

**Grampians Bird Survey 2009 (part of Matt Vinicombe's Deakin Univ. Honours Project)**  
**(Rod Bird's 8 sites were sampled 6 times from 15 April to 22 June)**

	Birds in 2 ha (20 min, 10 min) - adjacent (#) - overhead (O/H)	(1) Species in 2 ha (20 min survey)								Σ of (1)	(1) Extra sp. in next 10 min. (2) # adjacent, incl. out of time								Σ (2)	Σ 2&3	Σ 1&2
		Site Number									Site Number										
		27	22	26	36	31	18	11	30		27	22	26	36	31	18	11	30			
1	Australian magpie (#)								0								#	0	1	0	
2	Australian owl-nightjar			1					1									0	0	0	
3	Australian raven							1	1								#	0	1	0	
4	Brown quail (#, 500m)								0								#	0	1	0	
5	Brown thornbill	3	2		3	1	1	1	11				#		1#			1	3	12	
6	Brown-headed honeyeater					1			1					1				1	1	2	
7	Buff-rumped thornbill	3	1		1	2	2		9		2	#			1#			3	5	12	
8	Chestnut-rumped heathwren							4	4									0	0	4	
9	Crescent honeyeater	3							3	1								1	1	4	
10	Crimson rosella	1	2						3		1							1	1	4	
11	Eastern spinebill	4	1						5		1					#		1	2	6	
12	Eastern yellow robin		1						1		1							1	1	2	
13	Fuscous honeyeater								0							1		1	1	1	
14	Gang Gang cockatoo	1	1						2		#							0	1	2	
15	Golden whistler		1		1				2				#					0	1	2	
16	Grey currawong					1			1			#	#		#			0	3	1	
17	Grey fantail	1					1		1				1					1	1	2	
18	Grey shrike-thrush					1			1									0	0	1	
19	Laughing kookaburra	1							1					1				1	1	2	
20	New Holland honeyeater		1			1			2	1		#						1	2	3	
21	Painted button-quail (#)								0								#	0	1	0	
22	Red wattlebird								0		1			#		1		2	3	1	
23	Satin flycatcher	1							1									0	0	1	
24	Scarlet robin				1	2		1	5				1#2					1	3	6	
25	Silvereye			1					1				#					0	1	1	
26	Southern boobook								0						1			1	1	1	
27	Southern emu-wren (#)								0	#								0	1	0	
28	Spotted pardalote				1				1									0	0	1	
29	Striated thornbill	1	2	1	1	3	2		10						#2			0	2	10	
30	Sulphur-crested cockatoo (O/H)	1							1									0	0	1	
31	Superb fairy-wren	1	1		2				4	1			#			#		1	3	5	
32	Tawny-crowned honeyeater							1	1								#	0	1	1	
33	Wedge-tailed eagle (O/H)			1					1								1	1	1	2	
34	Welcome swallow (O/H)	1				1			2									0	0	2	
35	White-browed scrubwren	3	2	1	1				7				#					0	1	7	
36	White-eared honeyeater	2	2	2	5	4	5	6	26			#		1	#		1	3	27		
37	White-naped honeyeater		1						1			#						0	1	1	
38	White-throated treecreeper	6	4	2	3	4	3	3	22				#2	1			1	2	23		
39	Yellow thornbill								0				1					1	1	1	
40	Yellow-faced honeyeater	2		2	1	1	2	1	9					1		1		2	2	11	
	<b>Total number in each site</b>	<b>16</b>	<b>14</b>	<b>8</b>	<b>10</b>	<b>11</b>	<b>7</b>	<b>6</b>	<b>3</b>		<b>3</b>	<b>6</b>	<b>0</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>1</b>				
											<b>#1</b>	<b>#1</b>	<b>#5</b>	<b>#10</b>	<b>#1</b>	<b>#6</b>	<b>#4</b>	<b>#3</b>			

<b>Site No. 27</b>	Control - unburned forest	<b>Lavout:</b> from W, A1→G1 North side on Glenelg R Rd
<b>GPS:</b> (A1) 37-23-31.5/142-15-46.0		<b>Dist from Bulawyn Rd:</b> 0 km <b>Dist from Mathews Tk:</b> 27.0 km

<b>Site No. 22</b>	Control - unburned forest	<b>Lavout:</b> from Nth, A1→G1 on E side GR Rd
<b>GPS:</b> 37-21-45/142-18-17 on road		<b>Dist from B Rd:</b> 5.7 km <b>Dist from M Tk:</b> 21.2 km

<b>Site No. 26</b>	Control - unburned forest	<b>Lavout:</b> From Nth, A1→G1, east side GR Rd
<b>GPS:</b> 37-19-58/142-21-32 on road		<b>Dist from B Rd:</b> 12.1 km <b>Dist from M Tk:</b> 14.8 km

<b>Site No. 36</b>	Unburned small patch, adj. unburned forest	<b>Lavout:</b> From Nth, A1→G1, E side Syphon Rd
<b>GPS:</b> (A1) 37-16-51.7/142-22-29.5 ~ 150 m off rd		<b>Dist from B Rd:</b> 18.8 km <b>Dist from M Tk:</b> 8.1 km

