Government of South Australia
Department of Environment and Natural Resources

Malleefowl Monitoring Program: South Australian Murray Darling Basin 2011/2012

Final Report March 2012

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Acknowledgements

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Kevin Smith, Friends of Riverland Parks, Grant Geyer, Community Land Management volunteers, Birds Australia (Gluepot Reserve) volunteers, Tony Chambers, Dee Parkhurst, Kevin Burrett, Bruce Gotch, Scientific Expedition Group volunteers, Michael Weinel, Bill Boulton, Henry Short, Jason and Kathy Fullston and Darryn Burdett.

Thanks also to Raya Giffard from the Department of Defence and range control staff for helping facilitate the survey of the malleefowl grid on the Murray Bridge Army Range.

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Contents

1.0 Introduction

This project was initiated by DENR Murraylands Region in 2004. The original aim of the project was to implement best practice monitoring of the existing network of malleefowl grids in the South Australian Murray Darling Basin. This involved the adoption of the monitoring system developed by the Victorian Malleefowl Recovery Group. This monitoring system later became the national standard and has since been implemented throughout the state as part of DENR's ongoing commitment to the National Malleefowl Recovery Plan.

This report concludes the eighth year of the project. The focus of the project this year was on the consolidation of the volunteer network and annual surveys of all the regularly monitored grids in the region. The processing of the monitoring data and its incorporation into the National Malleefowl Monitoring Database (NMMD) has also become an integral part of the project. In recent years there has also been a greater emphasis on the analysis of the monitoring data to determine trends in breeding activity and rainfall for individual grids and across the region.

This report includes a summary of the 2011/2012 breeding season monitoring results and the volunteer hours contributed. Historical graphs of breeding activity for each grid, generated by the National Malleefowl Monitoring Database, have also been included.

This season Rebecca Boulton (RLB Ecology) was responsible for the coordination of the grid surveys and assisted with the surveys as required. Dave Setchell (Mallee Eco Services) was responsible for processing the monitoring data, entering and validating the data on the NMMD and writing this report.

2.0 Monitoring results for the 2011/2012 breeding season

The following section has been split into subsections for each of the individual grids monitored in the project area. The identification numbers for each grid, as allocated under the NMMD, have been included in the subsection titles. A summary of the monitoring results for the 2011/2012 season has also been included in Appendix 1.

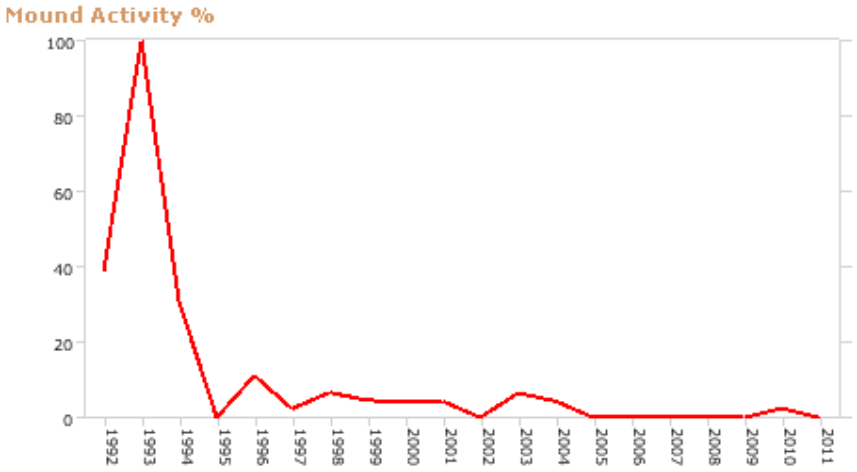
Rebecca Boulton (RLB Ecology) coordinated the grid surveys, including the provision of monitoring kits, and assisted with the surveys as required.

Graphs showing the number of active mounds as a percentage of the number of mounds on each grid over time have also been included. These graphs were generated using the NMMD. Graphs were not included for grids where no active mounds have been recorded.

2.1 Cooltong Conservation Park (s03) grid

The survey of the Cooltong grid was conducted by the Friends of Riverland Parks (FORP). The survey was conducted on 12, 13 and 15 December 2011.

A total of 40 mounds were surveyed at Cooltong and none of these mounds were active. One active mound was recorded last season.

