

Progress Report SP 2012-035

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 submitted for publication, and is in the review process.
- The link between NatureMap and the Pilbara Threatened Fauna User contributable online database system (<http://dpaw.gaiaresources.com.au/bdrs-core/home.htm>) has been implemented and is working. There are 2731 records from the Pilbara Threatened Fauna Database that are being ported directly into NatureMap.
- Habitat modelling is being performed in collaboration with other Parks and Wildlife scientists. This work is almost complete and will be submitted for publication in the next 2 months.
- Using the current technique of 2 ha plots, 578 plots targeted in likely bilby habitat have been surveyed across the Pilbara for the presence of bilbies. Evidence of bilbies was recorded at 172 of the surveyed plots.
- Two RPA (Remotely Piloted Aircraft) were trialled to survey for bilbies in May 2015. This data is currently being analysed.
- The fine scale population monitoring technique using scats collected quantitatively to genotype individuals has been developed and refined, and trialled at five locations. This work is being analysed and prepared for publication as a standard technique for monitoring abundance of bilbies.
- Five populations are now being monitored using the above technique, in collaboration with stakeholders.
- 2014-15 saw a significant increase in a public awareness campaign for bilbies in the Pilbara with information sessions and public presentations being delivered at Port Hedland, Newman and Millstream, as well as radio and newspaper articles.
- Poster and Information Sheets continued to be distributed to the public in the Pilbara.

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 elsewhere, 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 trial and refine remotely piloted aircraft to survey for bilbies.
- Continue a second year of monitoring at the five populations pending funding.
- Include more populations to the long-term monitoring program, developing more collaborations with stakeholders to monitor bilbies in their tenure, pending funding.