

Progress Report SP 2018-025

Survival and dispersal of black cockatoos in south-west Western Australia

Perth Zoo Science

Project Core Team

Supervising Scientist

Peter Mawson

Data Custodian

Peter Mawson

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Project Team

granted

Program Leader

granted

Directorate

granted

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Context

There are three taxa of black cockatoos (*Calyptrorhynchus* spp.) endemic to south-west Western Australia. All three are listed as threatened (two endangered, one vulnerable), and all have national recovery plans. This project is designed to capture additional information on the ecology of all species and monitor recruitment in the wild. Monitoring survivorship of rehabilitated birds once released back into the wild is also undertaken.

Aims

- Monitor the recruitment of Carnaby's cockatoo at a number of sites across the species' range.
- Measure the health of nestlings of Carnaby's cockatoos at a number of sites across the species' range.
- Determine the availability of suitable nest hollows for Carnaby's cockatoo and investigate the value of artificial nest hollows to increase recruitment in the wild.
- Following veterinary treatment and rehabilitation, monitor the survival and dispersal of rehabilitated cockatoos (all three species) at release sites across their respective ranges.

Progress

- Banding was undertaken for 153 (105 as pullus and 48 rehabilitated) Carnaby's cockatoos, along with 5 Baudin's cockatoos (all rehabilitated) and 46 forest red-tailed black cockatoos (all rehabilitated).
- 108 Carnaby's cockatoos and three forest red-tailed black cockatoos were either retrapped/recovered, had their bands/ colour bands photographed in the field and their band number read or inferred. four of those band recoveries involved birds that were dead (3 Carnaby's cockatoos and one forest red-tailed black cockatoo).
- A research paper describing habitat use and flock size in Baudin's cockatoos was published in *Wildlife Research*.
- Analyses of banding data for Carnaby's cockatoo to determine a more accurate annual survival estimate was continued, along with annual survival estimates for rehabilitated Carnaby's and forest red-tailed black cockatoos.
- Work continued on a manuscript describing the costs of rehabilitating black cockatoos, relative to other types of conservation action.

Management implications

- This project has seen the successful release of 709 leg-banded rehabilitated cockatoos from three species (369 Carnaby's cockatoo, 48 Baudin's cockatoo and 292 forest red-tailed black cockatoo). The total number of cockatoos banded (all species and all ages) is now 1,911 from 18 years of work. The rehabilitation techniques and release protocols currently in use provide very high survival rates, contributing to the conservation of the species.

Future directions

- Complete assessment of the costs-benefits associated with the rehabilitation of black cockatoos and prepare a manuscript for publication.
- Determine costs associated with the deployment of artificial nest hollows in comparison to the repair of degraded natural nest hollows.
- Investigate historical and current survival estimates for Carnaby's cockatoo, and determine the survival estimates for rehabilitated Carnaby's and forest red-tailed black cockatoos.