

Field Studies Day – Columbey National Park 27/11/2009

Reported by: Mike Newman

For the second visit to Columbey National Park it was decided test the findings of the first visit on the 29/09/2009 using a different survey technique. As previously, the target species were the Buff-rumped Thornbill and Speckled Warbler.

Methods

The Birds Australia 2ha 20 min. survey method was used on this occasion with 15 sites set up in the general vicinity and similar habitat to the six 250m radius area search sites evaluated previously. The 2 ha survey sites were at least 500m apart to minimise the possibility of double counting birds. The survey point co-ordinates (see Appendix Table 2) are marked on the map shown in Fig. 1. Sites were rectangular with dimensions of approximately 200 x 100m and located 50m from access roads to eliminate edge effects. Trees were marked with survey tape in the middle of the 200m edge adjacent to the road and a tree was also marked at the roadside to facilitate location during future visits.

Observations were made by five teams, four involving two observers and one a single person. At least one observer in each team was familiar with both the survey technique and the local birds. Four team leaders had been involved during the previous visit.

Each team conducted 3 surveys between 7.30 am and 10.00 am. The ambient temperature had risen to 26°C when the final five surveys were made (sites 11-15). Site 7 involved abnormally dense understorey vegetation and its future use is not recommended. The other sites all involved closed canopy woodland with varying amounts of understorey vegetation.

It was predicted that Buff-rumped Thornbills would be present with a Reporting Rate of 33% in the 2ha surveys (i.e. recorded in 5 of the 2ha surveys) based on the population densities estimated from the area searches conducted previously (see Appendix).

Results

1. Buff-rumped Thornbill and Speckled Warbler

Buff-rumped Thornbills were present during five of the 2ha 20 min surveys as predicted based on the assumption that the species is randomly distributed throughout the area at the density estimated on the previous visit. However, this may have been a fortuitous result as no Buff-rumped Thornbills were seen during the first five surveys when the birds were more active at lower ambient temperatures. In the later surveys the thornbills were located, mostly in denser vegetation by the use of “pishing” and in one instance taped calls to solicit a response.

No Speckled Warblers were located in the section of Columbey National Park shown in Figure 1 which is consistent with the previous result.

2. Species List

52 species were recorded during the 15 2ha 20 min. surveys. The 11 most frequently reported species are shown in Table 1. The Buff-rumped Thornbill ranked equal 10 with Wonga Pigeon. The full species list recorded in the surveys is shown as Table 2 in the Appendix. The Brown Gerygone *Gerygone mouki* and the Brown-headed Honeyeater *Melithreptus*

brevirostris were seen later in the day near Wallaroo Creek bringing the total for the day to 54 species. This compares well with the 42 species seen during six area surveys on the previous visit (i.e. similar area to 2 ha surveys 1 to 15). When the additional species seen near Wallaroo Creek are included the previous day list was 48 species, on a day when conditions were more favourable to observing birds.

Table 1 Top Species Ranked according to Reporting Rate

Rank	Species	Surveys Present	Reporting Rate
1	Yellow-faced Honeyeater ¹	14	93
2	Scarlet Honeyeater	9	60
2	Grey Fantail ¹	9	60
4	Eastern Yellow Robin	8	53
5	White Throated-Treecreeper ¹	7	47
5	Brown Thornbill ¹	7	47
7	Striated Thornbill	6	40
7	Rufous Whistler	6	40
7	Superb Fairy-wren	6	40
10	Buff-rumped Thornbill	5	33
10	Wonga Pigeon	5	33

¹ Species seen with 100% Reporting Rate on the six previous area searches.

On the previous visit, five species were seen on all six of the 250m area searches (100% Reporting Rate). As shown in Table 1, four of these species were among the top five ranked species in the 2ha surveys. However, the other species, the Spotted Pardalote, was only seen on 3 of the 2ha surveys at a Reporting Rate of 20%. A similar fall in Spotted Pardalote Reporting Rates in early summer has been noted at Green Wattle Creek, which may in part reflect decreased calling in early summer.

The combined list for the two visits stands at 65 with 17 species being added on the second visit and 10 only being seen on the first occasion.

Discussion

The second visit confirmed the suitability of the extensive areas of woodland at Columbey National Park for Buff-rumped Thornbills. However, initial expectations that this species would be a ground feeder attracted to areas with little understorey need further investigation with improved methods of microhabitat description and more time allowed to observe foraging behaviour. Speckled Warblers were not recorded.

The 2 ha 20 min survey technique gave similar results for Buff-rumped Thornbills to the area searches and as expected the use of multiple short duration searches gave more definition to differences in Reporting Rates between species. It is intended to continue to monitor this foundation set of 2 ha sites during 2010 and make comparisons with additional sites in a nearby area where the tree assemblages are similar but there is less understorey.

