



AROUND THE MOUNDS

Newsletter of the National Malleefowl Recovery Team

April 2012

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ILUKA

Edition 1

The National Malleefowl Recovery Team

by Sharon Gillam, Chairperson

Welcome all to the first edition of the reinstated National Malleefowl newsletter! Whilst we haven't had a newsletter for a few years, there has been no stop to Malleefowl conservation efforts around the States, with recovery initiatives already in place continuing and new ones beginning. The National monitoring system is well and truly primed in both Victoria and South Australia, and is gaining momentum in Western Australia, with 1000's of hours of support given by volunteers dedicated to the cause. Funding has been granted for a number of projects, one of them leading to the revision of the National Malleefowl Recovery Plan, and more recently, an ARC Linkage Grant which will provide the framework for an Adaptive Management Plan.

This Plan aims to bring together past, current and ongoing knowledge and data from research and monitoring programs, to inform and continually improve management actions, through a 'learning by doing' process. A National Malleefowl monitoring database has been meticulously developed, with its inception in 2004, and now, 8 years on, it houses up to 20 years worth of valuable Nationwide monitoring data. The data provides important information on the breeding trends of Malleefowl over its range, which in turn is essential in providing a platform from which to build effective management actions. Community groups, landholders and individuals also continue to participate in habitat restoration projects, education programs and events, and predator control activities, among a range of other recovery projects. This newsletter provides an avenue for sharing such information.

Current projects and highlights from the National Malleefowl Recovery Team (NMRT) include:

- Finding a new editor and securing monies for the *Around the Mounds* Newsletter for the next five years
- Gaining two representatives from the Commonwealth on the NMRT
- Funding for continued improvement to and uploading and vetting of WA data onto the National Malleefowl Monitoring Database
- Developing an Action Plan from the Forum Resolutions and performance evaluation of National Recovery Plan objectives
- Support sought for volunteers conducting monitoring in WA, through correspondence with the Department of Environment and Conservation, WA
- Ongoing close collaboration with Michael Bode, researcher, Adaptive Management Project.

The 2011 National Malleefowl Forum in Renmark, SA, was a major event on the Malleefowl conservation calendar, and by all accounts, through both attendance and presentations, proved to be a highlight and showed that there are many of us out there with great enthusiasm and



commitment to conserving the Malleefowl. The Proceedings of the Forum provide a valuable record of past and current conservation initiatives, while also serving as a guide for the National Recovery Team and source of motivation to all involved somehow in Malleefowl recovery efforts. The Proceedings have been posted out to those who attended the event, and are now available on the VMRG's newly updated website:

<http://www.malleefowlvictoria.org.au/forums.html>

If you missed out and would like a hard copy, there are a limited number available – please contact me on (08) 8222 9459 or email sharon.gillam@sa.gov.au

A bird busy at Innes National Park, SA

Photo by S. Gillam



Malleefowl at Eyre Bird Observatory, WA

by Stephen Davies

Malleefowl occur in the Mallee both north and south of the Nullarbor Plain. Eyre Bird Observatory is located south of the Plain at Longitude 126°, close to the sea. From its establishment in 1977, Malleefowl have been seen throughout the woodland between the Eyre Highway and the Observatory and many mounds have been located. The territories appear to be large because few of the mounds are used each year and sightings of the birds themselves are not frequent. Nevertheless the population is persistent, despite the presence of dingos and fishermen's dogs, and breeding is clearly taking place in suitable years.

From 1989 Rod Smith established a series of courses on Malleefowl, in which participants searched the woodland for mounds. By 1997 at least 33 mounds had been located within 10km of the Observatory and at least nine birds had been colour-banded by Rod. Several of these birds had been resighted and survival seemed to be good.

Between 2005 and 2006 the Malleefowl Preservation Group re-surveyed the mounds within 7km of the Observatory, by which time there were 70 known mounds in the search area, but other mounds were known beyond it and above the Scarp. In 2006 only one active mound was found, but as in other sites, the number of active mounds depends greatly on the weather that year. In 2011, for example, two of the four mounds visited in December had been prepared, but the litter was still wet after the heavy spring rain, and no breeding had been initiated.

In comparison it would be interesting to examine the distribution of Malleefowl in the Mallee north of the Plain.

Malleefowl Preservation Group, WA

by Leonie McMahon

In the last two years the mound monitoring program in Western Australia has undergone some important changes. In 2010 and 2011, the MPG successfully accessed sponsorship for two State monitoring workshops at Merredin, in the central wheatbelt, as the first step towards linking more strongly with the National project.

The first workshop, held in September 2010, was attended by 34 volunteers from three different WA Malleefowl interest groups: the Malleefowl Preservation Group (MPG), the North Central Malleefowl Preservation Group (NCMPG) and the Merredin Malleefowlers. One of the major outcomes of this workshop was that 19 sites across the State were selected as having the highest priority for annual monitoring and more than 20 volunteers nominated to take on-going responsibility for them.

This approach was so successful that MPG's 2010 monitoring program was completed by the end of December 2010 for the first time ever. The other main objective of this workshop was to train volunteers in the correct operation of monitoring equipment, in particular the use of Mobile Mappers that replaced palm computers a couple of years ago now.



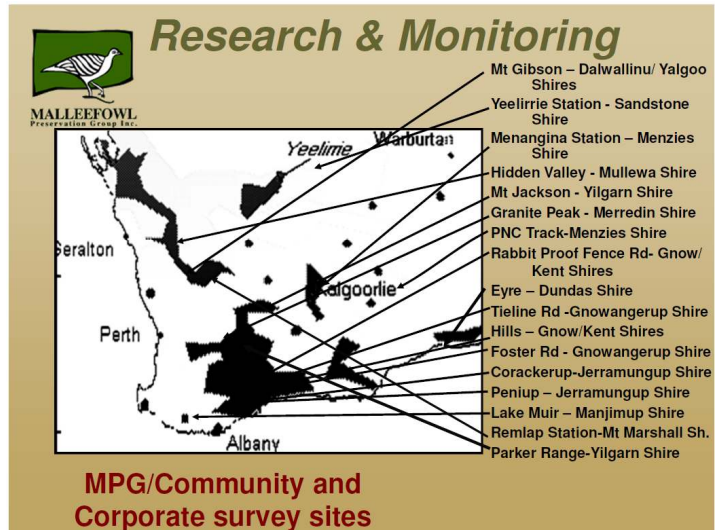
Merredin 'Groupie'

The second workshop, held in July 2011, attracted 36 volunteers and the monitoring program was further refined, once again resulting in the 2011 program being carried out in a timely manner. Key outcomes of this workshop included changes to the WA monitoring sheet, a review of support requirements for the volunteer role carried out by Carl Danzi (the main liaison person for monitoring equipment, technical support and data verification and input), and agreement to recruit more members into the WA groups.

