2023 Koala Monthly Monitoring and Tracking Report

Koala Monitoring Program, Yarrabilba PDA

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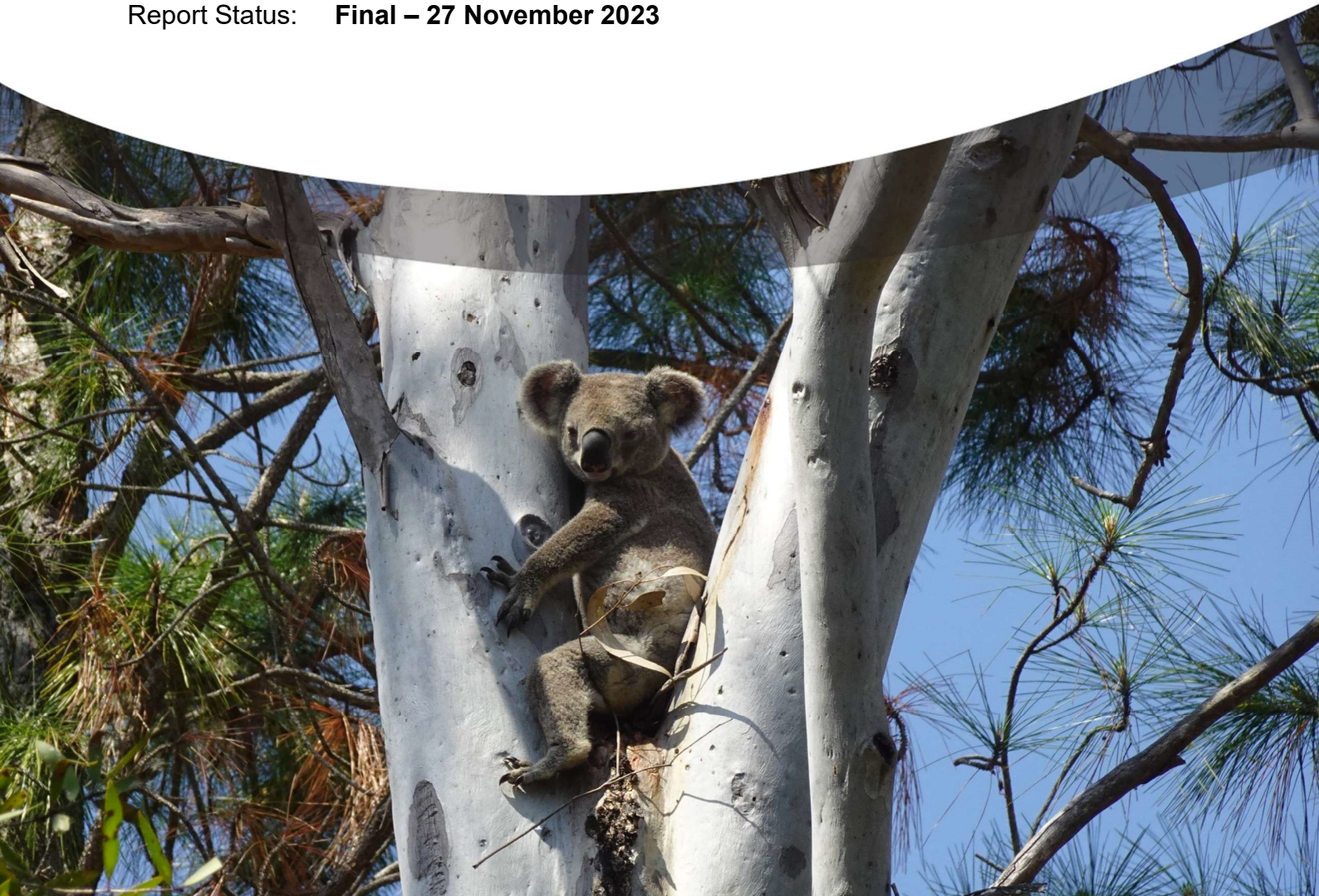

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Cover Photograph – 'Cleanskin' Koala, Heath Agnew, Austecology

1. Introduction

A *Koala Monitoring Program*[1] has been developed collaboratively between Austecology, University of Queensland's Koala Ecology Group, and Professor Frank Carrick to ensure a robust, scientific, research program to comply with Condition 1b of the EPBC 2013/6791 Approval. The aims of the *Koala Monitoring Program* cover detailed investigations into the ecology, health, and population characteristics of koalas on the site.