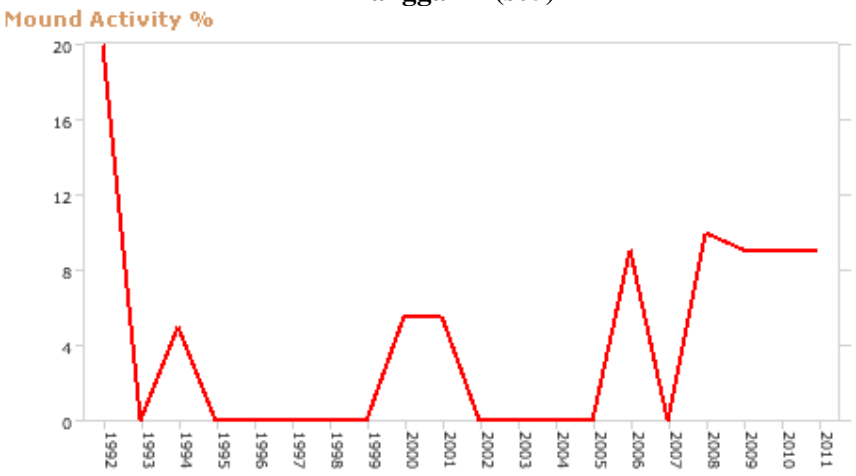


2.2 Danggali Conservation Park (s05 and s15) grids

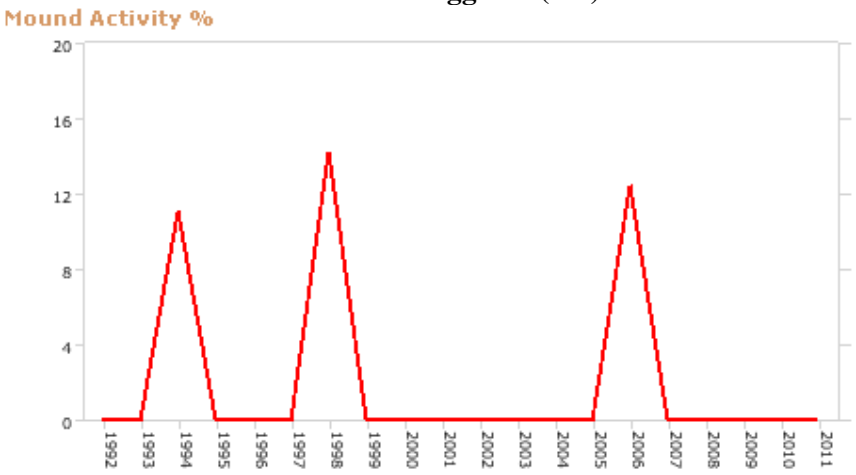
The two Danggali grids were surveyed on 5 November 2011 by Community Land Management (CLM) volunteers, supervised by Grant Geyer. The CLM volunteers used their own monitoring kits and the survey data and photos were submitted by Grant.

A total of 13 mounds were surveyed and 1 of these mounds was active (on the s05 grid). One mound was inadvertently missed on the s05 grid. One active mound had been recorded on the s05 grid last season. No active mounds were recorded on the s15 grid last season. The other 4 mounds on these grids are not due for monitoring again until 2015.

Danggali 1 (s05)



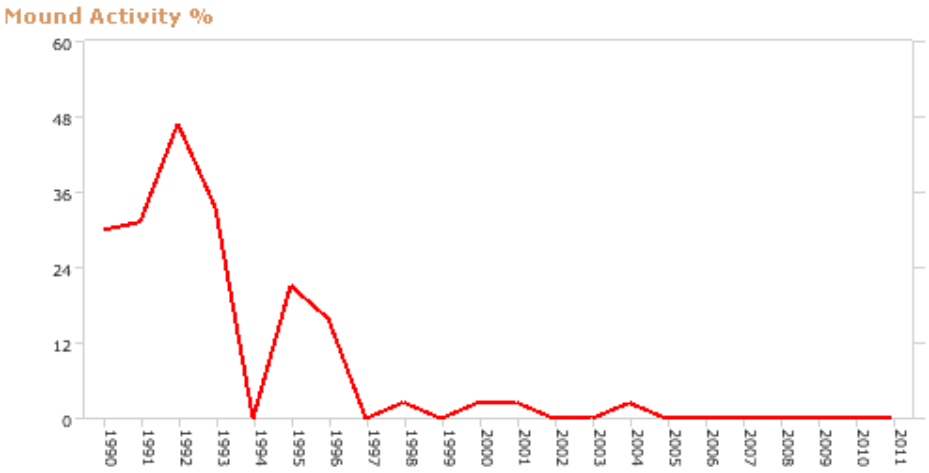
Danggali 2 (s15)



2.3 Pooginook Conservation Park (s06) grid

The survey of the Pooginook grid was also conducted by the FORP. The survey was conducted on 4, 5 and 6 December 2011.

