



Malleefowl Monitoring in Victoria: 2011/12

Report to the Victorian Malleefowl Recovery Group

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1. Monitoring effectiveness

Appendix A.1 shows a breakdown of the effectiveness of the monitoring effort and the overall result is, as usual, very impressive. The VMRG visited 1151 Malleefowl mounds during the 2011/12 breeding season (all 'sought and found', plus all 'new' mounds), including 32 newly listed mounds found incidentally at four sites (5 mounds at v08, v15, v20, v23), following searches at two sites (6 mounds at v28 and v29), and at three new sites where we visited mounds that were known to land holders/managers (v25, v38, v39). Monitoring was completed earlier than ever before, with the last sites being completed in mid January.

A total of seven regular mounds were not found during the 2011 season (Appendix A.2) and these were scattered through four sites: most were not searched for and appear to have been forgotten. None of these mounds had been recorded as having been active in the past.

Overall, we managed to find 99.4% of the mounds that we set out to monitor (excluding the 32 newly added mounds).

Optional mounds, those that are on the 5 year list, were also well represented considering there was no obligation to inspect them this year; we visited these mounds last year and don't have to revisit again until 2015. Monitors inspected 30 of the 80 mounds that have been on the list for at least a year: none were active, but then you don't know for sure unless you look! Although optional (5yr) mounds don't have to be inspected every year, every bit of data helps so please visit these mounds if you have the time and inclination. We also added 24 mounds in 11 sites to the optional list (all of which were visited in 2011), and added all mounds in three sites (v10, v17 and v22) that have not shown any evidence of Malleefowl breeding for many years (see below).

Five site searches were undertaken in 2011. Parts of established monitoring sites at Wedderburn (v29) and Skinners Flat (v31) were searched May 2011, and Nurcough (v28) in both May and August, and several mounds were found and monitored later in the season. The Broughtons site (v36) in the heart of the Little Desert was increased in size by a 100 ha extension to the north (5 new mounds), and a new site was searched on the southern edge of the Little Desert. Unfortunately (and somewhat puzzling) not one Malleefowl mound was found over several hundred hectares of apparently suitable habitat. The site is less than 10km from Nurcough, and while we didn't expect to find as many mounds as there are in Nurcough, the complete absence of mounds was a surprise and indicates that Malleefowl have not bred within this site for many decades, if ever: this clearly indicates that the habitat is unsuitable for Malleefowl and probably always has been. While this was a disappointing result for those of us who toiled through the scrub, it's nonetheless a good result in that our understanding has been challenged, and such challenges provide opportunities to learn what really matters to Malleefowl.

Finally, on 1st March 2012, we searched a 100ha block that will soon be partly cleared by the Iluka sand mine just east of Bronzewing. We found 4 good mounds (and 3 other dubious structures), all of which were used in the past 5 years but none this season. While it was sad to think the habitat would soon be cleared, the unfortunate fact is that the prognosis for the birds in this block was very poor due to the history of illegal clearing that has occurred on the property and generally unsympathetic management. We hope that management will be more sympathetic after Iluka have revegetated the site. Iluka staff will use the findings of the search to monitor

Malleefowl in the block and devise a management strategy for any birds that might occur there.

Many groups helped us search these sites, including the Wedderburn Conservation Management Network, Parks Victoria (Inglewood), the Swan Hill Indigenous Work Crew, Greening Australia (Wimmera), the Natimuk Community, SES (Nhill), BOCA (Nhill), CVA (Horsham), and Iluka environmental staff. It is only by having experienced VMRG members participating in searches that we are able to make use of inexperienced volunteers, so a special thankyou to VMRG members who participated in the searches.

Demoting of mounds in v10, v17 and v22 to Optional status

Three sites in the south eastern Sunset block have been demoted to optional status, meaning that we will no longer be under pressure to visit all the mounds in these sites by the end of December each year. These sites are still important, and we still need to monitor them, but the circumstances at each of these sites are such that the timing is less important than at other monitoring sites.

V10 (1 Tree Plain BNT) and v17 (One Tree Plain) were both burnt in 1996 and have shown no signs of Malleefowl since then (although a single Malleefowl print was recorded in v17 last year). The mounds known in these sites have badly degraded over the past 15 years and are mostly inconspicuous and not nearly as attractive to Malleefowl as they once were.

Nonetheless, monitoring is important in these sites, although our target is a little different from usual. While there is currently no evidence that Malleefowl regularly occur in these sites at the moment, let alone breed, at 15 years post fire we can expect that Malleefowl will be returning to breed soon. When they do, we will see an increase in the number of Malleefowl prints in the sites, and probably at the known mounds. But the birds may not renovate the known mounds at these sites because after being burnt and neglected for 15yrs many are overgrown and so eroded that they are barely recognisable as mounds.

Thus, detecting Malleefowl prints will be our first indication that Malleefowl have returned and when we monitor these sites and walk from mound to mound, we should be especially vigilant in keeping an eye out for Malleefowl prints.

The shift of emphasis from counting active mounds to detecting prints at these sites also has consequences regarding the timing of the monitoring. While we try hard to complete the monitoring between October and December in order to make our breeding counts most accurate and comparable, this timeframe is less relevant for detecting prints. Indeed, the best time to detect the presence of Malleefowl in these sites is probably during autumn when the weather is generally milder and prints persist on the ground longer, and when Malleefowl are likely to spend more time wandering in search of food. If any of the mounds in these sites were active in the preceding spring/summer, we will know about it even if its many months later, because any changes in the condition of the severely degraded mounds will be very conspicuous.

It is for these reasons that we have marked all the mounds in v10, v17 and v22 as optional during the monitoring season. Rather than compete with other sites during the busy October to December period, we can be more flexible about when we

monitor these specific sites, and this is reflected in their change of status. However, it would be a mistake to consider these sites as unimportant! We still need to make an effort to monitor these sites; it's just that the timeframes are less particular.

2. Malleefowl Breeding numbers

Rainfall was extremely high across the mallee at the start of the year, causing major flooding in some areas, but late autumn and winter were drier than usual in many areas (Figure 1). Nonetheless, Malleefowl breeding seemed undeterred in most areas, possibly because soil moisture was high through much of the first half of the year due to the early downpours, providing an abundance of herbaceous foods until July/August when more typical rainfall conditions returned in time to wet the mound litter for breeding.

Of the 1151 mounds that were monitored in 2011/12, 158 were active (142 of these were inside our regular sites, 11 were mounds outside the strict site boundaries; and 5 were within the new sites v25, v38 and v39; see Appendix A 3a-c). This is a great result and, if we exclude the 5 active mounds in the new sites, is on par with the record set in 2008/9 when 151 mounds were active (143 inside sites).

Despite the generally excellent breeding numbers across the state (Figure 2, 3), there were some areas where breeding numbers slipped. For example, at Menzies (v14) only 5 active mounds were recorded, the lowest breeding number since 1997, and breeding numbers were also unusually low at nearby O'Bree's (v27). These results, and average or below average results from other sites in the North-east, caused a general downturn in breeding numbers in the North-east (Figure 4; see Appendix 2 for individual site trends).

Elsewhere across the state results were more favourable. In the Eastern Big Desert, breeding numbers have improved compared with the last couple of years, but are still lower than numbers in the 1990s. Although breeding numbers at Lowan (v20) (where we traditionally conduct our training each year) are still inexplicably low, breeding numbers at neighbouring Dattuck (v01) have increased this season. The Paradise site which is also nearby has also shown increases over the past few years, although this site is not included in the collective totals in Figure 4 as the site has only been monitored for 5 years.

But it was in the north west of the state (Murray-Sunset and Hattah; Figure 4) where the greatest increases have occurred over the past few years. Breeding numbers have soared since the long western Victorian drought ended, and are currently higher than they were in 1996 after which they declined precipitously. It's been a long wait for breeding numbers in the north-west to return to what they once were, but this only increased the joyous excitement of the volunteers who discovered that Malleefowl at their sites were back in business and 'pumping'!

In the Little Desert and the Wychitella areas, we don't really have enough data to look at long term trends. In the shorter term, there are positive signs from the Little Desert area where breeding numbers appear stable over the past few years, and very encouraging news from Kiata, the original Malleefowl 'sanctuary' in the LD, where breeding Malleefowl have returned after an absence of over a decade (although Malleefowl footprints were occasionally recorded over this period). In the Wychitella area, only two active mounds were recorded in 2011 compared with 3-4 in the three previous seasons. Whether this is something to be concerned about, or just a temporary blip, will become apparent over the next couple of season's monitoring.

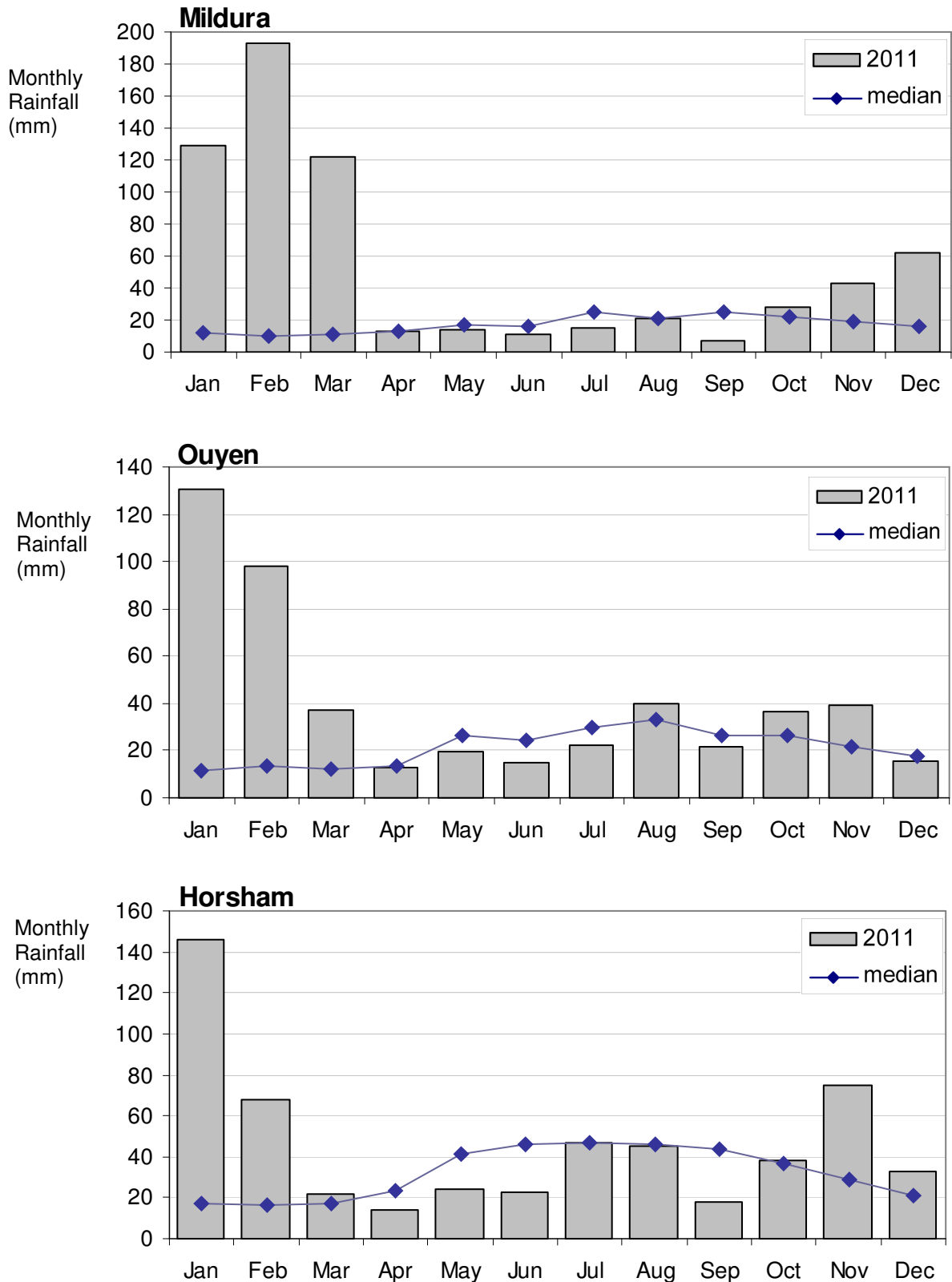


Figure 1. Rainfall at Mildura, Ouyen and Horsham in 2011 (bars) and median rainfall since early 1900s (line). Huge summer rainfall events affected all areas, while April to September totals were generally below the long term median. (Data from the Bureau of Meteorology website).

