



**2022-23**

# Arid Recovery Annual Report



For more information on Arid Recovery visit [www.aridrecovery.org.au](http://www.aridrecovery.org.au) or call 08 8671 2402.

The stone artefacts scattered everywhere through the sand dunes of the Arid Recovery Reserve are testament to the deep time over which Aboriginal people have lived on and cared for Country here. We recognise their enduring relationship with these extraordinary lands, and express our deep respect for their connection to this Country. With traditional knowledge and conservation science working together, we hope that struggling wildlife can be re-established to thrive again across Aboriginal land Australia-wide. The Arid Recovery Reserve is within the native title area of the Kokatha people, in a landscape where the neighbouring Kuyani and Arabana groups also spent time.



Kokatha women collecting bush medicine during bush tucker mapping on Andamooka Station. *Photo: Kath Tuft*

This document is the 26th in a series of annual reports and outlines the activities of Arid Recovery for the period from 1st July 2022 to 30th June 2023.

Arid Recovery is an independent, not-for-profit conservation initiative that has been restoring Australia's arid lands since 1997. Our success is attributed to many supporters, including the unwavering support of the local community through volunteers and the long term support of our major sponsors BHP, SA Department for Environment and Water, the University of Adelaide and Bush Heritage Australia.

Copies of this report, supplementary information and previous reports are available on the Arid Recovery website.

Arid Recovery  
PO Box 147  
Roxby Downs  
South Australia  
Australia 5725

© Arid Recovery 2023

Cover photo: Drone view of Conservation Land Management Officer Nathan Manders checking cat traps along the western boundary of the Arid Recovery Reserve.

*Photo: Ines Badman*

Page 2 photo: Conservation Intern Harrison Talarico at work helping to manage rabbit populations around the Arid Recovery Reserve.

*Photo: Martin Stokes*



The Arid Recovery team. From left to right: Kath Tuft (CEO), Tori Love (Conservation Intern), Kylie McQualter (UNSW researcher), Nathan Manders (Conservation Land Management Officer), Ines Badman (Community Coordinator), Erica Mayer-Zirn (Administration Officer) and Genevieve Hayes (Ecologist). Photo: Ines Badman

## Contents

<b>3</b>	<b>Chair report CEO report</b>	<b>11</b>	<b>Kowari translocation</b>
<b>4</b>	<b>Arid Recovery Board Scientific Advisory Panel</b>	<b>12</b>	<b>Research</b>
<b>5</b>	<b>Arid Recovery staff Volunteers</b>	<b>13</b>	<b>Climate Change</b>
<b>6</b>	<b>State of the Reserve</b>	<b>14</b>	<b>Arcoona Lakes birdlife</b>
<b>8</b>	<b>Re-introduced species monitoring</b>	<b>15</b>	<b>Working together on Country</b>
<b>9</b>	<b>In situ fauna</b>	<b>17</b>	<b>Community</b>
<b>10</b>	<b>Vegetation monitoring</b>	<b>19</b>	<b>Partners, volunteers &amp; supporters</b>
		<b>20</b>	<b>Financial report</b>





# Chair Report

ALLAN HOLMES

---

I begin my report by reflecting on the essence of Arid Recovery. We are a small independent, not-for-profit conservation organisation, pioneering conservation science to help threatened species thrive across the Australian Outback. Arid Recovery has evolved and transformed over 25 years of operation. Although our base is a large, fenced reserve at Roxby Downs, our influence and reach is far beyond.

The work we do has become even more vital. The decline in biodiversity continues apace in Australia as our society ignores the consequences of the unsustainable use of our landscapes. Our interest is in environmental repair – researching how to maintain what we have and reverse some of the damage that has been done.

In conducting our work, we are building relationships with traditional owners because we believe they are central to managing the country's biodiversity. Their relationship with lands and waters goes back thousands of years and as first people they have a special and unique status. We operate on the land of the Kokatha, and our partnership is deepening and becoming more productive.

We do great conservation science; provide an extraordinary training ground for young graduates; engage our community; and partner and influence for better conservation practice.

We are fortunate to have an outstanding chief executive and a great staff. Our success can be attributed to our supporters, including the unwavering support of the local community, our Scientific Advisory Panel, and the long-term commitment of major sponsors – BHP, SA Department for Environment and Water, the University of Adelaide and Bush Heritage. Finally, I acknowledge the contribution of Directors to steering and governing the enterprise. They play an essential role.



# CEO Report

KATHERINE TUFT

---

Arid Recovery has gone from strength to strength this year. The fence, our essential piece of infrastructure, is at last ahead of the relentless corrosion that threatens to undo 26 years of conservation work. This achievement is thanks to a large grant from the Australian Government, hard work by the Arid Recovery team and Kokatha Pastoral fencing contractors, and good science through our collaboration with soil scientists and metallurgists.

This year we made a significant improvement to the prospects of an enigmatic threatened species by providing kowaris protection in their first ever cat-free safe haven. We could not be happier with the success of the first translocation of kowaris and look forward to building up a sound understanding of this little-known animal.

Arid Recovery's science program continues to punch above its weight in developing the evidence base for reintroductions and safe haven management. With our collaborators, the research program is tackling two great challenges in finding solutions for recovery of threatened species beyond the fence and in understanding and adapting to the intensifying impacts of climate change. Arid Recovery's independence allows us to push the boundaries and try novel ideas with the thoughtful input of our Scientific Advisory Panel.

Connecting with the communities of Roxby Downs and the wider region continue to bring us much joy as we share passion for desert ecosystems and conservation. I am particularly proud of the depth of relationships we have developed with the Arabana Rangers to our north, and with the Kokatha community – marked this year by our brand new partnership with Kokatha Pastoral.

I extend my thanks and appreciation to Chair Allan Holmes and our quality Board, and to the excellent and dedicated team I have so much pleasure in working with. Finally, none of Arid Recovery's achievements are possible without the stalwart support of our core partners and the many supporters who donate to the cause.

# Arid Recovery Board

For more information on the people of Arid Recovery visit our website at [www.aridrecovery.org.au](http://www.aridrecovery.org.au)

**Allan Holmes**

Chair of Arid Recovery Board, Independent  
Ex-CEO SA Department for Environment and Water

**Stephen White**

Representative for BHP  
Principal, Rehabilitation & Biodiversity

**Sandy Carruthers**

Representative for SA Department for Environment and Water  
Executive Director, Strategy Science and Corporate Services

**Laura Parry**

Representative for the University of Adelaide  
Interim Executive Dean, Faculty of Sciences

**Heather Campbell**

Representative for Bush Heritage Australia  
CEO

**Mark Priadko**

Independent  
Financial management, financial and business analysis and business case consultant

**Andrew Corletto**

Independent  
Partner, Minter Ellison

**Emily Jenke**

Independent  
Co CEO, DemocracyCo

**Martin Smith (to April 2023)**

Representative for BHP  
Head of Health, Safety & Environment, BHP Olympic Dam



New Arid Recovery Board member - Stephen White

## Scientific Advisory Panel for 2022-23

Professor Laura Parry continues as Chair of the Scientific Advisory Panel and Board representative for the University of Adelaide. Laura is the Interim Pro Vice-Chancellor (Research) at the University of Adelaide.

In 2023, panel member and Arid Recovery co-founder Peter Copley retired from an impactful career with the SA Department for Environment and Water spanning four decades. Peter was integral to the first reintroduction at Arid Recovery (greater stick-nest rats) and has been an important government representative on recovery teams and in conservation planning for threatened species. We are pleased that Peter will continue to contribute to the panel as a lifelong friend of Arid Recovery.

The Panel met four times during 2022-23. Throughout the year the Panel contributed to kowari conservation planning, provided advice on research applications and supported Arid Recovery's pivot to research focussed on climate change impacts and adaptation.