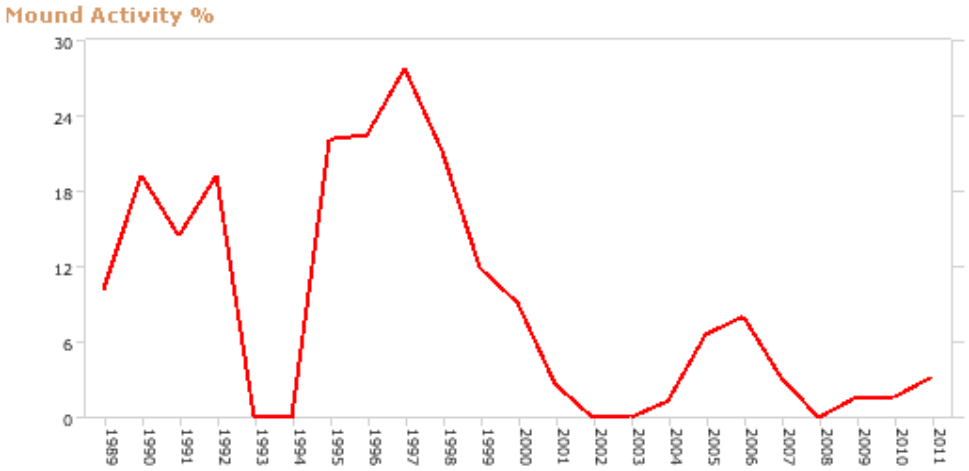
A total of 33 mounds were surveyed and none of these mounds were active. This grid was burnt during the Bookmark fires of November and December 2006. FORP continue to monitor this grid annually to record the regeneration of the vegetation after the Bookmark fires. No active mounds have been recorded on this grid for the last 7 breeding seasons.



2.4 Bakara Conservation Park (s07) grid

The survey of the Bakara grid was conducted on 29 October 2011 by 9 members of the Scientific Expedition Group (SEG), supervised by RLB Ecology.

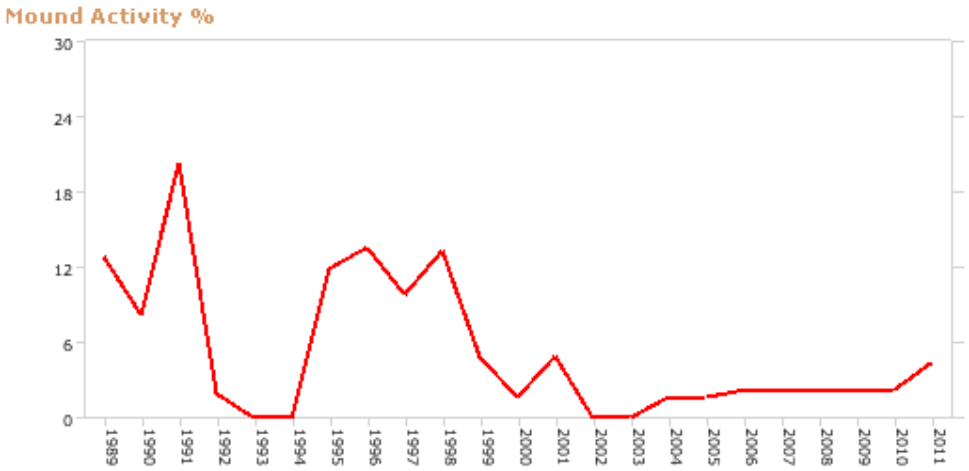
A total of 51 mounds were surveyed at Bakara and 2 of these mounds were active. This is the best result for this grid since 2007/2008. One active mound was recorded last season. The other 5 mounds on this grid are not due for monitoring again until 2015.



2.5 Short's Heritage Agreement (s08) grid

The survey of the Short's grid was conducted on 30 October 2011 by 8 members of the SEG, supervised by RLB Ecology.

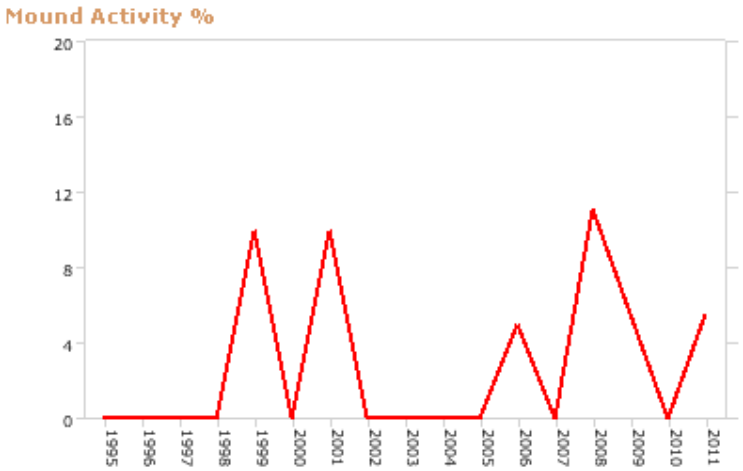
A total of 37 mounds were surveyed at Short's and 2 of these mounds were active. This is the best result for this grid since 2001/2002. One active mound was recorded last season. The other 4 mounds on this grid are not due for monitoring again until 2015.



