



Ian Falkenberg takes over as Chair from July 2020

On the 11th July, 2020 and following an exemplary 23 years of service (1997-2020), Mr. Duncan MacKenzie formally steps down as Chairman of the Birdlife Australia's Gluepot Reserve Management Committee. Duncan was a major influence at Gluepot for over two decades overseeing the development of Gluepot Reserve as a national leader in environmental management. I would also like to acknowledge the contribution Mr. John English made to the establishment of Gluepot Reserve. As the first Chairperson of Gluepot Reserve (1997-1998), John set in motion a number of key management decisions that would set Gluepot on a path to landscape recovery following a long history of grazing pressure from feral goats and stock.

I consider taking on the role as the new Chairman of Birdlife Australia's Gluepot Reserve a great honor and privilege. Being an active member of Gluepot Reserve Management Committee since 1999, I have a reasonable appreciation of how Gluepot operates and what key elements have made Gluepot so successful as a community managed reserve.

Having recently retired from the Department for Environment & Water, serving in the South Australian Arid Lands, South East, Murray Darling Basin and Northern and Yorke Regions and more recently as Operations Manager of the Adelaide International Bird Sanctuary National Park which involved the establishment of SA newest National Park to protect Migratory Shorebirds, I hope this experience will set me in good stead for my new role as Chairperson of the Management Committee. Whilst I am by no means a "Hard Core Birder" one of my interests is raptors and I am the South Australian Representative of Birdlife Australia's Raptor Group.

Over the past 9 months I have given a couple of presentations about Gluepot Reserve and the central theme of these presentations has been around the importance of volunteers. Gluepot Reserve's reputation as a successful Model for Environmental Conservation & Sustainability and the vital role volunteers play in Gluepot's management is well established and recognized. Clearly volunteers are the backbone of Gluepot Reserve. Further Gluepot Reserve is more widely known as the "Jewel in the Crown" for Birdlife Australia and this is largely due to the role and achievements of our dedicated volunteers.

An example of a couple of outstanding achievements by Gluepot volunteers is the recent total grazing pressure monitoring results which were carried out by DEW, highlight Gluepots vegetation recovery from grazing as the best in the region. A testament to the closure of 16 Dams on Gluepot about 20 years ago, building the 50 km electric fence and a coordinated and consistent feral animal control program. In addition Gluepots fox control program, one of the longest running control programs in SA, has contributed to reduced predation levels on so many species including Malleefowl. (Note: the jury's still out on the benefit of fox baiting to Malleefowl & it appears further scientific analysis may be warranted). **Cont...page 2**

Newsletter



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JULY 2021





Ian Falkenberg doing what he does best and loves doing, working with raptors.



A stunning Red-Lobed Wattlebird photographed by John Gitsham at the Whistler hide, a popular hide for bird photographers in Gluepot.

Gluepot Bird Reserve Chairman's Message cont...

What do I see as the priorities for management of Gluepot Reserve into the foreseeable future ?

- Continued support for our dedicated Volunteers that undertake so many important tasks and activities and Volunteer Rangers who do an exceptional and valuable job at keeping the day to day operations running smoothly across Gluepot.
- Ensure the Gluepot Management Action Plan is completed by end of 2021.
- Work with our neighbours and partners in a more cooperative and coordinated way.
- Ensure good Science underpins our monitoring programs and build on the excellent work undertaken to minimise total grazing pressure on the landscape.
- Upgrade our aging visitor facilities to a standard that meets future tourism and industry needs, ecotourism accreditation and minimises ongoing maintenance / repair.
- A more strategic focus on undertaking projects and monitoring activities by organised "Working Bees".
- Bird-based Tourism – this is a developing and expanding tourism market and we need to respond in a strategic way and engage with and support regional tourism.

I appreciate funding will be a significant challenge to ensure we deliver on some of the preceding priorities.

We have recently seen two of our valued Volunteer Ranger couples, Tony and Suzie Burgin and Ted and Carmel Meissner retire from Ranger duties however its great to see them continue their involvement in Gluepot by assisting with less demanding activities and taking things a little more leisurely these days. In addition it is fantastic to see Wally Klau still involved with Chris and Petra's bird banding activities, giving the occasional advice but sharing the great stories and life experiences that Wally has built up over many decades of bird banding.

Whilst I do not have the space to acknowledge everyone, I am so proud of what our dedicated volunteers, Friends of Gluepot and Volunteer Rangers have achieved at Gluepot Reserve. Well Done

Ian Falkenberg

"Gluepot Reserve is more widely known as the "Jewel in the Crown" for Birdlife Australia and this is largely due to the role and achievements of our dedicated volunteers." Ian Falkenberg

Finally a Gluepot Newsletter after 2 years

As a member of the Management committee of Gluepot, I have taken the initiative to produce this very overdue Gluepot newsletter, the last one was in January 2019. I also will be the new editor of the Gluepot newsletter, and endeavor to produce hopefully two a year, so please send me any interesting Gluepot news or other related stories to john.gitsham@bigpond.com Thanks.



Wendy Jennings facilitating the Painting Nature course at Gluepot

Education Courses at Gluepot

Introduction to Nature Photography 04 & 05 September 2021 Facilitator: Mark Newton To book: <https://www.trybooking.com/BOGSU>

An Introduction to Scientific Botanical Illustration 18 & 19 September 2021 Facilitator: Bronwyn Bean To book: <https://www.trybooking.com/BOMNW>

Painting Nature 25 & 26 September 2021 Facilitator: Wendy Jennings To book: <https://www.trybooking.com/BOGTB>

Cathemeral Kids Campout 02 to 04 October 2021 **FREE** Family Nature Campout To book: <https://www.trybooking.com/BOGTC>

Introduction to Birds & Birdwatching 09 & 10 October 2021 Facilitator: Phil Barron To book: <https://www.trybooking.com/BOGTG>

GPS and GIS Workshop 16 & 17 October 2021 Facilitators: Craig Oliver and Monty Luke To book: <https://www.trybooking.com/BOGTM>

