



around THE MOUNDS

NEWSLETTER OF THE NATIONAL MALLEEFOWL RECOVERY TEAM • SPRING 2012 EDITION TWO

THE NATIONAL MALLEEFOWL RECOVERY TEAM

BY SHARON GILLAM, CHAIRPERSON

Welcome to the second edition of the national Malleefowl newsletter. The Malleefowl breeding season is underway once again, with keen monitors honing their monitoring skills at various training opportunities around the states. The Malleefowl Preservation Group *MPG* conducted training for Western Australian volunteers in mid August (see Lisa Spence-Bailey's article), while the Victorian Malleefowl Recovery Group *VMRG* held their regular training event in Wyperfeld National Park in mid October. Whilst a proposed training day planned for September to bring together folks on Eyre Peninsula, SA did not eventuate, we will be providing extra support for our regular EP vollies this season, through funds made available via the EP Department of Environment, Water & Natural Resources (DEWNR) Office. Various levels of training are provided for other SA volunteers in regional areas.

Over the last 6 months there have been some changes in Recovery Team membership, with a wave of new knowledge and experience being added to the team. This includes two new members from Western Australia: Dr Lisa Spence-Bailey, Wildlife Ecologist with the Australian Wildlife Conservancy based at Mount Gibson, and Dr Manda Page, Principal Zoologist, Department of Environment & Conservation, based in Perth. Lisa and Manda fulfil a long-term quest for governmental and organisational representation from WA on the Recovery Team, adding to the value of

our current WA membership, and adding another possible avenue of support for WA volunteer groups and individuals.

Graeme Tonkin, long-time Malleefowl volunteer and advocate, also joins the Team, representing volunteers in SA.

One of our long-serving members, Ray Dayman, National Parks Ranger with the NSW Office of Environment & Heritage based in Buronga, NSW, has decided to step aside. He will, however, continue to work actively on Malleefowl recovery initiatives in his neck of the woods. Many thanks to Ray for his time and input into the Recovery Team. Ray is replaced by Melanie Bannerman, also a Ranger with OEHL, and based in Dubbo, NSW.

A warm welcome to our new Recovery Team members.

Advances continue to be made within the National Malleefowl Monitoring Database, with maps showing mounds on each site and mound history data planned to be made available to volunteers monitoring particular sites. A back-log of WA data also continues to be vetted and added to the database.

I hope you enjoy this edition of the 'new look' newsletter.



CAMERA TRAPPING COLLOQUIUM

BY GRAEME TONKIN

I am very fortunate to have had the opportunity to attend the World's first Camera Trapping Colloquium on September 13 & 14 at Taronga Zoo in Sydney. Now if you are like me and have no idea what "colloquium" means, here it is, direct from Wikipedia:

1. *an informal meeting for the exchange of views;*
2. *an academic seminar on a broad field of study, usually led by a different lecturer at each meeting*

Camera trapping is unfortunate terminology as trapping engenders an image of animals physically restrained in traps. This of course is not the case. Camera Trapping is simply taking digital images of animals in their natural environment using remote sensing cameras.

The colloquium was divided into four main areas of discussion:

1. Camera trapping for animal monitoring: case studies
2. Camera technology, constraints and pitfalls
3. Survey design, standards and protocols
4. Data and image management, identification and analysis

Two hundred participants attended the colloquium from all states and NT, with speakers from each state and NT as well as Canada, Peru, India, Nepal, Bhutan, Arizona, California, New Zealand and Christmas Island.

The animals covered ranged from camels in Central Australia to Tasmanian Devils, Malleefowl in WA's Wheatbelt and LBA's (Little Brown Animals) down to 100mm in length.

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CAMERA TRAPPING COLLOQUIUM

Projects ranged from the deployment of hundreds of cameras covering hundreds of hectares down to projects using only one or two cameras.

Of direct relevance to Malleefowl, Mike Griffiths from Healthy Bushland, World Wildlife Fund, Northam WA spoke on the topic titled **"Monitoring Malleefowl with Sensor Cameras in Western Australia's Wheatbelt - A case study in citizens' science"**.

Mike said:

"The Healthy Bushland Project works with landholders to conserve privately-owned remnant vegetation in a heavily cleared agricultural region of the South West Australian Ecoregion. Such remnants are typically high in biodiversity but are generally poorly surveyed. We approached a family in the WA Wheatbelt to negotiate protection of their patch of native bushland. While conducting a flora survey we noticed the abundance and diversity of fauna, and later deployed sensor cameras on Malleefowl mounds and gnammas (water holes) in the hope of recording further vertebrate species. The cameras detected many more species than had been known, triggering immediate interest and enthusiasm. We showed one family member how to use the cameras to monitor Malleefowl mounds and as his confidence grew he purchased his own cameras and monitored further mounds, recording daily mound activity, courtship displays, predators and a freshly hatched chick. He set cameras in other locations and recorded many other fauna species. We recorded behaviour, the family's increasing understanding of Malleefowl and their threats, and their commitment to protecting Malleefowl and the bushland, and the role of sensor cameras in citizens' science and indigenous engagement."

The "take home" message from the colloquium for me was that camera trapping is not the silver bullet to solve all monitoring questions but another tool in the arsenal that can be utilised to get the answers.

My thanks go to the Department of Environment, Water & Natural Resources SA, and particularly Chris Hedger, for giving me the opportunity to attend the colloquium.



MALLEEFOWL NEST WITH SENSOR CAMERA AND BATTERY PACK

PHOTO: GRAEME TONKIN



FEMALE MALLEEFOWL LAYING AN EGG WITH ATTENDANT 'FATHER'
PHOTO: GRAEME TONKIN SENSOR CAMERA

SOUTH EAST REGION SA

BY VICKI NATT

It is almost time to begin monitoring the five South East grids for the 2012 Season. There have been a number of staff changes especially in the Coorong so a slightly different team will be organised for this season.