The Merredin Malleefowlers hosted both workshops and local groups supported the venture, including the Merredin Pistol Club whose venue was used, and the Merredin Wildflower Society and the Merredin Bowls Club who provided catering services. The workshops were sponsored by MPG and Susanne Dennings in 2010 and AngloGold Ashanti Ltd in 2011.

Of the 19 sites selected as being of highest priority for monitoring in WA, six are located in the Ongerup district in the south west of the state – the birthplace of the MPG. Amongst them are the earliest established sites with the longest monitoring history (Corackerup being the first established in 1994). These sites tend to consist of Mallee shrubland, one of two main types of habitat used by Malleefowl in WA (the other being *Acacia* shrubland). The other sites were almost all established much later (between 2000 and 2010) and are distributed from just north of

Geraldton (420km north of Perth) through the northern wheatbelt and rangelands to the south-eastern corner of the State. Many (but not all) of these sites are located in more arid country and habitat typically consists of *Acacia* shrubland.



North Central Malleefowl Preservation Group, WA

by Gordon McNeill



We encountered two birds at a mound at 7am (shown above). One quickly left but one remained working the coned out nest. We left the area and returned later at 8.30am to find the mound completely restored to its 'incubator' shape (shown below). This photo was taken at a slightly different angle to photo 1 but exactly the same mound, only 1½ hours later. The weight of soil moved in that time is amazing yet the birds never seem to rush with their scratching!!



The NCMPG is based around Wubin in the Dalwallinu Shire of WA. Wubin is approx 272km N/E of Perth in the wheatbelt on the Great Northern Highway and very close to the start of the Murchison pastoral area. Our group monitors four sites in the area totalling 146 mounds.

In 2008/09 the number of active mounds in those sites was 13. In 2009/10 it dropped to 11 and in 2010/11 only 3 were active. So in 2011/12 it was pleasing to see the number of active mounds increase again to 11.

2011 saw a better rainfall year with about 370mm compared to 215mm in 2010. Also the spring months had 105mm compared to 44mm in 2010. This seems to be the main reason that nesting activity has increased.

In 2010/11 even though the nesting activity was down, there were 17 mounds with recent Malleefowl activity at the time of monitoring and some of those mounds were active this season. In 2011/12 the Malleefowl activity on inactive mounds at monitoring time was down to 7, no doubt due to the birds being involved with working active mounds.

Friends of Riverland Parks, SA

by Kevin Smith

Post-fire nesting

The Friends of Riverland Parks have been monitoring a 4Km² Malleefowl grid in Pooginook Conservation Park since 1990. Since the mid 1990's the number of active mounds has declined and so too has the rainfall. Despite the poor rainfall, Malleefowl managed to survive and in some years over the next decade we would find an active mound in our grid. Then in December of 2006 disaster struck in the form of a large wildfire that completely burnt the whole grid. We continued to monitor and photograph all of the known mounds to see how long after such a catastrophic event it would take for Malleefowl to return.

In December 2011 we checked all of the known mounds and looked for any signs of Malleefowl. We did not see any activity and not even a footprint. In discussion we decided that we would need to continue for some time before there would again be sufficient litter for the birds to return and reactivate any of the nests. We also discussed the possibility of doing a whole grid search some time in the next couple of years, especially if any footprints were observed, in case a new mound was started separate from the known ones. And then:

From: Birdpedia Sighting

Sent: Sunday, 26 February 2012 10:15AM

To: sighting@birdpedia.com

Subject: Birdpedia - Australia - Notification of a New General Sighting Report – Members

The following sighting has just been reported:

Area: SA

Date: Wednesday, 22 February, 2012

Time: 10AM

Contact: Peter Jacobs

Location: Pooginook Conservation Park (SA)

Observation:

*Malleefowl (*Leipoa ocellata*) (1) Malleefowl have not been seen in this Reserve for many years. I was surprised to see fresh diggings and footprints on an older mound and then I saw a Malleefowl about 15m away slowly walking into the Mallee. I checked another couple of old nest mounds a few kilometres away and they had both been dug out in the last few days (since the last rain) with fresh tracks and much activity. I do not know if this is from one or several birds.*

These observations were made in a section of the Park that was not burnt in the 2006 fire, but the detection of a Malleefowl in the Park is a promising sign. We will be hoping for some good rains through winter, and hopefully an active mound (or more) when we do our nest monitoring later this year.

Yorke Peninsula 2011 Season, SA

by Deb Furbank & Sharon Gillam, DENR



Monitoring at Innes NP - Photo S. Gillam

In November 2011 mound monitoring took place on the Innes National Park Grid on Yorke Peninsula, South Australia. Grid 11 at Innes NP consists of 47 mounds: and 23 of these are checked every year. The remaining 24 mounds have been inactive for many years with a rim height less than 10cm. These 'extinct' mounds are checked every five years and will be checked in the 2012 season, later this year.

Two DENR staff and four volunteers split into two groups and visited the 23 mounds. It was the first Malleefowl survey for two of the volunteers and it certainly did not disappoint!

Eleven of the 23 mounds visited were identified as active, with Malleefowl seen at 6 mounds and a few more seen in the scrub during the survey. The results of the 2011 survey showed that breeding activity on the Innes grid has remained consistently high.

The vegetation was in good condition after two years of good rainfall during winter and spring, with many shrub species in flower.

There was no evidence of foxes or rabbits on any of the mounds in the grid. Innes NP has an intensive fox baiting program which has been taking place for the past six years. Every fortnight, 217 baits are laid or changed over in the Park. In addition to this baiting in the Park, private landholders take part in a coordinated fox baiting program twice a year for a six week period. 'Baiting for Biodiversity' covers 70,000ha surrounding the Park. The Northern and Yorke NRM officers manage the program, with NRM and DENR staff laying the baits for landholders.

