



2014-2015

Arid Recovery Annual Report



For more information on Arid Recovery visit www.aridrecovery.org.au or call 08 8671 2402.

This document is the 18th in a series of annual reports and outlines the activities of Arid Recovery for the period from 1st July 2014 to 30th June 2015.

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 Billiton, SA Department of Environment, Water and Natural Resources and the University of Adelaide.

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

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Cover photo: Olympic Dam mine site at night from the Arid Recovery Reserve

Photo credit: Peter & Katie Meadow

Page 2 photo: Callitris pines at the Arid Recovery Reserve

Photo credit: Mark Runge



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Chair Report

STEVE MORTON

It has been my pleasure to fill the role of Chair for the past year and a half. The Board has continued to meet quarterly, mostly in Adelaide but at least once a year at Roxby Downs. Our Board continues to benefit from the positive contributions by representatives of major partners in BHP Billiton, the Department of Environment, Water and Natural Resources, and the University of Adelaide. Efforts in the past year have focused on rigorous management of the resources of Arid Recovery, on maintenance of its feral-free status, on re-energising our Scientific Advisory Panel and thereby boosting scientific input to use of the reserve, and on developing the new relationship with Bush Heritage Australia. Central to each of these efforts is the desire to continue delivering scientific insights towards the long-term task of recovering the original mammal fauna of arid Australia. Arid Recovery is a vital cog in ongoing work Australia-wide to learn how to do so effectively. The reserve is inspirational in showing what can be achieved with good science and dedicated application. Many thanks are due. Firstly, Kylie Piper and her team have worked tirelessly during the year to provide a safe, secure and effective reserve for the benefit of our scientific collaborators. Second, our collaborators – especially those based at the University of New South Wales and operating an Australian Research Council research project – have been wonderful colleagues for Arid Recovery. Third, members of the Scientific Advisory Panel have provided ongoing support, and I appreciate their willingness to participate in a recent process of expansion and rejuvenation. Next, the partnerships with BHPB, DEWNR, the University of Adelaide, and now Bush Heritage Australia, are fundamentally important to us. And, finally, thanks to my fellow Board members for so freely giving of their time and experience to the exciting job of helping Arid Recovery to further success.



CEO Report

KYLIE PIPER

This year has presented new opportunities to expand Arid Recovery beyond the fenceline. The development of the SA Rangelands Alliance project has brought with it the implementation of new business standards and the expansion of our vision to new research and funding potential in partnership with Bush Heritage. The continued support from our partner organisations this year has enabled Arid Recovery to upgrade infrastructure and assets and review of our research strategy. This will be my final report as Arid Recovery General Manager, and I would like to thank a number of people for their support over the years. To the Arid Recovery Board for their work in the development of the organisation and their support for me during my time, thank you all. A special mention should go to Marty Kittle and Craig Wyatt who taught me how to speak “fence” and guided me through from my first days at Olympic Dam. A great thanks should go to the staff members with whom I have worked over the years; their tireless dedication has been an inspiration for me each and every day. And finally I am grateful to the many volunteers and businesses who have been core to AR continuing to support our work throughout the highs and lows of Roxby Downs life.

AR Board

For more information on the people of Arid Recovery visit our website at www.aridrecovery.org.au

Steve Morton

Chair of Arid Recovery Board

Independent

Honorary Fellow with CSIRO Ecosystem Sciences

Mark Priadko

Independent

Financial management, financial and business analysis and business case consultant

Darryl Cuzzubbo

Representative for BHP Billiton

Asset President, Olympic Dam

John Schutz

Representative for SA Department of Environment, Water and Natural Resources

Professor Bob Hill

Representative for the University of Adelaide

Executive Dean, Faculty of Sciences at the University of Adelaide

Andrew Corletto

Independent

Partner, Minter Ellison

Allan Holmes

Independent

Ex-CEO DEWNR

Professor Sue Carthew

Independent

Pro Vice Chancellor, Faculty of Engineering, Health, Science and the Environment at Charles Darwin University

Scientific Advisory Panel for 2015-16

Phil Weinstein

Representative for the University of Adelaide

Head of School

School of Biological Sciences

University of Adelaide

Professor Philip Weinstein is a new Board member at Arid Recovery, and Chair of the Scientific Advisory Panel. He is Head of School of Biological Sciences at the University of Adelaide, where he has recently introduced a new named undergraduate degree, BSc (Wildlife Conservation Biology). Phil holds dual qualifications in ecology (PhD) and public health medicine (MBBS, FAFPHM). He has lectured zoology at James Cook University, was Professor of Public and Environmental Health at the University of Queensland, and Head of School of Population Health at the University of Western Australia. He has over 250 publications on the environmental determinants of water-borne and mosquito-borne disease, and also led a major research programme on air quality and respiratory health through the Cooperative Research Centre for Asthma and Airways. He was a member of the Board of Review Editors for the global Millennium Ecosystem Assessment, served as Co-Chair of the International Medical Geology Association, and is currently Vice President of the Australian Entomological Society.



New representatives for Arid Recovery partner organisations were elected in 2014-15. These representatives will be instrumental in the future of Arid Recovery.

- | | |
|--------------------|-------------------------------|
| Jeremy Austin | University of Adelaide |
| Hamish Campbell | University of New England |
| Peter Copley | SA DEWNR |
| Catherine Herbert | University of Sydney |
| Mike Letnic | University of New South Wales |
| Reece Pedler | SA DEWNR |
| Stephanie Williams | Ecological consultant |
| John Read | Ecological Horizons |
| Allan Holmes | Arid Recovery Board |
| Phil Weinstein | Arid Recovery Board |

Arid Recovery Staff

General Manager/CEO

Kylie Piper

Ecology and Research

Ecologist

Aaron Fenner (Aug 14-present)

Cat Lynch (until Aug 14)

Research Scientist

Katherine Moseby

Administration

Office Manager

Letitia Sikora (Jan 15-present)

Cornel Carvalho (until Jan 15)

Nishamali Nagasinghe

Field and Maintenance

Field and Maintenance Officer

John Crompton (Jan 15-present)

Craig Wyatt (until Nov 14)

Fence Maintenance Officer

Marty Kittel

Education and Community

Scientific & Education Officer

Kimberley Solly (May 15-present)

Education & Community Officer

Perri Carter (until May 15)

Scientific Advisory Group

Peter Copley

David Paton AM

John Read

Reece Pedler



↑ John Crompton, Arid Recovery's Field & Maintenance Officer.