An Introduction to Bird Banding 23 & 24 October 2021 Facilitators: Petra Hanke and Chris Scholz To book: <https://www.trybooking.com/BOGTO>

Introduction to Macro Photography 30 & 31 October 2021 Facilitator: Mark Newton To book: <https://www.trybooking.com/BOGTW>

A Beginners Guide to Mallee Vegetation at Gluepot 06 & 07 November 2021 Facilitator: Chris Lill To book: <https://www.trybooking.com/BOGUA>

Getting to Know Reptiles 13 & 14 November 2021 Facilitator: Dr Mark Hutchinson To book: <https://www.trybooking.com/BOGUF>

Introduction to the Bats of Gluepot Reserve 27 & 28 November 2021 Facilitators: Dennis Matthews To book: <https://www.trybooking.com/BOMMV>

For further information please go to the Gluepot website: Gluepot.org

Bird photographs below by Volunteer ranger Graham Lee taken at Gluepot during his volunteer stays as ranger with his wife Linda.

Go to *Page16* for their ranger interview by Ian Williams.



Top: Splendid Wren (Male), note flower in bill, males often present the female with a flower petal during courting.

Bottom: Red-capped robin (Male), they are often seen around the Sheoaks in Gluepot.

Gluepot Library News

The Bill Santos Library and Science Centre was completed in 2015, providing a purpose-built facility for visiting University and volunteer researchers. It was built entirely by volunteers using materials and money donated specifically for that purpose. The centre provides a separate space for researchers who are able to use their own laptops, the library's microscopes and other analytical equipment as well the donated reference books necessary to support their work on Gluepot related projects.

The collection covers subject areas such as Ornithology, Entomology, Herpetology, Conservation management, Botany, Pest control and Fire management. At present there are over 2600 items catalogued and the catalogue can be accessed via the Gluepot Reserve website or directly via the URL <https://gluepot.libib.com/>. Libib is the library management system used to catalogue the resources. Each record is accompanied by a photograph to assist the user in identifying the resource. Work is continuing on the cataloguing of an extensive journal collection.



Duncan MacKenzie retires as chairperson after 20 years at the helm.

In July of 2020 Duncan Mackenzie, long term Chairman of the Gluepot Reserve Management Committee retired. Duncan had been Chairman for 21 years. Under his stewardship Gluepot has grown from a fledgling Reserve to a birding destination of International Importance. During his term as Chairman and under his expert stewardship the number of research projects that have been carried out, the amount of infrastructure that has been built, and the number of Awards Gluepot has won, have been nothing short of astounding. The homestead complex now has a Visitors Centre, Accommodation Block, Library, Sheds, and Education Centre. In addition 5 bird hides, three camping areas and numerous walking tracks on the Reserve itself, all of this developed with the help of large numbers of volunteers. Gluepot now looks forward to more developments in the future. Duncan with his energy, enthusiasm and dedication has been the “glue” that has tied Gluepot and its volunteers together.

Despite the restrictions of COVID 19 Duncan was farewelled at a celebration of his achievements and contributions to Gluepot Reserve in October last year at Woodburn Homestead Langhorne Creek. The event was attended by a number of past and present Volunteers and invited guests. Regrettably many Interstate volunteers and also Birdlife Australia dignitaries were unable to attend.

Speakers included SA's Minister for

the Environment and Water, the Hon David Speirs, Mr Mike Williams, Executive Director, Department for Environment and Water, Mr Ian Falkenberg, new Chairperson of Gluepot Reserve Management Committee, and via Zoom, Mr Paul Sullivan, CEO Birdlife Australia, Mr John Barkla, Birdlife Australia Board Member, and Mrs Martine Marone, Birdlife Australia Board Member.

Duncan received a number of presentations including a portrait by well known Riverland Artist Garry Duncan, a framed photograph of the Gluepot environment, by noted local photographer Dean Lines, an original painting by noted local artist Wendy Jennings and a photobook of his 21 years as Gluepot Chairman.

Duncan's farewell was presided over by Ian Falkenberg, Gluepot's new Chairperson. Ian is set to very capably carry on the excellent stewardship Duncan had provided and to guide Gluepot into the future.



Duncan MacKenzie

“Duncan with his energy, enthusiasm and dedication has been the “glue” that has tied Gluepot and its volunteers together.”



**Duncan receiving a sign to be erected at the Entrance to the home-
stead complex**



**Portrait of Duncan
by Riverland artist Garry
Duncan.**



Duncan making concrete with RAG team leader Bill Santos



**Visitor's Centre showing the awards wall on right and awards table
centre.**

Gluepot moth larva included in new moth field guide

A moth larva photographed on Babbler Campground early November 2018 was identified by Jan Forrest of Butterfly Conservation SA and Peter McQuillan of the University of Tasmania as an anthelid, likely a Secretive Anthelid *Omphaliodes obscura*. Moths as a group are still poorly studied, and there are many species that remain undescribed. A photo of the moth larva was included in the field guide "Caterpillars, moths and their plants of southern Australia", which was published by Butterfly Conservation SA late 2019. The Gluepot Visitor Centre stocks copies of the book for sale.



Gluepot Reserves Solar/Battery Power System Up-grade completed in June 2020



A team of four installers from Natural Technology Systems (NTS) arrived on Monday 18th May 2020. On the Wednesday 20th May, an additional two NTS digital technology specialists arrived and worked on the system after the new batteries and solar panels were nearing completion.

Previous to the installation process, Bill Santos and Alistair Bestow had spent time at Gluepot clearing the area for the two solar panel arrays and excavating footings for the mounted solar panel framing. These holes were then filled with concrete and the frame mounts inserted. Trenching of the electrical lines to the two solar arrays were also undertaken by Alistair Bestow and John Glover. Installation of the solar framing, panels, gel batteries and instrumentation commenced on the Monday and the NTS Team departed Gluepot on the Thursday afternoon, having completed all required installation components in 4 days.