Since last season's monitoring, an attempt was made during the winter months to conduct a mound survey of the Mount Scott Grid as one has not been conducted for over five years. It served as a reminder of how difficult it is to organise enough people to conduct a mound search and how time consuming it is to complete the process due to the density of the habitat and the weather.

The first attempt involved a group of international volunteers, young people who were in Mount Gambier to help with environmental projects for two weeks. With one exception, a young woman from Canada, they all came from the United States to enjoy an environmental experience in Australia.

Once all the introductions were over, the first task was to issue them with the necessary equipment and teach them how to use it. Then they had to learn what a Malleefowl mound and a Malleefowl looked like, not just the obvious recent mounds but some very old extinct mounds that looked much more insignificant. All this took most of the morning. The mound search was then on in earnest. For safety and thoroughness the group was encouraged to work in a straight line, each person being 20metres from

the next.

At the end of the two days only some of the transects were completed. No new mounds were found and there was a lot of grid still to cover.

Ken Jones then generously offered to help out with his Bush Repair team on the 22nd and 23rd of August 2012. A team of five managed to walk up and back along the length of the grid. The weather was kind to us the first day but deteriorated over night. Ken's team had decided to camp, enjoying good camp food and a warm fire. However the next morning found them cold, wet and miserable, deciding to abandon ship and return to Mount Gambier. This left two of us, graduate ranger Sarah Vournard (who had driven from Mount Gambier to join in) and me to save the day. The two of us completed another two transects of the grid without getting too wet.

Ken wrote a newsletter article for his team about the experience. His comments included "the team soon clocked up some new mounds and re-visited some previously recorded ones... By sunrise our tents had leaked, our swags were damp and breakfast was gulped down on the run. We had no choice but to pack up our soggy gear and try to get warm again. Our campfire was pitiful and the ground was so waterlogged we were concerned about getting bogged. Vicki and Sarah were both so keen to join our team of hardened trekkers..."

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SOUTH EAST REGION SA

With gale warnings, heavy rain showers still forecast and strong Nor'west winds with hail already lashing the scrub, we stuck to our 'gut feeling' and reluctantly pulled out. As we made our retreat through the heavy rain and mud, we congratulated ourselves on our decision to postpone the search."

The grid survey still not completed, a team of four made yet another attempt at the mound search on Sunday September 23rd 2012.



INTERNATIONAL VOLUNTEERS GETTING READY FOR THE MOUNT SCOTT MOUND SEARCH
PHOTO: VICKI NATT

SSAA HUNTING & CONSERVATION (SA BRANCH)

BY JOHN DRUMMOND

Having been a member of the Friends of Gluepot since the founding of their group, I have been involved with their working bees and walked the Malleefowl Grids. Checking the mounds old and recent has rekindled my interest in ornithology, and the preservation of Malleefowl in particular.

Two decades ago I became aware and concerned with the damage that feral animals were doing to our flora and fauna in our National Parks. I took up the challenge of reducing their numbers by becoming a member of the Sporting Shooters Association of Australia (SSAA) - Hunting and Conservation (H&C) Branch (SA) Inc. In 1991 the Branch was invited into the Gammon Ranges by the National Parks

and Wildlife Service to control the numbers of feral goats which were devastating vast areas of that park and were in direct competition with Yellow-footed Rock Wallabies. Due to our success, other National Parks were soon included to our list as well. It became apparent that rabbits, cats, and foxes also impacting our native species could be effectively targeted, together with more sophistication of data gathering. Information from the examination of stomach contents of a predator, and location where it was shot, has led to the location of a live specimen of a Hopping Mouse not seen in an area for several decades.

Today, membership of the H&C Branch in SA is approaching 400

volunteers and its purpose of controlling the feral animal populations damaging our native species and habitat areas continues.

When I attended the 4th National Malleefowl Forum at Renmark in 2011, representing the Hunting & Conservation (SA) Branch of the Sporting Shooters Association of Australia, I realised the enormous dedication by people across the southern States of Australia to protect the Malleefowl and its habitat areas.

The perception that the Malleefowl can be regarded as one of Australia's most significant fauna species has sparked much interest with our group who are dedicated to conservation. Standard data gathering now includes the GPS location of all Malleefowl mound and fowl sightings wherever our efforts will take us in the name of conservation of our native species.



MALLEEFOWL IN THE BROOKFIELD AREA
PHOTO: KERRY WILLIAMS SSAA SA

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Submissions for Edition Three of Around the Mounds close on 25/3/13. For editing, articles are best sent by email as attachments, with photos also as attachments. If in doubt, phone!

OAK VALLEY LAND MANAGEMENT, SA

BY BRUCE MACPHERSON, MANAGER COMMUNITY ENGAGEMENT
ALINYTJARA WILURARA NATURAL RESOURCES MANAGEMENT BOARD



GORDON RECEIVING INSTRUCTIONS ON TRACKING MALLEEFOWL
PHOTO: NEVILLE HUDSON

An opportunity to build on Malleefowl surveys in the Maralinga Region has provided the basis for aboriginal trainees to learn and gain experience in a range of survey techniques.

Maralinga Tjarutja (MT) is a corporation established by the Maralinga Tjarutja Land Rights Act 1984 to represent the interests of the Maralinga traditional owners. In late 2011, Maralinga Tjarutja launched its Land Management Plan *Kuwarila Tjaatarinyi*, outlining its plans for management of the section of south-west South Australia that it is responsible for. The area includes a large section of the Great Victoria Desert, Mamungari Conservation Park, Maralinga Village and Section 400. The lands owned by MT are also the responsibility of the Alinytjara Wilurara Natural Resources Board as part of Dept Environment Water and Natural Resources (DEWNR).

