WESTERN BRISTLEBIRD RESEARCH PLAN

ANNUAL REPORT

JANUARY 2001

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for the WA South Coast Threatened Birds Recovery Team

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WESTERN BRISTLEBIRD RESEARCH PLAN

Summary

During 2000,
(1) several areas were surveyed as part of post-fire monitoring in Fitzgerald River National Park; at one of these, recolonisation has still not occurred after seven years,
(2) an extensive wildfire in late December 2000 burnt a significant amount of bristlebird habitat in the Two Peoples Bay area,
(3) monitoring of the translocation site at Nuyts Wilderness, Walpole-Nornalup National Park, showed that at least four of the eight birds translocated in 1999 were still present, indicating that the translocation is likely to be successful, and
(4) a further seven birds were translocated from Two Peoples Bay to Nuyts Wilderness, Walpole-Nornalup National Park.

WESTERN BRISTLEBIRD RESEARCH PLAN

Annual report, January 2001

Progress on research has departed significantly from the schedule specified in the Research Plan (Cale and Burbidge 1993), primarily due to the initial difficulties in locating a suitable translocation site. Following the discovery of an apparently highly suitable site at Nuyts Wilderness, Walpole-Nornalup National Park, in early 1999, eight birds were translocated in that year.

The following report is a summary of work carried out in 2000.

1. Micro-habitat requirements

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

2. Translocation

Monitoring of the release site in October 2000 revealed that at least four birds out of the eight translocated in 1999 were still present. A further seven birds were translocated in October 2000. Details of these activities are provided in the attached report to the Recovery Team. The project was also reported on in WATSNU (Burbidge 2000).

3. Post-fire monitoring

Three areas in Fitzgerald River National Park (FRNP) were surveyed by Shapelle McNee and Brenda Newbey in October 2000: (a) Fitzgerald Track, (b) Woolbernup and (c) Drummond Track.

(a) Fitzgerald Track

Bristlebirds were found to be occupying 23 territories/home ranges in October 2000. While there has been some variation from year to year, the number of birds present now is similar to that in 1994. There has been no evidence of birds moving back into areas burnt in October 1994.

(b) Woolbernup

At this site, 20 territories were found to be occupied post-fire in October 1998.In October 2000, 28 occupied territories were found, but most of this increase is attributable to an increase in search effort. There was some evidence that birds were utilising regrowth vegetation.

(c) Drummond Track

The small population at Drummond Track appears to be in decline. There were seven occupied territories in 1997, four in 1998 and three in 2000. The reason for this drop in numbers is unknown.

Conclusions from recent monitoring

The most interesting data come from Fitzgerald Track, where annual monitoring has shown no significant change in numbers over a seven year period. During this time there has been no re-colonisation of the area burnt in October 1994. This is in contrast to the pattern near Two Peoples Bay where recolonisation has been known to occur after about two years. However, rainfall is rather higher at Two Peoples Bay, and vegetation growth is therefore faster, meaning that the habitat is likely to recover sooner following fire.

4. Wildfire at Two Peoples Bay

A severe wildfire burnt an area of 6300 ha near Two Peoples Bay between 28 and 30 December 2000. The fire started from a lightning strike in the Angove Water Reserve to the north of Two Peoples Bay. It burnt over 3000 ha in the Angove Water Reserve, about 1700 ha in the Two Peoples Bay Nature Reserve and about 250 ha in the Boulder Hill Reserve. Each of these reserves contained Western Bristlebird habitat.

The number of bristlebirds lost in this fire is unknown, but is likely to be tens of birds, perhaps about a hundred. This equates to a significant impact on the local population. We are currently investigating the possibility of carrying out a complete census of bristlebirds in the Two Peoples Bay area in spring 2001. This would include a detailed investigation of the fire boundary and of any remaining unburnt remnants within the fire area. This will provide a much improved estimate of the total population size and a basis for documenting post-fire recovery. It is expected that post-fire re-colonisation will occur more quickly than in the drier habitat found in Fitzgerald River National Park. This kind of knowledge will be valuable when making future fire management decisions.

References:

Burbidge, A.H. (2000) Bristlebirds – they're back! *WATSNU* 7(2): 1-2.

Cale, P. and Burbidge, A.H. (1993) Research Plan for the Western Ground Parrot, Western Bristlebird and Western Whipbird. Unpubl. report to ANPWS. (51 pp).

Attachment:

Translocation and monitoring of the Western Bristlebird, spring 2000. Report to Recovery Team, December 2000

Attachment: TRANSLOCATION AND MONITORING OF THE WESTERN BRISTLEBIRD, SPRING 2000

Report to Recovery Team, December 2000

Relevant approvals:

CAEC / 13 /2000 and translocation proposal approved by Director of Nature Conservation 21/9/00.

