

around — THE MOUNDS —

NEWSLETTER OF THE NATIONAL MALLEEFOWL RECOVERY TEAM AUTUMN 2016 EDITION NINE

NATIONAL MALLEEFOWL RECOVERY TEAM

BY SHARON GILLAM, CHAIRPERSON



CELIA, SHARON, DEB, ELLEN

Hello everyone and welcome to the ninth edition. Malleefowl have been challenged by a breeding season with above average temperatures and below to well below average rainfall, across the breadth of their range. Training sessions for monitors have been run across all states for the first time, refreshing old hands and garnering new interest, so we can continue to collect data to assist us in understanding how Malleefowl are tracking (see Tim's articles pg. 2, 3).

Find out how the 2015 breeding season has panned out in the Riverland and South East regions of SA through Dave Setchell and Vicki Natt, while Peter Stokie shares the results from Victoria, and Tayla Bowden gives an update from Eyre Peninsula in SA. From the lower Yorke Peninsula region of SA (Innes NP), I can report that breeding activity was at seven active mounds, same as 2014, down from between 11 - 9 active mounds found consistently over the preceding eight years. I was joined by a fabulous group of monitors, and my

group (pictured), was lucky enough to witness the truly amazing spectacle of a chick emerging from a mound - see article on page 4.

The birds have been busy at Yongergnow in WA, resulting in perhaps the first chicks to have been successfully bred in captivity in that state - see pages 11, 12. Speaking of captivity, Adelaide Zoo has been busy supporting Malleefowl conservation, with a range of projects on the go (page 8).

You may have already seen it in the media, but if not, I'm pleased to announce that the Malleefowl has been chosen as a priority species under the *Threatened Species Strategy* run by the Commonwealth Government. See the article by Jessica Pink on page 3. For more details, visit the web page: <http://www.environment.gov.au/bio-diversity/threatened/publications/strategy-home>

Graeme Tonkin leads you through his impressive monitoring 'trek' at Mount Gibson late last year (page 12), and Noel Haywood shares a personal family story from the early days at Wandown in NW Victoria and the connection to Malleefowl in The Mallee Post section (pages 10, 11). Learn a little bit more about one of our Victorian Recovery Team members, Victor Hurley; how Malleefowl has inspired an artist in Wagga Wagga; and how Recovery Team member David Kellett has been raising the profile and conservation of Malleefowl through a children's book and passionate local landholders. You may remember Rosanna van Hespen if you went to the Forum in Dubbo - she brings us an update on her Masters

study on using cameras to monitor foxes as part of the Adaptive Management project.

There have been some changes to Recovery Team membership over the last six months, with membership now at an all-time high. We say farewell to John deJose, who took on the reigns of the MPG then Nest Egg Foundation in WA, over the last few years. We wish John all the best. Joy McGilvray has joined the team, representing volunteers and the community in WA. Joy has been an active member of the (now defunct) MPG, and is heavily involved as a volunteer in the monitoring process in WA. The team is also joined by two new Jessicas: Jessica Sackman, Senior Environmental Engineer, Mt Gibson Iron, WA (Jessica has taken Sally Cail's position from the NCMPG) and Jessica Pink, our new Commonwealth rep. Jessica is also on the Iluka Malleefowl Management Committee. And Mal Norman, keeper of birds at Adelaide and Monarto Zoos joins us as a new member for SA. A warm welcome to all of our new members.

At the time of writing this, the *Proceedings of the 5th National Malleefowl Forum 2014* were being posted out, either in book or CD form, so hopefully you have received your copy if you requested one. It is also available electronically via our webpage:

<http://www.nationalmalleefowl.com.au/other-information.html>. A big thank you to all of our authors and to our editors, Melanie Bannerman and Stephen Davies, for contributing to and capturing this event as an important record of current Malleefowl conservation activities.



MALLEEFOWL AND THREATENED SPECIES STRATEGY

FROM JESSICA PINK

TERRESTRIAL SPECIES CONSERVATION, DEPARTMENT OF THE ENVIRONMENT

Malleefowl are receiving increased attention from the Australian Government after Minister for the Environment, the Hon Greg Hunt MP, announced in January that this remarkable and iconic bird would join the list of 20 birds prioritised for conservation action under the *Threatened Species Strategy*.

Malleefowl were identified from consultation led by the Threatened Species Commissioner, Mr Gregory Andrews, involving expert input and advice from the scientific community and support from Western Australian and South Australian governments.

The *Strategy* sets a clear target for each of its 20 priority birds: to improve species' trajectories by 2020. The Green Army, 20 Million Trees, National Landcare Program and National Environmental Science Program (NESP) are contributing toward this target. The Australian

Government is currently funding 27 on-ground projects under these programmes that benefit Malleefowl by improving habitat, protecting nesting mounds and undertaking targeted predator control.

In addition, the Australian Government is funding a \$6.5 million adaptive management project through the National Environmental Science Program. This important research will evaluate the results of predator suppression and fire management in Victoria and South Australia for the long-term persistence of Malleefowl populations.

For further information on how the Malleefowl can benefit under the *Threatened Species Strategy*, please feel free to contact Daniela Binder, advisor to the Threatened Species Commissioner on daniela.binder@environment.gov.au.

NATIONAL MALLEEFOWL RECOVERY TEAM MEMBER

DR VICTOR G. HURLEY



Current Position - Senior Planned Burning Biodiversity Officer, Department of Environment, Land Water and Planning

Role responsibilities - Developing fire management strategies to reduce the risk to life and property and to biodiversity across the Mallee and Murray Goulburn Bushfire Risk Landscape. This landscape covers the northern third of Victoria and over 2Mha of public land. The role also involves assessing the impacts of fire control strategies and determining how to minimise these impacts and promote strategies to support an ideal growth stage structure for the highest biodiversity benefit.

Projects - Radio tracking Carpet Pythons to determine habitat usage in River Red Gum forests on the Murray River (results lead to change in firewood prescriptions). Monitoring populations of semi-arid woodland birds.

Investigating factors affecting breeding success in Major Mitchell's Cockatoo (MMC). Developed and field tested techniques for creating simulated natural cavities in *Callitris* for breeding MMCs.

