants in Arrernte language, and rangers shared knowledge of the plants and their uses.

Staff training and skills development

- Installed whoa-boys to control erosion on the access road to Phillipson Bore outstation, and completed erosion repair earthworks on the Judges Head paddock fence line.



Ranger Farron Gorey identifies a wild fig while on a trip to country.

MURNKURRUMURNKURRU RANGERS (DAGURAGU)

ACTIVITY HIGHLIGHTS

The Murnkurrumurnkurru Rangers are based in the community of Daguragu and operate across the Daguragu and northern portion of the Hooker Creek ALT. The group also periodically participates in projects in the southern section of Judbarra National Park.

Key achievements of 2016–17 included:

Consultation and planning

- Convened two TORAC meetings to review ranger work progress and formulate the next annual ranger work plan.

Cultural heritage management

- Completed work at the main community cemetery and a number of bush gravesites, including repair, construction and replacement of crosses and plaques. Met with Victoria Daly Shire and Gurindji Corporation personnel to coordinate the control of weeds at the main cemetery and access track.
- Supported the Gurindji Corporation to hold the annual Freedom Day Festival. Collected, cut and delivered firewood to various campgrounds.
- Collected raw material from the Mudburra/Top Springs area for coolamon production by traditional owners at art centre.

Biodiversity monitoring and threatened species

- Surveyed to identify new populations of the threatened purple crowned fairy wren. The Timber Creek ranger group assisted and rangers learnt survey methodology and identified four new sites where the wren was present.

Fire management

- Prepared fire plans with traditional owners, including visits with traditional owners to cultural sites in the Burtuwurtu area to conduct fire risk assessments.
- Reduced fuel load with ground burns on the Limbunya section of the Daguragu ALT boundary.
- Presented at the annual Warlu committee meeting.
- Partnered with the Muru-warinyi Ankkul Rangers in a burning exercise at Marlinja.

Feral animal management

- Held community meetings to discuss renewal of grazing licences on portions of Daguragu and Hooker Creek ALTs.
- Monitored the impact of grazing at various sites.

Weed management

- Controlled weeds around Daguragu and along nearby waterways, with particular attention to neem (*Azadirachta indica*), bellyache bush (*Jatropha gossypifolia*), hyptis (*Hyptis suaveolens*) and star burr (*Acanthospermum hispidum*) infestations.
- Conducted an aerial survey of Parkinsonia along the Victoria River, including mapping locations and scale of infestations. Several key areas were identified for future control works.

Freshwater management

- Visited the Muru-warinyi Ankkul Rangers in Tennant Creek to learn more about aquatic surveys.
- Completed work at the Mud Springs complex, including repair of protective fencing.
- Removed rubbish at popular recreational areas at Wattie Creek, Kalkaringi and along sections of the Victoria River.



Community education and development

- Held two school holiday events where elders taught children aspects of cultural practice.

Staff training and skills development

- Completed foundational skills training delivered by Batchelor Institute of Indigenous Tertiary Education (BIITE) study centre coordinator. One ranger undertook four days of study in Certificate II in Conservation and Land Management Management, and five rangers attended three days of training as part of a Certificate II in identifying plants and animals.
- Trained in the use and maintenance of Horiba water monitoring equipment, including practice using the equipment at five water sites near Kalkaringi.



Ranger Phillip Jimmy, from Murnkurrumurnkurru, returned to his father's country on the Karlantijpa North ALT to undertake controlled burning in April 2017.



Several rangers attended three days of training as part of a Certificate II in identifying plants and animals.

MURU-WARINYI ANKKUL RANGERS (TENNANT CREEK)

ACTIVITY HIGHLIGHTS

The Muru-warinyi Ankkul Rangers work on large areas of Aboriginal land around Tennant Creek as well as in jointly managed NT Parks and, where appropriate, on pastoral and government-owned land.

Key achievements of 2016–17 included:

Consultation and planning

- Held TORAC meetings in December 2016, March 2017, and June 2017. The main planning meeting was in March and other meetings reviewed progress and discussed work schedules.

Cultural heritage management

- Removed weeds at Kalumpurlpa which was made easier by improvements to the Bean Tree track as part of the Milway cultural project which assists older women to teach younger women cultural activities.
- Finalised permissions for planning future cultural heritage projects over three days with the women's land management officer.
- Fenced burial sites at Lake Surprise and Kuntatji.
- Maintained fencing at Mission Block and Kunjarra.
- Completed annual cold season burns on the Warumungu ALT near Tennant Creek.
- Completed maintenance, cleaning and fencing of cultural sites at Kunjarra.
- Cleaned around three significant white gums and mulga trees west of Pukalki as part of fire protection of culturally important trees.

Indigenous knowledge transfer

- Made visits with traditional owners to Karlintijpa North to plan burning, and conduct flora and fauna surveys. Country trips require extensive preparation and access is challenging.
- Facilitated attendance of female traditional owners and rangers at the 2016 women's law and culture camp at Willowra.
- Supported senior women to visit 15 sites north of Kalumpurlpa as part of the Milway cultural project and to develop projects for future certified natural resource management activities.

Biodiversity monitoring and threatened species

- Completed bilby and other fauna surveys in April 2017, and worked with traditional owners on the Marlinja carbon burning project survey.
- Completed a survey of population of the black footed rock wallaby at Nguyrramini after concerns about cat predation.
- Installed camera traps to assess feral cat numbers ready for further work which will be funded by a Territory Natural Resource Management grant in 2017–18.
- Analysed resource condition in the Jarra Jarra region, including aerial surveys. Pastoralists have blocked the region's access road and until that issue is resolved the work is on hold.

