



# Global Re-introduction Perspectives: 2010

Additional case-studies from around the globe  
Edited by Pritpal S. Soorae



IUCN/SSC Re-introduction Specialist Group (RSG)





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## Attempted re-introduction of the western bristlebird in south-western Australia

Allan H. Burbidge<sup>1</sup>, Sarah Comer<sup>2</sup>, Alan Danks<sup>2</sup>, Abby Berryman<sup>2</sup>  
& Neil Hamilton<sup>1</sup>

<sup>1</sup> – Department of Environment and Conservation, PO Box 51, Wanneroo, Western Australia 6946, Australia ([allan.burbidge@dec.wa.gov.au](mailto:allan.burbidge@dec.wa.gov.au))

<sup>2</sup> – Department of Environment and Conservation, 120 Albany Highway, Albany, Western Australia 6330, Australia

### Introduction

The passerine family Dasyornithidae includes only one genus (*Dasyornis*) and is endemic to southern Australia. All three species are considered threatened, with the western bristlebird (*D. longirostris*) being considered Vulnerable by the IUCN and both State (Western Australian) and Federal wildlife conservation agencies. It is also listed under CITES. The species is endemic to the south coast of Western Australia, where it currently occurs from near Albany east to Hopetoun; its historical distribution is poorly known, but it previously also occurred west of Albany, as far north as Perth. Western bristlebirds are cryptic, primarily insectivorous, and occupy sometimes overlapping home-ranges in near-coastal open to closed, floristically diverse heath 0.5-1.5 m high (e.g. Smith, 1987). The only feasible census method is by aural survey. The species has long been known to be threatened, and susceptible to inappropriate fire, particularly extensive wildfire (Burbidge, 2003). The whole population number of the western bristlebird is not known with certainty, but in 2001 was considered to be about 620 pairs. However, due to recent wildfires, it is now about 320 pairs, about two-thirds of which are in the Two Peoples Bay/ Waychinicup/Mt. Manypeaks area, with the remaining 125 in the Fitzgerald River National Park.

### Goals

- Goal 1: The overall aim was to increase the number of distinct subpopulations and decrease the risk of loss due to wildfires.
- Goal 2: Identification of potential translocation sites with suitable habitat, and appropriate management.
- Goal 3: Development of translocation techniques for bristlebirds.



Western bristlebird © S. J. Nevill



Radio-tracking released birds © Abby Berryman

- **Goal 4:** Establishment of at least one new sub-population near Walpole, west of Albany, but within the known historical range.

### Success Indicators

- **Indicator 1:** Persistence of bristlebirds at a site for a year would indicate that translocation methods were appropriate, and that site selection was likely to have been appropriate.
- **Indicator 2:** An increase in the number of singing males [as indicated by 'A' calling birds; Smith (1987)] would

confirm that target site selection was appropriate, and that generation of a self-sustaining population might be feasible.

- **Indicator 3:** Overall success would be met through the establishment of a self-sustaining population-overall risk to the total population from fire would be reduced, and the geographic extent of the species increased.

### Project Summary

**Feasibility:** Translocation techniques used were based on those developed for the similar-sized noisy scrub-bird (*Atrichornis clamosus*) (Danks, 1994). In addition, facilities and equipment developed for the scrub-bird translocation program were able to be utilised for the bristlebird work. The target area was known to include similar habitat to that occupied by western bristlebirds east of Albany, and was known to contain vegetation with a mix of fire ages, including an extensive area that was long unburnt. The target area was in a national park, which provided security of tenure, and local managers were confident of being able to provide appropriate fire management, both before and after translocation. Local managers were also conducting a low-level cat control program, which was intensified in the proposed release area.

**Implementation:** In the austral spring of 1999 and 2000, a total of 15 western bristlebirds were captured from Two Peoples Bay Nature Reserve, held in aviaries (from 1-5 days) until several birds were available for release, and the weather at the release site was predicted to be favourable. In the aviaries, all birds settled in readily, and all commenced feeding within an hour, with almost all feeding on the supplied invertebrates within 15 minutes of release into the aviary. Birds lost weight following capture, but re-gained weight in following days, and most were released at greater than capture weight. One male started singing territorial songs within 24 minutes of being placed in an aviary. Birds were released in the Nuyts Wilderness in the Walpole-Nornalup National Park, near Walpole, about 130 km west of Albany. In October-November 2007, a further

three birds were caught at Two Peoples Bay, held for up to three weeks, and translocated to D'Entrecasteaux National Park, less than 10 km from the earlier release site, and in contiguous habitat. In the 2000 release, faecal samples were collected and screened for oocytes, cysts and eggs of protozoans and helminths. Results of all tests on all seven birds were negative except that the sample from one bird contained a very low number of eggs of a nematode, *Capillaria*. In 2007,