Surveying breeding colonies of Regent Parrots and monitoring tree health of stands of River Red Gums at Regent Parrot colonies in the Victorian Mallee.

Other roles - Chair Regent Parrot National Recovery Team (Authored the Regent Parrot National Recovery Plan).

DELWP Representative on the Black-eared Miner National Recovery Team. DELWP Representative on the Mallee Emu-wren Working Group.

Experience in emergency responses as either a Planning Officer or a Situation Officer to: Wildfire, Floods, Locust plagues, Emu plagues and all biblical plagues as required.

Hobbies: - Hot air ballooning (Australia and Japan). Woodworking:-recycled Australian native hardwoods.

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Submissions for Edition ten of Around the Mounds close on **Friday 9/9/16**.

For editing, articles are best sent by email as attached documents with photos (ca 500kb) also as attachments.

This Newsletter is available in colour at www.nationalmalleefowl.com.au alongside the National Malleefowl Database.

Other important websites for news, information and photos include www.malleefowlvictoria.org.au www.malleefowl.com.au www.malleefowl.net.au

NATIONAL MALLEEFOWL RECOVERY COORDINATOR UPDATE

BY TIM BURNARD

So much to report on since the last edition just 6 months ago.

The massive training effort around the country last spring saw training in Kalgoorlie, Norseman, Dalwallinu, Merredin in WA, Lock, Secret Rocks and Murray Bridge in SA, Scotia, West Wyalong and Dubbo in NSW and of course, the VMRG weekend at Wyperfeld. That's a grand total of 11 training events with over 200 people trained to monitor Malleefowl. This happened with so many people involved that I can't name them all. It was also thanks to funding from a number of sources; Rangelands NRM (WA), Gundawa (WA), Riverina LLS (NSW), OEH (NSW), MDB NRM (SA).

In November 2015, the National Malleefowl Recovery Group Inc was employed to undertake annual monitoring at Mt Gibson/Extension Hill mine. Thanks go to Harriet Davey and Graeme Tonkin for making this happen. In June this year, we are having a Coordinator gathering in Adelaide and the money we raised from the Mt Gibson monitoring will help WA people attend. Graeme Tonkin our National Database and Training Manager will be managing the shindig (did anyone notice we added the words 'and Training' to Graeme's title?). The idea of the two day session is to ensure all monitoring across the country is uniform and that all sites are monitored. This means we will ensure that every site is covered by a Coordinator.

You may be aware that our volunteer team monitors roughly 3,500 mounds each year. But we have a lot more mounds than this on the database (about 4,500) and we are increasing this to satisfy the data appetite of the AM Project. To monitor all the mounds we need to attract more people and be a bit more efficient. I reckon we could fill a lot of the spaces just by letting people know that they are available. We are developing an Australia-wide volunteer call out so that if a coordinator in say Kalgoorlie or one at Dubbo needs an extra pair of feet, they can put out an alert to all Australia...who knows where we may end up in November this year?

There's a big upgrade coming for the database this year. The main driver for the upgrade is the AM Project. Very soon we will have cameras out in the bush recording predator activity. The partners in the AM Project will need a central location to store information from cameras as well as data describing the forms of predator

control being used. While doing this we need to ensure that the outputs from the database are adequate for all partners to use in their own reporting and research.

Apart from the major addition to the database, it has been quite a few years since the database website was updated and there are quite a few refinements we would like to include in the process. Please let us know if you have any suggestions for the database internet presence.

There have been some great strides forward with the AM Project in WA. Mt Gibson is just north of Dalwallinu in the heart of NCMPG area. There are five partners of the AM project in the area; Bush Heritage at Charles Darwin Reserve, Mt Gibson-Extension Hill Mining, AWC at Mt Gibson and Ninghan Station Indigenous Protected Area. They have combined with NCMPG to obtain funding from Gunduwa to conduct LiDAR mound searches. This means we have all of the NCMPG sites searched (a very big job done!) as well as gathered info to commence monitoring at several new AM sites. Searching sites to locate mounds is probably the greatest drain on resources of any part of the monitoring process. To have achieved this in one fell swoop across a substantial area is very impressive.

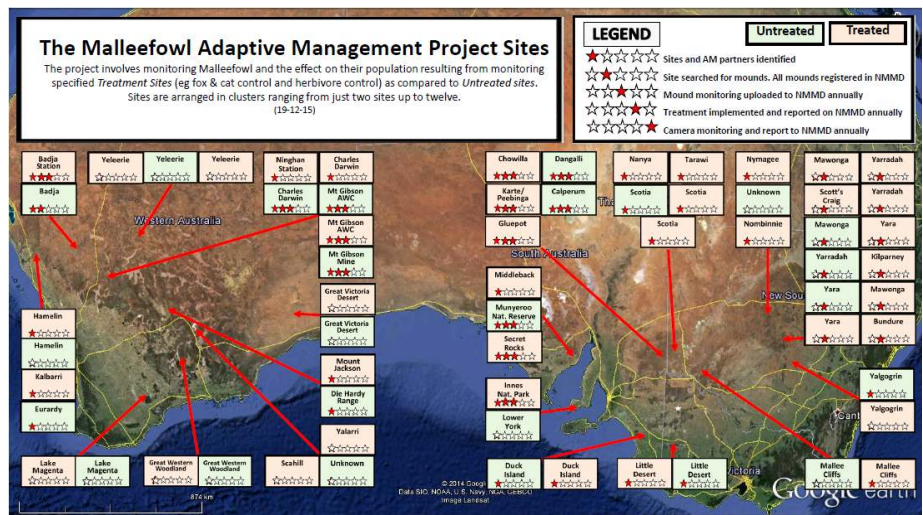
And while all that was going on, the Melbourne University wrapped up three years work in the AM Technical Report 2015. This comprehensive work gives us the sound foundations on which the whole AM Project is being built. It defines why the initial experiments are on predators right

through the power analysis that tells us just how many sites are needed to give us robust statistical strength to make decisions and even describes in detail how we came at the camera array needed at each site to develop a predator index. It is a pretty grand piece of work! You can find a copy at www.nationalmalleefowl.com.au on the Library page.