Early this year, Maralinga Tjarutja and Oak Valley Community Council gained funding through the Federal Government's Ceduna Indigenous Coordination Centre, for a pre-Employment Training Program. At an early planning meeting, DEWNR AW offered to run two threatened species surveys during the course, for the Malleefowl and Sandhill Dunnart respectively, as a means of providing direct experience in field work and survey tools. Alinytjara Wilurara also undertook to identify contract work which could support a level of employment at the end of the course.

The Surveys were conducted in July under the direction of Joe Benshemesh

who had done previous Malleefowl mapping in the area. The surveys were carried out in a single 10 day block in July and included a 20 km transect south of Oak Valley where there are previously known mounds. Trainees learnt to use digital survey tools, including Palm Pilots and GPS to map the mounds, which were then added to the DEWNR Malleefowl data base. Nathan Williams, DEWNR AW Project Officer in Ceduna, spent two weeks assisting the course facilitators and is committed to having an active role in supporting future land management projects out of Oak Valley.

Neville Hudson from Friends of the Great Victoria Desert tells the next part of the story.

Each year the Friends of the Great Victoria Desert Parks, FoGVD, conduct a two week field trip to a section of the Great Victoria Desert. The 2012 FoGVD Field Trip included surveys to record the presence and distribution of Malleefowl or Nganamarra in the Yumbera Conservation Park and the Yellabinna Regional Reserve.

A small group of five FoGVD members met with Nathan Williams, Project Officer with DEWNR AW and four men from the Oak Valley Community (Aaron Boogar, Aaron Young, Lyndon Pepper and Milton Kugena) to carry out the surveys. There was a plan that the Friends of GVD mob would learn how to track and enter the information into hand held computer devices, Cybertrackers. The Anangu crew were very familiar with the Cybertrackers used to record footprints

of animals, especially Nganamarra.

Using their highly developed tracking skills they quickly identified the tracks in the sand and entered the required data into the Cybertrackers. They moved so quickly it was difficult for the learners to keep up (as shown left).

The Anangu were willing to show the visitors how to find the tracks and how to use the recording devices. A good working relationship was soon established and the team of five from Oak Valley worked well with the five visitors who were mostly old enough to be their grandparents. Nathan William's leadership assisted with building a mutual trust and his young crew soon felt comfortable with the "oldies"

It was unfortunate that the weather was unpleasant with a hot north wind putting the temperature into the mid thirties making driving on the sand dunes difficult. However, six sites were surveyed and evidence of Malleefowl presence was found at four of them. None of the Malleefowl mounds were active. As the teams drove back to camp that evening many Malleefowl footprints were found on the road where vehicles had driven less than hour before. This was at a site where evidence of Malleefowl had not been recorded before. The excitement from this find was shared by the locals and the visitors.

A good connection was established between the teams during this hot day. As leader of the FoGVD Malleefowl survey group, I was especially pleased when a member of the Oak Valley team beckoned me by name saying, "Come and look at the Nganamarra footprints over here".

When a bird of prey was flying over it was seen to be carrying a small mouse like creature in its talons. The visitors were curious to know what species the bird was carrying. From inside the car Aaron looked up and nonchalantly said, "Hopping mouse!" All laughed together - an indicator of mutual understanding between the two groups. He had the measure of these "oldies" and would make jokes as if all were peers.

The experience gained from sharing this day together, where young Anangu people could demonstrate their knowledge and skills to a bunch of "oldies" opens opportunities for further sharing when the Friends of The Great Victoria Desert Parks visit this special part of Australia in future years.

SCENIC HIGHWAY TO MOONABIE HILL - THE DEATH ZONE, SA

BY LORRAINE & JIM WALFORD

This site is approximately 50km SW of Whyalla in South Australia, adjacent to the Munyaroo Conservation Reserve and 10km west of the Munyaroo Conservation Park. There are heritage blocks on the NW corner of the intersection of the Lincoln Highway with the Scenic Highway, and on the east side of the road to the north of the Munyaroo Conservation Reserve. In 1991 a bushfire burnt through this part of the Ironstone Hill Conservation Park south of the Middleback Range (which includes the Iron Duke Mine) and crossed the Lincoln Highway into surrounding areas.

We moved to Cowell in January 1998, joined the group monitoring Malleefowl nests that year, and have travelled along the Lincoln Highway at least twice a month since. There was anecdotal evidence of Malleefowl but they were rarely seen. In the last two years this has changed significantly. 14 birds have been hit by vehicles since November 2010 and 7 live birds have been seen.

Our first confirmed record of Malleefowl in this area was on 27/2/09 when a live bird was spotted. Then on 8/11/10 we found a dead bird near the southern edge of Ironstone Hill CP.

We found a dead juvenile Malleefowl on 14/4/11 and many feathers on 25/4/11, on the side of the road in the Munyaroo CR area. There were two roadkills in August 2011, and two

sightings of live birds.

On our way home from the Malleefowl Conference in Renmark, a live bird flew into an open paddock on 2/8/11 at Pine Hill. A bird was killed on 5/8/11 near Pine Hill driveway and feathers were found on 21/8/11 nearby. A neighbour stopped on 11/8/11 to chase a Malleefowl from the road.

In October 2011, two road kills occurred near the Scenic Highway corner, on 16/10/11 and 20/10/11.

November and December produced one death each, at Munyaroo CR and near Pine Hill driveway.

In January 2012 the Environmental Representative of HWE Mining Pty Ltd began a series of PowerPoint presentations of Malleefowl items for workers returning from breaks to raise awareness of the presence of the birds on the Lincoln Highway south of the Iron Duke mine towards Cowell. Notices were placed in crib-rooms and small items put in work bulletins. Workers began reporting sightings of Malleefowl on the entrance road to the mine, with a single bird being seen at least twice late in 2011 and other sightings in 2012.