Releasing western bristlebirds © A. H. Burbidge

we took blood and faecal samples from all three birds. All were clear except one male, whose heterophyl/lymphocyte ratio indicated possible stress or virus. As the sample was taken towards the end of a period in the aviary, it was concluded that stress was the most likely cause. As wild birds would be expected to experience some stress when brought into captivity, this was not thought to be an issue of concern.

**Post-release monitoring:** All birds were fitted with small radio-transmitters to facilitate monitoring, particularly as females do not sing as much as males, and it was unknown how much males would sing at the release site. However, most males started singing territorial ['A' song; Smith (1987)] within a day of release. Females are less likely to be heard calling, but on the morning after release of the first four birds in 1999, at least three of them were heard calling and, as judged by frequent dueting, two birds seemed to have paired up already. This pair moved about 1.8 km through suitable vegetation during the first weeks following translocation. In 2000, birds were released at the same location, and another two birds also began dueting within 24 hours of release. We interpreted the early singing, especially dueting, to mean that the birds were finding enough food to behave normally towards other birds. It suggested the habitat at the release site was appropriate, and it facilitated censusing this otherwise cryptic species. Despite a severe large wildfire started by lightning in March 2001, which burnt approximately 2,800 ha of the release area, at least seven bristlebirds were still calling in late 2001, and at least five birds in late 2002.

However, surveys conducted from October 2003 to mid 2005 found only one bird calling, and no bristlebird calls were heard in October 2005 or later surveys despite thorough searches. Interestingly, the bird heard in 2003 had moved back to the vicinity of the release area, where there had been an intense fire 2.5 years previously. In the case of the 2007 release, all three birds were radio-tracked and were heard calling in the weeks following release, and the female and one of the

# Birds

males appeared to have formed a pair. Interestingly, this female and the first male were caught in the same home range at Two Peoples Bay, but following translocation the pair did not reform, the female instead pairing up with the second male; they were still together nearly two months later. However, there was no evidence of persistence of any of these birds beyond four months. Local volunteers played a major role in the ongoing monitoring of the released birds.

## Major difficulties faced

- Bristlebirds proved very difficult to catch in 2007, but reasons for this are unknown.
- We captured twice as many males as females, making it difficult to establish a founder population with an unbiased sex ratio.
- A major wildfire in March 2001 burnt approximately 2,800 ha of the release area. The birds avoided the fire but it still represented a major difficulty because it made large areas of habitat unsuitable for bristlebirds. Nevertheless, 6-7 months later, at least seven birds were still present nearby.
- Despite attempts to control feral cat populations, some large cats were observed in the area following the translocations, and it is believed that cat predation may have contributed to the eventual failure of the translocations.

## Major lessons learned

- A well-functioning recovery team, including both researchers and on-ground managers, meant that well-informed decisions could be applied quickly when difficulties and challenges were encountered.
- Considerable volunteer assistance was required throughout the project, particularly in monitoring.
- Five birds persisted for at least two years and one bird for at least five years, despite a major wildfire and the presence of feral cats. This satisfied Success Indicator 1, and suggested that the translocation methods themselves were appropriate, but release site selection is important and ongoing management critical.
- The lack of long term persistence (or establishment) of the population suggested that effective predator control may be essential for success. However, it is also possible that year-round food supply might have been inadequate, but we do not have data to test this suggestion.

## Success of project

Highly Successful	Successful	Partially Successful	Failure
		√	

### Reason(s) for success/failure:

- The logistics of the project did not cause major difficulties, because a) we used infrastructure and built on techniques and procedures for scrub-bird translocations and b) all major decisions were based on productive interactions within a team involving persons with specialist knowledge of threatened birds

including bristlebirds, and field-based staff with specialist knowledge of land management, particularly in relation to fire.

- Habitat at the release sites seemed to have been appropriate, at least for short-term persistence.
- The founder population size was too small, and the sex ratio biased.
- Most birds moved into vegetation of a younger fire age than predicted, meaning that knowledge of habitat preferences was increased.
- The population did not persist, and while the reasons for this are unknown, cat predation is suspected to be part of the cause. The large wildfire may also have played a part, by forcing birds into less suitable habitat.

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