2.6 Chowilla Regional Reserve (s09) grid

The Chowilla grid was surveyed on 5 November 2011 by CLM volunteers, supervised by Grant Geyer. The same arrangements were in place for this survey as for the Danggali survey.

A total of 15 mounds were surveyed and 1 of these mounds was active. No active mounds were recorded last season. The other 3 mounds on this grid are not due for monitoring again until 2015.

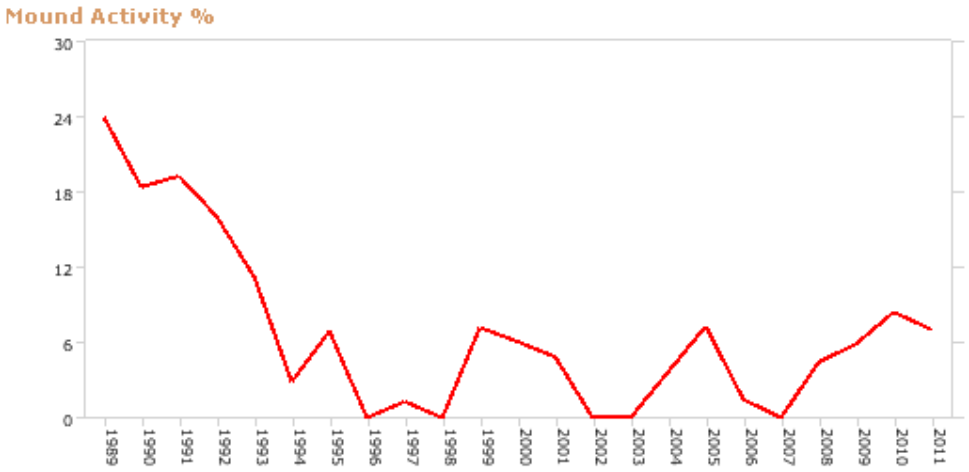


2.7 Ferries MacDonald Conservation Park (s10) grid

The Ferries MacDonald grid was surveyed on 25 October 2011 by Tony Chambers, Kevin Burrett, Bill Boulton and RLB Ecology.

A total of 44 mounds were surveyed and 5 of these mounds were active. Six active mounds were recorded last season. The remaining 17 mounds on this grid are not due for monitoring again until 2015.

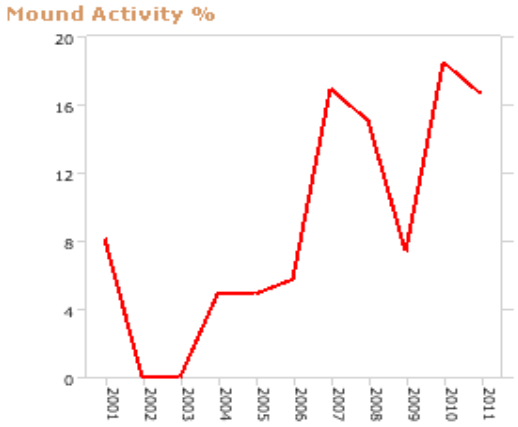
A motion triggered remote camera is currently installed on mound 27, which was active this season. The camera is being managed by Graeme Tonkin, under a DENR permit. There are a further 2 remote cameras currently installed on mounds in the western part of the park, outside the existing grid.



2.8 Peebinga Conservation Park (s44) grid

The Peebinga grid was surveyed on 12 November 2011 by Tony Chambers, Michael Weinel and RLB Ecology.

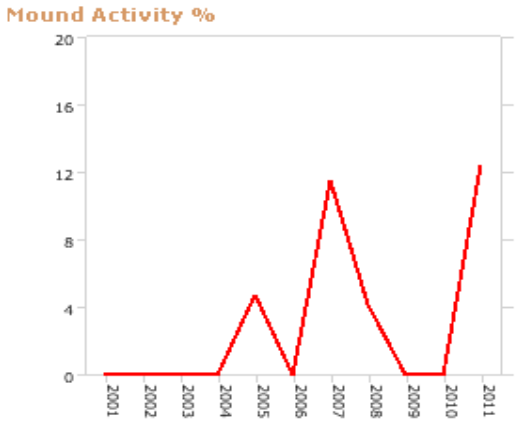
A total of 47 mounds were surveyed, of which 9 mounds were active. Ten active mounds were recorded last season. The other 7 mounds on this grid are not due for monitoring again until 2015.