Fire management

- Supported traditional owners to attend a meeting at an outstation on the Lajamanu road.
- Continued a Graslan woody herbicide trial at town firebreaks in a bid to lower the cost of machinery work. A prototype Graslan spreader mounted on an all-terrain vehicle spreads the granules well. After consultation and advice from NT Weeds, further trials are planned north of Tennant Creek in areas without watercourses.
- Installed and maintained 250 kilometres of firebreaks, two grader blades in width, on boundaries between Aboriginal land and Phillip Creek and Brunchilly stations, and around the Kantaji area.
- Completed ground-based cultural burns east of the Stuart Highway.

Feral animal management

- Checked and repaired fences at Mission Block to exclude cattle. There was far less damage to fencing by cattle this year than in previous years and, consequently, there was no need to help neighbouring pastoralists remove cattle.
- Held a meeting with traditional owners and community members at Murtulki to discuss the removal of horses and donkeys. The meeting decided the animals were not presently a problem and the issue will be addressed in the future as required.



Jeffrey Curtis checks that an all-terrain vehicle is in working order. These vehicles are an important tool in the working life of rangers.



Weed management

- Completed weed surveys around the Black Snake and Golden 40 mine area, Greenwood, Mungkarta, Warrego mine region, and other locations.
- Treated rubber bush infestations on the Bluebush Station boundary and Parkinsonia on the Juno boundary.
- Treated rubber bush and Parkinsonia in the vicinity of Kalumpurlpa community.
- Completed a survey of past infestations of rubber bush on the Bluebush outstation boundary. That the rangers found no new regrowth indicates that previous infestations had been effectively controlled.
- Treated all weed infestations around Kunjarra.
- Treated rubber bush infestations south-east of Mungkarta.

Freshwater management

- Monitored water quality at Goodna, Manga Manda and Karraman waterholes at Mission Block.
- Hosted the Murnkurrumurnkurru Rangers from Daguragu and shared knowledge of water quality survey methodologies and techniques, as well as fauna and flora surveys.

Visitor management

- Supported the planning and implementation of activities identified in the draft Kunjarra redevelopment management plan.
- Completed maintenance and rubbish removal at the Kunjarra campground and tourist site.
- Continued maintenance and rubbish removal at the Seven Mile campsite.
- Conducted regular rubbish monitoring and collection at Seven Mile, particularly at peak visitor times.

Community education and development

- Supported and attended a CLC council meeting held in Tennant Creek.
- Hosted three work experience participants at Karlu Karlu. A Year 10 student also completed one week's work experience on a fencing project at Ngayarrmini.
- Presented a cultural induction workshop in October 2016 at Mission Block for a group of invited senior staff from local community and government organisations as part of a two-way learning project funded by Desert Knowledge Australia (DKA). The rangers produced a photobook of the event and presented it at the annual ranger camp.
- Published two newsletters.

Staff training and skills development

- Two rangers in the digital knowledge group completed intermediate *CyberTracker* training.
- Helped to develop and deliver the DKA cultural induction package.
- Conducted joint carbon burning/survey work with Murnkurrumurnkurru Rangers at Marlinja.

Ranger works

- Completed a cleaning contract at Karlu Karlu for NT Parks and Wildlife during the peak tourist seasons in 2016 and 2017.
- Completed a contract with Pacific Environment to monitor dust. Rangers disassembled the equipment and returned the computer and monitoring data to the company's Sydney office.
- Built an exclusion fence around the Edna Beryl mine site evaporation dam on Mission Block.
- Assisted a consultant to survey the greater bilby (*Macrotis lagotis*) in the Northern Land Council region on Banka Banka Station.

NORTH TANAMI RANGERS (LAJAMANU)

ACTIVITY HIGHLIGHTS

The North Tanami Rangers are based in the community of Lajamanu. The group has been entrusted by traditional owners to manage the Northern Tanami IPA. The IPA incorporates four million hectares of country, stretching from just north of Lajamanu south to the Tanami Mine.

Key achievements of 2016–17 included:

Consultation and planning

- Attended two meetings of the IPA management committee which oversees, reviews and plans the work of the ranger group.
- Presented at the annual warlu (fire) committee meeting in October 2016 at Jiwaranpa in the IPA.
- Attended two meetings with Tanami regional staff to create integrated IPA and ranger group operational plans.

Cultural heritage management

- Managed the Emu rockhole cultural site, including checking and maintaining the boundary fence, clearing the access track and cleaning up rubbish.
- Completed restoration and protection works at Kamira waterhole to prevent damage from livestock. Work included cleaning of the waterhole, removing obstructions to water flow and monitoring water quality.

Indigenous knowledge transfer

- Attended the 2016 women's law and culture camp at Willowra in September 2016.
- Participated in a week long traditional owner trip to the Highland Rocks area which supported indigenous ecological knowledge transfer and recording.
- Made two multi-day trips to Seven Mile and Kamira which included 31 traditional owners.
- Made a multi-day visit with representatives of both the Southern and Northern Tanami IPAs to Pawu with traditional owners of the area.

Biodiversity monitoring and threatened species

- Conducted greater bilby surveys at two sites in the IPA (Duckponds and Ngulkulku) in accordance with the recommendations of the 2012 IPA greater bilby monitoring report.
- Assisted completion of mapping of *yarla* (bush potato, *Ipomea costata*).

Fire management

- Conducted a series of ground-based burning activities in areas prioritised by the warlu committee and subsequent IPA committee meetings.

Feral animal management

- Provided access and operational assistance to a feral horse removal contractor on a cull in May 2017 which removed 62 feral horses.

Weed management

- Controlled *Parkinsonia* infestations along the Victoria River.
- Recorded weed species information, including distribution, abundance and treatment histories, using *CyberTracker*. The CLC's land resource information officer subsequently collated and mapped the data.