In summary, the *Koala Monitoring Program* (KMP) comprises a field program extending over a 5-year period – September 2017 to July 2023, and includes the implementation of three field investigation streams, being:

1. The capture of koalas for the purpose of health assessments and to tag and / or attach monitoring collars in order to assess home range, dispersal into and out of the site, and habitat use. This work includes laboratory analyses of swabs taken from captured koalas in order assess koala health, and genetic diversity of koalas on the site.
2. A monthly program of fieldwork to radio-track koalas in order to visually assess koala condition and collect information on tree species usage.
3. Bi-annual systematic surveys across the site to investigate koala abundance and distribution.

This report presents the results of the 2023 monthly program of fieldwork to radio-track koalas across the site prior to the completion of the KMP in July 2023 when all collars were retrieved.

2. Field Methodology

The aim of each event was to track collared koalas in order to assess health condition and collect information on tree species usage. Each event was implemented by Heath Agnew using a Yagi 151MHz antenna and Australis 26K receiver scanner to track Koalas, and binoculars to assess animal condition and ancillary information such as the presence of joeys with their mothers. Notes were made of each observation.

Monitoring events were undertaken from January 2023 through to June 2023 (inclusive). Non-scheduled events were also implemented to investigate low / nil movement data for an individual Koala detected as part of the daily assessment of 12-hourly updates via the web-based LX System. As part of these non-scheduled events, other Koalas were also tracked.

During the field work, observations of other Koalas (previously ear-tagged and / or collared) were recorded to augment the data for the program.

There were no site access constraints which were considered to have any material impact to the success of either survey.

[1] Austecology (2017). Koala Monitoring Program Yarrabilba UDA. Report prepared by Lindsay Agnew (Austecology) and Bill Ellis (University of Queensland's Koala Ecology Group).

3. Results and Summary Observations

The program provided a total of six tracking events between mid-January and mid-June 2023.

A total of 44 observational records were collected, and providing data for nine 'known' adult Koalas (collared and / or tagged; three males and six females) and potentially up to 10 individual 'cleanskin' Koalas (not previously tagged). The monitoring results included observations of 3 females presumed to be pregnant (bulging belly).

Koalas observed were (in no particular order): Larabee, Kamala, Lindsay, Marlee, Zara, Douglas, Ella, Emily, and Nyunga. 'Cleanskin' Koalas comprised 4 males, 5 females, and 1 young Koala of indeterminant sex.

Of the 19 individual Koalas observed, and with repeat sightings of individuals over six-month period, only three Koalas (including Nyunga and Larabee) exhibited signs of Chlamydial infection that could be detected through visual clues[2]. All three Koalas had stained rumps. These cases were regarded as a low-level manifestation within the population, though noting that not all infected Koalas exhibit clinical signs nor can infection status of wild Koalas atop of trees be confidently assessed visually in the field.

Koalas were observed in six different tree species, including the introduced *Pinus radiata*. The results highlight that Koalas were most commonly observed within *Eucalyptus moluccana*. Koalas were also recorded within (in no particular order): *E. tereticornis; E. crebra*; *E. drepanophylla; E. fibrosa*; *Angophora floribunda*; *Melaleuca quinquenervia*; and *Corymbia intermedia*.

Observations within the introduced pine *Pinus radiata* represented 4% of the data. In 2022, observations of koalas within the introduced pine appear were the lowest of the five years of monitoring. This may in part be explained by the progressive removal of this environmental weed form the site.