Staying with the AM Project; another big upcoming event is the April AM meetings in Perth and Mildura. In 2015 we first met with partners in the AM Project to discuss this massive experiment on the effect of predator control on Malleefowl breeding activity (our indicator of a healthy population). This year we are meeting with partners to refine the data gathering further and see how we will get all the data into a useable place (the database!). We will also be exploring what are the common issues being experienced that can be dealt with as a group.

In other news; On 22 January 2016, the Minister for the Environment, the Hon Greg Hunt MP, announced the remaining eight birds under the Threatened Species Strategy's 20 birds by 2020 target. And it includes Malleefowl! We have been keeping in touch with the Threatened Species Commissioner office and provided lots of potential projects for inclusion in the prospectus being developed to attract funding. This is a good sign that we have been included.

That's it for now. Let's hope for a bit more rain this year and a prosperous breeding season.



MONITORING FOXES WITH CAMERA TRAPS

BY ROSANNA VAN HESPEN, MELBOURNE UNIVERSITY



KeepGuard 04-28-2013 05:08:55

For the past two years I worked with Cindy Hauser, Libby Rumpff, José Lahoz-Monfort and Michael Bode from the University of Melbourne for my Master's degree to develop a camera trap monitoring program for foxes, as part of the landscape-scale experiment to understand the role of red foxes in Malleefowl conservation.

My goal was to figure out how we can use camera traps in this large scale project to monitor foxes. Camera traps can become a bit of an investment when they have to be bought in large amounts for large-scale monitoring projects, and I looked at the most cost-effective way of using them for fox monitoring. I investigated how many cameras are minimally needed to draw reliable conclusions from the monitoring study.

To develop the models necessary for my research, I used the data that was collected by Joe Benshemesh and the VMRG in a pilot study in Wandown Nature Reserve, Victoria. At the end of the pilot study, I helped collect the cameras that were set up there, became familiar with the mallee and saw my first Malleefowl, a real experience for someone from the Netherlands!

Also, I really wanted to understand how camera traps work, and specifically the one we were using in the pilot study (a Keepguard KG680v). I set up a little field experiment with the camera to learn exactly what it can detect. It was set up in a paddock, and walking on half circles around the camera at set distances I measured its detection area (see picture below).



In my research, I asked questions such as: 'how do we account for the fact that foxes may be more active around some cameras than others?' This difference in activity may depend on the distribution of sources of interest, such as water and food. If this distribution is very patchy, there may be bigger differences in the number of fox photos between the different cameras. I found that using more cameras can help us account for this and will improve the reliability of the monitoring study.

I also compared camera brands, specifically the detection area of different cameras, to see if this affects the reliability of the monitoring study. Although cameras with larger detection areas will take more fox pictures, these cameras can be more expensive as well. I found that it is helpful to have a lot of pictures, but it is even more important to have a lot of cameras. This way we can account for the variation in fox activity between the different cameras.

So far the cameras have proven to be very helpful in the collection of useful data on foxes. The use of cameras for the large scale Malleefowl-fox monitoring program certainly looks promising.

VOLUNTEERS REWARDED AS ENDANGERED CHICK EMERGES, INNES NP, SA

FROM LORRAINE EDMUNDS, NATURAL RESOURCES, NORTHERN AND YORKE

Volunteers and officers from Natural Resources Northern and Yorke were in the right place at the right time recently, as a tiny Malleefowl chick hatched and emerged from a mound they were monitoring as part of an annual survey in Innes National Park.

Community Team Leader for Yorke District, Deborah Furbank said that the exciting experience was one of the highlights of her career in biodiversity conservation.

"We watched the chick rest for ten minutes as its feathers dried, before it scurried off the mound into the scrub, independent from the moment it hatched," Ms Furbank said. "It is magical moments like these that leave me in no doubt about the value of our fox control and monitoring work on southern Yorke Peninsula."

Once widespread across Australia, Malleefowl, now a nationally endangered species, continue to decline across much of their historic range, but despite their rarity, are often seen by visitors to Innes National Park.

An extensive fox-baiting program has been in place across southern Yorke

Peninsula since 2003 when Tamar Wallabies were reintroduced to Innes National Park and Ms Furbank believes it is delivering great benefits for Malleefowl and other native species.

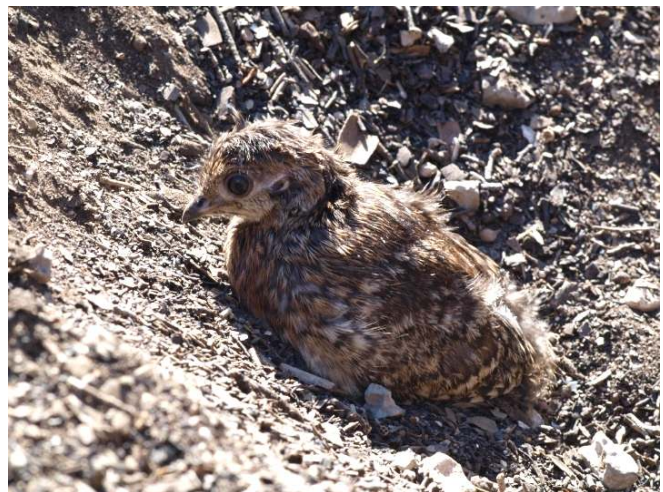
"Sightings of Malleefowl have increased within and outside the park over recent years and we're convinced this is attributable to our fox-baiting program, which continues to expand," Ms Furbank said. "For a second year we saw no signs of fox scats or prints on or around

any of the mounds we visited during the recent survey."

Each summer, a small team inspects Malleefowl mounds within a mapped grid, as part of the National Malleefowl Monitoring program.

In the most recent survey, 24 mounds were visited, seven of which were found to be active this season, with Malleefowl observed at three of the active mounds.