Photo by: Charmayne Cronje

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

Justin Ali

Bianca Amato

Benjamin Anatol

Alicia Arbon

Adrian Batchelor

Dean Behgamen

Dean Bensman

Anais Binggeli

Ryneisha Bollard

Brett Burgoyne

Diana Campos

Cornel Carvalho

Fernando Carvalho

Peter Coleman

Brendan Cook

Hayden Craddock

David Cronin

Karen Daniels

Rebecca Davies

Peter Davies

James Dunlop

Daniel Eaton

Bryce Gates

Calvin Gates

Kiani Gilbert

John Gilby

Jane Gloster

Richard Gloster

Mykaela Glover

Travis Gotch

Travis Hague

Kaarissa Harring-Harris

Tim Henry

Tori Hobson-Leslie

Peter Howard

Stewart Jones

Alexander Kelman

Deanna Kirkham

Susanna Kruger

Geoffrey Leecroft

Charlie Lodge

Mat Luthaus

Catherine Lynch

Jennifer Mackenzie

Shane Mason

Mike Mayrhofer

Chris McGoldrick

Jamie Millard

Rachel Moss

Vance Mundy

Nisha Nagasinghe

Nathan Oversen

Vicky Parker

Ben Parr

Aleksandr Pastrigan

Marianne Pederson

Reece Pedler

Alan Pilkington

Wendy Pilkington

Alex Postrigan

Johan Potgieter

Sophie Reid

Zach Richardson

Liam Rowles

Denni Russell

Karen Russell

Robin Russell

Geoff Sanders

Charisse Sanders

Luke Sanders

Trevor Sikora

Ashley Sky

Charlie Sloan

Margaret Sloan

Brooke Speight

Natasha Tay

Alice Taysom

Anthony Thomas

Tyler Van Der Weide

Helen Vouvopoulos

Jordan Walkington

Anni Walsh

David Watkinson

Katelyn Weinert

Bec West

Eric Willis

Lewis Woodhouse

Craig Wyatt

Margaret Wyatt

Pang Kee Yen

Mark Young

Sharni Zimmerman





◀ (Far left) Greater Stick-nest Rat being released after dawn trapping.
Photo credit: Casey Harris

◀ Burrowing Bettong.
Photo credit: Arid Recovery

Re-introduced Species

The Big Four (Burrowing Bettong, Greater Stick-nest Rat, Greater Bilby and the Western Barred Bandicoot) re-introduced species at Arid Recovery continue to thrive within the Reserve. They can now be found throughout the feral-free areas of the Reserve. The Red Lake Expansion which is free of feral predators, but occupied by rabbits is also home to a selected group of bettongs and bilbies that have been moved into that part of the Reserve as part of a predator naïveté study being conducted by UNSW.

BURROWING BETTONGS

Burrowing Bettongs continue to be the most abundant re-introduced species and occur in high numbers throughout the feral-free parts of the reserve. The numbers of Burrowing Bettongs have now surpassed the pre removal numbers of 2013, in which 1,400 animals were released outside the reserve. This year has been good with average rainfall and the seedling monitoring has shown that even with high numbers of bettongs, almost no damage is occurring to seedlings.

WESTERN BARRED BANDICOOTS

Western Barred Bandicoot numbers have continued to increase across the reserve over the past year. They are the second most abundant re-introduced species in the reserve, which is fantastic given they were rarely observed just a few years ago. They are now at the highest numbers ever seen at the reserve.

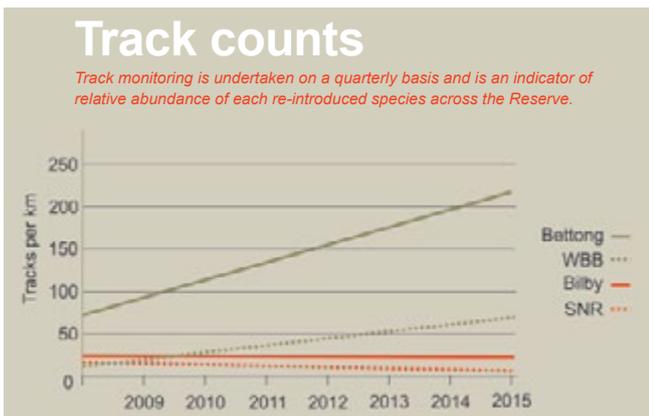
GREATER STICK-NEST RATS

Greater Stick-nest Rats remain stable in the Reserve. Nest monitoring is being undertaken to monitor stick-nest rat populations across the Reserve. The UNSW research group has also been radio-tracking stick-nest rats and has gained a lot of new information about their movements and use of nests. Track counts and nest surveys have shown a decrease in overall activity, but this may be due to rats utilising burrows as preferred nesting sites, rather than above ground nests and a preference for swales rather than dunal areas.

GREATER BILBIES

Greater Bilby numbers also remain stable across the Reserve and track counts have shown slight increases over the past year. Bilbies can be found throughout the feral free areas of the Reserve and the small population in the Red Lake Expansion also appears to be doing well.

All in all the re-introduced species continue to do well in the Arid Recovery reserve, with bettong and bandicoot numbers at an all-time high and stick-nest rat and bilby numbers remaining stable across the Reserve.





Prey Naiveté

BY KATHERINE MOSEBY AND REBECCA WEST

The linkage grant between Arid Recovery and the University of New South Wales is in its second year and has made significant progress. The grant aimed to determine if prey naiveté can be addressed by exposing prey to low levels of predators and using learning and natural selection to improve anti-predator behaviour. Our three main questions are outlined below and progress is outlined against each.

1) What is the base level of naiveté recorded in threatened species? Honours students Roie Atkins and Matt Hyatt both recorded the baseline vigilance and naiveté of bettongs and other species using scent trials and model predators. Comparisons were also made with rabbits. Baseline stick-nest rat naiveté is being monitored using radio-collared rats and feeding trays with predator scents. Initial results suggest that threatened prey have limited experience with predators and low vigilance levels. PhD student Lisa Steindler is also testing bilby naiveté using behaviour at burrow entrances.

