WESTERN BRISTLEBIRD

ANNUAL REPORT

1996

by Allan H. Burbidge
for the WA South Coast Threatened Birds Recovery Team
(including the former Western Bristlebird Recovery Team)

Department of Conservation and Land Management
Wildlife Research Centre
PO Box 51, Wanneroo WA 6065

SUMMARY

There was no significant difference in response from playback on home range boundaries compared with playback from within the home range. Western Bristlebirds are more likely to approach the source of a known (their own or a neighbour's) than an unknown call. This is in contrast to many species of birds, which are equally or more likely to respond to a stranger. This may be because bristlebirds have overlapping home ranges, and are frequently in the overlap region.

Attempts to catch Western Bristlebirds are more likely to be successful if attempts to attract a given individual utilise a call which is known to that individual.

Research actions to be covered in 1996 at this stage of the research plan were action 2.4, the determination of micro-habitat requirements and action 2.5, translocation. At the Recovery Team meeting on 22 November 1995 it was agreed (1) to postpone further work on micro-habitat requirements until existing data are analysed and (2) to carry out a trial translocation in 1996. These actions were reported on in the progress report of August 1996; progress since then is reported on here.

1. Micro-habitat requirements

No significant progress has been made on this since the last annual report.

2. Translocation

As outlined in more detail in the August 1996 Progress Report, three potential sites were identified and a translocation proposal drafted. As further explained, all three were found to be unacceptable at the present time because of current management arrangements and difficulties in responding to wildfire situations. This left two options, both of which are worth following up:

(a) pursue the question of improved fire management and
(b) search for other potential translocation sites.

(a) Fire management

The results of improved management at these sites will be seen in the long term only, but some steps, such as liaison with local managers and neighbours, and pusuit of vesting issues, are being addressed by CALM Regional staff. With respect to potential translocation sites, the three sites inspected are considered to be the only worthwhile sites east of Albany. Other potentially suitable habitat exists in Fitzgerald River National Park, but these areas are not sufficiently geographically separated from existing sites to constitute worthwhile translocation sites.

Continuing improvement in fire management will depend on having adequate knowledge of the response of birds to fire as well as the ability to control fire. In order to gain further knowledge of the effects of fire, the population at Fitzgerald Track (burnt in October 1994) was re-surveyed in August 1995 and December 1996. The home ranges of all but one pair were burnt in the 1994 fire. Following the fire, almost all the displaced birds were located in areas adjacent to the fire (November 1994). Numbers of home ranges have dropped slightly since then: 26 in November 1994 to 21 in August 1995 to 19 in December 1996. No birds have yet been located in the area burnt in 1994. It is planned to monitor this population annually to determine the fate of the displaced birds and to determine when the burnt area is re-occupied. A copy of the 1996 report by Brenda Newbey and Shapelle McNee is attached.

(b) Other potential translocation sites

Some possibilities for translocation sites exist within the historical range from Albany westward, and these are being inspected as opportunity permits. During May 1996, several staff from CALM's Walpole District (ca 100 km W of Albany) were given a basic introduction to the nature of Western Bristlebird habitat (and bristlebird calls), and have been checking possibilities in their District. Some possible sites have been located, but not yet checked by research staff. More interestingly, when Brenda Newbey and Shapelle McNee were doing work in the Walpole area in connection with Ground Parrots, they were taken to the site of a possible bristlebird sighting. When they were at this site, a possible bristlebird call was heard, but time and weather conditions did not permit closer investigation. At the Recovery Team meeting in December 1996, it was decided to search this area more thoroughly in May 1997, and to inspect potential translocation sites tentatively identified by local CALM Regional staff. It is planned to do this in May 1997.

3. Response of bristlebirds to call playback

A poster on the findings from this work were presented at the Southern Hemisphere Ornithological Congress in October 1996. The text of the poster is attached.

WESTERN BRISTLEBIRD RESEARCH PLAN, ANNUAL REPORT: ATTACHMENT ONE.

WESTERN BRISTLEBIRD AT FITZGERALD TRACK POST FIRE

A population of at least 22 (assumed) pairs of Western Bristlebirds (WBBs) was known to occur along and near Fitzgerald track, the most recent survey being in July 1994. In October 1994, all except one of these known WBB locations was burnt out. Since then, three surveys have been carried out. Results of those surveys are summarised in Table 1.

Table 1: Locations and numbers of Western Bristlebirds near Fitzgerald Track during three surveys.
Areas A, B, C and D, and points X and Y are marked on the attached map. Area A is the part of Fitzgerald track that is north of the firebreaks; Area B is on Fitzgerald Track south of the firebreaks; Area C is on the firebreaks to the east of Fitzgerald Track; Area D is on the firebreaks to the west of Fitzgerald Track. Point X is at the junction of Fitzgerald Track and the southernmost firebreak and point Y is at the junction of Fitzgerald Track and the northernmost firebreak. Note: 1 = one calling bird; 1p = one pair (birds heard dueting); * = WBB not re-located.

