Progress Report SP 2013-021

Monitoring of threatened birds on Dirk Hartog Island

Animal Science

Project Core Team

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Approved and active

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Project Team	granted
Program Leader	granted
Directorate	granted

Monitoring of threatened birds on Dirk Hartog Island

AH Burbidge

Context

This project will develop and implement a monitoring program for the three extant threatened bird species on Dirk Hartog Island (DHI): (DHI southern emu-wren, DHI rufous field-wren, and DHI white-winged fairy-wren). This will allow assessment of the distribution, status and population trends of these species, and enable monitoring of change in relation to management actions.

Aims

- Determine historical and contemporary occurrence of threatened bird species across DHI.
- Model threatened bird occurrence in relation to vegetation characteristics
- Model and map potential occurrence of each species across the island
- Develop a robust monitoring program
- Clarify the conservation status of each of the threatened bird taxa

Progress

- Distance sampling techniques have been utilised in spring 2015, and preliminary population estimates calculated. It is estimated that there are 36650 southern emu-wrens, 24700 white-winged fairy-wrens and 20750 rufous fieldwrens on DHI.
- A phylogenetic analysis for the DHI rufous fieldwren has been further developed in collaboration with staff at the WA Museum. This suggests that there is little genetic differentation of the DHI form from other western rufous fieldwrens.

Management implications

- This baseline monitoring will assist in interpreting the response of the DHI extant fauna to removal of goats and cats, and weed control. It is clear already that the southern emu-wren is much less common in the southern part of the island, where grazing pressure has been more intensive in the past.
- There is little support for the rufous fieldwren on DHI to be listed as a threatened species.

Future directions

- Carry out further distance sampling to provide robust estimates of population density for each of the threatened bird taxa.
- Develop a monitoring protocol based on the distance sampling data, and then field test the protocol.
- Continue phylogenetic analyses to assist in clarification of the conservation status of each of the bird species.