



Mt Toolebewong & District  
Landcare Group

## Report to Landcare Members on Leadbeater's Possum Surveys

Mt Toolebewong & District Landcare and Zoos Victoria, March - June 2020

### Background

Leadbeater's Possum is listed as Critically Endangered. The species' entire range is confined to a 70 x 95 km area, centred on the Victorian Central Highlands.

Following the Black Saturday Bushfires, a new survey method was developed for the species - camera trapping. This has proven to be highly effective, and detects the species with high reliability (>90% detection probability).

Extensive surveys for Leadbeater's Possum have occurred during the past six years, resulting in many new records of the species.

Despite this survey effort, some areas remain unsurveyed. This includes some of the forests close to Healesville, where some recent sightings of possums thought to be Leadbeater's Possum, indicate the species may be present.

In 2019, Mt Toolebewong & District Landcare received funding from DELWP to install some nest boxes for Leadbeater's Possum. There is an extensive nest box programme in place for Leadbeater's Possum at Yellingbo and across the Central Highlands, led by Zoos Victoria and Parks Victoria, with >650 nest boxes installed. The possum shows high rates of nest box colonization in sub-alpine woodland and lowland swamp forest (~80%). In montane ash forest, the rate of nest box colonization is lower (~40%). The species constructs highly distinctive nests of finely shredded bark in the nest boxes, so nest box use by the species can readily be determined. The camera trapping survey results outlined below will inform which areas on Mt Toolebewong may be targeted for nest box installations.

### Objectives

1. To undertake camera trapping surveys for Leadbeater's Possum within potentially suitable habitat in the Mt Toolebewong area to determine whether the species is present.
2. Based on the camera trapping results, to install nest boxes at targeted locations for Leadbeater's Possum.

The project is a partnership between Mt Toolebewong & District Landcare and Zoos Victoria, with funding from a Faunal Emblems grant from DELWP.

## Methods

Motion-activated camera traps were installed at heights of 3-4 m of trees, and directed towards a bait holder containing creamed honey positioned approximately 2 m from the camera. The camera traps were installed using an extension ladder, and fastened to the tree trunk using straps.



A camera trap used to survey for Leadbeater's Possum. The cameras take infrared images at night, and are triggered by heat and motion.



## Results

33 camera traps were installed across Mt Toolebewong from March-June 2020. The cameras recorded a total of 57,685 images. 14 species were detected; seven of these were arboreal/scansorial mammals and seven native bird species. The two most frequently detected species were the agile antechinus and common ringtail possum, which were detected at 79% and 65% of survey sites, respectively.

**Table 1.** Arboreal/scansorial mammals detected on camera traps (n=33) at Mt Toolebewong.

Species	Number of sites detected	Percentage of sites detected
Leadbeater's possum	3	9
Agile antechinus	26	79
Bobuck (mountain brushtail possum)	1	3
Bush rat	1	3
Feathertail glider	7	21
Common Ringtail possum	21	64
Sugar glider	12	36

Leadbeater's possum was detected on camera at three separate sites. Interestingly, the species was only detected on camera on one occasion at each of these sites once which indicates that the species is present in very low densities in this area. Typically if there are resident Leadbeater's possums in an area we obtain many images.

Leadbeater's possum images from the three survey sites where the species was detected.



Select images of other arboreal/scansorial mammals detected



Agile Antechinus



Common Ringtail Possum



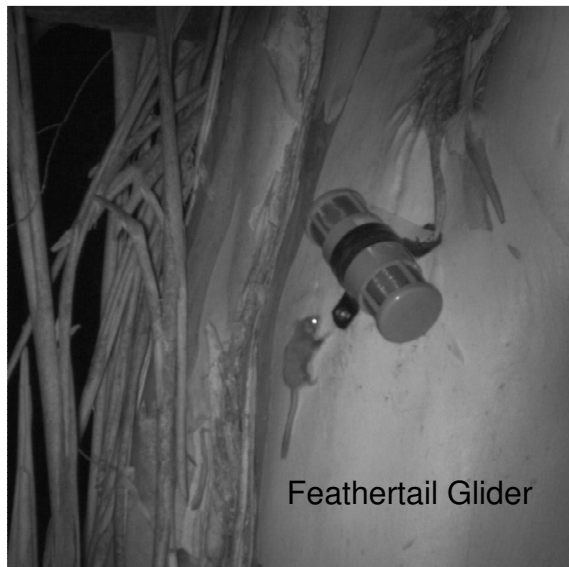
Bobuck  
(Mountain Brushtail Possum)



Bush Rat



Sugar Glider



Feathertail Glider