Two birds were killed on the Lincoln Highway during January 2012, both in the Munyaroo CR area. In February and March a single live bird was seen on the road inside the southern boundary of Ironstone Hill CP on 19/2/12 and 4/3/12. So far, all reports had been to the south

of the Iron Duke Mine entrance, but on 18/3/12 we found a few Malleefowl feathers on Moonabie Hill, 400m north of the Ash Road intersection, extending the range of the Malleefowl in this location considerably.

A second find to the north of the Iron Duke mine came on 13/6/12 with a roadkill 3km north of the entrance. Then 26/8/12 took us back to the site of the first roadkill, with another Malleefowl hit at the same place as the first noted in 2010 near the southern edge of Ironstone CP. On 15/9/12, a live bird was seen on the Lincoln Highway directly opposite the Iron Duke Mine entrance. One survives!!

The range of the Malleefowl from the Scenic Highway to the Moonabie Hill is approximately 16km. We know that the vegetation in Ironstone Hill CP has returned during the 22 years to pre-fire state. Have Malleefowl returned to their previous habitat? Has something else changed or disturbed them?

We know that traffic has increased significantly with mine shift changes at 6am and 6pm, as well as heavy transport to Port Lincoln. If the Malleefowl have moved back into their previous habitat, what impact will this have on numbers of active nests in the surrounding areas?

Why do Malleefowl cross the road?

MALLEEFOWL 'ICONIC SPECIES' PROGRAM, NSW

BY MARC IRVIN & PETER EWIN

The New South Wales Office of Environment and Heritage recently received funding through its threatened species program to help conserve Malleefowl. This program will fund management actions to support Malleefowl conservation over the next three years. The aim of the Malleefowl project is to initiate and enhance Malleefowl conservation on private and public land in NSW, with the species targeted because of its iconic nature, with benefits also achieved for a number of other threatened species that use similar habitats.

This Malleefowl project is in addition to work already being undertaken by various land managers, including National Parks and Wildlife and Catchment Management Authority staff, as well as private landholders,

and is also intended to enhance some existing programs. For example, where required, M44 Ejectors (a new bait delivery device) will be provided to help reduce fox predation; and camera traps will be supplied to help measure and monitor the impact of fauna that visit Malleefowl mounds (such as goats, goannas, foxes, pigs, etc.) and utilise the same habitats. Handheld data loggers will also be available to more easily collect field data on bait up-take, mound monitoring, new mounds, Malleefowl sightings and aerial survey.

A specific project in the Goonoo National Park near Dubbo will gather knowledge to help manage the Malleefowl population, which is estimated to be low. A wildfire in 2007 burnt large areas of habitat in Goonoo that is unlikely to contain active nests

for many years. In order to determine the sustainability of the Malleefowl breeding population while the burned habitat regenerates, mounds will be excavated several times throughout the season to collect information on egg size, weight and condition. Camera traps will be used to monitor mound visitation and activity throughout the project. Data collected will provide an insight into the fecundity of the population and specific threats acting at the mounds. The project will work with the Dubbo Area National Parks and Wildlife staff and surrounding landholders to provide information and recommendations for long-term management.

For further information please contact Marc Irvin (02 6883 5348) or Peter Ewin (03 5021 8915)

BIG DESERT TRACK SEARCH, VIC

BY RALPH PATFORD & RON WISEMAN



THE CORKE FAMILY AT A TRACK JUNCTION IN THE BIG DESERT

Following on from the relatively successful track search of the Little Desert (reported on at last year's National Forum), the VMRG, in partnership with the VMLCG (Victorian Mobile Landcare Group), set out to explore the Big Desert in much the same way.

The Big Desert is a conglomeration of National Park, Wilderness Area and State Forest and is over 8 times larger than the Little Desert. It is sandwiched between the Mallee Highway in the north, the Western Highway in the south, the state border with SA in the west and the Henty Highway in the east. The pattern of tracks within the area is not as extensive as in the Little Desert and there are large areas devoid of vehicular tracks.

Consequently, a track search as comprehensive as for the Little Desert was out of the question. After consulting with Parks Vic staff and tapping into some local knowledge, it was decided to concentrate our initial search along the northern boundary, extending 30 or so kilometres southward. The northern boundary of the area adjoins farm land for virtually its full length.

So, on the weekend of June 30th - July 1st, 19 VMRG members and 21 VMLCG members descended upon Underbool on the Mallee Highway and conducted what turned out to be a fairly successful track search. The VMLCG is an offshoot of the 4WD movement, and is very active in Landcare and environmental issues across the state.

Underbool, midway on the Mallee Highway above the Big Desert, is quite

a small town but, nonetheless, we were made welcome. We made good use of the excellent general store and the friendly and warm local pub.

As we did in the Little Desert, we sent off in single vehicle teams to search about 24 kms of track. This was done by driving 850 metres, walking 150 metres, driving 850 metres, etc. During the walking sections various gps readings were taken and track signs of animals, particularly Malleefowl were photographed and recorded.

The results, although yet to be analysed in a scientific way, easily vindicate the effort and the process. The sign of Malleefowl (i.e. recent tracks) in a couple of places was very

encouraging and a number of Malleefowl mounds were also seen. Whilst no birds were seen during the searching, quite a few people reported seeing Malleefowl beside the road midway between Walpeup and Patchewollock. The majority of teams also reported sightings of dog tracks.

Arising from the preliminary report of the activity, the VMRG Committee has asked Joe Benshemesh to look at the general question of where gaps exist in the current monitoring program. Hopefully, we will, in the not too distant future and with substantial help from the locals, establish grids in the area and add them to the monitoring program.