Soil management

- Surveyed and maintained whoa-boys along the Duck Ponds road.

Community education and development

- Supported collaborative planning with local school and learning centre staff for school and on-country learning activities.
- Made a four-day school visit to country at Jiwaranpa involving 28 children, four rangers and eight elders. Children participated in cultural activities, including burning, hunting, storytelling and ceremony.
- Presented at the NT natural resource management forum in Alice Springs in July 2016. Also presented to a joint NLC–CLC meeting at Kalkaringi in August 2016.
- Published a community storybook and two newsletters to share the work of the ranger group with residents of Lajamanu.

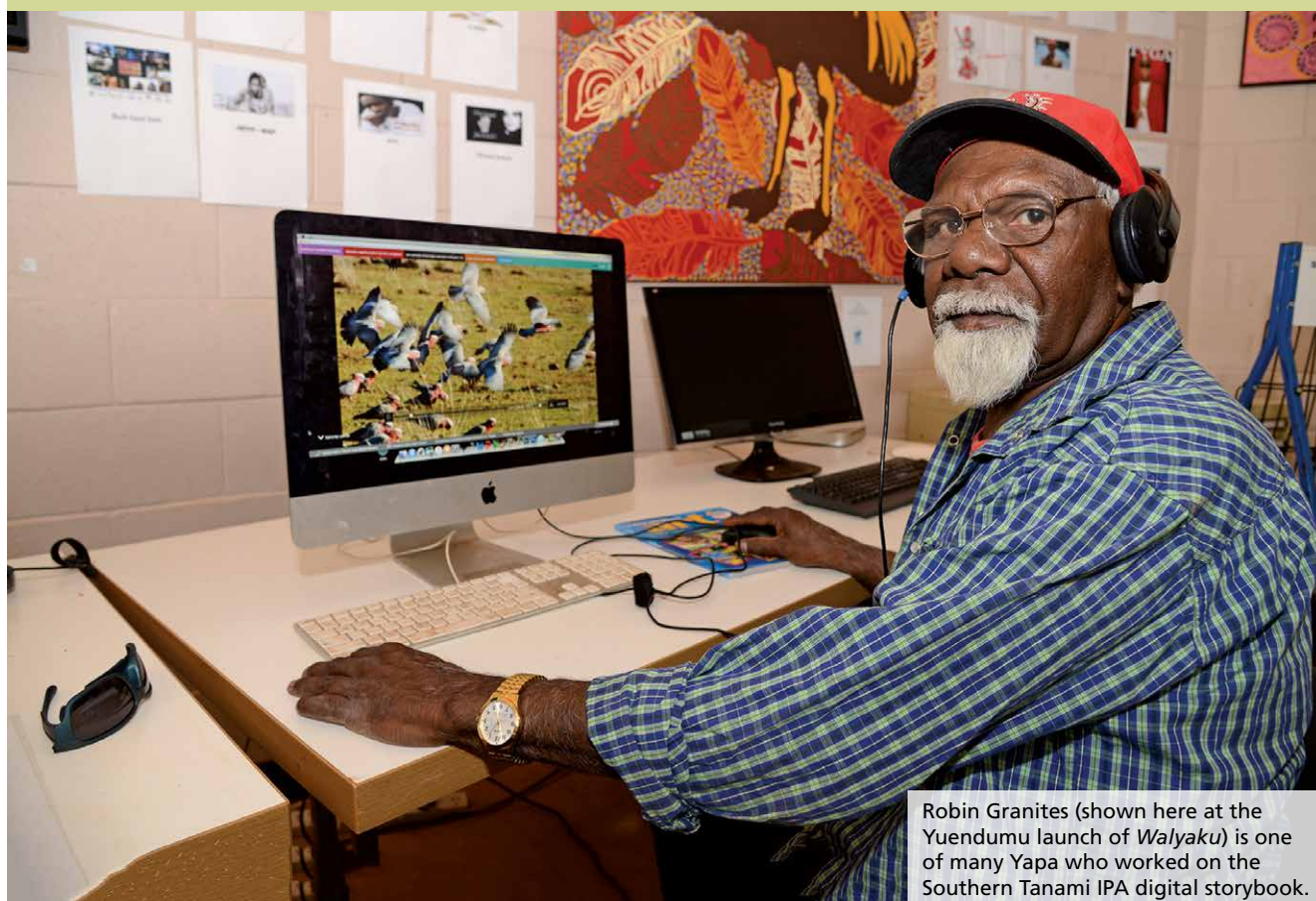
Staff training and skills development

- Participated in the CLC digital knowledge group.
- Participated in a joint training session on water ecology with the IPA coordinator and the Murnkurumurnkurru Rangers in September 2016.



North Tanami ranger Renee Blunden (left) with Wilhemina Johnson of Murnkurumurnkurru Rangers at the annual ranger camp.

Case study: Changing the tyre on English plans of management — *Walyaku*, the Southern Tanami IPA digital storybook



Robin Granites (shown here at the Yuendumu launch of *Walyaku*) is one of many Yapa who worked on the Southern Tanami IPA digital storybook.

The Southern Tanami IPA plan of management was developed by the CLC over a number of years with Yapa land owners and managers in mind. However, the completed plan was written in English for a mainstream audience and, despite their involvement, was a mystery to many traditional owners.

The plan is full of management talk – values, issues, opportunities, objectives and strategies — not easy for land managers whose first language is Warlpiri. To remedy this, the CLC decided to recreate the management plan in a way that puts Yapa in control. With no templates or examples to guide them, the CLC had to create its own from scratch. Warlpiri ranger Madeleine Napangardi Dixon worked with Julia Burke of the CLC to solve the challenge. Madeleine said, “We want Warlpiri to understand too, young and old, sharing.” After more than two years of research and development, trial and error, the result is *Walyaku*, a digital storybook (<http://walyaku.org.au/#/st/0>).