2.9 Karte Conservation Park (s45) grid

The Karte grid was surveyed on 29 December 2011 by CLM volunteers, supervised by Grant Geyer. The same arrangements were in place for this survey as for the Danggali and Chowilla surveys.

A total of 17 mounds were surveyed and 3 of these mounds were active. This is the first time since 2008/2009 that active mounds have been recorded at Karte and the best result since 2007/2008. Two mounds were inadvertently missed. The remaining 5 mounds on this grid are not due for monitoring again until 2015.



2.10 Gluepot Reserve (s52, s54, s56, s57, s59, s60, s63) grids

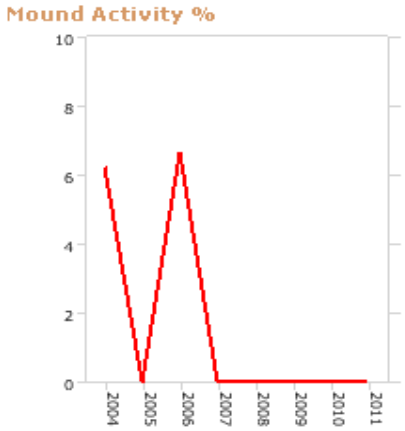
Sue Nettlefold and Chris Lill coordinated these surveys, with the assistance of other Gluepot volunteers and RLB Ecology. The surveys were conducted on 5 and 6 November 2011.

A total of 90 mounds were surveyed in the 7 grids and 1 of these mounds was active (on the s57 grid). One active mound had been recorded on the s57 grid last season. The other 17 known mounds on these grids are not due for monitoring again until 2015.

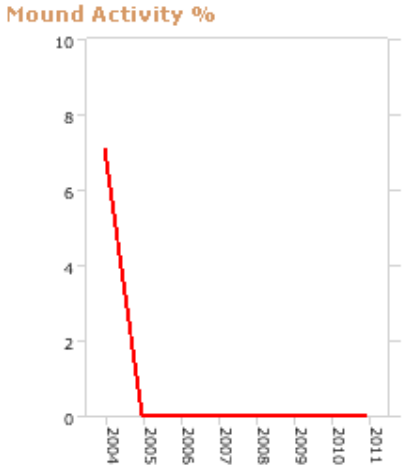
The majority of grids s52 and s54 were burnt in the Bookmark fires of November and December 2006. The Gluepot volunteers continue to monitor these grids annually to record the regeneration of the vegetation.

Chris Lill also organised the complete re-searching of the s63 grid and approximately 40% of the s57 grid on 17 and 18 September 2011 as part of the annual monitoring effort. No new mounds were found during these searches.

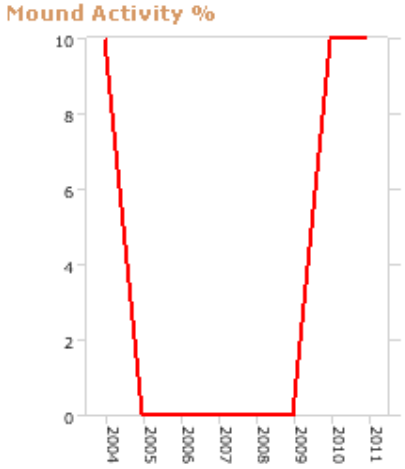
Gluepot 5 (s54)



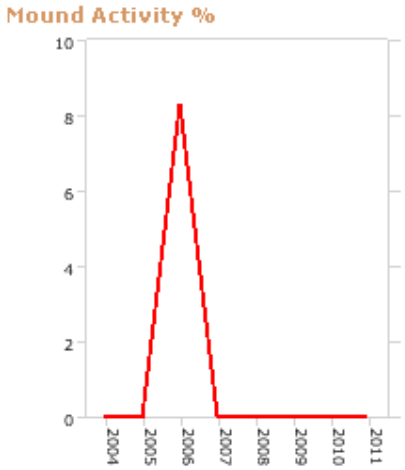
Gluepot 7 (s56)



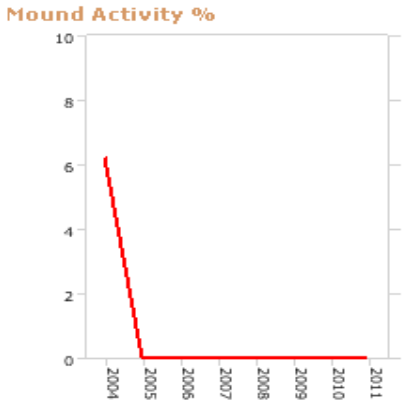
Gluepot 8 (s57)