Grid 11 at Innes NP currently has the highest breeding activity, per square kilometre, in SA. The ongoing fox baiting programs have almost certainly contributed to these consistently high numbers of active mounds.

We are currently investigating the possibility of establishing another monitoring site on the Yorke Peninsula, with the cooperation of landholders and we will keep you informed.

Malleefowl in South East Region, SA

by Vicki Natt

Five monitoring grids are now well established in the South East of SA. They include, from north to south, a grid in Mount Boothby Conservation Park, one in the Coorong National Park, two grids in Gum Lagoon Conservation Park and one in Mount Scott Conservation Park.

Malleefowl monitoring of all five grids was conducted during the second half of October 2011, involving inspection of 187 mounds altogether. Of these, 29 mounds were found to be active which is consistent with figures from the last three years. The number of active mounds for most grids was the same or slightly less than last year except for the newest and most northerly grid at Mount Boothby, recording 13 active mounds from a total of 49; 3 more than last year. The vegetation for this grid area looked particularly fresh with less evidence of deer, rabbit and fox activity, possible factors in favour of Malleefowl this season. Lack of activity on the Coorong grid remains a concern. The monitoring took 289 hours to complete, of which 194 were contributed by volunteers. The weather was pleasant making it easier to motivate participants, though more difficult to stop them enjoying other things. However, we ended up with some great photos of lizards, flowers, birds - anything except Malleefowl!

Participants were issued with cameras as part of the monitoring kits this season, enabling the photos to be collated with fewer complications. Data was recorded on Palm Pilots with paper backup but owing to the age and difficulty of obtaining Palms, it may be useful to consider 'Mobile Mappers' or some similar device for monitoring in the future.

No money was available for a Project Officer for the South East this season to coordinate volunteers and collate the monitoring data, but a DENR Volunteer Support Grant was successfully sought thanks to assistance from the Friends of Butcher Gap Conservation Park.

In order to raise the profile of threatened species in the region and encourage more volunteers to participate in Malleefowl monitoring, a presentation was given at the Mount Gambier Library in September 2011. Participants learned about Malleefowl, their habits, where they occur and what is involved in monitoring. It was attended by 25 members of the public, and generated some volunteer interest for the coming season. A Malleefowl display also featured on the Threatened Species Day at the Naracoorte Caves. Around 300 people were present at this event.

The National Malleefowl Forum held in Renmark, being closer to home, made it easier for us to participate this year. It was well run with some excellent guest speakers and displays and a great opportunity to network. Two people from the South East participated. The Riverland turned on a good show with their local habitats looking particularly fresh and healthy.

Grids are due to be resurveyed so it is envisaged that a grid survey can be organised for Mount Scott prior to next season.

Thanks to DENR staff and volunteers who made monitoring for the season possible. Two volunteers were lucky enough to sit and watch and then photograph a Malleefowl working its mound, the highlight of their trip.

Further information

by Oisin Sweeney

Warning signs have been installed on the Princes Highway, which is adjacent to the Coorong grid. Malleefowl regularly cross this stretch of very busy road.

Interpretive signs have been designed and printed and are currently installed at Mount Scott and Gum Lagoon Conservation Parks. Signs will also be installed by Coorong staff in Coorong NP, Mount Boothby and Messent CPs.

Nest cameras reveal Malleefowl secrets, SA

by Chris Hedger



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One of the many courtship displays recorded by Graeme Tonkin

Over the last two breeding seasons inconspicuous nest cameras have been set up around a few selected Malleefowl mounds at Ferries McDonald Conservation Park in the Murraylands southern district of South Australia. With the support of the Department of Environment and Natural Resources, the technologically savvy volunteer Graeme Tonkin has gathered a plethora of fascinating images and videos depicting the average day in the life of a breeding pair of Malleefowl, through his cameras. The videos and images, which can be viewed at www.malleefowl.net.au, highlight a variety of day-to-day events including nest maintenance, egg laying, chick emergence, courtship displays, predation, and use of the mound by other species. One such occurrence suggests that echidnas may utilise mounds for a reason not fully understood.

This visual information provides a valuable source of on-ground responses of Malleefowl to certain events. For example, a series of recent time-lapse photos demonstrates that fox predation may have resulted in premature abandonment of the active nest. The 'video' shows foxes actually digging out eggs.

It is hoped that future recordings will continue to reveal more of the Malleefowl's secrets.



Camera 3
29/2/2012 05:52 AM

Another sample from the cameras

Eyre Peninsula Update, SA

by Andrew Freeman & Sharon Gillam

Malleefowl monitoring on the five grids on Eyre Peninsula has been completed, with the Pinkawillinie Grid monitored for the first time since a wildfire swept through the Conservation Park in January 2006. No active mounds were found at this grid which is not surprising with the lack of leaf litter present, however Malleefowl tracks were seen at a number of sites. Breeding activity remains stable across the sites, with 17 mounds found to be active out of a total of around 214 mounds. This is up from 14 active mounds found last season (2010).

Trimble Nomads were trialled for the first time, replacing the Palms. There were a number of teething issues to work through, which took many hours of staff and volunteer time. However, the end result has been a much more reliable and easy to use unit for people to use in the future.

A number of areas of Malleefowl habitat on private land have been fenced off from the effects of stock grazing.

A training day for volunteers is proposed before the next monitoring season, to bring all interested persons from the Eyre Peninsula region up-to-date on the latest monitoring techniques, and for a general refresher. The last training session was held in Lock in 2006. We'll let you know when it happens!

Friends of Gluepot, SA

by Chris Lill, Secretary of Friends of Gluepot Reserve

Gluepot Reserve is situated in the Mallee region of South Australia approx 60km north of the small Murray River town of Waikerie. It is approx 50,000ha in size and is owned by BirdLife Australia. The Reserve is managed by a Management Committee of volunteers and has an active Friends Group. Visitors are welcome and there are several camping areas and a Visitors Centre. A number of research groups also carry out varied research projects on the Reserve.

Gluepot has seven 2km x 1km Malleefowl grids spread out across the Reserve. Each year the Friends of Gluepot carry out a transect walk of one of the grids to check for signs of new Malleefowl mounds and also check all of the known mounds on the grids for signs of recent Malleefowl activity using Palm pilots provided by the Department of Environment and Natural Resources. Data from these checks go into the National Database.