The storybook is the content of the IPA management plan presented in Warlpiri through short videos, audio, animation, diagrams and interactive maps. Audio navigational prompts – in both Warlpiri and English – guide viewers through the plan.

Video stories describe how the IPA allows Yapa land managers to care for country their way, alongside new scientific knowledge. Videos show the important work of rangers and traditional owners with animals, plants, water sites, fire, bush medicine, and feral animals and weed removal. A seasonal calendar describes the four Warlpiri seasons; information about which plants and animals are present at what times, and when is the right time to burn country. Photos and descriptions of plants and animals in the Southern Tanami area help schoolchildren learn both Warlpiri and English names.

Walyaku brought together dozens of collaborators to write and edit the scripts, produce translations and videos, and design and testdrive the storybook. Warlpiri project directors included Madeleine Napangardi Dixon, Enid Nangala Gallagher, Robin Japanangka Granites, Christine Napanangka Michaels, Eddie Jampijinpa Robertson and Lottie Napangardi Robertson-Williams. The Southern Tanami IPA coordinating council checked the storybook and the Warlpiri Rangers supported the entire project.

As a director of *Walyaku*, Madeleine enjoyed working with elders, schoolchildren, CLC staff, film-makers and designers:

"I found it interesting — people getting together, sharing ideas and getting involved in making videos."

Warlpiri senior ranger Preston Kelly pointed out, "Everyone is into technology now. You don't get time to read a book sometimes . . . *Walyaku* helps young kids to listen, learn, understand, build their knowledge and pass it on."

Poor internet access in remote communities necessitated two versions of the storybook: one available online at <http://walyaku.org.au/#/st/0> and a second available as a desktop application which can be accessed at community learning centres. Yapa can also watch the stories at home on television or game consoles via a USB stick.

The CLC has made the storybook's template freely available to other IPAs or indigenous ranger groups who would like to produce their own version. The *Walyaku* storybook will allow traditional owners to better manage their country and will also inspire many to consider a career as a ranger.



Locals get a first look at *Walyaku* at its Yuendumu launch.

Warlpiri elders and rangers at Sangsters Bore on the Southern Tanami IPA take part in production of the Southern Tanami digital storybook. (Photo: Ken Johnson)



TJUWANPA RANGERS (NTARIA)

ACTIVITY HIGHLIGHTS

The Tjuwanpa Rangers are based at Ntaria (Hermannsburg) and work on surrounding ALTs.

Key achievements of 2016–17 included:

Consultation and planning

- Held a TORAC review meeting in December 2016, following an open day celebrating 10 years of the ranger group, and a planning meeting in April 2017.
- Attended a joint management meeting at Rainbow Valley to assess if traditional owners and NT Parks required assistance from rangers on animal surveys, erosion control and other work. Interest was high from both parties.

Cultural heritage management

- Completed maintenance work at Namatjira House at Ntaria.
- Installed crosses on unmarked graves at the graveyard at Old Jay Creek welfare institution and repaired the exclusion fence. In April, approximately 300 people, including ranger families and the ABC, attended an open day organised for families of the deceased.

Indigenous knowledge transfer

- Published a handbook identifying native flora and fauna. Discussed the content with a school youth group who had undertaken an Anzac Day horseride. Rangers included information on introduced plants and animals, and explained impacts and control techniques to students.

Biodiversity monitoring and threatened species

- Checked known Slater's skink burrows, and scoped for new ones to assess the skink population as part of the threatened species monitoring plan.
- Surveyed and recorded fish habitation in waterways in the Tjoritja/West MacDonnell National Park.
- Controlled weeds and monitored horse movements at Kaporilya Springs.

Fire management

- Completed a burn to establish a buffer zone along the Rodna track leading to Rodna waterhole and outstation. Fifteen kilometres of track were burnt either side, creating an average 100 metre buffer zone, with strip burns continuing in places off the main burn.
- Conducted asset protection burns at Eight Mile outstation, Kaporilya Springs and community, Liltjera Springs, and around Ntaria.

Feral animal management

- Repaired feral animal exclusion fence at Tylers Pass, Liltjera Spring, Four Mile Spring and Wamina Gap.
- Inducted new rangers into the fencing program and repaired and maintained fencing at the Ahilpa Valley and Tylers Pass exclusion paddocks.
- Fenced two sites at Gilbert Springs outstation, and installed two alternative water points.

- Held talks with traditional owners to plan educational meetings and sessions to increase awareness of horse management methods of schools and other staff.



Weed management

- Treated 2.5 hectares of Kaporilya Springs for weeds, mainly buffel grass. Controlled Mexican poppy along the Finke River and Ellery Creek.
- Controlled Athel pine seedlings on both Gilbert Spring and Ellery Creek.
- Removed and destroyed Athel pine from an important gorge on the Rodna ALT.
- Visited the Walkers Gorge region to assess Athel pine eradication works. Previous spraying has been effective and there is no evidence of regrowth.
- Sprayed and removed weeds along the Palmer River, located on an old road with erosion problems and planned improved control methods with a consultant.

Soil management

- Worked with a soil conservation consultant and traditional owners to plan and prioritise erosion remediation works. Rangers will undertake the work, including sourcing heavy machinery. A report will be presented to TORAC.
- Trained in erosion control with a consultant and an accredited machinery trainer at Ntaria. Training covered theory and grader techniques. Two rangers received certificates in grader operations.

Community education and development

- Assisted students with horse management and prepped them before the 2017 ANZAC Day horseride from Hermannsburg to Alice Springs.
- Hosted an open day to celebrate the 10-year anniversary of the Tjuwanpa Rangers.
- Presented at NAIDOC events in Alice Springs with CLC chair Francis Kelly. Presented at the ranger camp and at a Slater's skink forum in Alice Springs.