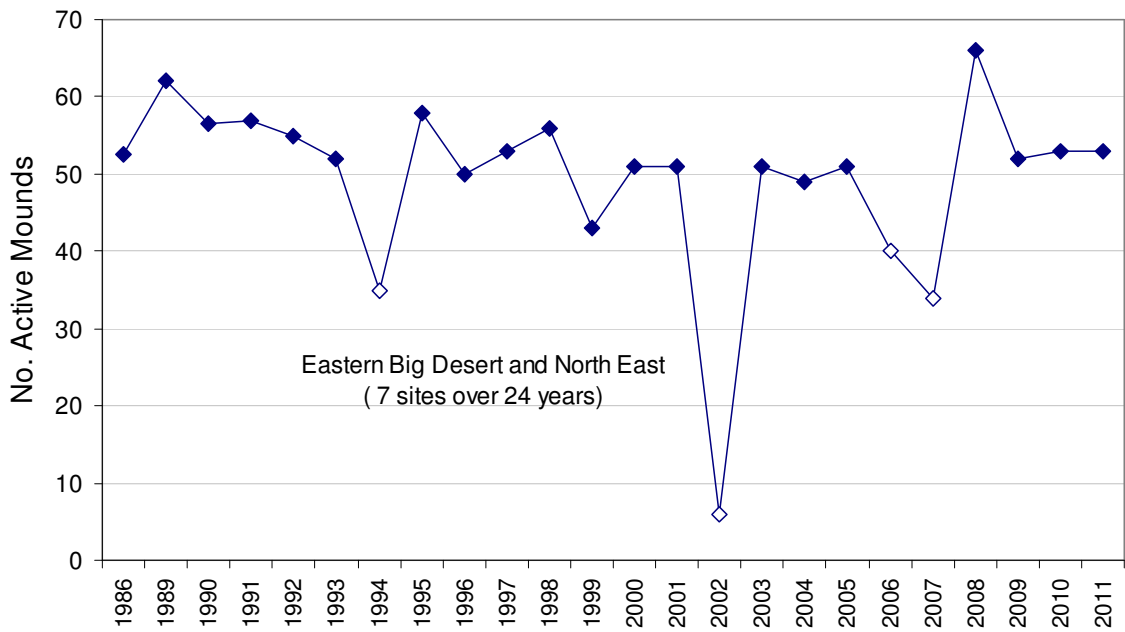


Figure 2. Trends in Malleefowl breeding numbers at 7 of the longest monitored sites over the past 24 years. 1994, 2002, 2006 and 2007 were major drought years (white points). Data comprise mounds in set areas across years in sites 01, 02, 03, 04, 07, 20 and 23.

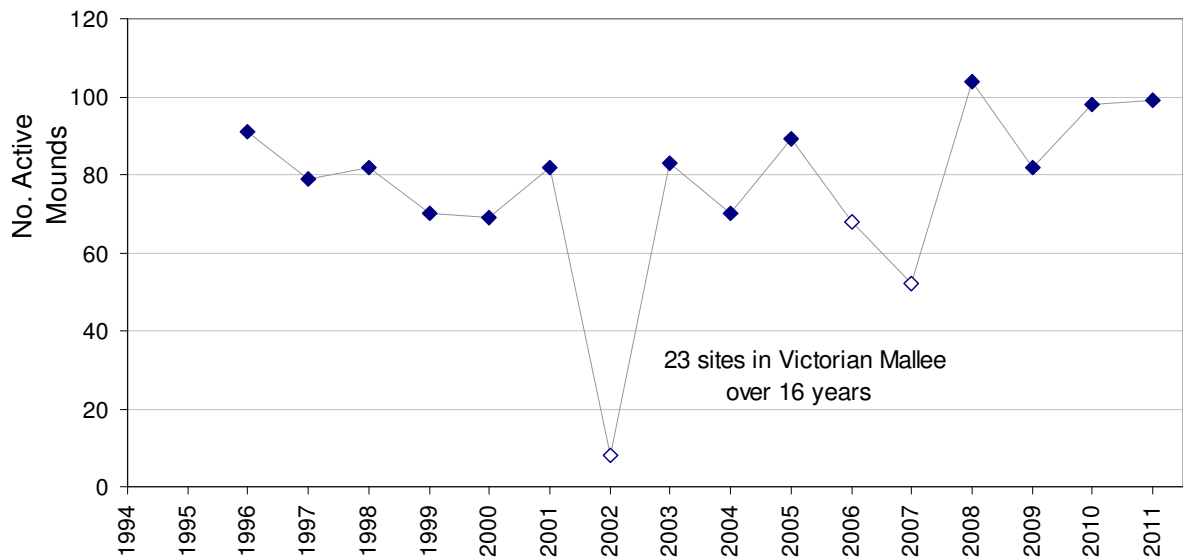


Figure 3. Trends in Malleefowl breeding numbers at 23 sites over the past 16 years shown as collective total. 1994, 2002, 2006 and 2007 were major drought years (white points). Data excludes mounds outside site boundaries. See figure 4 for regional breakdown.

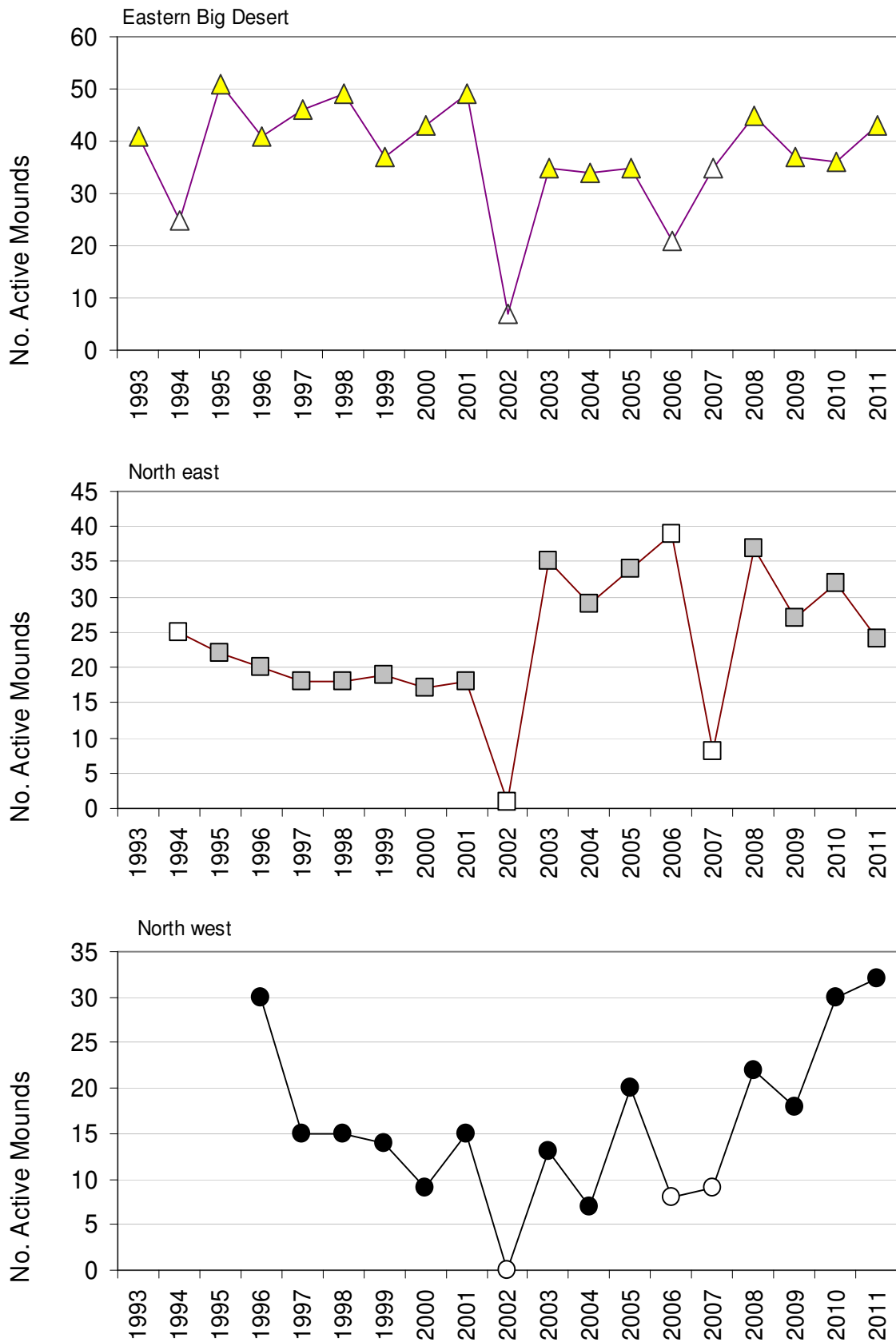


Figure 4. Trends in Malleefowl breeding numbers at 22 sites over the past 16-19 years shown by region. Eastern Big Desert comprise 6 sites over 19 years (triangles), North East comprise 4 sites over 18 years (shaded squares), and North West comprises 12 sites over 16 years (solid circles). 1994, 2002,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

Individual Site trends

Appendix B shows the histograms of grid trends from historical records to 2011/12. For each site, the bar graph displays the number of active mounds within the same area across years. The value (i.e. number of active nests) for each histogram bar is also shown so that you can distinguish between seasons when there was no breeding at a site, and seasons when the site was not monitored. Sites are represented in numerical order.

3. Changes to data recorded in the field

There were some changes to the Cybertracker sequence this season, although most of these changes would not be apparent to users (i.e. they were “under the hood”). One obvious change you might have noticed, even used, is a facility to record the number of hours spent travelling and monitoring a site. Keeping track of these data helps us report the effort volunteers make in monitoring Malleefowl, and in turn this helps us attract funds to keep the program going. So please make an effort to provide these details to us, either by using the Cybertracker page (“Log Hours” on the “DoWhat” screen) or some other means.

Another change is the ability to record deer, wombat and pig (!) prints and scats at mounds. While deer and wombats are mostly of interest in southern SA and relatively benign, pig signs have been increasing in the north eastern mallee in Victoria and are of great concern to Malleefowl conservation. We will be monitoring any signs of pigs near mounds and these data will be available to Parks Victoria and the mallee CMA for follow-up where required.

The Mobilemappers performed well for the majority of people and there were few problems. If you did experience problems, please bring these to the Mobilemapper training session at the training weekend.

4. Lerp

This season was the sixth time we have recorded the occurrence of lerp (the sweet and nutritious casing of psyllid sap-sucking insects that fall from leaves) on Malleefowl mounds, but there were very few to count. Lerp were recorded at about 3% of mounds in 2011 (Appendix A VIII), compared to only 4% last season and 1% in 2009/10.

5. Fox scats

Fox scats were collected at 453 mounds in 2011/12 and weighed a total of 7.9 kg. This is much more than last year when there were 363 mounds with fox scats which weighed a total of 5.1 kg (Table 1), but we suspected that the tally last year may have been affected by the heavy summer rainfall that may have washed scats off mounds or hastened their disintegration. Figure 5 shows the average weight of fox scats collected per mound since the mid 1990s for the same set of 20 sites and provides a comparison across years. There are a few comments and qualifications to make regarding this graph. Firstly, it’s apparent that more fox scats are collected during droughts, possibly because foxes are more territorial and hungrier when times are hard. This effect may also have increased fox scats on mounds in 1996 as rabbit populations plummeted after the spread of Rabbit Haemorrhagic Disease (RHD) Secondly, there was a steep decline in fox scat weights between 1996 and 2000 which coincides with, and probably reflects, the decline of rabbits due to RHD and

consequent adjustments to fox populations. Finally, there is a clear and increasing trend over the past decade suggesting that fox numbers are on the rise again, a trend certainly supported by anecdotal reports from various sources in the mallee. In fact fox scat weights for these sites are approaching levels not seen for 15 years.

