

Evidence that feral cats are preying on the critically endangered Leadbeater's possum

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The Leadbeater's possum – also known as the fairy possum due to its small size and elusive nature – lives in the tall wet forests of Victoria's Central Highlands. Credit: University of Melbourne

New evidence has raised concerns about the possibility of feral cats preying upon the critically endangered Leadbeater's possum, with a cat detected on cameras at two nest boxes used by the possums.

The Leadbeater's possum – also known as the fairy possum due to its small size and elusive nature – lives in the tall wet forests of Victoria's Central Highlands. The species has undergone significant population decline, primarily due to habitat loss and degradation from bushfires and timber harvesting. The 2009 Black Saturday bushfire affected 34 per cent of the possum's range.

Researchers from the University of Melbourne photographed a feral cat sitting on top of two [nest boxes](#), attempting to catch possums as they left. Seven feral cats were subsequently captured in the area over a 10-day period. Stomach contents and scat analysis confirmed the remains of Leadbeater's possum in two of the cats' stomachs. These findings are described in research published today in *Australian Mammalogy*.

University of Melbourne Masters student and lead author Leo McComb said the findings are unexpected.

"Feral predators haven't previously been considered a major threat to the Leadbeater's possum, which spends most of the night feeding in the canopy, rarely coming to the ground," Mr McComb said.

"Remote-sensing camera photos documented the cat visiting two nest boxes occupied by one possum colony over a period of 20 days. The cameras captured a dramatic, yet unsuccessful swipe by the cat as a possum emerges from the nest box at dusk."

University of Melbourne Research Fellow Natalie Briscoe from the School of BioSciences, who co-supervised the project, emphasised that more research is needed to work out whether this is an isolated incident

or a more widespread issue.

"Thankfully we didn't record photos of successful hunting by the cat at the nest boxes, but the observations highlight the risk," Dr. Briscoe said.

"The diet analysis confirms that feral cats do capture Leadbeater's possums, but it remains uncertain where and how this occurs. We didn't find any evidence of feral cats at the other 45 nest boxes monitored with cameras over winter, and no cats were detected at 63 nest boxes monitored over summer."

Zoos Victoria Threatened Species Biologist Dr. Dan Harley is a co-supervisor of the project and has a long involvement with Leadbeater's possum conservation.

"At some locations, nest boxes have been a valuable tool for providing additional denning opportunities for Leadbeater's possums living in forests where there is a shortage of natural hollows," Dr. Harley said.

"We don't know whether [nest](#) boxes elevate predation risk but it is worth considering measures that minimise this possibility, such as modifying the design of the box lid or potentially placing collars at the base of trees."

The authors have commenced further camera monitoring and are undertaking more cat trapping and stomach content analysis to assess the frequency that [feral cats](#)' prey upon the critically endangered Leadbeater's [possum](#).

Feral cats pose a major threat to many of Australia's native species. Very soon they will be declared a pest animal on specified crown land under the Victorian Catchment and Land Protection Act 1994. This will enable the development of large-scale feral cat control programs to protect

Victoria's threatened species.

More information: Leo B. McComb et al. Feral cat predation on Leadbeater's possum (*Gymnodelphax leadbeateri*) and observations of arboreal hunting at nest boxes, *Australian Mammalogy* (2018). [DOI: 10.1071/AM18010](https://doi.org/10.1071/AM18010)

Provided by University of Melbourne

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