Scientific Advisory Panel member - Peter Copley

## Panelists

Professor Laura Parry	Arid Recovery Board
Dr Jeremy Austin	University of Adelaide
Peter Copley	SA DEW
Dr Graeme Finlayson	Bush Heritage Australia
Allan Holmes	Arid Recovery Board
Dr Heather Neilly	Australian Landscape Trust
Dr Reece Pedler	UNSW, Wild Deserts
John Read	Ecological Horizons
Dr Dan Rogers	SA DEW
Dr Stephanie Williams	Ecological consultant

# Arid Recovery Staff

## Chief Executive

Dr Katherine Tuft

## Principal Scientist

Dr Katherine Moseby

## Ecologist

Dr Genevieve Hayes

## Administration Officer

Erica Mayer-Zirn

## Conservation Land Management Officer

Nathan Manders

## Community Coordinator

Ines Badman

## Safe Haven Support Officer

Nicole Galea

## Rabbit incursion support

Harrison Talarico

Ned Ryan-Schofield

Molly Barlow

## Fence Maintenance Officer

Dr Hugh McGregor

## Wildlife Hotline

Hayley Randall

## Interns

Molly Barlow, Emma Randle,

Victoria Love

## UNSW Research Officer

Dr Kylie McQualter



↑ Nathan Manders working in the field.

The Arid Recovery staff go above and beyond, volunteering a great deal of their time to help keep the Reserve secure, research progressing and the organisation running smoothly. We could not do it without you.

# Thank you to the volunteers of Arid Recovery for all their support

Courtney Adams

Isabel Anderson

Leon Anesbury

Gerry Anesbury

Oli Aylen

Casey Barczynski

Molly Barlow

Spike Barrow

Nathan Beerkens

Yashila Ballakrishnan

Harry Benn

Jamie Breward

Milly Breward

Todd Burns

Grant Cradock

Hayden Cradock

Bryce Cramer

Shane Crespan

Travis Crompton

Ash Curtis

Tyrone Demaine

Kelsey Donally

Robert Dugand

Robbie Dunn

Jacob Fagg

Corrie Ferguson

Grace Findlay

Graeme Finlayson

Nicole Galea

Grace Harmer

Jaclyn Harris

Alex Hayes

Frank Ingwersen

Adrian Kennett

Harrison Kent

Maggie Li

Katya Lindsay

Hamish Longbottom

Victoria Love

Tessa Manning

Alex Marinelli

Hugh McGregor

Andrea Merrylees

William Merrylees

Philip MOser

Milo Morrison-Jones

Tallai Morrison-Jones

Anke Oatley

Brenton Oldfield

Jason Patel

Eddie Pang

Kiara Poulson

Linda Prior

Tyson Qualmann

Emma Randle

Bridget Roberts

Scott Rodgers

Joe Rosa

Janet Rosa

Alistair Russell

Natasha Schedvin

Ned Ryan-Schofield

Maddy Scott

Shane Scuteri

Alicia Simpson

Robbie Simpson

Matthew Steed

Ben Stepkovitch

Andrea Stiglingh

Millie Sutherland Saines

Katie Szabo

Harrison Talarico

Emma Thomas

Max Tibby

Peter Tuft

Robyn Tuft

Taney Warren

Jonah Wiltshire

Constance Wilson

Dale Wilson

Jonah Wiltshire

Kimberly Wyatt-Read

Mark Young

Rachel Young

# State of the Reserve

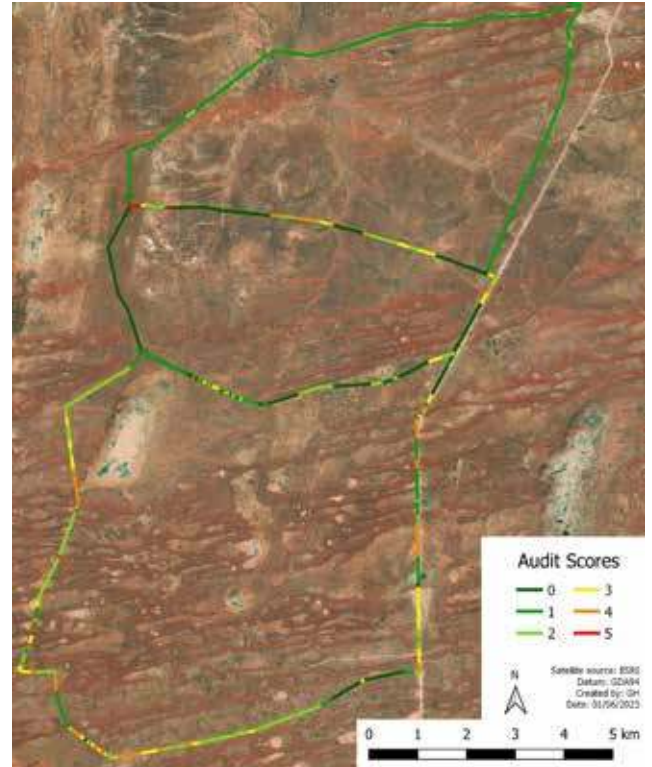
The fence is in excellent shape after significant investment through the Commonwealth Safe Haven grant and internally funded works in the last year. Steady improvements have also been made to the research station, to better support students and volunteers studying and working at Arid Recovery. Heavy rain events have presented some additional challenges to fences and tracks, while the successive good seasons have led to a record boom in feral cat activity outside the reserve.

## FENCING WORKS

This year saw the best fence audit results in many years (see map) as a result of significant investment in footnetting during 2022 and 2023. Weekly fence checks have ensured we are on top of any potential breaches and allowed us to rapidly replace footnetting in areas of high pressure.

Electric fences have been performing well. Any areas susceptible to high winds are well known and measures have been taken to decrease the likelihood of faults. Works have begun on raising sections of fence that have become too low as sand dunes have shifted, with roughly 200m of raising completed. Issues with the main entrance gate arose this year when one of the hinges snapped. Sturdy temporary repairs were made while quotes have been sought to replace and upgrade the gate.

A huge rain event just before Christmas 2022 knocked down a 50m section of fence on the western boundary. A staff member was stationed at the reserve and found the fallen fence on the following morning check. Additional staff were able to get to the reserve that day to erect a new section of fence. The electric fence was rewired and reinstated in the following days.



▲ 2023 fence audit showing few sections of corroded footnetting after major works through 2022 and 2023. Map prepared by Genevieve Hayes.

Work has commenced on straightening and reinforcing 1.5km of fence along the western boundary of the Northern Expansion where posts have become corroded. While the fence is stable in its current state, another windy spring coupled with any large rain events might pose a significant risk.

A few good years have seen vegetation growth along fencelines pose some issues by obscuring the view during fence patrols. A local contractor was engaged to undertake vegetation clearing along the external boundaries of Main Enclosure and First Expansion and up into the western boundary of Second Expansion. Follow-up spraying will be completed by land management staff as well as further vegetation clearing around the reserve.

New corrosion resistant fencing materials have arrived. These stainless steel and PVC-coated netting products will be used at scale in an expansion of fencing material trials in collaboration with Waratah based on the soil corrosion research done by PhD student Andrea Stiglingh.

◀ Storm damage to western fence, Dec 2022. Photo: Nathan Manders



## INCURSIONS

Work with incursion rabbits has been continuous, with additional staff employed to assist. Track and then photo evidence was picked up in June 2022 on the eastern boundary of Northern. Reconnaissance quickly narrowed the rabbit down to a specific area and it was shot a day later. Rabbit incursion monitoring has continued with nothing further picked up since June.

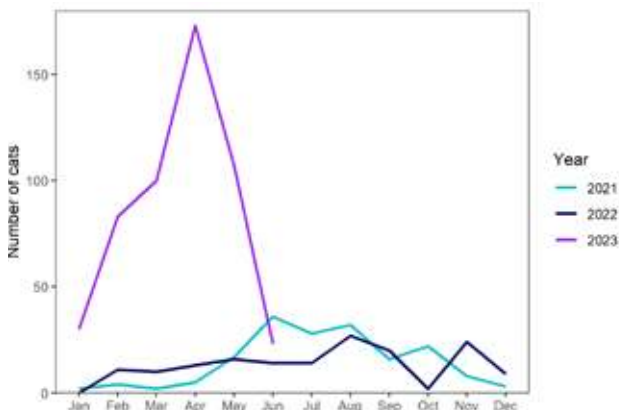
There have been at least 3 cat incursions in the past year. One incursion in Northern coincided with the major storm-driven fence breach in December. Traps and cameras were deployed and track scans done for weeks with no further sign detected. Professional shooter Frank Bernhardt shot a cat in Northern a month later. At least two more incursions were picked up in June. Traps were set in Northern and Red Lake and extra cameras added to the array in Northern. Track scans were completed on a regular basis with no further sign picked up to this date. Surveillance continues.

