

LEADBEATER'S POSSUM DETECTION REPORT

307-503-0003 'Flow Zone'

Black Range Track, Toolangi State Forest

**Report on Leadbeater's Possum (*Gymnobelideus leadbeateri*) detection adjacent to VicForests
scheduled logging coupe 307-503-0003 'Flow Zone'**

Abstract

VicForests scheduled logging coupe 307-503-0003 was investigated to assess the presence/absence of the Critically Endangered Leadbeater's Possum individuals within or adjacent to State Forest scheduled for logging. This investigation concludes that VicForests, within coupe 307-503-0003 has scheduled logging within an area of forest currently inhabited by the critically endangered Leadbeater's Possum. The methodology employed, results of the investigation and the report's conclusions are detailed below.

Status of site assessed

- Logging is scheduled in coupe 307-503-0003 and is listed as "Harvest Pending" on VicForests "Timber Harvesting Safety Zone" notice (<http://www.vicforests.com.au/timber-harvesting-safety-zones>) as at 26/09/2017

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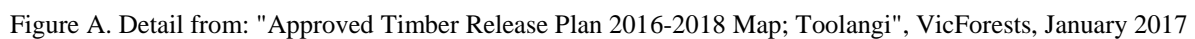
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Wildlife Of The Central Highlands Inc.

Date of investigation: 22/09/2017

Date of report: 08/10/2017

Adjacent to VicForests scheduled logging coupe 307-503-0003 off Black Range Track in the Toolangi State Forest.



Method 1 (method used: Active search)

LBP Survey (active search) [22/09/2017]

Survey technique:

- Active search using Thermal Imaging Camera.
- Spotlighting (hand-held) and binoculars for species identification.
- Digital camera photographs/video footage for recording species observed/identified.
- Global Positioning System (GPS) for recording location of species detection records.

Location:

- Off Black Range Track (location Leadbeater's Possum last seen):
S 37° 32.719'
E 145° 35.173' (GDA/LAT/LONG)
- See “Results 3, Figure 3. “Leadbeater's Possum detection location” for further details.

Method used:

1. A small arboreal mammal was detected using the Thermal Imaging Camera on an Acacia tree.
2. A hand-held spot light was used to illuminate the arboreal mammal for visual identification.
3. Using a video recorded, footage of the Leadbeater's Possum was recorded.
4. Shortly after the Leadbeater's Possum individual left the area
5. The active search survey was concluded shortly after

The results of this survey, including location details and photographic evidence are provided below in this report's “Result's” section.

Method 2 (analysis/recommendations)

From: “*New Restoration Forest Management Prescriptions to Conserve Leadbeater’s Possum and Rebuild the Cover of Ecologically Mature Forest in the Central Highlands of Victoria*”¹

“2. Strengthened protection of locations known to support Leadbeater’s Possum

Background scientific information:

A key part of the conservation of any organism is to protect individuals where they are known to occur. Recent (currently unpublished) analyses of time series data on arboreal marsupials gathered from 1997 to 2012 indicates that the probability of occurrence of Leadbeater’s Possum on a site is significantly influenced by their prior occurrence of the species at a site. This indicates that animals have a long-term site affinity – a result consistent with earlier work on the long-term occupancy of hollow-bearing trees by the species (Lindenmayer 1991).

Recommended Management Action:

Long-term site affinity by Leadbeater’s Possum suggests that it is important to protect sites where the species has been recorded in the past 15 years. The protection of these known locations is particularly important given the crucial role of animals from these remaining populations in assisting the recolonisation of previously burned areas. Given the estimated home range of Leadbeater’s Possum, coupled with colonial social organisation of the species (Smith 1984), we suggest that a logging exclusion area (i.e. an area excluding both clearfelling and thinning) be established around the known locations of the species. A 1 km buffer is proposed, based on sensitivity of the species to landscape-level disturbance (Lindenmayer et al. 1993A, 2013a).

All distribution records of Leadbeater’s Possum and associated buffers must be mapped and the subsequent spatial data lodged on the Government Geographic Information System to ensure they are clearly identified and delineated as areas from which logging is excluded.

If Leadbeater’s Possum has not been detected at a location adjacent the previous 15 years, then that location would revert to Zone 1 habitat for subsequent protection, provided that meets the requirements of Prescription 1.

Prescription 2:

2.1 All locations where Leadbeater’s Possum has been recorded present in the past 15 years will be protected by a 1 km buffer from which logging (both clearfell and thinnings) is excluded.