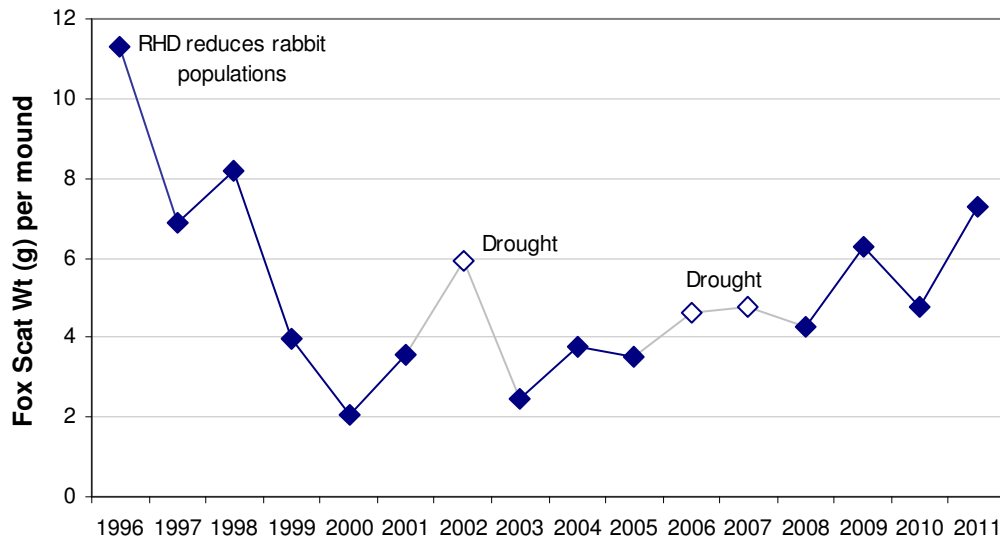


Figure 5. Trends in the average fox scat weight per mound at 20 sites over 16 years. No attempt has been made to control for biases due to variations in the proportion of active mounds (more likely to be marked with fox scats) or changes in the proportion of very old and inconspicuous mounds (less likely to be marked by foxes); values and patterns might change if these biases were considered (especially comparisons over large timeframes)..

Our measures of fox activity (% mounds with scats, and scat weights) in general agree with each other and provide valuable data on fox abundance trends which is a very difficult thing to measure in the field. Our measures are incidental to the monitoring of Malleefowl and are vulnerable to a number of biases (such as the variability in scat detection between observers); the measures are not perfect but they are simple and time efficient, and provide other valuable information on fox diet as well (thanks to Peter Sandell's efforts). Foxes are such an important and controversial factor in Malleefowl conservation that we do need to consider other routine methods of estimating trends in fox populations...but would volunteers be willing to make the extra effort?

Which brings us, as always, to reiterate:

May we remind everyone once again of the importance of being very systematic with fox scat collection. We must search the mound surface very carefully for a full minute to be to absolutely sure that we get all the scats, as emphasised in the manual and during the training weekends.

6. Concluding comments

Once again the VMRG has completed an excellent year of monitoring, and our results provide cause for optimism that Malleefowl are generally doing well ... at least for the time being.

However the many threats that the species faces have not gone away, and the prognosis for the species in the medium to longer term remains a concern. The great rains over the past four years have been associated with a rebound in Malleefowl breeding populations in many areas, but these conditions have been caused by la Nina events that are waning and provide only a temporary reprieve. If climate change progresses as expected we can expect climatic shifts that are deleterious to Malleefowl, especially if, as predicted, winters become drier. Fox numbers appear to be increasing and we are still unsure whether this is a major concern or not for Malleefowl conservation. The threat from fire has also increased over the past few years, due to Government policy rather than natural events, and it is difficult to see exactly where such policy will eventually lead. And while there are some laudable visions to reduce the degree of fragmentation of the mallee, changes on the ground are slow and we are still a long way from reducing this threat in a meaningful way except in a few small areas.

In this regard, the success of the Malleefowl Adaptive Management (AM) project (involving the VMRG, Parks Victoria and University of Melbourne) in attracting funding from the ARC has been a great and timely achievement. The AM project, under the leadership of Dr Michael Bode (you may have been lucky enough to hear him speak at the Malleefowl Forum in Renmark last year) will be funded for the next three years and will be tackling the crucial issue of how to make best use of the ongoing flow of monitoring data to better manage Malleefowl (see last year's report, and a paper in the Renmark Malleefowl forum for more details). We will be working closely with Michael and an expert team that includes Drs Libby Rumpff and Brendan Wintle (University of Melbourne) and Dr John Wright (Parks Victoria) to ensure the best possible program is in place and operational by the end of the project.

The AM project is an exciting development for Malleefowl conservation, and for the VMRG, and is in many ways a culmination of all our past effort to develop and implement a monitoring program for Malleefowl conservation. While the monitoring will continue much as it always has, there will also be some improvements, and new opportunities to gather information that is needed for the project. We hope the VMRG will be as responsive as they always have been to these new challenges and opportunities.

Joe Benshemesh and Peter Stokie

March 2012

NOTE: If you notice any likely errors in this report or the Appendices, or numbers that disagree with your recollections, please let us know!

Table 1. The total weight of fox scats, the number of mounds at which fox scats were collected, for both 2010 and the previous year (*italics*). The number of mounds at which Malleefowl scats were collected is also shown. Feathers were also collected in 2011 and sent to Taneal Cope, but numbers have not been tabulated.

Grid	Name	Fox Scats				MfScat
		2011 Wt (g)	2011 Count	<i>2010 Wt (g)</i>	<i>2010 count</i>	2011 Count
v01	Dattuck	35	5	<i>168</i>	<i>14</i>	
v02	Torpeys	214	17	<i>374</i>	<i>18</i>	2
v03	Wathe SW	818	35	<i>511</i>	<i>39</i>	
v04	Bronzewing	1326	62	<i>785</i>	<i>46</i>	
v05	Colignan	54	6	<i>63</i>	<i>5</i>	
v07	Annuello	498	23	<i>349</i>	<i>18</i>	7
v08	Powerline	77	4	<i>35</i>	<i>3</i>	2
v09	Mt Hattah	56	5	<i>104</i>	<i>4</i>	1
v11	Mopoke	193	11	<i>62</i>	<i>7</i>	
v12	Pheeneys	302	19	<i>126</i>	<i>12</i>	10
v13	Bambill	432	22	<i>261</i>	<i>21</i>	11
v14	Menzies	170	11	<i>52</i>	<i>3</i>	
v15	Wandown	335	27	<i>65</i>	<i>12</i>	
v16	South Bore	242	16	<i>74</i>	<i>8</i>	15
v18	Washing Machine	213	15	<i>60</i>	<i>8</i>	
v19	Underbool	130	8	<i>30</i>	<i>3</i>	
v20	Lowan	241	23	<i>243</i>	<i>16</i>	4
v21	Dumosa	360	21	<i>160</i>	<i>10</i>	12
v23	Moonah	1073	48	<i>852</i>	<i>48</i>	5
v24	Kiata	15	2	<i>55</i>	<i>6</i>	
v26	Hattah Tracks	256	11	<i>123</i>	<i>6</i>	8
v27	O'Brees	134	8	<i>36</i>	<i>3</i>	
v28	Nurcounq	53	9	<i>59</i>	<i>8</i>	
v29	Wedderburn	55	4	<i>23</i>	<i>5</i>	
v30	Hattah South		3	<i>65</i>	<i>6</i>	
v31	Skinners Flat	68	5	<i>25</i>	<i>5</i>	
v32	Wychitella	44	2	<i>4</i>	<i>1</i>	
v33	Korong Vale	8	1	<i>11</i>	<i>1</i>	
v34	Paradise	390	20	<i>317</i>	<i>25</i>	8
v35	Broken Bucket	85	4	<i>20</i>	<i>2</i>	
v36	Broughtons WH	4	2	<i>0</i>	<i>0</i>	
v38		16	3	<i>-</i>	<i>-</i>	
		7,897	452	<i>5,112</i>	<i>363</i>	80

Appendix A 1. 2011/12 Mound Inspection Report for All Victorian Sites

06-Mar-12

Table 1. Page 1 of 1
2011/12 Malleefowl Monitoring Report

Updated records

▶ *Regular mounds that will be included in future annual lists*

	Grid	01	02	03	04	05	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
Sought and found	1065	79	53	87	99	15	50	16	14		15	24	38	24	88	42		26	22	62	36		60	7		24	20	18	8	9	12	10	5	87	6	9				
New incidental	32							1							2					1			1		6		4	2										9	6	
Sought, NOT found	2			1																																1				
NOT sought or found	5			1	1		2																				1													
Total	1104	79	53	89	100	15	52	17	14		15	24	38	24	90	42		26	22	63	36		61	7		6	24	20	23	10	9	12	10	5	87	6	10		9	6

▶ *Mounds that have been PREVIOUSLY marked for checking every 5th year*

	Grid	01	02	03	04	05	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39		
Sought and found	30	1	2	7	6			2											1				7	1			1			1	1										
NOT sought or found	50		1	4								2	2	6						5	7		8				1	1		6	2	3				2					
Total	80	1	3	11	6			2				2	2	6					1		5	7	7	9			2	1		7	3	3				2					

▶ *Mounds that have been NEWLY marked this year for checking every 5th year*

	Grid	01	02	03	04	05	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39				
Sought and found	24			2	3		1				1	1		4	7			1												2	1	1											
NOT sought or found	46									3												12																					
Total	70			2	3		1			3	1	1		4	7			1				12							2	1	1												

Grand Total 1254 80 56 102 109 15 53 19 14 3 16 27 38 30 103 42 31 27 23 63 41 19 68 16 6 24 20 25 11 11 20 14 8 87 6 12 9 6

Notes: Sites v06 and v07 were combined in 1997 into one site named Annuello v07
 Site v37 (Wathe Burnt) was burnt in Nov 2007 and searched, but has not been monitored yet
 5yr mounds are optional most years but mandatory every fifth year
 Only mounds that have been omitted this season are shown; mounds omitted previously are not shown

