



Threatened species detection report

Dindi Log Rd, Toolangi State Forest

VicForests logging coupe 300-503-0009

A report on the detection of two Leadbeater's Possums (*Gymnobelideus leadbeateri*), three Greater Gliders (*Petauroides volans*), three Yellow-bellied Gliders (*Petaurus australis*) and three Tree Geebungs (*Persoonia arborea*) within VicForests scheduled logging coupe 300-503-0009.



Abstract

Multiple active surveys were conducted in areas within and adjacent VicForests logging coupe 300-503-0009 to detect the Critically Endangered Leadbeater's Possum (*Gymnobelideus leadbeateri*) and other threatened species of flora and fauna. Two Leadbeater's Possums (LBP), three Greater Gliders, three Yellow-bellied Gliders (YBG) and three Tree Geebungs were identified and recorded during these surveys. This investigation concludes that VicForests has failed to identify these threatened species including LBPs within/adjacent coupe 300-503-0009 and have scheduled logging in confirmed habitat for Greater Gliders, Yellow-bellied Gliders and the critically endangered LBP.

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Date of Investigation: 25/05/2022, 9-10/02/2023

Date of report: 21/02/2023

Location details

This investigation was undertaken within the Toolangi State Forest on Dindi Log Road, within coupe 300-503-0009.

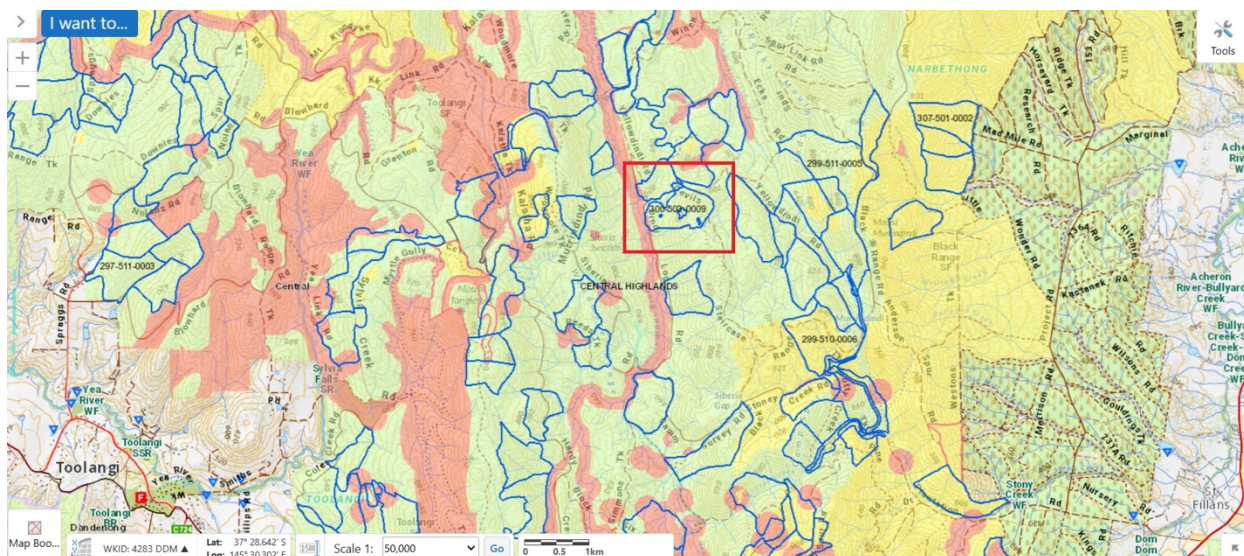


Figure 1. Map showing the location of the logging coupe investigated (in red box) in the context of the Toolangi State Forest area, image taken as a screenshot from the [Forest Information Portal](#) on 6/02/2023.