All six members of the NTS Team were very professional and dedicated 'workers'. They were highly organised and had specific tasks and roles to complete. They commenced work at about 7.30am each day (after a very brief breakfast) and worked through until darkness. They stopped for a quick lunch but did not stop for morning or afternoon teas. They did consume a large number of cans of COKE during the day and iced coffee in the mornings. Dinner was served at 6.30 pm. They were a very happy 'bunch' and it was a great pleasure having them work at Gluepot. A very special thanks to Margaret Falkenberg who supplied all the meals. As usual, her cooking was exceptional and the addition of her freshly baked chocolate cake, and a variety of biscuits added to the fun at meal times. Thanks also to Margaret's 'helpers', it was much appreciated. Meal times were certainly the best time of the day with many great stories being told !

The 'old' batteries have been loaded onto pallets and have been taken to Gawler to NTS depot to explore options for selling the batteries and 'old' inverters to recoup some of our expenditure.

An important part of the up-grade, is the ability to provide live remote monitoring. This means that Committee members for example, can go into the solar website and see instantly the output of the system and other areas of interest. If there is a problem with the power system, NTS can access the system remotely from Adelaide and instruct the Ranger, over the 'phone', to conduct tests and rectify any problem.

The new Selectronic and Fronius Inverters and live remote monitoring portals are significantly more complex than the old power system. As a result we have developed strict guidelines on monitoring and maintenance procedures. (no more fiddling and tinkering with inverters, portals, etc).

In essence the new solar/battery power system is a combination of AC and DC power system. In simple terms, all power during the day is supplied from the solar array and given the solar arrays face north/west and north/east means that they are more efficient at producing power. At night all power is supplied direct from the batteries. Previously all power (day & night) was supplied from the batteries only, thus placing unrealistic demand on the battery bank. The new system places significantly less demand on the battery bank, the solar arrays are more effective and efficient, hence the reason that the new system is expected to meet Gluepots power needs for at least the next 10 years and beyond.

A huge thanks to everyone involved in the installation process – Natural Technology Systems were highly professional and did a fantastic job installing the new system. In addition to their professionalism, they were reliable, organised and very knowledgeable about the technology of solar / battery system.

Gluepot Reserves solar / battery power system has now moved into 21st Century technology

Ian Falkenberg

Over the page, Photographs of the installation of the new Solar and battery system at Gluepot.



Bill Santos helping the concrete truck driver pour footings for the solar array.



NTS technicians installing the solar array panels.



Professionally installed inverters in the battery room.



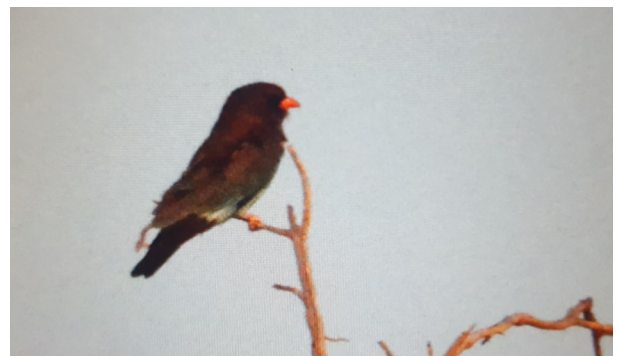
NTS technicians wiring the solar panels to the inverters

Unusual sighting of a Dollar Bird in Gluepot

In November 2020 after the bird course was facilitated by John Gitsham, a group were having a drink next to the Breezeway at Gluepot, when someone yelled “what’s this bird?”.

All who were looking, it was a very vagrant Dollarbird.

They are normally associated with the upper east coast NSW/QLD. I was told they occasionally follow the river system down into SA and have been seen only on a few occasion in other parts of SA, this sighting may a be a first for Gluepot?



The Dollarbird sighted in front of the rangers house in November 2020 by several volunteers.

Gluepot visit by SA Minister for the Environment

The Hon David Speirs MP, Minister for Environment & Water visits Birdlife Australia Gluepot Reserve on the 23rd and 24th March 2021. This tour provided the Minister with an insight into Gluepots operations & [what makes Gluepot Reserve a successful volunteer model](#).

In particular we were able to show the Minister the key elements that make Gluepot Reserve a success including, an example of the activities and projects undertaken by Friends, students and volunteers, the role of volunteer rangers and the establishment of the Gluepot Reserve (Foundation) Fund, etc.

To help with the Ministers visit were Don and Chris Lill - focussing on vegetation and Malleefowl, Dennis Mathews - fire management and bat ecology, Jim Spiker - bird banding (thanks to Chris and Petra for organising the bird banding activity). Ian and Diedre Kerr, Rangers provided outstanding support and all the facilities looking absolutely spotless and immaculate and clearly much preparation work prior to the Minister visit, sometimes it's the attention to detail that really counts. Also helping were Graham and Linda Lee and I am not sure how we could have managed without their support with the catering, setting up the education centre and chaperoning James and Sandra Schober. Attending the evening dinner were Sandra and James Schober who represented Riverland West Chamber of Commerce and River Gum Cruisers and our local ecotourism guide Rex Ellis and Clair Barry. A very special mention to Margaret Falkenberg for coordinating and organising the catering for the event. As usual the catering was undertaken with perfection. Some time was spent showing the Minister how Gluepot is managed. The following is a brief summary of some of the key management issues including;

Total Grazing Pressure Management - Which is recognised as one of our key threats to native plants and animals. At the time Gluepot was purchased in 1996, overgrazing across the property was evident primarily by stock and feral goats and to a lesser extent elevated numbers of kangaroos. Since this time there has been a significant reduction in total grazing pressure with expected vegetation regeneration and recovery.

Recent field work has been undertaken to determine the rate of recovery of long lived perennial vegetation that has been subjected to considerable goat browse in the recent past. Total grazing pressure monitoring results which were carried out by DEW show the following;

- Highlight Gluepots vegetation recovery from grazing as the best in the region.
- Indicator shrub species have shown a significant improvement in overall growth.
- Improvements shown in the structural form of plants which is indicative of a reduction in feral goat browsing impacts.
- Physical remove of feral goats from Gluepot and the maintenance of very low population levels due to limited access to water (dams) has improved the condition of vegetation communities across the property.