End

Appendix A 2. 2011/12 Details of Mounds Not found, New, or Omitted

2011/12 Malleefowl Monitoring Report

Grid_nest	sght/foun	Contributors	comment	Validation comment
<u>These mounds will be included in future ANNUAL lists:</u>				
● Previously known mounds that were Niether Sought, Nor Found				
03	130	n	n	@ECOLCOM=no data no photo
04	115	n	n	@ECOLCOM=no data, no photo= missed
07	92	n	n	@ECOLCOM=no data, no photo =missed
07	94	n	n	@ECOLCOM=no data, no photo =missed
28	36	n	n	@ECOLCOM=no photo no data: may have mistakenly thought this mound on 5yr list, but not so
● Previously recorded and Sought in monitoring, but Not Found				
03	123	y	n	
36	11	y	n	@FN=new location from search.searched 20 metres around; found nothing @ECOLCOM=found in partial search 25/6/11 2011 could not locate supposed mound
● New mounds encountered incidentally during monitoring				
08	21	n	y	@FN=New mound for this season. Low sandy mound in thick vegetation. Found during grid serch then lost refound Dec 2011. D T; J L. @ECOLCOM=2011 david thompson: "New mound for this season ...Found during grid serch then lost refound Dec 2011. D T; J L.". David named this n20, but a n20 already exists on the nmmid distant (1283m) from where this new mound recorded (albeit n20 omitted as never refound after search). thus, i have CHANGED number of current new mound to n21.
15	89	n	y	@FN=roos aactiive mf prints oh outer @ECOLCOM=KCW found this mound and first recorded on DB 2011. NEED TO CHECK THAT THEY FOUND MMFN TAG for a mound number less than 200. original data did not record mf prints, but note did (on outer) so i have CHANGED data to indicate MF prints. Also, as loc recorded with MM, GPS loc might be inaccurate. CHECK LOCATION
15	276	n	y	@FN=new to grid been there for some time @ECOLCOM=KCW found this mound and first recorded on DB 2011. NEED TO CHECK LOC AS RECORDED ON MM ONLY
20	69	n	y	@FN=paper entry. location 35 36 55.752 S 142 07 20.382 E @ECOLCOM=new mound noted in notebook with loc. no photo yet
23	71	n	y	@FN=new ! Suspect active Last year 28m due w of 04 @ECOLCOM=new, smallish mound. I (jb) remember searching for this last year because i found lots of prints in the area around n04 (mound is only 28m due w of n04), but i could not find the mound (it was hot and i was bothered). Walked right into it this year. Suspect was active Last year. and might be new then given 1) small size, and 2) that i did not see lots of prints in this area in previous years.
25	1	n	y	@FN=mound 1 @ECOLCOM=in 2011 only the mounds known to LDL were monitored, no search of site yet
25	2	n	y	@FN=mound 2 tower mound @ECOLCOM=in 2011 only the mounds known to LDL were monitored, no search of site yet
25	3	n	y	@FN=mound 3 @ECOLCOM=in 2011 only the mounds known to LDL were monitored, no search of site yet
25	4	n	y	@FN=mound 4 @ECOLCOM=in 2011 only the mounds known to LDL were monitored, no search of site yet
25	5	n	y	@FN=mound 5 @ECOLCOM=in 2011 only the mounds known to LDL were monitored, no search of site yet
25	6	n	y	@FN=mound 6 @ECOLCOM=in 2011 only the mounds known to LDL were monitored, no search of site yet

Grid_nest	sght/foun	Contributors	comment	Validation comment
● New mounds encountered incidentally during monitoring				
28	40	n	y	
28	41	n	y	@FN=nnot a mound
28	42	n	y	@ECOLCOM=photo taken but did not work! no useful photo.
28	44	n	y	
29	10	n	y	@ECOLCOM=no mound number in original, but record 22m from n10 (missing:found in partial search 21/5/11) and thus CHANGED nest number to n10. time of dc photo and ct record match ok (ct was 30min behind due to sa time on ct)
29	11	n	y	@ECOLCOM=no mound number in original, but record 7, from n11 (missing:found in partial search 21/5/11) and CHANGED nest number to n11. time of dc photo and ct record match ok (ct was 30min behind due to sa time on ct)
38	1	n	y	@FN=old @ECOLCOM=Site not searched yet, loc from Peter hawker circa 2000.
38	2	n	y	@ECOLCOM=Site not searched yet, loc from Peter hawker circa 2000.
38	3	n	y	@ECOLCOM=Site not searched yet, loc from Peter hawker circa 2000.
38	4	n	y	@FN=egg shell remains are bleached @ECOLCOM=Site not searched yet, loc from Peter hawker circa 2000. CHANGED sought to 'y'
38	5	n	y	@ECOLCOM=no data, but photo exists so mound supposedly found. data taken from photo Site not searched yet, loc from Peter hawker circa 2000.
38	6	n	y	@FN=ant nest at one stage. 5 year visits @ECOLCOM=Site not searched yet, loc from Peter hawker circa 2000.
38	7	n	y	@ECOLCOM=Site not searched yet, loc from Peter hawker circa 2000.
38	8	n	y	@FN=very old. rubbish dumped in mound. old quarry site @ECOLCOM=Site not searched yet, loc from Peter hawker circa 2000.
38	9	n	y	@FN=38-9 new find @ECOLCOM=2011 incidental find during monitoring
39	1	n	y	@FN=number 1 @ECOLCOM=2011 Site not searched yet, loc from Clive Crouch.
39	2	n	y	@FN=number 2 @ECOLCOM=2011 Site not searched yet, loc from Clive Crouch..
39	3	n	y	@FN=number 3 @ECOLCOM=2011 Site not searched yet, loc from Clive Crouch.
39	4	n	y	@FN=numberm4 @ECOLCOM=2011 Site not searched yet, loc from Clive Crouch.
39	5	n	y	@FN=mound no 5 @ECOLCOM=2011 Site not searched yet, loc from Clive Crouch.
39	6	n	y	@FN=moound no 6 @ECOLCOM=2011 Site not searched yet, loc from Clive Crouch.

These mounds have been marked THIS season for monitoring only every FIFTH year

- Previously known mounds that were Niether Sought, Nor Found

10	1	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
10	2	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
10	3	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)

Grid_nest	sght/foun		Contributors comment	Validation comment
● Previously known mounds that were Niether Sought, Nor Found				
17	2	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	3	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	4	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	5	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	6	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	7	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	8	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	9	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	11	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	12	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	13	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	14	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	15	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	18	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	19	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	20	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	21	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	23	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	24	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	25	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	26	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	29	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	32	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	33	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	34	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	35	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	36	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)

Grid_nest	sght/foun	Contributors	comment	Validation comment
● Previously known mounds that were Niether Sought, Nor Found				
17	37	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	38	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	39	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
17	40	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	1	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	2	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	3	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	4	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	6	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	9	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	12	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	13	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	17	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	19	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	20	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
22	21	n	n	@ECOLCOM=2011: temporarily suspended site by adding mounds to 5yr list (optional)
● Other reasons				
03	98	y	y	@FN=put on 5 year list. so overgrown @ECOLCOM=2011 now badly overgrown and indistinct. Added to 5yr list following rec from data collectors and inspecting data and photos
03	105	y	y	@ECOLCOM=no data but photo exists so obviously visited; some data filled from photo
04	48	y	y	@CordCom:From Neil's notes: Nothing nest, Indistinguishable from surrounding environment except for number peg (pjs) @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
04	56	y	y	@FN=No change; maybe 5year list? @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
04	119	y	y	@CordCom:From Neil's notes: very dubious mf site, definitely 5 yr only mound @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
07	102	y	y	@FN=clean cone like crater with little spoil. hard red flat in mallee. accidental find at end of day. an unlikely spot. never used. E0635960 N6139860 photo taken 07-102 @ECOLCOM=Just a hole in ground outside regular boundaries and thus added to 5 yr list.
11	7	y	y	@CordCom:From June's notes: suggest 5yr mound (pjs) @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history

Grid_nest	sght/foun	Contributors	comment	Validation comment
● Other reasons				
12	19	y	y	@CordCom:from notes: a sad imitation of a nest among pines, no tracks, scats, lots of crust, notmeasured (pjs) Co-ord comment- a possible 5 year mound? @ECOLCOM=added to 5yr list
14	14	y	y	@FN=5 year @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
14	15	y	y	@FN=5 year @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
14	30	y	y	@FN=definetly 5 year @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
14	36	y	y	@FN=5 year @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
15	28	y	y	@FN=5 year @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
15	200	y	y	@FN=5 yyear @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
15	223	y	y	@FN=put oon 5 year @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
15	251	y	y	@FN=put on 5 year @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
15	266	y	y	@FN=5 year @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
15	269	y	y	@FN=5 year @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
15	270	y	y	@FN=5 year @ECOLCOM=2011 request for 5yr listing approved given measures, photos and history
18	17	y	y	@CordCom:From notes: n17 is very hard to detect, this mm record was used at a false location and then reentered at correct location. (pjs) @ECOLCOM=2011 added to 5yr list after seeing photos and due to problems picking mound in field even when stake found!
30	3	y	y	@FN=prba ly not a nest @CordCom:from Peter Sandell's notes: goat scat at this nest (pjs) @ECOLCOM=i agree, probably not a mound and shifted to 5yr list. depth misleading as old shrub in centre.
30	4	y	y	@FN=not a nest. needs to be delete @ECOLCOM=2011: psandel asked for this to be deleted. photos show this was inconspicuous before fire but very nothing now. Moved to 5yr list and may delete entirely next time
31	19	y	y	@FN=very very old and question if a mound. looks oblong. 5 yr list @ECOLCOM=2011 added to 5yr list on request of monitor and as timber covered and derelict
32	1	y	y	@FN=measurements same as previously . tree fallen over nesr see photo. suggest vist every 5 years. remote and difficult track with many large fallen trees across track. @ECOLCOM=loc off and can't be sure of id from photos but seems likely. Added to 5yr list on request from monitor due to it being a long way from other monitored mounds and is thus inconvenient: it represents a lot of effort for little return. Suggest it is regularly monitored once the surrounding area is searched.

These mounds were previously marked for monitoring every FIFTH year

- Previously known mounds that were Niether Sought, Nor Found

02	47	n	n	
03	5	n	n	@ECOLCOM=no data no photo exits
03	60	n	n	@ECOLCOM=no data no photo
03	80	n	n	@ECOLCOM=no data no photo

Grid_nest	sght/foun	Contributors comment	Validation comment
● Previously known mounds that were Niether Sought, Nor Found			
03	103	n n	@ECOLCOM=no data no photo exits
12	21	n n	
12	26	n n	
14	26	n n	
14	34	n n	
15	27	n n	
15	227	n n	
15	228	n n	
15	242	n n	
15	243	n n	
15	244	n n	
21	7	n n	
21	31	n n	
21	33	n n	
21	35	n n	
21	36	n n	
22	5	n n	
22	7	n n	
22	8	n n	
22	10	n n	
22	11	n n	
22	14	n n	
22	18	n n	
24	5	n n	
24	6	n n	
24	7	n n	
24	8	n n	
24	15	n n	
24	16	n n	
24	18	n n	
24	99	n n	
28	38	n n	
29	4	n n	
31	1	n n	
31	2	n n	
31	3	n n	
31	5	n n	
31	8	n n	

Grid_nest	sght/foun	Contributors comment	Validation comment
● Previously known mounds that were Niether Sought, Nor Found			
31	11 n n		
32	7 n n		
32	14 n n		
33	4 n n		
33	5 n n		
33	8 n n		
36	-99 n n		
36	5 n n		
● Other reasons			
01	32 y y		
02	52 y y		
02	59 y y		
03	3 y y		@ECOLCOM=no data but photo exists so obviously visited; some data filled from photo
03	4 y y		@ECOLCOM=no data but photo exists so obviously visited; some data filled from photo
03	9 y y		@ECOLCOM=no data but photo exists so obviously visited; some data filled from photo
03	17 y y		@ECOLCOM=no data but photo exists so obviously visited; some data filled from photo
03	39 y y		@FN=5 year list @ECOLCOM=already on 5yr list
03	90 y y		
03	107 y y		@ECOLCOM=no data but photo exists so obviously visited; some data filled from photo
04	16 y y		@FN=Five year list
04	33 y y		
04	42 y y		
04	68 y y		
04	95 y y		
04	113 y y		@ECOLCOM=no loc but photo etc ok
08	14 y y		
08	17 y y		
19	23 y y		
23	6 y y		@FN=no longer recognisable as mound Lots Roo seats
23	8 y y		
23	47 y y		@FN=no Longer recognisable
23	53 y y		
23	55 y y		@FN=no longer recognisable as As mound
23	56 y y		
23	65 y y		@FN=not recognisable re

Grid_nest	sght/foun	Contributors comment	Validation comment
● Other reasons			
24	11 y y		@FN=take oof 5 year list. mf print and scat and not recent scrstching bot deep @ECOLCOM=photo too close to confirm id, and actually closer to n10 than n11. nonetheless, trust this is n11 and have CHANGED status from partial 5yr to regular
28	29 y y		
31	17 y y		@FN=dubious mound; missing tag and stake. monitered because close to 7
32	3 y y		@ECOLCOM=no data but photo exists. data deduced from photo