## FERAL ANIMAL CONTROL

2023 has seen an extraordinary number of feral cats removed from the landscape around the reserve. While numbers over the past 2-3 years have steadily increased, 2023 saw a boom that broke all our records. The implementation of the new Celium trap alert system meant we were able to run even more perimeter traps without the added effort of manually checking them. 186 cats were caught in perimeter traps. Shooting efforts also ramped up this year with the addition of a few more volunteer shooters and some of the current shooters going out on a more regular basis. Shooters removed 332 cats and two foxes.

Injected meat baits were again deployed over a 7-10km buffer from the Reserve perimeter to target foxes, with thanks to our neighbours Kokatha Pastoral who support this work on their land. A grant from the Thylation Foundation for subsidised Felixer hire saw the addition of 5 Felixers around the reserve for parts of the year, in addition to Arid Recovery's own Felixer. This year alone, the Felixers have removed a total of 104 cats and 4 foxes.

Combining all methods (Felixers, trapping and shooting) we removed a staggering 612 cats and 6 foxes in 2022-23.



↑ Feral cats removed from around the Arid Recovery Reserve 2021-2023 showing the exceptional numbers in autumn 2023.



↑ Feral cat captured in a cage trap. Photo: Hugh McGregor

## EROSION CONTROL

Some large rainfall events over the past 12 months have caused erosion issues around the reserve. A successful application for an SA Arid Landscapes Board Grassroots Grant has allowed for training in skid steer and grader operations as well as the hire of a skid steer for 3 weeks. Works levelling heavily eroded areas and constructing woah-boys have been completed along the southern boundary of Dingo Pen and the northern boundary of Red Lake.

Heavily eroded sections of track along the external boundary on Roxby Downs Station have been assessed with Roxby Downs Station staff and soil conservation expert Col Stanton. These works are likely to be completed in the new year by members of the Kokatha ranger group with the use of Kokatha Pastoral machinery.

## INFRASTRUCTURE

Split system air conditioners were installed in all bunkrooms at the research station to support workers over summer. A new gas hot water service has been fitted to the outdoor bathroom and a new water tank was installed to replace a leaking tank. A BHP Community Donations grant was awarded in May to support visitor infrastructure. Funds will be used for new signage, an outdoor kitchen/BBQ area and new chairs for starlight dinners.

ATVs are essential to all manner of work around the reserve. After months of having no working ATVs we are now back to a full set thanks to a local small engine mechanic. Repairs to the dual axle trailer made it safer for transporting all ATVs.

During their stay, volunteers Joe and Janet Rosa were able to repair stonework around the firepit, finish erecting a permanent elevated housing for the northern electric fence energisers, and gave the trapping shed a much needed tidy up. With the help of a donation from long time local volunteer Mark Young, we were able to purchase a new welder/generator which will make things much easier when it comes to repairs around the reserve.

# Re-introduced species monitoring

Track count monitoring of reintroduced mammal species was conducted quarterly in the four southern compartments of the reserve. The annual cage trapping survey to closely monitor reintroduced species in the Main Exclosure in May 2023 yielded population estimates for bettongs and bilbies.

## BURROWING BETTONGS

Burrowing bettong track counts are starting to increase following the 2018/19 drought, and have reached post-drought highs. After remaining stagnant for several years, activity has increased across most of the reserve. Population estimates generated from capture-recapture data in the Main Exclosure show some population growth, increasing from an estimated 79 individuals in 2022 to 105 individuals in 2023. Overall body condition remains a concern, with several ongoing studies attempting to address the issue.

## GREATER BILBIES

Bilby activity remains high following improvement post-drought, and has largely stabilised across the reserve. Bilby captures during the annual cage trapping survey in the Main Exclosure were higher than in 2022, with 39 individuals recorded from 52 captures compared with 31 individuals from 41 captures. Spatially explicit capture-recapture models estimate the bilby population within the Main Exclosure to be around 103 individuals.

## SHARK BAY BANDICOOTS

Shark Bay bandicoot activity across the reserve remains high post-drought, with activity highest in the quoll-free Main Exclosure. Compared to 2022, bandicoot captures were significantly lower during this year's annual cage trapping survey in the Main Exclosure; 19 individuals were recorded from 23 captures, compared with 41 individuals from 59 captures in 2022. Disturbance from bettongs removing available traps likely accounts for some of this drop. Similarly, high track activity of other species obscuring bandicoot tracks also likely account for the unexpected decline in bandicoot track activity earlier this year.

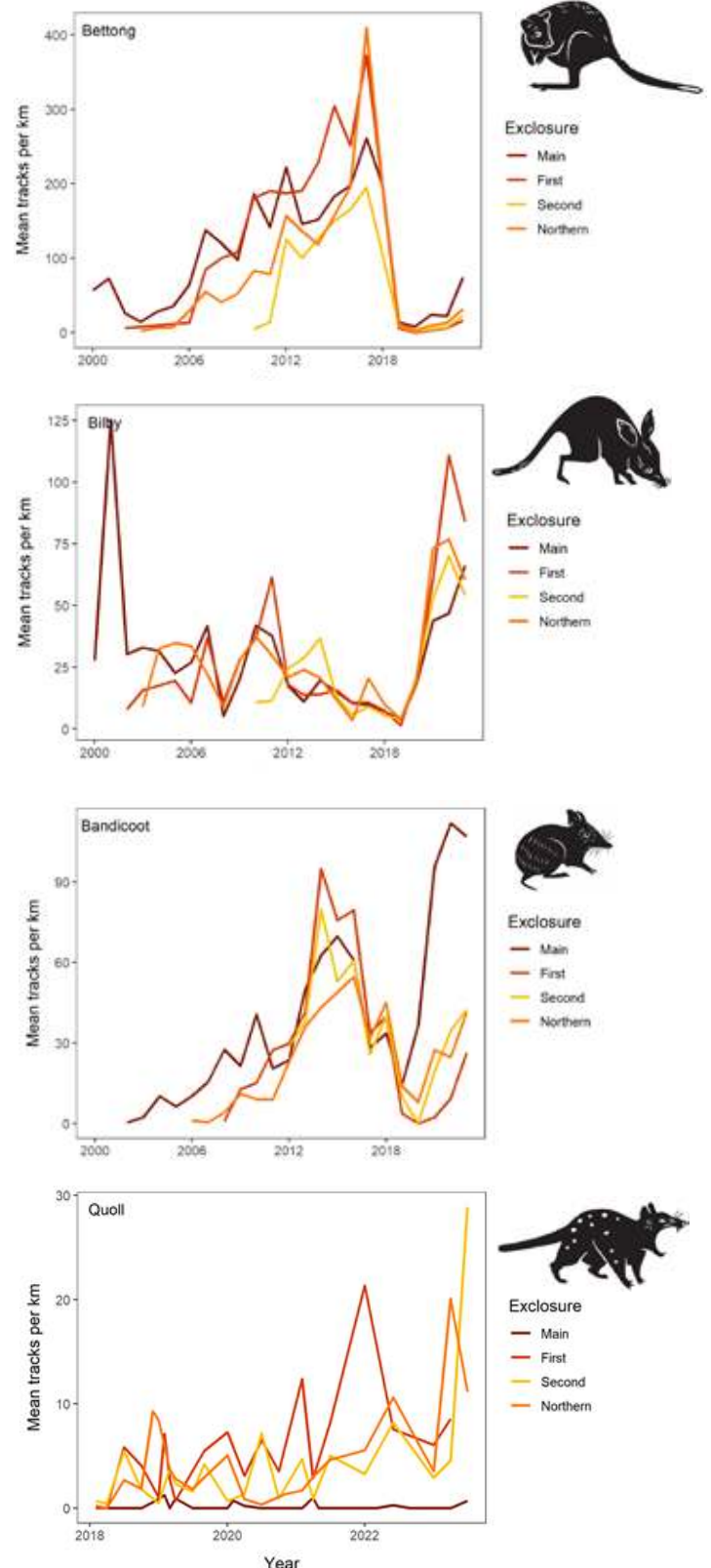
## GREATER STICK-NEST RATS

Stick-nest rats are functionally extinct at the reserve, with no detection made since January 2023. There are no imminent plans to reintroduce the species to the reserve, with climate change presenting a major challenge to the species' viability in arid regions and other projects across Australia providing sufficient safe havens for the species.