2) Can in situ predator training improve anti-predator responses? This is being tested using two main experiments. Firstly, by adding cats into populations of bilbies and Burrowing Bettongs. By December 2014 we had translocated 352 bettongs and 46 bilbies into the 26 square km Red Lake Expansion. These animals have coexisted with a feral cat for the past eight months. We are monitoring the population using track counts, cage trapping and camera trapping which has shown that the bettong and bilby populations have increased and that cat activity has remained constant. We have also measured the vigilance, survival, burrow use and flight behaviour of the bettongs and bilbies six months after they were translocated. In June 2015 we trapped and added an additional male cat with a GPS collar to the pen in order to increase the predation pressure. Our second predator experiment saw us reintroduce two native western quolls to the northern expansion of the reserve in May 2015 where we are recording their influence on stick nest rat behaviour and survival. The two quolls are both female and have settled into the Reserve well, using bettong warrens and bilby holes as shelter sites and we are collecting scats to examine what they are eating. For this part of the project we are focussing on the behaviour of stick-nest rats,



↑ Greater Stick-nest Rat trapping for the prey naiveté project.

Photo credit: Gregory Andrews

so we have fitted eleven collars to rats in the northern expansion and ten collars to rats in the main expansion to act as controls. We are testing the vigilance behaviour of rats at feed trays when they are presented with different predator scents, their flight distances when approached at night and their habitat and shelter use.

3) Which behavioural and physical traits equate to improved survival when populations are exposed to predators? Personality and physical traits have been collected for over 400 bettongs and 40 bilbies inside Red Lake and control areas in the southern parts of the reserve. These traits are also being resampled in individual animals captured at regular intervals in predator exposed areas. Bettong traits have been found to be variable and once predator pressure is increased they will be resampled to determine which traits are advantageous.

Team members presented at the Behaviour 2015 conference and the Scotia Sanctuary Symposium this year and presentations are planned for the Ecological Society Conference in December 2015.

← A Greater Bilby fitted with a tail radio transmitter.

Photo credit: Ruth Shepherd

← (far left) Sepia, one of the two Western Quolls released into the Arid Recovery reserve on May 6th 2015.

Photo credit: Karissa Harring-Hariss



SARA Project

BY AARON FENNER

The SA Rangelands Alliance has completed its first year. Some of the achievements over this period include:

REGIONAL ECOLOGIST ROLE

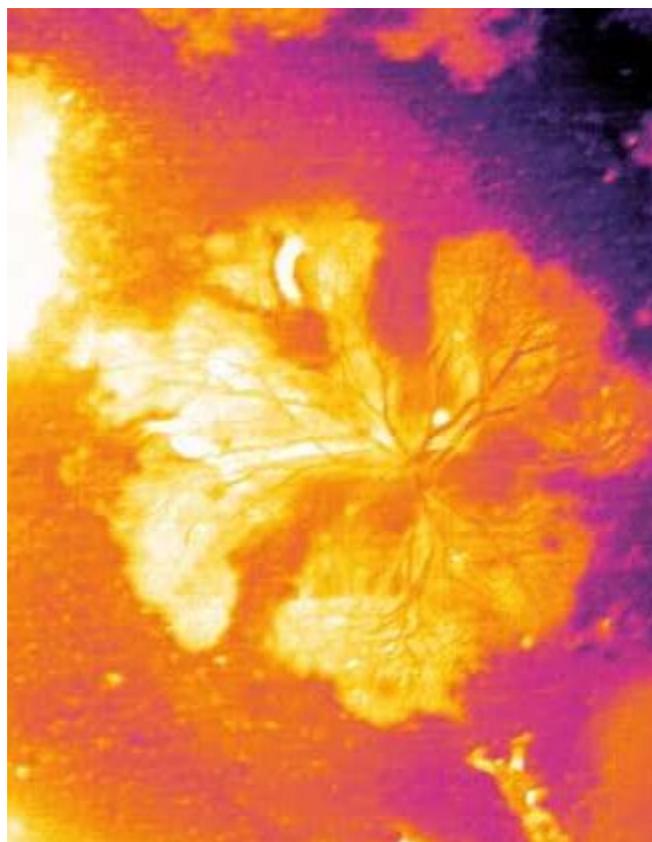
Aaron Fenner began working in the Regional Ecologist role in August 2014. Since arriving at Roxby Downs he has become an integral part of the AR team and also an invaluable part of the Bush Heritage crew. Aaron divides his time between the work at AR and the two Bush Heritage properties of Boolcoomatta and Bon Bon Station.

STUDENT PROJECTS AT BON BON STATION

Within the first 6 months of the project two honours students had been secured to begin studies on the impact of Buffel grass on small vertebrates at Bon Bon Station. These projects will be integral to understanding the impact of Buffel grass across the arid region.

GREEN ARMY TEAM WORK

With the commencement of the first Green Army project in February of 2015, the SARA project took another step towards the sharing of resources. The team spent time at all three properties involved in the project, assisting in weed control, warren mapping and vast amounts of fence repairs and upgrades. Future Green Army projects will focus efforts on the AR Reserve and Bon Bon Station and assist with projects across these two properties.



▲ Thermal image of a bettong warren taken using drone research.
Photo credit: Lian Pin Koh

◀ Chestnut-breasted Whiteface (*Aphelocephala pectoralis*) endemic to South Australia. Regarded as rare and elusive, spotted at Bon

WORKING TOGETHER

6 months into the project the following ideas were identified for future opportunities.

There are two potential projects that will be hugely beneficial to both organisations. The first is the potential use of drones for a variety of management issues. The second is in the translocation and relocation of threatened fauna back into unfenced reserves. These projects will also involve universities, post-graduate students and potentially other stakeholders such as DEWNR and other land holders.

1. Use of drones

There is a great opportunity for Bush Heritage and Arid Recovery to develop methods and to test drones for use in conservation and management. This is a new and developing technology, and the application of drones in Australia for conservation is cutting edge.

2. The re-introduction of threatened species into unfenced reserves

The second big opportunity for Bush Heritage and Arid Recovery is the reintroduction of native species into well managed unfenced reserves. Bush Heritage is currently investigating the feasibility of reintroductions of a number of species to Bush Heritage properties across Australia. Arid Recovery and Bush Heritage are in a unique position, as both organisations have a desire to see native species returned to the landscape they formerly occupied, as well as the animals and properties to test its feasibility.

Research Forum

BY KYLIE PIPER

In October 2014 the Chair of the Arid Recovery Scientific Advisory Panel (Prof Bob Hill of the University of Adelaide) called a meeting of those with an interest in the current and future research of Arid Recovery. The purpose of this meeting was to inform the development of a new research strategy for Arid Recovery.

This meeting was held 9th October 2014 at the University of Adelaide and was facilitated by Mark Douglas of Ethos Australia Pty Ltd.