Printed on 06-Mar-12

Appendix A 3a. 2011/12 Activity by Site (Grid)

Printed on 06-Mar-12

2011/12 Malleefowl Monitoring Report

Grid	Part	Total nests	Active (y)	Not Active (n)	Not Found (o)	Active Last Year	Area (ha)	Active density (per km sq)
01	A	53	2	51	0	1	300	0.7
01	B	27	1	26	0	0	300	0.3
02		55	4	50	1	4	400	1.0
03		85	9	71	5	11	324	2.8
04	A	57	10	46	1	7	270	3.7
04	B	30	7	23	0	4	270	2.6
05		15	1	14	0	1	400	0.3
07	A	19	1	17	1	4	150	0.7
07	B	8	3	5	0	1	150	2.0
07	C	10	2	8	0	3		
08		19	2	17	0	2	400	0.5
09		14	0	14	0	0	400	-
10		3			3	0	400	-
11		16	4	12	0	4	400	1.0
12		25	4	19	2	6	400	1.0
13		38	5	33	0	4	400	1.3
14		30	5	23	2	9	380	1.3
15	Ab	12	4	8	0	4	115	3.5
15	Au	30	5	24	1	9	325	1.5
15	B	19	6	9	4	5	440	1.4
15	Cb	20	6	13	1	7	660	0.9
15	Cu	6	2	4	0	1	370	0.5
15	D	16	2	14	0	2		
16		42	5	37	0	2	400	1.3
17		31			31	0	400	-
18		27	6	21	0	5	400	1.5
19		23	1	22	0	1	400	0.3
20		49	2	47	0	2	282	0.7
20	B	14	0	14	0	0	135	-
21		38	5	28	5	5	400	1.3
22		17			17	0	542	-
23		50	8	42	0	7	400	2.0
24		15	1	7	7	0	210	0.5
25		6	1	5	0	0		
26		24	5	19	0	7		
27		20	1	19	0	2	290	0.3
28		25	7	16	2	6		
29		11	0	10	1	0		-
30		11	1	10	0	1	400	0.3
31		20	0	14	6	0		-
32		14	1	11	2	1		
33		8	1	4	3	3		
34		87	11	76	0	8		
35		6	1	5	0	0		
36		11	1	8	2	1		
38		9	2	7	0	0		
39		6	2	4	0	0		
Totals		1171	147	927	97	140	11513	1.3*

* Over a total area of 115.1 km sq (excluding sites with as yet undetermined areas)

Appendix A 3b. 2011/12 Activity of nests that were OUT OF GRID (OOG)

Printed on 06-Mar-12

2011/2 Malleefowl Monitoring Report

Grid		Total nests	Active (y)	Not Active (n)	Not Found ()	Active Last Year
02	oog	1	0	1	0	1
03	oog	17	3	13	1	2
04	oog	22	3	19	0	3
07	oog	16	2	13	1	1
12	oog	2	1	1	0	0
21	oog	3	0	3	0	0
22	oog	2			2	0
23	oog	18	2	16	0	2
24	oog	1			1	1
36	oog	1			1	0
Totals		83	11	66	6	10

Appendix A 3c. 2011/12 Active Nests List

+ Mounds that have been newly added to the monitoring program

Where sites have been divided into various parts, these are indicated to the right of the mound code (e.g. A, B, C, and 'oog' (out grid)). At Wandown (v15) site parts have been further subdivided into burnt ("b") and unburnt sections ("u").

v01 : 3 active nests	04_71 A	13_35	16_28
01_11 A	04_73 oog	v14 : 5 active nests	16_33
01_55 B	04_82 A	14_3	v18 : 6 active nests
01_72 A	04_85 oog	14_17	18_2
v02 : 4 active nests	04_87 oog	14_18	18_5
02_10	04_107 B	14_21	18_12
02_20	v05 : 1 active nests	14_23	18_13
02_27	05_14	v15 : 25 active nests	18_18
02_62	v07 : 8 active nests	15_8 Au	18_27
v03 : 12 active nests	07_16 A	15_10 B	v19 : 1 active nests
03_10	07_19 C	15_11 B	19_11
03_25	07_62 B	15_24 Au	v20 : 2 active nests
03_32	07_64 B	15_34 Ab	20_34
03_34	07_85 oog	15_50 Cb	20_37
03_49	07_89 C	15_56 Ab	v21 : 5 active nests
03_52	07_97 B	15_65 Cb	21_1
03_53	07_101 oog	15_66 Cb	21_6
03_56	v08 : 2 active nests	15_86 B	21_11
03_86 oog	08_7	15_91 Cb	21_18
03_99 oog	08_11	15_93 Ab	21_43
03_104	v11 : 4 active nests	15_105 Cb	v23 : 10 active nests
03_106 oog	11_1	15_107 Au	23_11
v04 : 20 active nests	11_2	15_203 Ab	23_13
04_1 A	11_4	15_204 Au	23_19
04_2 A	11_10	15_205 Au	23_26 oog
04_13 A	v12 : 5 active nests	15_229 B	23_29
04_17 A	12_17	15_230 B	23_31 oog
04_22 A	12_18	15_233 B	23_35
04_26 B	12_22	15_245 Cu	23_39
04_27 B	12_25	15_248 Cb	23_46
04_30 B	12_27 oog	15_252 Cu	23_51
04_38 B	v13 : 5 active nests	15_262 D	v24 : 1 active nests
04_41 B	13_7	15_272 D	24_19
04_45 A	13_8	v16 : 5 active nests	v25 : 1 active nests
04_54 A	13_25	16_15	25_1 +
04_55 A	13_27	16_19	v26 : 5 active nests
04_66 B		16_25	

Appendix A 3c. 2011/12 Active Nests List

+ Mounds that have been newly added to the monitoring program

Where sites have been divided into various parts, these are indicated to the right of the mound code (e.g. A, B, C, and 'oog' (out grid)). At Wandown (v15) site parts have been further subdivided into burnt ("b") and unburnt sections ("u").

26_3	v38 : 2 active nests
26_15	38_3 +
26_16	38_4 +
26_17	
26_27	v39 : 2 active nests
	39_1 +
v27 : 1 active nests	39_4 +
27_19	
v28 : 7 active nests	
28_1	
28_3	
28_4	
28_6	
28_16	
28_39	
28_44 +	
v30 : 1 active nests	
30_1	
v32 : 1 active nests	
32_6	
v33 : 1 active nests	
33_1	
v34 : 11 active nests	
34_6	
34_16	
34_18	
34_37	
34_58	
34_60	
34_61	
34_62	
34_75	
34_78	
34_82	
v35 : 1 active nests	
35_1	
v36 : 1 active nests	
36_14	

Appendix A 4. 2011/12 Nests Needing Tags or Stakes

All 10 nests listed here require tags (astericks denote tags that are available but not yet placed in the field).

Grid	Nest	Need...	Note
<hr/>			
<i>Grid 01</i>	<i>needs 0 stake, 1 tag:</i>		
		01_ 82	Needs Tag
<hr/>			
<i>Grid 04</i>	<i>needs 1 stake, 1 tag:</i>		
		04_ 119	Needs Stake & Tag
<hr/>			
<i>Grid 07</i>	<i>needs 1 stake, 1 tag:</i>		
		07_ 102	Needs Stake & Tag
<hr/>			
<i>Grid 16</i>	<i>needs 0 stake, 1 tag:</i>		
		16_ 25	Needs Tag
<hr/>			
<i>Grid 18</i>	<i>needs 0 stake, 1 tag:</i>		
		18_ 25	Needs Tag
<hr/>			
<i>Grid 26</i>	<i>needs 2 stakes, 2 tag</i>		
		26_ 4	Needs Stake & Tag
		26_ 24	Needs Stake & Tag
<hr/>			
<i>Grid 29</i>	<i>needs 0 stakes, 2 tag</i>		
		29_ 1	Needs Tag
		29_ 5	Needs Tag
<hr/>			
<i>Grid 31</i>	<i>needs 1 stake, 1 tag:</i>		
		31_ 17	Needs Stake & Tag
<hr/>			

Appendix A 6. 2011/12 Frequencies of Animal Scats at Nests

06-Mar-12

Note: New observers collected data at several grids. Scat frequencies at these grids are not comparable with frequencies recorded in previous years or by other observers.

Grid	AvgDate	Total	MF	Fx	K	R	G	E	H	D	C	X	S
01	8/12/2011	79	5%	3%	27%	1%	-	1%	-	-	-	3%	-
02	15/11/2011	53	21%	33%	32%	-	19%	-	-	-	-	6%	-
03	5/12/2011	87	7%	51%	44%	2%	-	-	-	-	-	-	-
04	19/11/2011	99	29%	66%	26%	4%	1%	1%	-	-	-	-	-
05	1/12/2011	15	13%	33%	67%	7%	-	7%	-	-	-	7%	-
07	3/11/2011	50	14%	45%	28%	-	4%	-	-	-	-	2%	-
08	27/11/2011	17	6%	24%	71%	-	29%	-	-	-	-	-	-
09	10/12/2011	14	7%	36%	93%	7%	29%	-	-	-	-	-	-
11	11/10/2011	15	20%	60%	20%	-	-	-	-	-	-	-	-
12	26/12/2011	24	38%	71%	-	-	-	-	-	-	-	-	-
13	11/11/2011	38	34%	58%	37%	3%	3%	-	-	-	-	-	-
14	1/11/2011	24	33%	38%	25%	-	-	-	-	-	-	4%	-
15	14/11/2011	90	29%	28%	13%	-	-	-	-	-	-	-	-
16	18/12/2011	42	36%	40%	74%	-	7%	-	-	-	-	-	-
18	23/11/2011	26	23%	58%	50%	-	12%	-	-	-	-	-	-
19	13/10/2011	22	14%	36%	18%	-	5%	-	-	-	-	-	-
20	19/11/2011	63	3%	35%	54%	10%	-	2%	-	-	-	-	-
21	11/12/2011	36	36%	56%	33%	-	-	-	-	-	-	-	-
23	28/12/2011	61	48%	79%	84%	3%	2%	-	-	-	-	-	-
24	5/11/2011	7	0%	14%	86%	-	-	14%	-	-	-	-	-
25	5/11/2011	6	33%	17%	67%	-	-	-	-	-	-	-	-
26	16/11/2011	24	29%	50%	42%	8%	-	-	-	-	-	-	-
27	3/12/2011	20	5%	40%	75%	5%	-	-	-	-	-	-	-
28	9/11/2011	22	0%	43%	32%	-	-	-	-	-	-	-	-
29	16/11/2011	10	0%	40%	100%	20%	-	-	-	-	-	-	-
30	16/11/2011	9	22%	33%	67%	11%	-	33%	-	-	-	-	-
31	1/12/2011	12	8%	42%	83%	17%	-	-	-	-	8%	-	-
32	11/10/2011	10	10%	20%	90%	20%	-	-	-	-	-	-	-
33	15/11/2011	5	40%	20%	100%	20%	-	-	-	-	-	-	-
34	28/11/2011	87	17%	38%	5%	-	-	-	-	3%	-	-	-
35	8/01/2012	6	0%	67%	100%	-	-	-	-	-	-	-	-
36	11/01/2012	9	11%	22%	78%	-	-	-	-	-	-	-	-
38	14/11/2011	9	0%	38%	22%	22%	-	-	-	-	-	-	-
39	5/11/2011	6	33%	33%	83%	33%	-	-	-	-	-	-	-
22/11/2011	1097	20.5%	42.8%	39.8%	3.0%	2.8%	0.7%	0.0%	0.3%	0.1%	0.7%	0.0%	

K= Kangaroo, R= Rabbit, G= Goat, E= Emu, H= Human, D= Dog, C= Cat, X=Echidna, S=Sheep

Appendix A 7. 2011/12 Frequencies of Animal Prints at Nests

06-Mar-12

Note: New observers collected data at several grids. Print frequencies at these grids are not comparable with frequencies recorded in previous years or by other observers.