## WESTERN QUOLLS

Quoll activity data are noisy, but show a general increase since their release in 2018. Quolls are opportunistically captured in cage traps around the perimeter of the reserve and on remote camera trap images. Through these data, a student assessing the Arid Recovery quoll population has found there may be up to 70 individuals inhabiting the reserve and surrounds.

## TRACK COUNTS FOR REINTRODUCED SPECIES



# In situ fauna



Desert Mouse (*Pseudomys desertor*), sand goanna (*Varanus gouldii*) and stripe-faced dunnart (*Sminthopsis macroura*). Photos: Genevieve Hayes

**2023 SURVEY** Annual pitfall trapping was conducted in March 2023, with 19 swale sites trapped over four nights. This year's survey saw record high captures at swale sites; 1,506 individuals of 28 species of mammal and herpeto-fauna were captured. A team of enthusiastic volunteers were kept busy by the high captures, guided by AR staff, Genevieve Hayes, Kath Tuft, and Katherine Moseby, and Bush Heritage Ecologist, Bridget Roberts.

**NATIVE SMALL MAMMALS** There was a substantial increase in small mammal numbers since the last swale survey. Spinifex hopping mice, *Notomys alexis*, and plains mice, *Pseudomys australis*, comprised the majority of this year's mammal captures. There was a clear bias in mammal captures inside versus outside, with 95% mammals caught inside the Reserve.

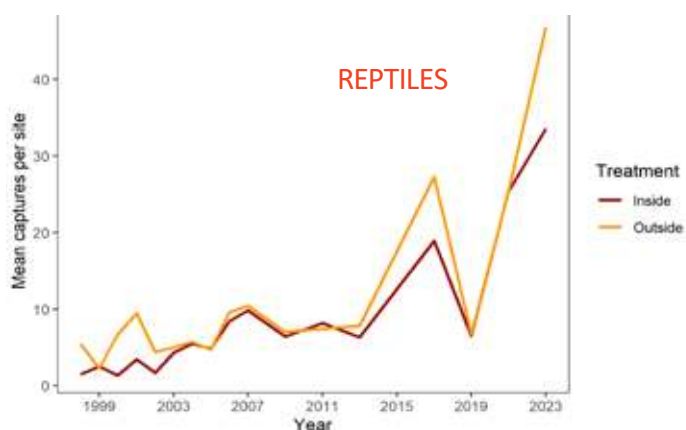
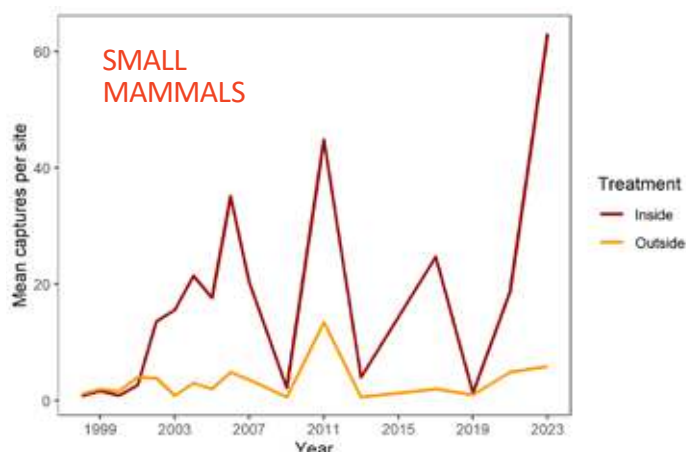
**REPTILES** Conditions during this year's survey were mild and made interpreting reptile captures difficult; however, there was no significant difference between mean captures inside and outside the Reserve. Interestingly, all 10 goannas captured during the survey were trapped inside the Reserve, for which there was only a 1% probability of occurring by chance, suggesting a clear bias in populations inside versus outside.

## PLAINS MOUSE TRANSLOCATION

In May 2023, 50 plains mice were harvested from Arid Recovery Reserve and released at Secret Rocks Nature Reserve. This is the second translocation of plains mice from Arid Recovery in the past twelve months, with the release representing the first wild-to-wild translocation.

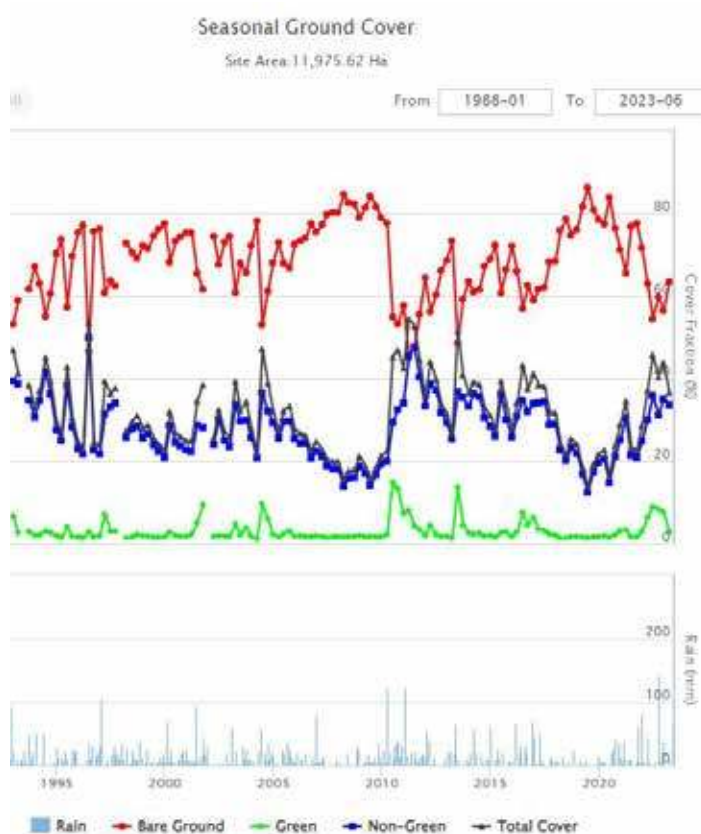


Painted dragon (*Ctenophorus pictus*). Photo: Genevieve Hayes



↑ Capture rates of individual small mammals (above) and reptiles (below) captured in pitfall surveys in swale habitats between 1998 and 2022, both inside and outside the Reserve.

# Vegetation condition



Left: VegMachine output for reserve area 1997 - 2023 showing percent cover of bare ground, total cover, green and non-green cover. Above: Maeriana (bluebush) in fruit.

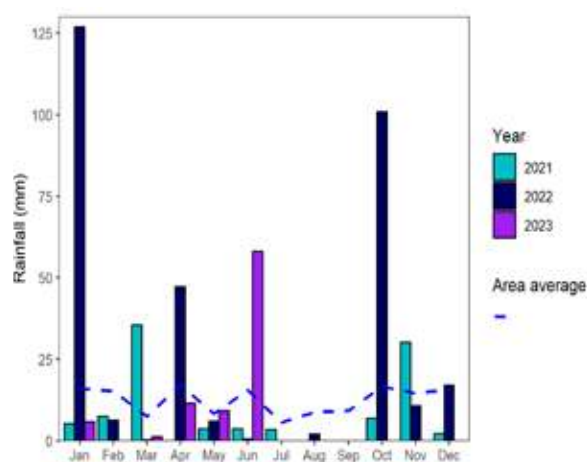
## RAINFALL EVENTS

The reserve received 85.7 mm rainfall in the first six months of 2023, and 216.1 mm total in the 2022-23 financial year. The Bureau of Meteorology’s El Niño-Southern Oscillation outlook currently suggests a 70% chance of El Niño forming in 2023 – three times the normal chance of such an event. This will have serious implications for rainfall around the reserve over summer 2023/4.

