Concept Plan SP 2017-036

Conservation of the night parrot

Animal Science

Project Core Team

Supervising Scientist	Allan Burbidge
Data Custodian	Allan Burbidge
Site Custodian	

Project status as of Nov. 13, 2019, 3:23 p.m.

Approved and active

Document endorsements and approvals as of Nov. 13, 2019, 3:23 p.m.

Project Team	granted
Program Leader	granted
Directorate	granted

Conservation of the night parrot

Biodiversity and Conservation Science Program

Animal Science

Departmental Service

Service 6: Conserving Habitats, Species and Communities

Aims

Long-term aims

This proposal has four related, long-term aims:

1.Understand the basic ecology of the night parrot in WA, in order to create a detailed habitat suitability model for predicting night parrot distribution;
2. Determine the true status of the night parrot in WA through improvement in understanding of the population demography (size, distribution and structure);
3. Understand the bird's patterns of decline, and assess past, current and future threats acting on night parrot populations; and
4. Engage with Traditional Owners (especially Martu people) to encourage survey for night parrots and sensitive management for the species.

Work over the last two decades

The department has responded to high veracity opportunistic reports and has supported searching effort in and near Matuwa. Support has come mostly from Goldfields Region (up to about $10,000 p.a. over several years), supplemented by a considerable amount of volunteer time and in-kind support from a range of observers (some of whom are also DBCA staff members volunteering their time). Approximately 1 TB of sound recording files have been accumulated for analysis. Capture work last year was funded by Goldfields Region and the University of Queensland (Nick Leseberg PhD project). This opportunistic work has revealed that (1) habitat usage in WA differs from that in SA and Queensland, and (2) likely sites of occupancy are also sites that are often highly prospective for some forms of resource extraction, particularly for potash. Unfortunately, it is proving difficult to provide sound advice with respect to EIA, because we only have scant knowledge concerning distribution and feeding habitat preferences. Further resources are needed to enable the gathering of relevant information, especially concerning habitat preferences.

Work proposed under this concept plan

1. Assess the spatial extent of the population in the area in and surrounding Matuwa/Lorna Glen. This will then be extended to the entire Lake Carnegie catchment (in which suitable habitat persists, and in which various mining and exploration tenements also occur). This would then be followed by survey (or re-survey) of other known/prospective areas such as Fortescue Marsh, Lake Maitland, Lake Nabberu catchment.
2. (Undertaken concurrently with 1.) Determine where the birds are foraging, through the use of GPS tags. Specifically, we will identify vegetation types are they using and the spatial relationship between roosting and foraging habitat, and identify use and importance of water points.
3. Build on the above data to determine differences in the vegetation at occupied versus non-occupied roost sites and foraging sites. We will also determine the fire history and grazing history of the sites and identify and rank a suite of habitat variables at different scales to inform predictive models to aid in future searches. This information is needed to underpin successful management and guide survey efforts for EIA.

Expected outcome

Outcomes will include

1. Significantly increased knowledge of a high profile endangered and declining species
2. Robust models of night parrot habitat preference and movements in WA
3. Clear recommendations for management of EIA processes potentially impacting on night parrots
4. Successful engagement of Traditional Owners (especially Martu people) in conservation management relevant to night parrots, through workshops, participation in field survey, etc

5. Incorporation of ecological knowledge into management of night parrots on the conservation estate, on Aboriginal lands, and potentially on pastoral properties
6. Multiple publications varying from popular to technical to scientific.

Strategic context

The project will involve significant collaboration between DBCA staff and university researchers, and potentially NGOs. It will provide an invaluable contribution to ecological knowledge of one of Australia's most enigmatic bird species, and provide a unique opportunity for researchers to be involved from an early stage in the development and implementation of a management strategy for a highly threatened species. It will addresses the Australian Government's Science and Research Priority aimed at building Australia's capacity to respond to environmental change, and will contribute to recovery of a species in the Commonwealth's Threatened Species Prospectus (20 birds by 2020).

The project will contribute to a number of the strategic priorities listed in the Science and Conservation Division Strategic Plan. In the wildlife area, this includes strategic fauna and flora conservation programs, integrated science and conservation, conservation status of threatened species and ecological communities, recovery of key animal species, and off reserve conservation through partnerships with the community. With respect to fire, it includes priorities related to fire regimes that enhance biodiversity and fire in desert lands. It also addresses people priorities, including community engagement, conservation partnerships, and joint management.

Knowledge gained in this project will contribute to revising the guidelines for night parrot survey, requested by the OEPA in 2017, to improve survey for EIA. It will also contribute to development of the national recovery plan for night parrots.

An important component of this project will also be the training opportunities for both regional conservation staff and traditional owners in biodiversity conservation. Already there has been a number of field opportunities provided for regional staff. This fieldwork has included initial site assessment and installing and collecting acoustic recorders. With sufficient funding it will be possible to expand this training to include traditional owners, and even potential employment opportunities for indigenous rangers.

Expected collaborations

Collaborative arrangements already exist through the Night Parrot Recovery Team and other contacts. The prime research collaborator will be Nick Leseberg, PhD student at UQ, working on night parrot ecology and demographics. This will provide access to his expertise developed in the Queensland night parrot population, and provide access to other ecologists (e.g. in the NESP program) who may assist with habitat modelling. Other collaborators may include Dr Rob Davis (ECU) and his students and post-docs, and BirdLife Australia staff (Tegan Douglas, Vicki Stokes) and volunteers, who have existing relationships with traditional owners.

DBCA regional staff will continue their input - in particular, Jennifer Jackson (Goldfields Region) will have input to botanical sampling to assist in characterisation of roosting and foraging habitat, and Lyle Gilbert (Wildlife Officer, Goldfields Region) will continue to assist with servicing ARUs in the field. Once better knowledge of habitat preferences is developed, we will work with operations staff (e.g. Ryan Butler, Goldfields Region) to develop fire management plans for known and prospective habitat on DBCA managed lands.

The program lends itself well to engagement with Traditional Owners, especially Martu people, who have expressed interest in being involved in surveys and fire management. With respect to fire management, one of the key contacts will be Gareth Catt, the Healthy Country Coordinator with Kanyiminpa Jukurrpa.

Proposed period of the project

July 26, 2017 – July 26, 2020

Staff time allocation

Role	Year 1	Year 2	Year 3
Scientist	0.1	0.1	0.1
Technical	0.1	0.1	0.1

Role	Year 1	Year 2	Year 3
Volunteer	multiple	multiple	multiple
Collaborator	N. Leseberg, R. Davis et al.	N. Leseberg, R. Davis et al.	N. Leseberg, R. Davis et al.

Indicative operating budget

Source	Year 1	Year 2	Year 3
Consolidated Funds (DPaW)	$10k + fromGoldfieldsRegion; potentialinputfromBiodiversityandConservationScienceorexternalTBA$	$10K + fromGoldfieldsRegion$	$10k + fromGoldfieldsRegion$
External Funding	UQ $3k+$	TBA	TBA