Our 2011 Campout and Malleefowl grid transect was held on September 17 & 18. Predictably even though we chose September, it was hot (35°). We walked five 2km transects completing one grid to check for signs of new mounds. Regrettably we did not find any new mounds although a relatively recent new mound was found on our 2010 walk on another grid. A big thank you to the volunteers who participated in the survey. On the Saturday night we enjoyed our traditional barbecue.

On November 5 & 6 a smaller group of volunteers, Sue and John Nettlefold and Chris Lill, also Assistant Rangers Pauline, Christian Bochud, and Alice Blackwood and Dr Rebecca Boulton, the Murraylands Malleefowl Monitoring Coordinator, checked all of the known mounds on the grid system for evidence of Malleefowl activity. We were fortunate that Rebecca was able to join us for the weekend. We observed that many of the mounds being checked were quite degraded and these may be progressively dropped off the grids as years go by. We found only one active mound – the same one as last year.

Last year (2010) a pair of birds nested on this mound and a number of chicks were observed emerging from the mound. Previously we had checked all known grids and had not seen any activity for the past four years during the drought. It is good to see the birds continuing to nest in 2011.



Our Malleefowl grid team

From left Assistant Rangers Hugo and Alex, also Tim Pascoe, John Spiers, Sue Nettlefold, Chris Lill, John Nettlefold, Assistant Ranger Mikaela Venn, Yvonne Gravier, Kim Smith, and Assistant Ranger Russell Venn. Photo by John Drummond.

Our Malleefowl checks were greatly assisted by an NRM funded Volunteers Small Grant for GPS units to assist participants in location of grid markers.

Since our check, Gluepot has had more good summer rains and the mound is still active. Since this mound is the only known active mound on Gluepot (there are probably others) and we are concerned about disturbance, the Management Committee has decided not to allow visitors to the mound. We have a 'stealth cam' on the mound – see photo below.

Gluepot is still looking very good right now. There is a growth flush on the Mallee and understorey, and a number of our small birds are already active. We have also had good early rains in 2012.



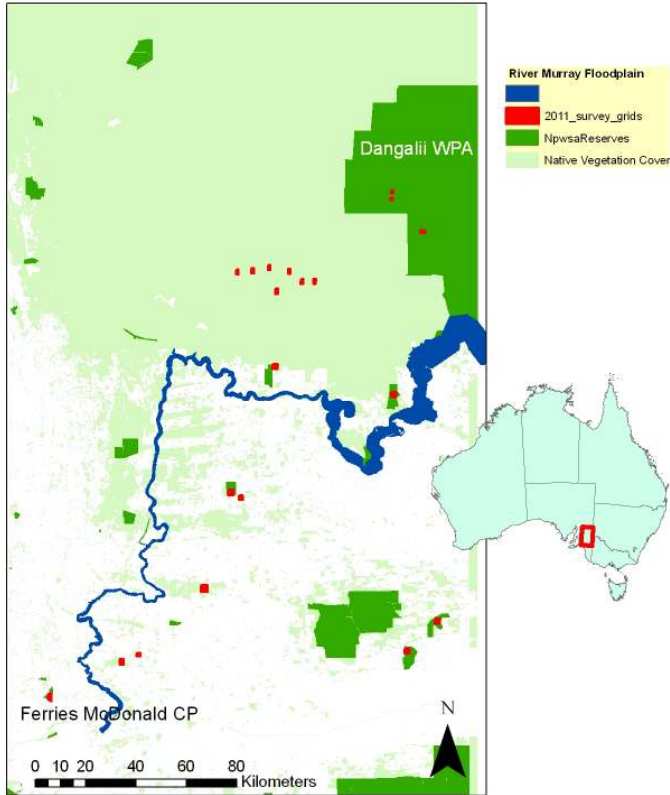
Stealth Cam 076 F 01-07-2012 07:30:18

A Brown Goshawk checking out our active mound with a very agitated Malleefowl in residence

Murraylands monitoring at a glance, SA

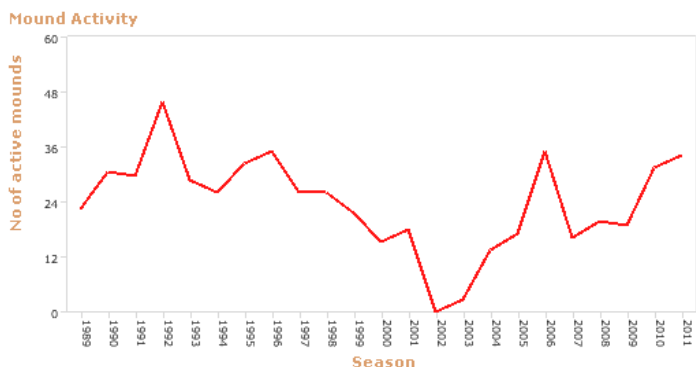
by Chris Hedger

The Murraylands 2011 Malleefowl grid monitoring program was funded by the Department of Environment and Natural Resources during October to December of 2011. The work was largely carried out by a myriad of volunteers across the region who contributed a total of 632 hours towards the project. Twenty grids and 498 mounds were surveyed ranging from Dangalli Wilderness Protection Area in the north to Ferries McDonald Conservation Park in the south (see map below).



Malleefowl grid locations throughout the Murraylands SA

Thirty-eight active nests were recorded during this period, an increase from 35 the previous season, which continues to highlight a general increase in productivity across the region over the last 3 years (see graph below).



Long term trends in Malleefowl activity throughout Murraylands

Most sites continue to maintain similar numbers of active mounds. There are some sites (south of the river) that seem to be showing increases in mound activity as feral goat presence diminishes under a persistent control program. However further research is needed to more thoroughly link management actions to outcomes for Malleefowl.

Despite the seemingly positive trend in Malleefowl productivity within the region there are still locations struggling to bounce back. As a general trend, grids north of the river have shown little in the way of increase. Having said this, positive reports are filtering through of Malleefowl preparing nests within Pooginook Conservation Park, which was largely burnt out in 2006. Whilst it remains to be seen whether these nests will become active during the breeding season, it does provide hope for the 120,000ha burnt in the 2006 Bookmark fires.