Tjuwanpa Rangers repaired gravesites and upgraded the church and cemetery at the Old Jay Creek mission.

WARLPIRI RANGERS (YUENDUMU, WILLOWRA, NYIRMPI)

ACTIVITY HIGHLIGHTS

The Warlpiri Rangers are responsible for the day-to-day management of the Southern Tanami IPA (IPA). Covering some 10 million hectares, the IPA is the largest terrestrial protected area in Australia. The operational centre for the ranger group is in the community of Yuendumu, with teams of casually employed rangers residing in the neighbouring communities of Willowra and Nyirmpi.

Key achievements of 2016–17 included:

Consultation and planning

- Held IPA coordinating council meeting in November 2016 in Yuendumu, and three IPA management committee meetings in March 2017.
- Convened three-day warlu committee meeting at Talbot Bore in October 2016.
- Met with other CLC staff during April and May 2017 to create integrated regional work plans for the upcoming financial year.

Cultural heritage management

- Maintained and protected bush gravesites.

Indigenous knowledge transfer

- Made extended country trips to Labi Labi (Nyirmpi), Chicari (Nyirmpi), Highland Rocks (Yuendumu) and Pawu (Willowra). The trips were opportunities to teach and practice culture, such as singing, traditional burning, spear making, clap stick making, ochre harvesting, traditional body painting, sacred site visits.

Biodiversity monitoring and threatened species

- Monitored sites of greater bilby, mulgara (*Dasycercus blythi*), and great desert skink (*Liopholis kintorei*) in the Nyirmpi region.
- Conducted wildlife survey at Chicari and detected new bilby activity at Mina Mina.
- Recorded threatened species at Sangsters Bore and Yinapaka. Future work at this site is dependent upon a review of data from current monitoring.

Fire management

- Conducted burns in the Tallaradda and Labi Labi areas in and around the Nyirmpi region.
- Conducted aerial and ground-based burning in the Highland Rocks area of the Yuendumu region.
- Conducted burns during two trips to the Yinapaka region and a trip to Pawu.
- Conducted close-in protective burning at the Chilla Well, Yarrapilangu, Waylinpa and Yutjalu outstations.

Feral animal management

- Killed three feral cats at Sangsters Bore in November 2016 and March 2017.

Weed management

- Undertook general weed control activities at Jakamarra Dam

(Yuendumu) and Sanford Bore (Willowra).

- Monitored results of Mexican poppy treatment at East Bore and Mount Allen.
- Controlled buffel grass at Wartapunya, Sangsters Bore and Yinyirapilungu.
- Inspected for couch grass infestations at Lake Ruth on Tanami Downs.

Community education and development

- Visited country with the Yuendumu and Nyirmpi schools. Combined ranger trips to Mission Creek, Yikardi and Wartapunya with a Yuendumu school trip. Elders and rangers taught the students about the country.
- Participated in the Yuendumu community expo.
- Presented to the Australian Mammal Society conference in Alice Springs.

Staff training and skills development

- Attended the annual CLC ranger camp in September 2016.



Ranger Christine Ellis Michaels with one of the feral cats destroyed at Sangsters Bore.

RANGER TRAINING AND DEVELOPMENT 2016–17

Training and professional development are an important part of the CLC ranger program. Training focuses on three key areas: work skills and competencies for new rangers, study in conservation and land management for experienced rangers, and career progression leading to support officer and coordinator roles.

In 2016–17 rangers participated in 50 separate training events across the program. This amounted to 11,311 hours of accredited training at 35 separate events, and 1,422 hours of non-accredited training at 15 separate events.

Fifty-five rangers were enrolled in nationally accredited conservation and land management training courses. The enrolments were: six in Certificate I, 28 in Certificate II, 15 in Certificate III and six in Certificate IV.

Many rangers completed their training hours at Certificate II (45%) and Certificate III (41%) levels, reflecting the need for new and developing rangers to increase their skills. More experienced rangers gained Certificate III in 2016–17 compared with previous years, which reflects the growing maturity of the program.

Significantly fewer training hours were delivered to senior rangers and ranger support officers at Certificate IV level (13%) than in previous years. This reflects the relatively high retention rate in those roles, with many having gained Certificate IV in previous years. Only 1 per cent of total training hours was delivered at Certificate I level, mostly literacy and specialist short courses.

As the ranger program expands, equitable distribution of training resources is a growing challenge. Several factors influence how much training is completed by each ranger group. Groups with larger numbers of rangers who undertake Certificate III and IV level training record a greater number of training hours than groups with fewer rangers. This is seen, for example, in the hours of training delivered to the Muru-warinyi Ankkul and Ltyentye Apurte ranger groups, both with a large number of rangers.



Work health and safety training is essential for fire management. Here, CLC ranger Helma Bernard helps traditional owners on a burn near Daguragu.

