

Mount Lofty Ranges Southern Emu-wren Translocation

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Summary

In 2001–2002, 46 Mt Lofty Ranges Southern Emu-wrens (*Stipiturus malachurus intermedius*) were translocated from Deep Creek Conservation Park to Cox Scrub CP, a site from which the endangered South Australian bird was extirpated by fire in 1983. This was the first attempted reintroduction of the species. Although initially promising, with successful reproduction by founders and progeny, the population declined. The translocation did not satisfy success criteria, but a small population, albeit of doubtful viability, persists and the trial provided information to support further translocations.

Background and Aims

The MLRSEW is a small (7 g) passerine confined to the South Mt Lofty Ranges–Fleurieu Peninsula in SA. It is endangered (Aust., SA) due to restricted, fragmented and declining range and habitat, which is characterised by low dense vegetation (swamp, heath). The MLRSEW is dispersal limited because of poor flying abilities and many former sites may be unoccupied due to isolation. A translocation in 2001–2002 aimed to re-establish the MLRSEW in Cox Scrub CP using birds from a large population in Deep Creek CP. A key success criterion required as many individuals present at the end of the 3rd breeding season as was transferred.

Methods

- Habitat/population assessments^{1, 2} and translocation proposal³.
- Source-population surveys to identify putative pairs for transfer.
- Translocation just prior to spring-summer breeding season.
- Individuals sourced from several areas to hedge against genetic uniformity.
- Individuals trapped in mist nets using call-luring; putative pairs targeted.
- 30 individuals (1:1) translocated in 2001 and 16 (1:1) in 2002.
- Translocated individuals colour-banded.
- Road transport to release site (1 h), then hard release, mostly on day of capture.
- Pairs held, transferred and released together.
- Transfers temporally staggered due to trapping constraints.
- Releases in 2001 spatially staggered across pre-selected locations.
- Releases in 2002 at two locations, vicinity settled individuals from 2001.
- Thorough monitoring at release and source sites during 2001–2004.

Results

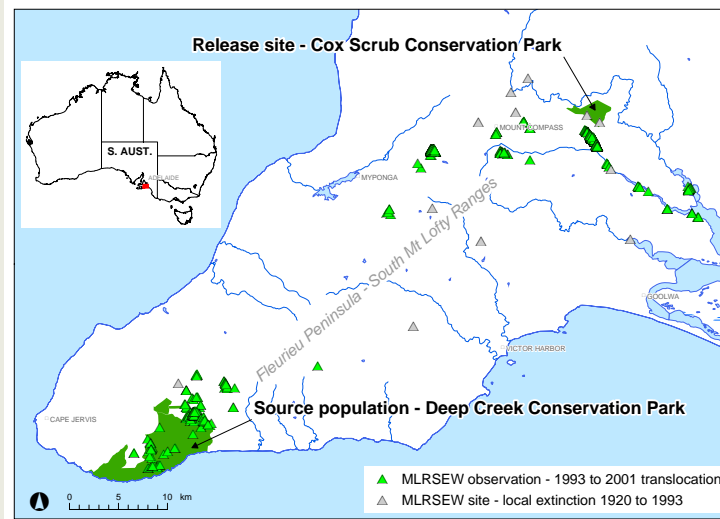
- 53% of 1st cohort observed post-release, but no more than 25% of 2nd cohort.
- All birds dispersed from release locs (0.2–1.8 km), but some moved to release locs.
- Only 33% of settled pairs were trapped as the same pair.
- Founder-group progeny successfully bred.
- Only ~ half of all pairs were recorded breeding each season.
- Productivity in 1st and 2nd seasons (1.6–2.8 offspring/breeding-pair/season) > 3rd.
- Annual (apparent) survival of founders averaged only 32%.
- Some unpaired breeding-age recruits were widely separated.
- Most observations were in areas previously identified as suitable or optimal habitat.
- Substantial dieback of habitat occurred during very dry conditions of 2002–2003.
- Reoccupation was recorded at most source locations.

Conclusions

- Translocated MLRSEWs survived, settled and reproduced, but production did not offset substantial losses and the population declined.
- Likely factors contributing to poor performance include drought, undetected dispersal beyond the site, and widely dispersed unpaired recruits.
- In terms of relative habitat suitability, the pre-translocation habitat assessment was confirmed, but quality might not have been as adequate as thought.
- Future assessments of MLRSEW translocation feasibility should consider potential 'dilution effects' due to patch size.
- Micro-selection of MLRSEW release locations is probably unnecessary, since reintroduced individuals dispersed, apparently for reasons unrelated to habitat suitability.
- Translocation of paired MLRSEWs may be unnecessary, since most established pairs were not trapped as pairs, and new pairs quickly formed and bred.
- Despite not meeting success criteria, successes relate to:
 - Establishment of a breeding population that persisted for at least several years.
 - Development/refinement of trapping, transfer and monitoring methods.
 - Enhanced knowledge of behaviour and habitat requirements.
 - Confirmation of the practicability of translocation.



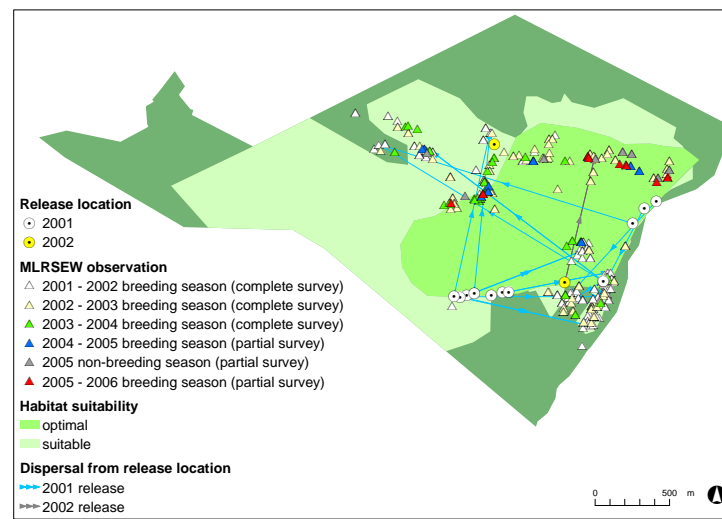
MLRSEWs are sexually dichromatic. Males have a blue breast and eye-brows. Tails comprise six long, filamentous feathers. MLRSEWs are secretive and very difficult to observe, typically moving quietly and cryptically through dense cover. Emu-wrens *Stipiturus* spp. are members of the passerine family Maluridae (Australian and New Guinean fairy-wrens). The genus is endemic to Australia.



Distribution of pre-translocation records and known local extinction sites.

Breeding Season	Survey	Pairs	Breeding Pairs	Offspring	MLRSEWs
2001–2002	complete	8	4	10–11	26–27
2002–2003	complete	12–14	8	13–16	20–25
2003–2004	complete	4	2	1	15–16
2004–2005	partial	5–6	3	5–6	16–17
2005–2006	partial	4?	2+?	?	8+?

Summary of post-translocation data for release site.



Distribution of post-translocation observations and known dispersals at the release site.



Habitat at the source site.



Habitat at the release site.

Acknowledgements

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