2.2 All distribution records of Leadbeater’s Possum and associated buffers must be

mapped and lodged on the Government Geographic Information System. No logging should proceed in a given forest block until the collation of all location records of Leadbeater’s Possum has been completed. The Government of Victoria should seek records from all reputable sources such as Field Naturalist Groups, universities and other organisations responsible for gathering high-quality field surveys in montane ash forests.”²

¹ David B. Lindenmayer, David Blair, Lachlan McBurney and Sam Banks, *New Restoration Forest Management Prescriptions to Conserve Leadbeater’s Possum and Rebuild the Cover of Ecologically Mature Forest in the Central Highlands of Victoria*, Version 2: July 2013, Fenner School of Environment and Society, Australian National University, Canberra, ACT, Australia, Version 2, July 2013

² *ibid*, p. 4-5

Method 3 (analysis/recommendations)

From: “Planning Standards for timber harvesting operations in Victoria’s State forests 2014, Appendix 5 to the Management Standards and Procedures for timber harvesting operations in Victoria’s State forests 2014”³

“4. Biodiversity

4.2 Fauna – fixed zoning

4.2.1 Statewide

4.2.1.1 Plan management actions for rare and endangered fauna in accordance with Table 3 (Fixed FMZ rules for fauna) below.

4.2.1.2 Maintain FMZ schemes for rare and endangered fauna in accordance with Table 3 (Fixed FMZ rules for fauna) below

Table 3: Fixed FMZ rules for fauna.⁴

FMA	Common name	Scientific name	Zoning management actions	Management actions	Review
Central Highland FMAs	Leadbeater's Possum	<i>Gymnobelideus leadbeateri</i>	Protect 30 % of Ash forest from timber harvesting operations in each LMU considering the following factors for selection of retained patches: - the aim to retain patches least likely to burn during bushfires; - the aim to retain patches of the oldest age class that will develop into old growth the quickest; and - the aim to retain patches that will consolidate other patches that may develop into old growth. Note preference should be given to meeting the 30 % target from conservation reserves or SPZs followed by areas informally reserved via timber harvesting exclusion areas in the Code.		
			Establish and maintain SPZs of 200 m radius centred on each verified Leadbeater's Possum colony found since 1998 that is not located adjacent forest areas severely impacted by the 2009 wildfire (Exclude colonies adjacent Fire Severity classes 1 and 2)		

4.3 Fauna - detection based zoning

4.3.1 Statewide

4.3.1.1 Apply the management actions outlined in Table 4 (Detection based FMZ rules for fauna) below for zoned rare or threatened fauna.

4.3.1.2 Implement FMZ amendments and reviews in accordance with Table 4

(Detection based FMZ rules for fauna) below for new verified rare or threatened fauna records and FMZ amendment requirements outlined in section 2.

³ *Planning Standards*, pp. 16, 17, 21, 22, 36, 39

⁴ *Planning Standards*, “Table 3 Fixed FMZ rules for fauna”, p. 21-22

Table 4: Detection based FMZ rules for fauna.⁵

FMA	Common name	Scientific name	Zoning management actions	Management actions	Review
Central Highland FMAs	Leadbeater's Possum	<i>Gymnobelideus leadbeateri</i>	Establish a SPZ of 200 m radius centred on each verified Leadbeater's Possum colony.		The effectiveness of this action in supporting the recovery of the Leadbeater's Possum will be reviewed after two years of surveying (commencing July 2014) or once 200 new colonies are located whose exclusion zones impact the GMZ or SMZ, whichever comes first.

Results (1-3) – Figures 1., Figure 2(a-c)., Figure 3.

Summary

1. This investigation detected the Leadbeater's Possum adjacent to VicForests scheduled logging coupe 307-503-0003.
2. Video footage was captured of the Leadbeater's Possum adjacent to coupe 307-503-0003 at S37° 32.719' E145° 35.173 (GDA/LAT/LONG)

Results 1.

“Figure 1.” (attached) is a video file excerpt of the Leadbeater's Possum video.

Results 2.

Figures 2(a-c). are still images captured from Figure 1 (attached video) of the Leadbeater's Possum (b-c) as well as the detection location (a).

Results 3.

Figure 3. displays the detection location of the Leadbeater's Possum as well as the relevant VicForests scheduled logging coupe extents and other basic features.

⁵ *Planning Standards*, “Table 4 Detection based FMZ rules for fauna”, p. 39

Results 2 – Figures 2(a-c).