MALLEEFOWL CHICK
RECOVERING
PHOTO SHARON GILLAM



WEST WYALONG, NSW, REPORT

BY DAVID KELLETT, RIVERINA LOCAL LAND SERVICES

It has been quite a busy time here in the Bland Shire. I have had several interviews on ABC morning radio discussing Malleefowl in the Bland Shire. I have also attended two local schools to educate the children about Malleefowl and the threats that they are faced with in order to survive. I was even honored by being selected as a "Local Hero" in recognition of my work with Riverina Local Land Services and Beckom Public School publishing a book called 'Making a Difference' through the Creative Catchment Kids Program. The book will be ready to view soon at www.envirostories.com.au



I was also contacted (via the NMRT webpage) by Rachel Viski an artist from Wagga Wagga who has created some wonderful paintings for the new Wagga Wagga Rural Referral Hospital's Children's Ward (pictures below)

Rachel explains her work "You'll see quite a large spotlight on the Malleefowl as he takes us on his adventures over the Murrumbidgee River and into the Riverina. I think I've captured the unique features of the Malleefowl in their plumage, their stance and the way they tilt their heads and look at you out of their tiny eyes; while at the same time being able to express some artistic licence in portraying a Malleefowl through a child's eyes. One of the spaces includes the main character, Mallie when he meets a community of Malleefowl in all shapes and sizes. Hopefully this will one day be a reality for the Malleefowl in Australia with the good work the National Malleefowl Recovery Team is doing."

So the Malleefowl is gaining lots of public exposure of late in the area which is fantastic!

As part of the Malleefowl Recovery Project run by Riverina Local Land Services, we have a landholder looking at signing a ten year agreement to fence/protect 165 hectares of Mallee. We have several other landholders looking at ways they can help protect precious Malleefowl habitat on their properties and we are hoping that they will follow suit.

Mal Carnegie (Lake Cowal Foundation) has been spending a lot of time this past month visiting some active mounds taking some great

photographs and videos and even managed to witness a chick as it entered the world. I was lucky enough to see a chick wandering around just 10 or so metres from a mound; it is fantastic to be able to see the next generation of Malleefowl in the area.

Mal has captured a great photo of a Malleefowl roosting in a tree (photo below).



Fox numbers seem to be on the rise again and approximately 20,000 hectares are being covered by our fox baiting program. Our monitoring program of late has seen us using Reconyx and UOVision monitoring cameras, GoPro cameras and even drones to capture both Malleefowl, habitat and locate mounds. We are looking forward to working with Bindi Vanzella (Regional Landcare Facilitator-Riverina) in the near future to help promote the Malleefowl and organise education sessions and workshops in the area. You can follow Bindi on Twitter Bindi Vanzella @bidgewidgee.



MOBILE TECHNOLOGY USED IN LOCK MALLEEFOWL SURVEY, SA

BY TAYLA BOWDEN

Volunteers and staff in central Eyre Peninsula successfully used smart phone technology to record Malleefowl mound survey data in the field last month.

Natural Resources Officer, Tayla Bowden said “the use of mobile technology is a first for the Lock grid in central Eyre Peninsula, and was welcomed by the volunteers.”

“These surveys play an important role in the monitoring of Malleefowl breeding behaviours, habitat distribution and population numbers, and being able to use new technology to make the process easier and more efficient.”

Tayla said she was continually amazed at the community enthusiasm with the project. “Volunteers and the local community are really on board with helping protect these remarkable birds and these surveys just wouldn’t be possible without their ongoing commitment.”

After delays due to hot weather, the annual Lock Malleefowl monitoring survey went ahead. With drizzly overcast conditions on the day, the rain held off long enough for volunteers and staff to check 57 mounds. These included two active mounds (one more than the previous 2013-14 season).

Staff and volunteers were pleased



LIZ MCTAGGART ALONGSIDE ONE OF THE MALLEEFOWL MOUNDS - PHOTO: CAROL LYDEAMORE

to finally get the chance to trial the new mobile devices and apply the skills they’d learnt from an earlier training day with Mr Graeme Tonkin and Mr Tim Burnard.

New volunteer Carol Lydeamore said she started the day apprehensively but found she enjoyed the day immensely. “I didn’t know what to expect however by the end of the day I was looking forward to the next survey,” Carol said. “The handheld phones used for data collection were very good. We had low-level, thick rain cloud that may have impacted

reception at times but we were patient and once I got the hang of it things went well.”

The Eyre Peninsula Natural Resources Management Board plays an active role in the national approach to Malleefowl conservation, developing regional strategies to manage existing Malleefowl populations and continuing to show support through ongoing surveying in priority areas.

Special thanks to Christine Taylor, Carol Lydeamore, Sue and Alan Tingay for their help with the survey.

SA MURRAY DARLING BASIN UPDATE BY DAVE SETCHELL, MALLEE ECO SERVICES

27 grids were monitored this season (682 mounds) on DEWNR reserves, private properties and Commonwealth land. This included 7 grids monitored by BirdLife Australia volunteers on Gluepot Reserve, 4 grids monitored by Australian Landscape Trust (ALT) volunteers on Taylorville Station and 3 grids monitored by ALT staff on Calperum Station.

All known mounds were monitored for the first time since 2010, with a couple of interesting observations showing that periodically checking old

mounds is definitely worthwhile (see photos below).

44 active mounds were recorded compared to 33 last season. Despite this, only 3 active mounds were recorded north of the Murray River (1 on Danggali and 2 on Calperum Station) compared to 5 last season.

A total of 759 hours of volunteer time were contributed to the monitoring program and I would like to take the opportunity to thank all the individuals and groups involved. A good number of new volunteers were

involved once again this season.

Excellent opening rains provided some optimism for a productive breeding season but the remainder of the critical May to September period was dry with above average temperatures, much like the previous 2 years. The Bakara, Short’s, Peebinga, Bandon, Ettrick and Murray Bridge Army Range grids were the notable exceptions, all recording an increase in active mounds this season.

A summary report will be available shortly and will be distributed to all the volunteers, landholders and stakeholders involved.