The 50 km electrified fence along its north and west boundaries, ensures minimal intrusion of feral goats from adjoining properties. Of the 18 dams on the reserve, 16 have been bulldozed in and following dam closures and the subsequent re-vegetation of the sites, goat numbers are now low and kangaroo numbers have fallen to 'natural' pre-dam levels.

Predator Control Program - In early 2000's Gluepot implemented a 1080 fox baiting program that has been in operation for over 2 decades. An intense baiting program coordinated by Ian and Oriana Williams is undertaken consistently 4 times per year and more recently have introduced the fox ejector system using 1080 capsules.

Malleefowl Adaptive Management - Chris and Don Lill gave a very informative insight into Malleefowl ecology at an active nest. Using existing mallee fowl grids, Gluepot contributes to a national scale monitoring and adaptive management project to determine if fox baiting assists the malleefowl population. Tim Pascoe uses drones to monitor mallee fowl grids and mounds and camera traps to monitor the occurrence of foxes and other species. The data collected is used with data collected from other properties to answer critical questions relating to mallee fowl conservation.

Monitoring – Visit an elevated bird hide at Froggy Dam. In addition to threatened species monitoring there are other activities that help guide the management of Gluepot including Bird banding which has been undertaken on Gluepot Reserve for over 2 decades and provides one of the longest data sets for determining bird distribution and movements. Jim Spiker conducted his banding operations with expertise and carefull attention to detail. Dennis Mathews did a very professional presentation on Bat ecology and monitoring and had a number of bats to release to the wild for the Minister and guests.

Fire Management - Gluepot follows the Bookmark Fire management Plan which guides our prescribed burn program that aims to break up large tracts of mallee so that in the event of a large uncontrolled fire, there may be abilities to slow and or halt the fire spread. Dennis Mathews gave the Minister an insight into how controlled burning stopped a wildfire in 2020 spreading into the Birdseye Block.

Gluepots facilities - A tour of the Gluepot facilities including Education Centre, Visitor Centre, Library & Research Station, home-stead, solar / battery power system and accommodation block and camping facilities.

I appreciate these visits place a huge burden on all volunteers involved, however Gluepot Management Committee has an important role to advocate the good work undertaken by all volunteers across so many areas of Gluepots management. One way to do this is to showcase the successful Gluepot Volunteer Model to our very supportive Minister for Environment & Water, the Hon David Speirs MP.

A huge thankyou to all who were involved in this visit and have made a significant contribution to its success. Well done.



Minister Speirs watching Jim Spiker identify a Striped Honeyeater captured in the mist net. Watching on from left are; Ian Kowald, Rod Bradke, Chris Lill, Minister Speirs, Ian Kerr, Don Lill (obscured) .



Minister Speirs watching Ian Kerr record banding data on ABBBS sheets. Don Lill watching on.



Minister Speirs and Don Lill spent some time in the Froggy Bird Hide watching Brown Headed Honeyeaters. Coming into drink.



Minister Speirs and Chris Lill checking out the quality Bluebush vegetation near the northern boundary fence of Gluepot.



Minister Speirs and Senior Ministerial Adviser Stuart Peevor talking to Dennis Mathews about the Gluepots fire management program on the Birdseye Block.



Chris and Don Lill explain the workings of an active Malleefowl nest on Gluepot to Minister Speirs and Senior Ministerial Adviser Stuart Peevor. Looking on are Volunteer Rangers, Ian and Deidre Kerr.

The November 2020 bushfires in Gluepot

Mid November 2020 lightning strikes hit Gluepot Bird reserve and the property below Taylorville, many hectares of Mallee were burnt, but Gluepot got away with only small isolated hot spots that either went out on their own or were extinguished by Gluepot Committee members/Volunteers, John Gitsham and John Glover about 5km NW of the homestead. A credit to the local CFS who found the hot spot and put a grader control line around the 4-5 acre burning scrub, luckily John Gitsham (a NPWS Park ranger and DEW Fire crew) who was running his Bird Course was able to use the Reserves fire unit and vehicle and was ably assisted by John Glovers to stop the fire going any further than the CFFS control line.

Photo by John Gitsham of burnt scrub from the November fire.



Vale Jock Bromell



Sadly Jock passed away recently after a long and courageous battle with cancer.

Jock and his wife Ros were long term Rangers at Gluepot. Over the past 17 years Jock and Ros have been Rangers five times (an enormous volunteer contribution) and Jock also did several stints as an Assistant Ranger in recent years.

Originally from a farming family in Central Western Victoria Jock was a keen birdwatcher and brought to his time as a Ranger at Gluepot many practical skills, as well as a huge capacity and energy for hard work. In particular Jock's great love was painting and he was responsible for painting many parts of the Homestead and surrounding infrastructure. He and Ros also spent many hours working on the construction and maintenance of Gluepot's Electric fences amongst many other activities which have become part of a Gluepot Ranger's complex and busy tasks. Whilst at Gluepot Jock and Ros made many friendships with both Rangers and Volunteers.

When Jock retired from farming he moved to Port Fairy where he also volunteered to paint houses and structures in Port Fairy.

One of nature's gentlemen Jock will be sadly missed by his friends and family and also his contemporaries and friends at Gluepot.

The sincere sympathies of the whole Gluepot Family go to Ros and her family.

He will be truly missed.

Chris Lill

Increase of Gluepot camping fees from 1 July 2021 to \$15 per vehicle.

Camping and day visitor fees from July 1, 2021

From July 1, 2021, the fees for **camping** in one of Gluepot's campgrounds are \$15 per vehicle per night. As before, campsites cannot be reserved in advance.

The fee for **day visitors** has remained at \$5 per vehicle.

The fees for **commercial tours** are \$5 per person for day visitors and \$10 per person per night for camping.

All visitors need to sign in and pay after arrival at Gluepot in the Visitor Information Centre, located on Track 1.

Payment can be made by cash or credit card.