Fox activity was mixed across the region, however some grids recorded a joint increase in Malleefowl and fox activity, indicating grids where Malleefowl are most active may be most at risk from predation. These areas will be targeted specifically for baiting, along with general baiting programs.

The Department would like to formally thank all the volunteers involved in 2011 monitoring, along with those individuals integral to the coordination of the monitoring program, including Rebecca Boulton from RLB Ecology and David Setchell from Mallee Eco Services.

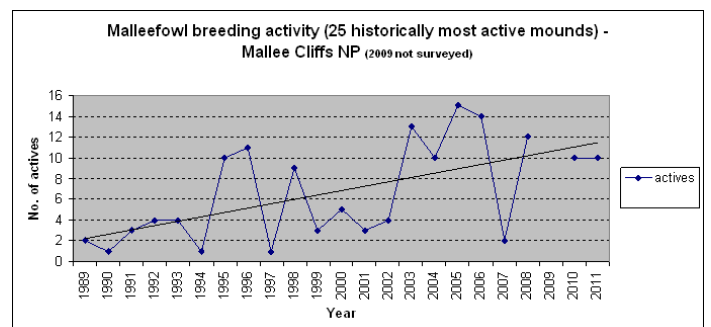
For more information relating to this project or a copy of the 2011 seasonal report, please contact Chris Hedger on 0428 420639 or chris.hedger@sa.gov.au

Malleefowl Monitoring in South West, NSW

by Ray Dayman, NPWS Ranger

In October 2011 the Lower Darling Area of the NSW National Parks and Wildlife Service conducted its annual Malleefowl mound monitoring in Mallee Cliffs NP. The monitoring consists of visiting the 25 historically most active mounds since monitoring first began in 1989. This methodology is in its second year since the cessation of funding for aerial surveys which was previously funded through the Fox Threat Abatement Plan in NSW. In 2011 10 active mounds were found which is the same number as 2010. This equates to an activity level of 40% which is significantly higher than the long term (over 22 years) average of 6.68%. The trend in the last decade (since 2001) when intensive fox control began with the introduction of the Fox Threat Abatement Plan shows a higher level of breeding activity at the 25 target mounds with the 10 year average rising to 37%.

While more effective predator control since 2001 is certainly likely to assist Malleefowl, it is unlikely to be the sole reason for increased breeding success. Other factors such as - land clearance adjoining the park, time since fire, decreased herbivore numbers through the closure of artificial watering points and local climatic factors are also likely to have benefited Malleefowl within Mallee Cliffs NP over the last decade.



Malleefowl in the Little Desert area, Victoria

by Peter Stokie, President, VMRG

The Little Desert National Park began its existence in 1955 when 217ha were set aside as a Reserve, specifically for the protection of Malleefowl, and was known as the Kiata Lowan Sanctuary. Since that time, the National Park has grown over time, with various additions to approximately 132,000ha.

The predominant vegetation communities of the Park are heathlands, Mallee Broombush and Eucalypt communities, Yellow Gum, Blackbox and Desert Stringybark woodlands and open forest.

Where appropriate habitat for Malleefowl existed, there was a commonly held belief that Malleefowl were present, but apart from occasional sightings it was not possible to be precise about Malleefowl numbers, mound locations, or of how viable were the populations of Malleefowl. The Little Desert is prone to extensive wildfire and a controlled burning regime, and impact of fires upon viable patches of old growth habitat and the effect of fires on Malleefowl populations is also unknown.

The only exception to lack of detailed knowledge was the original site at the Lowan Sanctuary where searches and mound monitoring were conducted from the foundation of the sanctuary until well into the early 1990's. In the early days up to 14 breeding pair was recorded but this number gradually declined over time to just a few and then none. Gradually over time consistent monitoring of mounds fell away and become all but a casual visit to mounds by the early 1990's. In 1999 lots of interested locals and the VMRG under the leadership of Paul Burton re-searched the sanctuary and relocated most of the original mounds and since that time the site has been monitored annually as part of the National Malleefowl Monitoring Program. Sadly from 1999 through to 2012 none of the 20 mounds were found to be active, and in the same period only one feather was found and footprints on only three separate occasions.

Early this year was an absolute highlight for VMRG monitors when one of the mounds was active, the first time since at least 1995/6, and once again it is possible to actually declare that Kiata is a genuine Malleefowl sanctuary.

The VMRG has been keen to address the lack of systematic monitoring in the Little Desert, but the biggest issue is where to begin. The group considered we had the capacity to do some survey work, and sufficient members to maintain on-going monitoring if sites could be established.



Nhill SES helping search at Broughton's - photo P.Stokie



Some searchers being introduced to the idea at Nurcough FFR - photo G.Hopkins

It was daunting to consider the vast expanse of the National Park to pinpoint a starting location. First it needed to be established where suitable habitat existed, how accessible it was, and how much long unburnt Mallee had been spared from the vast bushfires, sometimes in excess of 18,000ha destroyed in a single fire.

The Ranger-in-Charge suggested two sites, one in the central block of the Park and another at the Nurcough Flora and Fauna Reserve 6km to the south of the Little Desert. For the past six years as funds became available and sufficient searchers were brought together, the VMRG has toiled away through often impenetrable scrub to create two monitoring sites of 250ha and 400ha, but there is still 150ha at each site still to be searched.

What have we learned from this experience?

- Establishing viable monitoring sites in difficult terrain is a very long term project
- Both sites are effective as they are being used by Malleefowl, but there has been only one active mound at the Broughtons site located within the Little Desert. In contrast the Nurcough site at the remnant reserve south of the Little Desert is a Malleefowl hotspot with five to seven active mounds annually during the five years of monitoring to date
- Community groups are keen to assist with the searches, especially if they have their expenses covered and some funds are available to assist them in their fundraising efforts
- Wider interest has been generated through publicising the VMRG efforts. A covenanted private bush Reserve close to the northern boundary of the National Park is now part of the National monitoring program
- Property managed by the Little Desert Flora and Fauna Foundation is now monitored and has been added to the National database
- Local farmers in the locality of the Nurcough FFR who have small patches of intact native vegetation that contain Malleefowl mounds are interested in developing better management strategies so that they can protect Malleefowl on their properties
- Community support for developing a substantial vegetated corridor to link private remnant vegetation in farmland and existing public reserves is gaining impetus. Known as the Nurcough Corridor Link, the project will provide continuous habitat for Malleefowl to move between the Little Desert, Nurcough FFR, Toan State Park and further south.