For the statistically minded we collectively travelled 45,000 kms, volunteered 1,100 hours of time, and searched 275 kms of track. Quite an effort! The efforts of participating VMRG and VMLCG members were quite considerable and paramount to the success of the activity. Working with the VMLCG is not only good fun but is proving to be quite beneficial to both groups.

The majority of funding for the activity came from a grant from the Wilderness Society and Dara Foundation WildCountry Small Grants program, for which the VMRG is extremely thankful and grateful.



CUPPA TIME OUT ON THE TRACK
PHOTO: RALPH PATFORD

VMRG TRAINING WEEKEND WYPERFELD NATIONAL PARK, VIC

BY GIL HOPKINS



GETTING READY FOR THE FIRST TRAINING SESSION AT WYPERFELD NATIONAL PARK

Wyperfeld NP is over 5 hours travel northwest of Melbourne, on the south-eastern end of the Big Desert. VMRG has been holding an annual Training Weekend there for over 10 years, the second weekend of October. This year there were over 50 participants, including 16 new members. Many participants came from Melbourne, but there are members across most of the state. This year members of the Melbourne University Adaptive Management Research team also attended and caught up first-hand with the monitoring and data collection process, and visited an active Malleefowl nest.

We started on Saturday afternoon with an introductory session which included the reasons behind accurate consistent monitoring, and mentioned any changes or new initiatives. This was followed by smaller group demonstration and discussion sessions to refresh experienced monitors with MobileMappers and the monitoring process by visiting a number of known mounds in the local area. New monitors were separately taken through the whole monitoring process and then visited some mounds to practice their skills.

Saturday evening was dedicated to a gourmet camp-oven meal (shown above) and catching up with everyone socially.

On Sunday morning we started with the VMRG Annual General Meeting, including elections. This was followed by group discussion and demonstration sessions on Safety Procedures, Trunking radios, and Satellite phones. Then we all met again for information sessions on the National Malleefowl Database, The Adaptive Management Project, reports on VMRG projects and arrangements for monitoring of all sites in Victoria.

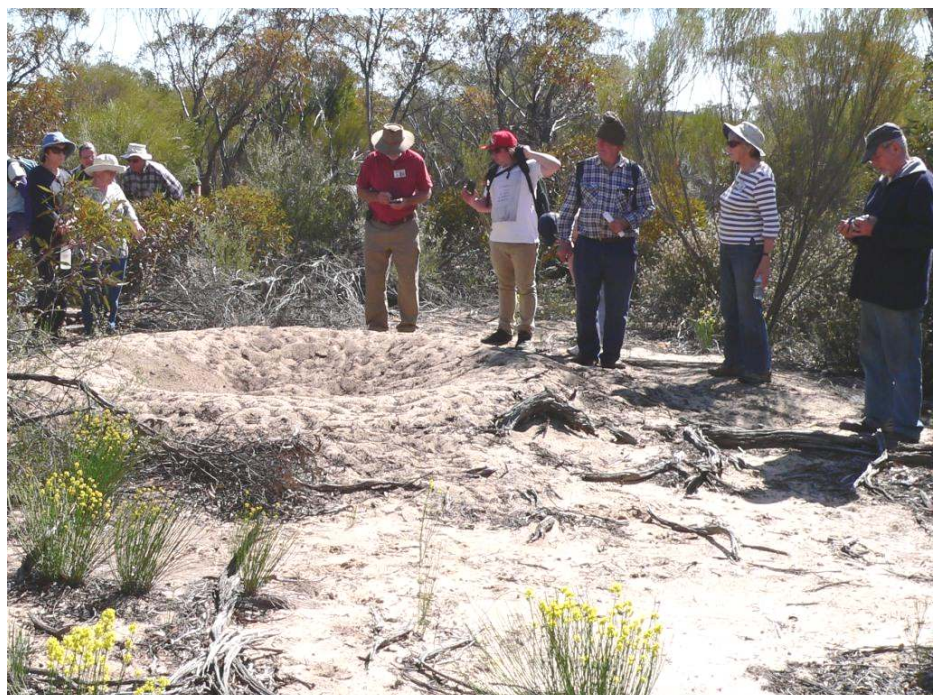


GOURMET AL FRESCO CAMP-OVEN TEA

Members also had the opportunity to check their monitoring knowledge with a self-help quiz, check their navigation skills with practical exercises, and to compete for prizes in a 'Just-for-fun knowledge quiz' about Malleefowl.

It was a great weekend, relaxed yet purposeful, organised but not officious, and it accomplished everything on the agenda as well as helping people with a common purpose get together and have fun!

REFRESHING MOBILEMAPPER AND MONITORING SKILLS IN THE BUSH



ADAPTIVE MANAGEMENT FOR MALLEEFOWL AND THE ARID ZONE

BY MICHAEL BODE, RESEARCH FELLOW, UNIVERSITY OF MELBOURNE

Conservation management is stuck between a rock and a hard place. On one hand, although we know that our native environments are in bad shape (and are getting worse), we're not always sure how to fix the situation. On the other hand, we can't use this uncertainty as an excuse for delaying management actions, because native habitats are normally going downhill fast. We have to act immediately, yet we sometimes don't even know where to start.

Australia's arid and semi-arid zones are a compelling example of this dilemma. Their declining condition is undeniable. Species loss and habitat degradation in Australia have disproportionately impacted low rainfall regions, whose fragility and variability make them vulnerable to introduced grazers, introduced predators, salinity and climate change. Without rapid management, and without extensive management, the future will only bring more extinctions.

Unfortunately, realising that the situation is grim is not the same as understanding how to stop the decline. There are lots of potential management actions, but no one is sure which (if any) will work - or, as often happens, everyone is certain, but no one can agree! This uncertainty is not surprising: dryland ecosystems are unusual, poorly researched and highly variable, and climate change is going to compound our ignorance.

