EIA and the Night Parrot - The Challenge of a Cryptic and Poorly Known Critically Endangered Species.

Jen Jackson, Department of Biodiversity Conservation and Attractions (DBCA).

EIA and the Night Parrot: the challenge of a cryptic and poorly known Critically Endangered species

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Night Parrot: Bruce Greatwich

WILUNA / TARLPA

Claim
Determination
Prescribed Body Corporate
Land Access and Future Acts
Links

The Wiluna and Tarlpa native title claims were largely determined with the consent of the parties on 29 July 2013. The Federal Court held a hearing at Puwanu rockhole, a location within the determination area where Justice McKerracher determined the exclusive and non-exclusive native title rights and interests of the Wiluna people over the respective Wiluna and Tarlpa claim areas.

Night Parrot

Characteristics

- threatened (EN - EPBC / CR - WA)
- highly cryptic
- nocturnal
- at low population density
- difficult to detect

Photo: Nigel Jackett

Poorly known

- distribution?
- calling behaviour, food requirements, etc
- feeding habitat virtually unknown in WA
- some data on roosting, nesting habitat

Challenges for EIA

- Species presumed to be widespread (so questions will often arise)
- Little experience in survey for NPs (but see guidelines)
- Both land-use and management decisions complicated by lack of knowledge
- Challenges also for research

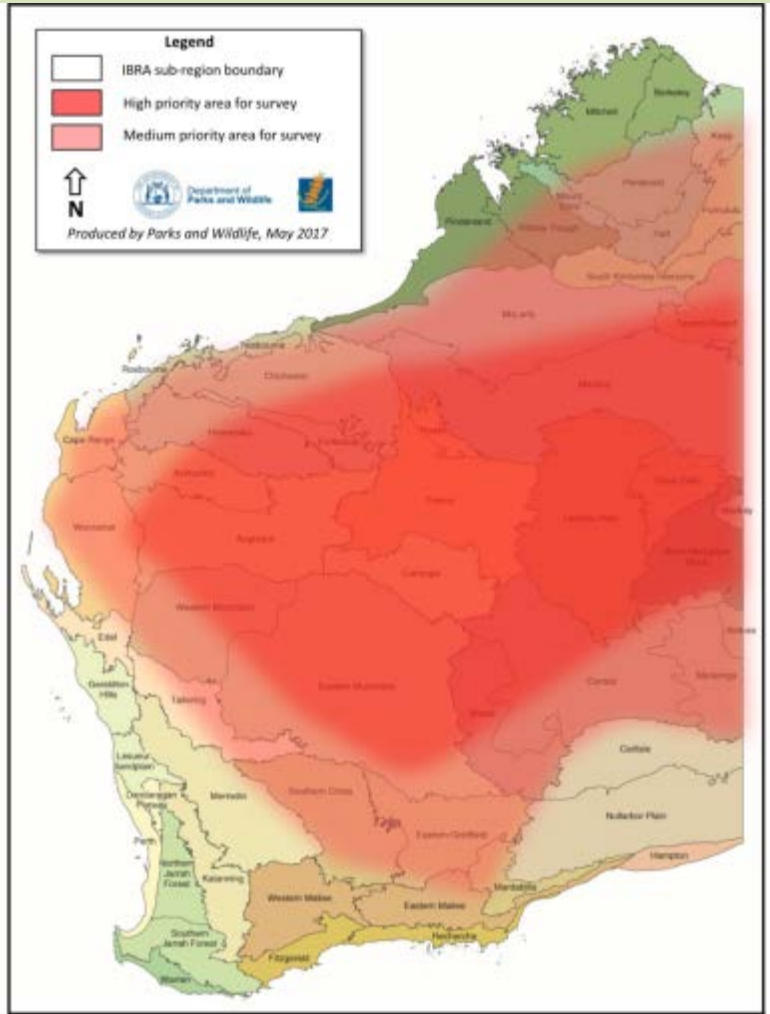


Figure 1: Priority areas for night parrot (*Pezoporus occidentalis*) surveys in Western Australia

Please note: This preliminary map is based on the best available information at the time of publication and may be modified in subsequent versions as new knowledge becomes available.