Method

Method used: Active search with the aid of a thermal imaging camera and spotlighting on the evenings of the 25/05/22 and 9-10/02/23 (the second survey included 3 groups covering different areas of the coupe):

- Areas of the forest within and adjacent the coupe 300-503-0009 are identified as suitable LBP habitat by surveyors and then searched with the assistance of a thermal imaging camera and red spotlights to detect and identify LBPs.
- Once spotted on the thermal imaging camera, red spotlights are used to light up the animal and video evidence is obtained using a Sony Handycam.
- Areas that are identified by surveyors to be suitable Greater Glider habitat are searched using spotlights to detect 'eye shine' within the canopy. Tree Geebungs are also searched for and can be detected under spotlight during the survey, mature individuals are recorded.
- Upon successfully obtaining video footage of possums, gliders or trees the camera is panned over to a GPS to provide the coordinates of the detection location and proof of location.
- Other threatened or species of interest can be detected aurally (in this case Yellow-bellied Gliders) which are video recorded if possible and location marked with the following step.
- A GPX waypoint is taken shortly after the animal is recorded/ detected directly beneath the tree/animal or projected to the animal location using the 'slight and go' (waypoint projection) function on the GPS.

The waypoints for each individual recorded tree or animal are developed with the following sequence:

- Firstly, the three letters at the beginning represented a unique sequence for the survey e.g. 'DEV'.
- Then, the following two numbers represented the individual count of threatened species encountered throughout the survey e.g. '01' for the first Greater Glider encountered
- Then, two or three letters representing a unique species code e.g. 'LBP' Leadbeater's Possum, 'GG' for Greater Glider, 'YB' for Yellow-bellied Glider or 'PA' for *Persoonia Arborea*.
- And finally, for fauna recorded a 'V' is given to individuals that were identified visually or an 'A' for aurally.

Results

This investigation detected two Leadbeater's Possum, three Southern Greater Gliders, three Yellow-bellied Gliders, three Tree Geebungs and one Mountain Ash with more than 2.5m DBH within and adjacent VicForests logging coupe 300-503-0009. Results are provided in the following sections:

Results 1 – summary

- Table 1 – details of location for each threatened species detection
- Figures 1-5 – screenshots taken from video evidence of LBPs and Greater Gliders
- Figures 6a-c – sequence of images of a Tree Geebung.

Results 2 – map

- Figure 7: A map of the threatened species detection locations and protective buffers

Results 3 – attachments

Refer to email for the following attachments:

- Attachment 1: Zip folder containing video and photo evidence
- Attachment 2: a GPX file containing the waypoints of the detection locations.

Results 1

Table 1: Results summary

| Date | Waypoint ID | Species | Coordinates (55H) | CBH (cm) | DBH (cm) |
|------------|-------------|-----------------------|-------------------|----------|----------|
| 25/05/22 | DEV02LBP | Leadbeater's Possum | 373064 5848622 | na | na |
| 9-10/02/23 | Dev02YBV | Yellow-bellied Glider | 373537 5848785 | na | na |
| 9-10/02/23 | Dev03pav | Tree Geebung | 373422 5848728 | 39 | 12.41 |
| 9-10/02/23 | Dev04pav | Tree Geebung | 373363 5848703 | 46 | 14.64 |
| 9-10/02/23 | DEV02GGV | Greater Glider | 373614 5848543 | na | na |
| 9-10/02/23 | DEV03GGV | Greater Glider | 373573 5848559 | na | na |
| 9-10/02/23 | DEV04GGV | Greater Glider | 373121 5848467 | na | na |
| 9-10/02/23 | DEV04YBA | Yellow-bellied Glider | 373589 5848402 | na | na |
| 9-10/02/23 | DEV05YBA | Yellow-bellied Glider | 373588 5848451 | na | na |
| 9-10/02/23 | DEV08LBP | Leadbeater's Possum | 373526 5848339 | na | na |
| 9-10/02/23 | DEV17PA | Tree Geebung | 373051 5848483 | 42 | 13.37 |
| 9-10/02/23 | DEV06ASH | Mountain Ash | 373547 5848393 | 802 | 255 |



Figure 1a. Screenshot of Leadbeater's Possum 'DEV02LBP' from video footage, captured at approximately 10:29am (25/05/22); Location: 373064 5848622 (GDA / MGA Zone 55H).



Figure 2a. Screenshot of Leadbeater's Possum 'DEV08LBP' from video footage, captured at approximately 12:32am (10/02/22); Location: 373521 5848333 (GDA / MGA Zone 55H).