Other Learnings from the Field Day

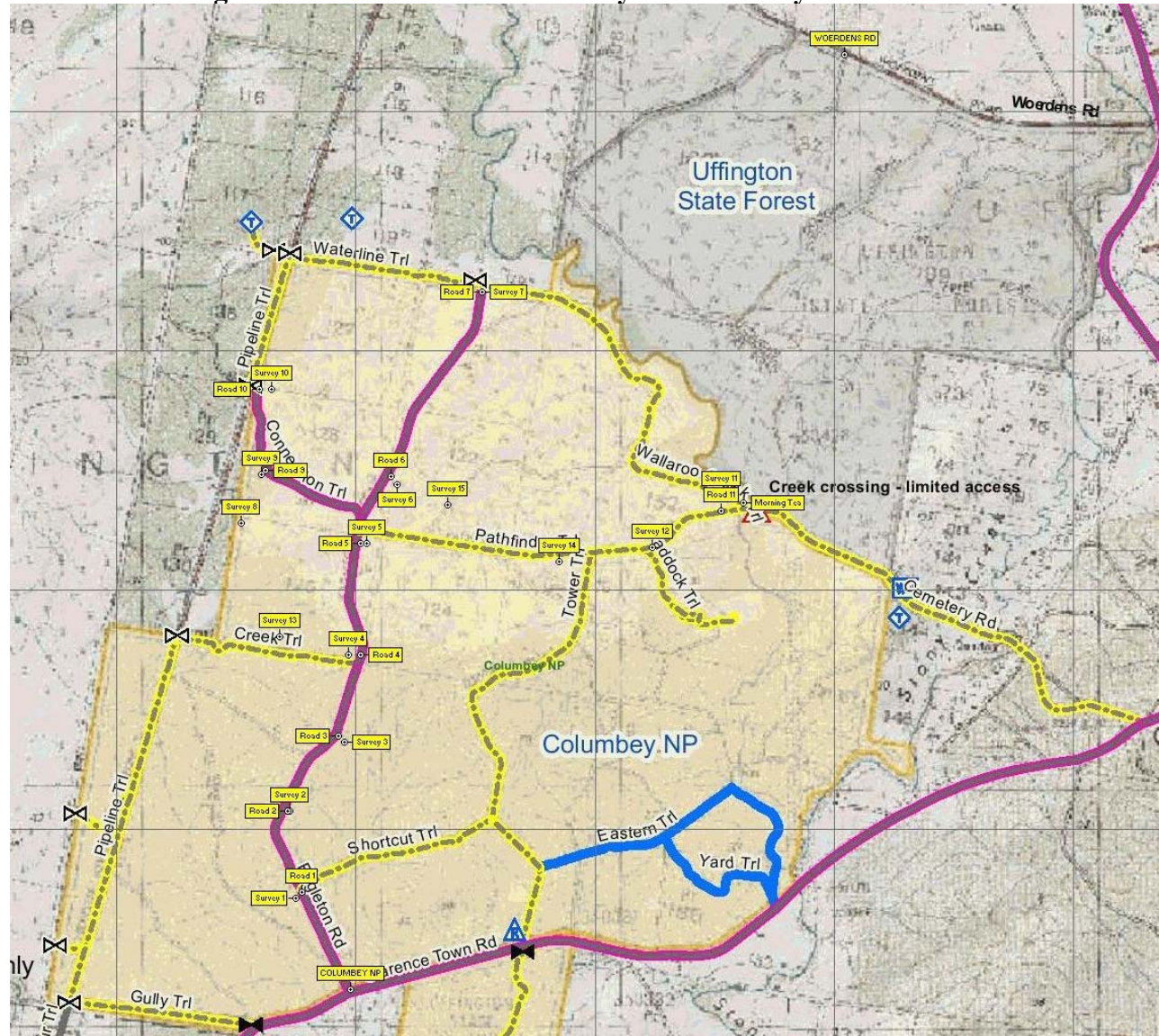
There were two important learnings to take into account for future Field Days:

- A verbal briefing and the provision of sketches of the initial site survey locations to the participants before the start of the surveys did not sufficiently eliminate potential confusions, and it would be preferable to combine detailed written instructions plus a verbal briefing/discussion. Where foundation survey sites are being established it is preferable that a preliminary visit is made to establish the sites before the surveys are conducted. However, this may not be practical for remote locations. When multiple teams are surveying, particularly during the establishment phase of a project, a co-ordinator who does not get involved in the surveys is strongly recommended to deal with any problems.
- GPS's were used by the teams to record the exact coordinates for each of their survey sites. Subsequently it was identified that there were some inconsistencies with these, necessitating a return visit by some of the team on 4 December to re-find the sites and obtain the correct coordinates. It will be useful in future to check that every GPS is set to the same reference (preferably, WGS84) and that users are able to correctly determine their location. This could be done as part of the briefing session at the start of the day. However briefings need to be short because particularly in summer it is important to start surveying as early as possible.

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Figure 1 Sites for 2ha 20 min surveys at Columbe National Park.