We are always looking for volunteers to help with monitoring, particularly with some of the more remote grids in the region. If you are interested please contact: Dave Setchell

0428 873 090

dhsetchell@gmail.com



2015 MONITORING SEASON SOUTH EAST SA

BY VICKI NATT

Season	Grid Number and Name									
	13 - Mount Scott		14 - Coola Coola		65 - Coorong		66 - Naen Naen		72 - Mount Boothby	
	Total mounds	Active mounds	Total mounds	Active mounds	Total mounds	Active mounds	Total mounds	Active mounds	Total mounds	Active mounds
2005	36	8			23	0				
2006	39	6			31	0	14	3		
2007	39	1	54	9	32	1	14	5		
2008	40	9	54	10	32	0	10	5	46	5
2009	42	6	52	14	32	0	10	4	46	6
2010	43	6	52	9	32	0	10	4	47	10
2011	44	6	52	8	32	0	10	2	49	13
2012	46	4	51	10	32	1	14	2	49	15
2013	36	6	51	7	23	1	11	3	49	12
2014	36	5	46	9	22	0	13	3	38	10
2015	46	2	56	9/11	36	1	15	2	51	9

Monitoring of South East sites for season 2015 commenced in October at Mount Boothby and was completed at Gum Lagoon (Naen Naen) on November 17. Included was Mount Boothby to the north, two grids in Gum Lagoon Conservation Park, (Coola Coola and Naen Naen), Coorong grid located in the Mallee of the Southern Coorong and Mount Scott Conservation Park to the South.

In total 204 (of a possible 207 mounds) were monitored from the 5 South East sites including three mounds outside the Coorong grid. Though the data is still to be validated and two 'active' mounds in Gum Lagoon need further investigation, overall 24 mounds were found to be active, 3 less than last year and 7 less than the 2013 season, a considerable drop in two years. The late winter and spring period was particularly dry in the South East especially at Mount Scott. For the Coorong, one active mound was found on site, and one off site nearby. All except three of the five year mounds were visited. The table above shows all results

A total of 392 hours (138 volunteer hours and 254 staff hours) were spent monitoring South East sites, including preparation, training and travel. Eight individual volunteers and 18 different staff members from various organisations, including DENWR, Coorong Tatiara Local Action Plan, Green Army, Working on Country Cultural Rangers, Nature Glenelg Trust, and the National Malleefowl Recovery Team participated on one or more days. Three volunteers and eight staff took part in monitoring at Mount Boothby over two days. Margaret Emery and Chris Brien and Joe Defoe once again camped there overnight, sharing dinner, snacks and a nice bottle of wine. The Gum Lagoon (Coola Coola) site took a further two days in which one volunteer and 5 staff participated. Tim Burnard and

Donna Higgins took on the Naen Naen grid once again camping overnight on their way home from elsewhere in SA. Four volunteers monitored Mount Scott over two days and eight staff including six members of the Green Army team took a day to finish monitoring the Coorong.

A monitoring workshop was held in Murray Bridge prior to the start of the monitoring season to train potential participants on correct monitoring techniques and allow 'old hands' to refresh their skills, be informed of any changes and network with other participants.

In August Bryan Haywood, Cassie Hlava, Libby Maplecroft and Abigail Goodman met to discuss the merits of a potential research project, designed to learn 'locally' about the impacts (positive or negative) of mosaic burning in Malleefowl habitat. A controlled burn that took place early in 2015 at Mount Boothby CP is the suggested study site for this research as it was a good example of a mosaic burn and the edges of the fire were in close proximity to several mounds. We look forward to the final proposal.

Bryan Haywood, Senior Ecologist at Nature Glenelg Trust has spent considerable time reviewing the 'Malleefowl Regional Action Plan for the South East of SA' which was updated in 2009. As part of that process he arranged for us to meet at Noonameena in March 2016 to review our efforts since 2009, discuss any new learnings or opportunities, and to agree on a revised action list for the next 10 years.

Thanks to the Coorong Tatiara Local Action Plan, my position as Project Officer was able to be funded for another year. Special thanks to Samantha Blight of Coorong Tatiara LAP as she not only made herself available to monitor two sites but organised a Green Army team to help out. Graeme Tonkin has been overseeing all the technical bits, such as downloading, uploading and ironing out problems with equipment. Thanks Graeme.

Once again a big thank you to everyone who participated this season, especially those who volunteered their time, it was much appreciated.



MONITORING WORKSHOP PARTICIPANTS

ZOOSA SUPPORTING MALLEEFOWL CONSERVATION

BY MAL NORMAN, BIRD KEEPER, ADELAIDE ZOO



CAN YOU FIND THE TWO MALLEEFOWL?

ZOOSA is a non government not for profit conservation organisation encompassing Adelaide and Monarto Zoos. We exist to save animals from extinction and connect people with nature.

"To achieve positive conservation outcomes we run and participate in field work, research programs, breeding programs, education and calls to action campaigns at local, regional and international levels." <http://www.zoosa.com.au/conservation/our-commitment/>

ZOOSA have a long history of keeping Malleefowl in captivity and supporting Malleefowl conservation. Our most recent efforts include collection and incubation of eggs from Ferries McDonald Conservation Park in South Australia to maintain a captive insurance population of Malleefowl in case of a catastrophic event such as fire in this Park. We

have also undertaken a Mallee vegetation restoration program at our Monarto Zoo Site and supported Taneal Cope's genetics research at Wandown Nature Reserve by assisting with egg collection in the field and setting up incubators.

Since 1991 Adelaide Zoo had maintained a single female Malleefowl for display purposes. She passed away in 2014 at an age of about 23 years, being one of the oldest Malleefowl to live in captivity. We recently transferred two younger female birds from Monarto to Adelaide Zoo to continue to display Malleefowl to the general public. We took this opportunity to convert some smaller owl aviaries into a larger aviary specific to Mallee habitat for education purposes. These Malleefowl share their home with Regent Parrots, Scarlet-chested Parrots, Purple-crowned Lorikeets, Peaceful Doves, White-browed Woodswallows and

Red-backed Kingfishers. We were delighted when in their first breeding season at Adelaide Zoo both birds built and worked a single mound in the exhibit, producing eggs. As we know Malleefowl can be very difficult to see in the wild, and this behaviour has provided a wonderful opportunity for schoolchildren and the general public to closely observe and appreciate the remarkable nesting behaviour of this unusual species. Even rarer than seeing a bird in the wild is to hear one. These birds also very occasionally vocalise with what I describe as a high trumpet note.