Grid	AvgDate	Total	MF	Fx	K	R	G	E	H	D	C
01	8/12/2011	79	18%	9%	23%	-	1%	6%	-	-	-
02	15/11/2011	53	19%	8%	25%	-	6%	2%	-	-	-
03	5/12/2011	87	36%	14%	16%	-	-	3%	1%	-	-
04	19/11/2011	99	38%	26%	10%	1%	3%	4%	-	-	-
05	1/12/2011	15	20%	27%	27%	7%	7%	27%	-	-	-
07	3/11/2011	50	20%	8%	22%	-	8%	-	-	-	-
08	27/11/2011	17	18%	18%	6%	-	18%	-	6%	-	-
09	10/12/2011	14	29%	43%	43%	-	36%	7%	-	-	-
11	11/10/2011	15	87%	-	20%	-	20%	-	-	-	-
12	26/12/2011	24	58%	21%	4%	-	4%	-	-	-	-
13	11/11/2011	38	24%	3%	-	3%	3%	-	-	-	-
14	1/11/2011	24	54%	33%	17%	-	-	4%	-	-	-
15	14/11/2011	90	66%	23%	26%	1%	-	4%	-	-	-
16	18/12/2011	42	17%	2%	-	-	-	-	-	-	-
18	23/11/2011	26	31%	4%	4%	-	8%	-	-	-	-
19	13/10/2011	22	14%	5%	45%	-	14%	-	-	-	-
20	19/11/2011	63	3%	2%	19%	-	-	2%	-	-	-
21	11/12/2011	36	19%	14%	36%	-	-	-	-	3%	-
23	28/12/2011	61	74%	36%	33%	2%	2%	5%	-	-	-
24	5/11/2011	7	14%	-	43%	14%	-	14%	14%	-	-
25	5/11/2011	6	50%	-	67%	-	-	-	-	-	-
26	16/11/2011	24	25%	25%	58%	-	-	4%	-	-	-
27	3/12/2011	20	20%	25%	45%	-	-	20%	-	-	-
28	9/11/2011	22	43%	5%	36%	-	-	-	-	-	-
29	16/11/2011	10	-	-	10%	-	-	-	-	-	-
30	16/11/2011	9	11%	11%	56%	-	11%	11%	-	-	-
31	1/12/2011	12	-	-	25%	17%	-	-	-	-	-
32	11/10/2011	10	10%	-	20%	-	-	-	-	-	-
33	15/11/2011	5	-	-	-	-	-	-	-	-	-
34	28/11/2011	87	49%	11%	7%	-	-	-	-	2%	-
35	8/01/2012	6	17%	-	-	-	-	-	-	-	-
36	11/01/2012	9	11%	-	33%	-	-	-	-	-	-
38	14/11/2011	9	25%	-	-	-	-	-	-	-	-
39	5/11/2011	6	50%	17%	50%	17%	-	-	-	-	-
22/11/2011		1097	33.0%	14.3%	20.5%	0.8%	2.9%	3.1%	0.3%	0.3%	0.0%

K= Kangaroo, R= Rabbit, G= Goat, E= Emu, H= Human, D= Dog, C= Cat

Appendix A 8. 2011/12 Lerp on Malleefowl Nests

06-Mar-12

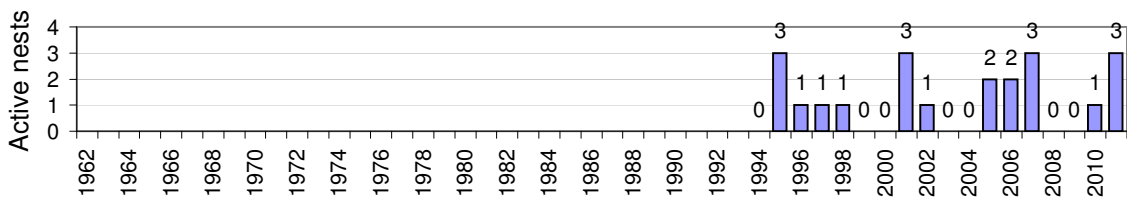
Note: Lerp on nests recorded as None (none), Some (1-10 lerp) or Lots (more than 10 lerp on the nest)

Grid	AvgDate	NUMBERS				FREQUENCIES (%nests)		
		Total	None	Some	Lots	Some	Lots	Any Lerp (at least some)
01	8/12/2011	80	71	7	2	9%	3%	11%
02	15/11/2011	54	48	6	0	11%	-	11%
03	2/12/2011	79	79	0	0	-	-	-
04	19/11/2011	106	100	6	0	6%	-	6%
05	1/12/2011	15	15	0	0	-	-	-
07	3/11/2011	49	48	1	0	2%	-	2%
08	27/11/2011	19	19	0	0	-	-	-
09	10/12/2011	14	14	0	0	-	-	-
11	11/10/2011	16	16	0	0	-	-	-
12	26/12/2011	25	25	0	0	-	-	-
13	11/11/2011	38	38	0	0	-	-	-
14	1/11/2011	28	27	1	0	4%	-	4%
15	13/11/2011	97	97	0	0	-	-	-
16	18/12/2011	42	42	0	0	-	-	-
18	23/11/2011	27	26	0	1	-	4%	4%
19	13/10/2011	23	23	0	0	-	-	-
20	19/11/2011	63	63	0	0	-	-	-
21	11/12/2011	36	35	1	0	3%	-	3%
23	28/12/2011	68	68	0	0	-	-	-
24	5/11/2011	8	8	0	0	-	-	-
25	5/11/2011	6	6	0	0	-	-	-
26	16/11/2011	24	24	0	0	-	-	-
27	3/12/2011	20	20	0	0	-	-	-
28	10/11/2011	22	22	0	0	-	-	-
29	16/11/2011	10	7	0	3	-	30%	30%
30	16/11/2011	11	11	0	0	-	-	-
31	1/12/2011	14	8	6	0	43%	-	43%
32	10/10/2011	11	11	0	0	-	-	-
33	15/11/2011	5	5	0	0	-	-	-
34	28/11/2011	47	47	0	0	-	-	-
35	8/01/2012	6	6	0	0	-	-	-
36	11/01/2012	9	9	0	0	-	-	-
38	14/11/2011	8	8	0	0	-	-	-
39	5/11/2011	6	6	0	0	-	-	-
	22/11/2011	1086	1052	28	6	2%	1%	3.3%