Bill Santos runner up for the SA Joy Noble Volunteer Award



The Friends of Gluepot Reserve recently nominated Bill Santos for the Joy Noble Medal Award, which is given to the most outstanding volunteer in South Australia. While Bill did not win this award, he was very high up in consideration. He did receive a certificate in recognition of his volunteering efforts, and this was presented to him at the last Gluepot Management Committee Meeting.

Prior to his involvement with Gluepot, Bill volunteered his time, shared his expertise and donated goods and equipment to many organisations in the Riverland. He was named Riverland Citizen of the Year in 1996. He joined the Gluepot Management Committee in 2001 and was an inaugural member of Friends of Gluepot Reserve when it was formed in 2004. He has been the go-to person for any issue regarding construction and maintenance for the last 20 years. Look around the Reserve, and evidence of Bill's work is everywhere. Gluepot has won many prestigious awards, thanks to the wonderful volunteers who contribute to the success of the Reserve.

Arguably, though, Bill's contribution has been outstanding.

Congratulations, Bill, in our eyes you are a legend.

Photo above: Bill Santos receiving his award from Gluepot Chair Ian Falkenberg and his wife Margaret

Feral Goat Browse Impact Assessment Monitoring and Malleefowl Adaptive Management Predator Experiment

At the May 2021 Gluepot Reserve Management Committee meeting, Craig Gillespie – Habitat Management and Restoration Ecologist, Natural Resources SA Murray-Darling Basin, presented on his feral Goat impact assessment monitoring and the Malleefowl adaptive management predator experiment work. Whilst the entire presentation is too long for this newsletter, we have selected the following summary (Results & Recommendations) and Discussion from Craig's Preliminary Report and key sections that relate specifically to Gluepot Reserve. For the complete and more detailed report please contact Craig Gillespie – Habitat Management and Restoration Ecologist, Natural Resources SA Murray-Darling Basin.

Feral Goat Browse Impact Assessment Monitoring in the Riverland Biosphere 2012-2017 – Summary.

By Craig Gillespie – Habitat Management and Restoration Ecologist, Natural Resources SA Murray-Darling Basin

Introduction

This report is a brief summary of the results from a repeat survey of grazing impact on native shrubs at 43 sites within the Riverland Biosphere. The purpose is to highlight changes since baseline monitoring began in 2012 in a brief preliminary analysis.

Summary

Results

- Indicator shrub species have shown overall growth across the Riverland Biosphere
- This is accompanied by improvements in the structural form of plants indicative of a reduction in feral goat browsing impact
- The physical removal of feral goats from the landscape and the maintenance of low population levels by restriction of access to water has improved the condition of vegetation communities across the Riverland Biosphere.
- Improvements are not evenly distributed across the Biosphere reflecting persistent goat populations in some areas
- There is evidence that better responding sites are in areas with more limited access to water and in close proximity to certain sections of the pastoral interface with the Biosphere
- More palatable shrub species are responding less well suggesting there is a residual impact of feral goat grazing even in the most improved sites
- Feral goat populations and the resultant impact on native vegetation will increase without continued downward pressure.

Recommendations

- Further removal of feral goats and closing down of water sources should be undertaken
- However, such activities should have direct and close scientific guidance
- Current findings suggest that feral goat removal can be targeted to specific areas to optimise cost-efficiency
- Results also suggest that further strategic closing of dams will result in a lasting local reduction in goat populations and a subsequent improvement in vegetation condition
- This should also result in a reduced pest animal management cost
- Efforts should be made to maintain good relationships with neighbouring pastoral operations
- Opportunities should be explored to replicate the results achieved in the Biosphere across the pastoral land
- These should include the strategic removal of feral goats in combination with improved regulation of access to water
- Stock dams may be fenced and stock watered at troughs which could be remotely drained and switched off when paddocks are rested
- Other market-based impediments to good management of feral goats may also be investigated.

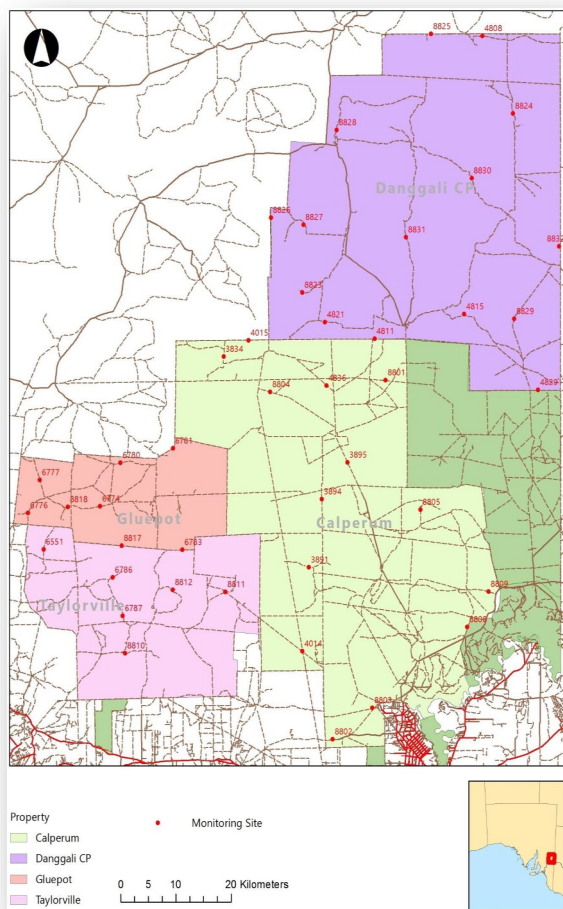


Figure 1: Riverland biosphere showing component properties and the locations of feral goat impact monitoring sites.

Note:

All Dams (except the house dam) on Gluepot Reserve were bulldozed closed nearly 20 years ago and the northern and western boundaries of Gluepot are electrified to minimise feral goat movement into the reserve. These management decisions were vitally important for the long term recovery of Gluepot's vegetation and grazing impact.