## VEGETATION RESPONSE

The condition of vegetation continues to improve in response to above-average rainfall. Significantly, chenopods (saltbushes and bluebushes) have responded to winter rainfall in June 2023 with widespread flowering and fruiting. This is the first observation of widespread chenopod fruiting in seven years, corresponding with a dearth of autumn and winter rainfall over that time.

While the chenopod response is very welcome, the trend for loss of autumn/winter rainfall follows regional climate projections and is likely to continue. Projections indicate no overall reduction in average rainfall but a shift in its seasonality. Autumn and winter weather-bands bringing rain from the Southern Ocean are drifting southwards, while the more sporadic spring and summer weather-bands bringing tropical systems become more prevalent.



Rainfall by month for 2021 - 2023, with dashed line showing monthly average rainfall.

## REMOTE SENSING

Outputs from VegMachine show a rapid increase in ground cover following the 2018-19 drought, to coverage close to what occurred during the last significant rain period of 2011.

## SOIL SEED BANK STUDY

The seed bank study commenced by graduate Jack Bilby is continuing with assistance from the South Australian Herbarium. The 750 samples have been taken to Adelaide where the herbarium staff will support volunteer Tanya Green to sort and identify seeds. The study repeats sampling that was conducted in 2005 to assess changes in seed availability following bettong over-abundance and drought.

# Kowari translocation

Arid Recovery, led by Ecologist, Genevieve Hayes, translocated 12 independent kowaris (8F, 4M) to the reserve in August 2022. Prior to this release, the species was not represented in any safe havens across the country, despite being identified as highly susceptible to cat predation. The translocation was funded through a grant from the Australian Government's Environment Restoration Fund to support the nation's network of predator-free sanctuaries to protect under-represented species.

Kowaris were harvested from their natural SA stronghold at Clifton Hills station, transported by air to the reserve, and released into soft-release pens in the Red Lake Expansion to help acclimatise them to their new surroundings. We were fortunate that seven of the eight females were each carrying six small dependent pouch young (42 in total).

Kowaris did not hyper-disperse as has been found in releases of other dasyurids. The time spent in release pens appeared unrelated to dispersal distance. Post-release survival was high, with only one unconfirmed mortality event (likely predation) and one individual untrackable. Excitingly, at least 75% of translocated young survived to denning age, and over 90% of those denned reached dispersal age. Of those young, 24 were able to be trapped and tagged, with DNA samples taken to measure genetic diversity of the founding population.

Males established larger home ranges than females, with regularly-used burrows more dispersed, and generally showed less site fidelity. While competition for shelter sites resulted in displacement in some instances, some individuals regularly co-occupied shelter sites. Home ranges were also not segregated, with most individuals' home ranges overlapping with at least one other kowari. Kowaris have now been detected (via camera traps) across most of the Red Lake Expansion, as well as within Dingo Pen and the Northern Expansion.

In the wild in South Australia, kowaris occur exclusively on vast gibber plains interspersed with small sand mounds where they den in burrows. At Arid Recovery, radio-tracked kowaris were found in swale/gibber areas only, avoiding dune areas for diurnal shelter sites. They largely colonised plains mice burrows and calcrete bettong warrens. Many of these shelter sites were concurrently active with other species. Individuals typically moved between several shelter sites, with only one individual restricted to one burrow.

The trial translocation reached all of the tested success criteria, with monitoring of the established population ongoing. There were indications in March 2023 that a second breeding event is underway. A plan for a future supplementation is being developed, with some individuals hoped to be sourced from Queensland populations to maximise the genetic diversity of Arid Recovery's founding population.



↑ Top to bottom: kowari drinking in release pen, mother and two young outside a den, kowari on release. Photos by Robert Dugand & Genevieve Hayes



↑ Pouch young of translocated. Photo: Genevieve Hayes

# Research

## HEATWAVE IMPACTS

UNSW Research Officer, Kylie McQualter, and PhD Student, Jack Bilby, are contributing to the Future Fellowship project of Arid Recovery Principal Scientist, Katherine Moseby, by investigating how native and invasive mammals are impacted by extreme heat events. By attaching a combination of radio and GPS transmitters, data loggers, and accelerometers to bilbies, bandicoots, rabbits, and cats, they will investigate how these species change their foraging and sheltering behaviour during heatwaves. The project is using thermal cameras mounted on drones to map microclimates across the habitats telemetered animals are using.

## RESPONSE OF FERAL CATS TO REPTILE CUES

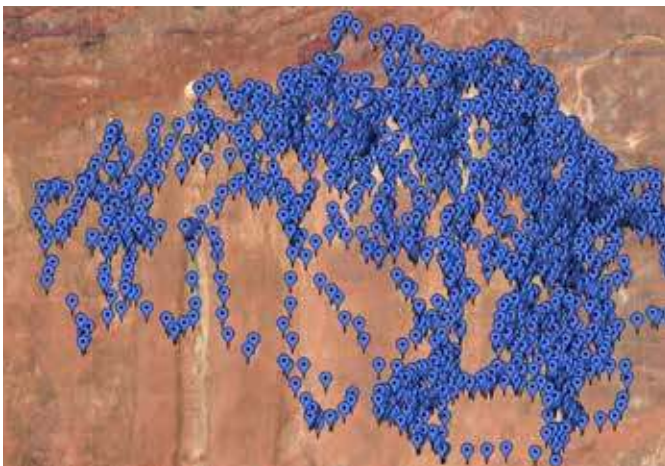
UNSW researchers, Katherine Moseby, Kylie McQualter, and Hugh McGregor, are investigating the response of feral cats to various reptile stimuli. Cats contained in a purpose-built pen have been exposed to reptile audio, olfactory, and visual lures to document interactions. The project is also documenting the behaviour of cats when hunting reptiles using video collars.

## CAT-REPTILE INTERACTIONS

Monash University PhD student, Claire Walke, and Honours student, Christina Paizis, are investigating the ability of various lizard species to detect and respond to sources and concentrations of feral cat odours, with the aim of understanding the behavioural responses of Australian lizards to feral cats.

## BURROWING BETTONG DNA

The University of Western Australia Masters student, Tim Mendoza, analysed SNP sequences from three time points to investigate contemporary vs historic genetic diversity and population health of burrowing bettongs at Arid Recovery. Preliminary results suggest that the contemporarily-sampled bettongs (2020-2022) are not noticeably inbred, but that there is a high degree of relatedness (as expected given the small population size), which will ultimately lead to inbreeding without intervention.



↑ Katherine Moseby releases a bilby. Photo: Frank Kutsch

## FERAL CAT GENETIC MAPPING

Arid Recovery is collaborating with BHP to quantify the extent to which supplementary resources at the Olympic Dam mine could be inflating cat numbers around the Arid Recovery Reserve. This question will be addressed by analysing and examining spatial patterns of relatedness between individual cats removed from around the mine and the reserve. A strong link between the two groups of cats will justify increasing control efforts around the mine.

## MULGA WOODLAND CLIMATE VULNERABILITY

University of Western Sydney PhD student, Aaranya Sekaran, is investigating drought-induced die-off of mulgas (*Acacia aneura*) across the arid rangelands, including at Arid Recovery and Bush Heritage's nearby Bon Bon Station. The project will repeat earlier research measuring recruitment and seedling survival for mulgas, and build field data into climate models to project likely outcomes for mulga woodlands.

## MICROBAT COMMUNITIES

University of NSW PhD student, Oli Aylen, visited Arid Recovery in early 2023 to place acoustic monitors inside and outside the reserve. He is studying the response of microbat communities to predator exclusion and mammal reintroduction here and at Wild Deserts in far northwestern NSW.