Figure 2b. Screenshot of Coordinates from video footage of Leadbeater's Possum 'DEV08LBP' captured at approximately 12:32pm (10/02/22); Location 373521 5848333 (GDA / MGA Zone 55H).



Figure 3. Screenshot of Greater Glider 'DEV02GGV' from video footage, captured at approximately 12:06am (10/02/22); Location: 373614 5848543 (GDA / MGA Zone 55H).



Figure 4. Screenshot of Greater Glider 'DEV03GGV' from video footage, captured at approximately 12:40am (10/02/22); Location: 373573 5848559 (GDA / MGA Zone 55H).



Figure 5. Screenshot of Greater Glider 'DEV04GGV' from video footage, captured at approximately 1:16am (10/02/22); Location: 373121 5848467 (GDA / MGA Zone 55H).



Figure 6a-c: An example from (Dev03pav) of the photo sequence taken for each Tree Geebung. a, The Circumference at breast height with the waypoint name, b, view of the tree and foliage and c, a close up of the leaves and fruit. There are often additional photos to assist with ID.



Figure 7. Screenshots of Mountain Ash 'DEVO6ASH' and measurement taken at breast height from video footage, captured location: 373547 5848393 (GDA / MGA Zone 55H).

Results 2

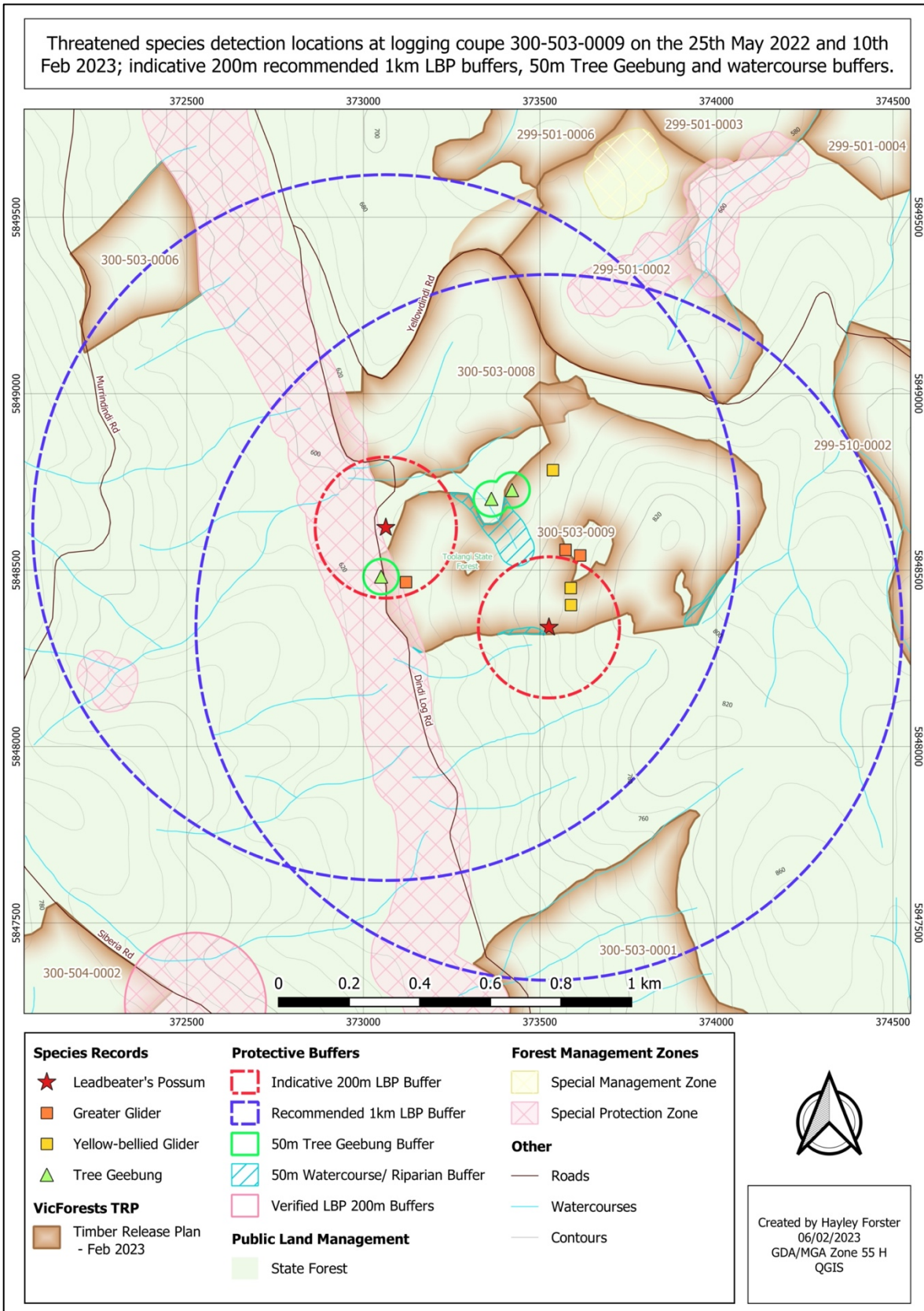


Figure 8: Map of Threatened species locations at coupe 300-503-0009, including LBP 200m and 1km buffers, Tree Geebung and watercourse 50m buffers.

Discussion

This investigation resulted in the detections of 2 critically endangered Leadbeater's Possum, 3 endangered (vulnerable FFG) Southern Greater Gliders, 3 vulnerable Yellow-bellied Gliders and 3 endangered (FFG) Tree Geebung across 2 survey nights. The conservation status listed are specific to the Environment Protection and Biodiversity Conservation Act 1999 (EPBC) unless specified otherwise as the Flora and Fauna Guarantee Act 1988 (FFG), and require adequate protection from disturbances such as logging to prevent further declines or localized extinctions. The specific requirements for protection of each species are described below;

Leadbeater's Possum

Mandatory actions

Under the *Sustainable Forests (Timber) Act 2004 (Vic)*, it is mandatory for VicForests, its contractors and any other organisations undertaking timber harvesting operations in a Victorian State forest to comply with all prescriptions outlined in the Code of Practice for Timber Production 2014 (the Code).

Application of the precautionary principle and expert advice