Opportunities

Significant contributions being made by

- EIA practitioners
- land managers/businesses/corporations operating in potential NP habitat

What can we do?

Adding distributional information

Experience in survey

Potentially learning about foraging habitat

Potential for collaboration with other researchers or managers

Work with and learn from traditional owners

DBCA NP Technical Advisory Panel

Allan Burbidge (DBCA; Chair)
Mike Bamford (Bamford Consulting Ecologists)
Rob Davis (ECU)
Tegan Douglas (BirdLife WA)
Bruce Greatwich (DBCA Kimberley Region)
Neil Hamilton (DBCA Science & Conservation)
Nigel Jackett (BirdLife, Broome)
Jennifer Jackson (DBCA Goldfields Region)
Manda Page (DBCA Threatened Species & Communities)

Providing advice to DBCA Biodiversity and Conservation Science concerning research and management priorities for Night Parrots

Overall goals for NPs in WA

Find out where to focus efforts and target threats:

1. Where are they?

2. How many are there?

3. What makes good roost habitat?

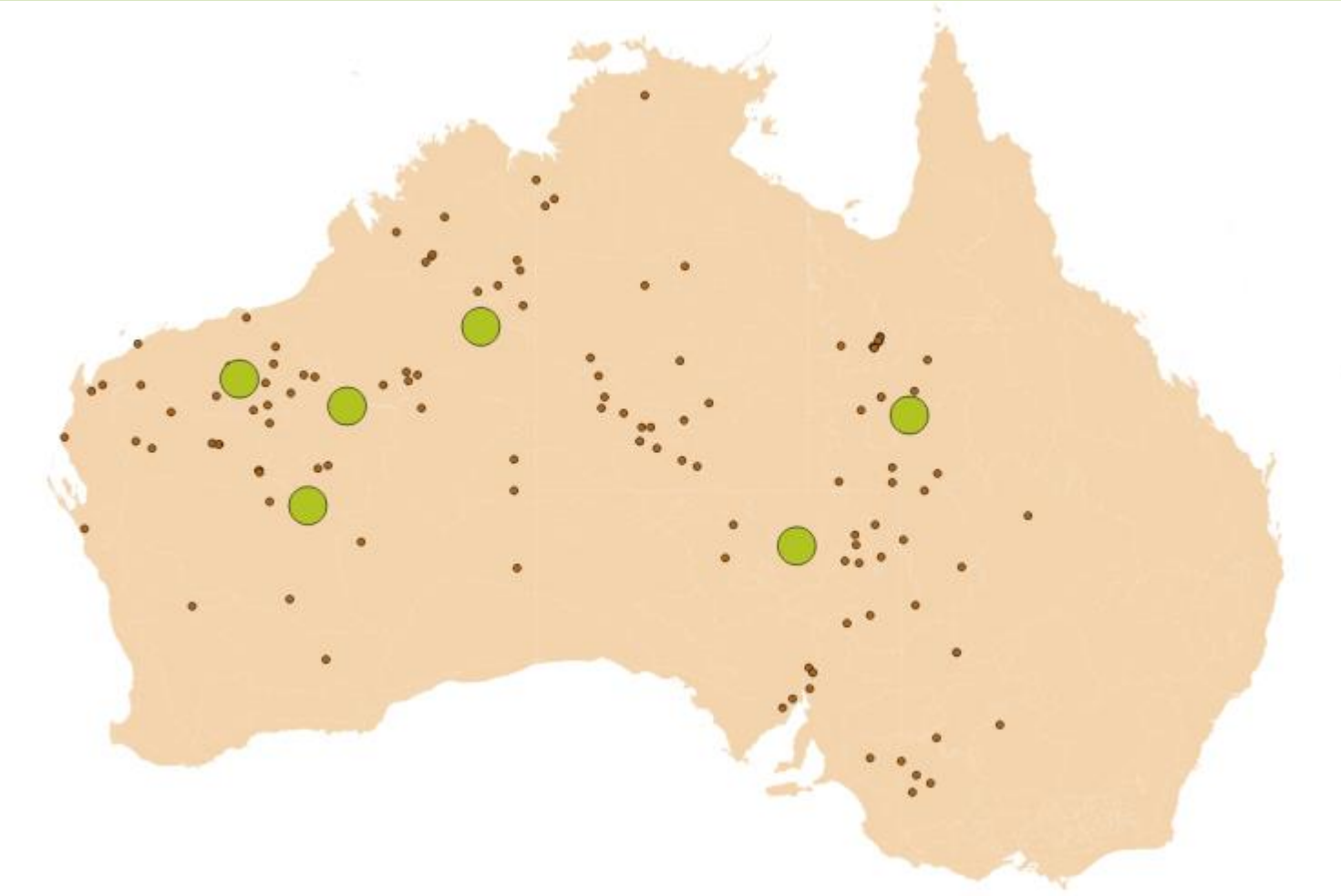
4. Where are the birds foraging?