The aim of the research forum was to undertake initial discussion around the direction of research at the Arid Recovery Reserve, the updating of the AR Research plan and the development of the Reserve as a research site for the future.

The event was well attended, with scientists from South Australia, NSW and Victoria in attendance.

A number of ideas were thrashed out on the day, with three main research topics coming to the fore early on, These are:

1. Predator / Prey interactions
2. Ecosystem Function
3. Monitoring of different management practices

Small groups were put together and people were able to discuss and flesh out these themes within their areas of interest and expertise.

A number of ideas for specific research projects, along with broad ranging areas of focus were developed on the day.

A research forum was the first step in the development of the new Arid Recovery Scientific Advisory Panel and the development of a new research prospectus for research projects. These aims have been put in place as part of the new strategic plan and will be developed over the coming 12-24 months to assist in increasing research undertaken at the Reserve and to also enable a broader range of topics to be looked at by researchers and Arid Recovery staff.

i Further information on Arid Recovery Reserach can be obtained from the website at www.aridrecovery.org.au



Deliberations on the day included discussions about what elements of Arid Recovery make it unique in terms of a research area for Australian conservation research:

- It is an experimental site
- The physical infrastructure of internal and external fences controlling areas differently
- It is intensively managed
- Risks are managed
- There is removal of feral predators
- The scale and longevity of the site is unique

Research forum attendees

Steve Morton	Arid Recovery
Bob Hill	Arid Recovery / University of Adelaide
Glen Norris	Bush Heritage
Mike Letnic	University of NSW
Doug Bickerton	SA DEWNR
Aaron Fenner	Arid Recovery
Reece Pedler	SA DEWNR / Arid Recovery
Lian Pin Koh	University of Adelaide
Rob Brandle	SA DEWNR
Laurence Clarke	University of Adelaide
Lauren White	University of Adelaide
Alexandra Bowman	University of Adelaide
David Paton	University of Adelaide / Arid Recovery
Allan Holmes	Arid Recovery / SA DEWNR
Megan Lewis	University of Adelaide
Tina Schroeder	University of Adelaide / TERN
Phil Cassey	University of Adelaide
Steve Delean	University of Adelaide
Jose Facelli	University of Adelaide
Jeremy Austin	University of Adelaide
Damien Fordham	University of Adelaide
Corey Bradshaw	University of Adelaide
Catherine Herbert	University of Sydney
Jim Radford	Bush Heritage
Kylie Piper	Arid Recovery

◀ The Arid Recovery Research Forum held during October 2014.
Photo credit: Kylie Piper

Ecological Targets

BY KYLIE PIPER

Leading on from the Arid Recovery Research Forum (see page 12) and the partnership with Bush Heritage, Arid Recovery has undertaken a review of current monitoring and reporting practices.

With the assistance of Bush Heritage personnel a new system of reporting has been developed using Miradi and the Open Standards for Conservation Planning concepts.

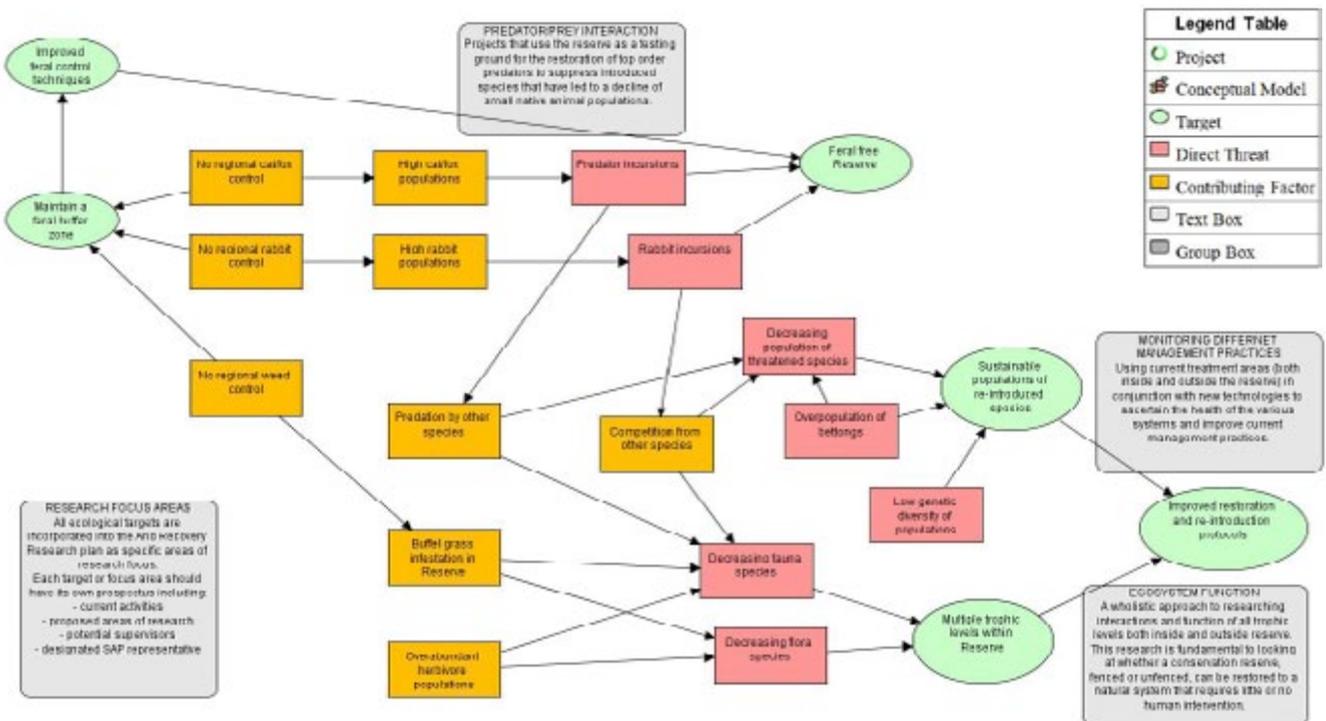
The development and implementation of the system has been undertaken across the 2014-15 financial year, with the implementation of the new strategic plan goals, along with the inclusion of information and research focus areas that were developed during the 2014 research forum.

The development and outlining of ecological threats within the reserve has given a clearer understanding of management tasks and has also increased the information received by all staff and the Board. This has led to a more transparent organisation and an opportunity for all staff to be involved in both the planning and reporting of reserve and organisational management.