The Code requires application of the precautionary principle to the conservation of biodiversity values and consideration of relevant expert advice and research in planning and conducting timber harvesting operations.

- | |
|---|
| <p>2.2.2.2 The precautionary principle must be applied to the conservation of biodiversity values. The application of the precautionary principle will be consistent with relevant monitoring and research that has improved the understanding of the effects of forest management on forest ecology and conservation values.</p> <p>2.2.2.3 The advice of relevant experts and relevant research in conservation biology and flora and fauna management must be considered when planning and conducting timber harvesting operations.</p> |
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Figure 7a. Excerpt from page 34 of the Code, under subheading: 2.2.2 Conservation of Biodiversity

VicForests should be adhering to the relevant scientific advice on protecting the LBP as part of its conservation of biodiversity values, which in coupe 300-503-0009 would include establishment of a 1km LBP buffer (refer to Figure 2 above) and additional protective measures as recommended by Australian National University (ANU) experts.

The following prescriptions relevant to this report were recommended by David Lindenmayer, David Blair, Lachlan McBurney and Sam Banks from ANU in their paper produced in July 2013, *New Restoration Forest Management Prescriptions to conserve Leadbeater's Possum and Rebuild the cover of Ecologically Mature Forest in the Central Highlands of Victoria*:

Prescription 2 – Protection of recorded locations

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.

Prescription 3 – Protection of Hollow-bearing Trees

3.1 Each hollow-bearing tree (whether living or dead) will be surrounded by a buffer of unlogged forest measuring 100 m in radius.

3.3 All trees 100 or more years old should be protected and surrounded by a buffer of unlogged forest measuring 100 m in radius.

Prescription 5 – Protection of Streamside Buffers

5.1.1 Streamside buffers will be widened to a minimum of 100 m either side of a stream, whether permanent or temporary/seasonal.

Detection-based zoning under the Management Standards and Procedures

The Code requires compliance with the biodiversity conservation measures specified in the Management Standards and Procedures.

2.2.2.1 Planning and management of timber harvesting operations must comply with relevant biodiversity conservation measures specified within the **Management Standards and Procedures**.