References

- Brandle R, McDonald J (2009) 'Management of Feral Goats: Evaluation of Ecological Indicators for a Monitoring and Evaluation Framework - Summary.' DEH.
- Milne T (2014) 'Repeat observations of grazing on native shrubs in the Bookmark Biosphere 2012-2014.' Department of Environment, Water and Natural Resources.
- Ryan-Colton E, McDonald J (2014) 'Riverland Biosphere Feral Goat Impact Assessment: Baseline Survey.' Department of Environment, Water and Natural Resources.

Discussion

The overall growth of indicator shrub species across the biosphere combined with improvements in browse state and current browse intensity scores indicates a general improvement in the condition of its vegetation communities. The intervention to control rabbits and reduce the population of feral goats in these landscapes after the end of the millennium drought was intended to protect the vegetation communities from increased grazing pressure as a result of herbivore populations responding to the improved conditions. The observed improvement in vegetation condition therefore represents a degree of success for this intervention.

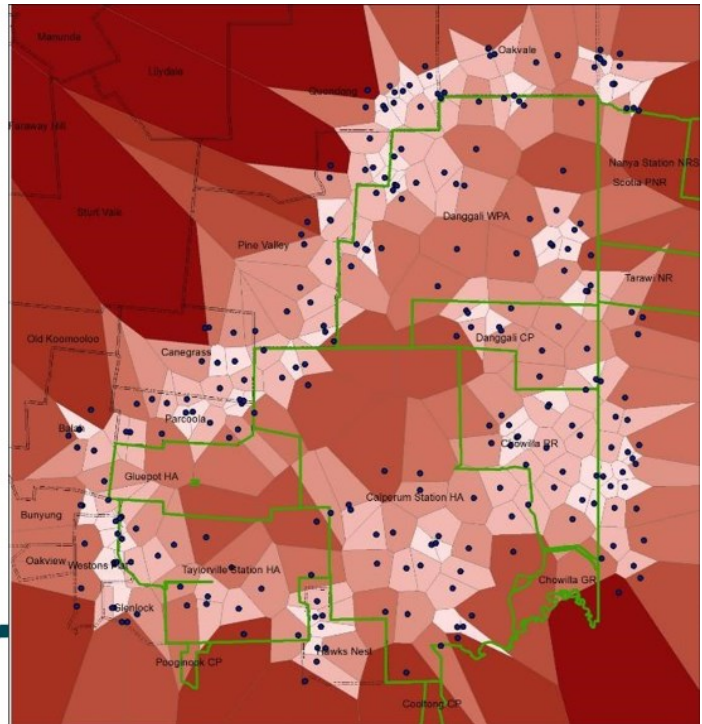
However, the improvements are not continuous across the landscape and are limited. Some areas clearly still have an abundance of feral goats as evident by their impact on the vegetation as well as aerial survey data and ground-based surveillance cameras. Removal of water sources has had a lasting effect on population numbers and more sophisticated analysis of this monitoring data will undoubtedly demonstrate more clearly that these areas are the ones responding better. Most of the dams in Danggali have been closed down and all dams in Gluepot have been flattened or made inaccessible to feral goats and these are the properties showing the biggest improvements in condition.

These results demonstrate that improvements can be made using the management actions that have been employed but that there is more work to be done. However, further analysis of this and other datasets such as aerial goat survey and waterless area analysis will provide scientific guidance for future works. There is evidence that a lower threshold in feral goat populations may be achieved and maintained with removal of water and a maintenance level of animal removal. Feral goat removal should continue in targeted areas along with further strategic removal of watering points within the biosphere. The findings of this monitoring also suggest that improvements to vegetation condition can be achieved outside the reserve in the pastoral country if similar actions are undertaken such as improved control of access to water and the continued removal of feral goats.

The growth of indicator species is a positive outcome but does not represent a threshold in ecological function. Presumably if a plant can grow it can develop reproductive structures however this methodology does not detect the recruitment of new individuals into plant populations which is vital for the long-term sustainability of the rangelands ecosystems. Such events are episodic and tend to occur in response to disturbances such as flooding rains and fire. As both of these phenomena also have an attractant or increasing effect on herbivore populations, downward pressure on feral goat and rabbit populations should continue in order to maximise the likelihood of future recruitment episodes.

Closing Dams

- 2020/21
- Remove standing water
- Re-watering the landscape
- Aboriginal heritage

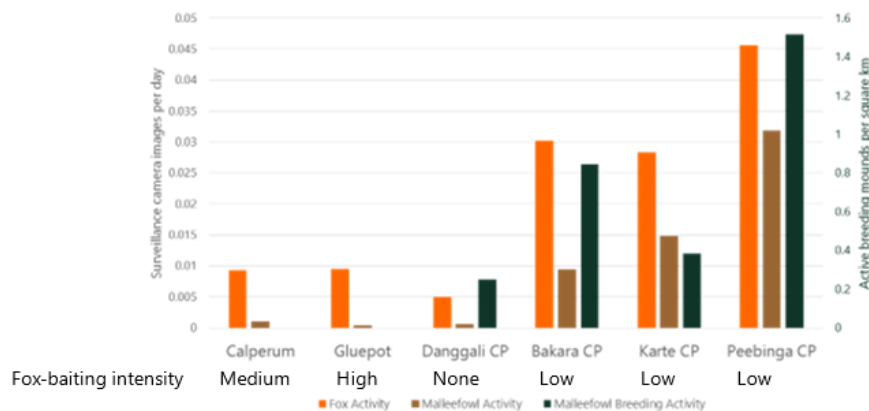


Malleefowl Adaptive Management Predator Experiment

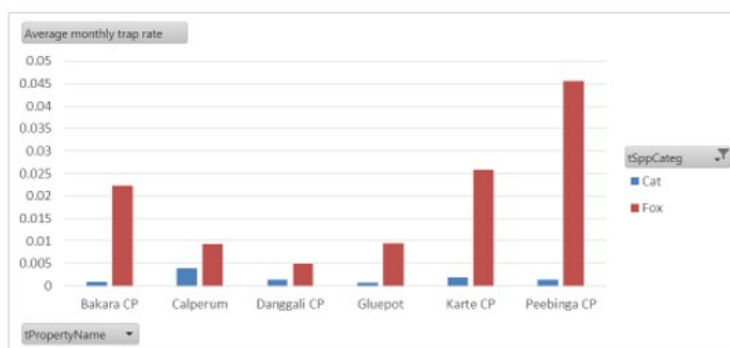
Does malleefowl breeding activity increase when predators are suppressed?