If you haven't seen or heard a Malleefowl or witnessed their nesting behaviour in the wild and you're passing through South Australia, drop into Adelaide Zoo next breeding season for a unique experience.



ABOVE ARE THE OWL AVIARIES, NOW UPGRADED, RENOVATED AND PLANTED TO BECOME THE MALLEE AVIARY, WITH WORKING MALLEEFOWL, RIGHT.



VICTORIAN MONITORING REPORT 2015-2016

BY PETER STOKIE, VMRG, CO-ORGANISOR OF VICTORIAN MONITORING

The 2015-16 season was a designated year when the Victorian Malleefowl Recovery Group monitors visited all mounds in all sites including those that had been classified as optional and only need to be visited once every five years. The next year when it will be mandatory to visit every mound will be 2020. There are 235 mounds (17%) that fall into this category on our state-wide monitoring list.

In 2015 the number of mounds on the Victorian list numbered 1,421 in 42 sites in four National Parks, namely Wyperfeld NP, Hattah Kulkyne NP, Murray Sunset NP and Little Desert NP. There are several sites in State Flora and Fauna Parks, the largest ones being Bronzewing, Wathe, Wandown and Mt Arapiles/Tooan, and three private covenanted bush properties close to the National Parks.

From the details above, and the fact that very little appropriate vegetation exists outside of these parks and covenanted properties, Malleefowl have a high degree of protection from land clearing in this state. However, the majority of protected areas are very marginal agricultural lands and as a consequence only support very small number of breeding pairs of Malleefowl.

All Victorian sites have been monitored and validated on the National Malleefowl Monitoring Database. It is pleasing to be able to report that more than 99% of the 1,421 mounds have been visited and valid data for all of them has been collected.

It is too early to report on overall trends, as Dr Joe Benshemesh is still analysing and comparing this season's data to past records, but I can report on some details. The number of active mounds this year totalled 108. This is 30 fewer than the previous year and the lowest number since 2007 which was towards the end of a ten to twelve year drought in Victoria. It is also almost half the number of active mounds (205 active mounds in 2012) in the year after the drought broke with significant rains in summer 2011.

There was no uniform pattern to the breeding numbers across the areas monitored in Victoria.

The large Murray Sunset National Park with many sites has a lot fewer active mounds this year, but the neighbouring Hattah Kulkyne National Park has an increase in breeding mounds, and two sites in Hattah have recorded the highest number of active mounds ever recorded. In the same area, and probably experiencing similar weather

patterns, there were very good breeding numbers at other sites but fewer than the past few years.

The northern section of Victoria between Mildura and Ouyen was considerably more productive than the middle section of the Victorian Malleefowl habitat comprising most of Wyperfeld NP and neighbouring reserves. Numbers were low across the board at these sites, with the exception of Paradise FFR where there were 13 active mounds. It is hard to explain why this site has done so well and others within 10 to 15 kilometres have little activity.

Further south in the Wimmera area in sites around the Little Desert, numbers have always been low except for one reserve. This year numbers have again been very low and the productive site has only one rather than 6 or 7 active mounds. The drought has hit hard in the Wimmera this year.

Another detail concerning the 108 active mounds in 2015 is that 46 of the active mounds came from three sites, two Flora and Fauna Reserves, Wandown (25), Paradise (13) and one private covenanted property, Mali Dunes (8). In times of climate change resulting in increased extreme temperatures and significant bush fire activities, it is a scary thought that close to half of the Victorian breeding population in this season is concentrated in so few sites

LiDAR

This year prior to the monitoring season a number of our sites were part of a LiDAR flyover. Joe's preliminary report on the results suggest that while about 30% of the known mounds were detected by the scan, detection was a function of mound height: about 75% of mounds over 30cm in height were detected, dropping to 40% for mounds 20-30cm in height and none for mounds below 20cm in height.

LiDAR detected some mounds we did not know of, but there were virtually no false detections. Joe is continuing to work with Umwelt to improve the detection algorithms.

Champion Victorian Monitors

I would like to finish by highlighting a novel way of monitoring sites by a group of folk in Victoria. A group of eight monitors, John and Noela Olsen, Greg and Margaret Davis, Reg and Ros Hill, Rosemary Thompson and Rod Lingard join forces to monitor four sites in relatively close proximity (maybe 80 kilometres apart) in four

days. They travel together, divide each site into four comparable sections and start monitoring early and are usually finished a site by 2pm and have their feet up at their camp site by 3pm with beer and wine in hand, contemplating the next site for next day.

I commend their initiative for four reasons:- they have fun together, they travel together with safety in numbers, they finish each site well before it gets extremely hot, and they finish each site in a day.

The same group returned to Murray Sunset NP to complete another two sites in a very remote location when another couple could not attend due to illness. They completed the task in two days rather than the usual four to five days.

PHOTOS BELOW BY ROSEMARY THOMPSON

1. GETTING THERE!
2. CAMPING
3. MONITORING
4. RECUPERATING/PLANNING





THE MALLEE POST ATM HISTORICAL ARTICLE

BY NOEL HAYWARD

HISTORY AND EARLY SURVEY FOR MALLEEFOWL AT WANDOWN FFR, VIC

After my Father died a few years ago I inherited his rather large slide collection, and have been slowly scanning them for posterity. Amongst them were photographs of the early days of Wandown. Whilst I had some knowledge of how Wandown came about, being involved in the original survey, it was whilst reminiscing with Neil McFarlane during last year's VMRG Training Weekend that I became fully aware of the chain of events that led up to the declaration of Wandown as a nature reserve.

In the 1960's the Hoare family from Koraleigh purchased a 4,250 hectare property at Wandown, between Annuello and Kooloonong. Though the property had been grazed, it was largely uncleared and the Hoares intended to develop it for wheat farming. However, as they commenced clearing the area they became so concerned at the number of Malleefowl they were displacing by the clearing, that they approached the Swan Hill Shire Council and the Mid-Murray Field Naturalists Trust (MMFNT) with a view to having 1,700 hectares of prime Malleefowl habitat reserved.