Martin Thompson

And, importantly –

How can we best work together to promote increased understanding and improved outcomes for all involved?

What do we know at present?



Small symbols – historical reports with variable levels of veracity.
Large symbols – current known or high veracity.

NP Roosting/nesting Habitat

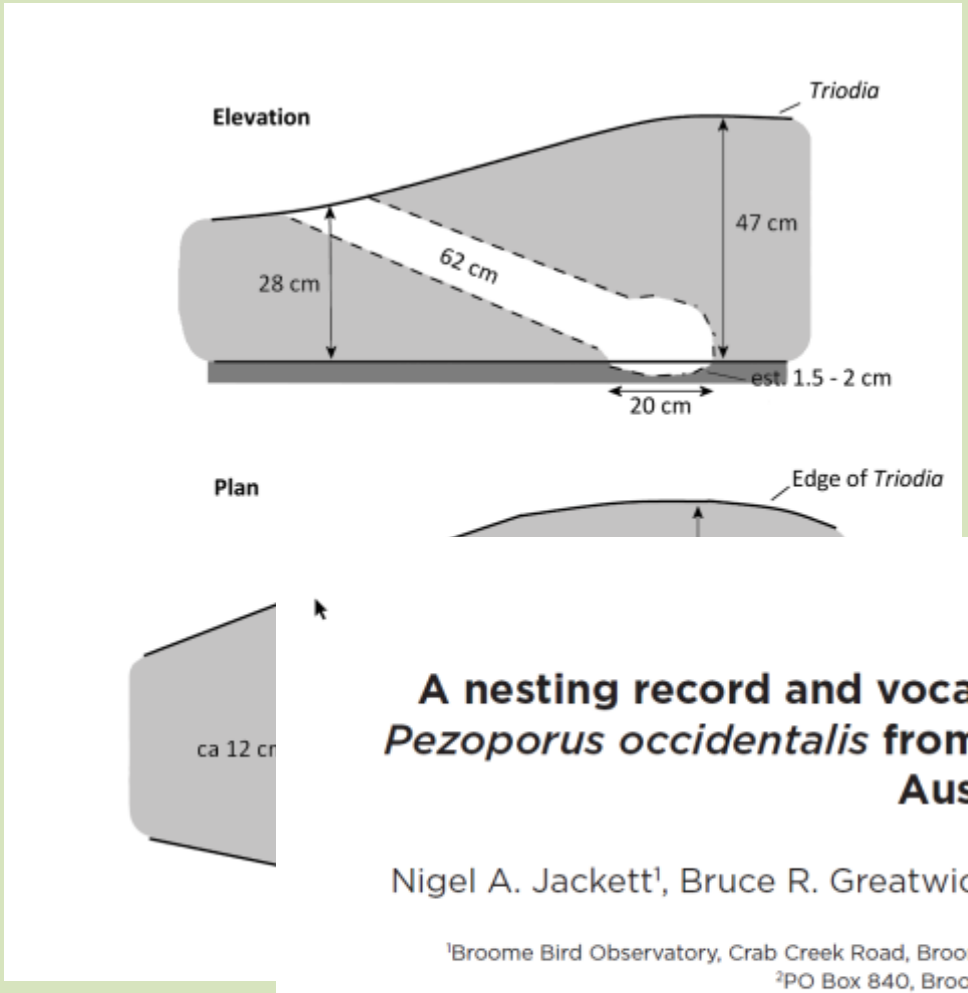
- mostly large, long unburnt, ring-forming *Triodia*
- especially *T. longiceps* and *T*. aff. *pleurinervata*