↑ Western Barred Bandicoot (*Perameles bougainville*).
Photo credit: Arid Recovery

↓ Ecological targets for Arid Recovery.





Conferences

BY AARON FENNER AND KYLIE PIPER

NATIONAL BILBY CONFERENCE

The Greater Bilby Recovery Summit was held between the 10th-13th of March 2015 on the Gold Coast. A total of 39 people from 29 organisations attended the summit to forge a new plan for the recovery and conservation of the Greater Bilby. The workshop, facilitated by the IUCN SSC Conservation Breeding Specialist Group, was organised by the Save the Bilby Fund in partnership with the Queensland Department of Environment and Heritage Protection, the Taronga Conservation Society Australia, Dreamworld Wildlife Foundation and the Australian Government Department of the Environment.

The goals of the summit were to; 1) assemble a community of stakeholders from across Australia who are ready and able to take action for Greater Bilby conservation; 2) to bring this community to a common understanding of the threats to and prognosis for the Greater Bilby across Australia; 3) to develop a shared vision for the future of the Greater Bilby across Australia and a plan to guide its realisation; 4) to agree, within this context, a plan of priority actions for the Greater Bilby in Queensland and; 5) to build a commitment to immediate action for this species and an enabling framework through which this can be sustained.

← Bilby caught on a remote sensor camera inside the Reserve.

Issues were divided into subsets and assigned to four working groups: Communities, Engagement and Governance, Wild Population Issues Southern Range, Wild Population Issues Northern, and Captive and Fenced populations. The working groups were charged with discussing and analysing each issue to produce a statement for each describing clearly: what the issue is; why it occurs; why it is a problem for the sustained recovery of the Greater Bilby.

Participants agreed that implementation of the emerging plan should be driven and coordinated by a dedicated bilby recovery coordinator, supported by a recovery team, with advice and support as needed from task-oriented working groups. Amongst other responsibilities the recovery coordinator would be charged with maintaining regular communication with the wider coalition of stakeholders, including the provision of regular status reports on plan progress. Post summit outcomes include a draft report of the 2015 Greater Bilby summit and interim conservation plan.

AUSTRALIAN RANGELANDS SOCIETY CONFERENCE

The Australian Rangelands Society Conference was held in Alice Springs in April 2015. This year's event was attended by both Arid Recovery and Bush Heritage personnel as part of the SA Rangelands Alliance project. The conference was a great opportunity for Arid Recovery staff to develop new relationships with Bush Heritage personnel, as well as see a range of interesting perspectives on rangelands management, partnerships and the development of new technologies. As an aside to the conference the Desert Science Network, an alliance of science communication organisations including the Arid Lands Environment Centre (ALEC), Ninti One and Centre for Appropriate Technology (CAT) was launched.

Threatened species report

The end of June 2015 saw the launch of Australia's first Threatened Species Strategy. The development of the strategy saw the new Threatened Species Commissioner, Gregory Andrews, visit a number of areas of importance in threatened species conservation within Australia, including the Arid Recovery Reserve. The Commissioner's visit to the Arid Recovery Reserve in May 2015 saw him assist in trapping of stick-nest rats and working closely with Rebecca West from the UNSW research team on the current Prey Naiveté project.



One of the main areas of concern for the Commissioner, and the Threatened Species Strategy, is the control of feral cat populations across Australia. The development of a threat abatement strategy for feral cats has been a key component of his work to date. The development of this key strategic plan for Australia is a credit to a number of projects that have been working tirelessly for years to develop an understanding of feral cat issues within Australia, not least of whom are Arid Recovery's founders John Read and Katherine Moseby.

← Bettong caught on remote sensor camera inside the Reserve.



↑ Arid Recovery stand at Science Alive August 2014
Photo credit: Perri Carter

Publicity and Events

BY KIMBERLEY SOLLY

Arid Recovery's education and community outreach projects continued to grow in 2014-2015. Our locally held events such as our open day, market days, toddler story time, Buffel buster working bees, and local school visits were a huge success and remain important in educating the local community about the arid zone. We also continued to spread the word of Arid Recovery far and wide by attending Science Alive and the Arid Smart Garden expo. Our Science Alive stall focussed on the damage feral cats do in arid Australia by displaying in jars the stomach contents of feral cats, which really hits home the damage feral animals do in Australia. Arid Recovery participated in 67 community events and reached a whopping audience with 25,135 attendees!

Research, education, and corporate visitors to the Arid Recovery Reserve are integral for highlighting and getting people interested in the plight of the arid zone. Schools such as Glenunga, Port Lincoln, Willunga Yacca are always a pleasure to host at the Arid Recovery Reserve with students undertaking flora and fauna workshops as well as learning the art of building a predator proof fence. We had two new, special visiting groups to the Reserve which were also a bonus to staff who got to learn a range of Pitjantjatjara words.

The Warru Rangers from the Anangu Pitjantjatjara Yankunytjatjara Lands and the Polly Farmer group of high-school aged students from Port Augusta learned new skills in tracking and trapping our big 4 mammals- the mitika (Burrowing Bettong), ninu (Greater Bilby), nyulu (Western Barred Bandicoot), and tju walpi (Greater Stick-nest Rat).

Further information on Arid Recovery community events can be found online at www.aridrecovery.org.au or by contacting the Scientific and Education Officer on 08 8671 2402.

5,814

↑ Number of volunteer hours undertaken across 2014-15

\$145,350

↑ Equivalent of volunteer hours in dollars for the year

In 2014-15 we have had numerous volunteers assist with a variety of events, activities, and general tasks at Arid Recovery. The total number of hours that they have worked for the year would be the equivalent of more than two full time staff members!

The number of hours and people involved in our volunteer activities is just one of the reasons why we partnered with Beyond Bank to say CHEERS FOR VOLUNTEERS!

Community Programs

BY DENNI RUSSELL AND LETITIA SIKORA

GREEN ARMY

By Denni Russell

From February through to July 2015 a team of 4 locals aged between 17-24, took part in the Federal Government initiative, Green Army team, undertaking conservation work at Arid Recovery, Bush Heritage sites and surroundings.

One of the main tasks of the Green Army has been to extend the height of the Red Lake fence, this was completed on Thursday June 11 after many weeks of work. The original fence was approximately 1.5m high and it was our task to increase this to 1.8m. This was done to reduce incursions of predators in the reserve such as cats, dogs and foxes.