- Malleefowl and the importance of maintaining and enhancing habitat have been promoted and highlighted as one of the key species protection outcomes of the Habitat 141 project

The VMRG has reported in the Proceedings of the 4th National Malleefowl Forum that all 880km of tracks in the Little Desert have been surveyed to assess the suitability of habitat to support Malleefowl. The search identified at least four locations where additional investigation is required to determine whether they contain permanent Malleefowl populations, and whether possible on-going monitoring is warranted.

In conclusion, it is worth noting that we now know a little bit more about Malleefowl in the Little Desert and its immediate vicinity, and our quest for further knowledge is definitely an on-going work in progress.

Over the quest of the past six years many groups and individuals have been involved and their acknowledgement is highly appropriate at the end of this article. So thanks to....

- VMRG members
- Nhill SES
- Landcare groups from Natimuk, Laharum and Hindmarsh
- The Victorian Mobile Landcare Group
- Greening Australia (Wimmera)
- Conservation Volunteers Australia (Horsham)
- Community members from Nhill and Natimuk

Wedderburn CMN Malleefowl, Victoria

by Peter Watts, Wendy Murphy and Michael Moore

The Wedderburn Conservation Management Network has now been involved with the conservation of this endangered species since 2003. The Malleefowl was selected as the iconic species for the Wedderburn CMN at the inception of the network and a great deal of time and effort has been put into the conservation of this isolated population of birds in the Wychitella Nature Conservation Reserve.

The Camera Monitoring Project

This form of monitoring carried out in collaboration with Parks Vic, using non-invasive cameras mounted at an active mound is now in its second year and has proved to be successful in many ways. Peter Watts, a member of the Wedderburn CMN and keen Malleefowl conservationist, has spent many hours over both seasons carrying out this work.



Loading the camera

At the beginning of the current breeding season improved cameras obtained through funding from Birds Australia, were located at the mound. After time spent experimenting to optimise their performance, the cameras have been used to observe such aspects as number of eggs laid, hatching of chicks, visitors to the mound including predators, and behavioural changes during the breeding season.



Peter Watts monitoring Malleefowl

Peter has found it possible to establish a predictive calendar of events which in turn makes for greater efficiency in observation. A short film of the breeding behaviour of the birds from last season has been made and used to increase community awareness of the endangered status of the birds. It is intended that a better quality film, using footage from the new cameras, will be made. A vast amount of film that may possibly be used for a more detailed study of mound behaviour has been archived.

Line Searches



Malleefowl mound line searchers

The camera form of monitoring however does not give evidence as to the general wellbeing of the Malleefowl population, or trends in the population. An important technique employed by the Wedderburn CMN in conjunction with the Victorian Malleefowl Recovery Group is that of line searches for Malleefowl mounds. Such searches have located previously-unknown mounds. Ideally, if all mounds were known and monitored on a regular basis then we would be in a much better position to understand the population dynamics of the birds.

Wedderburn CMN and partner organisations have applied for funding to Communities for Nature to assist in line searching. The establishment of an ongoing association with TAFE students has also helped greatly in these efforts and in the monitoring of browsers mentioned below.

Use of a helicopter

The latest technique under consideration is that of searching for mounds using a helicopter. Towards the end of last year a helicopter from the Department of Sustainability and the Environment was booked to make trial flights over selected parts of the Wychitella NCR. It had been arranged that two observers from the Wedderburn CMN would attempt mound sightings visually from on-board while the helicopter would also use its infrared equipment to attempt to locate mounds. Unfortunately this event has had to be postponed until later this year.

Vegetation transects

Vegetation transects including those over active and inactive mounds have been carried out to assess differential vegetation cover around Malleefowl mounds. These have been completed and the collected data awaits the conclusion of analysis in an effort to understand better the habitat requirements of the birds.

Decommissioned eucalyptus oil plantations

The latest exciting development has been that four eucalyptus oil harvesting coupes within the Wychitella NCR have recently been decommissioned. These blocks which occur in close proximity to areas known to be inhabited by Malleefowl, offer a great opportunity for possible expansion of Malleefowl habitat providing such monocultures of Mallee trees can be returned to a more naturally diverse species composition.

Wedderburn CMN have been monitoring a mature Mallee thinning trial on a member's property to determine whether opening up the canopy allows a more diverse understorey to develop. Results to date suggest that the understorey grows more vigorously, but the diversity of species isn't obvious at this stage. It remains to be determined whether it will be sufficient to thin out the regrowth to allow natural regeneration of the understorey, or whether planting of more species is also needed. A visit to some of these sites has been arranged to determine the best approach and whether the trials are a viable option for the group to pursue. Parks Victoria and DSE staff will accompany Wedderburn CMN members on this visit.

Concurrent ongoing efforts

Ongoing programs aimed at conservation of the birds have been proceeding alongside the efforts mentioned above. We have programs such as; an extensive fox baiting program, cat and rabbit control in areas within and surrounding the known habitat of the birds, monitoring of browsing competitors such as kangaroos and wallabies and successful efforts with respect to habitat expansion, linkage and enhancement.



Fox on top of an active malleefowl mound

HCO ScoutGuard

2.24.2011 4:26:05

Finally, we will be seeking tax deductible gift status as an organisation in an attempt to source further funding for our conservation work. Such status would be a financial encouragement for Corporate and Philanthropic organisations to contribute to the support of our work.