Personnel Involved:

The major reason for the success of the bristlebird translocation project has been due to the way in which CALM staff from CALMScience Division, South Coast Region and Southern Forest Region, together with volunteers from Perth, Albany and Walpole, all worked co-operatively to help secure the future of this threatened species. The people involved directly in the project during spring 2000 are listed in Table 1. Some other CALM staff and volunteers were involved in the 1999 translocation and subsequent monitoring. Many thanks to all those who helped!!

Table 1: CALM staff and volunteers involved in bristlebird monitoring and translocation in spring 2000:

Karlene Bain
Carl Beck
Andrea Bidwell
Allan Burbidge
Sarah Comer
Lawrence Cuthbert
Neil Daly
Greg Freebury
Sandra Gilfillan
Neil Hamilton
Isaac Lee
Ted Middleton
Gary Muir
Jim Rolfe
Mark Spice
Colin Steele
Kath White
Peter Wilkins

Release Site Monitoring

Monitoring was carried out at various times during the year by CALM staff and volunteers from Walpole. This showed that at least some birds were persisting at the translocation site.

In October 2000, two observers spent three days intensively monitoring that part of the release area thought to contain the most suitable habitat. This area is bisected by a 1.8 km transect put in by Walpole CALM staff and volunteers during spring 1999. This is marked as a row of dots running roughly north-east from Boggy Lake in Figure 1. Most monitoring has been done from this transect.

At least four birds from the eight translocated to Nuyts Wilderness in 1999 were still present in October 2000 (see Figure 1). One male was detected at the eastern end of the monitoring transect, about 1.6 km east of the release site. A male and a female were heard calling about half way along the transect, about one kilometre east of the release site. Another male was heard calling near the Mt Hopkins Track, A second bird was heard here in November 2000; this bird may also have been one from the 1999 translocation.

Overall, this is an excellent and encouraging result.

2000 Translocation

We translocated an additional seven Western Bristlebirds from Two Peoples Bay Nature Reserve to Nuyts Wilderness in Walpole-Nornalup National Park in late October 2000. Relevant notes follow.

Captures

Birds were captured using the method developed for male Noisy Scrub-birds (tape playback to attract birds to a pull net) and applied successfully to bristlebirds in 1999. Seven birds were caught in 19 attempts at 17 net sites. No signs of stress were noted in any of the birds captured, other than normal responses of passerine birds in capture situations. One bird had an injured foot or leg, first noticed some time after recapture from the aviary. The injury appeared to be consistent with over-stretching of a ligament or muscle. The cause of the injury is not known, but the leg showed recovery during the following 24 hours. Upon release at the translocation site, the bird moved off in a manner similar to other birds, with no apparent lasting effects of the injury.

Using current knowledge it is not possible to determine the sex of a bird from morphometric characters. A small number of feathers was collected from each bird, together with a small blood sample, to allow determination of sex using DNA analysis methods. Results are not yet available, but examination of other available evidence (morphometric data and field observations of behaviour of calling birds) suggests that both males and females were caught.

Faecal samples were also collected for parasite screening at the Animal Health Laboratories of Agriculture WA, Albany. Tests were run for the detection of oocytes, cysts and eggs of protozoans and helminths. Results of all tests on samples from all seven birds were negative except that in the sample from one bird (WBB11) there was a very low number of eggs of a nematode, *Capillaria*. This is apparently rare in wild birds in Australia but the full implications are not yet understood. Current work (S. Comer *et al.*) on samples from Noisy Scrub-birds and other litter foraging birds from Two Peoples Bay will help reveal the significance of this finding.

Aviaries

As in 1999, birds were held for up to five days in the aviaries at Two Peoples Bay until taken to the release site. As in 1999, all birds appeared to adapt well to aviary conditions. Some birds sang in the aviary. Weight change ranged from -1.5% to +11%. All but one bird gained weight; the one that did not, lost 0.5 g.

Behaviour at Release Site

At the release site, a number of birds were heard calling on the first day or the next morning after release. At least two birds seemed to have paired up at the release site (as judged by dueting of 'A' and 'B' calls).

Singing, particularly dueting, is an encouraging sign, as it indicates that birds are finding enough food to behave normally toward other birds in the way they would at Two Peoples Bay.

Radio Tracking

Radio transmitters were placed on the base of the tail of one bird, and on the back of three others. However, two fell off the back (complete with feathers) and the tail plus transmitter fell off in the holding boxes during transportation. The remaining transmitter stayed on for 4-5 hours following release, allowing the collection of a small amount of post-release data. As far as we could tell, there were no adverse effects brought about by this procedure other than the loss of 2-3 tail feathers in one case, and a small patch of feathers on the back in the other three birds.

