

## **12. Malleefowl Conservation Action in Victoria 2007 – 2011**

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### ***Abstract***

In Victoria, Malleefowl almost exclusively live in large public National Parks and Reserves and are managed by Parks Victoria and The Department of Sustainability and Environment (DSE) through policy development and on ground actions including fire regimes and predator/competitor control.

Since 2000 the Victorian Malleefowl Recovery Group manage and carry out all monitoring of Malleefowl in 35 sites in all places where Malleefowl exist, and since 2004 have also re-searched or established the majority of these sites. Community groups and individuals have been actively involved in these searches. There are a few unrepresented areas in the monitoring program especially in the Little Desert and the Western Big Desert that the VMRG are addressing.

The Wedderburn Conservation Management Network has organised extensive rehabilitation programs to protect Malleefowl in Victoria's most isolated remnant in the Wychitella NCR.

The VMRG organise annual training of monitors to carry out the monitoring and re-searching activities. The group has supported the PhD Genetics Research Project through participation in field activities. The VMRG produced and distributed the National Malleefowl Monitoring Manual and a Malleefowl Education Kit for grades 5/6 with great success. Actions to protect Malleefowl habitat from inappropriate development have been pursued.

Planning and cooperative activities between Victoria/SA have developed significantly since 2004, and with the establishment of Habitat 141 this will be enhanced.

There are challenges for this forum and for Victoria to devise ways to maintain volunteer effort, address inappropriate fire regimes, to refine and improve the National Monitoring Manual, and to effectively use the National Malleefowl Database.

### **1 *Introduction***

In the four years since the last forum, activities in Victoria have concentrated on annual data collection of Malleefowl breeding density and maintenance of existing sites by systematic on ground searches in several locations. I will report on these activities in detail throughout the paper.

The Victorian Report at Katanning (2007) raised several goals for the management and conservation of Malleefowl in our state, namely that:

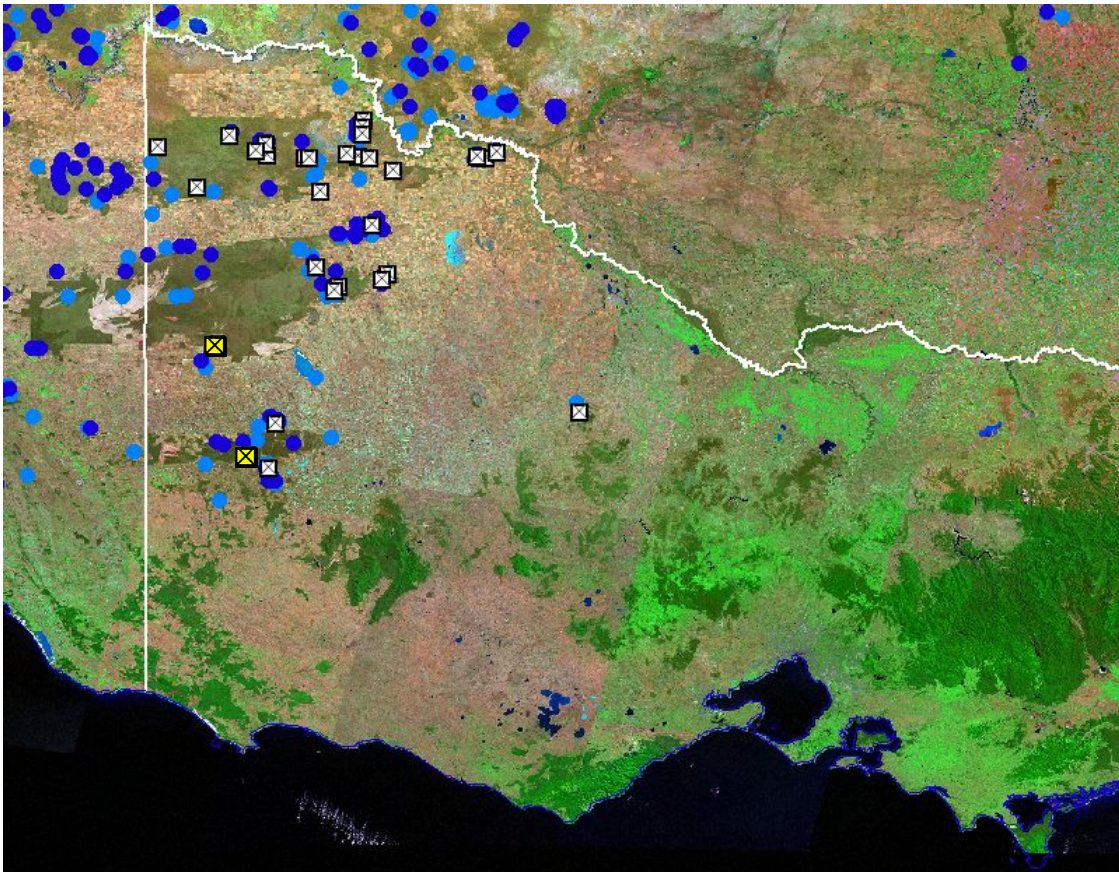
- The Little Desert will be a priority to establish monitoring sites
- Adaptive Management strategies will be encouraged
- Education will be an increasing priority for the VMRG
- Support for the National system and monitoring will continue
- Interaction with the National Database will be a priority