## PUBLICATIONS

Two theses (one PhD, one Honours) were submitted in 2022-23 and five scientific papers published on research conducted at Arid Recovery.

- ◀ Positions of a feral cat recorded at 10 minute intervals for heatwave research. Map from Kylie McQualter, UNSW

## Featured research publications

### Manning et al. 2022

In their paper “Skewed paternity impacts genetic diversity of a small reintroduced population of western quolls” (published in Australian Mammalogy), Honours student Tessa Manning and co-authors showed how assessing paternity of the first generation of young quolls born at Arid Recovery revealed that one male had sired 65% of offspring. This was important information for maximising the genetic diversity of the reintroduced population, and we subsequently swapped the high performing male for two different males. Tessa also found the first evidence for multiple paternity in western quolls, whereby young from the same litter can have different fathers.

### Stiglingh et al. 2023

PhD student Andrea Stiglingh and co-authors tested performance of different fencing materials to soil corrosion risk in their paper “Mapping soil corrosivity in an Australian arid environment and comparing corrosion rates of exclusion fence netting with different zinc coatings” published in the Geoderma Regional. This work informed selection of materials for the large maintenance works program in 2023 and is being applied at other sites in collaboration with manufacturers at Waratah.

# Climate change

Climate change presents a major challenge to Arid Recovery, threatening the persistence of some species and affecting the stability of the ecosystem, with flow on effects to Arid Recovery’s effectiveness as a conservation reserve and research program.

The 2021 Climate Change Action Plan set out four target areas, progress against which is described below.

## 1. MITIGATE

In 2022 we trialled an electric 4WD vehicle. It has advantages in being zero emissions (charged from solar power) and running more quietly than a diesel vehicle. At present however, EVs for ‘off-road’ use are challenged by lack of access to expertise in servicing.

We have also been steadily electrifying tools to reduce fuel use and upgraded the research station to run air conditioners on solar power so that we can accommodate researchers studying heatwave impacts during the hot summer months.

## 2. ADAPT

Lessons from the 2018-19 drought experience are being implemented by improving and adding soaks as a drought relief measure, setting thresholds for managing grazing pressure and preparing fencing to prevent rabbit incursion risk caused by sand movement. We also trialled using artificial structures for reducing animals’ exposure to extreme heat.

Projected increases in intense storms became a reality in late 2022 when a hailstorm and heavy runoff flattened a section of fence. Climate risks have been built into Arid Recovery’s new Infrastructure Plan to shore up the fence and other equipment to better prepare for these extreme events.

Electric Suzuki →

## 3. UNDERSTAND

Arid Recovery’s Research Plan has pivoted to prioritise focused research on climate impacts and adaptations. So far research has tested thermal properties of a range of heat refuges for stick-nest rats (Isabelle Onley PhD, University of Adelaide), assessed the tolerances of heat extremes for native compared to introduced fauna (Katherine Moseby Future Fellowship and Jack Bilby PhD, UNSW) and explored drought impacts on predator-prey dynamics between quolls, other reintroduced species and native rodents (Ben Stepkovitch PhD, UNSW).

## 4. SHARE STORIES

Arid Recovery has been driving climate conversations in the sector with discussions in recovery teams, through the safe haven network and with BHP’s global environment team. Our Climate Change Action Plan has been shared through a range of presentations, including to the federal environment department and Threatened Species Commissioner, and at the NESP Climate Hub’s Climate Adaptation Conference 2023.



# Arcoona Lakes birdlife



Purple swamphen, gull-billed tern and red-necked avocet. Photos: Robert Dugand

Arid Recovery is collaborating with Kokatha Pastoral to conduct bird surveys at four of the Arcoona Lakes occurring on three pastoral leases managed by the Kokatha Pastoral enterprise (Roxby Downs, Andamooka and Purple Downs stations). The Arcoona Lakes have been recognised as Key Biodiversity Areas for their value to birdlife as ephemeral inland waterbodies. Large rain events throughout 2022 provided a unique opportunity to study the bird species present around the Arcoona Lakes.

The study, being undertaken by Arid Recovery Ecologist, Genevieve Hayes, and The University of Western Australia Postdoctoral Research Associate, Robert Dugand, is assessing species diversity and community assemblages, and will provide estimates of abundance and breeding over time at the lakes, with an emphasis on water- and shore-birds.

Notes are also being made on feral predator and livestock activity to support Kokatha Pastoral's management of the Arcoona Lakes. The new Kokatha Ranger program will help to install livestock fencing around key waterbodies and to conduct feral animal control.

The lakes provide habitat to globally threatened species, such as blue-billed duck, and support large congregations of multiple water and shore-birds, including freckled duck, pink-eared duck, hardhead, grey teal, banded stilt, and red-capped plover. Migratory shorebirds like curlew sandpipers and red-necked stints fly from Siberia, spending winter in Australia (our summer) in various locations (depending on the species). They use the East Asian-Australasian Flyways, which can go via northwest Western Australia.



↑ Pink-eared ducks. Photo: Robert Dugand



↑ Lake Mary. Photo: Robert Dugand



# Working together on Country



↑ Auntie Barbara Amos cooking kalta on the campfire. Photo: Kath Tuft



↑ Visiting the Andamooka Station homestead. Photo: Kath Tuft

Arid Recovery had another busy year working with Kokatha Pastoral (the enterprise arm of Kokatha Aboriginal Corporation) to support land management on lands neighbouring the Arid Recovery Reserve. Staff from both organisations participated in soil conservation training, coordinated feral animal management in the region and discussed kangaroo management.

Kokatha Pastoral contracted Arid Recovery to survey birdlife and other biological values of the Arcoona Lakes system after they filled with rainwater. Members of the Kokatha community ran a stall at the Arid Recovery Open Day, talking to visitors about cultural heritage and work on the stations.

Kath Tuft and Nathan Manders continued surveys mapping bush tucker with senior women Irene Johnson and Barbara Amos who spent their early childhood on that country. A weekend of mapping culminated in a meal at Arid Recovery with marlu wippu (kangaroo tail) and kalta (sleepy lizard) cooked on the coals, and the ladies' first encounter with a bilby.

The development of the relationship with Kokatha Pastoral culminated in signing of a Memorandum of Understanding to work together to look after land and build the knowledge base and people to do it. The partnership will be launched in September 2023, along with the new Kokatha Ranger program.



↑ Picnic break during bush tucker mapping on Roxby Downs Station with Kokatha women. Photo: Kath Tuft

## INDIGENOUS PARTNERSHIPS



↑ Arabana Rangers learning to trap, handle and measure burrowing bettongs at Arid Recovery. Photo: Bill Harman



↑ Arabana Ranger Stanley Winfield examining a dragon during pitfall trapping at Canegrass. Photo: Ines Badman

The Arabana Cultural Rangers participated in more activities on Country with Arid Recovery during the year. The science team helped to produce a report on the successful fauna survey on Finnis Springs in support of healthy country planning for Arabana land.

The Rangers visited Arid Recovery to help with a quoll trapping survey, staying up late to check traps at night and early in the morning. They also helped to establish grazing monitoring plots at the new soak in the Main Enclosure and helped search for rabbit incursion signs.

Researcher Hugh McGregor worked with the rangers over a week to trap for dingoes to fit camera collars to in a project with the National Museum.

These joint activities have been great for establishing friendships across the teams, support Arid Recovery's work and contributes to the rangers' Certificate training in Conservation Land Management being completed through TAFE.

At the Board level, Directors have been building relationships with the Aboriginal corporation Boards and scoping how the organisation can partner more closely with indigenous communities around Arid Recovery. In building these connections we were pleased to welcome Dr Roger Thomas, SA Commissioner for Aboriginal Engagement to Arid Recovery, and for the opportunity for Kath Tuft to present to the Arabana Aboriginal Corporation Board in Marree.