FIGURE 3. RANGER EMPLOYMENT SNAPSHOT AT 30 JUNE 2017

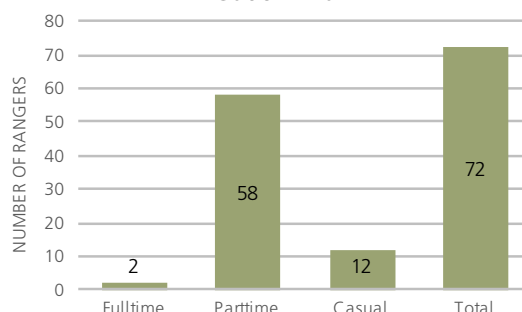


FIGURE 4. RANGER EMPLOYMENT TYPE, 2010–17

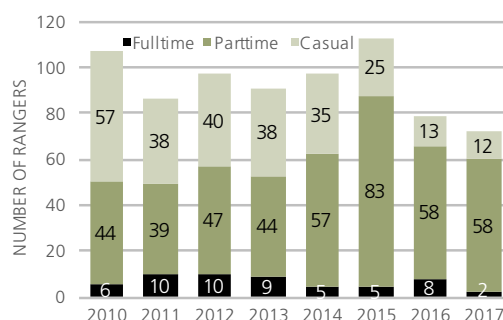


FIGURE 5. MALE AND FEMALE RANGERS, 2010–17

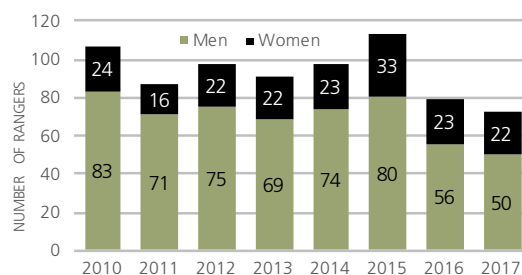
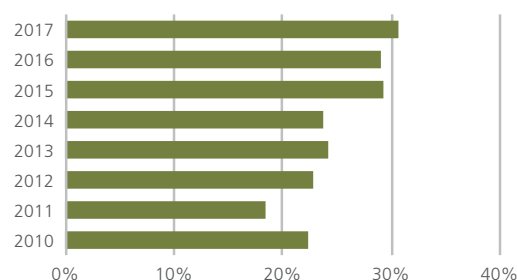


FIGURE 6. PERCENTAGE OF WOMEN RANGERS, 2010–17





Data collection app *CyberTracker* is widely used by rangers.

Ranger retention rates also have consequences for training participation rates. Staff turnover can place pressure on work programs — ranger groups with high staff turnover must prioritise establishing good work routines over training. This is reflected in the Anmatyerr, Arltarlpilta Inelye and Anangu Luritjiku ranger groups.

The Tjuwanpa, Ltyentye Apurte and Muru-warinyi Ankkul ranger groups benefit from their close proximity to Alice Springs where 64 per cent of training events took place in 2016–17. Easy access to classes and workshops increased those three groups' participation rates in training.

Conversely, the expense and challenges of remote delivery limit training opportunities at locations a long way from Alice Springs. This accounts for the lower number of training hours delivered to the Kaltukatjara Rangers who are based close to the Western Australian border.

The CLC works continuously to improve training outcomes by assisting providers to deliver training events and programs in remote areas, in combination with other activities that support the retention of rangers.