In this paper I will report on the recent Victorian activities and also outline the progress that has been made on some of the challenging goals since Katanning.

## 2 *Location of Malleefowl Monitoring Sites in Victoria*

The Victorian Malleefowl Recovery Group is responsible for collecting all data from monitoring sites in Victoria. Malleefowl are found almost exclusively in the National Parks of northwest and central west Victoria and in smaller Conservation Reserves close to these National Parks. The majority of the monitoring sites (30 sites in total) are situated in these parks and reserves, with an additional four sites in a small isolated remnant patch of habitat in the Wychitella Nature Conservation Reserve in central Victoria near Wedderburn.

A satellite image of Victoria showing the location of monitoring sites is presented in Figure 1. The map shows that the major national parks of Murray Sunset, Hattah Kulkyne and eastern Wyperfeld are well represented with monitoring sites, but there are gaps in areas of the Western Big Desert and the Little Desert where suitable habitat is less common. Since 2007, two additional monitoring sites have been added to the existing sites, one in the Little Desert and one in the Southern Western Big Desert. However there are still some additional gaps where we would like to install new sites to ensure adequate geographical coverage is achieved.



**Figure 1:** Satellite image of western Victoria showing the location of Malleefowl monitoring sites (crossed squares: white= established before 2007; yellow= established since 2007). Historical sightings of Malleefowl are also shown for the periods 1992-99 (light blue circles), and 2005-05 (dark blue circles).

## 3 *Monitoring results from Victorian sites since 2007*

Members of the VMRG conduct systematic and thorough data collection at all 34 monitoring sites to assess breeding density of Malleefowl in each of the sites. Monitoring of sites to determine breeding numbers remains the major role of the VMRG, and national standards are rigorously maintained by the group.

Following attendance at an annual Training Weekend and AGM held in Wyperfeld National Park, teams of two to four people visit all mounds in each site over a few days between mid October and late December. Data are collected on data loggers (Magellan/Ashtech Mobilemappers), mounds are photographed, and then data and photos are downloaded onto the National Malleefowl database.

The following data is extracted from the National Database and the annual Malleefowl Monitoring in Victoria reports from 2007 to 2011. (The full reports can be accessed from the VMRG website at [www.malleefowlvictoria.org.au](http://www.malleefowlvictoria.org.au) ).

**Table 1:** Data from 2006/07 to 2010/11 showing the number of sites, mounds inspected; the increase or decrease in mounds found/monitored; the percentage of mounds visited and the number of active mounds in total across all sites, per year.