APPENDIX (Tables 2 and 3)

Table 2 Co-ordinates for 2ha sites at Columbe National Park

Survey No.	Location	Side of Road	Co-ords as recorded		Revised 4/12/09 (to WGS84)		Tape Colour	Team
			South	East	South	East		
1	Along main road	LHS	32/35/53	151/43/40	32/35/48	151/43/45	Yellow	Penny & Ian
	(1)				32/35/47	151/43/46		
2	Along main road	RHS	Not measured		32/35/36	151/43/44	Blue	Lorna & Toni
	(1)				32/35/36	151/43/44		
3	Along main road	RHS	32/35/27	151/43/53	32/35/27	151/43/53	Black	Alan
	(1)				32/35/26	151/43/52		
4	Along main road	LHS	32/35/15	151/43/53	32/35/15	151/43/54	Green	Harold & Peter
	(1)				32/35/15	151/43/56		
5	Along main road	RHS	32/38/09	151/43/53	32/35/00	151/43/57	Clear	Jim & John
	(1)				32/35/00	151/43/56		
6	Along main road	RHS	32/34/57	151/43/58	32/35/52	151/44/02	Yellow	Penny and Ian
	(1)				32/34/51	151/44/01		
7	Along main road	LHS	32/34/46	151/44/29	32/34/26	151/44/16	Not found	Lorna & Toni
	(1)				32/34/26	151/44/16		
8	Side Rd. to left	LHS	32/34/57	151/43/37	32/34/57	151/43/37	Black	Alan
	(1)				Not re-measured			
9	Main road	LHS	32/34/50	151/43/40	32/34/50	151/43/40	Yellow	Harold & Peter
	(1)				32/34/50	151/43/41		
10	Side Rd. to left	RHS	32/34/45	151/40/30	32/34/39	151/43/42	Clear	Jim & John
	(1)				32/34/39	151/43/40		
11	Side Rd. to left	LHS	32/34/59	151/44/49	32/34/54	151/44/54	Yellow	Penny & Ian
	(1)				32/34/56	151/44/54	Pathfinder	
12	Pathfinder	RHS	Not measured		32/35/01	151/44/42	Blue	Lorna & Toni
	(1)							
13	Side Rd. to left		32/35/13	151/43/43	32/35/13	151/43/43	Black	Alan
	(1)				Not re-measured			
14	Pathfinder		32/35/02	151/44/28	32/35/02	151/44/28	Yellow	Harold & Peter
	(1)				Not re-measured			
15	Pathfinder	LHS	32/34/44	151/43/38	32/34/55	151/44/10	Clear	Jim & John

(1) Co-ordinates measured at the side of the road to facilitate finding the tree located on the edge of the survey site approximately 50m in from the edge of the road.

Table 3 Species recorded during 2ha surveys on 29/11/2009

	Number of Surveys Present	Reporting Rate (%)
Painted Button-quail	1	7
Brown Cuckoo-Dove	1	7
Common Bronzewing	1	7
Bar-shouldered Dove	1	7
Wonga Pigeon	5	33
Yellow-tailed Black-Cockatoo	1	7
Rainbow Lorikeet	1	7
Musk Lorikeet	1	7
Little Lorikeet	1	7
Eastern Rosella	1	7
Brush Cuckoo	2	13
Fan-tailed Cuckoo	1	7
Horsfield's Bronze-Cuckoo	1	7
Shining Bronze-Cuckoo	1	7
Channel-billed Cuckoo	2	13
Laughing Kookaburra	2	13
White-throated Treecreeper	7	47
Superb Fairy-wren	6	40
Variiegated Fairy-wren	3	20
Spotted Pardalote	3	20
White-browed Scrubwren	3	20
White-throated Gerygone	3	20
Brown Thornbill	7	47
Buff-rumped Thornbill	5	33
Yellow Thornbill	1	7
Striated Thornbill	6	40
Noisy Friarbird	5	33
Lewin's Honeyeater	2	13
Yellow-faced Honeyeater	14	93
White-naped Honeyeater	2	13
Scarlet Honeyeater	9	60
Eastern Yellow Robin	8	53
Eastern Whipbird	3	20
Varied Sittella	1	7
Crested Shrike-tit	1	7
Golden Whistler	3	20
Rufous Whistler	6	40
Grey Shrike-thrush	2	13
Black-faced Monarch	1	7
Leaden Flycatcher	3	20
Rufous Fantail	1	7
Grey Fantail	9	60
Black-faced Cuckoo-shrike	2	13
Cicadabird	1	7
Olive-backed Oriole	4	27
Grey Butcherbird	1	7
Australian Raven	1	7
Torresian Crow	2	13
Pied Currawong	2	13
Red-browed Finch	1	7
Mistletoebird	1	7
Silvereye	2	13

Estimation of Reporting Rates of Buff-rumped Thornbills at 2 ha survey sites.

The results of the surveys suggest that Buff-rumped Thornbills are fairly uniformly distributed throughout the woodland on either side of Eagleton Road (survey sites 1 to 4). Based on the calculated density of 17 foraging groups/km² it is predicted that the probability of observing a Buff-rumped Thornbill at a randomly selected 2ha survey site in this area is 34%. On this basis it would be expected to record Buff-rumped Thornbills at 5 of a set of 15 2ha sites searched for 20 minutes (the preferred BA Atlas method). It is suggested that this prediction is tested during a future breeding season visit to Columbey National Park. Outside the breeding season it is anticipated that the Buff-rumped Thornbills may form mixed species foraging flocks and become less dispersed; another hypothesis which could be tested.