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Conservation and management of the bilby in the Pilbara

BCS Animal Science

Project Core Team

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Update requested

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Project Team	granted
Program Leader	granted
Directorate	granted

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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 greater understanding of the distribution, abundance and ecology of the bilby is necessary to ensure appropriate conservation and management measures are implemented. This project will aim to increase our understanding of the bilby in the Pilbara Bioregion of Western Australia and allow for the development of 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 our 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

- Population viability analysis on how much land area is required to create reserves for bilbies completed and being submitted for publication.
- NatureMap theme for Bilby and other Pilbara threatened species completed and published online: http://naturemap.dec.wa.gov.au/Query.aspx?querytype=content&content=PILBFAUNA.
- User contributable online database system completed and published online: http://dpaw.gaiaresources.com.au/bdrs-core/home.htm.
- 243 records of bilbies entered in the database. Search of all published and unpublished literature was completed. Interviews with landholders and managers are ongoing to add data to the database.
- Poster and Information Sheets completed and published.
- Habitat modelling using above data currently being performed in collaboration with other Parks and Wildlife scientists.
- 369 sites in the Pilbara physically surveyed, resulting in 86 positive records of bilby presence or activity.
- External collaboration being developed for the use of remotely piloted aircraft for surveys for bilbies.
- Fine scale population monitoring technique using scats collected quantitatively to genotype individuals has been developed and is being refined.
- Three populations are being monitored using the above technique, in collaboration with stakeholders, with five more populations to be included in the near future.

Management implications

This research will develop consistent and refined survey and monitoring techniques for bilbies in the Pilbara Bioregion, with the potential for broader state and national applications. The data and records gathered will improve understanding of bilbies in the Pilbara, and allow for habitat modelling and predictions of bilby distribution. This in turn will inform future management of bilby populations and assist in the assessment of mining and development proposals.

Future directions

- Continue to develop collaboration on using remotely piloted aircraft to survey for bilbies.
- Model bilby habitat in collaboration with other Parks and Wildlife scientists.

- Include more populations to the long-term monitoring program, developing more collaborations with stakeholders to monitor bilbies in their tenure.