Gluepot 11 (s59)



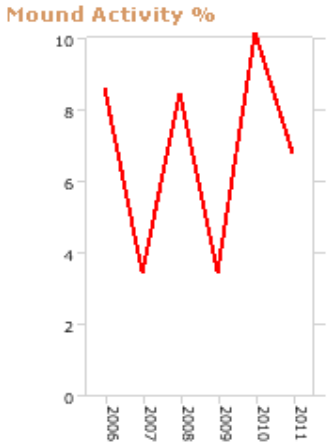
Gluepot 12 (s60)



2.11 Bandon (Burdett's Heritage Agreement) (s67) grid

The Bandon grid was surveyed on 17 November 2011 by Kevin Burrett, Tony Chambers, Dee Parkhurst and RLB Ecology.

A total of 47 mounds were surveyed and 4 of these mounds were active. Six active mounds were recorded last season. The remaining 12 mounds on this grid are not due for monitoring again until 2015.



2.12 Ettrick (Fullston's Heritage Agreement) (s68) grid

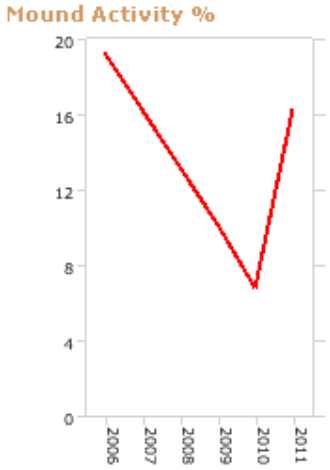
Kevin Burrett, Tony Chambers, Dee Parkhurst and RLB Ecology conducted the survey of the Ettrick grid on 22 November 2011.

A total of 22 mounds were surveyed and 2 of these mounds were active. Breeding activity was the same as last season. The other 4 mounds on this grid are not due for monitoring again until 2015.

2.13 Murray Bridge army training range (MBAR) (s69) grid

The MBAR grid was surveyed on 2 November 2011 by Kevin Burrett, Michael Weinel, Bill Boulton and RLB Ecology.

A total of 42 mounds were surveyed and 8 of these mounds were active. This is the best result ever recorded for this grid. Six active mounds were recorded last season. The remaining 7 mounds on this grid are not due for monitoring again until 2015.



2.14 Summary of volunteer hours contributed

The total volunteer hours contributed during the 2011/2012 monitoring season were as follows:

Cooltong - 31 hours (FORP)
Danggali, Chowilla & Karte - 176 hours (CLM)
Pooginook - 46 hours (FORP)
Bakara - 63 hours (SEG)
Short's - 45 hours (SEG)
Ferries MacDonald - 24 hours (Tony Chambers, Kevin Burrett, Bill Boulton)
Peebinga - 23 hours (Tony Chambers, Michael Weinel)
Gluepot - 59 hours (Birds Australia volunteers)
Gluepot (re-searching grid s60 and part s57) - 98 hours (Birds Australia volunteers)
Bandon - 27 hours (Kevin Burrett, Tony Chambers, Dee Parkhurst)
Ettrick - 19.5 hours (Kevin Burrett, Tony Chambers, Dee Parkhurst)
Murray Bridge Army Range - 21 hours (Kevin Burrett, Bill Boulton, Michael Weinel)

Total 2011/2012 season - 632.5 hours

(Total 2010/2011 season - 511.5 hours)

3.0 Other monitoring activities

The Malleefowl Monarto group organised an area search in the northern section of Ferries MacDonald Conservation Park on August 26 and 27, 2011 with assistance from DENR. An area of approximately 70 hectares was searched and 3 mounds were found. Malleefowl prints were recorded at 2 of the mounds. A litter trail and scratchings were recorded at 1 of the mounds. One of the mounds was a remnant mound.

Remote cameras have been installed on mounds on the Ferries MacDonald (s10) and the Gluepot 8 (s57) grids by volunteers. Additional remote cameras have been installed on mounds off grid at Ferries MacDonald Conservation Park and on Henry Short's property by volunteers and the Murray Mallee Local Action Planning Group.

Permission has been given to DENR to install an automatic weather station on the Bandon grid. The weather station has been purchased but is yet to be installed.

4.0 Upgrading to MobileMappers

After investigations and trials at the national level, Magellan MobileMappers were recommended as the best option to replace the ageing Palm 3xe units in the monitoring kits.

DENR has already purchased a number of MobileMappers for the Murraylands Region and the current intention is to have these units in operation in time for the 2012/2013 season.

Contact will be maintained with other MobileMapper users in SA and interstate to progress the phasing in of these units.