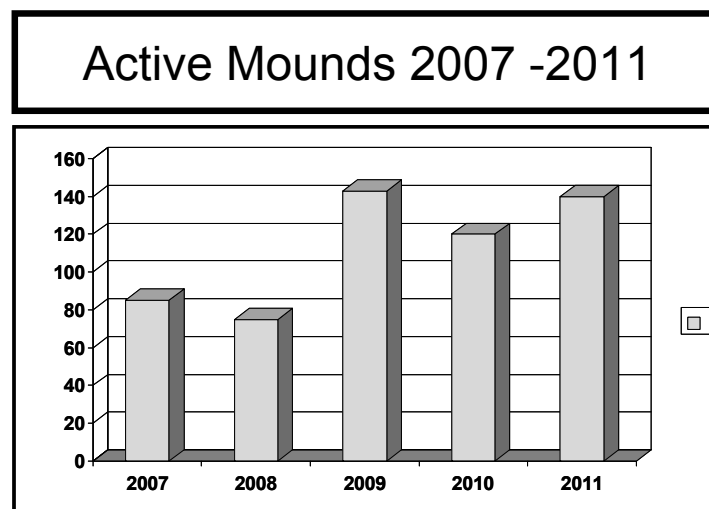
Year	Number of sites	Mounds inspected	Increase/Decrease mounds	% of mounds visited	Active total all sites
2006/07	29	1043		99.0%	90
2007/08	32	1170	+127	99.7%	75
2008/09	34	1169	-1	99.6%	131
2009/10	34	1164	-5	99.4%	110
2010/11	34	1213	+49	99.3%	136

Notes on Breeding Density Numbers 2007 – 2011

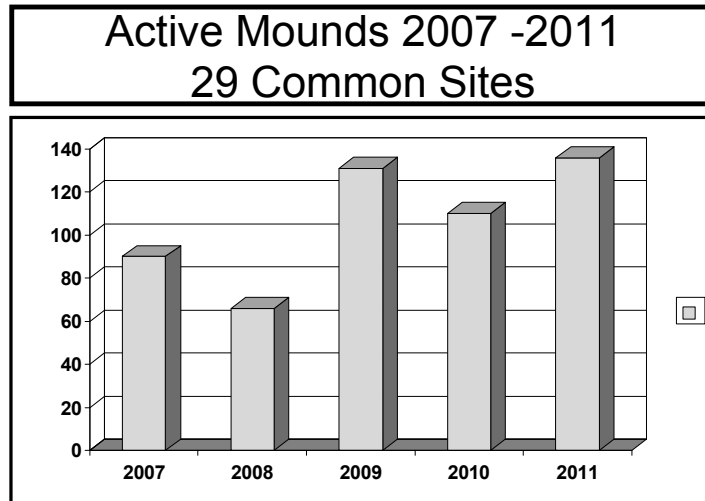
Five new sites have been added to the annual monitoring effort:

- 1 site in the locality of southern Wyperfeld National Park (five to six active mounds annually)
- 1 site in the southern Big Desert Wilderness Park (one active mound annually)
- 1 site in the Little Desert National Park (one active mound annually)
- 2 sites in Wychitella Nature Conservation Reserve (one to two active mounds annually)

The last three years (2008/09 to 2010/11) indicate a significant increase in Malleefowl breeding numbers coinciding with improved annual and winter rainfall, and the end of a ten year period of drought conditions (Benshemesh 2009). The additional 5 monitoring sites added only a few extra active mounds to the total count as shown in Figures 2 and 3 that indicate a marginal impact on the total number of active mounds (Benshemesh 2010). Other explanations for the increase need to be explored through further research as part of an adaptive management project.



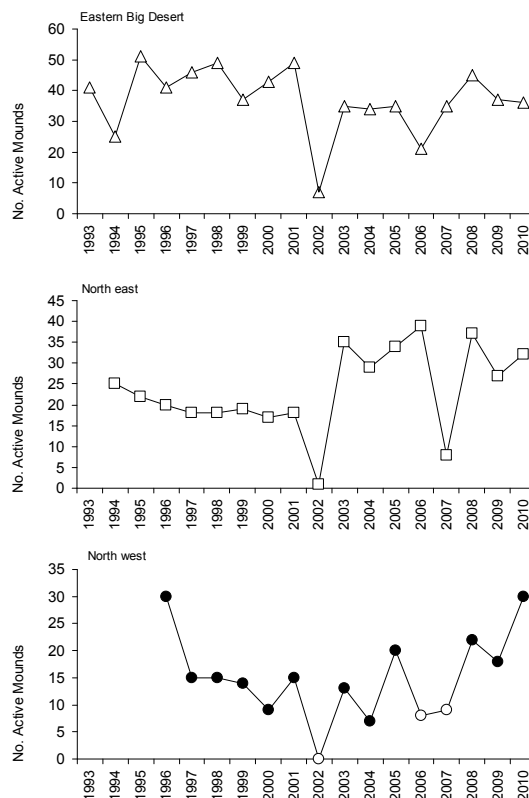
**Figure 2:** Active mounds at all sites including new sites 2007- 2011.