Trials of a harness (on a non-threatened species) are being considered for the coming year. If this is successful, it would be worth considering for bristlebirds.

Capture Site Monitoring

Monitoring at Two Peoples Bay has been difficult, mostly because of the difficulties in gathering and interpreting appropriate data. One difficulty is in knowing the number and sex of birds present at a site before capture is attempted. In several sites this year, at least three birds were found singing at the same site, in each case apparently all as part of a single social group. In each instance, there were at least two birds giving 'A' calls and one giving 'B' calls. It is possible that the sex ratio at Two Peoples Bay is skewed in favour of males. In any case, where capture attempts were made at sites where birds were captured last year, at least two, and sometimes three, birds were present this year, suggesting that replacement has occurred.

Conclusions

As in 1999, I consider the project to have been successful in terms of our management of the birds and their response to that management. Monitoring results to date from the translocation site are very encouraging. In addition, a range of participants gained significant experience in translocation and monitoring techniques.

Dr Allan H. Burbidge
for South Coast Threatened Birds Recovery Team
14 December, 2000.

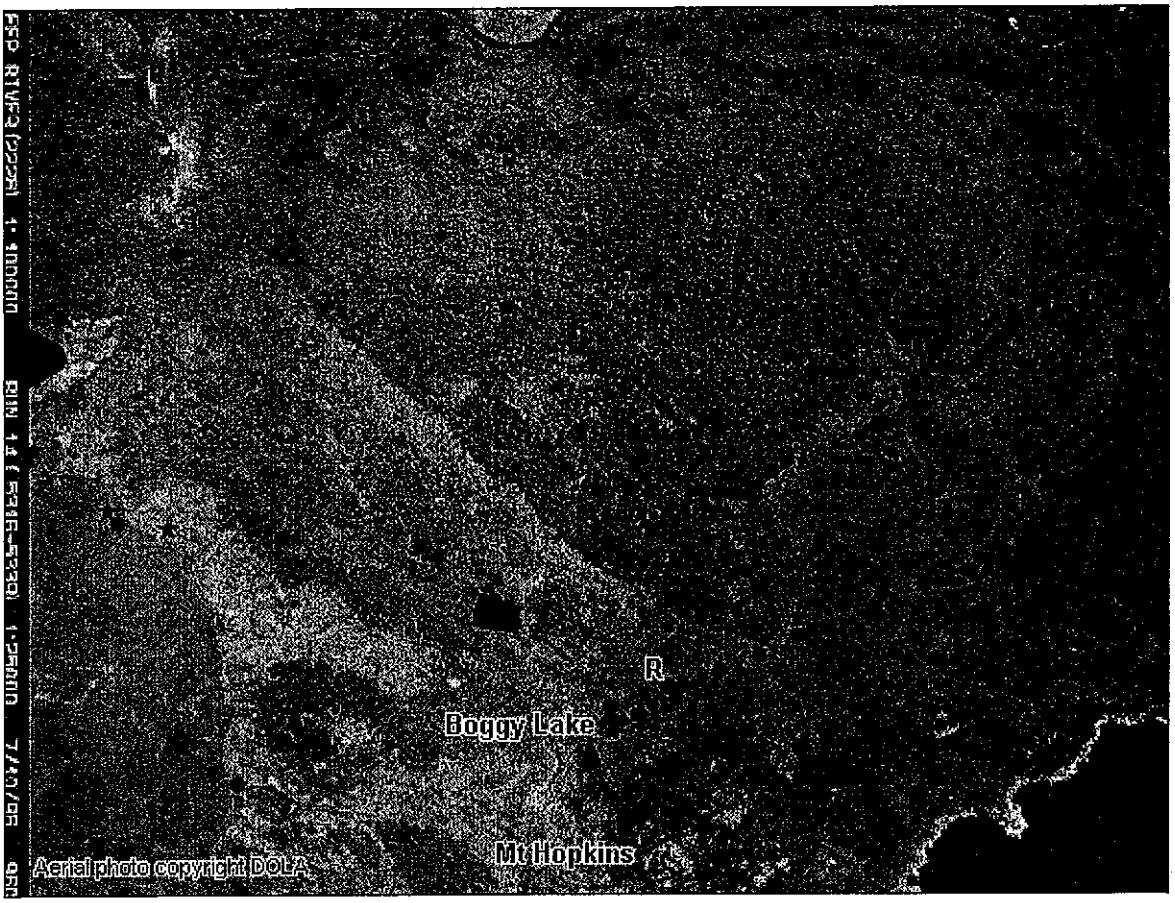

Figure 1:Locations of Western Bristlebirds (stars) heard calling in October 2000, before the current translocation.