Lessons from fox 'calling cards' in Victoria

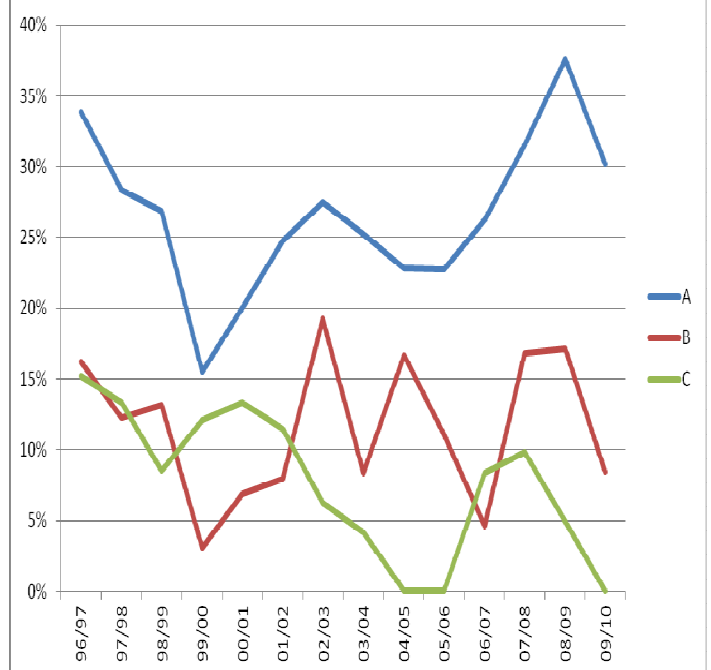
by Peter Sandell (Parks Victoria/VMRG)

VMRG volunteers have been collecting fox scats from Malleefowl nests in Victoria since 1996. This was the period when Rabbit Calicivirus Disease (RCD) first arrived in local rabbit populations. It was feared at the time that foxes might prey more heavily upon native fauna (such as Malleefowl) in response to the sudden decline in rabbit abundance. This is the phenomenon of so-called 'prey switching'.

Over the intervening 14 seasons to 2009/10, more than 5,000 fox scats were collected and the contents of those scats analysed by Barbara Triggs - a well known expert in scatology - on behalf of Parks Victoria. The expectation is that the scat data will provide evidence of any changes in fox diet over time and space, which might in turn be indicative of any changes in the level of risk to prey species. This data was stratified into three geographical classes (relating to distance from farmland) for interpretation. This stratification was based on Joe Benshemesh's 'Review of Malleefowl Monitoring Data in Victoria' in 1997. In this review Joe identified that declines in levels of nesting activity were more pronounced at that time in areas remote from farmland (refer to the article in Around the Mounds 2005).

Analysis of the fox scats collected by VMRG volunteers confirms that rabbit is a staple dietary item - one that foxes rely upon over time. However, rabbit is a relatively more important dietary item close to farmland (rabbit remains found in 27% of all scats collected) compared with remote areas (only in 8% of all scats collected). This distinction is illustrated in the chart shown below as

Frequency of occurrence of rabbit remains in fox scats collected from Malleefowl nests located (A) within 2km of cleared land, (B) 3-8km from cleared land, and (C) 10-28km from cleared land.



Reptiles are also a staple dietary item but their relative importance to foxes is the inverse of the situation with rabbits. They were found in 40% of scats collected in remote areas compared with only 10% of all scats collected

close to farmland. Native small mammals, such as pygmy possums, Ningai, Mitchell's hopping mouse, silky mouse, and dunnarts, were found in 15% of all scats collected in remote areas, but in only 2% of scats collected close to farmland.

The answer to whether the reduced availability of rabbits post-RCD resulted in an episode of prey-switching by foxes onto native prey such as Malleefowl, might lie in the evidence of the presence of feathers and eggshell in fox scats. Although feathers were not identified to species level, eggshell remains were analysed by Joe Benshemesh who determined that at least 90% of the eggshell found in fox scats were likely to be Malleefowl in origin.

Birds appear to be in the category of a supplementary prey item – they become more important when there is a decline in a staple prey item. Feathers were recorded in 18% of all scats collected in the first 4 seasons following the arrival of RCD, but in only 8% of all scats collected over the subsequent 10 seasons. In the case of eggshell this was recorded in 4% of scats initially and then in only 1% of scats during the latter period.

Hence it appears that foxes changed their diet for at least 4 years following the arrival of RCD in 1996, although it would have been good to have had some pre-RCD data. The question remains, has there also been a change in fox density, particularly in remote areas? This is not possible to determine on the basis of dietary evidence alone. There are other data, some of which were collected by Joe post-RCD, that support the proposition that fox and rabbit abundance are closely associated although there tends to be a lag period before fox numbers follow rabbits down.

The good news is that Malleefowl breeding activity in the remote Victorian grids (all of which are within Murray-Sunset NP) has steadily increased since 2002 after an extended decline. This increase in breeding has occurred despite the fact that rainfall remained relatively low from 2001 until 2009. Whether changing dynamics between foxes and rabbits after the initial episode of RCD might have contributed to this increase, has yet to be determined.

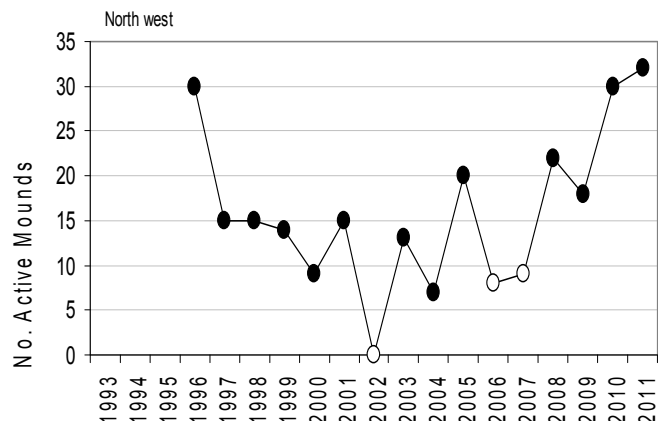
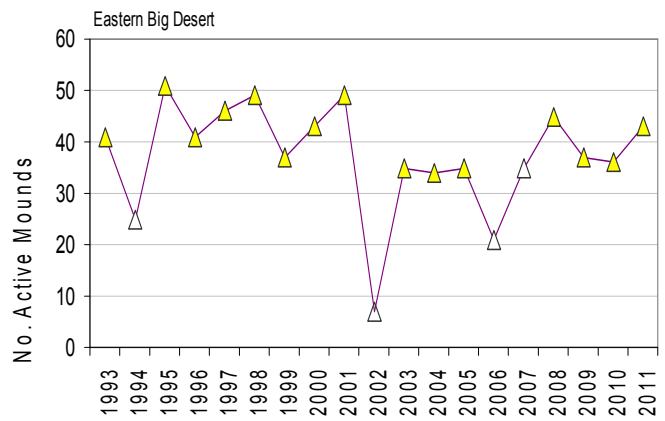
However, the maintenance of low rabbit abundance (where possible) is likely to be an effective way of avoiding intervals of enhanced risk associated with high fox abundance relative to the rabbit population. In remote areas, this will only ever be possible through biological control. This emphasises the importance of current work aimed at finding new agents to supplement RCD and Myxo.