A roost site in WA

Photo: Allan Burbidge

Photo: Nigel Jackett & Adrian Boyle

A nest site in WA



Australian Field Ornithology 2017, **34**, 144–150
http://dx.doi.org/10.20938/afo34144150

A nesting record and vocalisations of the Night Parrot *Pezoporus occidentalis* from the East Murchison, Western Australia

Nigel A. Jackett[1], Bruce R. Greatwich[2], George Swann[3] and Adrian Boyle[4]

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Light grey =
Figure from Hamilton *et al.* (2017)
See also photograph in Jackett et al. (2017)

Some other possible habitat

Old ring-forming *Triodia* in WA

Researchers at Pullen Pullen Reserve, Queensland
(Photo courtesy Bush Heritage Australia)

NP Foraging Habitat

Photo: Steve Murphy (Qu)

- very poorly known
- includes alluvial flats
- also chenopod dominated systems (esp. *Sclerolaena*)

Some Queensland examples:

Note cattle tracks

Survey guidelines

See https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-animals/night-parrot

Photo: M. Massam

- focus on likely roosting and nesting sites (call as they leave/arrive)

- foraging sites likely dispersed, seasonally variable

- passive acoustic surveys (reference calls on Night Parrot Recovery Team website - https://nightparrot.com.au/)

- ARUs (autonomous recording units) recording throughout the night, six nights

Photo Kathy McLeish, ABC News

Survey guidelines

Currently, efficient software recognisers not available

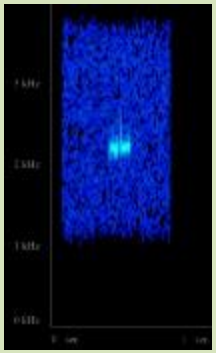
Two options:

- use a commercial service offering call recognition
- manual scanning of recordings in spectrogram view (suitable software e.g. Raven Lite, available freely on the internet)

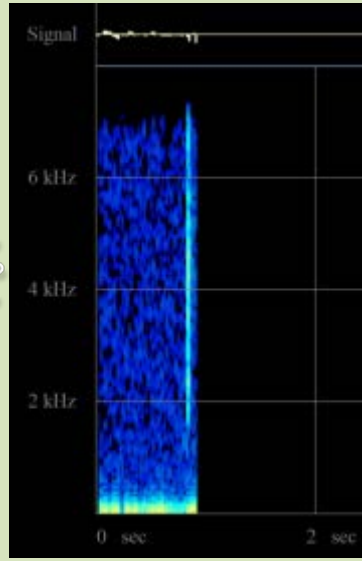
Survey guidelines - calls

- various short whistles

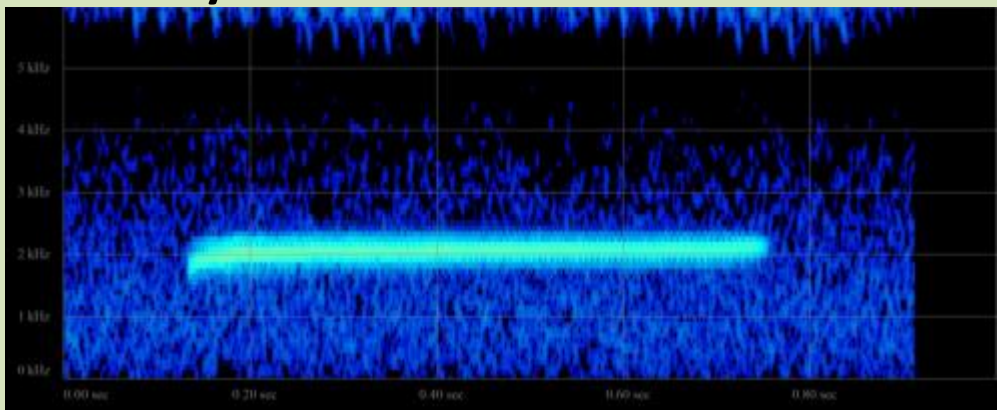
'didit' call



croak



- croak call often given near roost sites
- drawn out hollow whistle given in various contexts (BEWARE similarity with a Pallid Cuckoo call – hoarse whistle)



hollow whistle

Survey guidelines

- **No available survey technique can irrefutably demonstrate that Night Parrots are absent from a site**