Area/ site	Old site name(s)	Location	Nov 1994	Aug 1995	Dec 1996
A					
1	TT30-B	0.9 km - Y (100m 246°)	1p	*	1p
2	TT30-C	0.9 km - Y (50m 308°)	1p	1	1
3	TT30-A	0.9 km - Y (>100m 296°)	1p	*	1p
4	-	2.5 km - Y	-	-	1p
Total			**3**	**1**	**4**
B					
1	SS48-1	5.6 km - X (330 m W)	1p	*	*
2	SS48-2	5.6 km - X (100 m W)	1p	1p	1
3	SS48-3	5.6 km - X (300 m W)	1p	1	*
4	S58-1	5.5 km - X (100 m NE)	1	*	*
5	S58-2	5.5 km - X (50 m E)	1p	*	*
Total			**5**	**2**	**1**

C					
1	T70-1, B1	1.9 km - X (25 m NW)	l	lp	lp
2	B6	1.8 km - Y (70 m NW)	-	l	l
3	B7	1.7 km - Y (20 m NW)	-	lp	lp
4	T70-8, B9	1.0 km - Y (170 m SE)	lp	l	lp
5	T70-6, B10	1.05 km - Y (65 m SE)	lp	l	lp
6	T707, B8/11	1.55 km - Y (20 m SE)	lp	lp	lp
7	T70-5, B12	1.7 km - Y (90 m SE)	lp	l	l
8	TT29-A/3	1.4 km - X (100 m SE)	l	l	lp
9	TT29-A/2	1.4 km - X (100 m ESE)	l	*	*
10	T29-A/4	1.4 km - X (100 m S)	lp	lp	*
11	-	1.3 km - X (100 m S)	-	-	lp
12	TT29-6	0.75 km - X (100 m SE)	-	lp	*
13	TT29-D/2	1.6 km - X (27 m S)	l	l	*
14	T70-9	1.95 km - Y (35 m SE)	l	*	*
15	T70-10	1.88 km - Y (20 m SE)	l	*	*
16	-	1.37 km - Y (50 m SE)	-	-	l
17	-	1.65 km - Y (40 m SE)	-	-	l
18	-	1.4 km - Y (150 m NW)	-	-	l
19	TT29-1, T70-2, B3	1.8 km - X (NW)	lp	lp	lp
20	T70-2, B4	1.75 km - X (NW)	l	l	*
21	T70-3, B5	1.6 km - X (NW)	lp	l	l
22	T70-4, B5	1.65 km - X (NW)	l	l	*
Total			**15**	**15**	**14**
D					
1	S8-1, B14	2.1 km - Y (120 m SE)	l	l	*
2	S8-2, B13	2.3 km - Y	l	l	*

3	SS50	(80 m SE) 2.2 km - X (.....SE)	1	1p	*
Total			**3**	**3**	**0**
Grand Total			**26**	**21**	**19**

Shapelle McNee and Brenda Newbey, December 1996

WESTERN BRISTLEBIRD RESEARCH PLAN, ANNUAL REPORT: ATTACHMENT TWO.

TEXT OF POSTER PRESENTED AT THE SOUTHERN HEMISPHERE ORNITHOLOGICAL CONGRESS, ALBANY, WA, OCTOBER 1996

RESPONSE OF WESTERN BRISTLEBIRDS TO CALL PLAYBACK

INTRODUCTION

The Western Bristlebird (*Dasyornis longirostris*) is an endangered passerine restricted to infrequently burnt heathlands on the south coast of Western Australia. Pairs appear to occupy home ranges rather than conventional territories.

As part of the Research Plan for the Western Bristlebird it is proposed to translocate birds to new localities. However, catching them has proven difficult. The present study was designed to test which kinds of calls resulted in the maximum response from individual bristlebirds following playback.

[picture of WBB]
[map of former/current distribution]

RESPONSES

It was assumed that a response was obtained if the subject bird called, moved toward the source of the playback equipment or was seen close to the observer. If the subject bird responded with calls, this was noted. Approach of the subject bird was judged by the source of calls coming closer to the observer or by a bristlebird being seen close to the observer. Statistical significance of observed differences were assessed using χ^2 tests.

1. Playback from within home range vs boundary

	Boundary	Within	χ^2
Response	19	24	0.06
No response	9	13	ns

n=65; ns = not significant, * = 0.05>P>0.01, ** = 0.01>P>0.005, *** = P<0.005.

2. Own calls vs call of near neighbour

	calls		χ^2
	own	near neighbour's	
heard to call	14	13	0.26
not heard	4	7	ns
approached	12	7	2.64
unknown	6	13	ns
seen	9	4	2.57
not seen	9	16	ns

n=38; ns = not significant, * = 0.05>P>0.01, ** = 0.01>P>0.005, *** = P<0.005.

3. Own calls vs all other calls (neighbour or unknown)

	calls		χ^2
	own	other	
heard to call	14	29	1.1
not heard	4	19	ns
approached	12	14	6.2
unknown	6	34	*
seen	9	6	8.5
not seen	9	42	**

n=66; ns = not significant, * = 0.05>P>0.01, ** = 0.01>P>0.005, *** = P<0.005.

4. Known calls (own or neighbour) vs unknown call

	calls		χ^2
	known	unknown	
heard calling	27	16	0.82
not heard	11	12	ns
approached	19	7	3.2
unknown	19	21	ns
seen	13	2	5.2
not seen	25	26	*

n=66; ns = not significant, * = 0.05>P>0.01, ** = 0.01>P>0.005, *** = P<0.005.

Allan H. Burbidge and G.T. Smith