Birds Australia Southern Queensland

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Crows Nest Stock Route Surveys

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On 30 October 2009 a workshop was held in Crows Nest to develop survey methodology.

The next day 11 people carried out standard Birds Australia Atlas surveys on 8 base sites on local Stock Routes, and 15 associated outlier sites on privately managed property up to one kilometre to the side of the stock route. On 9 November three people surveyed two more base sites and outliers..

Aim

To test the hypothesis that birds use stock routes preferentially as habitat and corridors.

Sites

Five of the base sites were from one kilometre to 21 kilometres north of Crows Nest along the stock route running along Pierces Creek Road, Jones Gully Road and the New England Highway to Cooyar.

The other five sites were on stock route U814, running from Cooyar via Anduramba to Esk. Three of these sites were 25 km north north west of Crows Nest, where Pierces Creek Road meets the Blackbutt Range Road, and the other two were in Anduramba, 16 kilometres north of Crows Nest.. One of the latter sites was a water reserve.

The road verge in five of the ten base sites had trees with more than 20% crown cover (woodland or forest), while only two of the fifteen outlier sites had this much tree cover. Two of the base sites on U814 were grazed by cattle, the others being maintained shire or main roads. Thirteen of the outlier sites were being grazed, mainly by cattle. Most of the grazed sites had little or no tree cover.

Surveys

The sites were chosen in advance by inspection of Google Earth satellite images, followed by a quick recce to check the latitude and longitude readings and the on-ground appearance, (The satellite images were 4 years old.) Permission was obtained from the private land managers.

Each related group of sites – a base site and its outliers – was assigned to a team of two or three observers.

Results

The surveys were carried out by identifying and counting all the birds in a two hectare plot for 20 minutes. Some plots were circular with a radius of 80 metres. Where the stock route was fenced, a rectangular shape was used. Most of the stock routes were 40m wide, so the rectangle was 500 x 40m. One was 20 x 1000m, and one 100 x 200m. This method does not find all the birds using a site, but enables statistical comparison when repeat surveys are done.

See sample data sheet appended.

Counts on related sites

Group	Site	Number of species	Number of birds
1	SR.CN.1 Littleton	15	34
	SR.CN.1a Littleton	13	19
2	SR.CN.2 Pony Club	12	28
	SR.CN.2a Pony Club	11	23
3	SR.CN.3 Kahler	12	42
	SR.CN.3b Kahler	3	10
4	SR.CN.4 Landcare Shed	17	41
	SR.CN.4a Landcare Shed	6	47
5	SR.CN.5 Gould	10	24
	SR.CN.5a Gould	9	29
	SR.CN.5b Gould	7	15
6	SR.U814.1 Bird Trail N7	8	17
	SR.U814.1a Bird Trail N7	3	4
7	SR.U814.2 Bird Trail N7	9	16
	SR.U814.2a Bird Trail N7	2	5
	SR.U814.2y Bird Trail N7	5	13
	SR.U814.2z Bird Trail N7	6	11
8	SR.U814.3 Bird Trail N7	12	19
	SR.U814.3a Bird Trail N7	2	3
	SR.U814.3y Bird Trail N7	16	31
	SR.U814.3z Bird Trail N7	11	15
9	SR.U814.4 Reserve	6	18
	SR.U814.4a Reserve	10	16
10	SR.U814.5 McGreevy	3	9
	SR.U814.5a McGreevy	6	10

Table 1. Number of species and total number of birds at each site. Each group is a base site on a stock route with its associated outliers site(s).

In eight out of ten groups of sites, there were more species on the base site on the stock route, and for seven out of ten, there was a greater total number of individual birds..

Table 2 shows the averages for base sites and for outlier sites. The averages are higher for the sites on stock routes.

Bird averages

On stock route	Number of species	Number of birds
Yes		
SR.CN.1 Littleton	15	34
SR.CN.2 Pony Club	12	28
SR.CN.3 Kahler	12	42
SR.CN.4 Landcare Shed	17	41
SR.CN.4a Landcare Shed	6	47
SR.CN.5 Gould	10	24
SR.U814.1 Bird Trail N7	8	17
SR.U814.2 Bird Trail N7	9	16
SR.U814.3 Bird Trail N7	12	19
SR.U814.4 Reserve	6	18
SR.U814.5 McGreevy	3	9
Average number of species	**10**	Average number of birds **26.8**
		181
No		
SR.CN.1a Littleton	13	19
SR.CN.2a Pony Club	11	23
SR.CN.3b Kahler	3	10
SR.CN.5a Gould	9	29
SR.CN.5b Gould	7	15
SR.U814.1a Bird Trail N7	3	4
SR.U814.2a Bird Trail N7	2	5
SR.U814.2y Bird Trail N7	5	13
SR.U814.2z Bird Trail N7	6	11
SR.U814.3a Bird Trail N7	2	3
SR.U814.3y Bird Trail N7	16	31
SR.U814.3z Bird Trail N7	11	15
SR.U814.4a Reserve	10	16
SR.U814.5a McGreevy	6	10
Average number of species	**7.42**	Average number of birds **14.5**

Table 2. Average number of species and average total number of individual birds for base sites (on the stock route) and outlier sites (half to one kilometre to the side).

Conclusion

Although the sample is small, the methodology adopted shows promise for testing the hypothesis that birds use stock routes preferentially. More sites need to be chosen over a wider range of landscapes, and repeat surveys carried out at different times of the day and in different seasons.

Acknowledgements

Thanks to: Judit Szabo and Bob Sutherst who led the workshop and did surveys; and to L Beaton, J & F Bielewicz, R Bloss, M Cameron, G & A Neill, G & D Rogers who did the remainder of the surveys. G & D Rogers and L Beaton organised the event.

Site	**SR.U814.4a Reserve**			
Site No.				
Name	BASQ			
Obs code	51029			
Phone	07 3889 3055			
Date start		9/11/2009	dd/mm/yyyy	
Date finish				
to Atlas			yes/no	
Time start	0805		hhmm	
Time finish	0825			
Total time	20 min			
Latitude	27° 07' 20"		dd mm ss (WGS84)	
Longitude	152° 05' 22"			
Identify [1]	80 m E from fence at highest point			
from Town [2]	16 km N crows Nest			
State	QLD			
Type [3]	2c			
Surveyors [4]	L Beaton, G&D Rogers			
Wetland [5]				
Comments [6]				

Birds observed

Common name	No	Br	Fly
Scaly-breasted Lorikeet	2		
Little Lorikeet	2		
Pale-headed Rosella	1		
Striated Pardalote	1		
Noisy Miner	1		
Little Friarbird	1		
Australian Magpie	2		
Torresian Crow	3		
Magpie-lark	1		
Common Myna	2		
spp 10	16		

Temp	cool	
Cloud%	100%	
Wind	slight breeze	
Food [7]		
Vegetation [8]	grassland, 2-3 mature trees, some regrowth	

Land use	currently grazed	
Photo file	no	
Notes	500 m east of reserve. Walk in through steel gate E from corner	Birds offsite Sacred Kingfisher, White-throated Gerygone, Brown Songlark

Sample data sheet.