- Habitat assessment therefore critically important

- Where habitat is suitable, presence might possibly be seasonal (i.e. outside any survey time)

Survey guidelines

When based on habitat, impact assessments should

- indicate likelihood of occurrence based on quality of the habitat at the site,
- focus on the risk of a project to the species on the assumption that it is present, and
- assess any threatening processes that may occur as a result (e.g. reduction of the extent or quality of habitat, increase in numbers of feral predators, increase (or decrease) in grazing pressure, or changed fire regime)

Likely threatening processes

Altered fire regimes (esp. extensive fires in *Triodia*)

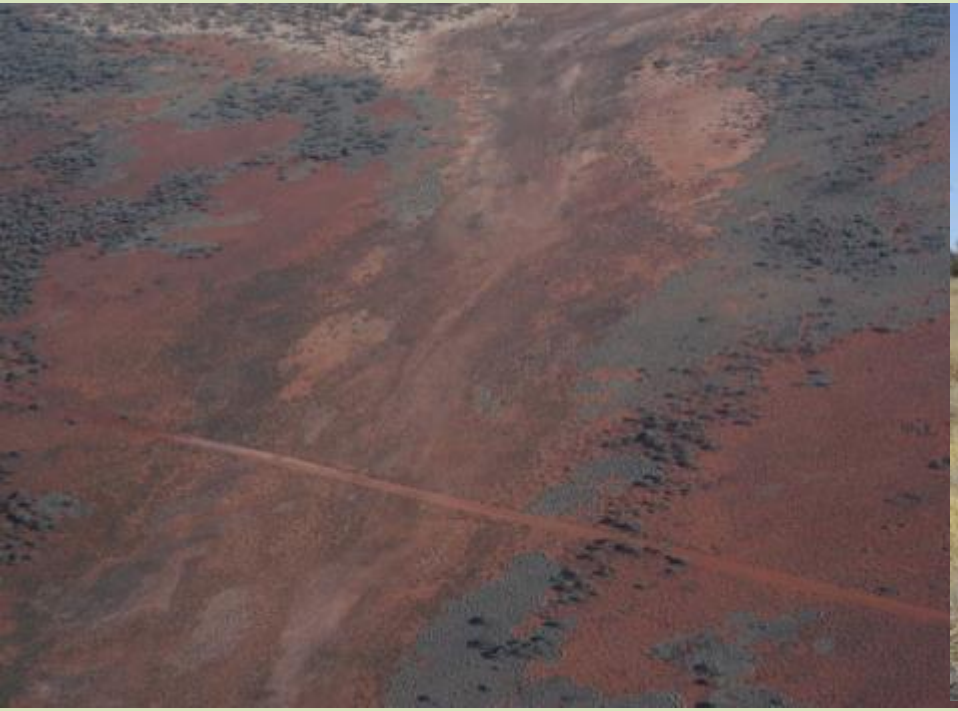
Introduced predators (foxes, cats) (note similarity with CWR mammals)

Introduced herbivores (cattle, sheep, camels, ….)

Mining, etc – mostly localised, esp. near salt lakes

Habitat Management

- *Triodia* may need protection from fire
- control of introduced predators and/or herbivores may be appropriate



Triodia with natural fire breaks

Triodia >50 years post fire

Strategy for the future

With any population found:

- manage introduced predators
- manage introduced herbivores
- secure site from inappropriate fire management
- where possible, determine basic ecological needs – diet, habitat, relationship with fire, breeding requirements, movements, etc

Location details not divulged until land holder sensitivities and management needs addressed

What can DBCA do?

We can't tell you

- whether there will be NPs at a given site that hasn't been surveyed
- …….

We can provide advice re technical aspects of NP

- survey
- biology
- management

Contact details

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https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-animals/night-parrot

Night Parrot Recovery Team
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Web: https://nightparrot.com.au/

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