As part of the programme our team spent 4 weeks at Bon Bon Station, north of Glendambo on the Stuart Highway. Here we were involved in a wide variety of tasks including roadside rest stop clean up, fence removal and more Buffel Grass work. One of the highlights of our time at Bon Bon trip was taking part in monitoring one of the most northern populations of the Southern Hairy Nosed Wombat. This involved locating active burrows and installing motion-sensor cameras to monitor the burrows over the 4 week period. In the final weeks the team made two week long trips to Boolcoomatta, another Bush Heritage site closer to Broken Hill where they undertook the rehabilitation of severely scarred land by installing matting to increase soil profiles and trap native grass seeds.

In our time working alongside Arid Recovery the team were privileged to join in activities with Dr. Rebecca West and Arid Recovery staff members. Activities included bettong trapping and stick-nest rat nests location using GPS.

The Arid Recovery Education and Community Officer Perri Carter, walked the team through the method of dissecting feral animals found in and around the Reserve such as; cats, wild dogs and foxes. During this process data was recorded which included; detailing the stomach contents and identifying species found inside, weight, sex and where it was captured.

One of the community events the team volunteered at was the Arid Recovery open night, inviting the community in to visit the Reserve for the first time of the year on April 10th. The team helped in the preparation of the night, cooking of the BBQ, directing traffic and impromptu tour guiding.

This was the first of four Green Army projects that Arid Recovery has been successful in securing over the coming 2 years. The work undertaken by the teams not only assists the Arid Recovery staff and work at the Reserve but also provides training for participants in Conservation and Land Management.



↑ Round One Green Army participants at their graduation.

Photo credit: Patrick Glover, The Monitor Newspaper

REMOTE JOBS AND COMMUNITIES PROGRAM

By Letitia Sikora

In 2015 Arid Recovery became a project sponsor of the Remote Jobs and Communities Program. The partnership with Complete Personnel and job seekers from the local community will enable Arid Recovery to implement a large range of projects.

The participants in the project will undertake a number of different activities including maintenance, assisting with administrative tasks and events. The crew of up to 13 people will also be instrumental in the development of a new Arid Education Garden for schools and the local community. The garden will encompass the areas surrounding the Arid Recovery Charlton Road offices. Sponsorship funds have been acquired through local businesses and the RJC program for plants and tools. With the assistance of volunteers Geoff and Cherise the area has been mapped and native plants identified for planting over the coming months.

The development of the Arid Education Garden has given us the opportunity to connect with the Kokatha Community to assist with traditional naming and uses of the local arid flora and fauna. We are currently in discussions with them for assistance with a large mural in our rock seating area and an artefact showcase of tools that have been recovered from the Olympic Dam mine site and surrounding areas.

The program has resulted in a number of participants gaining part time employment in the town, and has also greatly assisted the work of Arid Recovery staff.

The program will continue through 2015-16 and will see an increase in time the participants spend at Arid Recovery, with most participants working 5 days a week for 5 hours a day. The program has helped us achieve much more than previously possible and we are very grateful for the hard work and friendship of all of the RJCP participants.

📍 Further information about our community programs contact the Arid Recovery office on 08 8671 2402.

Reserve Infrastructure

BY JOHN CROMPTON & LETITIA SIKORA

Research and education visits to the Reserve are fundamental to the success of Arid Recovery as a research facility. The ability to stay at the Reserve to undertake research, including long-term volunteer and student stays or single visits by school or university groups have become a standard occurrence. Facilities at the Reserve were upgraded in 2012 to include bunk beds, and new kitchen facilities to cater for the increase in visits and enable growth. In 2014/15 a number of the longer term facilities are beginning to deteriorate and are in need of repair, including areas of the kitchen, the ablution block and the solar system for power. This Reserve upgrade is an expensive undertaking and we are now seeking donations and running events to fundraise towards the cost, as well as applying for grants.

In early 2015 the Arid Recovery staff started dreaming about a reserve upgrade. As a team we have made great progress for this dream to become a reality. We have gained support from our local businesses and community and we have kindly been donated ATCO buildings, the tools and materials required to make the AR Reserve into a research facility with facilities that we can all be proud of.

ACCOMMODATION UPGRADES

In late 2014-15 discussions commenced with the Myall Grove Caravan Park regarding the donation of two ATCO buildings no longer in use to be moved to the Reserve.

The larger of the two buildings contains a kitchen, bathroom with plumbed toilet, living/sleeping area & small office area. As the new building has better wet area facilities and kitchen, the

current kitchen at the Reserve will be converted into a storage and sitting area. The current building will then be for sleeping and have an inside area for visitors staying at the Reserve.

The smaller building is comprised of two 15 foot ATCO huts and has a large open space, which could be used for 2 educational/general purpose areas for research and for Kids Club or other educational groups.

FUNDRAISING FOR SOLAR SYSTEM UPGRADE

In 2014/15 the current solar powered system has caused issues with cutting out and also safety issues due to the age of the acid batteries used to power the system.

A quote has been obtained to replace the system and provide a stand-alone power system for the reserve. The current quote for \$35,000 includes a 5KW system with a generator backup.

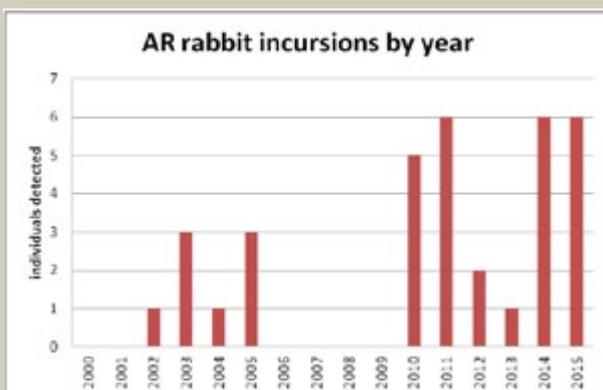
Additional requirements for this system to provide the optimal OHS requirements and ensure longevity of the asset is an insulated container to house the batteries.



← The Arid Recovery Reserve accommodation is set for upgrades in 2016.

Feral incursions

Incursions in the feral free area of the Arid Recovery reserve are a major risk to the organisation and the research capacity of the Reserve. In the past few years there had been an increase in the number of rabbit incursions being recorded in the feral free area of the Reserve



Rabbit incursions are controlled through regular fence maintenance. When they do occur, assessment of the incursion area is made through regular track checks and remote camera placement. The majority of incursions are picked up incidentally through field work or by the regular external fence check. Due to increased bettong numbers inside the Reserve, detecting incursions is difficult and follow up actions are limited. Baiting and trapping of rabbits inside the Reserve and detection of warren use is ineffective due to the bettong populations. Hunting with spotlights has been the most effective control.