Interesting Trends...



Cats vs Foxes



Note

The points to make about the preceding diagrams is that fox baiting intensity appears to have little benefit to Malleefowl breeding activity north of the Murray River. Note the contrast between Gluepot, Danggali, Calperum with the agricultural areas south of the Murray River (*refer to "Interesting Trends" graph above*).

Also interesting comparison between Calperum and Gluepot Reserve where fox baiting is undertaken and Danggali CP where no fox baiting is undertaken (*refer to Cats vs Foxes graph above*)

Get to Know your Gluepot Rangers

The guest Rangers for this newsletter are Linda and Graham Lee.

Linda and Graham live in Lara, Victoria, and have been volunteering at Gluepot for 4 years. They have provided wonderful service to Gluepot, including a major input into walking trail maintenance, and often making and implementing suggestions for improvement on the Reserve.

(Ian Williams: I've got a few questions to ask you both. Feel free to provide a team answer or separate ones if either of you have different views)

1. Q How did you first hear about Gluepot Reserve, and when & why did you commence volunteering as Rangers?

A We love the bush, and have had many years of extended bush walking, camping and 4x4 adventuring. Being bird watchers (among other things) we had heard of Gluepot many times, but didn't visit until October 2015. We camped at Babbler, and boy was it hot! Tim & Shirley Pascoe, the Rangers at the time, made us feel very much at home and were encouraging for us to return as Assistants and maybe later as Rangers. We returned for a 4 week stint as Assistants in July/August 2016 and with Ian & Oriana's help got to know much more of Gluepot and how it works. Our 4 weeks ended up 6, with us as stand-in Rangers for 4 as Tony & Suzie suddenly needed to return home.

2. Q How do you describe Gluepot to your friends or anyone else who asks about the Reserve?

A When we initially say it is 54000 Ha of mallee scrub with some interesting birds we often get a puzzled look. Then we describe what happens here, the infrastructure, the volunteers, the research, the courses, the activities, the role of Rangers and the public access. From this some non-birdo friends came to stay 2 weeks last year while we were Rangers. They worked hard. They loved it and said "we'll be back!"

3. Q What is the attraction that motivates you both to keep returning to Gluepot?

A Gluepot is a very inspiring place. It is amazing that a place of its size is run totally by volunteers and it is the people that motivate us to return. The volunteers, be they rangers, committee members, assistants, students, researchers and the many others involved, come from very diverse back grounds and it is a pleasure to meet and get to know them. Being part of this team allows us to give something back.

4 Q Can you describe for the readers 2 or 3 activities that gives you both the most satisfaction whilst living at Gluepot?

A A key responsibility and a pleasure is the interaction with the public. Like minded, friendly people with common interests. Visitors from out of the area or overseas have always been keen to know about Gluepot, and to share their experiences from elsewhere. The French students we had in 2019 were just wonderful young people, very keen and fast to learn, hard working and very easy to get on with. Then there's the general maintenance and upkeep of Gluepot. Those routine jobs we all do every day/week (!), but which add so much to the operation and public's perception of Gluepot.

5 Q You volunteer at parks and reserves around Australia and overseas. Can you describe some of these activities and their importance for conservation of our wildlife?

A In 2013 we spent a month at Matang Wildlife Centre in Sarawak, a rescue and rehabilitation centre that cares for a wide variety of endangered animals, including Orang-utans. We have also volunteered with Free The Bears at Phnom Tamao Wildlife Rescue Centre in Cambodia (2018) and at Cat Tien NP in Vietnam (2019). This work usually involved mornings with animal husbandry and feeding, and afternoons doing maintenance, animal enrichment activities or construction. **Cont.....page 17**

Get to Know your Gluepot Rangers cont...

In 2014 we volunteered for a month at the Manu Learning Centre in Peru, a jungle research camp on the Madre De Dios river in SE Peru and adjacent to the Manu NP. We were field assistants for university researchers from The Netherlands, Spain, Scotland and England. We were trained and tested on the relevant flora, fauna and jungle procedures and first aid before being allowed out of camp, which added tremendously to the experience and made us much more useful to the researchers.

In Australia, as well as Gluepot, we have volunteered as caretakers at Epping Forest NP, Qld, looking after Northern Hairy-nosed Wombats: April /May 2018 – tick breeding season (arrh!!!) and Jan 2019. We are heading to Richard Underwood Reserve near St George for Feb this year, the other NHW site in Qld.

We also did 10 days on Orpheus Is at the James Cook Uni Marine Research Centre – general maintenance and lots of weeding.

We have recently joined the volunteer group of Bush Heritage and have done a few weeding weekends with them at their Nardoo Hills property.

And then there's the Hooded Plover group on the surf coast where we assist with nest and chick monitoring over the summer.

6 Q Graham, you are a keen bird photographer. Can you recount any memories when out 'snapping' images that provided you with a lot of satisfaction or pleasure?

A We all know they're there, BUT the Chestnut Quail thrush was one bird at Gluepot we just could not get!! After a heads-up from Michelle we headed to a spot on Track 7, and spent 2 hours finding nothing. Back to the car we go ready to leave for home, and of course Linda sees one right near the car. Its partner was nearby, and they both allowed us to walk quietly following them for about 20 minutes, with a few nice photo opportunities.

7 Q There must have been a few things go wrong or that have tested your personal resources on occasions? I'm sure our readers, especially other current or potential Rangers would like to know about these.

A In June last year we had a record overnight low of -6.7C. This was our first experience of frozen and broken pipes: homestead tank stand, beside outside laundry and shearing shed hot water service. Luckily we noticed and had no great water loss, and Bill and Stewart arrived with parts and quickly got things fixed/replaced.