Figure 2(a). Still image of the Leadbeater's Possum detection location (GDA/LAT/LONG), captured from Figure 1 (attached video) at approximately “S37° 32.719' E145° 35.173' (GDA/LAT/LONG)”;



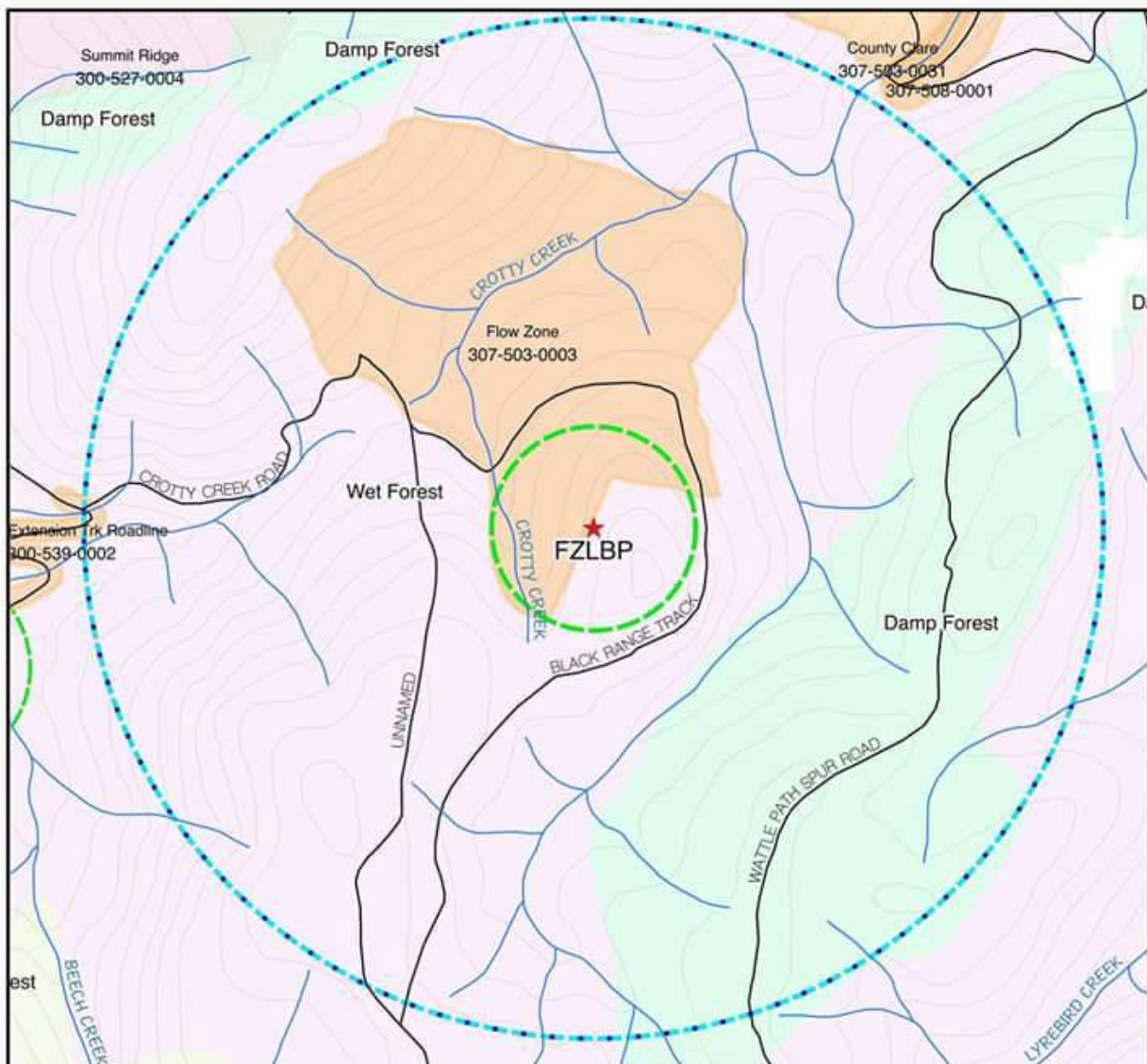
Figure 2(b). Still image of the Leadbeater's Possum captured from Figure 1 (attached video) at approximately “S37° 32.719' E145° 35.173' (GDA/LAT/LONG)”;



Figure 2(c). Still image of the Leadbeater's Possum captured from Figure 1 (attached video) at approximately “S37° 32.719' E145° 35.173' (GDA/LAT/LONG)”;

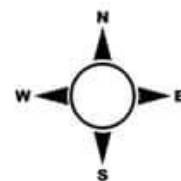
Results 3 – Figure 3.