Figure 7b. Excerpt from page 34 of the Code, under subheading: 2.2.2 Conservation of Biodiversity

Clause 4.2.1.1 of the Management Standards and Procedures requires application of management actions for rare and threatened fauna listed in Table 13. The Planning Standards (Appendix 5), via Table 13, provides the specific prescription to be applied for the detection of Leadbeater’s Possum in the field – establishment of a 200m radius SPZ centered on the verified detection.

| | | | |
|-----------------------|----------------------------|------------------------|--|
| Central Highlands MAs | Leadbeater’s Possum colony | Gymnobleus leadbeateri | Establish a SPZ of 200 m radius centred on each verified Leadbeater’s Possum colony. |
|-----------------------|----------------------------|------------------------|--|

Figure 7c. Excerpt from Table 4: Detection based FMZ rules for fauna in the Planning Standards, Appendix 5 to the Management Standards and Procedures

Greater Glider

On the 4 November 2022, the judgment for Kinglake Friends of Forests (KFF) and Environment East Gippsland’s (EEG) cases against VicForests were handed down in KFF and EEG’s favour. These cases were largely based around the failures to adequately survey for and protect Greater Gliders and Yellow-Bellied Gliders in logging coupes in the Central Highlands and East Gippsland. The final orders for the KFF vs VicForests case were released on 11 of November 2022. The orders state that (emphasis added):

VicForests must not, whether by itself, its servants, agents, contractors or otherwise, conduct timber harvesting operations in any coupe in the Central Highlands FMAs in which greater gliders have been detected unless:

- (a) it excludes the greater gliders' located home ranges from timber harvesting operations; and
- (b) it excludes from timber harvesting riparian strips at least 100 metres wide located along all waterways in the coupe, with an exclusion area at least 50 metres wide on each side of those waterways; and
- (c) it retains at least 60% of the basal area of eucalypts in the harvested area of the coupe.'

The judgment describes the Greater Glider and its habitat requirements including home range:

'The home range of a male is typically between 1.4 and 4.1 hectares; for females the range is between 1.3 and 3 hectares.⁴¹ Individual gliders have been observed to extend their home range to up to 18 hectares, probably due to habitat fragmentation and resource availability.'

Yellow-bellied Glider

The following is also extracted from the final Orders for the KFF vs VicForests case in regard to the Yellow-bellied Glider;

VicForests must not, whether by itself, its servants, agents, contractors or otherwise, conduct timber harvesting operations in any coupe in the Central Highlands FMAs in which yellow-bellied gliders have been detected unless:

- (a) it excludes from timber harvesting riparian strips at least 100 metres wide located along all waterways in the coupe, with an exclusion area at least 50 metres wide on each side of those waterways; and
- (b) it retains at least 60% of the basal area of eucalypts in the harvested area of the coupe, including all identified feed trees and hollow-bearing trees within the coupe.

Tree Geebung

On 25 October 2022, the *Warburton Environment vs VicForests* judgment was handed down in Warburton Environment's favour. The case provided clarity on the required level of protection of the Tree Geebung during logging operations. The judgment stated (emphasis added):

Conclusion

For the reasons I have given, the SMP (Special Management Plan for Tree Geebung) is an inadequate prescription to achieve the minimum required by the Management Action. If VicForests and its contractors act in accordance with the SMP, it is inevitable that there will be ongoing contraventions of the Code and Standards and significant losses of mature Tree Geebungs. Compliance with the Code and Standards requires targeted pre-harvest surveys of coupes to identify and locate mature Tree Geebungs, the provision of proper buffers during timber harvesting, and wider firebreaks to protect mature Tree Geebungs within buffers from the destructive effects of regeneration burning.

Remedies

Subject to the condition specified in the next paragraph, Warburton is entitled to injunctive relief in order that individual Tree Geebungs with a DBHOB of at least 10cm are protected from

disturbance where reasonably practicable. The injunctive relief is necessary to achieve compliance with the Code and Standards. The injunctive relief will restrain VicForests, its servants, agents or contractors from carrying out timber harvesting operations in any Wet Forest Coupe in the Central Highlands, including the Pat's Corner coupe, unless:

(a) prior to commencing timber harvesting operations:

(i) a person experienced in the identification of Tree Geebungs surveys the coupe utilising transects spaced at a maximum of 30m;