THE PHOTOGRAPH SHOWS ALEC FISHER, GEOFF HOBSON, UNKNOWN, ALF DUNBAVIN BUTCHER, BERT CURTIS (PARTLY OBSCURED), NEIL MCFARLANE AND JIM HOARE DISCUSSING A MALLEEFOWL MOUND

With strong community support the Shire Council agreed to purchase the area for a reserve and took up the cause and raised the issue with the Victorian Fisheries and Wildlife Department, and in May 1969 the MMFNT hosted a visit by Swan Hill Shire Councillors and representatives of Fisheries and Wildlife including the Director, Alfred Dunbavin Butcher, who saw the merit in creating a reserve at Wandown (photo below).

Shortly after the visit, the MMFNT arranged what was arguably the first systematic grid survey of a Malleefowl population in Australia. The survey was undertaken by members of the MMFNT and community volunteers including the Swan Hill Scouts on the Queen's Birthday weekend in 1969.

The survey confirmed the quality of the area for Malleefowl with 84 mounds identified, including 20 working mounds. This along with bird, plant and reptile lists compiled for the area, led to the purchase of what is now the Wandown Flora and Fauna Reserve by the private M.A. Ingram Trust, and its conversion to Crown Land and gazetted as a reserve.

Grace Willoughby, Foundation Secretary and Life Member of the MMFNT reported briefly on this in the 1970 edition of the *The Mid Murray Field Naturalist*; "I recall a biting, frosty early morning during the Malleefowl count at Wandown on Queen's Birthday weekend - the ground was white, the shadows long and cold; in spite of a camp fire; mugs of steaming hot tea; frozen toes and fingers in spite of all the stamping and rubbing. Admiration for those who had spent the night there in their caravan and woken up to find thick ice on everything. The sun gradually brightened and lit up the area. Then it was 'go' - the surveyors had donned weird and wonderful clothing, shirts and singlets, to make easier observation of one another, as walkers trudged through the dense Mallee, each armed with a bundle of numbers to mark any mound they might see".



ROY COOPER AND ALEC FISHER INSPECT AN EMU'S NEST DURING THE INGRAM TRUST VISIT TO WANDOWN AROUND MAY 1969

REPORT OF A MALLEE FOWL SURVEY BY J. L. HAYWARD, WOOD WOOD REPRODUCED FROM THE 1970 EDITION OF *THE MID MURRAY FIELD NATURALIST*

A project undertaken by our Trust during 1969 was to complete a survey over three and a half thousand acres of virgin mallee scrubland. The purpose was to establish the number of Malleefowl (*Leipoa ocellata*) nests including both those being used and others which were idle. We hoped to then have some idea of the population of Malleefowl which may be still in the area. I believe the exercise was a very successful one and the results most interesting.

The survey was carried out in the following way:- The first undertaking was to prepare a simple map of the area. This was achieved by first acquiring an aerial photo of the area and by using this, together with our knowledge, we were able to produce a map with all the landmarks and east-west sand ridges marked in. Twenty of these maps were

then produced. The area surveyed is approximately three and a half miles by two miles, the longer side being north and south.

The area is largely covered by dense whipstick type mallee scrub with the undergrowth being mostly Porcupine Grass (*Triodia irritans*). On the western and southern sides there are some areas which had been cleared many years ago but have almost reverted back to their natural state. A very few of the flats have some small open areas remaining. The ridges or perhaps better described as dunes were at times quite steep and high, particularly on the eastern side.

After much discussion of various methods and directions of traverse, it was decided that we would walk over the area in the north-south direction thus enabling us to use the east-west ridges as position markers. Three east-west ripper marks were also put

across the area at the quarter, half and three quarter positions to enable us to correctly position ourselves at least three times on each pass. The distance between each participant in the survey was to be two chains.

The long weekend in June was chosen as the time for the survey as it was thought the nests which were being used would be well under preparation for the forthcoming season.

Before beginning each pass the party was spaced out at two chain intervals and each member was given a map with the particular route he was on clearly indicated. While travelling along, he would be able to check his progress by marking off the ridges as they were crossed.

On arrival at each ripper mark a check of position could be made and corrections made as necessary.

ATM HISTORICAL ARTICLE (CONTINUED)

As each nest was found the position (and status - whether in use or not) was then plotted on the map carried by the person whose pass it was on. Each nest was also identified with a numbered metal tag thus making it possible to follow the history of any of the nests if further study is to be undertaken.

The person on the outside end of the line of surveyors was given the job of marking the track for the direction of the return journey. This was done by leaving a shovel mark every few yards. By keeping a close check on our progress as we moved across each end for the next pass we were able to finish the whole project without having lost our position at any time.

After three quite hard days of walking the job was finished. All the information that had been recorded on each two chain pass was then collected together on one master map.

We found we had recorded eighty four nests and of these twenty one were working. The number of nests was densest

in the north eastern sector where the scrub was by far the thickest. In the areas where clearing had taken place previously only a few nests were found.

During the course of the survey sixteen Emu nests were also found with clutches of eggs varying in number from seven to sixteen. A couple of Echidnas were also seen and there were signs of their presence throughout the area.

Botanically the area was diverse with some particularly rare plants being recorded. Altogether a wide spectrum of all sections of the flora and fauna of this area was observed.

This particular survey was undertaken to try to establish that this area of land would be eminently suitable to be set aside for a Mallee Fowl Reserve. We believe we have proved this and hope that by next year we may have helped to make this possible. We received assistance from many people outside our own membership in successfully carrying out this survey and to these people we extend our grateful thanks.



Today using Computer-based Geographic Information systems, satellite imagery, and geodatabases of topography and other features, it would only take a few minutes to produce a map like this. And with a Tablet computer with GPS and Google Earth imagery you would be able to see exactly where you are at anytime.

In 1969 I can recall Dad spending numerous nights sitting at the kitchen table with the black and white aerial photos carefully tracing the dunes and carefully marking them on the hand drawn map used in the field and to generate the final map shown above. How he produced the multiple copies required I am unsure but with photocopiers still years away I assume they were also copied by hand.