**Figure 3:** Active mounds at 29 common sites for all years, excludes new sites 2007 – 2011.

Despite the improved breeding numbers over the last three years, numbers have not returned to the pre drought years of 1994/95.

Data has been collected from 22 set sites (Figure 4) since long-term monitoring commenced. In this period all mounds within each site have been visited annually during the breeding



**Figure 4:** Trends in Malleefowl breeding numbers at 22 set sites over the past 15-19 years: Eastern Big Desert comprise 6 sites over 18 years (triangles); North East comprise 4 sites over 17 years (shaded squares): North West comprise 12 sites over 15 years (solid circles). White shapes indicate major drought years (1994/5, 2002/3, and 2006/7). Data from the annual Malleefowl Monitoring in Victoria report (Benshemesh 2011).

season. The sites have been grouped into convenient regional clusters to assist in assessing breeding trends. The sites in the Eastern Big Desert have 18 years of continuous data. Sites in the North East have 17 years of continuous data. Sites in the North West have 15 years of continuous data.

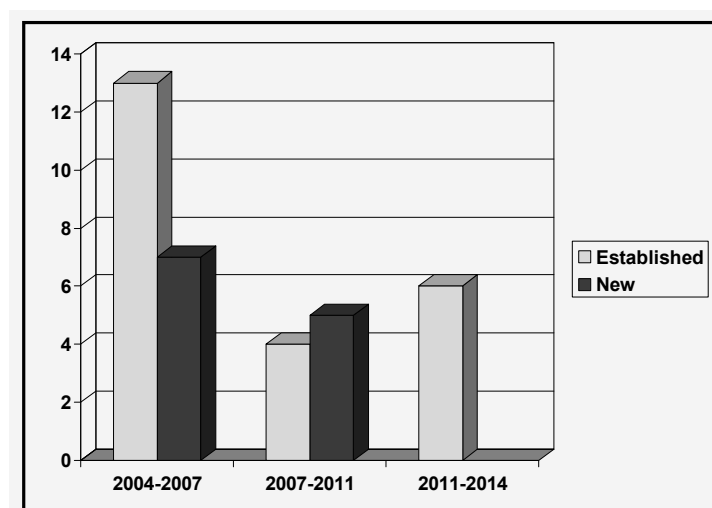
Data for the past four years show a general increase in breeding numbers in each of these three regions, but there are considerable variations between regions. The 2010/11 breeding numbers are encouraging as Malleefowl appear to have returned to historic numbers in Murray Sunset National Park in the north west, and stabilized in other Parks and Reserves (Benshemesh 2011). It is intriguing to speculate why birds in the Murray Sunset NP have almost doubled in breeding this season whereas a similar increase has not occurred in other places despite similar climatic conditions. It is a classic case of “the more you know about Malleefowl, the less you know at the same time”. The active mounds in each of the regions are presented in Figure 4.

#### 4. Search/Survey results from Victorian sites since 2007

Following recommendations arising out of the 2004 National Forum in Mildura that all sites needed to be re-searched/re-surveyed every five to ten years, the VMRG initiated a series of site searches between 2004 and 2007. A total of thirteen existing sites (v01, v02, v04, v05, v09, v11, v12, v13, v16, v19, v20, v21 and v23) and seven new sites (v26, v27, v28, v29, v30 v31 and v32) were targeted for complete searches to find all existing and new mounds within these sites, representing 80 square kilometres and a large investment of volunteer hours.

Between 2007 and 2011 an additional four established sites (v03, v07, v08 and v14) have been searched and five new sites (v33, v34, v35, v36 and v37) established, representing 25 square kilometres.

There are now only six sites (v10, v15, v17, v18, v22 and v24) still to be searched, according to the 2004 plan. If these can be managed within the next three years then all Victorian sites will have either been re-searched or recently established in the ten year cycle from 2004 to 2013.