The above results are similar to the previous stages of monitoring and tracking, with records from *Eucalyptus moluccana*[3] accounting for significant proportion of the overall tree usage data.

The tree size class data indicates that Koalas were more commonly encountered in trees with a trunk characteristic of >40cm DBH (62% being trees of >40cm DBH, and 31% being trees between 30 to 40cm DBH). These results are similar to the findings from previous years monitoring results.

Attachment A provides a summary of the monitoring and tracking results.

[2] Ocular infections leading to swollen eyes and / or urogenital disease leading to "Chlamydiosis" or "wet-bottom syndrome".
[3] *Eucalyptus moluccana* accounting for 56% of tree use data.

Attachment A Summary of Koala Monitoring and Tracking Records

Date	Koala	Gender	Tree Species	Tree Character	Health Appearance
17/01/2023	Larabee	M	*E. mollucana*	>20cm DBH	eyes & rump appear clean.
17/01/2023	Kamala	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
17/01/2023	Lindsay	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
17/01/2023	Cleanskin	?	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
17/01/2023	Marlee	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
13-18/02/2023	Population Survey				
3/03/2022	Cleanskin	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
3/03/2022	Larabee	M	*E. mollucana*	>20cm DBH	stained rump
3/03/2022	Zara	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
3/03/2022	Cleanskin	M	*P. radiata*	>40cm DBH	slight staining of rump
3/03/2022	Cleankskin	F	*E. crebra*	>30cm DBH	eyes & rump appear clean.
3/03/2022	Marlee	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.
3/03/2022	Cleanskin	M	*E. drepanophylla*	>40cm DBH	eyes & rump appear clean.
27-29/03/2023	Capture Event				
18/03/2023	Larabee	M	*E. mollucana*	>40cm DBH	stained rump
18/03/2023	Douglas	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
18/03/2023	Ella	F	*E. drepanophylla*	>40cm DBH	eyes & rump appear clean.
18/03/2023	Larabee	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.
18/03/2023	Cleanskin	M	*P. radiata*	>40cm DBH	slight staining of rump
18/03/2023	Cleanskin	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.
18/03/2023	Cleanskin	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
18/03/2023	Cleanskin	F	*E. drepanophylla*	>40cm DBH	eyes & rump appear clean.
12/04/2023	Emily	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.
12/04/2023	Nyunga	F	*A. floribunda*	>40cm DBH	stained rump
12/04/2023	Ella	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.
12/04/2023	Cleanskin	M	*C. intermedia*	>30cm DBH	eyes & rump appear clean.
12/04/2023	Cleanskin	M	*E. mollucana*	>40cm DBH	stained rump
12/04/2023	Nyunga	F	*P. radiata*	>30cm DBH	stained rump
12/04/2023	Emily	F	*E. tereticornis*	<20cm DBH	eyes & rump appear clean.
12/04/2023	Marlee	F	*A. floribunda*	>40cm DBH	eyes & rump appear clean.
12/04/2023	Larabee	M	*E. mollucana*	>20cm DBH	stained rump
19/05/2023	Emily	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.
19/05/2023	Marlee	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.
19/05/2023	Cleanskin	?	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.
19/05/2023	Cleanskin	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
19/05/2023	Cleanskin	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.
19/05/2023	Douglas	M	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.
19/05/2023	Marlee	F	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
19/05/2023	Cleanskin	M	*P. radiata*	>40cm DBH	slight staining of rump
16/06/2023	Cleanskin	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.
16/06/2023	Douglas	M	*E. mollucana*	>40cm DBH	eyes & rump appear clean.
16/06/2023	Larabee	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.
16/06/2023	Cleanskin	M	*E. mollucana*	>40cm DBH	stained rump
16/06/2023	Ella	F	*E. tereticornis*	>40cm DBH	eyes & rump appear clean.
16/06/2023	Cleanskin	F	*E. mollucana*	>30cm DBH	eyes & rump appear clean.
16/06/2023	Nyunga	F	*E. mollucana*	>30cm DBH	stained rump
17-19/07/2023	Decollaring Event				