FIGURE 10. RANGER ACCREDITED TRAINING, 2016–17

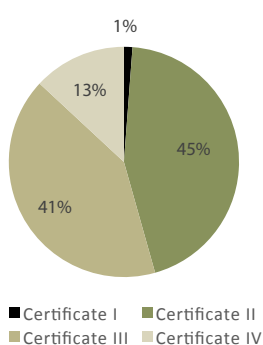


FIGURE 7. RANGER RETENTION AT 30 JUNE 2017

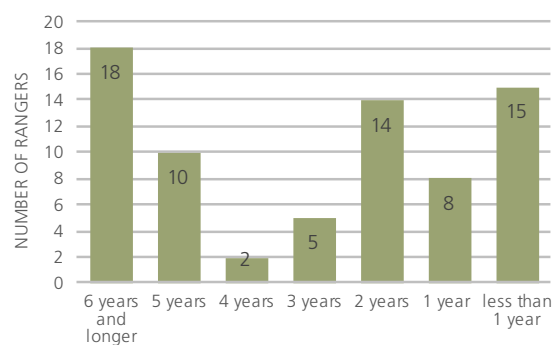


FIGURE 8. NUMBER OF RANGERS UNDERTAKING CONSERVATION AND LAND MANAGEMENT CERTIFICATES, 2016–17



FIGURE 9. NUMBER OF RANGERS UNDERTAKING WHS TRAINING, 2016–17

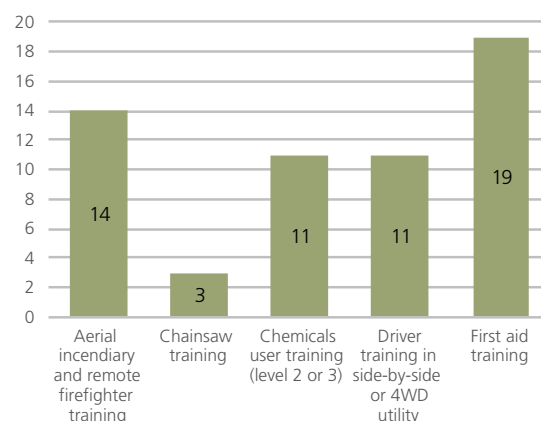


FIGURE 11. TRAINING HOURS BY RANGER GROUP, 2015–17

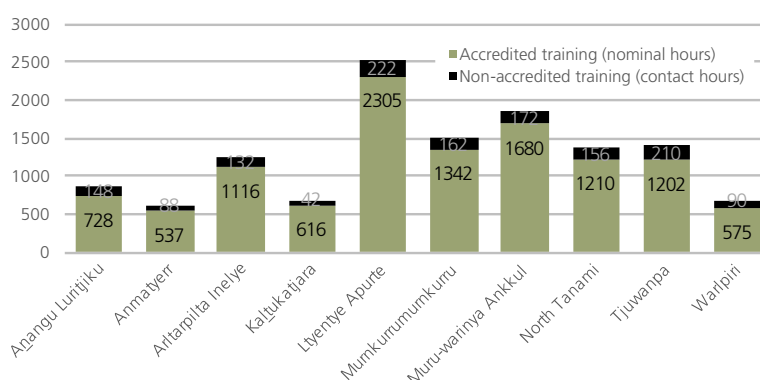


FIGURE 12. RANGER MENTOR ACTIVITY: VISITS TO RANGER GROUPS, 2016–17

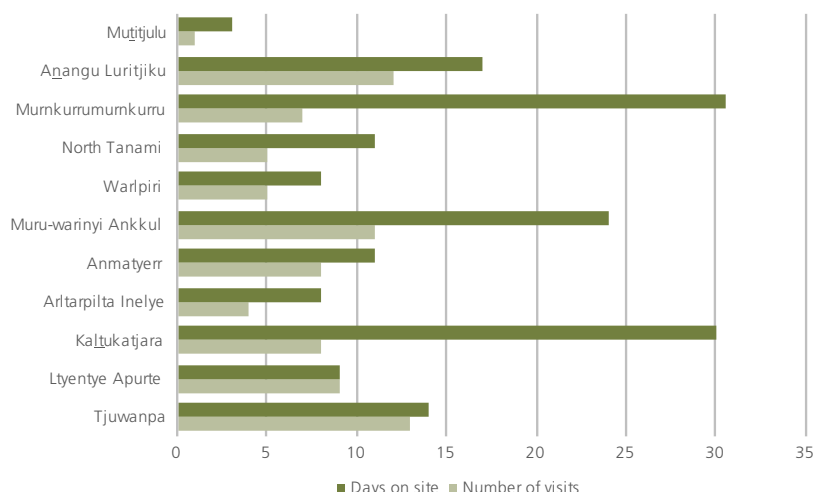
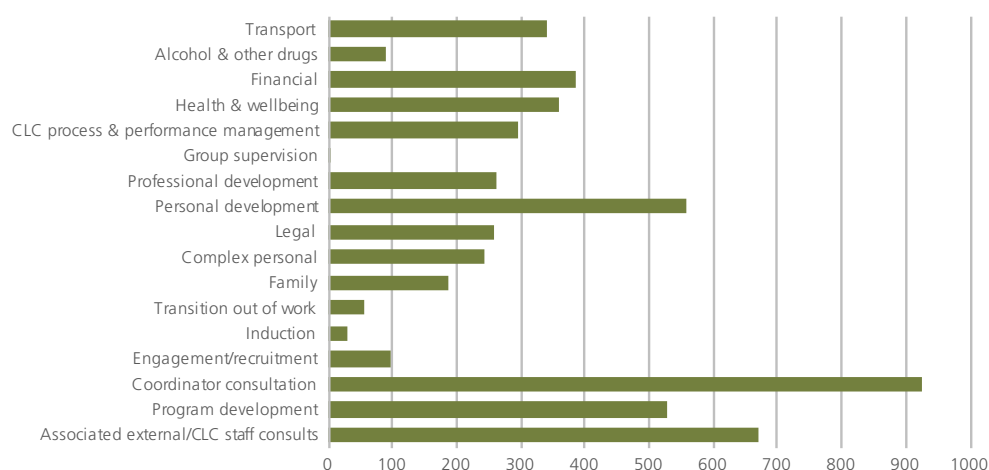


FIGURE 13. RANGER MENTOR ACTIVITY: TYPE OF ENGAGEMENT, 2016–17



The CLC prioritises work health and safety awareness and compliance across the organisation. In response to ongoing risk assessments and implementation of standard operating procedures, the ranger program has developed a suite of compulsory ranger-training requirements. This year, one-off sessions of accredited training in skills that contribute to a safe and productive workplace included training in operation of all-terrain vehicles (undertaken by 11 rangers), and training in the preparation, storage and safe handling of chemicals after which 11 rangers received their occupational licences. In this, the final year of the Biodiversity Fund project, significant burning activities were opportunities for 14 rangers to receive substantial training in aerial incendiary operation, firefighting and wildfire suppression.

WORKPLACE SKILLS AND KNOWLEDGE

Non-accredited training sits outside the Australian Qualifications Framework and typically is delivered within the organisation as workshops and/or as part of specific work activities. This year's non-accredited training included Microsoft Office software, various training activities as part of the digital knowledge group and senior ranger forums, and a significant species mapping workshop. Four workshops were also held at this year's ranger

camp: snake handling, weed management, writing for media, and safe food handling.

CAPACITY BUILDING THROUGH WORK WITH SCHOOLS

Aboriginal rangers are some of the most prominent role models for students in remote communities. Classroom and on-country interactions with rangers contribute to school attendance, enhance learning and showcase employment opportunities.

Ten ranger groups promoted ranger careers to schools, junior ranger programs, traditional owners, parents and others. They facilitated transfer of knowledge between generations and by sharing their skills also provided some work experience.

CONFERENCE PRESENTATIONS

CLC rangers and fire project officers along with two members of the Katiṯi–Petermann IPA management committee presented about fire management at *Connecting Science, People and Practice*, a national bushfire conference at the University of Queensland in September 2016. Their presentation was well received and, subsequently, a ranger exchange between the

Kaltukatjara Rangers and IPA rangers involved in the Firesticks program is under discussion for 2017.

Two Anangu Luritjiku rangers presented on the Ilpili restoration project at a national Australian Society for Limnology Conference, 26–30 September 2016, in Ballarat.

North Tanami Rangers presented on their work to a NT natural resource management forum in Alice Springs and also to a joint meeting of the Northern and Central Land Councils at Kalkaringi in August 2016.

Warlpiri rangers Christine Ellis and Preston Kelly delivered a well received presentation on their survey of bilbies at the Scientific Meeting of the Australian Mammal Society in Alice Springs in September 2016.