**Figure 5:** Numbers of sites searched and established 2004 – 2011, and six sites planned to be searched between 2011 – 2014.

As the Little Desert was a priority area in the previous four years, the VMRG has identified five or six previously unsearched areas where it is likely that Malleefowl may be present. We have established a new site in the vicinity of Broughton’s Track, and have searched an area in the Cooack locality in the southern section of the Little Desert. Several mounds, both old and

active, were recorded at the long unburnt Broughton's site in the heart of the Little Desert. However, at the Cooack site, we were unable to locate any mounds of any type in approximately 150 hectares of apparently suitable habitat, suggesting that Malleefowl have not bred at the site for many decades, if indeed ever. There have been several extensive wildfires in this general locality in the past fifteen years, some of which have burnt known Malleefowl habitats, but it would seem the area we searched was not suitable as a refuge for birds following these fires. The work in the Little Desert will still be a priority in the next four years as the group move to search other appropriate areas.

Since 2007 many community groups, most that had little or no experience of Malleefowl conservation, have participated in the site searches organised by the VMRG. These include Kindergarten parents groups, Landcare groups including the Victorian Mobile Landcare Group, an SES group, a local Lions Club, conservation groups including the Mid Murray Field Naturalists, Friends of the Simpson Desert and Wedderburn Conservation Management Network and the Bendigo TAFE College. We estimate that during the past four years (2007 – 2011) at least three hundred and twenty people were involved.

Re-searching the monitoring sites has been an important achievement of the VMRG, and has provided us with updated mound lists that will ensure that our monitoring of breeding numbers remains accurate. But it has been a big effort and it needs to be assessed whether the VMRG will be in a position to maintain the level of coordination and effort required to sustain the next ten year cycle of revisiting all of the 34 Victorian monitoring sites without the continued support of other community groups and more support from government departments. To that end, I submit the following recommendation for consideration:

- **Recommendation: A meeting of Parks Victoria, DSE, relevant CMA's and VMRG needs to be convened to determine a sustainable strategy for site re-searches. Once established, the group should meet annually to discuss continuing strategies and other matters relevant to Malleefowl Conservation in Victoria**

##### **5. *National Malleefowl monitoring, population assessment (breeding density) Project***

At the 2007 National Forum, the National Manual for the Malleefowl Monitoring System was launched, and since then has been widely distributed to existing groups in Western Australia, South Australia, and Victoria. The manual was a collective effort by Malleefowl monitoring volunteers across Australia, and was produced by the VMRG. It is used as the standard for Malleefowl monitoring and is extensively referred to at various training sessions across the range of the species. It has been gratifying to have been contacted by biodiversity officers who are interested in monitoring Malleefowl throughout the Malleefowl's range, such as most recently from those working in reserves such as Goonoo National Park and Tollingo State Reserve in NSW.

As with all manuals, systems and processes are constantly developing and the inaugural manual is desperately in need of review and republishing. I submit a recommendation to address the requirements for a new edition of the manual:

- **Recommendation: funding and resources be made available for a review of the National Malleefowl Monitoring Manual to create Version 2, and to devise a mechanism to update the manual on a regular basis.**

The final aspect of the National Malleefowl project was to produce an education package for schools. The Malleefowl Education Kit for Upper Primary School Students was launched on Threatened Species Day in September 2007, and distributed to more than 80 primary schools in the Mallee and Wimmera regions of Victoria. The designer, Mr. Tim Byrne, used the Victorian Curriculum Frameworks and Essential Learning Standards to ensure the educational value of the content of the kit. The kit provides detailed teachers' notes and twenty-four Student Activity sheets as well as detailed suggestions for teachers to develop additional units

of work. As education was one of the priorities of the VMRG, the success of the Educational Kit uptake was pleasing. Another initiative is the revamp of the VMRG web page at [www.malleefowlvictoria.org.au](http://www.malleefowlvictoria.org.au), as well as actively seeking opportunities to be guest speakers at various conservation and service club groups.