(ii) VicForests identifies and records the location of each individual Tree Geebung with a DBHOB of at least 10cm ('specified Tree Geebung');

(iii) VicForests ensures that the relevant coupe map identifies a protective buffer comprising at least a 50m radius circle, measured in the horizontal plane, of undisturbed vegetation around each specified Tree Geebung within the coupe, with each specified Tree Geebung located at least 15m horizontally from the perimeter of that circle; and

(iv) VicForests ensures that the relevant coupe plan provides adequate specifications and conditions to ensure that the vegetation within buffers remains undisturbed in the course of the timber harvesting;

(b) in the course of conducting timber harvesting operations, including regeneration burns, VicForests does all things reasonably necessary and practicable to ensure that:

(i) vegetation within the buffers as specified in the relevant coupe map in fact remains undisturbed and the specifications and conditions in the relevant coupe plan are followed; and

(ii) prior to conducting regeneration burns, a firebreak of at least 10m in width is created to separate buffers around specified Tree Geebungs from the area of the regeneration burn.

Large trees

The Management Standards and Procedures states:

- 4.1.1.3 Retain all living **large trees** and protect them from the direct effects of **timber harvesting operations** and **regeneration** burning. This includes not deliberately felling, falling into or damaging **large trees** during harvesting and **extraction**, and ensuring slash is not accumulated within 3m of the base of **large trees** immediately prior to **regeneration** burns.
- 4.1.1.4 Where possible, incorporate **large trees** in retained patches of **habitat trees** or expanded **buffers** or **exclusion areas**.
- 4.1.1.5 Include all **large trees** in a Large Tree Register.

Under the Code definitions, a 'large tree' means a living tree of any species that has a diameter at breast height over bark (DBHOB) equal to or greater than 2.5 metres.

The large Mountain Ash found during the survey was surrounded by other sizeable hollow-bearing Mountain Ash trees that should at minimum all be incorporated into a large retained patch to protect them.

Conclusion

This report details the detection of:

- Two critically endangered Leadbeater's Possums occupying forest within VicForests logging coupe 300-503-0009, in the Toolangi State Forest
- Three endangered Southern greater gliders detected within or adjacent the coupe
- Three vulnerable Yellow-bellied Gliders detected within the coupe
- Three endangered Tree Geebungs located within or adjacent the coupe
- A large Mountain Ash tree of greater than 2.5m DBH.

There is no evidence to suggest that VicForests have accounted for the high-quality Leadbeater's Possum, Greater Glider or Yellow-bellied Glider habitat within the area through the planning phase of the TRP. This report concludes that VicForests, through failing to identify the Leadbeater's Possums, Greater Gliders, Yellow-bellied Gliders and/or their habitat and Tree Geebungs, has planned to conduct logging operations within critical habitat for these species.

Recommendations

- Further comprehensive surveys for Leadbeater's Possum, Greater Gliders, Yellow-bellied Gliders, Tree Geebungs and other threatened species should be undertaken within and adjacent coupe 300-503-0009 to ensure all individuals, populations and habitat can be adequately protected.
- DEECA must restrain VicForests from conducting timber harvesting operations within scheduled logging coupe 300-503-0009 that falls within the prescribed 200m Special Protection Zone around the two Leadbeater's Possum detection sites as seen in Figure 8.
- VicForests should adhere to the recent court orders of protection for the Greater Glider, Yellow-bellied Glider and Tree Geebung, including establishing 50m protective buffers around Tree Geebung locations and watercourses.
- Greater Glider home range must be protected with consideration of typical home range size, that the Greater Glider detection site could be on the edge of its range, and the relatively low density of Greater Gliders found in the area which may indicate a larger home range.
- VicForests should adhere to the relevant scientific advice for the species including the establishment of a 1km LBP buffer around the detection as seen in Figure 8 as to apply with the precautionary principle.

The logging coupe 300-503-0009 should be removed from VicForests Timber Release Plan as this forest is of high significance multiple threatened species including the critically endangered Leadbeater's Possum, Greater Gliders, Yellow-bellied Gliders and Tree Geebungs.



We respectfully acknowledge the Traditional Custodians of the land in which we conduct our surveys and other important work where sovereignty has never been ceded, and we pay our respects to elders past and present.