Appendix B Site Trends

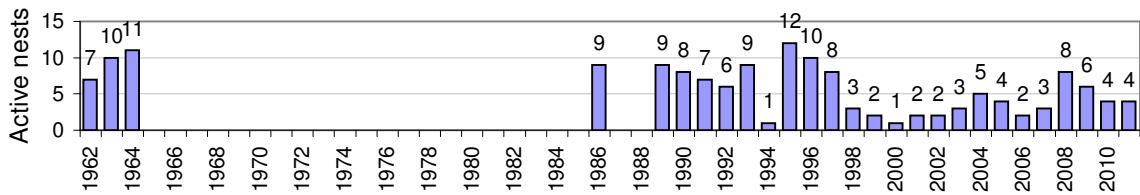
01 Dattuck

Eastern Big Desert



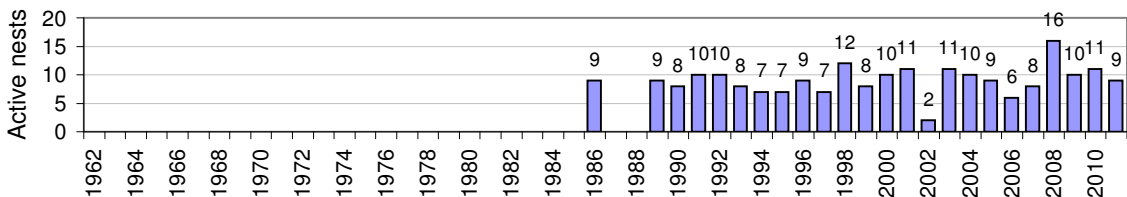
02 Torpey's

Eastern Big Desert



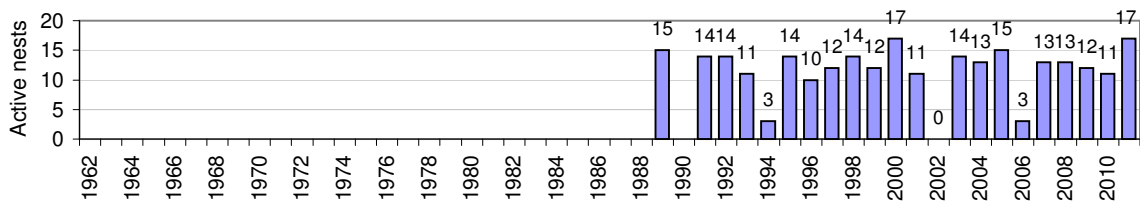
03 Wathe SW

Eastern Big Desert



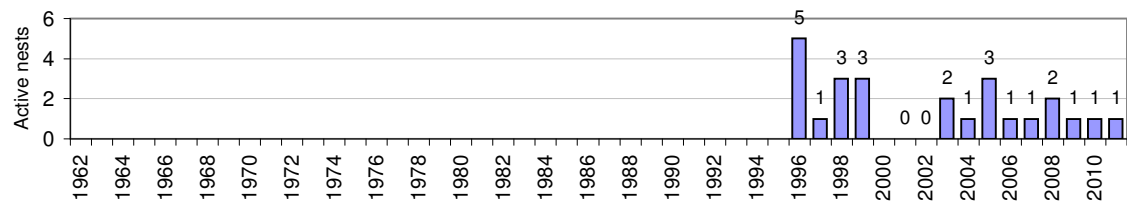
04 Bronzewing

Eastern Big Desert

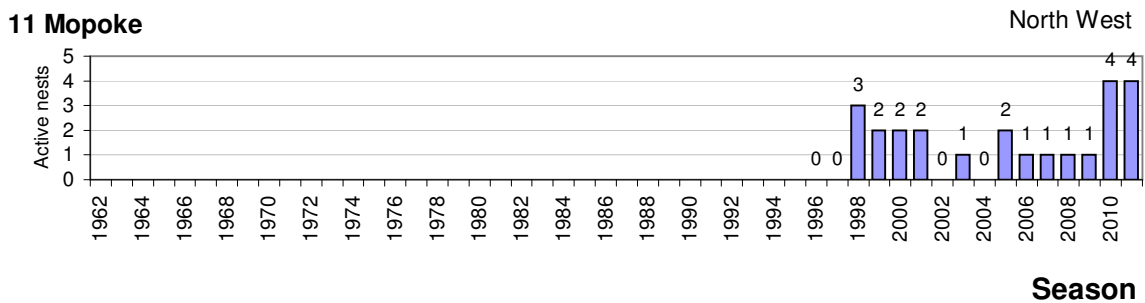
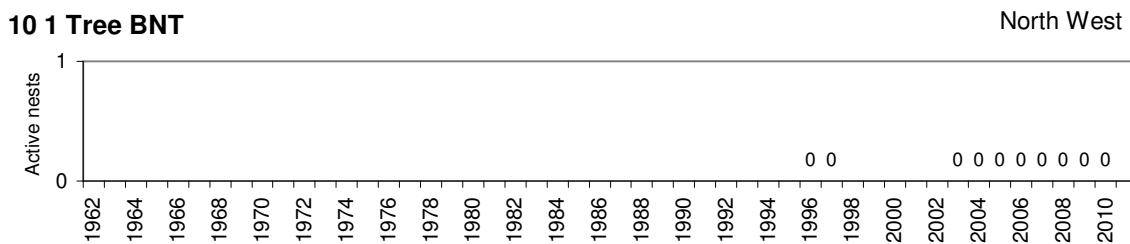
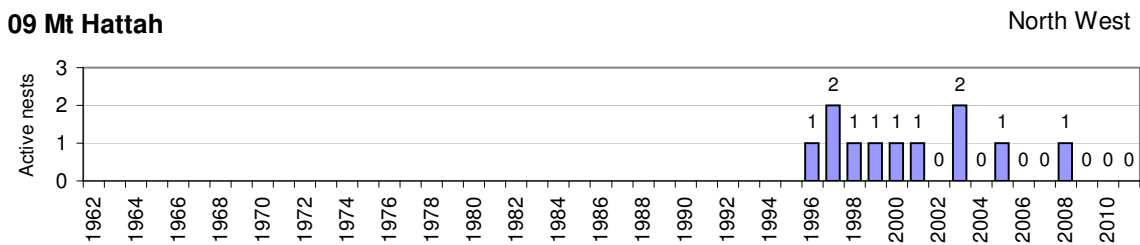
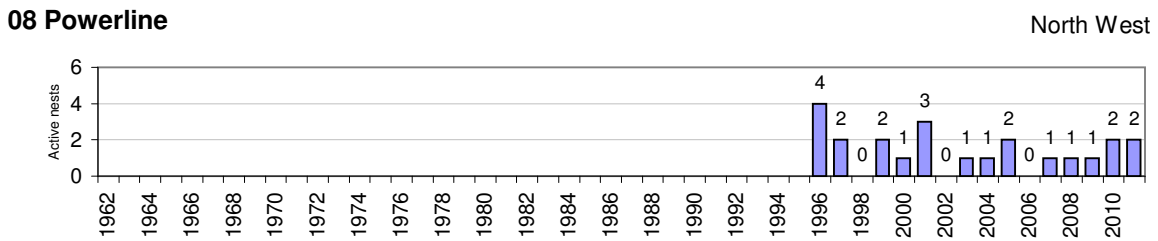
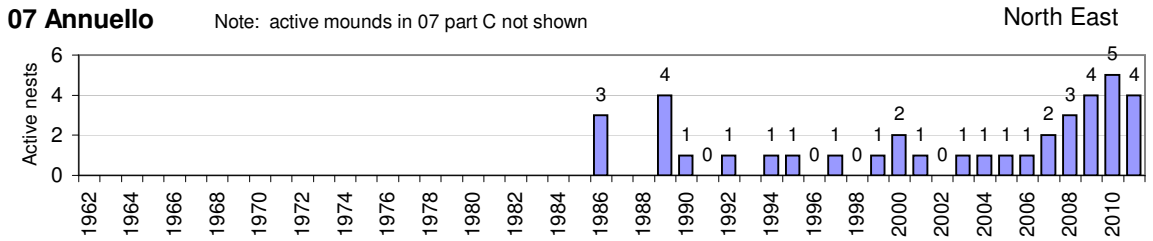


05 Coligan

North West

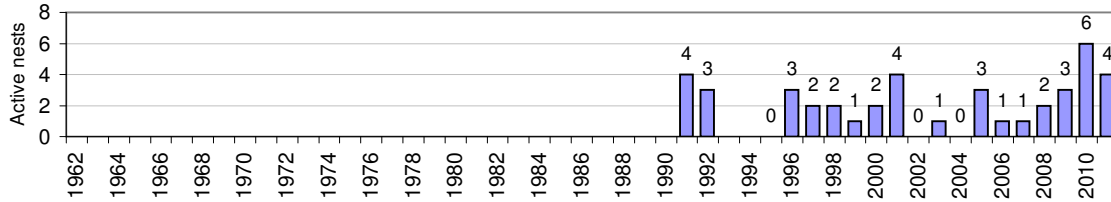


Season



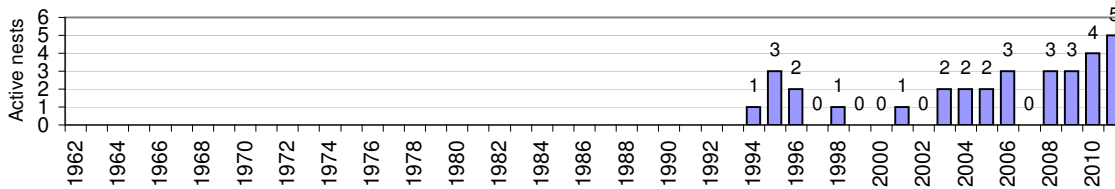
12 Pheeney's

North West



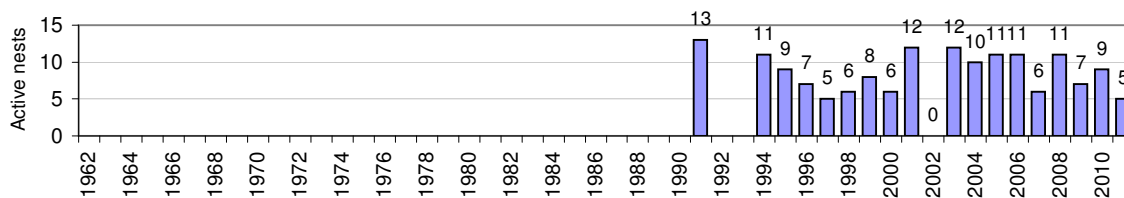
13 Bambill

North West



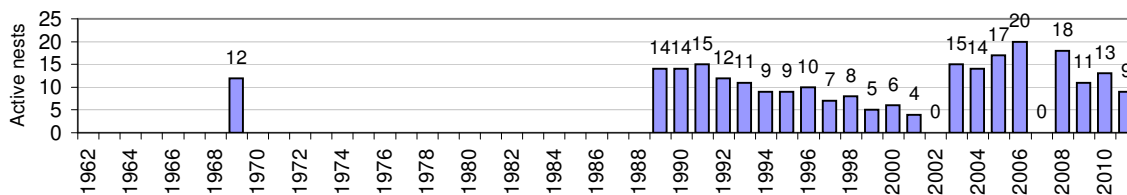
14 Menzies

North East



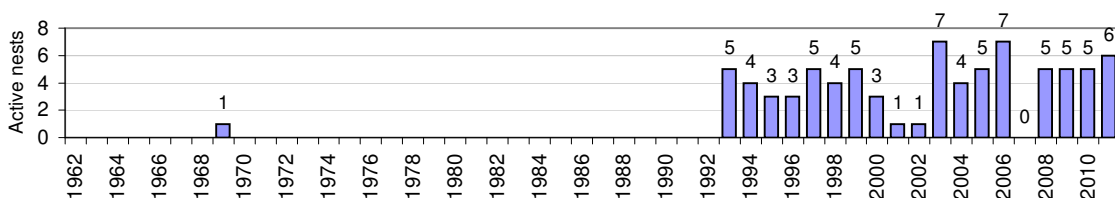
15 Wandown Part A

North East



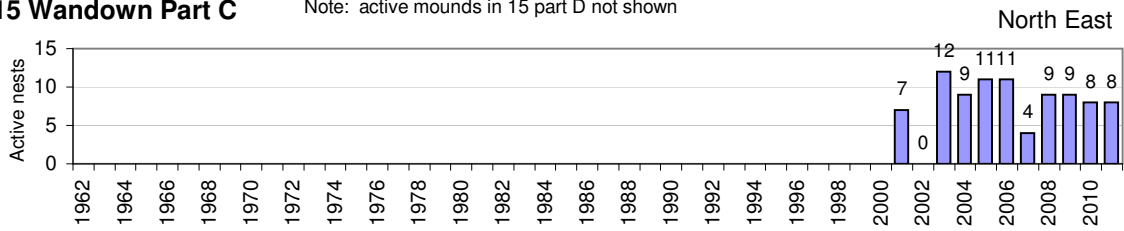
15 Wandown Part B

North East

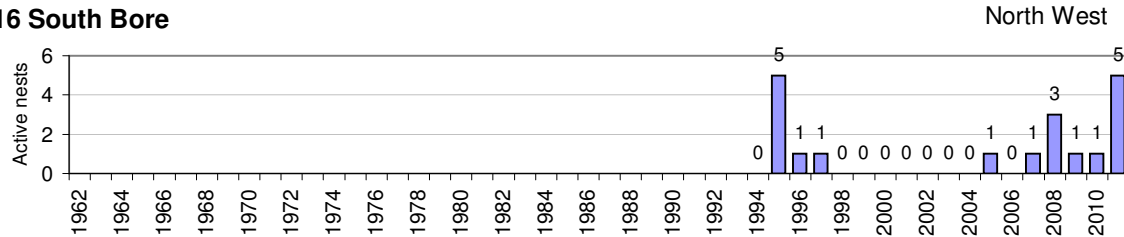


Season

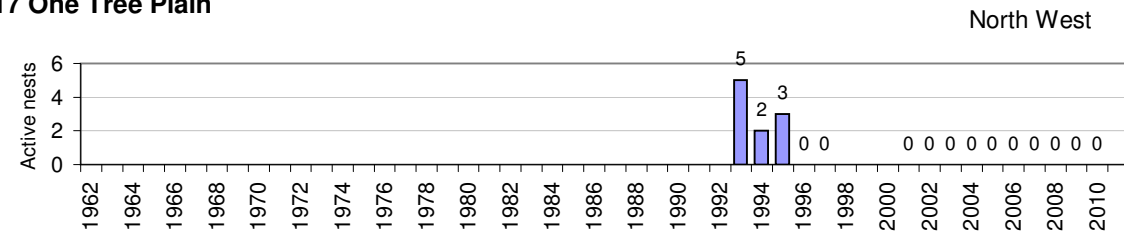
15 Wandown Part C Note: active mounds in 15 part D not shown