## 6. **Other initiatives**

Several other initiatives by the VMRG have been featured over the past four years - I will only briefly refer to them here, as many of them are represented as papers and/or poster presentations in other parts of this forum:

- **Little Desert Track Search** – the VMRG organised and conducted systematic searches of the more than 800 kilometres of public and maintenance tracks in the Little Desert. Sandy tracks were driven and walked to locate suitable Malleefowl habitat over two weekends in 2009 and 2011
- **Wedderburn Conservation Management Network** has carried out extensive revegetation and pest eradication to improve the conditions for Malleefowl in Victoria's most isolated remnant of habitat for Malleefowl at the Wychitella Nature Conservation Reserve.
- **Genetics PhD Project** – the VMRG has routinely collected feathers and Malleefowl scats during monitoring over a number of years, and these collections have been used by Taneal Cope in her genetics project. The VMRG volunteers have also supported Taneal in the field, most recently at a three day excursion to Wandown Flora and Fauna Reserve in February 2011, where all active mounds were visited daily to collect feathers.
- **Fox Scat Analysis** – The VMRG routinely collect all fox scats that occur on mounds in the monitoring program. These scats are used by Peter Sandell (Parks Victoria) and analysed to provide information on the diet of foxes in mallee parks. The scats from 2006 to 2011 are currently being analysed and a report will be available early next year
- **Trust for Nature Covenants** – A 650 hectare farm block, Mali Dunes, on the edge of the southern Big Desert is in the process of being extensively re-vegetated with appropriate mallee habitat to encourage Malleefowl onto the property and to become part of an extensive corridor linking the Big Desert and the Little Desert
- **Iluka** – The VMRG attended the Environment Effects Statement panel hearings for the Murray Basin Stage 2 Sand Mine proposals in 2008 to argue that significant offsets for Malleefowl needed to be provided if the mine was to proceed. Following the hearing the Victorian and Commonwealth governments made determinations that, in addition to routine offsets required for habitat and threatened species disturbance, a fund of \$700,000 should be established for Malleefowl conservation to be managed by a committee made up of representatives from Iluka, Victorian Malleefowl Recovery Group (VMRG), National Malleefowl Recovery Team (MNRT), Parks Victoria (PV), Department of Sustainability and Environment (DSE) and Department of Sustainability, Environment, Water, Population and Communities (DSEWPC).
- **National Malleefowl Monitoring Database** – VMRG are actively involved in shaping and testing the new online database for Malleefowl monitoring, especially in regard to volunteer needs and in advising how the database might help groups coordinate and manage activities and volunteers.

## 7. **Concluding Remarks**

Many positive conservation and management initiatives have been achieved in the past four years

- The monitoring, establishing and re-searching Malleefowl sites has comprised the 'core businesses' of the VMRG and has been very successfully accomplished due to a high level of volunteer involvement;
- Long term scientific data analysis continues to be a feature of Annual Victorian Monitoring Reports;

- Public lands continue to be a stronghold for Malleefowl with stable numbers during this period;
- Links between Victorian and South Australian organisations working on Malleefowl conservation are developing where common actions are possible.

There are areas for improvement which will need to be addressed in the next three years

- There are obvious gaps in knowledge of Malleefowl in remote places in the Little Desert and in the Western Big Desert;
- Little is known about Malleefowl in areas of private land and management strategies need to be developed for these areas;
- Co-operation between stakeholders is positive but needs to be strengthened.

In the next three to four years the VMRG will work towards achieving the following goals:

- Maintaining the existing level of monitoring to the current high standard, and extending the monitoring effort into under-represented areas;
- Investigating the population distribution of Malleefowl in the Little Desert through targeted track searches;
- Extending track searches into the Big Desert and monitoring suitable Malleefowl habitat by targeted track searches and the establishment of at least one additional monitoring site;
- Extending the integration of government bodies and the VMRG and other volunteer groups working on Malleefowl policy and management actions;
- Expand the cross-border activities in Malleefowl conservation between South Australian and Victorian groups;
- Contributing to the development of Habitat 141 and participating in activities to retain, improve and expand suitable habitat for Malleefowl;
- Contributing to the Adaptive Management project by providing volunteer resources and working closely with the project coordinators and PhD and post graduate students;
- Expanding the involvement of the group in education programs and initiatives.

## **References**

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