So when faced with this sort of uncertainty, scientists normally decide to collect more data. Once they know for certain what the problem is, they can propose the most effective solution. Unfortunately, when there's no time to lose, there's no time to learn: delays bring threatened species closer to extinction. How can we act immediately, even though we don't know what actions work, and which actions don't?

Luckily, other managers have tackled this problem in the past. In the late 1970s, fisheries scientists were faced with the same dilemma. They didn't know enough to set yearly harvest quotas with any certainty, but they couldn't stop fishing while they learned more about the fished species. To satisfy the contradictory demands of more learning with immediate action, they developed a set of scientific tools called "Adaptive Management", which might be better described as "learning

by doing". Adaptive management considers any action to be both a decision based on our current understanding, but also an experiment aimed at improving our knowledge.

An adaptive management approach is better than "best-practice", which normally involves managers going with the best information available at the time. It's also a lot better than "scientific experiments", which basically means we wait (i.e., do nothing) until we can work out the best alternative. Finally, it's also better than "trial-and-error", where managers give something a go until it becomes clear that it's not working. Adaptive management is more structured in the way it tries different alternatives; it often tries multiple alternatives simultaneously. Importantly, adaptive management is not simply trialling a particular action, it's using the action to try to understand the underlying ecosystem processes. The mathematics involved are a lot harder than the alternative approaches, but adaptive management has the potential to provide much better outcomes.

The University of Melbourne, the Victorian Malleefowl Recovery Group, Parks Victoria and Iluka Resources have just begun to develop an adaptive management strategy for Malleefowl. Over the next three years, our research team will devise an exhaustive set of mathematical arid ecosystem models. In collaboration with managers and arid zone scientists, we will outline all the potentially beneficial management interventions and the proposed mechanisms by which they help the Malleefowl.

Finally, we will connect the cables of the adaptive management machine to the data provided by the National Malleefowl Monitoring Database (past, present and future data), and start to sort the effective management actions from those that have no scientific support. The end result will be a better understanding of the population dynamics of Malleefowl; a clearer set of links between management interventions and key ecosystem components of the arid zone; and an enhanced ability to manage this unique species.

MALLEEFOWL PROJECT FUNDING

The Iluka Malleefowl Management Committee invites you or your group to consider submitting a funding application to support a Malleefowl recovery project you may be considering, with the following guidelines:

1. Funding is available to projects which contribute to implementing one or more of the priority actions in the National Recovery Plan for Malleefowl, and will deliver significant benefits to Malleefowl in the Victorian Mallee Region, but not to the exclusion of other areas and other states. The Recovery Plan is available at: <http://www.environment.gov.au/biodiversity/threatened/publications/recovery/malleefowl/index.html>
2. Those eligible for funding include Universities, NGOs, Government Agencies, Volunteer groups and Charities, and individuals.
3. Funding is available for one-off costs or ongoing costs over a number of years, including capital expenditure and core funding.
4. Projects that use the funds to gain additional funds from other sources will have a higher priority. Projects will need to indicate the level of financial and/or in-kind support the proponent provides for the project.
5. Projects that use the funds for proposals unlikely to be funded by Government and/or Agencies have a higher priority. Projects that would normally be funded by Government and/or Agencies have a lower priority.
6. Funding is not for habitat enhancement projects.
7. Projects need to be achievable in the funding time-line.
8. Applications need to be submitted on the application form to Iluka Resources limited by email or post.
9. The committee considers applications at their May and November meetings.
10. Applicants will be notified of the outcome within 28 days of the committee meeting.
11. Successful applicants will be required to submit a quarterly report (on a provided template) of progress and expenditure on the project.
12. Payments may be tied to the completion of milestones; each project will be assessed individually.

Deadlines for applications are: 1/5/13, 1/11/13, 1/5/14, 3/11/14, 1/5/15, 2/11/15, 2/5/16, 1/5/16, 1/5/17.

For further information or application forms, contact Stephanie Mitchell, Environmental Advisor, Iluka Resources Ltd. Stephanie.Mitchell@iluka.com, 0408 051 635

ARTIFICIAL WATERS & OUR MALLEE RESERVES

BY PETER SANDELL, PARKS VICTORIA



GOATS IN THE MALLEE

Most people would accept that the Mallee belt has very few natural waters outside the major river systems. The widespread introduction of artificial waters following European settlement meant that most mobile animals could access water most of the time. The limiting factor during drought for grazers then became the lack of feed rather than a lack of drinking water. This situation has led to extensive degradation of vegetation and habitats through over-grazing.

Over time, the proliferation of artificial waters across the Australian rangelands has meant that relatively few areas are now more than 10 km from a permanent water source (James et al. 1999). A recent study in western NSW found that goat populations tended to be concentrated within 3 km of water points (Ben Russell pers. comm.), particularly in summer. However, the zone of impact of a water point may extend as far as 10 km from permanent water (James et al. 1999). Areas like Murray-Sunset NP in Victoria, where most of the artificial waters have been closed, tend to be the exception within the semi-arid zone. However, even in Murray-Sunset NP, there are waters around the perimeter which continue to support relatively high densities of goats and kangaroos.

Decisions to close artificial waters in the form of catchment dams are generally based on a range of

considerations, particularly the role of the dam in supporting high grazing pressure. The closure of artificial waters in reserves is a prescribed action (2.2) in the National Recovery Plan for Malleefowl. This is because high grazing pressure reduces Malleefowl abundance.

People have reported to me that they used to be able to observe a variety of birds at dams within Murray-Sunset N.P. Now that these dams have been closed, those same species are not being recorded. These observations led them to believe that dams were important for those species and therefore should be retained.