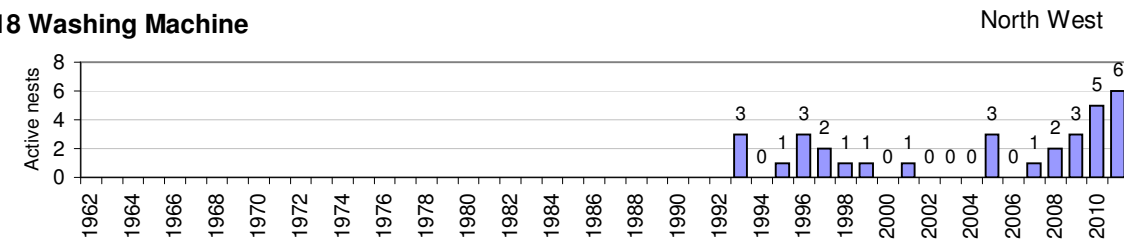
16 South Bore



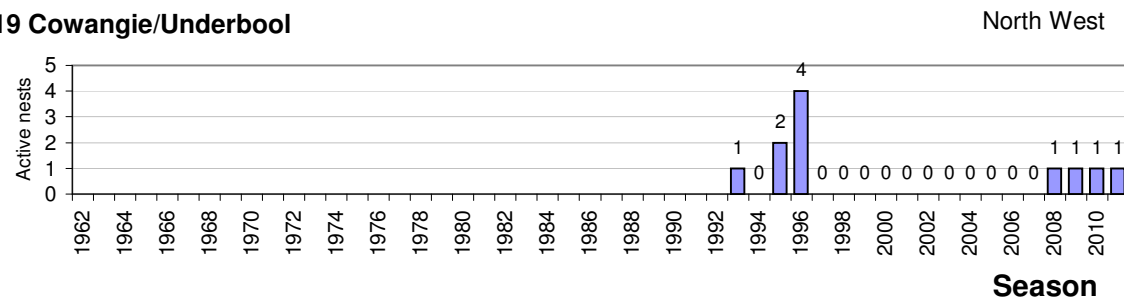
17 One Tree Plain



18 Washing Machine

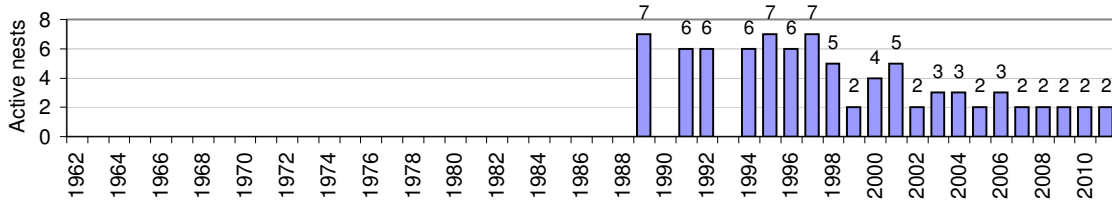


19 Cowangie/Underbool



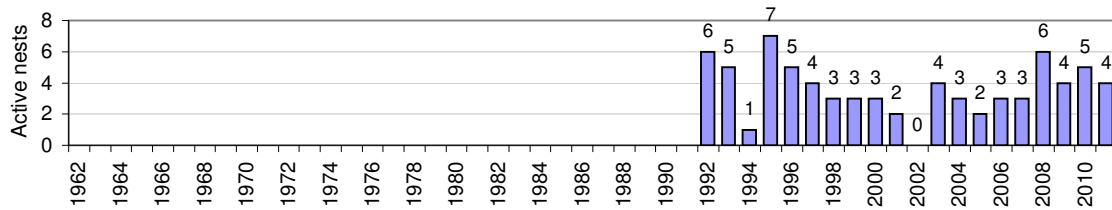
20 Lowan

Eastern Big Desert



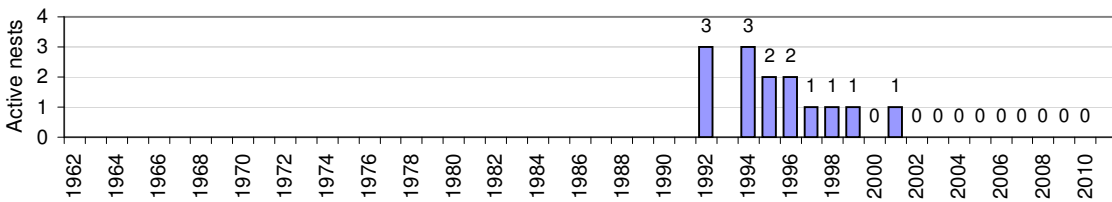
21 Dumosa

North West



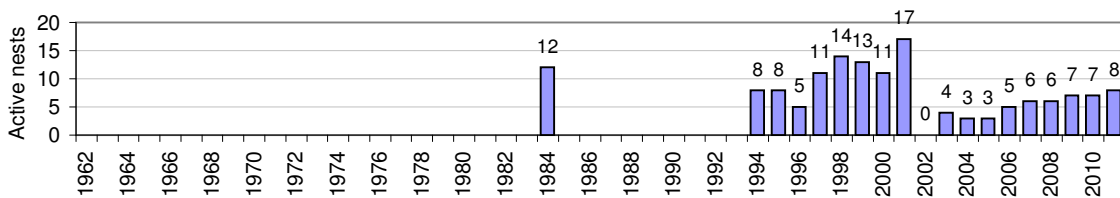
22 Denning

North West



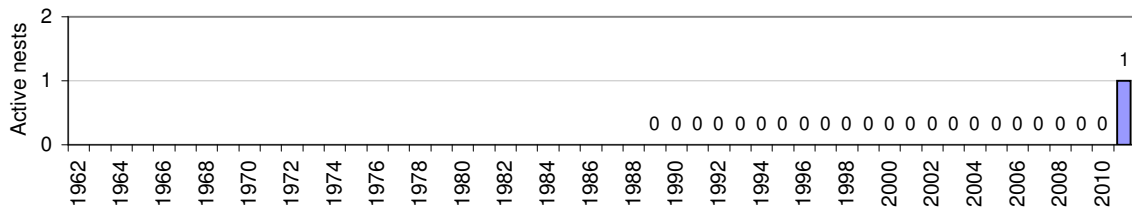
23 Moonah

Eastern Big Desert



24 Kiata

North East

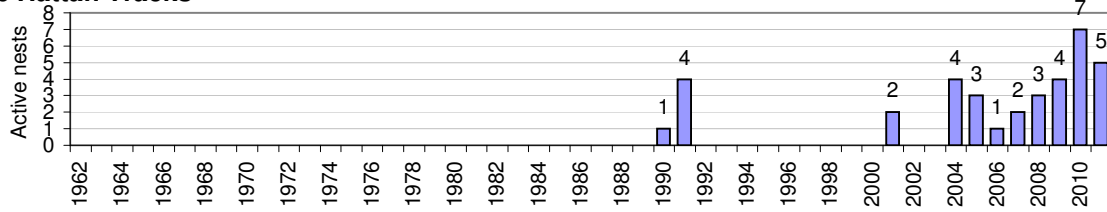


v25 does not exist

Season

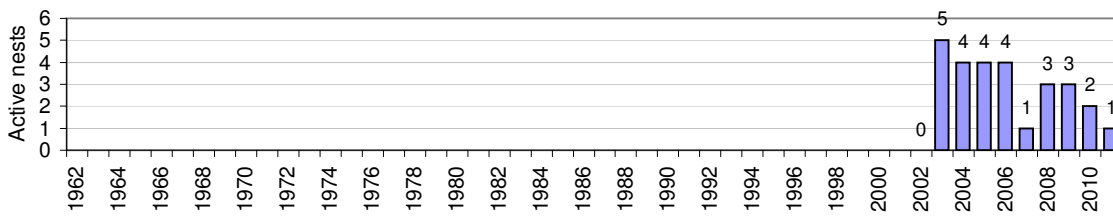
26 Hattah Tracks

North West



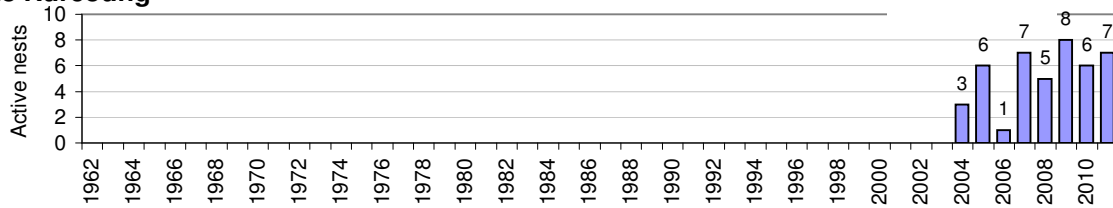
27 O'Brees

North East



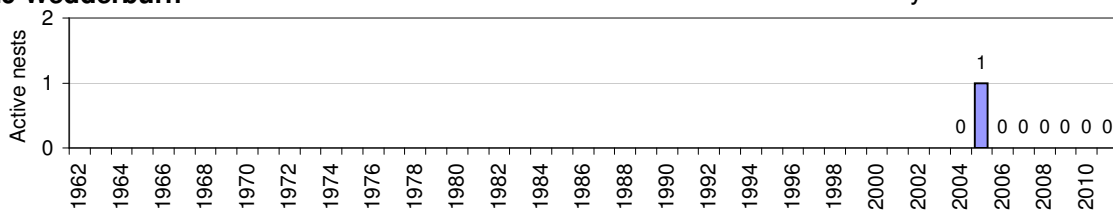
28 Nurcung

Little Desert



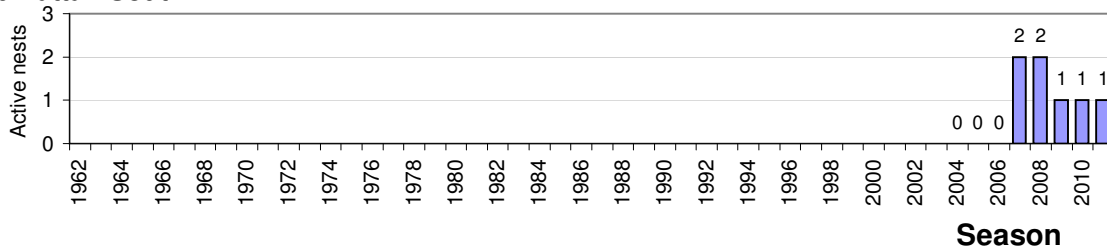
29 Wedderburn

Wychitella NCR



30 Hattah South

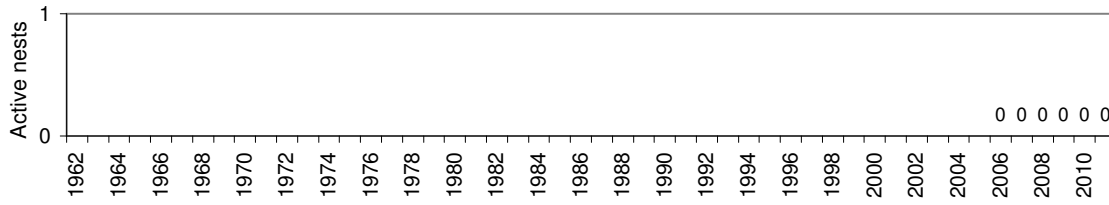
North West



Season

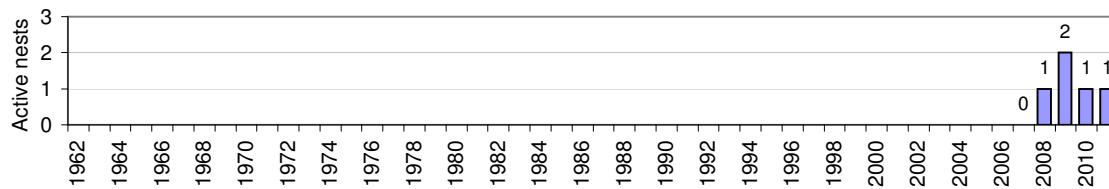
31 Skinners Flat

Wychitella NCR



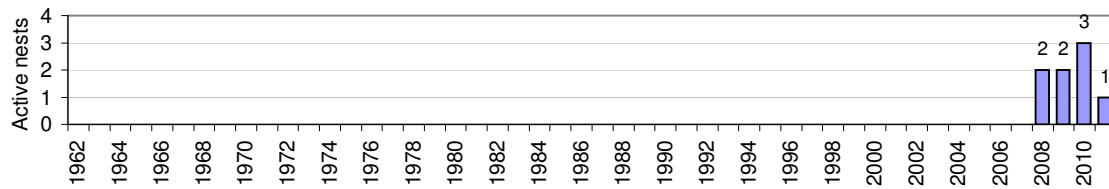
32 Wychitella

Wychitella NCR



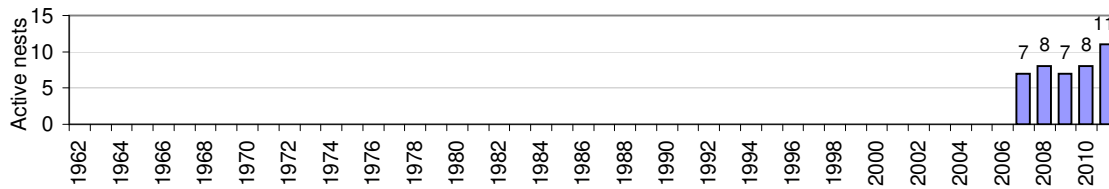
33 Korong Vale

Wychitella NCR



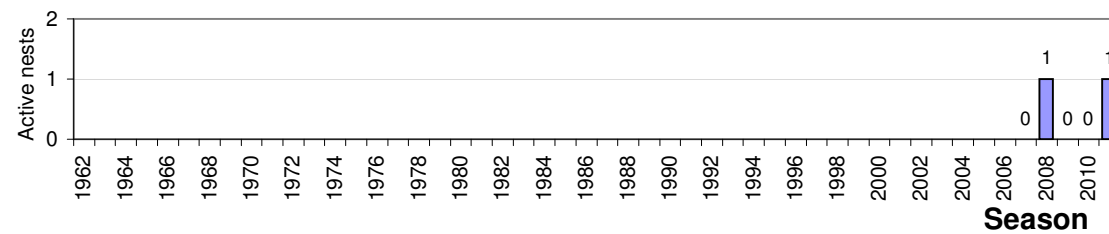
34 Paradise

Eastern Big Desert



35 Broken Bucket

Western Big Desert



Season

Appendix B Site Trends

36 Boughtons WH

Little Desert