5.0 Highlights of the 2011/2012 season

5.1 General observations

- Good conditions were experienced across the project area for the second consecutive year.
- A total of 38 active mounds were recorded in the project area out of the 498 mounds visited. Last season 35 active mounds were recorded.
- Breeding activity increased on 5 grids, decreased on 4 grids and was unchanged on 11 grids.
- A total of 632.5 volunteer hours was contributed to the monitoring program.
- No clear trends in fox activity across the project area but some instances of an increase in activity on grids where there was an increase in malleefowl breeding activity.
- Kangaroo activity was down across nearly every grid in the project area.
- Feral goat activity was sharply down on the Peebinga and Karte grids, probably due to ongoing control activities.
- Breeding activity has remained low north of the Murray River, despite the improved conditions over the last 2 seasons.

5.2 Grid specific observations

- Malleefowl sighting recorded on the Birdpedia website at Pooginook Conservation Park in February 2012. Evidence of mounds being dug out was also recorded. This is the first evidence of malleefowl moving back into the Park since the Bookmark fires of late 2006.
- Slight improvement in breeding activity on the Bakara and Short's grids after no change during the last 2 seasons, despite the improved conditions.
- Breeding activity remained high on the Peebinga grid. A sharp decline in goat activity was recorded this season. There has also been a declining trend in fox activity and a sharp decline in kangaroo activity over the last 2 seasons.
- A good response on the Karte grid after a declining trend in breeding activity since 2007/2008. A sharp decline in goat activity this season and a sharp decline in kangaroo activity over the last 2 seasons have also been recorded. Unlike Peebinga, fox activity seems to be increasing again on this grid after a steep decline in the previous 2 seasons.
- A record number of active mounds were recorded on the MBAR grid.

Appendix 1: Survey results for the 2011/2012 breeding season

Grid	Mounds visited	Mounds missed	Active mounds	Active mounds last season	5 year mounds (due 2015)
Bakara CP s07	51	0	2	1	5
Bandon (Burdett's HA) s67	47	0	4	6	12
Chowilla RR s09	15	0	1	0	3
Cooltong CP s03	40	0	0	1	0
Danggali CP 1 s05	8	1	1	1	2
Danggali CP 2 s15	5	0	0	0	2
Ettrick (Fullston's HA) s68	22	0	2	2	4
Ferries McDonald CP s10	44	0	5	6	17
Gluepot 11 s59	12	0	0	0	3
Gluepot 12 s60	10	0	0	0	5
Gluepot 15 s63	11	0	0	0	2
Gluepot 3 s52	23	0	0	0	0
Gluepot 5 s54	14	0	0	0	2
Gluepot 7 s56	12	0	0	0	3
Gluepot 8 s57	8	0	1	1	2
Karte CP s45	17	2	3	0	5
Murray Bridge AR s69	42	0	8	6	7
Peebinga CP s44	47	0	9	10	7
Pooginook CP s06	33	0	0	0	0
Shorts HA s08	37	0	2	1	4
TOTALS	**498**	**3**	**38**	**35**	**85**

Blue grid names indicate positive trend compared with last season

Red grid names indicate negative trend compared with last season

Black grid names indicate no change compared with last season

Appendix 2: Malleefowl Monitoring Data Summaries (1989 - 2011)

Murraylands malleefowl data summary 1989 - 1999

Grid	Grid Area (ha)	Total number of mounds visited (number of active mounds)										
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
03 - Cooltong CP	400					36(13)	36(16)	40(8)	43(5)	41(1)	43(3)	43(2)
05 - Danggali CP 1	100					(2)	(0)	(1)	(0)	NS	(0)	(0)
06 - Pooginook CP	400		(6)	(8)	(12)	27(6)	(8)	(7)	(4)	33(0)	33(1)	33(0)
07 - Bakara CP	400	(12)	(12)	(10.5)	(13.5)	NA	NS	58(16)	59(17)	58(18)	(10.5)	56(7)
08 - Shorts HA	250	(9)	NS	(9)	NA	NS	NS	42(7)	(7.5)	(5)	45(7)	41(6)
09 - Chowilla RR	200						NS	18(0)	19(0)	19(0)	19(0)	20(1)
10 - Ferries McDonald CP	330	PS	(10)	41(10)	(10)	49(7)	NS	(8)	PS	NS	NS	60(5)
15 - Danggali CP 2	100					(0)	(1)	(0)	(0)	NS	(1)	(0)

NA: data not available
NS: not surveyed
PS: partial survey only (less than 10 mounds)

Where the number of active mounds in brackets is the only figured included, these figures have been taken from the 2006 trend analysis of monitoring data