And of course there was the first difficult-to-find electric fence fault. Sometimes there is just no alternative than to take a breath, get out and walk, and be methodical and patient.

8 Q Any humorous stories or encounters that either of you can recall?

A During a dunny round Linda was opening the door of one of the homestead campground toilets, and the whole door came off its hinges in her hands. She ended up standing there, eyes wide, holding a door.

As part of our English conversations we taught one of our French students a couple of card games, that he quickly picked up and became almost unbeatable. We were taught a French game, but only later did we find out he played competition in France: we had no hope!! **Cont.....page 18**

Get to Know your Gluepot Rangers cont....

9 Q What are your favourite Gluepot birds?

A Graham

Chestnut Quail-thrush, Shy Heathwren, Southern Scrub-robin, all the Whistlers.
Striated Grasswren if I ever see one.

Linda

Major Mitchell Cockatoo, Regent parrot, Fairy wrens and the Whistlers.

10 Q Have you had any particularly memorable experiences or encounters with the visitors who stay and camp on the Reserve?

A Last April we thought there was a Blue-winged Parrot about but nobody had got a clear look. With loads of good birders about, it was a keen young girl who asked Dad what was that bird on the tree out the (Visitors Centre) window. Yep, just sitting there waiting for a photo.

Then there are the visitors that you click with, and strike up a friendship that continues beyond Gluepot.

11 Q Do you have any projects or tasks that you would like to undertake or complete during your future visits to Gluepot?

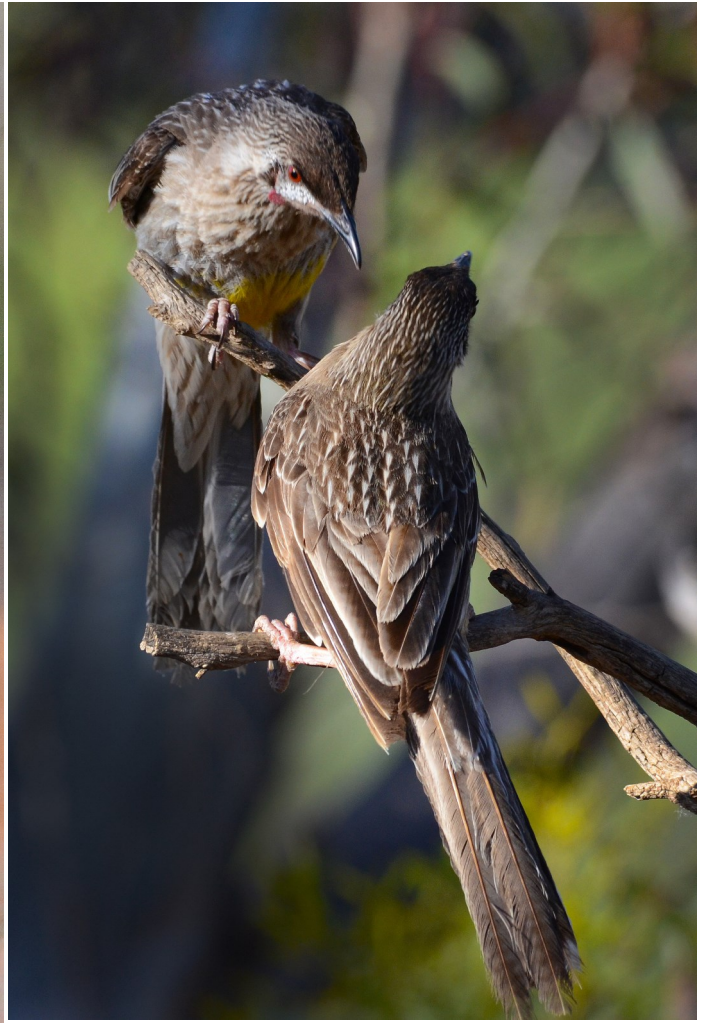
A Our major ongoing project is the updating of the Ranger Manual and Appendices. We can only keep this up to date with help from others. Thank you to the Rangers and committee members who have informed us of changes and suggestions; keep them coming!

Even though we have just completed major maintenance of the walking tracks, it is an on-going task. The visitor feedback sheets and chats to walkers are very helpful.



Photo above: Graham and Linda Lee at Gluepot and a Red-throat photographed in Gluepot by Graham Lee, a keen bird photographer.

Some Gluepot Birds photos by John Gitsham



Photos above: Left, Apostle Bird, Right, Red-lobed wattlebirds and Above a pair of Mulga Parrots, all photos taken in Gluepot Bird Reserve



GLUEPOT RESERVE

Camping at Gluepot

Gluepot Reserve has 3 public campgrounds:

- Babbler
- Bellbird
- Sitella

A camping fee of \$15 per night per vehicle applies.

Visitor campgrounds have two toilets, except the more popular Babbler campsite that has three.

Each also has a small rainwater tank. The water is not assured to be safe for drinking, or the tanks may be empty, so campers should bring their own drinking water with them.

Camp-fires are not permitted on the Reserve.

The Reserve is open to day-visitors and campers on most days of the year, only being closed on:

- catastrophic and extreme fire rating days,
- after heavy rainfall, making the tracks unsafe to travel on (usually >20mm in a day), or
- occasionally if feral animal control work is being undertaken.

To check if the Reserve is open, call the Rangers on (08) 88928600.



GLUEPOT RESERVE

Gluepot Reserve is a Reserve of Birdlife Australia.

ABN: 75 149 124 774

Email: gluepot@gluepot.org

Telephone: (08) 8892 8600

Website: www.gluepot.org

On Facebook

Postal address: PO Box 345, Waikerie, SA 5330

Gluepot is a not-for-profit conservation reserve, managed and operated entirely by volunteers.

It is funded through donations and bequests from its supporters, and by grants for capital works and projects.



If you wish to support the Reserve by being a donor or providing a bequest, please contact the Chairman:

Ian Falkenberg

E-Mail: Hawknest2@bigpond.com

Phone: 0428 842 873

'Gluepot' newsletter is produced as an e-newsletter, and is not available as a printed version.

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