Comprehensive studies have found that a number of bird species have expanded their geographic ranges or increased in abundance because of the provision of artificial waters (James et al. 1999). Examples are the crested pigeon, galah and zebra finch. Before the artificial water sources existed, these birds could only inhabit arid areas following good rains. Equally, there are water-independent species that have been disadvantaged by the proliferation of water points. These include the Major Mitchell Cockatoo, Chestnut Quail-thrush, and Plains-wanderer.

Evidence from Bookmark Biosphere Reserve in S.A. is that the sites with highest quality colonies of Black-eared Miners are more than 5 km from dams and man-made clearings (Clarke and

Clarke 1999). By contrast, all known Yellow-throated Miner colonies in the Bookmark region have been located within 2 km of permanent water or man-made clearings. As we know, genetic introgression from YTM is one of the greatest threats to the conservation of the BeM as a species.

Based on the evidence from a number of studies, the number of bird species found to have benefited from artificial waters (47) is more or less equivalent to the number of species found to have reduced in abundance or contracted in range (39) as a consequence of artificial waters (James et al. 1999). The species that have benefitted from artificial waters tend to be those species which did not occur originally.

I believe that the collective evidence with respect to artificial waters in conservation reserves supports their closure. The evidence that I rely upon for this conclusion is most notably the degrading effect of increased grazing pressure by introduced and native herbivores. With respect to birds, the precautionary principle would suggest that closure within a conservation setting is the appropriate management action given the proliferation of artificial waters outside reserves. Within the waterless areas, it can be assumed that the original bird fauna will be advantaged relative to those water-dependent species which will be favoured almost everywhere else.

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MPG MALLEEFOWL MONITORING WORKSHOP, WA

BY DR LISA SPENCE-BAILEY, AUSTRALIAN WILDLIFE CONSERVANCY WILDLIFE ECOLOGIST



GPS PRACTISE ON THE OVAL. PHOTO: LISA SPENCE-BAILEY

On Saturday August 11, 32 participants (21 current MPG members and 11 'newbies') converged on the sleepy wheatbelt town of Babakin to attend the annual Malleefowl monitoring workshop, hosted and coordinated by the Malleefowl Preservation Group Inc.

Those participants (such as myself) who were new to the monitoring game were informed about the general ecology and behaviour of Malleefowl, given instructions on basic GPS operation in the field (including locating points on the Babakin Rec Reserve oval!) and were taught the in-field monitoring guidelines (utilizing a real Malleefowl mound as an example), including mound monitoring and data collection protocols and most importantly how to use the MobileMappers for data entry.

Current members met separately to review last year's monitoring data and discuss ways of solving any issues from the previous year's monitoring including improving the quality of digital camera images, improving safety measures and the apparent inaccuracy of the GPS function on the MobileMappers.

Following this, all participants met to discuss who would be monitoring the mounds at the 20 monitoring sites throughout south-west WA. Encouragingly, the new participants were keen to help out current members, and dates and personnel were locked-in for monitoring each of these sites.

The evening meal was wonderfully catered for by the Babakin P & C and this was shortly followed by an interesting presentation on the ecology of the local rock wallabies by Kath Howard, the Species Conservation Manager (South-West Australia) for WWF.

Sunday morning was spent reviewing Saturday's activities and the general consensus was that Babakin was definitely a comfortable, practical and

central place to meet for future workshops. After morning tea, the weekend was finished off with a visit to a local rock wallaby site, where some got to view the elusive, rather cute little guys, hiding in the picture below.

From a 'newbies' perspective, it was very heartening and motivating to be around such a passionate, driven group of people and really advertised to me the importance of volunteers in such a monitoring program. We (my fiancé Daniel and I) were made to feel very welcome and left the workshop feeling very excited about participating in the upcoming Malleefowl mound monitoring at our home at Mt Gibson Sanctuary.



LOOKING FOR ROCK WALLABIES
PHOTO: LISA SPENCE-BAILEY

INTRODUCING MEMBERS OF THE NATIONAL MALLEEFOWL RECOVERY TEAM



CHRIS HEDGER, SA

Born and raised in the Riverland of South Australia I was baptised by the often harsh and dry environments of Murray Mallee. It was these conditions that spurred on a childhood curiosity in the adaptive traits of many species which call these habitats home. I often wondered how they survived in what seemed almost impossible to me.

As the years went by, my curiosity grew and I eventually found myself

volunteering for 6 months at **Calperum Station, part of the Bookmark Biosphere**, during my gap year in which my passion really grew. From here I took an unconventional approach to tertiary studies, studying part time by distance whilst working full time as an intern ecologist on the station. Amongst my many roles at Calperum station I was involved with maintaining Malleefowl grid monitoring programs along with the landscape scale implementation of fox baiting. During my 7 year stint on the property I worked with a variety of people, which included former Department for Environment and Heritage staff. It was from this involvement I decided it was time for a change, hoping to address many of the conservation issues faced within Calperum from a regional perspective. I took on a role as a threatened species officer which eventually converted to my current role.

Malleefowl quickly became a significant focus for me, with the maintenance of annual regional grid

monitoring becoming one of my key responsibilities. Of particular note, last year I contributed significantly to a regional project aimed at determining potential consequences of locust treatments on Malleefowl production in which record breaking breeding events were captured, with some nests producing up to 45 eggs in one season. In the next two years I hope to be contributing to the implementation of rigorous adaptive management strategies within the region in the hope to answer some of the long standing questions and concerns I hold over the future of Malleefowl in the Murray Mallee, particularly in relation to adult demographics and survivability, along with effectiveness of fox control measures. Whilst relatively new on the scene when compared to other more long-standing members, I hope to continue to play my part in the future maintenance of such a wonderfully adapted species, and hope that, like me, my children will still have the opportunity to stare in awe.