Murraylands malleefowl data summary 2000 - 2009

Grid	Grid Area (ha)	Total number of mounds visited (number of active mounds)									
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
03 - Cooltong CP	400	43(2)	43(2)	41(0)	41(3)	40(2)	41(0)	40(0)	39(0)	40(0)	40(0)
05 - Danggali CP 1	100	(1)	(1)	NS	NS	(0)	(0)	10(1)	10(0)	10(1)	11(1)
06 - Pooginook CP	400	33(1)	33(1)	NS	33(0)	33(1)	32(0)	33(0)	33(0)	33(0)	33(0)
07 - Bakara CP	400	53(7)	55(2)	55(0)	56(0)	55(1)	56(4)	56(5)	56(1)	56(0)	56(1)
08 - Shorts HA	250	40(1)	(3)	42(0)	42(0)	41(1)	41(1)	41(1)	41(1)	41(1)	41(1)
09 - Chowilla RR	200	20(0)	20(2)	NS	NS	18(0)	18(0)	18(1)	18(0)	18(2)	18(1)
10 - Ferries McDonald CP	330	60(3)	59(4)	NS	NS	31(3)	62(6)	61(1)	61(0)	61(3)	61(4)
15 - Danggali CP 2	100	(0)	(0)	NS	NS	(0)	(0)	7(1)	6(0)	7(0)	7(0)
44 - Peebinga CP	400		61(5)	NS	NS	50(3)	47(3)	50(2)	53(8)	53(8)	54(4)
45 - Karte CP	400		21(0)	NS	NS	NS	18(1)	18(0)	24(3)	24(1)	24(0)
46 - Billiatt CP	400		13(0)	NS	NS	NS	9(1)	NS	NS	NS	NS
47/48/49 - Ngarkat CP	1200		34(1)	NS	NS	NS	17(0)	NS	NS	NS	NS
52 - Gluepot 3	200					NS	9(0)	20(0)	23(0)	23(0)	23(0)
54 - Gluepot 5	200					16(1)	15(0)	15(1)	15(0)	15(0)	15(0)
56 - Gluepot 7	200					10(0)	13(0)	13(0)	15(0)	15(0)	15(0)
57 - Gluepot 8	200					10(1)	9(0)	9(0)	9(0)	10(0)	10(0)
59 - Gluepot 11	200					11(0)	12(0)	12(1)	12(0)	12(0)	15(0)
60 - Gluepot 12	200					15(0)	14(0)	14(0)	14(0)	14(0)	14(0)
63 - Gluepot 15	200					13(0)	13(0)	13(0)	13(0)	13(0)	13(0)
67 - Bandon	675							58(5)	58(2)	59(5)	59(2)
68 - Ettrick	155							26(2)	26(1)	26(1)	26(2)
69 - Murray Bridge AR	375	NS	NS	NS	48(7)	49(7)	NS	48(6)*	NS	NS	48(5)

NA: data not available
NS: not surveyed
Part survey only
Where the number of active mounds in brackets is the only figure included, the figures have been taken from the 2006 trend analysis of monitoring data

* plus 39(7) opportunistic mounds outside grid

Murraylands malleefowl data summary 2010 - 2019

Grid	Grid Area (ha)	Total number of mounds visited (number of active mounds)									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
03 - Cooltong CP	400	40(1)	40(0)								
05 - Danggali CP 1	100	10(1)	8(1)								
06 - Pooginook CP	400	33(0)	33(0)								
07 - Bakara CP	400	56(1)	51(2)								
08 - Shorts HA	250	41(1)	37(2)								
09 - Chowilla RR	200	18(0)	15(1)								
10 - Ferries McDonald CP	330	61(6)	44(5)								
15 - Danggali CP 2	100	7(0)	5(0)								
44 - Peebinga CP	400	54(10)	47(9)								
45 - Karte CP	400	24(0)	17(3)								
46 - Billiatt CP	400	NS	NS								
47/48/49 - Ngarkat CP	1200	NS	NS								
52 - Gluepot 3	200	23(0)	23(0)								
54 - Gluepot 5	200	16(0)	14(0)								
56 - Gluepot 7	200	15(0)	12(0)								
57 - Gluepot 8	200	10(1)	8(1)								
59 - Gluepot 11	200	15(0)	12(0)								
60 - Gluepot 12	200	15(0)	10(0)								
63 - Gluepot 15	200	13(0)	11(0)								
67 - Bandon	675	59(6)	47(4)								
68 - Ettrick	155	24(2)	22(2)								
69 - Murray Bridge AR	375	48(6)	42(8)								

NB: Prior to 2011 season some mounds on most grids were put onto a 5 yearly monitoring list (next due 2015) hence difference in no. visited

1 mound missed

2 mounds missed