↑ Kath Tuft and Arabana Head Ranger Sam Stuart record data during pitfall trapping at Canegrass. Photo: Ines Badman

# Community

## INTERNSHIPS

Three Conservation Internships were offered to recent science graduates in 2022-23. Molly Barlow joined the team in 2022 and helped in the intensive post-release monitoring of kowaris. She returned in 2023 on contract work helping with rabbit incursions and fence patrols. Emma Randle started her internship with the 2023 pitfall trapping survey. She has since gained employment working with indigenous ranger teams in the Anangu-Pitjantjatjara Lands. Victoria (Tori) Love interned from May 2023. In addition to taking tours and supporting community events, she helped to develop new signage designs for the reserve. Tori is now employed as a Community Landscape Officer for the SA Arid Landscapes Board and will continue to interact with Arid Recovery through her role in the Kingoonya district. The Rendere Trust and Upotipotpon Foundation supported the internship program again in 2022-23.

## OPEN DAY

A record 174 people attended the 2022 Arid Recovery Open Day at the Reserve. Activities included a scavenger hunt, invertebrate display, radio-tracking, tracks in the sand, a BBQ and nature walks and multiple stalls. The day was made possible with our partners Inspiring SA, Bugs N Slugs, Andamooka Observatory, ESS, Roxby Community Hub, Roxby Community Library, Kokatha Pastoral, Bush Heritage Australia, BHP and the SA Arid Landscapes Board.

## ARTISTS IN RESIDENCE

Three Arid Recovery staff members coordinated an exhibition of their artworks at the RoxbyLink Gallery in July. There were detailed pastel animal portraits by Nicole Galea, abstracted landscapes by Nathan Manders and leatherworks by Hugh McGregor. In September, we hosted a two-week residency for three artists from the Jam Factory. Katherine Grocott (jewellery-maker), Hannah Vorath-Pajak (ceramicist) and Duncan Young (furniture-maker) were joined by our ceramicist collaborator Jane Bamford who makes art for wildlife. The artists participated in the whole gamut of activities at the reserve and will produce a body of work inspired by the experience.

## EVENTS

We were pleased to have community events come back into full swing after the years disrupted by COVID-19. Arid Recovery hosted two family nights at the reserve, participated in the Nature Play festival in Roxby, and gave book readings at Toddler Storytime at the Roxby Library. We supported DunnArts Productions to present their sold-out live theatre show including cameos from native animals with Animals Anonymous. Bilby Burrow continues to be a success, with children from the kindergarten and early primary taking part in bilby-themed activities in the lead up to Easter.

## STARLIGHT DINNERS

The Rotary Club of Roxby Downs District continue their exceptional work cooking delicious camp oven meals for starlight dinners this year. With their help, we hosted three groups including the SA Museum's Waterhouse Club, Eureka Tours and the Arid Recovery Board and Scientific Advisory Panel. We also hosted a number of BHP teams for evenings on the Reserve during the year.



↑ Participants at Roxby Nature Play event. Photo: Roxby Council



↑ Artists of Arid Recovery exhibition, RoxbyLink Gallery, featuring Nicole Galea, Hugh McGregor and Nathan Manders. Photo: Kath Tuft



↑ Bilby Bush Bash event at the Reserve. Photo: Ines Badman



↑ Jam Factory Artists in Residence listen to ceramicist Jane Bamford talk about her work building nesting structures for spotted handfish.

## COMMUNITY



← 2022 intern Molly Barlow with a kowari cake for Threatened Species Day

### TOURS

Visitors started to come back to the region following the COVID-19 driven downturn in tourism. We took 21 sunset tours to visit the Reserve at sunset, speak to staff about our work and to go spotlighting for wildlife. A new booking system is available through our website, making it easier for both visitors and staff. Visitors can seamlessly book a tour using the FareHarbor plugin service. Another eleven special interest group tours were organised, including tours for BHP Olympic Dam teams, and Roxby Downs Area School.

### EDUCATION

We hosted two school camps at the Reserve: St Barbara's Parish School in 2022 and the Oodnadatta School in 2023. The St Barb's kids were inspired by their camp to work together on a painting that the class presented to Arid Recovery and now hangs in the Education Centre. In the build-up to summer, Ines Badman took our snake ambassador, Tirari the woma python on education visits with the community, including to local schools and Roxby Kindergarten. These sessions are important for children and adults alike to understand how to respect and be safe around snakes that are frequently encountered in Roxby Downs. We attended presentations by year 1 and 2 students at Roxby Downs Area School where students shared their reports on native animals in the region, including species at Arid Recovery. We again hosted a session for students in the Operation Flinders program, doing GPS 'treasure-hunt' exercises to extend their hiking and navigation skills.

### UNIVERSITY CAMPS

Masters of Environmental Law students and leader Marg Castles were welcomed again in 2022, and in 2023 we hosted the 7th second year biology field camp for the University of Adelaide. Students work with demonstrators to run a range of animal survey methods and learn to identify different species of small mammal, reptile and bird.

### SUPPORTING RESPONSIBLE CAT OWNERSHIP

We worked closely with Roxby Council in 2023 to support the updated bylaw requiring residents to keep pet cats contained to their properties at all times. Arid Recovery liaised regularly with Council staff and produced a range of communications on the importance of cat containment for both wildlife and pet welfare.

### KINGOONYA LANDSCAPE GROUP

Nathan Manders continues to contribute to the Kingoonya Landscape group, a diverse collaboration of people throughout the region with an interest in land management and sustainable communities.

### BILBY BUSH BASH

A micro-grant from SA Nature Festival supported the inaugural Bilby Bush Bash event in collaboration with the Roxby Community Library. 140 people participated in the scavenger hunt around Roxby Downs, visiting businesses and community groups like the bakery, CFS, hospital and police station. The event culminated in families travelling out to Arid Recovery for a BBQ and sunset walk.

### MEDIA & PRESENTATIONS

Arid Recovery was featured in 58 stories throughout the year, including the ABC, Australian Geographic and InDaily. Kath recorded a podcast with the Aussie Wildlife Show, and gave a number of presentations including to Friends of Mound Springs and Bush Heritage supporters. Nathan Manders shared experience of trap alert systems at a practitioner's forum. We maintained our fortnightly slot on ABC North & West radio's breakfast program talking to regional South Australians.



↑ Kath & Nathan with a picture painted by children from St Barbara's Parish School after their camp at Arid Recovery.

## Community: by numbers

748	Tour guests
801	People attending events
3,400	Hours volunteered
58	Media articles, newsletters, blogs
1,300	Newsletter subscribers
18,530	Social media followers
20,754	Website visitors

# Partnerships

**BHP** Arid Recovery's partnership with BHP was formally renewed with a new 5-year commitment for BHP's ongoing support. The new agreement reaffirms BHP's very long-running financial support, details exchange of in-kind support and flags future collaboration between BHP, Arid Recovery and Kokatha Pastoral on the pastoral stations around the Reserve.

**SA Department for Environment & Water** The Department continued to support Arid Recovery throughout the year in coordinating conservation and community engagement activities in the region, and through support of the Scientific Advisory Panel.

**Bush Heritage Australia** Bush Heritage regional staff supported Arid Recovery in preparing for renewal of the partnership at the close of the current 5-year term. Both teams interact regularly on fauna surveys, community events and sharing land management expertise between Arid Recovery, Bon Bon and Boolcoomatta.

**University of Adelaide** Connections with the university during the year included hosting the 7th field camp for 2nd year biology students and Professor Laura Parry's chairing of the Scientific Advisory Panel.



↑ Intern Molly Barlow, Kath Tuft, Graeme Finlayson and Bruce Hammond from Bush Heritage at kowari soft release pens.

# Volunteers and supporters



↑ Lynda Prior, long-time supporter, visited in 2022 to volunteer constructing soft-release pens for the kowari reintroduction.

Volunteers are the backbone of what we are able to achieve at Arid Recovery and we are fortunate to have so many come from all walks of life. Our volunteers recorded 3,400 hours helping Arid Recovery in 2022-23. We are grateful to volunteers from our local community, and those that travel from far afield to help in many and varied ways.