<b>Site No. 31</b>	Low severity wildfire	<b>Lavout:</b> From Nth, G1→A1, E side Syphon Rd
<b>GPS:</b> (G1) 37-15-46/142-22-05.4 ~ 70 m off rd		<b>Dist from B Rd:</b> 20.9 km <b>Dist from M Tk:</b> 6.1 km

<b>Site No. 18</b>	Severe fire, peripheral <300 m to unburned area	<b>Lavout:</b> from Sth, A1→G1, W side Syphon Rd
<b>GPS:</b> 37-14-34.1/142-21-39.8 on road		<b>Dist from BRd:</b> 23.2 <b>Dist from MTK:</b> 3.8 km

<b>Site No. 11</b>	Severe, peripheral fire <300 m to unburned forest	<b>Lavout:</b> from E, A1→G1 on S side MathTk
<b>GPS (G1)</b> 37-11-49.5/142-18-39.3 ~ 20 m off Tk		<b>Dist on M Tk:</b> 3.0 km <b>Dist on M Tk:</b> 5.7 km W

<b>Site No. 30</b>	Unburned large patch (heath) in peripheral burn	<b>Lavout:</b> from Nth, A1→G1, on E side Channel
<b>GPS (A1)</b> 37-12-29.0/142-21-05.8 ~ 600 m off channel		<b>Dist from Ch:</b> 1.2 km <b>Dist from Ch:</b> 1.2 km

## **Some results and discussion resulting from this survey:**

### Comparing the 20-minute survey with the 30-min periods

The totals for the 20-min surveys were 75 species records over the 8 sites compared with 99 species records for a 30-min period of survey. The range was an extra 0-6 species at each site overall. At only one of the eight sites were there no extra species seen. From this, it would seem that the extra 10 minutes deployed is of value. However it revealed only 3 more species – Fuscous Honeyeater, Southern Boobook & Yellow Thornbill – among the 40 species seen.

The extra 10 minutes of survey time would be useful for sites that are difficult to access or are only part of an infrequent survey. It should be noted, however, that the 2 ha-20 min survey is a standard method used by BirdLife Australia for repeat surveys. Their prescription should be used (for supplying their data records) but it is not too much trouble to record separately another 10 minutes. Combining the 20- and 10 minute data, plus records adjacent to the site, would then be recorded as part of an Area Search.

### Notable species seen:

Crescent Honeyeater, Chestnut-rumped Heathwren, Tawny-crowned Honeyeater, Satin Flycatcher, Gang-gang Cockatoo, Australian Owlet-nightjar, Common Boobook, Brown Quail & Painted Button-quail.

### Total number of species:

Only 40 species were seen in total. Matt's analysis of all 38 sites gave 64 species. This seems to indicate that the birds of the Grampians have suffered a severe decline. The massive fires of recent years (e.g. the January 2006 fire where half of the park was burned) and subsequent prescribed burns, have taken a heavy toll of both numbers and species richness

### Total number of species in burned v. unburned sites:

The number of species seen in 4 long-unburned 2-ha plots and immediate surroundings ranged from only 8-16 (from 20-min data) or 8-19 (from 30-min data) over the entire 6 periods of survey. The equivalent overall counts of species in 3 forest plots burned in recent times was 6-11 (20-min data) or 8-12 (30-min data). A complication is the effect of proximity (distance) of unburned forest/woodland to the burned area. We may have been recording some birds travelling through burned areas to get to unburned sites.

### Heath compared with forest:

An open, unburned wet heath plot (No. 30) had only 3 or 4 species (this site was 1 km from woodland). There would almost certainly be more birds in a similar wet heath that was immediately adjacent to forest or woodland. The results from this plot could reasonably be compared with unburned sites but not burned sites (unless a similar patch of burned wet heath at the same distance from forest could be found).

### Length and seasons of survey:

A longer period of survey, ranging through spring into summer, would probably reveal more species, including migratory birds. If the Grampians ever recovers from the fire events of the past and present burn policies, it would be good to repeat this survey at the same (or similar) sites and the same period. It would also be useful to continue the survey to cover the entire year.

Full report sheets: lists of birds seen in each of the 8 sites at each time is in the HFNC reports file.

**Mathew Vinicombe's thesis** (Bachelor of Environmental Science – Honours, Deakin University, Melb.)

*“The recovery of bird communities after a severe, landscape-scale wildfire”* (Oct 2009) pp. 44

The isolated burned site had significantly fewer species than the unburned control. Matt's analysis included examining bird guilds (their preference for foraging on the ground, in shrubs, in the tree canopy or a combination) but there were no significant differences among the various habitats.

There are 4 general fire-response groups of birds: strong negative (e.g. Silver-eye, Red-browed Finch, Crescent Honeyeater), weak negative (e.g. New Holland Honeyeater, White-browed Scrubwren, White-naped Honeyeater), positive (e.g. Brown Quail, Common Bronzewing, Chestnut-rumped Heathwren) and no effect (e.g. White-throated Treecreeper, White-eared Honeyeater, Brown Thornbill).

Matt contends that preserving long-unburnt patches reduces isolation in the burnt landscape, assisting the recovery of birds. Prescribed burns protect long-unburned areas but should also have patches unburned.