PETER EWIN, NSW

Hi, I am the Regional Biodiversity Conservation Officer with the Office of Environment and Heritage (OEH), located in Buronga in south western New South Wales. OEH is the NSW government agency that develops and leads policy, reform and education in sustainability, biodiversity and native vegetation, coastal protection and Aboriginal cultural heritage for the state.

I have held this position for six years, and before that worked in a number of positions (mainly with the Atlas of NSW Wildlife but also with other databases and GIS, and also undertaking fauna and flora assessments), starting my career

in 1991. My current position covers the south west of NSW, from about Temora to Broken Hill and north of the Murrumbidgee and Murray Rivers. It involves a number of roles around off-park conservation, including:

- assessment of impacts of developments on biodiversity and threatened species, particularly large projects like mines and wind farms;
- liaison with other government agencies in regard to biodiversity and threatened species in the south west of NSW;
- until recently, compliance for clearing of native vegetation;
- participation in special projects such as threatened species surveys and waterbird monitoring; and
- providing input into recovery actions for threatened species

It is in this last role that I have been a member of the National Malleefowl Recovery Team for the last six years. Unlike most members of the team, I don't have a direct role in Malleefowl recovery but serve more as a coordinator for the various staff in OEH undertaking programs. The Malleefowl population in NSW is quite varied with small, declining populations in the highly fragmented wheatbelt and a larger, and potentially stable, population in the

south west which occurs on both conservation and grazing (leasehold) lands. One role I do have is to maintain the information behind the Threatened Species website for a number of species including Malleefowl (see <http://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10459>). The data is also used for a number of OEH programs including BioBanking and the development of Property Vegetation Plans when clearing vegetation.

Although my job is based in NSW I actually live south of the Murray River in Mildura, with my wife Cate and my three children. Other than my family, bird-watching is my main passion and I have travelled extensively in Australia to do this. Seeing my kids learning about and enjoying the Australian bush is also a great reward. I also am a bander and have recently established a project looking at the bird populations at the local Australian Inland Botanic Gardens (near Dareton) hoping to gather information on movements between the various native and exotic plantings within the gardens. I also still manage to hobble around a squash court but may have to retire to the golf course when my ankles eventually pack it in.



PETER STOKIE, VIC

I came to Malleefowl monitoring for the first time in 2000, just after Ann and I retired from teaching. We attended a Victorian monitoring training weekend with Paul Burton at Wyperfeld National Park, and later he took us to a monitoring site in the northern section of Hattah Kulkyne NP, showed us how to monitor one mound and said "off you go....."

(and promptly disappeared).

Well, what a journey! We have monitored sites every year since then, helped organise three National Conferences, were an integral part of the massive two-year *Multi Regional National Malleefowl Monitoring, Population Assessment and Conservation Project* that resulted in producing the national standards for monitoring Malleefowl, and have helped Dr Joe Benshemesh devise and develop the *National Malleefowl Monitoring Database*.

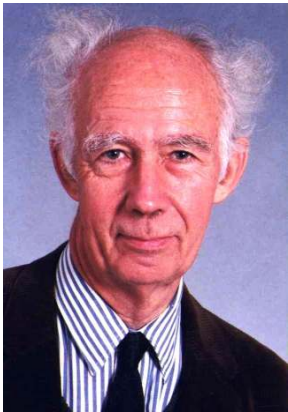
Currently I am the President of the Victorian Malleefowl Recovery Group Inc., and represent the VMRG on the National Malleefowl Recovery Team.

Working with Malleefowl conservation has brought Ann and I great experiences. We are not scientists, but over time have gained great scientific understandings through our associations with outstanding Australian environmentalists. I am continually amazed to meet so many young, skilful and dedicated ecologists working in the field in Government environment departments, and have been privileged to have had the opportunity to work with three outstanding PhD students - Jessica van der Waag, Taneal Cope and

Jessica Walsh.

We have met wonderful and committed people right across Australia. One of our great joys is to walk into a Mallee country outback pub and casually mention Malleefowl, and be regaled by exciting tales of Malleefowl. Generally, however, these tales go back 40 or 50 years and Malleefowl are long gone from these places.

The strength of the Malleefowl community is well positioned to bring Malleefowl back from the brink in many places. I believe that significant changes to some government environmental policies will be required for that to happen. The efforts of the National Malleefowl Recovery Team and the ARC *Adaptive management of Malleefowl in arid and semi arid ecosystems* project being undertaken by the University of Melbourne are positive elements for more enlightened management policies into the future.



STEPHEN DAVIES, WA

Stephen's introduction to Malleefowl was with Harry Frith where he helped record the behaviour of Joe and the other notables at Rankin Springs. He worked on Magpie Geese at Humpty Doo with Harry, and during those years was able to watch the activities of the local Jungle Fowl in the early morning, before going out to wade through the swamps following the ecology of the

geese.

Later he moved to Western Australia to interpret the pattern of movements of Emus between the pastoral and farming areas. This enabled him to regain contact with Malleefowl, both in the semi-arid zone at Wanjarri and Talling Stations and also in the farming area at Gutha.

After a spell as Director of the Royal Australian Ornithologists Union at their Melbourne office, he joined the teaching staff of Murdoch and Curtin Universities in Perth as an Adjunct Professor. In that role he supervised the Independent Study Contract and Honours projects of Jessica van der Waag and was drafted by WWF into the role of Chairman of the WA Malleefowl Network. He is still active in teaching at Curtin and is devoting much of his time to writing up the mass of data on the ecology of the arid zone that he collected during his years working in the Murchison District of Western Australia.

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 colour at <http://database.malleefowlvictoria.org.au/Start.aspx>