Volunteers helped throughout the year with feral animal control, ecological surveys, infrastructure maintenance and community events. We were helped again this year by skilled volunteers who came to us through Bush Heritage's network.

Just as valuable to Arid Recovery's work are local businesses and other organisations that support us in many different ways. Red Mulga helped enormously with their services maintaining Arid Recovery's fleet and providing support for fuelling vehicles. Our thanks also to the Rendere Trust and Upotipotpon Foundation for their ongoing support of the Conservation Internship program. Alliance Airlines continue to kindly sponsor flights for Arid Recovery's Board to attend an annual on site meeting, and many other businesses make generous contributions (listed p21).

## Volunteer profile

Tyson Qualmann is a volunteer shooter and one of the most active in helping manage feral cats around the reserve. Since joining the registered shooters list in 2022, Tyson has removed more than 200 feral cats. His efforts were recognised with a special trophy. Volunteers like Tyson are critical in maintaining the feral free status of Arid Recovery.



# 2022-23 Financial Report

## INTERPRETATION

Income continued to improve in 2023 thanks to significant grant income, commitments from partners to grow support, particularly BHP and Bush Heritage, and further increases in donations. More tours and special events, and funding from BHP for cat research also boosted revenue. Expenditure in 2023 was relatively high as we delivered on grant projects, most notably the Commonwealth Safe Haven grant to upgrade fencing infrastructure and reintroduce kowaris. Other grant projects included kowari research (Thyne Reid Foundation), Felixer hire (Thylation Foundation) and erosion control works (SA Arid Landscapes Board). We managed to keep ballooning vehicle costs down thanks to support from local businesses.

## Balance sheet

ASSETS		
CURRENT ASSETS	2023	2022
Cash and cash equivalents	\$550,377	\$636,537
Trade and other receivables	\$66,265	\$221,849
Prepayments	\$2,864	\$918
Inventories	\$150,335	\$150,513
<b>TOTAL CURRENT ASSETS</b>	<b>\$769,841</b>	<b>\$1,009,817</b>
NON-CURRENT ASSETS		
Land & buildings	\$253,329	\$256,154
Plant & equipment	\$254,837	\$268,256
<b>TOTAL NON-CURRENT ASSETS</b>	<b>\$508,166</b>	<b>\$524,410</b>
<b>TOTAL ASSETS</b>	<b>\$1,278,007</b>	<b>\$1,534,227</b>
LIABILITIES		
CURRENT LIABILITIES		
Trade and other payables	\$21,773	\$68,807
Income in advance	\$256,273	\$693,691
Provisions	\$33,600	\$32,054
<b>TOTAL CURRENT LIABILITIES</b>	<b>\$311,646</b>	<b>\$794,552</b>
Provisions	\$23,621	\$19,418
<b>TOTAL NON-CURRENT LIABILITIES</b>	<b>\$23,621</b>	<b>\$19,418</b>
<b>TOTAL LIABILITIES</b>	<b>\$335,267</b>	<b>\$813,970</b>
<b>NET ASSETS</b>	<b>\$942,740</b>	<b>\$720,257</b>
TRUST FUNDS		
Retained earnings	\$942,740	\$720,257
<b>TOTAL EQUITY</b>	<b>\$942,740</b>	<b>\$720,257</b>

Lower administration costs in 2023 reflect the completion of spending on evaluation of the BHP partnership in 2022. Higher wages in 2023 reflect additional short-term staff hired for Safe Haven grant activities.

Capital outlay was made on new computers for some staff and air conditioning in rooms at the field station as more research is conducted in summer months as the program focuses on climate change. Funds held as income in advance were drawn down in 2023 as grant projects were delivered.

Arid Recovery is in a strong financial position with the 2023 year ending with a surplus. Much of the surplus is due to capital items and materials held in stock having been purchased using grant funds for project activities.

## FULL FINANCIAL AND AUDIT REPORT

Arid Recovery's accounts were audited by MRL Group auditors. The full audited financial report can be found on Arid Recovery's profile on the Australian Charities and Not-for-profits Commission.

## Income and Expenses

REVENUE	2023	2022
Sponsorship contributions	\$635,463	\$605,000
Research income	\$27,840	\$440
Fundraising	\$11,896	\$8,444
Grant income	\$488,717	\$212,125
Donations	\$78,769	\$65,440
Tours and events	\$20,023	\$12,297
Interest income	\$5,316	\$2,566
Other income	\$30,708	\$19,716
<b>Total income</b>	<b>\$1,298,732</b>	<b>\$926,028</b>
OPERATING EXPENSES		
Administration	(\$67,308)	(\$106,030)
Depreciation	(\$39,930)	(\$36,324)
Fencing materials	(\$129,998)	(\$32,620)
Flora and fauna management	(\$54,299)	(\$66,643)
Grant expenses	(\$162,818)	(\$96,588)
Merchandise	(\$2,521)	(\$1,027)
Motor vehicles	(\$34,145)	(\$40,652)
Research	(\$9,190)	(\$2,354)
Reserve maintenance	(\$9,508)	(\$4,690)
Volunteer and community	(\$14,233)	(\$9,228)
Wages and Salaries	(\$552,299)	(\$529,400)
<b>Total expenditure</b>	<b>(\$1,076,249)</b>	<b>(\$925,556)</b>
<b>OPERATING SURPLUS/(LOSS)</b>	<b>\$222,483</b>	<b>\$472</b>



## SUPPORTERS

What better way to contribute to Arid Recovery than sponsoring the Kowari

### Adopt a Kowari

Your sponsorship includes:

- Certificate of sponsorship
- Regular updates on kowari conservation
- Our heartfelt thanks for your support of this enigmatic desert predator.

📍 Adopt a kowari at [www.aridrecovery.org.au/product/kowari](http://www.aridrecovery.org.au/product/kowari)



↑ Kowari emerging from her den. Photo: Robert Dugand

### Donate

Donate online or over the phone to assist the work of Arid Recovery.

### Adopt

Adopt a desert animal to support Arid Recovery's ongoing conservation work.

### Sponsor

Contact the Arid Recovery office if you or your organisation would like to become a sponsor.

### Volunteer

Join us for a working bee or assist around the office, there are many opportunities to volunteer with the staff of Arid Recovery.

# Thank you to the sponsors and supporters of Arid Recovery



Government of South Australia  
Department of Environment,  
Water and Natural Resources



Arid Recovery is a conservation initiative supported by BHP, the SA Department for Environment and Water, the University of Adelaide, Bush Heritage Australia and the local community.

### Thanks to the many businesses who support the work of Arid Recovery:

ABC	Camplin Computer Services	Kokatha Pastoral	PIRSA	SA Arid Landscape Board
Ahrens Group	Carmelo Scavone	Living with Wildlife	Polybelt	Specialty Feeds
Alliance Airlines	Cleanaway	Mackey Reptile Supplies	Render Trust	St Barbs School
Andamooka Observatory	CSIRO Local Voices	MinterEllison	Ron Kandelaars Media	Team Kowari
Animals Anonymous	DEW	Monadelphous Engineering	Rotary Club of Roxby District	The Waterhouse Club
Arabana Cultural Rangers	Dodoland	MyEnergy SA	Roxby Community Library	Time For Wellbeing
Arid Lands Botanic Garden	Ecological Horizons	National Science Week	Roxby Council	WA Specialty Feeds
Australian Geographic	ESS	Nature Foundation	Roxby Downs Environment Forum	Waratah
AutoPro Roxby Downs	EV North	Nature Play SA	Roxby Fabrication & Engineering	Wild Deserts
BHP	HEH Pty Ltd	Nobles Lifting & Rigging Equipment	Roxby LPO	Woolworths
Bianco	Hern & Associates	Northpoint	RoxbyLink	WrightsAir
Blackwoods	Inspiring South Australia	NRMjobs	RoxbyLink	ZoosSA
Bugs n Slugs	Jam Factory	Olympic Dam Transport Operation Flinders	RoxFM	
Burra Fencing	Kokatha Aboriginal Corporation			
Bush Heritage Australia				