ANNUAL RANGER CAMP

More than 80 Aboriginal rangers and land managers attended the 11th annual CLC ranger camp at Ross River in September 2016. Sixty-eight participants represented 10 CLC ranger groups, four rangers represented the Parks and Wildlife Commission NT (Watarrka), six represented the Jigalong Rangers (Kanyirninpa Jukurrpa), and eight represented the Anangu Pitjantjatjara Yankunytjatjara Land Management Rangers. The camp is an opportunity for professional development and networking across across the vast and remote Central Australian region.



Murnkurrumurnkurru ranger Krisilla Patrick services a chainsaw at the 2016 ranger camp at Ross River.



Ltyentye Apurte ranger Leon Davis has other rangers' undivided attention as he demonstrates snake removal at the 2016 ranger camp at Ross River.

Digital knowledge group

New rangers learn basic conservation and land management skills, such as weed identification and control, and 4WD driving; however, they also bring their own skills to the job. At least one ranger in every group has good computer skills, and these rangers are selected to join the digital knowledge group. Membership of the group involves attending its biannual workshops and acting as a point of contact for data management within each ranger group.

A focus of the group are the different technologies used to map and navigate country. Its first workshop in October 2016 introduced traditional mapping and navigation skills, such as orientation, memory, songs and stories, and natural landscape features. Rangers then learnt how to use standard paper maps, grid coordinates and map projections, and how to submit a map request to the CLC's spatial information services unit.

The digital knowledge group now develops digital mapping skills, including digital navigation tools, collecting spatial data on mobile tablets, managing data, and generating digital maps. An orientation activity using the *Avenza PDF Maps* navigation app was held at this year's ranger camp.

The group's rangers also learn to use *CyberTracker*, a data collection app, and take a leading role in installing the app on the rangers' tablets. The app's unique advantage is its ability to create icons that allow easy use when entering data in the field. The group's rangers advise on updates to app and icon design, which are then implemented by the land resource information officer. Through different exercises and activities rangers improve data collection in the field and learn scientific and mathematical concepts.

After collecting data in *CyberTracker*, rangers download and review the data at the ranger base. They then create different maps to show activity and issues identified in the field. In workshops, rangers learnt to create a newsletter in *MS Publisher*, adding maps and pictures to tell a story about their work.



The annual ranger camp is a chance for information sharing. Here, (left to right) Craig LeRossignol (Tjuwanpa Rangers), Benji Kenny (Kaltukatjara Rangers) and Willy Lane (Anmatyerr Rangers) share their experiences over morning tea.



Information sharing is critical for building the capabilities of rangers. Ranger group presentations, guest speakers and the ranger forum empower rangers to contribute to the continuous improvement of operational, management and governance practices.

At this year's camp six providers delivered 11 training sessions. There were workshops about the use of chemicals, chainsaws, 4WD vehicles and trailers, as well as on equipment maintenance, safe food and snake handling, writing for media and weed control planning. Social and health promotional activities at the camp included eye health checks, the healthy cooking competition and other team-building activities.

RANGER MENTORS

As the ranger program has expanded over the past 10 years, so too has the number of rangers. Unfortunately, the program is not resourced to deliver an equivalent increase in workplace mentors. In response to this shortfall, ranger mentors have extended their reach by educating and empowering ranger coordinators to act as alternative support and to foster resilience in their ranger teams. Thirty per cent of mentor effort this year was in working with coordinator-level staff.

The next greatest area of effort by mentors was personal development for rangers. Workplace coaching assists rangers to identify challenges and develop skills to meet those challenges.

A third regional workplace mentor was recruited and commenced work in May 2017. This new position represents a 50 per cent increase in mentoring resources for the program. Moving into the next period, the distribution of 33 mentees per mentor better positions the program to meet the extra demands of new recruits in the start-up ranger groups at Mutitjulu and Angas Downs.

RANGER EMPLOYMENT AND RETENTION

At 30 June 2017, 72 Aboriginal rangers were engaged in 10 ranger groups: two worked fulltime, 58 worked parttime and 12 were casuals. From 2010–17 a total of 677 Aboriginal people worked as CLC rangers. They were aged between 20 and 67 years with a wide range of knowledge and skills.

The CLC's first female ranger program support officer continued to relieve ranger group coordinators in various ranger groups. She rose through the ranks and now aspires to become the CLC's first Aboriginal female ranger group coordinator.

Over the last three years a combination of increased hours but fewer fulltime equivalents has led to a decline in the overall number of rangers employed. However, ranger groups are consolidating and maturing, and rangers' hours have increased from three to four days a week. While fewer people are employed, those that do work earn more and are moving towards fulltime employment.



Rangers met at a land management forum in Alice Springs in April 2017 to combine their data with other research towards protecting threatened reptiles.

PARTNERS AND SUPPORTERS

The CLC acknowledges the major funding bodies of the ranger program: the Australian Government's Department of Prime Minister and Cabinet and the Indigenous Land Corporation. Other funders and supporters include NT Natural Resource Management, PEW Charitable Trusts, Batchelor Institute of Indigenous Tertiary Education and Charles Darwin University.



GLOSSARY

ABA	Aboriginals Benefit Account
ALT	Aboriginal Land Trust
BIITE	Batchelor Institute of Indigenous Tertiary Education
CLC	Central Land Council
PM&C	Department of Prime Minister and Cabinet
IAS	Indigenous Advancement Strategy
ILC	Indigenous Land Corporation
IPA	Indigenous Protected Area
TORAC	Traditional Owner Ranger Advisory Committee

First published in 2018 by the Central Land Council
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FRONT COVER IMAGE: Arltarlipita Inelye ranger Barbara Petrick enjoys the view at the 2016 CLC ranger camp at Ross River.

BACK COVER IMAGE: The 2016 CLC ranger camp at Ross River.