Results 3. Figure 3. Black Range Track Leadbeater's Possum Detection; Recommended 1km & Indicative 200m LBP Buffers; Roads, Watercourses, EVC's & Contours; VicForests Logging Coupes



Legend

- | | |
|---------------------------------|---------------------------|
| ★ Leadbeater's Possum Detection | VicForests Logging Coupes |
| □ Indicative 200m LBP Buffer | EVC's |
| □ Recommended 1km LBP Buffer | Cool Temperate Rainforest |
| — Watercourses | Damp Forest |
| — Contours | Wet Forest |
| — Roads | |



Created by Blake Nisbet
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08/10/2017
GDA / MGA Zone 55 H

Discussion/Conclusion/Recommendations

“New Restoration Forest Management Prescriptions to Conserve Leadbeater’s Possum and Rebuild the Cover of Ecologically Mature Forest in the Central Highlands of Victoria”⁶

Prescription 2:

- 2.1** *All locations where Leadbeater's Possum has been recorded present in the past 15 years will be protected by a 1 km buffer from which logging (both clearfell and thinnings) is excluded*
- 2.2** *All distribution records of Leadbeater's Possum and associated buffers must be mapped and lodged on the Government Geographic Information System. No logging should proceed in a given forest block until the collation of all location records of Leadbeater's Possum has been completed. The Government of Victoria should seek records from all reputable sources such as Field Naturalist Groups, universities and other responsible organizations responsible for gathering high-quality field surveys in montane ash forests.”⁷*

and: *“Planning Standards for timber harvesting operations in Victoria’s State forests 2014, Appendix 5 to the Management Standards and Procedures for timber harvesting operations in Victoria’s State forests 2014”⁸*

4.2 Fauna – fixed zoning:

Table 3. *Establish and maintain SPZs of 200 m radius centred on each verified Leadbeater’s Possum colony found since 1998 that is not located adjacent forest areas severely impacted by the 2009 wildfire (Exclude colonies adjacent Fire Severity classes 1 and 2)⁹*

4.3 Fauna - detection based zoning

Table 4. *Establish a SPZ of 200 m radius centred on each verified Leadbeater’s Possum colony.”¹⁰*

Leadbeater's Possum detection record

1. Leadbeater's Possum was recorded on the 22/09/2017 at the following location:
‘S37° 32.719' E145° 35.173' (GDA/LAT/LONG) as described in the preceding “Method Used” section and displayed in the preceding “Results 3 Figure 3.” sections.
2. Figure 3. shows the location of the Leadbeater’s Possum “buffered” with a 200m (the dashed green circular polygon) and 1km buffer (the dashed blue circular polygon).
3. Figure 3. shows the Leadbeater's Possum detection location falling adjacent to VicForests scheduled logging coupe 307-503-0003.

⁶ David B. Lindenmayer, David Blair, Lachlan McBurney and Sam Banks, *New Restoration Forest Management Prescriptions to Conserve Leadbeater’s Possum and Rebuild the Cover of Ecologically Mature Forest in the Central Highlands of Victoria*, Version 2: July 2013, Fenner School of Environment and Society, Australian National University, Canberra, ACT, Australia, Version 2, July 2013, p. 2-4

⁷ *ibid*, p. 4-5

⁸ *Planning Standards*, pp. 16, 17, 21, 22, 39

⁹ *Planning Standards*, “Table 3 Fixed FMZ rules for fauna”, p. 21-22

¹⁰ *Planning Standards*, “Table 4 Detection based FMZ rules for fauna”, p. 39

“Planning Standards” – Fauna – fixed zoning 4.2 and Fauna - detection based zoning 4.3

4. All logging operations must be excluded from the area of forest within coupe 307-503-0003 that falls within 200m “dashed green circular polygon” buffer around the Leadbeater's Possum record.

“New Restoration Forest Management Prescriptions” – Prescription 2; 2.1 and 2.2

5. Figure 3. shows that the 1km buffer surrounding the Leadbeater's Possum record covers the entirety of VicForests scheduled logging coupe 307-503-0003.
6. **Logging (both clearfell and thinnings) should be excluded from the entirety of VicForests scheduled logging coupe 307-503-0003 that falls within the 1km buffer around the Leadbeater's Possum record.**
7. To ensure that Leadbeater's Possum colony's, their nest trees and their foraging habitat is not destroyed in the context of logging operations, VicForests must ensure (and the Department of Environment, Land, Water and Planning must require) that appropriate presence/absence surveys for the species are conducted prior to the commencement of logging, and that all sites where Leadbeater's Possum are detected are protected by a 1km buffer from which logging (both clearfell and thinnings) is excluded.