Malleefowl in Victoria

by Joe Benshemesh and Peter Stokie

Once again VMRG has completed an excellent year of monitoring: 1,151 mounds were monitored at 35 sites scattered throughout the north-west of the State, and only seven mounds were missed, so the operational success of the monitoring was an excellent 99.4% (albeit rather typical for the VMRG!). The VMRG also undertook five searches of sites with the help of various community groups (see Peter's article on pages 7 and 8).

The graphs opposite show trends in Malleefowl breeding numbers at 22 sites over the past 16-19 years, shown by region. Eastern Big Desert comprise 6 sites over 19 years (triangles), North East comprise 4 sites over 18 years (shaded squares), and North West comprises 12 sites over 16 years (solid circles). 1994, 2002, 2006 and 2007 were major drought years in many areas. Data excludes mounds outside site boundaries.



The results show that Malleefowl are generally doing well in Victoria, at least for the time being. Of the many sites we monitor, breeding numbers have slipped in some areas over the last couple of years (especially in the NE Mallee), and there are also some sites at which long term trends in breeding numbers show declines. But overall, the news was very good with 2011 showing breeding numbers equal to or higher than any season since 1995. Indeed, three of the past four years have been exceptionally good for Malleefowl in Victoria and this is almost certainly due to the great rains we have had over this period, and the end of the 10-15 year drought that made life hard for Malleefowl and farmers alike. While Malleefowl breeding numbers in many areas of Victoria were in decline during the drought, in the past four years there has been a rebound in breeding populations in many areas, especially in the north-west at sites in the Murray Sunset and Hattah Kulkyn National Parks. The relatively wet conditions since 2007 were caused by two La Nina events, the most recent of which is currently waning in south-eastern Australia. These wet years have been great for Malleefowl, but may not last. If climate change progresses as predicted, we can expect Mallee winters to become drier and this will be detrimental to Malleefowl.

A more detailed report on the monitoring in Victoria during 2011/12 and reports from previous years are published on the VMRG website at www.malleefowlvictoria.org.au.

While breeding numbers are currently looking good in Victoria, the many threats that this species faces have not gone away and the prognosis for the species in the medium to longer term remains a concern. Climate change remains a serious threat, although a difficult one to tackle on a local scale. Malleefowl populations remain fragmented despite some laudable visions to reduce the degree of fragmentation of the Mallee landscapes, such as large-scale wildlife corridors through Habitat 141. Changes on the ground are slow and we are still a long way from reducing this threat in a meaningful way except in a few small areas. Taneal Cope's PhD thesis will soon be completed and will provide us with fresh information on how to best manage Malleefowl genetics in fragmented landscapes.

The data collected through the monitoring program in Victoria also suggests that fox numbers may be increasing. Fox predation is a potential threat that is relatively easy to deal with, and it should be taken seriously. While the severity of this threat has in the past been overstated (20 years of monitoring data suggests that reducing foxes does not generally increase Malleefowl breeding numbers), we still need to evaluate whether there are specific situations where fox control is needed to conserve particular Malleefowl populations.

One threat that has certainly *increased* substantially over the past few years is fire. This is due to current Government policy whereby DSE plans to annually burn 5% of all public land in Victoria. While this ostensibly has to do with reducing the risks to life and property, the fact that there is - 1) a State-wide target and 2) large areas of remote and easily burnable Mallee in western Victoria, means that Malleefowl habitat is being targeted in order to attain regional and State targets. Because Mallee under 20 years of age is difficult to burn, the government policy is likely to result in most Malleefowl habitat being burnt over the next 20 years or so. This would be a catastrophe for Malleefowl populations because the species is known to be sensitive to fire and populations may not recover for 20-30 years, or even longer. Where foxes, clearing, and hunting have failed to eradicate Malleefowl from this State, we fear that the Victorian government may well succeed if ecologically insensitive fire regimes are imposed and habitats burnt just to achieve nominal State-wide targets. Ironically, the safest place for a Malleefowl in Victoria is no longer on public land managed for conservation!

Despite the good news regarding the monitoring effort and results, we clearly still have much to learn about how best to manage Malleefowl populations. In this regard, the success of the Malleefowl Adaptive Management (AM) project involving VMRG, Parks Victoria and University of Melbourne in attracting funding from the ARC has been a great and timely achievement.

The AM project, under the leadership of Dr Michael Bode (you may have been lucky enough to hear him speak at the Malleefowl Forum in Renmark last year) will be funded for the next three years and will be tackling the crucial issue of how to make best use of the ongoing flow of monitoring data to better manage Malleefowl across as much of its range as possible (see the paper in the Renmark Malleefowl Forum Proceedings for more details). We will be working closely with Michael and an expert team that includes Drs Libby Rumpff and Brendan Wintle (University of Melbourne) and Dr John Wright (Parks Victoria) to

ensure the best possible program is in place and operational by the end of the project.

The AM project is an exciting development for Malleefowl conservation, and is in many ways a culmination of our collective effort to develop and implement a monitoring program for Malleefowl conservation. The project is due to start this winter. While the monitoring will continue much as it always has, new opportunities will arise to gather information that is needed for the project. We hope the Malleefowl community will be as responsive as they always have been to these new challenges and opportunities.

What do you think of this Newsletter?

More photos? More technical talk?

What's missing from this edition?
What else would you like to see?

Contact Sharon or Gil with your suggestions
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Next edition will be in Spring 2012 so the closing date for articles is September 21, 2012

For editing, articles are best sent by email as attachments with photos also as attachments.



Malleefowl at Innes NP aren't worried about trees!
– photo S. Gillam

Important websites for news, information and photos include

www.malleefowlvictoria.org.au
www.malleefowl.com.au
www.malleefowl.net.au

This Newsletter is available in full colour at
<http://database.malleefowlvictoria.org.au/Start.aspx>