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Conservation and management of the bilby in the Pilbara

Animal Science

Project Core Team

Supervising Scientist	Martin Dziminski
Data Custodian	Martin Dziminski

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Project Team	granted
Program Leader	granted
Directorate	granted

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M Dziminski, F Carpenter, L Gibson

Context

The greater bilby (*Macrotis lagotis*) is listed as vulnerable under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*. Increases in threats, including pressure from mining activities across the Pilbara, means that a greater understanding of the distribution, abundance and ecology of the bilby is necessary to ensure appropriate conservation and management measures are implemented. This project aims to increase our knowledge of the bilby in the Pilbara bioregion of Western Australia, and develop a regional survey and monitoring program. The current focus is to determine the distribution of the bilby in the Pilbara and to establish appropriate survey and monitoring techniques, including genetic approaches.

Aims

- Improve understanding of the distribution and demographics of bilbies in the Pilbara.
- Provide information to environmental regulators, resource development companies and contractors that will allow appropriate management to ensure the long-term persistence of the greater bilby in the Pilbara.
- Design, establish and implement a long-term monitoring program for bilbies in the Pilbara.

Progress

- A collaborative project with the Warralong Community, Roy Hill, and Greening Australia continued with a report describing the results of remote camera and sign plots for predator, feral herbivore and bilby occupancy finalised. Feral cat occupancy was high, measured at 0.79 from sign plots to 0.92 from remote cameras and a single fox was detected.
- A paper describing the application of the abundance monitoring approach developed in the Pilbara but applied to a translocated population in the Goldfields was published in *Rangelands Ecology & Management.*
- Diet analysis of bilbies using 144 scats from 17 populations across Western Australia was completed. Initial results indicate cossid moth larvae were common in the diet of bilbies in Pilbara populations, and the ratio of invertebrate to plant items was higher in Pilbara populations compared to Kimberley populations.
- Information on bilby occupancy survey, abundance monitoring and management has been provided to mining and consultancy companies.

Management implications

- Recommendations regarding standardised survey and monitoring techniques for bilbies in the Pilbara bioregion will maximise comparability across sites to better inform conservation management.
- Improved understanding of the conservation status of bilbies in the Pilbara and elsewhere in Western Australia, including preferred habitat, will inform future management of bilby populations and assist in the assessment of mining and development proposals.
- Geographically isolated and small populations of bilbies in the Pilbara highlight the importance of threat managements such as for unmanaged fire regimes.
- Surveys using remotely piloted aircraft show future potential but require refinement.
- Knowledge of bilby diet preferences will assist in habitat management and assessment of managed sites in terms of food resource availability.

Future directions

- Continue the monitoring at Warralong to assess the effectiveness of threat management to bilbies.
- Review progress against the bilby research program and identify future research directions.