← Graph courtesy of Reece Pedler - submitted to AR Scientific Advisory Panel for discussions.

TELEMETRY SYSTEM

The ongoing development of the feral control boundary around the Reserve includes the maintenance and up-keep of permanent trap sites around the Arid Recovery Reserve fence line. A telemetry system has been in place around the Reserve for a number of years. This system allows Arid Recovery to be instantly notified when the traps are triggered. This saves time and allows us to respond ASAP to a triggered trap to ensure animals are in the traps for the least amount of time possible.

BHP Billiton donated additional funds in December 2014 to update the telemetry system to a new system designed by Nick Cumming at Atnik Solutions. We commenced installation of the systems components in late January.

The installation of new radio antennae base stations at the Viewing Platform in the First Expansion and the erection of a new tower in the Dingo Pen was the first step. The erection of the new tower was completed under the watchful eye of Ken Lamb and thanks to generous donation of time and vehicles by ODT Australis and Cowell Electric.

The new individual sensor systems at each trap site were then developed. This included wherever possible, the refurbishment of equipment around the existing 20 trap sites and the construction of new sensor systems for 8 new trap locations around the northern and western boundary of the Dingo Pen.

Traps surrounding the feral-free area of the Reserve (1-11 on the southern side of the Reserve and the Eastern side boundary traps 12,14 & 15) were up and running by March 2015. The installation of the final traps on the Eastern and northern boundary of the Reserve (traps 16-28) were all ready to run by 1st July 2015.

The system is working well and sending good signals with only minor power issues found with traps 10 & 27, which are being resolved.



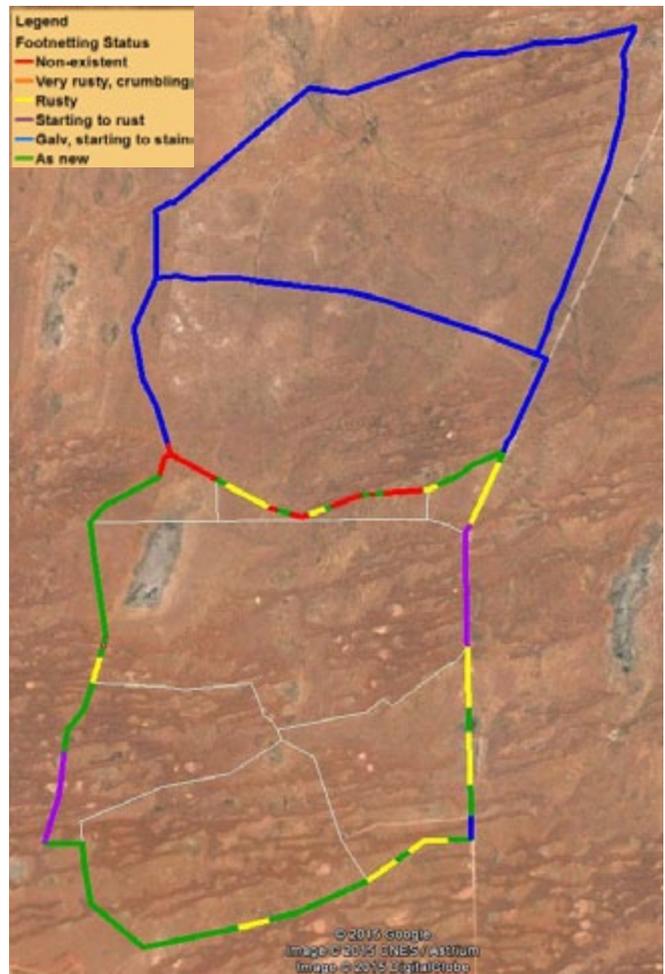
← One of the new telemetry signal boxes set up at the Arid Recovery Reserve.

Further information on Arid Recovery Reserve facilities can be found at www.aridrecovery.org.au or by contacting the Arid Recovery office on 08 8671 2402

FENCE AUDIT MAPPING

The 2014-15 fence audit was undertaken in May by Marty Kittle and John Crompton. This annual monitoring of Reserve fence condition is essential for identifying high priority areas for maintenance and repair for the coming year. Each year focus and funds are put towards areas designated high priority as per the fence maintenance strategy that has been in place since 2011.

This year the mapping of the audit was put onto Google maps (below), allowing all staff and volunteers to see areas of high priority. This will enable more efficient communication of priority areas for maintenance groups. We thank the SA Department of Environment, Water and Natural Resources for their special contribution to foot netting materials to continue to replace our priority areas.



Priority	Meaning	Repair schedule
1	Non-existent	To be replaced immediately
2	Very rusty/crumbling	To be replaced immediately
3	Rusty	To be replaced within 6 months
4	Starting to rust	Approx 2 years until needing replacement
5	Galv starting to stain	Approx 3-5 years until needing replacement
6	As new	Approx 10 years until needing replacement

2014-15 Operational Report

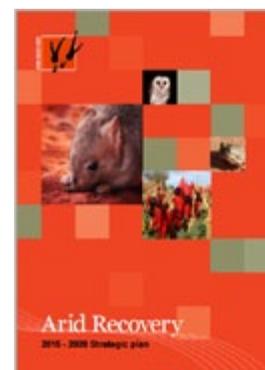
2015 - 2020 STRATEGIC PLAN

The new strategic plan was finalised and approved by the Board in February 2015. This document, available in full on the Arid Recovery website, will assist in ensuring the direction for the organisation over the coming 5 years. The strategic plan firmly places the development of collaborative research and the state of the Arid Recovery Reserve as the top priorities for Arid Recovery.

OPEN STANDARDS REPORTING FROM MIRADI

In 2015 the new system of reporting was introduced based on the Open Standards for the Practice of Conservation, and its supporting software Miradi. The following progress reporting format was developed with the assistance of Bush Heritage.

This reporting format outlines all key work plan activities for Arid Recovery against the new Strategic Plan objectives.



