

Wildseek Gippsland Hub

Mount Jack and Quarries Mission - Koala Detection

Survey date: 09/05/2025

Image quality: Some drone flights produced thermal blurred images with bright spots and low contrast between canopy and ground. This could be due to sensor calibration issues, and poor image quality can potentially reduce detection accuracy.

Number of koalas detected: 5

Table 1. Number of detections per flight.

Flight	Number of detections
Camp1_2	0
Middle	1
Strand1	0
Quarry 1	0
Quarry 2	3
TOTAL	4

Table 2. Coordinates of geolocated koala detections. The datum used to tabulate every coordinate was GDA2020 and the EPSG code 4326.

Detection	Latitude	Longitude	Flight
1	-37.52775	148.6728	Middle
2	-37.45877	148.6874	Quarry 2
3	-37.45991	148.6889	Quarry 2
4	-37.45899	148.6904	Quarry 2

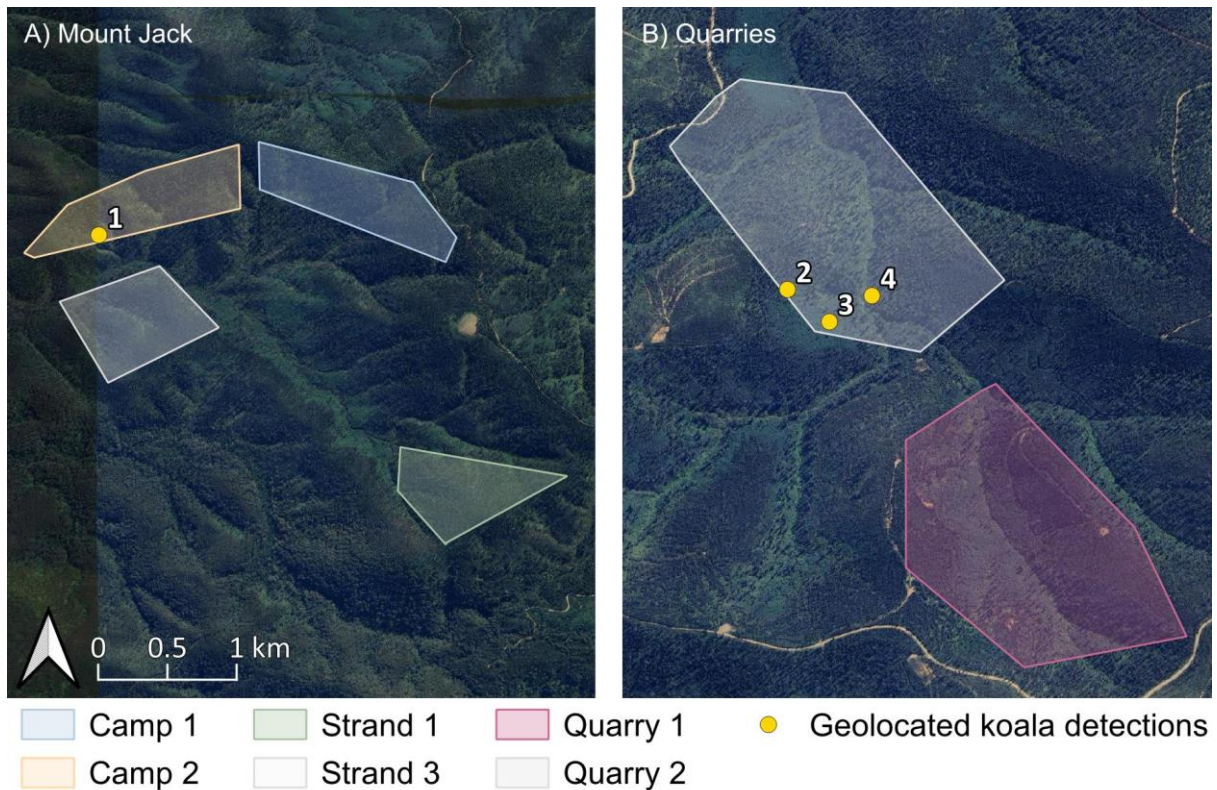


Figure 1. Geolocated koala detections from drone-based thermal imagery in (A) Mount Jack and (B) Quarries, showing a total of four detections. Detection numbers correspond to those listed in Table 2. Background source: Google Earth.

Environmental information

We provide environmental information concerning all detections to support the submission of sightings to biodiversity data repositories.

Site

- **Technique:** Koala drone search
- **Source:** Sighting only
- **Microhabitat Type:** In tree
- **Soil type¹:** Detection 1 occurred in granodiorite (all) soil type; and detections 2 – 4 in sandstone (dominant), siltstone (minor proportion), and chert (rare)
- **Geological unit¹:** Detection 1 occurred in biotite-muscovite granodiorite: medium-grained; foliated; S-type; and detections 2 – 4 in sandstone dark to pale grey and green colours; very thick to thin-bedded, turbiditic, moderately sorted, quartz-rich with minor feldspar and detrital mica, thick beds are mostly massive graded (Bouma Ta) and in places with granulestone bases, thinner beds with well-formed laminated and cross-bedded intervals (Bouma Tb and Tc); siltstone dark grey to green; well-bedded, with smooth regular banding
- **Vegetation²:** Detection 1 occurred in Highlands - Far East Warm Temperate Rainforest; and detections 2 – 4 in East Gippsland Uplands Wet Damp Forests

Detections

Table 3: Topographic information³ associated with each detection. TRI refers to terrain ruggedness index.

Detection	Elevation	Slope	TRI*	Aspect
1	313.07	15.73	7.00	159.91
2	298.35	18.08	6.75	94.27
3	277.36	15.55	5.38	59.20
4	253.35	3.59	2.12	194.06

* TRI: terrain ruggedness index.

Source:

1. <https://datashare.maps.vic.gov.au/search?q=uuid%3Dd6f410a9-57a4-5414-9c22-0360328a02ef>

2. <https://discover.data.vic.gov.au/dataset/native-vegetation-modelled-1750-ecological-vegetation-classes-with-bioregional-conservation-sta6>