Acknowledgements- My sincere thanks to Neil MacFarlane for recounting the history of Wandown. All the photographs used in this article have been scanned from slides taken by my father Jack Hayward.



PARTY OF HELPERS FOR MALLEEFOWL NEST SURVEY, WANDOWN MAY 1969

MALLEEFOWL BREEDING SUCCESS AT YONGERGNOW, WA BY VICKY BILNEY

Our adult Malleefowl Happy (male) and Rhea (female) bred for the first time this past season.

Both birds hatched from eggs collected in the wild in summer 2010 as part of our very first captive raising project, and are not related.

Happy and Rhea had built a mound last season, but Rhea didn't lay any eggs.

When we first observed the birds getting serious about their mound this season (May/June 2015), we decided to supply additional leaf litter to their 36m by 36m natural bush aviary, but otherwise to let any possible breeding happen as naturally as possible.

We were thrilled when in late November last year the first chick was observed in the aviary!

Between December and February, another seven chicks hatched naturally.

Since we had some major reconstruction work on Happy and Rhea's aviary planned for this March,

and had to shift all birds out of the aviary, we started examining the mound on a weekly basis in early February to ensure that Rhea had finished laying by the time we re-settled the birds into their new temporary homes.

Rhea had finished laying in mid-February, and we removed all remaining eggs from the mound. We were amazed to find a total of 24 unhatched eggs still in the mound!

We candled those eggs, but apart from four which we transferred to an incubator, they were either unfertilised or otherwise not viable ('miscarried', as we called it).

This is in addition to the eight chicks, a skeleton of a chick we found in the aviary and remains of a chick which had died inside the mound - adding up to a total of 34 eggs Rhea had laid in her first active breeding year!

At the time of writing, two of the incubated eggs have hatched, one

'miscarried', and one is still being incubated.

This means that Happy and Rhea have 10 or 11 surviving chicks (depending on the development of the unhatched egg) out of 34 eggs. We're very pleased with this result, and look forward to releasing the majority of our first 'babies' into the wild.

We believe this may well have been the first time that Malleefowl have successfully bred in captivity in WA.

The whole project would not have been possible without the incessant help of many volunteers; a special thank you goes to Sandy Vaux, Jane Campbell, Rebecca Brady and Emma Reid for their help and dedication, to Stephen Davies for being there when needed and to Dani Fuller for her wonderful photos.

For more information, please contact Vicky Bilney on 08 9828 2325 or

visitor@yongergnow.com.au

See photos next page.

2015 MT GIBSON MALLEEFOWL MONITORING, WA

BY GRAEME TONKIN, NATIONAL DATABASE AND TRAINING MANAGER

The National Malleefowl Recovery Group was successful in winning a contract to carry out the 2015 Malleefowl Monitoring for Mt Gibson Iron at their Extension Hill site on the Great Northern Highway, 390km NNE of Perth in Western Australia.

Mt Gibson Iron is an operating iron ore (hematite) mine. The hematite is crushed on site, loaded into road trains and driven 85km to Perenjori. In Perenjori the ore is transferred to trains and railed 239km to the port of Geraldton, where it is exported.

Initial planning to undertake the monitoring commenced in September, prior to submitting the tender in order to assess the level of interest by volunteers to undertake the project. Sixteen people indicated they were keen to participate and as we needed a minimum of eight, it was decided to proceed with the tender. Planning commenced in earnest on October 22 when Jess Sackmann advised Tim we had been awarded the contract.

I arrived at Mt Gibson on Tuesday November 24 to finalise some last minute details and ensure all the paper work was in place to allow the volunteers access to the site. Seven volunteers arrived at lunchtime on Wednesday 25 and completed their four hour induction. The final volunteer arrived at lunchtime on Friday 27.



Mt Gibson Mine provided accommodation at their on site mine camp and everyone had a single donga with an ensuite. The food was great with a good selection for each meal (a great place to stack on the pounds).

On Wednesday morning monitoring commenced in the area close to the camp and I was lucky enough to go into the bush with Glynn & Grahame Fogharty from the local area. They certainly taught me a thing or two about reading bush signs.

Monitoring commenced in earnest on November 25 and involved up to 14 volunteers, including five Badimaya people from the local area.

We were lucky with the weather as the days were mostly fine and the daytime temperatures in the high 30's. Some monitoring areas at Mt Gibson are covered with thick acacia where it is necessary to lower your head and force your way through and many of the mounds are in buckshot gravel where tracks are all but impossible to see or identify.



A typical monitoring day commenced with getting out of bed between 4 & 4.30am, breakfast from 4.30am, pre-start at 5.30am and into the field monitoring shortly after 6am. Smoko about 10.30am and back into the field for some more monitoring before lunch about 12noon. Rest and cool down until around 2.30pm then more monitoring before dinner. A quick shower before the wet mess opens at 6pm, dinner at around 7pm then bed around 8.30pm.

Pre-start is compulsory for everyone onsite and commences with a breathalyzer test (anything above 0.00 is a no start for the day) followed by the day's weather forecast and then a report on any incidents from the previous day. To finish off there were 10 minutes of stretching exercises before starting the day's work.

A funny incident occurred at a pre-start when one of the volunteers who shall remain nameless, did his breathalyzer test knowing full well it would be zero & up came the result, **0.25**. The look on his face was priceless and after a lot of soul searching realised he had just rinsed his mouth with Listerine. A quick rinse with fresh water and the following result was 0.00 (pew!).

On the Sunday we were invited by the blast-controller to view a mine blast that was to occur on the site. We were taken by bus to have a look at the area that was to be blasted and then to the observation area. It was amazing to see the before and after results of the blast (photo next column).



We monitored 185 mounds of which 8 were active. Each volunteer walked around 65km.

Our sincere thanks go to Mt Gibson Iron and especially Jess Sackmann for the hospitality and assistance during this project.

Everyone involved needs a gold medal for their monumental effort and persistence in what were, at times, very trying conditions.

Given the opportunity would we do it again? I suffer short-term memory loss so I think my answer is yes.



'SPUD' OUR MALLEEFOWL CHICK

YONGERGNOW PHOTOS

'HAPPY' COVERING A NEW EGG