STRATEGY	DATE	PROGRESS	STRATEGIC
Ecological reporting and data management	2015-06-30	On Track	SP1.1
Reserve infrastructure maintenance	2015-06-14	On Track	SP1.1
Maintain current research projects	2015-07-03	On Track	SP1.1.2
Feral fauna management	2015-06-10	Major Issues	SP1.1
Feral flora management	2015-08-10	On Track	SP1.1
Control area maintenance	2015-07-02	Major Issues	SP1.1
Re-introduced species management	2015-08-10	Major Issues	SP1.1
Native fauna species management	2015-08-10	Major Issues	SP1.1
Native vegetation management	2015-08-10	On Track	SP1.1
Revise the AR Research Plan	2015-08-10	On Track	SP1.2.2
Develop current land management partnerships	2015-07-02	On Track	SP2.1.1
Engage land users	2015-07-03	On Track	SP2.1.2
Develop & promote applied research & funding opportunities	2015-08-10	On Track	SP2.2.1
Identify & enlist new 'champions'		Planned	SP3.1.2
Develop 5 year brand, marketing & communication plan	2015-08-10	On Track	SP3.1.1
Develop key networks with national & international research organisations	2015-07-01	On Track	SP3.2.1
Increase visibility to research community	2015-07-03	On Track	SP3.2.2
Build on AR profile through community & online engagement	2015-08-04	On Track	SP3.3.1
Events	2015-08-10	On Track	SP3.3.1(c)
Tours	2015-07-03	On Track	SP3.3.1(a)
Education & training	2015-08-10	On Track	SP3.3.1(b)
Maintain a positive workplace health & safety culture	2015-07-03	On Track	SP4.1.1
Develop & maintain the required workforce capability	2015-08-10	Minor Issues	SP4.1.2
Developing alliances for funding & developing partnerships for research	2015-07-03	On Track	SP4.2(c)
Developing alternative recurrent and ad-hoc income streams	2015-08-14	On Track	SP4.2(b)
Financial management	2015-08-14	On Track	SP4.2(a)
Develop ongoing reporting & evaluation	2015-07-03	On Track	SP4.3.1
Governance	2015-08-10	On Track	SP4.3

2014-15 Financial Report

FUNDRAISING AND SUPPORTER CONTRIBUTIONS

Additional funding was received from Arid Recovery partners BHP Billiton and DEWNR for upgrades to Arid Recovery Reserve infrastructure throughout the year. This, along with increased fundraising through the “Adopt a Bettong” campaign saw an increase in income for 2014-15. Additions of donated assets, included two Toyota Hilux vehicles from the ex-BHPB fleet have also assisted in increasing AR assets and maintaining a working vehicle fleet. These vehicles have also assisted greatly in Arid Recovery’s in-kind contributions to its two major projects, the SA Rangelands Alliance with Bush Heritage and the Prey Naiveté research project with UNSW.

Balance sheet

ASSETS		
CURRENT ASSETS	2015	2014
Cash and cash equivalents	\$145,363	\$192,934
Trade and other receivables	\$28,288	\$15,972
Inventories	\$34,565	\$18,781
TOTAL EQUITY	\$208,216	\$227,687
NON-CURRENT ASSETS		
Plant, property and equipment	\$491,528	\$409,107
TOTAL NON-CURRENT ASSETS	\$491,528	\$409,107
TOTAL ASSETS	\$699,744	\$636,794
LIABILITIES		
CURRENT LIABILITIES		
Trade and other payables	\$38,785	\$28,112
NAB - Credit Card	\$2,448	\$2,952
Employee benefits	\$22,238	\$40,831
TOTAL CURRENT LIABILITIES	\$63,471	\$71,895
TOTAL NET ASSETS	\$636,273	\$564,899
TRUST FUNDS		
Retained earnings	\$636,273	\$564,899
TOTAL FUNDS	\$623,273	\$564,899

FULL FINANCIAL AND AUDIT REPORT

Arid Recovery accounts are audited each year by Ernst and Young. The full audited financial report can be found on the Arid Recovery website at www.aridrecovery.org.au.

↓ Buffel busting at Bon Bon Station.

Photo credit: Perri Carter



Income and Expenses

REVENUE	2015	2014
Sponsorship contributions	\$573,700	\$444,000
Research income	\$50,698	\$8,146
Fundraising	\$16,236	\$23,303
Grant income	0	\$30,850
Donations	\$22,420	\$17,578
Plant & Equipment - donated	\$24,400	\$365,000
Other income	\$41,941	\$63,135
Total income	\$729,395	\$952,012
OPERATING EXPENSES		
Administration	(\$73,077)	(\$54,750)
Depreciation	(\$35,803)	(36,974)
Wages and Salaries	(\$423,497)	(\$485,040)
Motor vehicle expenses	(\$37,839)	(\$33,457)
Research	(\$34,000)	(\$36,386)
Reserve maintenance	(\$12,258)	(\$2,493)
Flora and fauna management	(\$9,753)	(\$9,547)
Species management	(\$812)	(\$3,124)
Volunteer and community	(\$3,377)	(\$11,513)
Other expenses	(\$6,848)	(\$4,258)
Merchandise and fencing	(\$31,507)	(\$15,232)
Total expenditure	(\$668,771)	(\$692,774)
NET PROFIT / (LOSS)	\$60,624	\$259,238

SUPPORTERS

What better way to contribute to Arid Recovery than sponsoring the fenceline that protects our species

Sponsor 100m of fenceline - a gift to save our species

Your sponsorship includes:

- Certificate of sponsorship
- 12 month membership to Arid Recovery
- Individualised plaque on your segment of fence
- A warm and fuzzy feeling knowing that you are contributing to the ongoing work at Arid Recovery

📍 Sponsor 100m of fenceline at www.aridrecovery.org.au/donate



Donate

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

Volunteer

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

Join

Become a member of Arid Recovery for as little as \$25 a year and receive our quarterly newsletters and monthly e-news updates.

Sponsor

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

📍 Help contribute to the ongoing maintenance of our fenceline by sponsoring a segment today!

Thankyou 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 Billiton, the SA Department of Environment, Water and Natural Resources, the University of Adelaide and the local community.

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

- | | | | | |
|-------------------------|------------------------------|--------------------------|-----------------------|--------------|
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| Aspen Parks Myall Grove | Coates Hire | The Monitor Newspaper | Roxby Pest Management | Woolworths |
| Bianco | Cowell Electric | National Science Week | RoxFM | |
| Blackwoods | Ernst & Young | ODT Australis | Roxby Leisure Centre | |
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| CAT Rental | Holcim | Roxby Downs Mortor Inn | Toll Group | |

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Permission must be obtained to reference the contents of this report and any supplementary material. Please contact the Arid Recovery Ecologist on ecologist@aridrecovery.org.au for further information.

